LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 25

2020

Bate Stamp Numbers
00991798 – 00993615

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2020

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

VOLUME 25

2020

A. Title: (cont'd) Report – Level IV DOD to Quarterly Evaluation Report, 3rd Quarter (April-September) 2020, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, December 2020
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers
Date: December 3, 2020
Bate Stamp: 00991798 – 00993615

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

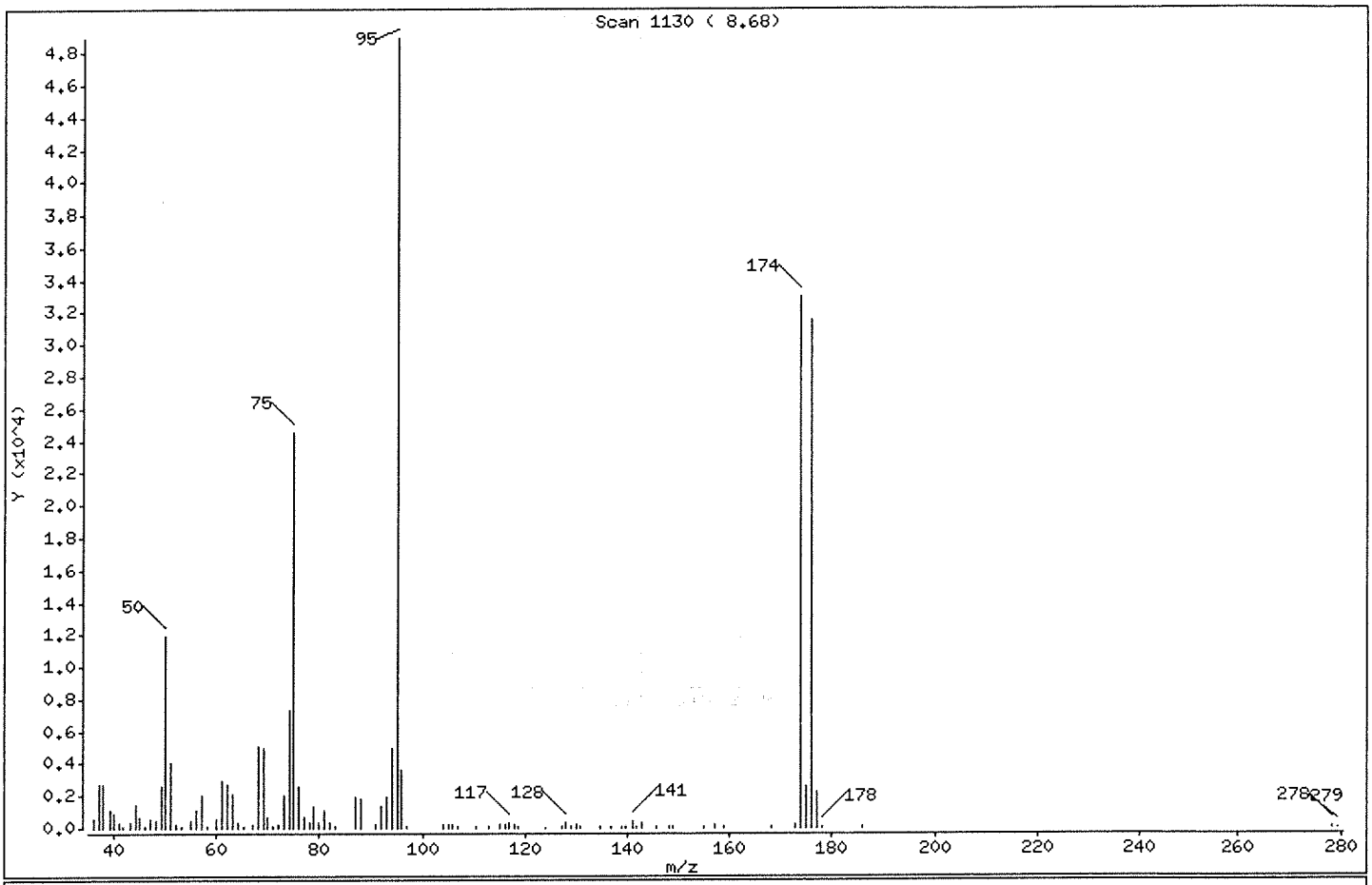
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.40
75	30.00 - 60.00% of mass 95	50.11
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.63)
174	Greater than 50.00% of mass 95	67.28
175	5.00 - 9.00% of mass 174	5.25 (7.80)
176	95.00 - 101.00% of mass 174	64.32 (95.60)
177	5.00 - 9.00% of mass 176	4.66 (7.25)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

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: X080301.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	531	62.00	2722	92.00	1357	136.80	58
37.00	2708	63.00	2090	93.00	1937	139.00	114
38.00	2689	64.10	333	94.00	5003	139.80	109
39.10	1102	65.10	152	95.00	48920	141.00	492
39.90	914	67.00	172	96.00	3597	141.70	68
41.00	390	68.00	5065	97.10	159	142.90	325
41.80	147	69.00	4934	104.10	247	145.60	116
43.10	318	70.00	640	105.00	192	148.00	163
44.10	1442	71.10	132	105.90	238	149.00	64
44.90	624	71.90	198	107.00	73	155.00	128
46.10	63	73.00	2073	110.60	59	156.90	179
47.00	559	74.00	7325	113.00	90	159.00	102
48.00	397	75.00	24512	114.90	227	168.00	114
49.10	2563	76.00	2607	116.00	174	172.90	208
50.00	11935	76.90	632	116.80	351	173.90	32912
51.00	4006	78.00	348	117.80	175	174.90	2566
52.10	210	78.90	1387	118.70	154	175.90	31464
53.00	122	79.90	370	123.90	56	176.90	2280
55.00	461	80.90	1139	127.10	81	178.00	150
56.10	1076	81.90	296	127.90	291	186.00	89
57.00	2018	82.90	133	128.80	113	277.90	149
58.20	143	87.00	1966	129.90	205	279.20	55
60.00	526	87.90	1834	130.90	98		
61.00	2907	91.00	222	134.80	63		

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-AUG-2020 11:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	572408	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	867920	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	763638	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	355732	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	1662	0.25000	0.29(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	2175	0.25000	0.32(Ta)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	6945	0.25000	0.37(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	3200	0.25000	0.44(aM)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1428	0.25000	0.24(a)
31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	2319	0.25000	0.26(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1974	0.25000	0.72(aM)
53 1,1,2-Trichloroethane	83	6.854	6.854	(0.894)	1511	0.25000	0.34(aM)
22 1,1-Dichloroethane	63	2.936	2.936	(0.701)	3028	0.25000	0.27(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1378	0.25000	0.30(a)
32 1,1-Dichloropropene	75	4.297	4.297	(0.865)	2193	0.25000	0.30(a)
93 1,2,3-Trichlorobenzene	180	11.768	11.768	(1.217)	168	0.25000	0.15(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1435	0.25000	0.27(aM)
90 1,2,4-Trichlorobenzene	180	11.374	11.374	(1.176)	428	0.25000	(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	5138	0.25000	0.27(a)
89 1,2-Dibromo-3-Chloropropane	155	10.686	10.686	(1.105)	50	0.25000	0.89(aM)
57 1,2-Dibromoethane	107	7.277	7.277	(0.949)	1365	0.25000	0.24(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	2418	0.25000	0.24(a)

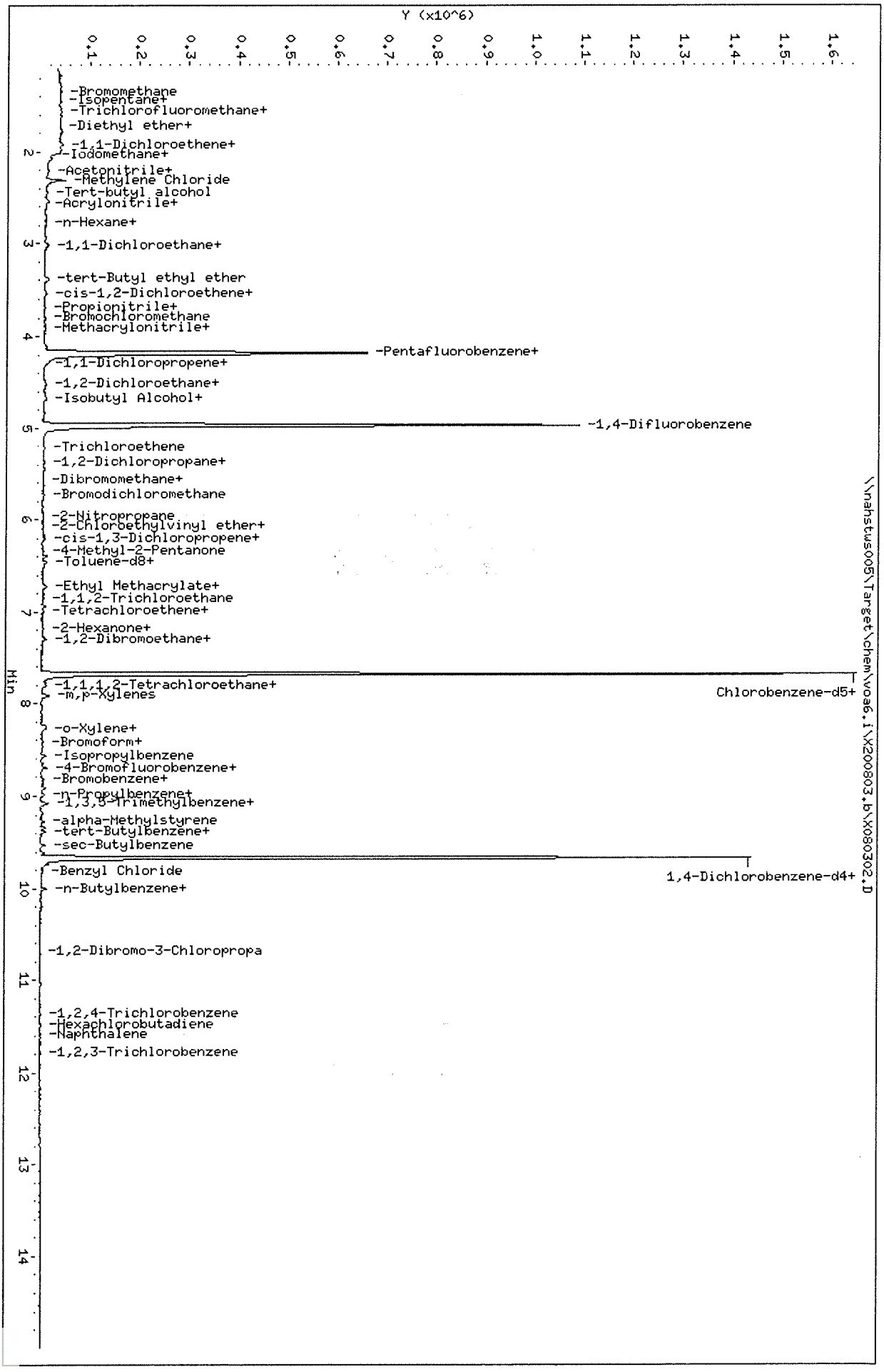
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	2225	0.25000	0.26 (a)
42 1,2-Dichloropropane	63	5.450	5.450	(1.097)	1294	0.25000	0.20 (aM)
75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	4991	0.25000	0.26 (a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2610	0.25000	0.23 (a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	2288	0.25000	0.26 (aM)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	3060	0.25000	0.27 (a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	2227	0.25000	0.27 (aM)
24 2-Butanone	43	3.638	3.638	(0.868)	1048	0.50000	0.37 (aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	4316	0.25000	0.27 (a)
52 2-Hexanone	43	7.112	7.112	(0.927)	2498	0.50000	0.52 (a)
77 4-Chlorotoluene	91	9.082	9.082	(0.939)	4822	0.25000	0.26 (a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	5222	0.25000	0.26 (a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	3501	0.50000	0.49 (a)
10 Acetone	43	1.976	1.976	(0.472)	4869	0.50000	1.39 (aM)
37 Benzene	78	4.526	4.526	(0.911)	5575	0.25000	0.25 (a)
74 Bromobenzene	156	8.817	8.817	(0.912)	1749	0.25000	0.25 (a)
29 Bromochloromethane	128	3.795	3.795	(0.906)	1013	0.25000	0.29 (aM)
39 Bromodichloromethane	83	5.737	5.737	(1.154)	2345	0.25000	0.30 (aM)
66 Bromoform	173	8.416	8.416	(1.097)	1002	0.25000	0.23 (aM)
6 Bromomethane	94	1.346	1.346	(0.321)	1280	0.25000	0.97 (aM)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	6971	0.50000	0.49 (a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	2189	0.25000	0.28 (a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	4245	0.25000	0.28 (a)
7 Chloroethane	64	1.410	1.410	(0.337)	1194	0.25000	0.29 (aM)
28 Chloroform	83	3.910	3.910	(0.933)	2183	0.25000	0.21 (a)
3 Chloromethane	50	1.081	1.081	(0.258)	2410	0.25000	0.29 (a)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	1634	0.25000	0.25 (a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	2355	0.25000	0.25 (a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	1646	0.25000	0.26 (a)
44 Dibromomethane	93	5.565	5.565	(1.120)	1127	0.25000	0.29 (a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1555	0.25000	0.27 (aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	2026	0.25000	0.26 (aM)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	351	0.25000	0.18 (aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	5606	0.25000	0.24 (a)
62 m,p-Xylenes	106	7.914	7.914	(1.032)	4680	0.50000	0.50 (a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	13192	0.25000	0.91 (aM)
87 n-Butylbenzene	91	10.006	10.006	(1.035)	4073	0.25000	0.25 (a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	6307	0.25000	0.24 (a)
92 Naphthalene	128	11.589	11.589	(1.199)	698	0.25000	0.12 (aM)
63 o-Xylene	106	8.251	8.251	(1.076)	2471	0.25000	0.26 (a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	5521	0.25000	0.25 (a)
64 Styrene	104	8.272	8.272	(1.078)	3575	0.25000	0.22 (a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	4130	0.25000	0.25 (a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1260	0.25000	0.25 (a)
50 Toluene	91	6.460	6.460	(0.842)	6876	0.25000	0.30 (aM)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1215	0.25000	0.22 (aM)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2328	0.25000	0.27 (aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	1542	0.25000	0.25 (a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	1948	0.25000	0.23 (a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	1889	0.25000	0.25 (a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Report Date: 22-Aug-2020 11:54

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Date : 03-AUG-2020 11:40
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-AUG-2020 12:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 11:40 Cal File: X080302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

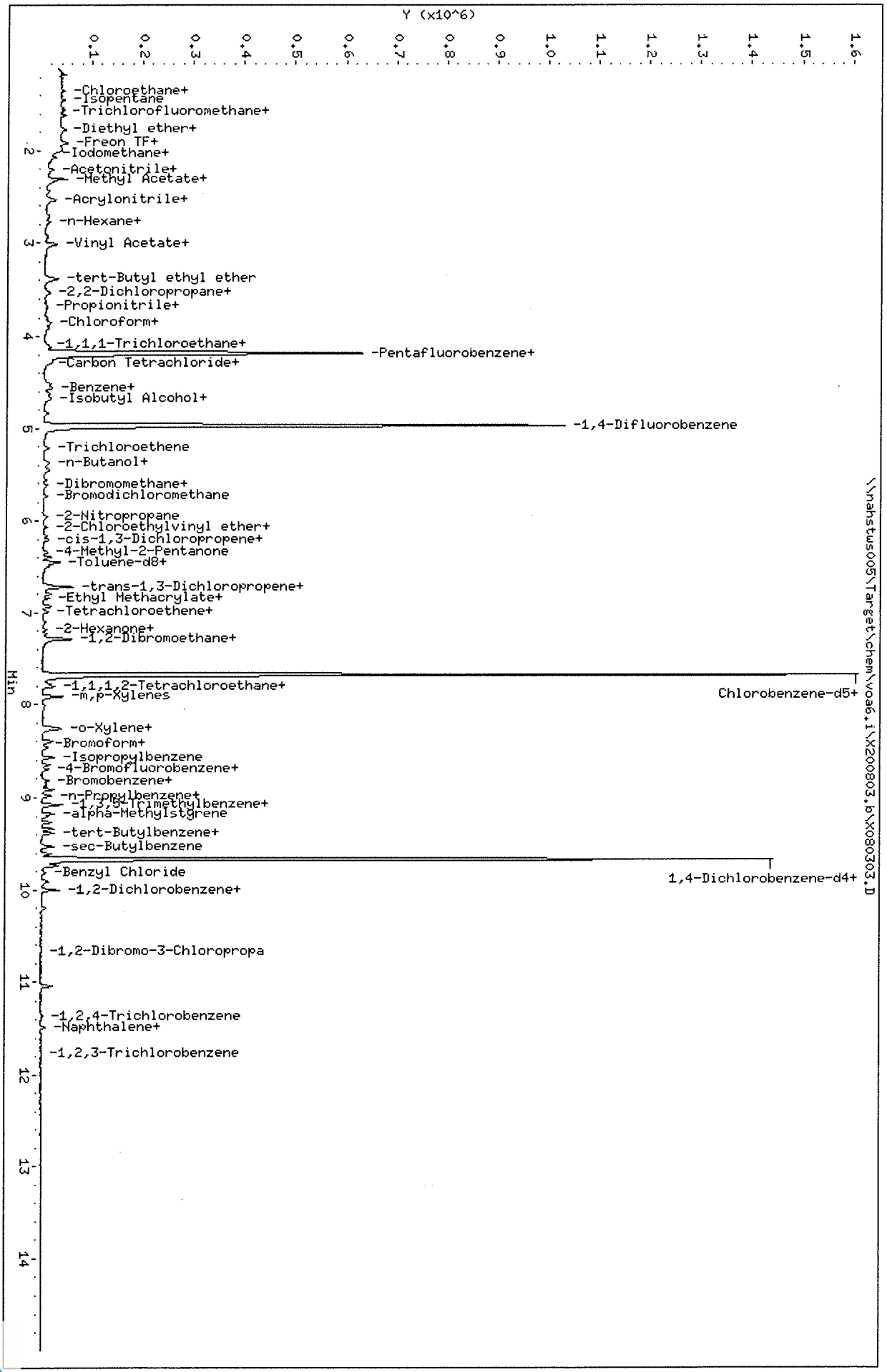
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	544079	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	825062	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	734728	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351808	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	2875	0.50000	0.53(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	3638	0.50000	0.57(aM)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	9247	0.50000	0.51(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3831	0.50000	0.55(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3529	0.50000	0.63(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	5010	0.50000	0.59(aM)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3887	0.50000	1.06(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2550	0.50000	0.60(aM)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	5969	0.50000	0.56(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	2144	0.50000	0.49(aM)
	32 1,1-Dichloropropene	75	4.297	4.297	(0.865)	4094	0.50000	0.59(aM)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	642	0.50000	0.60(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	3074	0.50000	0.59(aM)
	90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	1350	0.50000	0.14(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	11934	0.50000	0.63(aM)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	394	0.50000	1.56(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3081	0.50000	0.57(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	6299	0.50000	0.63(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	4445	0.50000	0.55(aM)
42	1,2-Dichloropropane	63	5.450	5.450	(1.097)	3223	0.50000	0.53(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	10923	0.50000	0.59(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6943	0.50000	0.62(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	4895	0.50000	0.59(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	6675	0.50000	0.61(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	4808	0.50000	0.61(aM)
24	2-Butanone	43	3.609	3.609	(0.862)	2796	1.00000	1.04(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	8675	0.50000	0.56(aM)
52	2-Hexanone	43	7.105	7.105	(0.926)	4973	1.00000	1.07(aM)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	10688	0.50000	0.60(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	12071	0.50000	0.61(aM)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7990	1.00000	1.17(a)
10	Acetone	43	1.976	1.976	(0.472)	6244	1.00000	2.25(aM)
37	Benzene	78	4.526	4.526	(0.911)	12142	0.50000	0.59(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4364	0.50000	0.63(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	1908	0.50000	0.58(aM)
39	Bromodichloromethane	83	5.736	5.736	(1.154)	4753	0.50000	0.63(aM)
66	Bromoform	173	8.415	8.415	(1.097)	2599	0.50000	0.63(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	2498	0.50000	1.31(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	16094	1.00000	1.20(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4361	0.50000	0.59(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	9164	0.50000	0.63(a)
7	Chloroethane	64	1.403	1.403	(0.335)	2338	0.50000	0.60(a)
28	Chloroform	83	3.917	3.917	(0.935)	5814	0.50000	0.59(a)
3	Chloromethane	50	1.080	1.080	(0.258)	4829	0.50000	0.63(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	3487	0.50000	0.58(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	5096	0.50000	0.58(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3742	0.50000	0.63(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	2117	0.50000	0.58(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2895	0.50000	0.54(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	4683	0.50000	0.62(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	828	0.50000	0.43(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	13211	0.50000	0.60(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	10883	1.00000	1.21(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	13006	0.50000	1.00(aM)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	9792	0.50000	0.62(aM)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	15904	0.50000	0.62(a)
92	Naphthalene	128	11.560	11.560	(1.196)	1670	0.50000	0.48(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5447	0.50000	0.61(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	13181	0.50000	0.61(a)
64	Styrene	104	8.272	8.272	(1.078)	9169	0.50000	0.59(aM)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	10025	0.50000	0.62(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	3139	0.50000	0.67(a)
50	Toluene	91	6.453	6.453	(0.841)	13642	0.50000	0.63(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	2977	0.50000	0.58(aM)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	4694	0.50000	0.58(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3262	0.50000	0.55(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4721	0.50000	0.58(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	3935	0.50000	0.56(a)

QC Flag Legend

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

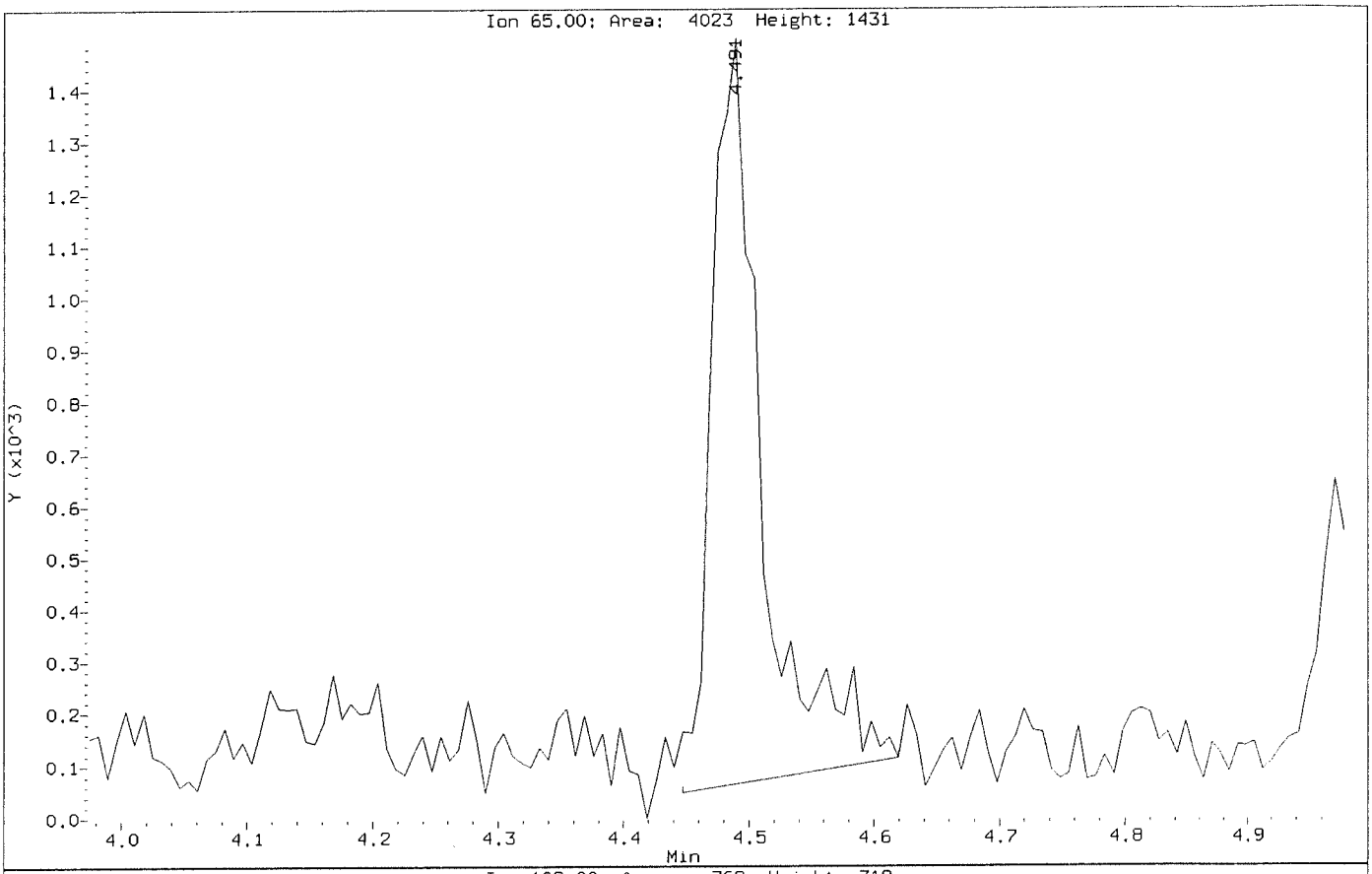


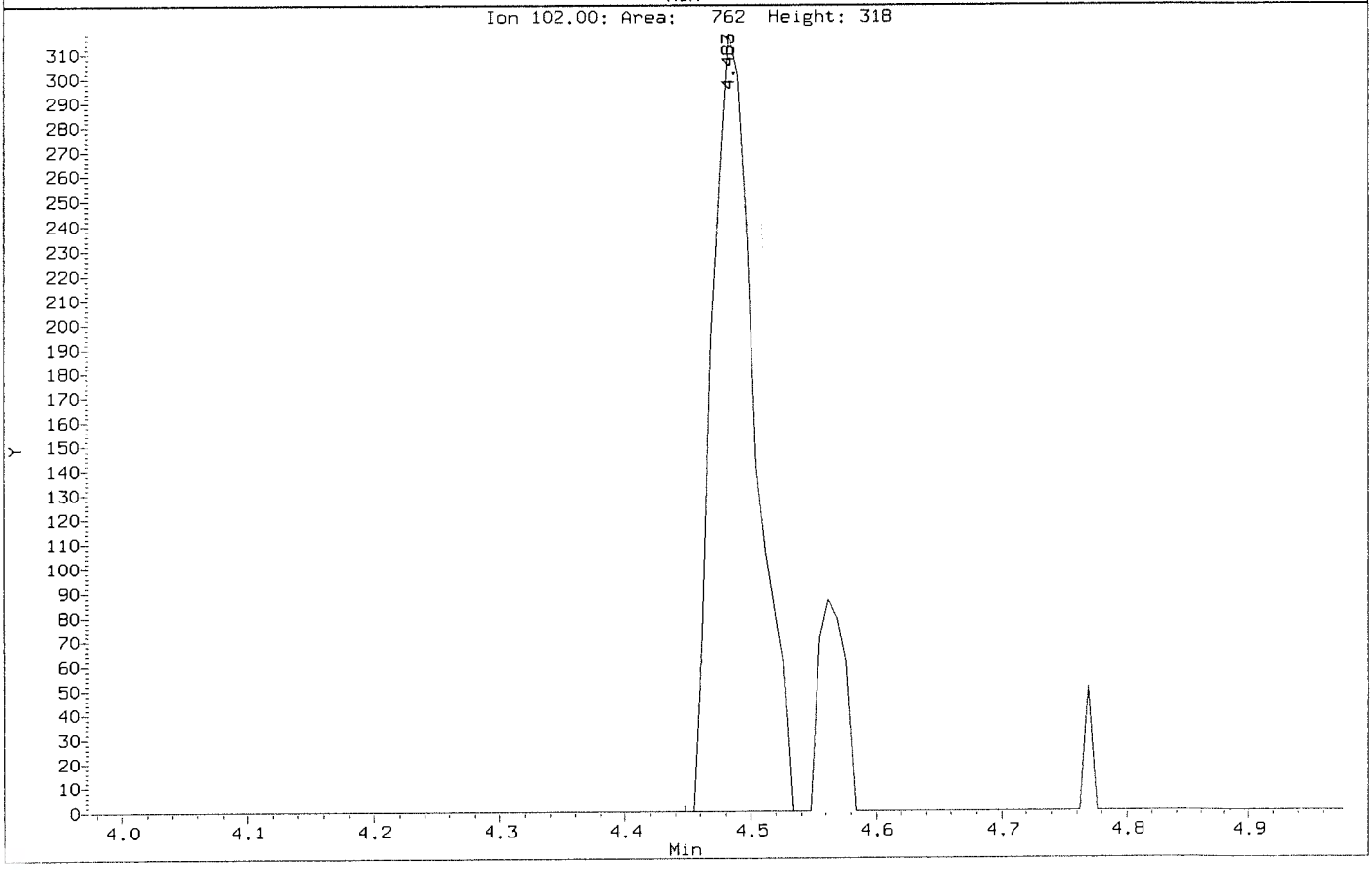
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Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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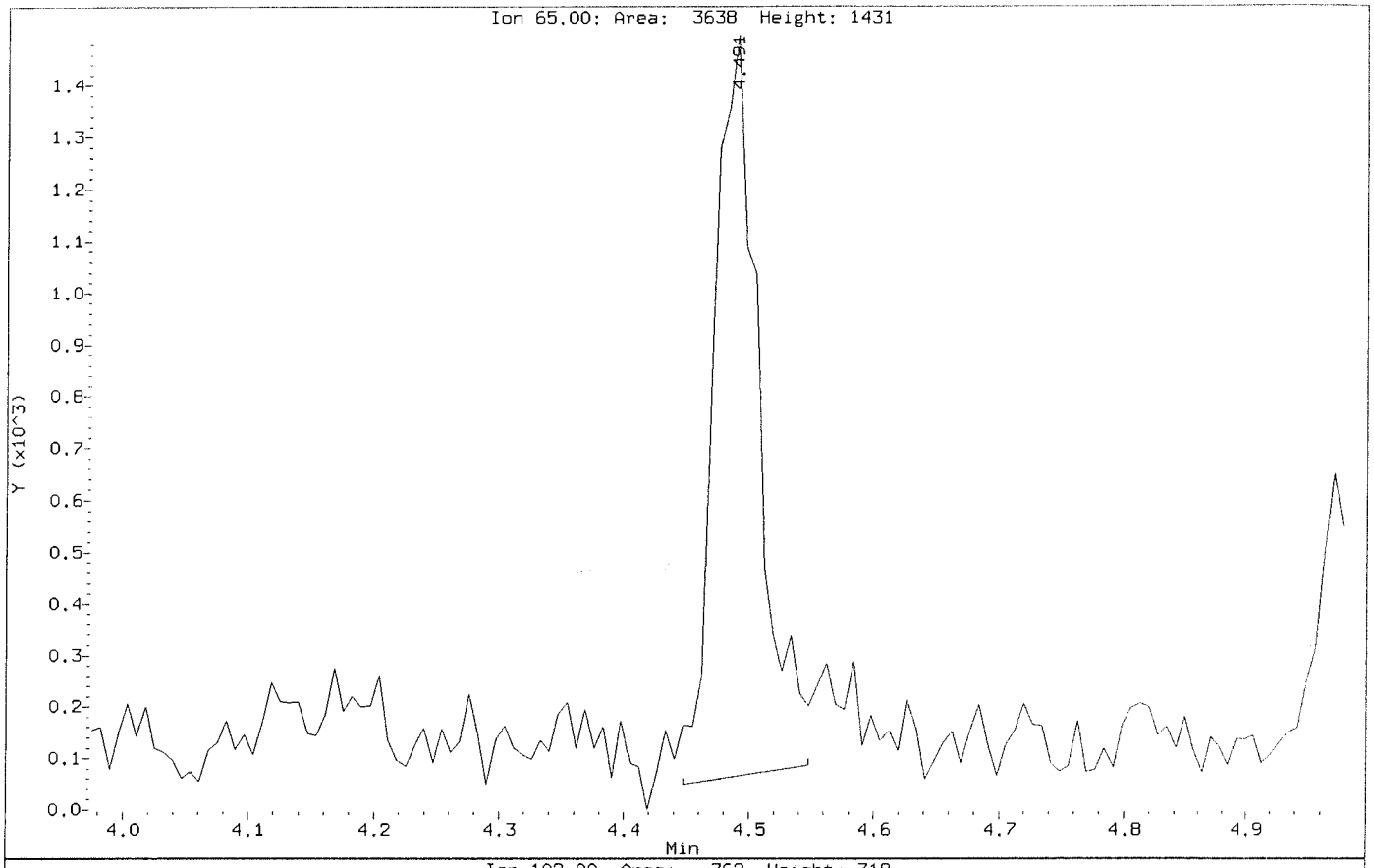
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CAS Number: 17060-07-0

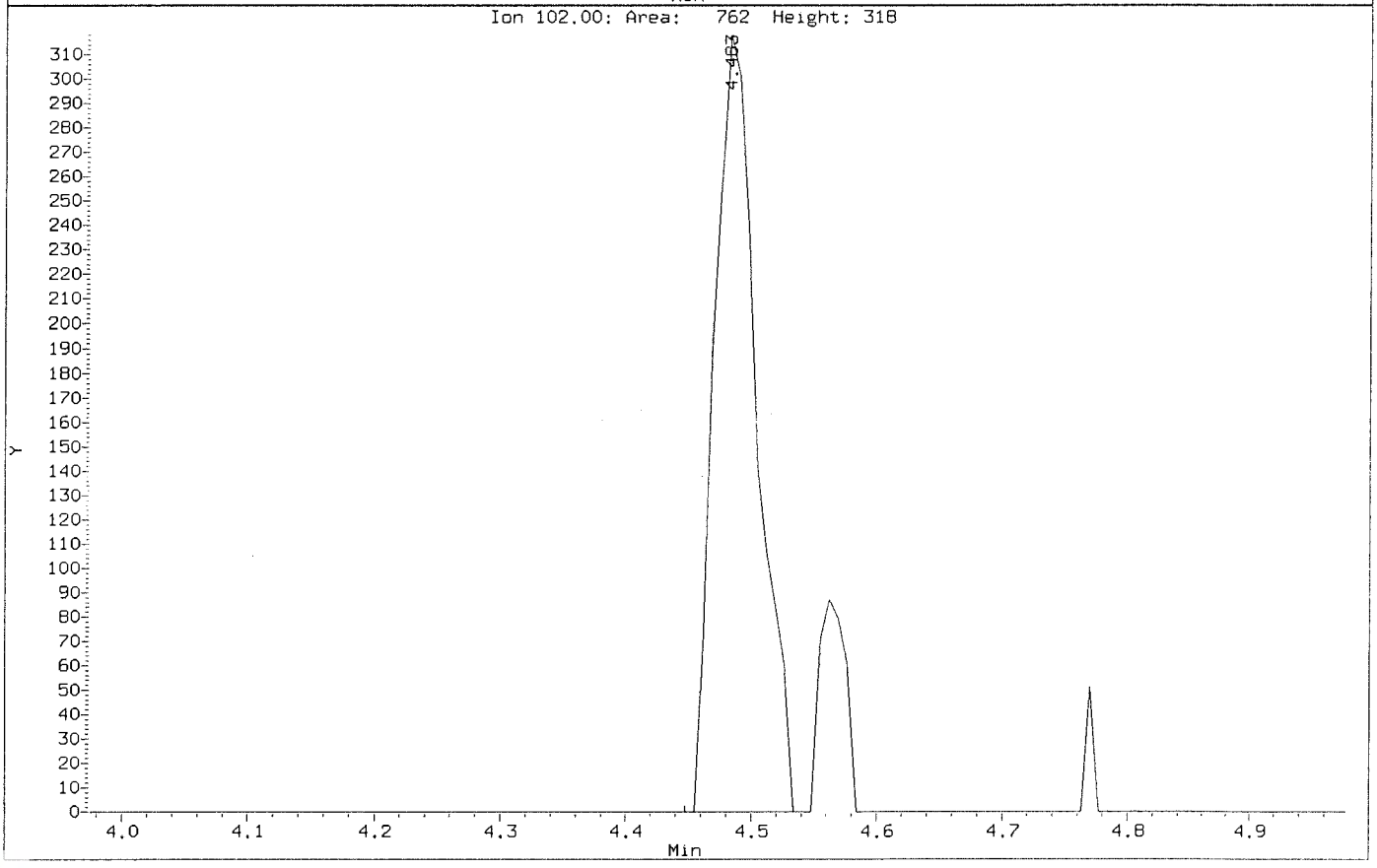




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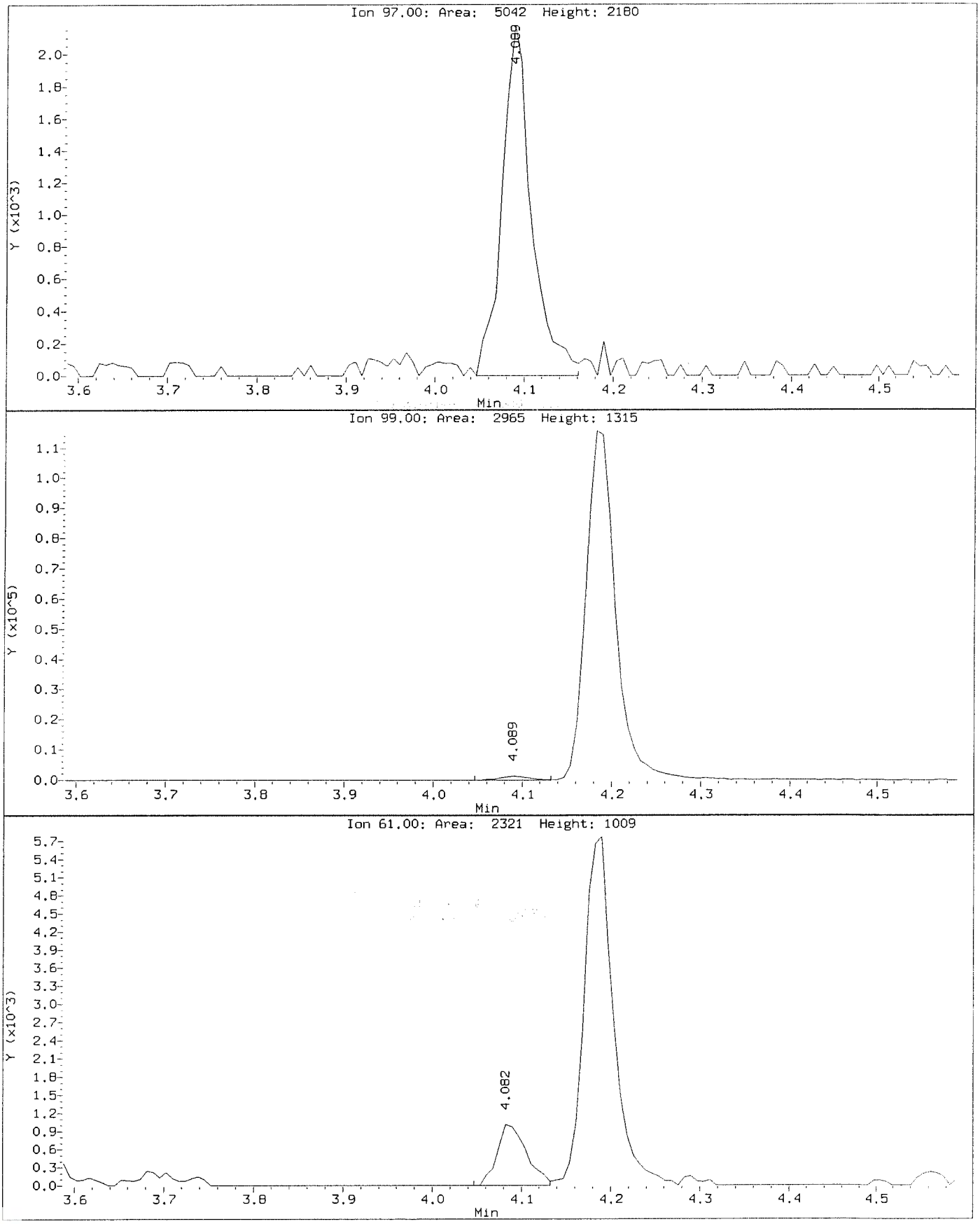
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CAS Number: 17060-07-0





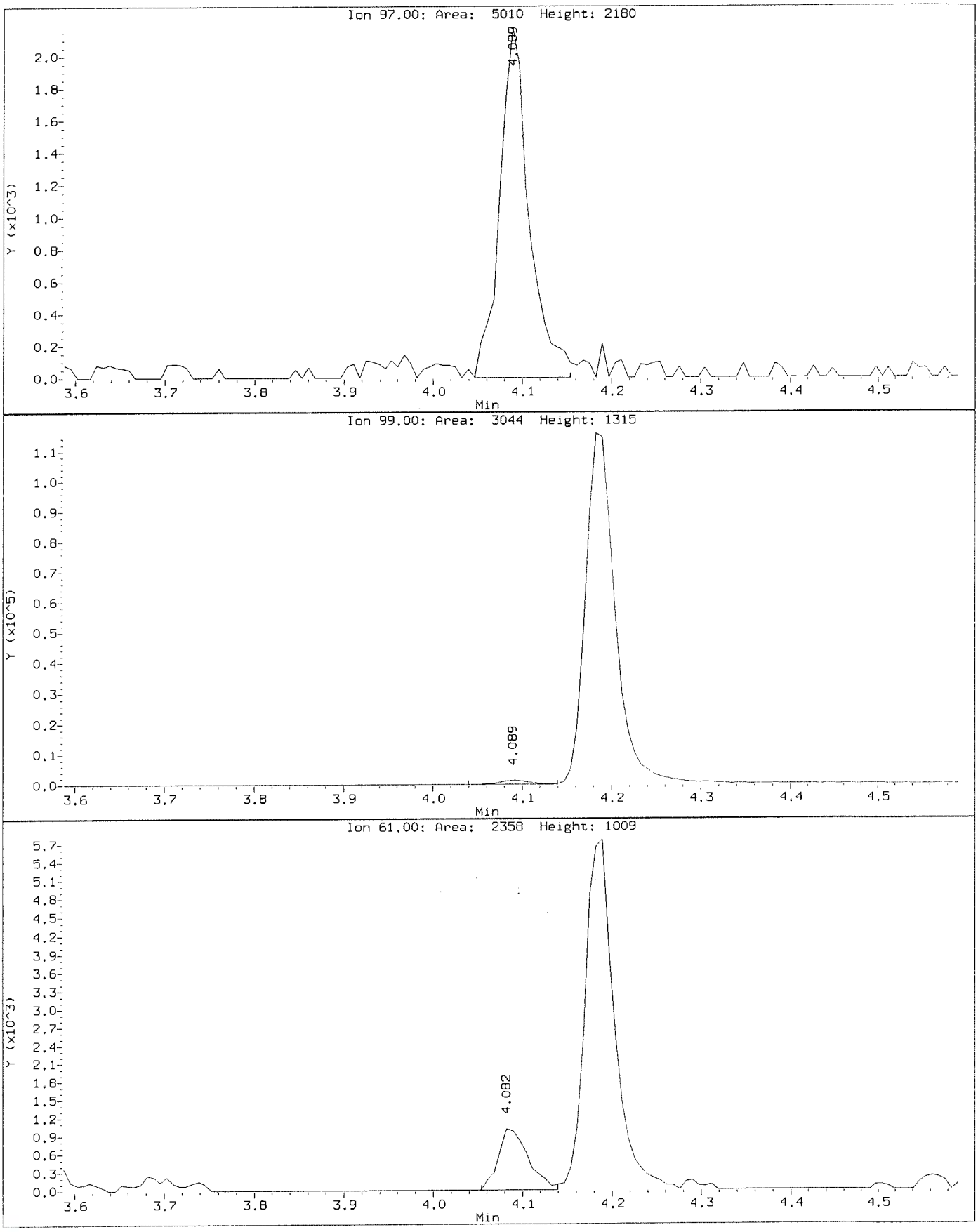
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



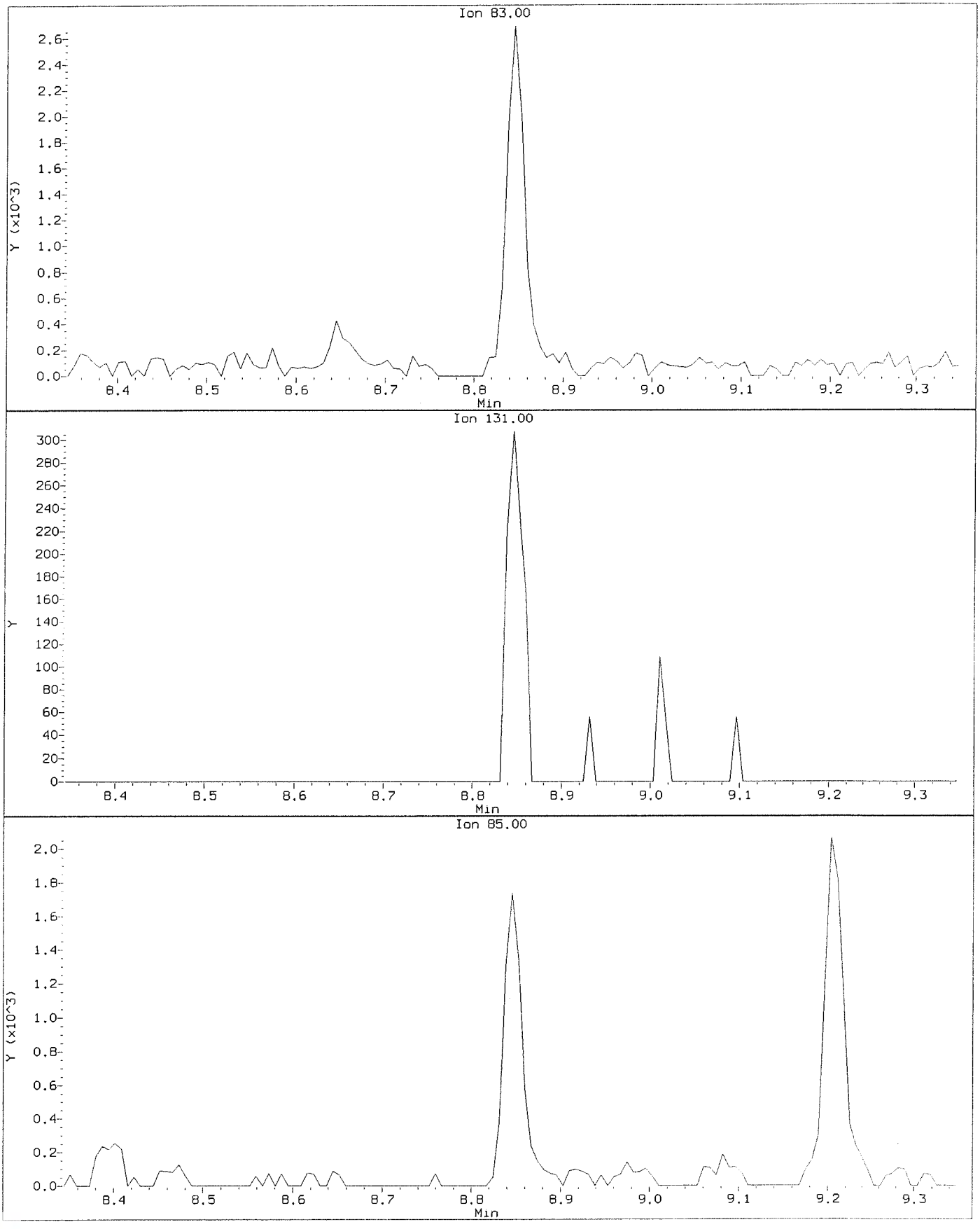
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



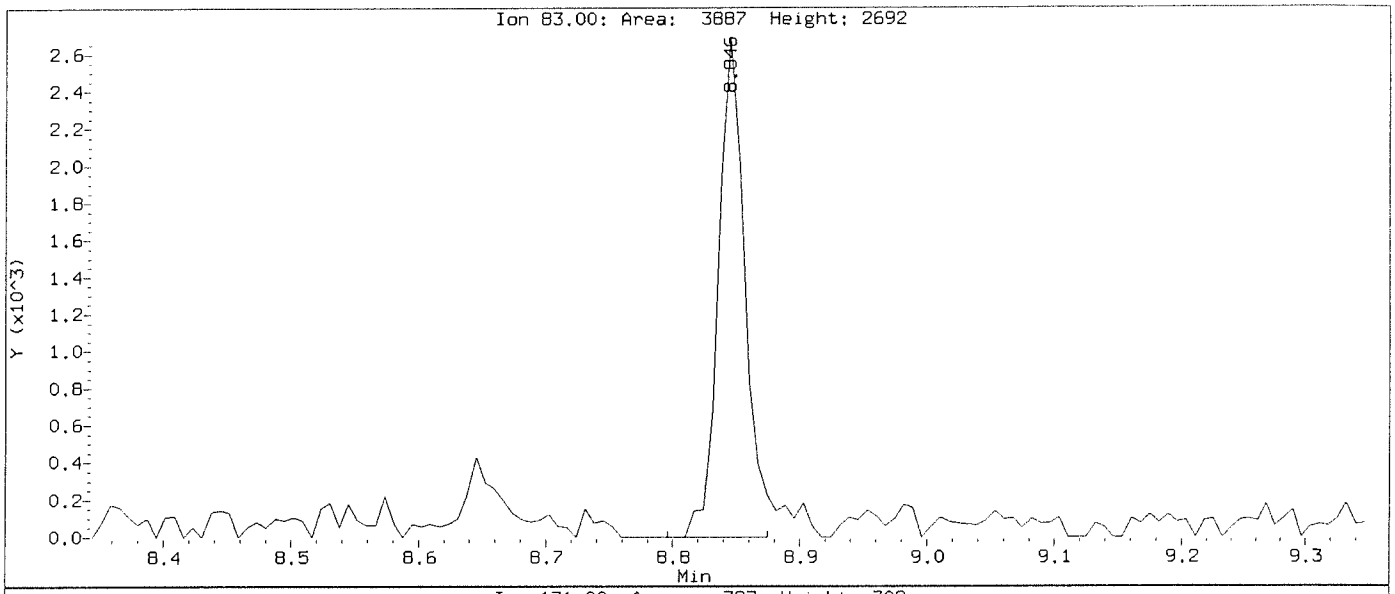
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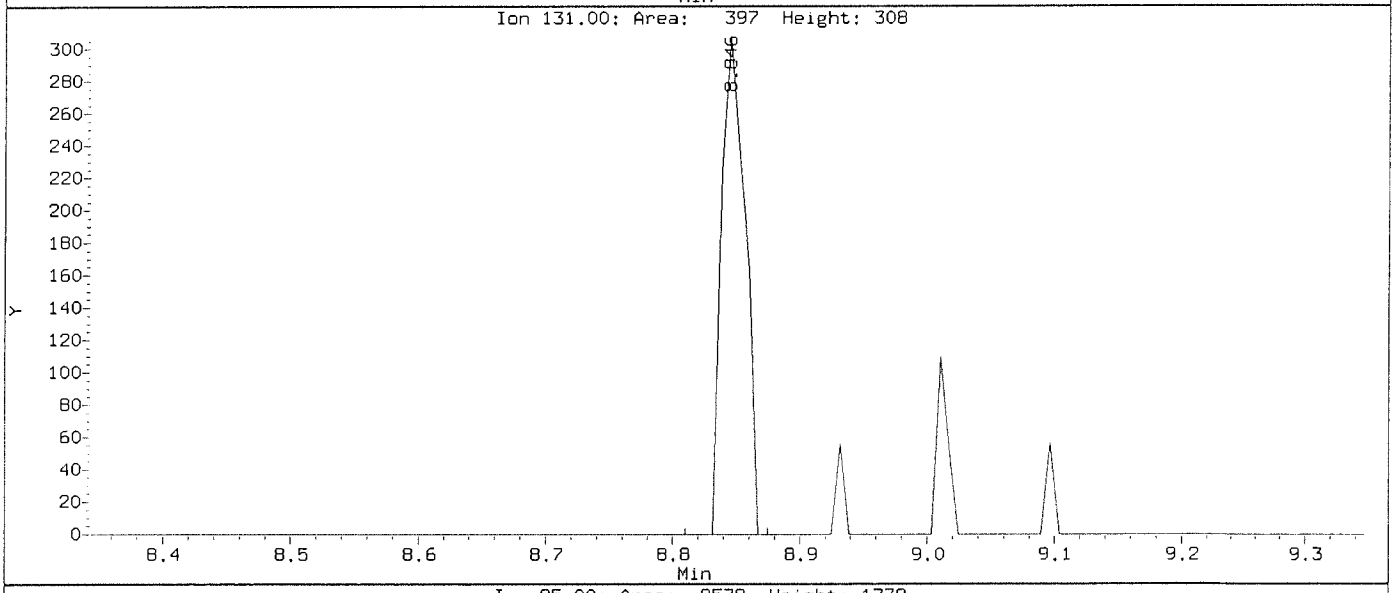
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CAS Number: 79-34-5

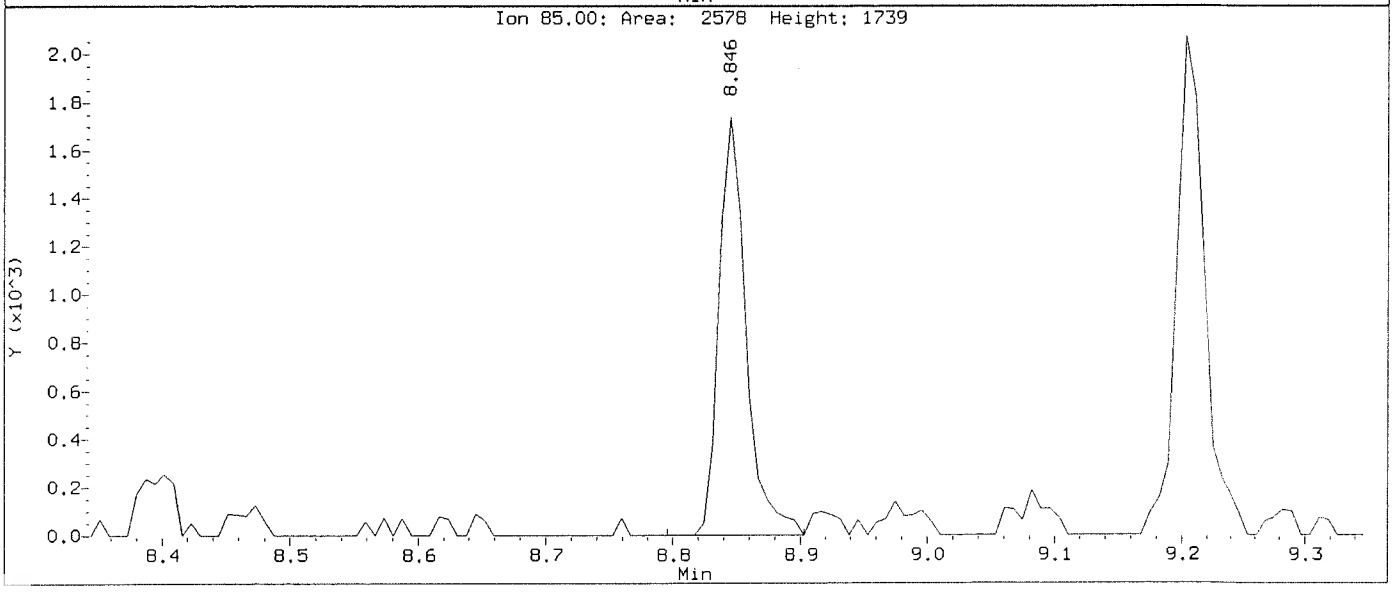


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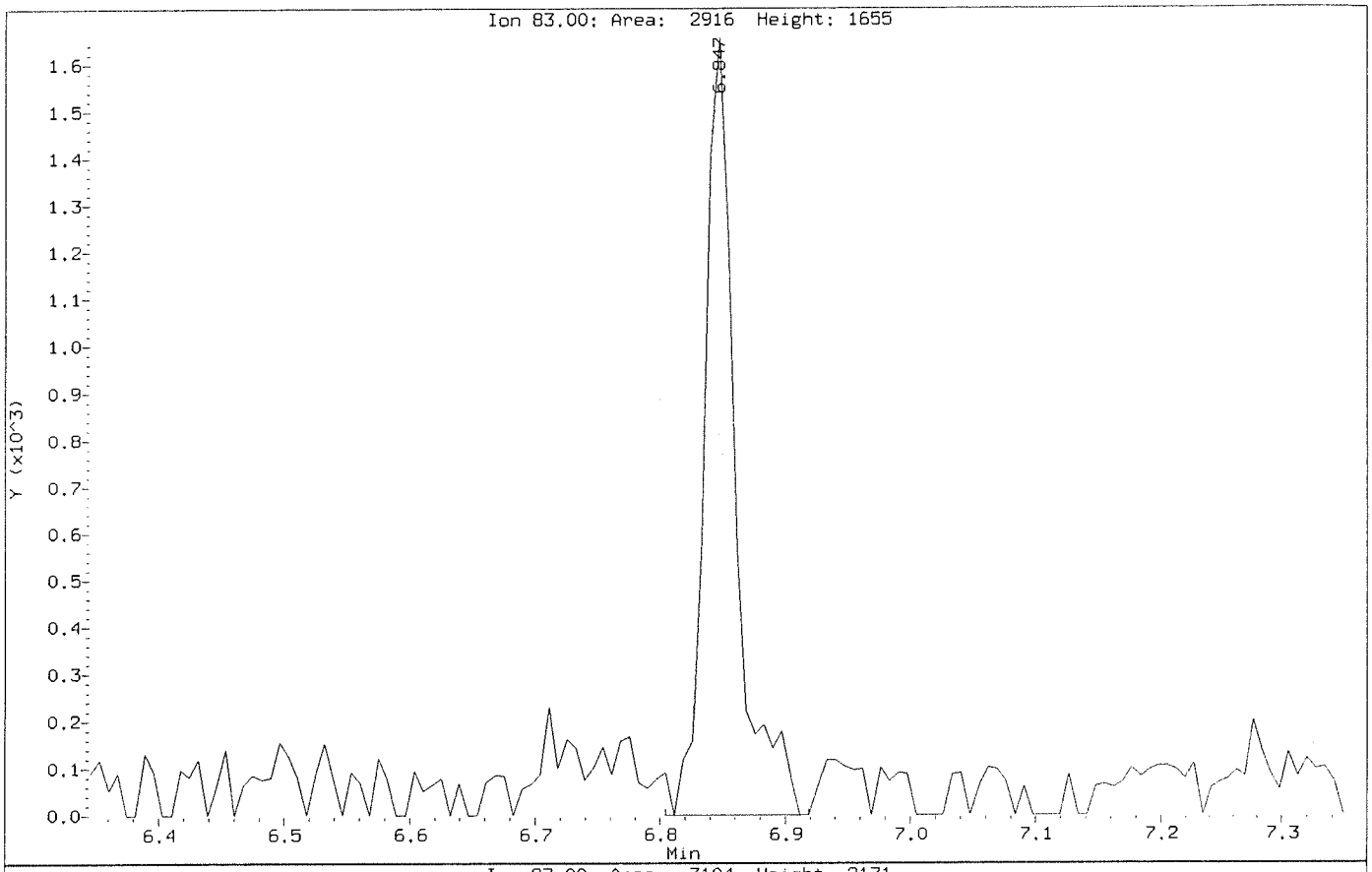


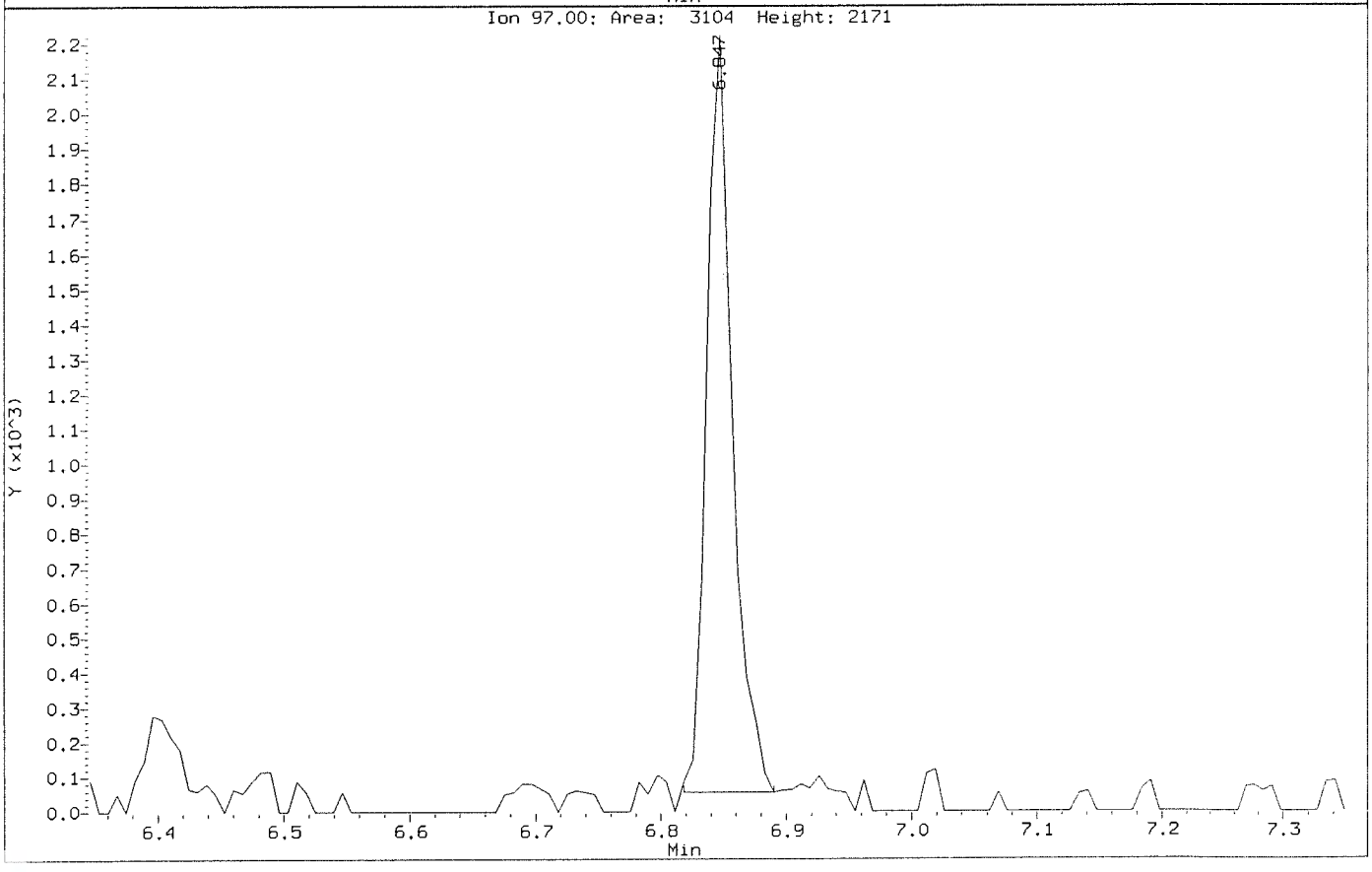




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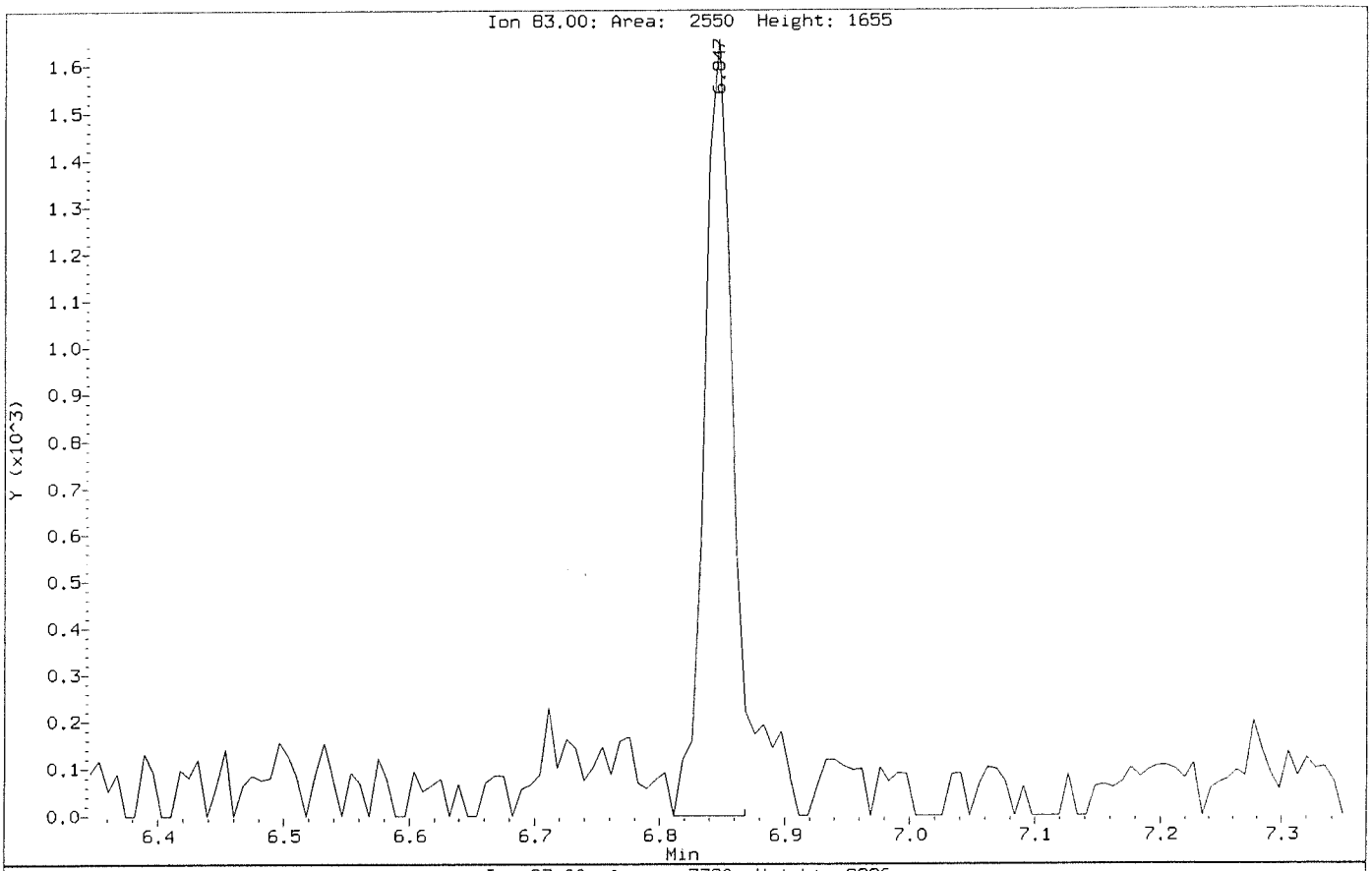
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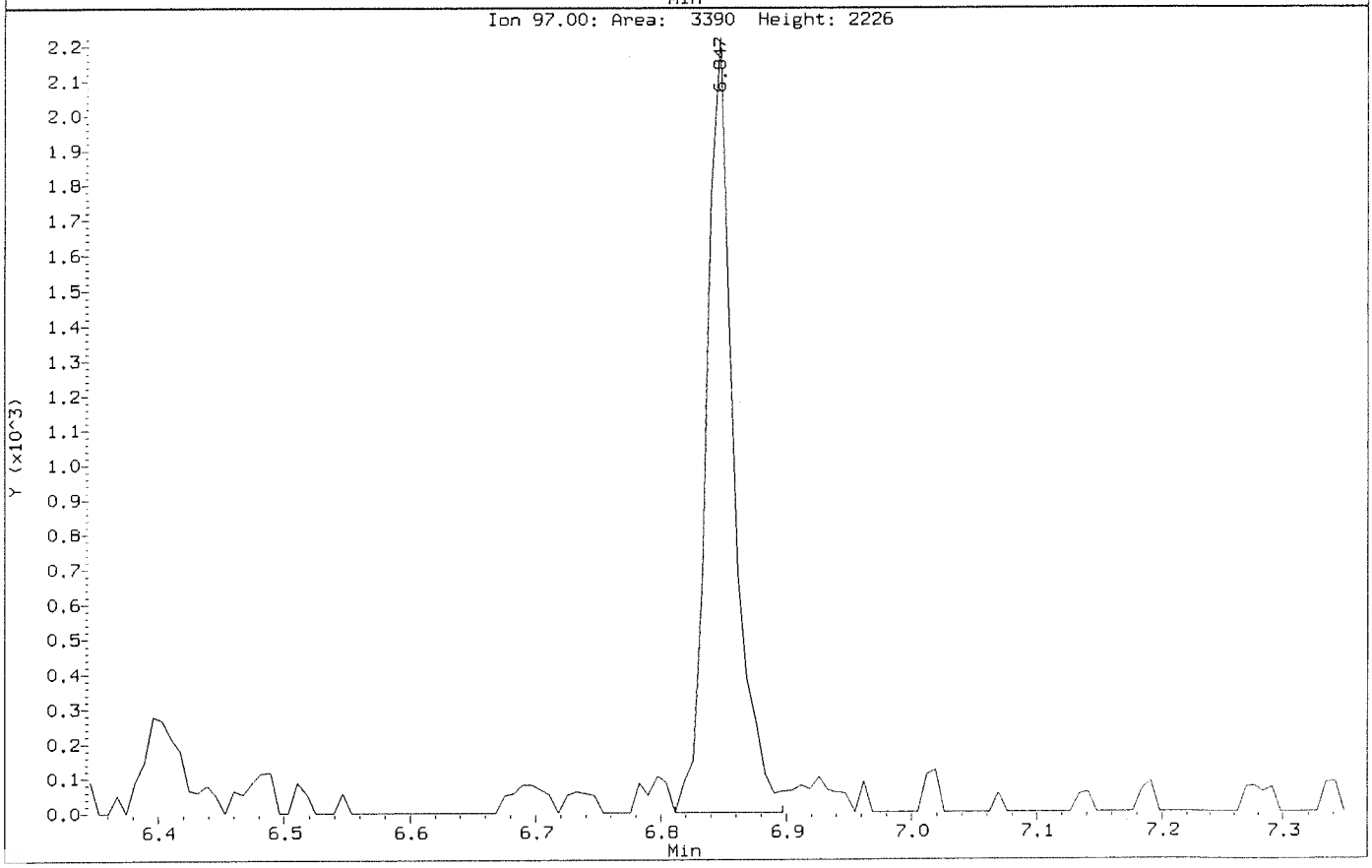




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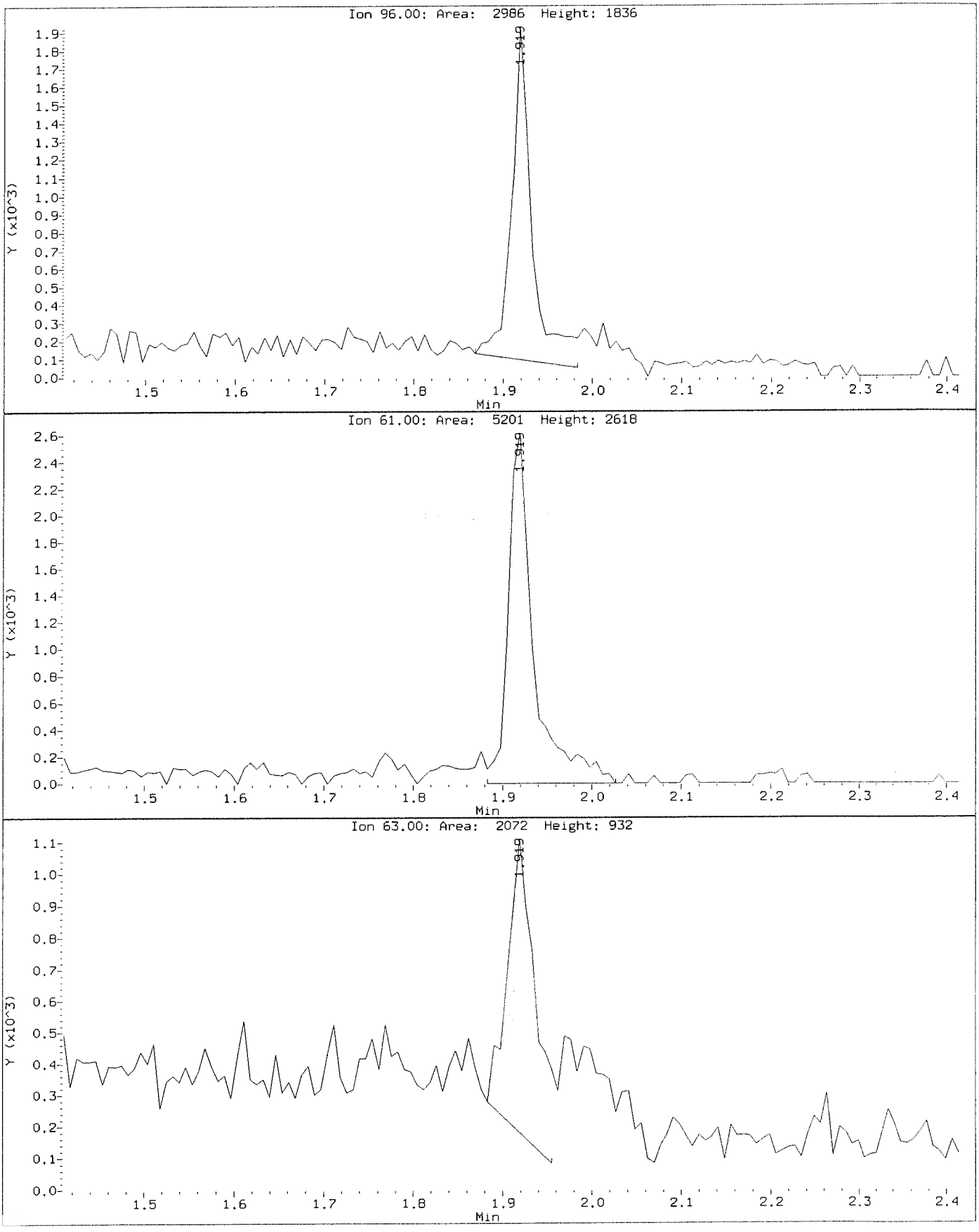
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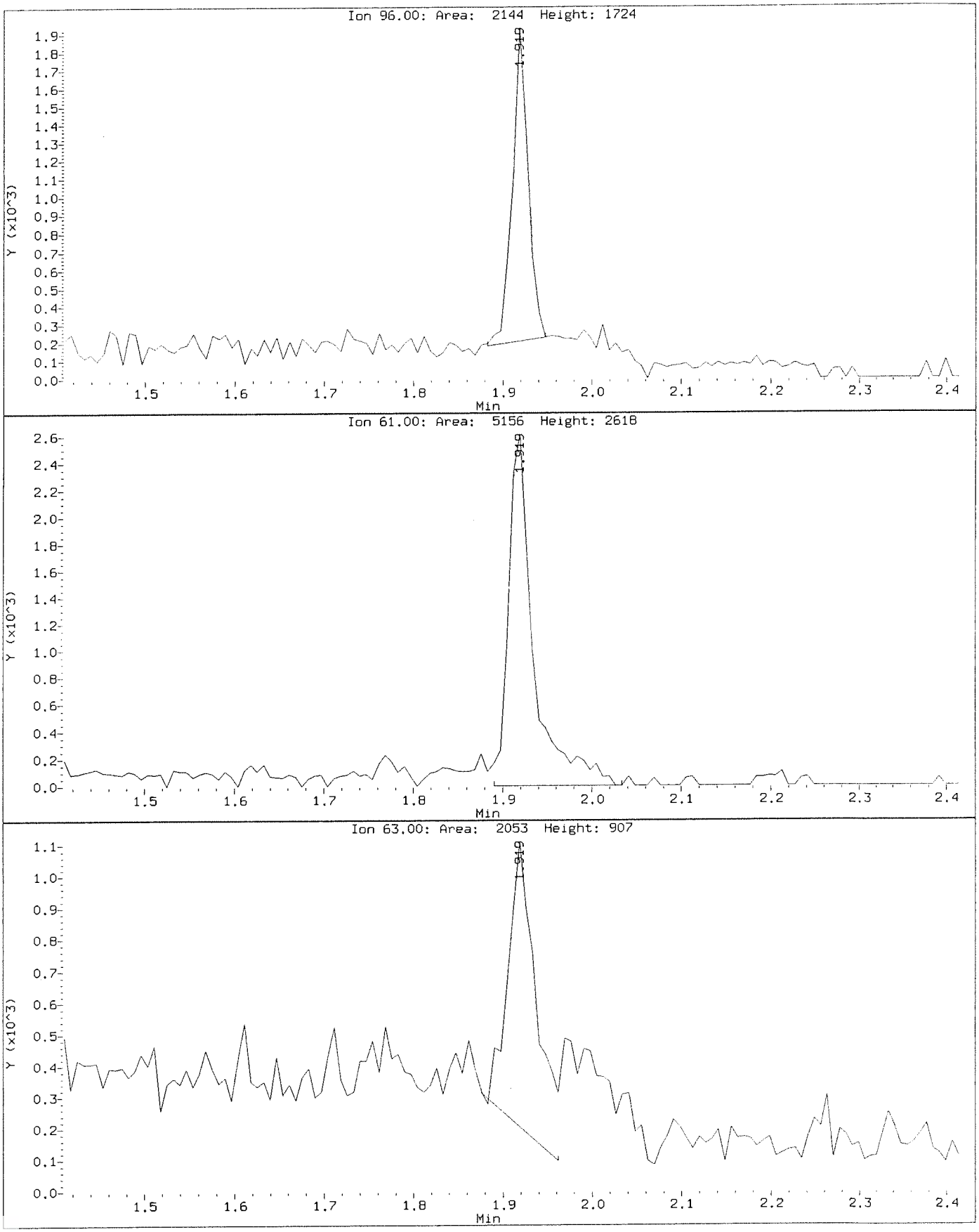
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



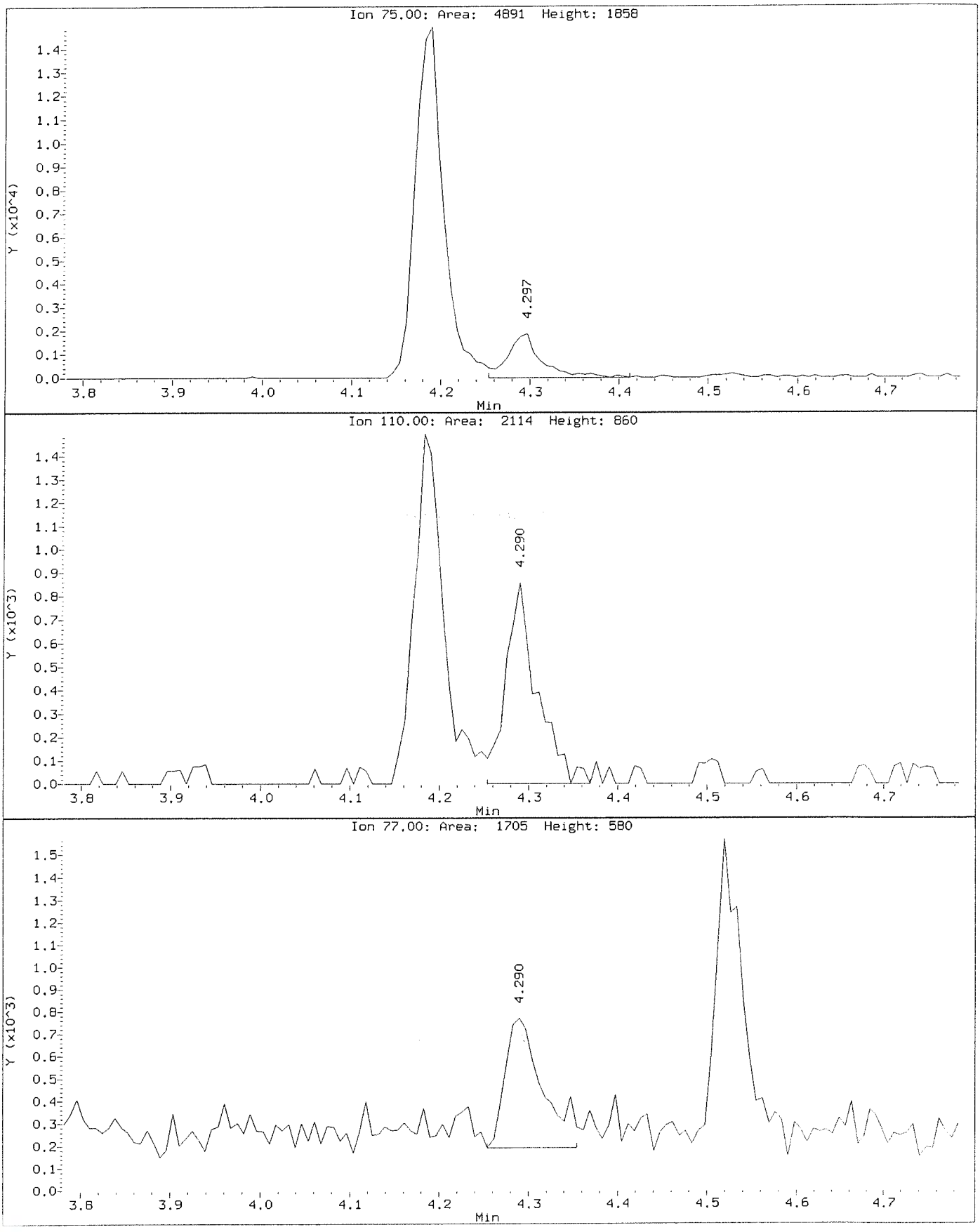
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



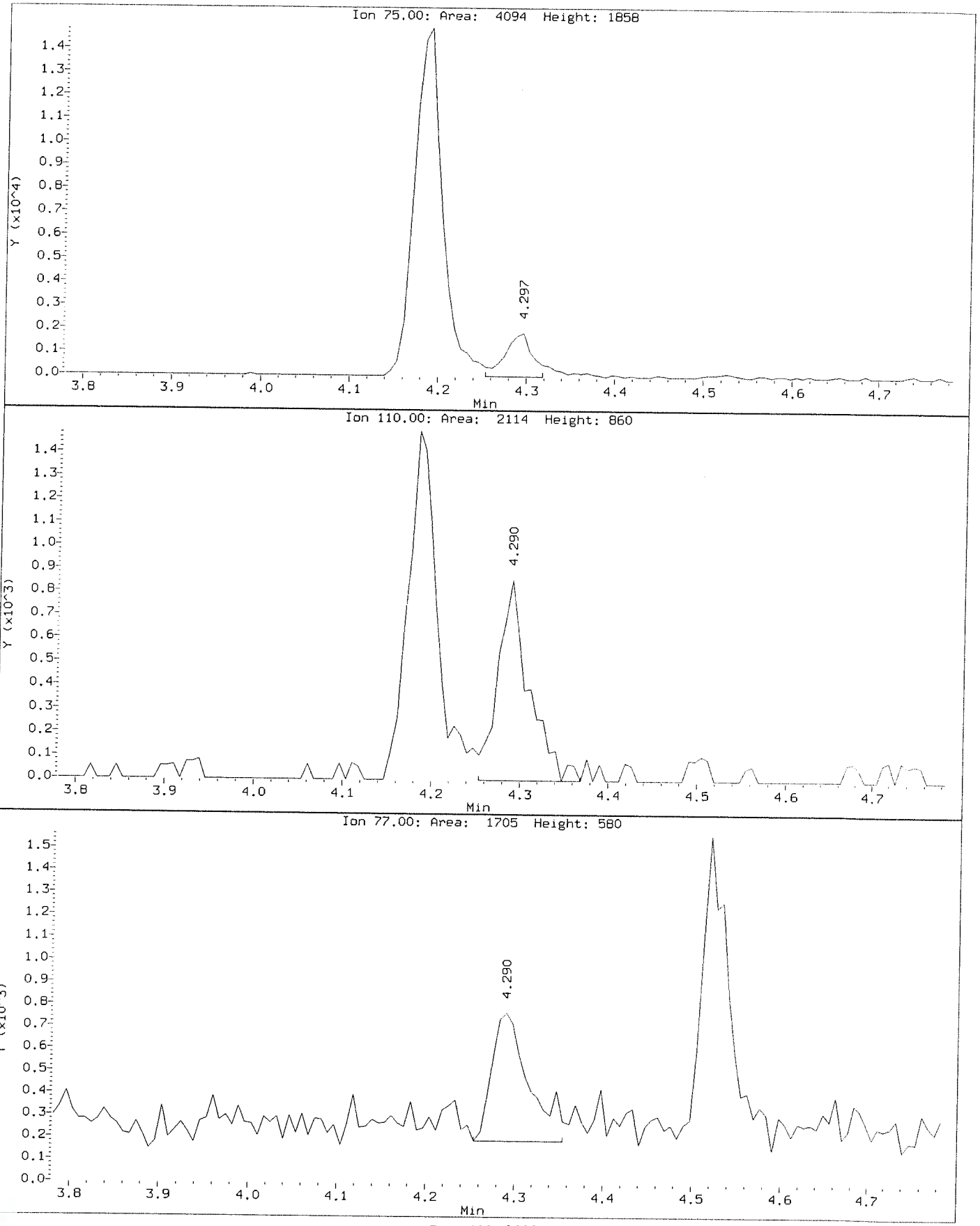
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



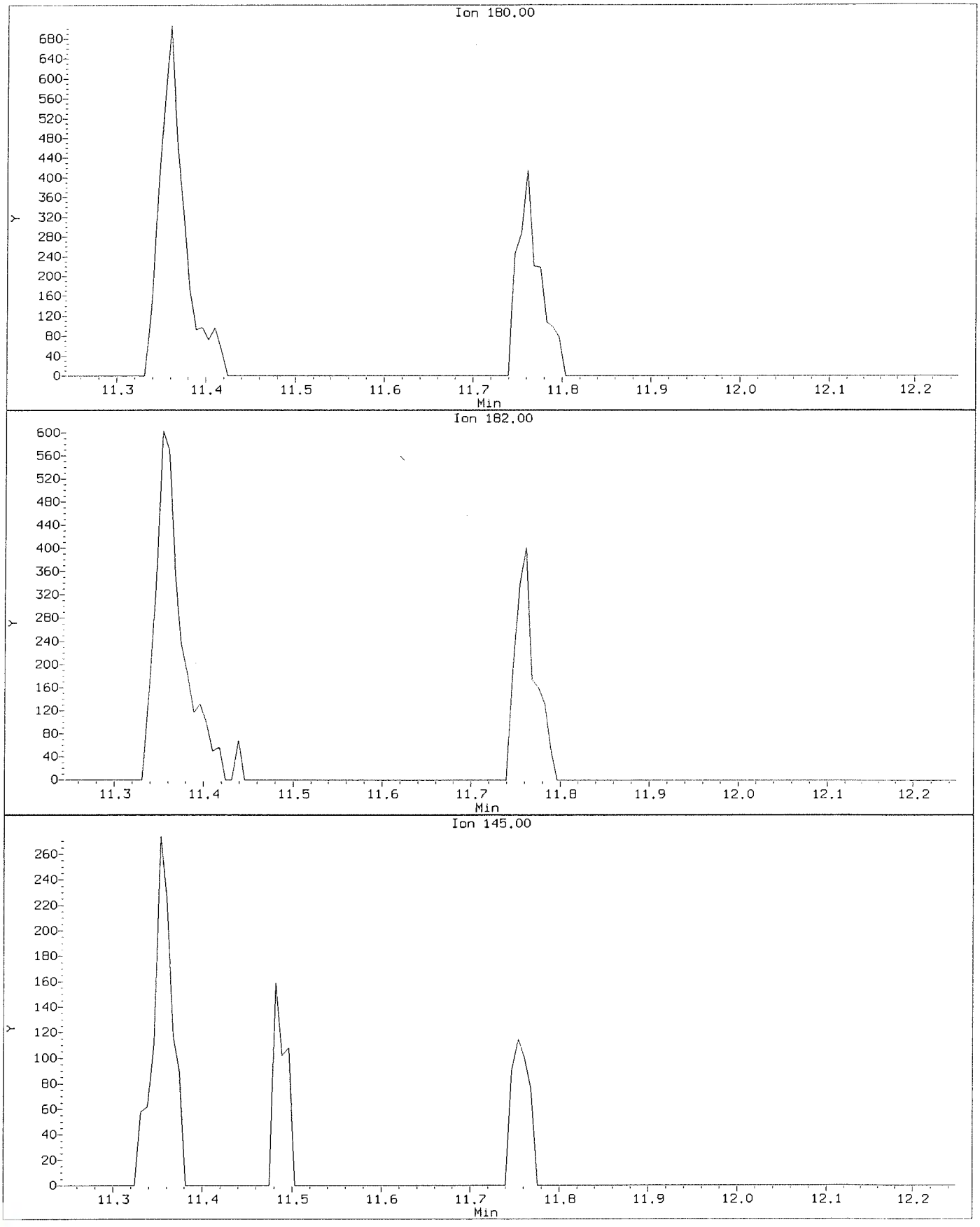
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



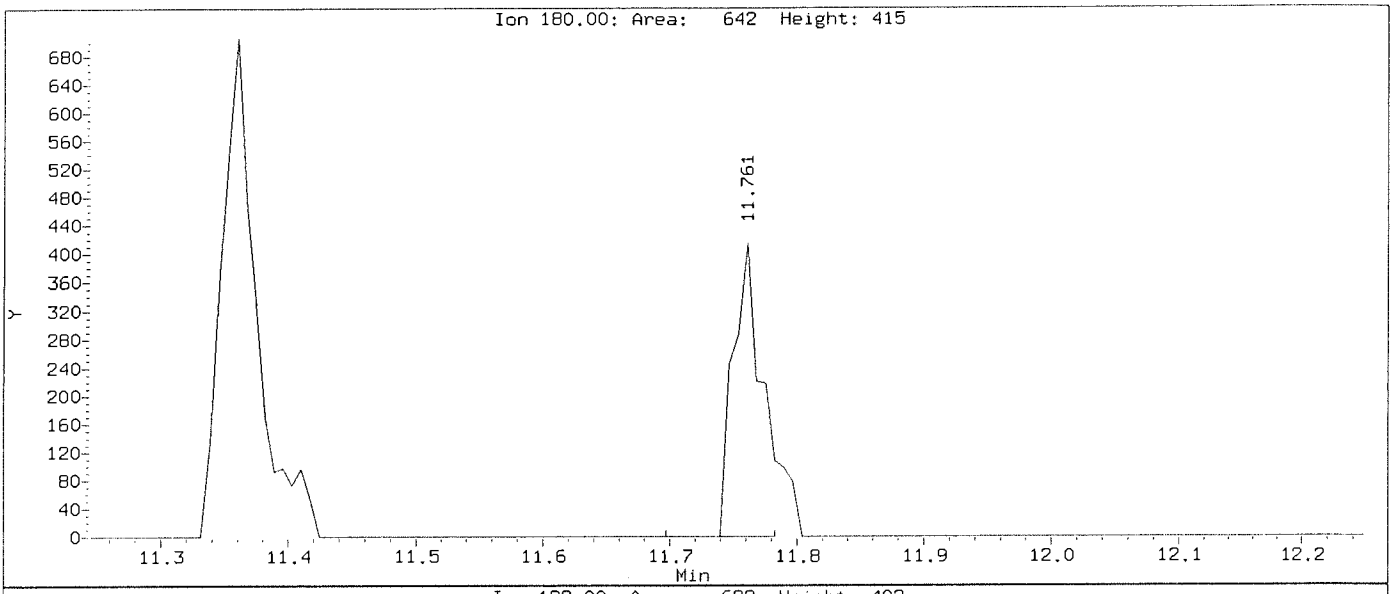
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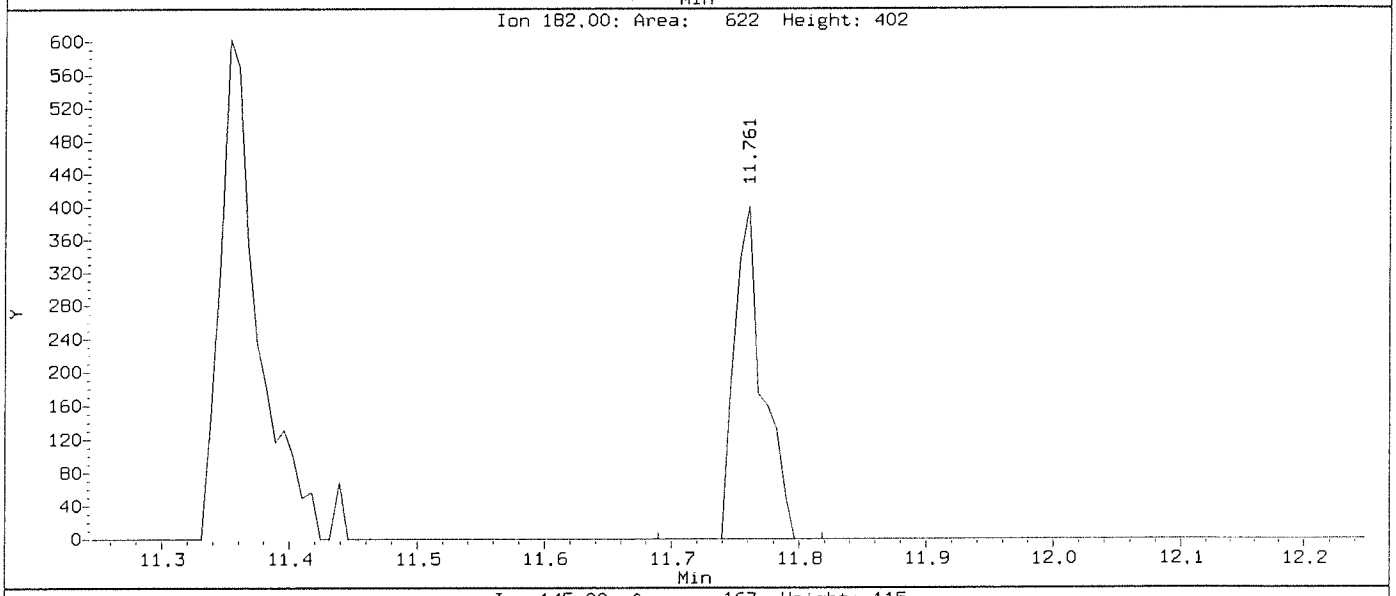
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

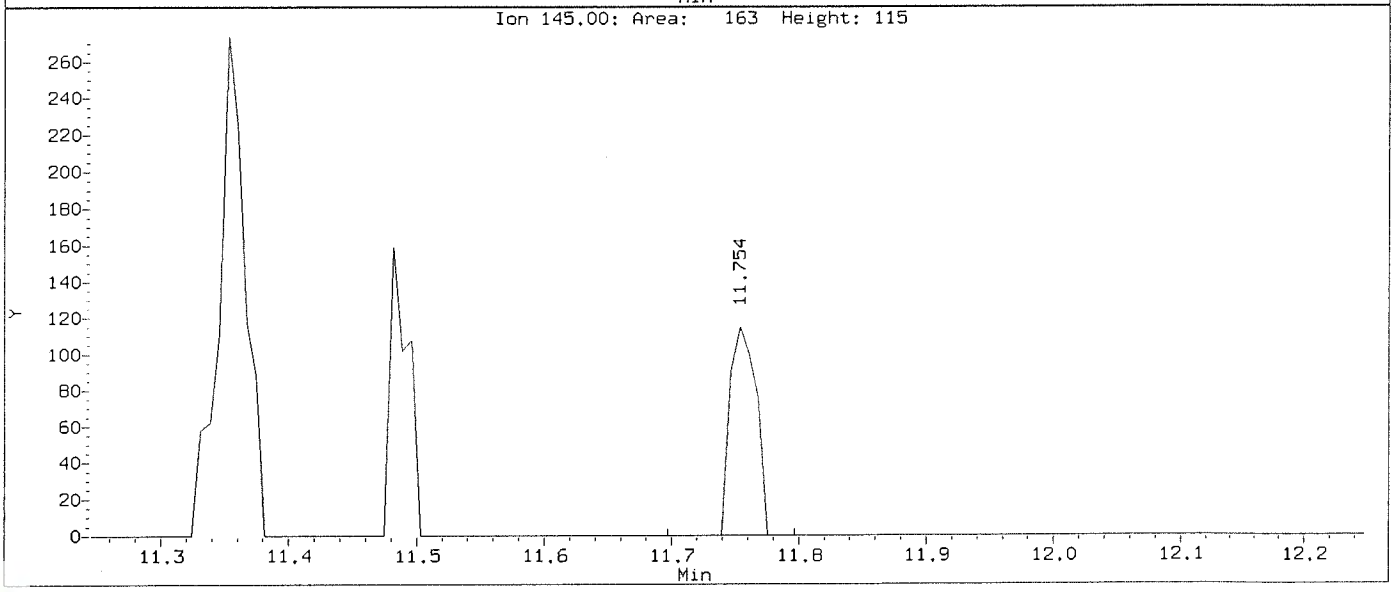


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Instrument: voa6.i
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

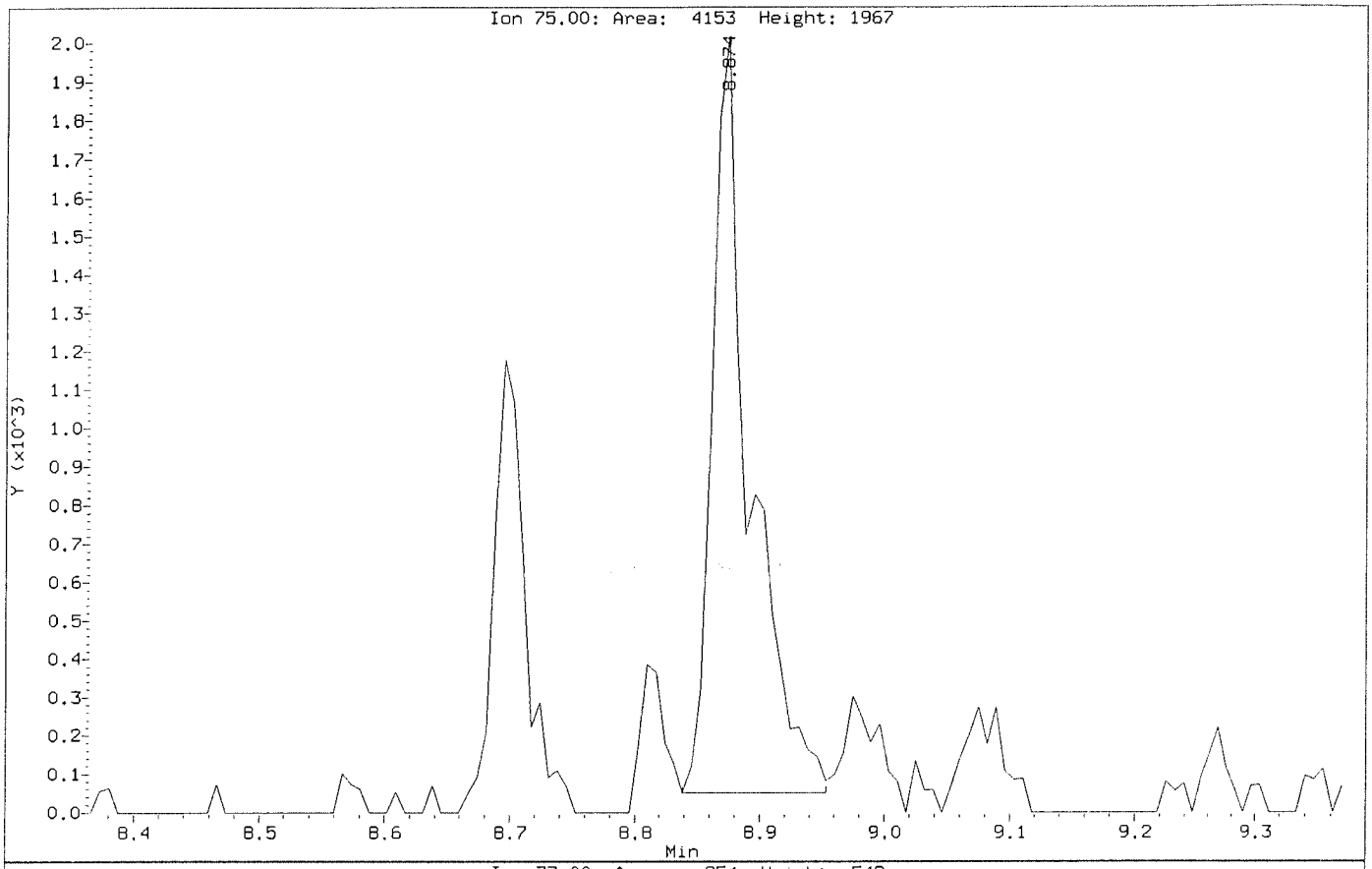


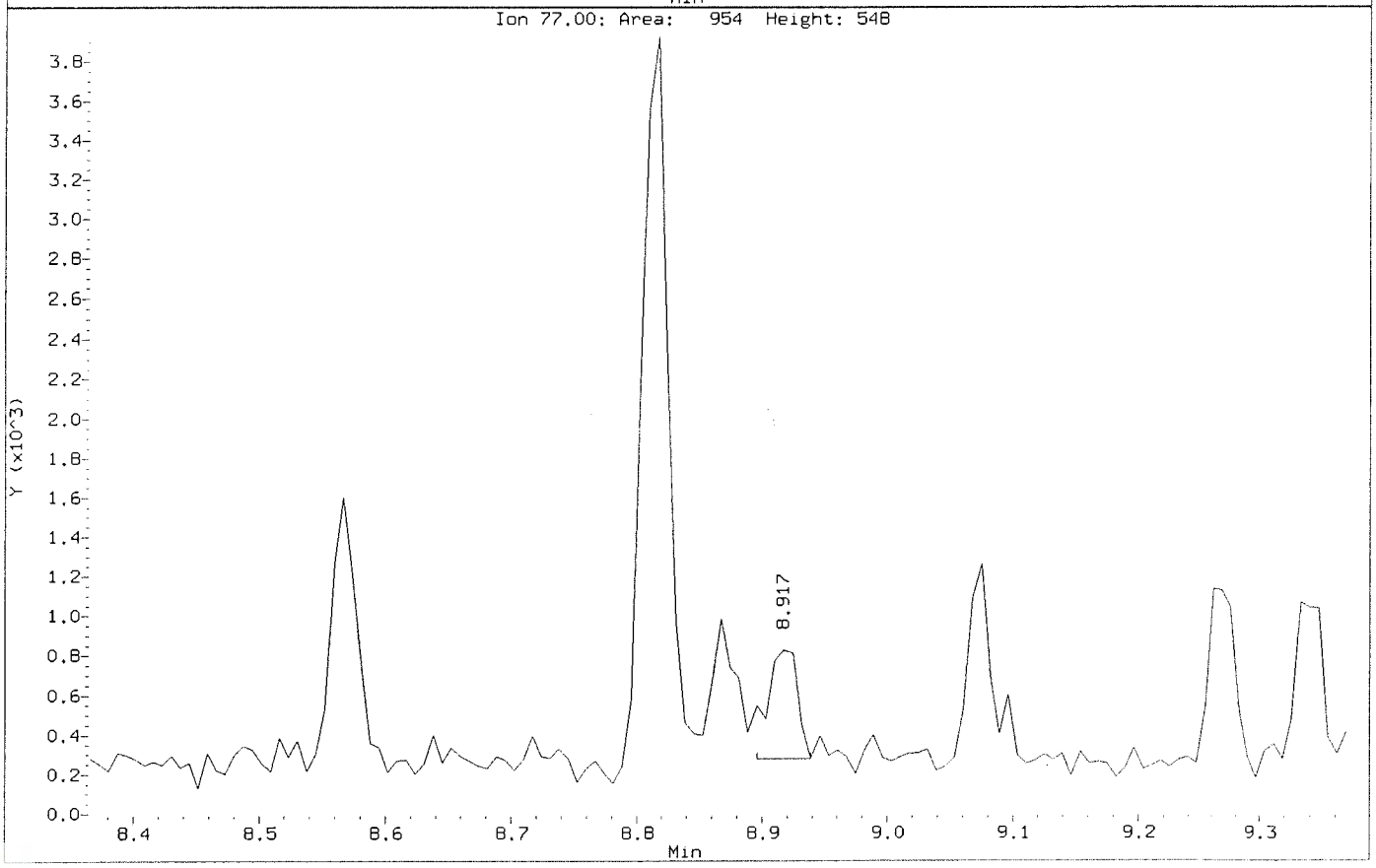




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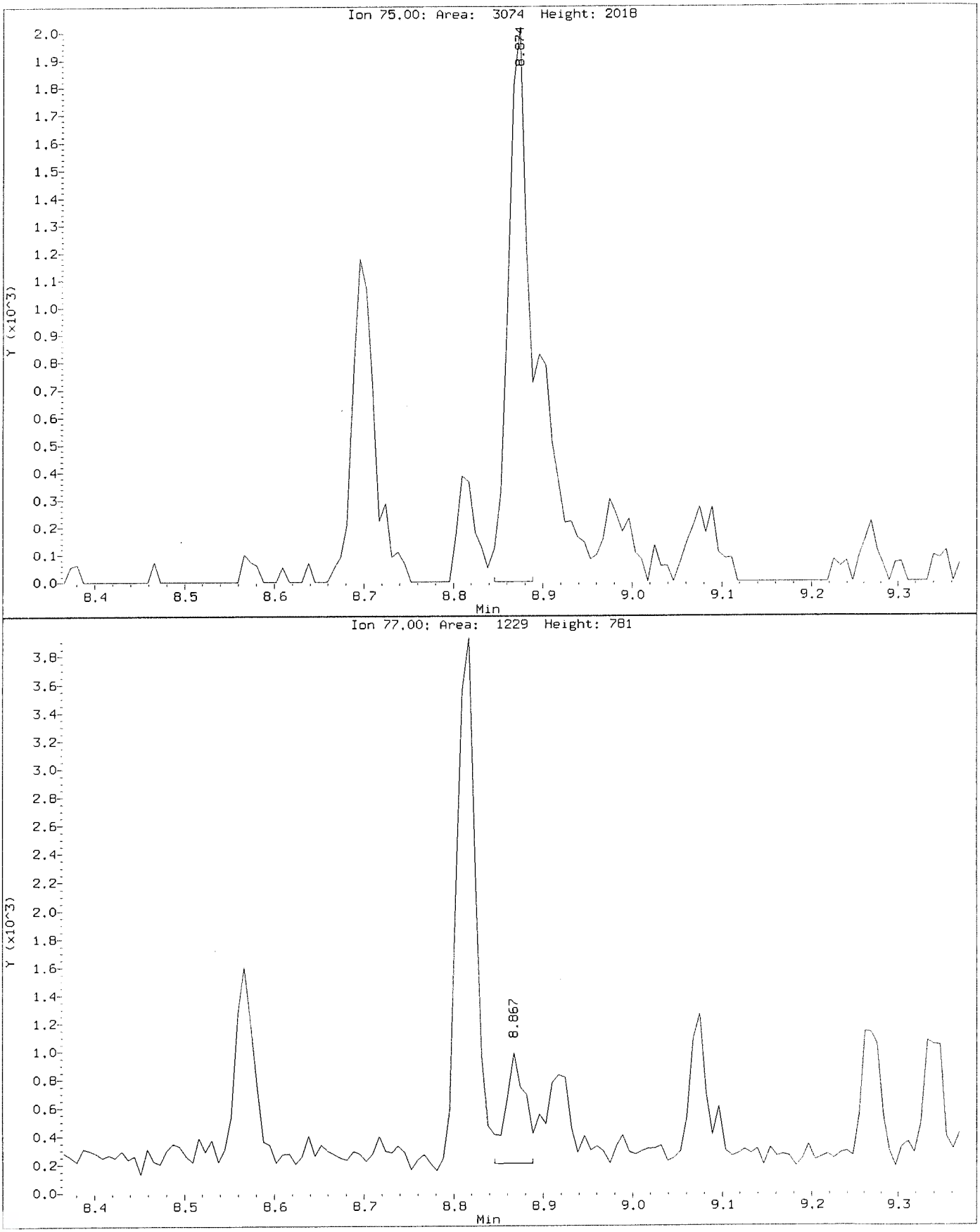
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





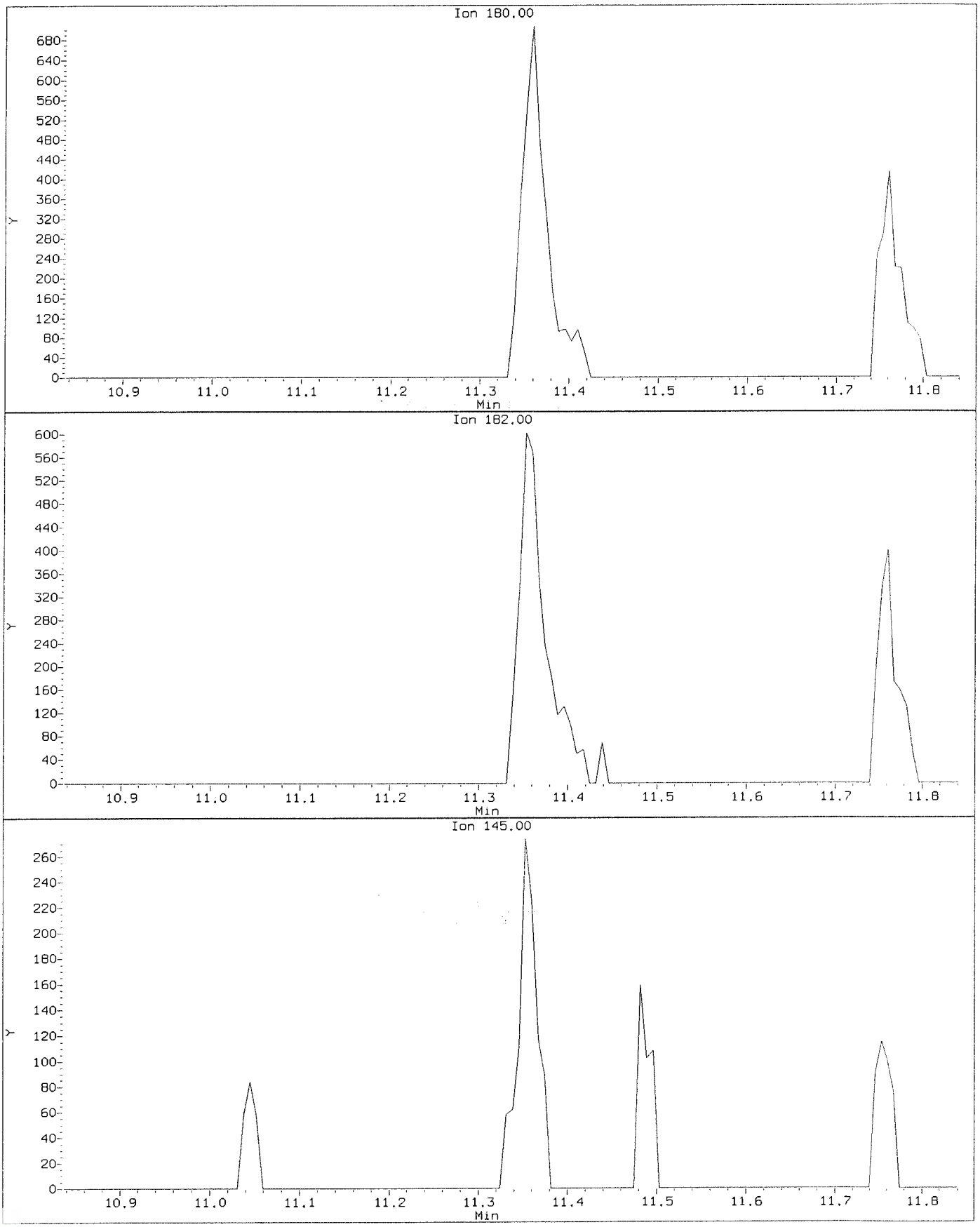
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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



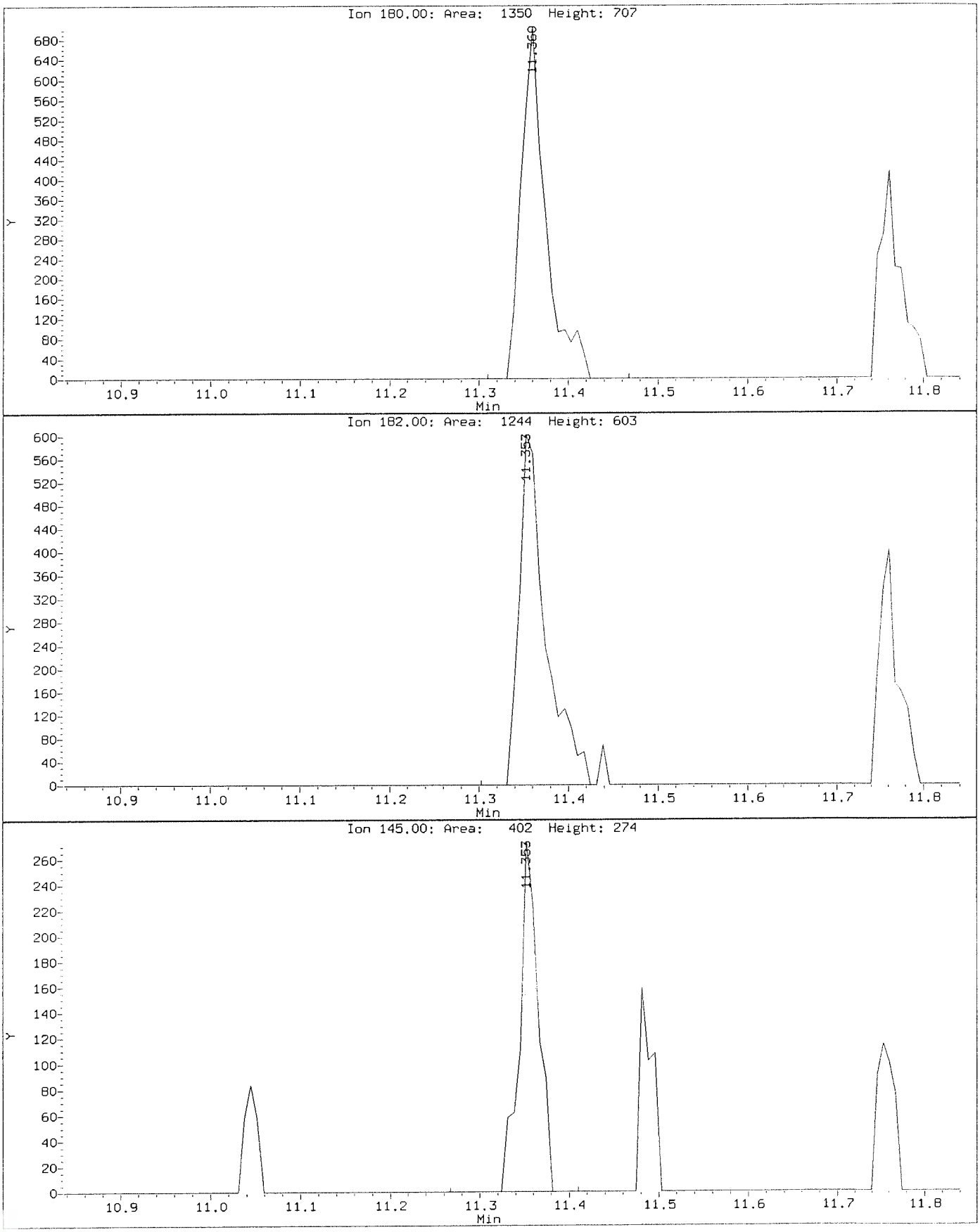
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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



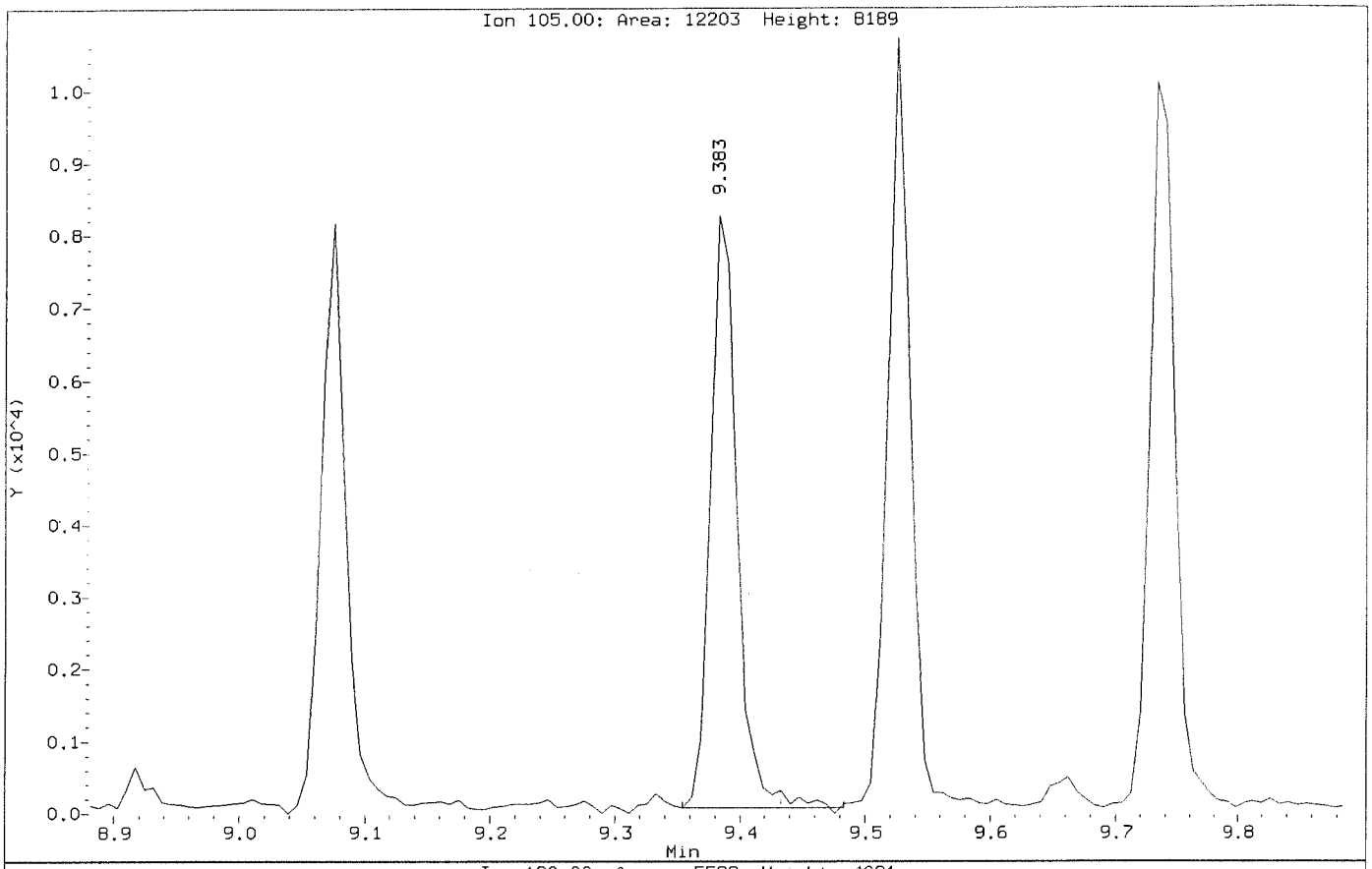
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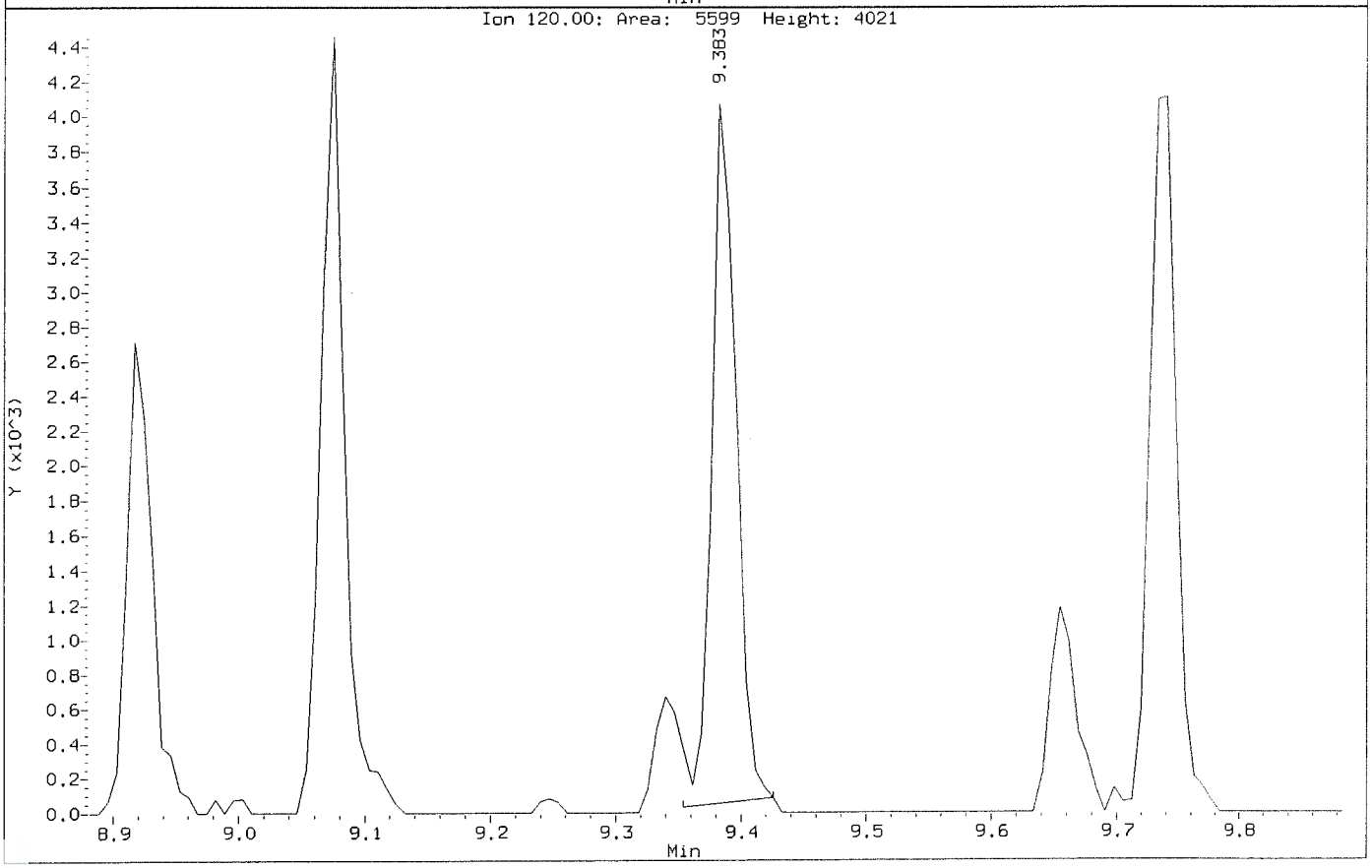
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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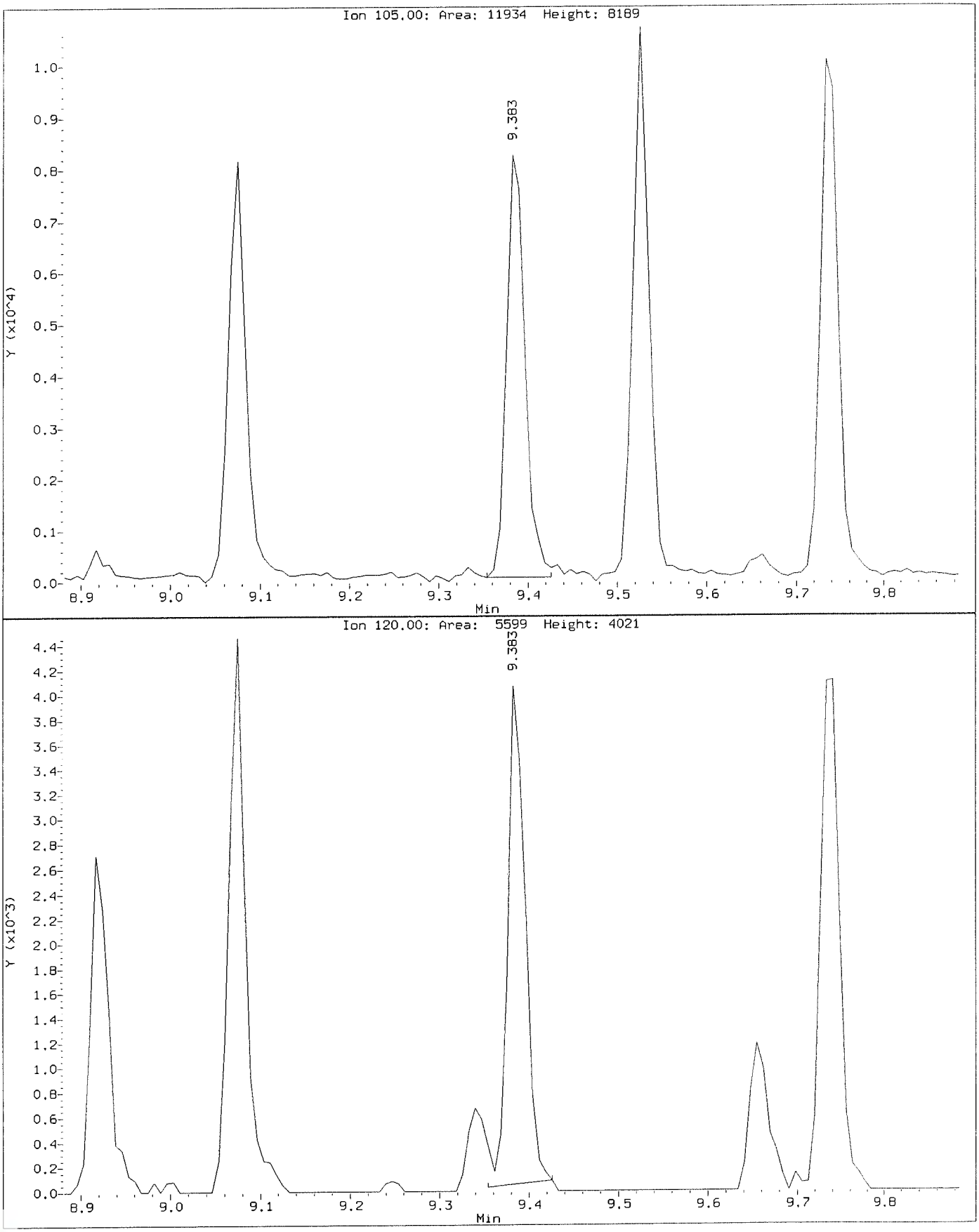
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





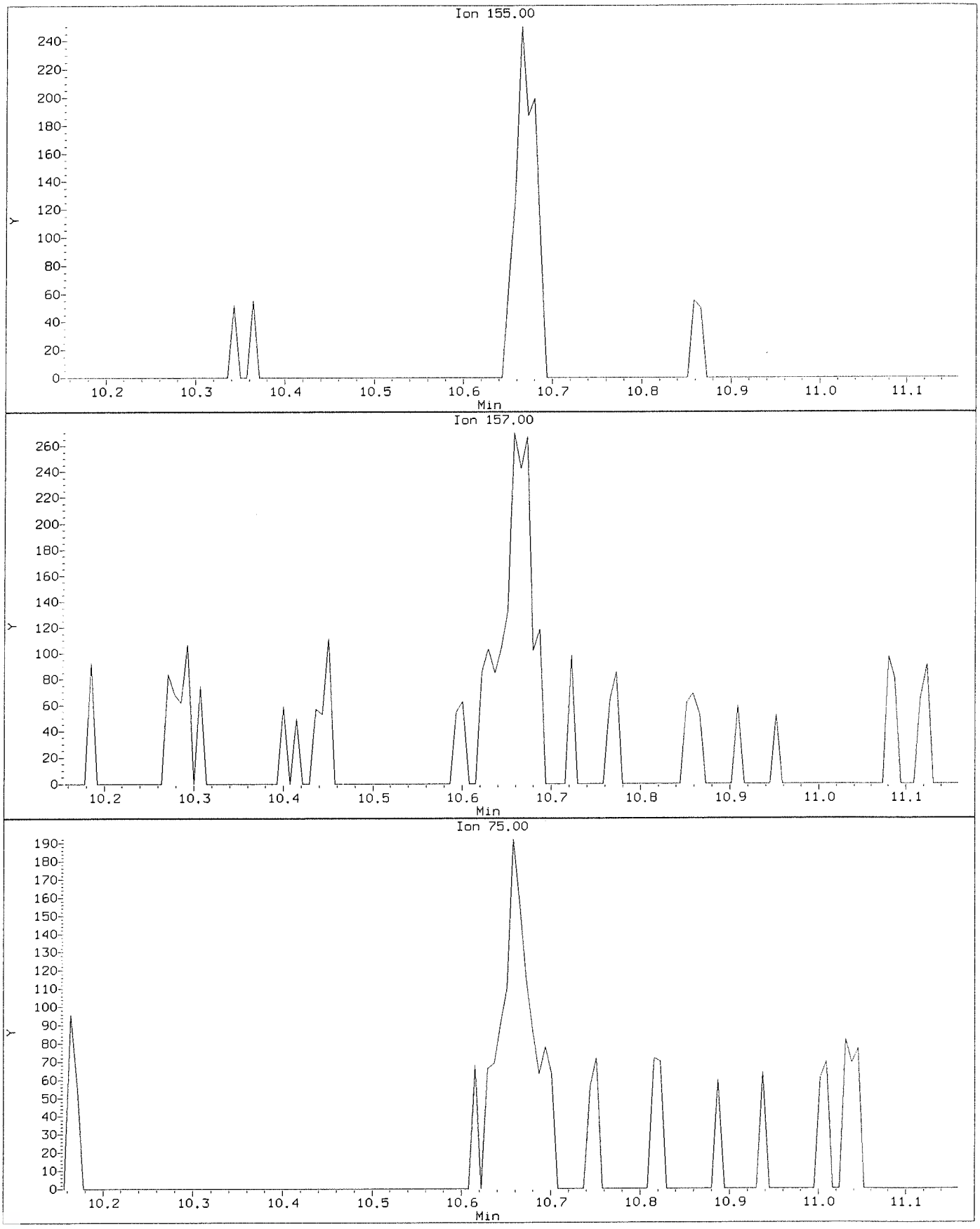
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Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



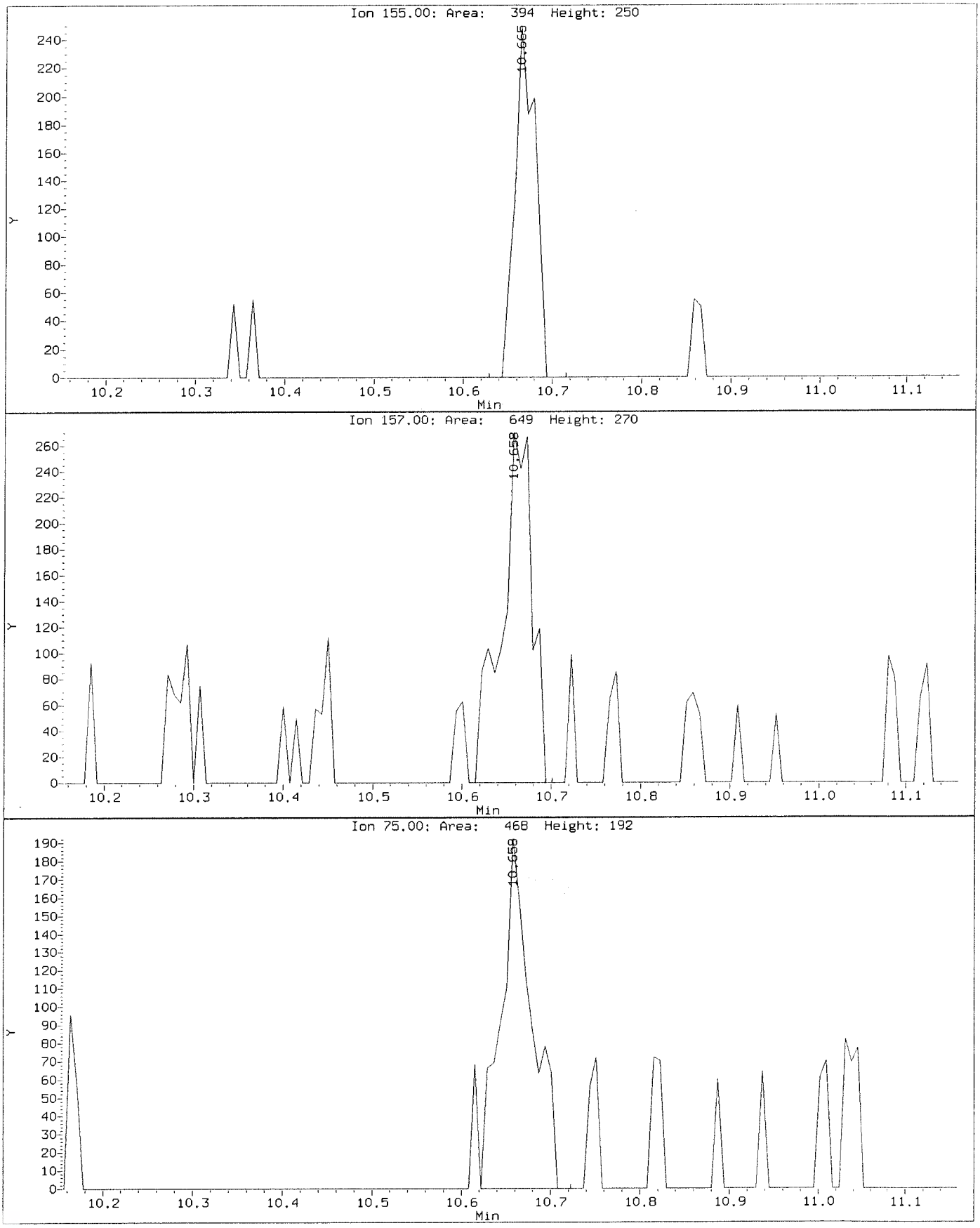
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



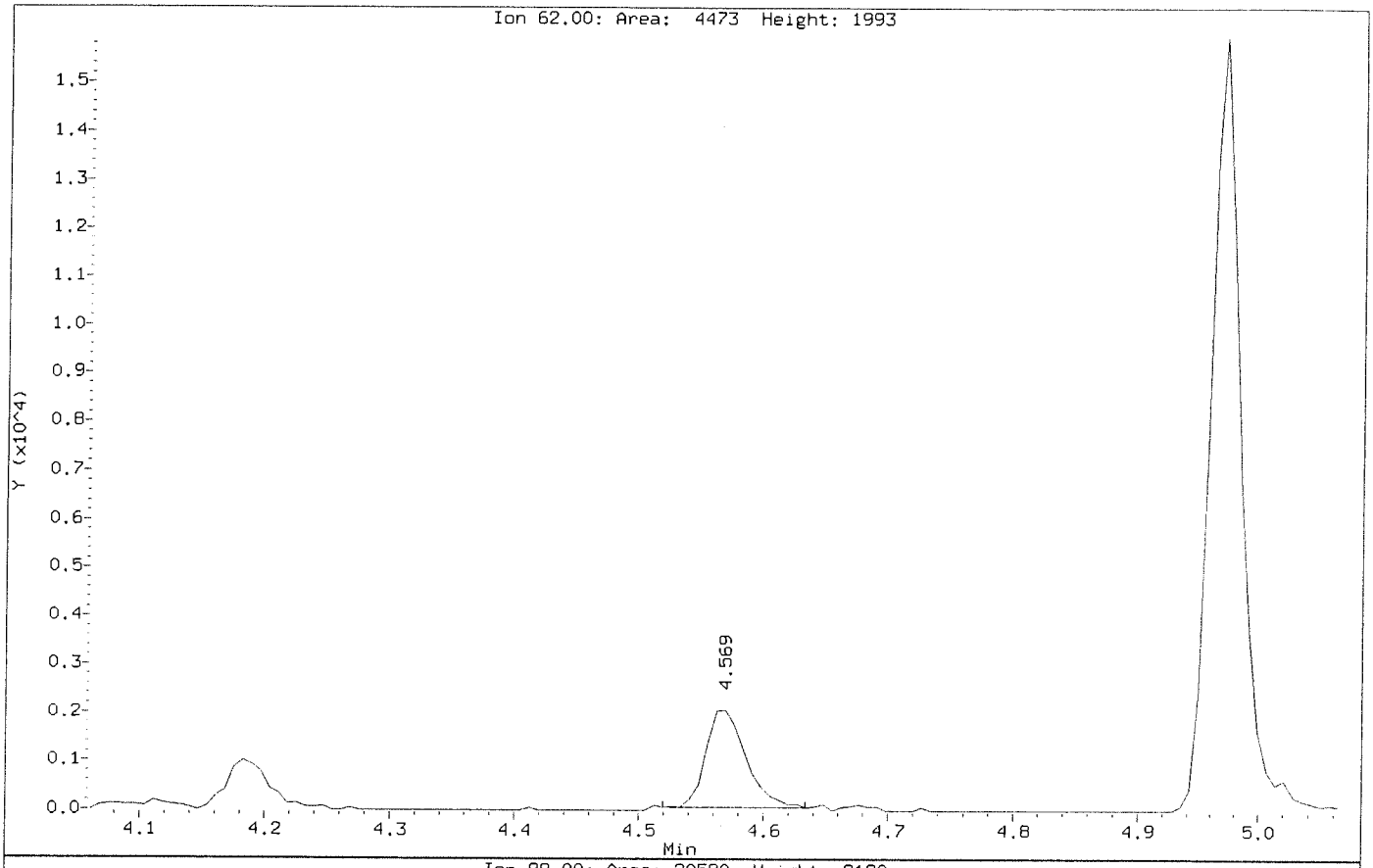
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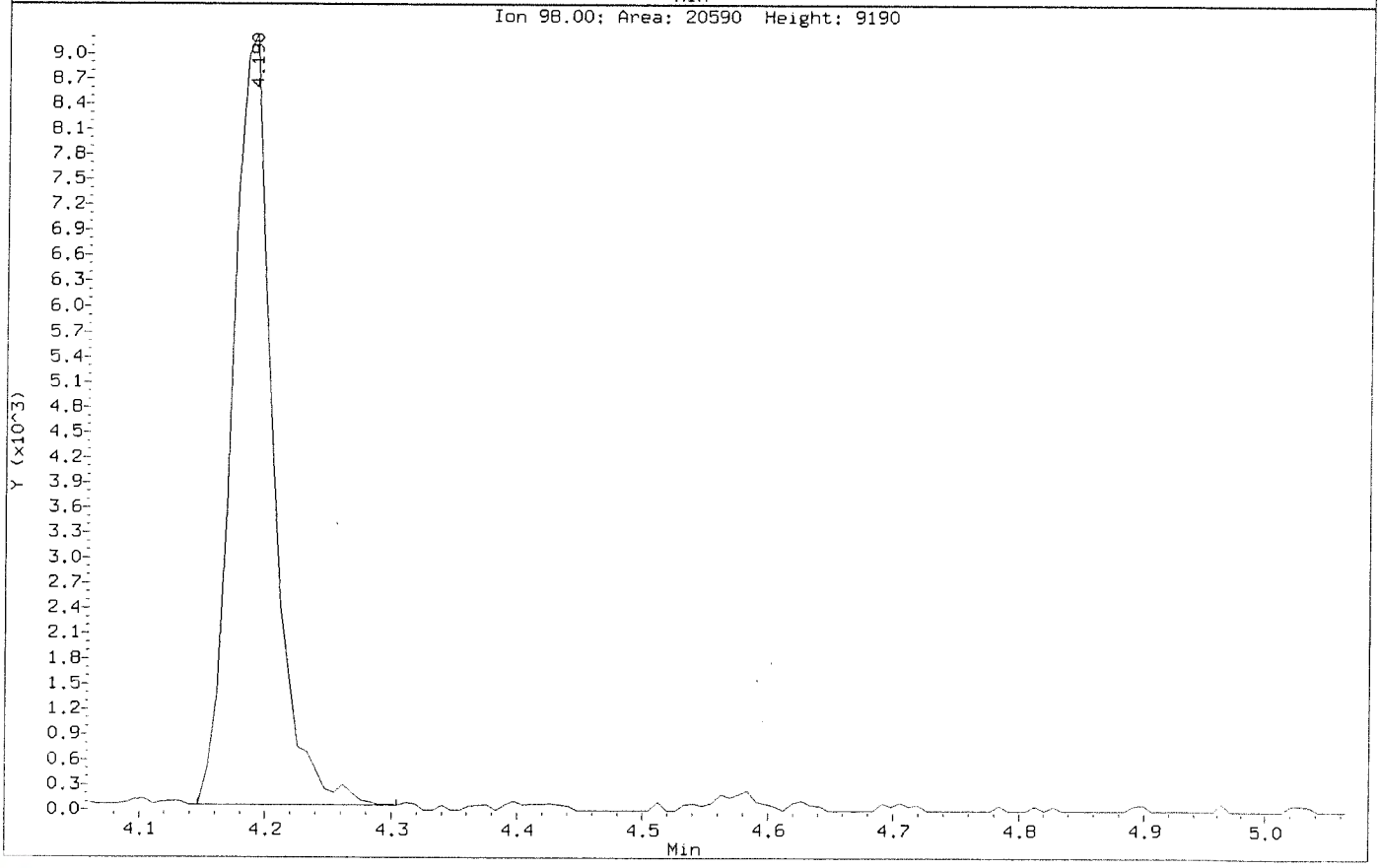
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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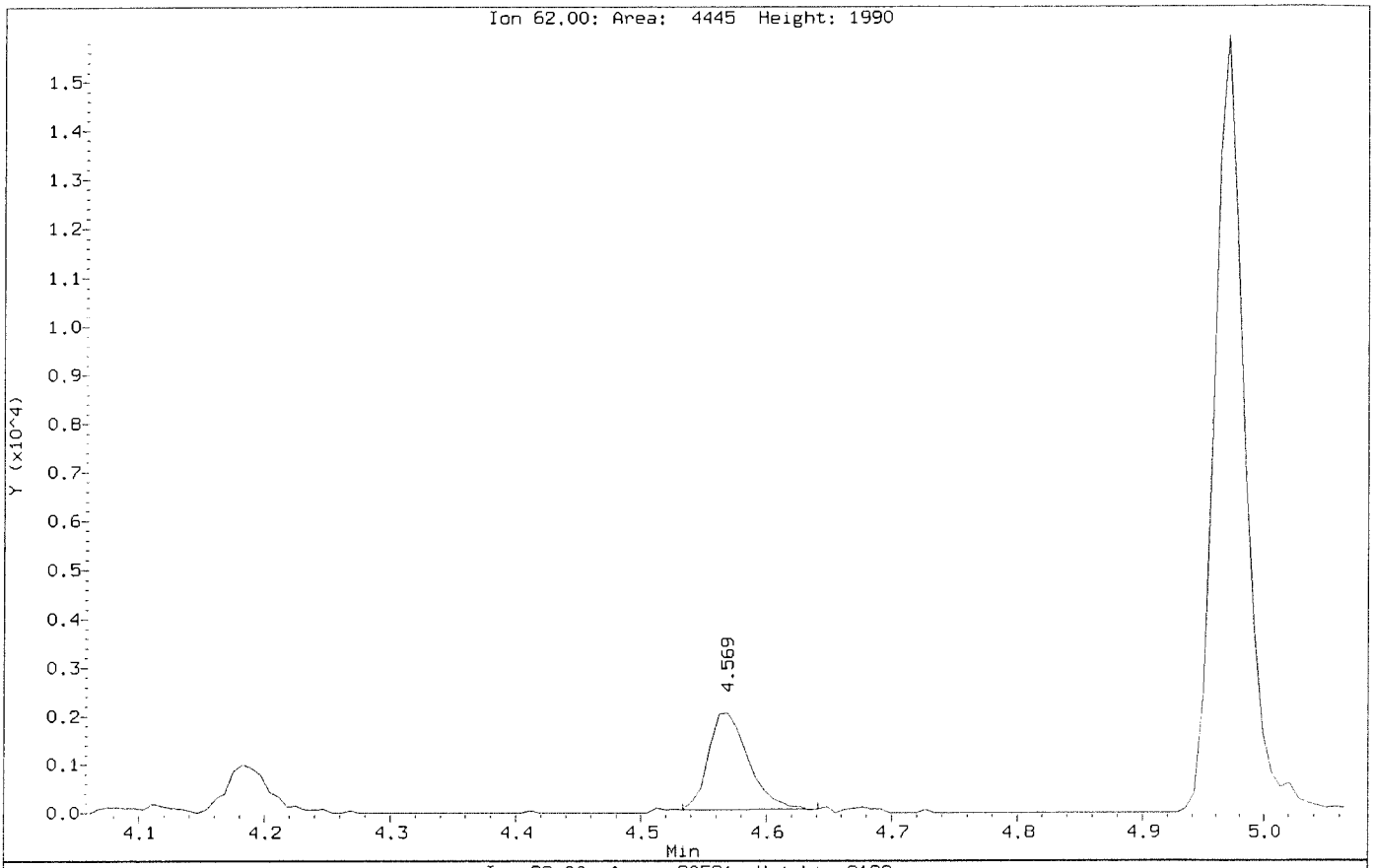
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

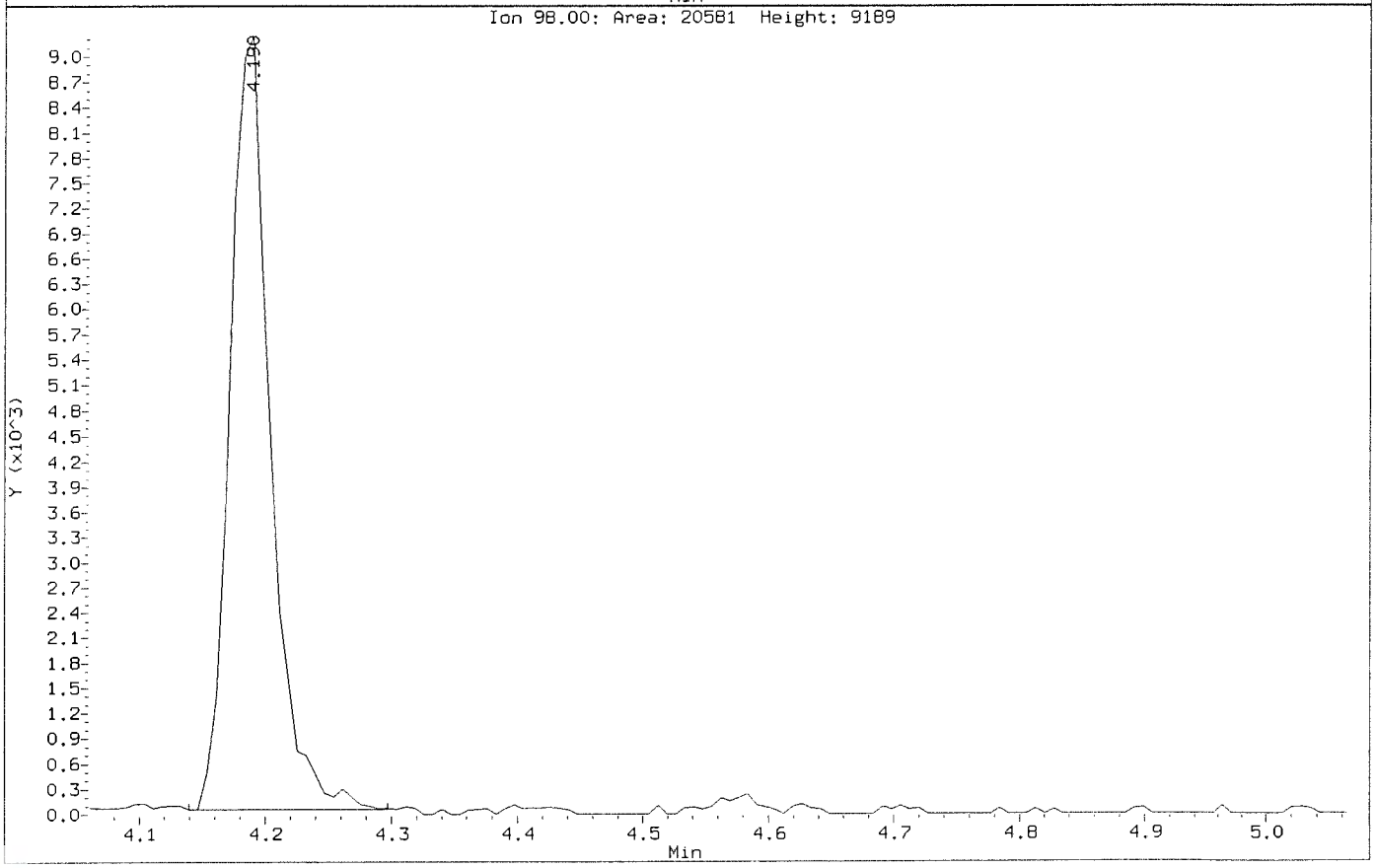




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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

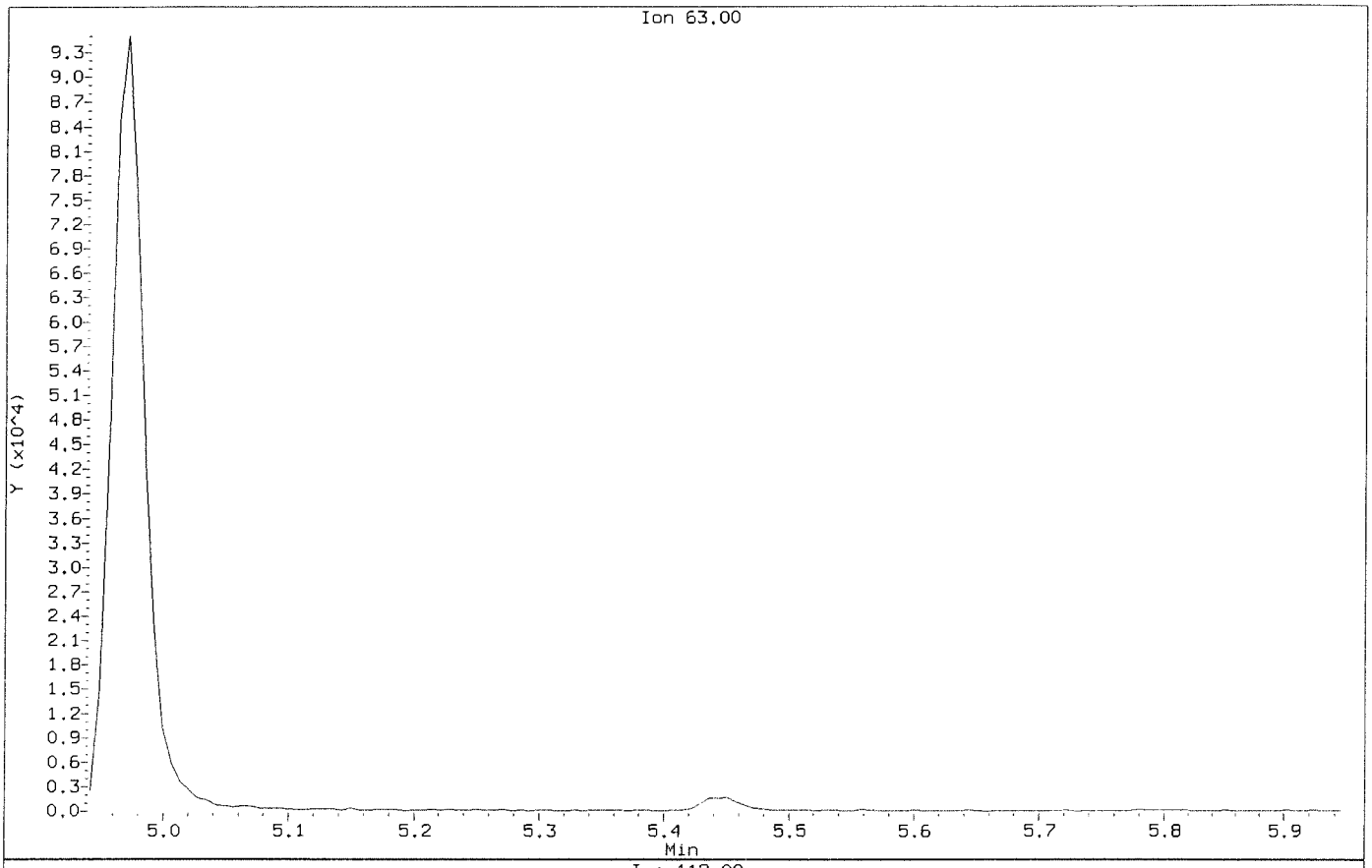
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

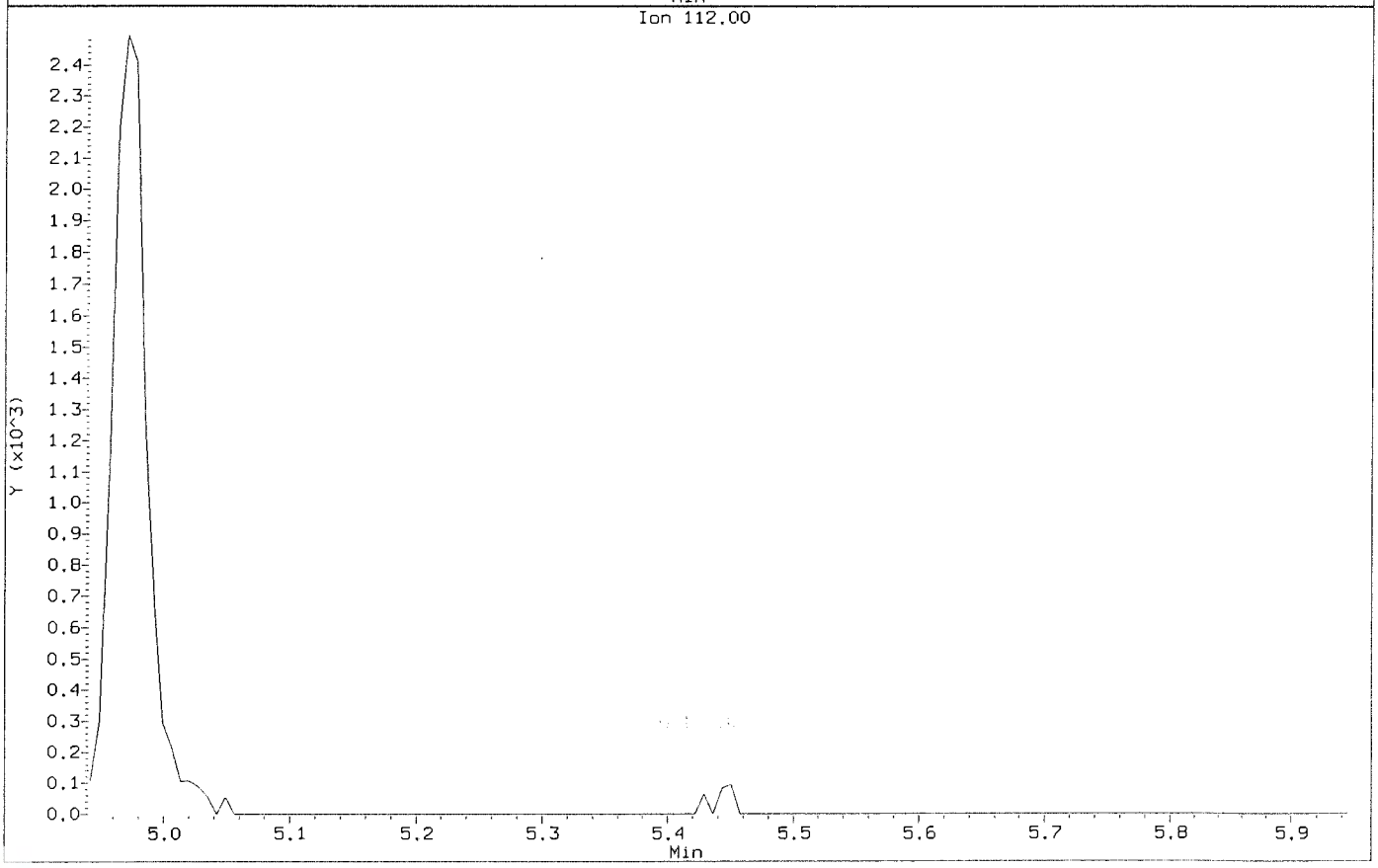




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Instrument: voa6.i
Client Sample ID: VSTD000.5

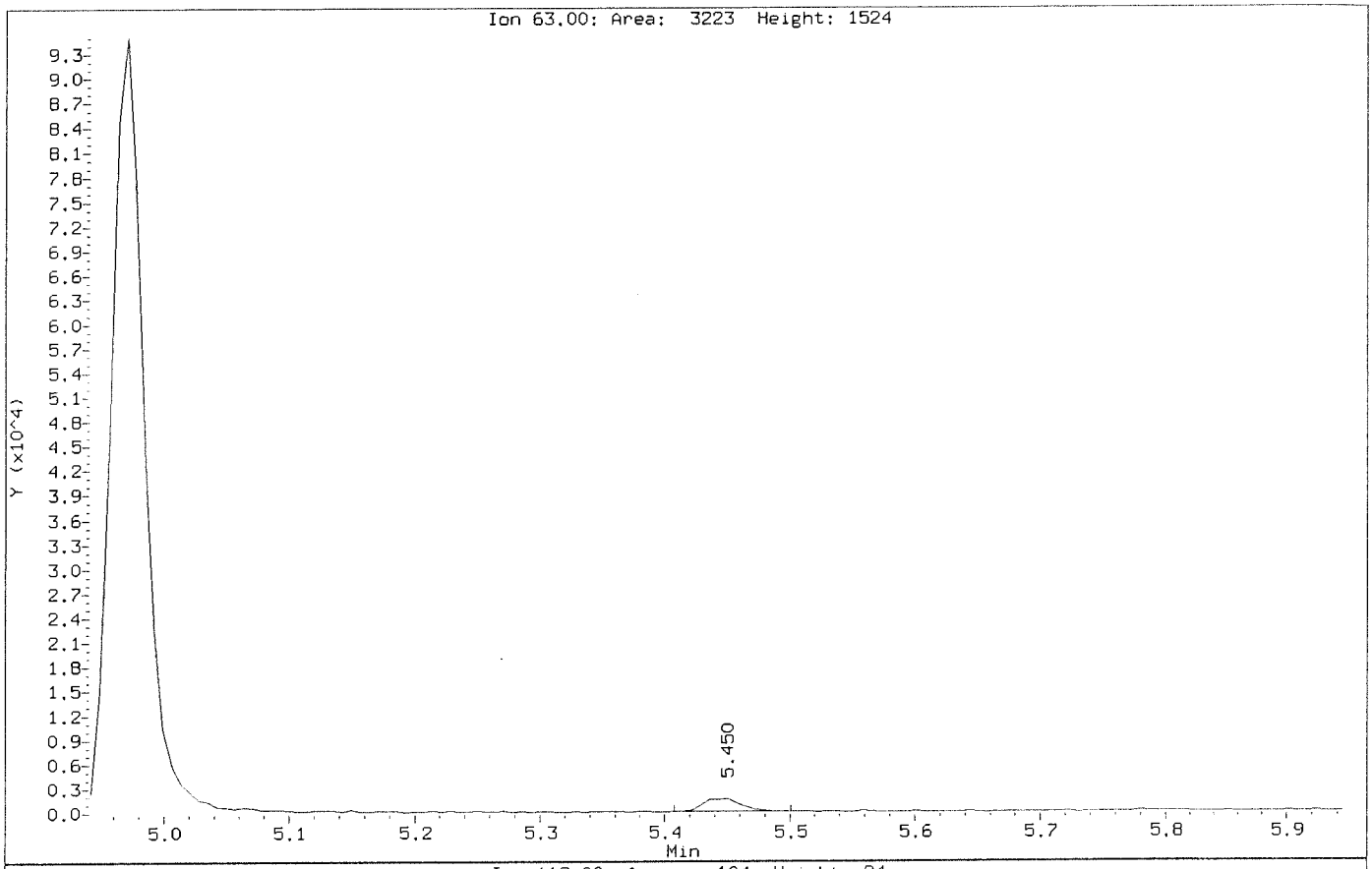
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

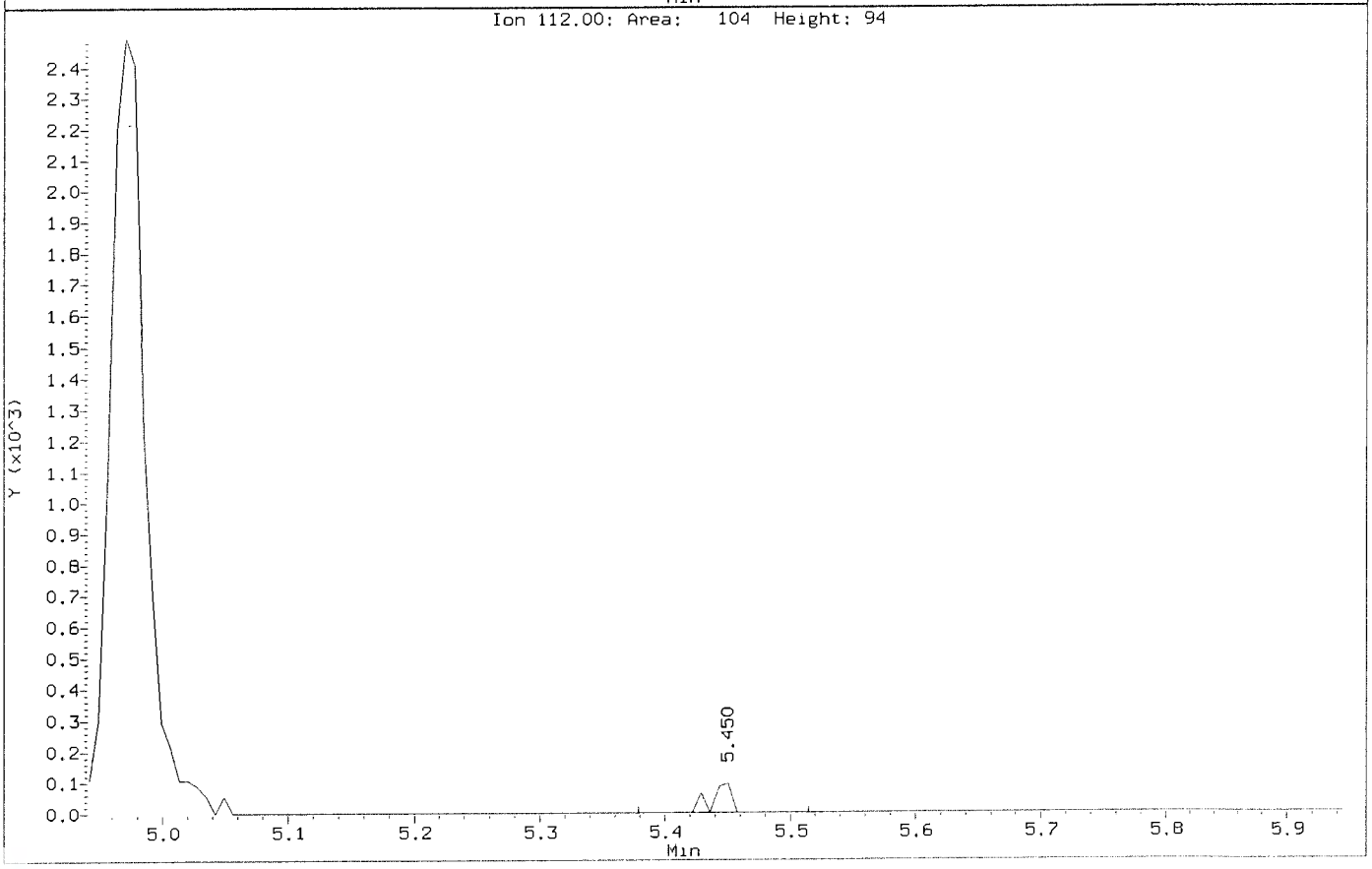




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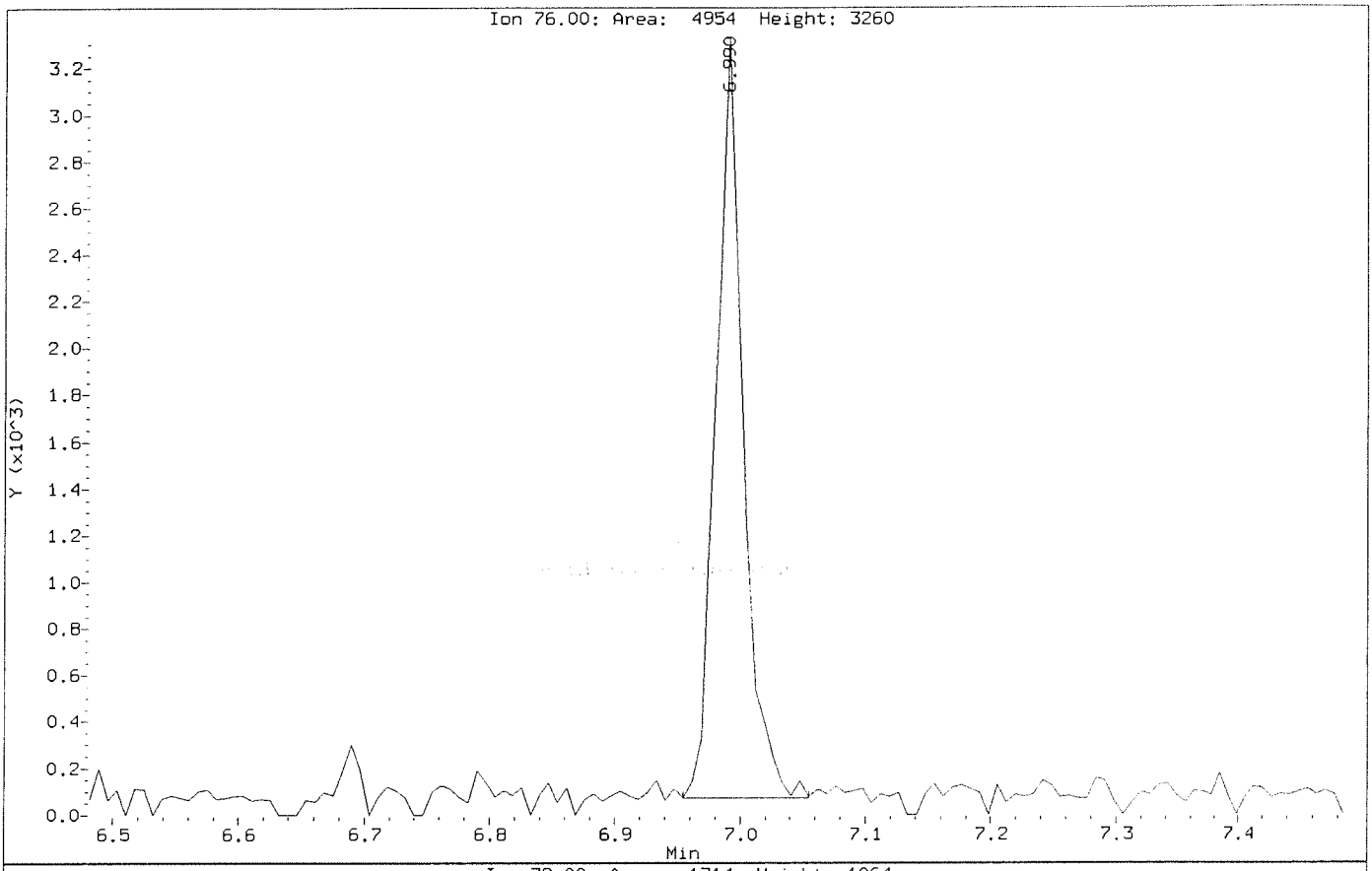
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

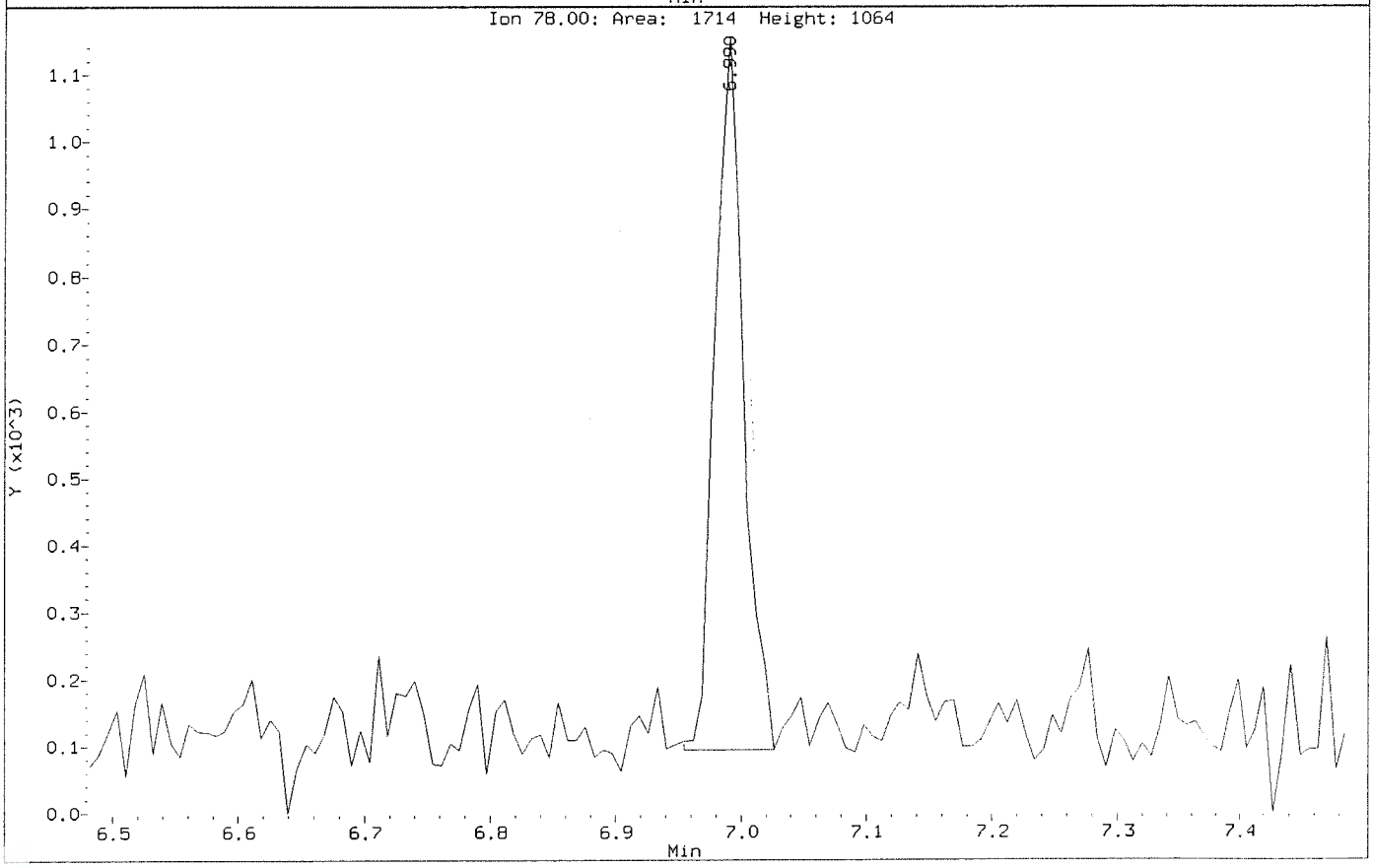




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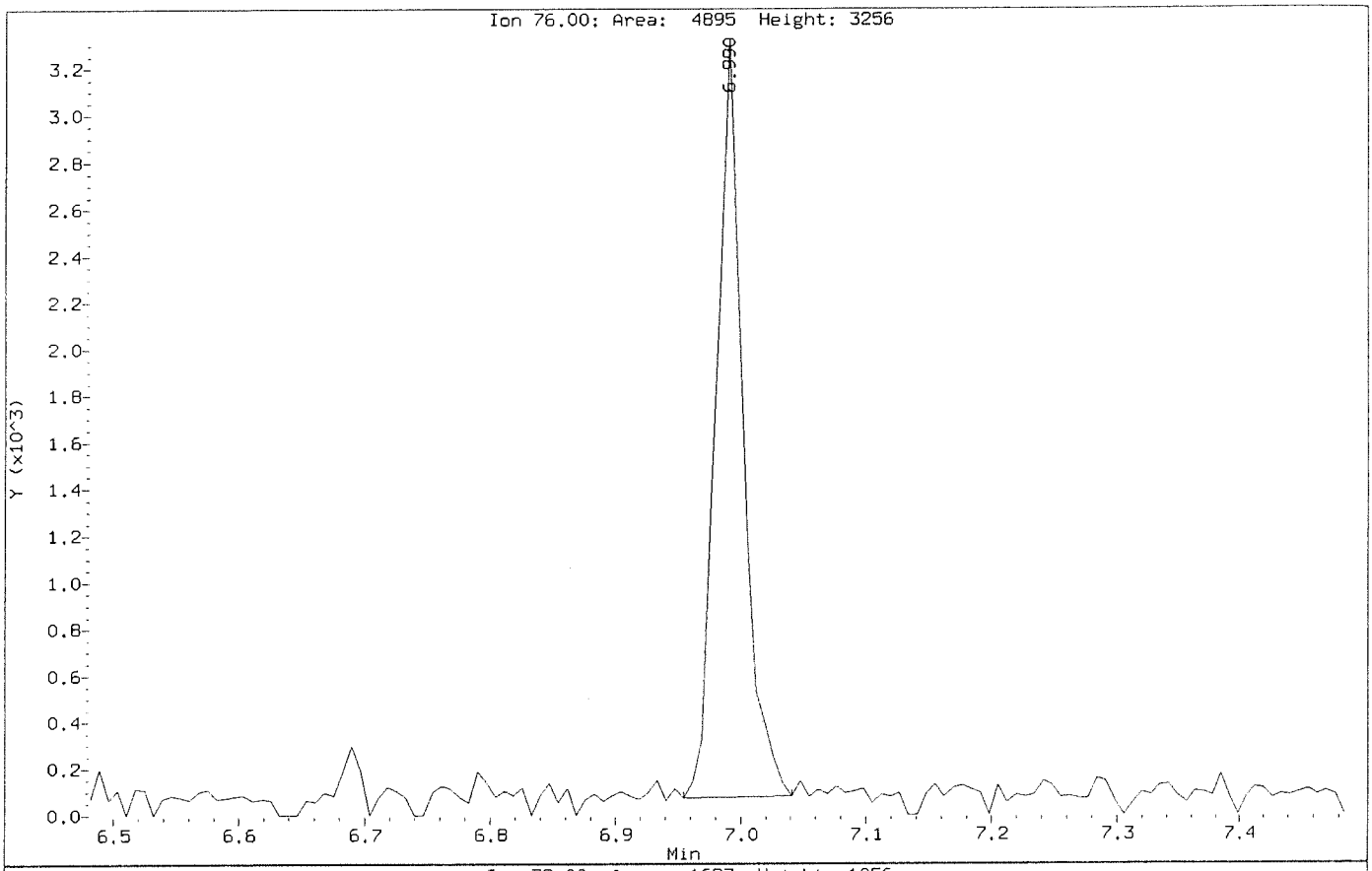
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

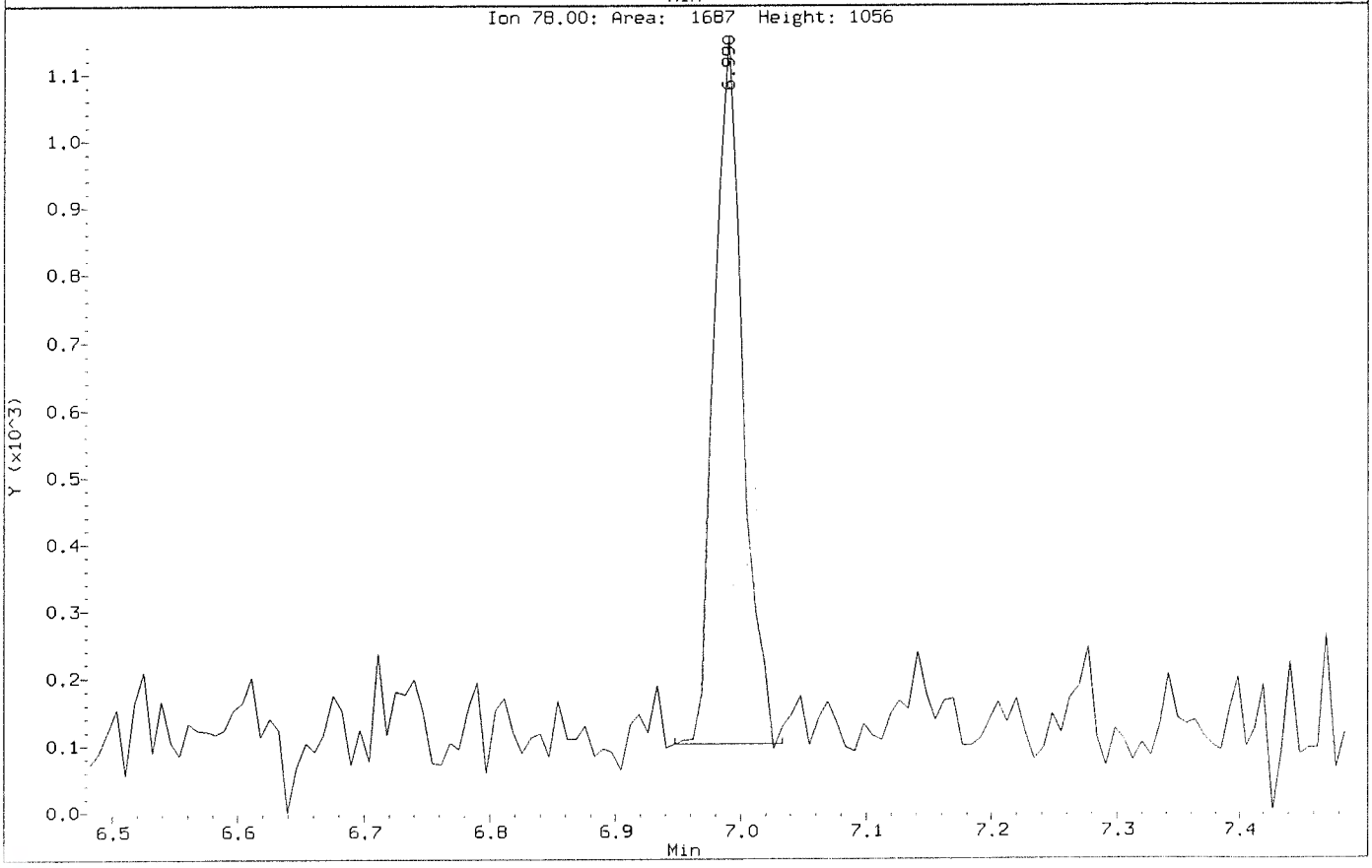




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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

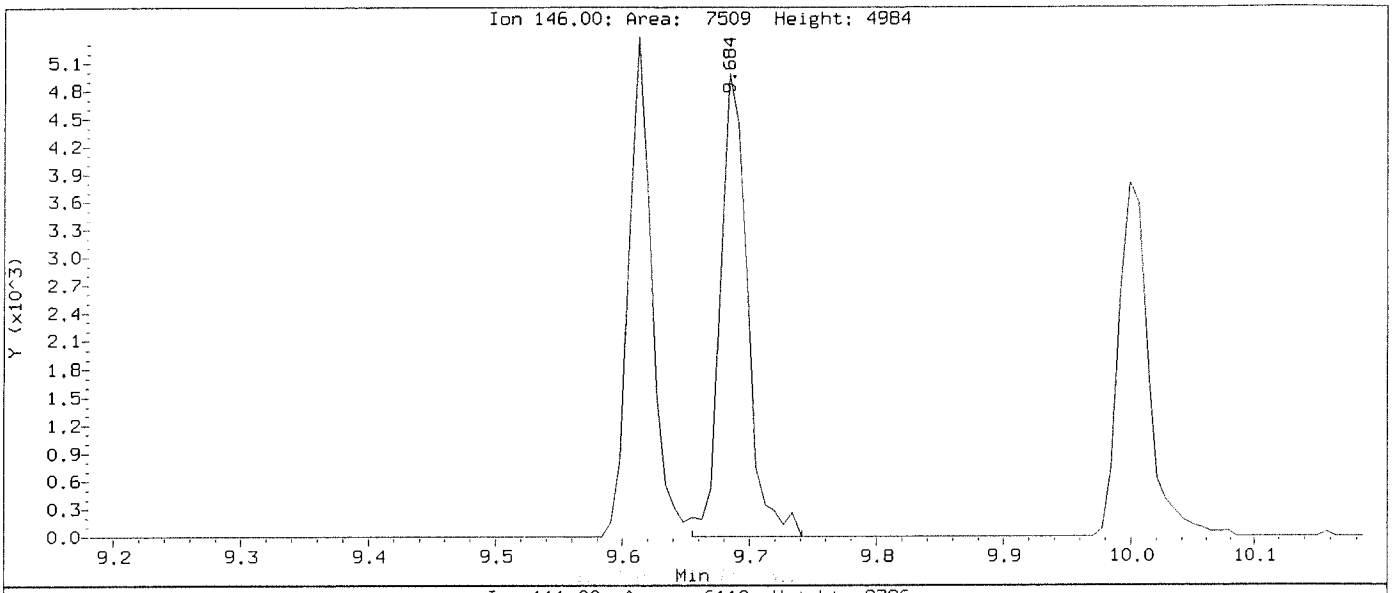
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

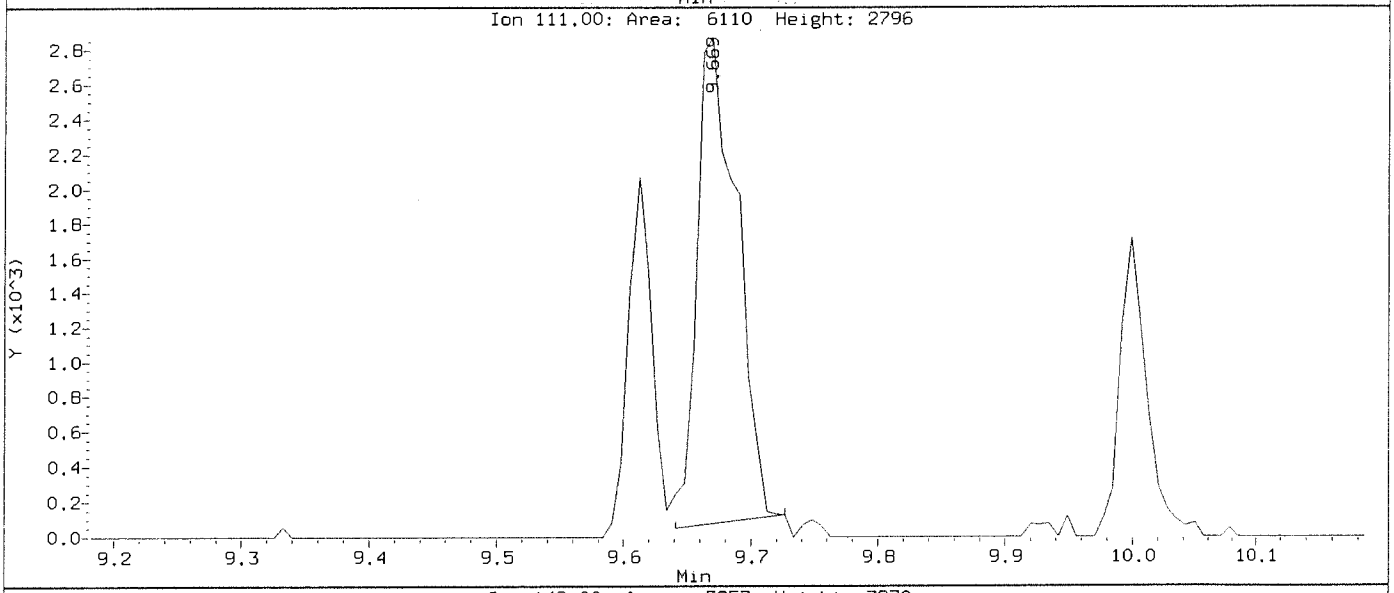


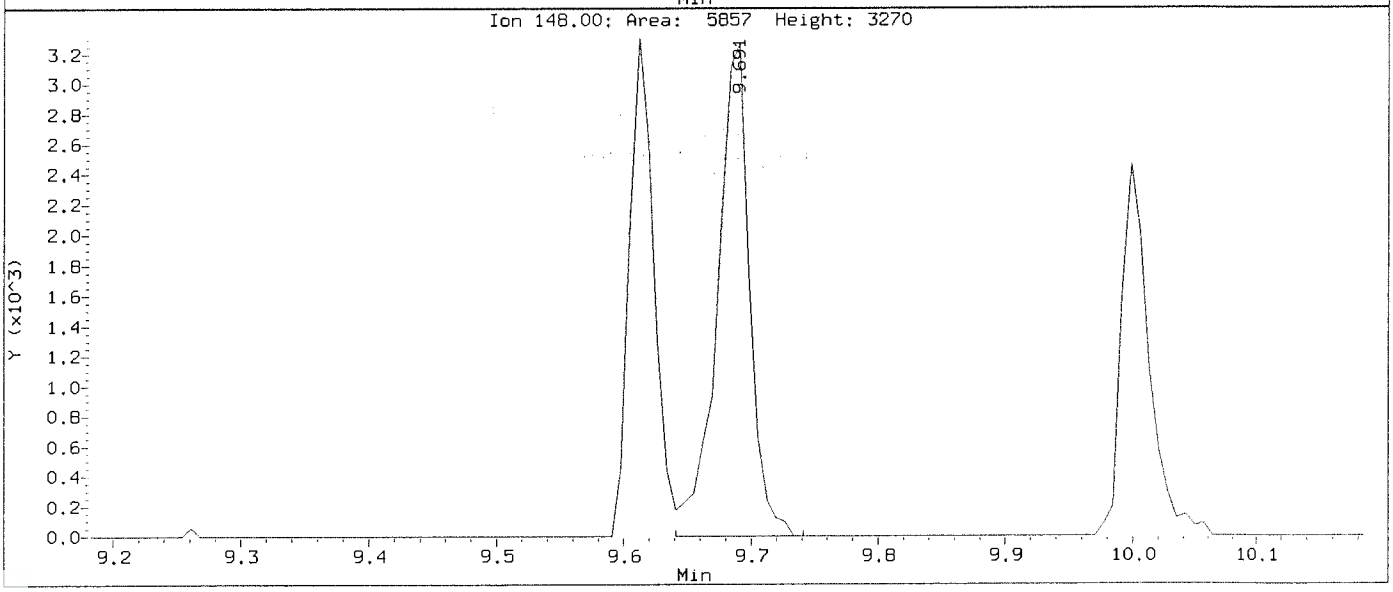


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

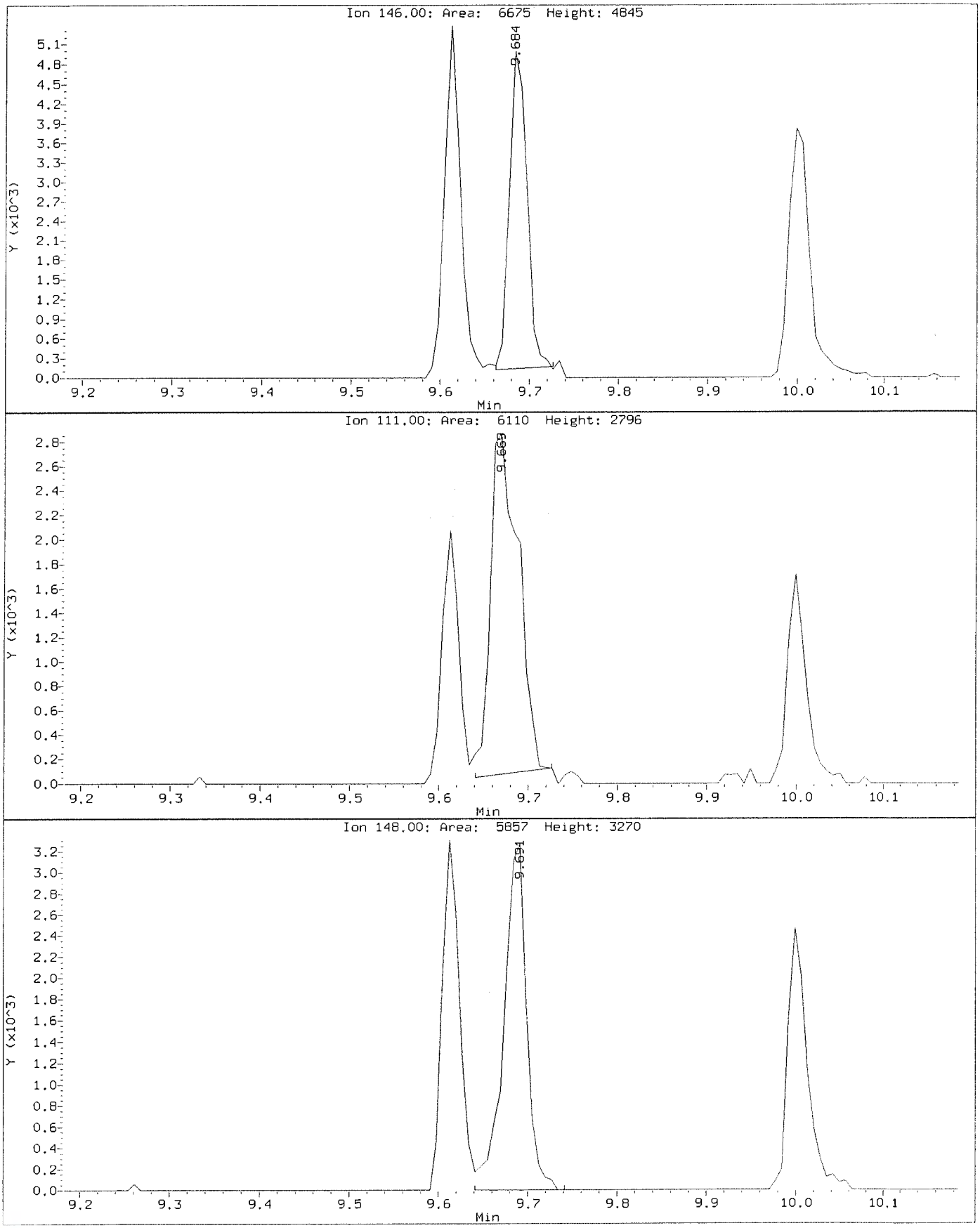






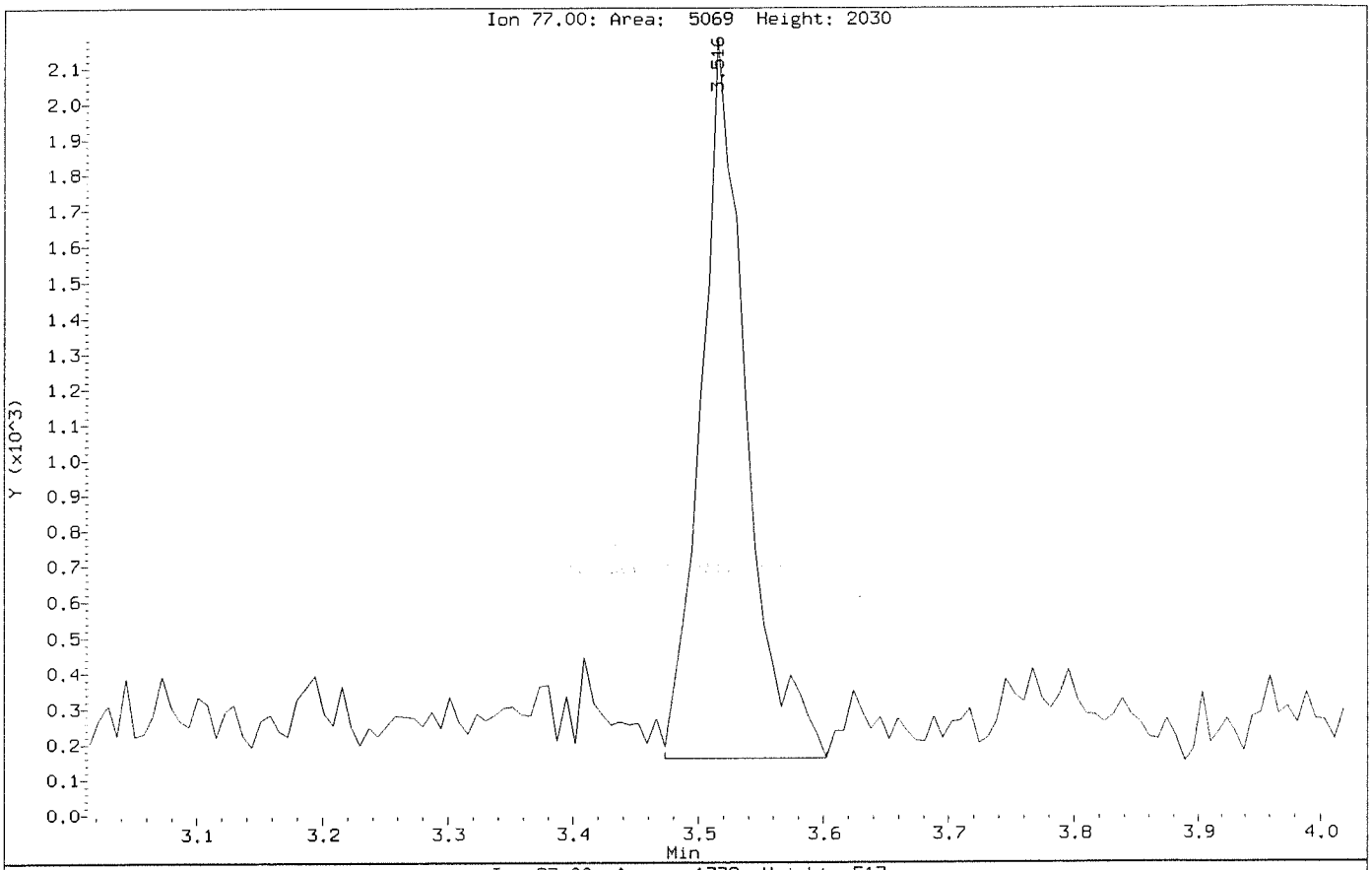
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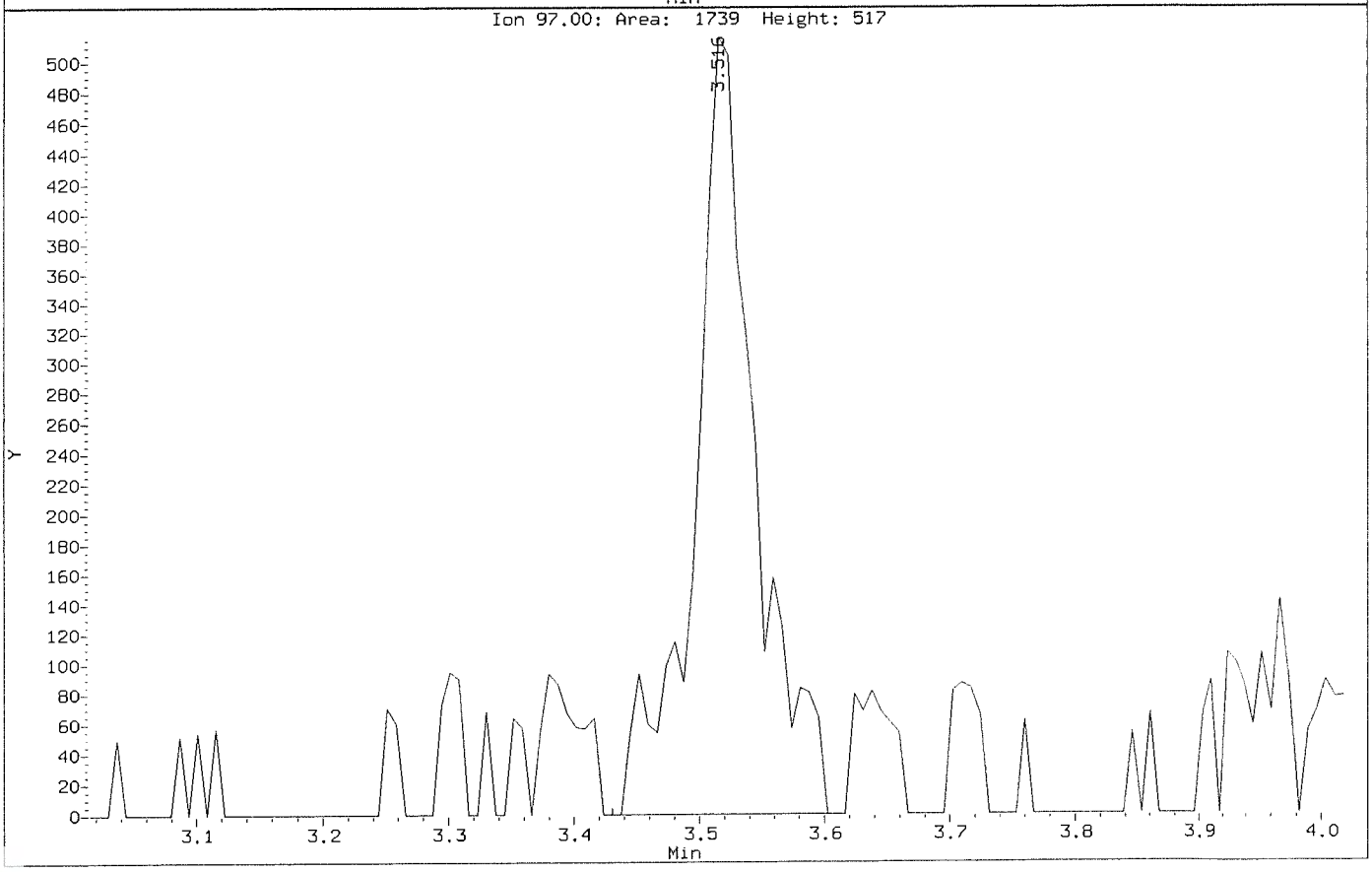
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

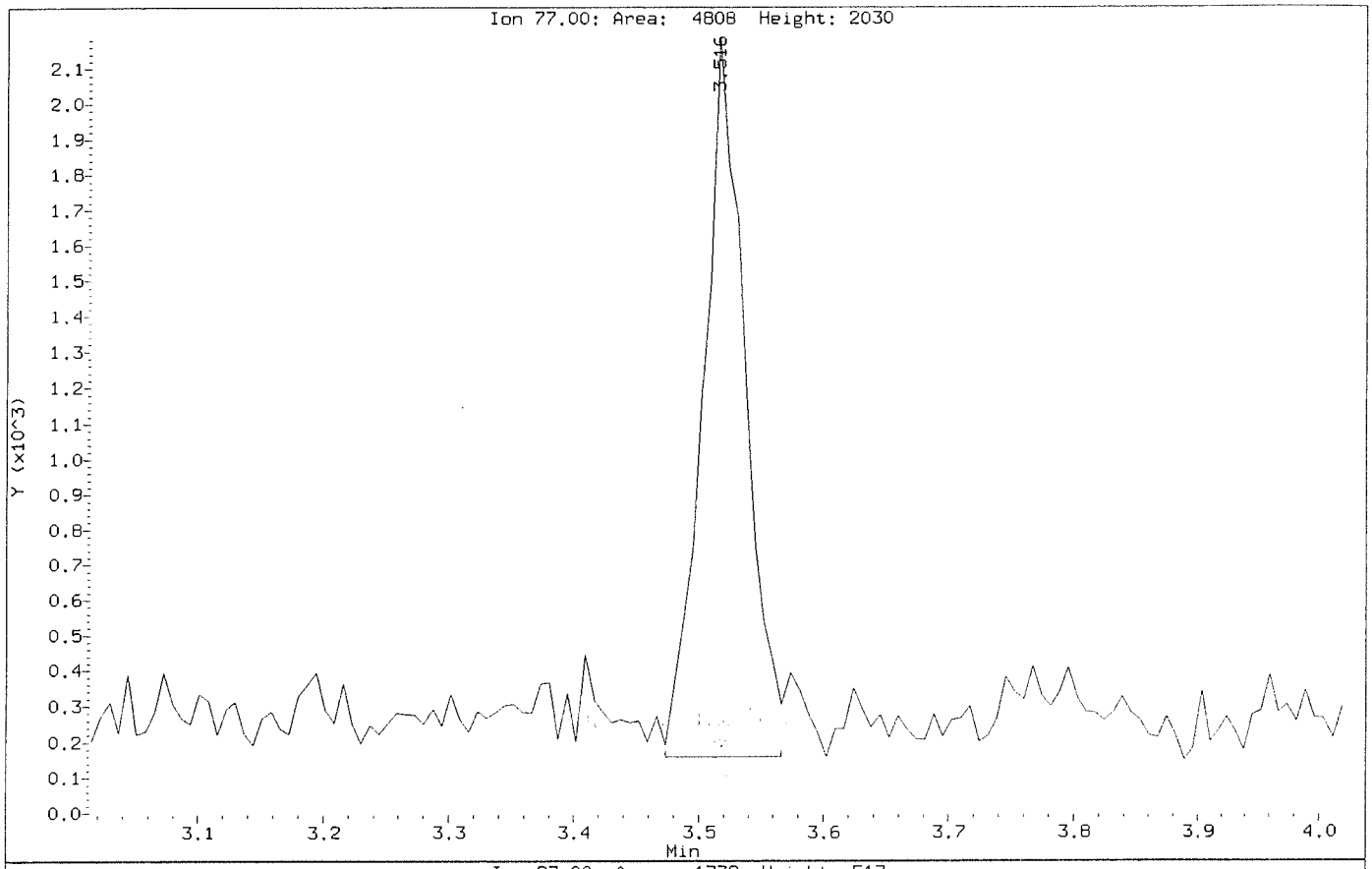
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

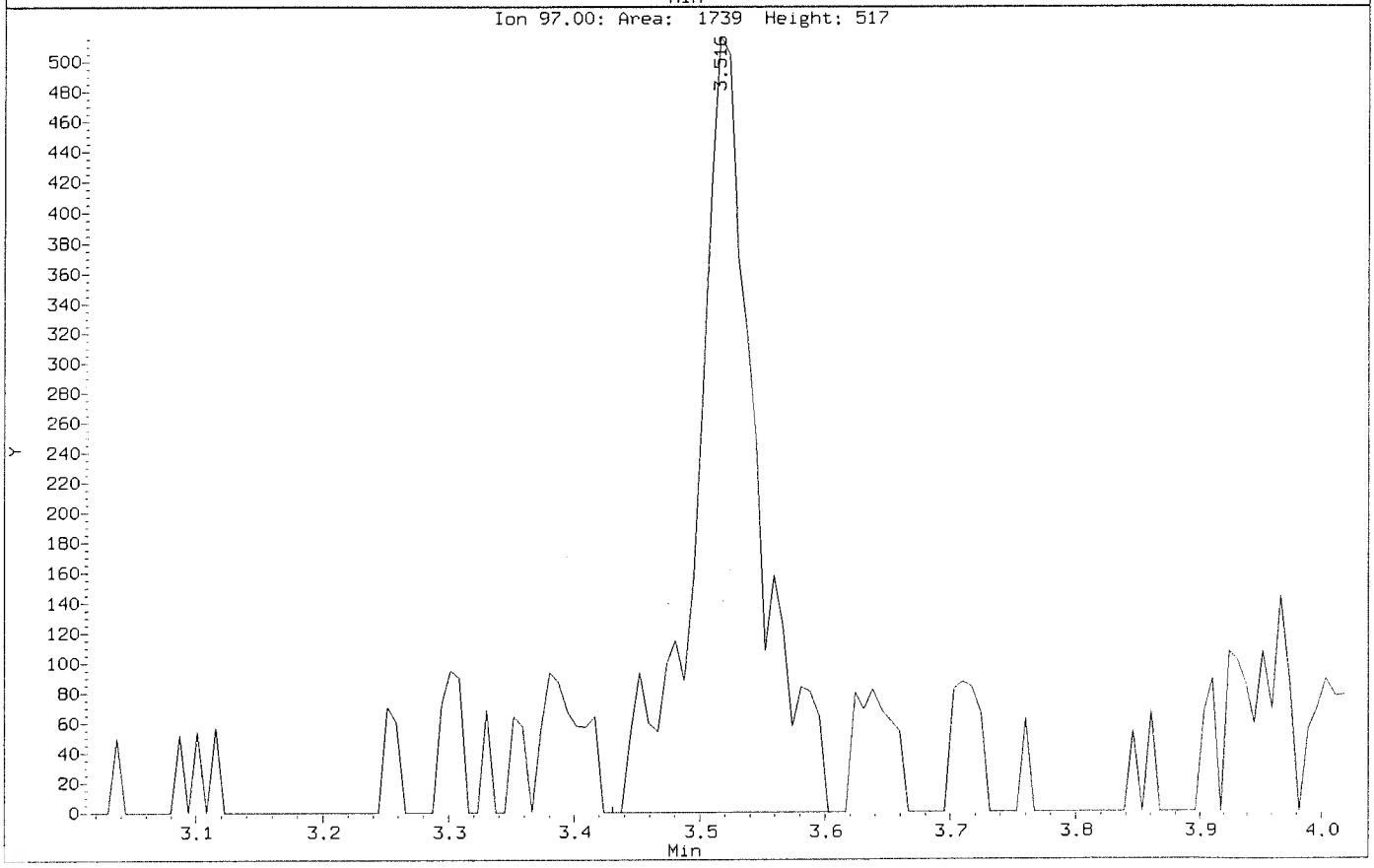




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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

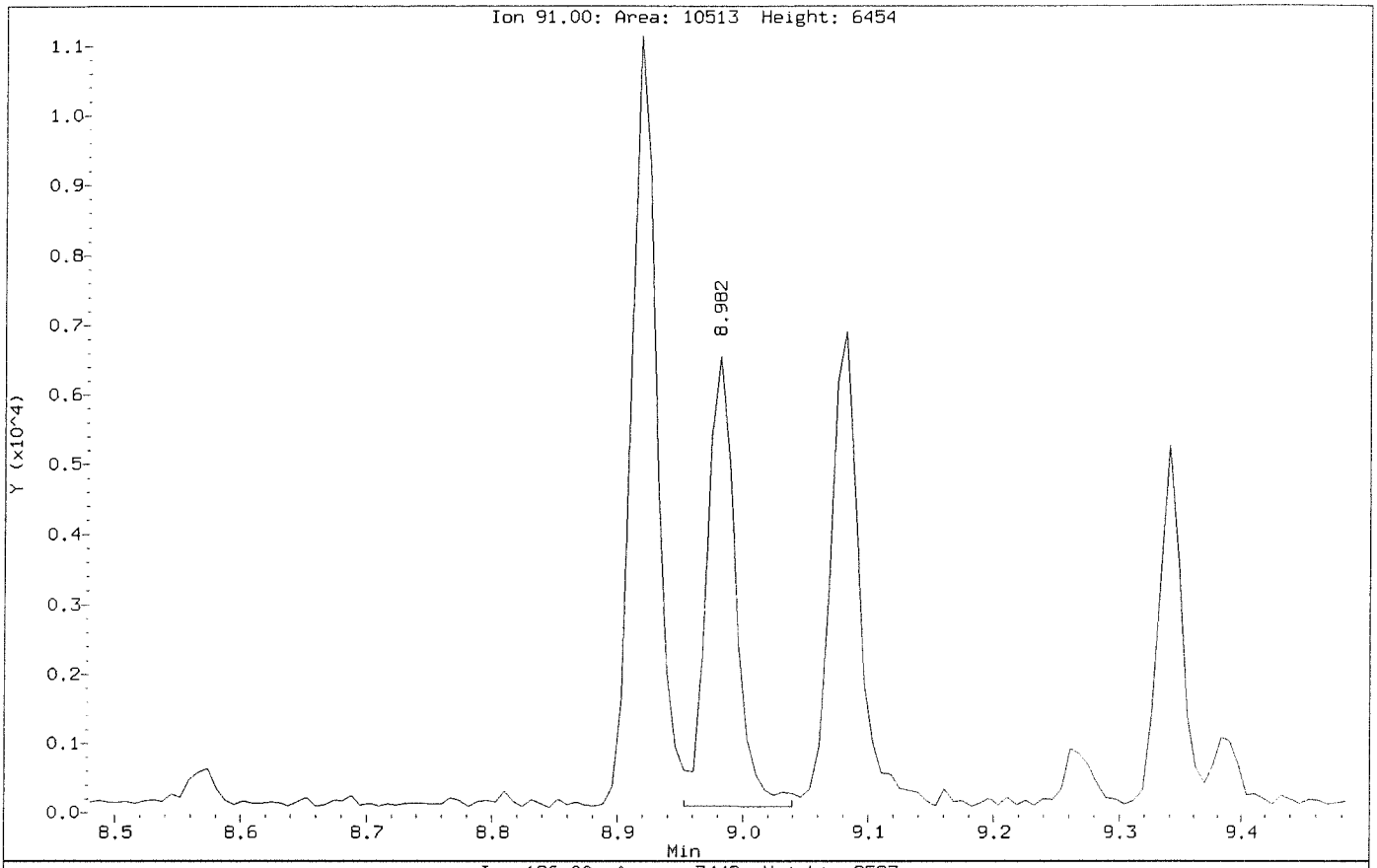
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

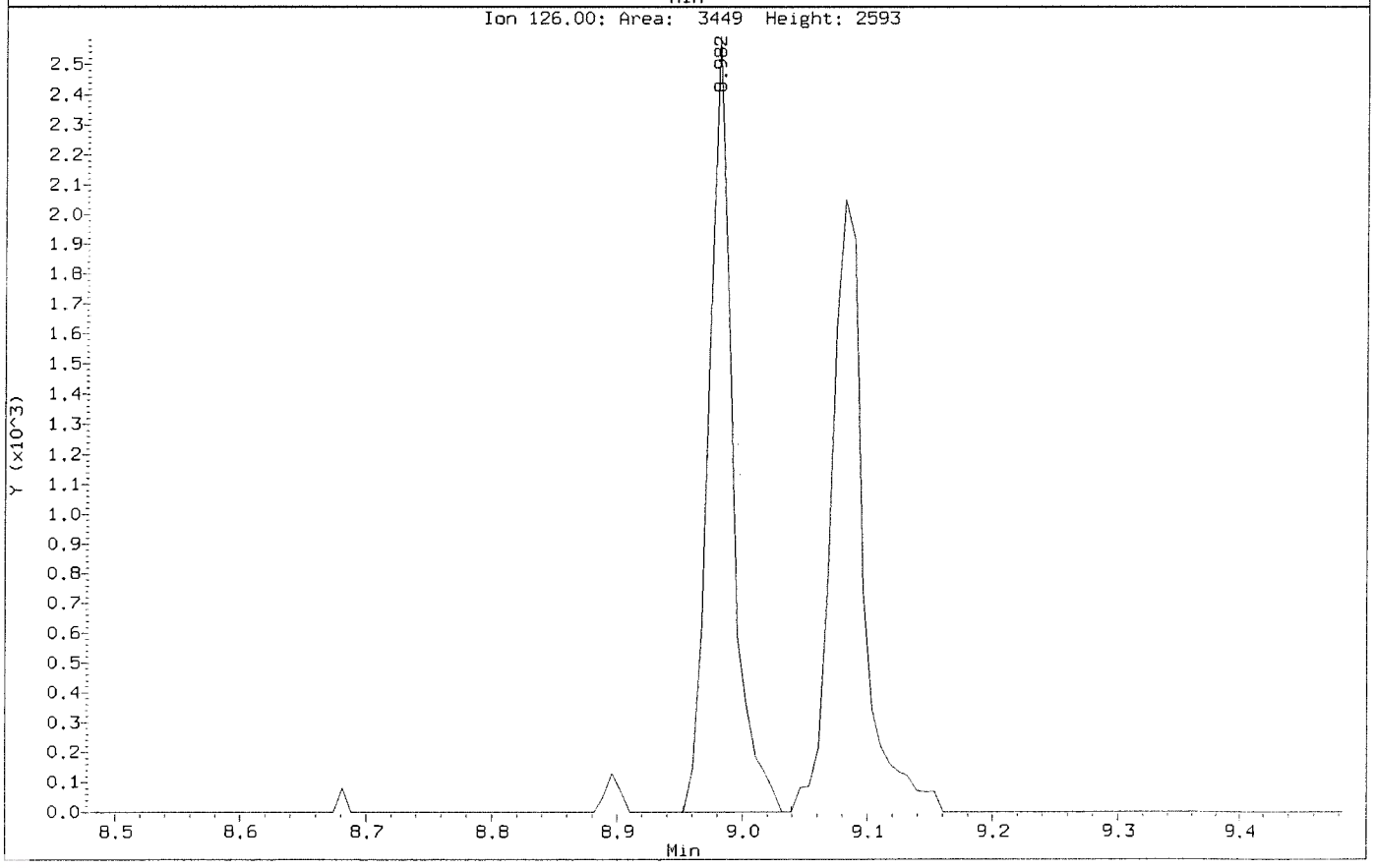




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Instrument: voa6.i
Client Sample ID: VSTD000.5

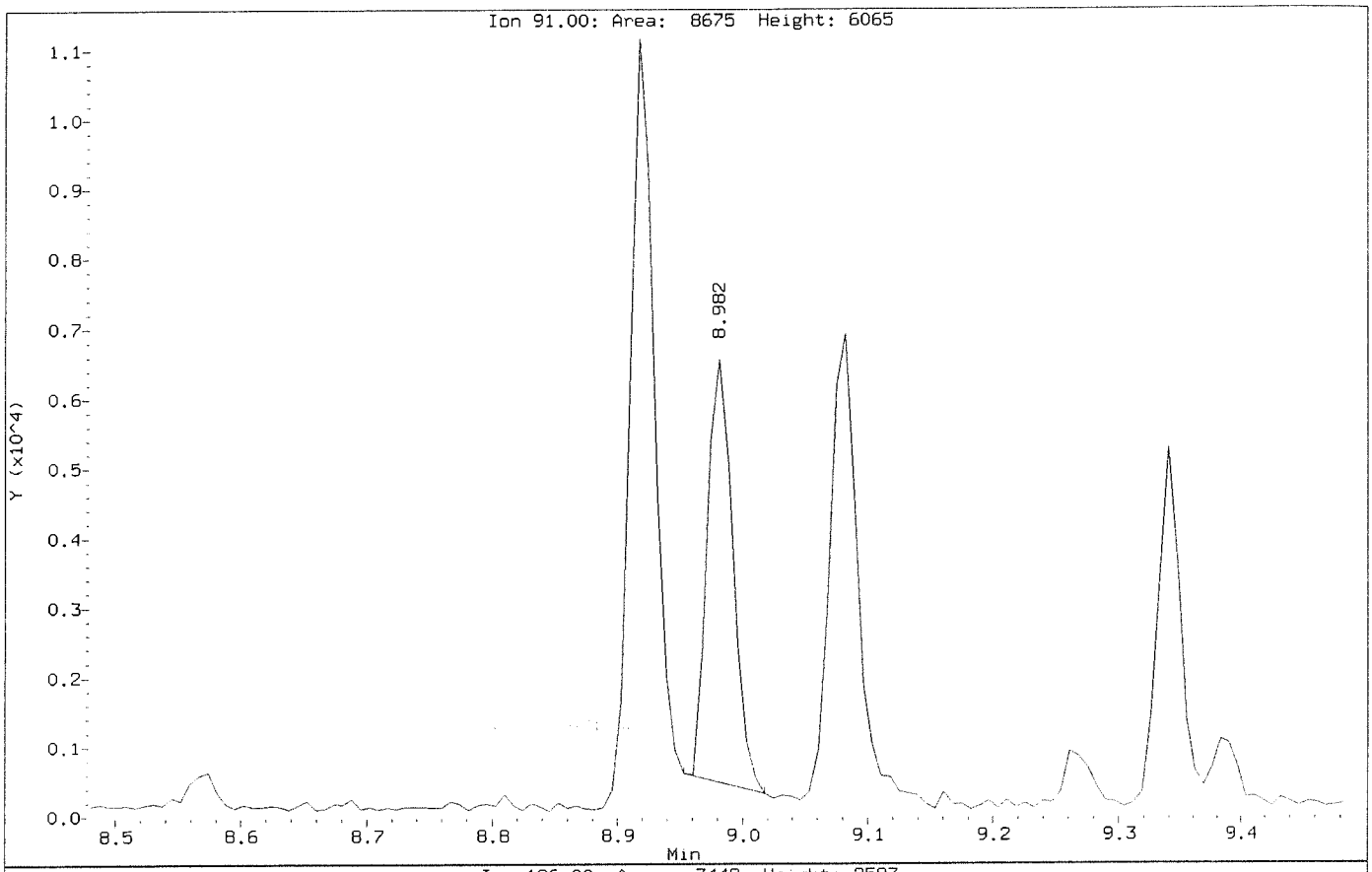
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

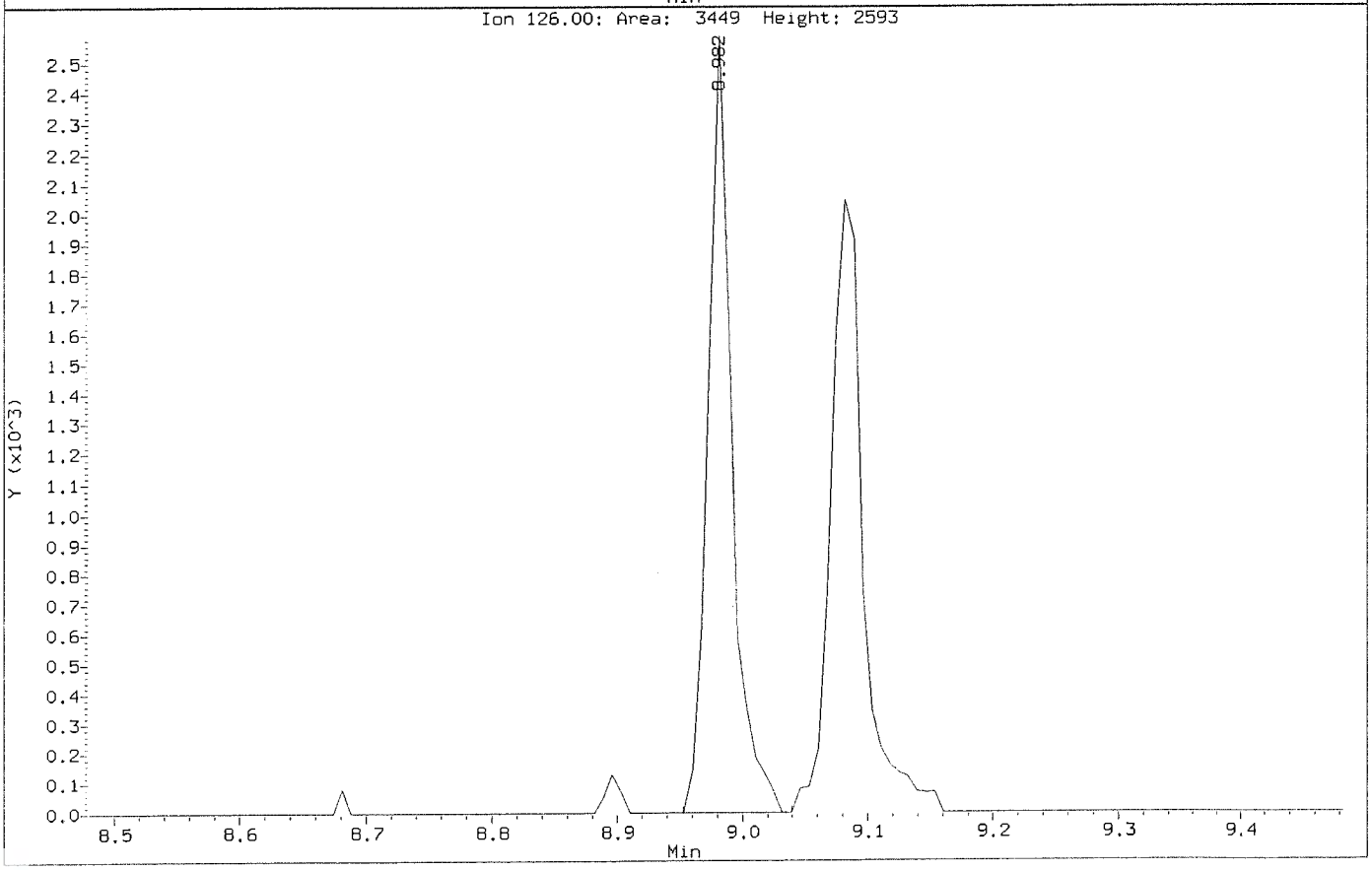




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Instrument: voa6.i
Client Sample ID: VSTD000.5

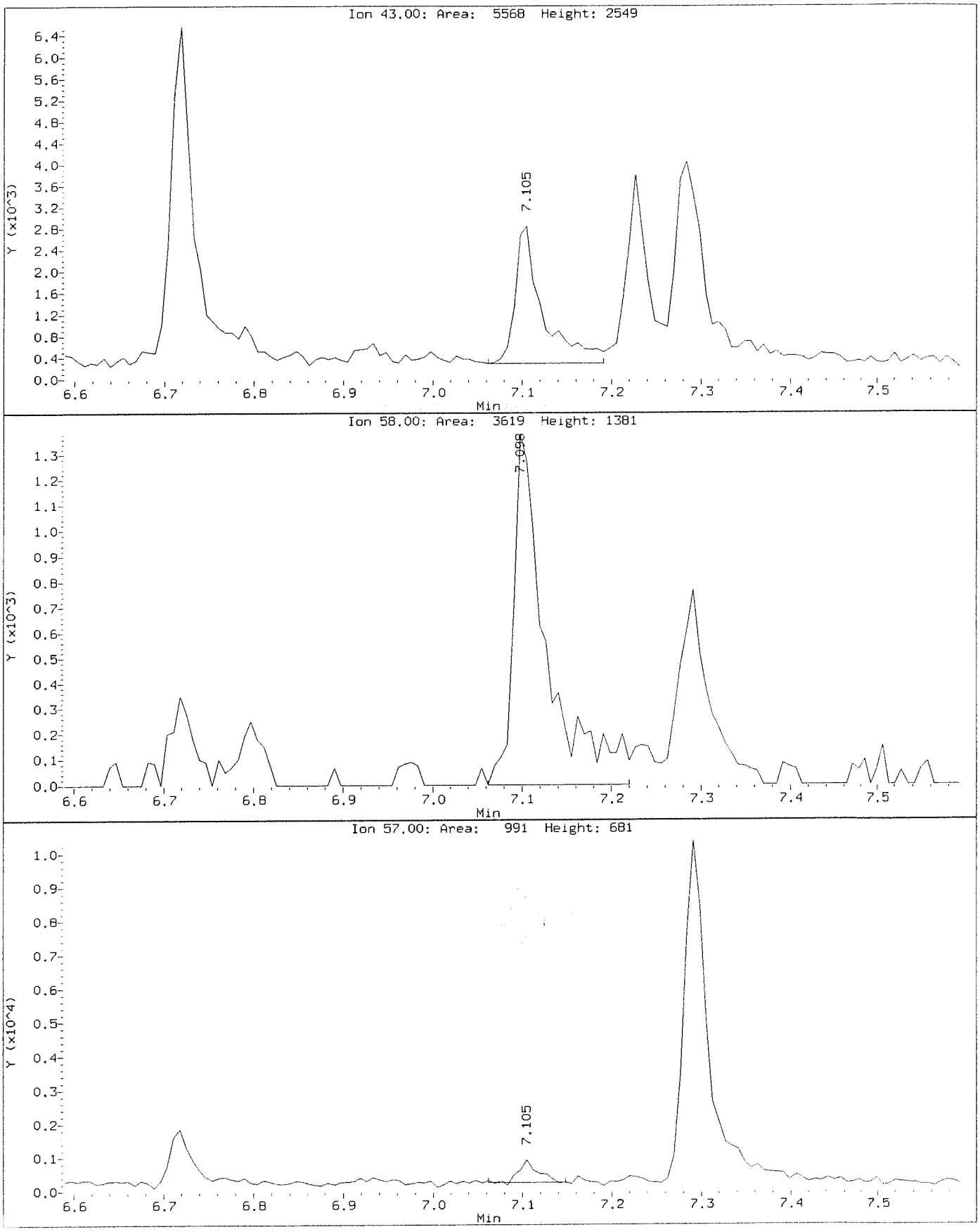
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





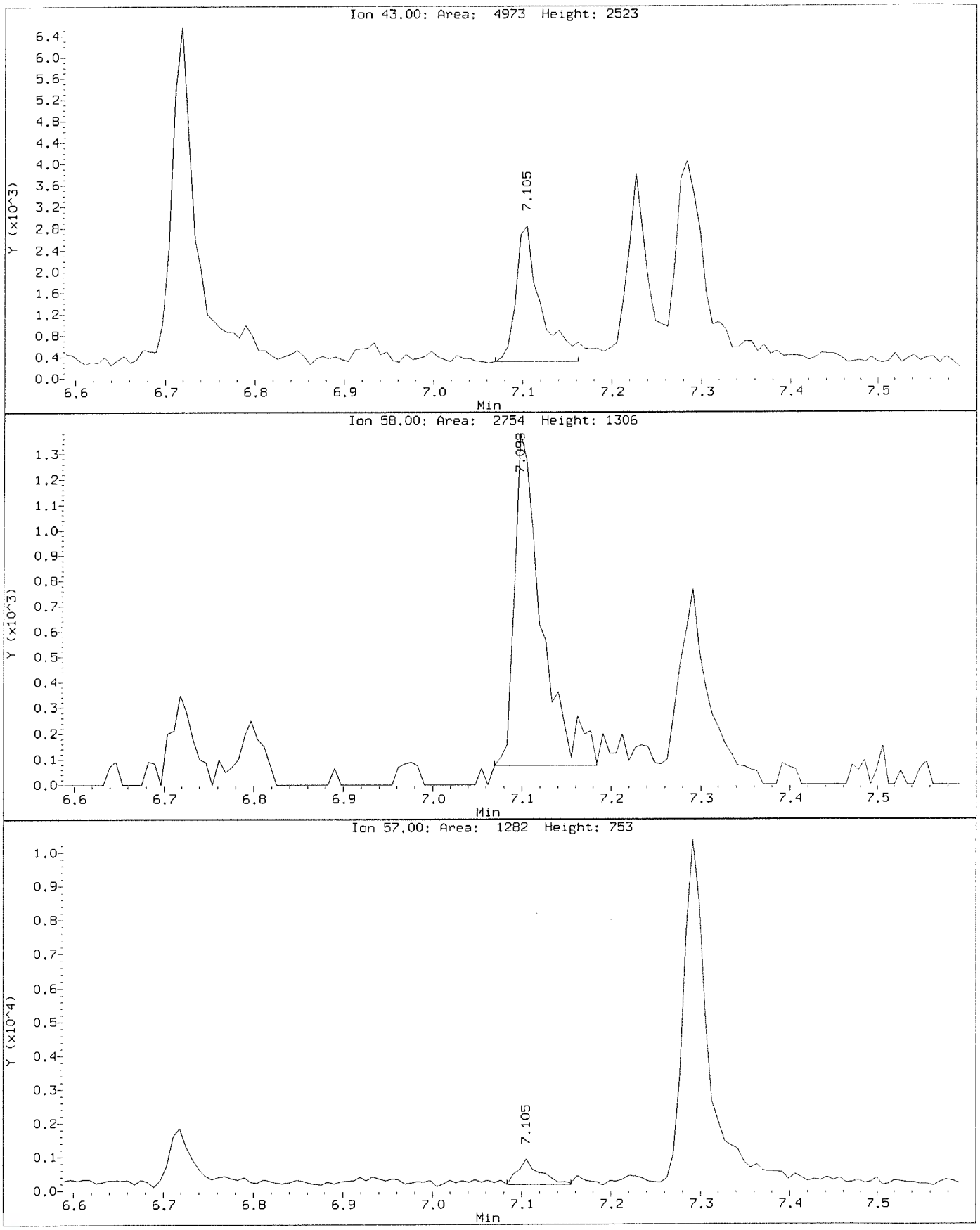
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



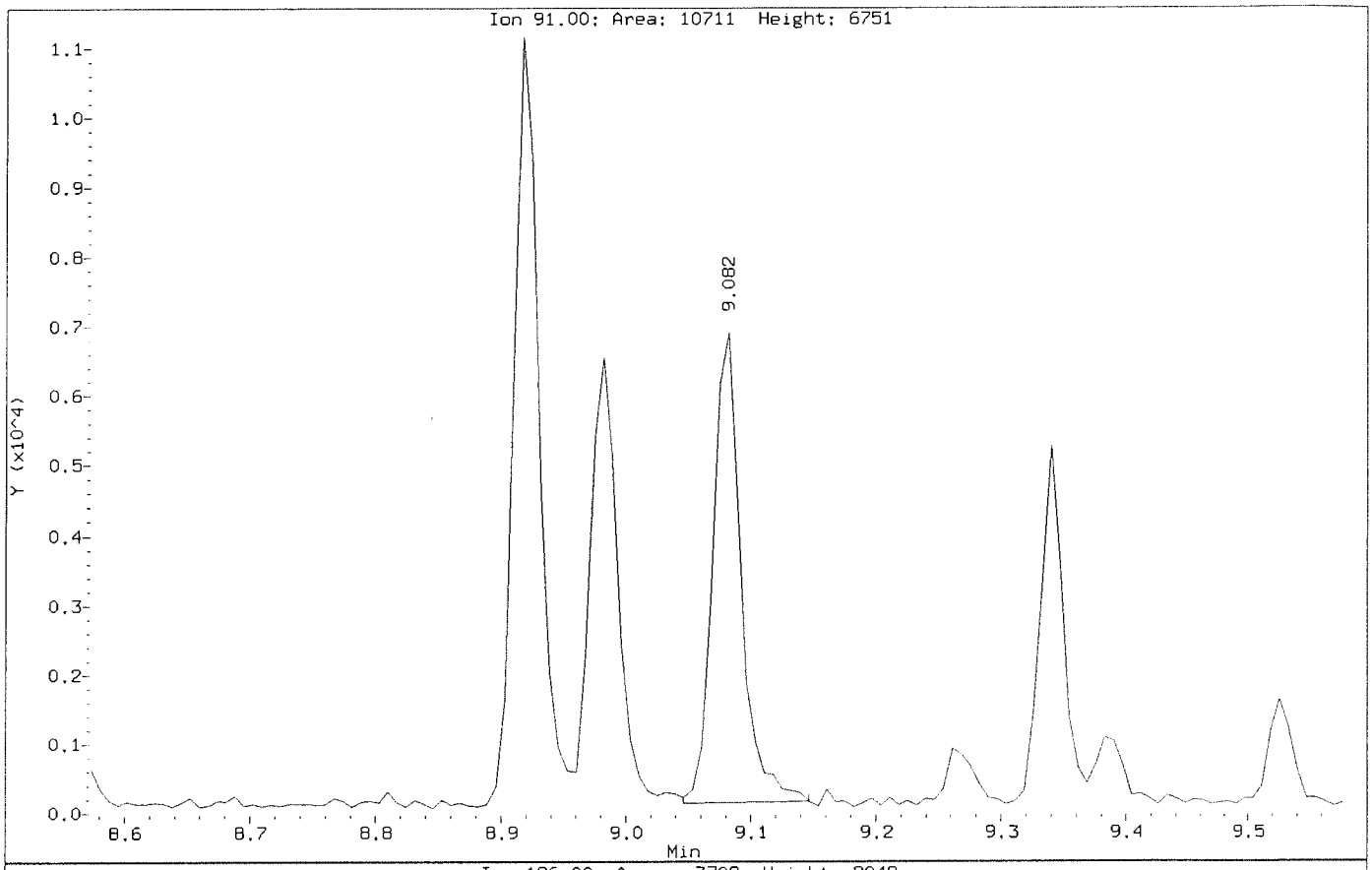
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Client Sample ID: VSTD000.5

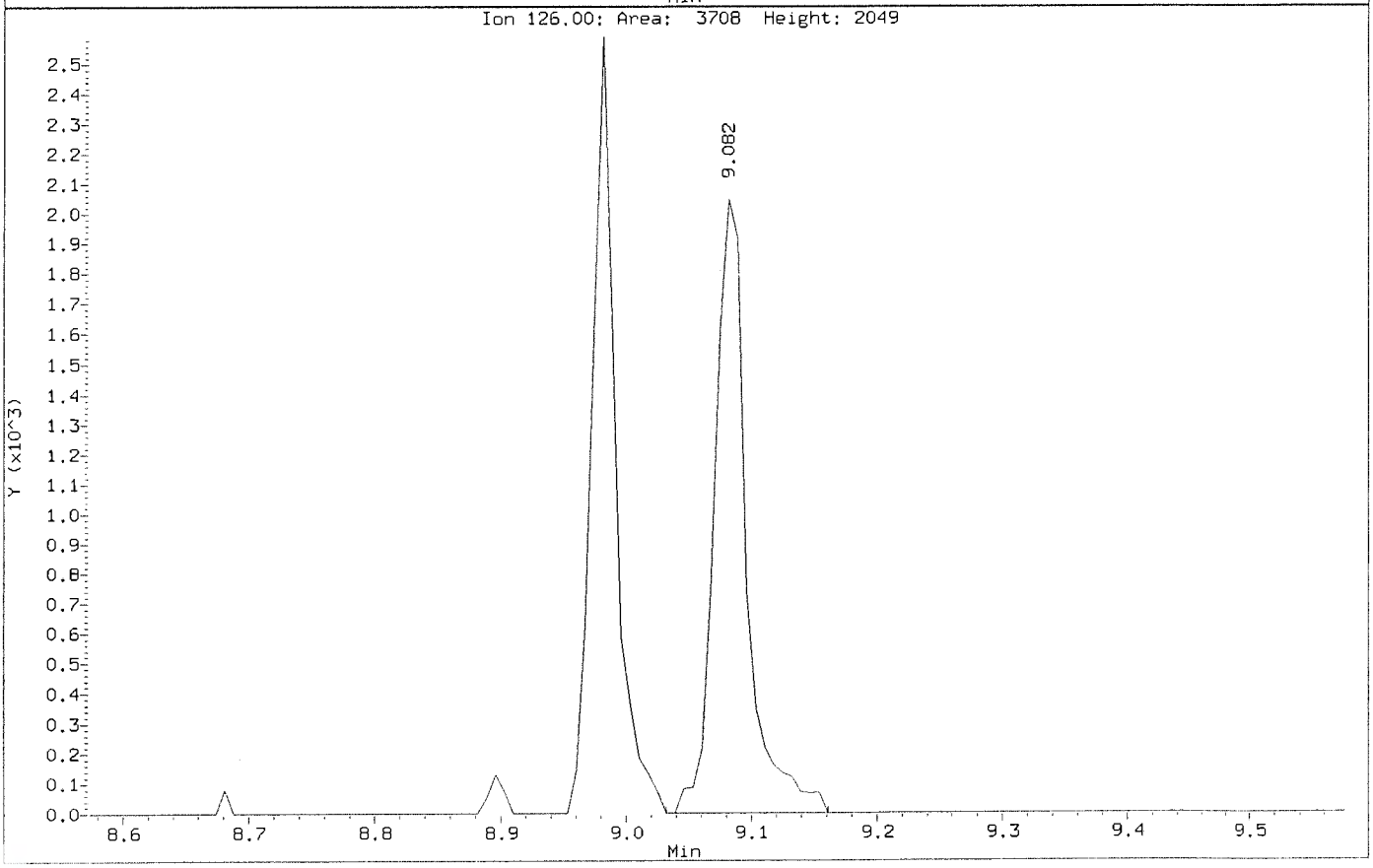
Compound: 2-Hexanone
CAS Number: 591-78-6



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

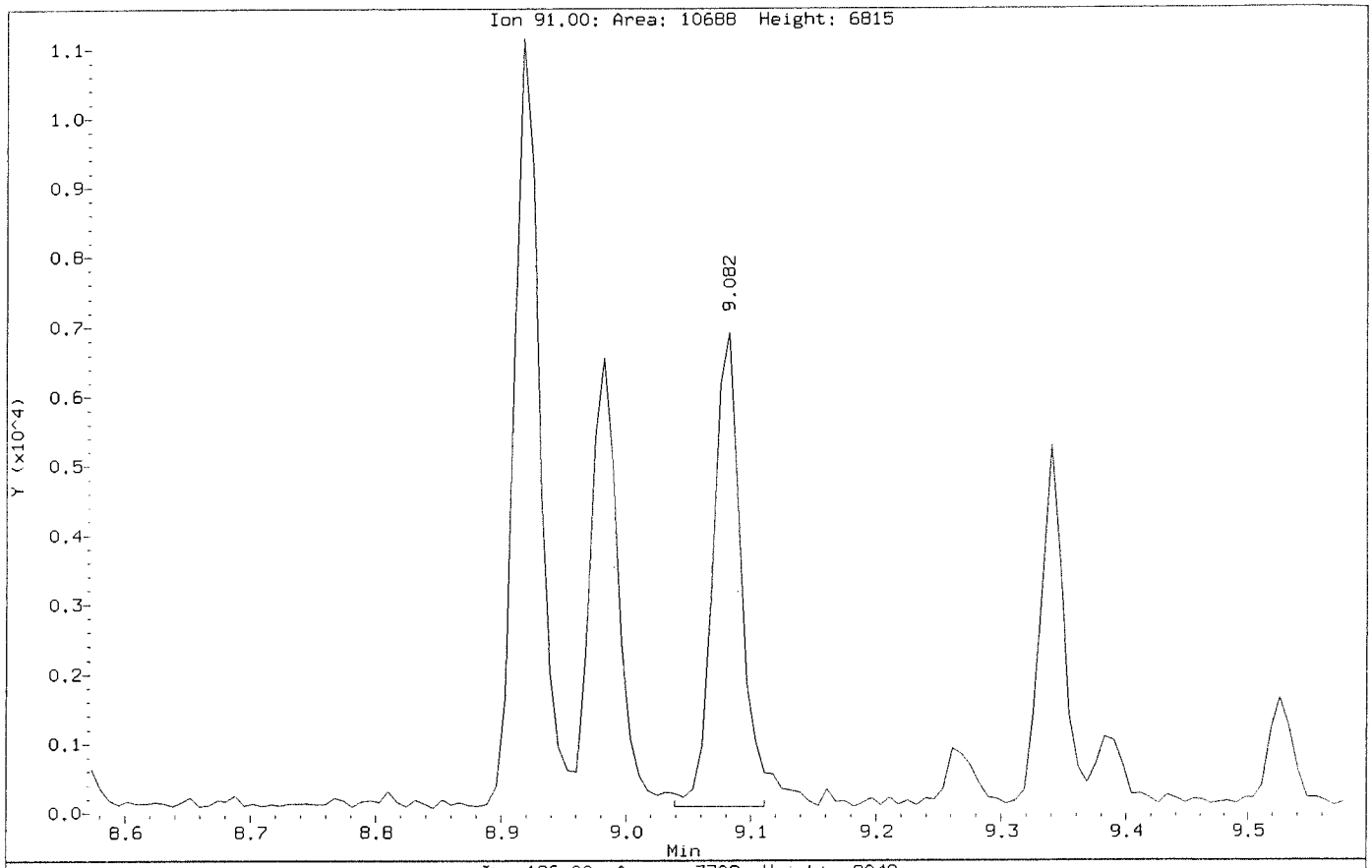
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

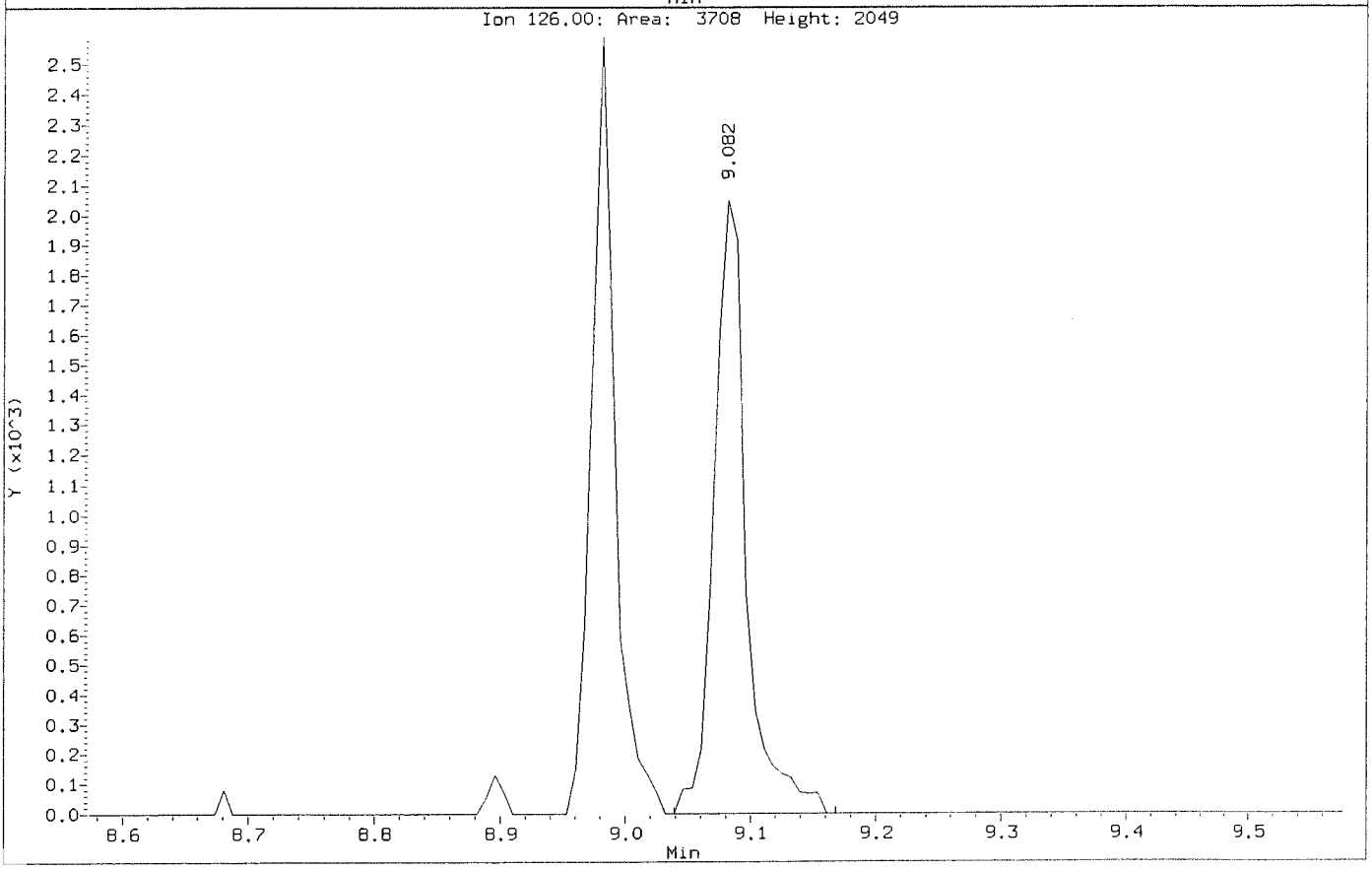




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Client Sample ID: VSTD000.5

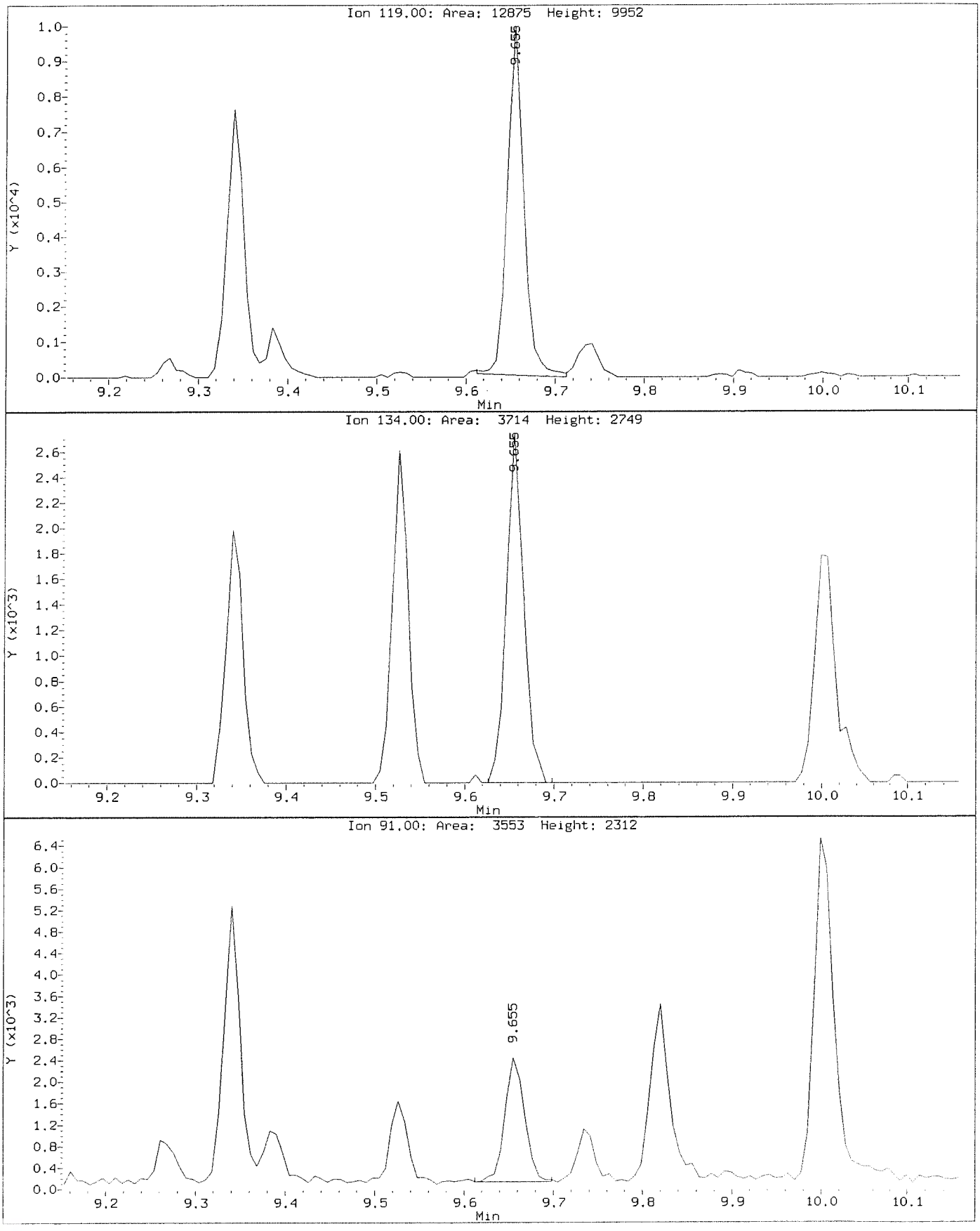
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





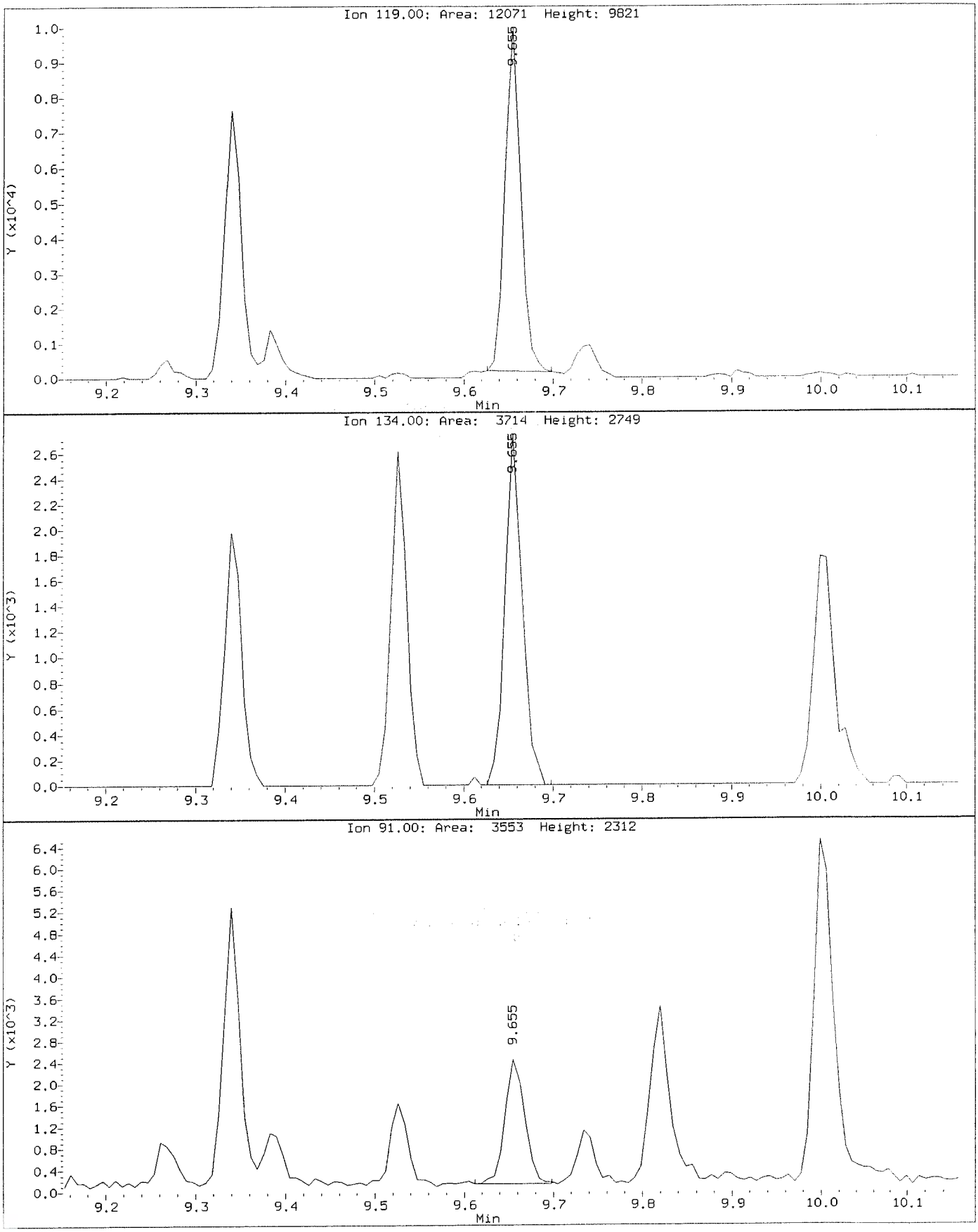
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



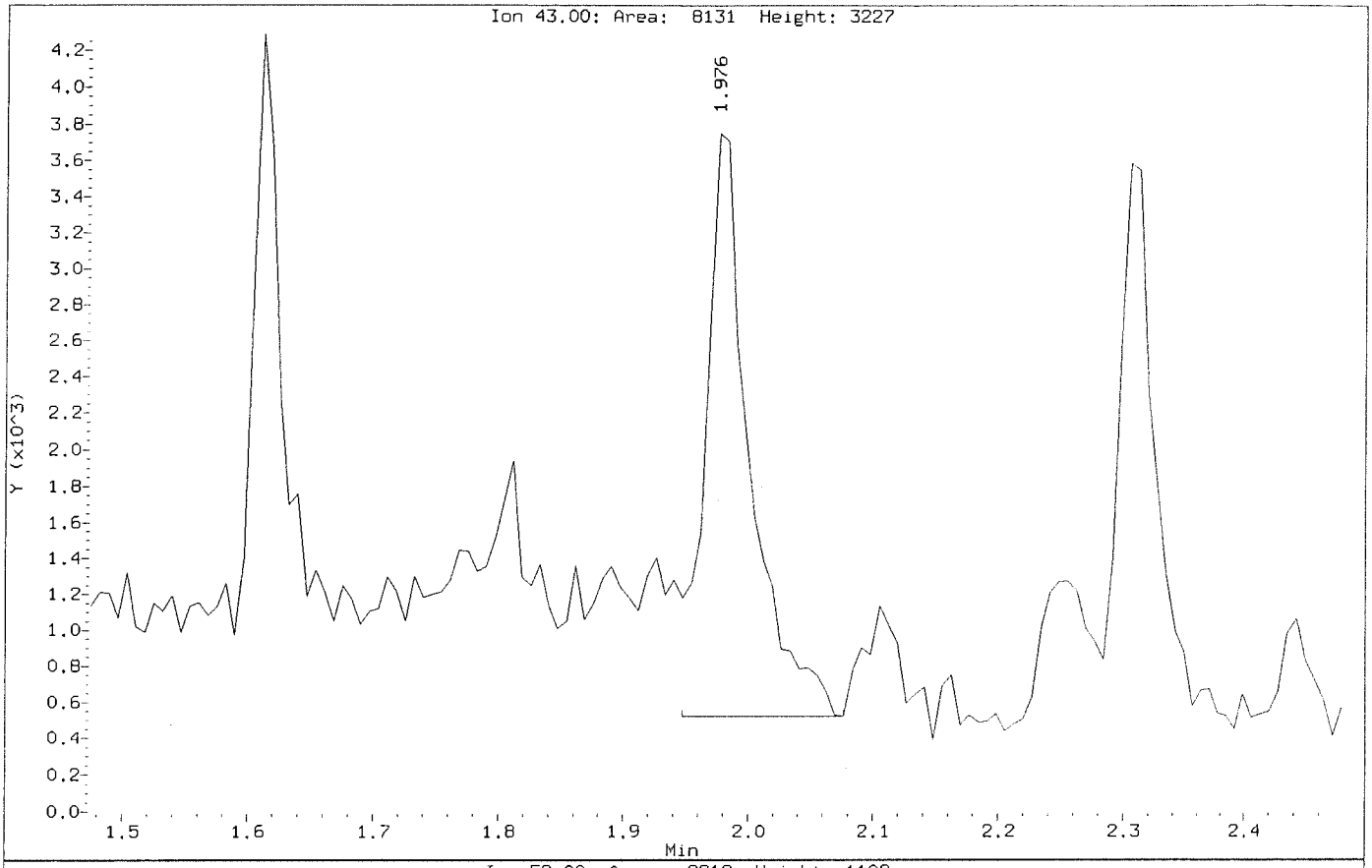
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Client Sample ID: VSTD000.5

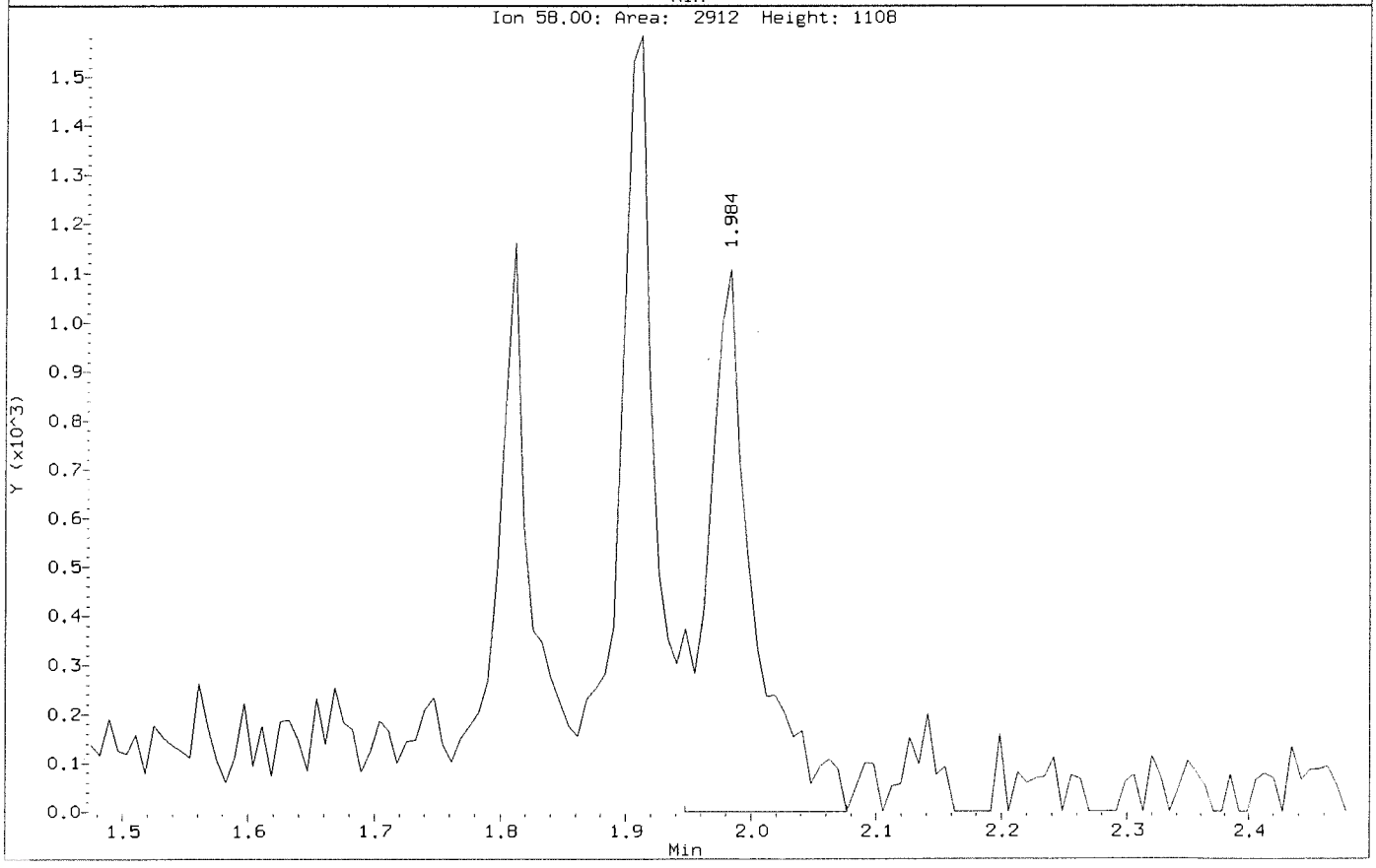
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Client Sample ID: VSTD000.5

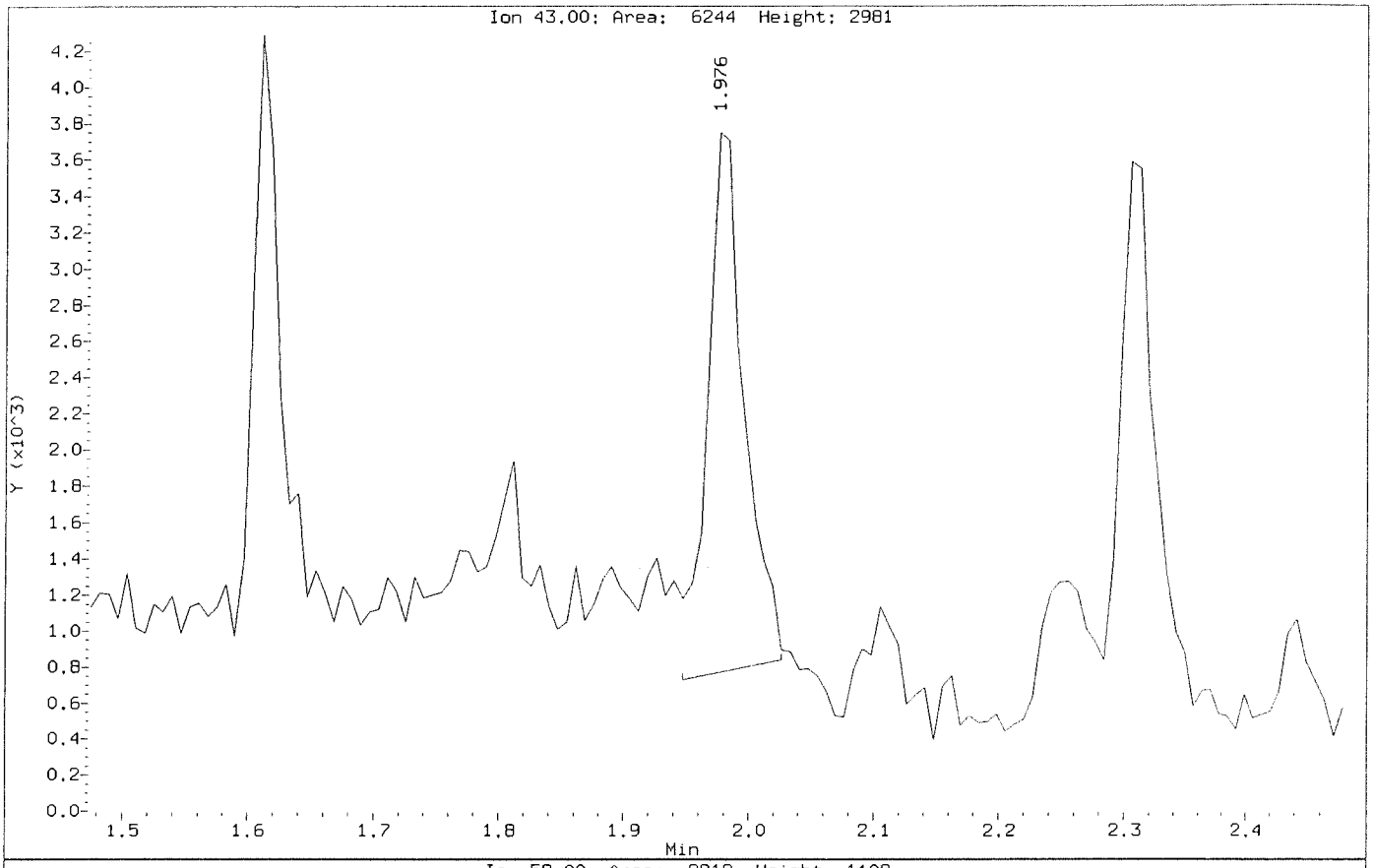
Compound: Acetone
CAS Number: 67-64-1

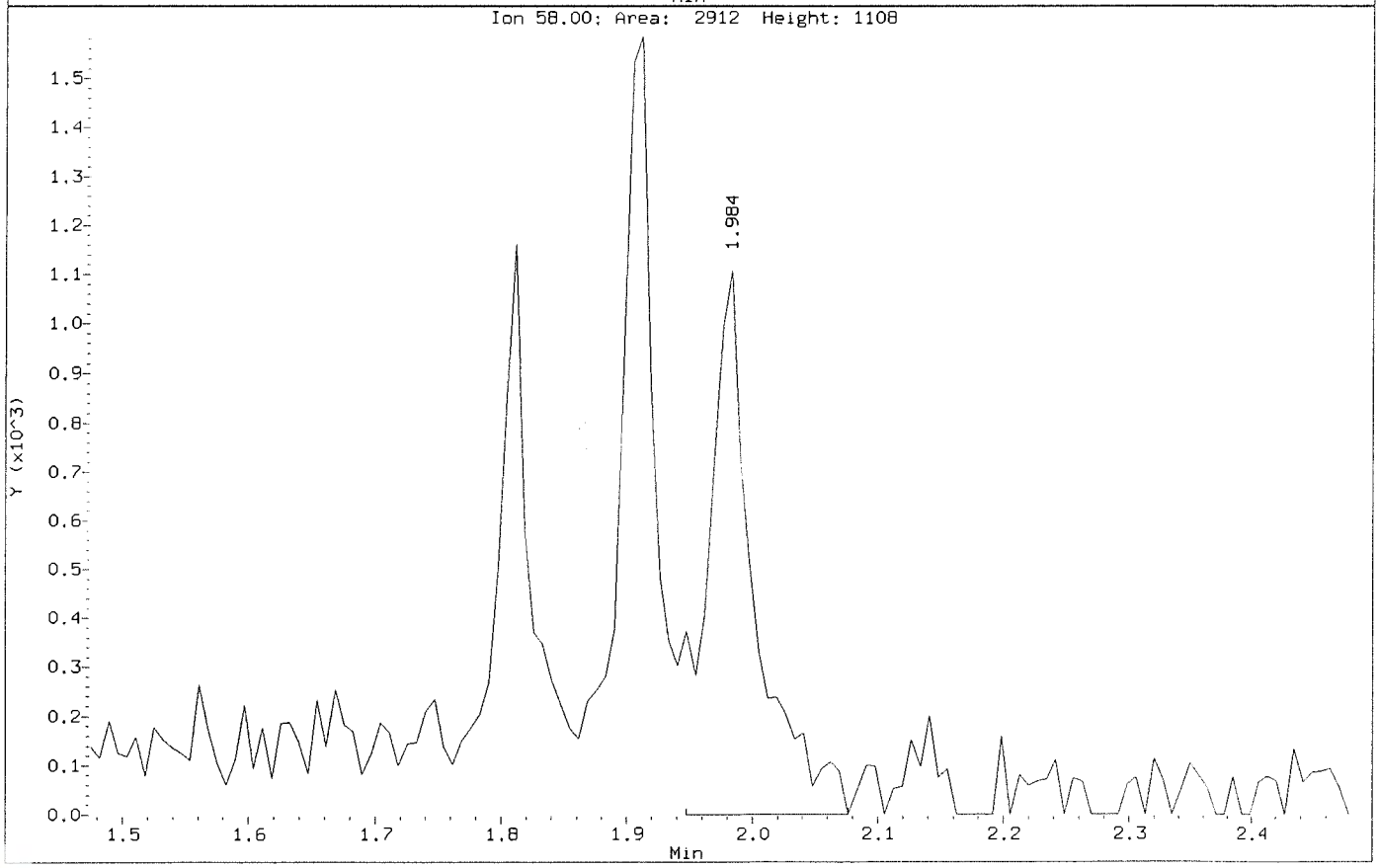




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Client Sample ID: VSTD000.5

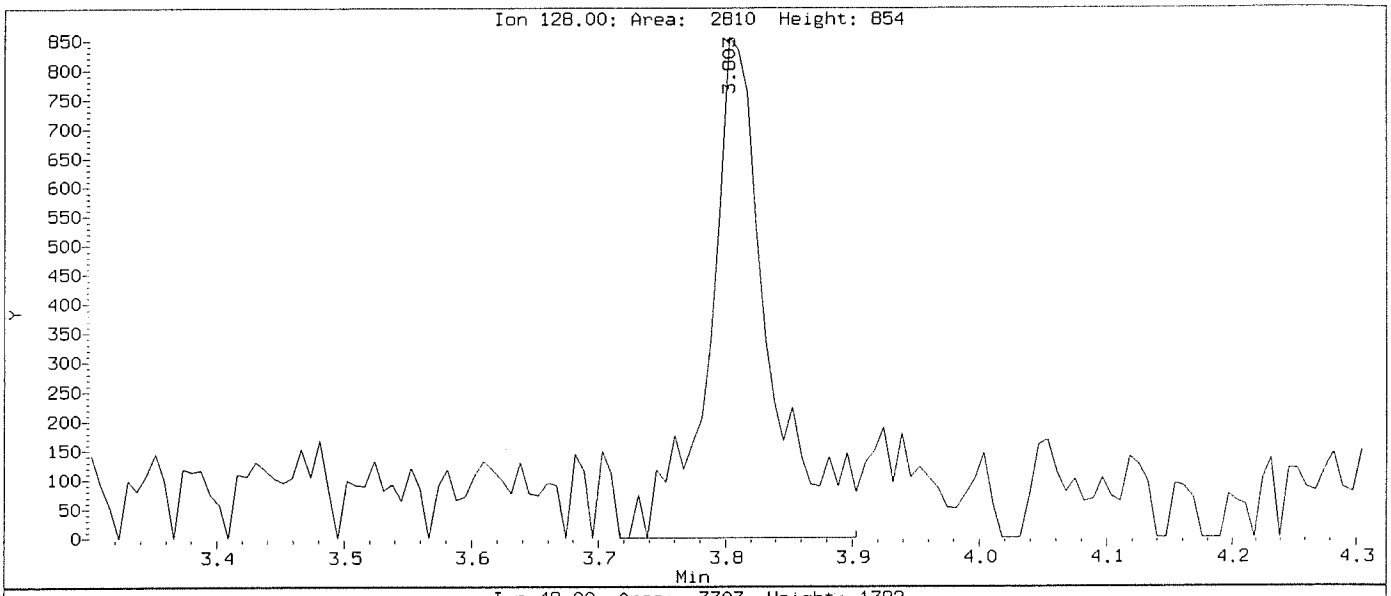
Compound: Acetone
CAS Number: 67-64-1

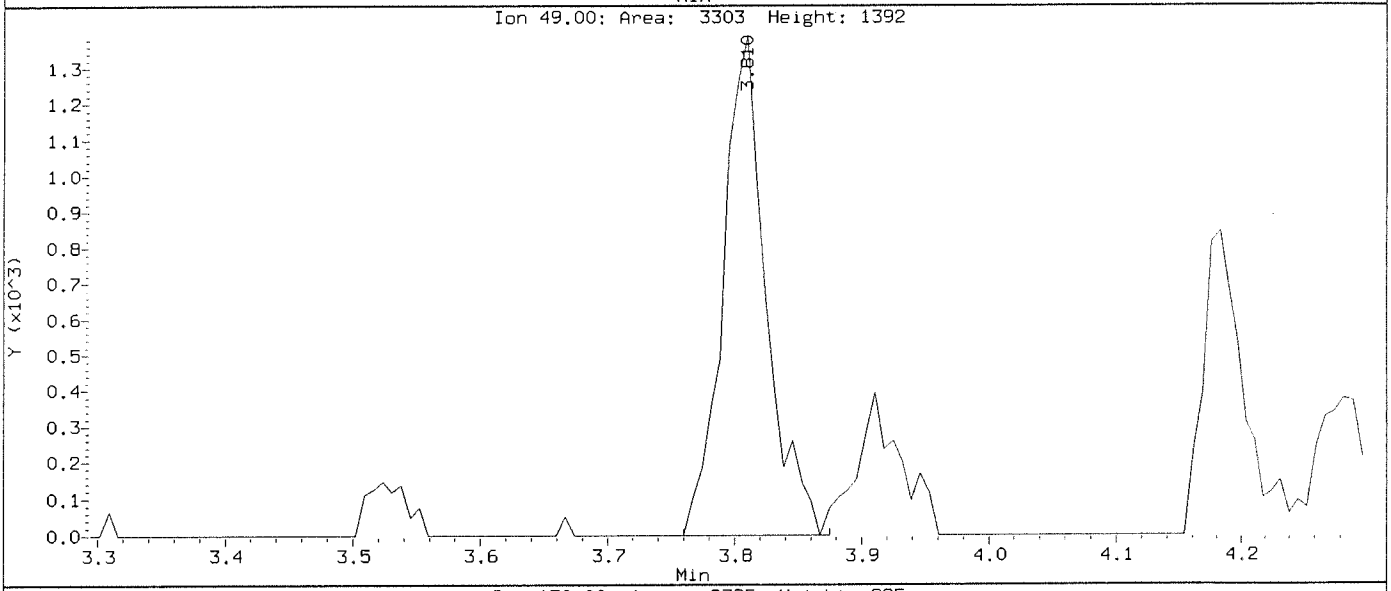


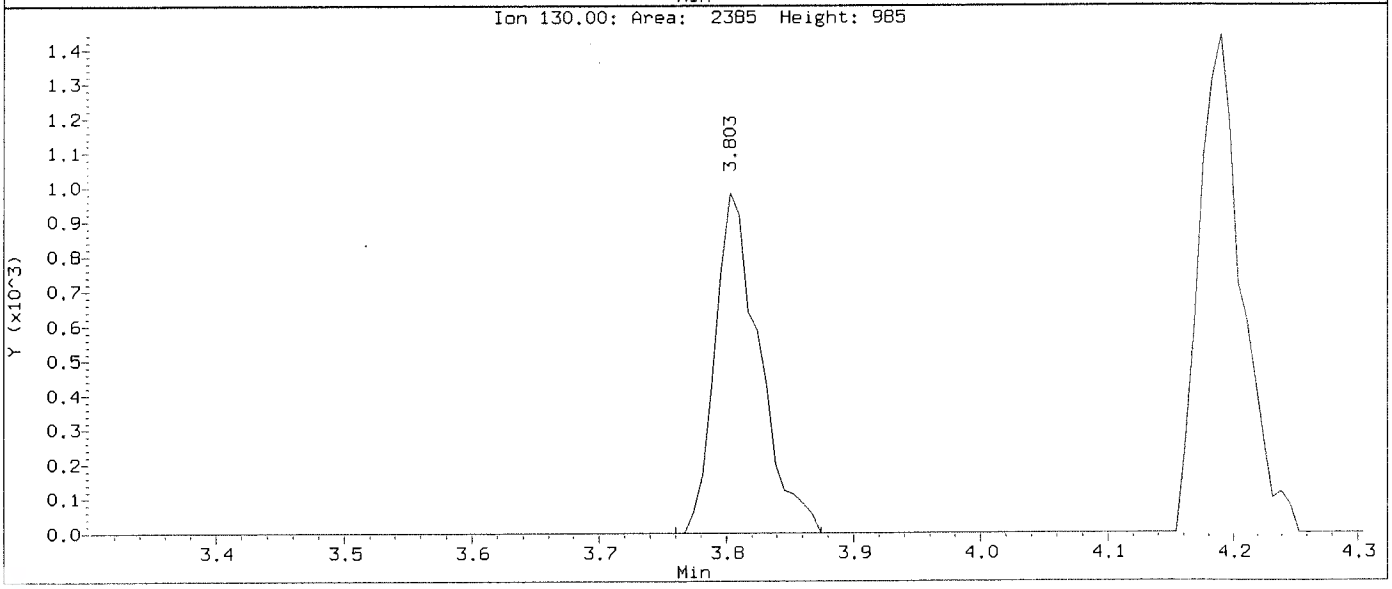


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

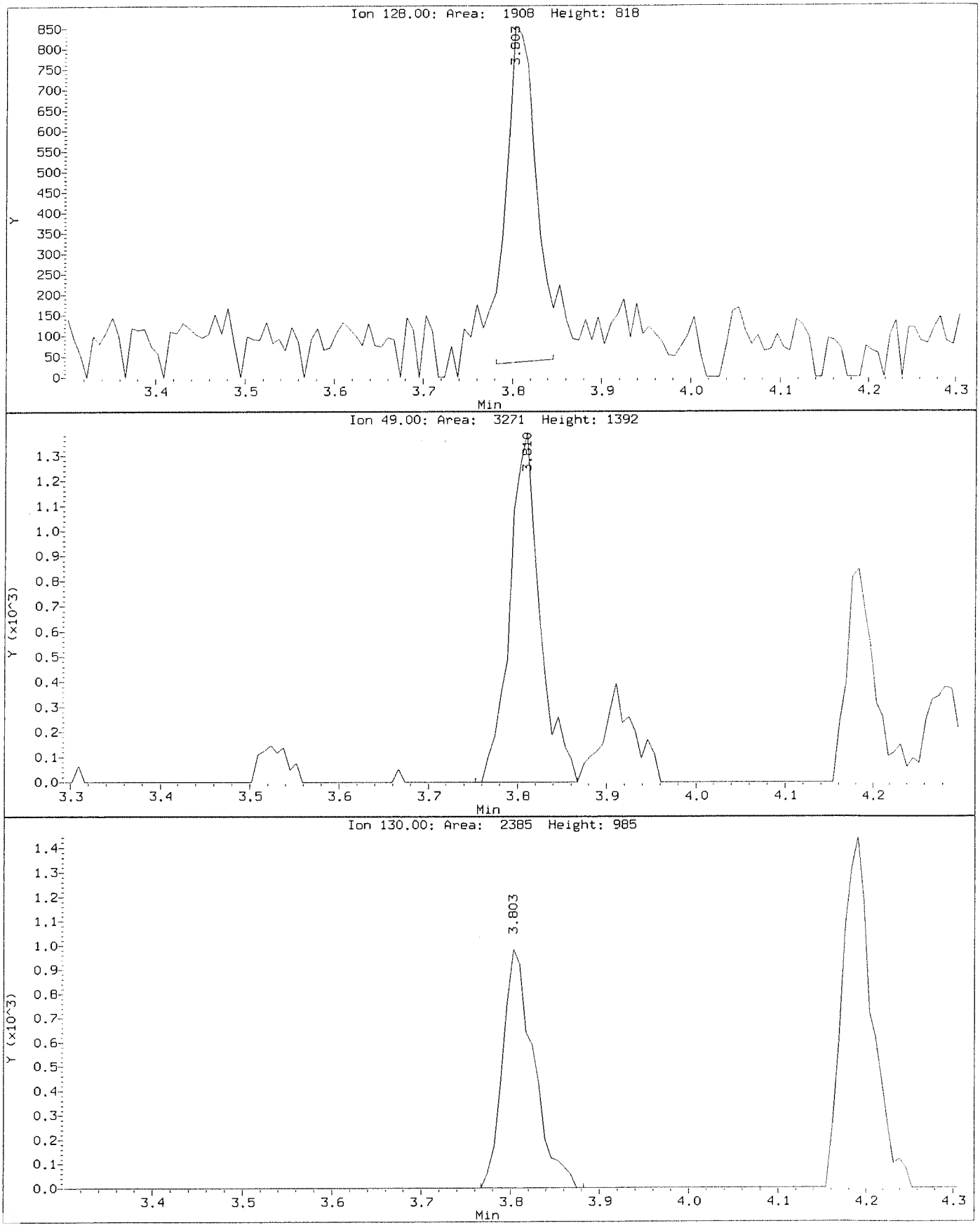






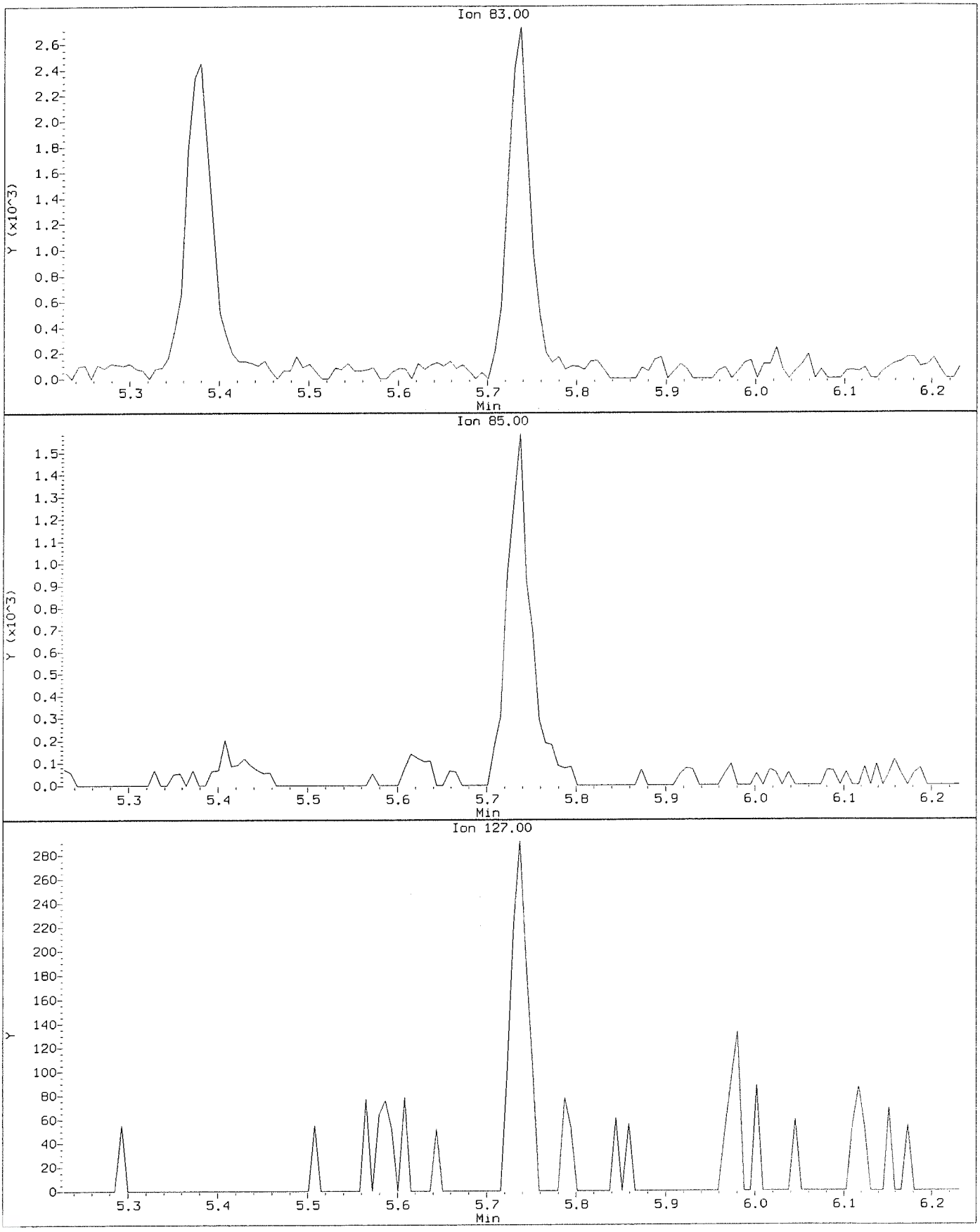
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5



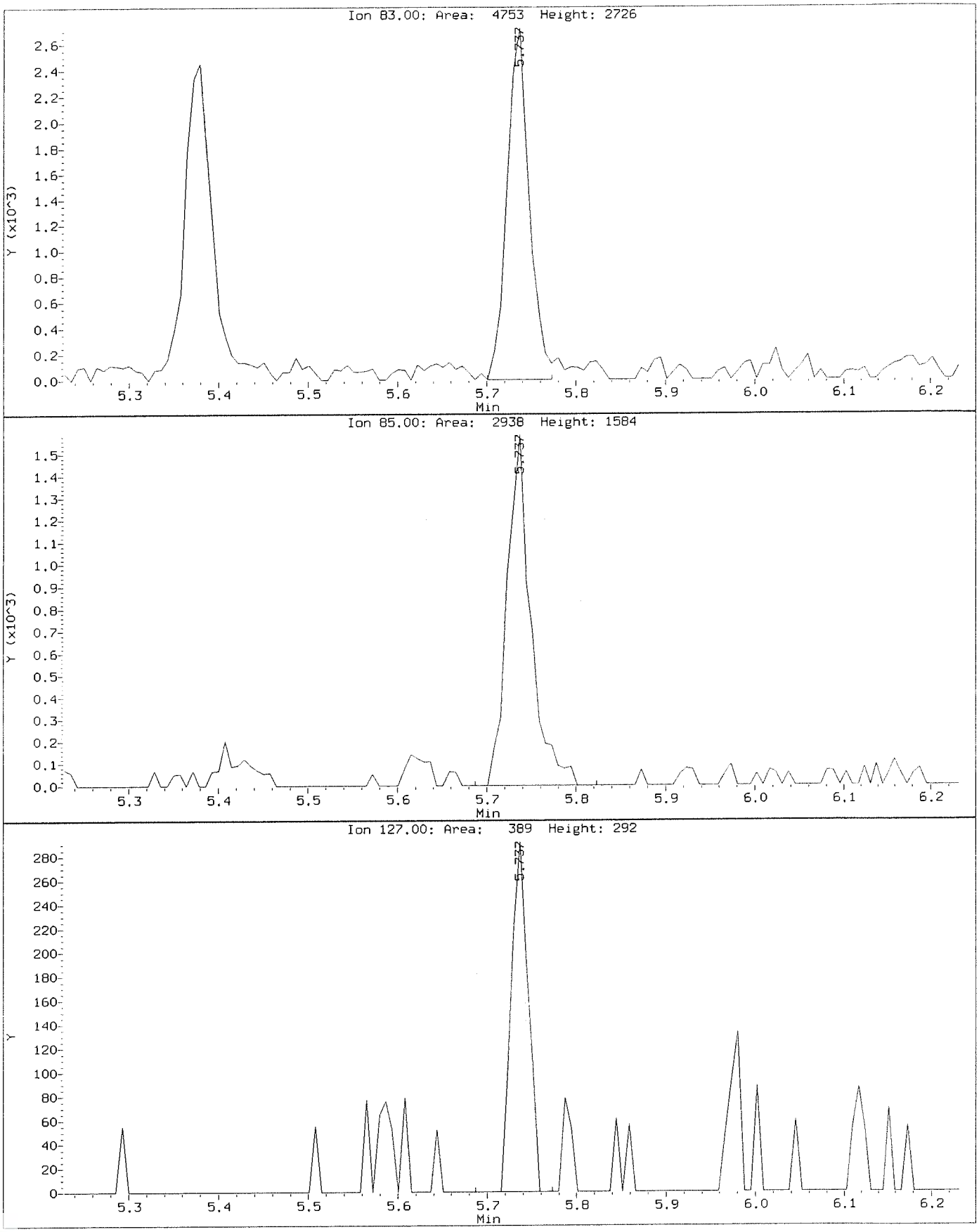
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



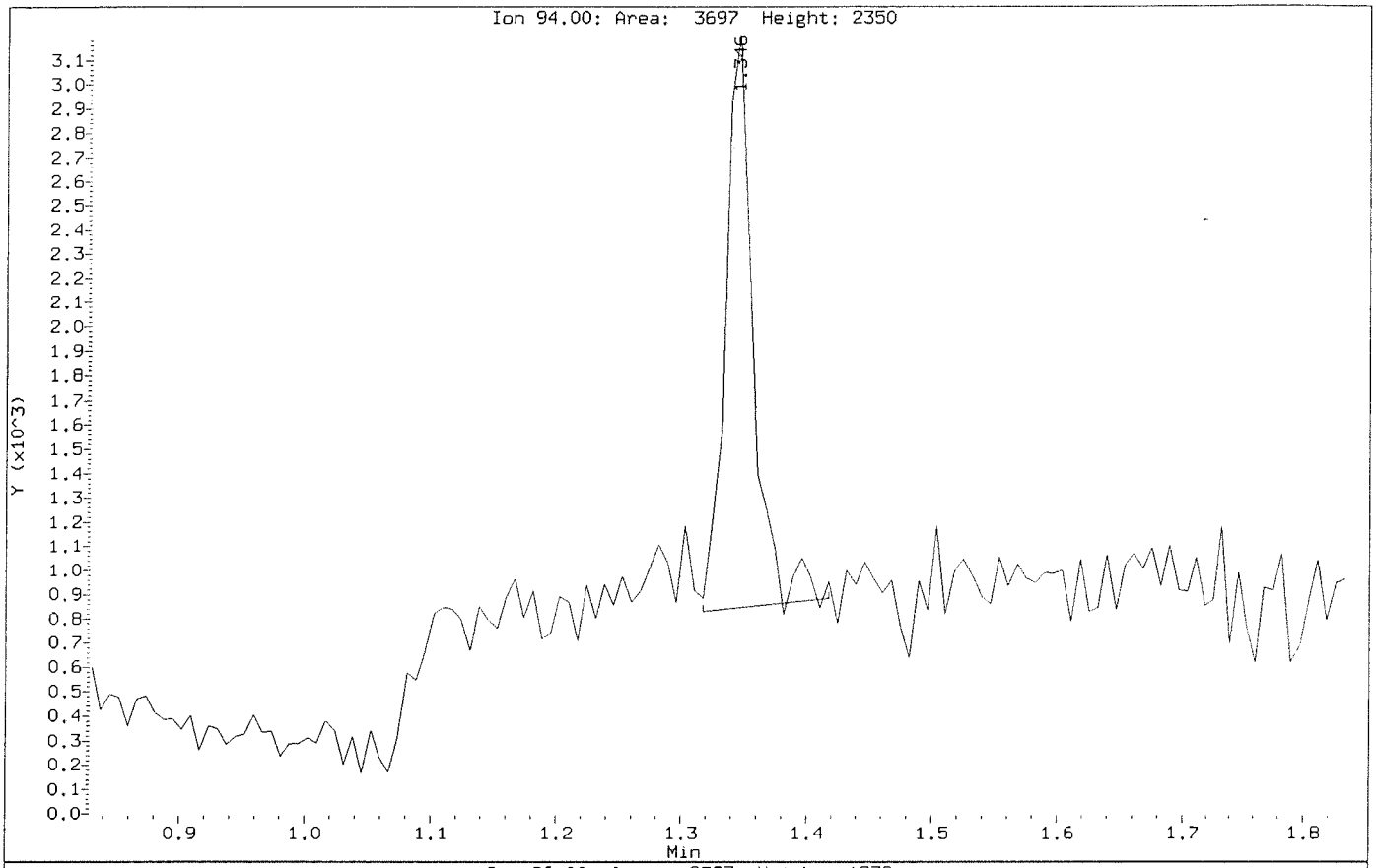
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
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Client Sample ID: VSTD000.5

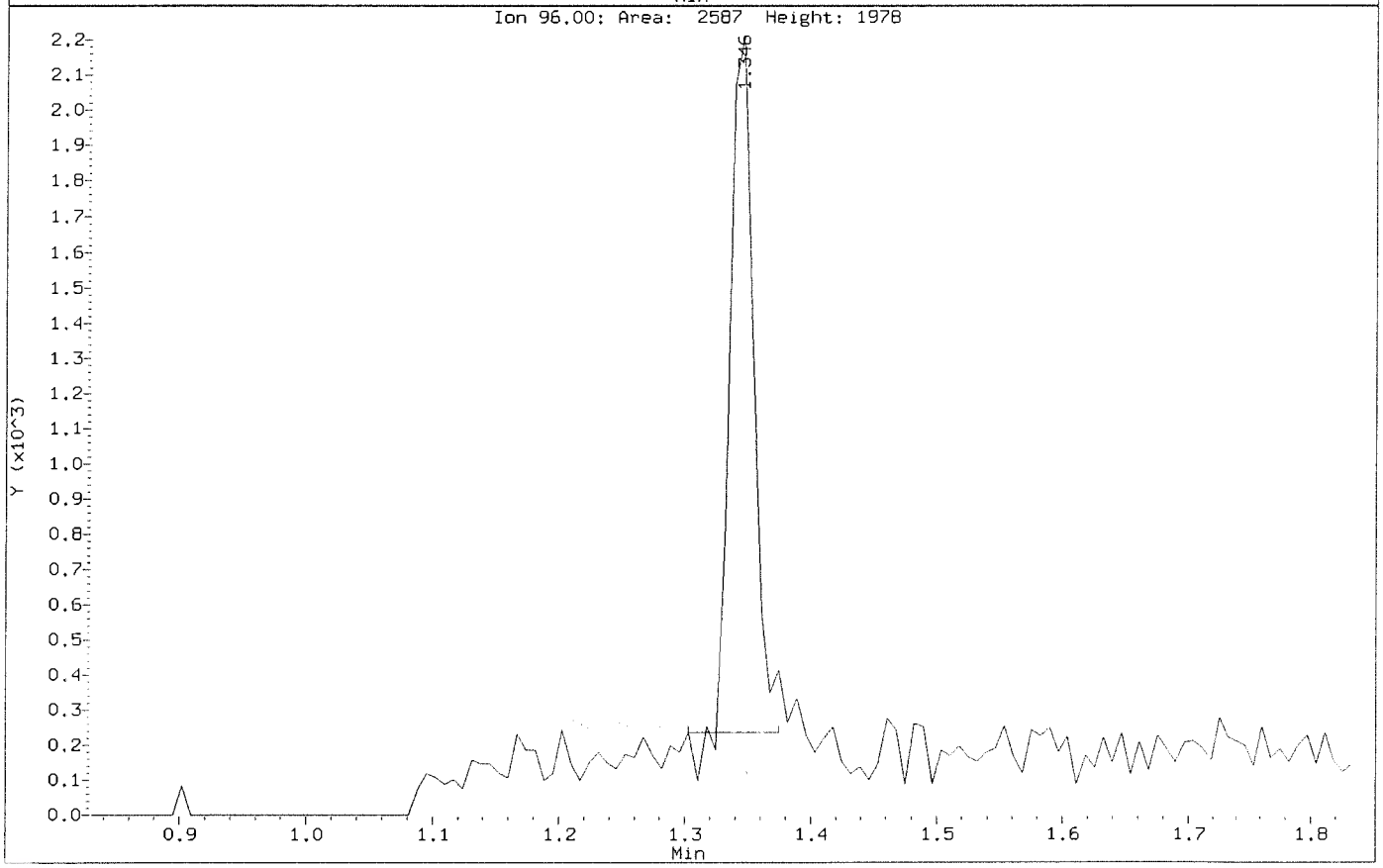
Compound: Bromodichloromethane
CAS Number: 75-27-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

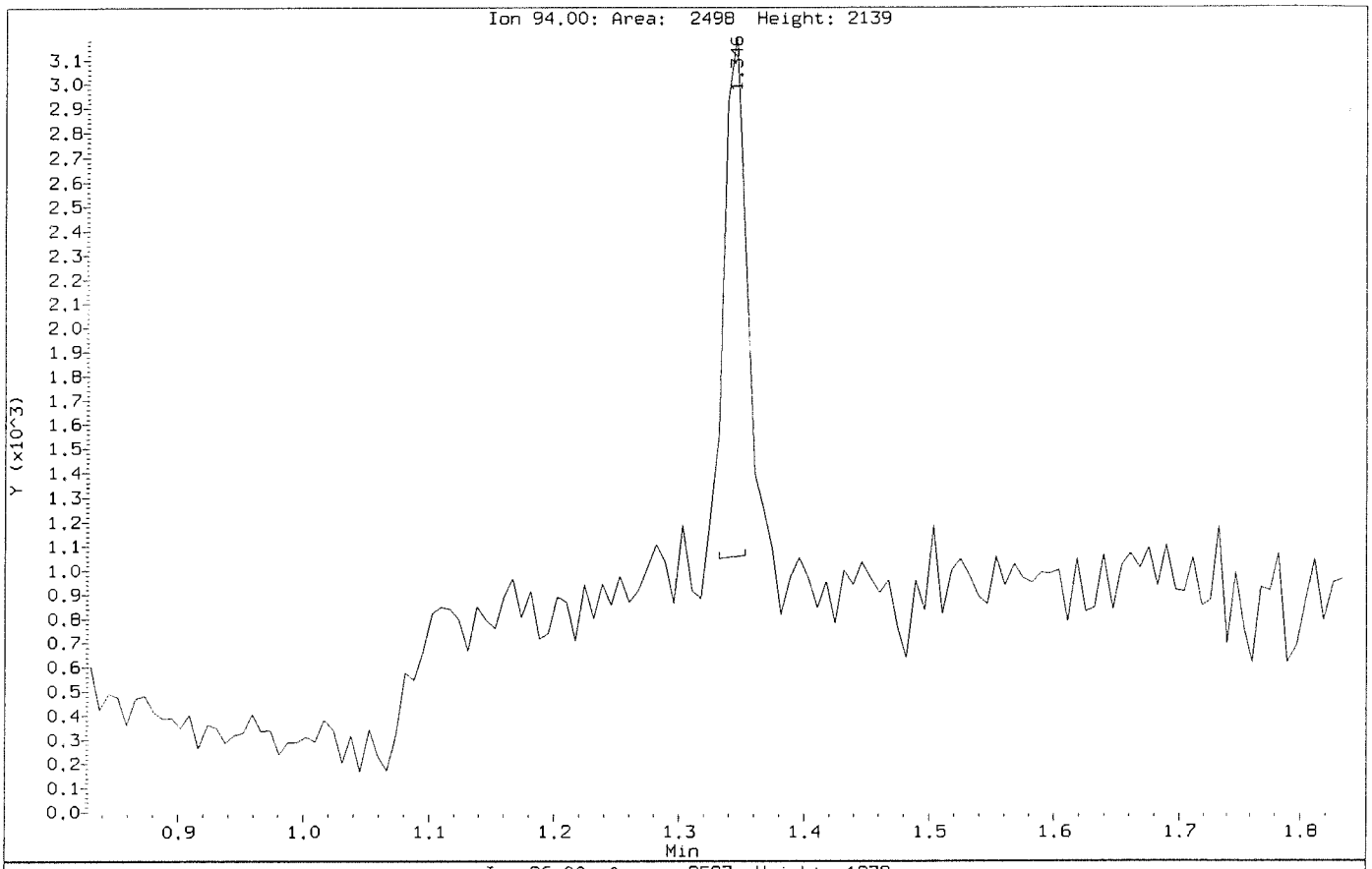
Compound: Bromomethane
CAS Number: 74-83-9

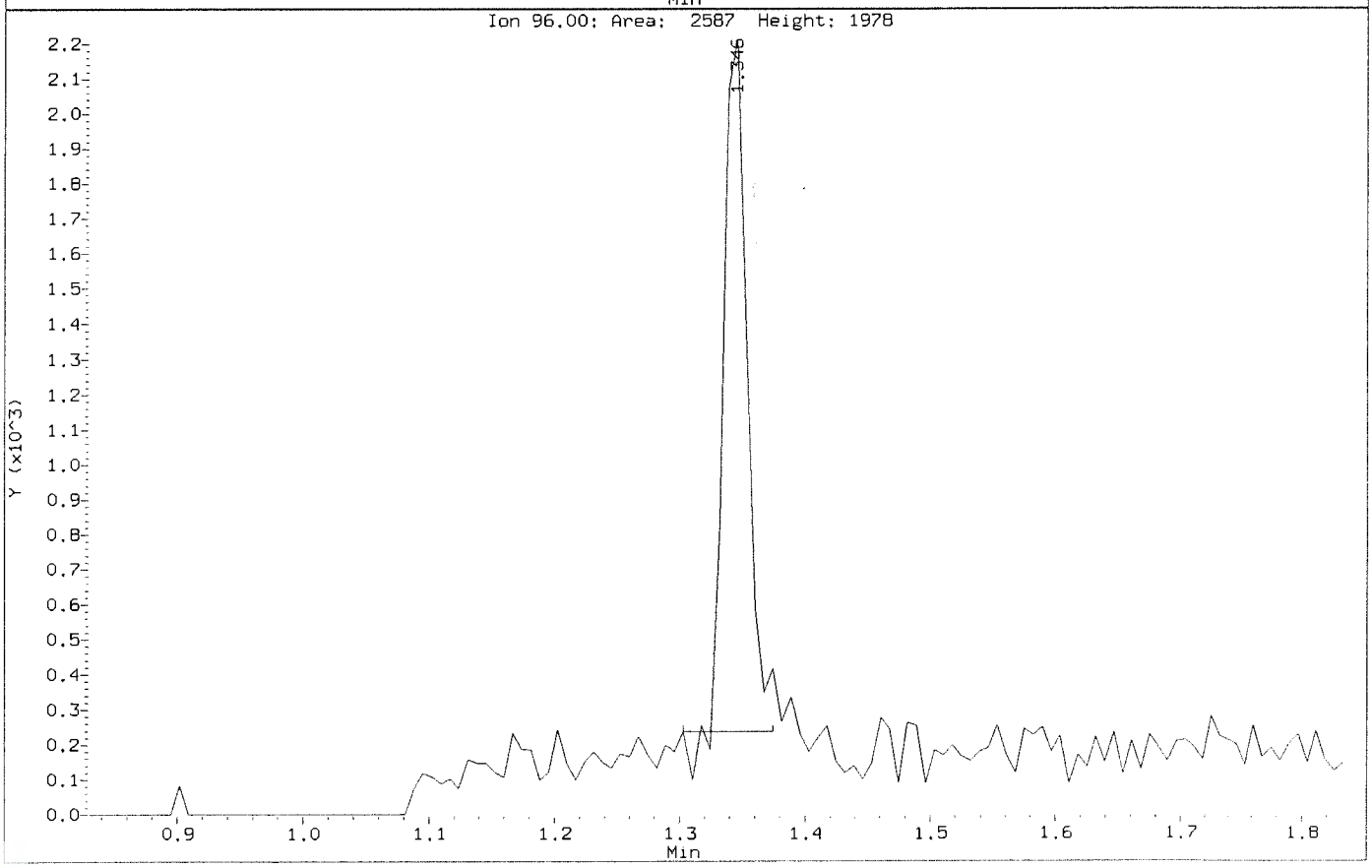




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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

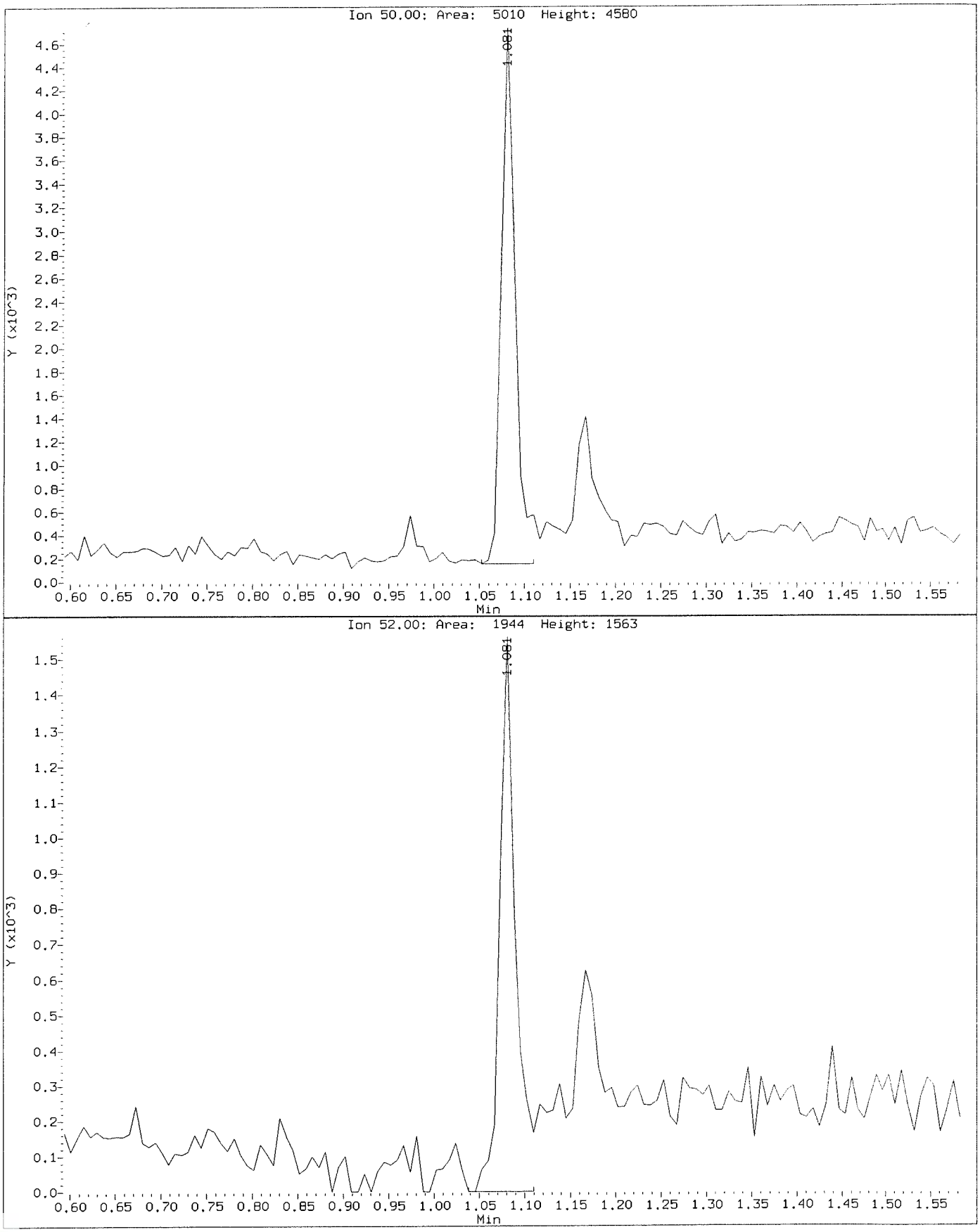
Compound: Bromomethane
CAS Number: 74-83-9





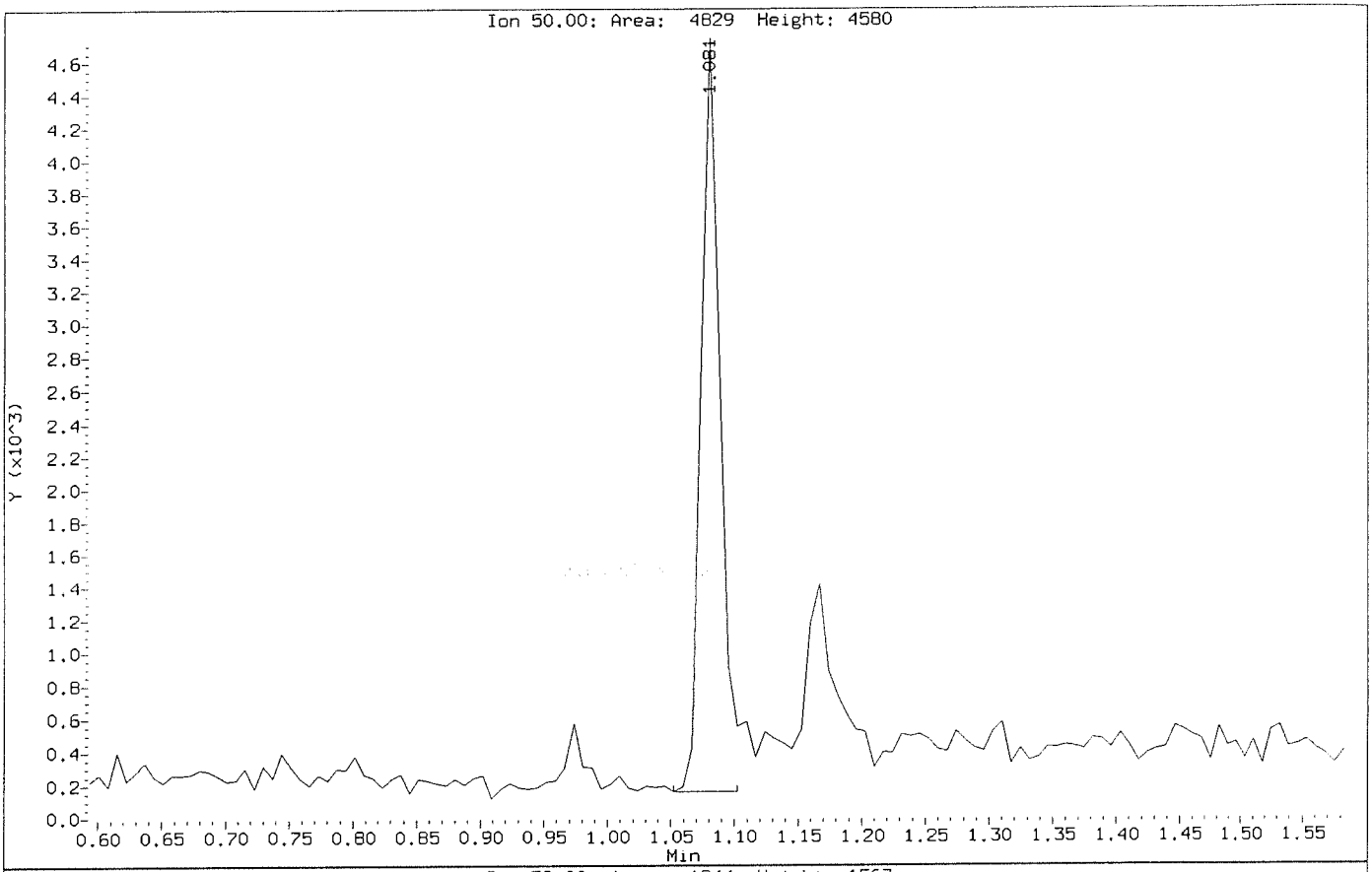
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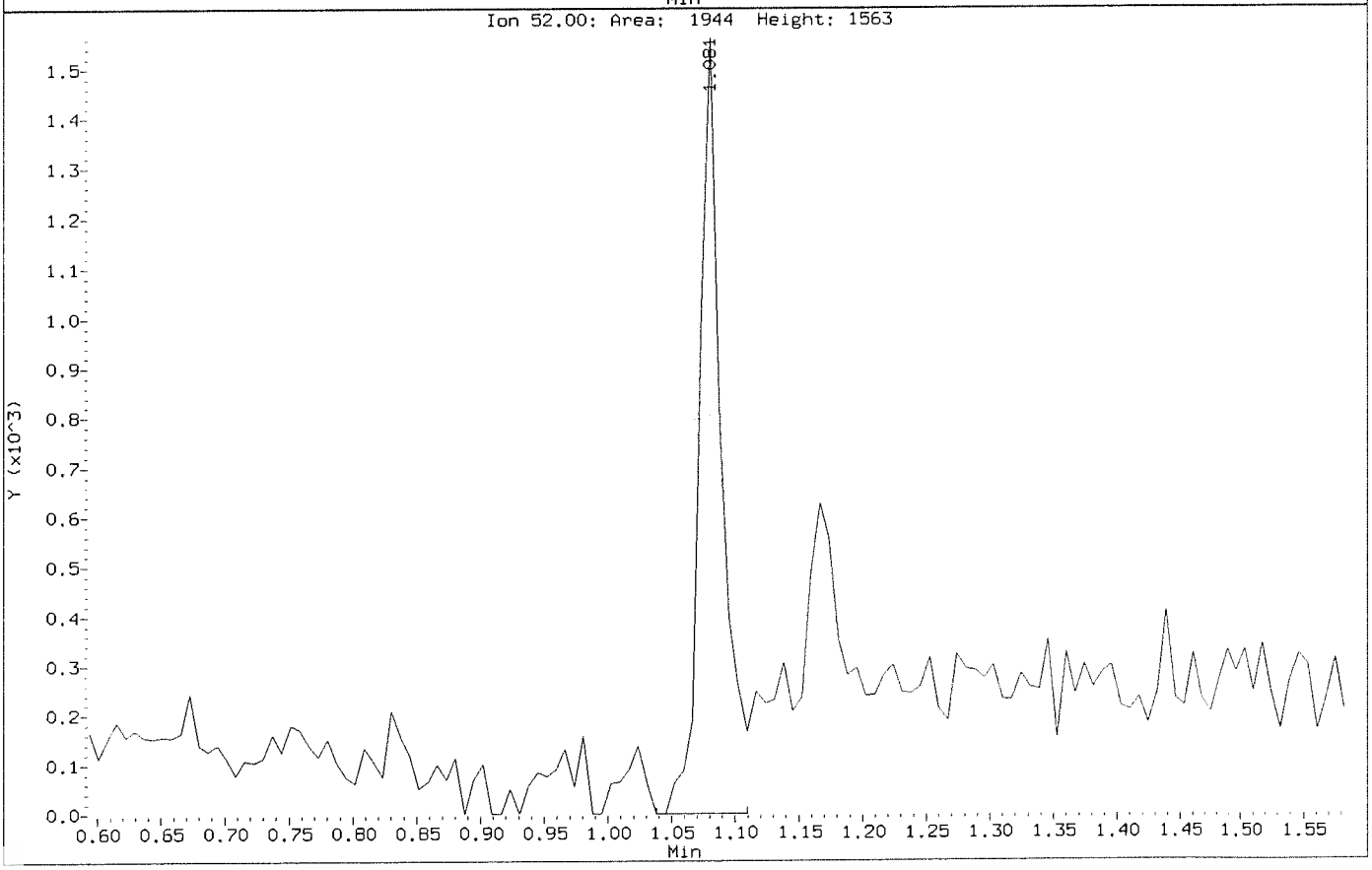
Compound: Chloromethane
CAS Number: 74-87-3



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Instrument: voa6.i
Client Sample ID: VSTD000.5

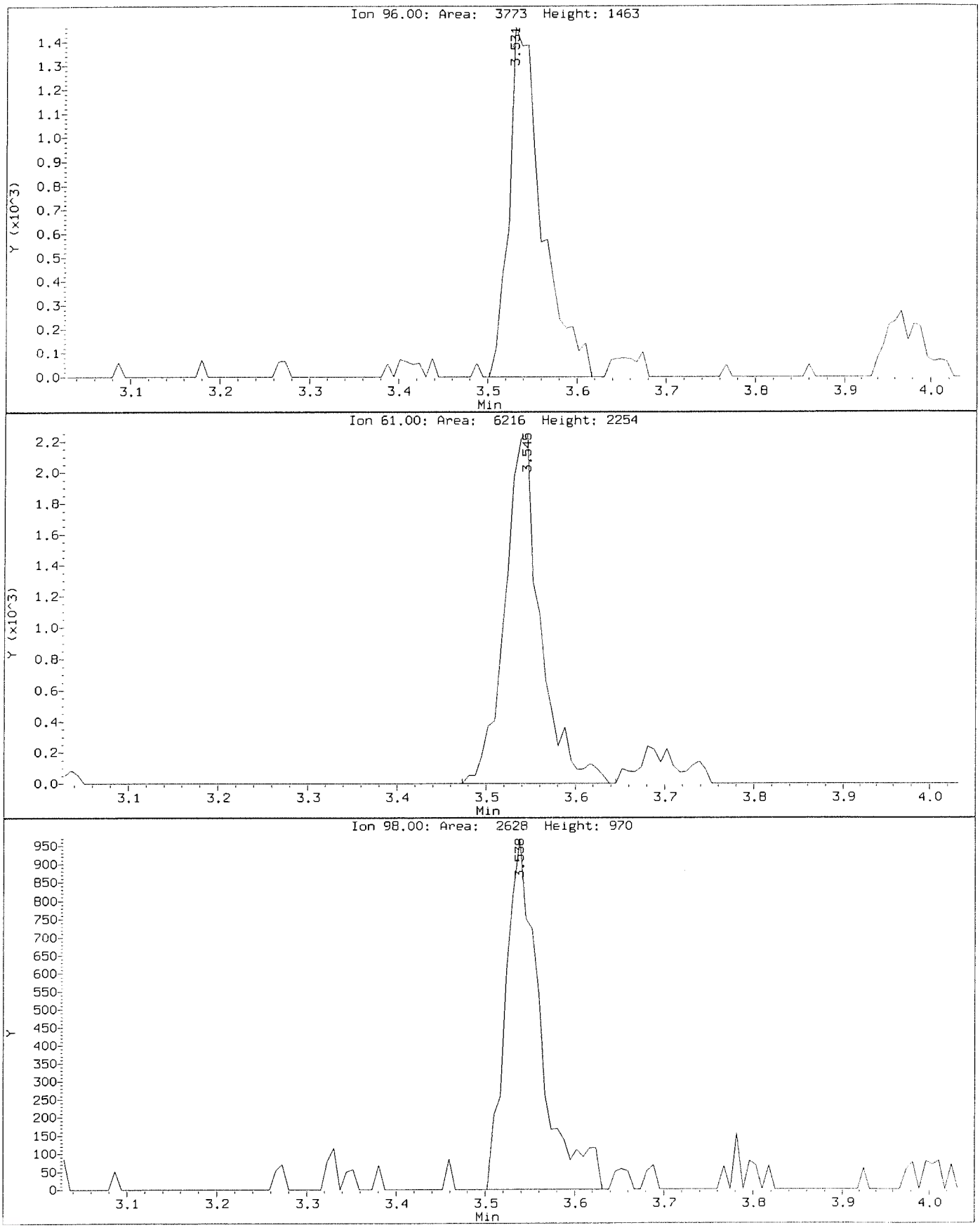
Compound: Chloromethane
CAS Number: 74-87-3





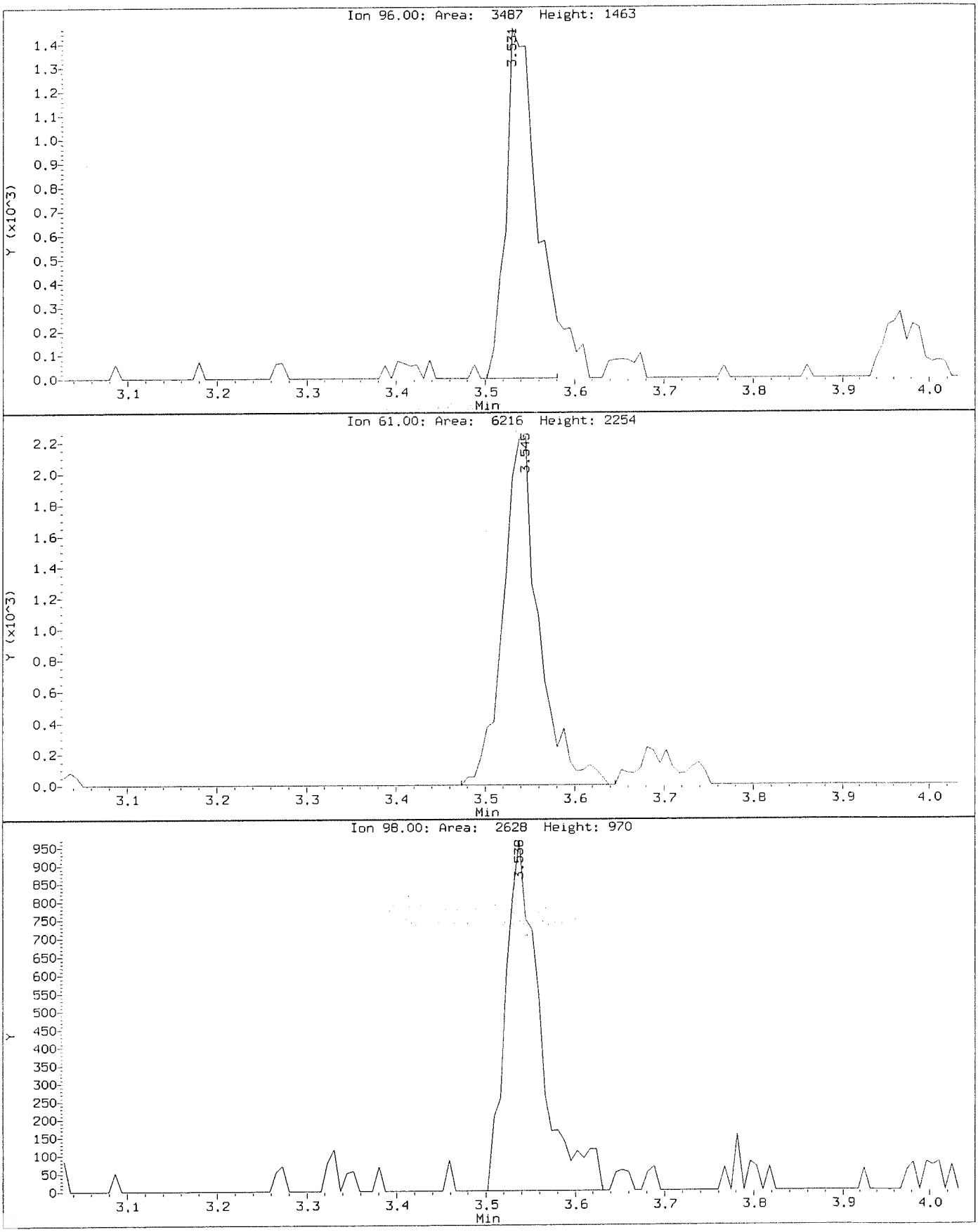
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



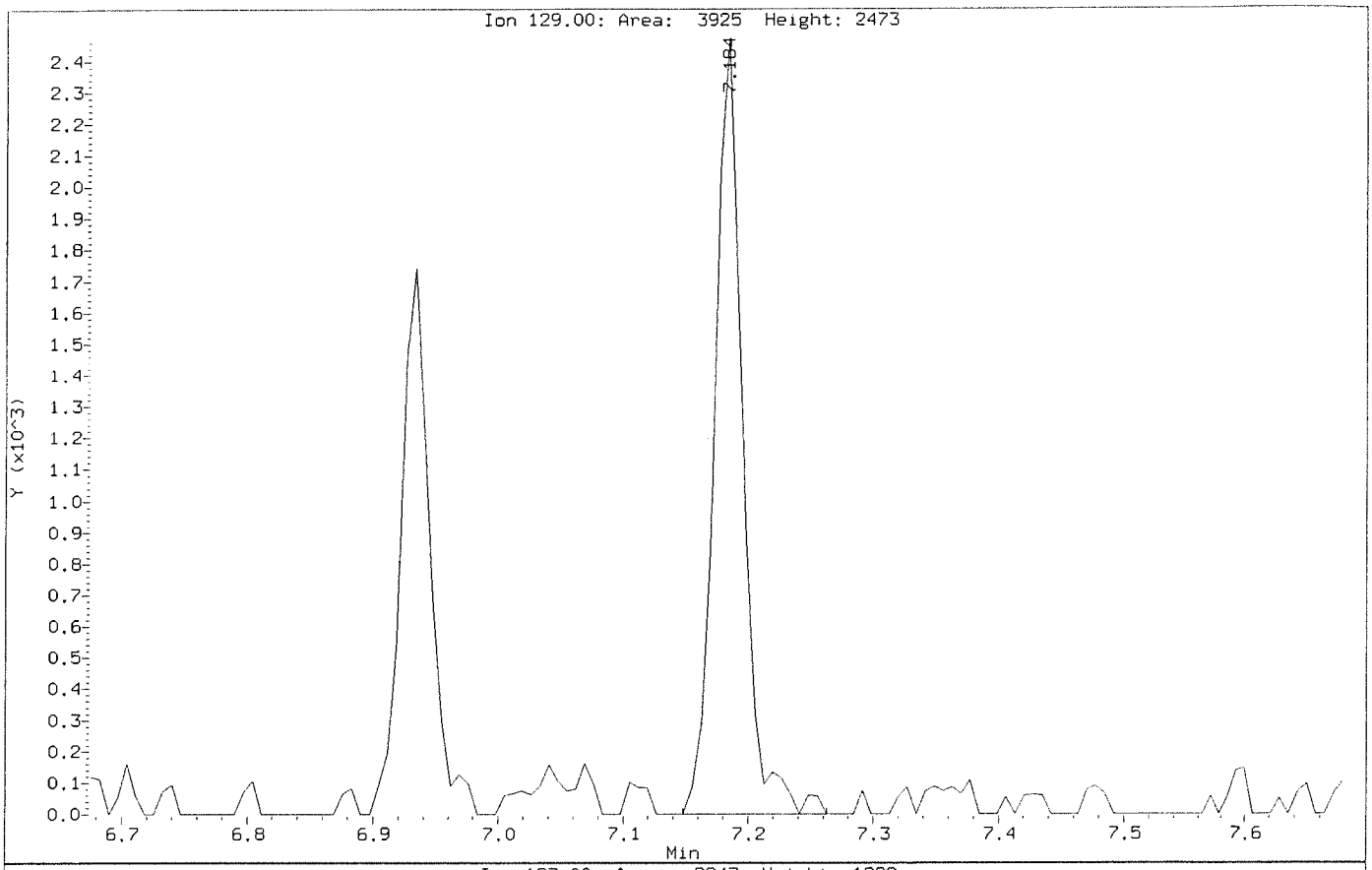
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Instrument: voa6.i
Client Sample ID: VSTD000.5

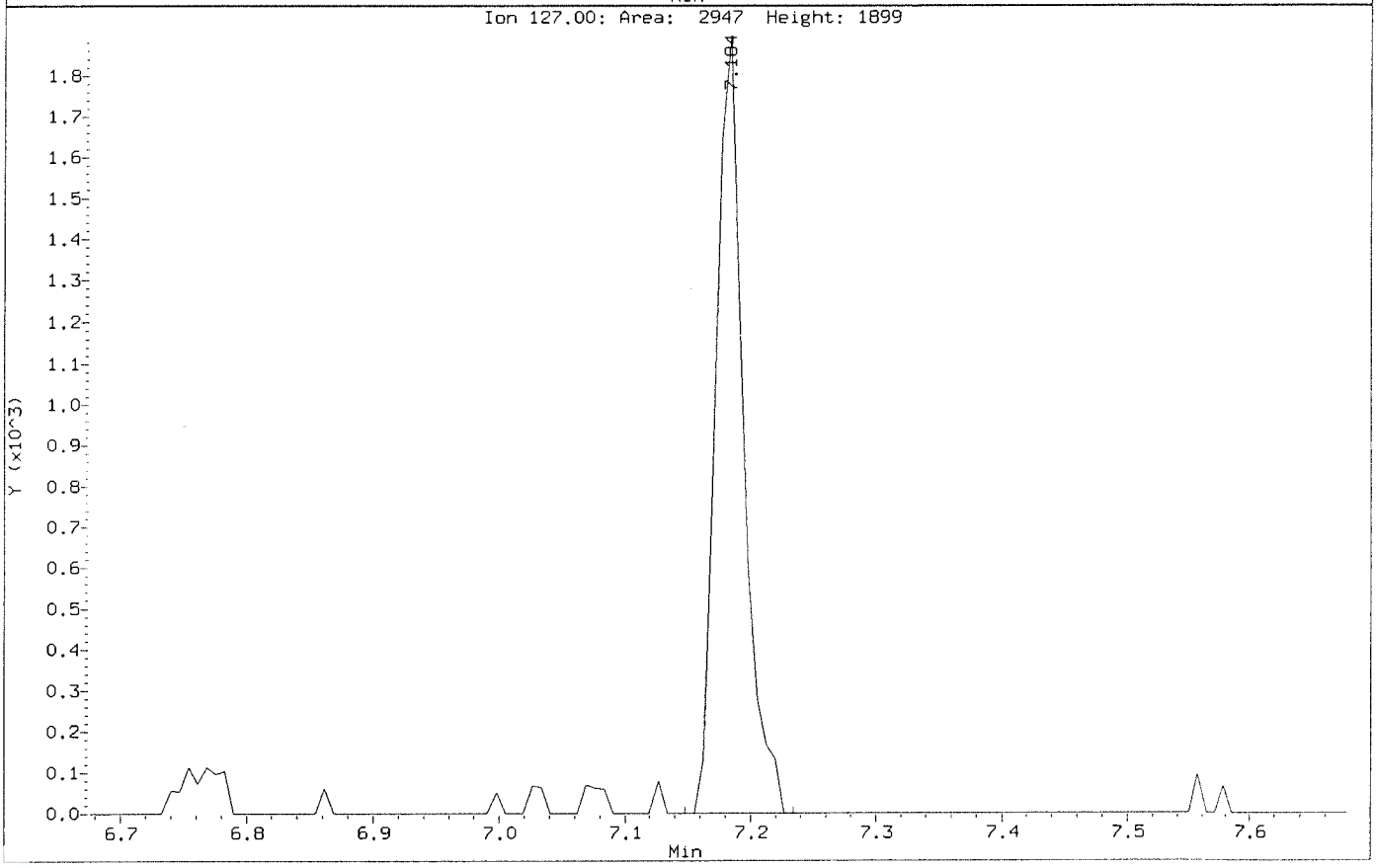
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

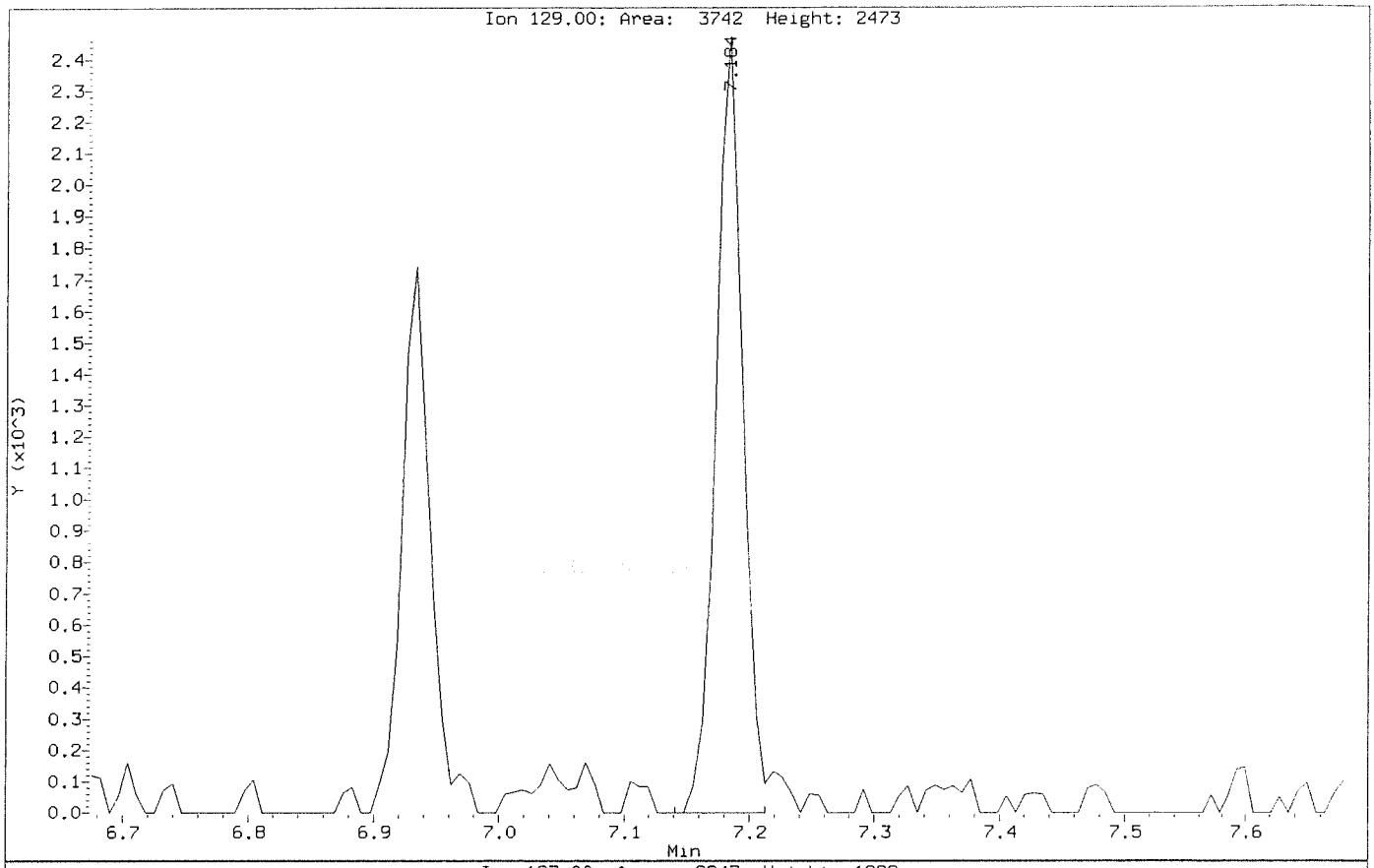
Compound: Dibromochloromethane
CAS Number: 124-48-1

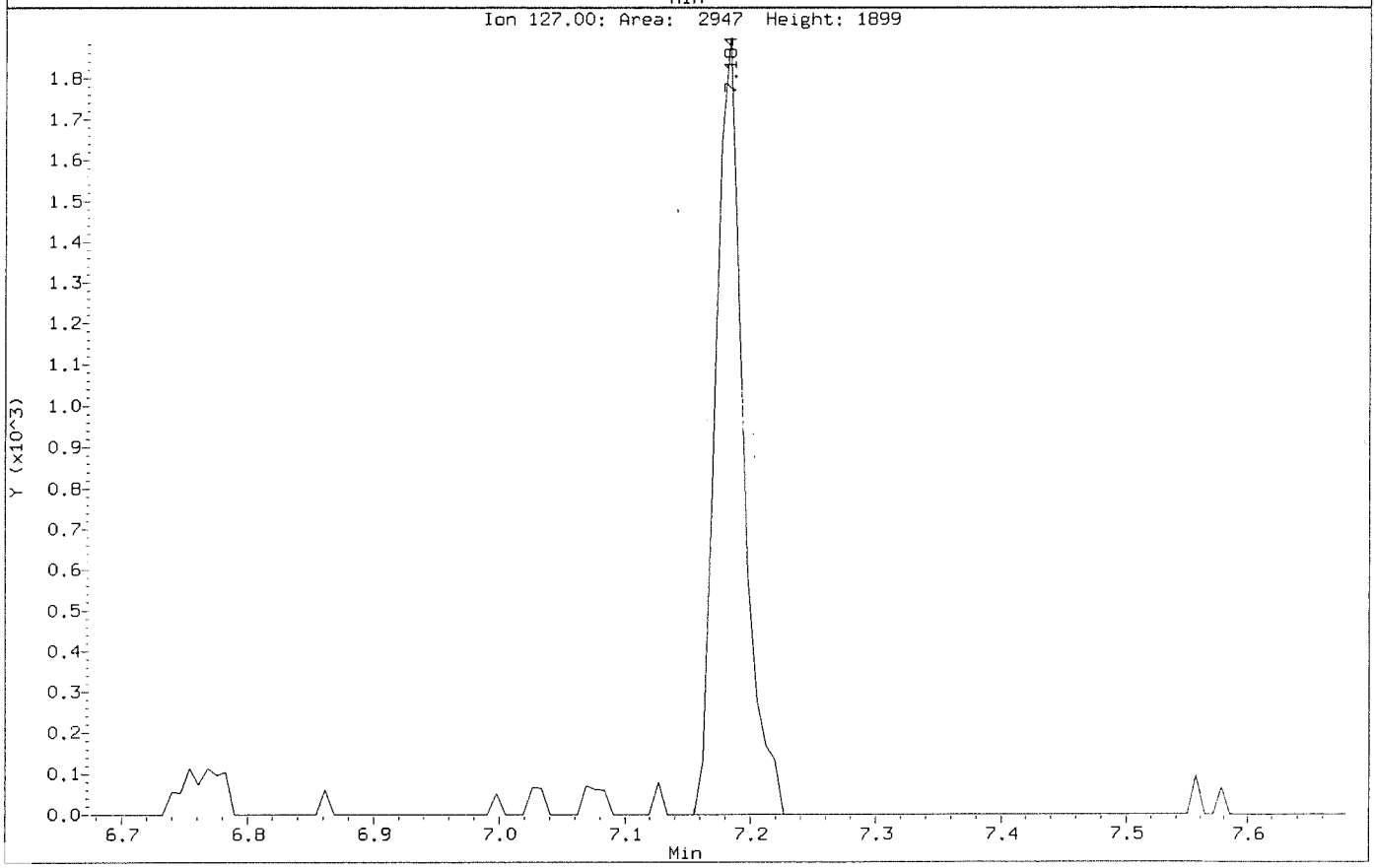




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Client Sample ID: VSTD000.5

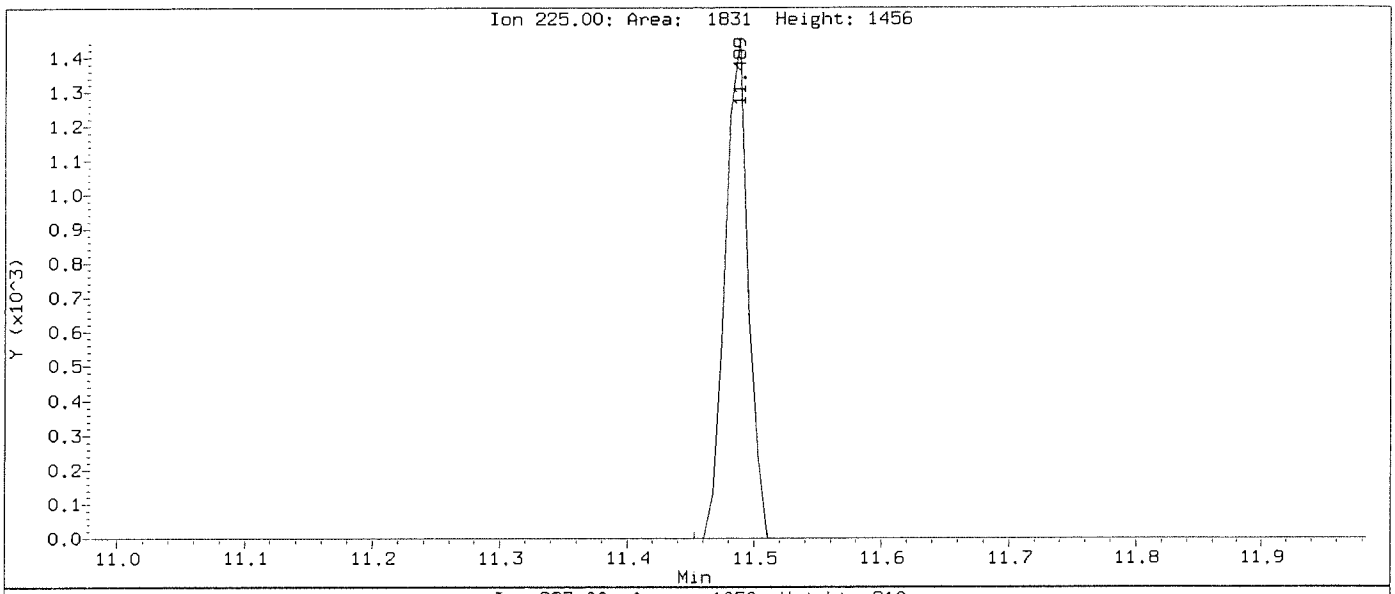
Compound: Dibromochloromethane
CAS Number: 124-48-1

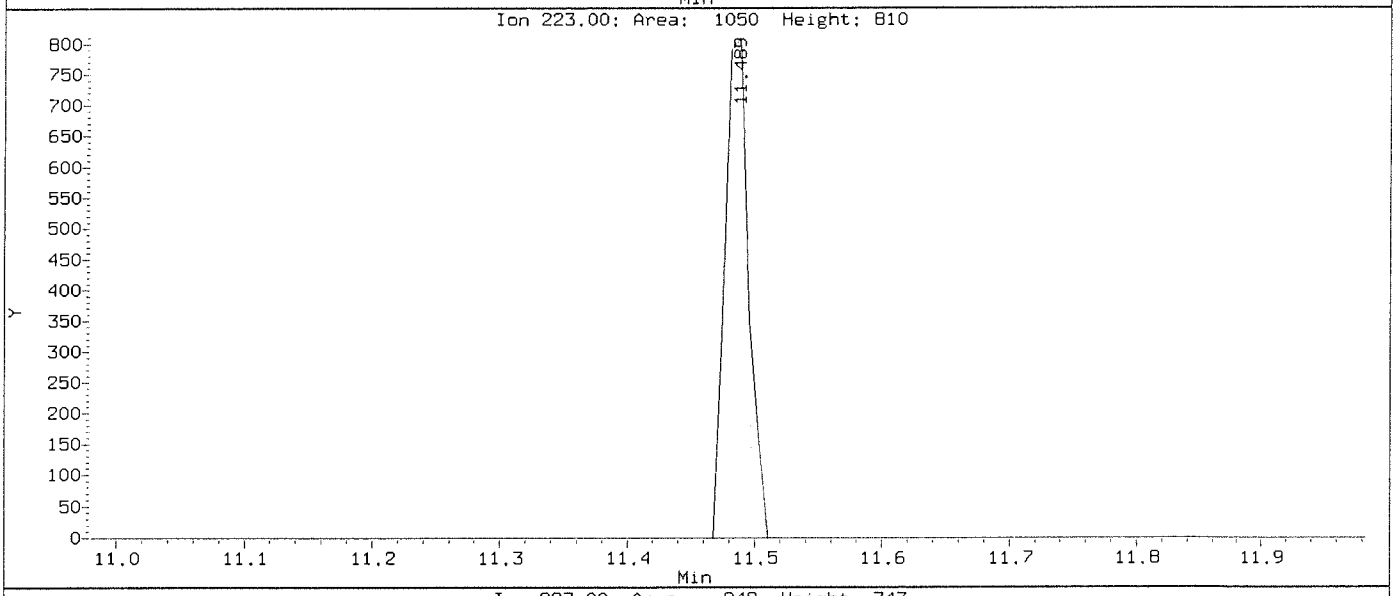


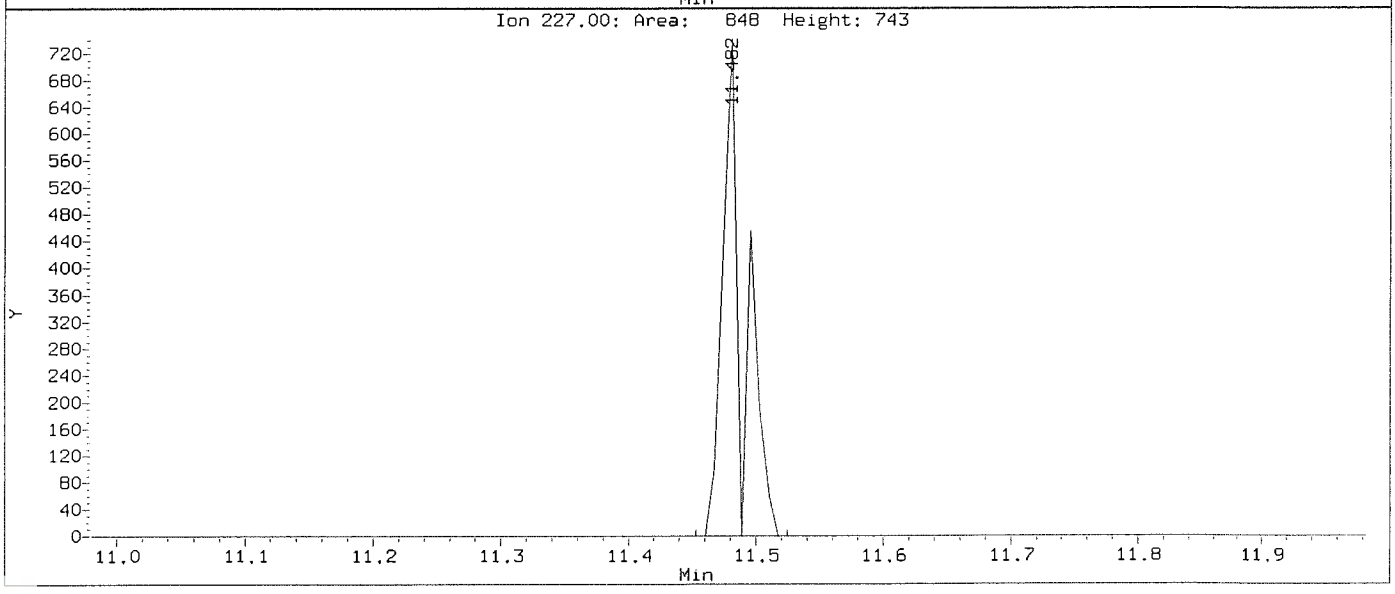


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

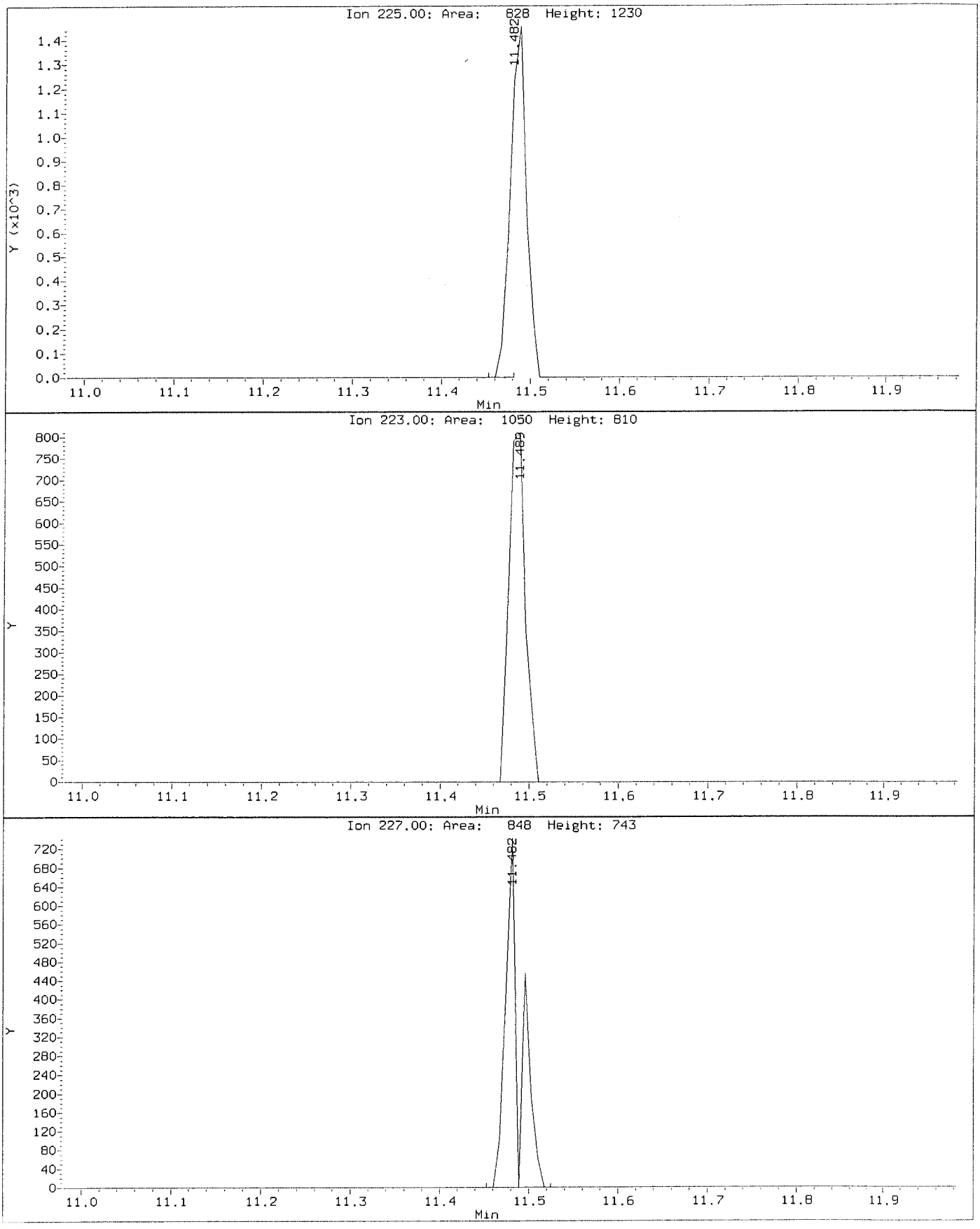






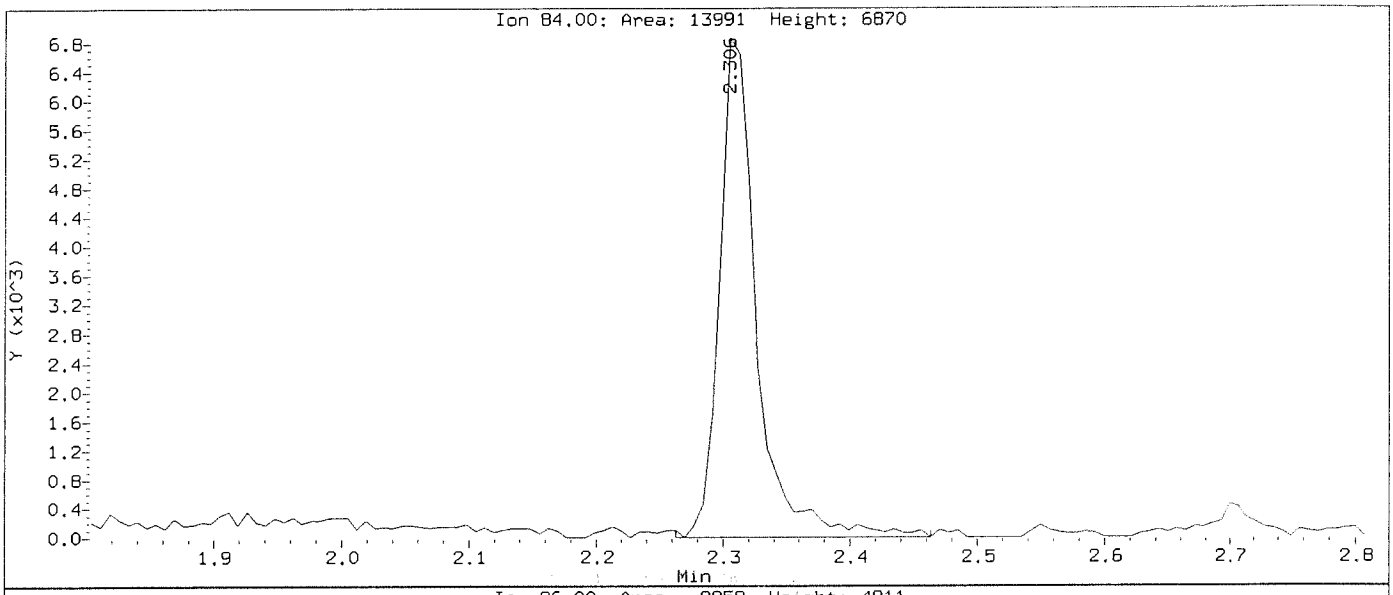
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Client Sample ID: VSTD000.5

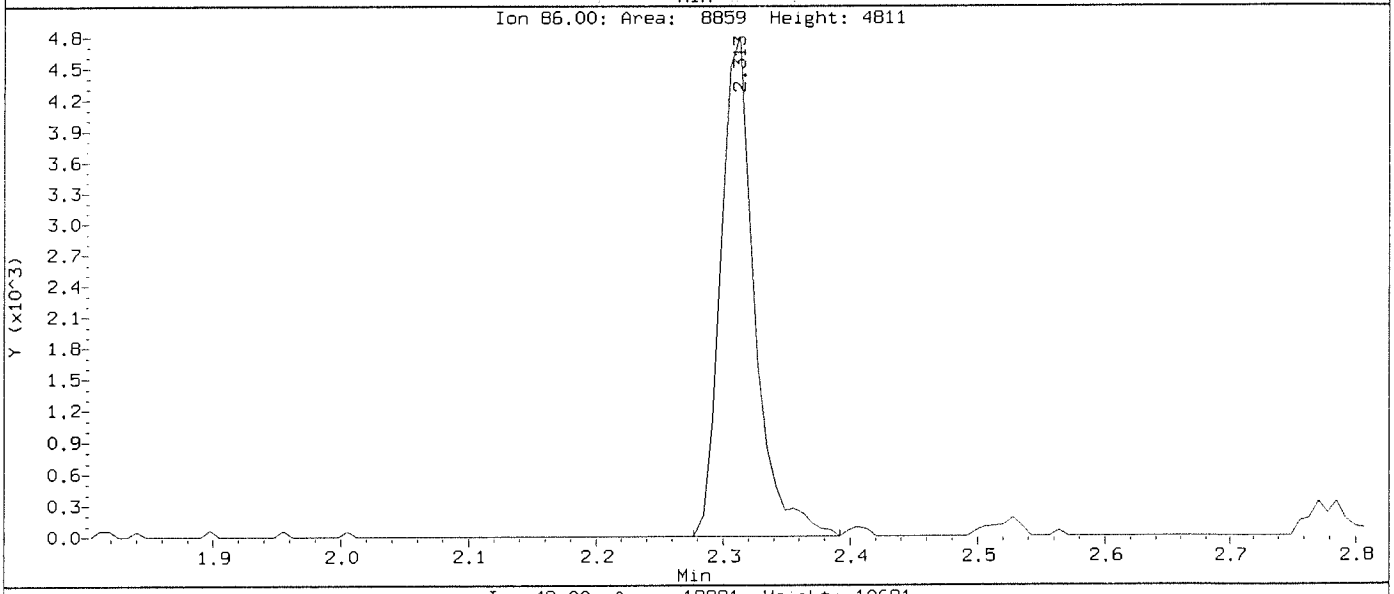
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

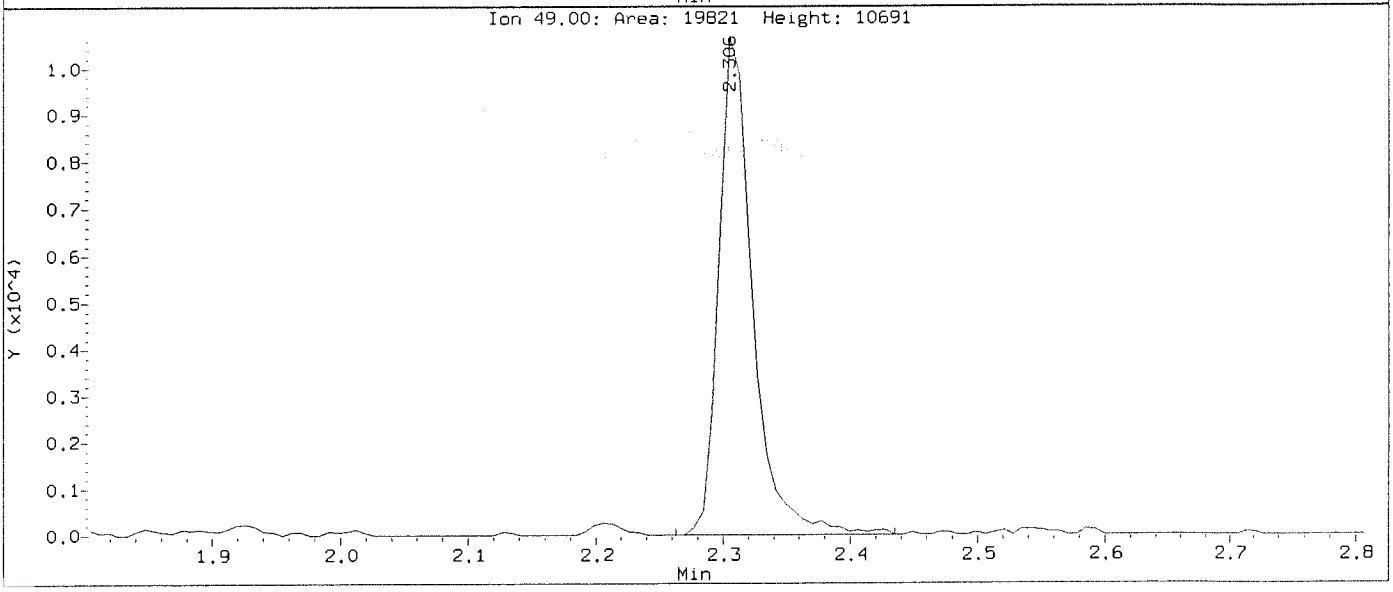


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

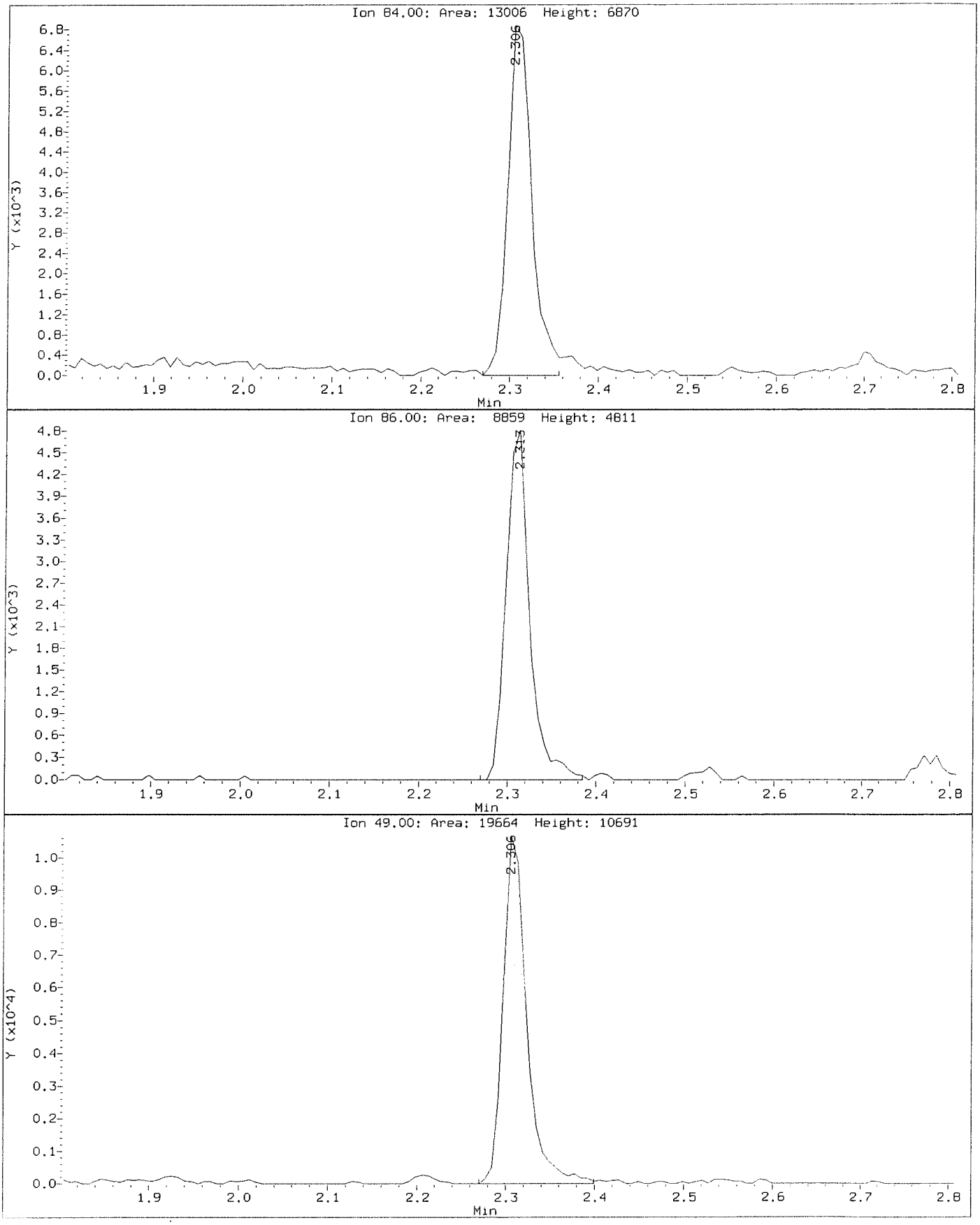






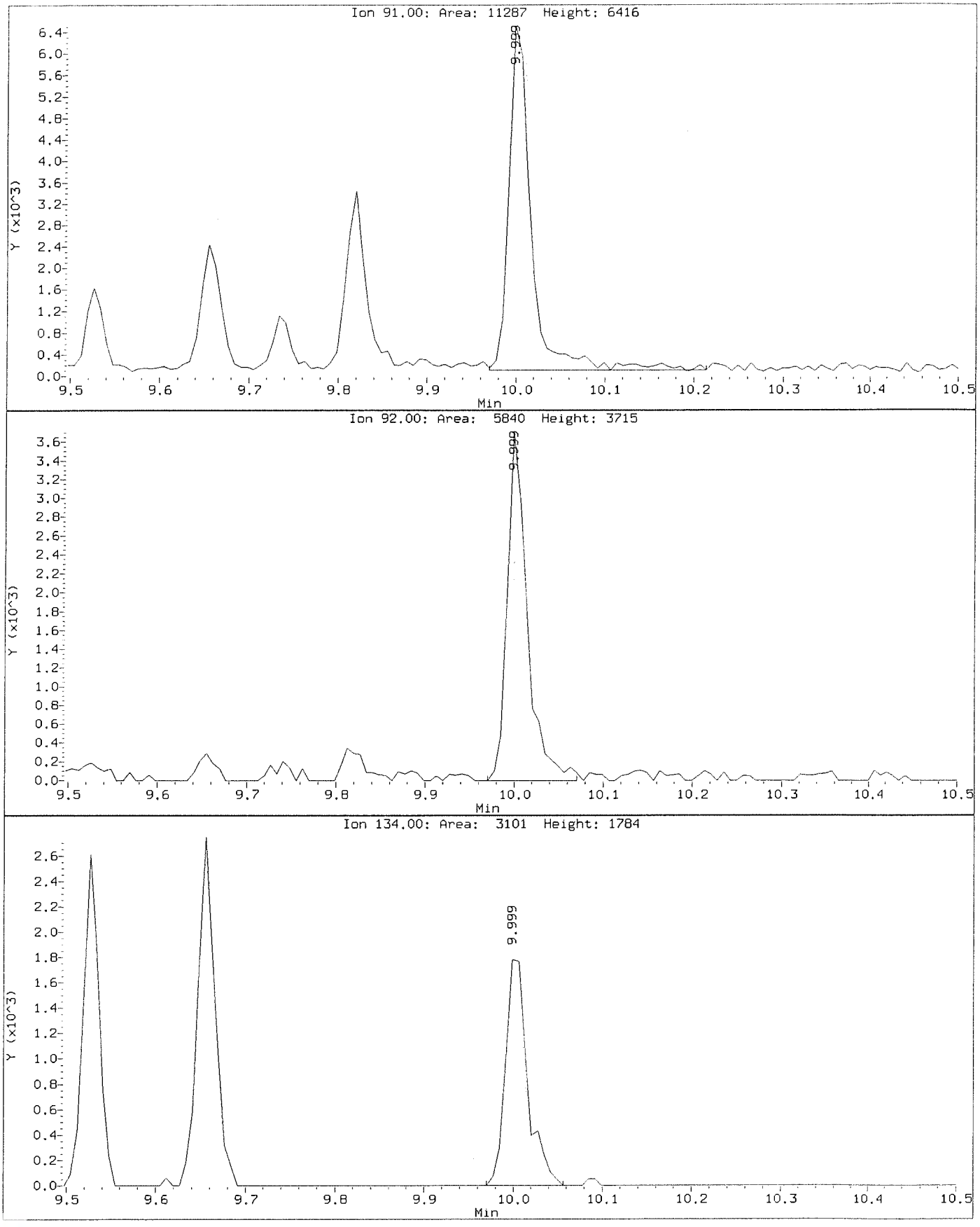
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



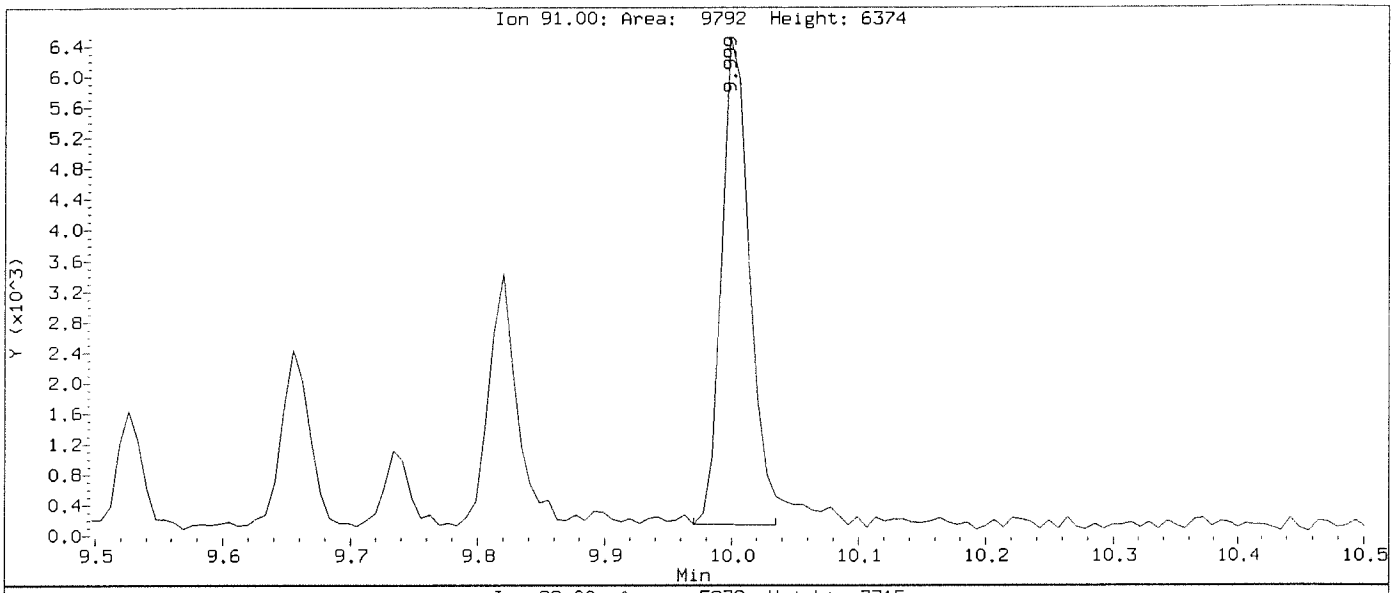
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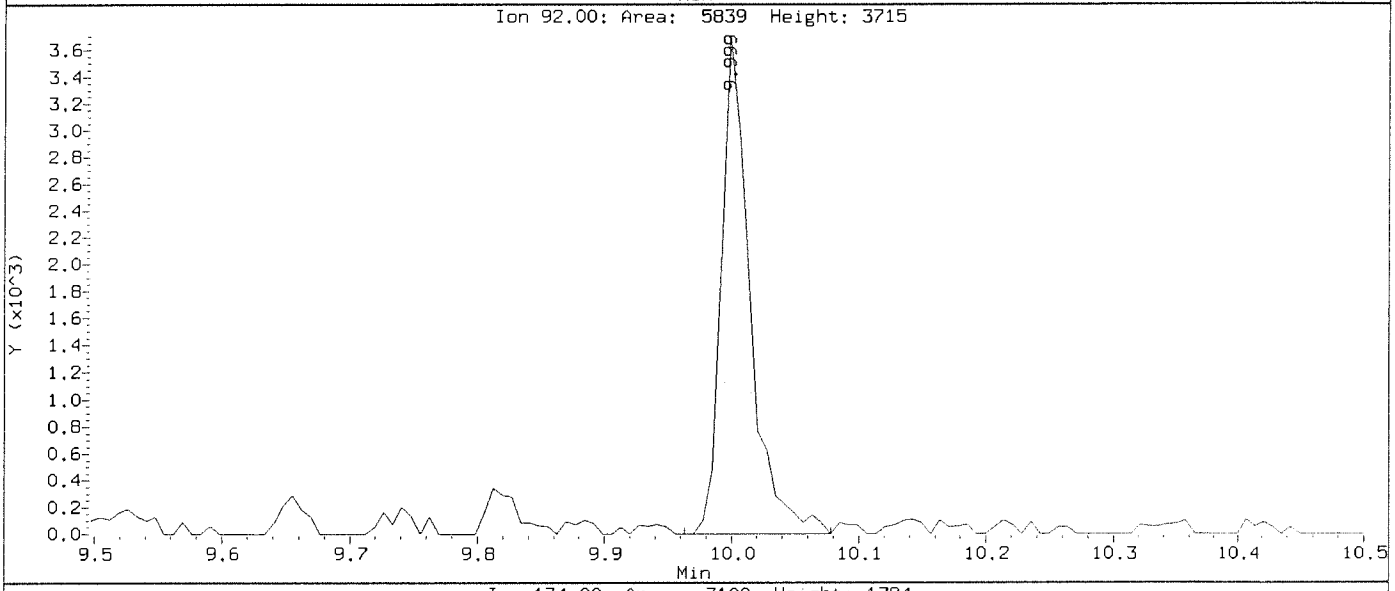
Compound: n-Butylbenzene
CAS Number: 104-51-8

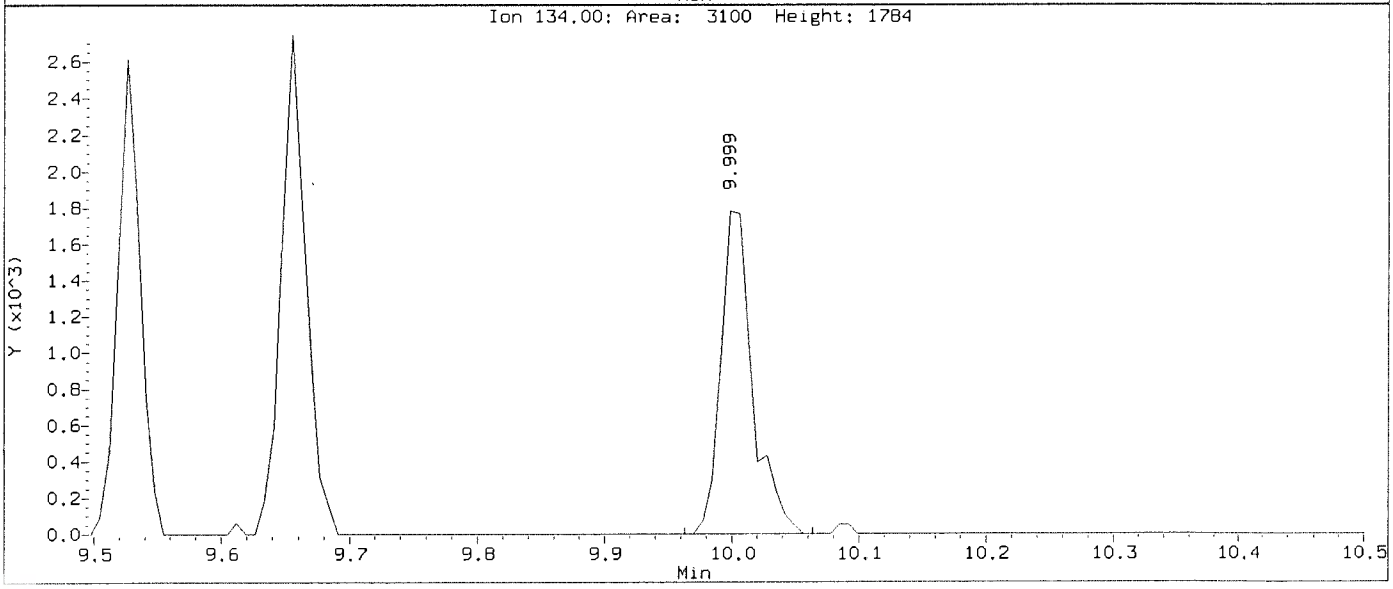


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

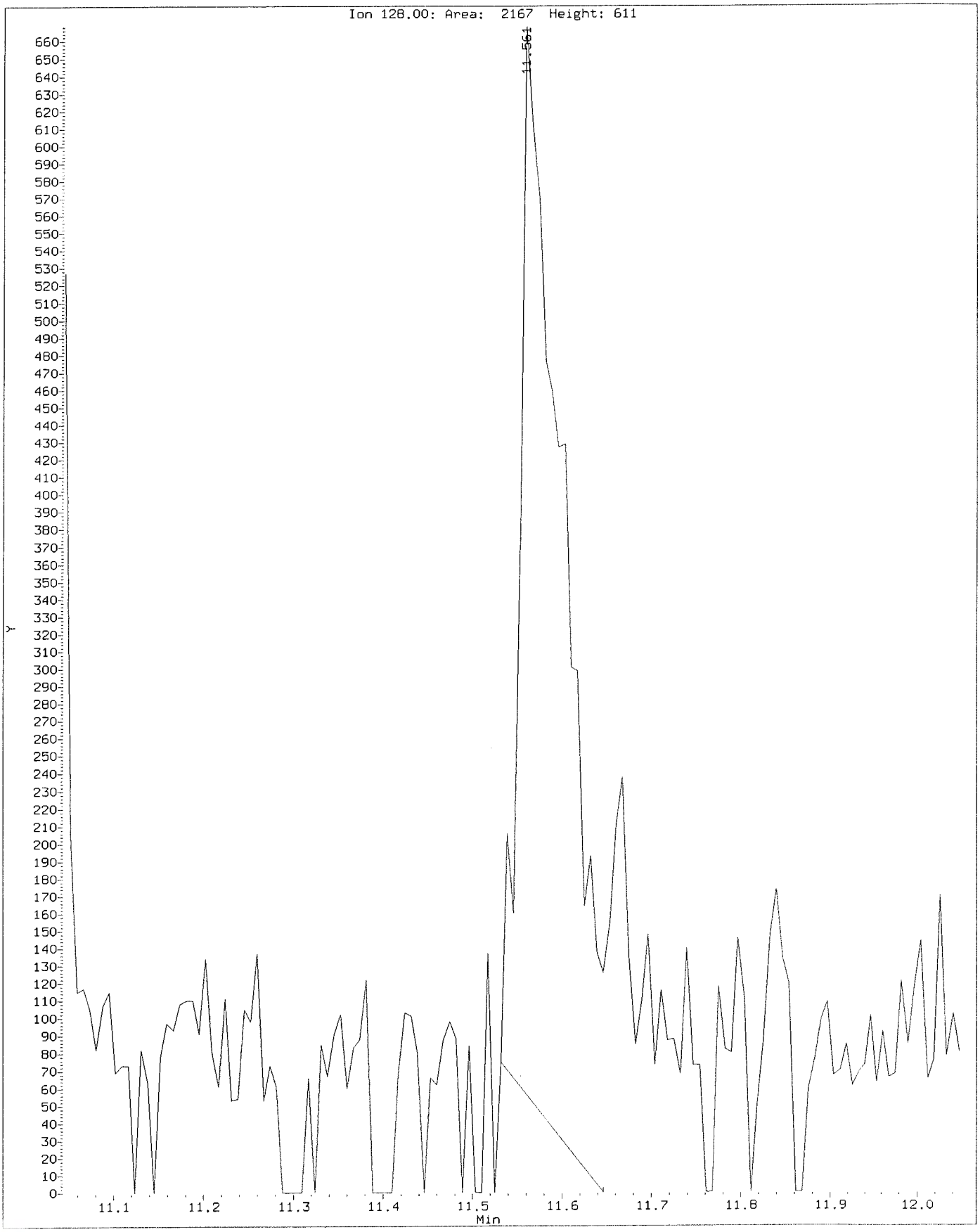






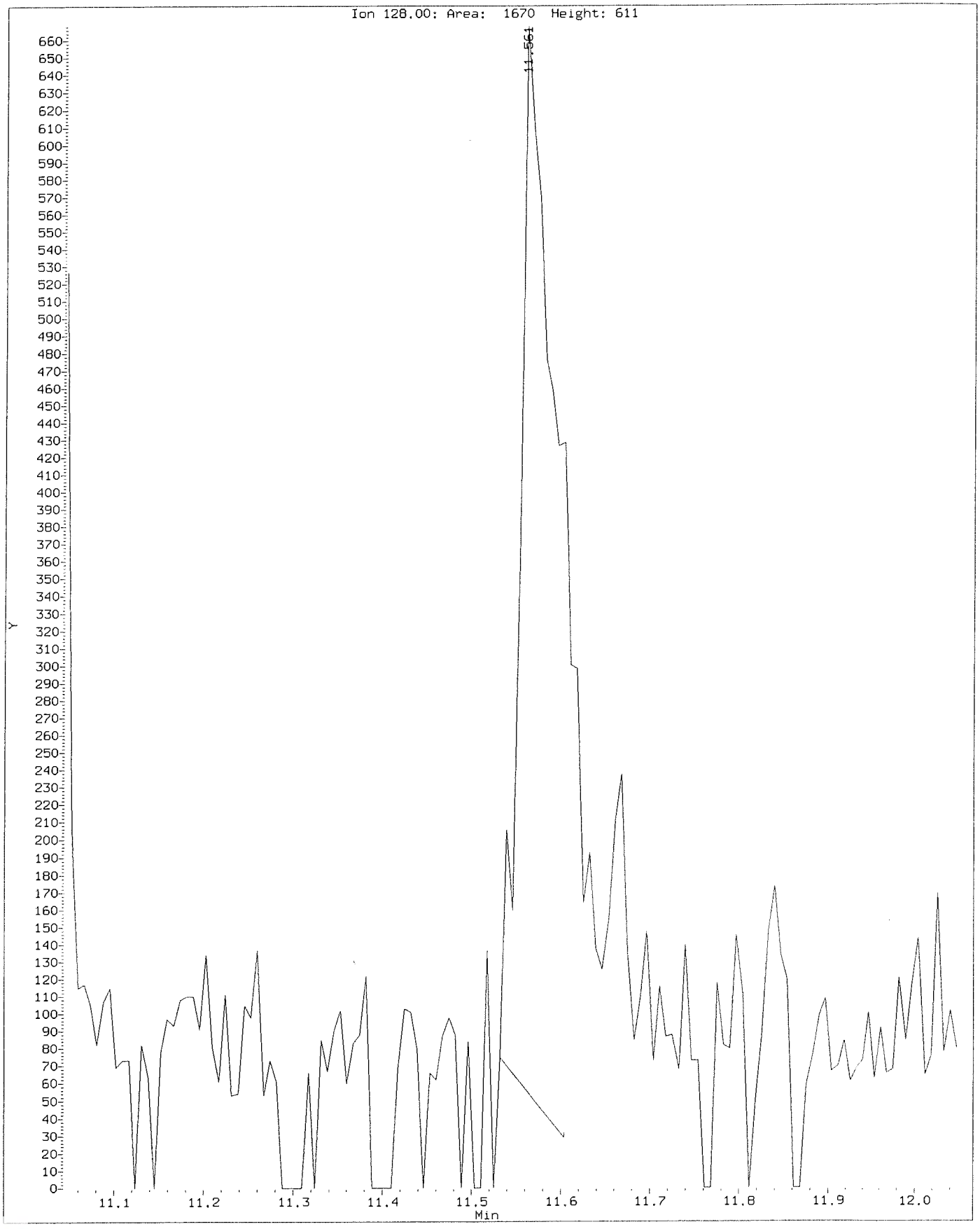
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



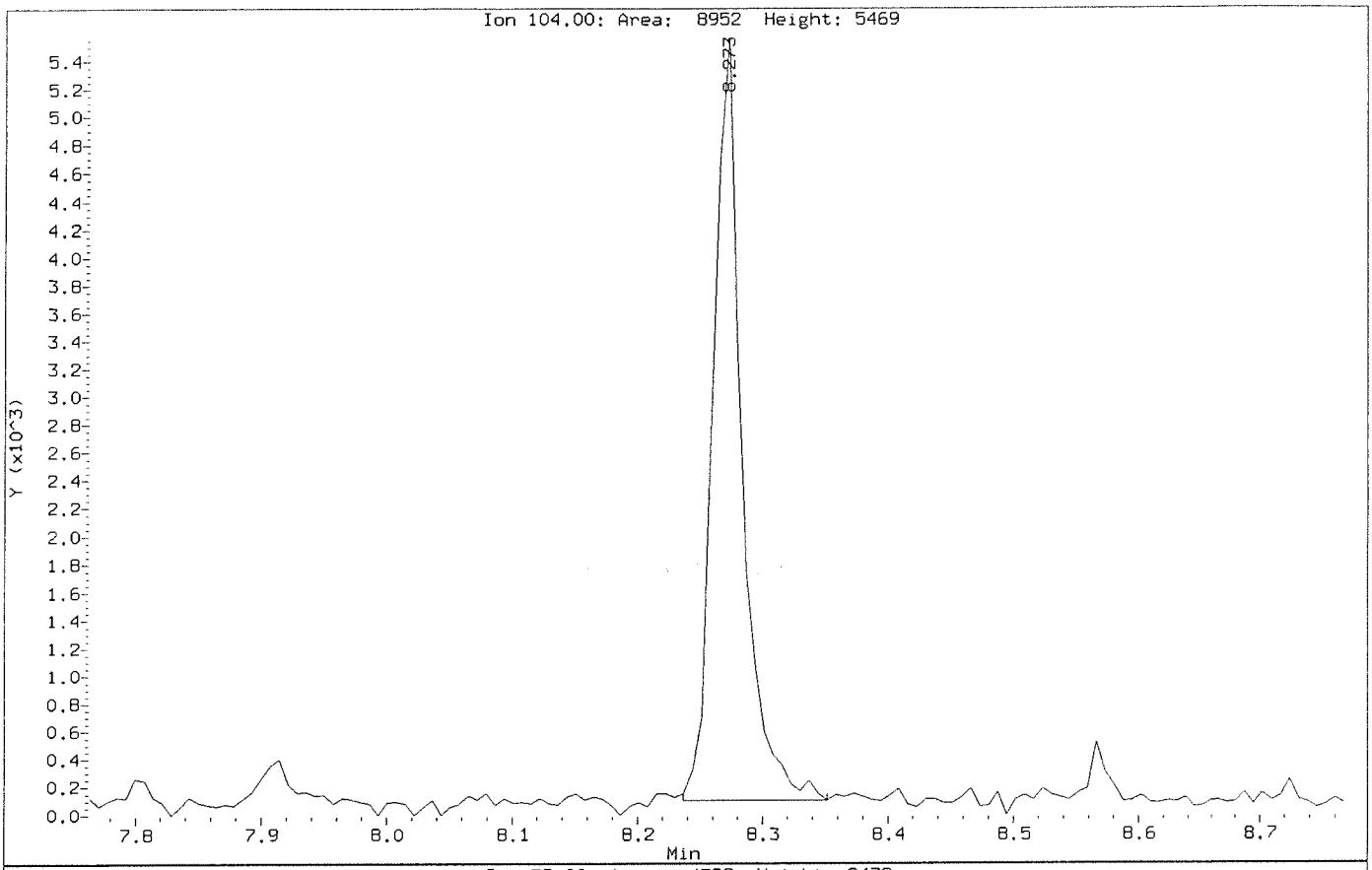
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Instrument: voa6.i
Client Sample ID: VSTD000.5

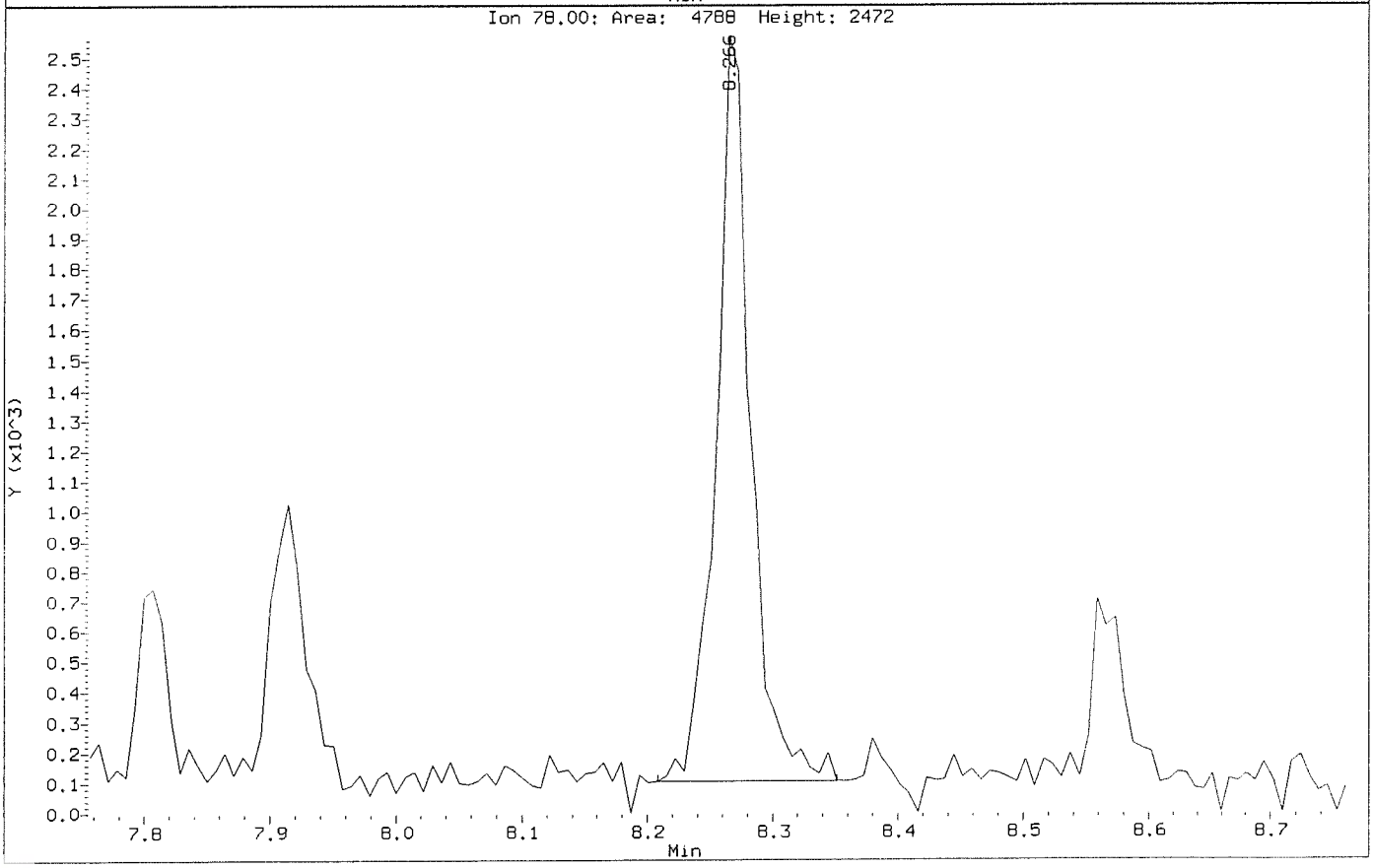
Compound: Naphthalene
CAS Number: 91-20-3



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Instrument: voa6.i
Client Sample ID: VSTD000.5

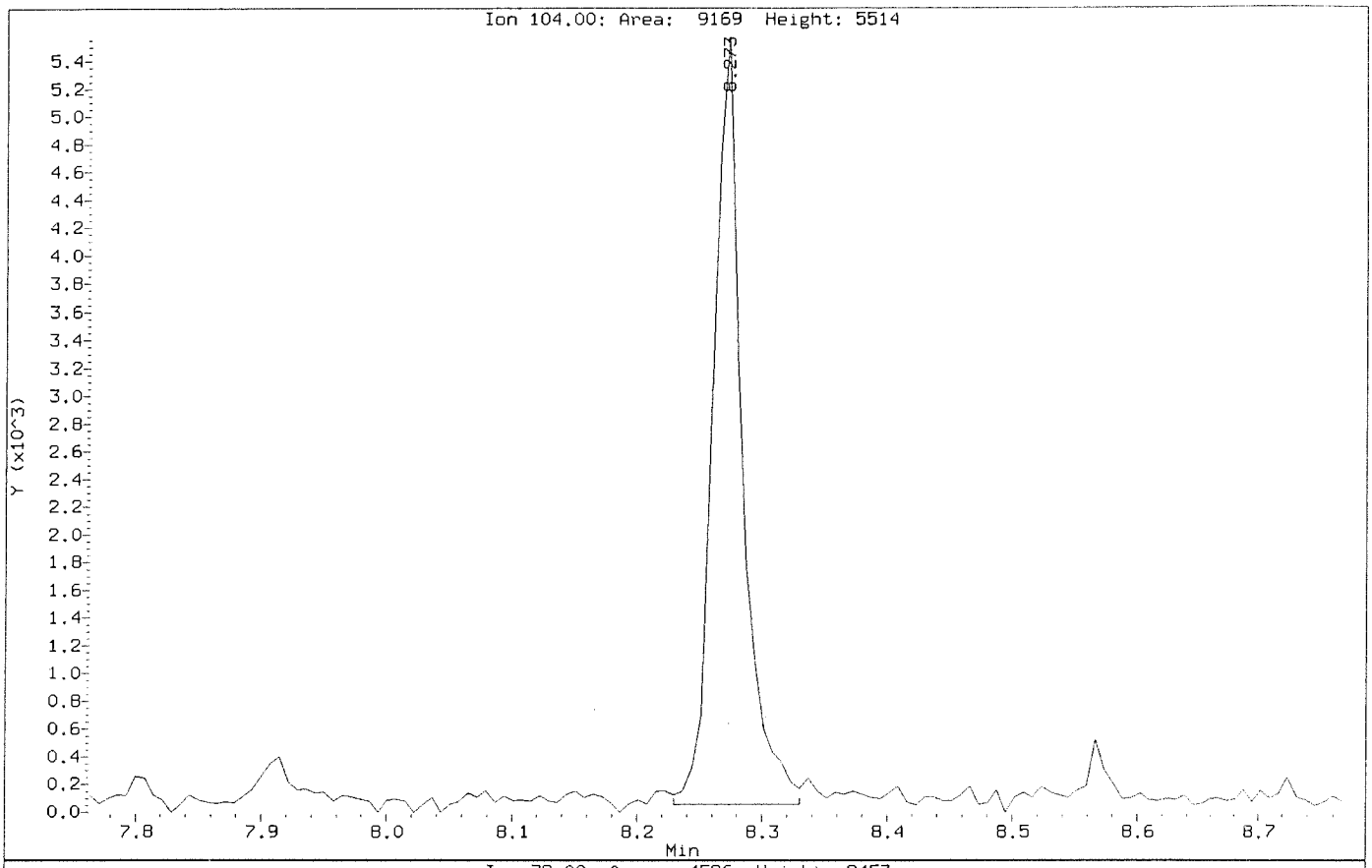
Compound: Styrene
CAS Number: 100-42-5

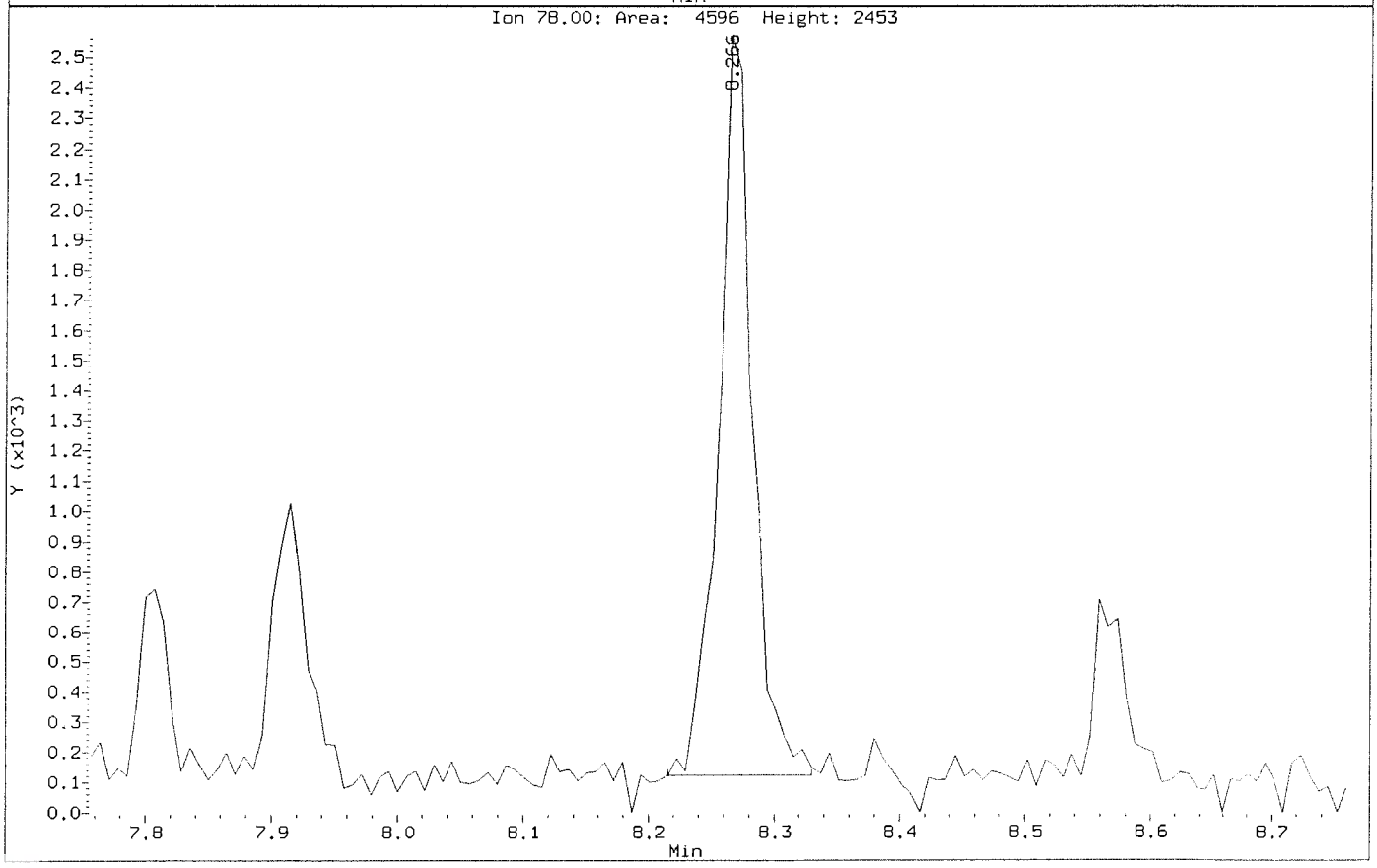




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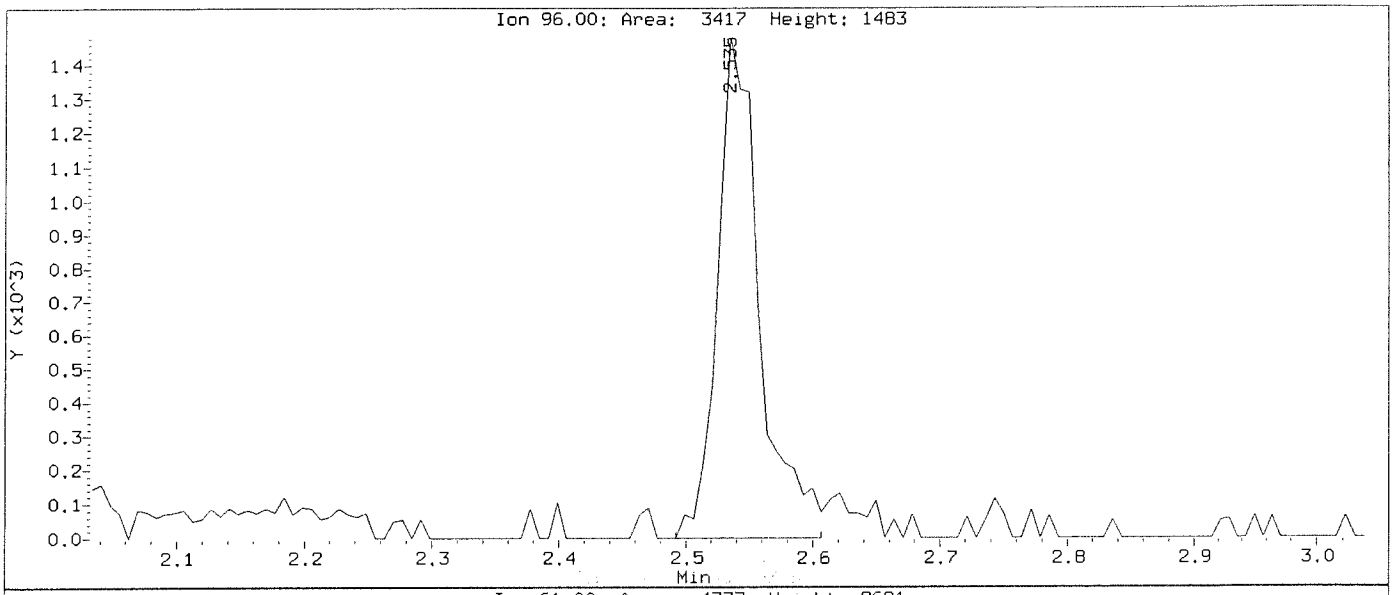
Compound: Styrene
CAS Number: 100-42-5

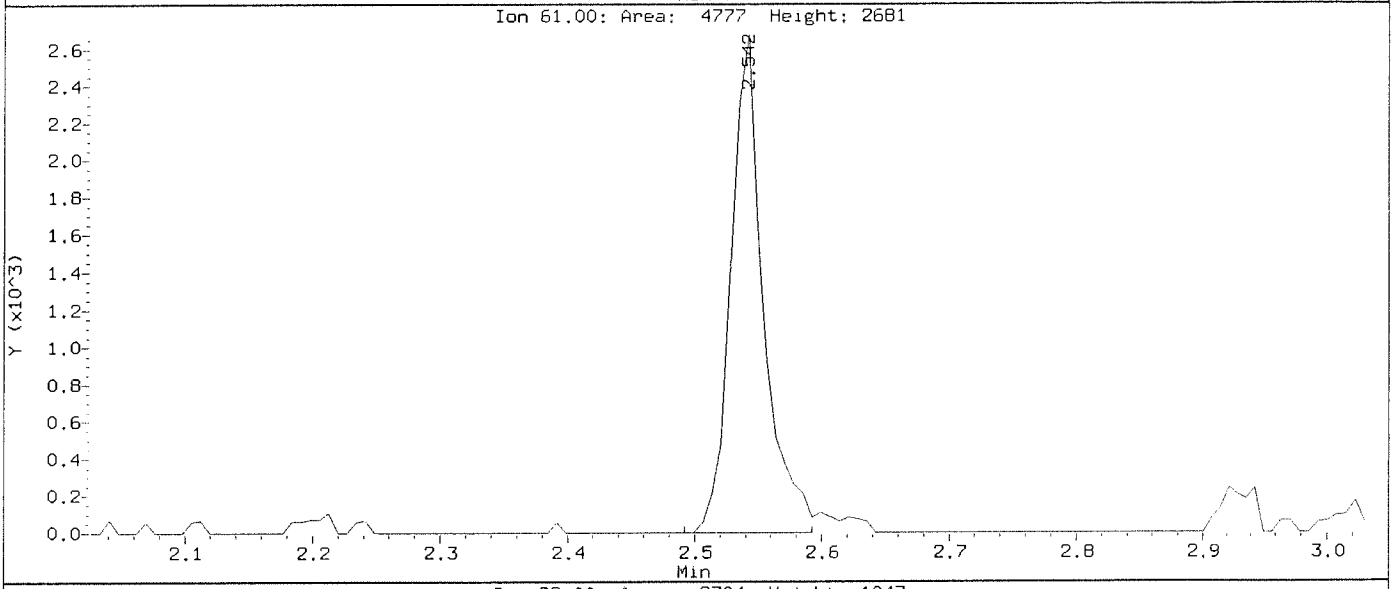


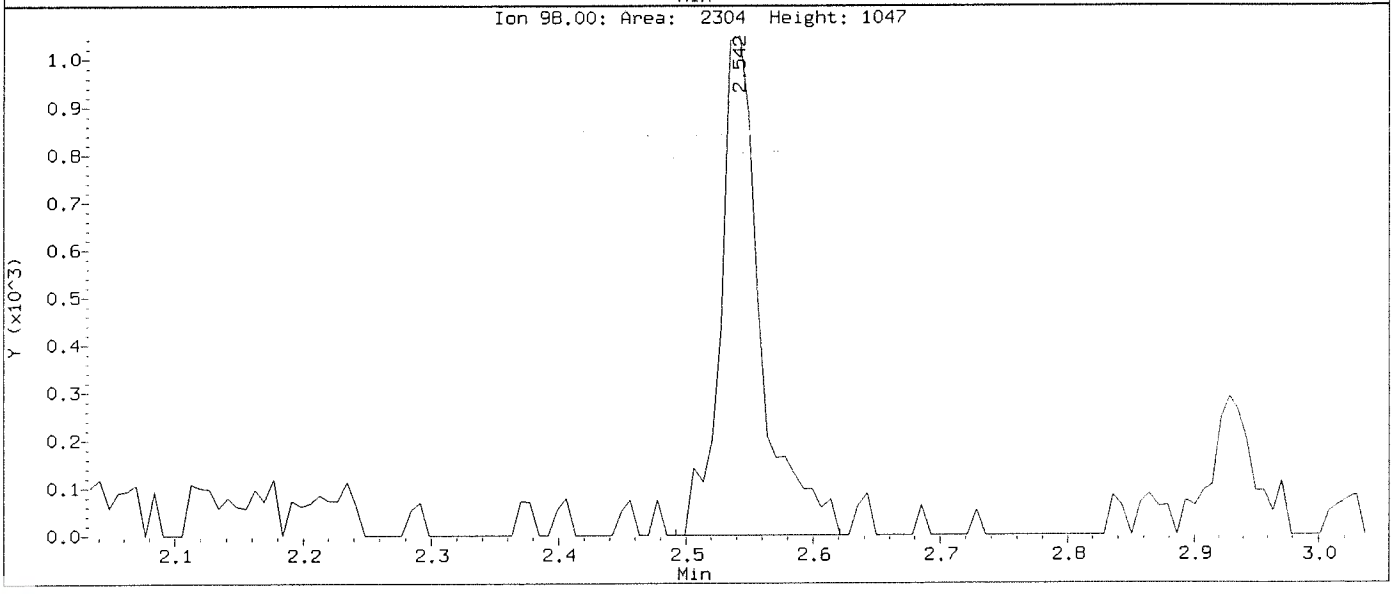


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

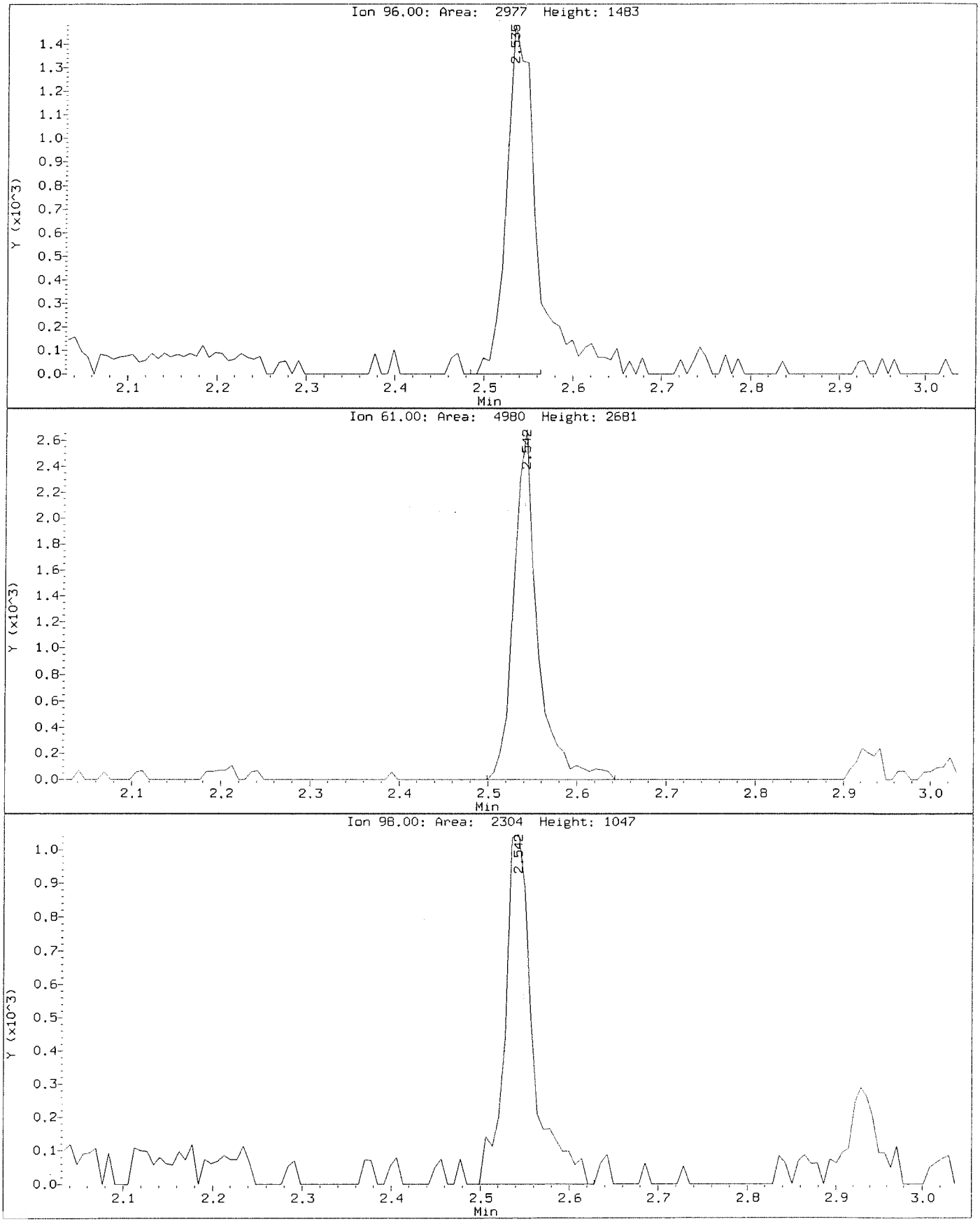






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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-AUG-2020 12:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:04 Cal File: X080303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

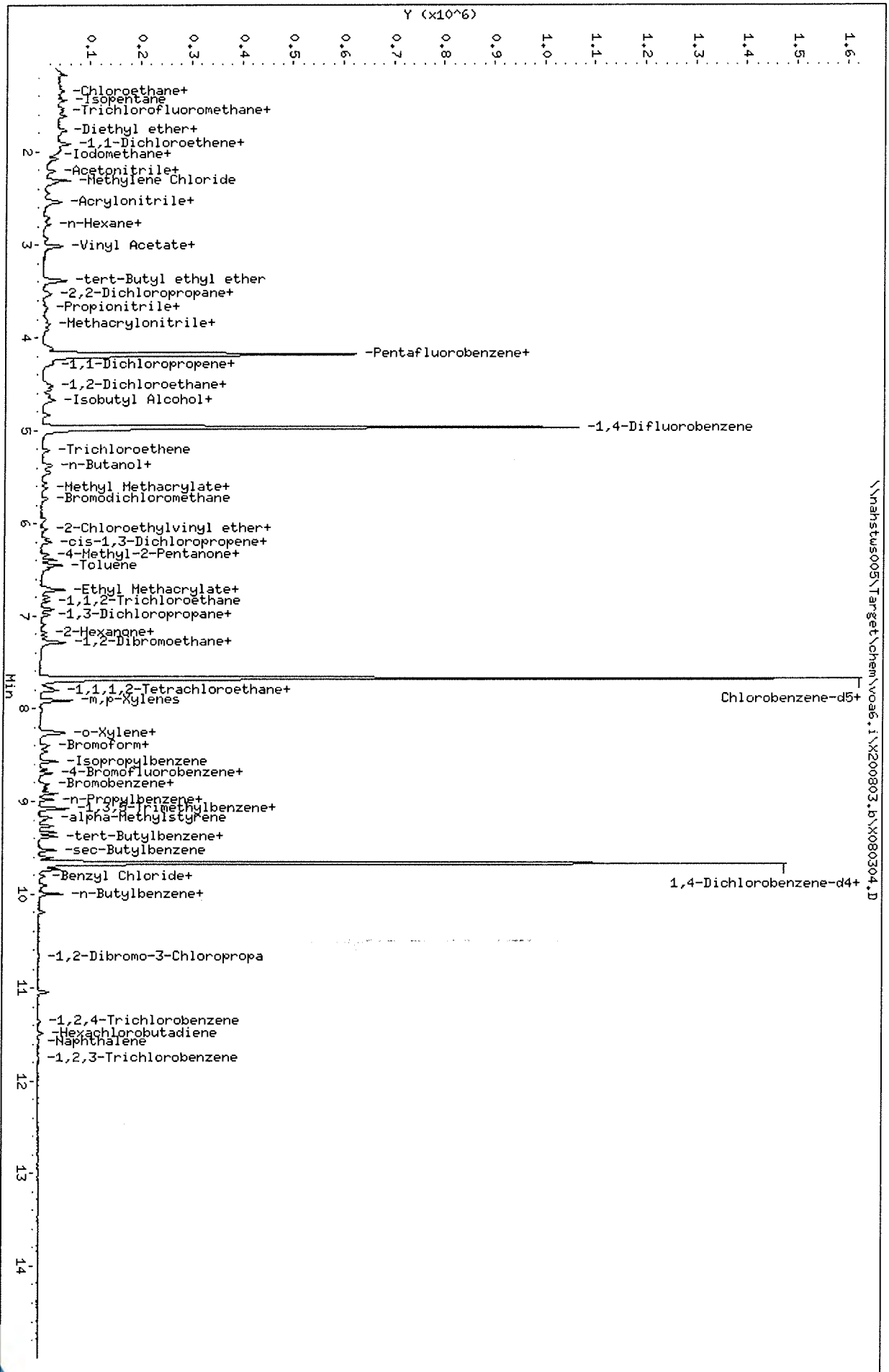
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539031	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	824218	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	742459	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	360447	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	5491	1.00000	1.03(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	6204	1.00000	0.98(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	20151	1.00000	1.11(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7948	1.00000	1.14(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5052	1.00000	0.89(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	7746	1.00000	0.93(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	5190	1.00000	1.27(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	3800	1.00000	0.89(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	8591	1.00000	0.81(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	4098	1.00000	0.95(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	6555	1.00000	0.94(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1040	1.00000	0.95(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	4319	1.00000	0.81(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1766	1.00000	0.33(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	16065	1.00000	0.83(a)
89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	461	1.00000	1.67(aM)
57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	5188	1.00000	0.95(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	9203	1.00000	0.90(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	7158	1.00000	0.89(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	5327	1.00000	0.88(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	16539	1.00000	0.87(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	9693	1.00000	0.85(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	7511	1.00000	0.90(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	10004	1.00000	0.89(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.838)	6234	1.00000	0.81(a)
24	2-Butanone	43	3.624	3.624	(0.865)	4199	2.00000	1.58(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	14320	1.00000	0.91(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	7382	2.00000	1.58(a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	16588	1.00000	0.91(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	17233	1.00000	0.86(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	11981	2.00000	1.74(a)
10	Acetone	43	1.976	1.976	(0.472)	5964	2.00000	2.13(aM)
37	Benzene	78	4.526	4.526	(0.911)	18524	1.00000	0.90(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	6199	1.00000	0.87(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	3452	1.00000	1.06(a)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	6632	1.00000	0.89(a)
66	Bromoform	173	8.416	8.416	(1.097)	3380	1.00000	0.82(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	4659	1.00000	1.89(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	24456	2.00000	1.84(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	7095	1.00000	0.96(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	12980	1.00000	0.89(a)
7	Chloroethane	64	1.403	1.403	(0.335)	3283	1.00000	0.85(a)
28	Chloroform	83	3.917	3.917	(0.935)	9174	1.00000	0.95(a)
3	Chloromethane	50	1.081	1.081	(0.258)	6446	1.00000	0.85(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	5626	1.00000	0.94(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	7619	1.00000	0.87(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	5073	1.00000	0.85(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	3381	1.00000	0.94(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	5003	1.00000	0.94(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	7129	1.00000	0.94(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	1845	1.00000	0.95(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	20764	1.00000	0.94(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	16885	2.00000	1.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	14851	1.00000	1.36(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	13125	1.00000	0.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	22125	1.00000	0.85(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3475	1.00000	1.12(a)
63	o-Xylene	106	8.244	8.244	(1.075)	8262	1.00000	0.92(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	19175	1.00000	0.87(a)
64	Styrene	104	8.265	8.265	(1.078)	13312	1.00000	0.86(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	14112	1.00000	0.86(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	4400	1.00000	0.93(a)
50	Toluene	91	6.453	6.453	(0.841)	20029	1.00000	0.92(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	4813	1.00000	0.95(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	7143	1.00000	0.89(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	4900	1.00000	0.83(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	7321	1.00000	0.92(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	5889	1.00000	0.84(a)

QC Flag Legend

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

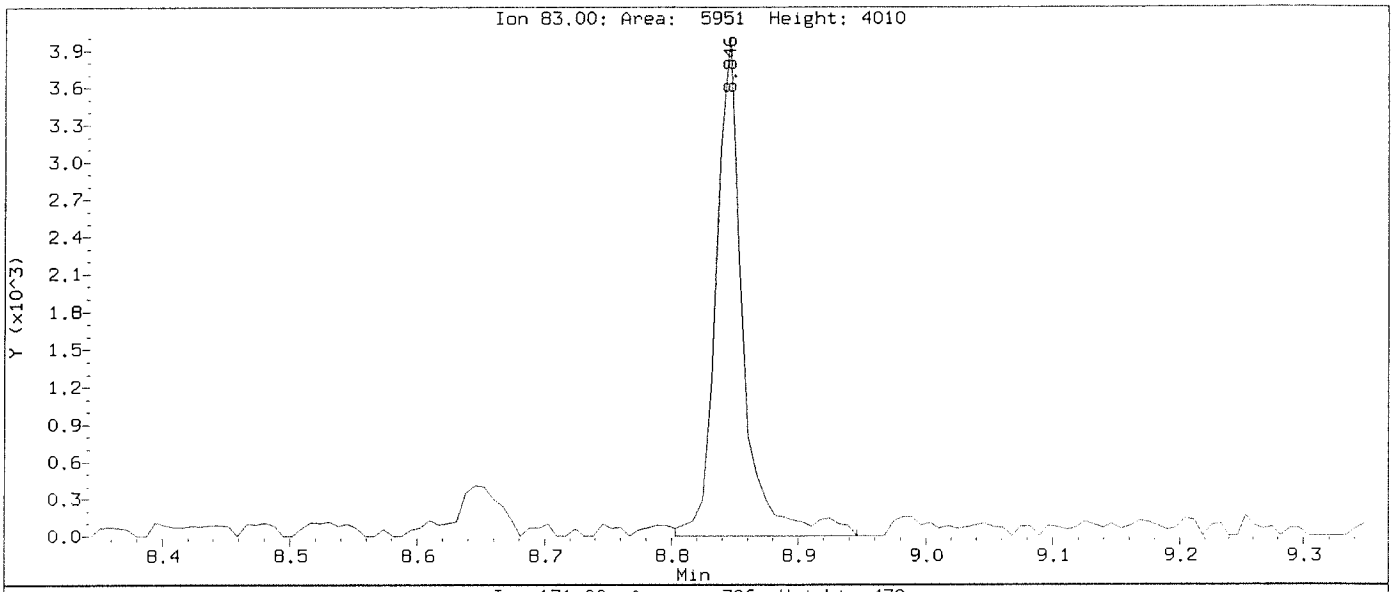


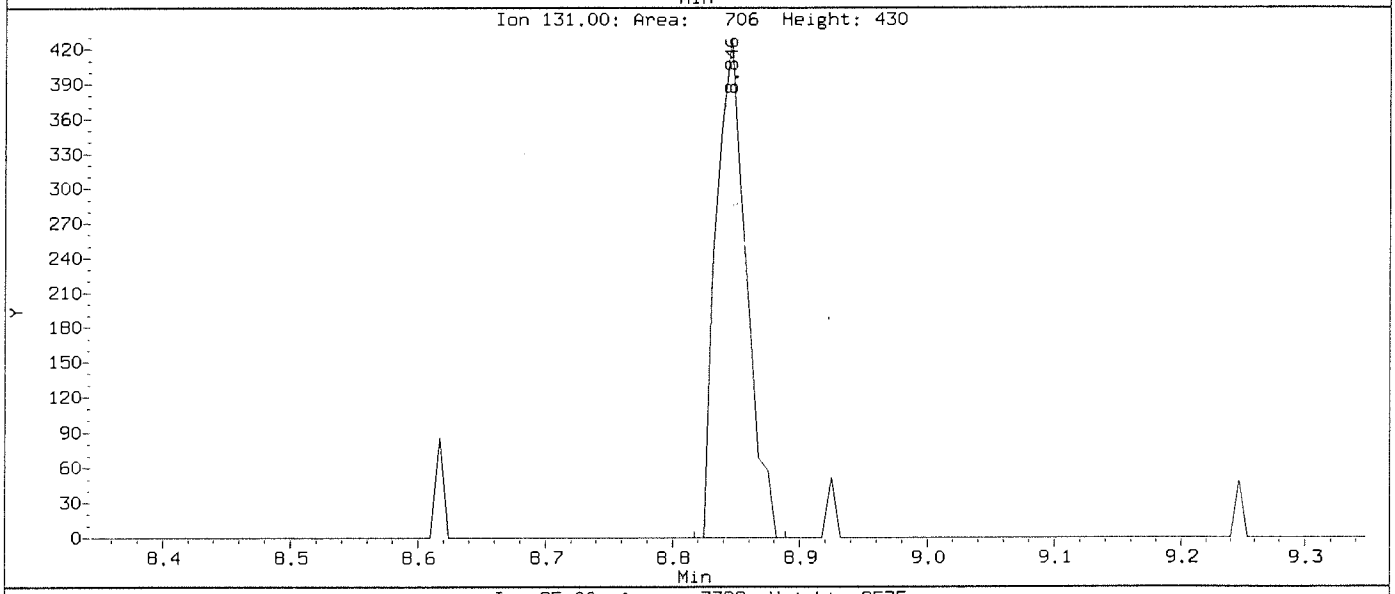
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Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

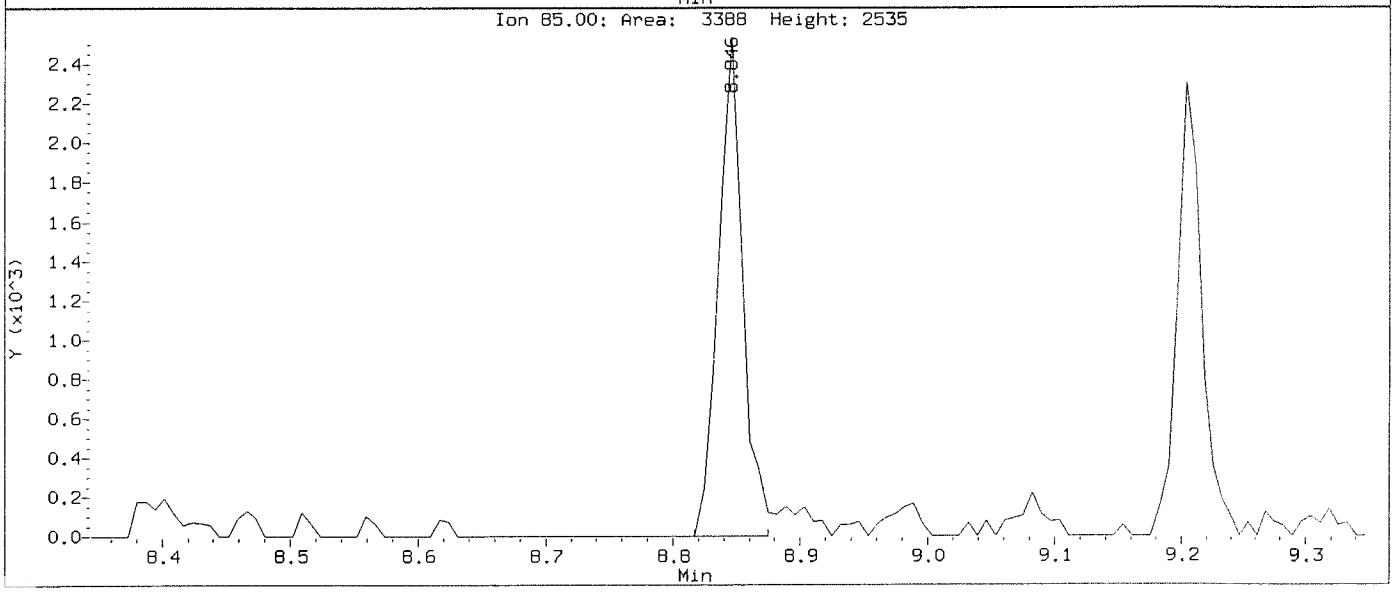
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Instrument: voa6.i
Client Sample ID: VSTD001

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

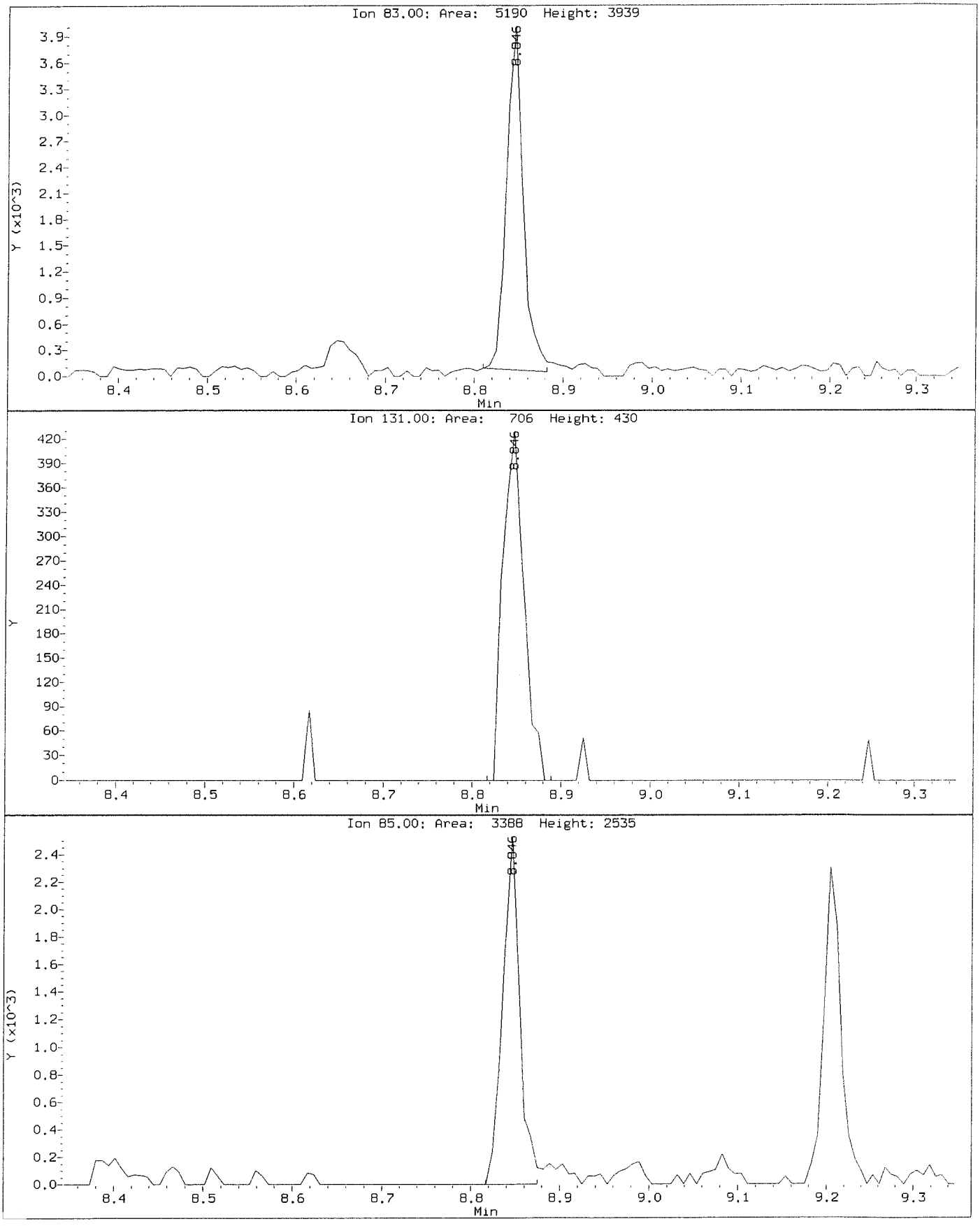






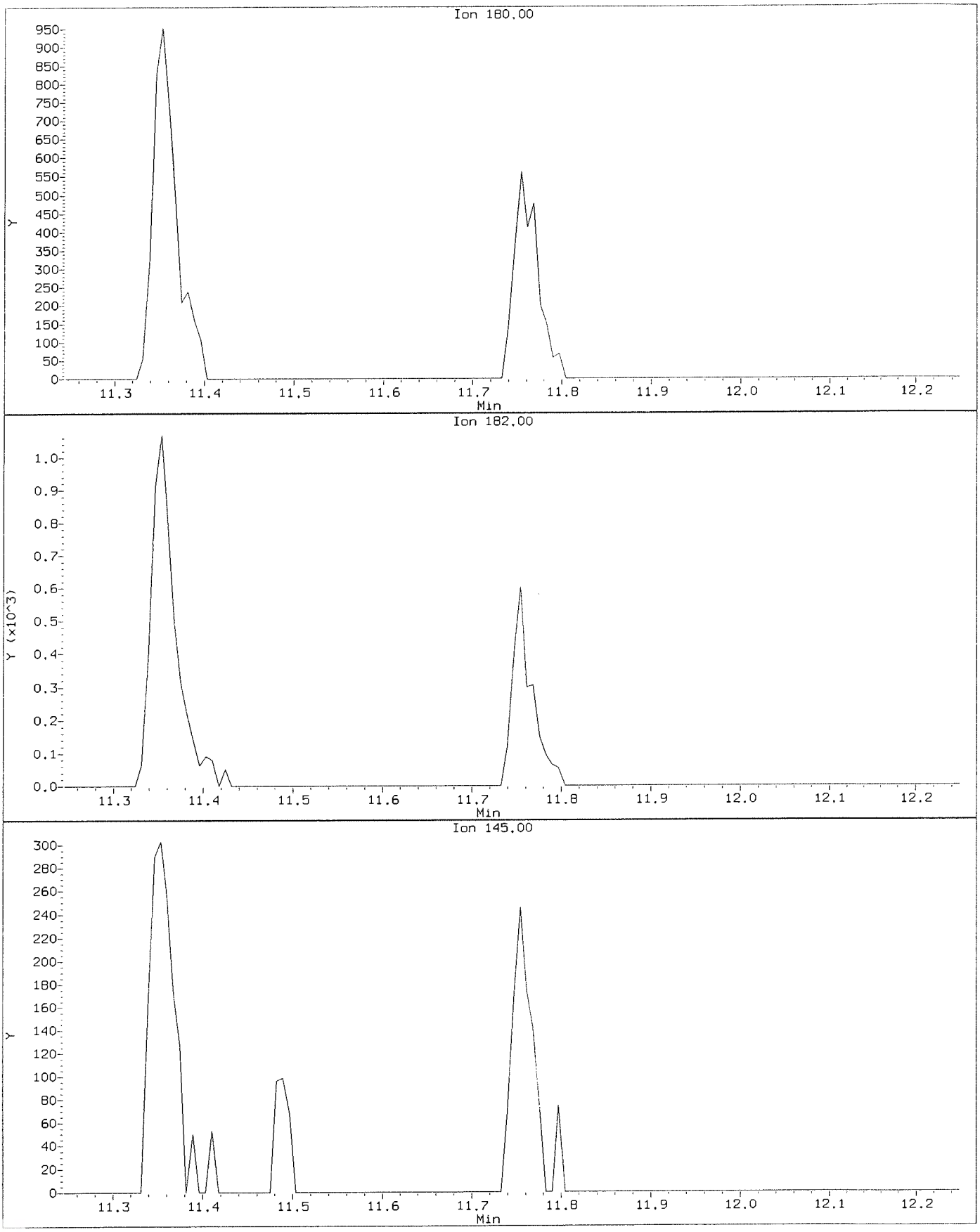
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Instrument: voa6.i
Client Sample ID: VSTD001

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



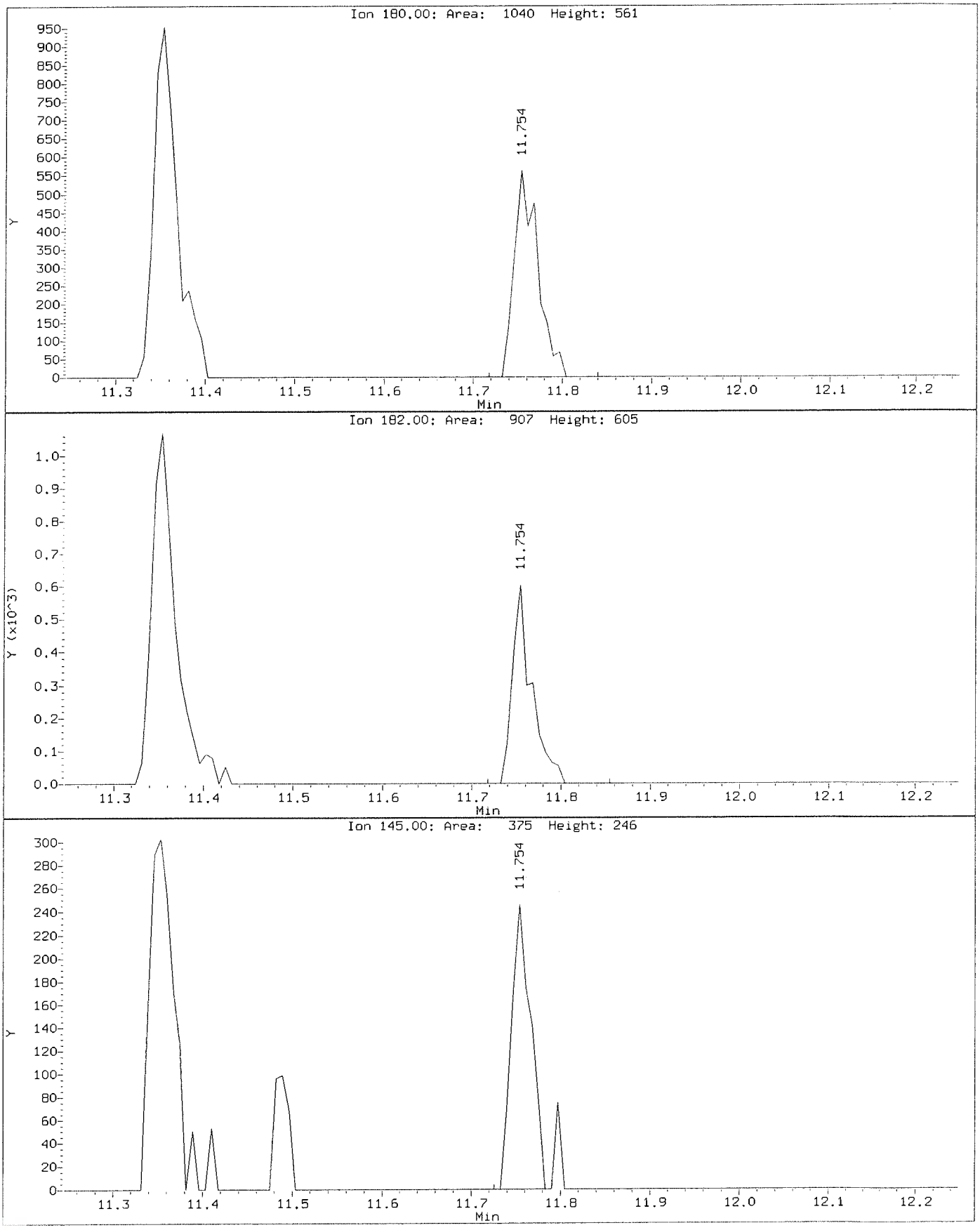
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Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



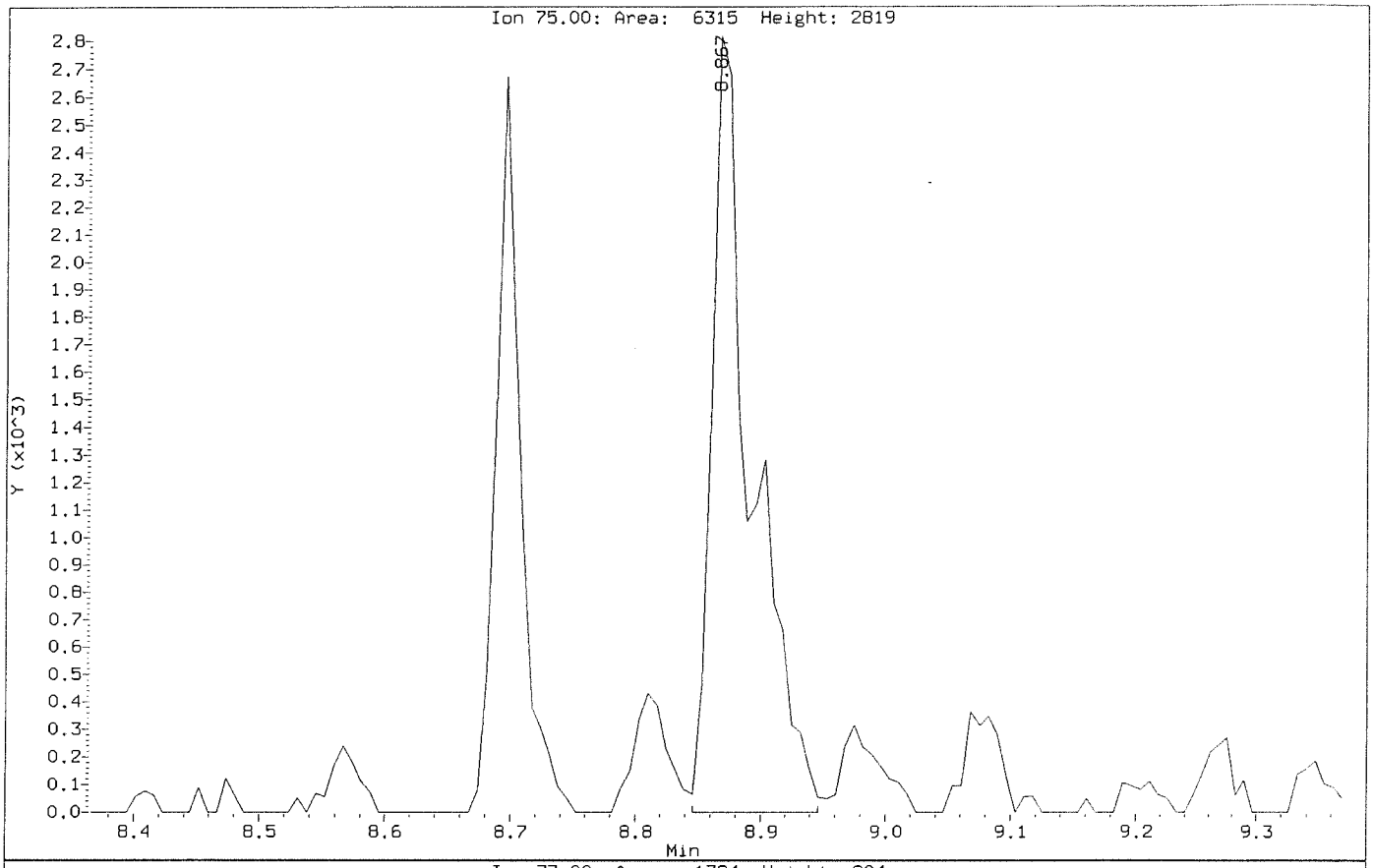
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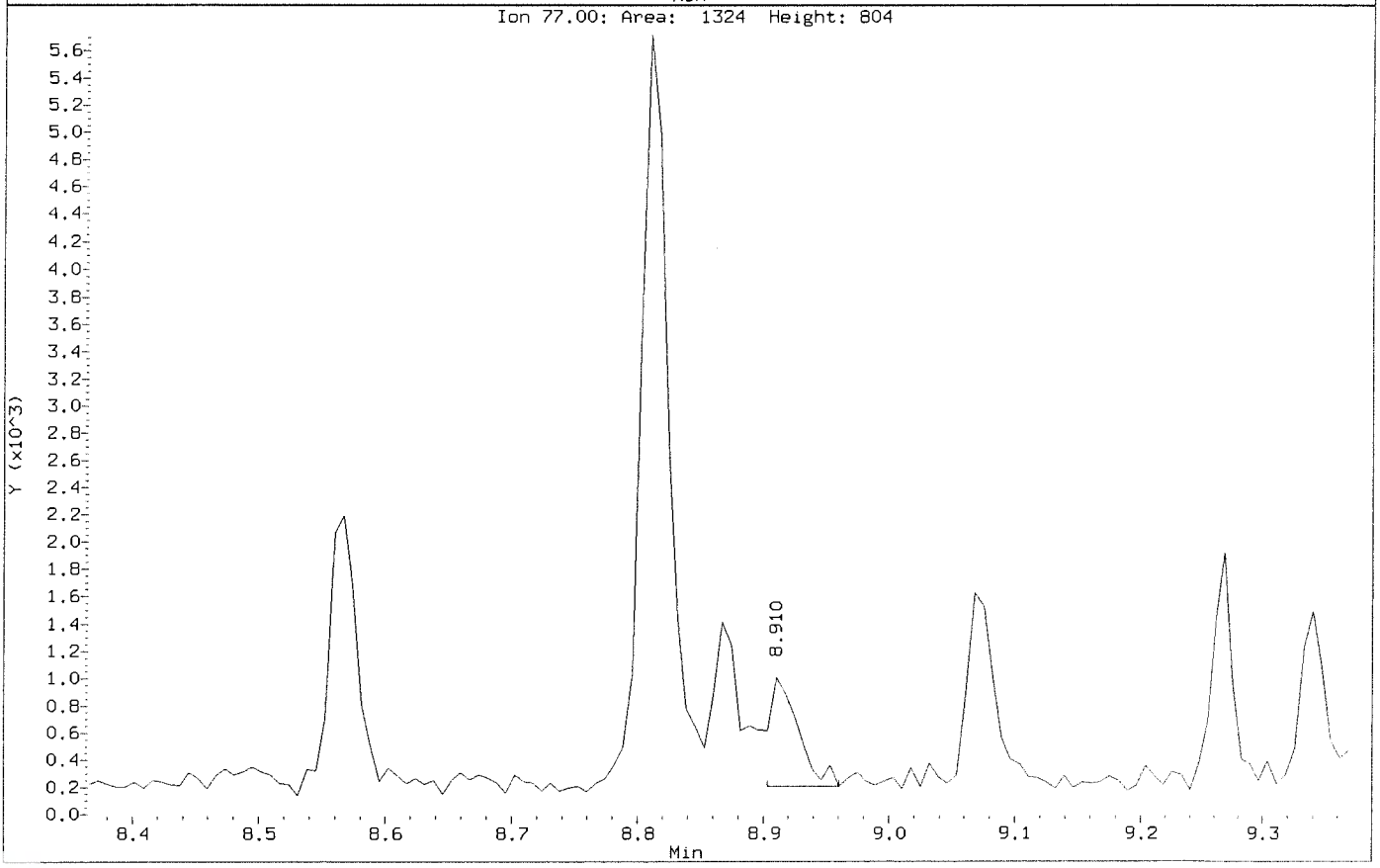
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD001

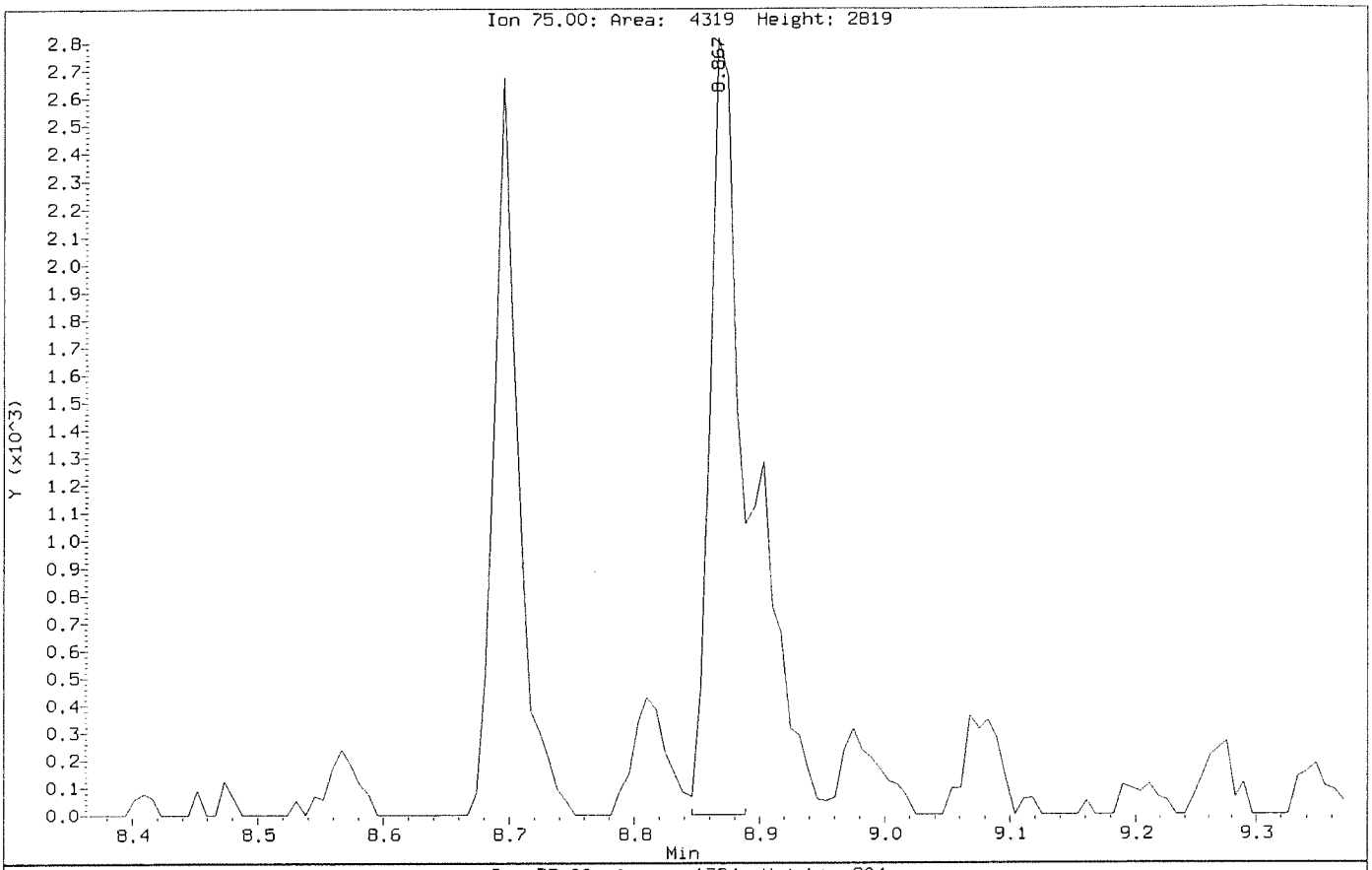
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

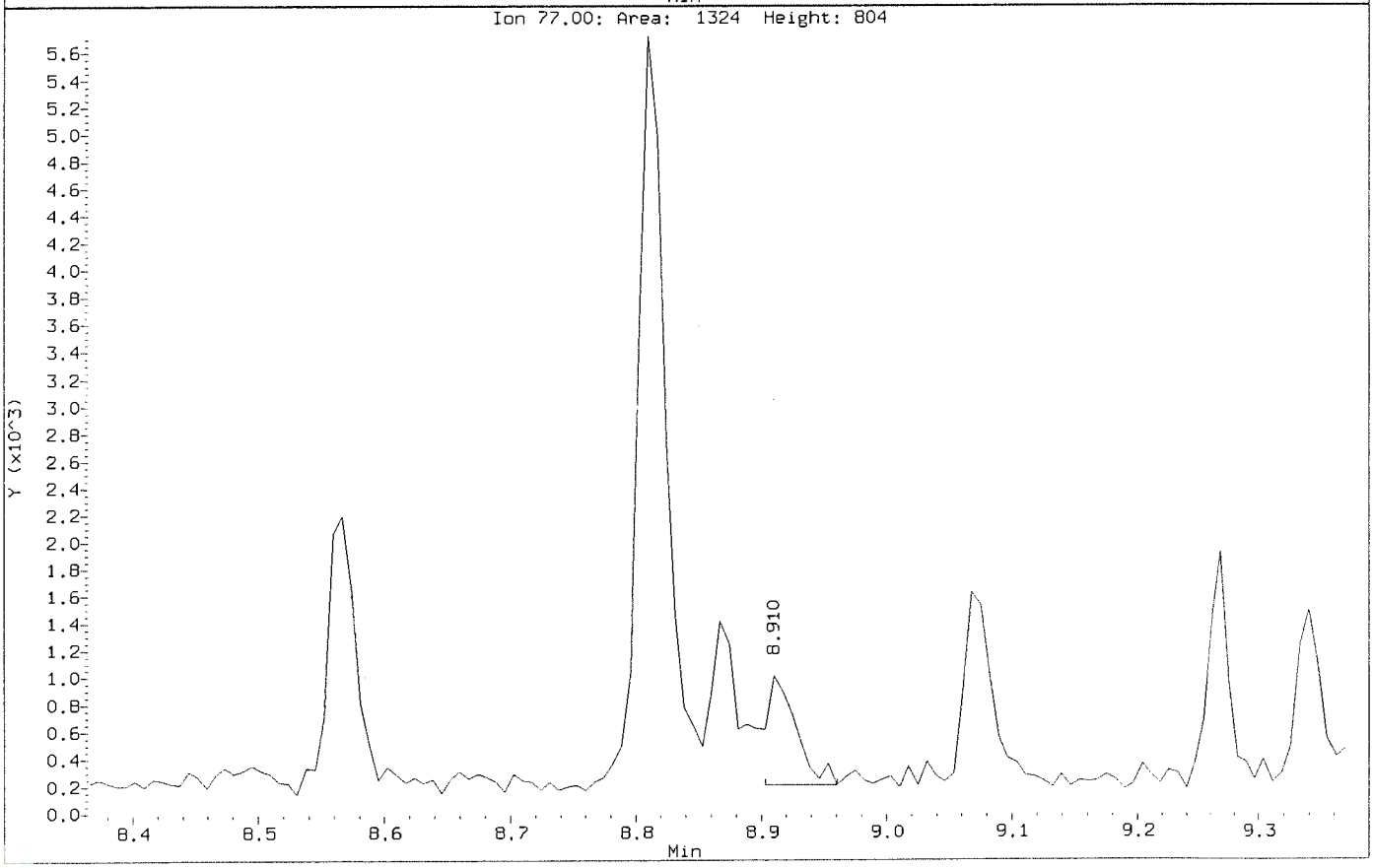




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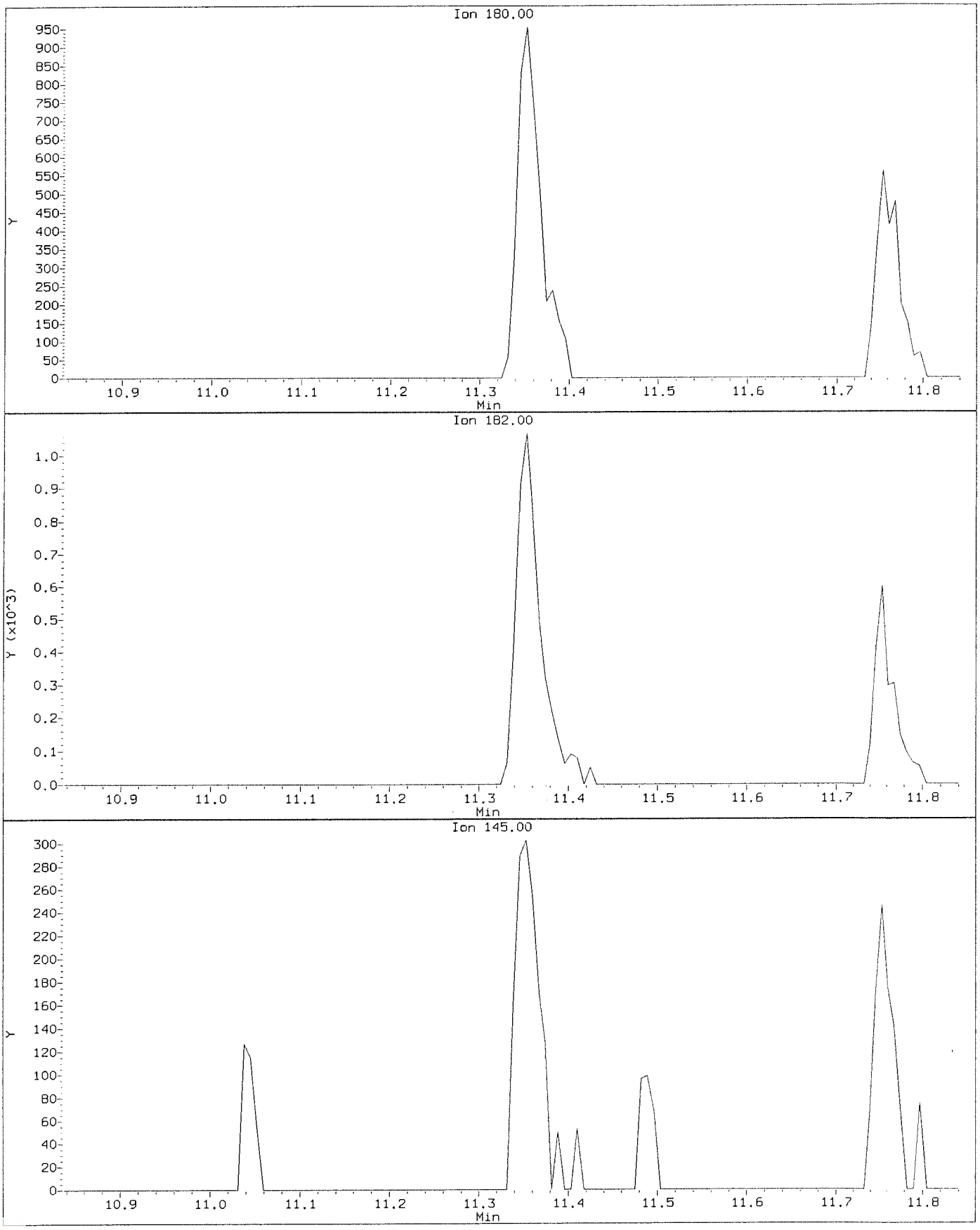
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





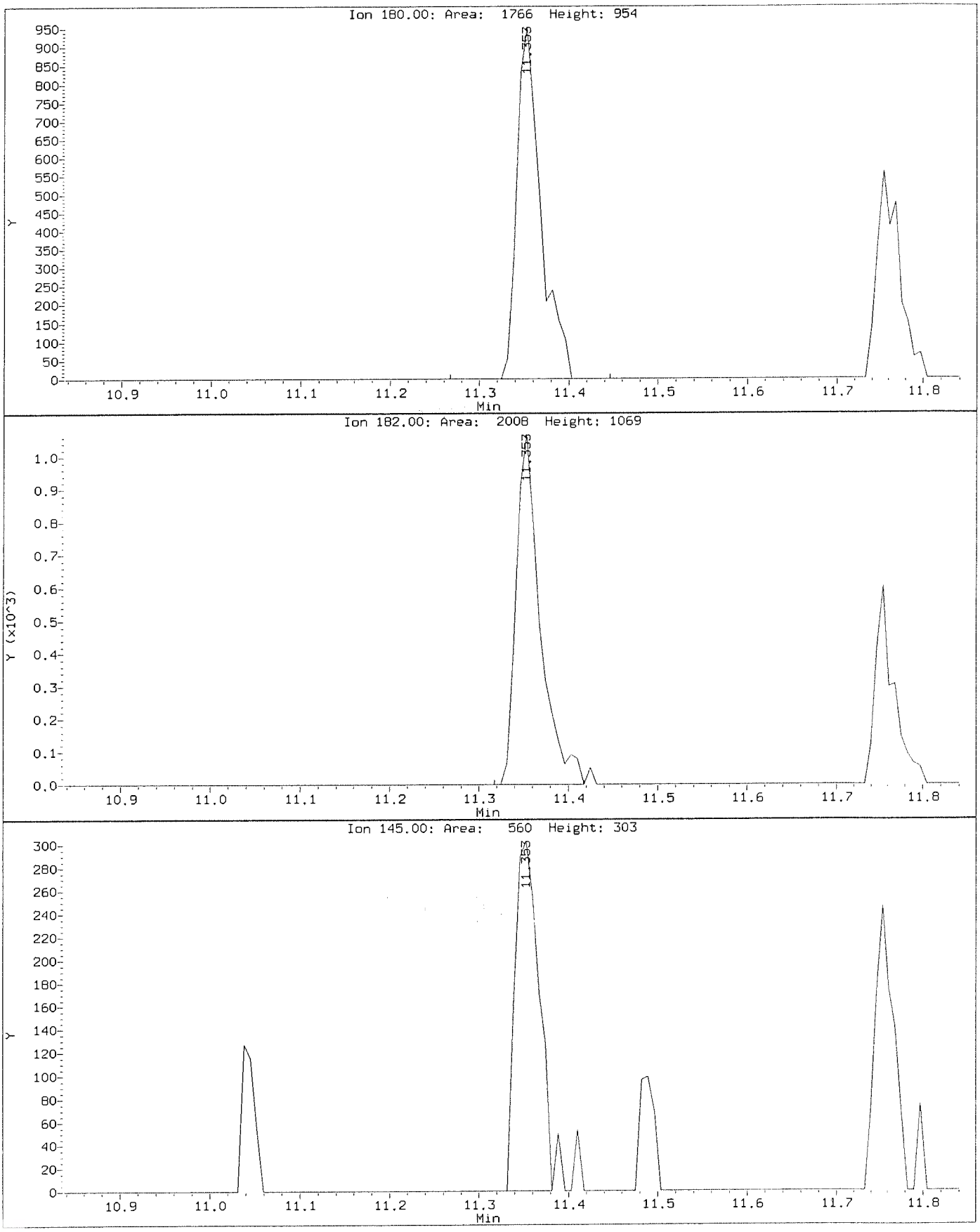
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



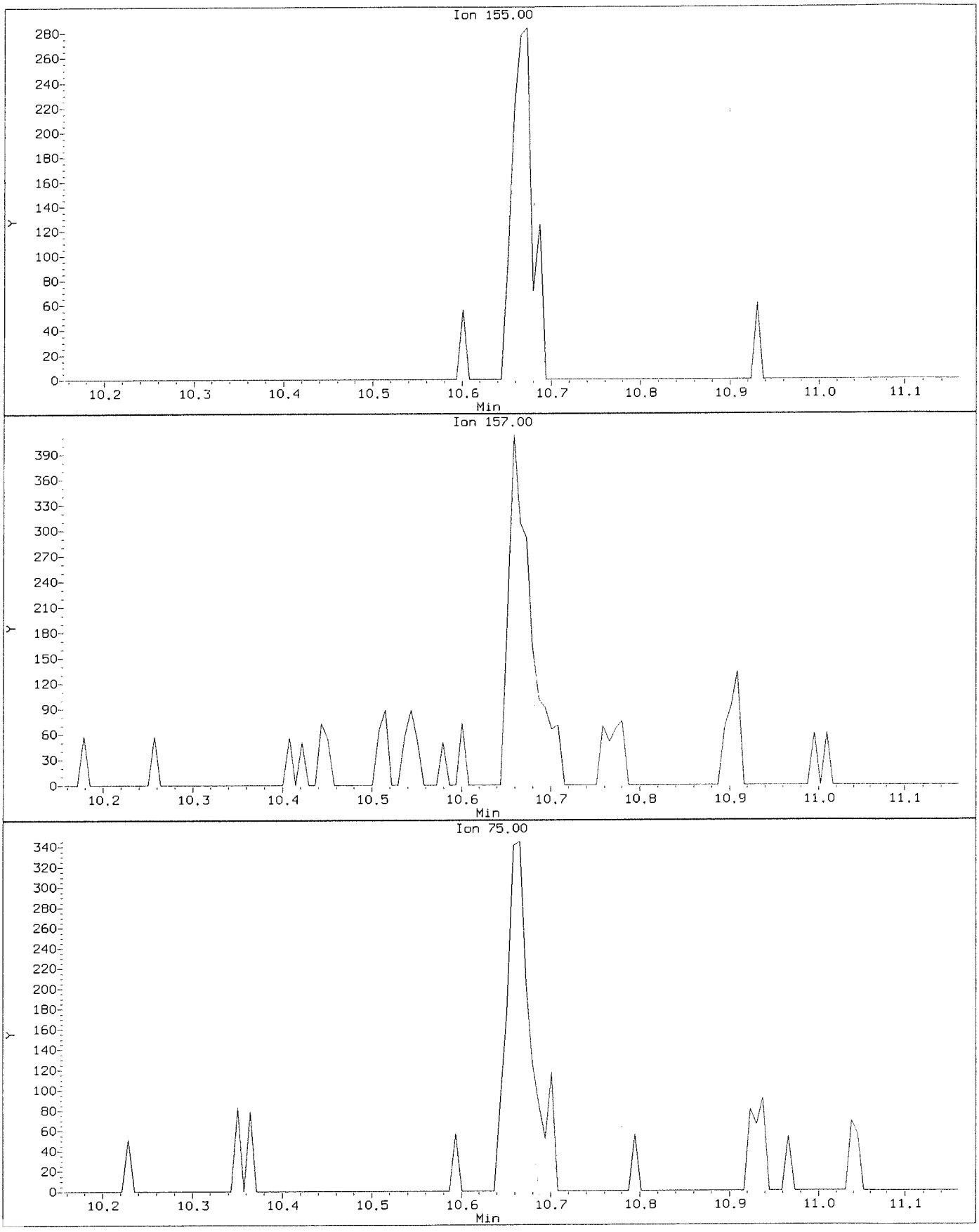
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



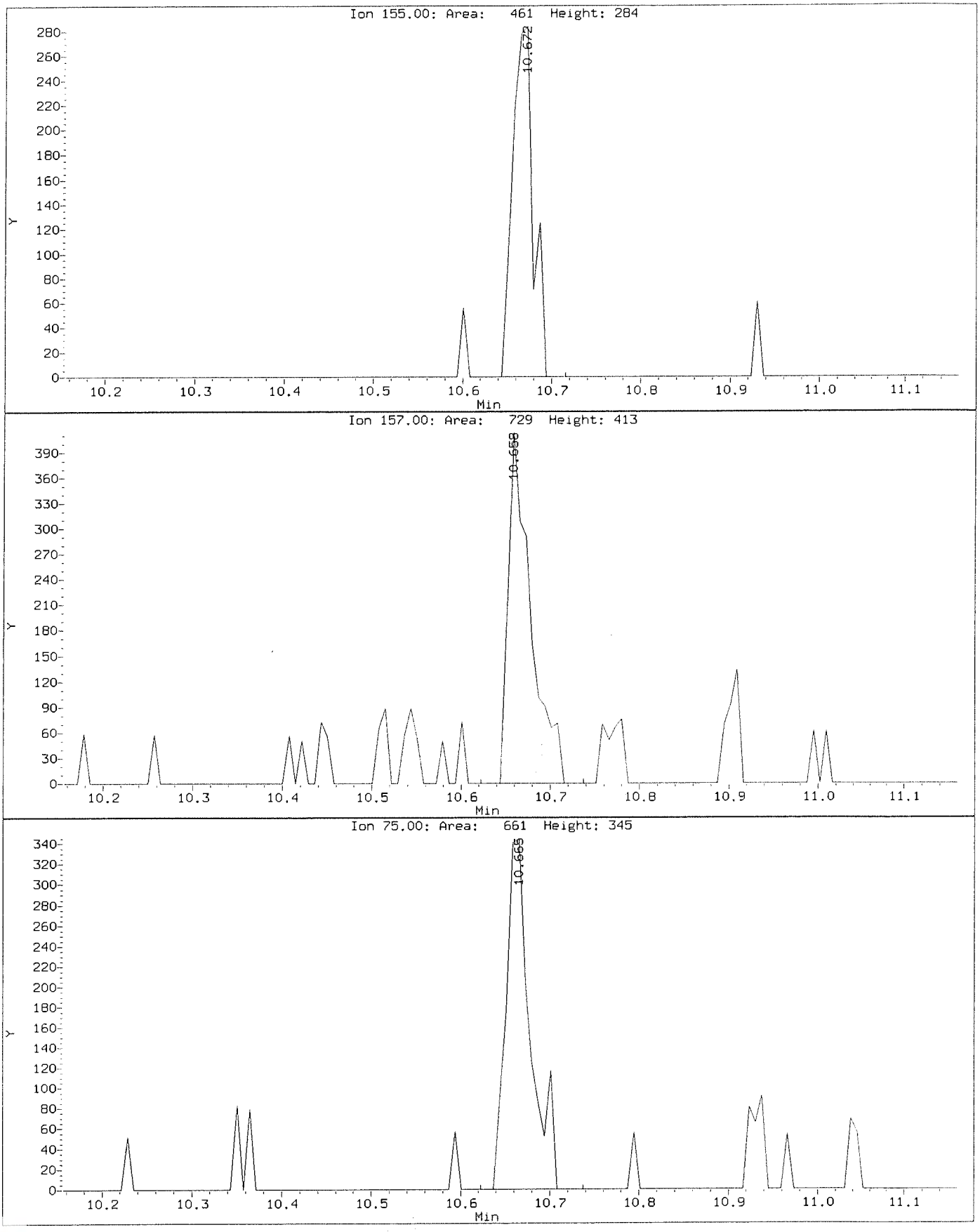
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Client Sample ID: VSTD001

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



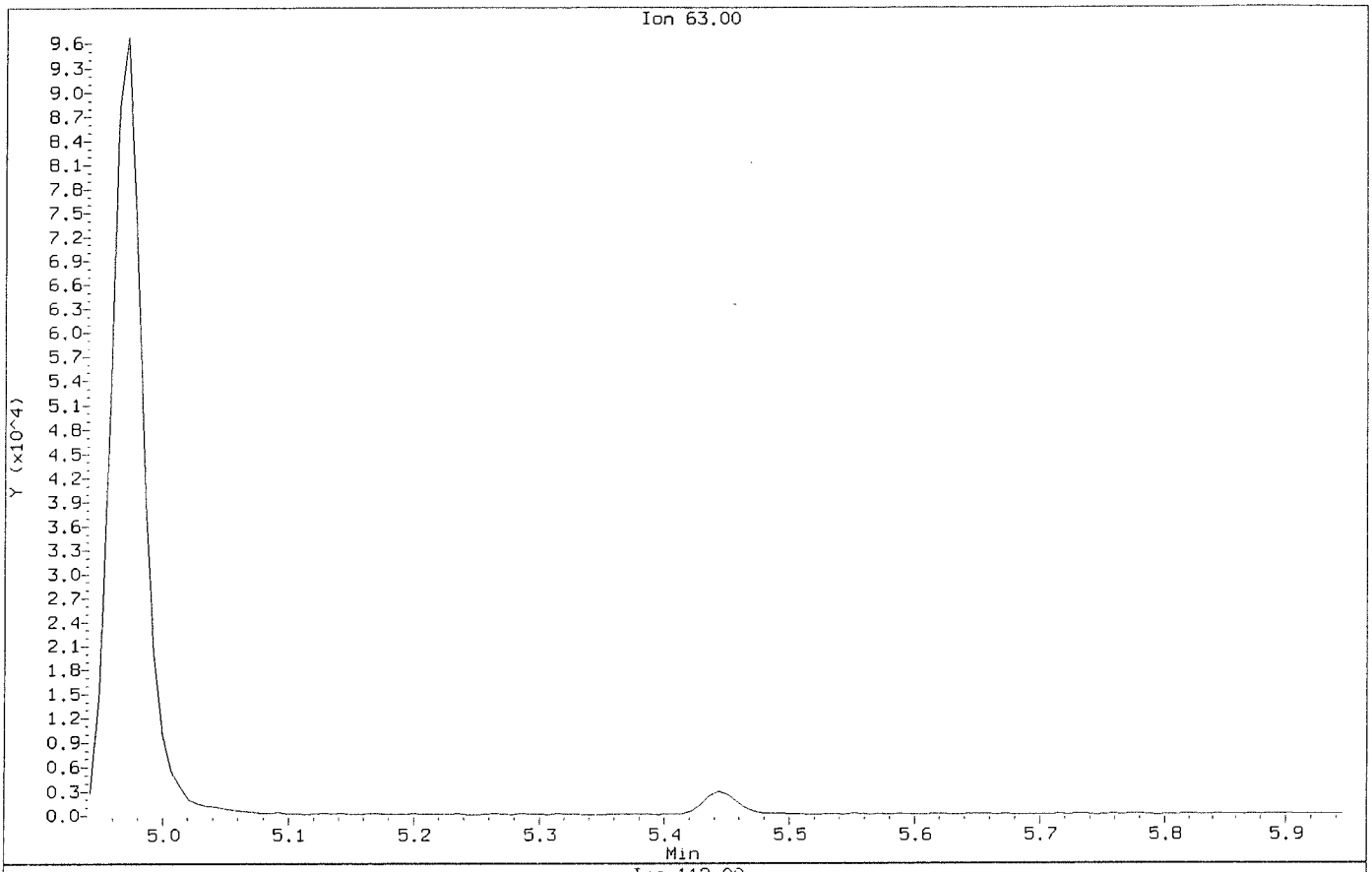
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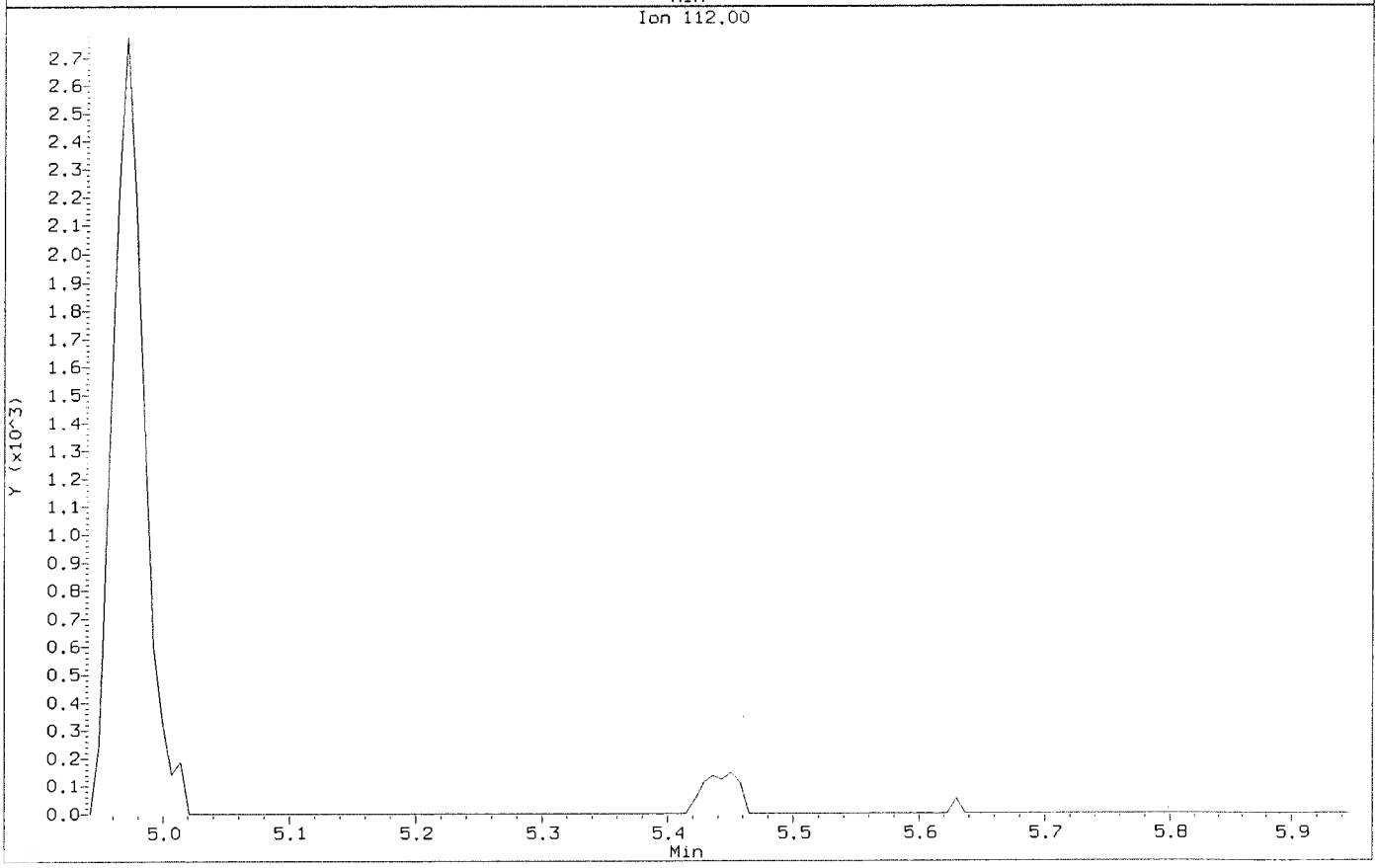
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
Client Sample ID: VSTD001

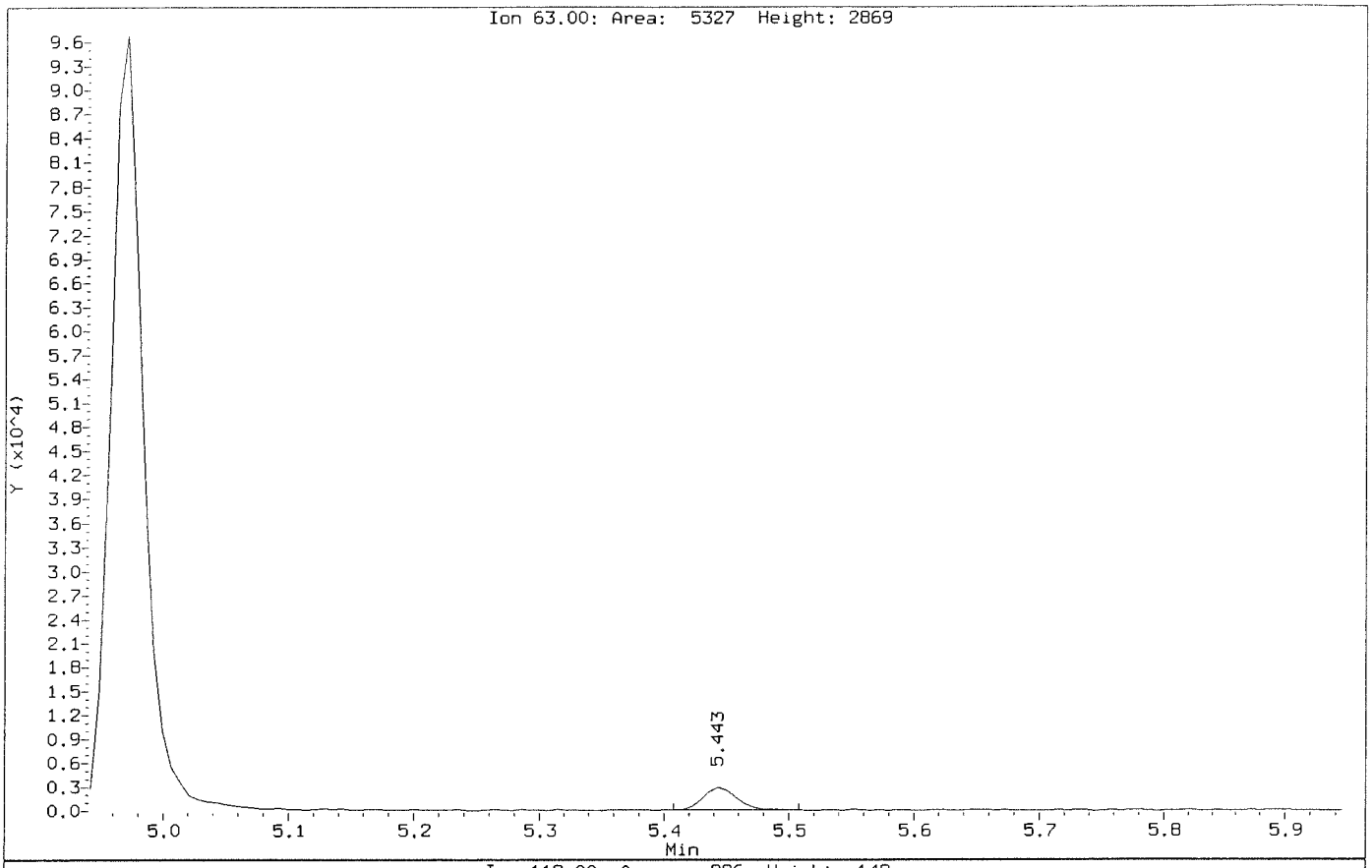
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

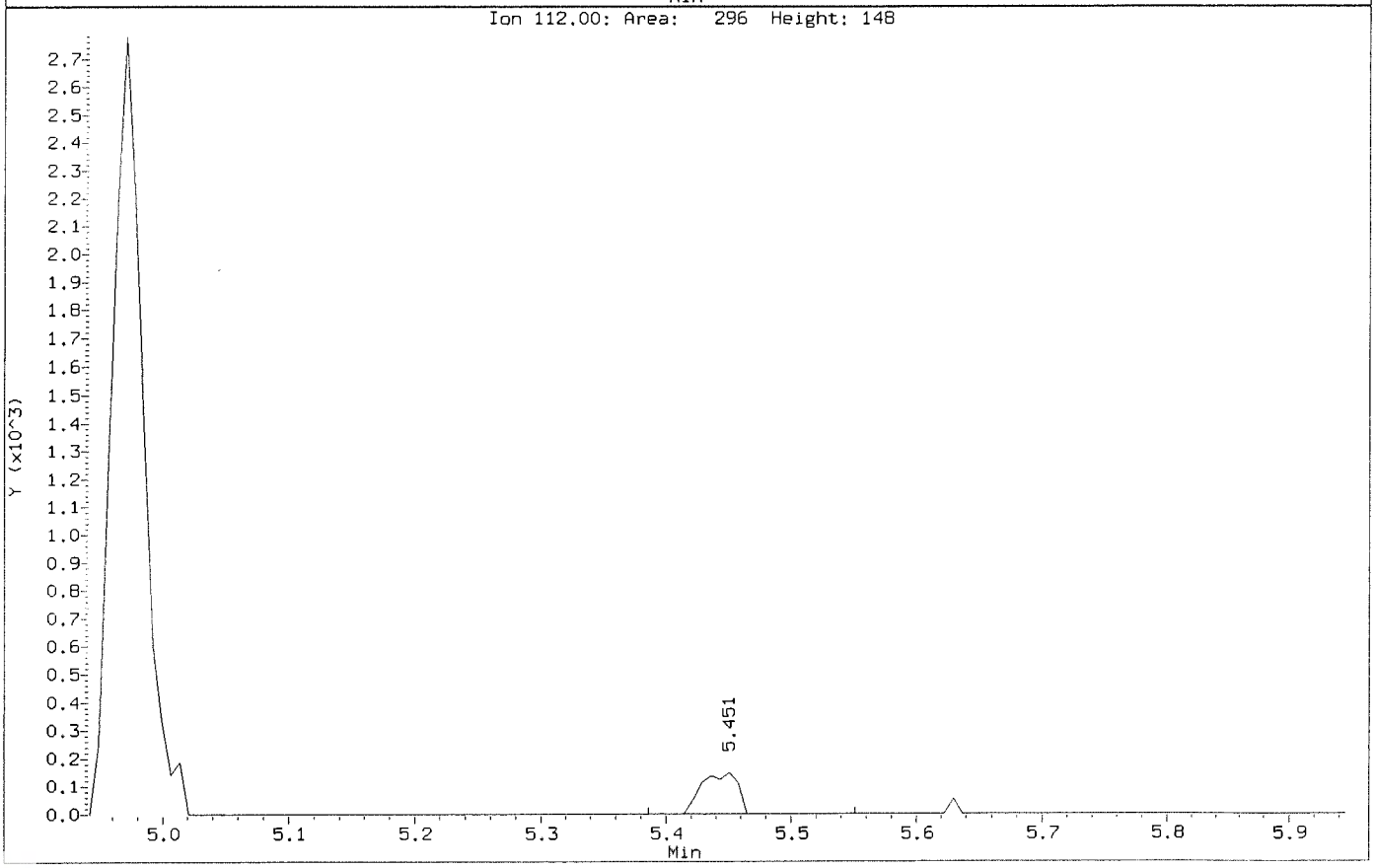




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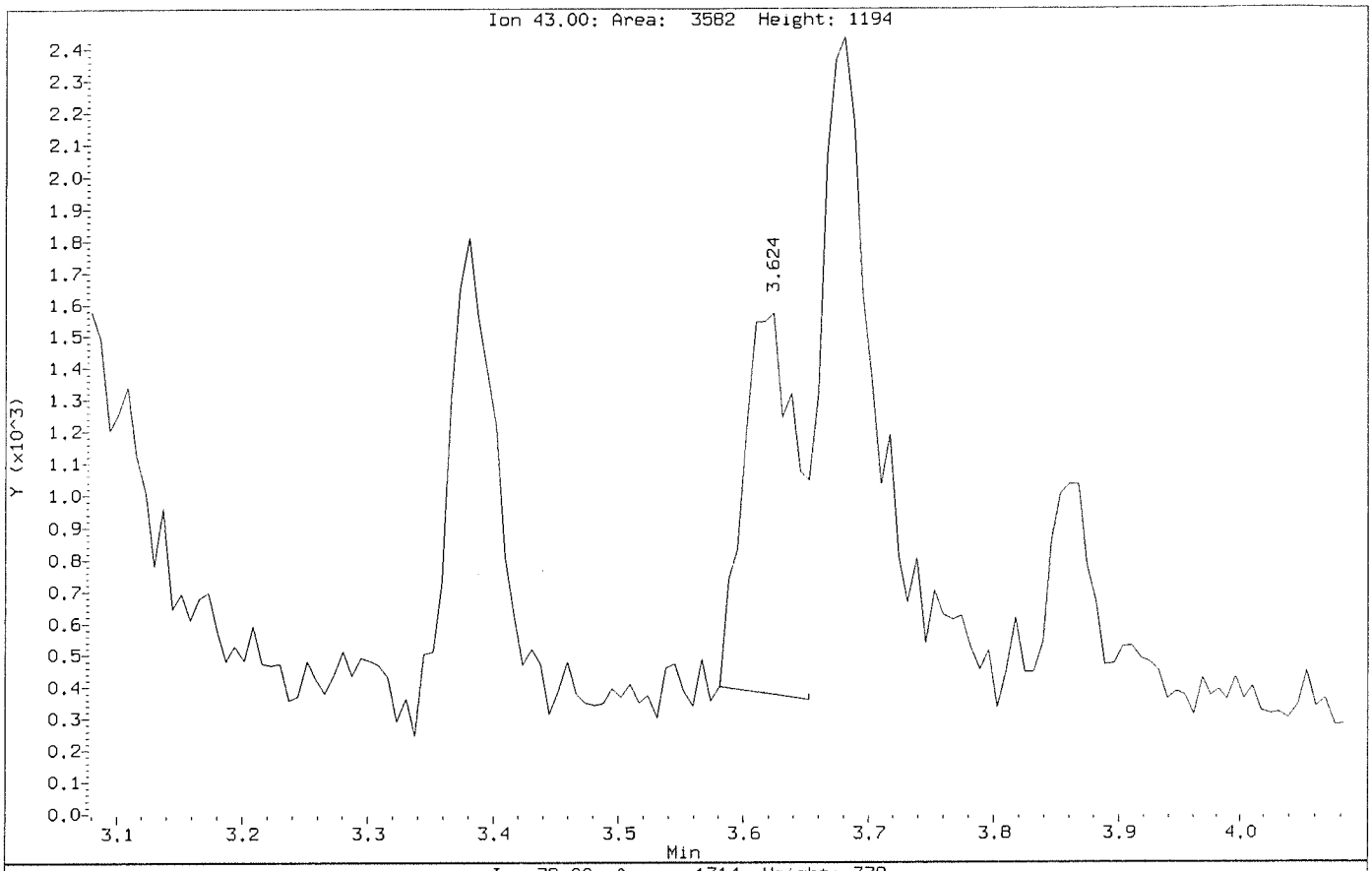
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

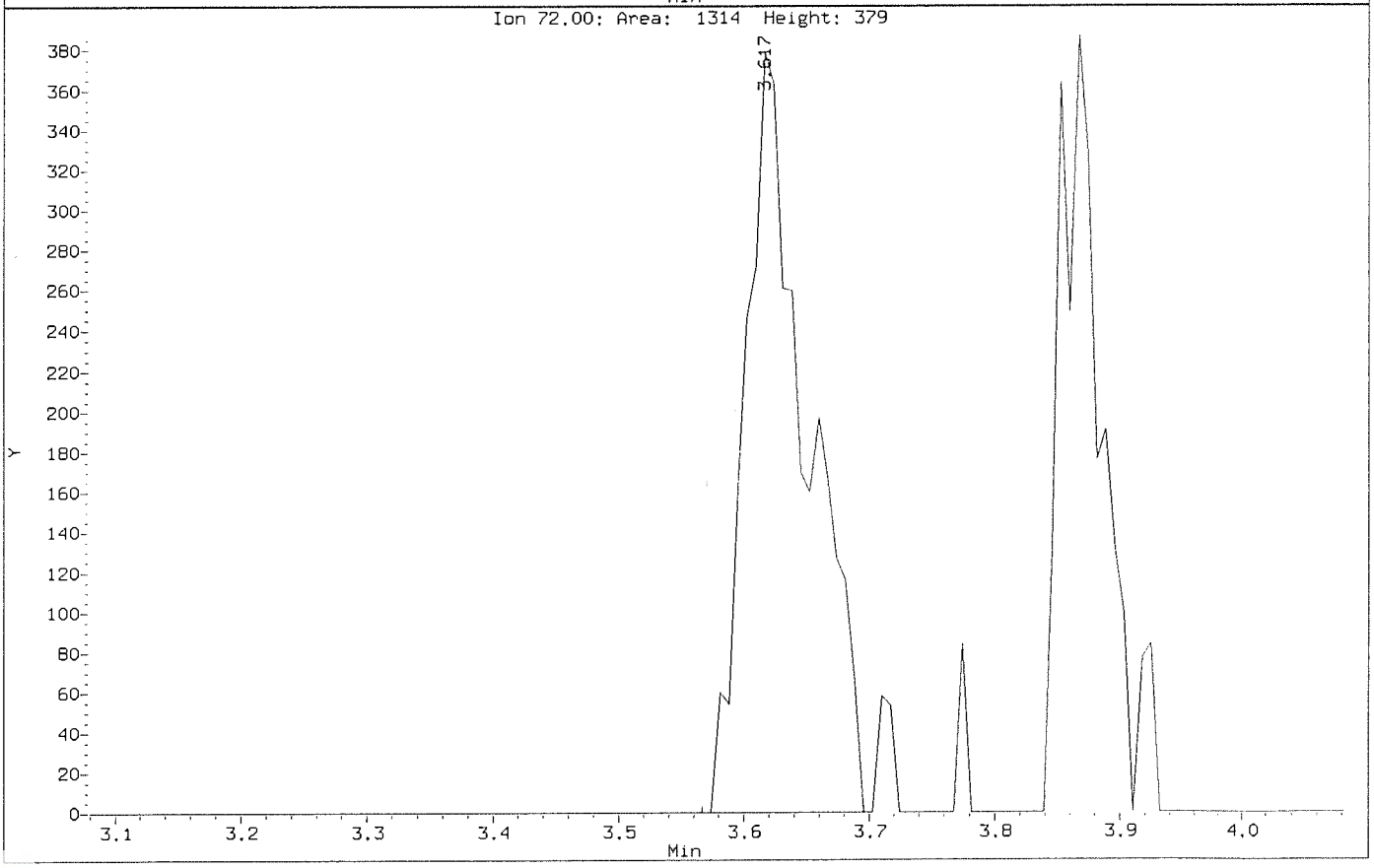




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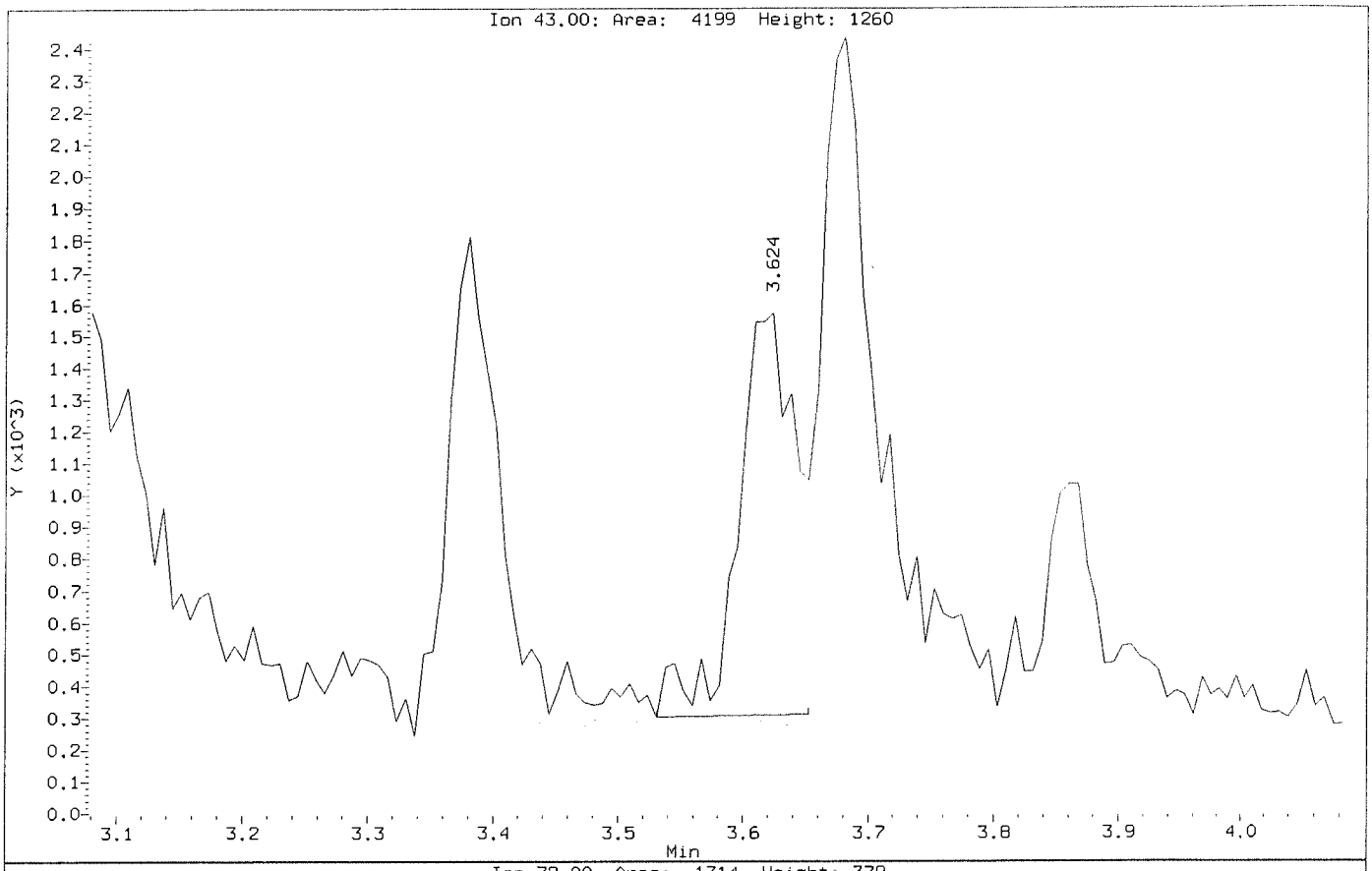
Compound: 2-Butanone
CAS Number: 78-93-3

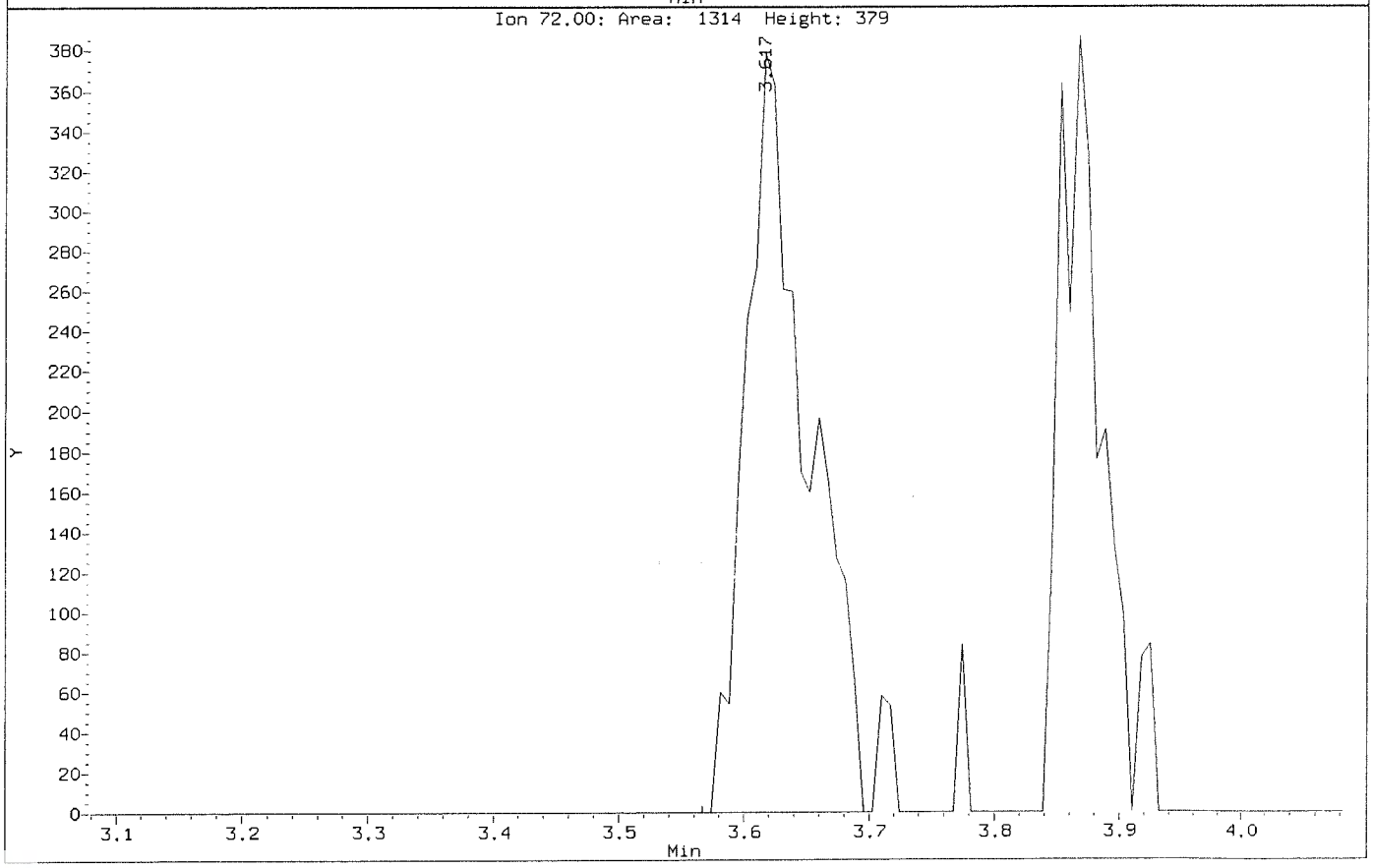




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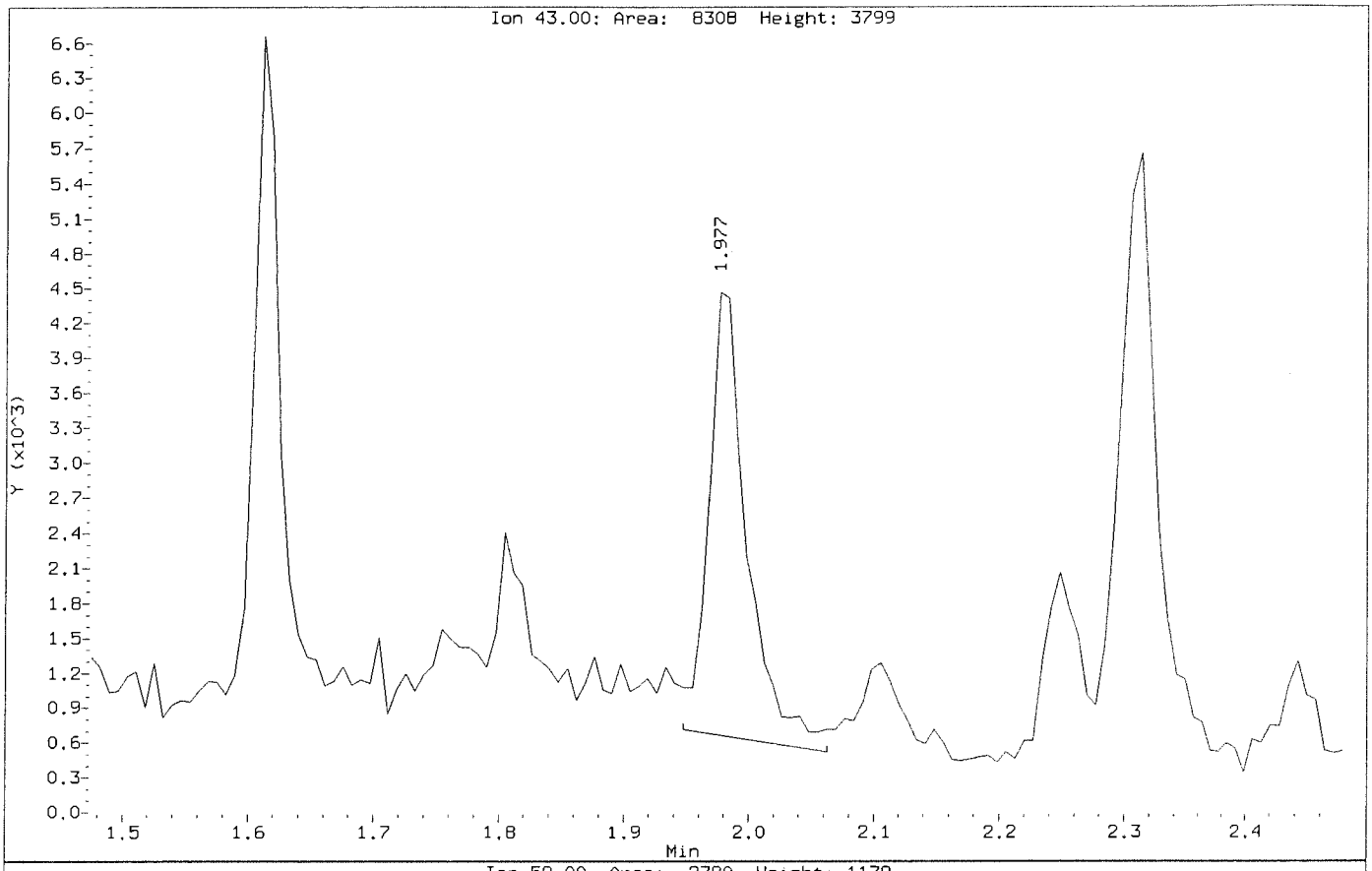
Compound: 2-Butanone
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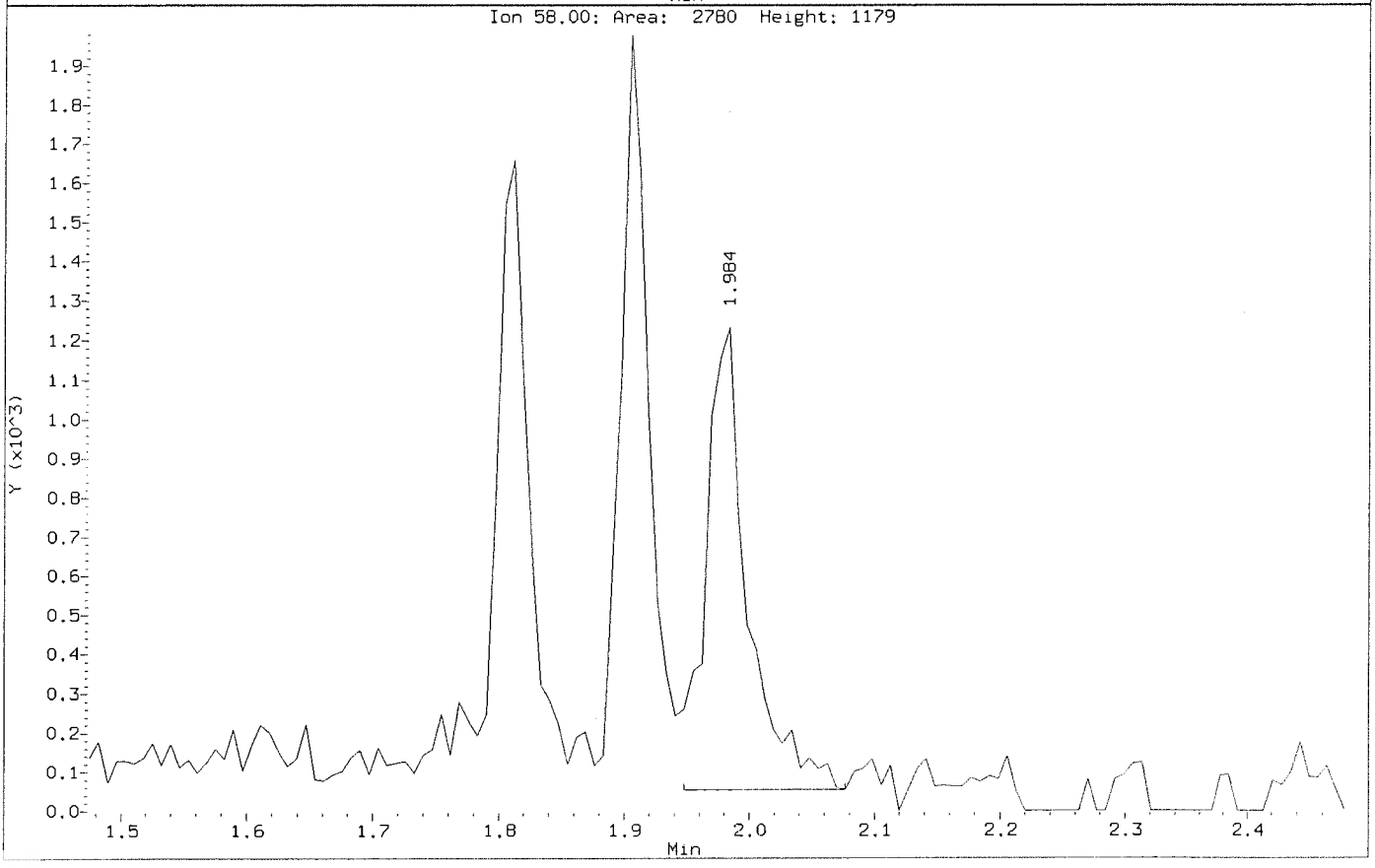




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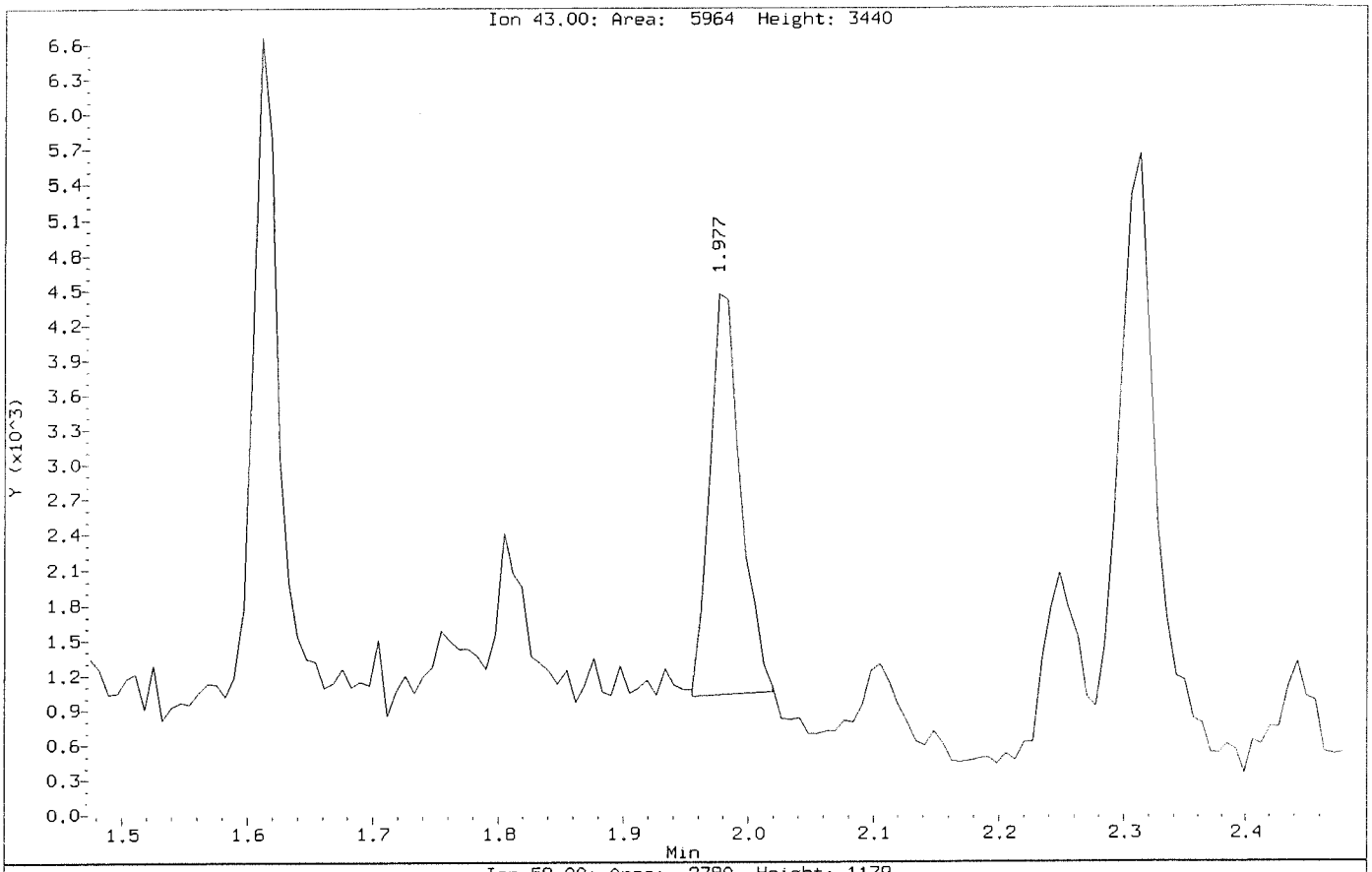
Compound: Acetone
CAS Number: 67-64-1

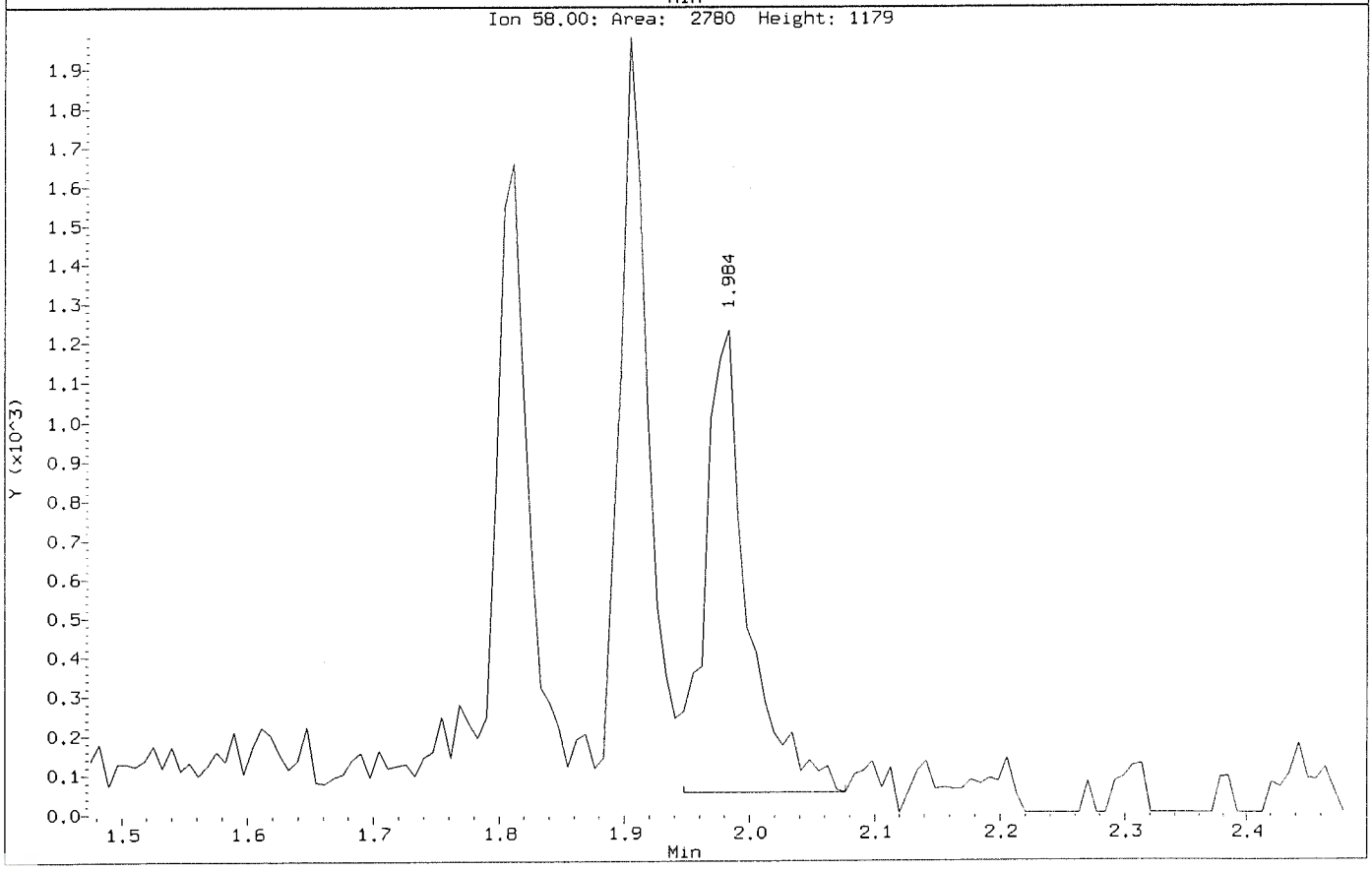




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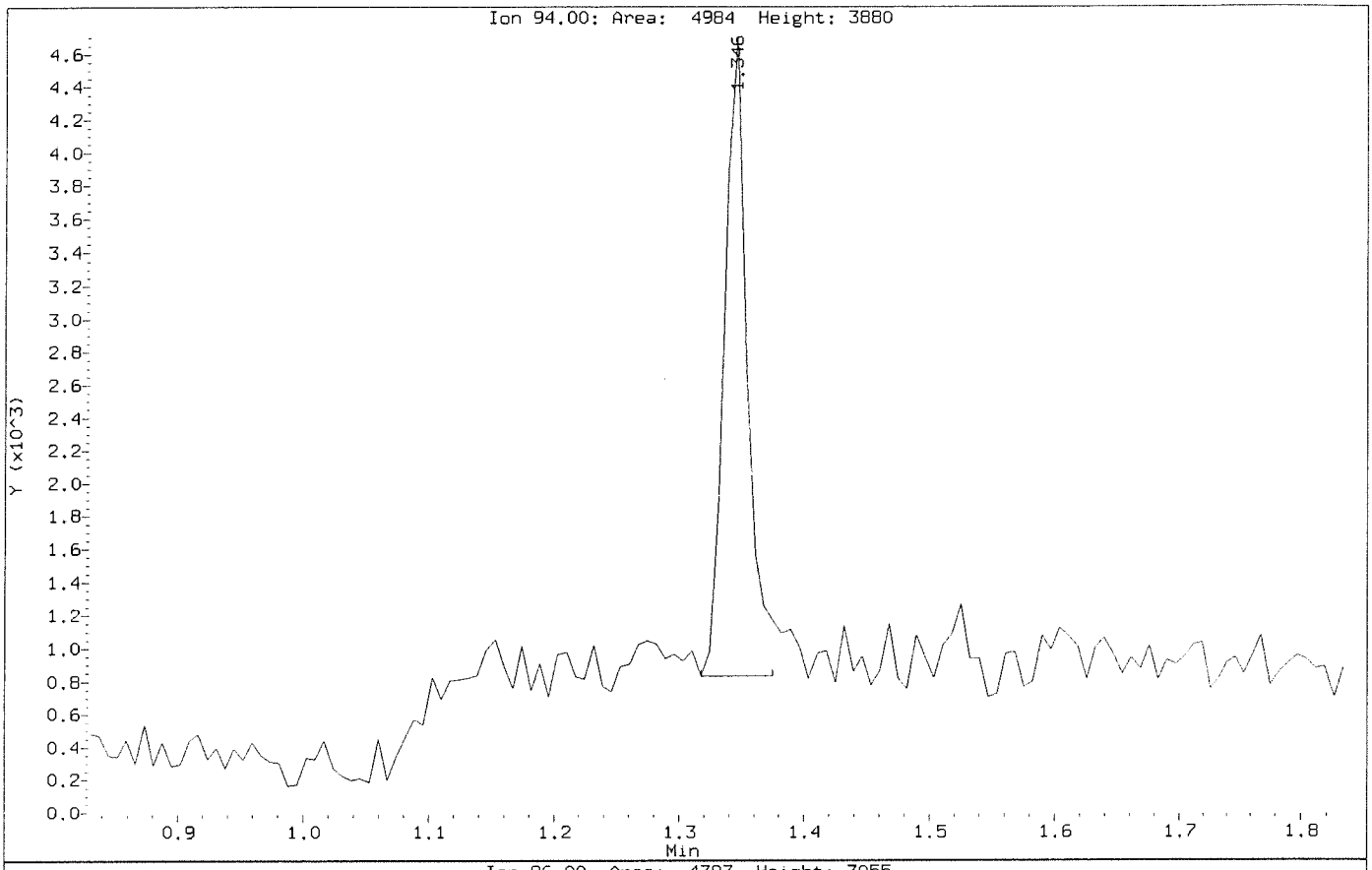
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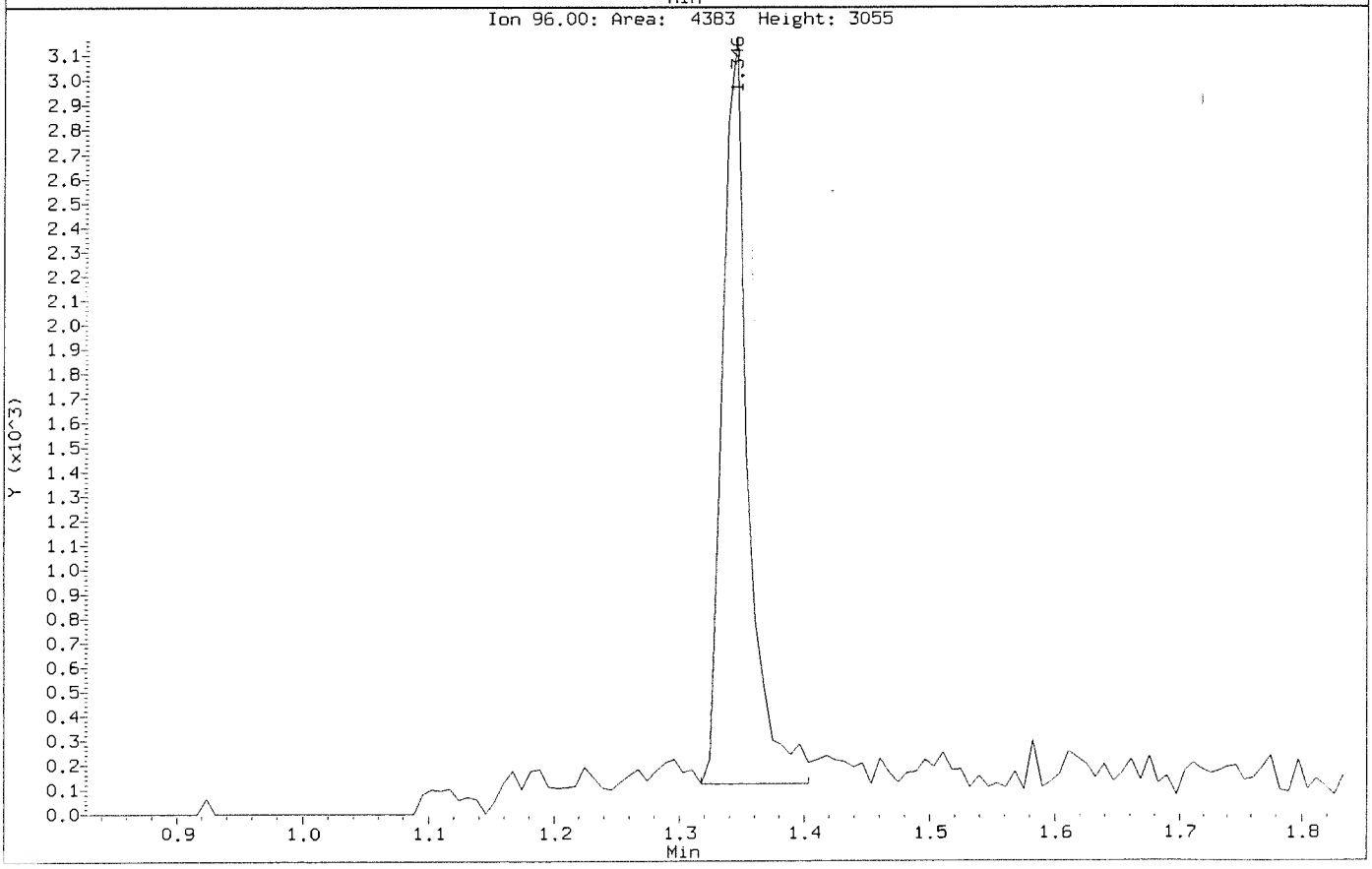




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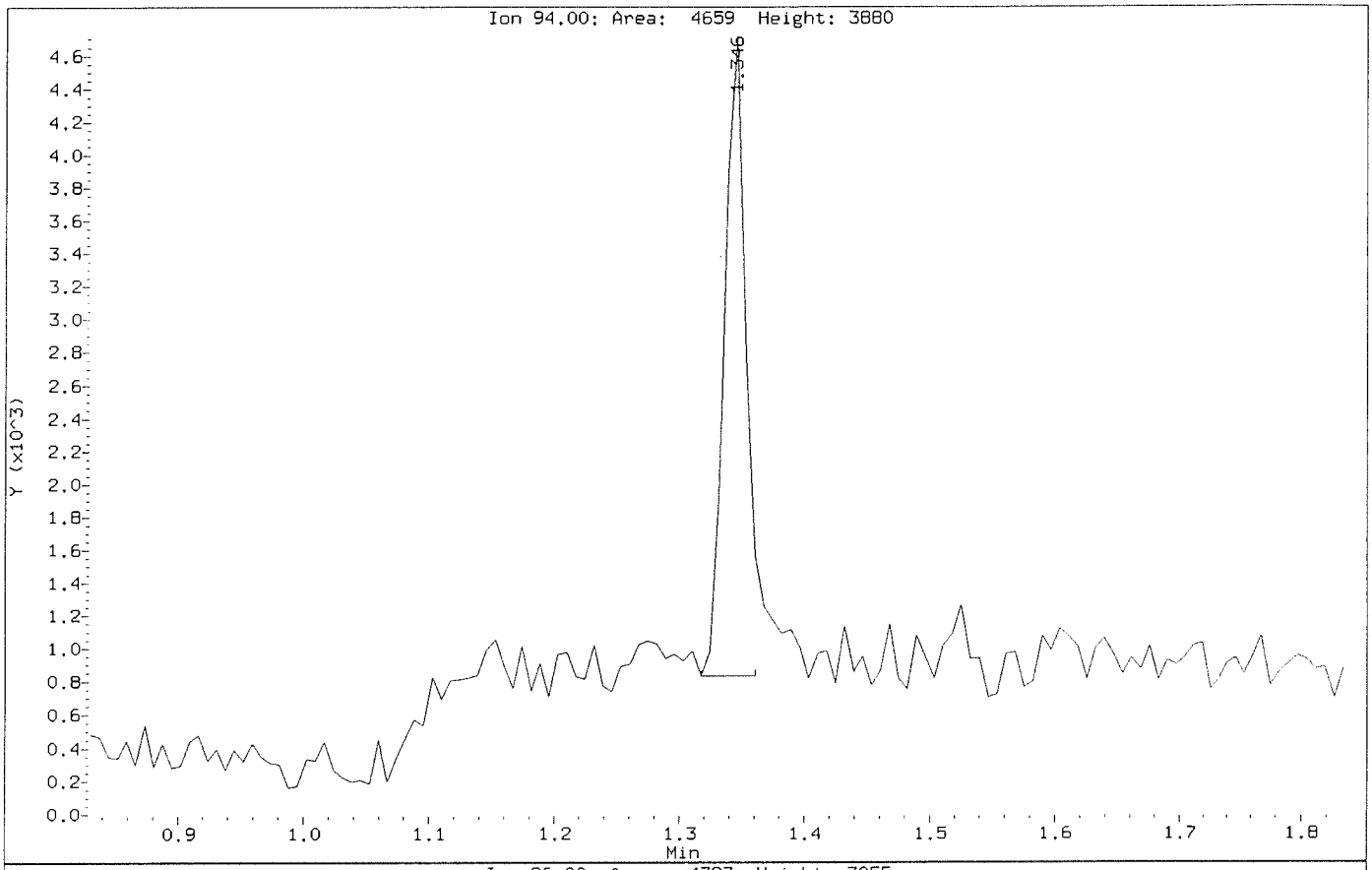
Compound: Bromomethane
CAS Number: 74-83-9

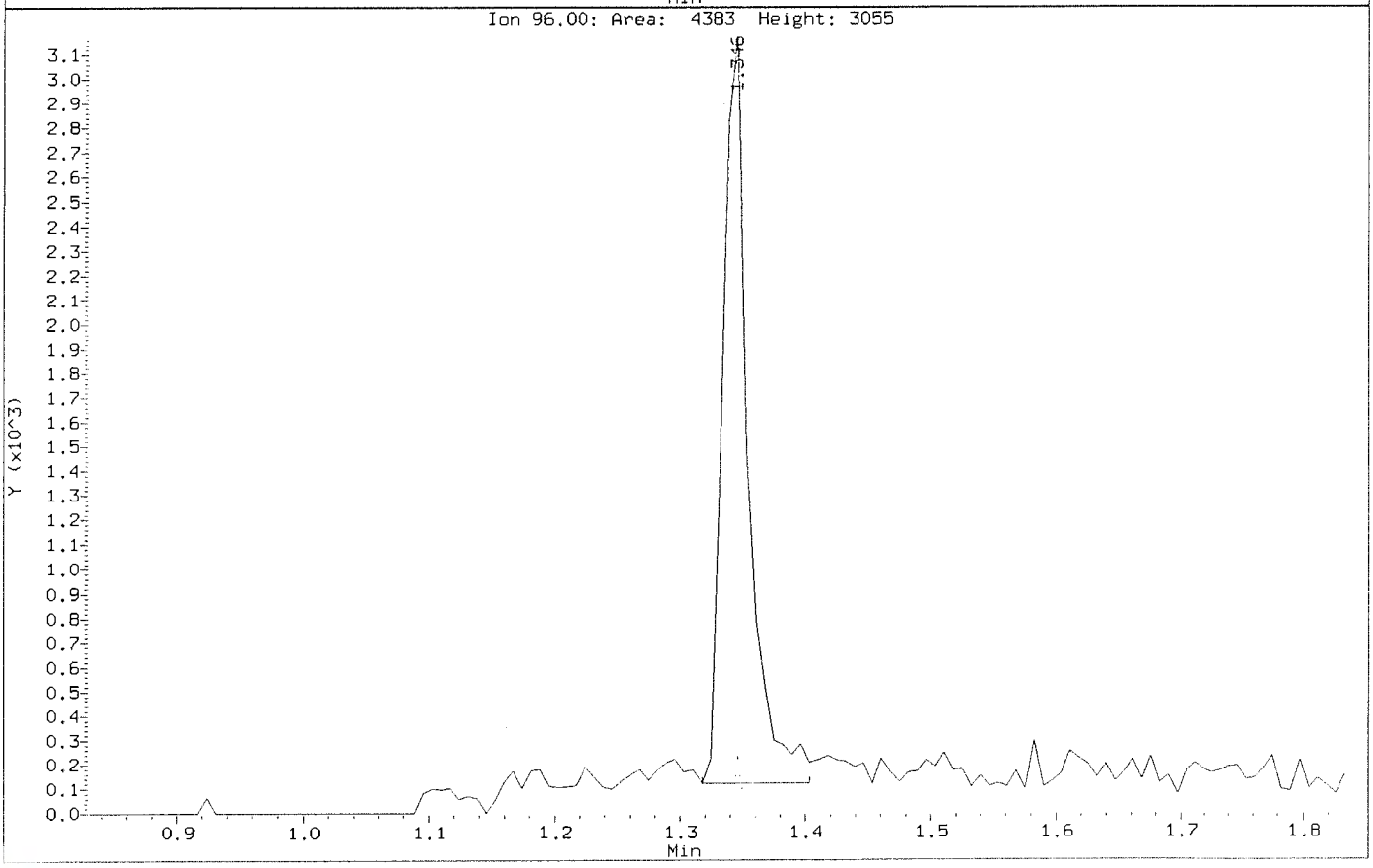




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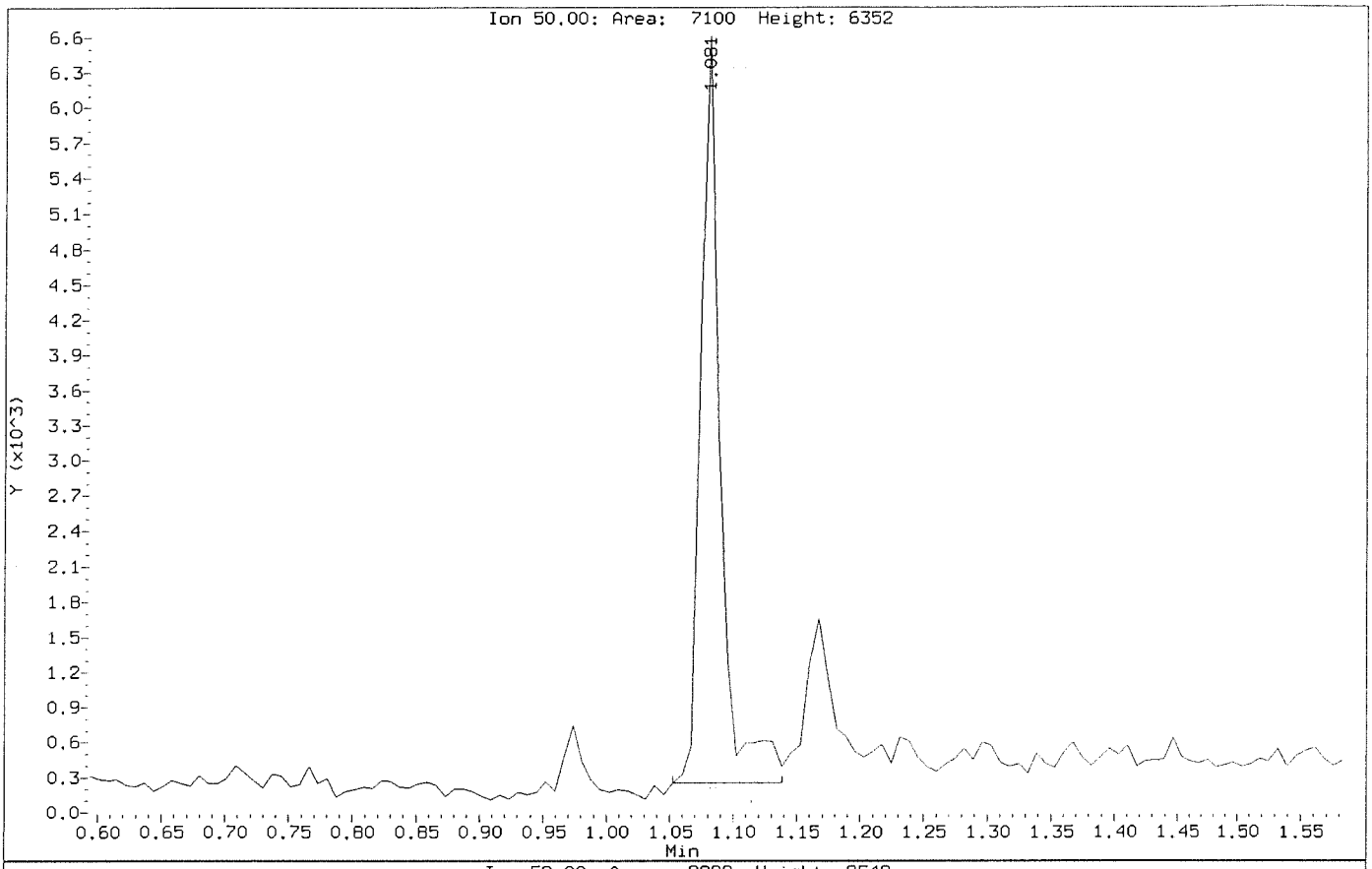
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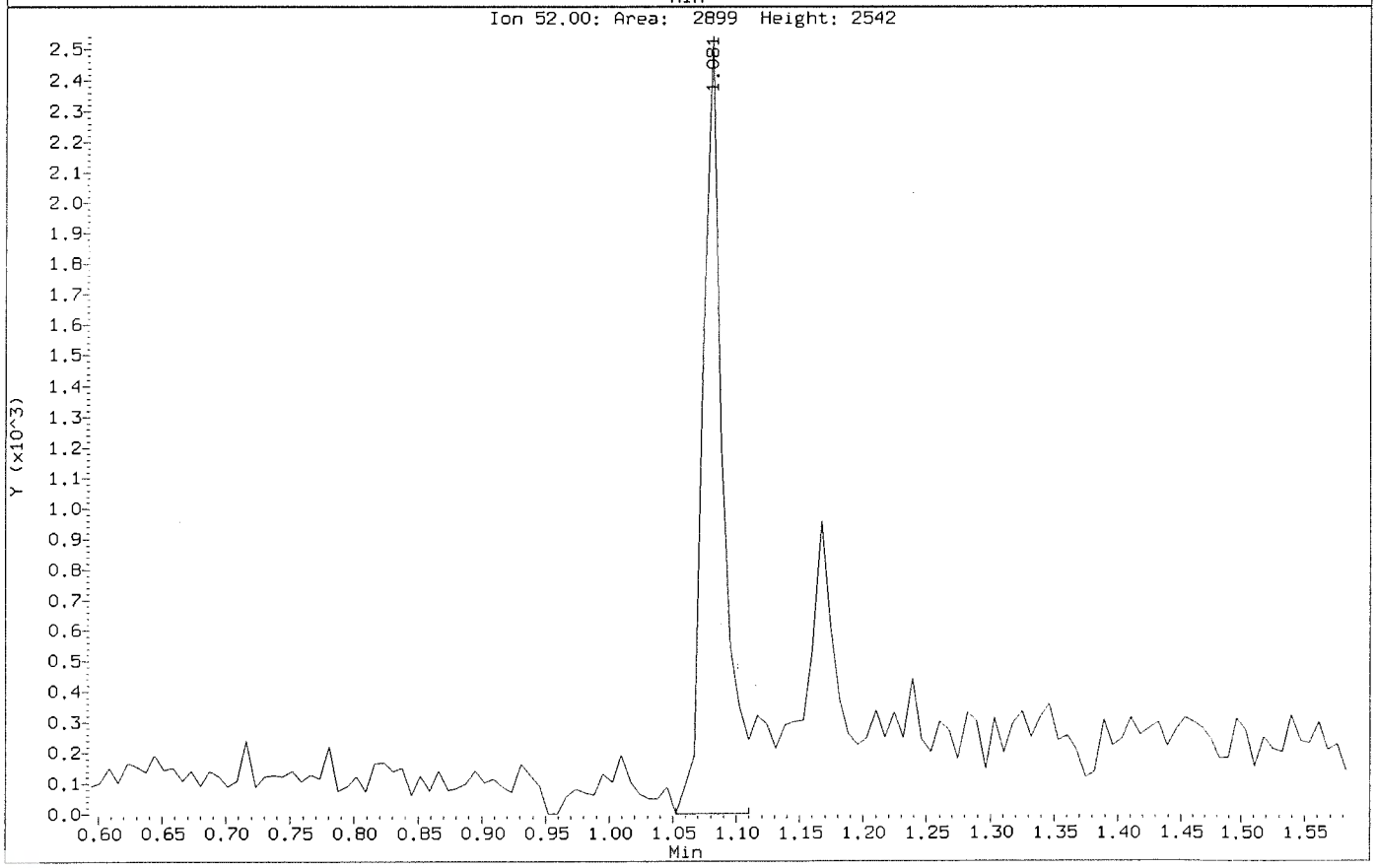




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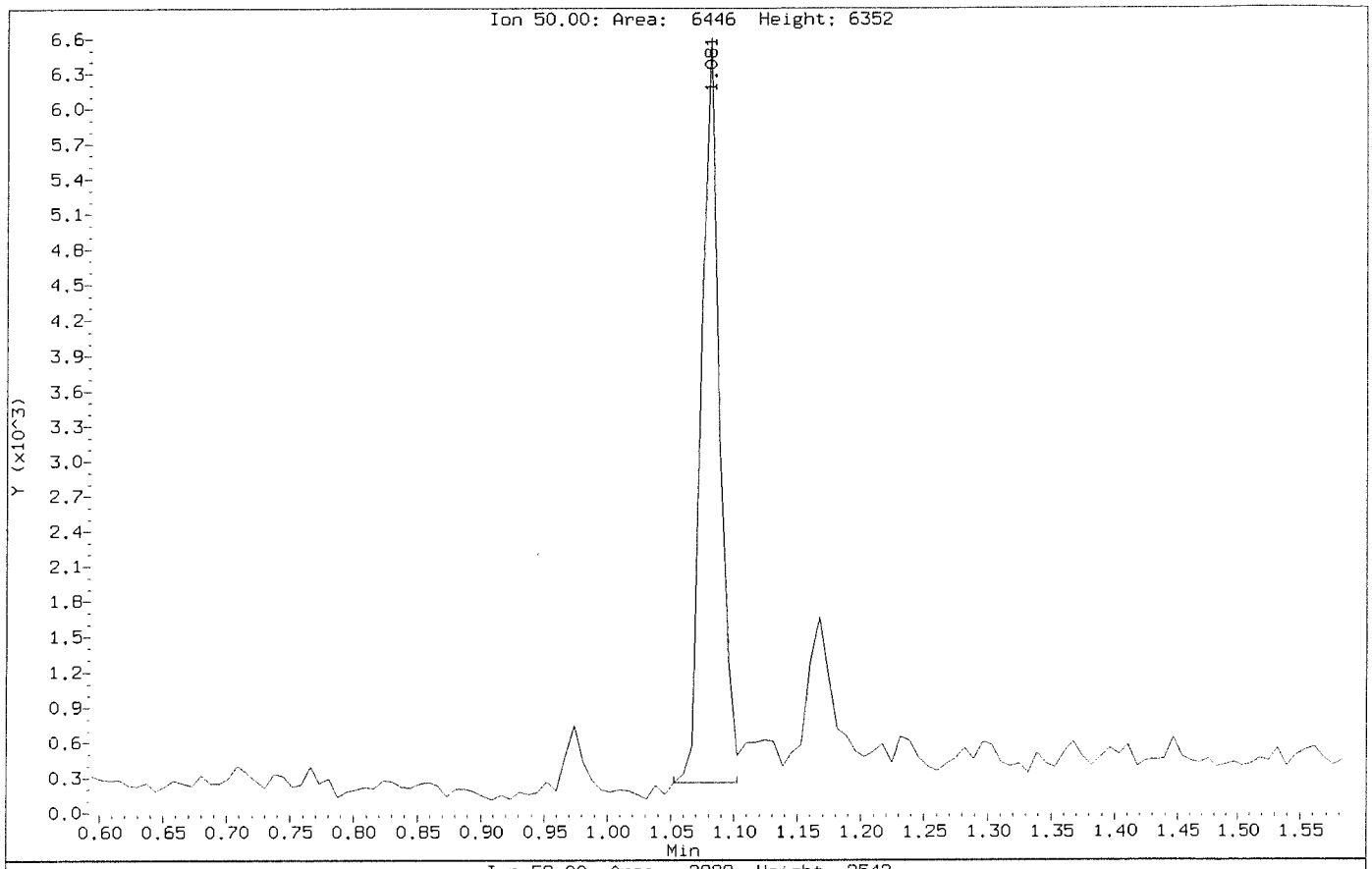
Compound: Chloromethane
CAS Number: 74-87-3

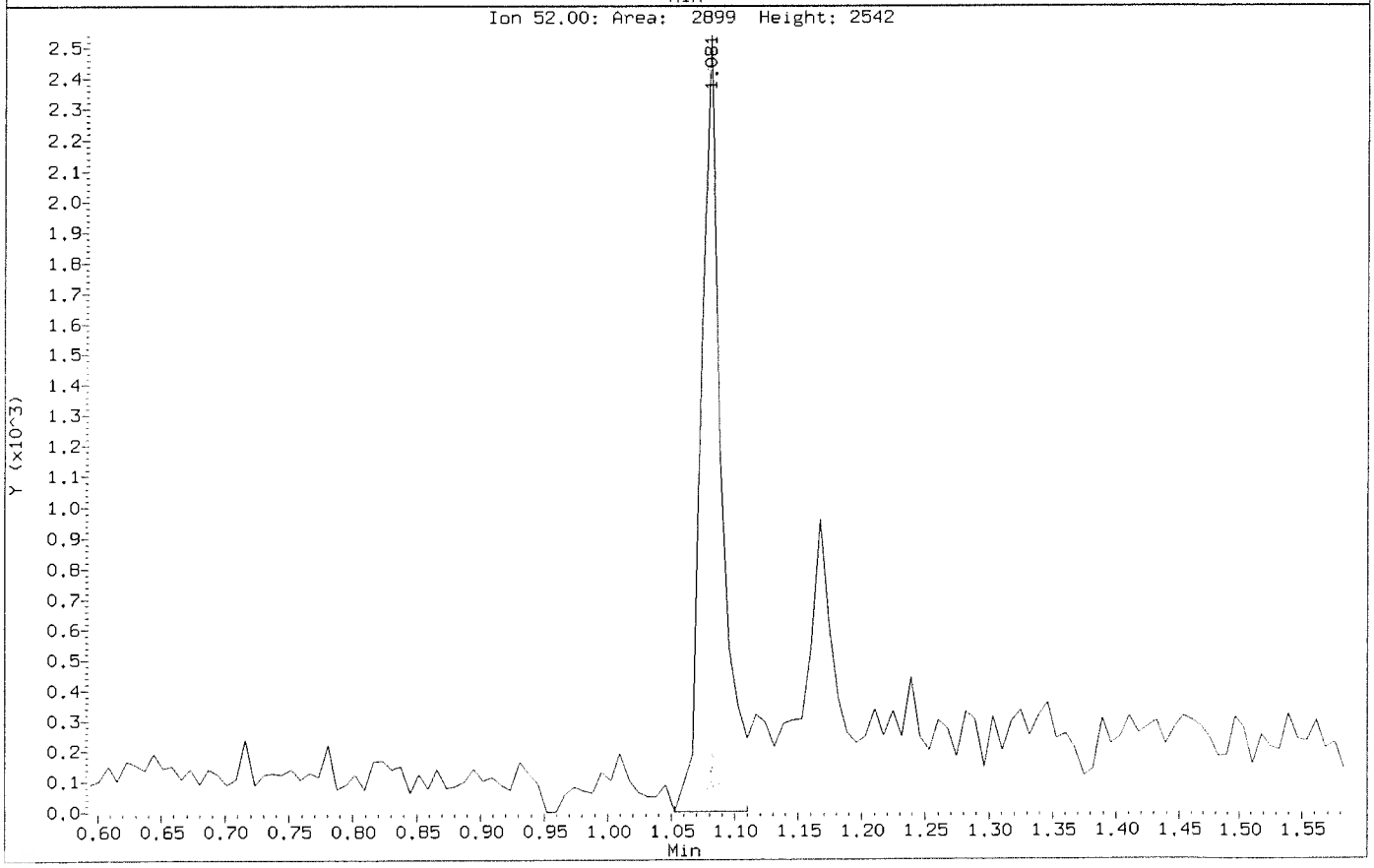




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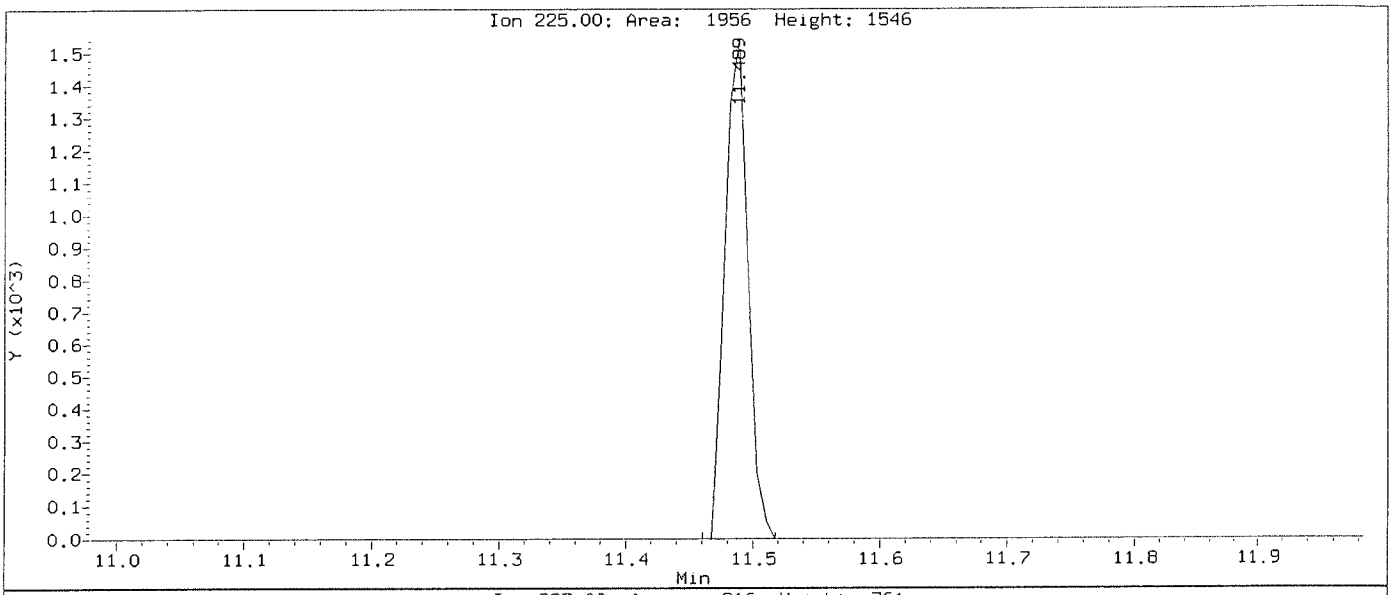
Compound: Chloromethane
CAS Number: 74-87-3

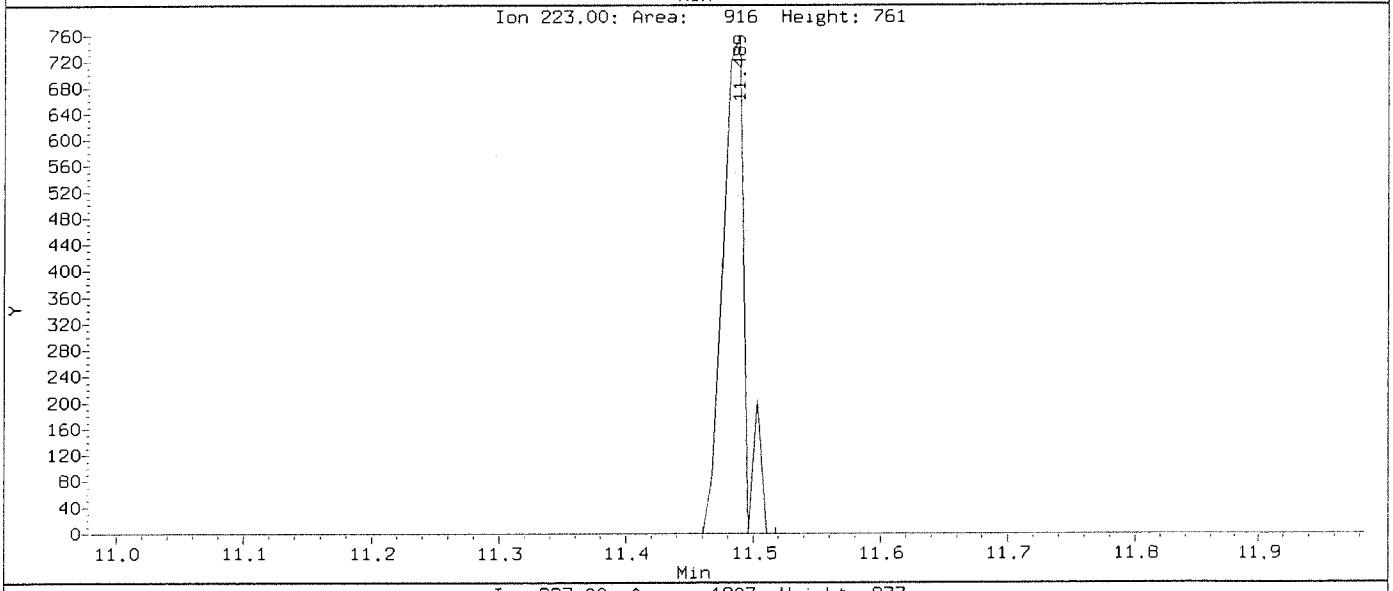


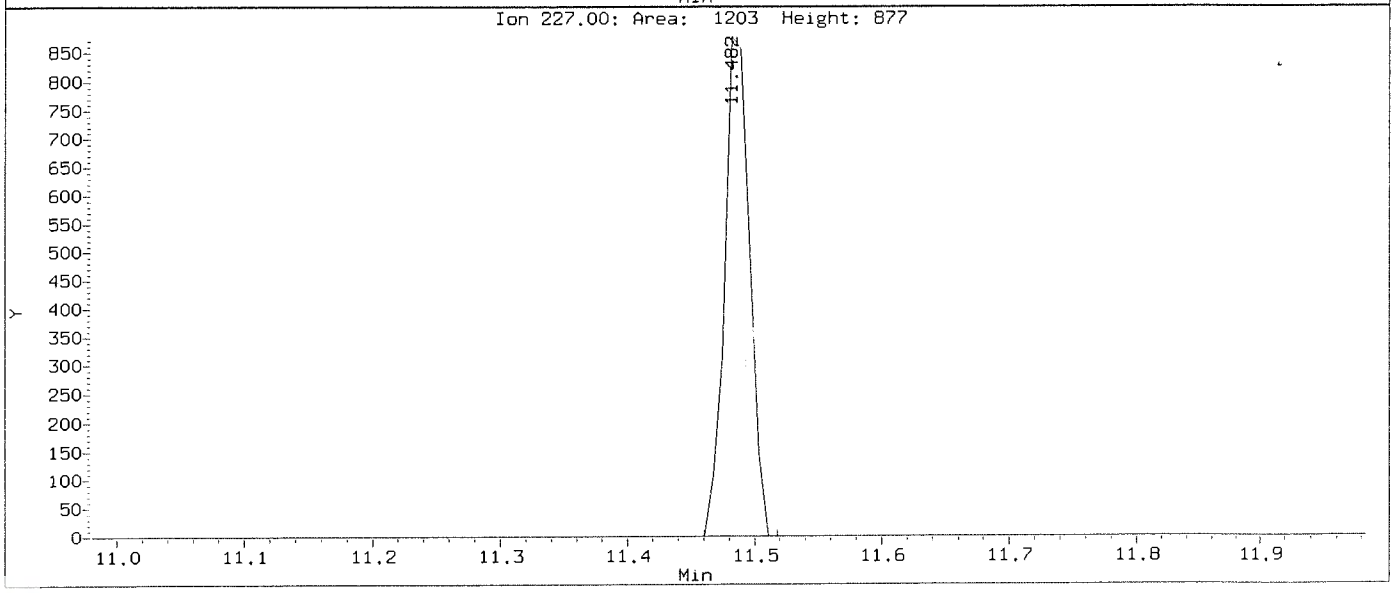


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

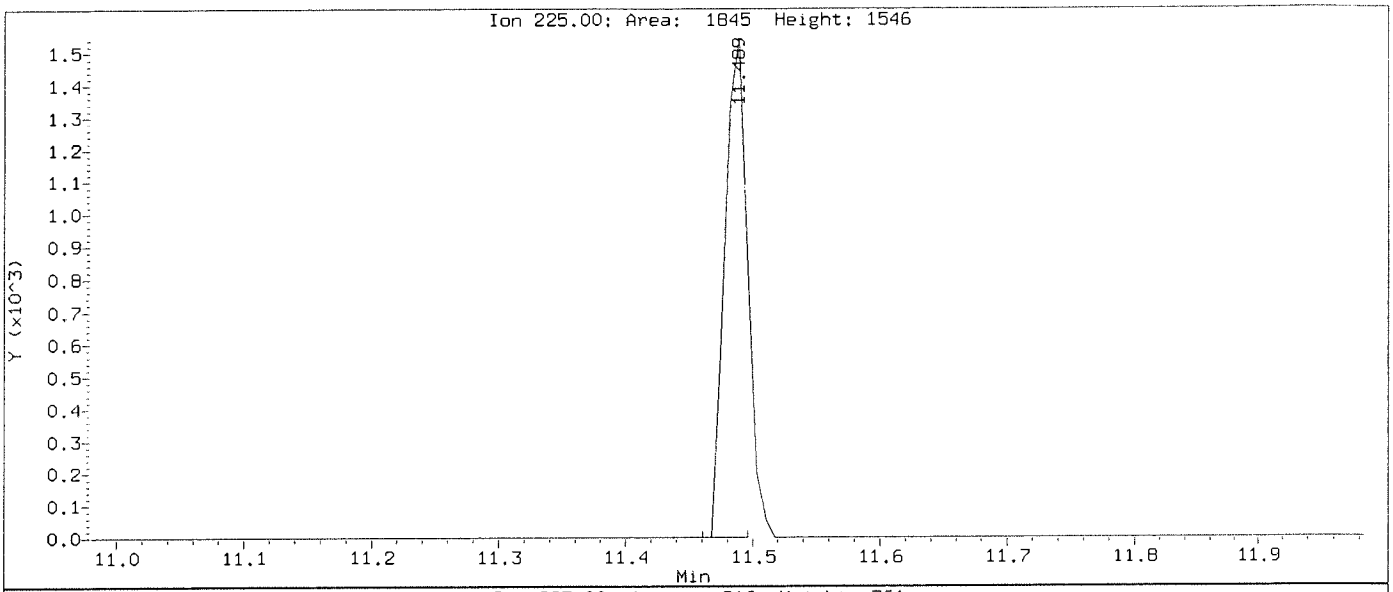


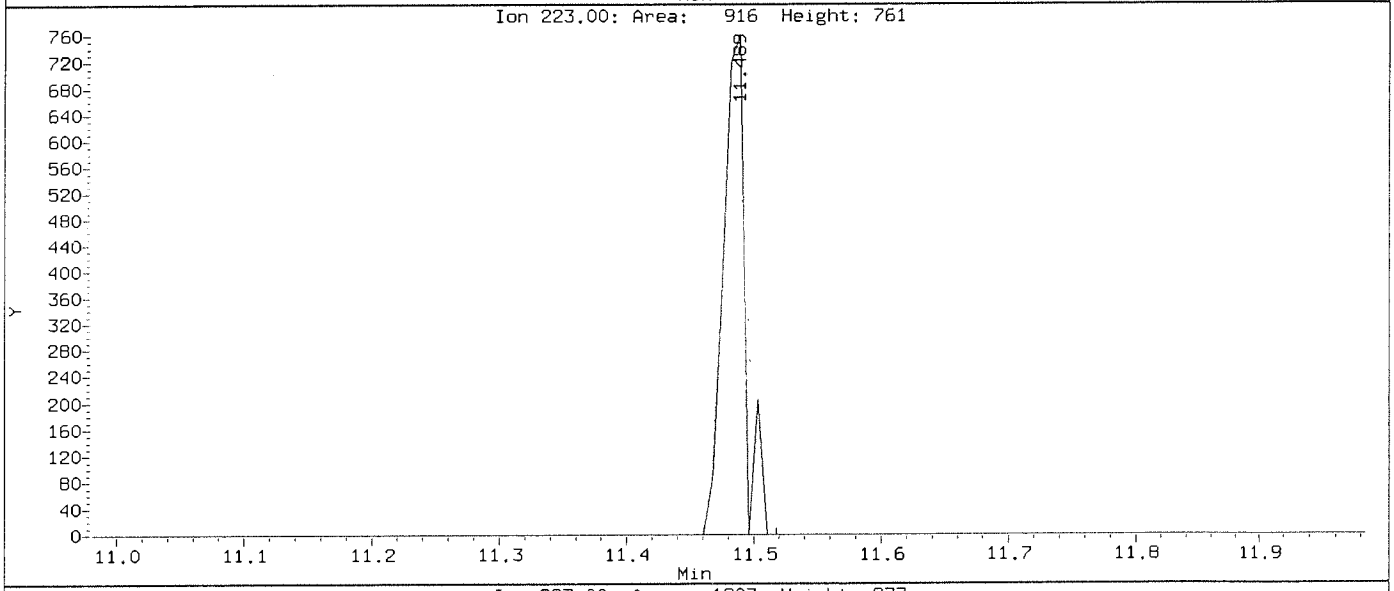


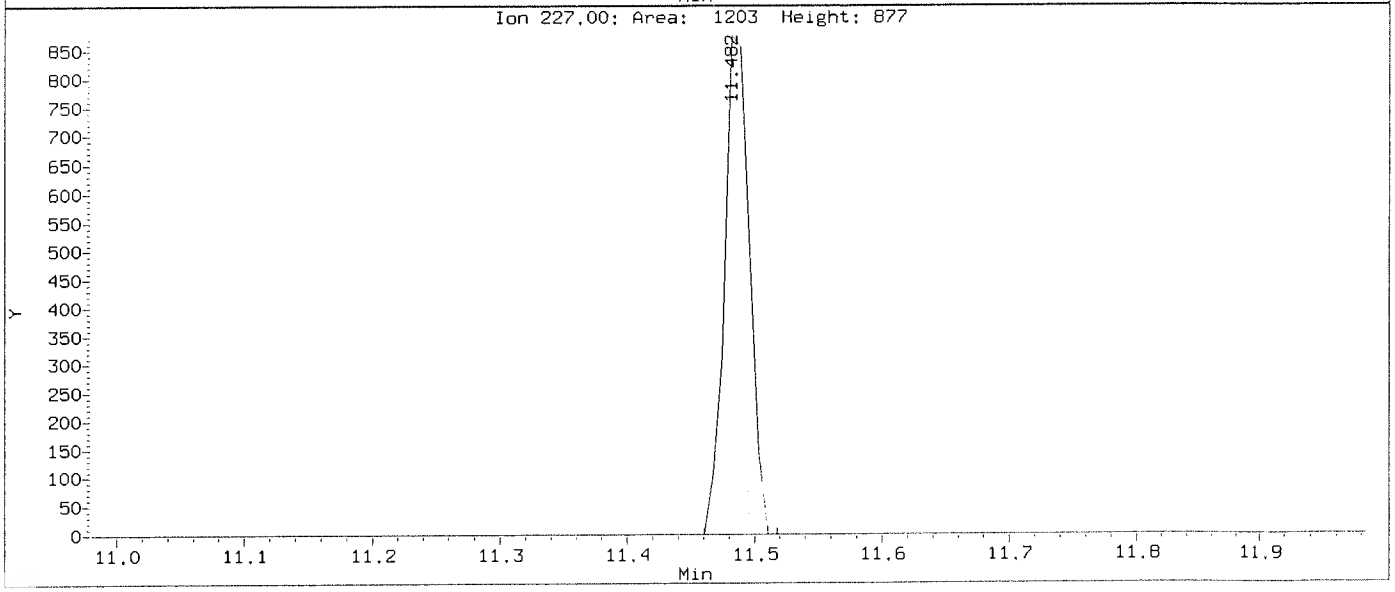


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3







Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-AUG-2020 13:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:52 Cal File: X080304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

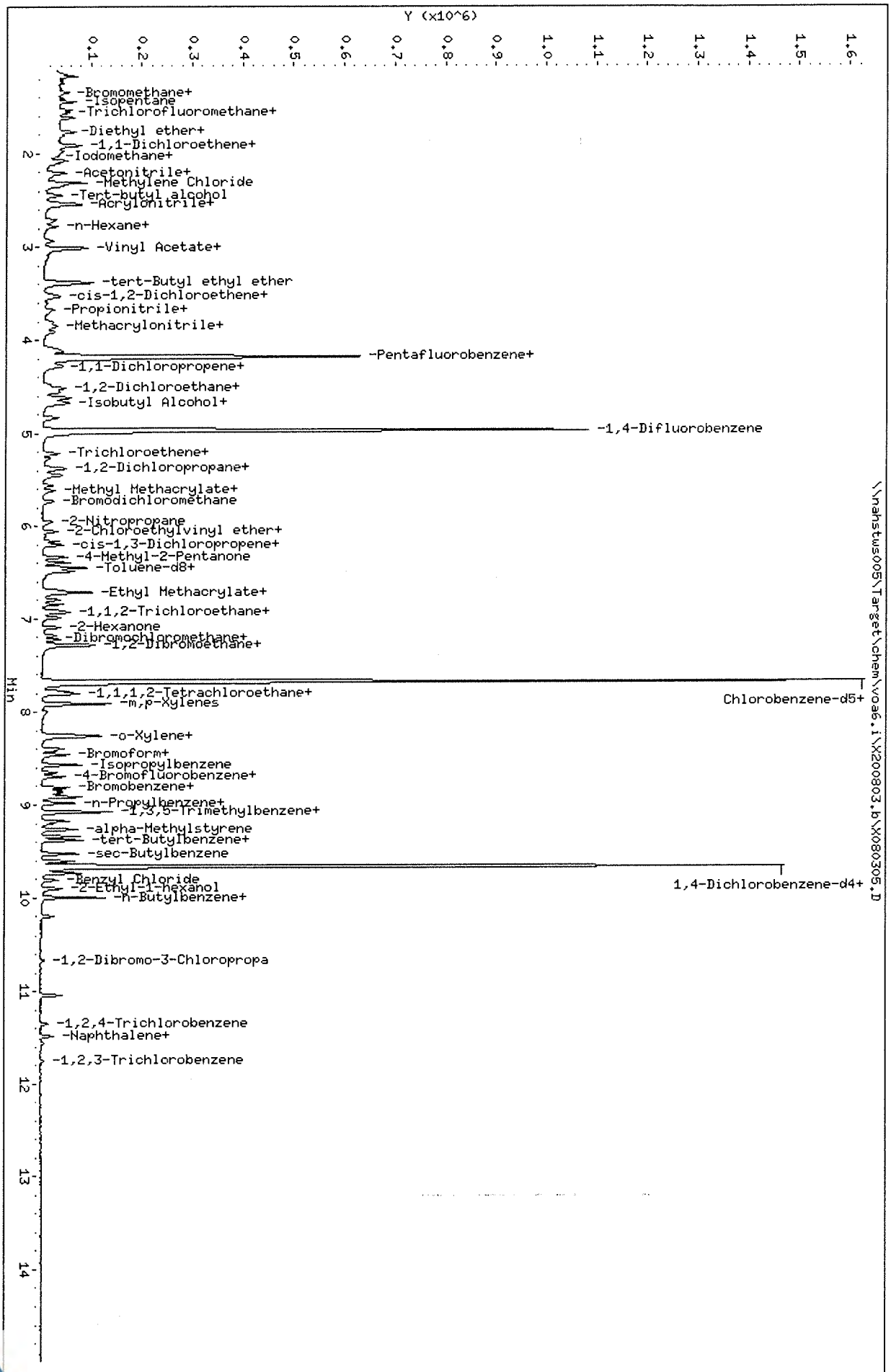
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.190	4.190	(1.000)	543911	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	829677	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	750905	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351595	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	9821	2.00000	1.83(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	10904	2.00000	1.72(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	33751	2.00000	1.85(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	13431	2.00000	1.91(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	11831	2.00000	2.06(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	15930	2.00000	1.90(a)
	68 1,1,2,2-Tetrachloroethane	83	8.846	8.846	(0.915)	17450	2.00000	3.44(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	9338	2.00000	2.18(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	20241	2.00000	1.90(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	8194	2.00000	1.90(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	14129	2.00000	2.02(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2318	2.00000	2.19(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12900	2.00000	2.50(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5020	2.00000	2.01(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	38643	2.00000	2.05(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	1468	2.00000	3.66(a)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	11414	2.00000	2.07(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	22043	2.00000	2.21(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	16305	2.00000	2.02(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	11836	2.00000	1.94(a)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	38031	2.00000	2.07(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	23923	2.00000	2.16(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	16738	2.00000	1.98(a)
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	23830	2.00000	2.18(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	15659	2.00000	2.01(aM)
24	2-Butanone	43	3.602	3.602	(0.860)	10002	4.00000	3.75(a)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	32223	2.00000	2.11(a)
52	2-Hexanone	43	7.091	7.091	(0.924)	23886	4.00000	5.06
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	36388	2.00000	2.05(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	39097	2.00000	2.00(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	32995	4.00000	4.74(a)
10	Acetone	43	1.976	1.976	(0.472)	9756	4.00000	4.12(aM)
37	Benzene	78	4.519	4.519	(0.909)	39024	2.00000	1.89(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	14653	2.00000	2.13(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	7080	2.00000	2.15(a)
39	Bromodichloromethane	83	5.730	5.730	(1.153)	14467	2.00000	1.93(a)
66	Bromoform	173	8.416	8.416	(1.097)	9196	2.00000	2.20(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	9294	2.00000	3.10(a)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	47873	4.00000	3.57(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	13935	2.00000	1.88(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	29194	2.00000	1.98(a)
7	Chloroethane	64	1.403	1.403	(0.335)	7130	2.00000	1.84(a)
28	Chloroform	83	3.910	3.910	(0.933)	19377	2.00000	1.99(a)
3	Chloromethane	50	1.081	1.081	(0.258)	15093	2.00000	1.97(a)
27	cis-1,2-Dichloroethene	96	3.531	3.531	(0.843)	11409	2.00000	1.90(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	16717	2.00000	1.91(a)
55	Dibromochloromethane	129	7.177	7.177	(0.936)	13023	2.00000	2.16(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	6946	2.00000	1.92(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	9815	2.00000	1.84(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	14170	2.00000	1.86(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	4418	2.00000	2.34(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	42458	2.00000	1.90(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	35460	4.00000	3.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	20318	2.00000	2.34(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	30052	2.00000	1.93(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	49004	2.00000	1.93(a)
92	Naphthalene	128	11.553	11.553	(1.195)	6258	2.00000	2.17(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	17455	2.00000	1.93(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	41975	2.00000	1.96(a)
64	Styrene	104	8.265	8.265	(1.078)	33224	2.00000	2.12(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	31980	2.00000	2.00(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8697	2.00000	1.82(a)
50	Toluene	91	6.453	6.453	(0.841)	43608	2.00000	1.98(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	9831	2.00000	1.92(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	15714	2.00000	1.96(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	11482	2.00000	1.95(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	14481	2.00000	1.80(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	12969	2.00000	1.85(a)

QC Flag Legend

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

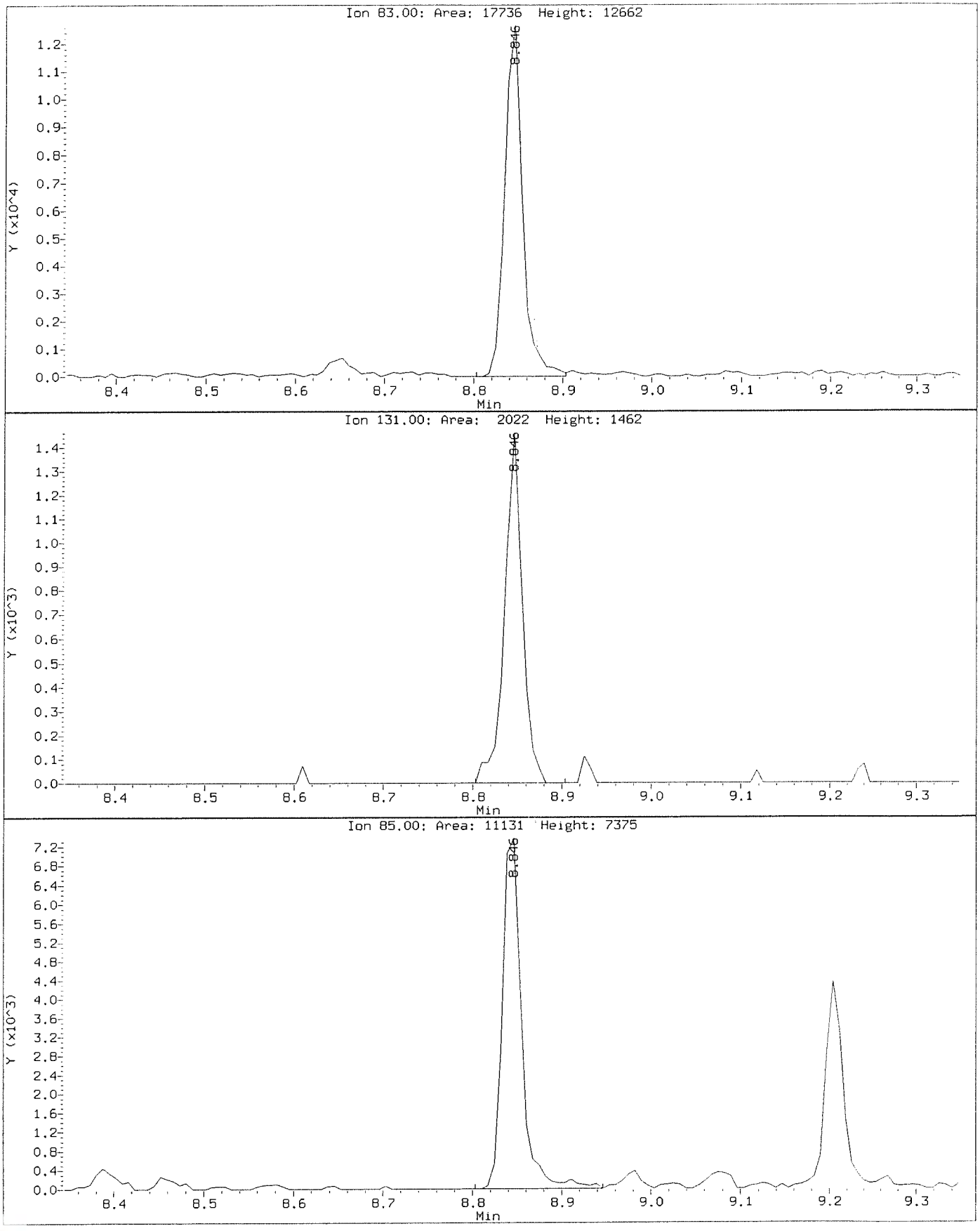


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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

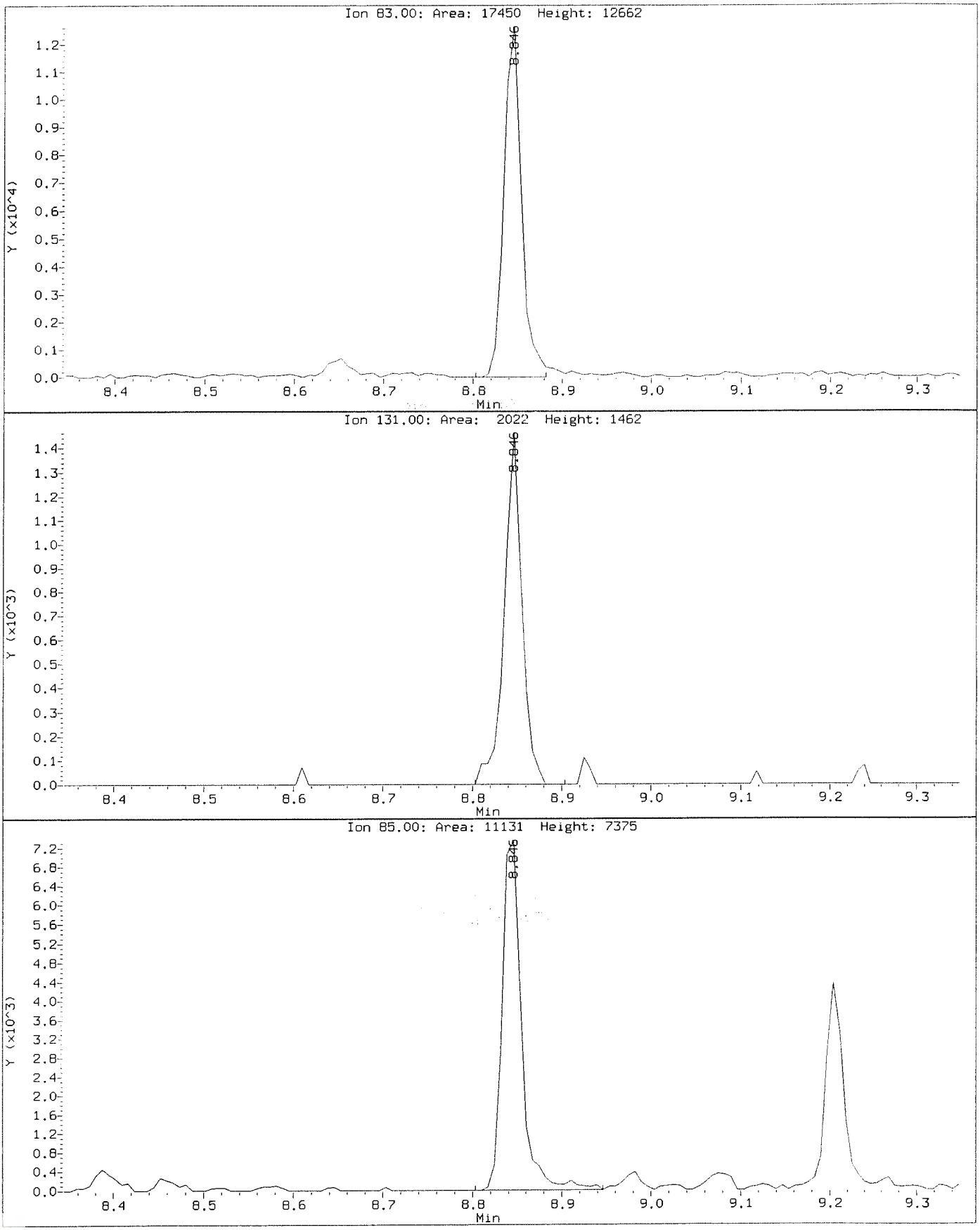
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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



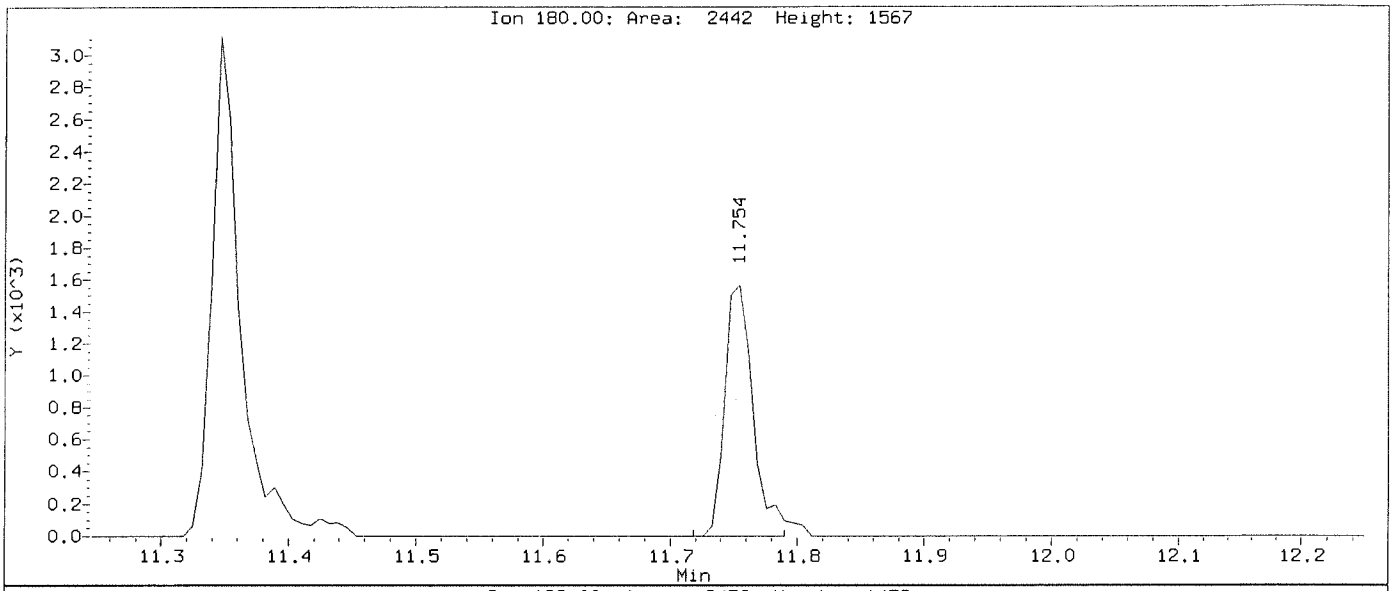
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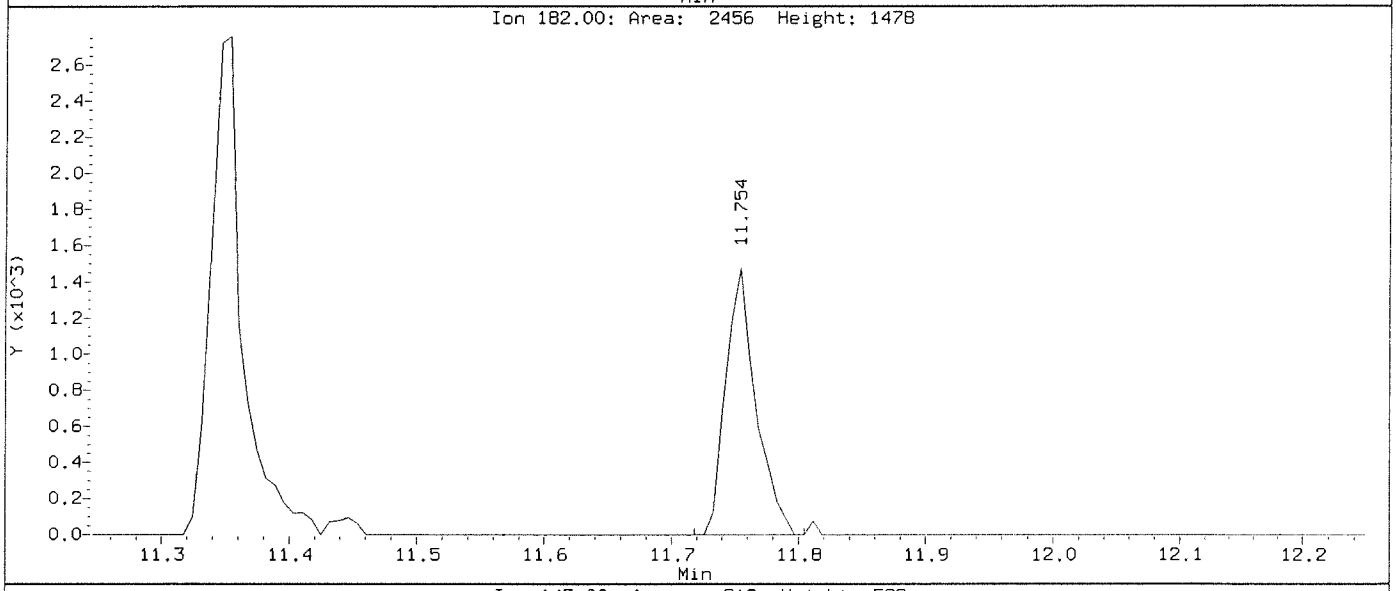
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

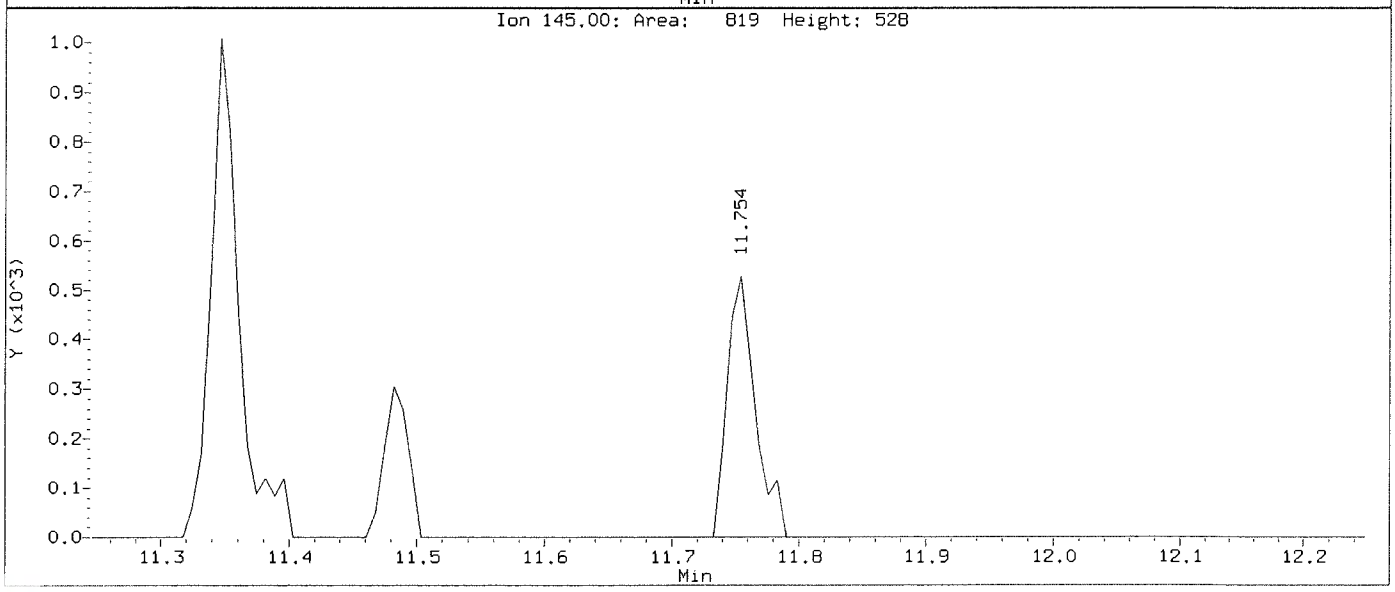


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

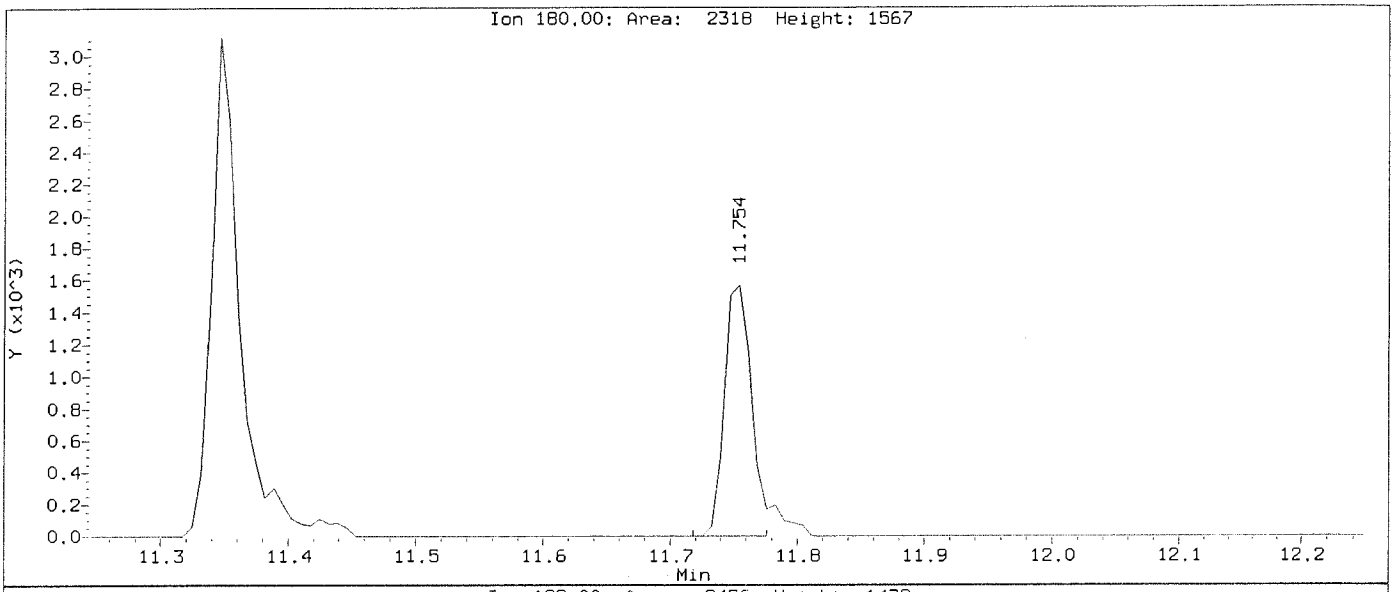


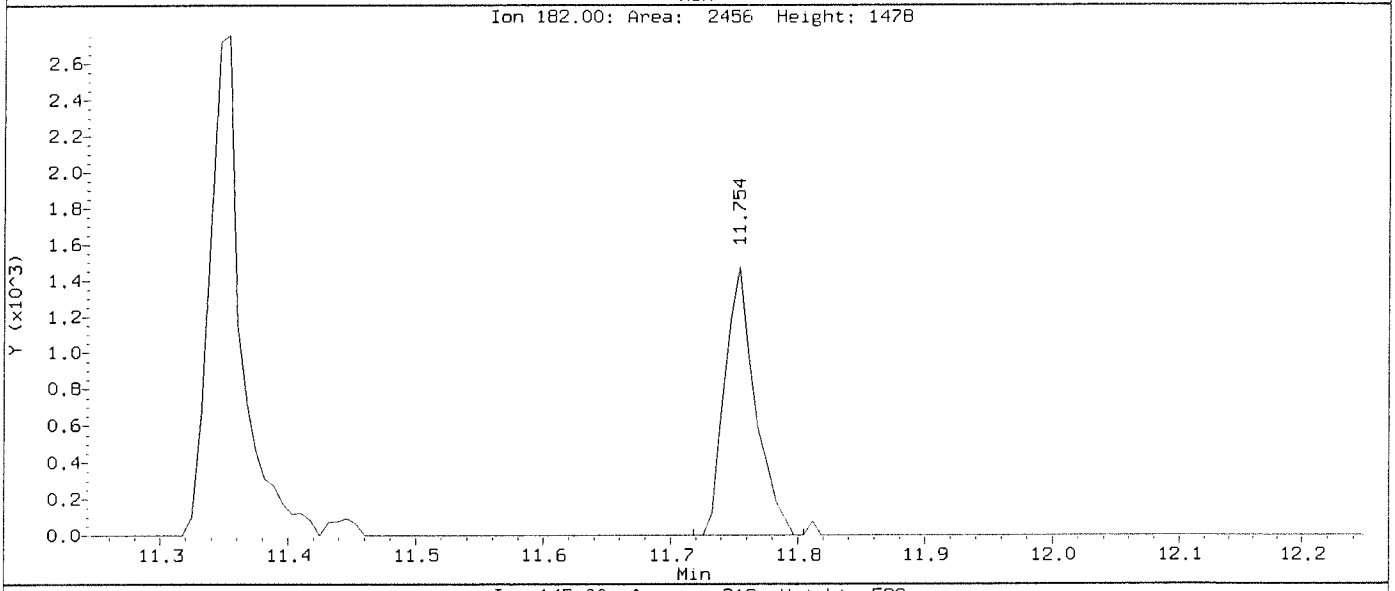


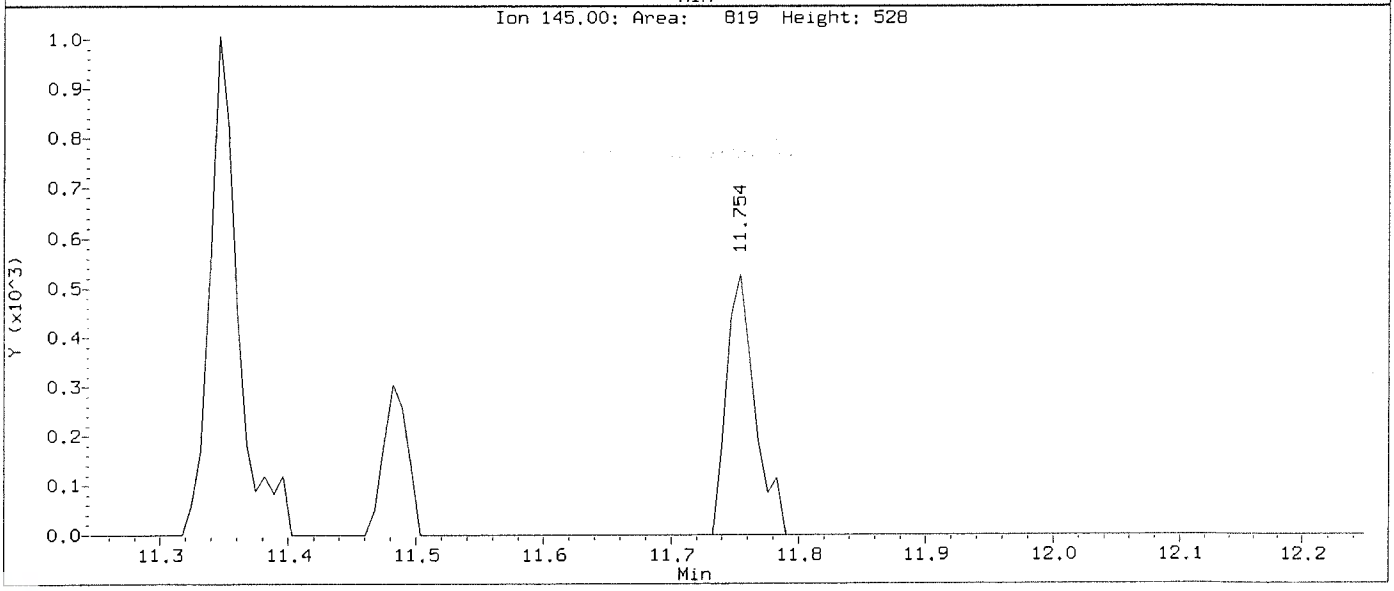


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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

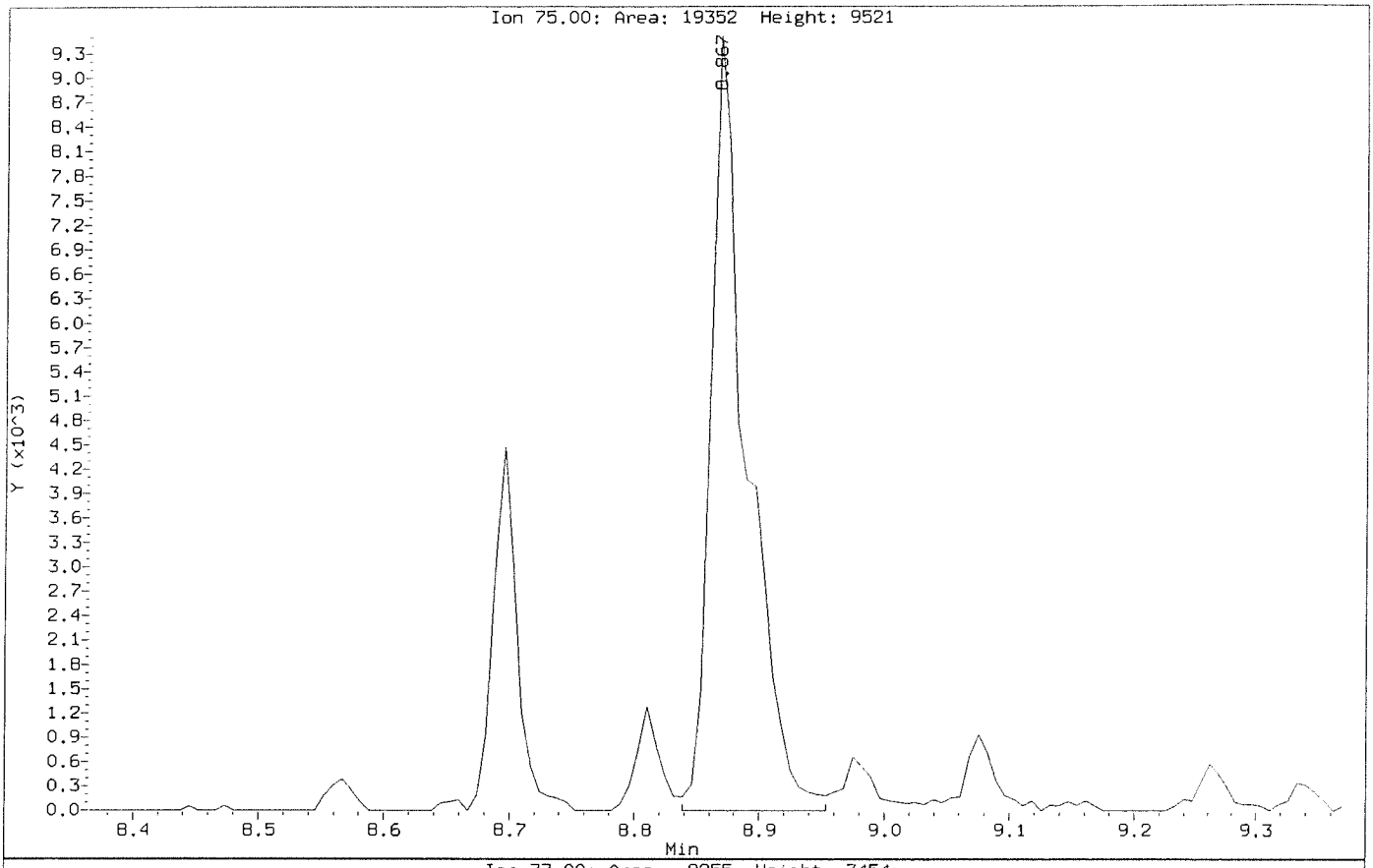


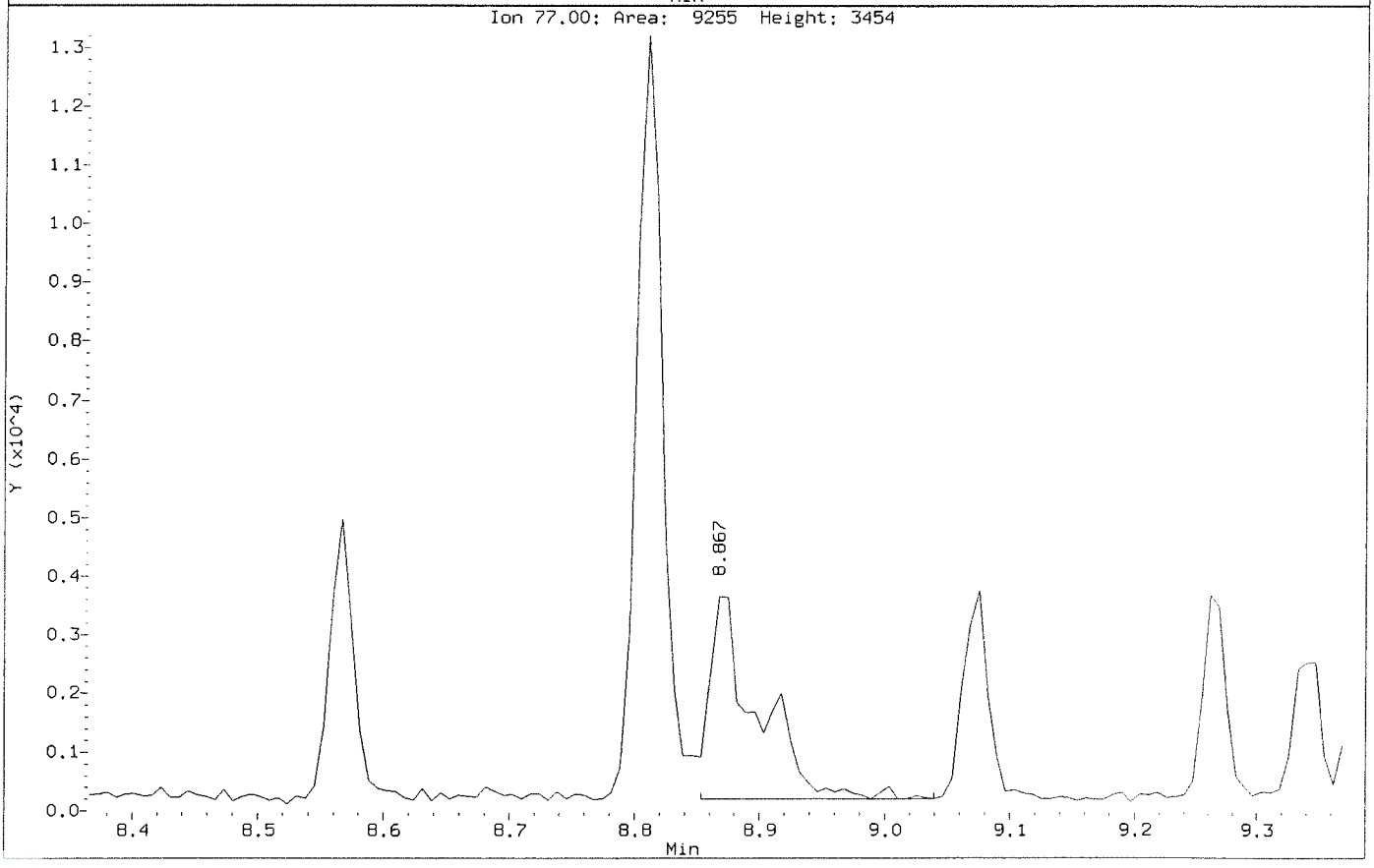




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Client Sample ID: VSTD002

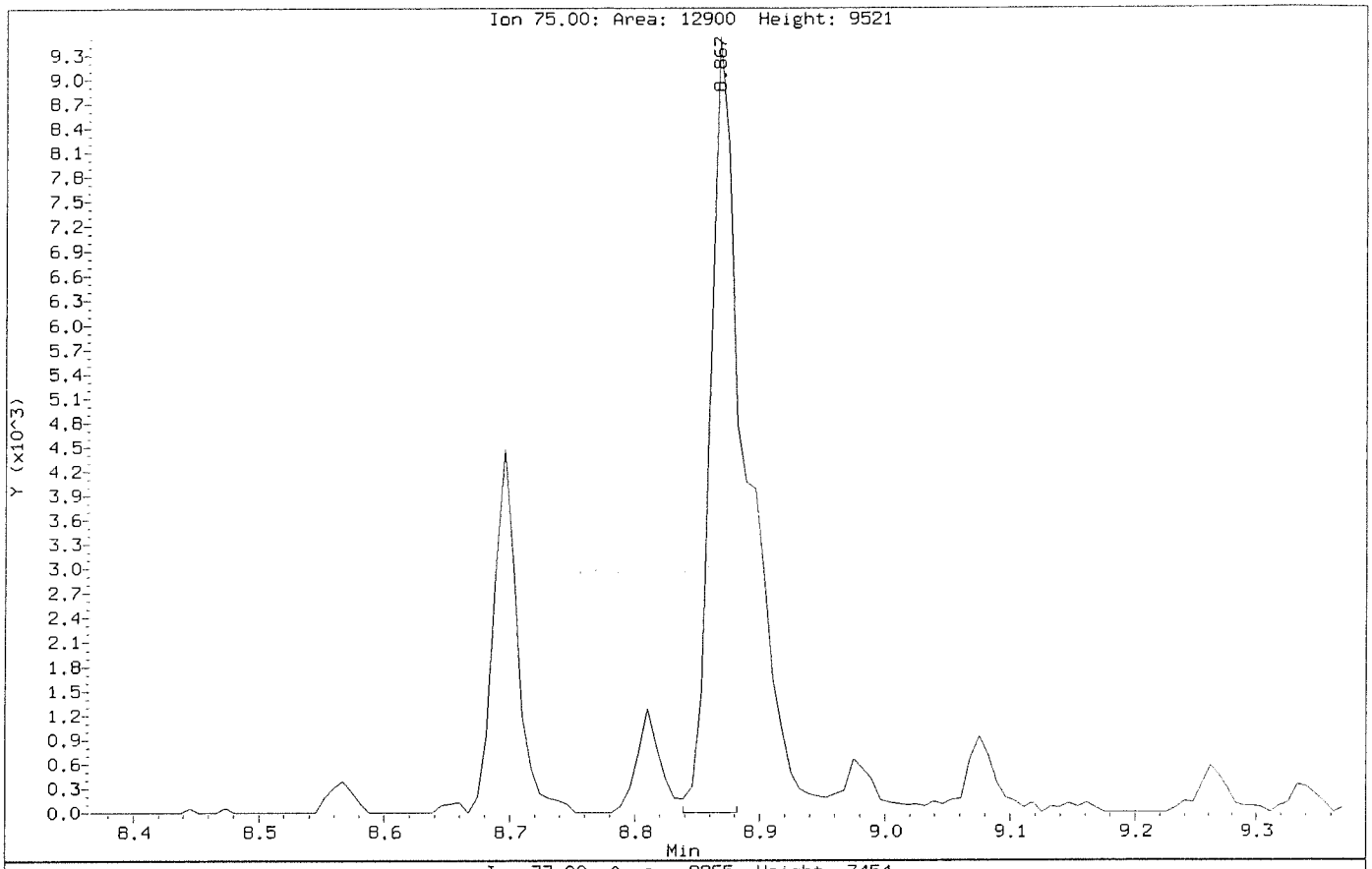
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

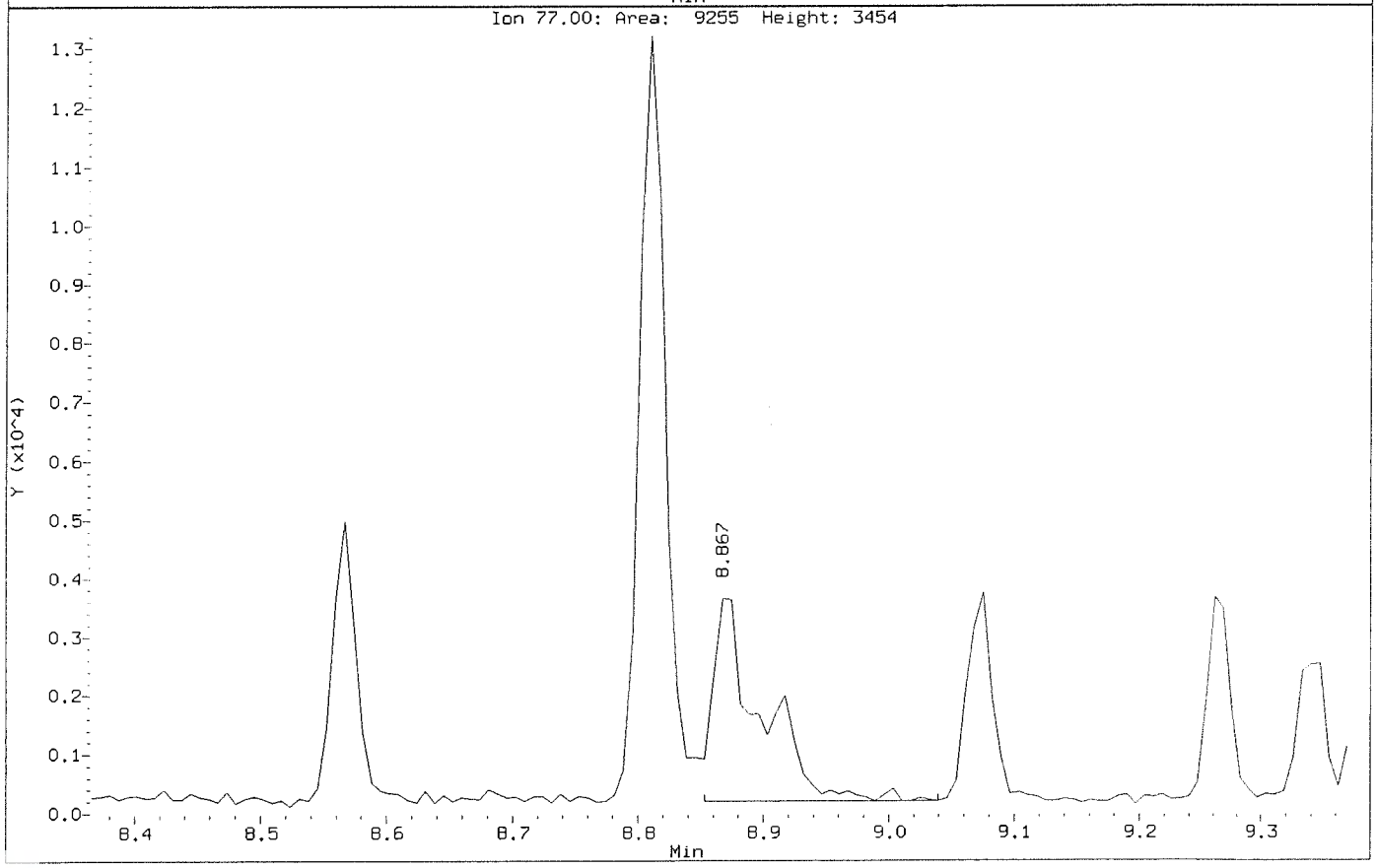




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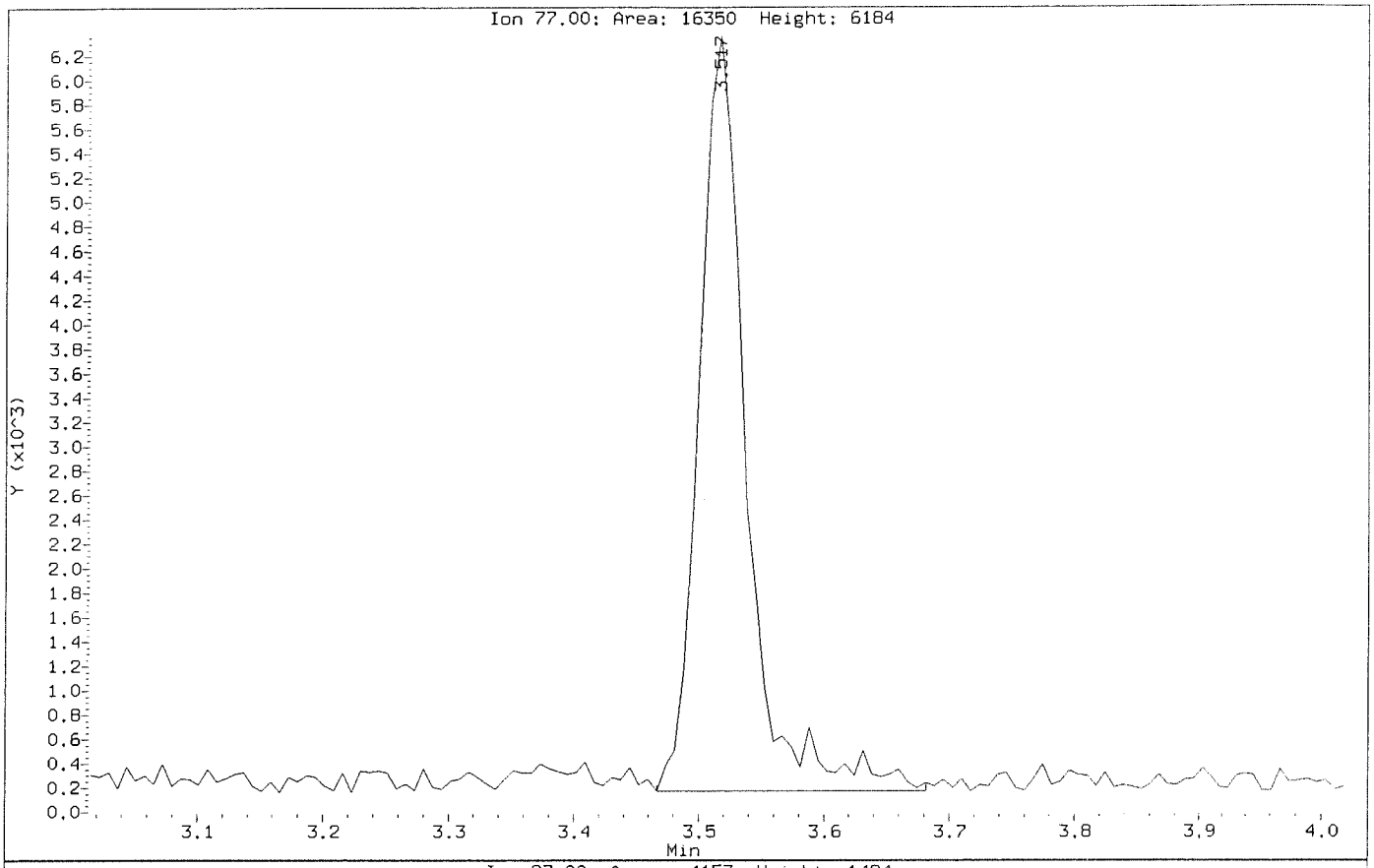
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

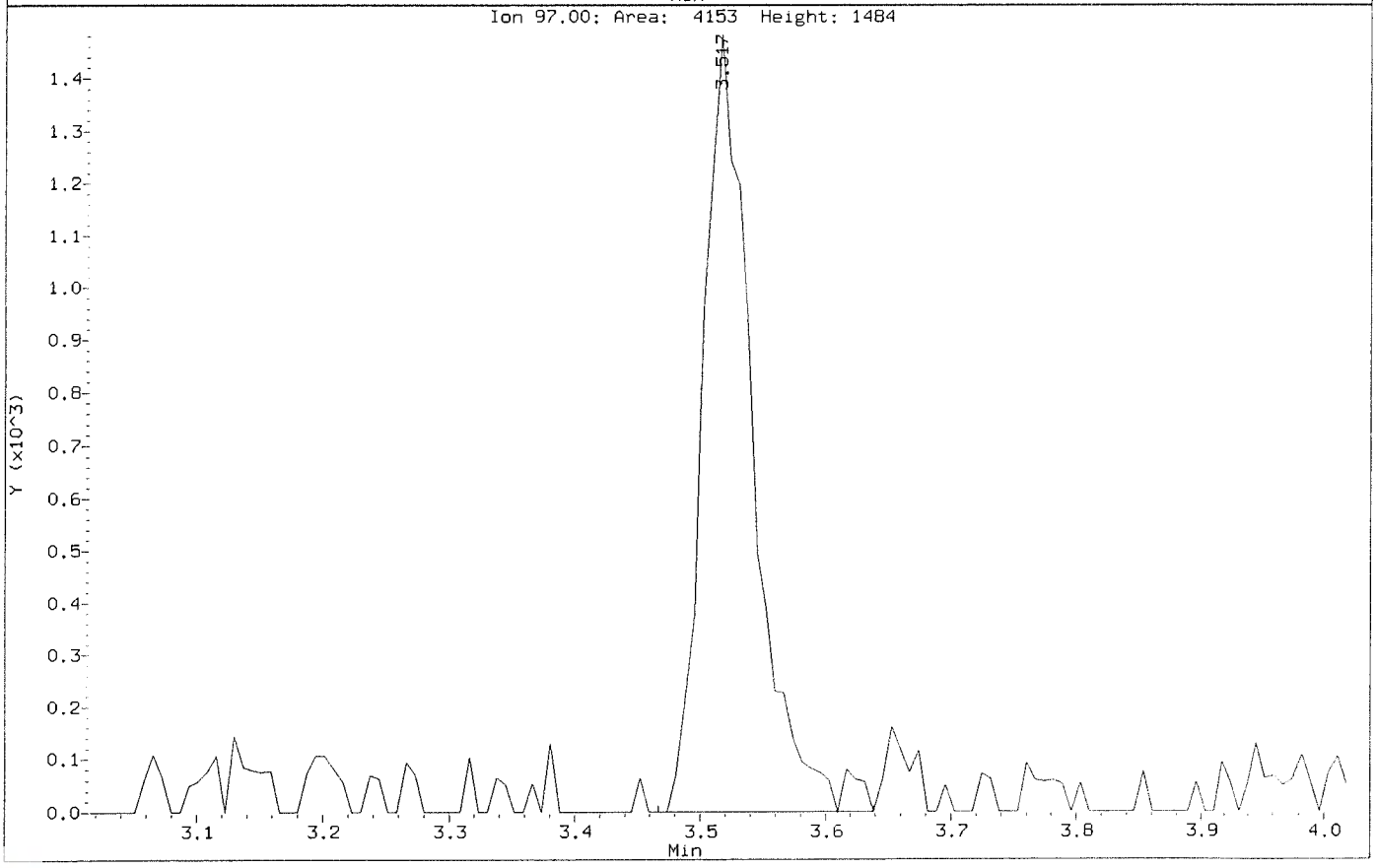




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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

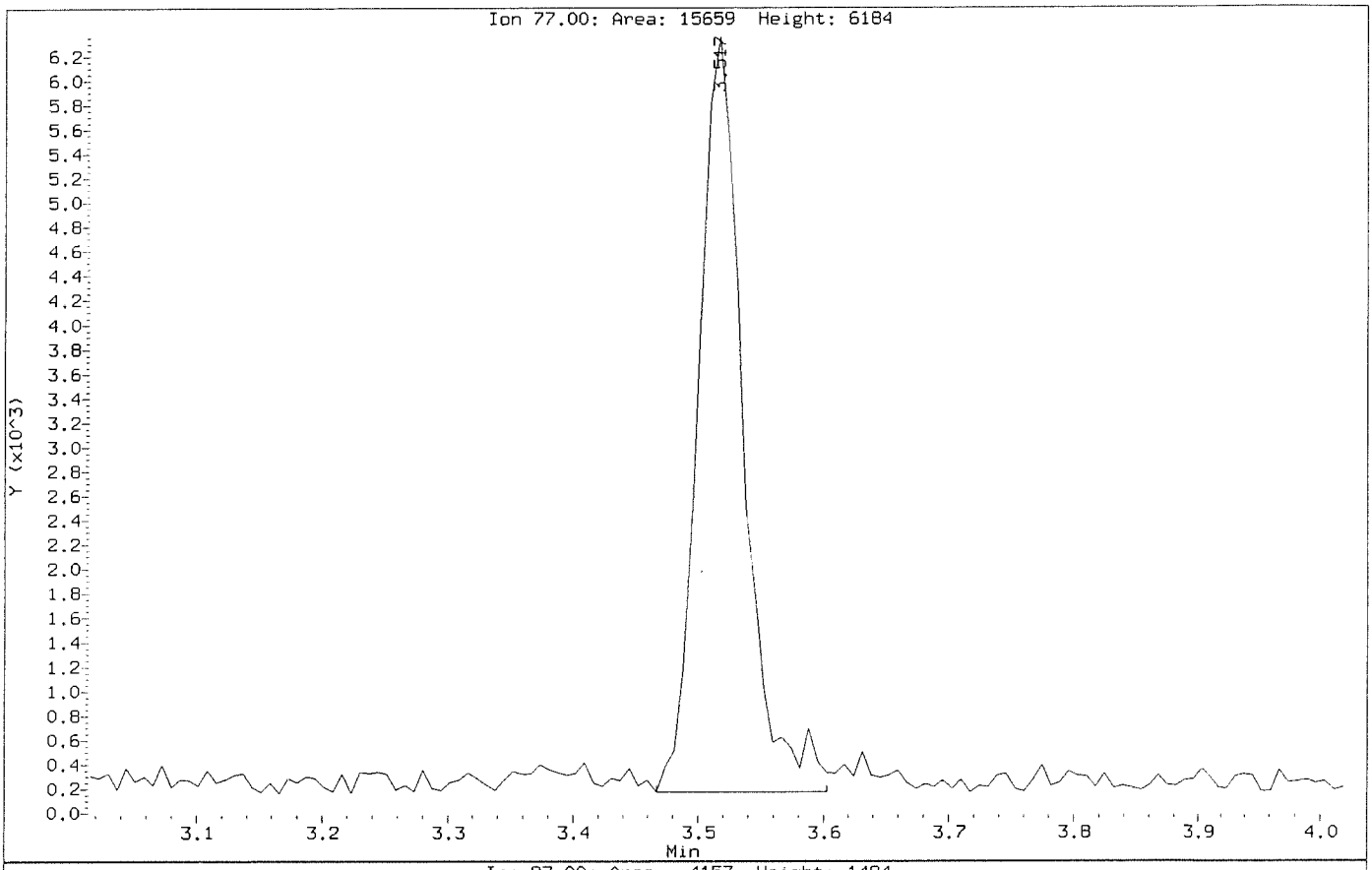
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

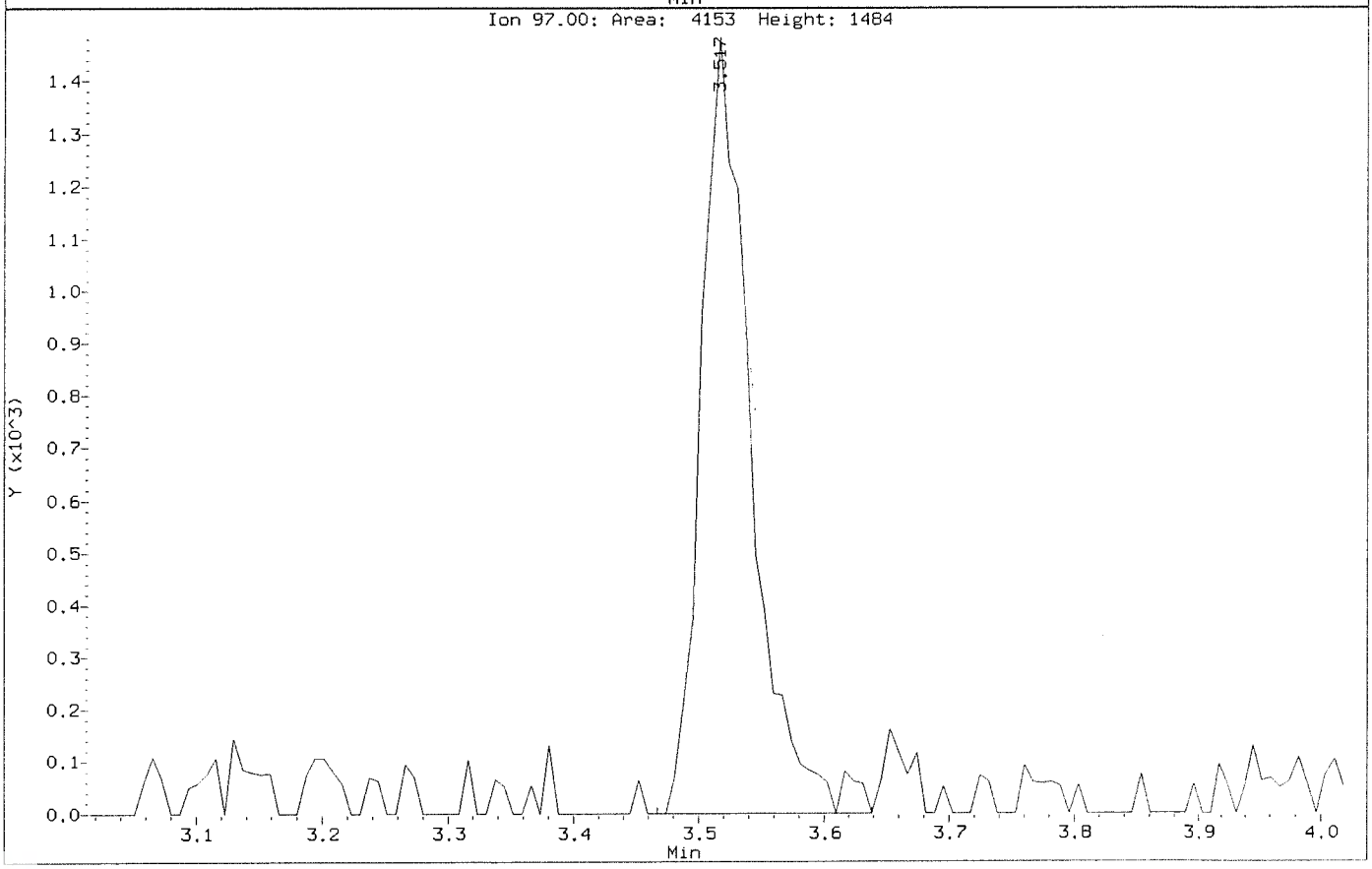




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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

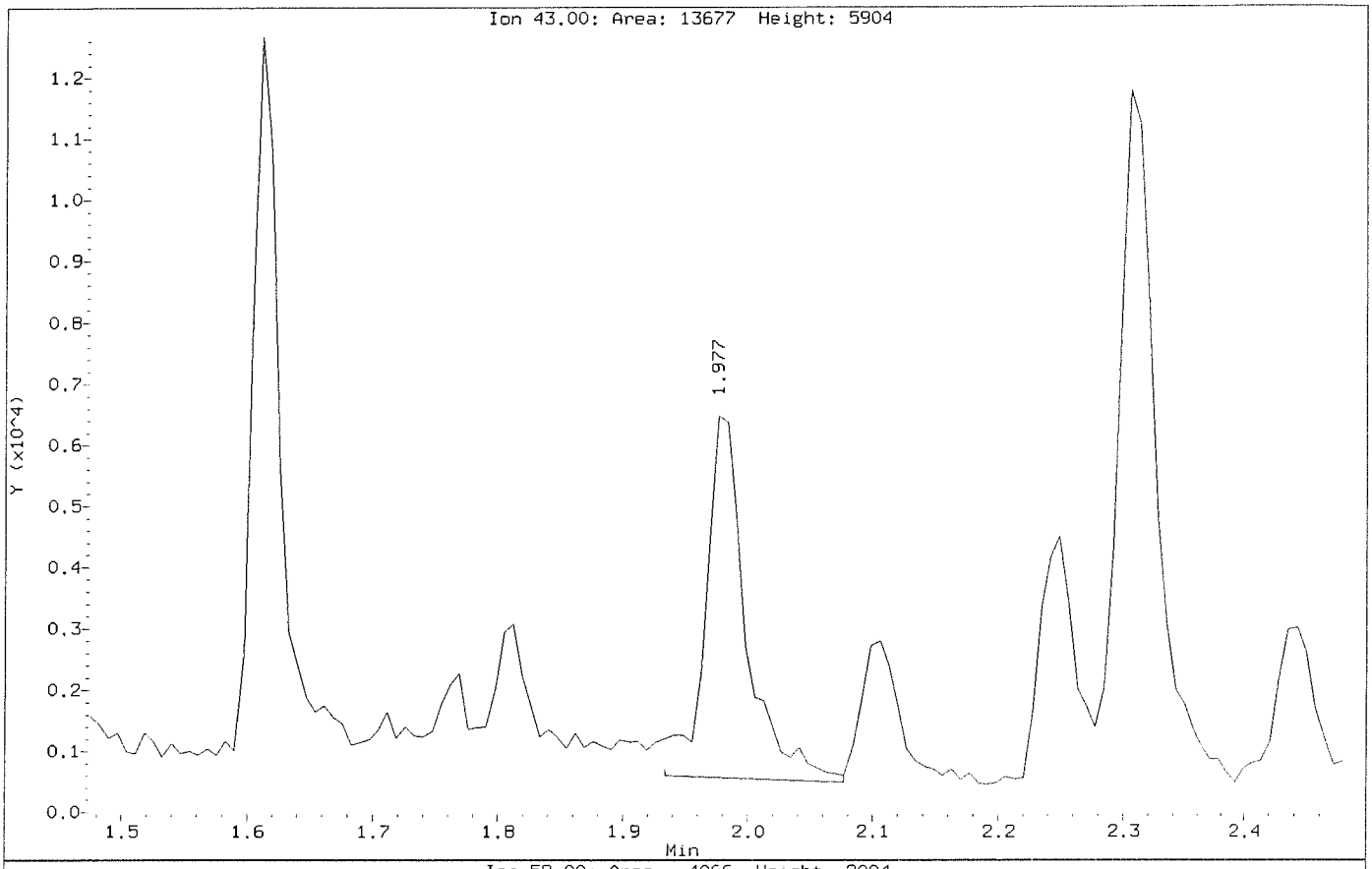
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

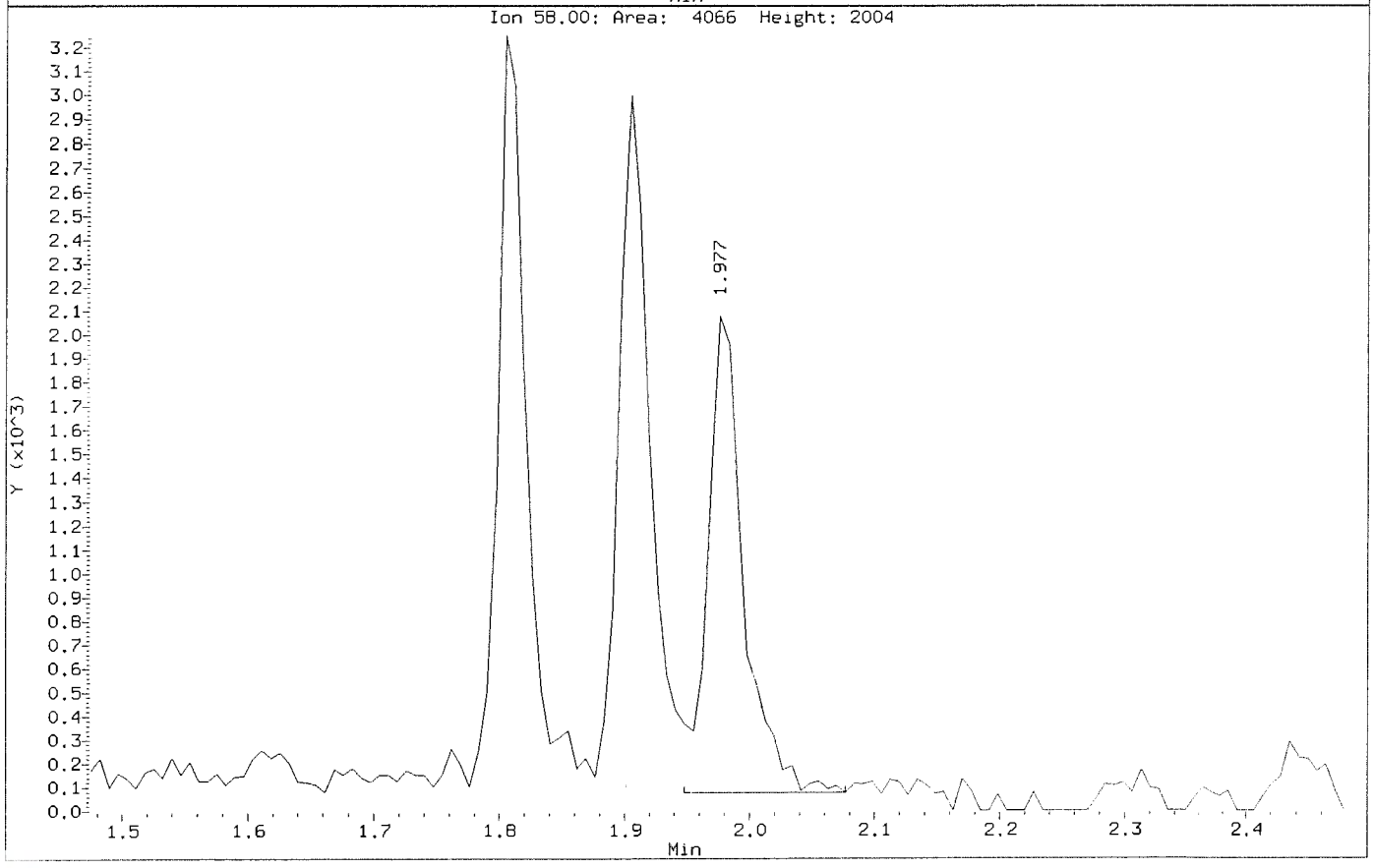




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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

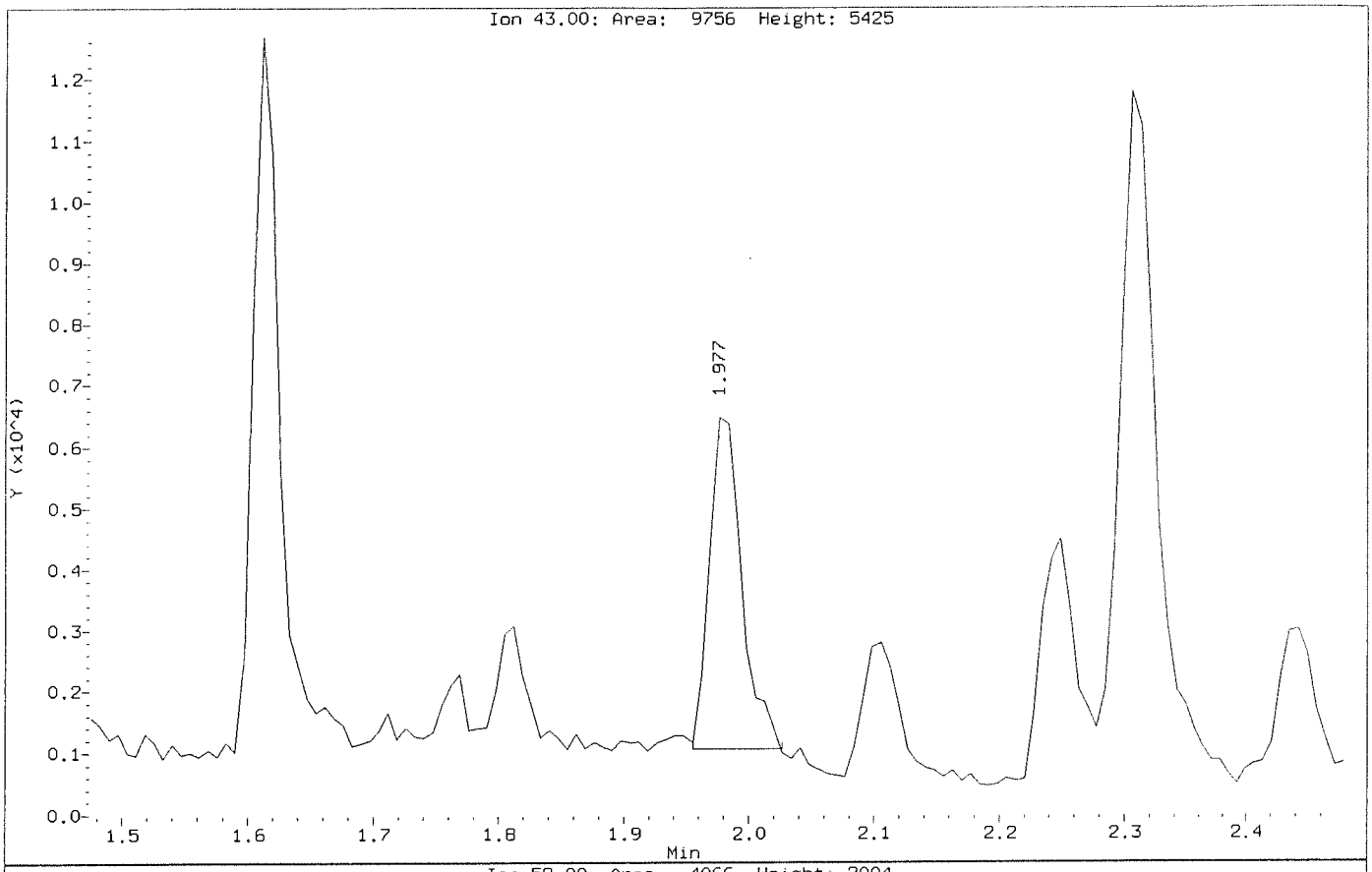
Compound: Acetone
CAS Number: 67-64-1

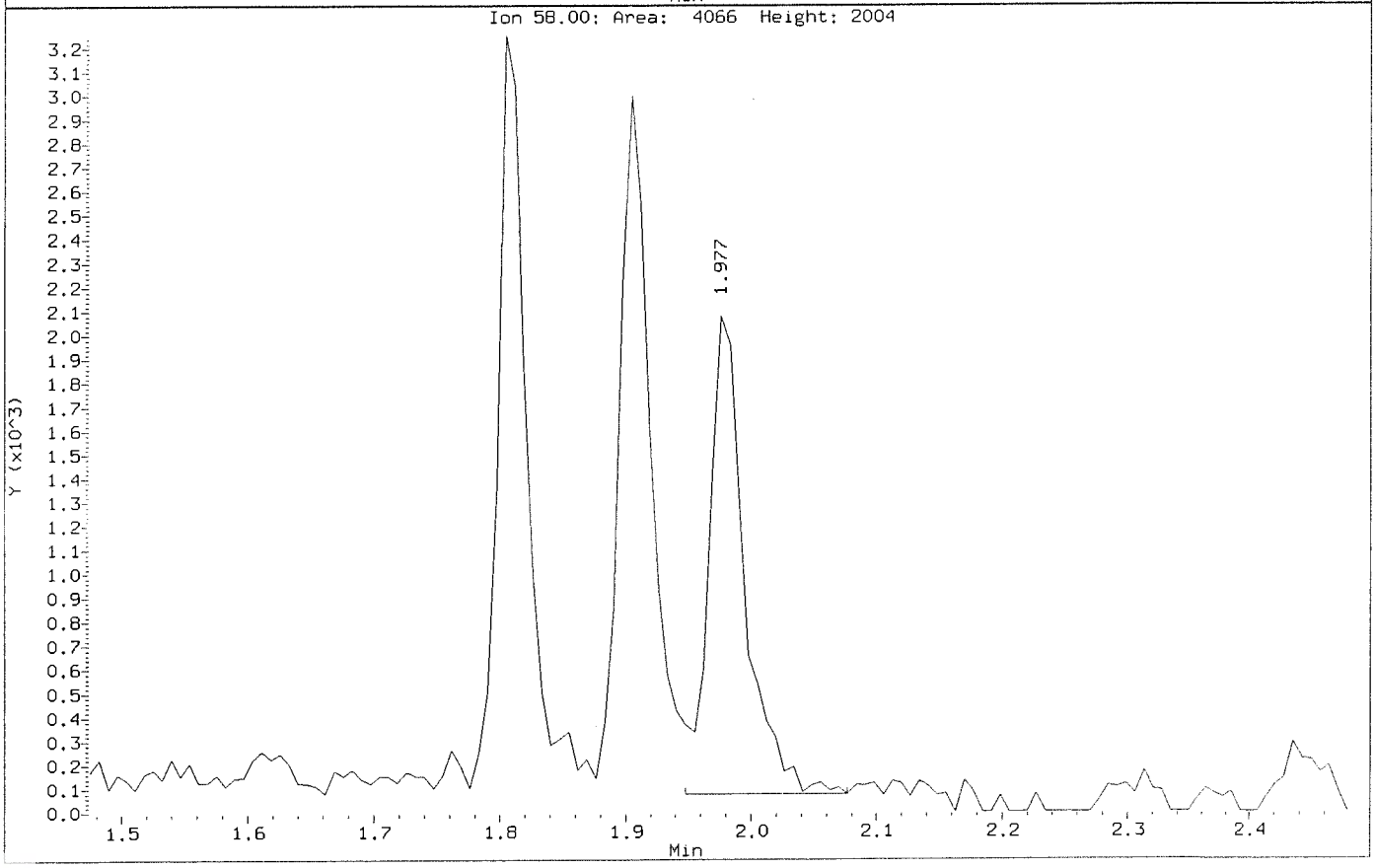




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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

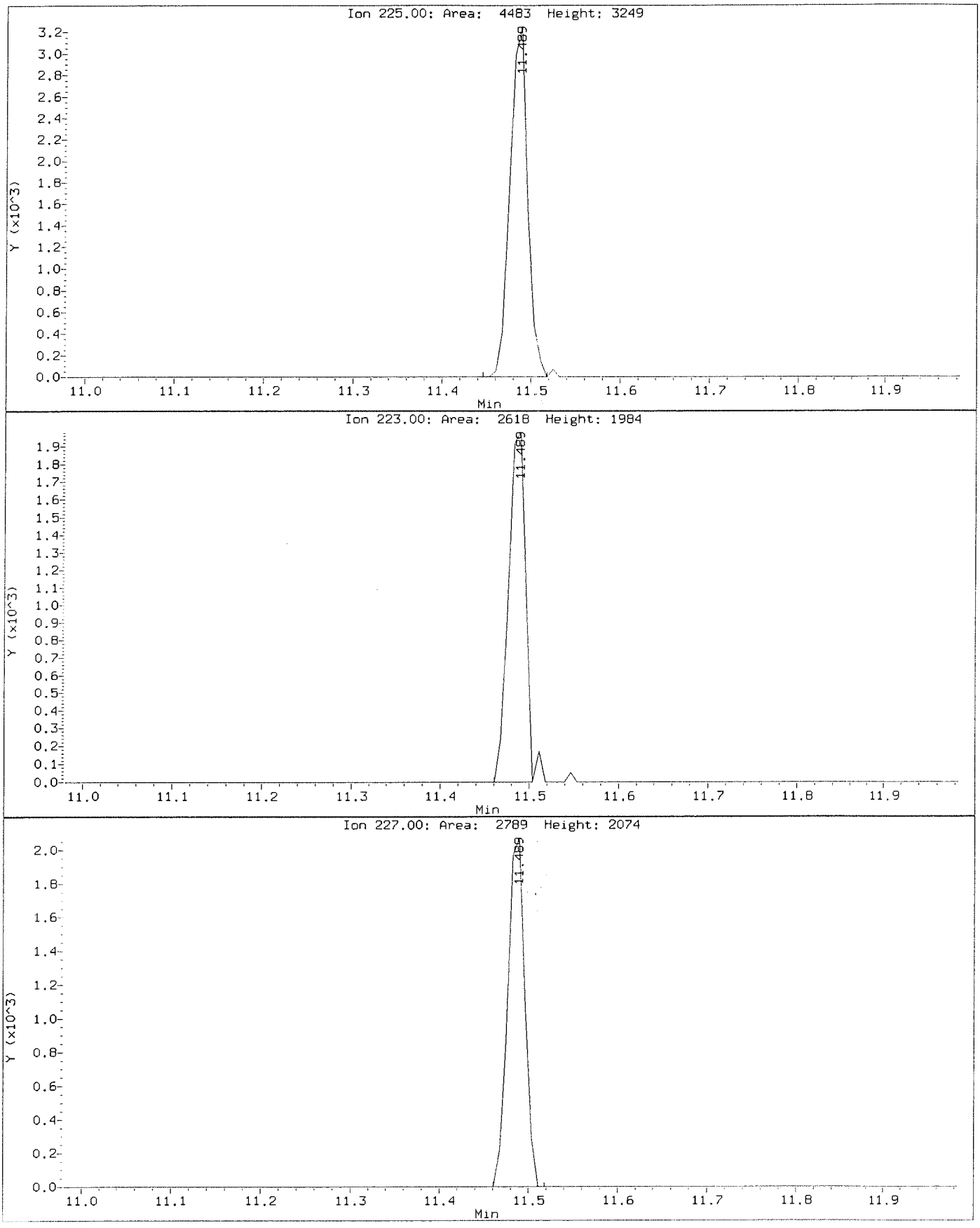
Compound: Acetone
CAS Number: 67-64-1





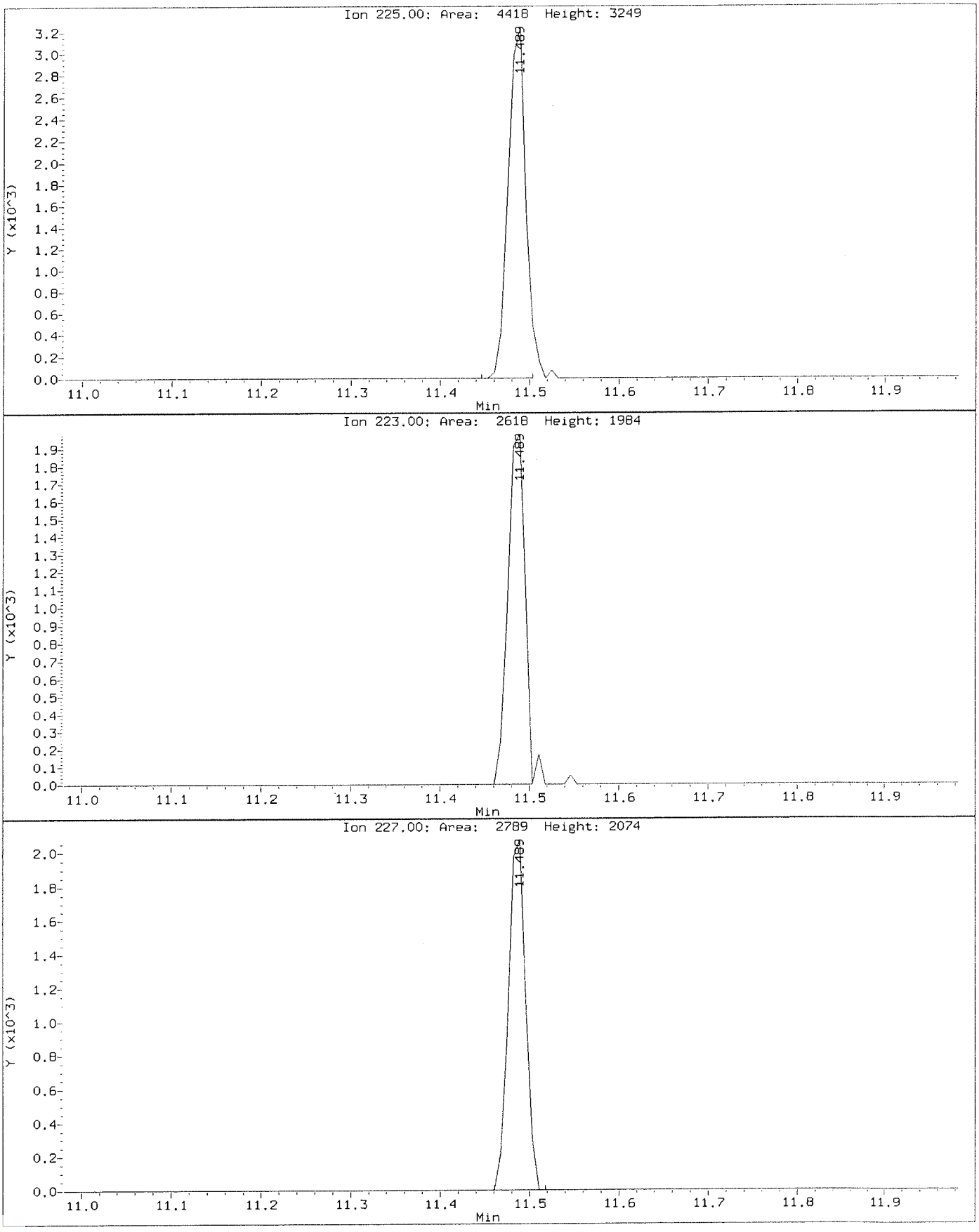
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



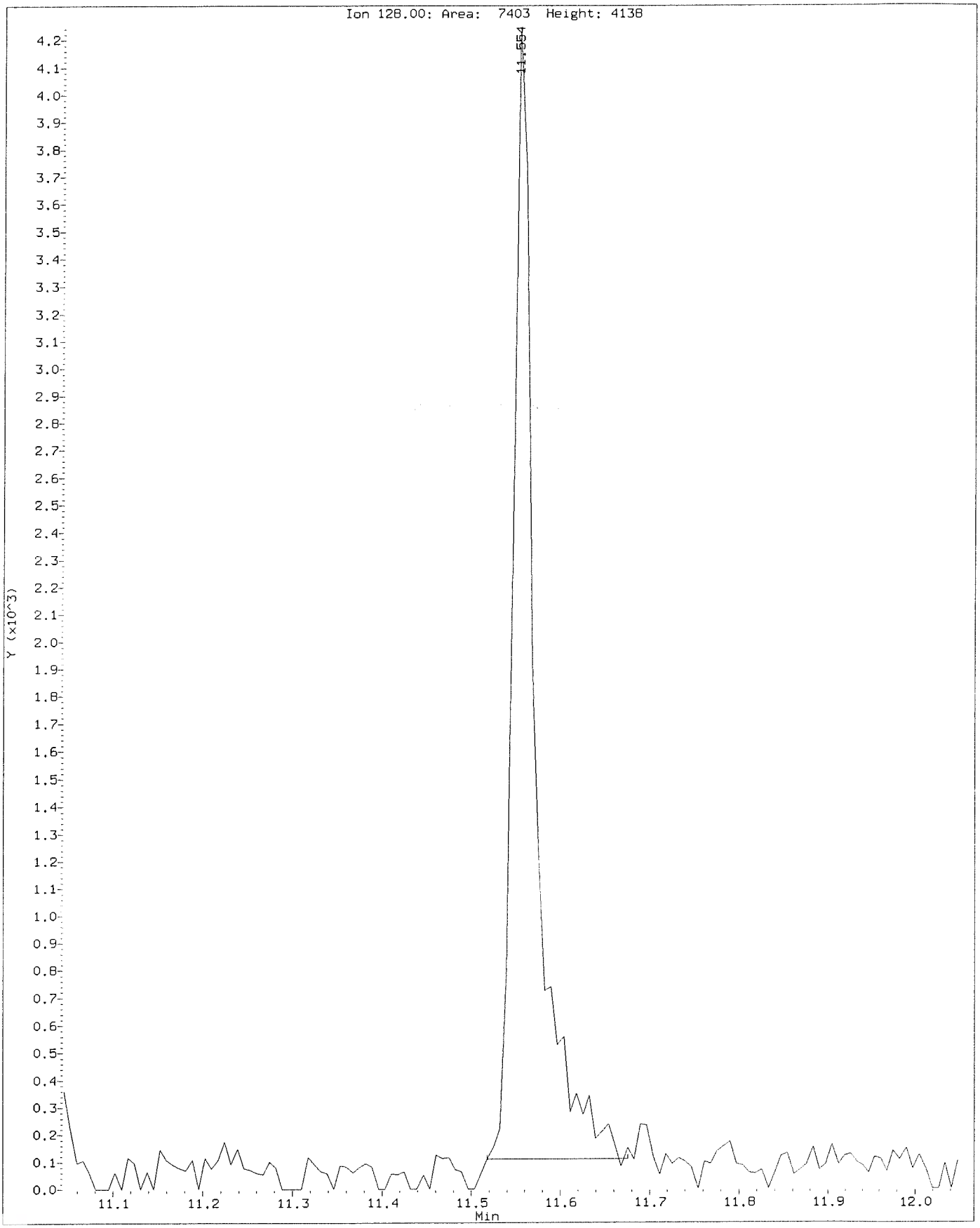
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



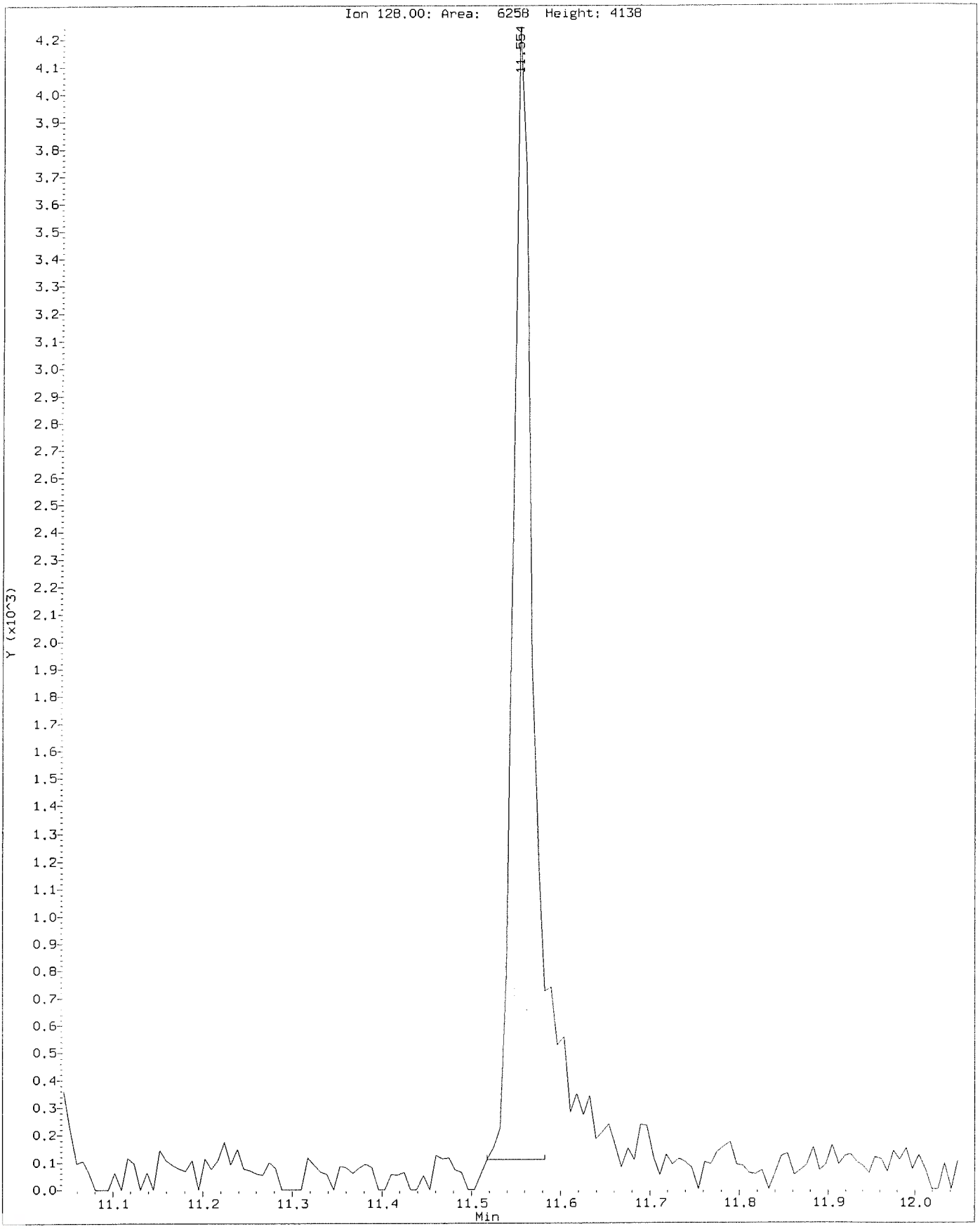
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-AUG-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:16 Cal File: X080305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

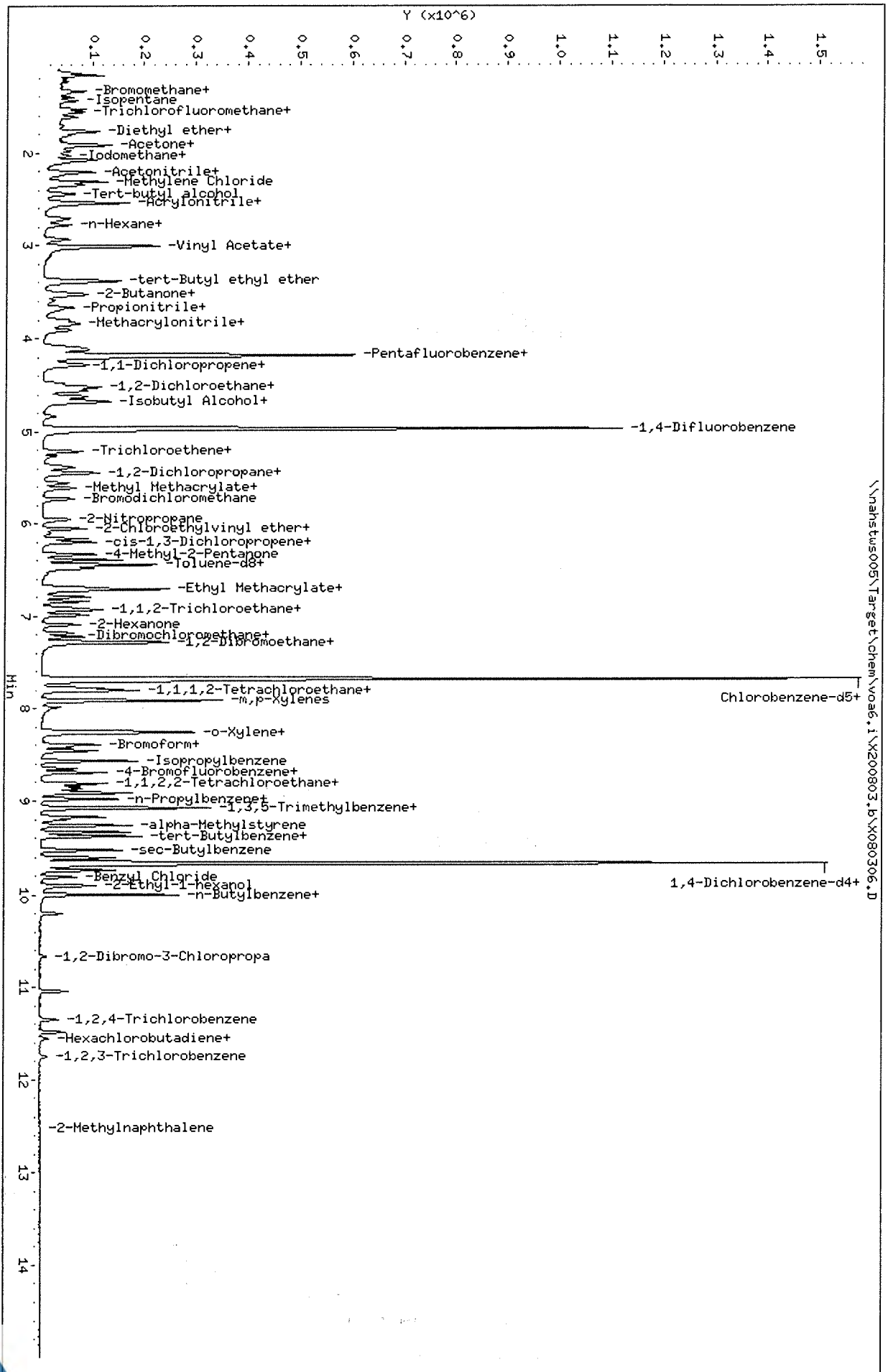
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	516466	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	799737	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721427	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	341252	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	26560	5.00000	5.23
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	31226	5.00000	5.19
$	48 Toluene-d8	98	6.388	6.388	(0.833)	87842	5.00000	5.01
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	32773	5.00000	4.85(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	26918	5.00000	4.90(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	38495	5.00000	4.83(a)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	30714	5.00000	5.92
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	20819	5.00000	5.07
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	51675	5.00000	5.12
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	18682	5.00000	4.56(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	29787	5.00000	4.43(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	4970	5.00000	4.83(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	24998	5.00000	5.00(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	11491	5.00000	5.47
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	87365	5.00000	4.79(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	2687	5.00000	6.21
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	26427	5.00000	4.99(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	47718	5.00000	4.94(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	39206	5.00000	5.06
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	30120	5.00000	5.13
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	84150	5.00000	4.71(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	51371	5.00000	4.78(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	41882	5.00000	5.16
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	50800	5.00000	4.78(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	37924	5.00000	5.14
24	2-Butanone	43	3.595	3.595	(0.858)	24626	10.0000	9.72
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	73756	5.00000	4.98(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	46666	10.0000	10.30
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	84320	5.00000	4.89(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	82617	5.00000	4.37(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	67354	10.0000	10.08
10	Acetone	43	1.976	1.976	(0.472)	22417	10.0000	11.51
37	Benzene	78	4.519	4.519	(0.909)	96422	5.00000	4.85(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	32917	5.00000	4.93(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	14966	5.00000	4.80(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	34225	5.00000	4.75(a)
66	Bromoform	173	8.416	8.416	(1.097)	19261	5.00000	4.81(a)
6	Bromomethane	94	1.339	1.339	(0.320)	19557	5.00000	6.08
19	Carbon Disulfide	76	2.069	2.069	(0.494)	115343	10.0000	9.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	32904	5.00000	4.60(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	69656	5.00000	4.92(a)
7	Chloroethane	64	1.403	1.403	(0.335)	16878	5.00000	4.61(a)
28	Chloroform	83	3.910	3.910	(0.933)	45810	5.00000	4.96(a)
3	Chloromethane	50	1.081	1.081	(0.258)	36080	5.00000	4.97(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	28232	5.00000	4.96(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	41664	5.00000	4.94(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	28435	5.00000	4.92(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	17438	5.00000	5.01
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	20209	5.00000	3.99(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	34866	5.00000	4.77(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	8440	5.00000	4.60(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	99162	5.00000	4.62(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	85878	10.0000	9.74
17	Methylene Chloride	84	2.306	2.306	(0.550)	36047	5.00000	5.57
87	n-Butylbenzene	91	9.999	9.999	(1.034)	63779	5.00000	4.22(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	111502	5.00000	4.53(a)
92	Naphthalene	128	11.553	11.553	(1.195)	16632	5.00000	6.16
63	o-Xylene	106	8.244	8.244	(1.075)	42060	5.00000	4.85(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	89332	5.00000	4.30(a)
64	Styrene	104	8.265	8.265	(1.078)	74772	5.00000	4.97(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	69721	5.00000	4.50(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	21403	5.00000	4.66(a)
50	Toluene	91	6.453	6.453	(0.841)	104074	5.00000	4.93(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	23352	5.00000	4.82(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	38875	5.00000	5.03
38	Trichloroethene	130	5.214	5.214	(1.049)	27117	5.00000	4.78(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	33185	5.00000	4.36(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	28782	5.00000	4.32(a)

QC Flag Legend

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

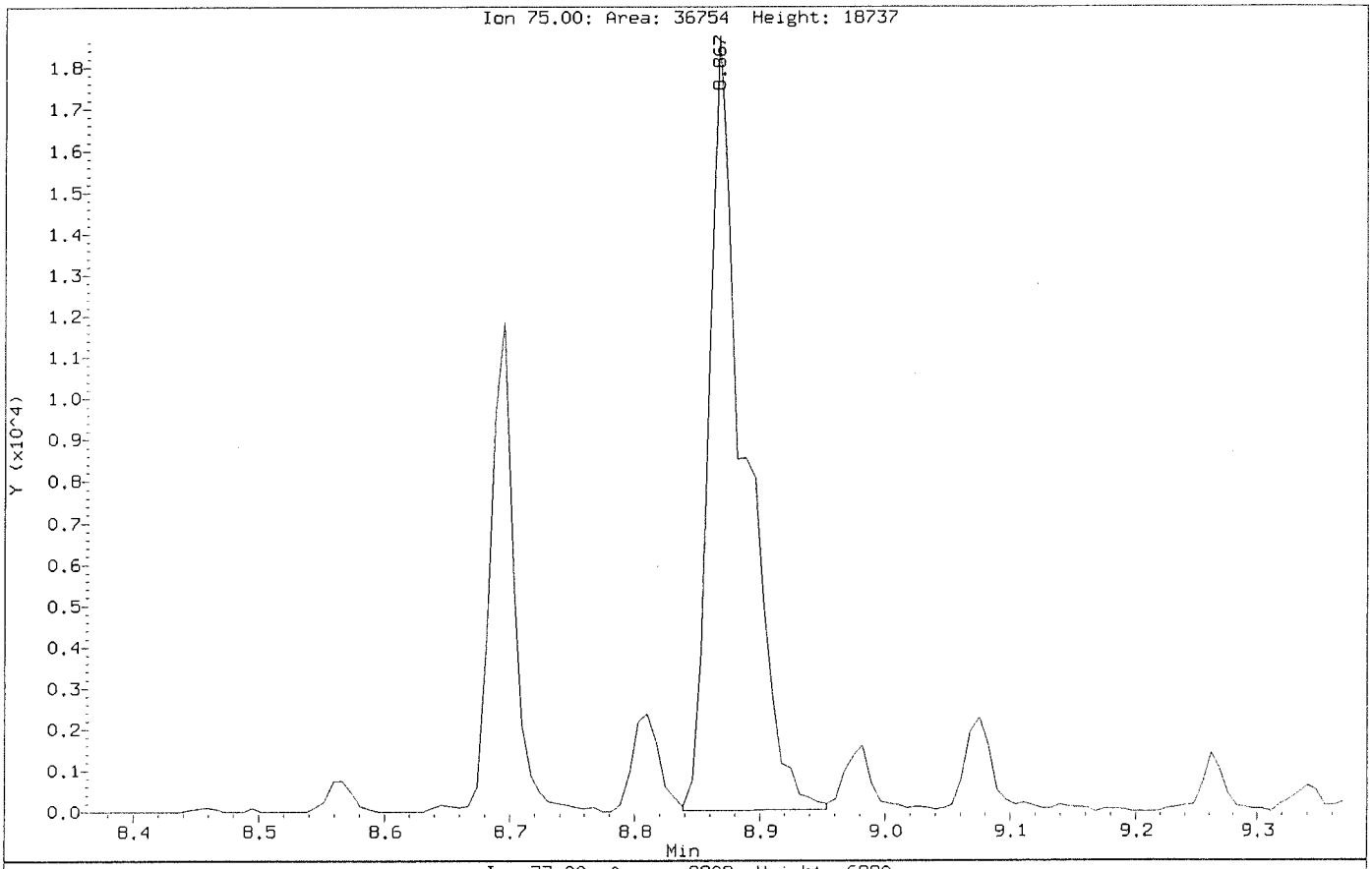


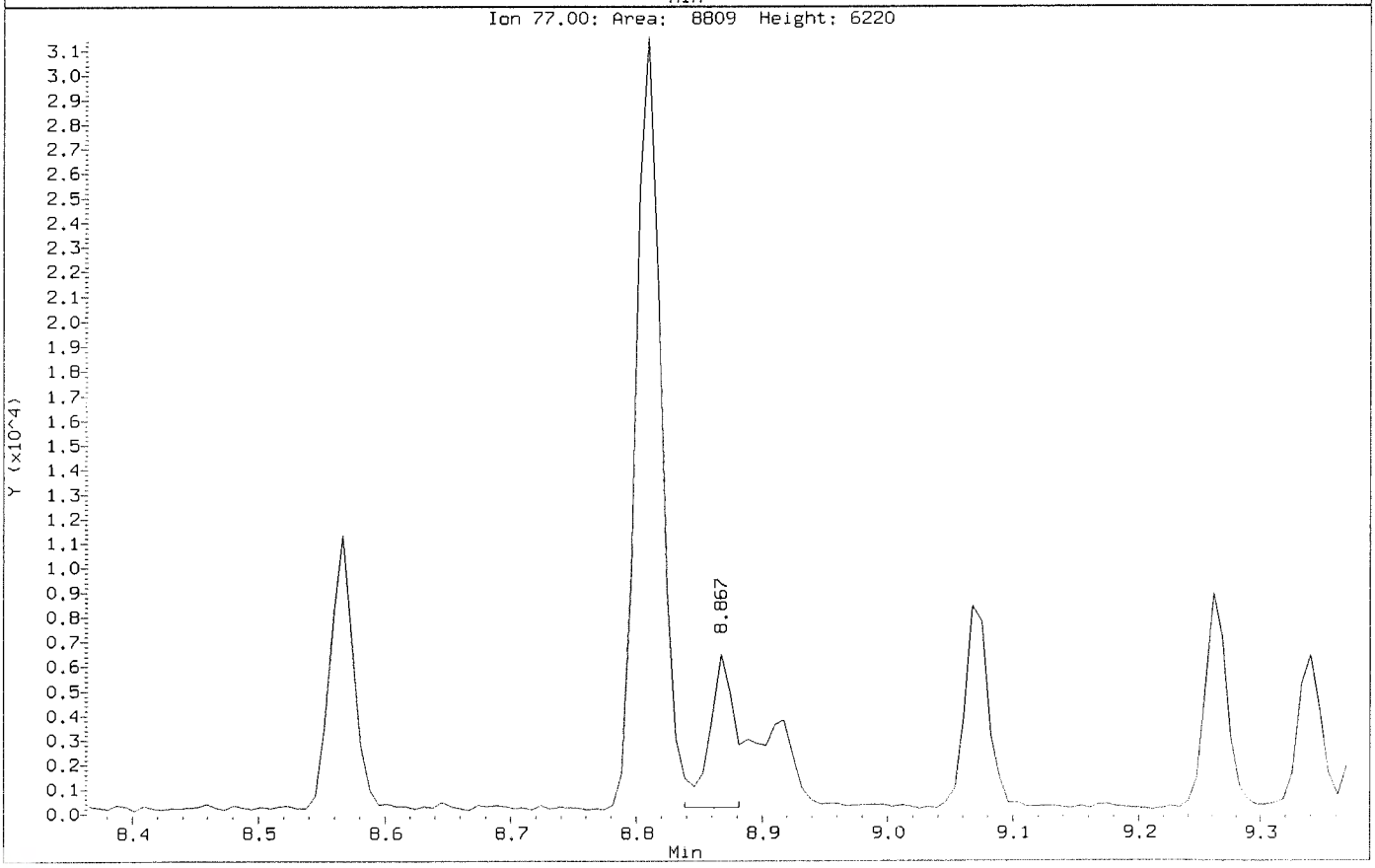
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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

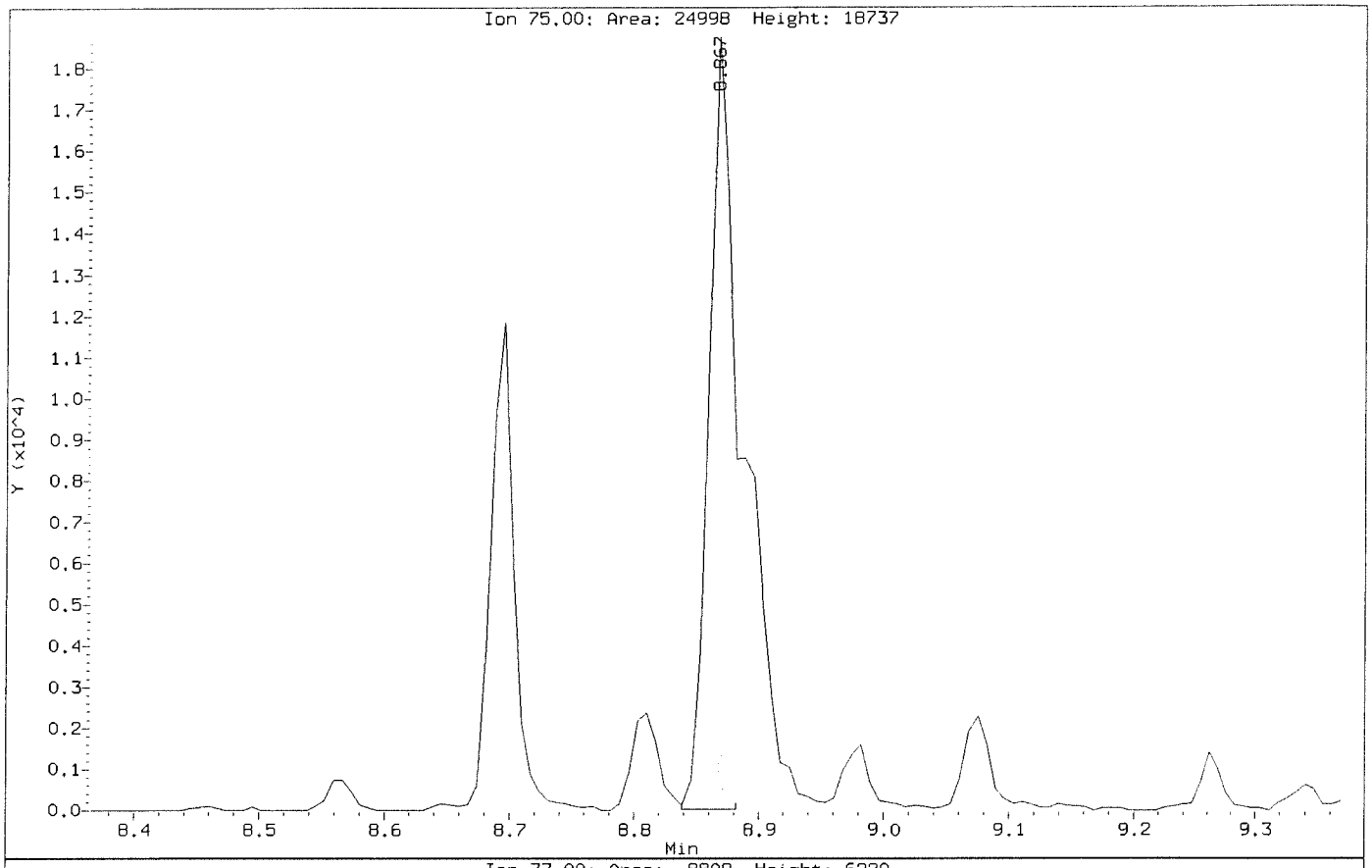
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

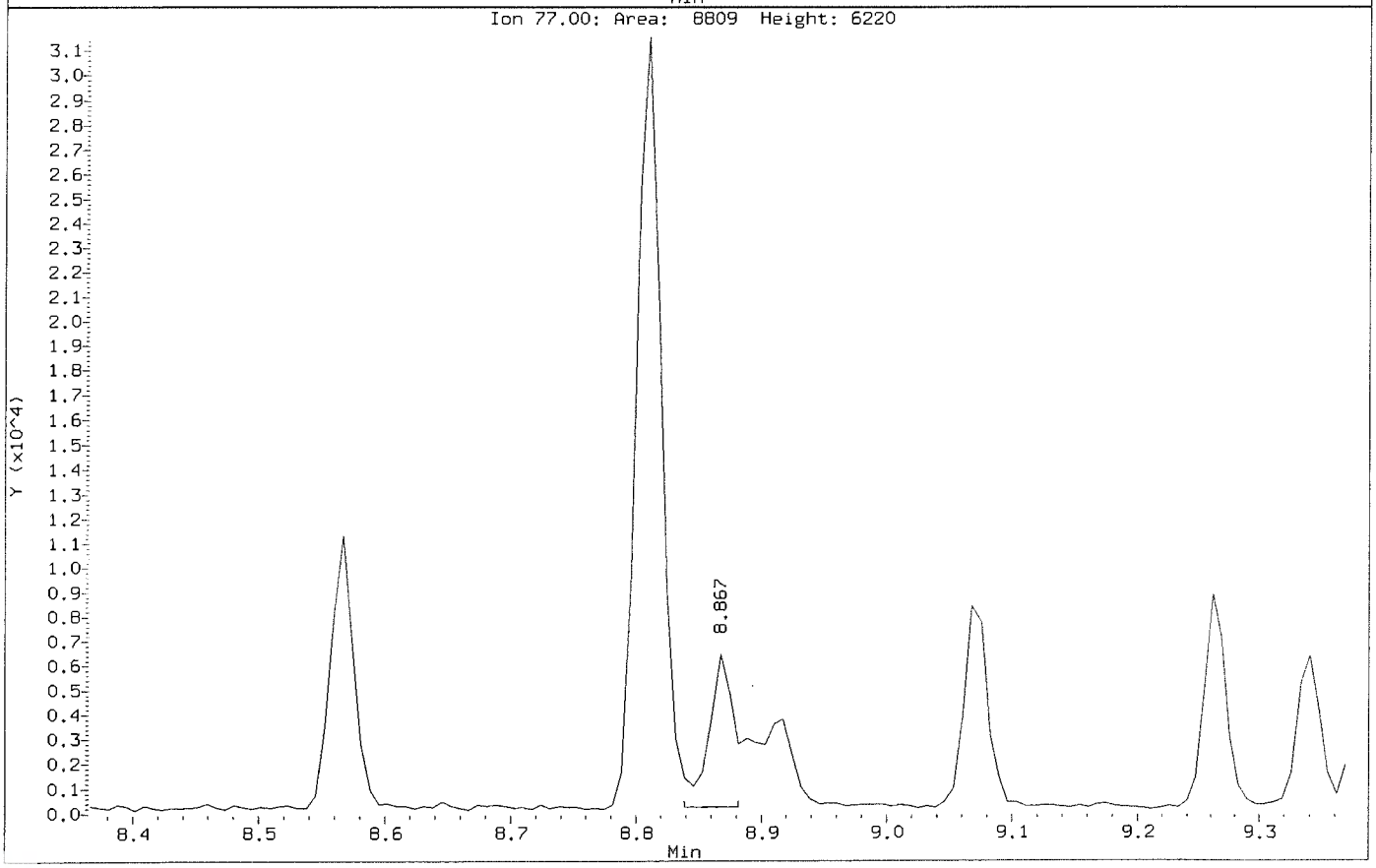




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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





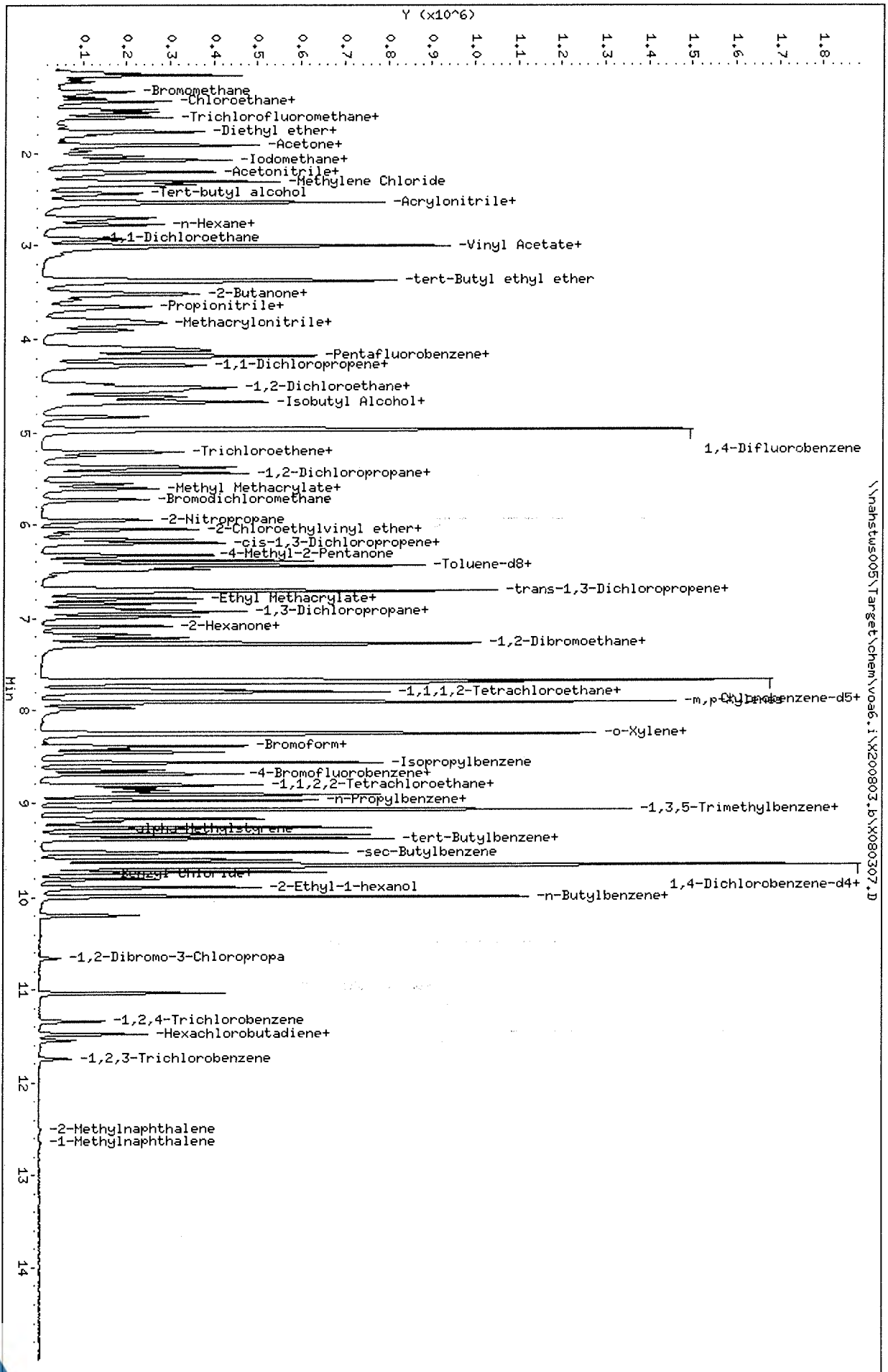
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-AUG-2020 14:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:40 Cal File: X080306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	527399	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	802950	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	728191	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	344410	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	100526	20.0000	19.40
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	118997	20.0000	19.38
$	48 Toluene-d8	98	6.388	6.388	(0.833)	349779	20.0000	19.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	131285	20.0000	19.26
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105143	20.0000	18.96
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	157003	20.0000	19.32
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	110449	20.0000	20.13
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	79259	20.0000	19.12
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	204692	20.0000	19.86
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	85725	20.0000	20.51
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	129183	20.0000	19.14
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	20139	20.0000	19.43
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	95152	20.0000	18.87(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	44232	20.0000	22.24
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	352711	20.0000	19.16
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9119	20.0000	19.01
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	103868	20.0000	19.45
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	184161	20.0000	18.90

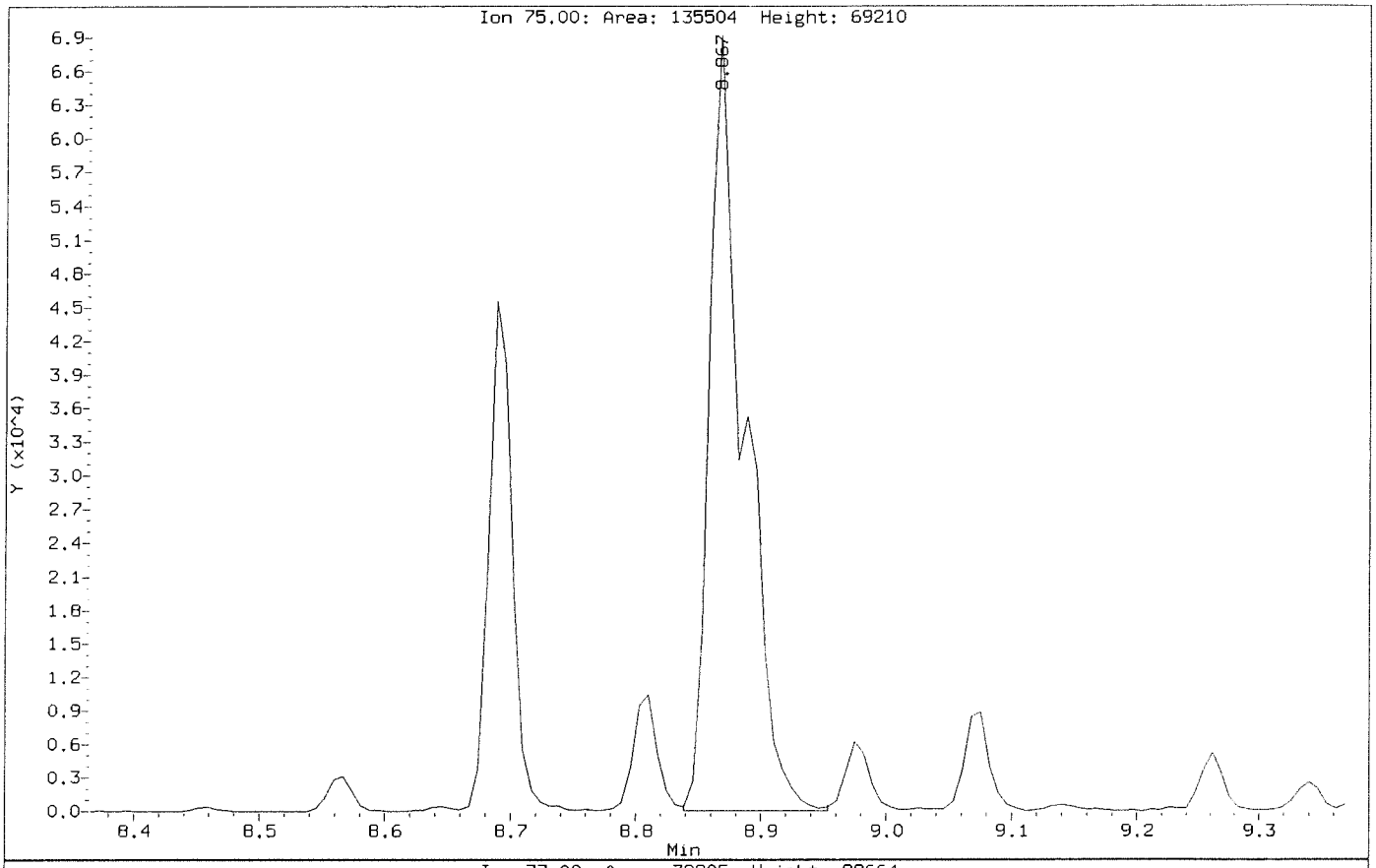


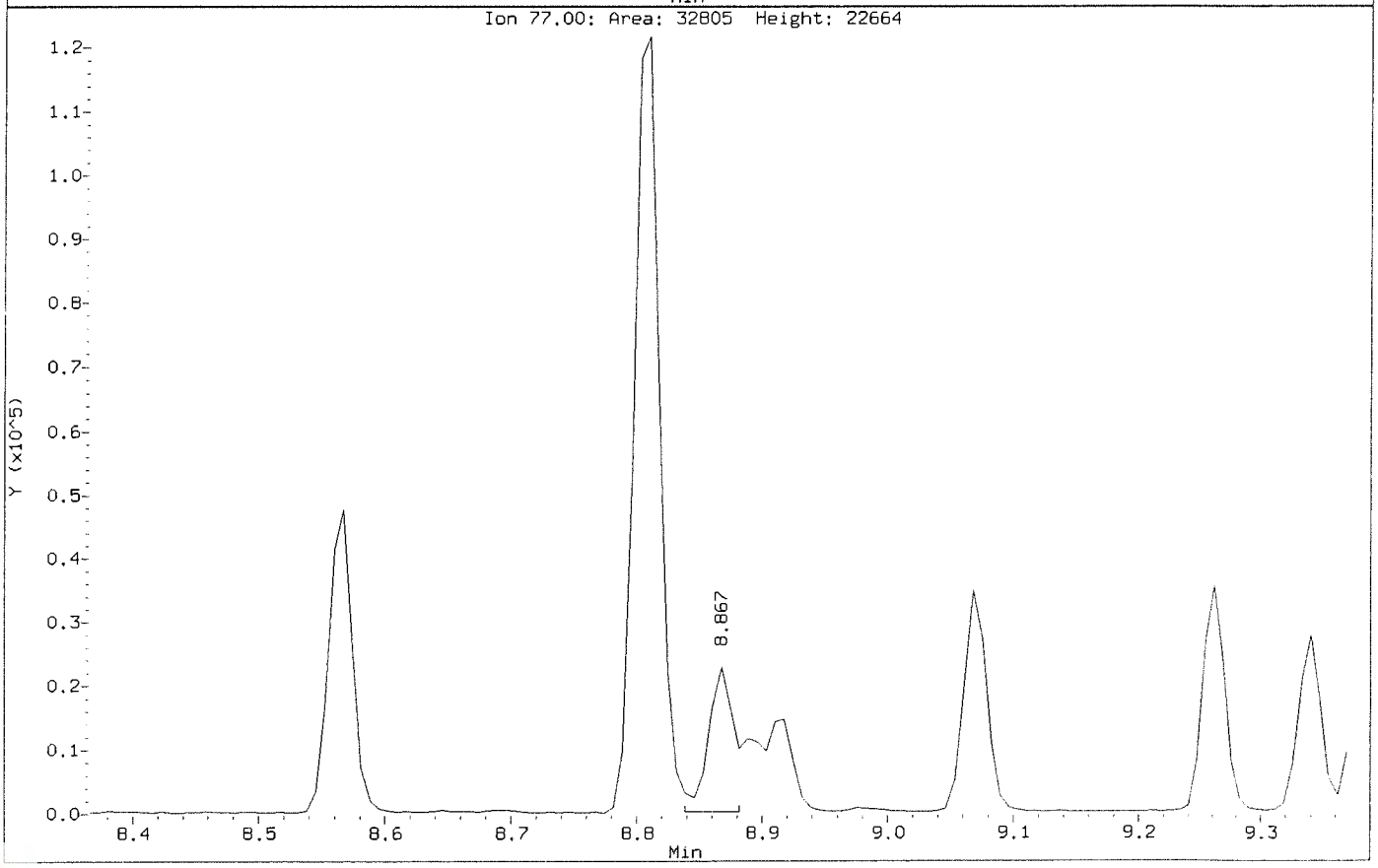
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Date : 03-AUG-2020 14:04
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

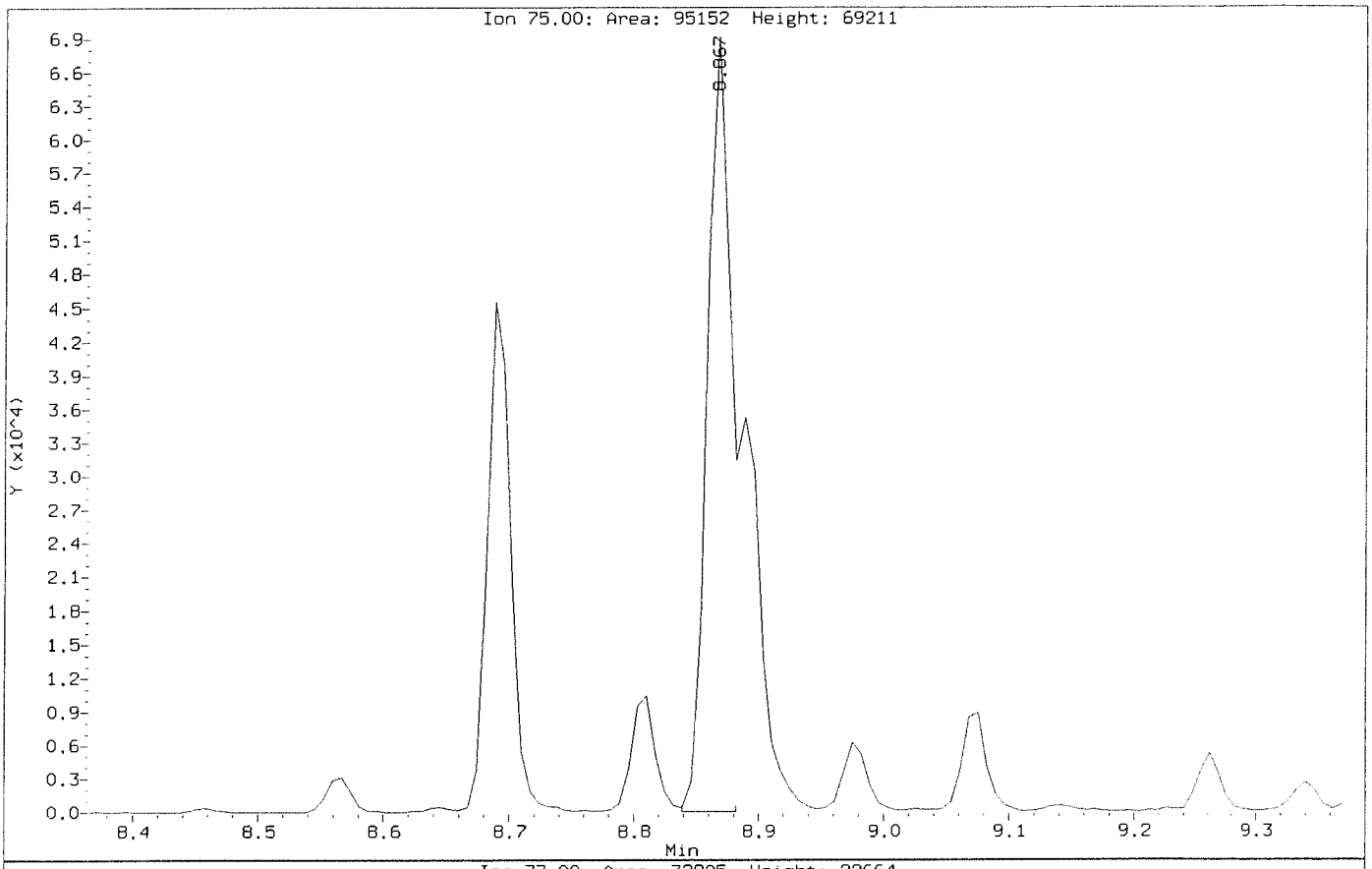
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

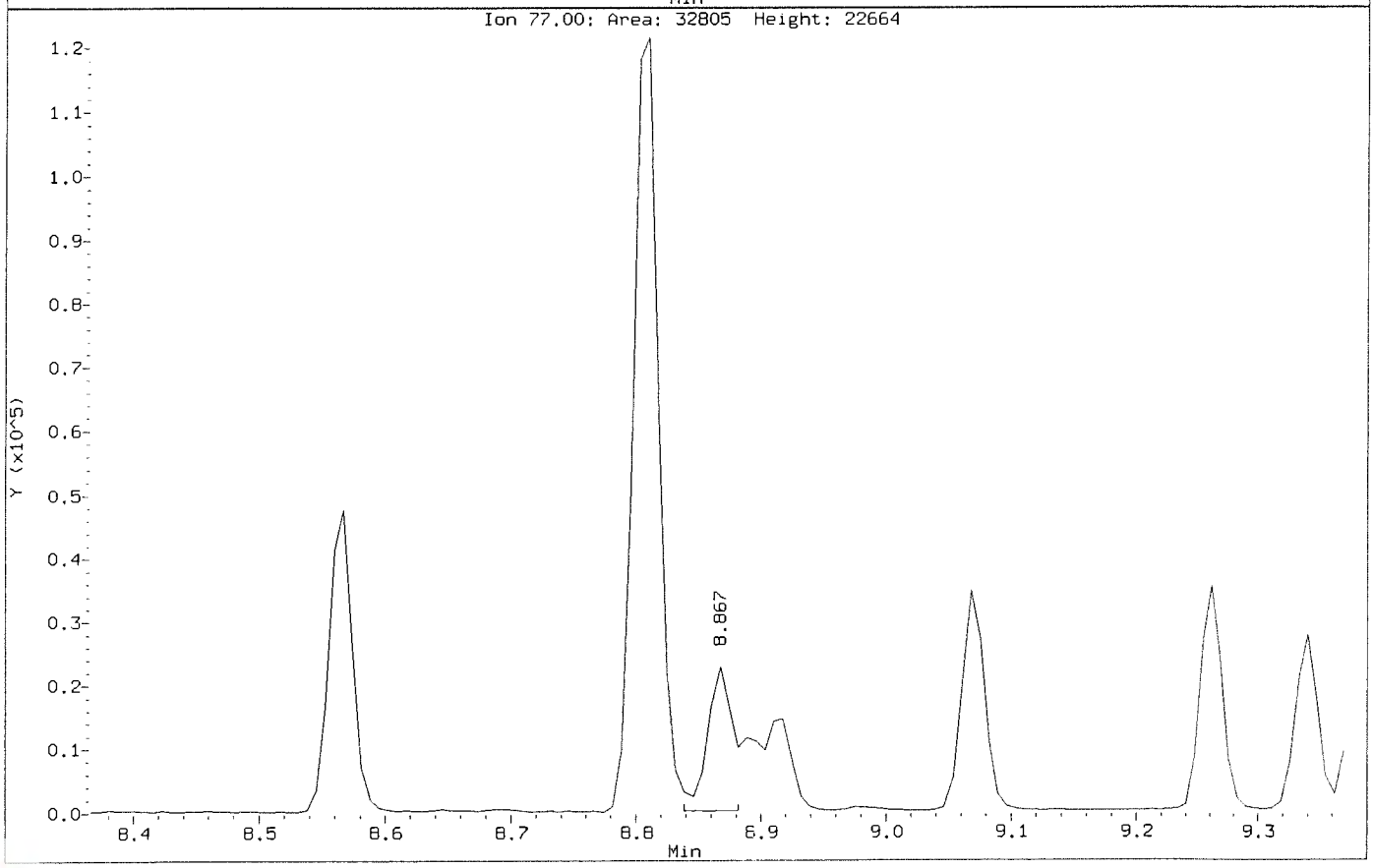




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Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 1
Report Date: 22-Aug-2020 11:54

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Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-AUG-2020 14:28
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:04 Cal File: X080307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

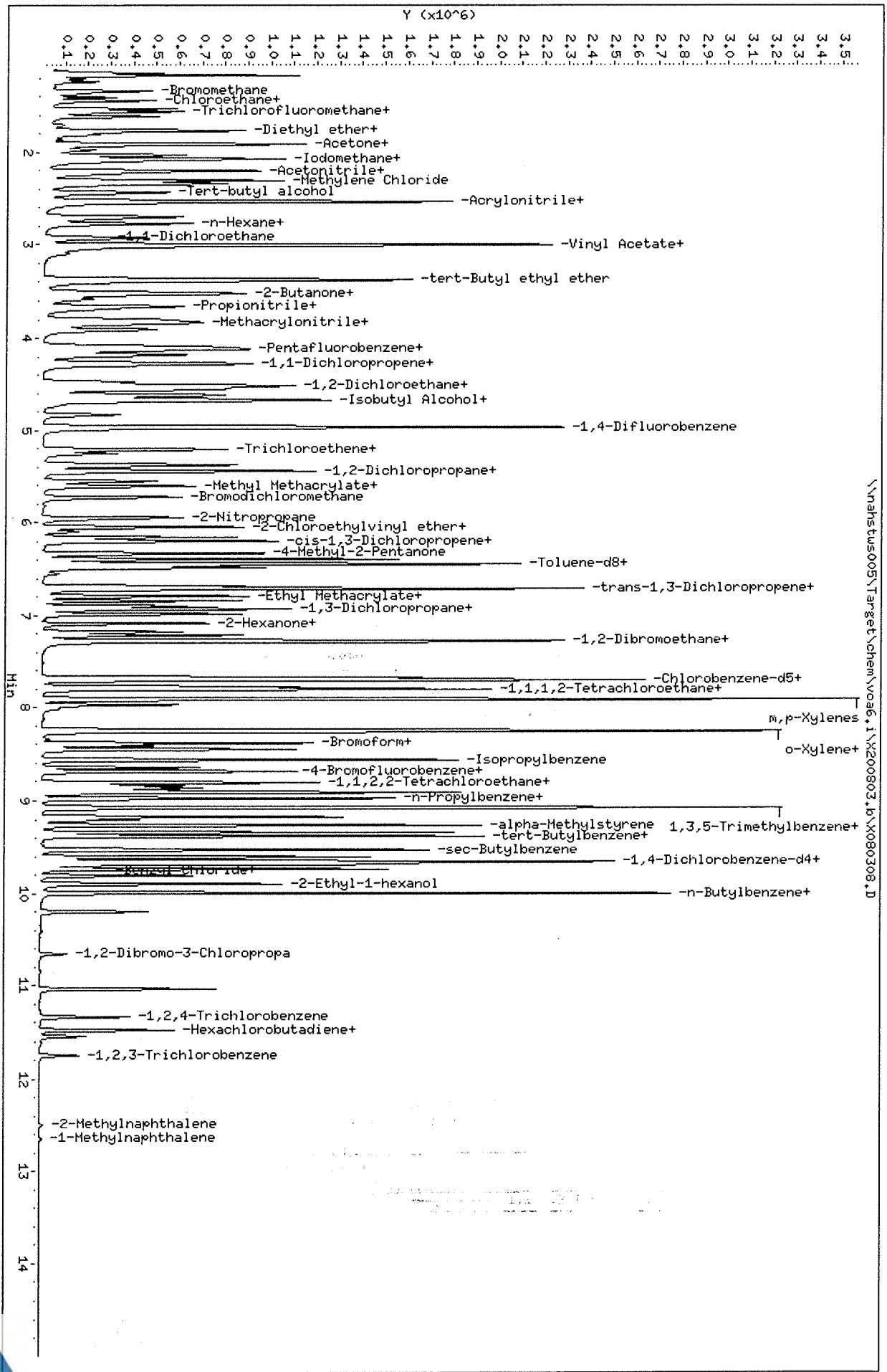
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	511920	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	771177	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	702771	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	336517	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	239584	50.0000	47.65
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	283572	50.0000	47.58
$	48 Toluene-d8	98	6.389	6.389	(0.833)	830682	50.0000	48.73
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	313797	50.0000	47.71
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	256851	50.0000	48.01
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	376263	50.0000	47.71
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	259509	50.0000	47.88
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	188669	50.0000	47.18
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	496869	50.0000	49.68
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	203794	50.0000	50.24
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	311586	50.0000	48.08
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	48796	50.0000	48.18
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	230185	50.0000	46.73(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	104906	50.0000	53.93
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	851116	50.0000	47.34
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22898	50.0000	47.61
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	248315	50.0000	48.20
	88 1,2-Dichlorobenzene	146	9.992	9.992	(1.033)	448782	50.0000	47.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	363525	50.0000	48.68
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	280124	50.0000	49.49
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	841136	50.0000	47.83
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	505958	50.0000	47.83
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	384017	50.0000	48.63
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	496379	50.0000	47.45
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	350133	50.0000	47.95
24	2-Butanone	43	3.581	3.581	(0.855)	256334	100.000	102.14
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	694810	50.0000	47.59
52	2-Hexanone	43	7.090	7.090	(0.924)	414221	100.000	93.88
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	801352	50.0000	47.17
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	892538	50.0000	47.89
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	601864	100.000	92.53
10	Acetone	43	1.976	1.976	(0.472)	170545	100.000	95.52
37	Benzene	78	4.519	4.519	(0.909)	930097	50.0000	48.61
74	Bromobenzene	156	8.810	8.810	(0.911)	308037	50.0000	46.79
29	Bromochloromethane	128	3.803	3.803	(0.908)	143774	50.0000	46.59
39	Bromodichloromethane	83	5.730	5.730	(1.153)	331518	50.0000	47.75
66	Bromoform	173	8.416	8.416	(1.097)	185248	50.0000	47.50
6	Bromomethane	94	1.339	1.339	(0.320)	165840	50.0000	47.10
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1239571	100.000	98.42
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	332646	50.0000	48.29
59	Chlorobenzene	112	7.699	7.699	(1.004)	660196	50.0000	47.93
7	Chloroethane	64	1.403	1.403	(0.335)	180055	50.0000	49.62
28	Chloroform	83	3.910	3.910	(0.933)	434838	50.0000	47.54
3	Chloromethane	50	1.081	1.081	(0.258)	348334	50.0000	48.46
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	270912	50.0000	48.07
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	396564	50.0000	48.85
55	Dibromochloromethane	129	7.176	7.176	(0.936)	267830	50.0000	47.57
44	Dibromomethane	93	5.558	5.558	(1.118)	161578	50.0000	48.14
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	250906	50.0000	50.07
61	Ethylbenzene	106	7.800	7.800	(1.017)	343587	50.0000	48.31
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	97456	50.0000	53.94
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1013032	50.0000	48.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	825892	100.000	96.22
17	Methylene Chloride	84	2.306	2.306	(0.550)	256910	50.0000	48.65
87	n-Butylbenzene	91	9.999	9.999	(1.034)	730650	50.0000	49.09
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1164933	50.0000	48.05
92	Naphthalene	128	11.546	11.546	(1.194)	137510	50.0000	51.02
63	o-Xylene	106	8.244	8.244	(1.075)	409054	50.0000	48.52
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	982268	50.0000	48.04
64	Styrene	104	8.258	8.258	(1.077)	713459	50.0000	48.73
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	726881	50.0000	47.67
56	Tetrachloroethene	164	6.933	6.933	(0.904)	211124	50.0000	47.25
50	Toluene	91	6.446	6.446	(0.840)	981156	50.0000	47.80
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	233416	50.0000	48.63
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	353535	50.0000	47.51
38	Trichloroethene	130	5.207	5.207	(1.048)	272294	50.0000	49.82
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	377358	50.0000	50.05
5	Vinyl Chloride	62	1.145	1.145	(0.273)	331269	50.0000	50.27

QC Flag Legend

M - Compound response manually integrated.

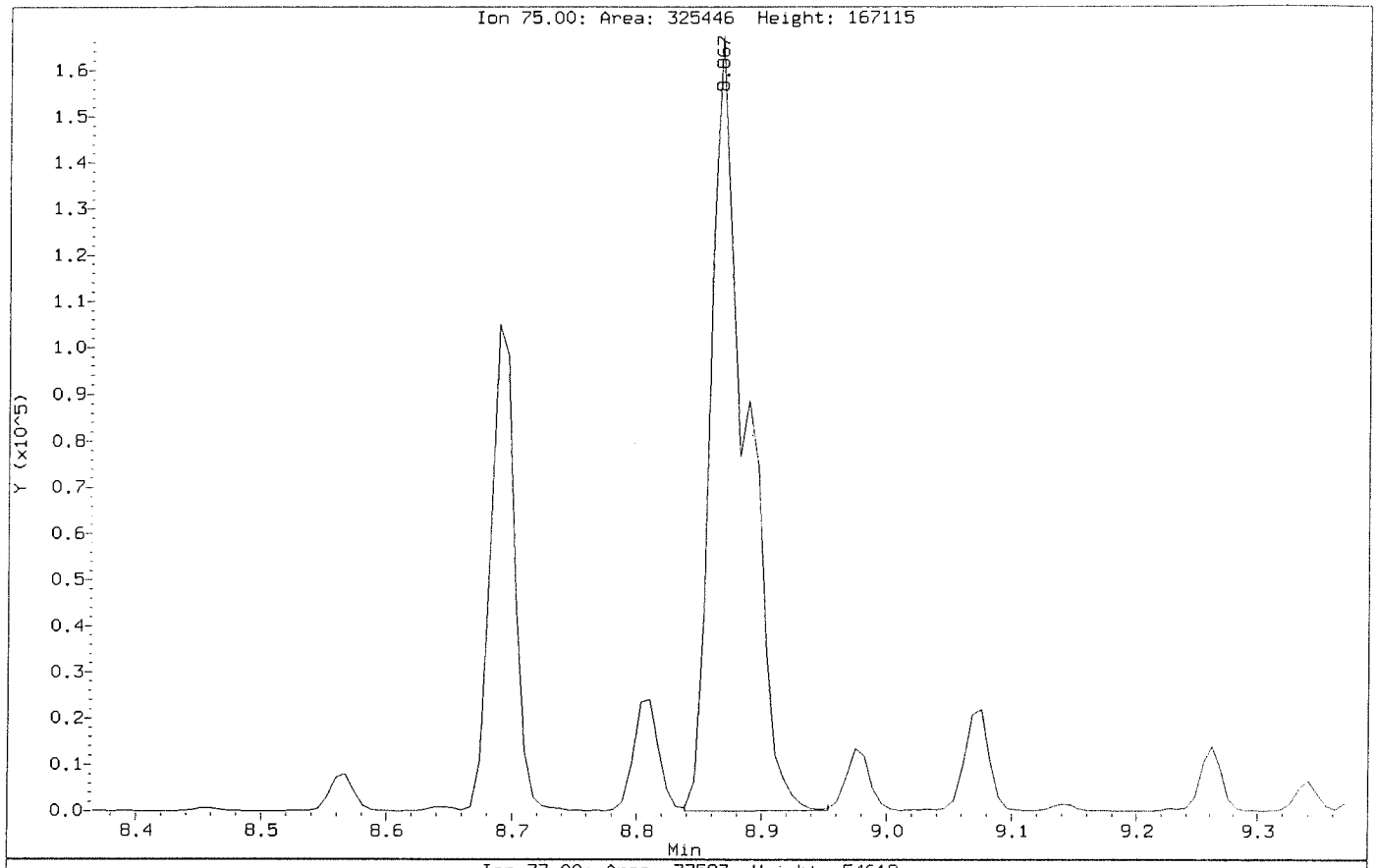


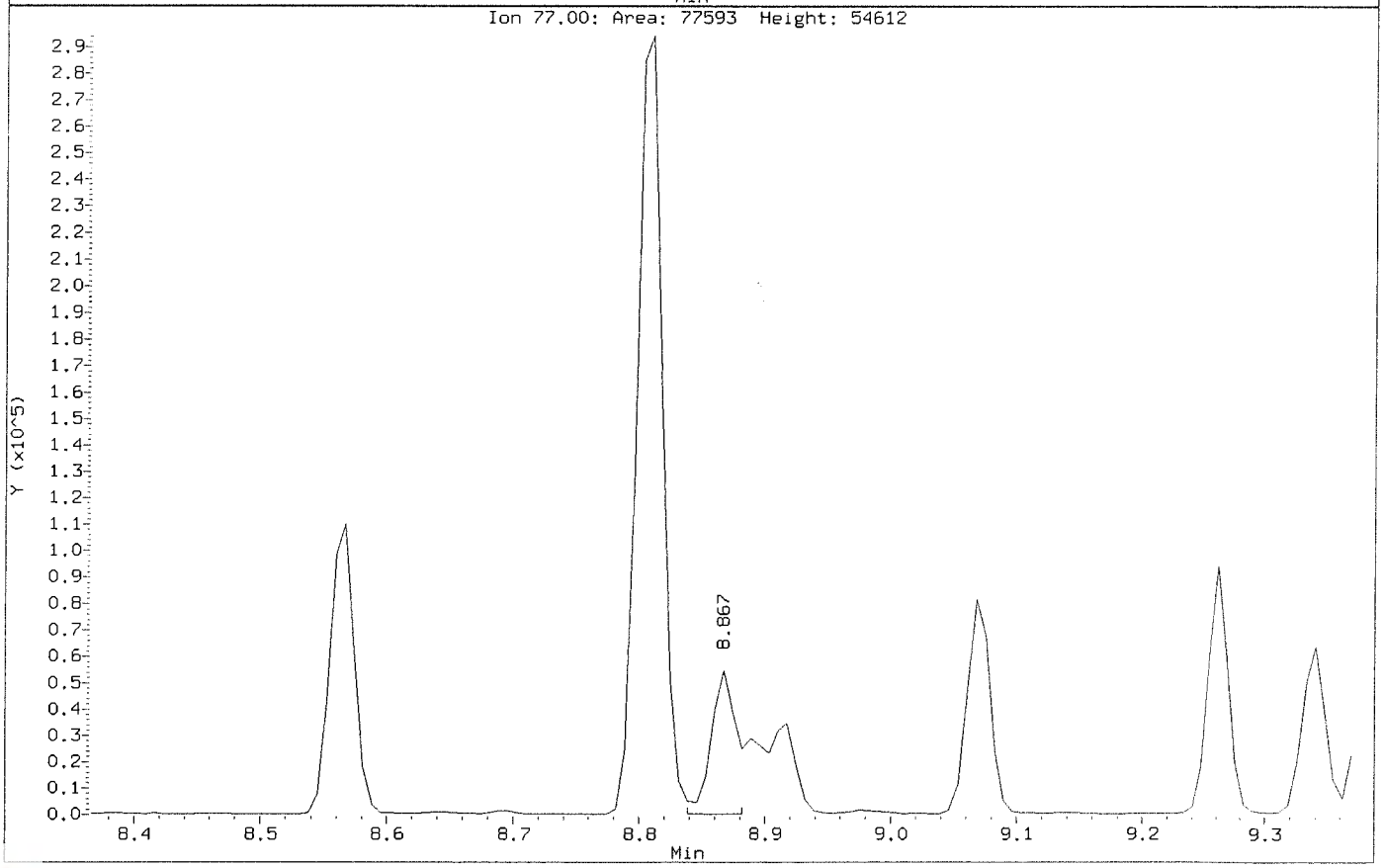
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Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080308.D
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Instrument: voa6.i
Client Sample ID: VSTD050

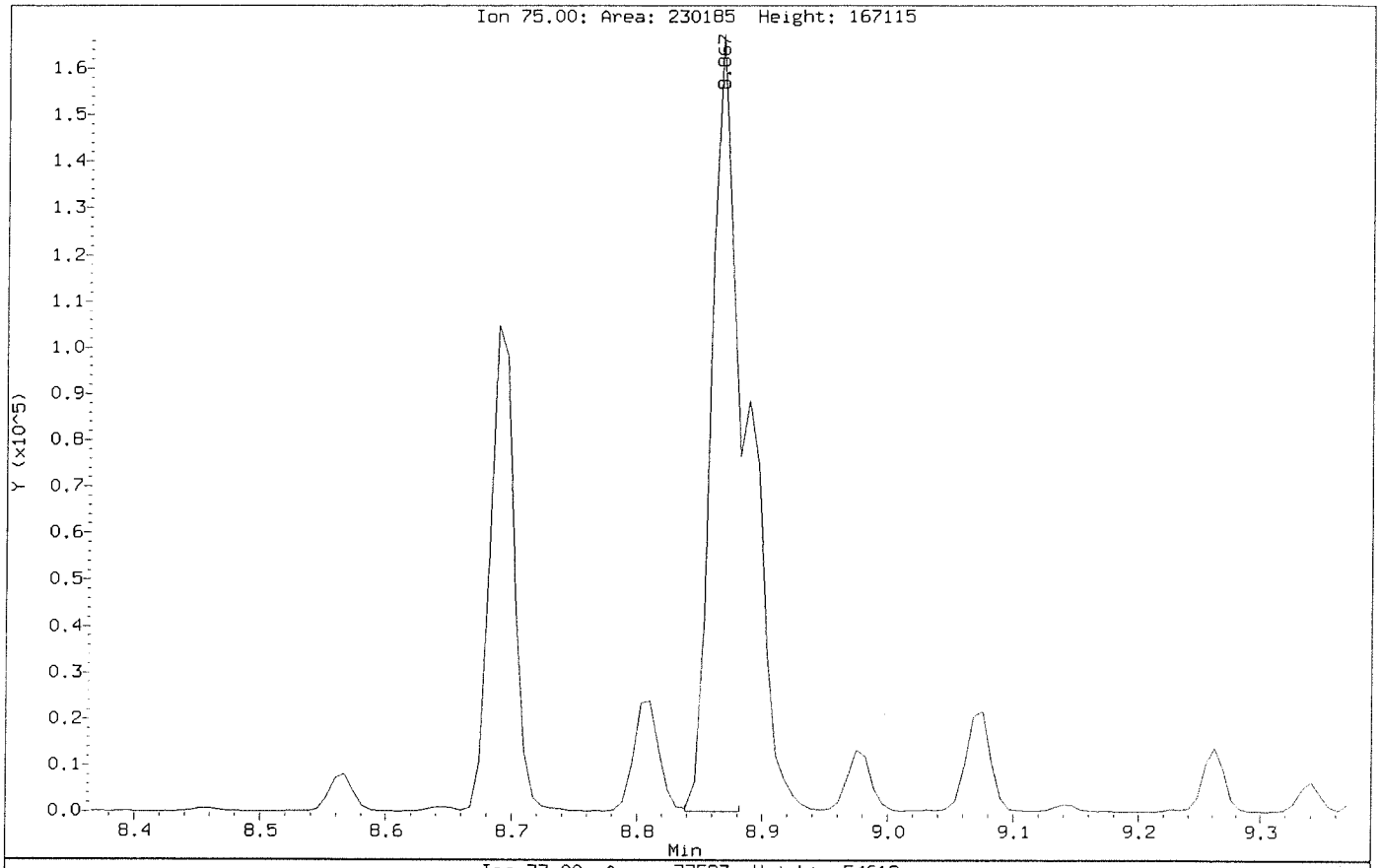
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CAS Number: 96-18-4

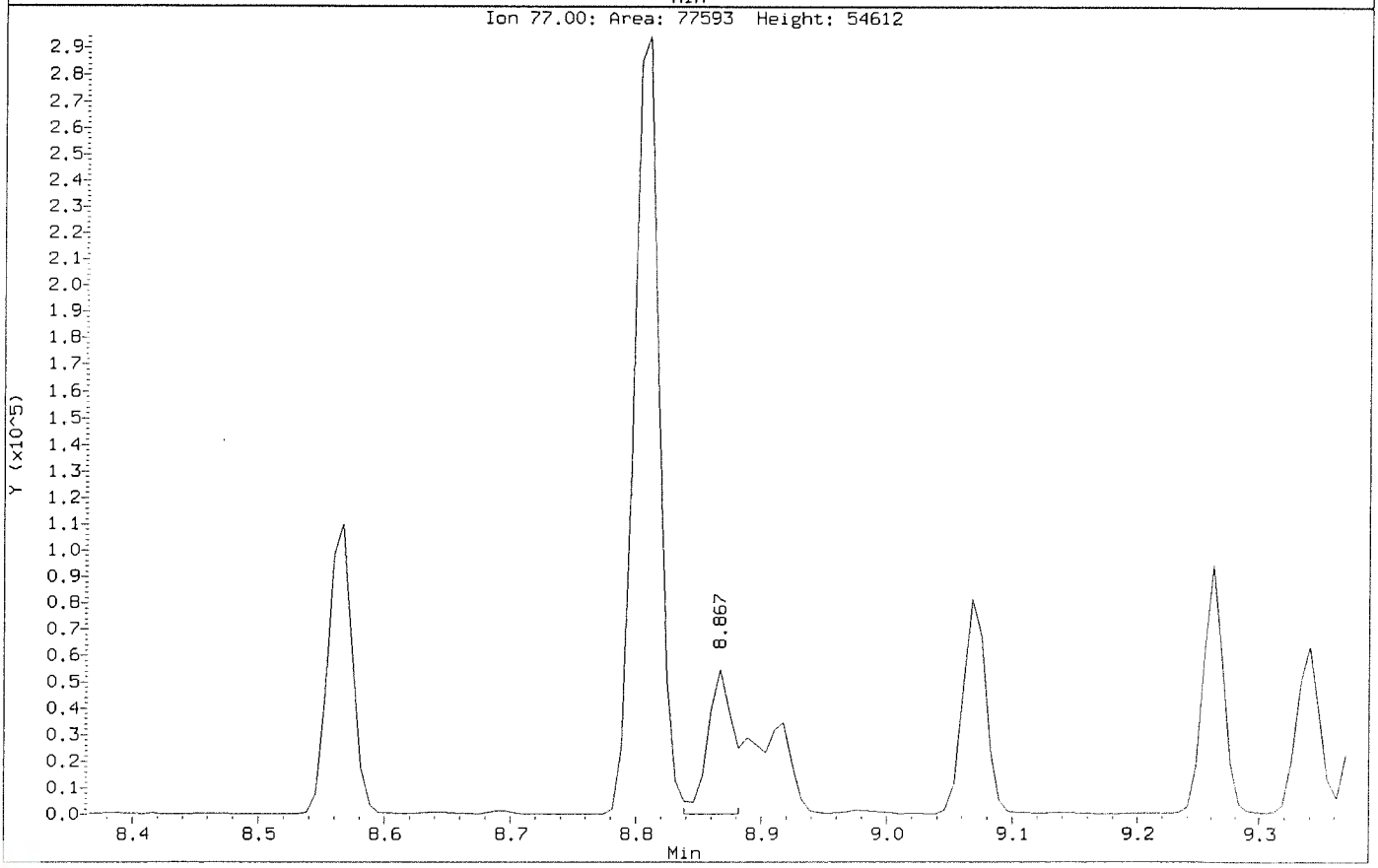




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Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 03-AUG-2020 14:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

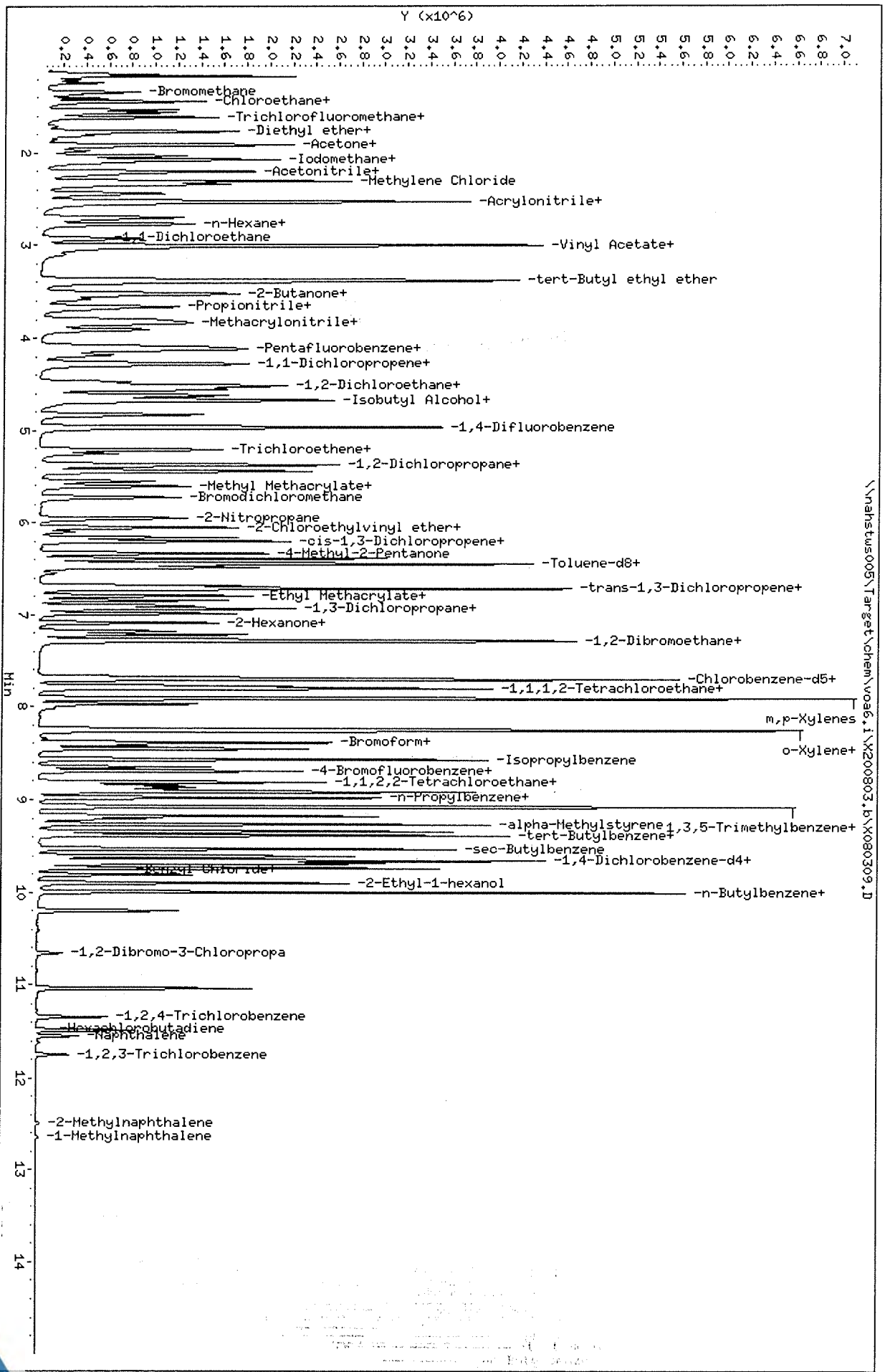
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	486833	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	732825	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	684816	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	323663	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	473016	100.000	98.93
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	567807	100.000	100.19
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1639713	100.000	98.71
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	621420	100.000	96.97
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	508756	100.000	97.59
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	743006	100.000	99.08
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	505068	100.000	96.50
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	371422	100.000	95.31
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	966853	100.000	101.67
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	399194	100.000	103.48
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	619847	100.000	100.65
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	78990	100.000	81.10
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	447455	100.000	94.44(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	167486	100.000	88.32
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1744071	100.000	100.86
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	44175	100.000	94.71
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	486059	100.000	96.82
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	860972	100.000	94.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	709131	100.000	99.94
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	549204	100.000	102.11
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1711898	100.000	101.21
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1000056	100.000	98.30
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	751120	100.000	97.62
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	985559	100.000	97.96
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	681466	100.000	98.14
24	2-Butanone	43	3.580	3.580	(0.855)	505532	200.000	211.82(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1388843	100.000	98.90
52	2-Hexanone	43	7.090	7.090	(0.924)	827198	200.000	192.40
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1630167	100.000	99.78
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1843729	100.000	102.86
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1209781	200.000	190.87
10	Acetone	43	1.976	1.976	(0.472)	340970	200.000	202.00(A)
37	Benzene	78	4.519	4.519	(0.909)	1833540	100.000	100.84
74	Bromobenzene	156	8.809	8.809	(0.911)	616831	100.000	97.42
29	Bromochloromethane	128	3.802	3.802	(0.908)	282659	100.000	96.32
39	Bromodichloromethane	83	5.729	5.729	(1.153)	654091	100.000	99.14
66	Bromoform	173	8.415	8.415	(1.097)	369358	100.000	97.21
6	Bromomethane	94	1.338	1.338	(0.320)	329463	100.000	97.68
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2437326	200.000	203.50(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	660151	100.000	100.85
59	Chlorobenzene	112	7.699	7.699	(1.004)	1320195	100.000	98.36
7	Chloroethane	64	1.403	1.403	(0.335)	350986	100.000	101.71
28	Chloroform	83	3.910	3.910	(0.933)	844067	100.000	97.04
3	Chloromethane	50	1.080	1.080	(0.258)	661182	100.000	96.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	527504	100.000	98.43
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	783645	100.000	101.58
55	Dibromochloromethane	129	7.176	7.176	(0.936)	530960	100.000	96.79
44	Dibromomethane	93	5.557	5.557	(1.118)	314468	100.000	98.60
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	502379	100.000	105.43
61	Ethylbenzene	106	7.799	7.799	(1.017)	683526	100.000	98.63
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	144027	100.000	82.88
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2047430	100.000	100.64
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1666940	200.000	199.31
17	Methylene Chloride	84	2.305	2.305	(0.550)	487953	100.000	98.54
87	n-Butylbenzene	91	9.998	9.998	(1.034)	1490980	100.000	104.16
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2376809	100.000	101.93
92	Naphthalene	128	11.546	11.546	(1.194)	244768	100.000	91.71
63	o-Xylene	106	8.244	8.244	(1.075)	812131	100.000	98.85
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2014765	100.000	102.46
64	Styrene	104	8.265	8.265	(1.078)	1389708	100.000	97.42
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	1474330	100.000	100.54
56	Tetrachloroethene	164	6.933	6.933	(0.904)	429146	100.000	98.57
50	Toluene	91	6.453	6.453	(0.841)	1938369	100.000	96.92
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	450443	100.000	98.69
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	699866	100.000	98.98
38	Trichloroethene	130	5.214	5.214	(1.049)	540855	100.000	104.13
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	735408	100.000	102.57
5	Vinyl Chloride	62	1.145	1.145	(0.273)	656263	100.000	104.72

QC Flag Legend

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

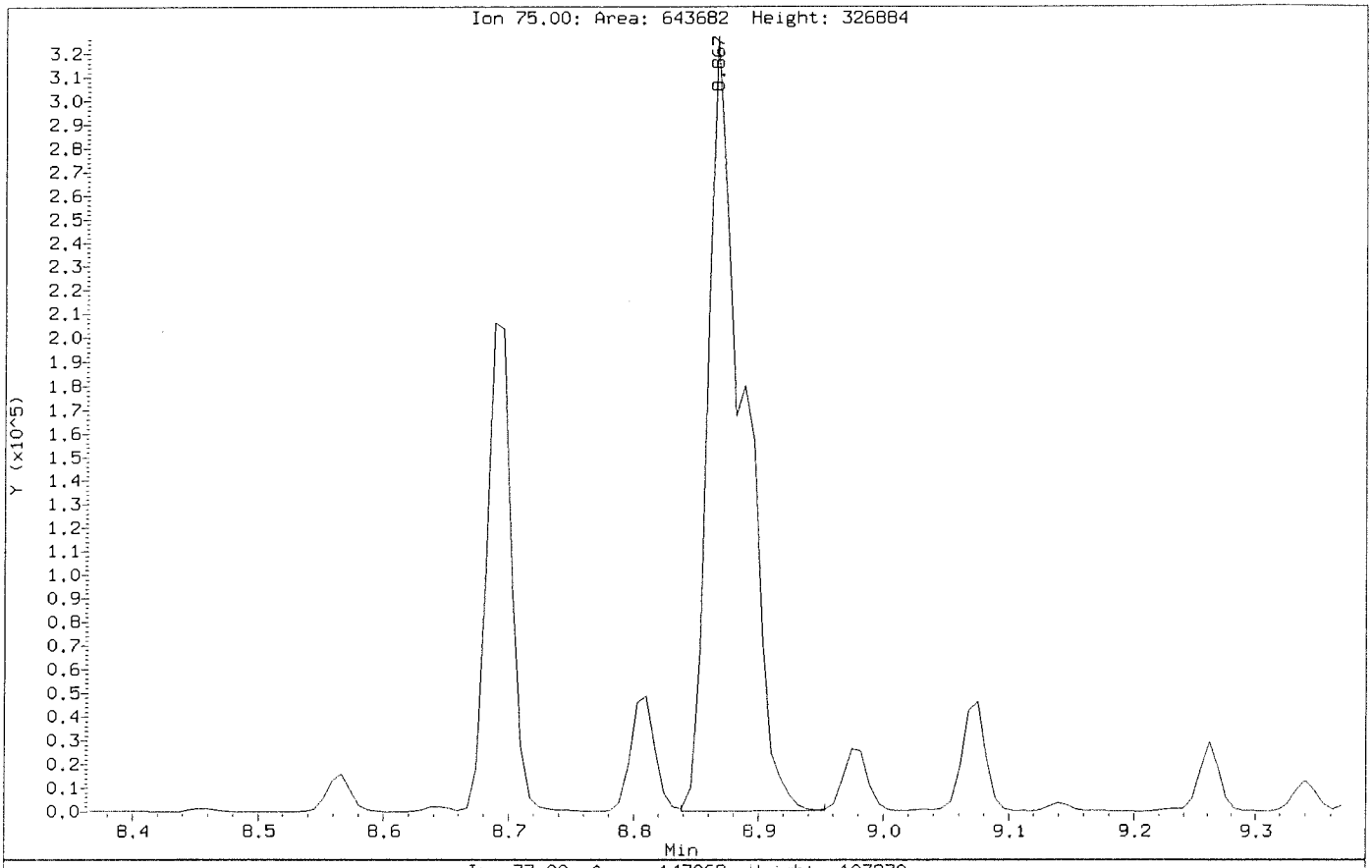


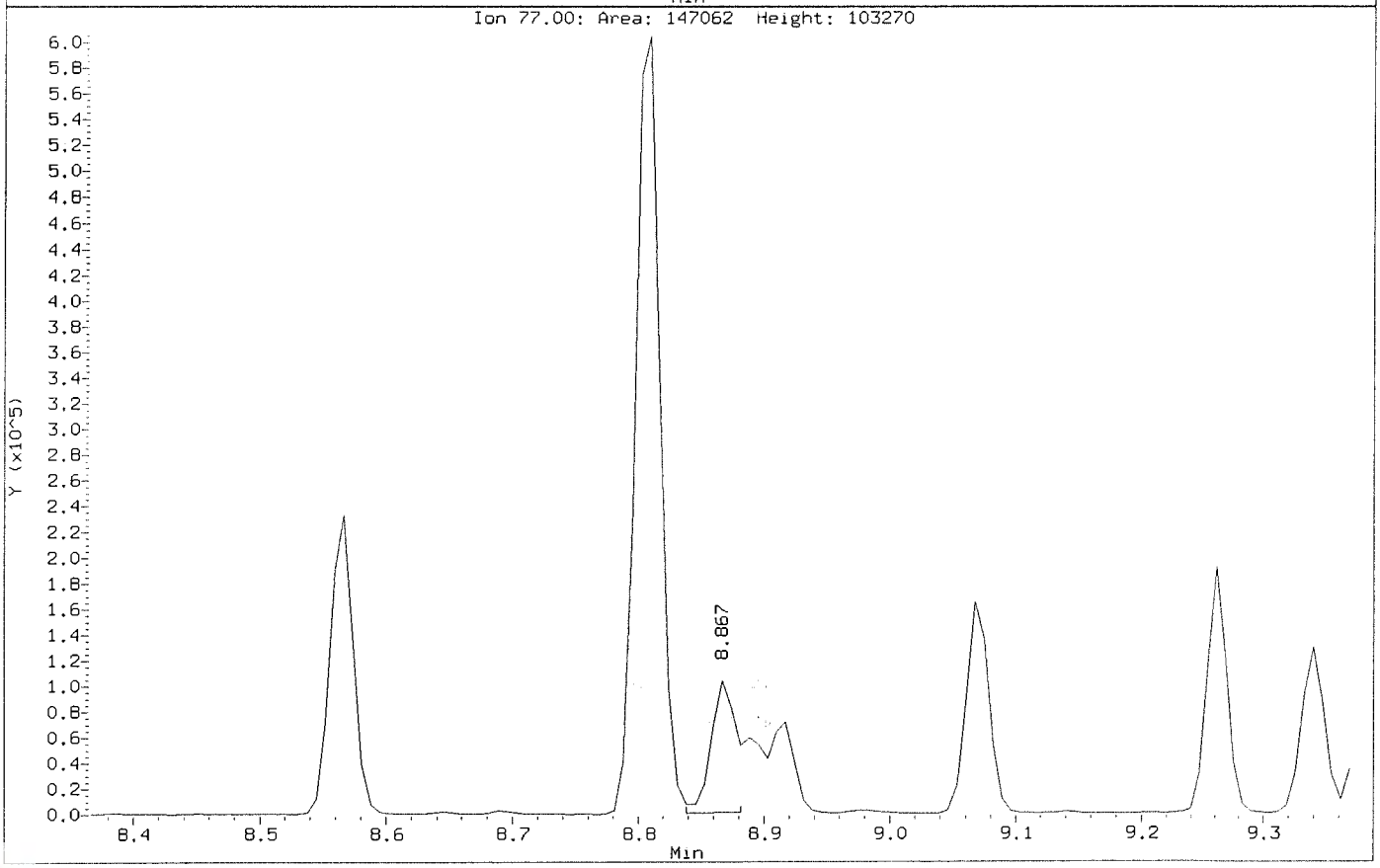
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080309.D
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Instrument: voa6.i
Client Sample ID: VSTD100

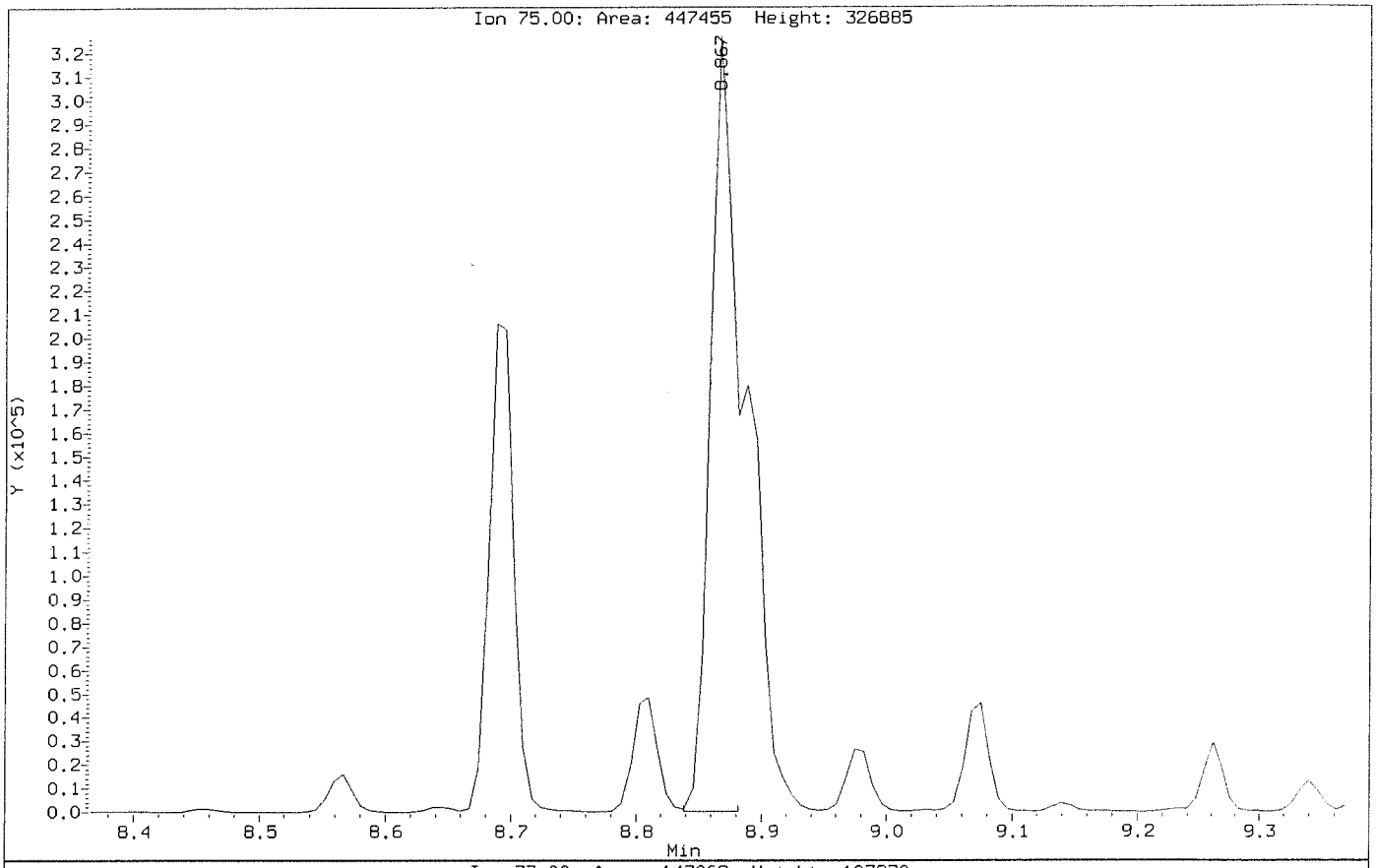
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

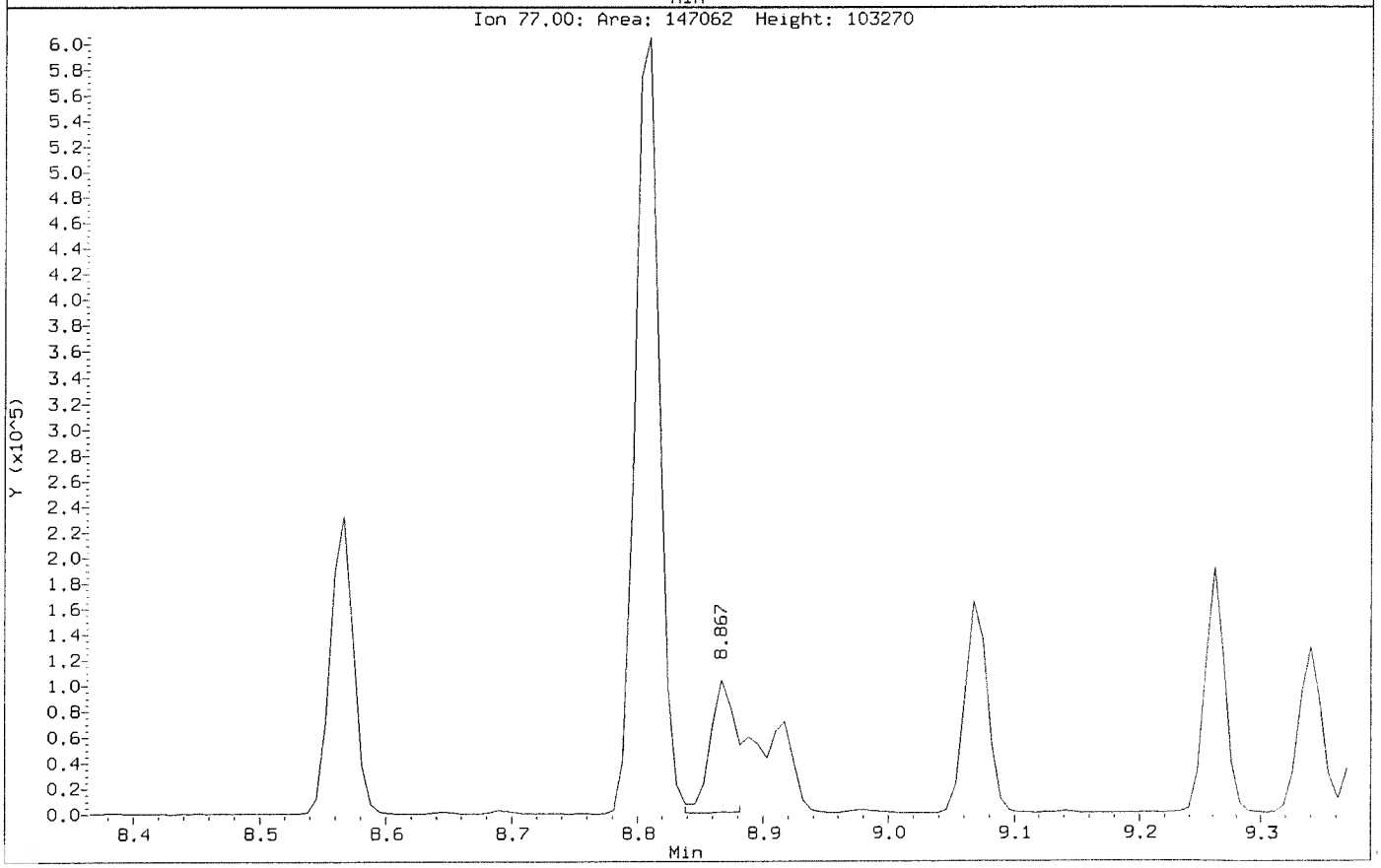




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-AUG-2020 15:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:52 Cal File: X080309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

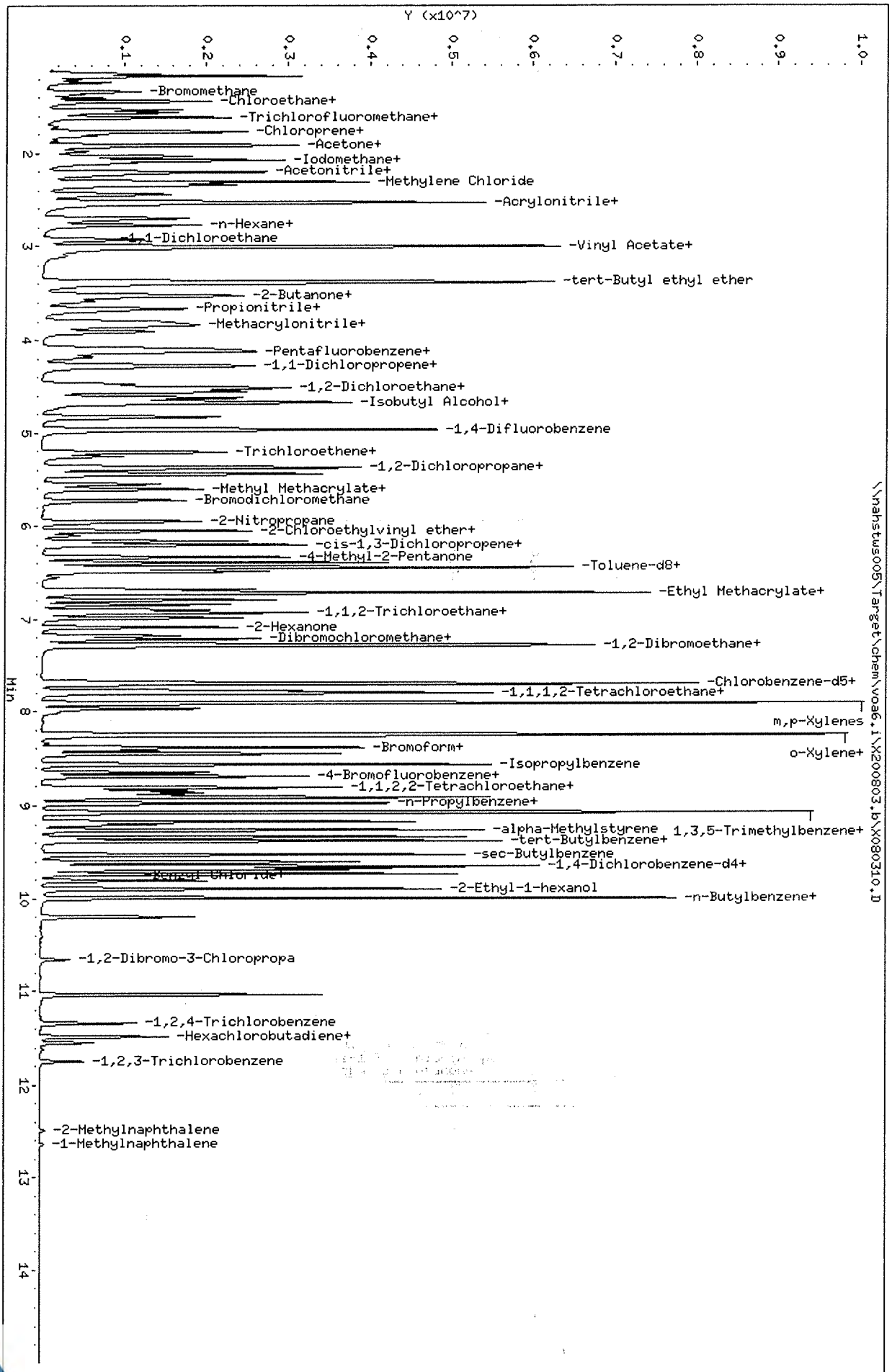
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457081	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697946	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	658557	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	308838	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	673356	150.000	150.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	814725	150.000	153.12
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2334447	150.000	146.14
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	886803	150.000	143.91
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	731767	150.000	145.97
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1070397	150.000	152.03
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	753290	150.000	150.61
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	538173	150.000	143.61
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1382538	150.000	154.84
11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	571714	150.000	157.86
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	893917	150.000	152.41
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	147859	150.000	159.09
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	653947	150.000	144.66(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	308625	150.000	163.97
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2442964	150.000	148.06
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	68839	150.000	154.17
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	709453	150.000	146.95
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	1244688	150.000	142.48

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1020218	150.000	150.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	786675	150.000	153.57
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2403624	150.000	148.94
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1420086	150.000	146.29
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1090826	150.000	147.42
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1405102	150.000	146.36
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	969504	150.000	148.71
24	2-Butanone	43	3.581	3.581	(0.855)	733748	300.000	327.46(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1990724	150.000	148.57
52	2-Hexanone	43	7.090	7.090	(0.924)	1228653	300.000	297.18(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	2300761	150.000	147.59
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2591814	150.000	151.54
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1784918	300.000	292.84(A)
10	Acetone	43	1.976	1.976	(0.472)	481556	300.000	304.39(A)
37	Benzene	78	4.519	4.519	(0.909)	2633133	150.000	152.06
74	Bromobenzene	156	8.810	8.810	(0.911)	875955	150.000	144.99
29	Bromochloromethane	128	3.803	3.803	(0.908)	397087	150.000	144.12
39	Bromodichloromethane	83	5.729	5.729	(1.153)	949497	150.000	151.12
66	Bromoform	173	8.416	8.416	(1.097)	545501	150.000	149.29
6	Bromomethane	94	1.339	1.339	(0.320)	475898	150.000	149.93
19	Carbon Disulfide	76	2.069	2.069	(0.494)	3493168	300.000	310.65(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	955431	150.000	153.26
59	Chlorobenzene	112	7.699	7.699	(1.004)	1894718	150.000	146.79
7	Chloroethane	64	1.403	1.403	(0.335)	503418	150.000	155.38
28	Chloroform	83	3.910	3.910	(0.933)	1203889	150.000	147.42
3	Chloromethane	50	1.081	1.081	(0.258)	952989	150.000	148.49
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	755671	150.000	150.19
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1139019	150.000	155.03
55	Dibromochloromethane	129	7.176	7.176	(0.936)	768555	150.000	145.69
44	Dibromomethane	93	5.558	5.558	(1.118)	458909	150.000	151.08
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	732272	150.000	163.68
61	Ethylbenzene	106	7.800	7.800	(1.017)	984064	150.000	147.65
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	270400	150.000	163.08
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2911603	150.000	148.83
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2378815	300.000	295.77(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	693942	150.000	149.97
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2113477	150.000	154.74
73	n-Propylbenzene	91	8.917	8.917	(0.922)	3384136	150.000	152.10
92	Naphthalene	128	11.546	11.546	(1.194)	435994	150.000	161.36
63	o-Xylene	106	8.244	8.244	(1.075)	1165295	150.000	147.50
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2872495	150.000	153.10
64	Styrene	104	8.258	8.258	(1.077)	2029238	150.000	147.92
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2094345	150.000	149.68
56	Tetrachloroethene	164	6.933	6.933	(0.904)	610841	150.000	145.91
50	Toluene	91	6.453	6.453	(0.841)	2766929	150.000	143.87
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	647458	150.000	151.10
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1027204	150.000	152.54
38	Trichloroethene	130	5.214	5.214	(1.049)	766453	150.000	154.95
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1054115	150.000	156.59
5	Vinyl Chloride	62	1.145	1.145	(0.273)	956993	150.000	162.65

QC Flag Legend

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

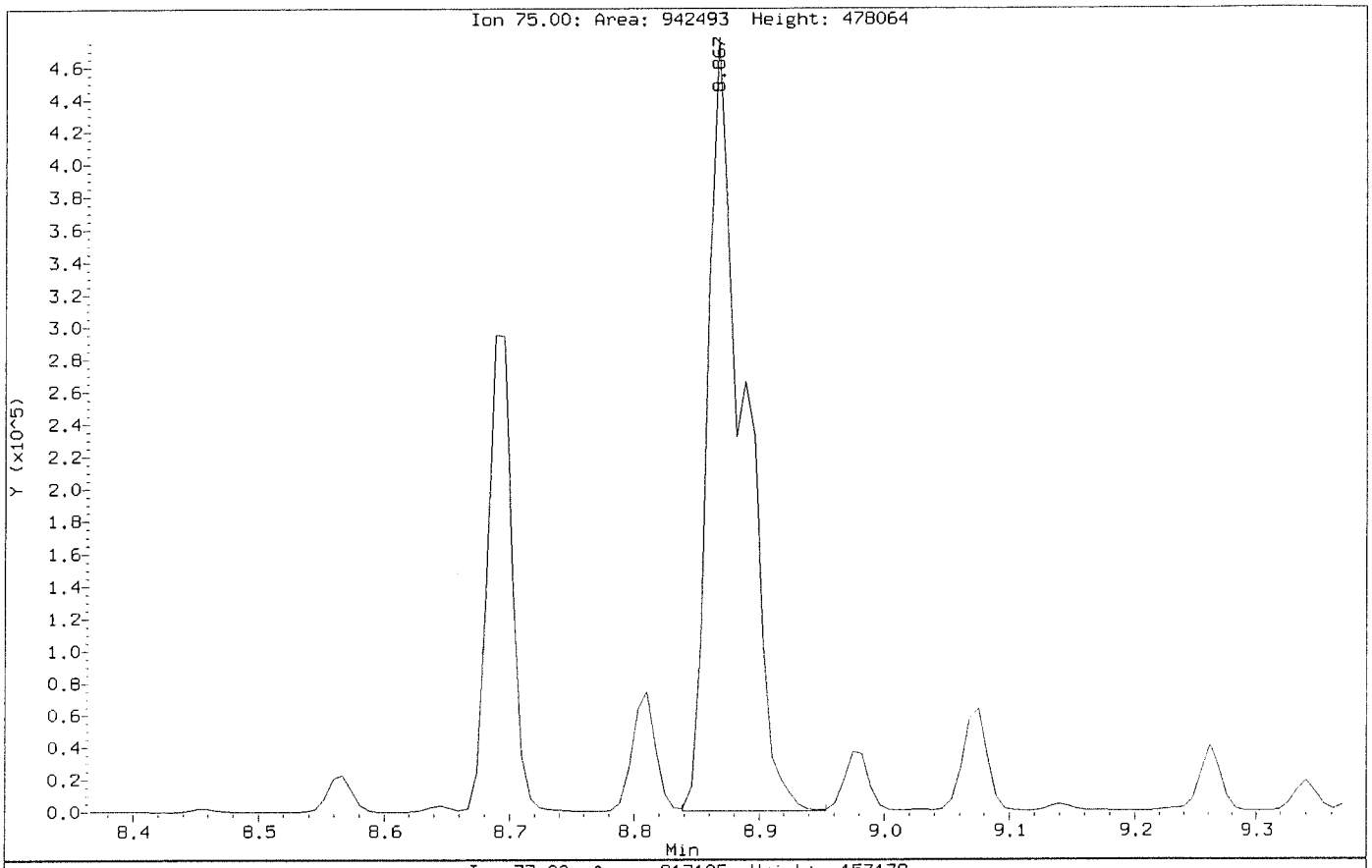


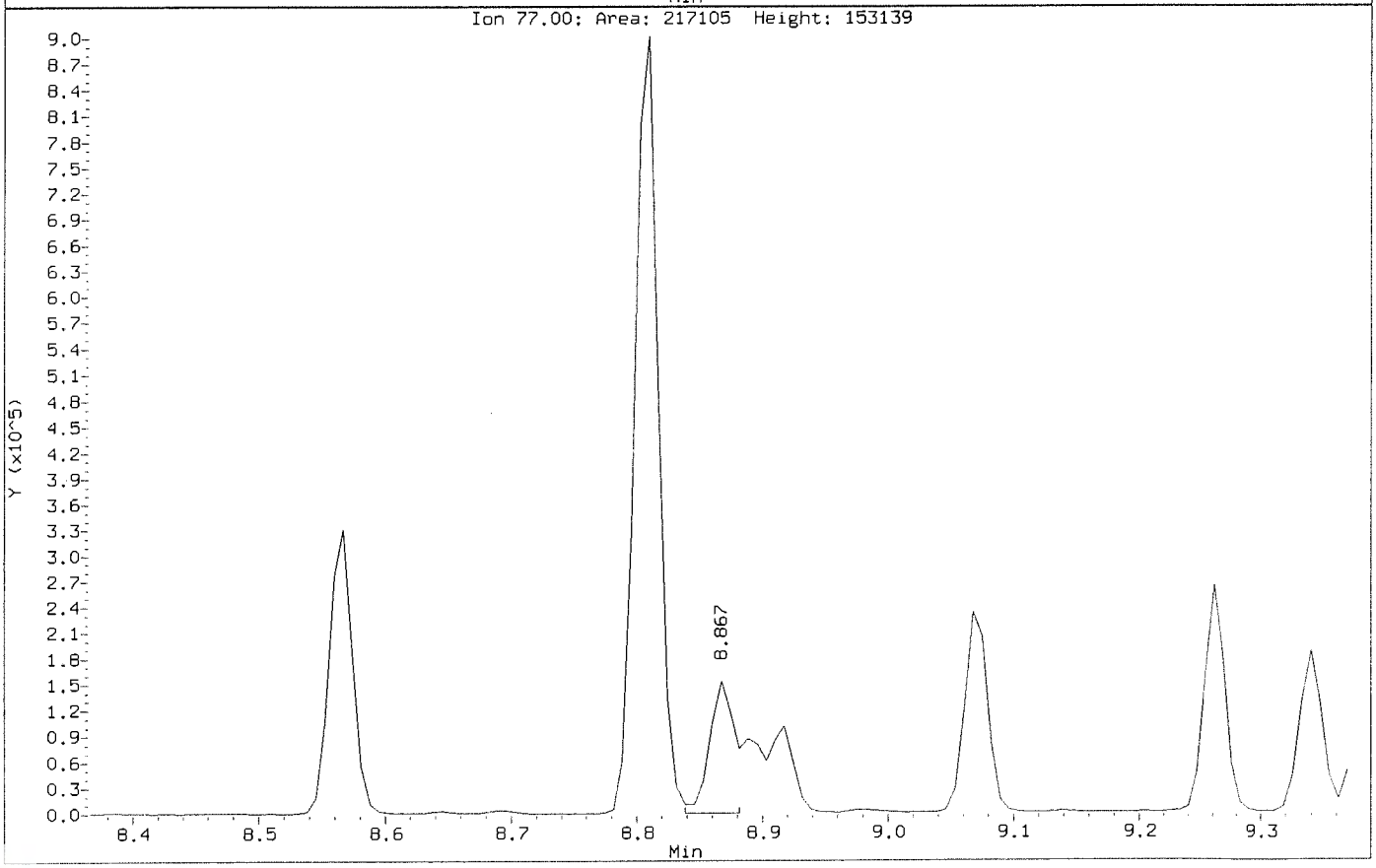
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Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

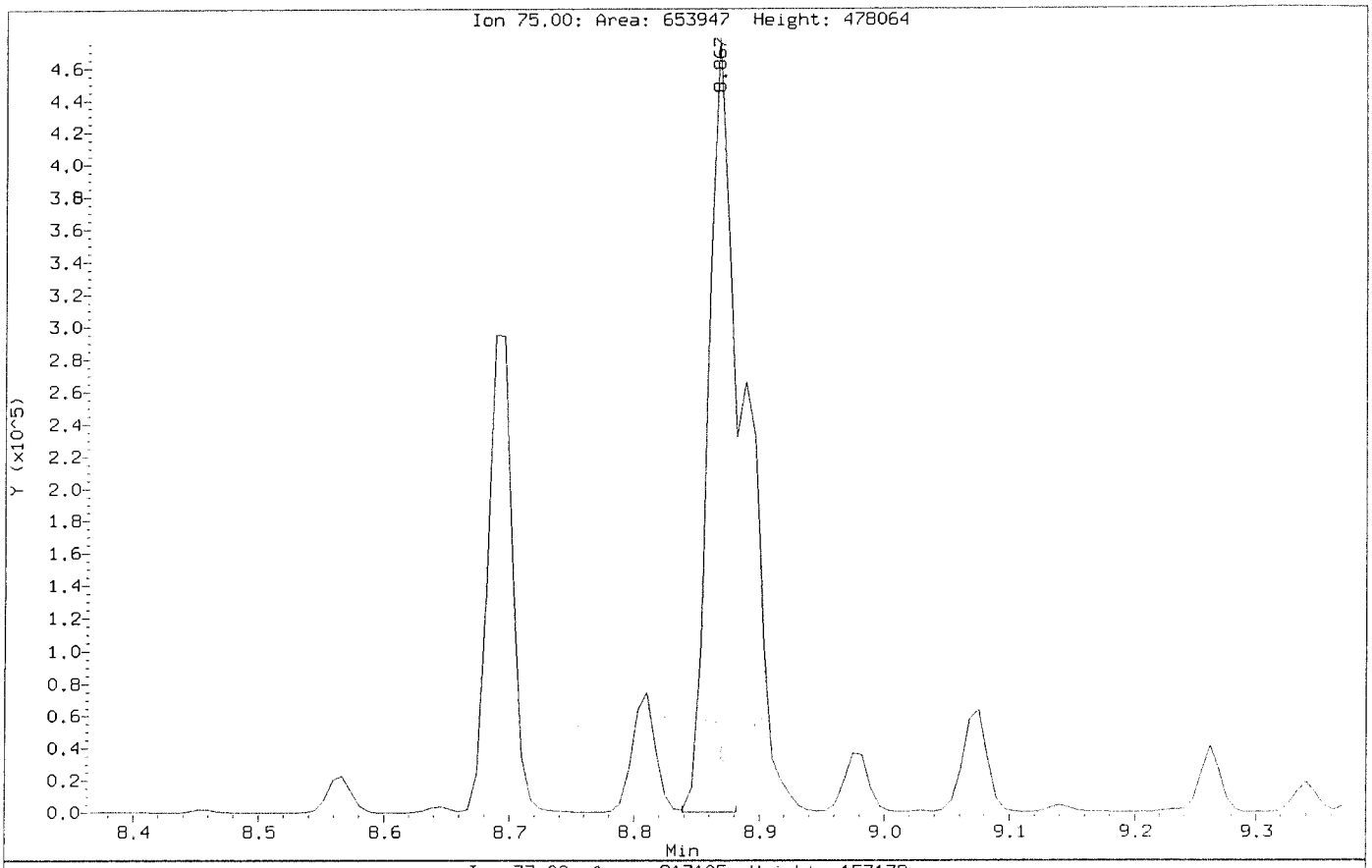
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

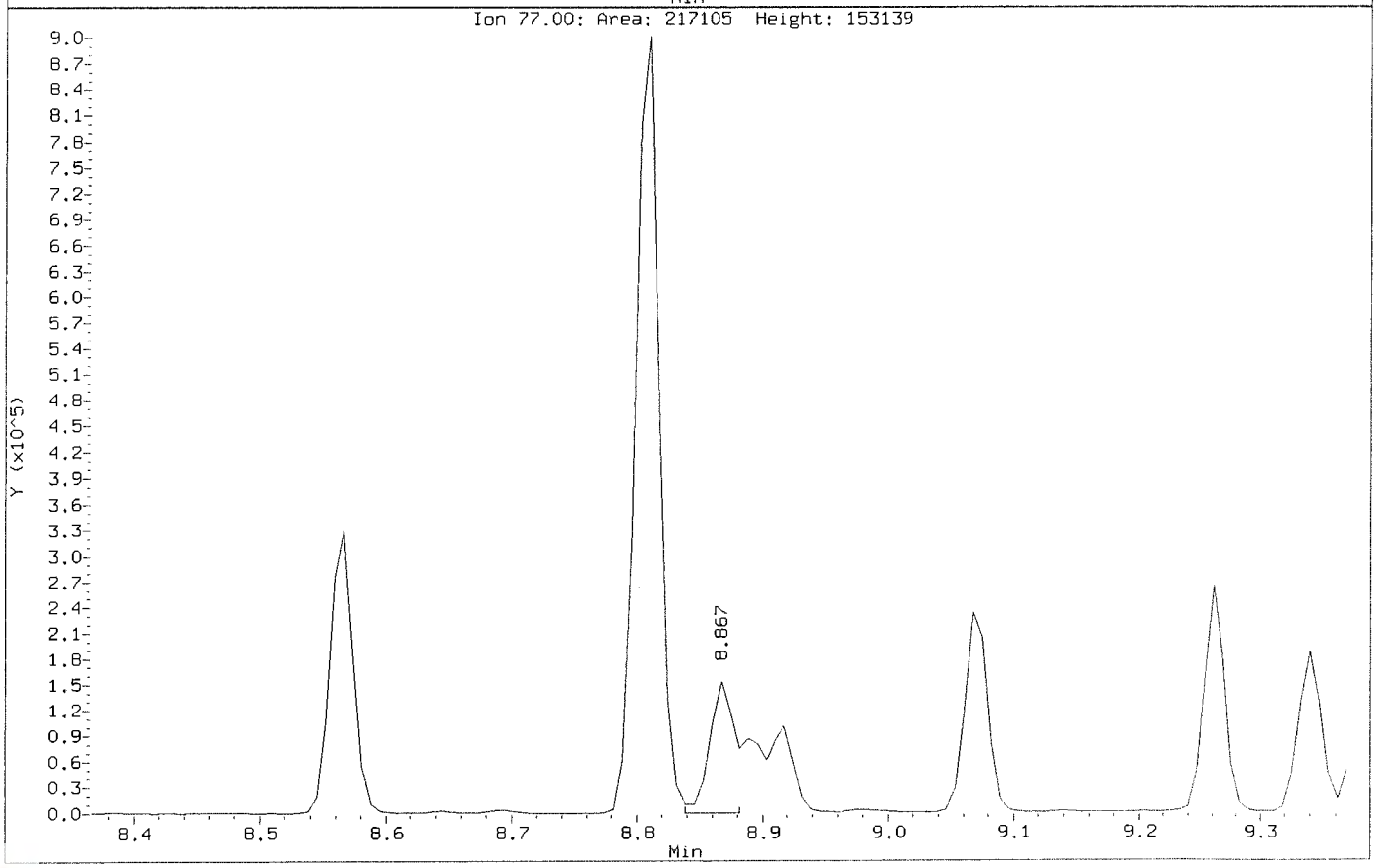




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Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-AUG-2020 15:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:16 Cal File: X080310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

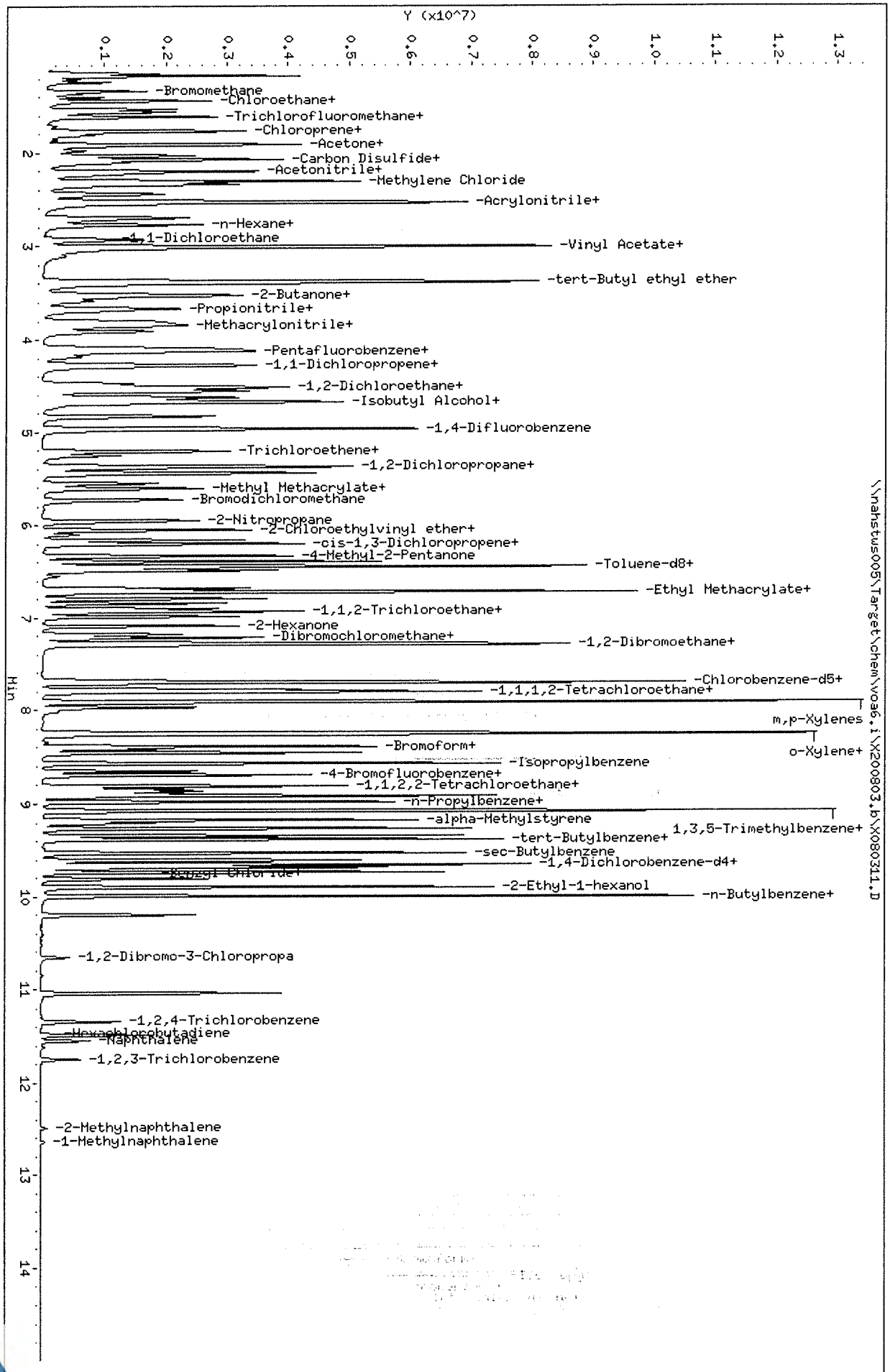
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450865	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	691821	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	647390	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	303189	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	891470	200.000	201.34(A)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	1069168	200.000	203.72(A)
$	48 Toluene-d8	98	6.389	6.389	(0.833)	3098306	200.000	197.30
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1172448	200.000	193.54
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	957096	200.000	194.21
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1427757	200.000	205.58(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	990670	200.000	201.64(A)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	709380	200.000	192.57
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1845041	200.000	209.49(A)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	760300	200.000	212.82(A)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1199113	200.000	206.26(A)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	174820	200.000	191.61
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	839680	200.000	189.20(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	360898	200.000	192.06
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	3263670	200.000	201.49(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	87710	200.000	199.86
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	931649	200.000	196.31
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1639229	200.000	191.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1348617	200.000	201.33(A)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1043924	200.000	205.60(A)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	3217418	200.000	203.08(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1875338	200.000	196.78
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1423457	200.000	195.70
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1859620	200.000	197.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1273388	200.000	198.01
24	2-Butanone	43	3.581	3.581	(0.855)	968566	400.000	438.21(A)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	2643071	200.000	200.93(A)
52	2-Hexanone	43	7.090	7.090	(0.924)	1629397	400.000	400.90(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	3060362	200.000	199.98
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3478638	200.000	207.19(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2352996	400.000	392.71(A)
10	Acetone	43	1.976	1.976	(0.472)	618700	400.000	396.80(A)
37	Benzene	78	4.519	4.519	(0.909)	3502746	200.000	204.07(A)
74	Bromobenzene	156	8.810	8.810	(0.911)	1163775	200.000	196.22
29	Bromochloromethane	128	3.803	3.803	(0.908)	510770	200.000	187.94
39	Bromodichloromethane	83	5.730	5.730	(1.153)	1253129	200.000	201.21(A)
66	Bromoform	173	8.416	8.416	(1.097)	720436	200.000	200.57(A)
6	Bromomethane	94	1.331	1.331	(0.318)	632580	200.000	201.82(A)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	4690853	400.000	422.91(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1290058	200.000	208.77(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2498297	200.000	196.90
7	Chloroethane	64	1.396	1.396	(0.333)	661534	200.000	207.00(A)
28	Chloroform	83	3.910	3.910	(0.933)	1599662	200.000	198.59
3	Chloromethane	50	1.081	1.081	(0.258)	1298797	200.000	205.16(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1003656	200.000	202.23(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1492460	200.000	204.94(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1019362	200.000	196.57
44	Dibromomethane	93	5.558	5.558	(1.118)	603267	200.000	200.37(A)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	990164	200.000	224.38(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1305080	200.000	199.20
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	306426	200.000	188.25
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3908287	200.000	203.22(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3158365	400.000	399.48(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	915440	200.000	201.03(A)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2826639	200.000	210.81(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	4530646	200.000	207.43(A)
92	Naphthalene	128	11.546	11.546	(1.194)	531999	200.000	194.12
63	o-Xylene	106	8.244	8.244	(1.075)	1537247	200.000	197.93
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3856474	200.000	209.37(A)
64	Styrene	104	8.265	8.265	(1.078)	2646814	200.000	196.27
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2815545	200.000	204.97(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	820612	200.000	199.39
50	Toluene	91	6.453	6.453	(0.841)	3655728	200.000	193.36
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	856683	200.000	202.68(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1360653	200.000	203.85(A)
38	Trichloroethene	130	5.207	5.207	(1.048)	1027730	200.000	209.61(A)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1414911	200.000	213.08(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1294651	200.000	223.07(A)

QC Flag Legend

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

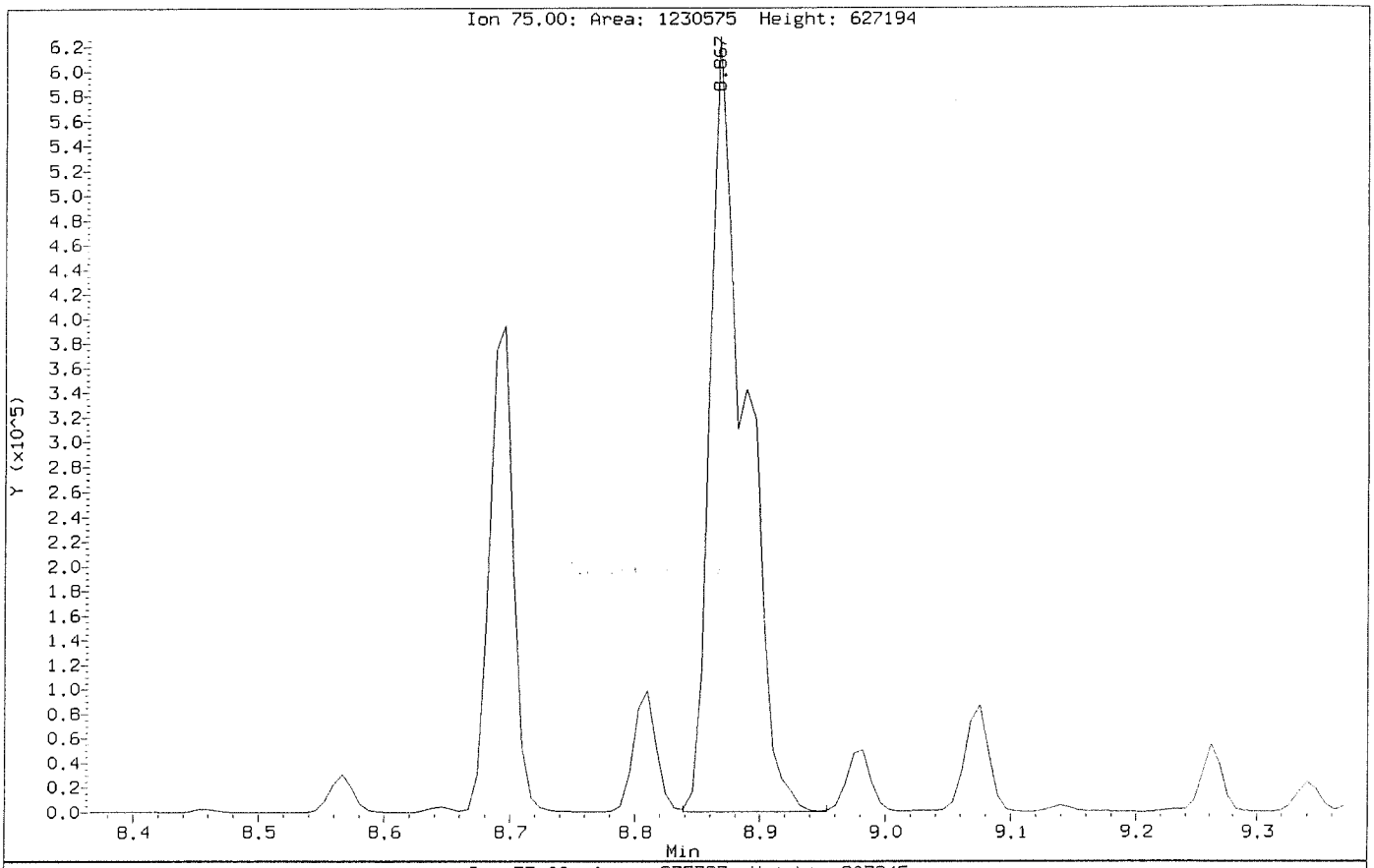


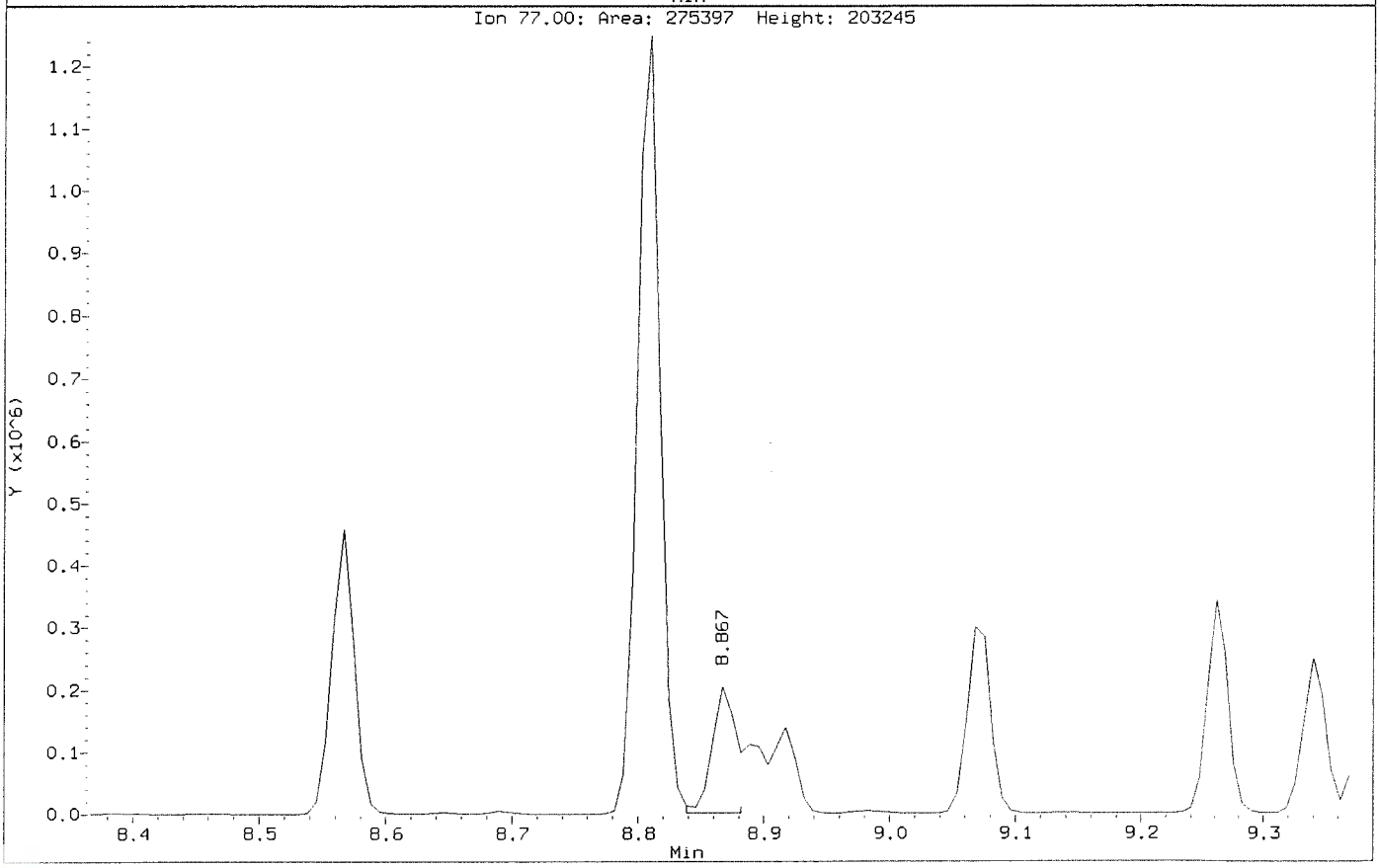
Data File: \\nahstus005\Target\chem\voa6.i\X200803.b\X080311.D
Date : 03-AUG-2020 15:40
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

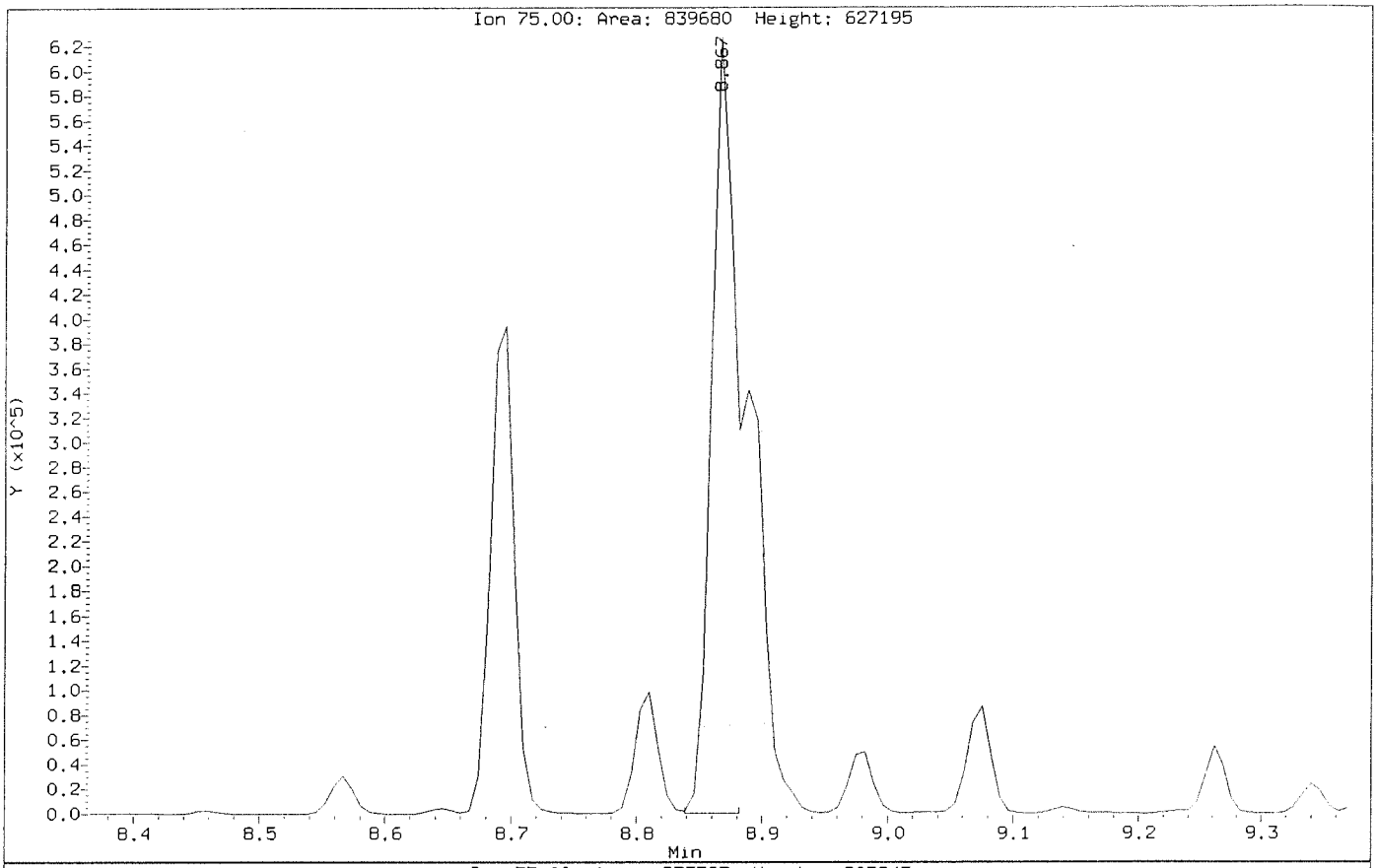
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

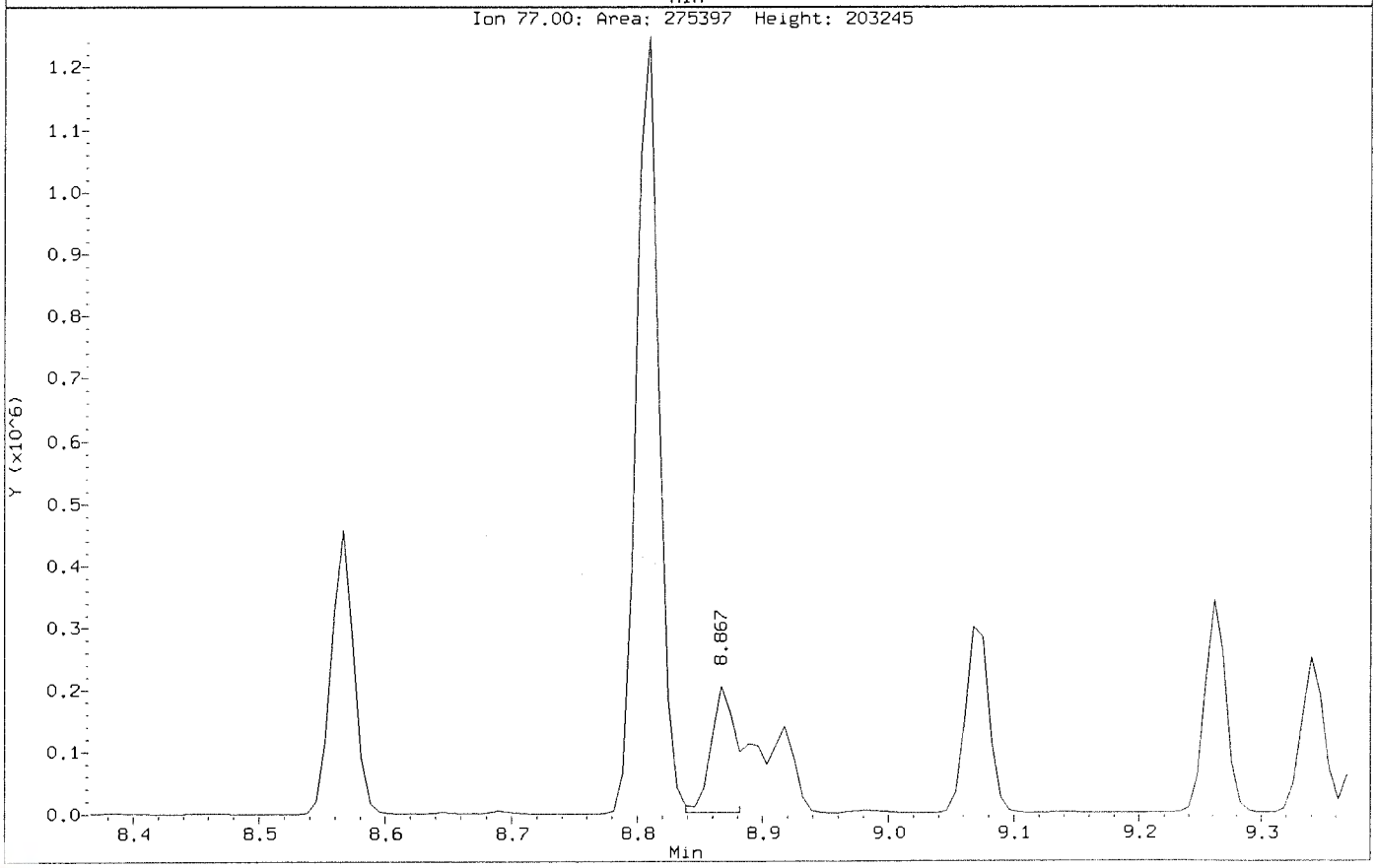




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D Page 1
Report Date: 22-Aug-2020 12:06

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-AUG-2020 16:51
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

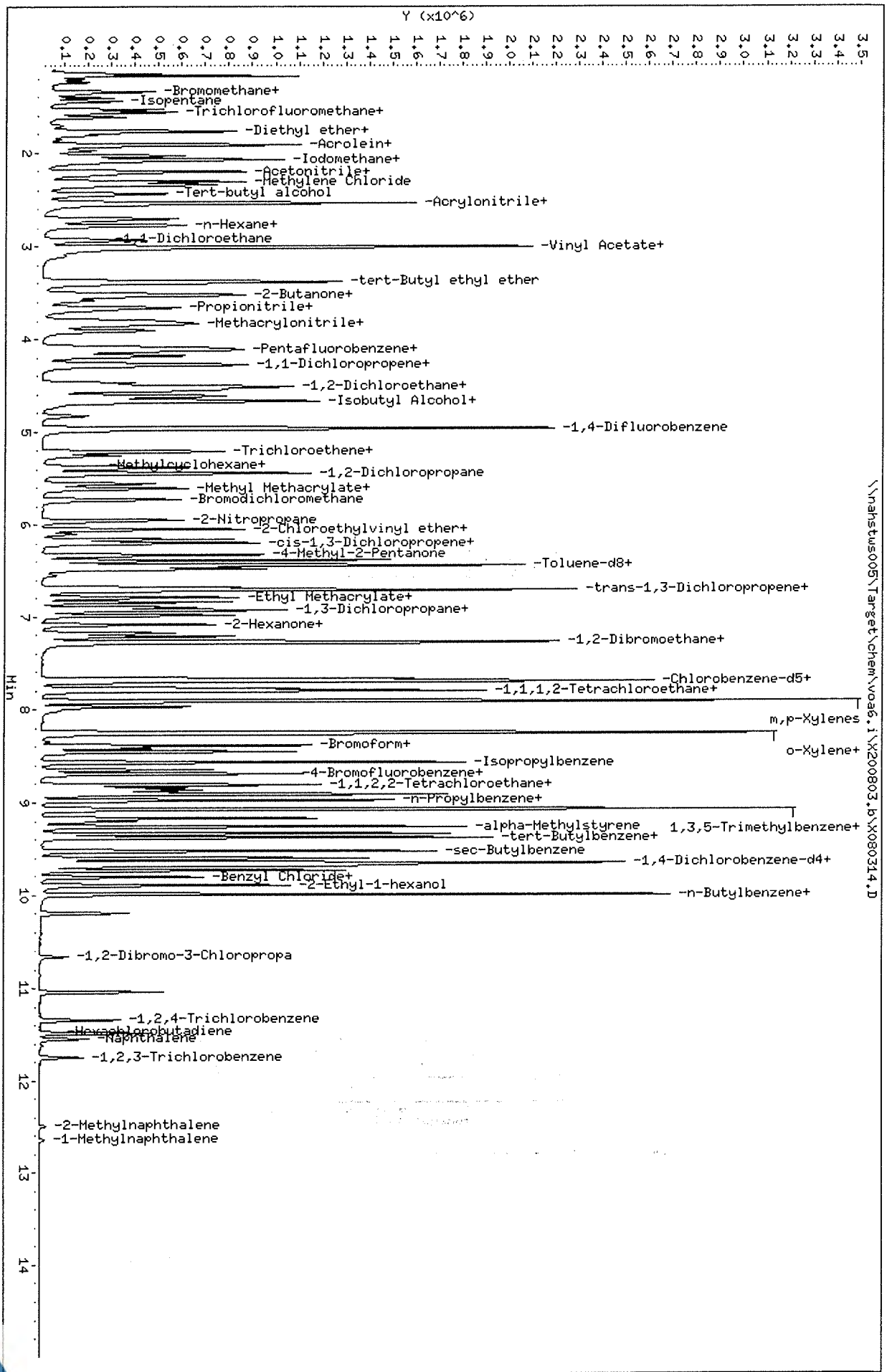
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	487811	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	737194	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	676175	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	325984	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	235982	49.2610	49.26
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	277053	48.7922	48.79
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	810392	49.4111	49.41
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	309544	48.9242	48.92
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	245824	47.7596	47.75
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	362002	48.1775	48.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	253503	48.2847	48.28
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	183527	47.7003	47.70
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	478275	50.1934	50.19
11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	198134	51.2626	51.26
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	303153	48.9364	48.93
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	49347	50.3044	50.30
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	225070	47.1692	47.16(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	94358	50.1387	50.13
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	838876	48.1702	48.17
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22001	47.2364	47.23
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	241523	48.7266	48.72
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	433731	47.0400	47.04

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D Page 2
Report Date: 22-Aug-2020 12:06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	349700	48.9941	48.99
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	272227	50.3156	50.31
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	818750	48.0653	48.06
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	489054	47.7302	47.73
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	370552	48.7766	48.77
84	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	489689	48.3269	48.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	354577	50.9627	50.96
24	2-Butanone	43	3.580	3.581	(0.855)	250811	104.882	104.88
76	2-Chlorotoluene	91	8.974	8.982	(0.928)	683359	48.3181	48.31
52	2-Hexanone	43	7.090	7.090	(0.924)	404545	95.3001	95.30
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	792702	48.1785	48.17
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	869988	48.1945	48.19
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	585620	93.5781	93.57
10	Acetone	43	1.976	1.976	(0.472)	173872	102.274	102.27
37	Benzene	78	4.519	4.519	(0.909)	904308	49.4427	49.44
74	Bromobenzene	156	8.809	8.810	(0.911)	302326	47.4100	47.40
29	Bromochloromethane	128	3.802	3.803	(0.908)	138253	47.0189	47.01
39	Bromodichloromethane	83	5.729	5.730	(1.153)	323350	48.7242	48.72
66	Bromoform	173	8.415	8.416	(1.097)	181296	48.3252	48.32
6	Bromomethane	94	1.338	1.331	(0.320)	179720	53.4789	53.47
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1217324	101.439	101.43
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	315836	47.9659	47.96
59	Chlorobenzene	112	7.699	7.699	(1.004)	648373	48.9257	48.92
7	Chloroethane	64	1.403	1.396	(0.335)	176540	51.0584	51.05
28	Chloroform	83	3.910	3.910	(0.933)	417889	47.9496	47.94
3	Chloromethane	50	1.081	1.081	(0.258)	337755	49.3134	49.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	262524	48.8914	48.89
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	387446	49.9295	49.92
55	Dibromochloromethane	129	7.176	7.176	(0.936)	256809	47.4144	47.41
44	Dibromomethane	93	5.557	5.558	(1.118)	155222	48.3826	48.38
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	241678	50.6204	50.62
61	Ethylbenzene	106	7.799	7.807	(1.017)	332949	48.6572	48.65
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	84278	48.1556	48.15
67	Isopropylbenzene	105	8.566	8.566	(1.117)	975427	48.5621	48.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	807125	97.7420	97.74
17	Methylene Chloride	84	2.305	2.306	(0.550)	246540	49.0057	49.00
87	n-Butylbenzene	91	9.999	9.999	(1.034)	708345	49.1343	49.13
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1130932	48.1580	48.15
92	Naphthalene	128	11.546	11.546	(1.194)	139595	53.3922	53.39
63	o-Xylene	106	8.244	8.244	(1.075)	395537	48.7621	48.76
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	948593	47.8994	47.89
64	Styrene	104	8.258	8.265	(1.077)	697467	49.5184	49.51
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	699293	47.3494	47.34
56	Tetrachloroethene	164	6.933	6.933	(0.904)	204313	47.5322	47.53
50	Toluene	91	6.446	6.453	(0.840)	953134	48.2682	48.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	223973	48.9770	48.97
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	345851	48.6275	48.62
38	Trichloroethene	130	5.214	5.207	(1.049)	264166	50.5627	50.56
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	357713	49.7923	49.79
5	Vinyl Chloride	62	1.145	1.145	(0.273)	318745	50.7622	50.76

QC Flag Legend

M - Compound response manually integrated.

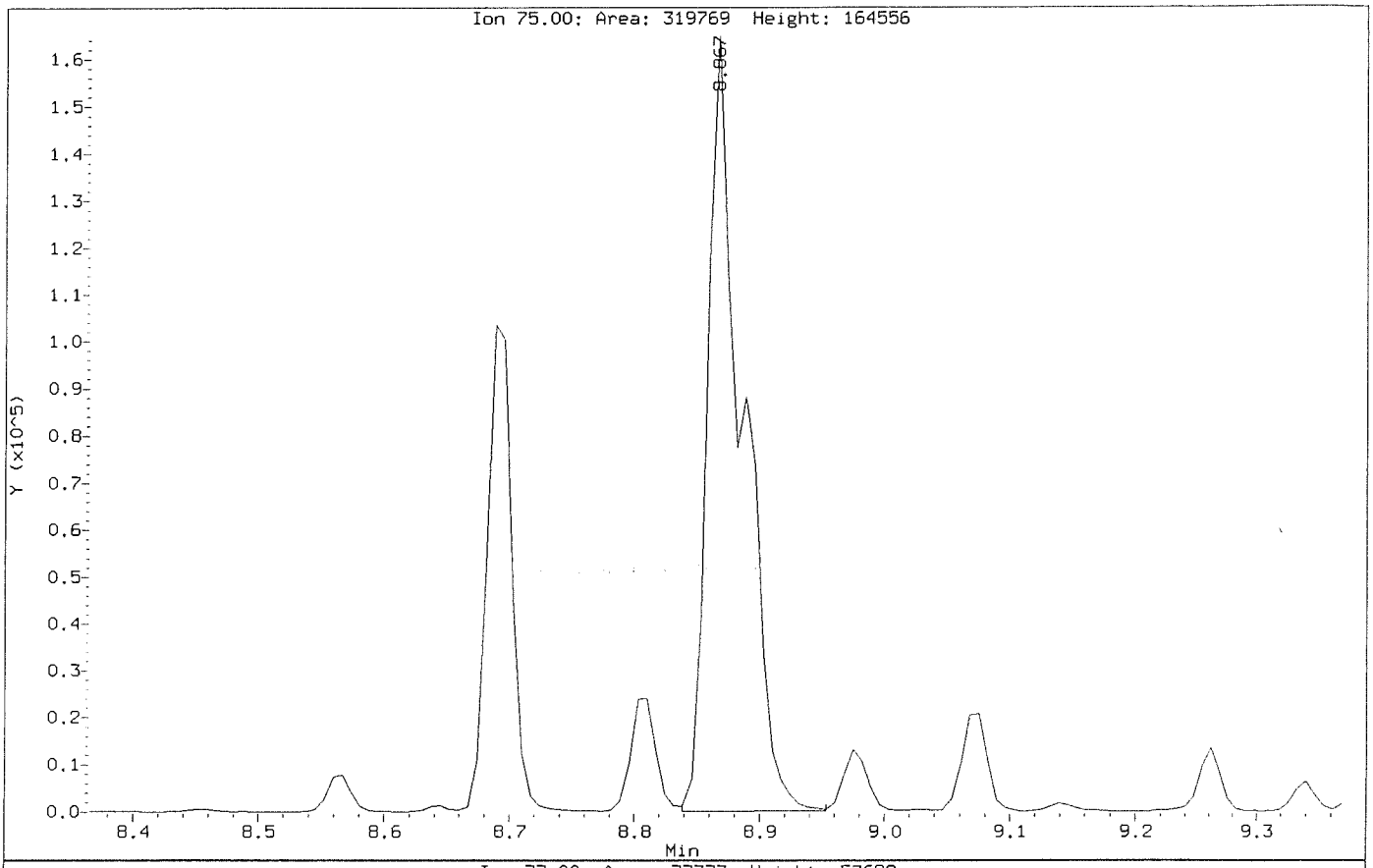


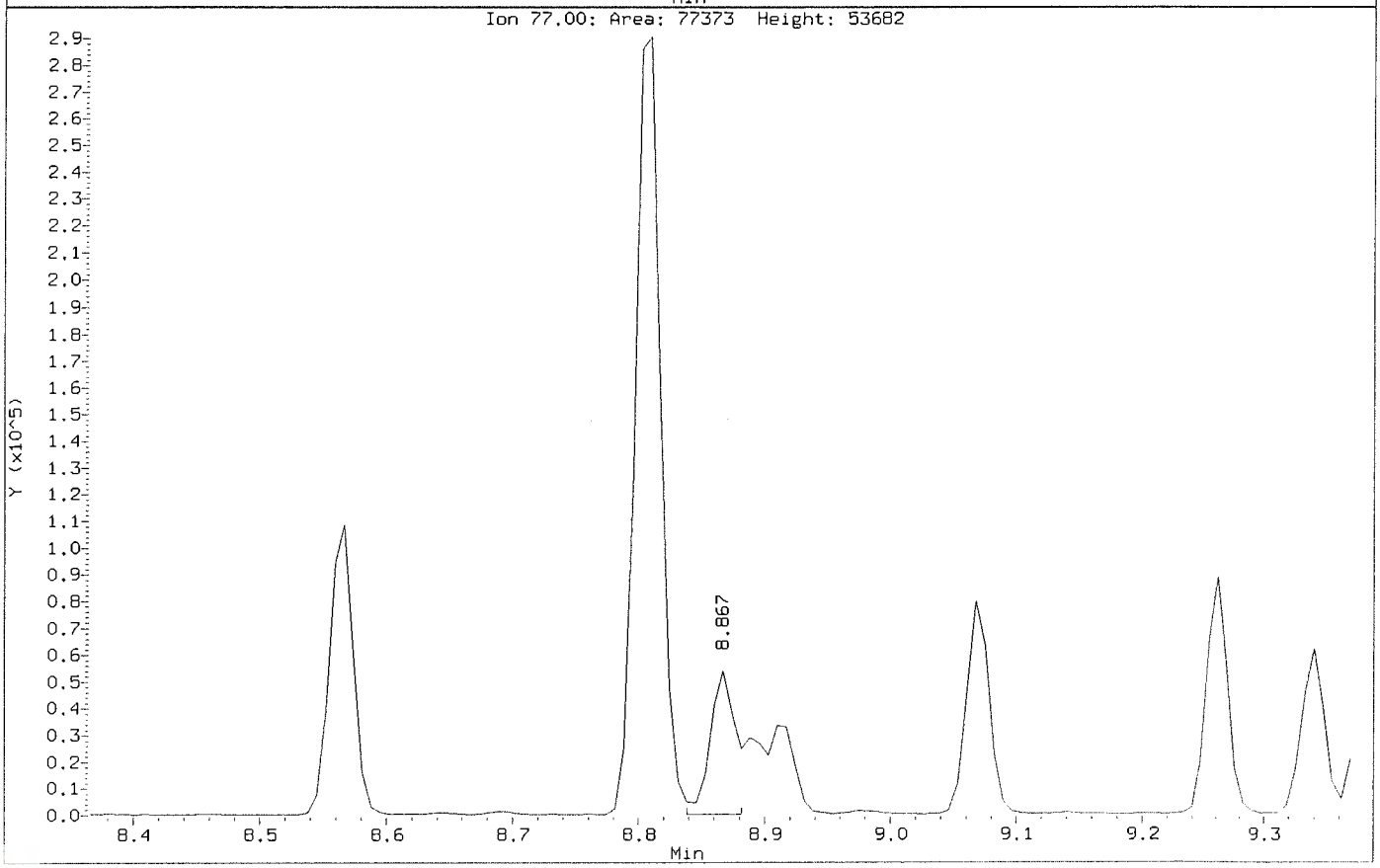
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Date : 03-AUG-2020 16:51
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

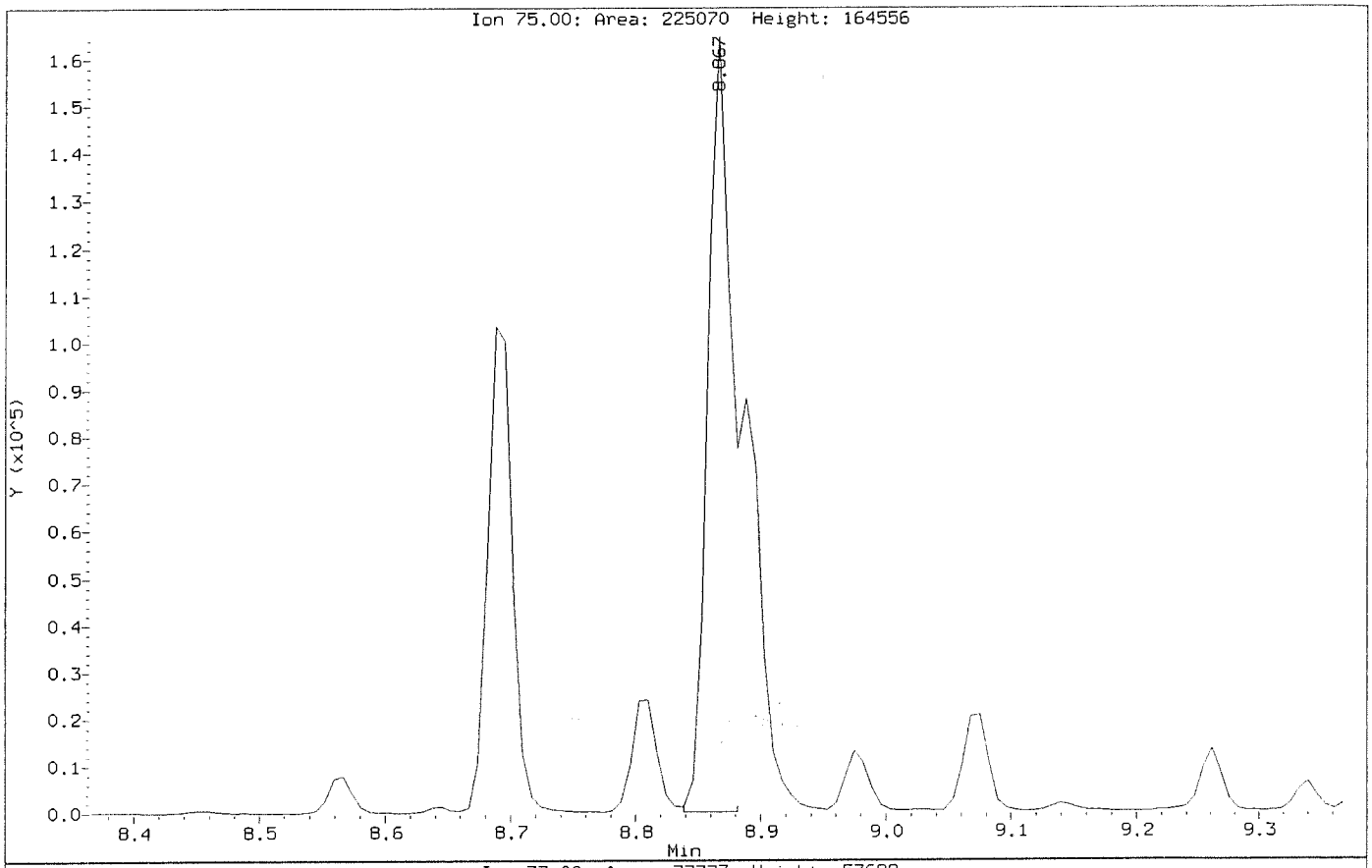
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

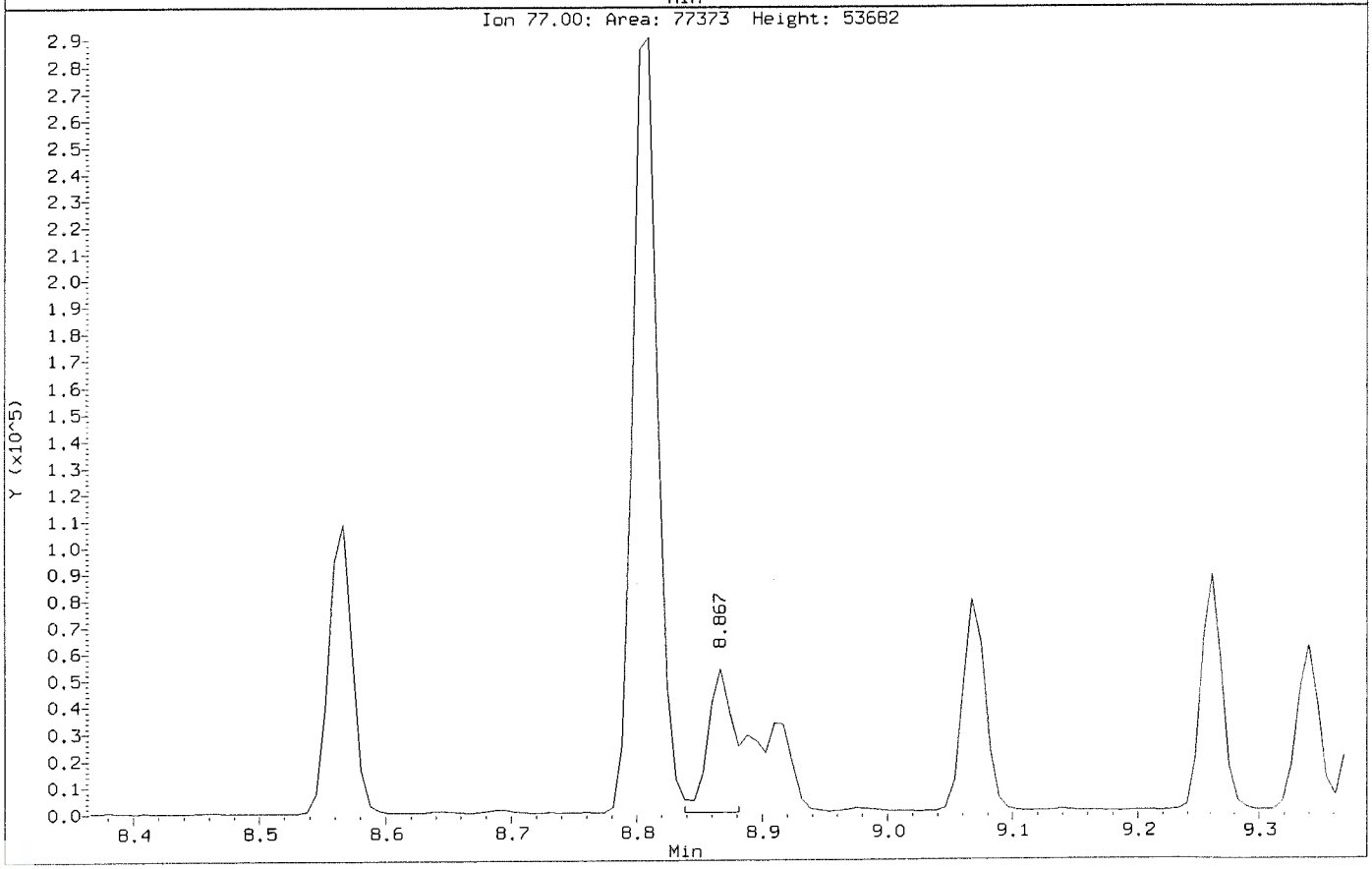




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 41395 **Analyst:** Presenta Cabascango

Date: 08-12-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	08-12-2020 10:42 am	1.00	50 mL	50 mL	X081201.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	08-12-2020 11:06 am	1.00	50 mL	50 mL	X081202.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	BLANK	SAMP	08-12-2020 11:30 am	1.00	50 mL	50 mL	X081203.D	Liquid	Y	NA
4	CCB	SAMP	08-12-2020 11:54 am	1.00	50 mL	50 mL	X081204.D	Liquid	Y	NA
5	VLCSW-200812	LCS	08-12-2020 12:18 pm	1.00	50 mL	50 mL	X081205.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	08-12-2020 12:42 pm	1.00	50 mL	50 mL	X081206.D	Liquid	Y	NA
7	VBLKW-200812	MBLK	08-12-2020 01:06 pm	1.00	50 mL	50 mL	X081207.D	Liquid	Y	NA
8	HS20080473-03	SAMP	08-12-2020 01:30 pm	1.00	50 mL	50 mL	X081208.D	Liquid	Y	<2
9	HS20080473-01	SAMP	08-12-2020 01:54 pm	1.00	50 mL	50 mL	X081209.D	Liquid	Y	<2
10	HS20080430-01	SAMP	08-12-2020 02:18 pm	200.0(	250 µL	50 mL	X081210.D	Liquid	Y	<2
11	HS20080322-09	SAMP	08-12-2020 02:42 pm	1.00	50 mL	50 mL	X081211.D	Liquid	Y	<2
12	HS20080322-06	SAMP	08-12-2020 03:06 pm	1.00	50 mL	50 mL	X081212.D	Liquid	Y	<2
13	HS20080473-01MS	MS	08-12-2020 03:30 pm	1.00	50 mL	50 mL	X081213.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
14	HS20080473-01MSD	MSD	08-12-2020 03:54 pm	1.00	50 mL	50 mL	X081214.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
15	CCV-END	CCV	08-12-2020 04:18 pm	1.00	50 mL	50 mL	X081215.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
16	HS20080322-03	SAMP	08-12-2020 04:42 pm	1000.0	50 µL	50 mL	X081216.D	Liquid	Y	<2
17	HS20080382-01	SAMP	08-12-2020 05:06 pm	1.00	50 mL	50 mL	X081217.D	Liquid	Y	<2
18	HS20080382-04	SAMP	08-12-2020 05:30 pm	1.00	50 mL	50 mL	X081218.D	Liquid	Y	<2
19	HS20080341-07	SAMP	08-12-2020 05:54 pm	1.00	50 mL	50 mL	X081219.D	Liquid	Y	<2
20	HS20080322-01	SAMP	08-12-2020 06:18 pm	100.0(	500 µL	50 mL	X081220.D	Liquid	Y	<2
21	HS20080322-06	SAMP	08-12-2020 06:42 pm	25.00	2 mL	50 mL	X081221.D	Liquid	Y	<2
22	HS20080322-05	SAMP	08-12-2020 07:06 pm	10.00	5 mL	50 mL	X081222.D	Liquid	Y	<2
23	HS20080322-05n/r	SAMP	08-12-2020 07:30 pm	100.0(	500 µL	50 mL	X081223.D	Liquid	Y	<2
24	HS20080322-04	SAMP	08-12-2020 07:54 pm	25.00	2 mL	50 mL	X081224.D	Liquid	Y	<2
25	HS20080322-04	SAMP	08-12-2020 08:18 pm	500.0(	100 µL	50 mL	X081225.D	Liquid	Y	<2
26	BLANK	SAMP	08-12-2020 08:42 pm	1.00	50 mL	50 mL	X081226.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-42-06
IS ID	31106-42-06
CAL STD ID	31106-42-01/02
BFB ID	31106-42-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200812	97	94	97	95	0
02	VBLKW-200812	90	93	106	95	0
03	HS20080473-03	91	93	108	94	0
04	HS20080473-01	91	93	106	97	0
05	HS20080473-01	91	93	104	98	0
06	HS20080473-01	90	93	104	98	0
07						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200812

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID: X081207 Lab Sample ID: VBLKW-200812

Date Analyzed: 08/12/20 Time Analyzed: 1306

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-200812	VLCSW-200812	X081205	1218
02	HS20080473-0	HS20080473-03	X081208	1330
03	HS20080473-0	HS20080473-01	X081209	1354
04	HS20080473-0	HS20080473-01M	X081213	1530
05	HS20080473-0	HS20080473-01M	X081214	1554
06				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID: X081201 BFB Injection Date: 08/12/20

Instrument ID: VOA6 BFB Injection Time: 1042

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.7
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	7.9
173	Less than 2.0% of mass 174	0.7 (1.1)1
174	Greater than 50.0% of mass 95	67.4
175	5.0 - 9.0% of mass 174	5.2 (7.7)1
176	95.0 - 101.0% of mass 174	64.1 (95.1)1
177	5.0 - 9.0% of mass 176	4.4 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X081202	08/12/20	1106
02	VLCSW-200812	VLCSW-200812	X081205	08/12/20	1218
03	VBLKW-200812	VBLKW-200812	X081207	08/12/20	1306
04	HS20080473-0	HS20080473-03	X081208	08/12/20	1330
05	HS20080473-0	HS20080473-01	X081209	08/12/20	1354
06	HS20080473-0	HS20080473-01M	X081213	08/12/20	1530
07	HS20080473-0	HS20080473-01M	X081214	08/12/20	1554
08	CCV-END	CCV-END	X081215	08/12/20	1618
09					
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19					
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22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: VOA6 Calibration Date: 08/12/20 Time: 1106

Lab File ID: X081202 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5222979	0.5222979	0.2	0.70	20.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.4645591	0.4645591	0.1	3.62	20.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.5557743	1.5557743	0.6	1.03	20.00	AVRG
2,2-Dichloropropane	0.7130000	0.7373870	0.7373870	0.1	-3.42	20.00	AVRG
1,1-Dichloropropene	0.4200000	0.4185988	0.4185988	0.1	0.33	20.00	AVRG
Dibromomethane	0.2170000	0.2101367	0.2101367	0.1	3.16	20.00	AVRG
1,2-Dibromoethane	0.3660000	0.3566815	0.3566815	0.1	2.55	20.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.4712109	0.4712109	0.1	-0.47	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3604022	0.3604022	0.1	5.16	20.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7581115	0.7581115	0.1	1.54	20.00	AVRG
1,1,2,2-Tetrachloroethane	48.765519	50.000000	0.7854617	0.3	2.47	20.00	LINR
1,1,2-Trichloroethane	0.2840000	0.2742272	0.2742272	0.1	3.44	20.00	AVRG
1,1-Dichloroethane	0.9760000	1.0099369	1.0099369	0.2	-3.48	20.00	AVRG
1,1-Dichloroethene	0.3960000	0.4169103	0.4169103	0.1	-5.28	20.00	AVRG
Trichloroethene	0.3540000	0.3615525	0.3615525	0.2	-2.13	20.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1260607	0.1260607	0.01	15.96	20.00	AVRG
Trichlorofluoromethane	0.7360000	0.7451577	0.7451577	0.1	-1.24	20.00	AVRG
1,2,4-Trichlorobenzene	44.322580	50.000000	0.2555105	0.1	11.35	20.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	2.7475537	2.7475537	0.1	-2.87	20.00	AVRG
Tetrachloroethene	0.3180000	0.3159700	0.3159700	0.2	0.64	20.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.3449564	1.3449564	0.4	4.88	20.00	AVRG
1,2-Dichloroethane	0.4840000	0.4693804	0.4693804	0.1	3.02	20.00	AVRG
1,2-Dichloropropane	0.3670000	0.3825859	0.3825859	0.1	-4.25	20.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.6965446	2.6965446	0.1	-3.20	20.00	AVRG
1,3-Dichloropropane	0.5620000	0.5489879	0.5489879	0.1	2.32	20.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.5456323	1.5456323	0.4	0.54	20.00	AVRG
Toluene	1.4600000	1.4517900	1.4517900	0.4	0.56	20.00	AVRG
2-Butanone	0.2450000	0.2685050	0.2685050	0.1	-9.59	20.00	AVRG
2-Chlorotoluene	2.1690000	2.2125793	2.2125793	0.1	-2.01	20.00	AVRG
2-Hexanone	0.3140000	0.3020681	0.3020681	0.1	3.80	20.00	AVRG
4-Chlorotoluene	2.5230000	2.5598674	2.5598674	0.1	-1.46	20.00	AVRG
tert-Butylbenzene	2.2650000	2.3234398	2.3234398	0.1	-2.58	20.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4334843	0.4334843	0.1	6.37	20.00	AVRG
Acetone	116.08039	100.00000	0.2020251	0.1	-16.08	20.00	LINR
Benzene	1.2410000	1.2588369	1.2588369	0.5	-1.44	20.00	AVRG
Bromobenzene	0.9780000	0.9594227	0.9594227	0.1	1.90	20.00	AVRG
Bromochloromethane	0.3010000	0.2879952	0.2879952	0.1	4.32	20.00	AVRG
Bromodichloromethane	0.4500000	0.4344232	0.4344232	0.2	3.46	20.00	AVRG
Bromoform	0.2780000	0.2585235	0.2585235	0.1	7.00	20.00	AVRG
Bromomethane	50.573366	50.000000	0.3481567	0.1	-1.15	20.00	LINR
Carbon Disulfide	1.2300000	1.2707370	1.2707370	0.1	-3.31	20.00	AVRG
Carbon Tetrachloride	0.4460000	0.4287951	0.4287951	0.1	3.86	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date: 08/12/20 Time: 1106

Lab File ID: X081202 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9800000	0.9563413	0.9563413	0.5	2.41	20.00	AVRG
Chloroethane	0.3540000	0.3723714	0.3723714	0.1	-5.19	20.00	AVRG
Chloroform	0.8930000	0.8740560	0.8740560	0.2	2.12	20.00	AVRG
Chloromethane	0.7020000	0.6608941	0.6608941	0.1	5.86	20.00	AVRG
cis-1,2-Dichloroethene	0.5500000	0.5538086	0.5538086	0.1	-0.69	20.00	AVRG
Dibromochloromethane	0.4000000	0.3756792	0.3756792	0.1	6.08	20.00	AVRG
Dichlorodifluoromethane	0.4890000	0.4716779	0.4716779	0.1	3.54	20.00	AVRG
Ethylbenzene	0.5060000	0.5056833	0.5056833	0.1	0.06	20.00	AVRG
Hexachlorobutadiene	0.2680000	0.2313470	0.2313470	0.1	13.68	20.00	AVRG
Isopropylbenzene	1.4850000	1.5067428	1.5067428	0.1	-1.46	20.00	AVRG
m,p-Xylenes	0.6100000	0.6101685	0.6101685	0.1	-0.03	20.00	AVRG
Methylene Chloride	49.819220	50.000000	0.5135606	0.1	0.36	20.00	LINR
n-Butylbenzene	2.2110000	2.3633100	2.3633100	0.5	-6.89	20.00	AVRG
n-Propylbenzene	3.6020000	3.7692327	3.7692327	0.1	-4.64	20.00	AVRG
Naphthalene	48.308169	50.000000	0.3861485	0.2	3.38	20.00	2RDR
o-Xylene	0.6000000	0.5928970	0.5928970	0.3	1.18	20.00	AVRG
sec-Butylbenzene	3.0380000	3.1824529	3.1824529	0.1	-4.75	20.00	AVRG
Styrene	1.0410000	1.0285299	1.0285299	0.3	1.20	20.00	AVRG
Vinyl Chloride	0.6440000	0.6644156	0.6644156	0.1	-3.17	20.00	AVRG
1,2,3-Trichloropropane	0.7320000	0.6944901	0.6944901	0.1	5.12	20.00	AVRG
p-Isopropyltoluene	2.7680000	2.8927006	2.8927006	0.1	-4.50	20.00	AVRG
1,2-Dibromo-3-Chloropropane	45.657308	50.000000	6.52e-002	0.05	8.68	20.00	LINR
1,2-Dichloroethane-d4	0.5820000	0.5461756	0.5461756	0.1	6.16	20.00	AVRG
Dibromofluoromethane	0.4910000	0.4677353	0.4677353	0.1	4.74	20.00	AVRG
Toluene-d8	1.2130000	1.1563706	1.1563706	0.1	4.67	20.00	AVRG
4-Bromofluorobenzene	0.4680000	0.4399152	0.4399152	0.1	6.00	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: VOA6 Calibration Date: 08/12/20 Time: 1618

Lab File ID: X081215 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5165382	0.5165382	0.2	1.80	50.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.4589244	0.4589244	0.1	4.79	50.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.4097807	1.4097807	0.6	10.32	50.00	AVRG
2,2-Dichloropropane	0.7130000	0.6404310	0.6404310	0.1	10.18	50.00	AVRG
1,1-Dichloropropene	0.4200000	0.3658267	0.3658267	0.1	12.90	50.00	AVRG
Dibromomethane	0.2170000	0.2131037	0.2131037	0.1	1.80	50.00	AVRG
1,2-Dibromoethane	0.3660000	0.3630650	0.3630650	0.1	0.80	50.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.4492810	0.4492810	0.1	4.20	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3456665	0.3456665	0.1	9.04	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.6878898	0.6878898	0.1	10.66	50.00	AVRG
1,1,2,2-Tetrachloroethane	50.233683	50.000000	0.8092980	0.3	-0.47	50.00	LINR
1,1,2-Trichloroethane	0.2840000	0.2744527	0.2744527	0.1	3.36	50.00	AVRG
1,1-Dichloroethane	0.9760000	0.9770087	0.9770087	0.2	-0.10	50.00	AVRG
1,1-Dichloroethene	0.3960000	0.3778282	0.3778282	0.1	4.59	50.00	AVRG
Trichloroethene	0.3540000	0.3336735	0.3336735	0.2	5.74	50.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1341325	0.1341325	0.01	10.58	50.00	AVRG
Trichlorofluoromethane	0.7360000	0.6474485	0.6474485	0.1	12.03	50.00	AVRG
1,2,4-Trichlorobenzene	45.676854	50.000000	0.2633969	0.1	8.65	50.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	2.3336085	2.3336085	0.1	12.63	50.00	AVRG
Tetrachloroethene	0.3180000	0.2691541	0.2691541	0.2	15.36	50.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.2631492	1.2631492	0.4	10.67	50.00	AVRG
1,2-Dichloroethane	0.4840000	0.4693846	0.4693846	0.1	3.02	50.00	AVRG
1,2-Dichloropropane	0.3670000	0.3713112	0.3713112	0.1	-1.17	50.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.2351789	2.2351789	0.1	14.46	50.00	AVRG
1,3-Dichloropropane	0.5620000	0.5522670	0.5522670	0.1	1.73	50.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.3979422	1.3979422	0.4	10.04	50.00	AVRG
Toluene	1.4600000	1.3544861	1.3544861	0.4	7.23	50.00	AVRG
2-Butanone	0.2450000	0.2826857	0.2826857	0.1	-15.38	50.00	AVRG
2-Chlorotoluene	2.1690000	1.9243042	1.9243042	0.1	11.28	50.00	AVRG
2-Hexanone	0.3140000	0.3270571	0.3270571	0.1	-4.16	50.00	AVRG
4-Chlorotoluene	2.5230000	2.2434671	2.2434671	0.1	11.08	50.00	AVRG
tert-Butylbenzene	2.2650000	1.8332767	1.8332767	0.1	19.06	50.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4762439	0.4762439	0.1	-2.86	50.00	AVRG
Acetone	104.20664	100.00000	0.1815491	0.1	-4.21	50.00	LINR
Benzene	1.2410000	1.2087990	1.2087990	0.5	2.59	50.00	AVRG
Bromobenzene	0.9780000	0.8901955	0.8901955	0.1	8.98	50.00	AVRG
Bromochloromethane	0.3010000	0.2851852	0.2851852	0.1	5.25	50.00	AVRG
Bromodichloromethane	0.4500000	0.4316257	0.4316257	0.2	4.08	50.00	AVRG
Bromoform	0.2780000	0.2687186	0.2687186	0.1	3.34	50.00	AVRG
Bromomethane	50.806096	50.000000	0.3497799	0.1	-1.61	50.00	LINR
Carbon Disulfide	1.2300000	1.1782050	1.1782050	0.1	4.21	50.00	AVRG
Carbon Tetrachloride	0.4460000	0.3697353	0.3697353	0.1	17.10	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date: 08/12/20 Time: 1618

Lab File ID: X081215 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9800000	0.9114444	0.9114444	0.5	7.00	50.00	AVRG
Chloroethane	0.3540000	0.3455750	0.3455750	0.1	2.38	50.00	AVRG
Chloroform	0.8930000	0.8624096	0.8624096	0.2	3.42	50.00	AVRG
Chloromethane	0.7020000	0.6394734	0.6394734	0.1	8.91	50.00	AVRG
cis-1,2-Dichloroethene	0.5500000	0.5350012	0.5350012	0.1	2.73	50.00	AVRG
Dibromochloromethane	0.4000000	0.3786892	0.3786892	0.1	5.33	50.00	AVRG
Dichlorodifluoromethane	0.4890000	0.4044971	0.4044971	0.1	17.28	50.00	AVRG
Ethylbenzene	0.5060000	0.4489138	0.4489138	0.1	11.28	50.00	AVRG
Hexachlorobutadiene	0.2680000	0.1868024	0.1868024	0.1	30.30	50.00	AVRG
Isopropylbenzene	1.4850000	1.2688275	1.2688275	0.1	14.56	50.00	AVRG
m,p-Xylenes	0.6100000	0.5481371	0.5481371	0.1	10.14	50.00	AVRG
Methylene Chloride	48.895765	50.000000	0.5042974	0.1	2.21	50.00	LINR
n-Butylbenzene	2.2110000	1.7782157	1.7782157	0.5	19.57	50.00	AVRG
n-Propylbenzene	3.6020000	3.0387609	3.0387609	0.1	15.64	50.00	AVRG
Naphthalene	52.186755	50.000000	0.4182214	0.2	-4.37	50.00	2RDR
o-Xylene	0.6000000	0.5519373	0.5519373	0.3	8.01	50.00	AVRG
sec-Butylbenzene	3.0380000	2.4107239	2.4107239	0.1	20.65	50.00	AVRG
Styrene	1.0410000	0.9887833	0.9887833	0.3	5.02	50.00	AVRG
Vinyl Chloride	0.6440000	0.6081498	0.6081498	0.1	5.57	50.00	AVRG
1,2,3-Trichloropropane	0.7320000	0.7135803	0.7135803	0.1	2.52	50.00	AVRG
p-Isopropyltoluene	2.7680000	2.2663597	2.2663597	0.1	18.12	50.00	AVRG
1,2-Dibromo-3-Chloropropane	50.279756	50.000000	7.19e-002	0.05	-0.56	50.00	LINR
1,2-Dichloroethane-d4	0.5820000	0.5661763	0.5661763	0.1	2.72	50.00	AVRG
Dibromofluoromethane	0.4910000	0.4803313	0.4803313	0.1	2.17	50.00	AVRG
Toluene-d8	1.2130000	1.1832931	1.1832931	0.1	2.45	50.00	AVRG
4-Bromofluorobenzene	0.4680000	0.4487267	0.4487267	0.1	4.12	50.00	AVRG

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID (Standard): X081202 Date Analyzed: 08/12/20

Instrument ID: VOA6 Time Analyzed: 1106

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	674871	7.67	735069	4.97	313944	9.67
	UPPER LIMIT	1349742	8.17	1470138	5.47	627888	10.17
	LOWER LIMIT	337436	7.17	367535	4.47	156972	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200812	680073	7.67	749741	4.97	323752	9.67
02	VBLKW-200812	645172	7.67	741858	4.97	299540	9.67
03	HS20080473-03	637156	7.67	744327	4.97	283197	9.67
04	HS20080473-01	650118	7.67	749922	4.97	304367	9.67
05	HS20080473-01	615235	7.67	690040	4.97	286793	9.67
06	HS20080473-01	602586	7.67	673875	4.97	278884	9.67
07							
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID (Standard): X081202 Date Analyzed: 08/12/20

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	479626	4.19				
	UPPER LIMIT	959252	4.69				
	LOWER LIMIT	239813	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200812	495012	4.19				
02	VBLKW-200812	502499	4.19				
03	HS20080473-03	502354	4.19				
04	HS20080473-01	508529	4.19				
05	HS20080473-01	470098	4.19				
06	HS20080473-01	458122	4.19				
07							
08							
09							
10							
11							
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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

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081201.D

Date : 12-AUG-2020 10:42

Client ID: BFB

Instrument: voa6.i

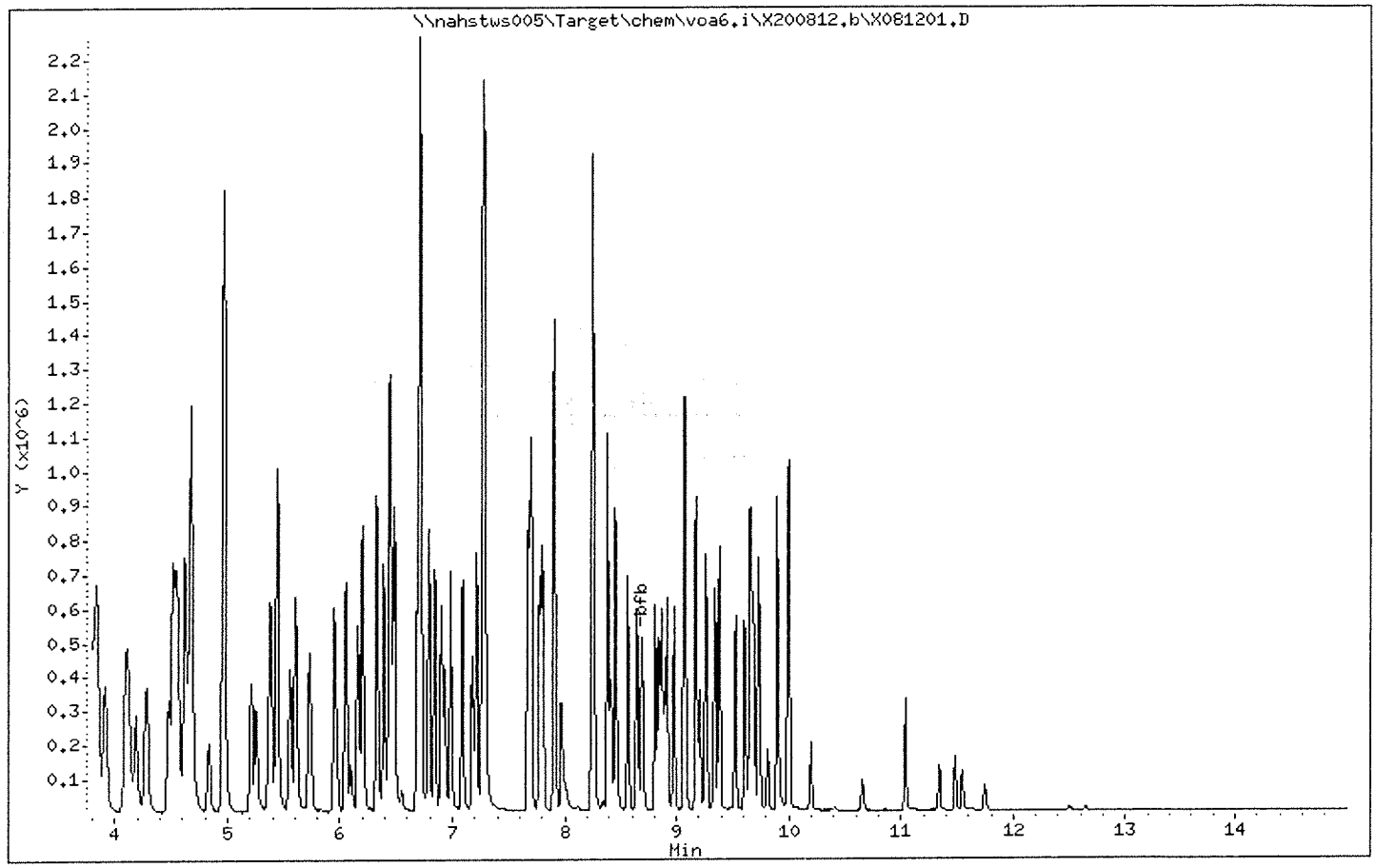
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081201.D

Date : 12-AUG-2020 10:42

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

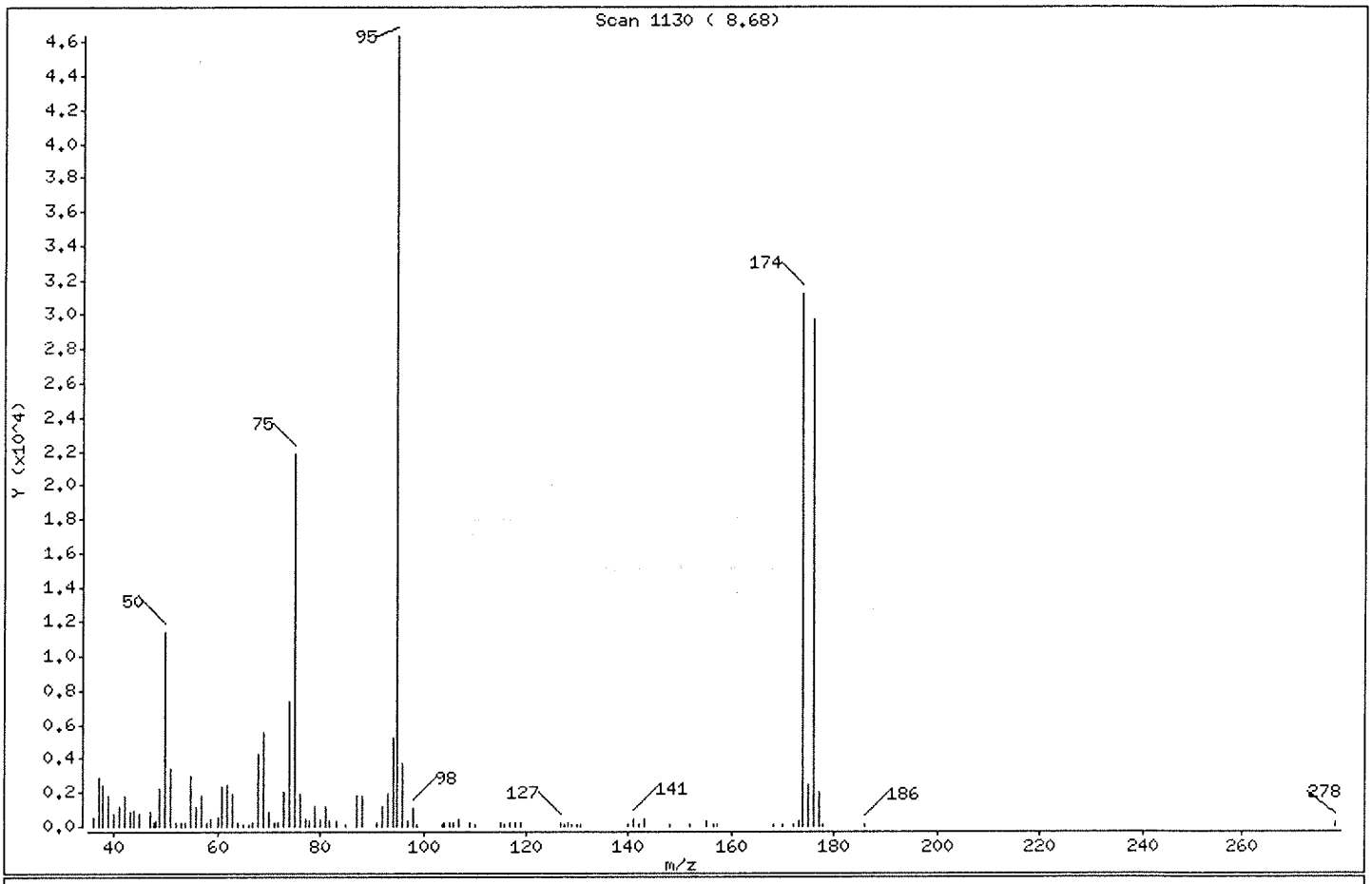
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.70
75	30.00 - 60.00% of mass 95	47.18
96	5.00 - 9.00% of mass 95	7.93
173	Less than 2.00% of mass 174	0.72 (1.07)
174	Greater than 50.00% of mass 95	67.41
175	5.00 - 9.00% of mass 174	5.17 (7.68)
176	95.00 - 101.00% of mass 174	64.13 (95.13)
177	5.00 - 9.00% of mass 176	4.39 (6.85)

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081201.D

Date : 12-AUG-2020 10:42

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: X081201.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 98

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	528	60.90	2315	88.00	1783	129.00	125
37.00	2908	62.00	2410	90.80	206	129.90	72
38.00	2446	63.00	1880	91.90	1192	130.70	100
39.00	1864	63.90	219	93.00	1925	140.00	69
40.00	782	65.20	113	94.00	5194	140.90	463
40.90	1211	66.00	95	95.00	46344	141.90	121
42.10	1762	66.90	204	96.00	3676	143.00	381
43.00	864	67.90	4211	97.00	287	147.90	142
44.00	921	69.00	5512	98.00	1020	151.80	67
45.00	730	70.00	861	98.90	59	155.00	274
47.00	855	71.00	165	103.70	150	156.60	76
47.80	258	71.90	174	104.10	171	157.00	104
48.10	272	73.00	2003	105.00	261	168.10	74
48.90	2217	74.00	7371	105.80	249	170.00	74
50.00	11445	75.00	21864	106.90	458	171.90	63
51.00	3374	76.00	1896	109.00	243	173.00	335
51.90	231	77.00	402	109.90	85	173.90	31240
52.90	219	77.90	274	114.90	217	174.90	2398
53.90	200	78.80	1182	115.90	127	175.90	29720
55.00	3023	79.90	463	116.70	226	176.90	2035
56.00	1133	80.90	1128	117.80	166	177.80	68
56.90	1853	81.80	339	119.00	187	185.90	127
58.00	222	83.00	294	126.80	264	278.00	233
58.90	442	84.90	99	127.50	127		
60.00	487	86.90	1760	128.00	204		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081202.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 12-AUG-2020 11:06
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:28 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

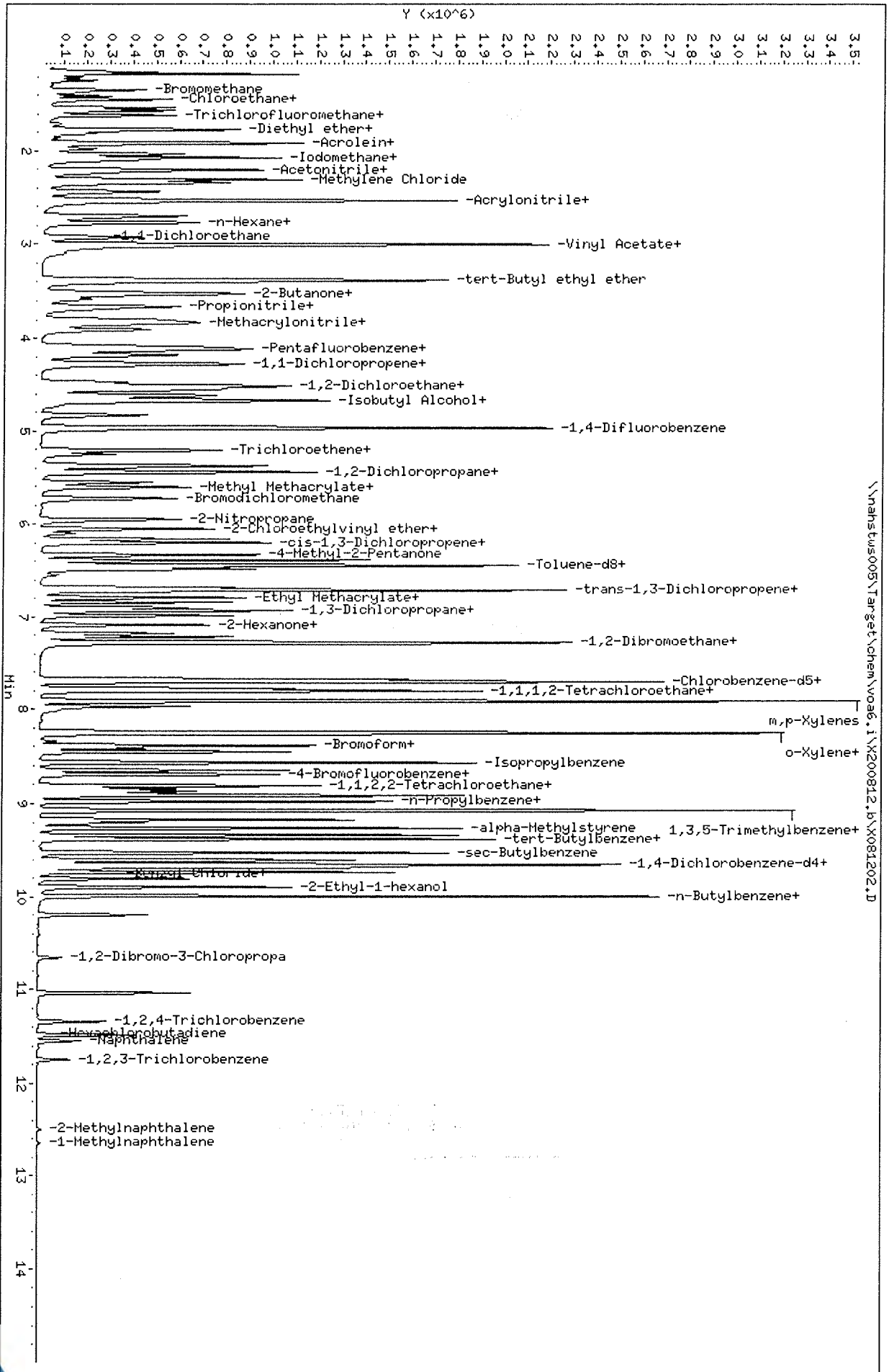
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	479626	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	735069	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	674871	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	313944	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	224338	50.0000	47.62
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	261960	50.0000	46.92
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	780401	50.0000	47.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	296886	50.0000	47.01
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	243225	50.0000	47.34
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	363610	50.0000	49.21
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	246591	50.0000	48.76
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	185068	50.0000	48.19
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	484392	50.0000	51.70
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	199961	50.0000	52.61
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	307699	50.0000	49.81
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	39576	50.0000	41.89
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	218031	50.0000	47.44(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	80216	50.0000	44.32
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	862578	50.0000	51.43
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	20468	50.0000	45.65
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	240714	50.0000	48.65
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	422241	50.0000	47.55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	345027	50.0000	48.47
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	281227	50.0000	52.12
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	846564	50.0000	51.60
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	488426	50.0000	49.49
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	370496	50.0000	48.86
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	485242	50.0000	49.72
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	353670	50.0000	51.69
24	2-Butanone	43	3.580	3.580	(0.855)	257564	100.000	109.54
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	694626	50.0000	50.99
52	2-Hexanone	43	7.090	7.090	(0.924)	407714	100.000	96.23
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	803655	50.0000	50.71
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	908146	50.0000	52.23
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	585092	100.000	93.67
10	Acetone	43	1.976	1.976	(0.472)	193793	100.000	116.08
37	Benzene	78	4.519	4.519	(0.909)	925332	50.0000	50.73
74	Bromobenzene	156	8.809	8.809	(0.911)	301205	50.0000	49.04
29	Bromochloromethane	128	3.802	3.802	(0.908)	138130	50.0000	47.77
39	Bromodichloromethane	83	5.729	5.729	(1.153)	319331	50.0000	48.25
66	Bromoform	173	8.415	8.415	(1.097)	174470	50.0000	46.59
6	Bromomethane	94	1.338	1.338	(0.320)	166985	50.0000	50.57
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1218957	100.000	103.30
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	315194	50.0000	48.00
59	Chlorobenzene	112	7.699	7.699	(1.004)	645407	50.0000	48.79
7	Chloroethane	64	1.403	1.403	(0.335)	178599	50.0000	52.53
28	Chloroform	83	3.910	3.910	(0.933)	419220	50.0000	48.92
3	Chloromethane	50	1.080	1.080	(0.258)	316982	50.0000	47.07
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	265621	50.0000	50.31
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	383925	50.0000	49.61
55	Dibromochloromethane	129	7.176	7.176	(0.936)	253535	50.0000	46.90
44	Dibromomethane	93	5.557	5.557	(1.118)	154465	50.0000	48.28
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	226229	50.0000	48.19
61	Ethylbenzene	106	7.799	7.799	(1.017)	341271	50.0000	49.96
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	72630	50.0000	43.09
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1016857	50.0000	50.72
62	m,p-Xylenes	106	7.907	7.907	(1.031)	823570	100.000	99.92
17	Methylene Chloride	84	2.305	2.305	(0.550)	246317	50.0000	49.81
87	n-Butylbenzene	91	9.998	9.998	(1.034)	741947	50.0000	53.43
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1183328	50.0000	52.32
92	Naphthalene	128	11.546	11.546	(1.194)	121229	50.0000	48.30
63	o-Xylene	106	8.244	8.244	(1.075)	400129	50.0000	49.42
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	999112	50.0000	52.38
64	Styrene	104	8.258	8.258	(1.077)	694125	50.0000	49.37
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	729430	50.0000	51.28
56	Tetrachloroethene	164	6.933	6.933	(0.904)	213239	50.0000	49.70
50	Toluene	91	6.453	6.453	(0.841)	979771	50.0000	49.71
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	226005	50.0000	50.26
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	341483	50.0000	48.15
38	Trichloroethene	130	5.214	5.214	(1.049)	265766	50.0000	51.01
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	357397	50.0000	50.59
5	Vinyl Chloride	62	1.145	1.145	(0.273)	318671	50.0000	51.61

QC Flag Legend

M - Compound response manually integrated.

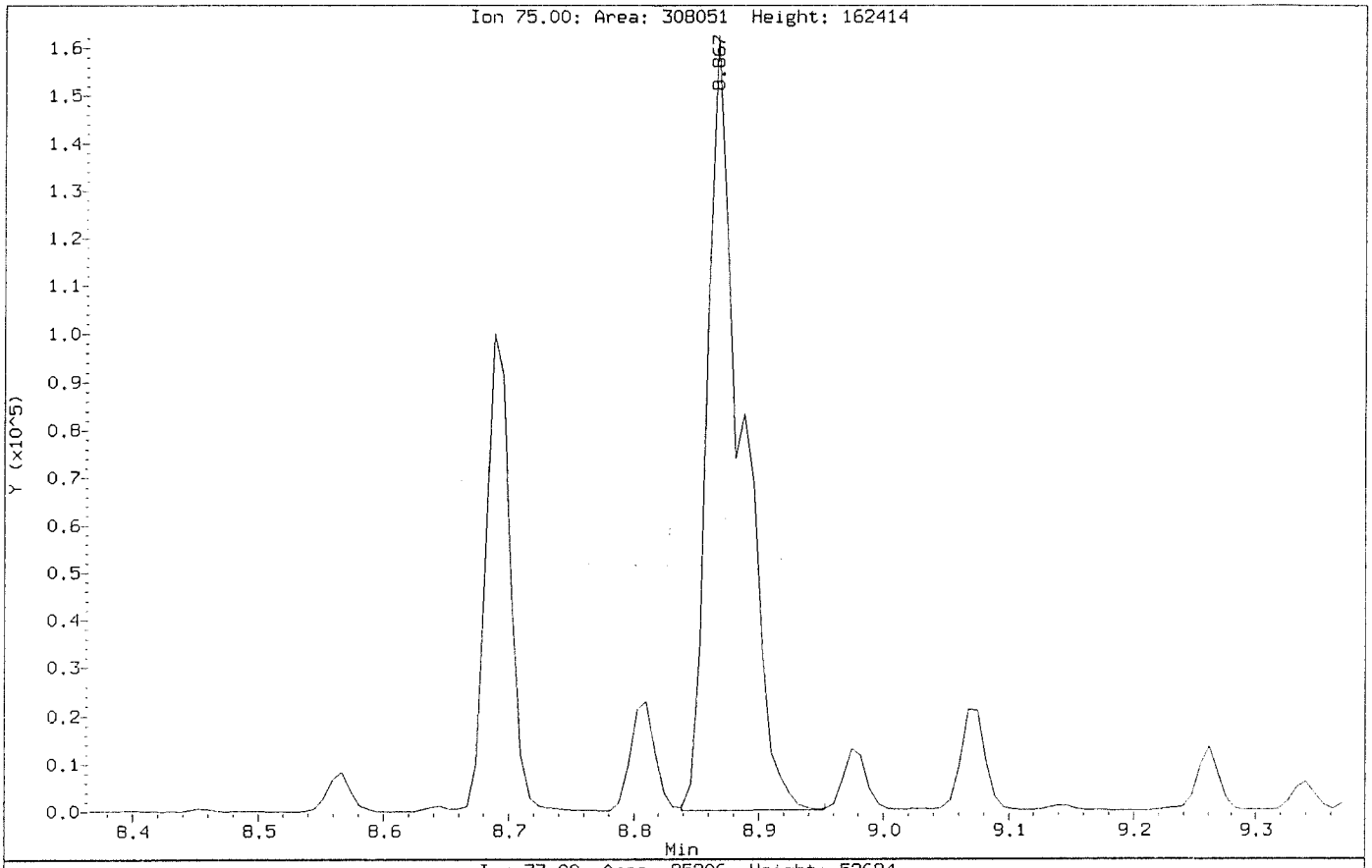


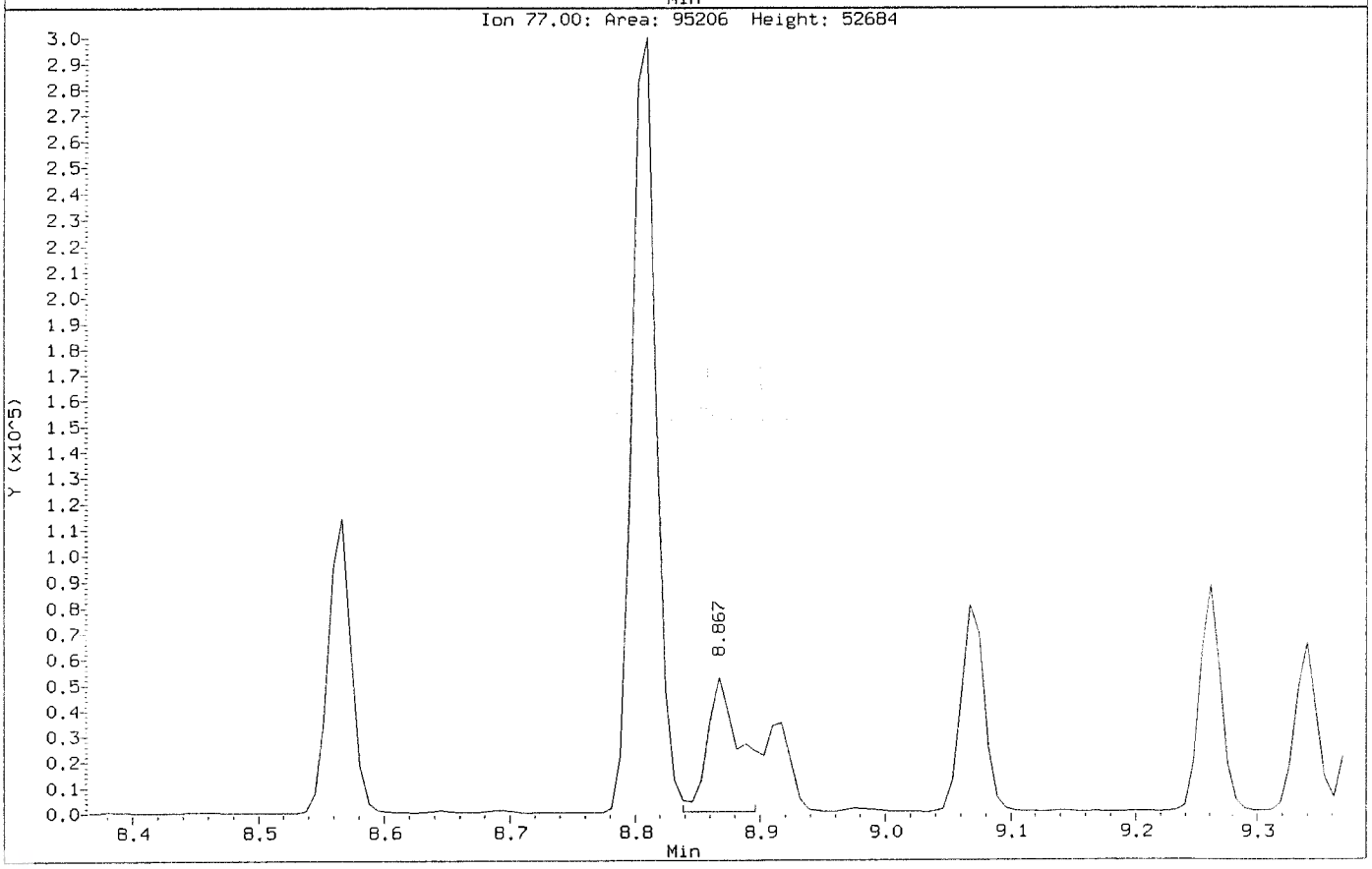
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Date : 12-AUG-2020 11:06
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\Before\X081202.D
Injection Date: 12-AUG-2020 11:06
Instrument: voa6.i
Client Sample ID: CCV

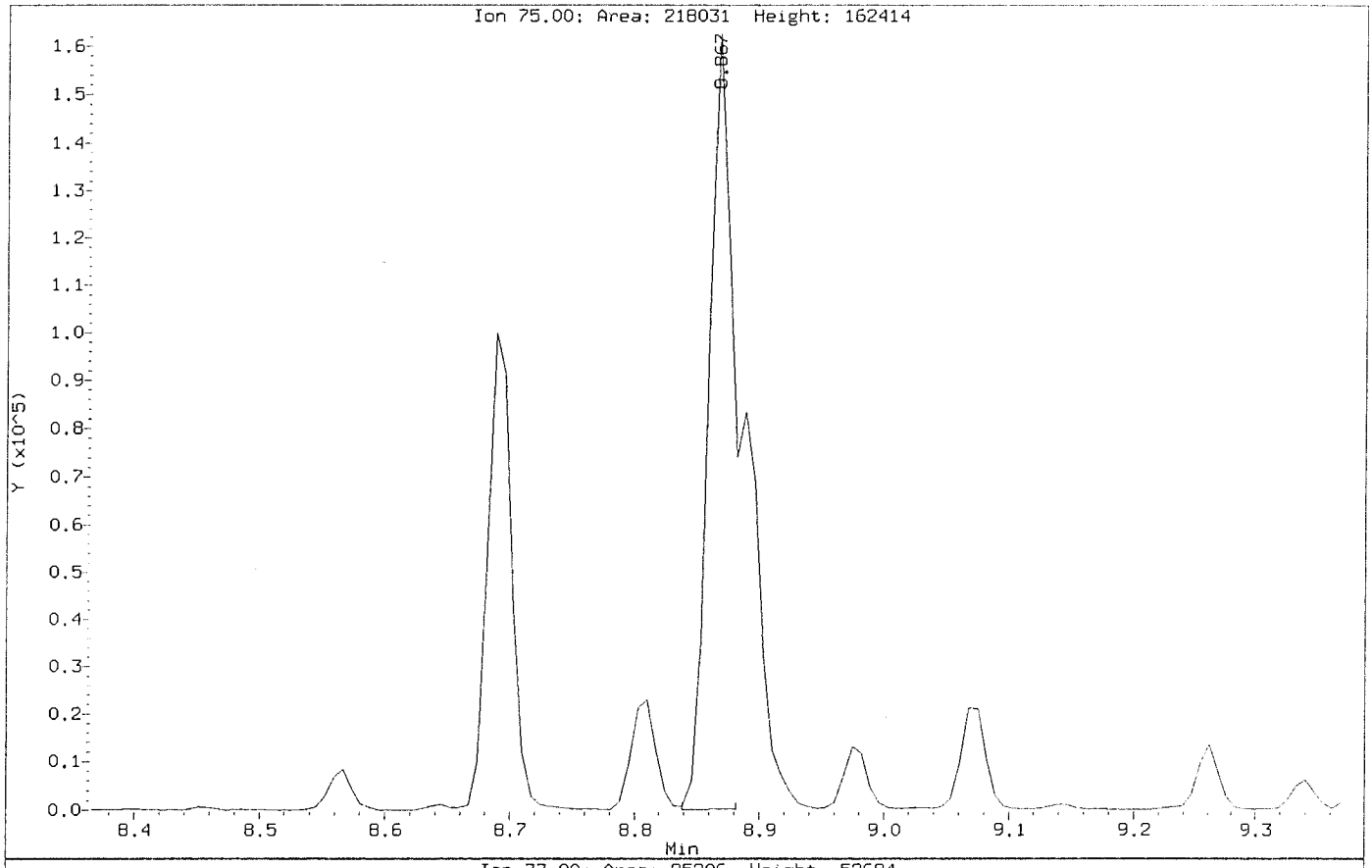
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CAS Number: 96-18-4

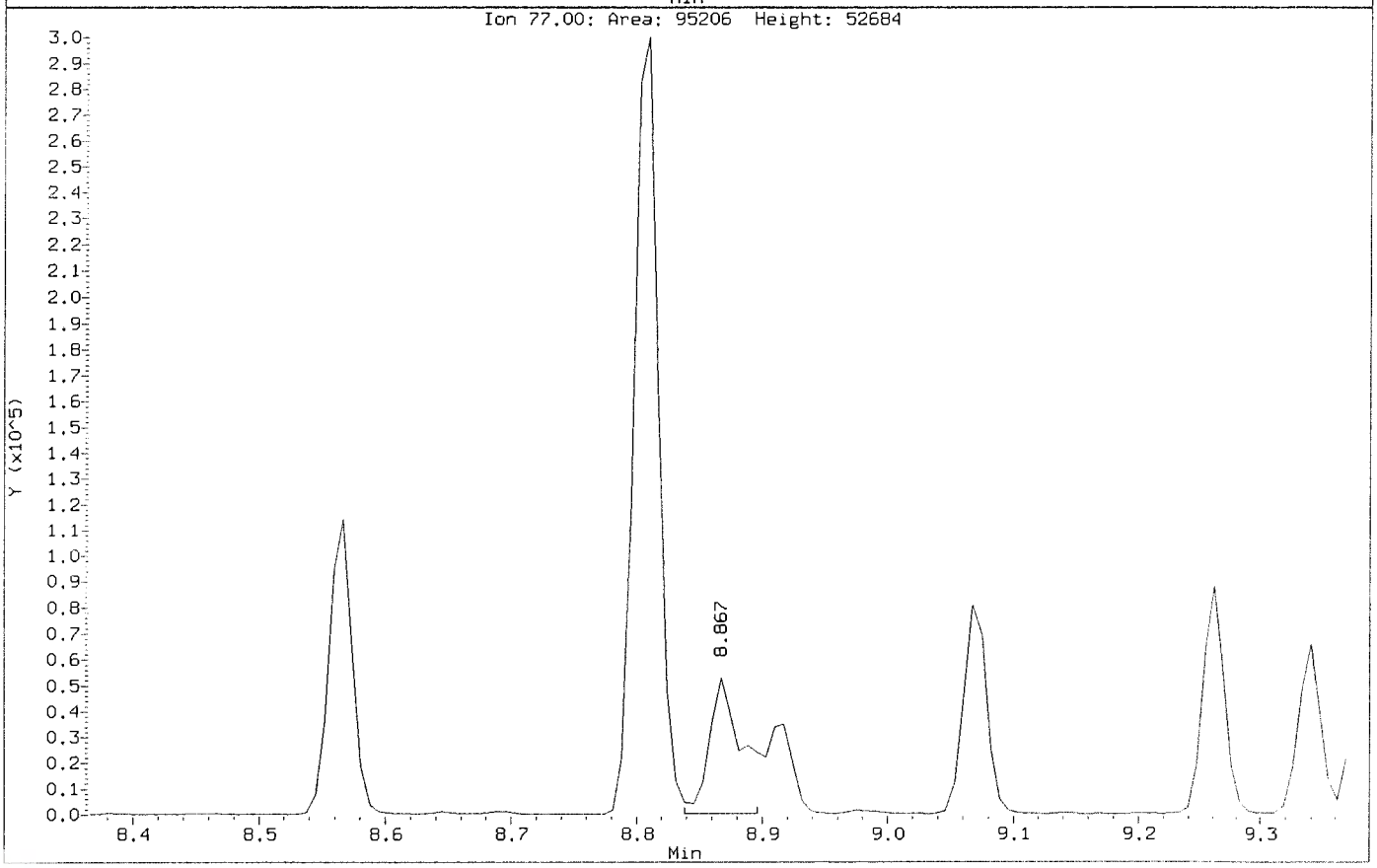




Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081202.D
Injection Date: 12-AUG-2020 11:06
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081205.D
Lab Smp Id: VLCSW-200812 Client Smp ID: VLCSW-200812
Inj Date : 12-AUG-2020 12:18
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200812;VLCSW-200812;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:28 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

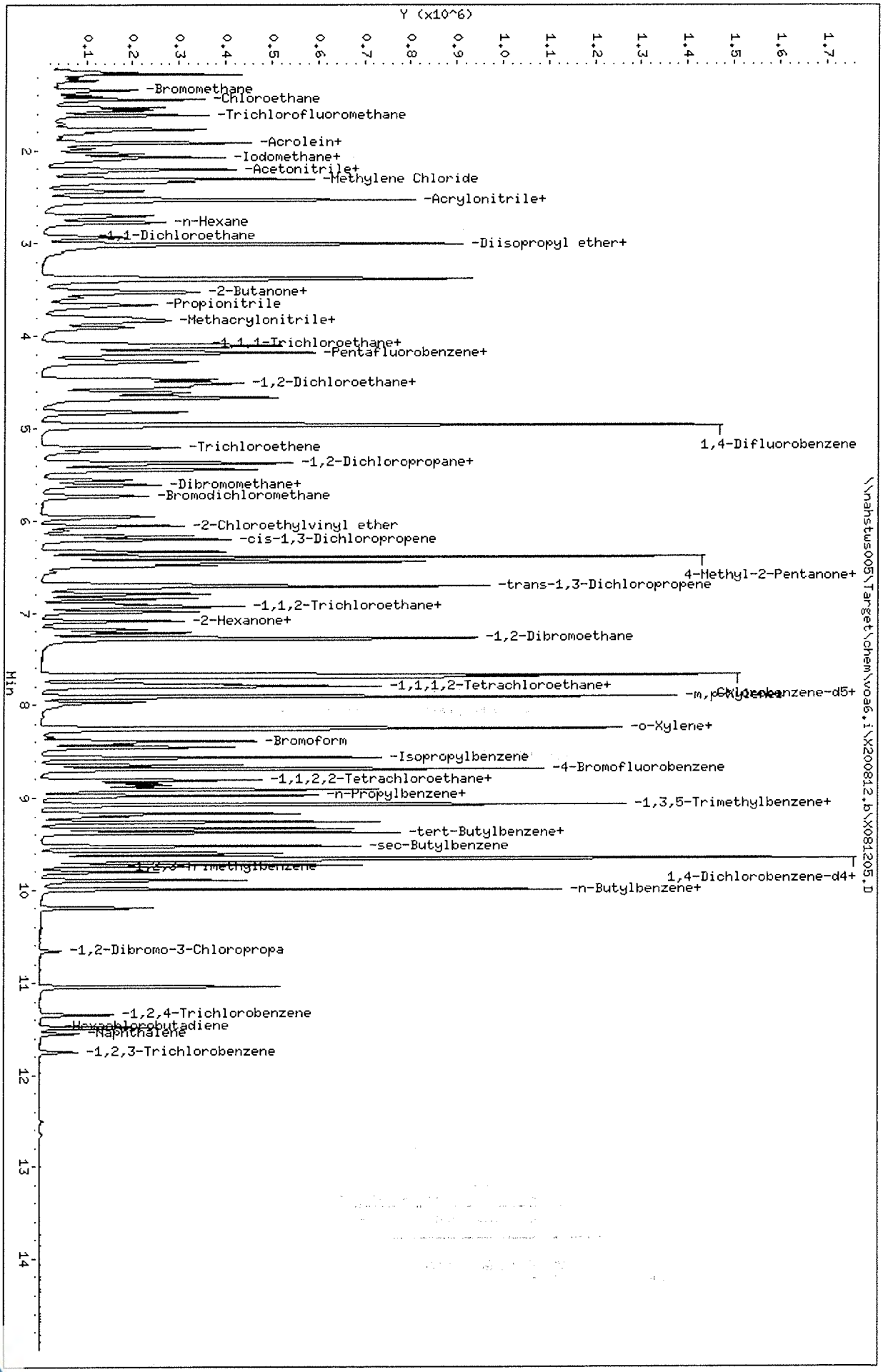
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	495012	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	749741	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	680073	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	323752	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	229664	47.2447	47.24
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	280026	48.5984	48.59
$	48 Toluene-d8	98	6.388	6.388	(0.833)	801204	48.5709	48.57
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	302149	47.4817	47.48
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	96737	18.6867	18.68
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	140696	18.4523	18.45
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	104892	20.3417	20.34
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	77851	20.1182	20.11
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	195899	20.2599	20.25
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	77182	19.6786	19.67
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	119086	18.9017	18.90
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	22309	22.8986	22.89
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	88433	18.6612	18.66(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	46027	24.6561	24.65
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	341383	19.7381	19.73
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	8908	19.7276	19.72
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	99844	20.0278	20.02
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	176440	19.2676	19.26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	143508	19.7695	19.76
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	112300	20.4090	20.40
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	330773	19.5521	19.55
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	196267	19.2871	19.28
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	153267	20.0593	20.05
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	194383	19.3157	19.31
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	139200	19.7159	19.71
24	2-Butanone	43	3.588	3.580	(0.856)	105291	43.3893	43.38
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	276894	19.7132	19.71
52	2-Hexanone	43	7.090	7.090	(0.924)	170578	39.9534	39.95
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	317613	19.4368	19.43
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	357059	19.9163	19.91
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	248209	39.4348	39.43
10	Acetone	43	1.976	1.976	(0.472)	83951	48.1015	48.10
37	Benzene	78	4.519	4.519	(0.909)	369988	19.8904	19.89
74	Bromobenzene	156	8.809	8.809	(0.911)	119365	18.8476	18.84
29	Bromochloromethane	128	3.802	3.802	(0.908)	56524	18.9438	18.94
39	Bromodichloromethane	83	5.729	5.729	(1.153)	127783	18.9328	18.93
66	Bromoform	173	8.415	8.415	(1.097)	69920	18.5306	18.53
6	Bromomethane	94	1.338	1.338	(0.320)	75280	22.4595	22.45
19	Carbon Disulfide	76	2.069	2.069	(0.494)	475291	39.0295	39.02
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	119843	17.8959	17.89
59	Chlorobenzene	112	7.699	7.699	(1.004)	260123	19.5162	19.51
7	Chloroethane	64	1.403	1.403	(0.335)	73399	20.9195	20.91
28	Chloroform	83	3.910	3.910	(0.933)	171199	19.3580	19.35
3	Chloromethane	50	1.080	1.080	(0.258)	127814	18.3898	18.38
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	107964	19.8143	19.81
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	155224	19.6687	19.66
55	Dibromochloromethane	129	7.176	7.176	(0.936)	102997	18.9072	18.90
44	Dibromomethane	93	5.557	5.557	(1.118)	64260	19.6946	19.69
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	86197	17.7916	17.79
61	Ethylbenzene	106	7.799	7.799	(1.017)	133083	19.3373	19.33
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	43691	25.1367	25.13
67	Isopropylbenzene	105	8.566	8.566	(1.117)	398929	19.7470	19.74
62	m,p-Xylenes	106	7.907	7.907	(1.031)	323806	38.9878	38.98
17	Methylene Chloride	84	2.305	2.305	(0.550)	101927	19.1490	19.14
87	n-Butylbenzene	91	9.998	9.998	(1.034)	292491	20.4285	20.42
73	n-Propylbenzene	91	8.917	8.917	(0.922)	453858	19.4597	19.45
92	Naphthalene	128	11.546	11.546	(1.194)	57634	22.6010	22.60
63	o-Xylene	106	8.243	8.244	(1.075)	158743	19.4578	19.45
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	388250	19.7399	19.73
64	Styrene	104	8.265	8.258	(1.078)	276606	19.5258	19.52
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	282828	19.2824	19.28
56	Tetrachloroethene	164	6.933	6.933	(0.904)	82339	19.0459	19.04
50	Toluene	91	6.453	6.453	(0.841)	388172	19.5450	19.54
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	92507	19.9346	19.93
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	139131	19.2348	19.23
38	Trichloroethene	130	5.214	5.214	(1.049)	103279	19.4373	19.43
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	138499	18.9981	18.99
5	Vinyl Chloride	62	1.145	1.145	(0.273)	122229	19.1826	19.18

QC Flag Legend

M - Compound response manually integrated.

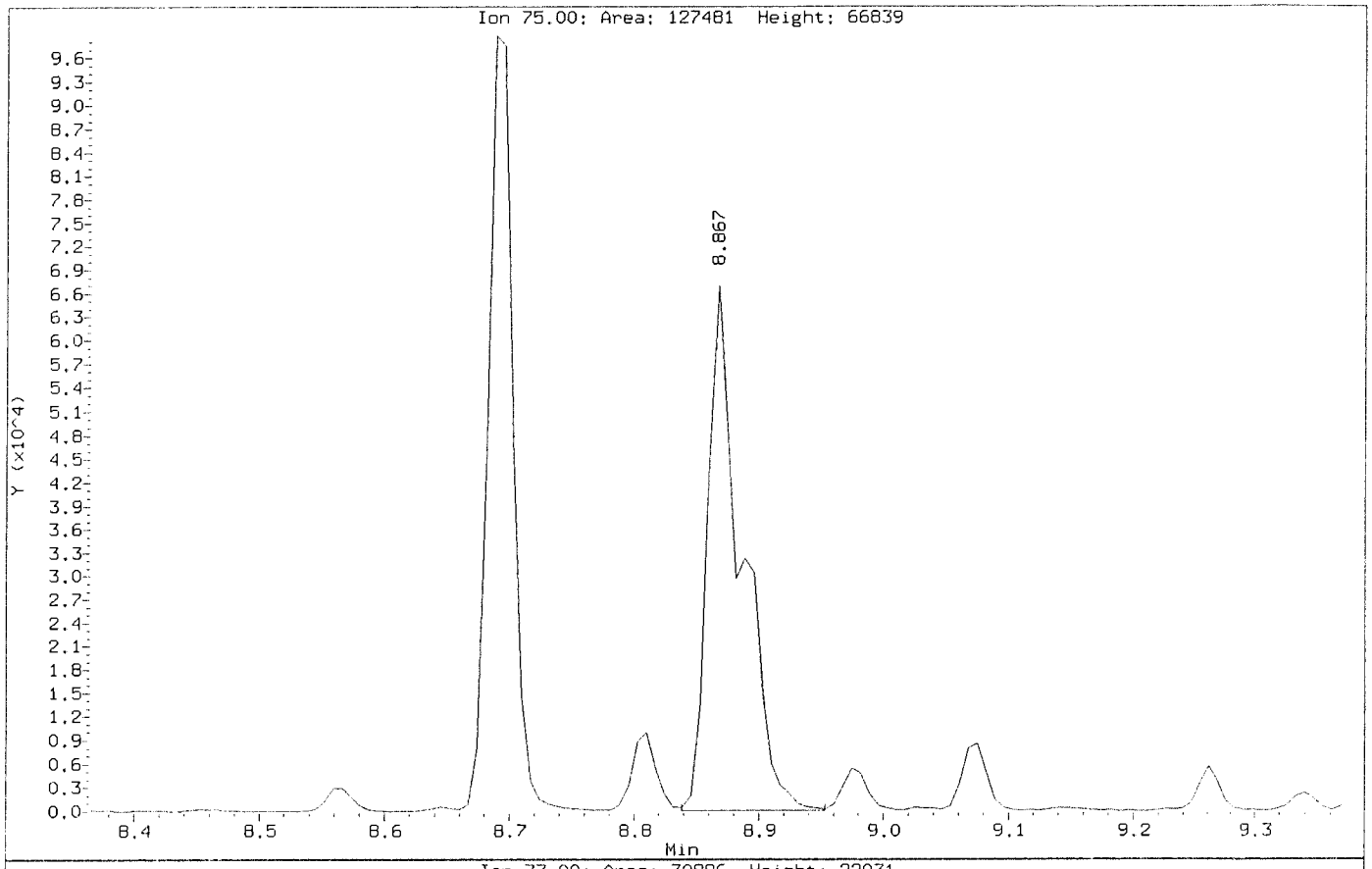


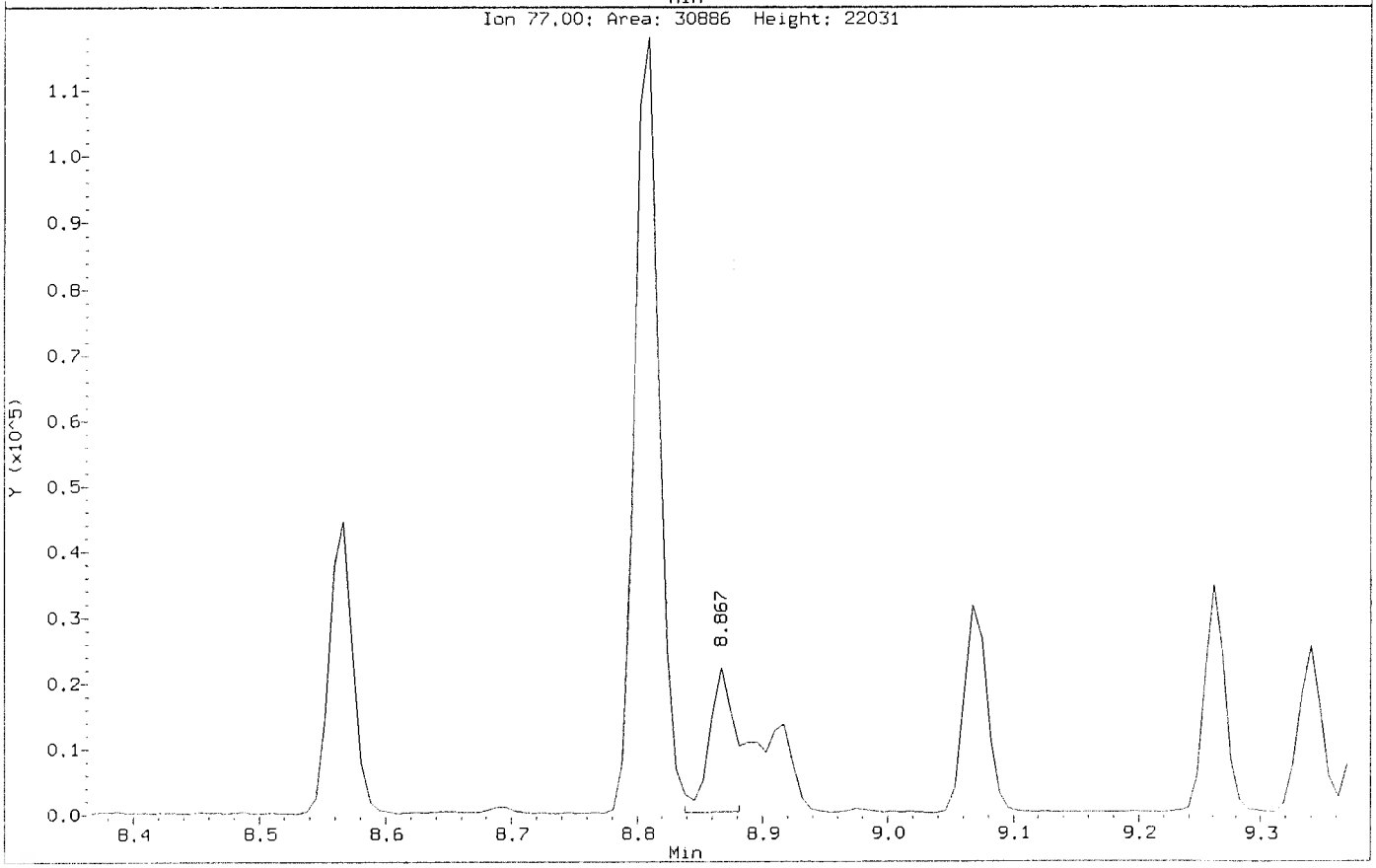
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Date : 12-AUG-2020 12:18
Client ID: VLCSW-200812
Sample Info: VLCSW-200812;VLCSW-200812;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\Before\X081205.D
Injection Date: 12-AUG-2020 12:18
Instrument: voa6.i
Client Sample ID: VLCSW-200812

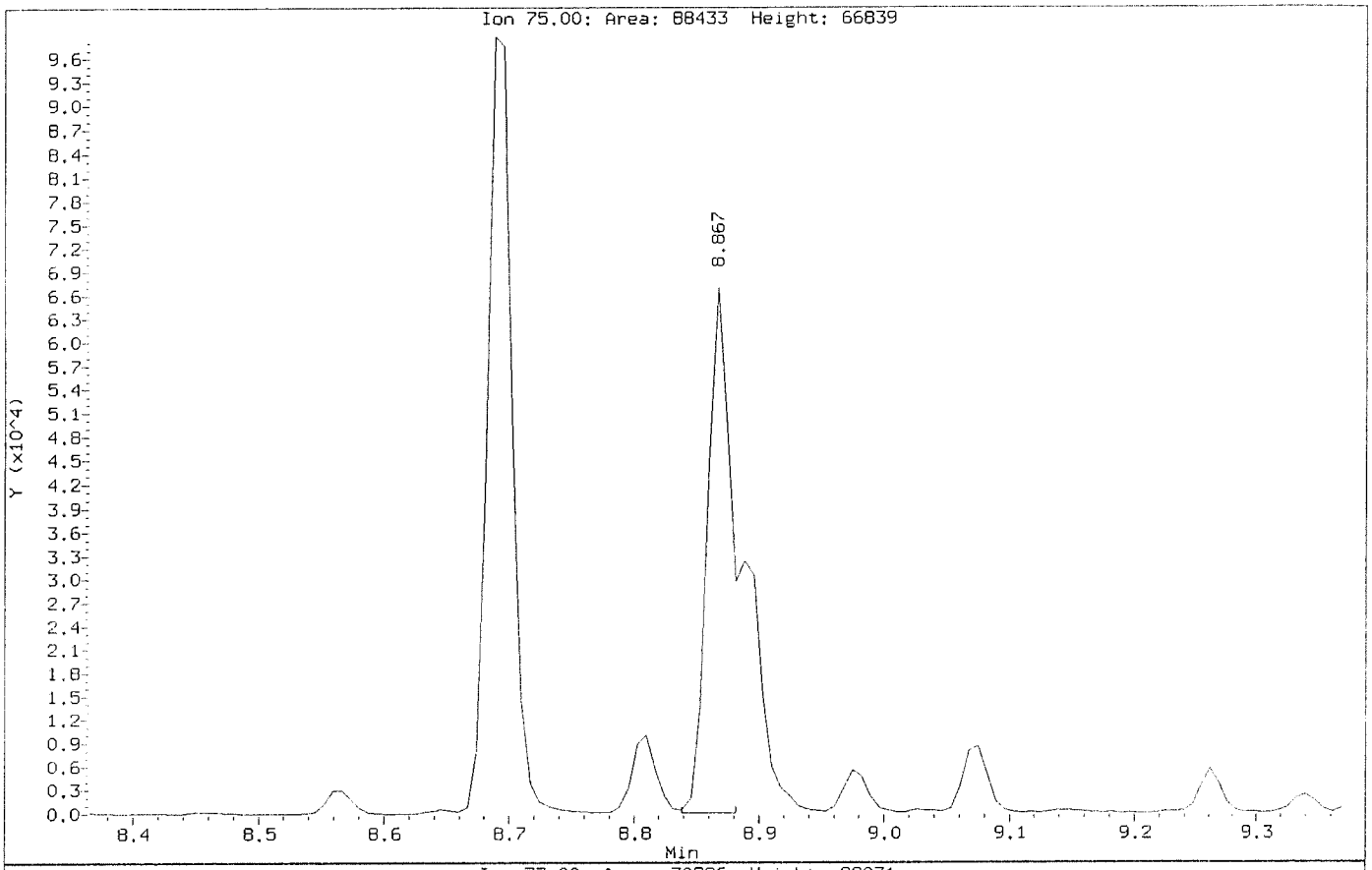
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

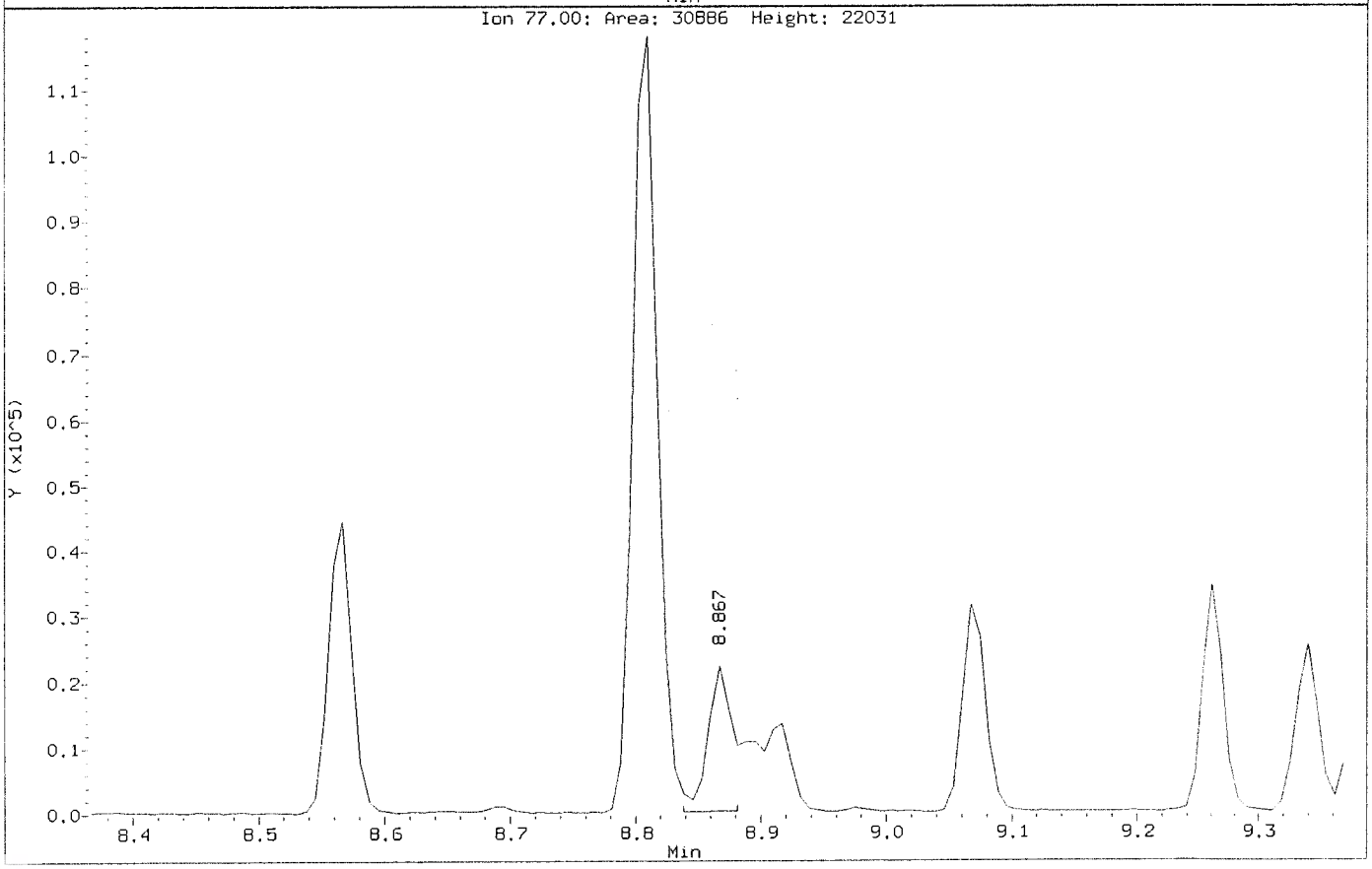




Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081205.D
Injection Date: 12-AUG-2020 12:18
Instrument: voa6.i
Client Sample ID: VLCSW-200812

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081207.D Page 1
Report Date: 11-Sep-2020 15:28

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081207.D
Lab Smp Id: VBLKW-200812 Client Smp ID: VBLKW-200812
Inj Date : 12-AUG-2020 13:06
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200812;VBLKW-200812;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:28 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

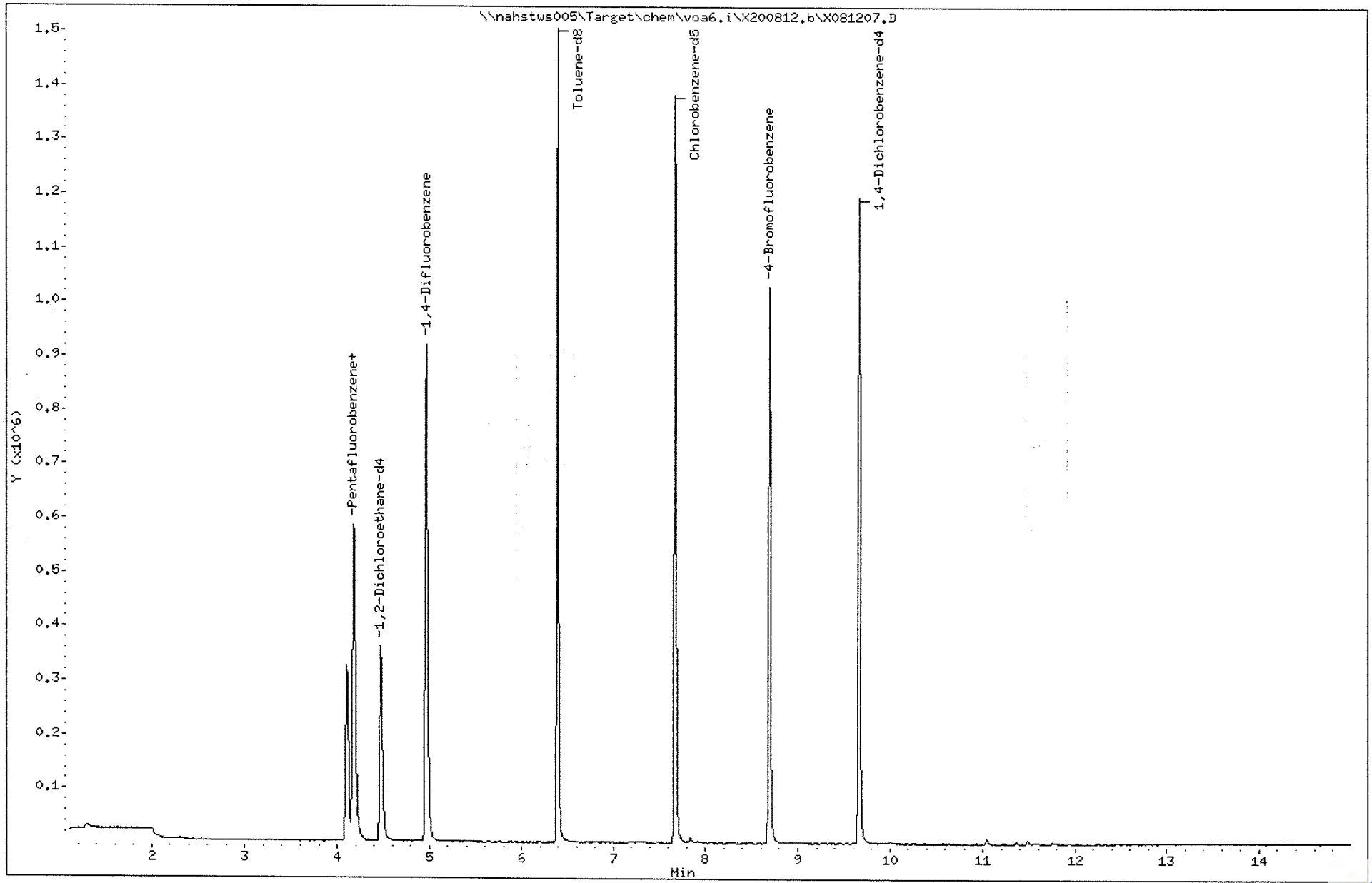
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	502499	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	741858	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	645172	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	299540	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	229924	46.5934	46.59
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	263615	45.0686	45.06
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	831887	53.1591	53.15
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	287165	47.5682	47.56

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081207.D
Date : 12-AUG-2020 13:06
Client ID: VBLKW-200812
Sample Info: VBLKW-200812;VBLKW-200812;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



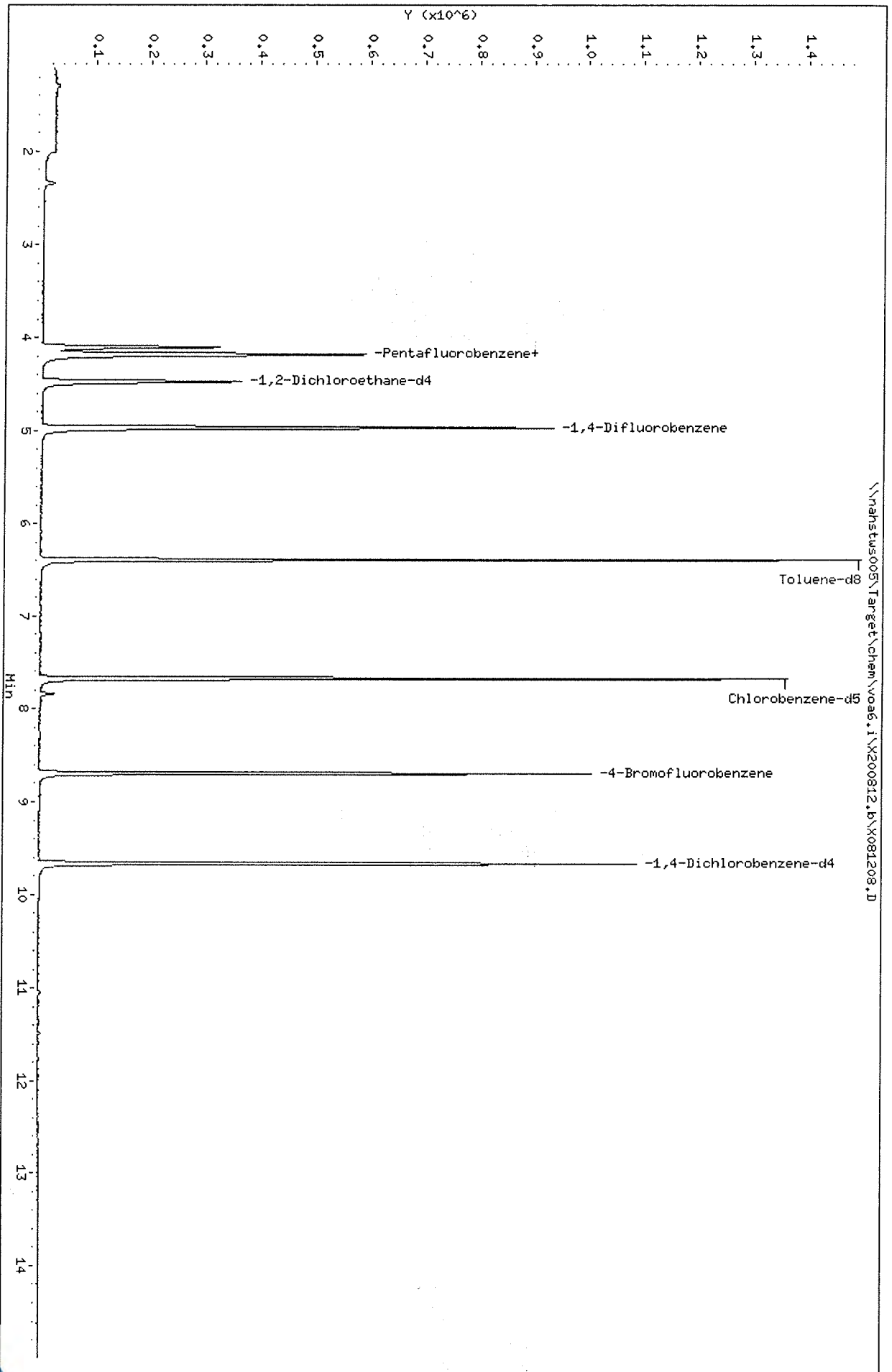
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081208.D
Lab Smp Id: HS20080473-03 Client Smp ID: HS20080473-03
Inj Date : 12-AUG-2020 13:30
Operator : PC Inst ID: voa6.i
Smp Info : HS20080473-03;HS20080473-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:26 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	502354	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	744327	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	637156	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	283197	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	229111	46.4421	46.44
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	265458	45.3968	45.39
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	836569	54.1308	54.13
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	281761	47.2602	47.26


Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081208.D
Date : 12-AUG-2020 13:30
Client ID: HS20080473-03
Sample Info: HS20080473-03;HS20080473-03;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Y (x10^6)
Min
-Pentafluorobenzene+
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4
\\nahstws005\Target\chem\voa6.i\X200812.b\X081208.D

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081209.D
Lab Smp Id: HS20080473-01 Client Smp ID: HS20080473-01
Inj Date : 12-AUG-2020 13:54
Operator : PC Inst ID: voa6.i
Smp Info : HS20080473-01;HS20080473-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:26 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

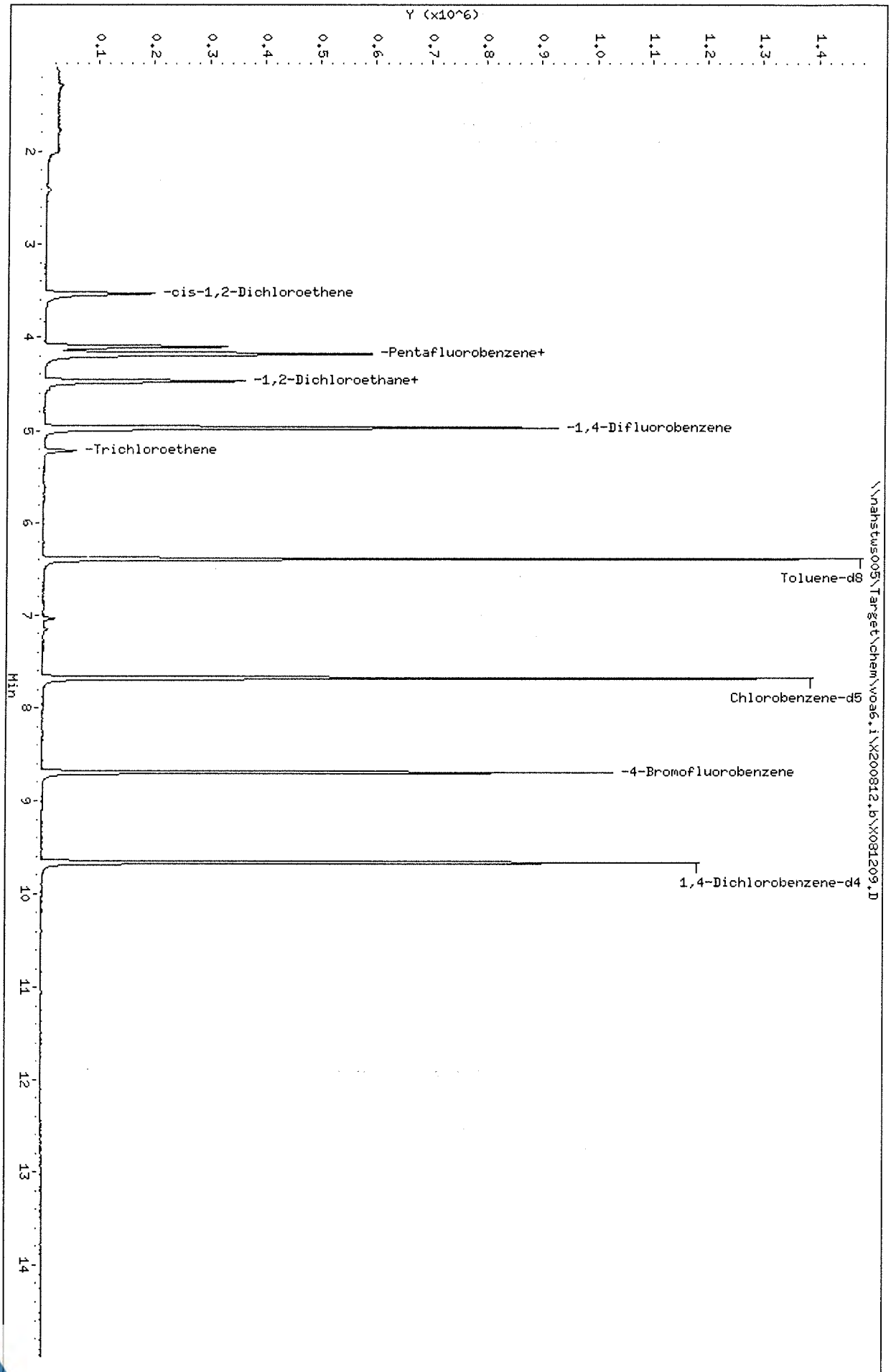
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	508529	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	749922	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	650118	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	304367	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	232403	46.5374	46.53
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	269560	45.5385	45.53
$	48 Toluene-d8	98	6.388	6.388	(0.833)	839840	53.2590	53.25
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	293853	48.3057	48.30
	33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	5063	0.69730	0.69(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	96374	17.2171	17.21
	38 Trichloroethene	130	5.214	5.214	(1.049)	19624	3.69238	3.69(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081209.D
Date : 12-AUG-2020 13:54
Client ID: HS20080473-01
Sample Info: HS20080473-01;HS20080473-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081209.D

Date : 12-AUG-2020 13:54

Client ID: HS20080473-01

Instrument: voa6.i

Sample Info: HS20080473-01;HS20080473-01;;;

Purge Volume: 5.0

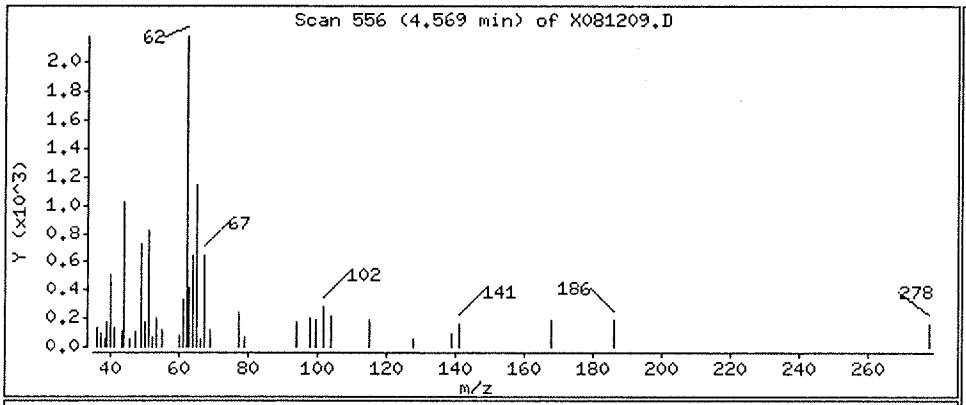
Operator: PC

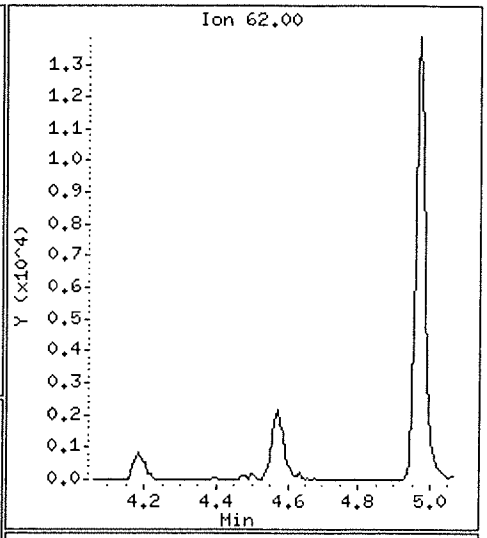
Column phase: DB624

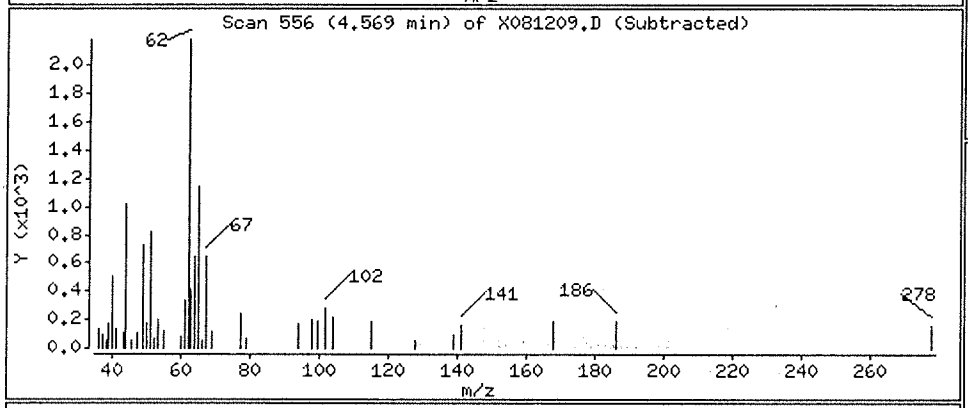
Column diameter: 0.18

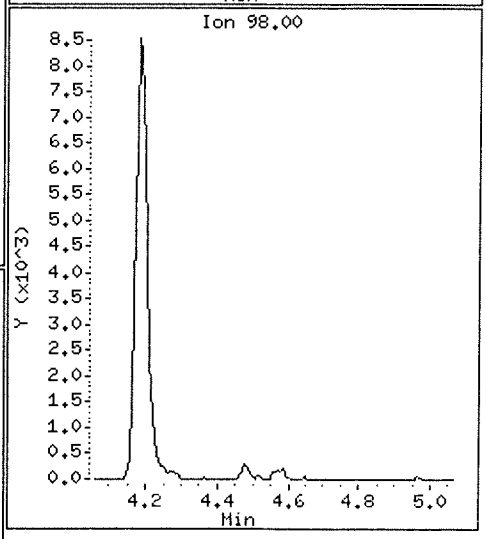
33 1,2-Dichloroethane

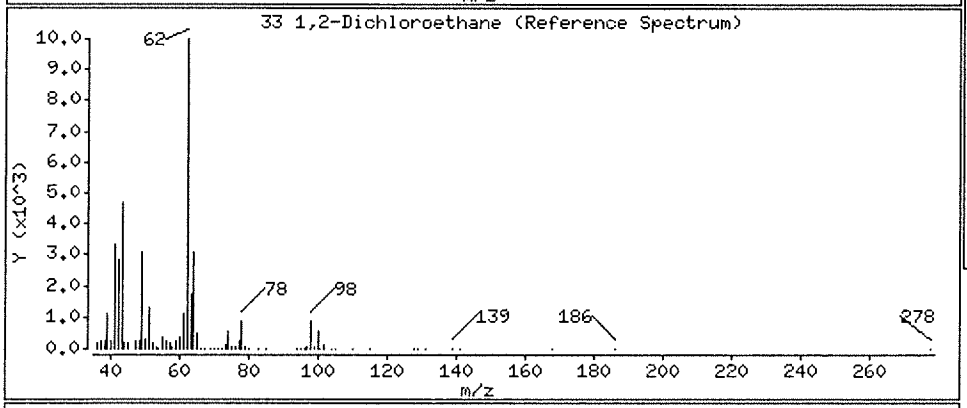
Concentration: 0.69 ug/l

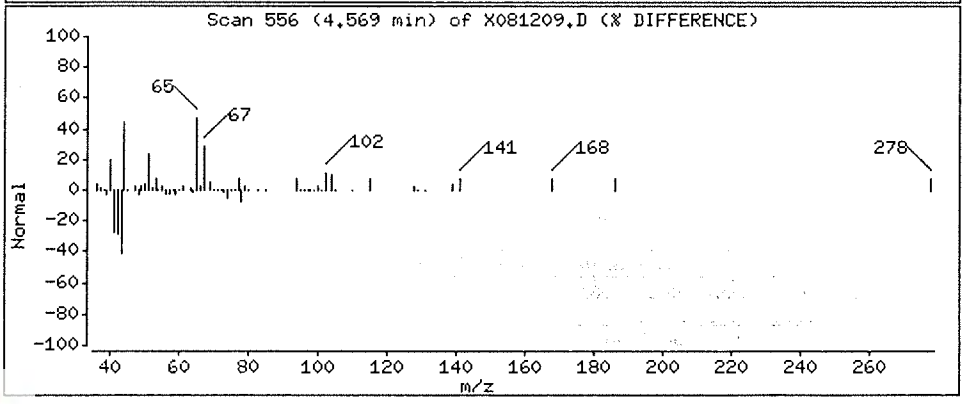












Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081209.D Page 4

Date : 12-AUG-2020 13:54

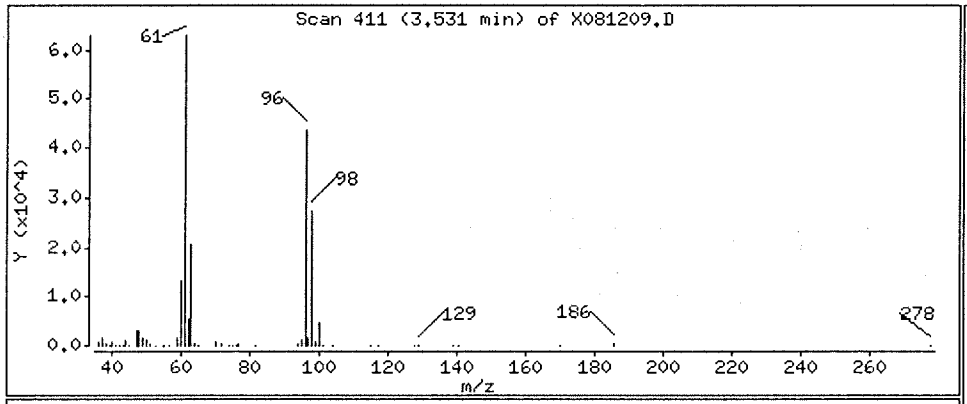
Client ID: HS20080473-01 Instrument: voa6.i

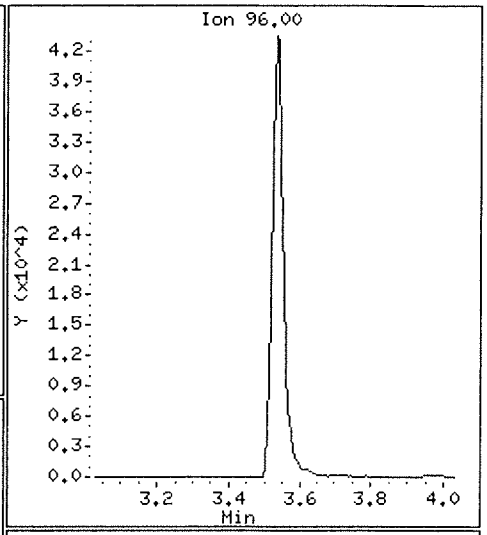
Sample Info: HS20080473-01;HS20080473-01;;;

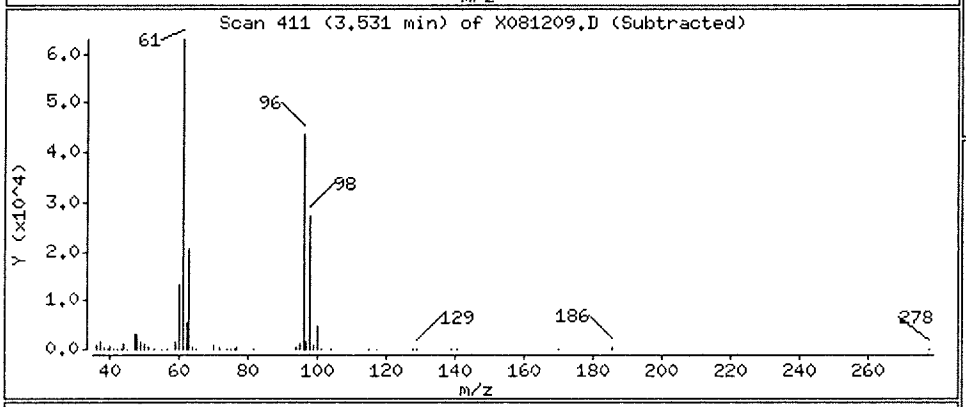
Purge Volume: 5.0 Operator: PC

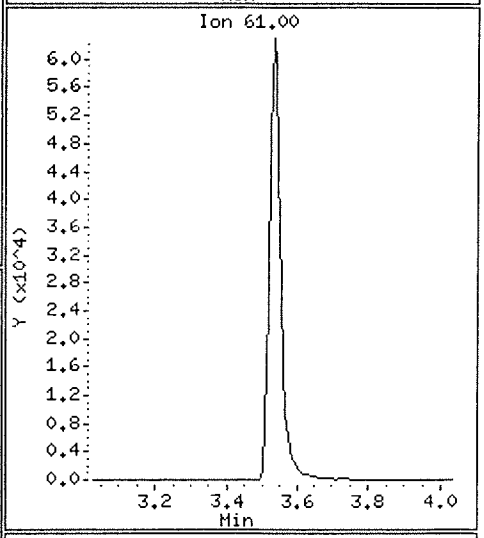
Column phase: DB624 Column diameter: 0.18

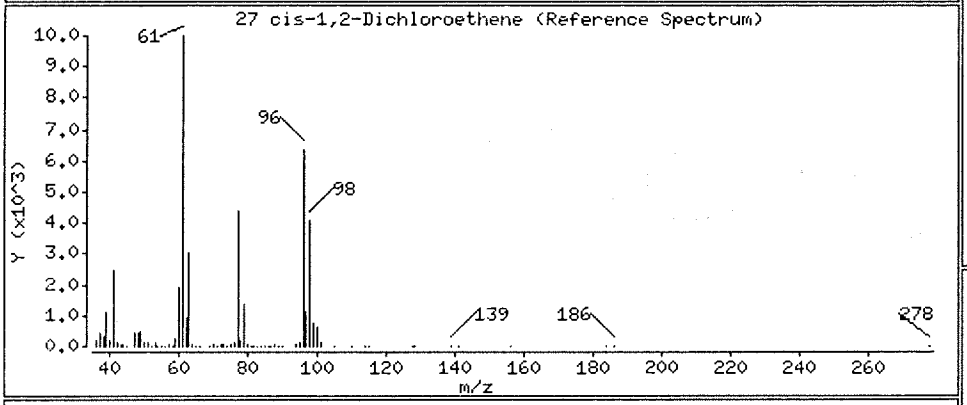
27 cis-1,2-Dichloroethene Concentration: 17.21 ug/l

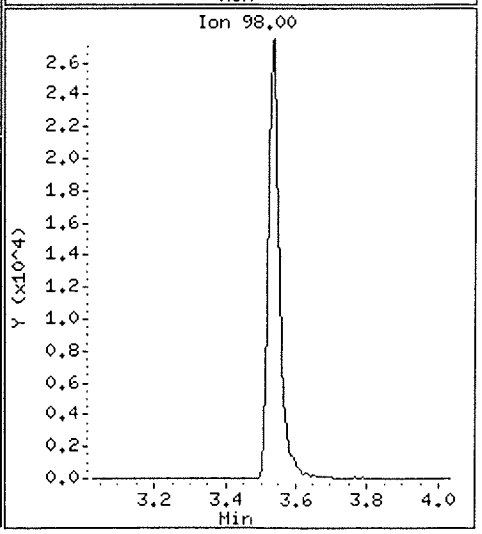


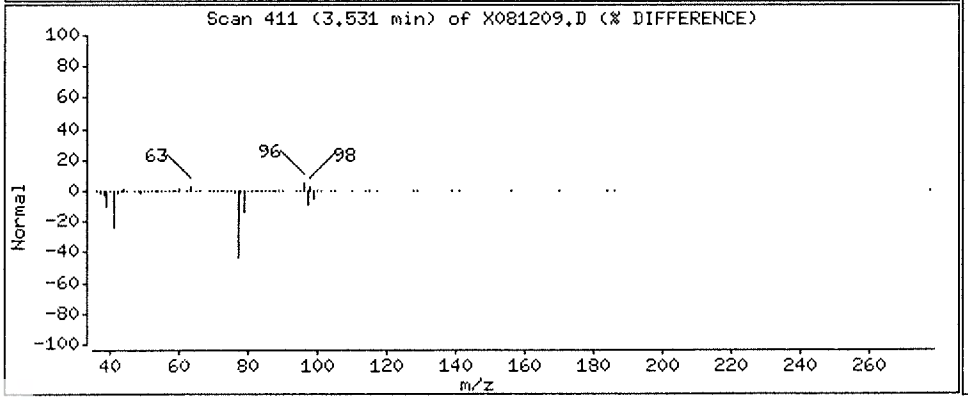












Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081209.D

Date : 12-AUG-2020 13:54

Client ID: HS20080473-01

Instrument: voa6.i

Sample Info: HS20080473-01;HS20080473-01;;;

Purge Volume: 5.0

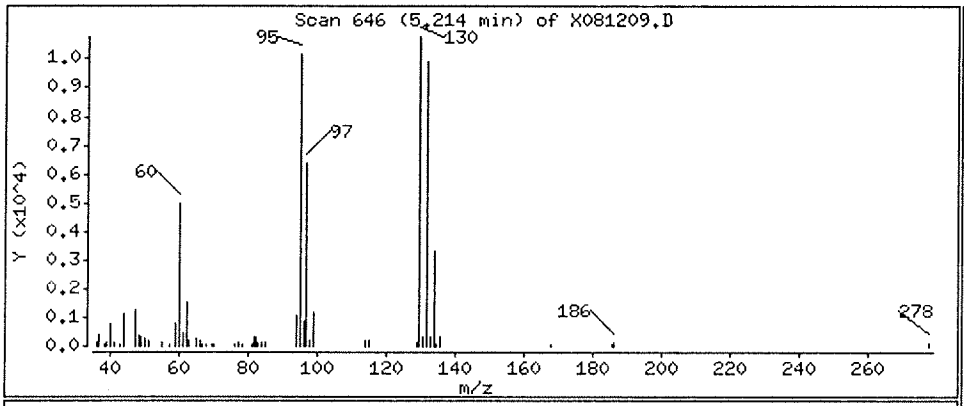
Operator: PC

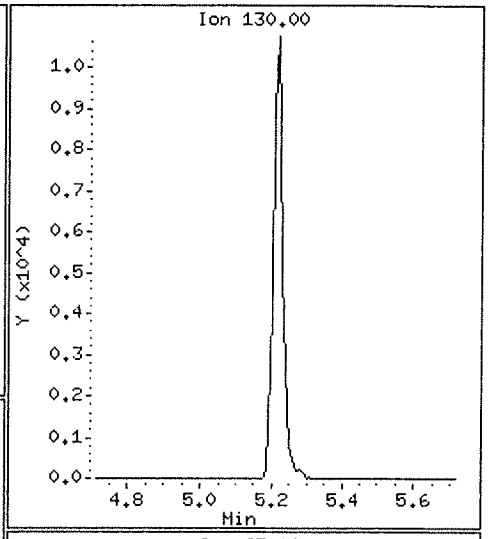
Column phase: DB624

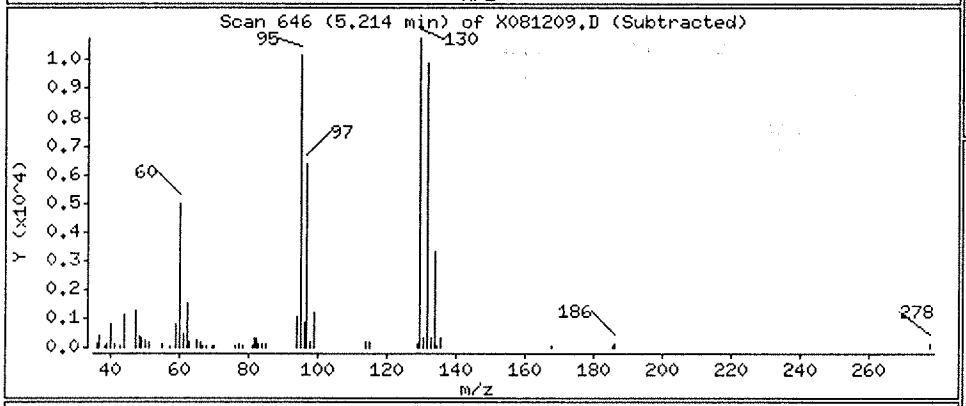
Column diameter: 0.18

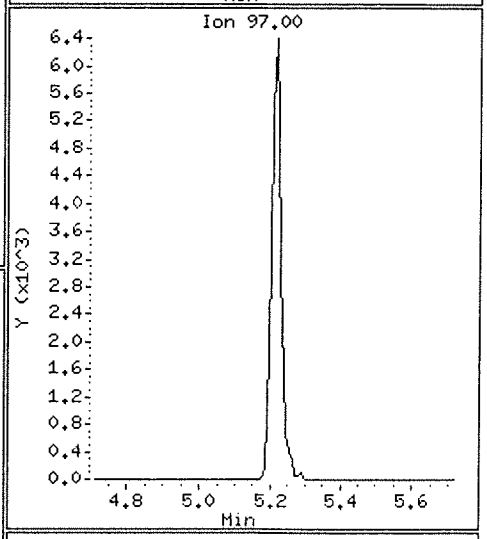
38 Trichloroethene

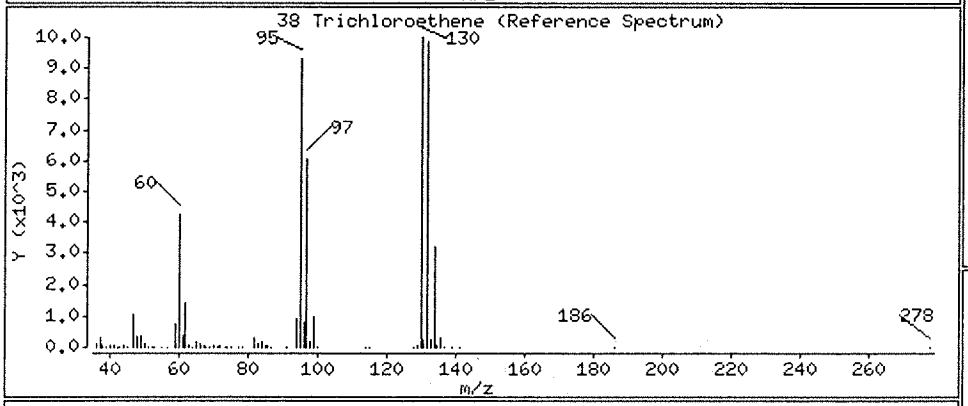
Concentration: 3.69 ug/l

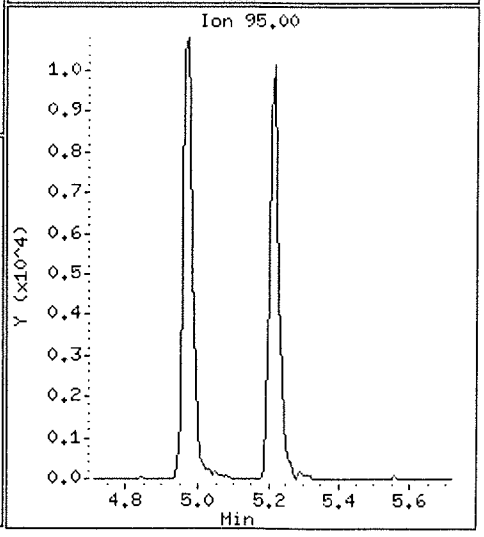


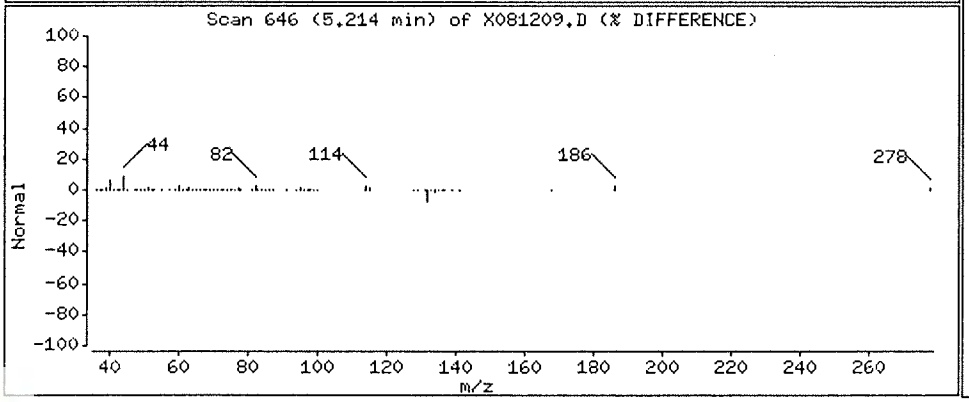












Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081213.D Page 1
Report Date: 11-Sep-2020 15:28

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Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081213.D
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Inj Date : 12-AUG-2020 15:30
Operator : PC Inst ID: voa6.i
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Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

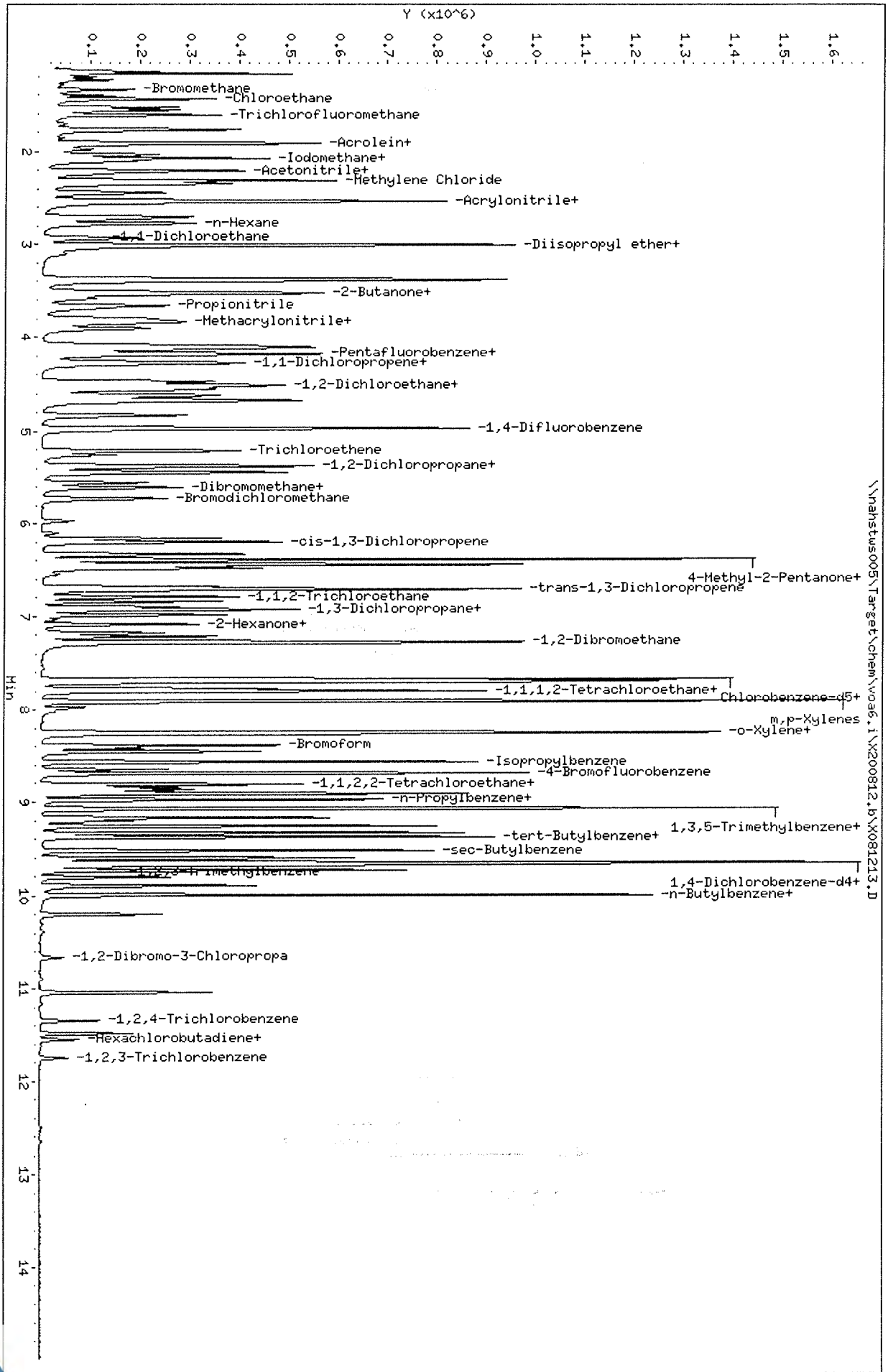
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	470098	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	690040	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	615235	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	286793	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	215368	46.6518	46.65
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	248066	45.3334	45.33
$	48 Toluene-d8	98	6.388	6.388	(0.833)	776394	52.0271	52.02
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	281824	48.9550	48.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	108831	23.2384	23.23
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	169758	23.4437	23.44
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	116785	25.4676	25.46
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	84348	24.0943	24.09
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	218731	23.8201	23.82
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	93229	25.0297	25.02
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	144662	24.9478	24.94
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	15690	18.1801	18.18
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	99827	23.7803	23.78(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	33930	20.4679	20.46
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	398553	26.0132	26.01
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	9859	24.4494	24.44
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	108823	24.1294	24.12
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	192994	23.7913	23.79

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	158739	23.7596	23.75
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	124265	24.5374	24.53
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	387637	25.8662	25.86
83	1,3-Dichlorobenzene	146	9.604	9.612	(0.993)	221852	24.6109	24.61
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	166021	24.0184	24.01
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	216411	24.2759	24.27
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	158788	23.6822	23.68
24	2-Butanone	43	3.580	3.580	(0.855)	104910	45.5235	45.52
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	318402	25.5896	25.58
52	2-Hexanone	43	7.090	7.090	(0.924)	178126	46.1182	46.11
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	361432	24.9688	24.96
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	410835	25.8690	25.86
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	265307	46.5935	46.59
10	Acetone	43	1.976	1.976	(0.472)	71258	42.8789	42.87
37	Benzene	78	4.519	4.519	(0.909)	418530	24.4467	24.44
74	Bromobenzene	156	8.809	8.809	(0.911)	133654	23.8234	23.82
29	Bromochloromethane	128	3.802	3.802	(0.908)	60454	21.3347	21.33
39	Bromodichloromethane	83	5.729	5.729	(1.153)	142415	22.9264	22.92
66	Bromoform	173	8.415	8.415	(1.097)	77321	22.6517	22.65
6	Bromomethane	94	1.338	1.338	(0.320)	81658	25.5604	25.56
19	Carbon Disulfide	76	2.069	2.069	(0.494)	550365	47.5896	47.58
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	146231	23.7257	23.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	290931	24.1279	24.12
7	Chloroethane	64	1.403	1.403	(0.335)	82798	24.8489	24.84
28	Chloroform	83	3.910	3.910	(0.933)	190150	22.6404	22.64
3	Chloromethane	50	1.080	1.080	(0.258)	133822	20.2747	20.27
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	209895	40.5629	40.56
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	170779	23.5119	23.51
55	Dibromochloromethane	129	7.176	7.176	(0.936)	111279	22.5804	22.58
44	Dibromomethane	93	5.557	5.557	(1.118)	70191	23.3735	23.37
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	93947	20.4190	20.41
61	Ethylbenzene	106	7.799	7.799	(1.017)	159527	25.6225	25.62
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	32669	21.2176	21.21
67	Isopropylbenzene	105	8.566	8.566	(1.117)	470867	25.7643	25.76
62	m,p-Xylenes	106	7.907	7.907	(1.031)	381506	50.7761	50.77
17	Methylene Chloride	84	2.305	2.305	(0.550)	111330	22.2309	22.23
87	n-Butylbenzene	91	9.998	9.998	(1.034)	332603	26.2237	26.22
73	n-Propylbenzene	91	8.917	8.917	(0.922)	542237	26.2452	26.24
92	Naphthalene	128	11.546	11.546	(1.194)	58707	25.9488	25.94
63	o-Xylene	106	8.244	8.244	(1.075)	184087	24.9423	24.94
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	457976	26.2858	26.28
64	Styrene	104	8.258	8.258	(1.077)	302581	23.6104	23.61
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	341242	26.2630	26.26
56	Tetrachloroethene	164	6.933	6.933	(0.904)	100681	25.7429	25.74
50	Toluene	91	6.446	6.453	(0.840)	460788	25.6464	25.64
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	104541	23.7217	23.72
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	150894	22.6659	22.66
38	Trichloroethene	130	5.214	5.214	(1.049)	139636	28.5534	28.55
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	166279	24.0175	24.01
5	Vinyl Chloride	62	1.145	1.145	(0.273)	145476	24.0409	24.04

QC Flag Legend

M - Compound response manually integrated.

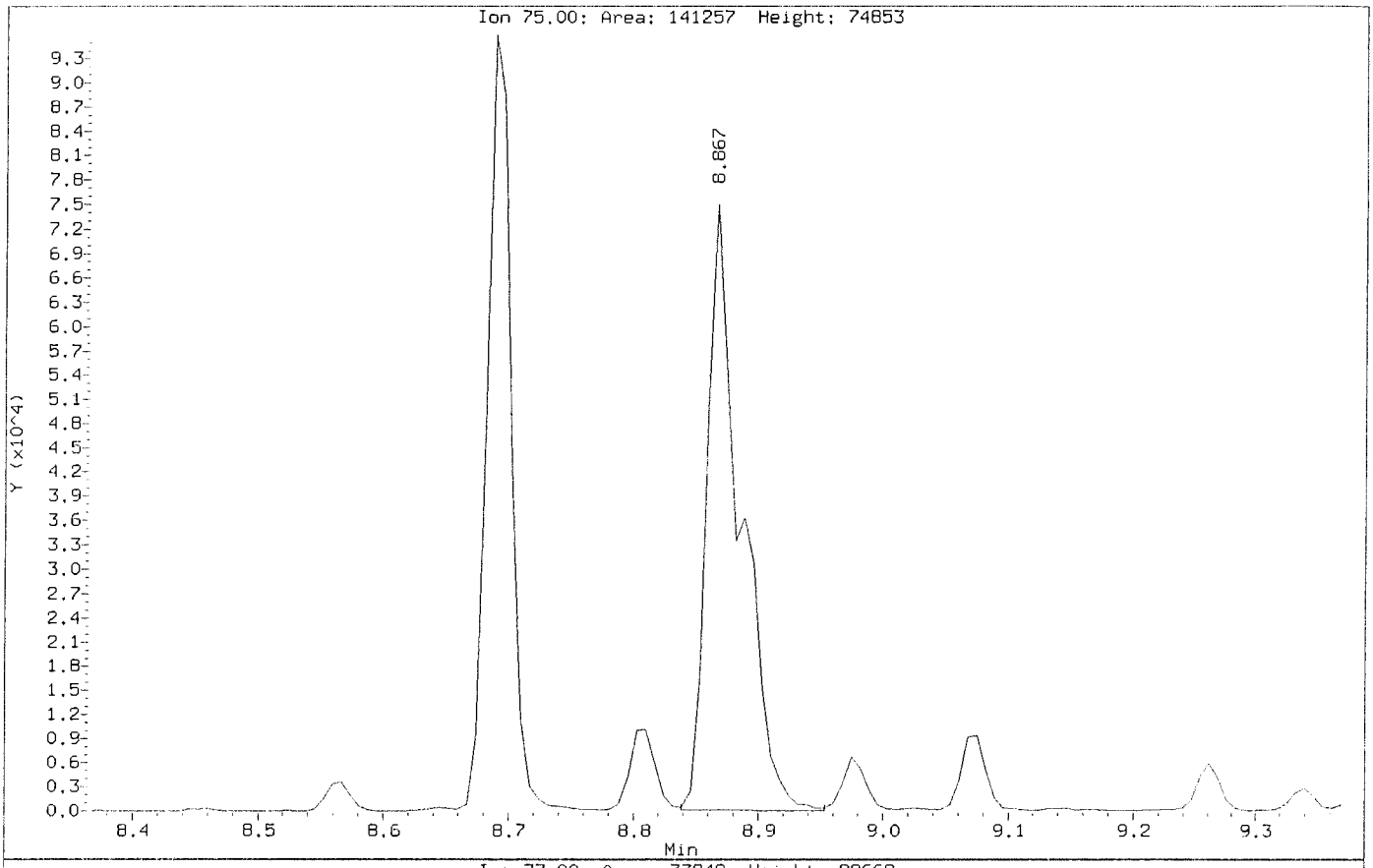


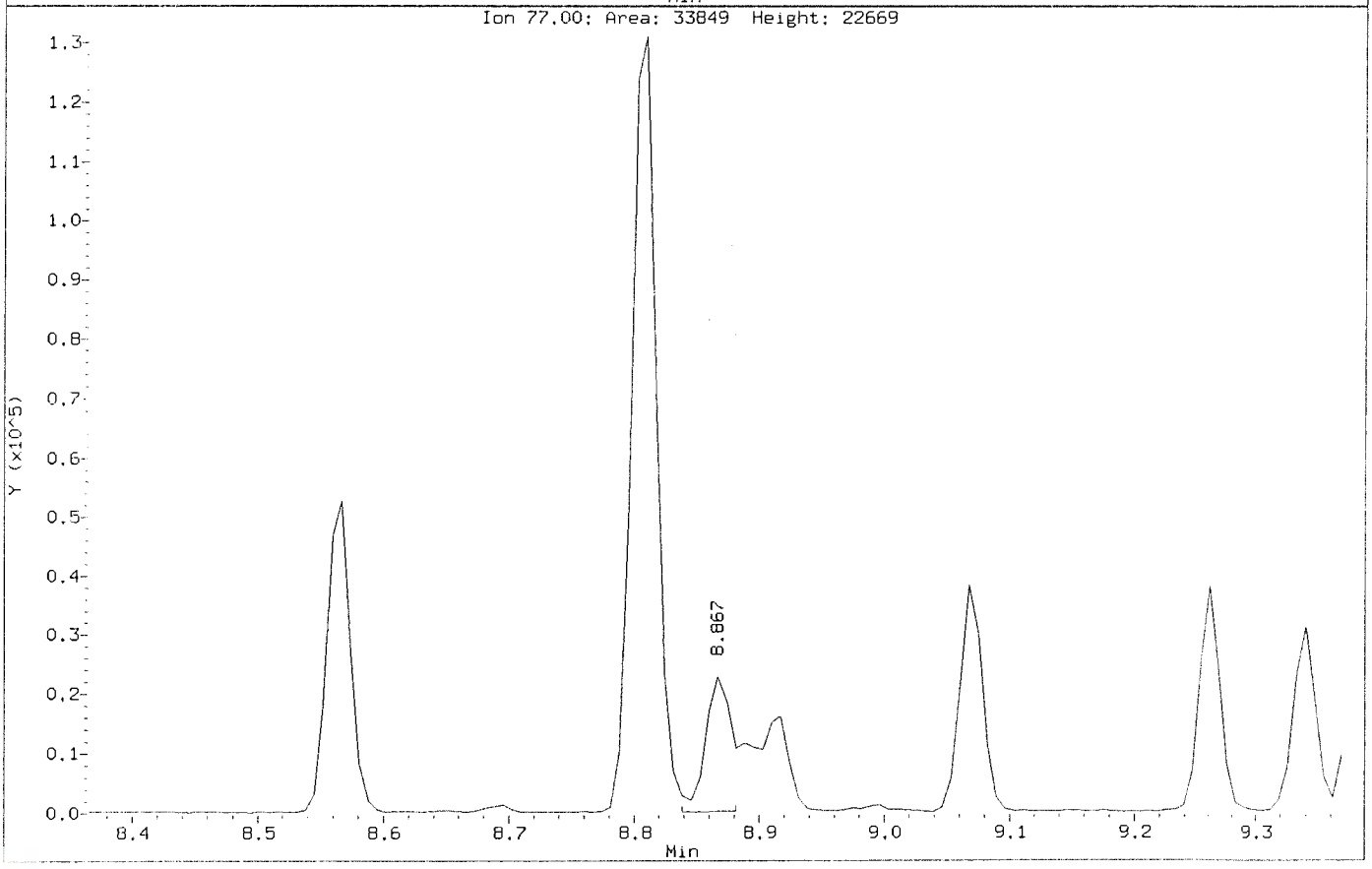
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Sample Info: HS20080473-01MS;HS20080473-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: HS20080473-01MS

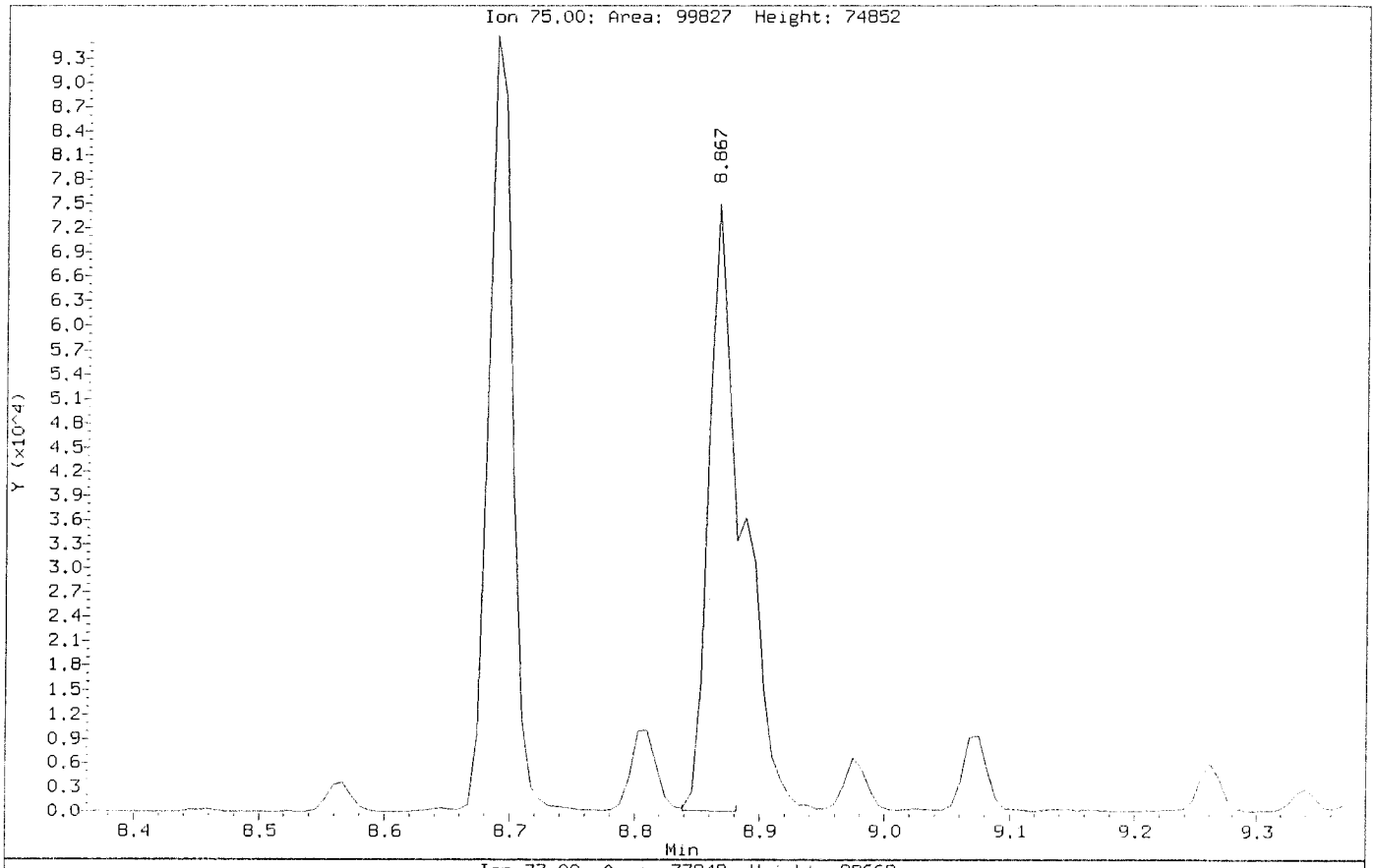
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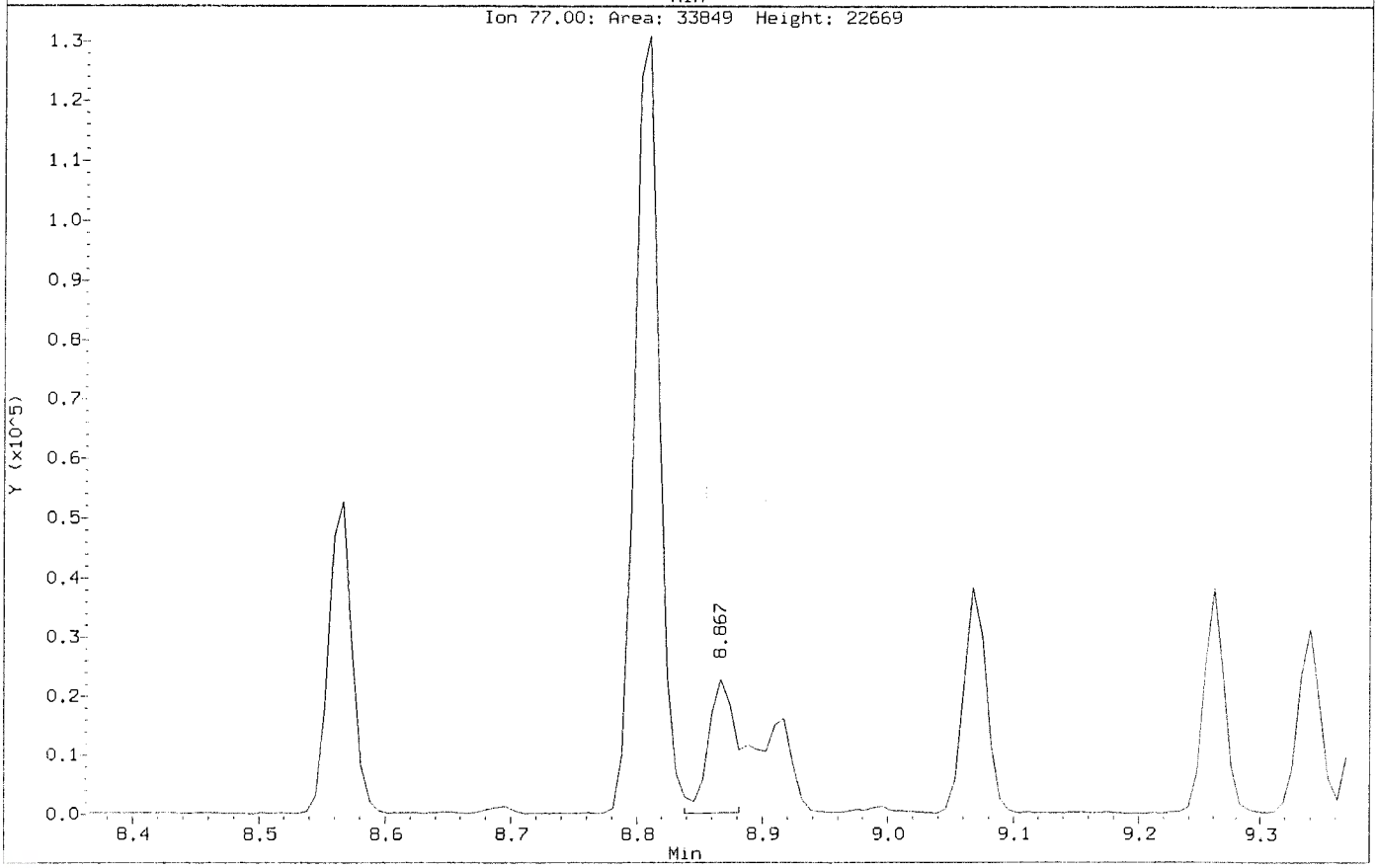




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Instrument: voa6.i
Client Sample ID: HS20080473-01MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081214.D Page 1
Report Date: 11-Sep-2020 15:28

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Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081214.D
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Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment   :
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Meth Date : 11-Sep-2020 15:28 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

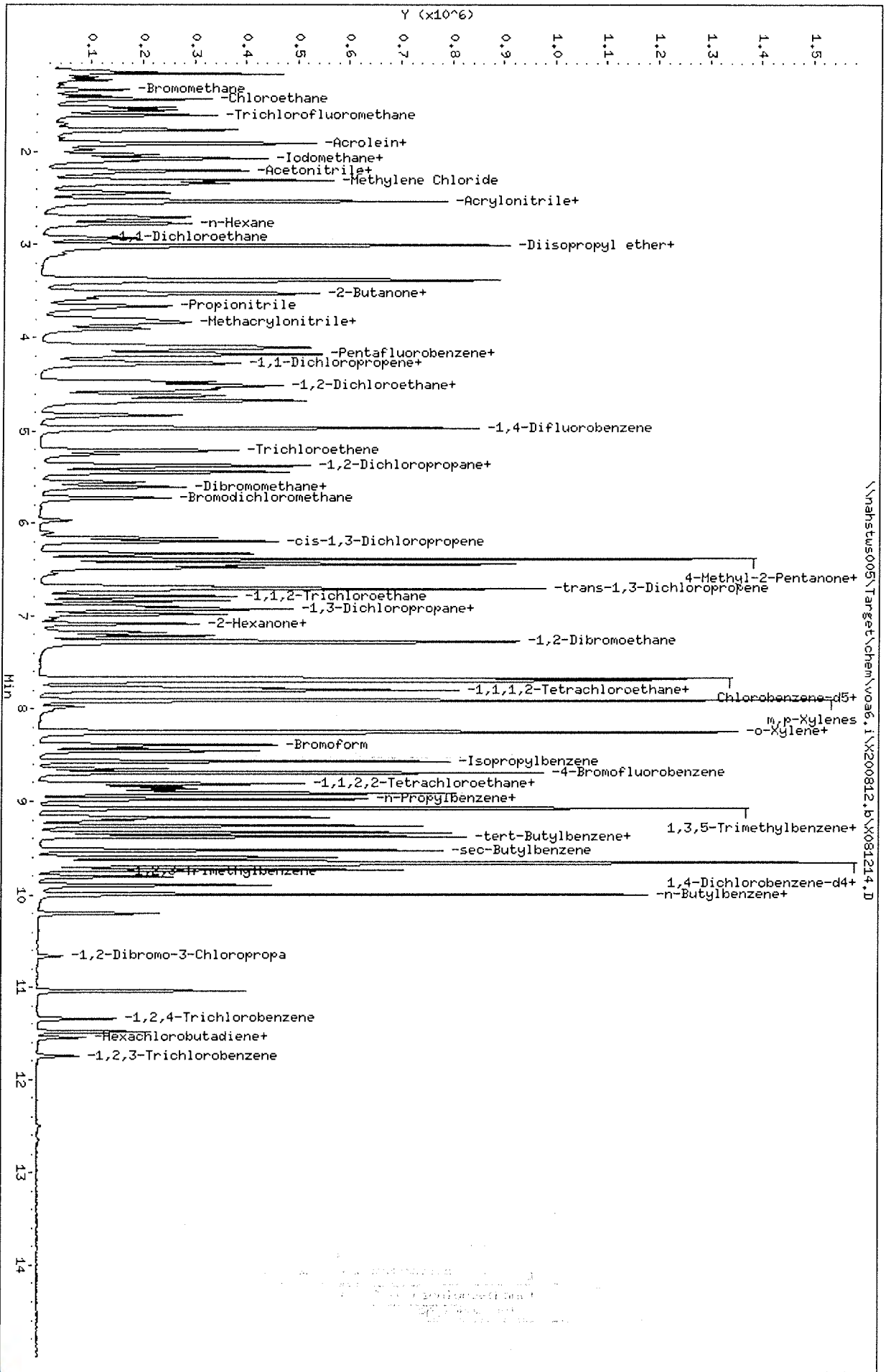
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	458122	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	673875	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	602586	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	278884	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	210190	46.7204	46.72
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	239410	44.8952	44.89
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	760783	52.0511	52.05
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	277324	49.1846	49.18
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105306	22.9578	22.95
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	162044	22.9634	22.96
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	114437	25.6604	25.66
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	82329	24.0112	24.01
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	209219	23.3798	23.37
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	87845	24.2007	24.20
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	136329	24.0747	24.07
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	22500	26.8102	26.81
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	96454	23.6284	23.62(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	44014	27.3949	27.39
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	371607	24.9423	24.94
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	10028	25.5373	25.53
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	105696	23.9280	23.92
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	184180	23.3487	23.34

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	156589	24.0000	24.00
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	121689	24.6051	24.60
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	366430	25.1446	25.14
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	210232	23.9832	23.98
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	162025	23.9323	23.93
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	205914	23.7535	23.75
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	149090	22.8171	22.81
24	2-Butanone	43	3.588	3.580	(0.856)	104654	46.5996	46.59
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	299291	24.7359	24.73
52	2-Hexanone	43	7.090	7.090	(0.924)	175808	46.4735	46.47
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	344291	24.4592	24.45
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	393445	25.4766	25.47
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	259633	46.5541	46.55
10	Acetone	43	1.976	1.976	(0.472)	71141	43.9537	43.95
37	Benzene	78	4.519	4.519	(0.909)	396840	23.7358	23.73
74	Bromobenzene	156	8.809	8.809	(0.911)	126875	23.2564	23.25
29	Bromochloromethane	128	3.802	3.802	(0.908)	59587	21.5784	21.57
39	Bromodichloromethane	83	5.729	5.729	(1.153)	135877	22.3986	22.39
66	Bromoform	173	8.415	8.415	(1.097)	74103	22.1647	22.16
6	Bromomethane	94	1.338	1.338	(0.320)	74831	24.0748	24.07
19	Carbon Disulfide	76	2.069	2.069	(0.494)	517367	45.9057	45.90
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	138505	23.0112	23.01
59	Chlorobenzene	112	7.699	7.699	(1.004)	276269	23.3929	23.39
7	Chloroethane	64	1.403	1.403	(0.335)	73567	22.6557	22.65
28	Chloroform	83	3.910	3.910	(0.933)	183239	22.3879	22.38
3	Chloromethane	50	1.081	1.080	(0.258)	132894	20.6604	20.66
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	198833	39.4296	39.42
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	162992	22.9781	22.97
55	Dibromochloromethane	129	7.176	7.176	(0.936)	109288	22.6419	22.64
44	Dibromomethane	93	5.557	5.557	(1.118)	68381	23.3170	23.31
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	86739	19.3452	19.34
61	Ethylbenzene	106	7.799	7.799	(1.017)	145570	23.8716	23.87
91	Hexachlorobutadiene	225	11.488	11.481	(1.188)	38235	25.5368	25.53
67	Isopropylbenzene	105	8.566	8.566	(1.117)	444046	24.8068	24.80
62	m,p-Xylenes	106	7.907	7.907	(1.031)	353791	48.0759	48.07
17	Methylene Chloride	84	2.305	2.305	(0.550)	105501	21.5796	21.57
87	n-Butylbenzene	91	9.999	9.998	(1.034)	318704	25.8405	25.84
73	n-Propylbenzene	91	8.917	8.917	(0.922)	513424	25.5553	25.55
92	Naphthalene	128	11.546	11.546	(1.194)	64104	29.0912	29.09
63	o-Xylene	106	8.244	8.244	(1.075)	173904	24.0572	24.05
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	435639	25.7128	25.71
64	Styrene	104	8.265	8.258	(1.078)	292932	23.3373	23.33
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	322961	25.5610	25.56
56	Tetrachloroethene	164	6.933	6.933	(0.904)	94629	24.7034	24.70
50	Toluene	91	6.453	6.453	(0.841)	427874	24.3144	24.31
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	99553	23.1804	23.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	145104	22.3190	22.31
38	Trichloroethene	130	5.214	5.214	(1.049)	130007	27.2222	27.22
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	156730	23.2300	23.23
5	Vinyl Chloride	62	1.145	1.145	(0.273)	134639	22.8317	22.83

QC Flag Legend

M - Compound response manually integrated.

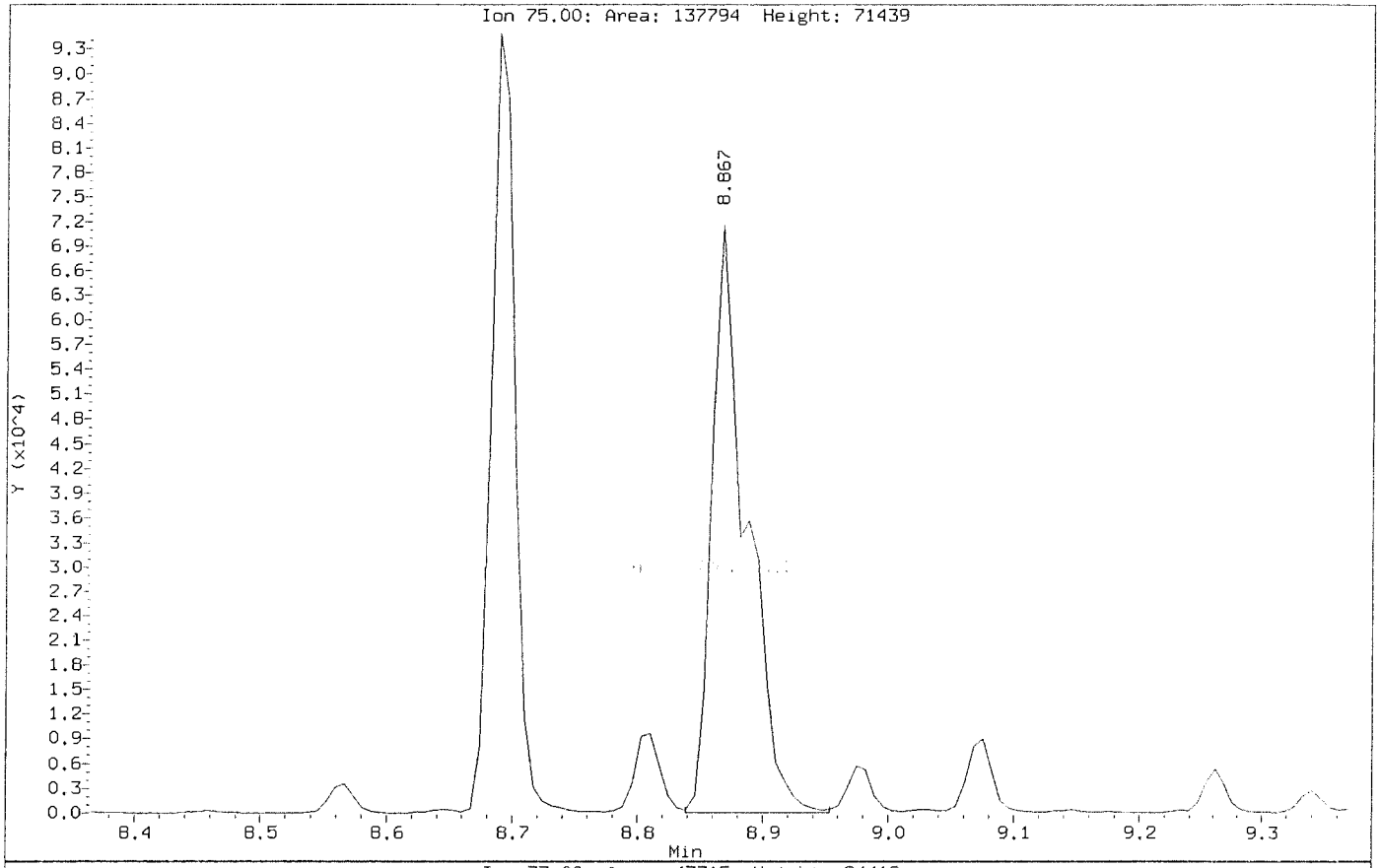


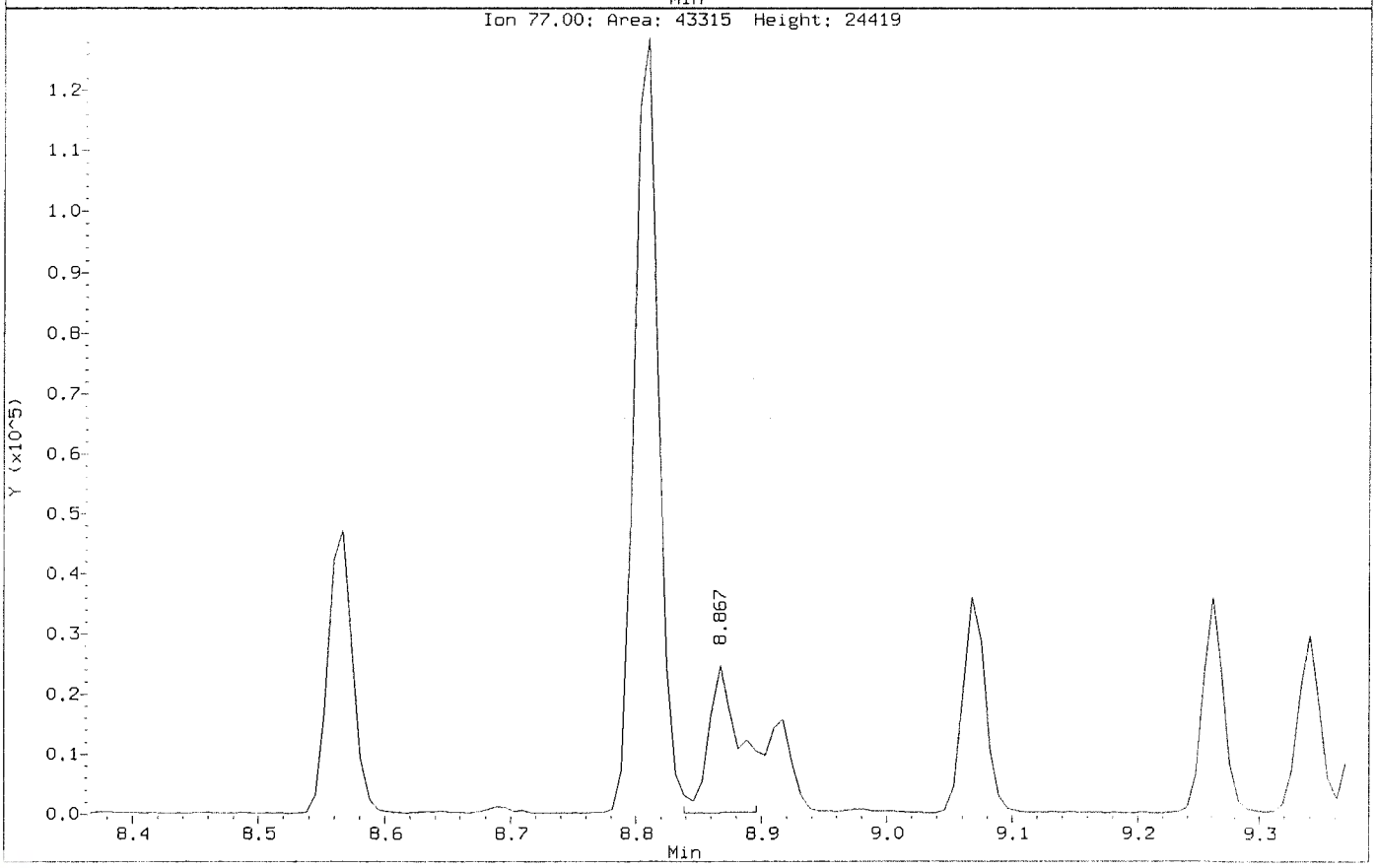
Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081214.D
Date : 12-AUG-2020 15:54
Client ID: HS20080473-01MSD
Sample Info: HS20080473-01MSD;HS20080473-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\Before\X081214.D
Injection Date: 12-AUG-2020 15:54
Instrument: voa6.i
Client Sample ID: HS20080473-01MSD

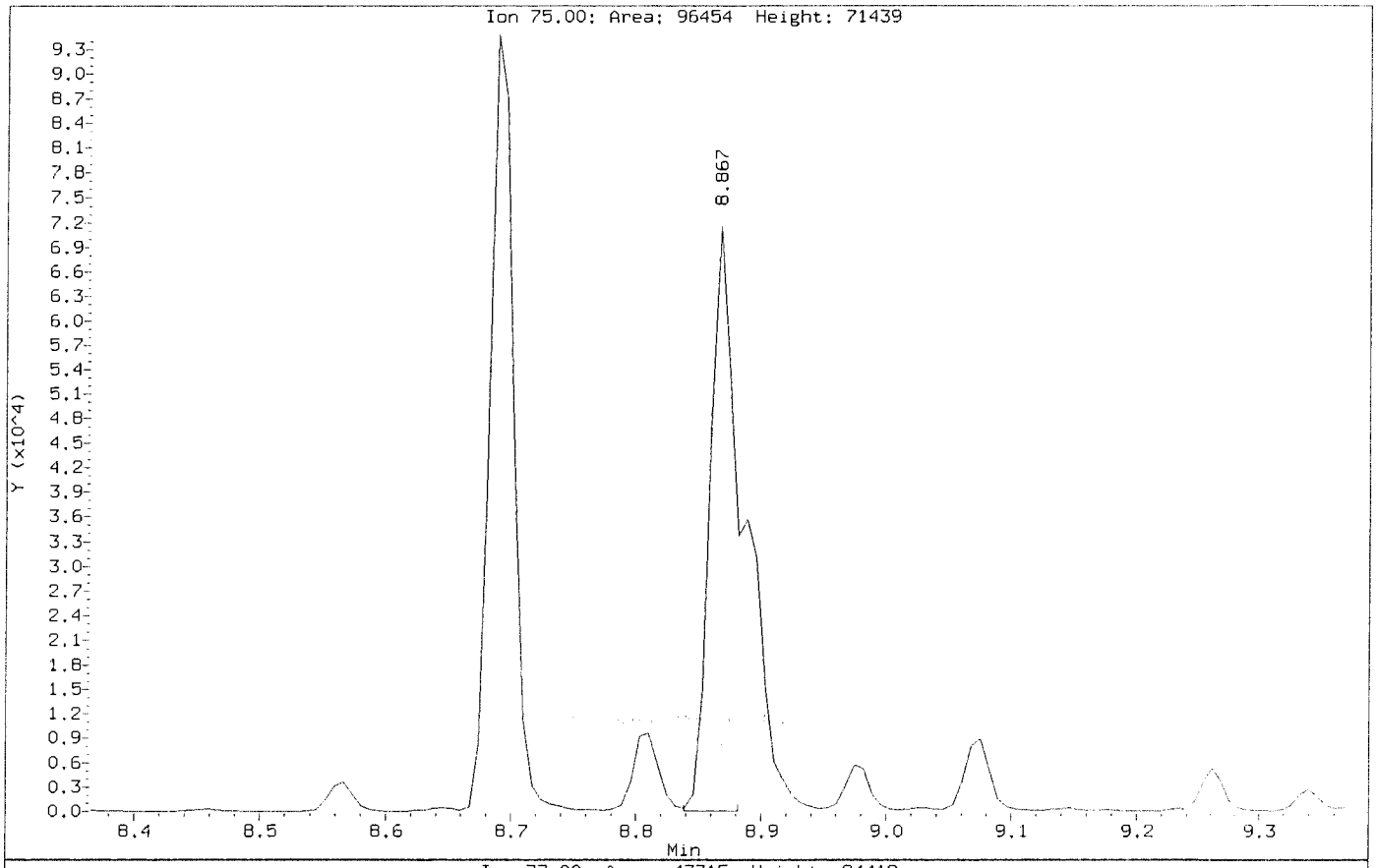
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

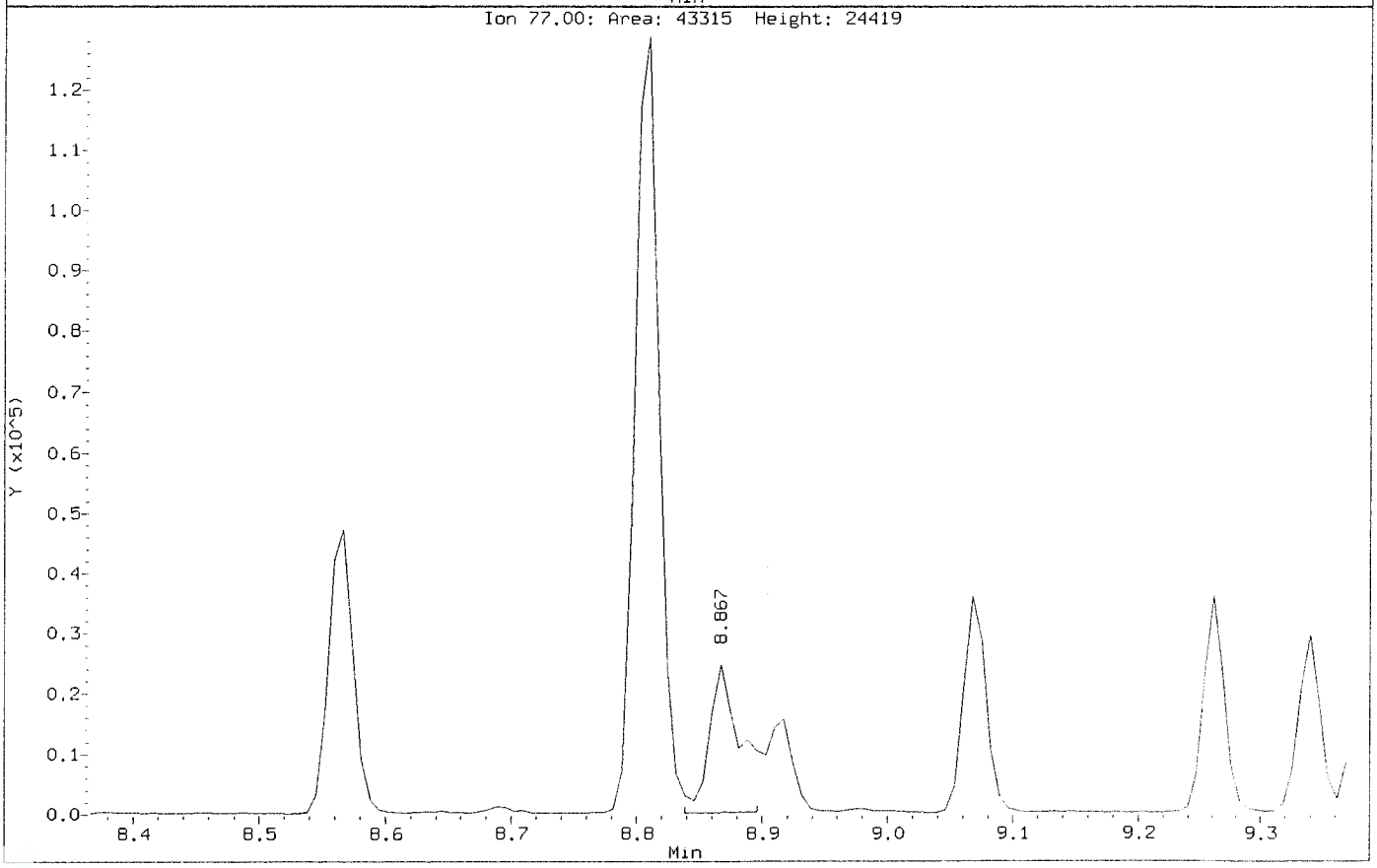




Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081214.D
Injection Date: 12-AUG-2020 15:54
Instrument: voa6.i
Client Sample ID: HS20080473-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200812.b\X081215.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 12-AUG-2020 16:18
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200812.b\8260W.m
Meth Date : 11-Sep-2020 15:28 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

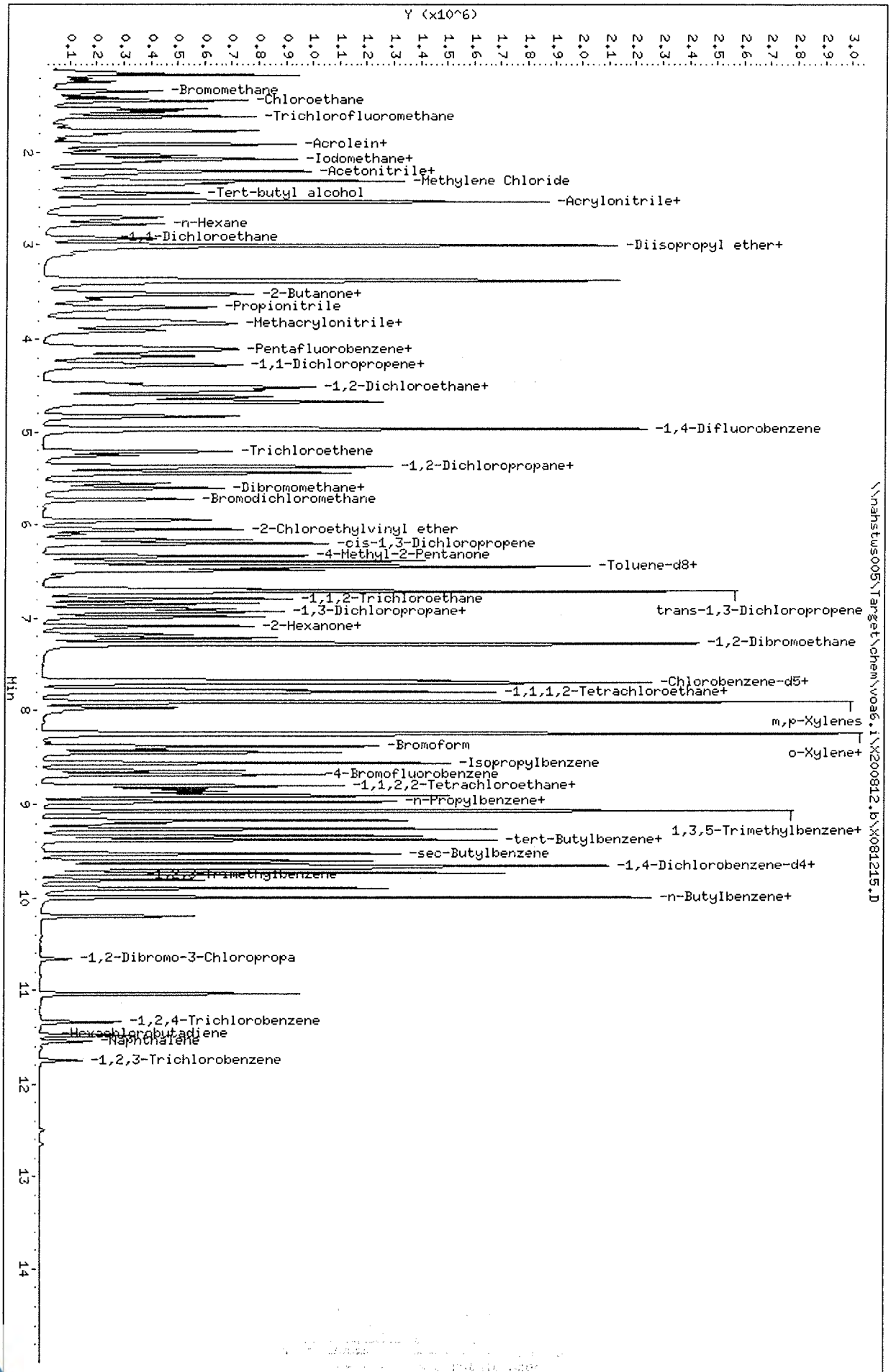
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	464698	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	709448	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	652065	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	314905	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	223209	50.0000	48.91
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	263101	50.0000	48.63
$	48 Toluene-d8	98	6.388	6.388	(0.833)	771584	50.0000	48.78
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	292599	50.0000	47.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	225397	50.0000	45.41
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	319661	50.0000	44.65
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	254852	50.0000	50.23
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	178961	50.0000	48.23
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	454014	50.0000	50.01
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	175576	50.0000	47.68
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	259535	50.0000	43.53
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	42239	50.0000	44.57
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	224710	50.0000	48.75(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	82945	50.0000	45.67
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	734865	50.0000	43.68
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	22646	50.0000	50.27
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	236742	50.0000	49.52
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	397772	50.0000	44.65

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	333004	50.0000	48.47
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	263426	50.0000	50.59
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	703869	50.0000	42.77
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	443947	50.0000	44.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	360114	50.0000	49.15
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	440219	50.0000	44.97
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	297607	50.0000	44.90
24	2-Butanone	43	3.580	3.580	(0.855)	262727	100.000	115.32
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	605973	50.0000	44.35
52	2-Hexanone	43	7.090	7.090	(0.924)	426525	100.000	104.19
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	706479	50.0000	44.44
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	713688	50.0000	40.92
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	621084	100.000	102.91
10	Acetone	43	1.976	1.976	(0.472)	168731	100.000	104.20
37	Benzene	78	4.519	4.519	(0.909)	857580	50.0000	48.72
74	Bromobenzene	156	8.809	8.809	(0.912)	280327	50.0000	45.50
29	Bromochloromethane	128	3.802	3.802	(0.908)	132525	50.0000	47.31
39	Bromodichloromethane	83	5.729	5.729	(1.153)	306216	50.0000	47.94
66	Bromoform	173	8.415	8.415	(1.097)	175222	50.0000	48.43
6	Bromomethane	94	1.338	1.338	(0.320)	162542	50.0000	50.80
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1095019	100.000	95.78
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	262308	50.0000	41.39
59	Chlorobenzene	112	7.699	7.699	(1.004)	594321	50.0000	46.50
7	Chloroethane	64	1.403	1.403	(0.335)	160588	50.0000	48.75
28	Chloroform	83	3.910	3.910	(0.933)	400760	50.0000	48.27
3	Chloromethane	50	1.081	1.081	(0.258)	297162	50.0000	45.54
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	248614	50.0000	48.60
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	366457	50.0000	49.07
55	Dibromochloromethane	129	7.176	7.176	(0.936)	246930	50.0000	47.27
44	Dibromomethane	93	5.557	5.557	(1.118)	151186	50.0000	48.96
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	187969	50.0000	41.32
61	Ethylbenzene	106	7.799	7.799	(1.017)	292721	50.0000	44.36
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	58825	50.0000	34.79
67	Isopropylbenzene	105	8.566	8.566	(1.117)	827358	50.0000	42.71
62	m,p-Xylenes	106	7.907	7.907	(1.031)	714842	100.000	89.76
17	Methylene Chloride	84	2.305	2.305	(0.550)	234346	50.0000	48.89
87	n-Butylbenzene	91	9.999	9.999	(1.035)	559969	50.0000	40.20
73	n-Propylbenzene	91	8.917	8.917	(0.923)	956921	50.0000	42.18
92	Naphthalene	128	11.546	11.546	(1.195)	131700	50.0000	52.18
63	o-Xylene	106	8.244	8.244	(1.075)	359899	50.0000	46.00
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	759149	50.0000	39.68
64	Styrene	104	8.258	8.258	(1.077)	644751	50.0000	47.46
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	577308	50.0000	40.46
56	Tetrachloroethene	164	6.933	6.933	(0.904)	175506	50.0000	42.34
50	Toluene	91	6.446	6.446	(0.840)	883213	50.0000	46.38
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	208780	50.0000	47.92
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	325583	50.0000	47.56
38	Trichloroethene	130	5.214	5.214	(1.049)	236724	50.0000	47.08
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	300868	50.0000	43.96
5	Vinyl Chloride	62	1.145	1.145	(0.273)	282606	50.0000	47.24

QC Flag Legend

M - Compound response manually integrated.

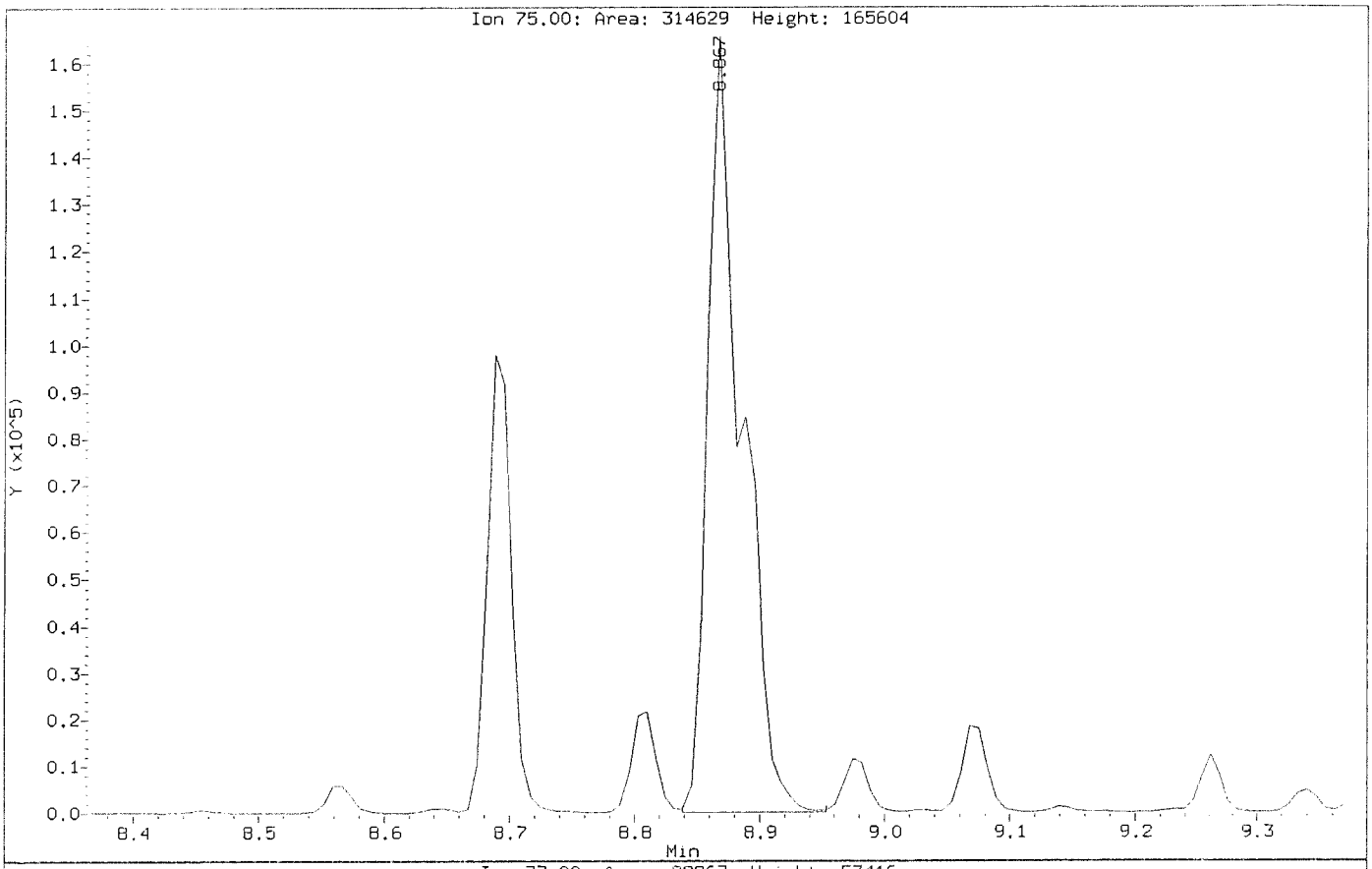


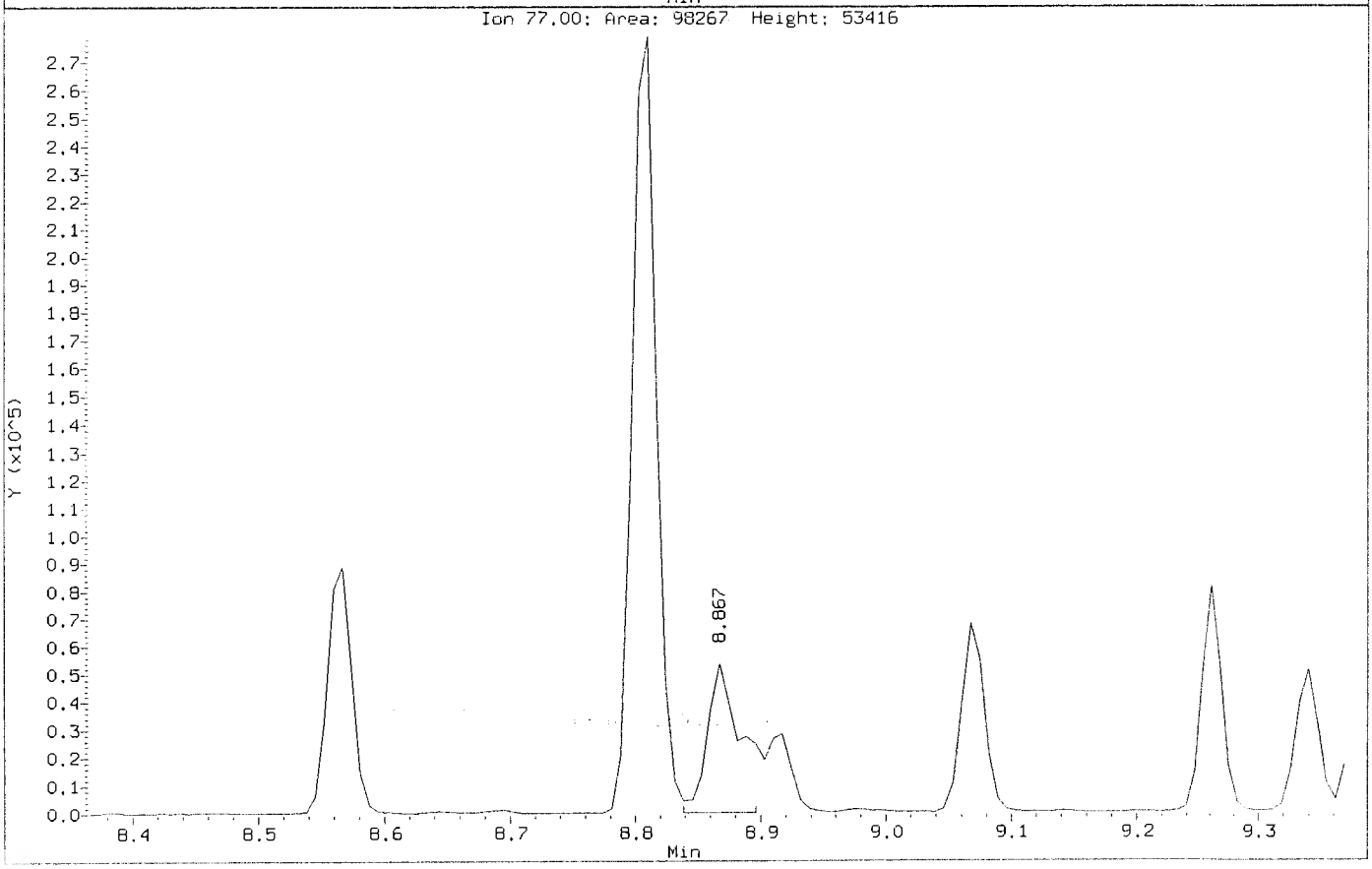
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Date : 12-AUG-2020 16:18
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\Before\X081215.D
Injection Date: 12-AUG-2020 16:18
Instrument: voa6.i
Client Sample ID: CCV-END

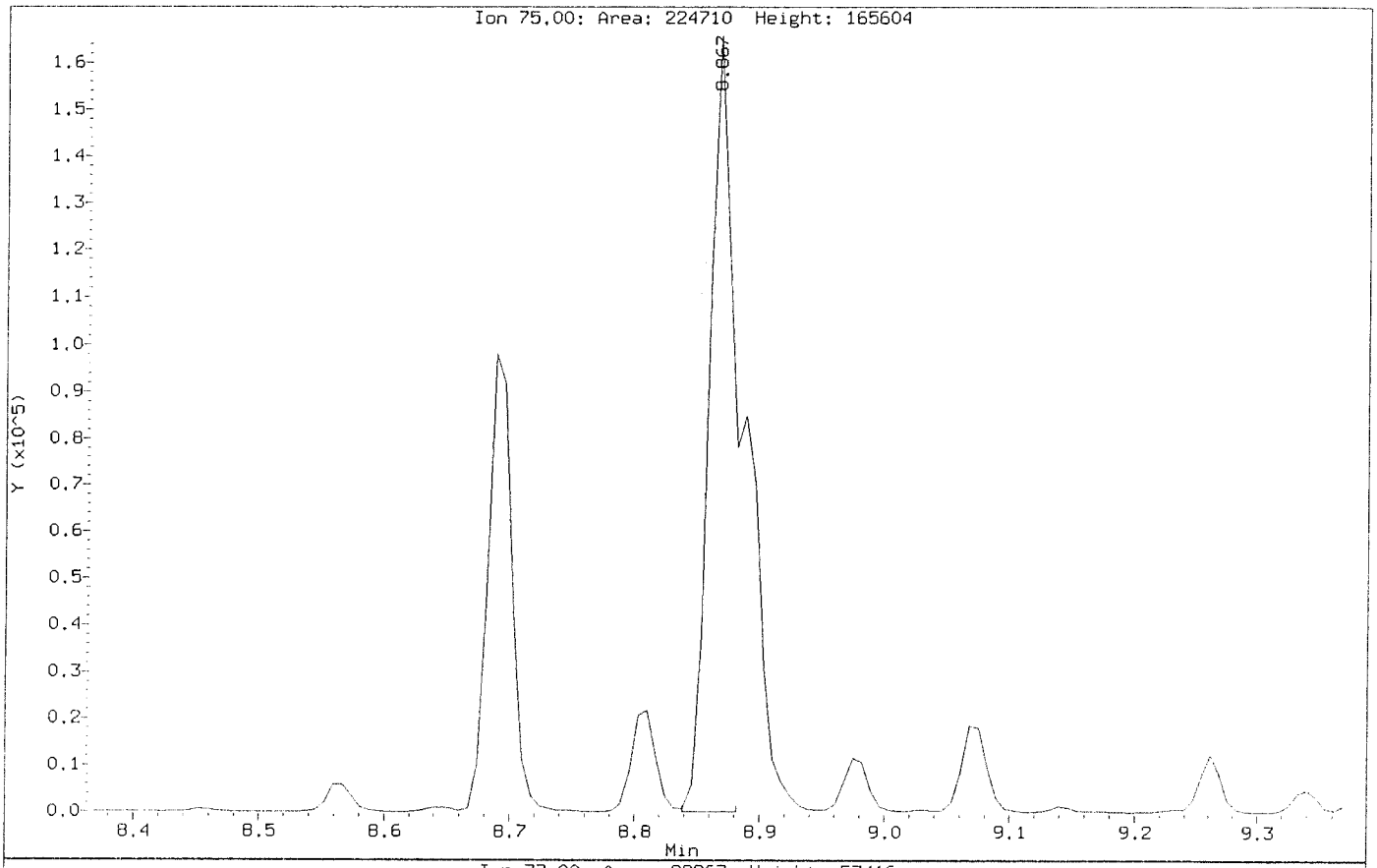
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

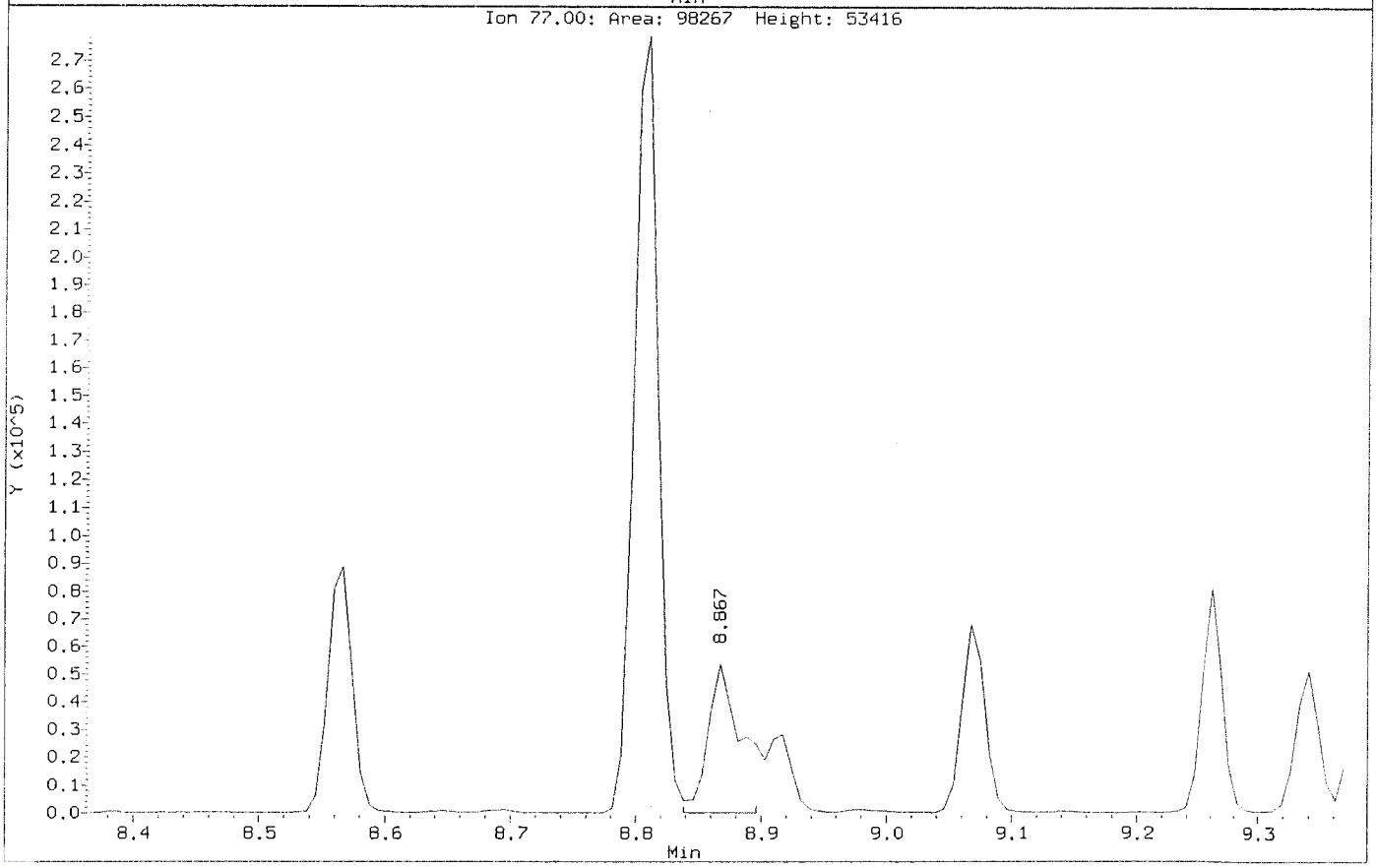




Data File: \\nahstws005\Target\chem\voa6.i\X200812.b\X081215.D
Injection Date: 12-AUG-2020 16:18
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





HS20080473 8270SIM_W Raw Data

ALS WO# HS20080473

Prep Batch Report

Batch ID: 156460
Prep Code: 3510_B_SIM
Start Date: 18 Aug 2020 12:18 PM
End Date: 18 Aug 2020 03:00 PM
Technician: Todi Lala

Init Sample Weight / Volume: 1000
Final Sample Volume: 1
Original Factor: 0.001
Prep Unit Factor: 1
Prep Unit: mL

Sample ID	Fraction	Matrix	pH	Initial Weight / Volume	Final Volume	Prep Factor	Spike Factor	Fail Safe	Due Date	Comments
HS20080473-01	C	Water	7	1000	1	0.001	1	21 Aug 2020	26 Aug 2020	ph adj 1/13
LCS-156460	A		5	1000	1	0.001	1			ph adj 1/13
LCSD-156460	A		5	1000	1	0.001	1			ph adj 1/13
MBLK-156460	A		5	1000	1	0.001	1			ph adj 1/13

SV06 -Logbook

Batch: 37098 **Analyst:** Linda Graham

Date: 08-20-2019 **Reviewer:**

Method: 8270D-LL & SIM **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP02	TUNE	08-20-2019 08:34 am	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	08-20-2019 08:59 am	1.00			002.D		Y	NA
3	SIMDX-0.08	SAMP	08-20-2019 09:27 am	1.00			003.D		Y	NA
4	SIMDX-0.01	SAMP	08-20-2019 09:52 am	1.00			004.D		Y	NA
5	SIMDX-0.03	ICAL2	08-20-2019 10:13 am	1.00			005.D		Y	NA
6	SIMDX-0.05	ICAL3	08-20-2019 10:32 am	1.00			006.D		Y	NA
7	SIMDX-0.08	ICAL4	08-20-2019 10:51 am	1.00			007.D		Y	NA
8	SIMDX-0.1	ICAL5	08-20-2019 11:10 am	1.00			008.D		Y	NA
9	SIMDX-0.15	ICAL6	08-20-2019 11:29 am	1.00			009.D		Y	NA
10	SIMDX-0.2	ICAL7	08-20-2019 11:49 am	1.00			010.D		Y	NA
11	SIMDX-0.5	ICAL8	08-20-2019 12:08 pm	1.00			011.D		Y	NA
12	SIMDX-0.01	ICAL1	08-20-2019 12:27 pm	1.00			012.D		Y	NA
13	SIMDX-ICV	SAMP	08-20-2019 12:46 pm	1.00			013.D		Y	NA
14	CCB	SAMP	08-20-2019 01:05 pm	1.00			014.D		Y	NA
15	MBLK-144188	MBLK	08-20-2019 01:24 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	LCS-144188	LCS	08-20-2019 01:43 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	LCSD-144188	LCSD	08-20-2019 02:02 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS19080732-01	SAMP	08-20-2019 02:21 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS19080732-01	SAMP	08-20-2019 02:43 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	SIMDX-0.08	CCV	08-20-2019 03:05 pm	1.00			020.D		Y	NA
21	SPIKE	SAMP	08-20-2019 03:24 pm	1.00	1000.00 mL	1.00 mL	021.D	Liquid	Y	NA
22	HS19080732-01	SAMP	08-20-2019 03:52 pm	5.00	1000.00 mL	1.00 mL	022.D	Liquid	Y	NA
23	CCB	SAMP	08-20-2019 04:16 pm	1.00			023.D		Y	NA
24	HS19080727-02	SAMP	08-20-2019 04:42 pm	100.0(	30.00 gm	1.00 mL	024.D	Solid	Y	NA
25	HS19080727-03	SAMP	08-20-2019 05:01 pm	100.0(	30.00 gm	1.00 mL	025.D	Solid	Y	NA
26	HS19080727-04	SAMP	08-20-2019 05:19 pm	5.00	30.00 gm	1.00 mL	026.D	Solid	Y	NA
27	HS19080727-07	SAMP	08-20-2019 05:38 pm	10.00	30.00 gm	1.00 mL	027.D	Solid	Y	NA
28	HS19080727-05	SAMP	08-20-2019 05:57 pm	100.0(	30.00 gm	1.00 mL	028.D	Solid	Y	NA

Chemical	Value
IS ID	3081958-02 & 3081957-10
CAL STD ID	3081945-06 & 3081962-05
DFTPP ID	3081958-01
PCP Tailing	0.91
Benz. Tailing	0.82
STD-01	3081962-02 - 3081962-09
ICV ID	3081962-10
Routine SOP Maintenance	LG

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Matrix Spike - Sample No.: SIMDX-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.06515	81	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM III SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID: 001 DFTPP Injection Date: 08/20/19

Instrument ID: SV6 DFTPP Injection Time: 0834

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.3
68	Less than 2.0% of mass 69	0.7 (1.3)1
69	Mass 69 relative abundance	52.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	50.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	30.5
365	1.0 - 100.0% of mass 198	5.4
441	Present, but less than mass 443	15.3
442	50.0 - 150.0% of mass 198	94.0
443	15.0 - 24.0% of mass 442	17.6 (18.7)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIMDX-0.03	SIMDX-0.03	005	08/20/19	1013
02	SIMDX-0.05	SIMDX-0.05	006	08/20/19	1032
03	SIMDX-0.08	SIMDX-0.08	007	08/20/19	1051
04	SIMDX-0.1	SIMDX-0.1	008	08/20/19	1110
05	SIMDX-0.15	SIMDX-0.15	009	08/20/19	1129
06	SIMDX-0.2	SIMDX-0.2	010	08/20/19	1149
07	SIMDX-0.5	SIMDX-0.5	011	08/20/19	1208
08	SIMDX-0.01	SIMDX-0.01	012	08/20/19	1227
09	SIMDX-ICV	SIMDX-ICV	013	08/20/19	1246
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.01: 012 RF0.03: 005 RF0.05: 006
RF0.08: 007 RF0.1: 008 RF0.15: 009

COMPOUND	RF0.01	RF0.03	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.068	0.066	0.062	0.062	0.066	0.058
Nitrobenzene-d5	0.259	0.253	0.248	0.235	0.256	0.251
4-Terphenyl-d14	0.864	0.799	0.804	0.815	0.808	0.822
2-Fluorobiphenyl	1.190	1.244	1.156	1.138	1.196	1.178

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.2: 010 RF0.5: 011

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.067	0.058	AVRG	6.346e-002	6.165	20.000
Nitrobenzene-d5	0.298	0.288	AVRG	0.26110947	8.070	20.000
4-Terphenyl-d14	0.864	0.822	AVRG	0.82462670	3.080	20.000
2-Fluorobiphenyl	1.198	1.196	AVRG	1.18704840	2.670	20.000

FORM VI SV

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

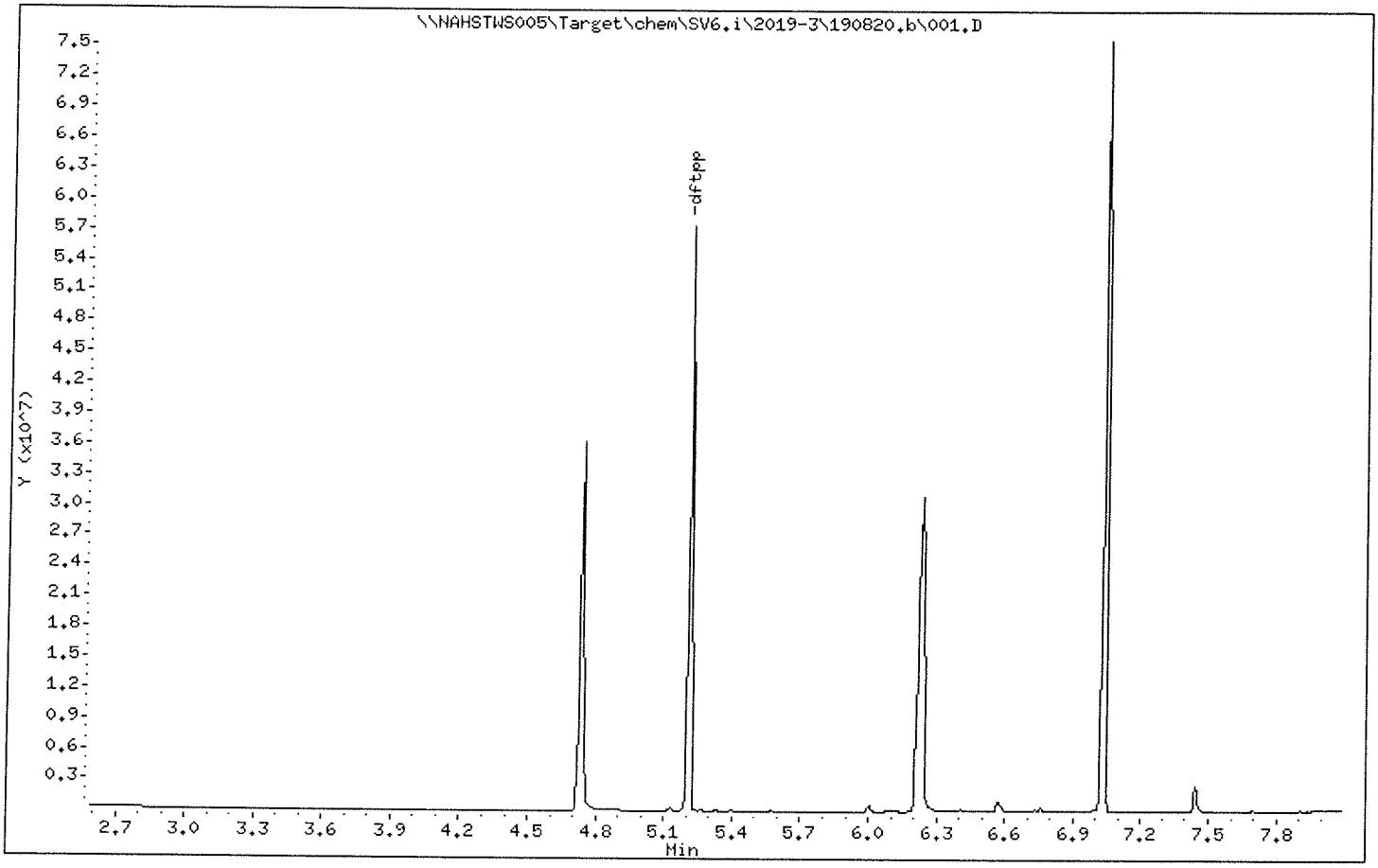
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

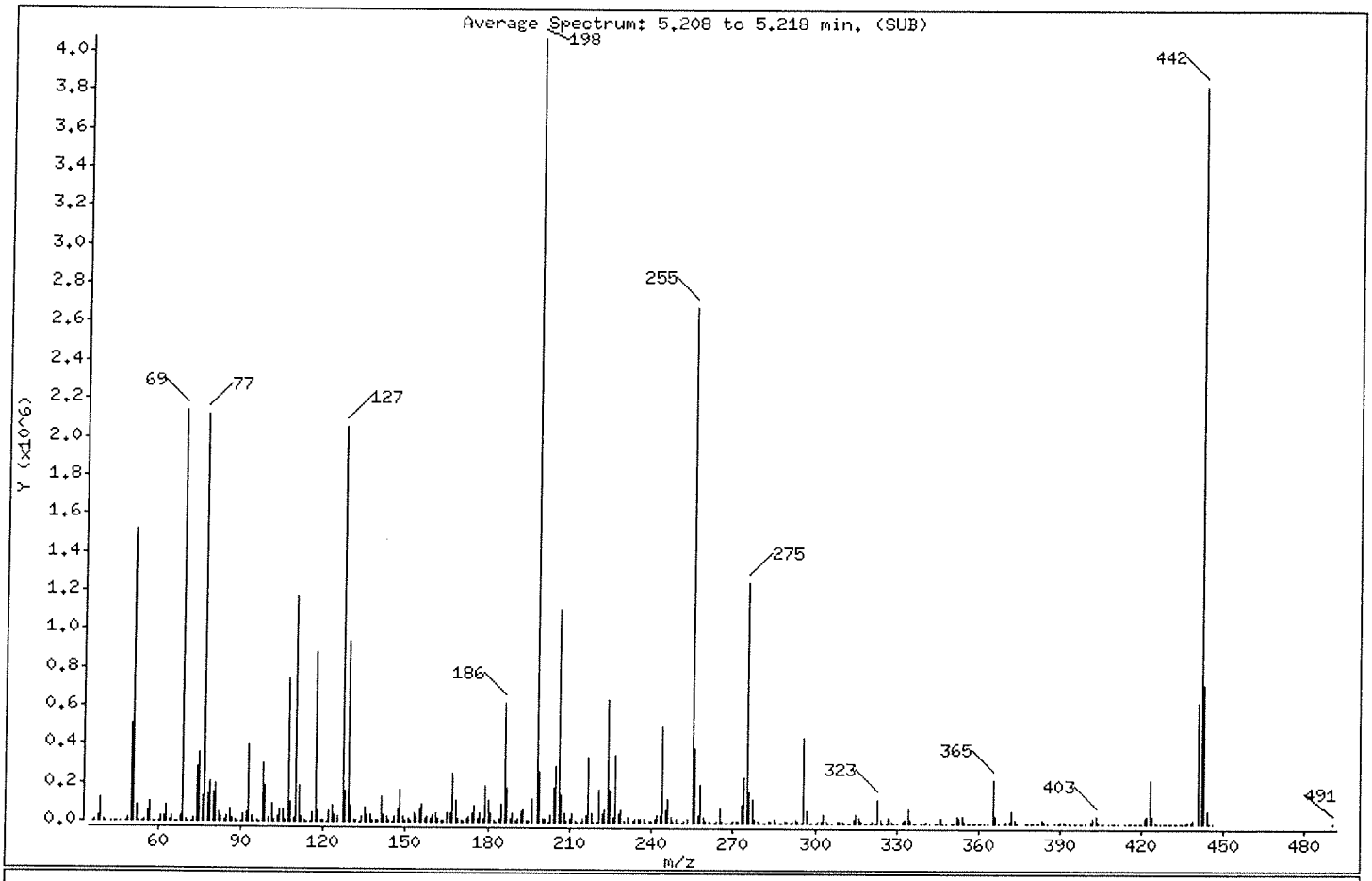
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.27
68	Less than 2.00% of mass 69	0.66 (1.27)
69	Mass 69 relative abundance	52.42
70	Less than 2.00% of mass 69	0.21 (0.40)
127	10.00 - 80.00% of mass 198	50.38
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.54
275	10.00 - 60.00% of mass 198	30.53
365	1.00 - 100.00% of mass 198	5.43
441	Present, but less than mass 443	15.33
442	50.00 - 150.00% of mass 198	93.99
443	15.00 - 24.00% of mass 442	17.61 (18.74)

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	835	137.00	33208	236.00	14798	337.00	100
37.00	12102	138.00	8411	237.00	22248	339.00	2477
38.00	25296	139.00	4795	238.00	2941	340.00	1567
39.00	117160	140.00	12158	239.00	13468	341.00	13981
40.00	5499	141.00	131200	240.00	9878	342.00	3948
41.00	753	142.00	36240	241.00	19728	344.00	804
43.00	91	143.00	24424	242.00	35264	345.00	480
44.00	1276	144.00	6124	243.00	41928	346.00	28472
45.00	3402	145.00	4643	244.00	496256	347.00	4140
46.00	106	146.00	26048	245.00	67520	348.00	271
48.00	1625	147.00	64000	246.00	122680	350.00	1935
49.00	14501	148.00	169408	247.00	24744	351.00	4169
50.00	504320	149.00	25880	248.00	4938	352.00	37592
51.00	1518592	150.00	7101	249.00	19120	353.00	27976
52.00	83816	151.00	16800	250.00	4389	354.00	36440
53.00	3136	152.00	9343	251.00	4453	355.00	7095
54.00	184	153.00	44568	252.00	6078	356.00	446
55.00	11858	154.00	31536	253.00	17208	357.00	391
56.00	54208	155.00	64536	255.00	2677248	358.00	1318
57.00	102632	156.00	92080	256.00	382592	359.00	2789
58.00	3650	157.00	15872	257.00	33904	360.00	1244
59.00	1625	158.00	23880	258.00	193536	361.00	1450
60.00	1858	159.00	18264	259.00	31792	362.00	1798
61.00	24904	160.00	36112	260.00	5628	363.00	1262
62.00	32112	161.00	51192	261.00	5009	365.00	221376
63.00	80232	162.00	14572	262.00	603	366.00	34008
64.00	12711	163.00	5995	263.00	2490	367.00	1707
65.00	29088	164.00	6170	264.00	6905	369.00	407
66.00	1294	165.00	51448	265.00	76376	370.00	5368
67.00	922	166.00	42280	266.00	13210	371.00	11263
68.00	27024	167.00	255744	267.00	1076	372.00	67920
69.00	2136064	168.00	107920	268.00	2066	373.00	18112
70.00	8518	169.00	18928	269.00	956	374.00	1860
71.00	489	170.00	10335	270.00	5559	377.00	1403
72.00	1438	171.00	7634	271.00	7831	378.00	915

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D Page 4

Date : 20-AUG-2019 08:34

Client ID: DFTPP02 Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	21832	172.00	21320	272.00	12923	379.00	143
74.00	279552	173.00	29712	273.00	90072	380.00	144
75.00	360000	174.00	45472	274.00	231936	381.00	498
76.00	127952	175.00	80656	275.00	1244160	382.00	629
77.00	2114048	176.00	21440	276.00	161152	383.00	20544
78.00	137728	177.00	47248	277.00	122616	384.00	4734
79.00	204864	178.00	18200	278.00	18792	385.00	1203
80.00	153472	179.00	183168	279.00	5011	388.00	451
81.00	199296	180.00	113264	280.00	604	389.00	265
82.00	46040	181.00	49512	281.00	900	390.00	10255
83.00	31856	182.00	11982	282.00	4109	391.00	6532
84.00	5566	183.00	3715	283.00	13570	392.00	4418
85.00	32504	184.00	16784	284.00	11220	393.00	1245
86.00	61824	185.00	89160	285.00	20912	394.00	513
87.00	21392	186.00	620608	286.00	3760	395.00	749
88.00	9127	187.00	175296	287.00	1271	396.00	444
89.00	3136	188.00	16624	288.00	1937	397.00	691
90.00	443	189.00	45672	289.00	5097	398.00	405
91.00	41216	190.00	7016	290.00	4794	399.00	123
92.00	50488	191.00	19680	291.00	3934	401.00	5262
93.00	394112	192.00	59496	292.00	8215	402.00	29296
94.00	24512	193.00	62640	293.00	21280	403.00	40856
95.00	3693	194.00	12573	294.00	8043	404.00	14012
96.00	9479	195.00	6966	295.00	4289	405.00	1459
97.00	44	196.00	124048	296.00	436544	406.00	138
98.00	303680	198.00	4075008	297.00	62032	408.00	284
99.00	191552	199.00	266624	298.00	3806	409.00	264
100.00	15372	200.00	19696	299.00	1143	410.00	1263
101.00	94456	201.00	17256	300.00	676	411.00	294
102.00	5355	202.00	1968	301.00	6097	414.00	403
103.00	32272	203.00	40488	302.00	8958	415.00	1669
104.00	67864	204.00	179392	303.00	43928	416.00	498
105.00	62672	205.00	294784	304.00	10193	417.00	65
106.00	12815	206.00	1107456	305.00	1447	418.00	1538
107.00	743744	207.00	142720	306.00	106	419.00	1353

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	101768	208.00	46152	308.00	6241	420.00	2993
109.00	17928	209.00	12596	309.00	6298	421.00	29488
110.00	1171456	210.00	19512	310.00	6172	422.00	36720
111.00	184832	211.00	45856	311.00	604	423.00	226496
112.00	25208	212.00	5547	312.00	1912	424.00	41632
113.00	6233	213.00	3969	313.00	3850	425.00	5802
114.00	2033	214.00	2043	314.00	19248	426.00	59
115.00	4354	215.00	17152	315.00	48288	427.00	586
116.00	48960	216.00	34016	316.00	24504	428.00	274
117.00	878976	217.00	341696	317.00	4752	429.00	576
118.00	56712	218.00	43448	318.00	87	430.00	1543
119.00	5084	219.00	3982	319.00	1150	431.00	1228
120.00	8536	220.00	3610	320.00	3527	432.00	2552
121.00	3746	221.00	168960	321.00	11938	433.00	1912
122.00	60432	222.00	45336	322.00	2915	434.00	2804
123.00	81152	223.00	66888	323.00	123376	435.00	3410
124.00	36080	224.00	638528	324.00	20024	436.00	3032
125.00	28848	225.00	166336	325.00	3713	437.00	7750
127.00	2053120	226.00	23496	326.00	3277	438.00	8493
128.00	154816	227.00	346624	327.00	25960	439.00	15936
129.00	939136	228.00	46312	328.00	10207	441.00	624704
130.00	80128	229.00	62808	329.00	3443	442.00	3830272
131.00	12860	230.00	8935	330.00	592	443.00	717696
132.00	9218	231.00	23840	332.00	10907	444.00	65712
133.00	3460	232.00	4201	333.00	16824	445.00	3400
134.00	26576	233.00	6938	334.00	79336	446.00	239
135.00	73008	234.00	21800	335.00	21480	491.00	180
136.00	35592	235.00	17528	336.00	2596		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D
Lab Smp Id: SIMDX-0.03 Client Smp ID: SIMDX-0.03
Inj Date : 20-AUG-2019 10:13 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.03;SIMDX-0.03
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 18-JUL-2019 10:08 Cal File: 002.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

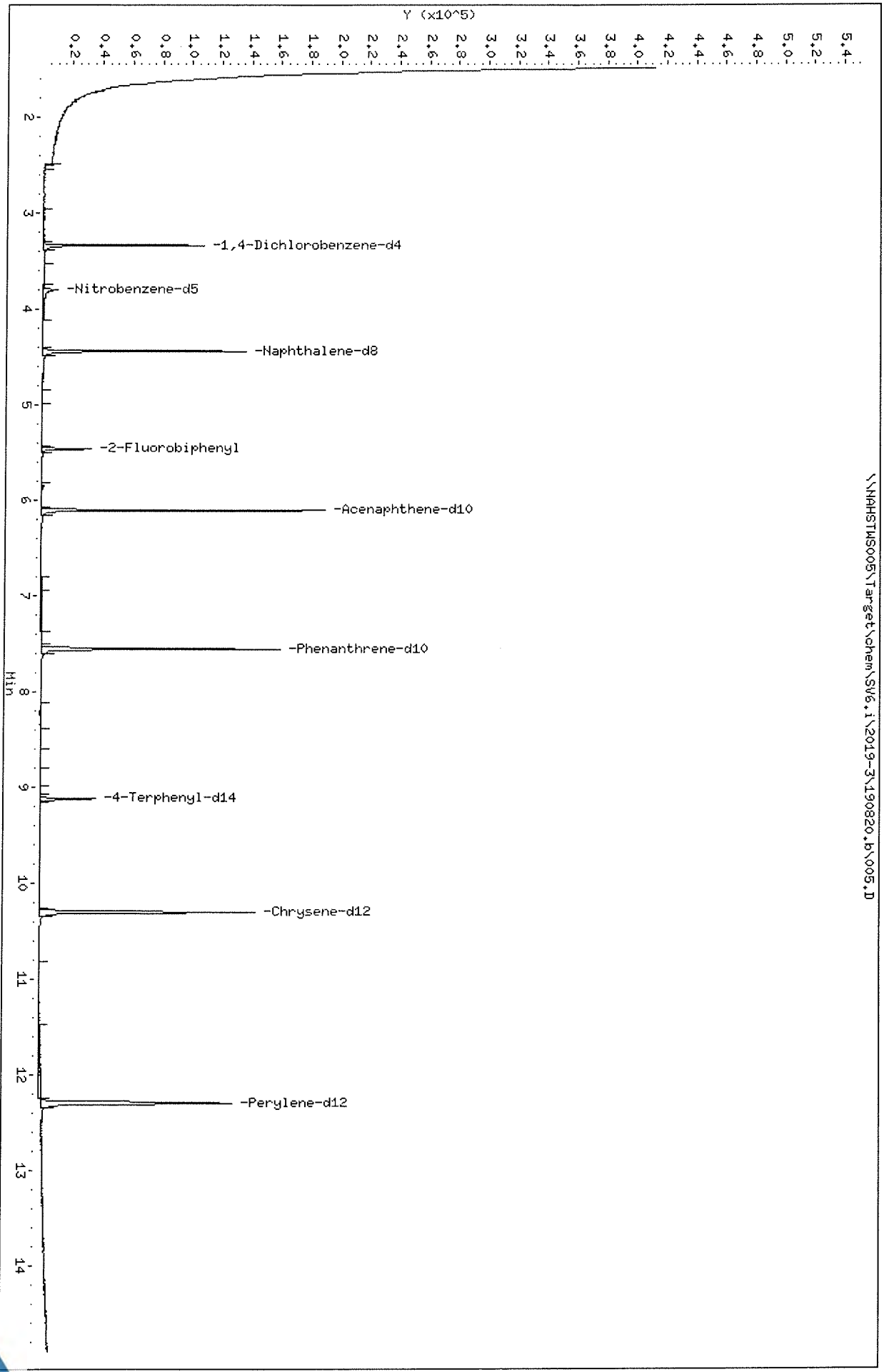
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	33546	0.10000		(aQH)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	136953	0.10000		(QH)
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	10387	0.03000		(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	81893	0.10000		(QH)
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.868)	30574	0.03000		(aQ)
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	160375	0.10000		(Q)
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	153711	0.10000		(QH)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.849)	36860	0.03000		(aQH)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	170856	0.10000		(QM)
1 1,4-Dioxane	58	1.652	1.612	(0.468)	666	0.03000		(aH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D
Date : 20-AUG-2019 10:13
Client ID: SIMDX-0.03
Sample Info: SIMDX-0.03;SIMDX-0.03
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Lab Smp Id: SIMDX-0.05 Client Smp ID: SIMDX-0.05
Inj Date : 20-AUG-2019 10:32 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.05;SIMDX-0.05
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:13 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

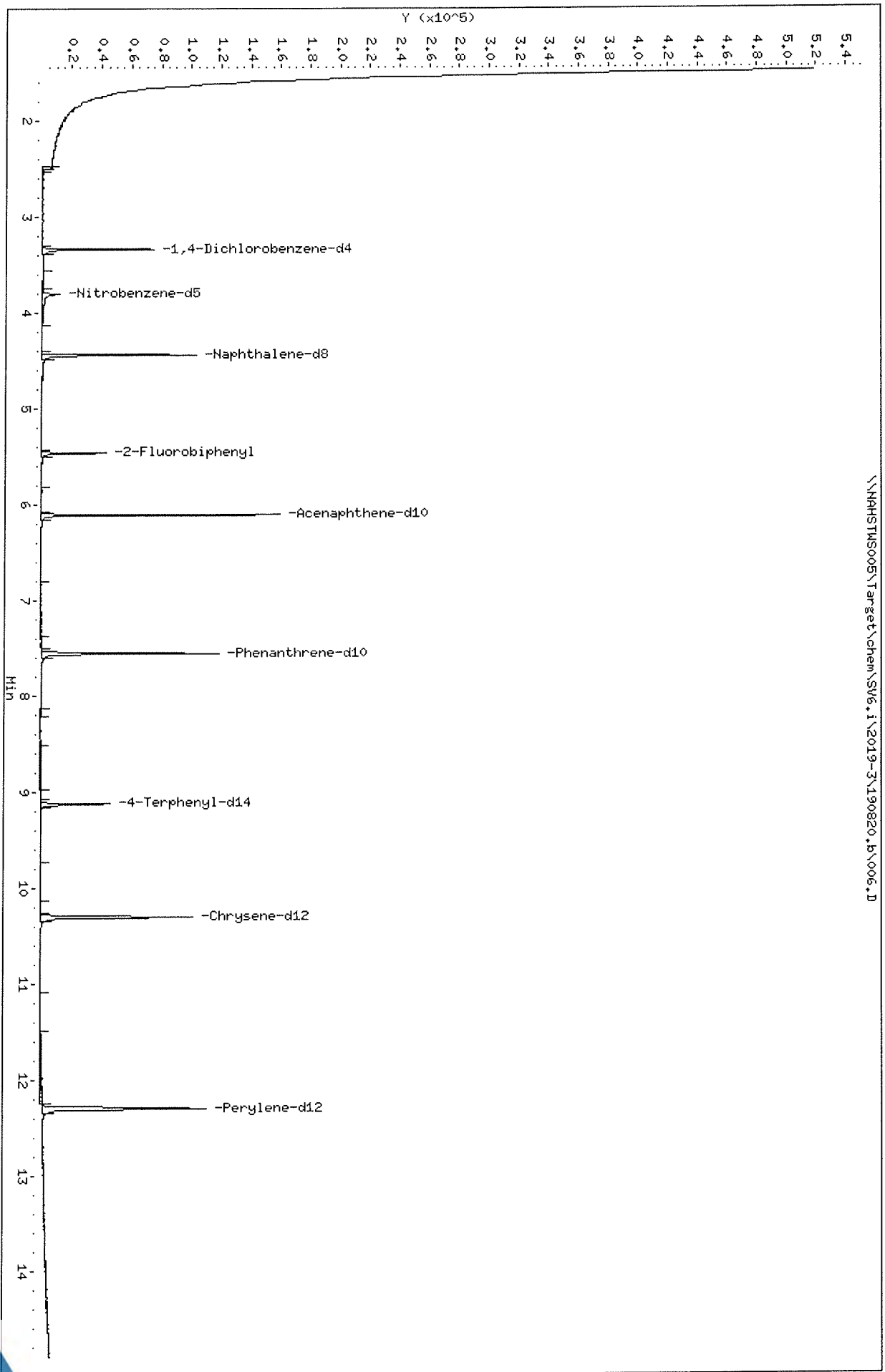
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	25816	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	94844	0.10000	(M)
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	11773	0.05000	0.04910(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	61276	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	35405	0.05000	0.04643
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	119311	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	113920	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	45770	0.05000	0.05026
* 198 Perylene-d12	264	12.292	12.297	(1.000)	125817	0.10000	
1 1,4-Dioxane	58	1.641	1.612	(0.492)	803	0.05000	0.04700(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Date : 20-AUG-2019 10:32
Client ID: SIMDX-0.05
Sample Info: SIMDX-0.05;SIMDX-0.05
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Lab Smp Id: SIMDX-0.08 Client Smp ID: SIMDX-0.08
Inj Date : 20-AUG-2019 10:51 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.08;SIMDX-0.08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:32 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

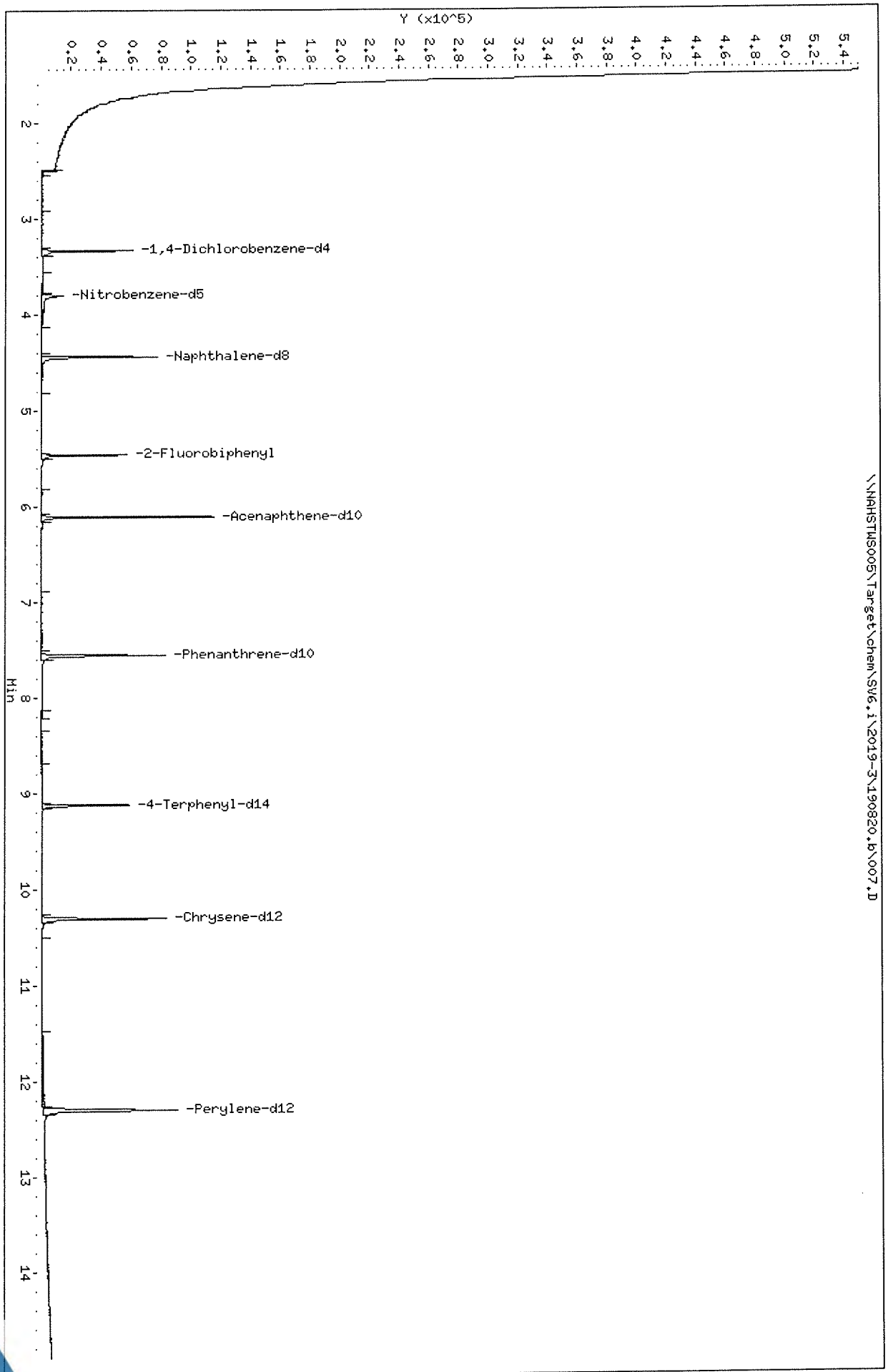
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	21258	0.10000		(a)
* 45 Naphthalene-d8	136	4.442	4.442	(1.000)	78809	0.10000		
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	14821	0.08000	0.07202	(M)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	46108	0.10000		
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	41986	0.08000	0.07671	
* 126 Phenanthrene-d10	188	7.555	7.555	(1.000)	88651	0.10000		
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	83555	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.125	9.125	(0.889)	54489	0.08000	0.07908	
* 198 Perylene-d12	264	12.297	12.297	(1.000)	95521	0.10000		
1 1,4-Dioxane	58	1.612	1.612	(0.483)	1060	0.08000	0.07857	(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Date : 20-AUG-2019 10:51
Client ID: SIMDX-0.08
Sample Info: SIMDX-0.08;SIMDX-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Lab Smp Id: SIMDX-0.1 Client Smp ID: SIMDX-0.1
Inj Date : 20-AUG-2019 11:10 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.1;SIMDX-0.1
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:51 Cal File: 007.D
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

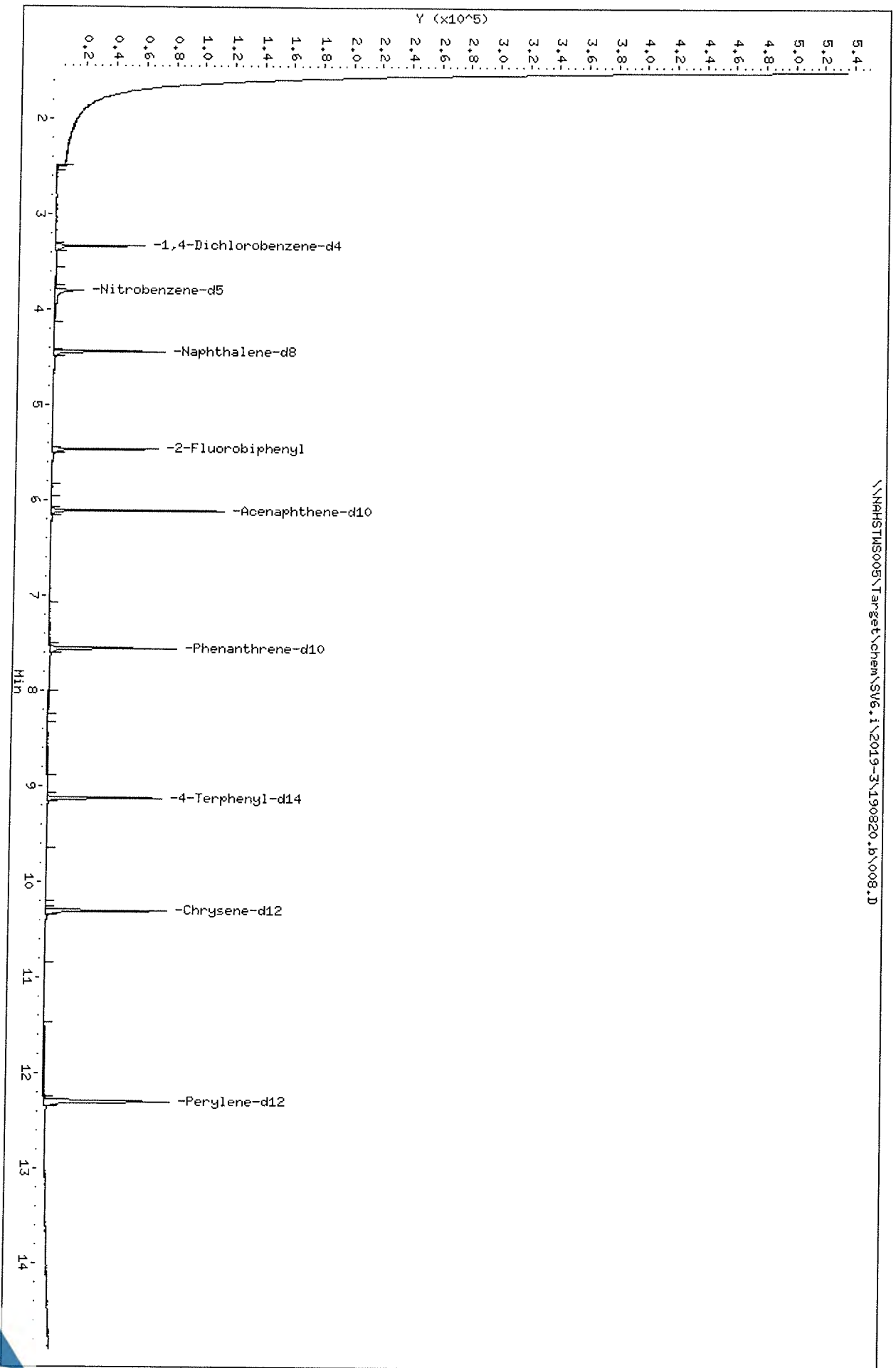
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	18520	0.10000	(a)
* 45 Naphthalene-d8	136	4.443	4.442	(1.000)	77644	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	19915	0.10000	0.1045(M)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	45687	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	54630	0.10000	0.1014
* 126 Phenanthrene-d10	188	7.555	7.555	(1.000)	94205	0.10000	
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	87080	0.10000	
$ 158 4-Terphenyl-d14	244	9.126	9.125	(0.886)	70350	0.10000	0.1002
* 198 Perylene-d12	264	12.297	12.297	(1.000)	96547	0.10000	
1 1,4-Dioxane	58	1.612	1.612	(0.484)	1224	0.10000	0.1040(aM)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Date : 20-AUG-2019 11:10
Client ID: SIHDX-0.1
Sample Info: SIHDX-0.1;SIHDX-0.1
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Lab Smp Id: SIMDX-0.15 Client Smp ID: SIMDX-0.15
Inj Date : 20-AUG-2019 11:29 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.15;SIMDX-0.15
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:10 Cal File: 008.D
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

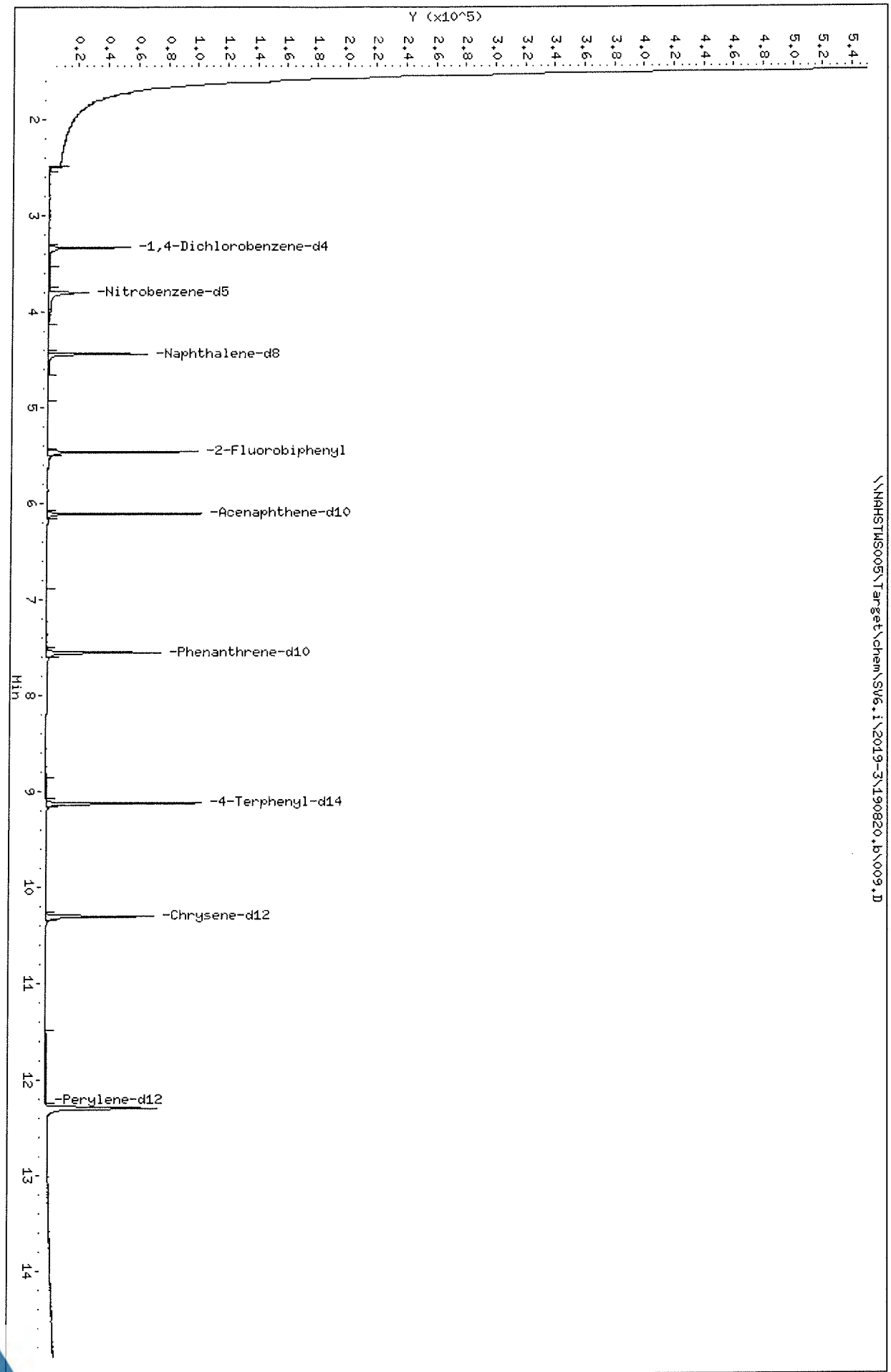
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	18250	0.10000	(a)
* 45 Naphthalene-d8	136	4.443	4.442	(1.000)	69930	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	26336	0.15000	0.1518(AM)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	42317	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	74789	0.15000	0.1493
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	87386	0.10000	
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	79255	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.885)	97729	0.15000	0.1529(A)
* 198 Perylene-d12	264	12.297	12.297	(1.000)	88054	0.10000	
1 1,4-Dioxane	58	1.612	1.612	(0.484)	1583	0.15000	0.1351(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Date : 20-AUG-2019 11:29
Client ID: SIMDX-0.15
Sample Info: SIMDX-0.15;SIMDX-0.15
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Lab Smp Id: SIMDX-0.2 Client Smp ID: SIMDX-0.2
Inj Date : 20-AUG-2019 11:49 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.2;SIMDX-0.2
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

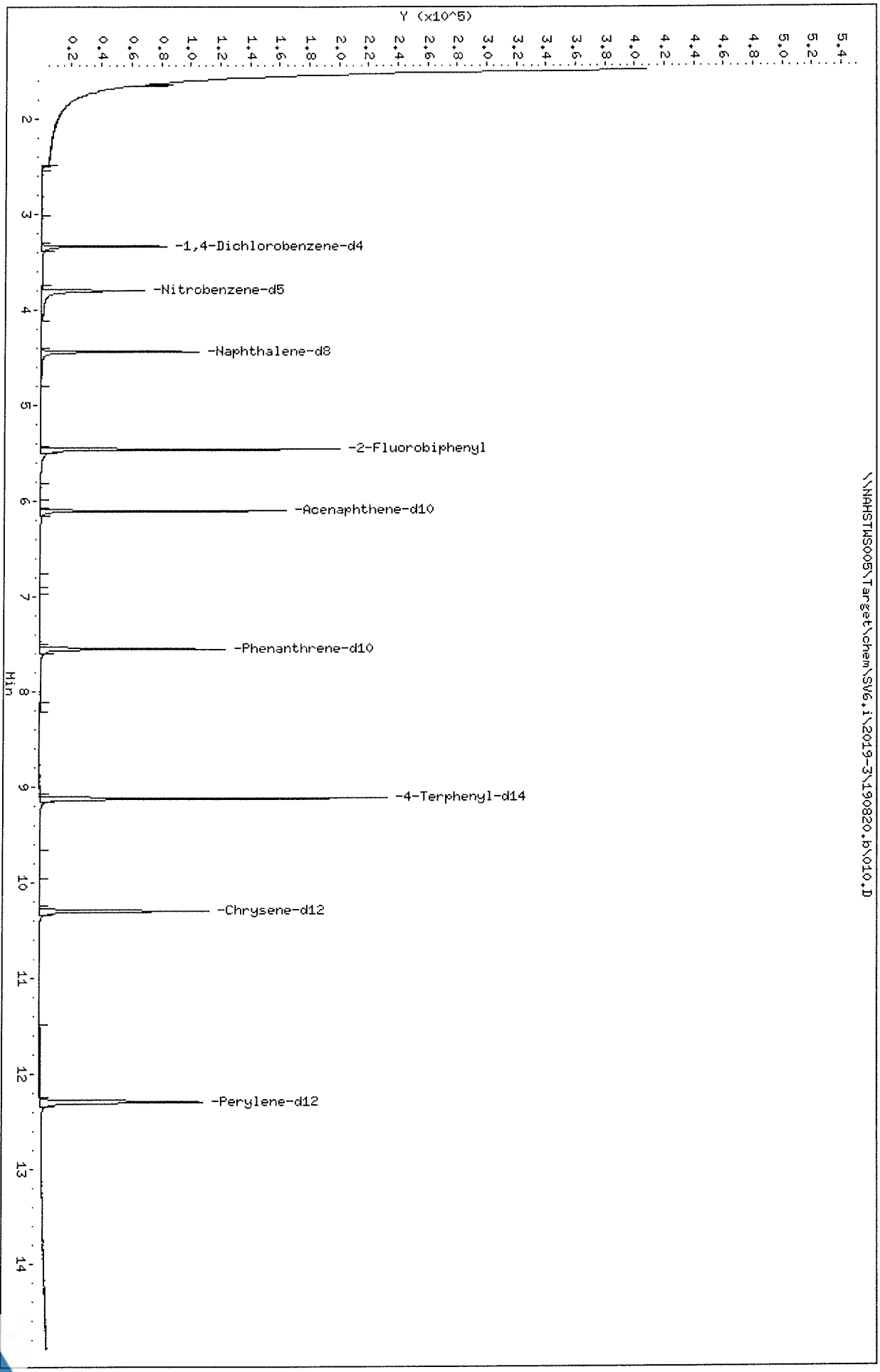
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	29701	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	114404	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	68087	0.20000	0.2331(AM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	67885	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	162627	0.20000	0.2022(AM)
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	130309	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	128572	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	222096	0.20000	0.2128(A)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	144072	0.10000	
1 1,4-Dioxane	58	1.648	1.612	(0.494)	3958	0.20000	0.2144

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Date : 20-AUG-2019 11:49
Client ID: SIMDX-0.2
Sample Info: SIMDX-0.2;SIMDX-0.2
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Lab Smp Id: SIMDX-0.5 Client Smp ID: SIMDX-0.5
Inj Date : 20-AUG-2019 12:08 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.5;SIMDX-0.5
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 11 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

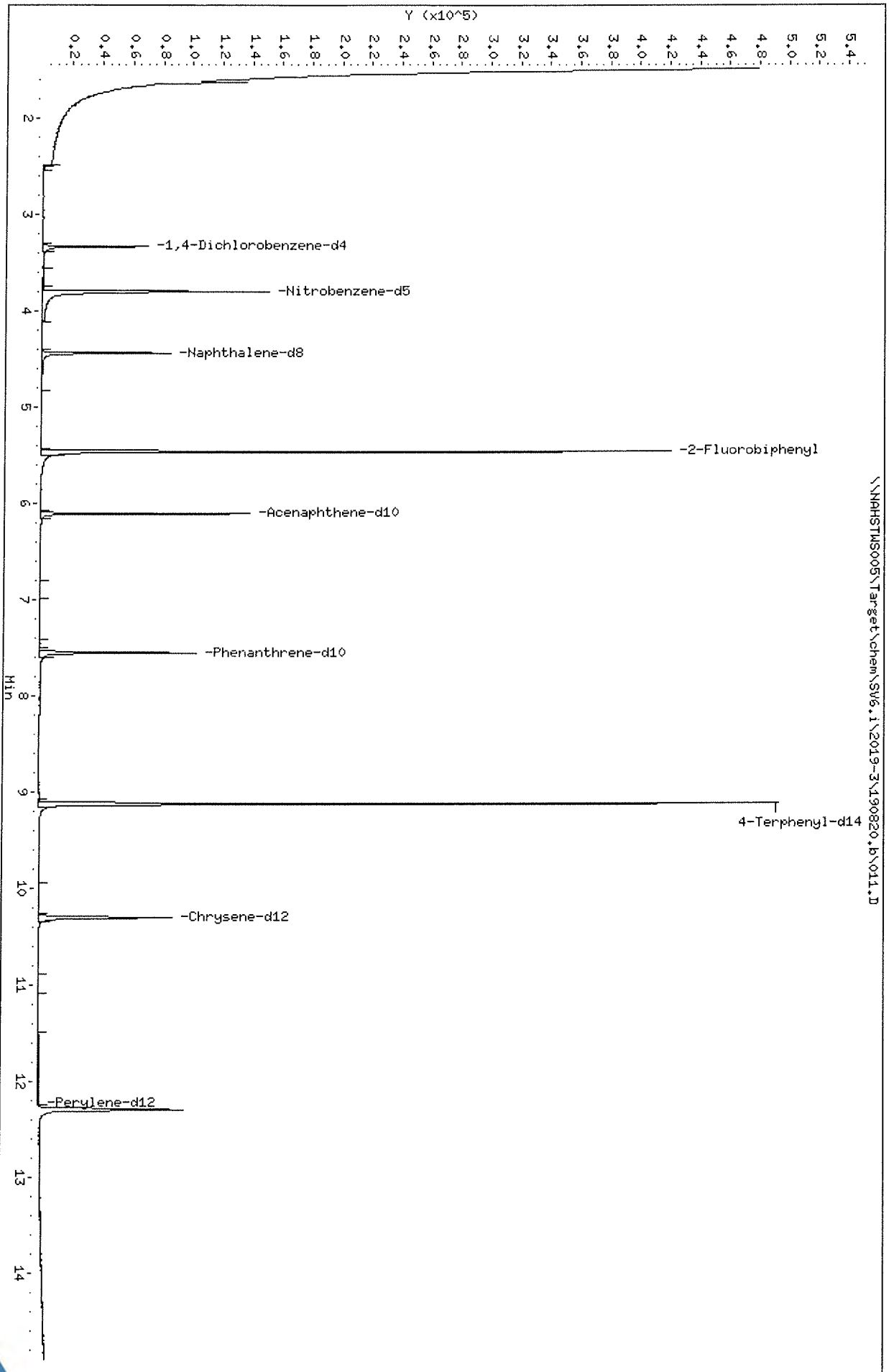
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	24883	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	93180	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	134339	0.50000	0.5521(AM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	55005	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.895)	328985	0.50000	0.5038(A)
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	104825	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	99506	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.894)	408835	0.50000	0.4982(A)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	114944	0.10000	
1 1,4-Dioxane	58	1.630	1.612	(0.489)	7255	0.50000	0.4594(M)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Date : 20-AUG-2019 12:08
Client ID: SIMDX-0.5
Sample Info: SIMDX-0.5;SIMDX-0.5
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D
Lab Smp Id: SIMDX-0.01 Client Smp ID: SIMDX-0.01
Inj Date : 20-AUG-2019 12:27 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.01;SIMDX-0.01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:49 Cal File: 010.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

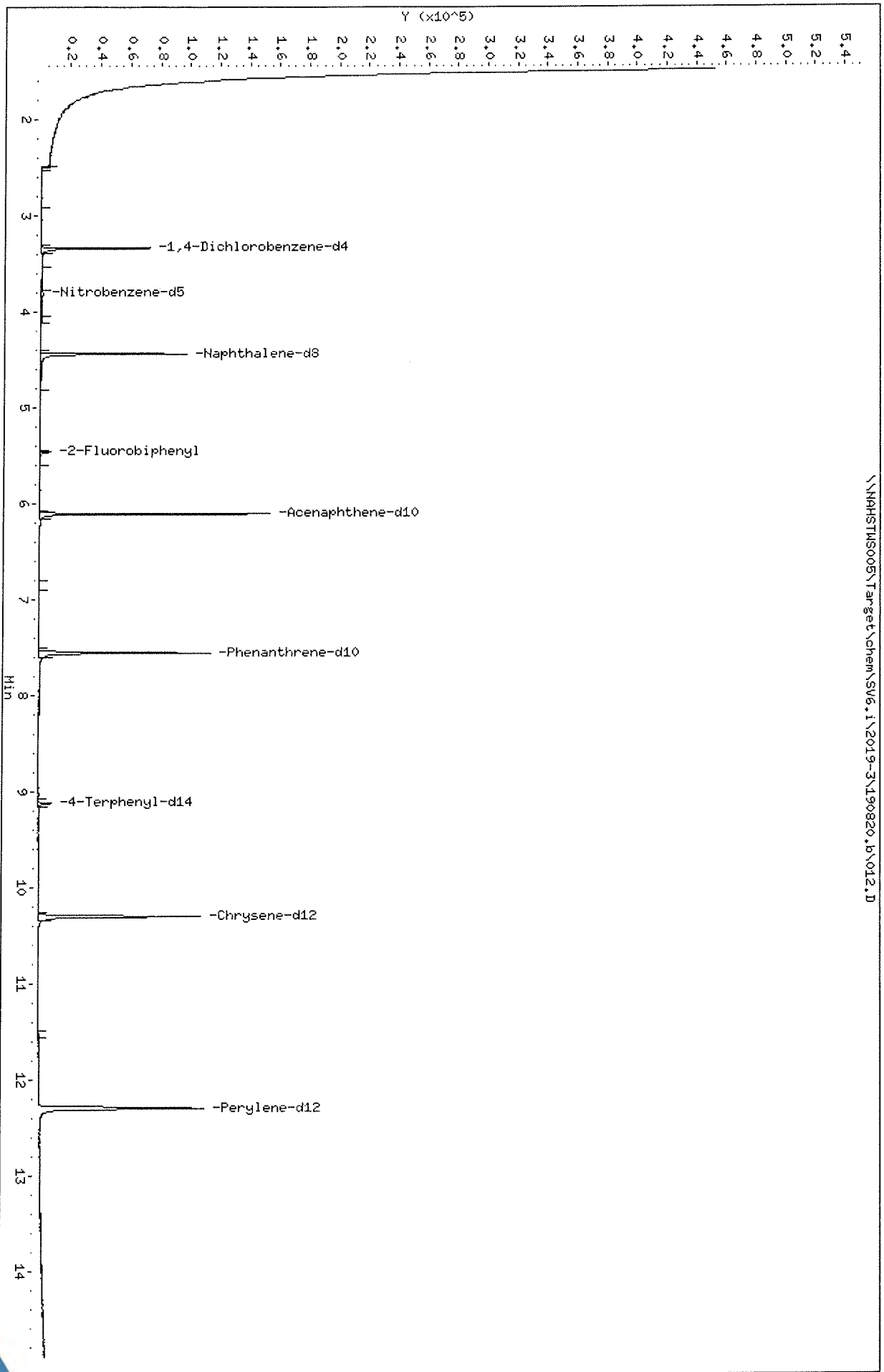
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	26864	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	99904	0.10000	
$ 33 Nitrobenzene-d5	82	3.806	3.801	(0.857)	2590	0.01000	0.009919(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	62399	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	7426	0.01000	0.01003
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	119188	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	118702	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	10251	0.01000	0.01054
* 198 Perylene-d12	264	12.292	12.297	(1.000)	130498	0.10000	
1 1,4-Dioxane	58	1.637	1.612	(0.490)	183	0.01000	0.01085(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D
Date : 20-AUG-2019 12:27
Client ID: SIMDX-0.01
Sample Info: SIMDX-0.01;SIMDX-0.01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

\\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Lab Smp Id: SIMDX-ICV Client Smp ID: SIMDX-ICV
Inj Date : 20-AUG-2019 12:46 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-ICV;SIMDX-ICV
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 13 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

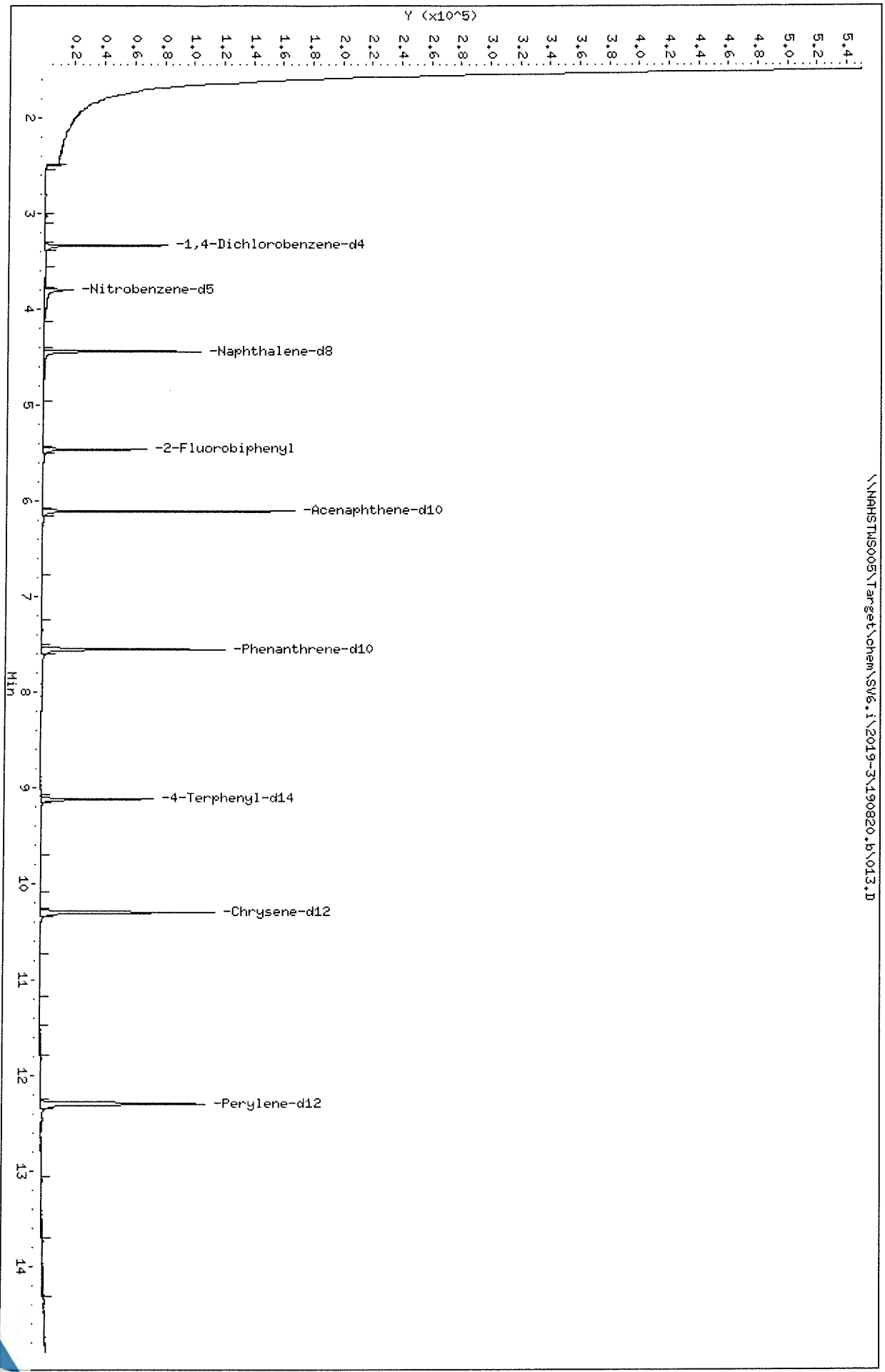
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	28781	0.10000		(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	106230	0.10000		
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	21420	0.07722	0.07722	(M)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	65527	0.10000		
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.895)	55855	0.07181	0.07181	
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	124804	0.10000		
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	120805	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.896)	70816	0.07109	0.07109	
* 198 Perylene-d12	264	12.292	12.297	(1.000)	136762	0.10000		
1 1,4-Dioxane	58	1.634	1.612	(0.489)	1190	0.06515	0.06515	(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Date : 20-AUG-2019 12:46
Client ID: SIMDX-ICV
Sample Info: SIMDX-ICV;SIMDX-ICV
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



SV06 -Logbook

Batch: 41531 **Analyst:** Andrew Neir

Date: 08-27-2020 **Reviewer:**

Method: 8270DLL/ LVI **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	08-27-2020 01:48 pm	1.00			001.D		Y	NA
2	SLSTD-2.5	SAMP	08-27-2020 01:59 pm	1.00			002.D		Y	NA
3	SLSTD-2.5	SAMP	08-27-2020 02:21 pm	1.00			003.D		Y	NA
4	LVIPAH-0.025	CCV	08-27-2020 02:45 pm	1.00			004.D		Y	NA
5	DXSIM-0.08	CCV	08-27-2020 03:05 pm	1.00			005.D		Y	NA
6	MBLK-156705	MBLK	08-27-2020 03:27 pm	1.00	33.00 mL	2.00 mL	006.D	Liquid	Y	NA
7	LCS-156705	LCS	08-27-2020 03:46 pm	1.00	33.00 mL	2.00 mL	007.D	Liquid	Y	NA
8	LCSD-156705	LCSD	08-27-2020 04:06 pm	1.00	33.00 mL	2.00 mL	008.D	Liquid	Y	NA
9	HS20080998-03	SAMP	08-27-2020 04:49 pm	1.00	33.00 mL	2.00 mL	009.D	Liquid	Y	NA
10	HS20081086-01	SAMP	08-27-2020 05:08 pm	1.00	33.00 mL	2.00 mL	010.D	Liquid	Y	NA
11	HS20080534-01	SAMP	08-27-2020 05:28 pm	100.0(	33.00 mL	2.00 mL	011.D	Liquid	Y	NA
12	MBLK-156460	MBLK	08-27-2020 05:45 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-156460	LCS	08-27-2020 06:04 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-156460	LCSD	08-27-2020 06:23 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS20080473-01	SAMP	08-27-2020 06:42 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS20080473-01	SAMP	08-27-2020 07:01 pm	100.0(	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	DXSIM-0.08	SAMP	08-27-2020 07:20 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS20080802-01	SAMP	08-27-2020 07:40 pm	100000.	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS20080802-05	SAMP	08-27-2020 07:59 pm	50000.(	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS20081086-01	SAMP	08-27-2020 08:21 pm	10.00	33.00 mL	2.00 mL	020.D	Liquid	Y	NA
21	HS20081086-01	SAMP	08-27-2020 08:41 pm	100.0(	33.00 mL	2.00 mL	021.D	Liquid	Y	NA
22	HS20081086-01	SAMP	08-27-2020 09:00 pm	1000.0	33.00 mL	2.00 mL	022.D	Liquid	Y	NA
23	HS20081086-01	SAMP	08-27-2020 09:20 pm	10000.(	33.00 mL	2.00 mL	023.D	Liquid	Y	NA
24	HS20080802-01	SAMP	08-27-2020 09:37 pm	100000.	1000.00 mL	1.00 mL	024.D	Liquid	Y	NA
25	HS20080802-05	SAMP	08-27-2020 09:56 pm	50000.(	1000.00 mL	1.00 mL	025.D	Liquid	Y	NA

Chemical	Value
IS ID	311142-01/ 3111846-01
CAL STD ID	3111832-06/3111841-04
DFTPP ID	3111843-07
PCP Tailing	1.30
Benz. Tailing	1.02
Routine SOP Maintenance	ACN

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 #	S3 (FBP)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	MBLK-156460	123	72	90						0
02	LCS-156460	95	91	85						0
03	LCSD-156460	98	70	88						0
04	HS20080473-01	0D	0D	0D						0
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
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24										
25										
26										
27										
28										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(40-140)
S2 = 4-Terphenyl-d14	(40-140)
S3 (FBP) = 2-Fluorobiphenyl	(40-140)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID: 001 DFTPP Injection Date: 08/27/20

Instrument ID: SV6 DFTPP Injection Time: 1348

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.1
68	Less than 2.0% of mass 69	0.9 (2.0)1
69	Mass 69 relative abundance	44.3
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	53.2
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	28.1
365	1.0 - 100.0% of mass 198	5.1
441	Present, but less than mass 443	19.8
442	50.0 - 150.0% of mass 198	129.9
443	15.0 - 24.0% of mass 442	25.2 (19.4)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	DXSIM-0.08	DXSIM-0.08	005	08/27/20	1505
02	MBLK-156460	MBLK-156460	012	08/27/20	1745
03	LCS-156460	LCS-156460	013	08/27/20	1804
04	LCSD-156460	LCSD-156460	014	08/27/20	1823
05	HS20080473-0	HS20080473-01	016	08/27/20	1901
06	DXSIM-0.08	DXSIM-0.08	017	08/27/20	1920
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: SV6 Calibration Date: 08/27/20 Time: 1505

Lab File ID: 005 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.3e-002	6.72e-002	0.01	6.67	20.00	AVRG
Nitrobenzene-d5	0.2610000	0.2567728	0.01	-1.62	20.00	AVRG
4-Terphenyl-d14	0.8250000	0.6827605	0.01	-17.24	20.00	AVRG
2-Fluorobiphenyl	1.1870000	1.0109734	0.01	-14.83	20.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: SV6 Calibration Date: 08/27/20 Time: 1920

Lab File ID: 017 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.3e-002	6.55e-002	0.01	3.97	50.00	AVRG
Nitrobenzene-d5	0.2610000	0.2323984	0.01	-10.96	50.00	AVRG
4-Terphenyl-d14	0.8250000	0.7469512	0.01	-9.46	50.00	AVRG
2-Fluorobiphenyl	1.1870000	1.2914881	0.01	8.80	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID (Standard): 005 Date Analyzed: 08/27/20

Instrument ID: SV6 Time Analyzed: 1505

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	6140	3.45	30674	4.57	16745	6.24
	UPPER LIMIT	12280	3.95	61348	5.07	33490	6.74
	LOWER LIMIT	3070	2.95	15337	4.07	8373	5.74
	CLIENT SAMPLE NO.						
01	MBLK-156460	8605	3.46	30843	4.57	19108	6.24
02	LCS-156460	7572	3.45	25132	4.57	14299	6.24
03	LCSD-156460	8541	3.45	31880	4.56	16446	6.24
04	HS20080473-01	5594	3.45	17767	4.56	11785	6.24
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID (Standard): 005 Date Analyzed: 08/27/20

Instrument ID: SV6 Time Analyzed: 1505

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	37983		7.69		36541		10.50		38581		12.55	
	UPPER LIMIT	75966		8.19		73082		11.00		77162		13.05	
	LOWER LIMIT	18992		7.19		18271		10.00		19291		12.05	
	CLIENT SAMPLE NO.												
01	MBLK-156460	34651		7.69		34680		10.50		38038		12.55	
02	LCS-156460	25839		7.69		19020		10.50		31610		12.54	
03	LCSD-156460	34838		7.69		34541		10.50		37700		12.54	
04	HS20080473-01	21415		7.69		18659		10.50		20720		12.54	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\001.D

Date : 27-AUG-2020 13:48

Client ID: DFTPP

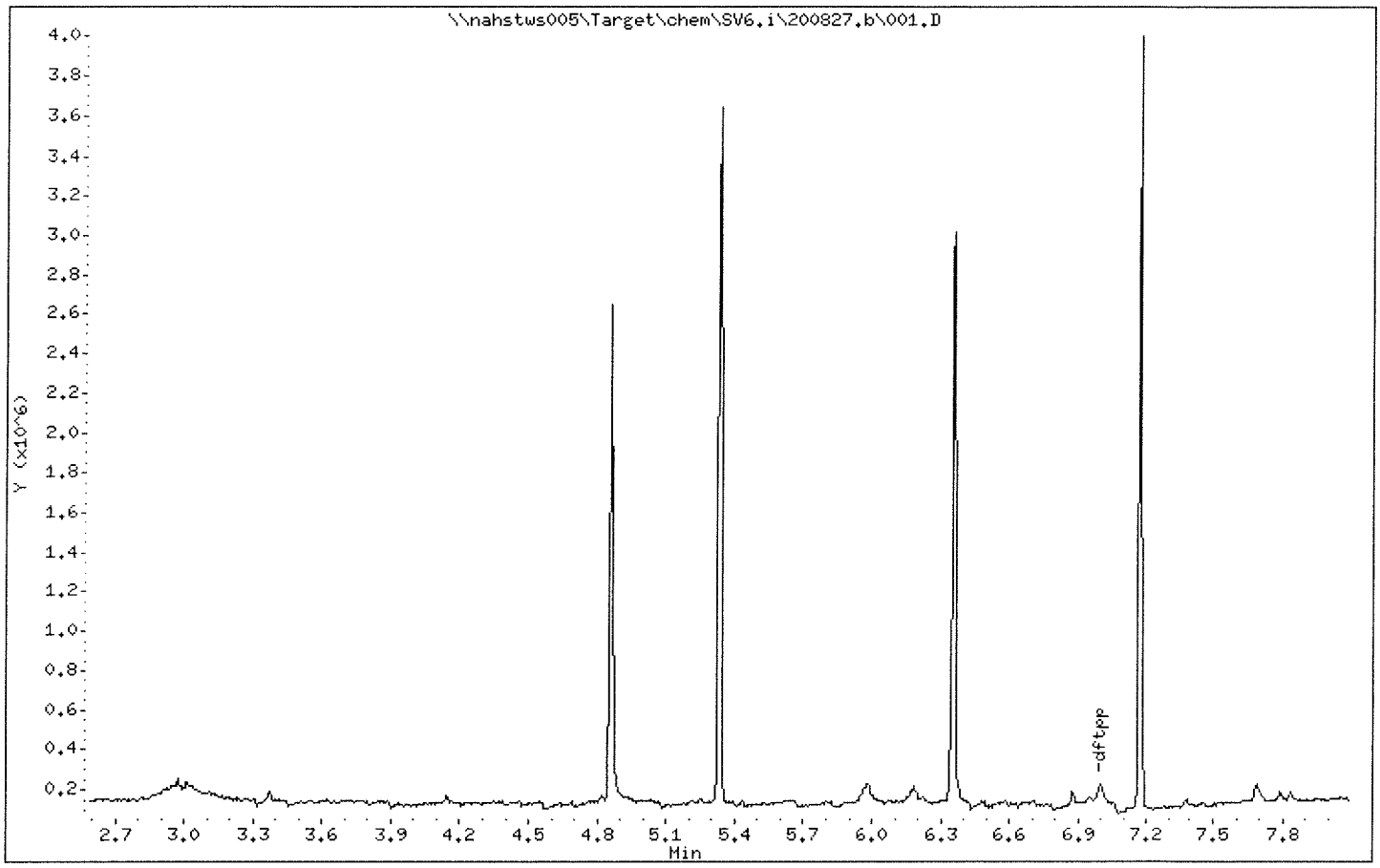
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\200827.b\001.D

Date : 27-AUG-2020 13:48

Client ID: DFTPP

Instrument: SV6.i

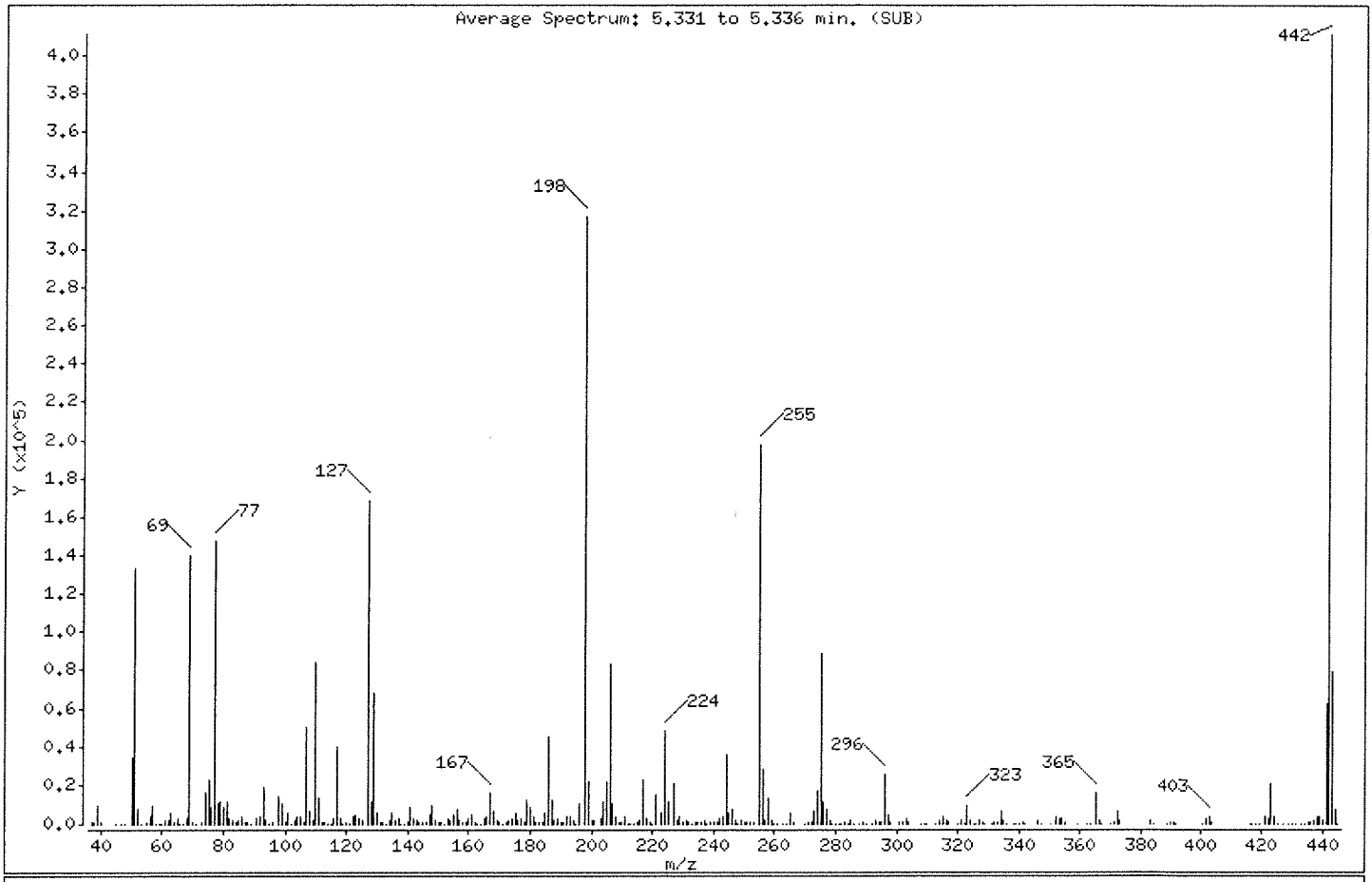
Sample Info: DFTPP;DFTPP;3;;DFTPP

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	42.10
68	Less than 2.00% of mass 69	0.88 (1.99)
69	Mass 69 relative abundance	44.33
70	Less than 2.00% of mass 69	0.30 (0.67)
127	10.00 - 80.00% of mass 198	53.22
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	28.10
365	1.00 - 100.00% of mass 198	5.14
441	Present, but less than mass 443	19.76
442	50.00 - 150.00% of mass 198	129.88
443	15.00 - 24.00% of mass 442	25.17 (19.38)

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\001.D

Date : 27-AUG-2020 13:48

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: 5.331 to 5.336 min. (SUB)
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	758	130.00	6024	214.00	210	310.00	249
38.00	1246	131.00	1125	215.00	1373	313.00	145
39.00	9238	132.00	648	216.00	2167	314.00	1503
40.00	667	133.00	52	217.00	22696	315.00	3778
45.00	170	134.00	2327	218.00	2825	316.00	1976
47.00	59	135.00	5580	219.00	644	317.00	534
48.00	53	136.00	2270	220.00	329	320.00	148
50.00	34288	137.00	3148	221.00	14716	321.00	1695
51.00	133376	138.00	372	223.00	5752	322.00	390
52.00	7132	139.00	327	224.00	48344	323.00	9373
53.00	281	140.00	776	225.00	11227	324.00	1958
55.00	549	141.00	8754	227.00	21032	325.00	314
56.00	4072	142.00	2818	228.00	2347	326.00	88
57.00	9147	143.00	1534	229.00	3700	327.00	1983
58.00	351	144.00	597	230.00	724	328.00	922
59.00	81	145.00	761	231.00	1490	329.00	295
60.00	81	146.00	1350	232.00	587	331.00	108
61.00	1729	147.00	4762	233.00	299	332.00	520
62.00	2024	148.00	9377	234.00	1091	333.00	1055
63.00	5358	149.00	1818	235.00	1294	334.00	6523
64.00	1026	150.00	744	236.00	1076	335.00	1571
65.00	2769	151.00	1211	237.00	1723	336.00	92
66.00	77	152.00	300	238.00	108	338.00	89
67.00	334	153.00	3224	239.00	750	339.00	101
68.00	2800	154.00	2056	240.00	504	340.00	108
69.00	140416	155.00	4998	241.00	1261	341.00	1350
70.00	946	156.00	7153	242.00	3131	342.00	407
71.00	172	157.00	1507	243.00	4015	346.00	2215
73.00	1077	158.00	1417	244.00	36240	347.00	353
74.00	15786	159.00	1322	245.00	5288	350.00	287
75.00	22928	160.00	2949	246.00	7742	352.00	4119
76.00	8205	161.00	4461	247.00	1529	353.00	2564
77.00	148032	162.00	1112	248.00	225	354.00	3004
78.00	10399	163.00	351	249.00	1806	355.00	782
79.00	11087	164.00	283	250.00	482	359.00	289

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\001.D

Date : 27-AUG-2020 13:48

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: 5.331 to 5.336 min. (SUB)
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8531	165.00	3087	251.00	960	362.00	116
81.00	11108	166.00	3476	252.00	751	363.00	272
82.00	2810	167.00	15729	253.00	540	365.00	16272
83.00	1913	168.00	6206	255.00	198080	366.00	1929
84.00	1164	169.00	1618	256.00	28432	367.00	195
85.00	1759	170.00	972	257.00	2256	370.00	301
86.00	3704	171.00	365	258.00	13247	371.00	1151
87.00	1109	172.00	1404	259.00	2228	372.00	6582
88.00	944	173.00	2167	260.00	443	373.00	1513
89.00	353	174.00	3107	261.00	420	383.00	1769
91.00	2745	175.00	5812	263.00	347	384.00	187
92.00	3488	176.00	2251	264.00	33	389.00	88
93.00	18920	177.00	3116	265.00	5399	390.00	979
94.00	1550	178.00	1261	266.00	1069	391.00	709
95.00	338	179.00	12450	270.00	451	392.00	378
96.00	1131	180.00	8442	271.00	692	401.00	292
98.00	14603	181.00	3840	272.00	585	402.00	2427
99.00	10501	182.00	909	273.00	6800	403.00	3451
100.00	890	183.00	539	274.00	17000	404.00	1273
101.00	5927	184.00	1016	275.00	89032	416.00	92
102.00	386	185.00	5967	276.00	11564	417.00	100
103.00	2204	186.00	44984	277.00	7774	418.00	82
104.00	4218	187.00	12748	278.00	1488	419.00	327
105.00	3905	188.00	1752	279.00	284	421.00	3742
106.00	1183	189.00	2486	280.00	111	422.00	2806
107.00	50448	190.00	744	281.00	114	423.00	21088
108.00	6870	191.00	1356	282.00	115	424.00	4033
109.00	1828	192.00	3458	283.00	961	425.00	389
110.00	84248	193.00	4035	284.00	413	427.00	123
111.00	13270	194.00	1607	285.00	1520	429.00	113
112.00	1415	195.00	345	286.00	337	430.00	192
113.00	655	196.00	9957	288.00	133	431.00	127
114.00	81	198.00	316864	289.00	690	433.00	385
115.00	92	199.00	21304	290.00	334	434.00	463
116.00	3299	200.00	1789	292.00	259	435.00	589

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\001.D

Date : 27-AUG-2020 13:48

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: 5.331 to 5.336 min. (SUB)
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	40032	201.00	1764	293.00	1663	436.00	1074
118.00	2873	203.00	2781	294.00	902	437.00	1598
119.00	146	204.00	11421	295.00	513	438.00	3647
120.00	629	205.00	21800	296.00	25608	439.00	4034
121.00	397	206.00	83464	297.00	4296	440.00	1777
122.00	3780	207.00	10201	298.00	480	441.00	62616
123.00	4940	208.00	3528	301.00	524	442.00	411520
124.00	2573	209.00	817	302.00	829	443.00	79744
125.00	2275	210.00	1396	303.00	2969	444.00	7564
127.00	168640	211.00	3967	304.00	906	445.00	468
128.00	11452	212.00	378	308.00	334		
129.00	67904	213.00	178	309.00	311		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\005.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 27-AUG-2020 15:05 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIM.m
Meth Date : 14-Sep-2020 13:11 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

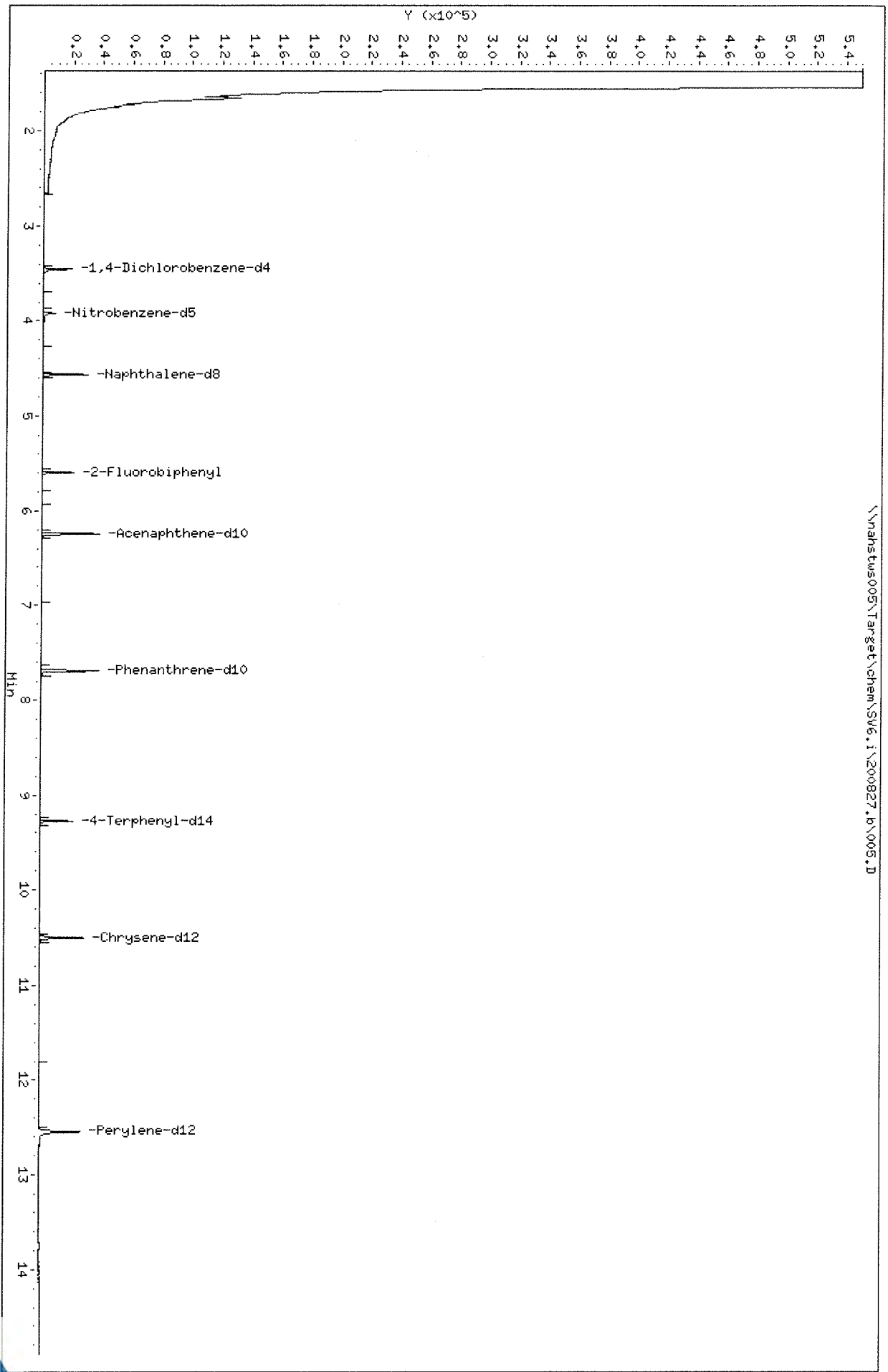
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.450	3.450	(1.000)	6140	0.10000		(aM)
* 45 Naphthalene-d8	136	4.567	4.567	(1.000)	30674	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.922	3.922	(0.859)	6301	0.08000	0.07867	(QM)
* 86 Acenaphthene-d10	164	6.243	6.243	(1.000)	16745	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.591	5.591	(0.896)	13543	0.08000	0.06813	
* 126 Phenanthrene-d10	188	7.693	7.693	(1.000)	37983	0.10000		(M)
* 182 Chrysene-d12	240	10.501	10.501	(1.000)	36541	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.274	9.274	(0.883)	19959	0.08000	0.06624	(M)
* 198 Perylene-d12	264	12.547	12.547	(1.000)	38581	0.10000		(M)
1 1,4-Dioxane	58	1.487	1.487	(0.431)	330	0.08000	0.08469	(aQM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\005.D
Date : 27-AUG-2020 15:05
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\012.D
Lab Smp Id: MBLK-156460 Client Smp ID: MBLK-156460
Inj Date : 27-AUG-2020 17:45 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-156460;MBLK-156460;3;;BLANK
Misc Info : HS20080473;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIM.m
Meth Date : 14-Sep-2020 13:08 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

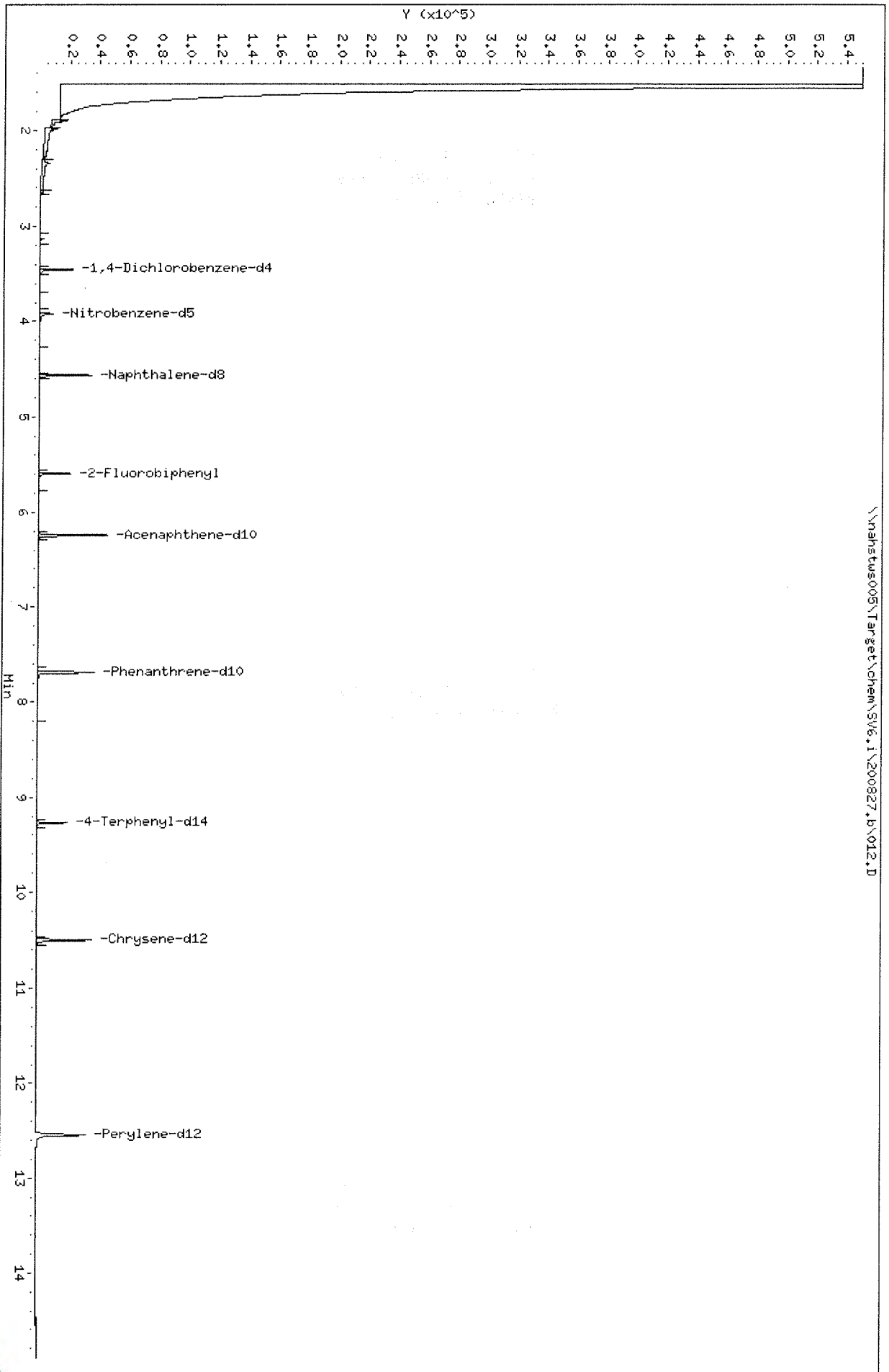
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.455	3.450	(1.000)	8605	0.10000		(a)
* 45 Naphthalene-d8	136	4.566	4.567	(1.000)	30843	0.10000		
$ 33 Nitrobenzene-d5	82	3.922	3.922	(0.859)	7911	0.09823	0.09823	(Q)
* 86 Acenaphthene-d10	164	6.243	6.243	(1.000)	19108	0.10000		
$ 69 2-Fluorobiphenyl	172	5.591	5.591	(0.896)	16257	0.07167	0.07167	
* 126 Phenanthrene-d10	188	7.693	7.693	(1.000)	34651	0.10000		
* 182 Chrysene-d12	240	10.495	10.501	(1.000)	34680	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.269	9.274	(1.000)	16414	0.05740	0.05740	
* 198 Perylene-d12	264	12.547	12.547	(1.000)	38038	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\012.D
Date : 27-AUG-2020 17:45
Client ID: MBLK-156460
Sample Info: MBLK-156460;MBLK-156460;3;;BLANK
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\013.D
Lab Smp Id: LCS-156460 Client Smp ID: LCS-156460
Inj Date : 27-AUG-2020 18:04 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCS-156460;LCS-156460;3;;LCS
Misc Info : HS20080473;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIM.m
Meth Date : 14-Sep-2020 13:08 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

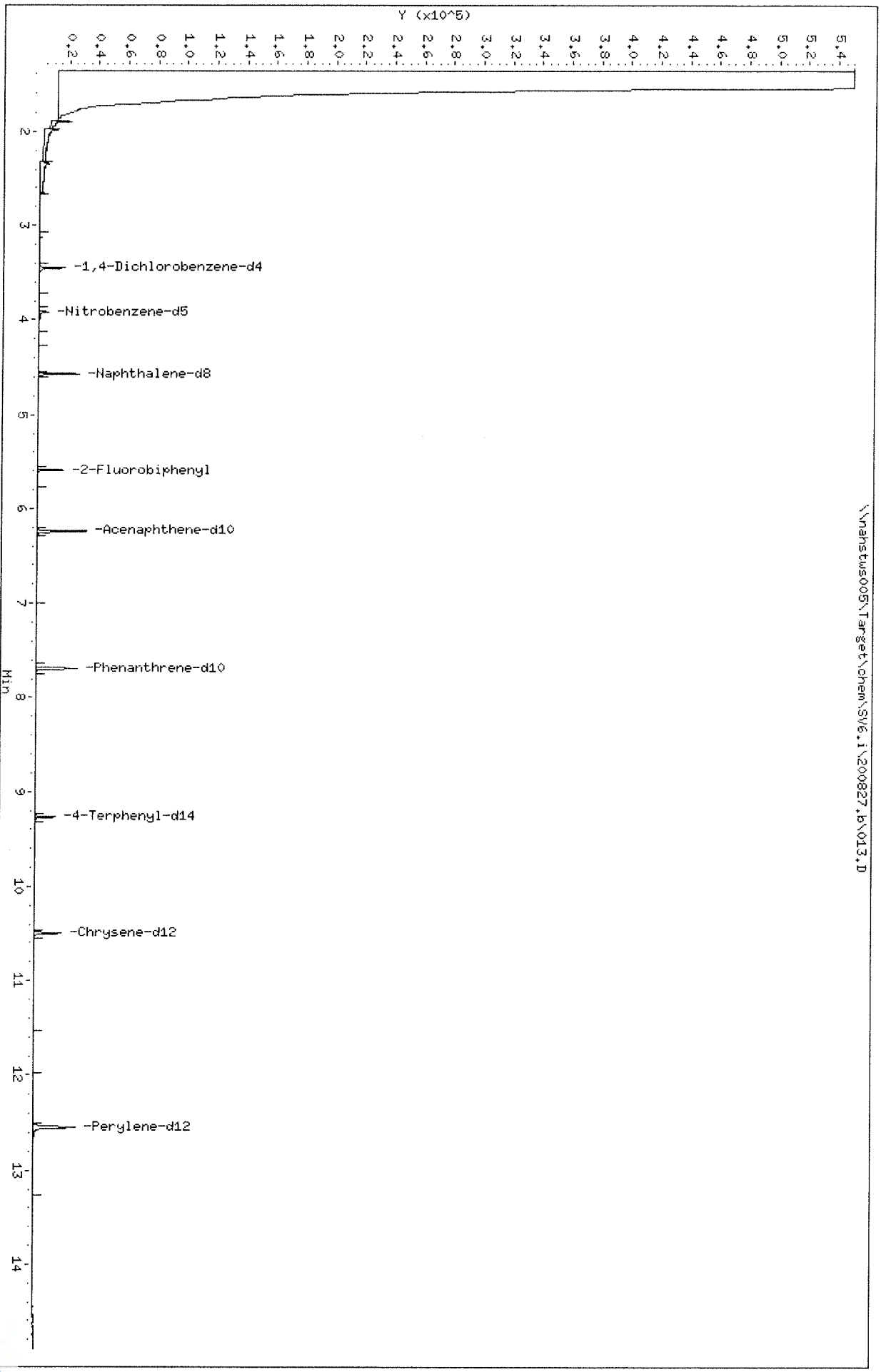
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 20 1,4-Dichlorobenzene-d4	152	3.450	3.450	(1.000)	7572	0.10000	(aM)
* 45 Naphthalene-d8	136	4.566	4.567	(1.000)	25132	0.10000	
$ 33 Nitrobenzene-d5	82	3.922	3.922	(0.859)	5012	0.07638	0.07638(M)
* 86 Acenaphthene-d10	164	6.243	6.243	(1.000)	14299	0.10000	
$ 69 2-Fluorobiphenyl	172	5.591	5.591	(0.896)	11517	0.06785	0.06785
* 126 Phenanthrene-d10	188	7.687	7.693	(1.000)	25839	0.10000	
* 182 Chrysene-d12	240	10.495	10.501	(1.000)	19020	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.269	9.274	(1.000)	11390	0.07262	0.07262
* 198 Perylene-d12	264	12.542	12.547	(1.000)	31610	0.10000	
1 1,4-Dioxane	58	1.487	1.487	(0.431)	423	0.08803	0.08803(aMH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\nahstws005\Target\chem\SV6.i\200827.b\013.D
Date : 27-AUG-2020 18:04
Client ID: LCS-156460
Sample Info: LCS-156460;LCS-156460:3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\014.D
Lab Smp Id: LCSD-156460 Client Smp ID: LCSD-156460
Inj Date : 27-AUG-2020 18:23 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-156460;LCSD-156460;3;;LCSD
Misc Info : HS20080473;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIM.m
Meth Date : 14-Sep-2020 13:08 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 14 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

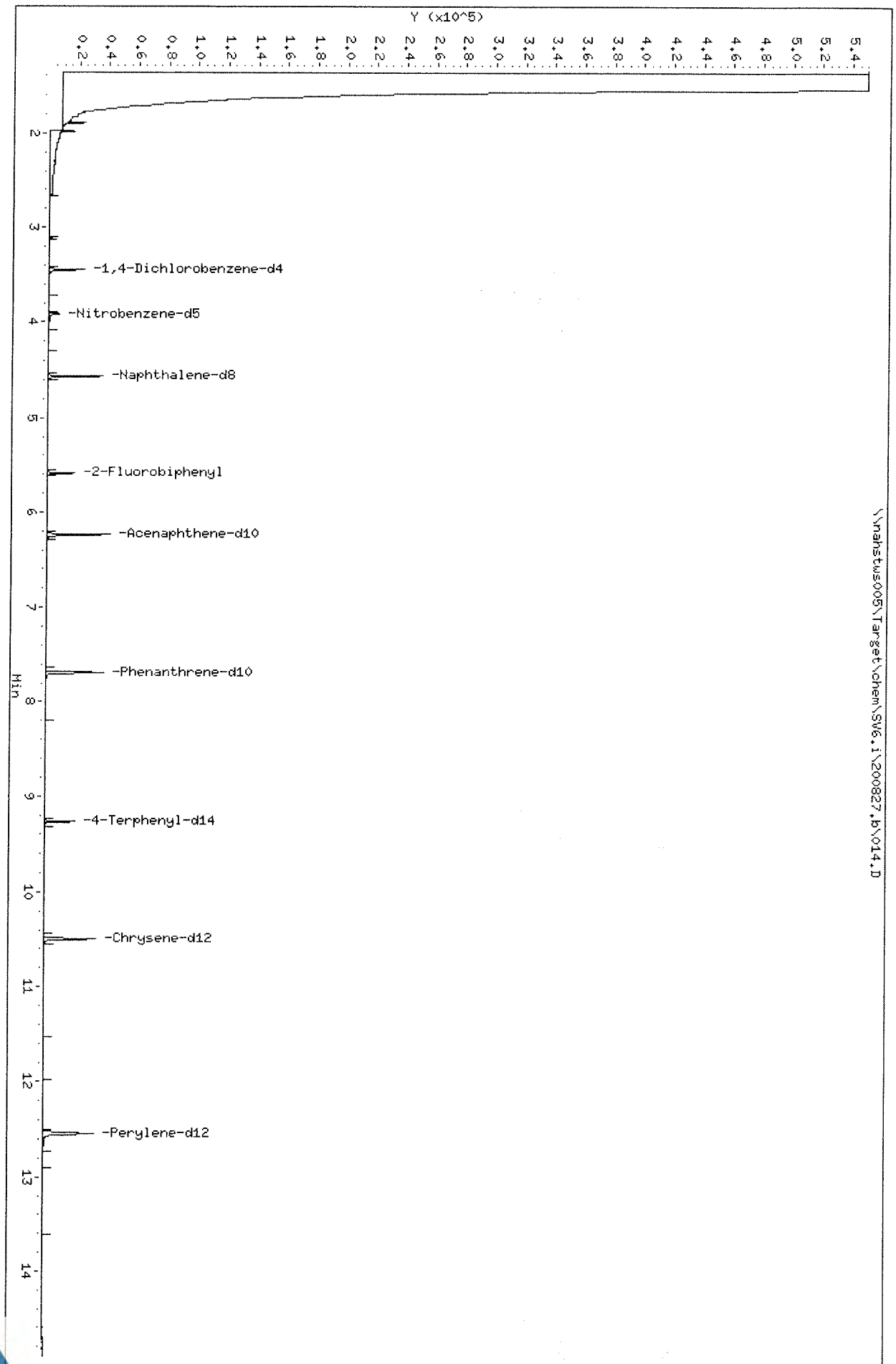
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 20 1,4-Dichlorobenzene-d4	152	3.450	3.450	(1.000)	8541	0.10000	(a)
* 45 Naphthalene-d8	136	4.563	4.567	(1.000)	31880	0.10000	
$ 33 Nitrobenzene-d5	82	3.917	3.922	(0.858)	6540	0.07857	0.07857(Q)
* 86 Acenaphthene-d10	164	6.238	6.243	(1.000)	16446	0.10000	
$ 69 2-Fluorobiphenyl	172	5.588	5.591	(0.896)	13808	0.07073	0.07073
* 126 Phenanthrene-d10	188	7.688	7.693	(1.000)	34838	0.10000	
* 182 Chrysene-d12	240	10.495	10.501	(1.000)	34541	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.269	9.274	(0.883)	15864	0.05570	0.05570(M)
* 198 Perylene-d12	264	12.542	12.547	(1.000)	37700	0.10000	
1 1,4-Dioxane	58	1.487	1.487	(0.431)	386	0.07121	0.07121(aQ)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.



Data File: \\nahstws005\Target\chem\SV6.i\200827.b\014.D
Date : 27-AUG-2020 18:23
Client ID: LCSD-156460
Sample Info: LCSD-156460;LCSD-156460;3;;LCSD
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LC
Column diameter: 0.28

\\nahstws005\Target\chem\SV6.i\200827.b\014.D

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\016.D Page 1
Report Date: 14-Sep-2020 13:07

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\016.D
Lab Smp Id: HS20080473-01 Client Smp ID: HS20080473-01
Inj Date : 27-AUG-2020 19:01 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : HS20080473-01;HS20080473-01
Misc Info : HS20080473;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIM.m
Meth Date : 14-Sep-2020 13:07 dev.giga Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 16
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.450	3.450	(1.000)	5594	0.10000		(a)
* 45 Naphthalene-d8	136	4.563	4.567	(1.000)	17767	0.10000		
* 86 Acenaphthene-d10	164	6.238	6.243	(1.000)	11785	0.10000		
* 126 Phenanthrene-d10	188	7.688	7.693	(1.000)	21415	0.10000		
* 182 Chrysene-d12	240	10.496	10.501	(1.000)	18659	0.10000		(M)
* 198 Perylene-d12	264	12.542	12.547	(1.000)	20720	0.10000		

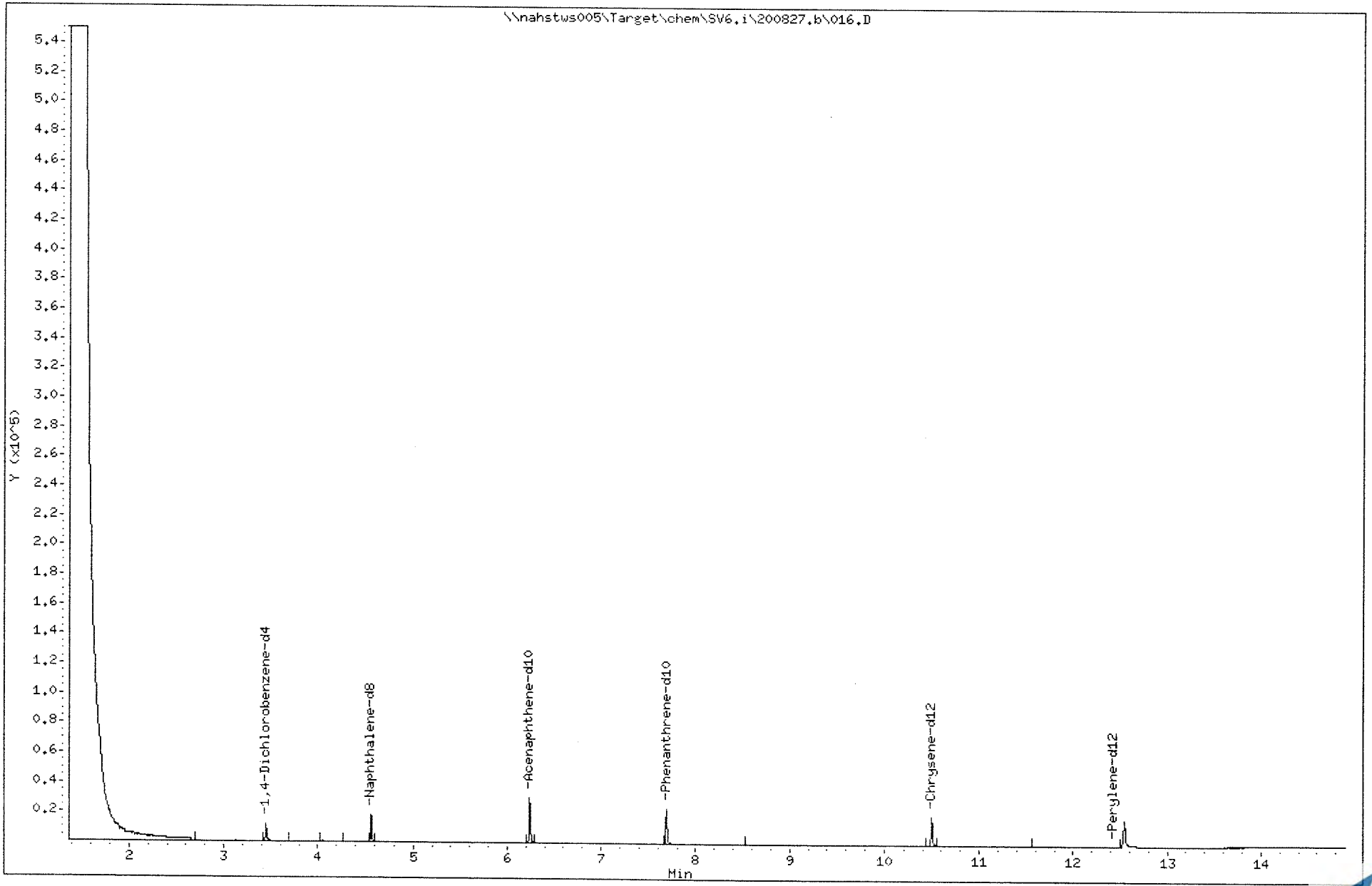
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\016.D
Date : 27-AUG-2020 19:01
Client ID: HS20080473-01
Sample Info: HS20080473-01;HS20080473-01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i

Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200827.b\017.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 27-AUG-2020 19:20 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200827.b\DXSIMEND.m
Meth Date : 14-Sep-2020 13:13 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:08 Cal File: 011.D
Als bottle: 17 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.450	3.450	(1.000)	5192	0.10000		(aQM)
* 45 Naphthalene-d8	136	4.563	4.563	(1.000)	24742	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.917	3.917	(0.858)	4600	0.08000	0.07120	(QM)
* 86 Acenaphthene-d10	164	6.238	6.238	(1.000)	10033	0.10000		
$ 69 2-Fluorobiphenyl	172	5.588	5.588	(0.896)	10366	0.08000	0.08704	
* 126 Phenanthrene-d10	188	7.687	7.687	(1.000)	20211	0.10000		
* 182 Chrysene-d12	240	10.495	10.495	(1.000)	21812	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.269	9.269	(0.883)	13034	0.08000	0.07246	(M)
* 198 Perylene-d12	264	12.542	12.542	(1.000)	21990	0.10000		
1 1,4-Dioxane	58	1.469	1.469	(0.426)	272	0.08000	0.08255	(aQ)

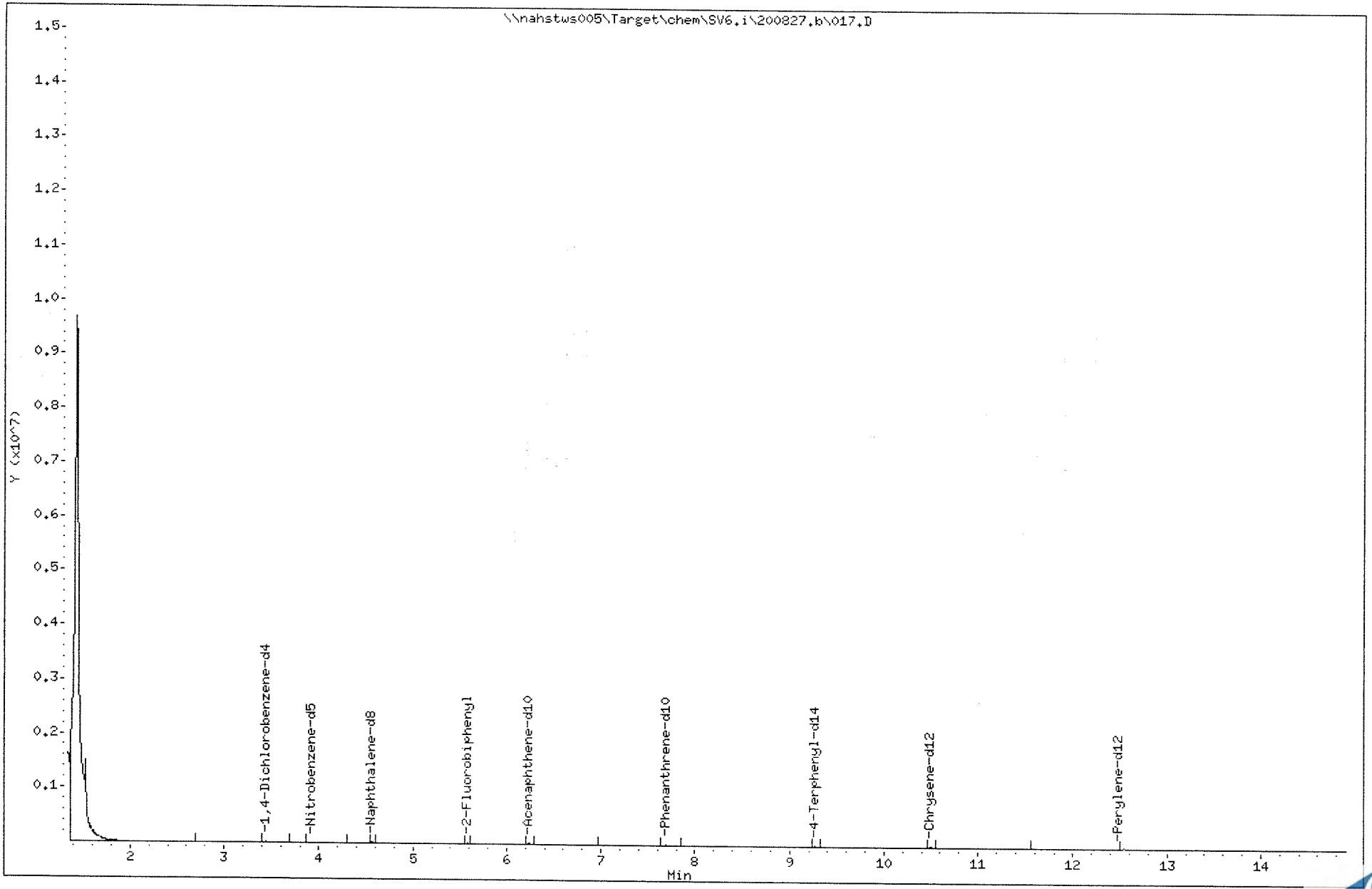
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200827.b\017.D
Date : 27-AUG-2020 19:20
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i

Operator: LC
Column diameter: 0.28



HS20080473 - ME - ICP_W_DOD

ALS WO# HS20080473

ALS Houston, US

Date: 11-Sep-20

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.

Instrument:ICPMS05

Project: Longhorn GW Treatment Plant Monthly Effluent Samples

WorkOrder: HS20080473

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

ALS Houston, US Date: 11-Sep-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473
Start Date: 14-Aug-2020 08:00 End Date: 14-Aug-2020 12:00

Batch ID: 156348
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20080189-02MS				10	10	1
HS20080189-02MSD				10	10	1
HS20080189-02PDS				10	10	1
HS20080189-02SD				10	10	1
HS20080198-04MS				10	10	1
HS20080198-04MSD				10	10	1
HS20080198-04PDS				10	10	1
HS20080198-04SD				10	10	1
HS20080223-05MS				10	10	1
HS20080223-05MSD				10	10	1
HS20080223-05PDS				10	10	1
HS20080223-05SD				10	10	1
HS20080473-01	LH18/24-SP650_081120	Water		10	10	1
LCS-156348				10	10	1
MBLK-156348				10	10	1

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473
Start Date: 19-Aug-2020 End Date: 19-Aug-2020

Run ID:ICPMS05_367010
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_367010_Tune	1	19-Aug-2020 00:00	ICPMS05_367010_Tune_1	
CAL BLK	1	19-Aug-2020 11:04	014CALB.d_5705633	AG BA PB SE
2/10/200	1	19-Aug-2020 11:06	015CALS.d_5705634	AG BA PB SE
5/25/500	1	19-Aug-2020 11:09	016CALS.d_5705635	AG BA PB SE
10/50/1000	1	19-Aug-2020 11:11	017CALS.d_5705636	AG BA PB SE
100/500/10K	1	19-Aug-2020 11:13	018CALS.d_5705637	AG BA PB SE
200/1000/20K	1	19-Aug-2020 11:16	019CALS.d_5705638	AG BA PB SE
ICV	1	19-Aug-2020 11:20	021_ICV.d_5705640	AG BA PB SE
LLICV2	1	19-Aug-2020 11:23	022LCV2.d_5705641	AG BA PB SE
LLICV5	1	19-Aug-2020 11:25	023LCV5.d_5705642	AG BA PB SE
ICB	1	19-Aug-2020 11:27	024_ICB.d_5705643	AG BA PB SE
ICSA	1	19-Aug-2020 11:31	025ICSA.d_5705644	AG BA PB SE
ICSAB	1	19-Aug-2020 11:33	026ICSB.d_5705645	AG BA PB SE
CCV 1	1	19-Aug-2020 11:48	028_CCV.d_5706163	AG BA PB SE
CCB 1	1	19-Aug-2020 11:50	029_CCB.d_5706164	AG BA PB SE
CCV 2	1	19-Aug-2020 12:21	040_CCV.d_5706175	AG BA PB SE
CCB 2	1	19-Aug-2020 12:23	041_CCB.d_5706176	AG BA PB SE
CCV 3	1	19-Aug-2020 12:49	052_CCV.d_5706187	AG BA PB SE
CCB 3	1	19-Aug-2020 12:51	053_CCB.d_5706188	AG BA PB SE
CCV 4	1	19-Aug-2020 13:17	064_CCV.d_5706161	AG BA PB SE
CCB 4	1	19-Aug-2020 13:19	065_CCB.d_5706162	AG BA PB SE
CCV 5	1	19-Aug-2020 13:50	076_CCV.d_5706338	AG BA PB SE
CCB 5	1	19-Aug-2020 13:52	077_CCB.d_5706339	AG BA PB SE
CCV 6	1	19-Aug-2020 14:27	089_CCV.d_5706350	AG BA PB SE
CCB 6	1	19-Aug-2020 14:29	090_CCB.d_5706351	AG BA PB SE
CCV 7	1	19-Aug-2020 15:01	101_CCV.d_5706362	AG BA PB SE
CCB 7	1	19-Aug-2020 15:04	102_CCB.d_5706363	AG BA PB SE
CCV 8	1	19-Aug-2020 15:31	113_CCV.d_5706529	AG BA PB SE
CCB 8	1	19-Aug-2020 15:33	114_CCB.d_5706530	AG BA PB SE
CCV 9	1	19-Aug-2020 15:52	122_CCV.d_5706632	AG BA PB SE
CCB 9	1	19-Aug-2020 15:55	123_CCB.d_5706633	AG BA PB SE
CCV 10	1	19-Aug-2020 16:52	146_CCV.d_5707327	AG BA PB SE
CCB 10	1	19-Aug-2020 16:54	147_CCB.d_5707328	AG BA PB SE
MBLK-156348	1	19-Aug-2020 16:59	148SMPL.d_5707329	AG BA PB SE
LCS-156348	1	19-Aug-2020 17:01	149SMPL.d_5707330	AG BA PB SE
ZZZZZZSD	5	19-Aug-2020 17:13	154SMPL.d_5707335	AG BA PB SE
ZZZZZZMS	1	19-Aug-2020 17:15	155SMPL.d_5707336	AG BA PB SE
ZZZZZZMSD	1	19-Aug-2020 17:17	156SMPL.d_5707337	AG BA PB SE
ZZZZZZPDS	1	19-Aug-2020 17:20	157SMPL.d_5707338	BA
CCV 11	1	19-Aug-2020 17:22	158_CCV.d_5707339	AG BA PB SE
CCB 11	1	19-Aug-2020 17:24	159_CCB.d_5707340	AG BA PB SE
CCV 12	1	19-Aug-2020 17:29	160_CCV.d_5707341	AG BA PB SE
ZZZZZZSD	10	19-Aug-2020 17:39	164SMPL.d_5707345	AG BA PB SE
ZZZZZZMS	2	19-Aug-2020 17:41	165SMPL.d_5707346	AG BA PB SE
ZZZZZZMSD	2	19-Aug-2020 17:43	166SMPL.d_5707347	AG BA PB SE
CCV 13	1	19-Aug-2020 17:55	171_CCV.d_5707352	AG BA PB SE
CCB 12	1	19-Aug-2020 17:57	172_CCB.d_5707353	AG BA PB SE
ZZZZZZSD	5	19-Aug-2020 18:07	176SMPL.d_5707357	AG BA PB SE
ZZZZZZMS	1	19-Aug-2020 18:09	177SMPL.d_5707358	AG BA PB SE
ZZZZZZMSD	1	19-Aug-2020 18:11	178SMPL.d_5707359	AG BA PB SE
ZZZZZZPDS	1	19-Aug-2020 18:14	179SMPL.d_5707360	AG BA PB

ALS Houston, US

Date: 11-Sep-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473
Start Date: 19-Aug-2020 End Date: 19-Aug-2020

Run ID:ICPMS05_367010
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
LH18/24-SP650_081120	1	19-Aug-2020 18:18	181SMPL.d_5707362	AG BA PB SE
CCV 14	1	19-Aug-2020 18:23	183_CCV.d_5707364	AG BA PB SE
CCB 13	1	19-Aug-2020 18:25	184_CCB.d_5707365	AG BA PB SE
CCV 15	1	19-Aug-2020 18:39	190_CCV.d_5707371	AG BA PB SE
CCB 14	1	19-Aug-2020 18:42	191_CCB.d_5707372	AG BA PB SE

ALS Houston, US

Date: 11-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICV — Date: 19-Aug-2020 11:20 — Seq: 5705640 — ICV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.783	101	90-110	
Lead	100	100.17	100	90-110	
Selenium	100	102.245	102	90-110	
Silver	100	99.108	99	90-110	

CCV1 — Date: 19-Aug-2020 11:48 — Seq: 5706163 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.874	99	90-110	
Lead	100	95.298	95	90-110	
Selenium	100	99.134	99	90-110	
Silver	100	99.165	99	90-110	

CCV2 — Date: 19-Aug-2020 12:21 — Seq: 5706175 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.373	100	90-110	
Lead	100	98.867	99	90-110	
Selenium	100	102.037	102	90-110	
Silver	100	99.026	99	90-110	

CCV3 — Date: 19-Aug-2020 12:49 — Seq: 5706187 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.245	103	90-110	
Lead	100	99.392	99	90-110	
Selenium	100	103.002	103	90-110	
Silver	100	101.078	101	90-110	

CCV4 — Date: 19-Aug-2020 13:17 — Seq: 5706161 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	104.886	105	90-110	
Lead	100	101.76	102	90-110	
Selenium	100	102.986	103	90-110	
Silver	100	101.34	101	90-110	

CCV5 — Date: 19-Aug-2020 13:50 — Seq: 5706338 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.375	103	90-110	
Lead	100	100.374	100	90-110	
Selenium	100	102.594	103	90-110	
Silver	100	100.083	100	90-110	

CCV6 — Date: 19-Aug-2020 14:27 — Seq: 5706350 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.702	104	90-110	
Lead	100	102.835	103	90-110	
Selenium	100	100.488	100	90-110	
Silver	100	102.488	102	90-110	

CCV7 — Date: 19-Aug-2020 15:01 — Seq: 5706362 — CCV — Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.771	103	90-110	
Lead	100	103.129	103	90-110	
Selenium	100	99.92	100	90-110	
Silver	100	101.71	102	90-110	

ALS Houston, US Date: 11-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS05_367010
Project: Longhorn GW Treatment Plant Monthly Effluent Samples Instrument: ICPMS05
WorkOrder: HS20080473 Method: SW6020

CCV8	Date: 19-Aug-2020 15:31		Seq: 5706529	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	102.791	103	90-110	
Lead	100	102.898	103	90-110	
Selenium	100	103.177	103	90-110	
Silver	100	102.875	103	90-110	

CCV9	Date: 19-Aug-2020 15:52		Seq: 5706632	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	101.702	102	90-110	
Lead	100	102.716	103	90-110	
Selenium	100	101.524	102	90-110	
Silver	100	101.688	102	90-110	

CCV10	Date: 19-Aug-2020 16:52		Seq: 5707327	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	105.104	105	90-110	
Lead	100	104.216	104	90-110	
Selenium	100	100.874	101	90-110	
Silver	100	104.549	105	90-110	

CCV11	Date: 19-Aug-2020 17:22		Seq: 5707339	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	103.583	104	90-110	
Lead	100	104.024	104	90-110	
Selenium	100	103.079	103	90-110	
Silver	100	103.076	103	90-110	

CCV12	Date: 19-Aug-2020 17:29		Seq: 5707341	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	101.321	101	90-110	
Lead	100	93.089	93	90-110	
Selenium	100	101.768	102	90-110	
Silver	100	101.913	102	90-110	

CCV13	Date: 19-Aug-2020 17:55		Seq: 5707352	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	104.278	104	90-110	
Lead	100	103.434	103	90-110	
Selenium	100	101.619	102	90-110	
Silver	100	103.129	103	90-110	

CCV14	Date: 19-Aug-2020 18:23		Seq: 5707364	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	105.311	105	90-110	
Lead	100	104.873	105	90-110	
Selenium	100	102.245	102	90-110	
Silver	100	103.824	104	90-110	

CCV15	Date: 19-Aug-2020 18:39		Seq: 5707371	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	107.188	107	90-110	
Lead	100	103.881	104	90-110	
Selenium	100	100.521	101	90-110	
Silver	100	105.043	105	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICB	Date: 19-Aug-2020 11:27		Seq: 5705643	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB1	Date: 19-Aug-2020 11:50		Seq: 5706164	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: 19-Aug-2020 12:23		Seq: 5706176	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	

CCB3	Date: 19-Aug-2020 12:51		Seq: 5706188	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: 19-Aug-2020 13:19		Seq: 5706162	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: 19-Aug-2020 13:52		Seq: 5706339	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: 19-Aug-2020 14:29		Seq: 5706351	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: 19-Aug-2020 15:04		Seq: 5706363	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	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

CCB8	Date: 19-Aug-2020 15:33		Seq: 5706530	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: 19-Aug-2020 15:55		Seq: 5706633	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: 19-Aug-2020 16:54		Seq: 5707328	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-156348	Date: 19-Aug-2020 16:59		Seq: 5707329	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB11	Date: 19-Aug-2020 17:24		Seq: 5707340	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: 19-Aug-2020 17:57		Seq: 5707353	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: 19-Aug-2020 18:25		Seq: 5707365	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: 19-Aug-2020 18:42		Seq: 5707372	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US

Date: 11-Sep-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 19-Aug-2020 11:31	Seq: 5705644	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		-0.061	0	
Lead		0.026	0	
Selenium		0.435	0	
Silver		-0.005	0	

ICSAB	Date: 19-Aug-2020 11:33	Seq: 5705645	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	103.7	104	
Lead	100	98.31	98.3	
Selenium	100	104.4	104	
Silver	100	96.63	96.6	

ALS Houston, US Date: 11-Sep-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Date Analyzed: 19-Aug-2020 17:17
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Matrix Spike: HS20080198-04MS Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	511.7	556.2	50.00	88.9	549.9	50.00	76.4	86-114	1.13	20
Lead	5.000	46.66	50.00	93.2	46.32	50.00	92.5	88-115	0.736	20
Selenium	5.000	48.84	50.00	97.2	49.79	50.00	99.1	80-120	1.92	20
Silver	5.000	45.59	50.00	91.3	45.14	50.00	90.4	85-116	0.999	20

Matrix Spike: HS20080189-02MS Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	108.7	162.2	50.00	107	163.8	50.00	110	86-114	0.942	20
Lead	10.00	49.61	50.00	97.2	51.01	50.00	100	88-115	2.78	20
Selenium	10.00	52.07	50.00	103	51.13	50.00	101	80-120	1.83	20
Silver	10.00	45.25	50.00	90.6	46.26	50.00	92.6	85-116	2.21	20

Matrix Spike: HS20080223-05MS Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	55.67	108.9	50.00	106	103.4	50.00	95.5	86-114	5.13	20
Lead	0.6780	48.70	50.00	96.0	46.83	50.00	92.3	88-115	3.90	20
Selenium	5.000	48.46	50.00	96.1	47.95	50.00	95.1	80-120	1.05	20
Silver	5.000	48.04	50.00	96.2	45.37	50.00	90.8	85-116	5.72	20

ALS Houston, US Date: 11-Sep-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Date Analyzed: 19-Aug-2020 17:20
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: HS20080198-04PDS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Barium	511.7	649.7	100	138	80-120

Lab Sample ID: HS20080223-05PDS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Barium	55.67	171.7	100	116	80-120
Lead	0.678	114.2	100	114	80-120
Silver	0	113.2	100	113	80-120

ALS Houston, US Date: 11-Sep-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Date Analyzed: 19-Aug-2020 17:01
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: LCS-156348 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Barium	50	46.8	94	86-114
Lead	50	45.78	92	88-115
Selenium	50	50.61	101	80-120
Silver	50	45.62	91	85-116

ALS Houston, US Date: 11-Sep-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20080473

Date Analyzed: 19-Aug-2020 17:13
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: HS20080198-04SD Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	C	SD Result	C	RPD	Q
Barium	511.7		500.7		2	
Lead	0	U	0	U	0	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

Lab Sample ID: HS20080189-02SD Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	C	SD Result	C	RPD	Q
Barium	108.7		106.2		2	
Lead	0	U	0	U	0	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

Lab Sample ID: HS20080223-05SD Analysis Method: SW6020
Client Sample ID:

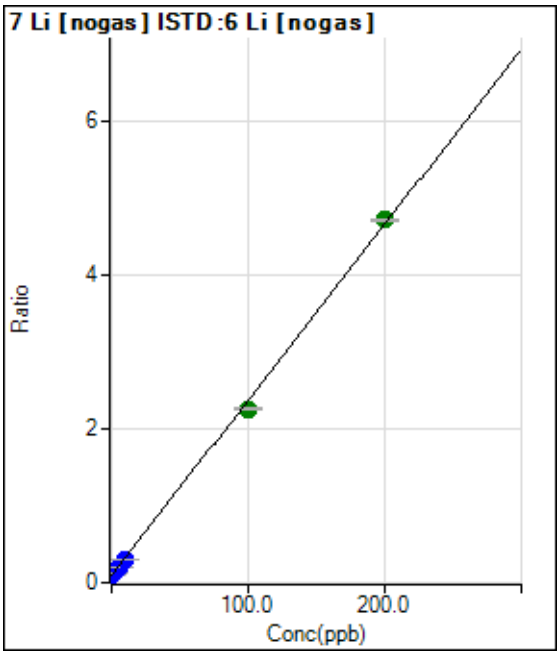
Analyte	Sample Result	C	SD Result	C	RPD	Q
Barium	55.67		57.34		3	
Lead	0.678	J	0	U	0	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

Calibration for 021_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 8:26:18 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	CAL BLK	8/19/2020 11:04:33 AM
2	015CALS.d	2/10/200	8/19/2020 11:06:54 AM
3	016CALS.d	5/25/500	8/19/2020 11:09:16 AM
4	017CALS.d	10/50/1000	8/19/2020 11:11:37 AM
5	018CALS.d	100/500/10K	8/19/2020 11:13:59 AM
6	019CALS.d	200/1000/20K	8/19/2020 11:16:14 AM
7			

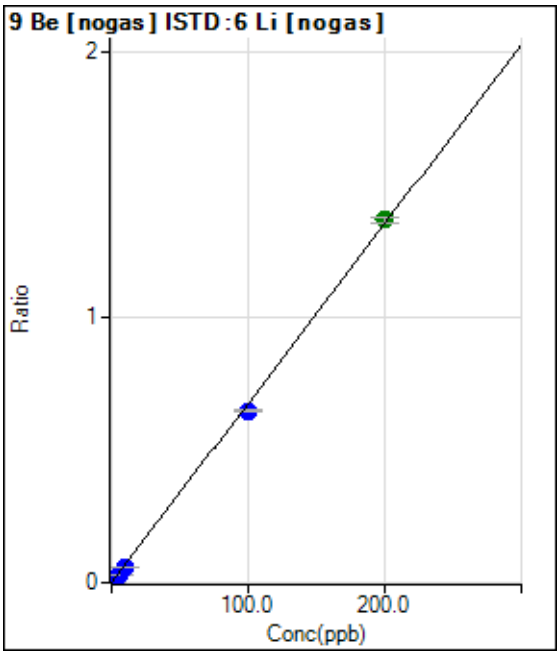
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93045.20	0.0937	P	2.4
2	☐	2.000	1.864	133034.26	0.1363	P	0.4
3	☐	5.000	4.492	195971.41	0.1963	P	1.1
4	☐	10.000	8.825	288594.71	0.2951	P	0.4
5	☐	100.000	94.770	2064557.42	2.2565	A	1.1
6	☐	200.000	202.688	4009502.76	4.7193	A	0.9
7	☐	1.000					

y = 0.0228 * x + 0.0937
R = 0.9995
DL = 0.2904
BEC = 4.108

Weight: <None>
Min Conc: <None>

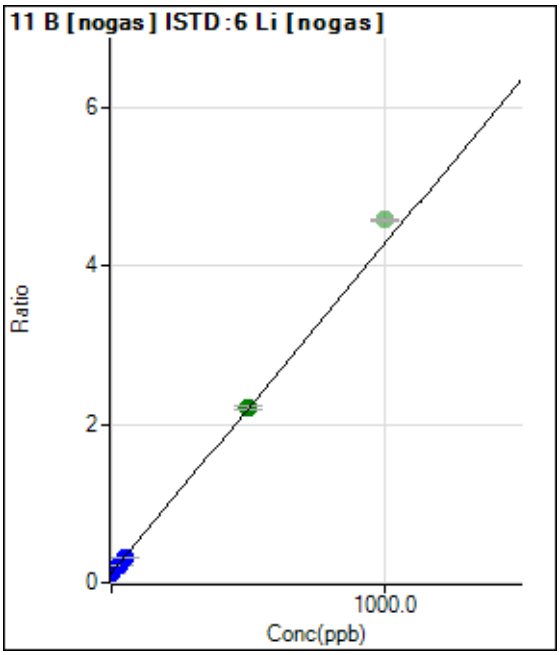


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218.33	0.0002	P	7.8
2	☐	2.000	1.736	11673.60	0.0120	P	1.9
3	☐	5.000	4.358	29642.79	0.0297	P	1.1
4	☐	10.000	8.779	58244.27	0.0596	P	2.7
5	☐	100.000	95.515	591018.11	0.6460	P	1.3
6	☐	200.000	202.322	1162481.99	1.3682	A	1.4
7	☐	1.000					

y = 0.0068 * x + 2.2013E-004
R = 0.9997
DL = 0.007647
BEC = 0.03256

Weight: <None>
Min Conc: <None>

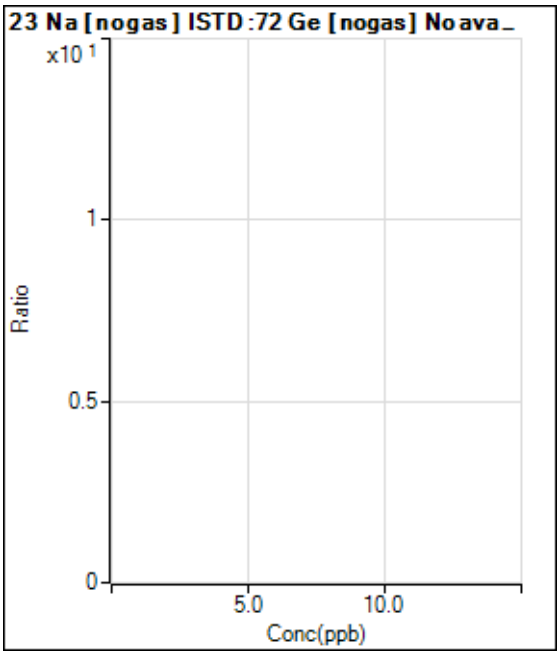
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122807.99	0.1237	P	2.6
2	☐	10.000	9.827	160638.54	0.1646	P	1.1
3	☐	25.000	20.970	210568.23	0.2109	P	1.3
4	☐	50.000	44.313	301044.81	0.3079	P	1.6
5	☐	500.000	500.774	2017065.54	2.2049	A	2.3
6	☑	1000.000		3896006.09	4.5856	A	0.5
7	☐	5.000					

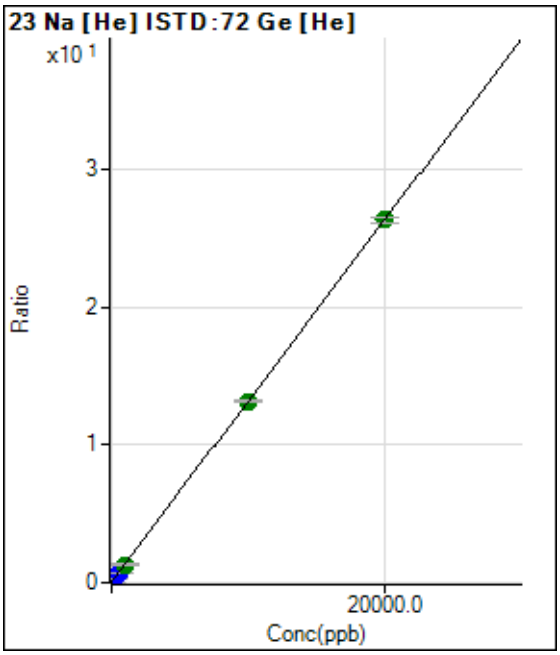
y = 0.0042 * x + 0.1237
R = 0.9999
DL = 2.348
BEC = 29.77

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

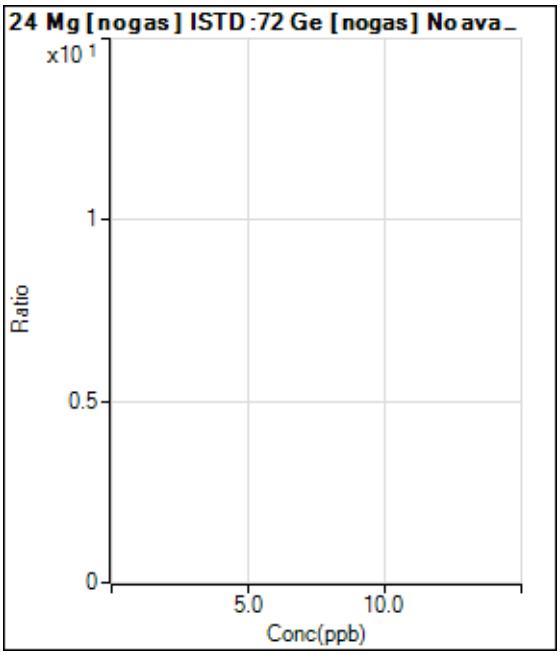
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49307.17	0.0451	P	1.5
2	☐	200.000	198.909	334738.04	0.3064	P	0.2
3	☐	500.000	510.741	773407.02	0.7160	P	1.1
4	☐	1000.000	974.357	1428454.46	1.3251	A	2.2
5	☐	10000.00	9988.980	14087125.62	13.1675	A	1.1
6	☐	20000.00	20006.53	27382432.09	26.3275	A	1.4
7	☐	100.000					

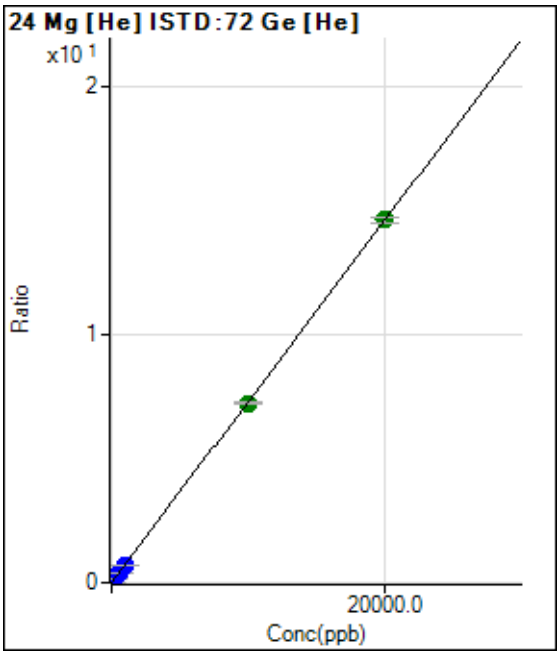
y = 0.0013 * x + 0.0451
R = 1.0000
DL = 1.54
BEC = 34.3

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

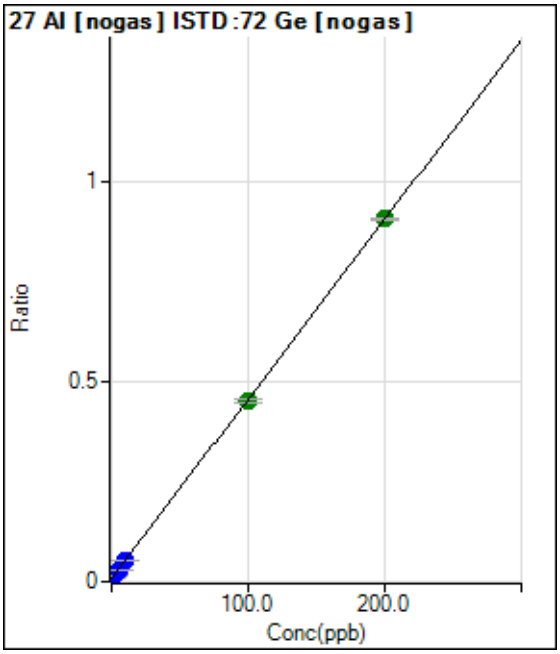
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	656.69	0.0006	P	3.6
2	☐	200.000	201.856	161303.34	0.1476	P	0.6
3	☐	500.000	516.065	406700.82	0.3765	P	1.0
4	☐	1000.000	991.720	779303.84	0.7230	P	1.3
5	☐	10000.00	9921.552	7732421.55	7.2275	A	0.5
6	☐	20000.00	20039.21	15182953.94	14.5972	A	1.9
7	☐	100.000					

y = 7.2840E-004 * x + 6.0012E-004
R = 1.0000
DL = 0.08801
BEC = 0.8239

Weight: <None>
Min Conc: <None>

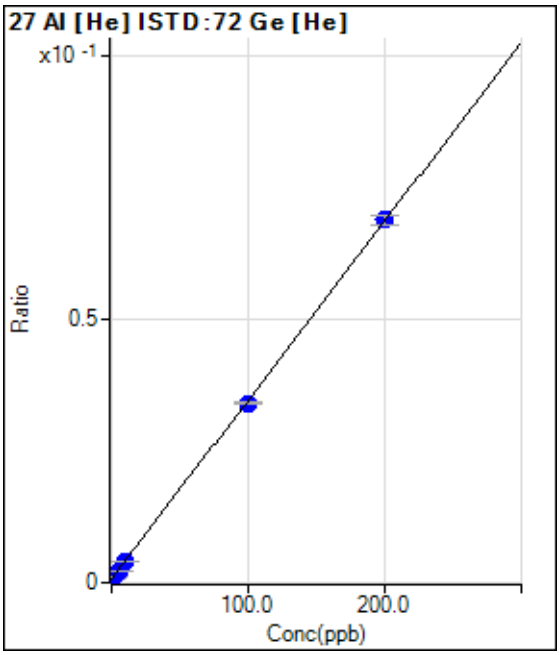


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37717.73	0.0077	P	5.3
2	☐	2.000	1.857	78521.90	0.0160	P	1.7
3	☐	5.000	4.976	147025.15	0.0300	P	1.9
4	☐	10.000	9.791	251741.73	0.0517	P	1.6
5	☐	100.000	99.182	2170869.40	0.4533	A	2.6
6	☐	200.000	200.421	4247772.33	0.9081	A	0.9
7	☐	1.000					

y = 0.0045 * x + 0.0077
R = 1.0000
DL = 0.2732
BEC = 1.71

Weight: <None>
Min Conc: <None>

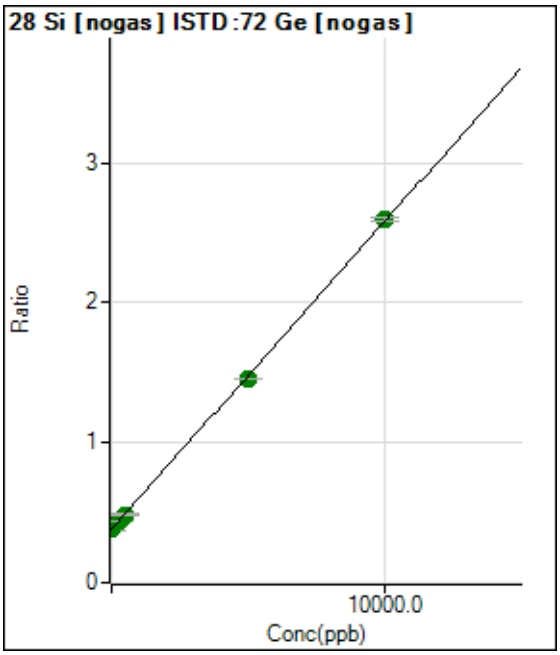
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	783.40	0.0007	P	11.4
2	☐	2.000	1.523	1346.74	0.0012	P	12.6
3	☐	5.000	4.732	2506.87	0.0023	P	3.2
4	☐	10.000	9.851	4373.91	0.0041	P	3.3
5	☐	100.000	98.386	36475.34	0.0341	P	0.7
6	☐	200.000	200.826	71605.23	0.0688	P	2.8
7	☐	1.000					

y = 3.3926E-004 * x + 7.1551E-004
R = 1.0000
DL = 0.7238
BEC = 2.109

Weight: <None>
Min Conc: <None>

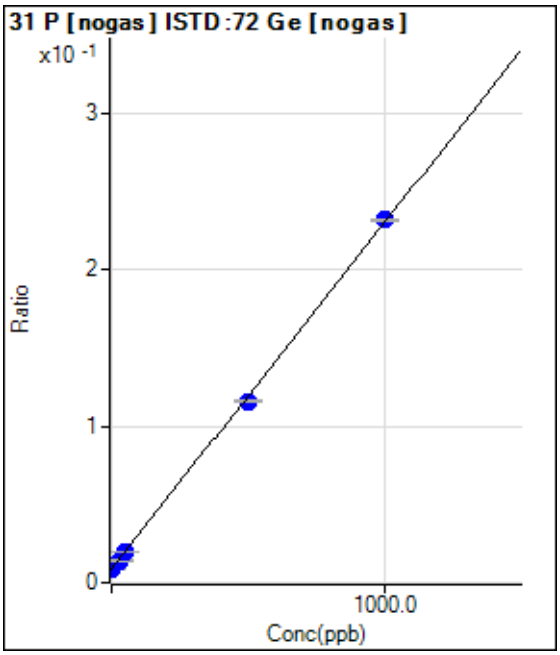


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1878823.04	0.3827	A	5.4
2	☐	100.000	120.517	2004886.11	0.4092	A	1.0
3	☐	250.000	261.641	2154503.04	0.4402	A	2.0
4	☐	500.000	465.810	2363969.18	0.4851	A	2.9
5	☐	5000.000	4898.311	6987490.73	1.4588	A	0.4
6	☐	10000.00	10052.05	12119859.40	2.5909	A	1.0
7	☐	50.000					

y = 2.1967E-004 * x + 0.3827
R = 0.9999
DL = 282.7
BEC = 1742

Weight: <None>
Min Conc: <None>

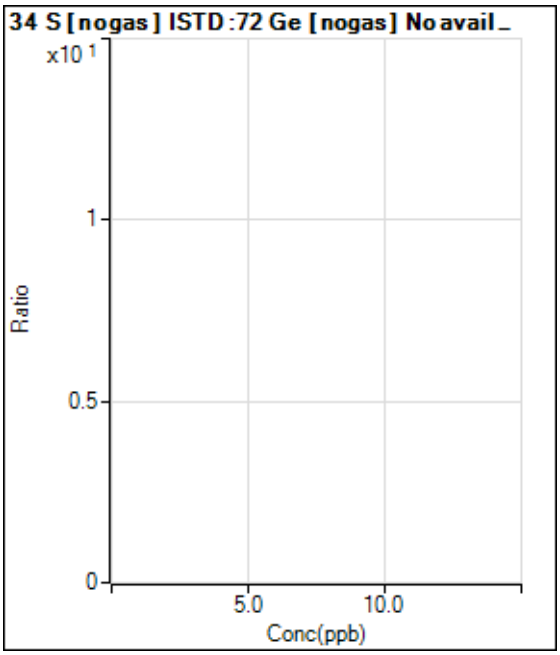
Calibration for 021_ICV.d



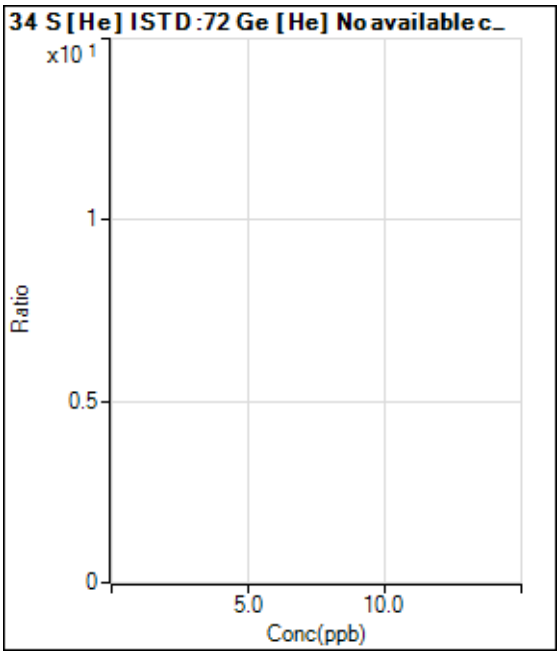
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43537.09	0.0089	P	2.2
2	☐	10.000	8.664	52827.35	0.0108	P	1.6
3	☐	25.000	23.617	68952.14	0.0141	P	3.3
4	☐	50.000	49.004	96025.92	0.0197	P	1.5
5	☐	500.000	483.890	555287.66	0.1159	P	0.8
6	☐	1000.000	1008.153	1084904.05	0.2319	P	0.6
7	☐	5.000					

y = 2.2125E-004 * x + 0.0089
R = 0.9998
DL = 2.643
BEC = 40.07

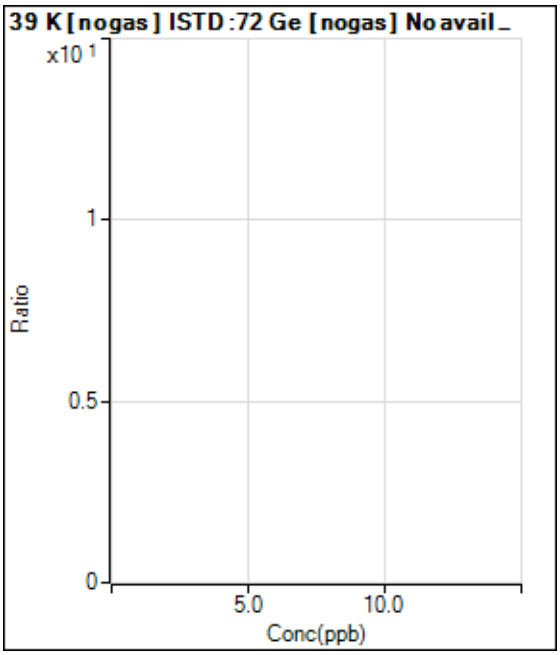
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

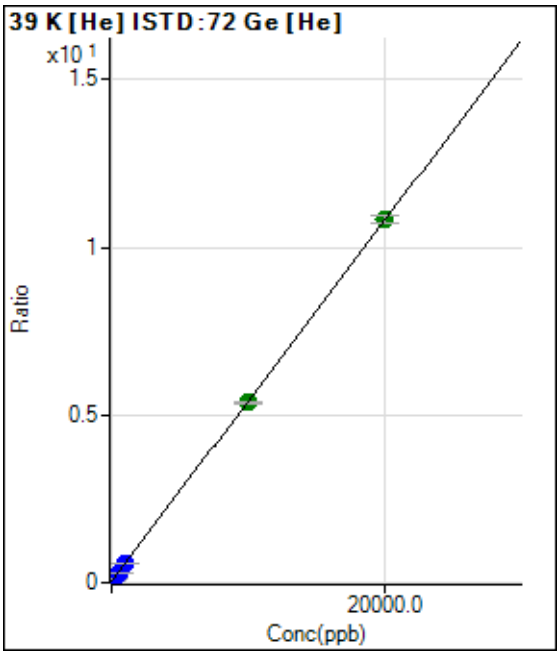


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

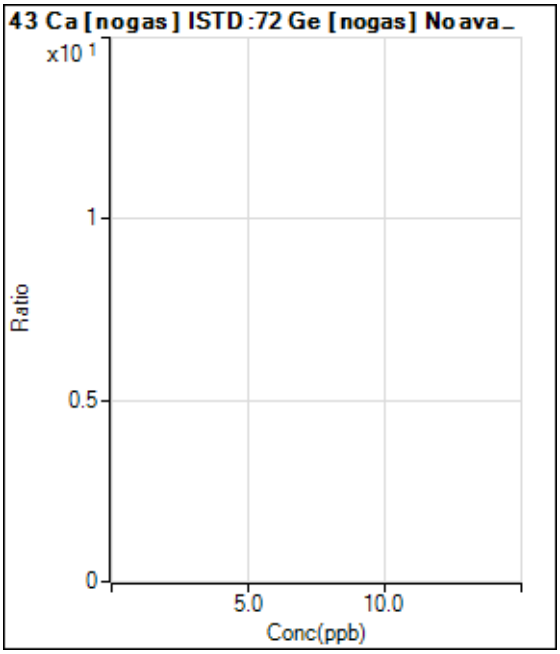
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37685.03	0.0344	P	0.1
2	☐	200.000	197.089	153493.96	0.1405	P	1.4
3	☐	500.000	509.046	333080.40	0.3084	P	0.3
4	☐	1000.000	988.847	610703.84	0.5665	P	0.2
5	☐	10000.00	9923.328	5749483.04	5.3742	A	0.8
6	☐	20000.00	20038.69	11250062.33	10.8173	A	2.1
7	☐	100.000					

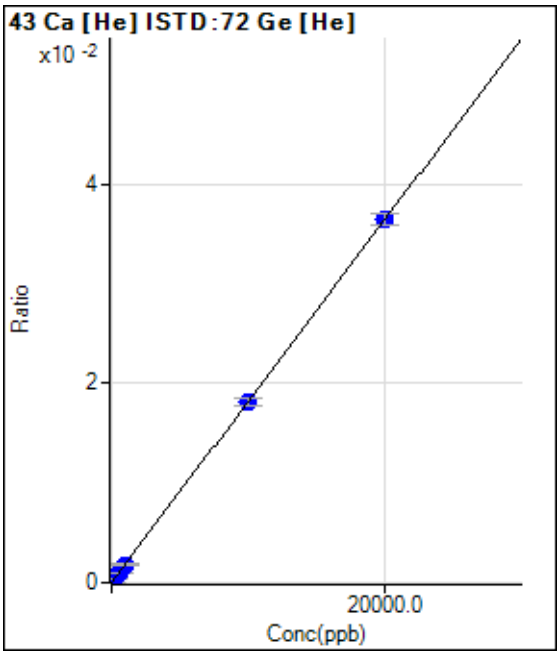
y = 5.3810E-004 * x + 0.0344
R = 1.0000
DL = 0.2594
BEC = 63.99

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

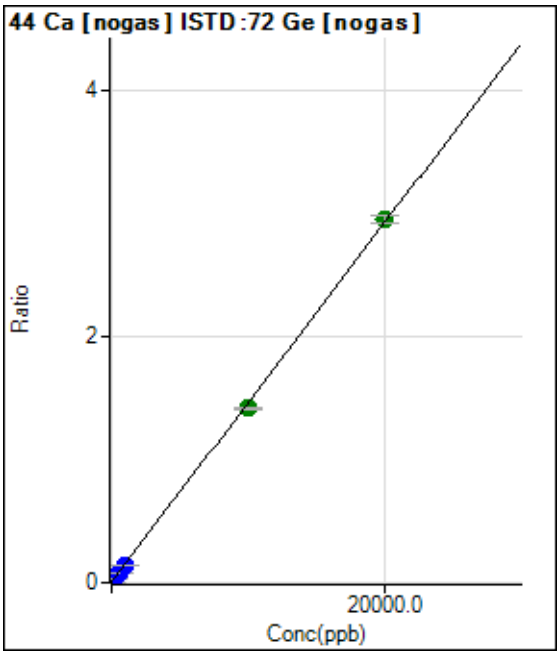
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	49.5
2	☐	200.000	199.518	416.68	0.0004	P	21.7
3	☐	500.000	499.975	1003.38	0.0009	P	12.0
4	☐	1000.000	995.504	1973.47	0.0018	P	6.2
5	☐	10000.00	9975.612	19450.49	0.0182	P	3.6
6	☐	20000.00	20012.42	37905.66	0.0365	P	3.3
7	☐	100.000					

y = 1.8206E-006 * x + 1.8242E-005
R = 1.0000
DL = 14.87
BEC = 10.02

Weight: <None>
Min Conc: <None>

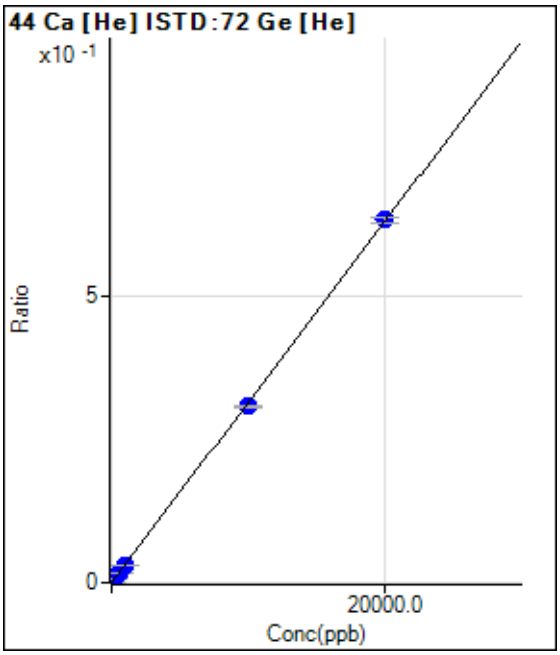


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28031.39	0.0057	P	4.7
2	☐	200.000	191.009	164377.85	0.0336	P	1.1
3	☐	500.000	485.728	374473.03	0.0765	P	1.6
4	☐	1000.000	946.477	700040.67	0.1437	P	0.7
5	☐	10000.00	9669.191	6778475.52	1.4152	A	0.9
6	☐	20000.00	20168.52	13779653.96	2.9456	A	2.1
7	☐	100.000					

y = 1.4577E-004 * x + 0.0057
R = 0.9998
DL = 5.547
BEC = 39.16

Weight: <None>
Min Conc: <None>

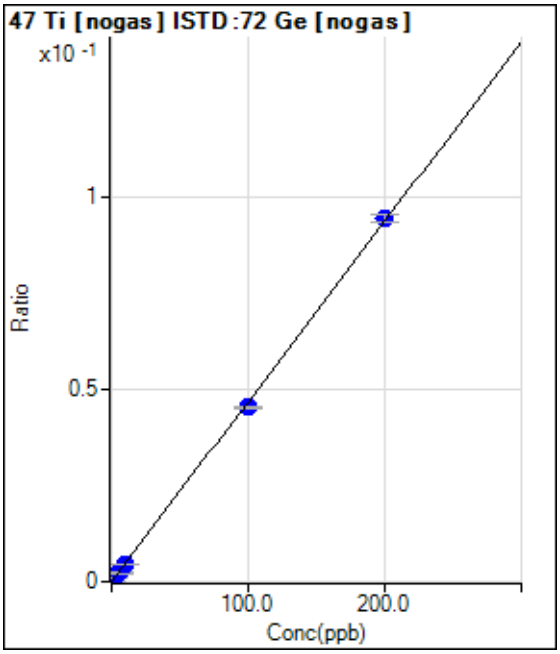
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0004	P	25.2
2	☐	200.000	185.454	6831.35	0.0063	P	6.6
3	☐	500.000	496.871	17315.01	0.0160	P	2.9
4	☐	1000.000	964.253	33089.61	0.0307	P	1.6
5	☐	10000.00	9774.899	328694.72	0.3072	P	0.6
6	☐	20000.00	20114.56	657066.76	0.6318	P	1.7
7	☐	100.000					

y = 3.1387E-005 * x + 4.3248E-004
R = 0.9999
DL = 10.42
BEC = 13.78

Weight: <None>
Min Conc: <None>

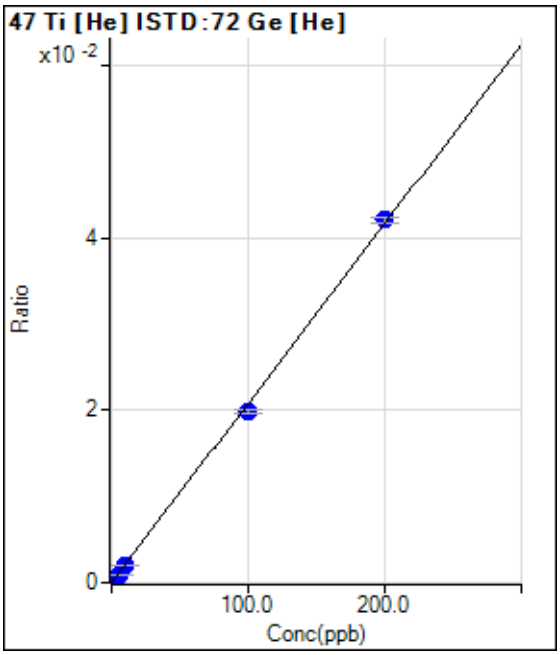


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	41.5
2	☐	2.000	1.866	4403.94	0.0009	P	3.8
3	☐	5.000	4.807	11146.86	0.0023	P	2.3
4	☐	10.000	9.636	22126.71	0.0045	P	3.7
5	☐	100.000	96.807	217448.66	0.0454	P	0.9
6	☐	200.000	201.621	442160.88	0.0945	P	2.3
7	☐	1.000					

y = 4.6870E-004 * x + 2.4322E-005
R = 0.9998
DL = 0.06464
BEC = 0.05189

Weight: <None>
Min Conc: <None>

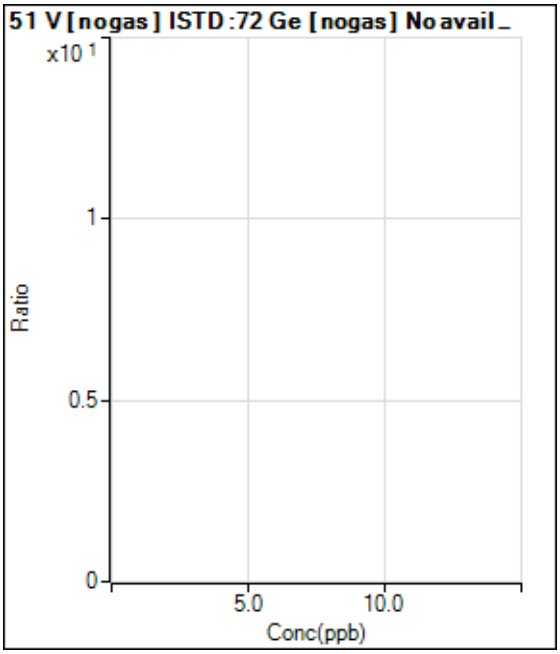
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	173.2
2	☐	2.000	2.021	476.68	0.0004	P	5.4
3	☐	5.000	4.223	966.71	0.0009	P	3.7
4	☐	10.000	9.400	2126.84	0.0020	P	7.2
5	☐	100.000	95.479	21295.83	0.0199	P	1.4
6	☐	200.000	202.310	43858.65	0.0422	P	1.9
7	☐	1.000					

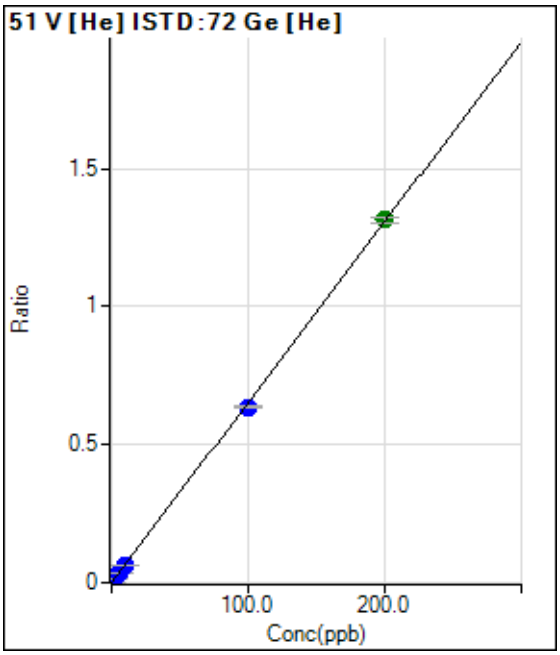
y = 2.0831E-004 * x + 1.5271E-005
R = 0.9997
DL = 0.3809
BEC = 0.07331

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					

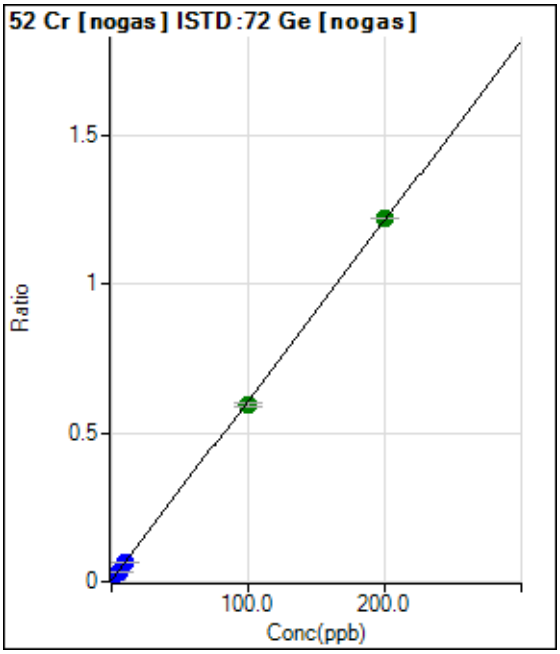
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	984.48	0.0009	P	6.5
2	☐	2.000	1.893	14480.14	0.0133	P	1.5
3	☐	5.000	4.872	35321.23	0.0327	P	1.6
4	☐	10.000	9.515	67917.38	0.0630	P	1.0
5	☐	100.000	97.511	681906.64	0.6374	P	1.3
6	☐	200.000	201.273	1367567.24	1.3147	A	1.8
7	☐	1.000					

y = 0.0065 * x + 8.9941E-004
R = 0.9999
DL = 0.02691
BEC = 0.1378

Weight: <None>
Min Conc: <None>

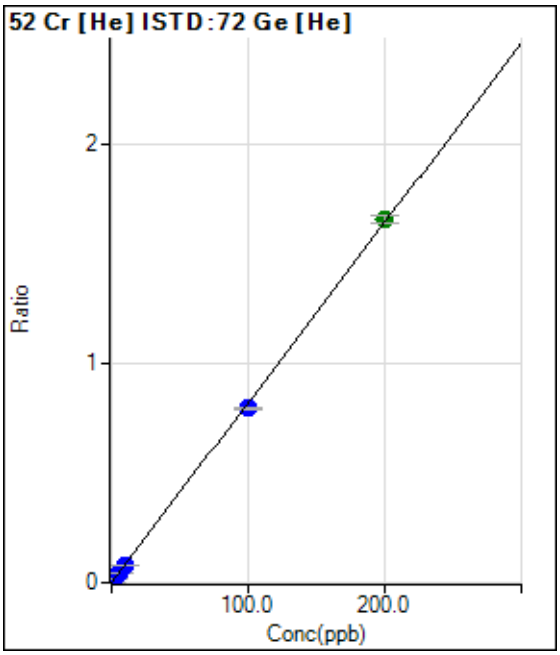


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23188.03	0.0047	P	2.2
2	☐	2.000	1.945	80781.87	0.0165	P	0.9
3	☐	5.000	4.968	170179.14	0.0348	P	2.3
4	☐	10.000	9.707	309080.91	0.0634	P	1.2
5	☐	100.000	98.009	2861770.27	0.5975	A	2.2
6	☐	200.000	201.011	5709473.04	1.2205	A	0.1
7	☐	1.000					

y = 0.0060 * x + 0.0047
R = 0.9999
DL = 0.05183
BEC = 0.7806

Weight: <None>
Min Conc: <None>

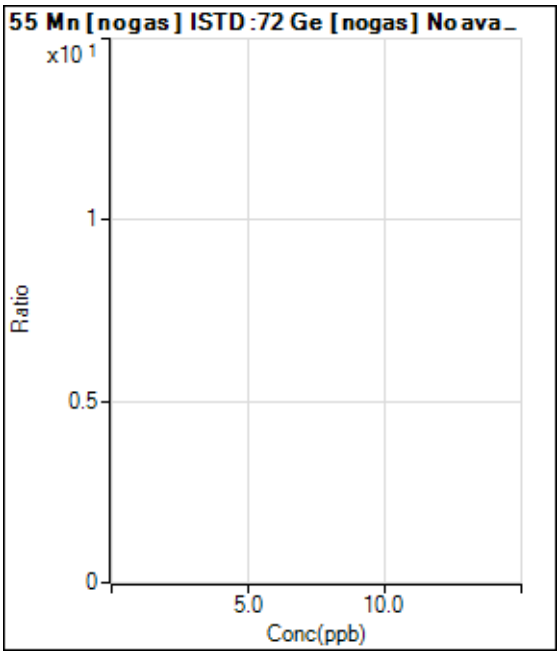
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.74	0.0013	P	5.2
2	☐	2.000	1.936	18716.38	0.0171	P	3.4
3	☐	5.000	4.986	45469.49	0.0421	P	0.8
4	☐	10.000	9.487	85094.36	0.0789	P	1.7
5	☐	100.000	96.679	848089.49	0.7927	P	0.6
6	☐	200.000	201.687	1718415.86	1.6523	A	2.1
7	☐	1.000					

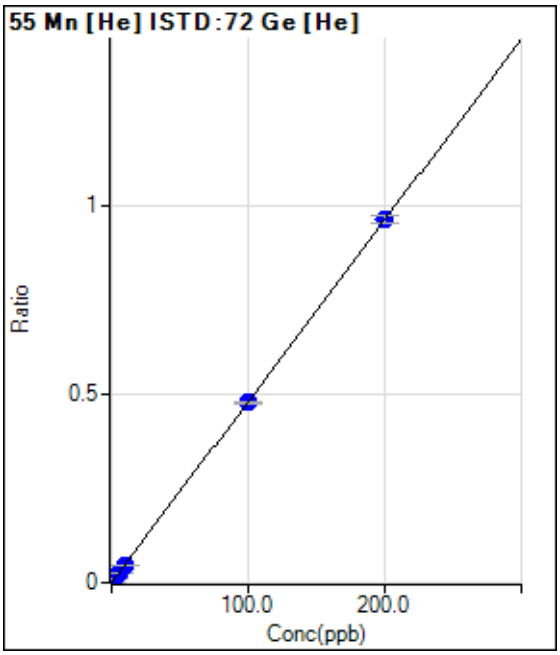
y = 0.0082 * x + 0.0013
R = 0.9998
DL = 0.02439
BEC = 0.1559

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					

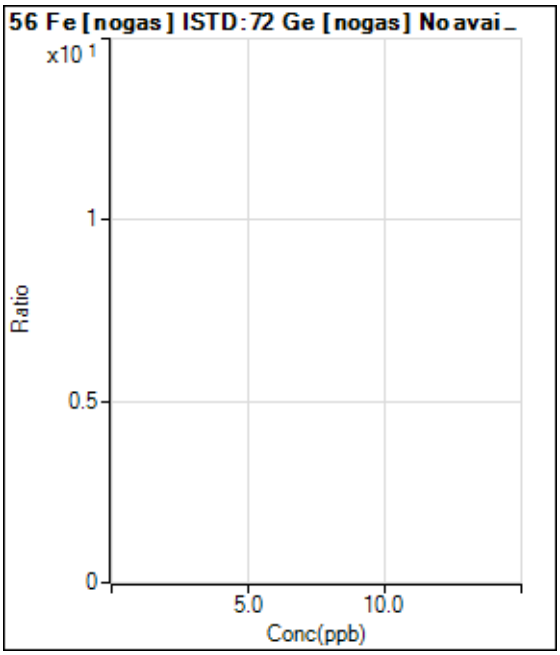
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0003	P	26.5
2	☐	2.000	1.940	10579.88	0.0097	P	4.7
3	☐	5.000	5.099	26893.27	0.0249	P	1.4
4	☐	10.000	9.759	51034.07	0.0473	P	3.1
5	☐	100.000	99.462	512858.70	0.4794	P	0.5
6	☐	200.000	200.279	1003556.29	0.9650	P	2.2
7	☐	1.000					

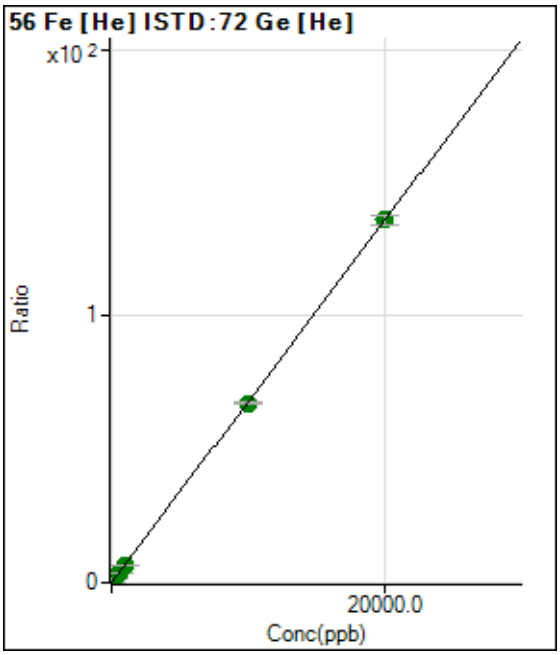
y = 0.0048 * x + 3.3777E-004
R = 1.0000
DL = 0.05567
BEC = 0.07013

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

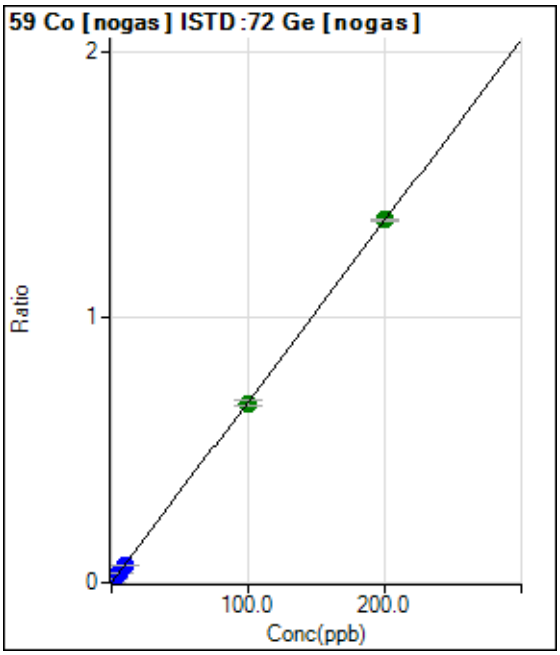
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10182.95	0.0093	P	4.4
2	☐	200.000	197.783	1477906.96	1.3525	A	2.1
3	☐	500.000	514.490	3784262.34	3.5035	A	1.4
4	☐	1000.000	973.520	7137581.98	6.6209	A	2.3
5	☐	10000.00	9925.175	72123645.59	67.4159	A	0.4
6	☐	20000.00	20038.39	141540927.8	136.099	A	2.5
7	☐	100.000					

y = 0.0068 * x + 0.0093
R = 1.0000
DL = 0.1804
BEC = 1.37

Weight: <None>
Min Conc: <None>

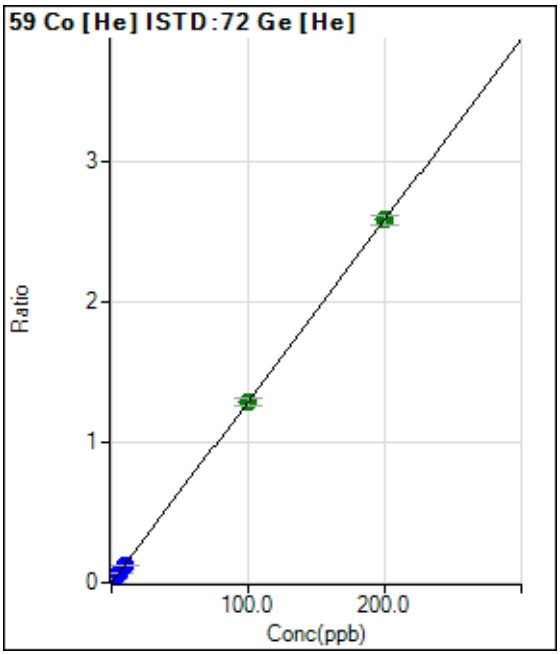


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.02	0.0001	P	14.5
2	☐	2.000	1.960	65964.60	0.0135	P	1.4
3	☐	5.000	5.026	168224.97	0.0344	P	0.5
4	☐	10.000	9.840	327338.99	0.0672	P	2.1
5	☐	100.000	99.035	3234049.64	0.6753	A	2.8
6	☐	200.000	200.490	6394590.53	1.3670	A	0.7
7	☐	1.000					

y = 0.0068 * x + 1.0181E-004
R = 1.0000
DL = 0.006492
BEC = 0.01493

Weight: <None>
Min Conc: <None>

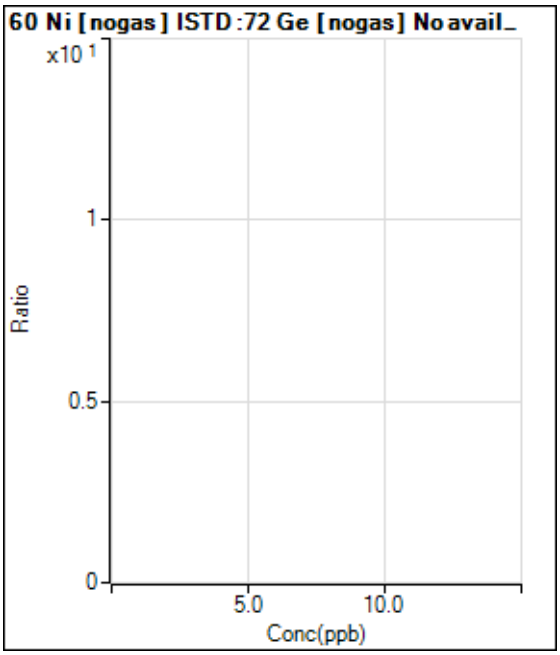
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	6.7
2	☐	2.000	2.007	28412.39	0.0260	P	2.9
3	☐	5.000	5.215	72730.01	0.0673	P	1.5
4	☐	10.000	10.018	139288.34	0.1292	P	1.0
5	☐	100.000	99.720	1374515.76	1.2850	A	3.6
6	☐	200.000	200.133	2681822.77	2.5788	A	2.7
7	☐	1.000					

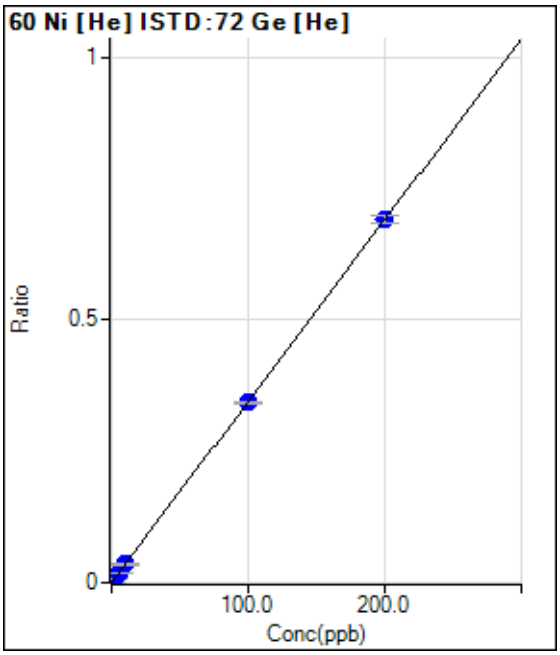
y = 0.0129 * x + 1.4624E-004
R = 1.0000
DL = 0.002291
BEC = 0.01135

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					

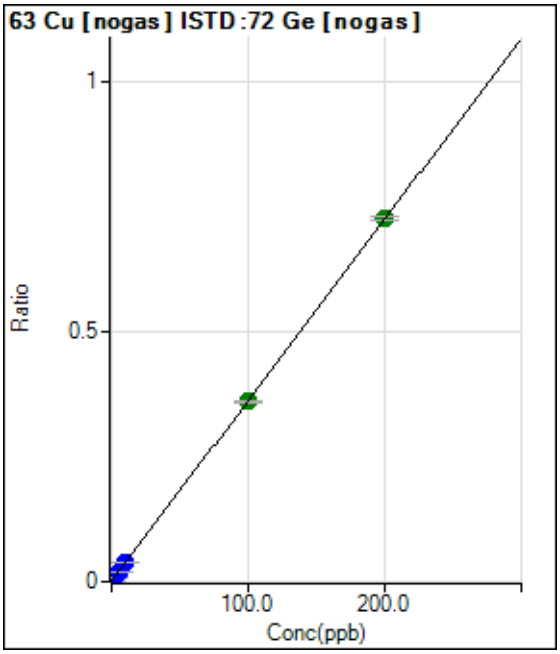
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0002	P	23.5
2	☐	2.000	2.061	7998.56	0.0073	P	3.8
3	☐	5.000	5.211	19644.08	0.0182	P	3.2
4	☐	10.000	10.030	37521.70	0.0348	P	1.2
5	☐	100.000	99.617	367822.91	0.3438	P	1.0
6	☐	200.000	200.184	718321.37	0.6907	P	2.2
7	☐	1.000					

y = 0.0034 * x + 2.1316E-004
R = 1.0000
DL = 0.04354
BEC = 0.0618

Weight: <None>
Min Conc: <None>

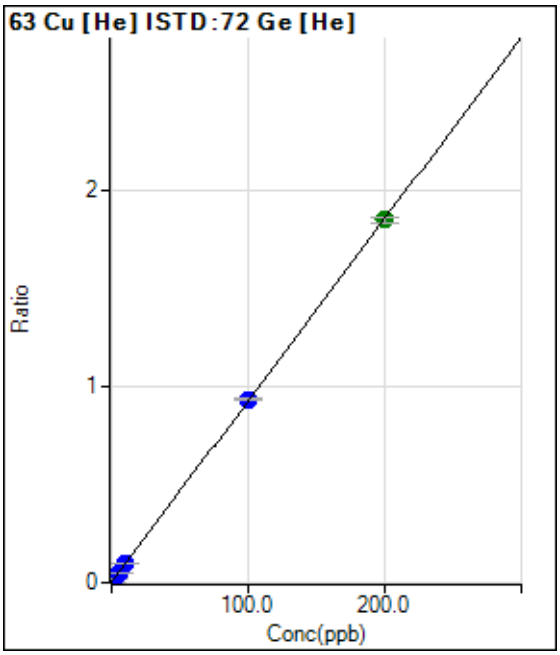


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4032.18	0.0008	P	2.2
2	☐	2.000	1.991	39302.25	0.0080	P	2.4
3	☐	5.000	5.207	96227.74	0.0197	P	2.6
4	☐	10.000	10.138	182708.81	0.0375	P	2.1
5	☐	100.000	99.280	1724742.21	0.3600	A	1.6
6	☐	200.000	200.348	3394665.05	0.7257	A	1.1
7	☐	1.000					

y = 0.0036 * x + 8.2048E-004
R = 1.0000
DL = 0.01518
BEC = 0.2268

Weight: <None>
Min Conc: <None>

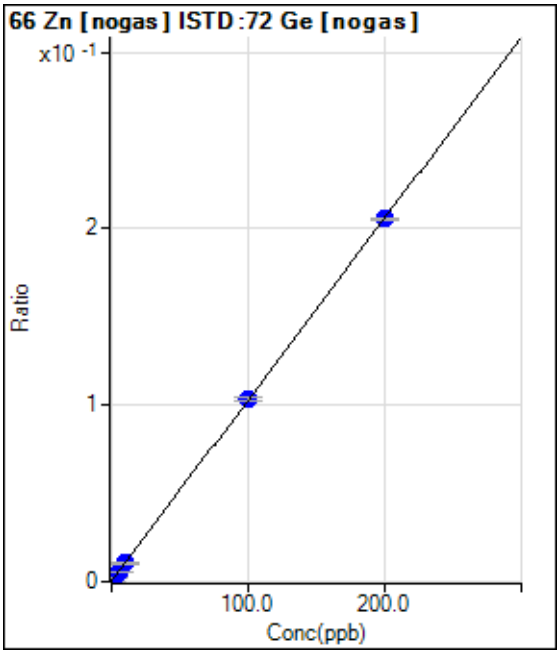
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1730.11	0.0016	P	7.8
2	☐	2.000	2.016	22127.00	0.0203	P	4.2
3	☐	5.000	5.158	53317.58	0.0494	P	1.8
4	☐	10.000	10.014	101699.86	0.0943	P	1.9
5	☐	100.000	100.890	1001566.57	0.9362	P	1.0
6	☐	200.000	199.550	1924368.88	1.8502	A	1.3
7	☐	1.000					

y = 0.0093 * x + 0.0016
R = 1.0000
DL = 0.03984
BEC = 0.1707

Weight: <None>
Min Conc: <None>

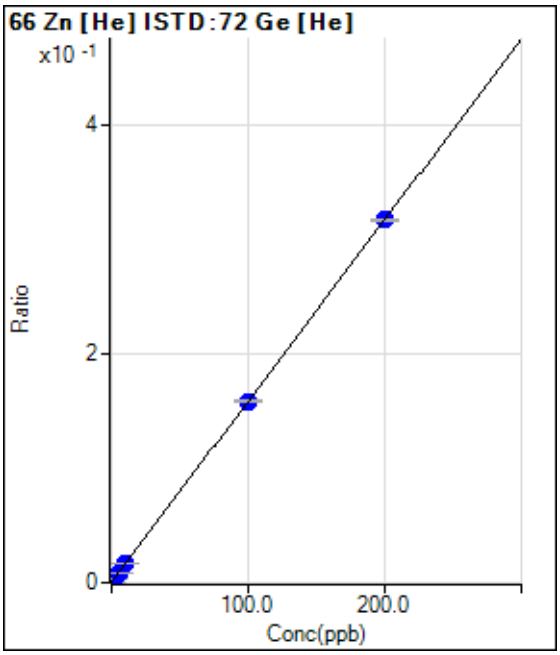


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1263.40	0.0003	P	4.6
2	☐	2.000	1.962	11143.57	0.0023	P	0.9
3	☐	5.000	4.955	26189.03	0.0054	P	1.1
4	☐	10.000	9.843	50560.02	0.0104	P	2.6
5	☐	100.000	100.427	495655.32	0.1035	P	2.0
6	☐	200.000	199.796	961870.69	0.2056	P	0.6
7	☐	1.000					

y = 0.0010 * x + 2.5734E-004
R = 1.0000
DL = 0.0345
BEC = 0.2504

Weight: <None>
Min Conc: <None>

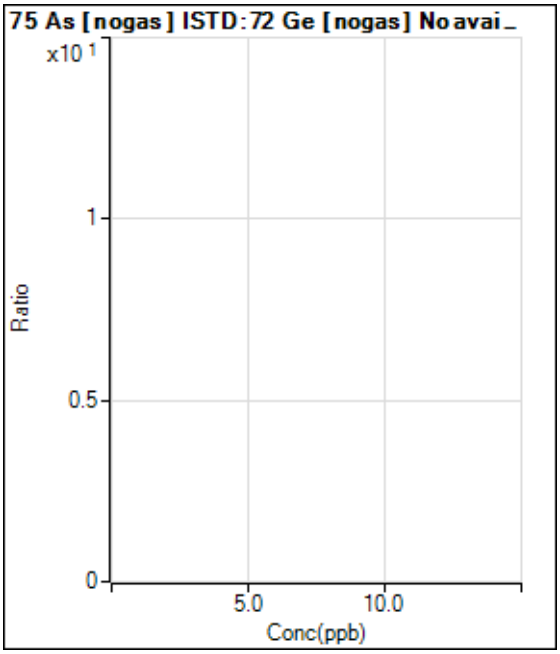
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0004	P	16.9
2	☐	2.000	1.986	3840.46	0.0035	P	8.6
3	☐	5.000	5.034	9012.36	0.0083	P	4.0
4	☐	10.000	10.090	17628.75	0.0164	P	4.5
5	☐	100.000	99.780	169526.08	0.1585	P	1.1
6	☐	200.000	200.105	330192.37	0.3174	P	0.4
7	☐	1.000					

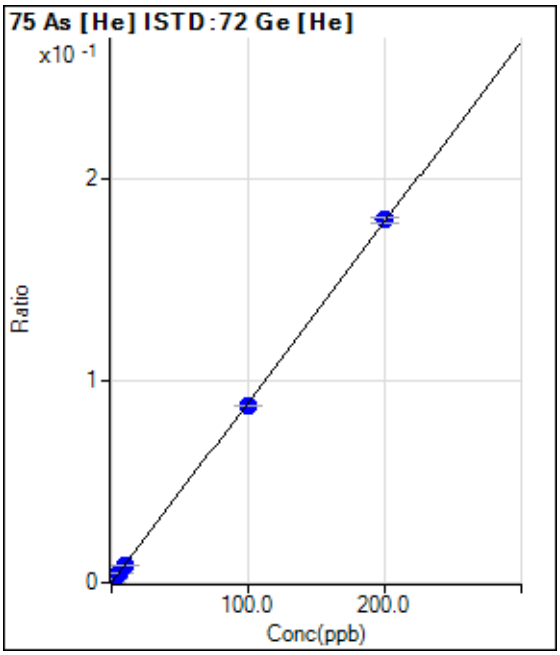
y = 0.0016 * x + 3.6874E-004
R = 1.0000
DL = 0.1183
BEC = 0.2327

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					

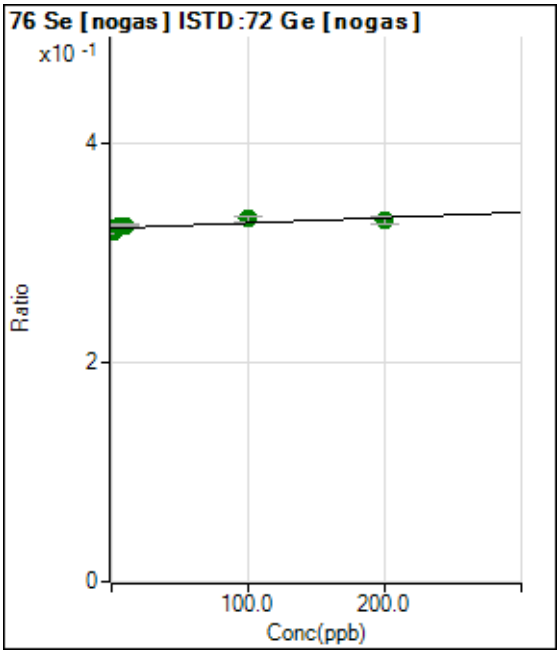
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	22.0
2	☐	2.000	1.856	1903.45	0.0017	P	5.7
3	☐	5.000	4.901	4812.88	0.0045	P	1.5
4	☐	10.000	9.547	9264.61	0.0086	P	0.9
5	☐	100.000	97.837	93355.76	0.0873	P	0.5
6	☐	200.000	201.108	186463.65	0.1793	P	1.3
7	☐	1.000					

y = 8.9098E-004 * x + 8.8393E-005
R = 0.9999
DL = 0.0655
BEC = 0.09921

Weight: <None>
Min Conc: <None>

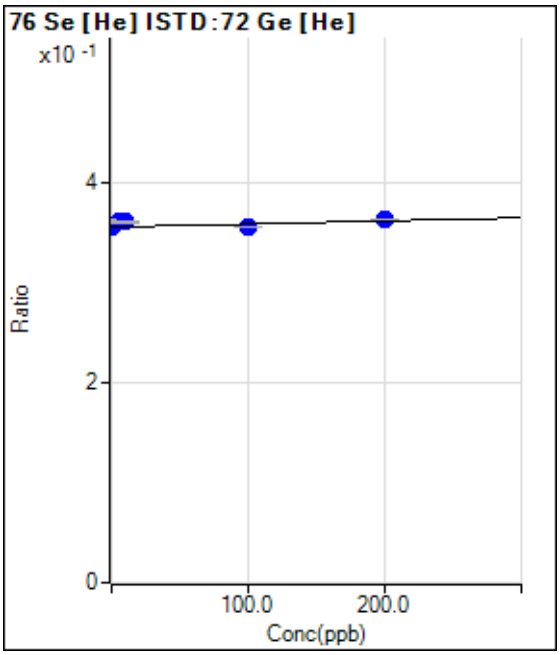


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1581391.75	0.3220	A	2.8
2	☐	2.000	-74.024	1560077.74	0.3184	A	1.3
3	☐	5.000	31.633	1583678.62	0.3235	A	0.5
4	☐	10.000	59.273	1582927.16	0.3249	A	0.2
5	☐	100.000	175.638	1583001.49	0.3305	A	1.5
6	☐	200.000	159.812	1542438.10	0.3297	A	2.0
7	☐	1.000					

y = 4.8286E-005 * x + 0.3220
R = 0.8069
DL = 560.1
BEC = 6669

Weight: <None>
Min Conc: <None>

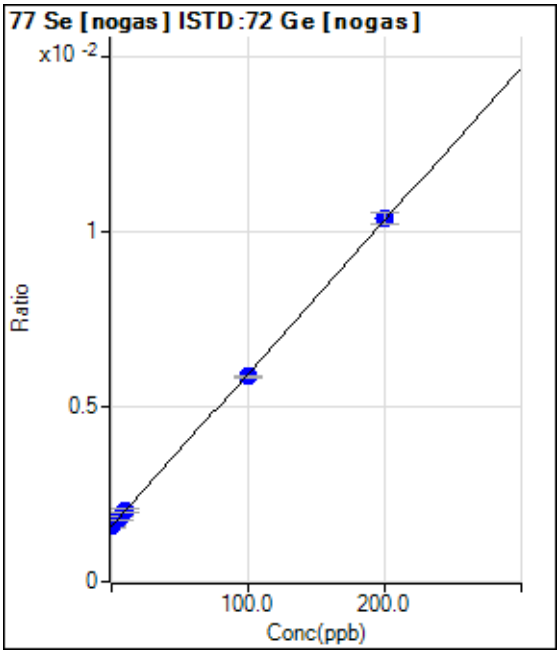
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	389872.94	0.3563	P	1.3
2	☐	2.000	75.040	391795.49	0.3586	P	0.4
3	☐	5.000	163.637	390284.47	0.3613	P	1.1
4	☐	10.000	174.199	389840.36	0.3616	P	0.5
5	☐	100.000	14.101	381621.14	0.3567	P	0.2
6	☐	200.000	230.043	377981.28	0.3634	P	0.7
7	☐	1.000					

y = 3.0881E-005 * x + 0.3563
R = 0.4026
DL = 435.5
BEC = 1.154E+04

Weight: <None>
Min Conc: <None>

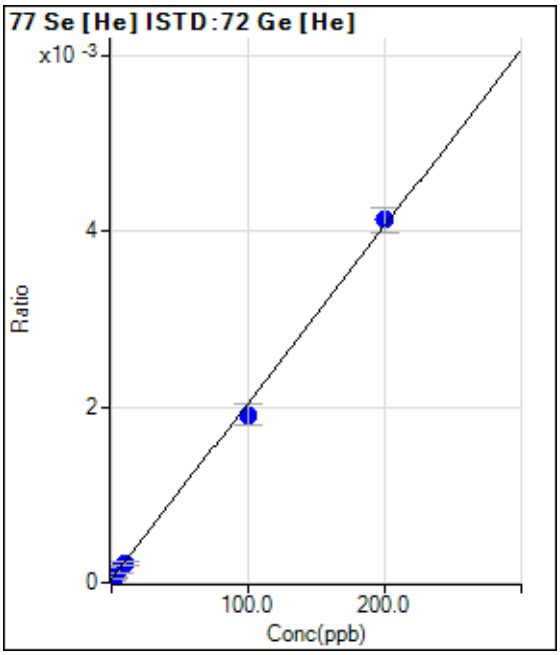


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7761.81	0.0016	P	2.6
2	☐	2.000	3.000	8385.46	0.0017	P	2.4
3	☐	5.000	5.518	8912.35	0.0018	P	7.9
4	☐	10.000	10.851	10012.95	0.0021	P	5.7
5	☐	100.000	97.829	28038.66	0.0059	P	1.4
6	☐	200.000	201.020	48461.34	0.0104	P	3.3
7	☐	1.000					

y = 4.3671E-005 * x + 0.0016
R = 0.9999
DL = 2.849
BEC = 36.19

Weight: <None>
Min Conc: <None>

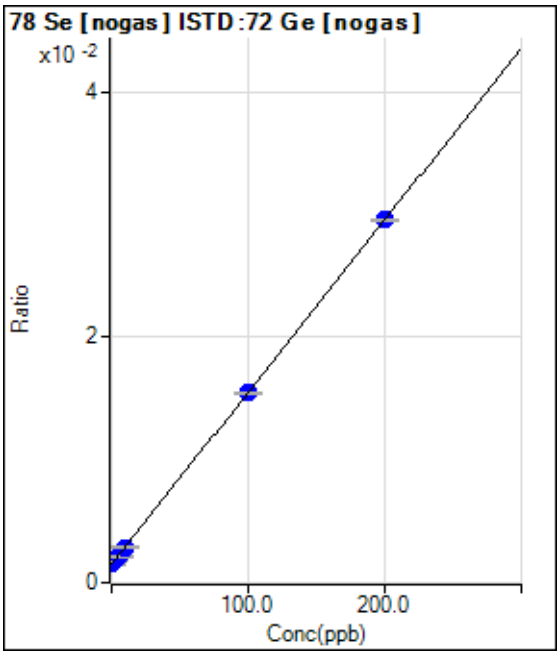
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	74.6
2	☐	2.000	0.618	53.33	0.0000	P	43.7
3	☐	5.000	5.412	156.67	0.0001	P	35.8
4	☐	10.000	9.264	240.00	0.0002	P	15.3
5	☐	100.000	93.026	2040.16	0.0019	P	12.4
6	☐	200.000	203.527	4297.27	0.0041	P	6.8
7	☐	1.000					

y = 2.0103E-005 * x + 3.6449E-005
R = 0.9992
DL = 4.055
BEC = 1.813

Weight: <None>
Min Conc: <None>

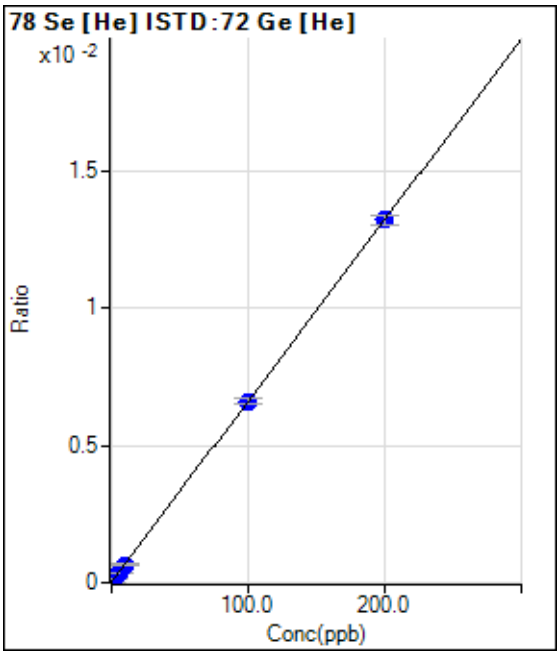


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7351.61	0.0015	P	6.0
2	☐	2.000	1.461	8328.72	0.0017	P	3.5
3	☐	5.000	4.557	10446.47	0.0021	P	2.7
4	☐	10.000	9.844	14015.59	0.0029	P	3.8
5	☐	100.000	99.738	74211.68	0.0155	P	0.9
6	☐	200.000	200.155	138403.72	0.0296	P	0.7
7	☐	1.000					

y = 1.4035E-004 * x + 0.0015
R = 1.0000
DL = 1.914
BEC = 10.65

Weight: <None>
Min Conc: <None>

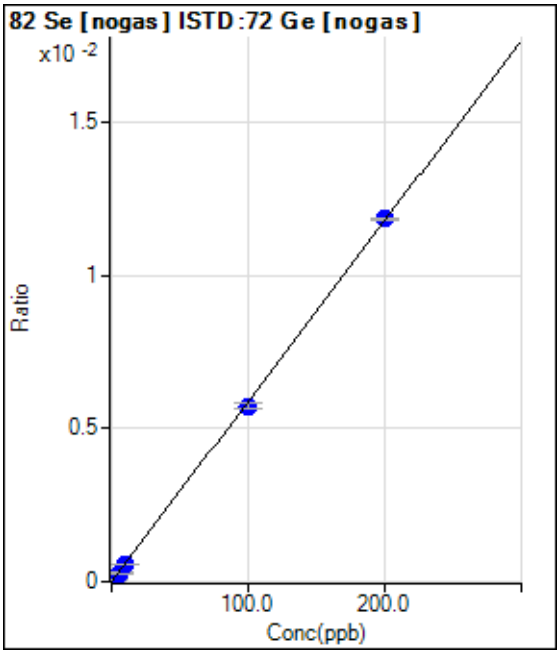
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	43.8
2	☐	2.000	2.171	179.33	0.0002	P	14.2
3	☐	5.000	4.904	372.01	0.0003	P	9.7
4	☐	10.000	9.616	706.69	0.0007	P	3.3
5	☐	100.000	99.962	7082.72	0.0066	P	3.0
6	☐	200.000	200.039	13756.55	0.0132	P	2.4
7	☐	1.000					

y = 6.6024E-005 * x + 2.0723E-005
R = 1.0000
DL = 0.4121
BEC = 0.3139

Weight: <None>
Min Conc: <None>

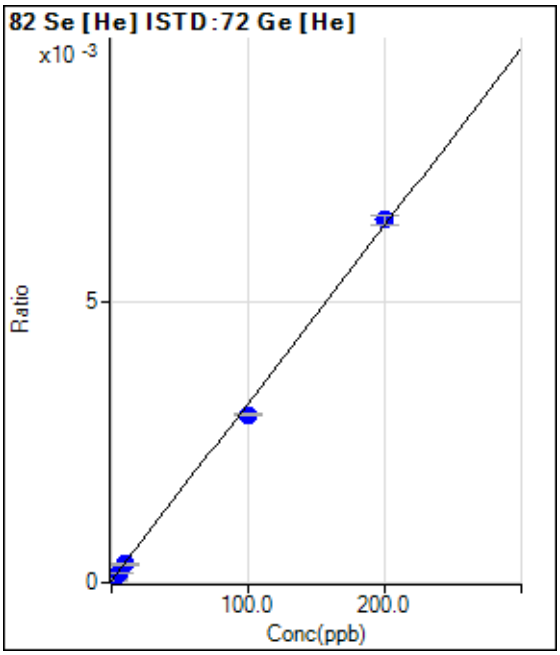


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.29	0.0000	P	1187.
2	☐	2.000	1.658	484.65	0.0001	P	24.9
3	☐	5.000	4.541	1314.83	0.0003	P	13.3
4	☐	10.000	9.430	2708.98	0.0006	P	7.1
5	☐	100.000	97.524	27469.61	0.0057	P	3.4
6	☐	200.000	201.282	55373.84	0.0118	P	0.4
7	☐	1.000					

y = 5.8804E-005 * x + 1.3002E-006
R = 0.9999
DL = 0.7874
BEC = 0.02211

Weight: <None>
Min Conc: <None>

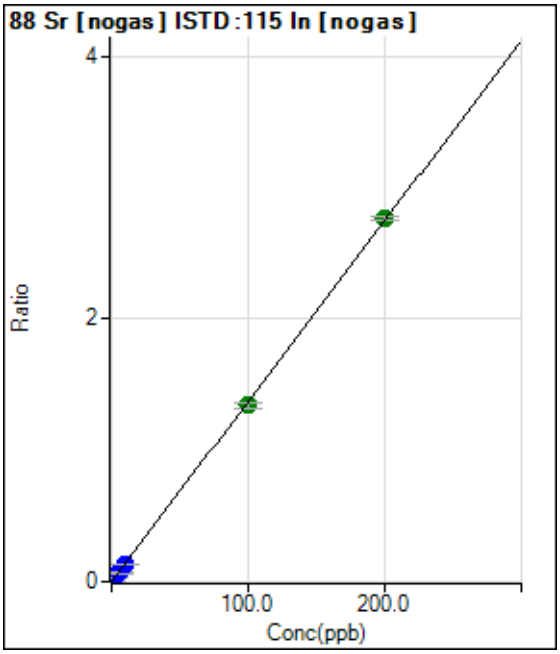
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	66.5
2	☐	2.000	0.680	63.33	0.0001	P	92.6
3	☐	5.000	4.222	183.34	0.0002	P	18.2
4	☐	10.000	9.616	366.68	0.0003	P	11.0
5	☐	100.000	93.633	3200.35	0.0030	P	1.1
6	☐	200.000	203.235	6708.04	0.0065	P	2.7
7	☐	1.000					

y = 3.1559E-005 * x + 3.6595E-005
R = 0.9993
DL = 2.315
BEC = 1.16

Weight: <None>
Min Conc: <None>

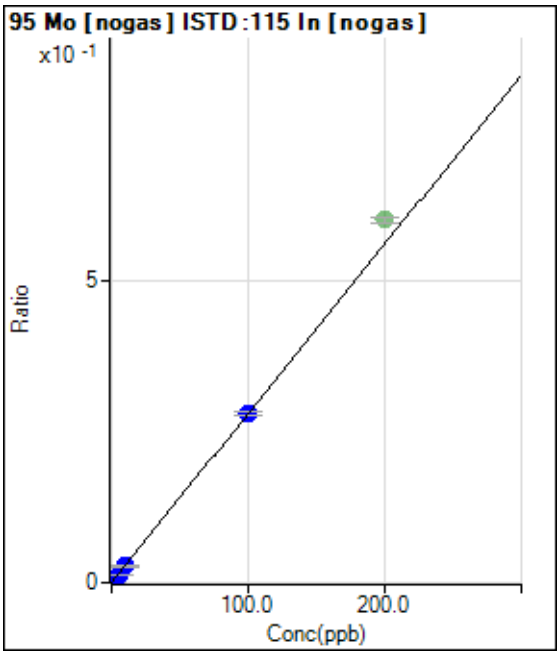


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2026.82	0.0007	P	7.1
2	☐	2.000	1.863	80878.17	0.0263	P	4.4
3	☐	5.000	4.803	206587.31	0.0667	P	3.7
4	☐	10.000	9.289	393514.47	0.1283	P	2.6
5	☐	100.000	97.937	4026157.86	1.3467	A	3.2
6	☐	200.000	201.073	8036925.71	2.7642	A	1.0
7	☐	1.000					

y = 0.0137 * x + 6.5839E-004
R = 0.9999
DL = 0.01027
BEC = 0.0479

Weight: <None>
Min Conc: <None>

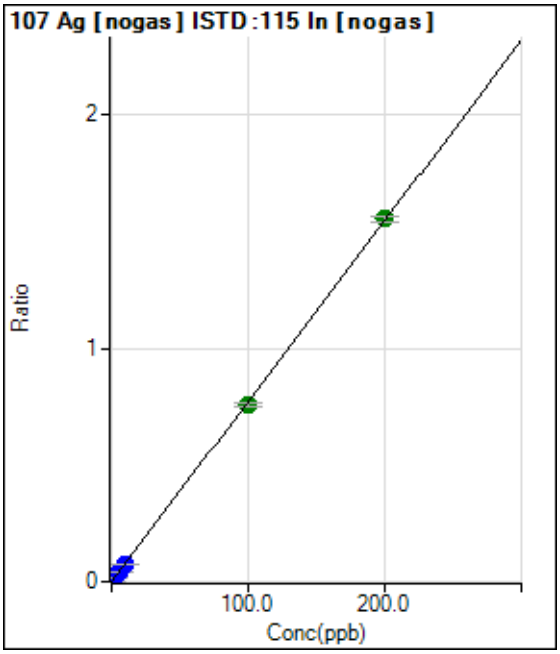
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1036.72	0.0003	P	4.3
2	☐	2.000	1.892	17332.02	0.0056	P	3.7
3	☐	5.000	4.843	42992.02	0.0139	P	3.4
4	☐	10.000	9.646	83705.57	0.0273	P	2.8
5	☐	100.000	100.045	837057.44	0.2800	P	2.7
6	☑	200.000		1743937.84	0.5998	A	1.3
7	☐	1.000					

y = 0.0028 * x + 3.3732E-004
R = 1.0000
DL = 0.01575
BEC = 0.1207

Weight: <None>
Min Conc: <None>

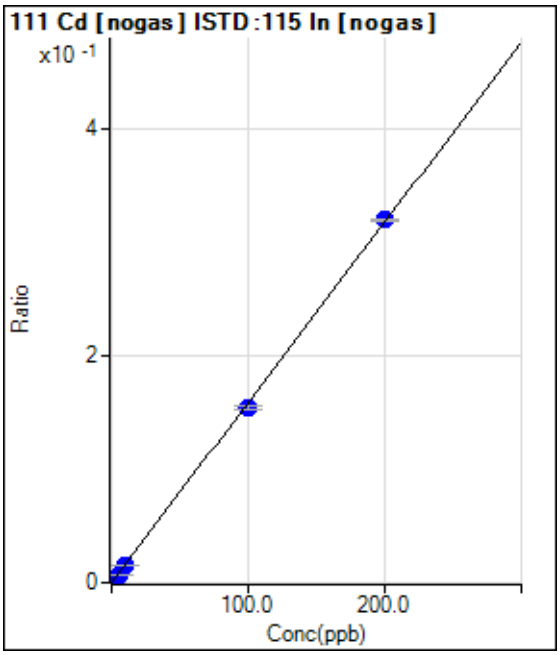


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1926.69	0.0006	P	73.0
2	☐	2.000	1.915	47457.48	0.0154	P	4.8
3	☐	5.000	4.846	117897.45	0.0380	P	3.2
4	☐	10.000	9.582	228855.93	0.0746	P	1.0
5	☐	100.000	97.984	2264516.84	0.7573	A	2.0
6	☐	200.000	201.033	4515828.79	1.5532	A	1.6
7	☐	1.000					

y = 0.0077 * x + 6.2195E-004
R = 0.9999
DL = 0.1764
BEC = 0.08054

Weight: <None>
Min Conc: <None>

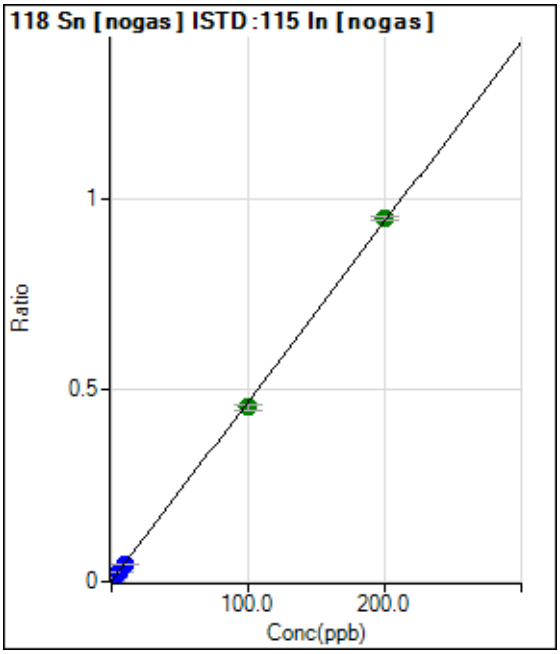
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	46.3
2	☐	2.000	1.896	9309.27	0.0030	P	5.6
3	☐	5.000	4.689	23102.14	0.0075	P	3.9
4	☐	10.000	9.508	46324.47	0.0151	P	1.1
5	☐	100.000	97.305	461753.13	0.1544	P	2.8
6	☐	200.000	201.381	929261.71	0.3196	P	0.6
7	☐	1.000					

y = 0.0016 * x + 1.3114E-005
R = 0.9999
DL = 0.01147
BEC = 0.008263

Weight: <None>
Min Conc: <None>

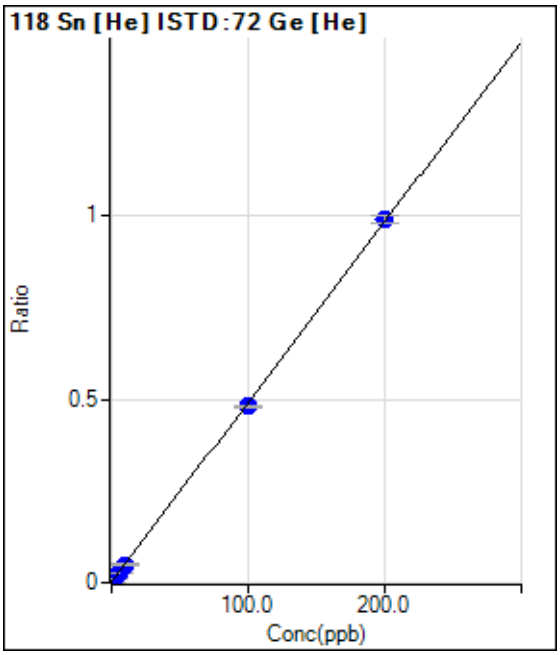


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3950.54	0.0013	P	10.3
2	☐	2.000	1.853	30770.89	0.0100	P	0.9
3	☐	5.000	4.701	72348.70	0.0233	P	3.2
4	☐	10.000	9.546	141309.02	0.0461	P	1.7
5	☐	100.000	96.746	1361529.04	0.4553	A	2.5
6	☐	200.000	201.658	2754918.71	0.9476	A	1.1
7	☐	1.000					

y = 0.0047 * x + 0.0013
R = 0.9998
DL = 0.08505
BEC = 0.2743

Weight: <None>
Min Conc: <None>

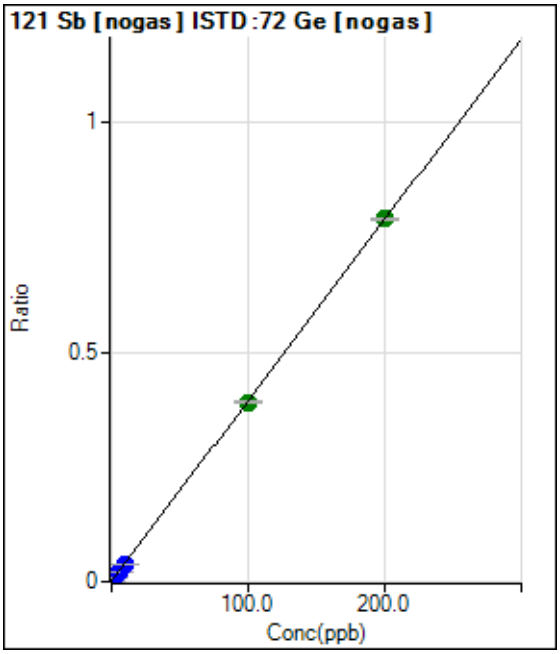
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1596.77	0.0015	P	2.3
2	☐	2.000	1.849	11497.28	0.0105	P	0.7
3	☐	5.000	5.025	28186.39	0.0261	P	1.7
4	☐	10.000	9.750	53107.37	0.0493	P	2.5
5	☐	100.000	97.565	513323.47	0.4798	P	0.5
6	☐	200.000	201.231	1027669.46	0.9881	P	2.1
7	☐	1.000					

y = 0.0049 * x + 0.0015
R = 0.9999
DL = 0.02098
BEC = 0.2976

Weight: <None>
Min Conc: <None>

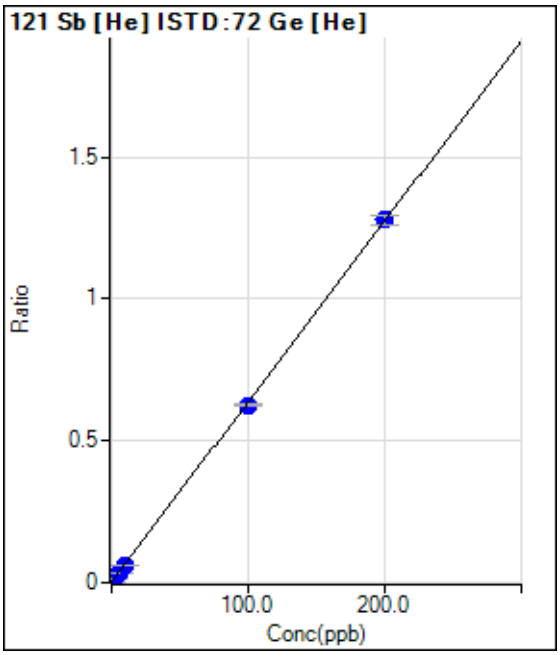


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7511.73	0.0015	P	2.5
2	☐	2.000	1.852	43223.86	0.0088	P	0.6
3	☐	5.000	4.749	98997.94	0.0202	P	1.1
4	☐	10.000	9.490	189471.31	0.0389	P	1.6
5	☐	100.000	99.020	1874565.91	0.3913	A	1.8
6	☐	200.000	200.523	3699650.99	0.7909	A	0.4
7	☐	1.000					

y = 0.0039 * x + 0.0015
R = 1.0000
DL = 0.02887
BEC = 0.3886

Weight: <None>
Min Conc: <None>

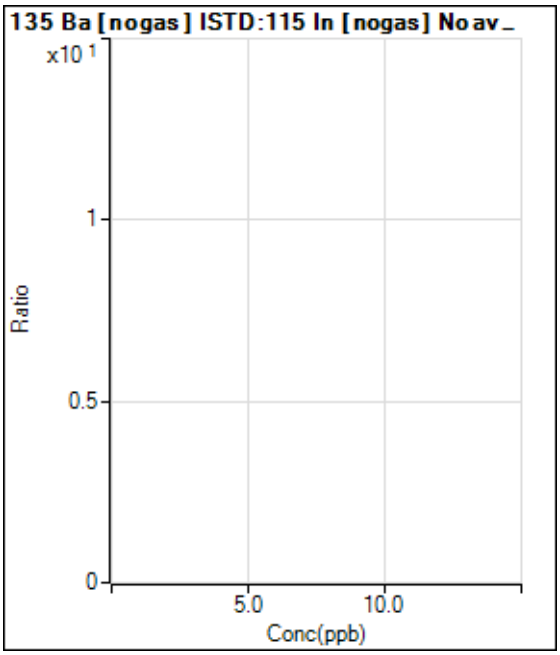
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2663.59	0.0024	P	3.3
2	☐	2.000	1.829	15346.88	0.0140	P	1.9
3	☐	5.000	4.954	36598.57	0.0339	P	3.0
4	☐	10.000	9.615	68416.60	0.0635	P	1.6
5	☐	100.000	98.290	670162.21	0.6264	P	0.2
6	☐	200.000	200.877	1328655.14	1.2777	P	2.7
7	☐	1.000					

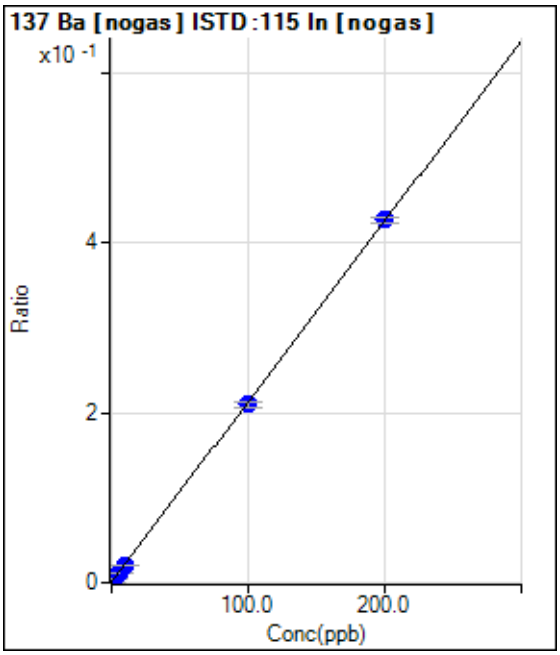
y = 0.0063 * x + 0.0024
R = 0.9999
DL = 0.03798
BEC = 0.3834

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					

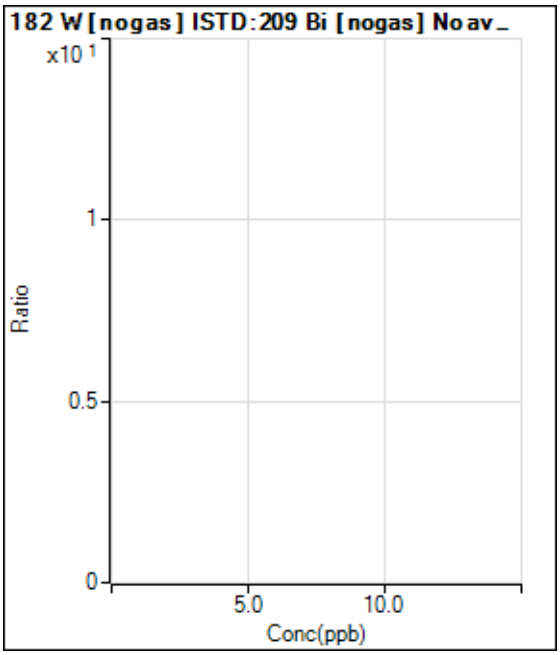
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1196.74	0.0004	P	7.0
2	☐	2.000	1.798	12961.82	0.0042	P	2.1
3	☐	5.000	4.824	32955.03	0.0106	P	1.9
4	☐	10.000	9.492	63001.47	0.0205	P	0.5
5	☐	100.000	98.384	625568.58	0.2093	P	4.2
6	☐	200.000	200.840	1240845.06	0.4268	P	1.9
7	☐	1.000					

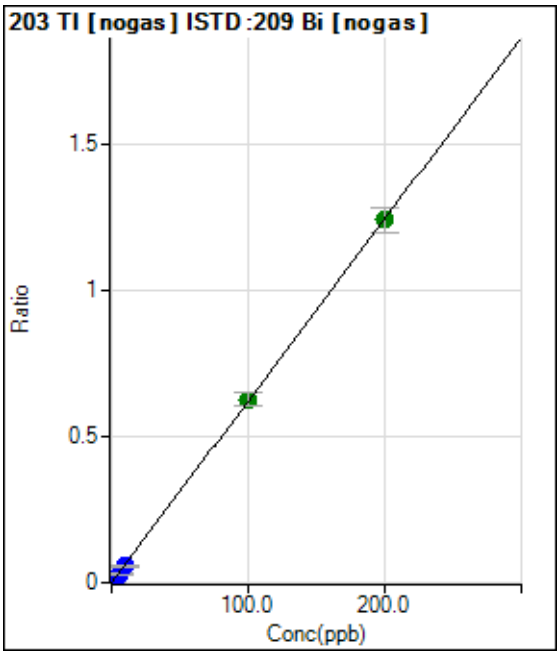
y = 0.0021 * x + 3.8952E-004
R = 1.0000
DL = 0.03849
BEC = 0.1835

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					

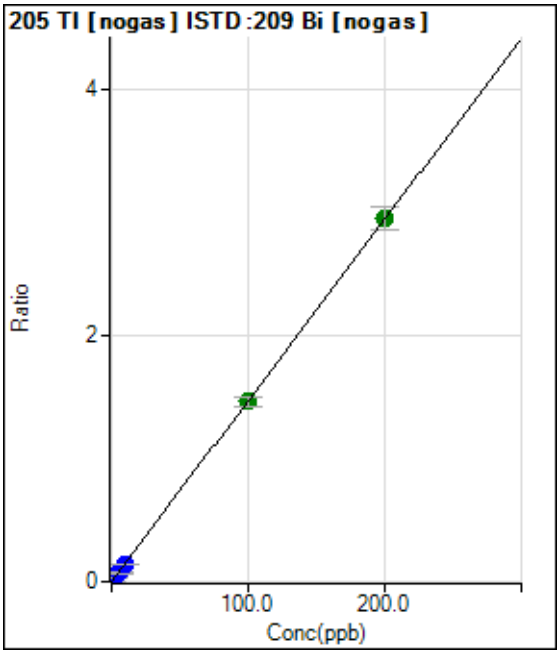
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0001	P	26.0
2	☐	2.000	1.874	36855.08	0.0118	P	3.2
3	☐	5.000	4.695	90492.02	0.0293	P	4.8
4	☐	10.000	9.162	178052.05	0.0570	P	5.4
5	☐	100.000	100.742	1879134.19	0.6258	A	7.2
6	☐	200.000	199.680	3646081.40	1.2403	A	6.6
7	☐	1.000					

y = 0.0062 * x + 1.2015E-004
R = 1.0000
DL = 0.01512
BEC = 0.01934

Weight: <None>
Min Conc: <None>

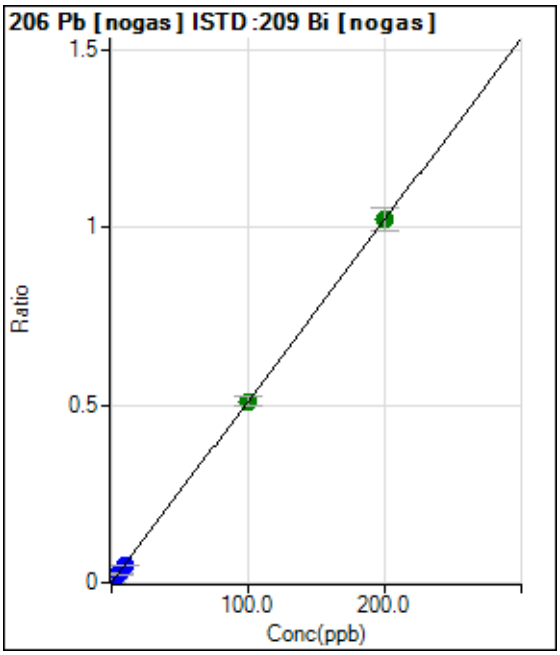


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	783.37	0.0003	P	20.6
2	☐	2.000	1.855	86311.23	0.0276	P	7.2
3	☐	5.000	4.785	218650.67	0.0707	P	5.2
4	☐	10.000	9.328	429916.19	0.1377	P	5.1
5	☐	100.000	99.329	4397090.35	1.4636	A	5.5
6	☐	200.000	200.376	8679909.04	2.9523	A	6.4
7	☐	1.000					

y = 0.0147 * x + 2.5318E-004
R = 1.0000
DL = 0.01061
BEC = 0.01719

Weight: <None>
Min Conc: <None>

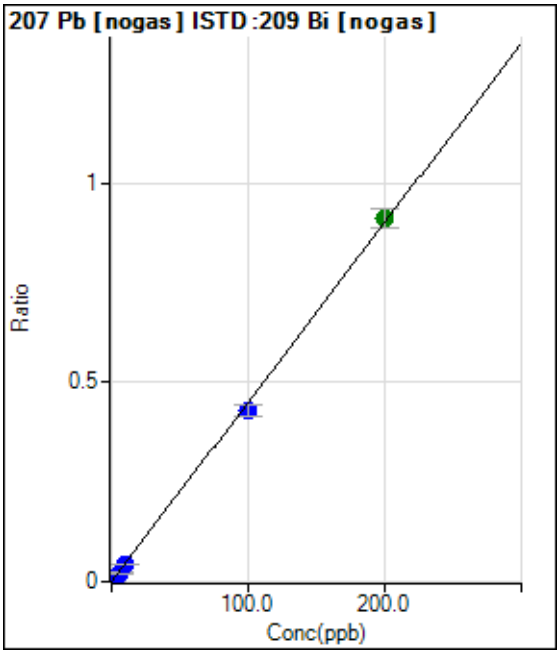
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1427.05	0.0005	P	35.0
2	☐	2.000	1.837	30842.99	0.0099	P	6.5
3	☐	5.000	4.737	76241.17	0.0247	P	5.1
4	☐	10.000	9.324	150172.74	0.0481	P	6.2
5	☐	100.000	100.097	1537519.67	0.5118	A	5.3
6	☐	200.000	199.993	3005178.18	1.0221	A	6.3
7	☐	1.000					

y = 0.0051 * x + 4.6805E-004
R = 1.0000
DL = 0.09624
BEC = 0.09163

Weight: <None>
Min Conc: <None>

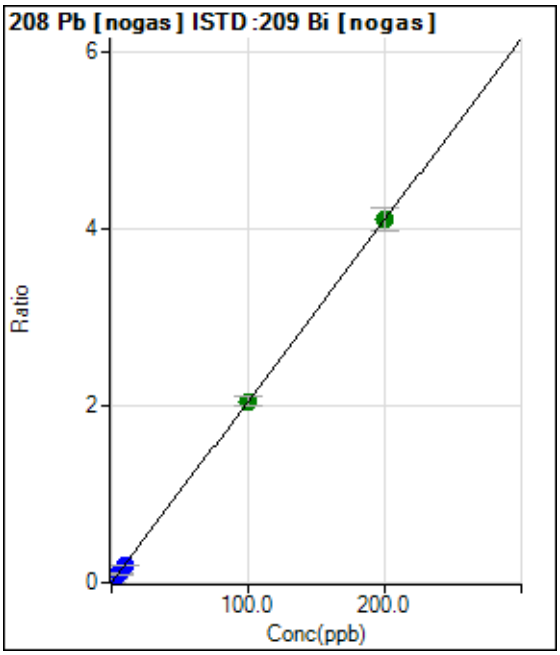


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	933.38	0.0003	P	19.5
2	☐	2.000	1.906	27777.39	0.0089	P	6.6
3	☐	5.000	4.711	66391.50	0.0215	P	5.7
4	☐	10.000	9.266	131057.01	0.0420	P	4.7
5	☐	100.000	95.753	1293805.42	0.4308	P	6.5
6	☐	200.000	202.168	2674335.90	0.9092	A	5.4
7	☐	1.000					

y = 0.0045 * x + 3.0461E-004
R = 0.9997
DL = 0.03973
BEC = 0.06775

Weight: <None>
Min Conc: <None>

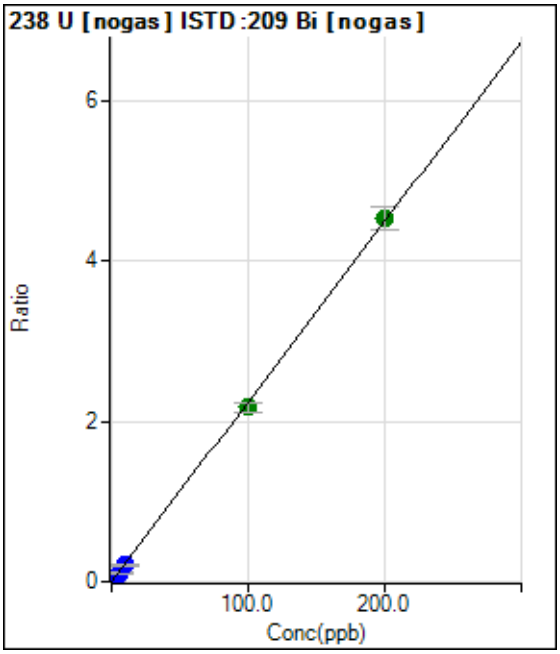
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4763.98	0.0016	P	18.9
2	☐	2.000	1.864	124242.49	0.0397	P	6.3
3	☐	5.000	4.725	303573.75	0.0982	P	5.2
4	☐	10.000	9.339	601607.01	0.1926	P	4.2
5	☐	100.000	99.919	6145529.52	2.0458	A	5.7
6	☐	200.000	200.082	12040318.15	4.0951	A	6.2
7	☐	1.000					

y = 0.0205 * x + 0.0016
R = 1.0000
DL = 0.04303
BEC = 0.07598

Weight: <None>
Min Conc: <None>

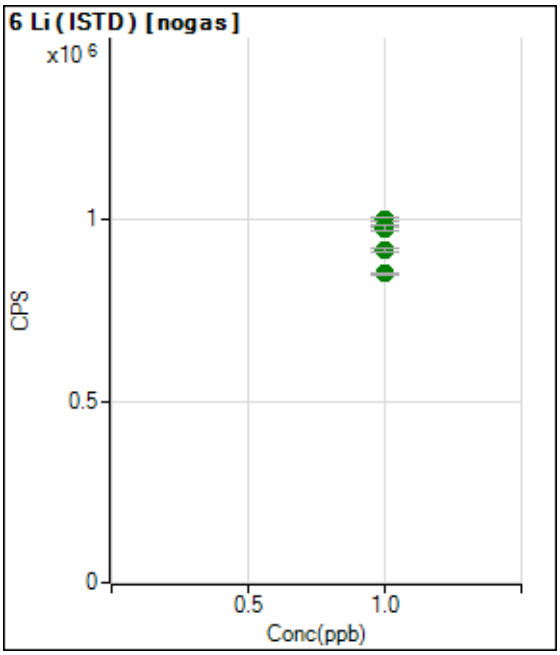


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	36.0
2	☐	2.000	1.822	128152.81	0.0409	P	6.7
3	☐	5.000	4.752	329901.67	0.1067	P	4.5
4	☐	10.000	9.146	641480.57	0.2054	P	4.4
5	☐	100.000	96.868	6535254.90	2.1751	A	4.9
6	☐	200.000	201.617	13308748.13	4.5271	A	6.4
7	☐	1.000					

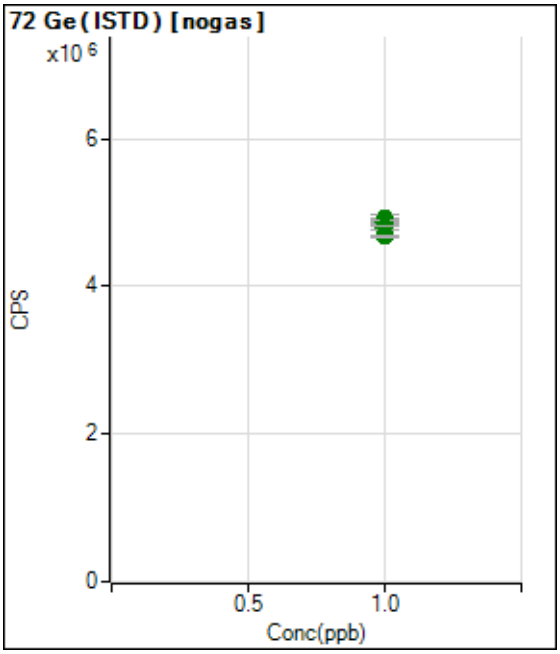
y = 0.0225 * x + 2.6084E-005
R = 0.9998
DL = 0.001254
BEC = 0.001162

Weight: <None>
Min Conc: <None>

Calibration for 021_ICV.d

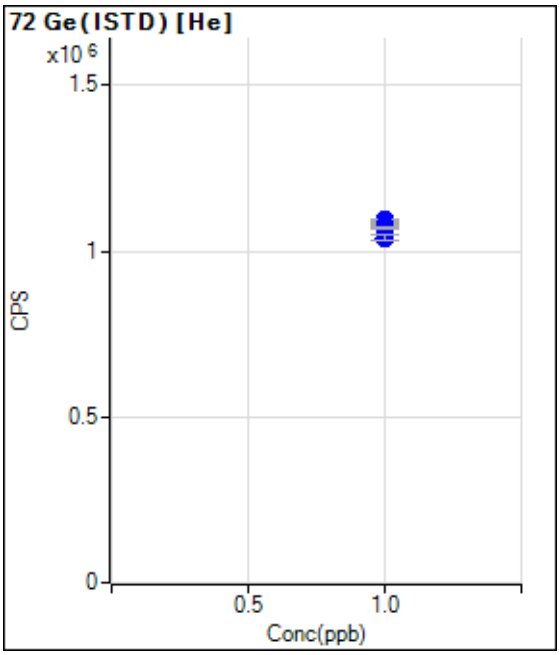


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		992919.97		A	2.1
2	☐	1.000		976188.54		A	1.0
3	☐	1.000		998615.37		A	1.0
4	☐	1.000		977873.67		A	1.4
5	☐	1.000		914945.55		A	1.3
6	☐	1.000		849627.02		A	0.8
7	☐	1.000					

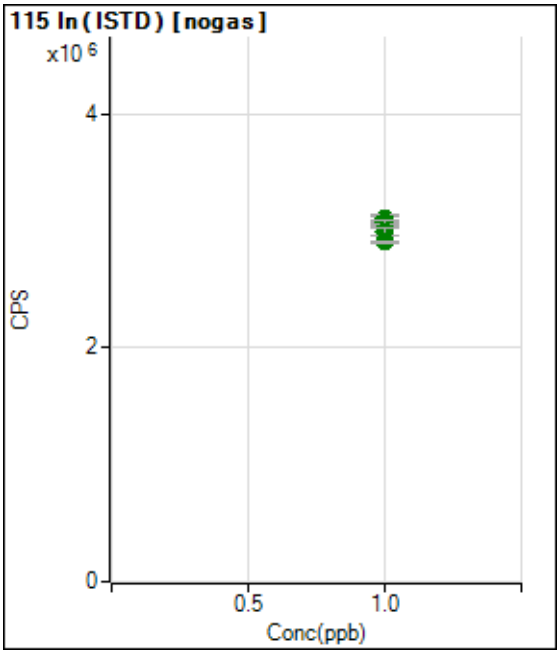


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4912784.72		A	2.3
2	☐	1.000		4899447.43		A	0.7
3	☐	1.000		4894903.99		A	1.3
4	☐	1.000		4872498.68		A	1.0
5	☐	1.000		4790189.72		A	1.2
6	☐	1.000		4677860.87		A	0.4
7	☐	1.000					

Calibration for 021_ICV.d

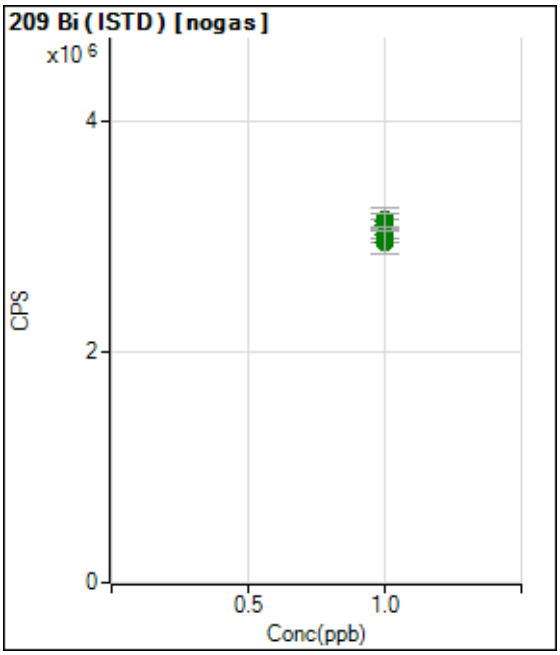


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1094371.60		P	0.6
2	☐	1.000		1092624.23		P	0.6
3	☐	1.000		1080190.53		P	0.6
4	☐	1.000		1077960.04		P	0.4
5	☐	1.000		1069856.36		P	0.8
6	☐	1.000		1040233.32		P	1.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3074864.54		A	2.6
2	☐	1.000		3082260.83		A	2.4
3	☐	1.000		3100268.32		A	2.1
4	☐	1.000		3066952.35		A	1.0
5	☐	1.000		2991017.82		A	2.2
6	☐	1.000		2907440.68		A	0.5
7	☐	1.000					

Calibration for 021_ICV.d



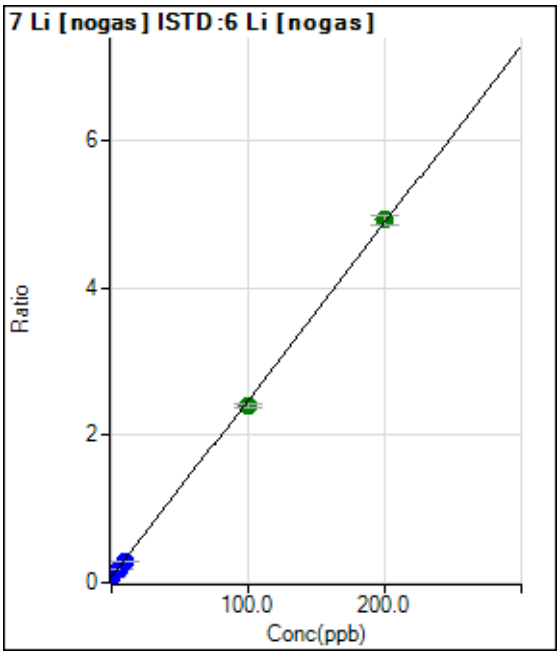
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3087509.54		A	6.7
2	☐	1.000		3138764.64		A	6.4
3	☐	1.000		3093921.31		A	3.3
4	☐	1.000		3126729.01		A	3.9
5	☐	1.000		3009257.77		A	4.7
6	☐	1.000		2948271.62		A	6.7
7	☐	1.000					

Calibration for 208_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 9:02:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	201CALB.d	CAL BLK	8/19/2020 8:45:16 PM
2	202CALS.d	2/10/200	8/19/2020 8:47:38 PM
3	203CALS.d	5/25/500	8/19/2020 8:50:01 PM
4	204CALS.d	10/50/1000	8/19/2020 8:52:26 PM
5	205CALS.d	100/500/10K	8/19/2020 8:54:47 PM
6	206CALS.d	200/1000/20K	8/19/2020 8:57:05 PM
7			

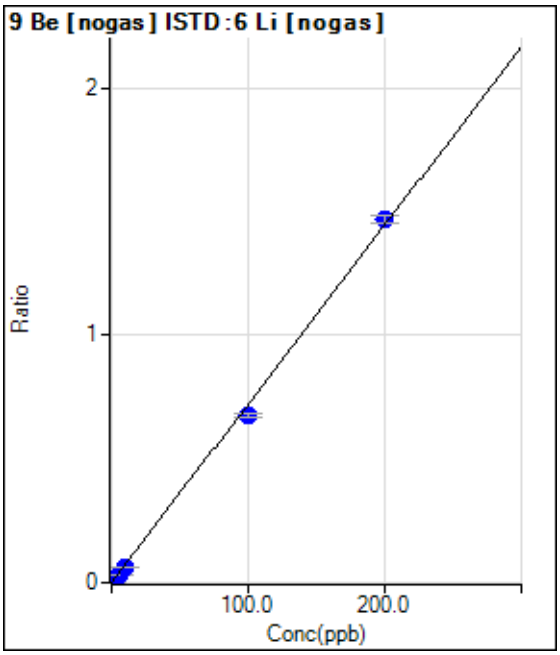
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60365.32	0.0759	P	0.5
2	☐	2.000	1.756	92295.04	0.1181	P	0.5
3	☐	5.000	4.438	142001.00	0.1825	P	0.8
4	☐	10.000	8.666	219180.84	0.2840	P	1.0
5	☐	100.000	96.690	1662808.93	2.3978	A	3.0
6	☐	200.000	201.738	3109311.73	4.9204	A	2.4
7	☐	1.000					

y = 0.0240 * x + 0.0759
R = 0.9998
DL = 0.04285
BEC = 3.161

Weight: <None>
Min Conc: <None>

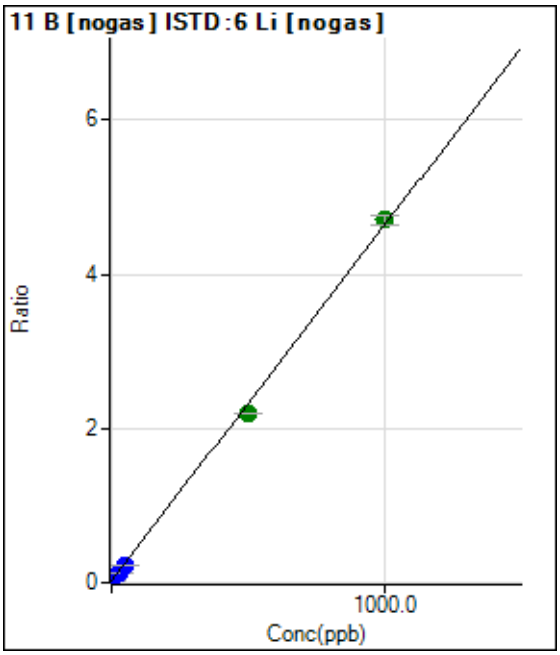


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	86.6
2	☐	2.000	1.691	9559.11	0.0122	P	1.4
3	☐	5.000	4.320	24275.29	0.0312	P	1.7
4	☐	10.000	8.418	46898.50	0.0608	P	1.8
5	☐	100.000	93.973	470363.57	0.6782	P	1.9
6	☐	200.000	203.113	926318.45	1.4658	P	2.0
7	☐	1.000					

y = 0.0072 * x + 2.9331E-005
R = 0.9994
DL = 0.01056
BEC = 0.004065

Weight: <None>
Min Conc: <None>

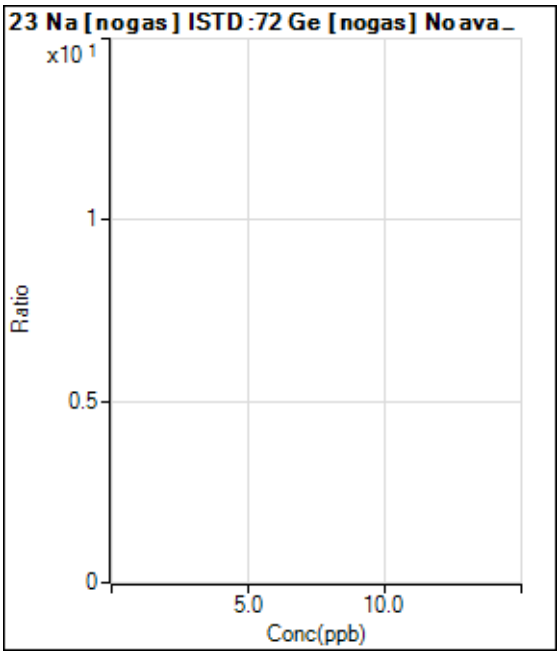
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18899.33	0.0238	P	3.1
2	☐	10.000	10.041	54772.48	0.0701	P	1.1
3	☐	25.000	21.355	95126.23	0.1223	P	0.8
4	☐	50.000	42.210	168575.96	0.2184	P	2.1
5	☐	500.000	470.407	1521509.35	2.1933	A	0.8
6	☐	1000.000	1015.277	2974211.93	4.7062	A	2.4
7	☐	5.000					

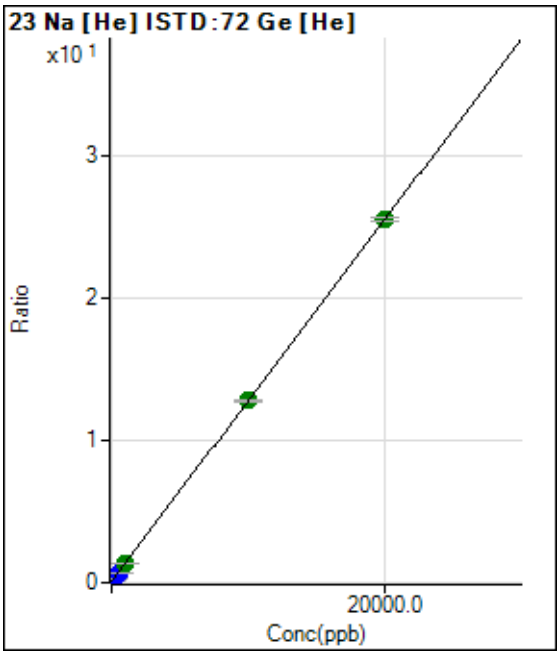
y = 0.0046 * x + 0.0238
R = 0.9994
DL = 0.4833
BEC = 5.153

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

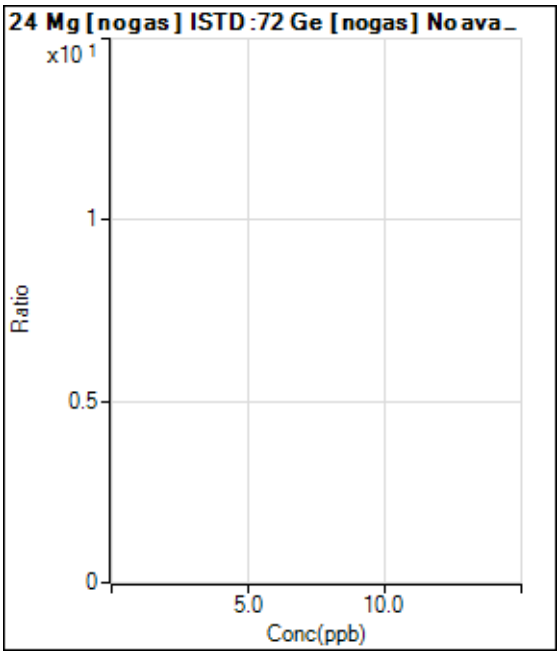
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79267.46	0.0825	P	2.3
2	☐	200.000	195.054	317162.17	0.3299	P	1.1
3	☐	500.000	503.452	682357.31	0.7210	P	0.3
4	☐	1000.000	988.191	1259232.25	1.3358	A	1.6
5	☐	10000.00	10001.96	11761401.91	12.7671	A	1.4
6	☐	20000.00	19999.57	22993306.33	25.4461	A	1.1
7	☐	100.000					

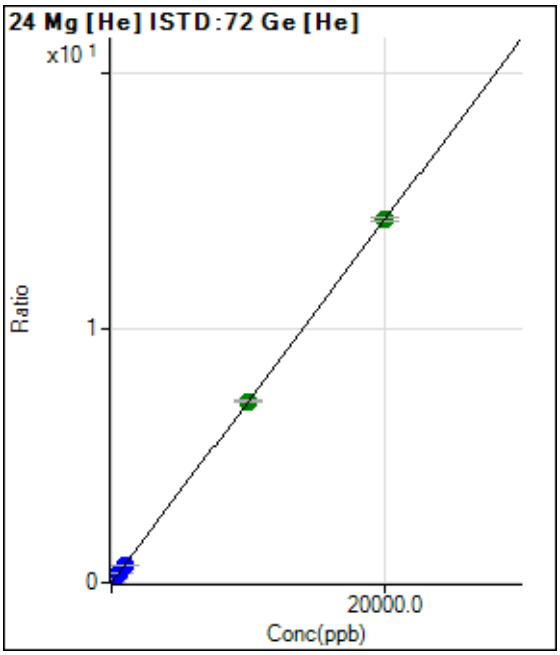
y = 0.0013 * x + 0.0825
R = 1.0000
DL = 4.413
BEC = 65.07

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

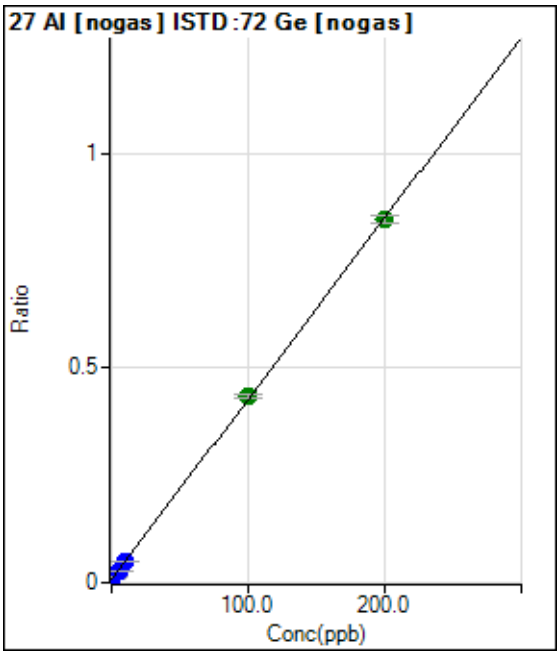
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.68	0.0006	P	13.0
2	☐	200.000	198.240	136169.31	0.1416	P	0.5
3	☐	500.000	507.895	342562.09	0.3620	P	1.1
4	☐	1000.000	991.222	665439.70	0.7059	P	1.4
5	☐	10000.00	9979.313	6542267.20	7.1016	A	1.1
6	☐	20000.00	20010.60	12868116.48	14.2397	A	1.2
7	☐	100.000					

y = 7.1158E-004 * x + 5.6921E-004
R = 1.0000
DL = 0.3111
BEC = 0.7999

Weight: <None>
Min Conc: <None>

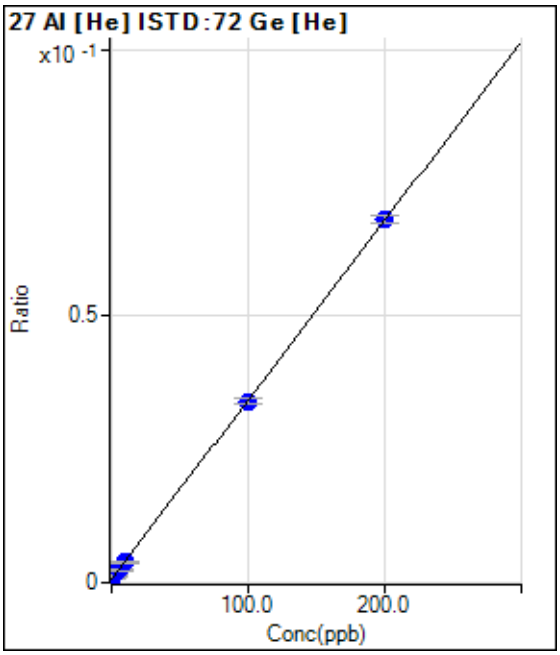


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33257.34	0.0079	P	3.1
2	☐	2.000	1.853	66209.04	0.0157	P	1.1
3	☐	5.000	5.019	122046.19	0.0290	P	0.4
4	☐	10.000	10.141	209964.45	0.0506	P	2.3
5	☐	100.000	101.567	1788916.64	0.4351	A	1.9
6	☐	200.000	199.210	3422632.35	0.8457	A	2.0
7	☐	1.000					

y = 0.0042 * x + 0.0079
R = 1.0000
DL = 0.1734
BEC = 1.883

Weight: <None>
Min Conc: <None>

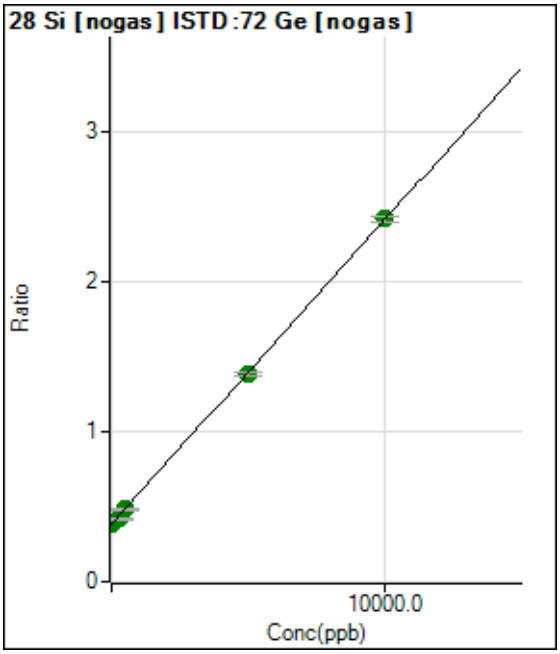
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	626.69	0.0007	P	5.3
2	☐	2.000	2.001	1273.40	0.0013	P	21.8
3	☐	5.000	5.341	2316.86	0.0024	P	13.8
4	☐	10.000	9.333	3573.75	0.0038	P	6.6
5	☐	100.000	99.084	31289.37	0.0340	P	2.9
6	☐	200.000	200.483	61486.25	0.0681	P	2.0
7	☐	1.000					

y = 3.3618E-004 * x + 6.5247E-004
R = 1.0000
DL = 0.3065
BEC = 1.941

Weight: <None>
Min Conc: <None>

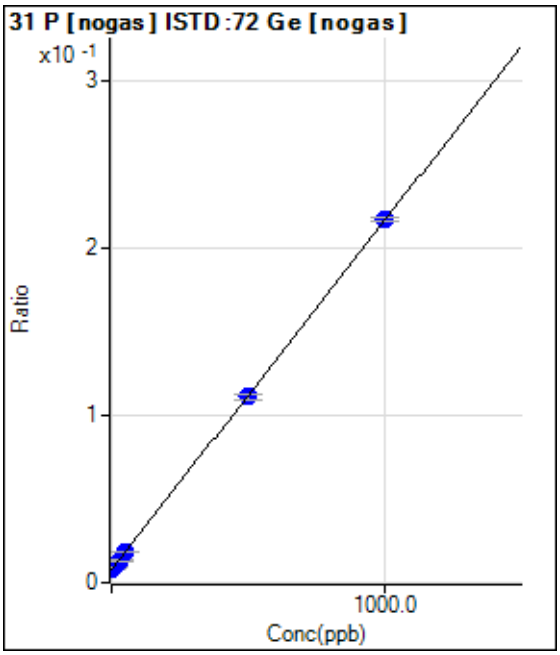


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1614185.55	0.3843	A	2.1
2	☐	100.000	69.998	1678701.02	0.3985	A	1.3
3	☐	250.000	180.144	1768751.85	0.4208	A	2.4
4	☐	500.000	475.517	1995418.35	0.4805	A	1.2
5	☐	5000.000	4939.612	5691130.54	1.3841	A	2.1
6	☐	10000.00	10033.46	9774852.56	2.4152	A	1.5
7	☐	50.000					

y = 2.0241E-004 * x + 0.3843
R = 1.0000
DL = 117.8
BEC = 1899

Weight: <None>
Min Conc: <None>

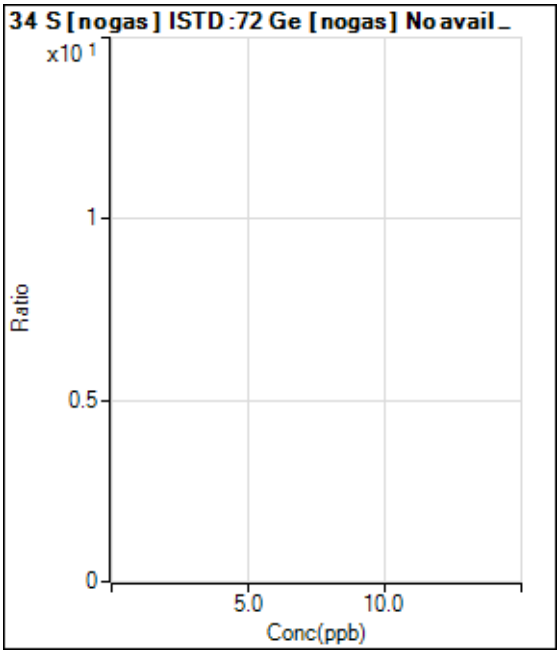
Calibration for 208_ICV.d



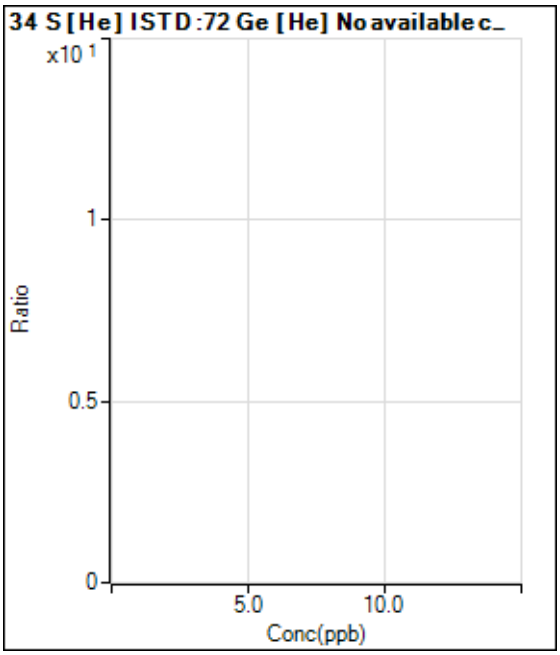
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32611.75	0.0078	P	3.8
2	☐	10.000	7.495	39311.11	0.0093	P	1.7
3	☐	25.000	25.379	54903.45	0.0131	P	4.0
4	☐	50.000	51.074	76514.22	0.0184	P	0.8
5	☐	500.000	494.671	456456.59	0.1110	P	3.2
6	☐	1000.000	1002.626	878588.19	0.2171	P	1.1
7	☐	5.000					

y = 2.0875E-004 * x + 0.0078
R = 1.0000
DL = 4.217
BEC = 37.2

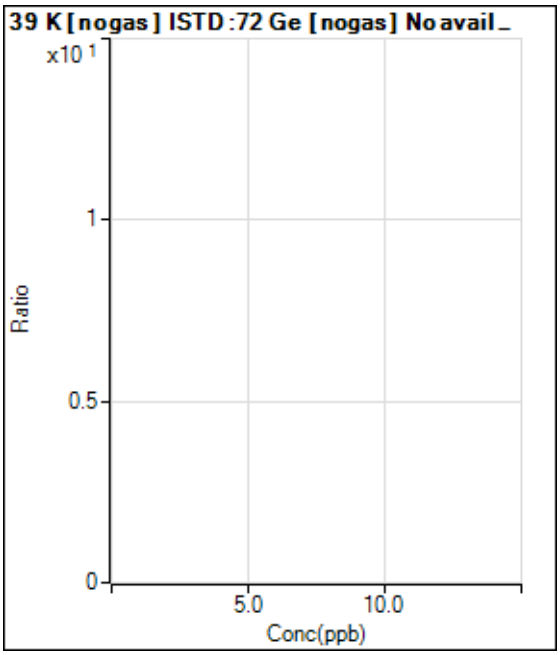
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

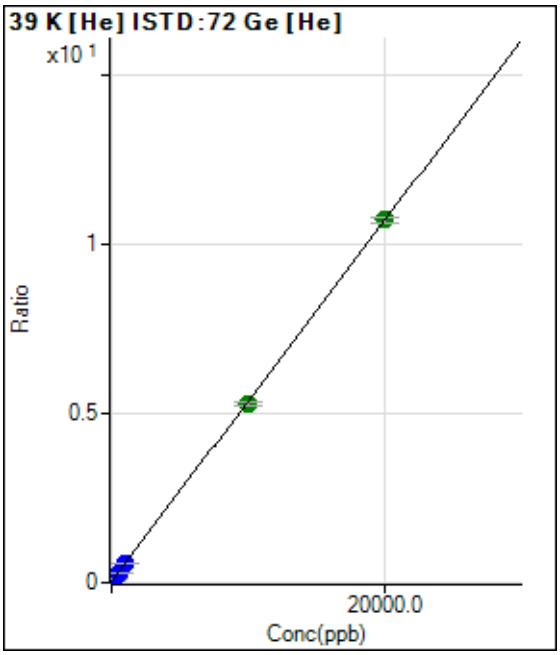


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

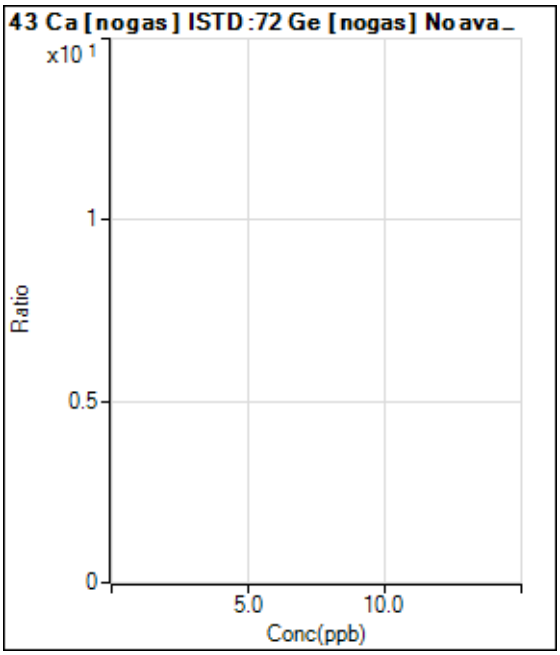
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28084.77	0.0292	P	0.7
2	☐	200.000	194.383	127714.31	0.1328	P	1.2
3	☐	500.000	499.990	279859.24	0.2957	P	1.8
4	☐	1000.000	970.245	515057.71	0.5464	P	1.0
5	☐	10000.00	9882.228	4879519.72	5.2964	A	2.2
6	☐	20000.00	20060.43	9687692.77	10.7212	A	1.3
7	☐	100.000					

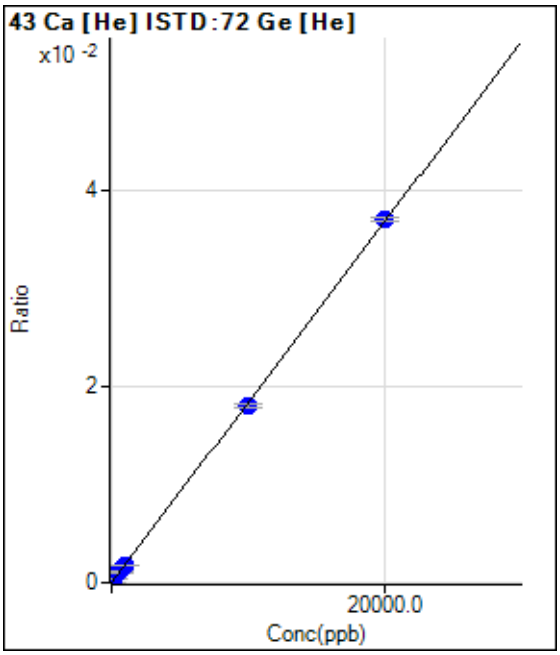
y = 5.3299E-004 * x + 0.0292
R = 1.0000
DL = 1.087
BEC = 54.86

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

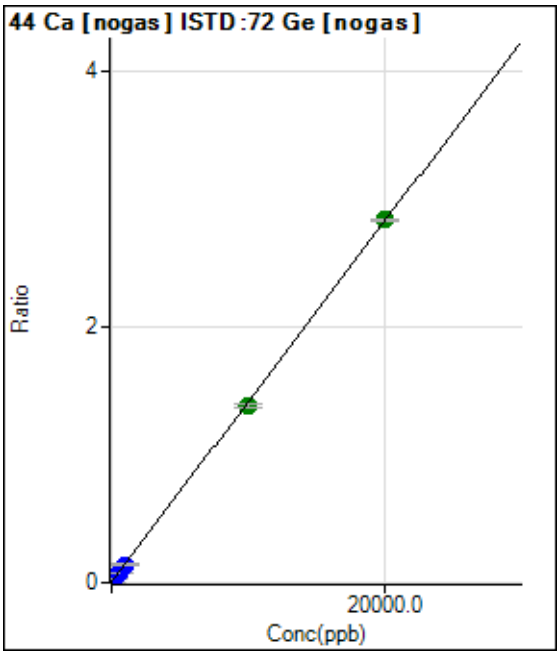
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	99.0
2	☐	200.000	198.080	373.35	0.0004	P	30.3
3	☐	500.000	587.747	1046.72	0.0011	P	13.4
4	☐	1000.000	947.450	1666.78	0.0018	P	8.3
5	☐	10000.00	9779.354	16600.95	0.0180	P	2.0
6	☐	20000.00	20110.77	33460.27	0.0370	P	1.2
7	☐	100.000					

y = 1.8401E-006 * x + 2.4305E-005
R = 0.9999
DL = 39.25
BEC = 13.21

Weight: <None>
Min Conc: <None>

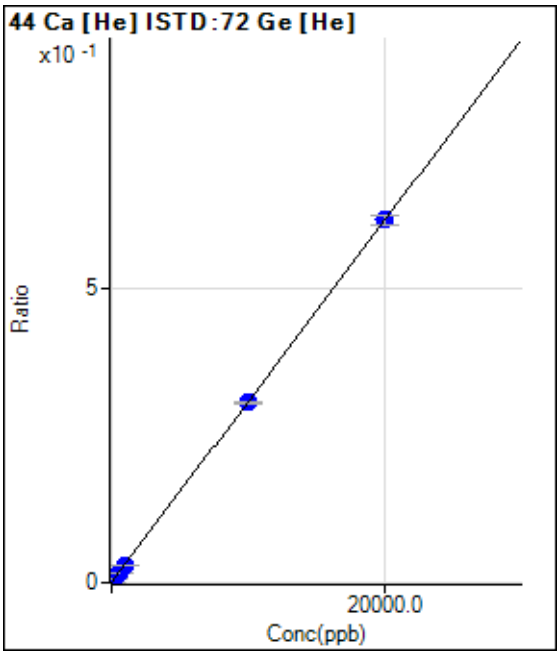


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21295.75	0.0051	P	4.0
2	☐	200.000	190.943	134787.61	0.0320	P	2.5
3	☐	500.000	488.686	311049.43	0.0740	P	1.7
4	☐	1000.000	973.939	591315.37	0.1424	P	2.9
5	☐	10000.00	9805.477	5707082.00	1.3879	A	2.1
6	☐	20000.00	20098.93	11494085.25	2.8395	A	0.4
7	☐	100.000					

y = 1.4102E-004 * x + 0.0051
R = 0.9999
DL = 4.292
BEC = 35.95

Weight: <None>
Min Conc: <None>

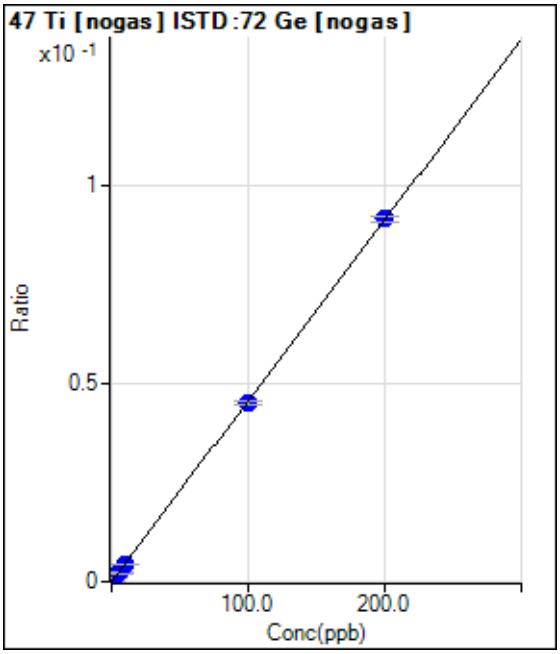
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0005	P	10.3
2	☐	200.000	191.362	6124.47	0.0064	P	5.7
3	☐	500.000	506.917	15196.43	0.0161	P	1.0
4	☐	1000.000	955.720	28124.86	0.0298	P	2.5
5	☐	10000.00	9928.159	281233.43	0.3053	P	0.6
6	☐	20000.00	20038.04	556193.89	0.6156	P	2.8
7	☐	100.000					

y = 3.0698E-005 * x + 4.9625E-004
R = 1.0000
DL = 4.992
BEC = 16.17

Weight: <None>
Min Conc: <None>

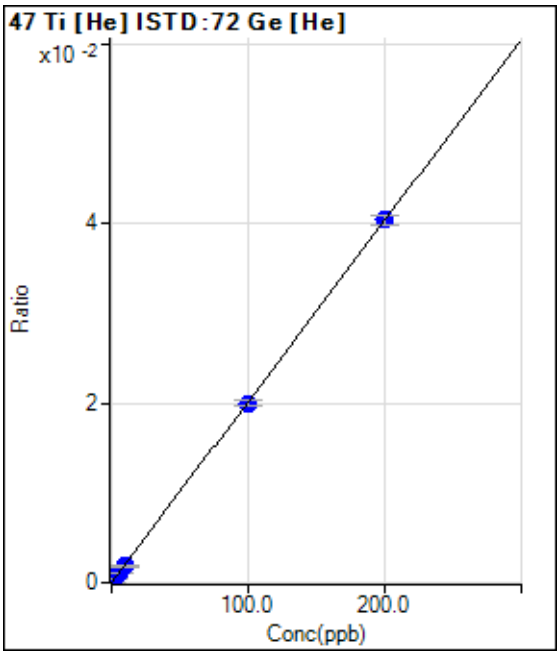


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0000	P	59.6
2	☐	2.000	1.973	3930.48	0.0009	P	1.4
3	☐	5.000	4.774	9292.47	0.0022	P	2.8
4	☐	10.000	9.822	18744.86	0.0045	P	1.6
5	☐	100.000	98.555	185021.02	0.0450	P	1.8
6	☐	200.000	200.737	370818.12	0.0916	P	1.3
7	☐	1.000					

y = 4.5623E-004 * x + 3.2555E-005
R = 1.0000
DL = 0.1277
BEC = 0.07136

Weight: <None>
Min Conc: <None>

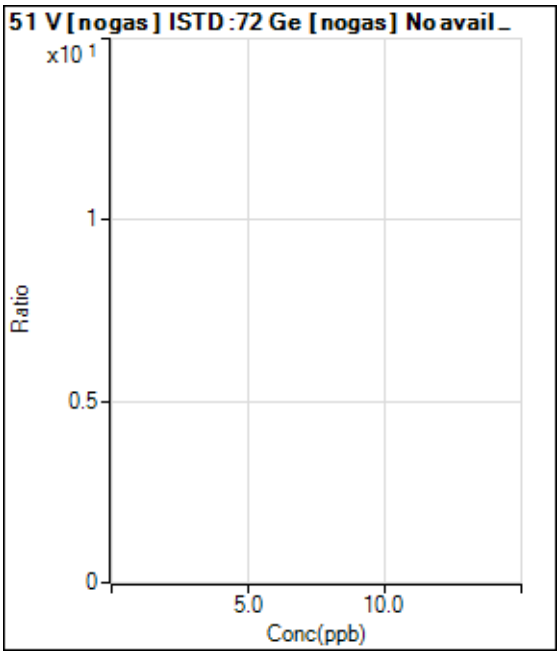
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐	2.000	1.790	353.35	0.0004	P	18.0
3	☐	5.000	5.573	1070.05	0.0011	P	8.4
4	☐	10.000	9.469	1806.79	0.0019	P	10.0
5	☐	100.000	99.230	18432.70	0.0200	P	2.4
6	☐	200.000	200.399	36506.12	0.0404	P	2.4
7	☐	1.000					

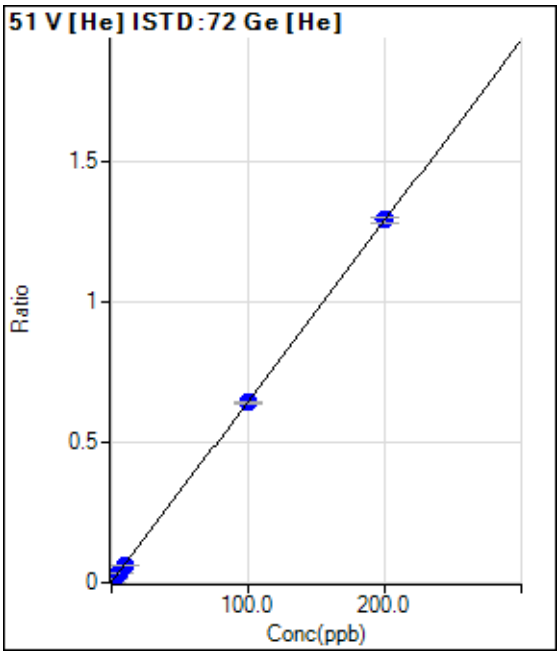
y = 2.0158E-004 * x + 6.9468E-006
R = 1.0000
DL = 0.1791
BEC = 0.03446

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					

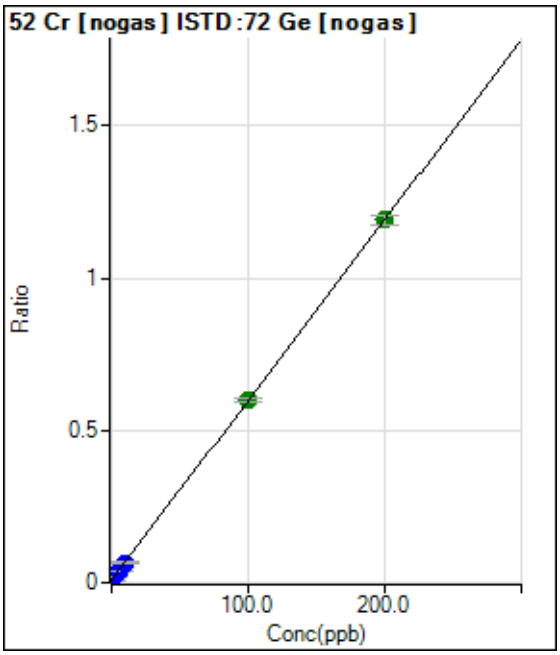
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2352.38	0.0024	P	7.2
2	☐	2.000	1.854	13838.52	0.0144	P	0.1
3	☐	5.000	4.937	32419.23	0.0343	P	0.7
4	☐	10.000	9.595	60581.28	0.0643	P	0.3
5	☐	100.000	99.153	590727.82	0.6412	P	0.9
6	☐	200.000	200.447	1169079.92	1.2938	P	1.6
7	☐	1.000					

y = 0.0064 * x + 0.0024
R = 1.0000
DL = 0.08243
BEC = 0.3801

Weight: <None>
Min Conc: <None>

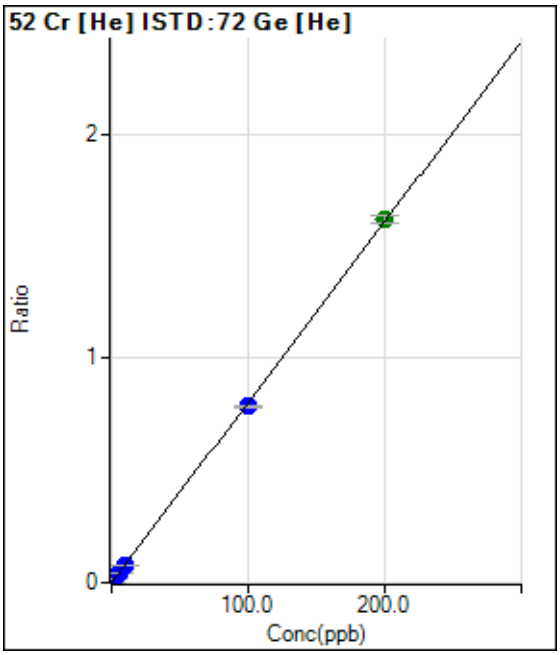


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31373.54	0.0075	P	1.9
2	☐	2.000	1.901	78876.87	0.0187	P	1.8
3	☐	5.000	4.942	154399.10	0.0367	P	1.0
4	☐	10.000	9.837	272777.56	0.0657	P	1.9
5	☐	100.000	100.038	2465843.35	0.5996	A	1.2
6	☐	200.000	199.992	4820985.55	1.1913	A	2.4
7	☐	1.000					

y = 0.0059 * x + 0.0075
R = 1.0000
DL = 0.07153
BEC = 1.262

Weight: <None>
Min Conc: <None>

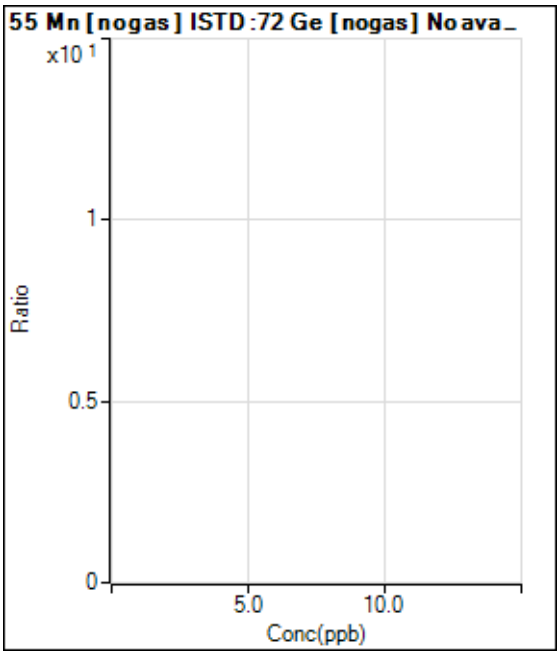
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1196.72	0.0012	P	5.0
2	☐	2.000	1.870	15650.07	0.0163	P	2.4
3	☐	5.000	4.965	38947.75	0.0412	P	2.5
4	☐	10.000	9.562	73625.70	0.0781	P	1.3
5	☐	100.000	97.864	725808.48	0.7879	P	1.2
6	☐	200.000	201.092	1461564.72	1.6176	A	2.1
7	☐	1.000					

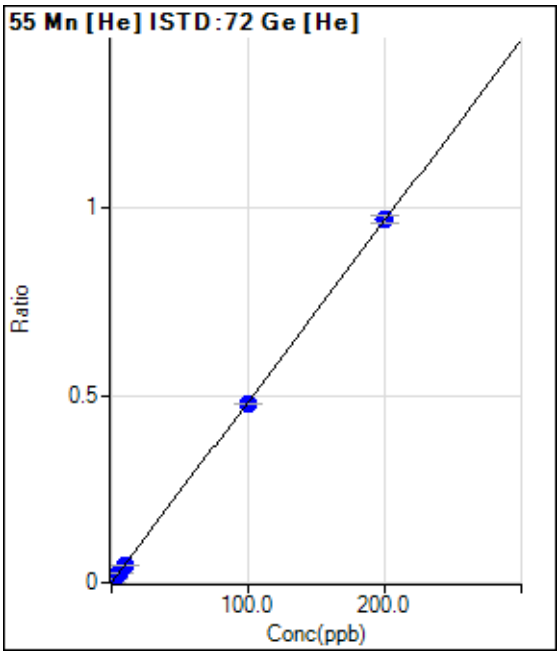
y = 0.0080 * x + 0.0012
R = 0.9999
DL = 0.02341
BEC = 0.155

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					

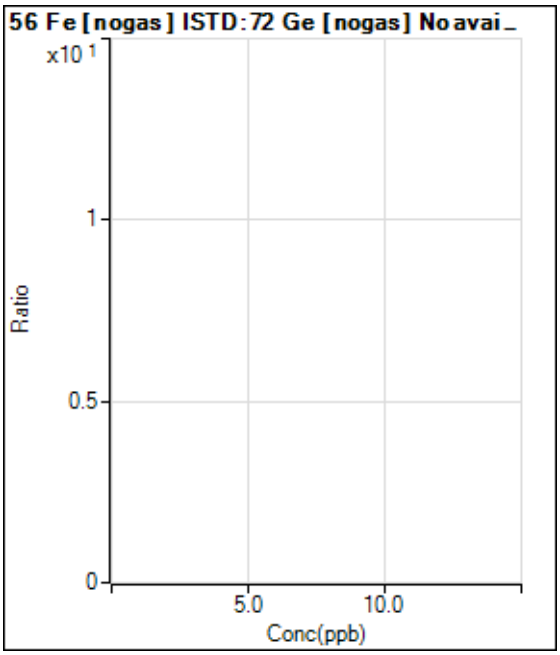
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0004	P	7.6
2	☐	2.000	1.896	9212.46	0.0096	P	5.3
3	☐	5.000	5.031	23401.77	0.0247	P	1.7
4	☐	10.000	9.834	45188.86	0.0479	P	1.5
5	☐	100.000	99.057	441278.22	0.4790	P	0.2
6	☐	200.000	200.480	875479.60	0.9690	P	2.3
7	☐	1.000					

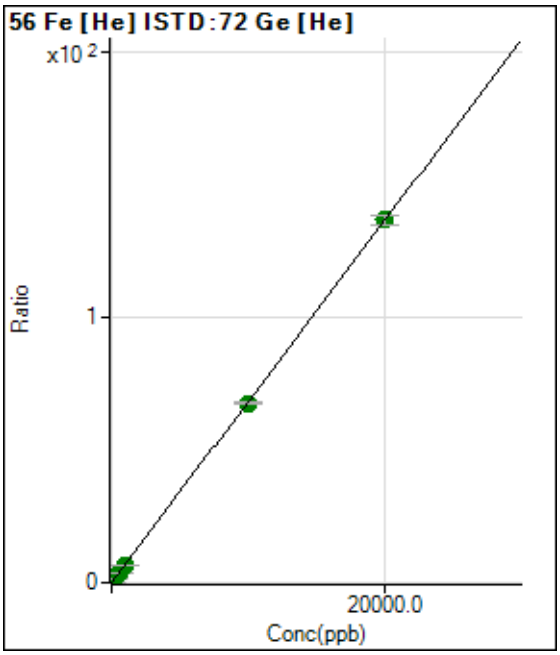
y = 0.0048 * x + 4.2340E-004
R = 1.0000
DL = 0.01986
BEC = 0.08764

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

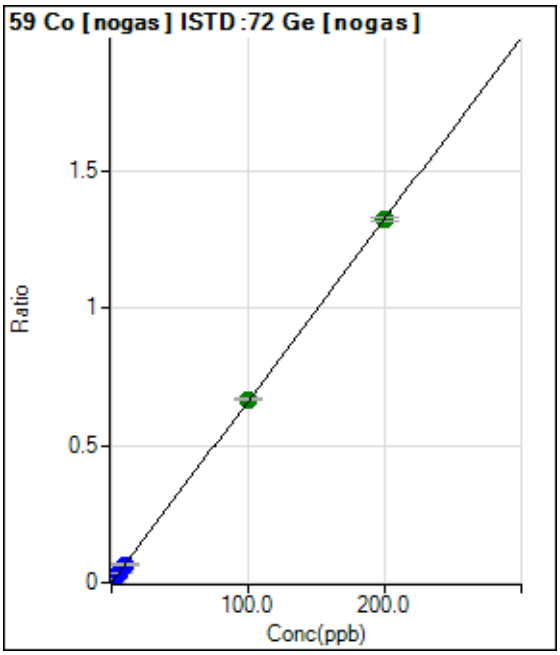
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6321.18	0.0066	P	2.4
2	☐	200.000	203.911	1341618.99	1.3953	A	2.5
3	☐	500.000	512.817	3311172.14	3.4992	A	3.8
4	☐	1000.000	970.606	6237687.82	6.6170	A	1.1
5	☐	10000.00	9917.017	62231570.74	67.5477	A	1.2
6	☐	20000.00	20042.60	123335041.4	136.509	A	2.5
7	☐	100.000					

y = 0.0068 * x + 0.0066
R = 1.0000
DL = 0.06974
BEC = 0.9663

Weight: <None>
Min Conc: <None>

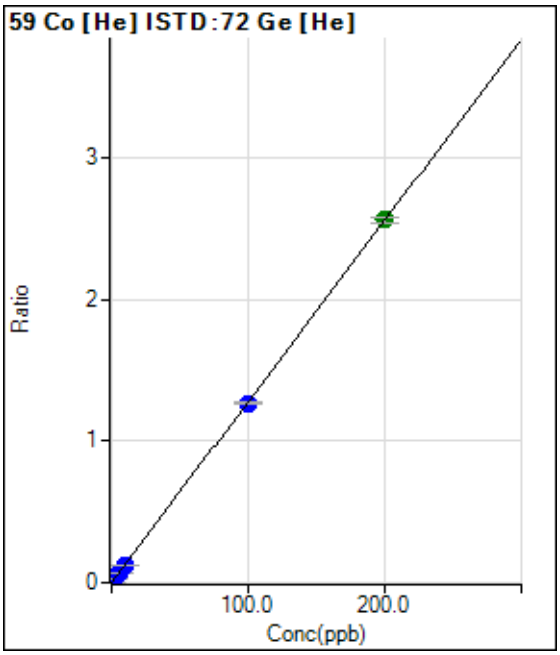


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0001	P	3.5
2	☐	2.000	1.983	55784.54	0.0132	P	2.5
3	☐	5.000	5.066	141567.65	0.0337	P	1.0
4	☐	10.000	9.990	275311.23	0.0663	P	1.8
5	☐	100.000	100.683	2744357.15	0.6674	A	1.3
6	☐	200.000	199.657	5355990.96	1.3233	A	1.0
7	☐	1.000					

y = 0.0066 * x + 9.6804E-005
R = 1.0000
DL = 0.001543
BEC = 0.01461

Weight: <None>
Min Conc: <None>

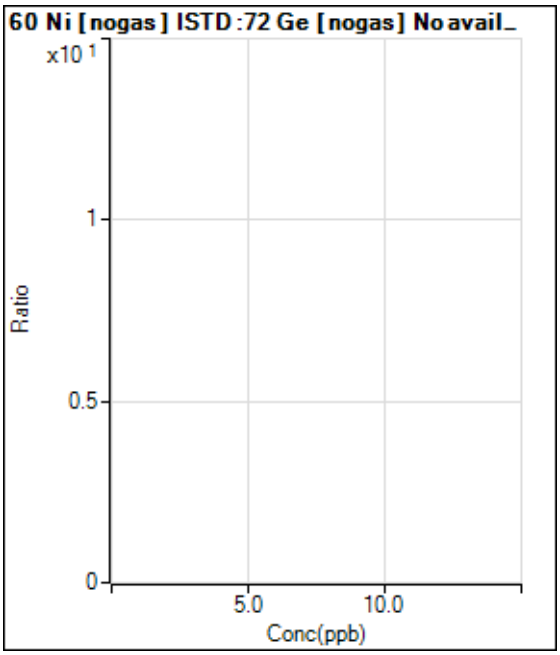
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0001	P	0.1
2	☐	2.000	1.975	24413.11	0.0254	P	2.4
3	☐	5.000	5.046	61238.41	0.0647	P	1.1
4	☐	10.000	9.949	120165.70	0.1275	P	1.8
5	☐	100.000	99.181	1169793.37	1.2697	P	0.6
6	☐	200.000	200.411	2318142.52	2.5656	A	1.8
7	☐	1.000					

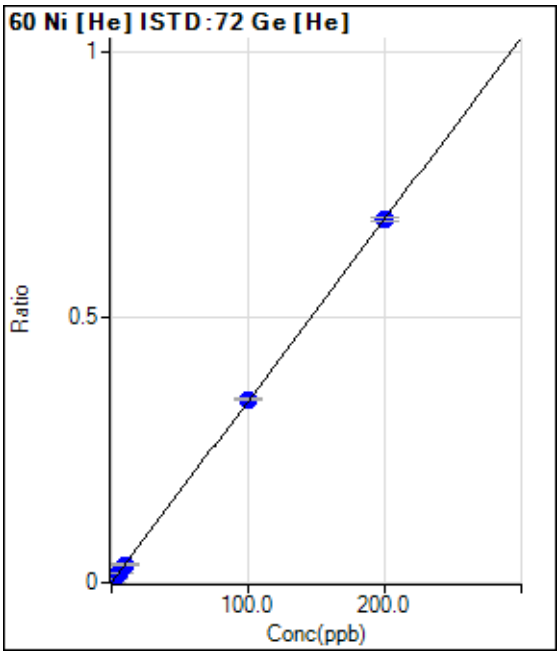
y = 0.0128 * x + 1.1452E-004
R = 1.0000
DL = 3.807E-05
BEC = 0.008946

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					

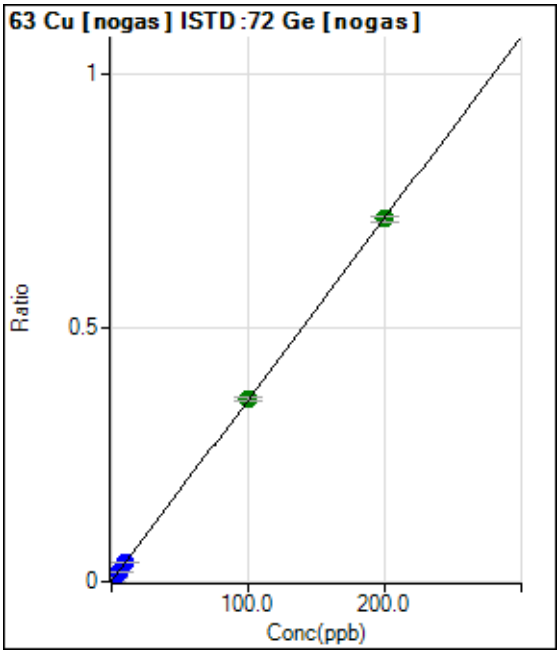
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.67	0.0002	P	29.2
2	☐	2.000	1.968	6698.01	0.0070	P	1.3
3	☐	5.000	4.930	16197.30	0.0171	P	4.2
4	☐	10.000	9.918	32238.59	0.0342	P	2.0
5	☐	100.000	100.611	317711.35	0.3449	P	1.1
6	☐	200.000	199.701	618351.47	0.6843	P	1.2
7	☐	1.000					

y = 0.0034 * x + 2.2552E-004
R = 1.0000
DL = 0.05758
BEC = 0.06583

Weight: <None>
Min Conc: <None>

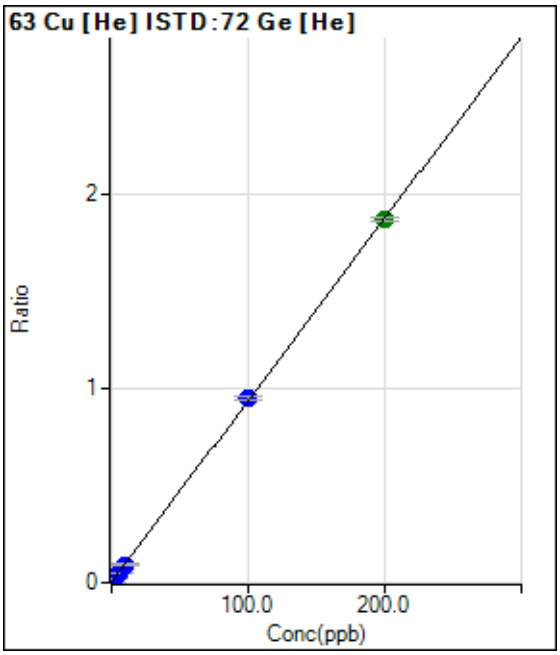


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2733.59	0.0007	P	5.8
2	☐	2.000	2.020	33160.17	0.0079	P	4.0
3	☐	5.000	5.190	80726.90	0.0192	P	3.2
4	☐	10.000	10.141	153265.92	0.0369	P	2.1
5	☐	100.000	100.690	1482898.78	0.3606	A	1.8
6	☐	200.000	199.643	2891599.75	0.7144	A	1.5
7	☐	1.000					

y = 0.0036 * x + 6.5092E-004
R = 1.0000
DL = 0.0318
BEC = 0.1821

Weight: <None>
Min Conc: <None>

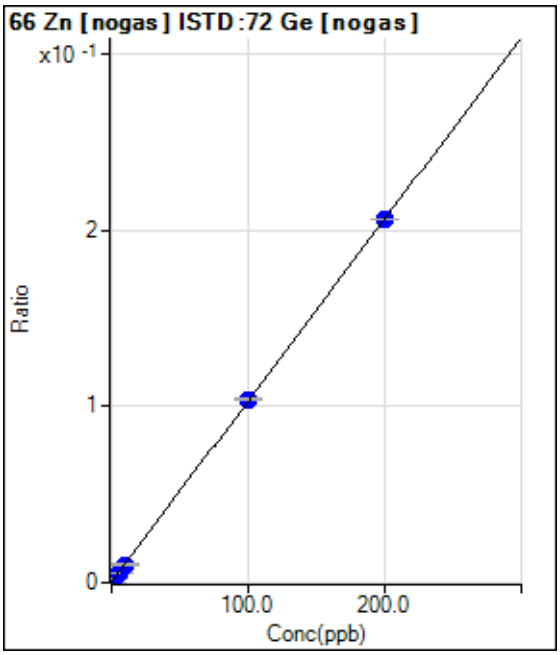
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1390.07	0.0014	P	3.3
2	☐	2.000	1.974	19123.55	0.0199	P	1.9
3	☐	5.000	5.131	46739.78	0.0494	P	0.5
4	☐	10.000	9.879	88367.96	0.0937	P	1.2
5	☐	100.000	101.173	872115.25	0.9467	P	2.1
6	☐	200.000	199.417	1684866.38	1.8646	A	1.1
7	☐	1.000					

y = 0.0093 * x + 0.0014
R = 1.0000
DL = 0.0155
BEC = 0.1549

Weight: <None>
Min Conc: <None>

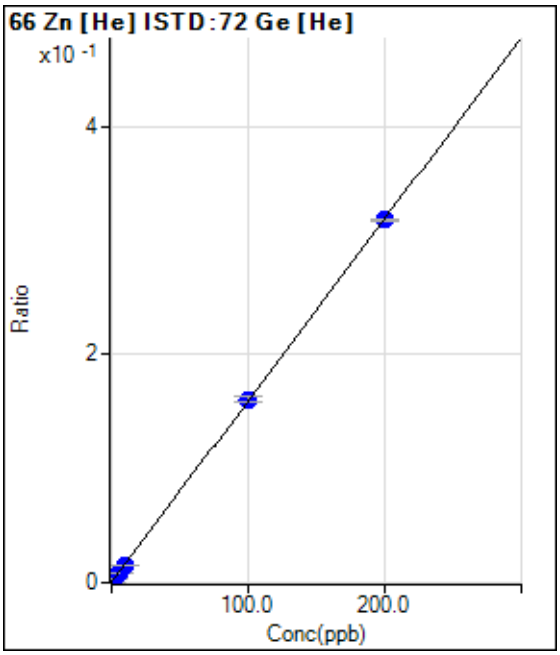


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.06	0.0003	P	13.0
2	☐	2.000	1.917	9485.91	0.0023	P	5.4
3	☐	5.000	5.001	22821.26	0.0054	P	1.0
4	☐	10.000	9.785	42983.83	0.0104	P	2.4
5	☐	100.000	100.635	427225.03	0.1039	P	1.4
6	☐	200.000	199.694	833388.76	0.2059	P	0.1
7	☐	1.000					

y = 0.0010 * x + 2.7836E-004
R = 1.0000
DL = 0.1053
BEC = 0.2704

Weight: <None>
Min Conc: <None>

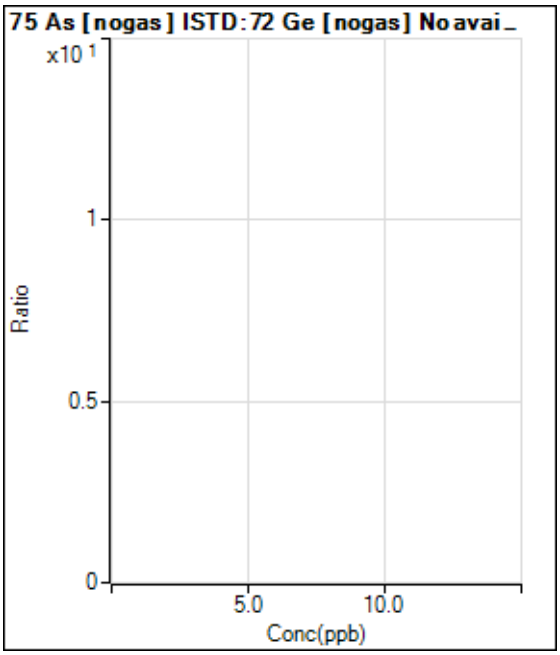
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	12.9
2	☐	2.000	1.987	3353.71	0.0035	P	3.3
3	☐	5.000	4.888	7671.74	0.0081	P	3.7
4	☐	10.000	9.587	14689.38	0.0156	P	0.6
5	☐	100.000	100.835	148119.12	0.1608	P	2.7
6	☐	200.000	199.606	287358.00	0.3180	P	0.5
7	☐	1.000					

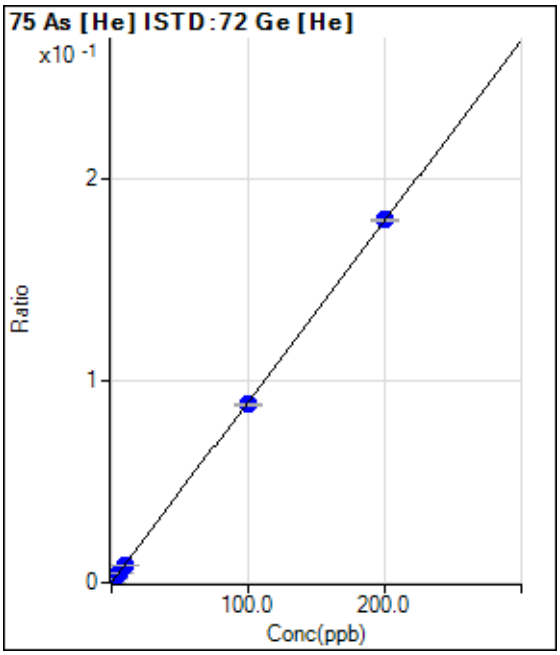
y = 0.0016 * x + 3.2622E-004
R = 1.0000
DL = 0.0793
BEC = 0.205

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					

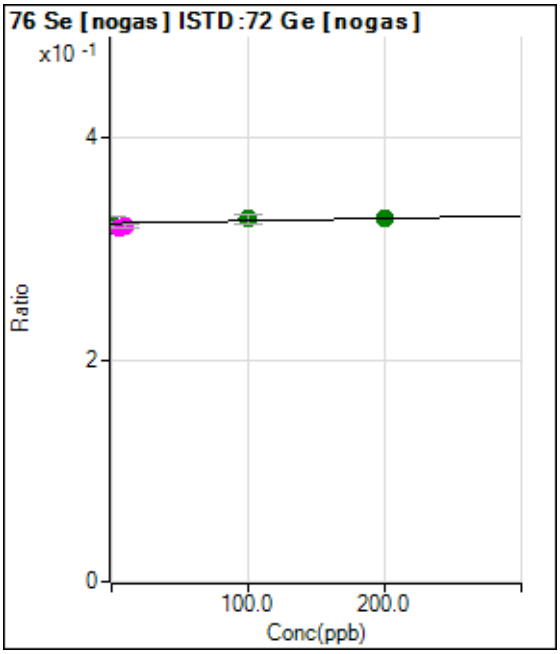
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	22.8
2	☐	2.000	1.898	1698.97	0.0018	P	1.9
3	☐	5.000	4.981	4287.19	0.0045	P	2.1
4	☐	10.000	9.518	8102.95	0.0086	P	3.0
5	☐	100.000	98.634	81490.72	0.0885	P	1.4
6	☐	200.000	200.708	162610.54	0.1799	P	0.5
7	☐	1.000					

y = 8.9616E-004 * x + 6.5922E-005
R = 1.0000
DL = 0.05029
BEC = 0.07356

Weight: <None>
Min Conc: <None>

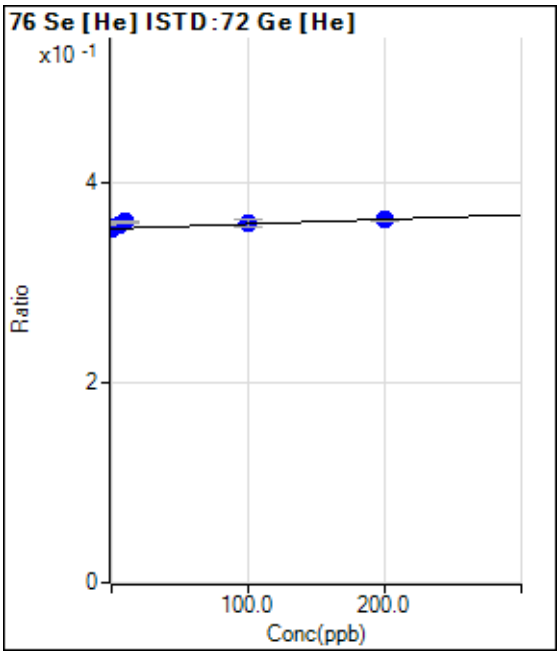


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1357645.29	0.3232	A	3.8
2	☐	2.000	-131.436	1349341.07	0.3203	A	2.1
3	☐	5.000	-158.295	1344235.61	0.3197	M	0.9
4	☐	10.000	-79.765	1334718.36	0.3214	M	1.2
5	☐	100.000	169.567	1344771.75	0.3270	A	2.6
6	☐	200.000	175.121	1324354.46	0.3272	A	0.1
7	☐	1.000					

y = 2.2478E-005 * x + 0.3232
R = 0.8567
DL = 1653
BEC = 1.438E+04

Weight: <None>
Min Conc: <None>

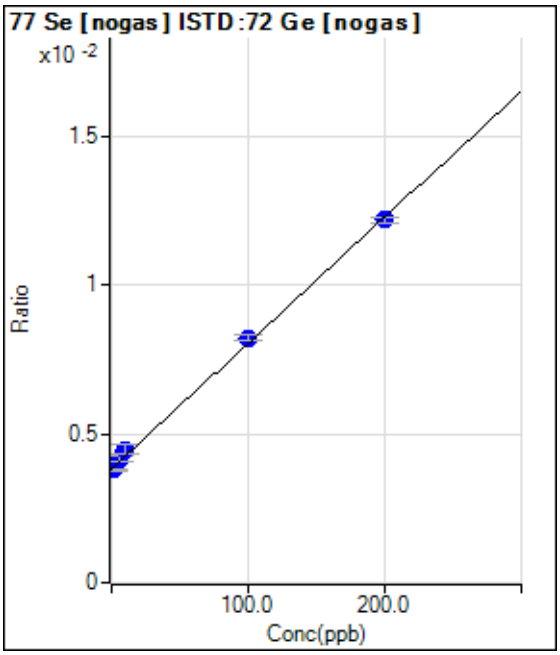
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340503.58	0.3545	P	1.1
2	☐	2.000	31.787	342267.56	0.3560	P	0.4
3	☐	5.000	84.455	339266.14	0.3585	P	0.7
4	☐	10.000	143.046	340532.18	0.3612	P	0.9
5	☐	100.000	109.205	331311.74	0.3596	P	1.9
6	☐	200.000	186.461	328289.31	0.3633	P	0.6
7	☐	1.000					

y = 4.7138E-005 * x + 0.3545
R = 0.7356
DL = 253.6
BEC = 7520

Weight: <None>
Min Conc: <None>

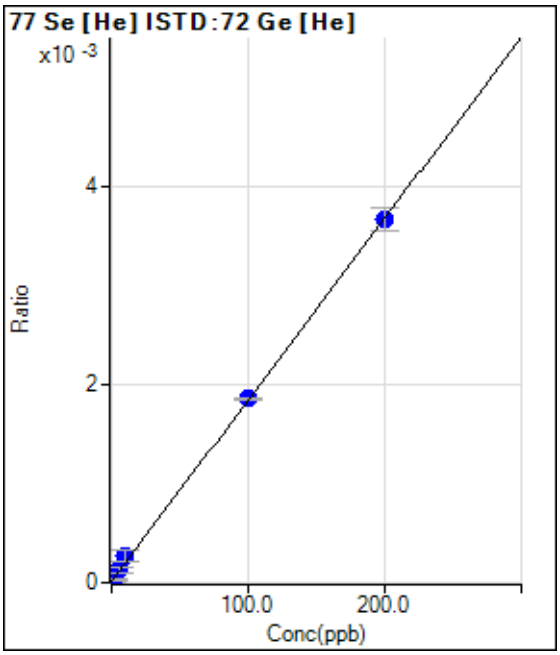


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16084.19	0.0038	P	4.8
2	☐	2.000	-0.505	16040.75	0.0038	P	1.8
3	☐	5.000	7.478	17422.09	0.0041	P	4.5
4	☐	10.000	15.515	18613.24	0.0045	P	6.6
5	☐	100.000	103.906	33805.24	0.0082	P	2.0
6	☐	200.000	197.734	49333.80	0.0122	P	1.7
7	☐	1.000					

y = 4.2288E-005 * x + 0.0038
R = 0.9992
DL = 12.99
BEC = 90.51

Weight: <None>
Min Conc: <None>

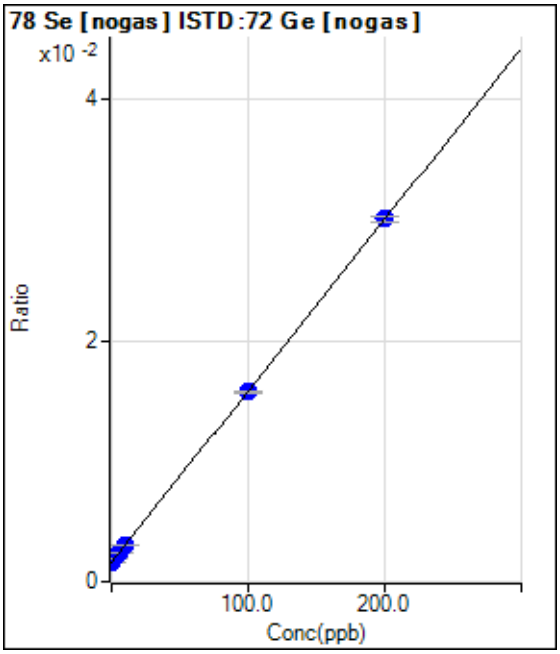
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	173.2
2	☐	2.000	1.131	33.33	0.0000	P	34.2
3	☐	5.000	6.151	120.00	0.0001	P	54.5
4	☐	10.000	14.313	260.01	0.0003	P	40.9
5	☐	100.000	100.905	1716.78	0.0019	P	1.3
6	☐	200.000	199.312	3313.68	0.0037	P	6.5
7	☐	1.000					

y = 1.8329E-005 * x + 1.3894E-005
R = 0.9998
DL = 3.939
BEC = 0.758

Weight: <None>
Min Conc: <None>

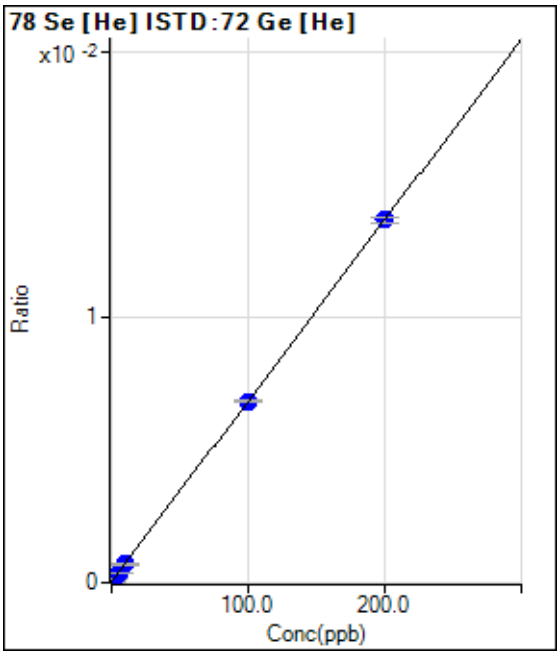


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6778.06	0.0016	P	2.0
2	☐	2.000	2.202	8118.63	0.0019	P	2.8
3	☐	5.000	5.204	9896.23	0.0024	P	3.3
4	☐	10.000	10.041	12634.60	0.0030	P	2.6
5	☐	100.000	99.235	64698.82	0.0157	P	1.2
6	☐	200.000	200.374	121913.55	0.0301	P	1.5
7	☐	1.000					

y = 1.4228E-004 * x + 0.0016
R = 1.0000
DL = 0.6652
BEC = 11.34

Weight: <None>
Min Conc: <None>

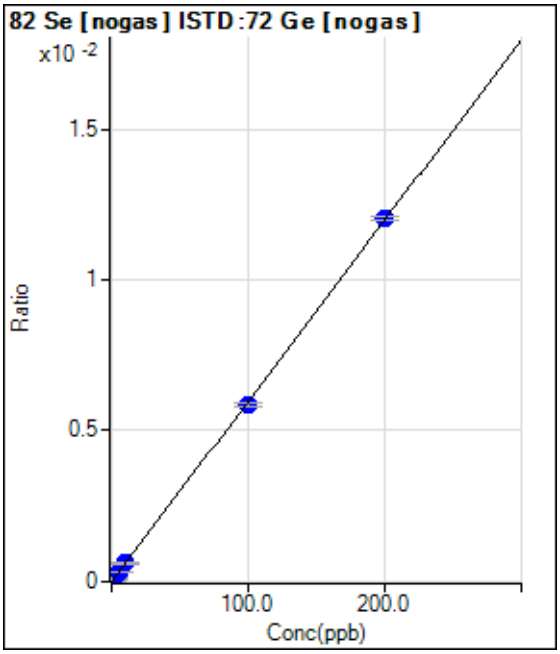
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	42.6
2	☐	2.000	2.101	170.67	0.0002	P	15.1
3	☐	5.000	4.555	326.00	0.0003	P	5.7
4	☐	10.000	9.680	653.34	0.0007	P	2.6
5	☐	100.000	99.708	6279.77	0.0068	P	1.4
6	☐	200.000	200.172	12334.18	0.0136	P	1.5
7	☐	1.000					

y = 6.8015E-005 * x + 3.4701E-005
R = 1.0000
DL = 0.6517
BEC = 0.5102

Weight: <None>
Min Conc: <None>

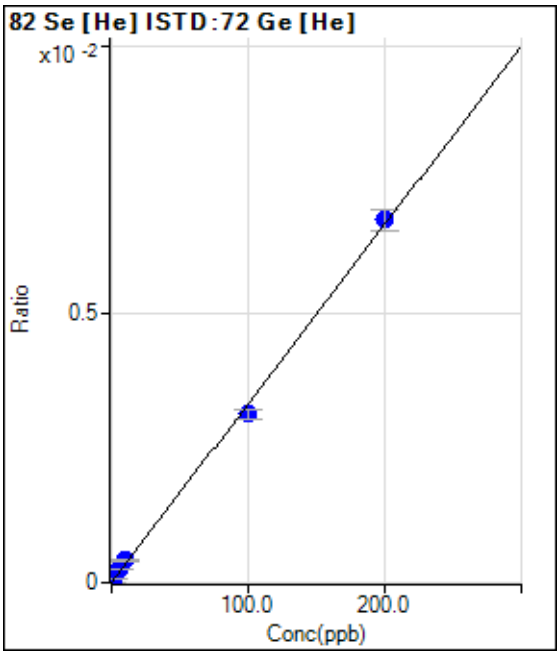


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-48.35	0.0000	P	-189.6
2	☐	2.000	1.790	404.88	0.0001	P	25.8
3	☐	5.000	5.027	1218.25	0.0003	P	8.6
4	☐	10.000	10.258	2505.82	0.0006	P	9.4
5	☐	100.000	97.866	24061.60	0.0059	P	2.6
6	☐	200.000	201.056	48718.22	0.0120	P	1.0
7	☐	1.000					

y = 5.9910E-005 * x - 1.1451E-005
R = 0.9999
DL = 1.087
BEC = -0.1911

Weight: <None>
Min Conc: <None>

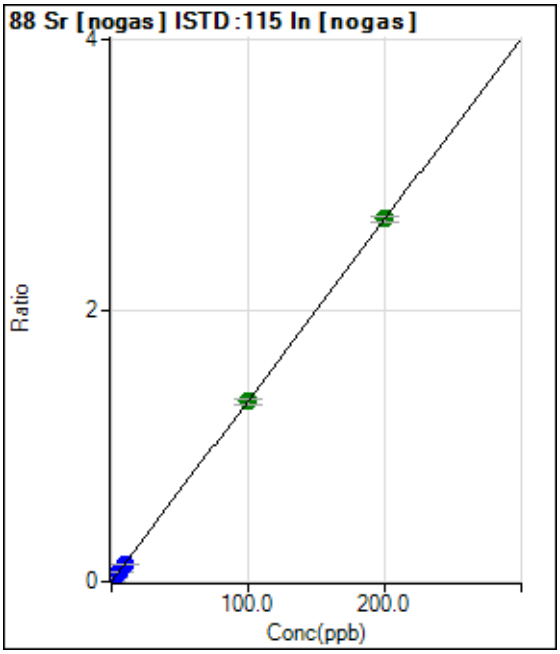
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.187	73.33	0.0001	P	7.6
3	☐	5.000	7.195	230.01	0.0002	P	8.3
4	☐	10.000	12.753	403.34	0.0004	P	7.8
5	☐	100.000	94.047	2886.95	0.0031	P	5.2
6	☐	200.000	202.782	6104.49	0.0068	P	5.6
7	☐	1.000					

y = 3.3289E-005 * x + 3.4730E-006
R = 0.9992
DL = 0.5421
BEC = 0.1043

Weight: <None>
Min Conc: <None>

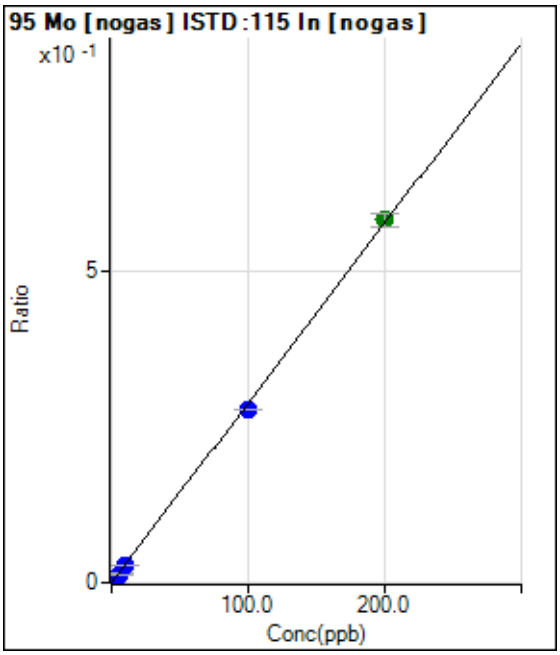


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1723.45	0.0006	P	13.7
2	☐	2.000	1.967	73272.52	0.0269	P	2.4
3	☐	5.000	5.028	182786.61	0.0677	P	0.9
4	☐	10.000	9.686	350983.33	0.1298	P	3.3
5	☐	100.000	99.326	3508211.61	1.3250	A	3.0
6	☐	200.000	200.352	7040493.85	2.6720	A	1.3
7	☐	1.000					

y = 0.0133 * x + 6.3678E-004
R = 1.0000
DL = 0.01963
BEC = 0.04776

Weight: <None>
Min Conc: <None>

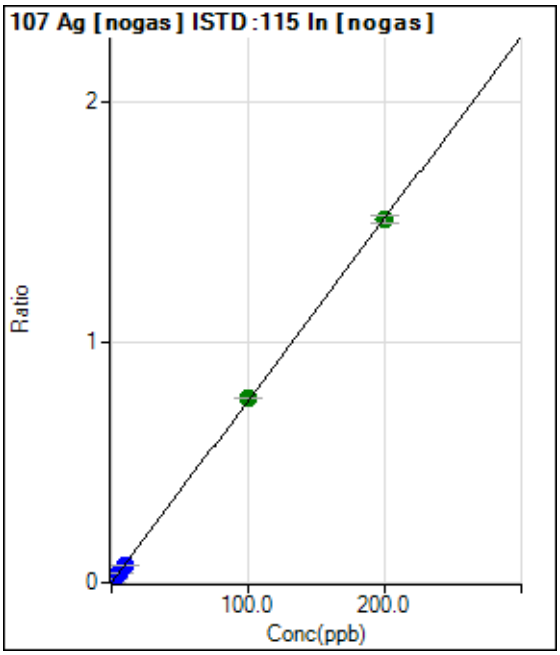
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	29.7
2	☐	2.000	1.829	14759.64	0.0054	P	4.3
3	☐	5.000	4.732	37162.40	0.0138	P	1.9
4	☐	10.000	9.326	72975.37	0.0270	P	1.2
5	☐	100.000	96.179	733269.39	0.2769	P	0.8
6	☐	200.000	201.952	1531294.92	0.5812	A	3.6
7	☐	1.000					

y = 0.0029 * x + 1.4757E-004
R = 0.9998
DL = 0.04568
BEC = 0.05129

Weight: <None>
Min Conc: <None>

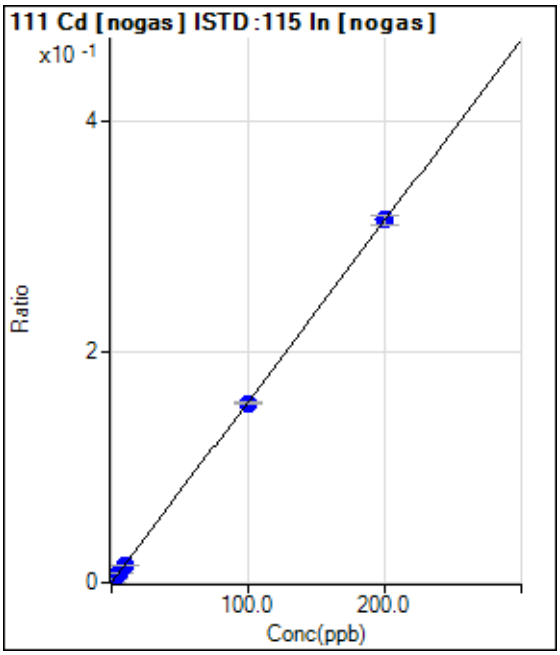


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0002	P	24.1
2	☐	2.000	1.970	41238.52	0.0151	P	3.1
3	☐	5.000	5.027	103376.74	0.0383	P	2.8
4	☐	10.000	9.875	202937.55	0.0750	P	1.8
5	☐	100.000	101.475	2037567.73	0.7693	A	0.7
6	☐	200.000	199.269	3979805.98	1.5105	A	2.2
7	☐	1.000					

y = 0.0076 * x + 1.8900E-004
R = 1.0000
DL = 0.01806
BEC = 0.02494

Weight: <None>
Min Conc: <None>

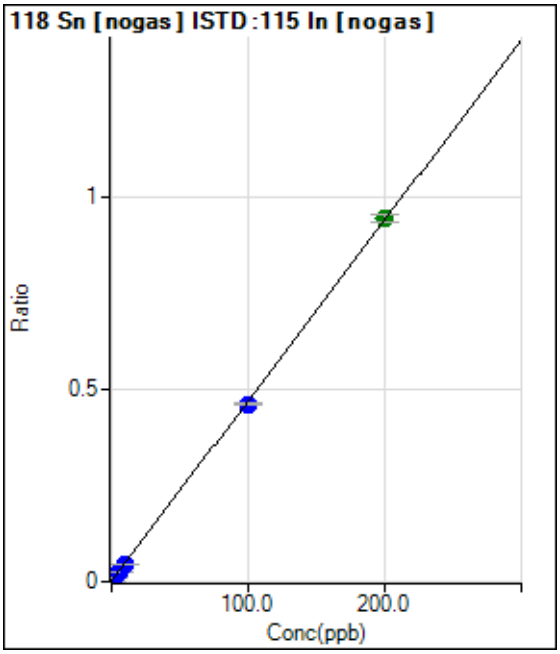
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	44.0
2	☐	2.000	1.978	8492.18	0.0031	P	5.6
3	☐	5.000	4.903	20802.59	0.0077	P	1.5
4	☐	10.000	9.733	41322.04	0.0153	P	3.6
5	☐	100.000	99.145	412020.06	0.1556	P	1.1
6	☐	200.000	200.444	828574.10	0.3145	P	2.8
7	☐	1.000					

y = 0.0016 * x + 9.8777E-006
R = 1.0000
DL = 0.008317
BEC = 0.006296

Weight: <None>
Min Conc: <None>

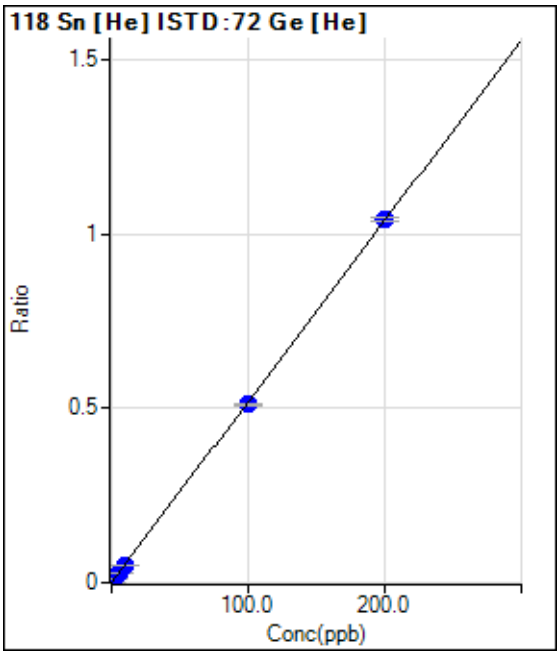


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2293.53	0.0008	P	11.3
2	☐	2.000	1.875	26269.88	0.0096	P	3.6
3	☐	5.000	4.836	63467.94	0.0235	P	0.4
4	☐	10.000	9.671	124831.78	0.0461	P	0.9
5	☐	100.000	98.272	1221423.78	0.4611	P	0.9
6	☐	200.000	200.886	2481445.07	0.9418	A	2.2
7	☐	1.000					

y = 0.0047 * x + 8.4782E-004
R = 0.9999
DL = 0.06117
BEC = 0.181

Weight: <None>
Min Conc: <None>

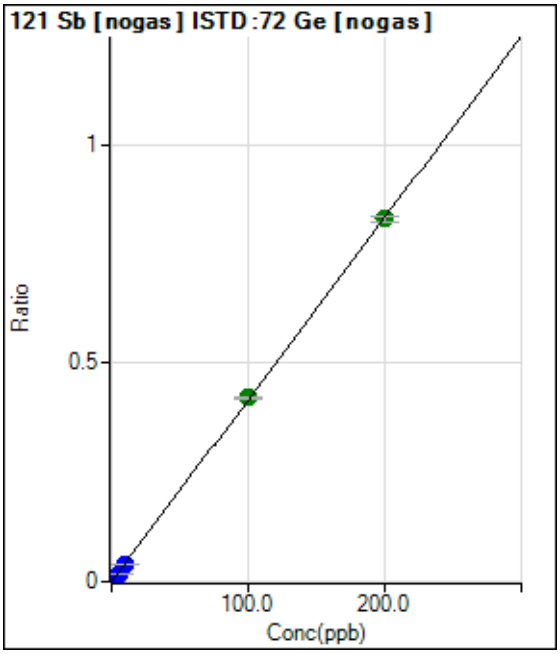
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	746.70	0.0008	P	15.6
2	☐	2.000	1.813	9776.24	0.0102	P	7.0
3	☐	5.000	4.823	24377.19	0.0258	P	1.4
4	☐	10.000	9.645	47828.73	0.0507	P	1.4
5	☐	100.000	98.765	472013.11	0.5124	P	1.1
6	☐	200.000	200.642	939808.11	1.0401	P	1.1
7	☐	1.000					

y = 0.0052 * x + 7.7744E-004
R = 1.0000
DL = 0.07023
BEC = 0.1501

Weight: <None>
Min Conc: <None>

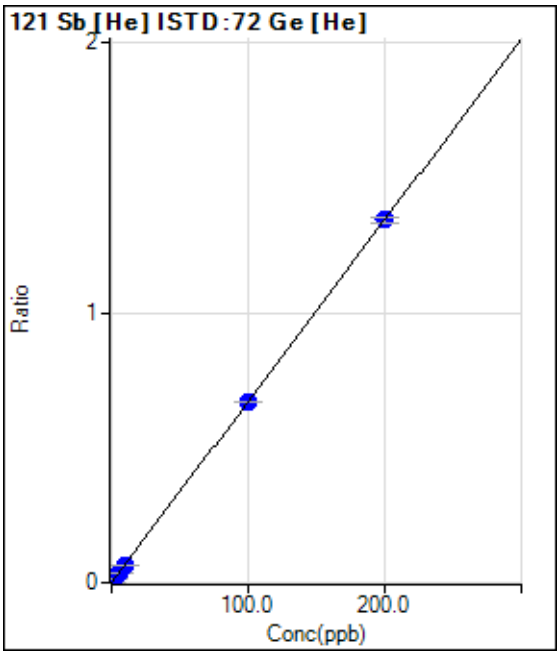


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.75	0.0003	P	12.0
2	☐	2.000	1.845	33749.51	0.0080	P	3.0
3	☐	5.000	4.639	82540.48	0.0196	P	1.3
4	☐	10.000	9.331	162551.04	0.0392	P	2.5
5	☐	100.000	100.995	1729235.71	0.4205	A	1.9
6	☐	200.000	199.546	3361631.93	0.8305	A	1.5
7	☐	1.000					

y = 0.0042 * x + 3.3232E-004
R = 1.0000
DL = 0.02885
BEC = 0.07988

Weight: <None>
Min Conc: <None>

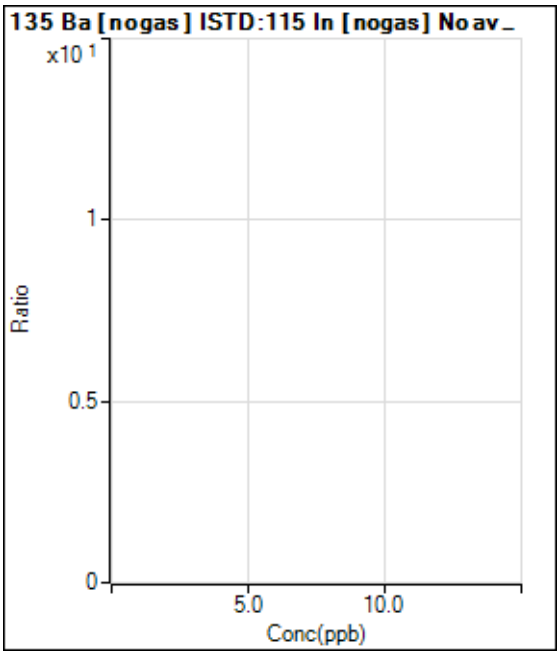
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0005	P	7.6
2	☐	2.000	1.911	12831.56	0.0133	P	1.5
3	☐	5.000	4.967	32062.94	0.0339	P	2.9
4	☐	10.000	9.634	61484.43	0.0652	P	0.5
5	☐	100.000	99.695	617359.52	0.6701	P	0.5
6	☐	200.000	200.172	1215298.03	1.3450	P	1.6
7	☐	1.000					

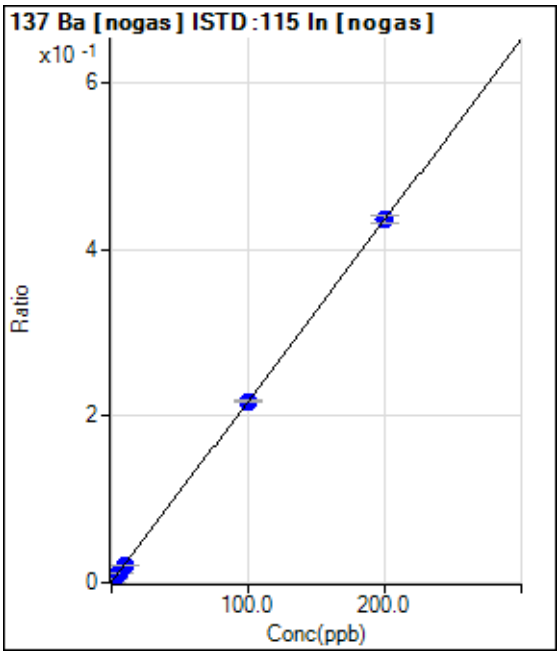
y = 0.0067 * x + 5.1361E-004
R = 1.0000
DL = 0.01742
BEC = 0.07647

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					

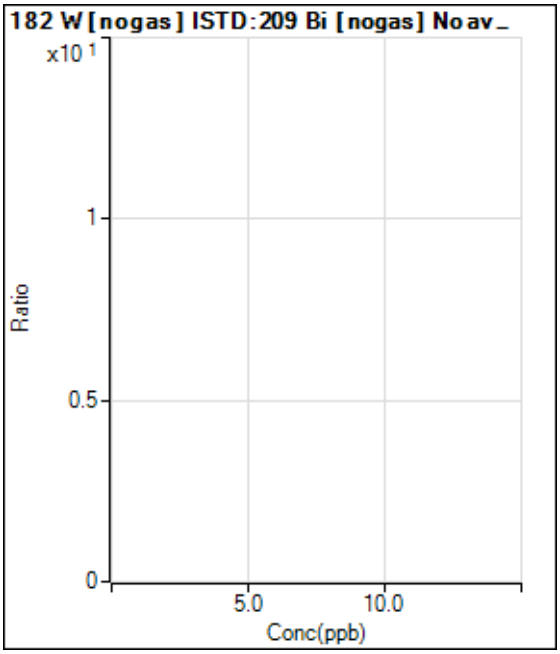
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1113.39	0.0004	P	10.6
2	☐	2.000	1.836	12027.73	0.0044	P	6.2
3	☐	5.000	4.770	29144.82	0.0108	P	2.5
4	☐	10.000	9.416	56555.84	0.0209	P	2.1
5	☐	100.000	99.806	576510.86	0.2177	P	1.3
6	☐	200.000	200.134	1149019.62	0.4361	P	2.1
7	☐	1.000					

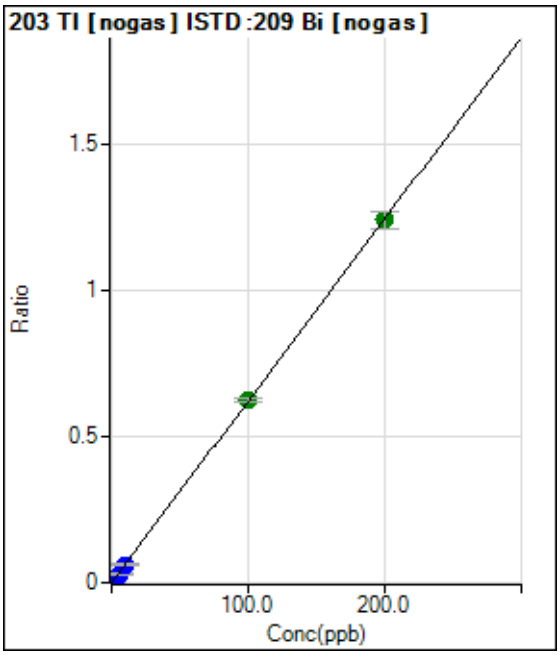
y = 0.0022 * x + 4.1131E-004
R = 1.0000
DL = 0.06013
BEC = 0.1889

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					

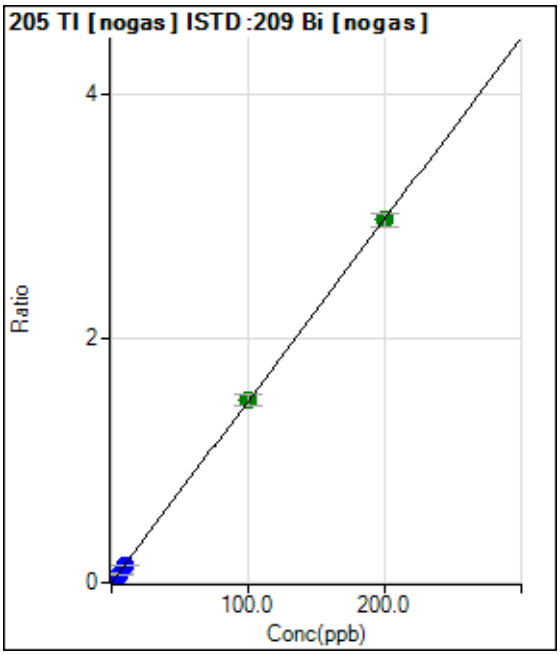
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	94.6
2	☐	2.000	1.825	32819.80	0.0114	P	6.0
3	☐	5.000	4.721	84932.95	0.0294	P	5.6
4	☐	10.000	9.759	168825.43	0.0607	P	6.3
5	☐	100.000	100.745	1744510.86	0.6264	A	2.4
6	☐	200.000	199.648	3432995.05	1.2413	A	4.8
7	☐	1.000					

y = 0.0062 * x + 2.2316E-005
R = 1.0000
DL = 0.01018
BEC = 0.003589

Weight: <None>
Min Conc: <None>

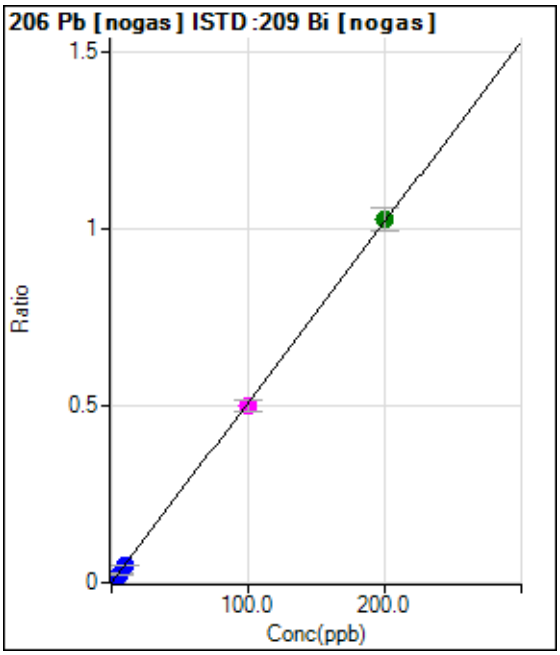


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.67	0.0001	P	34.1
2	☐	2.000	1.829	78854.02	0.0273	P	7.7
3	☐	5.000	4.697	202584.64	0.0701	P	5.8
4	☐	10.000	9.699	402148.57	0.1446	P	6.9
5	☐	100.000	100.649	4173573.17	1.4999	A	5.7
6	☐	200.000	199.700	8232376.55	2.9758	A	3.7
7	☐	1.000					

y = 0.0149 * x + 7.4616E-005
R = 1.0000
DL = 0.005121
BEC = 0.005007

Weight: <None>
Min Conc: <None>

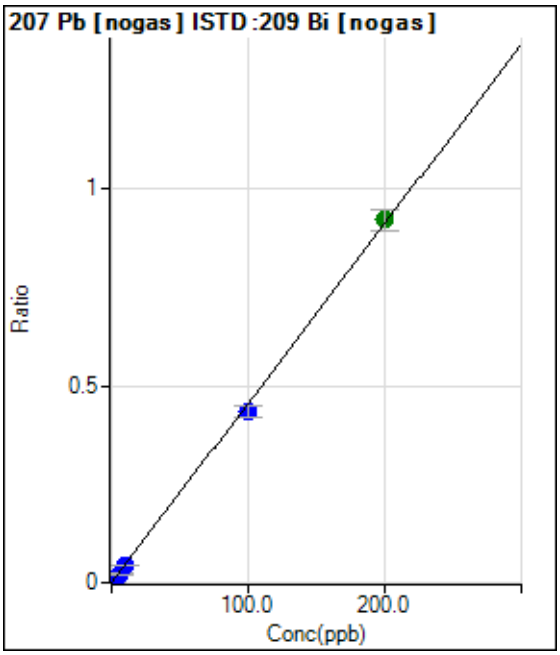
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.34	0.0001	P	12.1
2	☐	2.000	1.830	27336.55	0.0095	P	3.4
3	☐	5.000	4.743	70331.09	0.0243	P	6.1
4	☐	10.000	9.704	137992.97	0.0496	P	8.0
5	☐	100.000	97.751	1387577.43	0.4988	M	6.8
6	☐	200.000	201.147	2837063.08	1.0263	A	6.3
7	☐	1.000					

y = 0.0051 * x + 1.2920E-004
R = 0.9999
DL = 0.009164
BEC = 0.02533

Weight: <None>
Min Conc: <None>

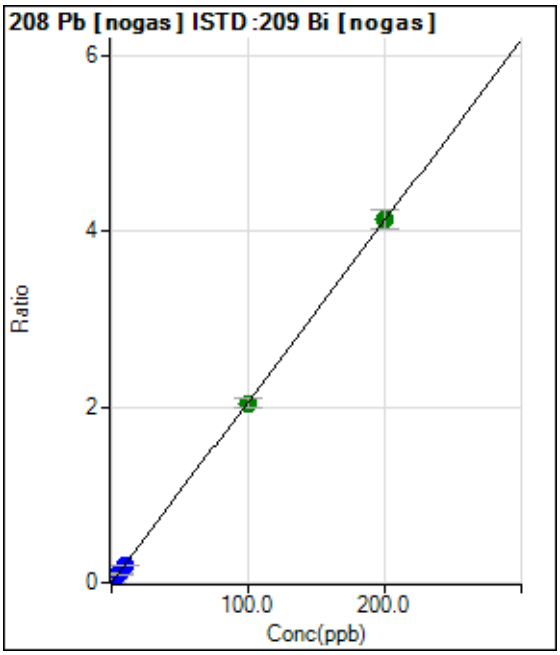


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0001	P	6.4
2	☐	2.000	1.863	24839.21	0.0086	P	5.1
3	☐	5.000	4.684	62068.21	0.0215	P	5.8
4	☐	10.000	9.570	121633.88	0.0438	P	7.9
5	☐	100.000	95.598	1213261.86	0.4361	P	6.6
6	☐	200.000	202.232	2550861.89	0.9224	A	5.9
7	☐	1.000					

y = 0.0046 * x + 1.0814E-004
R = 0.9997
DL = 0.004522
BEC = 0.02371

Weight: <None>
Min Conc: <None>

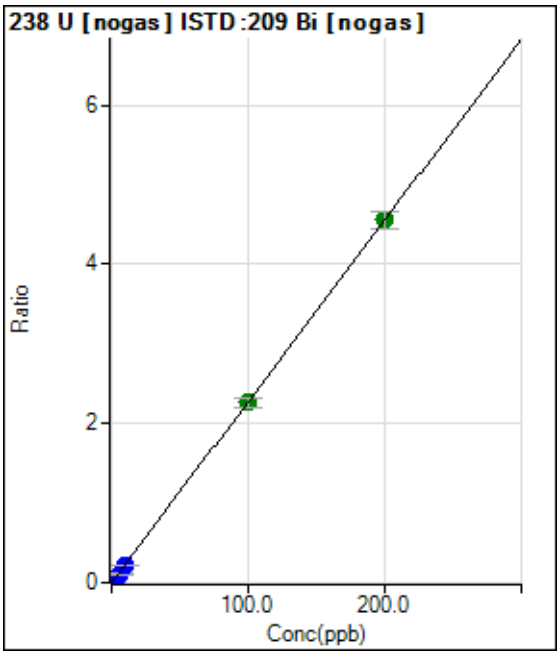
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1486.72	0.0005	P	2.9
2	☐	2.000	1.855	111754.70	0.0387	P	5.5
3	☐	5.000	4.777	285974.23	0.0989	P	5.5
4	☐	10.000	9.667	554993.32	0.1996	P	7.3
5	☐	100.000	99.081	5679927.36	2.0411	A	5.8
6	☐	200.000	200.483	11419183.00	4.1295	A	5.4
7	☐	1.000					

y = 0.0206 * x + 5.1430E-004
R = 1.0000
DL = 0.002161
BEC = 0.02497

Weight: <None>
Min Conc: <None>

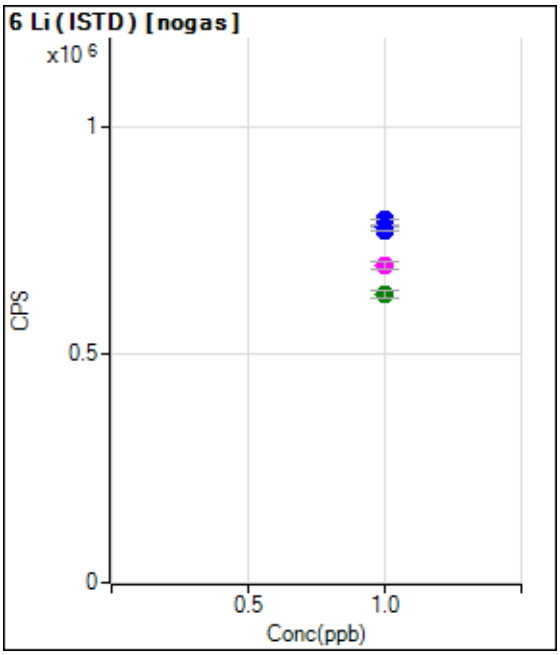


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	130.5
2	☐	2.000	1.828	120099.13	0.0416	P	5.2
3	☐	5.000	4.747	312384.21	0.1080	P	4.5
4	☐	10.000	9.449	597796.79	0.2150	P	7.2
5	☐	100.000	99.392	6295500.53	2.2612	A	5.4
6	☐	200.000	200.339	12605624.81	4.5578	A	4.8
7	☐	1.000					

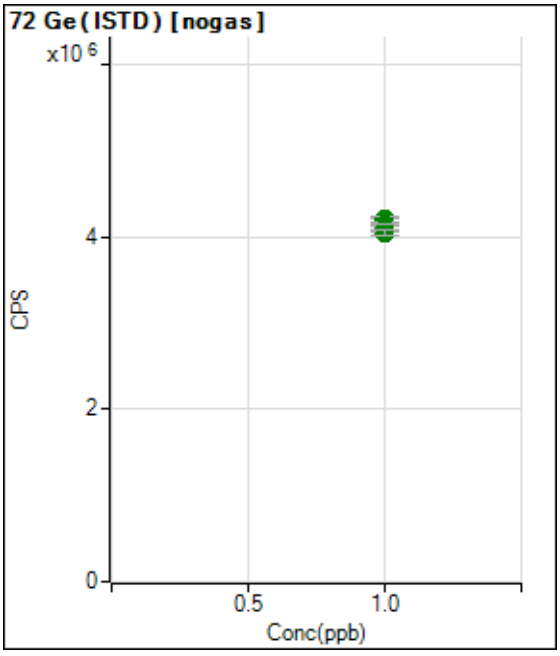
y = 0.0228 * x + 6.6921E-006
R = 1.0000
DL = 0.001152
BEC = 0.0002941

Weight: <None>
Min Conc: <None>

Calibration for 208_ICV.d

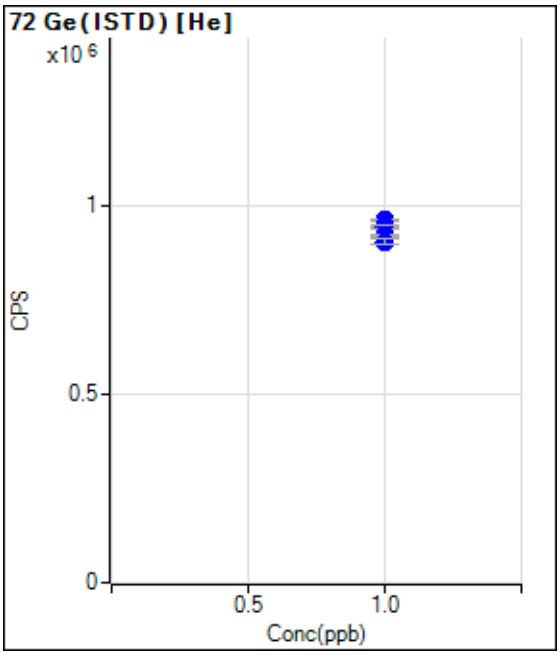


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		795171.79		P	0.1
2	☐	1.000		781617.18		P	0.1
3	☐	1.000		778146.61		P	1.6
4	☐	1.000		771688.48		P	0.4
5	☐	1.000		693803.69		M	2.5
6	☐	1.000		632178.44		A	2.6
7	☐	1.000					

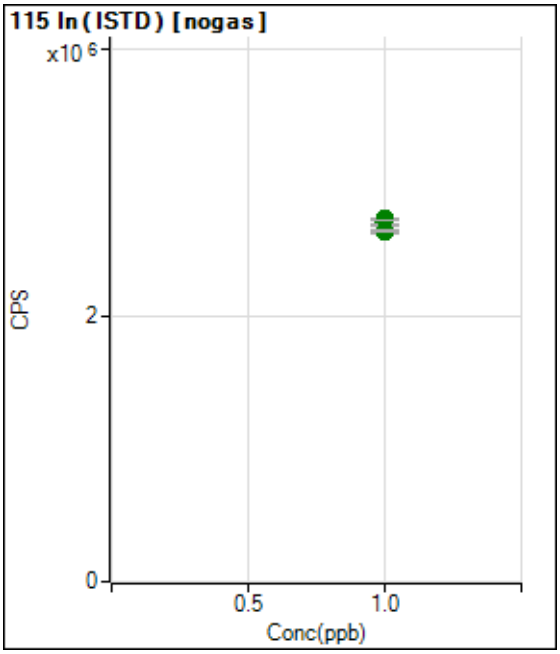


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4200937.96		A	1.0
2	☐	1.000		4213626.19		A	1.9
3	☐	1.000		4204694.94		A	1.5
4	☐	1.000		4152561.92		A	0.9
5	☐	1.000		4112934.11		A	2.1
6	☐	1.000		4048003.07		A	1.8
7	☐	1.000					

Calibration for 208_ICV.d

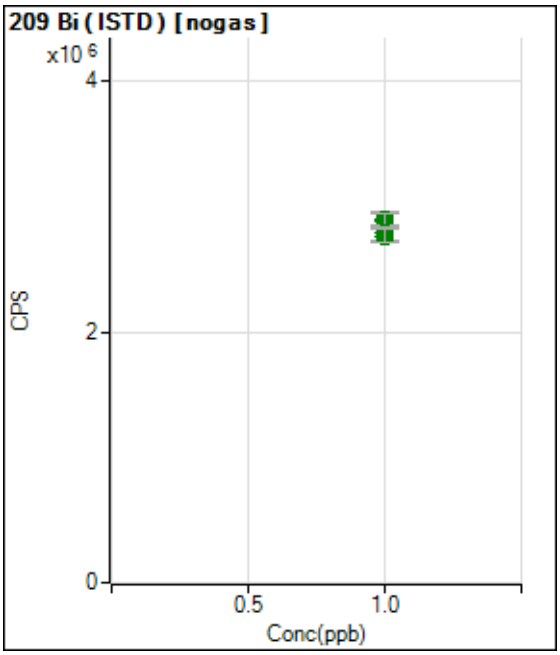


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		960523.27		P	0.1
2	☐	1.000		961445.77		P	0.7
3	☐	1.000		946405.61		P	0.6
4	☐	1.000		942716.52		P	0.7
5	☐	1.000		921272.90		P	0.6
6	☐	1.000		903709.10		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2705270.25		A	1.9
2	☐	1.000		2727767.60		A	0.1
3	☐	1.000		2700987.55		A	2.4
4	☐	1.000		2705040.34		A	1.3
5	☐	1.000		2648599.77		A	1.9
6	☐	1.000		2634989.42		A	0.6
7	☐	1.000					

Calibration for 208_ICV.d



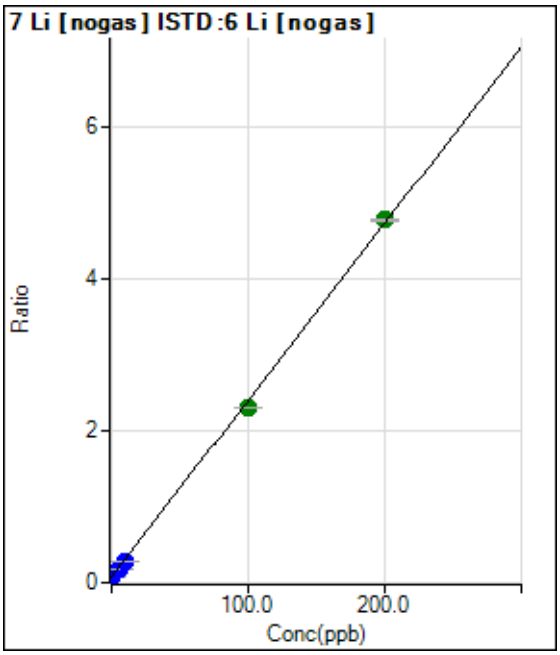
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2892860.16		A	3.8
2	☐	1.000		2891885.06		A	4.9
3	☐	1.000		2895332.35		A	3.7
4	☐	1.000		2787434.75		A	5.1
5	☐	1.000		2786489.13		A	3.7
6	☐	1.000		2769262.87		A	4.2
7	☐	1.000					

Calibration for 279_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 11:49:17 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	272CALB.d	CAL BLK	8/19/2020 11:32:01 PM
2	273CALS.d	2/10/200	8/19/2020 11:34:27 PM
3	274CALS.d	5/25/500	8/19/2020 11:36:50 PM
4	275CALS.d	10/50/1000	8/19/2020 11:39:11 PM
5	276CALS.d	100/500/10K	8/19/2020 11:41:32 PM
6	277CALS.d	200/1000/20K	8/19/2020 11:43:51 PM
7			

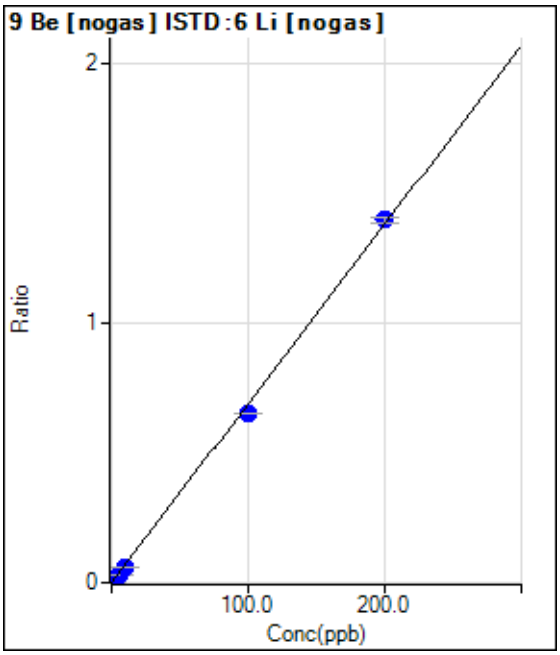
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53618.97	0.0772	P	1.0
2	☐	2.000	1.774	81505.31	0.1184	P	2.3
3	☐	5.000	4.517	124162.65	0.1820	P	0.7
4	☐	10.000	8.876	193104.20	0.2832	P	0.1
5	☐	100.000	95.883	1454313.78	2.3024	A	0.4
6	☐	200.000	202.129	2805231.94	4.7681	A	0.5
7	☐	1.000					

y = 0.0232 * x + 0.0772
R = 0.9997
DL = 0.1002
BEC = 3.327

Weight: <None>
Min Conc: <None>

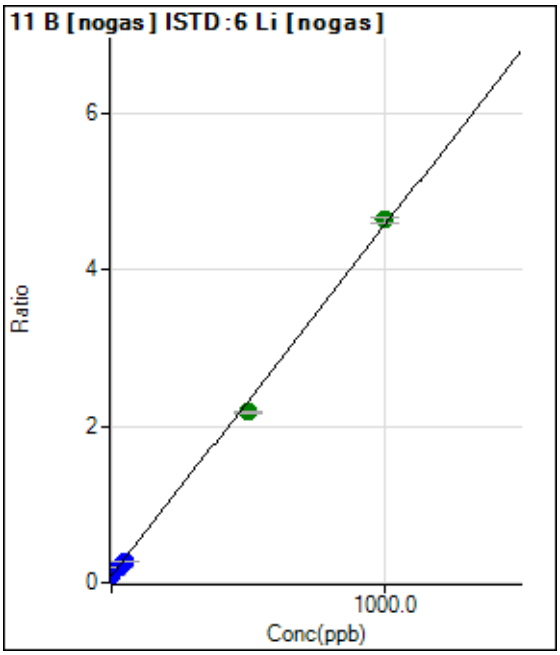


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.00	0.0001	P	34.4
2	☐	2.000	1.678	8045.04	0.0117	P	2.3
3	☐	5.000	4.345	20519.34	0.0301	P	1.8
4	☐	10.000	8.574	40410.52	0.0593	P	1.5
5	☐	100.000	94.961	413856.12	0.6552	P	0.1
6	☐	200.000	202.610	822356.97	1.3978	P	1.5
7	☐	1.000					

y = 0.0069 * x + 1.0794E-004
R = 0.9996
DL = 0.01614
BEC = 0.01565

Weight: <None>
Min Conc: <None>

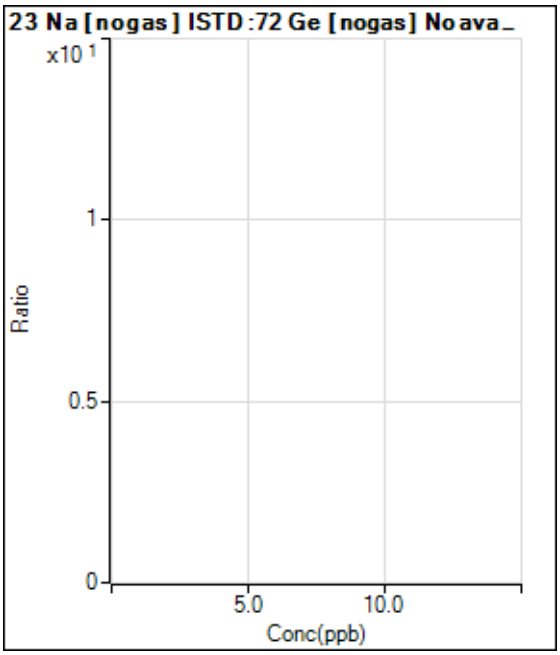
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61534.37	0.0886	P	1.5
2	☐	10.000	10.680	93963.70	0.1365	P	1.3
3	☐	25.000	21.841	127187.15	0.1865	P	0.5
4	☐	50.000	42.089	189005.28	0.2772	P	1.8
5	☐	500.000	467.926	1380414.72	2.1854	A	1.4
6	☐	1000.000	1016.505	2731950.58	4.6437	A	1.5
7	☐	5.000					

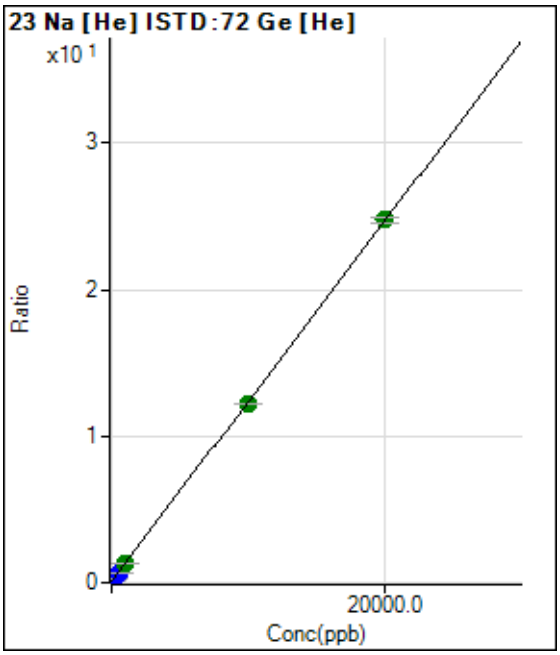
y = 0.0045 * x + 0.0886
R = 0.9993
DL = 0.8908
BEC = 19.77

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

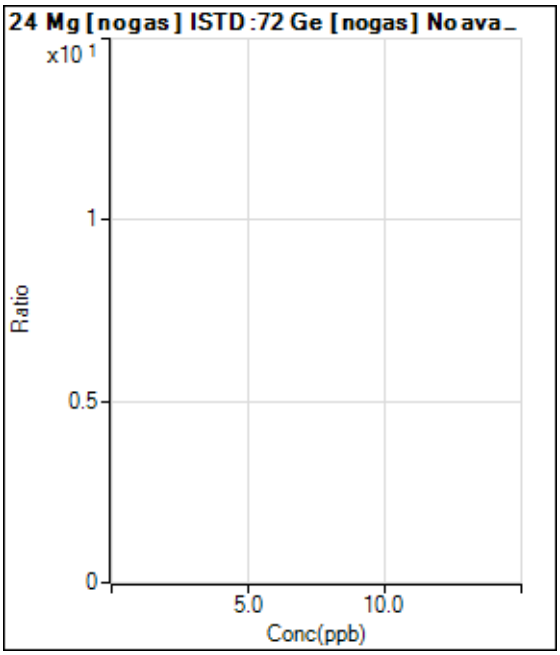
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58058.49	0.0666	P	3.1
2	☐	200.000	197.951	271171.79	0.3102	P	2.1
3	☐	500.000	497.837	594914.44	0.6792	P	1.2
4	☐	1000.000	973.161	1113116.49	1.2641	A	2.0
5	☐	10000.00	9870.201	10434919.22	12.2116	A	0.7
6	☐	20000.00	20066.31	20866674.69	24.7576	A	1.4
7	☐	100.000					

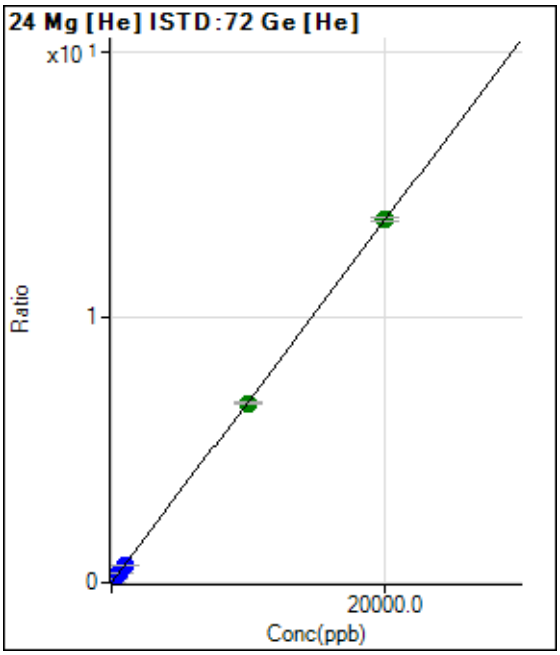
y = 0.0012 * x + 0.0666
R = 1.0000
DL = 5.007
BEC = 54.17

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

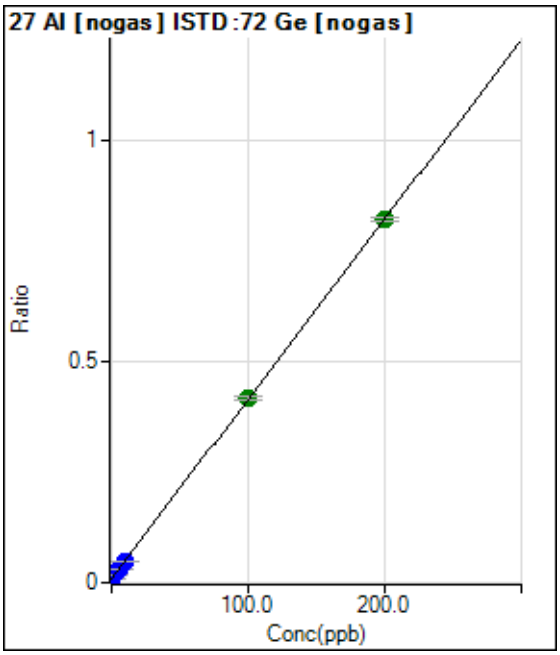
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.06	0.0013	P	17.6
2	☐	200.000	201.546	121149.25	0.1386	P	2.6
3	☐	500.000	505.915	303010.11	0.3459	P	1.2
4	☐	1000.000	983.723	591214.78	0.6715	P	0.8
5	☐	10000.00	9921.859	5776974.08	6.7605	A	0.3
6	☐	20000.00	20039.72	11507888.58	13.6533	A	1.0
7	☐	100.000					

y = 6.8124E-004 * x + 0.0013
R = 1.0000
DL = 1.008
BEC = 1.905

Weight: <None>
Min Conc: <None>

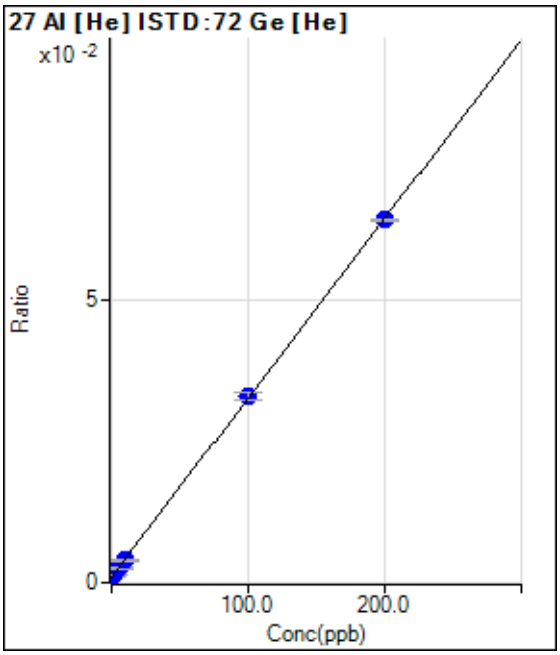


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36233.36	0.0092	P	6.4
2	☐	2.000	1.895	66504.21	0.0169	P	2.3
3	☐	5.000	4.952	113500.48	0.0293	P	3.3
4	☐	10.000	9.554	188536.72	0.0480	P	0.8
5	☐	100.000	100.572	1630075.86	0.4174	A	2.1
6	☐	200.000	199.738	3168035.89	0.8199	A	1.2
7	☐	1.000					

y = 0.0041 * x + 0.0092
R = 1.0000
DL = 0.4343
BEC = 2.272

Weight: <None>
Min Conc: <None>

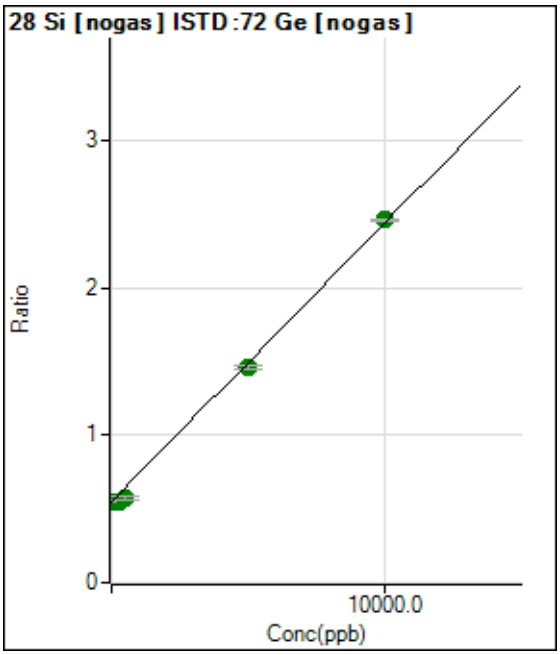
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	890.19	0.0010	P	28.1
2	☐	2.000	0.711	1090.05	0.0012	P	5.8
3	☐	5.000	4.897	2253.51	0.0026	P	6.8
4	☐	10.000	9.210	3467.04	0.0039	P	4.2
5	☐	100.000	101.181	28241.35	0.0331	P	4.8
6	☐	200.000	199.464	54093.99	0.0642	P	0.4
7	☐	1.000					

y = 3.1661E-004 * x + 0.0010
R = 0.9999
DL = 2.717
BEC = 3.226

Weight: <None>
Min Conc: <None>

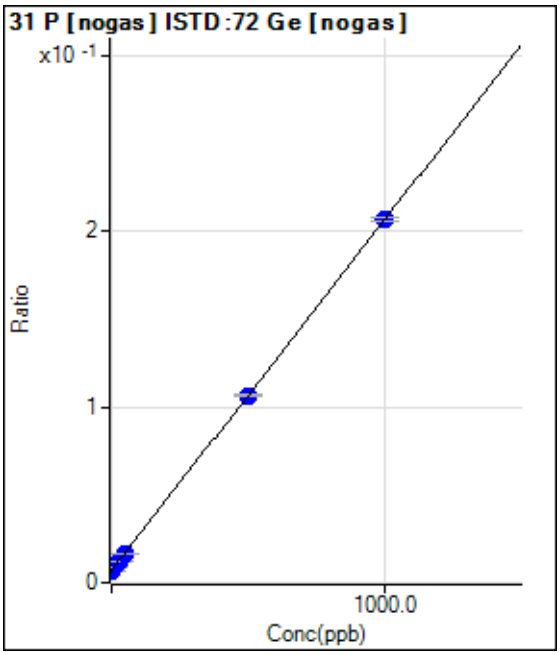


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2166496.79	0.5511	A	2.2
2	☐	100.000	3.191	2169462.41	0.5517	A	2.7
3	☐	250.000	14.996	2145196.74	0.5540	A	1.5
4	☐	500.000	121.779	2254193.41	0.5741	A	4.2
5	☐	5000.000	4828.845	5714768.46	1.4634	A	1.8
6	☐	10000.00	10111.33	9510983.40	2.4614	A	0.8
7	☐	50.000					

y = 1.8892E-004 * x + 0.5511
R = 0.9994
DL = 190.9
BEC = 2917

Weight: <None>
Min Conc: <None>

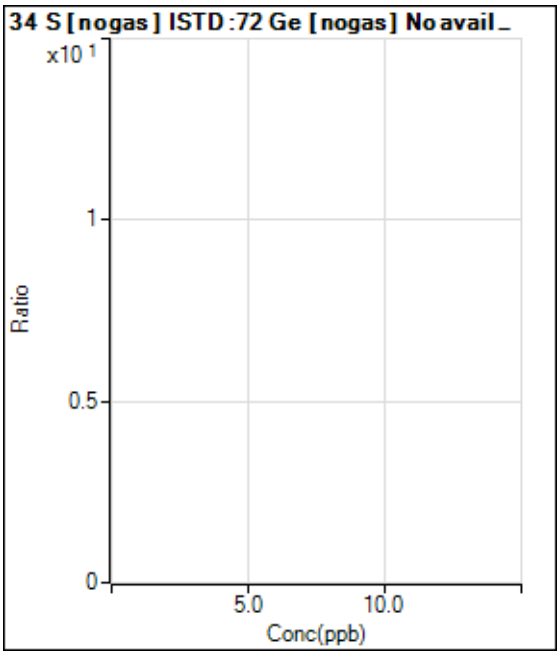
Calibration for 279_ICV.d



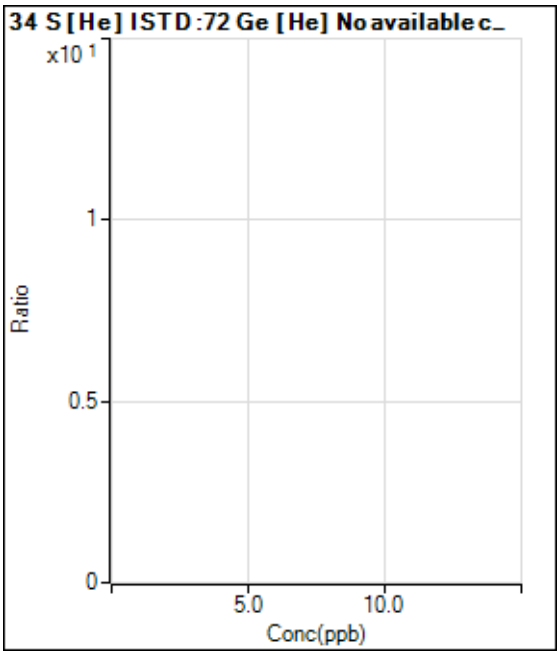
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27416.82	0.0070	P	2.1
2	☐	10.000	9.711	35049.53	0.0089	P	1.9
3	☐	25.000	25.256	46514.00	0.0120	P	3.0
4	☐	50.000	49.183	65944.66	0.0168	P	1.0
5	☐	500.000	499.511	416559.63	0.1067	P	1.7
6	☐	1000.000	1000.282	798325.72	0.2066	P	1.0
7	☐	5.000					

y = 1.9957E-004 * x + 0.0070
R = 1.0000
DL = 2.215
BEC = 34.94

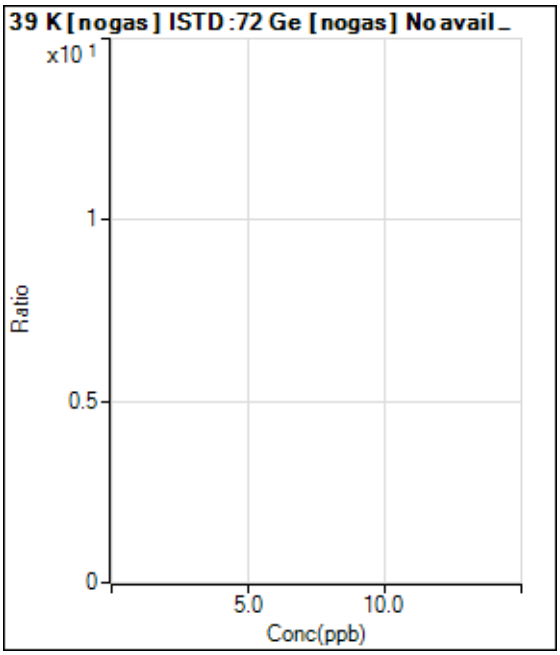
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

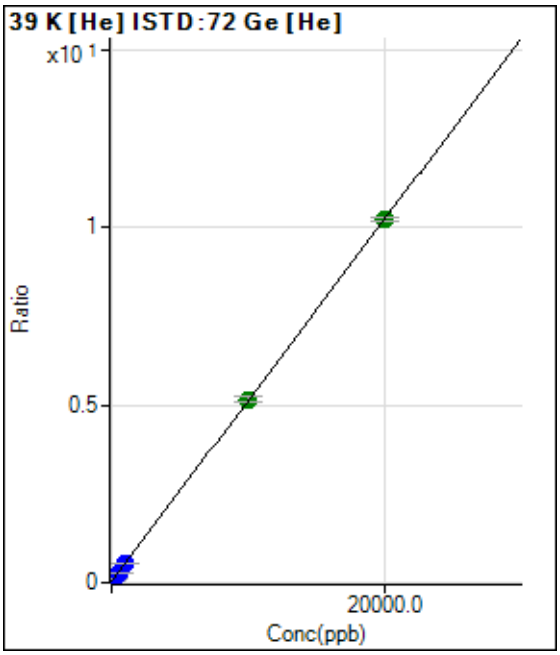


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

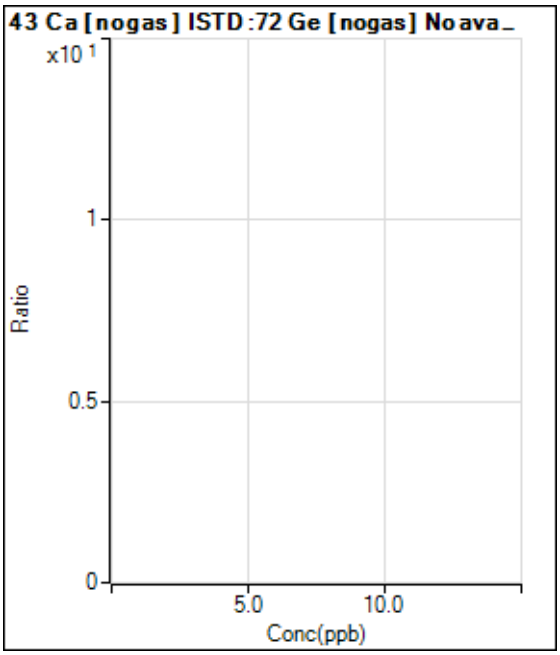
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25874.80	0.0297	P	4.4
2	☐	200.000	199.937	115032.39	0.1316	P	1.4
3	☐	500.000	496.709	247694.21	0.2828	P	2.1
4	☐	1000.000	968.647	460781.35	0.5233	P	0.5
5	☐	10000.00	10061.73	4405842.33	5.1570	A	2.8
6	☐	20000.00	19970.78	8603006.33	10.2065	A	1.0
7	☐	100.000					

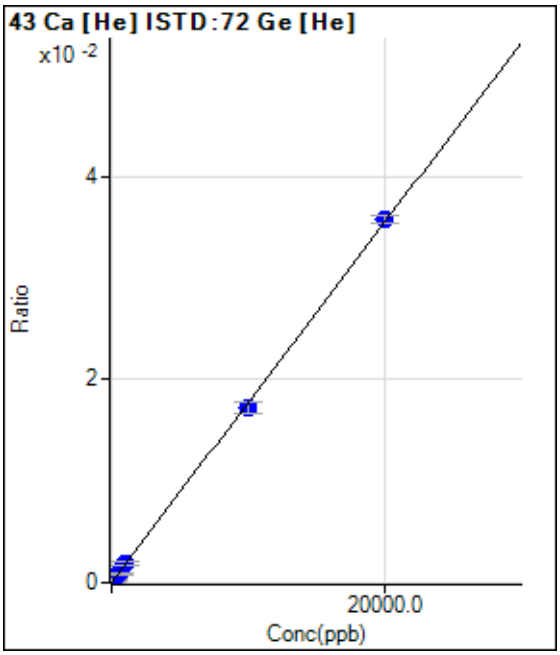
y = 5.0958E-004 * x + 0.0297
R = 1.0000
DL = 7.638
BEC = 58.29

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

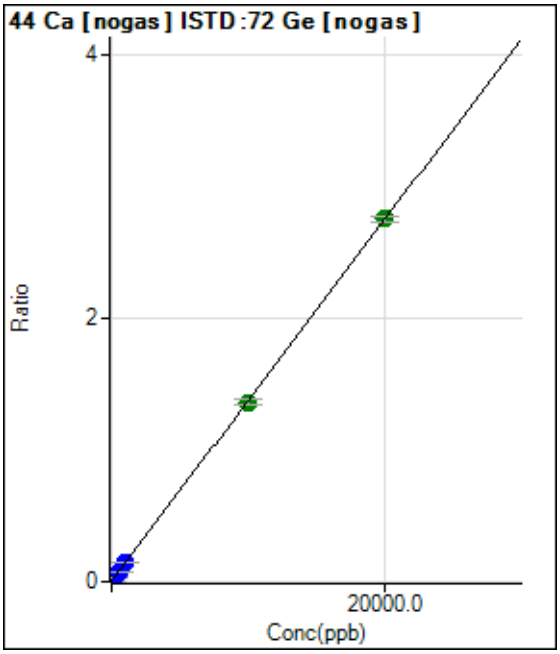
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	25.1
2	☐	200.000	148.352	253.34	0.0003	P	13.9
3	☐	500.000	476.877	763.36	0.0009	P	16.4
4	☐	1000.000	1042.916	1653.45	0.0019	P	17.2
5	☐	10000.00	9692.037	14706.01	0.0172	P	6.6
6	☐	20000.00	20152.93	30147.84	0.0358	P	2.1
7	☐	100.000					

y = 1.7730E-006 * x + 2.6800E-005
R = 0.9998
DL = 11.39
BEC = 15.12

Weight: <None>
Min Conc: <None>

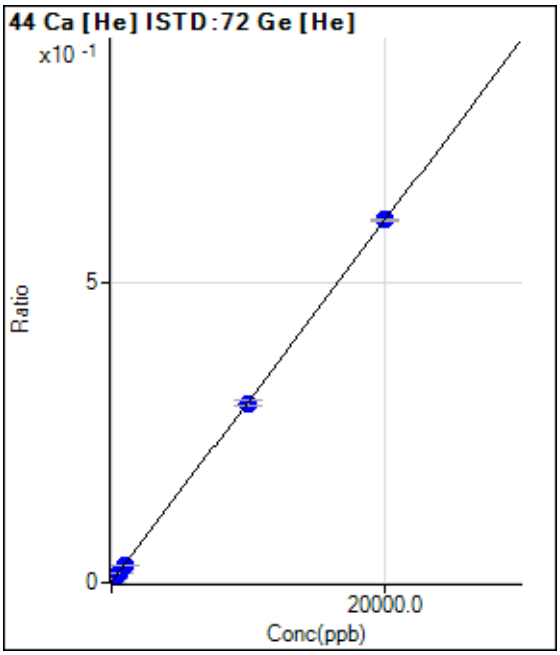


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22697.40	0.0058	P	5.4
2	☐	200.000	191.607	125980.71	0.0320	P	1.6
3	☐	500.000	507.138	291472.88	0.0753	P	2.7
4	☐	1000.000	985.983	553470.51	0.1409	P	1.0
5	☐	10000.00	9896.874	5319886.48	1.3622	A	2.6
6	☐	20000.00	20052.17	10641714.42	2.7541	A	1.6
7	☐	100.000					

y = 1.3706E-004 * x + 0.0058
R = 1.0000
DL = 6.813
BEC = 42.14

Weight: <None>
Min Conc: <None>

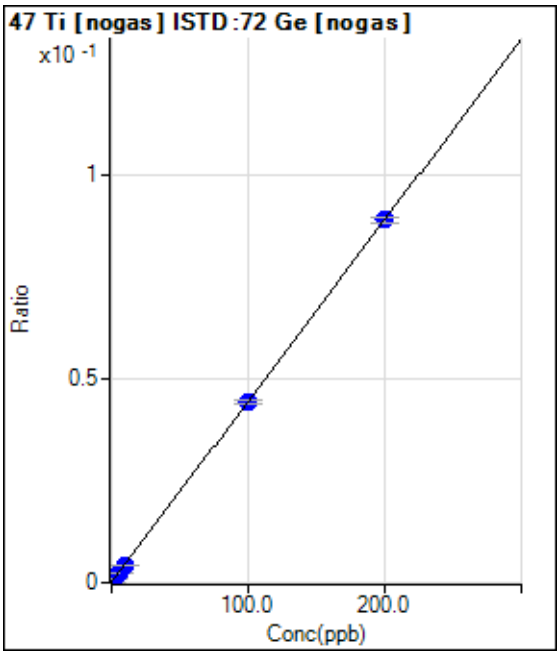
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0006	P	22.9
2	☐	200.000	198.907	5764.33	0.0066	P	0.5
3	☐	500.000	494.304	13595.13	0.0155	P	5.4
4	☐	1000.000	925.817	25137.24	0.0285	P	1.0
5	☐	10000.00	9915.206	256362.20	0.3001	P	2.7
6	☐	20000.00	20046.26	510845.68	0.6061	P	0.8
7	☐	100.000					

y = 3.0204E-005 * x + 5.8567E-004
R = 1.0000
DL = 13.31
BEC = 19.39

Weight: <None>
Min Conc: <None>

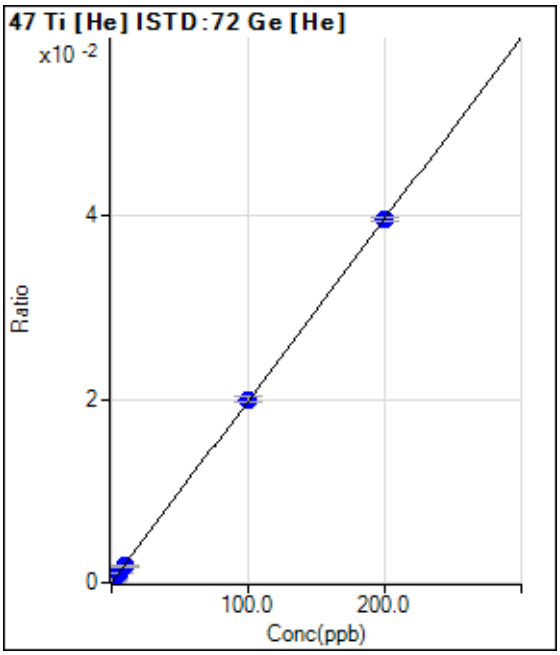


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.01	0.0001	P	14.6
2	☐	2.000	1.924	3653.75	0.0009	P	8.5
3	☐	5.000	4.941	8768.87	0.0023	P	6.9
4	☐	10.000	9.551	16931.28	0.0043	P	3.7
5	☐	100.000	99.724	172897.23	0.0443	P	1.6
6	☐	200.000	200.163	343101.40	0.0888	P	1.2
7	☐	1.000					

y = 4.4321E-004 * x + 7.6334E-005
R = 1.0000
DL = 0.07534
BEC = 0.1722

Weight: <None>
Min Conc: <None>

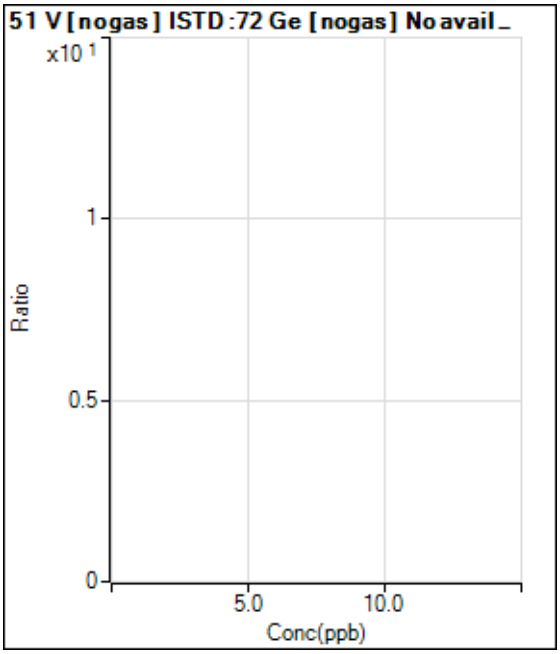
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	91.8
2	☐	2.000	1.636	300.01	0.0003	P	27.5
3	☐	5.000	5.338	943.38	0.0011	P	12.9
4	☐	10.000	9.011	1590.10	0.0018	P	5.7
5	☐	100.000	100.889	17101.42	0.0200	P	2.7
6	☐	200.000	199.600	33363.56	0.0396	P	1.0
7	☐	1.000					

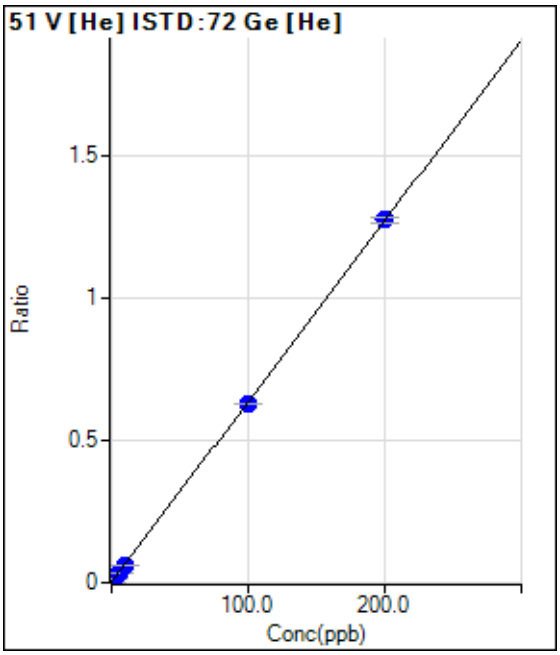
y = 1.9822E-004 * x + 1.9168E-005
R = 1.0000
DL = 0.2662
BEC = 0.0967

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					

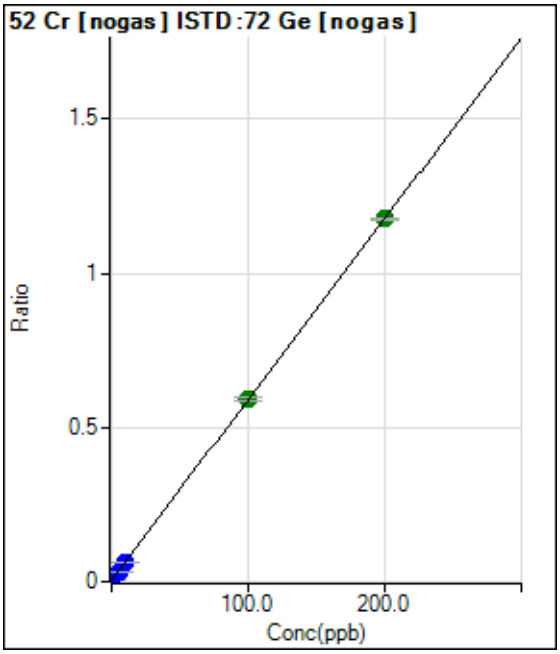
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	983.36	0.0011	P	10.4
2	☐	2.000	1.916	11624.79	0.0133	P	1.5
3	☐	5.000	4.937	28436.16	0.0325	P	4.0
4	☐	10.000	9.605	54693.20	0.0621	P	0.2
5	☐	100.000	98.709	536499.15	0.6279	P	0.8
6	☐	200.000	200.668	1074878.29	1.2752	P	1.3
7	☐	1.000					

y = 0.0063 * x + 0.0011
R = 1.0000
DL = 0.05532
BEC = 0.1777

Weight: <None>
Min Conc: <None>

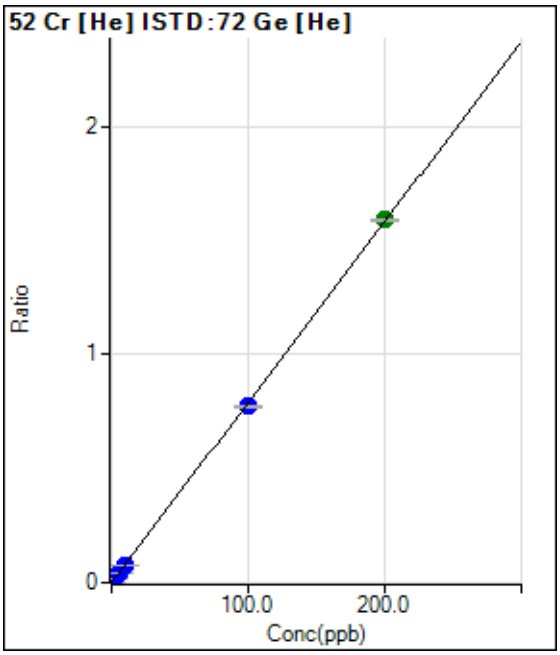


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18025.65	0.0046	P	3.1
2	☐	2.000	1.912	62093.64	0.0158	P	0.7
3	☐	5.000	5.017	131582.94	0.0340	P	1.9
4	☐	10.000	9.789	243266.38	0.0619	P	1.7
5	☐	100.000	99.994	2305720.23	0.5905	A	2.4
6	☐	200.000	200.014	4546072.74	1.1765	A	0.9
7	☐	1.000					

y = 0.0059 * x + 0.0046
R = 1.0000
DL = 0.07191
BEC = 0.7829

Weight: <None>
Min Conc: <None>

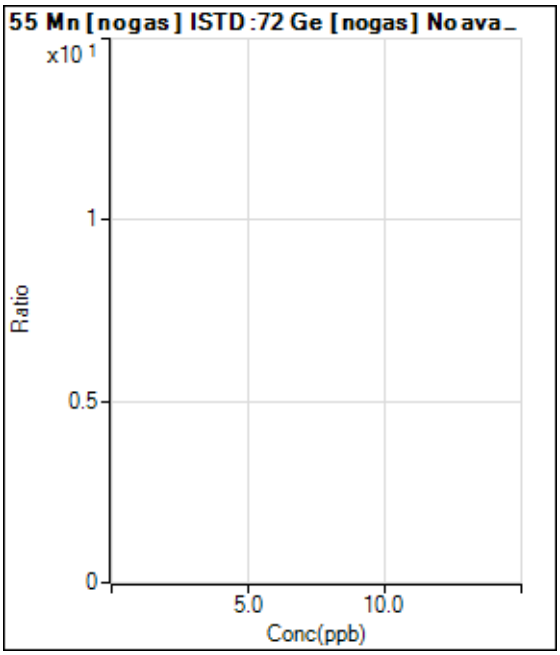
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1253.40	0.0014	P	4.1
2	☐	2.000	1.907	14422.52	0.0165	P	2.4
3	☐	5.000	4.882	35016.76	0.0400	P	3.3
4	☐	10.000	9.491	67254.84	0.0764	P	2.0
5	☐	100.000	97.658	660138.11	0.7726	P	0.8
6	☐	200.000	201.201	1340423.05	1.5902	A	0.7
7	☐	1.000					

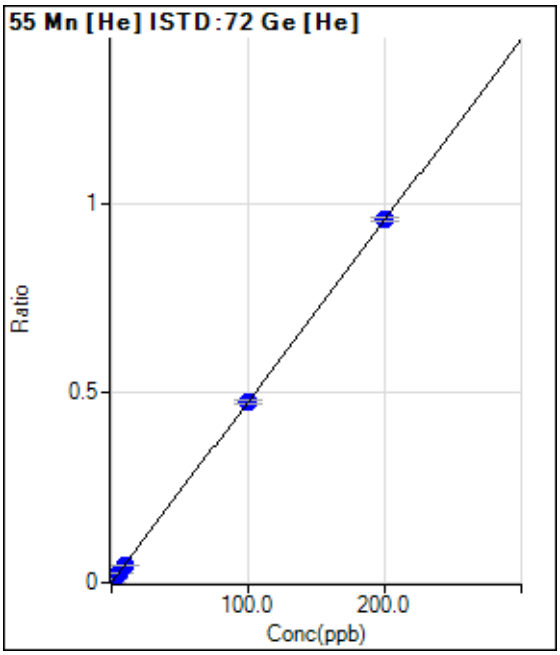
y = 0.0079 * x + 0.0014
R = 0.9999
DL = 0.02257
BEC = 0.1822

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					

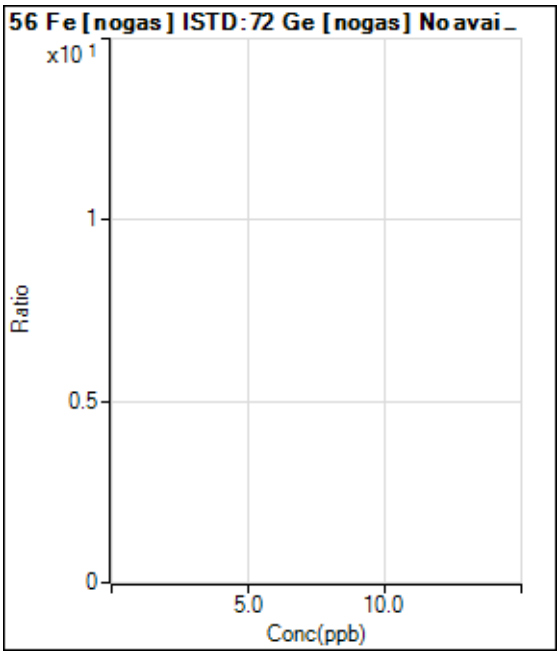
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0005	P	25.1
2	☐	2.000	1.967	8615.50	0.0099	P	0.4
3	☐	5.000	4.812	20525.08	0.0234	P	2.2
4	☐	10.000	9.656	40992.45	0.0466	P	3.8
5	☐	100.000	99.452	406085.92	0.4753	P	2.2
6	☐	200.000	200.296	806382.10	0.9567	P	1.1
7	☐	1.000					

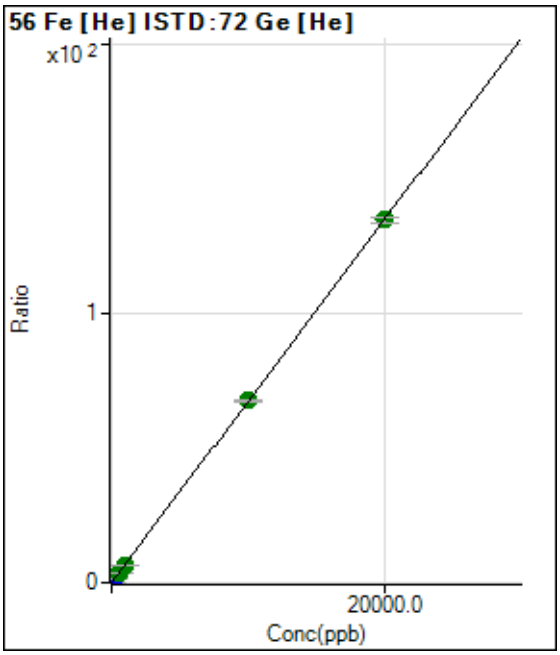
y = 0.0048 * x + 4.6319E-004
R = 1.0000
DL = 0.07308
BEC = 0.09702

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

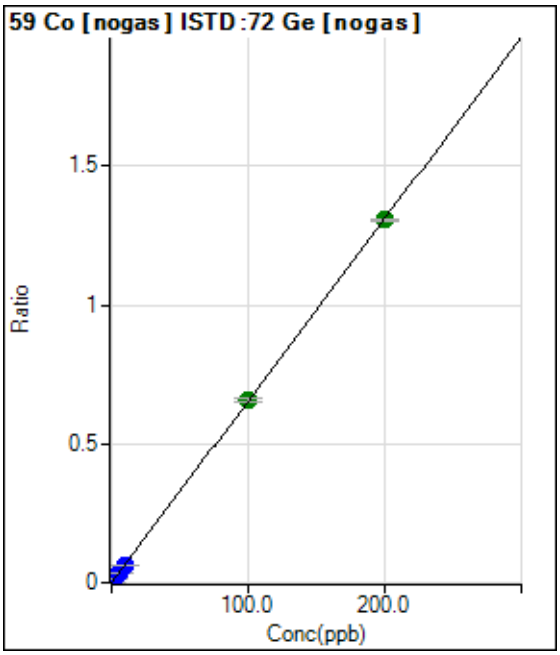
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9646.13	0.0111	P	4.0
2	☐	200.000	196.727	1168151.94	1.3363	P	1.4
3	☐	500.000	505.789	2993654.85	3.4182	A	2.1
4	☐	1000.000	970.944	5768233.46	6.5516	A	1.9
5	☐	10000.00	10019.35	57679132.47	67.5035	A	1.8
6	☐	20000.00	19991.66	113513261.6	134.679	A	1.4
7	☐	100.000					

y = 0.0067 * x + 0.0111
R = 1.0000
DL = 0.1971
BEC = 1.644

Weight: <None>
Min Conc: <None>

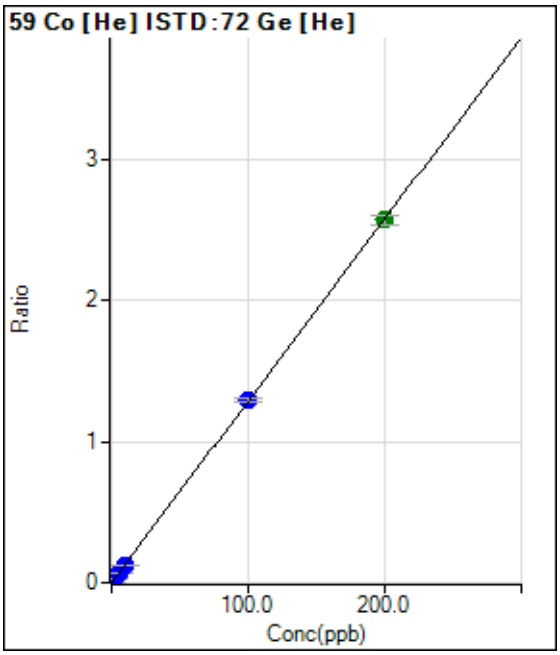


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396.68	0.0001	P	16.4
2	☐	2.000	1.951	50622.87	0.0129	P	1.7
3	☐	5.000	5.058	128581.29	0.0332	P	0.5
4	☐	10.000	9.956	256335.09	0.0653	P	1.5
5	☐	100.000	100.855	2577954.86	0.6602	A	1.9
6	☐	200.000	199.574	5047707.22	1.3062	A	0.7
7	☐	1.000					

y = 0.0065 * x + 1.0105E-004
R = 1.0000
DL = 0.007587
BEC = 0.01544

Weight: <None>
Min Conc: <None>

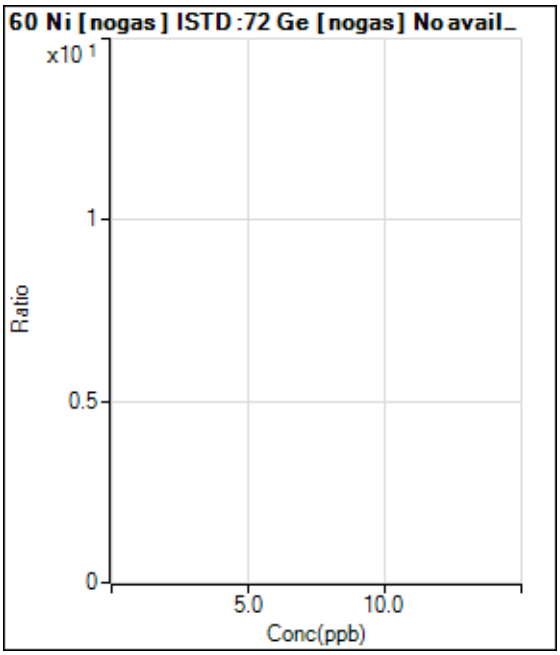
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0002	P	21.2
2	☐	2.000	2.000	22690.82	0.0260	P	0.2
3	☐	5.000	5.036	57004.77	0.0651	P	1.5
4	☐	10.000	9.688	110103.46	0.1251	P	1.8
5	☐	100.000	100.665	1108899.85	1.2978	P	1.6
6	☐	200.000	199.682	2169416.48	2.5742	A	2.7
7	☐	1.000					

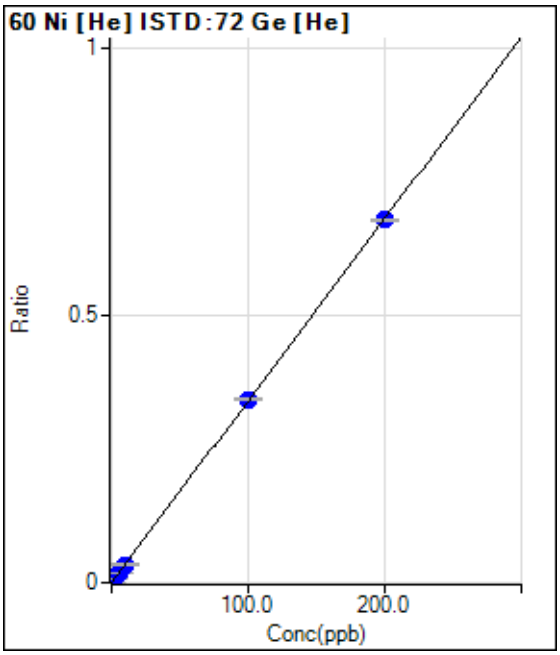
y = 0.0129 * x + 1.6843E-004
R = 1.0000
DL = 0.008297
BEC = 0.01307

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					

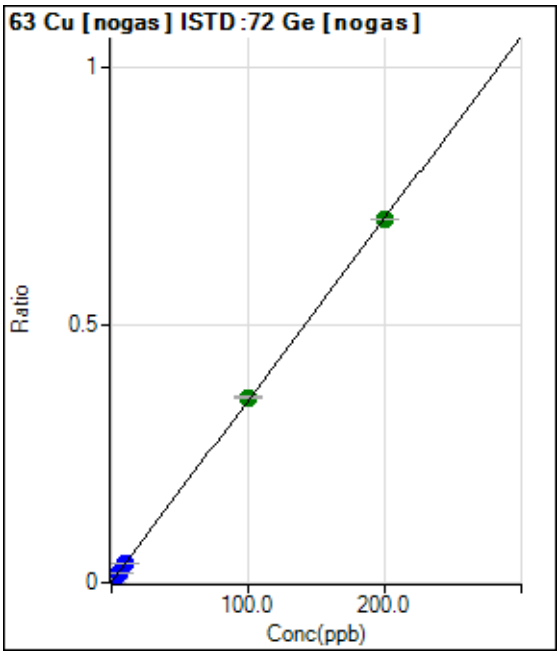
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0002	P	16.9
2	☐	2.000	2.004	6111.15	0.0070	P	5.3
3	☐	5.000	5.102	15346.66	0.0175	P	3.8
4	☐	10.000	9.873	29697.58	0.0337	P	4.0
5	☐	100.000	100.949	293287.51	0.3432	P	1.5
6	☐	200.000	199.529	571692.56	0.6783	P	0.7
7	☐	1.000					

y = 0.0034 * x + 1.8373E-004
R = 1.0000
DL = 0.0274
BEC = 0.05407

Weight: <None>
Min Conc: <None>

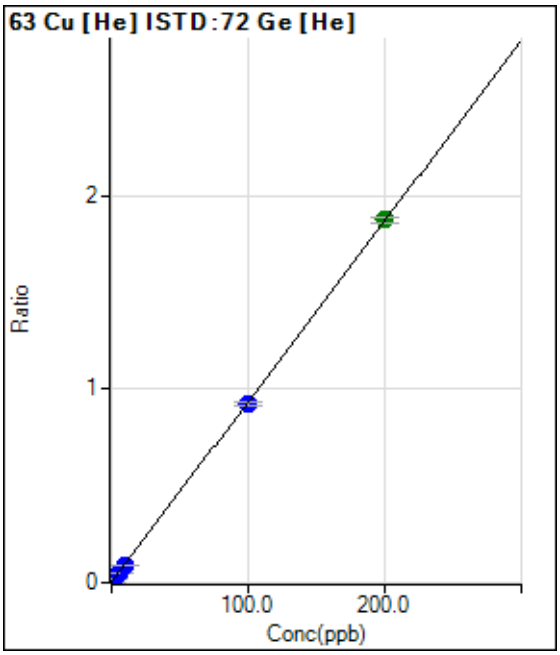


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4257.25	0.0011	P	16.9
2	☐	2.000	2.001	32058.17	0.0082	P	1.7
3	☐	5.000	5.190	75179.79	0.0194	P	1.8
4	☐	10.000	9.874	141251.38	0.0360	P	1.1
5	☐	100.000	101.543	1404945.24	0.3598	A	1.1
6	☐	200.000	199.230	2723753.92	0.7048	A	0.1
7	☐	1.000					

y = 0.0035 * x + 0.0011
R = 1.0000
DL = 0.1559
BEC = 0.3068

Weight: <None>
Min Conc: <None>

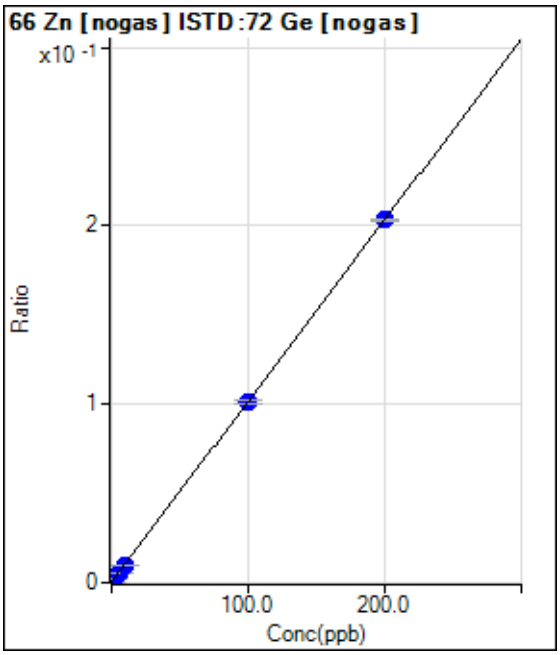
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1463.42	0.0017	P	2.2
2	☐	2.000	2.009	17845.55	0.0204	P	0.2
3	☐	5.000	5.001	42322.42	0.0483	P	1.6
4	☐	10.000	9.822	82115.46	0.0933	P	1.6
5	☐	100.000	98.614	787041.94	0.9212	P	2.2
6	☐	200.000	200.702	1578625.55	1.8730	A	1.9
7	☐	1.000					

y = 0.0093 * x + 0.0017
R = 1.0000
DL = 0.01199
BEC = 0.1802

Weight: <None>
Min Conc: <None>

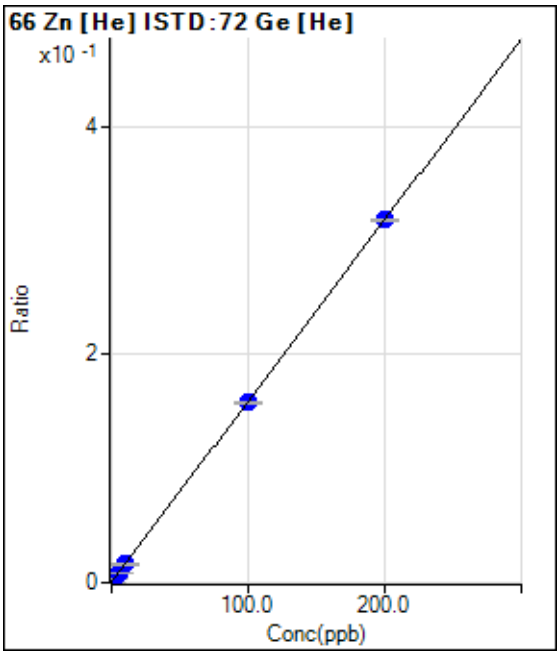


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	966.71	0.0002	P	16.9
2	☐	2.000	1.929	8662.19	0.0022	P	0.3
3	☐	5.000	5.161	21219.21	0.0055	P	2.6
4	☐	10.000	9.575	39115.42	0.0100	P	2.5
5	☐	100.000	99.600	395428.99	0.1013	P	1.2
6	☐	200.000	200.218	785611.55	0.2033	P	0.4
7	☐	1.000					

y = 0.0010 * x + 2.4623E-004
R = 1.0000
DL = 0.1227
BEC = 0.2428

Weight: <None>
Min Conc: <None>

Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0004	P	6.7
2	☐	2.000	1.945	3023.64	0.0035	P	7.5
3	☐	5.000	4.945	7201.56	0.0082	P	4.7
4	☐	10.000	9.943	14219.04	0.0161	P	3.2
5	☐	100.000	99.586	135301.03	0.1583	P	1.0
6	☐	200.000	200.212	268020.48	0.3180	P	0.4
7	☐	1.000					

y = 0.0016 * x + 3.7493E-004

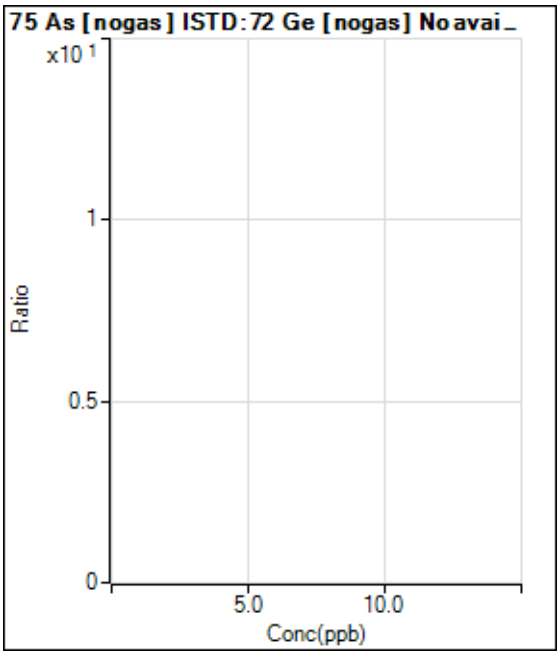
R = 1.0000

DL = 0.04777

BEC = 0.2364

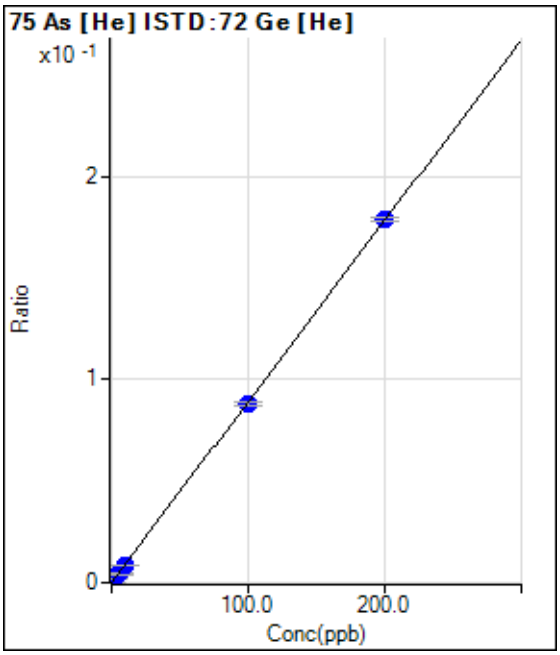
Weight: <None>

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					

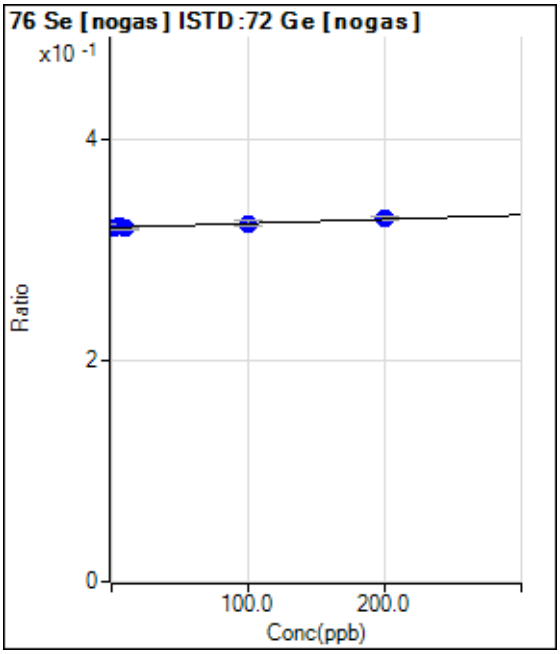
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85.56	0.0001	P	13.8
2	☐	2.000	1.857	1530.07	0.0017	P	5.7
3	☐	5.000	4.704	3750.41	0.0043	P	3.4
4	☐	10.000	9.432	7473.80	0.0085	P	1.2
5	☐	100.000	98.987	75311.03	0.0881	P	2.1
6	☐	200.000	200.544	150440.13	0.1785	P	1.1
7	☐	1.000					

y = 8.8949E-004 * x + 9.8219E-005
R = 1.0000
DL = 0.04558
BEC = 0.1104

Weight: <None>
Min Conc: <None>

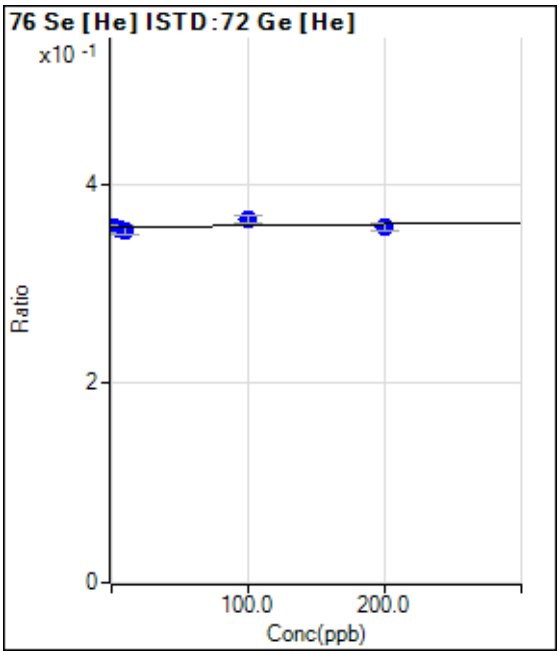


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1259076.86	0.3203	P	1.3
2	☐	2.000	4.890	1260490.16	0.3205	P	1.4
3	☐	5.000	39.532	1246247.77	0.3218	P	1.4
4	☐	10.000	-24.166	1254676.18	0.3194	P	0.8
5	☐	100.000	88.776	1264185.55	0.3237	P	1.6
6	☐	200.000	206.428	1268126.52	0.3282	P	1.0
7	☐	1.000					

y = 3.7940E-005 * x + 0.3203
R = 0.9642
DL = 328.2
BEC = 8444

Weight: <None>
Min Conc: <None>

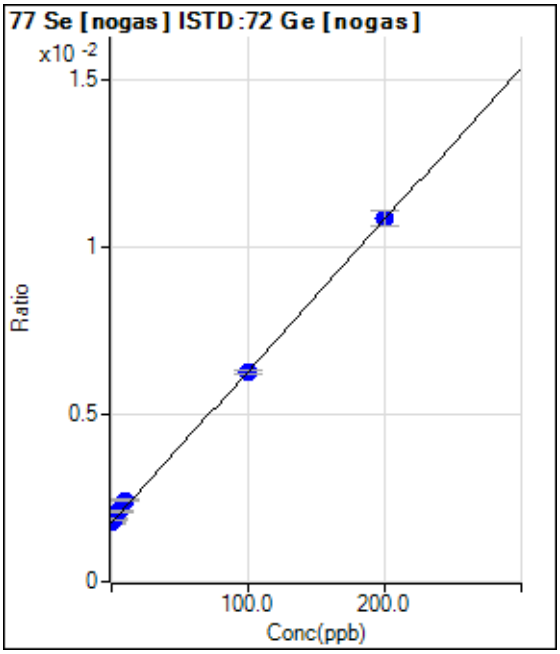
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	311139.56	0.3572	P	0.8
2	☐	2.000	-30.755	311793.97	0.3567	P	1.8
3	☐	5.000	-157.349	310656.48	0.3547	P	2.2
4	☐	10.000	-179.764	311987.99	0.3544	P	2.2
5	☐	100.000	467.928	311376.71	0.3644	P	2.3
6	☐	200.000	29.911	301408.11	0.3576	P	1.8
7	☐	1.000					

y = 1.5570E-005 * x + 0.3572
R = 0.4515
DL = 550.2
BEC = 2.294E+04

Weight: <None>
Min Conc: <None>

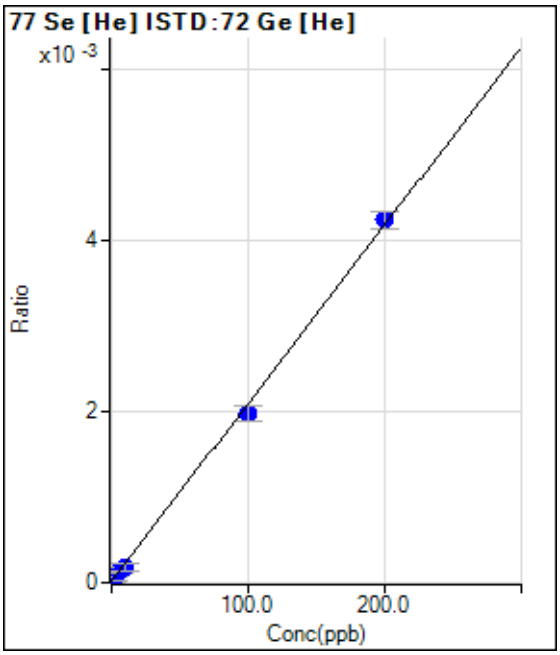


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6941.46	0.0018	P	2.5
2	☐	2.000	2.196	7338.29	0.0019	P	4.3
3	☐	5.000	7.765	8205.38	0.0021	P	2.8
4	☐	10.000	14.729	9562.68	0.0024	P	1.2
5	☐	100.000	98.761	24406.75	0.0062	P	2.0
6	☐	200.000	200.312	41952.16	0.0109	P	4.2
7	☐	1.000					

y = 4.5402E-005 * x + 0.0018
R = 0.9997
DL = 2.959
BEC = 38.89

Weight: <None>
Min Conc: <None>

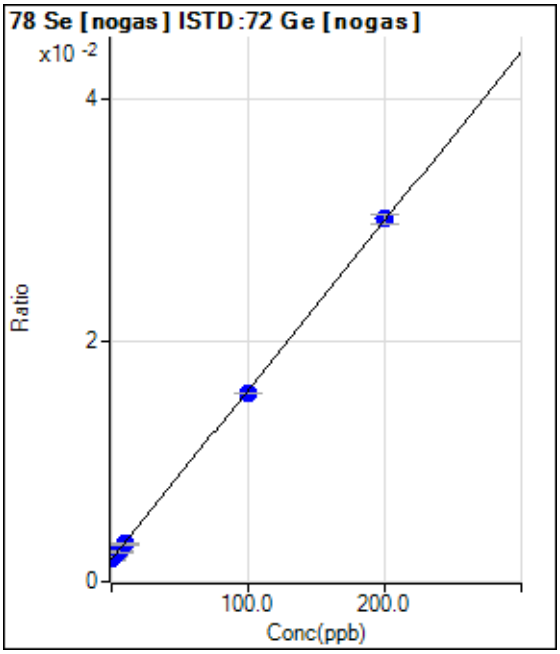
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.280	36.67	0.0000	P	95.1
3	☐	5.000	6.039	123.33	0.0001	P	46.4
4	☐	10.000	8.158	163.34	0.0002	P	52.6
5	☐	100.000	94.145	1686.78	0.0020	P	8.8
6	☐	200.000	203.001	3570.42	0.0042	P	4.4
7	☐	1.000					

y = 2.0791E-005 * x + 1.5315E-005
R = 0.9994
DL = 1.914
BEC = 0.7367

Weight: <None>
Min Conc: <None>

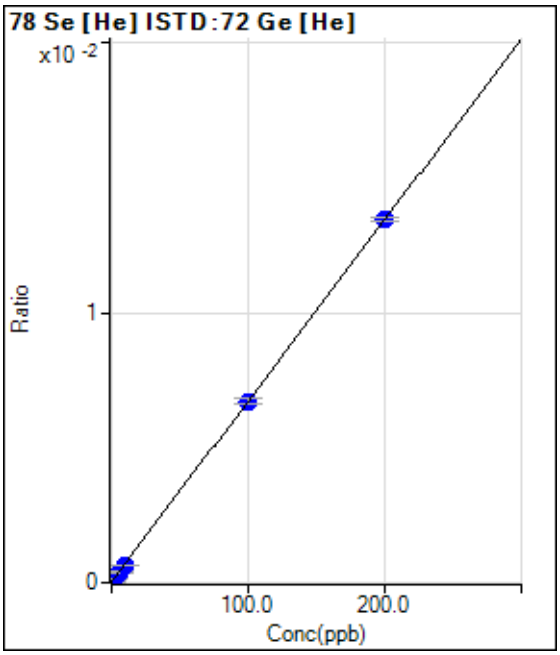


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7314.97	0.0019	P	4.5
2	☐	2.000	1.108	7931.86	0.0020	P	1.7
3	☐	5.000	4.500	9656.06	0.0025	P	2.9
4	☐	10.000	8.921	12230.96	0.0031	P	3.4
5	☐	100.000	98.011	60975.57	0.0156	P	0.7
6	☐	200.000	201.070	116199.24	0.0301	P	2.5
7	☐	1.000					

y = 1.4031E-004 * x + 0.0019
R = 0.9999
DL = 1.787
BEC = 13.27

Weight: <None>
Min Conc: <None>

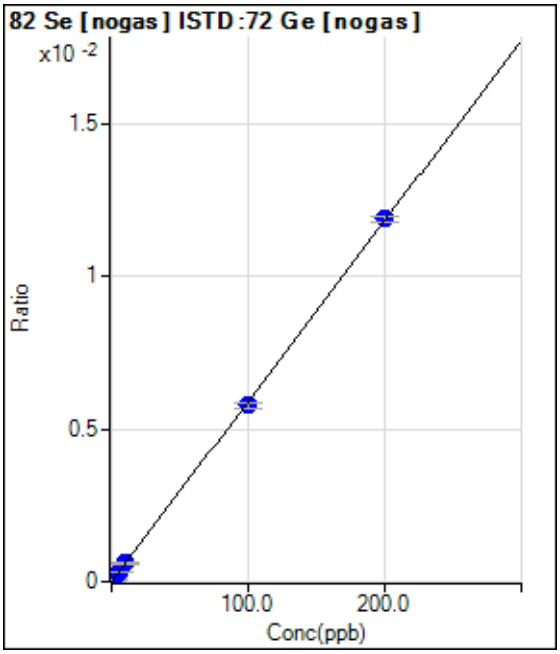
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0000	P	55.5
2	☐	2.000	2.023	146.67	0.0002	P	5.1
3	☐	5.000	5.059	325.33	0.0004	P	14.3
4	☐	10.000	9.270	575.34	0.0007	P	4.7
5	☐	100.000	99.954	5753.59	0.0067	P	3.2
6	☐	200.000	200.058	11331.55	0.0134	P	1.0
7	☐	1.000					

y = 6.7040E-005 * x + 3.2111E-005
R = 1.0000
DL = 0.7979
BEC = 0.479

Weight: <None>
Min Conc: <None>

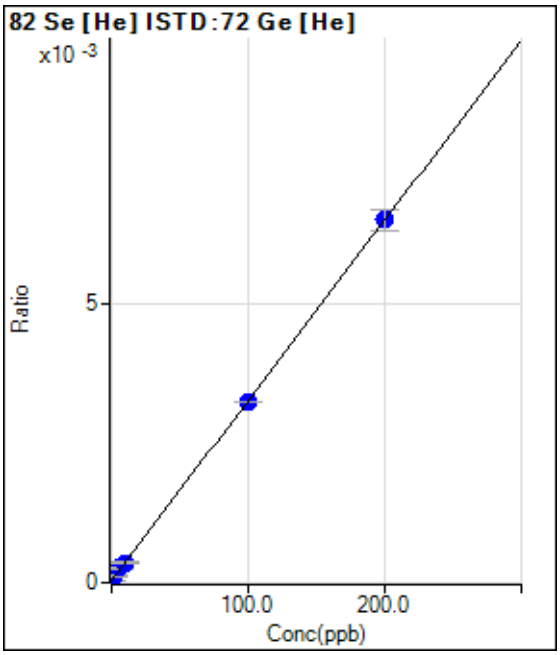


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.31	0.0000	P	187.6
2	☐	2.000	1.264	328.36	0.0001	P	20.6
3	☐	5.000	5.323	1248.84	0.0003	P	6.9
4	☐	10.000	10.102	2372.27	0.0006	P	6.0
5	☐	100.000	97.596	22496.75	0.0058	P	3.7
6	☐	200.000	201.196	45857.48	0.0119	P	1.2
7	☐	1.000					

y = 5.8938E-005 * x + 8.9059E-006
R = 0.9999
DL = 0.8503
BEC = 0.1511

Weight: <None>
Min Conc: <None>

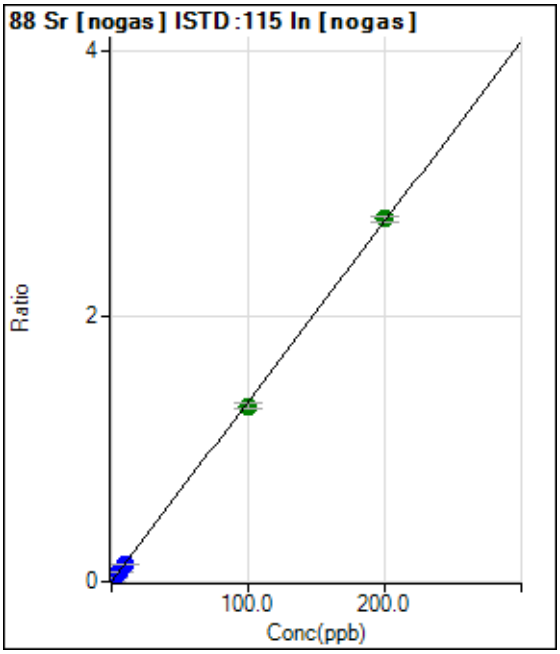
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	17.2
2	☐	2.000	2.489	103.33	0.0001	P	40.0
3	☐	5.000	6.842	226.68	0.0003	P	13.9
4	☐	10.000	9.976	316.68	0.0004	P	5.7
5	☐	100.000	99.290	2766.93	0.0032	P	0.3
6	☐	200.000	200.305	5470.93	0.0065	P	5.6
7	☐	1.000					

y = 3.2226E-005 * x + 3.8258E-005
R = 0.9999
DL = 0.6126
BEC = 1.187

Weight: <None>
Min Conc: <None>

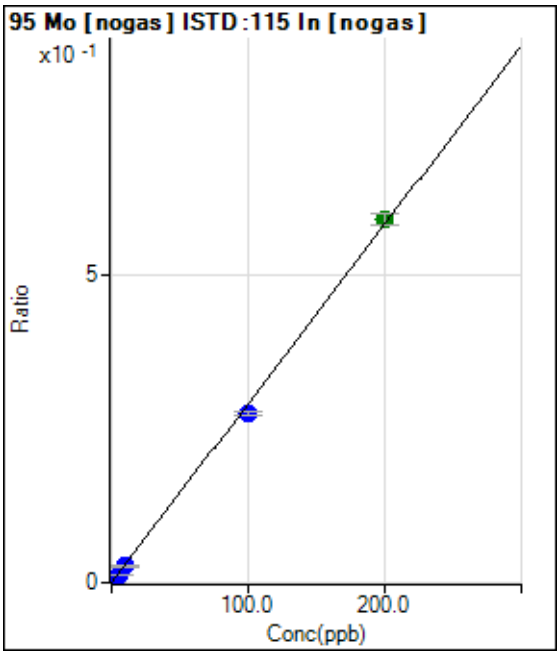


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2473.54	0.0010	P	7.3
2	☐	2.000	1.868	68172.60	0.0263	P	2.2
3	☐	5.000	4.822	169917.38	0.0664	P	1.8
4	☐	10.000	9.412	332978.82	0.1287	P	0.2
5	☐	100.000	97.253	3329681.31	1.3211	A	3.1
6	☐	200.000	201.409	6699556.15	2.7349	A	1.7
7	☐	1.000					

y = 0.0136 * x + 9.6567E-004
R = 0.9999
DL = 0.01549
BEC = 0.07114

Weight: <None>
Min Conc: <None>

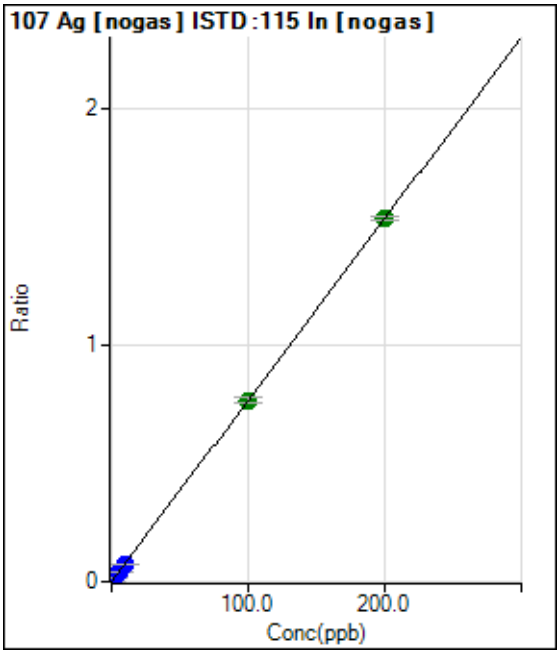
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.02	0.0003	P	15.6
2	☐	2.000	1.862	14699.59	0.0057	P	1.6
3	☐	5.000	4.668	35345.30	0.0138	P	3.1
4	☐	10.000	9.115	69103.44	0.0267	P	2.2
5	☐	100.000	94.837	694353.66	0.2755	P	2.1
6	☐	200.000	202.635	1441229.93	0.5883	A	3.2
7	☐	1.000					

y = 0.0029 * x + 2.7292E-004
R = 0.9995
DL = 0.04406
BEC = 0.09405

Weight: <None>
Min Conc: <None>

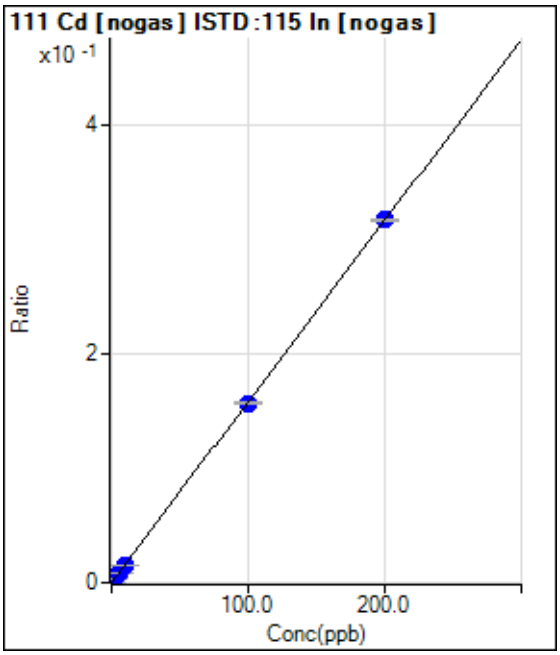


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	486.68	0.0002	P	8.2
2	☐	2.000	1.890	38081.24	0.0147	P	1.0
3	☐	5.000	5.005	98777.17	0.0386	P	2.0
4	☐	10.000	9.595	191019.50	0.0739	P	0.8
5	☐	100.000	100.053	1936464.61	0.7684	A	3.8
6	☐	200.000	199.995	3761709.00	1.5357	A	1.1
7	☐	1.000					

y = 0.0077 * x + 1.8989E-004
R = 1.0000
DL = 0.00608
BEC = 0.02473

Weight: <None>
Min Conc: <None>

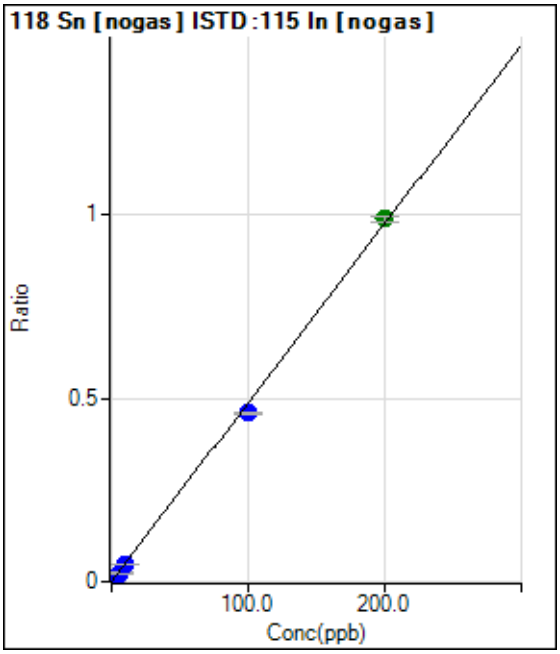
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	148.5
2	☐	2.000	1.886	7748.51	0.0030	P	4.8
3	☐	5.000	4.848	19617.78	0.0077	P	2.0
4	☐	10.000	9.594	39220.51	0.0152	P	1.8
5	☐	100.000	99.004	394178.07	0.1564	P	0.9
6	☐	200.000	200.523	775811.71	0.3167	P	0.4
7	☐	1.000					

y = 0.0016 * x + 1.3109E-005
R = 1.0000
DL = 0.03697
BEC = 0.008301

Weight: <None>
Min Conc: <None>

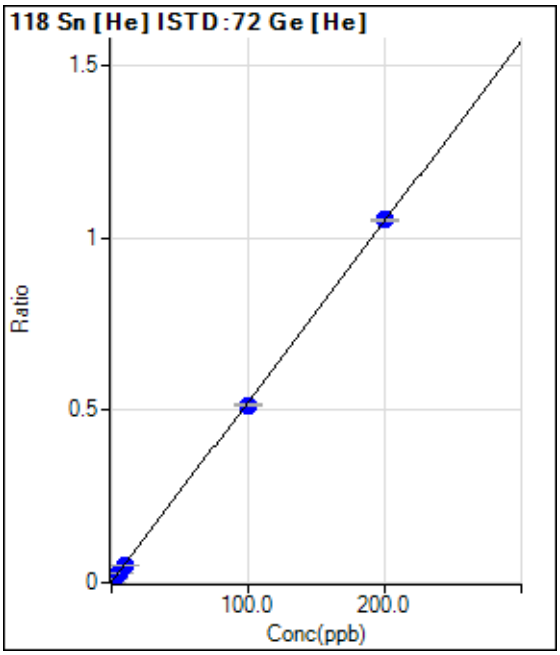


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2256.86	0.0009	P	7.7
2	☐	2.000	1.828	25345.37	0.0098	P	4.9
3	☐	5.000	4.638	60079.80	0.0235	P	2.2
4	☐	10.000	9.224	118561.24	0.0458	P	1.2
5	☐	100.000	94.448	1162620.53	0.4612	P	1.1
6	☐	200.000	202.825	2423136.32	0.9893	A	1.7
7	☐	1.000					

y = 0.0049 * x + 8.8016E-004
R = 0.9995
DL = 0.04164
BEC = 0.1806

Weight: <None>
Min Conc: <None>

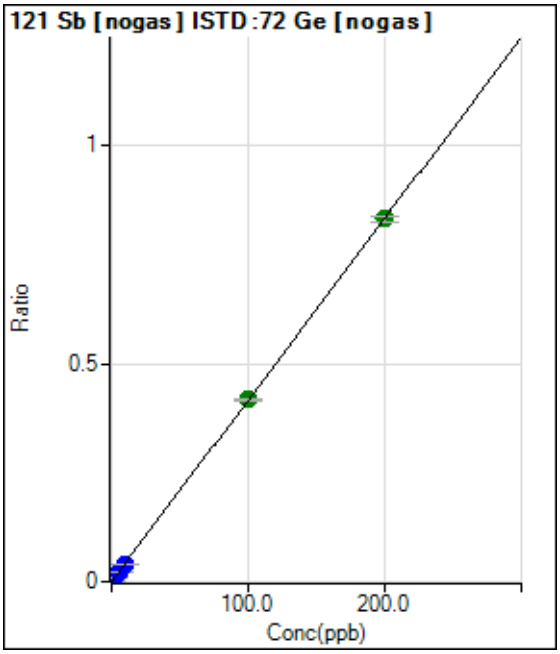
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.04	0.0010	P	6.3
2	☐	2.000	1.881	9466.04	0.0108	P	4.8
3	☐	5.000	4.852	23118.91	0.0264	P	5.3
4	☐	10.000	9.535	44831.04	0.0509	P	3.2
5	☐	100.000	98.335	440947.16	0.5161	P	1.8
6	☐	200.000	200.860	887683.40	1.0531	P	0.7
7	☐	1.000					

y = 0.0052 * x + 9.7563E-004
R = 1.0000
DL = 0.03501
BEC = 0.1862

Weight: <None>
Min Conc: <None>

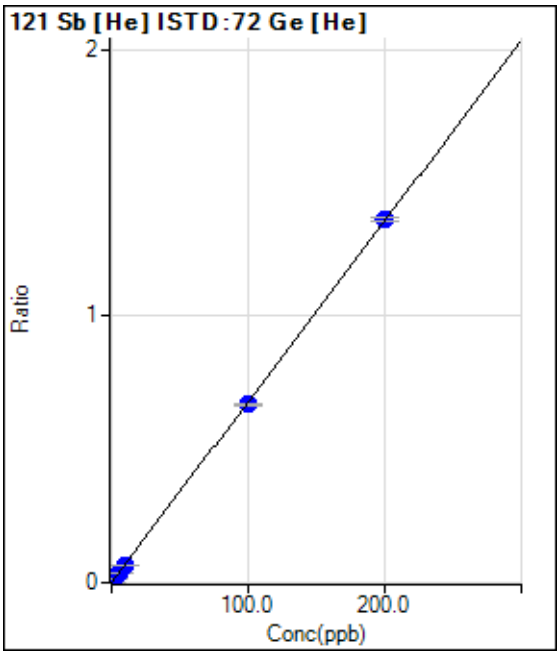


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1873.47	0.0005	P	7.9
2	☐	2.000	1.805	31381.92	0.0080	P	2.2
3	☐	5.000	4.804	79158.51	0.0204	P	2.8
4	☐	10.000	9.231	152587.21	0.0388	P	1.2
5	☐	100.000	100.179	1627968.10	0.4169	A	1.0
6	☐	200.000	199.956	3213213.28	0.8316	A	1.8
7	☐	1.000					

y = 0.0042 * x + 4.7668E-004
R = 1.0000
DL = 0.02721
BEC = 0.1147

Weight: <None>
Min Conc: <None>

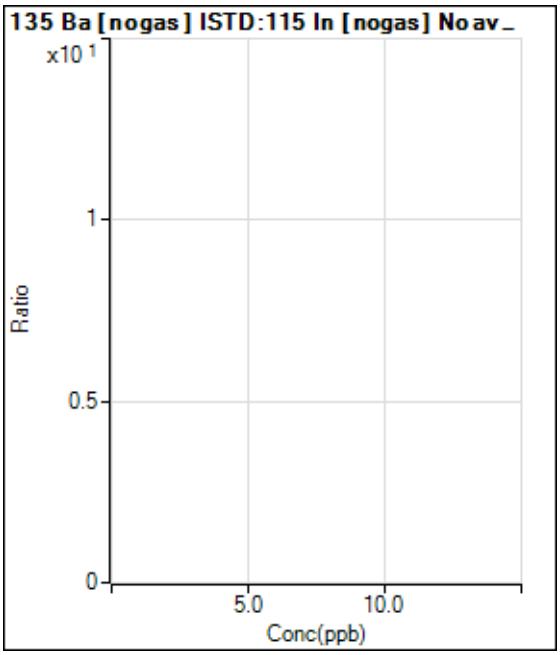
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.04	0.0010	P	15.0
2	☐	2.000	1.900	12104.41	0.0138	P	2.7
3	☐	5.000	4.872	29755.52	0.0340	P	1.5
4	☐	10.000	9.373	56752.24	0.0645	P	1.2
5	☐	100.000	98.626	571558.97	0.6689	P	1.5
6	☐	200.000	200.723	1146633.08	1.3604	P	1.1
7	☐	1.000					

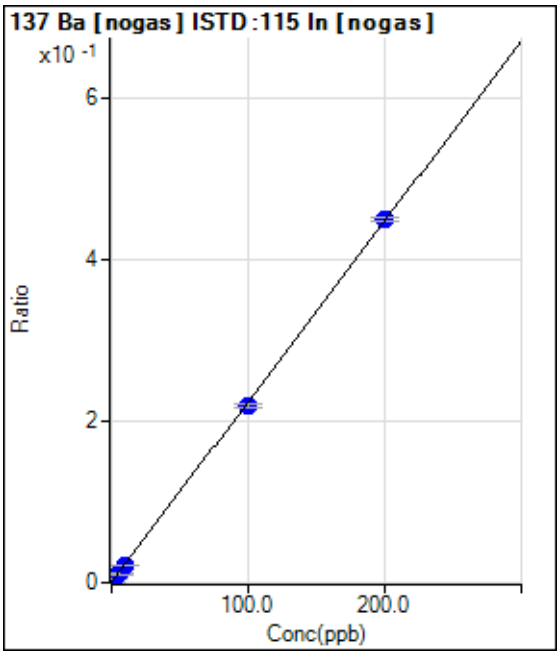
y = 0.0068 * x + 9.7603E-004
R = 1.0000
DL = 0.06504
BEC = 0.1441

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 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.75	0.0006	P	4.2
2	☐	2.000	1.764	11630.80	0.0045	P	6.2
3	☐	5.000	4.558	27452.25	0.0107	P	4.7
4	☐	10.000	9.213	54646.61	0.0211	P	3.2
5	☐	100.000	98.215	554365.77	0.2199	P	2.2
6	☐	200.000	200.945	1100866.23	0.4494	P	1.1
7	☐	1.000					

y = 0.0022 * x + 5.5261E-004

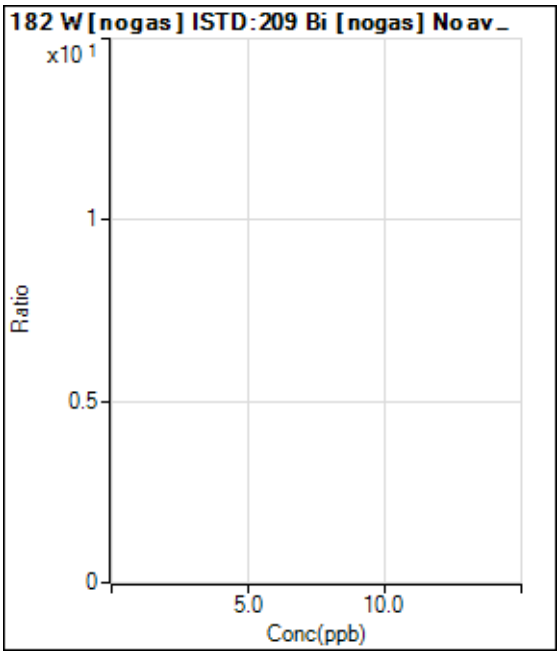
R = 0.9999

DL = 0.03139

BEC = 0.2474

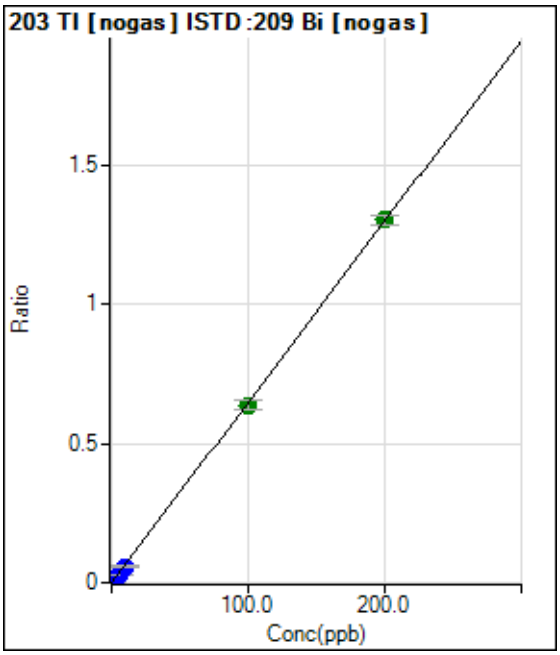
Weight: <None>

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					

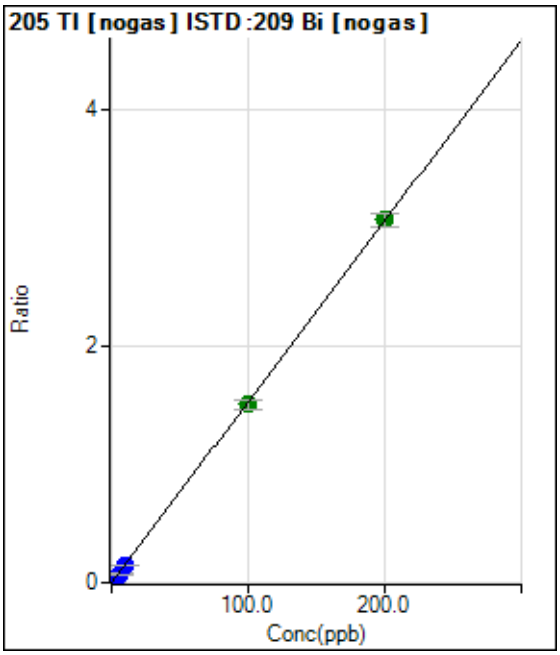
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.01	0.0001	P	18.4
2	☐	2.000	1.779	31200.03	0.0116	P	8.9
3	☐	5.000	4.621	80122.56	0.0301	P	5.2
4	☐	10.000	8.990	157907.67	0.0584	P	5.6
5	☐	100.000	98.215	1688947.58	0.6366	A	5.2
6	☐	200.000	200.954	3344785.47	1.3025	A	2.5
7	☐	1.000					

y = 0.0065 * x + 1.0376E-004
R = 0.9999
DL = 0.008817
BEC = 0.01601

Weight: <None>
Min Conc: <None>

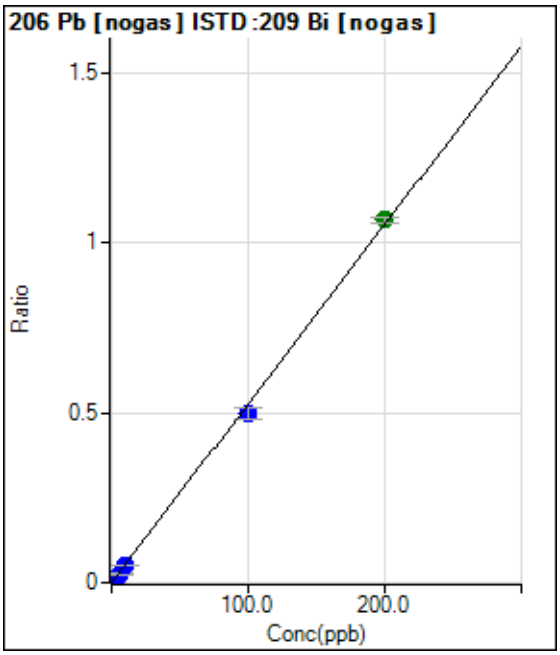


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	633.36	0.0002	P	10.5
2	☐	2.000	1.814	74994.99	0.0279	P	6.3
3	☐	5.000	4.727	192952.90	0.0724	P	5.6
4	☐	10.000	9.284	384196.48	0.1420	P	3.2
5	☐	100.000	98.721	3998930.98	1.5074	A	5.2
6	☐	200.000	200.684	7867790.30	3.0640	A	3.8
7	☐	1.000					

y = 0.0153 * x + 2.3453E-004
R = 1.0000
DL = 0.004859
BEC = 0.01536

Weight: <None>
Min Conc: <None>

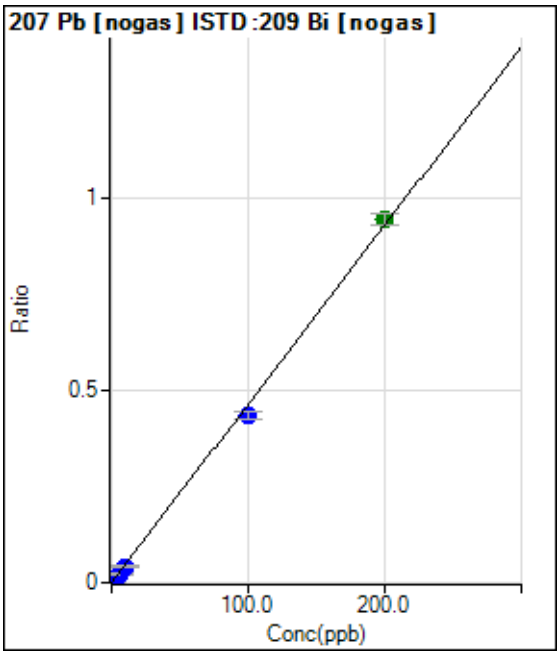
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	6.4
2	☐	2.000	1.865	26769.01	0.0100	P	6.4
3	☐	5.000	4.737	66876.62	0.0251	P	4.6
4	☐	10.000	9.261	132308.92	0.0489	P	2.6
5	☐	100.000	94.479	1318845.19	0.4972	P	5.9
6	☐	200.000	202.805	2740749.85	1.0671	A	1.8
7	☐	1.000					

y = 0.0053 * x + 1.6199E-004
R = 0.9995
DL = 0.005866
BEC = 0.03079

Weight: <None>
Min Conc: <None>

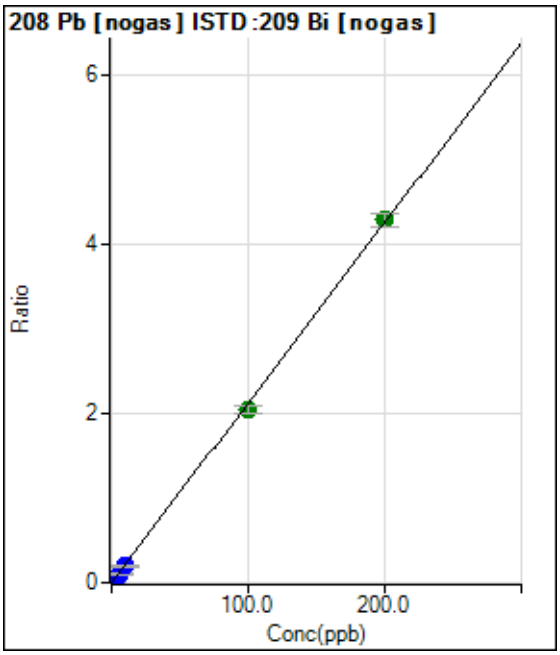


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0001	P	24.8
2	☐	2.000	1.845	23347.00	0.0087	P	7.3
3	☐	5.000	4.749	59194.52	0.0222	P	4.3
4	☐	10.000	9.122	115100.15	0.0425	P	3.0
5	☐	100.000	93.683	1155709.85	0.4356	P	5.1
6	☐	200.000	203.210	2425992.52	0.9448	A	3.3
7	☐	1.000					

y = 0.0046 * x + 1.2442E-004
R = 0.9993
DL = 0.01992
BEC = 0.02677

Weight: <None>
Min Conc: <None>

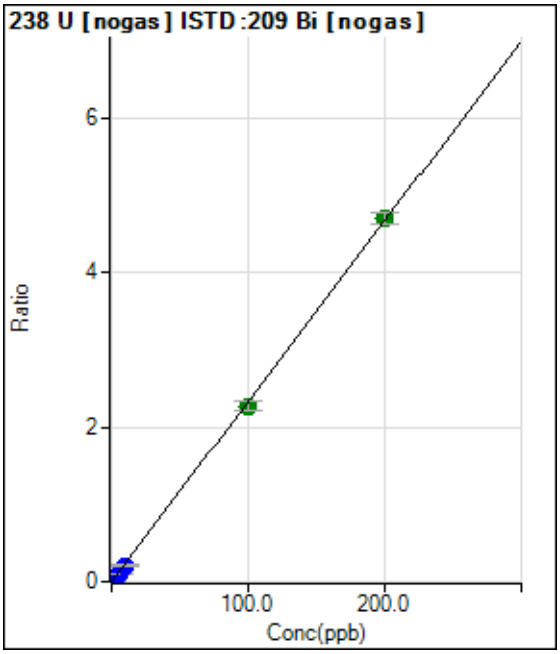
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1670.07	0.0006	P	8.3
2	☐	2.000	1.853	107386.85	0.0400	P	7.0
3	☐	5.000	4.724	269431.70	0.1011	P	4.8
4	☐	10.000	9.196	530848.73	0.1962	P	3.1
5	☐	100.000	96.648	5454169.16	2.0556	A	4.5
6	☐	200.000	201.725	11015722.07	4.2898	A	3.6
7	☐	1.000					

y = 0.0213 * x + 6.1882E-004
R = 0.9998
DL = 0.007264
BEC = 0.0291

Weight: <None>
Min Conc: <None>

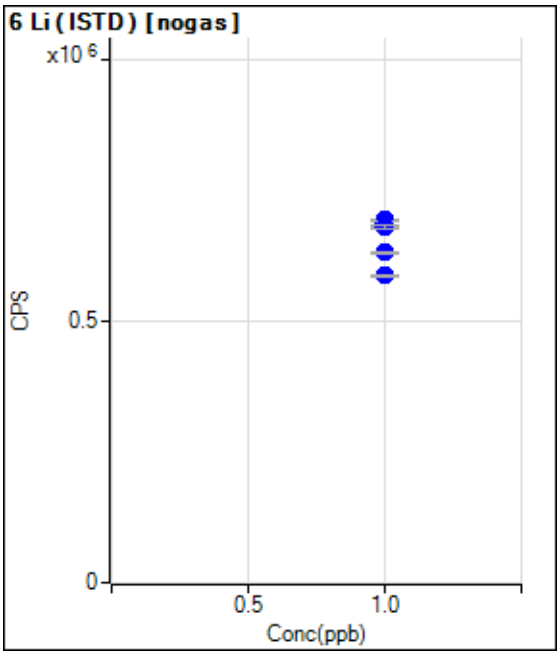


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	65.6
2	☐	2.000	1.787	112141.60	0.0417	P	3.9
3	☐	5.000	4.634	288591.97	0.1082	P	2.6
4	☐	10.000	9.067	572727.60	0.2117	P	5.3
5	☐	100.000	97.436	6035133.04	2.2747	A	5.6
6	☐	200.000	201.340	12069391.49	4.7004	A	3.1
7	☐	1.000					

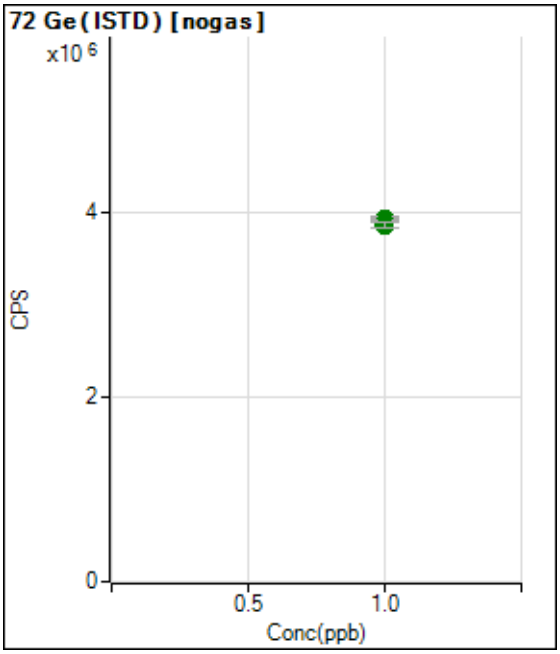
y = 0.0233 * x + 2.6671E-005
R = 0.9999
DL = 0.002247
BEC = 0.001142

Weight: <None>
Min Conc: <None>

Calibration for 279_ICV.d

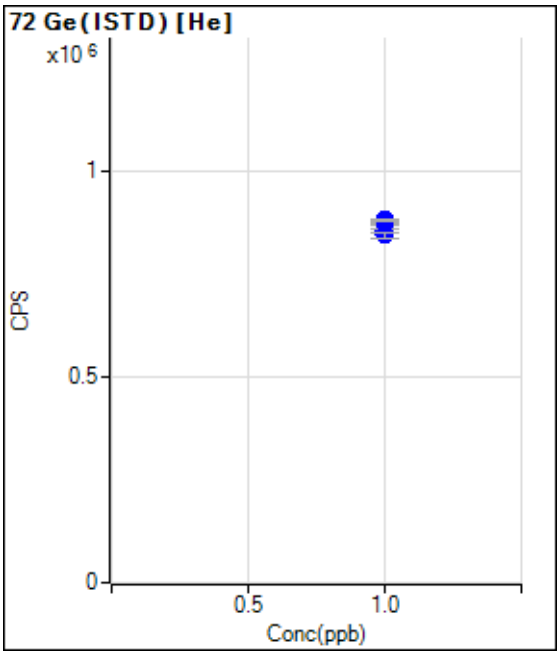


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		694483.00		P	0.3
2	☐	1.000		688608.84		P	0.9
3	☐	1.000		682074.45		P	0.5
4	☐	1.000		681891.58		P	1.0
5	☐	1.000		631647.58		P	0.1
6	☐	1.000		588341.51		P	0.6
7	☐	1.000					

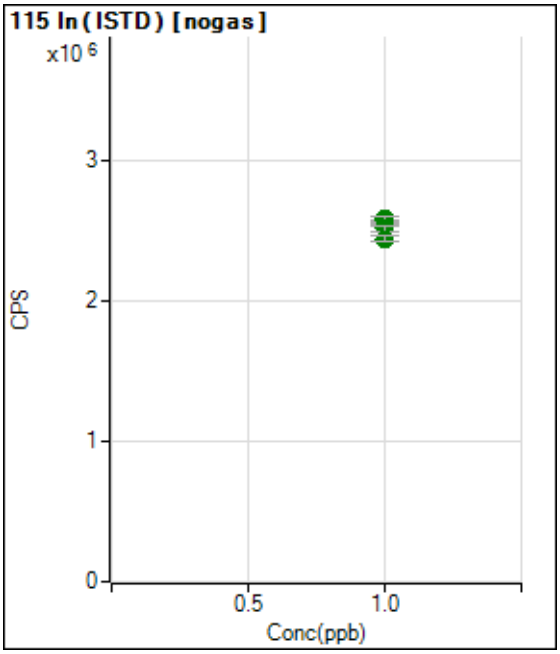


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3930774.11		A	1.2
2	☐	1.000		3932575.15		A	0.8
3	☐	1.000		3872818.07		A	1.7
4	☐	1.000		3928214.74		A	1.8
5	☐	1.000		3905288.38		A	0.5
6	☐	1.000		3864380.36		A	1.4
7	☐	1.000					

Calibration for 279_ICV.d

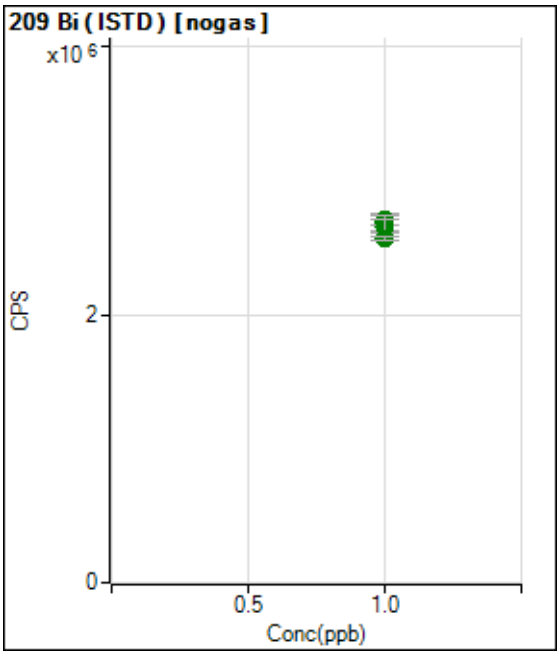


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		871164.98		P	0.4
2	☐	1.000		874271.92		P	1.2
3	☐	1.000		875933.06		P	1.0
4	☐	1.000		880536.19		P	0.9
5	☐	1.000		854529.47		P	1.2
6	☐	1.000		842945.30		P	1.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2562896.75		A	1.1
2	☐	1.000		2590207.11		A	1.4
3	☐	1.000		2558252.28		A	0.7
4	☐	1.000		2586645.63		A	2.2
5	☐	1.000		2520995.82		A	1.2
6	☐	1.000		2449817.93		A	1.8
7	☐	1.000					

Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2693631.26		A	5.0
2	☐	1.000		2689858.97		A	5.0
3	☐	1.000		2668919.65		A	3.7
4	☐	1.000		2707932.15		A	2.9
5	☐	1.000		2656401.26		A	3.8
6	☐	1.000		2568615.64		A	1.6
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	014CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:04:33-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	218	2.64
B	11	1	nogas	122808	0.00
Al	27	1	nogas	37718	0.01
P	31	1	nogas	43537	0.00
Ca	44	1	nogas	28031	0.01
Ti	47	1	nogas	120	36.08
Cr	52	1	nogas	23188	0.00
Co	59	1	nogas	500	2.88
Cu	63	1	nogas	4032	0.11
Zn	66	1	nogas	1263	0.19
Se	77	1	nogas	7762	0.02
Se	82	1	nogas	5	27005.55
Sr	88	1	nogas	2027	0.47
Mo	95	1	nogas	1037	0.33
Ag	107	1	nogas	1927	3.87
Cd	111	1	nogas	40	108.25
Sn	118	1	nogas	3951	0.20
Sb	121	1	nogas	7512	0.01
Ba	137	1	nogas	1197	0.48
Tl	205	1	nogas	783	2.88
Pb	208	1	nogas	4764	0.29
Li	7	1	nogas	93045	0.00
Si	28	1	nogas	1878823	0.00
Na	23	2	He	49307	0.00
Mg	24	2	He	657	0.48
Al	27	2	He	783	1.54
K	39	2	He	37685	0.00
Ca	43	2	He	20	250.00
Ca	44	2	He	473	5.32
V	51	2	He	984	0.71
Cr	52	2	He	1397	0.40
Mn	55	2	He	370	7.30
Fe	56	2	He	10183	0.04
Co	59	2	He	160	3.91
Ni	60	2	He	233	10.12
Cu	63	2	He	1730	0.42
Zn	66	2	He	403	4.09
As	75	2	He	97	22.28

Calibration Blank Report

Sb	121	2	He	2664	0.11
Se	78	2	He	23	192.02

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	4912785	2.28
In	115	1	nogas	3074865	2.62
Li	6	1	nogas	992920	2.10
Bi	209	1	nogas	3087510	6.73
Ge	72	2	He	1094372	0.61

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:06:54-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	11674	0.01
B	11	1	nogas	160639	0.00
Al	27	1	nogas	78522	0.00
P	31	1	nogas	52827	0.00
Ca	44	1	nogas	164378	0.00
Ti	47	1	nogas	4404	0.10
Cr	52	1	nogas	80782	0.00
Co	59	1	nogas	65965	0.00
Cu	63	1	nogas	39302	0.00
Zn	66	1	nogas	11144	0.01
Se	77	1	nogas	8385	0.04
Se	82	1	nogas	485	5.30
Sr	88	1	nogas	80878	0.00
Mo	95	1	nogas	17332	0.01
Ag	107	1	nogas	47457	0.01
Cd	111	1	nogas	9309	0.04
Sn	118	1	nogas	30771	0.01
Sb	121	1	nogas	43224	0.00
Ba	137	1	nogas	12962	0.01
Tl	205	1	nogas	86311	0.00
Pb	208	1	nogas	124242	0.00
Si	28	1	nogas	2004886	0.00
Na	23	2	He	334738	0.00
Mg	24	2	He	161303	0.00
Al	27	2	He	1347	0.97
K	39	2	He	153494	0.00
Ca	43	2	He	417	5.16
Ca	44	2	He	6831	0.09
V	51	2	He	14480	0.01
Cr	52	2	He	18716	0.02
Mn	55	2	He	10580	0.05
Fe	56	2	He	1477907	0.00
Co	59	2	He	28412	0.01
Ni	60	2	He	7999	0.04
Cu	63	2	He	22127	0.02
Zn	66	2	He	3840	0.21

Calibration Standard Report

As	75	2	He	1903	0.27
Sb	121	2	He	15347	0.01
Se	78	2	He	179	8.21

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4899447	0.72	4912785	99.73	70	120	
In	115	1	nogas	3082261	2.40	3074865	100.24	70	120	
Li	6	1	nogas	976189	1.01	992920	98.31	70	120	
Bi	209	1	nogas	3138765	6.43	3087510	101.66	70	120	
Ge	72	2	He	1092624	0.60	1094372	99.84	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:09:16-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	29643	0.00
B	11	1	nogas	210568	0.00
Al	27	1	nogas	147025	0.00
P	31	1	nogas	68952	0.00
Ca	44	1	nogas	374473	0.00
Ti	47	1	nogas	11147	0.02
Cr	52	1	nogas	170179	0.00
Co	59	1	nogas	168225	0.00
Cu	63	1	nogas	96228	0.00
Zn	66	1	nogas	26189	0.01
Se	77	1	nogas	8912	0.08
Se	82	1	nogas	1315	1.10
Sr	88	1	nogas	206587	0.00
Mo	95	1	nogas	42992	0.00
Ag	107	1	nogas	117897	0.00
Cd	111	1	nogas	23102	0.01
Sn	118	1	nogas	72349	0.00
Sb	121	1	nogas	98998	0.00
Ba	137	1	nogas	32955	0.00
Tl	205	1	nogas	218651	0.00
Pb	208	1	nogas	303574	0.00
Si	28	1	nogas	2154503	0.00
Na	23	2	He	773407	0.00
Mg	24	2	He	406701	0.00
Al	27	2	He	2507	0.11
K	39	2	He	333080	0.00
Ca	43	2	He	1003	1.24
Ca	44	2	He	17315	0.02
V	51	2	He	35321	0.01
Cr	52	2	He	45469	0.00
Mn	55	2	He	26893	0.01
Fe	56	2	He	3784262	0.00
Co	59	2	He	72730	0.00
Ni	60	2	He	19644	0.01
Cu	63	2	He	53318	0.00
Zn	66	2	He	9012	0.04

Calibration Standard Report

As	75	2	He	4813	0.04
Sb	121	2	He	36599	0.01
Se	78	2	He	372	2.51

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4894904	1.25	4912785	99.64	70	120	
In	115	1	nogas	3100268	2.08	3074865	100.83	70	120	
Li	6	1	nogas	998615	1.04	992920	100.57	70	120	
Bi	209	1	nogas	3093921	3.28	3087510	100.21	70	120	
Ge	72	2	He	1080191	0.59	1094372	98.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:11:37-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	58244	0.00
B	11	1	nogas	301045	0.00
Al	27	1	nogas	251742	0.00
P	31	1	nogas	96026	0.00
Ca	44	1	nogas	700041	0.00
Ti	47	1	nogas	22127	0.02
Cr	52	1	nogas	309081	0.00
Co	59	1	nogas	327339	0.00
Cu	63	1	nogas	182709	0.00
Zn	66	1	nogas	50560	0.01
Se	77	1	nogas	10013	0.07
Se	82	1	nogas	2709	0.28
Sr	88	1	nogas	393514	0.00
Mo	95	1	nogas	83706	0.00
Ag	107	1	nogas	228856	0.00
Cd	111	1	nogas	46324	0.00
Sn	118	1	nogas	141309	0.00
Sb	121	1	nogas	189471	0.00
Ba	137	1	nogas	63001	0.00
Tl	205	1	nogas	429916	0.00
Pb	208	1	nogas	601607	0.00
Si	28	1	nogas	2363969	0.00
Na	23	2	He	1428454	0.00
Mg	24	2	He	779304	0.00
Al	27	2	He	4374	0.08
K	39	2	He	610704	0.00
Ca	43	2	He	1973	0.32
Ca	44	2	He	33090	0.00
V	51	2	He	67917	0.00
Cr	52	2	He	85094	0.00
Mn	55	2	He	51034	0.01
Fe	56	2	He	7137582	0.00
Co	59	2	He	139288	0.00
Ni	60	2	He	37522	0.00
Cu	63	2	He	101700	0.00
Zn	66	2	He	17629	0.02

Calibration Standard Report

As	75	2	He	9265	0.01
Sb	121	2	He	68417	0.00
Se	78	2	He	707	0.47

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4872499	1.03	4912785	99.18	70	120	
In	115	1	nogas	3066952	1.02	3074865	99.74	70	120	
Li	6	1	nogas	977874	1.37	992920	98.48	70	120	
Bi	209	1	nogas	3126729	3.92	3087510	101.27	70	120	
Ge	72	2	He	1077960	0.44	1094372	98.50	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:13:59-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	591018	0.00
B	11	1	nogas	2017066	0.00
Al	27	1	nogas	2170869	0.00
P	31	1	nogas	555288	0.00
Ca	44	1	nogas	6778476	0.00
Ti	47	1	nogas	217449	0.00
Cr	52	1	nogas	2861770	0.00
Co	59	1	nogas	3234050	0.00
Cu	63	1	nogas	1724742	0.00
Zn	66	1	nogas	495655	0.00
Se	77	1	nogas	28039	0.01
Se	82	1	nogas	27470	0.01
Sr	88	1	nogas	4026158	0.00
Mo	95	1	nogas	837057	0.00
Ag	107	1	nogas	2264517	0.00
Cd	111	1	nogas	461753	0.00
Sn	118	1	nogas	1361529	0.00
Sb	121	1	nogas	1874566	0.00
Ba	137	1	nogas	625569	0.00
Tl	205	1	nogas	4397090	0.00
Pb	208	1	nogas	6145530	0.00
Si	28	1	nogas	6987491	0.00
Na	23	2	He	14087126	0.00
Mg	24	2	He	7732422	0.00
Al	27	2	He	36475	0.00
K	39	2	He	5749483	0.00
Ca	43	2	He	19450	0.02
Ca	44	2	He	328695	0.00
V	51	2	He	681907	0.00
Cr	52	2	He	848089	0.00
Mn	55	2	He	512859	0.00
Fe	56	2	He	72123646	0.00
Co	59	2	He	1374516	0.00
Ni	60	2	He	367823	0.00
Cu	63	2	He	1001567	0.00
Zn	66	2	He	169526	0.00

Calibration Standard Report

As	75	2	He	93356	0.00
Sb	121	2	He	670162	0.00
Se	78	2	He	7083	0.04

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4790190	1.22	4912785	97.50	70	120	
In	115	1	nogas	2991018	2.23	3074865	97.27	70	120	
Li	6	1	nogas	914946	1.28	992920	92.15	70	120	
Bi	209	1	nogas	3009258	4.73	3087510	97.47	70	120	
Ge	72	2	He	1069856	0.83	1094372	97.76	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:16:14-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1162482	0.00
B	11	1	nogas	3896006	0.00
Al	27	1	nogas	4247772	0.00
P	31	1	nogas	1084904	0.00
Ca	44	1	nogas	13779654	0.00
Ti	47	1	nogas	442161	0.00
Cr	52	1	nogas	5709473	0.00
Co	59	1	nogas	6394591	0.00
Cu	63	1	nogas	3394665	0.00
Zn	66	1	nogas	961871	0.00
Se	77	1	nogas	48461	0.01
Se	82	1	nogas	55374	0.00
Sr	88	1	nogas	8036926	0.00
Mo	95	1	nogas	1743938	0.00
Ag	107	1	nogas	4515829	0.00
Cd	111	1	nogas	929262	0.00
Sn	118	1	nogas	2754919	0.00
Sb	121	1	nogas	3699651	0.00
Ba	137	1	nogas	1240845	0.00
Tl	205	1	nogas	8679909	0.00
Pb	208	1	nogas	12040318	0.00
Si	28	1	nogas	12119859	0.00
Na	23	2	He	27382432	0.00
Mg	24	2	He	15182954	0.00
Al	27	2	He	71605	0.00
K	39	2	He	11250062	0.00
Ca	43	2	He	37906	0.00
Ca	44	2	He	657067	0.00
V	51	2	He	1367567	0.00
Cr	52	2	He	1718416	0.00
Mn	55	2	He	1003556	0.00
Fe	56	2	He	141540928	0.00
Co	59	2	He	2681823	0.00
Ni	60	2	He	718321	0.00
Cu	63	2	He	1924369	0.00
Zn	66	2	He	330192	0.00

Calibration Standard Report

As	75	2	He	186464	0.00
Sb	121	2	He	1328655	0.00
Se	78	2	He	13757	0.01

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4677861	0.40	4912785	95.22	70	120	
In	115	1	nogas	2907441	0.54	3074865	94.56	70	120	
Li	6	1	nogas	849627	0.79	992920	85.57	70	120	
Bi	209	1	nogas	2948272	6.71	3087510	95.49	70	120	
Ge	72	2	He	1040233	1.75	1094372	95.05	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	021_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:20:52-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	105.166	1.140	612902	0.84	100	105.2	90	110	
B	11	1	nogas	509.614	1.950	2038790	1.48	500	101.9	90	110	
Al	27	1	nogas	101.143	1.709	2227973	0.93	100	101.1	90	110	
P	31	1	nogas	501.007	1.426	577273	1.27	500	100.2	90	110	
Ca	44	1	nogas	9981.701	1.495	7043510	1.09	10000	99.8	90	110	
Ti	47	1	nogas	99.309	0.609	224579	1.48	100	99.3	90	110	
Cr	52	1	nogas	100.167	0.794	2944438	1.52	100	100.2	90	110	
Co	59	1	nogas	101.188	1.344	3327157	1.64	100	101.2	90	110	
Cu	63	1	nogas	104.386	1.605	1825051	0.84	100	104.4	90	110	
Zn	66	1	nogas	102.656	1.352	510101	2.10	100	102.7	90	110	
Se	77	1	nogas	94.935	0.769	27615	1.53	100	94.9	90	110	
Se	82	1	nogas	98.859	4.430	28041	4.73	100	98.9	90	110	
Sr	88	1	nogas	97.314	2.110	4041438	1.17	100	97.3	90	110	
Mo	95	1	nogas	94.617	3.105	845817	2.16	100	94.6	90	110	
Ag	107	1	nogas	99.108	3.058	2313337	2.10	100	99.1	90	110	
Cd	111	1	nogas	99.546	2.081	477183	1.13	100	99.5	90	110	
Sn	118	1	nogas	96.575	1.596	1372629	0.94	100	96.6	90	110	
Sb	121	1	nogas	102.224	0.888	1947779	0.39	100	102.2	90	110	
Ba	137	1	nogas	100.783	2.609	647429	1.90	100	100.8	90	110	
Tl	205	1	nogas	103.066	7.286	4619722	1.87	100	103.1	90	110	
Pb	208	1	nogas	100.170	7.829	6236745	1.47	100	100.2	90	110	
U	238	1	nogas	95.236	7.083	6505235	1.39	100	95.2	90	110	
Li	7	1	nogas	107.175	0.984	2188660	1.98	100	107.2	90	110	
Si	28	1	nogas	6076.094	1.690	8282897	2.34	5000	121.5	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	104.962	8.229	1982475	1.97	100	105.0	90	110	
Na	23	2	He	10419.151	1.564	14753045	0.91	10000	104.2	90	110	
Mg	24	2	He	10390.111	1.347	8132361	2.14	10000	103.9	90	110	
Al	27	2	He	103.258	1.767	38403	0.86	100	103.3	90	110	
K	39	2	He	10378.556	1.968	6036409	0.88	10000	103.8	90	110	
Ca	43	2	He	10647.804	0.096	20849	1.68	10000	106.5	90	110	
Ca	44	2	He	10234.816	2.958	345528	1.62	10000	102.3	90	110	
V	51	2	He	100.615	1.249	706533	1.06	100	100.6	90	110	
Cr	52	2	He	99.112	1.324	873127	2.01	100	99.1	90	110	
Mn	55	2	He	101.982	2.422	527977	0.70	100	102.0	90	110	
Fe	56	2	He	10382.369	3.449	75745541	2.04	10000	103.8	90	110	
Co	59	2	He	103.280	1.148	1429802	0.88	100	103.3	90	110	
Ni	60	2	He	102.804	2.806	381126	1.37	100	102.8	90	110	
Cu	63	2	He	105.165	1.648	1048309	0.68	100	105.2	90	110	
Zn	66	2	He	104.045	0.320	177514	1.45	100	104.0	90	110	
As	75	2	He	105.391	1.628	100971	0.32	100	105.4	90	110	
Sn	118	2	He	99.424	2.871	525197	1.57	100	99.4	90	110	
Sb	121	2	He	101.816	2.564	696907	0.91	100	101.8	90	110	
Se	78	2	He	102.245	2.627	7273	0.99	100	102.2	90	110	
Ti	47	2	He	100.005	2.471	22394	0.89	100	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4822267	1.06	4912785	98.16	70	120	
In	115	1	nogas	3020567	0.95	3074865	98.23	70	120	
Li	6	1	nogas	861830	1.96	992920	86.80	70	120	
Bi	209	1	nogas	3051530	6.68	3087510	98.83	70	120	
Ge	72	2	He	1074473	1.75	1094372	98.18	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	024_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:27:54-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	3335.2	215	18.2	1	
B	11	1	nogas	-0.467	-271.9	118087	2.4	10	
Al	27	1	nogas	0.302	85.2	42863	11.4	5	
P	31	1	nogas	-3.873	-19.7	37999	0.8	10	
Ca	44	1	nogas	0.013	28834.7	27080	8.6	100	
Ti	47	1	nogas	0.046	75.4	217	34.9	2.5	
Cr	52	1	nogas	-0.085	-20.5	19978	1.3	2.5	
Co	59	1	nogas	0.008	148.0	743	51.0	2.5	
Cu	63	1	nogas	-0.024	-72.8	3477	7.3	1	
Zn	66	1	nogas	-0.032	-52.7	1063	6.4	2.5	
Se	77	1	nogas	-1.620	-107.6	7162	3.8	2.5	
Se	82	1	nogas	-0.016	-864.0	2	2476.9	1	
Sr	88	1	nogas	0.012	183.8	2484	36.4	2.5	
Mo	95	1	nogas	0.166	17.6	2507	10.5	2.5	
Ag	107	1	nogas	-0.044	-9.4	863	11.3	2.5	
Cd	111	1	nogas	0.010	218.1	87	118.4	1	
Sn	118	1	nogas	0.052	22.8	4624	3.5	5	
Sb	121	1	nogas	-0.092	-10.0	5548	4.1	2.5	
Ba	137	1	nogas	-0.051	-75.9	850	28.9	2.5	
Tl	205	1	nogas	0.047	8.7	2897	11.1	1	
Pb	208	1	nogas	-0.004	-413.0	4560	20.7	2.5	
U	238	1	nogas	0.008	88.8	663	76.1	2.5	
Si	28	1	nogas	75.607	102.0	1895163	4.2	5	ICB Main CR1 Failed
Na	23	2	He	0.296	466.4	48218	2.6	100	
Mg	24	2	He	2.234	45.6	2357	31.8	100	
Al	27	2	He	0.336	40.1	880	4.1	5	
K	39	2	He	-2.891	-124.7	34880	4.4	100	
Ca	43	2	He	9.056	185.3	37	87.7	100	
Ca	44	2	He	2.165	293.5	530	39.3	100	
V	51	2	He	0.007	209.3	1006	9.5	2.5	
Cr	52	2	He	0.032	94.7	1633	15.0	2.5	
Mn	55	2	He	0.057	37.3	650	15.6	2.5	
Fe	56	2	He	2.520	40.2	27976	24.5	100	
Co	59	2	He	0.021	36.8	440	22.4	2.5	
Ni	60	2	He	0.038	43.6	363	15.2	2.5	
Cu	63	2	He	-0.009	-200.8	1587	10.0	1	
Zn	66	2	He	-0.027	-39.5	347	6.0	2.5	
As	75	2	He	0.069	78.0	159	30.6	2.5	

Initial Calibration Blank (ICB) Report

Sb	121	2	He	-0.100	-49.9	1910	16.8	2.5	
Se	78	2	He	0.211	106.5	37	41.3	1	
Ti	47	2	He	0.002	1204.5	17	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	4746010	1.40	4912785	96.61	70	120	
In	115	1	nogas	3022141	0.26	3074865	98.29	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	971190	2.25	992920	97.81	70	120	
Bi	209	1	nogas	3079709	5.18	3087510	99.75	70	120	
Ge	72	2	He	1061418	1.42	1094372	96.99	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	025ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:31:29-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-31.4	113	24.3	0	ICSA Main CR1 Failed
B	11	1	nogas	3.474	56.5	116766	2.2	0	ICSA Main CR1 Failed
Al	27	1	nogas	92304.238	1.6	1856645519	0.9	0	
P	31	1	nogas	90683.365	1.7	89873992	1.4	0	
Ca	44	1	nogas	95626.675	1.7	62437777	1.4	0	
Ti	47	1	nogas	1936.867	0.7	4065026	1.4	0	
Cr	52	1	nogas	1.109	7.0	51171	4.5	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.327	1.9	10446	1.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.560	4.9	12741	3.4	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.523	5.6	8162	5.5	0	ICSA Main CR1 Failed
Se	77	1	nogas	13.420	9.8	9699	2.1	0	
Se	82	1	nogas	-0.172	-205.4	-39	-237.2	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.924	3.2	36424	1.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2036.874	3.0	15531375	1.9	0	
Ag	107	1	nogas	-0.005	-86.6	1587	4.6	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.472	3.9	10740	3.0	0	
Sn	118	1	nogas	0.081	11.0	4551	1.0	0	ICSA Main CR1 Failed
Sb	121	1	nogas	-0.061	-5.0	5768	0.8	0	ICSA Main CR1 Failed
Ba	137	1	nogas	-0.061	-39.9	707	19.3	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	1.9	1627	11.0	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.026	55.4	5951	3.4	0	ICSA Main CR1 Failed
Si	28	1	nogas	308.959	15.8	2017492	1.9	0	
Na	23	2	He	99305.053	0.8	130171538	0.7	0	
Mg	24	2	He	97911.143	1.9	71133946	1.2	0	
Al	27	2	He	94287.023	1.4	31906191	0.5	0	
K	39	2	He	98979.274	2.1	53153766	0.7	0	
Ca	43	2	He	96827.759	3.0	175822	1.6	0	
Ca	44	2	He	95264.384	2.2	2982564	0.8	0	
V	51	2	He	0.072	19.2	1365	5.4	0	ICSA Main CR1 Failed
Cr	52	2	He	0.886	3.0	8509	2.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.163	12.0	1120	7.9	0	ICSA Main CR1 Failed
Fe	56	2	He	98763.267	0.9	669080097	1.2	0	
Co	59	2	He	0.181	8.5	2477	8.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.208	23.2	930	17.9	0	ICSA Main CR1 Failed
Cu	63	2	He	0.152	11.2	2979	3.7	0	ICSA Main CR1 Failed
Zn	66	2	He	0.328	15.8	887	10.2	0	ICSA Main CR1 Failed
As	75	2	He	0.094	46.4	172	23.4	0	ICSA Main CR1 Failed
Sb	121	2	He	-0.044	-45.0	2150	4.6	0	ICSA Main CR1 Failed
Se	78	2	He	0.435	8.6	49	4.7	0	ICSA Main CR1 Failed
Ti	47	2	He	1921.991	2.1	399320	0.6	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4477592	0.71	4912785	91.14	70	120	

Interference Check Solution A (ICS-A) Report

In	115	1	nogas	2728749	1.83	3074865	88.74	70	120	
Li	6	1	nogas	846346	3.78	992920	85.24	70	120	
Bi	209	1	nogas	2896820	11.69	3087510	93.82	70	120	
Ge	72	2	He	997559	1.55	1094372	91.15	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	026ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:33:49-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	104.384	2.957	544061	0.49	100	104.4	80	120	
B	11	1	nogas	552.059	5.548	1862708	2.68	100	552.1	80	120	
Al	27	1	nogas	91604.868	3.137	1860342746	1.55	100	91604.9	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105793.384	2.692	69738302	0.59	100	105793.4	80	120	
Ti	47	1	nogas	2022.399	2.759	4285065	0.77	100	2022.4	80	120	
Cr	52	1	nogas	96.031	3.166	2646987	1.55	100	96.0	80	120	
Co	59	1	nogas	98.752	2.279	3044088	0.27	100	98.8	80	120	
Cu	63	1	nogas	95.228	1.688	1561496	1.02	100	95.2	80	120	
Zn	66	1	nogas	99.123	2.193	461821	1.70	100	99.1	80	120	
Se	77	1	nogas	128.242	3.613	32469	2.89	100	128.2	80	120	
Se	82	1	nogas	103.610	3.382	27555	3.49	100	103.6	80	120	
Sr	88	1	nogas	102.019	0.895	3806159	1.15	100	102.0	80	120	
Mo	95	1	nogas	2145.458	0.246	16270760	0.12	100	2145.5	80	120	
Ag	107	1	nogas	96.627	0.910	2026325	0.77	100	96.6	80	120	
Cd	111	1	nogas	101.136	0.228	435533	0.48	100	101.1	80	120	
Sn	118	1	nogas	101.199	0.654	1291910	0.42	100	101.2	80	120	
Sb	121	1	nogas	99.270	3.543	1773373	2.14	100	99.3	80	120	
Ba	137	1	nogas	103.731	0.873	598615	1.09	100	103.7	80	120	
Tl	205	1	nogas	100.195	7.162	4034549	0.82	100	100.2	80	120	
Pb	208	1	nogas	98.307	5.924	5503689	1.53	100	98.3	80	120	
U	238	1	nogas	102.430	4.442	6292714	2.39	100	102.4	80	120	
Si	28	1	nogas	4979.370	3.070	6675249	0.32	100	4979.4	80	120	ICSB Main CR1 Failed
Na	23	2	He	109366.709	0.916	142993531	0.39	100	109366.7	80	120	
Mg	24	2	He	108707.764	1.340	78782675	0.90	100	108707.8	80	120	
Al	27	2	He	94081.944	0.637	31758643	0.56	100	94081.9	80	120	ICSB Main CR1 Failed
K	39	2	He	109763.931	1.149	58799762	0.65	100	109763.9	80	120	
Ca	43	2	He	107790.078	1.731	195268	1.33	100	107790.1	80	120	
Ca	44	2	He	104911.007	0.977	3276723	0.79	100	104911.0	80	120	
V	51	2	He	100.471	0.578	653403	0.87	100	100.5	80	120	
Cr	52	2	He	98.178	1.799	800943	1.88	100	98.2	80	120	
Mn	55	2	He	99.260	1.423	475995	1.12	100	99.3	80	120	
Fe	56	2	He	107352.298	1.539	725393003	1.02	100	107352.3	80	120	
Co	59	2	He	98.714	2.104	1265555	1.59	100	98.7	80	120	
Ni	60	2	He	96.351	0.356	330887	0.32	100	96.4	80	120	
Cu	63	2	He	96.171	0.520	888017	0.47	100	96.2	80	120	
Zn	66	2	He	98.863	1.630	156219	1.79	100	98.9	80	120	
As	75	2	He	100.915	0.756	89549	0.55	100	100.9	80	120	
Sb	121	2	He	99.401	0.614	630273	0.39	100	99.4	80	120	
Se	78	2	He	104.435	5.800	6880	5.30	100	104.4	80	120	
Ti	47	2	He	2039.866	0.835	422799	0.50	100	2039.9	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	4522330	2.26	4912785	92.05	70	120	
In	115	1	nogas	2713196	0.25	3074865	88.24	70	120	
Li	6	1	nogas	771031	2.55	992920	77.65	70	120	
Bi	209	1	nogas	2741055	6.39	3087510	88.78	70	120	
Ge	72	2	He	994982	0.53	1094372	90.92	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	028_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:48:06-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.489	1.803	565678	0.47	100	101.5	90	110	
B	11	1	nogas	529.781	1.876	1916597	1.60	500	106.0	90	110	
Al	27	1	nogas	98.831	2.797	2130579	1.96	100	98.8	90	110	
P	31	1	nogas	475.330	1.922	537922	0.93	500	95.1	90	110	
Ca	44	1	nogas	9602.516	1.442	6629942	0.53	10000	96.0	90	110	
Ti	47	1	nogas	97.129	1.858	214870	1.49	100	97.1	90	110	
Cr	52	1	nogas	97.958	1.143	2817466	1.38	100	98.0	90	110	
Co	59	1	nogas	99.470	1.187	3199667	1.05	100	99.5	90	110	
Cu	63	1	nogas	101.637	2.846	1738641	2.70	100	101.6	90	110	
Zn	66	1	nogas	100.240	1.855	487255	1.22	100	100.2	90	110	
Se	77	1	nogas	102.111	2.143	28496	2.41	100	102.1	90	110	
Se	82	1	nogas	99.153	3.782	27507	2.82	100	99.2	90	110	
Sr	88	1	nogas	95.683	1.259	3904229	1.11	100	95.7	90	110	
Mo	95	1	nogas	99.765	2.217	828416	2.00	100	99.8	90	110	
Ag	107	1	nogas	99.165	2.762	2274318	2.68	100	99.2	90	110	
Cd	111	1	nogas	97.812	3.024	460576	1.49	100	97.8	90	110	
Sn	118	1	nogas	97.422	2.417	1360507	2.99	100	97.4	90	110	
Sb	121	1	nogas	100.422	1.375	1872228	1.84	100	100.4	90	110	
Ba	137	1	nogas	98.874	3.089	623958	1.75	100	98.9	90	110	
Tl	205	1	nogas	98.456	5.167	4553135	0.49	100	98.5	90	110	
Pb	208	1	nogas	95.298	5.099	6124102	0.23	100	95.3	90	110	
U	238	1	nogas	93.210	4.724	6569628	0.75	100	93.2	90	110	
Li	7	1	nogas	101.337	3.097	1982823	1.00	100	101.3	90	110	
Si	28	1	nogas	4980.083	2.279	6966056	0.85	5000	99.6	90	110	
Tl	203	1	nogas	98.494	5.932	1919830	1.09	100	98.5	90	110	
Na	23	2	He	9916.715	1.150	13860583	1.96	10000	99.2	90	110	
Mg	24	2	He	9948.884	0.995	7683673	1.16	10000	99.5	90	110	
Al	27	2	He	100.711	1.982	36980	1.16	100	100.7	90	110	
K	39	2	He	9921.187	0.719	5696436	0.67	10000	99.2	90	110	
Ca	43	2	He	10047.316	1.529	19414	2.01	10000	100.5	90	110	
Ca	44	2	He	9869.527	2.856	328841	2.08	10000	98.7	90	110	
V	51	2	He	98.111	0.936	679905	1.21	100	98.1	90	110	
Cr	52	2	He	97.143	1.396	844404	0.58	100	97.1	90	110	
Mn	55	2	He	100.637	1.976	514234	1.88	100	100.6	90	110	
Fe	56	2	He	9985.260	2.326	71902919	2.01	10000	99.9	90	110	
Co	59	2	He	99.089	3.166	1353602	2.73	100	99.1	90	110	
Ni	60	2	He	98.812	1.741	361549	0.92	100	98.8	90	110	
Cu	63	2	He	101.501	1.359	998527	0.77	100	101.5	90	110	
Zn	66	2	He	101.832	0.496	171443	0.47	100	101.8	90	110	
As	75	2	He	100.583	1.751	95102	1.39	100	100.6	90	110	
Sb	121	2	He	100.281	1.954	677472	1.38	100	100.3	90	110	
Se	78	2	He	99.134	1.756	6961	1.05	100	99.1	90	110	
Ti	47	2	He	100.570	1.625	22227	1.57	100	100.6	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	4717717	0.95	4912785	96.03	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2967670	1.70	3074865	96.51	70	120	
Li	6	1	nogas	824311	2.00	992920	83.02	70	120	
Bi	209	1	nogas	3143827	4.98	3087510	101.82	70	120	
Ge	72	2	He	1060214	0.83	1094372	96.88	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	029_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:50:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.002	258.8	215	12.3	1	
B	11	1	nogas	-1.478	-118.5	108382	3.8	10	
Al	27	1	nogas	0.287	17.1	42468	2.6	5	
P	31	1	nogas	-4.953	-12.5	36770	0.3	10	
Ca	44	1	nogas	-1.300	-69.1	26119	0.9	100	
Ti	47	1	nogas	0.130	22.9	403	15.1	2.5	
Cr	52	1	nogas	-0.030	-43.3	21483	1.5	2.5	
Co	59	1	nogas	0.014	42.0	940	19.2	2.5	
Cu	63	1	nogas	0.026	97.1	4337	11.1	2	
Zn	66	1	nogas	0.038	40.4	1403	3.9	2.5	
Se	77	1	nogas	0.989	190.4	7688	6.3	2.5	
Se	82	1	nogas	0.641	41.3	185	41.5	2	
Sr	88	1	nogas	0.013	56.2	2517	12.2	2.5	
Mo	95	1	nogas	1.216	10.7	11250	10.1	2.5	
Ag	107	1	nogas	-0.003	-45.2	1797	2.3	2.5	
Cd	111	1	nogas	0.009	99.3	80	50.0	1	
Sn	118	1	nogas	0.438	24.8	10060	15.6	5	
Sb	121	1	nogas	0.084	37.7	8792	5.3	2.5	
Ba	137	1	nogas	-0.090	-15.8	600	14.8	2.5	
Tl	205	1	nogas	0.373	30.0	17521	34.5	1	
Pb	208	1	nogas	0.044	14.9	7451	10.8	2.5	
U	238	1	nogas	0.032	28.5	2294	33.7	2.5	
Si	28	1	nogas	-75.396	-126.5	1733032	5.3	5	
Na	23	2	He	5.656	9.7	55066	2.1	100	
Mg	24	2	He	1.689	2.2	1920	2.3	100	
Al	27	2	He	0.297	35.5	857	5.5	5	
K	39	2	He	-2.550	-46.3	34682	0.6	100	
Ca	43	2	He	11.069	173.0	40	90.1	100	
Ca	44	2	He	0.278	599.7	463	13.2	100	
V	51	2	He	0.020	89.9	1081	12.6	2.5	
Cr	52	2	He	0.042	25.1	1703	6.3	2.5	
Mn	55	2	He	0.038	38.2	547	12.8	2.5	
Fe	56	2	He	3.530	3.7	34917	3.0	100	
Co	59	2	He	0.011	65.9	297	31.3	2.5	
Ni	60	2	He	0.034	74.5	347	26.8	2.5	
Cu	63	2	He	0.036	60.1	2007	9.3	2	

Continuing Calibration Blank (CCB) Report

Zn	66	2	He	0.030	200.1	437	22.2	2.5	
As	75	2	He	0.218	21.9	297	16.2	2.5	
Sb	121	2	He	0.036	50.6	2794	3.3	2.5	
Se	78	2	He	0.677	27.4	69	19.4	2	
Ti	47	2	He	0.003	854.2	17	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	4733651	1.50	4912785	96.35	70	120	
In	115	1	nogas	3009966	0.42	3074865	97.89	70	120	
Li	6	1	nogas	922668	2.57	992920	92.92	70	120	
Bi	209	1	nogas	3019363	5.82	3087510	97.79	70	120	
Ge	72	2	He	1049141	1.31	1094372	95.87	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	040_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:21:06-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.602	1.587	559406	0.74	100	101.6	90	110	
B	11	1	nogas	508.687	0.336	1822081	2.02	500	101.7	90	110	
Al	27	1	nogas	98.562	1.488	2020260	1.87	100	98.6	90	110	
P	31	1	nogas	485.100	1.667	521050	0.45	500	97.0	90	110	
Ca	44	1	nogas	9700.000	2.321	6365661	1.00	10000	97.0	90	110	
Ti	47	1	nogas	98.540	1.789	207212	0.62	100	98.5	90	110	
Cr	52	1	nogas	100.026	1.165	2734258	0.54	100	100.0	90	110	
Co	59	1	nogas	99.570	1.042	3044622	0.43	100	99.6	90	110	
Cu	63	1	nogas	104.027	1.877	1691502	1.34	100	104.0	90	110	
Zn	66	1	nogas	101.500	0.982	469020	0.50	100	101.5	90	110	
Se	77	1	nogas	107.592	1.145	28159	0.69	100	107.6	90	110	
Se	82	1	nogas	102.166	1.892	26946	1.04	100	102.2	90	110	
Sr	88	1	nogas	96.466	1.517	3785563	0.59	100	96.5	90	110	
Mo	95	1	nogas	99.983	1.217	798564	1.76	100	100.0	90	110	
Ag	107	1	nogas	99.026	0.873	2184668	2.17	100	99.0	90	110	
Cd	111	1	nogas	98.998	0.801	448523	2.40	100	99.0	90	110	
Sn	118	1	nogas	96.445	2.055	1295310	2.11	100	96.4	90	110	
Sb	121	1	nogas	101.986	1.271	1807238	0.98	100	102.0	90	110	
Ba	137	1	nogas	100.373	2.913	609253	2.20	100	100.4	90	110	
Tl	205	1	nogas	100.419	5.877	4356721	1.41	100	100.4	90	110	
Pb	208	1	nogas	98.867	5.743	5960605	1.42	100	98.9	90	110	
U	238	1	nogas	96.970	5.489	6411696	0.99	100	97.0	90	110	
Li	7	1	nogas	101.300	2.084	1958165	0.41	100	101.3	90	110	
Si	28	1	nogas	5095.733	1.858	6735993	0.28	5000	101.9	90	110	
Tl	203	1	nogas	101.316	5.591	1853347	1.16	100	101.3	90	110	
Na	23	2	He	10117.179	2.089	13390508	0.99	10000	101.2	90	110	
Mg	24	2	He	10133.453	0.864	7412788	0.70	10000	101.3	90	110	
Al	27	2	He	103.279	1.808	35905	1.77	100	103.3	90	110	
K	39	2	He	10000.448	1.204	5438321	0.77	10000	100.0	90	110	
Ca	43	2	He	10334.827	2.749	18913	2.75	10000	103.3	90	110	
Ca	44	2	He	10114.937	1.564	319228	0.53	10000	101.1	90	110	
V	51	2	He	99.191	0.895	651049	0.33	100	99.2	90	110	
Cr	52	2	He	98.115	0.937	807829	0.32	100	98.1	90	110	
Mn	55	2	He	102.738	1.270	497220	0.17	100	102.7	90	110	
Fe	56	2	He	10252.933	2.171	69926116	0.99	10000	102.5	90	110	
Co	59	2	He	100.957	0.573	1306407	0.70	100	101.0	90	110	
Ni	60	2	He	101.524	1.900	351844	0.86	100	101.5	90	110	
Cu	63	2	He	103.778	2.485	966882	1.37	100	103.8	90	110	
Zn	66	2	He	101.831	1.806	162382	1.41	100	101.8	90	110	
As	75	2	He	102.648	0.827	91931	0.67	100	102.6	90	110	
Sb	121	2	He	102.955	2.918	658666	1.72	100	103.0	90	110	
Se	78	2	He	102.037	1.256	6786	1.10	100	102.0	90	110	
Ti	47	2	He	98.906	2.709	20702	1.58	100	98.9	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	4484905	1.48	4912785	91.29	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2854232	1.59	3074865	92.82	70	120	
Li	6	1	nogas	814269	2.28	992920	82.01	70	120	
Bi	209	1	nogas	2949729	4.66	3087510	95.54	70	120	
Ge	72	2	He	1004255	1.20	1094372	91.77	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:23:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.007	-58.2	153	15.4	1	
B	11	1	nogas	-8.494	-11.7	78778	4.2	10	
Al	27	1	nogas	0.117	52.9	36703	2.0	5	
P	31	1	nogas	-1.381	-58.8	38276	1.1	10	
Ca	44	1	nogas	0.851	73.7	26085	1.9	100	
Ti	47	1	nogas	0.078	32.4	273	20.2	2.5	
Cr	52	1	nogas	-0.020	-96.1	20582	4.0	2.5	
Co	59	1	nogas	0.025	39.8	1230	24.1	2.5	
Cu	63	1	nogas	0.005	559.1	3747	12.0	2	
Zn	66	1	nogas	0.047	141.0	1367	21.8	2.5	
Se	77	1	nogas	2.776	88.1	7615	7.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.407	169.0	112	162.1	2	
Sr	88	1	nogas	0.029	28.0	3067	9.2	2.5	
Mo	95	1	nogas	0.681	14.5	6481	12.1	2.5	
Ag	107	1	nogas	-0.005	-137.1	1683	8.0	2.5	
Cd	111	1	nogas	0.003	163.5	53	47.2	1	
Sn	118	1	nogas	0.388	10.6	8993	7.4	5	
Sb	121	1	nogas	0.138	57.3	9263	13.8	2.5	
Ba	137	1	nogas	-0.071	-6.8	693	5.1	2.5	
Tl	205	1	nogas	0.368	37.2	17110	41.4	1	
Pb	208	1	nogas	0.029	32.6	6447	14.9	2.5	
U	238	1	nogas	0.038	37.4	2667	42.0	2.5	
Si	28	1	nogas	-35.576	-135.8	1676773	2.8	5	
Na	23	2	He	11.977	6.7	61870	1.4	100	
Mg	24	2	He	2.270	13.3	2294	9.7	100	
Al	27	2	He	-0.052	-466.5	710	11.0	5	
K	39	2	He	-1.700	-87.4	34115	1.8	100	
Ca	43	2	He	34.973	39.3	83	30.2	100	
Ca	44	2	He	5.638	33.3	620	9.0	100	
V	51	2	He	0.011	67.9	986	4.9	2.5	
Cr	52	2	He	0.050	24.6	1717	5.7	2.5	
Mn	55	2	He	0.198	14.2	1317	11.1	2.5	
Fe	56	2	He	3.172	6.6	31394	3.9	100	
Co	59	2	He	0.021	28.8	430	18.6	2.5	
Ni	60	2	He	0.022	37.0	293	9.8	2.5	
Cu	63	2	He	0.010	154.5	1707	9.0	2	
Zn	66	2	He	0.086	36.9	513	9.8	2.5	
As	75	2	He	0.186	26.1	259	17.6	2.5	
Sb	121	2	He	0.076	78.5	2967	12.7	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.826	43.3	77	31.9	2	
Ti	47	2	He	-0.026	-182.3	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4472546	1.46	4912785	91.04	70	120	
In	115	1	nogas	2892362	1.67	3074865	94.06	70	120	
Li	6	1	nogas	891026	0.87	992920	89.74	70	120	
Bi	209	1	nogas	2980498	5.59	3087510	96.53	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1017830	0.78	1094372	93.01	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	052_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:49:08-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.975	3.568	558772	0.37	100	101.0	90	110	
B	11	1	nogas	499.746	3.588	1800600	0.16	500	99.9	90	110	
Al	27	1	nogas	98.755	1.432	2064663	0.93	100	98.8	90	110	
P	31	1	nogas	485.767	0.584	532239	0.69	500	97.2	90	110	
Ca	44	1	nogas	9785.196	0.611	6551365	0.60	10000	97.9	90	110	
Ti	47	1	nogas	98.470	1.060	211246	1.00	100	98.5	90	110	
Cr	52	1	nogas	99.759	0.375	2781932	0.29	100	99.8	90	110	
Co	59	1	nogas	100.423	0.952	3132549	1.15	100	100.4	90	110	
Cu	63	1	nogas	103.293	0.709	1713419	0.25	100	103.3	90	110	
Zn	66	1	nogas	101.561	1.165	478744	1.18	100	101.6	90	110	
Se	77	1	nogas	109.541	1.403	29114	0.70	100	109.5	90	110	
Se	82	1	nogas	98.977	0.908	26632	1.04	100	99.0	90	110	
Sr	88	1	nogas	99.037	1.433	3852211	1.03	100	99.0	90	110	
Mo	95	1	nogas	101.913	1.306	806698	0.66	100	101.9	90	110	
Ag	107	1	nogas	101.078	0.846	2209941	0.92	100	101.1	90	110	
Cd	111	1	nogas	100.734	0.977	452272	0.29	100	100.7	90	110	
Sn	118	1	nogas	99.757	0.850	1327807	0.27	100	99.8	90	110	
Sb	121	1	nogas	102.645	1.909	1855544	2.15	100	102.6	90	110	
Ba	137	1	nogas	103.245	1.584	621168	1.05	100	103.2	90	110	
Tl	205	1	nogas	101.899	4.481	4444286	2.38	100	101.9	90	110	
Pb	208	1	nogas	99.392	4.408	6022974	1.57	100	99.4	90	110	
U	238	1	nogas	97.980	3.710	6512313	1.11	100	98.0	90	110	
Li	7	1	nogas	100.881	3.567	1960431	0.31	100	100.9	90	110	
Si	28	1	nogas	5200.641	1.079	6977338	1.07	5000	104.0	90	110	
Tl	203	1	nogas	103.571	2.207	1905231	1.75	100	103.6	90	110	
Na	23	2	He	10148.119	1.834	13447691	0.57	10000	101.5	90	110	
Mg	24	2	He	10104.059	0.743	7400303	0.82	10000	101.0	90	110	
Al	27	2	He	99.297	2.952	34589	2.74	100	99.3	90	110	
K	39	2	He	10081.884	1.672	5488662	0.63	10000	100.8	90	110	
Ca	43	2	He	10127.243	1.012	18556	1.12	10000	101.3	90	110	
Ca	44	2	He	10008.540	2.009	316241	0.68	10000	100.1	90	110	
V	51	2	He	98.133	2.129	644829	0.84	100	98.1	90	110	
Cr	52	2	He	96.232	1.917	793241	0.59	100	96.2	90	110	
Mn	55	2	He	100.433	2.461	486611	1.16	100	100.4	90	110	
Fe	56	2	He	10136.503	2.190	69215724	1.07	10000	101.4	90	110	
Co	59	2	He	102.317	1.913	1325448	0.67	100	102.3	90	110	
Ni	60	2	He	100.989	2.733	350381	1.39	100	101.0	90	110	
Cu	63	2	He	103.100	2.320	961738	1.09	100	103.1	90	110	
Zn	66	2	He	101.591	1.982	162186	1.02	100	101.6	90	110	
As	75	2	He	102.251	0.722	91696	1.93	100	102.3	90	110	
Sb	121	2	He	102.834	2.181	658718	0.85	100	102.8	90	110	
Se	78	2	He	103.002	1.216	6858	0.46	100	103.0	90	110	
Ti	47	2	He	99.364	2.296	20825	2.04	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	4574774	0.64	4912785	93.12	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2828855	0.69	3074865	92.00	70	120	
Li	6	1	nogas	818812	3.18	992920	82.47	70	120	
Bi	209	1	nogas	2962267	3.08	3087510	95.94	70	120	
Ge	72	2	He	1005478	1.33	1094372	91.88	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	053_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:51:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.004	-121.9	170	21.2	1	
B	11	1	nogas	-11.146	-2.4	68310	2.5	10	
Al	27	1	nogas	0.133	36.0	37631	3.5	5	
P	31	1	nogas	-3.545	-21.0	36706	1.4	10	
Ca	44	1	nogas	-3.010	-21.4	23939	1.9	100	
Ti	47	1	nogas	0.059	41.8	237	23.3	2.5	
Cr	52	1	nogas	-0.059	-12.9	19817	2.0	2.5	
Co	59	1	nogas	0.013	39.7	880	19.1	2.5	
Cu	63	1	nogas	-0.043	-18.5	3027	3.4	2	
Zn	66	1	nogas	-0.046	-17.8	953	3.7	2.5	
Se	77	1	nogas	1.631	90.7	7502	3.4	2.5	
Se	82	1	nogas	1.071	12.8	292	12.9	2	
Sr	88	1	nogas	0.012	61.8	2377	9.3	2.5	
Mo	95	1	nogas	0.710	23.8	6751	17.9	2.5	
Ag	107	1	nogas	-0.038	-6.4	950	3.8	2.5	
Cd	111	1	nogas	0.005	86.4	63	32.9	1	
Sn	118	1	nogas	0.324	16.1	8185	7.7	5	
Sb	121	1	nogas	0.113	17.5	8966	4.9	2.5	
Ba	137	1	nogas	-0.042	-72.5	873	18.9	2.5	
Tl	205	1	nogas	0.348	39.9	16263	40.9	1	
Pb	208	1	nogas	0.022	39.6	6037	11.1	2.5	
U	238	1	nogas	0.034	37.8	2390	39.3	2.5	
Si	28	1	nogas	-79.239	-78.9	1659305	2.9	5	
Na	23	2	He	3.206	16.3	49214	1.7	100	
Mg	24	2	He	0.844	14.8	1213	7.8	100	
Al	27	2	He	-0.269	-109.1	623	15.7	5	
K	39	2	He	-6.344	-22.4	30986	2.3	100	
Ca	43	2	He	8.319	39.2	33	17.3	100	
Ca	44	2	He	0.049	4974.9	433	17.3	100	
V	51	2	He	0.013	100.0	983	8.2	2.5	
Cr	52	2	He	0.032	49.3	1533	7.9	2.5	
Mn	55	2	He	0.027	15.7	467	4.5	2.5	
Fe	56	2	He	1.783	8.3	21389	4.9	100	
Co	59	2	He	0.006	55.0	227	19.9	2.5	
Ni	60	2	He	0.015	100.0	263	18.7	2.5	
Cu	63	2	He	-0.027	-49.2	1333	9.5	2	

Continuing Calibration Blank (CCB) Report

Zn	66	2	He	-0.026	-135.1	327	17.7	2.5	
As	75	2	He	0.193	17.9	260	11.4	2.5	
Sb	121	2	He	0.076	36.2	2917	6.4	2.5	
Se	78	2	He	0.616	31.3	61	21.0	2	
Ti	47	2	He	0.023	367.8	20	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4542870	0.93	4912785	92.47	70	120	
In	115	1	nogas	2915801	2.61	3074865	94.83	70	120	
Li	6	1	nogas	882708	3.52	992920	88.90	70	120	
Bi	209	1	nogas	3002669	3.58	3087510	97.25	70	120	
Ge	72	2	He	998881	0.43	1094372	91.27	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:17:18-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	101.440	2.181	546458	1.36	100	101.4	90	110	
B	11	1	nogas	504.504	1.666	1768871	2.25	500	100.9	90	110	
Al	27	1	nogas	96.392	1.675	1992106	2.61	100	96.4	90	110	
P	31	1	nogas	478.546	0.406	518605	0.98	500	95.7	90	110	
Ca	44	1	nogas	9818.008	1.457	6494205	1.85	10000	98.2	90	110	
Ti	47	1	nogas	96.915	0.647	205412	1.24	100	96.9	90	110	
Cr	52	1	nogas	97.319	2.146	2681664	2.18	100	97.3	90	110	
Co	59	1	nogas	98.555	0.525	3037199	0.82	100	98.6	90	110	
Cu	63	1	nogas	102.564	1.509	1680787	1.12	100	102.6	90	110	
Zn	66	1	nogas	102.683	0.235	478194	0.97	100	102.7	90	110	
Se	77	1	nogas	130.174	1.852	32833	0.38	100	130.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.073	4.129	26598	3.63	100	100.1	90	110	
Sr	88	1	nogas	97.638	2.380	3821549	0.81	100	97.6	90	110	
Mo	95	1	nogas	100.692	1.317	802126	0.38	100	100.7	90	110	
Ag	107	1	nogas	101.340	2.107	2229487	0.44	100	101.3	90	110	
Cd	111	1	nogas	101.061	1.209	456678	1.83	100	101.1	90	110	
Sn	118	1	nogas	98.561	1.151	1320315	1.00	100	98.6	90	110	
Sb	121	1	nogas	102.803	0.451	1835899	0.63	100	102.8	90	110	
Ba	137	1	nogas	104.886	0.518	635142	1.77	100	104.9	90	110	
Tl	205	1	nogas	104.004	5.936	4516398	2.07	100	104.0	90	110	
Pb	208	1	nogas	101.760	6.416	6138667	1.46	100	101.8	90	110	
U	238	1	nogas	97.515	6.091	6452028	1.14	100	97.5	90	110	
Li	7	1	nogas	99.744	2.207	1887630	0.41	100	99.7	90	110	
Si	28	1	nogas	5167.168	1.157	6860454	1.92	5000	103.3	90	110	
Tl	203	1	nogas	105.314	5.816	1927998	1.18	100	105.3	90	110	
Na	23	2	He	10026.513	1.717	13220959	0.91	10000	100.3	90	110	
Mg	24	2	He	10032.810	1.596	7310736	0.45	10000	100.3	90	110	
Al	27	2	He	98.745	0.938	34235	2.36	100	98.7	90	110	
K	39	2	He	10169.085	1.737	5508253	1.14	10000	101.7	90	110	
Ca	43	2	He	10107.585	1.527	18426	0.27	10000	101.1	90	110	
Ca	44	2	He	9985.156	0.729	313962	0.79	10000	99.9	90	110	
V	51	2	He	99.642	0.915	651529	0.68	100	99.6	90	110	
Cr	52	2	He	97.359	0.237	798626	1.25	100	97.4	90	110	
Mn	55	2	He	101.625	0.421	490015	1.20	100	101.6	90	110	
Fe	56	2	He	10123.149	0.504	68788517	0.98	10000	101.2	90	110	
Co	59	2	He	100.959	2.499	1301467	2.58	100	101.0	90	110	
Ni	60	2	He	102.442	1.438	353697	1.22	100	102.4	90	110	
Cu	63	2	He	104.142	2.209	966617	1.33	100	104.1	90	110	
Zn	66	2	He	102.490	1.117	162809	0.38	100	102.5	90	110	
As	75	2	He	103.438	1.840	92279	1.15	100	103.4	90	110	
Sb	121	2	He	104.200	1.238	664161	0.80	100	104.2	90	110	
Se	78	2	He	102.986	2.828	6823	2.60	100	103.0	90	110	
Ti	47	2	He	97.335	4.676	20291	3.21	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	4519670	1.07	4912785	92.00	70	120	
In	115	1	nogas	2847131	1.68	3074865	92.59	70	120	
Li	6	1	nogas	796660	1.77	992920	80.23	70	120	
Bi	209	1	nogas	2952684	5.02	3087510	95.63	70	120	
Ge	72	2	He	1000458	1.48	1094372	91.42	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:19:34-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.001	-442.4	183	22.2	1	
B	11	1	nogas	-10.939	-5.1	68083	4.1	10	
Al	27	1	nogas	0.132	28.2	37431	0.7	5	
P	31	1	nogas	-4.336	-16.4	35761	2.4	10	
Ca	44	1	nogas	3.043	24.1	27824	0.6	100	
Ti	47	1	nogas	0.110	23.3	343	14.4	2.5	
Cr	52	1	nogas	0.082	25.3	23589	1.8	2.5	
Co	59	1	nogas	0.014	54.2	903	25.3	2.5	
Cu	63	1	nogas	-0.021	-113.0	3367	11.0	2	
Zn	66	1	nogas	0.013	88.5	1227	5.2	2.5	
Se	77	1	nogas	16.406	22.3	10393	7.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	1.051	37.6	285	36.6	2	
Sr	88	1	nogas	0.072	16.6	4777	9.7	2.5	
Mo	95	1	nogas	0.639	22.9	6145	19.0	2.5	
Ag	107	1	nogas	-0.018	-8.5	1393	2.3	2.5	
Cd	111	1	nogas	0.011	62.9	87	35.3	1	
Sn	118	1	nogas	0.315	23.3	7999	12.2	5	
Sb	121	1	nogas	0.000	-32568.0	6915	5.2	2.5	
Ba	137	1	nogas	-0.029	-29.8	947	5.4	2.5	
Tl	205	1	nogas	0.330	37.6	15515	41.5	1	
Pb	208	1	nogas	0.033	34.9	6734	16.3	2.5	
U	238	1	nogas	0.036	37.8	2510	42.6	2.5	
Si	28	1	nogas	-40.121	-121.3	1691064	1.5	5	
Na	23	2	He	51.629	0.3	115511	0.7	100	
Mg	24	2	He	3.432	14.0	3170	10.6	100	
Al	27	2	He	-0.255	-109.5	643	14.4	5	
K	39	2	He	-3.757	-61.4	33163	3.1	100	
Ca	43	2	He	11.502	168.8	40	90.1	100	
Ca	44	2	He	6.547	50.0	653	16.9	100	
V	51	2	He	0.072	7.5	1399	2.3	2.5	
Cr	52	2	He	0.032	85.4	1570	13.8	2.5	
Mn	55	2	He	0.280	6.8	1723	4.7	2.5	
Fe	56	2	He	2.333	10.2	25732	6.1	100	
Co	59	2	He	0.009	16.8	263	7.9	2.5	
Ni	60	2	He	0.011	304.1	257	45.5	2.5	
Cu	63	2	He	0.003	712.2	1643	11.3	2	
Zn	66	2	He	-0.009	-109.6	363	4.2	2.5	
As	75	2	He	0.228	18.1	298	11.9	2.5	
Sb	121	2	He	-0.045	-68.1	2197	8.6	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.909	12.5	83	9.8	2	
Ti	47	2	He	0.083	65.0	33	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	4523555	1.36	4912785	92.08	70	120	
In	115	1	nogas	2893416	0.26	3074865	94.10	70	120	
Li	6	1	nogas	869752	2.06	992920	87.60	70	120	
Bi	209	1	nogas	2995804	5.75	3087510	97.03	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1023313	0.78	1094372	93.51	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:50:07-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	102.231	1.989	587368	0.93	100	102.2	90	110	
B	11	1	nogas	517.285	2.062	1931428	1.35	500	103.5	90	110	
Al	27	1	nogas	101.823	2.109	2199413	1.58	100	101.8	90	110	
P	31	1	nogas	494.829	1.845	559638	1.23	500	99.0	90	110	
Ca	44	1	nogas	9971.093	0.470	6900424	0.47	10000	99.7	90	110	
Ti	47	1	nogas	100.736	1.660	223376	0.81	100	100.7	90	110	
Cr	52	1	nogas	100.695	0.903	2902543	1.08	100	100.7	90	110	
Co	59	1	nogas	100.871	2.124	3252358	1.56	100	100.9	90	110	
Cu	63	1	nogas	102.723	0.785	1761495	1.06	100	102.7	90	110	
Zn	66	1	nogas	103.408	1.452	503842	0.90	100	103.4	90	110	
Se	77	1	nogas	144.129	2.151	37238	1.52	100	144.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.962	1.222	28081	0.59	100	101.0	90	110	
Sr	88	1	nogas	98.938	1.074	4042547	0.37	100	98.9	90	110	
Mo	95	1	nogas	100.839	0.344	838531	0.60	100	100.8	90	110	
Ag	107	1	nogas	100.083	1.437	2298557	1.19	100	100.1	90	110	
Cd	111	1	nogas	100.223	1.083	472693	0.99	100	100.2	90	110	
Sn	118	1	nogas	99.481	1.635	1390882	0.69	100	99.5	90	110	
Sb	121	1	nogas	105.194	1.595	1965438	1.27	100	105.2	90	110	
Ba	137	1	nogas	103.375	0.802	653353	0.42	100	103.4	90	110	
Tl	205	1	nogas	103.328	5.869	4586240	0.43	100	103.3	90	110	
Pb	208	1	nogas	100.374	5.488	6191575	0.77	100	100.4	90	110	
U	238	1	nogas	97.899	5.904	6621613	0.80	100	97.9	90	110	
Li	7	1	nogas	103.649	3.205	2089036	2.50	100	103.6	90	110	
Si	28	1	nogas	5463.157	1.597	7485048	0.92	5000	109.3	90	110	
Tl	203	1	nogas	103.904	6.817	1943635	1.44	100	103.9	90	110	
Na	23	2	He	10259.236	0.717	14371936	0.57	10000	102.6	90	110	
Mg	24	2	He	10234.776	0.154	7924342	1.19	10000	102.3	90	110	
Al	27	2	He	98.747	5.109	36362	4.64	100	98.7	90	110	
K	39	2	He	10025.096	0.698	5770020	0.74	10000	100.3	90	110	
Ca	43	2	He	10431.114	5.305	20198	4.41	10000	104.3	90	110	
Ca	44	2	He	9969.068	1.776	332995	0.96	10000	99.7	90	110	
V	51	2	He	98.271	1.898	682614	0.61	100	98.3	90	110	
Cr	52	2	He	96.938	1.169	844767	1.18	100	96.9	90	110	
Mn	55	2	He	100.160	1.777	513113	2.35	100	100.2	90	110	
Fe	56	2	He	10026.655	2.231	72387651	2.60	10000	100.3	90	110	
Co	59	2	He	103.112	4.628	1411708	3.42	100	103.1	90	110	
Ni	60	2	He	100.764	1.474	369605	0.48	100	100.8	90	110	
Cu	63	2	He	102.395	1.045	1009823	0.42	100	102.4	90	110	
Zn	66	2	He	101.195	2.364	170784	1.86	100	101.2	90	110	
As	75	2	He	101.220	1.007	95942	0.31	100	101.2	90	110	
Sb	121	2	He	101.892	0.938	690044	0.40	100	101.9	90	110	
Se	78	2	He	102.594	0.786	7221	1.25	100	102.6	90	110	
Ti	47	2	He	97.529	2.415	21606	1.42	100	97.5	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	4729089	0.87	4912785	96.26	70	120	
In	115	1	nogas	2971637	0.94	3074865	96.64	70	120	
Li	6	1	nogas	849779	2.57	992920	85.58	70	120	
Bi	209	1	nogas	3019117	5.83	3087510	97.78	70	120	
Ge	72	2	He	1062879	1.28	1094372	97.12	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:52:22-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.004	-111.6	177	14.5	1	
B	11	1	nogas	-12.618	-4.8	64744	3.1	10	
Al	27	1	nogas	0.169	19.9	39531	0.4	5	
P	31	1	nogas	-4.859	-15.6	36486	1.6	10	
Ca	44	1	nogas	0.848	185.0	27310	2.7	100	
Ti	47	1	nogas	0.053	37.6	230	19.9	2.5	
Cr	52	1	nogas	0.098	14.8	24897	2.8	2.5	
Co	59	1	nogas	0.011	27.0	817	10.2	2.5	
Cu	63	1	nogas	0.010	86.3	4004	2.4	2	
Zn	66	1	nogas	0.034	73.2	1367	8.0	2.5	
Se	77	1	nogas	23.794	12.3	12271	5.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.759	63.1	215	60.9	2	
Sr	88	1	nogas	0.158	16.6	8272	10.9	2.5	
Mo	95	1	nogas	0.735	22.1	7008	17.6	2.5	
Ag	107	1	nogas	-0.029	-32.0	1177	17.9	2.5	
Cd	111	1	nogas	0.016	86.5	110	55.3	1	
Sn	118	1	nogas	0.299	21.0	7885	9.7	5	
Sb	121	1	nogas	0.250	21.5	11774	7.3	2.5	
Ba	137	1	nogas	-0.044	-18.7	870	6.4	2.5	
Tl	205	1	nogas	0.329	41.9	15786	45.3	1	
Pb	208	1	nogas	0.021	45.1	6101	14.2	2.5	
U	238	1	nogas	0.035	39.5	2527	43.7	2.5	
Si	28	1	nogas	-42.579	-50.6	1749155	2.1	5	
Na	23	2	He	98.185	1.4	182029	1.5	100	
Mg	24	2	He	4.352	11.5	3944	9.9	100	
Al	27	2	He	-0.005	-5654.9	747	14.3	5	
K	39	2	He	-2.012	-12.0	34883	0.8	100	
Ca	43	2	He	19.728	40.2	57	27.0	100	
Ca	44	2	He	1.972	283.7	517	35.1	100	
V	51	2	He	0.113	8.7	1709	4.4	2.5	
Cr	52	2	He	0.016	135.2	1473	12.2	2.5	
Mn	55	2	He	0.048	44.7	593	18.6	2.5	
Fe	56	2	He	2.035	12.7	24183	7.5	100	
Co	59	2	He	0.006	40.0	240	15.0	2.5	
Ni	60	2	He	0.015	57.4	277	11.6	2.5	
Cu	63	2	He	0.020	33.9	1843	3.0	2	
Zn	66	2	He	-0.038	-119.3	323	23.6	2.5	
As	75	2	He	0.219	9.9	297	7.4	2.5	
Sb	121	2	He	0.175	38.5	3707	11.6	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.651	8.8	67	6.2	2	
Ti	47	2	He	-0.012	-436.9	13	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	4684351	1.38	4912785	95.35	70	120	
In	115	1	nogas	2935174	2.58	3074865	95.46	70	120	
Li	6	1	nogas	908425	2.29	992920	91.49	70	120	
Bi	209	1	nogas	3052919	5.14	3087510	98.88	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1045870	0.58	1094372	95.57	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	089_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T14:27:14-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	97.728	3.274	579199	0.10	100	97.7	90	110	
B	11	1	nogas	509.602	3.576	1964277	1.07	500	101.9	90	110	
Al	27	1	nogas	100.928	3.466	2205299	2.12	100	100.9	90	110	
P	31	1	nogas	495.956	2.736	567246	1.07	500	99.2	90	110	
Ca	44	1	nogas	10298.998	2.321	7208085	1.05	10000	103.0	90	110	
Ti	47	1	nogas	102.787	0.944	230579	0.68	100	102.8	90	110	
Cr	52	1	nogas	102.909	2.501	2999767	1.24	100	102.9	90	110	
Co	59	1	nogas	102.227	2.208	3334055	0.71	100	102.2	90	110	
Cu	63	1	nogas	102.948	0.883	1785830	1.28	100	102.9	90	110	
Zn	66	1	nogas	104.109	1.280	513127	0.31	100	104.1	90	110	
Se	77	1	nogas	160.988	6.332	41184	4.42	100	161.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.273	0.891	28495	0.69	100	101.3	90	110	
Sr	88	1	nogas	101.591	2.530	4172102	0.81	100	101.6	90	110	
Mo	95	1	nogas	103.606	2.367	865894	0.70	100	103.6	90	110	
Ag	107	1	nogas	102.488	2.649	2365758	1.18	100	102.5	90	110	
Cd	111	1	nogas	101.944	1.473	483315	0.48	100	101.9	90	110	
Sn	118	1	nogas	103.842	0.686	1459476	1.10	100	103.8	90	110	
Sb	121	1	nogas	103.659	0.861	1959379	0.82	100	103.7	90	110	
Ba	137	1	nogas	103.702	2.603	658765	1.23	100	103.7	90	110	
Tl	205	1	nogas	104.441	4.653	4677926	1.86	100	104.4	90	110	
Pb	208	1	nogas	102.835	4.963	6398803	0.80	100	102.8	90	110	
U	238	1	nogas	101.179	4.747	6905188	1.14	100	101.2	90	110	
Li	7	1	nogas	101.327	3.192	2108576	0.58	100	101.3	90	110	
Si	28	1	nogas	4911.004	4.194	6990107	1.57	5000	98.2	90	110	
Tl	203	1	nogas	105.395	5.790	1989407	1.91	100	105.4	90	110	
Na	23	2	He	10503.406	0.858	14076117	1.13	10000	105.0	90	110	
Mg	24	2	He	10326.459	1.240	7649249	1.85	10000	103.3	90	110	
Al	27	2	He	101.555	1.518	35757	0.19	100	101.6	90	110	
K	39	2	He	10132.173	2.418	5577807	0.87	10000	101.3	90	110	
Ca	43	2	He	10098.314	5.509	18703	3.86	10000	101.0	90	110	
Ca	44	2	He	10043.956	2.915	320921	1.49	10000	100.4	90	110	
V	51	2	He	100.664	0.966	668998	0.69	100	100.7	90	110	
Cr	52	2	He	98.924	0.892	824721	1.07	100	98.9	90	110	
Mn	55	2	He	101.485	1.183	497325	0.47	100	101.5	90	110	
Fe	56	2	He	10358.188	0.988	71539532	1.16	10000	103.6	90	110	
Co	59	2	He	101.992	1.389	1336296	1.02	100	102.0	90	110	
Ni	60	2	He	101.952	2.531	357741	1.52	100	102.0	90	110	
Cu	63	2	He	103.379	1.618	975311	0.26	100	103.4	90	110	
Zn	66	2	He	102.882	1.551	166108	0.69	100	102.9	90	110	
As	75	2	He	100.500	1.864	91128	0.48	100	100.5	90	110	
Sb	121	2	He	101.950	2.443	660444	0.84	100	102.0	90	110	
Se	78	2	He	100.488	0.497	6768	1.96	100	100.5	90	110	
Ti	47	2	He	98.221	3.426	20822	3.85	100	98.2	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	4784202	1.58	4912785	97.38	70	120	
In	115	1	nogas	2987492	1.71	3074865	97.16	70	120	
Li	6	1	nogas	876896	3.24	992920	88.31	70	120	
Bi	209	1	nogas	3043533	4.40	3087510	98.58	70	120	
Ge	72	2	He	1016892	1.65	1094372	92.92	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	090_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T14:29:31-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-237.8	180	29.3	1	
B	11	1	nogas	-8.909	-2.3	79366	2.4	10	
Al	27	1	nogas	0.156	12.8	39518	1.3	5	
P	31	1	nogas	-3.787	-11.8	37845	1.0	10	
Ca	44	1	nogas	1.321	74.8	27821	2.3	100	
Ti	47	1	nogas	0.099	14.3	333	9.2	2.5	
Cr	52	1	nogas	0.112	6.4	25444	0.6	2.5	
Co	59	1	nogas	0.012	41.9	857	18.2	2.5	
Cu	63	1	nogas	0.035	72.8	4457	9.4	2	
Zn	66	1	nogas	0.080	42.5	1600	10.4	2.5	
Se	77	1	nogas	32.478	11.7	14139	5.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.729	39.4	208	38.4	2	
Sr	88	1	nogas	0.115	24.7	6751	17.6	2.5	
Mo	95	1	nogas	0.661	21.2	6605	18.3	2.5	
Ag	107	1	nogas	-0.043	-25.0	870	29.3	2.5	
Cd	111	1	nogas	0.006	287.1	70	124.5	1	
Sn	118	1	nogas	0.378	30.5	9253	18.0	5	
Sb	121	1	nogas	0.338	22.3	13479	10.1	2.5	
Ba	137	1	nogas	-0.053	-3.2	840	1.2	2.5	
Tl	205	1	nogas	0.146	33.5	7412	34.5	1	
Pb	208	1	nogas	0.016	100.7	5797	22.4	2.5	
U	238	1	nogas	0.038	40.7	2757	44.3	2.5	
Si	28	1	nogas	-55.406	-51.7	1747135	1.5	5	
Na	23	2	He	116.353	2.9	202633	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	3.466	1.8	3200	2.2	100	
Al	27	2	He	-0.364	-32.8	607	8.1	5	
K	39	2	He	-4.552	-48.0	32746	2.4	100	
Ca	43	2	He	6.063	316.8	30	120.2	100	
Ca	44	2	He	5.743	49.1	627	13.0	100	
V	51	2	He	0.116	11.9	1695	4.1	2.5	
Cr	52	2	He	0.018	118.8	1453	10.7	2.5	
Mn	55	2	He	0.079	25.4	733	12.4	2.5	
Fe	56	2	He	1.879	13.6	22584	6.6	100	
Co	59	2	He	0.007	132.7	240	50.5	2.5	
Ni	60	2	He	0.018	126.9	283	30.0	2.5	
Cu	63	2	He	0.038	52.4	1983	9.7	2	
Zn	66	2	He	-0.062	-87.1	277	32.8	2.5	
As	75	2	He	0.232	7.3	302	6.4	2.5	
Sb	121	2	He	0.155	19.3	3497	5.2	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.631	31.0	64	21.9	2	
Ti	47	2	He	0.005	2042.2	17	124.9	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	4714792	0.26	4912785	95.97	70	120	
In	115	1	nogas	3021724	0.45	3074865	98.27	70	120	
Li	6	1	nogas	915363	2.28	992920	92.19	70	120	
Bi	209	1	nogas	3064590	4.81	3087510	99.26	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1024080	1.35	1094372	93.58	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	101_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:01:54-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	99.687	4.157	576630	0.63	100	99.7	90	110	
B	11	1	nogas	517.666	4.769	1945561	0.45	500	103.5	90	110	
Al	27	1	nogas	103.775	1.755	2272344	1.21	100	103.8	90	110	
P	31	1	nogas	495.161	2.236	567787	0.16	500	99.0	90	110	
Ca	44	1	nogas	10248.549	1.433	7191789	2.17	10000	102.5	90	110	
Ti	47	1	nogas	101.275	1.465	227730	1.06	100	101.3	90	110	
Cr	52	1	nogas	102.068	1.170	2983162	1.61	100	102.1	90	110	
Co	59	1	nogas	100.341	1.500	3280688	0.65	100	100.3	90	110	
Cu	63	1	nogas	104.116	0.951	1810355	1.09	100	104.1	90	110	
Zn	66	1	nogas	103.670	0.789	512237	1.18	100	103.7	90	110	
Se	77	1	nogas	156.711	2.227	40405	3.12	100	156.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.331	4.036	29133	2.19	100	103.3	90	110	
Sr	88	1	nogas	101.771	1.365	4225899	0.42	100	101.8	90	110	
Mo	95	1	nogas	102.677	1.837	867607	0.55	100	102.7	90	110	
Ag	107	1	nogas	101.710	1.826	2373763	0.71	100	101.7	90	110	
Cd	111	1	nogas	102.182	2.108	489716	0.46	100	102.2	90	110	
Sn	118	1	nogas	103.097	0.785	1464984	1.62	100	103.1	90	110	
Sb	121	1	nogas	104.719	1.740	1983894	0.24	100	104.7	90	110	
Ba	137	1	nogas	102.771	1.738	660071	0.52	100	102.8	90	110	
Tl	205	1	nogas	102.947	3.953	4660570	0.38	100	102.9	90	110	
Pb	208	1	nogas	103.129	2.841	6489082	0.79	100	103.1	90	110	
U	238	1	nogas	102.068	4.160	7041082	0.68	100	102.1	90	110	
Li	7	1	nogas	100.196	6.777	2034255	1.95	100	100.2	90	110	
Si	28	1	nogas	4838.645	2.706	6931430	0.06	5000	96.8	90	110	
Tl	203	1	nogas	103.607	4.990	1976980	1.46	100	103.6	90	110	
Na	23	2	He	10432.309	1.022	13797739	0.44	10000	104.3	90	110	
Mg	24	2	He	10328.901	1.774	7550018	0.99	10000	103.3	90	110	
Al	27	2	He	99.193	0.683	34488	0.46	100	99.2	90	110	
K	39	2	He	10136.185	1.952	5507479	1.00	10000	101.4	90	110	
Ca	43	2	He	10205.763	3.998	18660	2.95	10000	102.1	90	110	
Ca	44	2	He	10006.724	1.602	315602	0.89	10000	100.1	90	110	
V	51	2	He	101.032	0.902	662660	0.55	100	101.0	90	110	
Cr	52	2	He	100.228	0.611	824713	1.64	100	100.2	90	110	
Mn	55	2	He	101.953	0.674	493109	0.76	100	102.0	90	110	
Fe	56	2	He	10464.852	1.177	71327384	0.33	10000	104.6	90	110	
Co	59	2	He	104.137	2.150	1346475	1.32	100	104.1	90	110	
Ni	60	2	He	102.512	2.364	355006	1.34	100	102.5	90	110	
Cu	63	2	He	104.599	1.086	973945	0.13	100	104.6	90	110	
Zn	66	2	He	103.054	0.529	164228	1.34	100	103.1	90	110	
As	75	2	He	102.206	0.285	91477	1.29	100	102.2	90	110	
Sb	121	2	He	103.089	0.851	659168	0.36	100	103.1	90	110	
Se	78	2	He	99.920	1.506	6642	2.43	100	99.9	90	110	
Ti	47	2	He	100.347	1.853	20992	1.83	100	100.3	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	4795903	1.93	4912785	97.62	70	120	
In	115	1	nogas	3020239	1.71	3074865	98.22	70	120	
Li	6	1	nogas	856371	4.74	992920	86.25	70	120	
Bi	209	1	nogas	3075326	3.65	3087510	99.61	70	120	
Ge	72	2	He	1003546	1.07	1094372	91.70	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	102_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:04:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.005	-176.1	173	30.0	1	
B	11	1	nogas	-11.593	-8.0	69165	5.2	10	
Al	27	1	nogas	0.064	75.7	38606	1.7	5	
P	31	1	nogas	-5.958	-5.8	36566	1.6	10	
Ca	44	1	nogas	-0.665	-263.1	27183	4.0	100	
Ti	47	1	nogas	0.069	39.5	273	21.4	2.5	
Cr	52	1	nogas	0.094	6.3	25618	0.5	2.5	
Co	59	1	nogas	0.006	40.2	697	11.1	2.5	
Cu	63	1	nogas	0.029	45.9	4487	5.1	2	
Zn	66	1	nogas	0.043	176.1	1457	24.7	2.5	
Se	77	1	nogas	31.114	6.1	14243	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.796	70.6	232	68.5	2	
Sr	88	1	nogas	0.071	13.1	5021	7.5	2.5	
Mo	95	1	nogas	0.660	11.6	6695	9.5	2.5	
Ag	107	1	nogas	-0.047	-7.0	783	9.7	2.5	
Cd	111	1	nogas	0.006	121.5	70	51.5	1	
Sn	118	1	nogas	0.379	29.3	9396	16.6	5	
Sb	121	1	nogas	0.361	21.5	14286	10.0	2.5	
Ba	137	1	nogas	-0.063	-33.1	783	17.0	2.5	
Tl	205	1	nogas	0.146	42.9	7569	40.7	1	
Pb	208	1	nogas	0.007	338.1	5334	31.2	2.5	
U	238	1	nogas	0.032	27.3	2364	28.6	2.5	
Si	28	1	nogas	-126.265	-44.3	1720001	3.4	5	
Na	23	2	He	102.511	3.8	181036	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	3.411	9.7	3107	7.1	100	
Al	27	2	He	-0.108	-340.9	683	18.1	5	
K	39	2	He	-7.207	-19.2	30782	0.9	100	
Ca	43	2	He	11.946	124.5	40	66.1	100	
Ca	44	2	He	3.324	116.1	540	21.4	100	
V	51	2	He	0.099	4.7	1557	3.0	2.5	
Cr	52	2	He	0.034	58.5	1563	9.1	2.5	
Mn	55	2	He	0.068	40.6	673	21.7	2.5	
Fe	56	2	He	1.802	15.9	21690	8.0	100	
Co	59	2	He	0.006	71.1	230	27.2	2.5	
Ni	60	2	He	0.005	354.2	230	22.6	2.5	
Cu	63	2	He	0.036	30.8	1927	4.5	2	
Zn	66	2	He	-0.021	-257.7	337	24.2	2.5	
As	75	2	He	0.184	28.9	254	20.4	2.5	
Sb	121	2	He	0.244	26.4	4011	9.6	2.5	
Se	78	2	He	0.478	10.8	53	5.8	2	
Ti	47	2	He	0.053	135.4	27	57.3	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4845175	1.04	4912785	98.62	70	120	
In	115	1	nogas	3068539	0.37	3074865	99.79	70	120	
Li	6	1	nogas	915507	1.13	992920	92.20	70	120	
Bi	209	1	nogas	3124769	2.30	3087510	101.21	70	120	
Ge	72	2	He	1007628	1.73	1094372	92.07	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	113_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:31:09-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	100.246	0.425	574188	0.45	100	100.2	90	110	
B	11	1	nogas	510.499	3.523	1901465	3.21	500	102.1	90	110	
Al	27	1	nogas	102.782	0.435	2213562	0.88	100	102.8	90	110	
P	31	1	nogas	496.402	0.625	559697	0.77	500	99.3	90	110	
Ca	44	1	nogas	10168.280	1.169	7015761	0.16	10000	101.7	90	110	
Ti	47	1	nogas	100.711	1.469	222686	1.06	100	100.7	90	110	
Cr	52	1	nogas	102.930	1.456	2957692	0.19	100	102.9	90	110	
Co	59	1	nogas	100.129	0.991	3219284	0.47	100	100.1	90	110	
Cu	63	1	nogas	103.668	1.698	1772744	2.58	100	103.7	90	110	
Zn	66	1	nogas	102.549	0.544	498282	1.51	100	102.5	90	110	
Se	77	1	nogas	165.843	0.436	41604	0.94	100	165.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.780	1.455	28228	1.37	100	101.8	90	110	
Sr	88	1	nogas	102.007	2.264	4151643	2.19	100	102.0	90	110	
Mo	95	1	nogas	102.759	1.030	851107	0.85	100	102.8	90	110	
Ag	107	1	nogas	102.875	1.944	2353450	2.07	100	102.9	90	110	
Cd	111	1	nogas	101.682	1.088	477683	0.67	100	101.7	90	110	
Sn	118	1	nogas	102.244	0.578	1423941	1.16	100	102.2	90	110	
Sb	121	1	nogas	103.102	0.468	1921043	0.93	100	103.1	90	110	
Ba	137	1	nogas	102.791	1.490	647177	2.15	100	102.8	90	110	
Tl	205	1	nogas	104.065	3.945	4614595	0.96	100	104.1	90	110	
Pb	208	1	nogas	102.898	5.128	6337788	1.00	100	102.9	90	110	
U	238	1	nogas	103.249	4.118	6976435	0.77	100	103.2	90	110	
Li	7	1	nogas	101.618	1.928	2043367	1.89	100	101.6	90	110	
Si	28	1	nogas	4920.324	4.129	6900009	1.85	5000	98.4	90	110	
Tl	203	1	nogas	104.364	4.392	1950807	0.62	100	104.4	90	110	
Na	23	2	He	10462.018	0.852	13655534	0.67	10000	104.6	90	110	
Mg	24	2	He	10263.451	1.393	7403856	0.63	10000	102.6	90	110	
Al	27	2	He	102.569	2.433	35170	2.28	100	102.6	90	110	
K	39	2	He	10168.555	0.898	5452812	0.33	10000	101.7	90	110	
Ca	43	2	He	10378.062	3.004	18726	1.80	10000	103.8	90	110	
Ca	44	2	He	10261.328	0.509	319416	1.60	10000	102.6	90	110	
V	51	2	He	102.520	1.175	663562	0.33	100	102.5	90	110	
Cr	52	2	He	100.338	0.114	814750	1.15	100	100.3	90	110	
Mn	55	2	He	102.085	0.755	487260	0.55	100	102.1	90	110	
Fe	56	2	He	10597.604	0.809	71288077	1.06	10000	106.0	90	110	
Co	59	2	He	106.744	0.620	1362195	0.68	100	106.7	90	110	
Ni	60	2	He	105.279	1.561	359814	0.40	100	105.3	90	110	
Cu	63	2	He	107.072	1.064	983900	1.21	100	107.1	90	110	
Zn	66	2	He	103.503	1.689	162758	1.00	100	103.5	90	110	
As	75	2	He	101.849	0.704	89960	1.30	100	101.8	90	110	
Sb	121	2	He	103.385	2.337	652296	1.12	100	103.4	90	110	
Se	78	2	He	103.177	2.605	6769	3.82	100	103.2	90	110	
Ti	47	2	He	101.712	2.293	20995	1.18	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	4715606	1.30	4912785	95.99	70	120	
In	115	1	nogas	2959957	0.90	3074865	96.26	70	120	
Li	6	1	nogas	846884	0.13	992920	85.29	70	120	
Bi	209	1	nogas	3012754	4.34	3087510	97.58	70	120	
Ge	72	2	He	990384	1.22	1094372	90.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	114_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:33:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-69.8	163	15.1	1	
B	11	1	nogas	-12.866	-3.3	63756	2.8	10	
Al	27	1	nogas	0.152	99.7	39776	7.1	5	
P	31	1	nogas	-4.322	-22.9	37614	1.9	10	
Ca	44	1	nogas	-2.672	-54.3	25297	3.4	100	
Ti	47	1	nogas	0.062	27.8	253	14.9	2.5	
Cr	52	1	nogas	0.150	32.6	26766	5.5	2.5	
Co	59	1	nogas	0.015	25.5	970	12.5	2.5	
Cu	63	1	nogas	-0.035	-18.2	3307	2.3	2	
Zn	66	1	nogas	0.007	231.5	1257	5.4	2.5	
Se	77	1	nogas	33.590	6.7	14499	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.736	7.6	212	7.2	2	
Sr	88	1	nogas	0.025	25.6	2997	9.6	2.5	
Mo	95	1	nogas	0.677	25.0	6698	22.6	2.5	
Ag	107	1	nogas	-0.044	-23.9	837	30.7	2.5	
Cd	111	1	nogas	0.011	89.7	93	52.9	1	
Sn	118	1	nogas	0.385	11.1	9279	8.0	5	
Sb	121	1	nogas	0.207	22.9	11147	6.9	2.5	
Ba	137	1	nogas	-0.044	-40.4	887	14.2	2.5	
Tl	205	1	nogas	0.161	37.7	8192	38.1	1	
Pb	208	1	nogas	0.007	196.6	5270	20.9	2.5	
U	238	1	nogas	0.039	37.8	2824	40.6	2.5	
Si	28	1	nogas	-149.584	-35.8	1664086	2.6	5	
Na	23	2	He	44.571	0.8	104521	0.9	100	
Mg	24	2	He	1.397	24.3	1630	14.4	100	
Al	27	2	He	-0.220	-64.5	647	7.6	5	
K	39	2	He	-6.088	-4.8	31433	0.6	100	
Ca	43	2	He	-2.772	-226.4	13	86.6	100	
Ca	44	2	He	1.174	182.8	473	14.1	100	
V	51	2	He	0.112	7.7	1647	3.5	2.5	
Cr	52	2	He	0.034	63.8	1573	12.5	2.5	
Mn	55	2	He	0.045	39.0	560	15.3	2.5	
Fe	56	2	He	1.895	15.2	22357	7.9	100	
Co	59	2	He	0.011	41.2	297	20.3	2.5	
Ni	60	2	He	0.029	8.5	317	3.6	2.5	
Cu	63	2	He	-0.019	-71.0	1413	8.2	2	
Zn	66	2	He	-0.003	-2791.6	367	34.5	2.5	
As	75	2	He	0.208	23.8	277	16.9	2.5	
Sb	121	2	He	0.138	11.5	3337	4.0	2.5	
Se	78	2	He	0.617	8.1	62	5.6	2	
Ti	47	2	He	-0.042	-65.9	7	86.6	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4757016	1.15	4912785	96.83	70	120	
In	115	1	nogas	2997033	1.72	3074865	97.47	70	120	
Li	6	1	nogas	907382	0.73	992920	91.39	70	120	
Bi	209	1	nogas	3085441	4.17	3087510	99.93	70	120	
Ge	72	2	He	1008825	0.94	1094372	92.18	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:52:53-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	100.453	3.885	571727	0.32	100	100.5	90	110	
B	11	1	nogas	509.819	5.725	1886455	2.12	500	102.0	90	110	
Al	27	1	nogas	101.381	1.958	2171959	1.91	100	101.4	90	110	
P	31	1	nogas	494.699	2.372	554837	1.63	500	98.9	90	110	
Ca	44	1	nogas	10209.064	1.774	7005209	0.91	10000	102.1	90	110	
Ti	47	1	nogas	101.194	2.709	222515	1.89	100	101.2	90	110	
Cr	52	1	nogas	101.412	1.409	2898608	0.91	100	101.4	90	110	
Co	59	1	nogas	100.977	2.425	3228674	1.82	100	101.0	90	110	
Cu	63	1	nogas	104.544	0.720	1777782	1.23	100	104.5	90	110	
Zn	66	1	nogas	103.245	1.283	498891	1.34	100	103.2	90	110	
Se	77	1	nogas	134.872	3.001	35031	1.70	100	134.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.169	3.930	27900	3.13	100	101.2	90	110	
Sr	88	1	nogas	100.034	2.171	4065371	0.83	100	100.0	90	110	
Mo	95	1	nogas	104.450	0.235	863972	1.14	100	104.5	90	110	
Ag	107	1	nogas	101.688	0.862	2323077	0.52	100	101.7	90	110	
Cd	111	1	nogas	101.030	0.574	474007	1.25	100	101.0	90	110	
Sn	118	1	nogas	101.867	1.274	1416777	1.53	100	101.9	90	110	
Sb	121	1	nogas	106.447	1.576	1972188	1.03	100	106.4	90	110	
Ba	137	1	nogas	101.702	2.325	639349	1.51	100	101.7	90	110	
Tl	205	1	nogas	104.535	6.662	4656968	2.47	100	104.5	90	110	
Pb	208	1	nogas	102.716	5.110	6361043	0.88	100	102.7	90	110	
U	238	1	nogas	101.314	3.405	6884300	1.17	100	101.3	90	110	
Li	7	1	nogas	100.597	4.697	2010530	1.11	100	100.6	90	110	
Si	28	1	nogas	4870.053	2.205	6811732	1.25	5000	97.4	90	110	
Tl	203	1	nogas	103.947	4.097	1953832	1.50	100	103.9	90	110	
Na	23	2	He	10318.160	0.984	13616825	0.21	10000	103.2	90	110	
Mg	24	2	He	10227.497	1.881	7459155	1.01	10000	102.3	90	110	
Al	27	2	He	98.497	1.610	34178	2.21	100	98.5	90	110	
K	39	2	He	9970.408	1.934	5405883	0.90	10000	99.7	90	110	
Ca	43	2	He	10613.189	0.610	19367	1.70	10000	106.1	90	110	
Ca	44	2	He	10119.156	1.593	318429	0.66	10000	101.2	90	110	
V	51	2	He	101.727	1.197	665723	0.79	100	101.7	90	110	
Cr	52	2	He	100.550	1.213	825432	0.94	100	100.5	90	110	
Mn	55	2	He	101.923	1.443	491854	1.29	100	101.9	90	110	
Fe	56	2	He	10440.885	2.107	71006301	1.88	10000	104.4	90	110	
Co	59	2	He	102.800	1.446	1326385	1.64	100	102.8	90	110	
Ni	60	2	He	103.714	1.711	358381	0.68	100	103.7	90	110	
Cu	63	2	He	105.413	1.688	979284	0.63	100	105.4	90	110	
Zn	66	2	He	102.967	2.006	163699	0.93	100	103.0	90	110	
As	75	2	He	102.012	1.383	91092	0.91	100	102.0	90	110	
Sb	121	2	He	104.642	2.042	667504	0.87	100	104.6	90	110	
Se	78	2	He	101.524	3.941	6731	2.79	100	101.5	90	110	
Ti	47	2	He	101.511	1.265	21189	1.74	100	101.5	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	4689781	0.86	4912785	95.46	70	120	
In	115	1	nogas	2956055	1.35	3074865	96.14	70	120	
Li	6	1	nogas	842293	3.57	992920	84.83	70	120	
Bi	209	1	nogas	3029055	4.25	3087510	98.11	70	120	
Ge	72	2	He	1001317	1.16	1094372	91.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:55:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.007	-52.6	153	15.4	1	
B	11	1	nogas	-12.189	-7.2	64308	4.4	10	
Al	27	1	nogas	0.179	24.5	39909	2.7	5	
P	31	1	nogas	-4.006	-28.2	37518	3.3	10	
Ca	44	1	nogas	-2.861	-20.7	24880	1.5	100	
Ti	47	1	nogas	0.093	63.2	320	40.6	2.5	
Cr	52	1	nogas	0.006	685.7	22364	5.2	2.5	
Co	59	1	nogas	0.012	10.3	850	4.2	2.5	
Cu	63	1	nogas	-0.055	-17.4	2917	5.2	2	
Zn	66	1	nogas	-0.021	-186.5	1110	16.9	2.5	
Se	77	1	nogas	20.908	12.4	11724	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.792	35.8	225	34.5	2	
Sr	88	1	nogas	0.017	37.1	2690	9.7	2.5	
Mo	95	1	nogas	0.784	19.6	7662	16.7	2.5	
Ag	107	1	nogas	0.037	71.0	2740	21.8	2.5	
Cd	111	1	nogas	0.006	58.2	70	24.7	1	
Sn	118	1	nogas	0.348	25.6	8846	13.9	5	
Sb	121	1	nogas	0.925	14.8	24317	10.2	2.5	
Ba	137	1	nogas	-0.034	-7.8	960	1.8	2.5	
Tl	205	1	nogas	0.192	36.8	9410	35.9	1	
Pb	208	1	nogas	0.010	147.7	5327	18.7	2.5	
U	238	1	nogas	0.037	39.6	2584	40.8	2.5	
Si	28	1	nogas	-31.617	-234.1	1767024	4.2	5	
Na	23	2	He	32.458	3.3	87952	1.2	100	
Mg	24	2	He	0.918	14.2	1273	8.5	100	
Al	27	2	He	-0.238	-21.4	637	2.4	5	
K	39	2	He	-6.376	-23.0	31093	1.7	100	
Ca	43	2	He	2.715	229.4	23	49.5	100	
Ca	44	2	He	-0.121	-912.0	430	8.4	100	
V	51	2	He	0.061	31.7	1301	9.2	2.5	
Cr	52	2	He	-0.015	-86.9	1160	8.3	2.5	
Mn	55	2	He	0.025	48.2	460	13.2	2.5	
Fe	56	2	He	1.870	17.9	22077	10.5	100	
Co	59	2	He	0.007	63.2	240	25.3	2.5	
Ni	60	2	He	0.012	113.6	257	19.6	2.5	
Cu	63	2	He	-0.033	-42.5	1283	10.8	2	
Zn	66	2	He	0.017	6.4	397	1.5	2.5	
As	75	2	He	0.254	16.7	316	11.1	2.5	
Sb	121	2	He	0.720	7.9	7028	5.7	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.815	29.6	75	20.3	2	
Ti	47	2	He	0.054	51.8	27	21.7	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	4702195	0.37	4912785	95.71	70	120	
In	115	1	nogas	3030179	0.55	3074865	98.55	70	120	
Li	6	1	nogas	880272	1.40	992920	88.65	70	120	
Bi	209	1	nogas	3034629	2.35	3087510	98.29	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1003007	1.04	1094372	91.65	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	146_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:52:32-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	102.014	2.093	536178	0.70	100	102.0	90	110	
B	11	1	nogas	544.882	1.420	1856147	1.31	500	109.0	90	110	
Al	27	1	nogas	100.141	1.385	2106011	3.03	100	100.1	90	110	
P	31	1	nogas	476.119	1.726	525489	0.22	500	95.2	90	110	
Ca	44	1	nogas	10044.432	1.043	6763622	0.99	10000	100.4	90	110	
Ti	47	1	nogas	99.837	2.296	215400	0.85	100	99.8	90	110	
Cr	52	1	nogas	102.010	2.297	2860450	0.82	100	102.0	90	110	
Co	59	1	nogas	101.154	2.595	3173197	0.96	100	101.2	90	110	
Cu	63	1	nogas	102.203	1.958	1705182	1.05	100	102.2	90	110	
Zn	66	1	nogas	103.436	1.582	490378	0.10	100	103.4	90	110	
Se	77	1	nogas	117.569	1.733	30900	1.85	100	117.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.263	5.880	27129	5.26	100	100.3	90	110	
Sr	88	1	nogas	102.712	2.331	4035645	1.44	100	102.7	90	110	
Mo	95	1	nogas	105.115	2.345	840464	1.50	100	105.1	90	110	
Ag	107	1	nogas	104.549	3.430	2308707	2.53	100	104.5	90	110	
Cd	111	1	nogas	103.243	2.635	468244	2.03	100	103.2	90	110	
Sn	118	1	nogas	106.508	1.283	1431898	0.87	100	106.5	90	110	
Sb	121	1	nogas	107.169	1.348	1948247	0.99	100	107.2	90	110	
Ba	137	1	nogas	105.104	2.100	638764	1.21	100	105.1	90	110	
Tl	205	1	nogas	105.638	4.822	4574276	0.70	100	105.6	90	110	
Pb	208	1	nogas	104.216	5.171	6269703	0.99	100	104.2	90	110	
U	238	1	nogas	103.124	4.784	6805029	1.21	100	103.1	90	110	
Li	7	1	nogas	102.722	3.754	1894117	1.21	100	102.7	90	110	
Si	28	1	nogas	4848.890	1.977	6662098	0.23	5000	97.0	90	110	
Tl	203	1	nogas	105.425	7.186	1923293	3.09	100	105.4	90	110	
Na	23	2	He	10192.456	1.526	13032413	0.60	10000	101.9	90	110	
Mg	24	2	He	10067.937	1.452	7114554	0.85	10000	100.7	90	110	
Al	27	2	He	99.579	3.813	33463	3.10	100	99.6	90	110	
K	39	2	He	10079.959	1.289	5295059	0.29	10000	100.8	90	110	
Ca	43	2	He	10273.866	4.425	18169	5.42	10000	102.7	90	110	
Ca	44	2	He	9981.903	1.835	304339	1.07	10000	99.8	90	110	
V	51	2	He	99.682	1.389	632041	0.65	100	99.7	90	110	
Cr	52	2	He	98.886	2.601	786401	1.12	100	98.9	90	110	
Mn	55	2	He	101.163	2.000	472943	0.44	100	101.2	90	110	
Fe	56	2	He	10492.309	2.087	69128571	0.71	10000	104.9	90	110	
Co	59	2	He	103.584	2.520	1294748	1.87	100	103.6	90	110	
Ni	60	2	He	102.752	3.351	343960	2.16	100	102.8	90	110	
Cu	63	2	He	103.997	2.061	936040	0.68	100	104.0	90	110	
Zn	66	2	He	102.350	2.880	157639	1.33	100	102.4	90	110	
As	75	2	He	101.944	2.300	88188	0.87	100	101.9	90	110	
Sb	121	2	He	103.501	2.289	639705	1.31	100	103.5	90	110	
Se	78	2	He	100.874	1.801	6481	0.37	100	100.9	90	110	
Ti	47	2	He	98.500	2.073	19918	0.65	100	98.5	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	4601951	1.67	4912785	93.67	70	120	
In	115	1	nogas	2857808	0.90	3074865	92.94	70	120	
Li	6	1	nogas	777369	2.41	992920	78.29	70	120	
Bi	209	1	nogas	2942727	4.29	3087510	95.31	70	120	
Ge	72	2	He	970191	1.57	1094372	88.65	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	147_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:54:48-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.001	627.6	192	19.6	1	
B	11	1	nogas	5.051	23.7	122004	1.7	10	
Al	27	1	nogas	0.643	20.5	48924	4.5	5	
P	31	1	nogas	-5.391	-36.9	35490	3.9	10	
Ca	44	1	nogas	-0.964	-81.3	25782	4.0	100	
Ti	47	1	nogas	0.082	49.2	290	29.5	2.5	
Cr	52	1	nogas	-0.068	-63.4	19938	4.8	2.5	
Co	59	1	nogas	0.014	31.2	917	13.6	2.5	
Cu	63	1	nogas	0.014	63.2	4034	2.8	2	
Zn	66	1	nogas	-0.009	-327.2	1150	13.7	2.5	
Se	77	1	nogas	9.375	32.7	9206	5.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.820	57.7	229	55.9	2	
Sr	88	1	nogas	0.018	21.1	2680	7.3	2.5	
Mo	95	1	nogas	0.705	26.5	6821	24.0	2.5	
Ag	107	1	nogas	0.038	65.4	2697	22.1	2.5	
Cd	111	1	nogas	0.011	35.3	90	19.2	1	
Sn	118	1	nogas	0.496	13.0	10670	10.0	5	
Sb	121	1	nogas	0.541	18.5	16922	9.0	2.5	
Ba	137	1	nogas	-0.045	-42.0	867	11.8	2.5	
Tl	205	1	nogas	0.265	32.6	12569	33.8	1	
Pb	208	1	nogas	0.031	146.5	6571	40.9	2.5	
U	238	1	nogas	0.032	43.7	2274	45.6	2.5	
Si	28	1	nogas	-2.027	-2870.3	1769733	3.8	5	
Na	23	2	He	34.324	5.3	87428	2.1	100	
Mg	24	2	He	1.130	11.8	1380	6.2	100	
Al	27	2	He	0.364	107.9	813	15.4	5	
K	39	2	He	-3.867	-27.2	31380	1.3	100	
Ca	43	2	He	14.538	157.7	43	93.3	100	
Ca	44	2	He	-0.093	-1106.1	417	7.7	100	
V	51	2	He	0.044	41.4	1153	9.7	2.5	
Cr	52	2	He	-0.004	-588.9	1207	16.2	2.5	
Mn	55	2	He	0.040	29.7	513	11.4	2.5	
Fe	56	2	He	2.136	9.7	23088	5.4	100	
Co	59	2	He	0.012	45.6	293	23.9	2.5	
Ni	60	2	He	-0.009	-48.9	177	8.6	2.5	
Cu	63	2	He	-0.005	-167.7	1490	4.4	2	
Zn	66	2	He	-0.018	-443.6	330	36.7	2.5	
As	75	2	He	0.265	17.5	314	12.6	2.5	
Sb	121	2	He	0.480	6.9	5318	3.2	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.644	35.2	61	23.6	2	
Ti	47	2	He	0.059	129.3	27	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	4629201	1.89	4912785	94.23	70	120	
In	115	1	nogas	2949936	1.68	3074865	95.94	70	120	
Li	6	1	nogas	843488	2.66	992920	84.95	70	120	
Bi	209	1	nogas	3010617	3.14	3087510	97.51	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	969942	0.67	1094372	88.63	70	120	

Sample Report

Sample Table

Sample Name	MBLK-156348
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:59:06-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	-0.019	-0.019	-50.53	80	-0.02	2000	
B	11	1	nogas	0.791	0.791	68.76	111463	0.00	2000	
Al	27	1	nogas	7.504	7.504	3.66	194725	0.00	2000	
Ca	44	1	nogas	-3.139	-3.139	-48.98	24697	-0.01	200000	
Ti	47	1	nogas	0.054	0.054	97.54	233	0.02	2000	
Cr	52	1	nogas	-0.138	-0.138	-18.37	18269	0.00	2000	
Co	59	1	nogas	-0.005	-0.005	-13.56	333	0.00	2000	
Cu	63	1	nogas	0.135	0.135	57.15	6155	0.00	2000	
Zn	66	1	nogas	0.581	0.581	3.78	4021	0.01	2000	
Se	77	1	nogas	4.039	4.039	62.87	8265	0.05	2000	
Se	82	1	nogas	0.517	0.517	57.62	149	0.35	2000	
Sr	88	1	nogas	0.004	0.004	206.60	2160	0.00	2000	
Mo	95	1	nogas	0.166	0.166	23.38	2424	0.01	2000	
Ag	107	1	nogas	-0.021	-0.021	-44.07	1403	0.00	2000	
Cd	111	1	nogas	-0.003	-0.003	-226.71	27	-0.01	2000	
Sn	118	1	nogas	0.006	0.006	44.44	3977	0.00	2000	
Sb	121	1	nogas	-0.096	-0.096	-19.88	5424	0.00	2000	
Ba	137	1	nogas	-0.094	-0.094	-29.80	573	-0.02	2000	
Tl	205	1	nogas	0.010	0.010	15.78	1420	0.00	2000	
Pb	208	1	nogas	-0.032	-0.032	-4.93	3150	0.00	2000	
U	238	1	nogas	0.001	0.001	39.93	197	0.00	2000	
Li	7	1	nogas	-0.694	-0.694	-4.48	68357	0.00	1000	
Si	28	1	nogas	910.767	910.767	6.93	2741653	0.03	2000	
Tl	203	1	nogas	0.006	0.006	48.43	563	0.00	2000	
Na	23	2	He	33.378	33.378	5.78	89592	0.04	200000	
Mg	24	2	He	15.333	15.333	2.73	11861	0.13	200000	
Al	27	2	He	7.067	7.067	6.00	3137	0.23	2000	
K	39	2	He	-7.725	-7.725	-21.80	30519	-0.03	200000	
Ca	43	2	He	2.659	2.659	233.60	23	11.39	200000	
Ca	44	2	He	-1.973	-1.973	-90.22	373	-0.53	200000	
V	51	2	He	0.029	0.029	61.07	1094	0.00	2000	
Cr	52	2	He	-0.030	-0.030	-26.13	1040	0.00	2000	
Mn	55	2	He	0.021	0.021	37.78	443	0.00	2000	
Fe	56	2	He	3.032	3.032	4.60	30132	0.01	200000	
Co	59	2	He	-0.004	-0.004	-57.24	100	0.00	2000	
Ni	60	2	He	0.213	0.213	14.29	957	0.02	2000	

Sample Report

Cu	63	2	He	0.043	0.043	14.12	1993	0.00	2000	
Zn	66	2	He	0.628	0.628	25.64	1373	0.05	2000	
As	75	2	He	0.006	0.006	192.04	94	0.01	2000	
Sb	121	2	He	-0.089	-0.089	-13.11	1883	0.00	2000	
Se	78	2	He	0.037	0.037	401.98	23	0.16	2000	
Ti	47	2	He	-0.010	-0.010	-573.16	13	-0.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4704316	0.68	4912785	95.76	70	120	
In	115	1	nogas	3026180	1.27	3074865	98.42	70	120	
Li	6	1	nogas	877572	0.33	992920	88.38	70	120	
Bi	209	1	nogas	3504701	11.87	3087510	113.51	70	120	
Ge	72	2	He	1007914	0.90	1094372	92.10	70	120	

Sample Report

Sample Table

Sample Name	LCS-156348
Data File Name	149SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:01:28-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.717	43.717	4.63	262272	0.02	2000	
B	11	1	nogas	2.908	2.908	26.53	120468	0.00	2000	
Al	27	1	nogas	53.013	53.013	0.59	1196732	0.00	2000	
Ca	44	1	nogas	4539.076	4539.076	0.30	3248753	0.14	200000	
Ti	47	1	nogas	42.944	42.944	1.37	98087	0.04	2000	
Cr	52	1	nogas	45.848	45.848	3.66	1372714	0.00	2000	
Co	59	1	nogas	45.917	45.917	3.69	1523775	0.00	2000	
Cu	63	1	nogas	46.952	46.952	1.89	830792	0.01	2000	
Zn	66	1	nogas	50.269	50.269	1.46	252755	0.02	2000	
Se	77	1	nogas	51.542	51.542	4.10	18647	0.28	2000	
Se	82	1	nogas	47.608	47.608	0.62	13634	0.35	2000	
Sr	88	1	nogas	0.060	0.060	6.46	4504	0.00	2000	
Mo	95	1	nogas	44.438	44.438	3.29	377876	0.01	2000	
Ag	107	1	nogas	45.623	45.623	2.21	1070972	0.00	2000	
Cd	111	1	nogas	47.112	47.112	2.40	226918	0.02	2000	
Sn	118	1	nogas	0.020	0.020	163.34	4184	0.00	2000	
Sb	121	1	nogas	45.384	45.384	1.83	876982	0.01	2000	
Ba	137	1	nogas	46.800	46.800	2.73	302677	0.02	2000	
Tl	205	1	nogas	44.638	44.638	8.55	2080605	0.00	2000	
Pb	208	1	nogas	45.778	45.778	7.76	2967879	0.00	2000	
U	238	1	nogas	0.000	0.000	-1478.63	80	0.00	2000	
Li	7	1	nogas	-0.671	-0.671	-12.80	69574	0.00	1000	
Si	28	1	nogas	959.428	959.428	5.45	2888535	0.03	2000	
Tl	203	1	nogas	42.825	42.825	9.49	841238	0.01	2000	
Na	23	2	He	4700.026	4700.026	1.52	6339196	0.07	200000	
Mg	24	2	He	4725.351	4725.351	1.85	3508844	0.13	200000	
Al	27	2	He	52.907	52.907	5.03	19020	0.28	2000	
K	39	2	He	4709.106	4709.106	2.09	2617843	0.18	200000	
Ca	43	2	He	4396.510	4396.510	3.72	8175	53.78	200000	
Ca	44	2	He	4493.525	4493.525	1.64	144199	3.12	200000	
V	51	2	He	45.475	45.475	2.07	303441	0.01	2000	
Cr	52	2	He	45.701	45.701	1.80	382617	0.01	2000	
Mn	55	2	He	46.767	46.767	1.10	229955	0.02	2000	
Fe	56	2	He	4734.381	4734.381	1.15	32783183	0.01	200000	
Co	59	2	He	47.579	47.579	2.94	624916	0.01	2000	
Ni	60	2	He	47.918	47.918	2.12	168678	0.03	2000	
Cu	63	2	He	49.031	49.031	1.76	464569	0.01	2000	
Zn	66	2	He	50.059	50.059	1.41	81222	0.06	2000	

Sample Report

As	75	2	He	47.499	47.499	2.51	43222	0.11	2000	
Sb	121	2	He	47.419	47.419	3.27	309256	0.02	2000	
Se	78	2	He	50.614	50.614	1.04	3428	1.48	2000	
Ti	47	2	He	45.455	45.455	1.35	9669	0.47	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	4867937	1.62	4912785	99.09	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	3034831	1.45	3074865	98.70	70	120	
Li	6	1	nogas	887393	2.81	992920	89.37	70	120	
Bi	209	1	nogas	3174507	6.66	3087510	102.82	70	120	
Ge	72	2	He	1019409	1.52	1094372	93.15	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04SD
Data File Name	154SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:13:13-05:00
Sample Type	Sample
Dilution	5
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.211	1.054	4.89	1363	0.02	2000	
B	11	1	nogas	16.611	83.054	4.60	159719	0.01	2000	
Al	27	1	nogas	3.789	18.947	0.78	108937	0.00	2000	
Ca	44	1	nogas	21506.249	107531.244	0.53	13847161	0.16	200000	
Ti	47	1	nogas	0.663	3.313	9.92	1477	0.04	2000	
Cr	52	1	nogas	0.212	1.062	12.25	26483	0.00	2000	
Co	59	1	nogas	0.285	1.424	1.85	9009	0.00	2000	
Cu	63	1	nogas	0.473	2.365	4.26	11164	0.00	2000	
Zn	66	1	nogas	2.443	12.213	0.82	12204	0.02	2000	
Se	77	1	nogas	13.688	68.439	8.60	9603	0.14	2000	
Se	82	1	nogas	0.603	3.013	29.76	162	0.37	2000	
Sr	88	1	nogas	146.897	734.485	0.59	5831094	0.00	2000	
Mo	95	1	nogas	1.047	5.236	7.79	9426	0.01	2000	
Ag	107	1	nogas	-0.009	-0.047	-136.18	1587	0.00	2000	
Cd	111	1	nogas	0.236	1.178	8.88	1117	0.02	2000	
Sn	118	1	nogas	0.070	0.349	17.17	4661	0.00	2000	
Sb	121	1	nogas	0.088	0.440	13.90	8272	0.00	2000	
Ba	137	1	nogas	100.139	500.693	0.50	614997	0.02	2000	
Tl	205	1	nogas	0.231	1.157	4.10	10944	0.00	2000	
Pb	208	1	nogas	0.215	1.074	7.28	17781	0.00	2000	
U	238	1	nogas	0.154	0.772	6.39	10424	0.00	2000	
Li	7	1	nogas	3.296	16.478	2.41	139989	0.00	1000	
Si	28	1	nogas	29165.543	145827.717	1.06	29935510	0.10	2000	>LDR
Tl	203	1	nogas	0.227	1.133	5.54	4557	0.00	2000	
Na	23	2	He	7502.448	37512.238	2.55	9345739	0.08	200000	
Mg	24	2	He	3591.839	17959.193	1.81	2470223	0.15	200000	
Al	27	2	He	3.839	19.193	17.94	1907	0.20	2000	
K	39	2	He	665.476	3327.379	2.65	370514	0.18	200000	
Ca	43	2	He	20641.558	103207.788	3.09	35488	58.17	200000	
Ca	44	2	He	21020.437	105102.183	0.45	623288	3.37	200000	
V	51	2	He	0.284	1.422	3.42	2601	0.01	2000	
Cr	52	2	He	0.250	1.251	15.97	3137	0.01	2000	
Mn	55	2	He	821.709	4108.546	0.74	3736504	0.02	2000	
Fe	56	2	He	1324.795	6623.976	1.17	8502271	0.02	200000	
Co	59	2	He	0.280	1.400	2.89	3544	0.01	2000	
Ni	60	2	He	0.403	2.015	3.30	1513	0.03	2000	
Cu	63	2	He	0.408	2.041	10.08	5061	0.01	2000	
Zn	66	2	He	2.402	12.012	4.48	3940	0.06	2000	

Sample Report

As	75	2	He	0.507	2.534	8.91	510	0.10	2000	
Sb	121	2	He	0.083	0.413	10.51	2794	0.00	2000	
Se	78	2	He	0.224	1.120	174.74	33	0.67	2000	
Ti	47	2	He	0.318	1.589	52.56	77	0.41	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	4409059	0.74	4912785	89.75	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2887288	0.59	3074865	93.90	70	120	
Li	6	1	nogas	828624	0.87	992920	83.45	70	120	
Bi	209	1	nogas	2989776	5.33	3087510	96.83	70	120	
Ge	72	2	He	944093	1.25	1094372	86.27	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04MS
Data File Name	155SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:15:33-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	44.808	44.808	0.54	246215	0.02	2000	
B	11	1	nogas	71.289	71.289	1.10	341091	0.02	2000	
Al	27	1	nogas	56.274	56.274	2.81	1157040	0.00	2000	
Ca	44	1	nogas	109715.497	109715.497	1.19	71059482	0.15	200000	
Ti	47	1	nogas	47.203	47.203	1.61	98382	0.05	2000	
Cr	52	1	nogas	46.821	46.821	1.10	1278905	0.00	2000	
Co	59	1	nogas	46.333	46.333	0.44	1403483	0.00	2000	
Cu	63	1	nogas	45.905	45.905	0.15	741366	0.01	2000	
Zn	66	1	nogas	50.554	50.554	1.20	231943	0.02	2000	
Se	77	1	nogas	61.682	61.682	2.36	18984	0.32	2000	
Se	82	1	nogas	53.301	53.301	3.39	13927	0.38	2000	
Sr	88	1	nogas	738.679	738.679	2.06	28625135	0.00	2000	
Mo	95	1	nogas	49.891	49.891	0.85	394148	0.01	2000	
Ag	107	1	nogas	45.591	45.591	1.43	994478	0.00	2000	
Cd	111	1	nogas	47.564	47.564	0.50	212904	0.02	2000	
Sn	118	1	nogas	-0.026	-0.026	-61.80	3287	0.00	2000	
Sb	121	1	nogas	48.281	48.281	1.40	850957	0.01	2000	
Ba	137	1	nogas	556.153	556.153	1.37	3330464	0.02	2000	
Tl	205	1	nogas	45.402	45.402	5.75	1954146	0.00	2000	
Pb	208	1	nogas	46.661	46.661	6.86	2791139	0.00	2000	
U	238	1	nogas	0.790	0.790	7.37	51835	0.00	2000	
Li	7	1	nogas	20.173	20.173	0.30	450013	0.00	1000	
Si	28	1	nogas	144531.421	144531.421	0.97	142717575	0.10	2000	>LDR
Tl	203	1	nogas	43.907	43.907	7.93	796006	0.01	2000	
Na	23	2	He	41184.842	41184.842	1.28	51002556	0.08	200000	
Mg	24	2	He	22026.380	22026.380	0.68	15112343	0.15	200000	
Al	27	2	He	56.411	56.411	3.94	18699	0.30	2000	
K	39	2	He	7804.372	7804.372	0.47	3988000	0.20	200000	
Ca	43	2	He	110572.870	110572.870	0.42	189632	58.31	200000	
Ca	44	2	He	107298.930	107298.930	0.90	3172561	3.38	200000	
V	51	2	He	46.083	46.083	0.70	284164	0.02	2000	
Cr	52	2	He	45.055	45.055	0.78	348601	0.01	2000	
Mn	55	2	He	3958.003	3958.003	1.11	17956211	0.02	2000	>LDR
Fe	56	2	He	10873.650	10873.650	1.52	69567147	0.02	200000	
Co	59	2	He	46.171	46.171	0.68	560466	0.01	2000	
Ni	60	2	He	45.453	45.453	1.87	147871	0.03	2000	
Cu	63	2	He	46.377	46.377	1.28	406156	0.01	2000	
Zn	66	2	He	49.764	49.764	0.82	74611	0.07	2000	

Sample Report

As	75	2	He	48.961	48.961	0.97	41172	0.12	2000	
Sb	121	2	He	48.031	48.031	1.45	289490	0.02	2000	
Se	78	2	He	48.843	48.843	2.14	3057	1.60	2000	
Ti	47	2	He	46.284	46.284	1.08	9096	0.51	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	4441758	0.58	4912785	90.41	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2819941	1.55	3074865	91.71	70	120	
Li	6	1	nogas	812129	0.14	992920	81.79	70	120	
Bi	209	1	nogas	2927795	6.60	3087510	94.83	70	120	
Ge	72	2	He	941899	0.14	1094372	86.07	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04MSD
Data File Name	156SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:17:52-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.998	43.998	1.15	240432	0.02	2000	
B	11	1	nogas	69.552	69.552	1.65	333408	0.02	2000	
Al	27	1	nogas	54.359	54.359	1.34	1131415	0.00	2000	
Ca	44	1	nogas	107411.853	107411.853	1.26	70354451	0.15	200000	
Ti	47	1	nogas	45.437	45.437	2.25	95752	0.05	2000	
Cr	52	1	nogas	44.419	44.419	2.39	1227789	0.00	2000	
Co	59	1	nogas	44.576	44.576	1.57	1365615	0.00	2000	
Cu	63	1	nogas	44.697	44.697	1.64	730063	0.01	2000	
Zn	66	1	nogas	49.444	49.444	1.77	229434	0.02	2000	
Se	77	1	nogas	59.528	59.528	3.48	18773	0.32	2000	
Se	82	1	nogas	51.193	51.193	3.64	13523	0.38	2000	
Sr	88	1	nogas	720.044	720.044	1.81	28110994	0.00	2000	
Mo	95	1	nogas	50.384	50.384	1.36	400958	0.01	2000	
Ag	107	1	nogas	45.138	45.138	0.58	991949	0.00	2000	
Cd	111	1	nogas	46.741	46.741	1.10	210745	0.02	2000	
Sn	118	1	nogas	-0.030	-0.030	-63.06	3260	0.00	2000	
Sb	121	1	nogas	47.033	47.033	1.74	838463	0.01	2000	
Ba	137	1	nogas	549.897	549.897	1.69	3317376	0.02	2000	
Tl	205	1	nogas	47.410	47.410	10.02	2032714	0.00	2000	
Pb	208	1	nogas	46.319	46.319	6.81	2765380	0.00	2000	
U	238	1	nogas	0.776	0.776	3.69	50892	0.00	2000	
Li	7	1	nogas	19.855	19.855	2.11	441663	0.00	1000	
Si	28	1	nogas	141528.468	141528.468	0.96	141369921	0.10	2000	>LDR
Tl	203	1	nogas	44.823	44.823	7.50	811080	0.01	2000	
Na	23	2	He	40904.161	40904.161	0.24	50655456	0.08	200000	
Mg	24	2	He	21746.331	21746.331	0.06	14920237	0.15	200000	
Al	27	2	He	54.473	54.473	1.81	18082	0.30	2000	
K	39	2	He	7675.676	7675.676	1.57	3922517	0.20	200000	
Ca	43	2	He	107903.684	107903.684	1.73	185045	58.31	200000	
Ca	44	2	He	106097.099	106097.099	1.50	3136923	3.38	200000	
V	51	2	He	45.512	45.512	0.91	280646	0.02	2000	
Cr	52	2	He	44.299	44.299	1.10	342764	0.01	2000	
Mn	55	2	He	3965.073	3965.073	1.49	17987026	0.02	2000	>LDR
Fe	56	2	He	10918.652	10918.652	1.38	69850266	0.02	200000	
Co	59	2	He	46.159	46.159	0.57	560304	0.01	2000	
Ni	60	2	He	45.108	45.108	1.24	146752	0.03	2000	
Cu	63	2	He	46.536	46.536	0.35	407541	0.01	2000	
Zn	66	2	He	48.976	48.976	1.42	73440	0.07	2000	

Sample Report

As	75	2	He	48.814	48.814	1.18	41047	0.12	2000	
Sb	121	2	He	48.161	48.161	0.87	290262	0.02	2000	
Se	78	2	He	49.790	49.790	1.85	3116	1.60	2000	
Ti	47	2	He	42.053	42.053	3.37	8265	0.51	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	4492447	2.03	4912785	91.44	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2840546	0.56	3074865	92.38	70	120	
Li	6	1	nogas	807717	1.34	992920	81.35	70	120	
Bi	209	1	nogas	2922890	7.43	3087510	94.67	70	120	
Ge	72	2	He	941899	0.63	1094372	86.07	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04PDS
Data File Name	157SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:20:11-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	120.114	120.114	0.92	657875	0.02	2000	
B	11	1	nogas	70.297	70.297	0.74	336800	0.02	2000	
Al	27	1	nogas	130.009	130.009	2.51	2641951	0.00	2000	
Ca	44	1	nogas	118596.970	118596.970	1.24	77224116	0.15	200000	
Ti	47	1	nogas	125.360	125.360	1.99	262462	0.05	2000	
Cr	52	1	nogas	121.622	121.622	0.53	3306751	0.00	2000	
Co	59	1	nogas	119.146	119.146	0.23	3628445	0.00	2000	
Cu	63	1	nogas	119.730	119.730	2.39	1938543	0.01	2000	
Zn	66	1	nogas	129.640	129.640	0.40	596292	0.02	2000	
Se	77	1	nogas	140.133	140.133	2.90	34379	0.41	2000	
Se	82	1	nogas	137.759	137.759	2.60	36185	0.38	2000	
Sr	88	1	nogas	740.461	740.461	6.48	28235058	0.00	2000	
Mo	95	1	nogas	133.569	133.569	6.19	1036676	0.01	2000	
Ag	107	1	nogas	122.652	122.652	6.08	2629632	0.00	2000	
Cd	111	1	nogas	129.292	129.292	4.44	569587	0.02	2000	
Sn	118	1	nogas	-0.011	-0.011	-72.45	3430	0.00	2000	
Sb	121	1	nogas	120.801	120.801	0.83	2130965	0.01	2000	
Ba	137	1	nogas	649.729	649.729	3.95	3830618	0.02	2000	
Tl	205	1	nogas	125.333	125.333	6.59	5418829	0.00	2000	
Pb	208	1	nogas	126.526	126.526	7.57	7598621	0.00	2000	
U	238	1	nogas	0.777	0.777	2.26	51353	0.00	2000	
Li	7	1	nogas	20.044	20.044	1.22	446363	0.00	1000	
Si	28	1	nogas	144732.229	144732.229	1.84	143669361	0.10	2000	>LDR
Tl	203	1	nogas	125.767	125.767	7.39	2292239	0.01	2000	
Na	23	2	He	49529.548	49529.548	1.46	61485142	0.08	200000	
Mg	24	2	He	30388.277	30388.277	1.13	20902848	0.15	200000	
Al	27	2	He	138.832	138.832	1.95	45161	0.31	2000	
K	39	2	He	16027.680	16027.680	2.23	8177285	0.20	200000	
Ca	43	2	He	119646.628	119646.628	1.53	205721	58.16	200000	
Ca	44	2	He	114642.407	114642.407	2.24	3398320	3.37	200000	
V	51	2	He	130.611	130.611	1.74	805934	0.02	2000	
Cr	52	2	He	127.085	127.085	1.53	983653	0.01	2000	
Mn	55	2	He	4082.744	4082.744	1.19	18569353	0.02	2000	>LDR
Fe	56	2	He	19427.270	19427.270	1.12	124602871	0.02	200000	
Co	59	2	He	130.523	130.523	1.56	1588344	0.01	2000	
Ni	60	2	He	128.340	128.340	0.65	418250	0.03	2000	
Cu	63	2	He	130.414	130.414	0.33	1142430	0.01	2000	
Zn	66	2	He	136.407	136.407	1.26	204452	0.07	2000	

Sample Report

As	75	2	He	138.330	138.330	0.43	116480	0.12	2000	
Sb	121	2	He	126.622	126.622	0.89	761399	0.02	2000	
Se	78	2	He	139.421	139.421	1.56	8712	1.60	2000	
Ti	47	2	He	127.023	127.023	0.99	25004	0.51	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	4466339	2.36	4912785	90.91	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2779092	4.23	3074865	90.38	70	120	
Li	6	1	nogas	809849	0.29	992920	81.56	70	120	
Bi	209	1	nogas	2938925	3.59	3087510	95.19	70	120	
Ge	72	2	He	944374	0.84	1094372	86.29	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	158_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:22:29-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.263	2.460	515848	0.54	100	101.3	90	110	
B	11	1	nogas	540.446	4.256	1784361	1.29	500	108.1	90	110	
Al	27	1	nogas	99.195	1.917	2043007	1.76	100	99.2	90	110	
P	31	1	nogas	474.588	1.308	513192	1.08	500	94.9	90	110	
Ca	44	1	nogas	10026.803	0.746	6612926	0.62	10000	100.3	90	110	
Ti	47	1	nogas	100.453	1.918	212301	1.79	100	100.5	90	110	
Cr	52	1	nogas	100.692	1.109	2766124	1.08	100	100.7	90	110	
Co	59	1	nogas	98.936	1.905	3040341	1.77	100	98.9	90	110	
Cu	63	1	nogas	100.898	2.096	1649003	2.15	100	100.9	90	110	
Zn	66	1	nogas	102.725	0.567	477034	0.47	100	102.7	90	110	
Se	77	1	nogas	105.543	4.438	27895	3.18	100	105.5	90	110	
Se	82	1	nogas	103.267	2.839	27373	2.71	100	103.3	90	110	
Sr	88	1	nogas	100.521	2.069	3927868	0.40	100	100.5	90	110	
Mo	95	1	nogas	105.585	1.121	839684	0.95	100	105.6	90	110	
Ag	107	1	nogas	103.076	0.925	2264184	1.04	100	103.1	90	110	
Cd	111	1	nogas	102.761	2.571	463464	1.00	100	102.8	90	110	
Sn	118	1	nogas	101.833	2.604	1361509	1.09	100	101.8	90	110	
Sb	121	1	nogas	107.492	2.306	1913915	2.17	100	107.5	90	110	
Ba	137	1	nogas	103.583	3.423	626015	2.20	100	103.6	90	110	
Tl	205	1	nogas	105.041	6.226	4570156	2.25	100	105.0	90	110	
Pb	208	1	nogas	104.024	4.834	6291087	0.69	100	104.0	90	110	
U	238	1	nogas	102.603	3.461	6807897	0.89	100	102.6	90	110	
Li	7	1	nogas	103.965	4.244	1857076	1.35	100	104.0	90	110	
Si	28	1	nogas	4913.566	0.305	6589556	0.09	5000	98.3	90	110	
Tl	203	1	nogas	105.499	6.759	1934839	2.69	100	105.5	90	110	
Na	23	2	He	10117.343	1.018	12628652	0.43	10000	101.2	90	110	
Mg	24	2	He	10089.702	1.395	6960031	1.06	10000	100.9	90	110	
Al	27	2	He	98.726	1.602	32398	2.15	100	98.7	90	110	
K	39	2	He	10096.514	1.542	5177886	2.16	10000	101.0	90	110	
Ca	43	2	He	10561.335	1.427	18226	1.42	10000	105.6	90	110	
Ca	44	2	He	10166.872	2.146	302577	1.50	10000	101.7	90	110	
V	51	2	He	100.833	0.849	624107	0.55	100	100.8	90	110	
Cr	52	2	He	99.151	0.851	769865	1.24	100	99.2	90	110	
Mn	55	2	He	103.070	1.681	470403	1.26	100	103.1	90	110	
Fe	56	2	He	10447.463	2.149	67197611	1.84	10000	104.5	90	110	
Co	59	2	He	103.607	1.151	1264237	0.54	100	103.6	90	110	
Ni	60	2	He	102.707	2.251	335659	1.59	100	102.7	90	110	
Cu	63	2	He	104.926	1.203	921970	1.05	100	104.9	90	110	
Zn	66	2	He	103.584	0.491	155769	1.03	100	103.6	90	110	
As	75	2	He	103.368	0.456	87301	0.81	100	103.4	90	110	
Sb	121	2	He	108.659	2.240	655474	1.58	100	108.7	90	110	
Se	78	2	He	103.079	1.472	6465	1.53	100	103.1	90	110	
Ti	47	2	He	100.572	3.943	19851	3.34	100	100.6	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	4506890	0.14	4912785	91.74	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2842358	1.65	3074865	92.44	70	120	
Li	6	1	nogas	753539	2.82	992920	75.89	70	120	
Bi	209	1	nogas	2957894	4.25	3087510	95.80	70	120	
Ge	72	2	He	946991	0.68	1094372	86.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	159_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:24:45-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	82.5	245	23.2	1	
B	11	1	nogas	1.404	60.3	106203	2.6	10	
Al	27	1	nogas	0.224	18.9	39050	1.7	5	
P	31	1	nogas	-6.143	-4.4	33730	1.2	10	
Ca	44	1	nogas	2.053	29.0	26996	1.1	100	
Ti	47	1	nogas	0.119	14.7	360	9.6	2.5	
Cr	52	1	nogas	-0.118	-21.7	18019	4.2	2.5	
Co	59	1	nogas	0.020	28.5	1060	16.4	2.5	
Cu	63	1	nogas	0.011	143.3	3864	7.1	2	
Zn	66	1	nogas	-0.030	-60.2	1017	8.2	2.5	
Se	77	1	nogas	1.735	126.5	7442	5.5	2.5	
Se	82	1	nogas	1.298	40.5	349	39.8	2	
Sr	88	1	nogas	0.038	7.6	3440	4.0	2.5	
Mo	95	1	nogas	1.062	15.6	9646	15.0	2.5	
Ag	107	1	nogas	0.061	46.5	3190	21.5	2.5	
Cd	111	1	nogas	0.012	21.7	93	12.4	1	
Sn	118	1	nogas	0.457	10.3	10016	8.2	5	
Sb	121	1	nogas	1.236	7.7	28737	6.2	2.5	
Ba	137	1	nogas	-0.019	-40.4	1017	4.0	2.5	
Tl	205	1	nogas	0.315	34.6	14998	35.1	1	
Pb	208	1	nogas	0.010	142.4	5390	19.3	2.5	
U	238	1	nogas	0.032	23.7	2254	24.8	2.5	
Si	28	1	nogas	37.195	97.1	1756676	2.0	5	CCB Main CR1 Failed
Na	23	2	He	38.341	2.3	91277	0.8	100	
Mg	24	2	He	2.769	6.5	2504	4.9	100	
Al	27	2	He	-0.220	-124.3	613	15.1	5	
K	39	2	He	-1.919	-30.4	31954	1.6	100	
Ca	43	2	He	14.817	57.7	43	35.3	100	
Ca	44	2	He	7.535	30.5	640	10.9	100	
V	51	2	He	0.021	86.4	989	10.7	2.5	
Cr	52	2	He	0.001	933.7	1227	4.0	2.5	
Mn	55	2	He	0.318	0.9	1787	0.3	2.5	
Fe	56	2	He	3.443	4.2	31274	3.8	100	
Co	59	2	He	0.013	69.3	297	37.0	2.5	
Ni	60	2	He	0.008	59.7	230	7.5	2.5	
Cu	63	2	He	-0.014	-129.0	1390	12.2	2	
Zn	66	2	He	-0.046	-123.2	283	30.4	2.5	
As	75	2	He	0.296	5.1	337	4.0	2.5	
Sb	121	2	He	1.029	1.8	8579	2.1	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	1.091	20.2	89	15.0	2	
Ti	47	2	He	0.027	185.6	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4493855	0.63	4912785	91.47	70	120	
In	115	1	nogas	2915654	1.96	3074865	94.82	70	120	
Li	6	1	nogas	819790	1.61	992920	82.56	70	120	
Bi	209	1	nogas	3047867	2.26	3087510	98.72	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	956594	0.79	1094372	87.41	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	160_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:29:31-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.642	3.293	524485	0.56	100	100.6	90	110	
B	11	1	nogas	530.747	5.380	1794244	1.94	500	106.1	90	110	
Al	27	1	nogas	99.578	0.421	2036509	0.12	100	99.6	90	110	
P	31	1	nogas	478.079	0.496	513089	0.83	500	95.6	90	110	
Ca	44	1	nogas	10054.806	1.087	6585226	1.17	10000	100.5	90	110	
Ti	47	1	nogas	98.526	0.287	206785	0.50	100	98.5	90	110	
Cr	52	1	nogas	100.294	1.719	2735964	1.29	100	100.3	90	110	
Co	59	1	nogas	97.750	0.219	2983075	0.74	100	97.8	90	110	
Cu	63	1	nogas	100.752	0.897	1635131	0.81	100	100.8	90	110	
Zn	66	1	nogas	100.761	1.081	464702	1.60	100	100.8	90	110	
Se	77	1	nogas	100.778	1.395	26770	1.01	100	100.8	90	110	
Se	82	1	nogas	103.820	1.939	27330	2.17	100	103.8	90	110	
Sr	88	1	nogas	102.521	1.063	4013572	0.27	100	102.5	90	110	
Mo	95	1	nogas	103.349	1.935	823316	0.76	100	103.3	90	110	
Ag	107	1	nogas	101.913	1.546	2242503	0.81	100	101.9	90	110	
Cd	111	1	nogas	100.417	2.175	453730	1.01	100	100.4	90	110	
Sn	118	1	nogas	101.302	1.531	1357228	2.26	100	101.3	90	110	
Sb	121	1	nogas	104.591	0.542	1849501	0.26	100	104.6	90	110	
Ba	137	1	nogas	101.321	2.276	613556	1.74	100	101.3	90	110	
Tl	205	1	nogas	93.165	9.712	4479844	1.19	100	93.2	90	110	
Pb	208	1	nogas	93.089	9.795	6220069	1.33	100	93.1	90	110	
U	238	1	nogas	92.120	9.986	6748782	1.26	100	92.1	90	110	
Li	7	1	nogas	101.448	3.965	1855958	0.91	100	101.4	90	110	
Si	28	1	nogas	4827.241	1.781	6458870	1.41	5000	96.5	90	110	
Tl	203	1	nogas	92.142	9.875	1867748	1.20	100	92.1	90	110	
Na	23	2	He	10252.499	0.986	12955016	0.99	10000	102.5	90	110	
Mg	24	2	He	10187.886	0.945	7114453	0.30	10000	101.9	90	110	
Al	27	2	He	98.886	4.079	32842	3.35	100	98.9	90	110	
K	39	2	He	10090.814	1.700	5238286	1.44	10000	100.9	90	110	
Ca	43	2	He	10025.940	2.846	17515	2.46	10000	100.3	90	110	
Ca	44	2	He	10067.334	1.234	303336	1.14	10000	100.7	90	110	
V	51	2	He	99.891	0.632	625909	0.18	100	99.9	90	110	
Cr	52	2	He	99.085	1.128	778795	0.52	100	99.1	90	110	
Mn	55	2	He	100.806	2.102	465744	1.62	100	100.8	90	110	
Fe	56	2	He	10402.419	2.936	67728697	2.31	10000	104.0	90	110	
Co	59	2	He	103.492	3.352	1278289	2.71	100	103.5	90	110	
Ni	60	2	He	102.925	2.464	340519	1.85	100	102.9	90	110	
Cu	63	2	He	104.131	1.354	926263	0.81	100	104.1	90	110	
Zn	66	2	He	102.750	1.849	156410	1.39	100	102.7	90	110	
As	75	2	He	102.755	0.790	87851	0.18	100	102.8	90	110	
Sb	121	2	He	104.241	0.703	636731	0.66	100	104.2	90	110	
Se	78	2	He	101.768	0.754	6461	0.49	100	101.8	90	110	
Ti	47	2	He	98.661	1.966	19717	2.01	100	98.7	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	4475544	0.52	4912785	91.10	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2847330	1.28	3074865	92.60	70	120	
Li	6	1	nogas	771081	3.27	992920	77.66	70	120	
Bi	209	1	nogas	3282671	9.14	3087510	106.32	70	120	
Ge	72	2	He	958672	0.65	1094372	87.60	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02SD
Data File Name	164SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:39:00-05:00
Sample Type	Sample
Dilution	10
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	-0.007	-0.071	-53.27	142	-0.01	2000	
B	11	1	nogas	11.329	113.290	8.81	140957	0.01	2000	
Al	27	1	nogas	149.927	1499.273	3.50	3097420	0.00	2000	
Ca	44	1	nogas	25585.411	255854.110	1.15	16981586	0.15	200000	
Ti	47	1	nogas	2.694	26.938	7.59	5852	0.05	2000	
Cr	52	1	nogas	0.463	4.630	4.12	34198	0.00	2000	
Co	59	1	nogas	0.102	1.016	6.70	3610	0.00	2000	
Cu	63	1	nogas	0.324	3.236	9.14	9052	0.00	2000	
Zn	66	1	nogas	1.971	19.709	1.58	10380	0.02	2000	
Se	77	1	nogas	50.218	502.182	9.80	17159	0.29	2000	
Se	82	1	nogas	1.195	11.947	41.36	325	0.37	2000	
Sr	88	1	nogas	756.975	7569.755	4.02	29669304	0.00	2000	
Mo	95	1	nogas	0.090	0.902	29.33	1680	0.01	2000	
Ag	107	1	nogas	-0.037	-0.365	-10.59	970	0.00	2000	
Cd	111	1	nogas	0.002	0.020	311.04	47	0.00	2000	
Sn	118	1	nogas	0.168	1.677	10.60	5914	0.00	2000	
Sb	121	1	nogas	-0.063	-0.627	-40.71	5831	0.00	2000	
Ba	137	1	nogas	10.621	106.211	0.68	65440	0.02	2000	
Tl	205	1	nogas	0.003	0.025	72.70	830	0.00	2000	
Pb	208	1	nogas	0.061	0.613	14.03	8041	0.00	2000	
U	238	1	nogas	0.053	0.530	1.17	3487	0.00	2000	
Li	7	1	nogas	29.854	298.544	2.21	639639	0.00	1000	
Si	28	1	nogas	12269.362	122693.617	1.47	13992942	0.09	2000	>LDR
Tl	203	1	nogas	0.001	0.006	518.73	353	0.00	2000	
Na	23	2	He	70093.652	700936.522	2.85	90352515	0.08	200000	
Mg	24	2	He	17257.477	172574.765	2.95	12328766	0.14	200000	
Al	27	2	He	160.270	1602.705	7.23	54014	0.30	2000	
K	39	2	He	856.349	8563.495	2.12	485755	0.18	200000	
Ca	43	2	He	28451.691	284516.906	0.84	50839	55.96	200000	
Ca	44	2	He	26811.804	268118.041	0.82	825998	3.25	200000	
V	51	2	He	0.720	7.203	3.78	5496	0.01	2000	
Cr	52	2	He	0.162	1.615	8.53	2550	0.01	2000	
Mn	55	2	He	4.364	43.636	3.83	20945	0.02	2000	
Fe	56	2	He	93.093	930.928	1.32	629339	0.01	200000	
Co	59	2	He	0.063	0.633	20.12	943	0.01	2000	
Ni	60	2	He	0.515	5.149	13.12	1953	0.03	2000	
Cu	63	2	He	0.208	2.077	10.64	3437	0.01	2000	
Zn	66	2	He	1.888	18.880	12.81	3300	0.06	2000	

Sample Report

As	75	2	He	0.141	1.410	3.25	210	0.07	2000	
Sb	121	2	He	-0.055	-0.552	-66.10	2044	0.00	2000	
Se	78	2	He	0.252	2.517	58.79	37	0.69	2000	
Ti	47	2	He	3.513	35.126	11.04	733	0.48	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	4546326	0.48	4912785	92.54	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2852905	1.88	3074865	92.78	70	120	
Li	6	1	nogas	825537	2.44	992920	83.14	70	120	
Bi	209	1	nogas	2867282	4.22	3087510	92.87	70	120	
Ge	72	2	He	981045	1.63	1094372	89.64	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02MS
Data File Name	165SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:41:21-05:00
Sample Type	Sample
Dilution	2
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	24.933	49.867	1.40	126104	0.02	2000	
B	11	1	nogas	74.691	149.382	3.23	324288	0.02	2000	
Al	27	1	nogas	877.482	1754.964	2.42	17076307	0.01	2000	
Ca	44	1	nogas	132525.782	265051.563	1.04	83539887	0.16	200000	
Ti	47	1	nogas	46.009	92.018	22.61	93248	0.05	2000	
Cr	52	1	nogas	25.025	50.049	2.23	674706	0.00	2000	
Co	59	1	nogas	24.067	48.134	2.19	709732	0.00	2000	
Cu	63	1	nogas	24.663	49.326	1.52	389288	0.01	2000	
Zn	66	1	nogas	31.378	62.756	2.94	140537	0.02	2000	
Se	77	1	nogas	97.705	195.411	5.55	25275	0.39	2000	
Se	82	1	nogas	27.952	55.904	6.46	7109	0.39	2000	
Sr	88	1	nogas	3832.323	7664.647	4.06	141703361	0.00	2000	>LDR
Mo	95	1	nogas	24.884	49.768	2.96	188037	0.01	2000	
Ag	107	1	nogas	22.624	45.248	1.42	471842	0.00	2000	
Cd	111	1	nogas	24.056	48.112	1.00	102785	0.02	2000	
Sn	118	1	nogas	0.548	1.097	5.13	10387	0.01	2000	
Sb	121	1	nogas	23.042	46.085	1.69	398712	0.01	2000	
Ba	137	1	nogas	81.121	162.242	1.89	464506	0.02	2000	
Tl	205	1	nogas	23.921	47.841	6.16	923650	0.00	2000	
Pb	208	1	nogas	24.803	49.606	5.65	1333367	0.00	2000	
U	238	1	nogas	0.283	0.565	6.21	16729	0.00	2000	
Li	7	1	nogas	160.281	320.563	2.46	2802189	0.01	1000	
Si	28	1	nogas	65260.365	130520.730	1.68	63625542	0.10	2000	>LDR
Tl	203	1	nogas	23.658	47.315	5.18	385300	0.01	2000	
Na	23	2	He	359630.307	719260.614	1.22	445944087	0.08	200000	>LDR
Mg	24	2	He	89058.063	178116.126	1.26	61225714	0.15	200000	
Al	27	2	He	895.758	1791.516	1.09	287504	0.31	2000	
K	39	2	He	6782.579	13565.157	2.02	3477222	0.20	200000	
Ca	43	2	He	148701.619	297403.239	0.74	255537	58.19	200000	
Ca	44	2	He	140076.166	280152.333	1.93	4150025	3.38	200000	
V	51	2	He	26.704	53.408	0.58	165361	0.02	2000	
Cr	52	2	He	24.158	48.317	1.03	187862	0.01	2000	
Mn	55	2	He	43.524	87.048	0.61	198172	0.02	2000	
Fe	56	2	He	2908.970	5817.939	0.73	18655120	0.02	200000	
Co	59	2	He	24.274	48.548	2.10	295323	0.01	2000	
Ni	60	2	He	25.408	50.817	1.88	82919	0.03	2000	
Cu	63	2	He	24.446	48.893	2.16	215244	0.01	2000	
Zn	66	2	He	30.636	61.273	1.52	46161	0.07	2000	

Sample Report

As	75	2	He	25.152	50.305	1.88	21235	0.12	2000	
Sb	121	2	He	23.253	46.505	1.32	141620	0.02	2000	
Se	78	2	He	26.035	52.070	9.03	1642	1.59	2000	
Ti	47	2	He	44.228	88.456	7.85	8710	0.51	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	4323039	0.66	4912785	88.00	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2691424	1.68	3074865	87.53	70	120	
Li	6	1	nogas	747192	2.12	992920	75.25	70	120	
Bi	209	1	nogas	2624263	4.84	3087510	85.00	70	120	
Ge	72	2	He	943824	0.15	1094372	86.24	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02MSD
Data File Name	166SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:43:41-05:00
Sample Type	Sample
Dilution	2
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	25.364	50.729	4.27	126626	0.02	2000	
B	11	1	nogas	76.170	152.341	4.82	324734	0.02	2000	
Al	27	1	nogas	956.674	1913.348	4.20	18872822	0.01	2000	
Ca	44	1	nogas	133624.947	267249.894	0.53	85400435	0.16	200000	
Ti	47	1	nogas	46.235	92.470	12.68	95066	0.05	2000	
Cr	52	1	nogas	25.086	50.173	0.78	685775	0.00	2000	
Co	59	1	nogas	23.901	47.802	0.54	714670	0.00	2000	
Cu	63	1	nogas	24.711	49.421	1.17	395484	0.01	2000	
Zn	66	1	nogas	32.170	64.339	1.48	146059	0.02	2000	
Se	77	1	nogas	104.325	208.649	3.86	26897	0.39	2000	
Se	82	1	nogas	29.514	59.027	3.31	7613	0.39	2000	
Sr	88	1	nogas	3981.339	7962.679	1.77	146635064	0.00	2000	>LDR
Mo	95	1	nogas	25.521	51.041	1.22	192039	0.01	2000	
Ag	107	1	nogas	23.130	46.259	2.22	480275	0.00	2000	
Cd	111	1	nogas	24.142	48.284	3.21	102687	0.02	2000	
Sn	118	1	nogas	0.542	1.084	3.62	10270	0.01	2000	
Sb	121	1	nogas	23.056	46.112	0.75	404524	0.01	2000	
Ba	137	1	nogas	81.888	163.777	1.74	466899	0.02	2000	
Tl	205	1	nogas	24.407	48.814	8.58	933659	0.00	2000	
Pb	208	1	nogas	25.503	51.006	6.91	1358976	0.00	2000	
U	238	1	nogas	0.290	0.580	7.12	16993	0.00	2000	
Li	7	1	nogas	164.017	328.035	1.80	2830948	0.01	1000	
Si	28	1	nogas	65432.826	130865.651	0.73	64679762	0.10	2000	>LDR
Tl	203	1	nogas	24.311	48.621	8.07	392210	0.01	2000	
Na	23	2	He	368206.101	736412.202	0.41	456010740	0.08	200000	>LDR
Mg	24	2	He	90872.540	181745.080	0.56	62395192	0.15	200000	
Al	27	2	He	979.836	1959.672	4.51	314004	0.31	2000	
K	39	2	He	7021.208	14042.416	2.43	3593812	0.20	200000	
Ca	43	2	He	151881.850	303763.700	2.15	260671	58.27	200000	
Ca	44	2	He	142639.862	285279.724	0.87	4220655	3.38	200000	
V	51	2	He	27.256	54.513	0.49	168553	0.02	2000	
Cr	52	2	He	24.651	49.302	0.75	191426	0.01	2000	
Mn	55	2	He	45.001	90.002	1.28	204626	0.02	2000	
Fe	56	2	He	2980.030	5960.060	1.12	19086513	0.02	200000	
Co	59	2	He	24.315	48.629	0.52	295456	0.01	2000	
Ni	60	2	He	25.537	51.074	1.24	83234	0.03	2000	
Cu	63	2	He	24.545	49.089	2.00	215821	0.01	2000	
Zn	66	2	He	31.291	62.582	0.42	47081	0.07	2000	

Sample Report

As	75	2	He	25.591	51.182	1.39	21576	0.12	2000	
Sb	121	2	He	23.861	47.721	0.71	145082	0.02	2000	
Se	78	2	He	25.564	51.128	6.86	1611	1.59	2000	
Ti	47	2	He	42.892	85.783	6.39	8436	0.51	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	4383135	0.33	4912785	89.22	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2679893	1.49	3074865	87.15	70	120	
Li	6	1	nogas	738107	3.26	992920	74.34	70	120	
Bi	209	1	nogas	2605008	6.91	3087510	84.37	70	120	
Ge	72	2	He	942646	0.29	1094372	86.14	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	171_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:55:19-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	98.205	3.029	576972	0.44	100	98.2	90	110	
B	11	1	nogas	508.031	3.149	1941554	0.62	500	101.6	90	110	
Al	27	1	nogas	104.710	4.170	2306550	2.53	100	104.7	90	110	
P	31	1	nogas	496.620	3.093	572932	0.92	500	99.3	90	110	
Ca	44	1	nogas	10405.179	2.601	7346247	1.14	10000	104.1	90	110	
Ti	47	1	nogas	101.969	2.851	230720	1.25	100	102.0	90	110	
Cr	52	1	nogas	102.570	2.629	3016338	1.20	100	102.6	90	110	
Co	59	1	nogas	100.650	2.114	3311626	0.14	100	100.6	90	110	
Cu	63	1	nogas	103.237	2.853	1806184	0.84	100	103.2	90	110	
Zn	66	1	nogas	104.780	1.072	521036	1.44	100	104.8	90	110	
Se	77	1	nogas	140.710	3.277	37289	3.27	100	140.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.398	4.056	29907	2.35	100	105.4	90	110	
Sr	88	1	nogas	104.081	2.291	4292922	2.32	100	104.1	90	110	
Mo	95	1	nogas	104.478	2.004	876895	1.49	100	104.5	90	110	
Ag	107	1	nogas	103.129	2.888	2390593	2.21	100	103.1	90	110	
Cd	111	1	nogas	102.850	2.498	489616	1.82	100	102.9	90	110	
Sn	118	1	nogas	104.867	0.998	1479932	1.08	100	104.9	90	110	
Sb	121	1	nogas	103.186	1.707	1967551	0.53	100	103.2	90	110	
Ba	137	1	nogas	104.278	1.313	665247	0.63	100	104.3	90	110	
Tl	205	1	nogas	104.149	3.759	4631321	0.69	100	104.1	90	110	
Pb	208	1	nogas	103.434	4.833	6389606	1.81	100	103.4	90	110	
U	238	1	nogas	101.252	4.982	6859365	1.95	100	101.3	90	110	
Li	7	1	nogas	100.235	3.303	2068641	1.74	100	100.2	90	110	
Si	28	1	nogas	5122.387	3.980	7275936	1.28	5000	102.4	90	110	
Tl	203	1	nogas	105.152	3.821	1971420	1.44	100	105.2	90	110	
Na	23	2	He	10660.811	0.880	14153426	1.34	10000	106.6	90	110	
Mg	24	2	He	10360.347	1.590	7601842	0.80	10000	103.6	90	110	
Al	27	2	He	99.052	1.000	34572	1.16	100	99.1	90	110	
K	39	2	He	10129.305	0.892	5525055	0.27	10000	101.3	90	110	
Ca	43	2	He	10544.402	3.160	19357	3.35	10000	105.4	90	110	
Ca	44	2	He	10181.763	0.965	322345	0.20	10000	101.8	90	110	
V	51	2	He	100.899	1.394	664305	1.23	100	100.9	90	110	
Cr	52	2	He	98.619	0.940	814492	0.16	100	98.6	90	110	
Mn	55	2	He	100.978	0.898	490238	0.09	100	101.0	90	110	
Fe	56	2	He	10354.096	1.944	70837871	1.14	10000	103.5	90	110	
Co	59	2	He	104.915	5.107	1361488	4.36	100	104.9	90	110	
Ni	60	2	He	103.981	2.566	361463	1.81	100	104.0	90	110	
Cu	63	2	He	105.638	1.979	987305	1.32	100	105.6	90	110	
Zn	66	2	He	102.836	1.688	164489	1.24	100	102.8	90	110	
As	75	2	He	101.221	1.042	90934	0.72	100	101.2	90	110	
Sb	121	2	He	103.784	0.364	666129	0.45	100	103.8	90	110	
Se	78	2	He	101.619	4.715	6778	4.04	100	101.6	90	110	
Ti	47	2	He	98.834	4.853	20752	4.45	100	98.8	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	4826774	2.02	4912785	98.25	70	120	
In	115	1	nogas	2999639	0.69	3074865	97.55	70	120	
Li	6	1	nogas	869270	3.44	992920	87.55	70	120	
Bi	209	1	nogas	3020279	3.21	3087510	97.82	70	120	
Ge	72	2	He	1007343	0.81	1094372	92.05	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	172_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:57:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-77.0	133	34.0	1	
B	11	1	nogas	-1.635	-103.9	103100	4.2	10	
Al	27	1	nogas	-0.111	-42.5	33720	2.3	5	
P	31	1	nogas	-5.135	-3.2	36278	0.8	10	
Ca	44	1	nogas	3.403	33.2	29123	2.6	100	
Ti	47	1	nogas	0.077	87.3	283	52.9	2.5	
Cr	52	1	nogas	0.022	219.2	22788	6.9	2.5	
Co	59	1	nogas	0.011	45.5	840	20.7	2.5	
Cu	63	1	nogas	0.227	5.8	7705	3.7	2	
Zn	66	1	nogas	0.217	11.5	2257	6.0	2.5	
Se	77	1	nogas	23.114	22.3	12151	8.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.804	11.0	228	11.7	2	
Sr	88	1	nogas	0.209	1.4	10507	1.6	2.5	
Mo	95	1	nogas	0.665	18.4	6548	16.9	2.5	
Ag	107	1	nogas	0.048	39.8	2964	16.6	2.5	
Cd	111	1	nogas	0.012	104.7	97	62.4	1	
Sn	118	1	nogas	0.466	12.2	10343	8.1	5	
Sb	121	1	nogas	0.244	24.6	11681	9.4	2.5	
Ba	137	1	nogas	-0.128	-4.7	353	11.4	2.5	
Tl	205	1	nogas	0.240	42.6	11511	42.9	1	
Pb	208	1	nogas	-0.010	-145.6	4104	24.4	2.5	
U	238	1	nogas	0.033	34.8	2334	36.9	2.5	
Si	28	1	nogas	85.687	37.6	1885063	2.3	5	CCB Main CR1 Failed
Na	23	2	He	161.098	0.8	252937	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	6.292	3.8	5107	3.4	100	
Al	27	2	He	-0.733	-22.2	460	11.5	5	
K	39	2	He	-3.099	-17.2	32288	0.7	100	
Ca	43	2	He	2.995	215.5	23	49.5	100	
Ca	44	2	He	5.191	22.2	587	6.0	100	
V	51	2	He	0.112	5.3	1607	2.5	2.5	
Cr	52	2	He	-0.020	-85.2	1097	12.4	2.5	
Mn	55	2	He	0.586	5.9	3114	5.5	2.5	
Fe	56	2	He	1.760	12.4	20949	7.2	100	
Co	59	2	He	0.005	32.8	207	10.1	2.5	
Ni	60	2	He	0.024	25.8	290	6.9	2.5	
Cu	63	2	He	0.120	9.4	2657	4.1	2	
Zn	66	2	He	0.045	98.8	433	15.7	2.5	
As	75	2	He	0.224	18.2	283	12.4	2.5	
Sb	121	2	He	0.166	16.3	3437	4.8	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.639	22.0	62	14.8	2	
Ti	47	2	He	-0.025	-197.0	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4694160	1.20	4912785	95.55	70	120	
In	115	1	nogas	2978280	1.83	3074865	96.86	70	120	
Li	6	1	nogas	882397	2.24	992920	88.87	70	120	
Bi	209	1	nogas	3009868	4.04	3087510	97.49	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	985374	0.28	1094372	90.04	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05SD
Data File Name	176SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:07:00-05:00
Sample Type	Sample
Dilution	5
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.013	0.067	34.87	257	0.01	2000	
B	11	1	nogas	-3.377	-16.887	-11.01	90563	0.00	2000	
Al	27	1	nogas	68.708	343.538	22.04	1417789	0.00	2000	
Ca	44	1	nogas	808.391	4041.957	0.50	554204	0.15	200000	
Ti	47	1	nogas	2.513	12.563	12.69	5396	0.05	2000	
Cr	52	1	nogas	0.396	1.978	12.30	31918	0.00	2000	
Co	59	1	nogas	0.158	0.789	3.95	5284	0.00	2000	
Cu	63	1	nogas	1.375	6.874	2.70	25992	0.01	2000	
Zn	66	1	nogas	4.218	21.092	2.01	20609	0.02	2000	
Se	77	1	nogas	47.526	237.628	10.69	16401	0.29	2000	
Se	82	1	nogas	-0.065	-0.323	-370.64	-12	0.56	2000	
Sr	88	1	nogas	13.084	65.420	1.17	517426	0.00	2000	
Mo	95	1	nogas	0.074	0.372	7.29	1563	0.00	2000	
Ag	107	1	nogas	-0.045	-0.227	-17.19	777	-0.01	2000	
Cd	111	1	nogas	0.042	0.211	9.85	230	0.02	2000	
Sn	118	1	nogas	-0.044	-0.222	-7.05	3094	0.00	2000	
Sb	121	1	nogas	-0.203	-1.017	-6.09	3270	-0.01	2000	
Ba	137	1	nogas	11.468	57.342	1.24	70929	0.02	2000	
Tl	205	1	nogas	0.017	0.087	10.31	1537	0.00	2000	
Pb	208	1	nogas	0.118	0.589	17.57	11919	0.00	2000	
U	238	1	nogas	0.014	0.072	8.96	1050	0.00	2000	
Li	7	1	nogas	0.529	2.645	15.45	87339	0.00	1000	
Si	28	1	nogas	31414.876	157074.381	1.09	32672003	0.10	2000	>LDR
Tl	203	1	nogas	0.010	0.048	27.20	543	0.00	2000	
Na	23	2	He	1940.313	9701.567	1.18	2439259	0.08	200000	
Mg	24	2	He	459.039	2295.196	2.32	314947	0.15	200000	
Al	27	2	He	58.837	294.187	5.32	19437	0.30	2000	
K	39	2	He	230.492	1152.459	1.05	149012	0.15	200000	
Ca	43	2	He	830.547	4152.733	10.14	1440	57.67	200000	
Ca	44	2	He	762.721	3813.603	5.00	22911	3.33	200000	
V	51	2	He	0.433	2.166	4.22	3504	0.01	2000	
Cr	52	2	He	0.195	0.973	12.29	2697	0.01	2000	
Mn	55	2	He	19.814	99.069	2.87	90062	0.02	2000	
Fe	56	2	He	453.761	2268.806	1.05	2906642	0.02	200000	
Co	59	2	He	0.164	0.821	8.41	2127	0.01	2000	
Ni	60	2	He	0.441	2.207	9.29	1633	0.03	2000	
Cu	63	2	He	1.504	7.518	3.52	14583	0.01	2000	
Zn	66	2	He	3.980	19.900	7.08	6275	0.06	2000	

Sample Report

As	75	2	He	0.247	1.234	6.59	290	0.09	2000	
Sb	121	2	He	-0.163	-0.817	-10.25	1313	-0.01	2000	
Se	78	2	He	0.279	1.393	89.48	37	0.76	2000	
Ti	47	2	He	2.639	13.197	32.53	530	0.50	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	4485929	1.14	4912785	91.31	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2866975	0.58	3074865	93.24	70	120	
Li	6	1	nogas	825552	1.65	992920	83.14	70	120	
Bi	209	1	nogas	3017994	6.75	3087510	97.75	70	120	
Ge	72	2	He	940414	1.20	1094372	85.93	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05MS
Data File Name	177SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:09:21-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.830	43.830	0.49	243932	0.02	2000	
B	11	1	nogas	2.460	2.460	7.05	110180	0.00	2000	
Al	27	1	nogas	339.388	339.388	6.33	6889619	0.00	2000	
Ca	44	1	nogas	8538.359	8538.359	2.77	5619207	0.15	200000	
Ti	47	1	nogas	56.331	56.331	6.05	118739	0.05	2000	
Cr	52	1	nogas	46.860	46.860	0.92	1295073	0.00	2000	
Co	59	1	nogas	47.905	47.905	0.91	1468413	0.00	2000	
Cu	63	1	nogas	54.721	54.721	2.28	893426	0.01	2000	
Zn	66	1	nogas	65.347	65.347	1.75	303027	0.02	2000	
Se	77	1	nogas	95.258	95.258	4.32	25795	0.37	2000	
Se	82	1	nogas	50.464	50.464	0.50	13344	0.38	2000	
Sr	88	1	nogas	67.403	67.403	2.33	2589143	0.00	2000	
Mo	95	1	nogas	46.313	46.313	3.17	362404	0.01	2000	
Ag	107	1	nogas	48.040	48.040	2.68	1037779	0.00	2000	
Cd	111	1	nogas	49.258	49.258	3.25	218335	0.02	2000	
Sn	118	1	nogas	-0.077	-0.077	-13.51	2590	0.00	2000	
Sb	121	1	nogas	47.050	47.050	2.98	839183	0.01	2000	
Ba	137	1	nogas	108.883	108.883	3.55	646583	0.02	2000	
Tl	205	1	nogas	48.812	48.812	6.40	2147090	0.00	2000	
Pb	208	1	nogas	48.697	48.697	6.61	2978072	0.00	2000	
U	238	1	nogas	0.059	0.059	10.91	4007	0.00	2000	
Li	7	1	nogas	5.244	5.244	0.68	175542	0.00	1000	
Si	28	1	nogas	159945.850	159945.850	0.20	159647514	0.10	2000	>LDR
Tl	203	1	nogas	45.745	45.745	6.25	848436	0.01	2000	
Na	23	2	He	13461.768	13461.768	0.29	16836741	0.08	200000	
Mg	24	2	He	6826.617	6826.617	1.28	4722247	0.14	200000	
Al	27	2	He	358.136	358.136	10.30	115995	0.31	2000	
K	39	2	He	5680.180	5680.180	1.86	2935027	0.19	200000	
Ca	43	2	He	7957.412	7957.412	0.96	13775	57.77	200000	
Ca	44	2	He	8258.573	8258.573	1.23	246557	3.35	200000	
V	51	2	He	46.724	46.724	0.87	290455	0.02	2000	
Cr	52	2	He	45.774	45.774	1.01	357052	0.01	2000	
Mn	55	2	He	137.636	137.636	1.03	629799	0.02	2000	
Fe	56	2	He	6798.618	6798.618	0.57	43854828	0.02	200000	
Co	59	2	He	47.902	47.902	0.47	586230	0.01	2000	
Ni	60	2	He	48.867	48.867	4.19	160247	0.03	2000	
Cu	63	2	He	55.822	55.822	1.37	492550	0.01	2000	
Zn	66	2	He	64.827	64.827	0.16	97886	0.07	2000	

Sample Report

As	75	2	He	48.378	48.378	0.80	41016	0.12	2000	
Sb	121	2	He	47.741	47.741	0.98	290107	0.02	2000	
Se	78	2	He	48.459	48.459	2.09	3058	1.58	2000	
Ti	47	2	He	49.874	49.874	4.98	9883	0.50	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	4494759	1.19	4912785	91.49	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2793608	2.14	3074865	90.85	70	120	
Li	6	1	nogas	822547	0.29	992920	82.84	70	120	
Bi	209	1	nogas	2991992	5.94	3087510	96.91	70	120	
Ge	72	2	He	949622	0.83	1094372	86.77	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05MSD
Data File Name	178SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:11:42-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	42.877	42.877	1.63	234358	0.02	2000	
B	11	1	nogas	2.186	2.186	11.64	107296	0.00	2000	
Al	27	1	nogas	359.226	359.226	11.94	7262288	0.00	2000	
Ca	44	1	nogas	8400.486	8400.486	0.64	5507565	0.15	200000	
Ti	47	1	nogas	51.774	51.774	0.73	108750	0.05	2000	
Cr	52	1	nogas	44.950	44.950	1.18	1238267	0.00	2000	
Co	59	1	nogas	46.592	46.592	1.12	1422485	0.00	2000	
Cu	63	1	nogas	52.998	52.998	0.08	862135	0.01	2000	
Zn	66	1	nogas	64.053	64.053	2.06	295889	0.02	2000	
Se	77	1	nogas	84.474	84.474	5.20	23589	0.36	2000	
Se	82	1	nogas	47.650	47.650	1.23	12550	0.38	2000	
Sr	88	1	nogas	63.464	63.464	1.33	2501927	0.00	2000	
Mo	95	1	nogas	44.790	44.790	2.51	359724	0.01	2000	
Ag	107	1	nogas	45.370	45.370	3.39	1005783	0.00	2000	
Cd	111	1	nogas	47.129	47.129	3.07	214377	0.02	2000	
Sn	118	1	nogas	-0.104	-0.104	-1.71	2284	0.00	2000	
Sb	121	1	nogas	46.162	46.162	0.93	820373	0.01	2000	
Ba	137	1	nogas	103.439	103.439	2.87	630479	0.02	2000	
Tl	205	1	nogas	46.354	46.354	7.33	2092647	0.00	2000	
Pb	208	1	nogas	46.833	46.833	6.99	2940245	0.00	2000	
U	238	1	nogas	0.054	0.054	3.32	3777	0.00	2000	
Li	7	1	nogas	5.082	5.082	2.46	169408	0.00	1000	
Si	28	1	nogas	153621.081	153621.081	1.82	152783631	0.10	2000	>LDR
Tl	203	1	nogas	43.618	43.618	9.20	829465	0.01	2000	
Na	23	2	He	13283.460	13283.460	1.71	16279920	0.08	200000	
Mg	24	2	He	6732.504	6732.504	0.87	4563902	0.15	200000	
Al	27	2	He	338.528	338.528	4.43	107544	0.31	2000	
K	39	2	He	5672.665	5672.665	0.63	2872447	0.20	200000	
Ca	43	2	He	8353.237	8353.237	1.99	14169	58.95	200000	
Ca	44	2	He	8271.169	8271.169	1.34	241975	3.42	200000	
V	51	2	He	45.750	45.750	0.34	278710	0.02	2000	
Cr	52	2	He	44.646	44.646	0.41	341282	0.01	2000	
Mn	55	2	He	136.855	136.855	1.22	613662	0.02	2000	
Fe	56	2	He	6715.953	6715.953	1.03	42450849	0.02	200000	
Co	59	2	He	47.624	47.624	1.15	571116	0.01	2000	
Ni	60	2	He	48.952	48.952	1.62	157319	0.03	2000	
Cu	63	2	He	55.521	55.521	1.35	480073	0.01	2000	
Zn	66	2	He	63.611	63.611	0.86	94127	0.07	2000	

Sample Report

As	75	2	He	47.847	47.847	0.47	39752	0.12	2000	
Sb	121	2	He	46.966	46.966	1.63	279702	0.02	2000	
Se	78	2	He	47.955	47.955	0.86	2966	1.62	2000	
Ti	47	2	He	52.253	52.253	3.40	10143	0.52	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	4476934	0.51	4912785	91.13	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2866605	1.83	3074865	93.23	70	120	
Li	6	1	nogas	807857	0.56	992920	81.36	70	120	
Bi	209	1	nogas	3074016	7.25	3087510	99.56	70	120	
Ge	72	2	He	930534	0.21	1094372	85.03	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05PDS
Data File Name	179SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:14:04-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	105.667	105.667	2.93	577682	0.02	2000	
B	11	1	nogas	1.026	1.026	54.59	103467	0.00	2000	
Al	27	1	nogas	257.053	257.053	9.96	5145493	0.00	2000	
Ca	44	1	nogas	15082.220	15082.220	1.72	9760745	0.15	200000	
Ti	47	1	nogas	114.529	114.529	3.82	237813	0.05	2000	
Cr	52	1	nogas	109.521	109.521	3.30	2954074	0.00	2000	
Co	59	1	nogas	110.002	110.002	2.73	3321265	0.00	2000	
Cu	63	1	nogas	122.740	122.740	3.11	1969922	0.01	2000	
Zn	66	1	nogas	136.104	136.104	2.87	620599	0.02	2000	
Se	77	1	nogas	155.536	155.536	4.15	37071	0.42	2000	
Se	82	1	nogas	125.947	125.947	2.36	32802	0.38	2000	
Sr	88	1	nogas	63.044	63.044	0.65	2478379	0.00	2000	
Mo	95	1	nogas	110.936	110.936	2.18	887138	0.01	2000	
Ag	107	1	nogas	113.180	113.180	3.61	2499434	0.00	2000	
Cd	111	1	nogas	117.612	117.612	3.46	533514	0.02	2000	
Sn	118	1	nogas	-0.111	-0.111	-10.56	2194	-0.01	2000	
Sb	121	1	nogas	109.807	109.807	2.19	1920814	0.01	2000	
Ba	137	1	nogas	171.714	171.714	2.55	1043037	0.02	2000	
Tl	205	1	nogas	114.414	114.414	7.60	5123760	0.00	2000	
Pb	208	1	nogas	114.223	114.223	7.73	7106581	0.00	2000	
U	238	1	nogas	0.053	0.053	5.84	3724	0.00	2000	
Li	7	1	nogas	4.906	4.906	2.02	166305	0.00	1000	
Si	28	1	nogas	150672.979	150672.979	0.57	148262654	0.10	2000	>LDR
Tl	203	1	nogas	115.516	115.516	8.86	2179739	0.01	2000	
Na	23	2	He	20472.113	20472.113	0.62	25260369	0.08	200000	
Mg	24	2	He	13969.092	13969.092	2.15	9540389	0.15	200000	
Al	27	2	He	265.877	265.877	1.67	85255	0.31	2000	
K	39	2	He	13080.362	13080.362	1.33	6631759	0.20	200000	
Ca	43	2	He	15345.140	15345.140	1.12	26212	58.54	200000	
Ca	44	2	He	15279.492	15279.492	1.06	450072	3.39	200000	
V	51	2	He	117.547	117.547	2.79	720170	0.02	2000	
Cr	52	2	He	115.342	115.342	2.61	886451	0.01	2000	
Mn	55	2	He	207.932	207.932	2.53	939263	0.02	2000	
Fe	56	2	He	13962.319	13962.319	2.12	88913735	0.02	200000	
Co	59	2	He	123.755	123.755	3.88	1494950	0.01	2000	
Ni	60	2	He	121.662	121.662	2.96	393636	0.03	2000	
Cu	63	2	He	131.010	131.010	2.24	1139373	0.01	2000	
Zn	66	2	He	145.785	145.785	1.76	216914	0.07	2000	

Sample Report

As	75	2	He	125.835	125.835	1.82	105204	0.12	2000	
Sb	121	2	He	115.871	115.871	1.61	691972	0.02	2000	
Se	78	2	He	130.457	130.457	3.08	8094	1.61	2000	
Ti	47	2	He	119.643	119.643	2.33	23382	0.51	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	4428393	0.92	4912785	90.14	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2858240	1.05	3074865	92.96	70	120	
Li	6	1	nogas	808538	1.62	992920	81.43	70	120	
Bi	209	1	nogas	3049295	6.56	3087510	98.76	70	120	
Ge	72	2	He	937676	0.85	1094372	85.68	70	120	

Sample Report

Sample Table

Sample Name	HS20080473-01
Data File Name	181SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:18:44-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.020	0.020	29.22	280	0.01	2000	
B	11	1	nogas	29.565	29.565	2.31	194225	0.02	2000	
Al	27	1	nogas	32.561	32.561	6.10	673207	0.00	2000	
Ca	44	1	nogas	30310.934	30310.934	0.87	19340774	0.16	200000	
Ti	47	1	nogas	4.099	4.099	5.84	8509	0.05	2000	
Cr	52	1	nogas	1.518	1.518	1.36	60789	0.00	2000	
Co	59	1	nogas	0.727	0.727	0.73	22117	0.00	2000	
Cu	63	1	nogas	1.421	1.421	1.45	26059	0.01	2000	
Zn	66	1	nogas	22.956	22.956	2.41	104267	0.02	2000	
Se	77	1	nogas	34.839	34.839	15.36	13562	0.26	2000	
Se	82	1	nogas	1.090	1.090	39.41	285	0.38	2000	
Sr	88	1	nogas	582.464	582.464	2.10	22036810	0.00	2000	
Mo	95	1	nogas	1.130	1.130	5.31	9629	0.01	2000	
Ag	107	1	nogas	-0.021	-0.021	-48.59	1267	0.00	2000	
Cd	111	1	nogas	0.055	0.055	31.93	277	0.02	2000	
Sn	118	1	nogas	-0.120	-0.120	-3.44	1990	-0.01	2000	
Sb	121	1	nogas	0.659	0.659	7.65	18026	0.00	2000	
Ba	137	1	nogas	553.387	553.387	1.17	3235369	0.02	2000	
Tl	205	1	nogas	0.040	0.040	5.91	2437	0.00	2000	
Pb	208	1	nogas	0.098	0.098	10.39	10191	0.00	2000	
U	238	1	nogas	0.128	0.128	7.18	8306	0.00	2000	
Li	7	1	nogas	17.758	17.758	1.70	393015	0.00	1000	
Si	28	1	nogas	164017.402	164017.402	1.01	159183051	0.10	2000	>LDR
Tl	203	1	nogas	0.045	0.045	15.72	1143	0.00	2000	
Na	23	2	He	166567.647	166567.647	0.22	205502137	0.08	200000	
Mg	24	2	He	22220.583	22220.583	0.45	15197942	0.15	200000	
Al	27	2	He	34.908	34.908	14.51	11789	0.30	2000	
K	39	2	He	1146.816	1146.816	0.17	611763	0.19	200000	
Ca	43	2	He	32429.937	32429.937	0.67	55455	58.48	200000	
Ca	44	2	He	30677.474	30677.474	1.04	904486	3.39	200000	
V	51	2	He	0.275	0.275	5.21	2527	0.01	2000	
Cr	52	2	He	1.490	1.490	1.08	12648	0.01	2000	
Mn	55	2	He	98.832	98.832	0.18	447273	0.02	2000	
Fe	56	2	He	450.564	450.564	1.85	2881800	0.02	200000	
Co	59	2	He	0.694	0.694	3.66	8535	0.01	2000	
Ni	60	2	He	2.010	2.010	4.40	6711	0.03	2000	
Cu	63	2	He	1.290	1.290	4.50	12701	0.01	2000	
Zn	66	2	He	22.005	22.005	0.80	33083	0.07	2000	

Sample Report

As	75	2	He	0.730	0.730	6.64	693	0.11	2000	
Sb	121	2	He	0.601	0.601	14.63	5868	0.01	2000	
Se	78	2	He	0.612	0.612	45.34	57	1.07	2000	
Ti	47	2	He	0.899	0.899	52.41	190	0.47	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	4371973	1.19	4912785	88.99	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2753178	2.26	3074865	89.54	70	120	
Li	6	1	nogas	787636	0.32	992920	79.33	70	120	
Bi	209	1	nogas	2874856	5.63	3087510	93.11	70	120	
Ge	72	2	He	938954	0.41	1094372	85.80	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	183_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:23:31-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	101.475	0.370	502459	0.23	100	101.5	90	110	
B	11	1	nogas	518.420	1.201	1667890	0.69	500	103.7	90	110	
Al	27	1	nogas	99.332	1.364	1993872	1.76	100	99.3	90	110	
P	31	1	nogas	471.471	0.542	497131	1.14	500	94.3	90	110	
Ca	44	1	nogas	10126.946	1.025	6509140	1.53	10000	101.3	90	110	
Ti	47	1	nogas	99.680	0.200	205323	1.31	100	99.7	90	110	
Cr	52	1	nogas	100.006	1.065	2677823	2.12	100	100.0	90	110	
Co	59	1	nogas	100.543	1.410	3011726	2.75	100	100.5	90	110	
Cu	63	1	nogas	103.283	2.387	1644792	1.72	100	103.3	90	110	
Zn	66	1	nogas	102.455	0.212	463717	1.52	100	102.5	90	110	
Se	77	1	nogas	141.761	4.231	34146	4.69	100	141.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.911	0.558	26071	1.60	100	100.9	90	110	
Sr	88	1	nogas	102.967	1.673	3927346	1.97	100	103.0	90	110	
Mo	95	1	nogas	104.768	1.269	813207	1.76	100	104.8	90	110	
Ag	107	1	nogas	103.824	1.144	2225887	1.76	100	103.8	90	110	
Cd	111	1	nogas	102.704	0.082	452161	0.65	100	102.7	90	110	
Sn	118	1	nogas	102.540	1.475	1338276	1.84	100	102.5	90	110	
Sb	121	1	nogas	107.474	2.276	1864687	0.90	100	107.5	90	110	
Ba	137	1	nogas	105.311	0.962	621308	1.55	100	105.3	90	110	
Tl	205	1	nogas	105.570	2.999	4478572	0.89	100	105.6	90	110	
Pb	208	1	nogas	104.873	4.195	6180293	1.49	100	104.9	90	110	
U	238	1	nogas	101.562	4.467	6563770	1.93	100	101.6	90	110	
Li	7	1	nogas	103.386	0.301	1796000	0.50	100	103.4	90	110	
Si	28	1	nogas	4856.109	1.856	6366141	0.36	5000	97.1	90	110	
Tl	203	1	nogas	106.118	1.614	1898479	1.73	100	106.1	90	110	
Na	23	2	He	10076.832	2.060	12418430	0.65	10000	100.8	90	110	
Mg	24	2	He	9988.643	2.076	6802718	0.56	10000	99.9	90	110	
Al	27	2	He	100.441	1.251	32532	1.42	100	100.4	90	110	
K	39	2	He	9889.903	1.612	5007854	0.45	10000	98.9	90	110	
Ca	43	2	He	9886.066	1.989	16845	0.65	10000	98.9	90	110	
Ca	44	2	He	9911.277	1.114	291274	0.52	10000	99.1	90	110	
V	51	2	He	99.460	1.485	607818	0.19	100	99.5	90	110	
Cr	52	2	He	98.304	0.745	753660	0.95	100	98.3	90	110	
Mn	55	2	He	99.857	1.214	450007	0.67	100	99.9	90	110	
Fe	56	2	He	10268.808	2.455	65206801	0.85	10000	102.7	90	110	
Co	59	2	He	101.872	2.729	1227179	1.13	100	101.9	90	110	
Ni	60	2	He	101.884	2.479	328742	1.01	100	101.9	90	110	
Cu	63	2	He	103.471	1.469	897712	0.92	100	103.5	90	110	
Zn	66	2	He	100.750	1.231	149605	1.48	100	100.7	90	110	
As	75	2	He	101.336	1.838	84496	0.21	100	101.3	90	110	
Sb	121	2	He	103.975	2.532	619362	1.24	100	104.0	90	110	
Se	78	2	He	102.245	2.396	6330	0.95	100	102.2	90	110	
Ti	47	2	He	98.106	2.550	19120	1.37	100	98.1	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	4392577	1.51	4912785	89.41	70	120	
In	115	1	nogas	2773803	0.71	3074865	90.21	70	120	
Li	6	1	nogas	732125	0.50	992920	73.73	70	120	
Bi	209	1	nogas	2880578	2.78	3087510	93.30	70	120	
Ge	72	2	He	935119	1.64	1094372	85.45	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	184_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:25:49-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-567.6	163	49.5	1	
B	11	1	nogas	-7.669	-20.3	75004	4.3	10	
Al	27	1	nogas	0.606	152.1	45643	40.3	5	
P	31	1	nogas	-6.816	-6.7	32238	0.7	10	
Ca	44	1	nogas	-6.832	-5.2	20652	1.2	100	
Ti	47	1	nogas	0.120	62.7	353	43.2	2.5	
Cr	52	1	nogas	0.077	33.9	22718	2.4	2.5	
Co	59	1	nogas	0.016	37.7	933	19.9	2.5	
Cu	63	1	nogas	-0.053	-26.0	2757	7.6	2	
Zn	66	1	nogas	0.101	6.8	1583	2.2	2.5	
Se	77	1	nogas	29.549	13.2	12578	5.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.734	61.4	195	60.2	2	
Sr	88	1	nogas	0.026	24.1	2960	9.3	2.5	
Mo	95	1	nogas	0.678	14.3	6488	12.8	2.5	
Ag	107	1	nogas	0.029	67.8	2470	18.9	2.5	
Cd	111	1	nogas	0.016	40.6	113	27.0	1	
Sn	118	1	nogas	0.421	17.5	9489	11.3	5	
Sb	121	1	nogas	0.383	10.9	13319	5.6	2.5	
Ba	137	1	nogas	-0.120	-6.7	390	13.6	2.5	
Tl	205	1	nogas	0.258	37.5	12122	41.2	1	
Pb	208	1	nogas	0.002	754.0	4754	26.4	2.5	
U	238	1	nogas	0.036	40.8	2530	44.9	2.5	
Si	28	1	nogas	59.258	71.4	1734382	2.5	5	CCB Main CR1 Failed
Na	23	2	He	61.691	1.8	116697	0.8	100	
Mg	24	2	He	1.825	10.7	1787	8.4	100	
Al	27	2	He	-0.410	-7.1	533	1.1	5	
K	39	2	He	-7.383	-22.1	28195	3.4	100	
Ca	43	2	He	-0.114	-6038.1	17	69.3	100	
Ca	44	2	He	-3.224	-33.0	307	10.5	100	
V	51	2	He	0.087	18.5	1358	7.5	2.5	
Cr	52	2	He	0.000	-4478.2	1177	12.8	2.5	
Mn	55	2	He	0.550	6.0	2767	6.3	2.5	
Fe	56	2	He	1.943	10.9	20815	5.6	100	
Co	59	2	He	0.009	33.9	247	16.4	2.5	
Ni	60	2	He	0.016	77.7	250	17.4	2.5	
Cu	63	2	He	-0.030	-80.3	1207	16.8	2	
Zn	66	2	He	0.056	57.1	423	12.1	2.5	
As	75	2	He	0.208	22.1	253	16.0	2.5	
Sb	121	2	He	0.292	15.5	3971	7.1	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.886	11.6	73	9.6	2	
Ti	47	2	He	-0.004	-2079.7	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4382303	0.65	4912785	89.20	70	120	
In	115	1	nogas	2906571	0.83	3074865	94.53	70	120	
Li	6	1	nogas	817681	3.22	992920	82.35	70	120	
Bi	209	1	nogas	2952852	5.93	3087510	95.64	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	925502	1.06	1094372	84.57	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	190_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:39:56-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	99.985	5.973	537552	1.26	100	100.0	90	110	
B	11	1	nogas	517.629	5.901	1809023	2.74	500	103.5	90	110	
Al	27	1	nogas	100.074	2.701	2117504	1.67	100	100.1	90	110	
P	31	1	nogas	481.472	0.833	534433	0.60	500	96.3	90	110	
Ca	44	1	nogas	10147.126	0.987	6876763	0.15	10000	101.5	90	110	
Ti	47	1	nogas	98.907	1.103	214809	0.42	100	98.9	90	110	
Cr	52	1	nogas	101.018	1.210	2851654	0.98	100	101.0	90	110	
Co	59	1	nogas	99.946	1.175	3156153	0.16	100	99.9	90	110	
Cu	63	1	nogas	101.884	1.989	1710897	0.87	100	101.9	90	110	
Zn	66	1	nogas	103.273	0.437	492848	1.05	100	103.3	90	110	
Se	77	1	nogas	147.827	4.207	37212	2.36	100	147.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.851	1.217	28291	1.74	100	103.9	90	110	
Sr	88	1	nogas	104.104	3.497	4079698	1.52	100	104.1	90	110	
Mo	95	1	nogas	105.645	2.418	842656	1.11	100	105.6	90	110	
Ag	107	1	nogas	105.043	1.138	2314482	0.84	100	105.0	90	110	
Cd	111	1	nogas	104.310	2.013	471952	0.97	100	104.3	90	110	
Sn	118	1	nogas	105.244	0.436	1411864	2.29	100	105.2	90	110	
Sb	121	1	nogas	105.651	2.164	1933087	1.21	100	105.7	90	110	
Ba	137	1	nogas	107.188	2.496	649801	0.73	100	107.2	90	110	
Tl	205	1	nogas	105.336	5.540	4664589	2.04	100	105.3	90	110	
Pb	208	1	nogas	103.881	3.614	6394917	0.26	100	103.9	90	110	
U	238	1	nogas	101.823	2.437	6876317	1.26	100	101.8	90	110	
Li	7	1	nogas	101.143	6.777	1908987	1.64	100	101.1	90	110	
Si	28	1	nogas	4883.742	2.842	6740748	1.29	5000	97.7	90	110	
Tl	203	1	nogas	104.316	5.049	1947736	1.43	100	104.3	90	110	
Na	23	2	He	10210.853	0.205	13015103	0.42	10000	102.1	90	110	
Mg	24	2	He	10223.970	0.781	7202003	0.52	10000	102.2	90	110	
Al	27	2	He	98.480	2.041	32999	1.63	100	98.5	90	110	
K	39	2	He	9972.805	1.504	5222602	1.33	10000	99.7	90	110	
Ca	43	2	He	10065.350	4.631	17735	4.04	10000	100.7	90	110	
Ca	44	2	He	9816.098	1.776	298343	1.29	10000	98.2	90	110	
V	51	2	He	99.269	0.638	627437	0.06	100	99.3	90	110	
Cr	52	2	He	99.803	1.065	791291	1.03	100	99.8	90	110	
Mn	55	2	He	101.677	1.779	473862	1.24	100	101.7	90	110	
Fe	56	2	He	10301.617	1.715	67660947	1.16	10000	103.0	90	110	
Co	59	2	He	101.088	0.829	1259620	0.24	100	101.1	90	110	
Ni	60	2	He	101.569	1.135	338987	0.74	100	101.6	90	110	
Cu	63	2	He	103.847	0.923	931809	0.41	100	103.8	90	110	
Zn	66	2	He	102.642	0.887	157613	0.32	100	102.6	90	110	
As	75	2	He	100.995	0.527	87103	0.62	100	101.0	90	110	
Sb	121	2	He	104.237	0.512	642252	0.23	100	104.2	90	110	
Se	78	2	He	100.521	1.067	6438	0.75	100	100.5	90	110	
Ti	47	2	He	98.235	3.236	19801	2.64	100	98.2	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	4631660	1.14	4912785	94.28	70	120	
In	115	1	nogas	2851300	1.95	3074865	92.73	70	120	
Li	6	1	nogas	796425	4.82	992920	80.21	70	120	
Bi	209	1	nogas	3009405	3.73	3087510	97.47	70	120	
Ge	72	2	He	967028	0.61	1094372	88.36	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	191_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:42:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-127.4	167	16.5	1	
B	11	1	nogas	-6.911	-11.2	80395	1.9	10	
Al	27	1	nogas	-0.046	-176.5	33994	5.2	5	
P	31	1	nogas	-4.809	-8.0	35460	1.4	10	
Ca	44	1	nogas	-1.065	-107.4	25241	2.8	100	
Ti	47	1	nogas	0.080	35.3	280	21.4	2.5	
Cr	52	1	nogas	0.098	65.8	24166	7.3	2.5	
Co	59	1	nogas	0.007	52.8	670	16.1	2.5	
Cu	63	1	nogas	0.079	21.3	5034	5.8	2	
Zn	66	1	nogas	0.181	17.2	2017	7.1	2.5	
Se	77	1	nogas	31.238	9.3	13385	4.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.996	11.7	272	11.2	2	
Sr	88	1	nogas	0.123	10.1	6888	8.6	2.5	
Mo	95	1	nogas	0.672	18.6	6505	17.6	2.5	
Ag	107	1	nogas	0.030	68.4	2504	20.2	2.5	
Cd	111	1	nogas	0.012	20.7	93	12.4	1	
Sn	118	1	nogas	0.381	25.3	9033	16.5	5	
Sb	121	1	nogas	0.166	41.2	9930	12.6	2.5	
Ba	137	1	nogas	-0.095	-14.9	553	16.4	2.5	
Tl	205	1	nogas	0.269	38.8	12903	40.4	1	
Pb	208	1	nogas	-0.006	-239.4	4367	23.9	2.5	
U	238	1	nogas	0.033	25.8	2374	28.9	2.5	
Si	28	1	nogas	30.244	389.8	1770077	6.8	5	CCB Main CR1 Failed
Na	23	2	He	102.859	1.3	174099	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	3.307	20.7	2907	16.6	100	
Al	27	2	He	-0.483	-32.3	533	10.3	5	
K	39	2	He	-6.269	-8.4	30018	2.0	100	
Ca	43	2	He	3.248	266.1	23	65.5	100	
Ca	44	2	He	1.395	136.2	460	12.1	100	
V	51	2	He	0.124	14.1	1649	5.5	2.5	
Cr	52	2	He	-0.008	-113.0	1167	7.3	2.5	
Mn	55	2	He	0.549	6.0	2884	5.3	2.5	
Fe	56	2	He	1.744	20.0	20435	11.3	100	
Co	59	2	He	0.007	122.4	230	47.8	2.5	
Ni	60	2	He	0.003	289.1	217	13.3	2.5	
Cu	63	2	He	0.050	49.7	1980	12.2	2	
Zn	66	2	He	0.024	139.2	393	14.0	2.5	
As	75	2	He	0.205	11.0	262	8.5	2.5	
Sb	121	2	He	0.087	33.0	2887	5.0	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.680	19.2	63	12.0	2	
Ti	47	2	He	0.094	173.8	33	96.4	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	4545512	0.34	4912785	92.52	70	120	
In	115	1	nogas	2931360	1.76	3074865	95.33	70	120	
Li	6	1	nogas	846497	1.83	992920	85.25	70	120	
Bi	209	1	nogas	3031970	3.93	3087510	98.20	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	966320	1.19	1094372	88.30	70	120	

Tune Report

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Report Comment
Instrument Name G3281A JP11080910

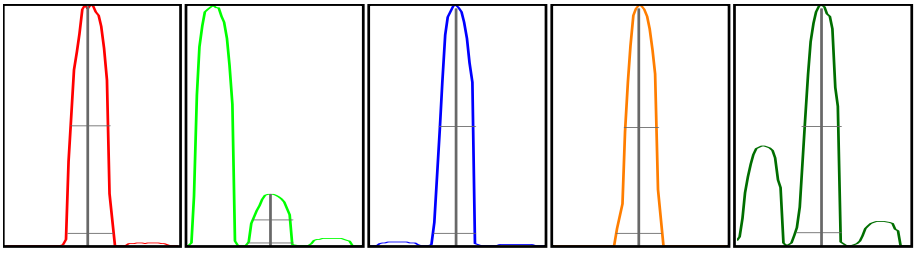
[nogas]

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		35649				NaN	-	
24		104110				NaN	-	
59		169767				NaN	-	
115		251786				NaN	-	
208		176168				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.50	5.00				
24	0.72	5.00				
59	0.20	5.00				
115	0.73	5.00				
208	0.60	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	35395	35671	35650	35631	35897
24	104335	103516	105165	103257	104278
59	169180	169936	169893	170018	169805
115	250490	249581	252782	251834	254241
208	175736	176185	175982	175043	177891

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	5745.93	8.95	8.9 - 9.1		0.65	0.785		
24	17419.13	23.95	23.9 - 24.1		0.64	0.757		
59	29760.02	59.00	58.9 - 59.1		0.61	0.722		
115	46060.28	115.00	114.9 - 115.1		0.57	0.755		
208	30650.22	208.00	207.9 - 208.1		0.61	0.779		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.55 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	10.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Tune Report

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		851				NaN	-	
24		5639				NaN	-	
59		79790				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.06	5.00				
24	1.72	5.00				
59	0.43	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	863	871	851	847	825
24	5753	5547	5734	5580	5579
59	80226	79424	80044	79494	79762

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	144.53	9.00	8.9 - 9.1		0.63	0.773		
24	931.96	24.00	23.9 - 24.1		0.64	0.744		
59	13996.06	59.00	58.9 - 59.1		0.60	0.713		

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

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.55 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.3 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

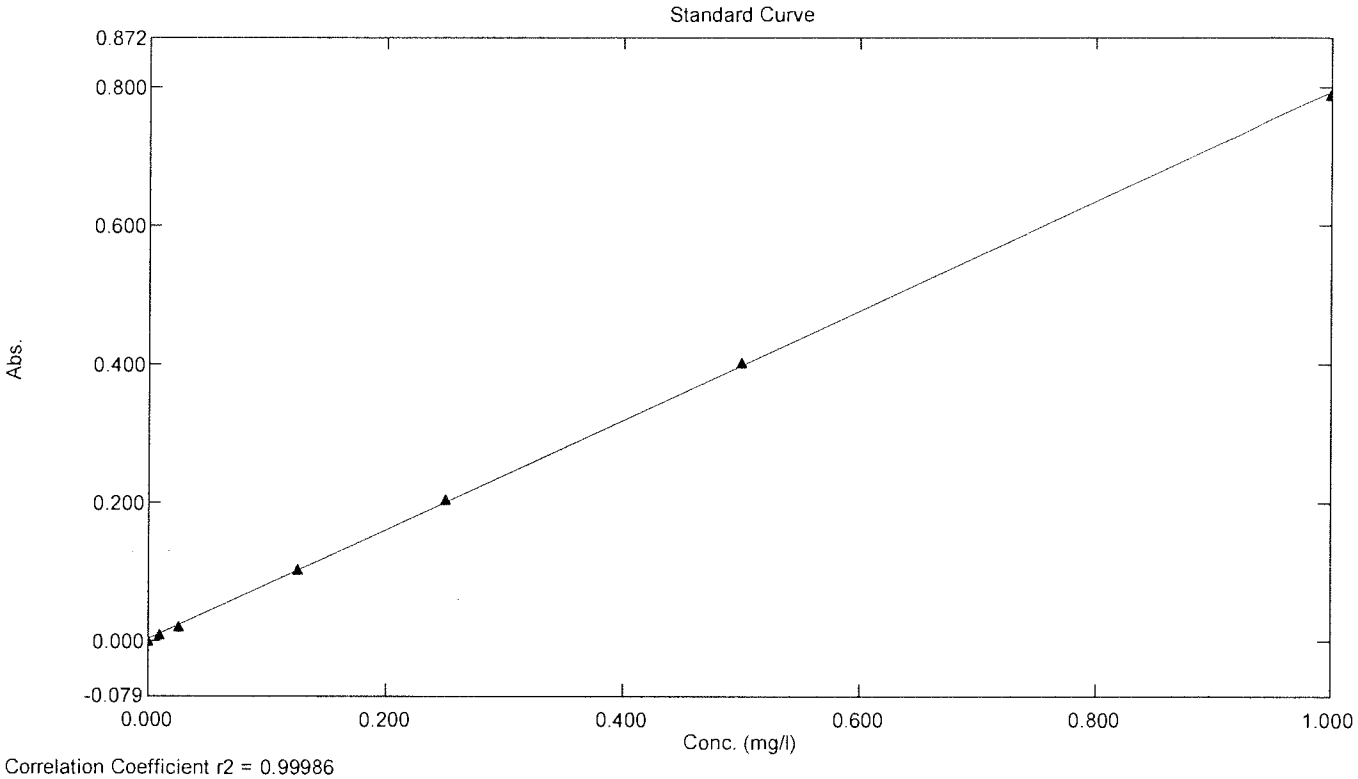
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ALS WO# HS20080473

Standard Table Report

08/25/2020 11:18:10 AM

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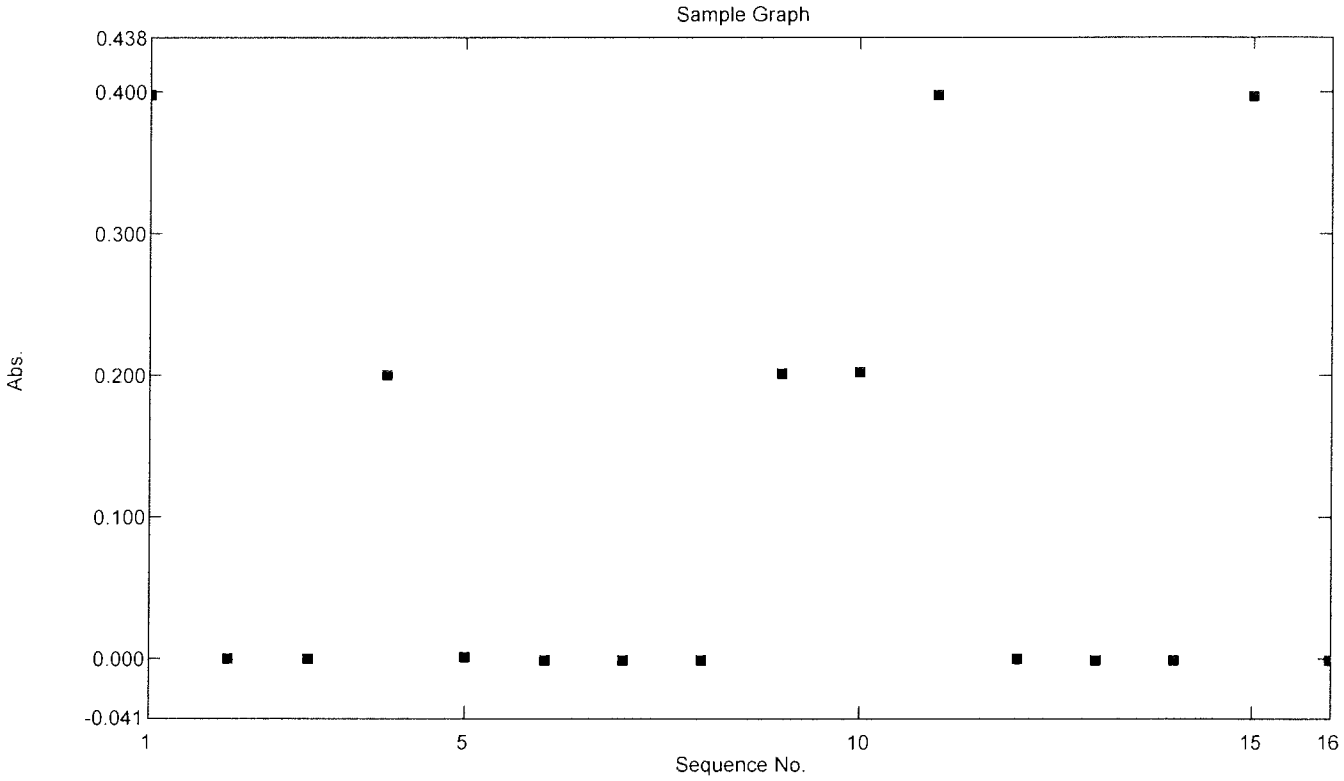
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	0.000	1.000	
2	STD2	Standard		0.010	0.008	1.000	
3	STD3	Standard		0.025	0.020	1.000	
4	STD4	Standard		0.125	0.104	1.000	
5	STD5	Standard		0.250	0.203	1.000	
6	STD6	Standard		0.500	0.403	1.000	
7	STD7	Standard		1.000	0.790	1.000	
8							

Sample Table Report

08/25/2020 11:18:14 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\08122020-CR6 W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.500	0.398	314062502 WC-14
2	CCB	Unknown		-0.004	-0.000	314062704 WC-13
3	MBLK	Unknown		-0.004	-0.000	314060711 WC-13
4	LCS	Unknown		0.249	0.200	314062503 WC-14
5	HS20080475.01	Unknown		-0.002	0.001	1:19PM,SAMP-BKG=TOTAL
6	HS20080475.01BKG	Unknown		-0.004	-0.001	1:19PM,0
7	HS20080473.01	Unknown		-0.004	-0.000	1:20PM,0
8	HS20080473.01BKG	Unknown		-0.005	-0.001	1:21PM
9	HS20080473.01MS	Unknown		0.251	0.201	1:22PM
10	HS20080473.01MSD	Unknown		0.253	0.202	1:23PM
11	CCV2	Unknown		0.500	0.398	
12	CCB2	Unknown		-0.004	-0.000	
13	HS20080482.01	Unknown		-0.004	-0.001	5:37PM 0
14	HS20080482.01BKG	Unknown		-0.004	-0.001	5:38PM
15	CCV3	Unknown		0.497	0.396	
16	CCB3	Unknown		-0.005	-0.001	
17						

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WorkOrder: HS20080474

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

28-Aug-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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Table of Contents

HS20080474 Cover Page
- CoverPage
- HS20080474 Longhorn GW Treatment Plant Weekly Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP650_081120
  - LH18/24-SP650_081120-BIX
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS20080474 ALS Kelso Sub Data K2007004
  - HS20080474 - Sub Perch IV (E2000741)
- HS20080474 Wet Chem Raw Data (P-ORTHO)
- HS20080474 Wet Chem Raw Data (NIT-AMM_W-ISE)

HS20080474 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20080474

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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August 27, 2020

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

Work Order: **HS20080474**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 12, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080474

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20080474-01	LH18/24-SP650_081120	Water		11-Aug-2020 14:00	12-Aug-2020 10:25	☐
HS20080474-02	LH18/24-SP650_081120-BIX	Water		11-Aug-2020 14:00	12-Aug-2020 10:25	☐

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080474

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

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

WetChemistry by Method E350.3

Batch ID: R366966

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

WetChemistry by Method E365.3

Batch ID: R366662

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

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20080474
Sample ID: LH18/24-SP650_081120
Lab ID:HS20080474-01
Collection Date: 11-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**12**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	18-Aug-2020 15:17
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.76**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	12-Aug-2020 14:52
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	27-Aug-2020 14:05

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

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20080474
Sample ID: LH18/24-SP650_081120-BIX
Lab ID:HS20080474-02
Collection Date: 11-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	27-Aug-2020 17:43

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

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080474

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R366662 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20080474-01	LH18/24-SP650_081120	11 Aug 2020 14:00			12 Aug 2020 14:52	10
Batch ID: R366966 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20080474-01	LH18/24-SP650_081120	11 Aug 2020 14:00			18 Aug 2020 15:17	1
Batch ID: R367563 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20080474-01	LH18/24-SP650_081120	11 Aug 2020 14:00			27 Aug 2020 14:05	1
Batch ID: R367591 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20080474-02	LH18/24-SP650_081120-BIX	11 Aug 2020 14:00			27 Aug 2020 17:43	1

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080474

QC BATCH REPORT

Batch ID: R366662 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-366662** Units: **mg/L** Analysis Date: **12-Aug-2020 14:52**
Client ID: Run ID: **UV-2450_366662** SeqNo: **5698304** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-366662** Units: **mg/L** Analysis Date: **12-Aug-2020 14:52**
Client ID: Run ID: **UV-2450_366662** SeqNo: **5698305** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.264	0.0250	0.25	0	106	85 - 115				

LCSD Sample ID: **LCSD-366662** Units: **mg/L** Analysis Date: **12-Aug-2020 14:52**
Client ID: Run ID: **UV-2450_366662** SeqNo: **5698306** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.269	0.0250	0.25	0	108	85 - 115	0.264	1.88	20	

MS Sample ID: **HS20080464-02MS** Units: **mg/L** Analysis Date: **12-Aug-2020 14:52**
Client ID: Run ID: **UV-2450_366662** SeqNo: **5698308** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.264	0.0250	0.25	0	106	80 - 120				

MSD Sample ID: **HS20080464-02MSD** Units: **mg/L** Analysis Date: **12-Aug-2020 14:52**
Client ID: Run ID: **UV-2450_366662** SeqNo: **5698309** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.263	0.0250	0.25	0	105	80 - 120	0.264	0.38	20	

The following samples were analyzed in this batch: HS20080474-01

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080474

QC BATCH REPORT

Batch ID: R366966 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R366966** Units: **mg/L** Analysis Date: **18-Aug-2020 15:17**
Client ID: Run ID: **WetChem_HS_366966** SeqNo: **5704416** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-R366966** Units: **mg/L** Analysis Date: **18-Aug-2020 15:17**
Client ID: Run ID: **WetChem_HS_366966** SeqNo: **5704415** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.727	0.20	10	0	97.3	80 - 120				

MS Sample ID: **HS20080602-01MS** Units: **mg/L** Analysis Date: **18-Aug-2020 15:17**
Client ID: Run ID: **WetChem_HS_366966** SeqNo: **5704418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	12.04	0.20	10	2.393	96.5	80 - 120				

MSD Sample ID: **HS20080602-01MSD** Units: **mg/L** Analysis Date: **18-Aug-2020 15:17**
Client ID: Run ID: **WetChem_HS_366966** SeqNo: **5704417** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	12.06	0.20	10	2.393	96.7	80 - 120	12.04	0.149	20	

The following samples were analyzed in this batch: HS20080474-01

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20080474**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V010	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080474

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20080474-01	LH18/24-SP650_081120	Login	8/12/2020 12:22:26 PM	JRM	WET096
HS20080474-01	LH18/24-SP650_081120	Login	8/12/2020 12:22:26 PM	JRM	WET096
HS20080474-01	LH18/24-SP650_081120	Login	8/12/2020 12:22:26 PM	JRM	Sub
HS20080474-02	LH18/24-SP650_081120-BIX	Login	8/12/2020 12:22:26 PM	JRM	Sub

ALS Houston, US Date: 27-Aug-20

Sample Receipt Checklist

Work Order ID: HS20080474 **Date/Time Received:** 12-Aug-2020 10:25

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	12-Aug-2020 12:23	**Reviewed by:**	/S/ RJ Modashia	12-Aug-2020 16:05
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	2.8°C/2.8°C UC/C	IR31
Cooler(s)/Kit(s):	44977	
Date/Time sample(s) sent to storage:	08/12/2020 12:25	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_081120	Water	08/11/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_081120	Water	08/11/20 / 14:00		1			X		NONE	
LH18/24-SP650_081120_BIX	Water	08/11/20 / 14:00		1				X	NONE	

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	08/11/20	14:30		8/12/2020	10:20						

For Lab Use Only

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

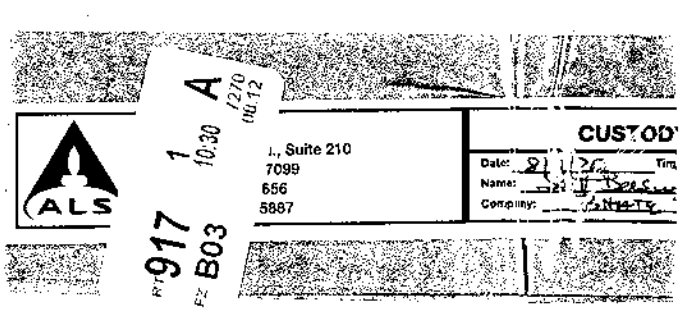
Remarks:

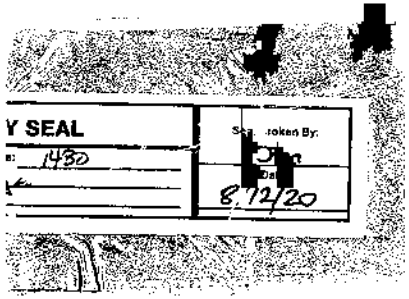
HS20080474

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

44977 vtc. 2.8° 431 cl2 c.o

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


ALS
, Suite 210
7099
656
5887
CUSTOD
Date:
Name:
Company:
917
B03


Y SEAL
1430
8/12/20


FedEx
TRK#
0221
4380 9531 7270
WED – 12 AUG 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX – US
IAH

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August 26, 2020

Analytical Report for Service Request No: K2007004

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

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 14, 2020
For your reference, these analyses have been assigned our service request number **K2007004.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
General Chemistry
Raw Data
    General Chemistry

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2007004
Date Received: 08/14/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 08/14/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 08/26/2020

Chain of Custody

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K2007004

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14486**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20080474
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20080474-01**	**LH18/24-SP650_081120**	**Water**	**11 Aug 2020 14:00**
	TOC Analysis for DOD Level IV			26 Aug 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 8/13/20 18:00

Received By: Date/Time: 8/14/20 0915

Cooler ID(s): Temperature(s):

PM KL

Cooler Receipt and Preservation Form

Client ALS / Houston Service Request K20 67004

Received: 8/14/20 Opened: 8/14/20 By: [illegible] Unloaded: 8/14/20 By: [illegible]

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
0.8	—	IR02	14488 /86			1891 8879 3472	

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2007004
Project:	ALS Houston DOD TOC	**Date Collected:**	08/11/20
Sample Matrix:	Water	**Date Received:**	08/14/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
HS20080474-01	K2007004-001	**2.11**	0.50	0.20	0.07	1	08/20/20 10:28	
Method Blank	K2007004-MB	ND U	0.50	0.20	0.07	1	08/20/20 10:28	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007004
Project:	ALS Houston DOD TOC	**Date Analyzed:**	08/20/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	692111

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2007004-LCS	23.2	25.0	93	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2007004
Project: ALS Houston DOD TOC

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	692111	KQ2011928-09	08/20/20 10:28	25.0	24.4	98	90-110
CCV2	692111	KQ2011928-10	08/20/20 10:28	25.0	24.6	98	90-110
CCV3	692111	KQ2011928-11	08/20/20 10:28	25.0	23.9	96	90-110
CCV4	692111	KQ2011928-12	08/20/20 10:28	25.0	23.4	94	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2007004
Project: ALS Houston DOD TOC

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	692111	KQ2011928-05	08/20/20 10:28	0.50	0.20	0.07	ND	U
CCB2	692111	KQ2011928-06	08/20/20 10:28	0.50	0.20	0.07	ND	U
CCB3	692111	KQ2011928-07	08/20/20 10:28	0.50	0.20	0.07	ND	U
CCB4	692111	KQ2011928-08	08/20/20 10:28	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # 6746 6805 6806 6883 7004 7063 7110 7111 6929

Tier: IV I I II IV II IV IV II

Date Analyzed: 8-20-20 7018 7063

Analyst: MK IV II Run # 692111 692113

Analysis: TOC/DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

7018-3 needs reanalysis. High RPD 16% due to carryover. LCS/DLCS was run

Final Approved by: _____ Date: 8/26/20

DOREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 692111 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2006746-001	Carbon, Total Organic	N/A		Water	1.50 mg/L	10 mL	1.50 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2006746-002	Carbon, Total Organic	N/A		Water	2.29 mg/L	10 mL	2.29 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2006805-001	Carbon, Total Organic	N/A		Water	39.91 mg/L	10 mL	39.9 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	I
K2006806-001	Carbon, Total Organic	N/A		Water	5.63 mg/L	10 mL	5.63 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	I
K2006806-002	Carbon, Total Organic	N/A		Water	30.77 mg/L	10 mL	30.8 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	I
K2006806-003	Carbon, Total Organic	N/A		Water	1.02 mg/L	10 mL	1.02 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	I
K2006883-001	Carbon, Total Organic	N/A		Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-002	Carbon, Total Organic	N/A		Water	0.53 mg/L	10 mL	0.53 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-003	Carbon, Total Organic	N/A		Water	0.70 mg/L	10 mL	0.70 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-004	Carbon, Total Organic	N/A		Water	0.62 mg/L	10 mL	0.62 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-005	Carbon, Total Organic	N/A		Water	0.64 mg/L	10 mL	0.64 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-006	Carbon, Total Organic	N/A		Water	0.31 mg/L	10 mL	0.31 mg/L J	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006886-001	Carbon, Total Organic	N/A		Reagent Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	I
K2006886-002	Carbon, Total Organic	N/A		Reagent Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	I
K2007004-001	Carbon, Total Organic	N/A		Water	2.11 mg/L	10 mL	2.11 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2007063-001	Carbon, Total Organic	N/A		Water	4.20 mg/L	10 mL	4.20 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2007063-003	Carbon, Total Organic	N/A		Water	3.18 mg/L	10 mL	3.18 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2007110-001	Carbon, Total Organic	N/A		Ground Water	4.56 mg/L	10 mL	4.56 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2007110-002	Carbon, Total Organic	N/A		Ground Water	13.18 mg/L	10 mL	13.2 mg/L	1	0.07	0.50			8/20/20 10:28:00	Y	IV
K2007111-001	Carbon, Total Organic	N/A		Water	2.49 mg/L	10 mL	2.49 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011928-01	Carbon, Total Organic	DUP	K2007110-002	Ground Water	13.08 mg/L	10 mL	13.1 mg/L	1	0.07	0.50		<1	8/20/20 10:28:00	N	IV
KQ2011928-02	Carbon, Total Organic	MS	K2007110-002	Ground Water	34.82 mg/L	10 mL	34.8 mg/L	1	0.07	0.50	87		8/20/20 10:28:00	N	IV
KQ2011928-03	Carbon, Total Organic	LCS		Water	23.20 mg/L	10 mL	23.2 mg/L	1	0.07	0.50	93		8/20/20 10:28:00	N	IV
KQ2011928-04	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	IV
KQ2011928-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	IV
KQ2011928-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	IV
KQ2011928-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	IV
KQ2011928-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	IV
KQ2011928-09	Carbon, Total Organic	CCV		Water	24.42 mg/L	10 mL	24.4 mg/L	1					8/20/20 10:28:00	N	IV
KQ2011928-10	Carbon, Total Organic	CCV		Water	24.55 mg/L	10 mL	24.6 mg/L	1					8/20/20 10:28:00	N	IV
KQ2011928-11	Carbon, Total Organic	CCV		Water	23.92 mg/L	10 mL	23.9 mg/L	1					8/20/20 10:28:00	N	IV
KQ2011928-12	Carbon, Total Organic	CCV		Water	23.44 mg/L	10 mL	23.4 mg/L	1					8/20/20 10:28:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 692113 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2006883-007	Carbon, Total Organic	N/A		Water	0.83 mg/L	10 mL	0.83 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006883-008	Carbon, Total Organic	N/A		Water	0.40 mg/L	10 mL	0.40 mg/L J	1	0.07	0.50			8/20/20 10:28:00	N	II
K2006929-001	Carbon, Total Organic	N/A		Water	7.61 mg/L	10 mL	7.61 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2007018-001	Carbon, Total Organic	N/A		Ground Water	2.31 mg/L	10 mL	2.31 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2007018-002	Carbon, Total Organic	N/A		Ground Water	468.90 mg/L	10 mL	4690 mg/L	10	0.7	5.0			8/20/20 10:28:00	N	IV
K2007018-003	Carbon, Total Organic	N/A		Ground Water	3.81 mg/L	10 mL	3.81 mg/L	1	0.07	0.50			8/20/20 10:28:00	Y	IV
K2007018-004	Carbon, Total Organic	N/A		Ground Water	23.77 mg/L	10 mL	23.8 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2007018-005	Carbon, Total Organic	N/A		Ground Water	24.16 mg/L	10 mL	24.2 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	IV
K2007063-002	Carbon, Dissolved Organic (DOC)	N/A		Water	5.79 mg/L	10 mL	5.79 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
K2007063-004	Carbon, Dissolved Organic (DOC)	N/A		Water	4.00 mg/L	10 mL	4.00 mg/L	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-01	Carbon, Total Organic	DUP	K2007018-003	Ground Water	4.48 mg/L	10 mL	4.48 mg/L	1	0.07	0.50		16*	8/20/20 10:28:00	N	IV
KQ2011930-02	Carbon, Total Organic	MS	K2007018-003	Ground Water	29.16 mg/L	10 mL	29.2 mg/L	1	0.07	0.50	101		8/20/20 10:28:00	N	IV
KQ2011930-03	Carbon, Dissolved Organic (DOC)	MB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-03	Carbon, Total Organic	MB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-04	Carbon, Dissolved Organic (DOC)	LCS		Water	22.99 mg/L	10 mL	23.0 mg/L	1	0.07	0.50	92		8/20/20 10:28:00	N	II
KQ2011930-04	Carbon, Total Organic	LCS		Water	22.99 mg/L	10 mL	23.0 mg/L	1	0.07	0.50	92		8/20/20 10:28:00	N	II
KQ2011930-05	Carbon, Dissolved Organic (DOC)	DLCS		Water	22.76 mg/L	10 mL	22.8 mg/L	1	0.07	0.50	91	1	8/20/20 10:28:00	N	II
KQ2011930-05	Carbon, Total Organic	DLCS		Water	22.76 mg/L	10 mL	22.8 mg/L	1	0.07	0.50	91	1	8/20/20 10:28:00	N	II
KQ2011930-06	Carbon, Dissolved Organic (DOC)	CCV		Water	23.92 mg/L	10 mL	23.9 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-06	Carbon, Total Organic	CCV		Water	23.92 mg/L	10 mL	23.9 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-07	Carbon, Dissolved Organic (DOC)	CCV		Water	23.43 mg/L	10 mL	23.4 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-07	Carbon, Total Organic	CCV		Water	23.43 mg/L	10 mL	23.4 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-08	Carbon, Dissolved Organic (DOC)	CCV		Water	23.03 mg/L	10 mL	23.0 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-08	Carbon, Total Organic	CCV		Water	23.03 mg/L	10 mL	23.0 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-09	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-09	Carbon, Total Organic	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-10	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 692113 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2011930-10	Carbon, Total Organic	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-11	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-11	Carbon, Total Organic	CCB		Water	-0.10 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-12	Carbon, Dissolved Organic (DOC)	CCV		Water	23.98 mg/L	10 mL	24.0 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-12	Carbon, Total Organic	CCV		Water	23.98 mg/L	10 mL	24.0 mg/L	1					8/20/20 10:28:00	N	II
KQ2011930-13	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II
KQ2011930-13	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/20/20 10:28:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
CBA	RB	1			0.0000	0	<0.5	
2	CCV	1	24.512	0.0969	24.4150	24.415	24.4	
3	CCB	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
4	MB1	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
5	LCS	1	23.302	0.0969	23.2052	23.2052	23.2	
6	ics	1	0.279	0.0969	0.1824	0.1824	<0.5	
7	6886-001	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
8	6886-002	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
9	6746-001	1	1.597	0.0969	1.5001	1.5001	1.50	
10	6746-002	1	2.390	0.0969	2.2928	2.2928	2.29	
11	7004-001	1	2.203	0.0969	2.1060	2.106	2.1	
12	6806-001	1	5.729	0.0969	5.6325	5.6325	5.63	
13	6806-002	1	30.872	0.0969	30.7746	30.7746	30.77	
14	ccv	1	24.532	0.0969	24.4354	24.4354	24.44	
15	ccb	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
16	6806-003	1	1.114	0.0969	1.0175	1.0175	1.0	
17	6805-001	1	40.009	0.0969	39.9118	39.9118	39.91	
18	7110-001	1	4.656	0.0969	4.5594	4.5594	4.6	
19	7110-002	1	13.277	0.0969	13.1801	13.1801	13.2	
20	7110-002d	1	13.179	0.0969	13.0824	13.0824	13.08	
21	7110-002ms	1	34.913	0.0969	34.8164	34.8164	34.82	
22	7111-001	1	2.591	0.0969	2.4943	2.4943	2.5	
23	7063-001	1	4.299	0.0969	4.2020	4.202	4.2	
24	7063-003	1	3.274	0.0969	3.1774	3.1774	3.18	
25	6883-001	1	0.523	0.0969	0.4261	0.4261	<0.5	

date time

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed

Revision 1, 2010 R:\WET\ANALYSES\TOC\TEMPLATE\TOCwaterLIMS

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
26	ccv	1	24.012	0.0969	23.9155	23.9155	23.92	
27	ccb	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
28	mb	1	0.000	0.0969	-0.0969	-0.0969	<0.5	
29	lcs	1	23.091	0.0969	22.9945	22.9945	23.0	
30	lcs	1	22.861	0.0969	22.7638	22.7638	22.8	
31	6883-002	1	0.6280	0.0969	0.5311	0.5311	0.5	
32	6883-003	1	0.7920	0.0969	0.6951	0.6951	0.7	
33	6883-004	1	0.7126	0.0969	0.6157	0.6157	0.6	
34	6883-005	1	0.7328	0.0969	0.6359	0.6359	0.6	
35	6883-006	1	0.4024	0.0969	0.3055	0.3055	<0.5	
36	6883-007	1	0.9261	0.0969	0.8292	0.8292	0.8	
37	6883-008	1	0.4861	0.0969	0.3892	0.3892	<0.5	
38	ccv	1	23.5262	0.0969	23.4293	23.4293	23.4	
39	ccb	1	0.0000	0.0969	-0.0969	-0.0969	<0.5	
40	6929-1	10	0.5872	0.0969	0.4903	4.903	4.9	NR
41	7018-001	1	2.4033	0.0969	2.3064	2.3064	2.3	
42	7018-002	1	97.1119	0.0969	97.0150	97.015	97.0	NR
43	7018-003	1	7.3687	0.0969	7.2718	7.2718	nr	NR
44	7018-3d	1	4.5730	0.0969	4.4761	4.4761	4.5	
45	7018-003ms	1	29.2565	0.0969	29.1596	29.1596	29.2	
46	7018-004	1	23.8707	0.0969	23.7738	23.7738	23.8	
47	7018-005	1	24.2526	0.0969	24.1557	24.1557	24.2	
48	7063-002	1	5.8856	0.0969	5.7887	5.7887	5.8	
49	7063-004	1	4.1003	0.0969	4.0034	4.0034	4.0	
50	ccv	1	23.1219	0.0969	23.0250	23.025	23.0	

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
51	ccb	1	0.5558	0.0969	0.4589	0.4589	<0.5	
52	mb	1	0.4627	0.0969	0.3658	0.3658	<0.5	
53	lcs	1	25.5496	0.0969	25.4527	25.4527	25.5	
54	dlcs	1	25.7292	0.0969	25.6323	25.6323	25.6	
55	6929-001	1	7.7110	0.0969	7.6141	7.6141	7.6	
56	7018-002	10	46.9853	0.0969	46.8884	468.884	468.9	
57	7018-003	1	3.9045	0.0969	3.8076	3.8076	3.8	
58	ccv	1	24.0763	0.0969	23.9794	23.9794	24.0	
59	ccb	1	0.0969	0.0969	0.0000	0	<0.5	
60		1		0.0000	0.0000	0	<0.5	
61		1		0.0000	0.0000	0	<0.5	
62		1		0.0000	0.0000	0	<0.5	
63		1		0.0000	0.0000	0	<0.5	
64		1		0.0000	0.0000	0	<0.5	
65		1		0.0000	0.0000	0	<0.5	
66		1		0.0000	0.0000	0	<0.5	
67		1		0.0000	0.0000	0	<0.5	
68		1		0.0000	0.0000	0	<0.5	
69		1		0.0000	0.0000	0	<0.5	
70		1		0.0000	0.0000	0	<0.5	
71		1		0.0000	0.0000	0	<0.5	
72		1		0.0000	0.0000	0	<0.5	
73		1		0.0000	0.0000	0	<0.5	
74		1		0.0000	0.0000	0	<0.5	
75		1		0.0000	0.0000	0	<0.5	

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed

Schedule: 082020

Version: 10
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/08/21 10:28 - Friday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Done
(Clean)	Clean	Clean		1	True	Done
(Clean)	Clean	Clean		1	True	Done
(Blank)	Blank	Reagent/Acid Blank		1	True	Done
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
3	Sample	K2006886-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
4	Sample	K2006886-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
5	Sample	K2006746-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
6	Sample	K2006746-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
7	Sample	K2007004-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
8	Sample	K2006806-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
9	Sample	K2006806-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
10	Sample	K2006806-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
11	Sample	K2006805-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
12	Sample	K2007110-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
13	Sample	K2007110-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
14	Sample	K2007110-002D	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
15	Sample	K2007110-002MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
16	Sample	K2007111-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
17	Sample	K2007063-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
18	Sample	K2007063-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
19	Sample	K2006883-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
22	Sample	K2006883-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
23	Sample	K2006883-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
24	Sample	K2006883-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
25	Sample	K2006883-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
26	Sample	K2006883-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
27	Sample	K2006883-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
28	Sample	K2006883-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
29	Sample	K2006929-001 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
30	Sample	K2007018-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
31	Sample	K2007018-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
32	Sample	K2007018-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
33	Sample	K2007018-003D	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
34	Sample	K2007018-003MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
35	Sample	K2007018-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
36	Sample	K2007018-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
37	Sample	K2007063-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
38	Sample	K2007063-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Running

Schedule: 082020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Pending
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
40	Sample	K2006929-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
41	Sample	K2007018-002 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
42	Sample	K2007018-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample		CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
					False	

Fusion Report - 082020
Thursday, August 20, 2020 11:36 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/08/24 09:32 - Monday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	082020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7) Fusion1 (Fusion1) (v8) Fusion1 (Fusion1) (v9) Fusion1 (Fusion1) (v10)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/20 11:36

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.60	26.95	13.35	49.69	05:30
2	TC Clean	16.57	29.67	13.10	49.70	07:16
3	TC Clean	2.40	15.39	12.99	49.88	07:03
4	TC Clean	0.99	14.20	13.21	49.75	07:03

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/20 12:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.23	12.89	13.11	49.83	08:00

2	TC Clean	4.24	17.20	12.97	49.91	07:18
3	TC Clean	0.78	13.76	12.98	49.71	07:04
4	TC Clean	0.36	13.36	13.00	49.73	07:02

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/20 12:42

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.05	12.76	12.80	49.67	05:19
2	TC Clean	3.48	16.54	13.07	49.72	07:15
3	TC Clean	0.78	13.80	13.02	49.73	06:58
4	TC Clean	0.47	13.41	12.94	49.84	07:01

Sample Type: Blank (Creating v1436) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/08/20 13:13

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.18	12.77	12.95	49.84	08:00
2	TC Clean	4.11	16.89	12.78	49.87	07:15
3	TC Clean	0.70	13.73	13.04	49.78	07:00
4	TC Clean	0.39	13.32	12.93	49.71	07:03
5	Reagent Blank	4.21	17.15	12.94	49.86	08:12
6	Acid Blank	0.23	13.15	12.92	49.87	08:00

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0418 ppm	0.0000 ppm	0.0000%	2020/08/20 14:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0418	0.4184	9.48	22.67	13.19	49.96	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5119 ppm (PASS)	0.0000 ppm	0%	2020/08/20 14:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5119	245.1193	181.84	194.84	13.00	49.89	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/20 14:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.09	21.89	12.80	49.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/20 14:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.57	21.49	12.92	49.94	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	23.3021 ppm (PASS)	0.0000 ppm	0%	2020/08/20 15:04

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.3021	233.0207	173.35	186.31	12.96	49.90	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.2793 ppm	0.0000 ppm	0.0000%	2020/08/20 15:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2793	2.7933	11.14	24.06	12.92	49.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2006886-001	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/20 15:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.49	21.38	12.88	49.91	10:29
2	TOC	0.0000	0.0000	8.61	21.52	12.91	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2006886-002	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/20 16:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.36	21.30	12.95	49.93	10:31
2	TOC	0.0000	0.0000	8.06	21.04	12.98	49.92	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2006746-001	1.5970 ppm	0.0385 ppm	2.4100%	2020/08/20 16:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5697	15.6974	20.19	33.24	13.04	49.93	10:25
2	TOC	1.6242	16.2420	20.58	33.48	12.90	49.88	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2006746-002	2.3897 ppm	0.0540 ppm	2.2600%	2020/08/20 16:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3515	23.5152	25.68	38.58	12.90	49.96	10:31
2	TOC	2.4279	24.2793	26.21	39.04	12.83	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2007004-001	2.2029 ppm	0.0211 ppm	0.9600%	2020/08/20 17:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1880	21.8801	24.53	37.65	13.11	49.95	10:30
2	TOC	2.2178	22.1780	24.74	37.46	12.72	49.96	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2006806-001	5.7294 ppm	0.0040 ppm	0.0700%	2020/08/20 17:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.7322	57.3221	49.39	62.24	12.85	49.95	10:27
2	TOC	5.7265	57.2651	49.35	62.31	12.96	49.98	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2006806-002	30.8715 ppm	0.0903 ppm	0.2900%	2020/08/20 18:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.8077	308.0767	225.29	238.33	13.03	50.06	10:26
2	TOC	30.9354	309.3540	226.19	239.30	13.11	50.16	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5323 ppm (PASS)	0.0000 ppm	0%	2020/08/20 18:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5323	245.3232	181.98	194.98	13.00	50.10	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/20 19:04

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.80	22.74	12.94	50.07	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2006806-003	1.1144 ppm	0.0101 ppm	0.9000%	2020/08/20 19:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1216	11.2155	17.05	30.13	13.08	50.21	10:25
2	TOC	1.1073	11.0730	16.95	29.91	12.96	50.12	10:26

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2006805-001	40.0087 ppm	0.4426 ppm	1.1100%	2020/08/20 19:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	40.3217	403.2167	292.03	305.07	13.04	50.08	10:29
2	TOC	39.6957	396.9571	287.64	300.54	12.89	50.22	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2007110-001	4.6563 ppm	0.1970 ppm	4.2300%	2020/08/20 20:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7956	47.9563	42.82	55.78	12.96	50.04	10:24
2	TOC	4.5171	45.1707	40.87	53.90	13.03	49.95	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2007110-002	13.2770 ppm	0.1438 ppm	1.0800%	2020/08/20 20:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.1753	131.7531	101.61	114.52	12.92	49.87	10:27
2	TOC	13.3787	133.7873	103.03	115.88	12.84	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2007110-002D	13.1793 ppm	0.1365 ppm	1.0400%	2020/08/20 21:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.2758	132.7581	102.31	115.16	12.85	49.88	10:29
2	TOC	13.0828	130.8279	100.96	113.87	12.91	49.95	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2007110-002MS	34.9133 ppm	0.5447 ppm	1.5600%	2020/08/20 21:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	35.2984	352.9845	256.80	269.65	12.85	49.87	10:31
2	TOC	34.5281	345.2808	251.39	264.23	12.84	49.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2007111-001	2.5912 ppm	0.0951 ppm	3.6700%	2020/08/20 22:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.6584	26.5844	27.83	40.81	12.98	49.91	10:28
2	TOC	2.5240	25.2401	26.89	39.81	12.92	49.87	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2007063-001	4.2989 ppm	0.0922 ppm	2.1500%	2020/08/20 22:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.2337	42.3367	38.88	51.93	13.05	49.81	10:28
2	TOC	4.3641	43.6411	39.80	52.62	12.83	49.90	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2007063-003	3.2743 ppm	0.0023 ppm	0.0700%	2020/08/20 23:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2760	32.7599	32.16	45.10	12.93	49.84	10:27
2	TOC	3.2727	32.7271	32.14	44.98	12.83	50.00	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2006883-001	0.5230 ppm	0.0016 ppm	0.3100%	2020/08/20 23:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5218	5.2182	12.84	25.81	12.97	49.86	10:25
2	TOC	0.5241	5.2410	12.86	25.94	13.08	49.84	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC)	CAS_salt_010711	CAS_salt_010711

(v1436) (v4) (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.0124 ppm (PASS)	0.0000 ppm	0%	2020/08/20 23:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0124	240.1242	178.33	191.21	12.88	49.93	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/21 00:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.90	21.92	13.02	49.86	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/21 00:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.11	21.07	12.96	49.94	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	23.0914 ppm (PASS)	0.0000 ppm	0%	2020/08/21 00:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.0914	230.9137	171.87	184.62	12.74	49.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	22.8607 ppm (PASS)	0.0000 ppm	0%	2020/08/21 00:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	22.8607	228.6071	170.26	183.33	13.08	49.92	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2006883-002	0.6280 ppm	0.0527 ppm	8.4000%	2020/08/21 01:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6652	6.6523	13.85	26.73	12.88	49.95	10:27
2	TOC	0.5907	5.9068	13.33	26.21	12.88	49.85	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2006883-003	0.7920 ppm	0.0757 ppm	9.5600%	2020/08/21 01:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7385	7.3851	14.36	27.23	12.87	49.98	10:27
2	TOC	0.8456	8.4556	15.11	28.10	12.99	49.91	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2006883-004	0.7126 ppm	0.0096 ppm	1.3400%	2020/08/21 02:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7059	7.0586	14.13	27.31	13.18	50.04	10:30
2	TOC	0.7194	7.1940	14.23	27.30	13.07	49.97	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2006883-005	0.7328 ppm	0.0488 ppm	6.6600%	2020/08/21 02:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7673	7.6730	14.57	27.51	12.95	49.88	10:27
2	TOC	0.6983	6.9830	14.08	27.23	13.15	49.99	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2006883-006	0.4024 ppm	0.0026 ppm	0.6500%	2020/08/21 03:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4005	4.0051	11.99	25.13	13.14	49.91	10:26
2	TOC	0.4042	4.0421	12.02	25.07	13.06	50.04	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2006883-007	0.9261 ppm	0.0369 ppm	3.9800%	2020/08/21 03:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9000	9.0002	15.50	28.52	13.02	49.93	10:30
2	TOC	0.9522	9.5220	15.86	28.80	12.93	50.02	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2006883-008	0.4861 ppm	0.0084 ppm	1.7200%	2020/08/21 04:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4802	4.8020	12.55	25.76	13.20	49.95	10:26

2	TOC	0.4920	4.9203	12.64	25.80	13.16	49.93	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.5262 ppm (PASS)	0.0000 ppm	0%	2020/08/21 04:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.5262	235.2616	174.92	187.91	12.99	49.99	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/21 04:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.96	21.91	12.95	49.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2006929-001 10X	0.5872 ppm	0.0408 ppm	6.9500%	2020/08/21 04:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5583	5.5832	13.10	26.27	13.17	49.99	10:25
2	TOC	0.6161	6.1605	13.50	26.43	12.93	49.92	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

		Analysis			Std. Dev.		

	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◆	30	TOC	K2007018-001	2.4033 ppm	0.0459 ppm	1.9100%	2020/08/21 05:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3709	23.7090	25.82	38.92	13.11	49.99	10:24
2	TOC	2.4358	24.3577	26.27	39.20	12.93	49.95	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2007018-002	97.1119 ppm	1.3734 ppm	1.4100%	2020/08/21 05:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	98.0830	980.8304	697.22	710.23	13.01	50.00	10:27
2	TOC	96.1407	961.4072	683.59	697.36	13.77	49.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2007018-003	7.3687 ppm	2.6382 ppm	35.8000%	2020/08/21 06:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	9.2342	92.3422	73.96	87.68	13.72	50.00	10:28
2	TOC	5.5033	55.0327	47.79	60.91	13.13	50.06	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2007018-003D	4.5753 ppm	0.3918 ppm	8.5600%	2020/08/21 06:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.8524	48.5236	43.22	56.16	12.93	49.97	10:29
2	TOC	4.2983	42.9825	39.33	52.30	12.97	50.10	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	K2007018-003MS	29.2565 ppm	0.1532 ppm	0.5200%	2020/08/21 07:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.3649	293.6487	215.17	228.41	13.24	49.95	10:29
2	TOC	29.1482	291.4819	213.65	226.91	13.26	50.02	10:27

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	K2007018-004	23.8707 ppm	0.5947 ppm	2.4900%	2020/08/21 07:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	23.4501	234.5011	173.68	186.59	12.90	50.07	10:30
2	TOC	24.2912	242.9119	179.58	192.65	13.07	49.97	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	K2007018-005	24.2526 ppm	0.0925 ppm	0.3800%	2020/08/21 08:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.1871	241.8713	178.85	191.97	13.11	50.02	10:25
2	TOC	24.3180	243.1799	179.77	192.98	13.21	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2007063-002	5.8856 ppm	0.7693 ppm	13.0700%	2020/08/21 08:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.4296	64.2959	54.29	67.26	12.98	49.96	10:29
2	TOC	5.3416	53.4161	46.65	59.71	13.06	50.05	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2007063-004	4.1003 ppm	0.0134 ppm	0.3300%	2020/08/21 09:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.1098	41.0979	38.01	51.09	13.08	50.10	10:27
2	TOC	4.0908	40.9083	37.88	50.85	12.97	49.98	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.1219 ppm (PASS)	0.0000 ppm	0%	2020/08/21 10:28

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.1219	231.2188	172.09	185.09	13.01	49.98	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.5558 ppm (PASS)	0.0000 ppm	0%	2020/08/21 10:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.5558	5.5582	13.79	26.93	13.14	50.01	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 10

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.4627 ppm	0.0000 ppm	0.0000%	2020/08/21 10:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4627	4.6266	12.43	25.52	13.09	50.12	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	25.5496 ppm (PASS)	0.0000 ppm	0%	2020/08/21 11:11

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.5496	255.4959	189.12	202.09	12.97	50.03	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	25.7292 ppm (PASS)	0.0000 ppm	0%	2020/08/21 11:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.7292	257.2921	190.38	203.40	13.02	49.96	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 10

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	40	TOC	K2006929-001	7.7110 ppm	0.0183 ppm	0.2400%	2020/08/21 11:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7240	77.2400	63.37	76.45	13.09	50.07	10:26
2	TOC	7.6980	76.9805	63.18	76.02	12.83	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	41	TOC	K2007018-002 10X	46.9853 ppm	0.2265 ppm	0.4800%	2020/08/21 12:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	46.8252	468.2518	337.65	350.55	12.90	49.97	10:26
2	TOC	47.1455	471.4550	339.90	353.06	13.16	50.07	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	42	TOC	K2007018-003	3.9045 ppm	0.3744 ppm	9.5900%	2020/08/21 12:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.1692	41.6924	38.43	51.54	13.11	49.94	10:27
2	TOC	3.6398	36.3979	34.72	47.72	13.01	49.97	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.1835 (IC) (v1436)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.0763 ppm (PASS)	0.0000 ppm	0%	2020/08/21 13:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0763	240.7628	178.78	191.91	13.12	50.05	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 10

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0969 ppm (PASS)	0.0000 ppm	0%	2020/08/21 13:19

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0969	0.9693	10.57	23.46	12.88	49.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1435	1.3927	0.5240	0.0000	0.0000	0.0000	2020/08/17 12:16	Fusion1 (Fusion1)

v1436	1.4033	0.2300	0.0000	0.0000	0.0000	2020/08/20 14:05	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version:	v4	Operator:	Fusion1 (Fusion1)
Ver Creation:	2019/02/21 17:57		
Comment:			

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5

SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/08/21 13:34

0.556				OBSERVATIONS	9		ABOVE
0.463				STD Deviation	0.22197		ABOVE
0.097	0.097	######	######	AVERAGE	0.12393		0.0969
0.000				UCL	0.34590		0
0.000				LCL	-0.09803		0
0.000							0
0.000							0
0.000				OBSERVATIONS	1		0
0.000				STD Deviation	#DIV/0!		0
				AVERAGE	0.09690		0
				UCL	#DIV/0!		0
				LCL	#DIV/0!		0
							0
							0
				OBSERVATIONS	0		0
				STD Deviation	#DIV/0!		0
				AVERAGE	#DIV/0!		0
				UCL	#DIV/0!		0
				LCL	#DIV/0!		0
							0
							0
				OBSERVATIONS	0		0
				STD Deviation	#DIV/0!		0
				AVERAGE	#DIV/0!		0
							0
							0
							0
							0
							0
							0

ALS Environmental

StarLIMS Run: 692111/392113

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-15-C 50 ppm LCS: 19-GEN-8-31I 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-J

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-38-B

21 % H3PO4: 19-GEN-08-38-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MM	Date Analyzed: 8/10/20
Reviewed By: JC	Date Reviewed: 8/26/20

August 27, 2020 Service Request No:E2000741

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

Laboratory Results for: HS20080474

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2020
For your reference, these analyses have been assigned our service request number **E2000741.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000741
Project:	HS20080474	**Date Received:**	08/13/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/13/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000359: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS and MSD were performed on unrelated samples. The LCS and LCSD recovery passed.

DOD Certification is held for the method/matrix/analytes provided in this report.

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

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

Client: ALS Environmental - US **Service Request:**E2000741
Project: HS20080474

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000741-001	LH18/24-SP650_081120_BIX	8/11/2020	1400

Service Request Summary

Folder #: **E2000741**
Client Name: ALS Environmental - US
Project Name: HS20080474
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080474
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000741-001	LH18/24-SP650_081120_BIX	Ground Water	08/11/20 1400	**IV**

Service Request Summary

Folder #: **E2000741**
Client Name: ALS Environmental - US
Project Name: HS20080474
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080474
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 8/26,level IV 9/2

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

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

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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E2000741 5
ALS Laboratory Group
HS20080474

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14485**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20080474
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20080474-02**	**LH18/24-SP650_081120-BIX**	**Water**	**11 Aug 2020 14:00**
	SUB_Perch-6850			26 Aug 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time:

Received By: Date/Time: 8/13/20 1346

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CC.

Client/Project ALS-H

Thermometer ID IR#1

Date/Time Received: 8/13/12 Initials: J.M Date/Time Logged in: 8/13/12 Initials CC.

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

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

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
–		8/13/12	1346	CC.	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000741 5
ALS Laboratory Group
HS20080474

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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 364168 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/24/20 09:31

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000716-001	LH18/24-SP650_080520-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000739-001	LH18/24-SP650_081120_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000740-001	LH18/24-SP140_081120	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000741-001	LH18/24-SP650_081120_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000742-001	LHSMW01-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000742-002	04WW04-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000742-003	04WW08-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000742-004	04WW08-200810-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000742-005	04WW02-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000742-006	04WW06-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000742-007	LHSMW02-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000742-008	04WW11-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000742-009	04WW01-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000742-010	04WW05-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000742-011	04WW09-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000742-012	04WW10-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2000742-013	04WW07-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2000742-014	04WW07-200811-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2000759-001	16WW58-200817	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2000759-002	16WW57-200817	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000359-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000359-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000359-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2000359-04	04WW10-200811 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2000359-05	04WW10-200811 DMS	.01	6850/ClO4 DOD			Liquid	10mL	
26	EQ2000359-06	16WW57-200817 MS	.01	6850/ClO4 DOD			Liquid	10mL	
27	EQ2000359-07	16WW57-200817 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

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

E2000716-001	100.00µL	E2000739-001	100.00µL	E2000740-001	100.00µL	E2000741-001	100.00µL	E2000742-001	100.00µL	E2000742-002	100.00µL
E2000742-003	100.00µL	E2000742-004	100.00µL	E2000742-005	100.00µL	E2000742-006	100.00µL	E2000742-007	100.00µL	E2000742-008	100.00µL
E2000742-009	100.00µL	E2000742-010	100.00µL	E2000742-011	100.00µL	E2000742-012	100.00µL	E2000742-013	100.00µL	E2000742-014	100.00µL
E2000759-001	100.00µL	E2000759-002	100.00µL	EQ2000359-01	100.00µL	EQ2000359-02	100.00µL	EQ2000359-03	100.00µL	EQ2000359-04	100.00µL

Preparation Information Benchsheet

Prep Run#: 364168
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 8/24/20 09:31

EQ2000359-05 100.00µL EQ2000359-06 100.00µL EQ2000359-07 100.00µL

Name:	Perchlorate Intermediate Stock1	Inventory ID	209764	Logbook Ref:	Perchlorate Int. Stock1 51820	Expires On:	11/18/2020

EQ2000359-02 1.00µL EQ2000359-03 1.00µL EQ2000359-04 1.00µL EQ2000359-05 1.00µL EQ2000359-06 1.00µL EQ2000359-07 1.00µL

Preparation Steps

Step: Preparation
Started: 8/24/20 09:31
Finished: 8/25/20 17:54
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	8/11/20 1400
Sample Matrix:	Ground Water	**Date Received:**	8/13/20
Sample Name:	LH18/24-SP650_081120_BIX	**Units:**	µg/L
Lab Code:	E2000741-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	8/24/20	8/26/20 16:46	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000359-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	8/24/20	8/25/20 18:56	364168	692783	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474
Sample Matrix: Ground Water

Service Request: E2000741
Date Analyzed: 8/26/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 364168

	Lab Control Sample EQ2000359-02			Duplicate Lab Control Sample EQ2000359-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.108	0.100	108	0.100	0.100	100	84 - 119	8	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000359-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.108**		0.100	0.0500	0.0250	1	8/24/20	8/26/20 15:35	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000359-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.100**		0.100	0.0500	0.0250	1	8/24/20	8/26/20 15:27	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	8/26/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000742-012	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS Matrix Spike EQ2000359-04				Batch QCDMS Duplicate Matrix Spike EQ2000359-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.339	0.459	0.100	120	*	0.428	0.100	89	84 - 119	7	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.459**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:43	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.428**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:51	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	8/26/20

Matrix Spike Summary

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000759-002	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS				Batch QCDMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000359-06				EQ2000359-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.454	0.530	0.100	76	#	0.558	0.100	105	#	84 - 119	5	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-06	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.530**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:59	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-07	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.558**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 16:07	364168	692775	

Initial Calibration

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

20200819

ALS Environmental

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000022

1st Review: Kneir
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200819_005	Perchlorate6850b.lcm	1x	☒	3100806-05	8/19/2020 10:42
2	PERCHLORATE2		20200819_006	Perchlorate6850b.lcm	1x	☒	3100806-06	8/19/2020 10:50
3	PERCHLORATE3		20200819_007	Perchlorate6850b.lcm	1x	☒	3100806-07	8/19/2020 10:58
4	PERCHLORATE4		20200819_008	Perchlorate6850b.lcm	1x	☒	3100807-01	8/19/2020 11:06
5	PERCHLORATE5		20200819_009	Perchlorate6850b.lcm	1x	☒	3100807-02	8/19/2020 11:14
6	PERCHLORATE6		20200819_010	Perchlorate6850b.lcm	1x	☒	3100807-03	8/19/2020 11:22
7	PERCHLORATE7		20200819_011	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 11:30
8	PERCHLORATE8		20200819_012	Perchlorate6850b.lcm	1x	☒	3100807-05	8/19/2020 11:38
9	PERCHLORATE9		20200819_013	Perchlorate6850b.lcm	1x	☒	3100807-06	8/19/2020 11:45
10	PERCHLORATE10		20200819_014	Perchlorate6850b.lcm	1x	☒	3100807-07	8/19/2020 11:53
11	PERCHLORATEICV		20200819_016	Perchlorate6850b.lcm	1x	☒	3100807-08	8/19/2020 12:09
12	LODV		20200819_017	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:17
13	EQ2000337-01		20200819_019	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:38
14	EQ2000337-02		20200819_020	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:46
15	EQ2000337-03		20200819_021	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:53
16	E2000723-001		20200819_022	Perchlorate6850b.lcm	1x	☒		8/19/2020 13:01
17	PERCHLORATE7		20200819_023	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 13:09
18	E2000680-002X10		20200819_024	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:17
19	E2000680-004X2		20200819_025	Perchlorate6850b.lcm	2x	☒		8/19/2020 13:25
20	E2000680-007X10		20200819_026	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:33
21	E2000680-009X10		20200819_027	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:41
22	E2000680-010X10		20200819_028	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:49
23	E2000680-011X10		20200819_029	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:57
24	EQ2000327-01		20200819_030	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:04
25	EQ2000327-02		20200819_031	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:12
26	EQ2000327-03		20200819_033	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:21
27	PERCHLORATE7		20200819_034	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 14:29
28	E2000735-001		20200819_035	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:37
29	E2000735-002		20200819_036	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:45
30	E2000735-003		20200819_037	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:53
31	E2000735-004		20200819_038	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:01
32	E2000735-005		20200819_039	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:09
33	E2000735-006		20200819_040	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:16
34	E2000735-007		20200819_041	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:24
35	E2000735-008		20200819_042	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:32
36	E2000735-009		20200819_043	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:44
37	PERCHLORATE7		20200819_044	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 15:52
38	E2000735-010		20200819_045	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:00
39	E2000735-011		20200819_046	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:08
40	E2000735-013		20200819_047	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:16
41	E2000735-014		20200819_048	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:24
42	E2000735-015		20200819_049	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:32
43	E2000735-016		20200819_050	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:40
44	E2000735-017		20200819_051	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:47
45	E2000735-018		20200819_052	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:55
46	E2000735-019		20200819_053	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:03
47	PERCHLORATE7		20200819_054	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 17:11
48	EQ2000339-01		20200819_055	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:19
49	EQ2000339-02		20200819_056	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:27
50	EQ2000339-03		20200819_057	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:35
51	E2000712-001		20200819_058	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:43
52	E2000712-002		20200819_059	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:51
53	E2000712-003		20200819_060	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:59
54	IB		20200819_061	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:08
55	IB		20200819_062	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:16
56	IB		20200819_063	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:24
57	IB		20200819_064	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:32
58	PERCHLORATE7		20200819_065	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 18:40
59	E2000712-004		20200819_066	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:48
60	E2000712-005		20200819_067	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:56
61	E2000712-006		20200819_068	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:04

20200819

ALS Environmental

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000022

1st Review: Kneir
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000712-007		20200819_069	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:12
63	E2000694-012		20200819_070	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:19
64	E2000694-012MS		20200819_071	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:27
65	E2000694-012MSD		20200819_072	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:35
66	E2000711-001		20200819_073	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:43
67	E2000711-002		20200819_074	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:51
68	E2000724-001		20200819_075	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:59
69	PERCHLORATE7		20200819_076	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 20:07
70	E2000724-002		20200819_077	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:15
71	E2000724-003		20200819_078	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:22
72	E2000724-004		20200819_079	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:30
73	E2000728-001		20200819_080	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:38
74	E2000728-002		20200819_081	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:46
75	E2000729-001		20200819_082	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:54
76	R2006493-001		20200819_083	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:02
77	R2006493-003		20200819_084	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:10
78	R2006493-005		20200819_085	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:18
79	R2006493-007		20200819_086	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:26
80	PERCHLORATE7		20200819_087	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 21:33
81	R2006493-009		20200819_088	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:41
82	R2006493-011		20200819_089	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:49
83	R2006493-013		20200819_090	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:57
84	R2006493-015		20200819_091	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:05
85	PERCHLORATE7		20200819_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 22:13
86	EQ2000338-01		20200819_093	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:21
87	EQ2000338-02		20200819_094	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:29
88	EQ2000338-03		20200819_095	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:37
89	EQ2000338-04		20200819_096	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:44
90	EQ2000338-05		20200819_097	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:52
91	R2006532-001		20200819_098	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:00
92	R2006532-003		20200819_099	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:08
93	R2006532-005		20200819_100	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:16
94	R2006532-007		20200819_101	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:24
95	R2006532-009		20200819_102	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:32
96	PERCHLORATE7		20200819_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 23:40
97	R2006532-011		20200819_104	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:47
98	R2006555-002		20200819_105	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:55
99	R2006555-004		20200819_106	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:03
100	R2006555-006		20200819_107	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:11
101	R2006555-008		20200819_108	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:19
102	R2006555-010		20200819_109	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:27
103	R2006555-012		20200819_110	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:35
104	R2006617-001		20200819_111	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:43
105	R2006617-003		20200819_112	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:50
106	R2006617-005		20200819_113	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:58
107	PERCHLORATE7		20200819_114	Perchlorate6850b.lcm	1x	☒	3100807-04	8/20/2020 1:06
108	R2006617-007		20200819_115	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:14
109	R2006617-009		20200819_116	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:22
110	R2006617-010		20200819_117	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:30
111	PERCHLORATE7		20200819_118	Perchlorate6850b.lcm	1x	☒	3100807-04	8/20/2020 1:38

Initial Calibration - Detailed Report

Calibration ID: EC2000022 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000022-01	PERCHLORATE1	20200819_005	08/19/2020 10:42
02	EC2000022-02	PERCHLORATE2	20200819_006	08/19/2020 10:50
03	EC2000022-03	PERCHLORATE3	20200819_007	08/19/2020 10:58
04	EC2000022-04	PERCHLORATE4	20200819_008	08/19/2020 11:06
05	EC2000022-05	PERCHLORATE5	20200819_009	08/19/2020 11:14
06	EC2000022-06	PERCHLORATE6	20200819_010	08/19/2020 11:22
07	EC2000022-07	PERCHLORATE7	20200819_011	08/19/2020 11:30
08	EC2000022-08	PERCHLORATE8	20200819_012	08/19/2020 11:38
09	EC2000022-09	PERCHLORATE9	20200819_013	08/19/2020 11:45
10	EC2000022-10	PERCHLORATE10	20200819_014	08/19/2020 11:53

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

Perchlorate **Average RF** **RSD = 5.952** **Average RF = 0.1131**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1299	02	0.5000	0.113	03	0.7000	0.1123	04	1.0000	0.1147
05	2.0000	0.1134	06	5.0000	0.1082	07	10.0000	0.1069	08	20.0000	0.1158
09	30.0000	0.1094	10	50.0000	0.107						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.115	14.9	02	0.5000	0.500	-0.1	03	0.7000	0.695	-0.7
04	1.0000	1.01	1.5	05	2.0000	2.01	0.3	06	5.0000	4.78	-4.3
07	10.0000	9.46	-5.4	08	20.0000	20.5	2.4	09	30.0000	29.0	-3.2
10	50.0000	47.3	-5.4								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000022	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200819_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000022-11	T	Average RF	10	9.352	ng/mL	-6.5	<= 15

ALS Group Houston

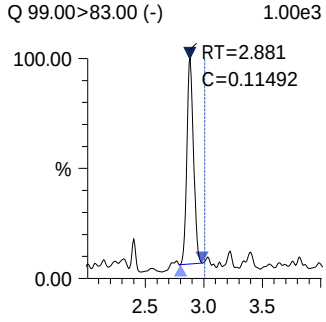
PERCHLORATE1

Date acquired: 8/19/2020 10:42:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/19/2020 10:42:37 AM	3802	0.11492	20200819_005	2.881	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/19/2020 10:42:37 AM	292622	1.00000	20200819_005	2.877	25.0000	1.0000	5

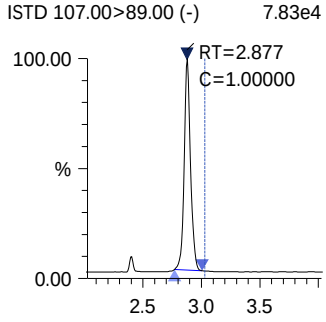
Perchlorate

Conc 0.11492
Area 3802



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292622



ALS Group Houston

PERCHLORATE2

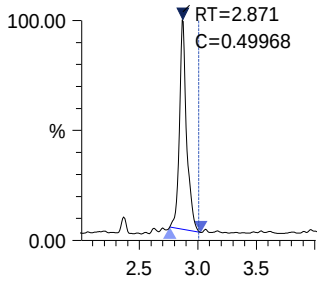
Date acquired: 8/19/2020 10:50:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/19/2020 10:50:33 AM	18036	0.49968	20200819_006	2.871	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/19/2020 10:50:33 AM	319274	1.00000	20200819_006	2.870	25.0000	1.0000	6

Perchlorate

Conc 0.49968
Area 18036

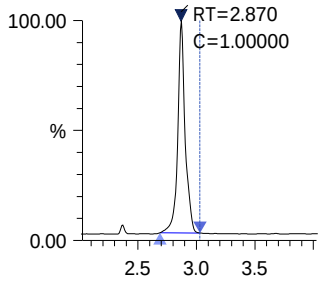
Q 99.00>83.00 (-) 4.32e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 319274

ISTD 107.00>89.00 (-) 7.26e4



ALS Group Houston

PERCHLORATE3

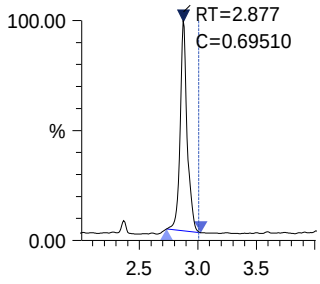
Date acquired: 8/19/2020 10:58:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/19/2020 10:58:27 AM	24394	0.69510	20200819_007	2.877	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/19/2020 10:58:27 AM	310422	1.00000	20200819_007	2.874	25.0000	1.0000	7

Perchlorate

Conc 0.69510
Area 24394

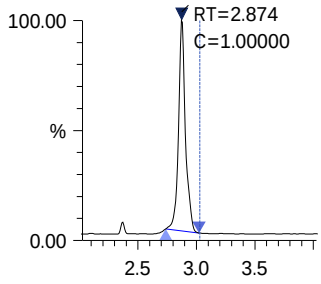
Q 99.00>83.00 (-) 5.99e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 310422

ISTD 107.00>89.00 (-) 7.56e4



ALS Group Houston

PERCHLORATE4

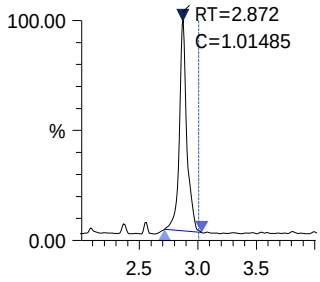
Date acquired: 8/19/2020 11:06:22 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/19/2020 11:06:22 AM	33591	1.01485	20200819_008	2.872	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/19/2020 11:06:22 AM	292786	1.00000	20200819_008	2.872	25.0000	1.0000	8

Perchlorate

Conc 1.01485
Area 33591

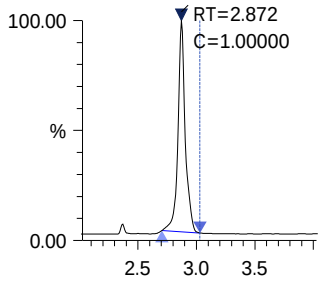
Q 99.00>83.00 (-) 7.70e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292786

ISTD 107.00>89.00 (-) 6.80e4



ALS Group Houston

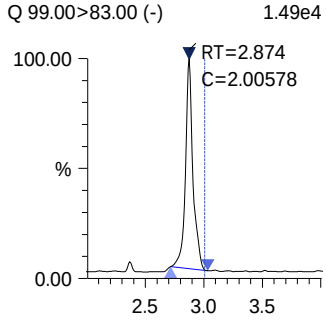
PERCHLORATE5

Date acquired: 8/19/2020 11:14:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/19/2020 11:14:18 AM	65114	2.00578	20200819_009	2.874	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/19/2020 11:14:18 AM	287158	1.00000	20200819_009	2.873	25.0000	1.0000	9

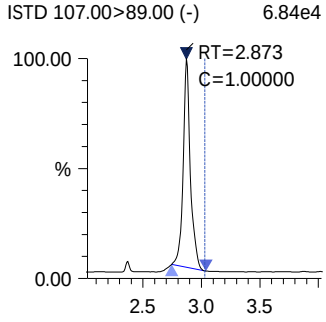
Perchlorate

Conc 2.00578
Area 65114



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 287158



ALS Group Houston

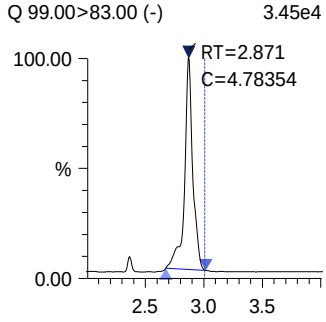
PERCHLORATE6

Date acquired: 8/19/2020 11:22:10 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/19/2020 11:22:10 AM	167892	4.78354	20200819_010	2.871	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/19/2020 11:22:10 AM	310462	1.00000	20200819_010	2.870	25.0000	1.0000	10

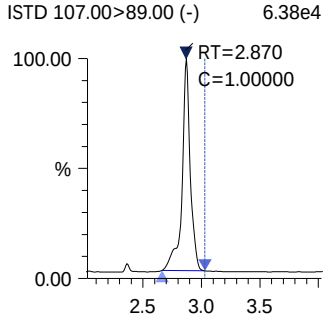
Perchlorate

Conc 4.78354
Area 167892



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 310462



ALS Group Houston

PERCHLORATE7

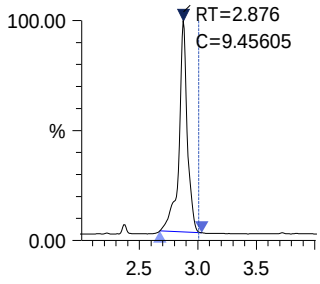
Date acquired: 8/19/2020 11:30:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/19/2020 11:30:05 AM	309830	9.45605	20200819_011	2.876	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/19/2020 11:30:05 AM	289828	1.00000	20200819_011	2.875	25.0000	1.0000	4

Perchlorate

Conc 9.45605
Area 309830

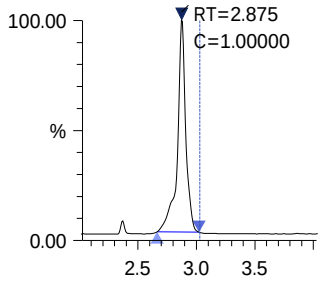
Q 99.00>83.00 (-) 6.35e4



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 289828

ISTD 107.00>89.00 (-) 5.81e4



ALS Group Houston

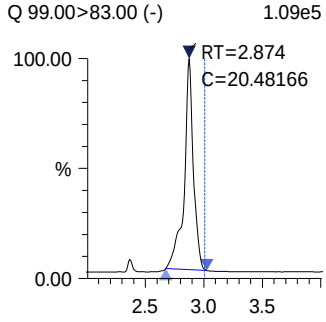
PERCHLORATE8

Date acquired: 8/19/2020 11:38:00 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/19/2020 11:38:00 AM	587088	20.48166	20200819_012	2.874	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/19/2020 11:38:00 AM	253551	1.00000	20200819_012	2.873	25.0000	1.0000	11

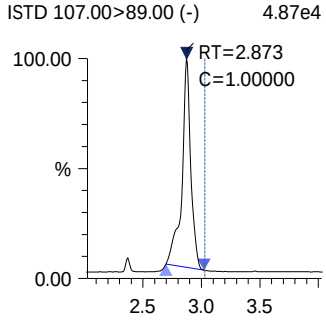
Perchlorate

Conc 20.48166
Area 587088



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 253551



ALS Group Houston

PERCHLORATE9

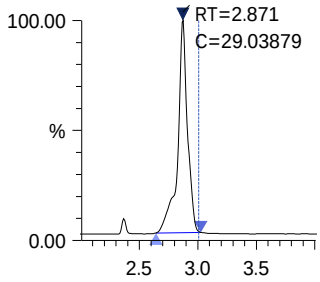
Date acquired: 8/19/2020 11:45:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/19/2020 11:45:53 AM	849278	29.03879	20200819_013	2.871	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/19/2020 11:45:53 AM	258702	1.00000	20200819_013	2.870	25.0000	1.0000	12

Perchlorate

Conc 29.03879
Area 849278

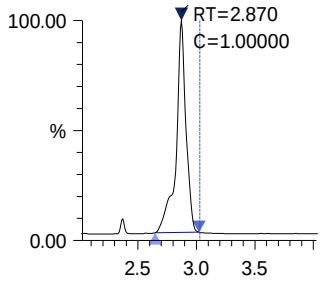
Q 99.00>83.00 (-) 1.48e5



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 258702

ISTD 107.00>89.00 (-) 4.43e4



ALS Group Houston

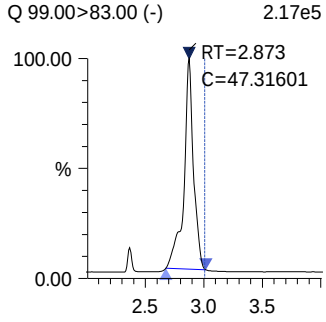
PERCHLORATE10

Date acquired: 8/19/2020 11:53:48 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/19/2020 11:53:48 AM	1220253	47.31601	20200819_014	2.873	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/19/2020 11:53:48 AM	228123	1.00000	20200819_014	2.871	25.0000	1.0000	13

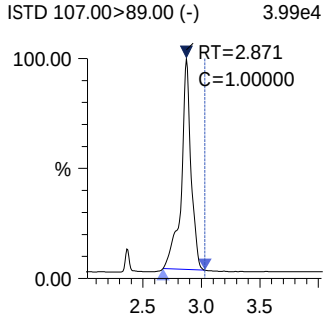
Perchlorate

Conc 47.31601
Area 1220253



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 228123



ALS Group Houston

PERCHLORATEICV

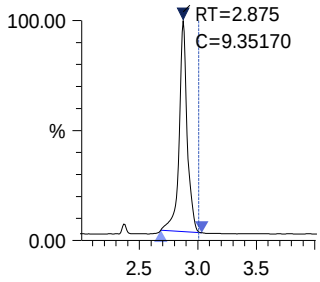
Date acquired: 8/19/2020 12:09:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/19/2020 12:09:35 PM	294031	9.35170	20200819_016	2.875	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/19/2020 12:09:35 PM	278118	1.00000	20200819_016	2.873	25.0000	1.0000	14

Perchlorate

Conc 9.35170
Area 294031

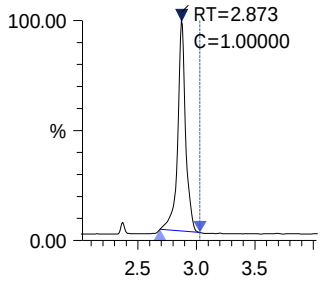
Q 99.00>83.00 (-) 6.27e4



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 278118

ISTD 107.00>89.00 (-) 5.98e4



20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000023

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

Initial Calibration - Detailed Report

Calibration ID: EC2000023 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000023-01	PERCHLORATE1	20200826_024	08/26/2020 11:55
02	EC2000023-02	PERCHLORATE2	20200826_025	08/26/2020 12:03
03	EC2000023-03	PERCHLORATE3	20200826_026	08/26/2020 12:11
04	EC2000023-04	PERCHLORATE4	20200826_027	08/26/2020 12:19
05	EC2000023-05	PERCHLORATE5	20200826_028	08/26/2020 12:27
06	EC2000023-06	PERCHLORATE6	20200826_029	08/26/2020 12:35
07	EC2000023-07	PERCHLORATE7	20200826_030	08/26/2020 12:42
08	EC2000023-08	PERCHLORATE8	20200826_031	08/26/2020 12:50
09	EC2000023-09	PERCHLORATE9	20200826_032	08/26/2020 12:58
10	EC2000023-10	PERCHLORATE10	20200826_033	08/26/2020 13:06

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

Perchlorate **Average RF** **RSD = 5.546** **Average RF = 0.1085**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1181	02	0.5000	0.1137	03	0.7000	0.1087	04	1.0000	0.1168
05	2.0000	0.1092	06	5.0000	0.1056	07	10.0000	0.1014	08	20.0000	0.1048
09	30.0000	0.1049	10	50.0000	0.1012						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.109	8.9	02	0.5000	0.524	4.8	03	0.7000	0.702	0.2
04	1.0000	1.08	7.7	05	2.0000	2.01	0.7	06	5.0000	4.87	-2.6
07	10.0000	9.35	-6.5	08	20.0000	19.3	-3.3	09	30.0000	29.0	-3.3
10	50.0000	46.7	-6.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000023	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200826_035	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000023-11	T	Average RF	10	9.690	ng/mL	-3.1	<= 15

ALS Group Houston

PERCHLORATE1

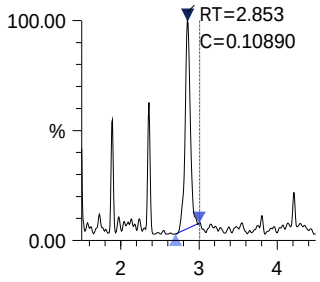
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/26/2020 11:55:32 AM	2254	0.10890	20200826_024	2.853	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/26/2020 11:55:32 AM	190859	1.00000	20200826_024	2.852	25.0000	1.0000	5

Perchlorate

Conc 0.10890
Area 2254

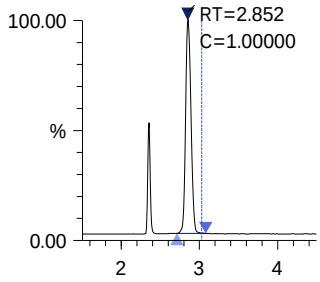
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

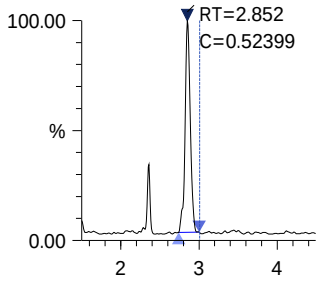
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/26/2020 12:03:28 PM	11013	0.52399	20200826_025	2.852	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/26/2020 12:03:28 PM	193789	1.00000	20200826_025	2.850	25.0000	1.0000	6

Perchlorate

Conc 0.52399
Area 11013

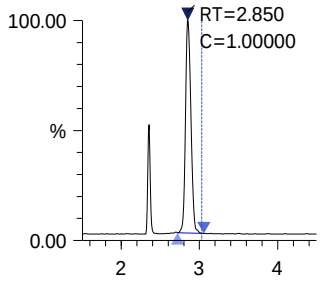
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

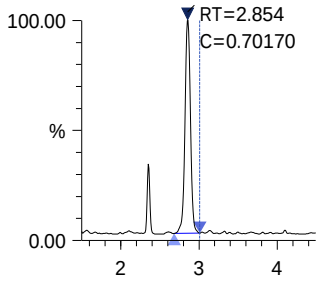
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/26/2020 12:11:22 PM	15252	0.70170	20200826_026	2.854	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/26/2020 12:11:22 PM	200410	1.00000	20200826_026	2.849	25.0000	1.0000	7

Perchlorate

Conc 0.70170
Area 15252

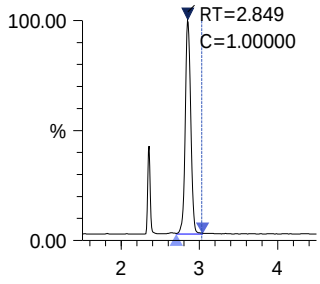
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

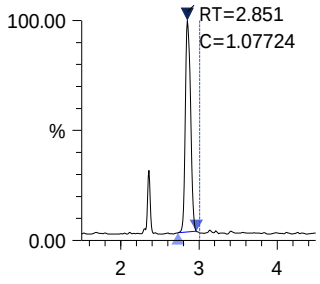
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/26/2020 12:19:17 PM	21473	1.07724	20200826_027	2.851	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/26/2020 12:19:17 PM	183791	1.00000	20200826_027	2.851	25.0000	1.0000	8

Perchlorate

Conc 1.07724
Area 21473

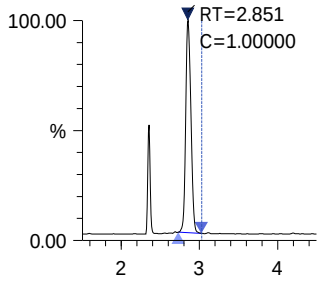
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

PERCHLORATE5

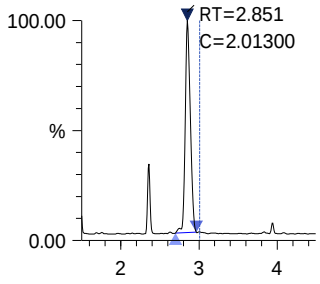
Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/26/2020 12:27:10 PM	40038	2.01300	20200826_028	2.851	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/26/2020 12:27:10 PM	183386	1.00000	20200826_028	2.849	25.0000	1.0000	9

Perchlorate

Conc 2.01300
Area 40038

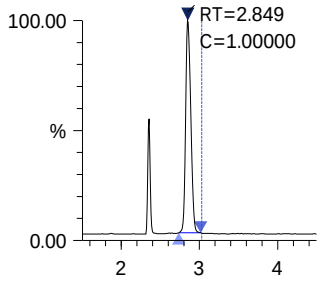
Q 99.00>83.00 (-) 8.76e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE6

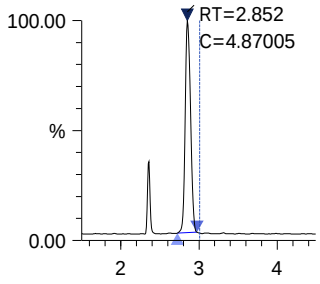
Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/26/2020 12:35:02 PM	98121	4.87005	20200826_029	2.852	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/26/2020 12:35:02 PM	185768	1.00000	20200826_029	2.850	25.0000	1.0000	10

Perchlorate

Conc 4.87005
Area 98121

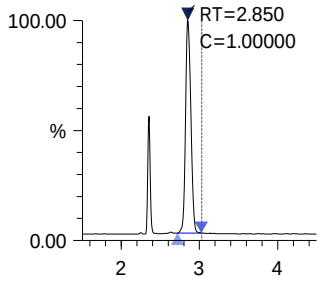
Q 99.00>83.00 (-) 2.04e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768

ISTD 107.00>89.00 (-) 3.86e4



ALS Group Houston

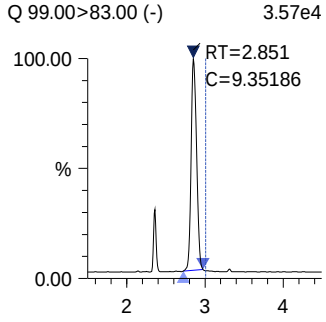
PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 12:42:57 PM	174248	9.35186	20200826_030	2.851	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 12:42:57 PM	171796	1.00000	20200826_030	2.850	25.0000	1.0000	4

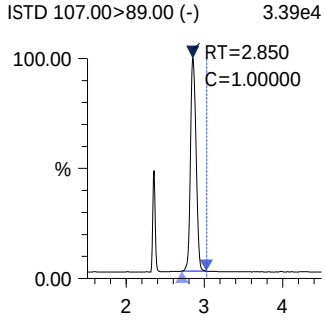
Perchlorate

Conc 9.35186
Area 174248



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

PERCHLORATE8

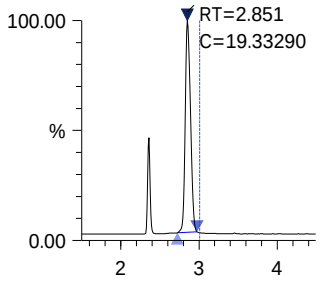
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/26/2020 12:50:51 PM	337010	19.33290	20200826_031	2.851	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/26/2020 12:50:51 PM	160727	1.00000	20200826_031	2.850	25.0000	1.0000	11

Perchlorate

Conc 19.33290
Area 337010

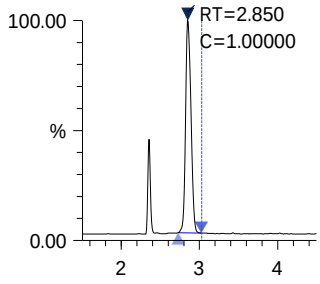
Q 99.00>83.00 (-) 7.14e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

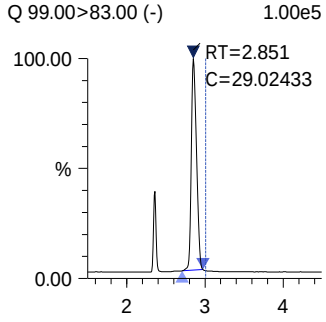
PERCHLORATE9

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/26/2020 12:58:44 PM	466342	29.02433	20200826_032	2.851	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/26/2020 12:58:44 PM	148144	1.00000	20200826_032	2.849	25.0000	1.0000	12

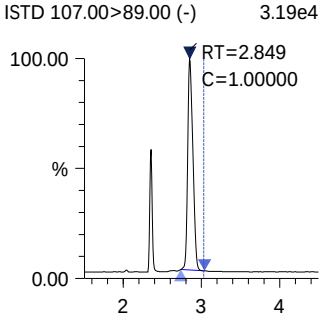
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



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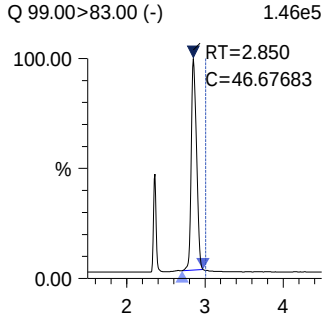
PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/26/2020 1:06:40 PM	694738	46.67683	20200826_033	2.850	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/26/2020 1:06:40 PM	137234	1.00000	20200826_033	2.849	25.0000	1.0000	13

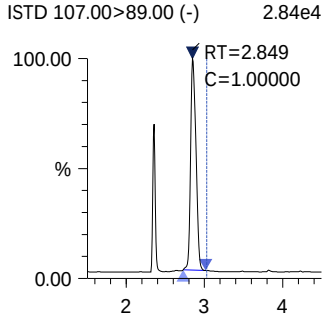
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



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PERCHLORATEICV

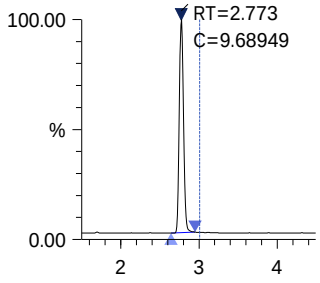
Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/26/2020 2:26:45 PM	257692	9.68949	20200826_035	2.773	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/26/2020 2:26:45 PM	245213	1.00000	20200826_035	2.771	25.0000	1.0000	14

Perchlorate

Conc 9.68949
Area 257692

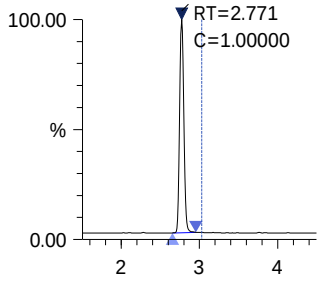
Q 99.00>83.00 (-) 7.12e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213

ISTD 107.00>89.00 (-) 6.83e4



Chromatograms and Selected Ion Monitoring

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

20200825

ALS Environmental

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000022

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	IB		20200825_017	Perchlorate6850b.lcm	1x	☒		8/25/2020 16:49
2	IB		20200825_018	Perchlorate6850b.lcm	1x	☒		8/25/2020 16:57
3	IB		20200825_019	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:05
4	IB		20200825_020	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:13
5	null		20200825_021	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:20
6	null		20200825_022	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:25
7	null		20200825_023	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:30
8	null		20200825_024	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:34
9	IB		20200825_025	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:40
10	IB		20200825_027	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:22
11	PERCHLORATE7		20200825_028	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 18:32
12	LODV		20200825_029	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:40
13	PERCHLORATE7		20200825_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 18:48
14	EQ2000359-01		20200825_031	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:56
15	EQ2000359-02		20200825_032	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:04
16	EQ2000359-03		20200825_033	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:12
17	EQ2000359-04		20200825_034	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:19
18	EQ2000359-05		20200825_035	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:27
19	EQ2000359-06		20200825_036	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:35
20	EQ2000359-07		20200825_037	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:43
21	E2000716-001		20200825_038	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:51
22	E2000739-001		20200825_039	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:59
23	E2000740-001		20200825_040	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:07
24	PERCHLORATE7		20200825_041	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 20:15
25	E2000741-001		20200825_042	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:22
26	E2000742-001		20200825_043	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:30
27	E2000742-002		20200825_044	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:38
28	E2000742-003		20200825_045	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:46
29	E2000742-004		20200825_046	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:54
30	E2000742-005		20200825_047	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:02
31	E2000742-006		20200825_048	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:10
32	E2000742-007		20200825_049	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:18
33	E2000742-008		20200825_050	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:26
34	E2000742-009		20200825_051	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:33
35	PERCHLORATE7		20200825_052	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 21:41
36	E2000742-010		20200825_053	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:49
37	E2000742-011		20200825_054	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:57
38	E2000742-012		20200825_055	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:05
39	E2000742-013		20200825_056	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:13
40	E2000742-014		20200825_057	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:21
41	E2000759-001		20200825_058	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:29
42	E2000759-002		20200825_059	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:36
43	PERCHLORATE7		20200825_060	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 22:44
44								
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20200826

ALS Environmental

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
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91								
92								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_038

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.96	0.1085	0.09719	-10.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_049

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.65	0.1085	0.1047	-3.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_057

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.59	0.1085	0.1040	-4.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_066

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.71	0.1085	0.1053	-2.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_030

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.23	0.1131	0.1043	-7.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_041

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.78	0.1131	0.1105	-2.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_052

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.00	0.1131	0.1018	-10.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20 14:50

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

File ID: I:\LCMS01\DATA\20200826\20200826_038
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000370-01
Analysis Lot: 692775
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-01	168,655	2.85
Duplicate Lab Control Sample	EQ2000359-03	222,420	2.86
Lab Control Sample	EQ2000359-02	218,301	2.86
Batch QCMS	EQ2000359-04	136,805	2.85
Batch QCDMS	EQ2000359-05	144,861	2.85
Batch QCMS	EQ2000359-06	127,802	2.85
Batch QCDMS	EQ2000359-07	144,838	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Analyzed:**	8/26/20 16:30

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_049	**Lab Code:**	EQ2000370-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-02	159,403	2.86
LH18/24-SP650_081120_BIX	E2000741-001	151,084	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080474

Service Request: E2000741
Date Analyzed: 8/26/20 17:33

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

File ID: I:\LCMS01\DATA\20200826\20200826_057
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000370-03
Analysis Lot: 692775
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-03	153,993	2.86
Batch QC	E2000742-012	141,019	2.85
Batch QC	E2000759-002	131,720	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Analyzed:**	8/26/20 18:44

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_066	**Lab Code:**	EQ2000370-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-04	147,883	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Analyzed:**	8/25/20 18:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_030	**Lab Code:**	EQ2000371-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-01	185,913	2.86
Method Blank	EQ2000359-01	246,634	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Analyzed:**	8/25/20 20:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_041	**Lab Code:**	EQ2000371-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-02	148,398	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000741
Project:	HS20080474	**Date Analyzed:**	8/25/20 21:41

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_052	**Lab Code:**	EQ2000371-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-03	176,558	2.85

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

ALS Group Houston

PERCHLORATE7

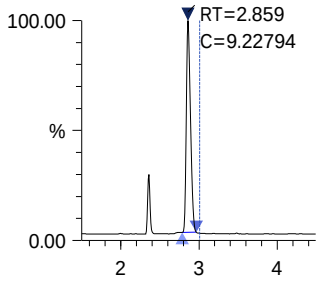
Date acquired: 8/25/2020 6:48:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/25/2020 6:48:17 PM	193948	9.22794	20200825_030	2.859	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/25/2020 6:48:17 PM	185913	1.00000	20200825_030	2.859	25.0000	1.0000	4

Perchlorate

Conc 9.22794
Area 193948

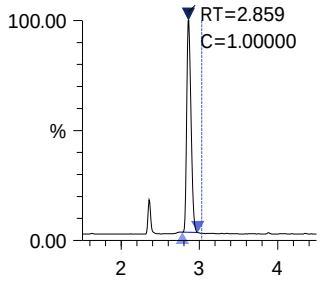
Q 99.00>83.00 (-) 5.19e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185913

ISTD 107.00>89.00 (-) 4.80e4



ALS Group Houston

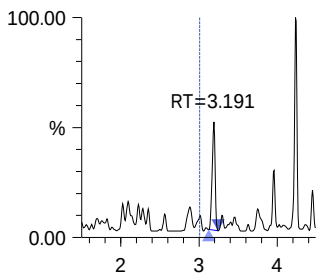
EQ2000359-01

Date acquired: 8/25/2020 6:56:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_031.lcd
Vial: 1 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-01	8/25/2020 6:56:11 PM	----	----	20200825_031	----	25.0000	1.0000	1
Sodium Perchlorate-18O4_IS	EQ2000359-01	8/25/2020 6:56:11 PM	246634	1.00000	20200825_031	2.856	25.0000	1.0000	1

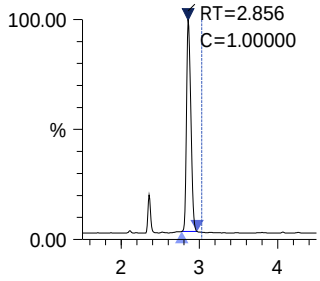
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 5.44e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 246634
ISTD 107.00>89.00 (-) 6.33e4



ALS Group Houston

PERCHLORATE7

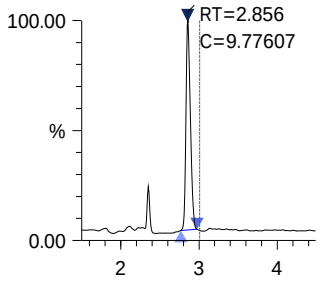
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Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/25/2020 8:15:05 PM	164008	9.77607	20200825_041	2.856	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/25/2020 8:15:05 PM	148398	1.00000	20200825_041	2.853	25.0000	1.0000	4

Perchlorate

Conc 9.77607
Area 164008

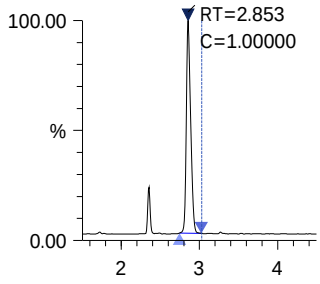
Q 99.00>83.00 (-) 4.18e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148398

ISTD 107.00>89.00 (-) 3.81e4



ALS Group Houston

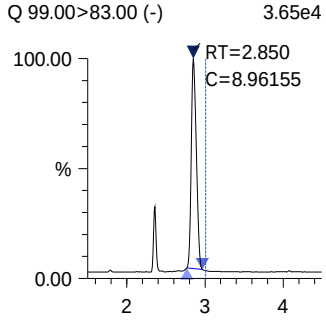
PERCHLORATE7

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Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 2:50:21 PM	163923	8.96155	20200826_038	2.850	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 2:50:21 PM	168655	1.00000	20200826_038	2.849	25.0000	1.0000	4

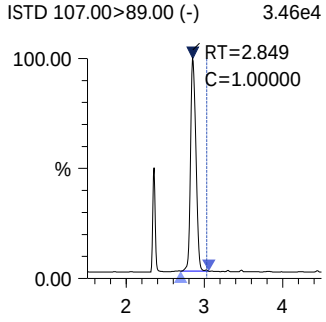
Perchlorate

Conc 8.96155
Area 163923



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168655



ALS Group Houston

EQ2000359-03

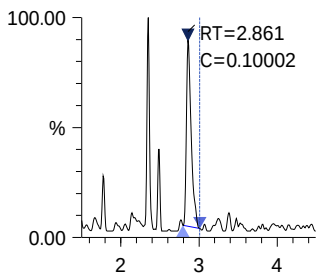
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Vial: 3 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-03	8/26/2020 3:27:52 PM	2413	0.10002	20200826_041	2.861	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	EQ2000359-03	8/26/2020 3:27:52 PM	222420	1.00000	20200826_041	2.861	25.0000	1.0000	3

Perchlorate

Conc 0.10002
Area 2413

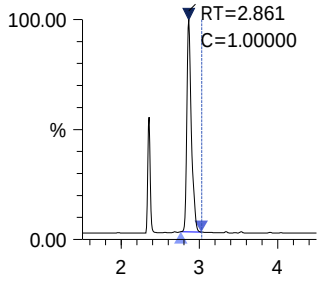
Q 99.00>83.00 (-) 6.41e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222420

ISTD 107.00>89.00 (-) 5.49e4



ALS Group Houston

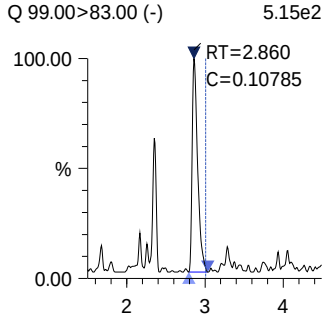
EQ2000359-02

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_042.lcd
Vial: 2 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-02	8/26/2020 3:35:46 PM	2554	0.10785	20200826_042	2.860	25.0000	1.0000	2
Sodium Perchlorate-18O4_IS	EQ2000359-02	8/26/2020 3:35:46 PM	218301	1.00000	20200826_042	2.861	25.0000	1.0000	2

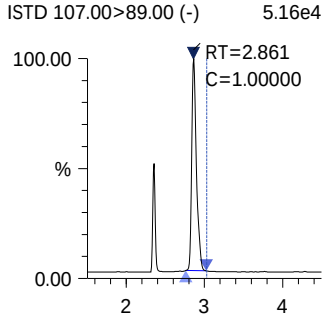
Perchlorate

Conc 0.10785
Area 2554



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 218301



ALS Group Houston

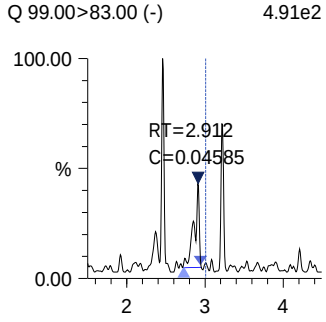
EQ2000359-04X10

Date acquired: 8/26/2020 3:43:38 PM
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Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-04X10	8/26/2020 3:43:38 PM	680	0.04585	20200826_043	2.912	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	EQ2000359-04X10	8/26/2020 3:43:38 PM	136805	1.00000	20200826_043	2.846	25.0000	1.0000	4

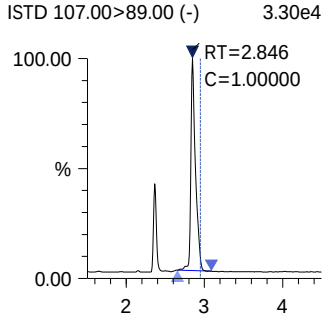
Perchlorate

Conc 0.04585
Area 680



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 136805



ALS Group Houston

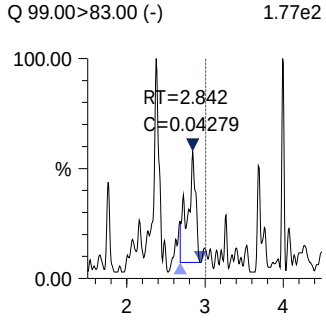
EQ2000359-05X10

Date acquired: 8/26/2020 3:51:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_044.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-05X10	8/26/2020 3:51:31 PM	672	0.04279	20200826_044	2.842	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000359-05X10	8/26/2020 3:51:31 PM	144861	1.00000	20200826_044	2.847	25.0000	1.0000	5

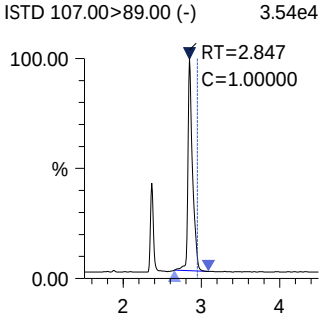
Perchlorate

Conc 0.04279
Area 672



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144861



ALS Group Houston

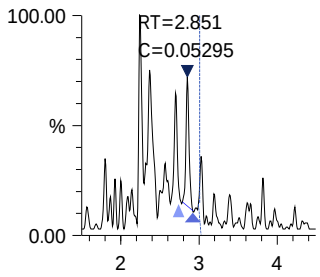
EQ2000359-06X10

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Data File: I:\LCMS01\DATA\20200826\20200826_045.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-06X10	8/26/2020 3:59:24 PM	734	0.05295	20200826_045	2.851	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000359-06X10	8/26/2020 3:59:24 PM	127802	1.00000	20200826_045	2.850	25.0000	1.0000	6

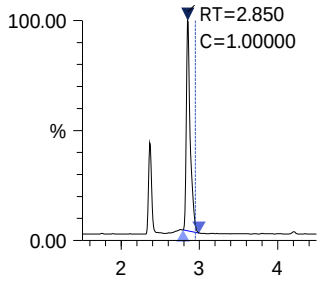
Perchlorate

Conc 0.05295
Area 734
Q 99.00>83.00 (-) 2.12e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 127802
ISTD 107.00>89.00 (-) 3.69e4



ALS Group Houston

EQ2000359-07X10

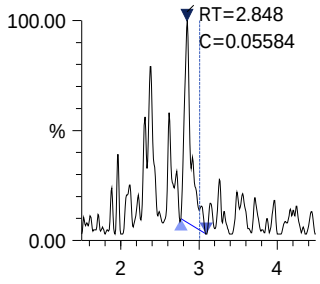
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Data File: I:\LCMS01\DATA\20200826\20200826_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-07X10	8/26/2020 4:07:16 PM	878	0.05584	20200826_046	2.848	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000359-07X10	8/26/2020 4:07:16 PM	144838	1.00000	20200826_046	2.851	25.0000	1.0000	7

Perchlorate

Conc 0.05584
Area 878

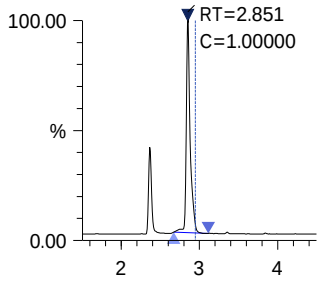
Q 99.00>83.00 (-) 1.53e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144838

ISTD 107.00>89.00 (-) 4.13e4



ALS Group Houston

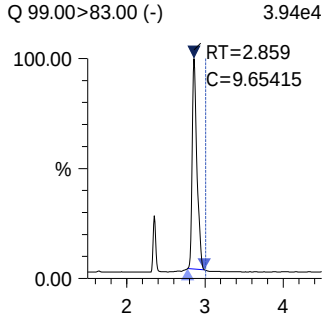
PERCHLORATE7

Date acquired: 8/26/2020 4:30:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_049.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 4:30:55 PM	166904	9.65415	20200826_049	2.859	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 4:30:55 PM	159403	1.00000	20200826_049	2.858	25.0000	1.0000	4

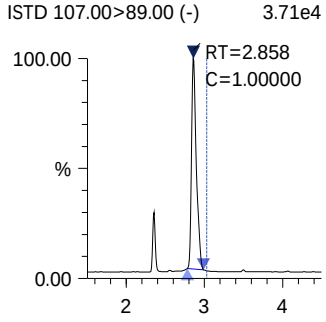
Perchlorate

Conc 9.65415
Area 166904



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 159403



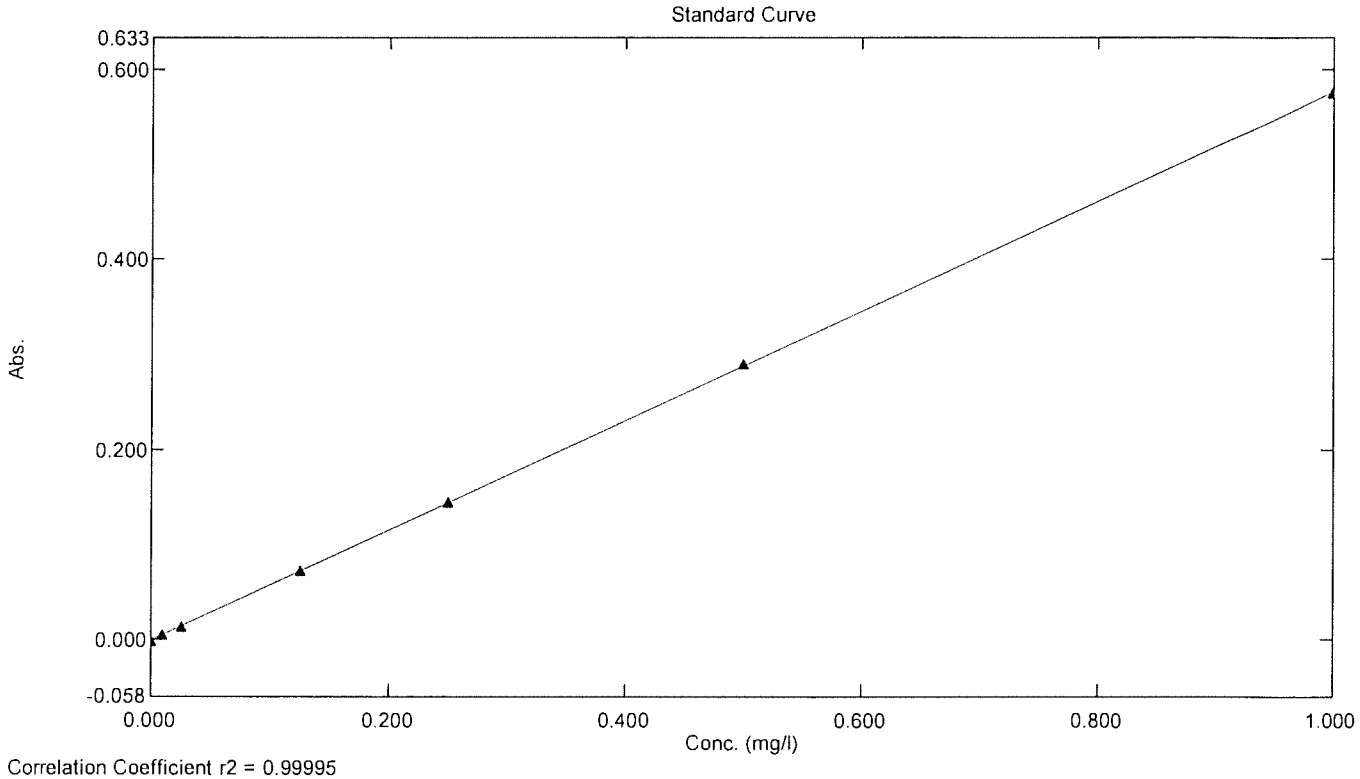
HS20080474 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20080474

Standard Table Report

08/26/2020 01:29:33 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\081220_P_ORTHO.pho..p



Correlation Coefficient r2 = 0.99995

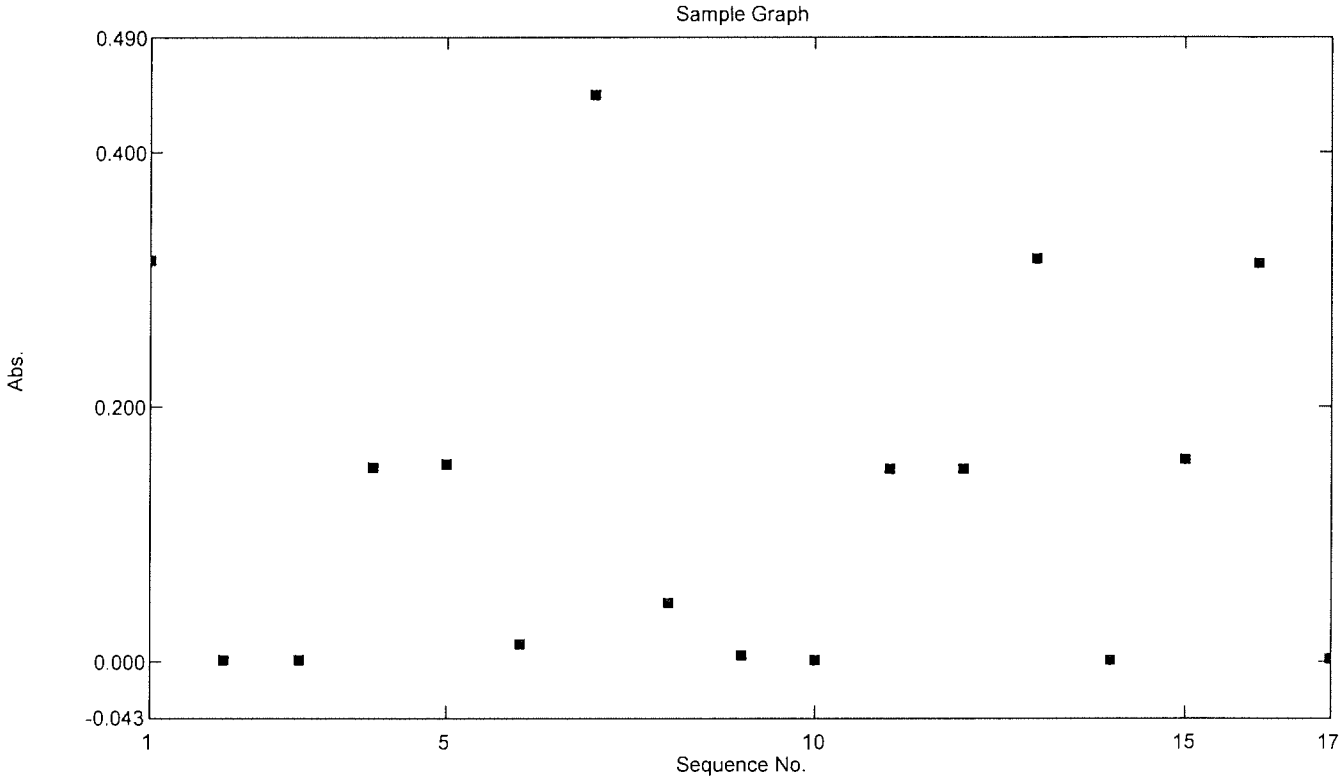
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.073	1.000	
5	STD5	Standard		0.250	0.145	1.000	
6	STD6	Standard		0.500	0.290	1.000	
7	STD7	Standard		1.000	0.575	1.000	
8							

Sample Table Report

08/26/2020 01:29:39 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\081220_P_ORTHO.pho..p



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.547	0.315	314061705 WC-14
2	CCB	Unknown		0.002	0.001	
3	MBLK	Unknown		0.003	0.002	
4	LCS	Unknown		0.264	0.152	314061704 WC-14
5	LCSD	Unknown		0.269	0.155	
6	LOQ	Unknown		0.024	0.014	
7	HS20080252.10	Unknown		0.773	0.446	
8	HS20080252.10.	Unknown		0.080	0.046	PF:10X
9	HS20080464.01	Unknown		0.009	0.005	02:52PM
10	HS20080464.02	Unknown		0.002	0.001	02:52PM
11	HS20080464.02MS	Unknown		0.264	0.152	02:53PM
12	HS20080464.02MS D	Unknown		0.263	0.152	02:53PM
13	CCV2	Unknown		0.549	0.317	
14	CCB2	Unknown		0.003	0.002	
15	HS20080474.01	Unknown		0.276	0.159	PF:10X,02:55PM
16	CCV3	Unknown		0.543	0.313	
17	CCB3	Unknown		0.004	0.003	C-314062905 UV-11
18						

HS20080474 Wet Chem Raw Data (NIT-AMM_W-ISE)

ALS WO# HS20080474

NIT-Am N-W -ISE 350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD	Date: 8/18/20 12:10pm
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date:	Cal Std ID:	Probe ID:
8/18/20	3140635(01-06)	X01-11806

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	132.4	0.20
STD 2 (mg/L):	1	96.0	1.00
STD 3 (mg/L):	5	53.2	5.015

Sodium Thiosulfate ID: 3100601115

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	35.5 -5.2	10.012
STD 5 (mg/L): 50		52.72

LSC / MS Spike ID:	3140635(01)
ICV Cal STD ID:	3100602320
DPD Reagent ID:	3100602305

ICAL Date & Slope: 98.9% | -58.4 mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV					10.219			
CCB					0.008			
MBLK					0.010			
LCS					9.727			
MS200804 74-01					12.487		-ve	
602-01					2.393		+ve	Rechecked
602-01MS					12.011		↓	↓
602-01MSD					12.059			
554-01		0.5ml	5ml	100X	5.255		-ve	
556-01		0.5ml	↓	↓	5.382		-ve	
549-01		0.5m	↓	↓	5.543		-ve	
CV					10.587			
CCB					0.007			

Batch ID:	Reported By	Reviewed By:
366969 366966	MD	KL

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Houston, TX 77099
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F: +1 281 530 5887
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WorkOrder: HS20080475

Longhorn GW Treatment Plant Monthly Influent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

28-Aug-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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Table of Contents

HS20080475 Cover Page
- CoverPage
- HS20080475 Longhorn GW Treatment Plant Monthly Influent Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP140_081120
  - Weight/Volume Log
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS20080475 - Sub Perch IV (E2000740)
- HS20080475 - ME - ICP_W_DOD
  - Form 11 - ICPMS05 Internal Standard Association
  - Form 12 - ICPMS05_367010 Preparation Log
  - Form 13 - ICPMS05_367010 Run Log
  - Form 2 - ICPMS05_367010 CCV
  - Form 3 - ICPMS05_367010 CCB

Table of Contents (continued)

Form 4 - ICPMS05_367010 ICSA
Form 5A - ICPMS05_367010 MS
Form 5B - ICPMS05_367010 PDS
Form 7 - ICPMS05_367010 LCS
Form 8 - ICPMS05_367010 SD
HS20080475 Wet Chem Raw Data (Cr6_W_7196_DOD)

HS20080475 Longhorn GW Treatment Plant Monthly Influent Samples Final

ALS WO# HS20080475

10450 Stancliff Rd. Suite 210
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August 27, 2020

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

Work Order: **HS20080475**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 1 sample(s) on Aug 12, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20080475

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20080475-01	LH18/24-SP140_081120	Water		11-Aug-2020 14:00	12-Aug-2020 10:25	☐

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20080475

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

Metals by Method SW6020

Batch ID: 156348

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

WetChemistry by Method SW7196

Batch ID: R366666

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

ALS Houston, US Date: 27-Aug-20

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

Project: Longhorn GW Treatment Plant Monthly Influent Samples WorkOrder:HS20080475

Sample ID: LH18/24-SP140_081120 Lab ID:HS20080475-01

Collection Date: 11-Aug-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 14-Aug-2020		Analyst: JHD
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	19-Aug-2020 18:28
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	19-Aug-2020 18:28
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	12-Aug-2020 13:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	27-Aug-2020 17:43

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Batch ID: 156348 **Start Date:** 14 Aug 2020 08:00 **End Date:** 14 Aug 2020 12:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20080475-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 156348 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20080475-01	LH18/24-SP140_081120	11 Aug 2020 14:00		14 Aug 2020 12:00	19 Aug 2020 18:28	1
Batch ID: R366666 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20080475-01	LH18/24-SP140_081120	11 Aug 2020 14:00			12 Aug 2020 13:15	1
Batch ID: R367591 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20080475-01	LH18/24-SP140_081120	11 Aug 2020 14:00			27 Aug 2020 17:43	1

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

QC BATCH REPORT

Batch ID: 156348 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-156348** Units: **mg/L** Analysis Date: **19-Aug-2020 16:59**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707329** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-156348** Units: **mg/L** Analysis Date: **19-Aug-2020 17:01**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707330** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05061	0.00500	0.05	0	101	80 - 120				
Silver	0.04562	0.00500	0.05	0	91.2	85 - 116				

MS Sample ID: **HS20080223-05MS** Units: **mg/L** Analysis Date: **19-Aug-2020 18:09**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707358** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04846	0.00500	0.05	0.0004	96.1	80 - 120				
Silver	0.04804	0.00500	0.05	-0.000038	96.2	85 - 116				

MS Sample ID: **HS20080198-04MS** Units: **mg/L** Analysis Date: **19-Aug-2020 17:15**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707336** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04884	0.00500	0.05	0.000233	97.2	80 - 120				
Silver	0.04559	0.00500	0.05	-0.000046	91.3	85 - 116				

MS Sample ID: **HS20080189-02MS** Units: **mg/L** Analysis Date: **19-Aug-2020 17:41**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707346** PrepDate: **14-Aug-2020** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05207	0.0100	0.05	0.000801	103	80 - 120				
Silver	0.04525	0.0100	0.05	-0.000049	90.6	85 - 116				

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

QC BATCH REPORT

Batch ID: 156348 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20080223-05MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 18:11**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707359** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04795	0.00500	0.05	0.0004	95.1	80 - 120	0.04846	1.05	20	
Silver	0.04537	0.00500	0.05	-0.000038	90.8	85 - 116	0.04804	5.72	20	

MSD Sample ID: **HS20080198-04MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:17**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707337** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04979	0.00500	0.05	0.000233	99.1	80 - 120	0.04884	1.92	20	
Silver	0.04514	0.00500	0.05	-0.000046	90.4	85 - 116	0.04559	0.999	20	

MSD Sample ID: **HS20080189-02MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:43**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707347** PrepDate: **14-Aug-2020** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05113	0.0100	0.05	0.000801	101	80 - 120	0.05207	1.83	20	
Silver	0.04626	0.0100	0.05	-0.000049	92.6	85 - 116	0.04525	2.21	20	

PDS Sample ID: **HS20080223-05PDS** Units: **mg/L** Analysis Date: **19-Aug-2020 18:14**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707360** PrepDate: **14-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.1132	0.00500	0.1	-0.000038	113	80 - 120				

SD Sample ID: **HS20080223-05SD** Units: **mg/L** Analysis Date: **19-Aug-2020 18:07**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707357** PrepDate: **14-Aug-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					0.0004	0	10	U
Silver	0.00250	0.0250					-0.000038	0	10	U

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

QC BATCH REPORT

Batch ID: 156348 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20080198-04SD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:13**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707335** PrepDate: **14-Aug-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					0.000233	0	10	U
Silver	0.00250	0.0250					-0.000046	0	10	U

SD Sample ID: **HS20080189-02SD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:39**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707345** PrepDate: **14-Aug-2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0250	0.0500					0.000801	0	10	U
Silver	0.00500	0.0500					-0.000049	0	10	U

The following samples were analyzed in this batch: HS20080475-01

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

QC BATCH REPORT

Batch ID: R366666 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R366666** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698362** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R366666** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698361** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.249	0.0100	0.25	0	99.6	90 - 111				

MS Sample ID: **HS20080473-01MS** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698364** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.251	0.0100	0.25	0	100	90 - 111				

MSD Sample ID: **HS20080473-01MSD** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698363** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.253	0.0100	0.25	0	101	90 - 111	0.251	0.794	20	

The following samples were analyzed in this batch: HS20080475-01

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20080475**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V010	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20080475

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20080475-01	LH18/24-SP140_081120	Login	8/12/2020 12:25:52 PM	JRM	MET044
HS20080475-01	LH18/24-SP140_081120	Login	8/12/2020 12:25:52 PM	JRM	Sub
HS20080475-01	LH18/24-SP140_081120	Login	8/12/2020 12:25:52 PM	JRM	WET024

ALS Houston, US Date: 27-Aug-20

Sample Receipt Checklist

Work Order ID: HS20080475 **Date/Time Received:** 12-Aug-2020 10:25

Client Name: Bhate Environmental **Received by:** Paresh M. Giga

Completed By:	/S/ Jared R. Makan	12-Aug-2020 12:26	**Reviewed by:**	/S/ RJ Modashia	12-Aug-2020 16:05
	eSignature	Date/Time		eSignature	Date/Time

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 ☑	
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑	
Chain of custody present?	Yes ☑	No ☐	1 Page(s)	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Samplers name present on COC?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

Temperature(s)/Thermometer(s):	2.8°C/2.8°C UC/C	IR31
Cooler(s)/Kit(s):	44977	
Date/Time sample(s) sent to storage:	08/12/2020 12:27	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

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_081120	Water	08/11/20 / 14:00		1	X			HNO3	
LH18/24-SP140_081120	Water	08/11/20 / 14:00		2		X	X	NONE	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	08/11/20	14:30		8/12/20	10:30						

For Lab Use Only

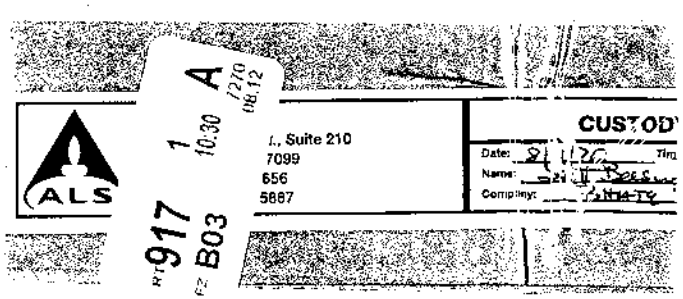
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

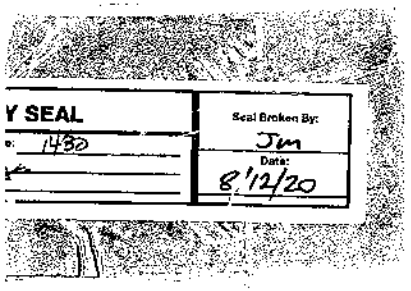
Remarks:

HS20080475

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Influent Sam

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


ALS
1
10:30 A
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08.12
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., Suite 210
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5887
CUSTOD
Date:
Name:
Company:


Y SEAL
1430
Seal Broken By:
Jm
Date:
8/12/20


FedEx
TRK# 0221 4380 9531 7270
WED – 12 AUG 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US IAH

August 27, 2020 Service Request No:E2000740

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

Laboratory Results for: HS20080475

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2020
For your reference, these analyses have been assigned our service request number **E2000740.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000740
Project:	HS20080475	**Date Received:**	08/13/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/13/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000359: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS and MSD were performed on unrelated samples. The LCS and LCSD recovery passed.

DOD Certification is held for the method/matrix/analytes provided in this report.

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

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

Client: ALS Environmental - US
Project: HS20080475

Service Request:E2000740

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000740-001	LH18/24-SP140_081120	8/11/2020	1400

Service Request Summary

Folder #: **E2000740**
Client Name: ALS Environmental - US
Project Name: HS20080475
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080475
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000740-001	LH18/24-SP140_081120	Ground Water	08/11/20 1400	IV

Service Request Summary

Folder #: **E2000740**
Client Name: ALS Environmental - US
Project Name: HS20080475
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080475
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 8/26,level IV 9/2

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

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

E2000740 5
ALS Laboratory Group
HS20080475

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14484**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20080475
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20080475-01**	**LH18/24-SP140_081120**	**Water**	**11 Aug 2020 14:00**
	SUB_Perch-6850			26 Aug 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time:

Received By: Date/Time: 8/13/20 1346

Cooler ID(s): Temperature(s):

00992482

ALS Environmental

Cooler Receipt Form

Project Chemist CC

Client/Project ALS-HI

Thermometer ID IR31

Date/Time Received: 8/13/20 Initials: JM Date/Time Logged in: 8/13/20 Initials CC

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

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

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?
Were they intact? ○ Yes ○ No ✓ N/A
Were they signed and dated? ○ Yes ○ No ✓ N/A

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
–		8/13/20	1346	CC	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000740 5
ALS Laboratory Group
HS20080475

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 364168 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/24/20 09:31

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000716-001	LH18/24-SP650_080520-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000739-001	LH18/24-SP650_081120_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000740-001	LH18/24-SP140_081120	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000741-001	LH18/24-SP650_081120_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000742-001	LHSMW01-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000742-002	04WW04-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000742-003	04WW08-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000742-004	04WW08-200810-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000742-005	04WW02-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000742-006	04WW06-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000742-007	LHSMW02-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000742-008	04WW11-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000742-009	04WW01-200810	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000742-010	04WW05-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000742-011	04WW09-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000742-012	04WW10-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2000742-013	04WW07-200811	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2000742-014	04WW07-200811-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2000759-001	16WW58-200817	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2000759-002	16WW57-200817	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000359-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000359-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000359-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2000359-04	04WW10-200811 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2000359-05	04WW10-200811 DMS	.01	6850/ClO4 DOD			Liquid	10mL	
26	EQ2000359-06	16WW57-200817 MS	.01	6850/ClO4 DOD			Liquid	10mL	
27	EQ2000359-07	16WW57-200817 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

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

E2000716-001	100.00µL	E2000739-001	100.00µL	E2000740-001	100.00µL	E2000741-001	100.00µL	E2000742-001	100.00µL	E2000742-002	100.00µL
E2000742-003	100.00µL	E2000742-004	100.00µL	E2000742-005	100.00µL	E2000742-006	100.00µL	E2000742-007	100.00µL	E2000742-008	100.00µL
E2000742-009	100.00µL	E2000742-010	100.00µL	E2000742-011	100.00µL	E2000742-012	100.00µL	E2000742-013	100.00µL	E2000742-014	100.00µL
E2000759-001	100.00µL	E2000759-002	100.00µL	EQ2000359-01	100.00µL	EQ2000359-02	100.00µL	EQ2000359-03	100.00µL	EQ2000359-04	100.00µL

Preparation Information Benchsheet

Prep Run#: 364168
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 8/24/20 09:31

EQ2000359-05 100.00µL EQ2000359-06 100.00µL EQ2000359-07 100.00µL

Name:	Perchlorate Intermediate Stock1	Inventory ID	209764	Logbook Ref:	Perchlorate Int. Stock1 51820	Expires On:	11/18/2020

EQ2000359-02 1.00µL EQ2000359-03 1.00µL EQ2000359-04 1.00µL EQ2000359-05 1.00µL EQ2000359-06 1.00µL EQ2000359-07 1.00µL

Preparation Steps

Step: Preparation
Started: 8/24/20 09:31
Finished: 8/25/20 17:54
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	8/11/20 1400
Sample Matrix:	Ground Water	**Date Received:**	8/13/20
Sample Name:	LH18/24-SP140_081120	**Units:**	µg/L
Lab Code:	E2000740-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**8310**		20.0	10.0	5.00	200	8/24/20	8/26/20 16:38	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000359-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	8/24/20	8/25/20 18:56	364168	692783	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475
Sample Matrix: Ground Water

Service Request: E2000740
Date Analyzed: 8/26/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 364168

	Lab Control Sample EQ2000359-02			Duplicate Lab Control Sample EQ2000359-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.108	0.100	108	0.100	0.100	100	84 - 119	8	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000359-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.108**		0.100	0.0500	0.0250	1	8/24/20	8/26/20 15:35	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000359-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.100**		0.100	0.0500	0.0250	1	8/24/20	8/26/20 15:27	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	8/26/20

Matrix Spike Summary

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000742-012	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS **Matrix Spike** EQ2000359-04				Batch QCDMS **Duplicate Matrix Spike** EQ2000359-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.339	0.459	0.100	120	*	0.428	0.100	89	84 - 119	7	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.459**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:43	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.428**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:51	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	8/26/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000759-002	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS Matrix Spike EQ2000359-06				Batch QCDMS Duplicate Matrix Spike EQ2000359-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.454	0.530	0.100	76	#	0.558	0.100	105	#	84 - 119	5	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-06	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.530**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 15:59	364168	692775	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000359-07	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.558**	J	1.00	0.500	0.250	10	8/24/20	8/26/20 16:07	364168	692775	

Initial Calibration

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

20200819

ALS Environmental

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000022

1st Review: Kneir
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200819_005	Perchlorate6850b.lcm	1x	☒	3100806-05	8/19/2020 10:42
2	PERCHLORATE2		20200819_006	Perchlorate6850b.lcm	1x	☒	3100806-06	8/19/2020 10:50
3	PERCHLORATE3		20200819_007	Perchlorate6850b.lcm	1x	☒	3100806-07	8/19/2020 10:58
4	PERCHLORATE4		20200819_008	Perchlorate6850b.lcm	1x	☒	3100807-01	8/19/2020 11:06
5	PERCHLORATE5		20200819_009	Perchlorate6850b.lcm	1x	☒	3100807-02	8/19/2020 11:14
6	PERCHLORATE6		20200819_010	Perchlorate6850b.lcm	1x	☒	3100807-03	8/19/2020 11:22
7	PERCHLORATE7		20200819_011	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 11:30
8	PERCHLORATE8		20200819_012	Perchlorate6850b.lcm	1x	☒	3100807-05	8/19/2020 11:38
9	PERCHLORATE9		20200819_013	Perchlorate6850b.lcm	1x	☒	3100807-06	8/19/2020 11:45
10	PERCHLORATE10		20200819_014	Perchlorate6850b.lcm	1x	☒	3100807-07	8/19/2020 11:53
11	PERCHLORATEICV		20200819_016	Perchlorate6850b.lcm	1x	☒	3100807-08	8/19/2020 12:09
12	LODV		20200819_017	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:17
13	EQ2000337-01		20200819_019	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:38
14	EQ2000337-02		20200819_020	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:46
15	EQ2000337-03		20200819_021	Perchlorate6850b.lcm	1x	☒		8/19/2020 12:53
16	E2000723-001		20200819_022	Perchlorate6850b.lcm	1x	☒		8/19/2020 13:01
17	PERCHLORATE7		20200819_023	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 13:09
18	E2000680-002X10		20200819_024	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:17
19	E2000680-004X2		20200819_025	Perchlorate6850b.lcm	2x	☒		8/19/2020 13:25
20	E2000680-007X10		20200819_026	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:33
21	E2000680-009X10		20200819_027	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:41
22	E2000680-010X10		20200819_028	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:49
23	E2000680-011X10		20200819_029	Perchlorate6850b.lcm	10x	☒		8/19/2020 13:57
24	EQ2000327-01		20200819_030	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:04
25	EQ2000327-02		20200819_031	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:12
26	EQ2000327-03		20200819_033	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:21
27	PERCHLORATE7		20200819_034	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 14:29
28	E2000735-001		20200819_035	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:37
29	E2000735-002		20200819_036	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:45
30	E2000735-003		20200819_037	Perchlorate6850b.lcm	1x	☒		8/19/2020 14:53
31	E2000735-004		20200819_038	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:01
32	E2000735-005		20200819_039	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:09
33	E2000735-006		20200819_040	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:16
34	E2000735-007		20200819_041	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:24
35	E2000735-008		20200819_042	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:32
36	E2000735-009		20200819_043	Perchlorate6850b.lcm	1x	☒		8/19/2020 15:44
37	PERCHLORATE7		20200819_044	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 15:52
38	E2000735-010		20200819_045	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:00
39	E2000735-011		20200819_046	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:08
40	E2000735-013		20200819_047	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:16
41	E2000735-014		20200819_048	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:24
42	E2000735-015		20200819_049	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:32
43	E2000735-016		20200819_050	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:40
44	E2000735-017		20200819_051	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:47
45	E2000735-018		20200819_052	Perchlorate6850b.lcm	1x	☒		8/19/2020 16:55
46	E2000735-019		20200819_053	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:03
47	PERCHLORATE7		20200819_054	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 17:11
48	EQ2000339-01		20200819_055	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:19
49	EQ2000339-02		20200819_056	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:27
50	EQ2000339-03		20200819_057	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:35
51	E2000712-001		20200819_058	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:43
52	E2000712-002		20200819_059	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:51
53	E2000712-003		20200819_060	Perchlorate6850b.lcm	1x	☒		8/19/2020 17:59
54	IB		20200819_061	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:08
55	IB		20200819_062	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:16
56	IB		20200819_063	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:24
57	IB		20200819_064	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:32
58	PERCHLORATE7		20200819_065	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 18:40
59	E2000712-004		20200819_066	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:48
60	E2000712-005		20200819_067	Perchlorate6850b.lcm	1x	☒		8/19/2020 18:56
61	E2000712-006		20200819_068	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:04

20200819

ALS Environmental

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000022

1st Review: Kneir
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000712-007		20200819_069	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:12
63	E2000694-012		20200819_070	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:19
64	E2000694-012MS		20200819_071	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:27
65	E2000694-012MSD		20200819_072	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:35
66	E2000711-001		20200819_073	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:43
67	E2000711-002		20200819_074	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:51
68	E2000724-001		20200819_075	Perchlorate6850b.lcm	1x	☒		8/19/2020 19:59
69	PERCHLORATE7		20200819_076	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 20:07
70	E2000724-002		20200819_077	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:15
71	E2000724-003		20200819_078	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:22
72	E2000724-004		20200819_079	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:30
73	E2000728-001		20200819_080	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:38
74	E2000728-002		20200819_081	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:46
75	E2000729-001		20200819_082	Perchlorate6850b.lcm	1x	☒		8/19/2020 20:54
76	R2006493-001		20200819_083	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:02
77	R2006493-003		20200819_084	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:10
78	R2006493-005		20200819_085	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:18
79	R2006493-007		20200819_086	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:26
80	PERCHLORATE7		20200819_087	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 21:33
81	R2006493-009		20200819_088	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:41
82	R2006493-011		20200819_089	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:49
83	R2006493-013		20200819_090	Perchlorate6850b.lcm	1x	☒		8/19/2020 21:57
84	R2006493-015		20200819_091	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:05
85	PERCHLORATE7		20200819_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 22:13
86	EQ2000338-01		20200819_093	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:21
87	EQ2000338-02		20200819_094	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:29
88	EQ2000338-03		20200819_095	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:37
89	EQ2000338-04		20200819_096	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:44
90	EQ2000338-05		20200819_097	Perchlorate6850b.lcm	1x	☒		8/19/2020 22:52
91	R2006532-001		20200819_098	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:00
92	R2006532-003		20200819_099	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:08
93	R2006532-005		20200819_100	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:16
94	R2006532-007		20200819_101	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:24
95	R2006532-009		20200819_102	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:32
96	PERCHLORATE7		20200819_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/19/2020 23:40
97	R2006532-011		20200819_104	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:47
98	R2006555-002		20200819_105	Perchlorate6850b.lcm	1x	☒		8/19/2020 23:55
99	R2006555-004		20200819_106	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:03
100	R2006555-006		20200819_107	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:11
101	R2006555-008		20200819_108	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:19
102	R2006555-010		20200819_109	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:27
103	R2006555-012		20200819_110	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:35
104	R2006617-001		20200819_111	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:43
105	R2006617-003		20200819_112	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:50
106	R2006617-005		20200819_113	Perchlorate6850b.lcm	1x	☒		8/20/2020 0:58
107	PERCHLORATE7		20200819_114	Perchlorate6850b.lcm	1x	☒	3100807-04	8/20/2020 1:06
108	R2006617-007		20200819_115	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:14
109	R2006617-009		20200819_116	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:22
110	R2006617-010		20200819_117	Perchlorate6850b.lcm	1x	☒		8/20/2020 1:30
111	PERCHLORATE7		20200819_118	Perchlorate6850b.lcm	1x	☒	3100807-04	8/20/2020 1:38

Initial Calibration - Detailed Report

Calibration ID: EC2000022 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000022-01	PERCHLORATE1	20200819_005	08/19/2020 10:42
02	EC2000022-02	PERCHLORATE2	20200819_006	08/19/2020 10:50
03	EC2000022-03	PERCHLORATE3	20200819_007	08/19/2020 10:58
04	EC2000022-04	PERCHLORATE4	20200819_008	08/19/2020 11:06
05	EC2000022-05	PERCHLORATE5	20200819_009	08/19/2020 11:14
06	EC2000022-06	PERCHLORATE6	20200819_010	08/19/2020 11:22
07	EC2000022-07	PERCHLORATE7	20200819_011	08/19/2020 11:30
08	EC2000022-08	PERCHLORATE8	20200819_012	08/19/2020 11:38
09	EC2000022-09	PERCHLORATE9	20200819_013	08/19/2020 11:45
10	EC2000022-10	PERCHLORATE10	20200819_014	08/19/2020 11:53

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

Perchlorate **Average RF** **RSD = 5.952** **Average RF = 0.1131**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1299	02	0.5000	0.113	03	0.7000	0.1123	04	1.0000	0.1147
05	2.0000	0.1134	06	5.0000	0.1082	07	10.0000	0.1069	08	20.0000	0.1158
09	30.0000	0.1094	10	50.0000	0.107						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.115	14.9	02	0.5000	0.500	-0.1	03	0.7000	0.695	-0.7
04	1.0000	1.01	1.5	05	2.0000	2.01	0.3	06	5.0000	4.78	-4.3
07	10.0000	9.46	-5.4	08	20.0000	20.5	2.4	09	30.0000	29.0	-3.2
10	50.0000	47.3	-5.4								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000022	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200819_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000022-11	T	Average RF	10	9.352	ng/mL	-6.5	<= 15

ALS Group Houston

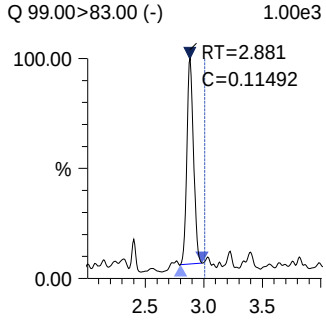
PERCHLORATE1

Date acquired: 8/19/2020 10:42:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/19/2020 10:42:37 AM	3802	0.11492	20200819_005	2.881	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/19/2020 10:42:37 AM	292622	1.00000	20200819_005	2.877	25.0000	1.0000	5

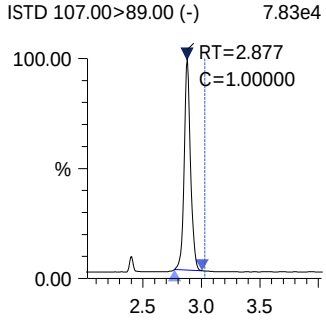
Perchlorate

Conc 0.11492
Area 3802



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292622



ALS Group Houston

PERCHLORATE2

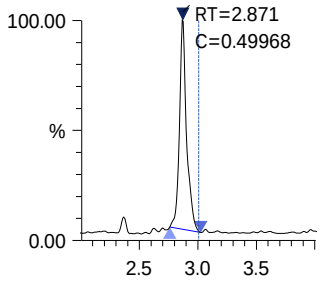
Date acquired: 8/19/2020 10:50:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/19/2020 10:50:33 AM	18036	0.49968	20200819_006	2.871	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/19/2020 10:50:33 AM	319274	1.00000	20200819_006	2.870	25.0000	1.0000	6

Perchlorate

Conc 0.49968
Area 18036

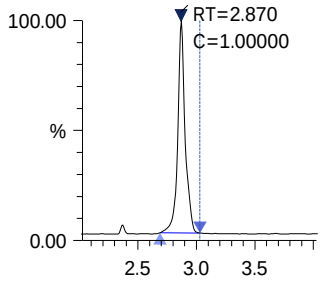
Q 99.00>83.00 (-) 4.32e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 319274

ISTD 107.00>89.00 (-) 7.26e4



ALS Group Houston

PERCHLORATE3

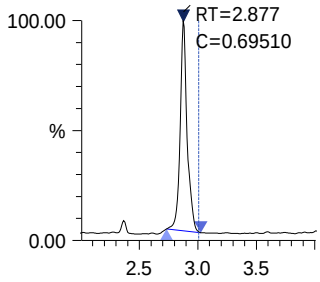
Date acquired: 8/19/2020 10:58:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/19/2020 10:58:27 AM	24394	0.69510	20200819_007	2.877	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/19/2020 10:58:27 AM	310422	1.00000	20200819_007	2.874	25.0000	1.0000	7

Perchlorate

Conc 0.69510
Area 24394

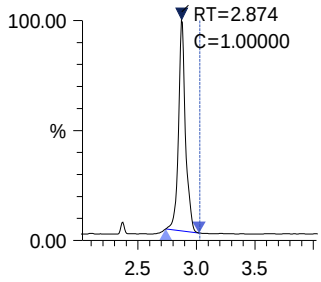
Q 99.00>83.00 (-) 5.99e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 310422

ISTD 107.00>89.00 (-) 7.56e4



ALS Group Houston

PERCHLORATE4

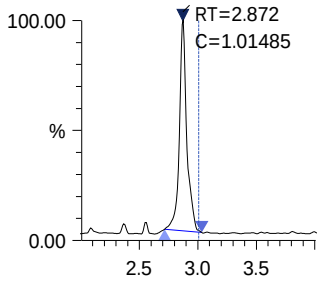
Date acquired: 8/19/2020 11:06:22 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/19/2020 11:06:22 AM	33591	1.01485	20200819_008	2.872	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/19/2020 11:06:22 AM	292786	1.00000	20200819_008	2.872	25.0000	1.0000	8

Perchlorate

Conc 1.01485
Area 33591

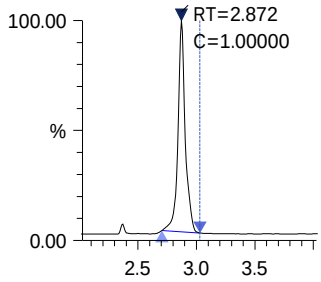
Q 99.00>83.00 (-) 7.70e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292786

ISTD 107.00>89.00 (-) 6.80e4



ALS Group Houston

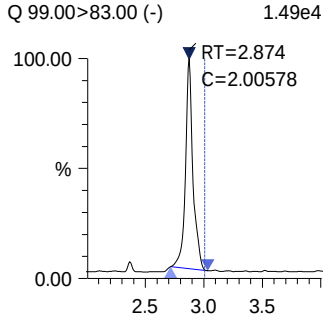
PERCHLORATE5

Date acquired: 8/19/2020 11:14:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/19/2020 11:14:18 AM	65114	2.00578	20200819_009	2.874	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/19/2020 11:14:18 AM	287158	1.00000	20200819_009	2.873	25.0000	1.0000	9

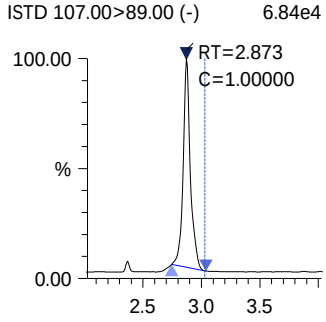
Perchlorate

Conc 2.00578
Area 65114



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 287158



ALS Group Houston

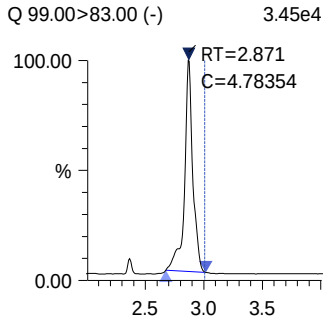
PERCHLORATE6

Date acquired: 8/19/2020 11:22:10 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/19/2020 11:22:10 AM	167892	4.78354	20200819_010	2.871	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/19/2020 11:22:10 AM	310462	1.00000	20200819_010	2.870	25.0000	1.0000	10

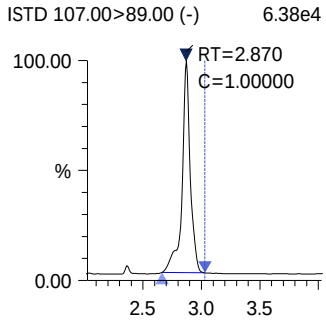
Perchlorate

Conc 4.78354
Area 167892



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 310462



ALS Group Houston

PERCHLORATE7

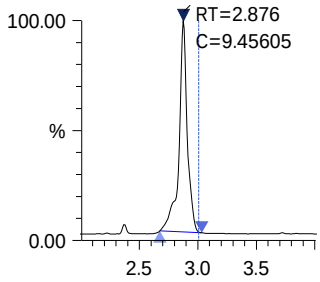
Date acquired: 8/19/2020 11:30:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/19/2020 11:30:05 AM	309830	9.45605	20200819_011	2.876	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/19/2020 11:30:05 AM	289828	1.00000	20200819_011	2.875	25.0000	1.0000	4

Perchlorate

Conc 9.45605
Area 309830

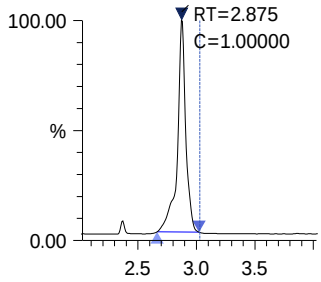
Q 99.00>83.00 (-) 6.35e4



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 289828

ISTD 107.00>89.00 (-) 5.81e4



ALS Group Houston

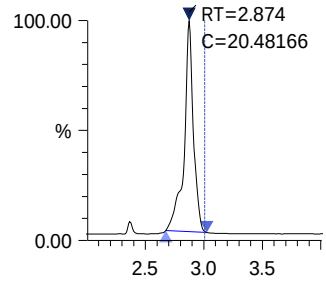
PERCHLORATE8

Date acquired: 8/19/2020 11:38:00 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/19/2020 11:38:00 AM	587088	20.48166	20200819_012	2.874	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/19/2020 11:38:00 AM	253551	1.00000	20200819_012	2.873	25.0000	1.0000	11

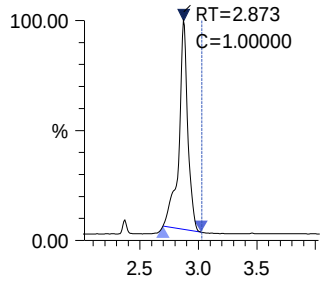
Perchlorate

Conc 20.48166
Area 587088



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 253551



ALS Group Houston

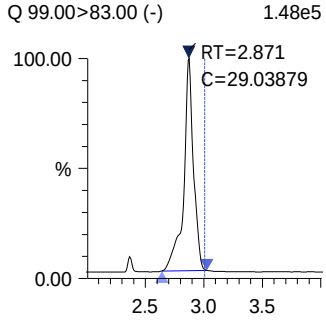
PERCHLORATE9

Date acquired: 8/19/2020 11:45:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/19/2020 11:45:53 AM	849278	29.03879	20200819_013	2.871	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/19/2020 11:45:53 AM	258702	1.00000	20200819_013	2.870	25.0000	1.0000	12

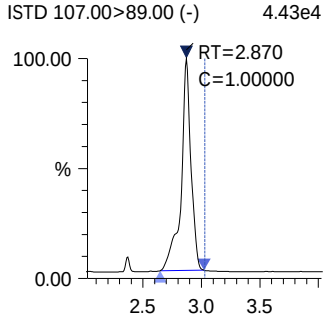
Perchlorate

Conc 29.03879
Area 849278



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 258702



ALS Group Houston

PERCHLORATE10

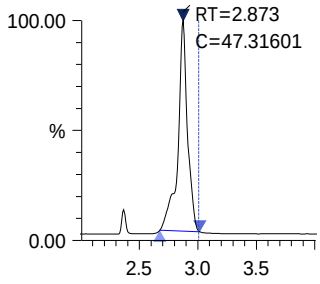
Date acquired: 8/19/2020 11:53:48 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/19/2020 11:53:48 AM	1220253	47.31601	20200819_014	2.873	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/19/2020 11:53:48 AM	228123	1.00000	20200819_014	2.871	25.0000	1.0000	13

Perchlorate

Conc 47.31601
Area 1220253

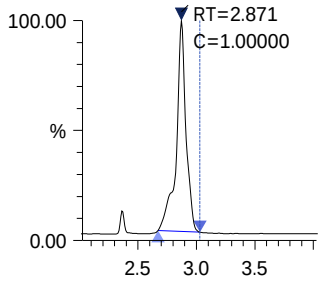
Q 99.00>83.00 (-) 2.17e5



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 228123

ISTD 107.00>89.00 (-) 3.99e4



ALS Group Houston

PERCHLORATEICV

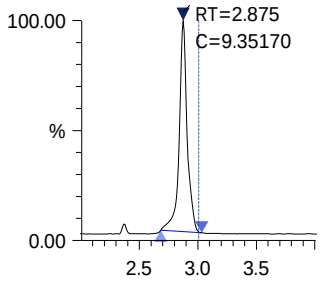
Date acquired: 8/19/2020 12:09:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/19/2020 12:09:35 PM	294031	9.35170	20200819_016	2.875	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/19/2020 12:09:35 PM	278118	1.00000	20200819_016	2.873	25.0000	1.0000	14

Perchlorate

Conc 9.35170
Area 294031

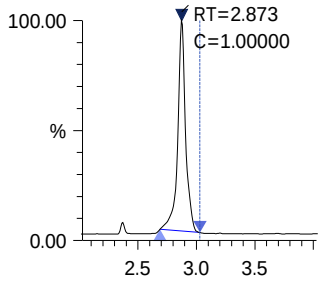
Q 99.00>83.00 (-) 6.27e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 278118

ISTD 107.00>89.00 (-) 5.98e4



20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

Initial Calibration - Detailed Report

Calibration ID: EC2000023 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000023-01	PERCHLORATE1	20200826_024	08/26/2020 11:55
02	EC2000023-02	PERCHLORATE2	20200826_025	08/26/2020 12:03
03	EC2000023-03	PERCHLORATE3	20200826_026	08/26/2020 12:11
04	EC2000023-04	PERCHLORATE4	20200826_027	08/26/2020 12:19
05	EC2000023-05	PERCHLORATE5	20200826_028	08/26/2020 12:27
06	EC2000023-06	PERCHLORATE6	20200826_029	08/26/2020 12:35
07	EC2000023-07	PERCHLORATE7	20200826_030	08/26/2020 12:42
08	EC2000023-08	PERCHLORATE8	20200826_031	08/26/2020 12:50
09	EC2000023-09	PERCHLORATE9	20200826_032	08/26/2020 12:58
10	EC2000023-10	PERCHLORATE10	20200826_033	08/26/2020 13:06

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

Perchlorate **Average RF** **RSD = 5.546** **Average RF = 0.1085**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1181	02	0.5000	0.1137	03	0.7000	0.1087	04	1.0000	0.1168
05	2.0000	0.1092	06	5.0000	0.1056	07	10.0000	0.1014	08	20.0000	0.1048
09	30.0000	0.1049	10	50.0000	0.1012						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.109	8.9	02	0.5000	0.524	4.8	03	0.7000	0.702	0.2
04	1.0000	1.08	7.7	05	2.0000	2.01	0.7	06	5.0000	4.87	-2.6
07	10.0000	9.35	-6.5	08	20.0000	19.3	-3.3	09	30.0000	29.0	-3.3
10	50.0000	46.7	-6.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000023	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200826_035	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000023-11	T	Average RF	10	9.690	ng/mL	-3.1	<= 15

ALS Group Houston

PERCHLORATE1

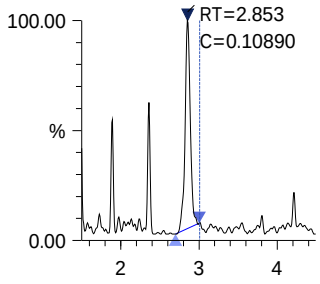
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/26/2020 11:55:32 AM	2254	0.10890	20200826_024	2.853	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/26/2020 11:55:32 AM	190859	1.00000	20200826_024	2.852	25.0000	1.0000	5

Perchlorate

Conc 0.10890
Area 2254

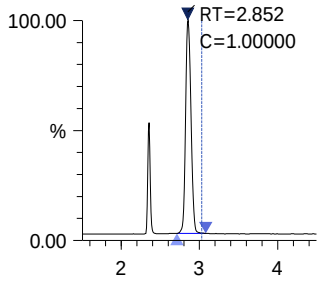
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

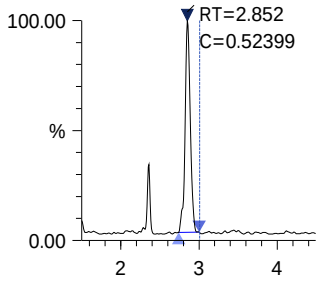
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/26/2020 12:03:28 PM	11013	0.52399	20200826_025	2.852	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/26/2020 12:03:28 PM	193789	1.00000	20200826_025	2.850	25.0000	1.0000	6

Perchlorate

Conc 0.52399
Area 11013

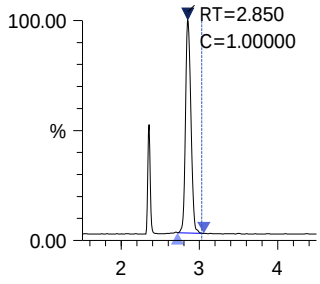
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

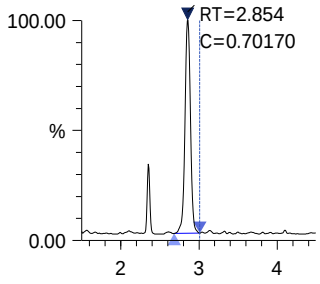
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/26/2020 12:11:22 PM	15252	0.70170	20200826_026	2.854	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/26/2020 12:11:22 PM	200410	1.00000	20200826_026	2.849	25.0000	1.0000	7

Perchlorate

Conc 0.70170
Area 15252

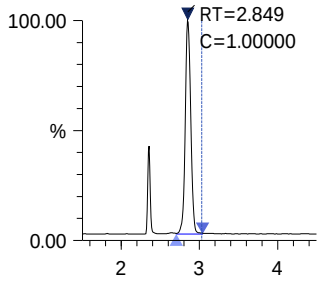
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

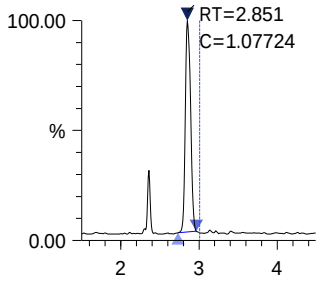
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/26/2020 12:19:17 PM	21473	1.07724	20200826_027	2.851	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/26/2020 12:19:17 PM	183791	1.00000	20200826_027	2.851	25.0000	1.0000	8

Perchlorate

Conc 1.07724
Area 21473

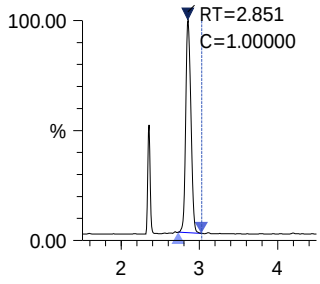
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

PERCHLORATE5

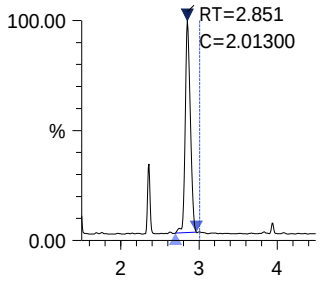
Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/26/2020 12:27:10 PM	40038	2.01300	20200826_028	2.851	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/26/2020 12:27:10 PM	183386	1.00000	20200826_028	2.849	25.0000	1.0000	9

Perchlorate

Conc 2.01300
Area 40038

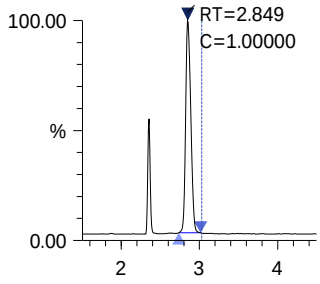
Q 99.00>83.00 (-) 8.76e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

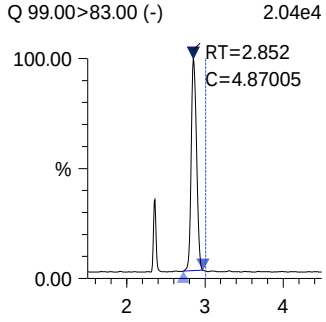
PERCHLORATE6

Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/26/2020 12:35:02 PM	98121	4.87005	20200826_029	2.852	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/26/2020 12:35:02 PM	185768	1.00000	20200826_029	2.850	25.0000	1.0000	10

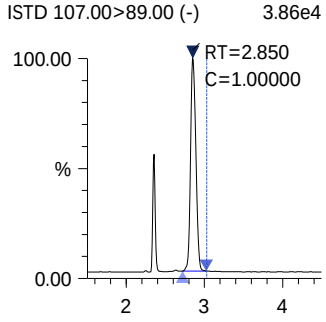
Perchlorate

Conc 4.87005
Area 98121



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768



ALS Group Houston

PERCHLORATE7

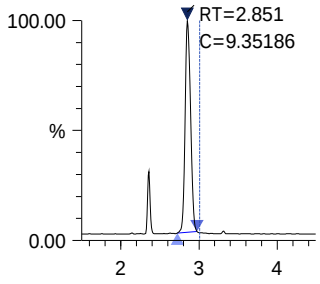
Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 12:42:57 PM	174248	9.35186	20200826_030	2.851	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 12:42:57 PM	171796	1.00000	20200826_030	2.850	25.0000	1.0000	4

Perchlorate

Conc 9.35186
Area 174248

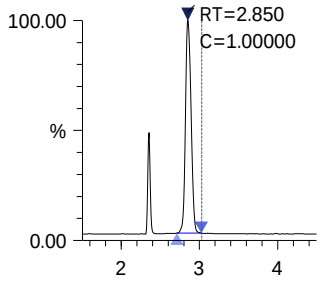
Q 99.00>83.00 (-) 3.57e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796

ISTD 107.00>89.00 (-) 3.39e4



ALS Group Houston

PERCHLORATE8

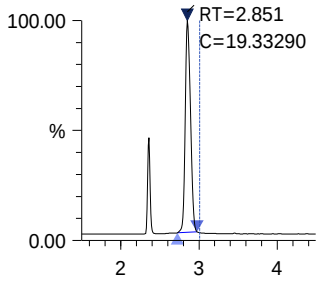
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/26/2020 12:50:51 PM	337010	19.33290	20200826_031	2.851	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/26/2020 12:50:51 PM	160727	1.00000	20200826_031	2.850	25.0000	1.0000	11

Perchlorate

Conc 19.33290
Area 337010

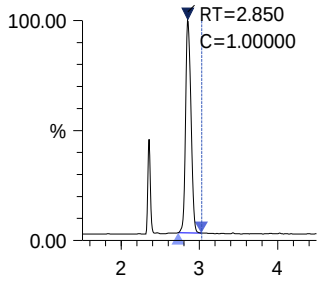
Q 99.00>83.00 (-) 7.14e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

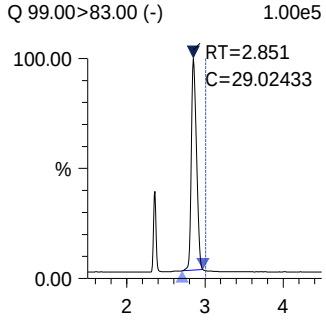
PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/26/2020 12:58:44 PM	466342	29.02433	20200826_032	2.851	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/26/2020 12:58:44 PM	148144	1.00000	20200826_032	2.849	25.0000	1.0000	12

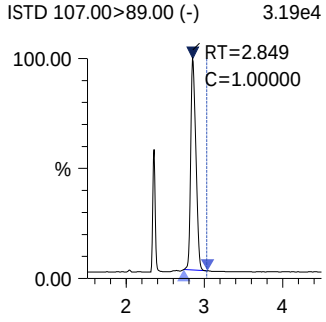
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



ALS Group Houston

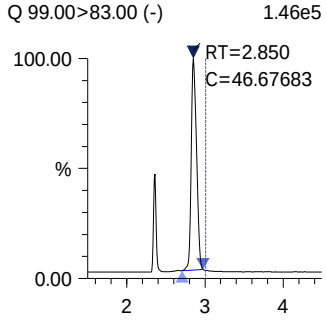
PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/26/2020 1:06:40 PM	694738	46.67683	20200826_033	2.850	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/26/2020 1:06:40 PM	137234	1.00000	20200826_033	2.849	25.0000	1.0000	13

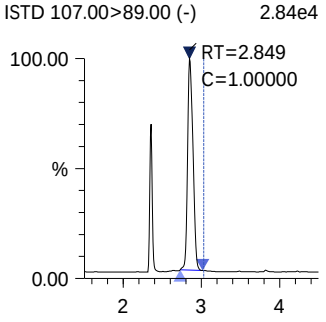
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



ALS Group Houston

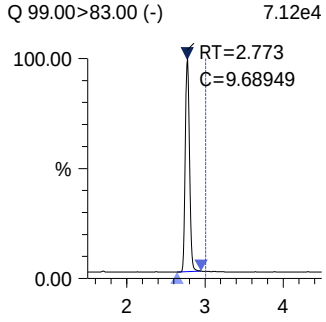
PERCHLORATEICV

Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/26/2020 2:26:45 PM	257692	9.68949	20200826_035	2.773	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/26/2020 2:26:45 PM	245213	1.00000	20200826_035	2.771	25.0000	1.0000	14

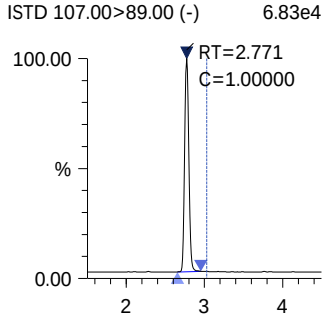
Perchlorate

Conc 9.68949
Area 257692



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213



Chromatograms and Selected Ion Monitoring

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

20200825

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 7/19/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000022**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	IB		20200825_017	Perchlorate6850b.lcm	1x	☒		8/25/2020 16:49
2	IB		20200825_018	Perchlorate6850b.lcm	1x	☒		8/25/2020 16:57
3	IB		20200825_019	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:05
4	IB		20200825_020	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:13
5	null		20200825_021	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:20
6	null		20200825_022	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:25
7	null		20200825_023	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:30
8	null		20200825_024	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:34
9	IB		20200825_025	Perchlorate6850b.lcm	1x	☒		8/25/2020 17:40
10	IB		20200825_027	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:22
11	PERCHLORATE7		20200825_028	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 18:32
12	LODV		20200825_029	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:40
13	PERCHLORATE7		20200825_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 18:48
14	EQ2000359-01		20200825_031	Perchlorate6850b.lcm	1x	☒		8/25/2020 18:56
15	EQ2000359-02		20200825_032	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:04
16	EQ2000359-03		20200825_033	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:12
17	EQ2000359-04		20200825_034	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:19
18	EQ2000359-05		20200825_035	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:27
19	EQ2000359-06		20200825_036	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:35
20	EQ2000359-07		20200825_037	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:43
21	E2000716-001		20200825_038	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:51
22	E2000739-001		20200825_039	Perchlorate6850b.lcm	1x	☒		8/25/2020 19:59
23	E2000740-001		20200825_040	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:07
24	PERCHLORATE7		20200825_041	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 20:15
25	E2000741-001		20200825_042	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:22
26	E2000742-001		20200825_043	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:30
27	E2000742-002		20200825_044	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:38
28	E2000742-003		20200825_045	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:46
29	E2000742-004		20200825_046	Perchlorate6850b.lcm	1x	☒		8/25/2020 20:54
30	E2000742-005		20200825_047	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:02
31	E2000742-006		20200825_048	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:10
32	E2000742-007		20200825_049	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:18
33	E2000742-008		20200825_050	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:26
34	E2000742-009		20200825_051	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:33
35	PERCHLORATE7		20200825_052	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 21:41
36	E2000742-010		20200825_053	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:49
37	E2000742-011		20200825_054	Perchlorate6850b.lcm	1x	☒		8/25/2020 21:57
38	E2000742-012		20200825_055	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:05
39	E2000742-013		20200825_056	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:13
40	E2000742-014		20200825_057	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:21
41	E2000759-001		20200825_058	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:29
42	E2000759-002		20200825_059	Perchlorate6850b.lcm	1x	☒		8/25/2020 22:36
43	PERCHLORATE7		20200825_060	Perchlorate6850b.lcm	1x	☒	3100807-04	8/25/2020 22:44
44								
45								
46								
47								
48								

20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_038

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.96	0.1085	0.09719	-10.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_049

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.65	0.1085	0.1047	-3.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_057

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.59	0.1085	0.1040	-4.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/26/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200826\20200826_066

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 692775
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.71	0.1085	0.1053	-2.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_030

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.23	0.1131	0.1043	-7.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_041

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.78	0.1131	0.1105	-2.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080475

Service Request: E2000740
Date Analyzed: 8/25/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200825\20200825_052

Calibration Date: 8/19/20
Calibration ID: EC2000022
Analysis Lot: 692783
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.00	0.1131	0.1018	-10.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/26/20 14:50

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_038	**Lab Code:**	EQ2000370-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-01	168,655	2.85
Duplicate Lab Control Sample	EQ2000359-03	222,420	2.86
Lab Control Sample	EQ2000359-02	218,301	2.86
Batch QCMS	EQ2000359-04	136,805	2.85
Batch QCDMS	EQ2000359-05	144,861	2.85
Batch QCMS	EQ2000359-06	127,802	2.85
Batch QCDMS	EQ2000359-07	144,838	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/26/20 16:30

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_049	**Lab Code:**	EQ2000370-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-02	159,403	2.86
LH18/24-SP140_081120	E2000740-001	129,227	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/26/20 17:33

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_057	**Lab Code:**	EQ2000370-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-03	153,993	2.86
Batch QC	E2000742-012	141,019	2.85
Batch QC	E2000759-002	131,720	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/26/20 18:44

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200826\20200826_066	**Lab Code:**	EQ2000370-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692775
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000370-04	147,883	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/25/20 18:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_030	**Lab Code:**	EQ2000371-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-01	185,913	2.86
Method Blank	EQ2000359-01	246,634	2.86

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/25/20 20:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_041	**Lab Code:**	EQ2000371-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-02	148,398	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000740
Project:	HS20080475	**Date Analyzed:**	8/25/20 21:41

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200825\20200825_052	**Lab Code:**	EQ2000371-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	692783
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	284,293	2.87
	Upper Limit ==>	426,440	4.87
	Lower Limit ==>	142,147	0.87
Associated Analyses			
Continuing Calibration Verification	EQ2000371-03	176,558	2.85

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

ALS Group Houston

PERCHLORATE7

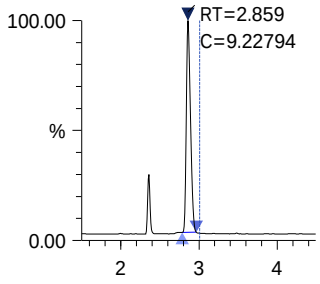
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/25/2020 6:48:17 PM	193948	9.22794	20200825_030	2.859	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/25/2020 6:48:17 PM	185913	1.00000	20200825_030	2.859	25.0000	1.0000	4

Perchlorate

Conc 9.22794
Area 193948

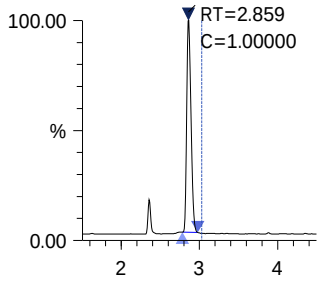
Q 99.00>83.00 (-) 5.19e4



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 185913

ISTD 107.00>89.00 (-) 4.80e4



ALS Group Houston

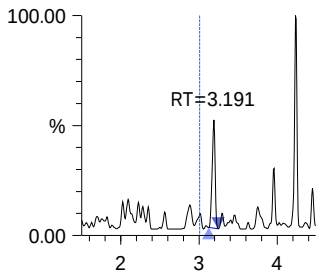
EQ2000359-01

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Vial: 1 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-01	8/25/2020 6:56:11 PM	----	----	20200825_031	----	25.0000	1.0000	1
Sodium Perchlorate-18O4_IS	EQ2000359-01	8/25/2020 6:56:11 PM	246634	1.00000	20200825_031	2.856	25.0000	1.0000	1

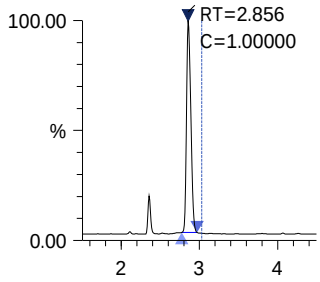
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 5.44e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 246634
ISTD 107.00>89.00 (-) 6.33e4



ALS Group Houston

PERCHLORATE7

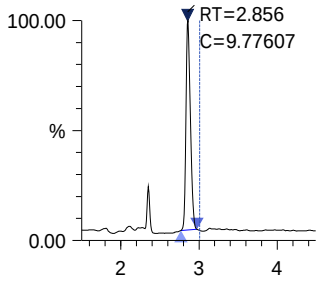
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Data File: I:\LCMS01\DATA\20200825\20200825_041.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/25/2020 8:15:05 PM	164008	9.77607	20200825_041	2.856	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/25/2020 8:15:05 PM	148398	1.00000	20200825_041	2.853	25.0000	1.0000	4

Perchlorate

Conc 9.77607
Area 164008

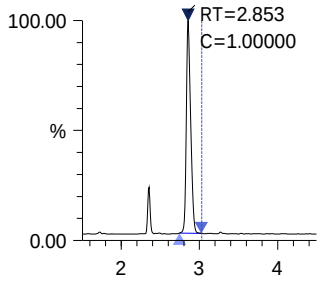
Q 99.00>83.00 (-) 4.18e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148398

ISTD 107.00>89.00 (-) 3.81e4



ALS Group Houston

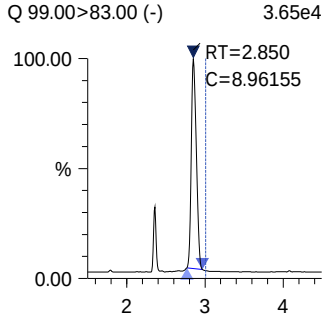
PERCHLORATE7

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Acquired by: System Administrator
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Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 2:50:21 PM	163923	8.96155	20200826_038	2.850	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 2:50:21 PM	168655	1.00000	20200826_038	2.849	25.0000	1.0000	4

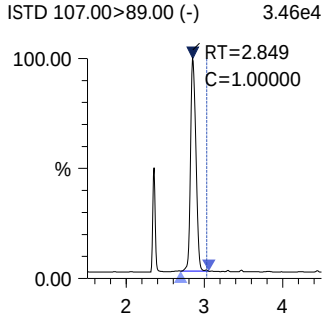
Perchlorate

Conc 8.96155
Area 163923



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168655



ALS Group Houston

EQ2000359-03

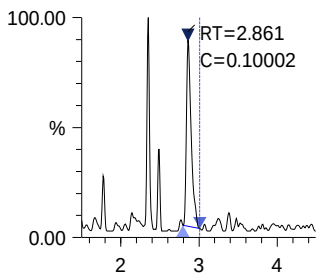
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Data File: I:\LCMS01\DATA\20200826\20200826_041.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-03	8/26/2020 3:27:52 PM	2413	0.10002	20200826_041	2.861	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	EQ2000359-03	8/26/2020 3:27:52 PM	222420	1.00000	20200826_041	2.861	25.0000	1.0000	3

Perchlorate

Conc 0.10002
Area 2413

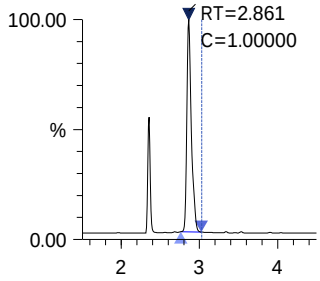
Q 99.00>83.00 (-) 6.41e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222420

ISTD 107.00>89.00 (-) 5.49e4



ALS Group Houston

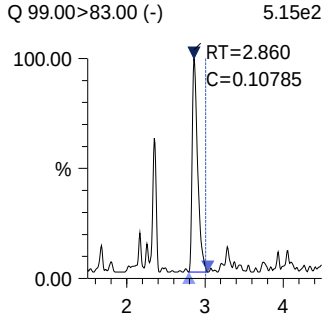
EQ2000359-02

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Data File: I:\LCMS01\DATA\20200826\20200826_042.lcd
Vial: 2 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-02	8/26/2020 3:35:46 PM	2554	0.10785	20200826_042	2.860	25.0000	1.0000	2
Sodium Perchlorate-18O4_IS	EQ2000359-02	8/26/2020 3:35:46 PM	218301	1.00000	20200826_042	2.861	25.0000	1.0000	2

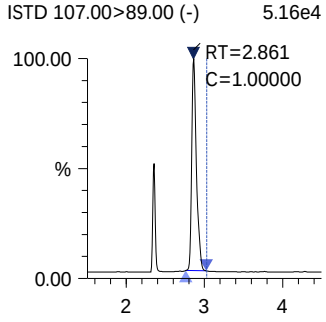
Perchlorate

Conc 0.10785
Area 2554



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 218301



ALS Group Houston

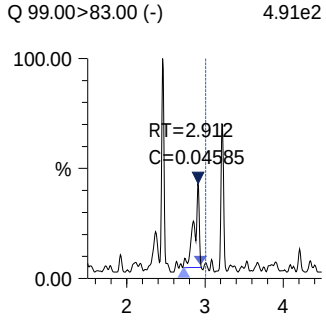
EQ2000359-04X10

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_043.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-04X10	8/26/2020 3:43:38 PM	680	0.04585	20200826_043	2.912	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	EQ2000359-04X10	8/26/2020 3:43:38 PM	136805	1.00000	20200826_043	2.846	25.0000	1.0000	4

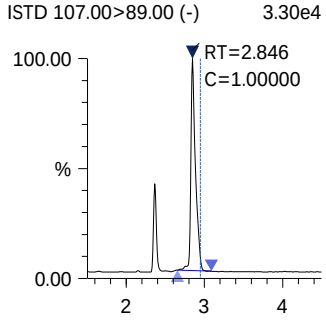
Perchlorate

Conc 0.04585
Area 680



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 136805



ALS Group Houston

EQ2000359-05X10

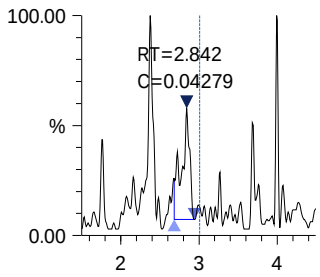
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_044.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-05X10	8/26/2020 3:51:31 PM	672	0.04279	20200826_044	2.842	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000359-05X10	8/26/2020 3:51:31 PM	144861	1.00000	20200826_044	2.847	25.0000	1.0000	5

Perchlorate

Conc 0.04279
Area 672

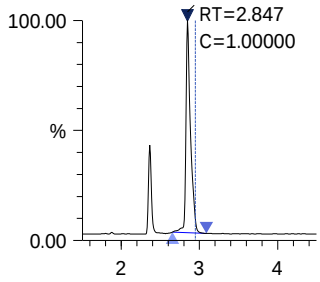
Q 99.00>83.00 (-) 1.77e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144861

ISTD 107.00>89.00 (-) 3.54e4



ALS Group Houston

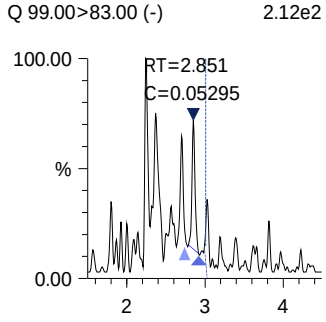
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_045.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-06X10	8/26/2020 3:59:24 PM	734	0.05295	20200826_045	2.851	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000359-06X10	8/26/2020 3:59:24 PM	127802	1.00000	20200826_045	2.850	25.0000	1.0000	6

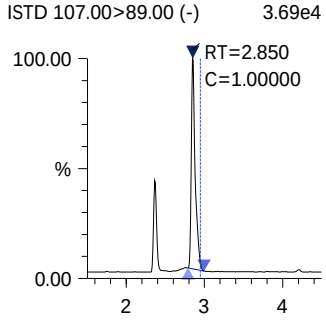
Perchlorate

Conc 0.05295
Area 734



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 127802



ALS Group Houston

EQ2000359-07X10

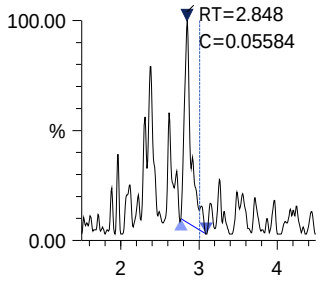
Date acquired: 8/26/2020 4:07:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000359-07X10	8/26/2020 4:07:16 PM	878	0.05584	20200826_046	2.848	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000359-07X10	8/26/2020 4:07:16 PM	144838	1.00000	20200826_046	2.851	25.0000	1.0000	7

Perchlorate

Conc 0.05584
Area 878

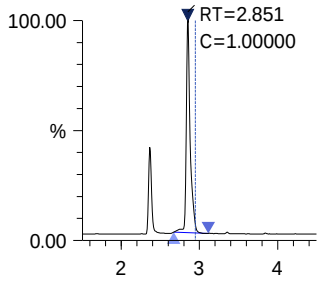
Q 99.00>83.00 (-) 1.53e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144838

ISTD 107.00>89.00 (-) 4.13e4



ALS Group Houston

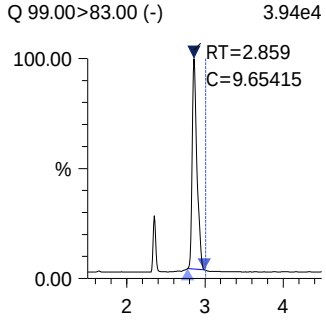
PERCHLORATE7

Date acquired: 8/26/2020 4:30:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_049.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 4:30:55 PM	166904	9.65415	20200826_049	2.859	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 4:30:55 PM	159403	1.00000	20200826_049	2.858	25.0000	1.0000	4

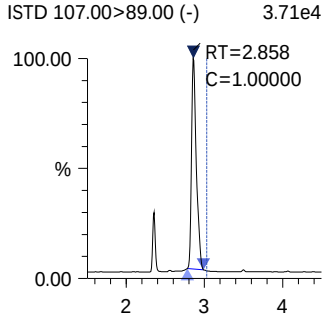
Perchlorate

Conc 9.65415
Area 166904



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 159403



HS20080475 - ME - ICP_W_DOD

ALS WO# HS20080475

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.

Instrument:ICPMS05

Project: Longhorn GW Treatment Plant Monthly Influent Samples

WorkOrder: HS20080475

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

ALS Houston, US

Date: 26-Aug-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475
Start Date: 14-Aug-2020 08:00 End Date: 14-Aug-2020 12:00

Batch ID: 156348
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20080189-02MS				10	10	1
HS20080189-02MSD				10	10	1
HS20080189-02PDS				10	10	1
HS20080189-02SD				10	10	1
HS20080198-04MS				10	10	1
HS20080198-04MSD				10	10	1
HS20080198-04PDS				10	10	1
HS20080198-04SD				10	10	1
HS20080223-05MS				10	10	1
HS20080223-05MSD				10	10	1
HS20080223-05PDS				10	10	1
HS20080223-05SD				10	10	1
HS20080475-01	LH18/24-SP140_081120	Water		10	10	1
LCS-156348				10	10	1
MBLK-156348				10	10	1

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475
Start Date: 19-Aug-2020 End Date: 19-Aug-2020

Run ID:ICPMS05_367010
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_367010_Tune	1	19-Aug-2020 00:00	ICPMS05_367010_Tune_1	
CAL BLK	1	19-Aug-2020 11:04	014CALB.d_5705633	AG SE
2/10/200	1	19-Aug-2020 11:06	015CALS.d_5705634	AG SE
5/25/500	1	19-Aug-2020 11:09	016CALS.d_5705635	AG SE
10/50/1000	1	19-Aug-2020 11:11	017CALS.d_5705636	AG SE
100/500/10K	1	19-Aug-2020 11:13	018CALS.d_5705637	AG SE
200/1000/20K	1	19-Aug-2020 11:16	019CALS.d_5705638	AG SE
ICV	1	19-Aug-2020 11:20	021_ICV.d_5705640	AG SE
LLICV2	1	19-Aug-2020 11:23	022LCV2.d_5705641	AG SE
LLICV5	1	19-Aug-2020 11:25	023LCV5.d_5705642	AG SE
ICB	1	19-Aug-2020 11:27	024_ICB.d_5705643	AG SE
ICSA	1	19-Aug-2020 11:31	025ICSA.d_5705644	AG SE
ICSAB	1	19-Aug-2020 11:33	026ICSB.d_5705645	AG SE
CCV 1	1	19-Aug-2020 11:48	028_CCV.d_5706163	AG SE
CCB 1	1	19-Aug-2020 11:50	029_CCB.d_5706164	AG SE
CCV 2	1	19-Aug-2020 12:21	040_CCV.d_5706175	AG SE
CCB 2	1	19-Aug-2020 12:23	041_CCB.d_5706176	AG SE
CCV 3	1	19-Aug-2020 12:49	052_CCV.d_5706187	AG SE
CCB 3	1	19-Aug-2020 12:51	053_CCB.d_5706188	AG SE
CCV 4	1	19-Aug-2020 13:17	064_CCV.d_5706161	AG SE
CCB 4	1	19-Aug-2020 13:19	065_CCB.d_5706162	AG SE
CCV 5	1	19-Aug-2020 13:50	076_CCV.d_5706338	AG SE
CCB 5	1	19-Aug-2020 13:52	077_CCB.d_5706339	AG SE
CCV 6	1	19-Aug-2020 14:27	089_CCV.d_5706350	AG SE
CCB 6	1	19-Aug-2020 14:29	090_CCB.d_5706351	AG SE
CCV 7	1	19-Aug-2020 15:01	101_CCV.d_5706362	AG SE
CCB 7	1	19-Aug-2020 15:04	102_CCB.d_5706363	AG SE
CCV 8	1	19-Aug-2020 15:31	113_CCV.d_5706529	AG SE
CCB 8	1	19-Aug-2020 15:33	114_CCB.d_5706530	AG SE
CCV 9	1	19-Aug-2020 15:52	122_CCV.d_5706632	AG SE
CCB 9	1	19-Aug-2020 15:55	123_CCB.d_5706633	AG SE
CCV 10	1	19-Aug-2020 16:52	146_CCV.d_5707327	AG SE
CCB 10	1	19-Aug-2020 16:54	147_CCB.d_5707328	AG SE
MBLK-156348	1	19-Aug-2020 16:59	148SMPL.d_5707329	AG SE
LCS-156348	1	19-Aug-2020 17:01	149SMPL.d_5707330	AG SE
ZZZZZZSD	5	19-Aug-2020 17:13	154SMPL.d_5707335	AG SE
ZZZZZZMS	1	19-Aug-2020 17:15	155SMPL.d_5707336	AG SE
ZZZZZZMSD	1	19-Aug-2020 17:17	156SMPL.d_5707337	AG SE
ZZZZZZPDS	1	19-Aug-2020 17:20	157SMPL.d_5707338	
CCV 11	1	19-Aug-2020 17:22	158_CCV.d_5707339	AG SE
CCB 11	1	19-Aug-2020 17:24	159_CCB.d_5707340	AG SE
CCV 12	1	19-Aug-2020 17:29	160_CCV.d_5707341	AG SE
ZZZZZZSD	10	19-Aug-2020 17:39	164SMPL.d_5707345	AG SE
ZZZZZZMS	2	19-Aug-2020 17:41	165SMPL.d_5707346	AG SE
ZZZZZZMSD	2	19-Aug-2020 17:43	166SMPL.d_5707347	AG SE
CCV 13	1	19-Aug-2020 17:55	171_CCV.d_5707352	AG SE
CCB 12	1	19-Aug-2020 17:57	172_CCB.d_5707353	AG SE
ZZZZZZSD	5	19-Aug-2020 18:07	176SMPL.d_5707357	AG SE
ZZZZZZMS	1	19-Aug-2020 18:09	177SMPL.d_5707358	AG SE
ZZZZZZMSD	1	19-Aug-2020 18:11	178SMPL.d_5707359	AG SE
ZZZZZZPDS	1	19-Aug-2020 18:14	179SMPL.d_5707360	AG

ALS Houston, US

Date: 26-Aug-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475
Start Date: 19-Aug-2020 End Date: 19-Aug-2020

Run ID:ICPMS05_367010
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 14	1	19-Aug-2020 18:23	183_CCV.d_5707364	AG SE
CCB 13	1	19-Aug-2020 18:25	184_CCB.d_5707365	AG SE
LH18/24-SP140_081120	1	19-Aug-2020 18:28	185SMPL.d_5707366	AG SE
CCV 15	1	19-Aug-2020 18:39	190_CCV.d_5707371	AG SE
CCB 14	1	19-Aug-2020 18:42	191_CCB.d_5707372	AG SE

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICV	Date: 19-Aug-2020 11:20		Seq: 5705640	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.245	102	90-110	
Silver	100	99.108	99	90-110	

CCV1	Date: 19-Aug-2020 11:48		Seq: 5706163	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	99.134	99	90-110	
Silver	100	99.165	99	90-110	

CCV2	Date: 19-Aug-2020 12:21		Seq: 5706175	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.037	102	90-110	
Silver	100	99.026	99	90-110	

CCV3	Date: 19-Aug-2020 12:49		Seq: 5706187	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	103.002	103	90-110	
Silver	100	101.078	101	90-110	

CCV4	Date: 19-Aug-2020 13:17		Seq: 5706161	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.986	103	90-110	
Silver	100	101.34	101	90-110	

CCV5	Date: 19-Aug-2020 13:50		Seq: 5706338	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.594	103	90-110	
Silver	100	100.083	100	90-110	

CCV6	Date: 19-Aug-2020 14:27		Seq: 5706350	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	100.488	100	90-110	
Silver	100	102.488	102	90-110	

CCV7	Date: 19-Aug-2020 15:01		Seq: 5706362	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	99.92	100	90-110	
Silver	100	101.71	102	90-110	

CCV8	Date: 19-Aug-2020 15:31		Seq: 5706529	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	103.177	103	90-110	
Silver	100	102.875	103	90-110	

CCV9	Date: 19-Aug-2020 15:52		Seq: 5706632	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	101.524	102	90-110	
Silver	100	101.688	102	90-110	

CCV10	Date: 19-Aug-2020 16:52		Seq: 5707327	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	100.874	101	90-110	
Silver	100	104.549	105	90-110	

ALS Houston, US

Date: 26-Aug-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

CCV11	Date: 19-Aug-2020 17:22		Seq: 5707339	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	103.079	103	90-110	
Silver	100	103.076	103	90-110	

CCV12	Date: 19-Aug-2020 17:29		Seq: 5707341	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	101.768	102	90-110	
Silver	100	101.913	102	90-110	

CCV13	Date: 19-Aug-2020 17:55		Seq: 5707352	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	101.619	102	90-110	
Silver	100	103.129	103	90-110	

CCV14	Date: 19-Aug-2020 18:23		Seq: 5707364	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.245	102	90-110	
Silver	100	103.824	104	90-110	

CCV15	Date: 19-Aug-2020 18:39		Seq: 5707371	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	100.521	101	90-110	
Silver	100	105.043	105	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICB	Date: 19-Aug-2020 11:27		Seq: 5705643	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
CCB1	Date: 19-Aug-2020 11:50		Seq: 5706164	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB2	Date: 19-Aug-2020 12:23		Seq: 5706176	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB3	Date: 19-Aug-2020 12:51		Seq: 5706188	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB4	Date: 19-Aug-2020 13:19		Seq: 5706162	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB5	Date: 19-Aug-2020 13:52		Seq: 5706339	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB6	Date: 19-Aug-2020 14:29		Seq: 5706351	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB7	Date: 19-Aug-2020 15:04		Seq: 5706363	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB8	Date: 19-Aug-2020 15:33		Seq: 5706530	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB9	Date: 19-Aug-2020 15:55		Seq: 5706633	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB10	Date: 19-Aug-2020 16:54		Seq: 5707328	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
MBLK-156348	Date: 19-Aug-2020 16:59		Seq: 5707329	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

MBLK-156348	Date: 19-Aug-2020 16:59		Seq: 5707329	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Silver	5	0.2	5	U	

CCB11	Date: 19-Aug-2020 17:24		Seq: 5707340	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB12	Date: 19-Aug-2020 17:57		Seq: 5707353	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB13	Date: 19-Aug-2020 18:25		Seq: 5707365	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB14	Date: 19-Aug-2020 18:42		Seq: 5707372	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US Date: 26-Aug-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Run ID: ICPMS05_367010
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 19-Aug-2020 11:31	Seq: 5705644	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		0.435	0	
Silver		-0.005	0	

ICSAB	Date: 19-Aug-2020 11:33	Seq: 5705645	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	104.4	104	
Silver	100	96.63	96.6	

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Date Analyzed: 19-Aug-2020 17:17
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Matrix Spike: HS20080198-04MS — Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	5.000	48.84	50.00	97.2	49.79	50.00	99.1	80-120	1.92	20
Silver	5.000	45.59	50.00	91.3	45.14	50.00	90.4	85-116	0.999	20

Matrix Spike: HS20080189-02MS — Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	10.00	52.07	50.00	103	51.13	50.00	101	80-120	1.83	20
Silver	10.00	45.25	50.00	90.6	46.26	50.00	92.6	85-116	2.21	20

Matrix Spike: HS20080223-05MS — Analysis Method: SW6020
Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	5.000	48.46	50.00	96.1	47.95	50.00	95.1	80-120	1.05	20
Silver	5.000	48.04	50.00	96.2	45.37	50.00	90.8	85-116	5.72	20

ALS Houston, US Date: 26-Aug-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Date Analyzed: 19-Aug-2020 18:14
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: HS20080223-05PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Silver	0	113.2	100	113	80-120

ALS Houston, US Date: 26-Aug-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Date Analyzed: 19-Aug-2020 17:01
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: LCS-156348 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Selenium	50	50.61	101	80-120
Silver	50	45.62	91	85-116

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20080475

Date Analyzed: 19-Aug-2020 17:13
Date Extracted: 14-Aug-2020 12:00
Units: ug/L

Lab Sample ID: HS20080198-04SD
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	

Lab Sample ID: HS20080189-02SD
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	

Lab Sample ID: HS20080223-05SD
Client Sample ID:
Analysis Method: SW6020

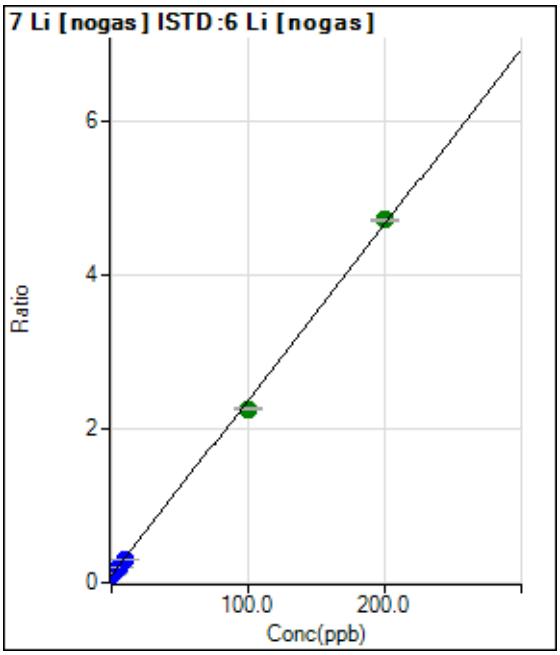
Analyte	Sample Result	C	SD Result	C	RPD	Q
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

Calibration for 021_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 8:26:18 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	CAL BLK	8/19/2020 11:04:33 AM
2	015CALS.d	2/10/200	8/19/2020 11:06:54 AM
3	016CALS.d	5/25/500	8/19/2020 11:09:16 AM
4	017CALS.d	10/50/1000	8/19/2020 11:11:37 AM
5	018CALS.d	100/500/10K	8/19/2020 11:13:59 AM
6	019CALS.d	200/1000/20K	8/19/2020 11:16:14 AM
7			

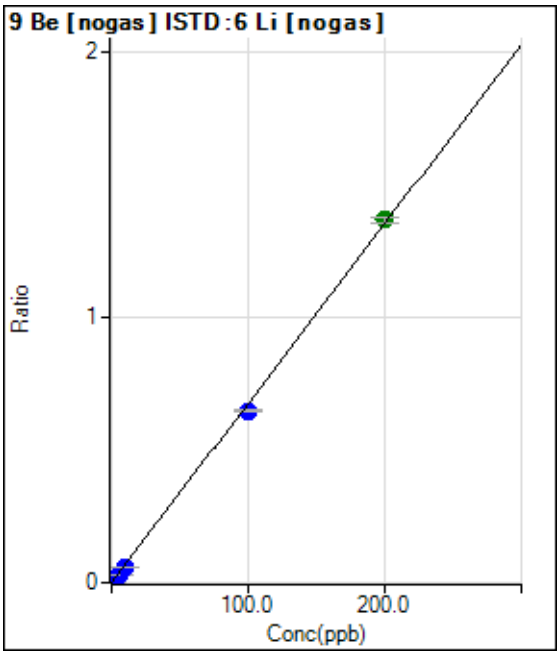
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93045.20	0.0937	P	2.4
2	☐	2.000	1.864	133034.26	0.1363	P	0.4
3	☐	5.000	4.492	195971.41	0.1963	P	1.1
4	☐	10.000	8.825	288594.71	0.2951	P	0.4
5	☐	100.000	94.770	2064557.42	2.2565	A	1.1
6	☐	200.000	202.688	4009502.76	4.7193	A	0.9
7	☐	1.000					

y = 0.0228 * x + 0.0937
R = 0.9995
DL = 0.2904
BEC = 4.108

Weight: <None>
Min Conc: <None>

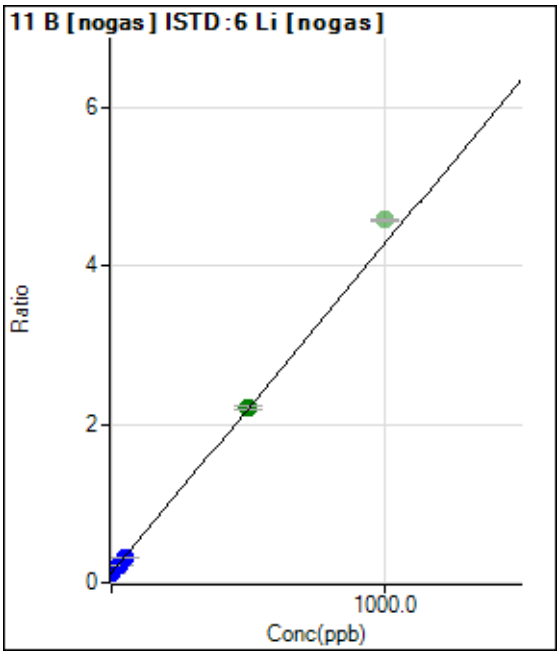


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218.33	0.0002	P	7.8
2	☐	2.000	1.736	11673.60	0.0120	P	1.9
3	☐	5.000	4.358	29642.79	0.0297	P	1.1
4	☐	10.000	8.779	58244.27	0.0596	P	2.7
5	☐	100.000	95.515	591018.11	0.6460	P	1.3
6	☐	200.000	202.322	1162481.99	1.3682	A	1.4
7	☐	1.000					

y = 0.0068 * x + 2.2013E-004
R = 0.9997
DL = 0.007647
BEC = 0.03256

Weight: <None>
Min Conc: <None>

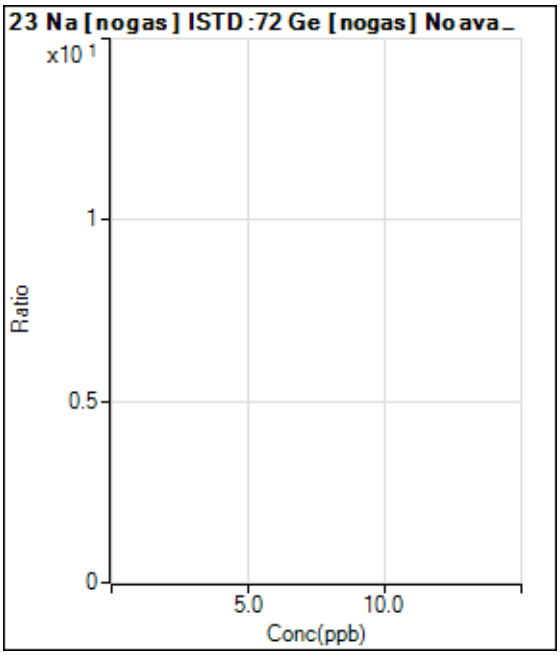
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122807.99	0.1237	P	2.6
2	☐	10.000	9.827	160638.54	0.1646	P	1.1
3	☐	25.000	20.970	210568.23	0.2109	P	1.3
4	☐	50.000	44.313	301044.81	0.3079	P	1.6
5	☐	500.000	500.774	2017065.54	2.2049	A	2.3
6	☑	1000.000		3896006.09	4.5856	A	0.5
7	☐	5.000					

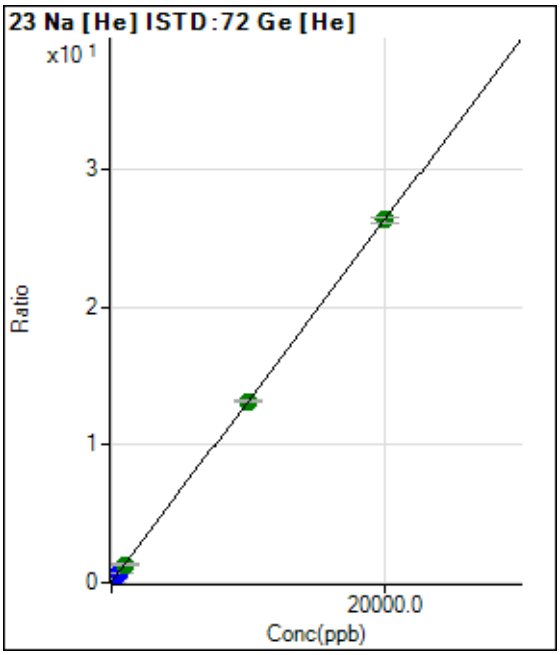
y = 0.0042 * x + 0.1237
R = 0.9999
DL = 2.348
BEC = 29.77

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

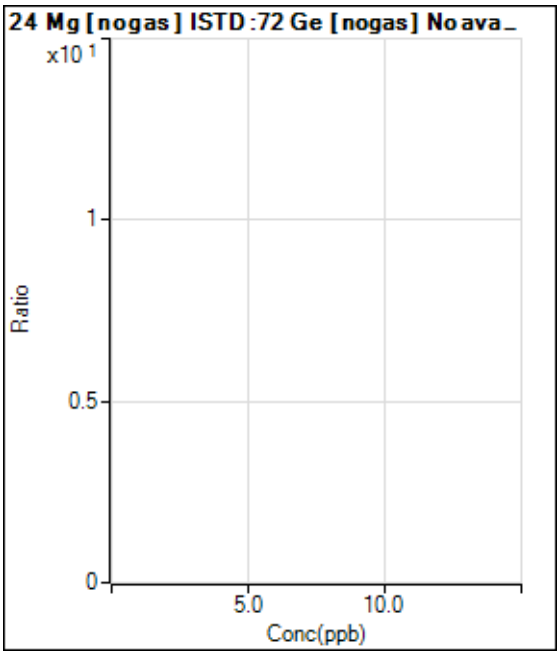
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49307.17	0.0451	P	1.5
2	☐	200.000	198.909	334738.04	0.3064	P	0.2
3	☐	500.000	510.741	773407.02	0.7160	P	1.1
4	☐	1000.000	974.357	1428454.46	1.3251	A	2.2
5	☐	10000.00	9988.980	14087125.62	13.1675	A	1.1
6	☐	20000.00	20006.53	27382432.09	26.3275	A	1.4
7	☐	100.000					

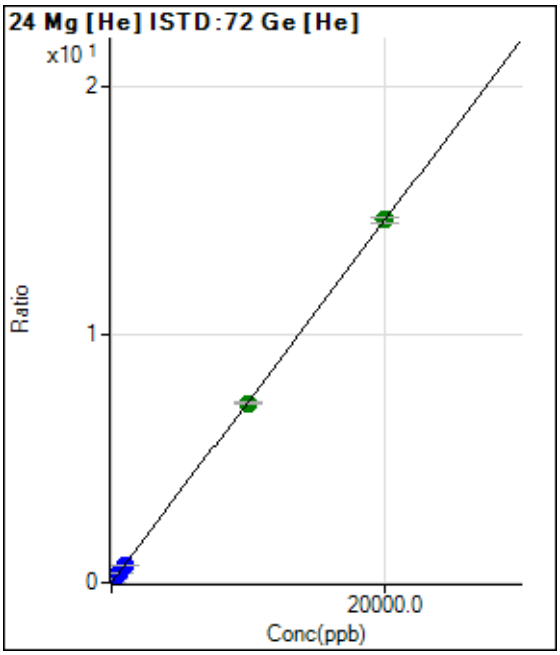
y = 0.0013 * x + 0.0451
R = 1.0000
DL = 1.54
BEC = 34.3

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

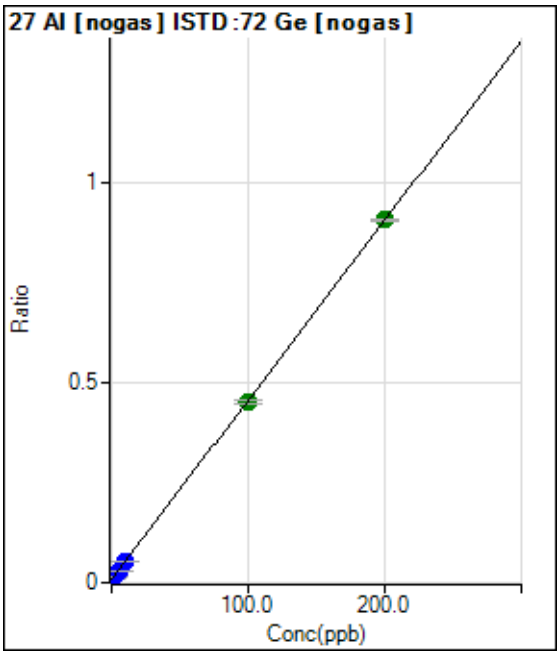
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	656.69	0.0006	P	3.6
2	☐	200.000	201.856	161303.34	0.1476	P	0.6
3	☐	500.000	516.065	406700.82	0.3765	P	1.0
4	☐	1000.000	991.720	779303.84	0.7230	P	1.3
5	☐	10000.00	9921.552	7732421.55	7.2275	A	0.5
6	☐	20000.00	20039.21	15182953.94	14.5972	A	1.9
7	☐	100.000					

y = 7.2840E-004 * x + 6.0012E-004
R = 1.0000
DL = 0.08801
BEC = 0.8239

Weight: <None>
Min Conc: <None>

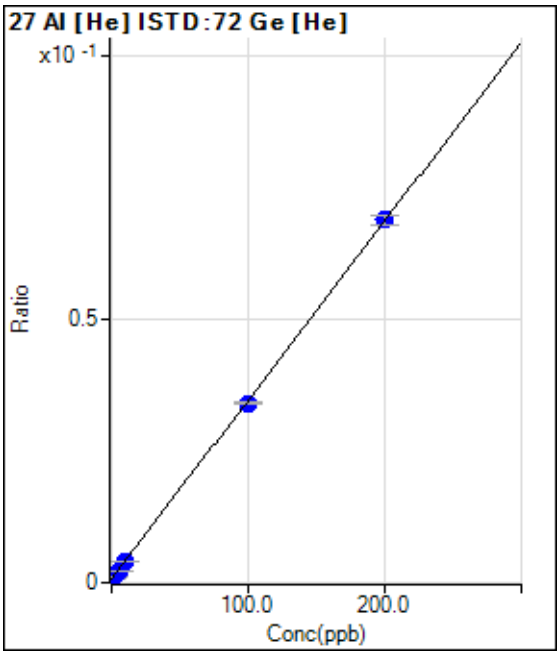


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37717.73	0.0077	P	5.3
2	☐	2.000	1.857	78521.90	0.0160	P	1.7
3	☐	5.000	4.976	147025.15	0.0300	P	1.9
4	☐	10.000	9.791	251741.73	0.0517	P	1.6
5	☐	100.000	99.182	2170869.40	0.4533	A	2.6
6	☐	200.000	200.421	4247772.33	0.9081	A	0.9
7	☐	1.000					

y = 0.0045 * x + 0.0077
R = 1.0000
DL = 0.2732
BEC = 1.71

Weight: <None>
Min Conc: <None>

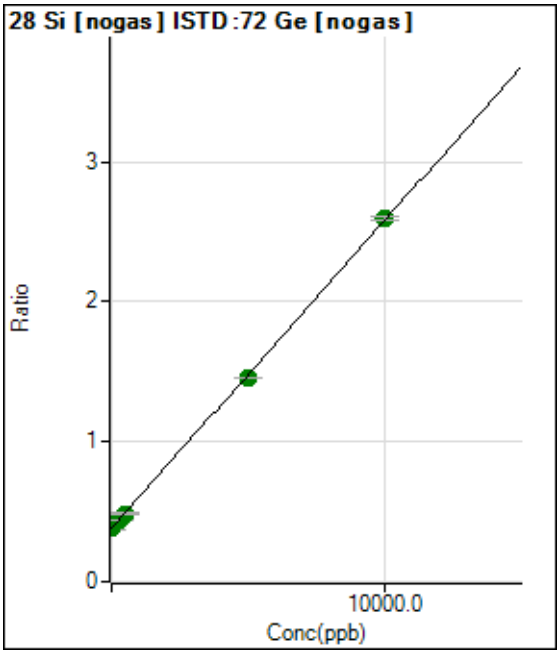
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	783.40	0.0007	P	11.4
2	☐	2.000	1.523	1346.74	0.0012	P	12.6
3	☐	5.000	4.732	2506.87	0.0023	P	3.2
4	☐	10.000	9.851	4373.91	0.0041	P	3.3
5	☐	100.000	98.386	36475.34	0.0341	P	0.7
6	☐	200.000	200.826	71605.23	0.0688	P	2.8
7	☐	1.000					

y = 3.3926E-004 * x + 7.1551E-004
R = 1.0000
DL = 0.7238
BEC = 2.109

Weight: <None>
Min Conc: <None>

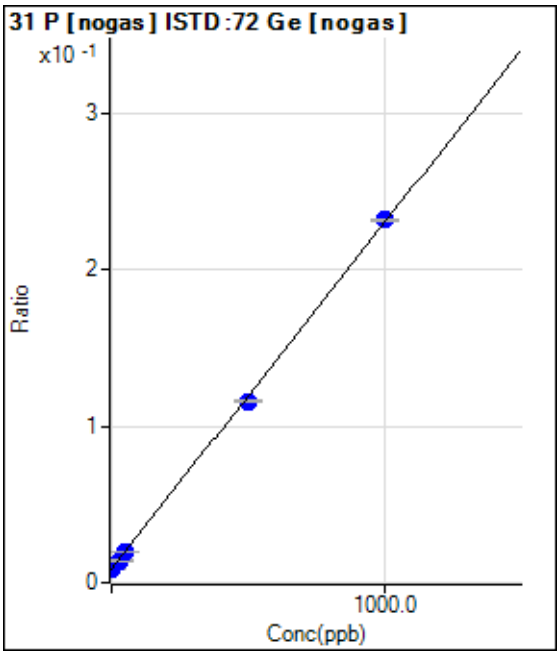


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1878823.04	0.3827	A	5.4
2	☐	100.000	120.517	2004886.11	0.4092	A	1.0
3	☐	250.000	261.641	2154503.04	0.4402	A	2.0
4	☐	500.000	465.810	2363969.18	0.4851	A	2.9
5	☐	5000.000	4898.311	6987490.73	1.4588	A	0.4
6	☐	10000.00	10052.05	12119859.40	2.5909	A	1.0
7	☐	50.000					

y = 2.1967E-004 * x + 0.3827
R = 0.9999
DL = 282.7
BEC = 1742

Weight: <None>
Min Conc: <None>

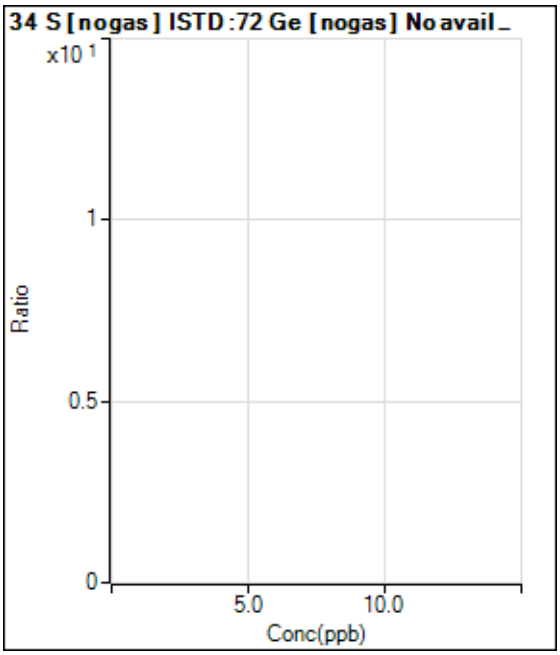
Calibration for 021_ICV.d



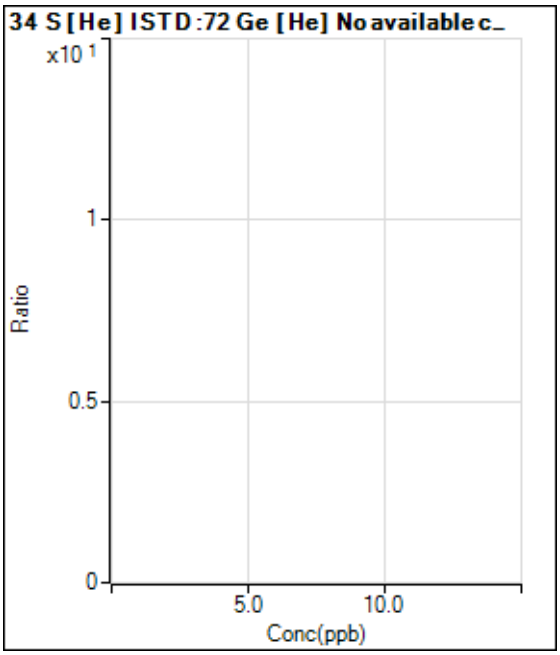
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43537.09	0.0089	P	2.2
2	☐	10.000	8.664	52827.35	0.0108	P	1.6
3	☐	25.000	23.617	68952.14	0.0141	P	3.3
4	☐	50.000	49.004	96025.92	0.0197	P	1.5
5	☐	500.000	483.890	555287.66	0.1159	P	0.8
6	☐	1000.000	1008.153	1084904.05	0.2319	P	0.6
7	☐	5.000					

y = 2.2125E-004 * x + 0.0089
R = 0.9998
DL = 2.643
BEC = 40.07

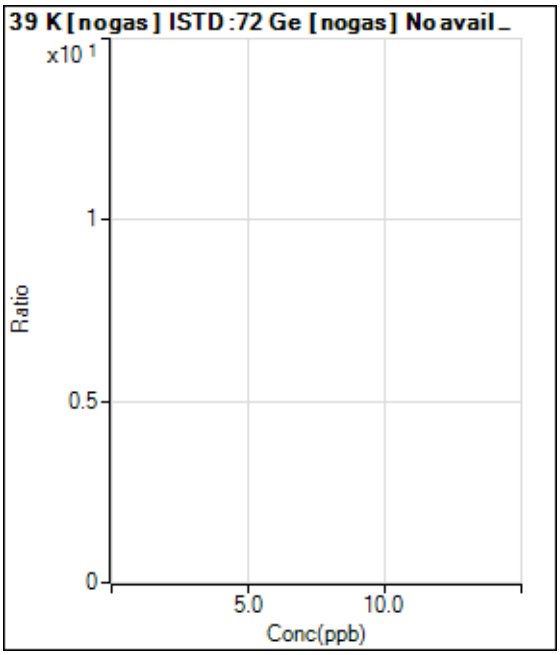
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

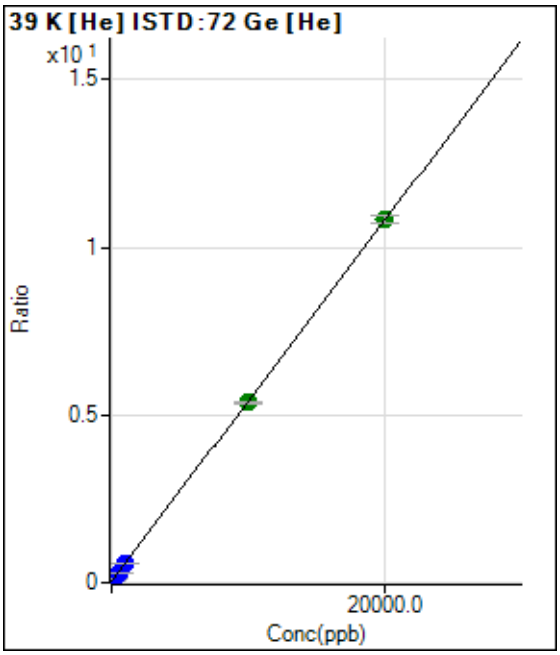


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

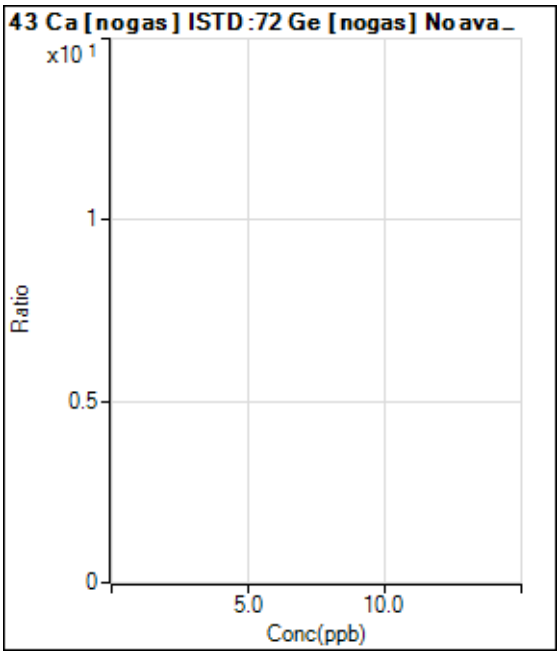
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37685.03	0.0344	P	0.1
2	☐	200.000	197.089	153493.96	0.1405	P	1.4
3	☐	500.000	509.046	333080.40	0.3084	P	0.3
4	☐	1000.000	988.847	610703.84	0.5665	P	0.2
5	☐	10000.00	9923.328	5749483.04	5.3742	A	0.8
6	☐	20000.00	20038.69	11250062.33	10.8173	A	2.1
7	☐	100.000					

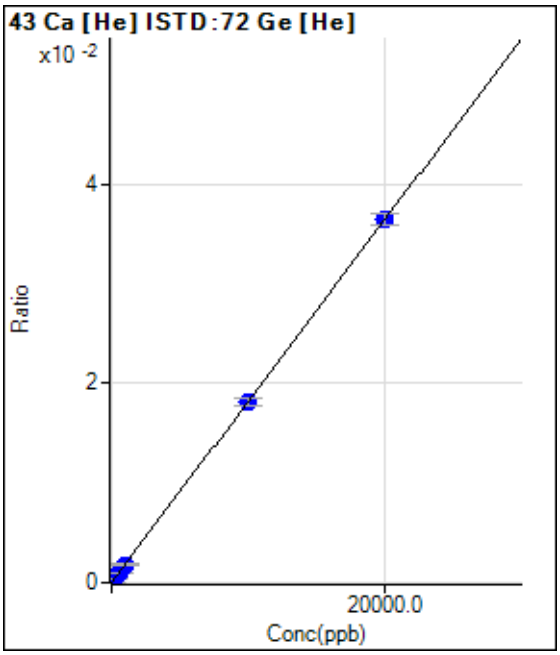
y = 5.3810E-004 * x + 0.0344
R = 1.0000
DL = 0.2594
BEC = 63.99

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

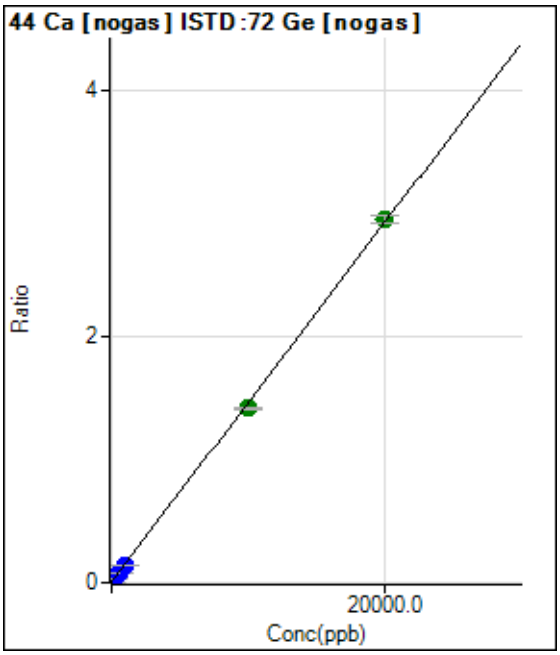
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	49.5
2	☐	200.000	199.518	416.68	0.0004	P	21.7
3	☐	500.000	499.975	1003.38	0.0009	P	12.0
4	☐	1000.000	995.504	1973.47	0.0018	P	6.2
5	☐	10000.00	9975.612	19450.49	0.0182	P	3.6
6	☐	20000.00	20012.42	37905.66	0.0365	P	3.3
7	☐	100.000					

y = 1.8206E-006 * x + 1.8242E-005
R = 1.0000
DL = 14.87
BEC = 10.02

Weight: <None>
Min Conc: <None>

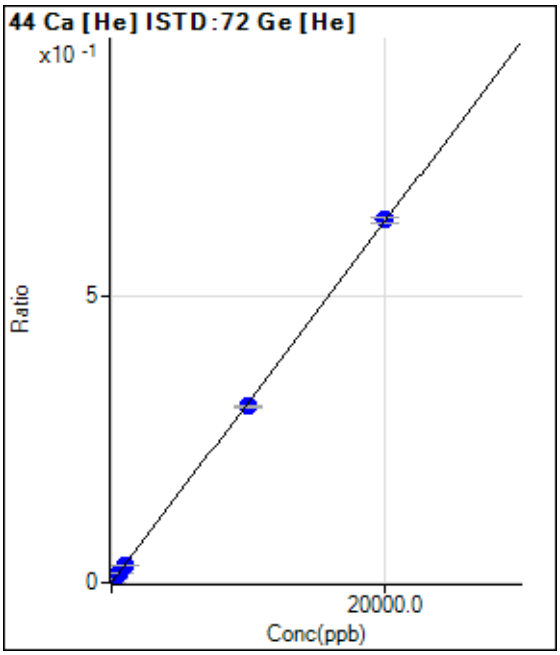


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28031.39	0.0057	P	4.7
2	☐	200.000	191.009	164377.85	0.0336	P	1.1
3	☐	500.000	485.728	374473.03	0.0765	P	1.6
4	☐	1000.000	946.477	700040.67	0.1437	P	0.7
5	☐	10000.00	9669.191	6778475.52	1.4152	A	0.9
6	☐	20000.00	20168.52	13779653.96	2.9456	A	2.1
7	☐	100.000					

y = 1.4577E-004 * x + 0.0057
R = 0.9998
DL = 5.547
BEC = 39.16

Weight: <None>
Min Conc: <None>

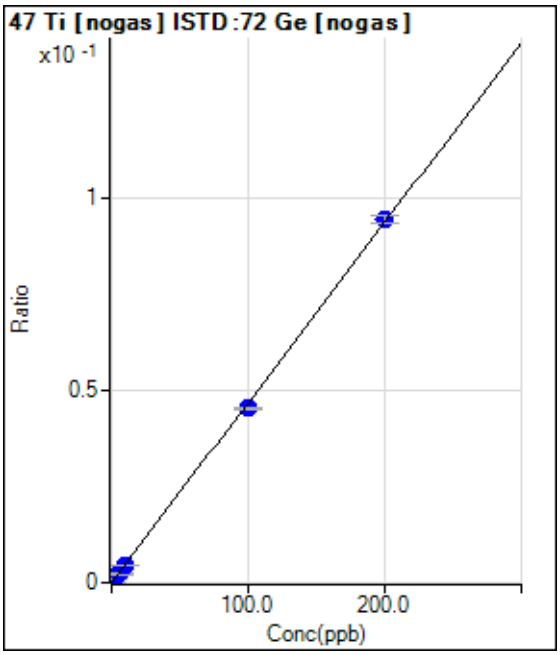
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0004	P	25.2
2	☐	200.000	185.454	6831.35	0.0063	P	6.6
3	☐	500.000	496.871	17315.01	0.0160	P	2.9
4	☐	1000.000	964.253	33089.61	0.0307	P	1.6
5	☐	10000.00	9774.899	328694.72	0.3072	P	0.6
6	☐	20000.00	20114.56	657066.76	0.6318	P	1.7
7	☐	100.000					

y = 3.1387E-005 * x + 4.3248E-004
R = 0.9999
DL = 10.42
BEC = 13.78

Weight: <None>
Min Conc: <None>

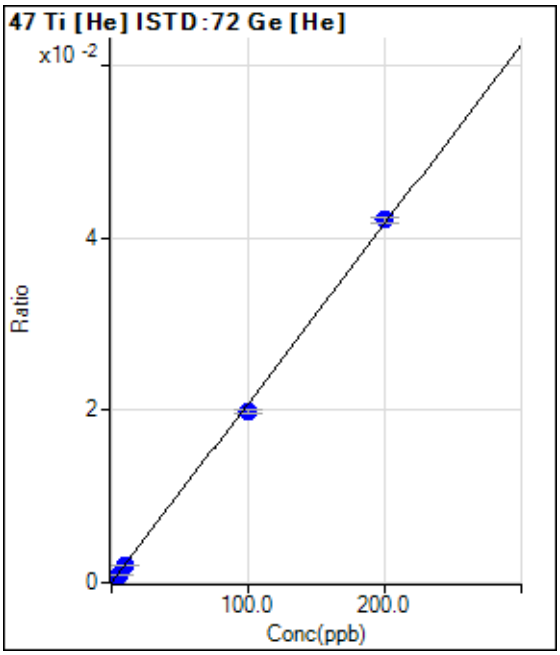


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	41.5
2	☐	2.000	1.866	4403.94	0.0009	P	3.8
3	☐	5.000	4.807	11146.86	0.0023	P	2.3
4	☐	10.000	9.636	22126.71	0.0045	P	3.7
5	☐	100.000	96.807	217448.66	0.0454	P	0.9
6	☐	200.000	201.621	442160.88	0.0945	P	2.3
7	☐	1.000					

y = 4.6870E-004 * x + 2.4322E-005
R = 0.9998
DL = 0.06464
BEC = 0.05189

Weight: <None>
Min Conc: <None>

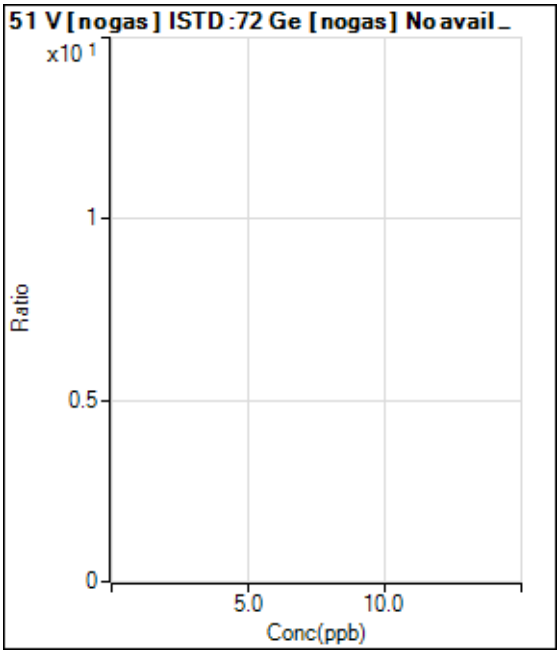
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	173.2
2	☐	2.000	2.021	476.68	0.0004	P	5.4
3	☐	5.000	4.223	966.71	0.0009	P	3.7
4	☐	10.000	9.400	2126.84	0.0020	P	7.2
5	☐	100.000	95.479	21295.83	0.0199	P	1.4
6	☐	200.000	202.310	43858.65	0.0422	P	1.9
7	☐	1.000					

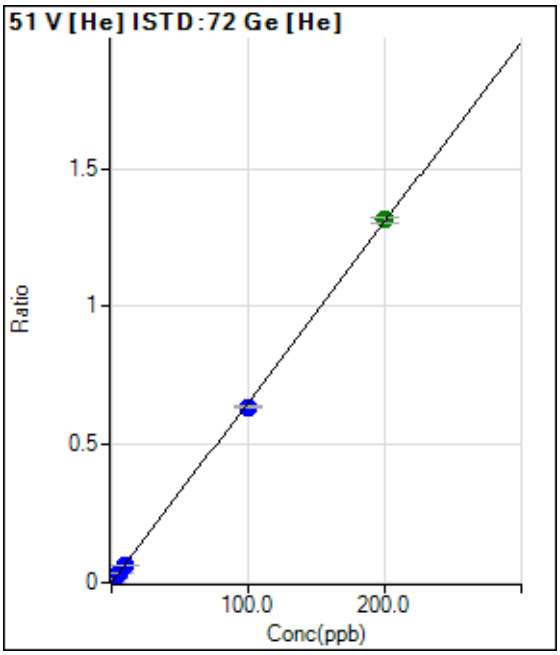
y = 2.0831E-004 * x + 1.5271E-005
R = 0.9997
DL = 0.3809
BEC = 0.07331

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					

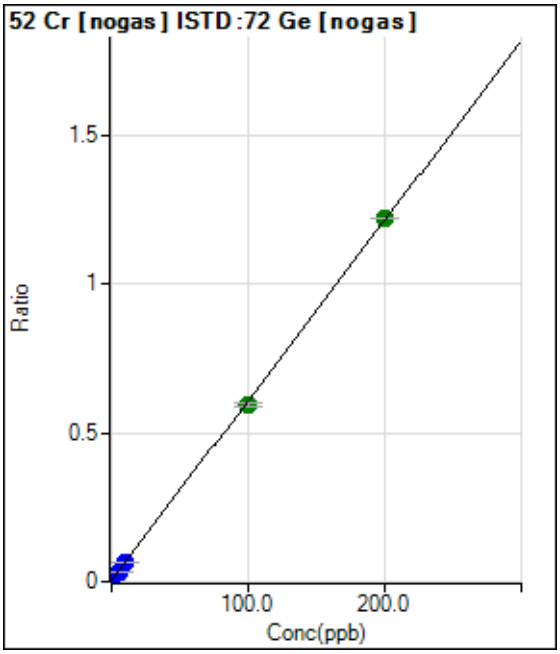
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	984.48	0.0009	P	6.5
2	☐	2.000	1.893	14480.14	0.0133	P	1.5
3	☐	5.000	4.872	35321.23	0.0327	P	1.6
4	☐	10.000	9.515	67917.38	0.0630	P	1.0
5	☐	100.000	97.511	681906.64	0.6374	P	1.3
6	☐	200.000	201.273	1367567.24	1.3147	A	1.8
7	☐	1.000					

y = 0.0065 * x + 8.9941E-004
R = 0.9999
DL = 0.02691
BEC = 0.1378

Weight: <None>
Min Conc: <None>

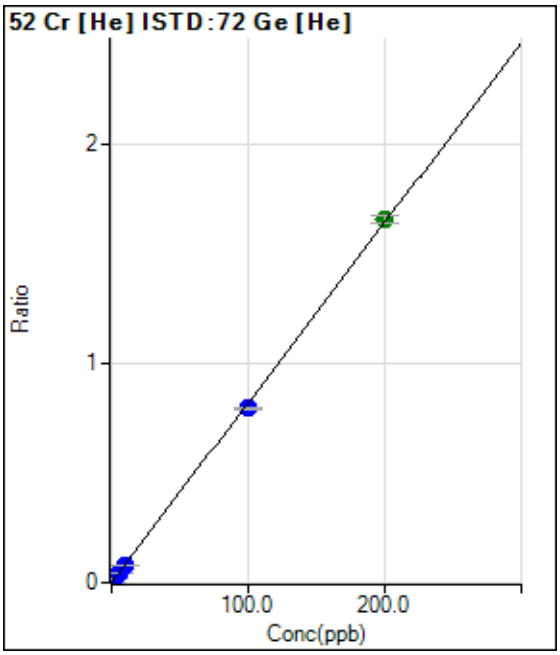


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23188.03	0.0047	P	2.2
2	☐	2.000	1.945	80781.87	0.0165	P	0.9
3	☐	5.000	4.968	170179.14	0.0348	P	2.3
4	☐	10.000	9.707	309080.91	0.0634	P	1.2
5	☐	100.000	98.009	2861770.27	0.5975	A	2.2
6	☐	200.000	201.011	5709473.04	1.2205	A	0.1
7	☐	1.000					

y = 0.0060 * x + 0.0047
R = 0.9999
DL = 0.05183
BEC = 0.7806

Weight: <None>
Min Conc: <None>

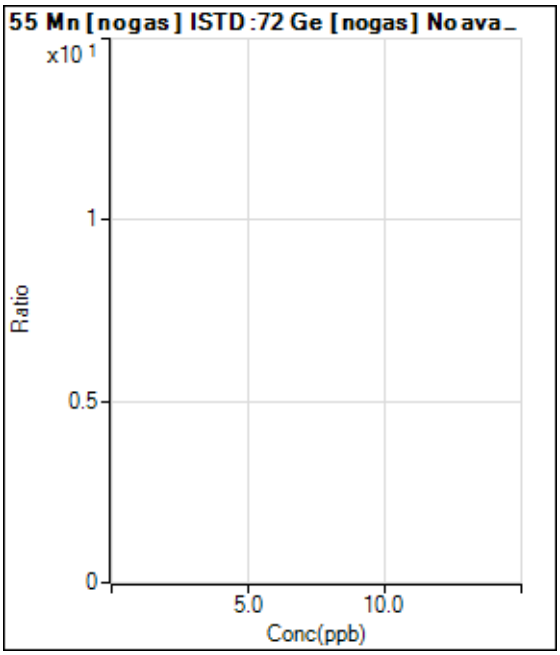
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.74	0.0013	P	5.2
2	☐	2.000	1.936	18716.38	0.0171	P	3.4
3	☐	5.000	4.986	45469.49	0.0421	P	0.8
4	☐	10.000	9.487	85094.36	0.0789	P	1.7
5	☐	100.000	96.679	848089.49	0.7927	P	0.6
6	☐	200.000	201.687	1718415.86	1.6523	A	2.1
7	☐	1.000					

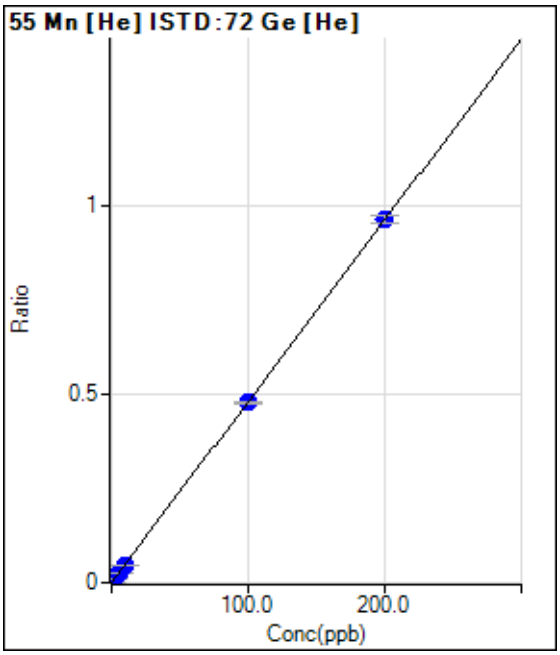
y = 0.0082 * x + 0.0013
R = 0.9998
DL = 0.02439
BEC = 0.1559

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					

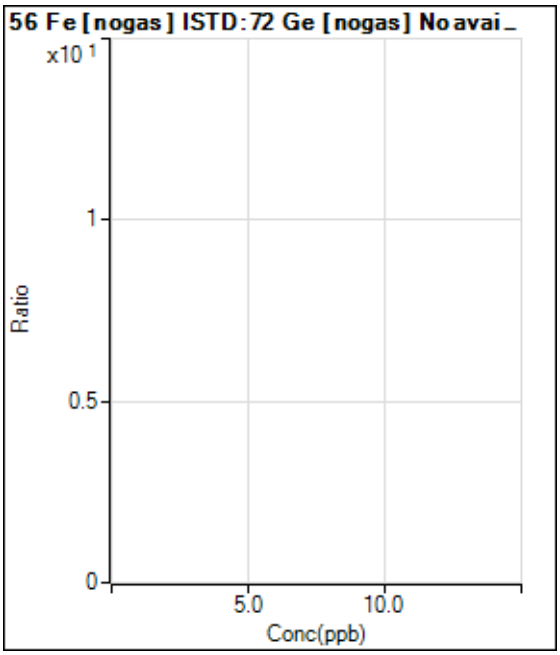
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0003	P	26.5
2	☐	2.000	1.940	10579.88	0.0097	P	4.7
3	☐	5.000	5.099	26893.27	0.0249	P	1.4
4	☐	10.000	9.759	51034.07	0.0473	P	3.1
5	☐	100.000	99.462	512858.70	0.4794	P	0.5
6	☐	200.000	200.279	1003556.29	0.9650	P	2.2
7	☐	1.000					

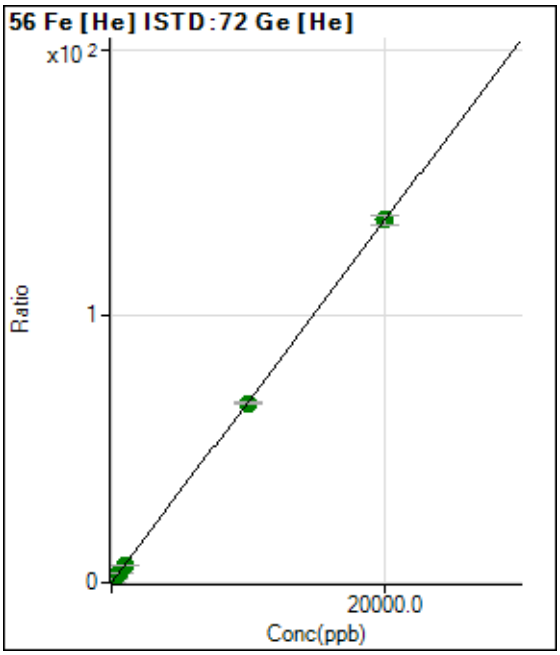
y = 0.0048 * x + 3.3777E-004
R = 1.0000
DL = 0.05567
BEC = 0.07013

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

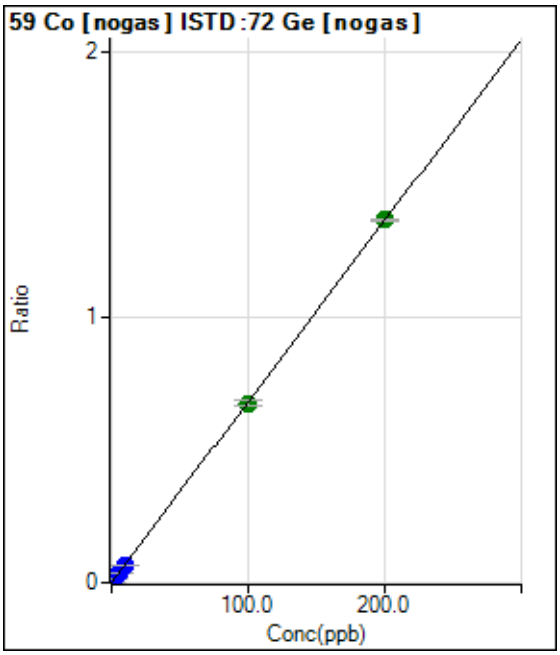
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10182.95	0.0093	P	4.4
2	☐	200.000	197.783	1477906.96	1.3525	A	2.1
3	☐	500.000	514.490	3784262.34	3.5035	A	1.4
4	☐	1000.000	973.520	7137581.98	6.6209	A	2.3
5	☐	10000.00	9925.175	72123645.59	67.4159	A	0.4
6	☐	20000.00	20038.39	141540927.8	136.099	A	2.5
7	☐	100.000					

y = 0.0068 * x + 0.0093
R = 1.0000
DL = 0.1804
BEC = 1.37

Weight: <None>
Min Conc: <None>

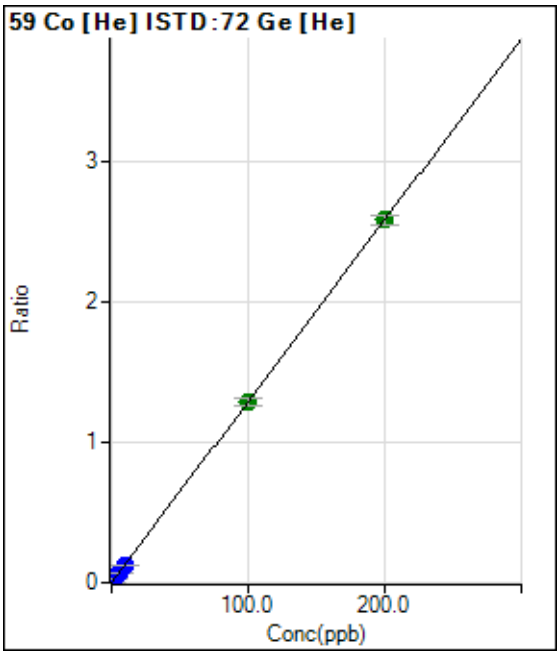


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.02	0.0001	P	14.5
2	☐	2.000	1.960	65964.60	0.0135	P	1.4
3	☐	5.000	5.026	168224.97	0.0344	P	0.5
4	☐	10.000	9.840	327338.99	0.0672	P	2.1
5	☐	100.000	99.035	3234049.64	0.6753	A	2.8
6	☐	200.000	200.490	6394590.53	1.3670	A	0.7
7	☐	1.000					

y = 0.0068 * x + 1.0181E-004
R = 1.0000
DL = 0.006492
BEC = 0.01493

Weight: <None>
Min Conc: <None>

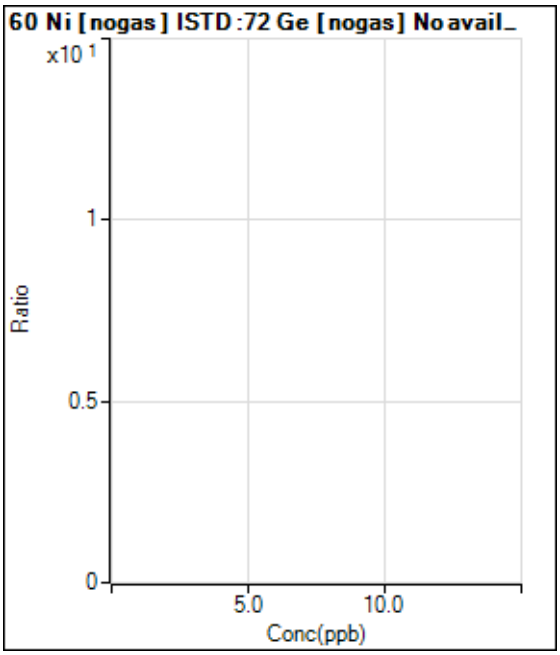
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	6.7
2	☐	2.000	2.007	28412.39	0.0260	P	2.9
3	☐	5.000	5.215	72730.01	0.0673	P	1.5
4	☐	10.000	10.018	139288.34	0.1292	P	1.0
5	☐	100.000	99.720	1374515.76	1.2850	A	3.6
6	☐	200.000	200.133	2681822.77	2.5788	A	2.7
7	☐	1.000					

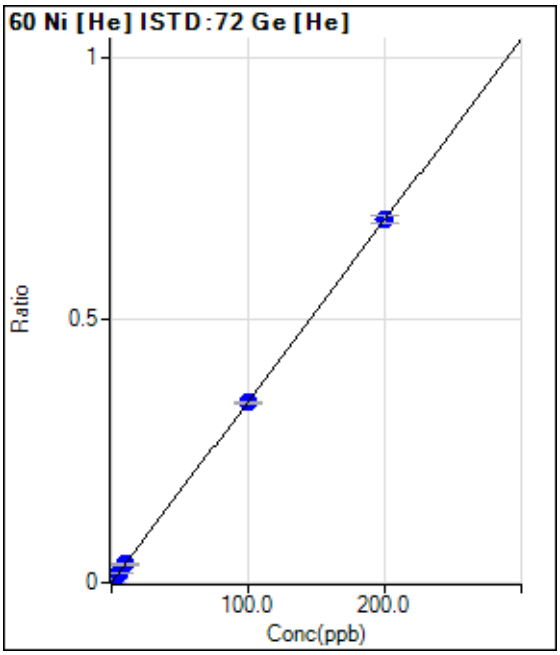
y = 0.0129 * x + 1.4624E-004
R = 1.0000
DL = 0.002291
BEC = 0.01135

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					

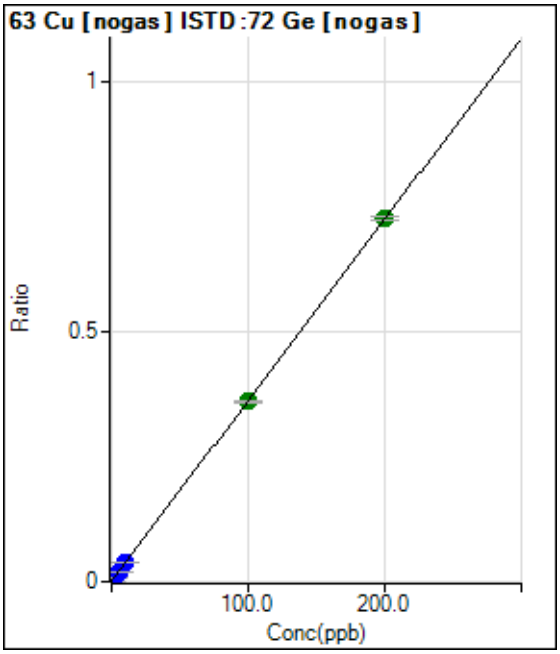
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0002	P	23.5
2	☐	2.000	2.061	7998.56	0.0073	P	3.8
3	☐	5.000	5.211	19644.08	0.0182	P	3.2
4	☐	10.000	10.030	37521.70	0.0348	P	1.2
5	☐	100.000	99.617	367822.91	0.3438	P	1.0
6	☐	200.000	200.184	718321.37	0.6907	P	2.2
7	☐	1.000					

y = 0.0034 * x + 2.1316E-004
R = 1.0000
DL = 0.04354
BEC = 0.0618

Weight: <None>
Min Conc: <None>

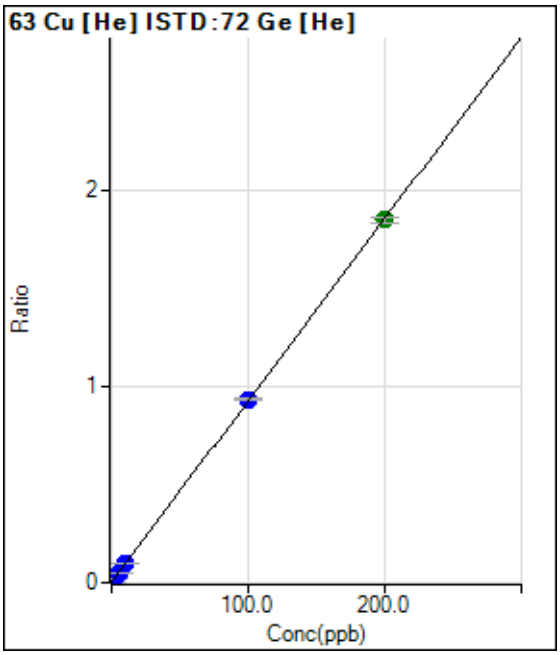


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4032.18	0.0008	P	2.2
2	☐	2.000	1.991	39302.25	0.0080	P	2.4
3	☐	5.000	5.207	96227.74	0.0197	P	2.6
4	☐	10.000	10.138	182708.81	0.0375	P	2.1
5	☐	100.000	99.280	1724742.21	0.3600	A	1.6
6	☐	200.000	200.348	3394665.05	0.7257	A	1.1
7	☐	1.000					

y = 0.0036 * x + 8.2048E-004
R = 1.0000
DL = 0.01518
BEC = 0.2268

Weight: <None>
Min Conc: <None>

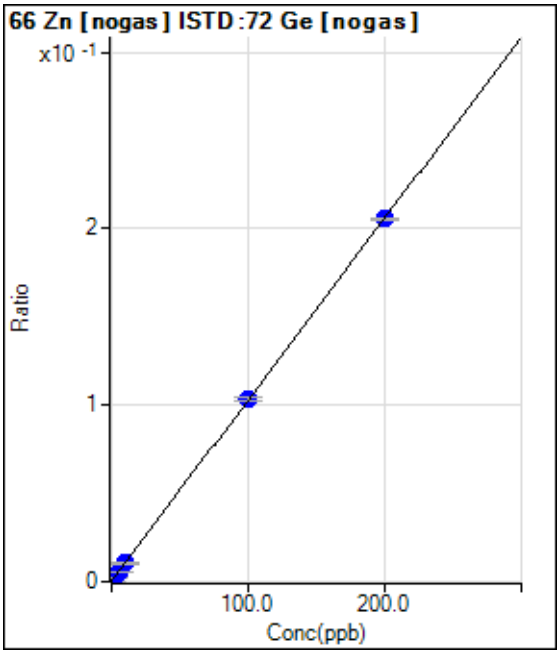
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1730.11	0.0016	P	7.8
2	☐	2.000	2.016	22127.00	0.0203	P	4.2
3	☐	5.000	5.158	53317.58	0.0494	P	1.8
4	☐	10.000	10.014	101699.86	0.0943	P	1.9
5	☐	100.000	100.890	1001566.57	0.9362	P	1.0
6	☐	200.000	199.550	1924368.88	1.8502	A	1.3
7	☐	1.000					

y = 0.0093 * x + 0.0016
R = 1.0000
DL = 0.03984
BEC = 0.1707

Weight: <None>
Min Conc: <None>

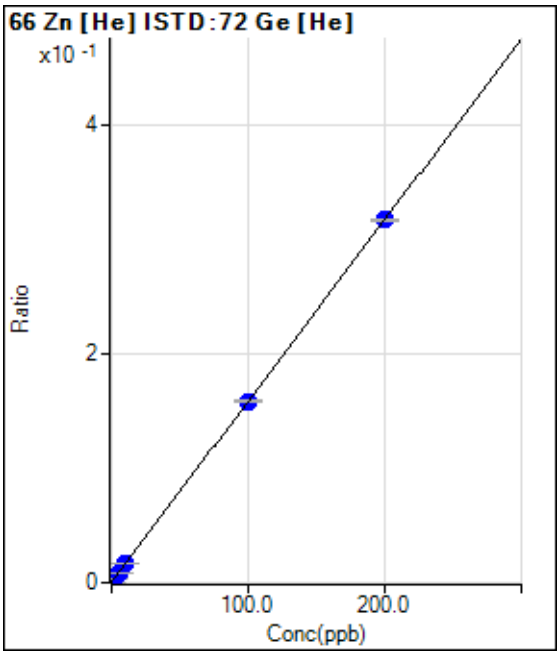


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1263.40	0.0003	P	4.6
2	☐	2.000	1.962	11143.57	0.0023	P	0.9
3	☐	5.000	4.955	26189.03	0.0054	P	1.1
4	☐	10.000	9.843	50560.02	0.0104	P	2.6
5	☐	100.000	100.427	495655.32	0.1035	P	2.0
6	☐	200.000	199.796	961870.69	0.2056	P	0.6
7	☐	1.000					

y = 0.0010 * x + 2.5734E-004
R = 1.0000
DL = 0.0345
BEC = 0.2504

Weight: <None>
Min Conc: <None>

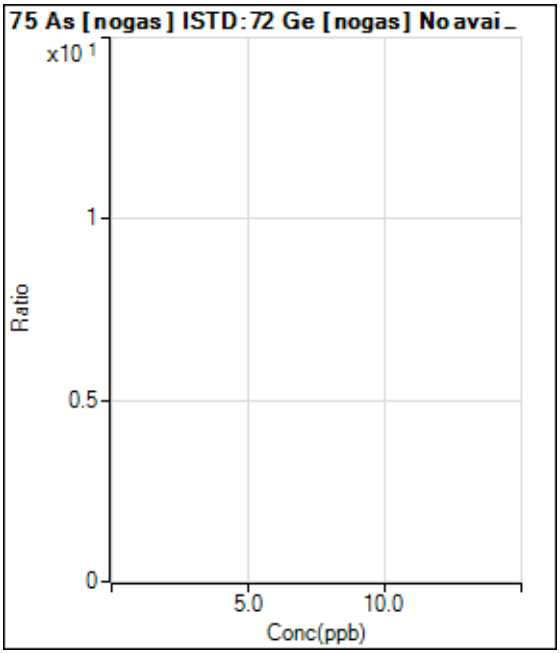
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0004	P	16.9
2	☐	2.000	1.986	3840.46	0.0035	P	8.6
3	☐	5.000	5.034	9012.36	0.0083	P	4.0
4	☐	10.000	10.090	17628.75	0.0164	P	4.5
5	☐	100.000	99.780	169526.08	0.1585	P	1.1
6	☐	200.000	200.105	330192.37	0.3174	P	0.4
7	☐	1.000					

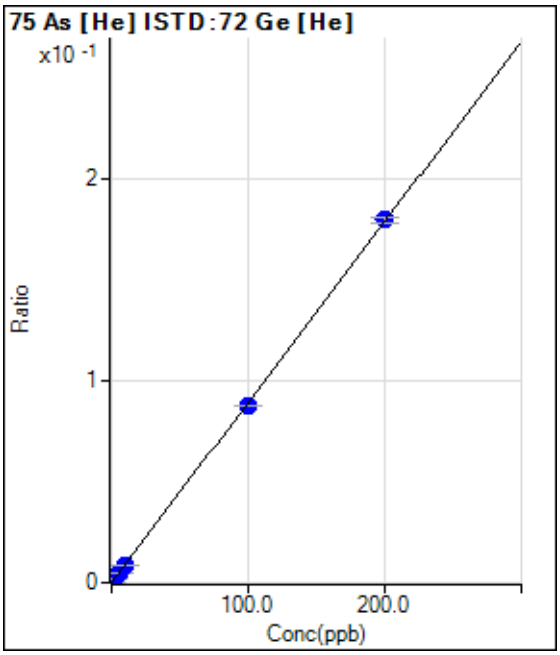
y = 0.0016 * x + 3.6874E-004
R = 1.0000
DL = 0.1183
BEC = 0.2327

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					

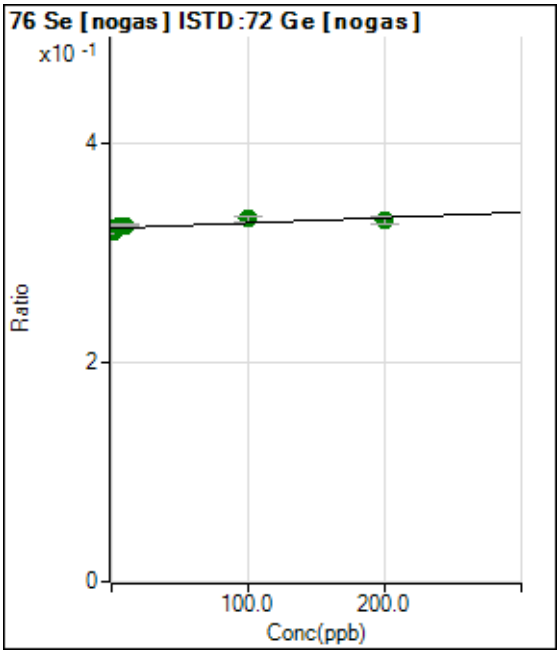
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	22.0
2	☐	2.000	1.856	1903.45	0.0017	P	5.7
3	☐	5.000	4.901	4812.88	0.0045	P	1.5
4	☐	10.000	9.547	9264.61	0.0086	P	0.9
5	☐	100.000	97.837	93355.76	0.0873	P	0.5
6	☐	200.000	201.108	186463.65	0.1793	P	1.3
7	☐	1.000					

y = 8.9098E-004 * x + 8.8393E-005
R = 0.9999
DL = 0.0655
BEC = 0.09921

Weight: <None>
Min Conc: <None>

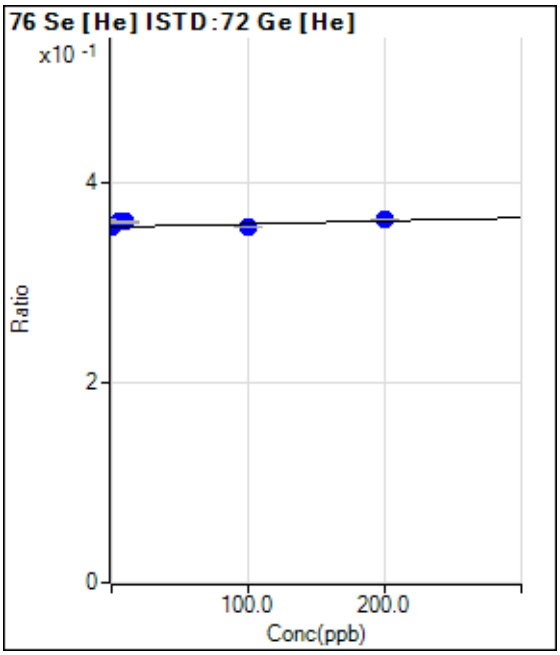


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1581391.75	0.3220	A	2.8
2	☐	2.000	-74.024	1560077.74	0.3184	A	1.3
3	☐	5.000	31.633	1583678.62	0.3235	A	0.5
4	☐	10.000	59.273	1582927.16	0.3249	A	0.2
5	☐	100.000	175.638	1583001.49	0.3305	A	1.5
6	☐	200.000	159.812	1542438.10	0.3297	A	2.0
7	☐	1.000					

y = 4.8286E-005 * x + 0.3220
R = 0.8069
DL = 560.1
BEC = 6669

Weight: <None>
Min Conc: <None>

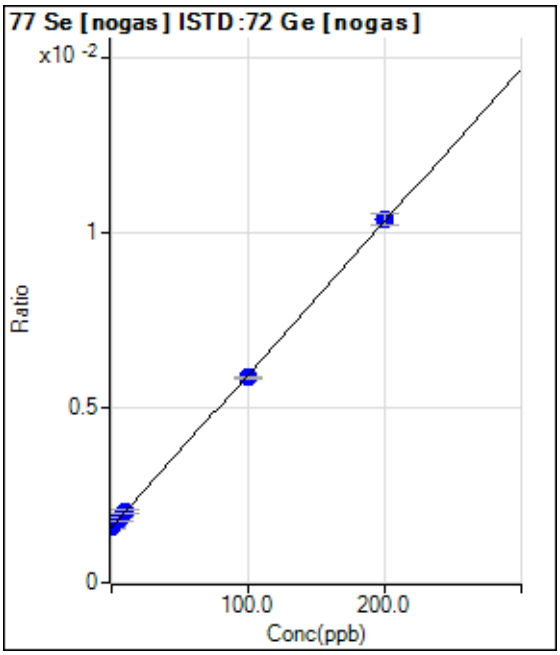
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	389872.94	0.3563	P	1.3
2	☐	2.000	75.040	391795.49	0.3586	P	0.4
3	☐	5.000	163.637	390284.47	0.3613	P	1.1
4	☐	10.000	174.199	389840.36	0.3616	P	0.5
5	☐	100.000	14.101	381621.14	0.3567	P	0.2
6	☐	200.000	230.043	377981.28	0.3634	P	0.7
7	☐	1.000					

y = 3.0881E-005 * x + 0.3563
R = 0.4026
DL = 435.5
BEC = 1.154E+04

Weight: <None>
Min Conc: <None>

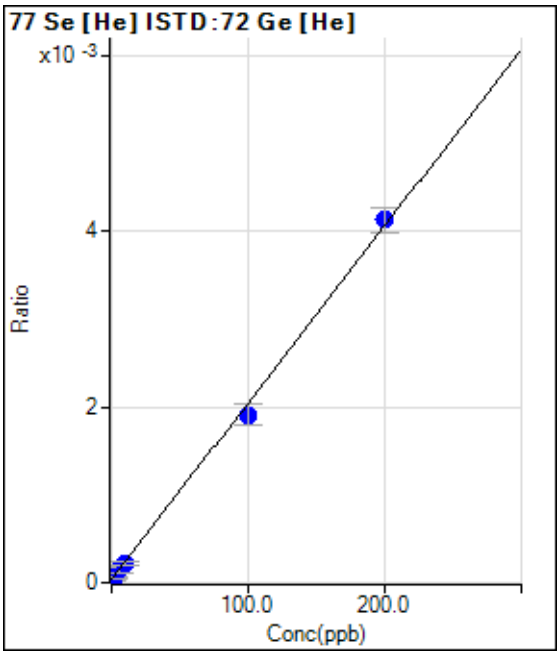


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7761.81	0.0016	P	2.6
2	☐	2.000	3.000	8385.46	0.0017	P	2.4
3	☐	5.000	5.518	8912.35	0.0018	P	7.9
4	☐	10.000	10.851	10012.95	0.0021	P	5.7
5	☐	100.000	97.829	28038.66	0.0059	P	1.4
6	☐	200.000	201.020	48461.34	0.0104	P	3.3
7	☐	1.000					

y = 4.3671E-005 * x + 0.0016
R = 0.9999
DL = 2.849
BEC = 36.19

Weight: <None>
Min Conc: <None>

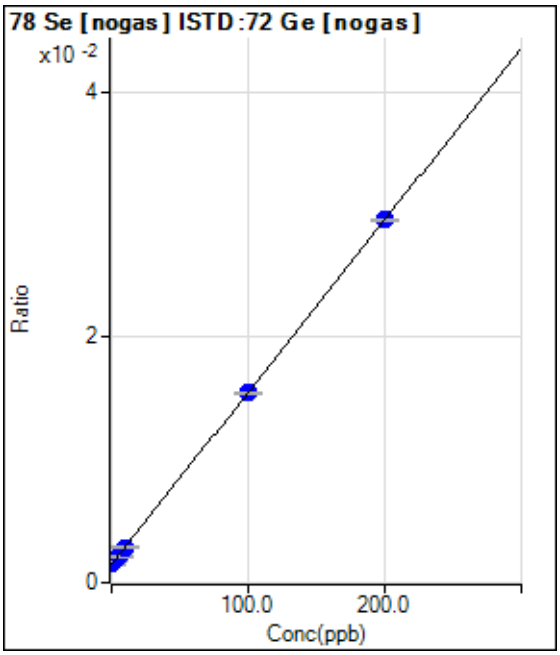
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	74.6
2	☐	2.000	0.618	53.33	0.0000	P	43.7
3	☐	5.000	5.412	156.67	0.0001	P	35.8
4	☐	10.000	9.264	240.00	0.0002	P	15.3
5	☐	100.000	93.026	2040.16	0.0019	P	12.4
6	☐	200.000	203.527	4297.27	0.0041	P	6.8
7	☐	1.000					

y = 2.0103E-005 * x + 3.6449E-005
R = 0.9992
DL = 4.055
BEC = 1.813

Weight: <None>
Min Conc: <None>

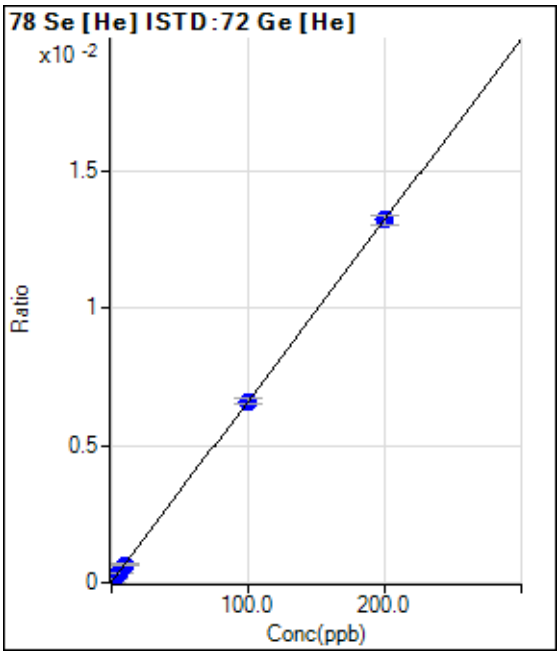


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7351.61	0.0015	P	6.0
2	☐	2.000	1.461	8328.72	0.0017	P	3.5
3	☐	5.000	4.557	10446.47	0.0021	P	2.7
4	☐	10.000	9.844	14015.59	0.0029	P	3.8
5	☐	100.000	99.738	74211.68	0.0155	P	0.9
6	☐	200.000	200.155	138403.72	0.0296	P	0.7
7	☐	1.000					

y = 1.4035E-004 * x + 0.0015
R = 1.0000
DL = 1.914
BEC = 10.65

Weight: <None>
Min Conc: <None>

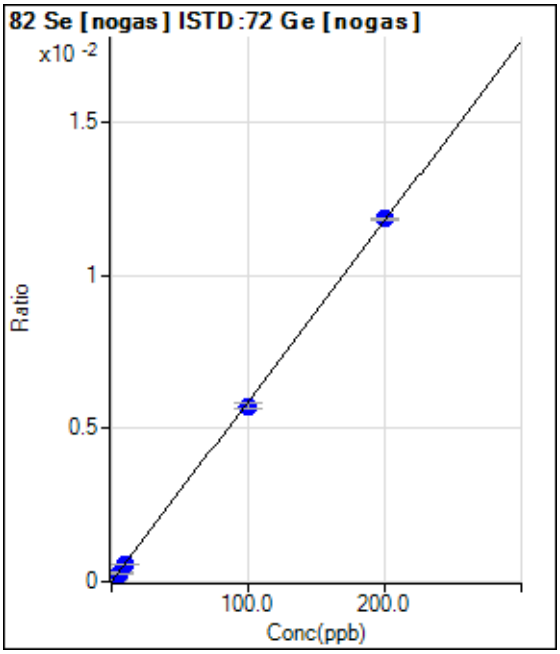
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	43.8
2	☐	2.000	2.171	179.33	0.0002	P	14.2
3	☐	5.000	4.904	372.01	0.0003	P	9.7
4	☐	10.000	9.616	706.69	0.0007	P	3.3
5	☐	100.000	99.962	7082.72	0.0066	P	3.0
6	☐	200.000	200.039	13756.55	0.0132	P	2.4
7	☐	1.000					

y = 6.6024E-005 * x + 2.0723E-005
R = 1.0000
DL = 0.4121
BEC = 0.3139

Weight: <None>
Min Conc: <None>

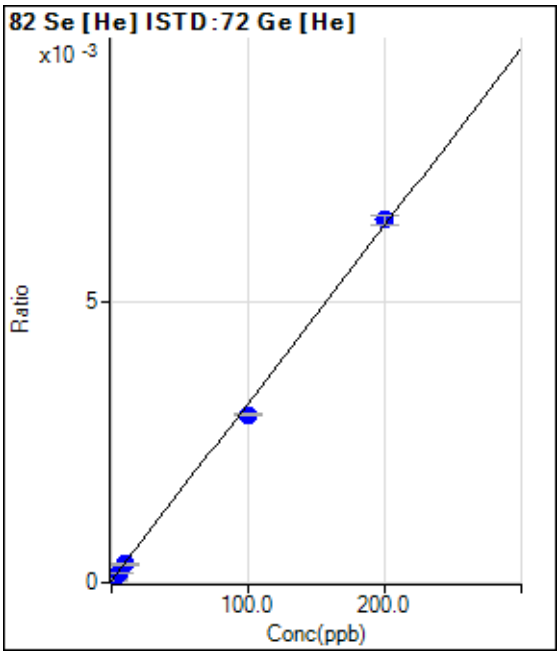


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.29	0.0000	P	1187.
2	☐	2.000	1.658	484.65	0.0001	P	24.9
3	☐	5.000	4.541	1314.83	0.0003	P	13.3
4	☐	10.000	9.430	2708.98	0.0006	P	7.1
5	☐	100.000	97.524	27469.61	0.0057	P	3.4
6	☐	200.000	201.282	55373.84	0.0118	P	0.4
7	☐	1.000					

y = 5.8804E-005 * x + 1.3002E-006
R = 0.9999
DL = 0.7874
BEC = 0.02211

Weight: <None>
Min Conc: <None>

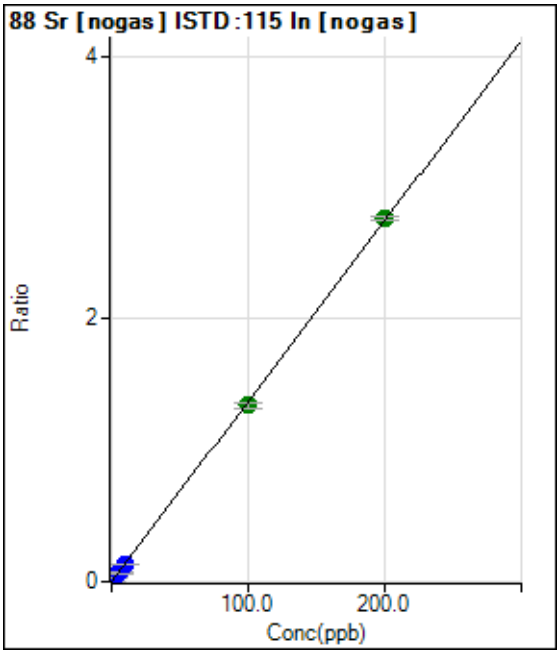
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	66.5
2	☐	2.000	0.680	63.33	0.0001	P	92.6
3	☐	5.000	4.222	183.34	0.0002	P	18.2
4	☐	10.000	9.616	366.68	0.0003	P	11.0
5	☐	100.000	93.633	3200.35	0.0030	P	1.1
6	☐	200.000	203.235	6708.04	0.0065	P	2.7
7	☐	1.000					

y = 3.1559E-005 * x + 3.6595E-005
R = 0.9993
DL = 2.315
BEC = 1.16

Weight: <None>
Min Conc: <None>

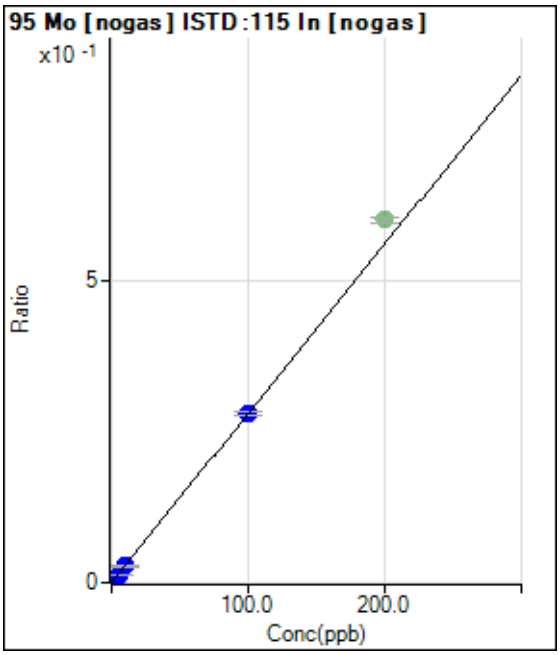


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2026.82	0.0007	P	7.1
2	☐	2.000	1.863	80878.17	0.0263	P	4.4
3	☐	5.000	4.803	206587.31	0.0667	P	3.7
4	☐	10.000	9.289	393514.47	0.1283	P	2.6
5	☐	100.000	97.937	4026157.86	1.3467	A	3.2
6	☐	200.000	201.073	8036925.71	2.7642	A	1.0
7	☐	1.000					

y = 0.0137 * x + 6.5839E-004
R = 0.9999
DL = 0.01027
BEC = 0.0479

Weight: <None>
Min Conc: <None>

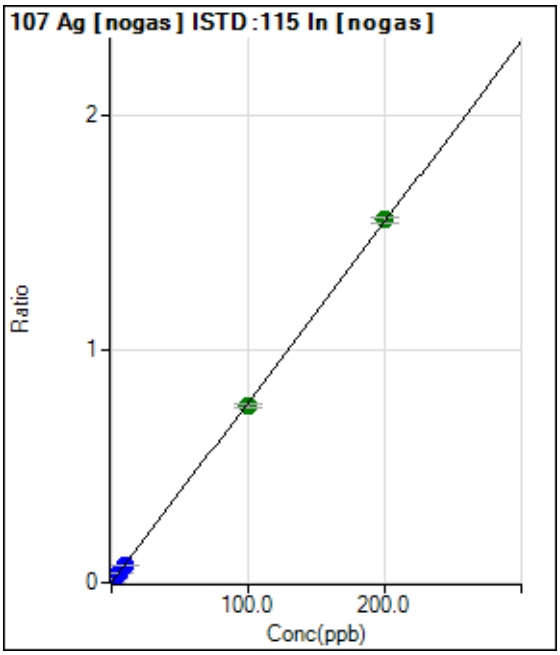
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1036.72	0.0003	P	4.3
2	☐	2.000	1.892	17332.02	0.0056	P	3.7
3	☐	5.000	4.843	42992.02	0.0139	P	3.4
4	☐	10.000	9.646	83705.57	0.0273	P	2.8
5	☐	100.000	100.045	837057.44	0.2800	P	2.7
6	☑	200.000		1743937.84	0.5998	A	1.3
7	☐	1.000					

y = 0.0028 * x + 3.3732E-004
R = 1.0000
DL = 0.01575
BEC = 0.1207

Weight: <None>
Min Conc: <None>

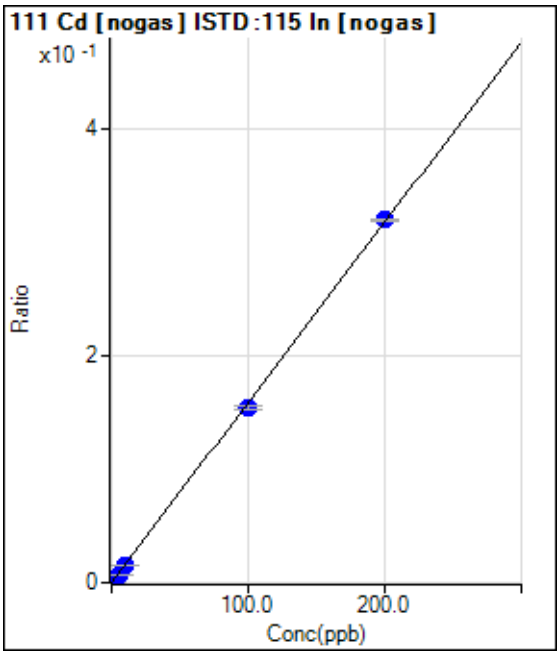


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1926.69	0.0006	P	73.0
2	☐	2.000	1.915	47457.48	0.0154	P	4.8
3	☐	5.000	4.846	117897.45	0.0380	P	3.2
4	☐	10.000	9.582	228855.93	0.0746	P	1.0
5	☐	100.000	97.984	2264516.84	0.7573	A	2.0
6	☐	200.000	201.033	4515828.79	1.5532	A	1.6
7	☐	1.000					

y = 0.0077 * x + 6.2195E-004
R = 0.9999
DL = 0.1764
BEC = 0.08054

Weight: <None>
Min Conc: <None>

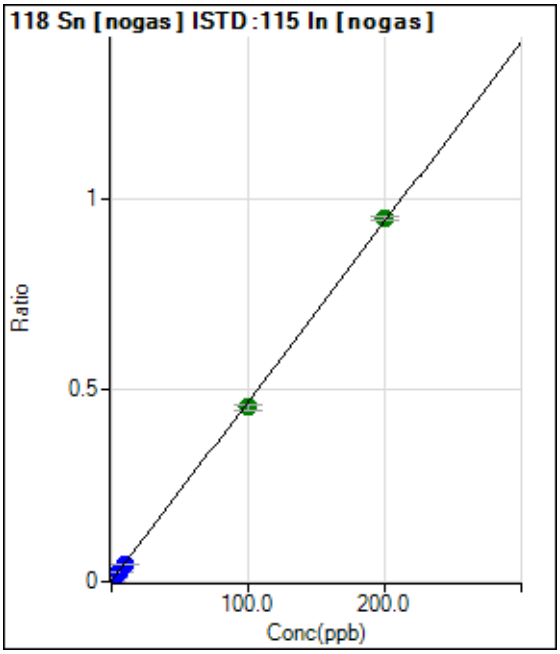
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	46.3
2	☐	2.000	1.896	9309.27	0.0030	P	5.6
3	☐	5.000	4.689	23102.14	0.0075	P	3.9
4	☐	10.000	9.508	46324.47	0.0151	P	1.1
5	☐	100.000	97.305	461753.13	0.1544	P	2.8
6	☐	200.000	201.381	929261.71	0.3196	P	0.6
7	☐	1.000					

y = 0.0016 * x + 1.3114E-005
R = 0.9999
DL = 0.01147
BEC = 0.008263

Weight: <None>
Min Conc: <None>

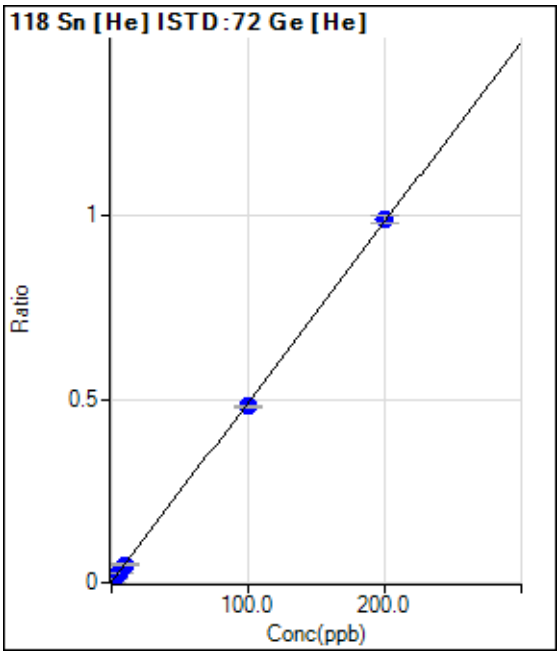


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3950.54	0.0013	P	10.3
2	☐	2.000	1.853	30770.89	0.0100	P	0.9
3	☐	5.000	4.701	72348.70	0.0233	P	3.2
4	☐	10.000	9.546	141309.02	0.0461	P	1.7
5	☐	100.000	96.746	1361529.04	0.4553	A	2.5
6	☐	200.000	201.658	2754918.71	0.9476	A	1.1
7	☐	1.000					

y = 0.0047 * x + 0.0013
R = 0.9998
DL = 0.08505
BEC = 0.2743

Weight: <None>
Min Conc: <None>

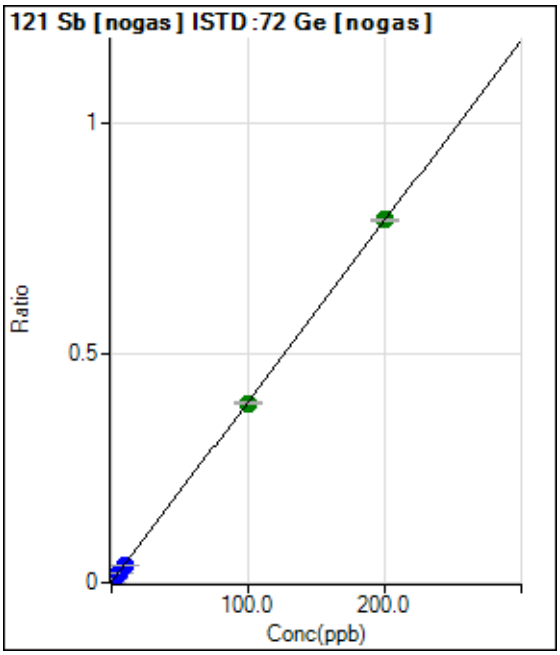
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1596.77	0.0015	P	2.3
2	☐	2.000	1.849	11497.28	0.0105	P	0.7
3	☐	5.000	5.025	28186.39	0.0261	P	1.7
4	☐	10.000	9.750	53107.37	0.0493	P	2.5
5	☐	100.000	97.565	513323.47	0.4798	P	0.5
6	☐	200.000	201.231	1027669.46	0.9881	P	2.1
7	☐	1.000					

y = 0.0049 * x + 0.0015
R = 0.9999
DL = 0.02098
BEC = 0.2976

Weight: <None>
Min Conc: <None>

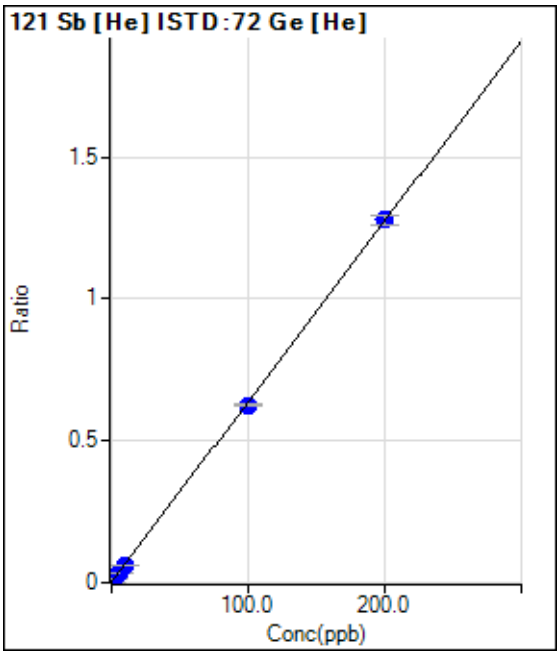


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7511.73	0.0015	P	2.5
2	☐	2.000	1.852	43223.86	0.0088	P	0.6
3	☐	5.000	4.749	98997.94	0.0202	P	1.1
4	☐	10.000	9.490	189471.31	0.0389	P	1.6
5	☐	100.000	99.020	1874565.91	0.3913	A	1.8
6	☐	200.000	200.523	3699650.99	0.7909	A	0.4
7	☐	1.000					

y = 0.0039 * x + 0.0015
R = 1.0000
DL = 0.02887
BEC = 0.3886

Weight: <None>
Min Conc: <None>

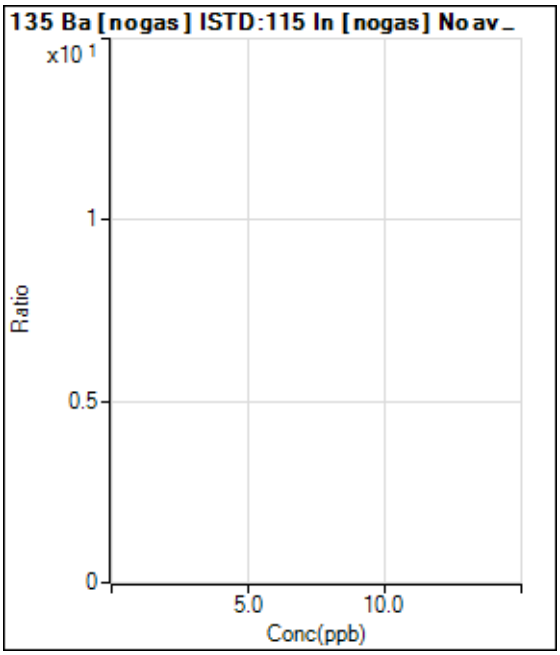
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2663.59	0.0024	P	3.3
2	☐	2.000	1.829	15346.88	0.0140	P	1.9
3	☐	5.000	4.954	36598.57	0.0339	P	3.0
4	☐	10.000	9.615	68416.60	0.0635	P	1.6
5	☐	100.000	98.290	670162.21	0.6264	P	0.2
6	☐	200.000	200.877	1328655.14	1.2777	P	2.7
7	☐	1.000					

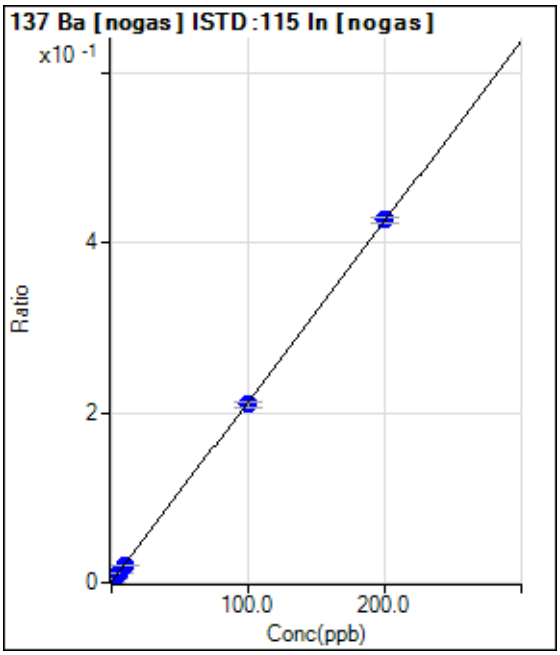
y = 0.0063 * x + 0.0024
R = 0.9999
DL = 0.03798
BEC = 0.3834

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					

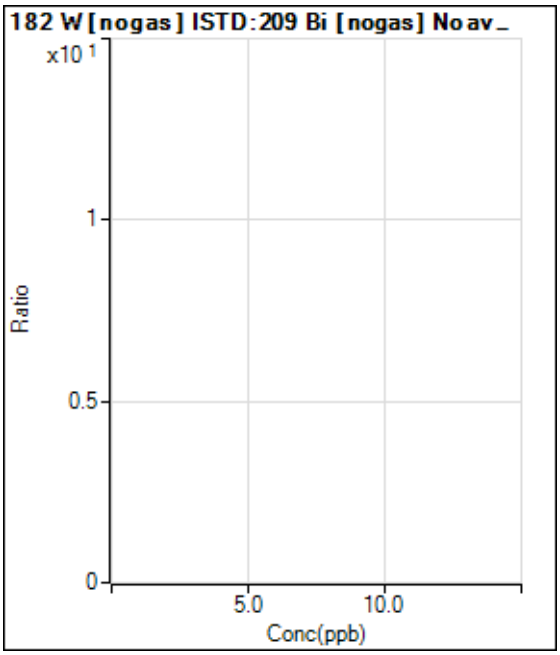
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1196.74	0.0004	P	7.0
2	☐	2.000	1.798	12961.82	0.0042	P	2.1
3	☐	5.000	4.824	32955.03	0.0106	P	1.9
4	☐	10.000	9.492	63001.47	0.0205	P	0.5
5	☐	100.000	98.384	625568.58	0.2093	P	4.2
6	☐	200.000	200.840	1240845.06	0.4268	P	1.9
7	☐	1.000					

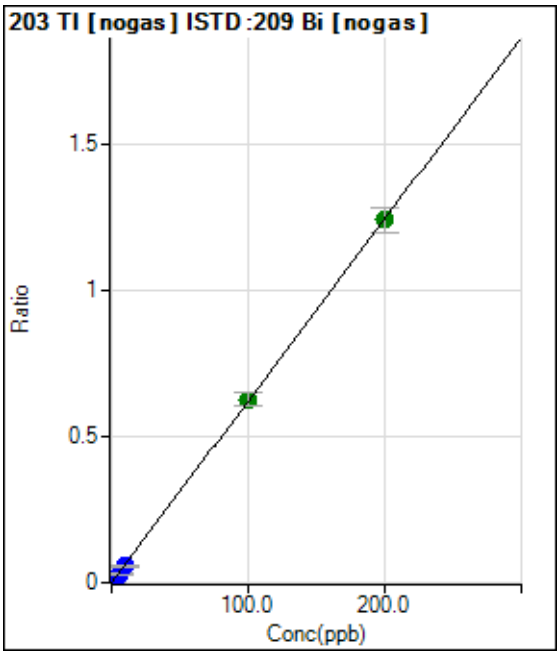
y = 0.0021 * x + 3.8952E-004
R = 1.0000
DL = 0.03849
BEC = 0.1835

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					

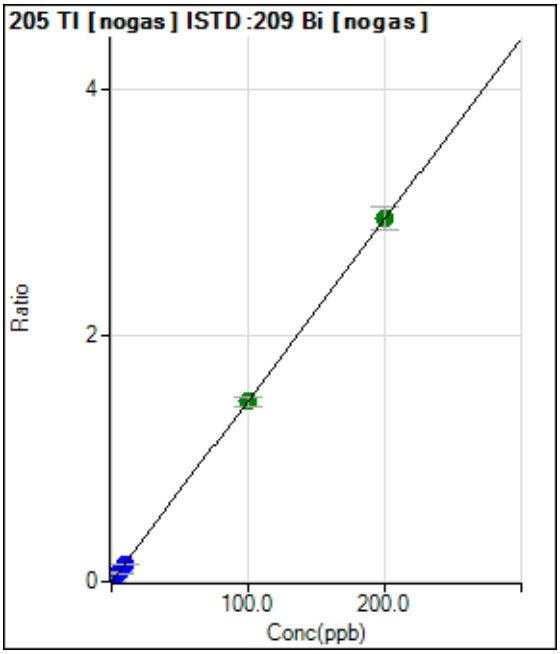
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0001	P	26.0
2	☐	2.000	1.874	36855.08	0.0118	P	3.2
3	☐	5.000	4.695	90492.02	0.0293	P	4.8
4	☐	10.000	9.162	178052.05	0.0570	P	5.4
5	☐	100.000	100.742	1879134.19	0.6258	A	7.2
6	☐	200.000	199.680	3646081.40	1.2403	A	6.6
7	☐	1.000					

y = 0.0062 * x + 1.2015E-004
R = 1.0000
DL = 0.01512
BEC = 0.01934

Weight: <None>
Min Conc: <None>

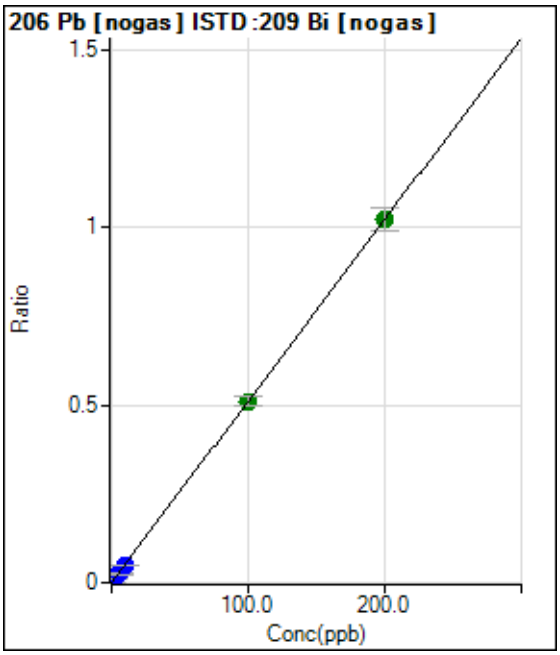


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	783.37	0.0003	P	20.6
2	☐	2.000	1.855	86311.23	0.0276	P	7.2
3	☐	5.000	4.785	218650.67	0.0707	P	5.2
4	☐	10.000	9.328	429916.19	0.1377	P	5.1
5	☐	100.000	99.329	4397090.35	1.4636	A	5.5
6	☐	200.000	200.376	8679909.04	2.9523	A	6.4
7	☐	1.000					

y = 0.0147 * x + 2.5318E-004
R = 1.0000
DL = 0.01061
BEC = 0.01719

Weight: <None>
Min Conc: <None>

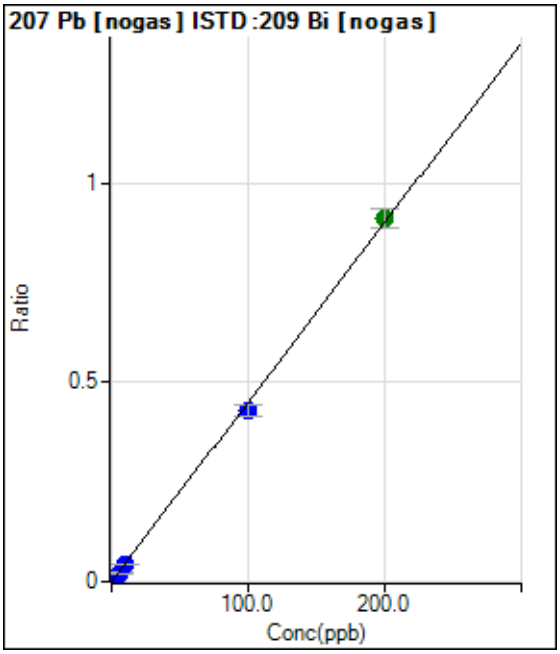
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1427.05	0.0005	P	35.0
2	☐	2.000	1.837	30842.99	0.0099	P	6.5
3	☐	5.000	4.737	76241.17	0.0247	P	5.1
4	☐	10.000	9.324	150172.74	0.0481	P	6.2
5	☐	100.000	100.097	1537519.67	0.5118	A	5.3
6	☐	200.000	199.993	3005178.18	1.0221	A	6.3
7	☐	1.000					

y = 0.0051 * x + 4.6805E-004
R = 1.0000
DL = 0.09624
BEC = 0.09163

Weight: <None>
Min Conc: <None>

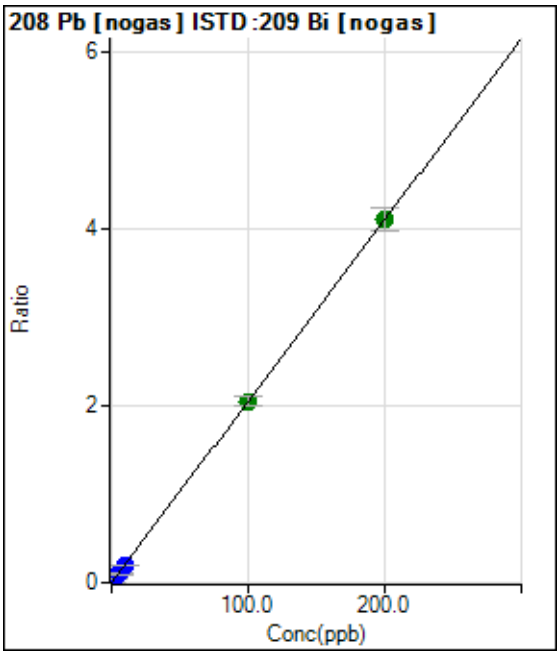


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	933.38	0.0003	P	19.5
2	☐	2.000	1.906	27777.39	0.0089	P	6.6
3	☐	5.000	4.711	66391.50	0.0215	P	5.7
4	☐	10.000	9.266	131057.01	0.0420	P	4.7
5	☐	100.000	95.753	1293805.42	0.4308	P	6.5
6	☐	200.000	202.168	2674335.90	0.9092	A	5.4
7	☐	1.000					

y = 0.0045 * x + 3.0461E-004
R = 0.9997
DL = 0.03973
BEC = 0.06775

Weight: <None>
Min Conc: <None>

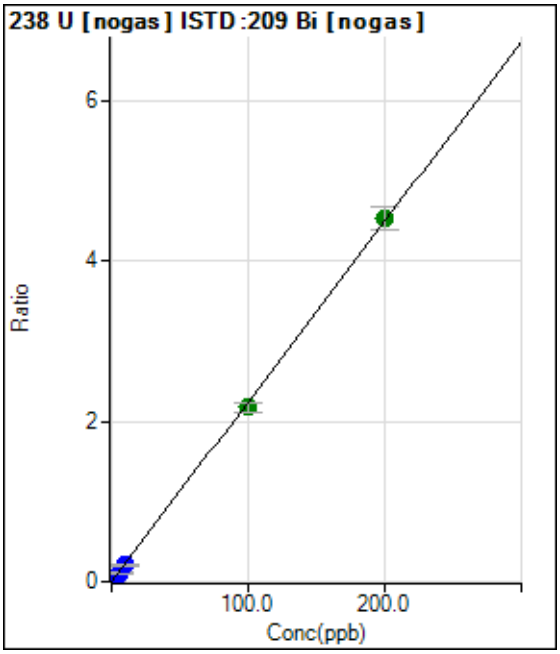
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4763.98	0.0016	P	18.9
2	☐	2.000	1.864	124242.49	0.0397	P	6.3
3	☐	5.000	4.725	303573.75	0.0982	P	5.2
4	☐	10.000	9.339	601607.01	0.1926	P	4.2
5	☐	100.000	99.919	6145529.52	2.0458	A	5.7
6	☐	200.000	200.082	12040318.15	4.0951	A	6.2
7	☐	1.000					

y = 0.0205 * x + 0.0016
R = 1.0000
DL = 0.04303
BEC = 0.07598

Weight: <None>
Min Conc: <None>

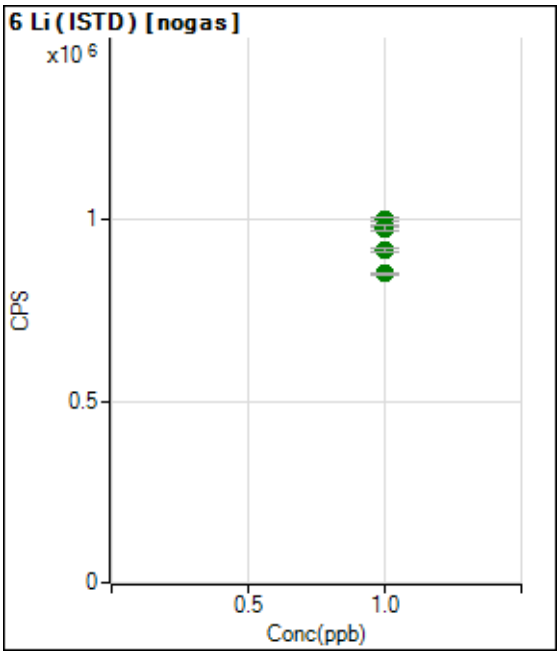


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	36.0
2	☐	2.000	1.822	128152.81	0.0409	P	6.7
3	☐	5.000	4.752	329901.67	0.1067	P	4.5
4	☐	10.000	9.146	641480.57	0.2054	P	4.4
5	☐	100.000	96.868	6535254.90	2.1751	A	4.9
6	☐	200.000	201.617	13308748.13	4.5271	A	6.4
7	☐	1.000					

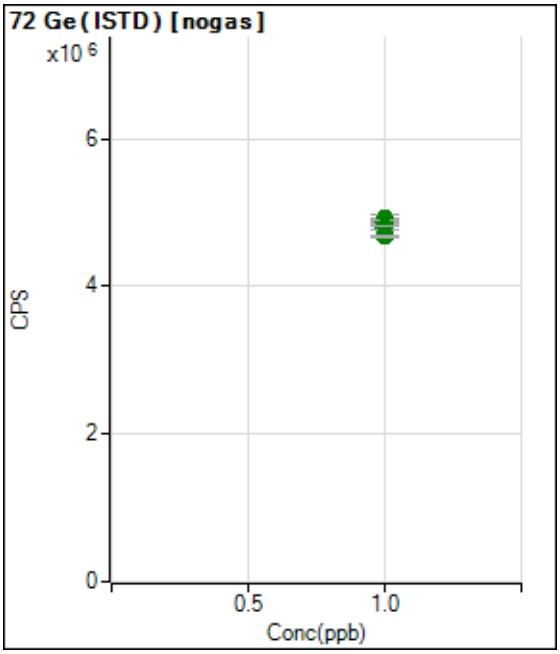
y = 0.0225 * x + 2.6084E-005
R = 0.9998
DL = 0.001254
BEC = 0.001162

Weight: <None>
Min Conc: <None>

Calibration for 021_ICV.d

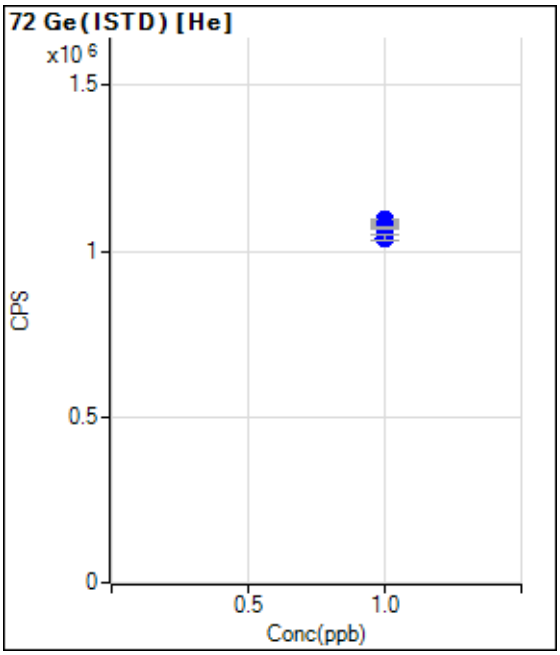


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		992919.97		A	2.1
2	☐	1.000		976188.54		A	1.0
3	☐	1.000		998615.37		A	1.0
4	☐	1.000		977873.67		A	1.4
5	☐	1.000		914945.55		A	1.3
6	☐	1.000		849627.02		A	0.8
7	☐	1.000					

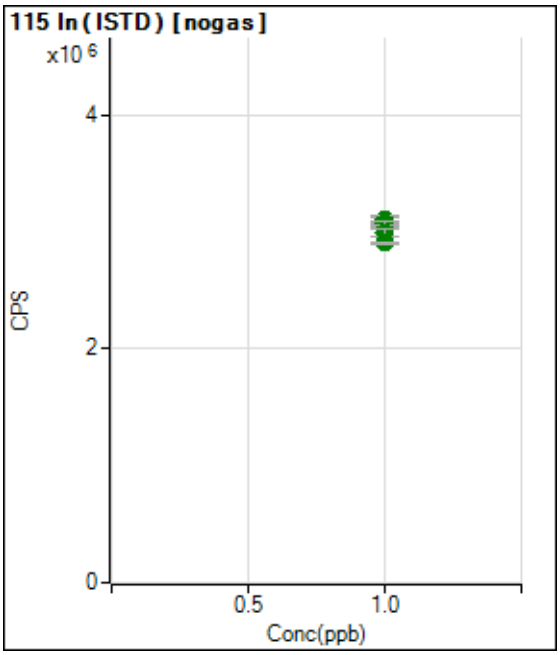


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4912784.72		A	2.3
2	☐	1.000		4899447.43		A	0.7
3	☐	1.000		4894903.99		A	1.3
4	☐	1.000		4872498.68		A	1.0
5	☐	1.000		4790189.72		A	1.2
6	☐	1.000		4677860.87		A	0.4
7	☐	1.000					

Calibration for 021_ICV.d

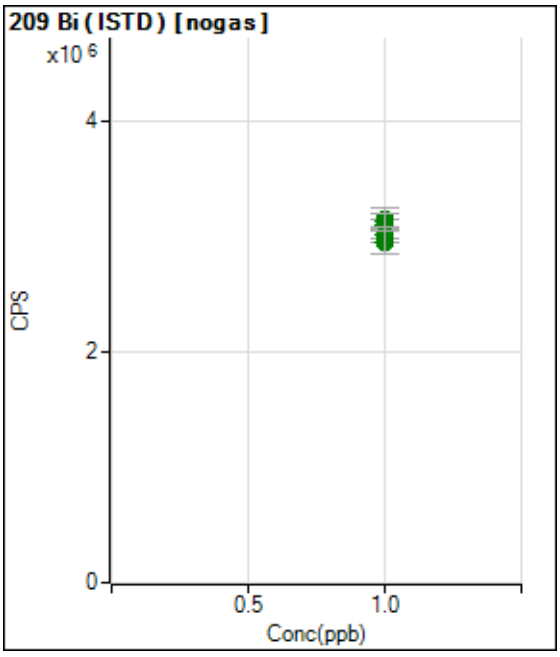


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1094371.60		P	0.6
2	☐	1.000		1092624.23		P	0.6
3	☐	1.000		1080190.53		P	0.6
4	☐	1.000		1077960.04		P	0.4
5	☐	1.000		1069856.36		P	0.8
6	☐	1.000		1040233.32		P	1.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3074864.54		A	2.6
2	☐	1.000		3082260.83		A	2.4
3	☐	1.000		3100268.32		A	2.1
4	☐	1.000		3066952.35		A	1.0
5	☐	1.000		2991017.82		A	2.2
6	☐	1.000		2907440.68		A	0.5
7	☐	1.000					

Calibration for 021_ICV.d



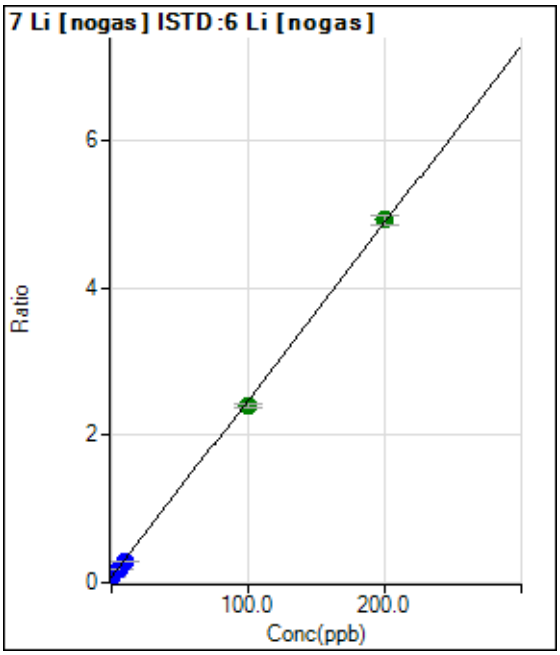
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3087509.54		A	6.7
2	☐	1.000		3138764.64		A	6.4
3	☐	1.000		3093921.31		A	3.3
4	☐	1.000		3126729.01		A	3.9
5	☐	1.000		3009257.77		A	4.7
6	☐	1.000		2948271.62		A	6.7
7	☐	1.000					

Calibration for 208_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 9:02:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	201CALB.d	CAL BLK	8/19/2020 8:45:16 PM
2	202CALS.d	2/10/200	8/19/2020 8:47:38 PM
3	203CALS.d	5/25/500	8/19/2020 8:50:01 PM
4	204CALS.d	10/50/1000	8/19/2020 8:52:26 PM
5	205CALS.d	100/500/10K	8/19/2020 8:54:47 PM
6	206CALS.d	200/1000/20K	8/19/2020 8:57:05 PM
7			

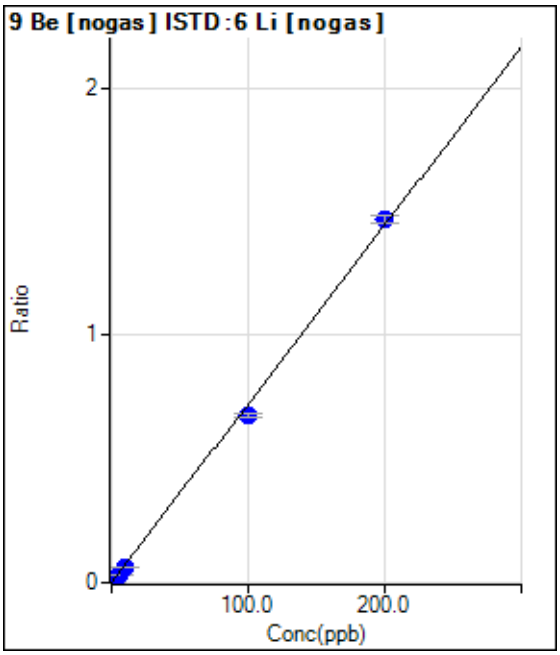
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60365.32	0.0759	P	0.5
2	☐	2.000	1.756	92295.04	0.1181	P	0.5
3	☐	5.000	4.438	142001.00	0.1825	P	0.8
4	☐	10.000	8.666	219180.84	0.2840	P	1.0
5	☐	100.000	96.690	1662808.93	2.3978	A	3.0
6	☐	200.000	201.738	3109311.73	4.9204	A	2.4
7	☐	1.000					

y = 0.0240 * x + 0.0759
R = 0.9998
DL = 0.04285
BEC = 3.161

Weight: <None>
Min Conc: <None>

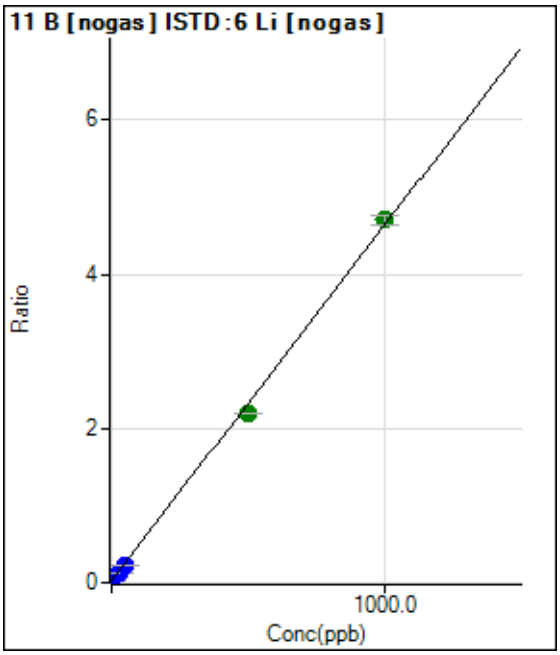


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	86.6
2	☐	2.000	1.691	9559.11	0.0122	P	1.4
3	☐	5.000	4.320	24275.29	0.0312	P	1.7
4	☐	10.000	8.418	46898.50	0.0608	P	1.8
5	☐	100.000	93.973	470363.57	0.6782	P	1.9
6	☐	200.000	203.113	926318.45	1.4658	P	2.0
7	☐	1.000					

y = 0.0072 * x + 2.9331E-005
R = 0.9994
DL = 0.01056
BEC = 0.004065

Weight: <None>
Min Conc: <None>

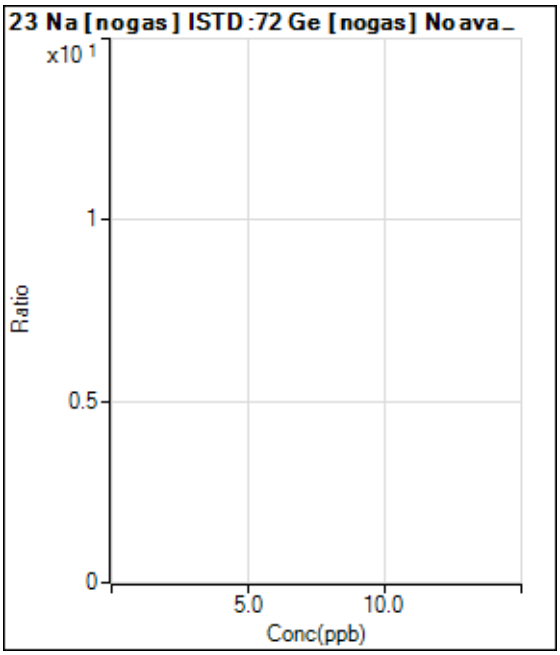
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18899.33	0.0238	P	3.1
2	☐	10.000	10.041	54772.48	0.0701	P	1.1
3	☐	25.000	21.355	95126.23	0.1223	P	0.8
4	☐	50.000	42.210	168575.96	0.2184	P	2.1
5	☐	500.000	470.407	1521509.35	2.1933	A	0.8
6	☐	1000.000	1015.277	2974211.93	4.7062	A	2.4
7	☐	5.000					

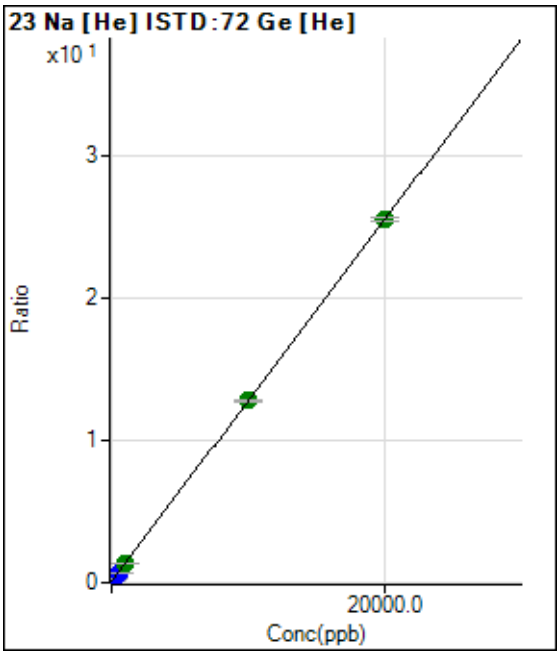
y = 0.0046 * x + 0.0238
R = 0.9994
DL = 0.4833
BEC = 5.153

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

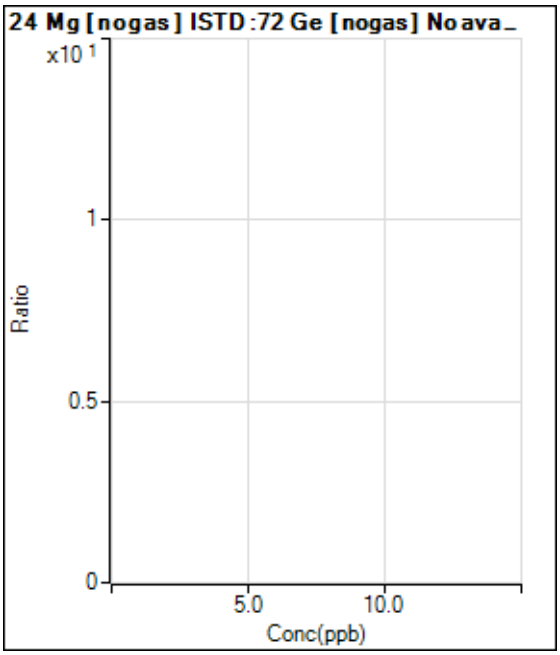
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79267.46	0.0825	P	2.3
2	☐	200.000	195.054	317162.17	0.3299	P	1.1
3	☐	500.000	503.452	682357.31	0.7210	P	0.3
4	☐	1000.000	988.191	1259232.25	1.3358	A	1.6
5	☐	10000.00	10001.96	11761401.91	12.7671	A	1.4
6	☐	20000.00	19999.57	22993306.33	25.4461	A	1.1
7	☐	100.000					

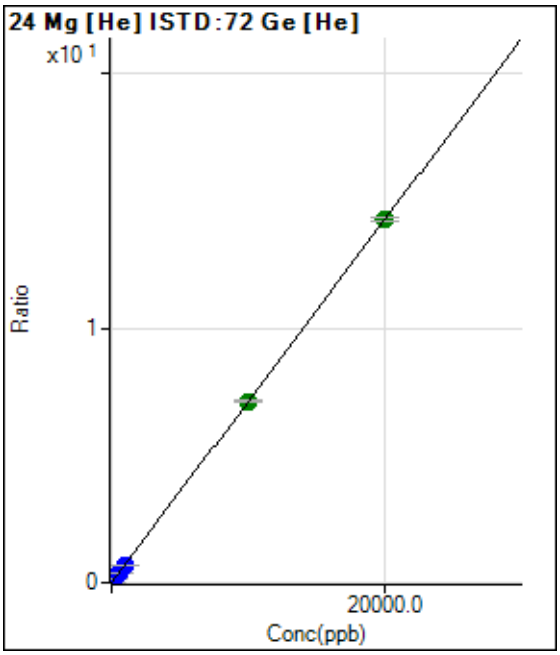
y = 0.0013 * x + 0.0825
R = 1.0000
DL = 4.413
BEC = 65.07

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

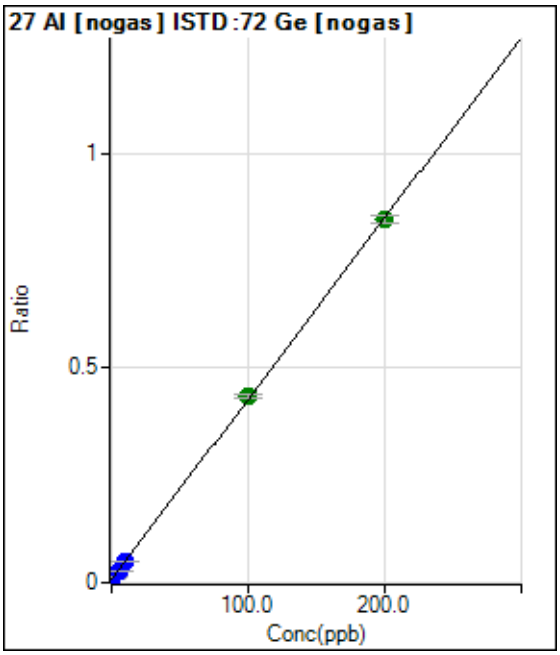
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.68	0.0006	P	13.0
2	☐	200.000	198.240	136169.31	0.1416	P	0.5
3	☐	500.000	507.895	342562.09	0.3620	P	1.1
4	☐	1000.000	991.222	665439.70	0.7059	P	1.4
5	☐	10000.00	9979.313	6542267.20	7.1016	A	1.1
6	☐	20000.00	20010.60	12868116.48	14.2397	A	1.2
7	☐	100.000					

y = 7.1158E-004 * x + 5.6921E-004
R = 1.0000
DL = 0.3111
BEC = 0.7999

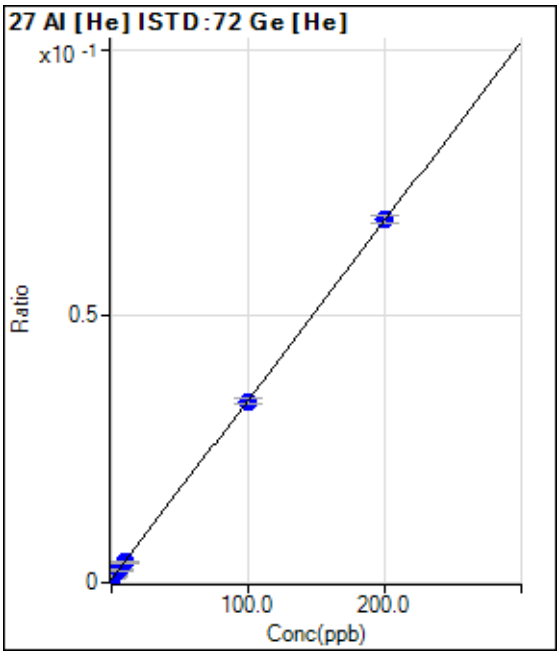
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33257.34	0.0079	P	3.1
2	☐	2.000	1.853	66209.04	0.0157	P	1.1
3	☐	5.000	5.019	122046.19	0.0290	P	0.4
4	☐	10.000	10.141	209964.45	0.0506	P	2.3
5	☐	100.000	101.567	1788916.64	0.4351	A	1.9
6	☐	200.000	199.210	3422632.35	0.8457	A	2.0
7	☐	1.000					

y = 0.0042 * x + 0.0079
R = 1.0000
DL = 0.1734
BEC = 1.883

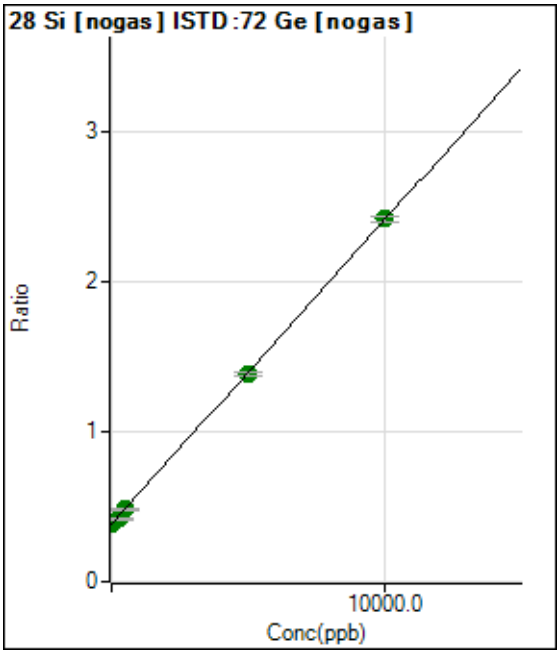
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	626.69	0.0007	P	5.3
2	☐	2.000	2.001	1273.40	0.0013	P	21.8
3	☐	5.000	5.341	2316.86	0.0024	P	13.8
4	☐	10.000	9.333	3573.75	0.0038	P	6.6
5	☐	100.000	99.084	31289.37	0.0340	P	2.9
6	☐	200.000	200.483	61486.25	0.0681	P	2.0
7	☐	1.000					

y = 3.3618E-004 * x + 6.5247E-004
R = 1.0000
DL = 0.3065
BEC = 1.941

Weight: <None>
Min Conc: <None>

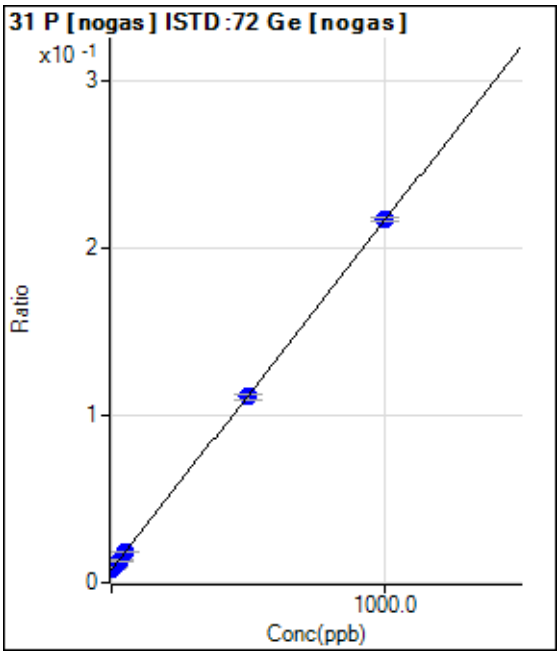


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1614185.55	0.3843	A	2.1
2	☐	100.000	69.998	1678701.02	0.3985	A	1.3
3	☐	250.000	180.144	1768751.85	0.4208	A	2.4
4	☐	500.000	475.517	1995418.35	0.4805	A	1.2
5	☐	5000.000	4939.612	5691130.54	1.3841	A	2.1
6	☐	10000.00	10033.46	9774852.56	2.4152	A	1.5
7	☐	50.000					

y = 2.0241E-004 * x + 0.3843
R = 1.0000
DL = 117.8
BEC = 1899

Weight: <None>
Min Conc: <None>

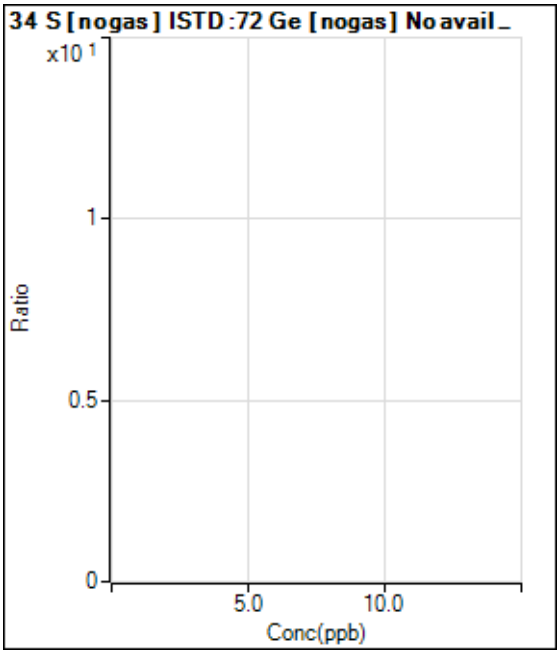
Calibration for 208_ICV.d



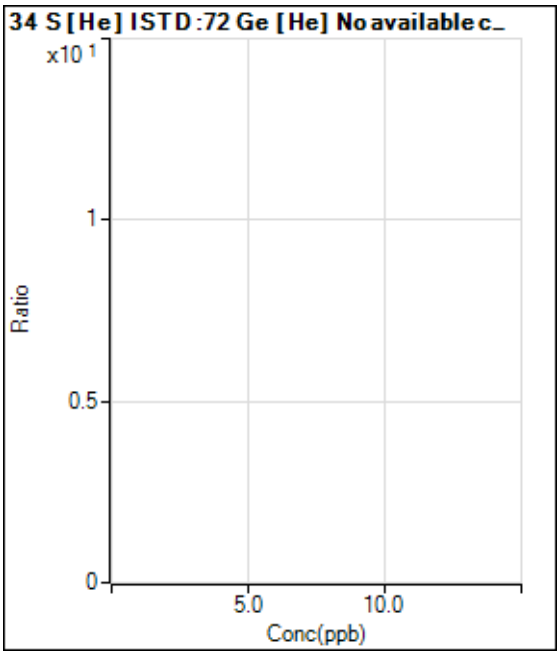
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32611.75	0.0078	P	3.8
2	☐	10.000	7.495	39311.11	0.0093	P	1.7
3	☐	25.000	25.379	54903.45	0.0131	P	4.0
4	☐	50.000	51.074	76514.22	0.0184	P	0.8
5	☐	500.000	494.671	456456.59	0.1110	P	3.2
6	☐	1000.000	1002.626	878588.19	0.2171	P	1.1
7	☐	5.000					

y = 2.0875E-004 * x + 0.0078
R = 1.0000
DL = 4.217
BEC = 37.2

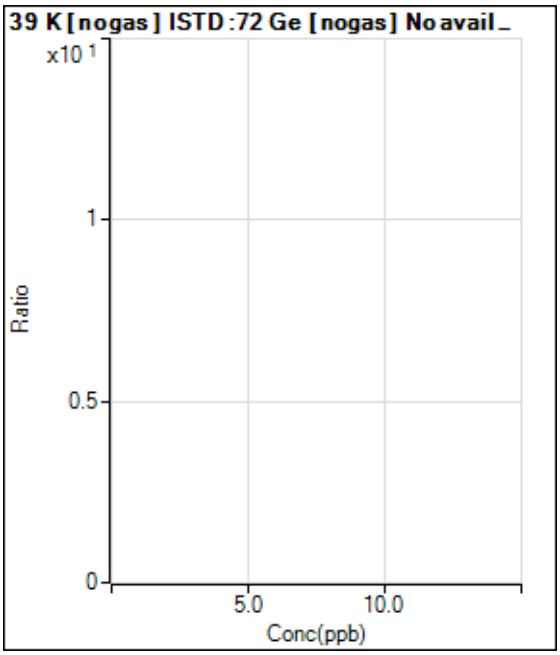
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

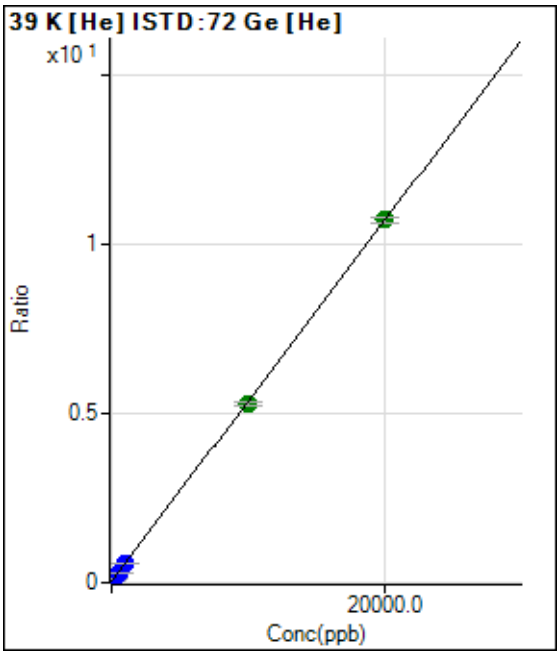


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

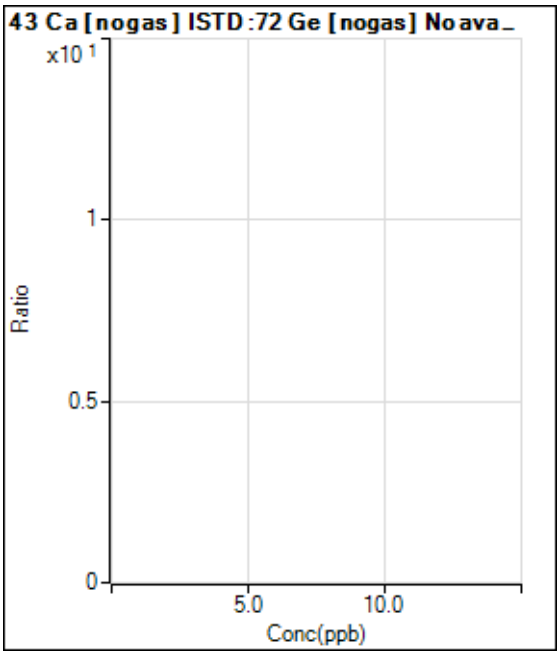
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28084.77	0.0292	P	0.7
2	☐	200.000	194.383	127714.31	0.1328	P	1.2
3	☐	500.000	499.990	279859.24	0.2957	P	1.8
4	☐	1000.000	970.245	515057.71	0.5464	P	1.0
5	☐	10000.00	9882.228	4879519.72	5.2964	A	2.2
6	☐	20000.00	20060.43	9687692.77	10.7212	A	1.3
7	☐	100.000					

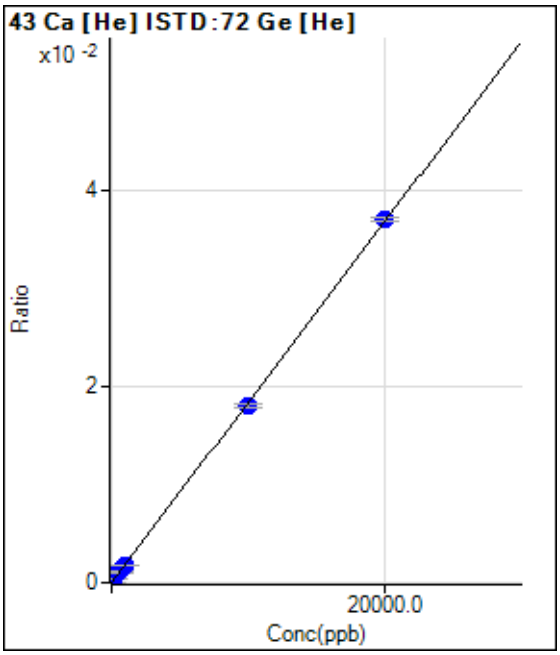
y = 5.3299E-004 * x + 0.0292
R = 1.0000
DL = 1.087
BEC = 54.86

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

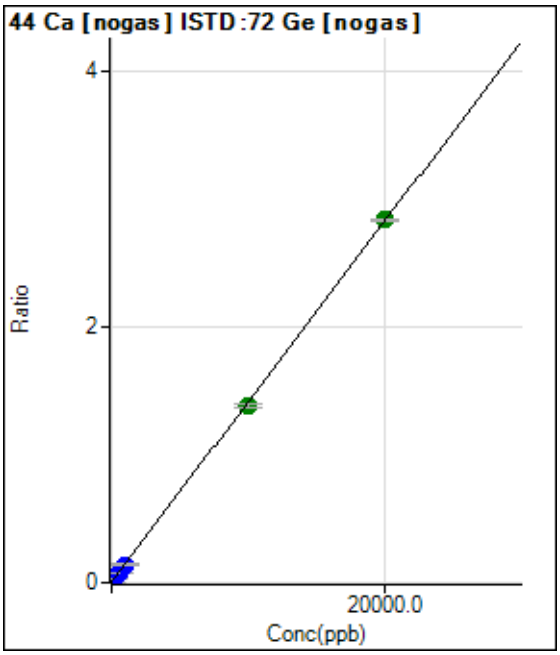
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	99.0
2	☐	200.000	198.080	373.35	0.0004	P	30.3
3	☐	500.000	587.747	1046.72	0.0011	P	13.4
4	☐	1000.000	947.450	1666.78	0.0018	P	8.3
5	☐	10000.00	9779.354	16600.95	0.0180	P	2.0
6	☐	20000.00	20110.77	33460.27	0.0370	P	1.2
7	☐	100.000					

y = 1.8401E-006 * x + 2.4305E-005
R = 0.9999
DL = 39.25
BEC = 13.21

Weight: <None>
Min Conc: <None>

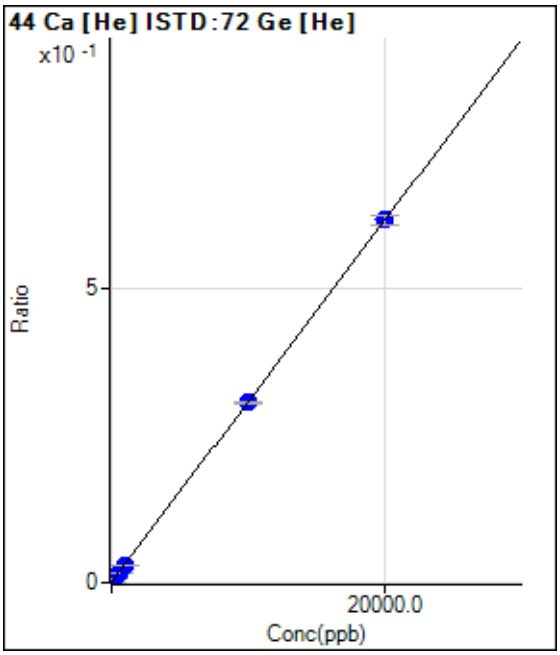


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21295.75	0.0051	P	4.0
2	☐	200.000	190.943	134787.61	0.0320	P	2.5
3	☐	500.000	488.686	311049.43	0.0740	P	1.7
4	☐	1000.000	973.939	591315.37	0.1424	P	2.9
5	☐	10000.00	9805.477	5707082.00	1.3879	A	2.1
6	☐	20000.00	20098.93	11494085.25	2.8395	A	0.4
7	☐	100.000					

y = 1.4102E-004 * x + 0.0051
R = 0.9999
DL = 4.292
BEC = 35.95

Weight: <None>
Min Conc: <None>

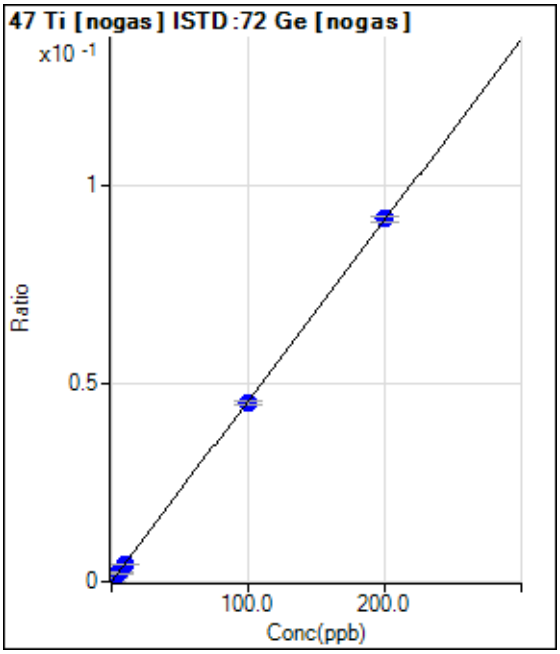
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0005	P	10.3
2	☐	200.000	191.362	6124.47	0.0064	P	5.7
3	☐	500.000	506.917	15196.43	0.0161	P	1.0
4	☐	1000.000	955.720	28124.86	0.0298	P	2.5
5	☐	10000.00	9928.159	281233.43	0.3053	P	0.6
6	☐	20000.00	20038.04	556193.89	0.6156	P	2.8
7	☐	100.000					

y = 3.0698E-005 * x + 4.9625E-004
R = 1.0000
DL = 4.992
BEC = 16.17

Weight: <None>
Min Conc: <None>

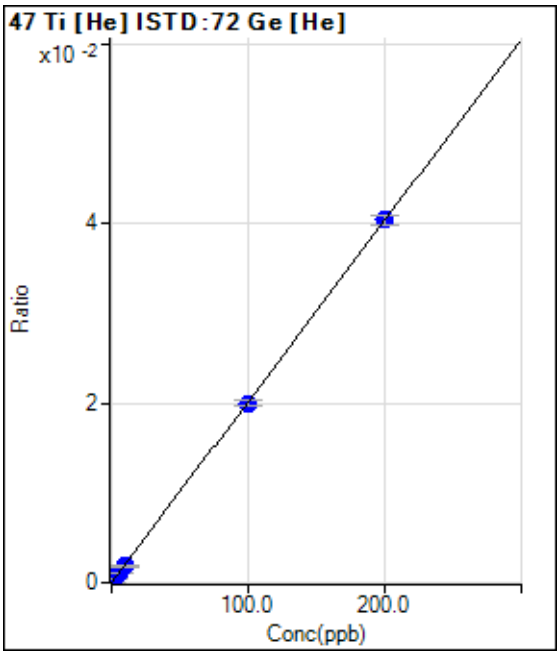


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0000	P	59.6
2	☐	2.000	1.973	3930.48	0.0009	P	1.4
3	☐	5.000	4.774	9292.47	0.0022	P	2.8
4	☐	10.000	9.822	18744.86	0.0045	P	1.6
5	☐	100.000	98.555	185021.02	0.0450	P	1.8
6	☐	200.000	200.737	370818.12	0.0916	P	1.3
7	☐	1.000					

y = 4.5623E-004 * x + 3.2555E-005
R = 1.0000
DL = 0.1277
BEC = 0.07136

Weight: <None>
Min Conc: <None>

Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐	2.000	1.790	353.35	0.0004	P	18.0
3	☐	5.000	5.573	1070.05	0.0011	P	8.4
4	☐	10.000	9.469	1806.79	0.0019	P	10.0
5	☐	100.000	99.230	18432.70	0.0200	P	2.4
6	☐	200.000	200.399	36506.12	0.0404	P	2.4
7	☐	1.000					

y = 2.0158E-004 * x + 6.9468E-006

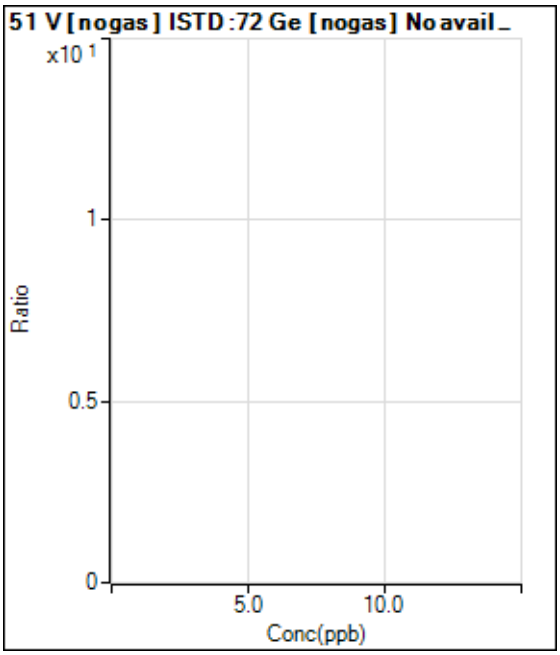
R = 1.0000

DL = 0.1791

BEC = 0.03446

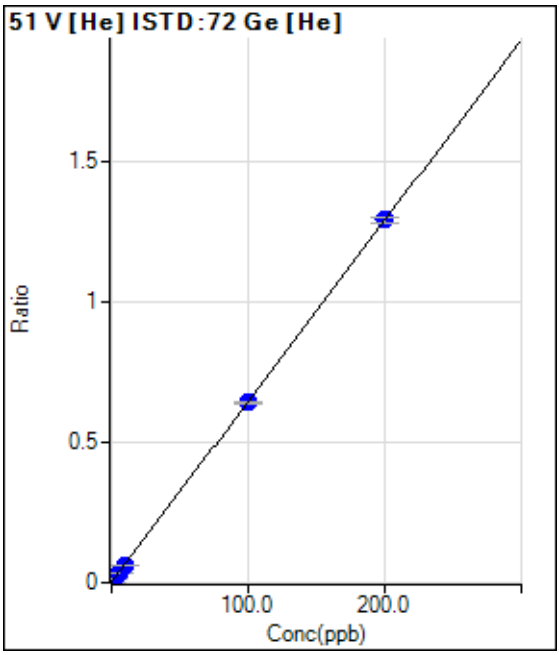
Weight: <None>

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					

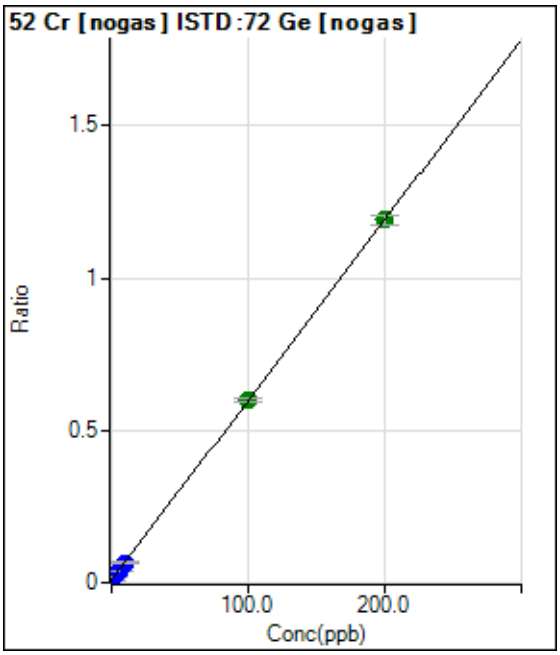
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2352.38	0.0024	P	7.2
2	☐	2.000	1.854	13838.52	0.0144	P	0.1
3	☐	5.000	4.937	32419.23	0.0343	P	0.7
4	☐	10.000	9.595	60581.28	0.0643	P	0.3
5	☐	100.000	99.153	590727.82	0.6412	P	0.9
6	☐	200.000	200.447	1169079.92	1.2938	P	1.6
7	☐	1.000					

y = 0.0064 * x + 0.0024
R = 1.0000
DL = 0.08243
BEC = 0.3801

Weight: <None>
Min Conc: <None>

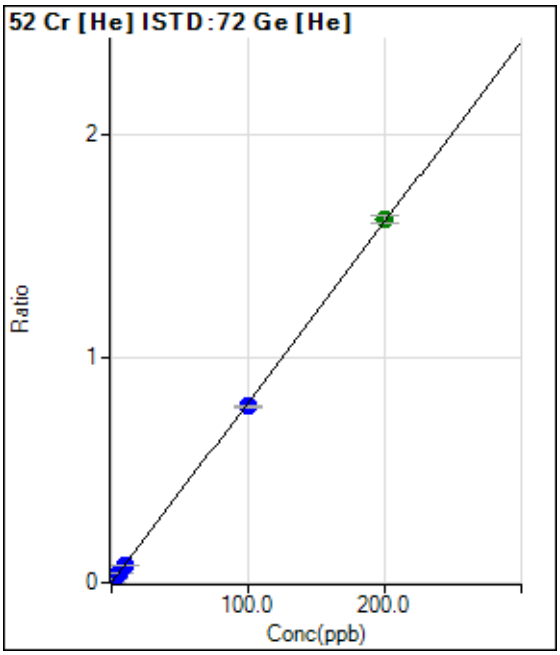


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31373.54	0.0075	P	1.9
2	☐	2.000	1.901	78876.87	0.0187	P	1.8
3	☐	5.000	4.942	154399.10	0.0367	P	1.0
4	☐	10.000	9.837	272777.56	0.0657	P	1.9
5	☐	100.000	100.038	2465843.35	0.5996	A	1.2
6	☐	200.000	199.992	4820985.55	1.1913	A	2.4
7	☐	1.000					

y = 0.0059 * x + 0.0075
R = 1.0000
DL = 0.07153
BEC = 1.262

Weight: <None>
Min Conc: <None>

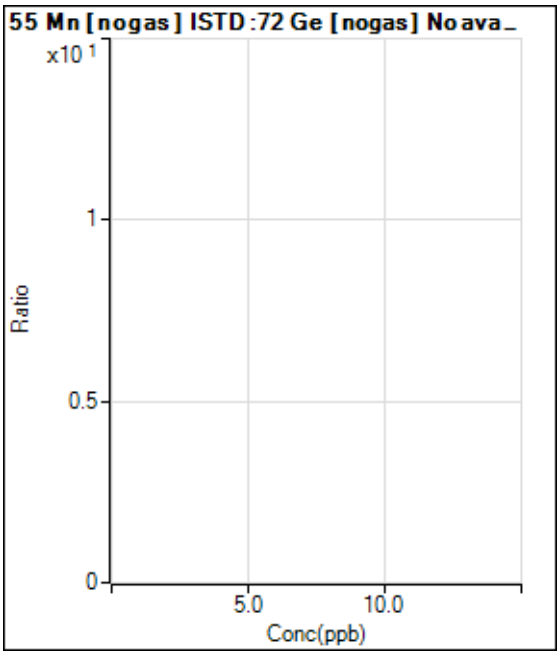
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1196.72	0.0012	P	5.0
2	☐	2.000	1.870	15650.07	0.0163	P	2.4
3	☐	5.000	4.965	38947.75	0.0412	P	2.5
4	☐	10.000	9.562	73625.70	0.0781	P	1.3
5	☐	100.000	97.864	725808.48	0.7879	P	1.2
6	☐	200.000	201.092	1461564.72	1.6176	A	2.1
7	☐	1.000					

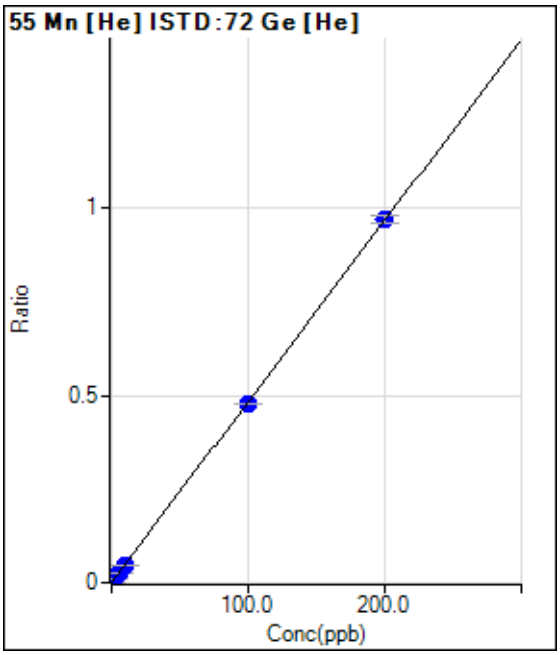
y = 0.0080 * x + 0.0012
R = 0.9999
DL = 0.02341
BEC = 0.155

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					

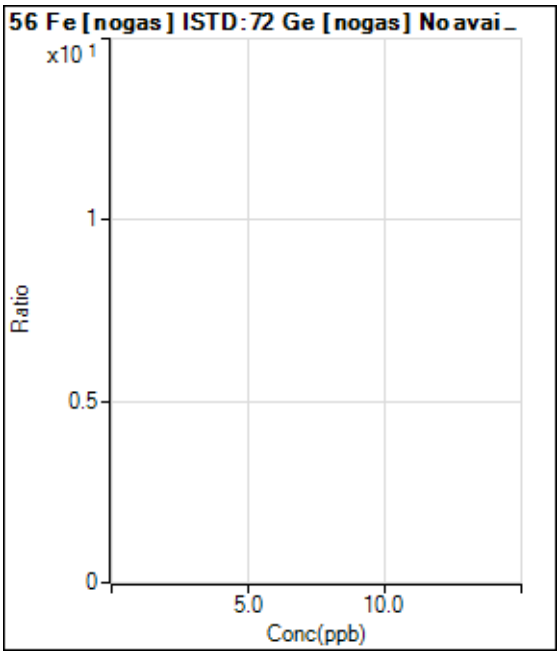
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0004	P	7.6
2	☐	2.000	1.896	9212.46	0.0096	P	5.3
3	☐	5.000	5.031	23401.77	0.0247	P	1.7
4	☐	10.000	9.834	45188.86	0.0479	P	1.5
5	☐	100.000	99.057	441278.22	0.4790	P	0.2
6	☐	200.000	200.480	875479.60	0.9690	P	2.3
7	☐	1.000					

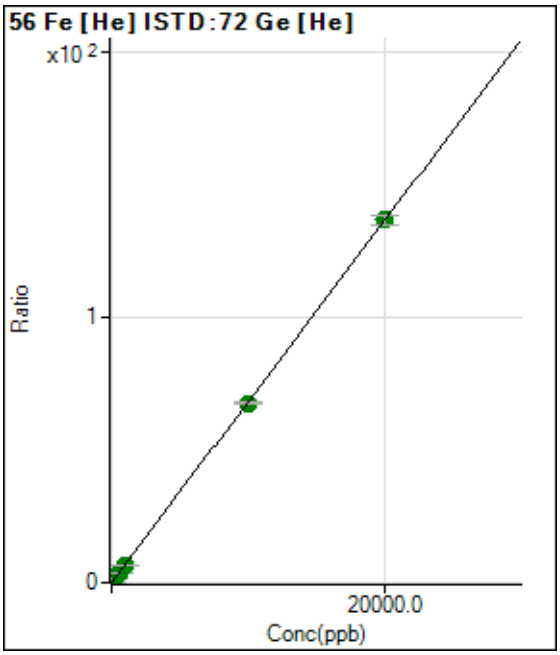
y = 0.0048 * x + 4.2340E-004
R = 1.0000
DL = 0.01986
BEC = 0.08764

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

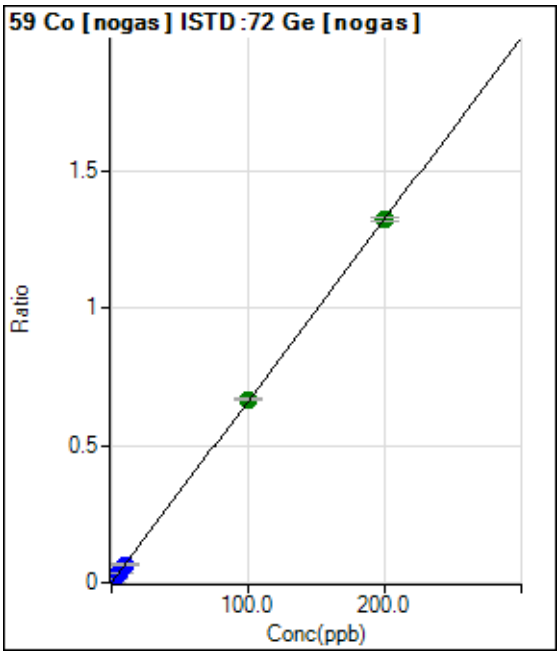
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6321.18	0.0066	P	2.4
2	☐	200.000	203.911	1341618.99	1.3953	A	2.5
3	☐	500.000	512.817	3311172.14	3.4992	A	3.8
4	☐	1000.000	970.606	6237687.82	6.6170	A	1.1
5	☐	10000.00	9917.017	62231570.74	67.5477	A	1.2
6	☐	20000.00	20042.60	123335041.4	136.509	A	2.5
7	☐	100.000					

y = 0.0068 * x + 0.0066
R = 1.0000
DL = 0.06974
BEC = 0.9663

Weight: <None>
Min Conc: <None>

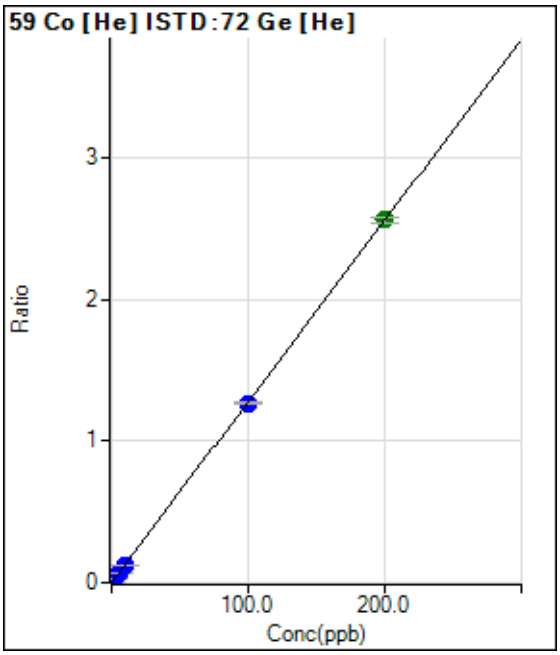


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0001	P	3.5
2	☐	2.000	1.983	55784.54	0.0132	P	2.5
3	☐	5.000	5.066	141567.65	0.0337	P	1.0
4	☐	10.000	9.990	275311.23	0.0663	P	1.8
5	☐	100.000	100.683	2744357.15	0.6674	A	1.3
6	☐	200.000	199.657	5355990.96	1.3233	A	1.0
7	☐	1.000					

y = 0.0066 * x + 9.6804E-005
R = 1.0000
DL = 0.001543
BEC = 0.01461

Weight: <None>
Min Conc: <None>

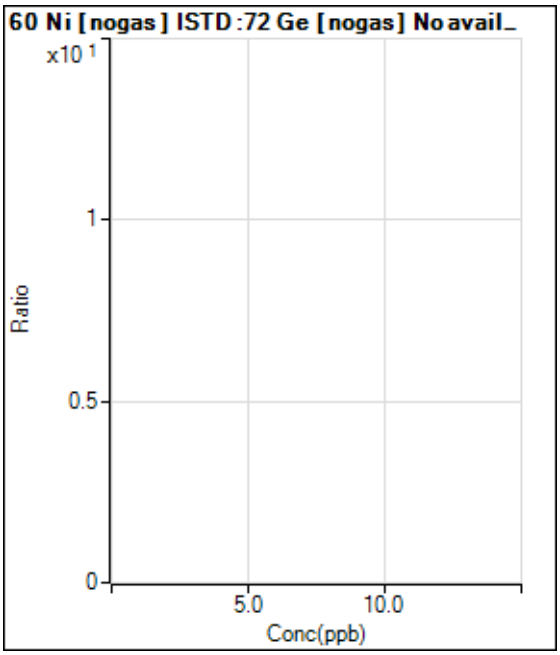
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0001	P	0.1
2	☐	2.000	1.975	24413.11	0.0254	P	2.4
3	☐	5.000	5.046	61238.41	0.0647	P	1.1
4	☐	10.000	9.949	120165.70	0.1275	P	1.8
5	☐	100.000	99.181	1169793.37	1.2697	P	0.6
6	☐	200.000	200.411	2318142.52	2.5656	A	1.8
7	☐	1.000					

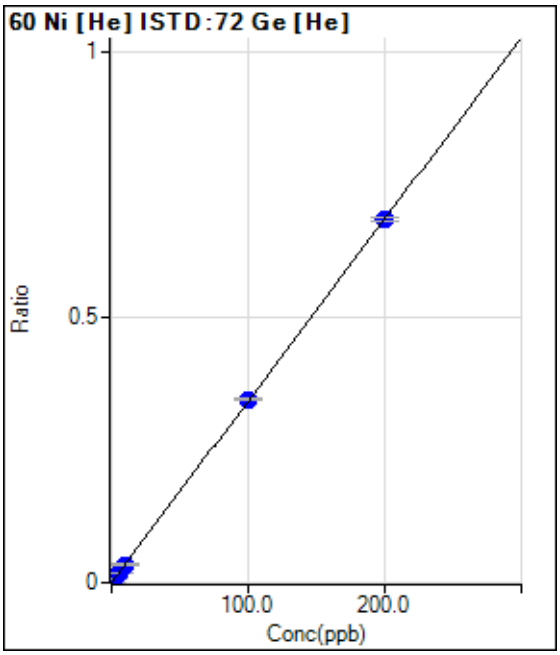
y = 0.0128 * x + 1.1452E-004
R = 1.0000
DL = 3.807E-05
BEC = 0.008946

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					

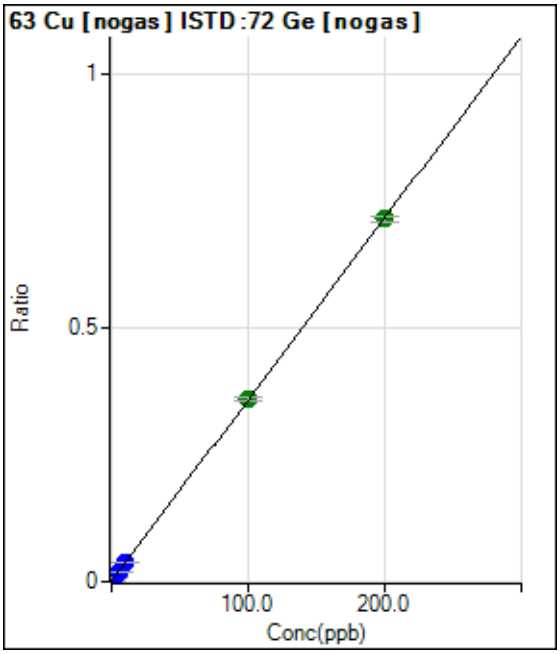
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.67	0.0002	P	29.2
2	☐	2.000	1.968	6698.01	0.0070	P	1.3
3	☐	5.000	4.930	16197.30	0.0171	P	4.2
4	☐	10.000	9.918	32238.59	0.0342	P	2.0
5	☐	100.000	100.611	317711.35	0.3449	P	1.1
6	☐	200.000	199.701	618351.47	0.6843	P	1.2
7	☐	1.000					

y = 0.0034 * x + 2.2552E-004
R = 1.0000
DL = 0.05758
BEC = 0.06583

Weight: <None>
Min Conc: <None>

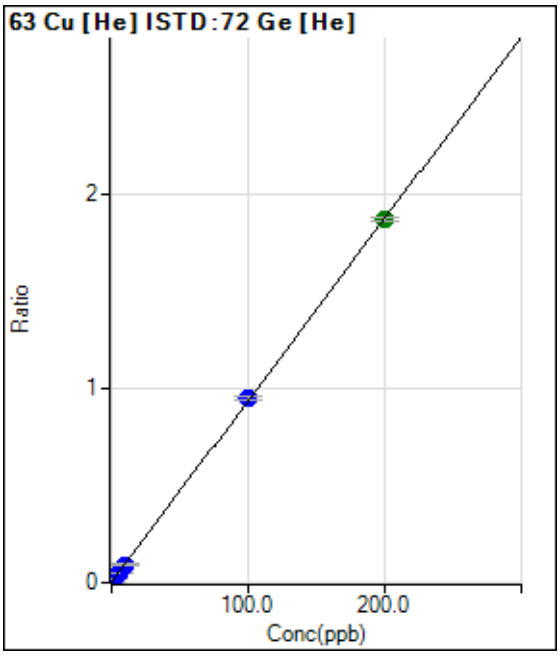


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2733.59	0.0007	P	5.8
2	☐	2.000	2.020	33160.17	0.0079	P	4.0
3	☐	5.000	5.190	80726.90	0.0192	P	3.2
4	☐	10.000	10.141	153265.92	0.0369	P	2.1
5	☐	100.000	100.690	1482898.78	0.3606	A	1.8
6	☐	200.000	199.643	2891599.75	0.7144	A	1.5
7	☐	1.000					

y = 0.0036 * x + 6.5092E-004
R = 1.0000
DL = 0.0318
BEC = 0.1821

Weight: <None>
Min Conc: <None>

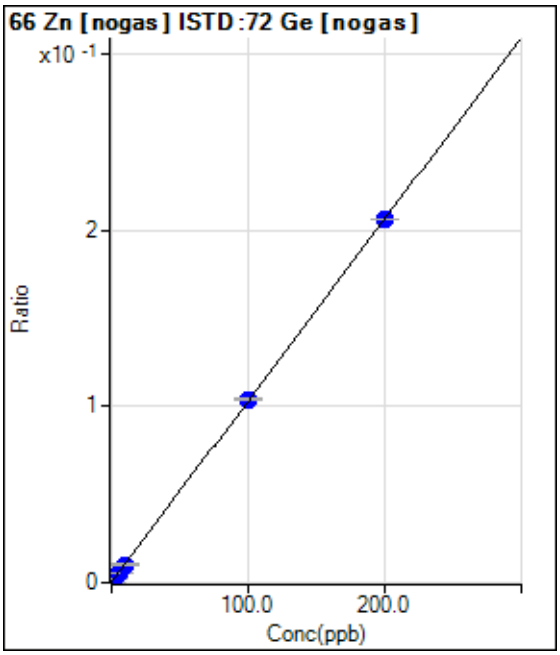
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1390.07	0.0014	P	3.3
2	☐	2.000	1.974	19123.55	0.0199	P	1.9
3	☐	5.000	5.131	46739.78	0.0494	P	0.5
4	☐	10.000	9.879	88367.96	0.0937	P	1.2
5	☐	100.000	101.173	872115.25	0.9467	P	2.1
6	☐	200.000	199.417	1684866.38	1.8646	A	1.1
7	☐	1.000					

y = 0.0093 * x + 0.0014
R = 1.0000
DL = 0.0155
BEC = 0.1549

Weight: <None>
Min Conc: <None>

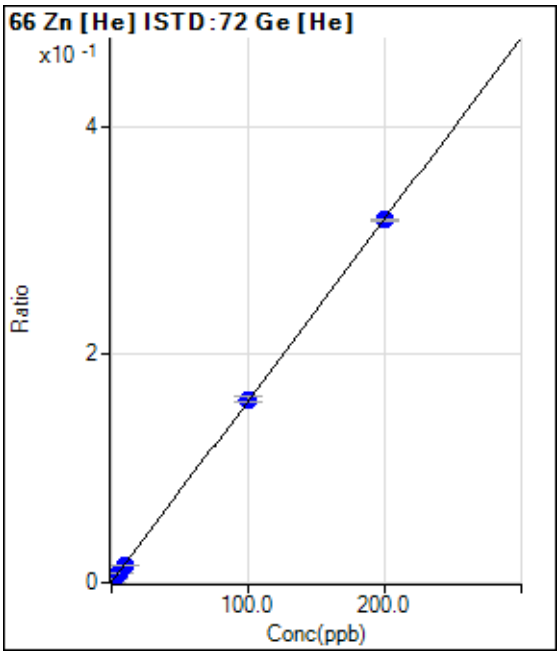


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.06	0.0003	P	13.0
2	☐	2.000	1.917	9485.91	0.0023	P	5.4
3	☐	5.000	5.001	22821.26	0.0054	P	1.0
4	☐	10.000	9.785	42983.83	0.0104	P	2.4
5	☐	100.000	100.635	427225.03	0.1039	P	1.4
6	☐	200.000	199.694	833388.76	0.2059	P	0.1
7	☐	1.000					

y = 0.0010 * x + 2.7836E-004
R = 1.0000
DL = 0.1053
BEC = 0.2704

Weight: <None>
Min Conc: <None>

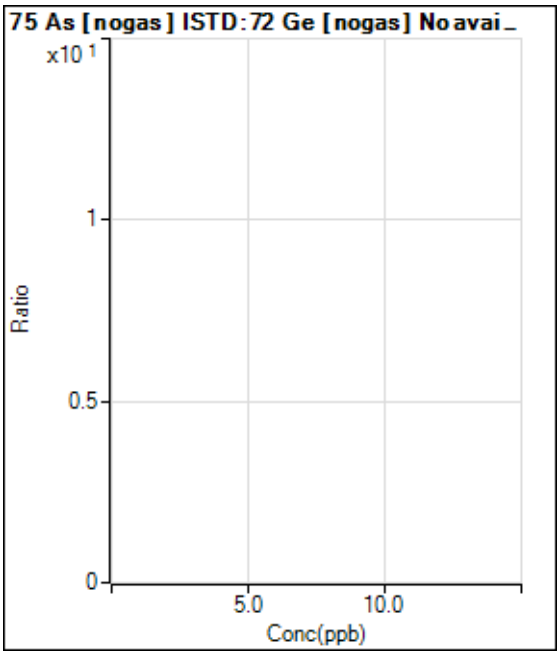
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	12.9
2	☐	2.000	1.987	3353.71	0.0035	P	3.3
3	☐	5.000	4.888	7671.74	0.0081	P	3.7
4	☐	10.000	9.587	14689.38	0.0156	P	0.6
5	☐	100.000	100.835	148119.12	0.1608	P	2.7
6	☐	200.000	199.606	287358.00	0.3180	P	0.5
7	☐	1.000					

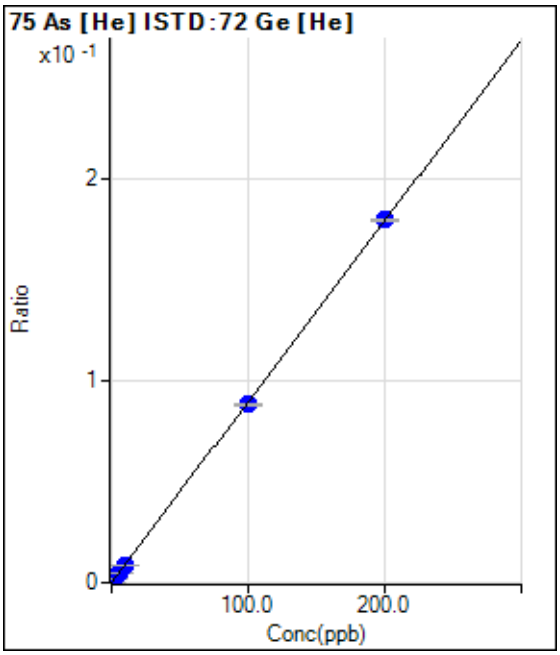
y = 0.0016 * x + 3.2622E-004
R = 1.0000
DL = 0.0793
BEC = 0.205

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					

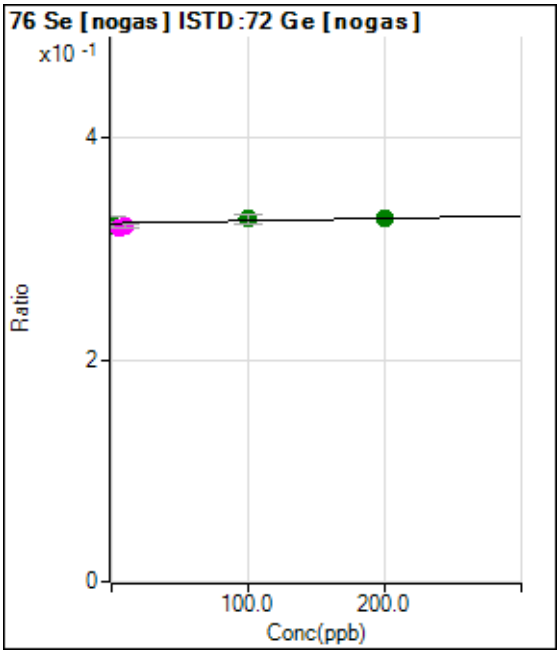
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	22.8
2	☐	2.000	1.898	1698.97	0.0018	P	1.9
3	☐	5.000	4.981	4287.19	0.0045	P	2.1
4	☐	10.000	9.518	8102.95	0.0086	P	3.0
5	☐	100.000	98.634	81490.72	0.0885	P	1.4
6	☐	200.000	200.708	162610.54	0.1799	P	0.5
7	☐	1.000					

y = 8.9616E-004 * x + 6.5922E-005
R = 1.0000
DL = 0.05029
BEC = 0.07356

Weight: <None>
Min Conc: <None>

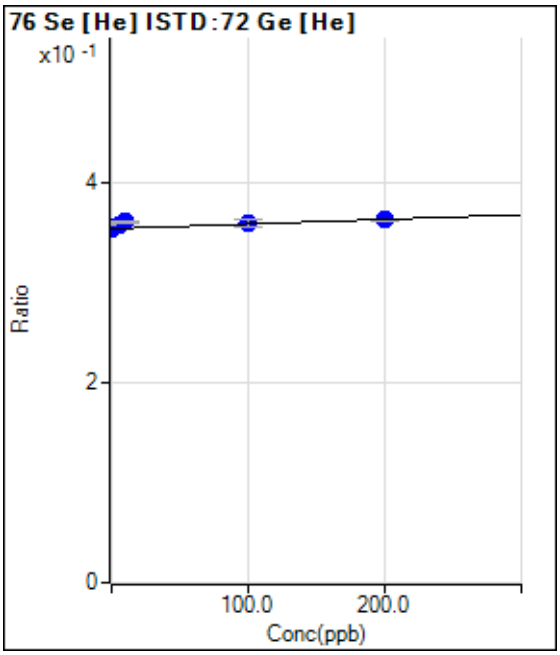


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1357645.29	0.3232	A	3.8
2	☐	2.000	-131.436	1349341.07	0.3203	A	2.1
3	☐	5.000	-158.295	1344235.61	0.3197	M	0.9
4	☐	10.000	-79.765	1334718.36	0.3214	M	1.2
5	☐	100.000	169.567	1344771.75	0.3270	A	2.6
6	☐	200.000	175.121	1324354.46	0.3272	A	0.1
7	☐	1.000					

y = 2.2478E-005 * x + 0.3232
R = 0.8567
DL = 1653
BEC = 1.438E+04

Weight: <None>
Min Conc: <None>

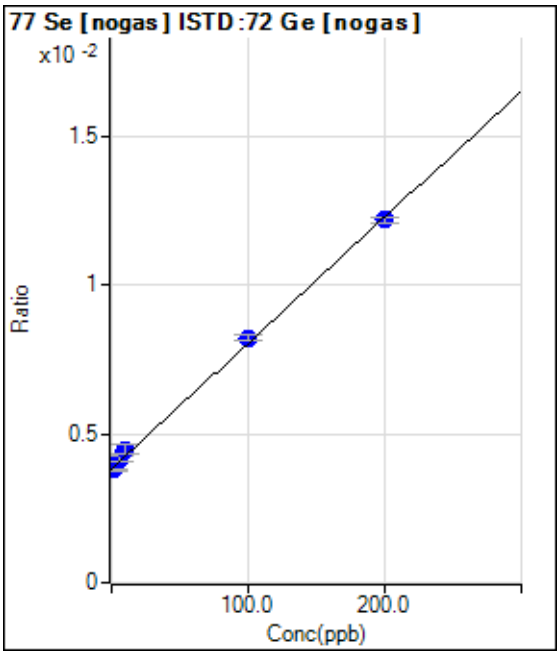
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340503.58	0.3545	P	1.1
2	☐	2.000	31.787	342267.56	0.3560	P	0.4
3	☐	5.000	84.455	339266.14	0.3585	P	0.7
4	☐	10.000	143.046	340532.18	0.3612	P	0.9
5	☐	100.000	109.205	331311.74	0.3596	P	1.9
6	☐	200.000	186.461	328289.31	0.3633	P	0.6
7	☐	1.000					

y = 4.7138E-005 * x + 0.3545
R = 0.7356
DL = 253.6
BEC = 7520

Weight: <None>
Min Conc: <None>

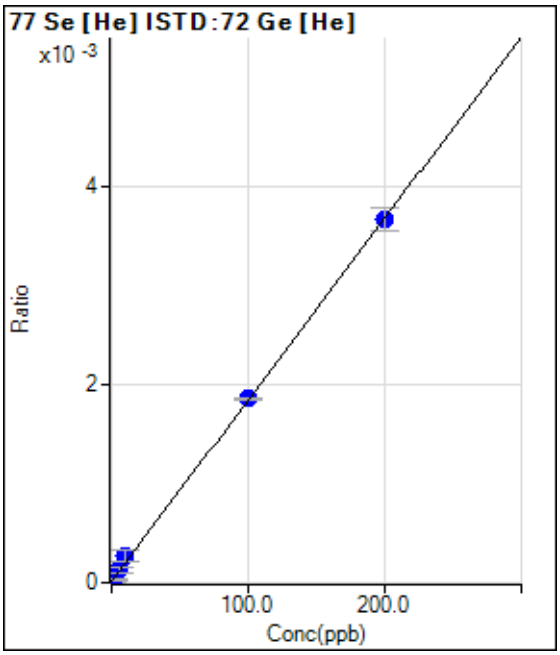


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16084.19	0.0038	P	4.8
2	☐	2.000	-0.505	16040.75	0.0038	P	1.8
3	☐	5.000	7.478	17422.09	0.0041	P	4.5
4	☐	10.000	15.515	18613.24	0.0045	P	6.6
5	☐	100.000	103.906	33805.24	0.0082	P	2.0
6	☐	200.000	197.734	49333.80	0.0122	P	1.7
7	☐	1.000					

y = 4.2288E-005 * x + 0.0038
R = 0.9992
DL = 12.99
BEC = 90.51

Weight: <None>
Min Conc: <None>

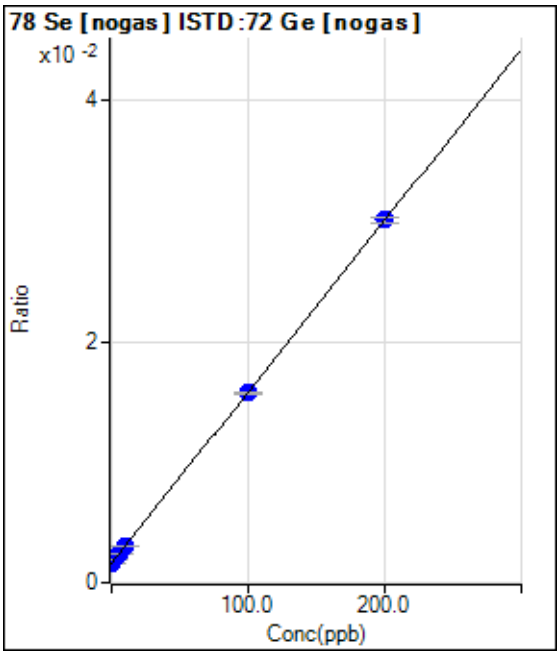
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	173.2
2	☐	2.000	1.131	33.33	0.0000	P	34.2
3	☐	5.000	6.151	120.00	0.0001	P	54.5
4	☐	10.000	14.313	260.01	0.0003	P	40.9
5	☐	100.000	100.905	1716.78	0.0019	P	1.3
6	☐	200.000	199.312	3313.68	0.0037	P	6.5
7	☐	1.000					

y = 1.8329E-005 * x + 1.3894E-005
R = 0.9998
DL = 3.939
BEC = 0.758

Weight: <None>
Min Conc: <None>

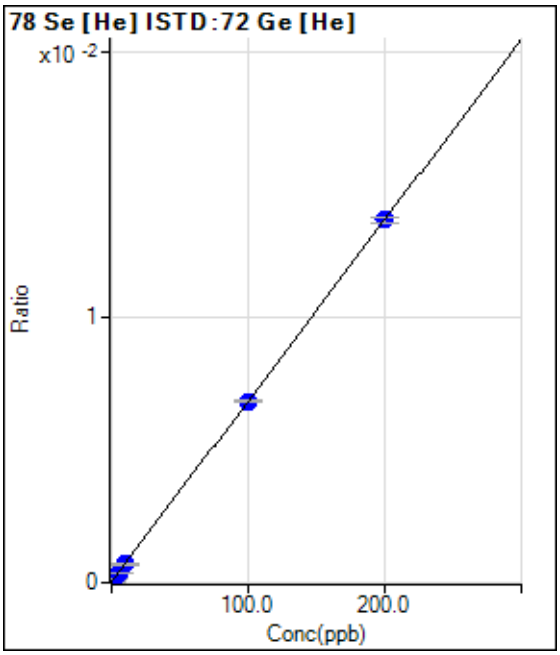


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6778.06	0.0016	P	2.0
2	☐	2.000	2.202	8118.63	0.0019	P	2.8
3	☐	5.000	5.204	9896.23	0.0024	P	3.3
4	☐	10.000	10.041	12634.60	0.0030	P	2.6
5	☐	100.000	99.235	64698.82	0.0157	P	1.2
6	☐	200.000	200.374	121913.55	0.0301	P	1.5
7	☐	1.000					

y = 1.4228E-004 * x + 0.0016
R = 1.0000
DL = 0.6652
BEC = 11.34

Weight: <None>
Min Conc: <None>

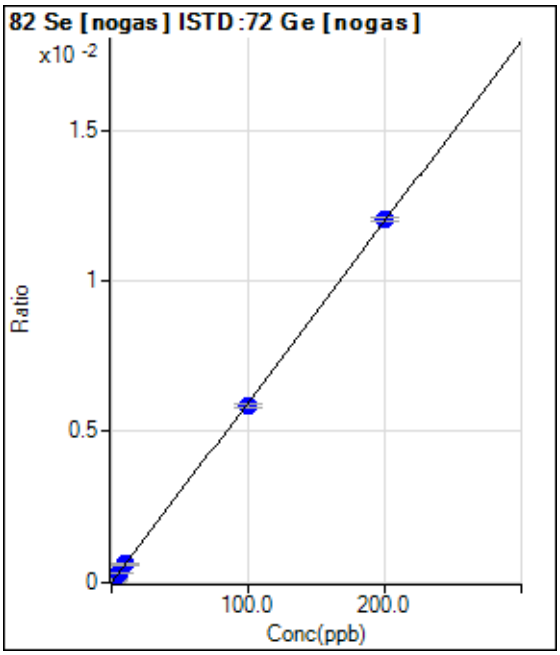
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	42.6
2	☐	2.000	2.101	170.67	0.0002	P	15.1
3	☐	5.000	4.555	326.00	0.0003	P	5.7
4	☐	10.000	9.680	653.34	0.0007	P	2.6
5	☐	100.000	99.708	6279.77	0.0068	P	1.4
6	☐	200.000	200.172	12334.18	0.0136	P	1.5
7	☐	1.000					

y = 6.8015E-005 * x + 3.4701E-005
R = 1.0000
DL = 0.6517
BEC = 0.5102

Weight: <None>
Min Conc: <None>

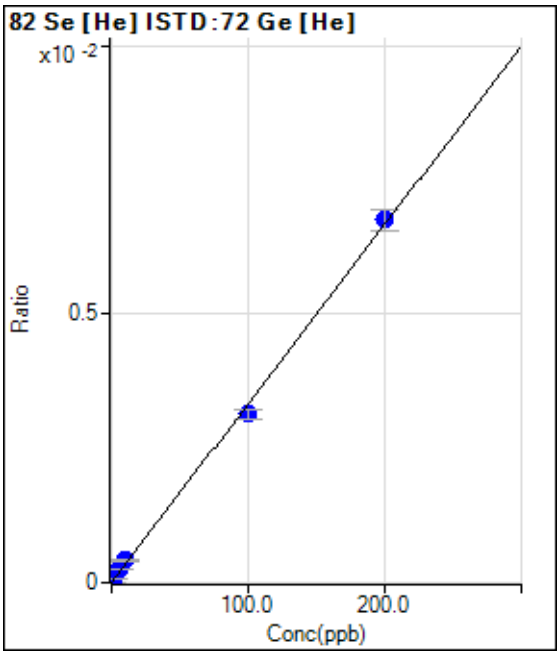


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-48.35	0.0000	P	-189.6
2	☐	2.000	1.790	404.88	0.0001	P	25.8
3	☐	5.000	5.027	1218.25	0.0003	P	8.6
4	☐	10.000	10.258	2505.82	0.0006	P	9.4
5	☐	100.000	97.866	24061.60	0.0059	P	2.6
6	☐	200.000	201.056	48718.22	0.0120	P	1.0
7	☐	1.000					

y = 5.9910E-005 * x - 1.1451E-005
R = 0.9999
DL = 1.087
BEC = -0.1911

Weight: <None>
Min Conc: <None>

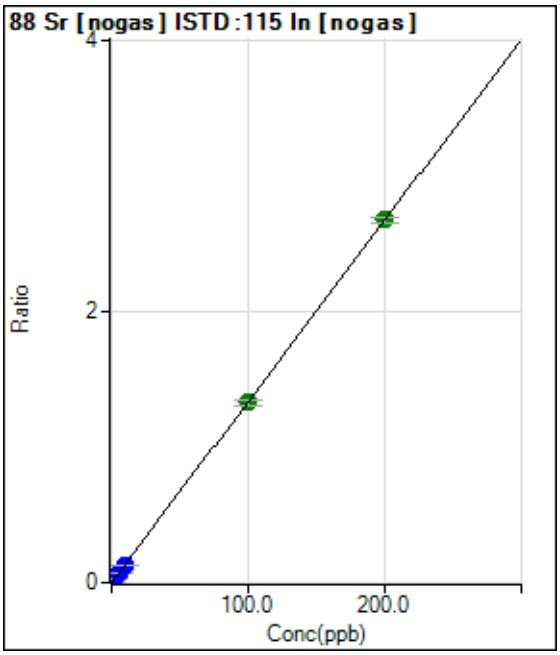
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.187	73.33	0.0001	P	7.6
3	☐	5.000	7.195	230.01	0.0002	P	8.3
4	☐	10.000	12.753	403.34	0.0004	P	7.8
5	☐	100.000	94.047	2886.95	0.0031	P	5.2
6	☐	200.000	202.782	6104.49	0.0068	P	5.6
7	☐	1.000					

y = 3.3289E-005 * x + 3.4730E-006
R = 0.9992
DL = 0.5421
BEC = 0.1043

Weight: <None>
Min Conc: <None>

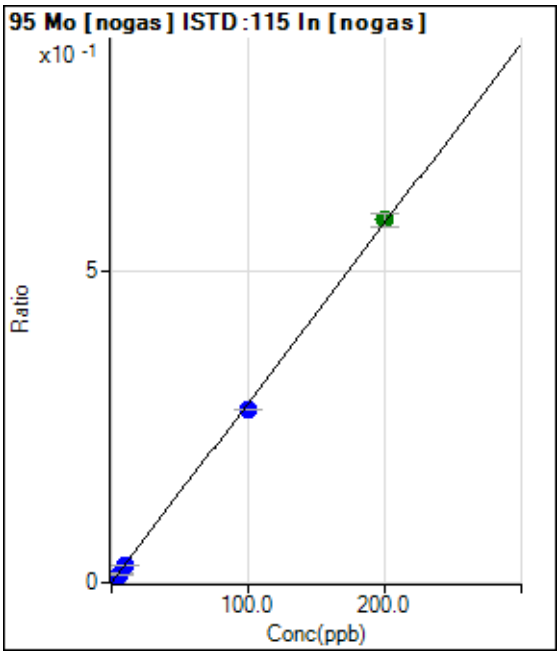


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1723.45	0.0006	P	13.7
2	☐	2.000	1.967	73272.52	0.0269	P	2.4
3	☐	5.000	5.028	182786.61	0.0677	P	0.9
4	☐	10.000	9.686	350983.33	0.1298	P	3.3
5	☐	100.000	99.326	3508211.61	1.3250	A	3.0
6	☐	200.000	200.352	7040493.85	2.6720	A	1.3
7	☐	1.000					

y = 0.0133 * x + 6.3678E-004
R = 1.0000
DL = 0.01963
BEC = 0.04776

Weight: <None>
Min Conc: <None>

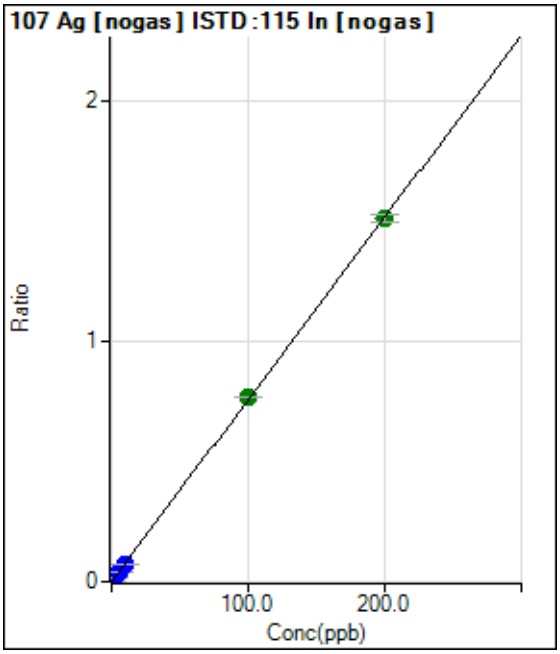
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	29.7
2	☐	2.000	1.829	14759.64	0.0054	P	4.3
3	☐	5.000	4.732	37162.40	0.0138	P	1.9
4	☐	10.000	9.326	72975.37	0.0270	P	1.2
5	☐	100.000	96.179	733269.39	0.2769	P	0.8
6	☐	200.000	201.952	1531294.92	0.5812	A	3.6
7	☐	1.000					

y = 0.0029 * x + 1.4757E-004
R = 0.9998
DL = 0.04568
BEC = 0.05129

Weight: <None>
Min Conc: <None>

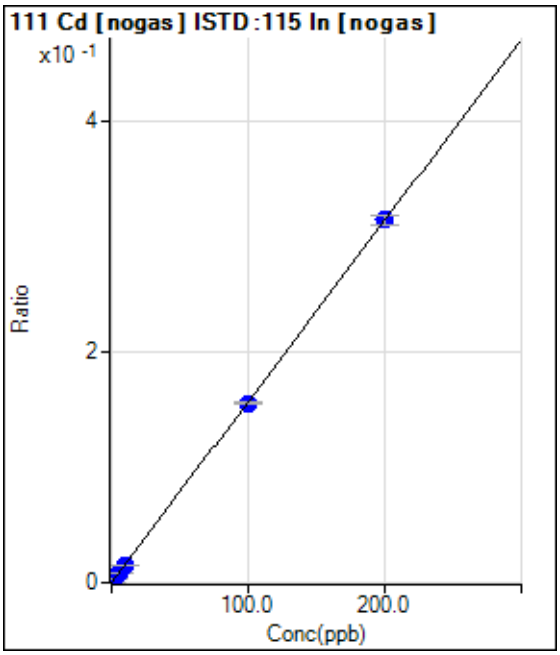


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0002	P	24.1
2	☐	2.000	1.970	41238.52	0.0151	P	3.1
3	☐	5.000	5.027	103376.74	0.0383	P	2.8
4	☐	10.000	9.875	202937.55	0.0750	P	1.8
5	☐	100.000	101.475	2037567.73	0.7693	A	0.7
6	☐	200.000	199.269	3979805.98	1.5105	A	2.2
7	☐	1.000					

y = 0.0076 * x + 1.8900E-004
R = 1.0000
DL = 0.01806
BEC = 0.02494

Weight: <None>
Min Conc: <None>

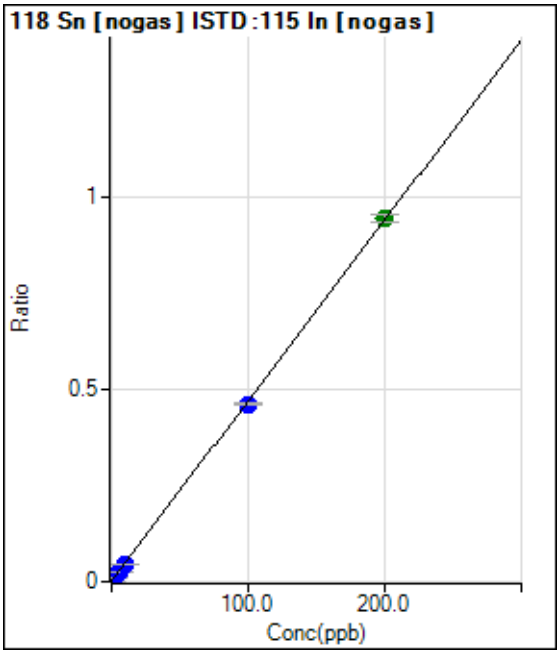
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	44.0
2	☐	2.000	1.978	8492.18	0.0031	P	5.6
3	☐	5.000	4.903	20802.59	0.0077	P	1.5
4	☐	10.000	9.733	41322.04	0.0153	P	3.6
5	☐	100.000	99.145	412020.06	0.1556	P	1.1
6	☐	200.000	200.444	828574.10	0.3145	P	2.8
7	☐	1.000					

y = 0.0016 * x + 9.8777E-006
R = 1.0000
DL = 0.008317
BEC = 0.006296

Weight: <None>
Min Conc: <None>

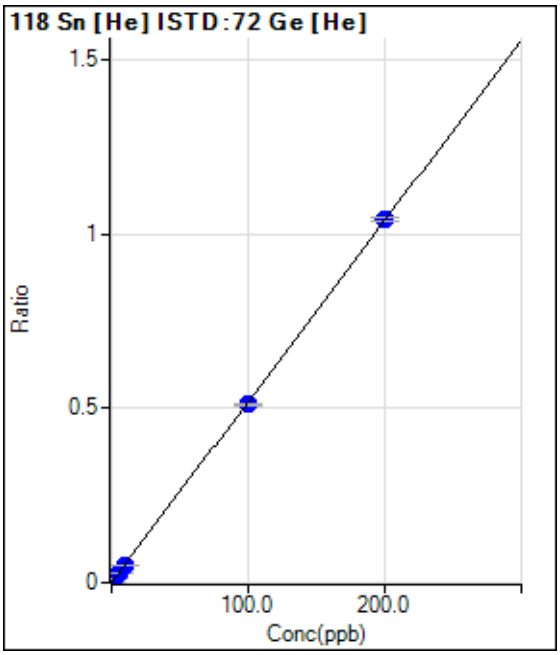


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2293.53	0.0008	P	11.3
2	☐	2.000	1.875	26269.88	0.0096	P	3.6
3	☐	5.000	4.836	63467.94	0.0235	P	0.4
4	☐	10.000	9.671	124831.78	0.0461	P	0.9
5	☐	100.000	98.272	1221423.78	0.4611	P	0.9
6	☐	200.000	200.886	2481445.07	0.9418	A	2.2
7	☐	1.000					

y = 0.0047 * x + 8.4782E-004
R = 0.9999
DL = 0.06117
BEC = 0.181

Weight: <None>
Min Conc: <None>

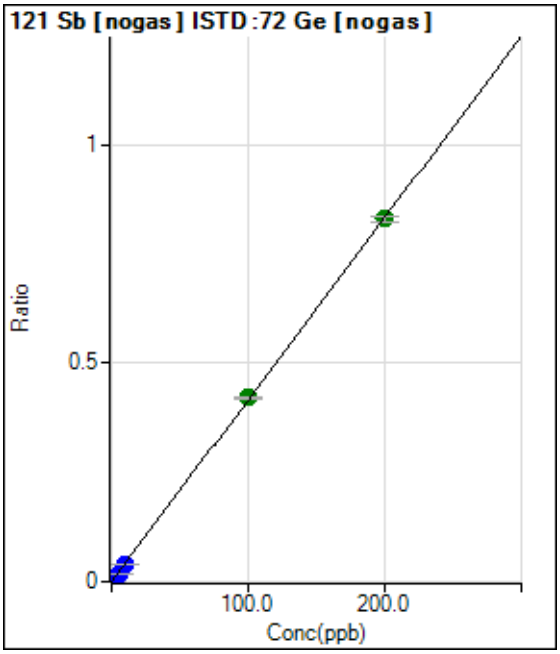
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	746.70	0.0008	P	15.6
2	☐	2.000	1.813	9776.24	0.0102	P	7.0
3	☐	5.000	4.823	24377.19	0.0258	P	1.4
4	☐	10.000	9.645	47828.73	0.0507	P	1.4
5	☐	100.000	98.765	472013.11	0.5124	P	1.1
6	☐	200.000	200.642	939808.11	1.0401	P	1.1
7	☐	1.000					

y = 0.0052 * x + 7.7744E-004
R = 1.0000
DL = 0.07023
BEC = 0.1501

Weight: <None>
Min Conc: <None>

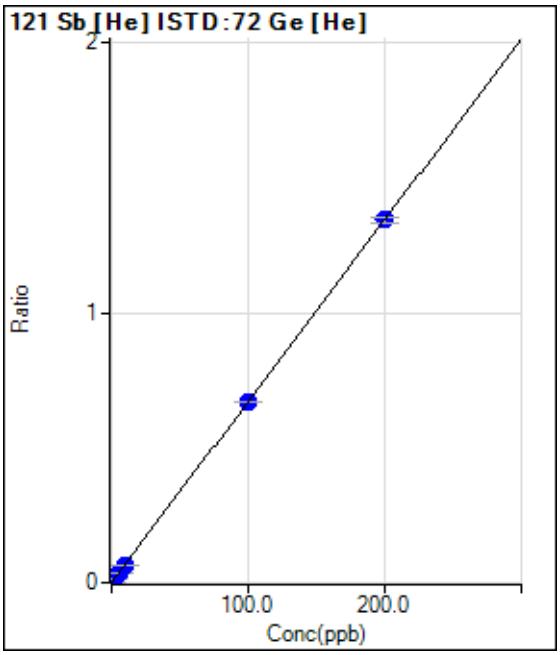


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.75	0.0003	P	12.0
2	☐	2.000	1.845	33749.51	0.0080	P	3.0
3	☐	5.000	4.639	82540.48	0.0196	P	1.3
4	☐	10.000	9.331	162551.04	0.0392	P	2.5
5	☐	100.000	100.995	1729235.71	0.4205	A	1.9
6	☐	200.000	199.546	3361631.93	0.8305	A	1.5
7	☐	1.000					

y = 0.0042 * x + 3.3232E-004
R = 1.0000
DL = 0.02885
BEC = 0.07988

Weight: <None>
Min Conc: <None>

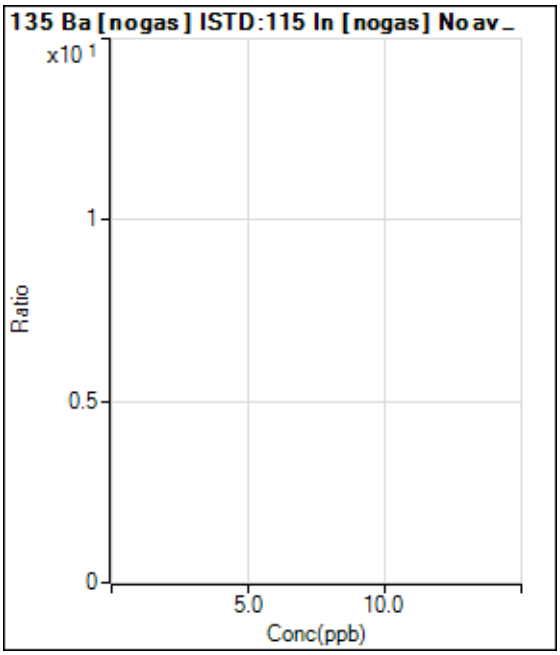
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0005	P	7.6
2	☐	2.000	1.911	12831.56	0.0133	P	1.5
3	☐	5.000	4.967	32062.94	0.0339	P	2.9
4	☐	10.000	9.634	61484.43	0.0652	P	0.5
5	☐	100.000	99.695	617359.52	0.6701	P	0.5
6	☐	200.000	200.172	1215298.03	1.3450	P	1.6
7	☐	1.000					

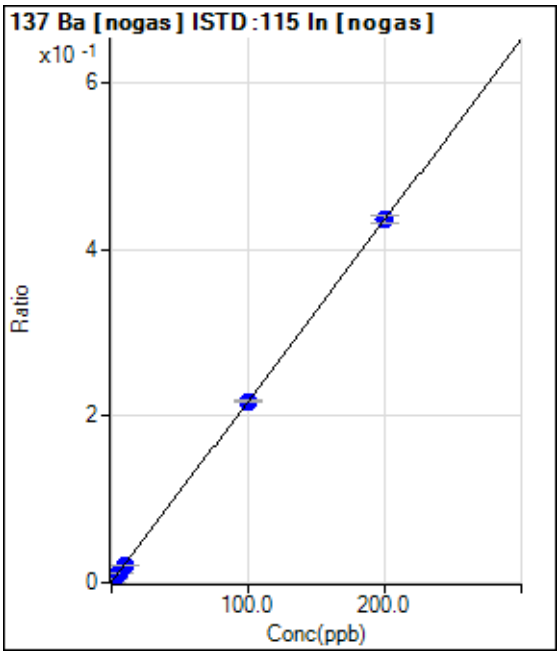
y = 0.0067 * x + 5.1361E-004
R = 1.0000
DL = 0.01742
BEC = 0.07647

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					

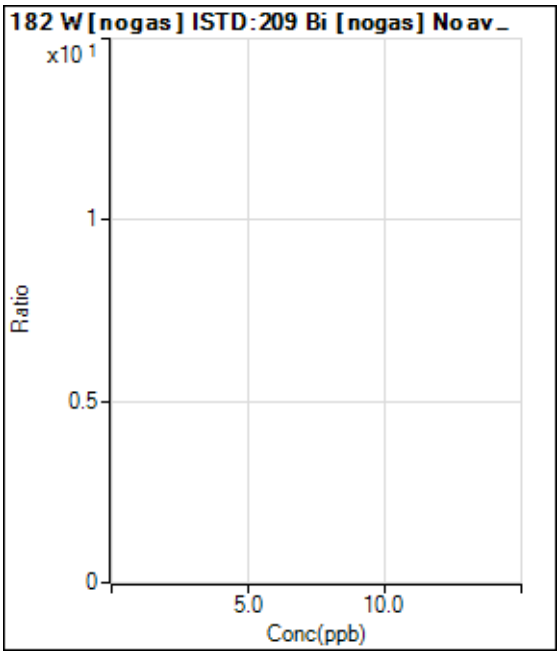
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1113.39	0.0004	P	10.6
2	☐	2.000	1.836	12027.73	0.0044	P	6.2
3	☐	5.000	4.770	29144.82	0.0108	P	2.5
4	☐	10.000	9.416	56555.84	0.0209	P	2.1
5	☐	100.000	99.806	576510.86	0.2177	P	1.3
6	☐	200.000	200.134	1149019.62	0.4361	P	2.1
7	☐	1.000					

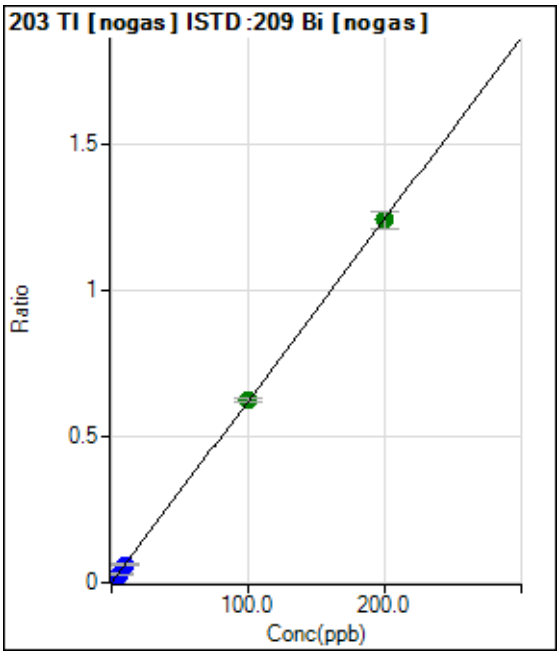
y = 0.0022 * x + 4.1131E-004
R = 1.0000
DL = 0.06013
BEC = 0.1889

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					

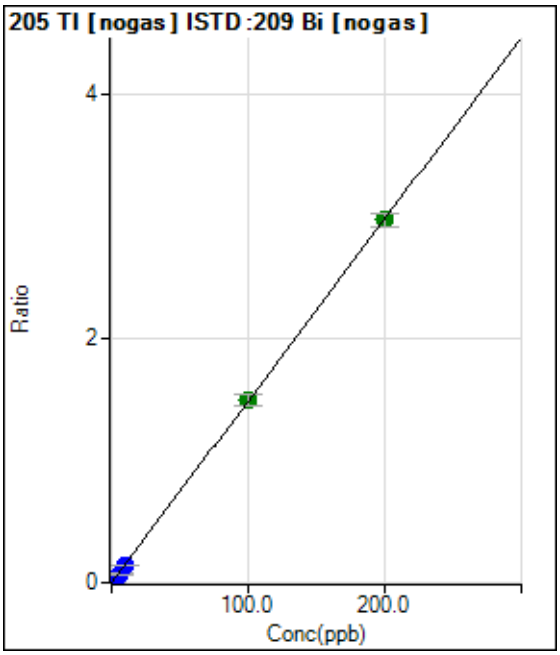
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	94.6
2	☐	2.000	1.825	32819.80	0.0114	P	6.0
3	☐	5.000	4.721	84932.95	0.0294	P	5.6
4	☐	10.000	9.759	168825.43	0.0607	P	6.3
5	☐	100.000	100.745	1744510.86	0.6264	A	2.4
6	☐	200.000	199.648	3432995.05	1.2413	A	4.8
7	☐	1.000					

y = 0.0062 * x + 2.2316E-005
R = 1.0000
DL = 0.01018
BEC = 0.003589

Weight: <None>
Min Conc: <None>

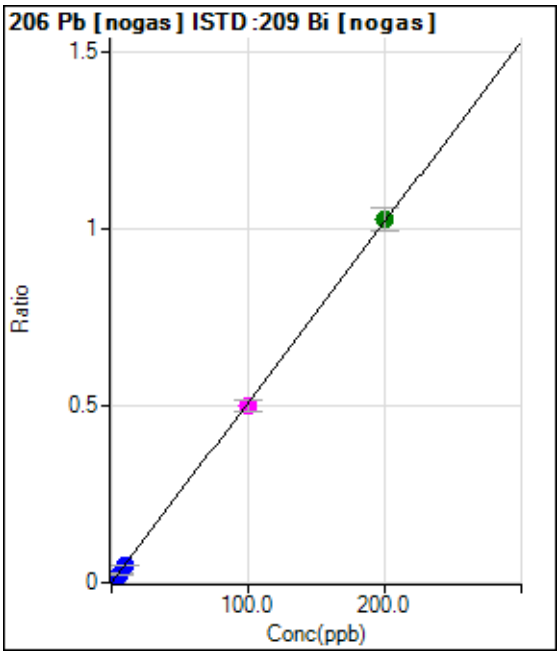


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.67	0.0001	P	34.1
2	☐	2.000	1.829	78854.02	0.0273	P	7.7
3	☐	5.000	4.697	202584.64	0.0701	P	5.8
4	☐	10.000	9.699	402148.57	0.1446	P	6.9
5	☐	100.000	100.649	4173573.17	1.4999	A	5.7
6	☐	200.000	199.700	8232376.55	2.9758	A	3.7
7	☐	1.000					

y = 0.0149 * x + 7.4616E-005
R = 1.0000
DL = 0.005121
BEC = 0.005007

Weight: <None>
Min Conc: <None>

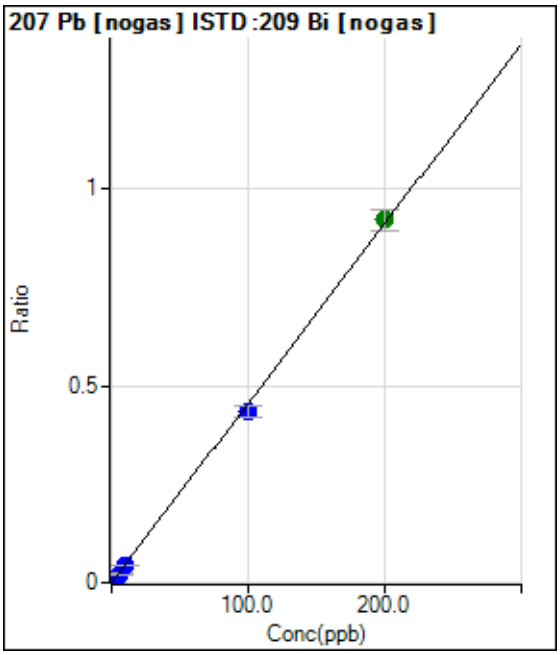
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.34	0.0001	P	12.1
2	☐	2.000	1.830	27336.55	0.0095	P	3.4
3	☐	5.000	4.743	70331.09	0.0243	P	6.1
4	☐	10.000	9.704	137992.97	0.0496	P	8.0
5	☐	100.000	97.751	1387577.43	0.4988	M	6.8
6	☐	200.000	201.147	2837063.08	1.0263	A	6.3
7	☐	1.000					

y = 0.0051 * x + 1.2920E-004
R = 0.9999
DL = 0.009164
BEC = 0.02533

Weight: <None>
Min Conc: <None>

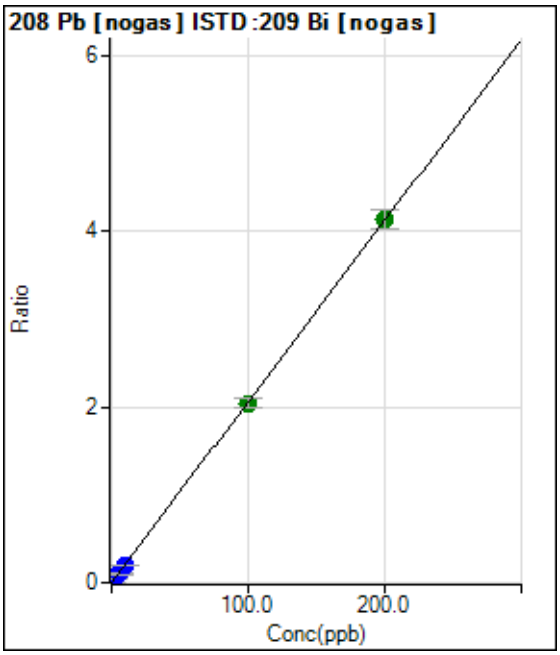


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0001	P	6.4
2	☐	2.000	1.863	24839.21	0.0086	P	5.1
3	☐	5.000	4.684	62068.21	0.0215	P	5.8
4	☐	10.000	9.570	121633.88	0.0438	P	7.9
5	☐	100.000	95.598	1213261.86	0.4361	P	6.6
6	☐	200.000	202.232	2550861.89	0.9224	A	5.9
7	☐	1.000					

y = 0.0046 * x + 1.0814E-004
R = 0.9997
DL = 0.004522
BEC = 0.02371

Weight: <None>
Min Conc: <None>

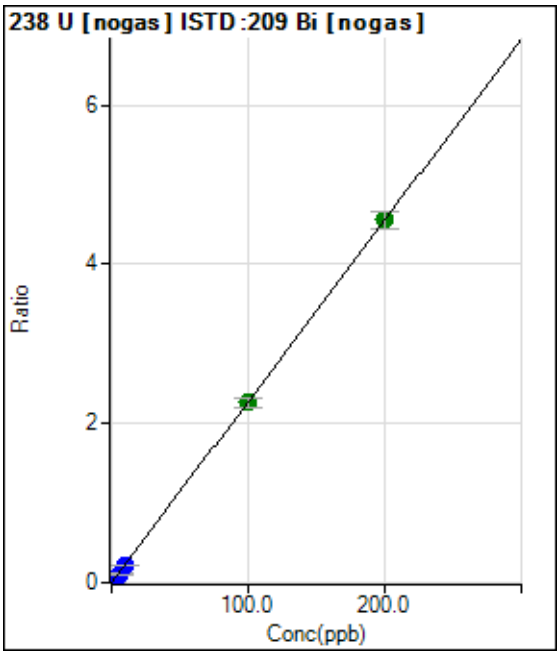
Calibration for 208_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1486.72	0.0005	P	2.9
2	☐	2.000	1.855	111754.70	0.0387	P	5.5
3	☐	5.000	4.777	285974.23	0.0989	P	5.5
4	☐	10.000	9.667	554993.32	0.1996	P	7.3
5	☐	100.000	99.081	5679927.36	2.0411	A	5.8
6	☐	200.000	200.483	11419183.00	4.1295	A	5.4
7	☐	1.000					

y = 0.0206 * x + 5.1430E-004
R = 1.0000
DL = 0.002161
BEC = 0.02497

Weight: <None>
Min Conc: <None>

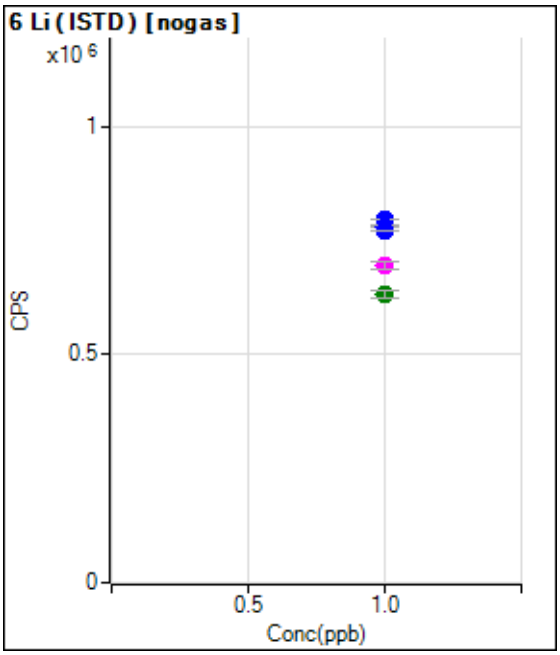


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	130.5
2	☐	2.000	1.828	120099.13	0.0416	P	5.2
3	☐	5.000	4.747	312384.21	0.1080	P	4.5
4	☐	10.000	9.449	597796.79	0.2150	P	7.2
5	☐	100.000	99.392	6295500.53	2.2612	A	5.4
6	☐	200.000	200.339	12605624.81	4.5578	A	4.8
7	☐	1.000					

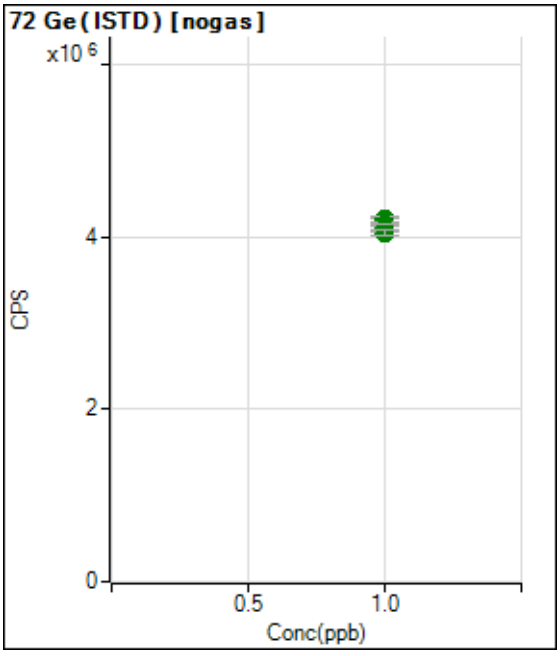
y = 0.0228 * x + 6.6921E-006
R = 1.0000
DL = 0.001152
BEC = 0.0002941

Weight: <None>
Min Conc: <None>

Calibration for 208_ICV.d

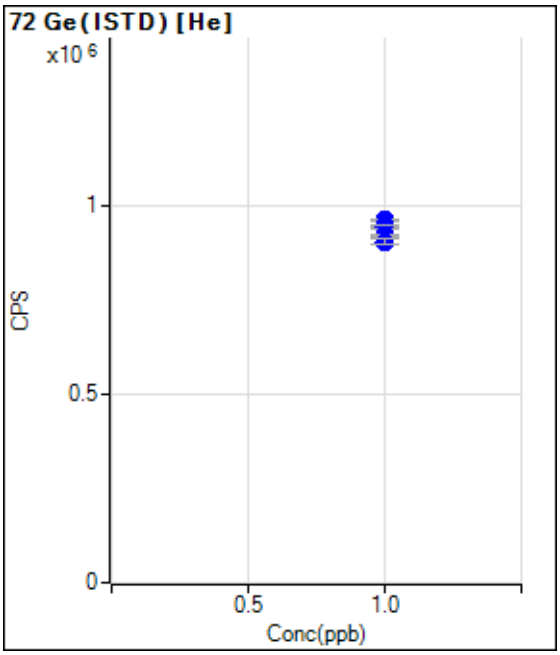


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		795171.79		P	0.1
2	☐	1.000		781617.18		P	0.1
3	☐	1.000		778146.61		P	1.6
4	☐	1.000		771688.48		P	0.4
5	☐	1.000		693803.69		M	2.5
6	☐	1.000		632178.44		A	2.6
7	☐	1.000					

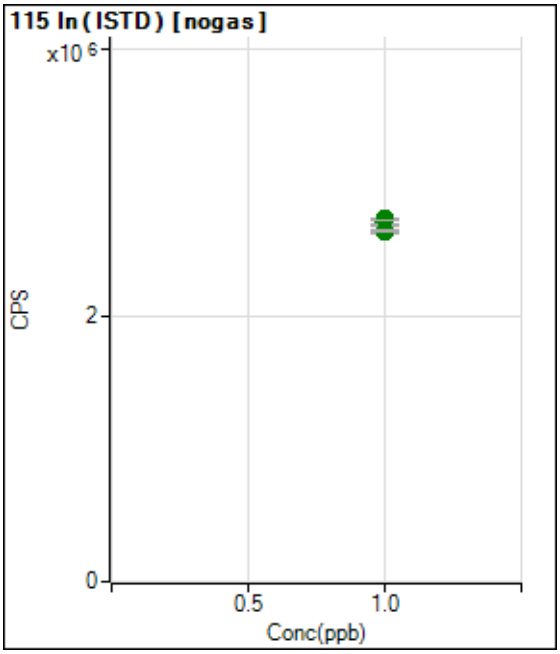


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4200937.96		A	1.0
2	☐	1.000		4213626.19		A	1.9
3	☐	1.000		4204694.94		A	1.5
4	☐	1.000		4152561.92		A	0.9
5	☐	1.000		4112934.11		A	2.1
6	☐	1.000		4048003.07		A	1.8
7	☐	1.000					

Calibration for 208_ICV.d

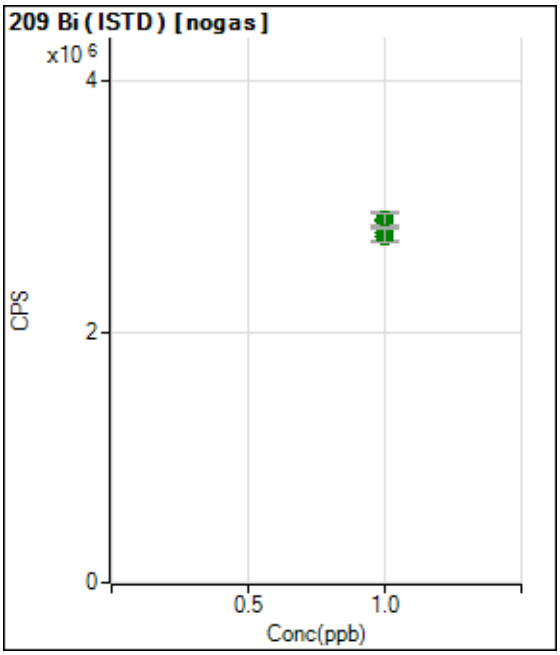


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		960523.27		P	0.1
2	☐	1.000		961445.77		P	0.7
3	☐	1.000		946405.61		P	0.6
4	☐	1.000		942716.52		P	0.7
5	☐	1.000		921272.90		P	0.6
6	☐	1.000		903709.10		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2705270.25		A	1.9
2	☐	1.000		2727767.60		A	0.1
3	☐	1.000		2700987.55		A	2.4
4	☐	1.000		2705040.34		A	1.3
5	☐	1.000		2648599.77		A	1.9
6	☐	1.000		2634989.42		A	0.6
7	☐	1.000					

Calibration for 208_ICV.d



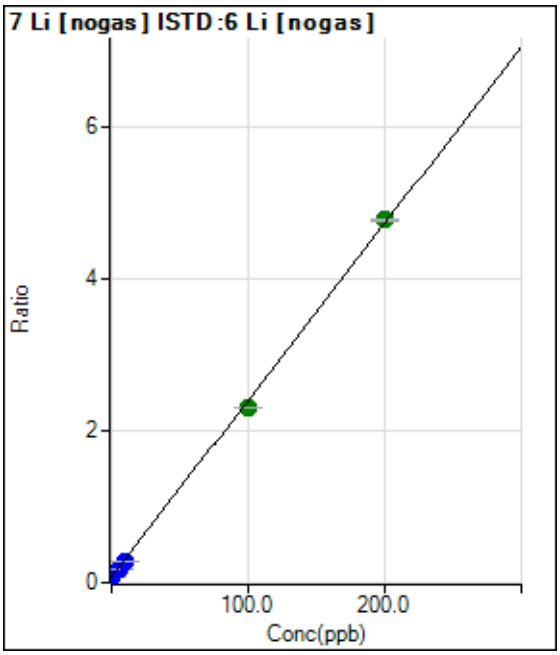
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2892860.16		A	3.8
2	☐	1.000		2891885.06		A	4.9
3	☐	1.000		2895332.35		A	3.7
4	☐	1.000		2787434.75		A	5.1
5	☐	1.000		2786489.13		A	3.7
6	☐	1.000		2769262.87		A	4.2
7	☐	1.000					

Calibration for 279_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\081920A.b\
Analysis File: 081920A.batch.bin
DA Date-Time: 8/19/2020 11:49:17 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	272CALB.d	CAL BLK	8/19/2020 11:32:01 PM
2	273CALS.d	2/10/200	8/19/2020 11:34:27 PM
3	274CALS.d	5/25/500	8/19/2020 11:36:50 PM
4	275CALS.d	10/50/1000	8/19/2020 11:39:11 PM
5	276CALS.d	100/500/10K	8/19/2020 11:41:32 PM
6	277CALS.d	200/1000/20K	8/19/2020 11:43:51 PM
7			

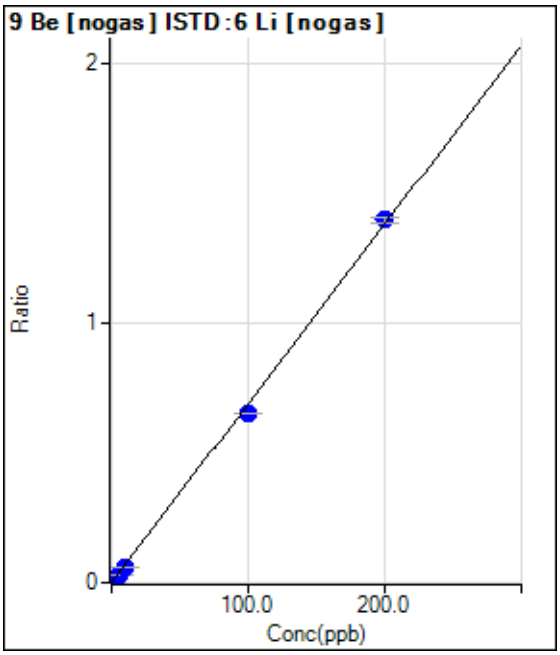
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53618.97	0.0772	P	1.0
2	☐	2.000	1.774	81505.31	0.1184	P	2.3
3	☐	5.000	4.517	124162.65	0.1820	P	0.7
4	☐	10.000	8.876	193104.20	0.2832	P	0.1
5	☐	100.000	95.883	1454313.78	2.3024	A	0.4
6	☐	200.000	202.129	2805231.94	4.7681	A	0.5
7	☐	1.000					

y = 0.0232 * x + 0.0772
R = 0.9997
DL = 0.1002
BEC = 3.327

Weight: <None>
Min Conc: <None>

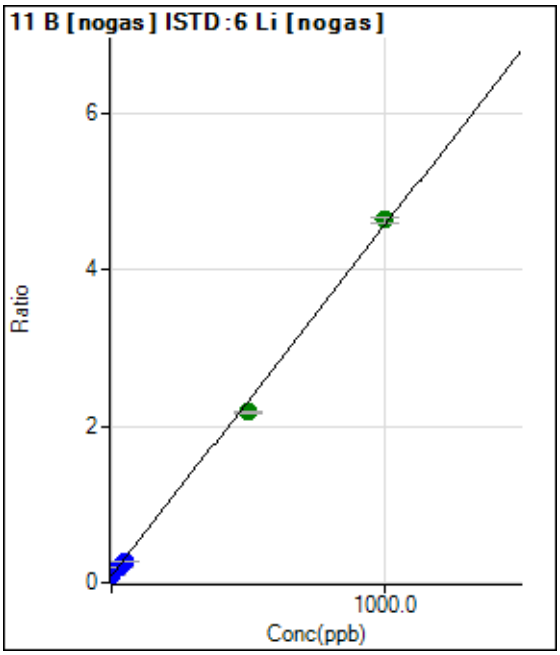


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.00	0.0001	P	34.4
2	☐	2.000	1.678	8045.04	0.0117	P	2.3
3	☐	5.000	4.345	20519.34	0.0301	P	1.8
4	☐	10.000	8.574	40410.52	0.0593	P	1.5
5	☐	100.000	94.961	413856.12	0.6552	P	0.1
6	☐	200.000	202.610	822356.97	1.3978	P	1.5
7	☐	1.000					

y = 0.0069 * x + 1.0794E-004
R = 0.9996
DL = 0.01614
BEC = 0.01565

Weight: <None>
Min Conc: <None>

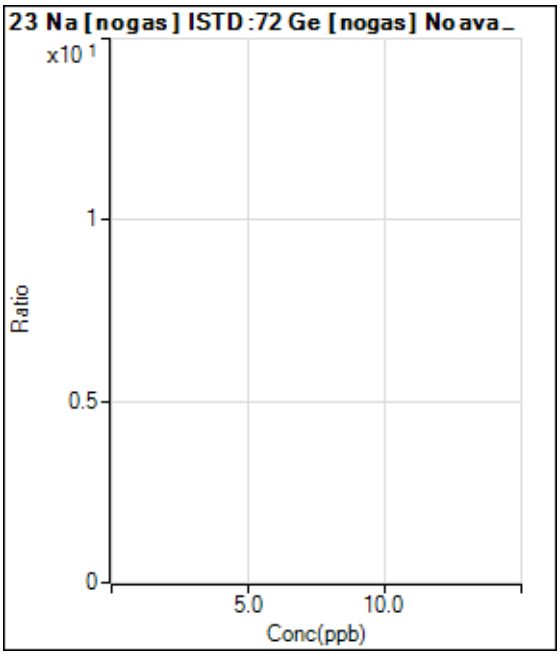
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61534.37	0.0886	P	1.5
2	☐	10.000	10.680	93963.70	0.1365	P	1.3
3	☐	25.000	21.841	127187.15	0.1865	P	0.5
4	☐	50.000	42.089	189005.28	0.2772	P	1.8
5	☐	500.000	467.926	1380414.72	2.1854	A	1.4
6	☐	1000.000	1016.505	2731950.58	4.6437	A	1.5
7	☐	5.000					

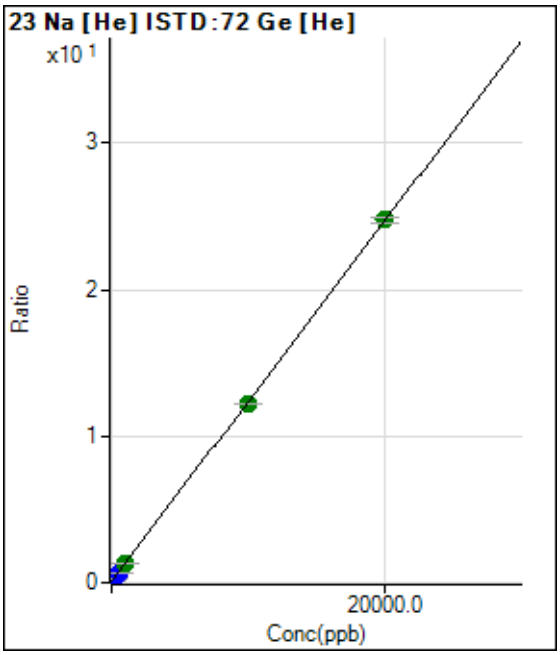
y = 0.0045 * x + 0.0886
R = 0.9993
DL = 0.8908
BEC = 19.77

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

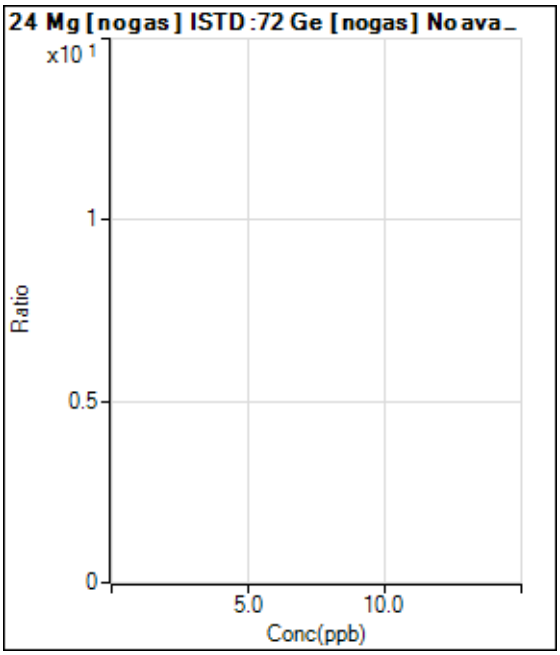
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58058.49	0.0666	P	3.1
2	☐	200.000	197.951	271171.79	0.3102	P	2.1
3	☐	500.000	497.837	594914.44	0.6792	P	1.2
4	☐	1000.000	973.161	1113116.49	1.2641	A	2.0
5	☐	10000.00	9870.201	10434919.22	12.2116	A	0.7
6	☐	20000.00	20066.31	20866674.69	24.7576	A	1.4
7	☐	100.000					

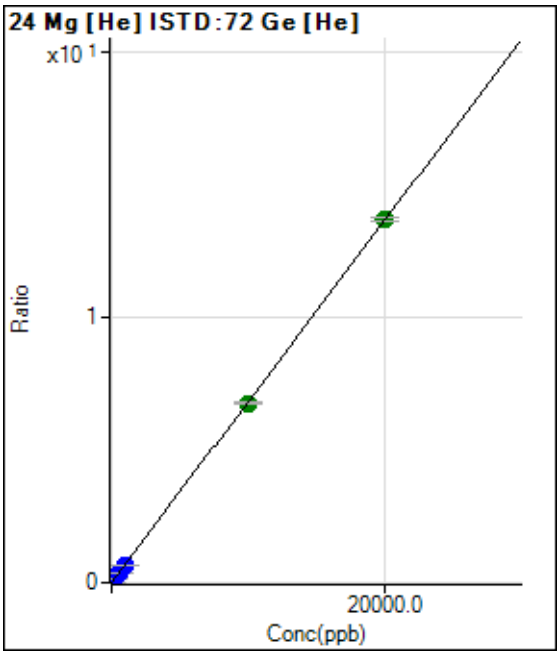
y = 0.0012 * x + 0.0666
R = 1.0000
DL = 5.007
BEC = 54.17

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

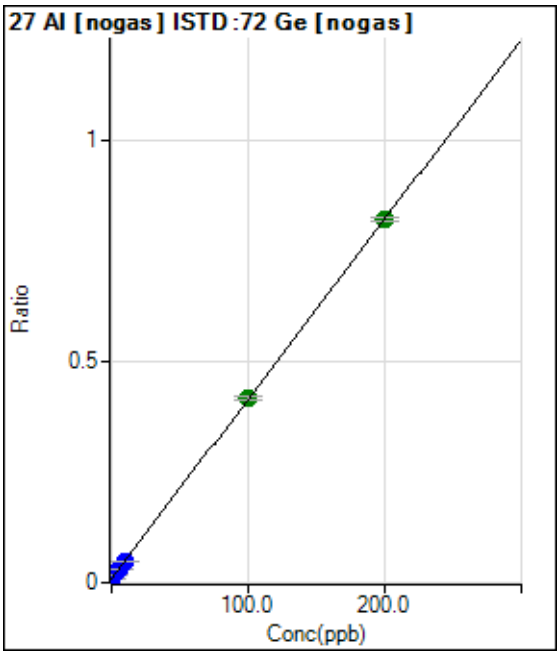
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.06	0.0013	P	17.6
2	☐	200.000	201.546	121149.25	0.1386	P	2.6
3	☐	500.000	505.915	303010.11	0.3459	P	1.2
4	☐	1000.000	983.723	591214.78	0.6715	P	0.8
5	☐	10000.00	9921.859	5776974.08	6.7605	A	0.3
6	☐	20000.00	20039.72	11507888.58	13.6533	A	1.0
7	☐	100.000					

y = 6.8124E-004 * x + 0.0013
R = 1.0000
DL = 1.008
BEC = 1.905

Weight: <None>
Min Conc: <None>

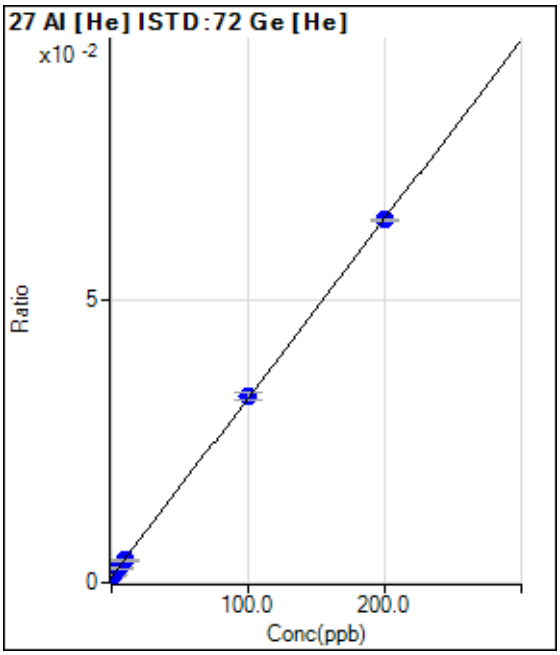


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36233.36	0.0092	P	6.4
2	☐	2.000	1.895	66504.21	0.0169	P	2.3
3	☐	5.000	4.952	113500.48	0.0293	P	3.3
4	☐	10.000	9.554	188536.72	0.0480	P	0.8
5	☐	100.000	100.572	1630075.86	0.4174	A	2.1
6	☐	200.000	199.738	3168035.89	0.8199	A	1.2
7	☐	1.000					

y = 0.0041 * x + 0.0092
R = 1.0000
DL = 0.4343
BEC = 2.272

Weight: <None>
Min Conc: <None>

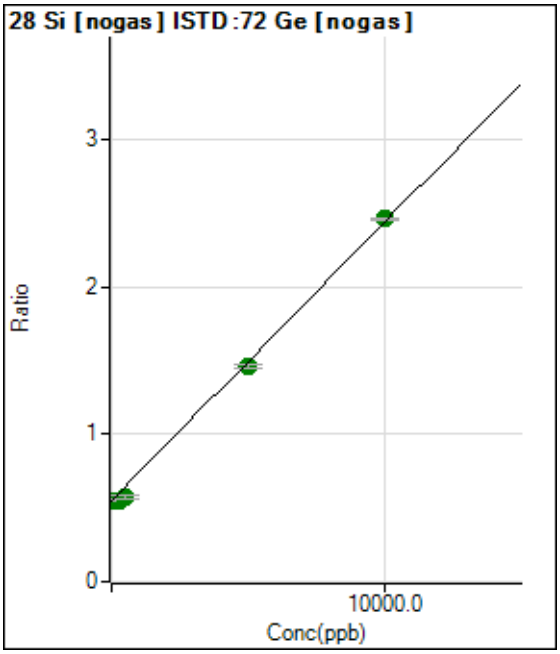
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	890.19	0.0010	P	28.1
2	☐	2.000	0.711	1090.05	0.0012	P	5.8
3	☐	5.000	4.897	2253.51	0.0026	P	6.8
4	☐	10.000	9.210	3467.04	0.0039	P	4.2
5	☐	100.000	101.181	28241.35	0.0331	P	4.8
6	☐	200.000	199.464	54093.99	0.0642	P	0.4
7	☐	1.000					

y = 3.1661E-004 * x + 0.0010
R = 0.9999
DL = 2.717
BEC = 3.226

Weight: <None>
Min Conc: <None>

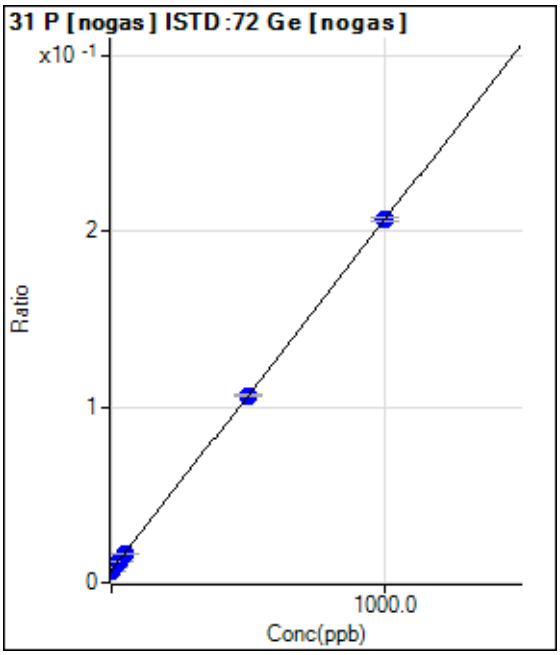


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2166496.79	0.5511	A	2.2
2	☐	100.000	3.191	2169462.41	0.5517	A	2.7
3	☐	250.000	14.996	2145196.74	0.5540	A	1.5
4	☐	500.000	121.779	2254193.41	0.5741	A	4.2
5	☐	5000.000	4828.845	5714768.46	1.4634	A	1.8
6	☐	10000.00	10111.33	9510983.40	2.4614	A	0.8
7	☐	50.000					

y = 1.8892E-004 * x + 0.5511
R = 0.9994
DL = 190.9
BEC = 2917

Weight: <None>
Min Conc: <None>

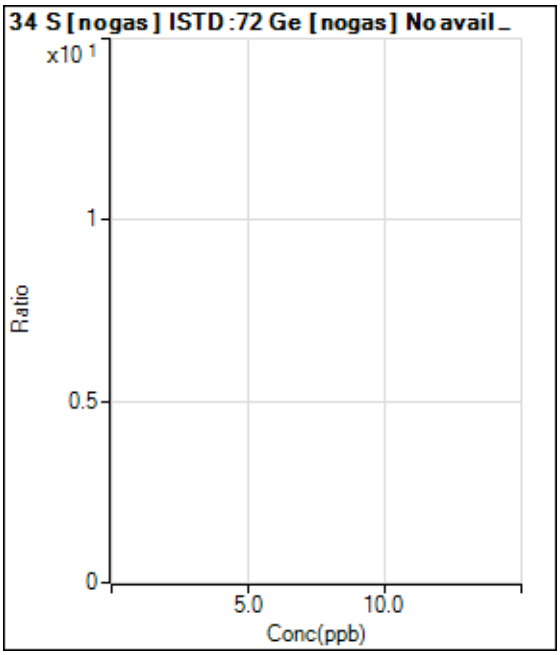
Calibration for 279_ICV.d



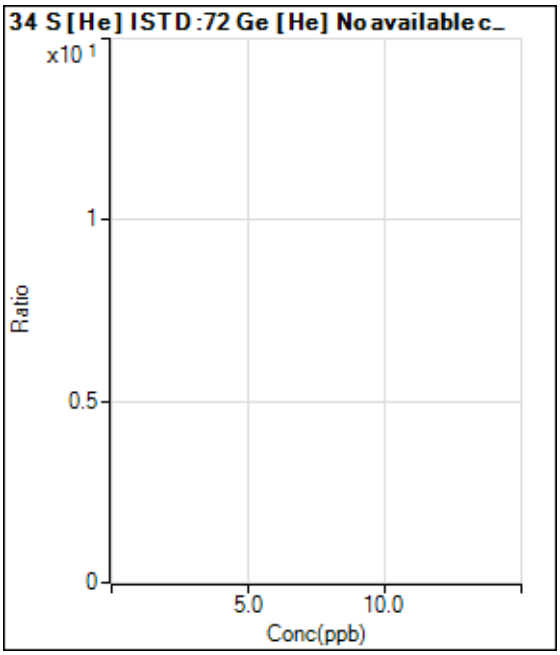
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27416.82	0.0070	P	2.1
2	☐	10.000	9.711	35049.53	0.0089	P	1.9
3	☐	25.000	25.256	46514.00	0.0120	P	3.0
4	☐	50.000	49.183	65944.66	0.0168	P	1.0
5	☐	500.000	499.511	416559.63	0.1067	P	1.7
6	☐	1000.000	1000.282	798325.72	0.2066	P	1.0
7	☐	5.000					

y = 1.9957E-004 * x + 0.0070
R = 1.0000
DL = 2.215
BEC = 34.94

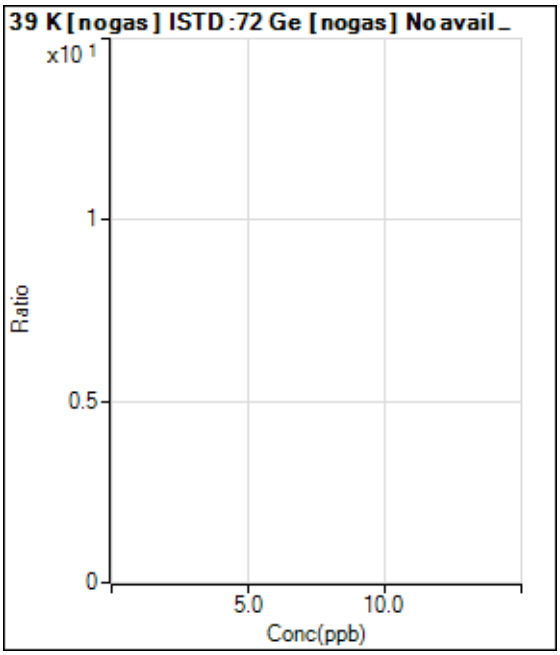
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					

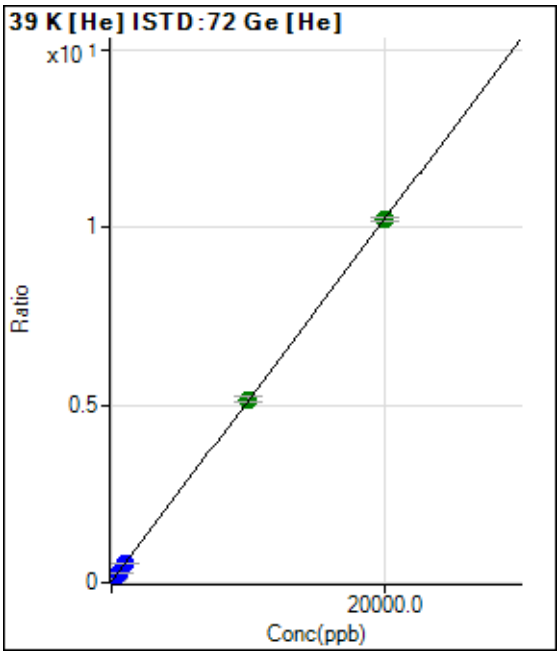


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.00					
6	☐	40000.00					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

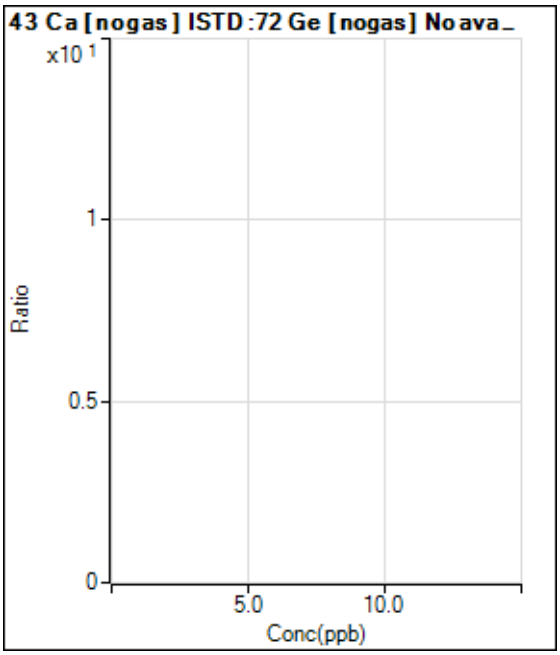
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25874.80	0.0297	P	4.4
2	☐	200.000	199.937	115032.39	0.1316	P	1.4
3	☐	500.000	496.709	247694.21	0.2828	P	2.1
4	☐	1000.000	968.647	460781.35	0.5233	P	0.5
5	☐	10000.00	10061.73	4405842.33	5.1570	A	2.8
6	☐	20000.00	19970.78	8603006.33	10.2065	A	1.0
7	☐	100.000					

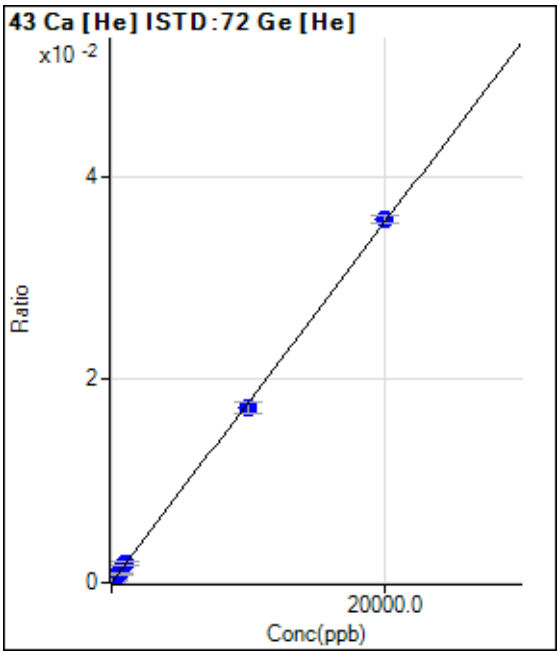
y = 5.0958E-004 * x + 0.0297
R = 1.0000
DL = 7.638
BEC = 58.29

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

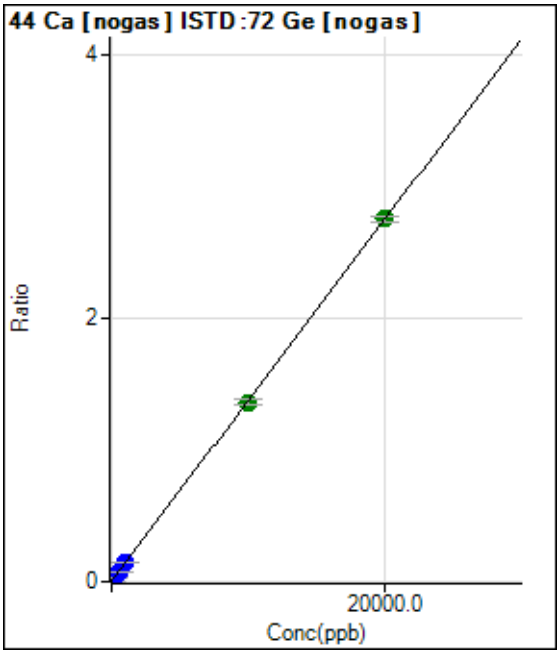
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	25.1
2	☐	200.000	148.352	253.34	0.0003	P	13.9
3	☐	500.000	476.877	763.36	0.0009	P	16.4
4	☐	1000.000	1042.916	1653.45	0.0019	P	17.2
5	☐	10000.00	9692.037	14706.01	0.0172	P	6.6
6	☐	20000.00	20152.93	30147.84	0.0358	P	2.1
7	☐	100.000					

y = 1.7730E-006 * x + 2.6800E-005
R = 0.9998
DL = 11.39
BEC = 15.12

Weight: <None>
Min Conc: <None>

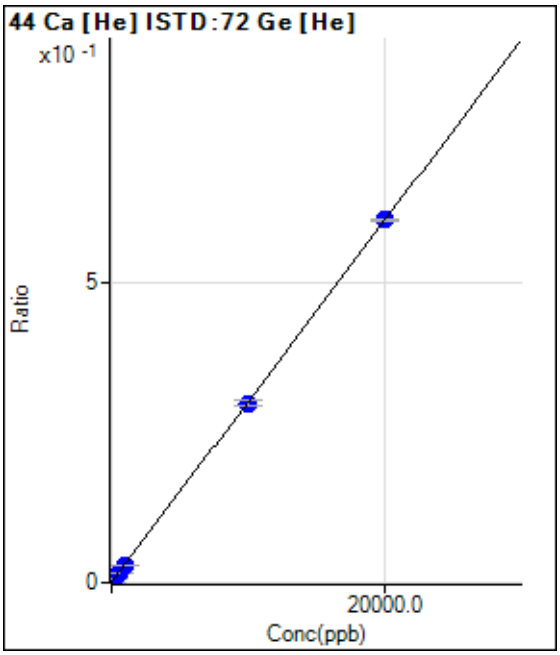


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22697.40	0.0058	P	5.4
2	☐	200.000	191.607	125980.71	0.0320	P	1.6
3	☐	500.000	507.138	291472.88	0.0753	P	2.7
4	☐	1000.000	985.983	553470.51	0.1409	P	1.0
5	☐	10000.00	9896.874	5319886.48	1.3622	A	2.6
6	☐	20000.00	20052.17	10641714.42	2.7541	A	1.6
7	☐	100.000					

y = 1.3706E-004 * x + 0.0058
R = 1.0000
DL = 6.813
BEC = 42.14

Weight: <None>
Min Conc: <None>

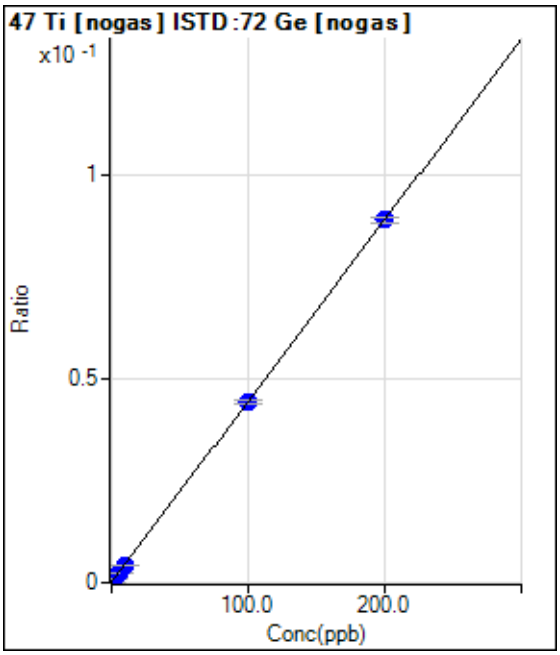
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0006	P	22.9
2	☐	200.000	198.907	5764.33	0.0066	P	0.5
3	☐	500.000	494.304	13595.13	0.0155	P	5.4
4	☐	1000.000	925.817	25137.24	0.0285	P	1.0
5	☐	10000.00	9915.206	256362.20	0.3001	P	2.7
6	☐	20000.00	20046.26	510845.68	0.6061	P	0.8
7	☐	100.000					

y = 3.0204E-005 * x + 5.8567E-004
R = 1.0000
DL = 13.31
BEC = 19.39

Weight: <None>
Min Conc: <None>

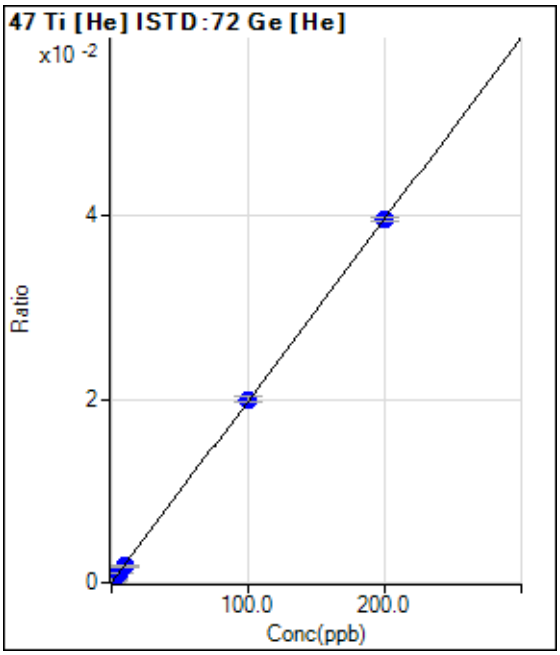


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.01	0.0001	P	14.6
2	☐	2.000	1.924	3653.75	0.0009	P	8.5
3	☐	5.000	4.941	8768.87	0.0023	P	6.9
4	☐	10.000	9.551	16931.28	0.0043	P	3.7
5	☐	100.000	99.724	172897.23	0.0443	P	1.6
6	☐	200.000	200.163	343101.40	0.0888	P	1.2
7	☐	1.000					

y = 4.4321E-004 * x + 7.6334E-005
R = 1.0000
DL = 0.07534
BEC = 0.1722

Weight: <None>
Min Conc: <None>

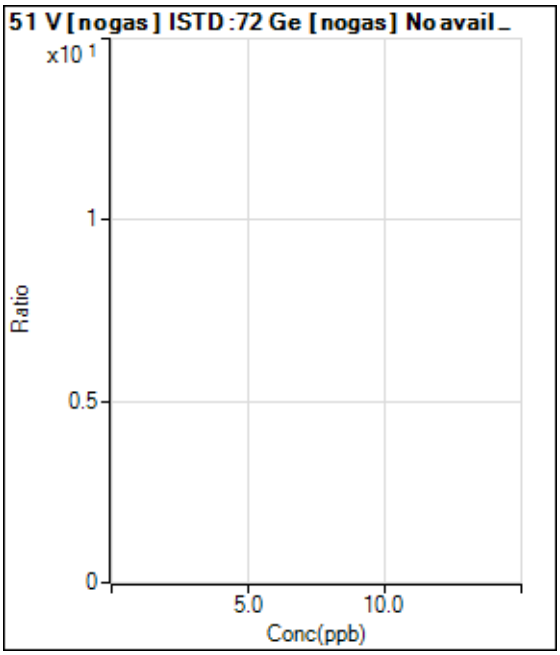
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	91.8
2	☐	2.000	1.636	300.01	0.0003	P	27.5
3	☐	5.000	5.338	943.38	0.0011	P	12.9
4	☐	10.000	9.011	1590.10	0.0018	P	5.7
5	☐	100.000	100.889	17101.42	0.0200	P	2.7
6	☐	200.000	199.600	33363.56	0.0396	P	1.0
7	☐	1.000					

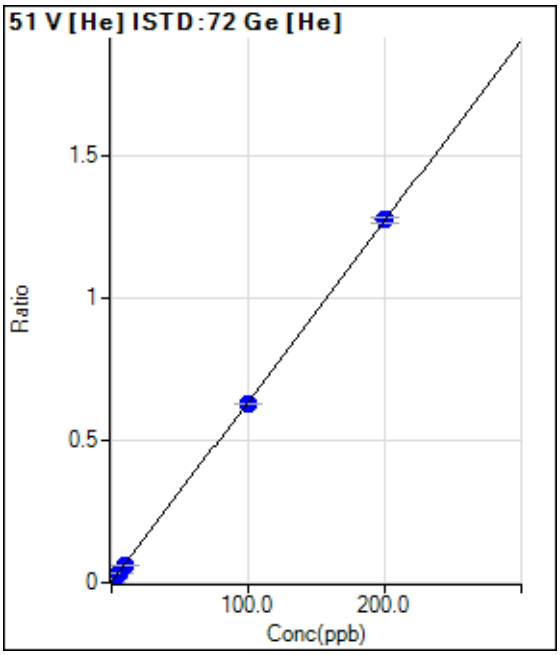
y = 1.9822E-004 * x + 1.9168E-005
R = 1.0000
DL = 0.2662
BEC = 0.0967

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					

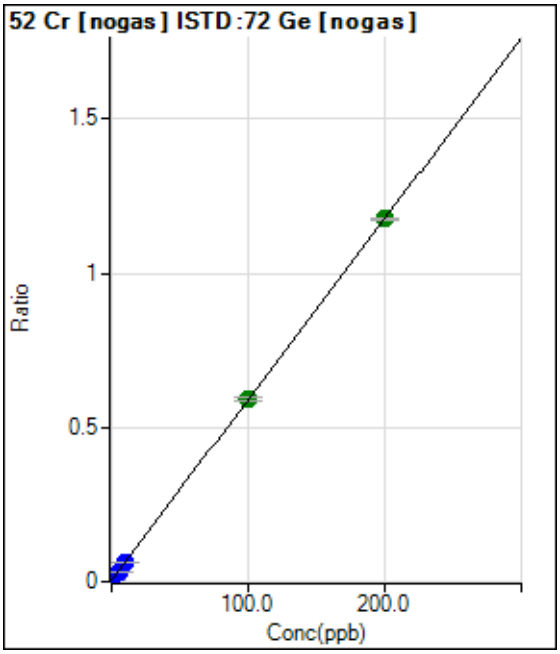
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	983.36	0.0011	P	10.4
2	☐	2.000	1.916	11624.79	0.0133	P	1.5
3	☐	5.000	4.937	28436.16	0.0325	P	4.0
4	☐	10.000	9.605	54693.20	0.0621	P	0.2
5	☐	100.000	98.709	536499.15	0.6279	P	0.8
6	☐	200.000	200.668	1074878.29	1.2752	P	1.3
7	☐	1.000					

y = 0.0063 * x + 0.0011
R = 1.0000
DL = 0.05532
BEC = 0.1777

Weight: <None>
Min Conc: <None>

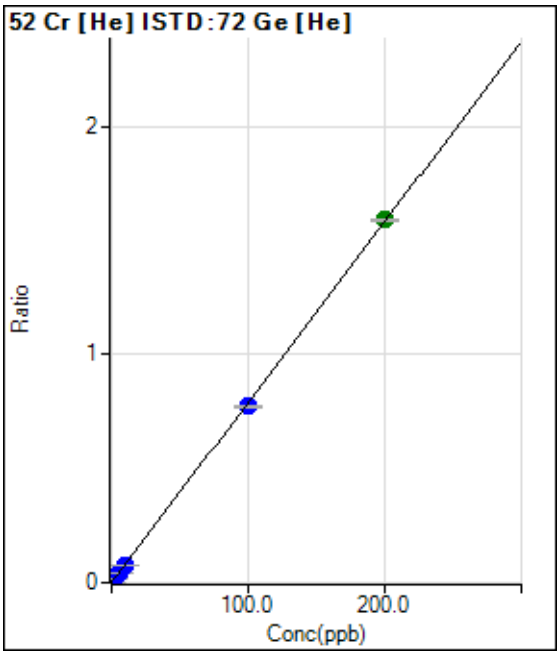


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18025.65	0.0046	P	3.1
2	☐	2.000	1.912	62093.64	0.0158	P	0.7
3	☐	5.000	5.017	131582.94	0.0340	P	1.9
4	☐	10.000	9.789	243266.38	0.0619	P	1.7
5	☐	100.000	99.994	2305720.23	0.5905	A	2.4
6	☐	200.000	200.014	4546072.74	1.1765	A	0.9
7	☐	1.000					

y = 0.0059 * x + 0.0046
R = 1.0000
DL = 0.07191
BEC = 0.7829

Weight: <None>
Min Conc: <None>

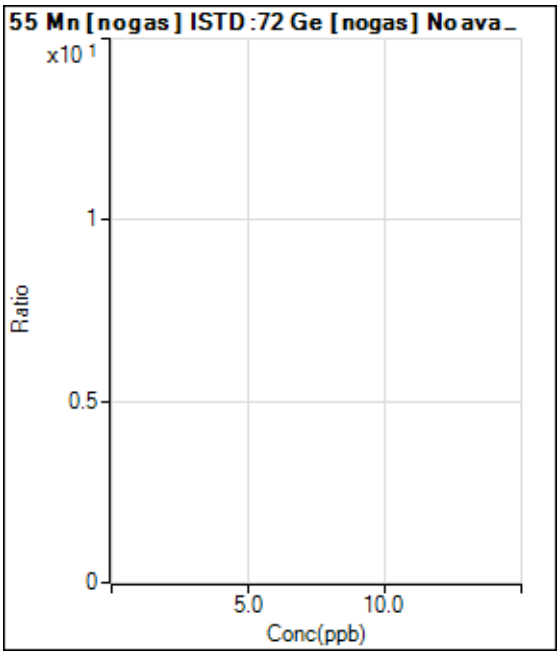
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1253.40	0.0014	P	4.1
2	☐	2.000	1.907	14422.52	0.0165	P	2.4
3	☐	5.000	4.882	35016.76	0.0400	P	3.3
4	☐	10.000	9.491	67254.84	0.0764	P	2.0
5	☐	100.000	97.658	660138.11	0.7726	P	0.8
6	☐	200.000	201.201	1340423.05	1.5902	A	0.7
7	☐	1.000					

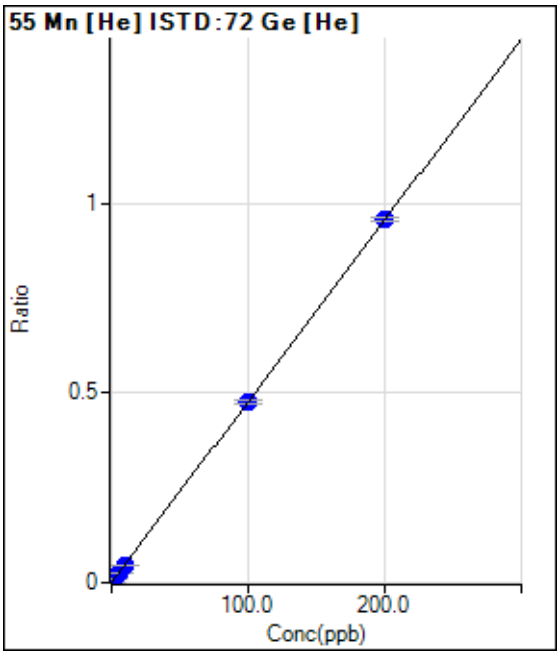
y = 0.0079 * x + 0.0014
R = 0.9999
DL = 0.02257
BEC = 0.1822

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					

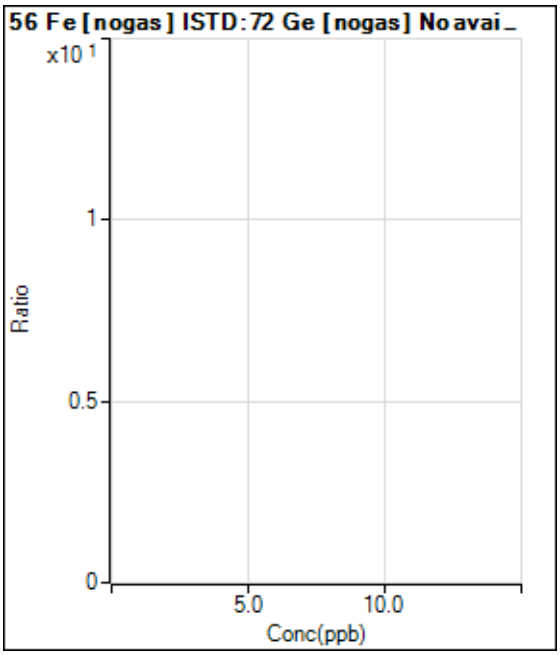
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0005	P	25.1
2	☐	2.000	1.967	8615.50	0.0099	P	0.4
3	☐	5.000	4.812	20525.08	0.0234	P	2.2
4	☐	10.000	9.656	40992.45	0.0466	P	3.8
5	☐	100.000	99.452	406085.92	0.4753	P	2.2
6	☐	200.000	200.296	806382.10	0.9567	P	1.1
7	☐	1.000					

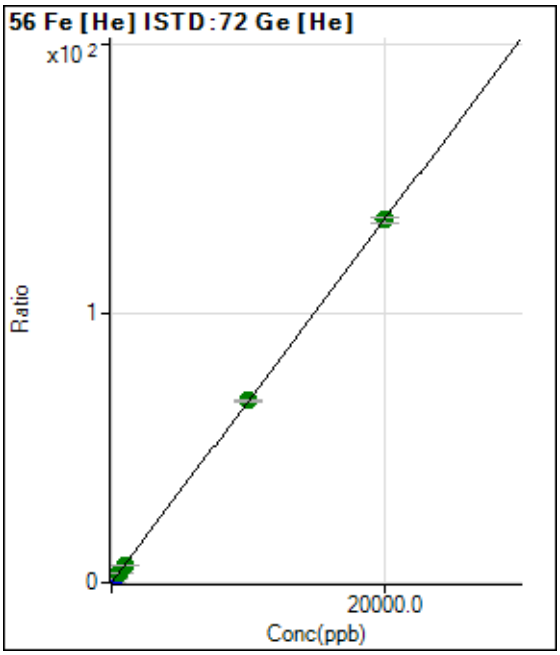
y = 0.0048 * x + 4.6319E-004
R = 1.0000
DL = 0.07308
BEC = 0.09702

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.00					
6	☐	20000.00					
7	☐	100.000					

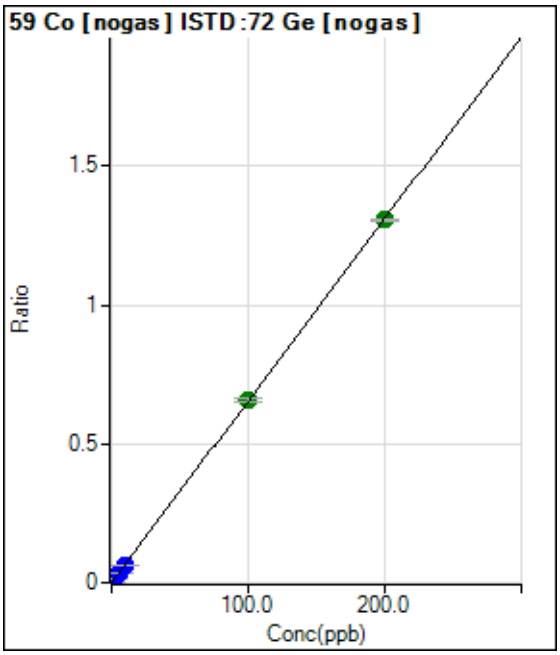
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9646.13	0.0111	P	4.0
2	☐	200.000	196.727	1168151.94	1.3363	P	1.4
3	☐	500.000	505.789	2993654.85	3.4182	A	2.1
4	☐	1000.000	970.944	5768233.46	6.5516	A	1.9
5	☐	10000.00	10019.35	57679132.47	67.5035	A	1.8
6	☐	20000.00	19991.66	113513261.6	134.679	A	1.4
7	☐	100.000					

y = 0.0067 * x + 0.0111
R = 1.0000
DL = 0.1971
BEC = 1.644

Weight: <None>
Min Conc: <None>

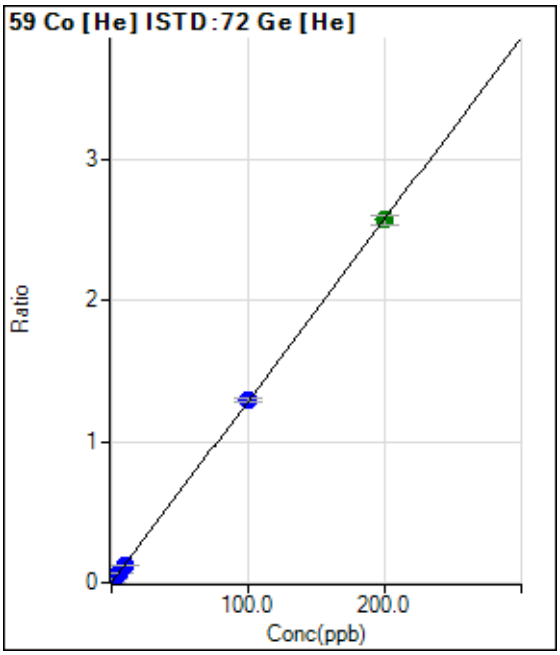


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396.68	0.0001	P	16.4
2	☐	2.000	1.951	50622.87	0.0129	P	1.7
3	☐	5.000	5.058	128581.29	0.0332	P	0.5
4	☐	10.000	9.956	256335.09	0.0653	P	1.5
5	☐	100.000	100.855	2577954.86	0.6602	A	1.9
6	☐	200.000	199.574	5047707.22	1.3062	A	0.7
7	☐	1.000					

y = 0.0065 * x + 1.0105E-004
R = 1.0000
DL = 0.007587
BEC = 0.01544

Weight: <None>
Min Conc: <None>

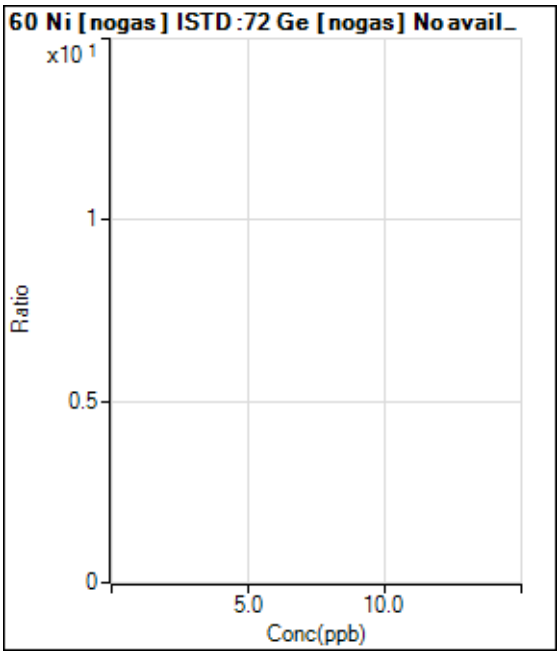
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0002	P	21.2
2	☐	2.000	2.000	22690.82	0.0260	P	0.2
3	☐	5.000	5.036	57004.77	0.0651	P	1.5
4	☐	10.000	9.688	110103.46	0.1251	P	1.8
5	☐	100.000	100.665	1108899.85	1.2978	P	1.6
6	☐	200.000	199.682	2169416.48	2.5742	A	2.7
7	☐	1.000					

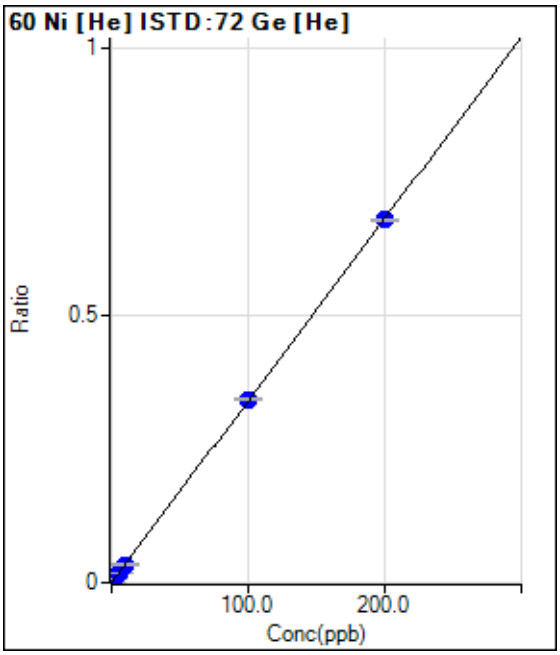
y = 0.0129 * x + 1.6843E-004
R = 1.0000
DL = 0.008297
BEC = 0.01307

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					

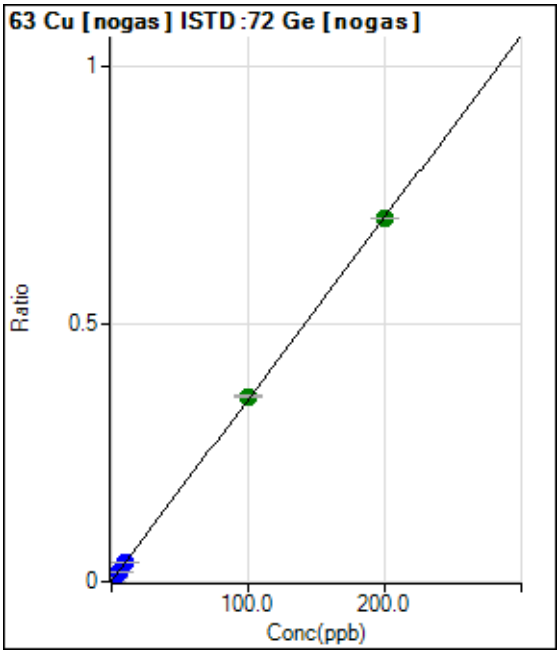
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0002	P	16.9
2	☐	2.000	2.004	6111.15	0.0070	P	5.3
3	☐	5.000	5.102	15346.66	0.0175	P	3.8
4	☐	10.000	9.873	29697.58	0.0337	P	4.0
5	☐	100.000	100.949	293287.51	0.3432	P	1.5
6	☐	200.000	199.529	571692.56	0.6783	P	0.7
7	☐	1.000					

y = 0.0034 * x + 1.8373E-004
R = 1.0000
DL = 0.0274
BEC = 0.05407

Weight: <None>
Min Conc: <None>

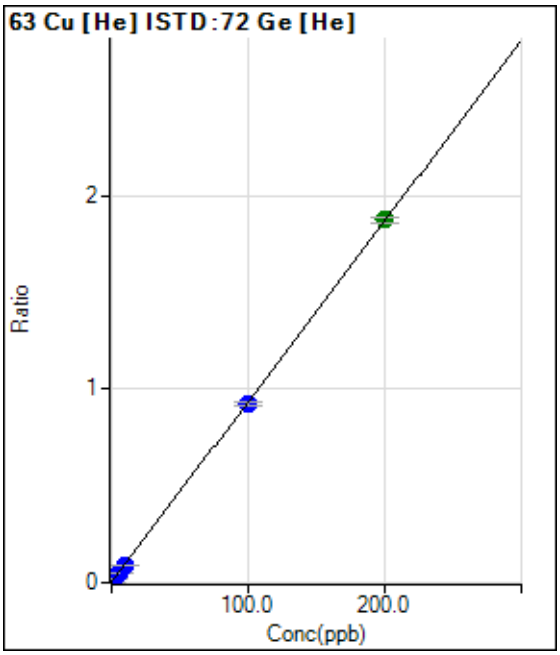


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4257.25	0.0011	P	16.9
2	☐	2.000	2.001	32058.17	0.0082	P	1.7
3	☐	5.000	5.190	75179.79	0.0194	P	1.8
4	☐	10.000	9.874	141251.38	0.0360	P	1.1
5	☐	100.000	101.543	1404945.24	0.3598	A	1.1
6	☐	200.000	199.230	2723753.92	0.7048	A	0.1
7	☐	1.000					

y = 0.0035 * x + 0.0011
R = 1.0000
DL = 0.1559
BEC = 0.3068

Weight: <None>
Min Conc: <None>

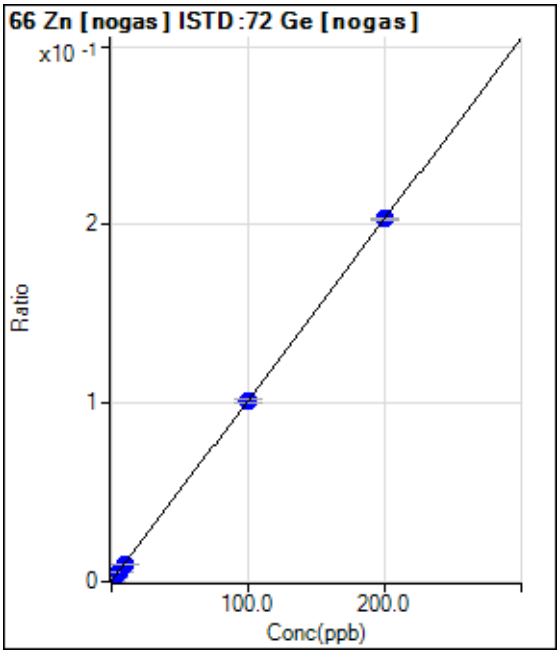
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1463.42	0.0017	P	2.2
2	☐	2.000	2.009	17845.55	0.0204	P	0.2
3	☐	5.000	5.001	42322.42	0.0483	P	1.6
4	☐	10.000	9.822	82115.46	0.0933	P	1.6
5	☐	100.000	98.614	787041.94	0.9212	P	2.2
6	☐	200.000	200.702	1578625.55	1.8730	A	1.9
7	☐	1.000					

y = 0.0093 * x + 0.0017
R = 1.0000
DL = 0.01199
BEC = 0.1802

Weight: <None>
Min Conc: <None>

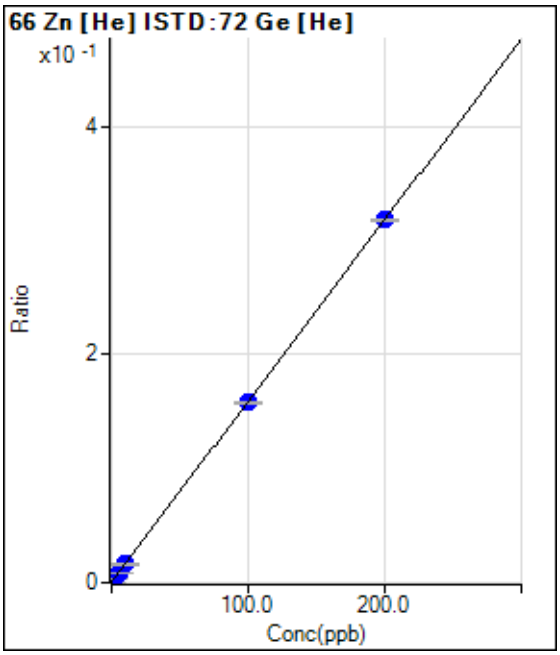


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	966.71	0.0002	P	16.9
2	☐	2.000	1.929	8662.19	0.0022	P	0.3
3	☐	5.000	5.161	21219.21	0.0055	P	2.6
4	☐	10.000	9.575	39115.42	0.0100	P	2.5
5	☐	100.000	99.600	395428.99	0.1013	P	1.2
6	☐	200.000	200.218	785611.55	0.2033	P	0.4
7	☐	1.000					

y = 0.0010 * x + 2.4623E-004
R = 1.0000
DL = 0.1227
BEC = 0.2428

Weight: <None>
Min Conc: <None>

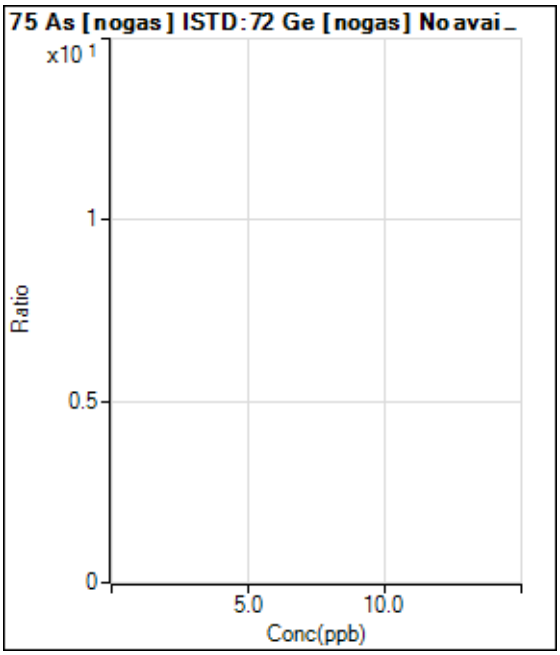
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0004	P	6.7
2	☐	2.000	1.945	3023.64	0.0035	P	7.5
3	☐	5.000	4.945	7201.56	0.0082	P	4.7
4	☐	10.000	9.943	14219.04	0.0161	P	3.2
5	☐	100.000	99.586	135301.03	0.1583	P	1.0
6	☐	200.000	200.212	268020.48	0.3180	P	0.4
7	☐	1.000					

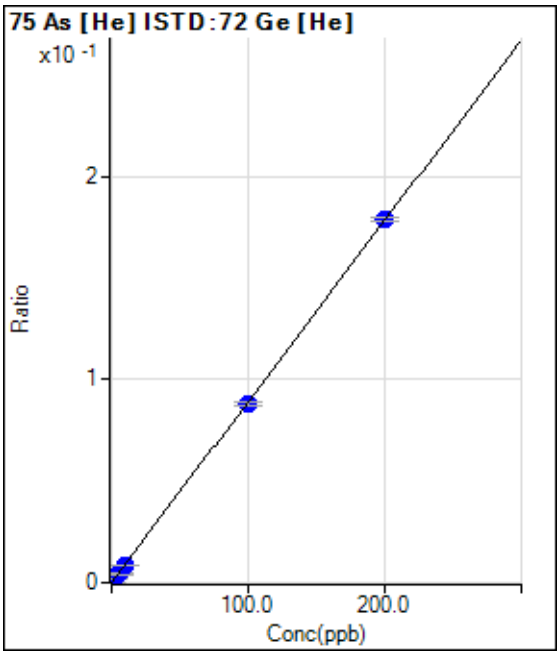
y = 0.0016 * x + 3.7493E-004
R = 1.0000
DL = 0.04777
BEC = 0.2364

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					

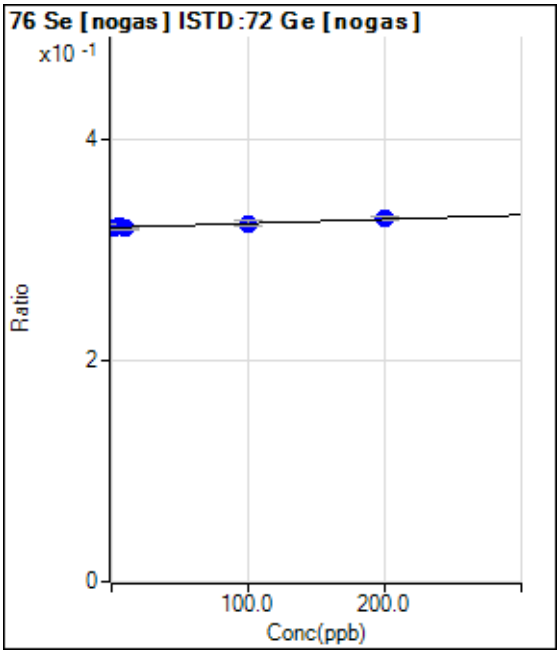
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85.56	0.0001	P	13.8
2	☐	2.000	1.857	1530.07	0.0017	P	5.7
3	☐	5.000	4.704	3750.41	0.0043	P	3.4
4	☐	10.000	9.432	7473.80	0.0085	P	1.2
5	☐	100.000	98.987	75311.03	0.0881	P	2.1
6	☐	200.000	200.544	150440.13	0.1785	P	1.1
7	☐	1.000					

y = 8.8949E-004 * x + 9.8219E-005
R = 1.0000
DL = 0.04558
BEC = 0.1104

Weight: <None>
Min Conc: <None>

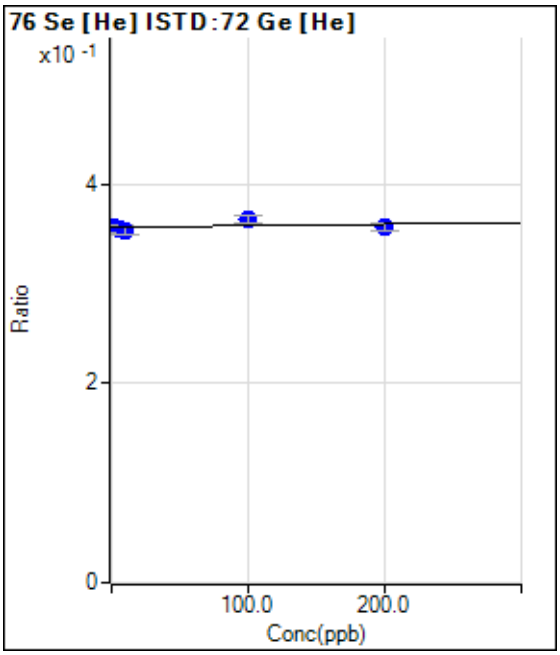


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1259076.86	0.3203	P	1.3
2	☐	2.000	4.890	1260490.16	0.3205	P	1.4
3	☐	5.000	39.532	1246247.77	0.3218	P	1.4
4	☐	10.000	-24.166	1254676.18	0.3194	P	0.8
5	☐	100.000	88.776	1264185.55	0.3237	P	1.6
6	☐	200.000	206.428	1268126.52	0.3282	P	1.0
7	☐	1.000					

y = 3.7940E-005 * x + 0.3203
R = 0.9642
DL = 328.2
BEC = 8444

Weight: <None>
Min Conc: <None>

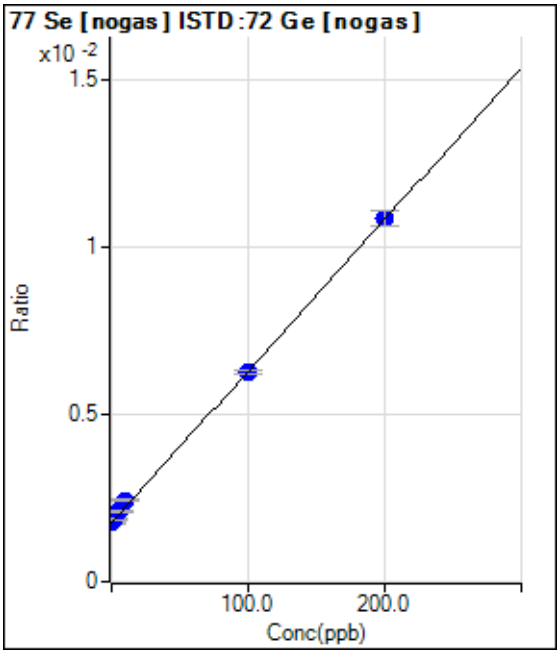
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	311139.56	0.3572	P	0.8
2	☐	2.000	-30.755	311793.97	0.3567	P	1.8
3	☐	5.000	-157.349	310656.48	0.3547	P	2.2
4	☐	10.000	-179.764	311987.99	0.3544	P	2.2
5	☐	100.000	467.928	311376.71	0.3644	P	2.3
6	☐	200.000	29.911	301408.11	0.3576	P	1.8
7	☐	1.000					

y = 1.5570E-005 * x + 0.3572
R = 0.4515
DL = 550.2
BEC = 2.294E+04

Weight: <None>
Min Conc: <None>

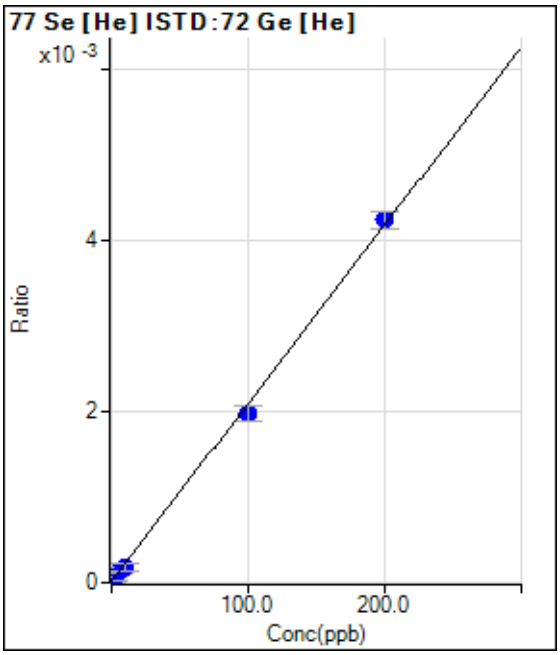


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6941.46	0.0018	P	2.5
2	☐	2.000	2.196	7338.29	0.0019	P	4.3
3	☐	5.000	7.765	8205.38	0.0021	P	2.8
4	☐	10.000	14.729	9562.68	0.0024	P	1.2
5	☐	100.000	98.761	24406.75	0.0062	P	2.0
6	☐	200.000	200.312	41952.16	0.0109	P	4.2
7	☐	1.000					

y = 4.5402E-005 * x + 0.0018
R = 0.9997
DL = 2.959
BEC = 38.89

Weight: <None>
Min Conc: <None>

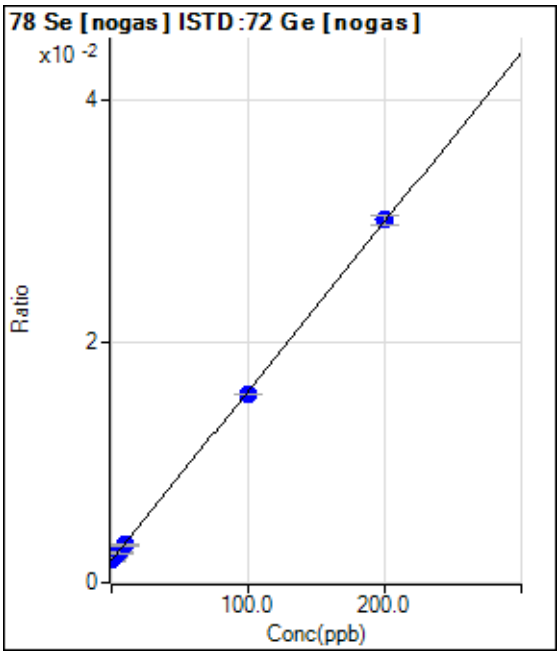
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.280	36.67	0.0000	P	95.1
3	☐	5.000	6.039	123.33	0.0001	P	46.4
4	☐	10.000	8.158	163.34	0.0002	P	52.6
5	☐	100.000	94.145	1686.78	0.0020	P	8.8
6	☐	200.000	203.001	3570.42	0.0042	P	4.4
7	☐	1.000					

y = 2.0791E-005 * x + 1.5315E-005
R = 0.9994
DL = 1.914
BEC = 0.7367

Weight: <None>
Min Conc: <None>

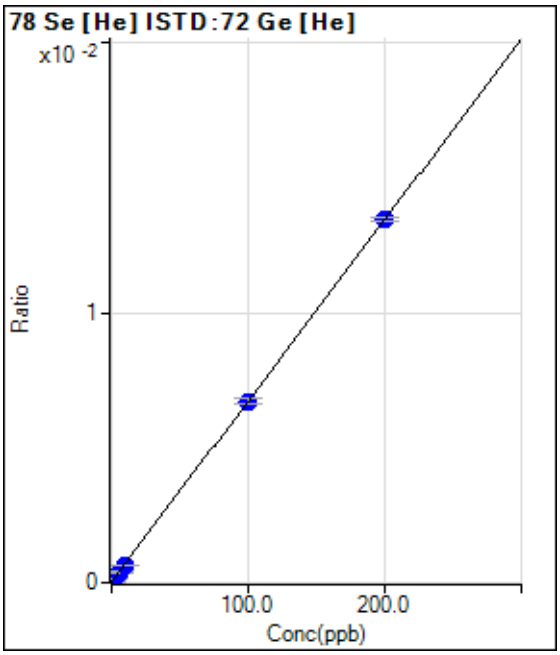


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7314.97	0.0019	P	4.5
2	☐	2.000	1.108	7931.86	0.0020	P	1.7
3	☐	5.000	4.500	9656.06	0.0025	P	2.9
4	☐	10.000	8.921	12230.96	0.0031	P	3.4
5	☐	100.000	98.011	60975.57	0.0156	P	0.7
6	☐	200.000	201.070	116199.24	0.0301	P	2.5
7	☐	1.000					

y = 1.4031E-004 * x + 0.0019
R = 0.9999
DL = 1.787
BEC = 13.27

Weight: <None>
Min Conc: <None>

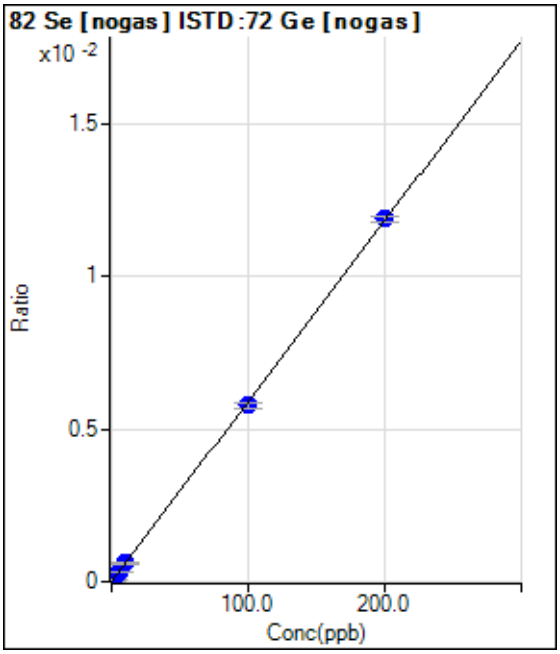
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0000	P	55.5
2	☐	2.000	2.023	146.67	0.0002	P	5.1
3	☐	5.000	5.059	325.33	0.0004	P	14.3
4	☐	10.000	9.270	575.34	0.0007	P	4.7
5	☐	100.000	99.954	5753.59	0.0067	P	3.2
6	☐	200.000	200.058	11331.55	0.0134	P	1.0
7	☐	1.000					

y = 6.7040E-005 * x + 3.2111E-005
R = 1.0000
DL = 0.7979
BEC = 0.479

Weight: <None>
Min Conc: <None>

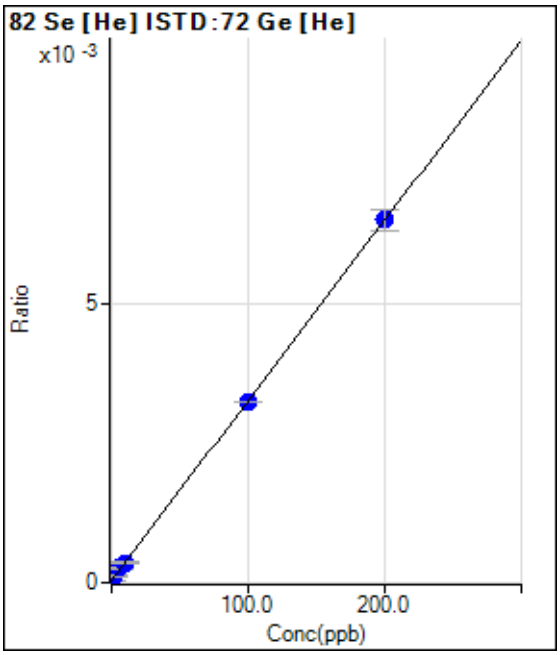


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.31	0.0000	P	187.6
2	☐	2.000	1.264	328.36	0.0001	P	20.6
3	☐	5.000	5.323	1248.84	0.0003	P	6.9
4	☐	10.000	10.102	2372.27	0.0006	P	6.0
5	☐	100.000	97.596	22496.75	0.0058	P	3.7
6	☐	200.000	201.196	45857.48	0.0119	P	1.2
7	☐	1.000					

y = 5.8938E-005 * x + 8.9059E-006
R = 0.9999
DL = 0.8503
BEC = 0.1511

Weight: <None>
Min Conc: <None>

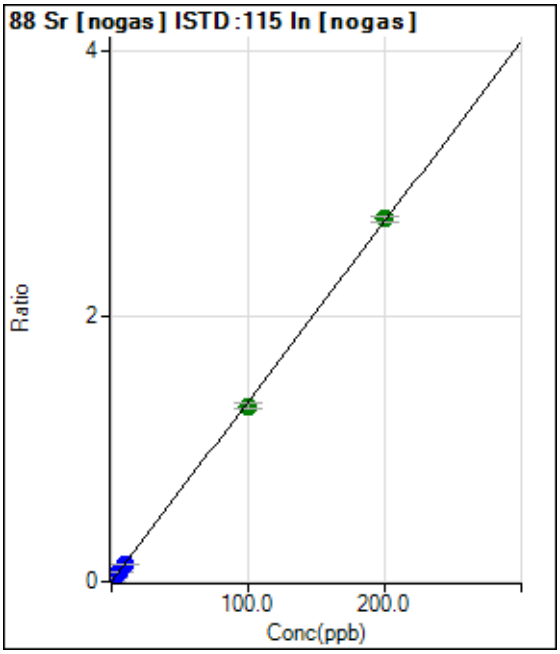
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	17.2
2	☐	2.000	2.489	103.33	0.0001	P	40.0
3	☐	5.000	6.842	226.68	0.0003	P	13.9
4	☐	10.000	9.976	316.68	0.0004	P	5.7
5	☐	100.000	99.290	2766.93	0.0032	P	0.3
6	☐	200.000	200.305	5470.93	0.0065	P	5.6
7	☐	1.000					

y = 3.2226E-005 * x + 3.8258E-005
R = 0.9999
DL = 0.6126
BEC = 1.187

Weight: <None>
Min Conc: <None>

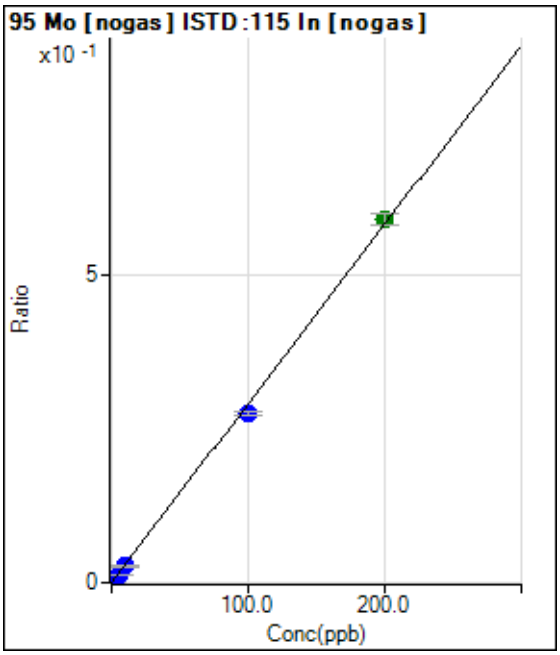


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2473.54	0.0010	P	7.3
2	☐	2.000	1.868	68172.60	0.0263	P	2.2
3	☐	5.000	4.822	169917.38	0.0664	P	1.8
4	☐	10.000	9.412	332978.82	0.1287	P	0.2
5	☐	100.000	97.253	3329681.31	1.3211	A	3.1
6	☐	200.000	201.409	6699556.15	2.7349	A	1.7
7	☐	1.000					

y = 0.0136 * x + 9.6567E-004
R = 0.9999
DL = 0.01549
BEC = 0.07114

Weight: <None>
Min Conc: <None>

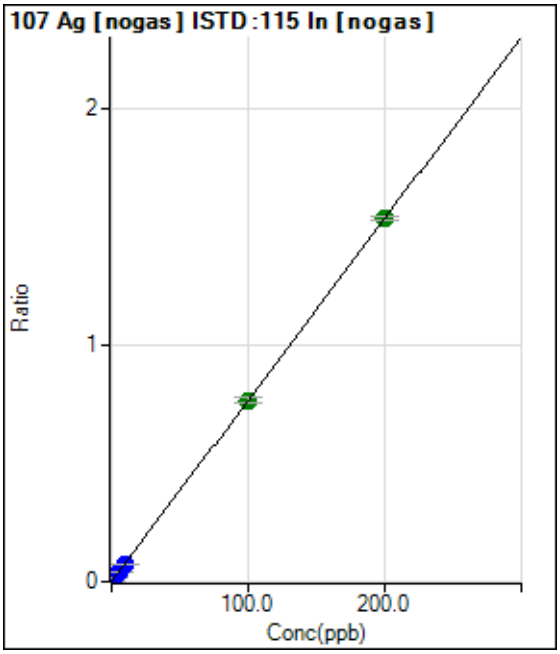
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.02	0.0003	P	15.6
2	☐	2.000	1.862	14699.59	0.0057	P	1.6
3	☐	5.000	4.668	35345.30	0.0138	P	3.1
4	☐	10.000	9.115	69103.44	0.0267	P	2.2
5	☐	100.000	94.837	694353.66	0.2755	P	2.1
6	☐	200.000	202.635	1441229.93	0.5883	A	3.2
7	☐	1.000					

y = 0.0029 * x + 2.7292E-004
R = 0.9995
DL = 0.04406
BEC = 0.09405

Weight: <None>
Min Conc: <None>

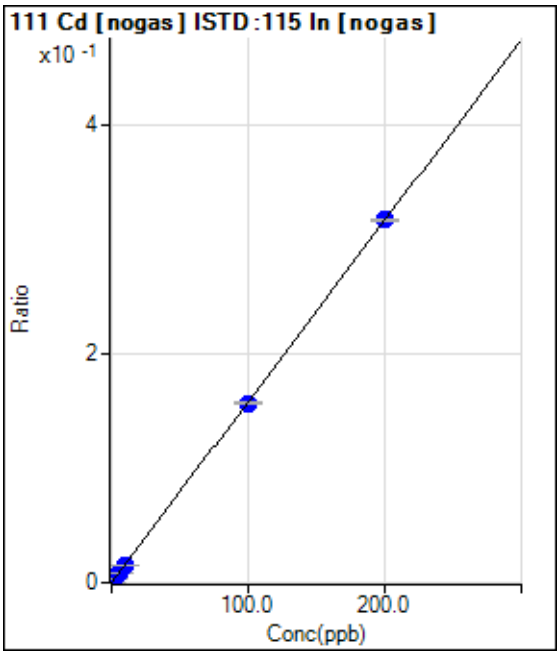


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	486.68	0.0002	P	8.2
2	☐	2.000	1.890	38081.24	0.0147	P	1.0
3	☐	5.000	5.005	98777.17	0.0386	P	2.0
4	☐	10.000	9.595	191019.50	0.0739	P	0.8
5	☐	100.000	100.053	1936464.61	0.7684	A	3.8
6	☐	200.000	199.995	3761709.00	1.5357	A	1.1
7	☐	1.000					

y = 0.0077 * x + 1.8989E-004
R = 1.0000
DL = 0.00608
BEC = 0.02473

Weight: <None>
Min Conc: <None>

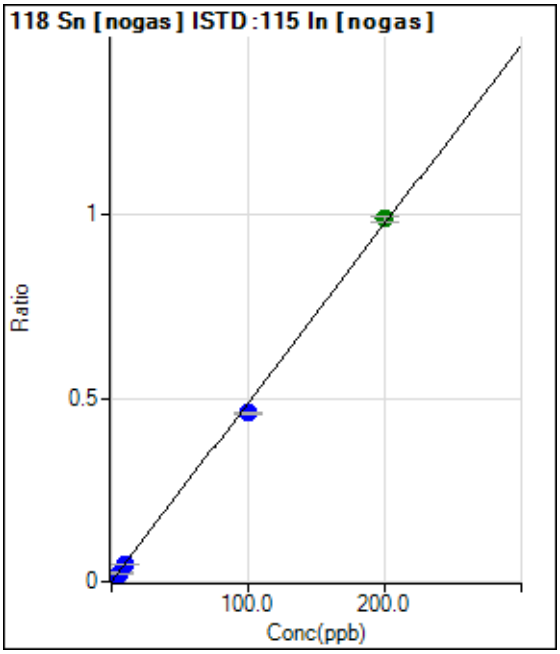
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	148.5
2	☐	2.000	1.886	7748.51	0.0030	P	4.8
3	☐	5.000	4.848	19617.78	0.0077	P	2.0
4	☐	10.000	9.594	39220.51	0.0152	P	1.8
5	☐	100.000	99.004	394178.07	0.1564	P	0.9
6	☐	200.000	200.523	775811.71	0.3167	P	0.4
7	☐	1.000					

y = 0.0016 * x + 1.3109E-005
R = 1.0000
DL = 0.03697
BEC = 0.008301

Weight: <None>
Min Conc: <None>

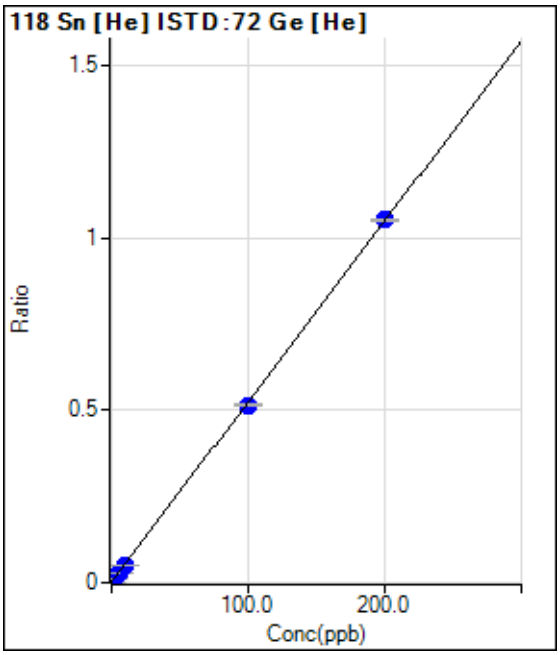


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2256.86	0.0009	P	7.7
2	☐	2.000	1.828	25345.37	0.0098	P	4.9
3	☐	5.000	4.638	60079.80	0.0235	P	2.2
4	☐	10.000	9.224	118561.24	0.0458	P	1.2
5	☐	100.000	94.448	1162620.53	0.4612	P	1.1
6	☐	200.000	202.825	2423136.32	0.9893	A	1.7
7	☐	1.000					

y = 0.0049 * x + 8.8016E-004
R = 0.9995
DL = 0.04164
BEC = 0.1806

Weight: <None>
Min Conc: <None>

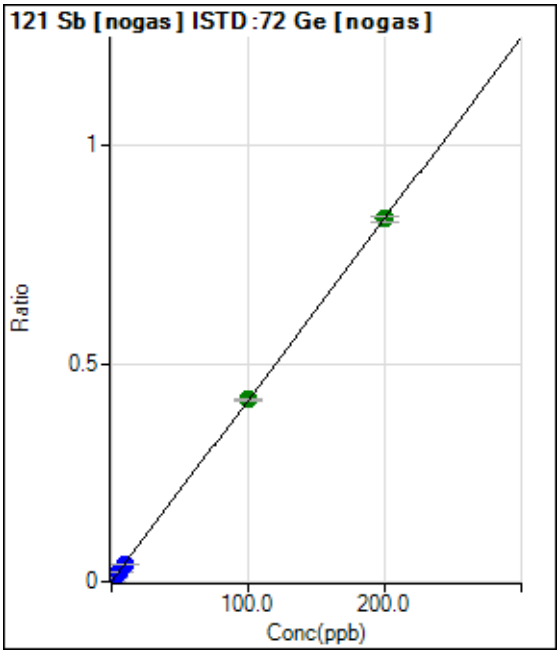
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.04	0.0010	P	6.3
2	☐	2.000	1.881	9466.04	0.0108	P	4.8
3	☐	5.000	4.852	23118.91	0.0264	P	5.3
4	☐	10.000	9.535	44831.04	0.0509	P	3.2
5	☐	100.000	98.335	440947.16	0.5161	P	1.8
6	☐	200.000	200.860	887683.40	1.0531	P	0.7
7	☐	1.000					

y = 0.0052 * x + 9.7563E-004
R = 1.0000
DL = 0.03501
BEC = 0.1862

Weight: <None>
Min Conc: <None>

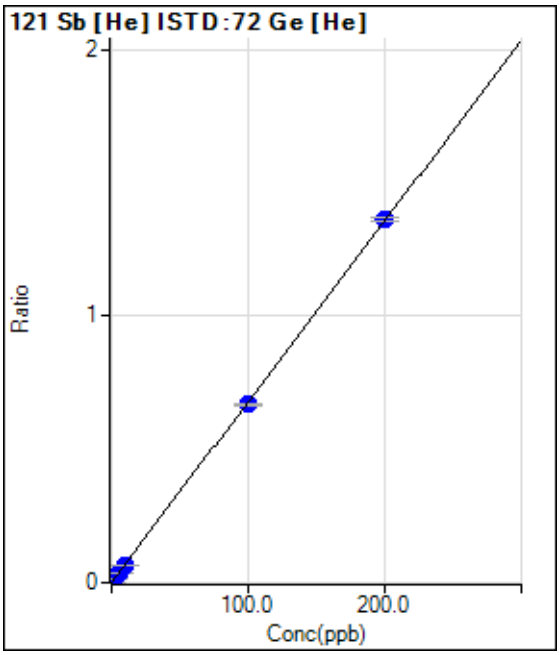


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1873.47	0.0005	P	7.9
2	☐	2.000	1.805	31381.92	0.0080	P	2.2
3	☐	5.000	4.804	79158.51	0.0204	P	2.8
4	☐	10.000	9.231	152587.21	0.0388	P	1.2
5	☐	100.000	100.179	1627968.10	0.4169	A	1.0
6	☐	200.000	199.956	3213213.28	0.8316	A	1.8
7	☐	1.000					

y = 0.0042 * x + 4.7668E-004
R = 1.0000
DL = 0.02721
BEC = 0.1147

Weight: <None>
Min Conc: <None>

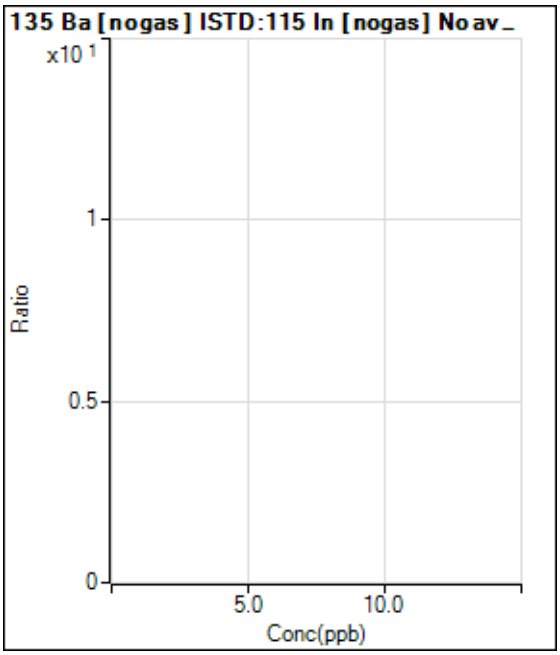
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.04	0.0010	P	15.0
2	☐	2.000	1.900	12104.41	0.0138	P	2.7
3	☐	5.000	4.872	29755.52	0.0340	P	1.5
4	☐	10.000	9.373	56752.24	0.0645	P	1.2
5	☐	100.000	98.626	571558.97	0.6689	P	1.5
6	☐	200.000	200.723	1146633.08	1.3604	P	1.1
7	☐	1.000					

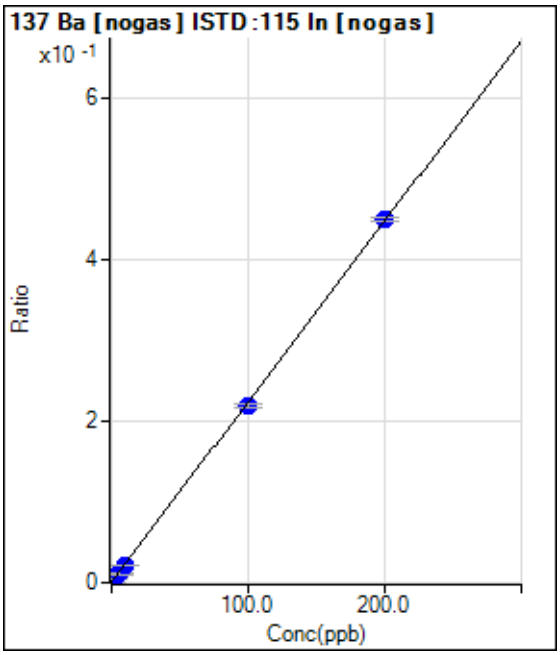
y = 0.0068 * x + 9.7603E-004
R = 1.0000
DL = 0.06504
BEC = 0.1441

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					

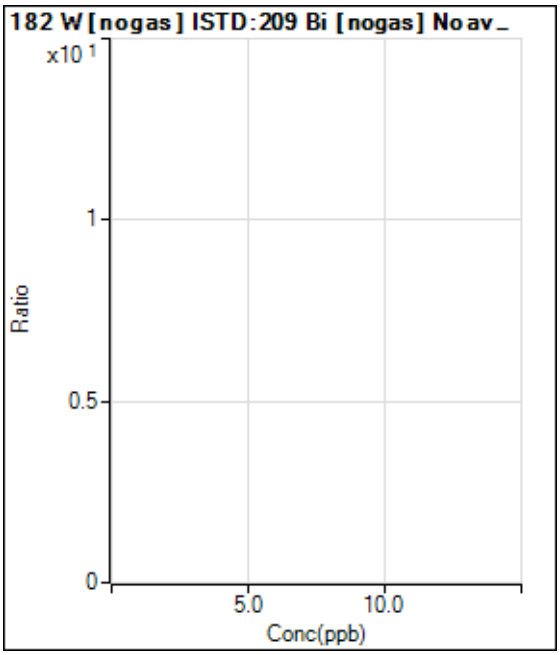
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.75	0.0006	P	4.2
2	☐	2.000	1.764	11630.80	0.0045	P	6.2
3	☐	5.000	4.558	27452.25	0.0107	P	4.7
4	☐	10.000	9.213	54646.61	0.0211	P	3.2
5	☐	100.000	98.215	554365.77	0.2199	P	2.2
6	☐	200.000	200.945	1100866.23	0.4494	P	1.1
7	☐	1.000					

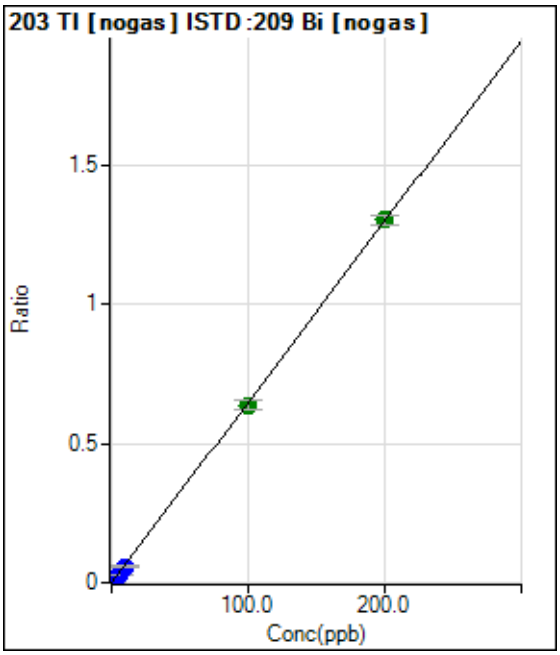
y = 0.0022 * x + 5.5261E-004
R = 0.9999
DL = 0.03139
BEC = 0.2474

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					

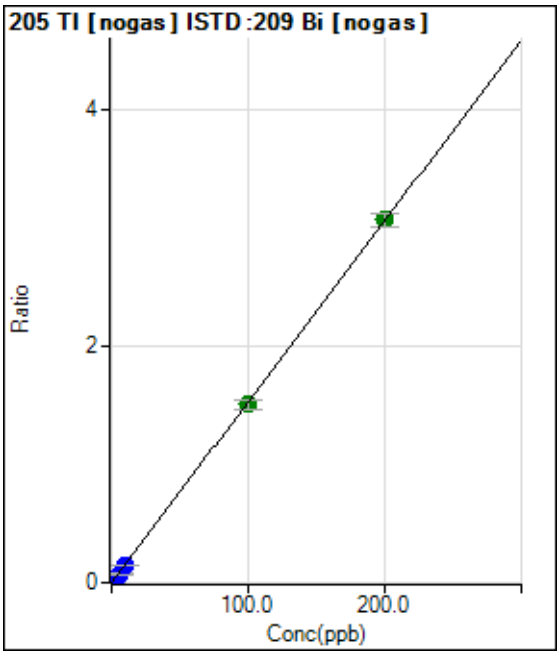
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.01	0.0001	P	18.4
2	☐	2.000	1.779	31200.03	0.0116	P	8.9
3	☐	5.000	4.621	80122.56	0.0301	P	5.2
4	☐	10.000	8.990	157907.67	0.0584	P	5.6
5	☐	100.000	98.215	1688947.58	0.6366	A	5.2
6	☐	200.000	200.954	3344785.47	1.3025	A	2.5
7	☐	1.000					

y = 0.0065 * x + 1.0376E-004
R = 0.9999
DL = 0.008817
BEC = 0.01601

Weight: <None>
Min Conc: <None>

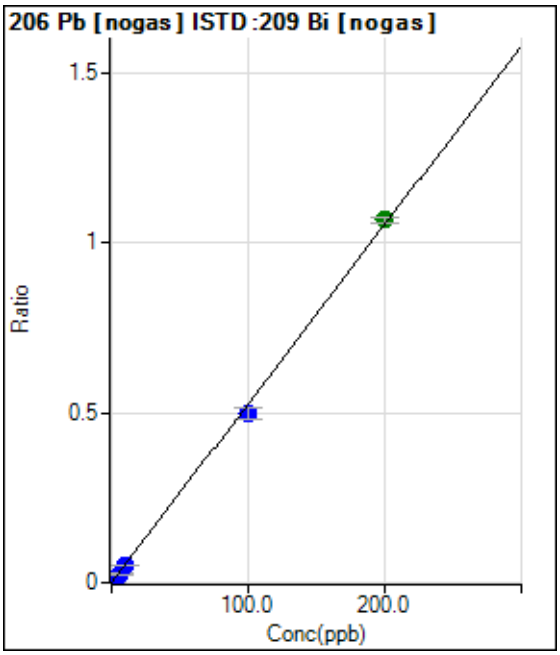


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	633.36	0.0002	P	10.5
2	☐	2.000	1.814	74994.99	0.0279	P	6.3
3	☐	5.000	4.727	192952.90	0.0724	P	5.6
4	☐	10.000	9.284	384196.48	0.1420	P	3.2
5	☐	100.000	98.721	3998930.98	1.5074	A	5.2
6	☐	200.000	200.684	7867790.30	3.0640	A	3.8
7	☐	1.000					

y = 0.0153 * x + 2.3453E-004
R = 1.0000
DL = 0.004859
BEC = 0.01536

Weight: <None>
Min Conc: <None>

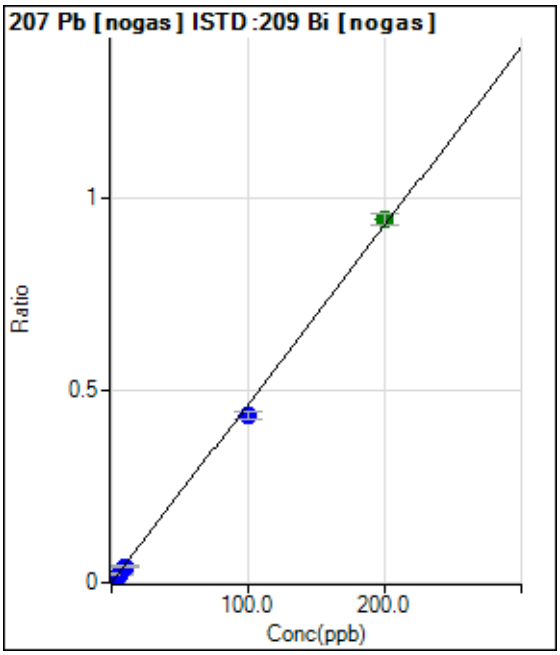
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	6.4
2	☐	2.000	1.865	26769.01	0.0100	P	6.4
3	☐	5.000	4.737	66876.62	0.0251	P	4.6
4	☐	10.000	9.261	132308.92	0.0489	P	2.6
5	☐	100.000	94.479	1318845.19	0.4972	P	5.9
6	☐	200.000	202.805	2740749.85	1.0671	A	1.8
7	☐	1.000					

y = 0.0053 * x + 1.6199E-004
R = 0.9995
DL = 0.005866
BEC = 0.03079

Weight: <None>
Min Conc: <None>

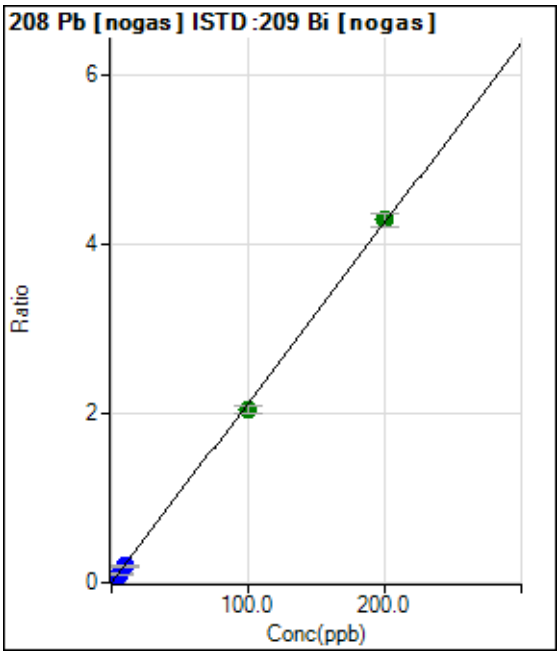


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0001	P	24.8
2	☐	2.000	1.845	23347.00	0.0087	P	7.3
3	☐	5.000	4.749	59194.52	0.0222	P	4.3
4	☐	10.000	9.122	115100.15	0.0425	P	3.0
5	☐	100.000	93.683	1155709.85	0.4356	P	5.1
6	☐	200.000	203.210	2425992.52	0.9448	A	3.3
7	☐	1.000					

y = 0.0046 * x + 1.2442E-004
R = 0.9993
DL = 0.01992
BEC = 0.02677

Weight: <None>
Min Conc: <None>

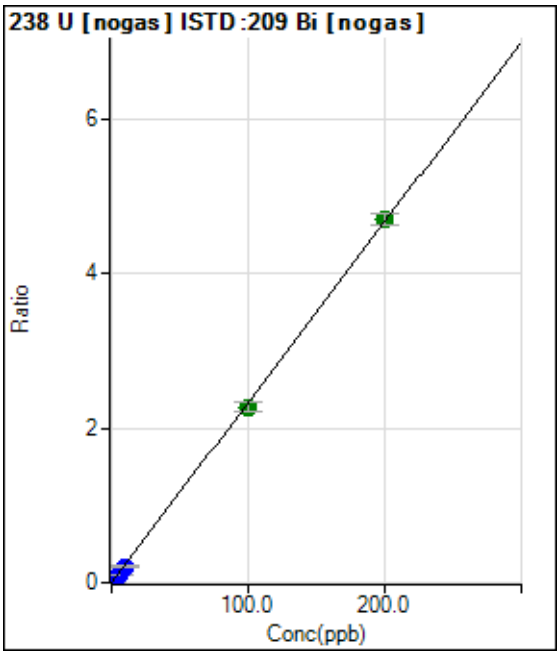
Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1670.07	0.0006	P	8.3
2	☐	2.000	1.853	107386.85	0.0400	P	7.0
3	☐	5.000	4.724	269431.70	0.1011	P	4.8
4	☐	10.000	9.196	530848.73	0.1962	P	3.1
5	☐	100.000	96.648	5454169.16	2.0556	A	4.5
6	☐	200.000	201.725	11015722.07	4.2898	A	3.6
7	☐	1.000					

y = 0.0213 * x + 6.1882E-004
R = 0.9998
DL = 0.007264
BEC = 0.0291

Weight: <None>
Min Conc: <None>

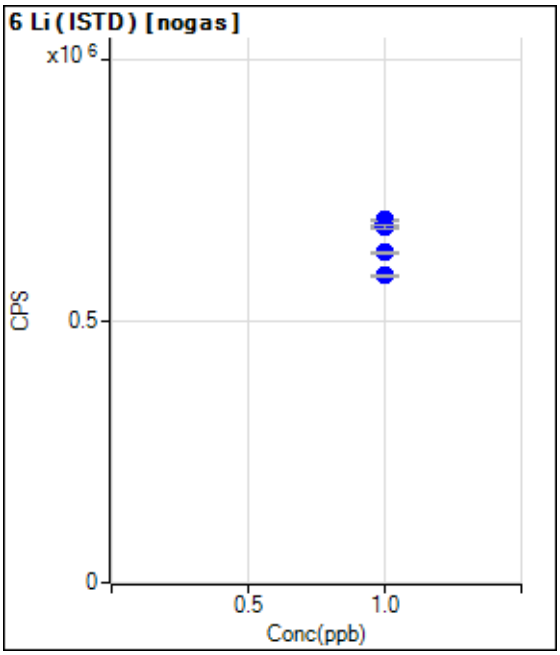


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	65.6
2	☐	2.000	1.787	112141.60	0.0417	P	3.9
3	☐	5.000	4.634	288591.97	0.1082	P	2.6
4	☐	10.000	9.067	572727.60	0.2117	P	5.3
5	☐	100.000	97.436	6035133.04	2.2747	A	5.6
6	☐	200.000	201.340	12069391.49	4.7004	A	3.1
7	☐	1.000					

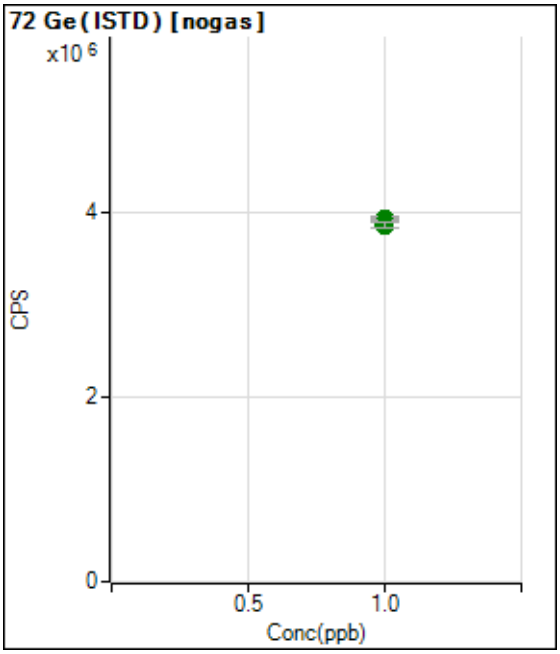
y = 0.0233 * x + 2.6671E-005
R = 0.9999
DL = 0.002247
BEC = 0.001142

Weight: <None>
Min Conc: <None>

Calibration for 279_ICV.d

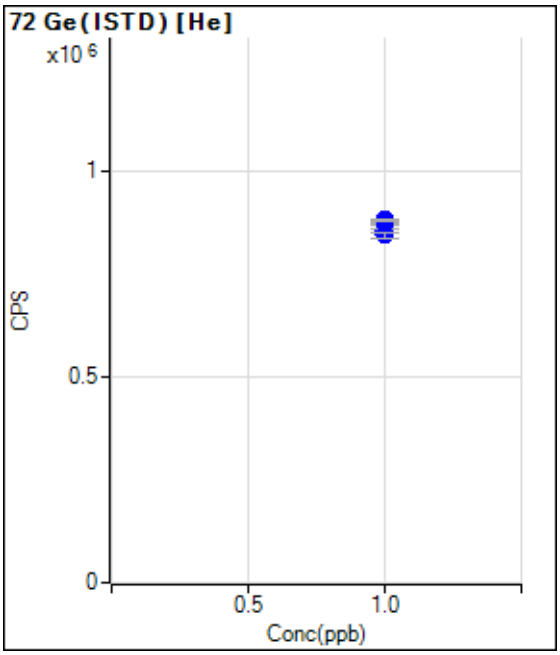


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		694483.00		P	0.3
2	☐	1.000		688608.84		P	0.9
3	☐	1.000		682074.45		P	0.5
4	☐	1.000		681891.58		P	1.0
5	☐	1.000		631647.58		P	0.1
6	☐	1.000		588341.51		P	0.6
7	☐	1.000					

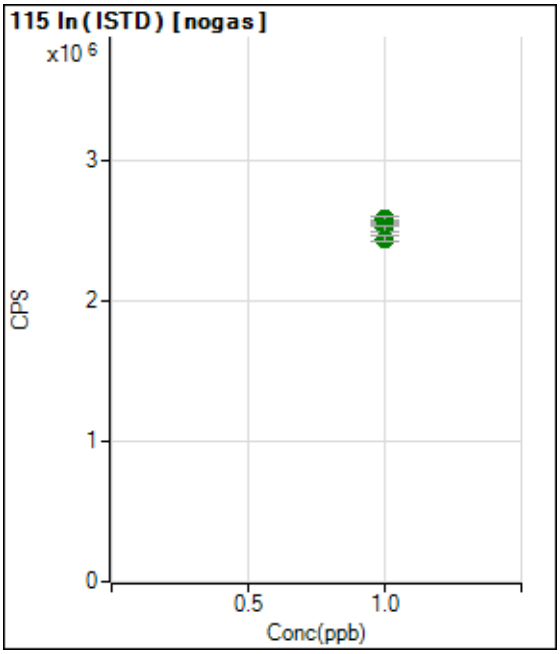


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3930774.11		A	1.2
2	☐	1.000		3932575.15		A	0.8
3	☐	1.000		3872818.07		A	1.7
4	☐	1.000		3928214.74		A	1.8
5	☐	1.000		3905288.38		A	0.5
6	☐	1.000		3864380.36		A	1.4
7	☐	1.000					

Calibration for 279_ICV.d

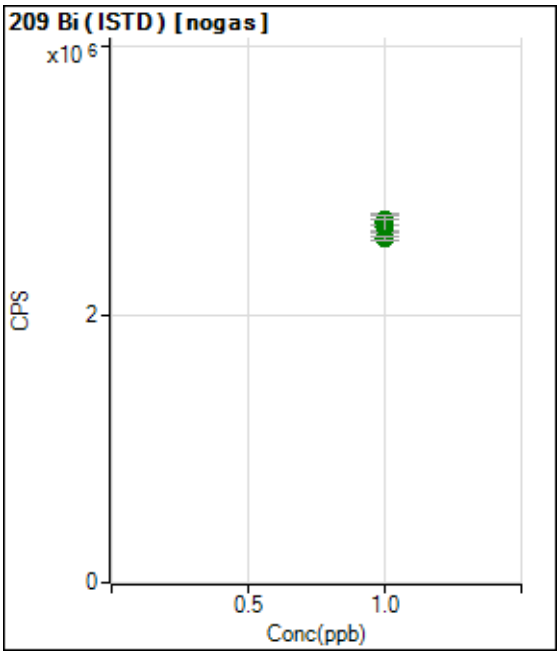


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		871164.98		P	0.4
2	☐	1.000		874271.92		P	1.2
3	☐	1.000		875933.06		P	1.0
4	☐	1.000		880536.19		P	0.9
5	☐	1.000		854529.47		P	1.2
6	☐	1.000		842945.30		P	1.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2562896.75		A	1.1
2	☐	1.000		2590207.11		A	1.4
3	☐	1.000		2558252.28		A	0.7
4	☐	1.000		2586645.63		A	2.2
5	☐	1.000		2520995.82		A	1.2
6	☐	1.000		2449817.93		A	1.8
7	☐	1.000					

Calibration for 279_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2693631.26		A	5.0
2	☐	1.000		2689858.97		A	5.0
3	☐	1.000		2668919.65		A	3.7
4	☐	1.000		2707932.15		A	2.9
5	☐	1.000		2656401.26		A	3.8
6	☐	1.000		2568615.64		A	1.6
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	014CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:04:33-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	218	2.64
B	11	1	nogas	122808	0.00
Al	27	1	nogas	37718	0.01
P	31	1	nogas	43537	0.00
Ca	44	1	nogas	28031	0.01
Ti	47	1	nogas	120	36.08
Cr	52	1	nogas	23188	0.00
Co	59	1	nogas	500	2.88
Cu	63	1	nogas	4032	0.11
Zn	66	1	nogas	1263	0.19
Se	77	1	nogas	7762	0.02
Se	82	1	nogas	5	27005.55
Sr	88	1	nogas	2027	0.47
Mo	95	1	nogas	1037	0.33
Ag	107	1	nogas	1927	3.87
Cd	111	1	nogas	40	108.25
Sn	118	1	nogas	3951	0.20
Sb	121	1	nogas	7512	0.01
Ba	137	1	nogas	1197	0.48
Tl	205	1	nogas	783	2.88
Pb	208	1	nogas	4764	0.29
Li	7	1	nogas	93045	0.00
Si	28	1	nogas	1878823	0.00
Na	23	2	He	49307	0.00
Mg	24	2	He	657	0.48
Al	27	2	He	783	1.54
K	39	2	He	37685	0.00
Ca	43	2	He	20	250.00
Ca	44	2	He	473	5.32
V	51	2	He	984	0.71
Cr	52	2	He	1397	0.40
Mn	55	2	He	370	7.30
Fe	56	2	He	10183	0.04
Co	59	2	He	160	3.91
Ni	60	2	He	233	10.12
Cu	63	2	He	1730	0.42
Zn	66	2	He	403	4.09
As	75	2	He	97	22.28

Calibration Blank Report

Sb	121	2	He	2664	0.11
Se	78	2	He	23	192.02

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	4912785	2.28
In	115	1	nogas	3074865	2.62
Li	6	1	nogas	992920	2.10
Bi	209	1	nogas	3087510	6.73
Ge	72	2	He	1094372	0.61

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:06:54-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	11674	0.01
B	11	1	nogas	160639	0.00
Al	27	1	nogas	78522	0.00
P	31	1	nogas	52827	0.00
Ca	44	1	nogas	164378	0.00
Ti	47	1	nogas	4404	0.10
Cr	52	1	nogas	80782	0.00
Co	59	1	nogas	65965	0.00
Cu	63	1	nogas	39302	0.00
Zn	66	1	nogas	11144	0.01
Se	77	1	nogas	8385	0.04
Se	82	1	nogas	485	5.30
Sr	88	1	nogas	80878	0.00
Mo	95	1	nogas	17332	0.01
Ag	107	1	nogas	47457	0.01
Cd	111	1	nogas	9309	0.04
Sn	118	1	nogas	30771	0.01
Sb	121	1	nogas	43224	0.00
Ba	137	1	nogas	12962	0.01
Tl	205	1	nogas	86311	0.00
Pb	208	1	nogas	124242	0.00
Si	28	1	nogas	2004886	0.00
Na	23	2	He	334738	0.00
Mg	24	2	He	161303	0.00
Al	27	2	He	1347	0.97
K	39	2	He	153494	0.00
Ca	43	2	He	417	5.16
Ca	44	2	He	6831	0.09
V	51	2	He	14480	0.01
Cr	52	2	He	18716	0.02
Mn	55	2	He	10580	0.05
Fe	56	2	He	1477907	0.00
Co	59	2	He	28412	0.01
Ni	60	2	He	7999	0.04
Cu	63	2	He	22127	0.02
Zn	66	2	He	3840	0.21

Calibration Standard Report

As	75	2	He	1903	0.27
Sb	121	2	He	15347	0.01
Se	78	2	He	179	8.21

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4899447	0.72	4912785	99.73	70	120	
In	115	1	nogas	3082261	2.40	3074865	100.24	70	120	
Li	6	1	nogas	976189	1.01	992920	98.31	70	120	
Bi	209	1	nogas	3138765	6.43	3087510	101.66	70	120	
Ge	72	2	He	1092624	0.60	1094372	99.84	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:09:16-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	29643	0.00
B	11	1	nogas	210568	0.00
Al	27	1	nogas	147025	0.00
P	31	1	nogas	68952	0.00
Ca	44	1	nogas	374473	0.00
Ti	47	1	nogas	11147	0.02
Cr	52	1	nogas	170179	0.00
Co	59	1	nogas	168225	0.00
Cu	63	1	nogas	96228	0.00
Zn	66	1	nogas	26189	0.01
Se	77	1	nogas	8912	0.08
Se	82	1	nogas	1315	1.10
Sr	88	1	nogas	206587	0.00
Mo	95	1	nogas	42992	0.00
Ag	107	1	nogas	117897	0.00
Cd	111	1	nogas	23102	0.01
Sn	118	1	nogas	72349	0.00
Sb	121	1	nogas	98998	0.00
Ba	137	1	nogas	32955	0.00
Tl	205	1	nogas	218651	0.00
Pb	208	1	nogas	303574	0.00
Si	28	1	nogas	2154503	0.00
Na	23	2	He	773407	0.00
Mg	24	2	He	406701	0.00
Al	27	2	He	2507	0.11
K	39	2	He	333080	0.00
Ca	43	2	He	1003	1.24
Ca	44	2	He	17315	0.02
V	51	2	He	35321	0.01
Cr	52	2	He	45469	0.00
Mn	55	2	He	26893	0.01
Fe	56	2	He	3784262	0.00
Co	59	2	He	72730	0.00
Ni	60	2	He	19644	0.01
Cu	63	2	He	53318	0.00
Zn	66	2	He	9012	0.04

Calibration Standard Report

As	75	2	He	4813	0.04
Sb	121	2	He	36599	0.01
Se	78	2	He	372	2.51

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4894904	1.25	4912785	99.64	70	120	
In	115	1	nogas	3100268	2.08	3074865	100.83	70	120	
Li	6	1	nogas	998615	1.04	992920	100.57	70	120	
Bi	209	1	nogas	3093921	3.28	3087510	100.21	70	120	
Ge	72	2	He	1080191	0.59	1094372	98.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:11:37-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	58244	0.00
B	11	1	nogas	301045	0.00
Al	27	1	nogas	251742	0.00
P	31	1	nogas	96026	0.00
Ca	44	1	nogas	700041	0.00
Ti	47	1	nogas	22127	0.02
Cr	52	1	nogas	309081	0.00
Co	59	1	nogas	327339	0.00
Cu	63	1	nogas	182709	0.00
Zn	66	1	nogas	50560	0.01
Se	77	1	nogas	10013	0.07
Se	82	1	nogas	2709	0.28
Sr	88	1	nogas	393514	0.00
Mo	95	1	nogas	83706	0.00
Ag	107	1	nogas	228856	0.00
Cd	111	1	nogas	46324	0.00
Sn	118	1	nogas	141309	0.00
Sb	121	1	nogas	189471	0.00
Ba	137	1	nogas	63001	0.00
Tl	205	1	nogas	429916	0.00
Pb	208	1	nogas	601607	0.00
Si	28	1	nogas	2363969	0.00
Na	23	2	He	1428454	0.00
Mg	24	2	He	779304	0.00
Al	27	2	He	4374	0.08
K	39	2	He	610704	0.00
Ca	43	2	He	1973	0.32
Ca	44	2	He	33090	0.00
V	51	2	He	67917	0.00
Cr	52	2	He	85094	0.00
Mn	55	2	He	51034	0.01
Fe	56	2	He	7137582	0.00
Co	59	2	He	139288	0.00
Ni	60	2	He	37522	0.00
Cu	63	2	He	101700	0.00
Zn	66	2	He	17629	0.02

Calibration Standard Report

As	75	2	He	9265	0.01
Sb	121	2	He	68417	0.00
Se	78	2	He	707	0.47

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4872499	1.03	4912785	99.18	70	120	
In	115	1	nogas	3066952	1.02	3074865	99.74	70	120	
Li	6	1	nogas	977874	1.37	992920	98.48	70	120	
Bi	209	1	nogas	3126729	3.92	3087510	101.27	70	120	
Ge	72	2	He	1077960	0.44	1094372	98.50	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:13:59-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	591018	0.00
B	11	1	nogas	2017066	0.00
Al	27	1	nogas	2170869	0.00
P	31	1	nogas	555288	0.00
Ca	44	1	nogas	6778476	0.00
Ti	47	1	nogas	217449	0.00
Cr	52	1	nogas	2861770	0.00
Co	59	1	nogas	3234050	0.00
Cu	63	1	nogas	1724742	0.00
Zn	66	1	nogas	495655	0.00
Se	77	1	nogas	28039	0.01
Se	82	1	nogas	27470	0.01
Sr	88	1	nogas	4026158	0.00
Mo	95	1	nogas	837057	0.00
Ag	107	1	nogas	2264517	0.00
Cd	111	1	nogas	461753	0.00
Sn	118	1	nogas	1361529	0.00
Sb	121	1	nogas	1874566	0.00
Ba	137	1	nogas	625569	0.00
Tl	205	1	nogas	4397090	0.00
Pb	208	1	nogas	6145530	0.00
Si	28	1	nogas	6987491	0.00
Na	23	2	He	14087126	0.00
Mg	24	2	He	7732422	0.00
Al	27	2	He	36475	0.00
K	39	2	He	5749483	0.00
Ca	43	2	He	19450	0.02
Ca	44	2	He	328695	0.00
V	51	2	He	681907	0.00
Cr	52	2	He	848089	0.00
Mn	55	2	He	512859	0.00
Fe	56	2	He	72123646	0.00
Co	59	2	He	1374516	0.00
Ni	60	2	He	367823	0.00
Cu	63	2	He	1001567	0.00
Zn	66	2	He	169526	0.00

Calibration Standard Report

As	75	2	He	93356	0.00
Sb	121	2	He	670162	0.00
Se	78	2	He	7083	0.04

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4790190	1.22	4912785	97.50	70	120	
In	115	1	nogas	2991018	2.23	3074865	97.27	70	120	
Li	6	1	nogas	914946	1.28	992920	92.15	70	120	
Bi	209	1	nogas	3009258	4.73	3087510	97.47	70	120	
Ge	72	2	He	1069856	0.83	1094372	97.76	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:16:14-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1162482	0.00
B	11	1	nogas	3896006	0.00
Al	27	1	nogas	4247772	0.00
P	31	1	nogas	1084904	0.00
Ca	44	1	nogas	13779654	0.00
Ti	47	1	nogas	442161	0.00
Cr	52	1	nogas	5709473	0.00
Co	59	1	nogas	6394591	0.00
Cu	63	1	nogas	3394665	0.00
Zn	66	1	nogas	961871	0.00
Se	77	1	nogas	48461	0.01
Se	82	1	nogas	55374	0.00
Sr	88	1	nogas	8036926	0.00
Mo	95	1	nogas	1743938	0.00
Ag	107	1	nogas	4515829	0.00
Cd	111	1	nogas	929262	0.00
Sn	118	1	nogas	2754919	0.00
Sb	121	1	nogas	3699651	0.00
Ba	137	1	nogas	1240845	0.00
Tl	205	1	nogas	8679909	0.00
Pb	208	1	nogas	12040318	0.00
Si	28	1	nogas	12119859	0.00
Na	23	2	He	27382432	0.00
Mg	24	2	He	15182954	0.00
Al	27	2	He	71605	0.00
K	39	2	He	11250062	0.00
Ca	43	2	He	37906	0.00
Ca	44	2	He	657067	0.00
V	51	2	He	1367567	0.00
Cr	52	2	He	1718416	0.00
Mn	55	2	He	1003556	0.00
Fe	56	2	He	141540928	0.00
Co	59	2	He	2681823	0.00
Ni	60	2	He	718321	0.00
Cu	63	2	He	1924369	0.00
Zn	66	2	He	330192	0.00

Calibration Standard Report

As	75	2	He	186464	0.00
Sb	121	2	He	1328655	0.00
Se	78	2	He	13757	0.01

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4677861	0.40	4912785	95.22	70	120	
In	115	1	nogas	2907441	0.54	3074865	94.56	70	120	
Li	6	1	nogas	849627	0.79	992920	85.57	70	120	
Bi	209	1	nogas	2948272	6.71	3087510	95.49	70	120	
Ge	72	2	He	1040233	1.75	1094372	95.05	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	021_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:20:52-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	105.166	1.140	612902	0.84	100	105.2	90	110	
B	11	1	nogas	509.614	1.950	2038790	1.48	500	101.9	90	110	
Al	27	1	nogas	101.143	1.709	2227973	0.93	100	101.1	90	110	
P	31	1	nogas	501.007	1.426	577273	1.27	500	100.2	90	110	
Ca	44	1	nogas	9981.701	1.495	7043510	1.09	10000	99.8	90	110	
Ti	47	1	nogas	99.309	0.609	224579	1.48	100	99.3	90	110	
Cr	52	1	nogas	100.167	0.794	2944438	1.52	100	100.2	90	110	
Co	59	1	nogas	101.188	1.344	3327157	1.64	100	101.2	90	110	
Cu	63	1	nogas	104.386	1.605	1825051	0.84	100	104.4	90	110	
Zn	66	1	nogas	102.656	1.352	510101	2.10	100	102.7	90	110	
Se	77	1	nogas	94.935	0.769	27615	1.53	100	94.9	90	110	
Se	82	1	nogas	98.859	4.430	28041	4.73	100	98.9	90	110	
Sr	88	1	nogas	97.314	2.110	4041438	1.17	100	97.3	90	110	
Mo	95	1	nogas	94.617	3.105	845817	2.16	100	94.6	90	110	
Ag	107	1	nogas	99.108	3.058	2313337	2.10	100	99.1	90	110	
Cd	111	1	nogas	99.546	2.081	477183	1.13	100	99.5	90	110	
Sn	118	1	nogas	96.575	1.596	1372629	0.94	100	96.6	90	110	
Sb	121	1	nogas	102.224	0.888	1947779	0.39	100	102.2	90	110	
Ba	137	1	nogas	100.783	2.609	647429	1.90	100	100.8	90	110	
Tl	205	1	nogas	103.066	7.286	4619722	1.87	100	103.1	90	110	
Pb	208	1	nogas	100.170	7.829	6236745	1.47	100	100.2	90	110	
U	238	1	nogas	95.236	7.083	6505235	1.39	100	95.2	90	110	
Li	7	1	nogas	107.175	0.984	2188660	1.98	100	107.2	90	110	
Si	28	1	nogas	6076.094	1.690	8282897	2.34	5000	121.5	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	104.962	8.229	1982475	1.97	100	105.0	90	110	
Na	23	2	He	10419.151	1.564	14753045	0.91	10000	104.2	90	110	
Mg	24	2	He	10390.111	1.347	8132361	2.14	10000	103.9	90	110	
Al	27	2	He	103.258	1.767	38403	0.86	100	103.3	90	110	
K	39	2	He	10378.556	1.968	6036409	0.88	10000	103.8	90	110	
Ca	43	2	He	10647.804	0.096	20849	1.68	10000	106.5	90	110	
Ca	44	2	He	10234.816	2.958	345528	1.62	10000	102.3	90	110	
V	51	2	He	100.615	1.249	706533	1.06	100	100.6	90	110	
Cr	52	2	He	99.112	1.324	873127	2.01	100	99.1	90	110	
Mn	55	2	He	101.982	2.422	527977	0.70	100	102.0	90	110	
Fe	56	2	He	10382.369	3.449	75745541	2.04	10000	103.8	90	110	
Co	59	2	He	103.280	1.148	1429802	0.88	100	103.3	90	110	
Ni	60	2	He	102.804	2.806	381126	1.37	100	102.8	90	110	
Cu	63	2	He	105.165	1.648	1048309	0.68	100	105.2	90	110	
Zn	66	2	He	104.045	0.320	177514	1.45	100	104.0	90	110	
As	75	2	He	105.391	1.628	100971	0.32	100	105.4	90	110	
Sn	118	2	He	99.424	2.871	525197	1.57	100	99.4	90	110	
Sb	121	2	He	101.816	2.564	696907	0.91	100	101.8	90	110	
Se	78	2	He	102.245	2.627	7273	0.99	100	102.2	90	110	
Ti	47	2	He	100.005	2.471	22394	0.89	100	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4822267	1.06	4912785	98.16	70	120	
In	115	1	nogas	3020567	0.95	3074865	98.23	70	120	
Li	6	1	nogas	861830	1.96	992920	86.80	70	120	
Bi	209	1	nogas	3051530	6.68	3087510	98.83	70	120	
Ge	72	2	He	1074473	1.75	1094372	98.18	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	024_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:27:54-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	3335.2	215	18.2	1	
B	11	1	nogas	-0.467	-271.9	118087	2.4	10	
Al	27	1	nogas	0.302	85.2	42863	11.4	5	
P	31	1	nogas	-3.873	-19.7	37999	0.8	10	
Ca	44	1	nogas	0.013	28834.7	27080	8.6	100	
Ti	47	1	nogas	0.046	75.4	217	34.9	2.5	
Cr	52	1	nogas	-0.085	-20.5	19978	1.3	2.5	
Co	59	1	nogas	0.008	148.0	743	51.0	2.5	
Cu	63	1	nogas	-0.024	-72.8	3477	7.3	1	
Zn	66	1	nogas	-0.032	-52.7	1063	6.4	2.5	
Se	77	1	nogas	-1.620	-107.6	7162	3.8	2.5	
Se	82	1	nogas	-0.016	-864.0	2	2476.9	1	
Sr	88	1	nogas	0.012	183.8	2484	36.4	2.5	
Mo	95	1	nogas	0.166	17.6	2507	10.5	2.5	
Ag	107	1	nogas	-0.044	-9.4	863	11.3	2.5	
Cd	111	1	nogas	0.010	218.1	87	118.4	1	
Sn	118	1	nogas	0.052	22.8	4624	3.5	5	
Sb	121	1	nogas	-0.092	-10.0	5548	4.1	2.5	
Ba	137	1	nogas	-0.051	-75.9	850	28.9	2.5	
Tl	205	1	nogas	0.047	8.7	2897	11.1	1	
Pb	208	1	nogas	-0.004	-413.0	4560	20.7	2.5	
U	238	1	nogas	0.008	88.8	663	76.1	2.5	
Si	28	1	nogas	75.607	102.0	1895163	4.2	5	ICB Main CR1 Failed
Na	23	2	He	0.296	466.4	48218	2.6	100	
Mg	24	2	He	2.234	45.6	2357	31.8	100	
Al	27	2	He	0.336	40.1	880	4.1	5	
K	39	2	He	-2.891	-124.7	34880	4.4	100	
Ca	43	2	He	9.056	185.3	37	87.7	100	
Ca	44	2	He	2.165	293.5	530	39.3	100	
V	51	2	He	0.007	209.3	1006	9.5	2.5	
Cr	52	2	He	0.032	94.7	1633	15.0	2.5	
Mn	55	2	He	0.057	37.3	650	15.6	2.5	
Fe	56	2	He	2.520	40.2	27976	24.5	100	
Co	59	2	He	0.021	36.8	440	22.4	2.5	
Ni	60	2	He	0.038	43.6	363	15.2	2.5	
Cu	63	2	He	-0.009	-200.8	1587	10.0	1	
Zn	66	2	He	-0.027	-39.5	347	6.0	2.5	
As	75	2	He	0.069	78.0	159	30.6	2.5	

Initial Calibration Blank (ICB) Report

Sb	121	2	He	-0.100	-49.9	1910	16.8	2.5	
Se	78	2	He	0.211	106.5	37	41.3	1	
Ti	47	2	He	0.002	1204.5	17	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	4746010	1.40	4912785	96.61	70	120	
In	115	1	nogas	3022141	0.26	3074865	98.29	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	971190	2.25	992920	97.81	70	120	
Bi	209	1	nogas	3079709	5.18	3087510	99.75	70	120	
Ge	72	2	He	1061418	1.42	1094372	96.99	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	025ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:31:29-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-31.4	113	24.3	0	ICSA Main CR1 Failed
B	11	1	nogas	3.474	56.5	116766	2.2	0	ICSA Main CR1 Failed
Al	27	1	nogas	92304.238	1.6	1856645519	0.9	0	
P	31	1	nogas	90683.365	1.7	89873992	1.4	0	
Ca	44	1	nogas	95626.675	1.7	62437777	1.4	0	
Ti	47	1	nogas	1936.867	0.7	4065026	1.4	0	
Cr	52	1	nogas	1.109	7.0	51171	4.5	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.327	1.9	10446	1.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.560	4.9	12741	3.4	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.523	5.6	8162	5.5	0	ICSA Main CR1 Failed
Se	77	1	nogas	13.420	9.8	9699	2.1	0	
Se	82	1	nogas	-0.172	-205.4	-39	-237.2	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.924	3.2	36424	1.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2036.874	3.0	15531375	1.9	0	
Ag	107	1	nogas	-0.005	-86.6	1587	4.6	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.472	3.9	10740	3.0	0	
Sn	118	1	nogas	0.081	11.0	4551	1.0	0	ICSA Main CR1 Failed
Sb	121	1	nogas	-0.061	-5.0	5768	0.8	0	ICSA Main CR1 Failed
Ba	137	1	nogas	-0.061	-39.9	707	19.3	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	1.9	1627	11.0	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.026	55.4	5951	3.4	0	ICSA Main CR1 Failed
Si	28	1	nogas	308.959	15.8	2017492	1.9	0	
Na	23	2	He	99305.053	0.8	130171538	0.7	0	
Mg	24	2	He	97911.143	1.9	71133946	1.2	0	
Al	27	2	He	94287.023	1.4	31906191	0.5	0	
K	39	2	He	98979.274	2.1	53153766	0.7	0	
Ca	43	2	He	96827.759	3.0	175822	1.6	0	
Ca	44	2	He	95264.384	2.2	2982564	0.8	0	
V	51	2	He	0.072	19.2	1365	5.4	0	ICSA Main CR1 Failed
Cr	52	2	He	0.886	3.0	8509	2.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.163	12.0	1120	7.9	0	ICSA Main CR1 Failed
Fe	56	2	He	98763.267	0.9	669080097	1.2	0	
Co	59	2	He	0.181	8.5	2477	8.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.208	23.2	930	17.9	0	ICSA Main CR1 Failed
Cu	63	2	He	0.152	11.2	2979	3.7	0	ICSA Main CR1 Failed
Zn	66	2	He	0.328	15.8	887	10.2	0	ICSA Main CR1 Failed
As	75	2	He	0.094	46.4	172	23.4	0	ICSA Main CR1 Failed
Sb	121	2	He	-0.044	-45.0	2150	4.6	0	ICSA Main CR1 Failed
Se	78	2	He	0.435	8.6	49	4.7	0	ICSA Main CR1 Failed
Ti	47	2	He	1921.991	2.1	399320	0.6	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4477592	0.71	4912785	91.14	70	120	

Interference Check Solution A (ICS-A) Report

In	115	1	nogas	2728749	1.83	3074865	88.74	70	120	
Li	6	1	nogas	846346	3.78	992920	85.24	70	120	
Bi	209	1	nogas	2896820	11.69	3087510	93.82	70	120	
Ge	72	2	He	997559	1.55	1094372	91.15	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	026ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:33:49-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	104.384	2.957	544061	0.49	100	104.4	80	120	
B	11	1	nogas	552.059	5.548	1862708	2.68	100	552.1	80	120	
Al	27	1	nogas	91604.868	3.137	1860342746	1.55	100	91604.9	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105793.384	2.692	69738302	0.59	100	105793.4	80	120	
Ti	47	1	nogas	2022.399	2.759	4285065	0.77	100	2022.4	80	120	
Cr	52	1	nogas	96.031	3.166	2646987	1.55	100	96.0	80	120	
Co	59	1	nogas	98.752	2.279	3044088	0.27	100	98.8	80	120	
Cu	63	1	nogas	95.228	1.688	1561496	1.02	100	95.2	80	120	
Zn	66	1	nogas	99.123	2.193	461821	1.70	100	99.1	80	120	
Se	77	1	nogas	128.242	3.613	32469	2.89	100	128.2	80	120	
Se	82	1	nogas	103.610	3.382	27555	3.49	100	103.6	80	120	
Sr	88	1	nogas	102.019	0.895	3806159	1.15	100	102.0	80	120	
Mo	95	1	nogas	2145.458	0.246	16270760	0.12	100	2145.5	80	120	
Ag	107	1	nogas	96.627	0.910	2026325	0.77	100	96.6	80	120	
Cd	111	1	nogas	101.136	0.228	435533	0.48	100	101.1	80	120	
Sn	118	1	nogas	101.199	0.654	1291910	0.42	100	101.2	80	120	
Sb	121	1	nogas	99.270	3.543	1773373	2.14	100	99.3	80	120	
Ba	137	1	nogas	103.731	0.873	598615	1.09	100	103.7	80	120	
Tl	205	1	nogas	100.195	7.162	4034549	0.82	100	100.2	80	120	
Pb	208	1	nogas	98.307	5.924	5503689	1.53	100	98.3	80	120	
U	238	1	nogas	102.430	4.442	6292714	2.39	100	102.4	80	120	
Si	28	1	nogas	4979.370	3.070	6675249	0.32	100	4979.4	80	120	ICSB Main CR1 Failed
Na	23	2	He	109366.709	0.916	142993531	0.39	100	109366.7	80	120	
Mg	24	2	He	108707.764	1.340	78782675	0.90	100	108707.8	80	120	
Al	27	2	He	94081.944	0.637	31758643	0.56	100	94081.9	80	120	ICSB Main CR1 Failed
K	39	2	He	109763.931	1.149	58799762	0.65	100	109763.9	80	120	
Ca	43	2	He	107790.078	1.731	195268	1.33	100	107790.1	80	120	
Ca	44	2	He	104911.007	0.977	3276723	0.79	100	104911.0	80	120	
V	51	2	He	100.471	0.578	653403	0.87	100	100.5	80	120	
Cr	52	2	He	98.178	1.799	800943	1.88	100	98.2	80	120	
Mn	55	2	He	99.260	1.423	475995	1.12	100	99.3	80	120	
Fe	56	2	He	107352.298	1.539	725393003	1.02	100	107352.3	80	120	
Co	59	2	He	98.714	2.104	1265555	1.59	100	98.7	80	120	
Ni	60	2	He	96.351	0.356	330887	0.32	100	96.4	80	120	
Cu	63	2	He	96.171	0.520	888017	0.47	100	96.2	80	120	
Zn	66	2	He	98.863	1.630	156219	1.79	100	98.9	80	120	
As	75	2	He	100.915	0.756	89549	0.55	100	100.9	80	120	
Sb	121	2	He	99.401	0.614	630273	0.39	100	99.4	80	120	
Se	78	2	He	104.435	5.800	6880	5.30	100	104.4	80	120	
Ti	47	2	He	2039.866	0.835	422799	0.50	100	2039.9	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	4522330	2.26	4912785	92.05	70	120	
In	115	1	nogas	2713196	0.25	3074865	88.24	70	120	
Li	6	1	nogas	771031	2.55	992920	77.65	70	120	
Bi	209	1	nogas	2741055	6.39	3087510	88.78	70	120	
Ge	72	2	He	994982	0.53	1094372	90.92	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	028_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:48:06-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.489	1.803	565678	0.47	100	101.5	90	110	
B	11	1	nogas	529.781	1.876	1916597	1.60	500	106.0	90	110	
Al	27	1	nogas	98.831	2.797	2130579	1.96	100	98.8	90	110	
P	31	1	nogas	475.330	1.922	537922	0.93	500	95.1	90	110	
Ca	44	1	nogas	9602.516	1.442	6629942	0.53	10000	96.0	90	110	
Ti	47	1	nogas	97.129	1.858	214870	1.49	100	97.1	90	110	
Cr	52	1	nogas	97.958	1.143	2817466	1.38	100	98.0	90	110	
Co	59	1	nogas	99.470	1.187	3199667	1.05	100	99.5	90	110	
Cu	63	1	nogas	101.637	2.846	1738641	2.70	100	101.6	90	110	
Zn	66	1	nogas	100.240	1.855	487255	1.22	100	100.2	90	110	
Se	77	1	nogas	102.111	2.143	28496	2.41	100	102.1	90	110	
Se	82	1	nogas	99.153	3.782	27507	2.82	100	99.2	90	110	
Sr	88	1	nogas	95.683	1.259	3904229	1.11	100	95.7	90	110	
Mo	95	1	nogas	99.765	2.217	828416	2.00	100	99.8	90	110	
Ag	107	1	nogas	99.165	2.762	2274318	2.68	100	99.2	90	110	
Cd	111	1	nogas	97.812	3.024	460576	1.49	100	97.8	90	110	
Sn	118	1	nogas	97.422	2.417	1360507	2.99	100	97.4	90	110	
Sb	121	1	nogas	100.422	1.375	1872228	1.84	100	100.4	90	110	
Ba	137	1	nogas	98.874	3.089	623958	1.75	100	98.9	90	110	
Tl	205	1	nogas	98.456	5.167	4553135	0.49	100	98.5	90	110	
Pb	208	1	nogas	95.298	5.099	6124102	0.23	100	95.3	90	110	
U	238	1	nogas	93.210	4.724	6569628	0.75	100	93.2	90	110	
Li	7	1	nogas	101.337	3.097	1982823	1.00	100	101.3	90	110	
Si	28	1	nogas	4980.083	2.279	6966056	0.85	5000	99.6	90	110	
Tl	203	1	nogas	98.494	5.932	1919830	1.09	100	98.5	90	110	
Na	23	2	He	9916.715	1.150	13860583	1.96	10000	99.2	90	110	
Mg	24	2	He	9948.884	0.995	7683673	1.16	10000	99.5	90	110	
Al	27	2	He	100.711	1.982	36980	1.16	100	100.7	90	110	
K	39	2	He	9921.187	0.719	5696436	0.67	10000	99.2	90	110	
Ca	43	2	He	10047.316	1.529	19414	2.01	10000	100.5	90	110	
Ca	44	2	He	9869.527	2.856	328841	2.08	10000	98.7	90	110	
V	51	2	He	98.111	0.936	679905	1.21	100	98.1	90	110	
Cr	52	2	He	97.143	1.396	844404	0.58	100	97.1	90	110	
Mn	55	2	He	100.637	1.976	514234	1.88	100	100.6	90	110	
Fe	56	2	He	9985.260	2.326	71902919	2.01	10000	99.9	90	110	
Co	59	2	He	99.089	3.166	1353602	2.73	100	99.1	90	110	
Ni	60	2	He	98.812	1.741	361549	0.92	100	98.8	90	110	
Cu	63	2	He	101.501	1.359	998527	0.77	100	101.5	90	110	
Zn	66	2	He	101.832	0.496	171443	0.47	100	101.8	90	110	
As	75	2	He	100.583	1.751	95102	1.39	100	100.6	90	110	
Sb	121	2	He	100.281	1.954	677472	1.38	100	100.3	90	110	
Se	78	2	He	99.134	1.756	6961	1.05	100	99.1	90	110	
Ti	47	2	He	100.570	1.625	22227	1.57	100	100.6	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	4717717	0.95	4912785	96.03	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2967670	1.70	3074865	96.51	70	120	
Li	6	1	nogas	824311	2.00	992920	83.02	70	120	
Bi	209	1	nogas	3143827	4.98	3087510	101.82	70	120	
Ge	72	2	He	1060214	0.83	1094372	96.88	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	029_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T11:50:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.002	258.8	215	12.3	1	
B	11	1	nogas	-1.478	-118.5	108382	3.8	10	
Al	27	1	nogas	0.287	17.1	42468	2.6	5	
P	31	1	nogas	-4.953	-12.5	36770	0.3	10	
Ca	44	1	nogas	-1.300	-69.1	26119	0.9	100	
Ti	47	1	nogas	0.130	22.9	403	15.1	2.5	
Cr	52	1	nogas	-0.030	-43.3	21483	1.5	2.5	
Co	59	1	nogas	0.014	42.0	940	19.2	2.5	
Cu	63	1	nogas	0.026	97.1	4337	11.1	2	
Zn	66	1	nogas	0.038	40.4	1403	3.9	2.5	
Se	77	1	nogas	0.989	190.4	7688	6.3	2.5	
Se	82	1	nogas	0.641	41.3	185	41.5	2	
Sr	88	1	nogas	0.013	56.2	2517	12.2	2.5	
Mo	95	1	nogas	1.216	10.7	11250	10.1	2.5	
Ag	107	1	nogas	-0.003	-45.2	1797	2.3	2.5	
Cd	111	1	nogas	0.009	99.3	80	50.0	1	
Sn	118	1	nogas	0.438	24.8	10060	15.6	5	
Sb	121	1	nogas	0.084	37.7	8792	5.3	2.5	
Ba	137	1	nogas	-0.090	-15.8	600	14.8	2.5	
Tl	205	1	nogas	0.373	30.0	17521	34.5	1	
Pb	208	1	nogas	0.044	14.9	7451	10.8	2.5	
U	238	1	nogas	0.032	28.5	2294	33.7	2.5	
Si	28	1	nogas	-75.396	-126.5	1733032	5.3	5	
Na	23	2	He	5.656	9.7	55066	2.1	100	
Mg	24	2	He	1.689	2.2	1920	2.3	100	
Al	27	2	He	0.297	35.5	857	5.5	5	
K	39	2	He	-2.550	-46.3	34682	0.6	100	
Ca	43	2	He	11.069	173.0	40	90.1	100	
Ca	44	2	He	0.278	599.7	463	13.2	100	
V	51	2	He	0.020	89.9	1081	12.6	2.5	
Cr	52	2	He	0.042	25.1	1703	6.3	2.5	
Mn	55	2	He	0.038	38.2	547	12.8	2.5	
Fe	56	2	He	3.530	3.7	34917	3.0	100	
Co	59	2	He	0.011	65.9	297	31.3	2.5	
Ni	60	2	He	0.034	74.5	347	26.8	2.5	
Cu	63	2	He	0.036	60.1	2007	9.3	2	

Continuing Calibration Blank (CCB) Report

Zn	66	2	He	0.030	200.1	437	22.2	2.5	
As	75	2	He	0.218	21.9	297	16.2	2.5	
Sb	121	2	He	0.036	50.6	2794	3.3	2.5	
Se	78	2	He	0.677	27.4	69	19.4	2	
Ti	47	2	He	0.003	854.2	17	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	4733651	1.50	4912785	96.35	70	120	
In	115	1	nogas	3009966	0.42	3074865	97.89	70	120	
Li	6	1	nogas	922668	2.57	992920	92.92	70	120	
Bi	209	1	nogas	3019363	5.82	3087510	97.79	70	120	
Ge	72	2	He	1049141	1.31	1094372	95.87	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	040_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:21:06-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.602	1.587	559406	0.74	100	101.6	90	110	
B	11	1	nogas	508.687	0.336	1822081	2.02	500	101.7	90	110	
Al	27	1	nogas	98.562	1.488	2020260	1.87	100	98.6	90	110	
P	31	1	nogas	485.100	1.667	521050	0.45	500	97.0	90	110	
Ca	44	1	nogas	9700.000	2.321	6365661	1.00	10000	97.0	90	110	
Ti	47	1	nogas	98.540	1.789	207212	0.62	100	98.5	90	110	
Cr	52	1	nogas	100.026	1.165	2734258	0.54	100	100.0	90	110	
Co	59	1	nogas	99.570	1.042	3044622	0.43	100	99.6	90	110	
Cu	63	1	nogas	104.027	1.877	1691502	1.34	100	104.0	90	110	
Zn	66	1	nogas	101.500	0.982	469020	0.50	100	101.5	90	110	
Se	77	1	nogas	107.592	1.145	28159	0.69	100	107.6	90	110	
Se	82	1	nogas	102.166	1.892	26946	1.04	100	102.2	90	110	
Sr	88	1	nogas	96.466	1.517	3785563	0.59	100	96.5	90	110	
Mo	95	1	nogas	99.983	1.217	798564	1.76	100	100.0	90	110	
Ag	107	1	nogas	99.026	0.873	2184668	2.17	100	99.0	90	110	
Cd	111	1	nogas	98.998	0.801	448523	2.40	100	99.0	90	110	
Sn	118	1	nogas	96.445	2.055	1295310	2.11	100	96.4	90	110	
Sb	121	1	nogas	101.986	1.271	1807238	0.98	100	102.0	90	110	
Ba	137	1	nogas	100.373	2.913	609253	2.20	100	100.4	90	110	
Tl	205	1	nogas	100.419	5.877	4356721	1.41	100	100.4	90	110	
Pb	208	1	nogas	98.867	5.743	5960605	1.42	100	98.9	90	110	
U	238	1	nogas	96.970	5.489	6411696	0.99	100	97.0	90	110	
Li	7	1	nogas	101.300	2.084	1958165	0.41	100	101.3	90	110	
Si	28	1	nogas	5095.733	1.858	6735993	0.28	5000	101.9	90	110	
Tl	203	1	nogas	101.316	5.591	1853347	1.16	100	101.3	90	110	
Na	23	2	He	10117.179	2.089	13390508	0.99	10000	101.2	90	110	
Mg	24	2	He	10133.453	0.864	7412788	0.70	10000	101.3	90	110	
Al	27	2	He	103.279	1.808	35905	1.77	100	103.3	90	110	
K	39	2	He	10000.448	1.204	5438321	0.77	10000	100.0	90	110	
Ca	43	2	He	10334.827	2.749	18913	2.75	10000	103.3	90	110	
Ca	44	2	He	10114.937	1.564	319228	0.53	10000	101.1	90	110	
V	51	2	He	99.191	0.895	651049	0.33	100	99.2	90	110	
Cr	52	2	He	98.115	0.937	807829	0.32	100	98.1	90	110	
Mn	55	2	He	102.738	1.270	497220	0.17	100	102.7	90	110	
Fe	56	2	He	10252.933	2.171	69926116	0.99	10000	102.5	90	110	
Co	59	2	He	100.957	0.573	1306407	0.70	100	101.0	90	110	
Ni	60	2	He	101.524	1.900	351844	0.86	100	101.5	90	110	
Cu	63	2	He	103.778	2.485	966882	1.37	100	103.8	90	110	
Zn	66	2	He	101.831	1.806	162382	1.41	100	101.8	90	110	
As	75	2	He	102.648	0.827	91931	0.67	100	102.6	90	110	
Sb	121	2	He	102.955	2.918	658666	1.72	100	103.0	90	110	
Se	78	2	He	102.037	1.256	6786	1.10	100	102.0	90	110	
Ti	47	2	He	98.906	2.709	20702	1.58	100	98.9	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	4484905	1.48	4912785	91.29	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2854232	1.59	3074865	92.82	70	120	
Li	6	1	nogas	814269	2.28	992920	82.01	70	120	
Bi	209	1	nogas	2949729	4.66	3087510	95.54	70	120	
Ge	72	2	He	1004255	1.20	1094372	91.77	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:23:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.007	-58.2	153	15.4	1	
B	11	1	nogas	-8.494	-11.7	78778	4.2	10	
Al	27	1	nogas	0.117	52.9	36703	2.0	5	
P	31	1	nogas	-1.381	-58.8	38276	1.1	10	
Ca	44	1	nogas	0.851	73.7	26085	1.9	100	
Ti	47	1	nogas	0.078	32.4	273	20.2	2.5	
Cr	52	1	nogas	-0.020	-96.1	20582	4.0	2.5	
Co	59	1	nogas	0.025	39.8	1230	24.1	2.5	
Cu	63	1	nogas	0.005	559.1	3747	12.0	2	
Zn	66	1	nogas	0.047	141.0	1367	21.8	2.5	
Se	77	1	nogas	2.776	88.1	7615	7.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.407	169.0	112	162.1	2	
Sr	88	1	nogas	0.029	28.0	3067	9.2	2.5	
Mo	95	1	nogas	0.681	14.5	6481	12.1	2.5	
Ag	107	1	nogas	-0.005	-137.1	1683	8.0	2.5	
Cd	111	1	nogas	0.003	163.5	53	47.2	1	
Sn	118	1	nogas	0.388	10.6	8993	7.4	5	
Sb	121	1	nogas	0.138	57.3	9263	13.8	2.5	
Ba	137	1	nogas	-0.071	-6.8	693	5.1	2.5	
Tl	205	1	nogas	0.368	37.2	17110	41.4	1	
Pb	208	1	nogas	0.029	32.6	6447	14.9	2.5	
U	238	1	nogas	0.038	37.4	2667	42.0	2.5	
Si	28	1	nogas	-35.576	-135.8	1676773	2.8	5	
Na	23	2	He	11.977	6.7	61870	1.4	100	
Mg	24	2	He	2.270	13.3	2294	9.7	100	
Al	27	2	He	-0.052	-466.5	710	11.0	5	
K	39	2	He	-1.700	-87.4	34115	1.8	100	
Ca	43	2	He	34.973	39.3	83	30.2	100	
Ca	44	2	He	5.638	33.3	620	9.0	100	
V	51	2	He	0.011	67.9	986	4.9	2.5	
Cr	52	2	He	0.050	24.6	1717	5.7	2.5	
Mn	55	2	He	0.198	14.2	1317	11.1	2.5	
Fe	56	2	He	3.172	6.6	31394	3.9	100	
Co	59	2	He	0.021	28.8	430	18.6	2.5	
Ni	60	2	He	0.022	37.0	293	9.8	2.5	
Cu	63	2	He	0.010	154.5	1707	9.0	2	
Zn	66	2	He	0.086	36.9	513	9.8	2.5	
As	75	2	He	0.186	26.1	259	17.6	2.5	
Sb	121	2	He	0.076	78.5	2967	12.7	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.826	43.3	77	31.9	2	
Ti	47	2	He	-0.026	-182.3	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4472546	1.46	4912785	91.04	70	120	
In	115	1	nogas	2892362	1.67	3074865	94.06	70	120	
Li	6	1	nogas	891026	0.87	992920	89.74	70	120	
Bi	209	1	nogas	2980498	5.59	3087510	96.53	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1017830	0.78	1094372	93.01	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	052_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:49:08-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.975	3.568	558772	0.37	100	101.0	90	110	
B	11	1	nogas	499.746	3.588	1800600	0.16	500	99.9	90	110	
Al	27	1	nogas	98.755	1.432	2064663	0.93	100	98.8	90	110	
P	31	1	nogas	485.767	0.584	532239	0.69	500	97.2	90	110	
Ca	44	1	nogas	9785.196	0.611	6551365	0.60	10000	97.9	90	110	
Ti	47	1	nogas	98.470	1.060	211246	1.00	100	98.5	90	110	
Cr	52	1	nogas	99.759	0.375	2781932	0.29	100	99.8	90	110	
Co	59	1	nogas	100.423	0.952	3132549	1.15	100	100.4	90	110	
Cu	63	1	nogas	103.293	0.709	1713419	0.25	100	103.3	90	110	
Zn	66	1	nogas	101.561	1.165	478744	1.18	100	101.6	90	110	
Se	77	1	nogas	109.541	1.403	29114	0.70	100	109.5	90	110	
Se	82	1	nogas	98.977	0.908	26632	1.04	100	99.0	90	110	
Sr	88	1	nogas	99.037	1.433	3852211	1.03	100	99.0	90	110	
Mo	95	1	nogas	101.913	1.306	806698	0.66	100	101.9	90	110	
Ag	107	1	nogas	101.078	0.846	2209941	0.92	100	101.1	90	110	
Cd	111	1	nogas	100.734	0.977	452272	0.29	100	100.7	90	110	
Sn	118	1	nogas	99.757	0.850	1327807	0.27	100	99.8	90	110	
Sb	121	1	nogas	102.645	1.909	1855544	2.15	100	102.6	90	110	
Ba	137	1	nogas	103.245	1.584	621168	1.05	100	103.2	90	110	
Tl	205	1	nogas	101.899	4.481	4444286	2.38	100	101.9	90	110	
Pb	208	1	nogas	99.392	4.408	6022974	1.57	100	99.4	90	110	
U	238	1	nogas	97.980	3.710	6512313	1.11	100	98.0	90	110	
Li	7	1	nogas	100.881	3.567	1960431	0.31	100	100.9	90	110	
Si	28	1	nogas	5200.641	1.079	6977338	1.07	5000	104.0	90	110	
Tl	203	1	nogas	103.571	2.207	1905231	1.75	100	103.6	90	110	
Na	23	2	He	10148.119	1.834	13447691	0.57	10000	101.5	90	110	
Mg	24	2	He	10104.059	0.743	7400303	0.82	10000	101.0	90	110	
Al	27	2	He	99.297	2.952	34589	2.74	100	99.3	90	110	
K	39	2	He	10081.884	1.672	5488662	0.63	10000	100.8	90	110	
Ca	43	2	He	10127.243	1.012	18556	1.12	10000	101.3	90	110	
Ca	44	2	He	10008.540	2.009	316241	0.68	10000	100.1	90	110	
V	51	2	He	98.133	2.129	644829	0.84	100	98.1	90	110	
Cr	52	2	He	96.232	1.917	793241	0.59	100	96.2	90	110	
Mn	55	2	He	100.433	2.461	486611	1.16	100	100.4	90	110	
Fe	56	2	He	10136.503	2.190	69215724	1.07	10000	101.4	90	110	
Co	59	2	He	102.317	1.913	1325448	0.67	100	102.3	90	110	
Ni	60	2	He	100.989	2.733	350381	1.39	100	101.0	90	110	
Cu	63	2	He	103.100	2.320	961738	1.09	100	103.1	90	110	
Zn	66	2	He	101.591	1.982	162186	1.02	100	101.6	90	110	
As	75	2	He	102.251	0.722	91696	1.93	100	102.3	90	110	
Sb	121	2	He	102.834	2.181	658718	0.85	100	102.8	90	110	
Se	78	2	He	103.002	1.216	6858	0.46	100	103.0	90	110	
Ti	47	2	He	99.364	2.296	20825	2.04	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	4574774	0.64	4912785	93.12	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2828855	0.69	3074865	92.00	70	120	
Li	6	1	nogas	818812	3.18	992920	82.47	70	120	
Bi	209	1	nogas	2962267	3.08	3087510	95.94	70	120	
Ge	72	2	He	1005478	1.33	1094372	91.88	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	053_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T12:51:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.004	-121.9	170	21.2	1	
B	11	1	nogas	-11.146	-2.4	68310	2.5	10	
Al	27	1	nogas	0.133	36.0	37631	3.5	5	
P	31	1	nogas	-3.545	-21.0	36706	1.4	10	
Ca	44	1	nogas	-3.010	-21.4	23939	1.9	100	
Ti	47	1	nogas	0.059	41.8	237	23.3	2.5	
Cr	52	1	nogas	-0.059	-12.9	19817	2.0	2.5	
Co	59	1	nogas	0.013	39.7	880	19.1	2.5	
Cu	63	1	nogas	-0.043	-18.5	3027	3.4	2	
Zn	66	1	nogas	-0.046	-17.8	953	3.7	2.5	
Se	77	1	nogas	1.631	90.7	7502	3.4	2.5	
Se	82	1	nogas	1.071	12.8	292	12.9	2	
Sr	88	1	nogas	0.012	61.8	2377	9.3	2.5	
Mo	95	1	nogas	0.710	23.8	6751	17.9	2.5	
Ag	107	1	nogas	-0.038	-6.4	950	3.8	2.5	
Cd	111	1	nogas	0.005	86.4	63	32.9	1	
Sn	118	1	nogas	0.324	16.1	8185	7.7	5	
Sb	121	1	nogas	0.113	17.5	8966	4.9	2.5	
Ba	137	1	nogas	-0.042	-72.5	873	18.9	2.5	
Tl	205	1	nogas	0.348	39.9	16263	40.9	1	
Pb	208	1	nogas	0.022	39.6	6037	11.1	2.5	
U	238	1	nogas	0.034	37.8	2390	39.3	2.5	
Si	28	1	nogas	-79.239	-78.9	1659305	2.9	5	
Na	23	2	He	3.206	16.3	49214	1.7	100	
Mg	24	2	He	0.844	14.8	1213	7.8	100	
Al	27	2	He	-0.269	-109.1	623	15.7	5	
K	39	2	He	-6.344	-22.4	30986	2.3	100	
Ca	43	2	He	8.319	39.2	33	17.3	100	
Ca	44	2	He	0.049	4974.9	433	17.3	100	
V	51	2	He	0.013	100.0	983	8.2	2.5	
Cr	52	2	He	0.032	49.3	1533	7.9	2.5	
Mn	55	2	He	0.027	15.7	467	4.5	2.5	
Fe	56	2	He	1.783	8.3	21389	4.9	100	
Co	59	2	He	0.006	55.0	227	19.9	2.5	
Ni	60	2	He	0.015	100.0	263	18.7	2.5	
Cu	63	2	He	-0.027	-49.2	1333	9.5	2	

Continuing Calibration Blank (CCB) Report

Zn	66	2	He	-0.026	-135.1	327	17.7	2.5	
As	75	2	He	0.193	17.9	260	11.4	2.5	
Sb	121	2	He	0.076	36.2	2917	6.4	2.5	
Se	78	2	He	0.616	31.3	61	21.0	2	
Ti	47	2	He	0.023	367.8	20	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4542870	0.93	4912785	92.47	70	120	
In	115	1	nogas	2915801	2.61	3074865	94.83	70	120	
Li	6	1	nogas	882708	3.52	992920	88.90	70	120	
Bi	209	1	nogas	3002669	3.58	3087510	97.25	70	120	
Ge	72	2	He	998881	0.43	1094372	91.27	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:17:18-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	101.440	2.181	546458	1.36	100	101.4	90	110	
B	11	1	nogas	504.504	1.666	1768871	2.25	500	100.9	90	110	
Al	27	1	nogas	96.392	1.675	1992106	2.61	100	96.4	90	110	
P	31	1	nogas	478.546	0.406	518605	0.98	500	95.7	90	110	
Ca	44	1	nogas	9818.008	1.457	6494205	1.85	10000	98.2	90	110	
Ti	47	1	nogas	96.915	0.647	205412	1.24	100	96.9	90	110	
Cr	52	1	nogas	97.319	2.146	2681664	2.18	100	97.3	90	110	
Co	59	1	nogas	98.555	0.525	3037199	0.82	100	98.6	90	110	
Cu	63	1	nogas	102.564	1.509	1680787	1.12	100	102.6	90	110	
Zn	66	1	nogas	102.683	0.235	478194	0.97	100	102.7	90	110	
Se	77	1	nogas	130.174	1.852	32833	0.38	100	130.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.073	4.129	26598	3.63	100	100.1	90	110	
Sr	88	1	nogas	97.638	2.380	3821549	0.81	100	97.6	90	110	
Mo	95	1	nogas	100.692	1.317	802126	0.38	100	100.7	90	110	
Ag	107	1	nogas	101.340	2.107	2229487	0.44	100	101.3	90	110	
Cd	111	1	nogas	101.061	1.209	456678	1.83	100	101.1	90	110	
Sn	118	1	nogas	98.561	1.151	1320315	1.00	100	98.6	90	110	
Sb	121	1	nogas	102.803	0.451	1835899	0.63	100	102.8	90	110	
Ba	137	1	nogas	104.886	0.518	635142	1.77	100	104.9	90	110	
Tl	205	1	nogas	104.004	5.936	4516398	2.07	100	104.0	90	110	
Pb	208	1	nogas	101.760	6.416	6138667	1.46	100	101.8	90	110	
U	238	1	nogas	97.515	6.091	6452028	1.14	100	97.5	90	110	
Li	7	1	nogas	99.744	2.207	1887630	0.41	100	99.7	90	110	
Si	28	1	nogas	5167.168	1.157	6860454	1.92	5000	103.3	90	110	
Tl	203	1	nogas	105.314	5.816	1927998	1.18	100	105.3	90	110	
Na	23	2	He	10026.513	1.717	13220959	0.91	10000	100.3	90	110	
Mg	24	2	He	10032.810	1.596	7310736	0.45	10000	100.3	90	110	
Al	27	2	He	98.745	0.938	34235	2.36	100	98.7	90	110	
K	39	2	He	10169.085	1.737	5508253	1.14	10000	101.7	90	110	
Ca	43	2	He	10107.585	1.527	18426	0.27	10000	101.1	90	110	
Ca	44	2	He	9985.156	0.729	313962	0.79	10000	99.9	90	110	
V	51	2	He	99.642	0.915	651529	0.68	100	99.6	90	110	
Cr	52	2	He	97.359	0.237	798626	1.25	100	97.4	90	110	
Mn	55	2	He	101.625	0.421	490015	1.20	100	101.6	90	110	
Fe	56	2	He	10123.149	0.504	68788517	0.98	10000	101.2	90	110	
Co	59	2	He	100.959	2.499	1301467	2.58	100	101.0	90	110	
Ni	60	2	He	102.442	1.438	353697	1.22	100	102.4	90	110	
Cu	63	2	He	104.142	2.209	966617	1.33	100	104.1	90	110	
Zn	66	2	He	102.490	1.117	162809	0.38	100	102.5	90	110	
As	75	2	He	103.438	1.840	92279	1.15	100	103.4	90	110	
Sb	121	2	He	104.200	1.238	664161	0.80	100	104.2	90	110	
Se	78	2	He	102.986	2.828	6823	2.60	100	103.0	90	110	
Ti	47	2	He	97.335	4.676	20291	3.21	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	4519670	1.07	4912785	92.00	70	120	
In	115	1	nogas	2847131	1.68	3074865	92.59	70	120	
Li	6	1	nogas	796660	1.77	992920	80.23	70	120	
Bi	209	1	nogas	2952684	5.02	3087510	95.63	70	120	
Ge	72	2	He	1000458	1.48	1094372	91.42	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:19:34-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.001	-442.4	183	22.2	1	
B	11	1	nogas	-10.939	-5.1	68083	4.1	10	
Al	27	1	nogas	0.132	28.2	37431	0.7	5	
P	31	1	nogas	-4.336	-16.4	35761	2.4	10	
Ca	44	1	nogas	3.043	24.1	27824	0.6	100	
Ti	47	1	nogas	0.110	23.3	343	14.4	2.5	
Cr	52	1	nogas	0.082	25.3	23589	1.8	2.5	
Co	59	1	nogas	0.014	54.2	903	25.3	2.5	
Cu	63	1	nogas	-0.021	-113.0	3367	11.0	2	
Zn	66	1	nogas	0.013	88.5	1227	5.2	2.5	
Se	77	1	nogas	16.406	22.3	10393	7.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	1.051	37.6	285	36.6	2	
Sr	88	1	nogas	0.072	16.6	4777	9.7	2.5	
Mo	95	1	nogas	0.639	22.9	6145	19.0	2.5	
Ag	107	1	nogas	-0.018	-8.5	1393	2.3	2.5	
Cd	111	1	nogas	0.011	62.9	87	35.3	1	
Sn	118	1	nogas	0.315	23.3	7999	12.2	5	
Sb	121	1	nogas	0.000	-32568.0	6915	5.2	2.5	
Ba	137	1	nogas	-0.029	-29.8	947	5.4	2.5	
Tl	205	1	nogas	0.330	37.6	15515	41.5	1	
Pb	208	1	nogas	0.033	34.9	6734	16.3	2.5	
U	238	1	nogas	0.036	37.8	2510	42.6	2.5	
Si	28	1	nogas	-40.121	-121.3	1691064	1.5	5	
Na	23	2	He	51.629	0.3	115511	0.7	100	
Mg	24	2	He	3.432	14.0	3170	10.6	100	
Al	27	2	He	-0.255	-109.5	643	14.4	5	
K	39	2	He	-3.757	-61.4	33163	3.1	100	
Ca	43	2	He	11.502	168.8	40	90.1	100	
Ca	44	2	He	6.547	50.0	653	16.9	100	
V	51	2	He	0.072	7.5	1399	2.3	2.5	
Cr	52	2	He	0.032	85.4	1570	13.8	2.5	
Mn	55	2	He	0.280	6.8	1723	4.7	2.5	
Fe	56	2	He	2.333	10.2	25732	6.1	100	
Co	59	2	He	0.009	16.8	263	7.9	2.5	
Ni	60	2	He	0.011	304.1	257	45.5	2.5	
Cu	63	2	He	0.003	712.2	1643	11.3	2	
Zn	66	2	He	-0.009	-109.6	363	4.2	2.5	
As	75	2	He	0.228	18.1	298	11.9	2.5	
Sb	121	2	He	-0.045	-68.1	2197	8.6	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.909	12.5	83	9.8	2	
Ti	47	2	He	0.083	65.0	33	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	4523555	1.36	4912785	92.08	70	120	
In	115	1	nogas	2893416	0.26	3074865	94.10	70	120	
Li	6	1	nogas	869752	2.06	992920	87.60	70	120	
Bi	209	1	nogas	2995804	5.75	3087510	97.03	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1023313	0.78	1094372	93.51	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:50:07-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	102.231	1.989	587368	0.93	100	102.2	90	110	
B	11	1	nogas	517.285	2.062	1931428	1.35	500	103.5	90	110	
Al	27	1	nogas	101.823	2.109	2199413	1.58	100	101.8	90	110	
P	31	1	nogas	494.829	1.845	559638	1.23	500	99.0	90	110	
Ca	44	1	nogas	9971.093	0.470	6900424	0.47	10000	99.7	90	110	
Ti	47	1	nogas	100.736	1.660	223376	0.81	100	100.7	90	110	
Cr	52	1	nogas	100.695	0.903	2902543	1.08	100	100.7	90	110	
Co	59	1	nogas	100.871	2.124	3252358	1.56	100	100.9	90	110	
Cu	63	1	nogas	102.723	0.785	1761495	1.06	100	102.7	90	110	
Zn	66	1	nogas	103.408	1.452	503842	0.90	100	103.4	90	110	
Se	77	1	nogas	144.129	2.151	37238	1.52	100	144.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.962	1.222	28081	0.59	100	101.0	90	110	
Sr	88	1	nogas	98.938	1.074	4042547	0.37	100	98.9	90	110	
Mo	95	1	nogas	100.839	0.344	838531	0.60	100	100.8	90	110	
Ag	107	1	nogas	100.083	1.437	2298557	1.19	100	100.1	90	110	
Cd	111	1	nogas	100.223	1.083	472693	0.99	100	100.2	90	110	
Sn	118	1	nogas	99.481	1.635	1390882	0.69	100	99.5	90	110	
Sb	121	1	nogas	105.194	1.595	1965438	1.27	100	105.2	90	110	
Ba	137	1	nogas	103.375	0.802	653353	0.42	100	103.4	90	110	
Tl	205	1	nogas	103.328	5.869	4586240	0.43	100	103.3	90	110	
Pb	208	1	nogas	100.374	5.488	6191575	0.77	100	100.4	90	110	
U	238	1	nogas	97.899	5.904	6621613	0.80	100	97.9	90	110	
Li	7	1	nogas	103.649	3.205	2089036	2.50	100	103.6	90	110	
Si	28	1	nogas	5463.157	1.597	7485048	0.92	5000	109.3	90	110	
Tl	203	1	nogas	103.904	6.817	1943635	1.44	100	103.9	90	110	
Na	23	2	He	10259.236	0.717	14371936	0.57	10000	102.6	90	110	
Mg	24	2	He	10234.776	0.154	7924342	1.19	10000	102.3	90	110	
Al	27	2	He	98.747	5.109	36362	4.64	100	98.7	90	110	
K	39	2	He	10025.096	0.698	5770020	0.74	10000	100.3	90	110	
Ca	43	2	He	10431.114	5.305	20198	4.41	10000	104.3	90	110	
Ca	44	2	He	9969.068	1.776	332995	0.96	10000	99.7	90	110	
V	51	2	He	98.271	1.898	682614	0.61	100	98.3	90	110	
Cr	52	2	He	96.938	1.169	844767	1.18	100	96.9	90	110	
Mn	55	2	He	100.160	1.777	513113	2.35	100	100.2	90	110	
Fe	56	2	He	10026.655	2.231	72387651	2.60	10000	100.3	90	110	
Co	59	2	He	103.112	4.628	1411708	3.42	100	103.1	90	110	
Ni	60	2	He	100.764	1.474	369605	0.48	100	100.8	90	110	
Cu	63	2	He	102.395	1.045	1009823	0.42	100	102.4	90	110	
Zn	66	2	He	101.195	2.364	170784	1.86	100	101.2	90	110	
As	75	2	He	101.220	1.007	95942	0.31	100	101.2	90	110	
Sb	121	2	He	101.892	0.938	690044	0.40	100	101.9	90	110	
Se	78	2	He	102.594	0.786	7221	1.25	100	102.6	90	110	
Ti	47	2	He	97.529	2.415	21606	1.42	100	97.5	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	4729089	0.87	4912785	96.26	70	120	
In	115	1	nogas	2971637	0.94	3074865	96.64	70	120	
Li	6	1	nogas	849779	2.57	992920	85.58	70	120	
Bi	209	1	nogas	3019117	5.83	3087510	97.78	70	120	
Ge	72	2	He	1062879	1.28	1094372	97.12	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T13:52:22-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.004	-111.6	177	14.5	1	
B	11	1	nogas	-12.618	-4.8	64744	3.1	10	
Al	27	1	nogas	0.169	19.9	39531	0.4	5	
P	31	1	nogas	-4.859	-15.6	36486	1.6	10	
Ca	44	1	nogas	0.848	185.0	27310	2.7	100	
Ti	47	1	nogas	0.053	37.6	230	19.9	2.5	
Cr	52	1	nogas	0.098	14.8	24897	2.8	2.5	
Co	59	1	nogas	0.011	27.0	817	10.2	2.5	
Cu	63	1	nogas	0.010	86.3	4004	2.4	2	
Zn	66	1	nogas	0.034	73.2	1367	8.0	2.5	
Se	77	1	nogas	23.794	12.3	12271	5.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.759	63.1	215	60.9	2	
Sr	88	1	nogas	0.158	16.6	8272	10.9	2.5	
Mo	95	1	nogas	0.735	22.1	7008	17.6	2.5	
Ag	107	1	nogas	-0.029	-32.0	1177	17.9	2.5	
Cd	111	1	nogas	0.016	86.5	110	55.3	1	
Sn	118	1	nogas	0.299	21.0	7885	9.7	5	
Sb	121	1	nogas	0.250	21.5	11774	7.3	2.5	
Ba	137	1	nogas	-0.044	-18.7	870	6.4	2.5	
Tl	205	1	nogas	0.329	41.9	15786	45.3	1	
Pb	208	1	nogas	0.021	45.1	6101	14.2	2.5	
U	238	1	nogas	0.035	39.5	2527	43.7	2.5	
Si	28	1	nogas	-42.579	-50.6	1749155	2.1	5	
Na	23	2	He	98.185	1.4	182029	1.5	100	
Mg	24	2	He	4.352	11.5	3944	9.9	100	
Al	27	2	He	-0.005	-5654.9	747	14.3	5	
K	39	2	He	-2.012	-12.0	34883	0.8	100	
Ca	43	2	He	19.728	40.2	57	27.0	100	
Ca	44	2	He	1.972	283.7	517	35.1	100	
V	51	2	He	0.113	8.7	1709	4.4	2.5	
Cr	52	2	He	0.016	135.2	1473	12.2	2.5	
Mn	55	2	He	0.048	44.7	593	18.6	2.5	
Fe	56	2	He	2.035	12.7	24183	7.5	100	
Co	59	2	He	0.006	40.0	240	15.0	2.5	
Ni	60	2	He	0.015	57.4	277	11.6	2.5	
Cu	63	2	He	0.020	33.9	1843	3.0	2	
Zn	66	2	He	-0.038	-119.3	323	23.6	2.5	
As	75	2	He	0.219	9.9	297	7.4	2.5	
Sb	121	2	He	0.175	38.5	3707	11.6	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.651	8.8	67	6.2	2	
Ti	47	2	He	-0.012	-436.9	13	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	4684351	1.38	4912785	95.35	70	120	
In	115	1	nogas	2935174	2.58	3074865	95.46	70	120	
Li	6	1	nogas	908425	2.29	992920	91.49	70	120	
Bi	209	1	nogas	3052919	5.14	3087510	98.88	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1045870	0.58	1094372	95.57	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	089_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T14:27:14-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	97.728	3.274	579199	0.10	100	97.7	90	110	
B	11	1	nogas	509.602	3.576	1964277	1.07	500	101.9	90	110	
Al	27	1	nogas	100.928	3.466	2205299	2.12	100	100.9	90	110	
P	31	1	nogas	495.956	2.736	567246	1.07	500	99.2	90	110	
Ca	44	1	nogas	10298.998	2.321	7208085	1.05	10000	103.0	90	110	
Ti	47	1	nogas	102.787	0.944	230579	0.68	100	102.8	90	110	
Cr	52	1	nogas	102.909	2.501	2999767	1.24	100	102.9	90	110	
Co	59	1	nogas	102.227	2.208	3334055	0.71	100	102.2	90	110	
Cu	63	1	nogas	102.948	0.883	1785830	1.28	100	102.9	90	110	
Zn	66	1	nogas	104.109	1.280	513127	0.31	100	104.1	90	110	
Se	77	1	nogas	160.988	6.332	41184	4.42	100	161.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.273	0.891	28495	0.69	100	101.3	90	110	
Sr	88	1	nogas	101.591	2.530	4172102	0.81	100	101.6	90	110	
Mo	95	1	nogas	103.606	2.367	865894	0.70	100	103.6	90	110	
Ag	107	1	nogas	102.488	2.649	2365758	1.18	100	102.5	90	110	
Cd	111	1	nogas	101.944	1.473	483315	0.48	100	101.9	90	110	
Sn	118	1	nogas	103.842	0.686	1459476	1.10	100	103.8	90	110	
Sb	121	1	nogas	103.659	0.861	1959379	0.82	100	103.7	90	110	
Ba	137	1	nogas	103.702	2.603	658765	1.23	100	103.7	90	110	
Tl	205	1	nogas	104.441	4.653	4677926	1.86	100	104.4	90	110	
Pb	208	1	nogas	102.835	4.963	6398803	0.80	100	102.8	90	110	
U	238	1	nogas	101.179	4.747	6905188	1.14	100	101.2	90	110	
Li	7	1	nogas	101.327	3.192	2108576	0.58	100	101.3	90	110	
Si	28	1	nogas	4911.004	4.194	6990107	1.57	5000	98.2	90	110	
Tl	203	1	nogas	105.395	5.790	1989407	1.91	100	105.4	90	110	
Na	23	2	He	10503.406	0.858	14076117	1.13	10000	105.0	90	110	
Mg	24	2	He	10326.459	1.240	7649249	1.85	10000	103.3	90	110	
Al	27	2	He	101.555	1.518	35757	0.19	100	101.6	90	110	
K	39	2	He	10132.173	2.418	5577807	0.87	10000	101.3	90	110	
Ca	43	2	He	10098.314	5.509	18703	3.86	10000	101.0	90	110	
Ca	44	2	He	10043.956	2.915	320921	1.49	10000	100.4	90	110	
V	51	2	He	100.664	0.966	668998	0.69	100	100.7	90	110	
Cr	52	2	He	98.924	0.892	824721	1.07	100	98.9	90	110	
Mn	55	2	He	101.485	1.183	497325	0.47	100	101.5	90	110	
Fe	56	2	He	10358.188	0.988	71539532	1.16	10000	103.6	90	110	
Co	59	2	He	101.992	1.389	1336296	1.02	100	102.0	90	110	
Ni	60	2	He	101.952	2.531	357741	1.52	100	102.0	90	110	
Cu	63	2	He	103.379	1.618	975311	0.26	100	103.4	90	110	
Zn	66	2	He	102.882	1.551	166108	0.69	100	102.9	90	110	
As	75	2	He	100.500	1.864	91128	0.48	100	100.5	90	110	
Sb	121	2	He	101.950	2.443	660444	0.84	100	102.0	90	110	
Se	78	2	He	100.488	0.497	6768	1.96	100	100.5	90	110	
Ti	47	2	He	98.221	3.426	20822	3.85	100	98.2	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	4784202	1.58	4912785	97.38	70	120	
In	115	1	nogas	2987492	1.71	3074865	97.16	70	120	
Li	6	1	nogas	876896	3.24	992920	88.31	70	120	
Bi	209	1	nogas	3043533	4.40	3087510	98.58	70	120	
Ge	72	2	He	1016892	1.65	1094372	92.92	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	090_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T14:29:31-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-237.8	180	29.3	1	
B	11	1	nogas	-8.909	-2.3	79366	2.4	10	
Al	27	1	nogas	0.156	12.8	39518	1.3	5	
P	31	1	nogas	-3.787	-11.8	37845	1.0	10	
Ca	44	1	nogas	1.321	74.8	27821	2.3	100	
Ti	47	1	nogas	0.099	14.3	333	9.2	2.5	
Cr	52	1	nogas	0.112	6.4	25444	0.6	2.5	
Co	59	1	nogas	0.012	41.9	857	18.2	2.5	
Cu	63	1	nogas	0.035	72.8	4457	9.4	2	
Zn	66	1	nogas	0.080	42.5	1600	10.4	2.5	
Se	77	1	nogas	32.478	11.7	14139	5.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.729	39.4	208	38.4	2	
Sr	88	1	nogas	0.115	24.7	6751	17.6	2.5	
Mo	95	1	nogas	0.661	21.2	6605	18.3	2.5	
Ag	107	1	nogas	-0.043	-25.0	870	29.3	2.5	
Cd	111	1	nogas	0.006	287.1	70	124.5	1	
Sn	118	1	nogas	0.378	30.5	9253	18.0	5	
Sb	121	1	nogas	0.338	22.3	13479	10.1	2.5	
Ba	137	1	nogas	-0.053	-3.2	840	1.2	2.5	
Tl	205	1	nogas	0.146	33.5	7412	34.5	1	
Pb	208	1	nogas	0.016	100.7	5797	22.4	2.5	
U	238	1	nogas	0.038	40.7	2757	44.3	2.5	
Si	28	1	nogas	-55.406	-51.7	1747135	1.5	5	
Na	23	2	He	116.353	2.9	202633	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	3.466	1.8	3200	2.2	100	
Al	27	2	He	-0.364	-32.8	607	8.1	5	
K	39	2	He	-4.552	-48.0	32746	2.4	100	
Ca	43	2	He	6.063	316.8	30	120.2	100	
Ca	44	2	He	5.743	49.1	627	13.0	100	
V	51	2	He	0.116	11.9	1695	4.1	2.5	
Cr	52	2	He	0.018	118.8	1453	10.7	2.5	
Mn	55	2	He	0.079	25.4	733	12.4	2.5	
Fe	56	2	He	1.879	13.6	22584	6.6	100	
Co	59	2	He	0.007	132.7	240	50.5	2.5	
Ni	60	2	He	0.018	126.9	283	30.0	2.5	
Cu	63	2	He	0.038	52.4	1983	9.7	2	
Zn	66	2	He	-0.062	-87.1	277	32.8	2.5	
As	75	2	He	0.232	7.3	302	6.4	2.5	
Sb	121	2	He	0.155	19.3	3497	5.2	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.631	31.0	64	21.9	2	
Ti	47	2	He	0.005	2042.2	17	124.9	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	4714792	0.26	4912785	95.97	70	120	
In	115	1	nogas	3021724	0.45	3074865	98.27	70	120	
Li	6	1	nogas	915363	2.28	992920	92.19	70	120	
Bi	209	1	nogas	3064590	4.81	3087510	99.26	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1024080	1.35	1094372	93.58	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	101_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:01:54-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	99.687	4.157	576630	0.63	100	99.7	90	110	
B	11	1	nogas	517.666	4.769	1945561	0.45	500	103.5	90	110	
Al	27	1	nogas	103.775	1.755	2272344	1.21	100	103.8	90	110	
P	31	1	nogas	495.161	2.236	567787	0.16	500	99.0	90	110	
Ca	44	1	nogas	10248.549	1.433	7191789	2.17	10000	102.5	90	110	
Ti	47	1	nogas	101.275	1.465	227730	1.06	100	101.3	90	110	
Cr	52	1	nogas	102.068	1.170	2983162	1.61	100	102.1	90	110	
Co	59	1	nogas	100.341	1.500	3280688	0.65	100	100.3	90	110	
Cu	63	1	nogas	104.116	0.951	1810355	1.09	100	104.1	90	110	
Zn	66	1	nogas	103.670	0.789	512237	1.18	100	103.7	90	110	
Se	77	1	nogas	156.711	2.227	40405	3.12	100	156.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.331	4.036	29133	2.19	100	103.3	90	110	
Sr	88	1	nogas	101.771	1.365	4225899	0.42	100	101.8	90	110	
Mo	95	1	nogas	102.677	1.837	867607	0.55	100	102.7	90	110	
Ag	107	1	nogas	101.710	1.826	2373763	0.71	100	101.7	90	110	
Cd	111	1	nogas	102.182	2.108	489716	0.46	100	102.2	90	110	
Sn	118	1	nogas	103.097	0.785	1464984	1.62	100	103.1	90	110	
Sb	121	1	nogas	104.719	1.740	1983894	0.24	100	104.7	90	110	
Ba	137	1	nogas	102.771	1.738	660071	0.52	100	102.8	90	110	
Tl	205	1	nogas	102.947	3.953	4660570	0.38	100	102.9	90	110	
Pb	208	1	nogas	103.129	2.841	6489082	0.79	100	103.1	90	110	
U	238	1	nogas	102.068	4.160	7041082	0.68	100	102.1	90	110	
Li	7	1	nogas	100.196	6.777	2034255	1.95	100	100.2	90	110	
Si	28	1	nogas	4838.645	2.706	6931430	0.06	5000	96.8	90	110	
Tl	203	1	nogas	103.607	4.990	1976980	1.46	100	103.6	90	110	
Na	23	2	He	10432.309	1.022	13797739	0.44	10000	104.3	90	110	
Mg	24	2	He	10328.901	1.774	7550018	0.99	10000	103.3	90	110	
Al	27	2	He	99.193	0.683	34488	0.46	100	99.2	90	110	
K	39	2	He	10136.185	1.952	5507479	1.00	10000	101.4	90	110	
Ca	43	2	He	10205.763	3.998	18660	2.95	10000	102.1	90	110	
Ca	44	2	He	10006.724	1.602	315602	0.89	10000	100.1	90	110	
V	51	2	He	101.032	0.902	662660	0.55	100	101.0	90	110	
Cr	52	2	He	100.228	0.611	824713	1.64	100	100.2	90	110	
Mn	55	2	He	101.953	0.674	493109	0.76	100	102.0	90	110	
Fe	56	2	He	10464.852	1.177	71327384	0.33	10000	104.6	90	110	
Co	59	2	He	104.137	2.150	1346475	1.32	100	104.1	90	110	
Ni	60	2	He	102.512	2.364	355006	1.34	100	102.5	90	110	
Cu	63	2	He	104.599	1.086	973945	0.13	100	104.6	90	110	
Zn	66	2	He	103.054	0.529	164228	1.34	100	103.1	90	110	
As	75	2	He	102.206	0.285	91477	1.29	100	102.2	90	110	
Sb	121	2	He	103.089	0.851	659168	0.36	100	103.1	90	110	
Se	78	2	He	99.920	1.506	6642	2.43	100	99.9	90	110	
Ti	47	2	He	100.347	1.853	20992	1.83	100	100.3	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	4795903	1.93	4912785	97.62	70	120	
In	115	1	nogas	3020239	1.71	3074865	98.22	70	120	
Li	6	1	nogas	856371	4.74	992920	86.25	70	120	
Bi	209	1	nogas	3075326	3.65	3087510	99.61	70	120	
Ge	72	2	He	1003546	1.07	1094372	91.70	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	102_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:04:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.005	-176.1	173	30.0	1	
B	11	1	nogas	-11.593	-8.0	69165	5.2	10	
Al	27	1	nogas	0.064	75.7	38606	1.7	5	
P	31	1	nogas	-5.958	-5.8	36566	1.6	10	
Ca	44	1	nogas	-0.665	-263.1	27183	4.0	100	
Ti	47	1	nogas	0.069	39.5	273	21.4	2.5	
Cr	52	1	nogas	0.094	6.3	25618	0.5	2.5	
Co	59	1	nogas	0.006	40.2	697	11.1	2.5	
Cu	63	1	nogas	0.029	45.9	4487	5.1	2	
Zn	66	1	nogas	0.043	176.1	1457	24.7	2.5	
Se	77	1	nogas	31.114	6.1	14243	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.796	70.6	232	68.5	2	
Sr	88	1	nogas	0.071	13.1	5021	7.5	2.5	
Mo	95	1	nogas	0.660	11.6	6695	9.5	2.5	
Ag	107	1	nogas	-0.047	-7.0	783	9.7	2.5	
Cd	111	1	nogas	0.006	121.5	70	51.5	1	
Sn	118	1	nogas	0.379	29.3	9396	16.6	5	
Sb	121	1	nogas	0.361	21.5	14286	10.0	2.5	
Ba	137	1	nogas	-0.063	-33.1	783	17.0	2.5	
Tl	205	1	nogas	0.146	42.9	7569	40.7	1	
Pb	208	1	nogas	0.007	338.1	5334	31.2	2.5	
U	238	1	nogas	0.032	27.3	2364	28.6	2.5	
Si	28	1	nogas	-126.265	-44.3	1720001	3.4	5	
Na	23	2	He	102.511	3.8	181036	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	3.411	9.7	3107	7.1	100	
Al	27	2	He	-0.108	-340.9	683	18.1	5	
K	39	2	He	-7.207	-19.2	30782	0.9	100	
Ca	43	2	He	11.946	124.5	40	66.1	100	
Ca	44	2	He	3.324	116.1	540	21.4	100	
V	51	2	He	0.099	4.7	1557	3.0	2.5	
Cr	52	2	He	0.034	58.5	1563	9.1	2.5	
Mn	55	2	He	0.068	40.6	673	21.7	2.5	
Fe	56	2	He	1.802	15.9	21690	8.0	100	
Co	59	2	He	0.006	71.1	230	27.2	2.5	
Ni	60	2	He	0.005	354.2	230	22.6	2.5	
Cu	63	2	He	0.036	30.8	1927	4.5	2	
Zn	66	2	He	-0.021	-257.7	337	24.2	2.5	
As	75	2	He	0.184	28.9	254	20.4	2.5	
Sb	121	2	He	0.244	26.4	4011	9.6	2.5	
Se	78	2	He	0.478	10.8	53	5.8	2	
Ti	47	2	He	0.053	135.4	27	57.3	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4845175	1.04	4912785	98.62	70	120	
In	115	1	nogas	3068539	0.37	3074865	99.79	70	120	
Li	6	1	nogas	915507	1.13	992920	92.20	70	120	
Bi	209	1	nogas	3124769	2.30	3087510	101.21	70	120	
Ge	72	2	He	1007628	1.73	1094372	92.07	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	113_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:31:09-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	100.246	0.425	574188	0.45	100	100.2	90	110	
B	11	1	nogas	510.499	3.523	1901465	3.21	500	102.1	90	110	
Al	27	1	nogas	102.782	0.435	2213562	0.88	100	102.8	90	110	
P	31	1	nogas	496.402	0.625	559697	0.77	500	99.3	90	110	
Ca	44	1	nogas	10168.280	1.169	7015761	0.16	10000	101.7	90	110	
Ti	47	1	nogas	100.711	1.469	222686	1.06	100	100.7	90	110	
Cr	52	1	nogas	102.930	1.456	2957692	0.19	100	102.9	90	110	
Co	59	1	nogas	100.129	0.991	3219284	0.47	100	100.1	90	110	
Cu	63	1	nogas	103.668	1.698	1772744	2.58	100	103.7	90	110	
Zn	66	1	nogas	102.549	0.544	498282	1.51	100	102.5	90	110	
Se	77	1	nogas	165.843	0.436	41604	0.94	100	165.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.780	1.455	28228	1.37	100	101.8	90	110	
Sr	88	1	nogas	102.007	2.264	4151643	2.19	100	102.0	90	110	
Mo	95	1	nogas	102.759	1.030	851107	0.85	100	102.8	90	110	
Ag	107	1	nogas	102.875	1.944	2353450	2.07	100	102.9	90	110	
Cd	111	1	nogas	101.682	1.088	477683	0.67	100	101.7	90	110	
Sn	118	1	nogas	102.244	0.578	1423941	1.16	100	102.2	90	110	
Sb	121	1	nogas	103.102	0.468	1921043	0.93	100	103.1	90	110	
Ba	137	1	nogas	102.791	1.490	647177	2.15	100	102.8	90	110	
Tl	205	1	nogas	104.065	3.945	4614595	0.96	100	104.1	90	110	
Pb	208	1	nogas	102.898	5.128	6337788	1.00	100	102.9	90	110	
U	238	1	nogas	103.249	4.118	6976435	0.77	100	103.2	90	110	
Li	7	1	nogas	101.618	1.928	2043367	1.89	100	101.6	90	110	
Si	28	1	nogas	4920.324	4.129	6900009	1.85	5000	98.4	90	110	
Tl	203	1	nogas	104.364	4.392	1950807	0.62	100	104.4	90	110	
Na	23	2	He	10462.018	0.852	13655534	0.67	10000	104.6	90	110	
Mg	24	2	He	10263.451	1.393	7403856	0.63	10000	102.6	90	110	
Al	27	2	He	102.569	2.433	35170	2.28	100	102.6	90	110	
K	39	2	He	10168.555	0.898	5452812	0.33	10000	101.7	90	110	
Ca	43	2	He	10378.062	3.004	18726	1.80	10000	103.8	90	110	
Ca	44	2	He	10261.328	0.509	319416	1.60	10000	102.6	90	110	
V	51	2	He	102.520	1.175	663562	0.33	100	102.5	90	110	
Cr	52	2	He	100.338	0.114	814750	1.15	100	100.3	90	110	
Mn	55	2	He	102.085	0.755	487260	0.55	100	102.1	90	110	
Fe	56	2	He	10597.604	0.809	71288077	1.06	10000	106.0	90	110	
Co	59	2	He	106.744	0.620	1362195	0.68	100	106.7	90	110	
Ni	60	2	He	105.279	1.561	359814	0.40	100	105.3	90	110	
Cu	63	2	He	107.072	1.064	983900	1.21	100	107.1	90	110	
Zn	66	2	He	103.503	1.689	162758	1.00	100	103.5	90	110	
As	75	2	He	101.849	0.704	89960	1.30	100	101.8	90	110	
Sb	121	2	He	103.385	2.337	652296	1.12	100	103.4	90	110	
Se	78	2	He	103.177	2.605	6769	3.82	100	103.2	90	110	
Ti	47	2	He	101.712	2.293	20995	1.18	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	4715606	1.30	4912785	95.99	70	120	
In	115	1	nogas	2959957	0.90	3074865	96.26	70	120	
Li	6	1	nogas	846884	0.13	992920	85.29	70	120	
Bi	209	1	nogas	3012754	4.34	3087510	97.58	70	120	
Ge	72	2	He	990384	1.22	1094372	90.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	114_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:33:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-69.8	163	15.1	1	
B	11	1	nogas	-12.866	-3.3	63756	2.8	10	
Al	27	1	nogas	0.152	99.7	39776	7.1	5	
P	31	1	nogas	-4.322	-22.9	37614	1.9	10	
Ca	44	1	nogas	-2.672	-54.3	25297	3.4	100	
Ti	47	1	nogas	0.062	27.8	253	14.9	2.5	
Cr	52	1	nogas	0.150	32.6	26766	5.5	2.5	
Co	59	1	nogas	0.015	25.5	970	12.5	2.5	
Cu	63	1	nogas	-0.035	-18.2	3307	2.3	2	
Zn	66	1	nogas	0.007	231.5	1257	5.4	2.5	
Se	77	1	nogas	33.590	6.7	14499	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.736	7.6	212	7.2	2	
Sr	88	1	nogas	0.025	25.6	2997	9.6	2.5	
Mo	95	1	nogas	0.677	25.0	6698	22.6	2.5	
Ag	107	1	nogas	-0.044	-23.9	837	30.7	2.5	
Cd	111	1	nogas	0.011	89.7	93	52.9	1	
Sn	118	1	nogas	0.385	11.1	9279	8.0	5	
Sb	121	1	nogas	0.207	22.9	11147	6.9	2.5	
Ba	137	1	nogas	-0.044	-40.4	887	14.2	2.5	
Tl	205	1	nogas	0.161	37.7	8192	38.1	1	
Pb	208	1	nogas	0.007	196.6	5270	20.9	2.5	
U	238	1	nogas	0.039	37.8	2824	40.6	2.5	
Si	28	1	nogas	-149.584	-35.8	1664086	2.6	5	
Na	23	2	He	44.571	0.8	104521	0.9	100	
Mg	24	2	He	1.397	24.3	1630	14.4	100	
Al	27	2	He	-0.220	-64.5	647	7.6	5	
K	39	2	He	-6.088	-4.8	31433	0.6	100	
Ca	43	2	He	-2.772	-226.4	13	86.6	100	
Ca	44	2	He	1.174	182.8	473	14.1	100	
V	51	2	He	0.112	7.7	1647	3.5	2.5	
Cr	52	2	He	0.034	63.8	1573	12.5	2.5	
Mn	55	2	He	0.045	39.0	560	15.3	2.5	
Fe	56	2	He	1.895	15.2	22357	7.9	100	
Co	59	2	He	0.011	41.2	297	20.3	2.5	
Ni	60	2	He	0.029	8.5	317	3.6	2.5	
Cu	63	2	He	-0.019	-71.0	1413	8.2	2	
Zn	66	2	He	-0.003	-2791.6	367	34.5	2.5	
As	75	2	He	0.208	23.8	277	16.9	2.5	
Sb	121	2	He	0.138	11.5	3337	4.0	2.5	
Se	78	2	He	0.617	8.1	62	5.6	2	
Ti	47	2	He	-0.042	-65.9	7	86.6	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4757016	1.15	4912785	96.83	70	120	
In	115	1	nogas	2997033	1.72	3074865	97.47	70	120	
Li	6	1	nogas	907382	0.73	992920	91.39	70	120	
Bi	209	1	nogas	3085441	4.17	3087510	99.93	70	120	
Ge	72	2	He	1008825	0.94	1094372	92.18	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:52:53-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	100.453	3.885	571727	0.32	100	100.5	90	110	
B	11	1	nogas	509.819	5.725	1886455	2.12	500	102.0	90	110	
Al	27	1	nogas	101.381	1.958	2171959	1.91	100	101.4	90	110	
P	31	1	nogas	494.699	2.372	554837	1.63	500	98.9	90	110	
Ca	44	1	nogas	10209.064	1.774	7005209	0.91	10000	102.1	90	110	
Ti	47	1	nogas	101.194	2.709	222515	1.89	100	101.2	90	110	
Cr	52	1	nogas	101.412	1.409	2898608	0.91	100	101.4	90	110	
Co	59	1	nogas	100.977	2.425	3228674	1.82	100	101.0	90	110	
Cu	63	1	nogas	104.544	0.720	1777782	1.23	100	104.5	90	110	
Zn	66	1	nogas	103.245	1.283	498891	1.34	100	103.2	90	110	
Se	77	1	nogas	134.872	3.001	35031	1.70	100	134.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.169	3.930	27900	3.13	100	101.2	90	110	
Sr	88	1	nogas	100.034	2.171	4065371	0.83	100	100.0	90	110	
Mo	95	1	nogas	104.450	0.235	863972	1.14	100	104.5	90	110	
Ag	107	1	nogas	101.688	0.862	2323077	0.52	100	101.7	90	110	
Cd	111	1	nogas	101.030	0.574	474007	1.25	100	101.0	90	110	
Sn	118	1	nogas	101.867	1.274	1416777	1.53	100	101.9	90	110	
Sb	121	1	nogas	106.447	1.576	1972188	1.03	100	106.4	90	110	
Ba	137	1	nogas	101.702	2.325	639349	1.51	100	101.7	90	110	
Tl	205	1	nogas	104.535	6.662	4656968	2.47	100	104.5	90	110	
Pb	208	1	nogas	102.716	5.110	6361043	0.88	100	102.7	90	110	
U	238	1	nogas	101.314	3.405	6884300	1.17	100	101.3	90	110	
Li	7	1	nogas	100.597	4.697	2010530	1.11	100	100.6	90	110	
Si	28	1	nogas	4870.053	2.205	6811732	1.25	5000	97.4	90	110	
Tl	203	1	nogas	103.947	4.097	1953832	1.50	100	103.9	90	110	
Na	23	2	He	10318.160	0.984	13616825	0.21	10000	103.2	90	110	
Mg	24	2	He	10227.497	1.881	7459155	1.01	10000	102.3	90	110	
Al	27	2	He	98.497	1.610	34178	2.21	100	98.5	90	110	
K	39	2	He	9970.408	1.934	5405883	0.90	10000	99.7	90	110	
Ca	43	2	He	10613.189	0.610	19367	1.70	10000	106.1	90	110	
Ca	44	2	He	10119.156	1.593	318429	0.66	10000	101.2	90	110	
V	51	2	He	101.727	1.197	665723	0.79	100	101.7	90	110	
Cr	52	2	He	100.550	1.213	825432	0.94	100	100.5	90	110	
Mn	55	2	He	101.923	1.443	491854	1.29	100	101.9	90	110	
Fe	56	2	He	10440.885	2.107	71006301	1.88	10000	104.4	90	110	
Co	59	2	He	102.800	1.446	1326385	1.64	100	102.8	90	110	
Ni	60	2	He	103.714	1.711	358381	0.68	100	103.7	90	110	
Cu	63	2	He	105.413	1.688	979284	0.63	100	105.4	90	110	
Zn	66	2	He	102.967	2.006	163699	0.93	100	103.0	90	110	
As	75	2	He	102.012	1.383	91092	0.91	100	102.0	90	110	
Sb	121	2	He	104.642	2.042	667504	0.87	100	104.6	90	110	
Se	78	2	He	101.524	3.941	6731	2.79	100	101.5	90	110	
Ti	47	2	He	101.511	1.265	21189	1.74	100	101.5	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	4689781	0.86	4912785	95.46	70	120	
In	115	1	nogas	2956055	1.35	3074865	96.14	70	120	
Li	6	1	nogas	842293	3.57	992920	84.83	70	120	
Bi	209	1	nogas	3029055	4.25	3087510	98.11	70	120	
Ge	72	2	He	1001317	1.16	1094372	91.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T15:55:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.007	-52.6	153	15.4	1	
B	11	1	nogas	-12.189	-7.2	64308	4.4	10	
Al	27	1	nogas	0.179	24.5	39909	2.7	5	
P	31	1	nogas	-4.006	-28.2	37518	3.3	10	
Ca	44	1	nogas	-2.861	-20.7	24880	1.5	100	
Ti	47	1	nogas	0.093	63.2	320	40.6	2.5	
Cr	52	1	nogas	0.006	685.7	22364	5.2	2.5	
Co	59	1	nogas	0.012	10.3	850	4.2	2.5	
Cu	63	1	nogas	-0.055	-17.4	2917	5.2	2	
Zn	66	1	nogas	-0.021	-186.5	1110	16.9	2.5	
Se	77	1	nogas	20.908	12.4	11724	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.792	35.8	225	34.5	2	
Sr	88	1	nogas	0.017	37.1	2690	9.7	2.5	
Mo	95	1	nogas	0.784	19.6	7662	16.7	2.5	
Ag	107	1	nogas	0.037	71.0	2740	21.8	2.5	
Cd	111	1	nogas	0.006	58.2	70	24.7	1	
Sn	118	1	nogas	0.348	25.6	8846	13.9	5	
Sb	121	1	nogas	0.925	14.8	24317	10.2	2.5	
Ba	137	1	nogas	-0.034	-7.8	960	1.8	2.5	
Tl	205	1	nogas	0.192	36.8	9410	35.9	1	
Pb	208	1	nogas	0.010	147.7	5327	18.7	2.5	
U	238	1	nogas	0.037	39.6	2584	40.8	2.5	
Si	28	1	nogas	-31.617	-234.1	1767024	4.2	5	
Na	23	2	He	32.458	3.3	87952	1.2	100	
Mg	24	2	He	0.918	14.2	1273	8.5	100	
Al	27	2	He	-0.238	-21.4	637	2.4	5	
K	39	2	He	-6.376	-23.0	31093	1.7	100	
Ca	43	2	He	2.715	229.4	23	49.5	100	
Ca	44	2	He	-0.121	-912.0	430	8.4	100	
V	51	2	He	0.061	31.7	1301	9.2	2.5	
Cr	52	2	He	-0.015	-86.9	1160	8.3	2.5	
Mn	55	2	He	0.025	48.2	460	13.2	2.5	
Fe	56	2	He	1.870	17.9	22077	10.5	100	
Co	59	2	He	0.007	63.2	240	25.3	2.5	
Ni	60	2	He	0.012	113.6	257	19.6	2.5	
Cu	63	2	He	-0.033	-42.5	1283	10.8	2	
Zn	66	2	He	0.017	6.4	397	1.5	2.5	
As	75	2	He	0.254	16.7	316	11.1	2.5	
Sb	121	2	He	0.720	7.9	7028	5.7	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.815	29.6	75	20.3	2	
Ti	47	2	He	0.054	51.8	27	21.7	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	4702195	0.37	4912785	95.71	70	120	
In	115	1	nogas	3030179	0.55	3074865	98.55	70	120	
Li	6	1	nogas	880272	1.40	992920	88.65	70	120	
Bi	209	1	nogas	3034629	2.35	3087510	98.29	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1003007	1.04	1094372	91.65	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	146_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:52:32-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	102.014	2.093	536178	0.70	100	102.0	90	110	
B	11	1	nogas	544.882	1.420	1856147	1.31	500	109.0	90	110	
Al	27	1	nogas	100.141	1.385	2106011	3.03	100	100.1	90	110	
P	31	1	nogas	476.119	1.726	525489	0.22	500	95.2	90	110	
Ca	44	1	nogas	10044.432	1.043	6763622	0.99	10000	100.4	90	110	
Ti	47	1	nogas	99.837	2.296	215400	0.85	100	99.8	90	110	
Cr	52	1	nogas	102.010	2.297	2860450	0.82	100	102.0	90	110	
Co	59	1	nogas	101.154	2.595	3173197	0.96	100	101.2	90	110	
Cu	63	1	nogas	102.203	1.958	1705182	1.05	100	102.2	90	110	
Zn	66	1	nogas	103.436	1.582	490378	0.10	100	103.4	90	110	
Se	77	1	nogas	117.569	1.733	30900	1.85	100	117.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.263	5.880	27129	5.26	100	100.3	90	110	
Sr	88	1	nogas	102.712	2.331	4035645	1.44	100	102.7	90	110	
Mo	95	1	nogas	105.115	2.345	840464	1.50	100	105.1	90	110	
Ag	107	1	nogas	104.549	3.430	2308707	2.53	100	104.5	90	110	
Cd	111	1	nogas	103.243	2.635	468244	2.03	100	103.2	90	110	
Sn	118	1	nogas	106.508	1.283	1431898	0.87	100	106.5	90	110	
Sb	121	1	nogas	107.169	1.348	1948247	0.99	100	107.2	90	110	
Ba	137	1	nogas	105.104	2.100	638764	1.21	100	105.1	90	110	
Tl	205	1	nogas	105.638	4.822	4574276	0.70	100	105.6	90	110	
Pb	208	1	nogas	104.216	5.171	6269703	0.99	100	104.2	90	110	
U	238	1	nogas	103.124	4.784	6805029	1.21	100	103.1	90	110	
Li	7	1	nogas	102.722	3.754	1894117	1.21	100	102.7	90	110	
Si	28	1	nogas	4848.890	1.977	6662098	0.23	5000	97.0	90	110	
Tl	203	1	nogas	105.425	7.186	1923293	3.09	100	105.4	90	110	
Na	23	2	He	10192.456	1.526	13032413	0.60	10000	101.9	90	110	
Mg	24	2	He	10067.937	1.452	7114554	0.85	10000	100.7	90	110	
Al	27	2	He	99.579	3.813	33463	3.10	100	99.6	90	110	
K	39	2	He	10079.959	1.289	5295059	0.29	10000	100.8	90	110	
Ca	43	2	He	10273.866	4.425	18169	5.42	10000	102.7	90	110	
Ca	44	2	He	9981.903	1.835	304339	1.07	10000	99.8	90	110	
V	51	2	He	99.682	1.389	632041	0.65	100	99.7	90	110	
Cr	52	2	He	98.886	2.601	786401	1.12	100	98.9	90	110	
Mn	55	2	He	101.163	2.000	472943	0.44	100	101.2	90	110	
Fe	56	2	He	10492.309	2.087	69128571	0.71	10000	104.9	90	110	
Co	59	2	He	103.584	2.520	1294748	1.87	100	103.6	90	110	
Ni	60	2	He	102.752	3.351	343960	2.16	100	102.8	90	110	
Cu	63	2	He	103.997	2.061	936040	0.68	100	104.0	90	110	
Zn	66	2	He	102.350	2.880	157639	1.33	100	102.4	90	110	
As	75	2	He	101.944	2.300	88188	0.87	100	101.9	90	110	
Sb	121	2	He	103.501	2.289	639705	1.31	100	103.5	90	110	
Se	78	2	He	100.874	1.801	6481	0.37	100	100.9	90	110	
Ti	47	2	He	98.500	2.073	19918	0.65	100	98.5	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	4601951	1.67	4912785	93.67	70	120	
In	115	1	nogas	2857808	0.90	3074865	92.94	70	120	
Li	6	1	nogas	777369	2.41	992920	78.29	70	120	
Bi	209	1	nogas	2942727	4.29	3087510	95.31	70	120	
Ge	72	2	He	970191	1.57	1094372	88.65	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	147_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:54:48-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.001	627.6	192	19.6	1	
B	11	1	nogas	5.051	23.7	122004	1.7	10	
Al	27	1	nogas	0.643	20.5	48924	4.5	5	
P	31	1	nogas	-5.391	-36.9	35490	3.9	10	
Ca	44	1	nogas	-0.964	-81.3	25782	4.0	100	
Ti	47	1	nogas	0.082	49.2	290	29.5	2.5	
Cr	52	1	nogas	-0.068	-63.4	19938	4.8	2.5	
Co	59	1	nogas	0.014	31.2	917	13.6	2.5	
Cu	63	1	nogas	0.014	63.2	4034	2.8	2	
Zn	66	1	nogas	-0.009	-327.2	1150	13.7	2.5	
Se	77	1	nogas	9.375	32.7	9206	5.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.820	57.7	229	55.9	2	
Sr	88	1	nogas	0.018	21.1	2680	7.3	2.5	
Mo	95	1	nogas	0.705	26.5	6821	24.0	2.5	
Ag	107	1	nogas	0.038	65.4	2697	22.1	2.5	
Cd	111	1	nogas	0.011	35.3	90	19.2	1	
Sn	118	1	nogas	0.496	13.0	10670	10.0	5	
Sb	121	1	nogas	0.541	18.5	16922	9.0	2.5	
Ba	137	1	nogas	-0.045	-42.0	867	11.8	2.5	
Tl	205	1	nogas	0.265	32.6	12569	33.8	1	
Pb	208	1	nogas	0.031	146.5	6571	40.9	2.5	
U	238	1	nogas	0.032	43.7	2274	45.6	2.5	
Si	28	1	nogas	-2.027	-2870.3	1769733	3.8	5	
Na	23	2	He	34.324	5.3	87428	2.1	100	
Mg	24	2	He	1.130	11.8	1380	6.2	100	
Al	27	2	He	0.364	107.9	813	15.4	5	
K	39	2	He	-3.867	-27.2	31380	1.3	100	
Ca	43	2	He	14.538	157.7	43	93.3	100	
Ca	44	2	He	-0.093	-1106.1	417	7.7	100	
V	51	2	He	0.044	41.4	1153	9.7	2.5	
Cr	52	2	He	-0.004	-588.9	1207	16.2	2.5	
Mn	55	2	He	0.040	29.7	513	11.4	2.5	
Fe	56	2	He	2.136	9.7	23088	5.4	100	
Co	59	2	He	0.012	45.6	293	23.9	2.5	
Ni	60	2	He	-0.009	-48.9	177	8.6	2.5	
Cu	63	2	He	-0.005	-167.7	1490	4.4	2	
Zn	66	2	He	-0.018	-443.6	330	36.7	2.5	
As	75	2	He	0.265	17.5	314	12.6	2.5	
Sb	121	2	He	0.480	6.9	5318	3.2	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.644	35.2	61	23.6	2	
Ti	47	2	He	0.059	129.3	27	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	4629201	1.89	4912785	94.23	70	120	
In	115	1	nogas	2949936	1.68	3074865	95.94	70	120	
Li	6	1	nogas	843488	2.66	992920	84.95	70	120	
Bi	209	1	nogas	3010617	3.14	3087510	97.51	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	969942	0.67	1094372	88.63	70	120	

Sample Report

Sample Table

Sample Name	MBLK-156348
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T16:59:06-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	-0.019	-0.019	-50.53	80	-0.02	2000	
B	11	1	nogas	0.791	0.791	68.76	111463	0.00	2000	
Al	27	1	nogas	7.504	7.504	3.66	194725	0.00	2000	
Ca	44	1	nogas	-3.139	-3.139	-48.98	24697	-0.01	200000	
Ti	47	1	nogas	0.054	0.054	97.54	233	0.02	2000	
Cr	52	1	nogas	-0.138	-0.138	-18.37	18269	0.00	2000	
Co	59	1	nogas	-0.005	-0.005	-13.56	333	0.00	2000	
Cu	63	1	nogas	0.135	0.135	57.15	6155	0.00	2000	
Zn	66	1	nogas	0.581	0.581	3.78	4021	0.01	2000	
Se	77	1	nogas	4.039	4.039	62.87	8265	0.05	2000	
Se	82	1	nogas	0.517	0.517	57.62	149	0.35	2000	
Sr	88	1	nogas	0.004	0.004	206.60	2160	0.00	2000	
Mo	95	1	nogas	0.166	0.166	23.38	2424	0.01	2000	
Ag	107	1	nogas	-0.021	-0.021	-44.07	1403	0.00	2000	
Cd	111	1	nogas	-0.003	-0.003	-226.71	27	-0.01	2000	
Sn	118	1	nogas	0.006	0.006	44.44	3977	0.00	2000	
Sb	121	1	nogas	-0.096	-0.096	-19.88	5424	0.00	2000	
Ba	137	1	nogas	-0.094	-0.094	-29.80	573	-0.02	2000	
Tl	205	1	nogas	0.010	0.010	15.78	1420	0.00	2000	
Pb	208	1	nogas	-0.032	-0.032	-4.93	3150	0.00	2000	
U	238	1	nogas	0.001	0.001	39.93	197	0.00	2000	
Li	7	1	nogas	-0.694	-0.694	-4.48	68357	0.00	1000	
Si	28	1	nogas	910.767	910.767	6.93	2741653	0.03	2000	
Tl	203	1	nogas	0.006	0.006	48.43	563	0.00	2000	
Na	23	2	He	33.378	33.378	5.78	89592	0.04	200000	
Mg	24	2	He	15.333	15.333	2.73	11861	0.13	200000	
Al	27	2	He	7.067	7.067	6.00	3137	0.23	2000	
K	39	2	He	-7.725	-7.725	-21.80	30519	-0.03	200000	
Ca	43	2	He	2.659	2.659	233.60	23	11.39	200000	
Ca	44	2	He	-1.973	-1.973	-90.22	373	-0.53	200000	
V	51	2	He	0.029	0.029	61.07	1094	0.00	2000	
Cr	52	2	He	-0.030	-0.030	-26.13	1040	0.00	2000	
Mn	55	2	He	0.021	0.021	37.78	443	0.00	2000	
Fe	56	2	He	3.032	3.032	4.60	30132	0.01	200000	
Co	59	2	He	-0.004	-0.004	-57.24	100	0.00	2000	
Ni	60	2	He	0.213	0.213	14.29	957	0.02	2000	

Sample Report

Cu	63	2	He	0.043	0.043	14.12	1993	0.00	2000	
Zn	66	2	He	0.628	0.628	25.64	1373	0.05	2000	
As	75	2	He	0.006	0.006	192.04	94	0.01	2000	
Sb	121	2	He	-0.089	-0.089	-13.11	1883	0.00	2000	
Se	78	2	He	0.037	0.037	401.98	23	0.16	2000	
Ti	47	2	He	-0.010	-0.010	-573.16	13	-0.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4704316	0.68	4912785	95.76	70	120	
In	115	1	nogas	3026180	1.27	3074865	98.42	70	120	
Li	6	1	nogas	877572	0.33	992920	88.38	70	120	
Bi	209	1	nogas	3504701	11.87	3087510	113.51	70	120	
Ge	72	2	He	1007914	0.90	1094372	92.10	70	120	

Sample Report

Sample Table

Sample Name	LCS-156348
Data File Name	149SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:01:28-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.717	43.717	4.63	262272	0.02	2000	
B	11	1	nogas	2.908	2.908	26.53	120468	0.00	2000	
Al	27	1	nogas	53.013	53.013	0.59	1196732	0.00	2000	
Ca	44	1	nogas	4539.076	4539.076	0.30	3248753	0.14	200000	
Ti	47	1	nogas	42.944	42.944	1.37	98087	0.04	2000	
Cr	52	1	nogas	45.848	45.848	3.66	1372714	0.00	2000	
Co	59	1	nogas	45.917	45.917	3.69	1523775	0.00	2000	
Cu	63	1	nogas	46.952	46.952	1.89	830792	0.01	2000	
Zn	66	1	nogas	50.269	50.269	1.46	252755	0.02	2000	
Se	77	1	nogas	51.542	51.542	4.10	18647	0.28	2000	
Se	82	1	nogas	47.608	47.608	0.62	13634	0.35	2000	
Sr	88	1	nogas	0.060	0.060	6.46	4504	0.00	2000	
Mo	95	1	nogas	44.438	44.438	3.29	377876	0.01	2000	
Ag	107	1	nogas	45.623	45.623	2.21	1070972	0.00	2000	
Cd	111	1	nogas	47.112	47.112	2.40	226918	0.02	2000	
Sn	118	1	nogas	0.020	0.020	163.34	4184	0.00	2000	
Sb	121	1	nogas	45.384	45.384	1.83	876982	0.01	2000	
Ba	137	1	nogas	46.800	46.800	2.73	302677	0.02	2000	
Tl	205	1	nogas	44.638	44.638	8.55	2080605	0.00	2000	
Pb	208	1	nogas	45.778	45.778	7.76	2967879	0.00	2000	
U	238	1	nogas	0.000	0.000	-1478.63	80	0.00	2000	
Li	7	1	nogas	-0.671	-0.671	-12.80	69574	0.00	1000	
Si	28	1	nogas	959.428	959.428	5.45	2888535	0.03	2000	
Tl	203	1	nogas	42.825	42.825	9.49	841238	0.01	2000	
Na	23	2	He	4700.026	4700.026	1.52	6339196	0.07	200000	
Mg	24	2	He	4725.351	4725.351	1.85	3508844	0.13	200000	
Al	27	2	He	52.907	52.907	5.03	19020	0.28	2000	
K	39	2	He	4709.106	4709.106	2.09	2617843	0.18	200000	
Ca	43	2	He	4396.510	4396.510	3.72	8175	53.78	200000	
Ca	44	2	He	4493.525	4493.525	1.64	144199	3.12	200000	
V	51	2	He	45.475	45.475	2.07	303441	0.01	2000	
Cr	52	2	He	45.701	45.701	1.80	382617	0.01	2000	
Mn	55	2	He	46.767	46.767	1.10	229955	0.02	2000	
Fe	56	2	He	4734.381	4734.381	1.15	32783183	0.01	200000	
Co	59	2	He	47.579	47.579	2.94	624916	0.01	2000	
Ni	60	2	He	47.918	47.918	2.12	168678	0.03	2000	
Cu	63	2	He	49.031	49.031	1.76	464569	0.01	2000	
Zn	66	2	He	50.059	50.059	1.41	81222	0.06	2000	

Sample Report

As	75	2	He	47.499	47.499	2.51	43222	0.11	2000	
Sb	121	2	He	47.419	47.419	3.27	309256	0.02	2000	
Se	78	2	He	50.614	50.614	1.04	3428	1.48	2000	
Ti	47	2	He	45.455	45.455	1.35	9669	0.47	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	4867937	1.62	4912785	99.09	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	3034831	1.45	3074865	98.70	70	120	
Li	6	1	nogas	887393	2.81	992920	89.37	70	120	
Bi	209	1	nogas	3174507	6.66	3087510	102.82	70	120	
Ge	72	2	He	1019409	1.52	1094372	93.15	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04SD
Data File Name	154SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:13:13-05:00
Sample Type	Sample
Dilution	5
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.211	1.054	4.89	1363	0.02	2000	
B	11	1	nogas	16.611	83.054	4.60	159719	0.01	2000	
Al	27	1	nogas	3.789	18.947	0.78	108937	0.00	2000	
Ca	44	1	nogas	21506.249	107531.244	0.53	13847161	0.16	200000	
Ti	47	1	nogas	0.663	3.313	9.92	1477	0.04	2000	
Cr	52	1	nogas	0.212	1.062	12.25	26483	0.00	2000	
Co	59	1	nogas	0.285	1.424	1.85	9009	0.00	2000	
Cu	63	1	nogas	0.473	2.365	4.26	11164	0.00	2000	
Zn	66	1	nogas	2.443	12.213	0.82	12204	0.02	2000	
Se	77	1	nogas	13.688	68.439	8.60	9603	0.14	2000	
Se	82	1	nogas	0.603	3.013	29.76	162	0.37	2000	
Sr	88	1	nogas	146.897	734.485	0.59	5831094	0.00	2000	
Mo	95	1	nogas	1.047	5.236	7.79	9426	0.01	2000	
Ag	107	1	nogas	-0.009	-0.047	-136.18	1587	0.00	2000	
Cd	111	1	nogas	0.236	1.178	8.88	1117	0.02	2000	
Sn	118	1	nogas	0.070	0.349	17.17	4661	0.00	2000	
Sb	121	1	nogas	0.088	0.440	13.90	8272	0.00	2000	
Ba	137	1	nogas	100.139	500.693	0.50	614997	0.02	2000	
Tl	205	1	nogas	0.231	1.157	4.10	10944	0.00	2000	
Pb	208	1	nogas	0.215	1.074	7.28	17781	0.00	2000	
U	238	1	nogas	0.154	0.772	6.39	10424	0.00	2000	
Li	7	1	nogas	3.296	16.478	2.41	139989	0.00	1000	
Si	28	1	nogas	29165.543	145827.717	1.06	29935510	0.10	2000	>LDR
Tl	203	1	nogas	0.227	1.133	5.54	4557	0.00	2000	
Na	23	2	He	7502.448	37512.238	2.55	9345739	0.08	200000	
Mg	24	2	He	3591.839	17959.193	1.81	2470223	0.15	200000	
Al	27	2	He	3.839	19.193	17.94	1907	0.20	2000	
K	39	2	He	665.476	3327.379	2.65	370514	0.18	200000	
Ca	43	2	He	20641.558	103207.788	3.09	35488	58.17	200000	
Ca	44	2	He	21020.437	105102.183	0.45	623288	3.37	200000	
V	51	2	He	0.284	1.422	3.42	2601	0.01	2000	
Cr	52	2	He	0.250	1.251	15.97	3137	0.01	2000	
Mn	55	2	He	821.709	4108.546	0.74	3736504	0.02	2000	
Fe	56	2	He	1324.795	6623.976	1.17	8502271	0.02	200000	
Co	59	2	He	0.280	1.400	2.89	3544	0.01	2000	
Ni	60	2	He	0.403	2.015	3.30	1513	0.03	2000	
Cu	63	2	He	0.408	2.041	10.08	5061	0.01	2000	
Zn	66	2	He	2.402	12.012	4.48	3940	0.06	2000	

Sample Report

As	75	2	He	0.507	2.534	8.91	510	0.10	2000	
Sb	121	2	He	0.083	0.413	10.51	2794	0.00	2000	
Se	78	2	He	0.224	1.120	174.74	33	0.67	2000	
Ti	47	2	He	0.318	1.589	52.56	77	0.41	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	4409059	0.74	4912785	89.75	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2887288	0.59	3074865	93.90	70	120	
Li	6	1	nogas	828624	0.87	992920	83.45	70	120	
Bi	209	1	nogas	2989776	5.33	3087510	96.83	70	120	
Ge	72	2	He	944093	1.25	1094372	86.27	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04MS
Data File Name	155SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:15:33-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	44.808	44.808	0.54	246215	0.02	2000	
B	11	1	nogas	71.289	71.289	1.10	341091	0.02	2000	
Al	27	1	nogas	56.274	56.274	2.81	1157040	0.00	2000	
Ca	44	1	nogas	109715.497	109715.497	1.19	71059482	0.15	200000	
Ti	47	1	nogas	47.203	47.203	1.61	98382	0.05	2000	
Cr	52	1	nogas	46.821	46.821	1.10	1278905	0.00	2000	
Co	59	1	nogas	46.333	46.333	0.44	1403483	0.00	2000	
Cu	63	1	nogas	45.905	45.905	0.15	741366	0.01	2000	
Zn	66	1	nogas	50.554	50.554	1.20	231943	0.02	2000	
Se	77	1	nogas	61.682	61.682	2.36	18984	0.32	2000	
Se	82	1	nogas	53.301	53.301	3.39	13927	0.38	2000	
Sr	88	1	nogas	738.679	738.679	2.06	28625135	0.00	2000	
Mo	95	1	nogas	49.891	49.891	0.85	394148	0.01	2000	
Ag	107	1	nogas	45.591	45.591	1.43	994478	0.00	2000	
Cd	111	1	nogas	47.564	47.564	0.50	212904	0.02	2000	
Sn	118	1	nogas	-0.026	-0.026	-61.80	3287	0.00	2000	
Sb	121	1	nogas	48.281	48.281	1.40	850957	0.01	2000	
Ba	137	1	nogas	556.153	556.153	1.37	3330464	0.02	2000	
Tl	205	1	nogas	45.402	45.402	5.75	1954146	0.00	2000	
Pb	208	1	nogas	46.661	46.661	6.86	2791139	0.00	2000	
U	238	1	nogas	0.790	0.790	7.37	51835	0.00	2000	
Li	7	1	nogas	20.173	20.173	0.30	450013	0.00	1000	
Si	28	1	nogas	144531.421	144531.421	0.97	142717575	0.10	2000	>LDR
Tl	203	1	nogas	43.907	43.907	7.93	796006	0.01	2000	
Na	23	2	He	41184.842	41184.842	1.28	51002556	0.08	200000	
Mg	24	2	He	22026.380	22026.380	0.68	15112343	0.15	200000	
Al	27	2	He	56.411	56.411	3.94	18699	0.30	2000	
K	39	2	He	7804.372	7804.372	0.47	3988000	0.20	200000	
Ca	43	2	He	110572.870	110572.870	0.42	189632	58.31	200000	
Ca	44	2	He	107298.930	107298.930	0.90	3172561	3.38	200000	
V	51	2	He	46.083	46.083	0.70	284164	0.02	2000	
Cr	52	2	He	45.055	45.055	0.78	348601	0.01	2000	
Mn	55	2	He	3958.003	3958.003	1.11	17956211	0.02	2000	>LDR
Fe	56	2	He	10873.650	10873.650	1.52	69567147	0.02	200000	
Co	59	2	He	46.171	46.171	0.68	560466	0.01	2000	
Ni	60	2	He	45.453	45.453	1.87	147871	0.03	2000	
Cu	63	2	He	46.377	46.377	1.28	406156	0.01	2000	
Zn	66	2	He	49.764	49.764	0.82	74611	0.07	2000	

Sample Report

As	75	2	He	48.961	48.961	0.97	41172	0.12	2000	
Sb	121	2	He	48.031	48.031	1.45	289490	0.02	2000	
Se	78	2	He	48.843	48.843	2.14	3057	1.60	2000	
Ti	47	2	He	46.284	46.284	1.08	9096	0.51	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	4441758	0.58	4912785	90.41	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2819941	1.55	3074865	91.71	70	120	
Li	6	1	nogas	812129	0.14	992920	81.79	70	120	
Bi	209	1	nogas	2927795	6.60	3087510	94.83	70	120	
Ge	72	2	He	941899	0.14	1094372	86.07	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04MSD
Data File Name	156SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:17:52-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.998	43.998	1.15	240432	0.02	2000	
B	11	1	nogas	69.552	69.552	1.65	333408	0.02	2000	
Al	27	1	nogas	54.359	54.359	1.34	1131415	0.00	2000	
Ca	44	1	nogas	107411.853	107411.853	1.26	70354451	0.15	200000	
Ti	47	1	nogas	45.437	45.437	2.25	95752	0.05	2000	
Cr	52	1	nogas	44.419	44.419	2.39	1227789	0.00	2000	
Co	59	1	nogas	44.576	44.576	1.57	1365615	0.00	2000	
Cu	63	1	nogas	44.697	44.697	1.64	730063	0.01	2000	
Zn	66	1	nogas	49.444	49.444	1.77	229434	0.02	2000	
Se	77	1	nogas	59.528	59.528	3.48	18773	0.32	2000	
Se	82	1	nogas	51.193	51.193	3.64	13523	0.38	2000	
Sr	88	1	nogas	720.044	720.044	1.81	28110994	0.00	2000	
Mo	95	1	nogas	50.384	50.384	1.36	400958	0.01	2000	
Ag	107	1	nogas	45.138	45.138	0.58	991949	0.00	2000	
Cd	111	1	nogas	46.741	46.741	1.10	210745	0.02	2000	
Sn	118	1	nogas	-0.030	-0.030	-63.06	3260	0.00	2000	
Sb	121	1	nogas	47.033	47.033	1.74	838463	0.01	2000	
Ba	137	1	nogas	549.897	549.897	1.69	3317376	0.02	2000	
Tl	205	1	nogas	47.410	47.410	10.02	2032714	0.00	2000	
Pb	208	1	nogas	46.319	46.319	6.81	2765380	0.00	2000	
U	238	1	nogas	0.776	0.776	3.69	50892	0.00	2000	
Li	7	1	nogas	19.855	19.855	2.11	441663	0.00	1000	
Si	28	1	nogas	141528.468	141528.468	0.96	141369921	0.10	2000	>LDR
Tl	203	1	nogas	44.823	44.823	7.50	811080	0.01	2000	
Na	23	2	He	40904.161	40904.161	0.24	50655456	0.08	200000	
Mg	24	2	He	21746.331	21746.331	0.06	14920237	0.15	200000	
Al	27	2	He	54.473	54.473	1.81	18082	0.30	2000	
K	39	2	He	7675.676	7675.676	1.57	3922517	0.20	200000	
Ca	43	2	He	107903.684	107903.684	1.73	185045	58.31	200000	
Ca	44	2	He	106097.099	106097.099	1.50	3136923	3.38	200000	
V	51	2	He	45.512	45.512	0.91	280646	0.02	2000	
Cr	52	2	He	44.299	44.299	1.10	342764	0.01	2000	
Mn	55	2	He	3965.073	3965.073	1.49	17987026	0.02	2000	>LDR
Fe	56	2	He	10918.652	10918.652	1.38	69850266	0.02	200000	
Co	59	2	He	46.159	46.159	0.57	560304	0.01	2000	
Ni	60	2	He	45.108	45.108	1.24	146752	0.03	2000	
Cu	63	2	He	46.536	46.536	0.35	407541	0.01	2000	
Zn	66	2	He	48.976	48.976	1.42	73440	0.07	2000	

Sample Report

As	75	2	He	48.814	48.814	1.18	41047	0.12	2000	
Sb	121	2	He	48.161	48.161	0.87	290262	0.02	2000	
Se	78	2	He	49.790	49.790	1.85	3116	1.60	2000	
Ti	47	2	He	42.053	42.053	3.37	8265	0.51	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	4492447	2.03	4912785	91.44	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2840546	0.56	3074865	92.38	70	120	
Li	6	1	nogas	807717	1.34	992920	81.35	70	120	
Bi	209	1	nogas	2922890	7.43	3087510	94.67	70	120	
Ge	72	2	He	941899	0.63	1094372	86.07	70	120	

Sample Report

Sample Table

Sample Name	HS20080198-04PDS
Data File Name	157SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:20:11-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	120.114	120.114	0.92	657875	0.02	2000	
B	11	1	nogas	70.297	70.297	0.74	336800	0.02	2000	
Al	27	1	nogas	130.009	130.009	2.51	2641951	0.00	2000	
Ca	44	1	nogas	118596.970	118596.970	1.24	77224116	0.15	200000	
Ti	47	1	nogas	125.360	125.360	1.99	262462	0.05	2000	
Cr	52	1	nogas	121.622	121.622	0.53	3306751	0.00	2000	
Co	59	1	nogas	119.146	119.146	0.23	3628445	0.00	2000	
Cu	63	1	nogas	119.730	119.730	2.39	1938543	0.01	2000	
Zn	66	1	nogas	129.640	129.640	0.40	596292	0.02	2000	
Se	77	1	nogas	140.133	140.133	2.90	34379	0.41	2000	
Se	82	1	nogas	137.759	137.759	2.60	36185	0.38	2000	
Sr	88	1	nogas	740.461	740.461	6.48	28235058	0.00	2000	
Mo	95	1	nogas	133.569	133.569	6.19	1036676	0.01	2000	
Ag	107	1	nogas	122.652	122.652	6.08	2629632	0.00	2000	
Cd	111	1	nogas	129.292	129.292	4.44	569587	0.02	2000	
Sn	118	1	nogas	-0.011	-0.011	-72.45	3430	0.00	2000	
Sb	121	1	nogas	120.801	120.801	0.83	2130965	0.01	2000	
Ba	137	1	nogas	649.729	649.729	3.95	3830618	0.02	2000	
Tl	205	1	nogas	125.333	125.333	6.59	5418829	0.00	2000	
Pb	208	1	nogas	126.526	126.526	7.57	7598621	0.00	2000	
U	238	1	nogas	0.777	0.777	2.26	51353	0.00	2000	
Li	7	1	nogas	20.044	20.044	1.22	446363	0.00	1000	
Si	28	1	nogas	144732.229	144732.229	1.84	143669361	0.10	2000	>LDR
Tl	203	1	nogas	125.767	125.767	7.39	2292239	0.01	2000	
Na	23	2	He	49529.548	49529.548	1.46	61485142	0.08	200000	
Mg	24	2	He	30388.277	30388.277	1.13	20902848	0.15	200000	
Al	27	2	He	138.832	138.832	1.95	45161	0.31	2000	
K	39	2	He	16027.680	16027.680	2.23	8177285	0.20	200000	
Ca	43	2	He	119646.628	119646.628	1.53	205721	58.16	200000	
Ca	44	2	He	114642.407	114642.407	2.24	3398320	3.37	200000	
V	51	2	He	130.611	130.611	1.74	805934	0.02	2000	
Cr	52	2	He	127.085	127.085	1.53	983653	0.01	2000	
Mn	55	2	He	4082.744	4082.744	1.19	18569353	0.02	2000	>LDR
Fe	56	2	He	19427.270	19427.270	1.12	124602871	0.02	200000	
Co	59	2	He	130.523	130.523	1.56	1588344	0.01	2000	
Ni	60	2	He	128.340	128.340	0.65	418250	0.03	2000	
Cu	63	2	He	130.414	130.414	0.33	1142430	0.01	2000	
Zn	66	2	He	136.407	136.407	1.26	204452	0.07	2000	

Sample Report

As	75	2	He	138.330	138.330	0.43	116480	0.12	2000	
Sb	121	2	He	126.622	126.622	0.89	761399	0.02	2000	
Se	78	2	He	139.421	139.421	1.56	8712	1.60	2000	
Ti	47	2	He	127.023	127.023	0.99	25004	0.51	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	4466339	2.36	4912785	90.91	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2779092	4.23	3074865	90.38	70	120	
Li	6	1	nogas	809849	0.29	992920	81.56	70	120	
Bi	209	1	nogas	2938925	3.59	3087510	95.19	70	120	
Ge	72	2	He	944374	0.84	1094372	86.29	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	158_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:22:29-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	101.263	2.460	515848	0.54	100	101.3	90	110	
B	11	1	nogas	540.446	4.256	1784361	1.29	500	108.1	90	110	
Al	27	1	nogas	99.195	1.917	2043007	1.76	100	99.2	90	110	
P	31	1	nogas	474.588	1.308	513192	1.08	500	94.9	90	110	
Ca	44	1	nogas	10026.803	0.746	6612926	0.62	10000	100.3	90	110	
Ti	47	1	nogas	100.453	1.918	212301	1.79	100	100.5	90	110	
Cr	52	1	nogas	100.692	1.109	2766124	1.08	100	100.7	90	110	
Co	59	1	nogas	98.936	1.905	3040341	1.77	100	98.9	90	110	
Cu	63	1	nogas	100.898	2.096	1649003	2.15	100	100.9	90	110	
Zn	66	1	nogas	102.725	0.567	477034	0.47	100	102.7	90	110	
Se	77	1	nogas	105.543	4.438	27895	3.18	100	105.5	90	110	
Se	82	1	nogas	103.267	2.839	27373	2.71	100	103.3	90	110	
Sr	88	1	nogas	100.521	2.069	3927868	0.40	100	100.5	90	110	
Mo	95	1	nogas	105.585	1.121	839684	0.95	100	105.6	90	110	
Ag	107	1	nogas	103.076	0.925	2264184	1.04	100	103.1	90	110	
Cd	111	1	nogas	102.761	2.571	463464	1.00	100	102.8	90	110	
Sn	118	1	nogas	101.833	2.604	1361509	1.09	100	101.8	90	110	
Sb	121	1	nogas	107.492	2.306	1913915	2.17	100	107.5	90	110	
Ba	137	1	nogas	103.583	3.423	626015	2.20	100	103.6	90	110	
Tl	205	1	nogas	105.041	6.226	4570156	2.25	100	105.0	90	110	
Pb	208	1	nogas	104.024	4.834	6291087	0.69	100	104.0	90	110	
U	238	1	nogas	102.603	3.461	6807897	0.89	100	102.6	90	110	
Li	7	1	nogas	103.965	4.244	1857076	1.35	100	104.0	90	110	
Si	28	1	nogas	4913.566	0.305	6589556	0.09	5000	98.3	90	110	
Tl	203	1	nogas	105.499	6.759	1934839	2.69	100	105.5	90	110	
Na	23	2	He	10117.343	1.018	12628652	0.43	10000	101.2	90	110	
Mg	24	2	He	10089.702	1.395	6960031	1.06	10000	100.9	90	110	
Al	27	2	He	98.726	1.602	32398	2.15	100	98.7	90	110	
K	39	2	He	10096.514	1.542	5177886	2.16	10000	101.0	90	110	
Ca	43	2	He	10561.335	1.427	18226	1.42	10000	105.6	90	110	
Ca	44	2	He	10166.872	2.146	302577	1.50	10000	101.7	90	110	
V	51	2	He	100.833	0.849	624107	0.55	100	100.8	90	110	
Cr	52	2	He	99.151	0.851	769865	1.24	100	99.2	90	110	
Mn	55	2	He	103.070	1.681	470403	1.26	100	103.1	90	110	
Fe	56	2	He	10447.463	2.149	67197611	1.84	10000	104.5	90	110	
Co	59	2	He	103.607	1.151	1264237	0.54	100	103.6	90	110	
Ni	60	2	He	102.707	2.251	335659	1.59	100	102.7	90	110	
Cu	63	2	He	104.926	1.203	921970	1.05	100	104.9	90	110	
Zn	66	2	He	103.584	0.491	155769	1.03	100	103.6	90	110	
As	75	2	He	103.368	0.456	87301	0.81	100	103.4	90	110	
Sb	121	2	He	108.659	2.240	655474	1.58	100	108.7	90	110	
Se	78	2	He	103.079	1.472	6465	1.53	100	103.1	90	110	
Ti	47	2	He	100.572	3.943	19851	3.34	100	100.6	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	4506890	0.14	4912785	91.74	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2842358	1.65	3074865	92.44	70	120	
Li	6	1	nogas	753539	2.82	992920	75.89	70	120	
Bi	209	1	nogas	2957894	4.25	3087510	95.80	70	120	
Ge	72	2	He	946991	0.68	1094372	86.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	159_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:24:45-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	82.5	245	23.2	1	
B	11	1	nogas	1.404	60.3	106203	2.6	10	
Al	27	1	nogas	0.224	18.9	39050	1.7	5	
P	31	1	nogas	-6.143	-4.4	33730	1.2	10	
Ca	44	1	nogas	2.053	29.0	26996	1.1	100	
Ti	47	1	nogas	0.119	14.7	360	9.6	2.5	
Cr	52	1	nogas	-0.118	-21.7	18019	4.2	2.5	
Co	59	1	nogas	0.020	28.5	1060	16.4	2.5	
Cu	63	1	nogas	0.011	143.3	3864	7.1	2	
Zn	66	1	nogas	-0.030	-60.2	1017	8.2	2.5	
Se	77	1	nogas	1.735	126.5	7442	5.5	2.5	
Se	82	1	nogas	1.298	40.5	349	39.8	2	
Sr	88	1	nogas	0.038	7.6	3440	4.0	2.5	
Mo	95	1	nogas	1.062	15.6	9646	15.0	2.5	
Ag	107	1	nogas	0.061	46.5	3190	21.5	2.5	
Cd	111	1	nogas	0.012	21.7	93	12.4	1	
Sn	118	1	nogas	0.457	10.3	10016	8.2	5	
Sb	121	1	nogas	1.236	7.7	28737	6.2	2.5	
Ba	137	1	nogas	-0.019	-40.4	1017	4.0	2.5	
Tl	205	1	nogas	0.315	34.6	14998	35.1	1	
Pb	208	1	nogas	0.010	142.4	5390	19.3	2.5	
U	238	1	nogas	0.032	23.7	2254	24.8	2.5	
Si	28	1	nogas	37.195	97.1	1756676	2.0	5	CCB Main CR1 Failed
Na	23	2	He	38.341	2.3	91277	0.8	100	
Mg	24	2	He	2.769	6.5	2504	4.9	100	
Al	27	2	He	-0.220	-124.3	613	15.1	5	
K	39	2	He	-1.919	-30.4	31954	1.6	100	
Ca	43	2	He	14.817	57.7	43	35.3	100	
Ca	44	2	He	7.535	30.5	640	10.9	100	
V	51	2	He	0.021	86.4	989	10.7	2.5	
Cr	52	2	He	0.001	933.7	1227	4.0	2.5	
Mn	55	2	He	0.318	0.9	1787	0.3	2.5	
Fe	56	2	He	3.443	4.2	31274	3.8	100	
Co	59	2	He	0.013	69.3	297	37.0	2.5	
Ni	60	2	He	0.008	59.7	230	7.5	2.5	
Cu	63	2	He	-0.014	-129.0	1390	12.2	2	
Zn	66	2	He	-0.046	-123.2	283	30.4	2.5	
As	75	2	He	0.296	5.1	337	4.0	2.5	
Sb	121	2	He	1.029	1.8	8579	2.1	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	1.091	20.2	89	15.0	2	
Ti	47	2	He	0.027	185.6	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4493855	0.63	4912785	91.47	70	120	
In	115	1	nogas	2915654	1.96	3074865	94.82	70	120	
Li	6	1	nogas	819790	1.61	992920	82.56	70	120	
Bi	209	1	nogas	3047867	2.26	3087510	98.72	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	956594	0.79	1094372	87.41	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	160_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:29:31-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.642	3.293	524485	0.56	100	100.6	90	110	
B	11	1	nogas	530.747	5.380	1794244	1.94	500	106.1	90	110	
Al	27	1	nogas	99.578	0.421	2036509	0.12	100	99.6	90	110	
P	31	1	nogas	478.079	0.496	513089	0.83	500	95.6	90	110	
Ca	44	1	nogas	10054.806	1.087	6585226	1.17	10000	100.5	90	110	
Ti	47	1	nogas	98.526	0.287	206785	0.50	100	98.5	90	110	
Cr	52	1	nogas	100.294	1.719	2735964	1.29	100	100.3	90	110	
Co	59	1	nogas	97.750	0.219	2983075	0.74	100	97.8	90	110	
Cu	63	1	nogas	100.752	0.897	1635131	0.81	100	100.8	90	110	
Zn	66	1	nogas	100.761	1.081	464702	1.60	100	100.8	90	110	
Se	77	1	nogas	100.778	1.395	26770	1.01	100	100.8	90	110	
Se	82	1	nogas	103.820	1.939	27330	2.17	100	103.8	90	110	
Sr	88	1	nogas	102.521	1.063	4013572	0.27	100	102.5	90	110	
Mo	95	1	nogas	103.349	1.935	823316	0.76	100	103.3	90	110	
Ag	107	1	nogas	101.913	1.546	2242503	0.81	100	101.9	90	110	
Cd	111	1	nogas	100.417	2.175	453730	1.01	100	100.4	90	110	
Sn	118	1	nogas	101.302	1.531	1357228	2.26	100	101.3	90	110	
Sb	121	1	nogas	104.591	0.542	1849501	0.26	100	104.6	90	110	
Ba	137	1	nogas	101.321	2.276	613556	1.74	100	101.3	90	110	
Tl	205	1	nogas	93.165	9.712	4479844	1.19	100	93.2	90	110	
Pb	208	1	nogas	93.089	9.795	6220069	1.33	100	93.1	90	110	
U	238	1	nogas	92.120	9.986	6748782	1.26	100	92.1	90	110	
Li	7	1	nogas	101.448	3.965	1855958	0.91	100	101.4	90	110	
Si	28	1	nogas	4827.241	1.781	6458870	1.41	5000	96.5	90	110	
Tl	203	1	nogas	92.142	9.875	1867748	1.20	100	92.1	90	110	
Na	23	2	He	10252.499	0.986	12955016	0.99	10000	102.5	90	110	
Mg	24	2	He	10187.886	0.945	7114453	0.30	10000	101.9	90	110	
Al	27	2	He	98.886	4.079	32842	3.35	100	98.9	90	110	
K	39	2	He	10090.814	1.700	5238286	1.44	10000	100.9	90	110	
Ca	43	2	He	10025.940	2.846	17515	2.46	10000	100.3	90	110	
Ca	44	2	He	10067.334	1.234	303336	1.14	10000	100.7	90	110	
V	51	2	He	99.891	0.632	625909	0.18	100	99.9	90	110	
Cr	52	2	He	99.085	1.128	778795	0.52	100	99.1	90	110	
Mn	55	2	He	100.806	2.102	465744	1.62	100	100.8	90	110	
Fe	56	2	He	10402.419	2.936	67728697	2.31	10000	104.0	90	110	
Co	59	2	He	103.492	3.352	1278289	2.71	100	103.5	90	110	
Ni	60	2	He	102.925	2.464	340519	1.85	100	102.9	90	110	
Cu	63	2	He	104.131	1.354	926263	0.81	100	104.1	90	110	
Zn	66	2	He	102.750	1.849	156410	1.39	100	102.7	90	110	
As	75	2	He	102.755	0.790	87851	0.18	100	102.8	90	110	
Sb	121	2	He	104.241	0.703	636731	0.66	100	104.2	90	110	
Se	78	2	He	101.768	0.754	6461	0.49	100	101.8	90	110	
Ti	47	2	He	98.661	1.966	19717	2.01	100	98.7	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	4475544	0.52	4912785	91.10	70	120	

Continuing Calibration Verification (CCV) Report

In	115	1	nogas	2847330	1.28	3074865	92.60	70	120	
Li	6	1	nogas	771081	3.27	992920	77.66	70	120	
Bi	209	1	nogas	3282671	9.14	3087510	106.32	70	120	
Ge	72	2	He	958672	0.65	1094372	87.60	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02SD
Data File Name	164SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:39:00-05:00
Sample Type	Sample
Dilution	10
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	-0.007	-0.071	-53.27	142	-0.01	2000	
B	11	1	nogas	11.329	113.290	8.81	140957	0.01	2000	
Al	27	1	nogas	149.927	1499.273	3.50	3097420	0.00	2000	
Ca	44	1	nogas	25585.411	255854.110	1.15	16981586	0.15	200000	
Ti	47	1	nogas	2.694	26.938	7.59	5852	0.05	2000	
Cr	52	1	nogas	0.463	4.630	4.12	34198	0.00	2000	
Co	59	1	nogas	0.102	1.016	6.70	3610	0.00	2000	
Cu	63	1	nogas	0.324	3.236	9.14	9052	0.00	2000	
Zn	66	1	nogas	1.971	19.709	1.58	10380	0.02	2000	
Se	77	1	nogas	50.218	502.182	9.80	17159	0.29	2000	
Se	82	1	nogas	1.195	11.947	41.36	325	0.37	2000	
Sr	88	1	nogas	756.975	7569.755	4.02	29669304	0.00	2000	
Mo	95	1	nogas	0.090	0.902	29.33	1680	0.01	2000	
Ag	107	1	nogas	-0.037	-0.365	-10.59	970	0.00	2000	
Cd	111	1	nogas	0.002	0.020	311.04	47	0.00	2000	
Sn	118	1	nogas	0.168	1.677	10.60	5914	0.00	2000	
Sb	121	1	nogas	-0.063	-0.627	-40.71	5831	0.00	2000	
Ba	137	1	nogas	10.621	106.211	0.68	65440	0.02	2000	
Tl	205	1	nogas	0.003	0.025	72.70	830	0.00	2000	
Pb	208	1	nogas	0.061	0.613	14.03	8041	0.00	2000	
U	238	1	nogas	0.053	0.530	1.17	3487	0.00	2000	
Li	7	1	nogas	29.854	298.544	2.21	639639	0.00	1000	
Si	28	1	nogas	12269.362	122693.617	1.47	13992942	0.09	2000	>LDR
Tl	203	1	nogas	0.001	0.006	518.73	353	0.00	2000	
Na	23	2	He	70093.652	700936.522	2.85	90352515	0.08	200000	
Mg	24	2	He	17257.477	172574.765	2.95	12328766	0.14	200000	
Al	27	2	He	160.270	1602.705	7.23	54014	0.30	2000	
K	39	2	He	856.349	8563.495	2.12	485755	0.18	200000	
Ca	43	2	He	28451.691	284516.906	0.84	50839	55.96	200000	
Ca	44	2	He	26811.804	268118.041	0.82	825998	3.25	200000	
V	51	2	He	0.720	7.203	3.78	5496	0.01	2000	
Cr	52	2	He	0.162	1.615	8.53	2550	0.01	2000	
Mn	55	2	He	4.364	43.636	3.83	20945	0.02	2000	
Fe	56	2	He	93.093	930.928	1.32	629339	0.01	200000	
Co	59	2	He	0.063	0.633	20.12	943	0.01	2000	
Ni	60	2	He	0.515	5.149	13.12	1953	0.03	2000	
Cu	63	2	He	0.208	2.077	10.64	3437	0.01	2000	
Zn	66	2	He	1.888	18.880	12.81	3300	0.06	2000	

Sample Report

As	75	2	He	0.141	1.410	3.25	210	0.07	2000	
Sb	121	2	He	-0.055	-0.552	-66.10	2044	0.00	2000	
Se	78	2	He	0.252	2.517	58.79	37	0.69	2000	
Ti	47	2	He	3.513	35.126	11.04	733	0.48	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	4546326	0.48	4912785	92.54	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2852905	1.88	3074865	92.78	70	120	
Li	6	1	nogas	825537	2.44	992920	83.14	70	120	
Bi	209	1	nogas	2867282	4.22	3087510	92.87	70	120	
Ge	72	2	He	981045	1.63	1094372	89.64	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02MS
Data File Name	165SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:41:21-05:00
Sample Type	Sample
Dilution	2
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	24.933	49.867	1.40	126104	0.02	2000	
B	11	1	nogas	74.691	149.382	3.23	324288	0.02	2000	
Al	27	1	nogas	877.482	1754.964	2.42	17076307	0.01	2000	
Ca	44	1	nogas	132525.782	265051.563	1.04	83539887	0.16	200000	
Ti	47	1	nogas	46.009	92.018	22.61	93248	0.05	2000	
Cr	52	1	nogas	25.025	50.049	2.23	674706	0.00	2000	
Co	59	1	nogas	24.067	48.134	2.19	709732	0.00	2000	
Cu	63	1	nogas	24.663	49.326	1.52	389288	0.01	2000	
Zn	66	1	nogas	31.378	62.756	2.94	140537	0.02	2000	
Se	77	1	nogas	97.705	195.411	5.55	25275	0.39	2000	
Se	82	1	nogas	27.952	55.904	6.46	7109	0.39	2000	
Sr	88	1	nogas	3832.323	7664.647	4.06	141703361	0.00	2000	>LDR
Mo	95	1	nogas	24.884	49.768	2.96	188037	0.01	2000	
Ag	107	1	nogas	22.624	45.248	1.42	471842	0.00	2000	
Cd	111	1	nogas	24.056	48.112	1.00	102785	0.02	2000	
Sn	118	1	nogas	0.548	1.097	5.13	10387	0.01	2000	
Sb	121	1	nogas	23.042	46.085	1.69	398712	0.01	2000	
Ba	137	1	nogas	81.121	162.242	1.89	464506	0.02	2000	
Tl	205	1	nogas	23.921	47.841	6.16	923650	0.00	2000	
Pb	208	1	nogas	24.803	49.606	5.65	1333367	0.00	2000	
U	238	1	nogas	0.283	0.565	6.21	16729	0.00	2000	
Li	7	1	nogas	160.281	320.563	2.46	2802189	0.01	1000	
Si	28	1	nogas	65260.365	130520.730	1.68	63625542	0.10	2000	>LDR
Tl	203	1	nogas	23.658	47.315	5.18	385300	0.01	2000	
Na	23	2	He	359630.307	719260.614	1.22	445944087	0.08	200000	>LDR
Mg	24	2	He	89058.063	178116.126	1.26	61225714	0.15	200000	
Al	27	2	He	895.758	1791.516	1.09	287504	0.31	2000	
K	39	2	He	6782.579	13565.157	2.02	3477222	0.20	200000	
Ca	43	2	He	148701.619	297403.239	0.74	255537	58.19	200000	
Ca	44	2	He	140076.166	280152.333	1.93	4150025	3.38	200000	
V	51	2	He	26.704	53.408	0.58	165361	0.02	2000	
Cr	52	2	He	24.158	48.317	1.03	187862	0.01	2000	
Mn	55	2	He	43.524	87.048	0.61	198172	0.02	2000	
Fe	56	2	He	2908.970	5817.939	0.73	18655120	0.02	200000	
Co	59	2	He	24.274	48.548	2.10	295323	0.01	2000	
Ni	60	2	He	25.408	50.817	1.88	82919	0.03	2000	
Cu	63	2	He	24.446	48.893	2.16	215244	0.01	2000	
Zn	66	2	He	30.636	61.273	1.52	46161	0.07	2000	

Sample Report

As	75	2	He	25.152	50.305	1.88	21235	0.12	2000	
Sb	121	2	He	23.253	46.505	1.32	141620	0.02	2000	
Se	78	2	He	26.035	52.070	9.03	1642	1.59	2000	
Ti	47	2	He	44.228	88.456	7.85	8710	0.51	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	4323039	0.66	4912785	88.00	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2691424	1.68	3074865	87.53	70	120	
Li	6	1	nogas	747192	2.12	992920	75.25	70	120	
Bi	209	1	nogas	2624263	4.84	3087510	85.00	70	120	
Ge	72	2	He	943824	0.15	1094372	86.24	70	120	

Sample Report

Sample Table

Sample Name	HS20080189-02MSD
Data File Name	166SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:43:41-05:00
Sample Type	Sample
Dilution	2
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	25.364	50.729	4.27	126626	0.02	2000	
B	11	1	nogas	76.170	152.341	4.82	324734	0.02	2000	
Al	27	1	nogas	956.674	1913.348	4.20	18872822	0.01	2000	
Ca	44	1	nogas	133624.947	267249.894	0.53	85400435	0.16	200000	
Ti	47	1	nogas	46.235	92.470	12.68	95066	0.05	2000	
Cr	52	1	nogas	25.086	50.173	0.78	685775	0.00	2000	
Co	59	1	nogas	23.901	47.802	0.54	714670	0.00	2000	
Cu	63	1	nogas	24.711	49.421	1.17	395484	0.01	2000	
Zn	66	1	nogas	32.170	64.339	1.48	146059	0.02	2000	
Se	77	1	nogas	104.325	208.649	3.86	26897	0.39	2000	
Se	82	1	nogas	29.514	59.027	3.31	7613	0.39	2000	
Sr	88	1	nogas	3981.339	7962.679	1.77	146635064	0.00	2000	>LDR
Mo	95	1	nogas	25.521	51.041	1.22	192039	0.01	2000	
Ag	107	1	nogas	23.130	46.259	2.22	480275	0.00	2000	
Cd	111	1	nogas	24.142	48.284	3.21	102687	0.02	2000	
Sn	118	1	nogas	0.542	1.084	3.62	10270	0.01	2000	
Sb	121	1	nogas	23.056	46.112	0.75	404524	0.01	2000	
Ba	137	1	nogas	81.888	163.777	1.74	466899	0.02	2000	
Tl	205	1	nogas	24.407	48.814	8.58	933659	0.00	2000	
Pb	208	1	nogas	25.503	51.006	6.91	1358976	0.00	2000	
U	238	1	nogas	0.290	0.580	7.12	16993	0.00	2000	
Li	7	1	nogas	164.017	328.035	1.80	2830948	0.01	1000	
Si	28	1	nogas	65432.826	130865.651	0.73	64679762	0.10	2000	>LDR
Tl	203	1	nogas	24.311	48.621	8.07	392210	0.01	2000	
Na	23	2	He	368206.101	736412.202	0.41	456010740	0.08	200000	>LDR
Mg	24	2	He	90872.540	181745.080	0.56	62395192	0.15	200000	
Al	27	2	He	979.836	1959.672	4.51	314004	0.31	2000	
K	39	2	He	7021.208	14042.416	2.43	3593812	0.20	200000	
Ca	43	2	He	151881.850	303763.700	2.15	260671	58.27	200000	
Ca	44	2	He	142639.862	285279.724	0.87	4220655	3.38	200000	
V	51	2	He	27.256	54.513	0.49	168553	0.02	2000	
Cr	52	2	He	24.651	49.302	0.75	191426	0.01	2000	
Mn	55	2	He	45.001	90.002	1.28	204626	0.02	2000	
Fe	56	2	He	2980.030	5960.060	1.12	19086513	0.02	200000	
Co	59	2	He	24.315	48.629	0.52	295456	0.01	2000	
Ni	60	2	He	25.537	51.074	1.24	83234	0.03	2000	
Cu	63	2	He	24.545	49.089	2.00	215821	0.01	2000	
Zn	66	2	He	31.291	62.582	0.42	47081	0.07	2000	

Sample Report

As	75	2	He	25.591	51.182	1.39	21576	0.12	2000	
Sb	121	2	He	23.861	47.721	0.71	145082	0.02	2000	
Se	78	2	He	25.564	51.128	6.86	1611	1.59	2000	
Ti	47	2	He	42.892	85.783	6.39	8436	0.51	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	4383135	0.33	4912785	89.22	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2679893	1.49	3074865	87.15	70	120	
Li	6	1	nogas	738107	3.26	992920	74.34	70	120	
Bi	209	1	nogas	2605008	6.91	3087510	84.37	70	120	
Ge	72	2	He	942646	0.29	1094372	86.14	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	171_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:55:19-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	98.205	3.029	576972	0.44	100	98.2	90	110	
B	11	1	nogas	508.031	3.149	1941554	0.62	500	101.6	90	110	
Al	27	1	nogas	104.710	4.170	2306550	2.53	100	104.7	90	110	
P	31	1	nogas	496.620	3.093	572932	0.92	500	99.3	90	110	
Ca	44	1	nogas	10405.179	2.601	7346247	1.14	10000	104.1	90	110	
Ti	47	1	nogas	101.969	2.851	230720	1.25	100	102.0	90	110	
Cr	52	1	nogas	102.570	2.629	3016338	1.20	100	102.6	90	110	
Co	59	1	nogas	100.650	2.114	3311626	0.14	100	100.6	90	110	
Cu	63	1	nogas	103.237	2.853	1806184	0.84	100	103.2	90	110	
Zn	66	1	nogas	104.780	1.072	521036	1.44	100	104.8	90	110	
Se	77	1	nogas	140.710	3.277	37289	3.27	100	140.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.398	4.056	29907	2.35	100	105.4	90	110	
Sr	88	1	nogas	104.081	2.291	4292922	2.32	100	104.1	90	110	
Mo	95	1	nogas	104.478	2.004	876895	1.49	100	104.5	90	110	
Ag	107	1	nogas	103.129	2.888	2390593	2.21	100	103.1	90	110	
Cd	111	1	nogas	102.850	2.498	489616	1.82	100	102.9	90	110	
Sn	118	1	nogas	104.867	0.998	1479932	1.08	100	104.9	90	110	
Sb	121	1	nogas	103.186	1.707	1967551	0.53	100	103.2	90	110	
Ba	137	1	nogas	104.278	1.313	665247	0.63	100	104.3	90	110	
Tl	205	1	nogas	104.149	3.759	4631321	0.69	100	104.1	90	110	
Pb	208	1	nogas	103.434	4.833	6389606	1.81	100	103.4	90	110	
U	238	1	nogas	101.252	4.982	6859365	1.95	100	101.3	90	110	
Li	7	1	nogas	100.235	3.303	2068641	1.74	100	100.2	90	110	
Si	28	1	nogas	5122.387	3.980	7275936	1.28	5000	102.4	90	110	
Tl	203	1	nogas	105.152	3.821	1971420	1.44	100	105.2	90	110	
Na	23	2	He	10660.811	0.880	14153426	1.34	10000	106.6	90	110	
Mg	24	2	He	10360.347	1.590	7601842	0.80	10000	103.6	90	110	
Al	27	2	He	99.052	1.000	34572	1.16	100	99.1	90	110	
K	39	2	He	10129.305	0.892	5525055	0.27	10000	101.3	90	110	
Ca	43	2	He	10544.402	3.160	19357	3.35	10000	105.4	90	110	
Ca	44	2	He	10181.763	0.965	322345	0.20	10000	101.8	90	110	
V	51	2	He	100.899	1.394	664305	1.23	100	100.9	90	110	
Cr	52	2	He	98.619	0.940	814492	0.16	100	98.6	90	110	
Mn	55	2	He	100.978	0.898	490238	0.09	100	101.0	90	110	
Fe	56	2	He	10354.096	1.944	70837871	1.14	10000	103.5	90	110	
Co	59	2	He	104.915	5.107	1361488	4.36	100	104.9	90	110	
Ni	60	2	He	103.981	2.566	361463	1.81	100	104.0	90	110	
Cu	63	2	He	105.638	1.979	987305	1.32	100	105.6	90	110	
Zn	66	2	He	102.836	1.688	164489	1.24	100	102.8	90	110	
As	75	2	He	101.221	1.042	90934	0.72	100	101.2	90	110	
Sb	121	2	He	103.784	0.364	666129	0.45	100	103.8	90	110	
Se	78	2	He	101.619	4.715	6778	4.04	100	101.6	90	110	
Ti	47	2	He	98.834	4.853	20752	4.45	100	98.8	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	4826774	2.02	4912785	98.25	70	120	
In	115	1	nogas	2999639	0.69	3074865	97.55	70	120	
Li	6	1	nogas	869270	3.44	992920	87.55	70	120	
Bi	209	1	nogas	3020279	3.21	3087510	97.82	70	120	
Ge	72	2	He	1007343	0.81	1094372	92.05	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	172_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T17:57:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

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	-77.0	133	34.0	1	
B	11	1	nogas	-1.635	-103.9	103100	4.2	10	
Al	27	1	nogas	-0.111	-42.5	33720	2.3	5	
P	31	1	nogas	-5.135	-3.2	36278	0.8	10	
Ca	44	1	nogas	3.403	33.2	29123	2.6	100	
Ti	47	1	nogas	0.077	87.3	283	52.9	2.5	
Cr	52	1	nogas	0.022	219.2	22788	6.9	2.5	
Co	59	1	nogas	0.011	45.5	840	20.7	2.5	
Cu	63	1	nogas	0.227	5.8	7705	3.7	2	
Zn	66	1	nogas	0.217	11.5	2257	6.0	2.5	
Se	77	1	nogas	23.114	22.3	12151	8.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.804	11.0	228	11.7	2	
Sr	88	1	nogas	0.209	1.4	10507	1.6	2.5	
Mo	95	1	nogas	0.665	18.4	6548	16.9	2.5	
Ag	107	1	nogas	0.048	39.8	2964	16.6	2.5	
Cd	111	1	nogas	0.012	104.7	97	62.4	1	
Sn	118	1	nogas	0.466	12.2	10343	8.1	5	
Sb	121	1	nogas	0.244	24.6	11681	9.4	2.5	
Ba	137	1	nogas	-0.128	-4.7	353	11.4	2.5	
Tl	205	1	nogas	0.240	42.6	11511	42.9	1	
Pb	208	1	nogas	-0.010	-145.6	4104	24.4	2.5	
U	238	1	nogas	0.033	34.8	2334	36.9	2.5	
Si	28	1	nogas	85.687	37.6	1885063	2.3	5	CCB Main CR1 Failed
Na	23	2	He	161.098	0.8	252937	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	6.292	3.8	5107	3.4	100	
Al	27	2	He	-0.733	-22.2	460	11.5	5	
K	39	2	He	-3.099	-17.2	32288	0.7	100	
Ca	43	2	He	2.995	215.5	23	49.5	100	
Ca	44	2	He	5.191	22.2	587	6.0	100	
V	51	2	He	0.112	5.3	1607	2.5	2.5	
Cr	52	2	He	-0.020	-85.2	1097	12.4	2.5	
Mn	55	2	He	0.586	5.9	3114	5.5	2.5	
Fe	56	2	He	1.760	12.4	20949	7.2	100	
Co	59	2	He	0.005	32.8	207	10.1	2.5	
Ni	60	2	He	0.024	25.8	290	6.9	2.5	
Cu	63	2	He	0.120	9.4	2657	4.1	2	
Zn	66	2	He	0.045	98.8	433	15.7	2.5	
As	75	2	He	0.224	18.2	283	12.4	2.5	
Sb	121	2	He	0.166	16.3	3437	4.8	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.639	22.0	62	14.8	2	
Ti	47	2	He	-0.025	-197.0	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4694160	1.20	4912785	95.55	70	120	
In	115	1	nogas	2978280	1.83	3074865	96.86	70	120	
Li	6	1	nogas	882397	2.24	992920	88.87	70	120	
Bi	209	1	nogas	3009868	4.04	3087510	97.49	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	985374	0.28	1094372	90.04	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05SD
Data File Name	176SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:07:00-05:00
Sample Type	Sample
Dilution	5
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.013	0.067	34.87	257	0.01	2000	
B	11	1	nogas	-3.377	-16.887	-11.01	90563	0.00	2000	
Al	27	1	nogas	68.708	343.538	22.04	1417789	0.00	2000	
Ca	44	1	nogas	808.391	4041.957	0.50	554204	0.15	200000	
Ti	47	1	nogas	2.513	12.563	12.69	5396	0.05	2000	
Cr	52	1	nogas	0.396	1.978	12.30	31918	0.00	2000	
Co	59	1	nogas	0.158	0.789	3.95	5284	0.00	2000	
Cu	63	1	nogas	1.375	6.874	2.70	25992	0.01	2000	
Zn	66	1	nogas	4.218	21.092	2.01	20609	0.02	2000	
Se	77	1	nogas	47.526	237.628	10.69	16401	0.29	2000	
Se	82	1	nogas	-0.065	-0.323	-370.64	-12	0.56	2000	
Sr	88	1	nogas	13.084	65.420	1.17	517426	0.00	2000	
Mo	95	1	nogas	0.074	0.372	7.29	1563	0.00	2000	
Ag	107	1	nogas	-0.045	-0.227	-17.19	777	-0.01	2000	
Cd	111	1	nogas	0.042	0.211	9.85	230	0.02	2000	
Sn	118	1	nogas	-0.044	-0.222	-7.05	3094	0.00	2000	
Sb	121	1	nogas	-0.203	-1.017	-6.09	3270	-0.01	2000	
Ba	137	1	nogas	11.468	57.342	1.24	70929	0.02	2000	
Tl	205	1	nogas	0.017	0.087	10.31	1537	0.00	2000	
Pb	208	1	nogas	0.118	0.589	17.57	11919	0.00	2000	
U	238	1	nogas	0.014	0.072	8.96	1050	0.00	2000	
Li	7	1	nogas	0.529	2.645	15.45	87339	0.00	1000	
Si	28	1	nogas	31414.876	157074.381	1.09	32672003	0.10	2000	>LDR
Tl	203	1	nogas	0.010	0.048	27.20	543	0.00	2000	
Na	23	2	He	1940.313	9701.567	1.18	2439259	0.08	200000	
Mg	24	2	He	459.039	2295.196	2.32	314947	0.15	200000	
Al	27	2	He	58.837	294.187	5.32	19437	0.30	2000	
K	39	2	He	230.492	1152.459	1.05	149012	0.15	200000	
Ca	43	2	He	830.547	4152.733	10.14	1440	57.67	200000	
Ca	44	2	He	762.721	3813.603	5.00	22911	3.33	200000	
V	51	2	He	0.433	2.166	4.22	3504	0.01	2000	
Cr	52	2	He	0.195	0.973	12.29	2697	0.01	2000	
Mn	55	2	He	19.814	99.069	2.87	90062	0.02	2000	
Fe	56	2	He	453.761	2268.806	1.05	2906642	0.02	200000	
Co	59	2	He	0.164	0.821	8.41	2127	0.01	2000	
Ni	60	2	He	0.441	2.207	9.29	1633	0.03	2000	
Cu	63	2	He	1.504	7.518	3.52	14583	0.01	2000	
Zn	66	2	He	3.980	19.900	7.08	6275	0.06	2000	

Sample Report

As	75	2	He	0.247	1.234	6.59	290	0.09	2000	
Sb	121	2	He	-0.163	-0.817	-10.25	1313	-0.01	2000	
Se	78	2	He	0.279	1.393	89.48	37	0.76	2000	
Ti	47	2	He	2.639	13.197	32.53	530	0.50	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	4485929	1.14	4912785	91.31	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2866975	0.58	3074865	93.24	70	120	
Li	6	1	nogas	825552	1.65	992920	83.14	70	120	
Bi	209	1	nogas	3017994	6.75	3087510	97.75	70	120	
Ge	72	2	He	940414	1.20	1094372	85.93	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05MS
Data File Name	177SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:09:21-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	43.830	43.830	0.49	243932	0.02	2000	
B	11	1	nogas	2.460	2.460	7.05	110180	0.00	2000	
Al	27	1	nogas	339.388	339.388	6.33	6889619	0.00	2000	
Ca	44	1	nogas	8538.359	8538.359	2.77	5619207	0.15	200000	
Ti	47	1	nogas	56.331	56.331	6.05	118739	0.05	2000	
Cr	52	1	nogas	46.860	46.860	0.92	1295073	0.00	2000	
Co	59	1	nogas	47.905	47.905	0.91	1468413	0.00	2000	
Cu	63	1	nogas	54.721	54.721	2.28	893426	0.01	2000	
Zn	66	1	nogas	65.347	65.347	1.75	303027	0.02	2000	
Se	77	1	nogas	95.258	95.258	4.32	25795	0.37	2000	
Se	82	1	nogas	50.464	50.464	0.50	13344	0.38	2000	
Sr	88	1	nogas	67.403	67.403	2.33	2589143	0.00	2000	
Mo	95	1	nogas	46.313	46.313	3.17	362404	0.01	2000	
Ag	107	1	nogas	48.040	48.040	2.68	1037779	0.00	2000	
Cd	111	1	nogas	49.258	49.258	3.25	218335	0.02	2000	
Sn	118	1	nogas	-0.077	-0.077	-13.51	2590	0.00	2000	
Sb	121	1	nogas	47.050	47.050	2.98	839183	0.01	2000	
Ba	137	1	nogas	108.883	108.883	3.55	646583	0.02	2000	
Tl	205	1	nogas	48.812	48.812	6.40	2147090	0.00	2000	
Pb	208	1	nogas	48.697	48.697	6.61	2978072	0.00	2000	
U	238	1	nogas	0.059	0.059	10.91	4007	0.00	2000	
Li	7	1	nogas	5.244	5.244	0.68	175542	0.00	1000	
Si	28	1	nogas	159945.850	159945.850	0.20	159647514	0.10	2000	>LDR
Tl	203	1	nogas	45.745	45.745	6.25	848436	0.01	2000	
Na	23	2	He	13461.768	13461.768	0.29	16836741	0.08	200000	
Mg	24	2	He	6826.617	6826.617	1.28	4722247	0.14	200000	
Al	27	2	He	358.136	358.136	10.30	115995	0.31	2000	
K	39	2	He	5680.180	5680.180	1.86	2935027	0.19	200000	
Ca	43	2	He	7957.412	7957.412	0.96	13775	57.77	200000	
Ca	44	2	He	8258.573	8258.573	1.23	246557	3.35	200000	
V	51	2	He	46.724	46.724	0.87	290455	0.02	2000	
Cr	52	2	He	45.774	45.774	1.01	357052	0.01	2000	
Mn	55	2	He	137.636	137.636	1.03	629799	0.02	2000	
Fe	56	2	He	6798.618	6798.618	0.57	43854828	0.02	200000	
Co	59	2	He	47.902	47.902	0.47	586230	0.01	2000	
Ni	60	2	He	48.867	48.867	4.19	160247	0.03	2000	
Cu	63	2	He	55.822	55.822	1.37	492550	0.01	2000	
Zn	66	2	He	64.827	64.827	0.16	97886	0.07	2000	

Sample Report

As	75	2	He	48.378	48.378	0.80	41016	0.12	2000	
Sb	121	2	He	47.741	47.741	0.98	290107	0.02	2000	
Se	78	2	He	48.459	48.459	2.09	3058	1.58	2000	
Ti	47	2	He	49.874	49.874	4.98	9883	0.50	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	4494759	1.19	4912785	91.49	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2793608	2.14	3074865	90.85	70	120	
Li	6	1	nogas	822547	0.29	992920	82.84	70	120	
Bi	209	1	nogas	2991992	5.94	3087510	96.91	70	120	
Ge	72	2	He	949622	0.83	1094372	86.77	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05MSD
Data File Name	178SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:11:42-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	42.877	42.877	1.63	234358	0.02	2000	
B	11	1	nogas	2.186	2.186	11.64	107296	0.00	2000	
Al	27	1	nogas	359.226	359.226	11.94	7262288	0.00	2000	
Ca	44	1	nogas	8400.486	8400.486	0.64	5507565	0.15	200000	
Ti	47	1	nogas	51.774	51.774	0.73	108750	0.05	2000	
Cr	52	1	nogas	44.950	44.950	1.18	1238267	0.00	2000	
Co	59	1	nogas	46.592	46.592	1.12	1422485	0.00	2000	
Cu	63	1	nogas	52.998	52.998	0.08	862135	0.01	2000	
Zn	66	1	nogas	64.053	64.053	2.06	295889	0.02	2000	
Se	77	1	nogas	84.474	84.474	5.20	23589	0.36	2000	
Se	82	1	nogas	47.650	47.650	1.23	12550	0.38	2000	
Sr	88	1	nogas	63.464	63.464	1.33	2501927	0.00	2000	
Mo	95	1	nogas	44.790	44.790	2.51	359724	0.01	2000	
Ag	107	1	nogas	45.370	45.370	3.39	1005783	0.00	2000	
Cd	111	1	nogas	47.129	47.129	3.07	214377	0.02	2000	
Sn	118	1	nogas	-0.104	-0.104	-1.71	2284	0.00	2000	
Sb	121	1	nogas	46.162	46.162	0.93	820373	0.01	2000	
Ba	137	1	nogas	103.439	103.439	2.87	630479	0.02	2000	
Tl	205	1	nogas	46.354	46.354	7.33	2092647	0.00	2000	
Pb	208	1	nogas	46.833	46.833	6.99	2940245	0.00	2000	
U	238	1	nogas	0.054	0.054	3.32	3777	0.00	2000	
Li	7	1	nogas	5.082	5.082	2.46	169408	0.00	1000	
Si	28	1	nogas	153621.081	153621.081	1.82	152783631	0.10	2000	>LDR
Tl	203	1	nogas	43.618	43.618	9.20	829465	0.01	2000	
Na	23	2	He	13283.460	13283.460	1.71	16279920	0.08	200000	
Mg	24	2	He	6732.504	6732.504	0.87	4563902	0.15	200000	
Al	27	2	He	338.528	338.528	4.43	107544	0.31	2000	
K	39	2	He	5672.665	5672.665	0.63	2872447	0.20	200000	
Ca	43	2	He	8353.237	8353.237	1.99	14169	58.95	200000	
Ca	44	2	He	8271.169	8271.169	1.34	241975	3.42	200000	
V	51	2	He	45.750	45.750	0.34	278710	0.02	2000	
Cr	52	2	He	44.646	44.646	0.41	341282	0.01	2000	
Mn	55	2	He	136.855	136.855	1.22	613662	0.02	2000	
Fe	56	2	He	6715.953	6715.953	1.03	42450849	0.02	200000	
Co	59	2	He	47.624	47.624	1.15	571116	0.01	2000	
Ni	60	2	He	48.952	48.952	1.62	157319	0.03	2000	
Cu	63	2	He	55.521	55.521	1.35	480073	0.01	2000	
Zn	66	2	He	63.611	63.611	0.86	94127	0.07	2000	

Sample Report

As	75	2	He	47.847	47.847	0.47	39752	0.12	2000	
Sb	121	2	He	46.966	46.966	1.63	279702	0.02	2000	
Se	78	2	He	47.955	47.955	0.86	2966	1.62	2000	
Ti	47	2	He	52.253	52.253	3.40	10143	0.52	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	4476934	0.51	4912785	91.13	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2866605	1.83	3074865	93.23	70	120	
Li	6	1	nogas	807857	0.56	992920	81.36	70	120	
Bi	209	1	nogas	3074016	7.25	3087510	99.56	70	120	
Ge	72	2	He	930534	0.21	1094372	85.03	70	120	

Sample Report

Sample Table

Sample Name	HS20080223-05PDS
Data File Name	179SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:14:04-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	105.667	105.667	2.93	577682	0.02	2000	
B	11	1	nogas	1.026	1.026	54.59	103467	0.00	2000	
Al	27	1	nogas	257.053	257.053	9.96	5145493	0.00	2000	
Ca	44	1	nogas	15082.220	15082.220	1.72	9760745	0.15	200000	
Ti	47	1	nogas	114.529	114.529	3.82	237813	0.05	2000	
Cr	52	1	nogas	109.521	109.521	3.30	2954074	0.00	2000	
Co	59	1	nogas	110.002	110.002	2.73	3321265	0.00	2000	
Cu	63	1	nogas	122.740	122.740	3.11	1969922	0.01	2000	
Zn	66	1	nogas	136.104	136.104	2.87	620599	0.02	2000	
Se	77	1	nogas	155.536	155.536	4.15	37071	0.42	2000	
Se	82	1	nogas	125.947	125.947	2.36	32802	0.38	2000	
Sr	88	1	nogas	63.044	63.044	0.65	2478379	0.00	2000	
Mo	95	1	nogas	110.936	110.936	2.18	887138	0.01	2000	
Ag	107	1	nogas	113.180	113.180	3.61	2499434	0.00	2000	
Cd	111	1	nogas	117.612	117.612	3.46	533514	0.02	2000	
Sn	118	1	nogas	-0.111	-0.111	-10.56	2194	-0.01	2000	
Sb	121	1	nogas	109.807	109.807	2.19	1920814	0.01	2000	
Ba	137	1	nogas	171.714	171.714	2.55	1043037	0.02	2000	
Tl	205	1	nogas	114.414	114.414	7.60	5123760	0.00	2000	
Pb	208	1	nogas	114.223	114.223	7.73	7106581	0.00	2000	
U	238	1	nogas	0.053	0.053	5.84	3724	0.00	2000	
Li	7	1	nogas	4.906	4.906	2.02	166305	0.00	1000	
Si	28	1	nogas	150672.979	150672.979	0.57	148262654	0.10	2000	>LDR
Tl	203	1	nogas	115.516	115.516	8.86	2179739	0.01	2000	
Na	23	2	He	20472.113	20472.113	0.62	25260369	0.08	200000	
Mg	24	2	He	13969.092	13969.092	2.15	9540389	0.15	200000	
Al	27	2	He	265.877	265.877	1.67	85255	0.31	2000	
K	39	2	He	13080.362	13080.362	1.33	6631759	0.20	200000	
Ca	43	2	He	15345.140	15345.140	1.12	26212	58.54	200000	
Ca	44	2	He	15279.492	15279.492	1.06	450072	3.39	200000	
V	51	2	He	117.547	117.547	2.79	720170	0.02	2000	
Cr	52	2	He	115.342	115.342	2.61	886451	0.01	2000	
Mn	55	2	He	207.932	207.932	2.53	939263	0.02	2000	
Fe	56	2	He	13962.319	13962.319	2.12	88913735	0.02	200000	
Co	59	2	He	123.755	123.755	3.88	1494950	0.01	2000	
Ni	60	2	He	121.662	121.662	2.96	393636	0.03	2000	
Cu	63	2	He	131.010	131.010	2.24	1139373	0.01	2000	
Zn	66	2	He	145.785	145.785	1.76	216914	0.07	2000	

Sample Report

As	75	2	He	125.835	125.835	1.82	105204	0.12	2000	
Sb	121	2	He	115.871	115.871	1.61	691972	0.02	2000	
Se	78	2	He	130.457	130.457	3.08	8094	1.61	2000	
Ti	47	2	He	119.643	119.643	2.33	23382	0.51	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	4428393	0.92	4912785	90.14	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2858240	1.05	3074865	92.96	70	120	
Li	6	1	nogas	808538	1.62	992920	81.43	70	120	
Bi	209	1	nogas	3049295	6.56	3087510	98.76	70	120	
Ge	72	2	He	937676	0.85	1094372	85.68	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	183_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:23:31-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	101.475	0.370	502459	0.23	100	101.5	90	110	
B	11	1	nogas	518.420	1.201	1667890	0.69	500	103.7	90	110	
Al	27	1	nogas	99.332	1.364	1993872	1.76	100	99.3	90	110	
P	31	1	nogas	471.471	0.542	497131	1.14	500	94.3	90	110	
Ca	44	1	nogas	10126.946	1.025	6509140	1.53	10000	101.3	90	110	
Ti	47	1	nogas	99.680	0.200	205323	1.31	100	99.7	90	110	
Cr	52	1	nogas	100.006	1.065	2677823	2.12	100	100.0	90	110	
Co	59	1	nogas	100.543	1.410	3011726	2.75	100	100.5	90	110	
Cu	63	1	nogas	103.283	2.387	1644792	1.72	100	103.3	90	110	
Zn	66	1	nogas	102.455	0.212	463717	1.52	100	102.5	90	110	
Se	77	1	nogas	141.761	4.231	34146	4.69	100	141.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.911	0.558	26071	1.60	100	100.9	90	110	
Sr	88	1	nogas	102.967	1.673	3927346	1.97	100	103.0	90	110	
Mo	95	1	nogas	104.768	1.269	813207	1.76	100	104.8	90	110	
Ag	107	1	nogas	103.824	1.144	2225887	1.76	100	103.8	90	110	
Cd	111	1	nogas	102.704	0.082	452161	0.65	100	102.7	90	110	
Sn	118	1	nogas	102.540	1.475	1338276	1.84	100	102.5	90	110	
Sb	121	1	nogas	107.474	2.276	1864687	0.90	100	107.5	90	110	
Ba	137	1	nogas	105.311	0.962	621308	1.55	100	105.3	90	110	
Tl	205	1	nogas	105.570	2.999	4478572	0.89	100	105.6	90	110	
Pb	208	1	nogas	104.873	4.195	6180293	1.49	100	104.9	90	110	
U	238	1	nogas	101.562	4.467	6563770	1.93	100	101.6	90	110	
Li	7	1	nogas	103.386	0.301	1796000	0.50	100	103.4	90	110	
Si	28	1	nogas	4856.109	1.856	6366141	0.36	5000	97.1	90	110	
Tl	203	1	nogas	106.118	1.614	1898479	1.73	100	106.1	90	110	
Na	23	2	He	10076.832	2.060	12418430	0.65	10000	100.8	90	110	
Mg	24	2	He	9988.643	2.076	6802718	0.56	10000	99.9	90	110	
Al	27	2	He	100.441	1.251	32532	1.42	100	100.4	90	110	
K	39	2	He	9889.903	1.612	5007854	0.45	10000	98.9	90	110	
Ca	43	2	He	9886.066	1.989	16845	0.65	10000	98.9	90	110	
Ca	44	2	He	9911.277	1.114	291274	0.52	10000	99.1	90	110	
V	51	2	He	99.460	1.485	607818	0.19	100	99.5	90	110	
Cr	52	2	He	98.304	0.745	753660	0.95	100	98.3	90	110	
Mn	55	2	He	99.857	1.214	450007	0.67	100	99.9	90	110	
Fe	56	2	He	10268.808	2.455	65206801	0.85	10000	102.7	90	110	
Co	59	2	He	101.872	2.729	1227179	1.13	100	101.9	90	110	
Ni	60	2	He	101.884	2.479	328742	1.01	100	101.9	90	110	
Cu	63	2	He	103.471	1.469	897712	0.92	100	103.5	90	110	
Zn	66	2	He	100.750	1.231	149605	1.48	100	100.7	90	110	
As	75	2	He	101.336	1.838	84496	0.21	100	101.3	90	110	
Sb	121	2	He	103.975	2.532	619362	1.24	100	104.0	90	110	
Se	78	2	He	102.245	2.396	6330	0.95	100	102.2	90	110	
Ti	47	2	He	98.106	2.550	19120	1.37	100	98.1	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	4392577	1.51	4912785	89.41	70	120	
In	115	1	nogas	2773803	0.71	3074865	90.21	70	120	
Li	6	1	nogas	732125	0.50	992920	73.73	70	120	
Bi	209	1	nogas	2880578	2.78	3087510	93.30	70	120	
Ge	72	2	He	935119	1.64	1094372	85.45	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	184_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:25:49-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-567.6	163	49.5	1	
B	11	1	nogas	-7.669	-20.3	75004	4.3	10	
Al	27	1	nogas	0.606	152.1	45643	40.3	5	
P	31	1	nogas	-6.816	-6.7	32238	0.7	10	
Ca	44	1	nogas	-6.832	-5.2	20652	1.2	100	
Ti	47	1	nogas	0.120	62.7	353	43.2	2.5	
Cr	52	1	nogas	0.077	33.9	22718	2.4	2.5	
Co	59	1	nogas	0.016	37.7	933	19.9	2.5	
Cu	63	1	nogas	-0.053	-26.0	2757	7.6	2	
Zn	66	1	nogas	0.101	6.8	1583	2.2	2.5	
Se	77	1	nogas	29.549	13.2	12578	5.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.734	61.4	195	60.2	2	
Sr	88	1	nogas	0.026	24.1	2960	9.3	2.5	
Mo	95	1	nogas	0.678	14.3	6488	12.8	2.5	
Ag	107	1	nogas	0.029	67.8	2470	18.9	2.5	
Cd	111	1	nogas	0.016	40.6	113	27.0	1	
Sn	118	1	nogas	0.421	17.5	9489	11.3	5	
Sb	121	1	nogas	0.383	10.9	13319	5.6	2.5	
Ba	137	1	nogas	-0.120	-6.7	390	13.6	2.5	
Tl	205	1	nogas	0.258	37.5	12122	41.2	1	
Pb	208	1	nogas	0.002	754.0	4754	26.4	2.5	
U	238	1	nogas	0.036	40.8	2530	44.9	2.5	
Si	28	1	nogas	59.258	71.4	1734382	2.5	5	CCB Main CR1 Failed
Na	23	2	He	61.691	1.8	116697	0.8	100	
Mg	24	2	He	1.825	10.7	1787	8.4	100	
Al	27	2	He	-0.410	-7.1	533	1.1	5	
K	39	2	He	-7.383	-22.1	28195	3.4	100	
Ca	43	2	He	-0.114	-6038.1	17	69.3	100	
Ca	44	2	He	-3.224	-33.0	307	10.5	100	
V	51	2	He	0.087	18.5	1358	7.5	2.5	
Cr	52	2	He	0.000	-4478.2	1177	12.8	2.5	
Mn	55	2	He	0.550	6.0	2767	6.3	2.5	
Fe	56	2	He	1.943	10.9	20815	5.6	100	
Co	59	2	He	0.009	33.9	247	16.4	2.5	
Ni	60	2	He	0.016	77.7	250	17.4	2.5	
Cu	63	2	He	-0.030	-80.3	1207	16.8	2	
Zn	66	2	He	0.056	57.1	423	12.1	2.5	
As	75	2	He	0.208	22.1	253	16.0	2.5	
Sb	121	2	He	0.292	15.5	3971	7.1	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.886	11.6	73	9.6	2	
Ti	47	2	He	-0.004	-2079.7	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	4382303	0.65	4912785	89.20	70	120	
In	115	1	nogas	2906571	0.83	3074865	94.53	70	120	
Li	6	1	nogas	817681	3.22	992920	82.35	70	120	
Bi	209	1	nogas	2952852	5.93	3087510	95.64	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	925502	1.06	1094372	84.57	70	120	

Sample Report

Sample Table

Sample Name	HS20080475-01
Data File Name	185SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:28:12-05:00
Sample Type	Sample
Dilution	1
Comment	TW DOD 156348
ISTD Ref FileName	014CALB.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	0.087	0.087	10.64	638	0.01	2000	
B	11	1	nogas	29.717	29.717	3.20	195512	0.02	2000	
Al	27	1	nogas	37.714	37.714	6.32	782375	0.00	2000	
Ca	44	1	nogas	30671.936	30671.936	1.70	19781181	0.16	200000	
Ti	47	1	nogas	2.459	2.459	3.66	5201	0.05	2000	
Cr	52	1	nogas	0.982	0.982	3.18	47123	0.00	2000	
Co	59	1	nogas	6.645	6.645	2.71	200607	0.00	2000	
Cu	63	1	nogas	11.418	11.418	1.04	186189	0.01	2000	
Zn	66	1	nogas	36.412	36.412	1.14	166541	0.02	2000	
Se	77	1	nogas	39.698	39.698	5.55	14653	0.27	2000	
Se	82	1	nogas	0.886	0.886	48.29	235	0.38	2000	
Sr	88	1	nogas	555.909	555.909	1.72	21387467	0.00	2000	
Mo	95	1	nogas	0.567	0.567	5.68	5381	0.01	2000	
Ag	107	1	nogas	-0.041	-0.041	-8.80	847	0.00	2000	
Cd	111	1	nogas	0.100	0.100	34.53	480	0.02	2000	
Sn	118	1	nogas	-0.035	-0.035	-27.94	3147	0.00	2000	
Sb	121	1	nogas	-0.027	-0.027	-45.55	6295	0.00	2000	
Ba	137	1	nogas	598.672	598.672	3.15	3558177	0.02	2000	
Tl	205	1	nogas	0.017	0.017	31.08	1463	0.00	2000	
Pb	208	1	nogas	0.038	0.038	19.16	6727	0.00	2000	
U	238	1	nogas	0.114	0.114	6.84	7445	0.00	2000	
Li	7	1	nogas	19.855	19.855	2.23	432467	0.00	1000	
Si	28	1	nogas	191199.325	191199.325	0.12	187320771	0.10	2000	>LDR
Tl	203	1	nogas	0.015	0.015	58.03	617	0.00	2000	
Na	23	2	He	152299.650	152299.650	1.08	190178764	0.08	200000	
Mg	24	2	He	22867.998	22867.998	1.20	15829966	0.14	200000	
Al	27	2	He	39.964	39.964	3.97	13566	0.29	2000	
K	39	2	He	1061.542	1061.542	2.73	575470	0.18	200000	
Ca	43	2	He	31306.932	31306.932	1.98	54182	57.78	200000	
Ca	44	2	He	30497.628	30497.628	1.56	910053	3.35	200000	
V	51	2	He	0.372	0.372	3.32	3163	0.01	2000	
Cr	52	2	He	0.882	0.882	5.14	8069	0.01	2000	
Mn	55	2	He	461.849	461.849	2.13	2114391	0.02	2000	
Fe	56	2	He	716.208	716.208	1.62	4631075	0.02	200000	
Co	59	2	He	6.837	6.837	2.81	83836	0.01	2000	
Ni	60	2	He	8.651	8.651	2.60	28562	0.03	2000	
Cu	63	2	He	11.094	11.094	1.55	99163	0.01	2000	
Zn	66	2	He	34.858	34.858	2.83	52830	0.07	2000	

Sample Report

As	75	2	He	1.108	1.108	7.35	1021	0.11	2000	
Sb	121	2	He	0.008	0.008	248.75	2360	0.00	2000	
Se	78	2	He	0.569	0.569	23.65	55	1.03	2000	
Ti	47	2	He	0.482	0.482	1.98	110	0.44	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	4419700	2.07	4912785	89.96	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	2799255	1.37	3074865	91.04	70	120	
Li	6	1	nogas	790907	1.11	992920	79.65	70	120	
Bi	209	1	nogas	2898208	7.31	3087510	93.87	70	120	
Ge	72	2	He	950442	1.72	1094372	86.85	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	190_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:39:56-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	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	99.985	5.973	537552	1.26	100	100.0	90	110	
B	11	1	nogas	517.629	5.901	1809023	2.74	500	103.5	90	110	
Al	27	1	nogas	100.074	2.701	2117504	1.67	100	100.1	90	110	
P	31	1	nogas	481.472	0.833	534433	0.60	500	96.3	90	110	
Ca	44	1	nogas	10147.126	0.987	6876763	0.15	10000	101.5	90	110	
Ti	47	1	nogas	98.907	1.103	214809	0.42	100	98.9	90	110	
Cr	52	1	nogas	101.018	1.210	2851654	0.98	100	101.0	90	110	
Co	59	1	nogas	99.946	1.175	3156153	0.16	100	99.9	90	110	
Cu	63	1	nogas	101.884	1.989	1710897	0.87	100	101.9	90	110	
Zn	66	1	nogas	103.273	0.437	492848	1.05	100	103.3	90	110	
Se	77	1	nogas	147.827	4.207	37212	2.36	100	147.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.851	1.217	28291	1.74	100	103.9	90	110	
Sr	88	1	nogas	104.104	3.497	4079698	1.52	100	104.1	90	110	
Mo	95	1	nogas	105.645	2.418	842656	1.11	100	105.6	90	110	
Ag	107	1	nogas	105.043	1.138	2314482	0.84	100	105.0	90	110	
Cd	111	1	nogas	104.310	2.013	471952	0.97	100	104.3	90	110	
Sn	118	1	nogas	105.244	0.436	1411864	2.29	100	105.2	90	110	
Sb	121	1	nogas	105.651	2.164	1933087	1.21	100	105.7	90	110	
Ba	137	1	nogas	107.188	2.496	649801	0.73	100	107.2	90	110	
Tl	205	1	nogas	105.336	5.540	4664589	2.04	100	105.3	90	110	
Pb	208	1	nogas	103.881	3.614	6394917	0.26	100	103.9	90	110	
U	238	1	nogas	101.823	2.437	6876317	1.26	100	101.8	90	110	
Li	7	1	nogas	101.143	6.777	1908987	1.64	100	101.1	90	110	
Si	28	1	nogas	4883.742	2.842	6740748	1.29	5000	97.7	90	110	
Tl	203	1	nogas	104.316	5.049	1947736	1.43	100	104.3	90	110	
Na	23	2	He	10210.853	0.205	13015103	0.42	10000	102.1	90	110	
Mg	24	2	He	10223.970	0.781	7202003	0.52	10000	102.2	90	110	
Al	27	2	He	98.480	2.041	32999	1.63	100	98.5	90	110	
K	39	2	He	9972.805	1.504	5222602	1.33	10000	99.7	90	110	
Ca	43	2	He	10065.350	4.631	17735	4.04	10000	100.7	90	110	
Ca	44	2	He	9816.098	1.776	298343	1.29	10000	98.2	90	110	
V	51	2	He	99.269	0.638	627437	0.06	100	99.3	90	110	
Cr	52	2	He	99.803	1.065	791291	1.03	100	99.8	90	110	
Mn	55	2	He	101.677	1.779	473862	1.24	100	101.7	90	110	
Fe	56	2	He	10301.617	1.715	67660947	1.16	10000	103.0	90	110	
Co	59	2	He	101.088	0.829	1259620	0.24	100	101.1	90	110	
Ni	60	2	He	101.569	1.135	338987	0.74	100	101.6	90	110	
Cu	63	2	He	103.847	0.923	931809	0.41	100	103.8	90	110	
Zn	66	2	He	102.642	0.887	157613	0.32	100	102.6	90	110	
As	75	2	He	100.995	0.527	87103	0.62	100	101.0	90	110	
Sb	121	2	He	104.237	0.512	642252	0.23	100	104.2	90	110	
Se	78	2	He	100.521	1.067	6438	0.75	100	100.5	90	110	
Ti	47	2	He	98.235	3.236	19801	2.64	100	98.2	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	4631660	1.14	4912785	94.28	70	120	
In	115	1	nogas	2851300	1.95	3074865	92.73	70	120	
Li	6	1	nogas	796425	4.82	992920	80.21	70	120	
Bi	209	1	nogas	3009405	3.73	3087510	97.47	70	120	
Ge	72	2	He	967028	0.61	1094372	88.36	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	191_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\081
Acq Date Time	2020-08-19T18:42:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.003	-127.4	167	16.5	1	
B	11	1	nogas	-6.911	-11.2	80395	1.9	10	
Al	27	1	nogas	-0.046	-176.5	33994	5.2	5	
P	31	1	nogas	-4.809	-8.0	35460	1.4	10	
Ca	44	1	nogas	-1.065	-107.4	25241	2.8	100	
Ti	47	1	nogas	0.080	35.3	280	21.4	2.5	
Cr	52	1	nogas	0.098	65.8	24166	7.3	2.5	
Co	59	1	nogas	0.007	52.8	670	16.1	2.5	
Cu	63	1	nogas	0.079	21.3	5034	5.8	2	
Zn	66	1	nogas	0.181	17.2	2017	7.1	2.5	
Se	77	1	nogas	31.238	9.3	13385	4.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.996	11.7	272	11.2	2	
Sr	88	1	nogas	0.123	10.1	6888	8.6	2.5	
Mo	95	1	nogas	0.672	18.6	6505	17.6	2.5	
Ag	107	1	nogas	0.030	68.4	2504	20.2	2.5	
Cd	111	1	nogas	0.012	20.7	93	12.4	1	
Sn	118	1	nogas	0.381	25.3	9033	16.5	5	
Sb	121	1	nogas	0.166	41.2	9930	12.6	2.5	
Ba	137	1	nogas	-0.095	-14.9	553	16.4	2.5	
Tl	205	1	nogas	0.269	38.8	12903	40.4	1	
Pb	208	1	nogas	-0.006	-239.4	4367	23.9	2.5	
U	238	1	nogas	0.033	25.8	2374	28.9	2.5	
Si	28	1	nogas	30.244	389.8	1770077	6.8	5	CCB Main CR1 Failed
Na	23	2	He	102.859	1.3	174099	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	3.307	20.7	2907	16.6	100	
Al	27	2	He	-0.483	-32.3	533	10.3	5	
K	39	2	He	-6.269	-8.4	30018	2.0	100	
Ca	43	2	He	3.248	266.1	23	65.5	100	
Ca	44	2	He	1.395	136.2	460	12.1	100	
V	51	2	He	0.124	14.1	1649	5.5	2.5	
Cr	52	2	He	-0.008	-113.0	1167	7.3	2.5	
Mn	55	2	He	0.549	6.0	2884	5.3	2.5	
Fe	56	2	He	1.744	20.0	20435	11.3	100	
Co	59	2	He	0.007	122.4	230	47.8	2.5	
Ni	60	2	He	0.003	289.1	217	13.3	2.5	
Cu	63	2	He	0.050	49.7	1980	12.2	2	
Zn	66	2	He	0.024	139.2	393	14.0	2.5	
As	75	2	He	0.205	11.0	262	8.5	2.5	
Sb	121	2	He	0.087	33.0	2887	5.0	2.5	

Continuing Calibration Blank (CCB) Report

Se	78	2	He	0.680	19.2	63	12.0	2	
Ti	47	2	He	0.094	173.8	33	96.4	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	4545512	0.34	4912785	92.52	70	120	
In	115	1	nogas	2931360	1.76	3074865	95.33	70	120	
Li	6	1	nogas	846497	1.83	992920	85.25	70	120	
Bi	209	1	nogas	3031970	3.93	3087510	98.20	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	966320	1.19	1094372	88.30	70	120	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\081920A.b
Report Comment
Instrument Name G3281A JP11080910

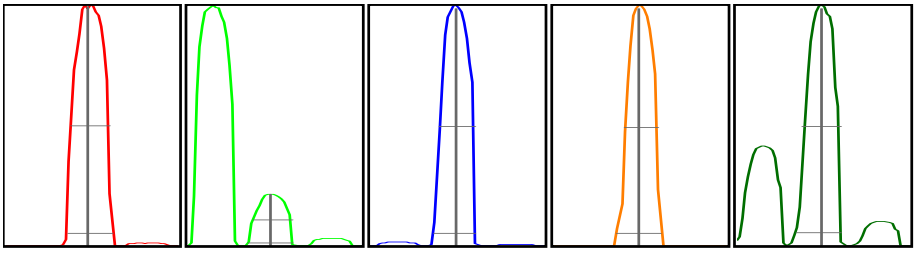
[nogas]

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		35649				NaN	-	
24		104110				NaN	-	
59		169767				NaN	-	
115		251786				NaN	-	
208		176168				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.50	5.00				
24	0.72	5.00				
59	0.20	5.00				
115	0.73	5.00				
208	0.60	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	35395	35671	35650	35631	35897
24	104335	103516	105165	103257	104278
59	169180	169936	169893	170018	169805
115	250490	249581	252782	251834	254241
208	175736	176185	175982	175043	177891

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	5745.93	8.95	8.9 - 9.1		0.65	0.785		
24	17419.13	23.95	23.9 - 24.1		0.64	0.757		
59	29760.02	59.00	58.9 - 59.1		0.61	0.722		
115	46060.28	115.00	114.9 - 115.1		0.57	0.755		
208	30650.22	208.00	207.9 - 208.1		0.61	0.779		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.55 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	10.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Tune Report

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		851				NaN	-	
24		5639				NaN	-	
59		79790				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.06	5.00				
24	1.72	5.00				
59	0.43	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	863	871	851	847	825
24	5753	5547	5734	5580	5579
59	80226	79424	80044	79494	79762

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	144.53	9.00	8.9 - 9.1		0.63	0.773		
24	931.96	24.00	23.9 - 24.1		0.64	0.744		
59	13996.06	59.00	58.9 - 59.1		0.60	0.713		

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

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.55 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.3 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

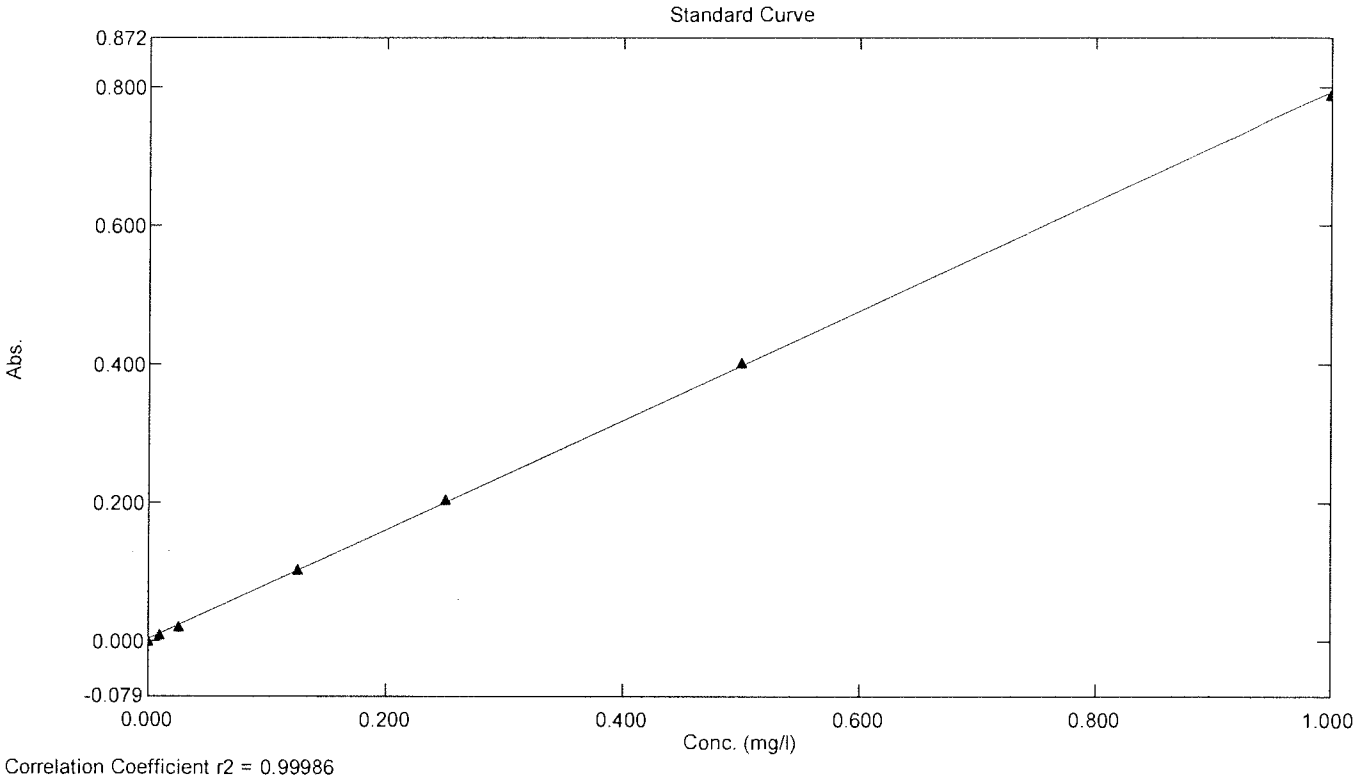
HS20080475 Wet Chem Raw Data (Cr6_W_7196_DOD)

ALS WO# HS20080475

Standard Table Report

08/25/2020 11:18:10 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\08122020-CR6 W_.pho



Correlation Coefficient r2 = 0.99986

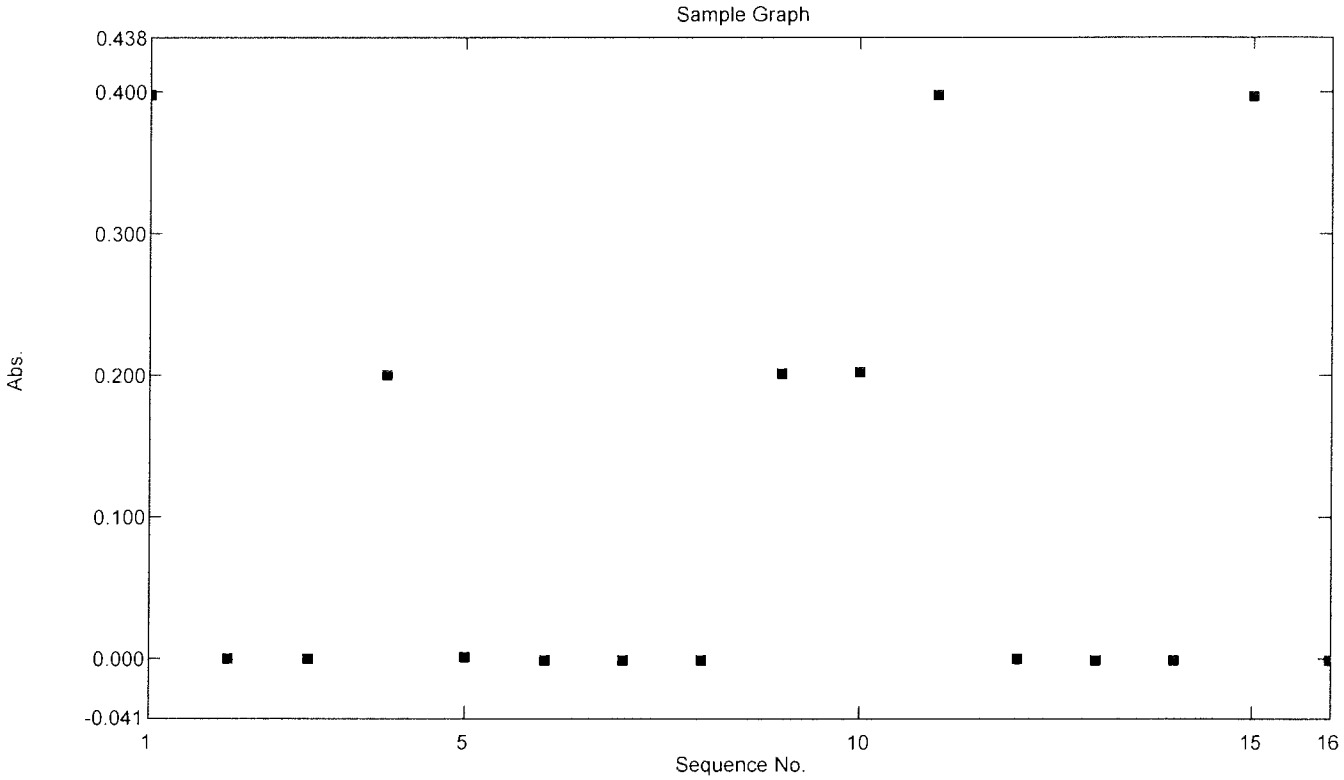
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	0.000	1.000	
2	STD2	Standard		0.010	0.008	1.000	
3	STD3	Standard		0.025	0.020	1.000	
4	STD4	Standard		0.125	0.104	1.000	
5	STD5	Standard		0.250	0.203	1.000	
6	STD6	Standard		0.500	0.403	1.000	
7	STD7	Standard		1.000	0.790	1.000	
8							

Sample Table Report

08/25/2020 11:18:14 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\08122020-CR6 W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.500	0.398	314062502 WC-14
2	CCB	Unknown		-0.004	-0.000	314062704 WC-13
3	MBLK	Unknown		-0.004	-0.000	314060711 WC-13
4	LCS	Unknown		0.249	0.200	314062503 WC-14
5	HS20080475.01	Unknown		-0.002	0.001	1:19PM,SAMP-BKG=TOTAL
6	HS20080475.01BKG	Unknown		-0.004	-0.001	1:19PM,0
7	HS20080473.01	Unknown		-0.004	-0.000	1:20PM,0
8	HS20080473.01BKG	Unknown		-0.005	-0.001	1:21PM
9	HS20080473.01MS	Unknown		0.251	0.201	1:22PM
10	HS20080473.01MSD	Unknown		0.253	0.202	1:23PM
11	CCV2	Unknown		0.500	0.398	
12	CCB2	Unknown		-0.004	-0.000	
13	HS20080482.01	Unknown		-0.004	-0.001	5:37PM 0
14	HS20080482.01BKG	Unknown		-0.004	-0.001	5:38PM
15	CCV3	Unknown		0.497	0.396	
16	CCB3	Unknown		-0.005	-0.001	
17						

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WorkOrder: HS20080794

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

11-Sep-2020

ALS Environmental
ALS Group USA, Corp
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Table of Contents

HS20080794 Cover Page
- CoverPage
- HS20080794 Longhorn GW Treatment Plant Weekly Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP650_081820
  - LH18/24-SP650_081820-BIX
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS20080794 - Sub Perch IV (E2000760)
  - HS20080794 ALS Kelso Report K2007183
- HS20080794 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)
- HS20080794 Wet Chem Raw Data (P-ORTHO)

HS20080794 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20080794

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September 10, 2020

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

Work Order: **HS20080794**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 19, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080794

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20080794-01	LH18/24-SP650_081820	Water		18-Aug-2020 14:00	19-Aug-2020 09:40	☐
HS20080794-02	LH18/24-SP650_081820-BIX	Water		18-Aug-2020 14:00	19-Aug-2020 09:40	☐

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080794

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

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

WetChemistry by Method E350.3

Batch ID: R367346

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

WetChemistry by Method E365.3

Batch ID: R367067

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

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20080794
Sample ID: LH18/24-SP650_081820
Lab ID:HS20080794-01
Collection Date: 18-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**11**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	24-Aug-2020 12:50
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.58**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	19-Aug-2020 14:30
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	10-Sep-2020 17:15

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

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20080794
Sample ID: LH18/24-SP650_081820-BIX
Lab ID:HS20080794-02
Collection Date: 18-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	03-Sep-2020 13:54

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

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080794

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R367067 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20080794-01	LH18/24-SP650_081820	18 Aug 2020 14:00			19 Aug 2020 14:30	10
Batch ID: R367346 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20080794-01	LH18/24-SP650_081820	18 Aug 2020 14:00			24 Aug 2020 12:50	1
Batch ID: R367952 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20080794-02	LH18/24-SP650_081820-BIX	18 Aug 2020 14:00			03 Sep 2020 13:54	1
Batch ID: R368336 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20080794-01	LH18/24-SP650_081820	18 Aug 2020 14:00			10 Sep 2020 17:15	1

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080794

QC BATCH REPORT

Batch ID: R367067 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R367067** Units: **mg/L** Analysis Date: **19-Aug-2020 14:30**
Client ID: Run ID: **UV-2450_367067** SeqNo: **5706773** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-R367067** Units: **mg/L** Analysis Date: **19-Aug-2020 14:30**
Client ID: Run ID: **UV-2450_367067** SeqNo: **5706772** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.238	0.0250	0.25	0	95.2	85 - 115				

MS Sample ID: **HS20080685-01MS** Units: **mg/L** Analysis Date: **19-Aug-2020 14:30**
Client ID: Run ID: **UV-2450_367067** SeqNo: **5706781** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.249	0.0250	0.25	0	99.6	80 - 120				

MSD Sample ID: **HS20080685-01MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 14:30**
Client ID: Run ID: **UV-2450_367067** SeqNo: **5706780** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.236	0.0250	0.25	0	94.4	80 - 120	0.249	5.36	20	

The following samples were analyzed in this batch: HS20080794-01

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20080794

QC BATCH REPORT

Batch ID: R367346 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-367346** Units: **mg/L** Analysis Date: **24-Aug-2020 12:50**
Client ID: Run ID: **WetChem_HS_367346** SeqNo: **5712693** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-367346** Units: **mg/L** Analysis Date: **24-Aug-2020 12:50**
Client ID: Run ID: **WetChem_HS_367346** SeqNo: **5712694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.987	0.20	10	0	99.9	80 - 120				

MS Sample ID: **HS20080731-01MS** Units: **mg/L** Analysis Date: **24-Aug-2020 12:50**
Client ID: Run ID: **WetChem_HS_367346** SeqNo: **5712696** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.08	0.20	10	0.327	97.6	80 - 120				

MSD Sample ID: **HS20080731-01MSD** Units: **mg/L** Analysis Date: **24-Aug-2020 12:50**
Client ID: Run ID: **WetChem_HS_367346** SeqNo: **5712697** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.08	0.20	10	0.327	97.5	80 - 120	10.08	0.0377	20	

The following samples were analyzed in this batch: HS20080794-01

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20080794**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 10-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20080794

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20080794-01	LH18/24-SP650_081820	Login	8/19/2020 12:56:53 PM	PMG	WET131
HS20080794-01	LH18/24-SP650_081820	Login	8/19/2020 12:56:53 PM	PMG	WET131
HS20080794-01	LH18/24-SP650_081820	Login	8/19/2020 12:56:53 PM	PMG	Sub
HS20080794-02	LH18/24-SP650_081820-BIX	Login	8/19/2020 12:56:53 PM	PMG	Sub

ALS Houston, US Date: 10-Sep-20

Sample Receipt Checklist

Work Order ID: HS20080794 **Date/Time Received:** 19-Aug-2020 09:40

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	19-Aug-2020 12:58	**Reviewed by:**	/S/ RJ Modashia	19-Aug-2020 15:13
	eSignature	Date/Time		eSignature	Date/Time

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.0C U/c	IR25	
Cooler(s)/Kit(s):	45827		
Date/Time sample(s) sent to storage:	8/19/2020 13:05		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

HS20080794
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE						Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_081820	Water	08/18/20 / 14:00		3	X	X								H2SO4	
LH18/24-SP650_081820	Water	08/18/20 / 14:00		1			X							NONE	
LH18/24-SP650_081820_AIX	Water	08/18/20 / 14:00		1				X						NONE	

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	08/18/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Summers	6/19/20	09:40							

Remarks:
Cooler 45827 IR25
Temp 1.0°C CFO

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

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

45827

CUSTODY SEAL

Date: 8/18/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 08/19/20

45827 AUG 19 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

45827

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 04AUG20
ACTWGT: 1.00 LB MAN
CAD: 000130/CAFE3211
DIMS: 14x11x10 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5856
REF: LLONGHORN GW TREATMENT - BO 73[illegible] - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8878 9550

WED - 19 AUG 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

September 03, 2020 Service Request No:E2000760

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

Laboratory Results for: HS20080794

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 19, 2020
For your reference, these analyses have been assigned our service request number **E2000760.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000760
Project:	HS20080794	**Date Received:**	08/14/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/14/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000392: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DOD Certification is held for the method/matrix/analytes provided in this report.

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

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

Client: ALS Environmental - US **Service Request:**E2000760
Project: HS20080794

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000760-001	LH18/24-SP650_081820-BIX	8/18/2020	1400

Service Request Summary

Folder #: **E2000760**
Client Name: ALS Environmental - US
Project Name: HS20080794
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/19/20
Internal Due Date: 9/2/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20080794
EDD: No EDD Specified

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

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000760-001	LH18/24-SP650_081820-BIX	Water	08/18/20 1400	II

Service Request Summary

Folder #: **E2000760**
Client Name: ALS Environmental - US
Project Name: HS20080794
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/19/20
Internal Due Date: 9/2/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20080794
EDD: No EDD Specified

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

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/2,level IV 9/9

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

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

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New York Department of Health	11707	3/31/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14527**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20080794
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20080794-02**	**LH18/24-SP650_081820-BIX**	**Water**	**18 Aug 2020 14:00**
	SUB_Perch-6850			27 Aug 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Innarelli Date/Time: 8/19/20 13:20

Received By: LH Date/Time: 8/14/20 1920

Cooler ID(s): Temperature(s):

RIGHT SOLUTIONS | RIGHT PARTNER

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H Thermometer ID IR25

Date/Time Received: 8/19/20 Initials: CG Date/Time Logged in: 8/19/20 Initials CG

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

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

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where? _____

Were they intact? ○ Yes ○ No ✓ N/A

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		8/19/20	1320	CG	3.3	☒
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 364887
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/2/20 12:56

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000760-001	LH18/24-SP650_081820-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000796-001	LH18/24-SP650_082520-AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2000797-001	LH18/24-SP140_082520	.01	6850/ClO4 DOD			Water	10mL	
4	E2000798-001	LH18/24-SP650_082520-BIX	.01	6850/ClO4 DOD			Water	10mL	
5	EQ2000392-01	MB		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000392-02	LCS		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000392-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

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

E2000760-001 100.00µL E2000796-001 100.00µL E2000797-001 100.00µL E2000798-001 100.00µL EQ2000392-01 100.00µL EQ2000392-02 100.00µL
EQ2000392-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

E2000796-001 1.00µL E2000797-001 1.00µL E2000798-001 1.00µL EQ2000392-01 1.00µL EQ2000392-02 1.00µL EQ2000392-03 1.00µL

Preparation Steps

Step: Preparation
Started: 9/2/20 12:56
Finished: 9/2/20 16:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Collected:**	8/18/20 1400
Sample Matrix:	Water	**Date Received:**	8/19/20
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 17:32
Sample Name:	LH18/24-SP650_081820-BIX	**Units:**	µg/L
Lab Code:	E2000760-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_015	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.207**		0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 16:18
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000392-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_007	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794
Sample Matrix: Water

Service Request: E2000760
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 364887

	Lab Control Sample EQ2000392-02			Duplicate Lab Control Sample EQ2000392-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.116	0.100	116	84 - 119	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:03
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_019	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.118**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:11
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_020	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.116**		0.100	0.0500	0.0250	

Initial Calibration

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

20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

Initial Calibration - Detailed Report

Calibration ID: EC2000023 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000023-01	PERCHLORATE1	20200826_024	08/26/2020 11:55
02	EC2000023-02	PERCHLORATE2	20200826_025	08/26/2020 12:03
03	EC2000023-03	PERCHLORATE3	20200826_026	08/26/2020 12:11
04	EC2000023-04	PERCHLORATE4	20200826_027	08/26/2020 12:19
05	EC2000023-05	PERCHLORATE5	20200826_028	08/26/2020 12:27
06	EC2000023-06	PERCHLORATE6	20200826_029	08/26/2020 12:35
07	EC2000023-07	PERCHLORATE7	20200826_030	08/26/2020 12:42
08	EC2000023-08	PERCHLORATE8	20200826_031	08/26/2020 12:50
09	EC2000023-09	PERCHLORATE9	20200826_032	08/26/2020 12:58
10	EC2000023-10	PERCHLORATE10	20200826_033	08/26/2020 13:06

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

Perchlorate **Average RF** **RSD = 5.546** **Average RF = 0.1085**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1181	02	0.5000	0.1137	03	0.7000	0.1087	04	1.0000	0.1168
05	2.0000	0.1092	06	5.0000	0.1056	07	10.0000	0.1014	08	20.0000	0.1048
09	30.0000	0.1049	10	50.0000	0.1012						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.109	8.9	02	0.5000	0.524	4.8	03	0.7000	0.702	0.2
04	1.0000	1.08	7.7	05	2.0000	2.01	0.7	06	5.0000	4.87	-2.6
07	10.0000	9.35	-6.5	08	20.0000	19.3	-3.3	09	30.0000	29.0	-3.3
10	50.0000	46.7	-6.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000023	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200826_035	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000023-11	T	Average RF	10	9.690	ng/mL	-3.1	<= 15

ALS Group Houston

PERCHLORATE1

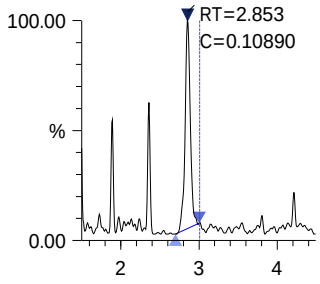
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/26/2020 11:55:32 AM	2254	0.10890	20200826_024	2.853	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/26/2020 11:55:32 AM	190859	1.00000	20200826_024	2.852	25.0000	1.0000	5

Perchlorate

Conc 0.10890
Area 2254

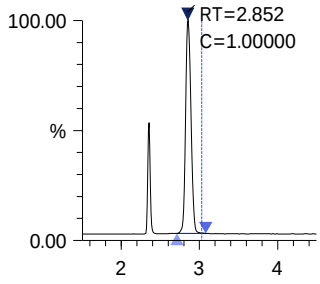
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

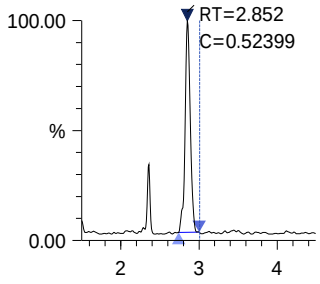
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/26/2020 12:03:28 PM	11013	0.52399	20200826_025	2.852	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/26/2020 12:03:28 PM	193789	1.00000	20200826_025	2.850	25.0000	1.0000	6

Perchlorate

Conc 0.52399
Area 11013

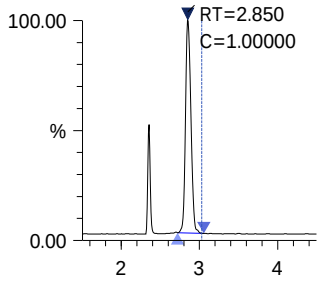
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

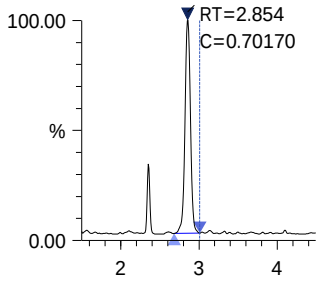
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/26/2020 12:11:22 PM	15252	0.70170	20200826_026	2.854	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/26/2020 12:11:22 PM	200410	1.00000	20200826_026	2.849	25.0000	1.0000	7

Perchlorate

Conc 0.70170
Area 15252

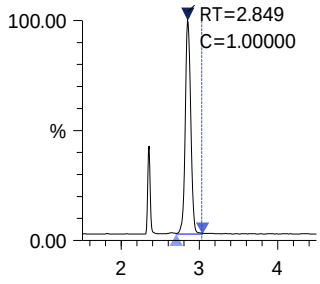
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

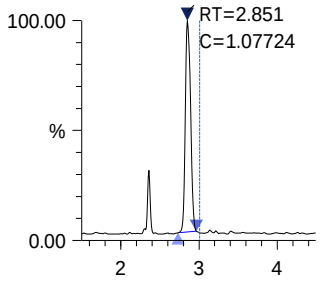
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/26/2020 12:19:17 PM	21473	1.07724	20200826_027	2.851	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/26/2020 12:19:17 PM	183791	1.00000	20200826_027	2.851	25.0000	1.0000	8

Perchlorate

Conc 1.07724
Area 21473

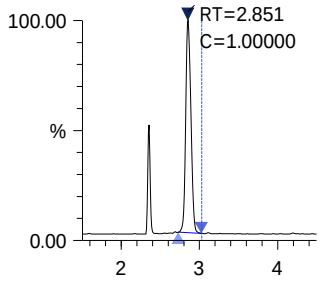
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

PERCHLORATE5

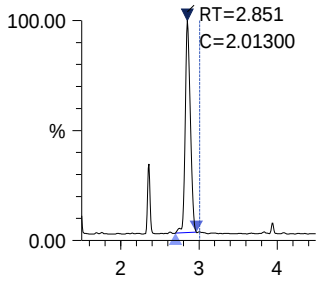
Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/26/2020 12:27:10 PM	40038	2.01300	20200826_028	2.851	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/26/2020 12:27:10 PM	183386	1.00000	20200826_028	2.849	25.0000	1.0000	9

Perchlorate

Conc 2.01300
Area 40038

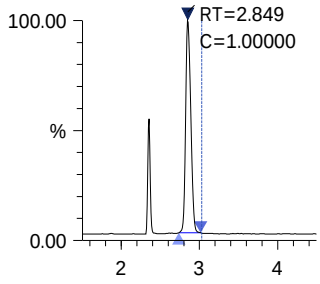
Q 99.00>83.00 (-) 8.76e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

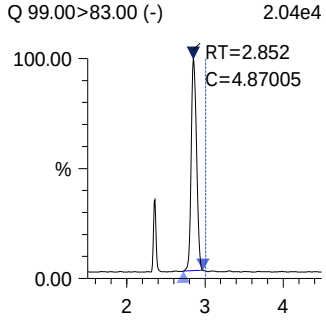
PERCHLORATE6

Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/26/2020 12:35:02 PM	98121	4.87005	20200826_029	2.852	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/26/2020 12:35:02 PM	185768	1.00000	20200826_029	2.850	25.0000	1.0000	10

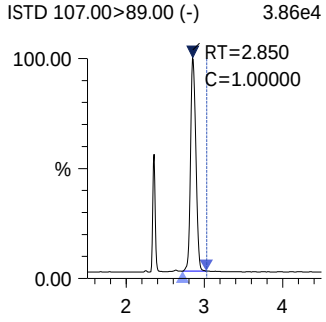
Perchlorate

Conc 4.87005
Area 98121



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768



ALS Group Houston

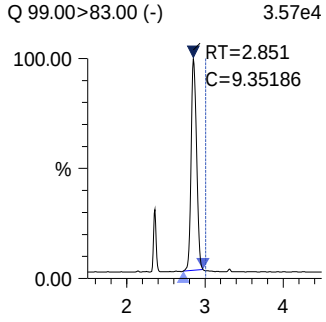
PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 12:42:57 PM	174248	9.35186	20200826_030	2.851	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 12:42:57 PM	171796	1.00000	20200826_030	2.850	25.0000	1.0000	4

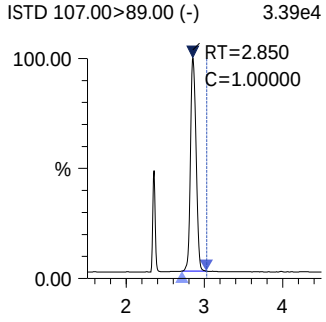
Perchlorate

Conc 9.35186
Area 174248



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

PERCHLORATE8

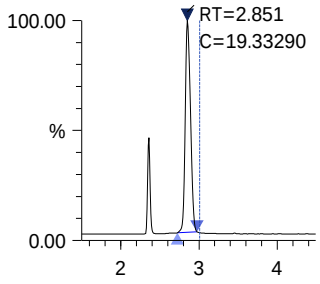
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/26/2020 12:50:51 PM	337010	19.33290	20200826_031	2.851	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/26/2020 12:50:51 PM	160727	1.00000	20200826_031	2.850	25.0000	1.0000	11

Perchlorate

Conc 19.33290
Area 337010

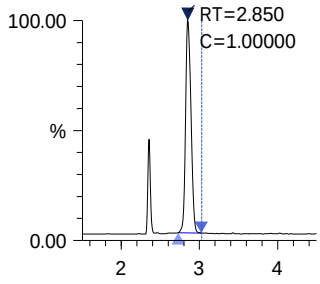
Q 99.00>83.00 (-) 7.14e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

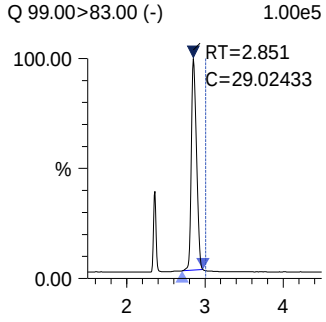
PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/26/2020 12:58:44 PM	466342	29.02433	20200826_032	2.851	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/26/2020 12:58:44 PM	148144	1.00000	20200826_032	2.849	25.0000	1.0000	12

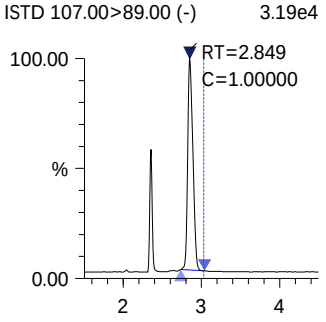
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



ALS Group Houston

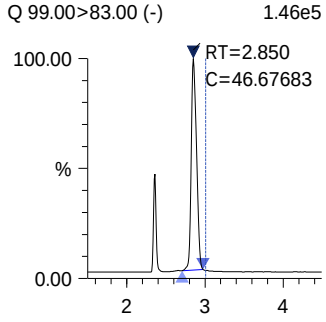
PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/26/2020 1:06:40 PM	694738	46.67683	20200826_033	2.850	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/26/2020 1:06:40 PM	137234	1.00000	20200826_033	2.849	25.0000	1.0000	13

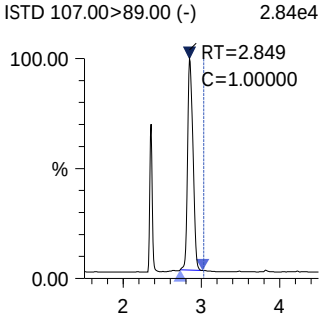
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



ALS Group Houston

PERCHLORATEICV

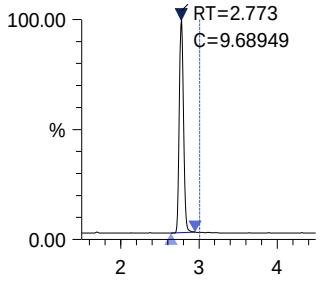
Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/26/2020 2:26:45 PM	257692	9.68949	20200826_035	2.773	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/26/2020 2:26:45 PM	245213	1.00000	20200826_035	2.771	25.0000	1.0000	14

Perchlorate

Conc 9.68949
Area 257692

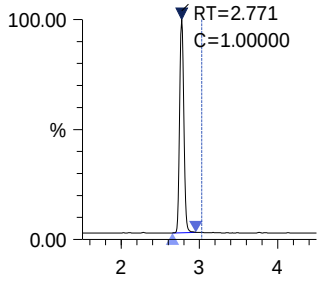
Q 99.00>83.00 (-) 7.12e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213

ISTD 107.00>89.00 (-) 6.83e4



Chromatograms and Selected Ion Monitoring

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

20200902

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20200902_001	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:32
2	null		20200902_002	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:36
3	IB		20200902_003	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:42
4	IB		20200902_004	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:50
5	LODV		20200902_005	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:58
6	PERCHLORATE7		20200902_006	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 16:10
7	EQ2000392-01		20200902_007	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:18
8	E2000760-001		20200902_008	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:26
9	E2000796-001		20200902_009	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:34
10	E2000797-001		20200902_010	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:42
11	E2000798-001		20200902_011	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:50
12	EQ2000392-02		20200902_012	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:58
13	EQ2000392-03		20200902_013	Perchlorate6850b.lcm	1x	☒		9/2/2020 17:06
14	PERCHLORATE7		20200902_014	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 17:13
15	E2000760-001X2		20200902_015	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:32
16	E2000796-001X2		20200902_016	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:40
17	E2000797-001X10		20200902_017	Perchlorate6850b.lcm	10x	☒		9/2/2020 17:48
18	E2000798-001X2		20200902_018	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:55
19	EQ2000392-02		20200902_019	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:03
20	EQ2000392-03		20200902_020	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:11
21	PERCHLORATE7		20200902_021	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 18:19
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20200903

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20200903_001	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:14
2	null		20200903_002	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:19
3	IB		20200903_003	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:24
4	IB		20200903_004	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:32
5	LODV		20200903_005	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:40
6	PERCHLORATE7		20200903_006	Perchlorate6850b.lcm	1x	☒	3100807-04	9/3/2020 9:48
7	E2000797-001X500		20200903_007	Perchlorate6850b.lcm	500x	☒		9/3/2020 9:55
8	PERCHLORATE7		20200903_008	Perchlorate6850b.lcm	1x	☒	3100807-04	9/3/2020 10:03
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1085	0.1092	0.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_014

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.80	0.1085	0.1063	-2.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_021

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.0	0.1085	0.1086	0.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.58	0.1085	0.1039	-4.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_008

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.45	0.1085	0.1025	-5.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/2/20 16:10

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

File ID: I:\LCMS01\DATA\20200902\20200902_006
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-01
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-01	199,073	2.74
Method Blank	EQ2000392-01	207,056	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Analyzed:**	9/2/20 17:13

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200902\20200902_014	**Lab Code:**	EQ2000396-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-02	181,498	2.85
LH18/24-SP650_081820-BIX	E2000760-001	125,622	2.74
Lab Control Sample	EQ2000392-02	236,222	2.85
Duplicate Lab Control Sample	EQ2000392-03	222,560	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20080794

Service Request: E2000760
Date Analyzed: 9/2/20 18:19

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

File ID: I:\LCMS01\DATA\20200902\20200902_021
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-03
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-03	186,696	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Analyzed:**	9/3/20 09:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_006	**Lab Code:**	EQ2000396-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-04	165,769	2.84

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000760
Project:	HS20080794	**Date Analyzed:**	9/3/20 10:03

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_008	**Lab Code:**	EQ2000396-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-05	166,758	2.84

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

ALS Group Houston

PERCHLORATE7

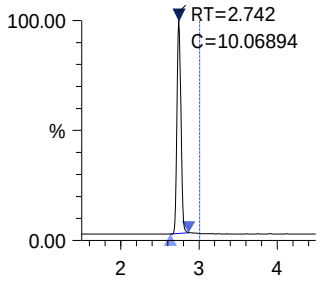
Date acquired: 9/2/2020 4:10:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_006.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 4:10:48 PM	217480	10.06894	20200902_006	2.742	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 4:10:48 PM	199073	1.00000	20200902_006	2.741	25.0000	1.0000	4

Perchlorate

Conc 10.06894
Area 217480

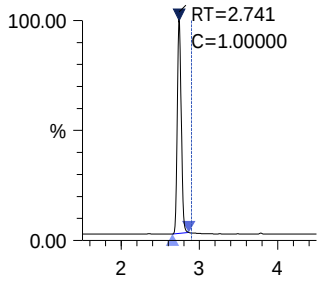
Q 99.00>83.00 (-) 6.33e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 199073

ISTD 107.00>89.00 (-) 5.76e4



ALS Group Houston

EQ2000392-01

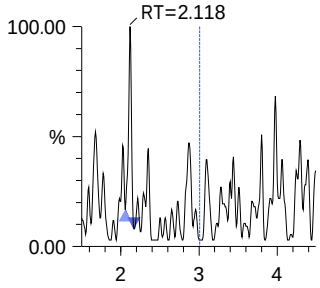
Date acquired: 9/2/2020 4:18:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_007.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-01	9/2/2020 4:18:42 PM	----	----	20200902_007	----	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000392-01	9/2/2020 4:18:42 PM	207056	1.00000	20200902_007	2.845	25.0000	1.0000	19

Perchlorate

Conc ----
Area ----

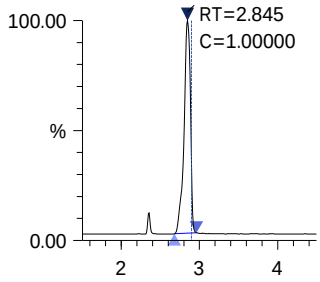
Q 99.00>83.00 (-) 7.70e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 207056

ISTD 107.00>89.00 (-) 3.61e4



ALS Group Houston

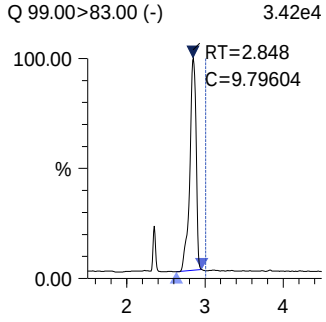
PERCHLORATE7

Date acquired: 9/2/2020 5:13:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_014.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 5:13:58 PM	192905	9.79604	20200902_014	2.848	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 5:13:58 PM	181498	1.00000	20200902_014	2.845	25.0000	1.0000	4

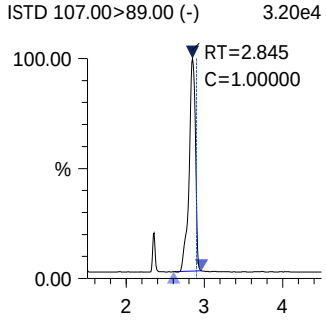
Perchlorate

Conc 9.79604
Area 192905



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181498



ALS Group Houston

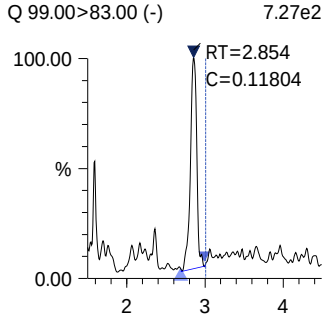
EQ2000392-02

Date acquired: 9/2/2020 6:03:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_019.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-02	9/2/2020 6:03:47 PM	3025	0.11804	20200902_019	2.854	25.0000	1.0000	24
Sodium Perchlorate-18O4_IS	EQ2000392-02	9/2/2020 6:03:47 PM	236222	1.00000	20200902_019	2.846	25.0000	1.0000	24

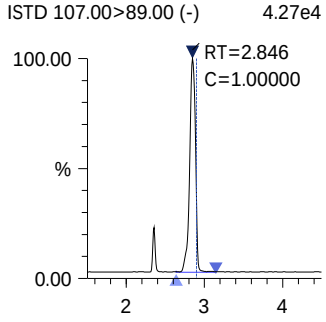
Perchlorate

Conc 0.11804
Area 3025



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 236222



ALS Group Houston

EQ2000392-03

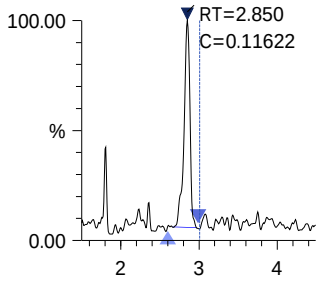
Date acquired: 9/2/2020 6:11:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_020.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-03	9/2/2020 6:11:38 PM	2806	0.11622	20200902_020	2.850	25.0000	1.0000	25
Sodium Perchlorate-18O4_IS	EQ2000392-03	9/2/2020 6:11:38 PM	222560	1.00000	20200902_020	2.848	25.0000	1.0000	25

Perchlorate

Conc 0.11622
Area 2806

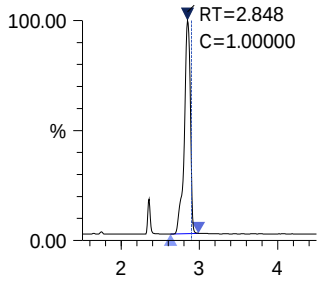
Q 99.00>83.00 (-) 5.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222560

ISTD 107.00>89.00 (-) 4.10e4



ALS Group Houston

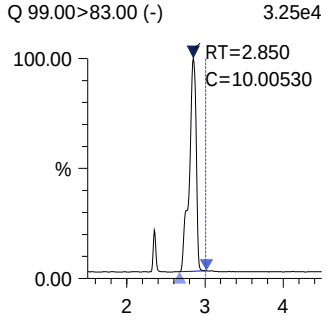
PERCHLORATE7

Date acquired: 9/2/2020 6:19:32 PM
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Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 6:19:32 PM	202669	10.00530	20200902_021	2.850	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 6:19:32 PM	186696	1.00000	20200902_021	2.848	25.0000	1.0000	4

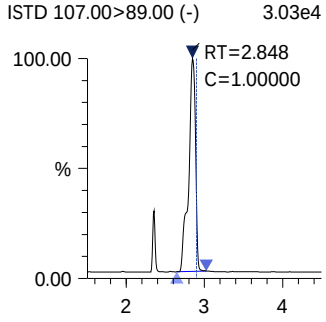
Perchlorate

Conc 10.00530
Area 202669



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 186696



ALS Environmental
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August 27, 2020

Analytical Report for Service Request No: K2007183

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

RE: HS20080794

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 21, 2020
For your reference, these analyses have been assigned our service request number **K2007183.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
General Chemistry
Raw Data
    General Chemistry

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20080794
Sample Matrix: Water

Service Request: K2007183
Date Received: 08/21/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 08/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 08/27/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

K20071

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14526**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20080794
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20080794-01**	**LH18/24-SP650_081820**	**Water**	**18 Aug 2020 14:00**
	TOC Analysis for DOD Level IV			27 Aug 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 8/20/2020 1800.

Received By: _____ Date/Time: 8/21/2020 0945

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: HS20080794

VENDOR:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	14526
TSR:	Danielle Winnings

Item	Catalog No	Unit Price	Quantity	Ext Price
1. TOC Analysis for DOD Level IV	NA	$9.00	1	$9.00

Order Total: $9.00

PM_____

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20

Received: AUG 2 1 2020 Opened: AUG 2 1 2020 By: CG Unloaded: AUG 2 1 2020 By: CG

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
2-6		IR02				1891 8879 5740	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions:_____

RUSH

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2007183
Project:	HS20080794	**Date Collected:**	08/18/20
Sample Matrix:	Water	**Date Received:**	08/21/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_081820	K2007183-001	**1.85**	0.50	0.20	0.07	1	08/24/20 08:36	
Method Blank	K2007183-MB	ND U	0.50	0.20	0.07	1	08/24/20 08:36	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007183
Project:	HS20080794	**Date Analyzed:**	08/24/20
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	692339

	Lab Control Sample K2007183-LCS			Duplicate Lab Control Sample K2007183-DLCS					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon, Total Organic	25.0	25.0	100	24.8	25.0	99	83-117	<1	10

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2007183
Project: HS20080794

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	692339	KQ2011931-05	08/24/20 08:36	25.0	24.7	99	90-110
CCV2	692339	KQ2011931-08	08/24/20 08:36	25.0	23.6	94	90-110
CCV3	692339	KQ2011931-09	08/24/20 08:36	25.0	23.6	94	90-110
CCV4	692339	KQ2011931-13	08/24/20 08:36	25.0	23.1	92	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2007183
Project: HS20080794

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	692339	KQ2011931-10	08/24/20 08:36	0.50	0.20	0.07	ND	U
CCB2	692339	KQ2011931-11	08/24/20 08:36	0.50	0.20	0.07	ND	U
CCB3	692339	KQ2011931-12	08/24/20 08:36	0.50	0.20	0.07	ND	U
CCB4	692339	KQ2011931-14	08/24/20 08:36	0.50	0.20	0.07	ND	U

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

General Chemistry

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Work Request # 6713 7140 7146 7214 6813

Tier: II II IV IV III

Date Analyzed: 8-24-20

Analyst: MK

Run # 692340 692339

Analysis: TOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	yes/(no)
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/(no)/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

7146-5 MS failed high 118% Narr. no sample to reanalyze!

Final Approved by: _____ Date: 8/26/20

DOREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 692340 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2006713-002	Carbon, Total Organic	N/A		Water	0.92 mg/L	10 mL	0.92 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2006713-004	Carbon, Total Organic	N/A		Water	0.62 mg/L	10 mL	0.62 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2006813-001	Carbon, Total Organic	N/A		Water	0.16 mg/L	10 mL	0.16 mg/L J	1	0.07	0.50			8/24/20 08:36:00	N	III
K2006813-002	Carbon, Total Organic	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	III
K2007140-001	Carbon, Total Organic	N/A		Water	1.21 mg/L	10 mL	1.21 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2007140-002	Carbon, Total Organic	N/A		Water	7.66 mg/L	10 mL	76.6 mg/L	10	0.7	5.0			8/24/20 08:36:00	N	II
K2007140-003	Carbon, Total Organic	N/A		Water	1.22 mg/L	10 mL	1.22 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2007140-004	Carbon, Total Organic	N/A		Water	1.93 mg/L	10 mL	1.93 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2007140-005	Carbon, Total Organic	N/A		Water	1.88 mg/L	10 mL	1.88 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	II
K2007146-010	Carbon, Total Organic	N/A		Water	1.81 mg/L	10 mL	1.81 mg/L	1	0.07	0.50			8/24/20 08:36:00	Y	IV
K2007146-013	Carbon, Total Organic	N/A		Water	7.67 mg/L	10 mL	7.67 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-014	Carbon, Total Organic	N/A		Water	5.02 mg/L	10 mL	5.02 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-015	Carbon, Total Organic	N/A		Water	7.91 mg/L	10 mL	7.91 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-016	Carbon, Total Organic	N/A		Water	7.56 mg/L	10 mL	7.56 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-017	Carbon, Total Organic	N/A		Water	15.17 mg/L	10 mL	15.2 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007214-001	Carbon, Total Organic	N/A		Water	1.64 mg/L	10 mL	1.64 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007214-003	Carbon, Total Organic	N/A		Water	1.22 mg/L	10 mL	1.22 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007214-005	Carbon, Total Organic	N/A		Water	1.09 mg/L	10 mL	1.09 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007214-006	Carbon, Total Organic	N/A		Water	2.84 mg/L	10 mL	2.84 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007214-008	Carbon, Total Organic	N/A		Water	7.51 mg/L	10 mL	7.51 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011932-01	Carbon, Total Organic	LCS		Water	24.43 mg/L	10 mL	24.4 mg/L	1	0.07	0.50	98		8/24/20 08:36:00	N	II
KQ2011932-02	Carbon, Total Organic	DLCS		Water	24.51 mg/L	10 mL	24.5 mg/L	1	0.07	0.50	98	<1	8/24/20 08:36:00	N	II
KQ2011932-03	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-04	Carbon, Total Organic	CCV		Water	23.60 mg/L	10 mL	23.6 mg/L	1					8/24/20 08:36:00	N	II
KQ2011932-05	Carbon, Total Organic	CCV		Water	23.57 mg/L	10 mL	23.6 mg/L	1					8/24/20 08:36:00	N	II
KQ2011932-06	Carbon, Total Organic	CCV		Water	23.17 mg/L	10 mL	23.2 mg/L	1					8/24/20 08:36:00	N	II
KQ2011932-07	Carbon, Total Organic	CCV		Water	23.07 mg/L	10 mL	23.1 mg/L	1					8/24/20 08:36:00	N	II
KQ2011932-08	Carbon, Total Organic	CCV		Water	23.19 mg/L	10 mL	23.2 mg/L	1					8/24/20 08:36:00	N	II
KQ2011932-09	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-10	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-11	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-12	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-13	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	II
KQ2011932-14	Carbon, Total Organic	DUP	K2007146-010	Water	1.91 mg/L	10 mL	1.91 mg/L	1	0.07	0.50		5	8/24/20 08:36:00	N	IV
KQ2011932-15	Carbon, Total Organic	MS	K2007146-010	Water	30.23 mg/L	10 mL	30.2 mg/L	1	0.07	0.50	114		8/24/20 08:36:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 692339 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2007146-001	Carbon, Total Organic	N/A		Water	0.86 mg/L	10 mL	0.86 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-002	Carbon, Total Organic	N/A		Water	0.59 mg/L	10 mL	0.59 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-003	Carbon, Total Organic	N/A		Water	0.58 mg/L	10 mL	0.58 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-004	Carbon, Total Organic	N/A		Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-005	Carbon, Total Organic	N/A		Water	1.53 mg/L	10 mL	1.53 mg/L	1	0.07	0.50			8/24/20 08:36:00	Y	IV
K2007146-006	Carbon, Total Organic	N/A		Water	1.34 mg/L	10 mL	1.34 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-007	Carbon, Total Organic	N/A		Water	2.84 mg/L	10 mL	2.84 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-008	Carbon, Total Organic	N/A		Water	1.76 mg/L	10 mL	1.76 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007146-009	Carbon, Total Organic	N/A		Water	1.22 mg/L	10 mL	1.22 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
K2007183-001	Carbon, Total Organic	N/A		Water	1.85 mg/L	10 mL	1.85 mg/L	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011931-01	Carbon, Total Organic	DUP	K2007146-005	Water	1.59 mg/L	10 mL	1.59 mg/L	1	0.07	0.50		4	8/24/20 08:36:00	N	IV
KQ2011931-02	Carbon, Total Organic	MS	K2007146-005	Water	31.13 mg/L	10 mL	31.1 mg/L	1	0.07	0.50	118*		8/24/20 08:36:00	N	IV
KQ2011931-03	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011931-05	Carbon, Total Organic	CCV		Water	24.67 mg/L	10 mL	24.7 mg/L	1					8/24/20 08:36:00	N	IV
KQ2011931-06	Carbon, Total Organic	LCS		Water	24.97 mg/L	10 mL	25.0 mg/L	1	0.07	0.50	100		8/24/20 08:36:00	N	IV
KQ2011931-07	Carbon, Total Organic	DLCS		Water	24.81 mg/L	10 mL	24.8 mg/L	1	0.07	0.50	99	<1	8/24/20 08:36:00	N	IV
KQ2011931-08	Carbon, Total Organic	CCV		Water	23.60 mg/L	10 mL	23.6 mg/L	1					8/24/20 08:36:00	N	IV
KQ2011931-09	Carbon, Total Organic	CCV		Water	23.57 mg/L	10 mL	23.6 mg/L	1					8/24/20 08:36:00	N	IV
KQ2011931-10	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011931-11	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011931-12	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	IV
KQ2011931-13	Carbon, Total Organic	CCV		Water	23.07 mg/L	10 mL	23.1 mg/L	1					8/24/20 08:36:00	N	IV
KQ2011931-14	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			8/24/20 08:36:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 082420

Version: 13
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/08/25 08:36 - Tuesday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
4	Sample	K2007146-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2007146-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2007146-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2007146-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2007146-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2007146-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2007146-005MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2007146-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2007146-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2007146-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2007146-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2007146-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2007146-010D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2007146-010MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2007146-013	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2007146-014	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2007146-015	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2007146-016	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2007146-017	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2006713-003 2 mke 8/25/20	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2006713-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2007214-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2007214-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2007214-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2007214-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2007214-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2006813-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2006813-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2007140-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2007140-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2007140-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2007140-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2007140-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	K2007183-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready

Printed on: August 25, 2020 10:54:45

Schedule: 082420

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	K2007140-002 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 082420
Monday, August 24, 2020 10:13 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/08/25 10:55 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	082420	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v4) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v9) Fusion1 (Fusion1) (v11) Fusion1 (Fusion1) (v12) Fusion1 (Fusion1) (v13)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/24 10:13

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.22	27.45	13.23	49.71	05:30
2	TC Clean	19.76	32.86	13.10	49.78	07:19
3	TC Clean	5.06	18.28	13.22	49.92	07:00
4	TC Clean	2.91	16.23	13.32	49.78	07:02

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/24 10:45

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.07	13.24	13.17	49.68	05:20

2	TC Clean	6.99	20.02	13.03	49.79	07:16
3	TC Clean	2.23	15.02	12.79	49.95	07:03
4	TC Clean	1.96	14.95	12.99	49.78	07:04

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/08/24 11:16

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.06	13.01	12.95	49.61	05:28
2	TC Clean	5.32	18.24	12.93	49.98	07:17
3	TC Clean	1.62	14.44	12.82	49.80	07:01
4	TC Clean	1.56	14.52	12.96	49.81	07:03

Sample Type: Blank (Creating v1437) From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/08/24 11:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.16	12.97	13.12	49.58	05:29
2	TC Clean	5.34	18.21	12.87	49.80	07:17
3	TC Clean	2.13	14.93	12.80	49.88	07:02
4	TC Clean	2.02	14.89	12.87	49.93	07:02
5	Reagent Blank	4.79	17.85	13.06	49.82	08:12
6	Acid Blank	0.38	13.21	12.83	49.54	05:32

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.1678 ppm	0.0000 ppm	0.0000%	2020/08/24 12:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1678	1.6779	10.40	23.45	13.05	50.03	10:33

Dilution **Blank Contribution** **Method** **Calibration**

1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.6660 ppm (PASS)	0.0000 ppm	0%	2020/08/24 12:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6660	246.6603	182.92	196.08	13.16	50.08	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/24 13:04

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.91	22.09	13.18	49.99	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/24 13:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.56	21.48	12.92	50.02	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration	Dil	Sample ID	Min / Max	Result	Std. Dev.	RSD	Start Time

			(ppm)			(% dev)				
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.9717 ppm (PASS)	0.0000 ppm	0%	2020/08/24 13:33

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.9717	249.7167	185.06	197.90	12.84	50.07	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.6786 ppm	0.0000 ppm	0.0000%	2020/08/24 13:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6786	6.7857	13.98	26.80	12.82	50.03	10:35

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.8119 ppm (PASS)	0.0000 ppm	0%	2020/08/24 14:03

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.8119	248.1187	183.94	196.85	12.90	50.03	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2007146-001	0.8603 ppm	0.0841 ppm	9.7700%	2020/08/24 14:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9198	9.1977	15.67	28.50	12.82	50.09	10:31
2	TOC	0.8009	8.0088	14.84	27.81	12.97	50.03	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2007146-002	0.5872 ppm	0.0196 ppm	3.3300%	2020/08/24 14:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6010	6.0102	13.44	26.32	12.89	50.00	10:26
2	TOC	0.5734	5.7336	13.24	26.19	12.95	50.07	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2007146-003	0.5832 ppm	0.0401 ppm	6.8800%	2020/08/24 15:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6116	6.1156	13.51	26.50	12.98	49.99	10:30
2	TOC	0.5548	5.5483	13.11	26.32	13.20	50.06	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2007146-004	1.4347 ppm	0.0258 ppm	1.8000%	2020/08/24 15:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.4164	14.1643	19.16	32.10	12.94	50.05	10:27
2	TOC	1.4529	14.5293	19.41	32.30	12.88	50.00	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2007146-005	1.5258 ppm	0.0149 ppm	0.9800%	2020/08/24 16:11

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	1.5152	15.1522	19.85	32.87	13.02	50.09	10:26
2	TOC	1.5363	15.3632	20.00	32.94	12.95	50.04	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2007146-005 DUP	1.5938 ppm	0.0236 ppm	1.4800%	2020/08/24 16:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5771	15.7709	20.28	33.45	13.16	49.98	10:27
2	TOC	1.6104	16.1045	20.52	33.57	13.06	50.07	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.6033 ppm (PASS)	0.0000 ppm	0%	2020/08/24 17:07

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.6033	236.0328	175.46	188.46	12.99	50.03	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/24 17:21

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.77	21.71	12.93	49.97	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample

From Schedule Version 11

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2007146-005MS	31.1263 ppm	0.1803 ppm	0.5800%	2020/08/24 17:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.9988	309.9877	226.67	239.56	12.88	50.02	10:30
2	TOC	31.2538	312.5380	228.46	241.53	13.07	50.04	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample

From Schedule Version 12

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2007146-006	1.3432 ppm	0.0294 ppm	2.1900%	2020/08/24 18:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3640	13.6397	18.79	31.82	13.03	49.98	10:29
2	TOC	1.3223	13.2234	18.50	31.39	12.89	50.01	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2007146-007	2.8393 ppm	0.0031 ppm	0.1100%	2020/08/24 18:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.8416	28.4156	29.16	42.10	12.95	50.03	10:28
2	TOC	2.8371	28.3714	29.12	42.14	13.02	49.98	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2007146-008	1.7630 ppm	0.0387 ppm	2.2000%	2020/08/24 19:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7356	17.3561	21.40	34.43	13.03	50.04	10:27
2	TOC	1.7904	17.9035	21.78	34.82	13.04	50.02	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	14	TOC	K2007146-009	1.2150 ppm	0.0250 ppm	2.0600%	2020/08/24 19:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2327	12.3268	17.87	30.83	12.96	50.02	10:29
2	TOC	1.1973	11.9732	17.62	30.67	13.05	50.10	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2007146-010	1.8119 ppm	0.0087 ppm	0.4800%	2020/08/24 19:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8057	18.0575	21.89	34.89	13.00	50.02	10:26
2	TOC	1.8180	18.1801	21.98	35.19	13.22	50.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2007146-010D	1.9125 ppm	0.0184 ppm	0.9600%	2020/08/24 20:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8994	18.9941	22.55	35.60	13.05	50.03	10:29
2	TOC	1.9255	19.2550	22.73	35.86	13.13	50.12	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2007146-010MS	30.2319 ppm	0.3182 ppm	1.0500%	2020/08/24 20:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.0069	300.0687	219.72	232.80	13.09	50.01	10:29
2	TOC	30.4569	304.5692	222.87	235.61	12.74	50.11	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2007146-013	7.6681 ppm	0.0832 ppm	1.0800%	2020/08/24 21:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.6093	76.0931	62.60	75.73	13.13	50.02	10:28
2	TOC	7.7269	77.2692	63.42	76.58	13.15	50.11	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2007146-014	5.0204 ppm	0.0281 ppm	0.5600%	2020/08/24 21:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.0006	50.0055	44.30	57.36	13.06	49.98	10:28
2	TOC	5.0403	50.4033	44.58	57.53	12.95	49.98	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.5719 ppm (PASS)	0.0000 ppm	0%	2020/08/24 22:17

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.5719	235.7192	175.24	188.52	13.27	50.03	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/24 22:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.22	22.42	13.20	49.95	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 12

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/24 22:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.07	22.31	13.24	49.92	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.4320 ppm (PASS)	0.0000 ppm	0%	2020/08/24 23:01

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.4320	244.3196	181.28	194.17	12.89	49.85	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.5121 ppm (PASS)	0.0000 ppm	0%	2020/08/24 23:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.5121	245.1207	181.84	195.01	13.17	49.84	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 12

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2007146-015	7.9137 ppm	0.0606 ppm	0.7700%	2020/08/24 23:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.8709	78.7090	64.44	77.51	13.08	50.04	10:27
2	TOC	7.9566	79.5658	65.04	78.12	13.08	49.95	10:25

Dilution	Blank Contribution	Method	Calibration

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	K2007146-016	7.5579 ppm	0.0315 ppm	0.4200%	2020/08/24 23:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.5356	75.3561	62.08	75.25	13.17	49.91	10:26
2	TOC	7.5801	75.8009	62.40	75.52	13.12	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	K2007146-017	15.1715 ppm	0.0791 ppm	0.5200%	2020/08/25 00:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.1156	151.1556	115.26	128.38	13.12	49.88	10:26
2	TOC	15.2275	152.2746	116.04	129.07	13.03	49.86	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	K2006713-003	0.9206 ppm	0.1385 ppm	15.0400%	2020/08/25 00:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0186	10.1856	16.37	29.42	13.05	50.08	10:28
2	TOC	0.8227	8.2269	14.99	28.30	13.30	50.00	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	K2006713-004	0.6248 ppm	0.0253 ppm	4.0500%	2020/08/25 01:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6069	6.0686	13.48	26.86	13.38	49.97	10:27
2	TOC	0.6426	6.4264	13.73	26.80	13.07	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	26	TOC	K2007214-001	1.6415 ppm	0.0183 ppm	1.1200%	2020/08/25 01:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6286	16.2855	20.65	33.99	13.35	49.93	10:27
2	TOC	1.6545	16.5450	20.83	34.11	13.28	49.93	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	27	TOC	K2007214-003	1.2210 ppm	0.0268 ppm	2.2000%	2020/08/25 02:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2399	12.3995	17.92	31.18	13.26	49.90	10:30
2	TOC	1.2020	12.0203	17.65	30.94	13.29	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K2007214-005	1.0893 ppm	0.0430 ppm	3.9500%	2020/08/25 02:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0589	10.5890	16.65	29.99	13.34	49.93	10:28
2	TOC	1.1198	11.1977	17.08	30.28	13.21	49.94	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.1654 ppm (PASS)	0.0000 ppm	0%	2020/08/25 03:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.1654	231.6536	172.39	185.55	13.16	49.95	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/25 03:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.55	22.02	13.47	49.97	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 12

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2007214-006	2.8402 ppm	0.0059 ppm	0.2100%	2020/08/25 03:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.8444	28.4441	29.17	42.26	13.08	49.97	10:27
2	TOC	2.8360	28.3600	29.12	42.36	13.24	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2007214-008	7.5116 ppm	0.0422 ppm	0.5600%	2020/08/25 04:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.4817	74.8173	61.70	74.85	13.15	50.00	10:29
2	TOC	7.5415	75.4146	62.12	75.43	13.31	50.00	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2006813-001	0.1637 ppm	0.0168 ppm	10.2800%	2020/08/25 04:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1518	1.5182	10.29	23.54	13.26	50.01	10:27
2	TOC	0.1756	1.7563	10.45	23.60	13.14	50.04	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2006813-002	0.0000 ppm	0.0000 ppm	0.0000%	2020/08/25 05:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.99	22.08	13.08	50.06	10:25
2	TOC	0.0000	0.0000	8.97	22.11	13.14	50.10	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2007140-001	1.2141 ppm	0.0006 ppm	0.0500%	2020/08/25 05:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2137	12.1372	17.74	31.03	13.29	50.08	10:29
2	TOC	1.2146	12.1457	17.74	30.95	13.21	50.12	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2007140-002	72.2578 ppm	0.3992 ppm	0.5500%	2020/08/25 06:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	72.5401	725.4007	518.08	531.24	13.16	50.11	10:29
2	TOC	71.9756	719.7555	514.12	527.44	13.32	50.15	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2007140-003	1.2239 ppm	0.1797 ppm	14.6800%	2020/08/25 06:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3510	13.5100	18.70	32.00	13.30	50.12	10:30
2	TOC	1.0968	10.9682	16.92	30.15	13.23	50.14	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	K2007140-004	1.9345 ppm	0.0070 ppm	0.3600%	2020/08/25 07:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9395	19.3947	22.83	35.96	13.13	50.11	10:27
2	TOC	1.9296	19.2963	22.76	36.06	13.30	50.10	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC)	CAS_salt_010711	CAS_salt_010711

(v1437) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2007140-005	1.8796 ppm	0.0192 ppm	1.0200%	2020/08/25 07:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8931	18.9314	22.50	35.72	13.22	50.07	10:27
2	TOC	1.8661	18.6605	22.31	35.48	13.17	50.05	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2007183-001	1.8475 ppm	0.0405 ppm	2.1900%	2020/08/25 07:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8762	18.7617	22.38	35.58	13.20	50.02	10:27
2	TOC	1.8189	18.1886	21.98	35.28	13.30	50.00	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 12

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.0734 ppm (PASS)	0.0000 ppm	0%	2020/08/25 08:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.0734	230.7341	171.75	185.09	13.34	50.04	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 13

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/25 08:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.72	21.90	13.19	49.97	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 13

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	K2007140-002 10X	7.6587 ppm	0.0186 ppm	0.2400%	2020/08/25 08:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.6719	76.7190	63.04	76.26	13.22	49.94	10:26
2	TOC	7.6455	76.4552	62.85	76.14	13.29	49.96	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2220 (IC) (v1437)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 13

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.1886 ppm (PASS)	0.0000 ppm	0%	2020/08/25 09:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.1886	231.8859	172.56	185.60	13.04	49.95	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 13

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/08/25 09:36

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.75	21.72	12.98	49.92	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1436	1.4033	0.2300	0.0000	0.0000	0.0000	2020/08/20 14:05	Fusion1 (Fusion1)
v1437	1.5957	0.3770	0.0000	0.0000	0.0000	2020/08/24 12:34	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC
Calibration curve formula: TOC: y = 7.015x + 9.892
r^2 value: TOC: r^2 = 0.99974

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4
Ver Creation: 2019/02/21 17:57
Comment:
Operator: Fusion1 (Fusion1)

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7

DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/08/25 09:52

ALS Environmental

StarLIMS Run: 692340/692339+

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-15-C 50 ppm LCS: 19-GEN-8-31I 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-J

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-38-B

21 % H3PO4: 19-GEN-08-38-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By:	MR	Date Analyzed:	8/24/20
Reviewed By:		Date Reviewed:	8/26/20

HS20080794 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20080794

NIT- AMN- W-ISE / 350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD	Date: 8/24/20 12:50PM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	
Probe Calibration Date: 8/24/20	Cal Std ID: 3140639101-06)
Probe ID: X01-11806	
Sodium Thiosulfate ID: 31806 01 15	

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	137.7	0.205
STD 2 (mg/L):	1	95.4	1.003
STD 3 (mg/L):	5	54.2	5.006

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	36.6	10.026
STD 5 (mg/L): 50	-4.1	50.069

LSC / MS Spike ID: 3100602320
ICV Cal STD ID: 3140639(01-06)
DPD Reagent ID: 3100602305
ICAL Date & Slope: 98.71 -58.2mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/-)	Comments
CCV		50ml	50ml		9.791			
CCB		↓	↓		0.015			
MBLK		25ml			0.015			
LCS					9.987			
HS200807 31-01					0.327		-ve	
731-01MS					10.0834			
731-01MSD					10.0796			
742-01					2.160		-ve	
794-01					10.890		-ve	
946-01		↓	↓		0.705		-ve	
941-01		5ml	50ml	10X	48.841		-ve	
952-01		1ml	50ml	50X	9.632		-ve	
CCV		50ml	50ml		9.910			
CCB		↓	↓		0.014			
HS200809 57-01		5ml	50ml	10X	41.457		-ve	
↓ 962-01		1ml	50ml	50X	9.768		-ve	
CCV		50ml	50ml		9.717			
CCB		↓	↓		0.015			

Batch ID:	Reported By	Reviewed By:
367345 / 367346	MD	YP

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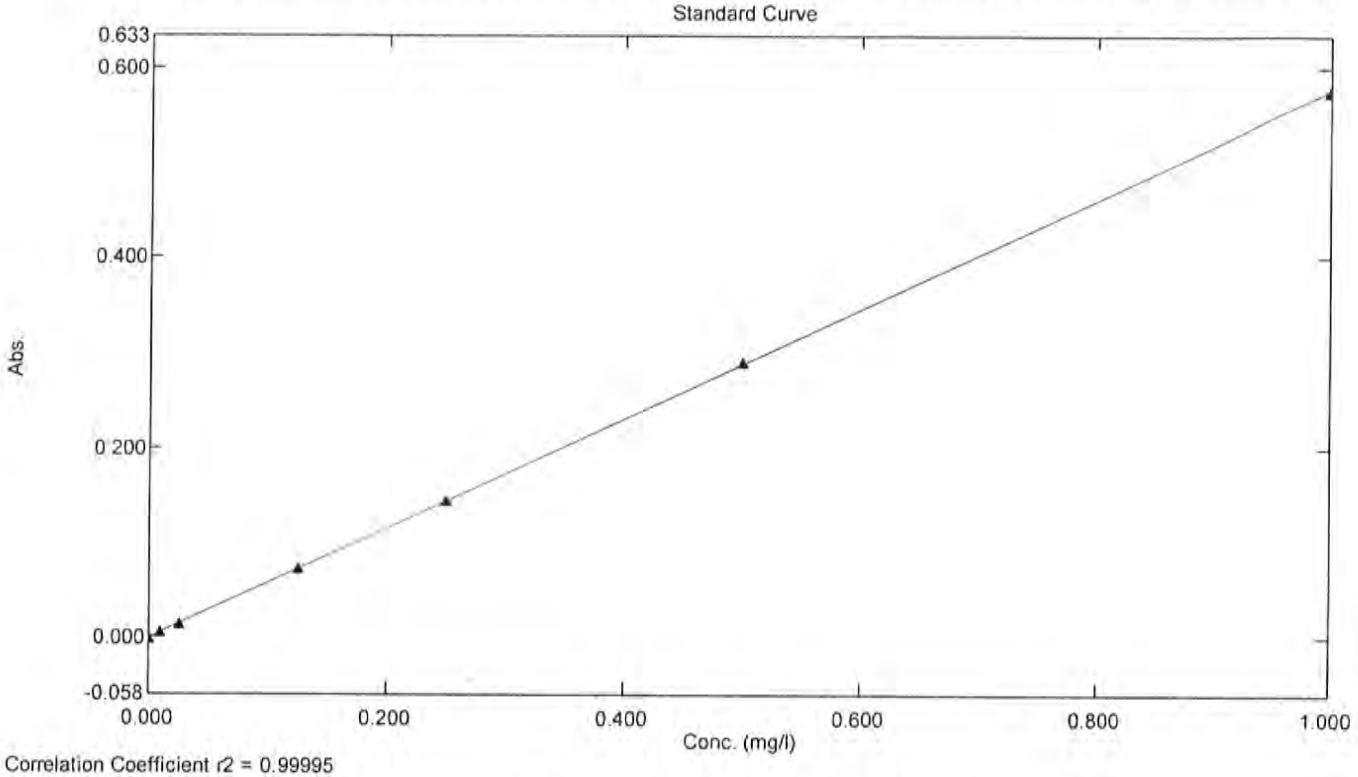
HS20080794 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20080794

Standard Table Report

09/03/2020 03:53:24 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\081920_P_ORTHO.pho..p



Correlation Coefficient r2 = 0.99995

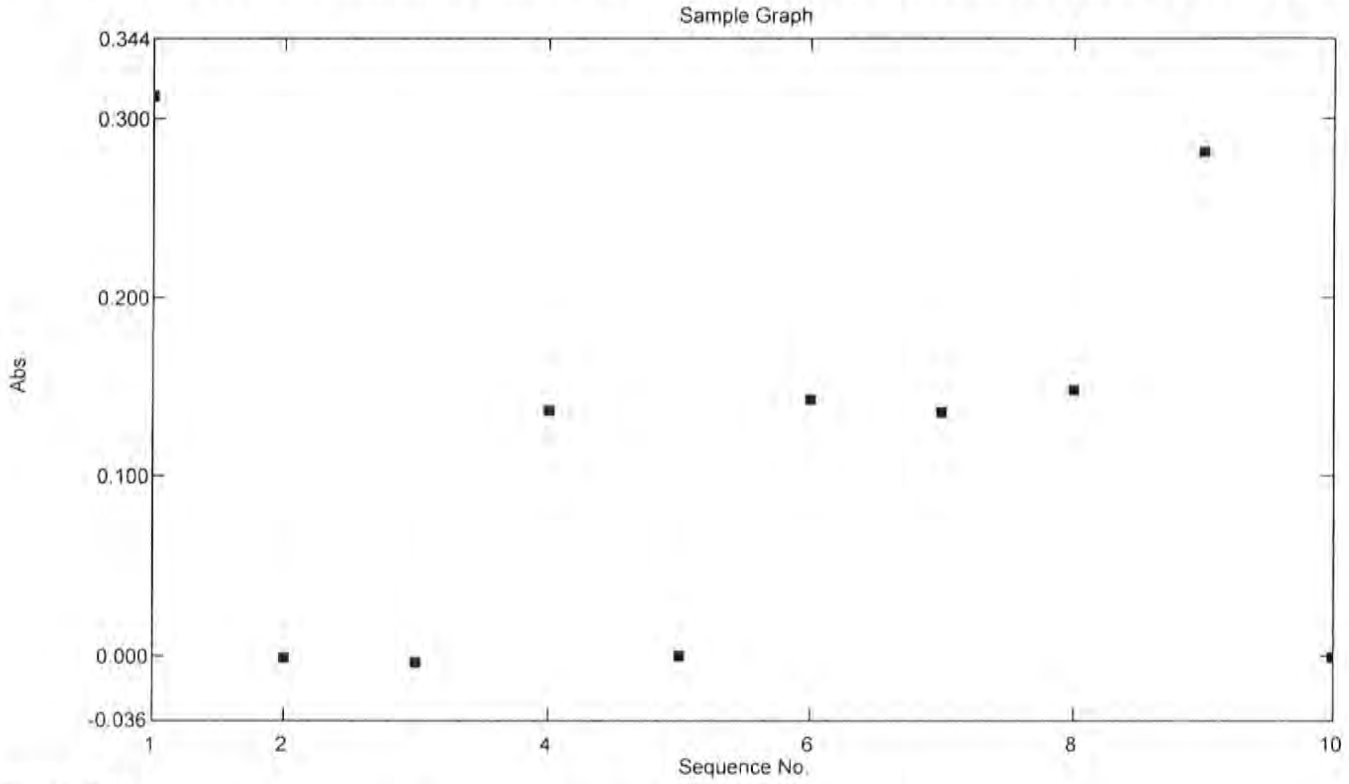
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.073	1.000	
5	STD5	Standard		0.250	0.145	1.000	
6	STD6	Standard		0.500	0.290	1.000	
7	STD7	Standard		1.000	0.575	1.000	
8							

Sample Table Report

09/03/2020 03:53:27 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\081920_P_ORTHO.pho..p



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.543	0.313	314061705 WC-14
2	CCB	Unknown		-0.003	-0.001	
3	MBLK	Unknown		-0.007	-0.004	
4	LCS	Unknown		0.238	0.137	314061704 WC-14
5	HS20080685.01	Unknown		-0.000	0.000	02:38PM
6	HS20080685.01MS	Unknown		0.249	0.143	02:38PM
7	HS20080685.01MS D	Unknown		0.236	0.136	02:38PM
8	H20080794.01	Unknown		0.258	0.149	02:39PM
9	CCV2	Unknown		0.487	0.281	
10	CCB2	Unknown		-0.002	-0.001	C-314063510 UV-11
11						

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WorkOrder: HS20080801

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

18-Sep-2020

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Table of Contents

HS20080801 Cover Page
- CoverPage
- HS20080801 Longhorn GW Treatment Plant Bi Weekly Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP650_081820
  - Trip Blank
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
- HS20080801 8260_W_DOD Raw Data
- HS20080801 (9056_anions_W) Wet Chem Raw Data

HS20080801 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20080801

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August 28, 2020

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

Work Order: **HS20080801**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 19, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20080801

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20080801-01	LH18/24-SP650_081820	Water		18-Aug-2020 14:00	19-Aug-2020 09:40	☐
HS20080801-02	Trip Blank	Water		18-Aug-2020 14:00	19-Aug-2020 09:40	☐

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20080801

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R367184

Sample ID: CCV

- Hexachlorobutadiene exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: LH18/24-SP650_081820 (HS20080801-01MS)

- MS/MSD failed QC limits for several compounds. One related RPD.

WetChemistry by Method SW9056

Batch ID: R367662

Sample ID: LH18/24-SP650_081820 (HS20080801-01MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Chloride)

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20080801
Sample ID: LH18/24-SP650_081820 Lab ID:HS20080801-01
Collection Date: 18-Aug-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,2-Dichloroethane	**0.64**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	20-Aug-2020 13:22
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	20-Aug-2020 13:22
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	20-Aug-2020 13:22
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	20-Aug-2020 13:22
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	20-Aug-2020 13:22
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	20-Aug-2020 13:22
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22

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

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_081820
Collection Date: 18-Aug-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20080801
Lab ID:HS20080801-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
cis-1,2-Dichloroethene	**16**		**0.20**	**0.50**	**1.0**	**UG/L**	1	20-Aug-2020 13:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	20-Aug-2020 13:22
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	20-Aug-2020 13:22
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 13:22
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Trichloroethene	**3.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	20-Aug-2020 13:22
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 13:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 13:22
Surr: 1,2-Dichloroethane-d4	*87.4*			**0**	*81-118*	*%REC*	*1*	*20-Aug-2020 13:22*
Surr: 4-Bromofluorobenzene	*96.1*			**0**	*85-114*	*%REC*	*1*	*20-Aug-2020 13:22*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*20-Aug-2020 13:22*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*20-Aug-2020 13:22*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**332**		**4.00**	**10.0**	**10.0**	**mg/L**	20	27-Aug-2020 23:07
Sulfate	**32.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	27-Aug-2020 18:00

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

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20080801
Sample ID: Trip Blank
Lab ID:HS20080801-02
Collection Date: 18-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	20-Aug-2020 12:58
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	20-Aug-2020 12:58
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	20-Aug-2020 12:58
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	20-Aug-2020 12:58
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	20-Aug-2020 12:58
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58

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

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: Trip Blank
Collection Date: 18-Aug-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20080801
Lab ID:HS20080801-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	20-Aug-2020 12:58
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	20-Aug-2020 12:58
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	20-Aug-2020 12:58
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	20-Aug-2020 12:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	20-Aug-2020 12:58
Surr: 1,2-Dichloroethane-d4	*88.0*			**0**	*81-118*	*%REC*	*1*	*20-Aug-2020 12:58*
Surr: 4-Bromofluorobenzene	*99.2*			**0**	*85-114*	*%REC*	*1*	*20-Aug-2020 12:58*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*1*	*20-Aug-2020 12:58*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*20-Aug-2020 12:58*

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

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R367184 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20080801-01	LH18/24-SP650_081820	18 Aug 2020 14:00			20 Aug 2020 13:22	1
HS20080801-02	Trip Blank	18 Aug 2020 14:00			20 Aug 2020 12:58	1
Batch ID: R367662 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20080801-01	LH18/24-SP650_081820	18 Aug 2020 14:00			27 Aug 2020 23:07	20
HS20080801-01	LH18/24-SP650_081820	18 Aug 2020 14:00			27 Aug 2020 18:00	1

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200820** Units: **UG/L** Analysis Date: **20-Aug-2020 12:34**
Client ID: Run ID: **VOA6_367184** SeqNo: **5709405** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200820** Units: **UG/L** Analysis Date: **20-Aug-2020 12:34**
Client ID: Run ID: **VOA6_367184** SeqNo: **5709405** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.01*	*1.0*	*50*	*0*	*86.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.42*	*1.0*	*50*	*0*	*94.8*	*85 - 114*				
Surr: Dibromofluoromethane	*45.67*	*1.0*	*50*	*0*	*91.3*	*80 - 119*				
Surr: Toluene-d8	*53.73*	*1.0*	*50*	*0*	*107*	*89 - 112*				

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200820** Units: **UG/L** Analysis Date: **20-Aug-2020 11:45**
Client ID: Run ID: **VOA6_367184** SeqNo: **5709404** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.69	1.0	20	0	103	78 - 124				
1,1,1-Trichloroethane	20.98	1.0	20	0	105	74 - 131				
1,1,2,2-Tetrachloroethane	21.69	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	21.91	1.0	20	0	110	80 - 119				
1,1-Dichloroethane	23.14	1.0	20	0	116	77 - 125				
1,1-Dichloroethene	22.76	1.0	20	0	114	71 - 131				
1,1-Dichloropropene	21.3	1.0	20	0	106	78 - 125				
1,2,3-Trichlorobenzene	20.53	1.0	20	0	103	69 - 129				
1,2,3-Trichloropropane	19.91	1.0	20	0	99.5	73 - 122				
1,2,4-Trichlorobenzene	21.28	1.0	20	0	106	69 - 130				
1,2,4-Trimethylbenzene	21.03	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	17.95	1.0	20	0	89.8	62 - 128				
1,2-Dibromoethane	21.71	1.0	20	0	109	77 - 121				
1,2-Dichlorobenzene	20	1.0	20	0	100.0	80 - 119				
1,2-Dichloroethane	21.62	1.0	20	0	108	73 - 128				
1,2-Dichloropropane	22.93	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	20.68	1.0	20	0	103	75 - 124				
1,3-Dichlorobenzene	20.55	1.0	20	0	103	80 - 119				
1,3-Dichloropropane	22.12	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	20.56	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	22.55	1.0	20	0	113	60 - 139				
2-Butanone	42.49	2.0	40	0	106	56 - 143				
2-Chlorotoluene	21.3	1.0	20	0	106	79 - 122				
2-Hexanone	38.94	2.0	40	0	97.4	57 - 139				
4-Chlorotoluene	20.86	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	20.47	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	40	2.0	40	0	100	67 - 130				
Acetone	44.75	2.0	40	0	112	39 - 160				
Benzene	22.55	1.0	20	0	113	79 - 120				
Bromobenzene	21.17	1.0	20	0	106	80 - 120				
Bromochloromethane	21.71	1.0	20	0	109	78 - 123				
Bromodichloromethane	20.97	1.0	20	0	105	79 - 125				
Bromoform	18.98	1.0	20	0	94.9	66 - 130				
Bromomethane	20.09	1.0	20	0	100	53 - 141				

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200820** Units: **UG/L** Analysis Date: **20-Aug-2020 11:45**
Client ID: Run ID: **VOA6_367184** SeqNo: **5709404** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	44.9	2.0	40	0	112	64 - 133				
Carbon tetrachloride	19.54	1.0	20	0	97.7	72 - 136				
Chlorobenzene	21.7	1.0	20	0	108	82 - 118				
Chloroethane	19.6	1.0	20	0	98.0	60 - 138				
Chloroform	22.15	1.0	20	0	111	79 - 124				
Chloromethane	17.96	1.0	20	0	89.8	50 - 139				
cis-1,2-Dichloroethene	22.65	1.0	20	0	113	78 - 123				
cis-1,3-Dichloropropene	21.82	1.0	20	0	109	75 - 124				
Dibromochloromethane	20.54	1.0	20	0	103	74 - 126				
Dibromomethane	21.41	1.0	20	0	107	79 - 123				
Dichlorodifluoromethane	17.99	1.0	20	0	90.0	32 - 152				
Ethylbenzene	21.12	1.0	20	0	106	79 - 121				
Hexachlorobutadiene	24.78	1.0	20	0	124	66 - 134				
Isopropylbenzene	20.61	1.0	20	0	103	72 - 131				
m,p-Xylene	42.46	2.0	40	0	106	80 - 121				
Methylene chloride	21.47	2.0	20	0	107	74 - 124				
Naphthalene	20.43	1.0	20	0	102	61 - 128				
n-Butylbenzene	20.62	1.0	20	0	103	75 - 128				
n-Propylbenzene	20.75	1.0	20	0	104	76 - 126				
o-Xylene	21.37	1.0	20	0	107	78 - 122				
sec-Butylbenzene	20	1.0	20	0	100	77 - 126				
Styrene	21.36	1.0	20	0	107	78 - 123				
tert-Butylbenzene	20.2	1.0	20	0	101	78 - 124				
Tetrachloroethene	21.38	1.0	20	0	107	74 - 129				
Toluene	22.22	1.0	20	0	111	80 - 121				
trans-1,2-Dichloroethene	22.55	1.0	20	0	113	75 - 124				
trans-1,3-Dichloropropene	20.73	1.0	20	0	104	73 - 127				
Trichloroethene	22.29	1.0	20	0	111	79 - 123				
Trichlorofluoromethane	20.86	1.0	20	0	104	65 - 141				
Vinyl chloride	21.11	1.0	20	0	106	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.06*	*1.0*	*50*	*0*	*102*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.31*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*51.79*	*1.0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*52.57*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20080801-01MS** Units: **UG/L** Analysis Date: **20-Aug-2020 15:46**
Client ID: **LH18/24-SP650_081820** Run ID: **VOA6_367184** SeqNo: **5709408** 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	23.92	1.0	20	0	120	78 - 124				
1,1,1-Trichloroethane	24.27	1.0	20	0	121	74 - 131				
1,1,2,2-Tetrachloroethane	24.16	1.0	20	0	121	71 - 121				
1,1,2-Trichloroethane	24.27	1.0	20	0	121	80 - 119				S
1,1-Dichloroethane	25.54	1.0	20	0	128	77 - 125				S
1,1-Dichloroethene	27.58	1.0	20	0	138	71 - 131				S
1,1-Dichloropropene	25.9	1.0	20	0	130	78 - 125				S
1,2,3-Trichlorobenzene	14.8	1.0	20	0	74.0	69 - 129				
1,2,3-Trichloropropane	22.44	1.0	20	0	112	73 - 122				
1,2,4-Trichlorobenzene	17.72	1.0	20	0	88.6	69 - 130				
1,2,4-Trimethylbenzene	26.22	1.0	20	0	131	76 - 124				S
1,2-Dibromo-3-chloropropane	17.94	1.0	20	0	89.7	62 - 128				
1,2-Dibromoethane	23.82	1.0	20	0	119	77 - 121				
1,2-Dichlorobenzene	23.27	1.0	20	0	116	80 - 119				
1,2-Dichloroethane	23.98	1.0	20	0.6426	117	73 - 128				
1,2-Dichloropropane	25.73	1.0	20	0	129	78 - 122				S
1,3,5-Trimethylbenzene	26.64	1.0	20	0	133	75 - 124				S
1,3-Dichlorobenzene	24.83	1.0	20	0	124	80 - 119				S
1,3-Dichloropropane	24.59	1.0	20	0	123	80 - 119				S
1,4-Dichlorobenzene	24.61	1.0	20	0	123	79 - 118				S
2,2-Dichloropropane	25.23	1.0	20	0	126	60 - 139				
2-Butanone	44.33	2.0	40	0	111	56 - 143				
2-Chlorotoluene	26.51	1.0	20	0	133	79 - 122				S
2-Hexanone	42.78	2.0	40	0	107	57 - 139				
4-Chlorotoluene	25.95	1.0	20	0	130	78 - 122				S
4-Isopropyltoluene	26.79	1.0	20	0	134	77 - 127				S
4-Methyl-2-pentanone	45.34	2.0	40	0	113	67 - 130				
Acetone	40.32	2.0	40	0	101	39 - 160				
Benzene	25.53	1.0	20	0	128	79 - 120				S
Bromobenzene	25.12	1.0	20	0	126	80 - 120				S
Bromochloromethane	22.84	1.0	20	0	114	78 - 123				
Bromodichloromethane	23.43	1.0	20	0	117	79 - 125				
Bromoform	21.29	1.0	20	0	106	66 - 130				
Bromomethane	22.1	1.0	20	0	110	53 - 141				

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20080801-01MS** Units: **UG/L** Analysis Date: **20-Aug-2020 15:46**
Client ID: **LH18/24-SP650_081820** Run ID: **VOA6_367184** SeqNo: **5709408** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	51.24	2.0	40	0	128	64 - 133				
Carbon tetrachloride	24.18	1.0	20	0	121	72 - 136				
Chlorobenzene	25.29	1.0	20	0	126	82 - 118				S
Chloroethane	23.82	1.0	20	0	119	60 - 138				
Chloroform	24.04	1.0	20	0	120	79 - 124				
Chloromethane	18.77	1.0	20	0	93.8	50 - 139				
cis-1,2-Dichloroethene	40.15	1.0	20	15.81	122	78 - 123				
cis-1,3-Dichloropropene	24	1.0	20	0	120	75 - 124				
Dibromochloromethane	22.76	1.0	20	0	114	74 - 126				
Dibromomethane	23.28	1.0	20	0	116	79 - 123				
Dichlorodifluoromethane	19.12	1.0	20	0	95.6	32 - 152				
Ethylbenzene	26.55	1.0	20	0	133	79 - 121				S
Hexachlorobutadiene	21.08	1.0	20	0	105	66 - 134				
Isopropylbenzene	26.56	1.0	20	0	133	72 - 131				S
m,p-Xylene	51.91	2.0	40	0	130	80 - 121				S
Methylene chloride	23.73	2.0	20	0	119	74 - 124				
Naphthalene	16.44	1.0	20	0	82.2	61 - 128				
n-Butylbenzene	26.63	1.0	20	0	133	75 - 128				S
n-Propylbenzene	27.41	1.0	20	0	137	76 - 126				S
o-Xylene	25.73	1.0	20	0	129	78 - 122				S
sec-Butylbenzene	27.18	1.0	20	0	136	77 - 126				S
Styrene	25.01	1.0	20	0	125	78 - 123				S
tert-Butylbenzene	26.75	1.0	20	0	134	78 - 124				S
Tetrachloroethene	27.18	1.0	20	0	136	74 - 129				S
Toluene	25.99	1.0	20	0	130	80 - 121				S
trans-1,2-Dichloroethene	25.33	1.0	20	0	127	75 - 124				S
trans-1,3-Dichloropropene	22.67	1.0	20	0	113	73 - 127				
Trichloroethene	28.99	1.0	20	3.372	128	79 - 123				S
Trichlorofluoromethane	24.36	1.0	20	0	122	65 - 141				
Vinyl chloride	24.1	1.0	20	0	120	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.45*	*1.0*	*50*	*0*	*88.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.41*	*1.0*	*50*	*0*	*94.8*	*80 - 119*				
Surr: Toluene-d8	*52.37*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20080801-01MSD** Units: **UG/L** Analysis Date: **20-Aug-2020 16:10**
Client ID: **LH18/24-SP650_081820** Run ID: **VOA6_367184** SeqNo: **5709409** 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	23.02	1.0	20	0	115	78 - 124	23.92	3.85	20	
1,1,1-Trichloroethane	23.36	1.0	20	0	117	74 - 131	24.27	3.82	20	
1,1,2,2-Tetrachloroethane	25.68	1.0	20	0	128	71 - 121	24.16	6.09	20	S
1,1,2-Trichloroethane	24.18	1.0	20	0	121	80 - 119	24.27	0.38	20	S
1,1-Dichloroethane	24.88	1.0	20	0	124	77 - 125	25.54	2.59	20	
1,1-Dichloroethene	25.61	1.0	20	0	128	71 - 131	27.58	7.41	20	
1,1-Dichloropropene	24.63	1.0	20	0	123	78 - 125	25.9	5.04	20	
1,2,3-Trichlorobenzene	19.68	1.0	20	0	98.4	69 - 129	14.8	28.3	20	R
1,2,3-Trichloropropane	23.18	1.0	20	0	116	73 - 122	22.44	3.22	20	
1,2,4-Trichlorobenzene	22.96	1.0	20	0	115	69 - 130	17.72	25.8	20	R
1,2,4-Trimethylbenzene	26.08	1.0	20	0	130	76 - 124	26.22	0.546	20	S
1,2-Dibromo-3-chloropropane	20.41	1.0	20	0	102	62 - 128	17.94	12.9	20	
1,2-Dibromoethane	23.81	1.0	20	0	119	77 - 121	23.82	0.0387	20	
1,2-Dichlorobenzene	23.41	1.0	20	0	117	80 - 119	23.27	0.621	20	
1,2-Dichloroethane	24.25	1.0	20	0.6426	118	73 - 128	23.98	1.16	20	
1,2-Dichloropropane	25	1.0	20	0	125	78 - 122	25.73	2.85	20	S
1,3,5-Trimethylbenzene	26.32	1.0	20	0	132	75 - 124	26.64	1.21	20	S
1,3-Dichlorobenzene	24.67	1.0	20	0	123	80 - 119	24.83	0.629	20	S
1,3-Dichloropropane	24.29	1.0	20	0	121	80 - 119	24.59	1.23	20	S
1,4-Dichlorobenzene	24.76	1.0	20	0	124	79 - 118	24.61	0.61	20	S
2,2-Dichloropropane	24.1	1.0	20	0	121	60 - 139	25.23	4.56	20	
2-Butanone	44.38	2.0	40	0	111	56 - 143	44.33	0.112	20	
2-Chlorotoluene	26.55	1.0	20	0	133	79 - 122	26.51	0.164	20	S
2-Hexanone	44.67	2.0	40	0	112	57 - 139	42.78	4.33	20	
4-Chlorotoluene	26.24	1.0	20	0	131	78 - 122	25.95	1.11	20	S
4-Isopropyltoluene	26.65	1.0	20	0	133	77 - 127	26.79	0.498	20	S
4-Methyl-2-pentanone	45.69	2.0	40	0	114	67 - 130	45.34	0.781	20	
Acetone	39.6	2.0	40	0	99.0	39 - 160	40.32	1.8	20	
Benzene	24.52	1.0	20	0	123	79 - 120	25.53	4.06	20	S
Bromobenzene	24.76	1.0	20	0	124	80 - 120	25.12	1.45	20	S
Bromochloromethane	22.91	1.0	20	0	115	78 - 123	22.84	0.317	20	
Bromodichloromethane	22.97	1.0	20	0	115	79 - 125	23.43	2	20	
Bromoform	21.21	1.0	20	0	106	66 - 130	21.29	0.388	20	
Bromomethane	21.01	1.0	20	0	105	53 - 141	22.1	5.02	20	

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20080801-01MSD** Units: **UG/L** Analysis Date: **20-Aug-2020 16:10**
Client ID: **LH18/24-SP650_081820** Run ID: **VOA6_367184** SeqNo: **5709409** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	48.52	2.0	40	0	121	64 - 133	51.24	5.45	20	
Carbon tetrachloride	23.14	1.0	20	0	116	72 - 136	24.18	4.42	20	
Chlorobenzene	24.32	1.0	20	0	122	82 - 118	25.29	3.9	20	S
Chloroethane	22.71	1.0	20	0	114	60 - 138	23.82	4.74	20	
Chloroform	23.3	1.0	20	0	116	79 - 124	24.04	3.12	20	
Chloromethane	18.47	1.0	20	0	92.4	50 - 139	18.77	1.6	20	
cis-1,2-Dichloroethene	39.28	1.0	20	15.81	117	78 - 123	40.15	2.2	20	
cis-1,3-Dichloropropene	23.45	1.0	20	0	117	75 - 124	24	2.3	20	
Dibromochloromethane	22.37	1.0	20	0	112	74 - 126	22.76	1.75	20	
Dibromomethane	23.15	1.0	20	0	116	79 - 123	23.28	0.565	20	
Dichlorodifluoromethane	17.64	1.0	20	0	88.2	32 - 152	19.12	8.06	20	
Ethylbenzene	24.79	1.0	20	0	124	79 - 121	26.55	6.87	20	S
Hexachlorobutadiene	25.13	1.0	20	0	126	66 - 134	21.08	17.6	20	
Isopropylbenzene	25.74	1.0	20	0	129	72 - 131	26.56	3.15	20	
m,p-Xylene	49.92	2.0	40	0	125	80 - 121	51.91	3.9	20	S
Methylene chloride	22.66	2.0	20	0	113	74 - 124	23.73	4.6	20	
Naphthalene	22.94	1.0	20	0	115	61 - 128	16.44	33	20	R
n-Butylbenzene	27.25	1.0	20	0	136	75 - 128	26.63	2.31	20	S
n-Propylbenzene	26.62	1.0	20	0	133	76 - 126	27.41	2.92	20	S
o-Xylene	24.57	1.0	20	0	123	78 - 122	25.73	4.61	20	S
sec-Butylbenzene	26.83	1.0	20	0	134	77 - 126	27.18	1.29	20	S
Styrene	23.82	1.0	20	0	119	78 - 123	25.01	4.88	20	
tert-Butylbenzene	26.68	1.0	20	0	133	78 - 124	26.75	0.282	20	S
Tetrachloroethene	25.68	1.0	20	0	128	74 - 129	27.18	5.68	20	
Toluene	25.11	1.0	20	0	126	80 - 121	25.99	3.41	20	S
trans-1,2-Dichloroethene	24	1.0	20	0	120	75 - 124	25.33	5.39	20	
trans-1,3-Dichloropropene	22.44	1.0	20	0	112	73 - 127	22.67	1.04	20	
Trichloroethene	27.67	1.0	20	3.372	121	79 - 123	28.99	4.66	20	
Trichlorofluoromethane	22.93	1.0	20	0	115	65 - 141	24.36	6.03	20	
Vinyl chloride	22.75	1.0	20	0	114	58 - 137	24.1	5.74	20	
Surr: 1,2-Dichloroethane-d4	*44.94*	*1.0*	*50*	*0*	*89.9*	*81 - 118*	*44.45*	*1.12*	*20*	
Surr: 4-Bromofluorobenzene	*47.98*	*1.0*	*50*	*0*	*96.0*	*85 - 114*	*48.31*	*0.705*	*20*	
Surr: Dibromofluoromethane	*46.91*	*1.0*	*50*	*0*	*93.8*	*80 - 119*	*47.41*	*1.07*	*20*	
Surr: Toluene-d8	*52.28*	*1.0*	*50*	*0*	*105*	*89 - 112*	*52.37*	*0.17*	*20*	

ALS Houston, US Date: 28-Aug-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20080801

QC BATCH REPORT

Batch ID:	**R367184 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20080801-01 HS20080801-02

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20080801

QC BATCH REPORT

Batch ID: R367662 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-082720** Units: **mg/L** Analysis Date: **27-Aug-2020 10:20**
Client ID: Run ID: **ICS-Integrion_367662** SeqNo: **5719265** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-082720** Units: **mg/L** Analysis Date: **27-Aug-2020 10:38**
Client ID: Run ID: **ICS-Integrion_367662** SeqNo: **5719266** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.32	0.500	20	0	96.6	80 - 120				
Sulfate	19.22	0.500	20	0	96.1	80 - 120				

MS Sample ID: **HS20080801-01MS** Units: **mg/L** Analysis Date: **27-Aug-2020 18:18**
Client ID: **LH18/24-SP650_081820** Run ID: **ICS-Integrion_367662** SeqNo: **5719272** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	335.8	0.500	10	331	48.3	80 - 120				SEO
Sulfate	41.94	0.500	10	32.76	91.8	80 - 120				

MSD Sample ID: **HS20080801-01MSD** Units: **mg/L** Analysis Date: **27-Aug-2020 18:36**
Client ID: **LH18/24-SP650_081820** Run ID: **ICS-Integrion_367662** SeqNo: **5719273** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	334.9	0.500	10	331	39.2	80 - 120	335.8	0.272	20	SEO
Sulfate	41.74	0.500	10	32.76	89.9	80 - 120	41.94	0.468	20	

The following samples were analyzed in this batch: HS20080801-01

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20080801**

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	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V010	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20080801

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20080801-01	LH18/24-SP650_081820	Login	8/19/2020 1:46:08 PM	JRM	WET104
HS20080801-01	LH18/24-SP650_081820	Login	8/19/2020 1:46:08 PM	JRM	VOA236
HS20080801-02	Trip Blank	Login	8/19/2020 1:46:08 PM	JRM	VOA236

ALS Houston, US Date: 28-Aug-20

Sample Receipt Checklist

Work Order ID: HS20080801 **Date/Time Received:** 19-Aug-2020 09:40

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	19-Aug-2020 13:47	**Reviewed by:**	/S/ RJ Modashia	19-Aug-2020 15:23
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on shipping container/cooler?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes	☐	No	☐	Not Present	☑
Chain of custody present?	Yes	☑	No	☐	1 Page(s)	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Samplers name present on COC?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Samples in proper container/bottle?	Yes	☑	No	☐		
Sample containers intact?	Yes	☑	No	☐		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Container/Temp Blank temperature in compliance?	Yes	☑	No	☐		

Temperature(s)/Thermometer(s):	1.0°C/1.0°C UC/C	IR25
Cooler(s)/Kit(s):	45827	
Date/Time sample(s) sent to storage:	08/19/2020 13:52	

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

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_081820	Water	08/18/20 / 14:00		3	3		HCL	
LH18/24-SP650_081820	Water	08/18/20 / 14:00		1		1	NONE	
Trip Blank	Water	08/18/20		2	2		HCL	

HS20080801
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Sample

Additional Remarks: **Standard TAT**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	08/18/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. MacLean	8/19/20	09:40							

Remarks: Cooler 45827 IR25
Temp 1.0°C CFO

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

ALS
10450 Stanclift R d., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45827

CUSTODY SEAL

Date: 8/18/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 08/19/20

45827

Must Deliver Next Business Day
Time and Tempature Sensitive!

45827

ORIGIN ID:SGRA (303) 587-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 04AUG20
ACTWGT: 1.00 LB MAN
CAD: 800130/CAFE3211
DIMS: 14x11x10 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LLONGHORN GW TREATMENT - BD 73141 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8878 9550

WED - 19 AUG 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

HS20080801 8260_W_DOD Raw Data

ALS WO# HS20080801

MSVOA06 -Logbook

Batch: 41322 **Analyst:** Presenta Cabascango

Date: 08-03-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	08-03-2020 11:16 am	1.00	50 mL	50 mL	X080301.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	08-03-2020 11:40 am	1.00	50 mL	50 mL	X080302.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	08-03-2020 12:04 pm	1.00	50 mL	50 mL	X080303.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	08-03-2020 12:52 pm	1.00	50 mL	50 mL	X080304.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	08-03-2020 01:16 pm	1.00	50 mL	50 mL	X080305.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	08-03-2020 01:40 pm	1.00	50 mL	50 mL	X080306.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	08-03-2020 02:04 pm	1.00	50 mL	50 mL	X080307.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	08-03-2020 02:28 pm	1.00	50 mL	50 mL	X080308.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	08-03-2020 02:52 pm	1.00	50 mL	50 mL	X080309.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	08-03-2020 03:16 pm	1.00	50 mL	50 mL	X080310.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	08-03-2020 03:40 pm	1.00	50 mL	50 mL	X080311.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	08-03-2020 04:04 pm	1.00	50 mL	50 mL	X080312.D	Liquid	Y	NA
13	BLANK	SAMP	08-03-2020 04:28 pm	1.00	50 mL	50 mL	X080313.D	Liquid	Y	NA
14	ICV	CCV	08-03-2020 04:51 pm	1.00	50 mL	50 mL	X080314.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
15	BLANK	SAMP	08-03-2020 05:16 pm	1.00	50 mL	50 mL	X080315.D	Liquid	Y	NA
16	VLCSW-200803	LCS	08-03-2020 05:39 pm	1.00	50 mL	50 mL	X080316.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
17	BLANK	SAMP	08-03-2020 06:04 pm	1.00	50 mL	50 mL	X080317.D	Liquid	Y	NA
18	BLANK	SAMP	08-03-2020 06:28 pm	1.00	50 mL	50 mL	X080318.D	Liquid	Y	NA
19	VBLKW-200803	MBLK	08-03-2020 06:52 pm	1.00	50 mL	50 mL	X080319.D	Liquid	Y	NA
20	HS20070575-13	SAMP	08-03-2020 07:16 pm	1.00	50 mL	50 mL	X080320.D	Liquid	Y	NA
21	HS20070575-14	SAMP	08-03-2020 07:40 pm	1.00	50 mL	50 mL	X080321.D	Liquid	Y	NA
22	HS20070575-15	SAMP	08-03-2020 08:03 pm	1.00	50 mL	50 mL	X080322.D	Liquid	Y	NA
23	HS20070575-16	SAMP	08-03-2020 08:27 pm	1.00	50 mL	50 mL	X080323.D	Liquid	Y	NA
24	HS20070984-02	SAMP	08-03-2020 08:51 pm	1.00	50 mL	50 mL	X080324.D	Liquid	Y	<2
25	HS20070984-01	SAMP	08-03-2020 09:15 pm	1.00	50 mL	50 mL	X080325.D	Liquid	Y	<2
26	HS20070984-01MS	MS	08-03-2020 09:39 pm	1.00	50 mL	50 mL	X080326.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	HS20070984-01MSD	MSD	08-03-2020 10:04 pm	1.00	50 mL	50 mL	X080327.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
28	CCV-END	CCV	08-03-2020 10:27 pm	1.00	50 mL	50 mL	X080328.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-38-06
IS ID	31106-38-06
CAL STD ID	31106-41-01/02
BFB ID	31106-38-06
pH Paper	634-64-10

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	49.92	100	80-120
trans-1,3-Dichloroprope	50.00	48.62	97	80-120
1,3-Dichlorobenzene	50.00	47.73	95	80-120
2,2-Dichloropropane	50.00	50.96	102	80-120
1,1-Dichloropropene	50.00	48.93	98	80-120
Dibromomethane	50.00	48.38	97	80-120
1,2-Dibromoethane	50.00	48.72	97	80-120
trans-1,2-Dichloroethen	50.00	48.97	98	80-120
1,1,1,2-Tetrachloroetha	50.00	47.75	96	80-120
1,1,1-Trichloroethane	50.00	48.17	96	80-120
1,1,2,2-Tetrachloroetha	50.00	48.28	96	80-120
1,1,2-Trichloroethane	50.00	47.70	95	80-120
1,1-Dichloroethane	50.00	50.19	100	80-120
1,1-Dichloroethene	50.00	51.26	102	80-120
Trichloroethene	50.00	50.56	101	80-120
1,2,3-Trichlorobenzene	50.00	50.30	101	80-120
Trichlorofluoromethane	50.00	49.79	100	80-120
1,2,4-Trichlorobenzene	50.00	50.13	100	80-120
1,2,4-Trimethylbenzene	50.00	48.17	96	80-120
Tetrachloroethene	50.00	47.53	95	80-120
1,2-Dichlorobenzene	50.00	47.04	94	80-120
1,2-Dichloroethane	50.00	48.99	98	80-120
1,2-Dichloropropane	50.00	50.31	101	80-120
1,3,5-Trimethylbenzene	50.00	48.06	96	80-120
1,3-Dichloropropane	50.00	48.77	98	80-120
1,4-Dichlorobenzene	50.00	48.32	97	80-120
Toluene	50.00	48.26	96	80-120
2-Butanone	100.00	104.88	105	80-120

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

* Values outside of QC limits

COMMENTS: _____

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FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	48.31	97	80-120
2-Hexanone	100.00	95.30	95	80-120
4-Chlorotoluene	50.00	48.17	96	80-120
tert-Butylbenzene	50.00	47.34	95	80-120
4-Methyl-2-Pentanone	100.00	93.57	94	80-120
Acetone	100.00	102.27	102	80-120
Benzene	50.00	49.44	99	80-120
Bromobenzene	50.00	47.40	95	80-120
Bromochloromethane	50.00	47.01	94	80-120
Bromodichloromethane	50.00	48.72	97	80-120
Bromoform	50.00	48.32	97	80-120
Bromomethane	50.00	53.47	107	80-120
Carbon Disulfide	100.00	101.43	101	80-120
Carbon Tetrachloride	50.00	47.96	96	80-120
Chlorobenzene	50.00	48.92	98	80-120
Chloroethane	50.00	51.05	102	80-120
Chloroform	50.00	47.94	96	80-120
Chloromethane	50.00	49.31	99	80-120
cis-1,2-Dichloroethene	50.00	48.89	98	80-120
Dibromochloromethane	50.00	47.41	95	80-120
Dichlorodifluoromethane	50.00	50.62	101	80-120
Ethylbenzene	50.00	48.65	97	80-120
Hexachlorobutadiene	50.00	48.15	96	80-120
Isopropylbenzene	50.00	48.56	97	80-120
m,p-Xylenes	100.00	97.74	98	80-120
Methylene Chloride	50.00	49.00	98	80-120
n-Butylbenzene	50.00	49.13	98	80-120
n-Propylbenzene	50.00	48.15	96	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	53.39	107	80-120
o-Xylene	50.00	48.76	98	80-120
sec-Butylbenzene	50.00	47.89	96	80-120
Styrene	50.00	49.51	99	80-120
Vinyl Chloride	50.00	50.76	102	80-120
1,2,3-Trichloropropane	50.00	47.16	94	80-120
p-Isopropyltoluene	50.00	48.19	96	80-120
1,2-Dibromo-3-Chloropro	50.00	47.23	94	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Lab File ID: X080301 BFB Injection Date: 08/03/20

Instrument ID: VOA6 BFB Injection Time: 1116

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.4
75	30.0 - 60.0% of mass 95	50.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	67.3
175	5.0 - 9.0% of mass 174	5.2 (7.8)1
176	95.0 - 101.0% of mass 174	64.3 (95.6)1
177	5.0 - 9.0% of mass 176	4.7 (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	VSTD000.25	VSTD000.25	X080302	08/03/20	1140
02	VSTD000.5	VSTD000.5	X080303	08/03/20	1204
03	VSTD001	VSTD001	X080304	08/03/20	1252
04	VSTD002	VSTD002	X080305	08/03/20	1316
05	VSTD005	VSTD005	X080306	08/03/20	1340
06	VSTD020	VSTD020	X080307	08/03/20	1404
07	VSTD050	VSTD050	X080308	08/03/20	1428
08	VSTD100	VSTD100	X080309	08/03/20	1452
09	VSTD150	VSTD150	X080310	08/03/20	1516
10	VSTD200	VSTD200	X080311	08/03/20	1540
11	ICV	ICV	X080314	08/03/20	1651
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.618	0.462	0.504	0.521	0.500
trans-1,3-Dichloropropene		0.569	0.433	0.473	0.486	0.461
1,3-Dichlorobenzene		1.974	1.344	1.701	1.505	1.492
2,2-Dichloropropane		0.884	0.578	0.720	0.734	0.705
1,1-Dichloropropene		0.496	0.398	0.426	0.372	0.402
Dibromomethane		0.256	0.205	0.209	0.218	0.208
1,2-Dibromoethane		0.419	0.349	0.380	0.366	0.356
trans-1,2-Dichloroethene		0.547	0.446	0.452	0.452	0.455
1,1,1,2-Tetrachloroethane		0.480	0.340	0.394	0.373	0.361
1,1,1-Trichloroethane		0.921	0.718	0.732	0.745	0.744
1,1,2,2-Tetrachloroethane		3887	5190	17450	30714	110449
1,1,2-Trichloroethane		0.347	0.256	0.311	0.288	0.272
1,1-Dichloroethane		1.097	0.797	0.930	1.000	0.970
1,1-Dichloroethene		0.394	0.380	0.377	0.362	0.406
Trichloroethene		0.395	0.297	0.346	0.339	0.352
1,2,3-Trichlorobenzene		0.182	0.144	0.165	0.146	0.146
Trichlorofluoromethane		0.868	0.679	0.666	0.642	0.726
1,2,4-Trichlorobenzene		1350	1766	5020	11491	44232
1,2,4-Trimethylbenzene		3.392	2.228	2.748	2.560	2.560
Tetrachloroethene		0.427	0.296	0.290	0.297	0.311
1,2-Dichlorobenzene		1.790	1.277	1.567	1.398	1.337
1,2-Dichloroethane		0.539	0.434	0.491	0.490	0.473
1,2-Dichloropropane		0.391	0.323	0.357	0.377	0.365
1,3,5-Trimethylbenzene		3.105	2.294	2.704	2.466	2.554
1,3-Dichloropropane		0.666	0.506	0.557	0.580	0.549
1,4-Dichlorobenzene		1.897	1.388	1.694	1.489	1.472
Toluene		1.857	1.349	1.452	1.443	1.418
2-Butanone		0.257	0.195	0.230	0.238	0.240
2-Chlorotoluene		2.466	1.986	2.291	2.161	2.080
2-Hexanone		0.338	0.248	0.398	0.323	0.295
4-Chlorotoluene		3.038	2.301	2.587	2.471	2.409
tert-Butylbenzene		2.850	1.958	2.274	2.043	2.244
4-Methyl-2-Pentanone		0.544	0.403	0.549	0.467	0.426
Acetone		6244	5964	9756	22417	71506
Benzene		1.472	1.124	1.176	1.206	1.207
Bromobenzene		1.240	0.860	1.042	0.964	0.923
Bromochloromethane		0.351	0.320	0.325	0.290	0.282
Bromodichloromethane		0.576	0.402	0.436	0.428	0.426
Bromoform		0.354	0.228	0.306	0.267	0.255
Bromomethane		2498	4659	9294	19557	69521
Carbon Disulfide		1.479	1.134	1.100	1.117	1.204
Carbon Tetrachloride		0.528	0.430	0.420	0.411	0.425
Chlorobenzene		1.247	0.874	0.972	0.966	0.933
Chloroethane		0.430	0.304	0.328	0.327	0.355

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.068	0.851	0.891	0.887	0.861
Chloromethane		0.888	0.598	0.694	0.698	0.666
cis-1,2-Dichloroethene		0.641	0.522	0.524	0.547	0.541
Dibromochloromethane		0.509	0.342	0.434	0.394	0.374
Dichlorodifluoromethane		0.532	0.464	0.451	0.391	0.476
Ethylbenzene		0.637	0.480	0.472	0.483	0.491
Hexachlorobutadiene		0.235	0.256	0.314	0.247	0.306
Isopropylbenzene		1.798	1.398	1.414	1.374	1.464
m,p-Xylenes		0.741	0.568	0.590	0.595	0.593
Methylene Chloride		13006	14851	20318	36047	113086
n-Butylbenzene		2.783	1.821	2.137	1.869	2.205
n-Propylbenzene		4.521	3.069	3.484	3.267	3.554
Naphthalene		1670	3475	6258	16632	55065
o-Xylene		0.741	0.556	0.581	0.583	0.578
sec-Butylbenzene		3.747	2.660	2.985	2.618	3.017
Styrene		1.248	0.896	1.106	1.036	1.008
Vinyl Chloride		0.723	0.546	0.596	0.557	0.633
1,2,3-Trichloropropane		0.874	0.599	0.917	0.732	0.691
p-Isopropyltoluene		3.431	2.390	2.780	2.421	2.730
1,2-Dibromo-3-Chloropropane		394	461	1468	2687	9119
1,2-Dichloroethane-d4		0.669	0.575	0.501	0.605	0.564
Dibromofluoromethane		0.528	0.509	0.451	0.514	0.476
Toluene-d8		1.258	1.357	1.124	1.218	1.201
4-Bromofluorobenzene		0.521	0.535	0.447	0.454	0.451

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.514	0.535	0.544	0.539
trans-1,3-Dichloropropene	0.458	0.478	0.490	0.492
1,3-Dichlorobenzene	1.504	1.545	1.533	1.546
2,2-Dichloropropane	0.684	0.700	0.707	0.706
1,1-Dichloropropene	0.404	0.423	0.427	0.433
Dibromomethane	0.210	0.214	0.219	0.218
1,2-Dibromoethane	0.353	0.355	0.359	0.360
trans-1,2-Dichloroethene	0.456	0.463	0.472	0.475
1,1,1,2-Tetrachloroethane	0.365	0.371	0.370	0.370
1,1,1-Trichloroethane	0.735	0.763	0.781	0.792
1,1,2,2-Tetrachloroethane	259509	505068	753290	990670
1,1,2-Trichloroethane	0.268	0.271	0.272	0.274
1,1-Dichloroethane	0.970	0.993	1.008	1.023
1,1-Dichloroethene	0.398	0.410	0.417	0.422
Trichloroethene	0.353	0.369	0.366	0.371
1,2,3-Trichlorobenzene	0.145	0.122	0.160	0.144
Trichlorofluoromethane	0.737	0.755	0.769	0.784
1,2,4-Trichlorobenzene	104906	167486	308625	360898
1,2,4-Trimethylbenzene	2.529	2.694	2.637	2.691
Tetrachloroethene	0.300	0.313	0.309	0.317
1,2-Dichlorobenzene	1.334	1.330	1.343	1.352
1,2-Dichloroethane	0.471	0.484	0.487	0.487
1,2-Dichloropropane	0.363	0.375	0.376	0.377
1,3,5-Trimethylbenzene	2.500	2.644	2.594	2.653
1,3-Dichloropropane	0.546	0.548	0.552	0.550
1,4-Dichlorobenzene	1.475	1.522	1.516	1.533
Toluene	1.396	1.415	1.400	1.412
2-Butanone	0.250	0.260	0.268	0.268
2-Chlorotoluene	2.065	2.146	2.149	2.179
2-Hexanone	0.295	0.302	0.311	0.315
4-Chlorotoluene	2.381	2.518	2.483	2.523
tert-Butylbenzene	2.160	2.278	2.260	2.322
4-Methyl-2-Pentanone	0.428	0.442	0.452	0.454
Acetone	170545	340970	481556	618700
Benzene	1.206	1.251	1.258	1.266
Bromobenzene	0.915	0.953	0.945	0.960
Bromochloromethane	0.281	0.290	0.290	0.283
Bromodichloromethane	0.430	0.446	0.453	0.453
Bromoform	0.264	0.270	0.276	0.278
Bromomethane	165840	329463	475898	632580
Carbon Disulfide	1.211	1.252	1.274	1.300
Carbon Tetrachloride	0.431	0.450	0.456	0.466
Chlorobenzene	0.939	0.964	0.959	0.965
Chloroethane	0.352	0.360	0.367	0.367

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.849	0.867	0.878	0.887
Chloromethane	0.680	0.679	0.695	0.720
cis-1,2-Dichloroethene	0.529	0.542	0.551	0.556
Dibromochloromethane	0.381	0.388	0.389	0.394
Dichlorodifluoromethane	0.490	0.516	0.534	0.549
Ethylbenzene	0.489	0.499	0.498	0.504
Hexachlorobutadiene	0.290	0.222	0.292	0.253
Isopropylbenzene	1.441	1.495	1.474	1.509
m,p-Xylenes	0.588	0.608	0.602	0.610
Methylene Chloride	256910	487953	693942	915440
n-Butylbenzene	2.171	2.303	2.281	2.331
n-Propylbenzene	3.462	3.672	3.652	3.736
Naphthalene	137510	244768	435994	531999
o-Xylene	0.582	0.593	0.590	0.594
sec-Butylbenzene	2.919	3.112	3.100	3.180
Styrene	1.015	1.015	1.027	1.022
Vinyl Chloride	0.647	0.674	0.698	0.718
1,2,3-Trichloropropane	0.684	0.691	0.706	0.692
p-Isopropyltoluene	2.652	2.848	2.797	2.868
1,2-Dibromo-3-Chloropropane	22898	44175	68839	87710
1,2-Dichloroethane-d4	0.554	0.583	0.594	0.593
Dibromofluoromethane	0.468	0.486	0.491	0.494
Toluene-d8	1.182	1.197	1.182	1.196
4-Bromofluorobenzene	0.446	0.454	0.449	0.453

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.52631108		8.055	15.000
trans-1,3-Dichloropropene	AVRG		0.48238639		7.750	15.000
1,3-Dichlorobenzene	AVRG		1.57158280		11.203	15.000
2,2-Dichloropropane	AVRG		0.71314301		10.968	15.000
1,1-Dichloropropene	AVRG		0.42016302		8.160	15.000
Dibromomethane	AVRG		0.21759689		7.106	15.000
1,2-Dibromoethane	AVRG		0.36652489		5.926	15.000
trans-1,2-Dichloroethene	AVRG		0.46872891		6.594	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.38060507		10.480	15.000
1,1,1-Trichloroethane	AVRG		0.77016692		7.945	15.000
1,1,2,2-Tetrachloroethane	LINR	7.722e-003	1.23187232		0.9994783	0.9900000
1,1,2-Trichloroethane	AVRG		0.28450466		9.857	15.000
1,1-Dichloroethane	AVRG		0.97667293		8.336	15.000
1,1-Dichloroethene	AVRG		0.39616599		5.052	15.000
Trichloroethene	AVRG		0.35435187		7.661	15.000
1,2,3-Trichlorobenzene	AVRG		0.15046244		11.203	15.000
Trichlorofluoromethane	AVRG		0.73636136		9.380	15.000
1,2,4-Trichlorobenzene	2ORDR	-1.1e-002	3.58766703	-0.2952283	0.9906334	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.67111779		11.604	15.000
Tetrachloroethene	AVRG		0.31784777		13.220	15.000
1,2-Dichlorobenzene	AVRG		1.41425088		11.530	15.000
1,2-Dichloroethane	AVRG		0.48410523		5.599	15.000
1,2-Dichloropropane	AVRG		0.36695807		5.225	15.000
1,3,5-Trimethylbenzene	AVRG		2.61272360		8.480	15.000
1,3-Dichloropropane	AVRG		0.56175693		7.766	15.000
1,4-Dichlorobenzene	AVRG		1.55419344		9.792	15.000
Toluene	AVRG		1.46017119		10.382	15.000
2-Butanone	AVRG		0.24511086		9.425	15.000
2-Chlorotoluene	AVRG		2.16926792		6.442	15.000
2-Hexanone	AVRG		0.31389491		12.771	15.000
4-Chlorotoluene	AVRG		2.52365549		8.359	15.000
tert-Butylbenzene	AVRG		2.26526404		11.041	15.000
4-Methyl-2-Pentanone	AVRG		0.46275648		11.014	15.000
Acetone	LINR	-2.14e-002	5.79885157		0.9996587	0.9900000
Benzene	AVRG		1.24051491		7.846	15.000
Bromobenzene	AVRG		0.97809166		11.206	15.000
Bromochloromethane	AVRG		0.30138449		8.187	15.000
Bromodichloromethane	AVRG		0.45010731		11.069	15.000
Bromoform	AVRG		0.27741236		12.753	15.000
Bromomethane	LINR	1.309e-002	2.86760046		0.9995243	0.9900000
Carbon Disulfide	AVRG		1.23004403		9.502	15.000
Carbon Tetrachloride	AVRG		0.44659821		7.968	15.000
Chlorobenzene	AVRG		0.97993823		10.682	15.000
Chloroethane	AVRG		0.35440033		9.973	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.89329334		7.561	15.000
Chloromethane	AVRG		0.70202961		11.036	15.000
cis-1,2-Dichloroethene	AVRG		0.55037038		6.534	15.000
Dibromochloromethane	AVRG		0.40050806		11.789	15.000
Dichlorodifluoromethane	AVRG		0.48936200		10.210	15.000
Ethylbenzene	AVRG		0.50598922		9.941	15.000
Hexachlorobutadiene	AVRG		0.26843621		12.210	15.000
Isopropylbenzene	AVRG		1.48528003		8.449	15.000
m,p-Xylenes	AVRG		0.61061949		8.238	15.000
Methylene Chloride	LINR	-2.76e-002	1.99382468		0.9998680	0.9900000
n-Butylbenzene	AVRG		2.21122856		12.709	15.000
n-Propylbenzene	AVRG		3.60198062		11.195	15.000
Naphthalene	2ORDR	-2.54e-003	2.59173673	-0.2152357	0.9947090	0.9900000
o-Xylene	AVRG		0.59981322		9.042	15.000
sec-Butylbenzene	AVRG		3.03754823		10.849	15.000
Styrene	AVRG		1.04152018		9.045	15.000
Vinyl Chloride	AVRG		0.64360842		10.284	15.000
1,2,3-Trichloropropane	AVRG		0.73186776		13.664	15.000
p-Isopropyltoluene	AVRG		2.76878531		10.947	15.000
1,2-Dibromo-3-Chloropropane	LINR	1.588e-002	13.7625896		0.9986959	0.9900000
1,2-Dichloroethane-d4	AVRG		0.58201048		7.676	15.000
Dibromofluoromethane	AVRG		0.49101450		4.895	15.000
Toluene-d8	AVRG		1.21277844		5.331	15.000
4-Bromofluorobenzene	AVRG		0.46785309		7.389	15.000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

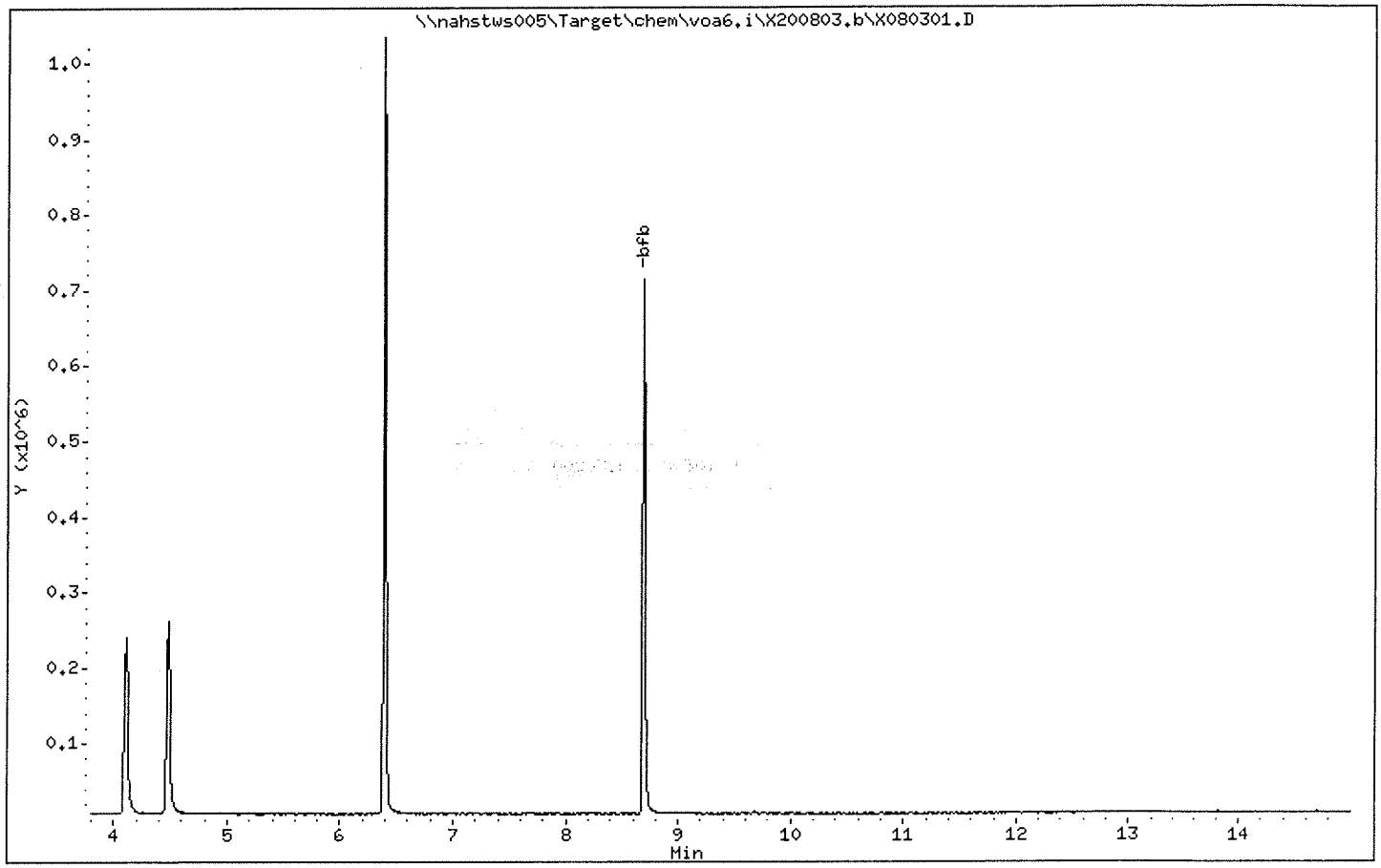
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

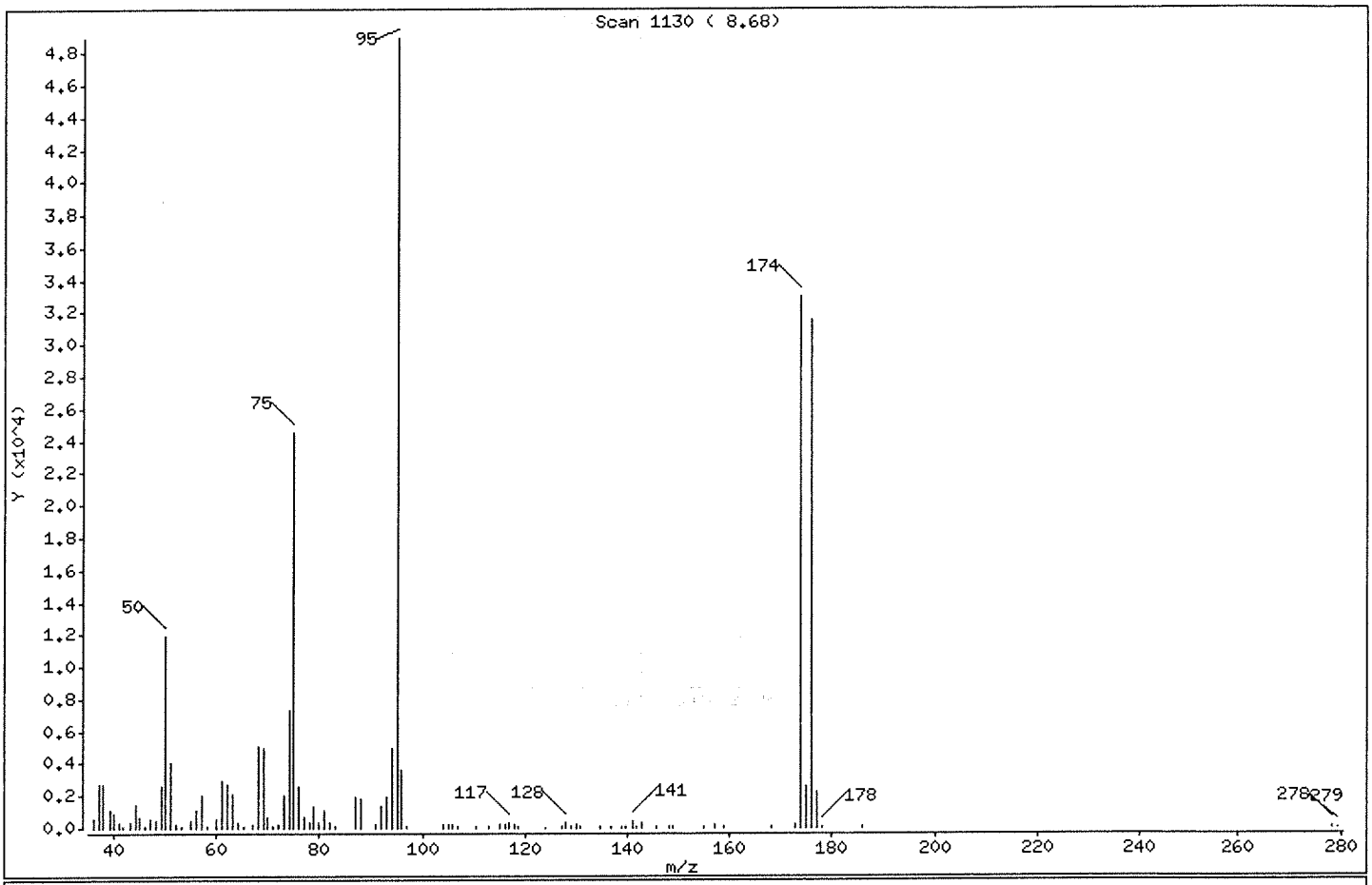
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.40
75	30.00 - 60.00% of mass 95	50.11
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.63)
174	Greater than 50.00% of mass 95	67.28
175	5.00 - 9.00% of mass 174	5.25 (7.80)
176	95.00 - 101.00% of mass 174	64.32 (95.60)
177	5.00 - 9.00% of mass 176	4.66 (7.25)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

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: X080301.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	531	62.00	2722	92.00	1357	136.80	58
37.00	2708	63.00	2090	93.00	1937	139.00	114
38.00	2689	64.10	333	94.00	5003	139.80	109
39.10	1102	65.10	152	95.00	48920	141.00	492
39.90	914	67.00	172	96.00	3597	141.70	68
41.00	390	68.00	5065	97.10	159	142.90	325
41.80	147	69.00	4934	104.10	247	145.60	116
43.10	318	70.00	640	105.00	192	148.00	163
44.10	1442	71.10	132	105.90	238	149.00	64
44.90	624	71.90	198	107.00	73	155.00	128
46.10	63	73.00	2073	110.60	59	156.90	179
47.00	559	74.00	7325	113.00	90	159.00	102
48.00	397	75.00	24512	114.90	227	168.00	114
49.10	2563	76.00	2607	116.00	174	172.90	208
50.00	11935	76.90	632	116.80	351	173.90	32912
51.00	4006	78.00	348	117.80	175	174.90	2566
52.10	210	78.90	1387	118.70	154	175.90	31464
53.00	122	79.90	370	123.90	56	176.90	2280
55.00	461	80.90	1139	127.10	81	178.00	150
56.10	1076	81.90	296	127.90	291	186.00	89
57.00	2018	82.90	133	128.80	113	277.90	149
58.20	143	87.00	1966	129.90	205	279.20	55
60.00	526	87.90	1834	130.90	98		
61.00	2907	91.00	222	134.80	63		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-AUG-2020 11:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	572408	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	867920	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	763638	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	355732	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	1662	0.25000	0.29(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	2175	0.25000	0.32(Ta)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	6945	0.25000	0.37(a)
$	69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	3200	0.25000	0.44(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1428	0.25000	0.24(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	2319	0.25000	0.26(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1974	0.25000	0.72(aM)
	53 1,1,2-Trichloroethane	83	6.854	6.854	(0.894)	1511	0.25000	0.34(aM)
	22 1,1-Dichloroethane	63	2.936	2.936	(0.701)	3028	0.25000	0.27(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1378	0.25000	0.30(a)
	32 1,1-Dichloropropene	75	4.297	4.297	(0.865)	2193	0.25000	0.30(a)
	93 1,2,3-Trichlorobenzene	180	11.768	11.768	(1.217)	168	0.25000	0.15(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1435	0.25000	0.27(aM)
	90 1,2,4-Trichlorobenzene	180	11.374	11.374	(1.176)	428	0.25000	(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	5138	0.25000	0.27(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.686	10.686	(1.105)	50	0.25000	0.89(aM)
	57 1,2-Dibromoethane	107	7.277	7.277	(0.949)	1365	0.25000	0.24(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	2418	0.25000	0.24(a)

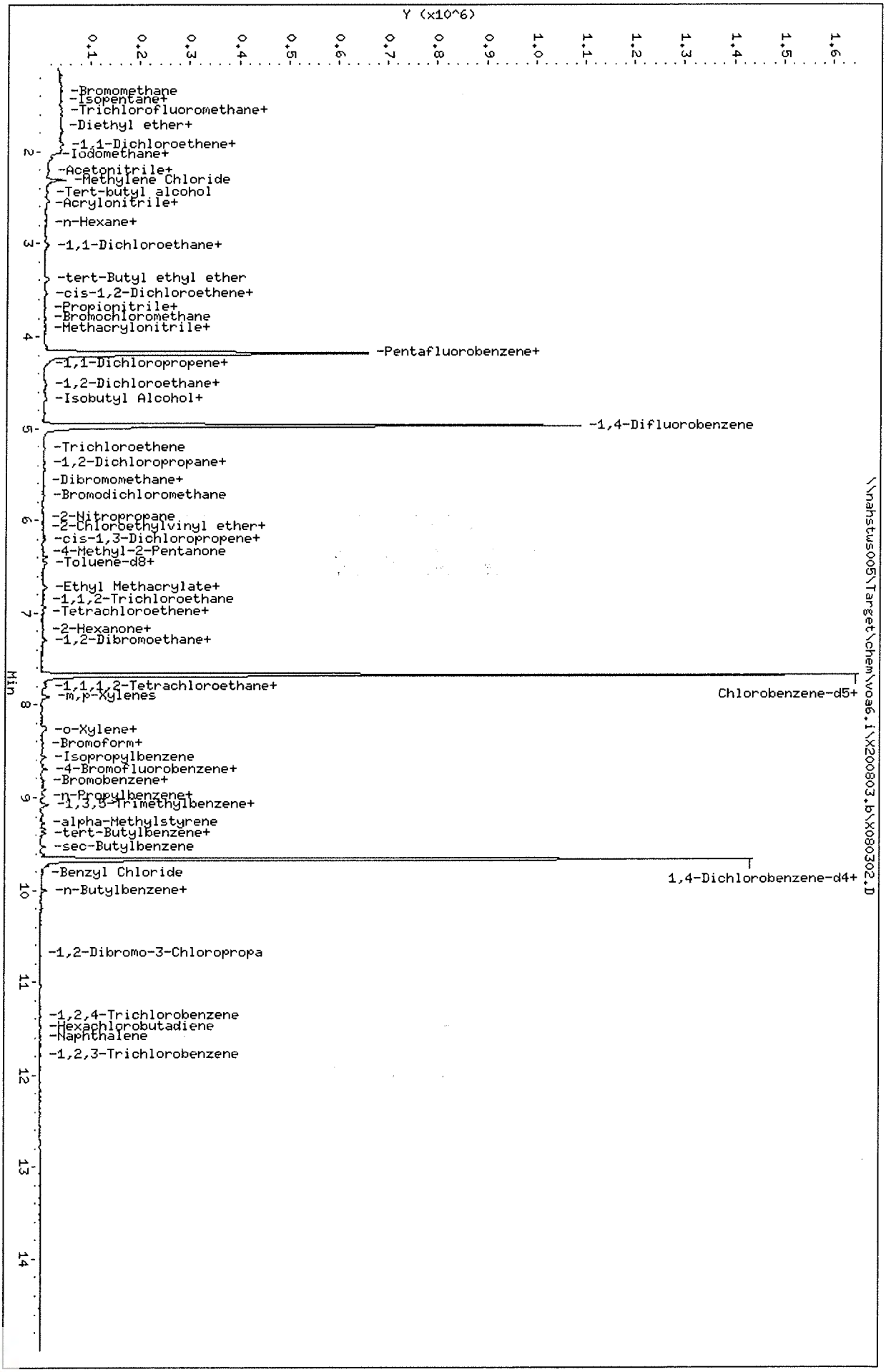
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	2225	0.25000	0.26(a)
42 1,2-Dichloropropane	63	5.450	5.450	(1.097)	1294	0.25000	0.20(aM)
75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	4991	0.25000	0.26(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2610	0.25000	0.23(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	2288	0.25000	0.26(aM)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	3060	0.25000	0.27(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	2227	0.25000	0.27(aM)
24 2-Butanone	43	3.638	3.638	(0.868)	1048	0.50000	0.37(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	4316	0.25000	0.27(a)
52 2-Hexanone	43	7.112	7.112	(0.927)	2498	0.50000	0.52(a)
77 4-Chlorotoluene	91	9.082	9.082	(0.939)	4822	0.25000	0.26(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	5222	0.25000	0.26(a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	3501	0.50000	0.49(a)
10 Acetone	43	1.976	1.976	(0.472)	4869	0.50000	1.39(aM)
37 Benzene	78	4.526	4.526	(0.911)	5575	0.25000	0.25(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	1749	0.25000	0.25(a)
29 Bromochloromethane	128	3.795	3.795	(0.906)	1013	0.25000	0.29(aM)
39 Bromodichloromethane	83	5.737	5.737	(1.154)	2345	0.25000	0.30(aM)
66 Bromoform	173	8.416	8.416	(1.097)	1002	0.25000	0.23(aM)
6 Bromomethane	94	1.346	1.346	(0.321)	1280	0.25000	0.97(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	6971	0.50000	0.49(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	2189	0.25000	0.28(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	4245	0.25000	0.28(a)
7 Chloroethane	64	1.410	1.410	(0.337)	1194	0.25000	0.29(aM)
28 Chloroform	83	3.910	3.910	(0.933)	2183	0.25000	0.21(a)
3 Chloromethane	50	1.081	1.081	(0.258)	2410	0.25000	0.29(a)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	1634	0.25000	0.25(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	2355	0.25000	0.25(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	1646	0.25000	0.26(a)
44 Dibromomethane	93	5.565	5.565	(1.120)	1127	0.25000	0.29(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1555	0.25000	0.27(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	2026	0.25000	0.26(aM)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	351	0.25000	0.18(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	5606	0.25000	0.24(a)
62 m,p-Xylenes	106	7.914	7.914	(1.032)	4680	0.50000	0.50(a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	13192	0.25000	0.91(aM)
87 n-Butylbenzene	91	10.006	10.006	(1.035)	4073	0.25000	0.25(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	6307	0.25000	0.24(a)
92 Naphthalene	128	11.589	11.589	(1.199)	698	0.25000	0.12(aM)
63 o-Xylene	106	8.251	8.251	(1.076)	2471	0.25000	0.26(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	5521	0.25000	0.25(a)
64 Styrene	104	8.272	8.272	(1.078)	3575	0.25000	0.22(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	4130	0.25000	0.25(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1260	0.25000	0.25(a)
50 Toluene	91	6.460	6.460	(0.842)	6876	0.25000	0.30(aM)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1215	0.25000	0.22(aM)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2328	0.25000	0.27(aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	1542	0.25000	0.25(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	1948	0.25000	0.23(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	1889	0.25000	0.25(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page
Report Date: 22-Aug-2020 11:54

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Date : 03-AUG-2020 11:40
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-AUG-2020 12:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 11:40 Cal File: X080302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

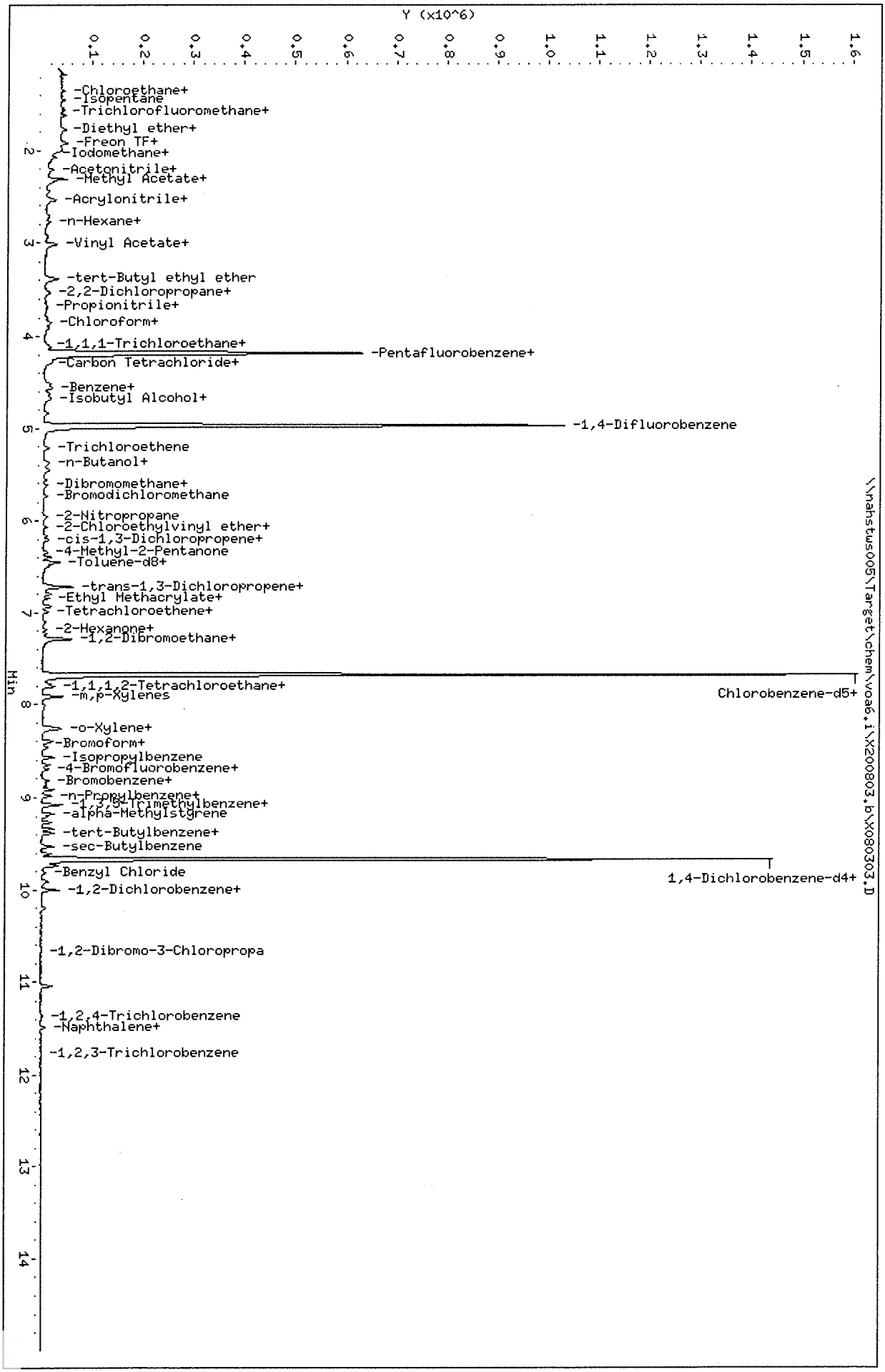
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	544079	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	825062	50.0000	
* 47	Chlorobenzene-d5	117	7.670	7.670	(1.000)	734728	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351808	50.0000	
$ 30	Dibromofluoromethane	113	4.110	4.110	(0.981)	2875	0.50000	0.53(a)
$ 35	1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	3638	0.50000	0.57(aM)
$ 48	Toluene-d8	98	6.395	6.395	(0.834)	9247	0.50000	0.51(a)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3831	0.50000	0.55(a)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3529	0.50000	0.63(a)
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	5010	0.50000	0.59(aM)
68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3887	0.50000	1.06(aM)
53	1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2550	0.50000	0.60(aM)
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	5969	0.50000	0.56(a)
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	2144	0.50000	0.49(aM)
32	1,1-Dichloropropene	75	4.297	4.297	(0.865)	4094	0.50000	0.59(aM)
93	1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	642	0.50000	0.60(aM)
71	1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	3074	0.50000	0.59(aM)
90	1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	1350	0.50000	0.14(aM)
79	1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	11934	0.50000	0.63(aM)
89	1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	394	0.50000	1.56(aM)
57	1,2-Dibromoethane	107	7.269	7.269	(0.948)	3081	0.50000	0.57(a)
88	1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	6299	0.50000	0.63(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	4445	0.50000	0.55(aM)
42	1,2-Dichloropropane	63	5.450	5.450	(1.097)	3223	0.50000	0.53(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	10923	0.50000	0.59(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6943	0.50000	0.62(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	4895	0.50000	0.59(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	6675	0.50000	0.61(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	4808	0.50000	0.61(aM)
24	2-Butanone	43	3.609	3.609	(0.862)	2796	1.00000	1.04(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	8675	0.50000	0.56(aM)
52	2-Hexanone	43	7.105	7.105	(0.926)	4973	1.00000	1.07(aM)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	10688	0.50000	0.60(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	12071	0.50000	0.61(aM)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7990	1.00000	1.17(a)
10	Acetone	43	1.976	1.976	(0.472)	6244	1.00000	2.25(aM)
37	Benzene	78	4.526	4.526	(0.911)	12142	0.50000	0.59(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4364	0.50000	0.63(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	1908	0.50000	0.58(aM)
39	Bromodichloromethane	83	5.736	5.736	(1.154)	4753	0.50000	0.63(aM)
66	Bromoform	173	8.415	8.415	(1.097)	2599	0.50000	0.63(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	2498	0.50000	1.31(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	16094	1.00000	1.20(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4361	0.50000	0.59(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	9164	0.50000	0.63(a)
7	Chloroethane	64	1.403	1.403	(0.335)	2338	0.50000	0.60(a)
28	Chloroform	83	3.917	3.917	(0.935)	5814	0.50000	0.59(a)
3	Chloromethane	50	1.080	1.080	(0.258)	4829	0.50000	0.63(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	3487	0.50000	0.58(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	5096	0.50000	0.58(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3742	0.50000	0.63(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	2117	0.50000	0.58(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2895	0.50000	0.54(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	4683	0.50000	0.62(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	828	0.50000	0.43(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	13211	0.50000	0.60(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	10883	1.00000	1.21(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	13006	0.50000	1.00(aM)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	9792	0.50000	0.62(aM)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	15904	0.50000	0.62(a)
92	Naphthalene	128	11.560	11.560	(1.196)	1670	0.50000	0.48(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5447	0.50000	0.61(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	13181	0.50000	0.61(a)
64	Styrene	104	8.272	8.272	(1.078)	9169	0.50000	0.59(aM)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	10025	0.50000	0.62(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	3139	0.50000	0.67(a)
50	Toluene	91	6.453	6.453	(0.841)	13642	0.50000	0.63(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	2977	0.50000	0.58(aM)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	4694	0.50000	0.58(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3262	0.50000	0.55(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4721	0.50000	0.58(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	3935	0.50000	0.56(a)

QC Flag Legend

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

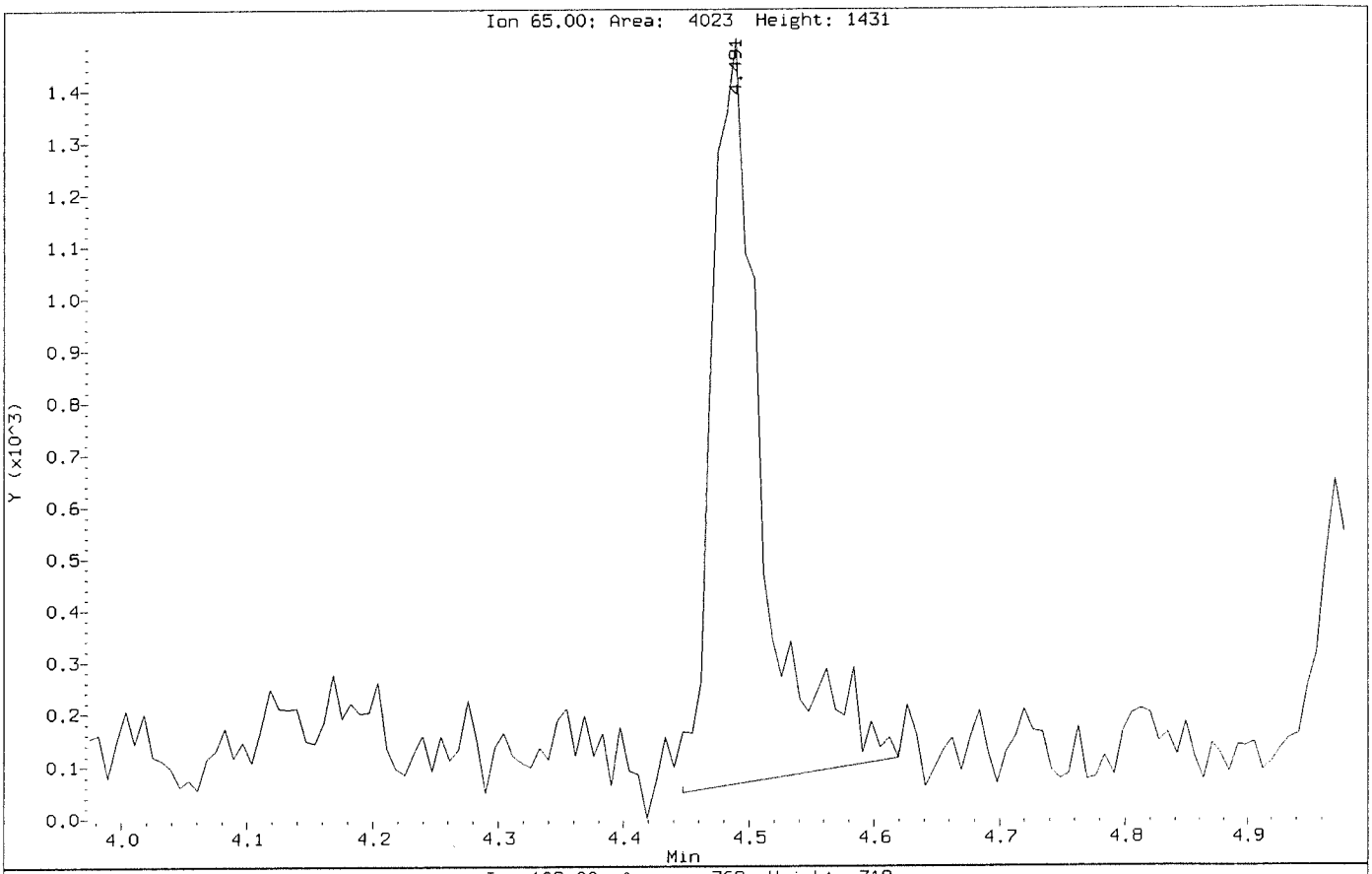


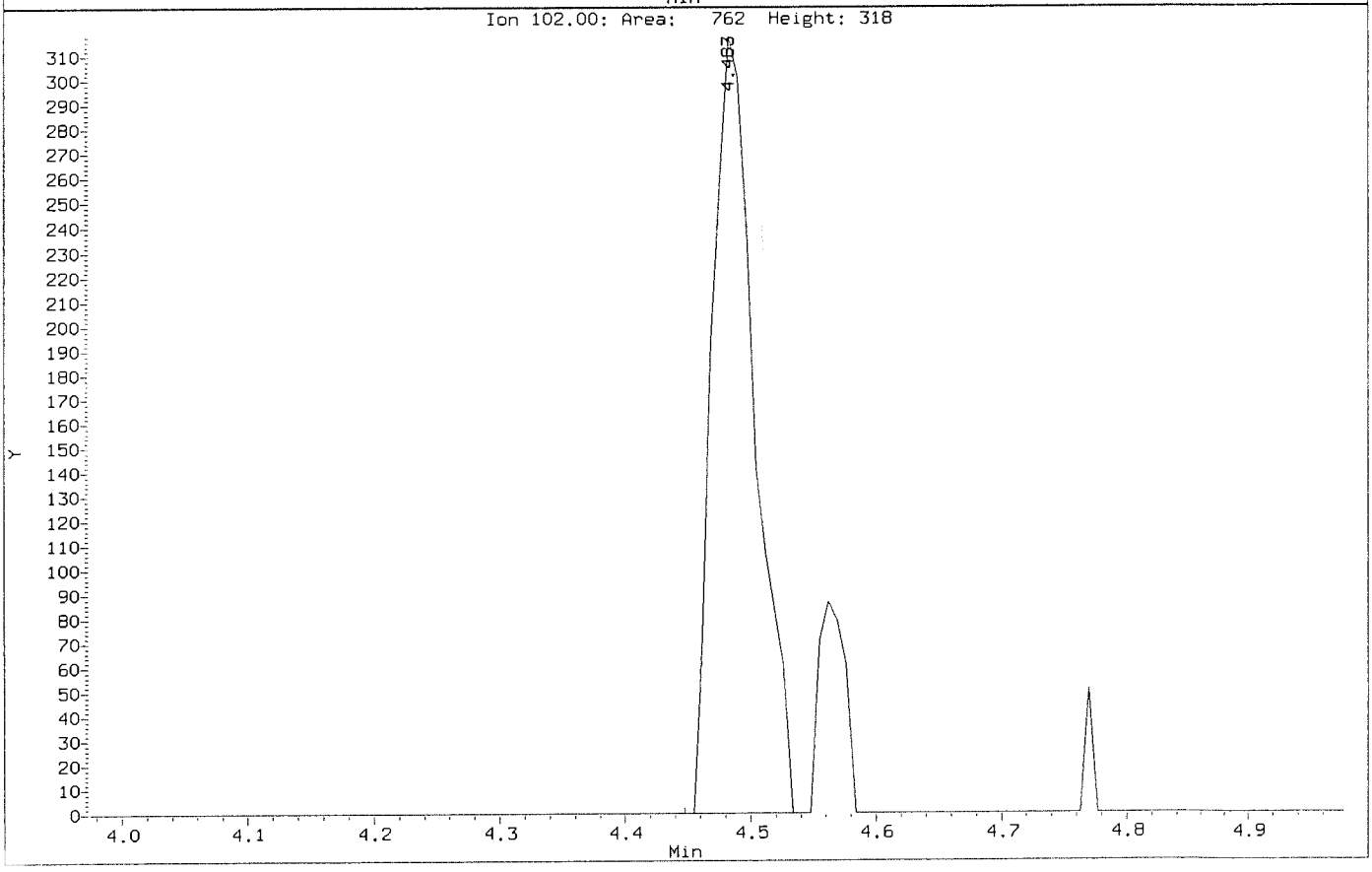
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Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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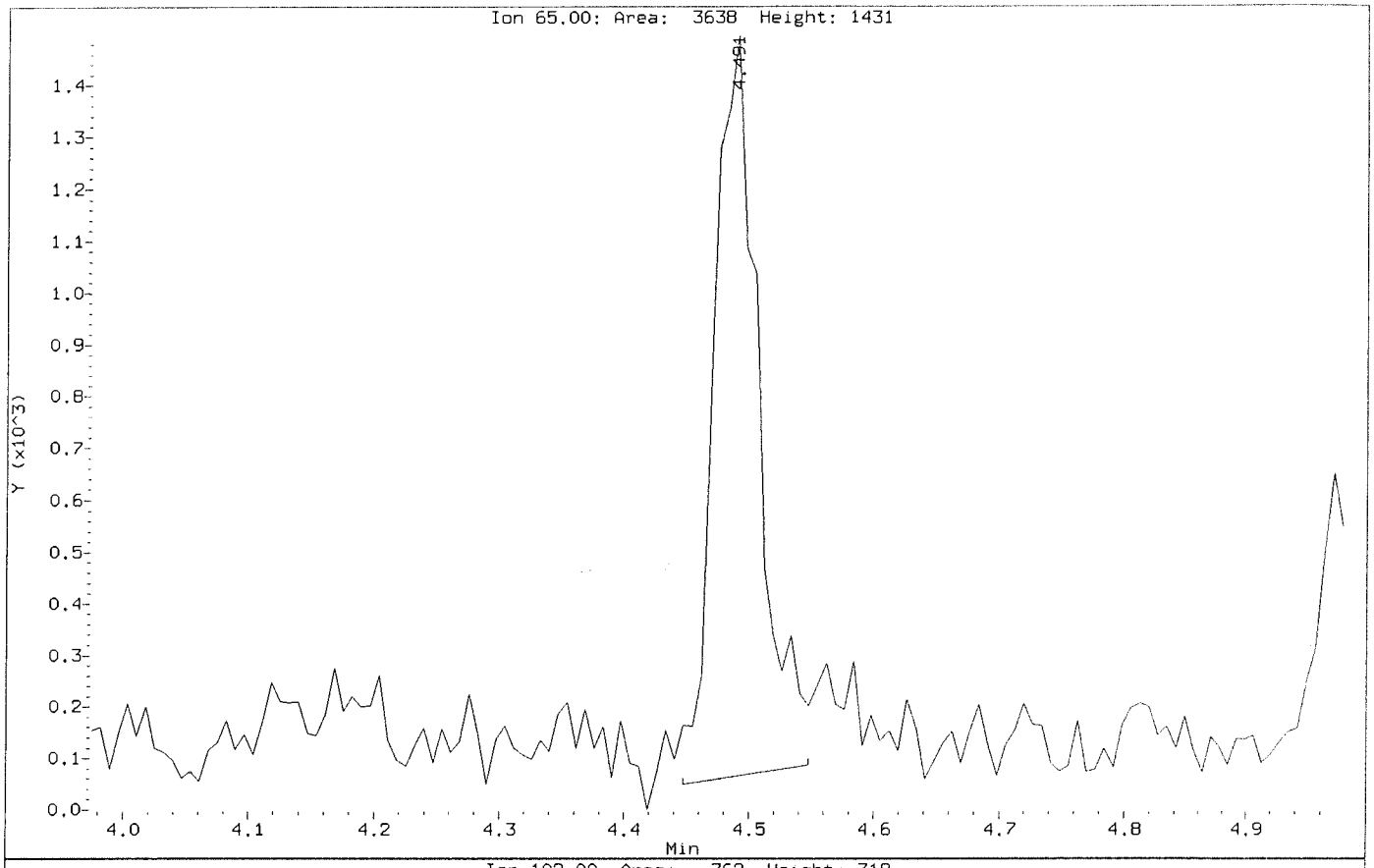
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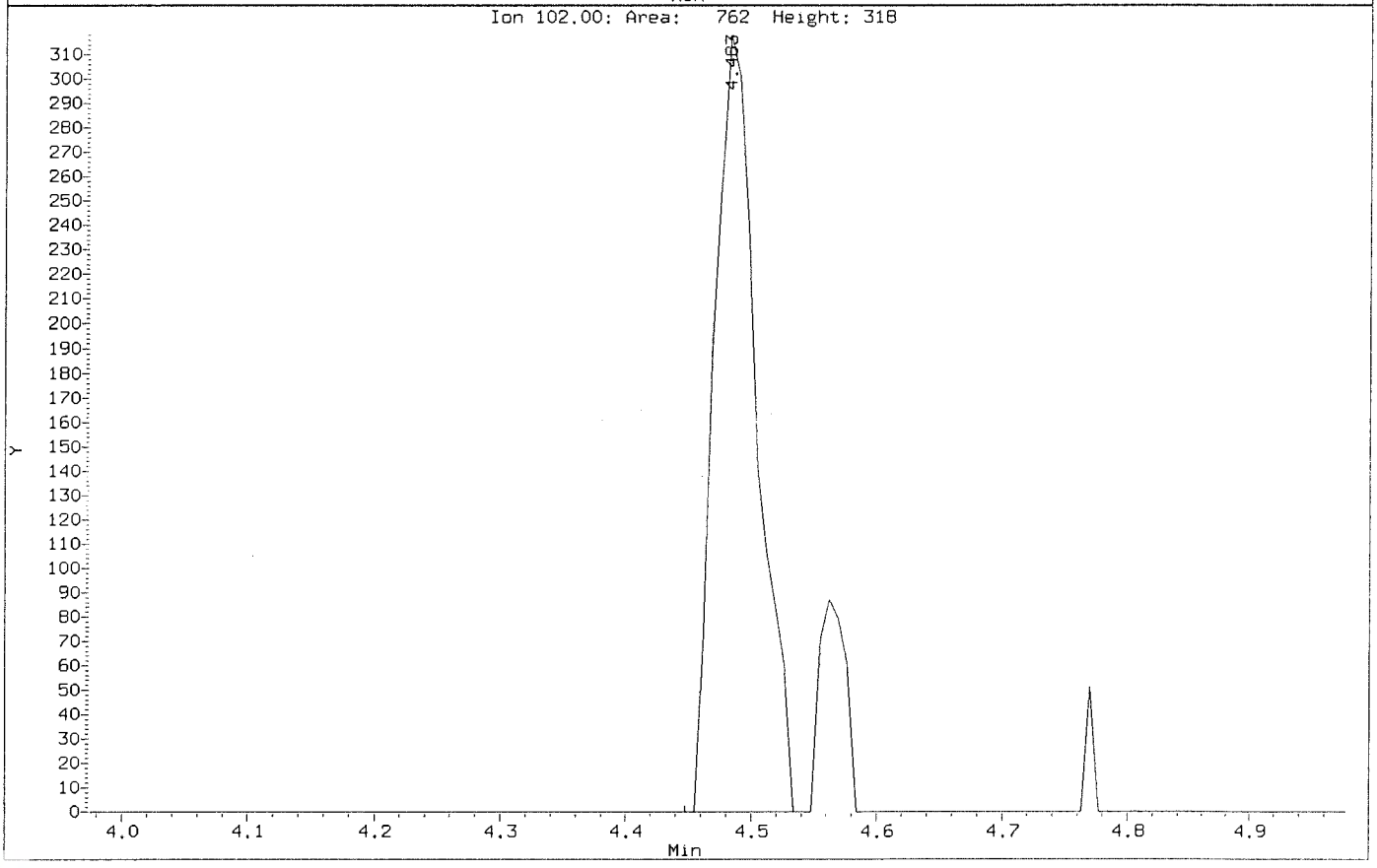




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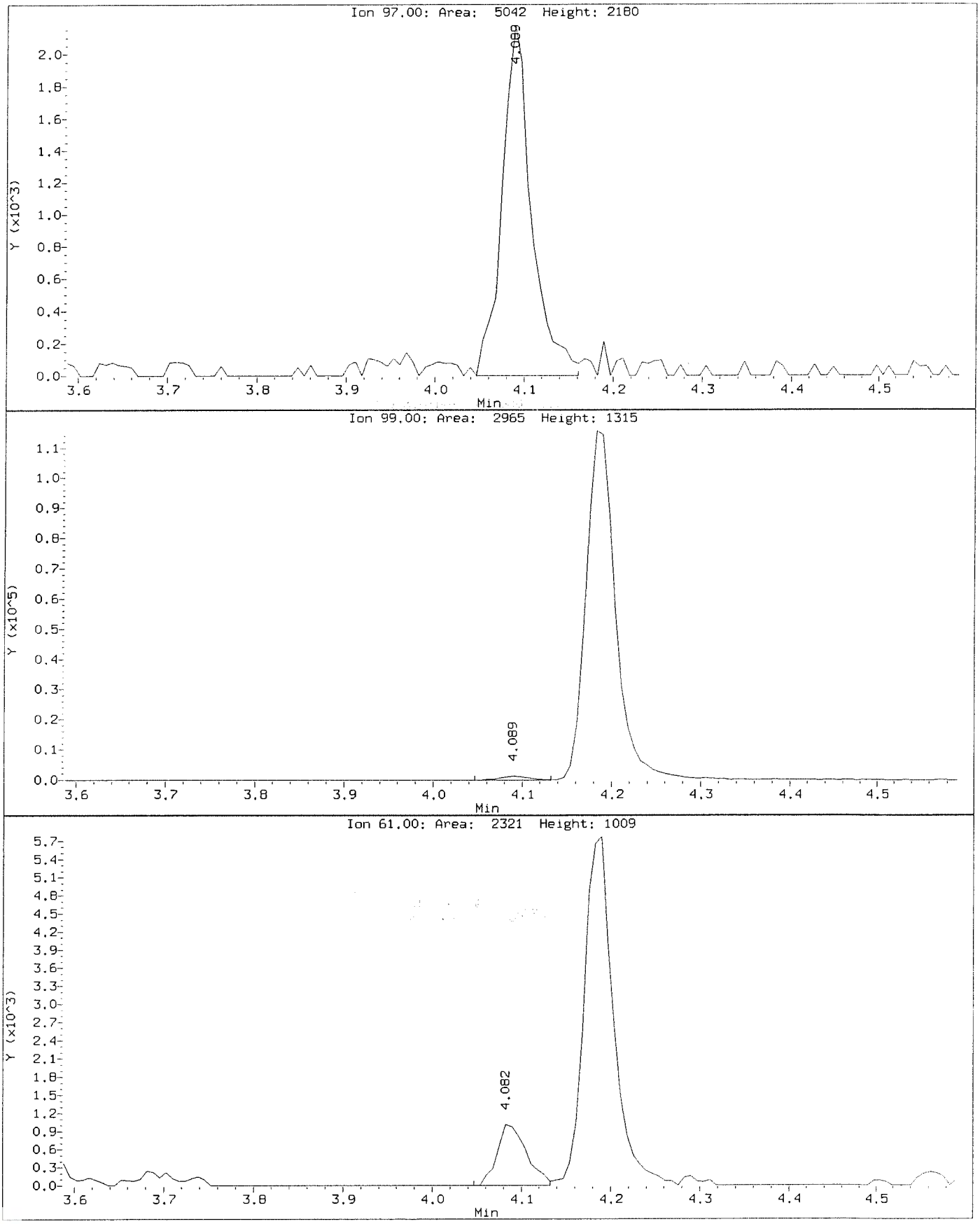
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CAS Number: 17060-07-0





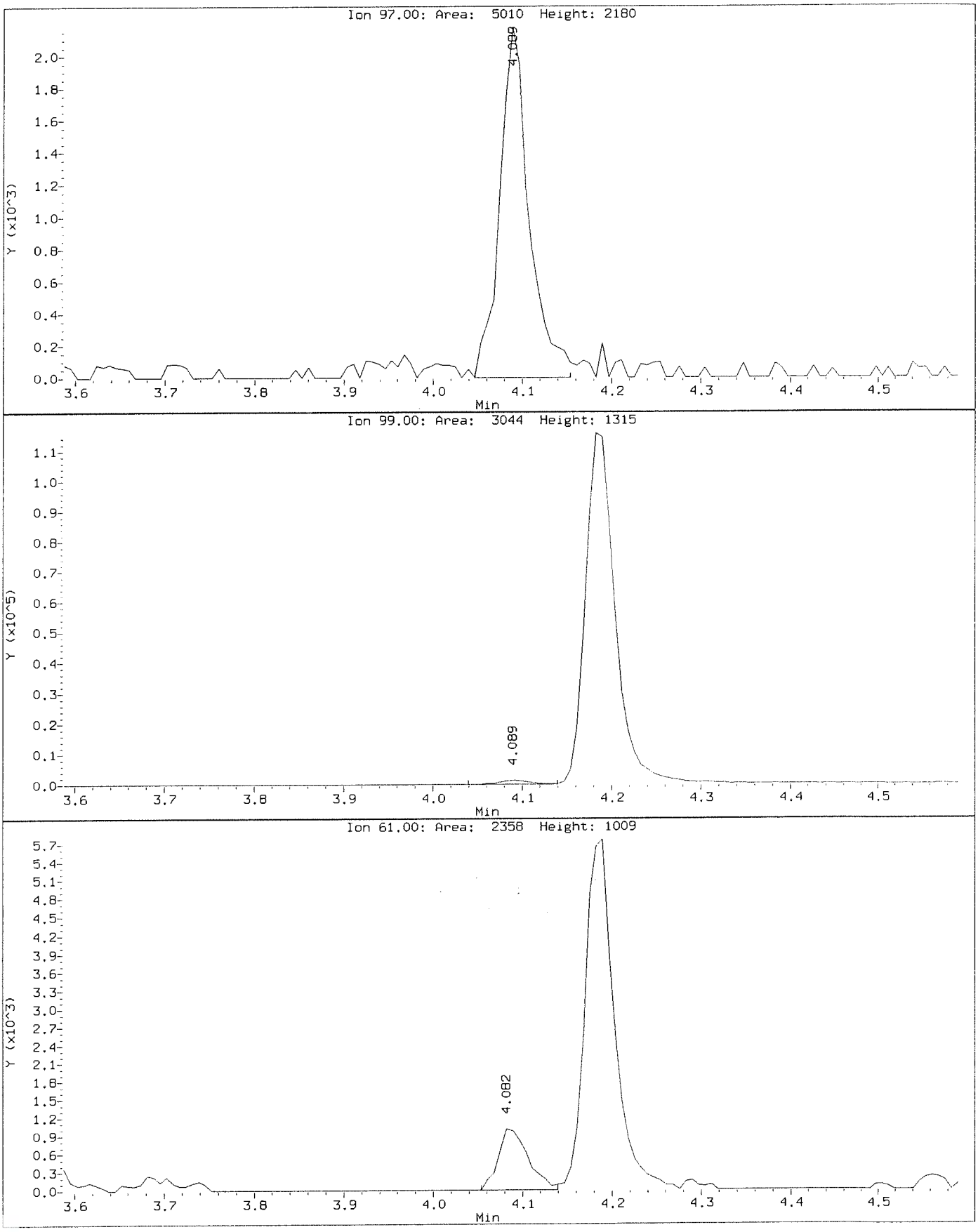
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



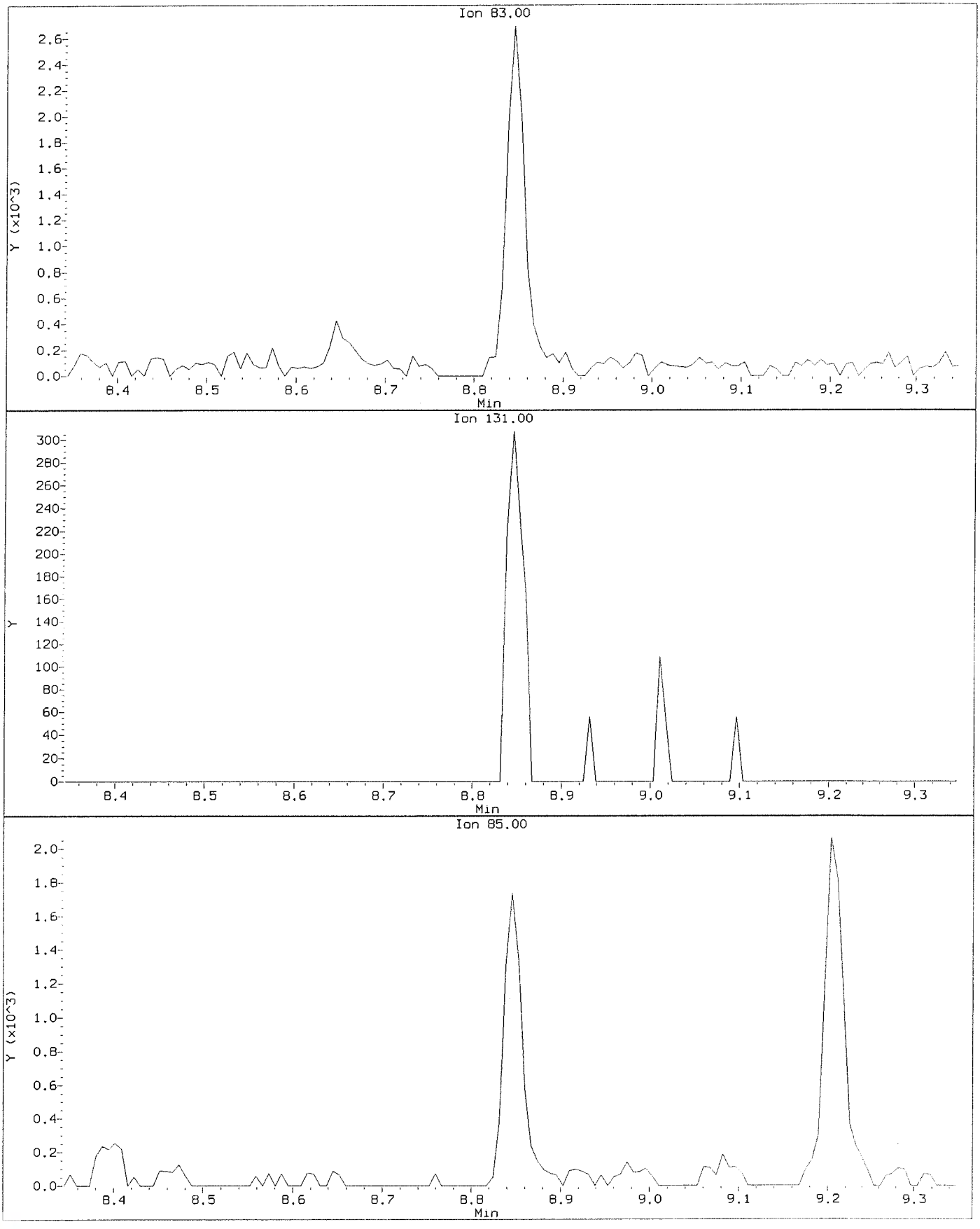
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



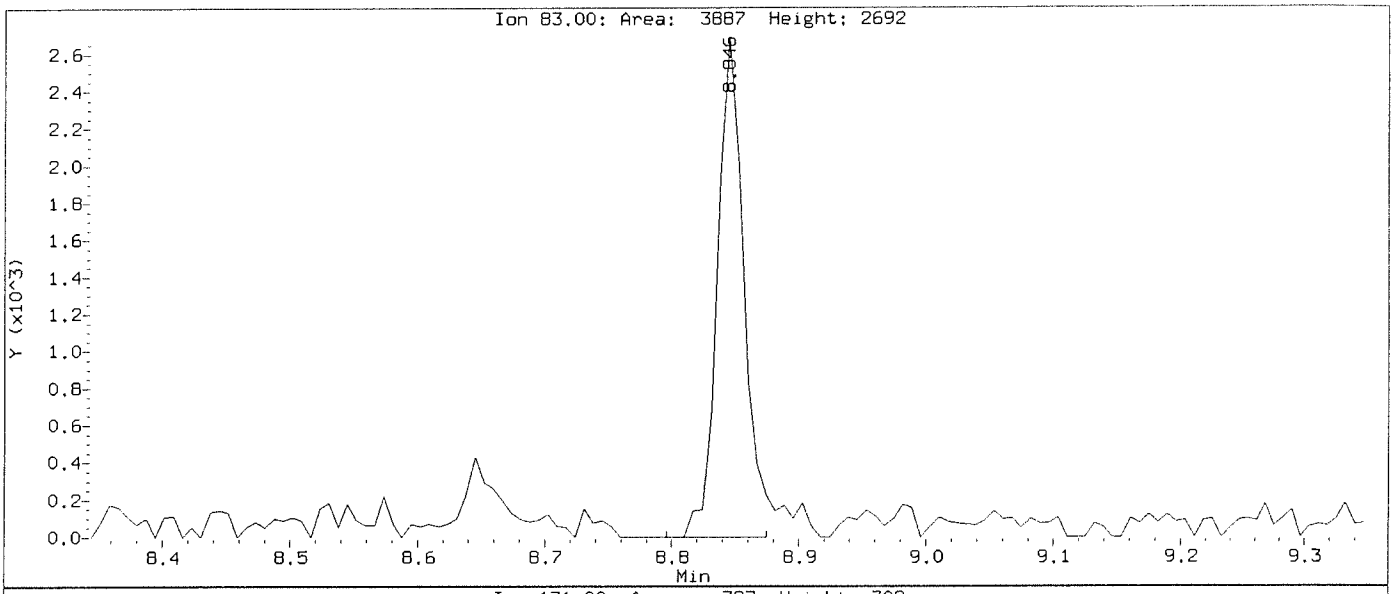
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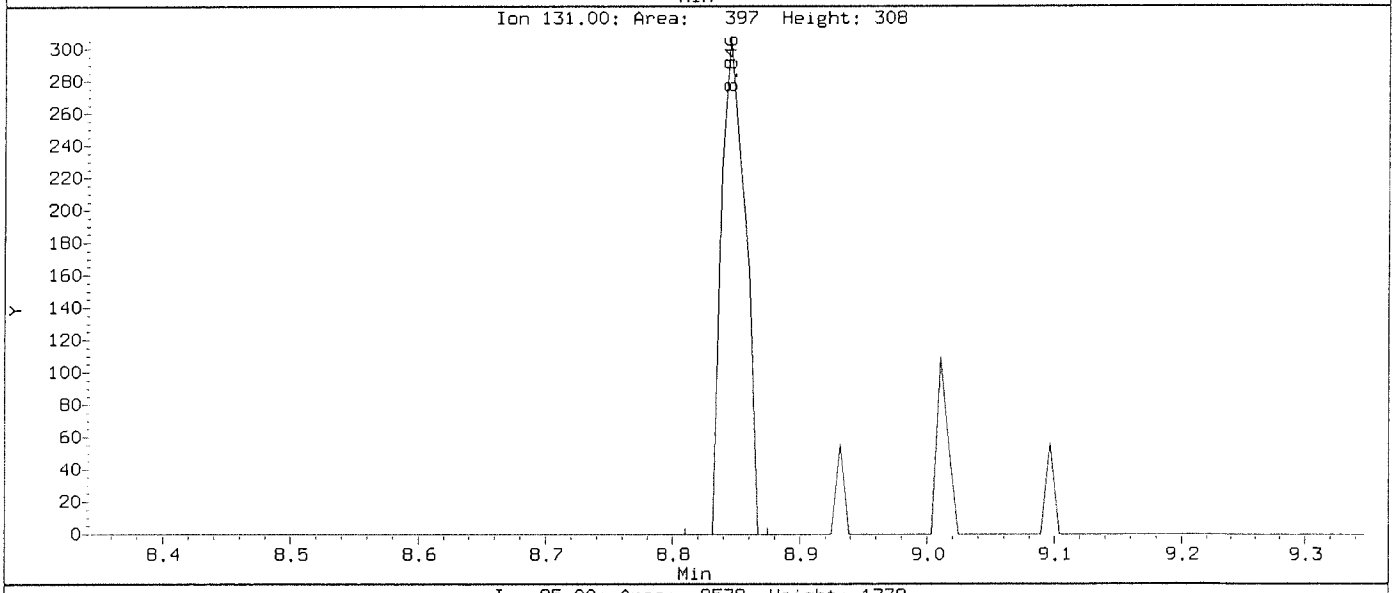
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CAS Number: 79-34-5

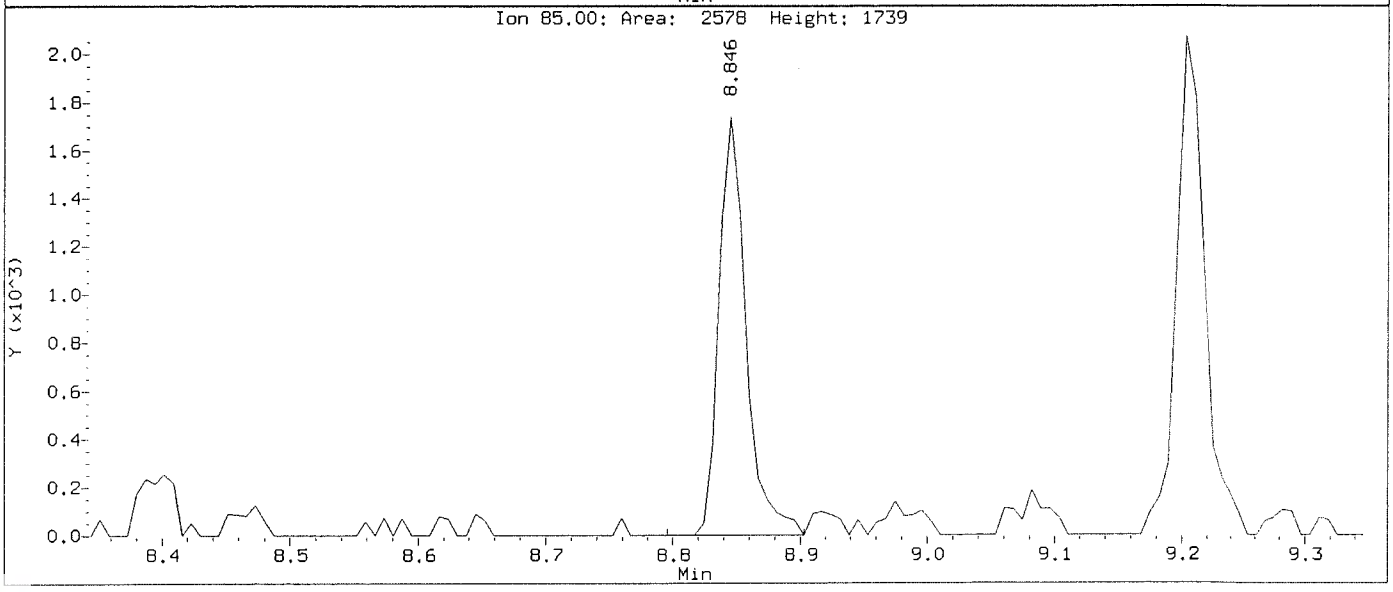


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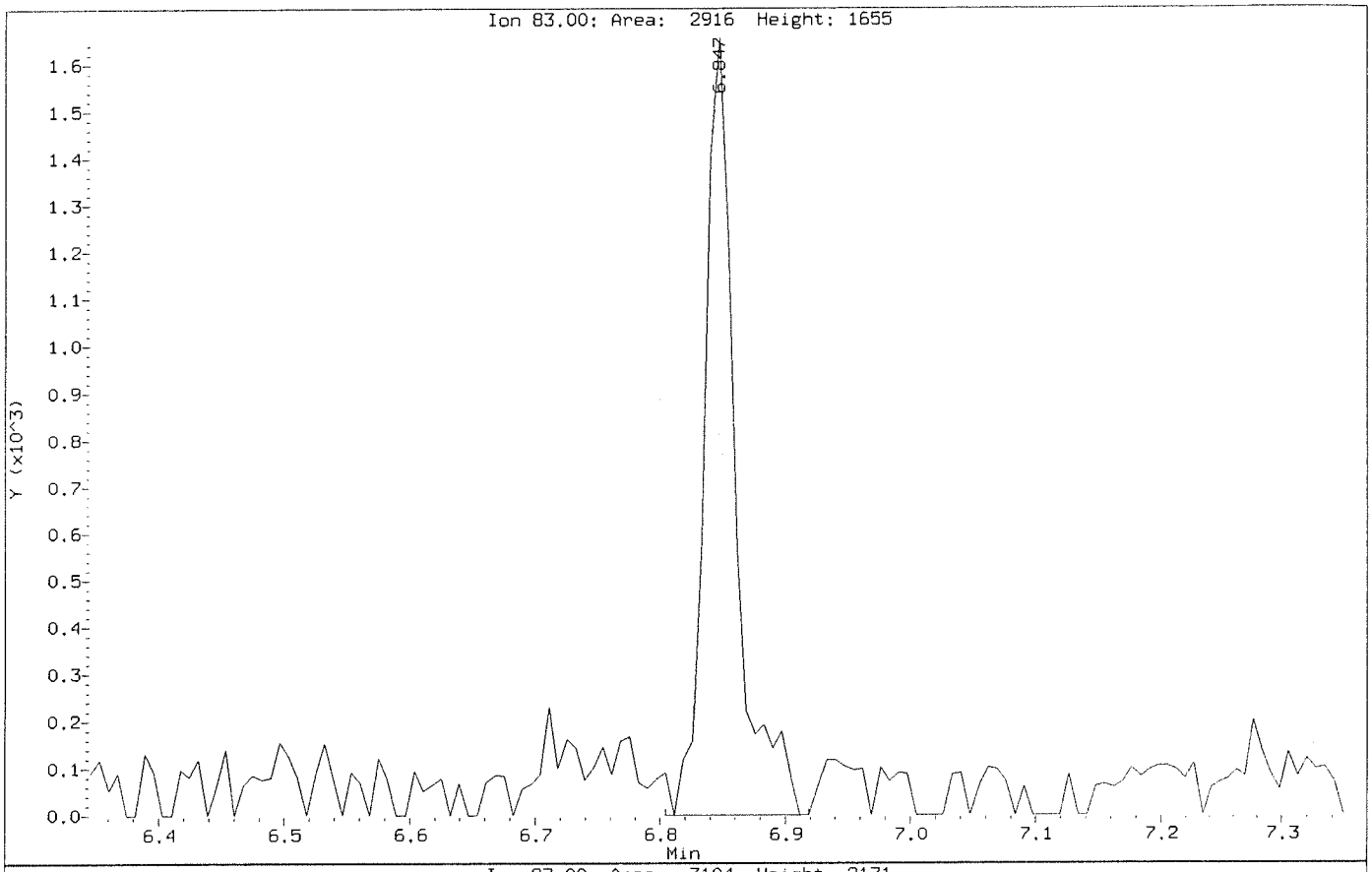


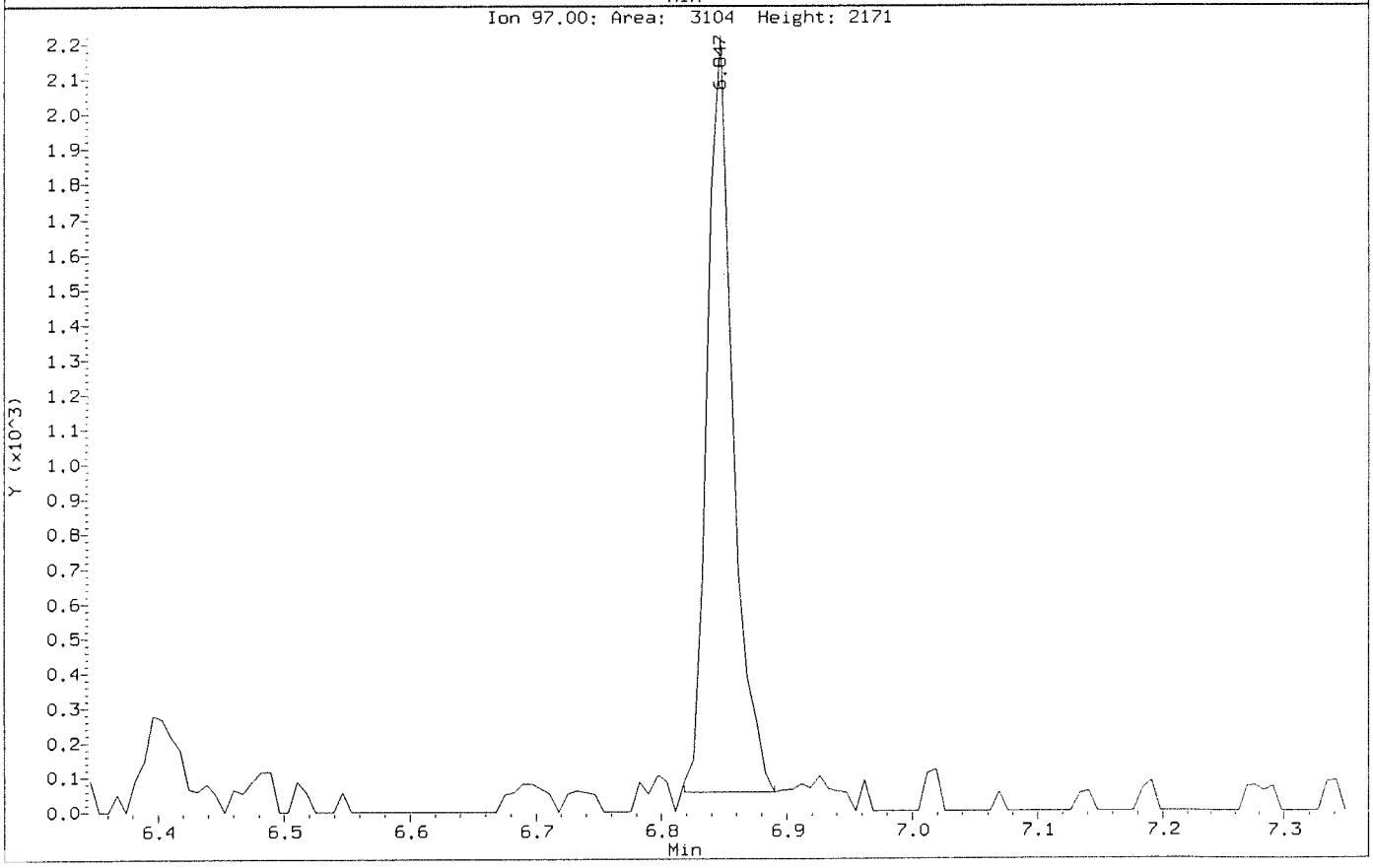




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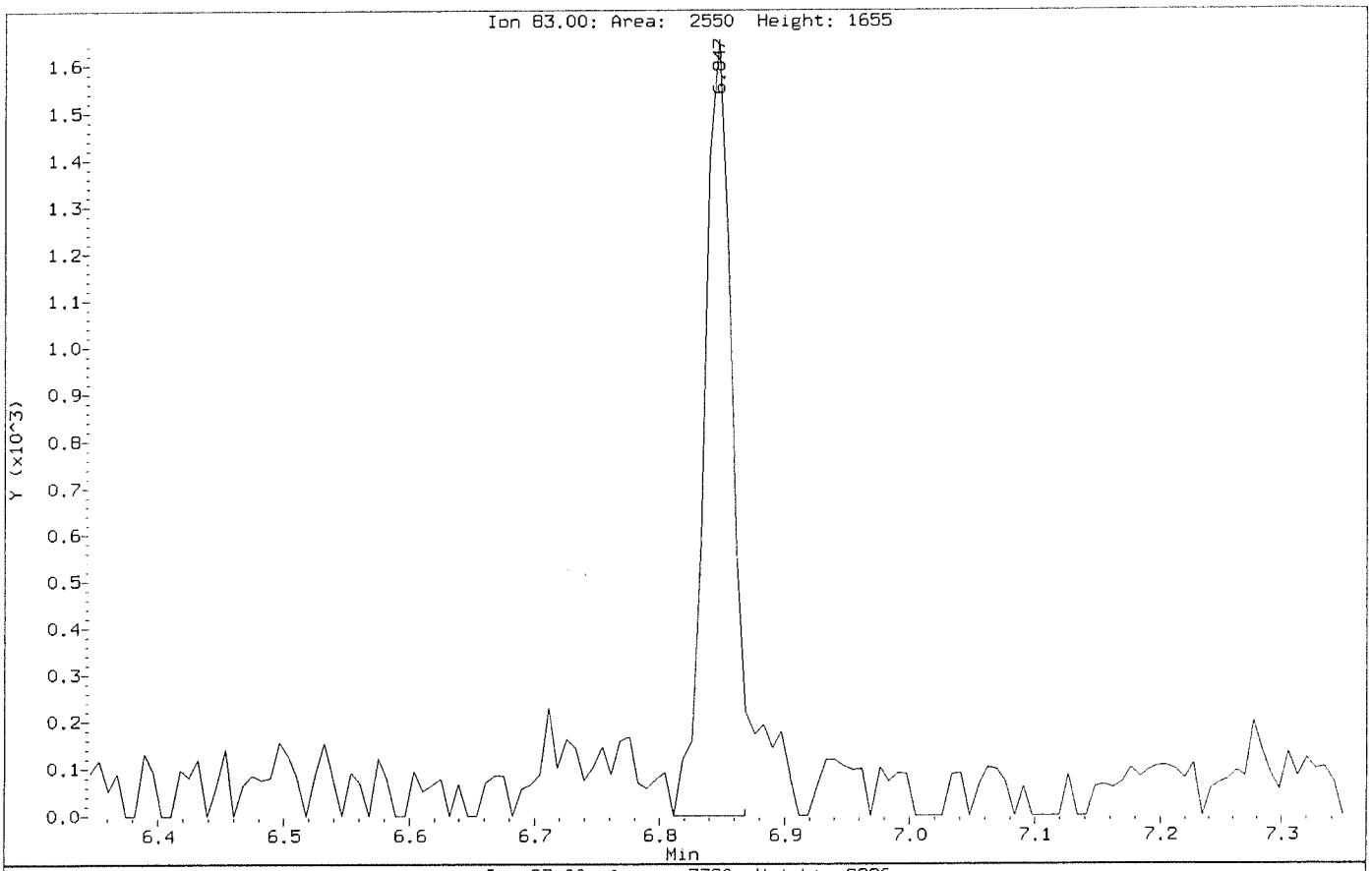
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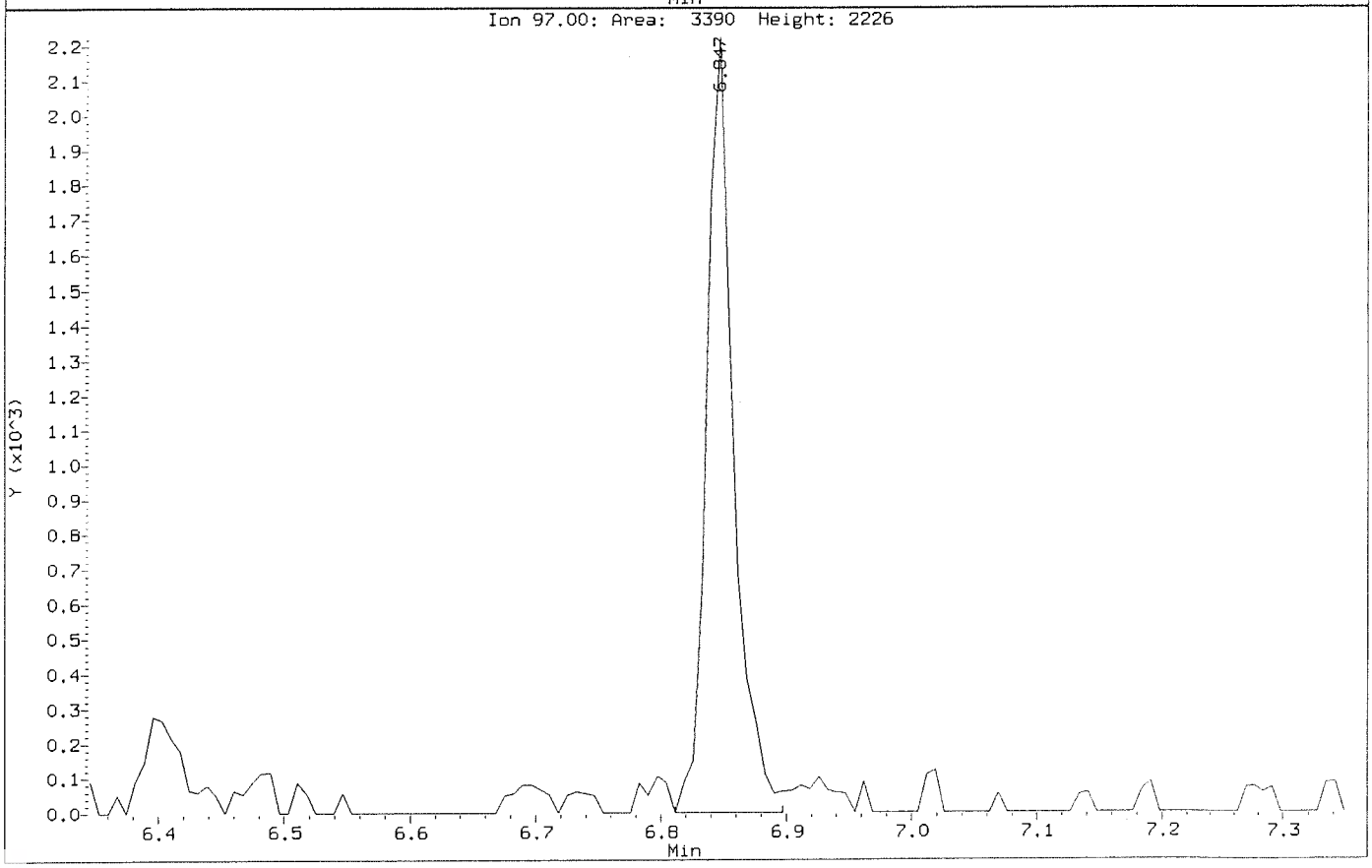




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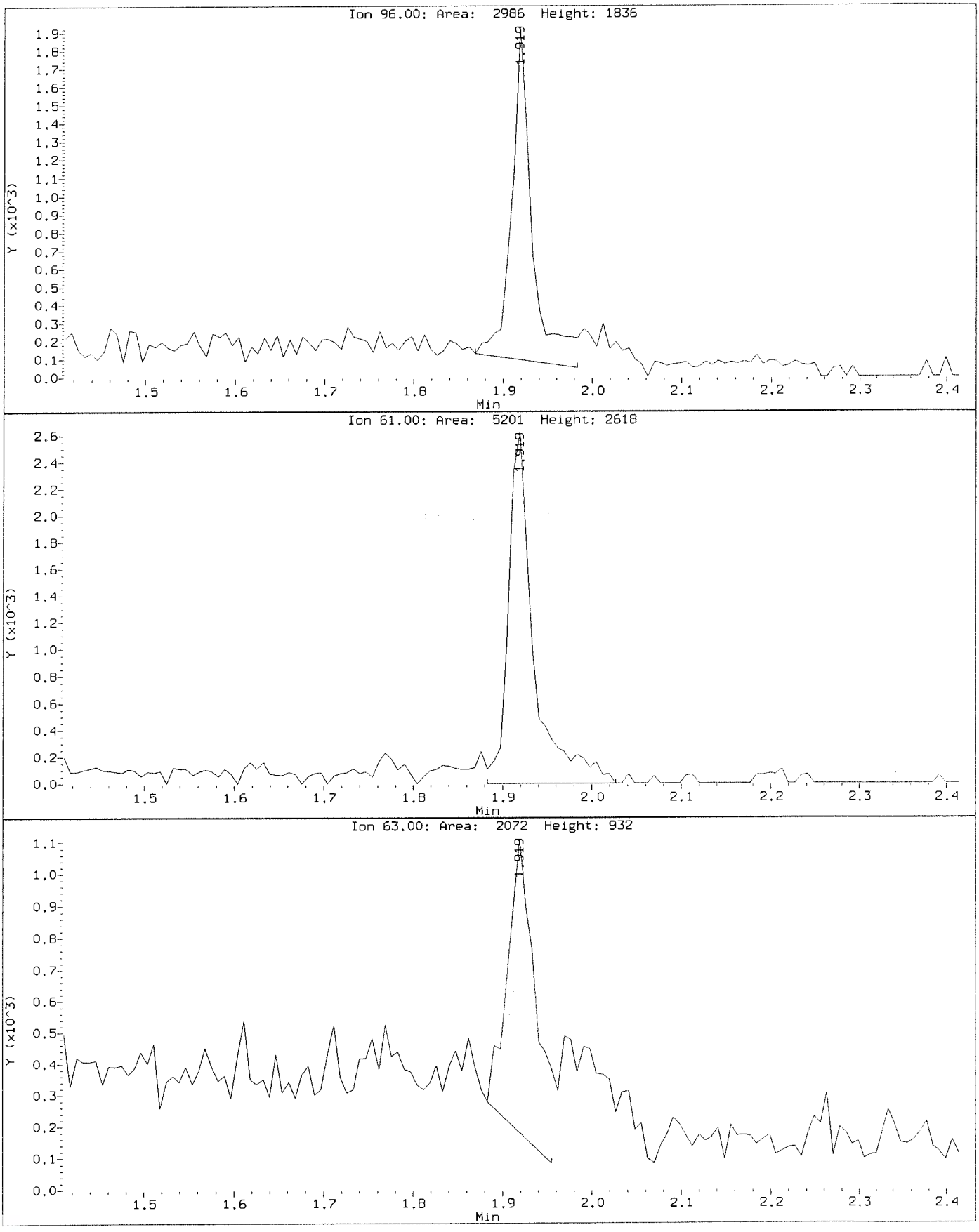
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CAS Number: 79-00-5





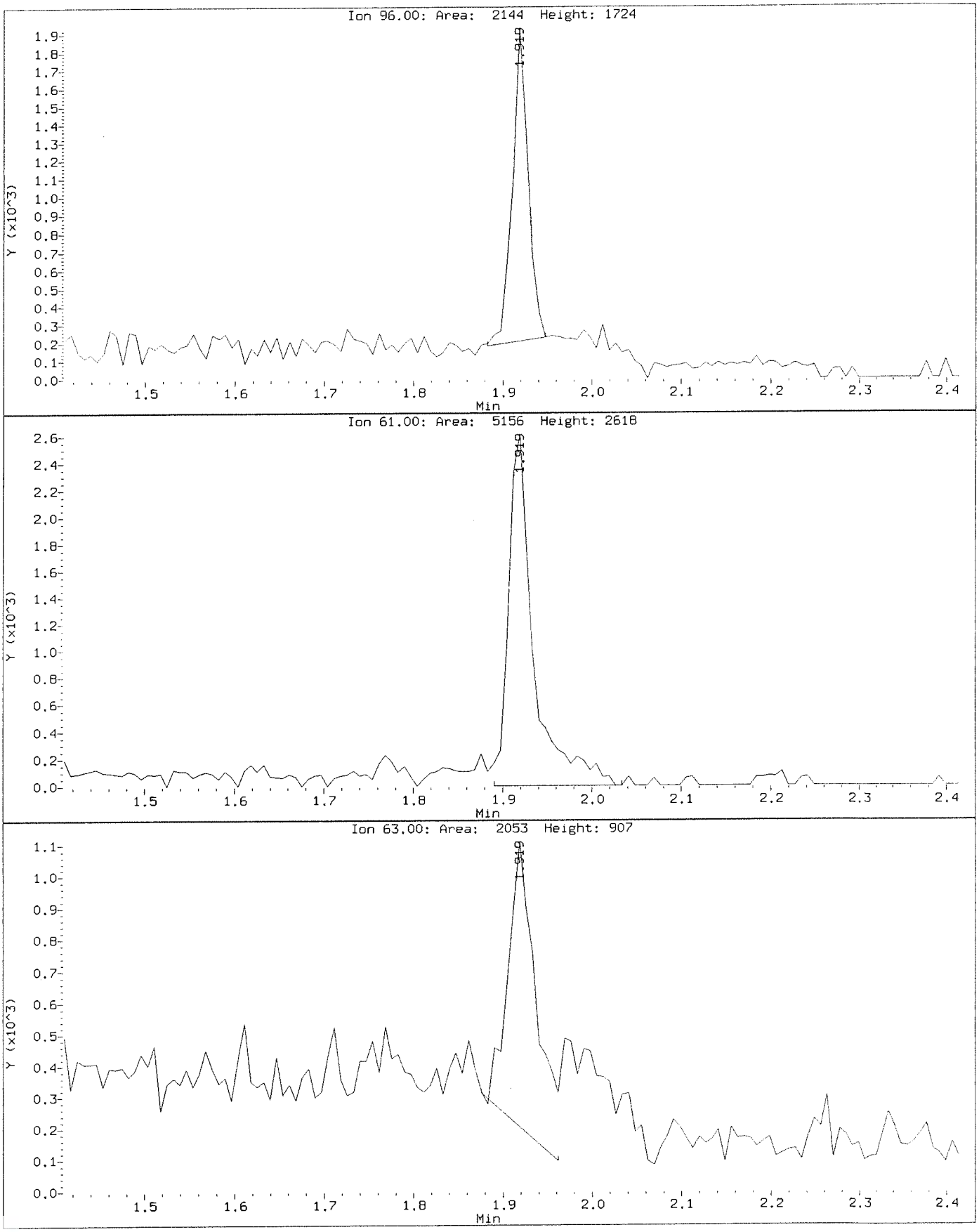
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



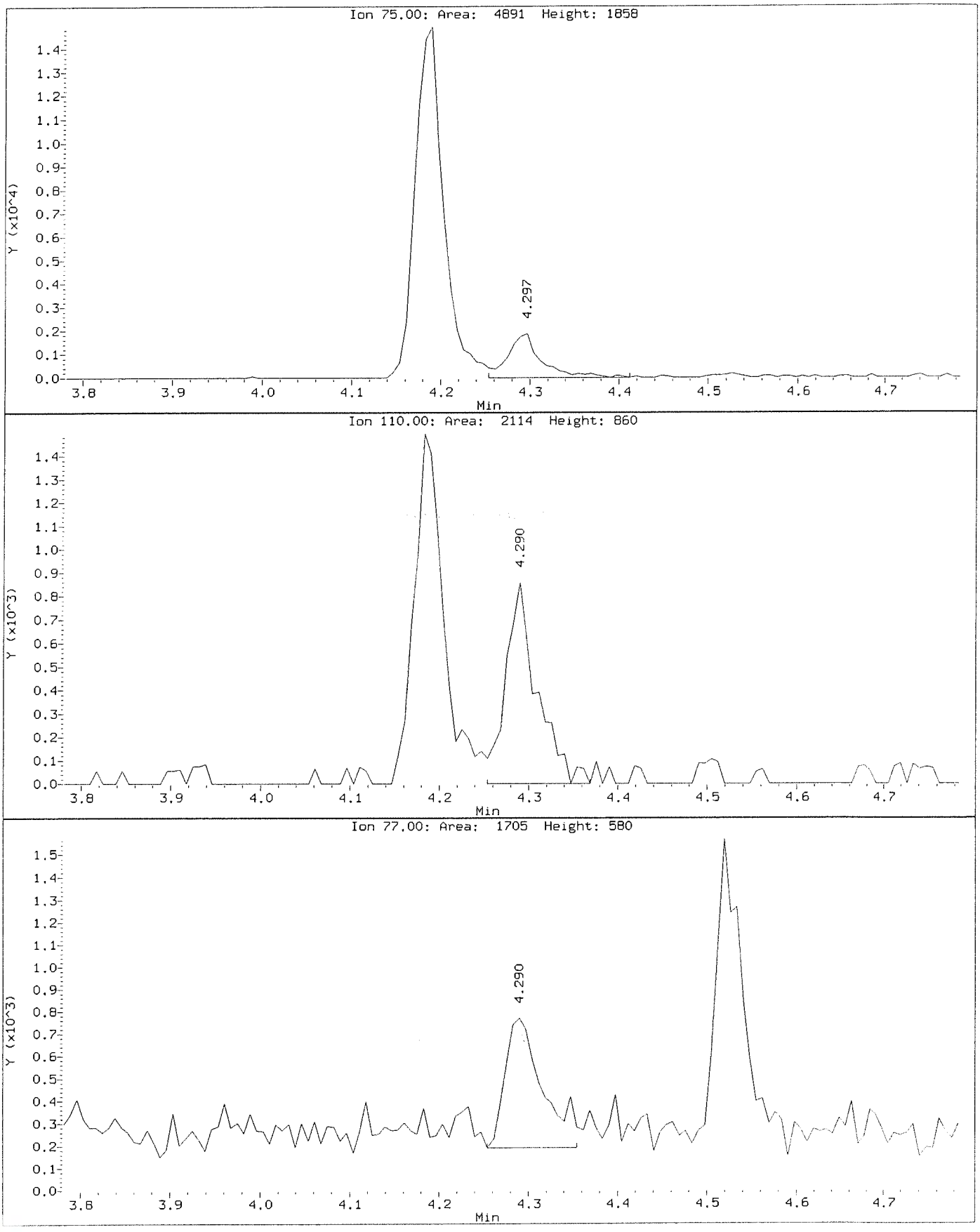
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



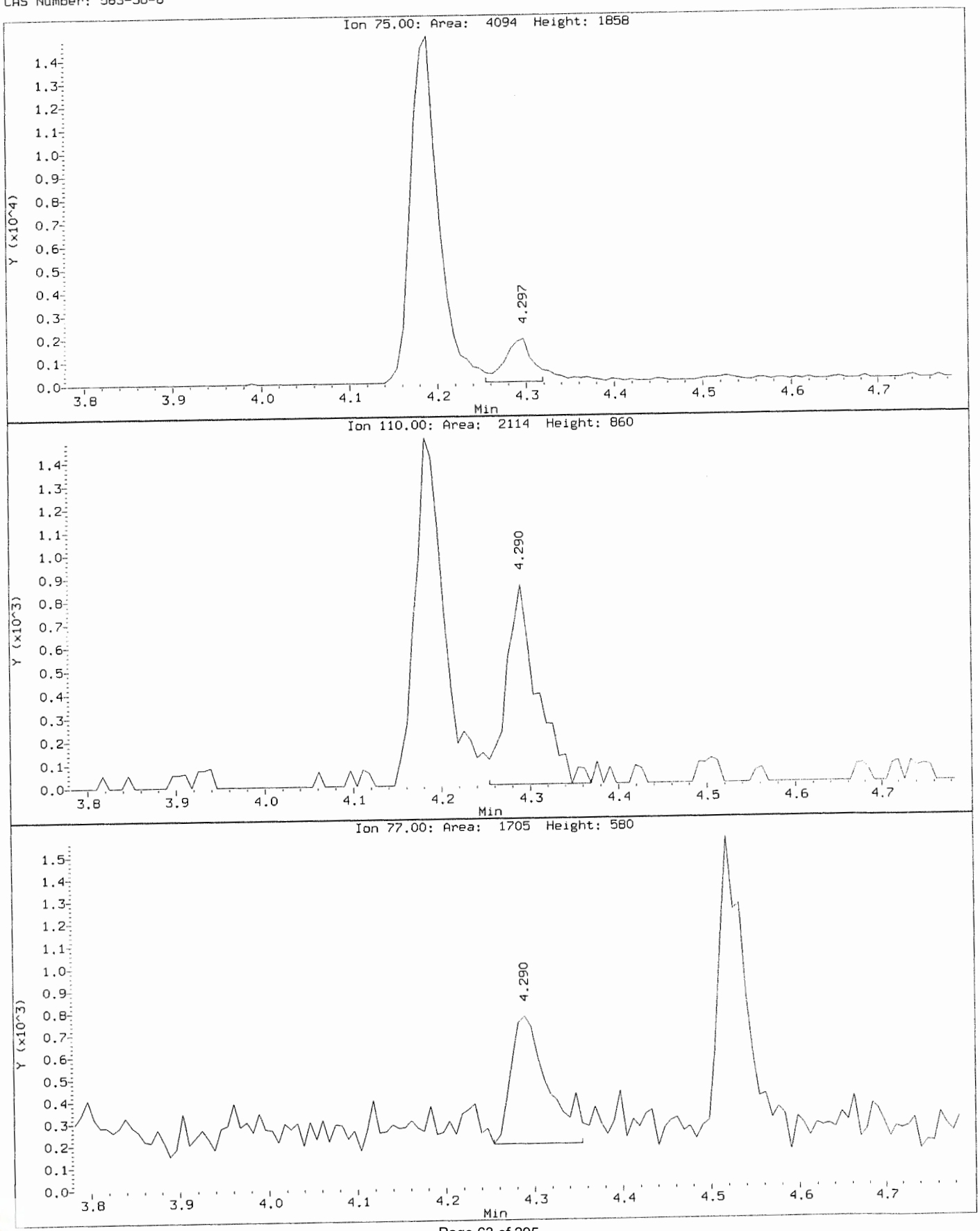
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



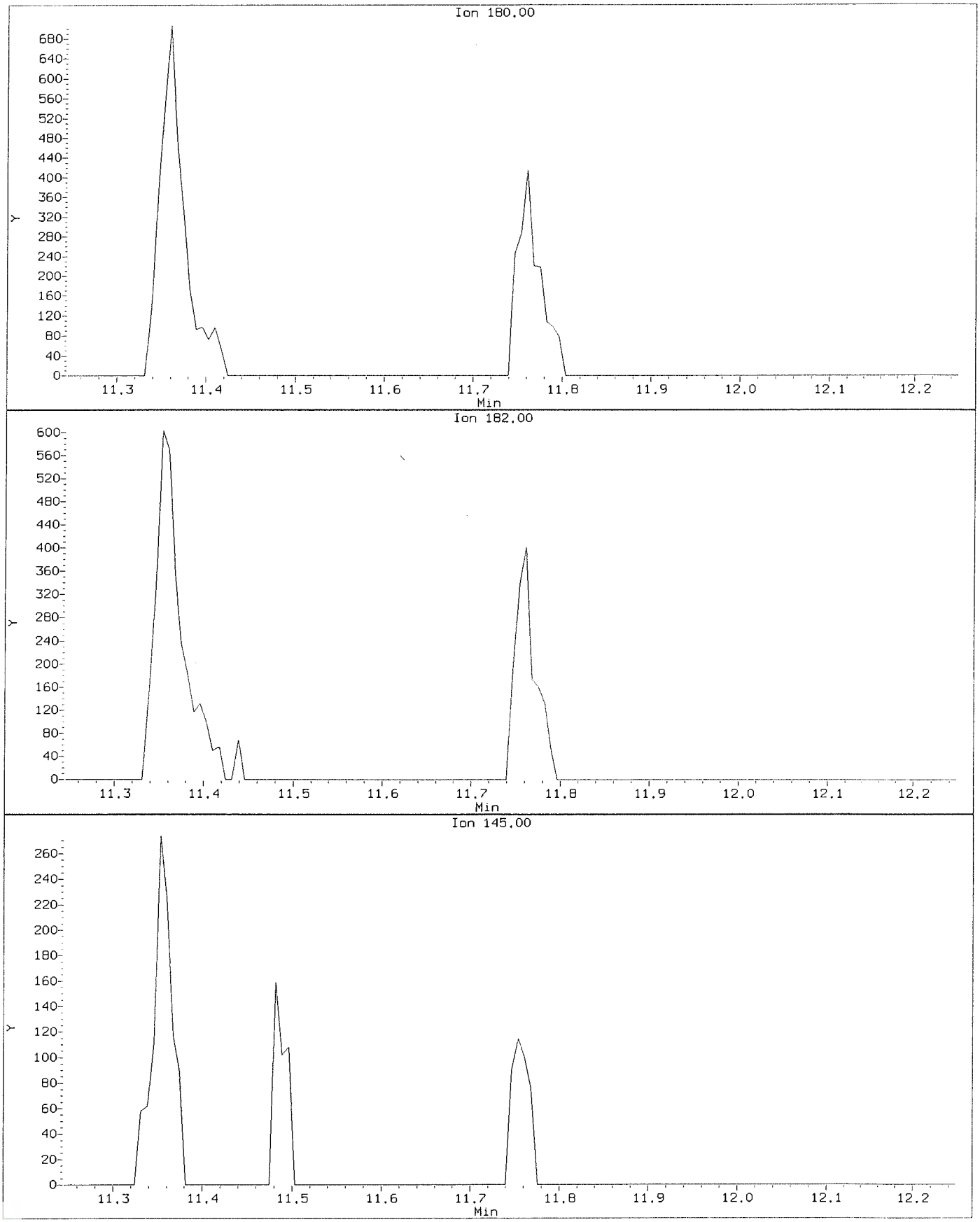
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



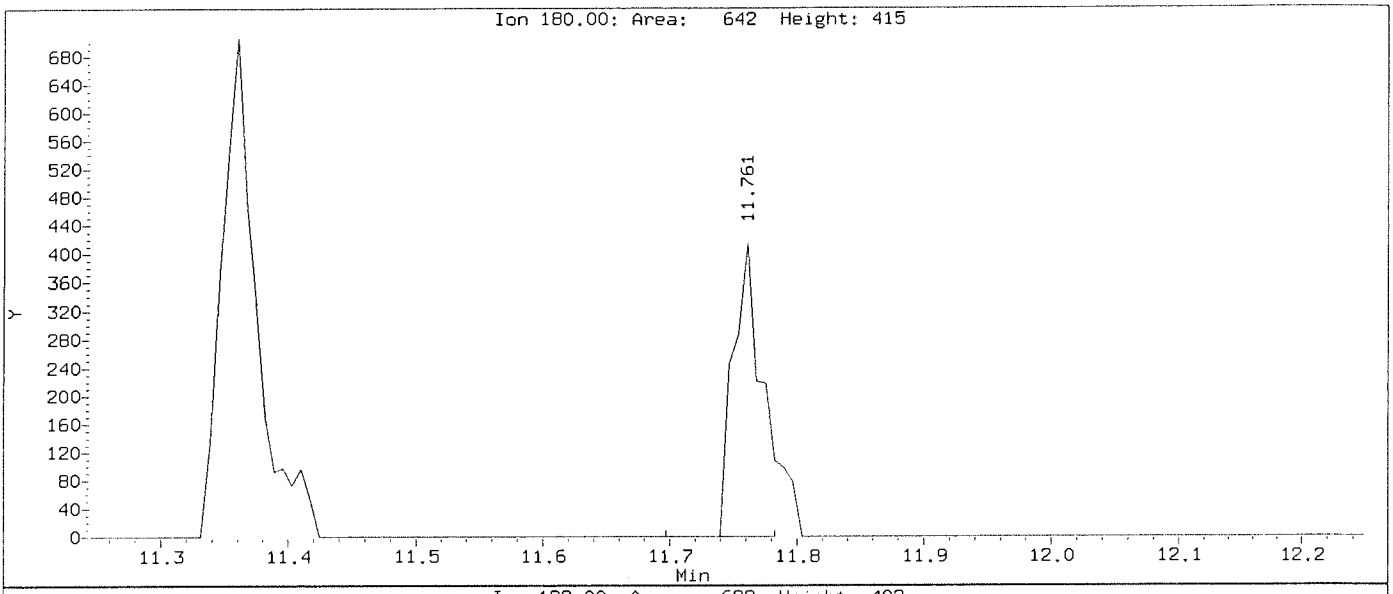
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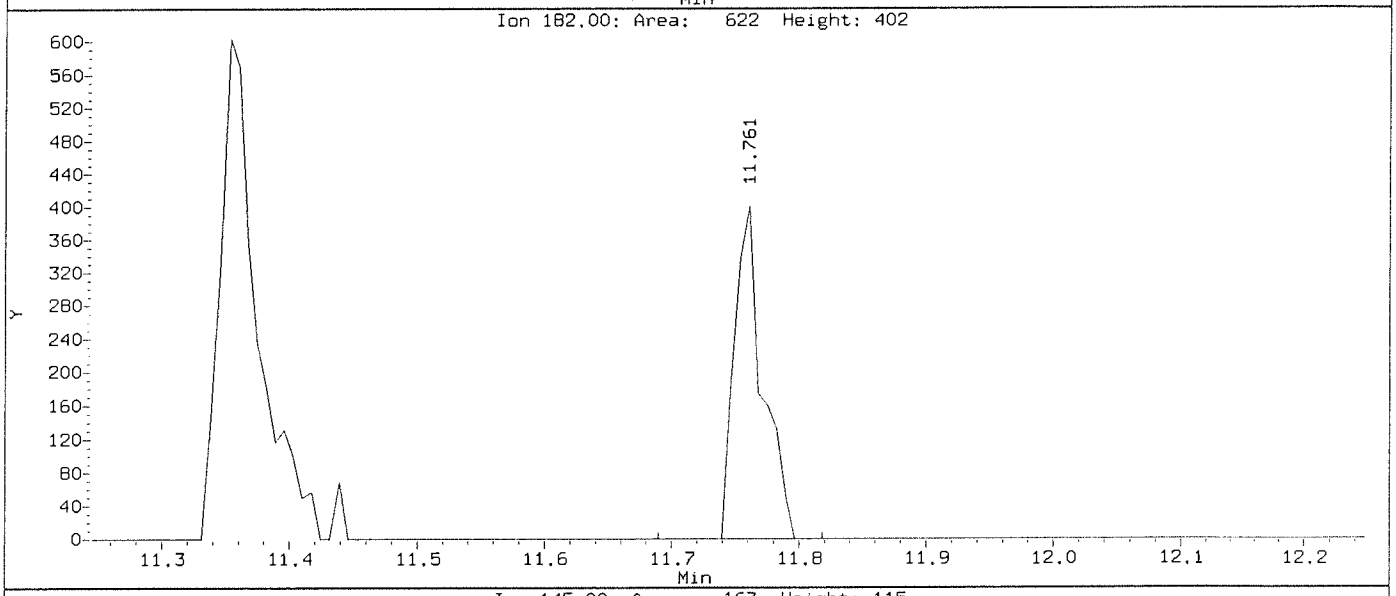
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

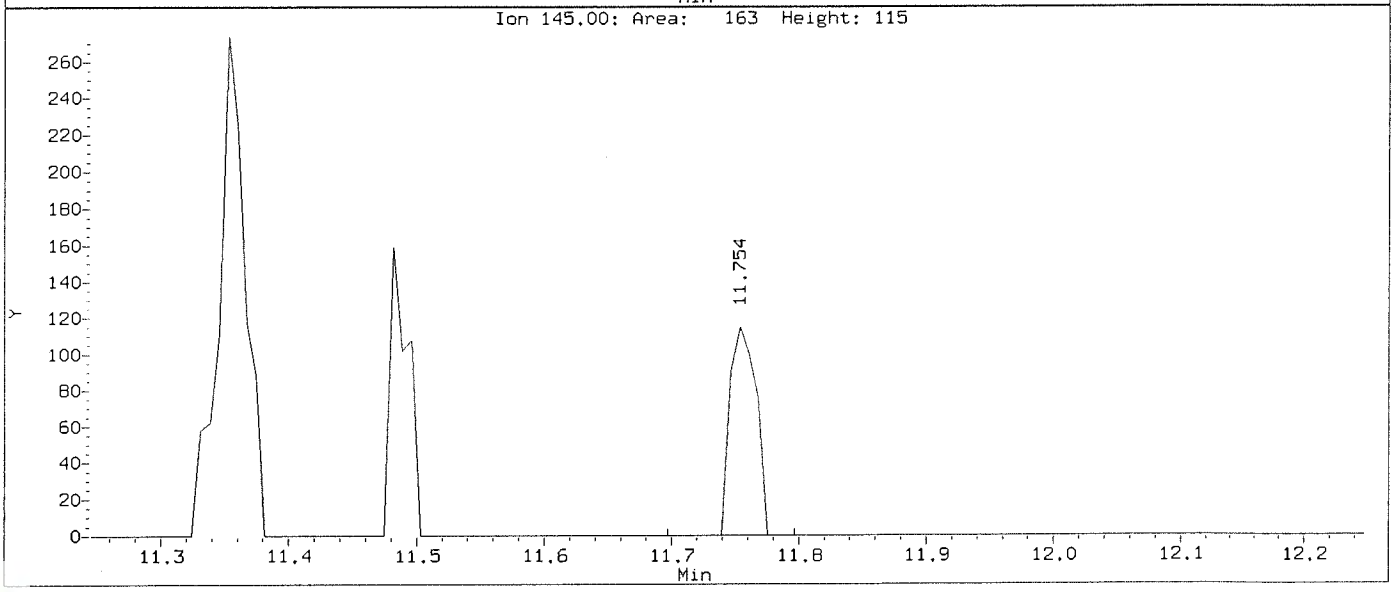


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

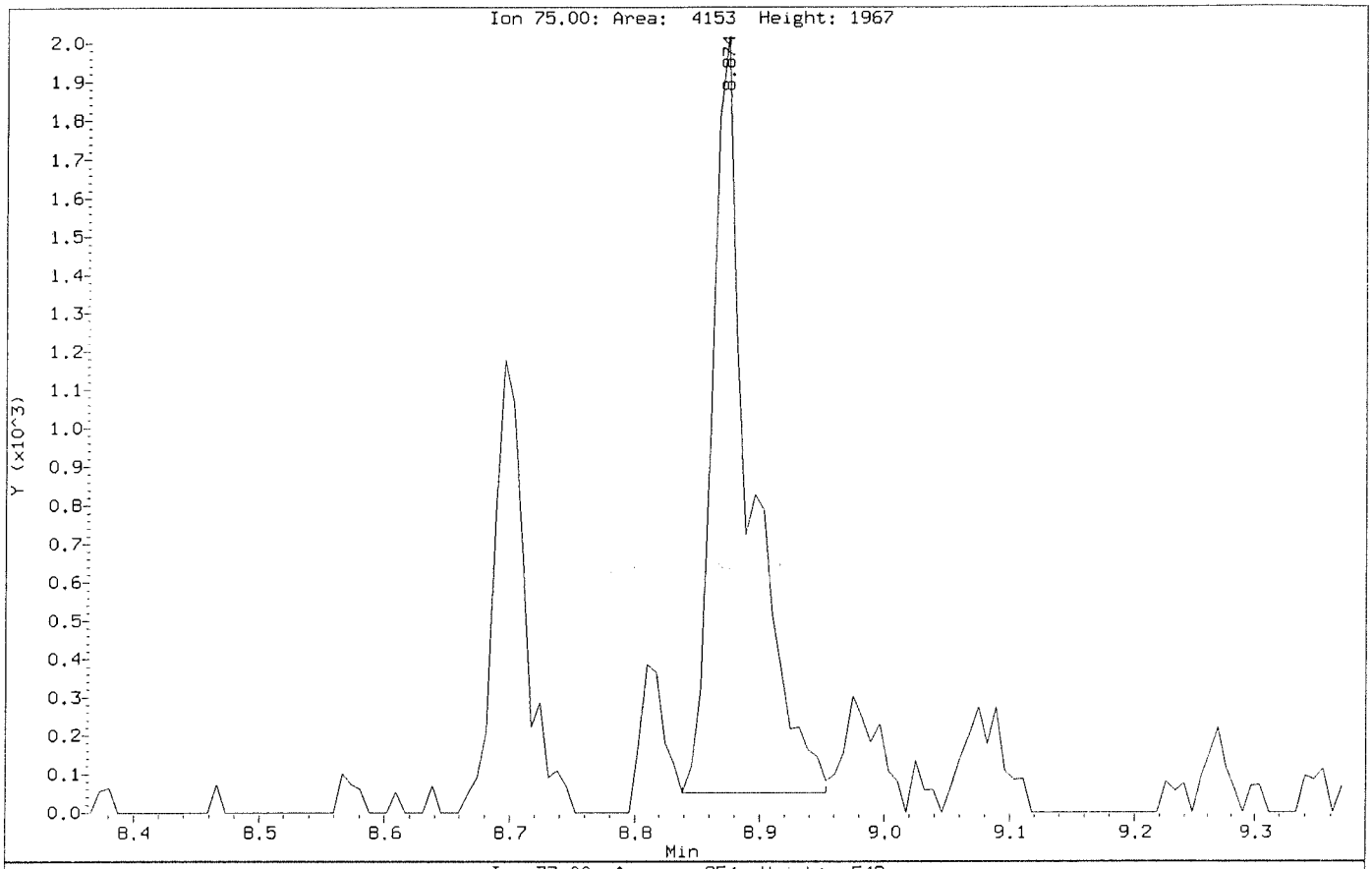


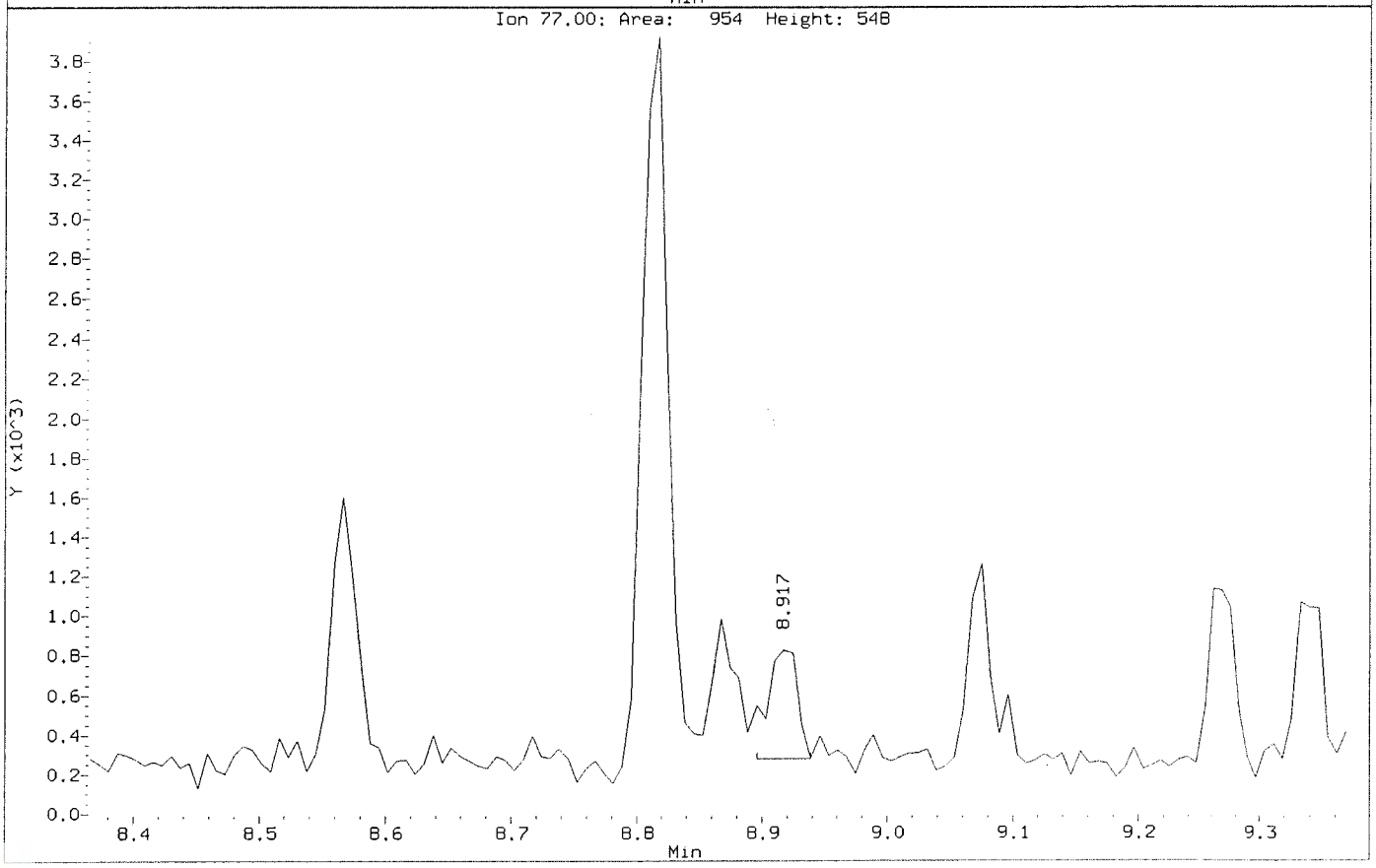




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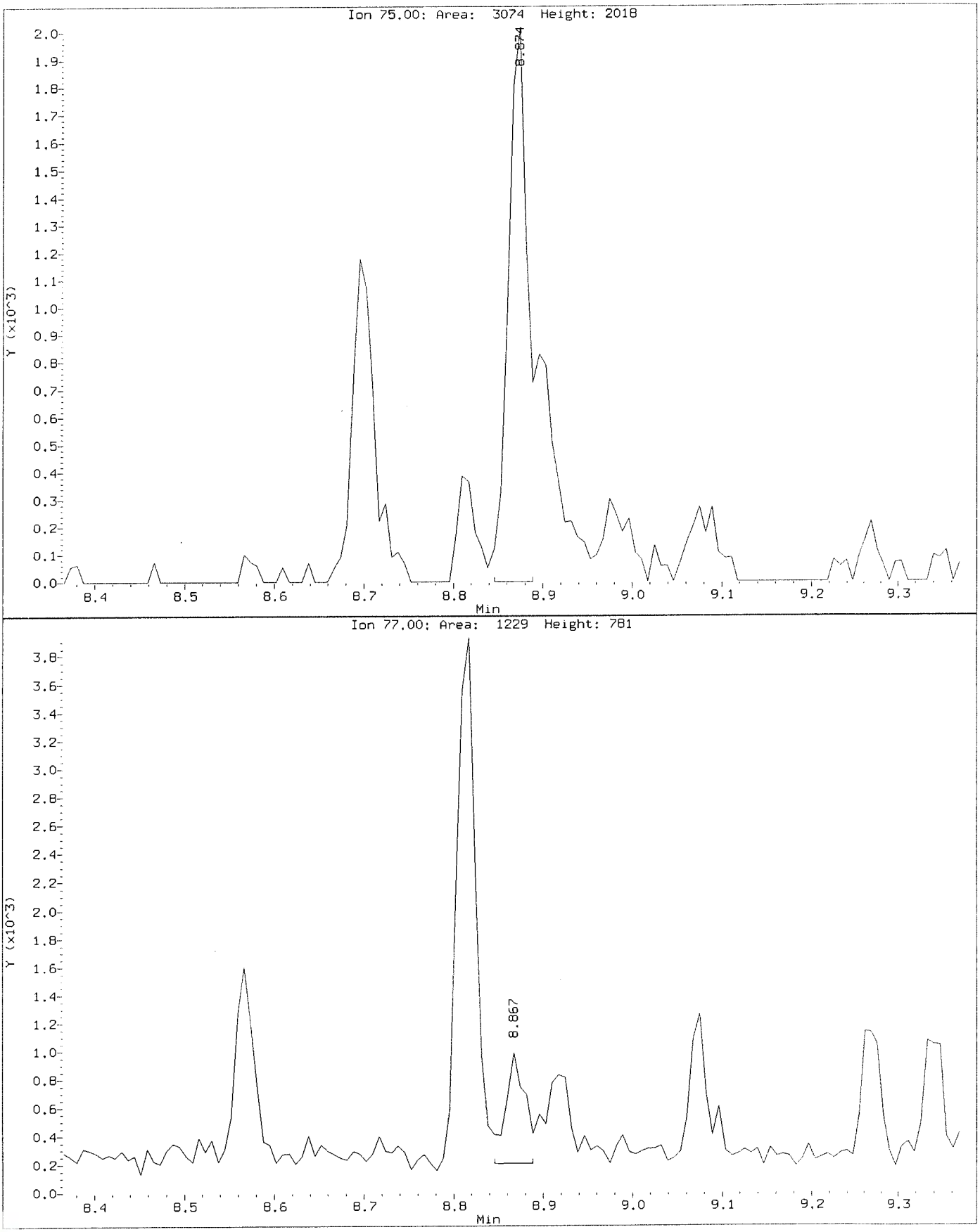
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





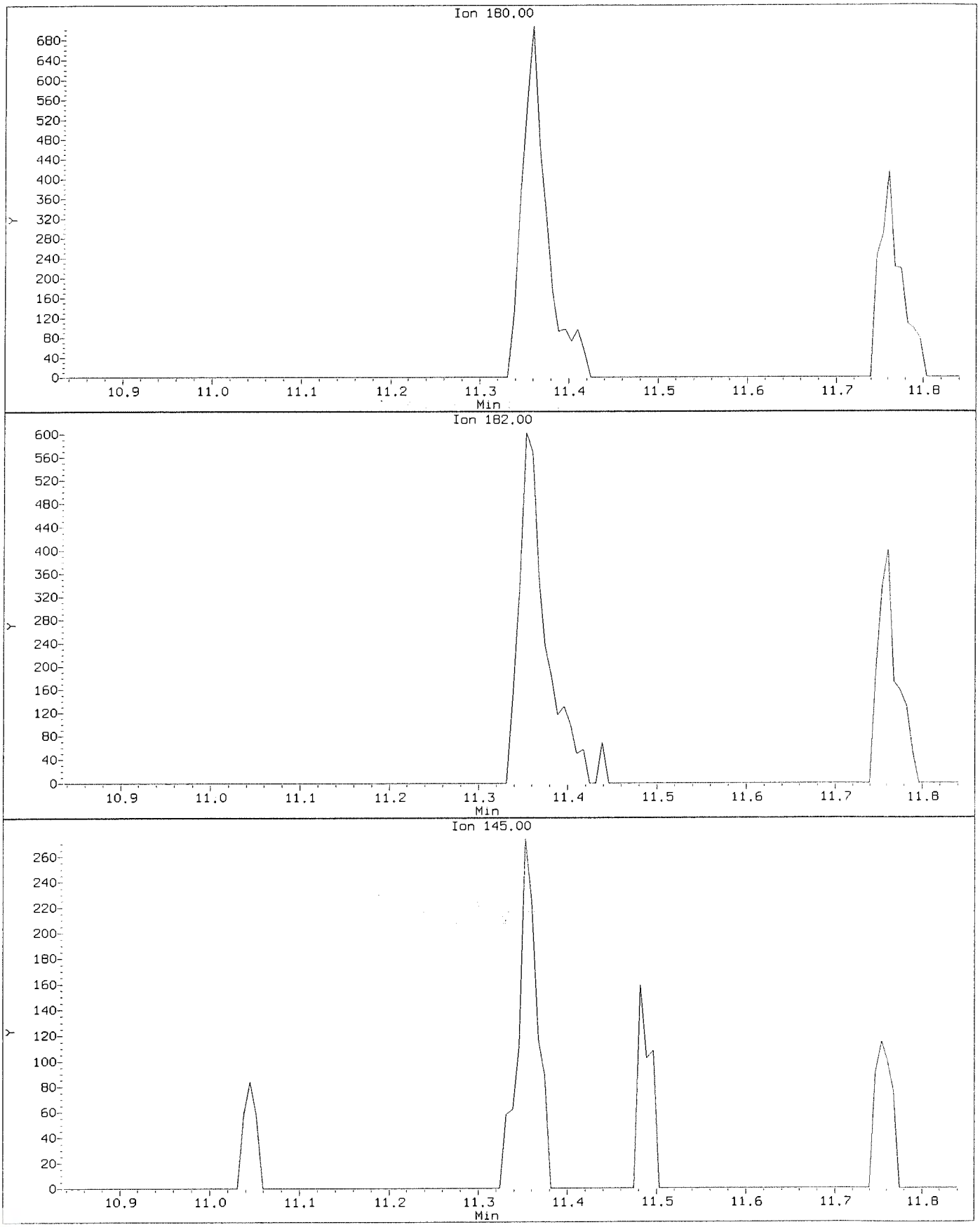
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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



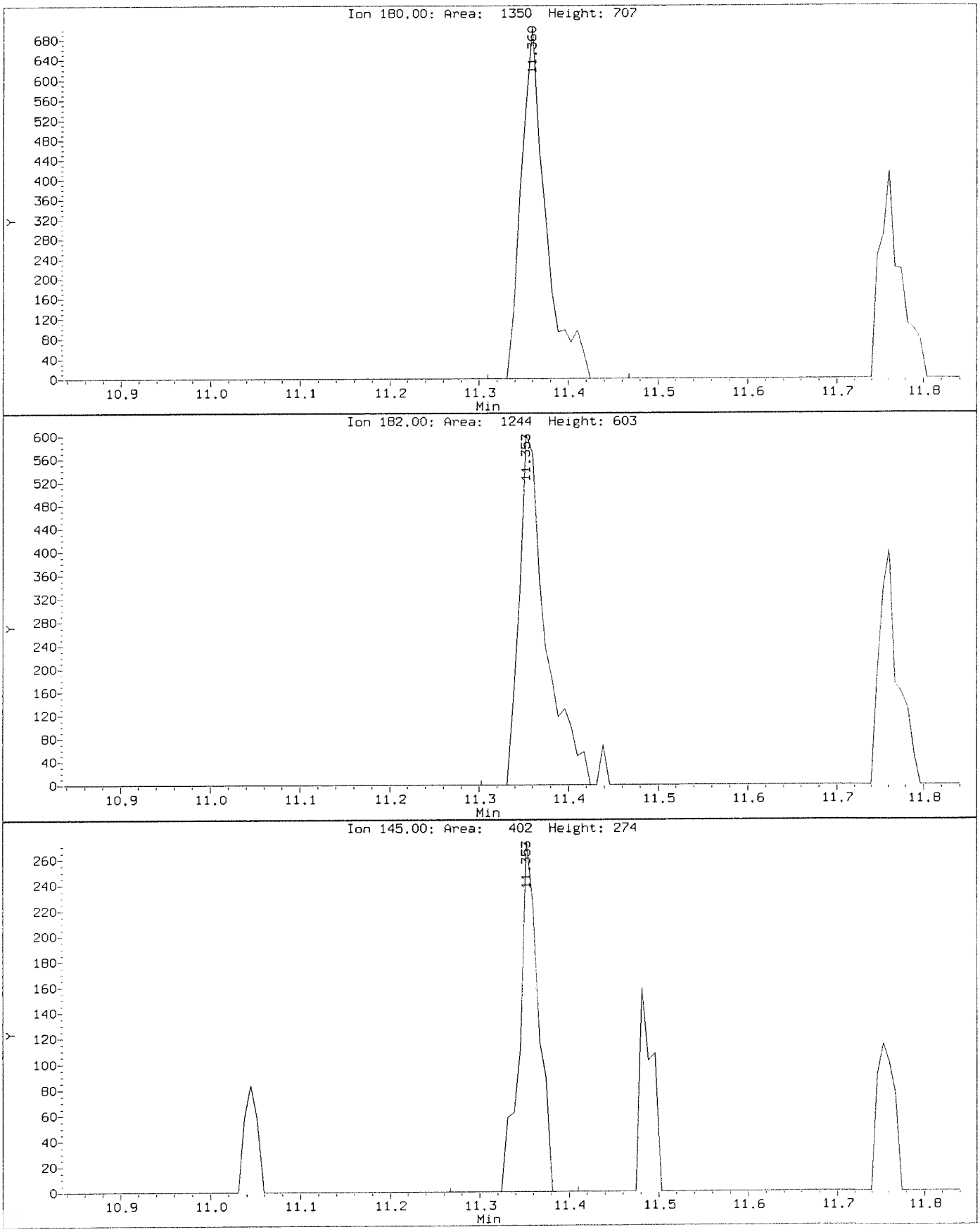
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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



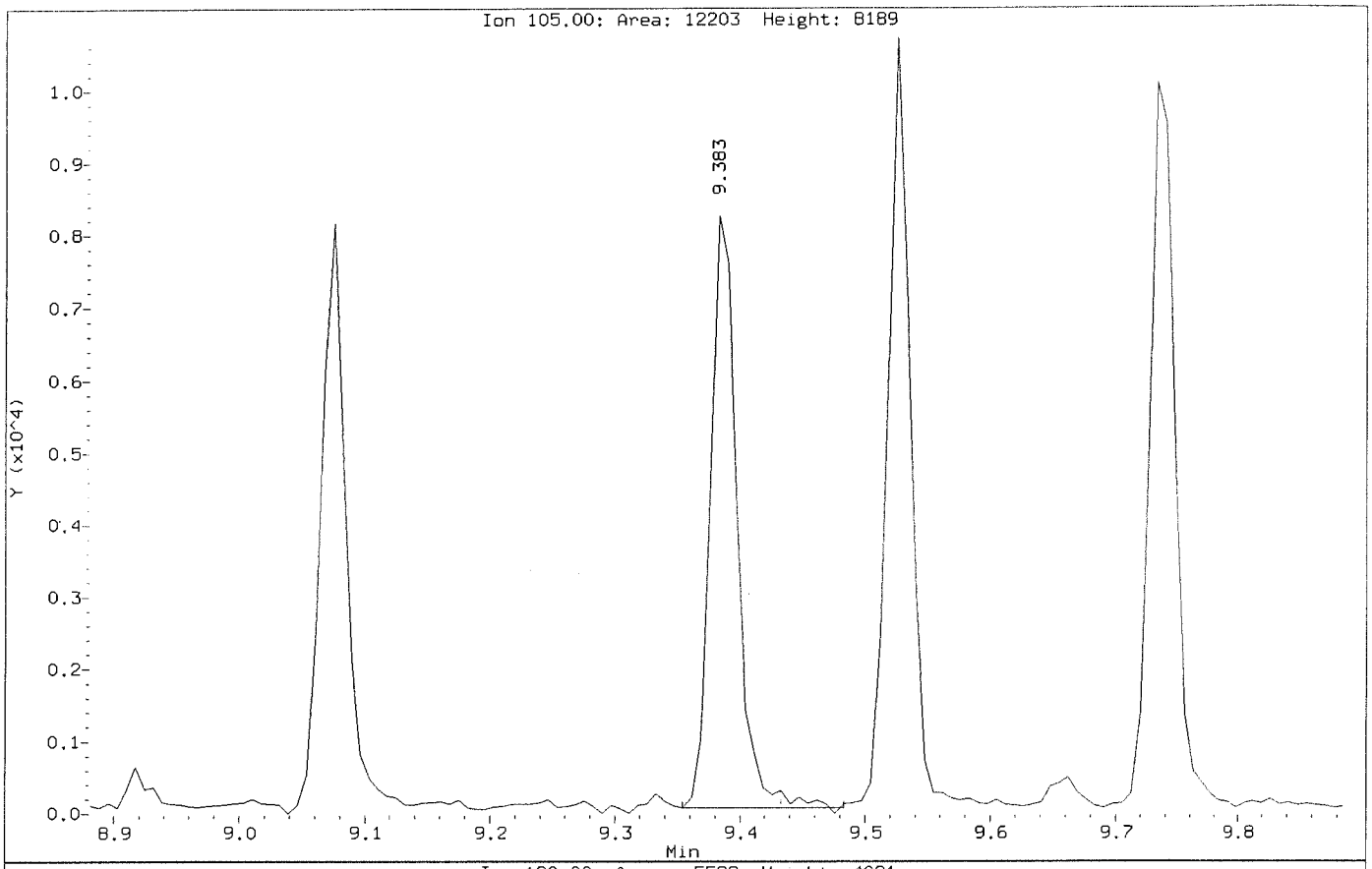
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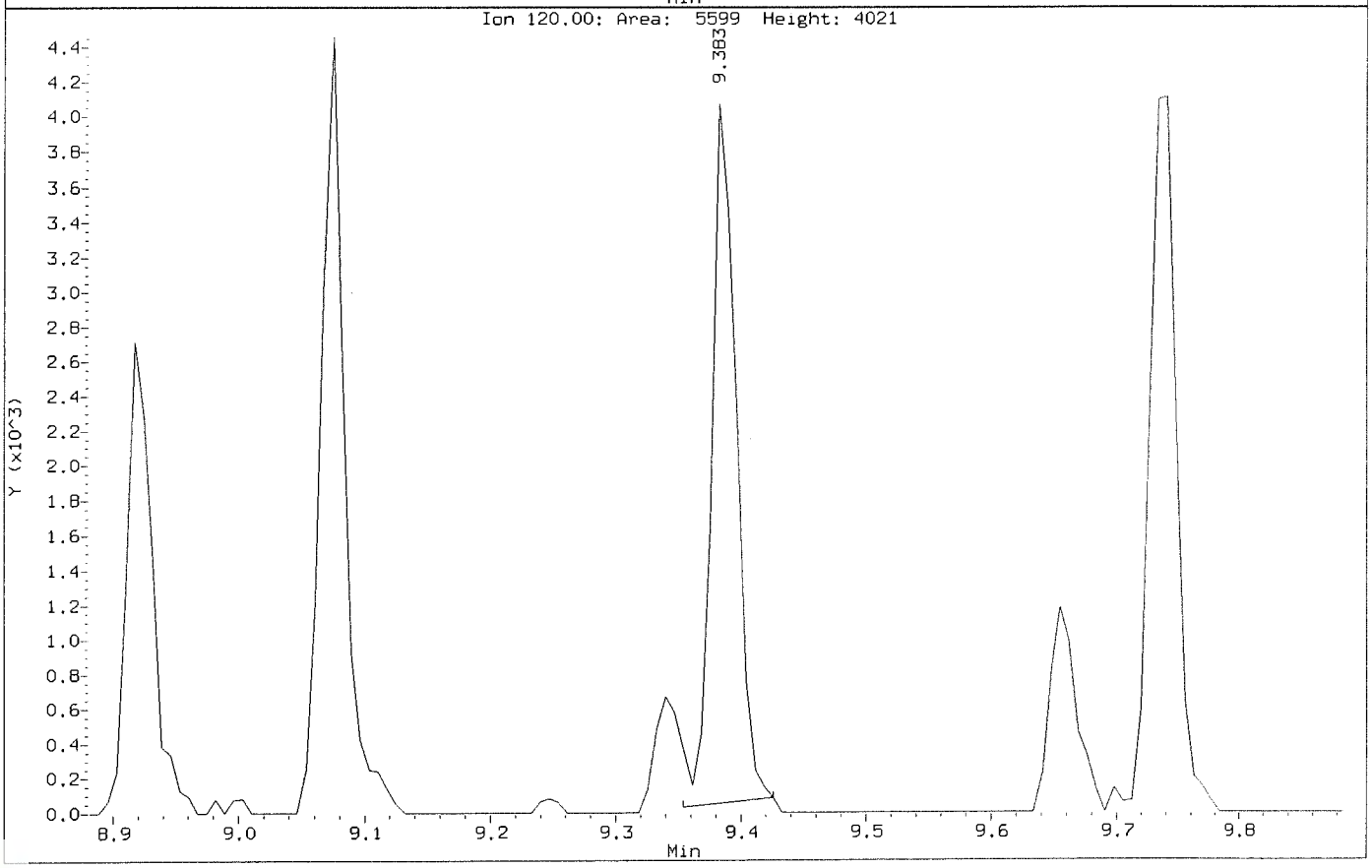
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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Instrument: voa6.i
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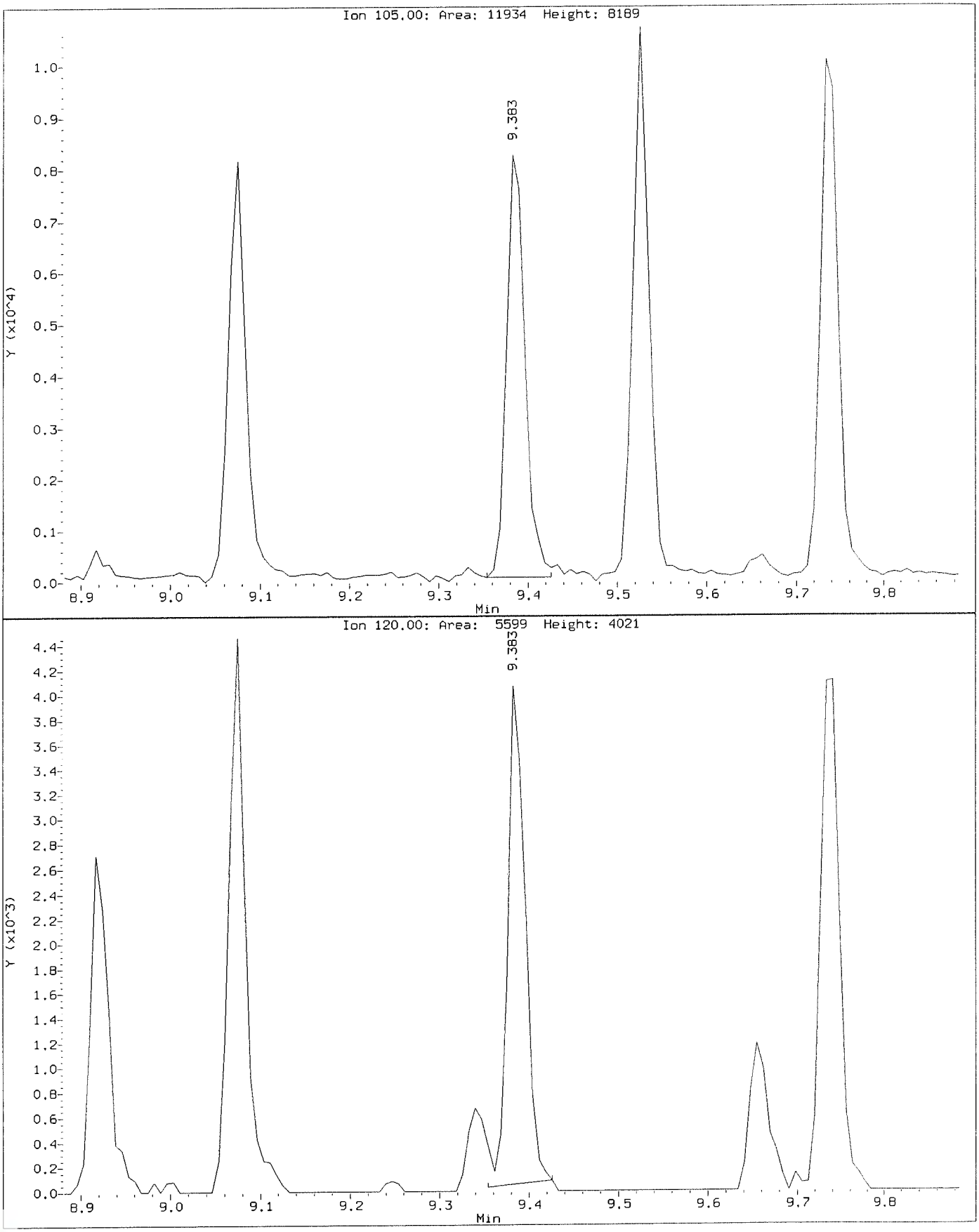
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





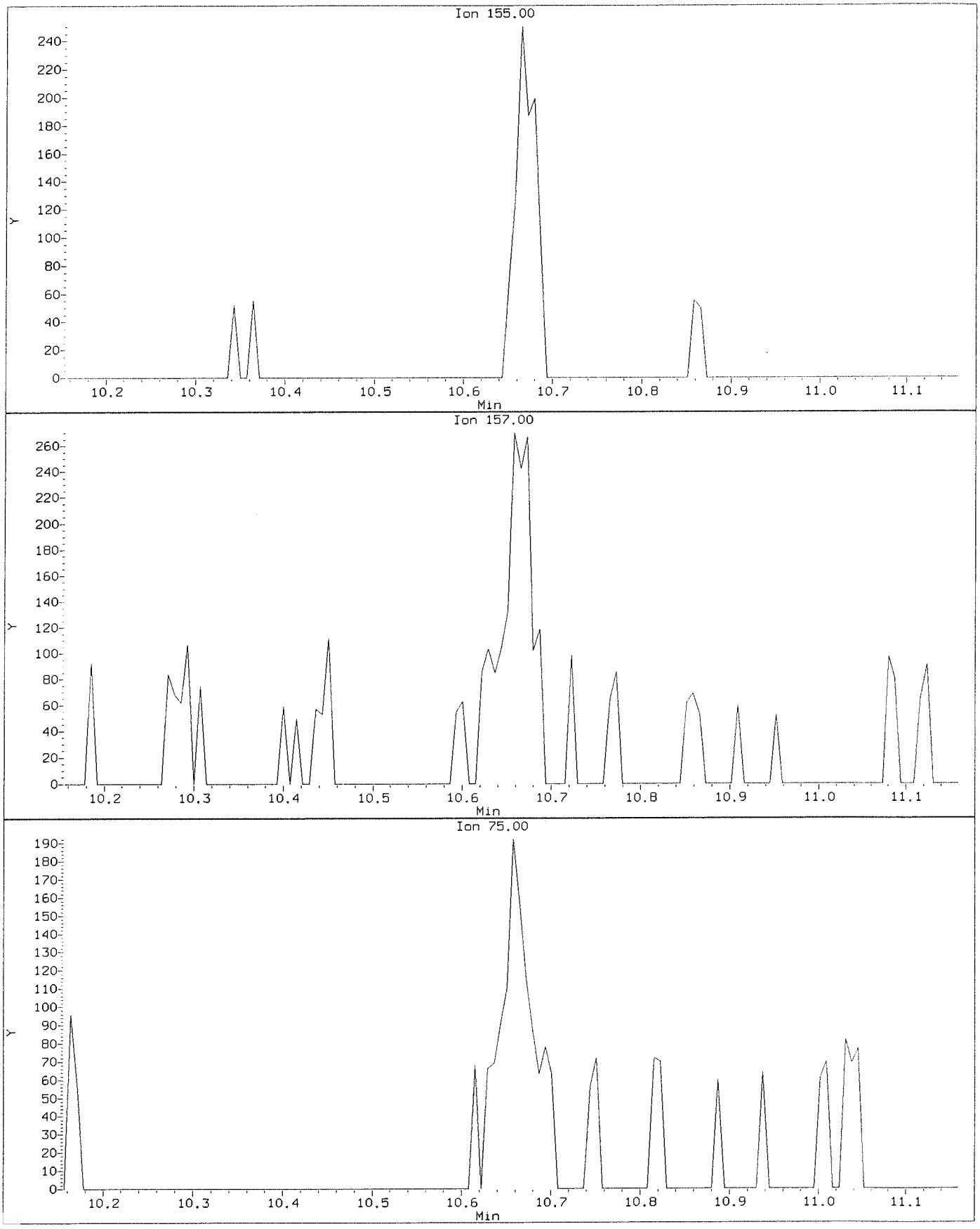
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



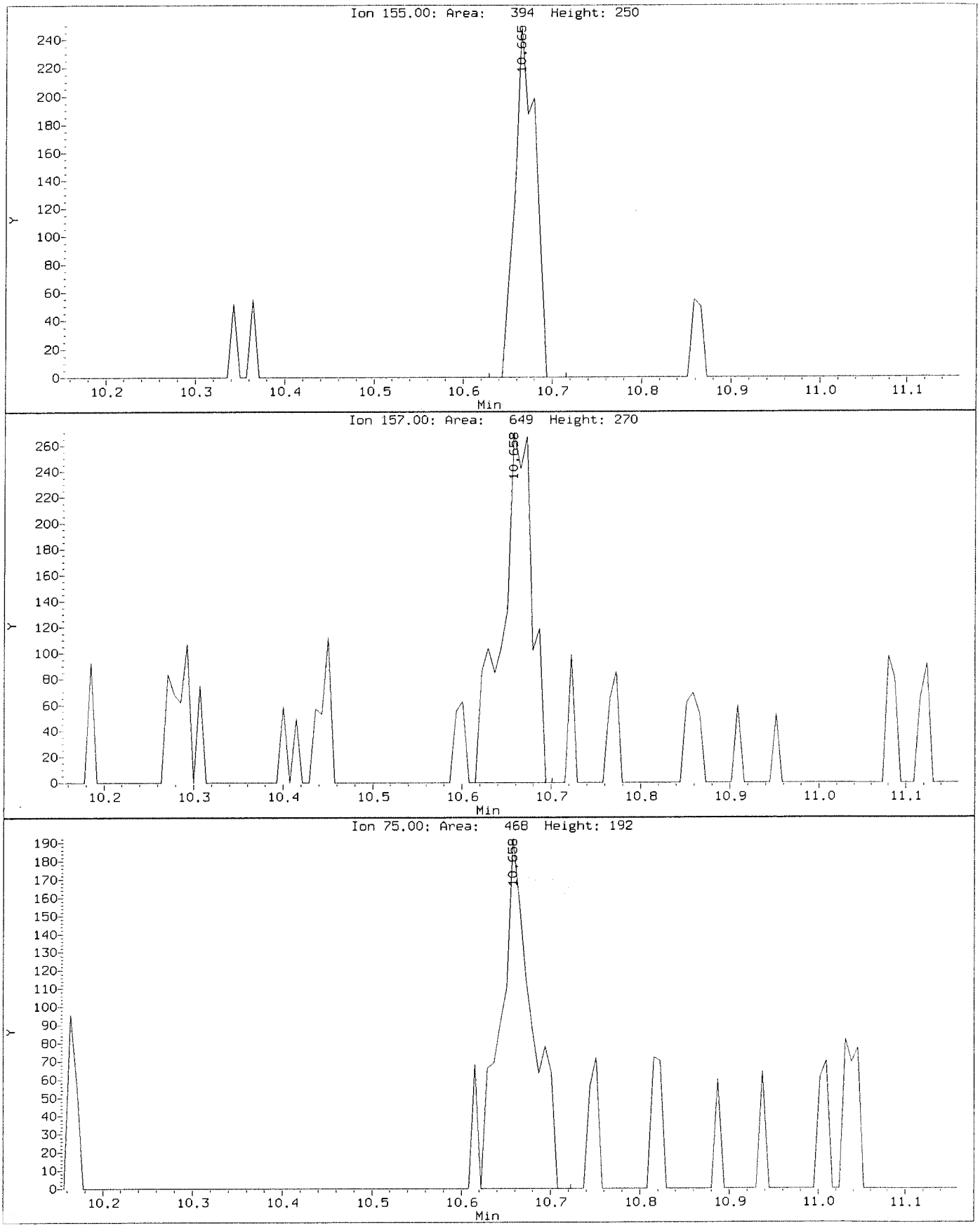
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Instrument: voa6.i
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



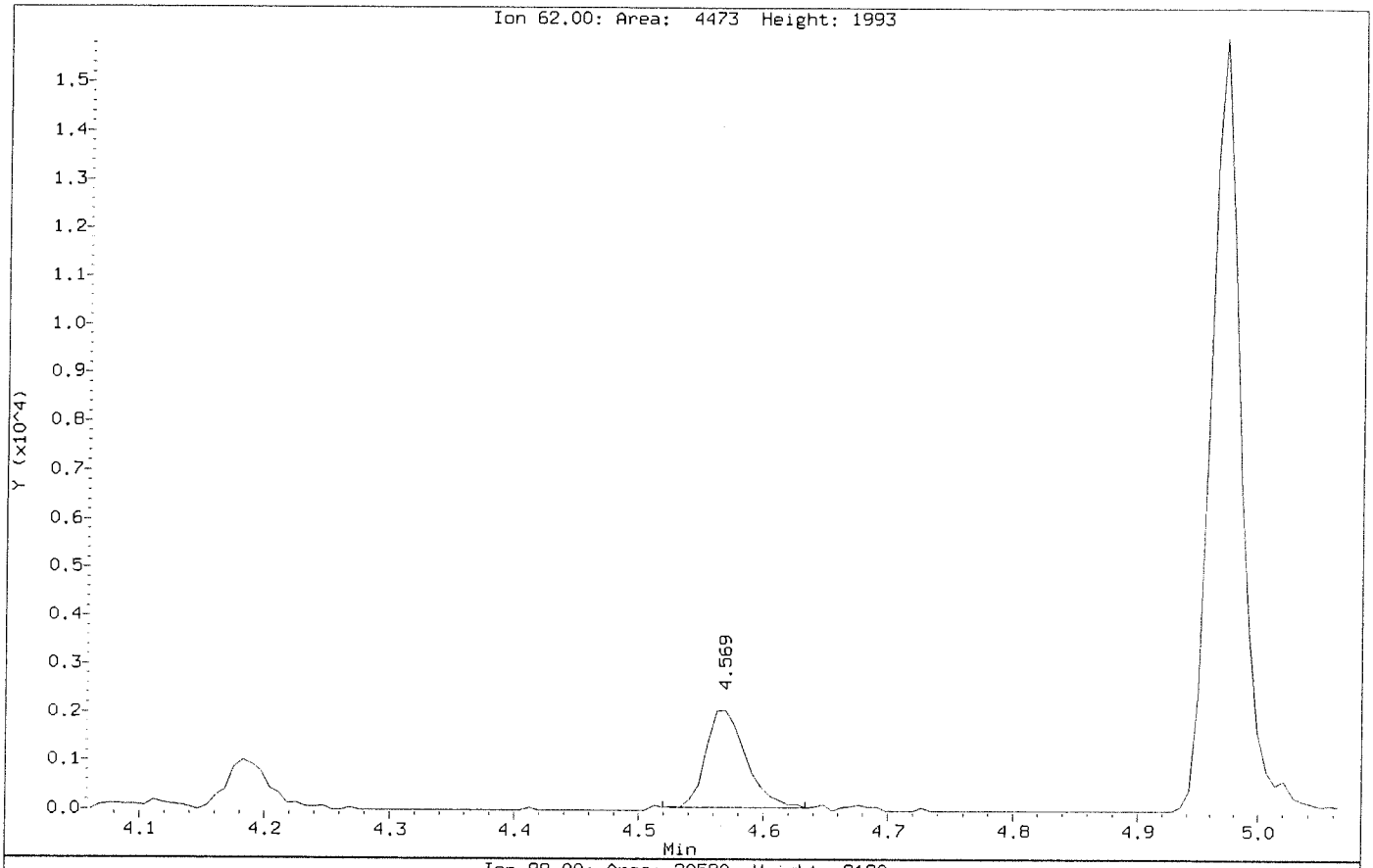
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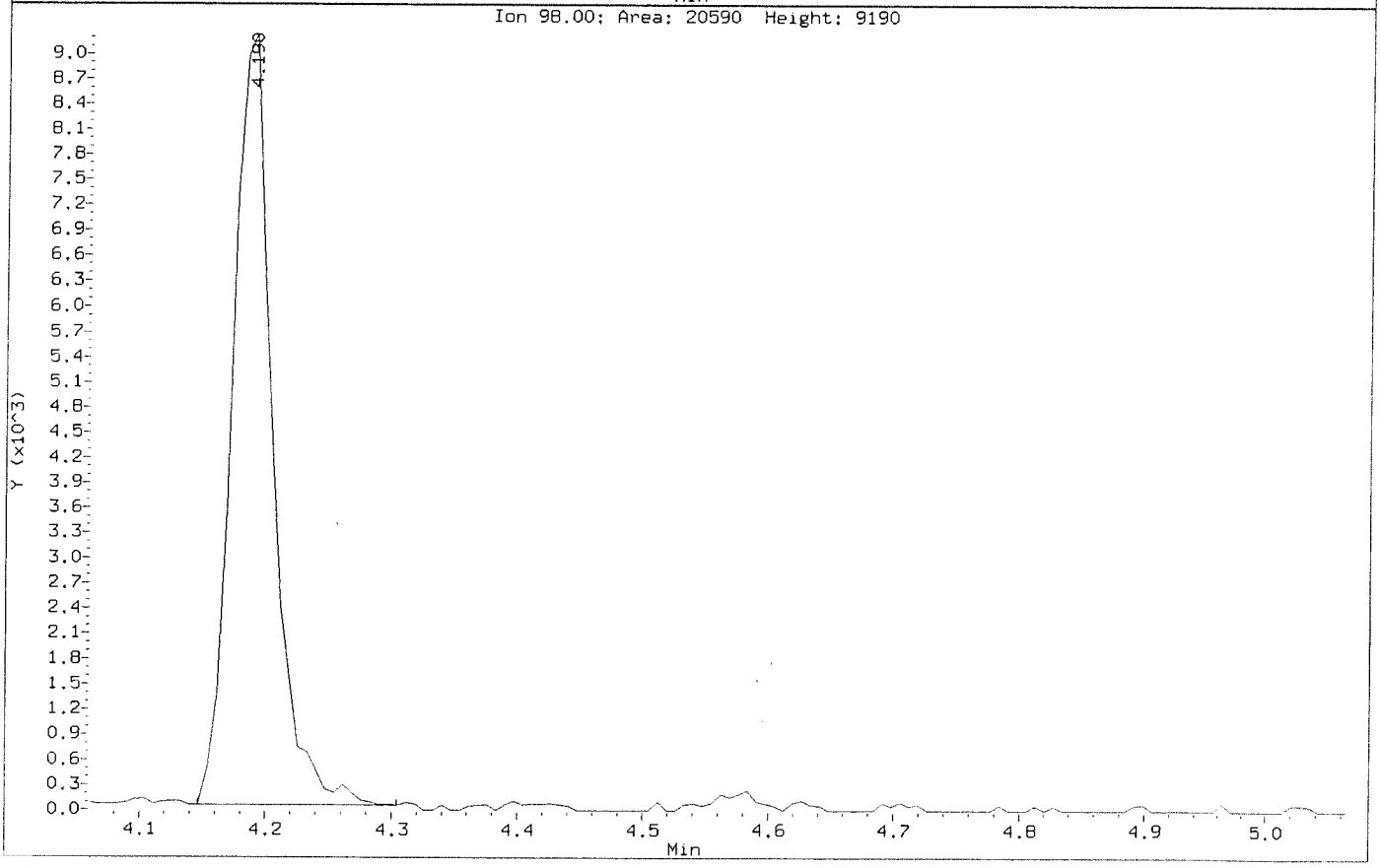
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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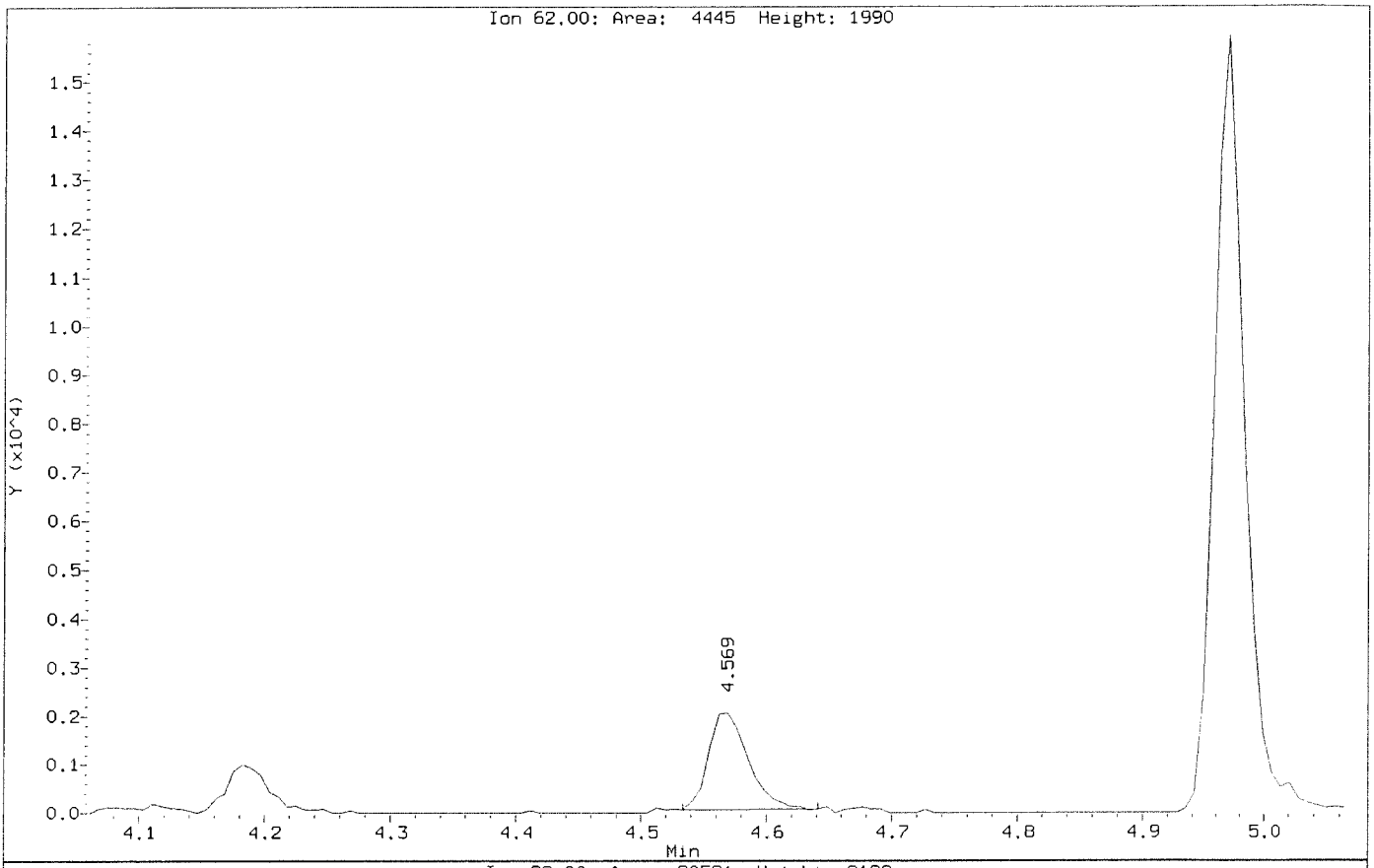
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

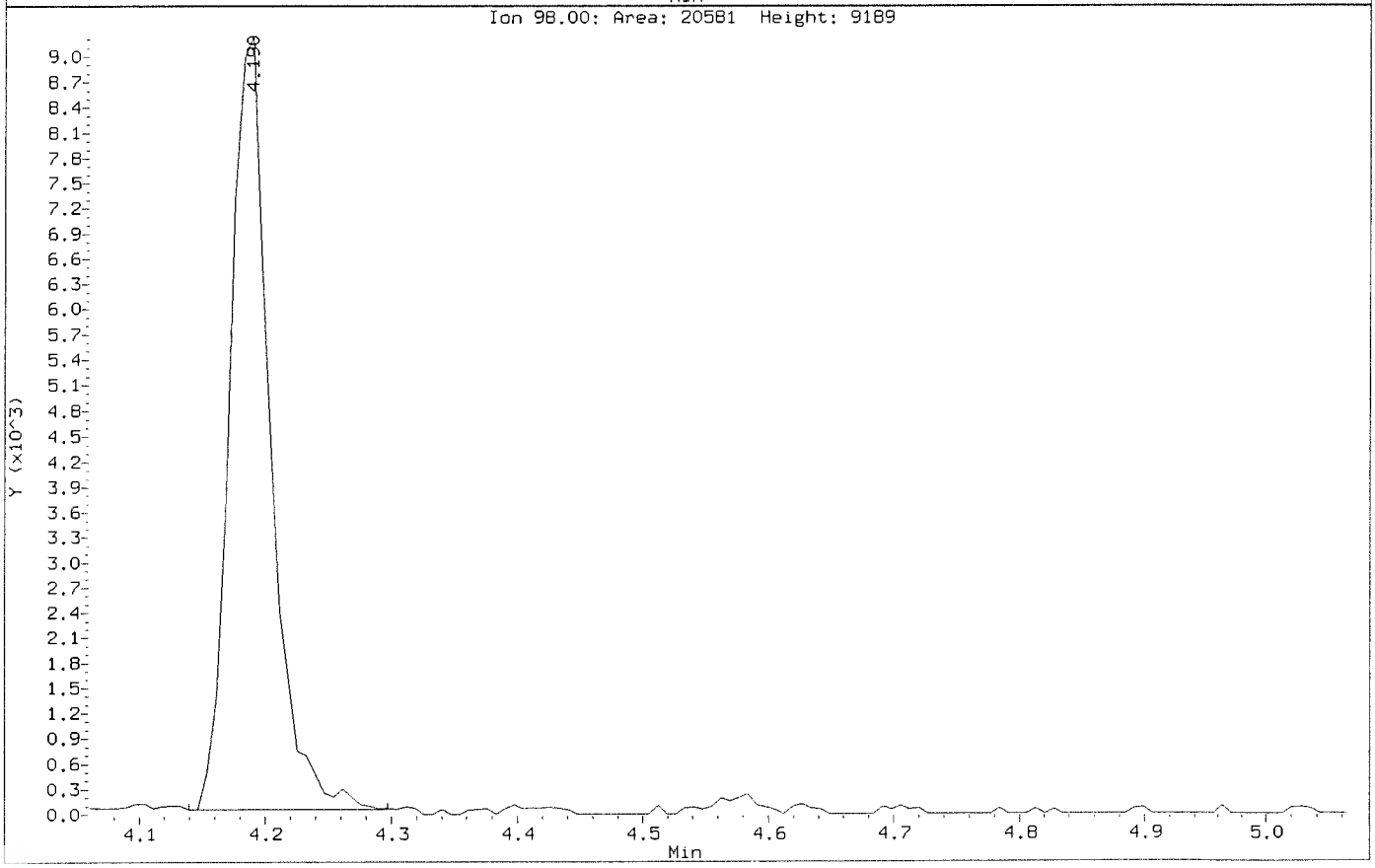




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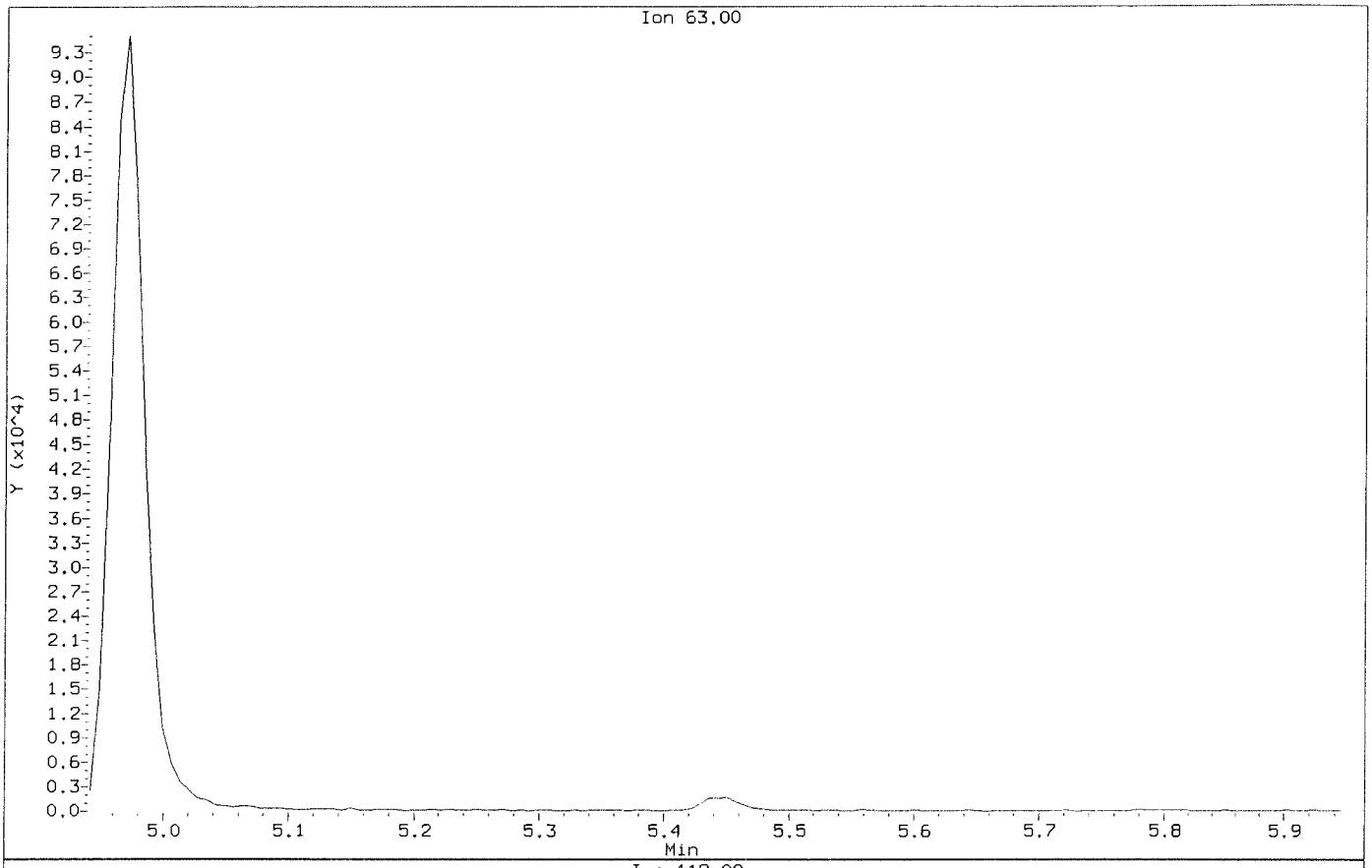
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CAS Number: 107-06-2

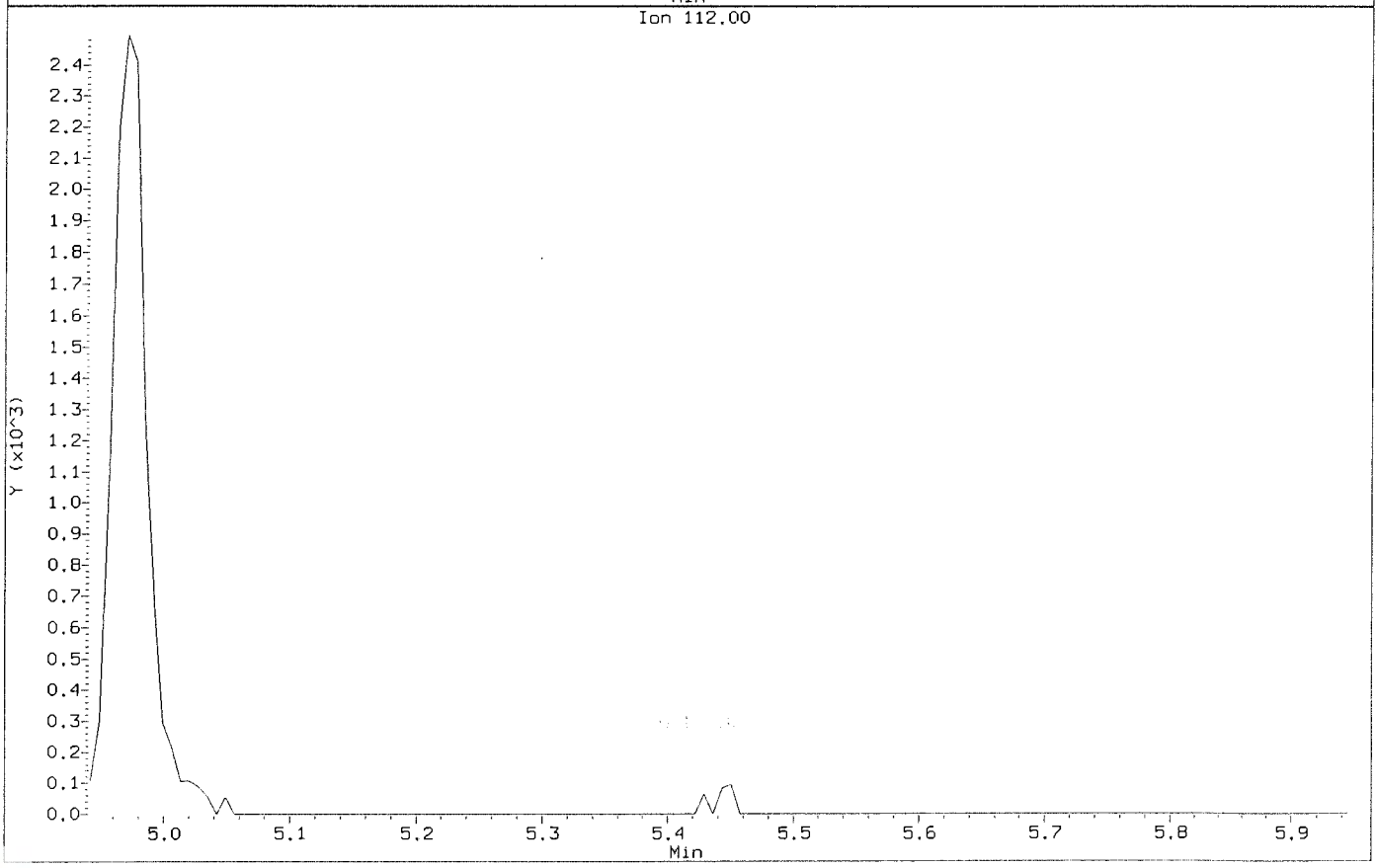




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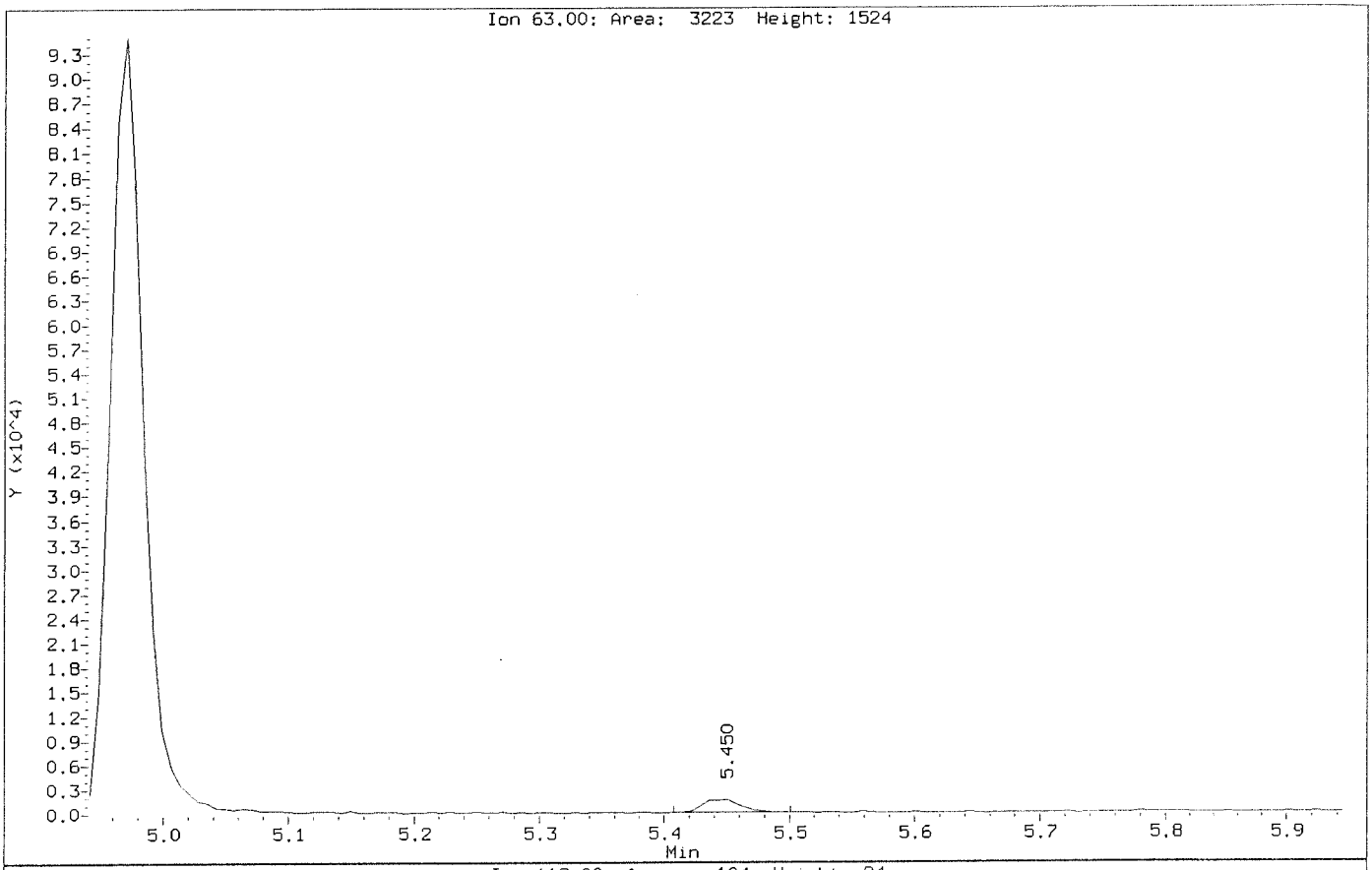
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

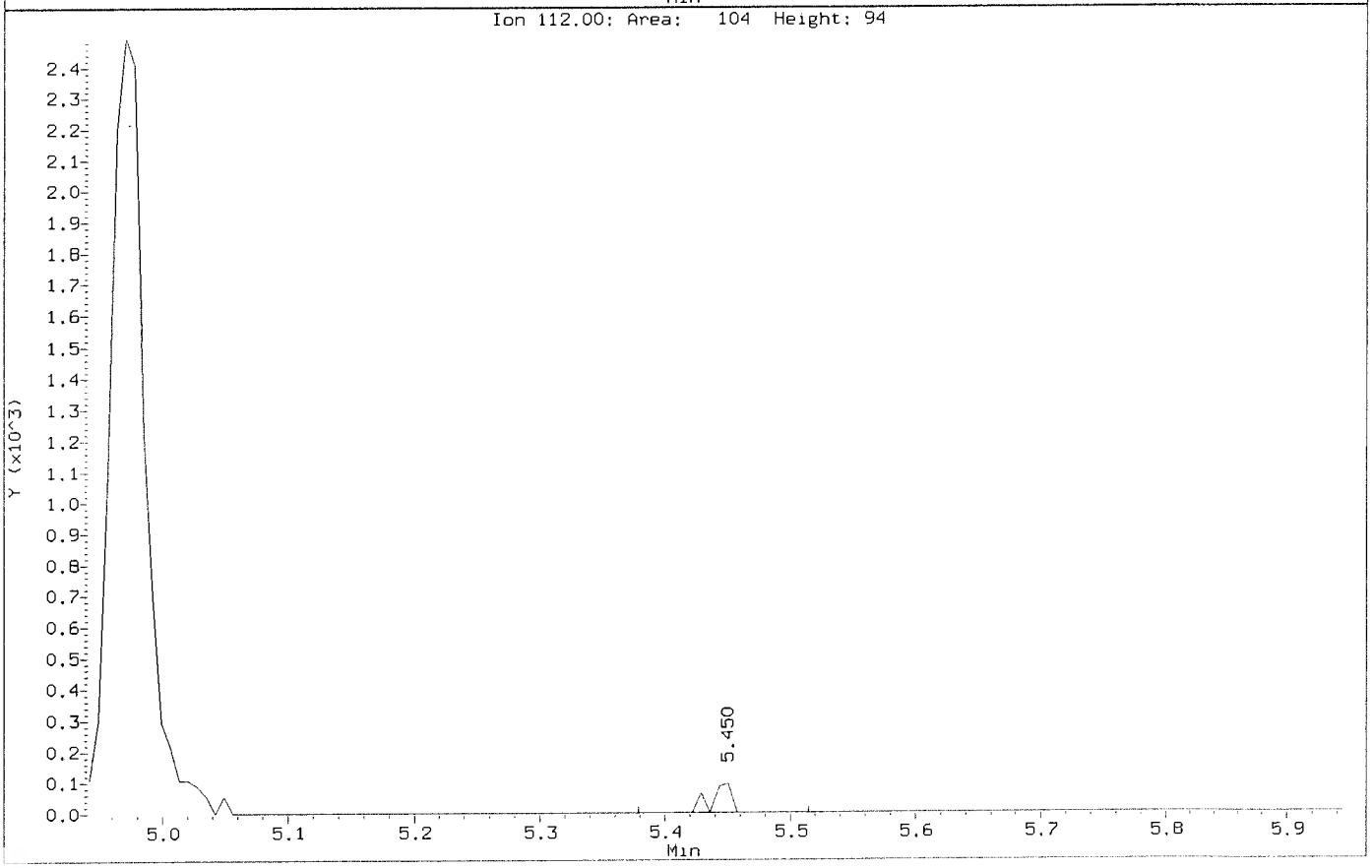




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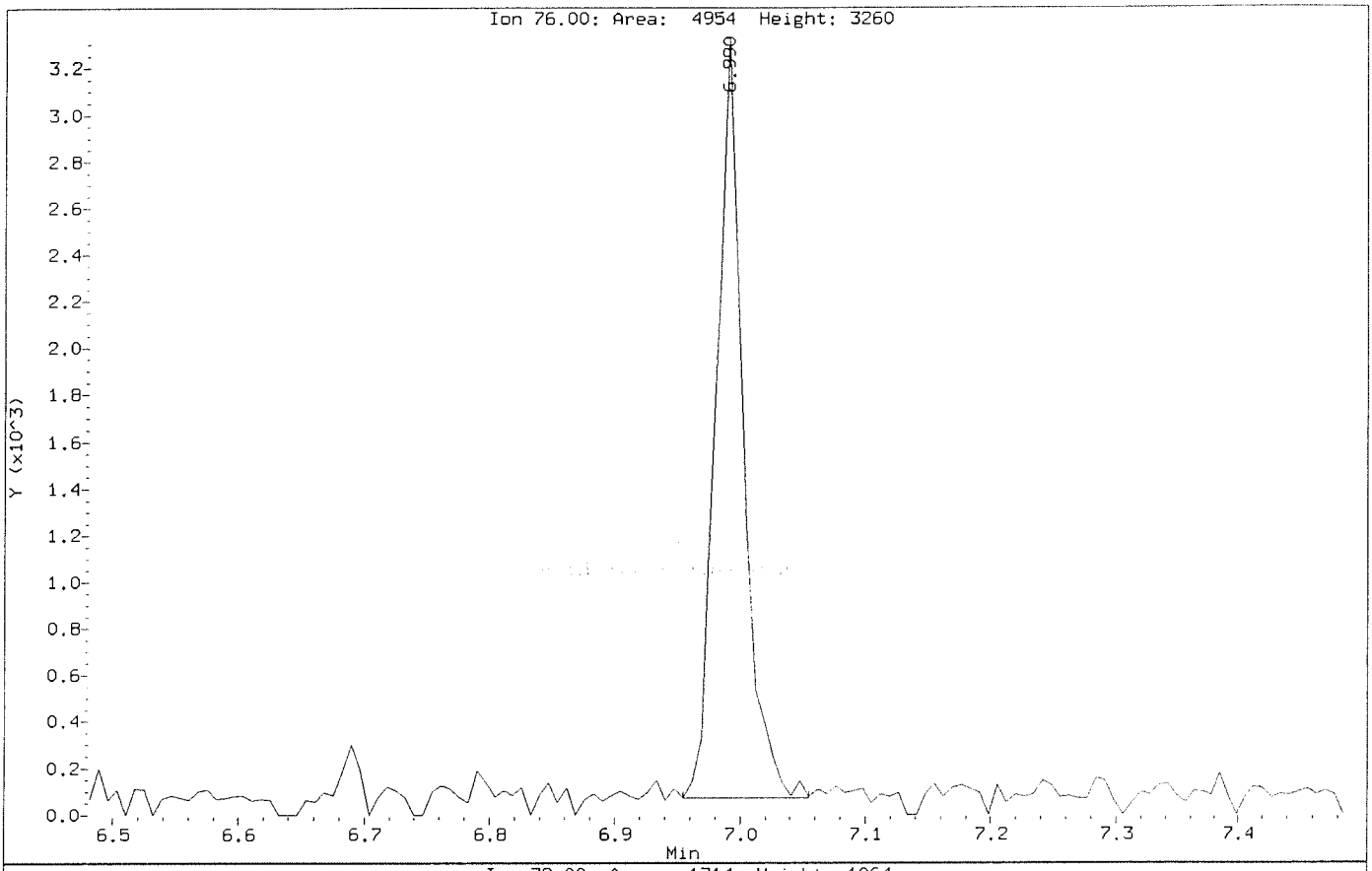
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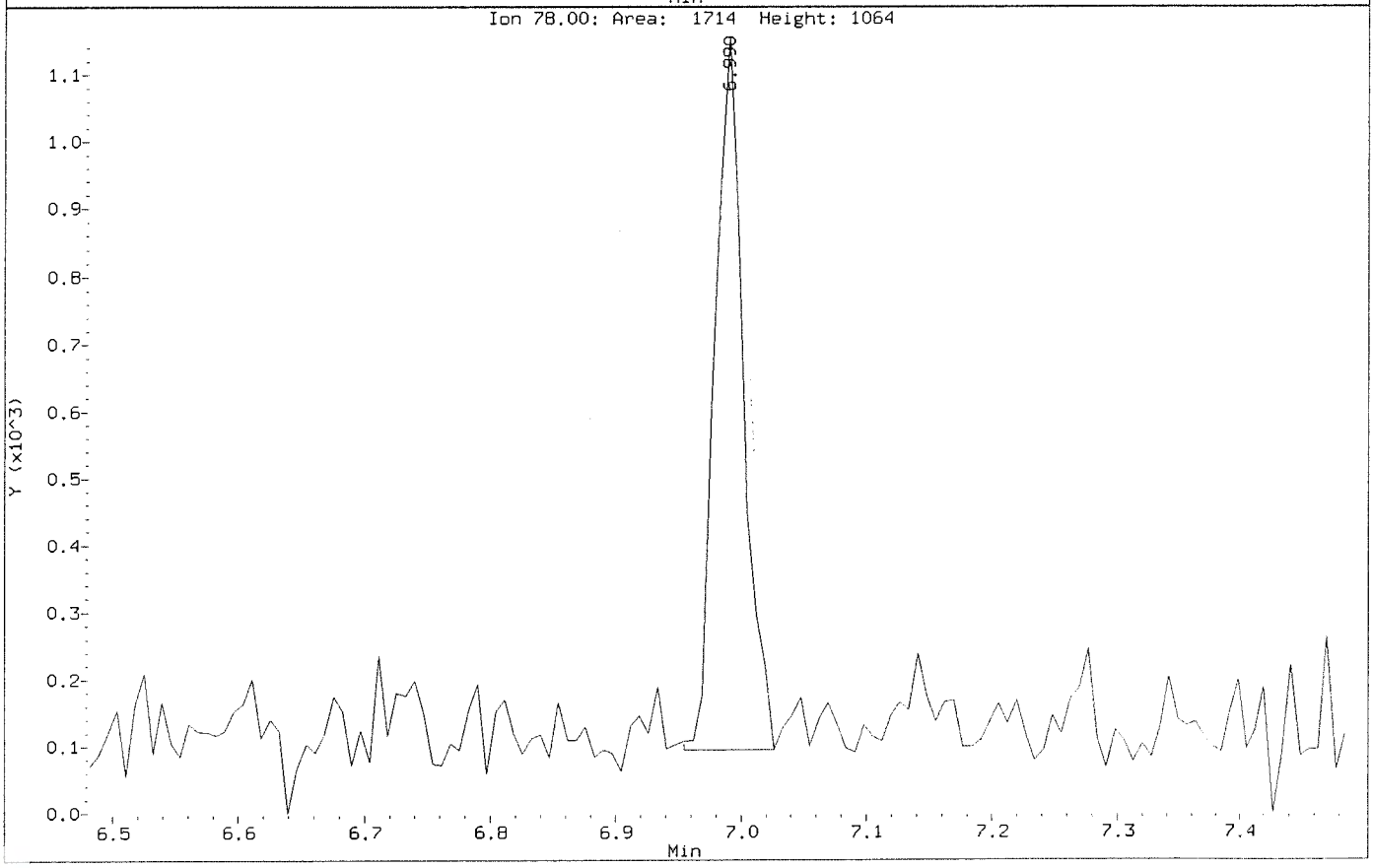




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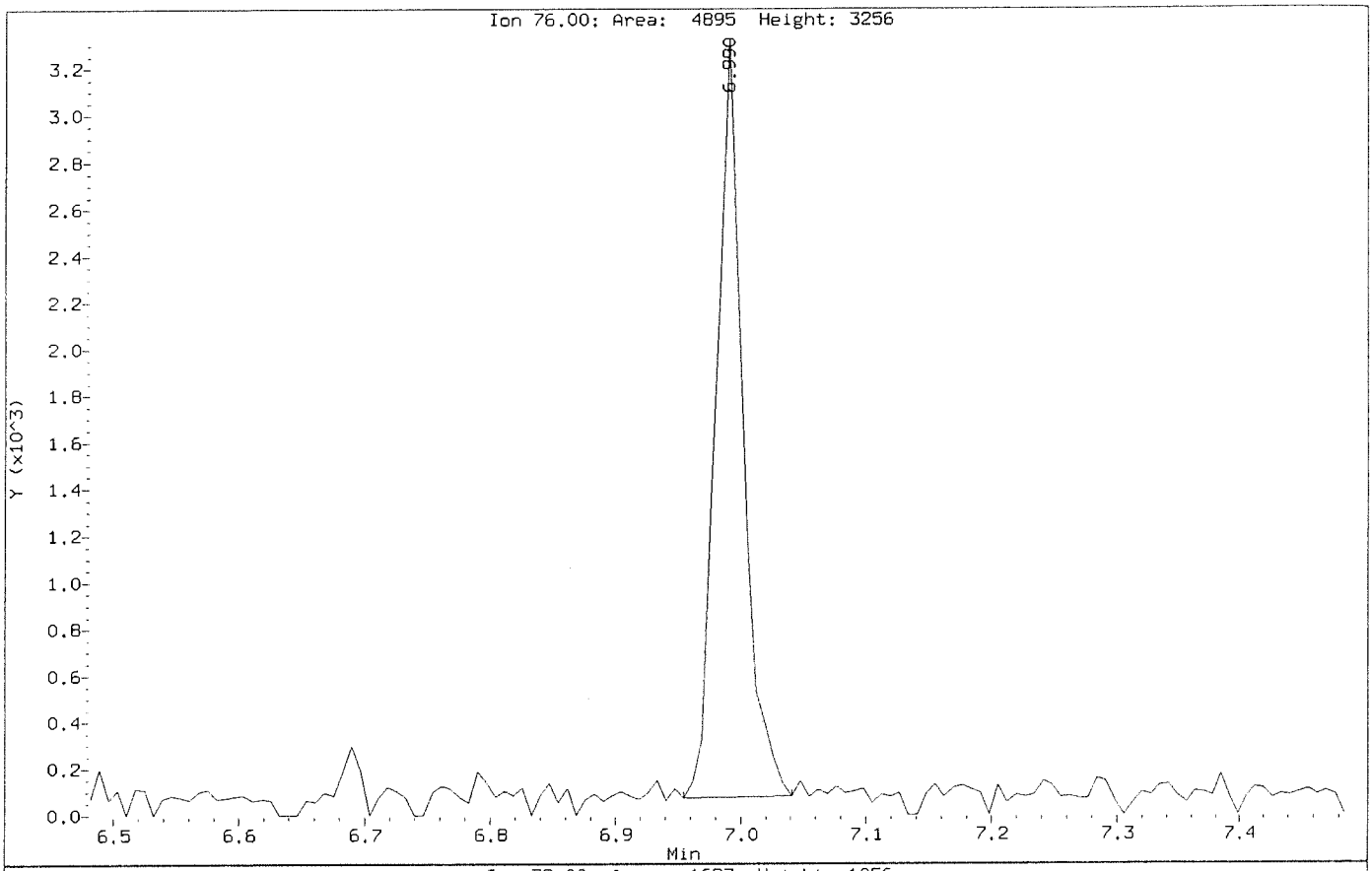
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

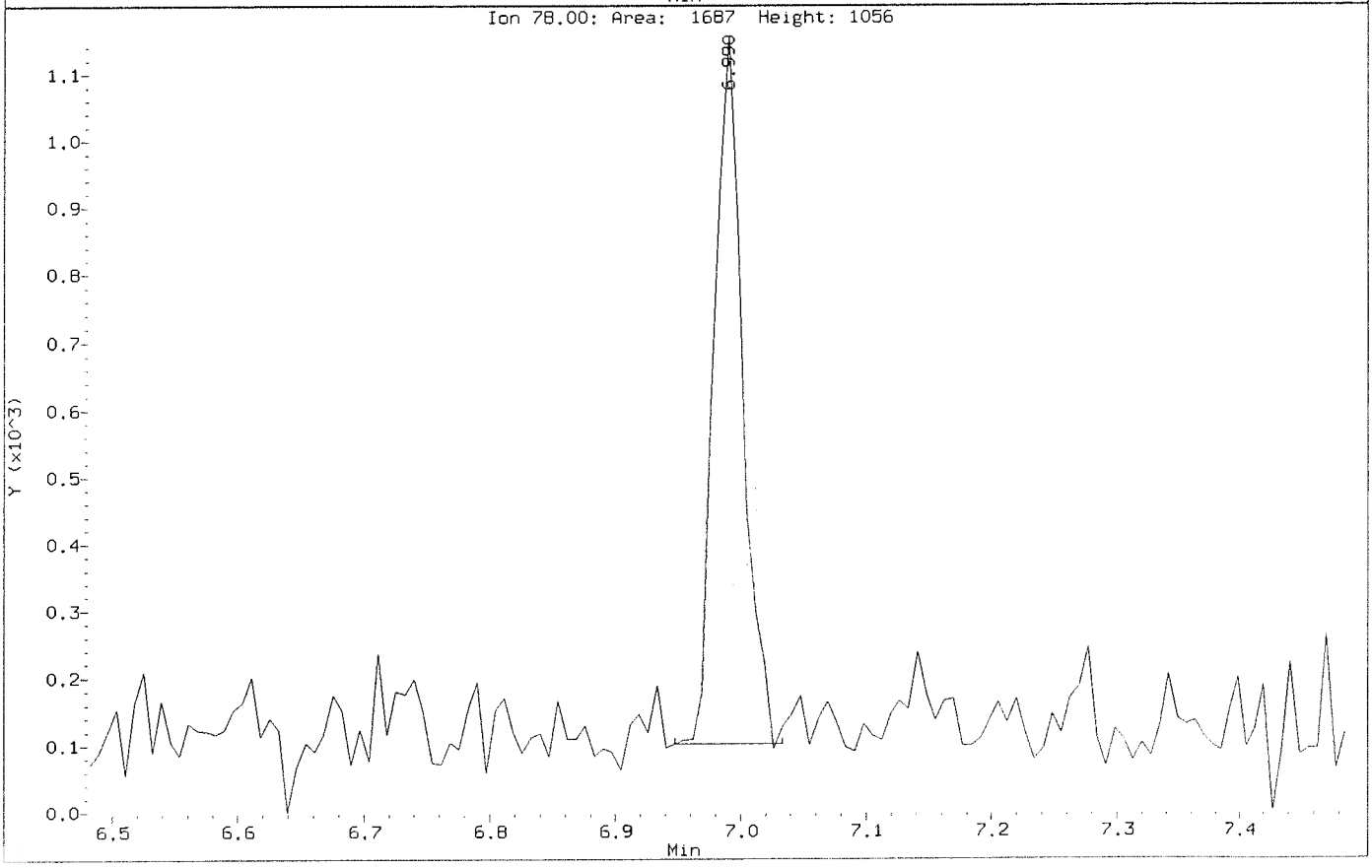




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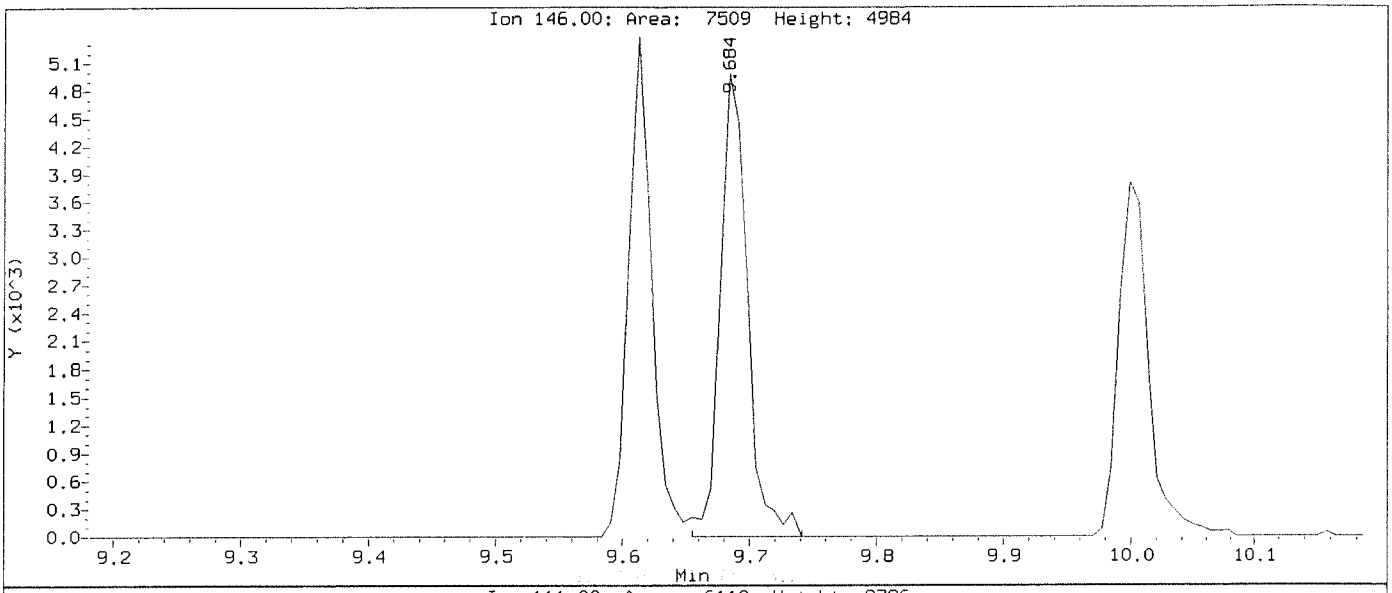
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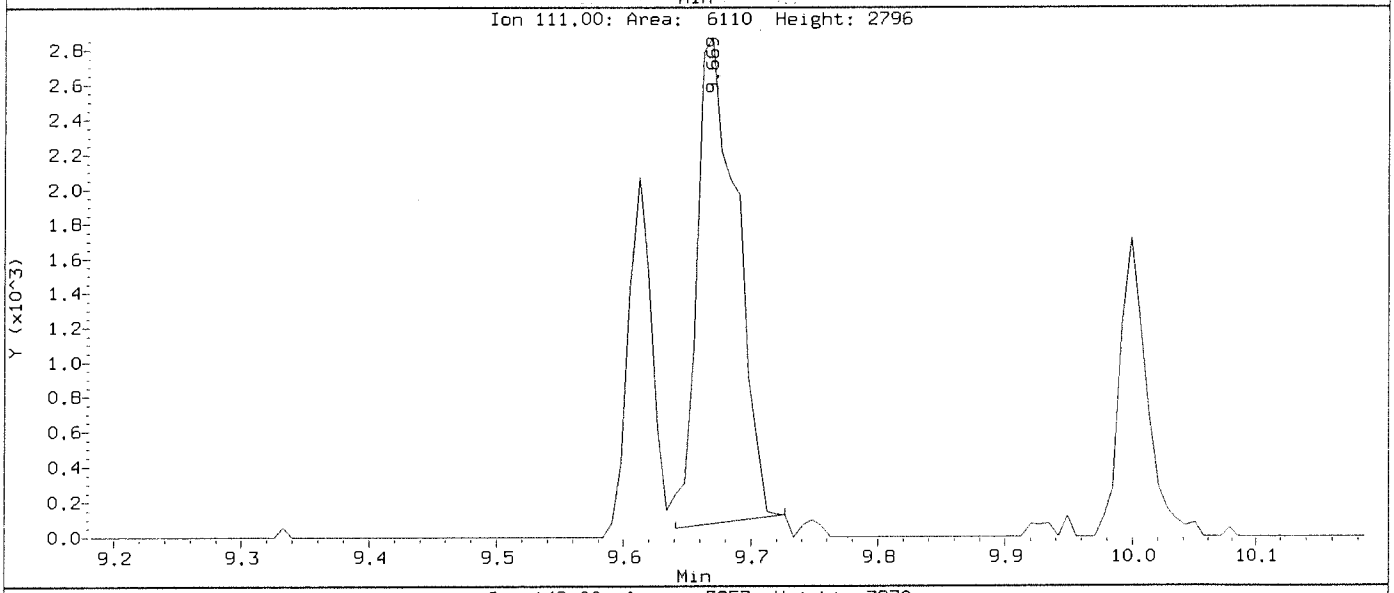


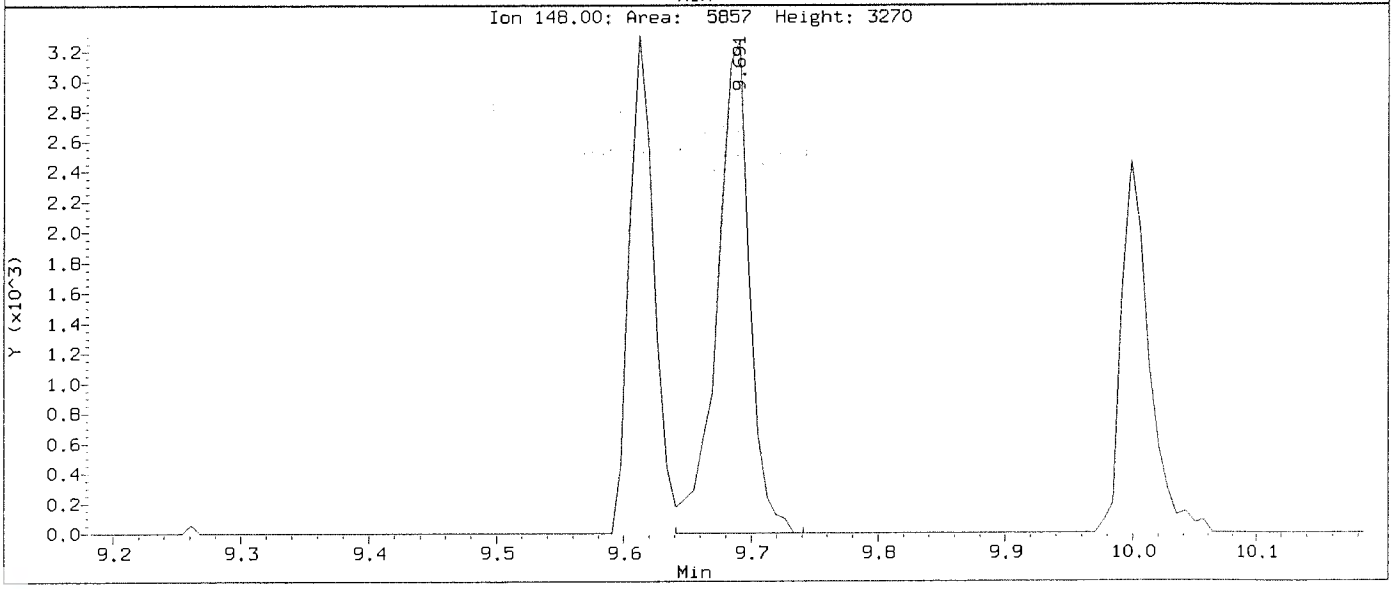


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

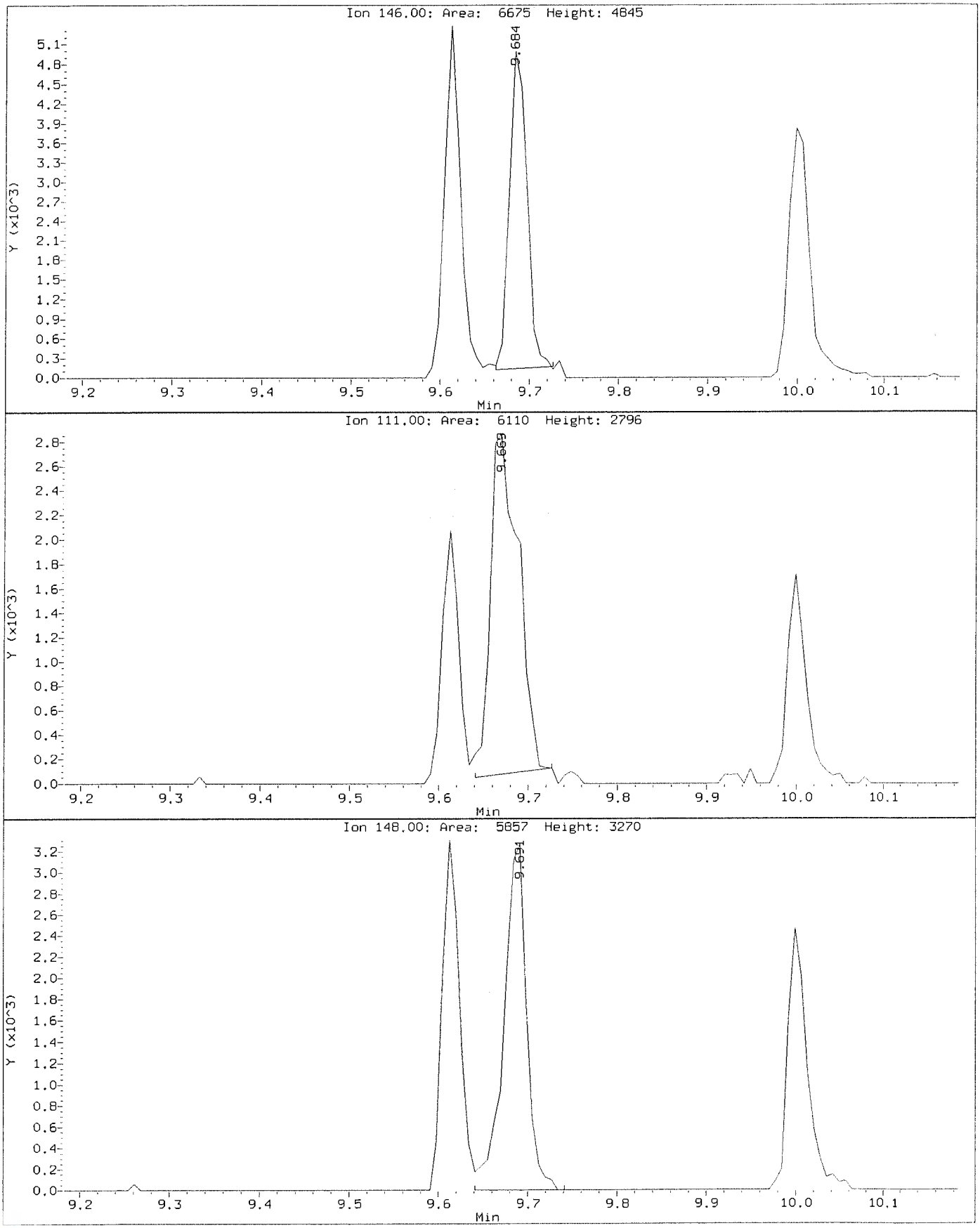






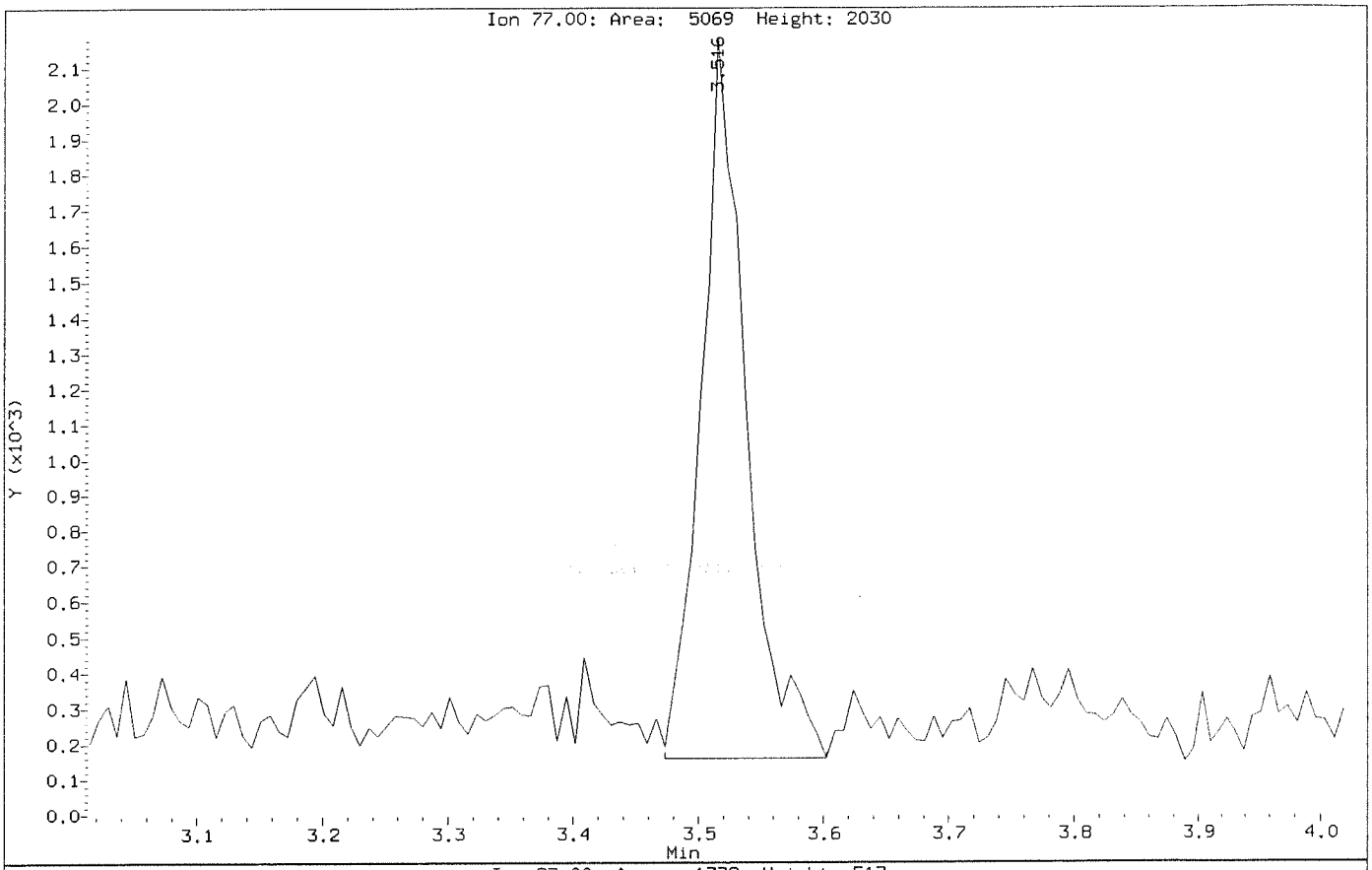
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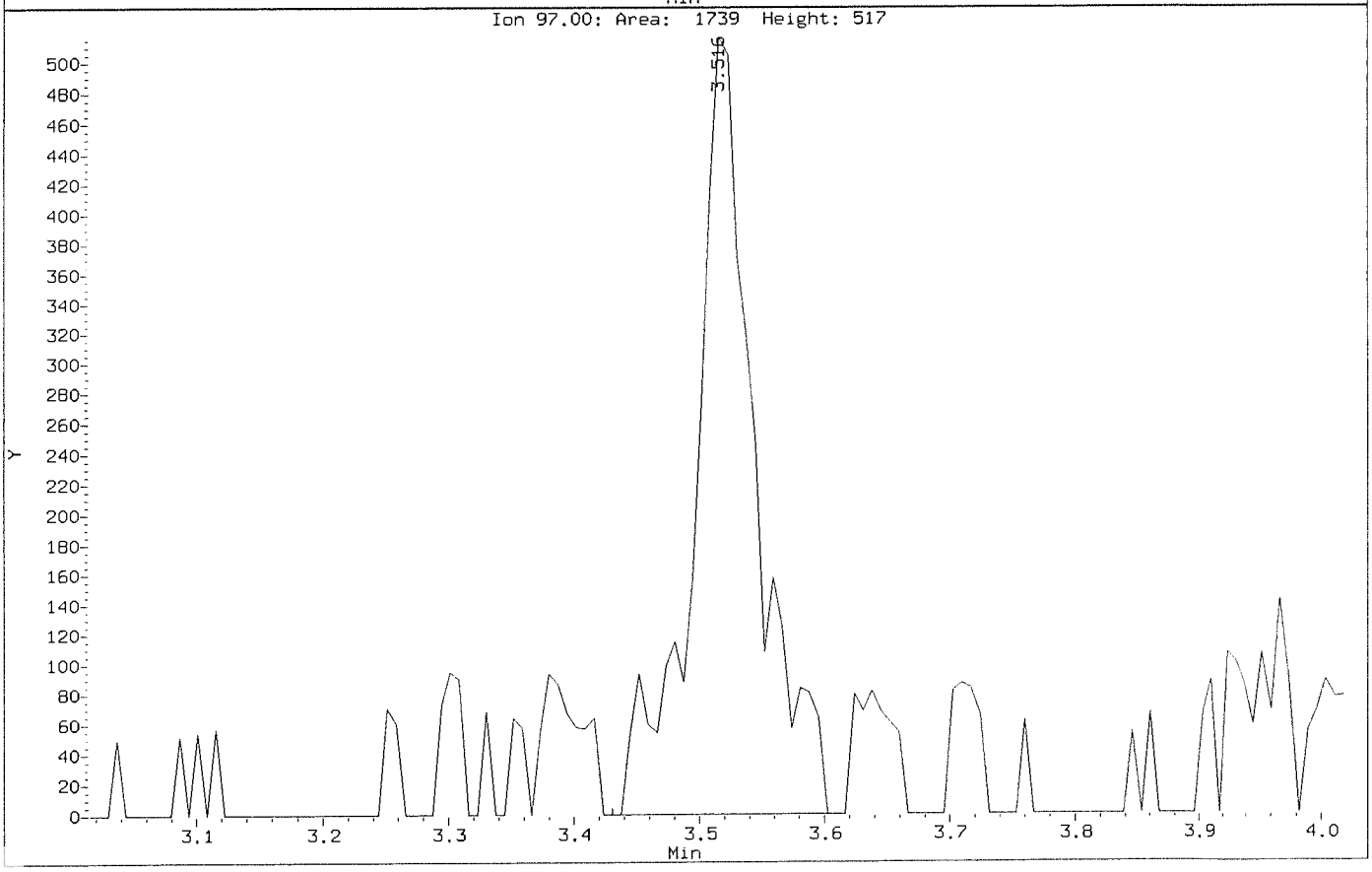
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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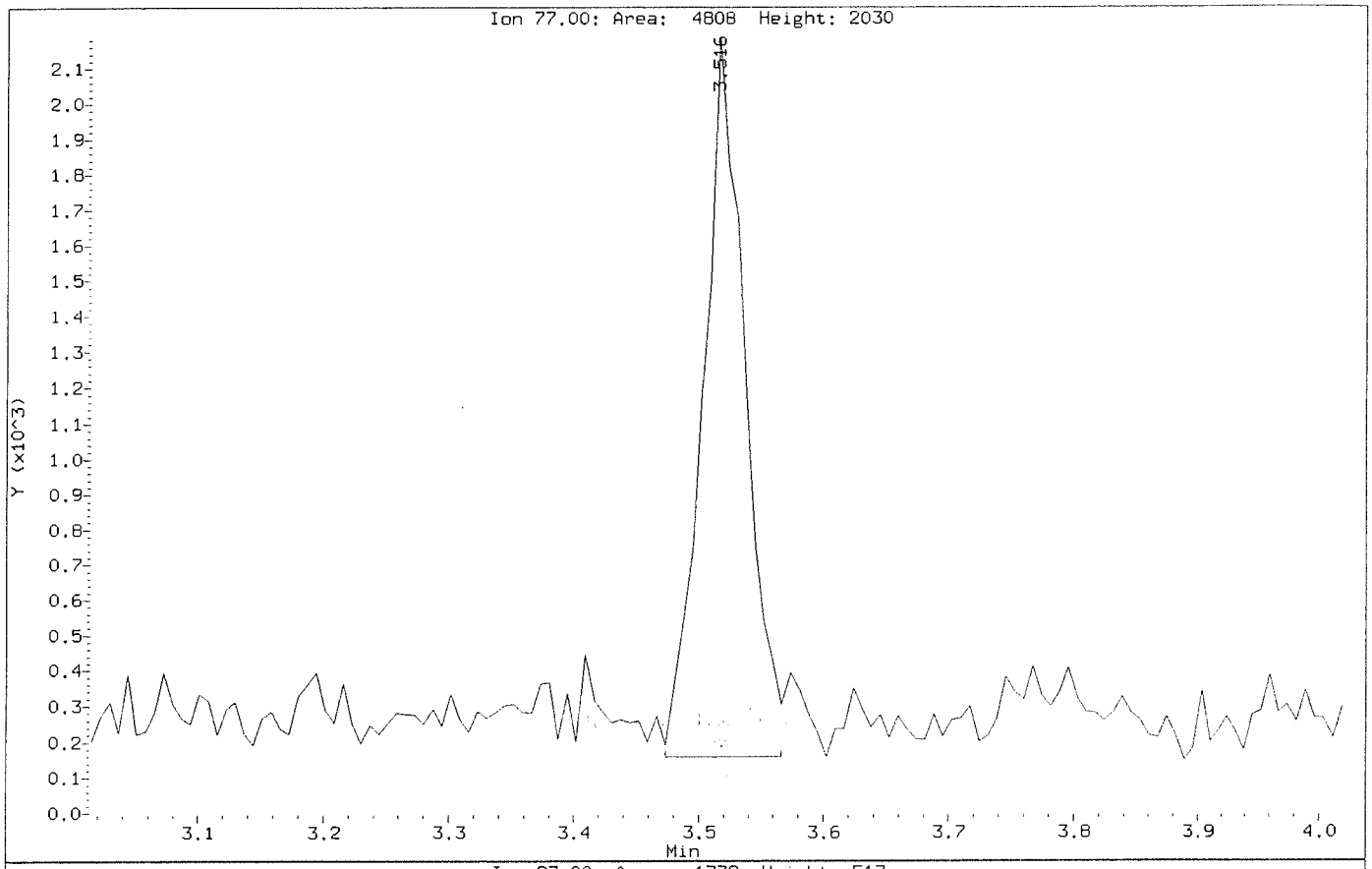
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

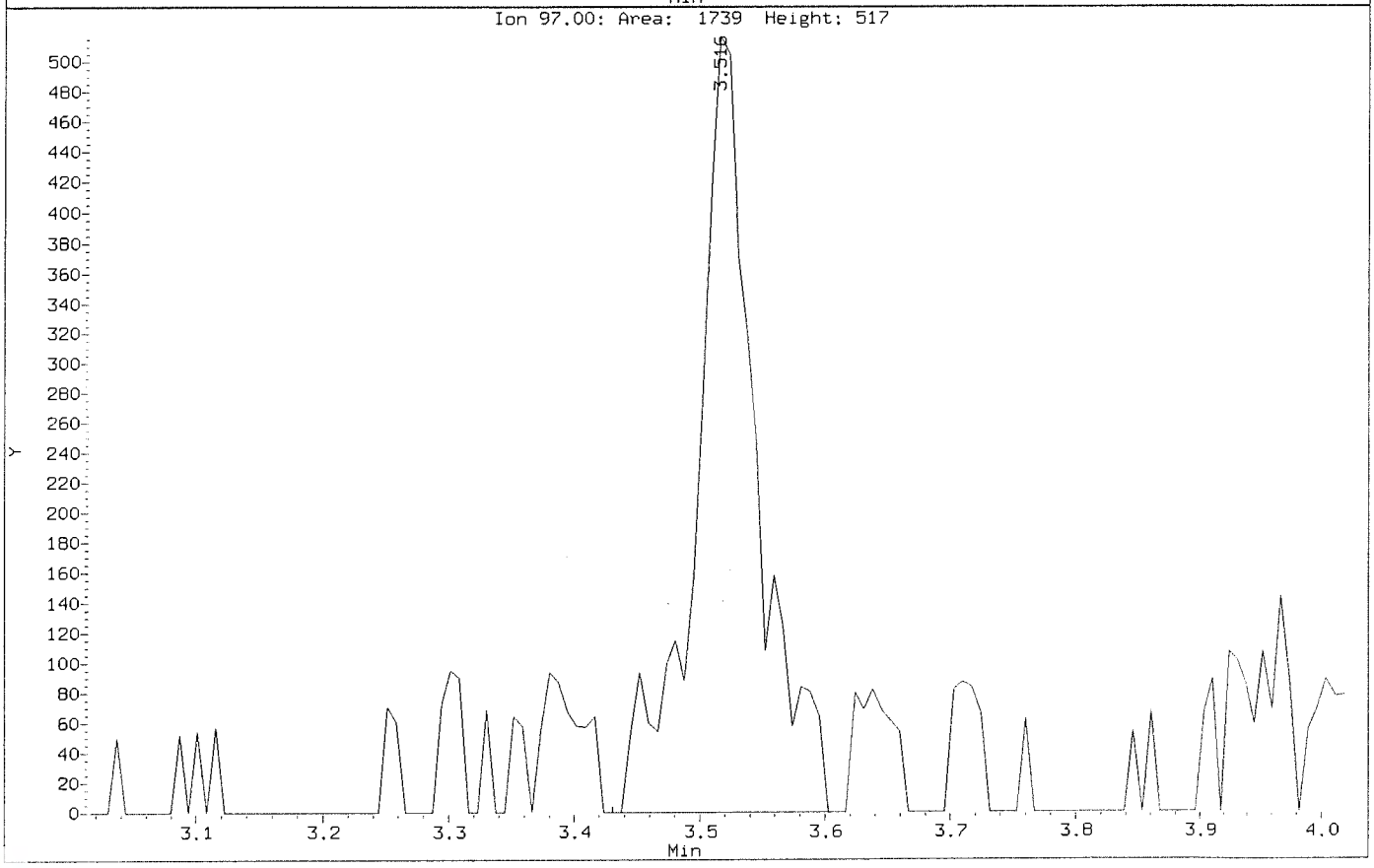




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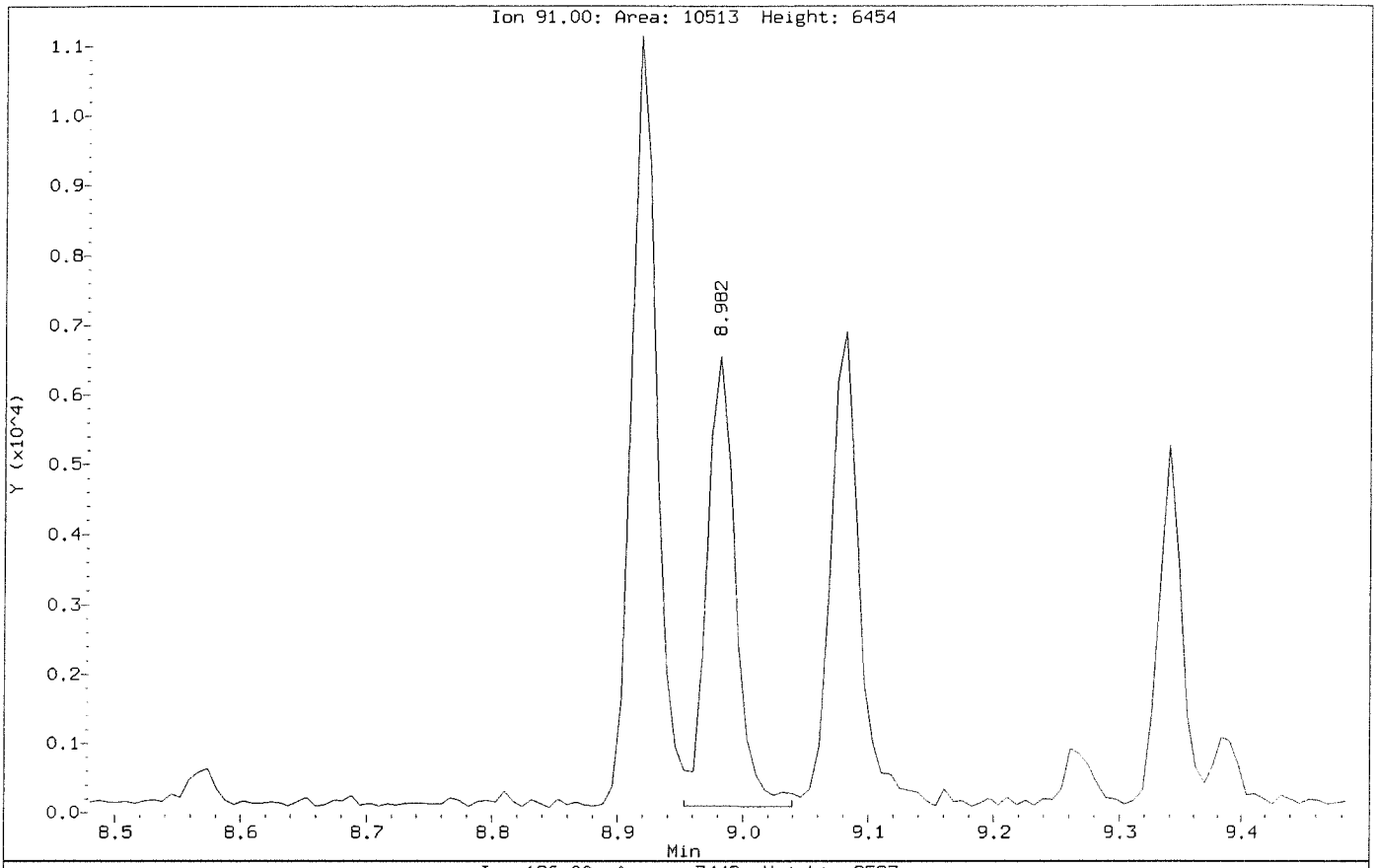
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

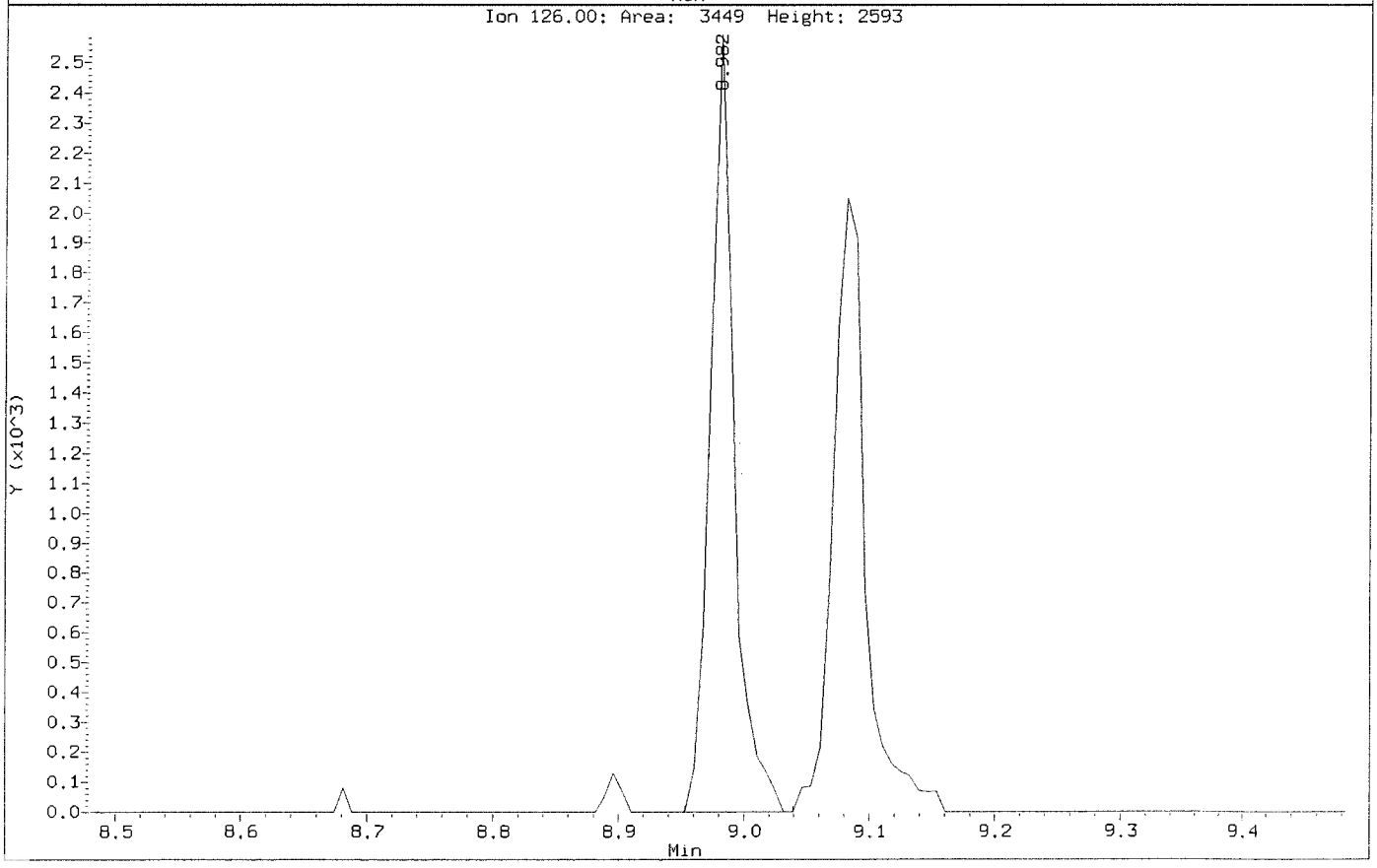




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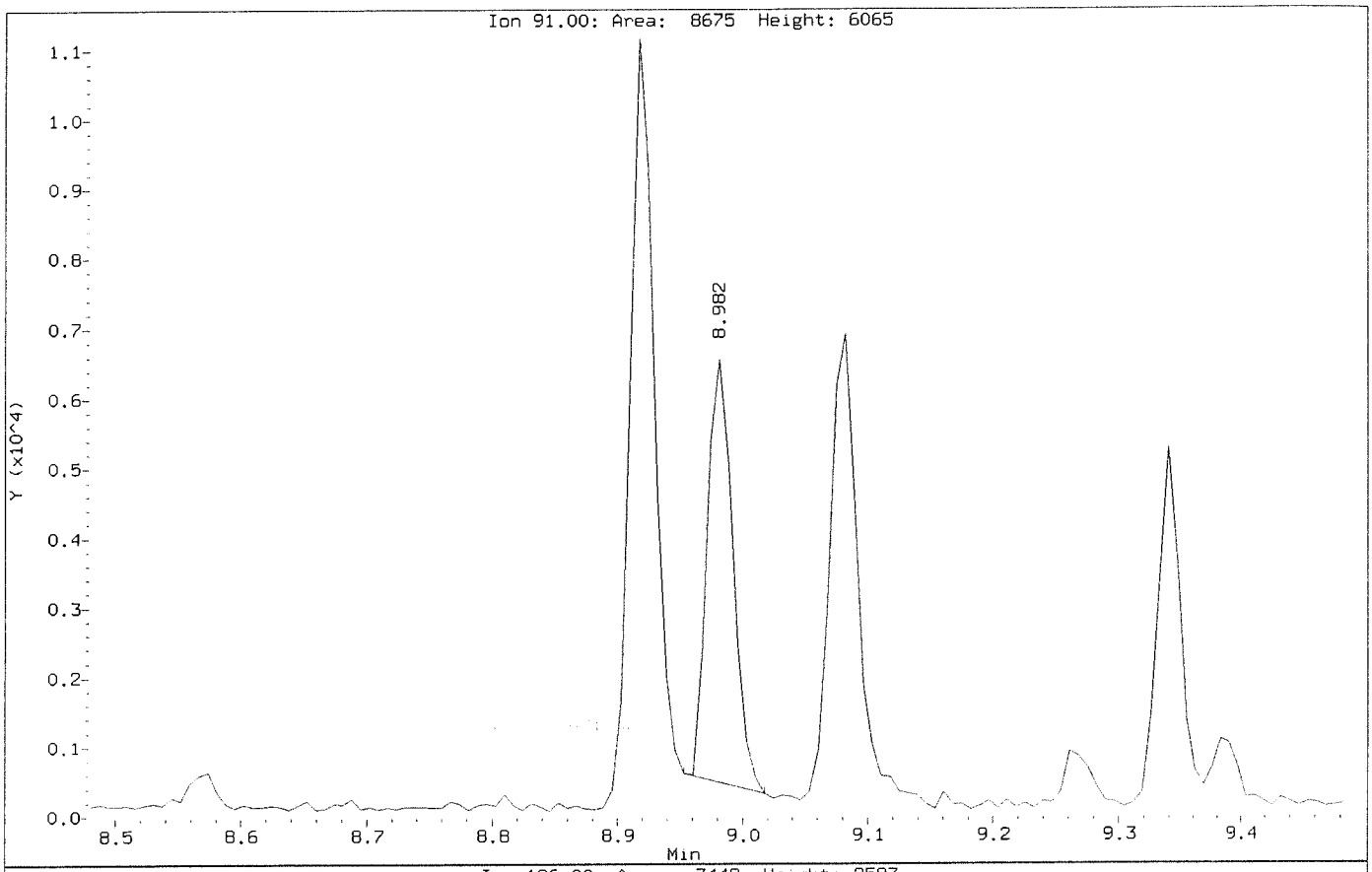
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

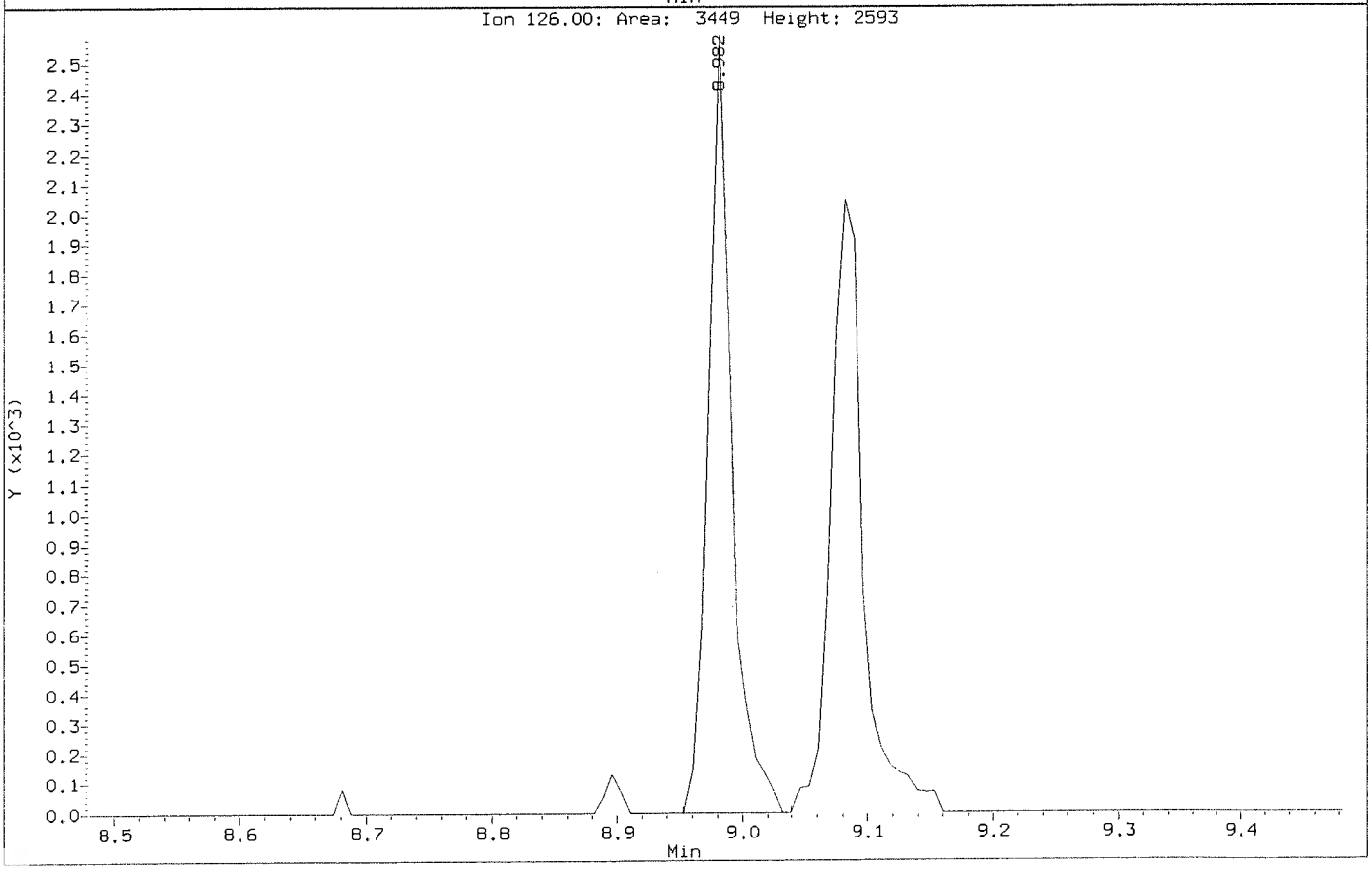




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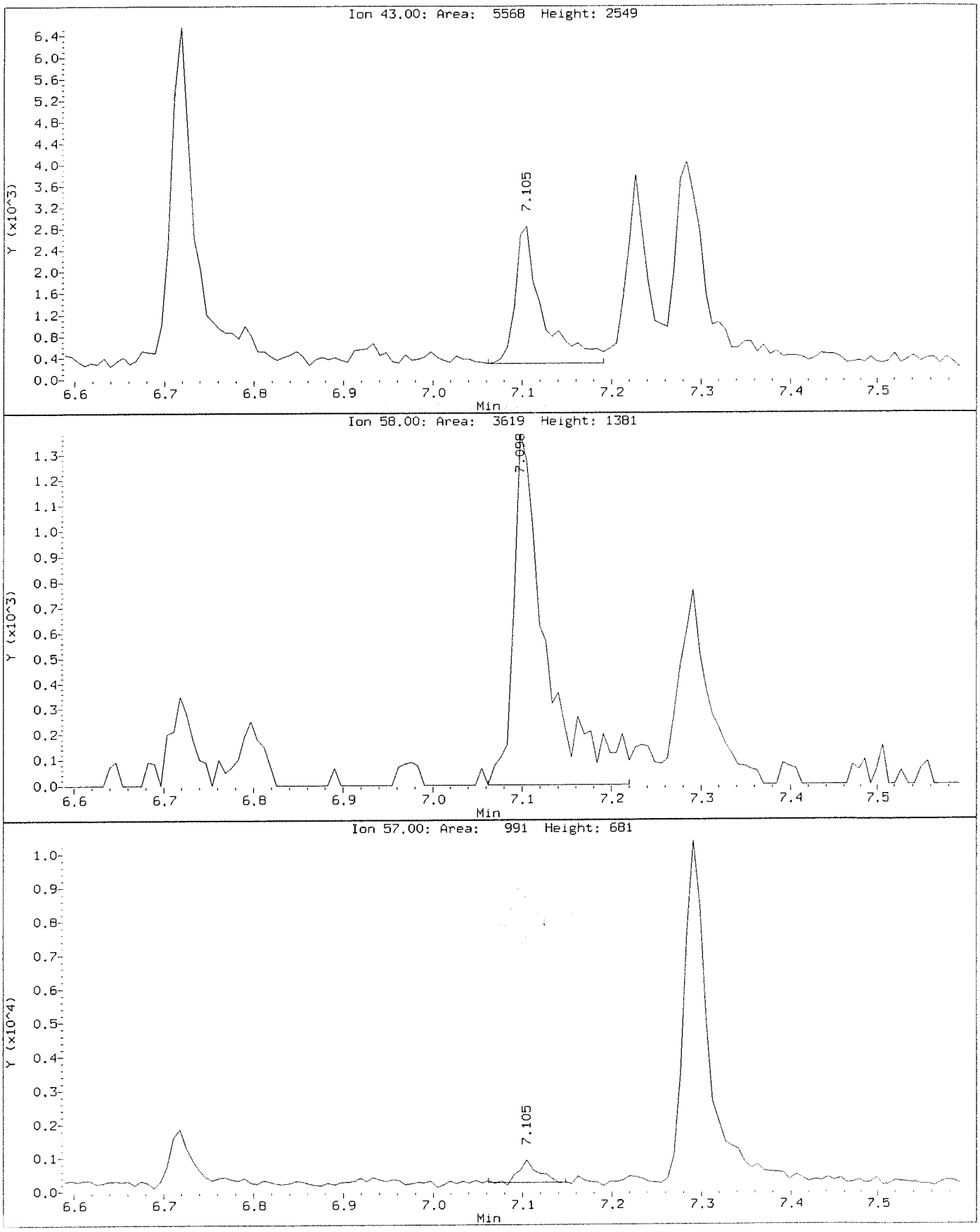
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





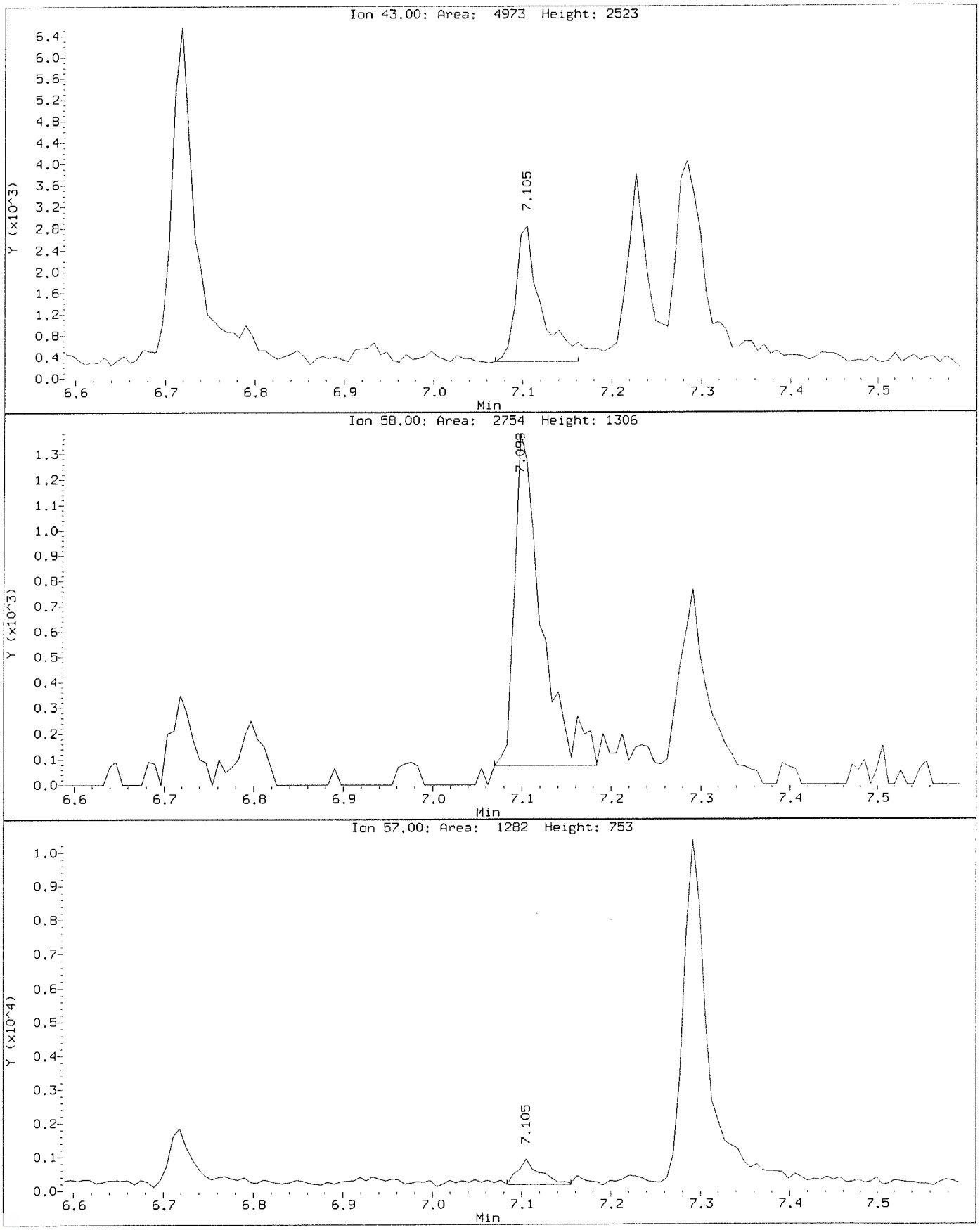
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



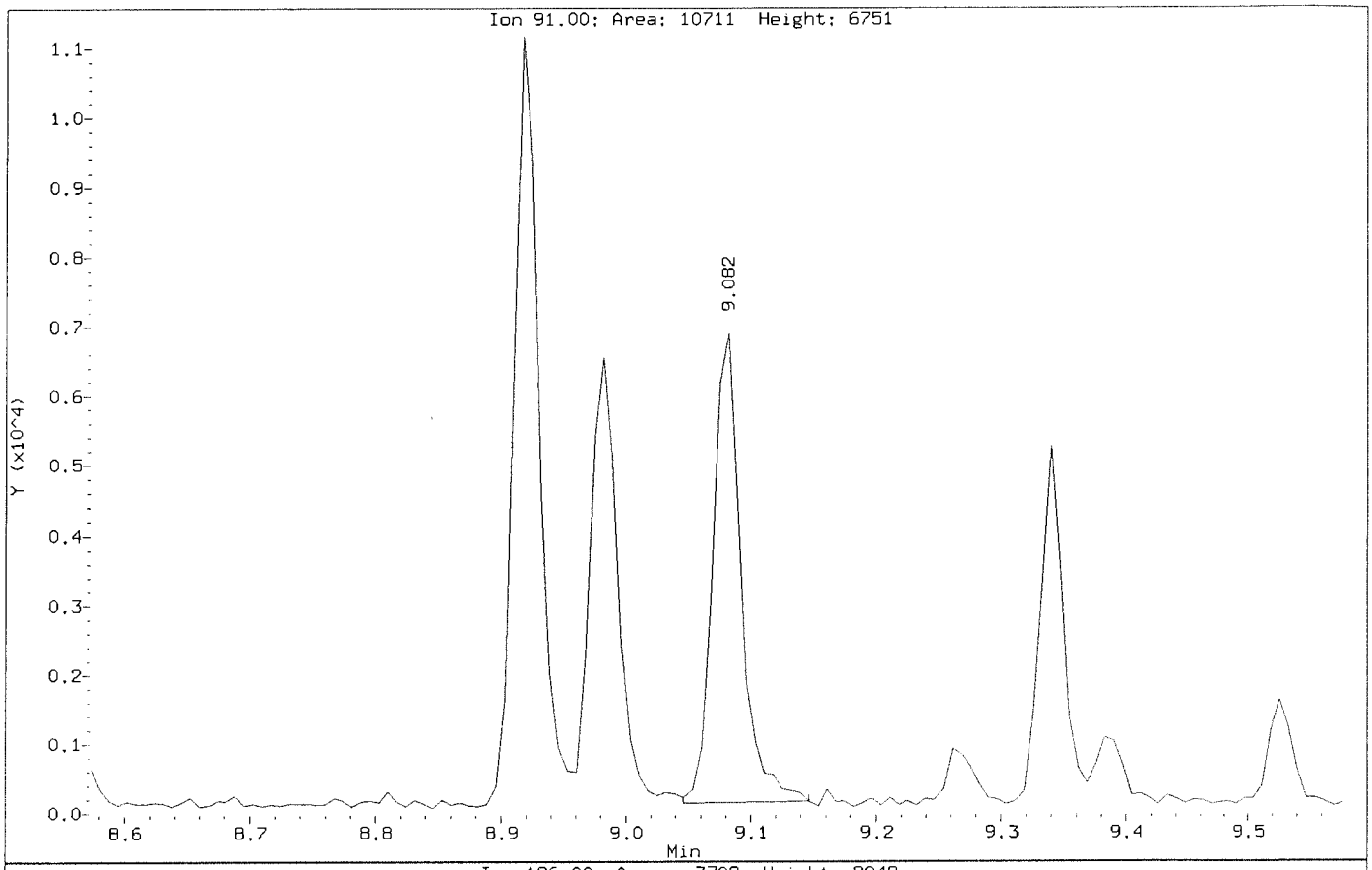
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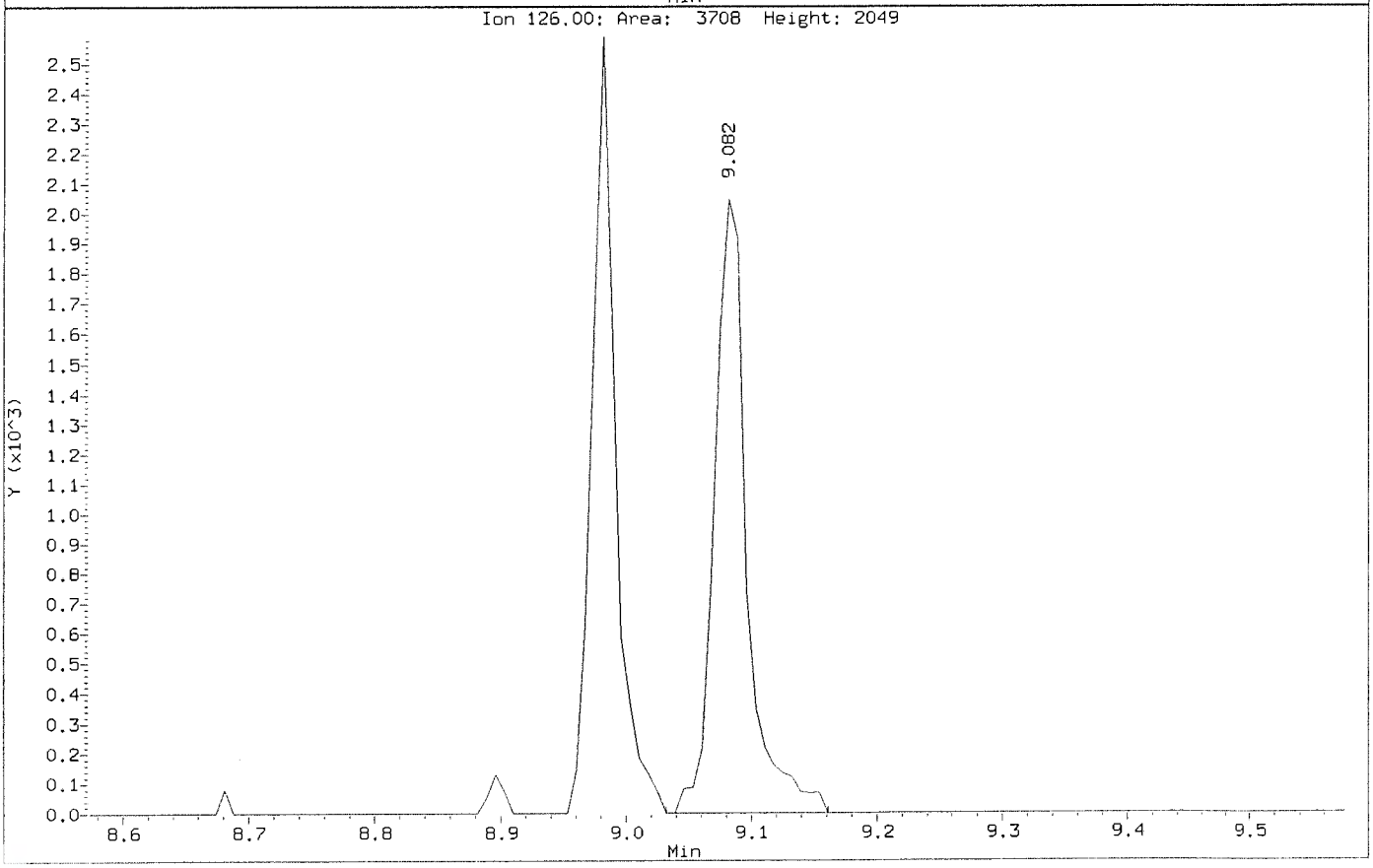
Compound: 2-Hexanone
CAS Number: 591-78-6



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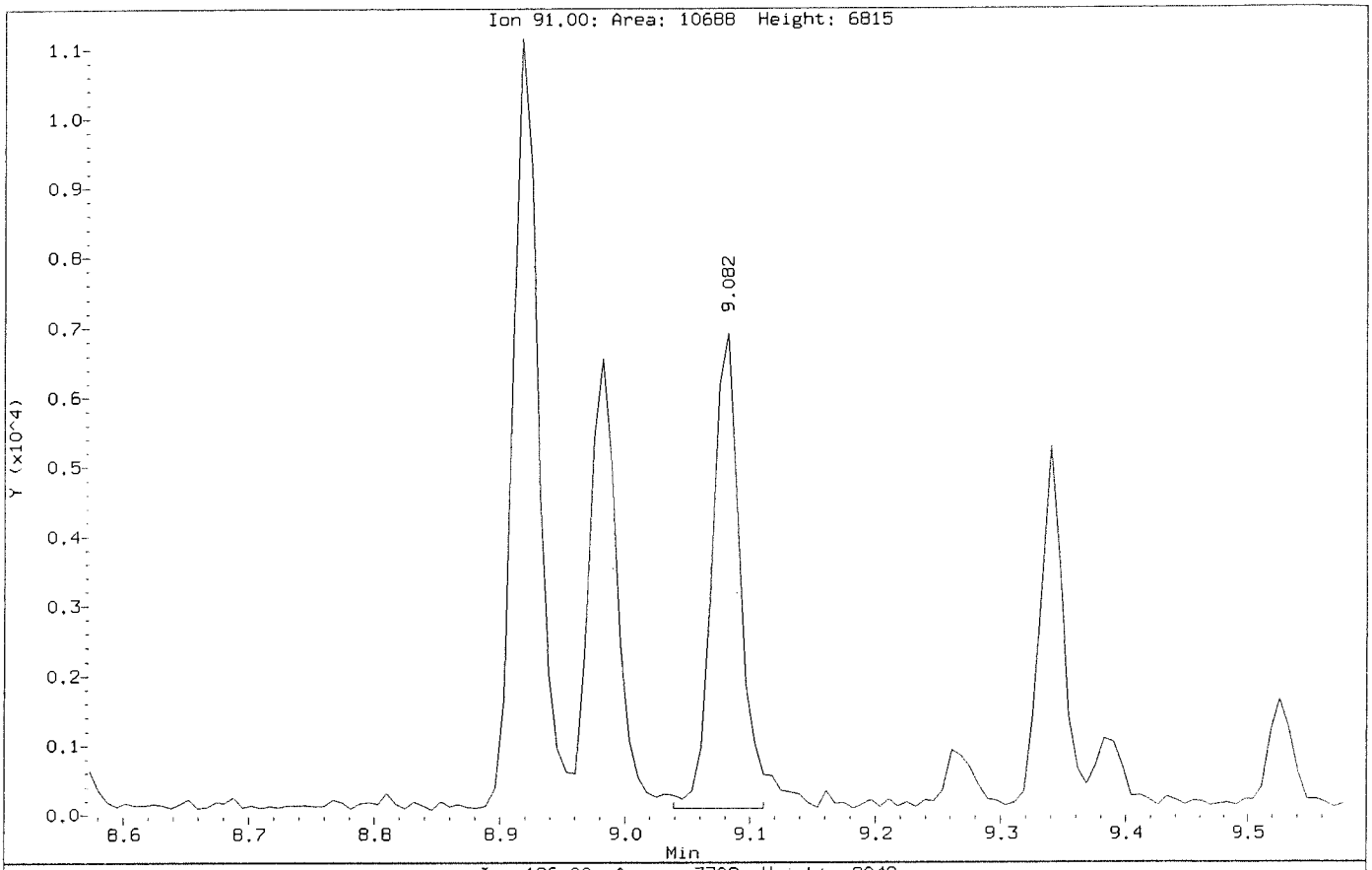
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

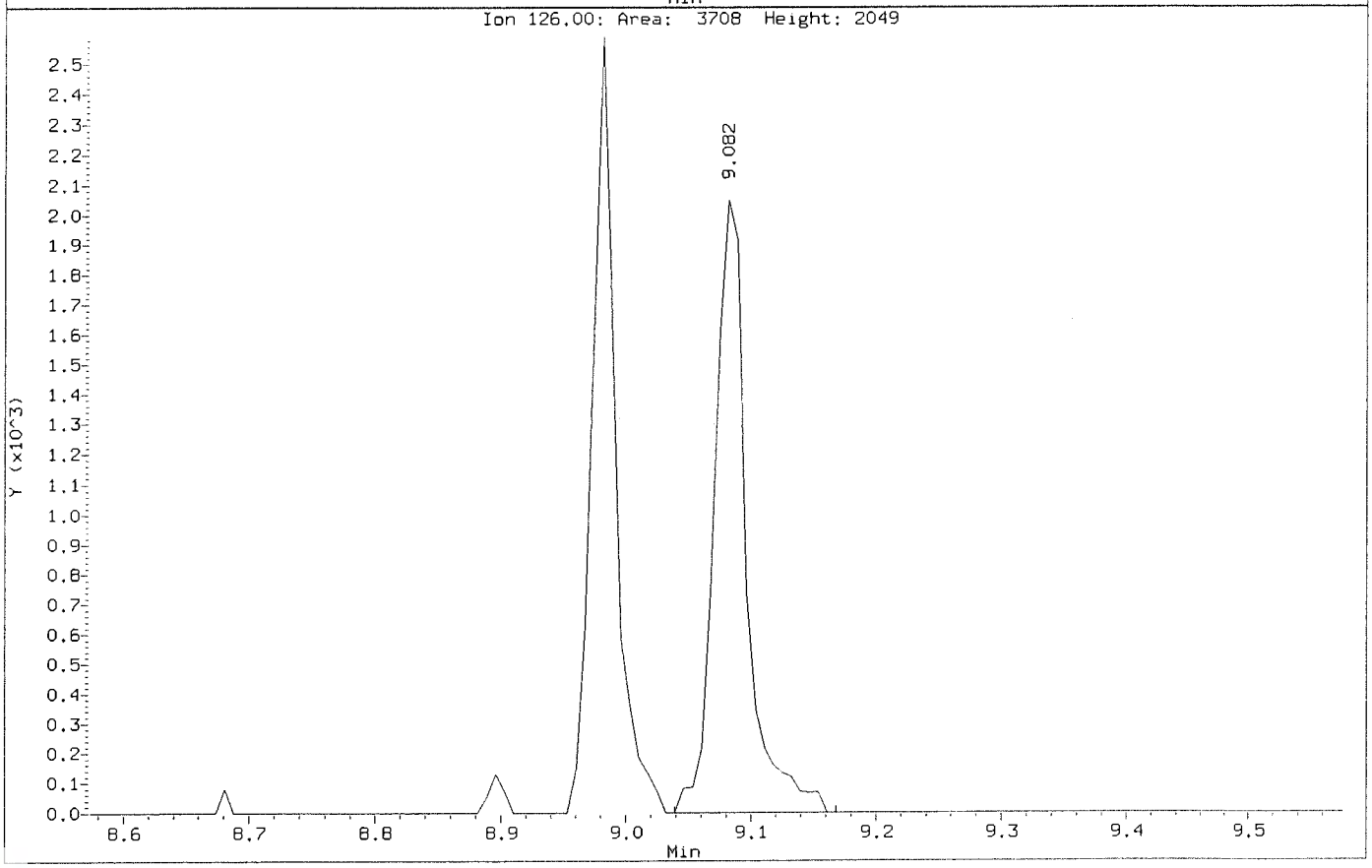




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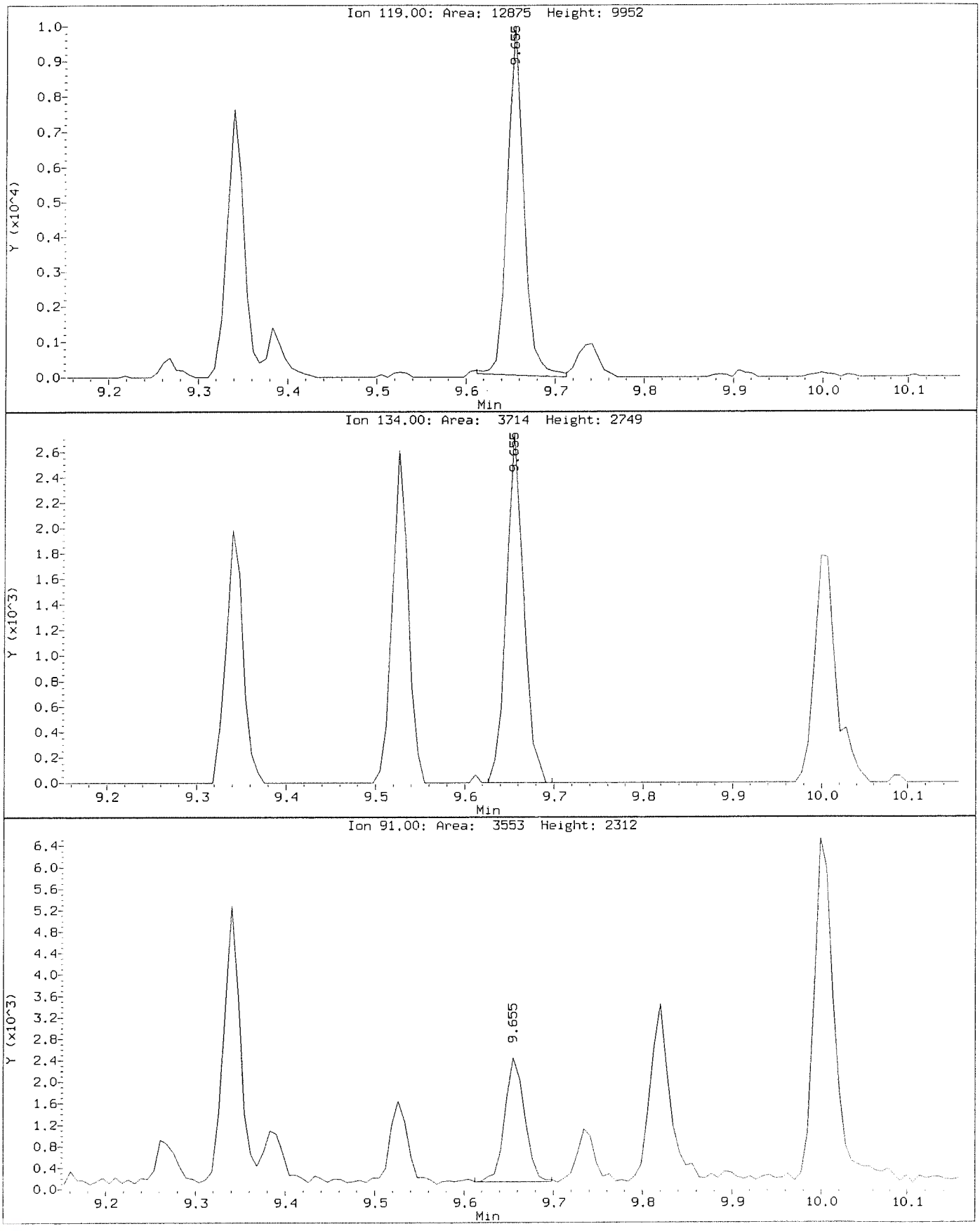
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





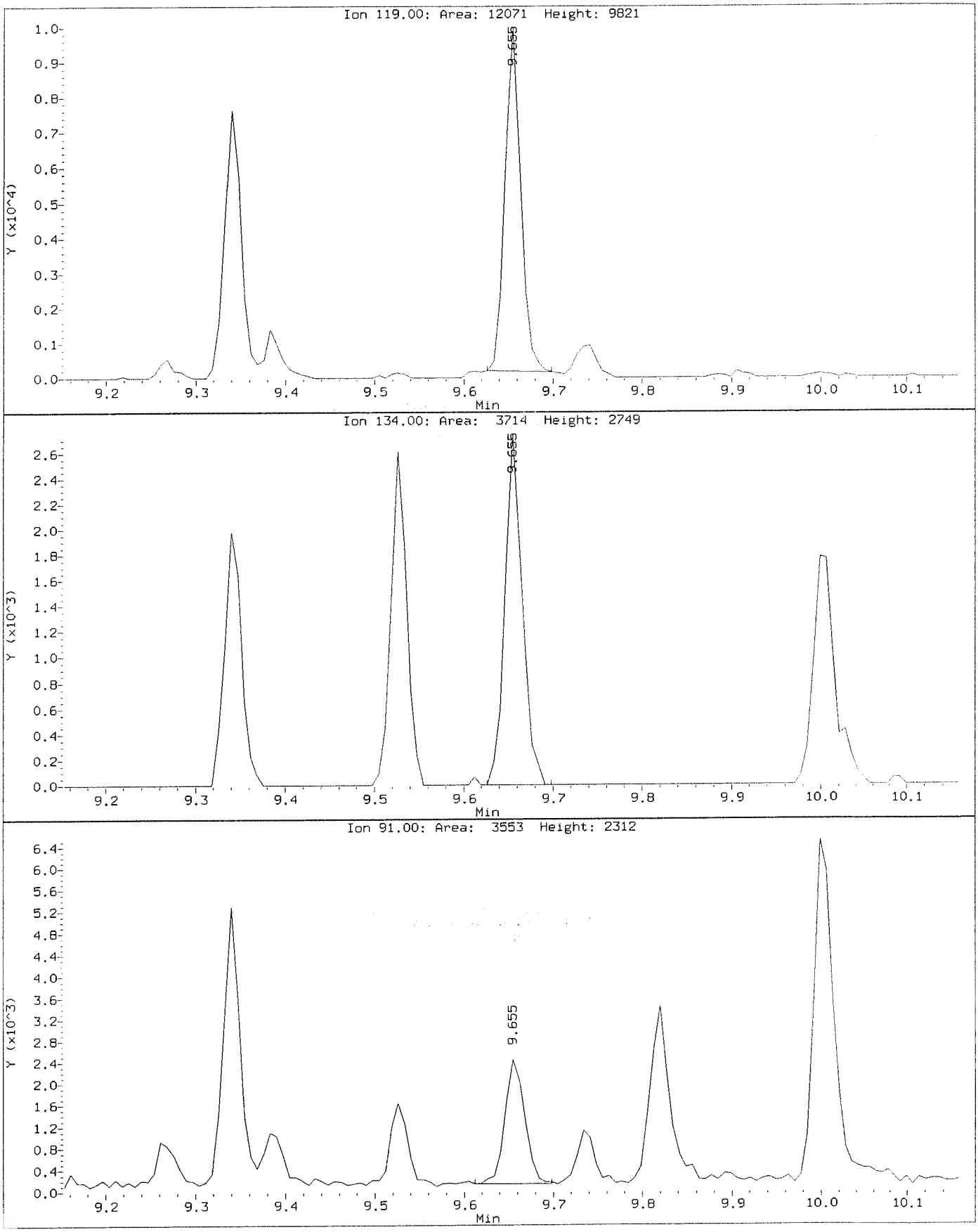
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



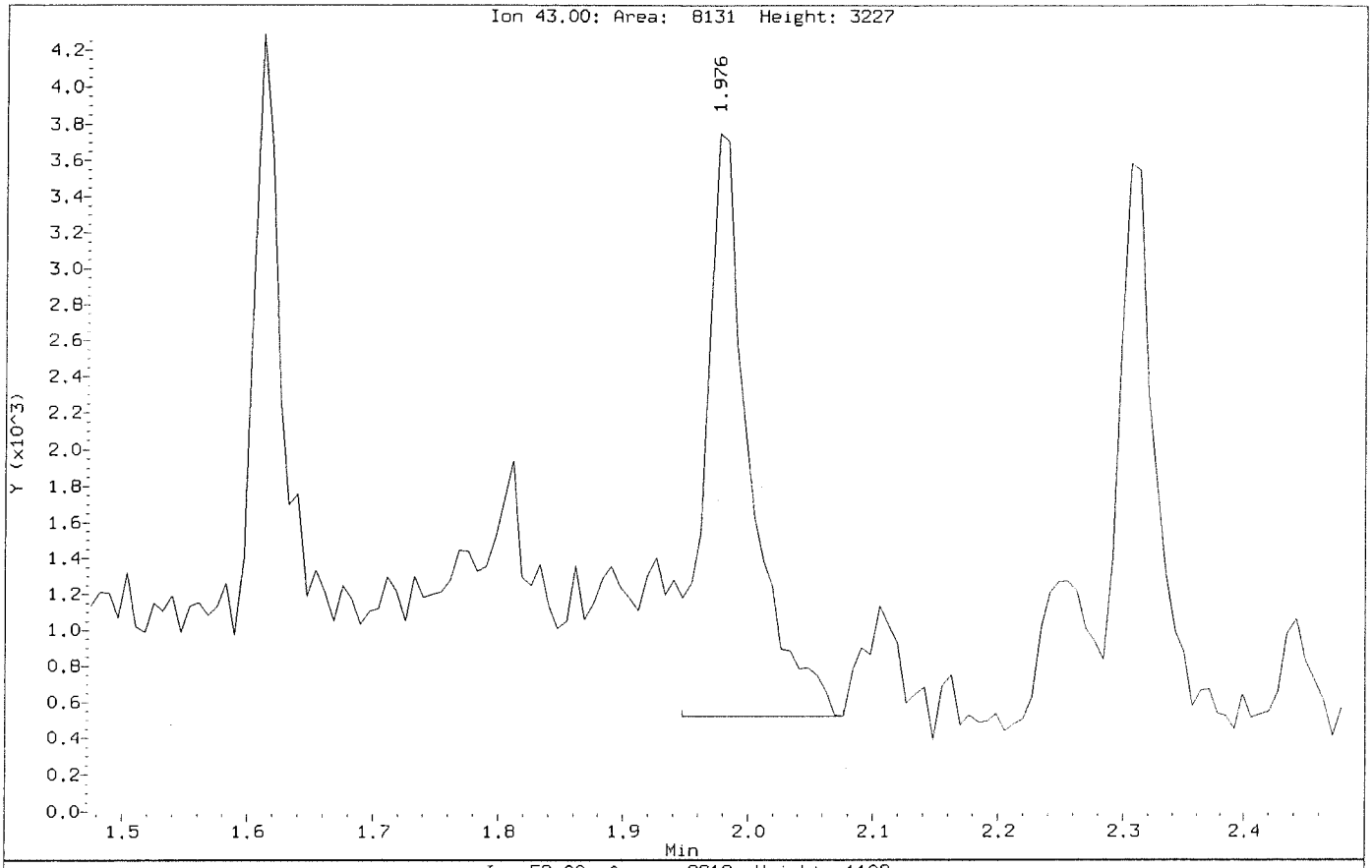
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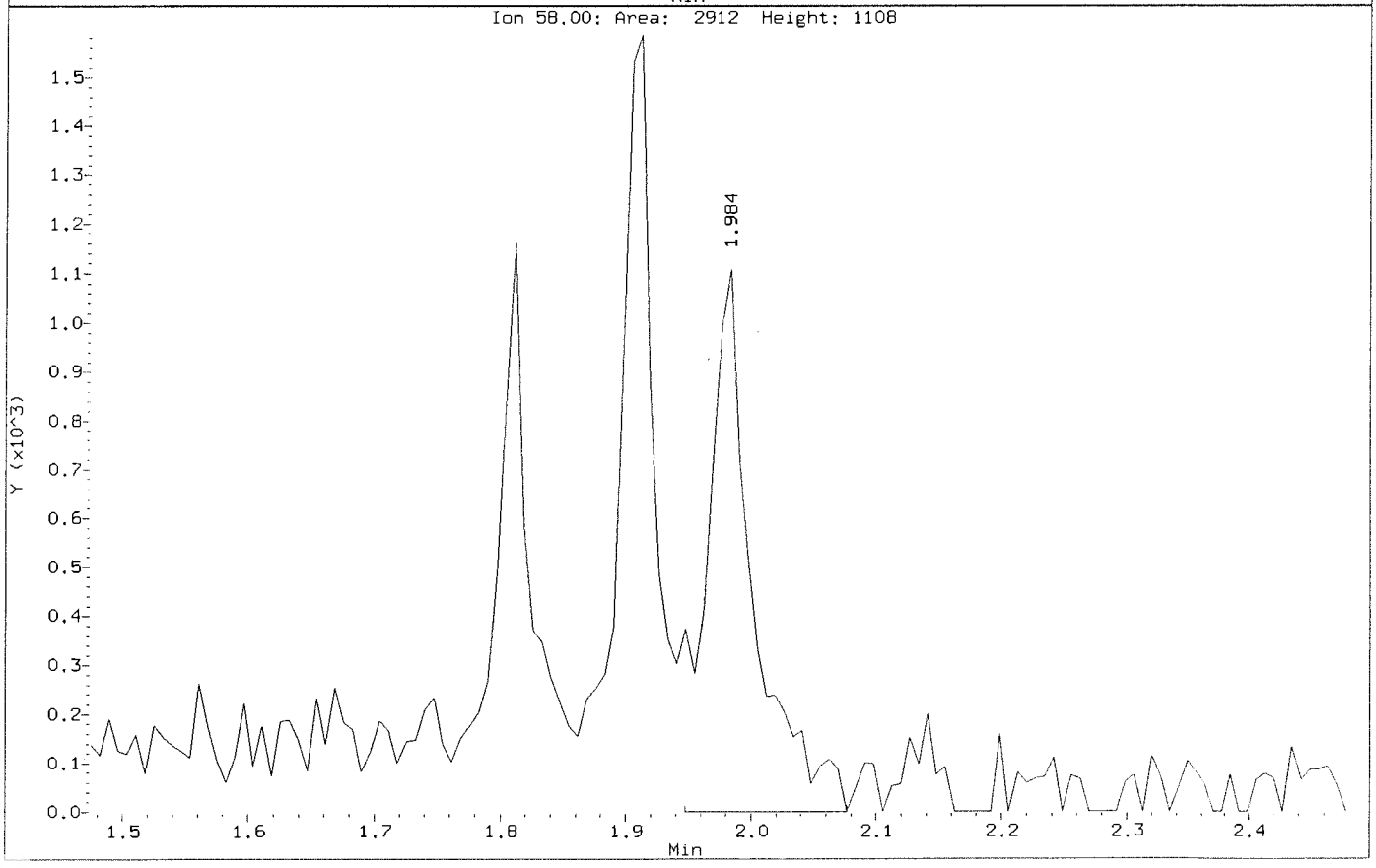
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



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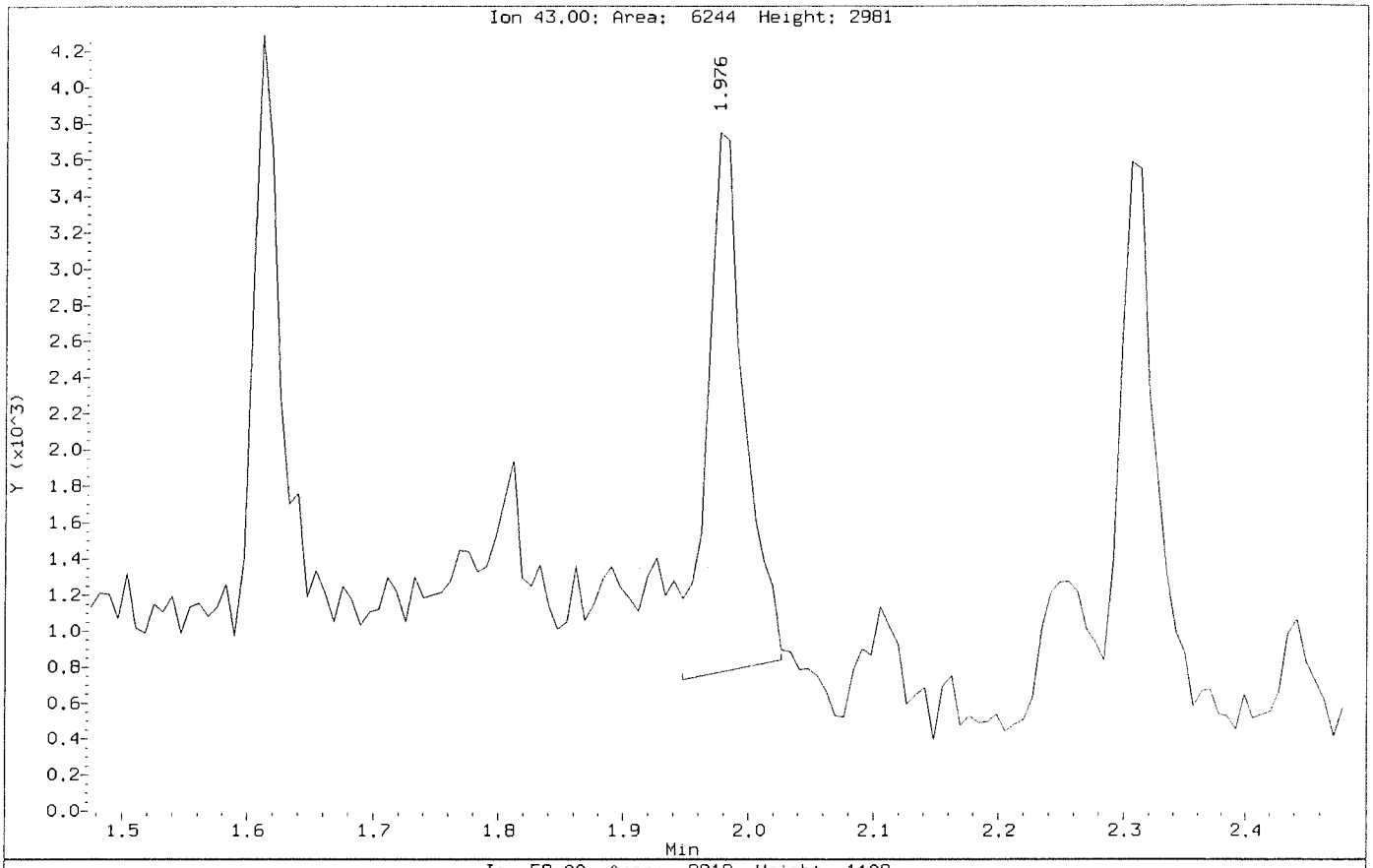
Compound: Acetone
CAS Number: 67-64-1

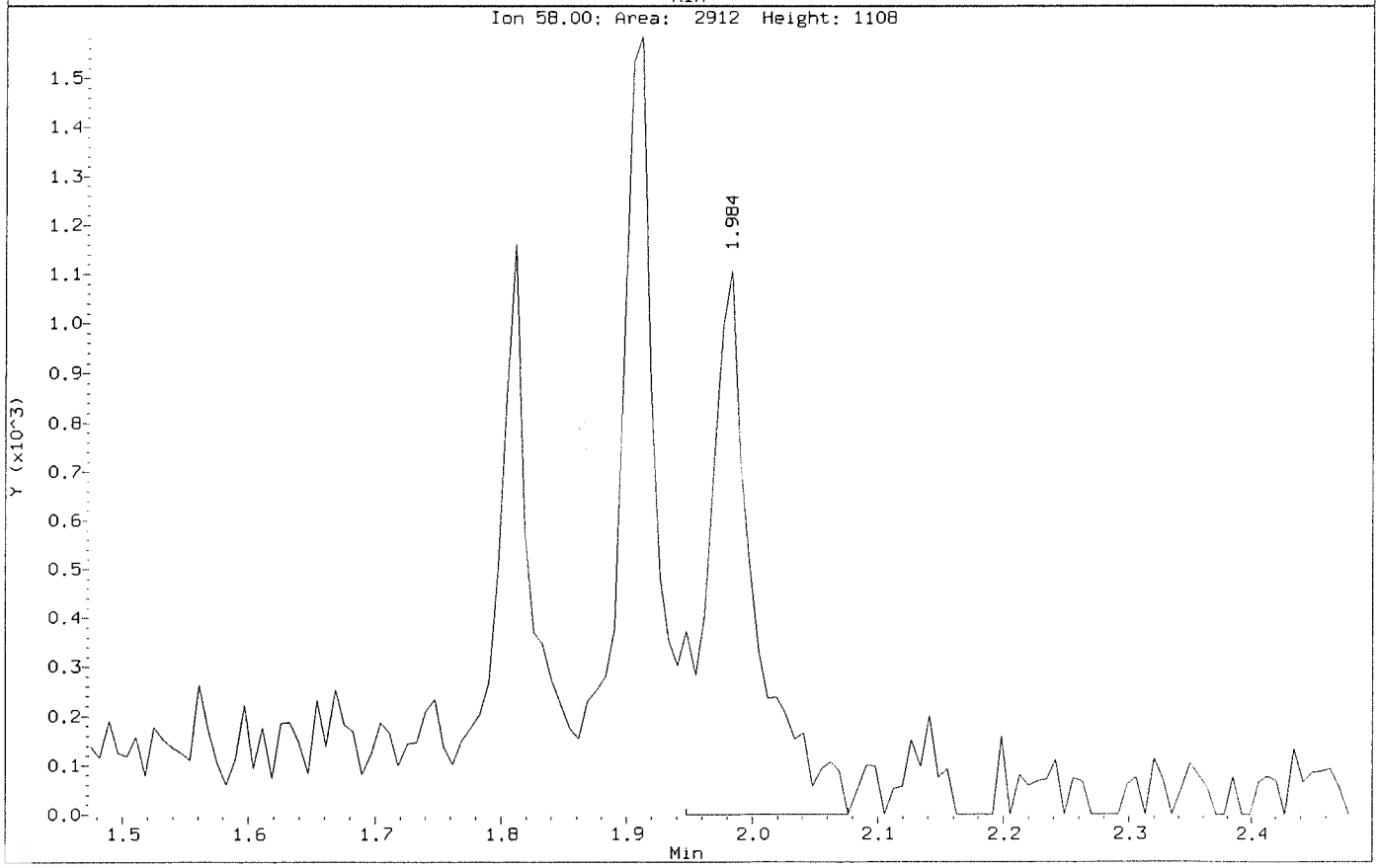




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Client Sample ID: VSTD000.5

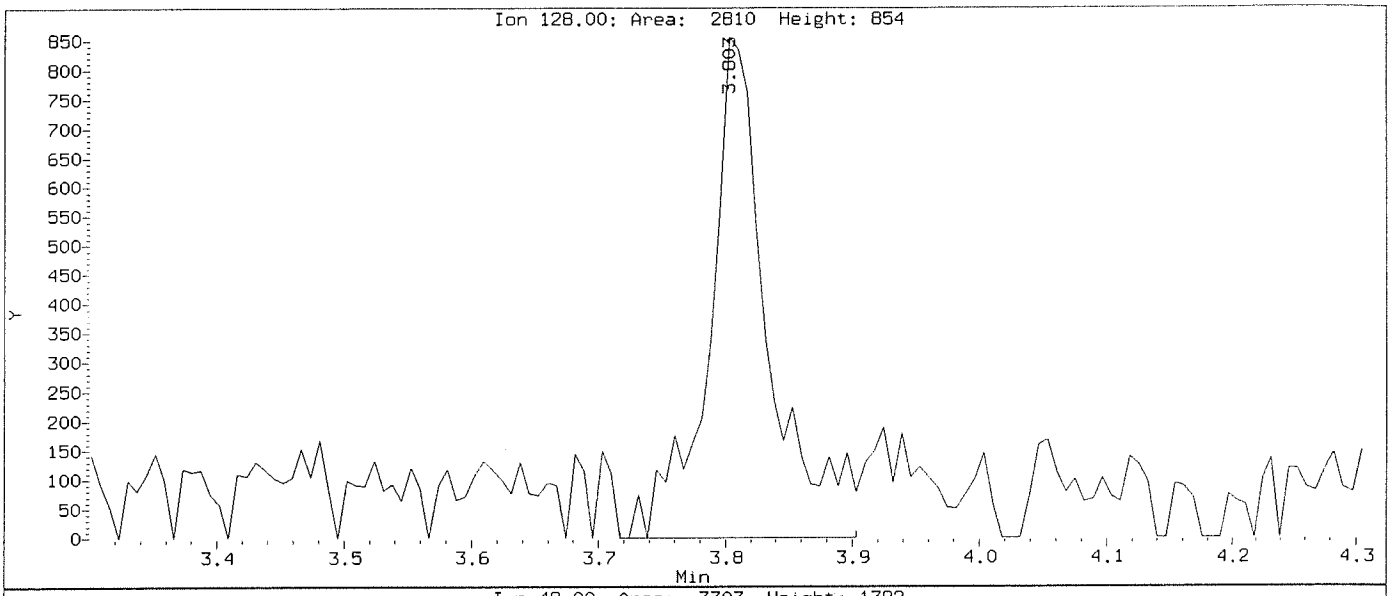
Compound: Acetone
CAS Number: 67-64-1

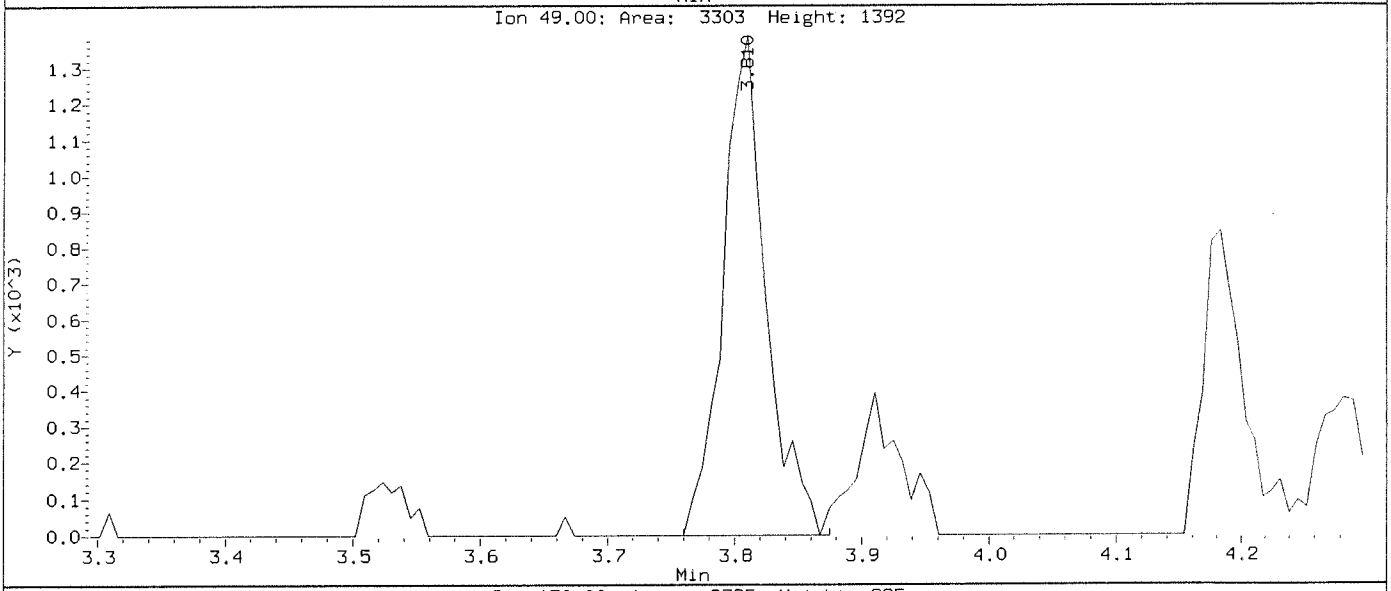


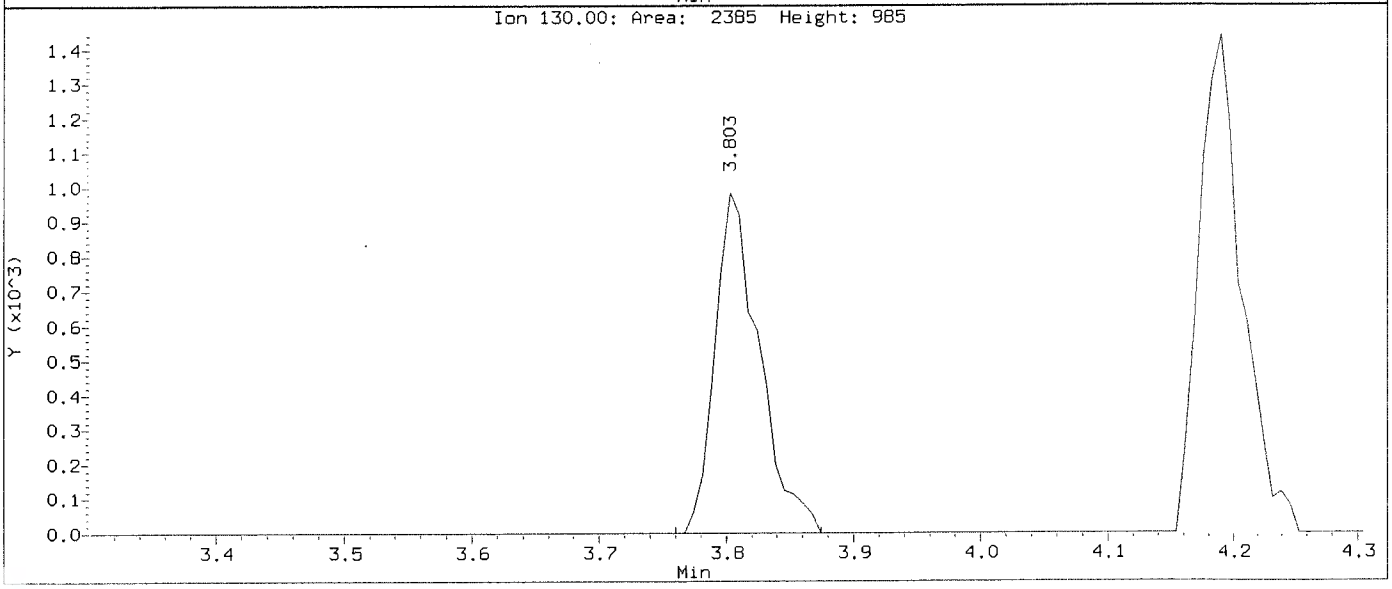


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

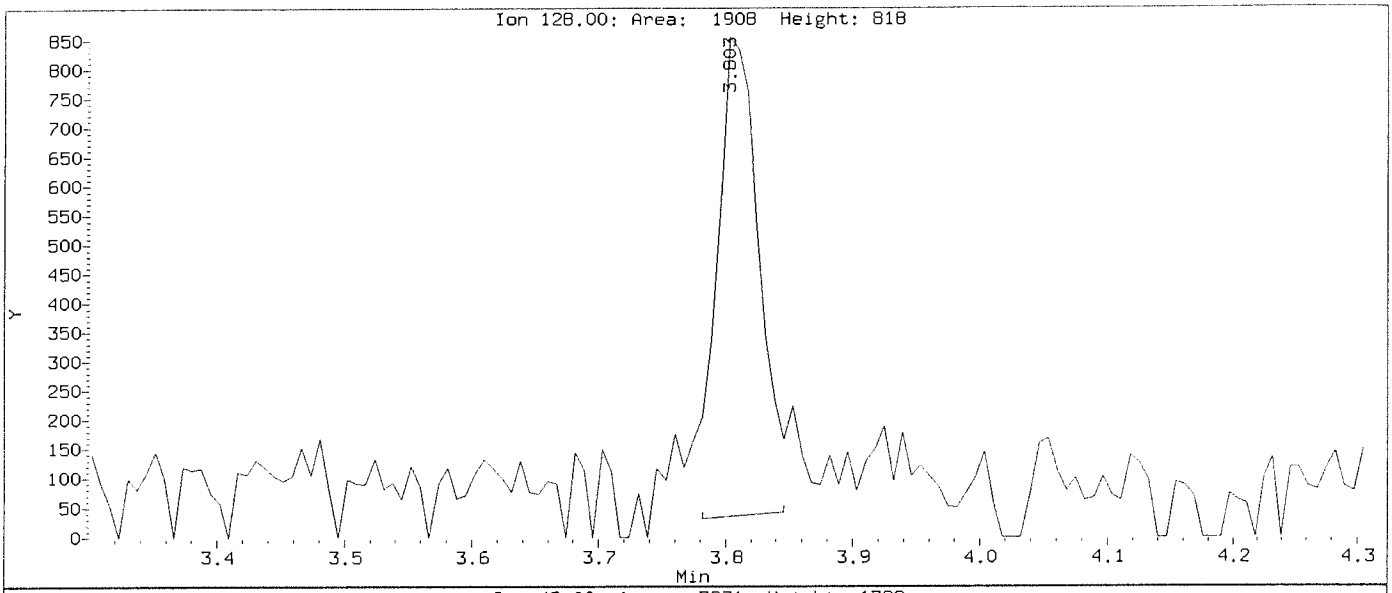


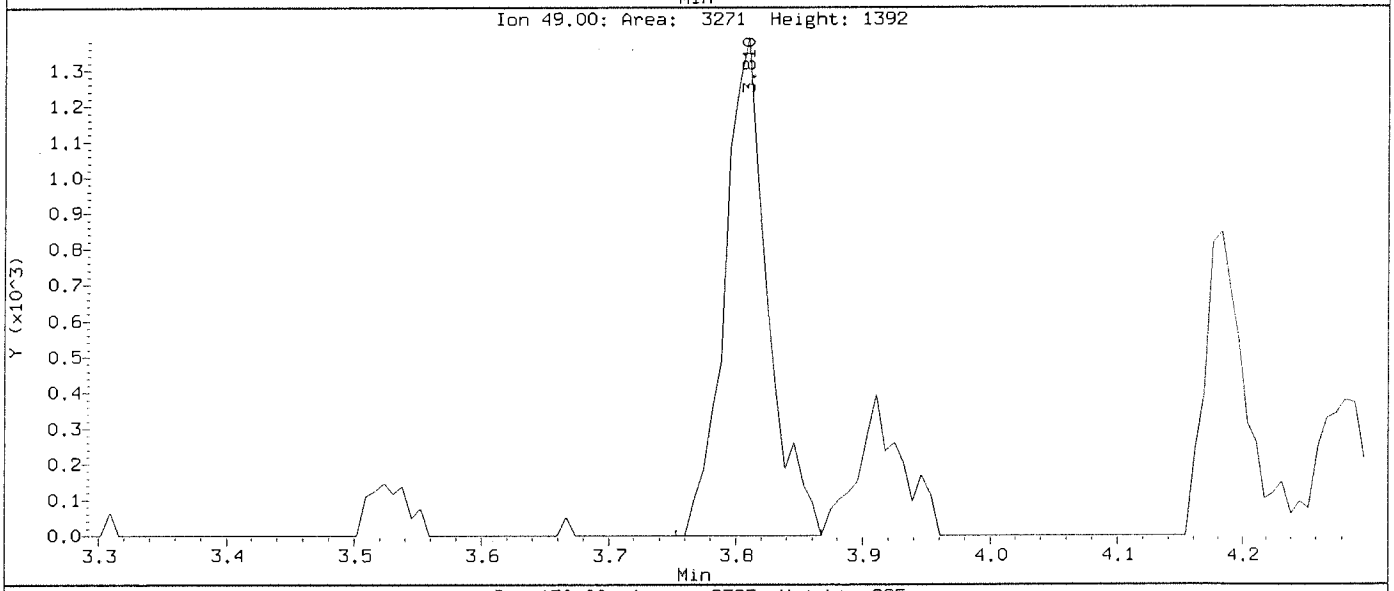


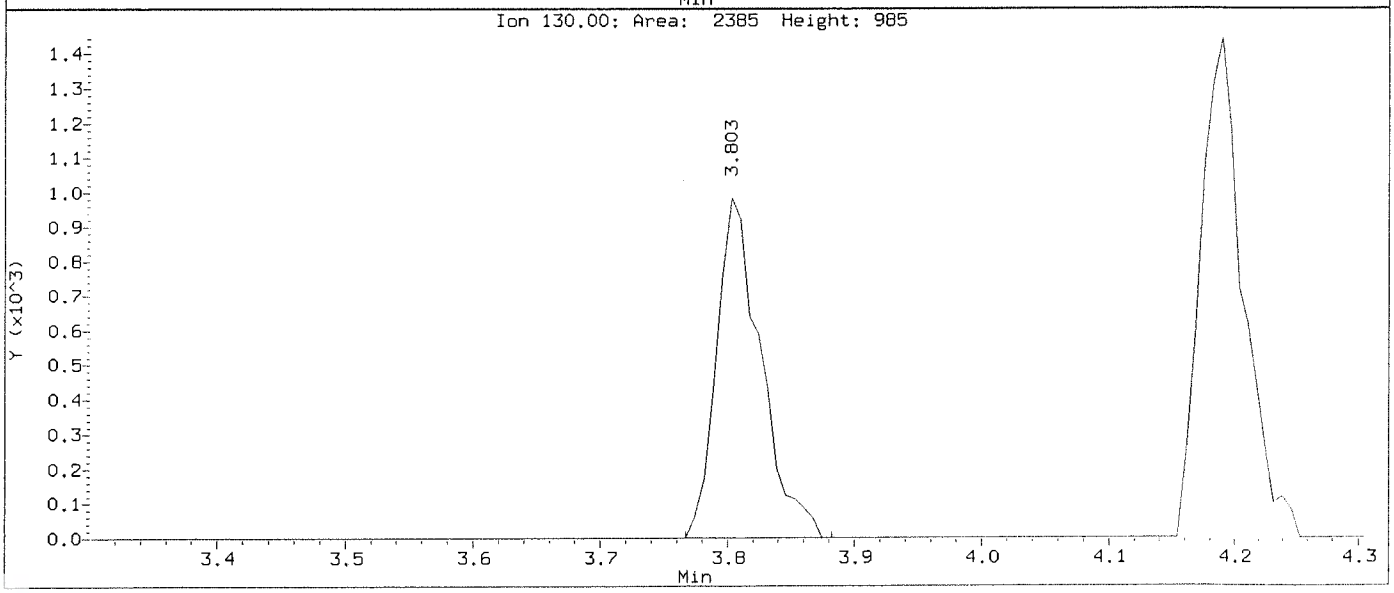


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

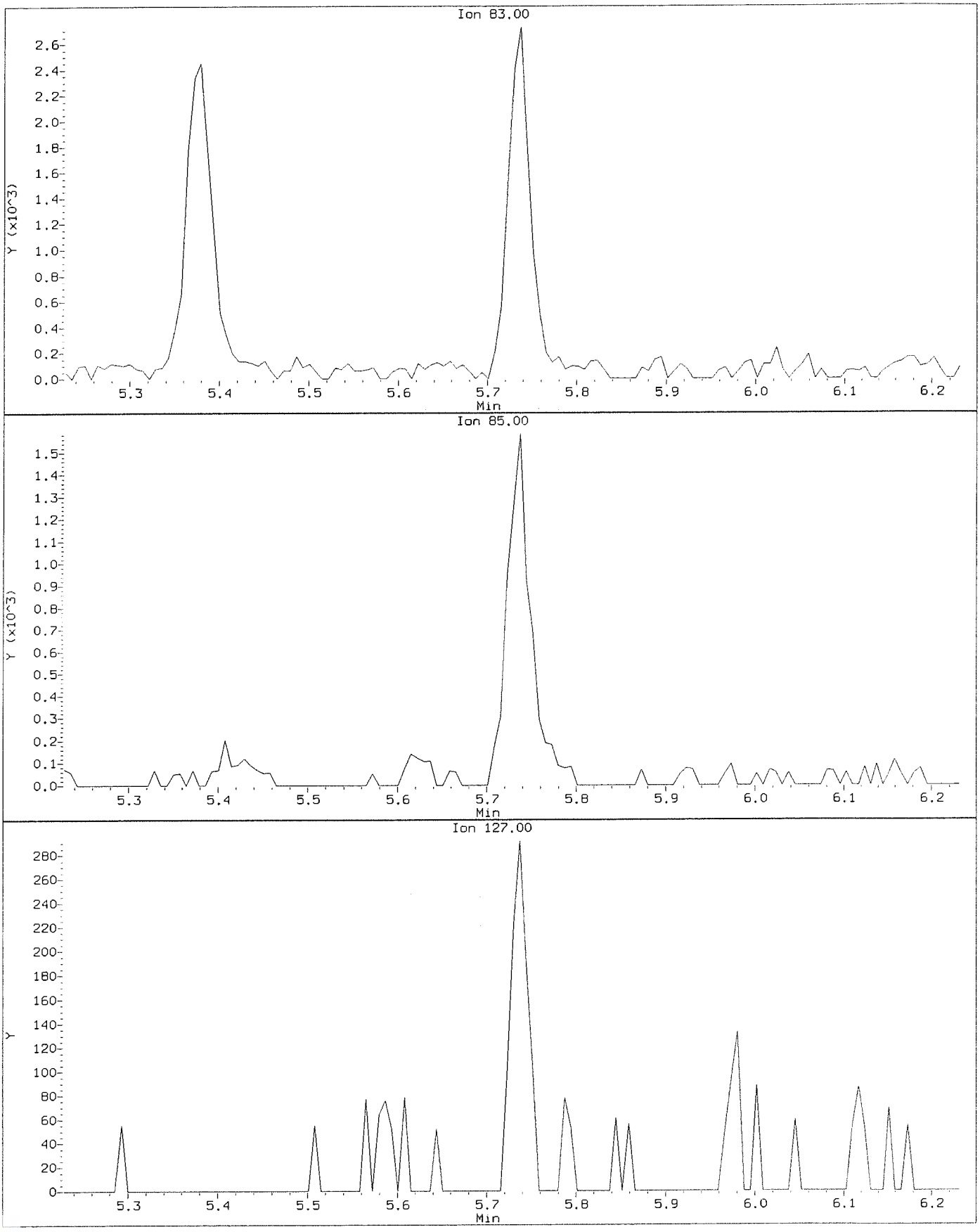






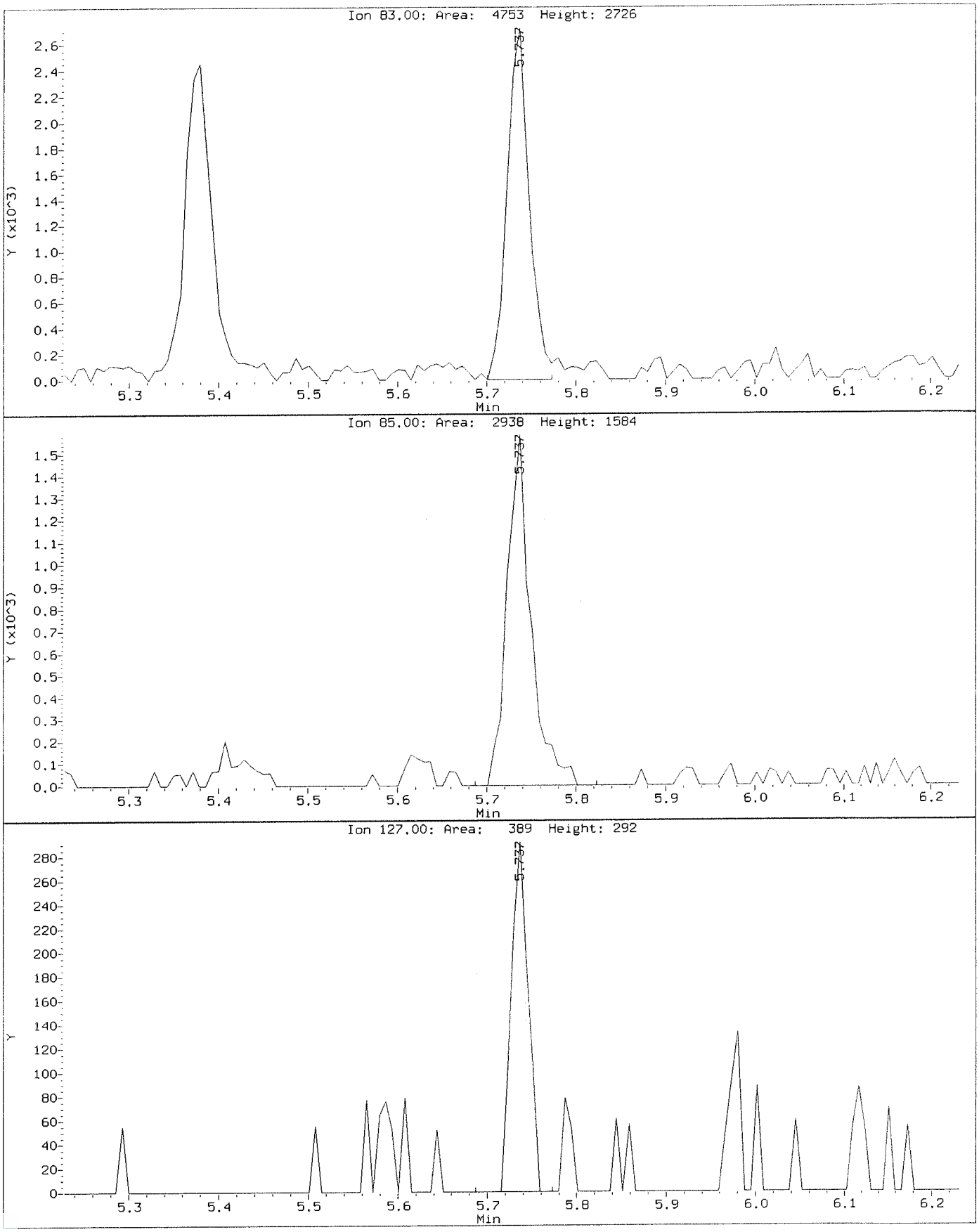
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



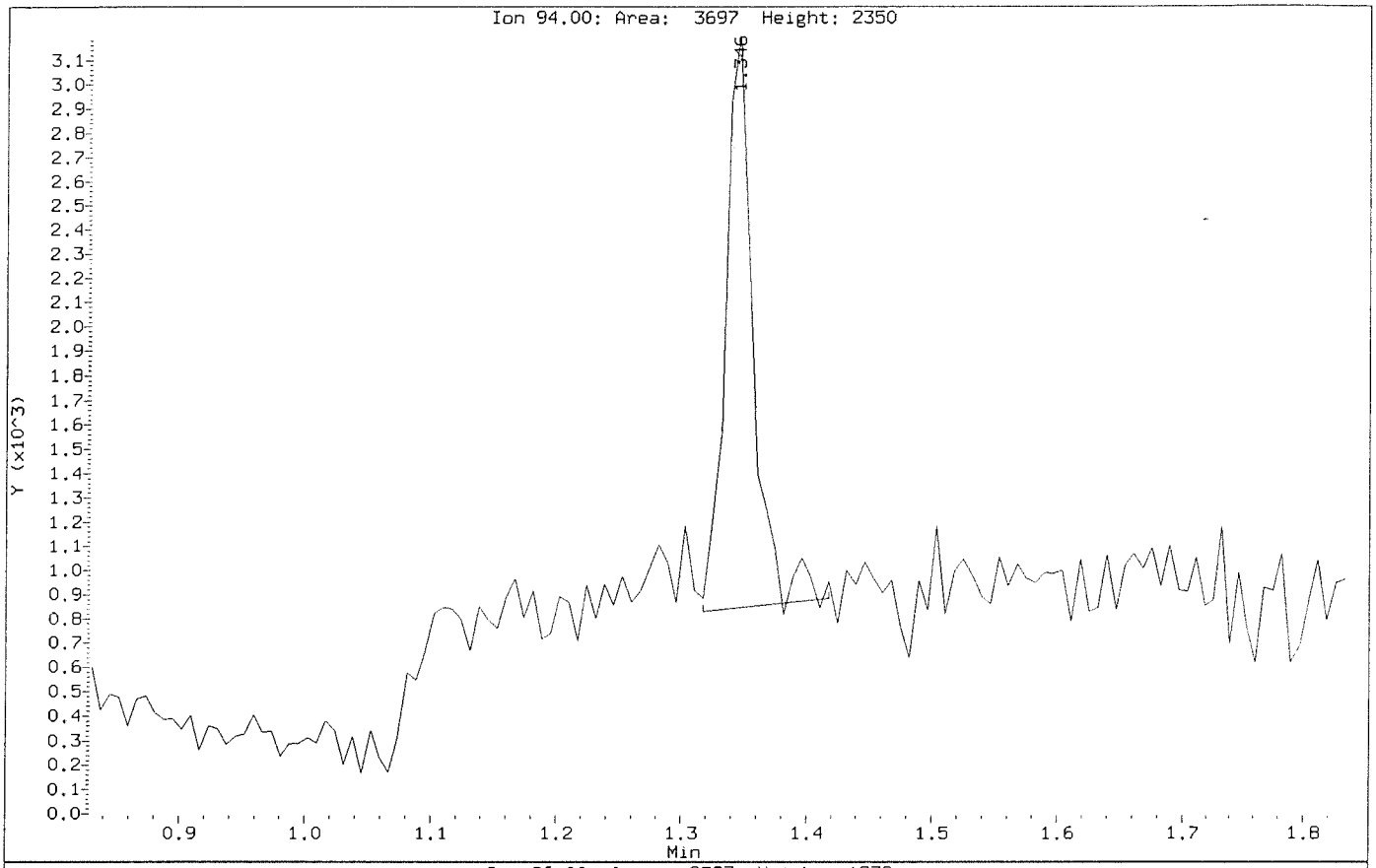
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Client Sample ID: VSTD000.5

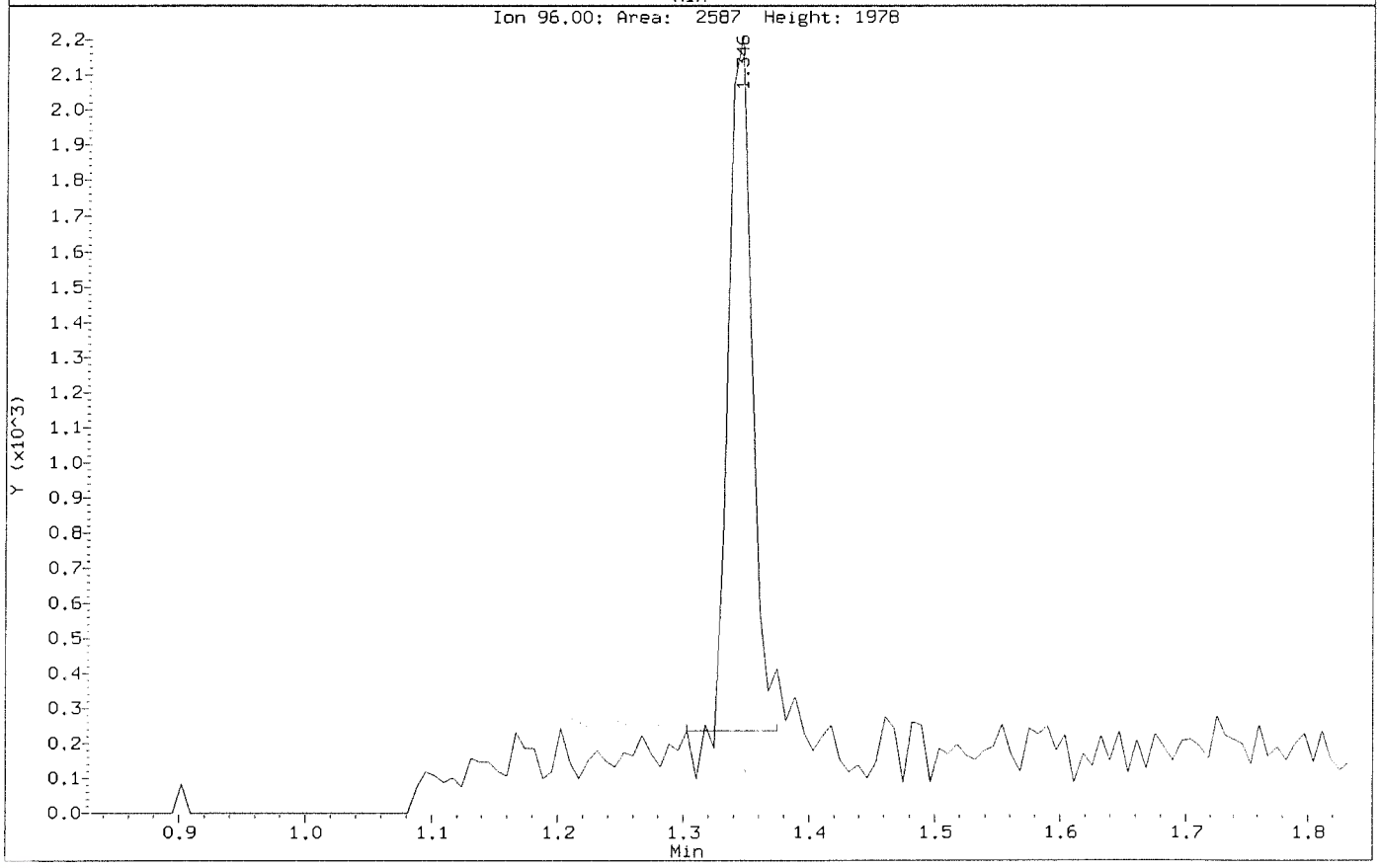
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Instrument: voa6.i
Client Sample ID: VSTD000.5

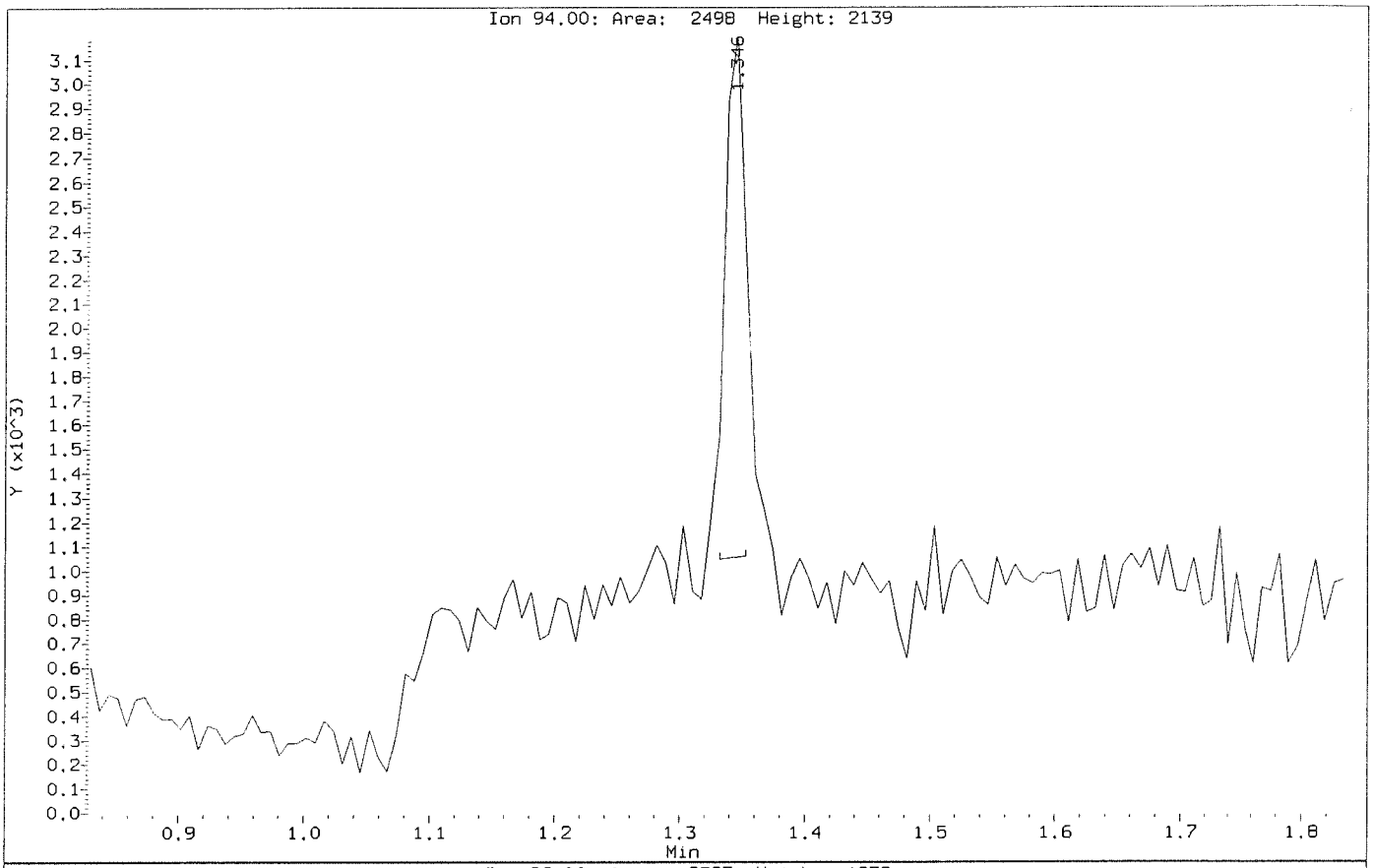
Compound: Bromomethane
CAS Number: 74-83-9

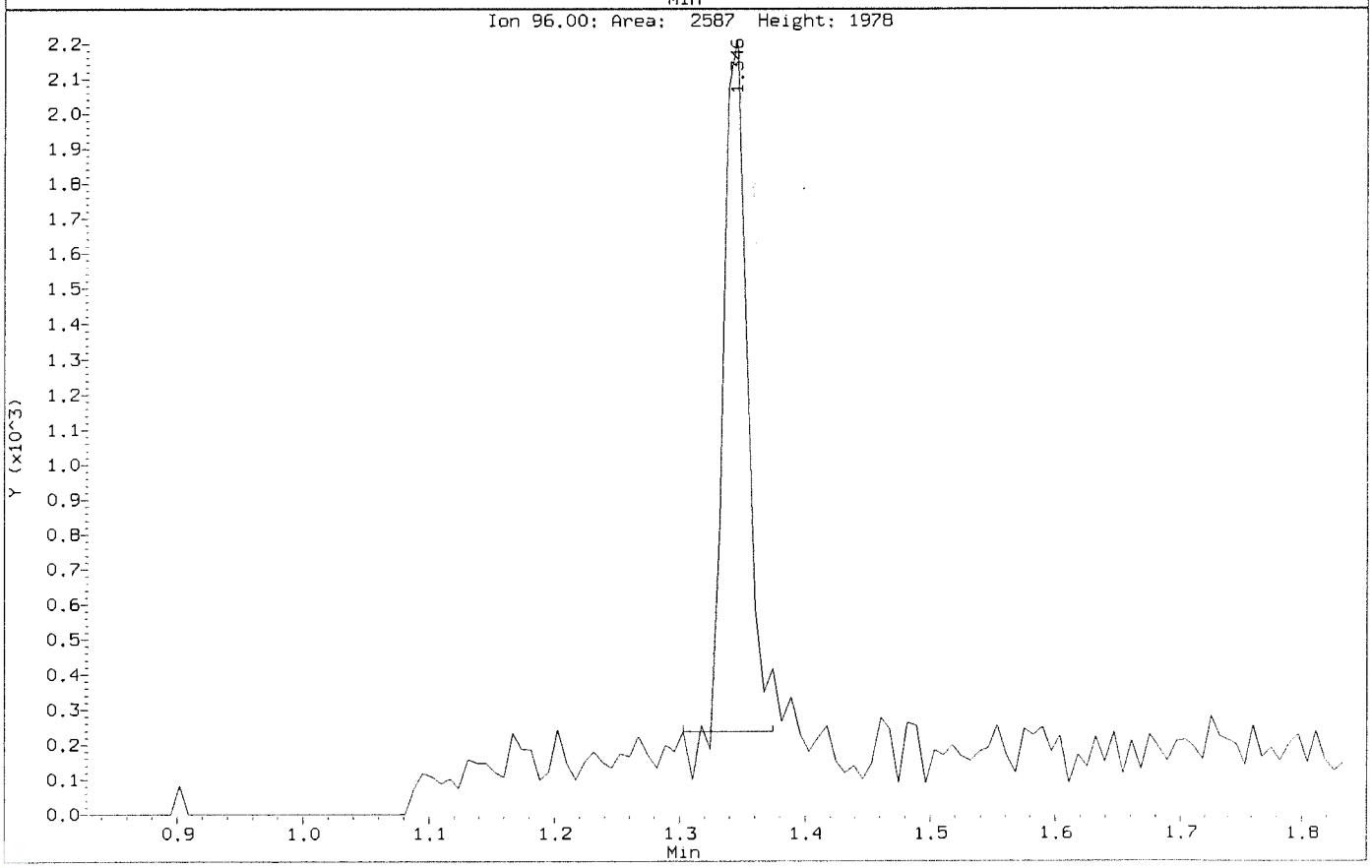




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Client Sample ID: VSTD000.5

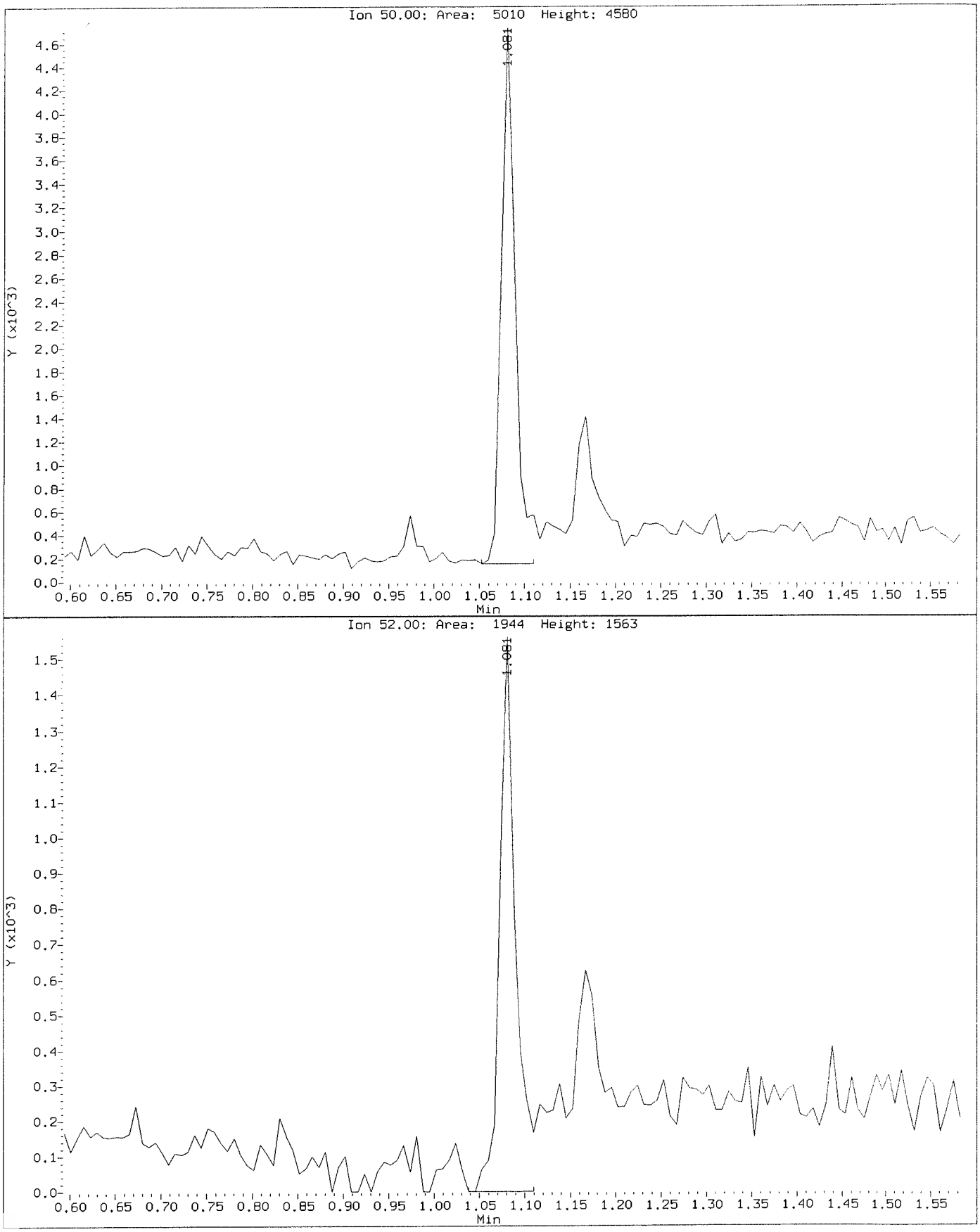
Compound: Bromomethane
CAS Number: 74-83-9





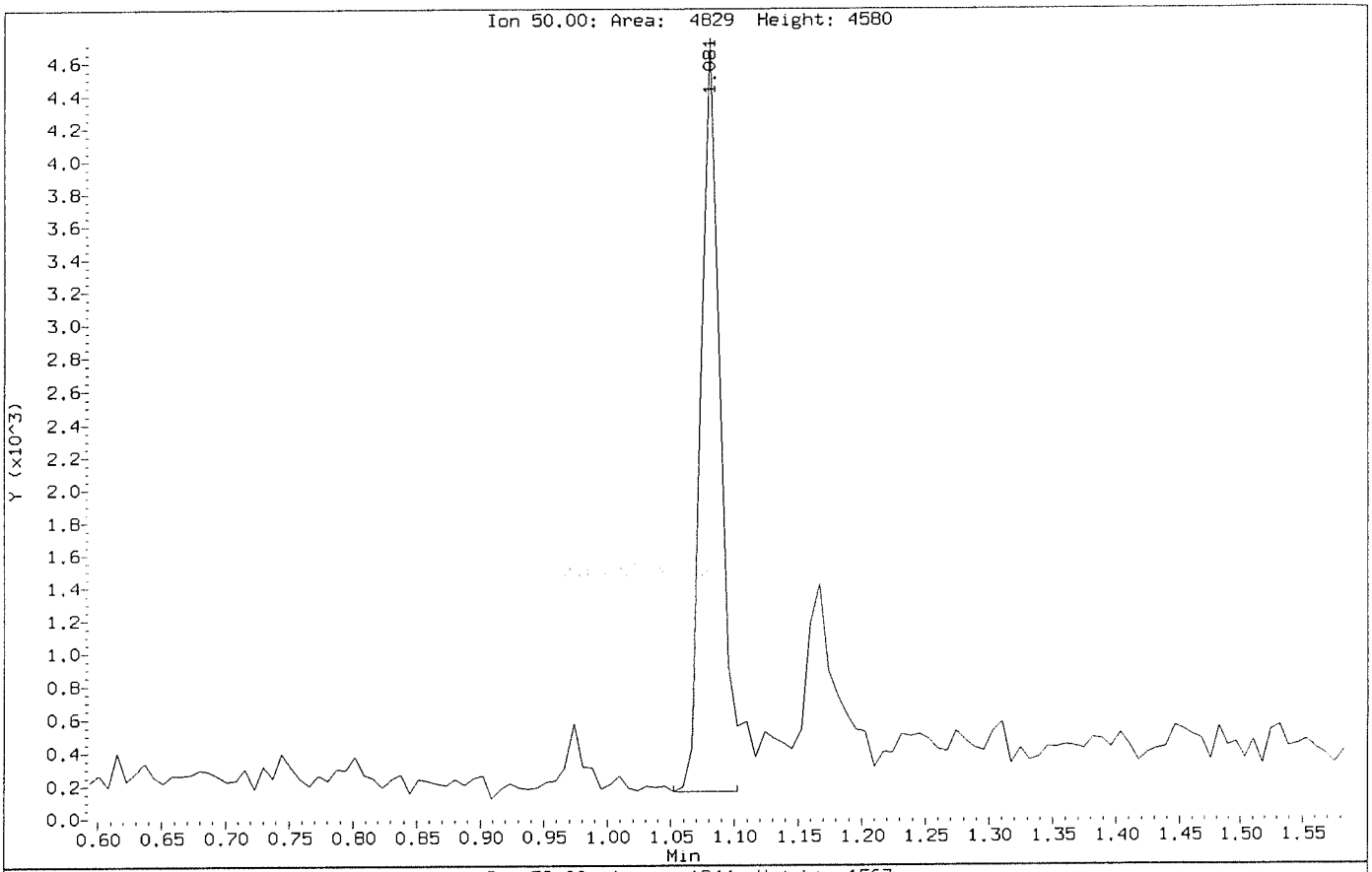
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Instrument: voa6.i
Client Sample ID: VSTD000.5

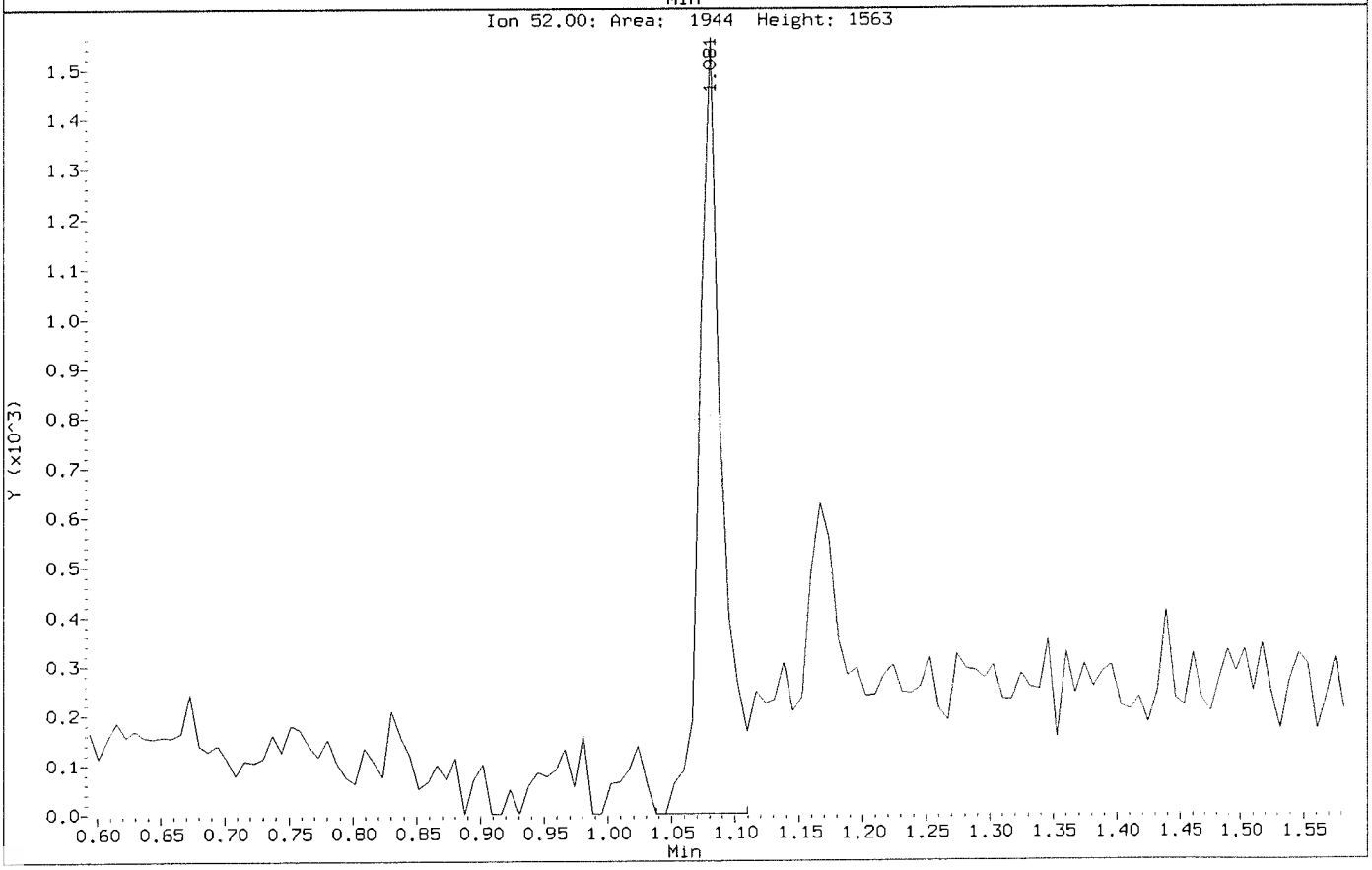
Compound: Chloromethane
CAS Number: 74-87-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

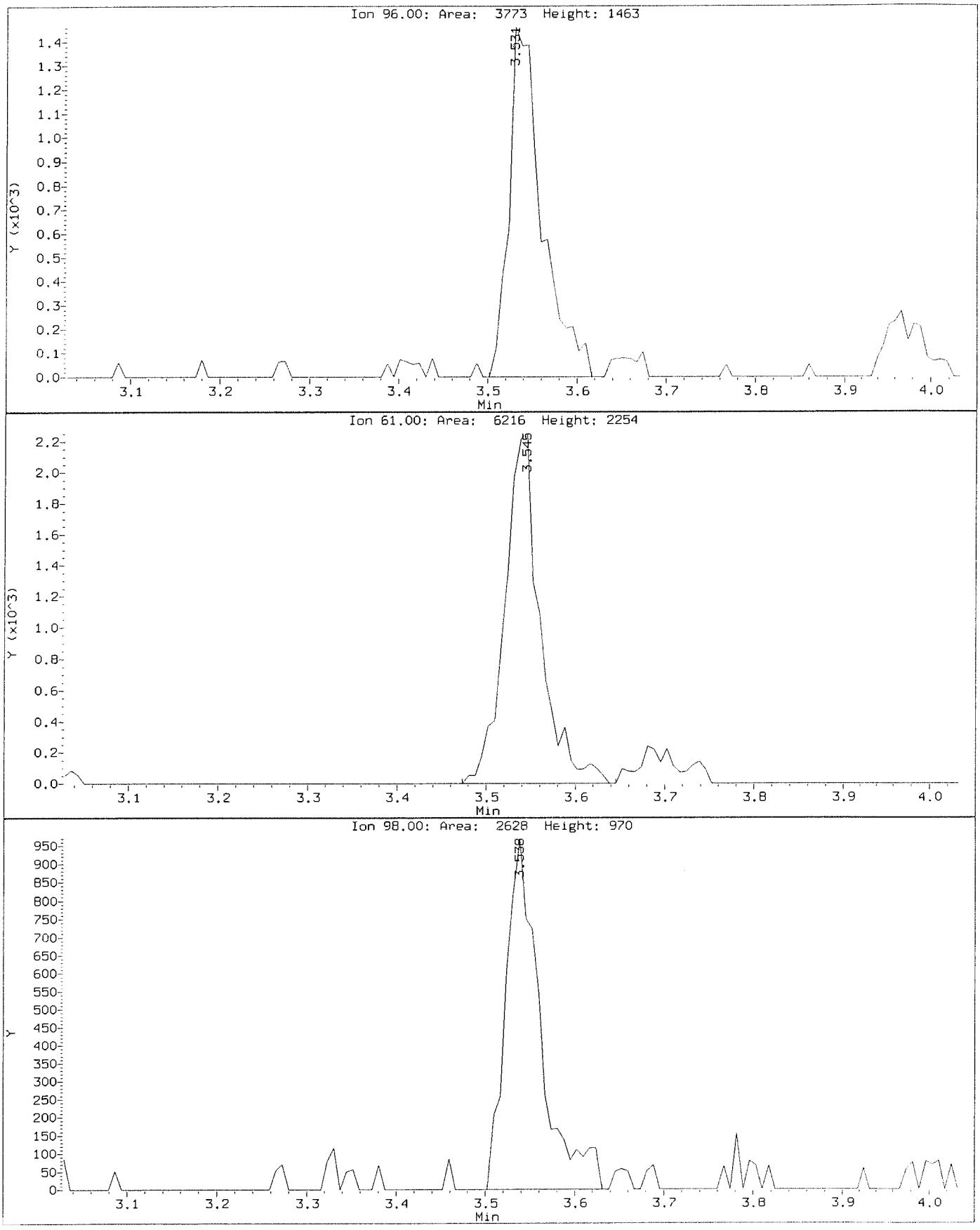
Compound: Chloromethane
CAS Number: 74-87-3





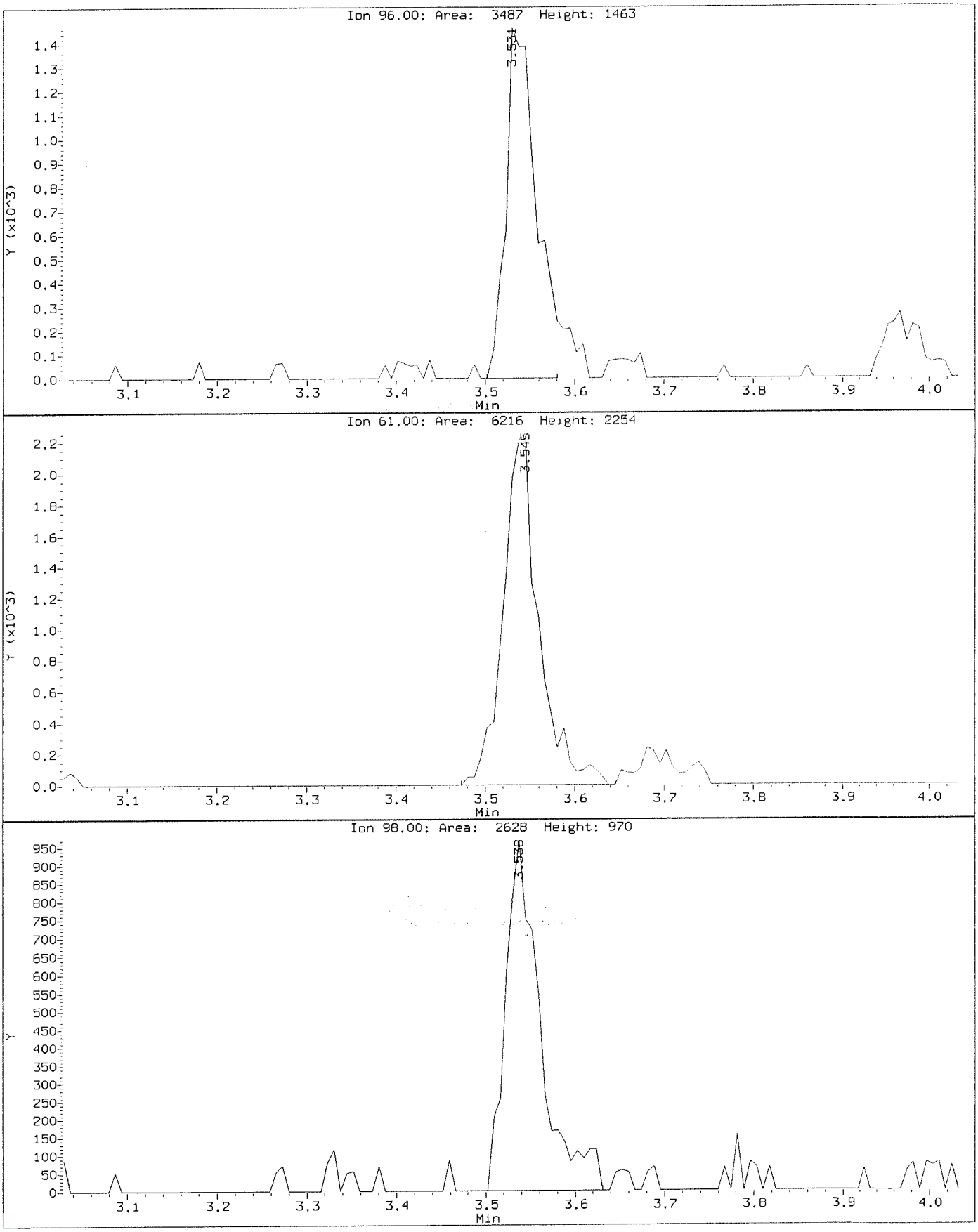
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



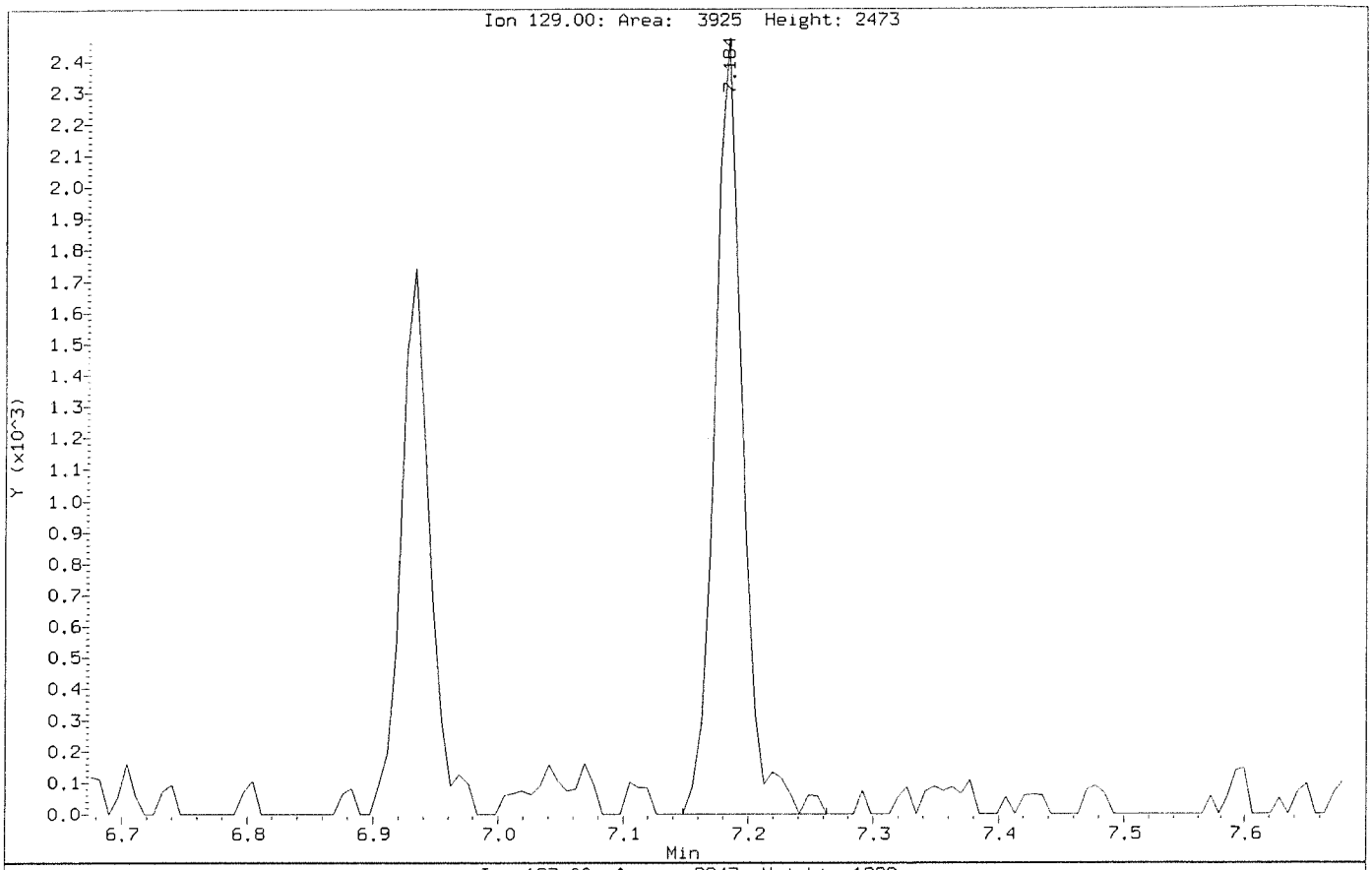
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Client Sample ID: VSTD000.5

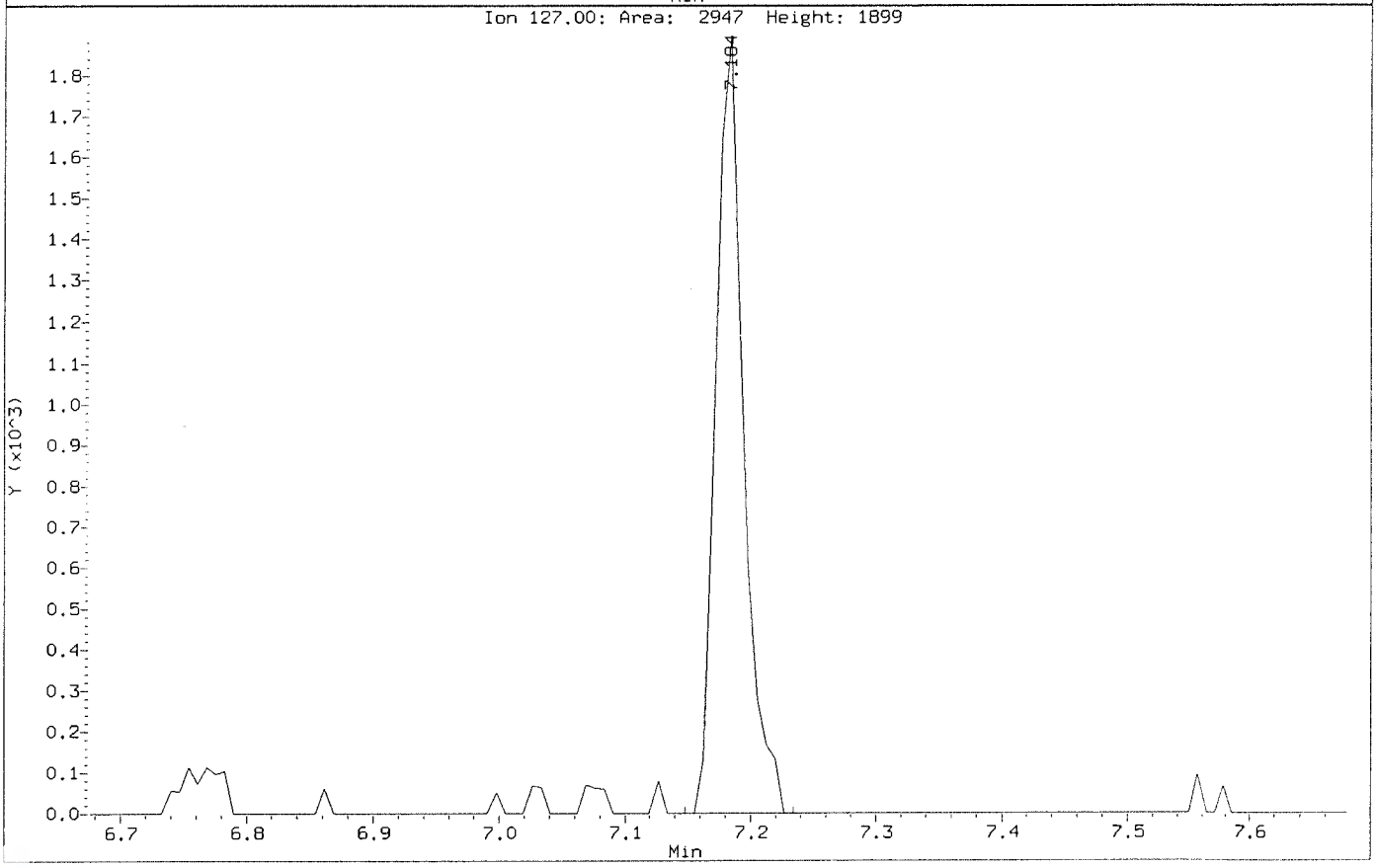
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

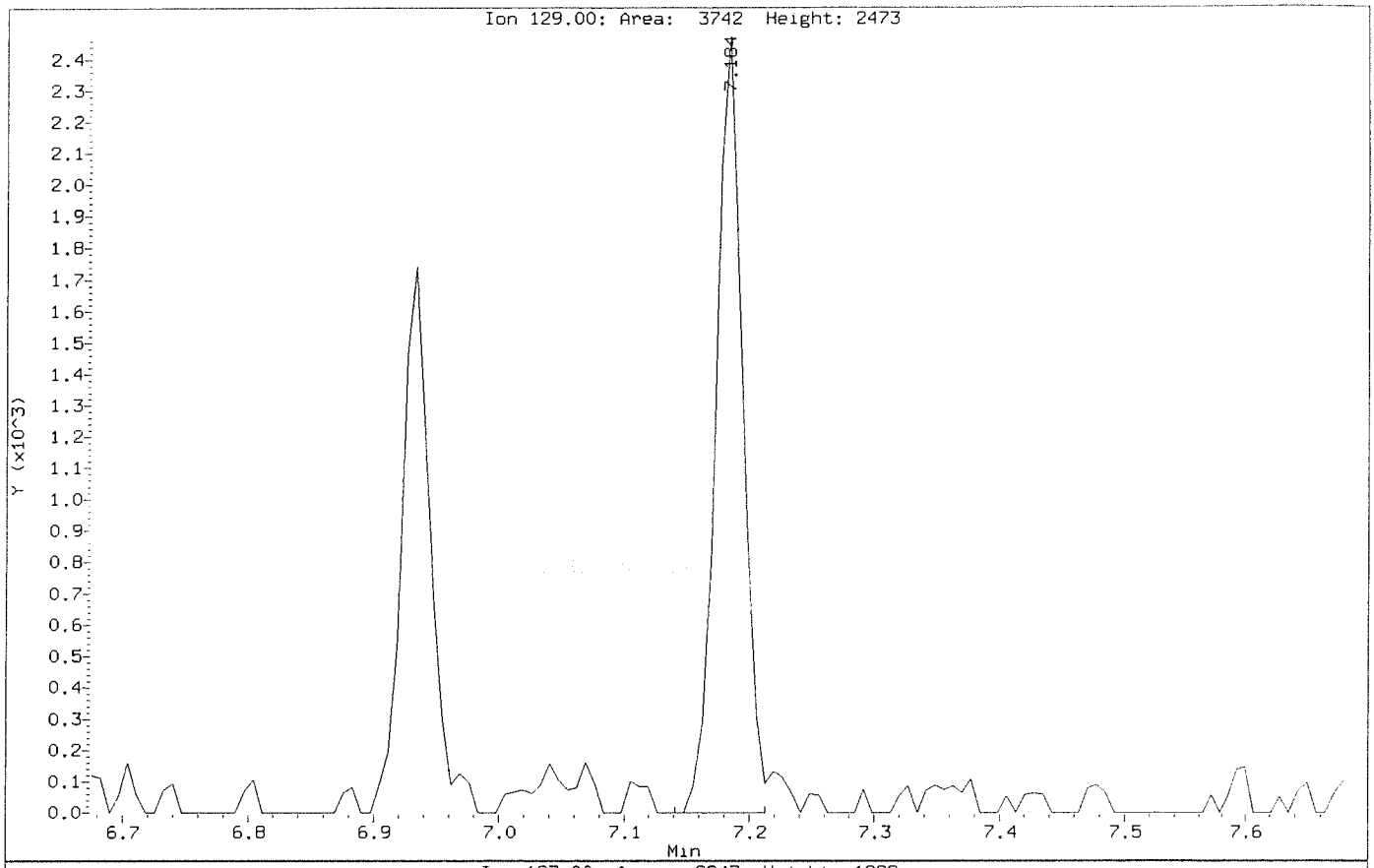
Compound: Dibromochloromethane
CAS Number: 124-48-1

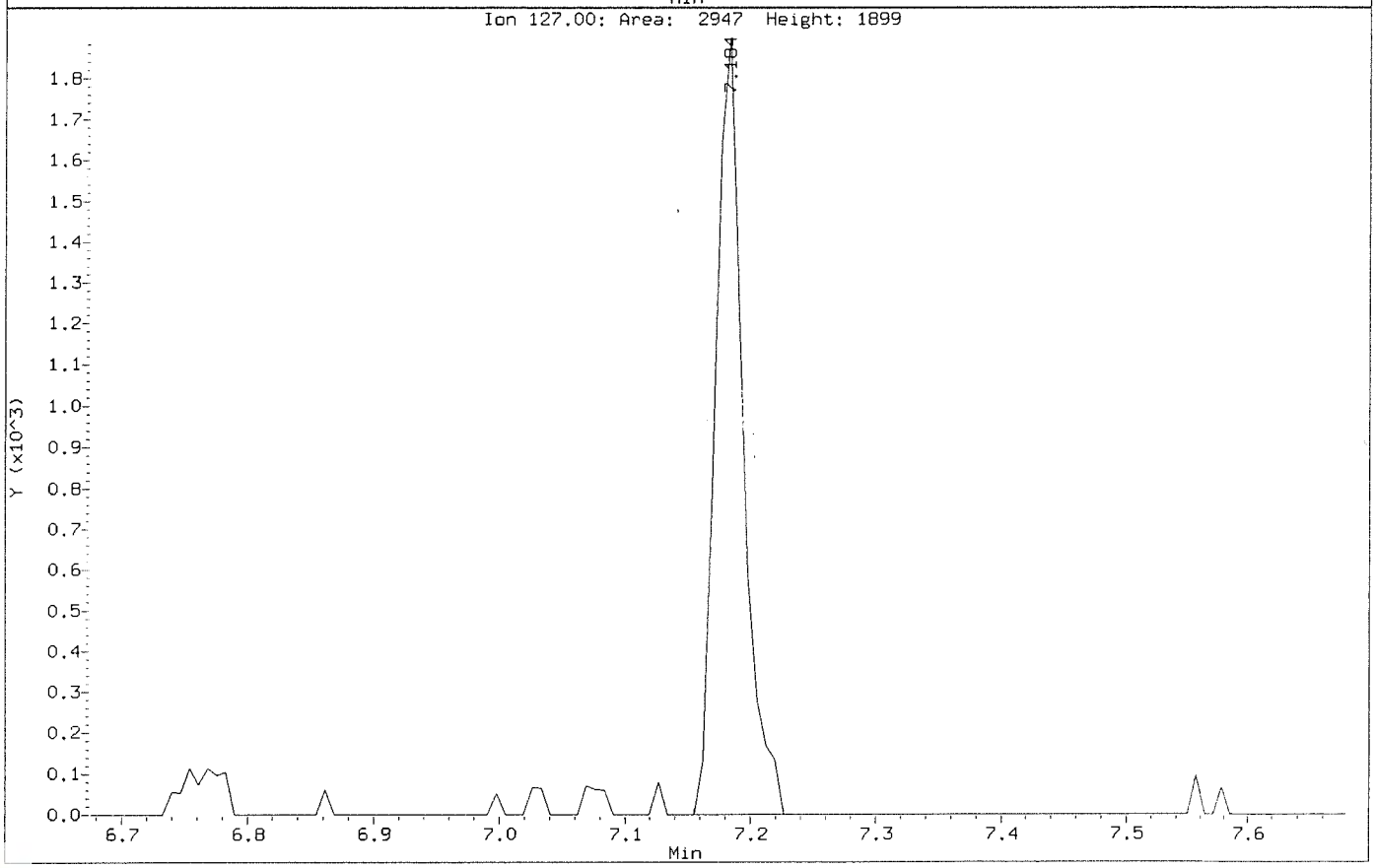




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Client Sample ID: VSTD000.5

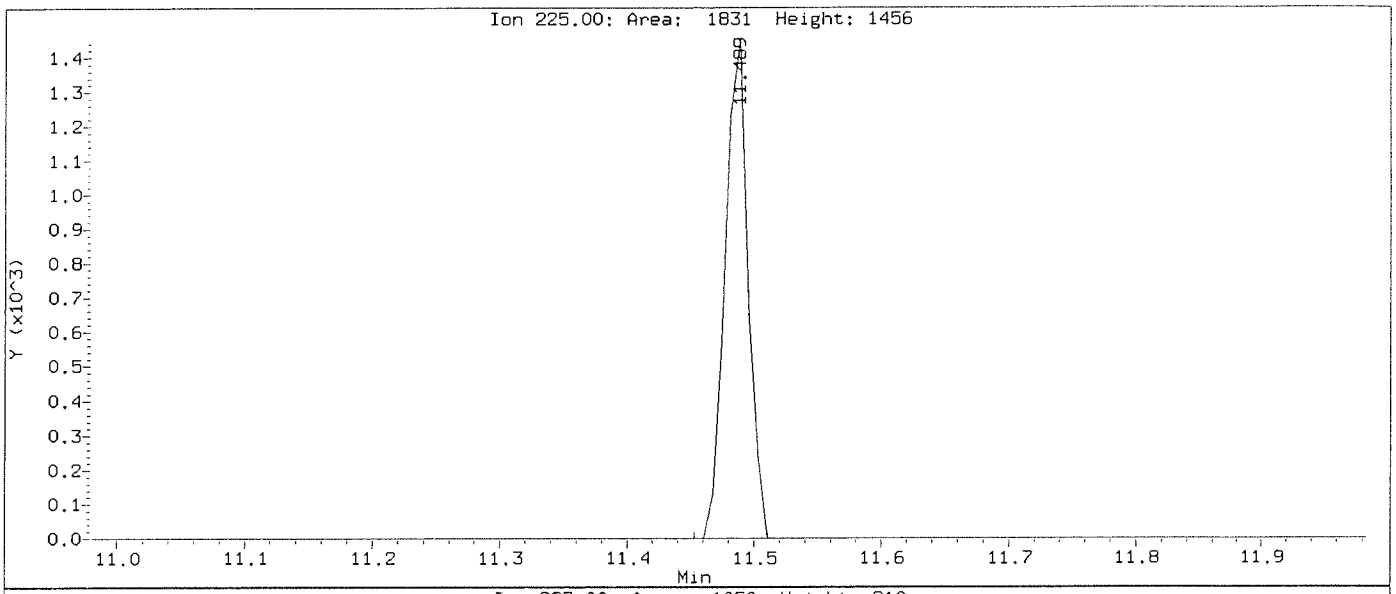
Compound: Dibromochloromethane
CAS Number: 124-48-1

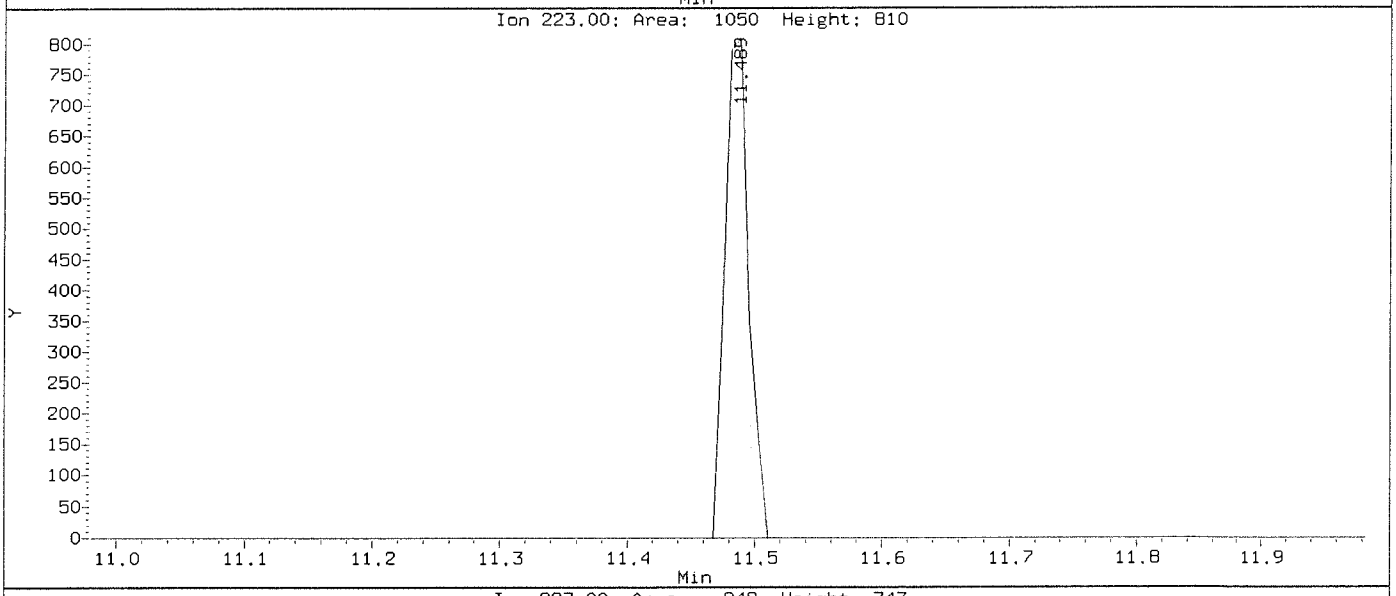


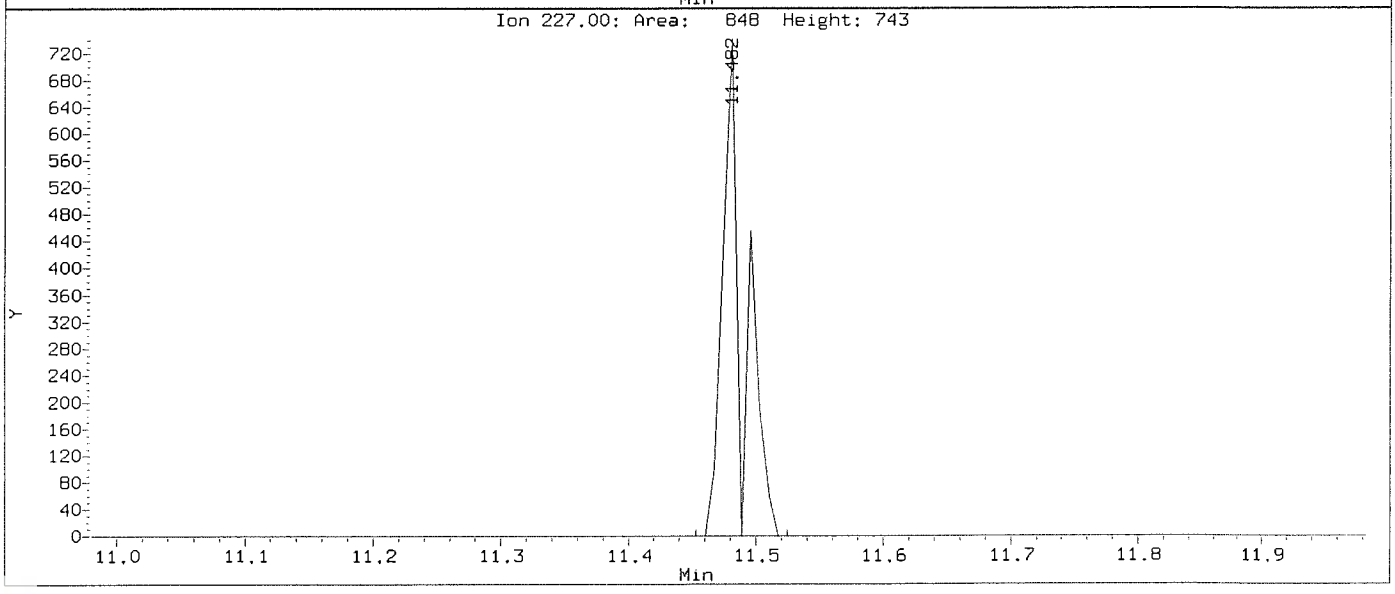


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

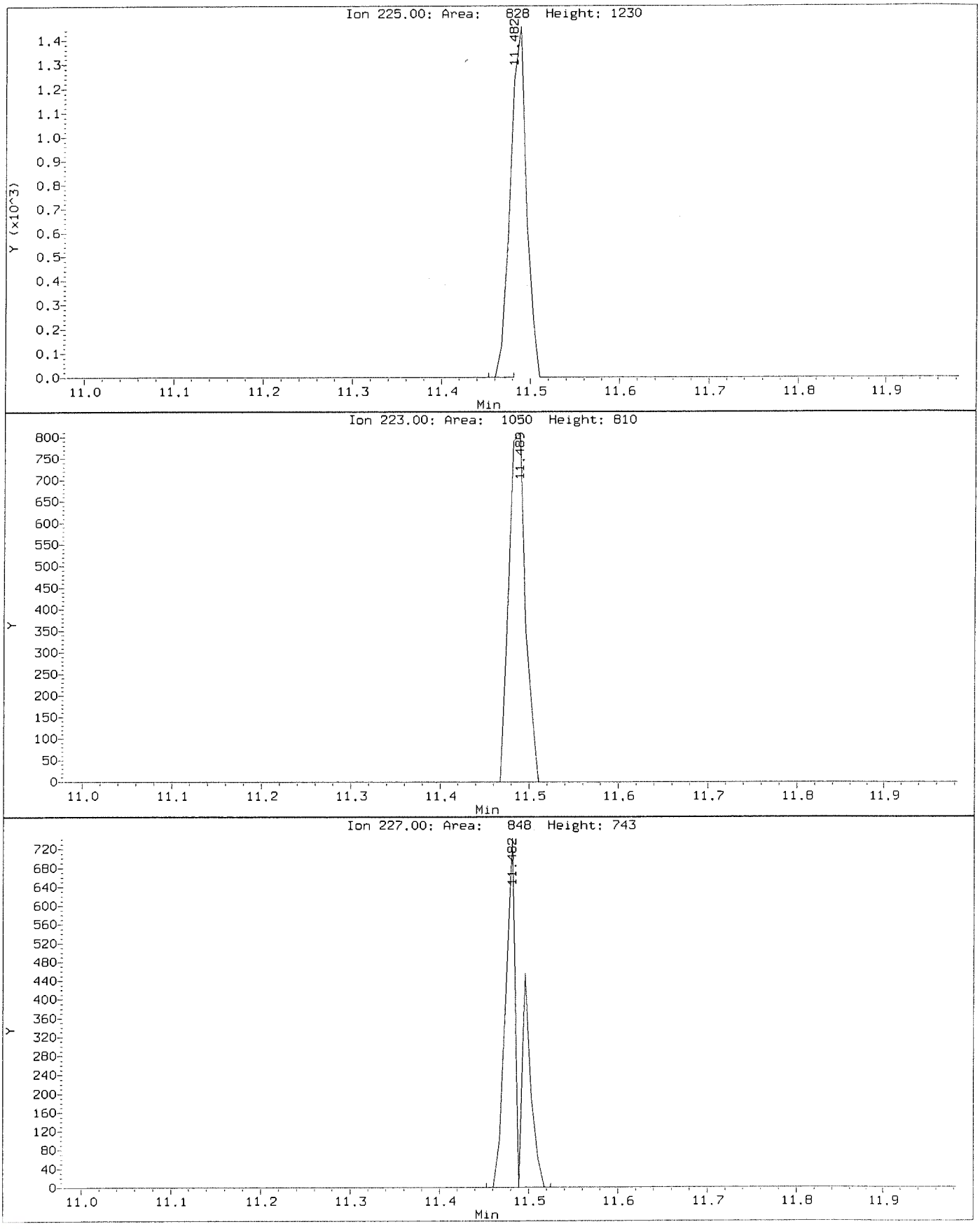






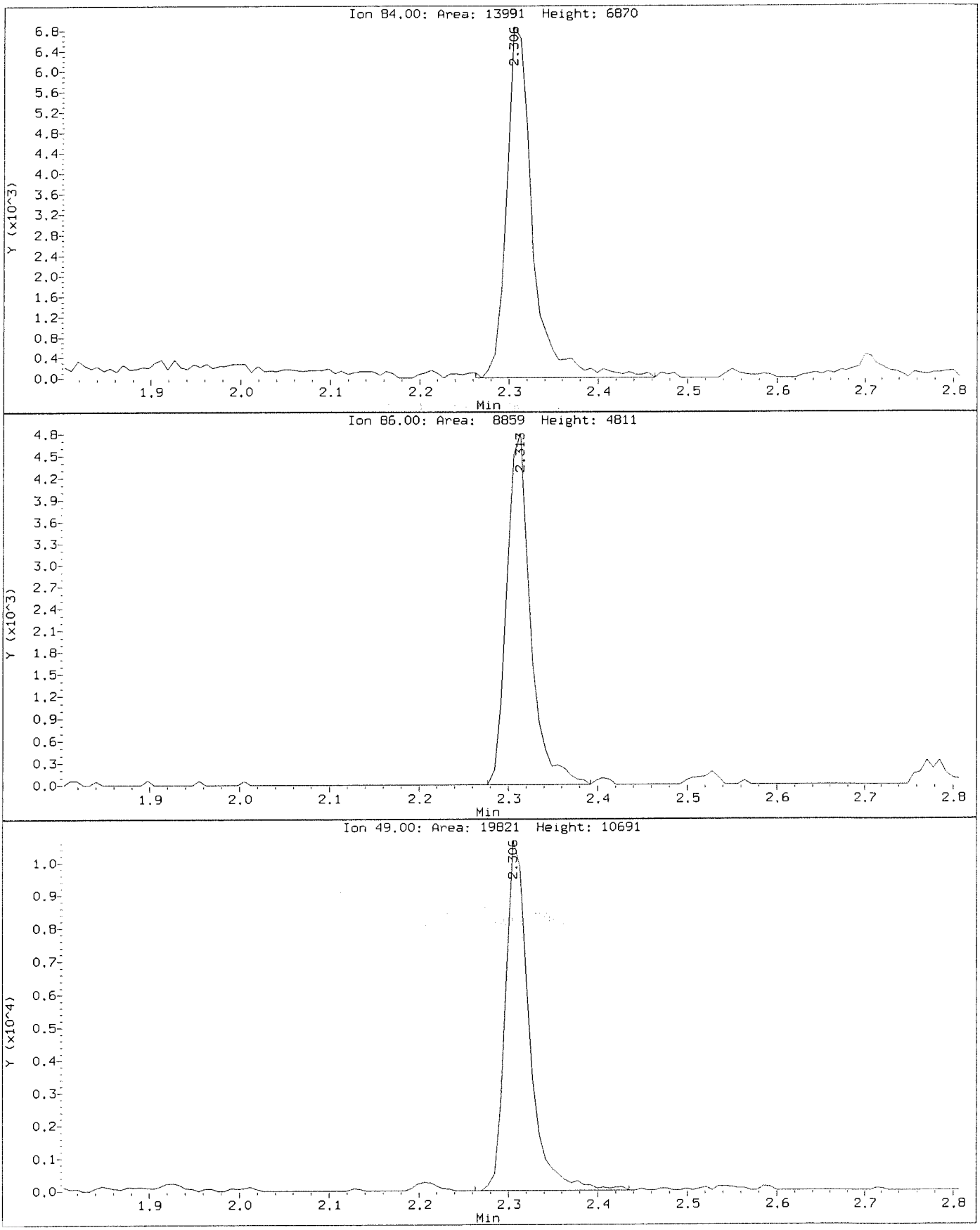
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



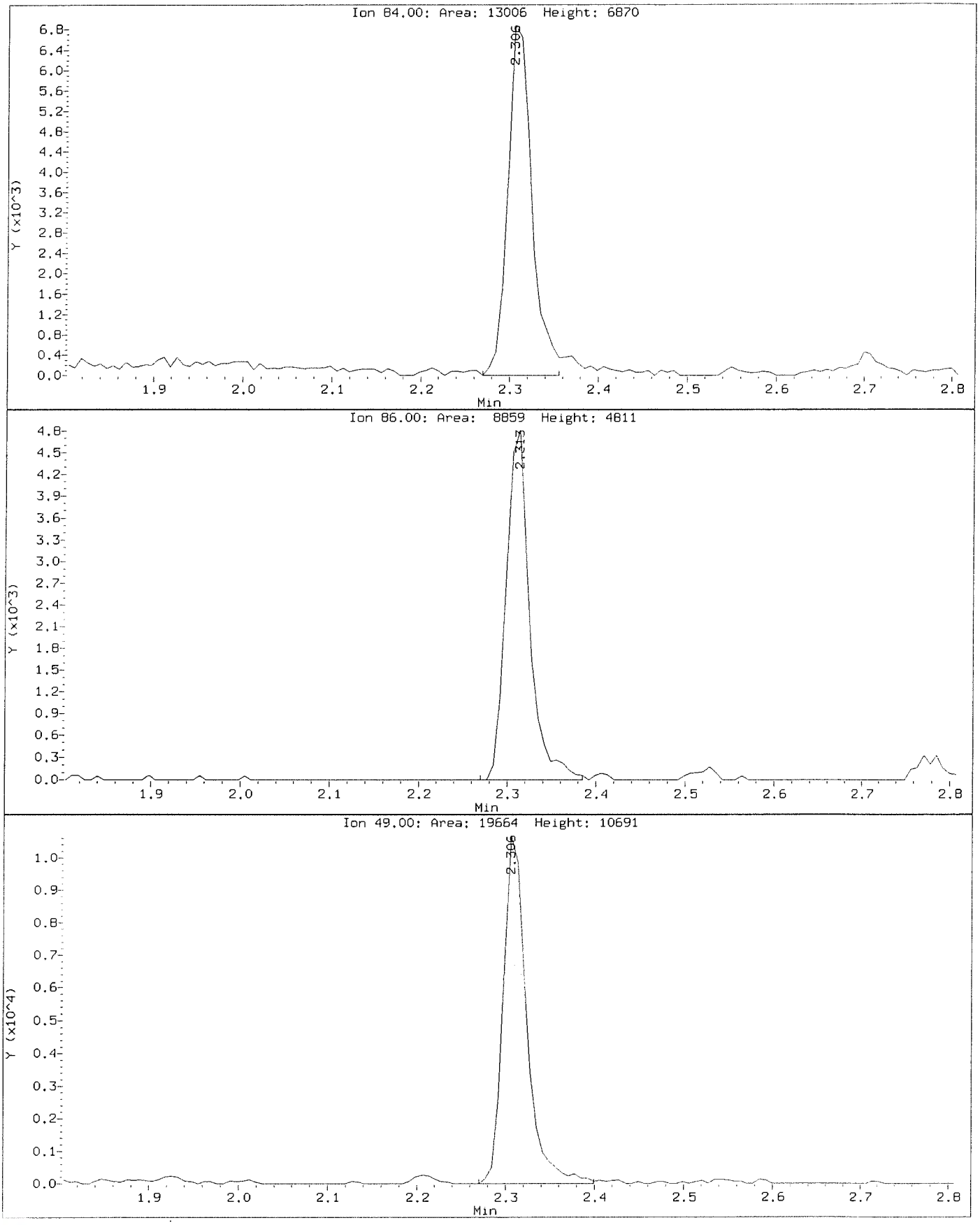
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



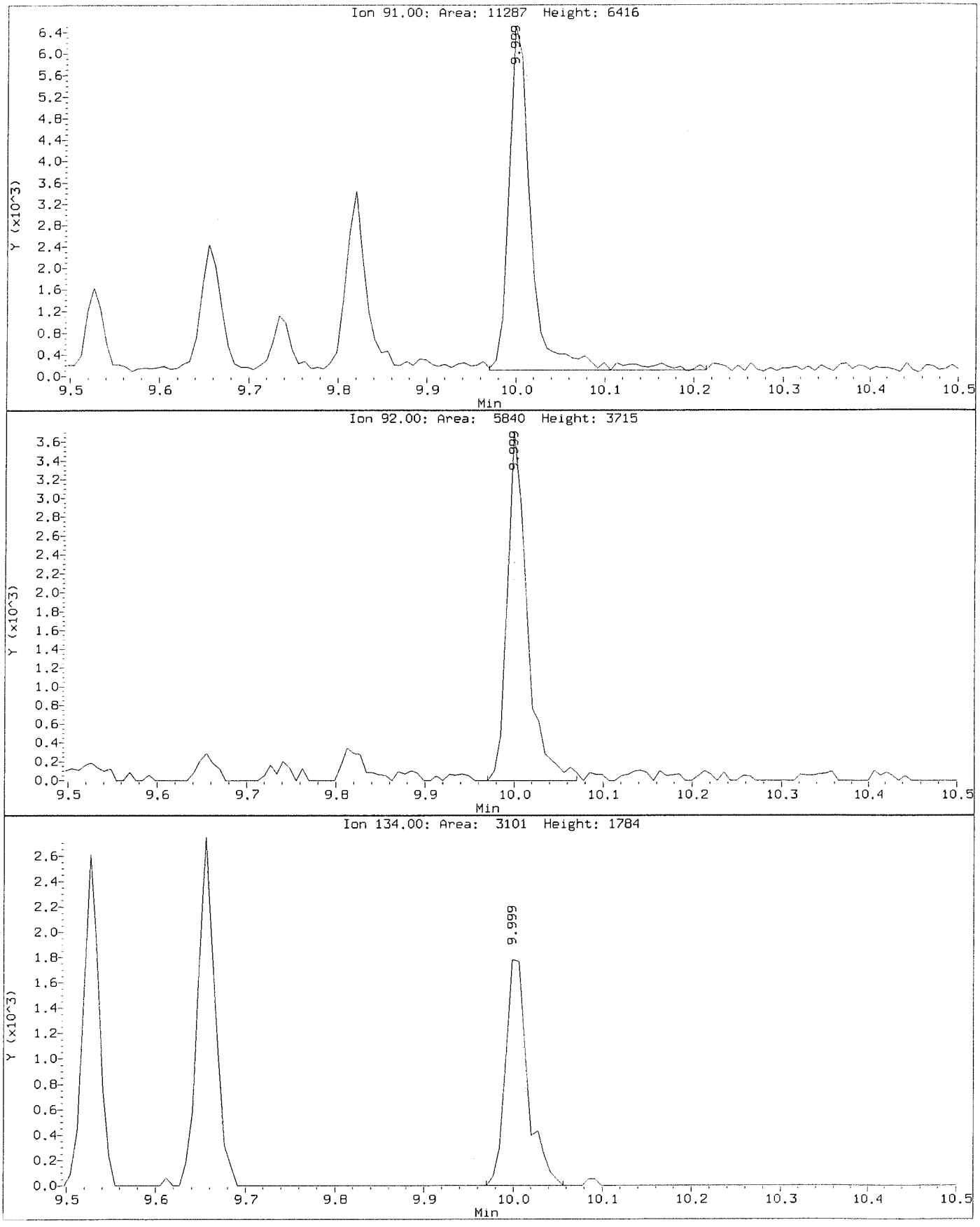
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



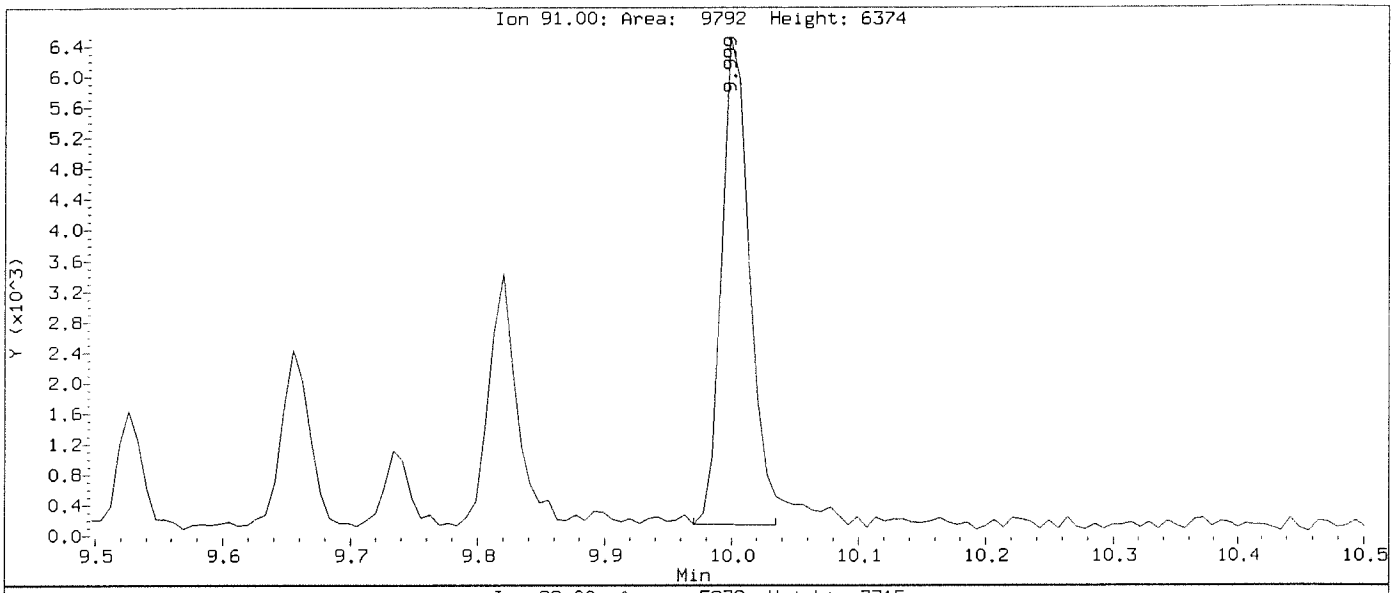
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

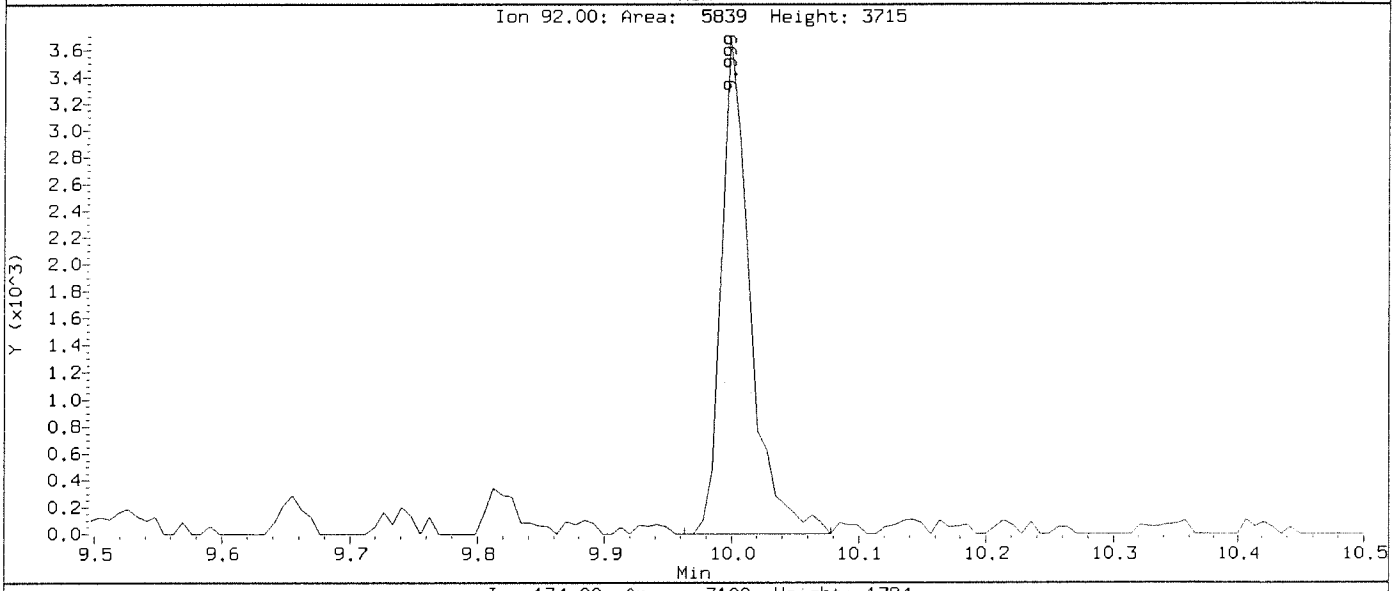
Compound: n-Butylbenzene
CAS Number: 104-51-8

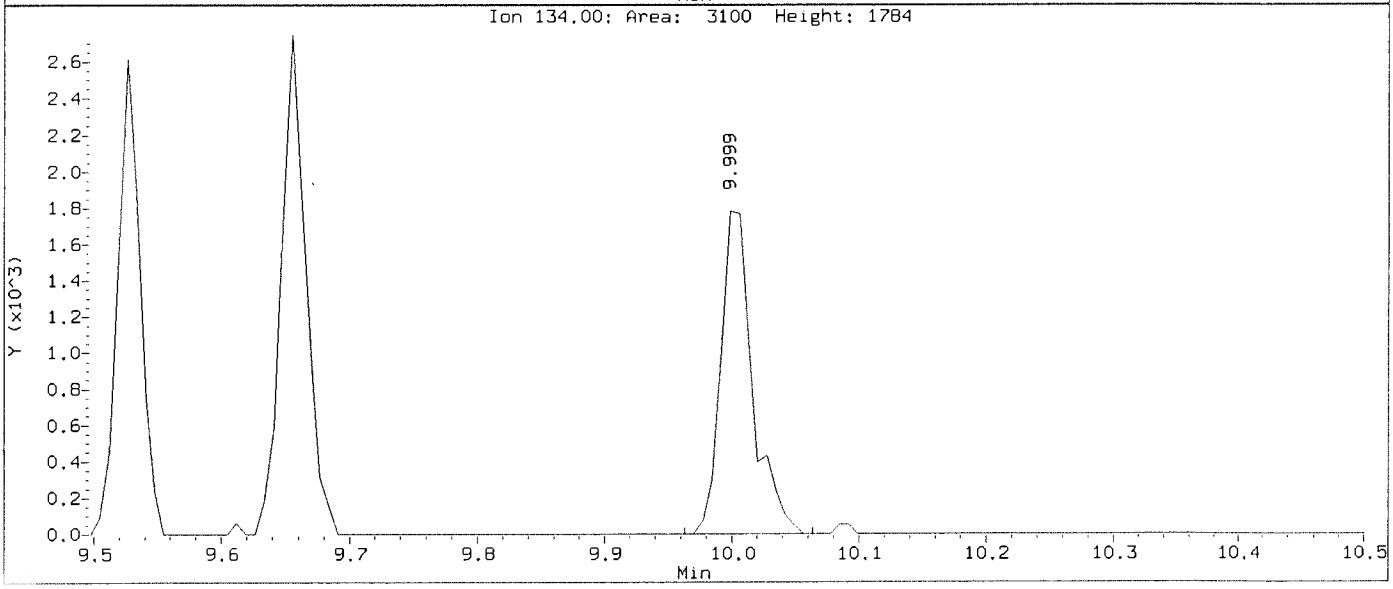


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

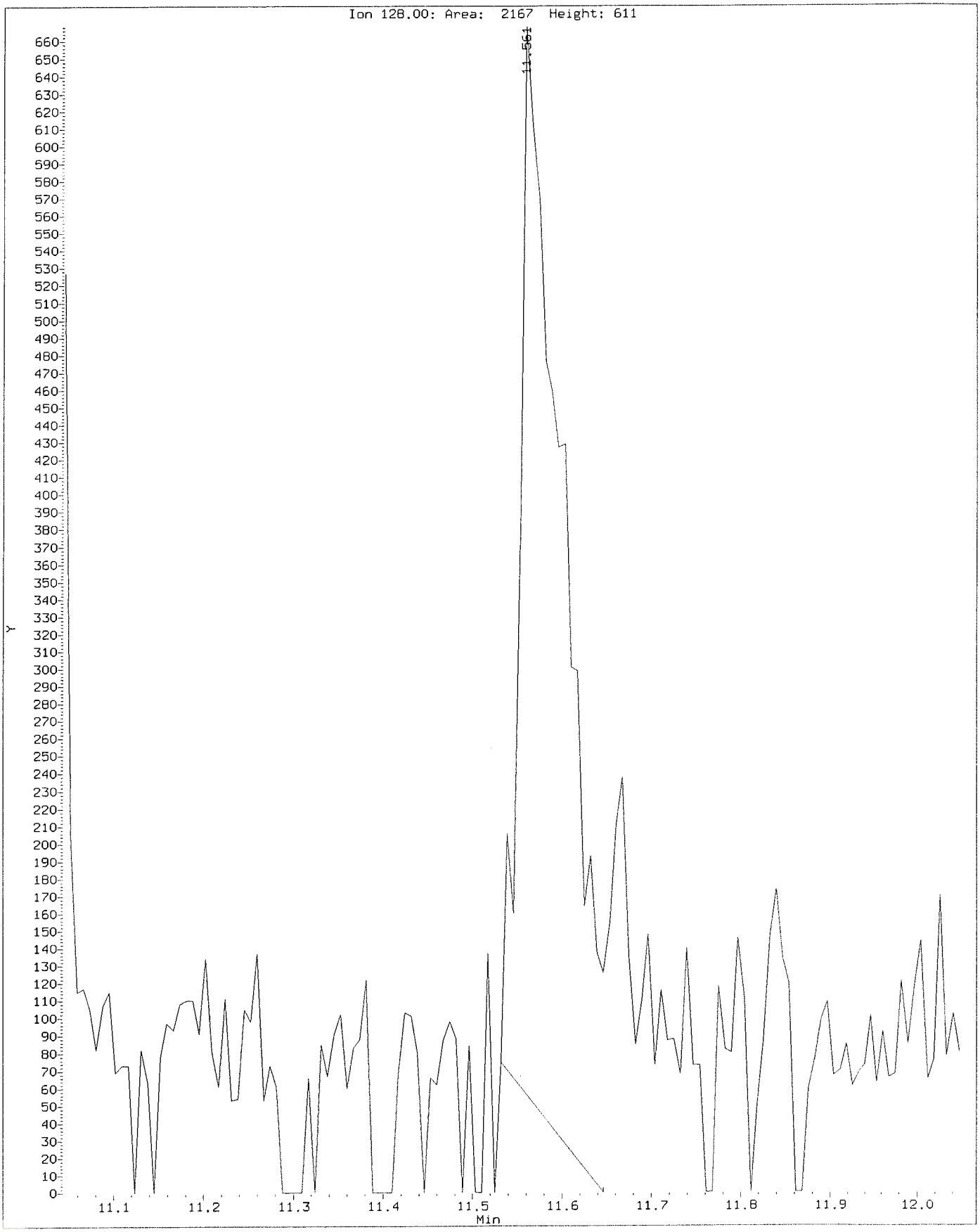






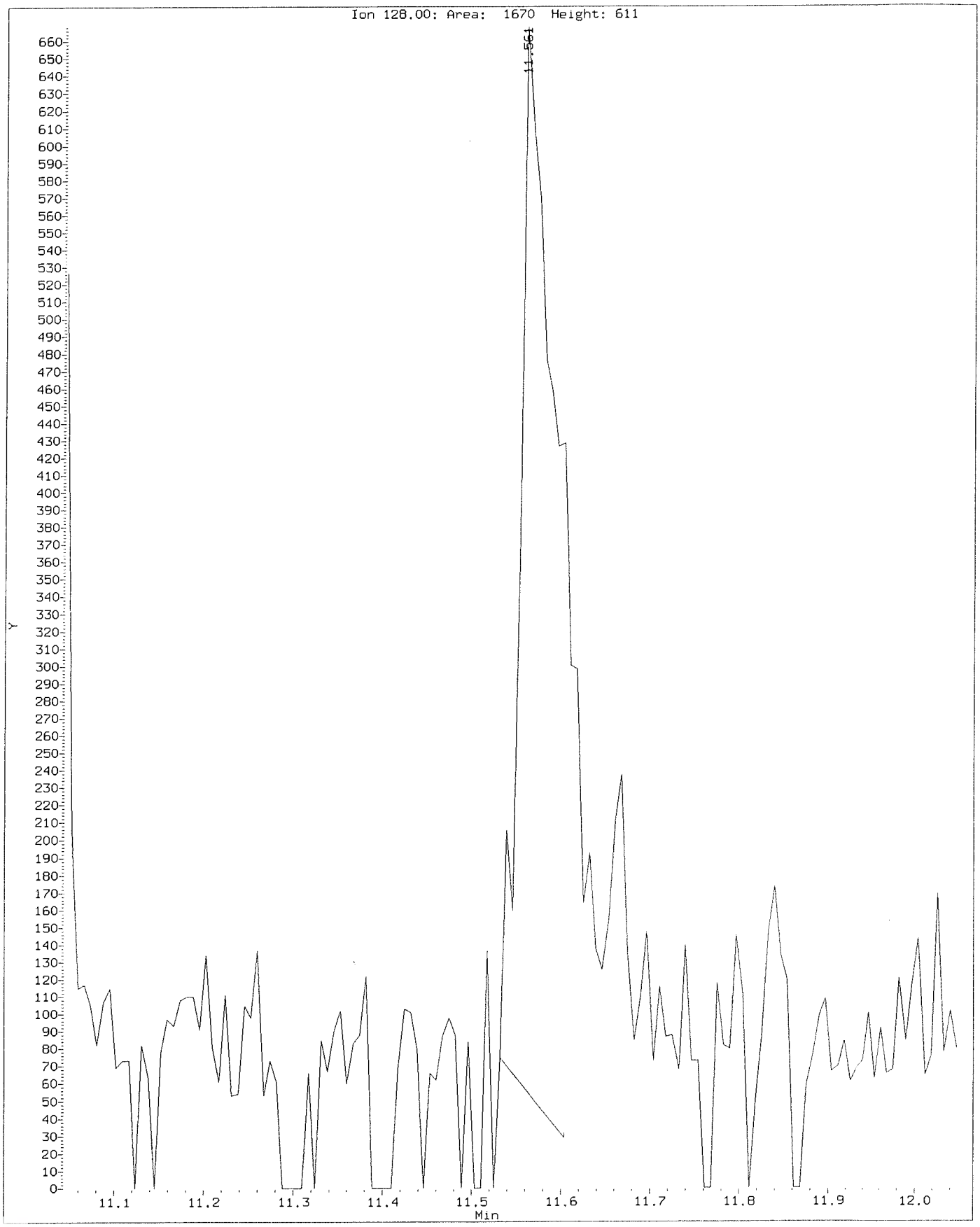
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



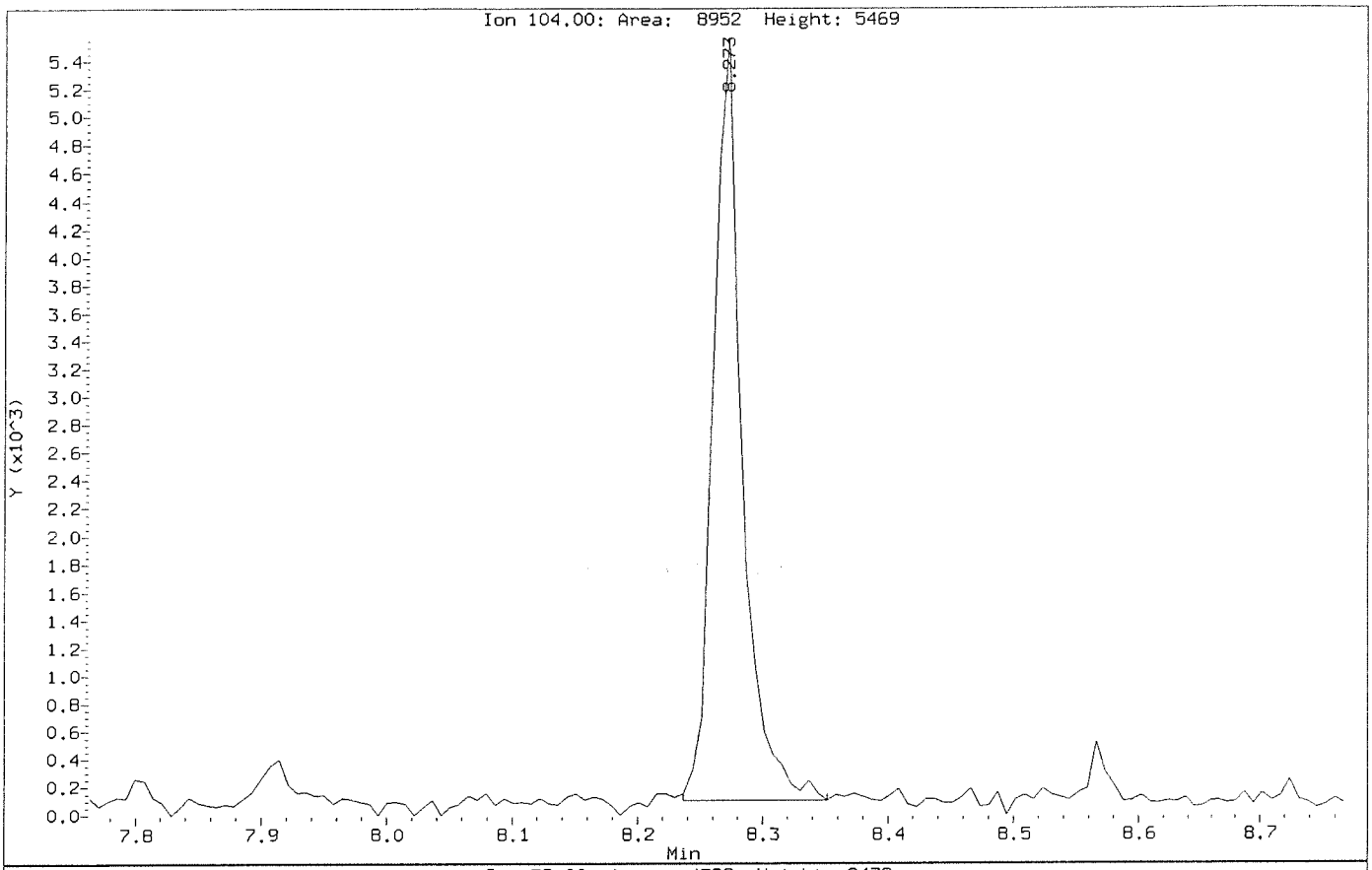
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Client Sample ID: VSTD000.5

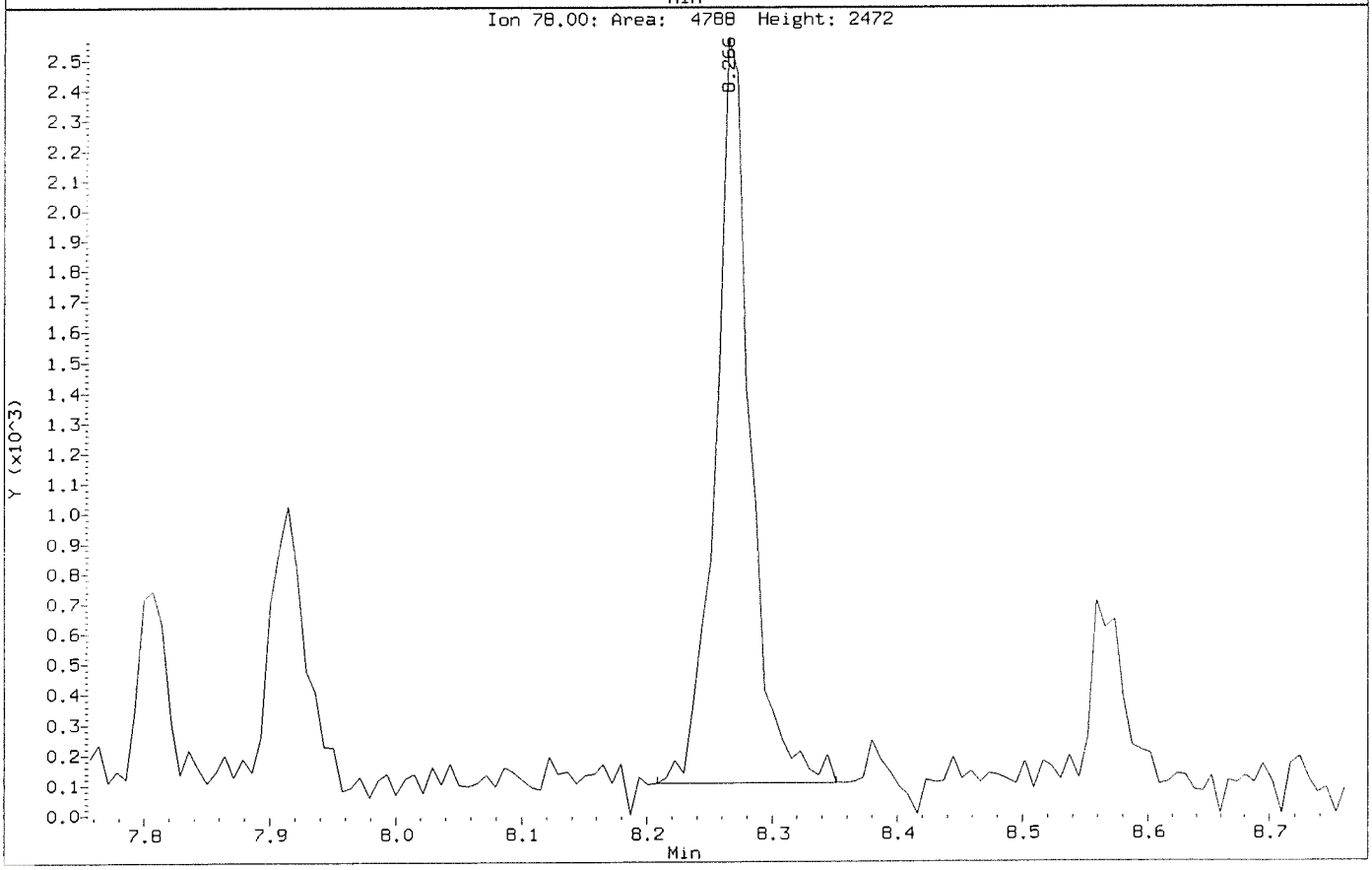
Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
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Client Sample ID: VSTD000.5

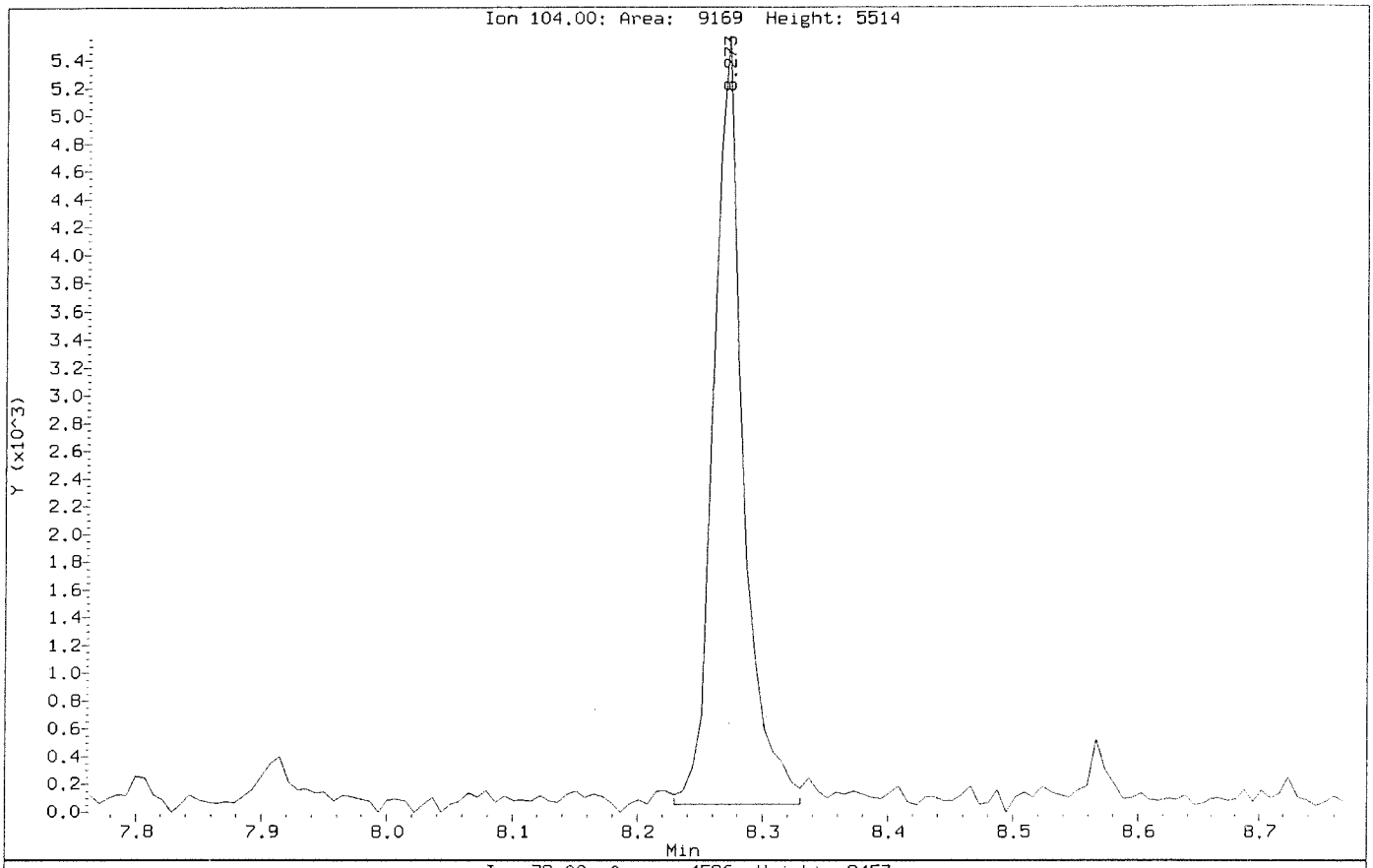
Compound: Styrene
CAS Number: 100-42-5

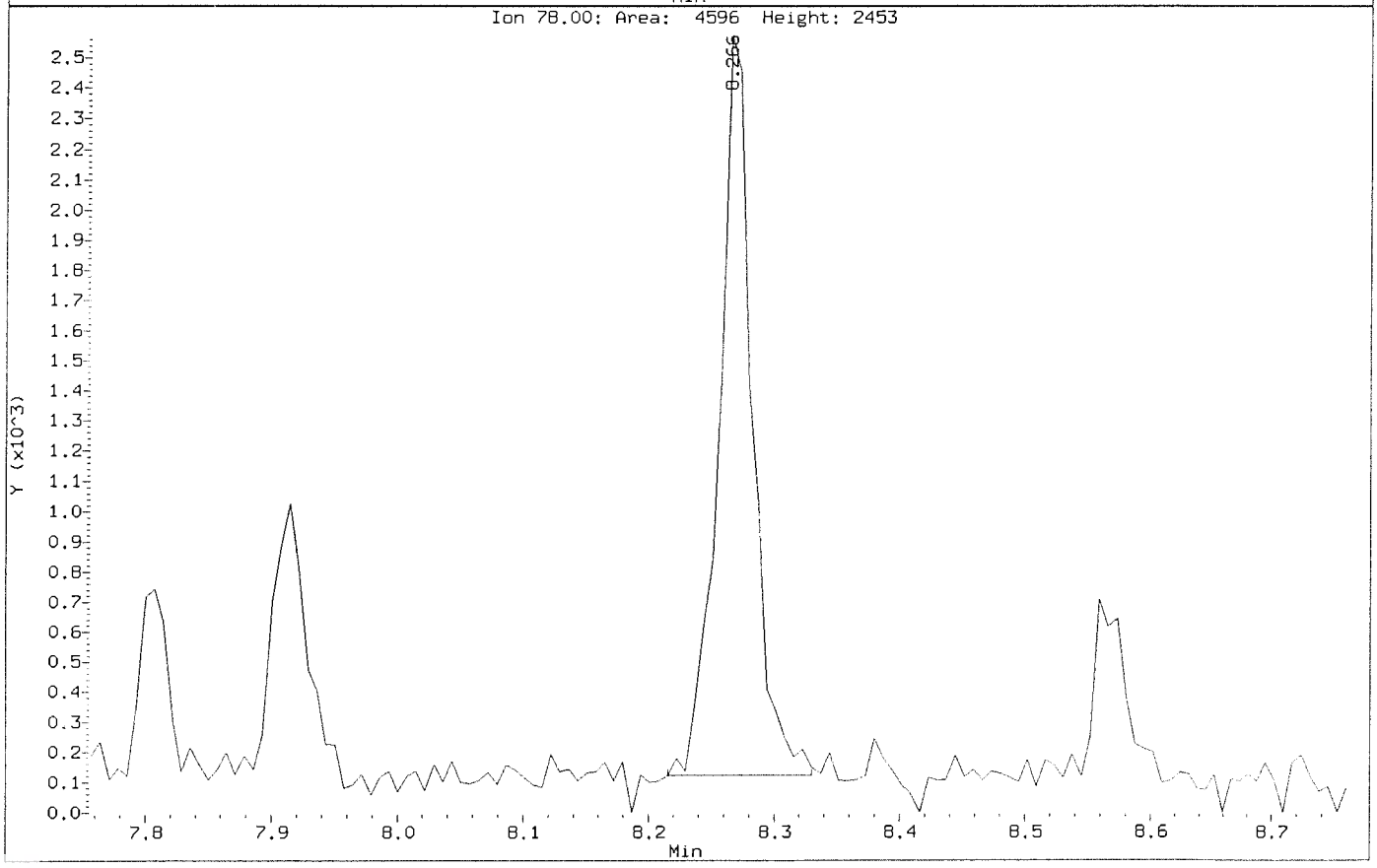




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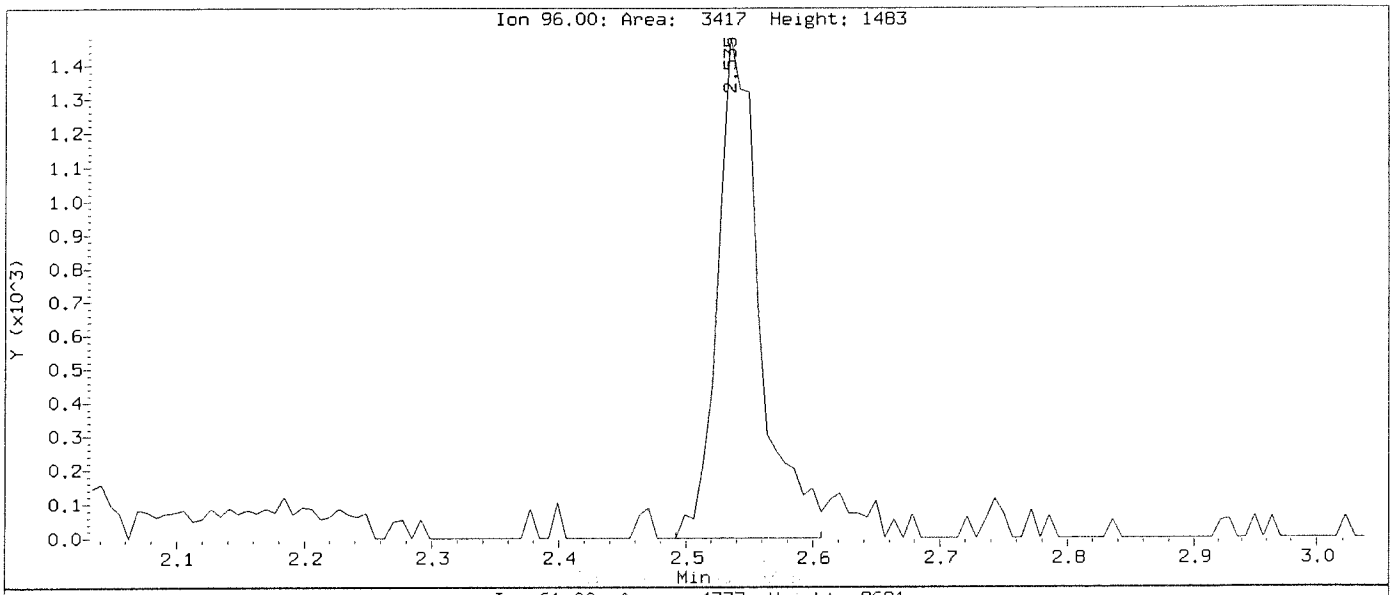
Compound: Styrene
CAS Number: 100-42-5

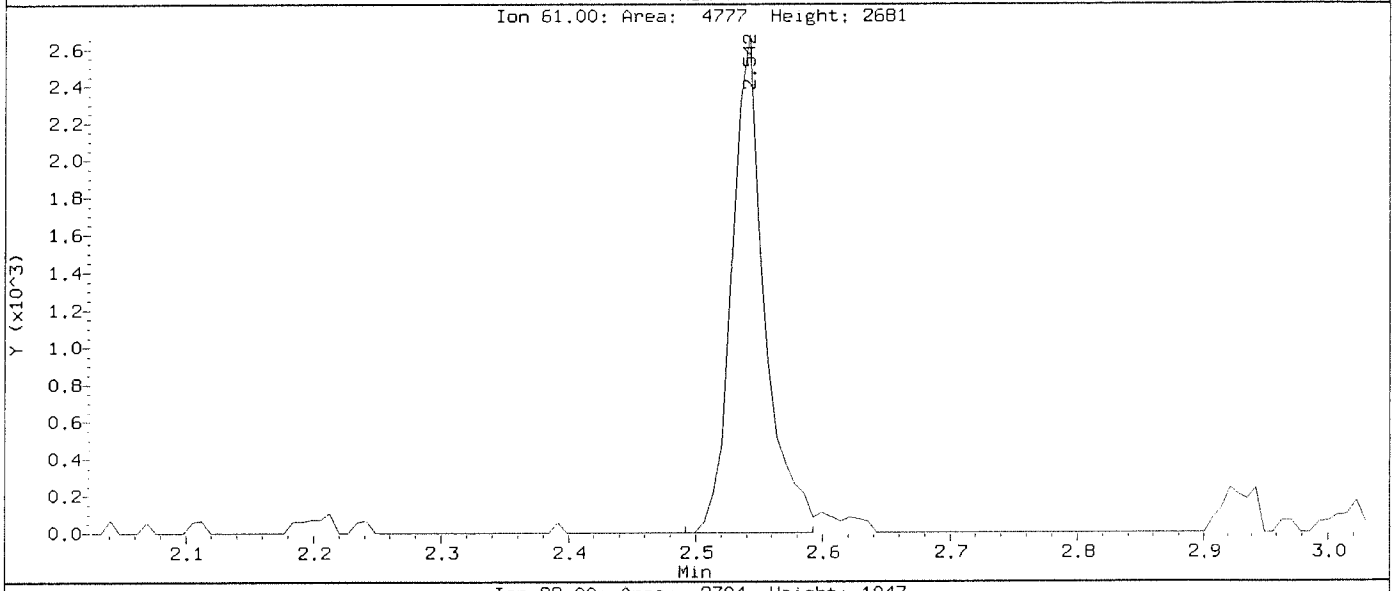


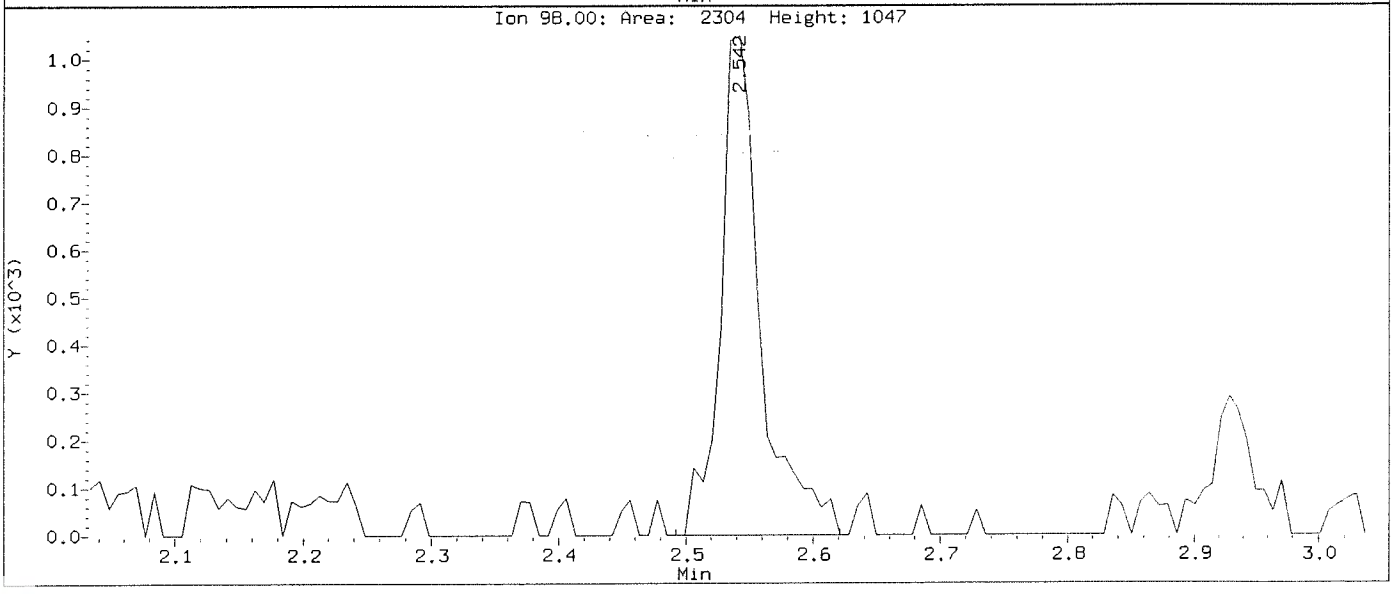


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

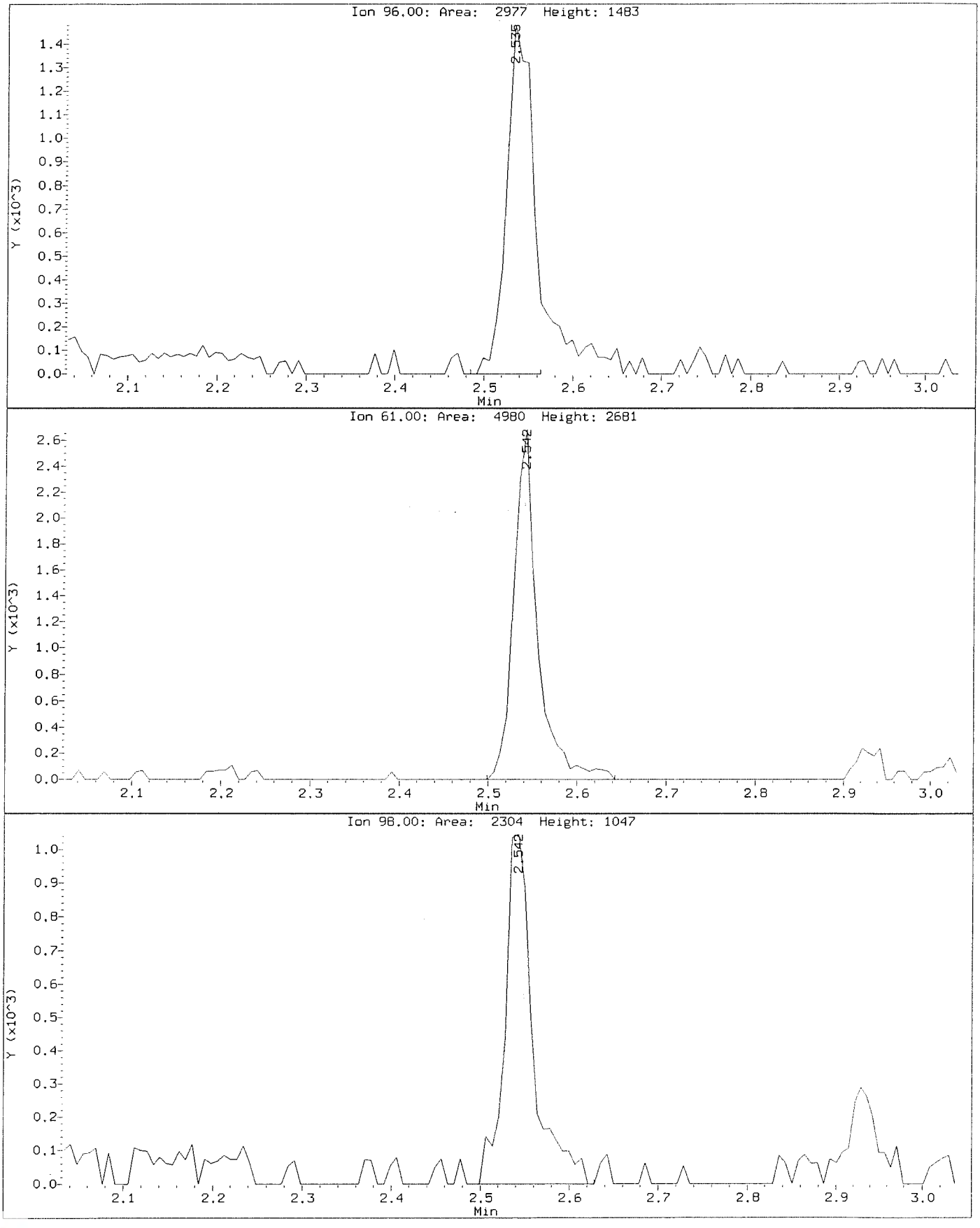






Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-AUG-2020 12:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:04 Cal File: X080303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

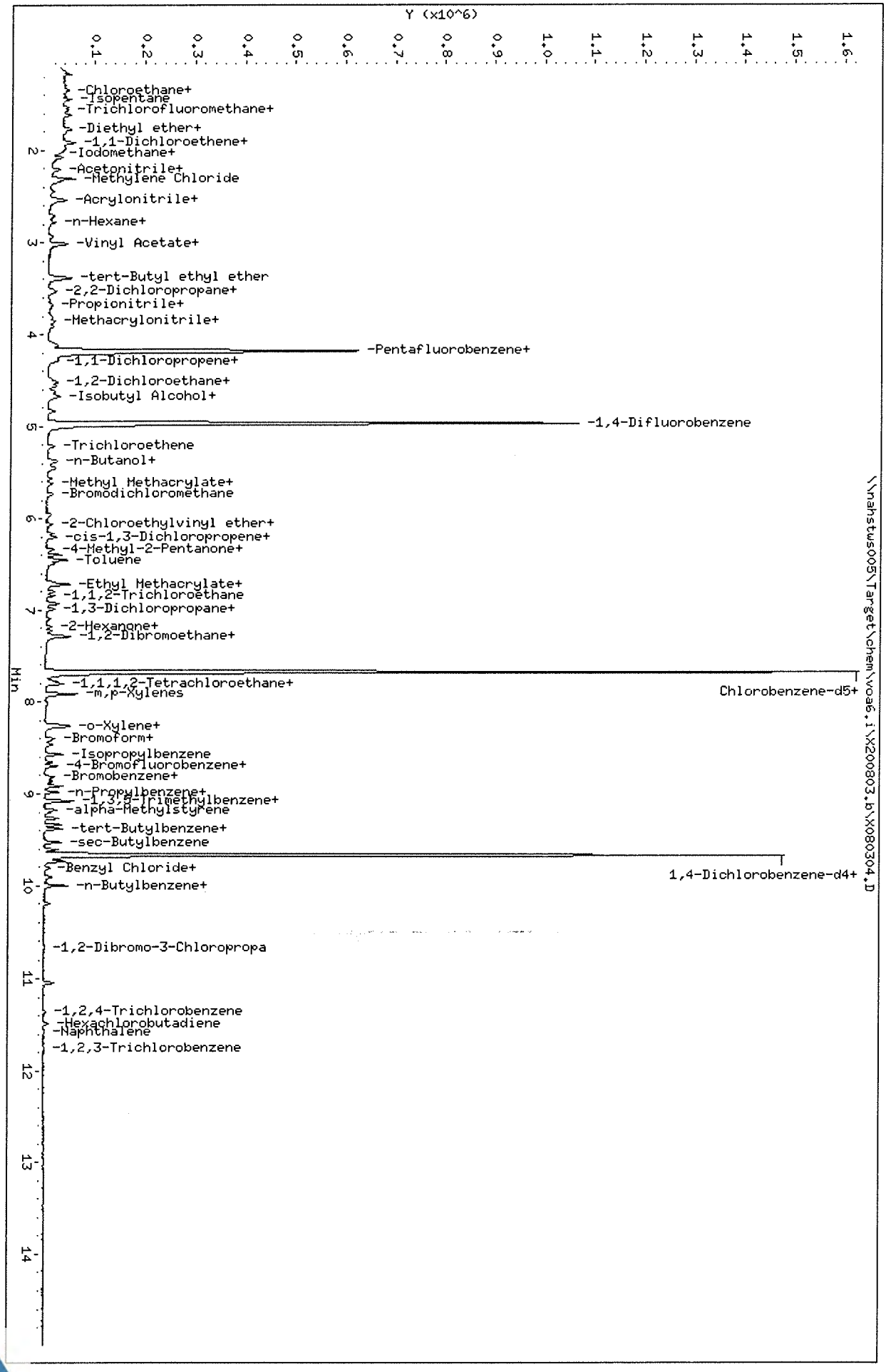
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539031	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	824218	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	742459	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	360447	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	5491	1.00000	1.03(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	6204	1.00000	0.98(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	20151	1.00000	1.11(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7948	1.00000	1.14(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5052	1.00000	0.89(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	7746	1.00000	0.93(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	5190	1.00000	1.27(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	3800	1.00000	0.89(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	8591	1.00000	0.81(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	4098	1.00000	0.95(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	6555	1.00000	0.94(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1040	1.00000	0.95(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	4319	1.00000	0.81(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1766	1.00000	0.33(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	16065	1.00000	0.83(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	461	1.00000	1.67(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	5188	1.00000	0.95(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	9203	1.00000	0.90(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	7158	1.00000	0.89(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	5327	1.00000	0.88(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	16539	1.00000	0.87(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	9693	1.00000	0.85(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	7511	1.00000	0.90(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	10004	1.00000	0.89(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.838)	6234	1.00000	0.81(a)
24	2-Butanone	43	3.624	3.624	(0.865)	4199	2.00000	1.58(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	14320	1.00000	0.91(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	7382	2.00000	1.58(a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	16588	1.00000	0.91(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	17233	1.00000	0.86(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	11981	2.00000	1.74(a)
10	Acetone	43	1.976	1.976	(0.472)	5964	2.00000	2.13(aM)
37	Benzene	78	4.526	4.526	(0.911)	18524	1.00000	0.90(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	6199	1.00000	0.87(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	3452	1.00000	1.06(a)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	6632	1.00000	0.89(a)
66	Bromoform	173	8.416	8.416	(1.097)	3380	1.00000	0.82(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	4659	1.00000	1.89(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	24456	2.00000	1.84(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	7095	1.00000	0.96(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	12980	1.00000	0.89(a)
7	Chloroethane	64	1.403	1.403	(0.335)	3283	1.00000	0.85(a)
28	Chloroform	83	3.917	3.917	(0.935)	9174	1.00000	0.95(a)
3	Chloromethane	50	1.081	1.081	(0.258)	6446	1.00000	0.85(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	5626	1.00000	0.94(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	7619	1.00000	0.87(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	5073	1.00000	0.85(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	3381	1.00000	0.94(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	5003	1.00000	0.94(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	7129	1.00000	0.94(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	1845	1.00000	0.95(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	20764	1.00000	0.94(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	16885	2.00000	1.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	14851	1.00000	1.36(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	13125	1.00000	0.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	22125	1.00000	0.85(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3475	1.00000	1.12(a)
63	o-Xylene	106	8.244	8.244	(1.075)	8262	1.00000	0.92(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	19175	1.00000	0.87(a)
64	Styrene	104	8.265	8.265	(1.078)	13312	1.00000	0.86(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	14112	1.00000	0.86(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	4400	1.00000	0.93(a)
50	Toluene	91	6.453	6.453	(0.841)	20029	1.00000	0.92(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	4813	1.00000	0.95(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	7143	1.00000	0.89(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	4900	1.00000	0.83(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	7321	1.00000	0.92(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	5889	1.00000	0.84(a)

QC Flag Legend

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

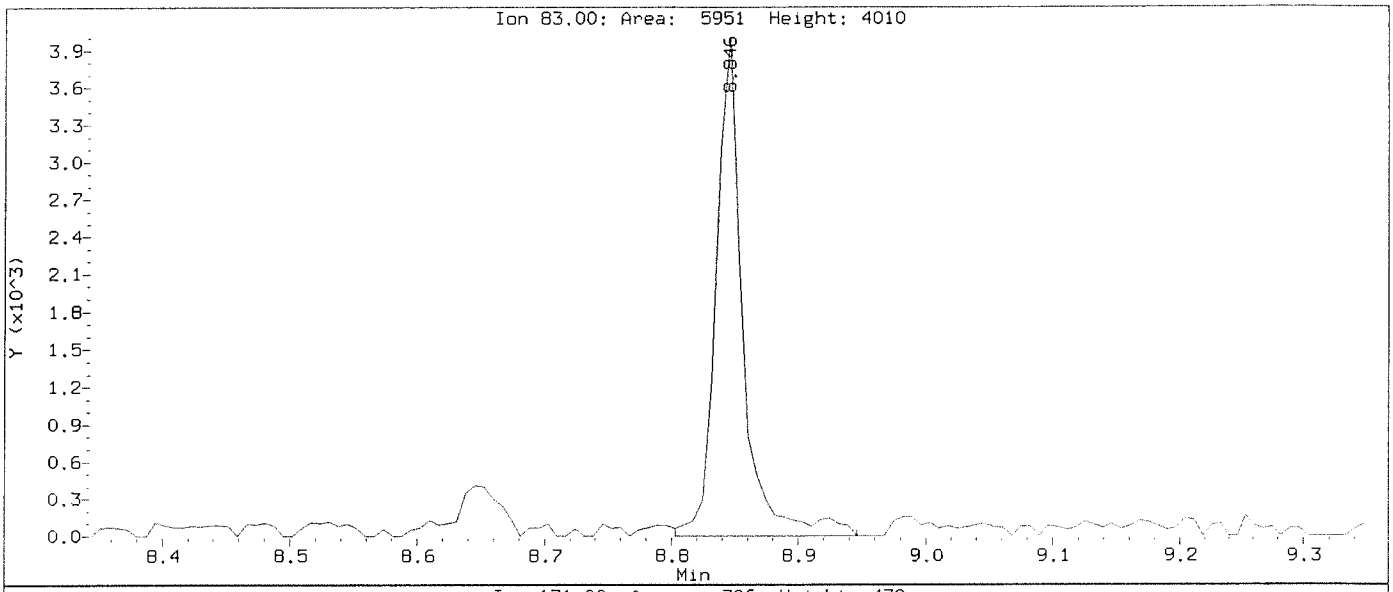


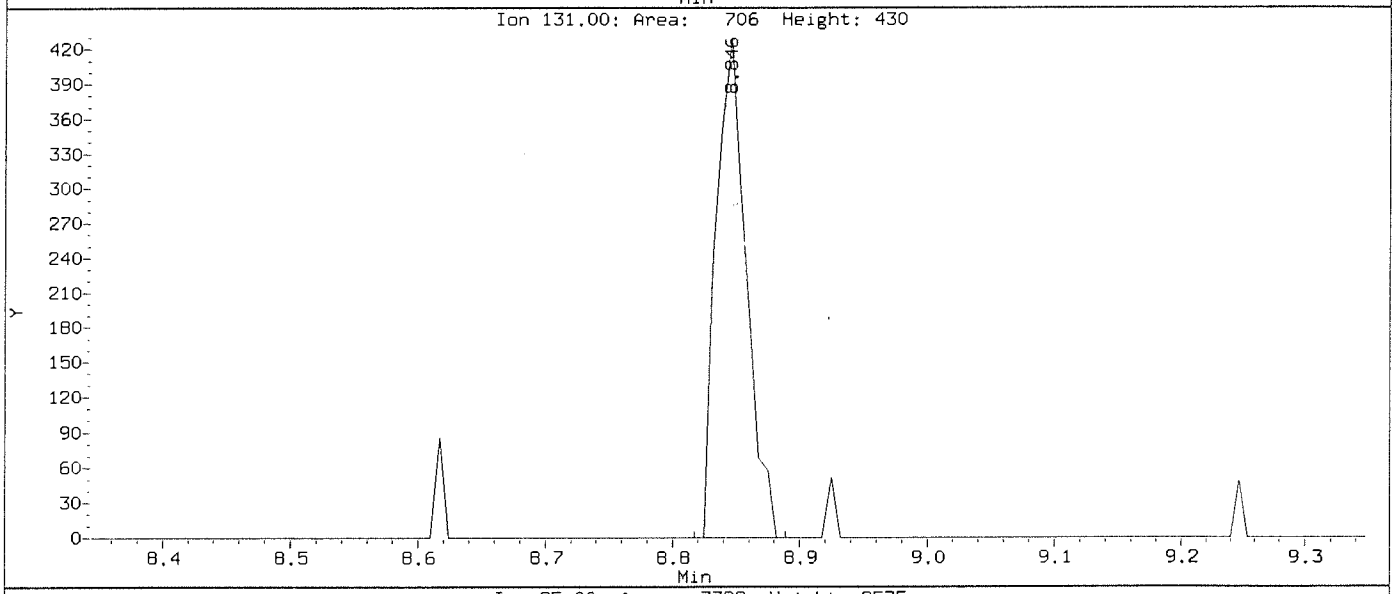
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Sample Info: VSTD001;VSTD001;1;3;;
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Column phase: DB624

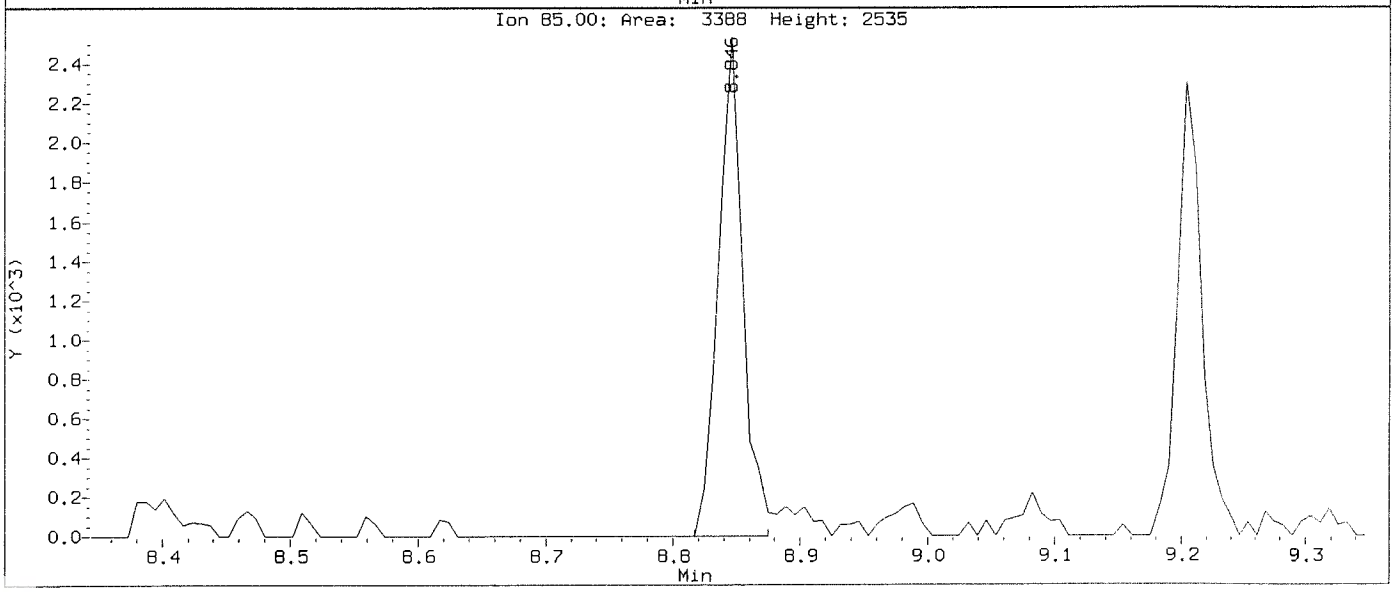
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Instrument: voa6.i
Client Sample ID: VSTD001

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

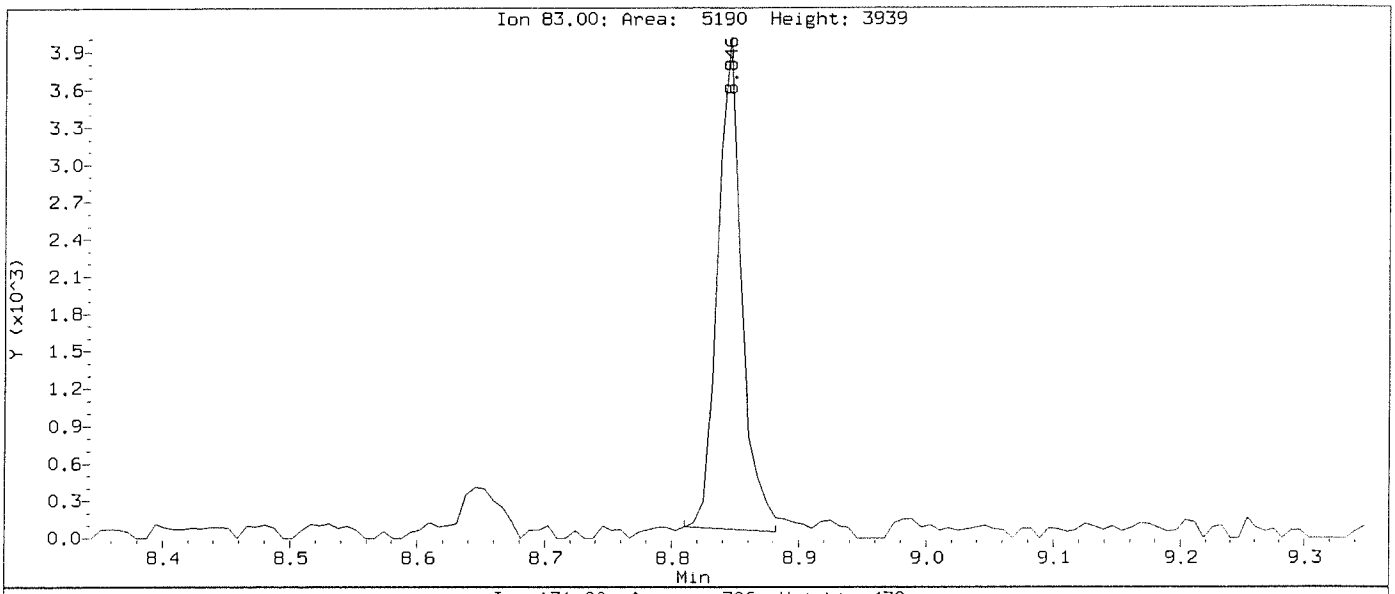


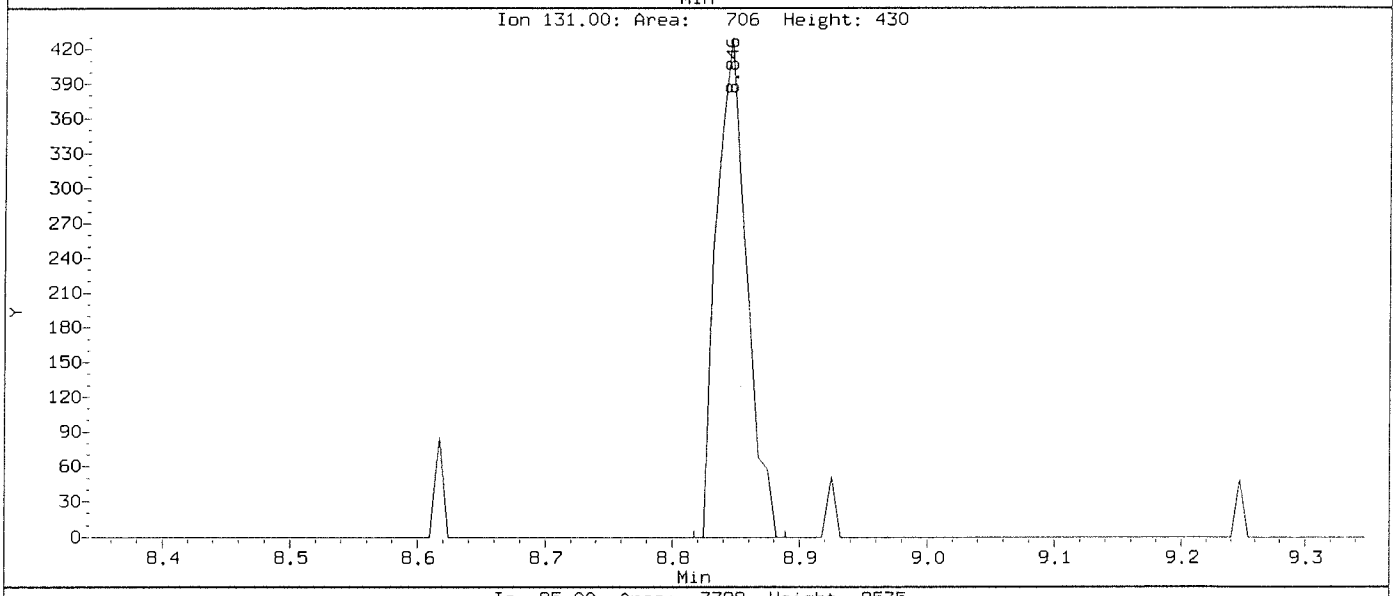


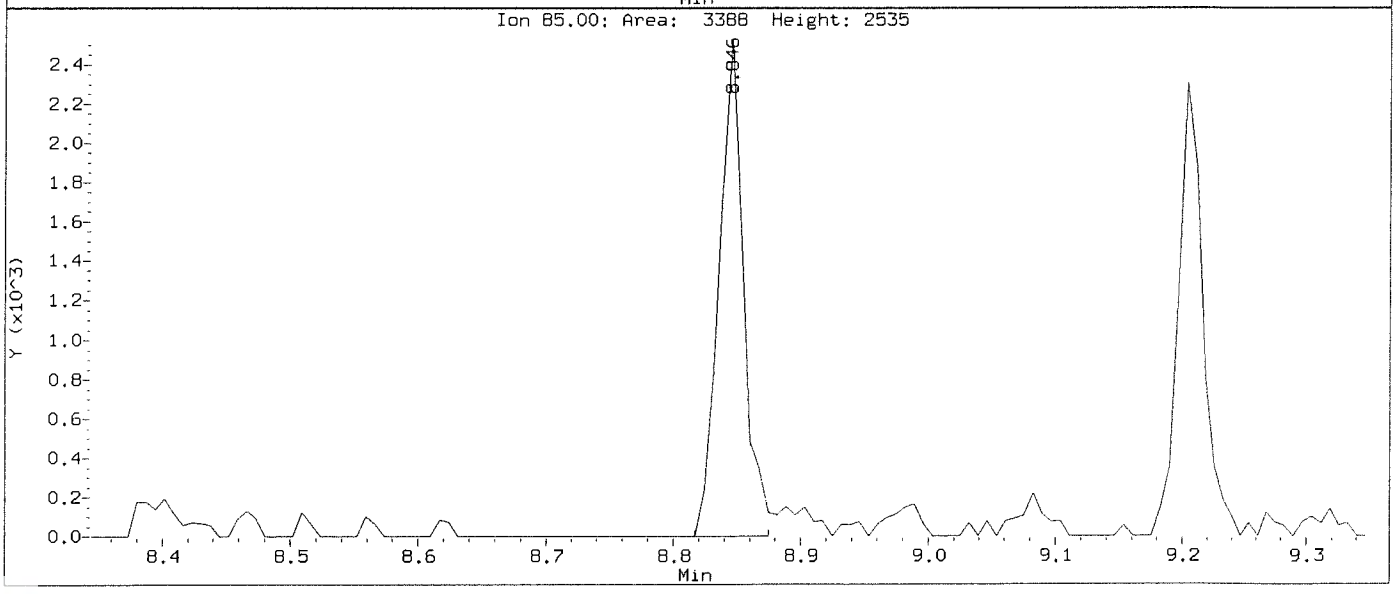


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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

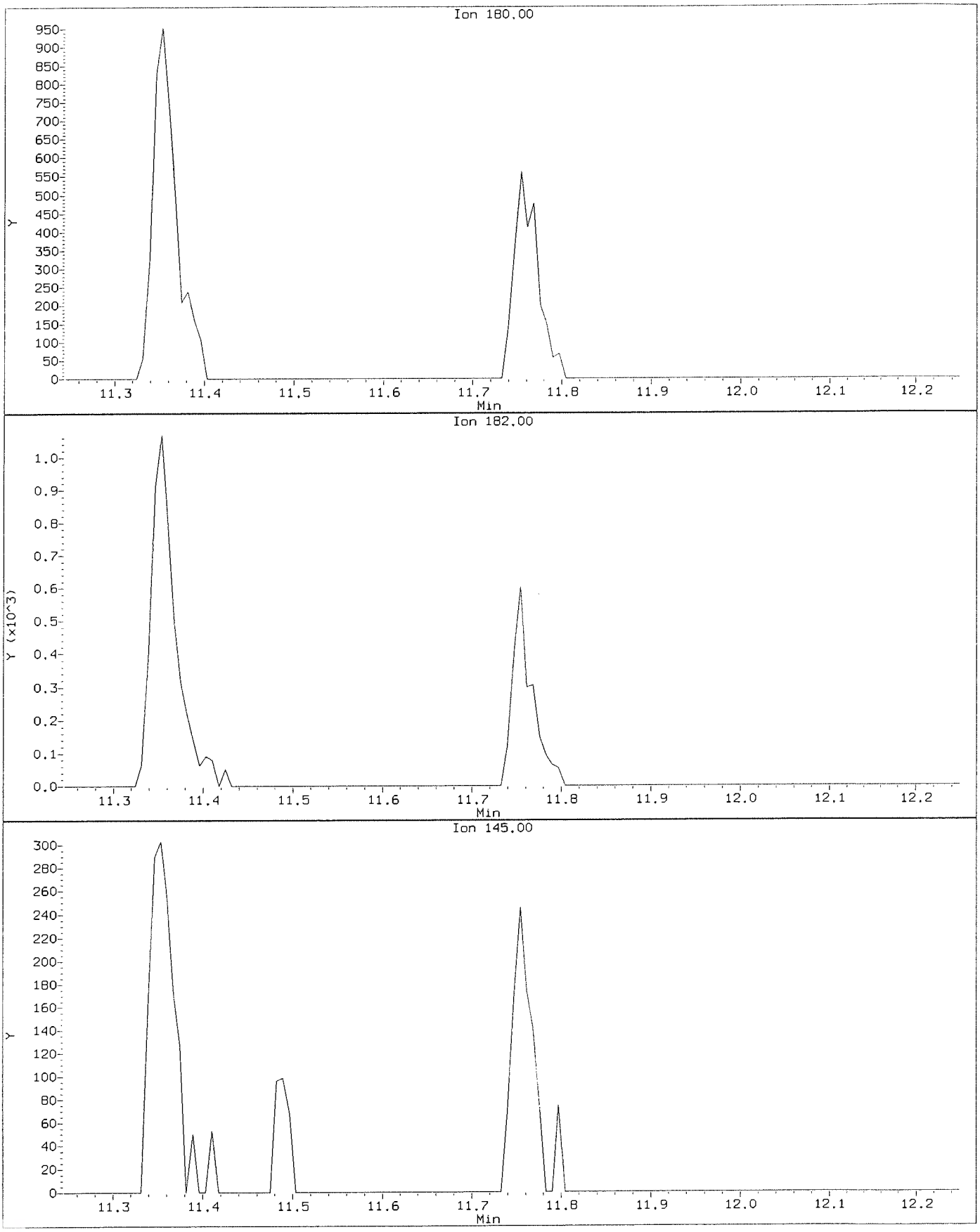






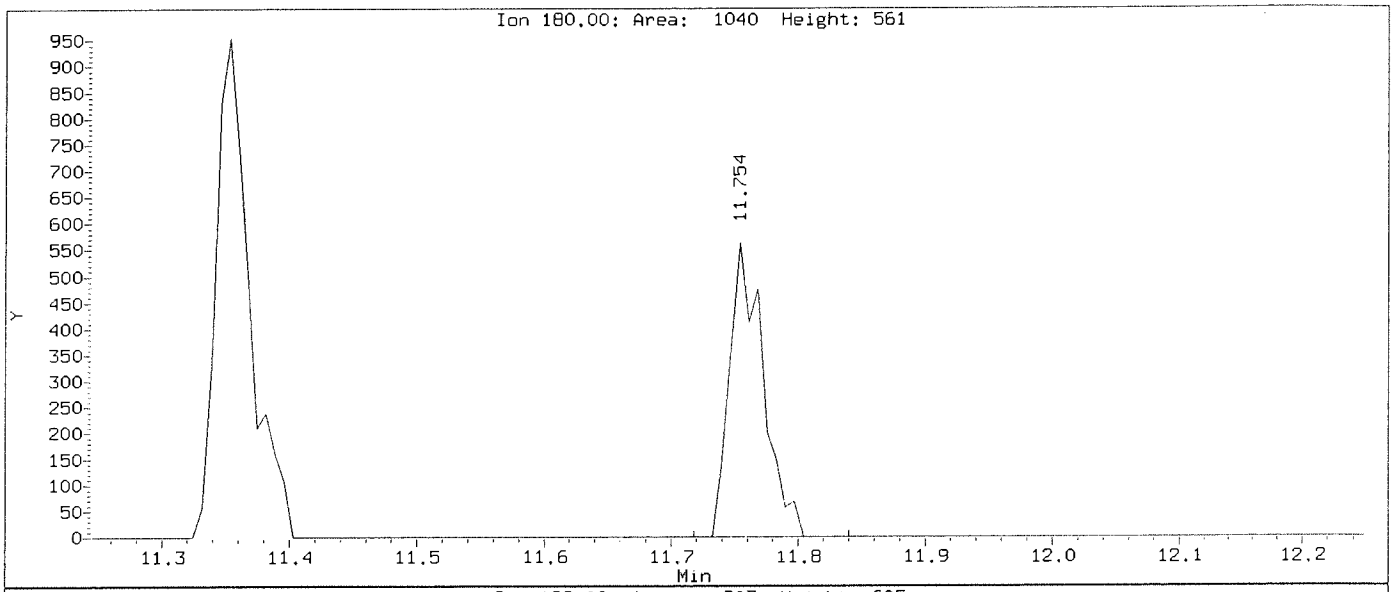
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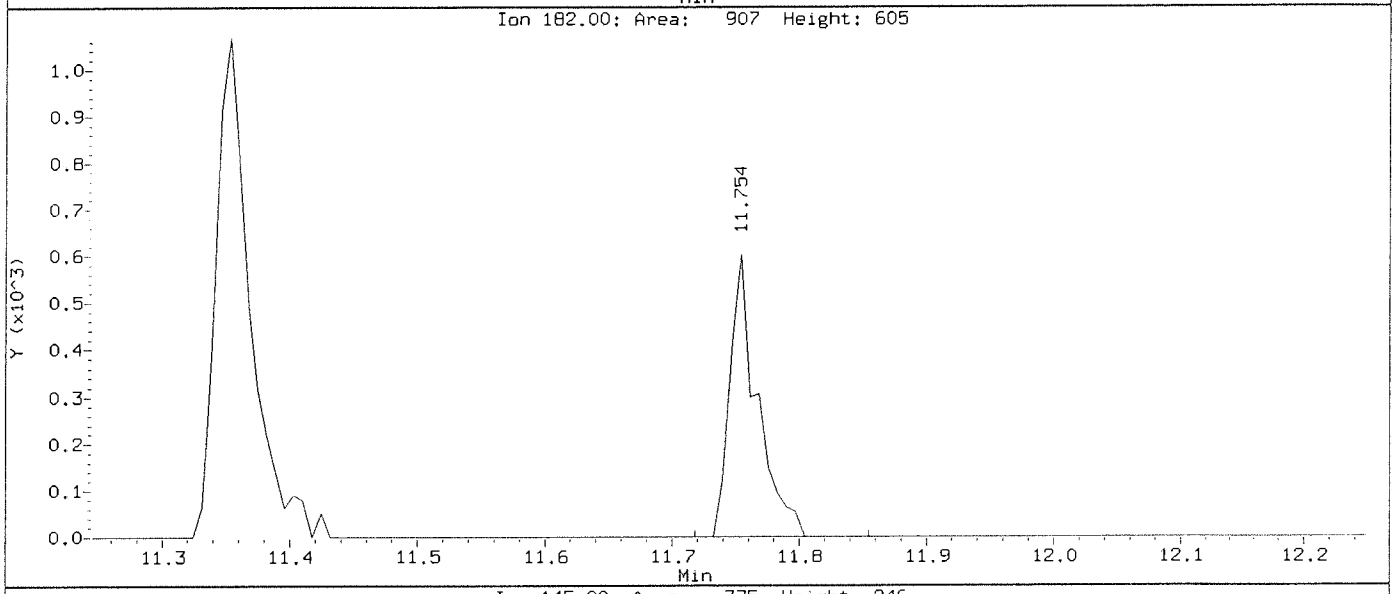
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

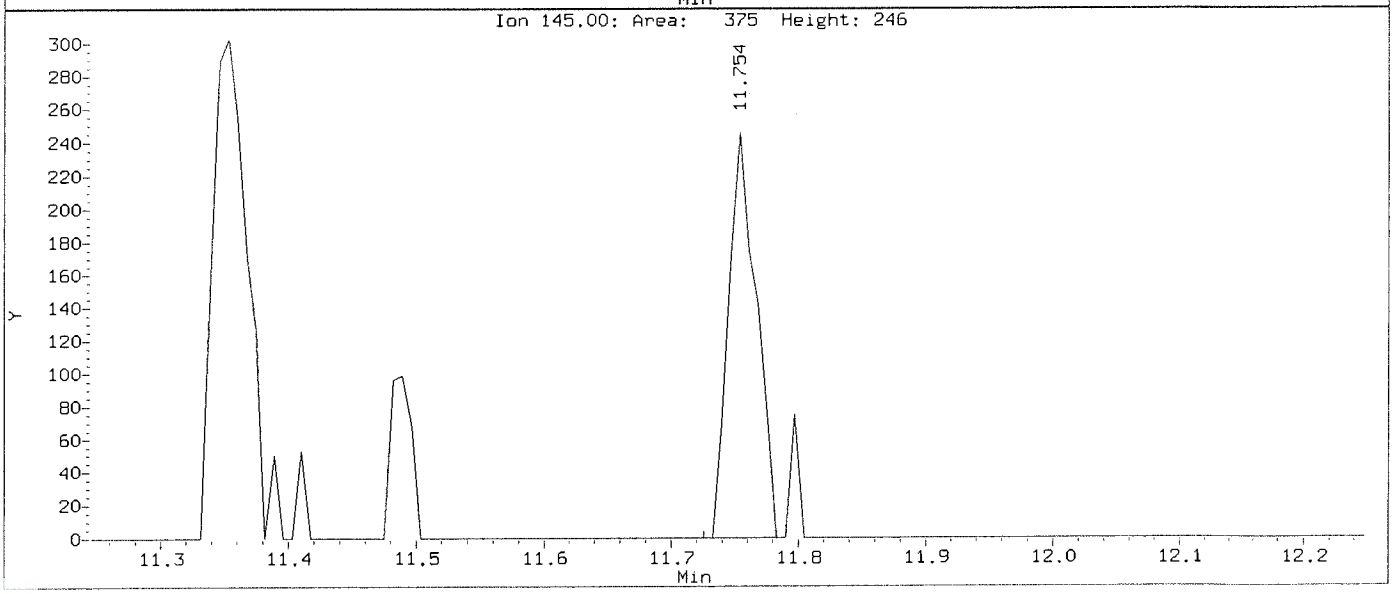


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Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

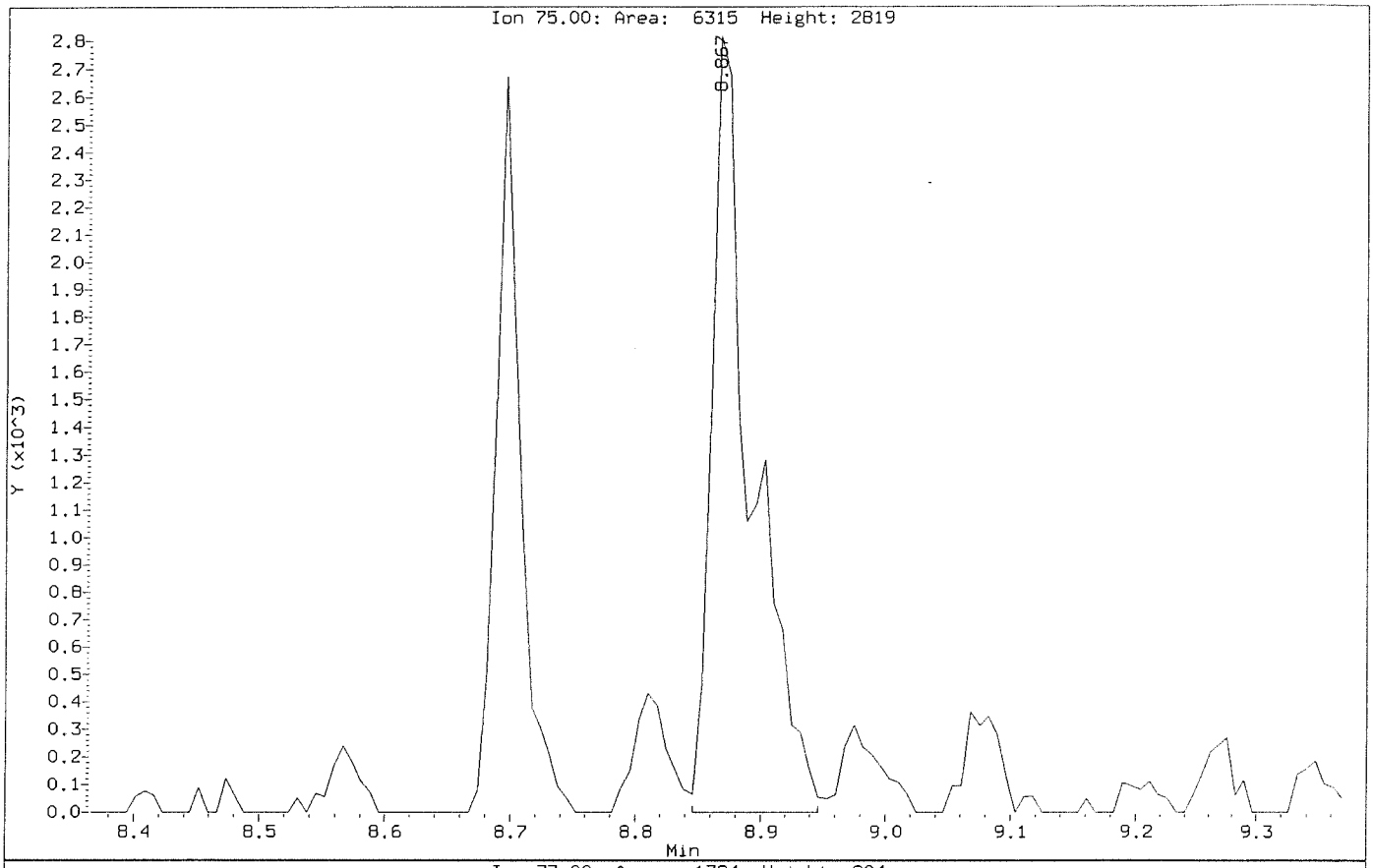


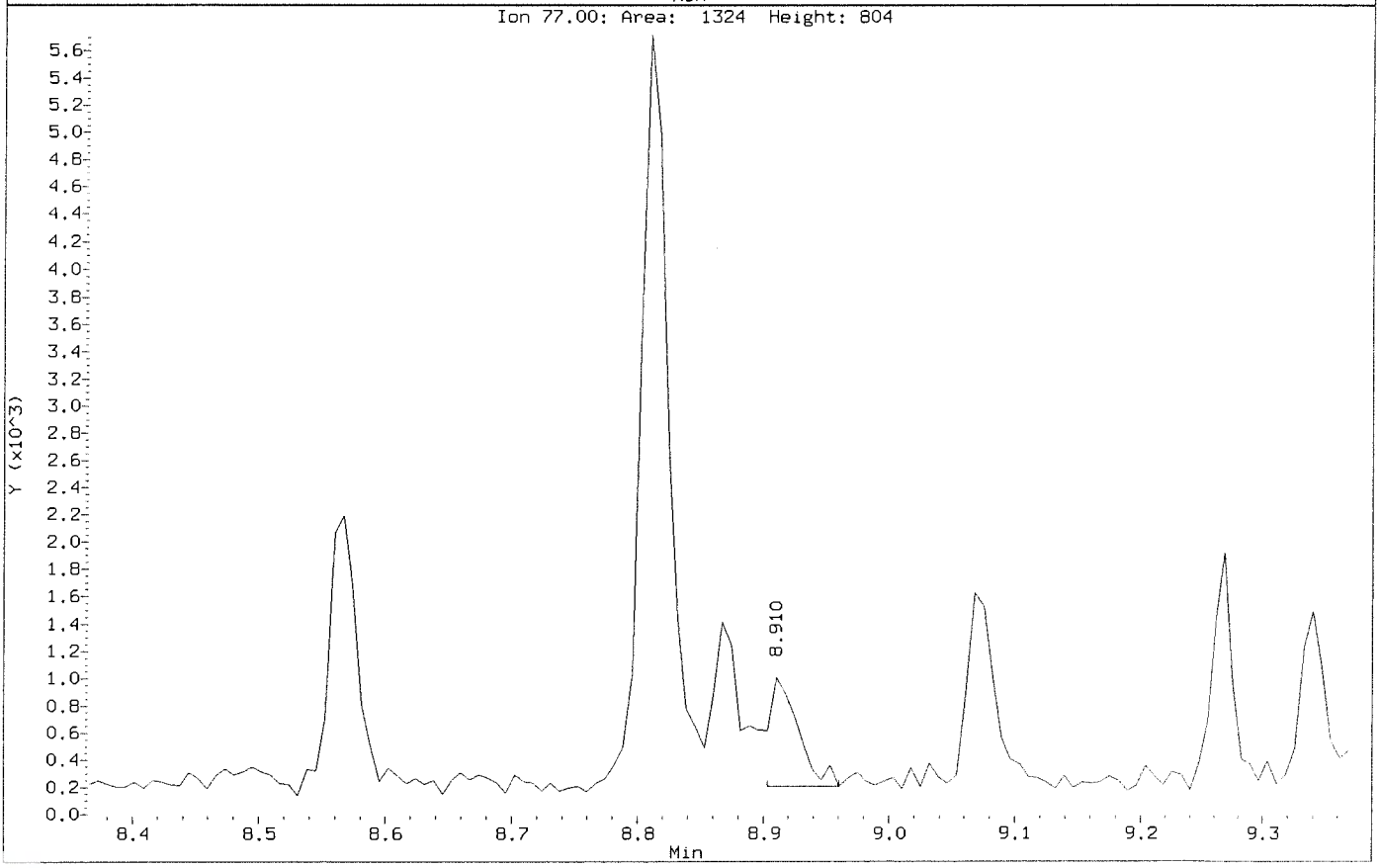




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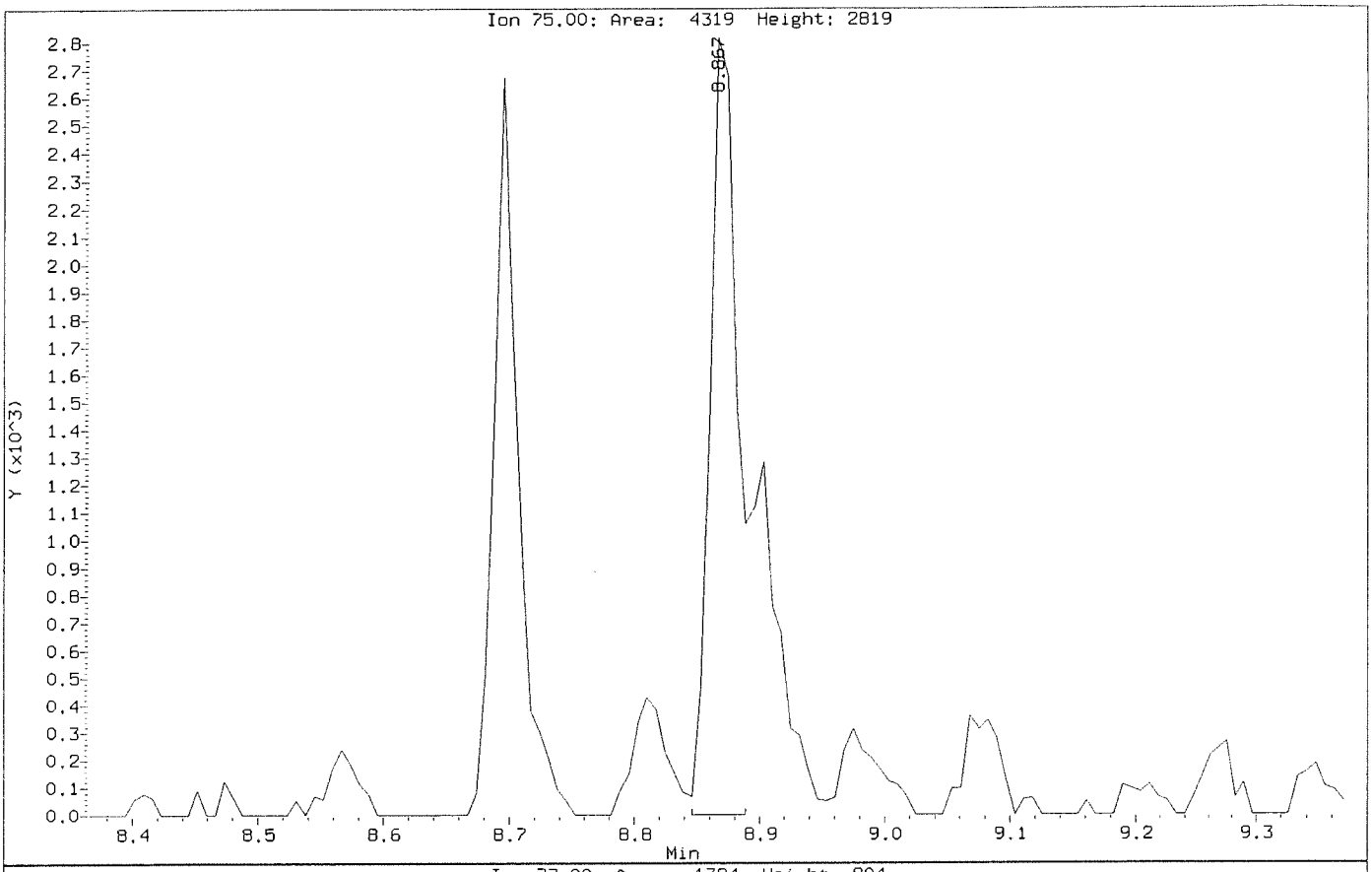
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CAS Number: 96-18-4

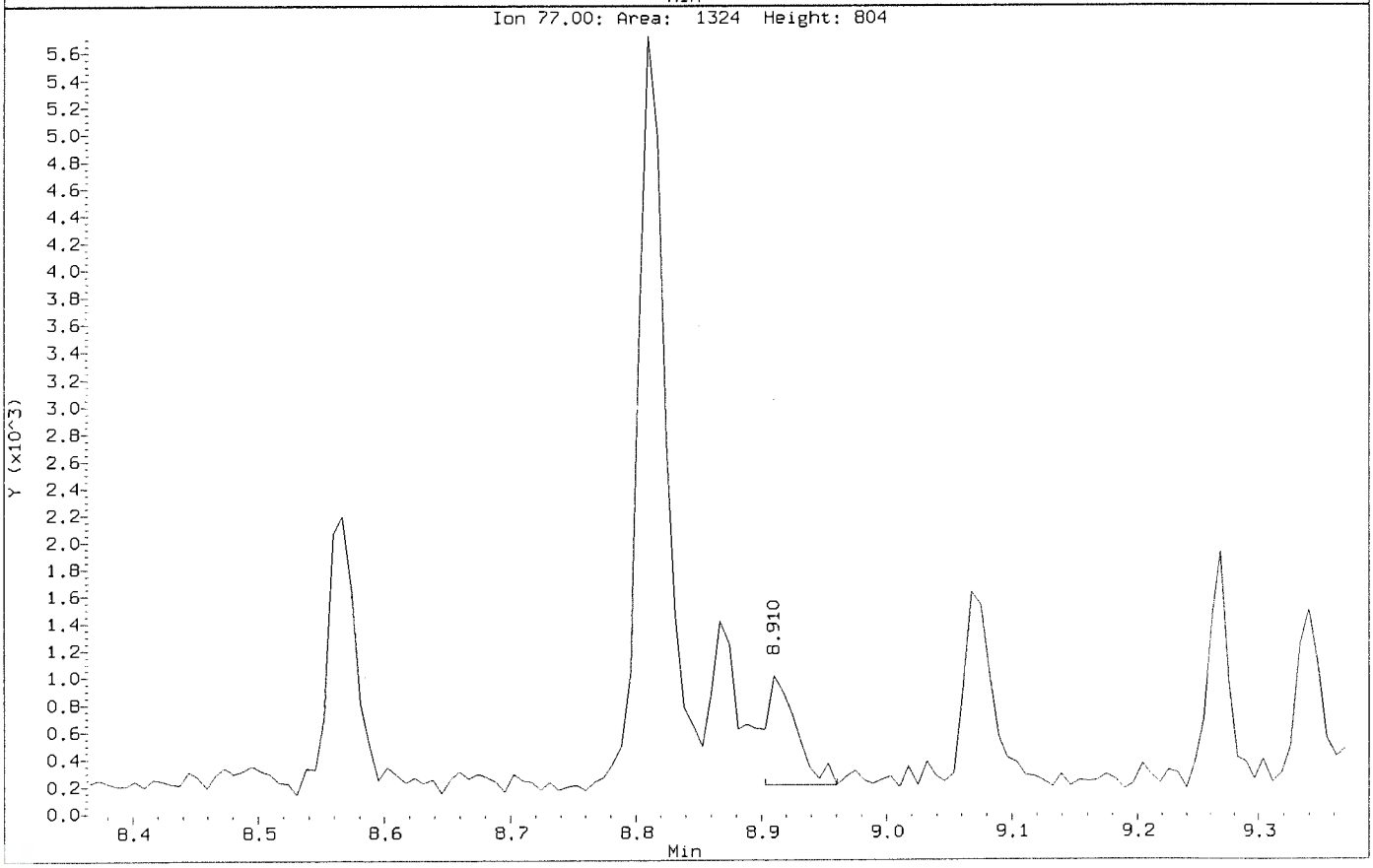




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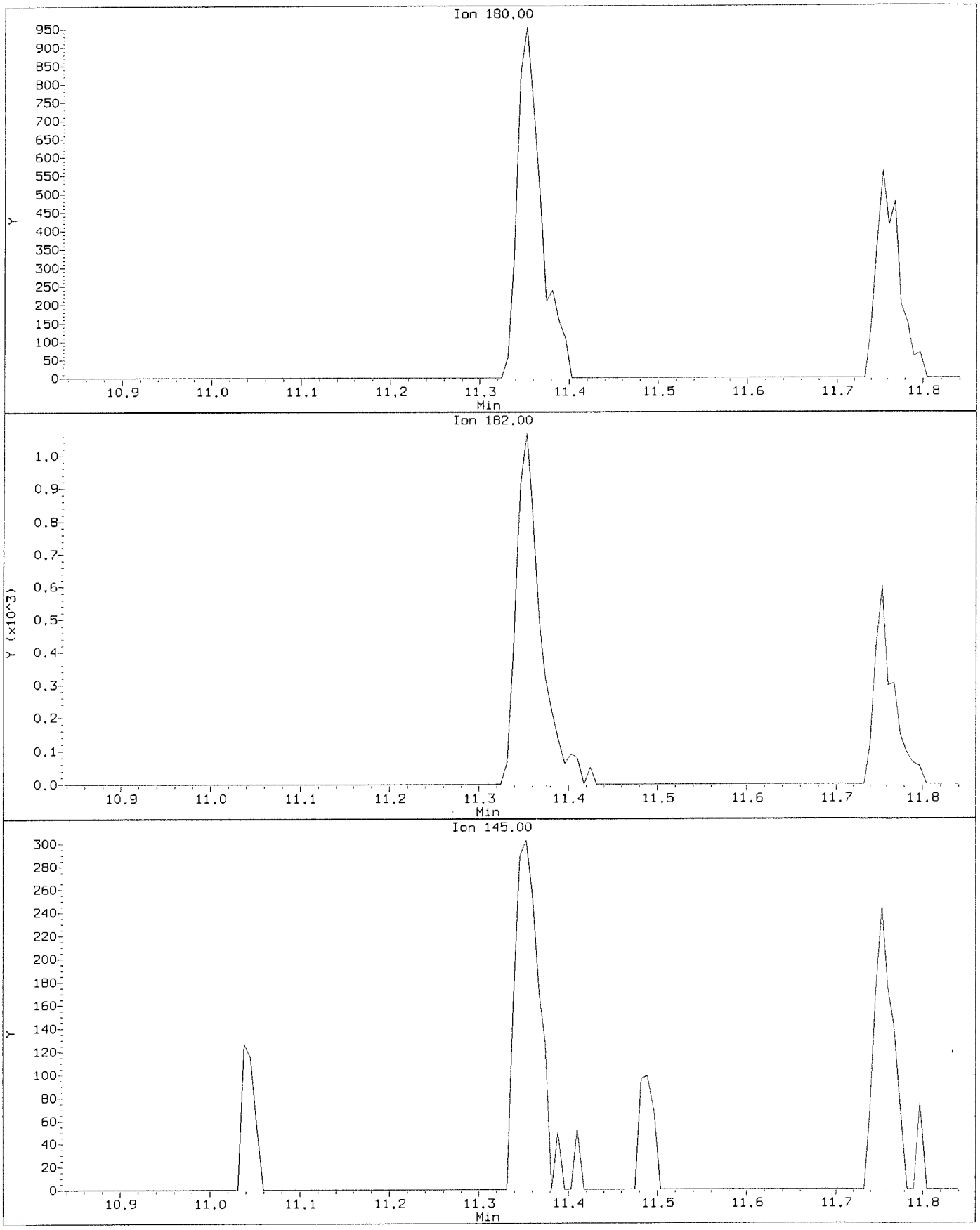
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





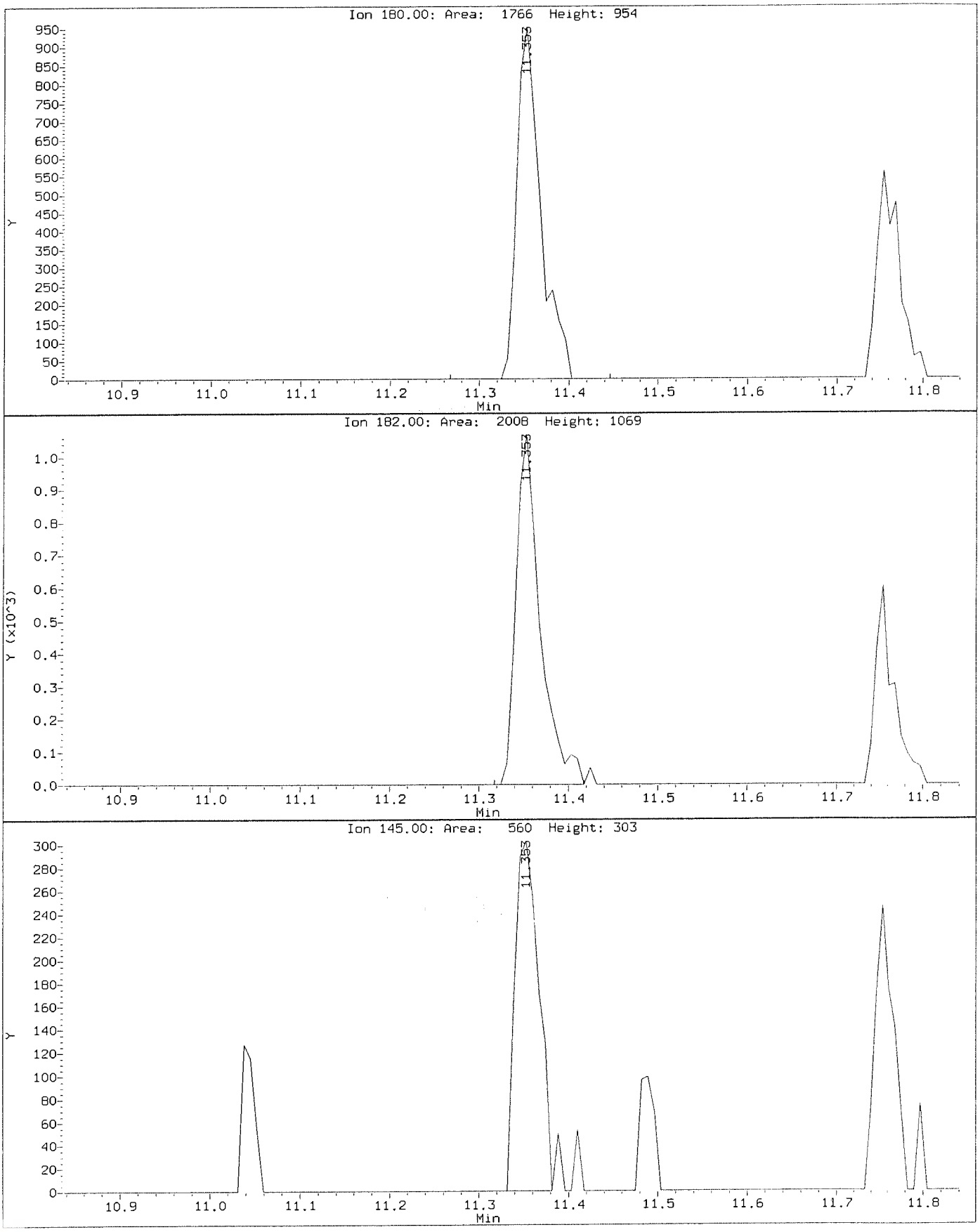
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



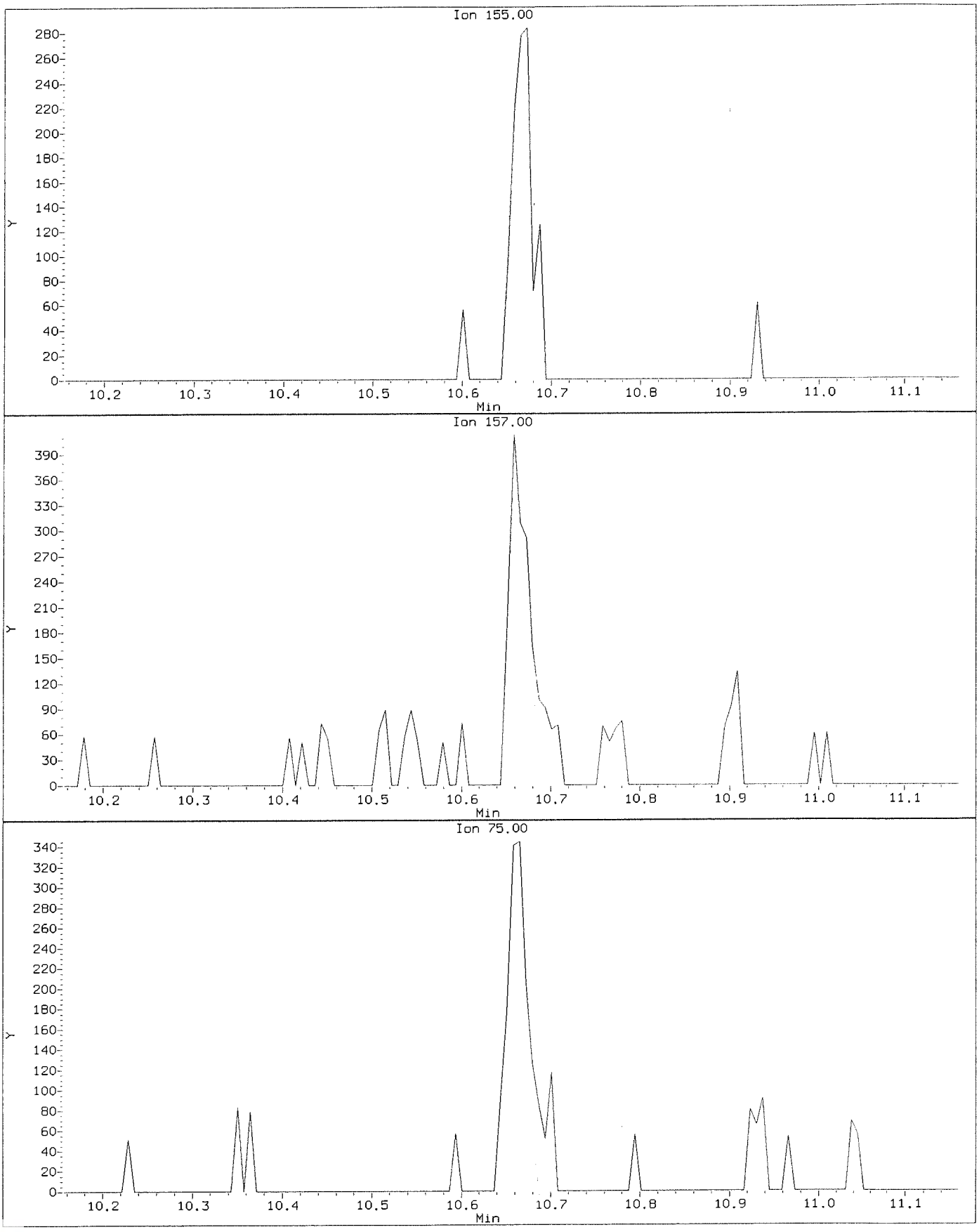
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Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



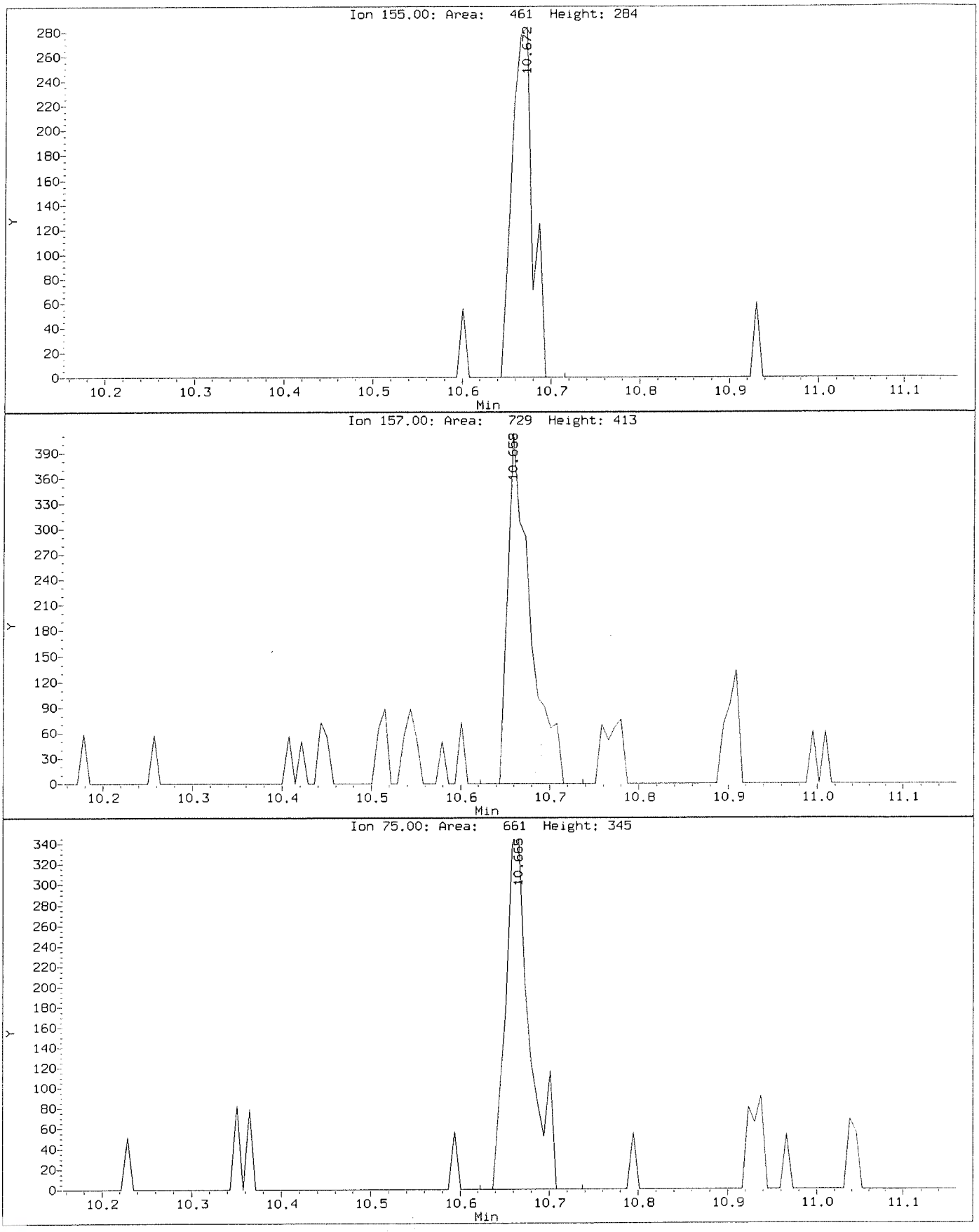
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Instrument: voa6.i
Client Sample ID: VSTD001

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



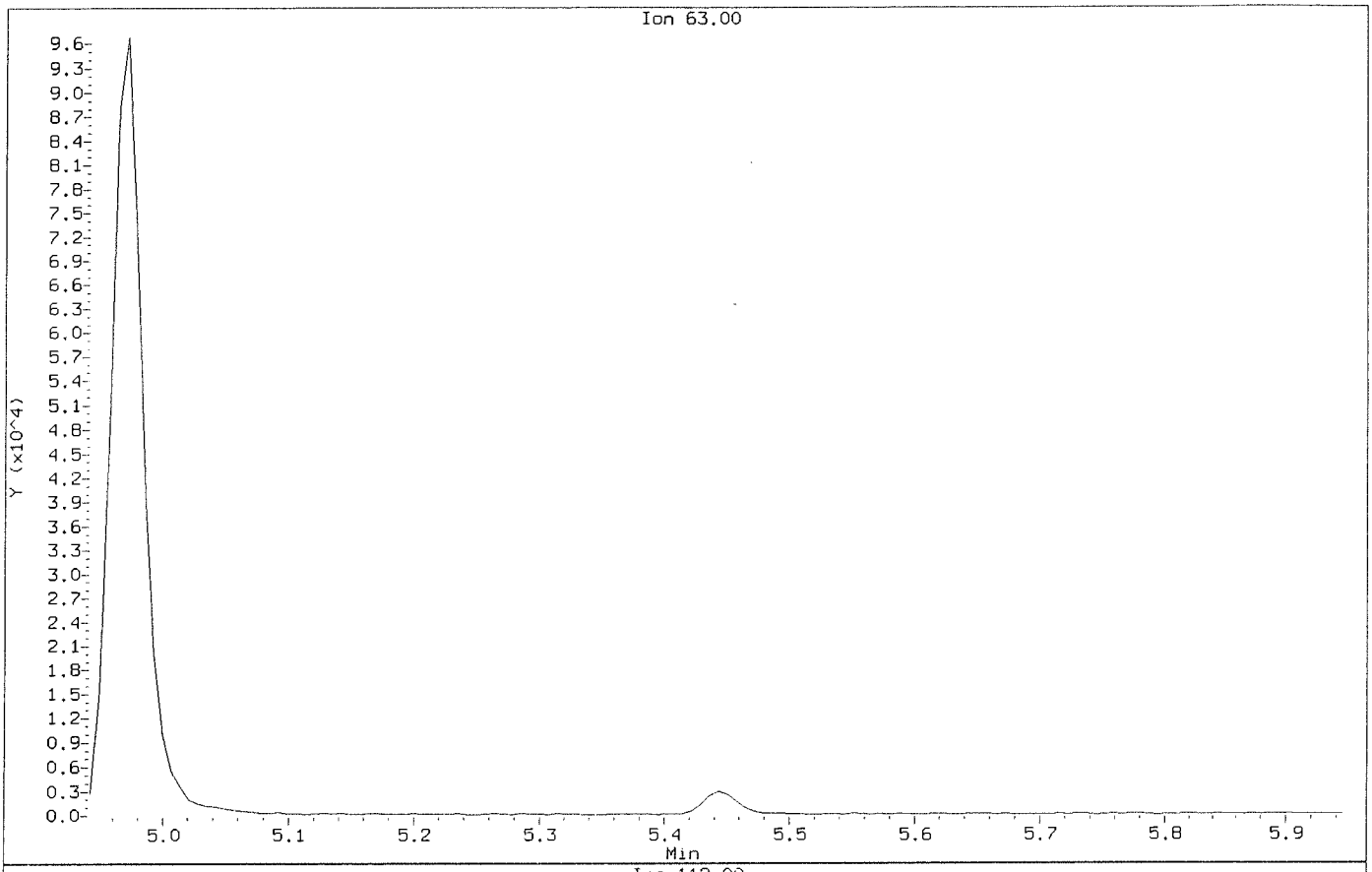
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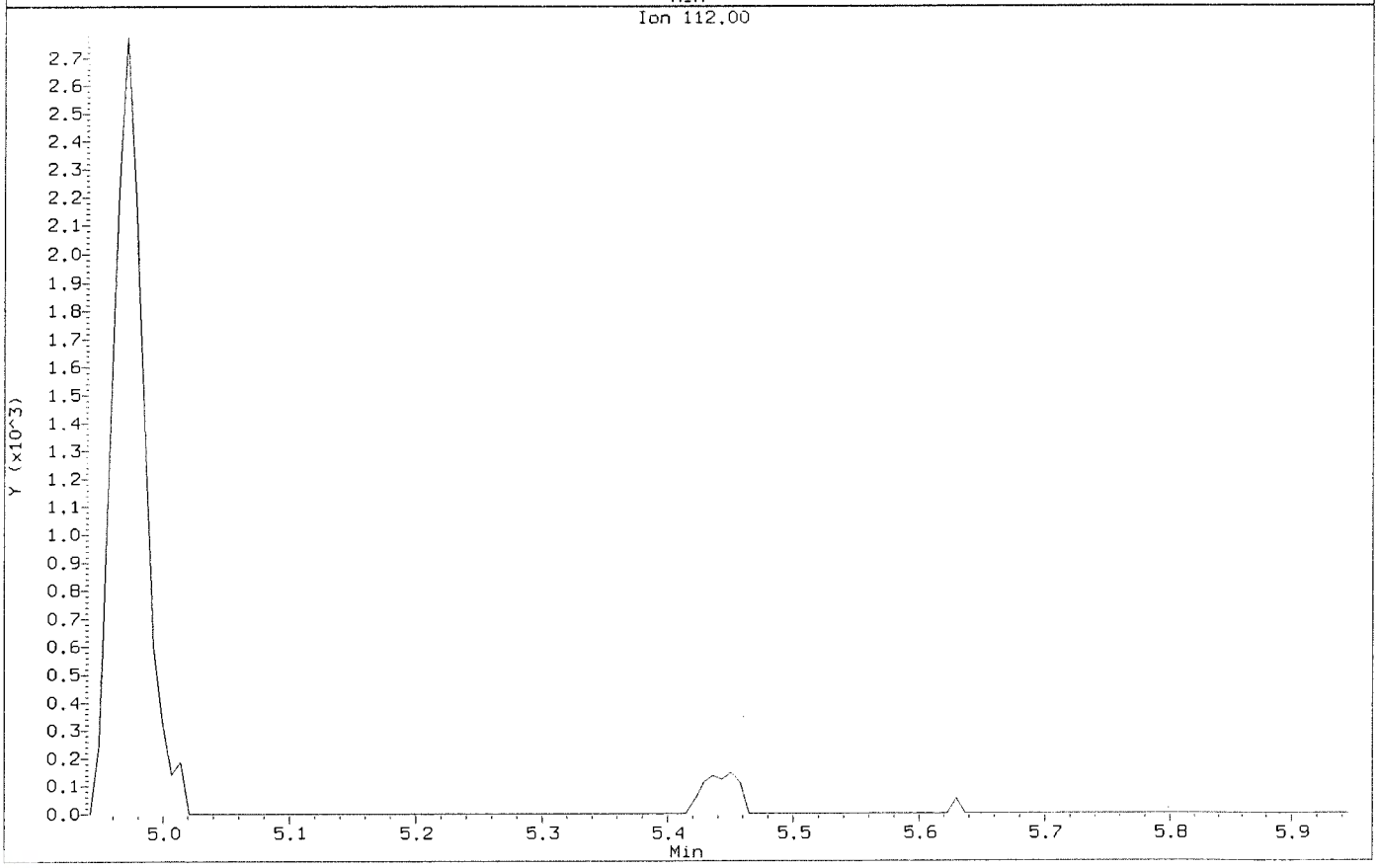
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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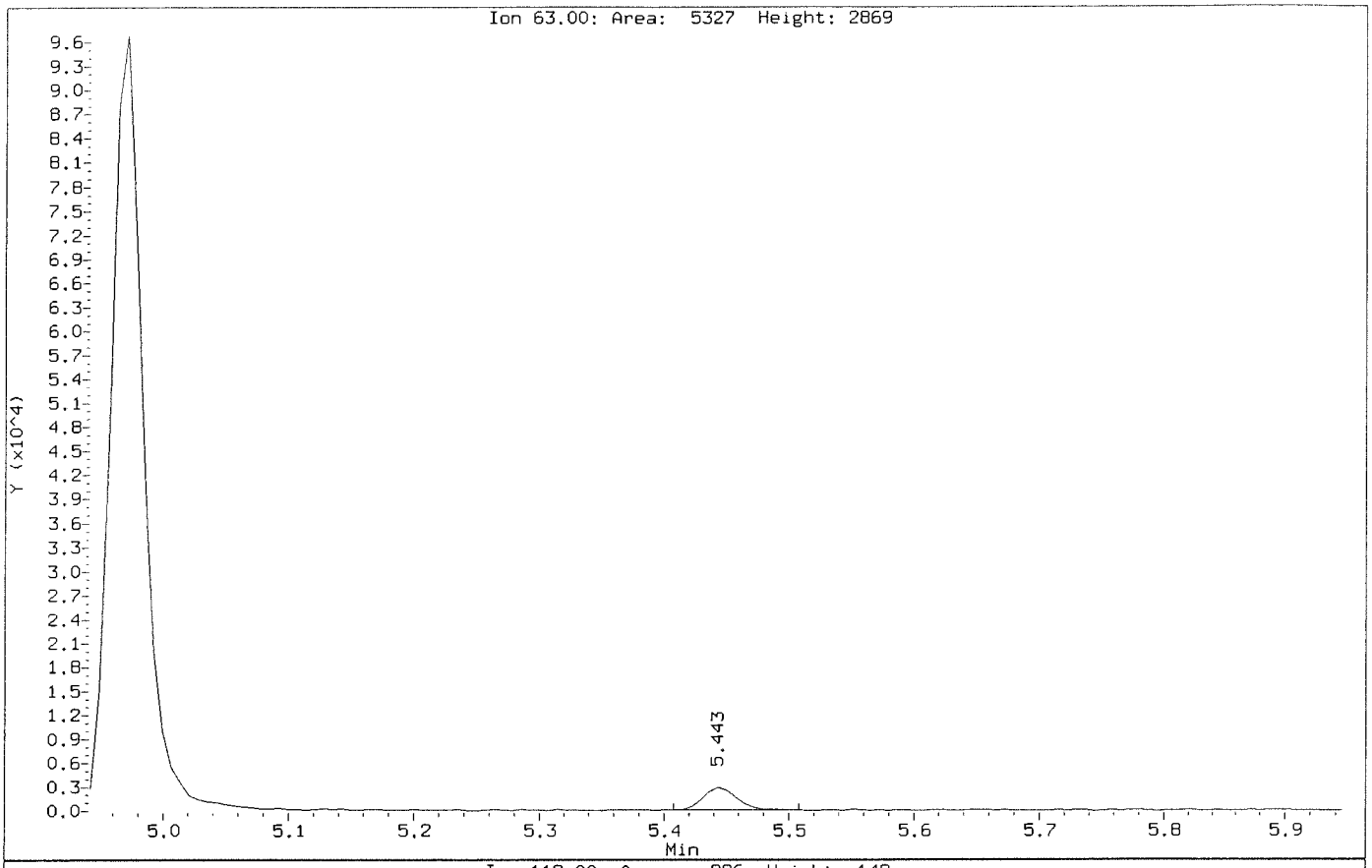
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CAS Number: 78-87-5

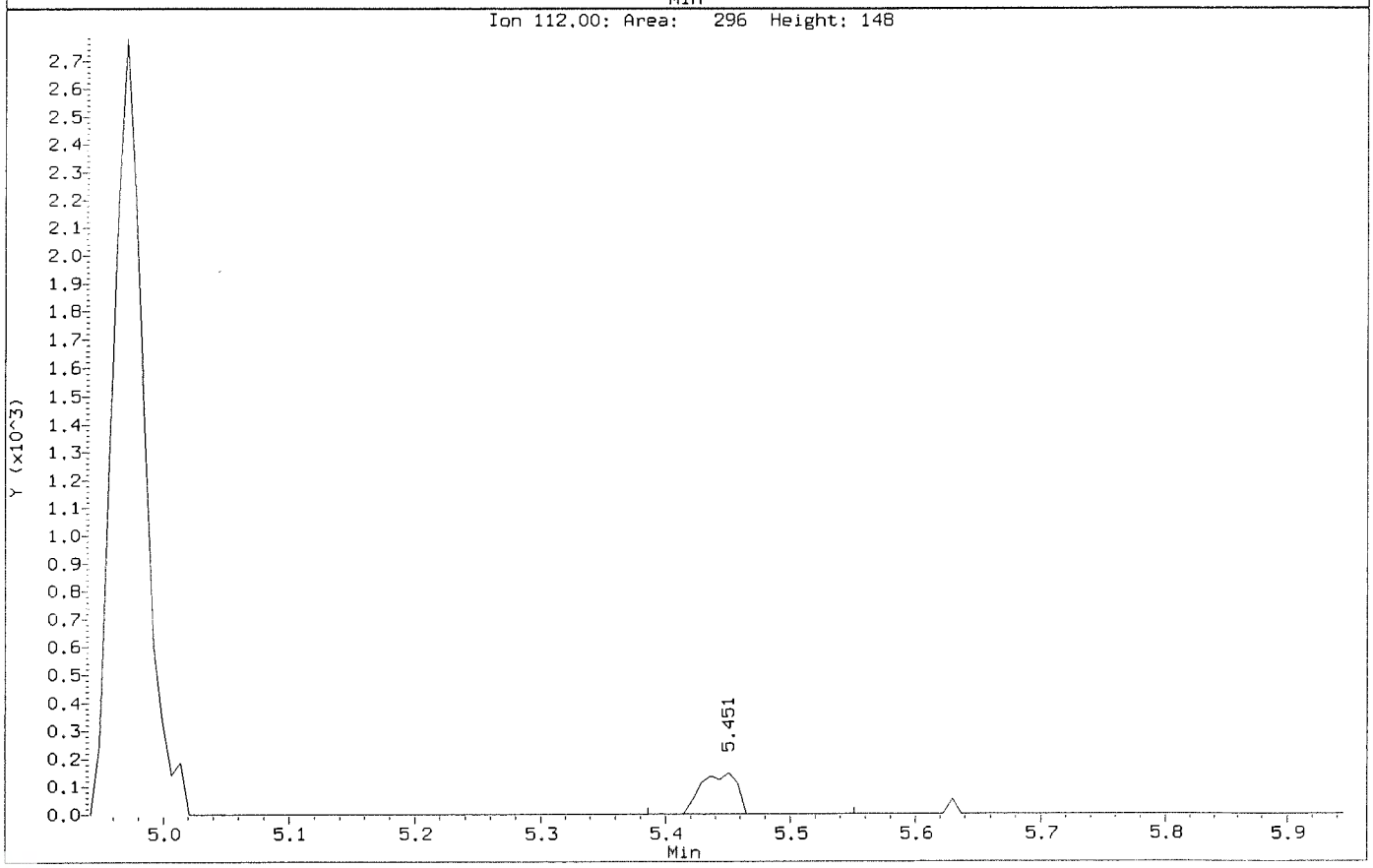




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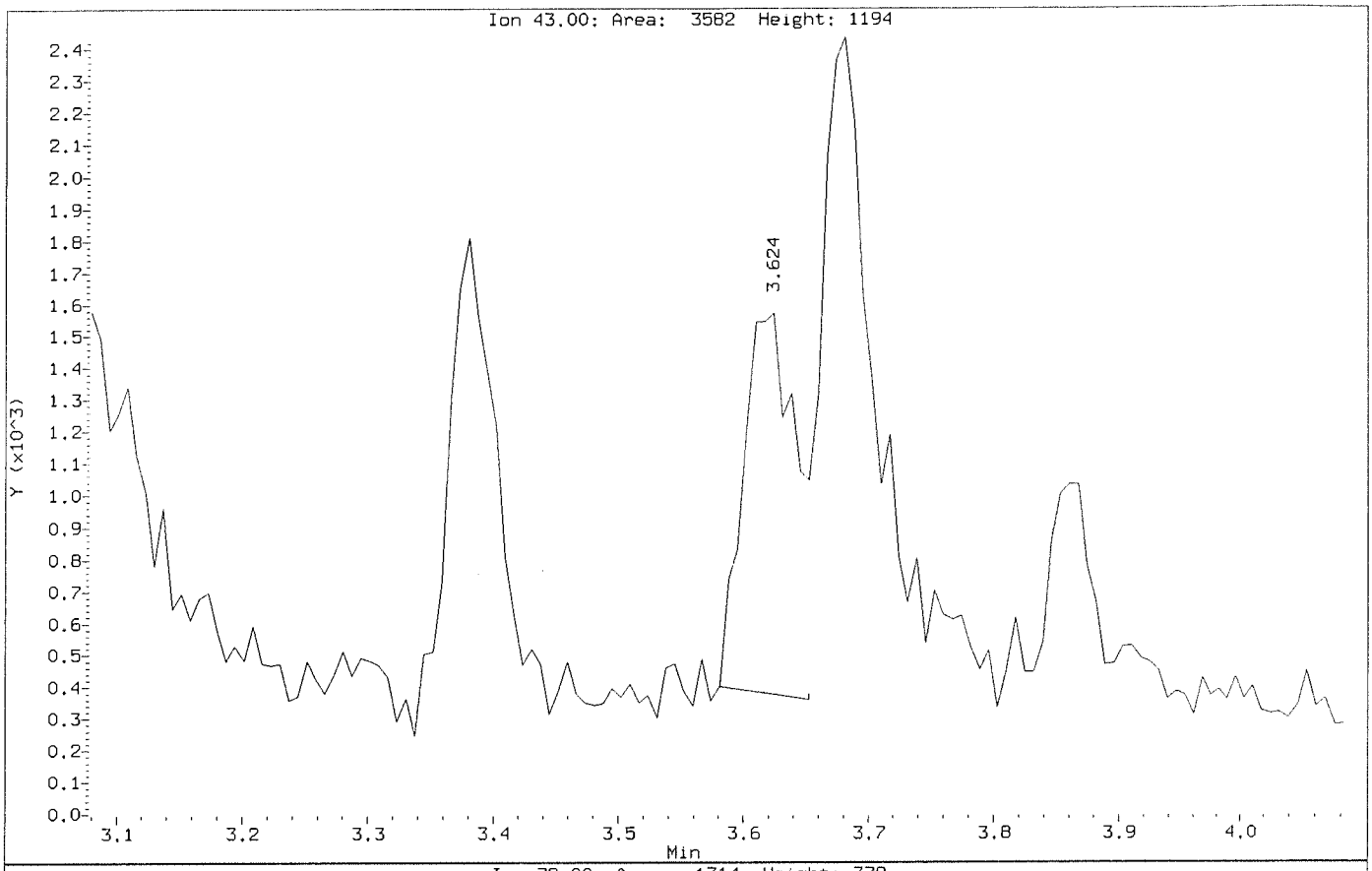
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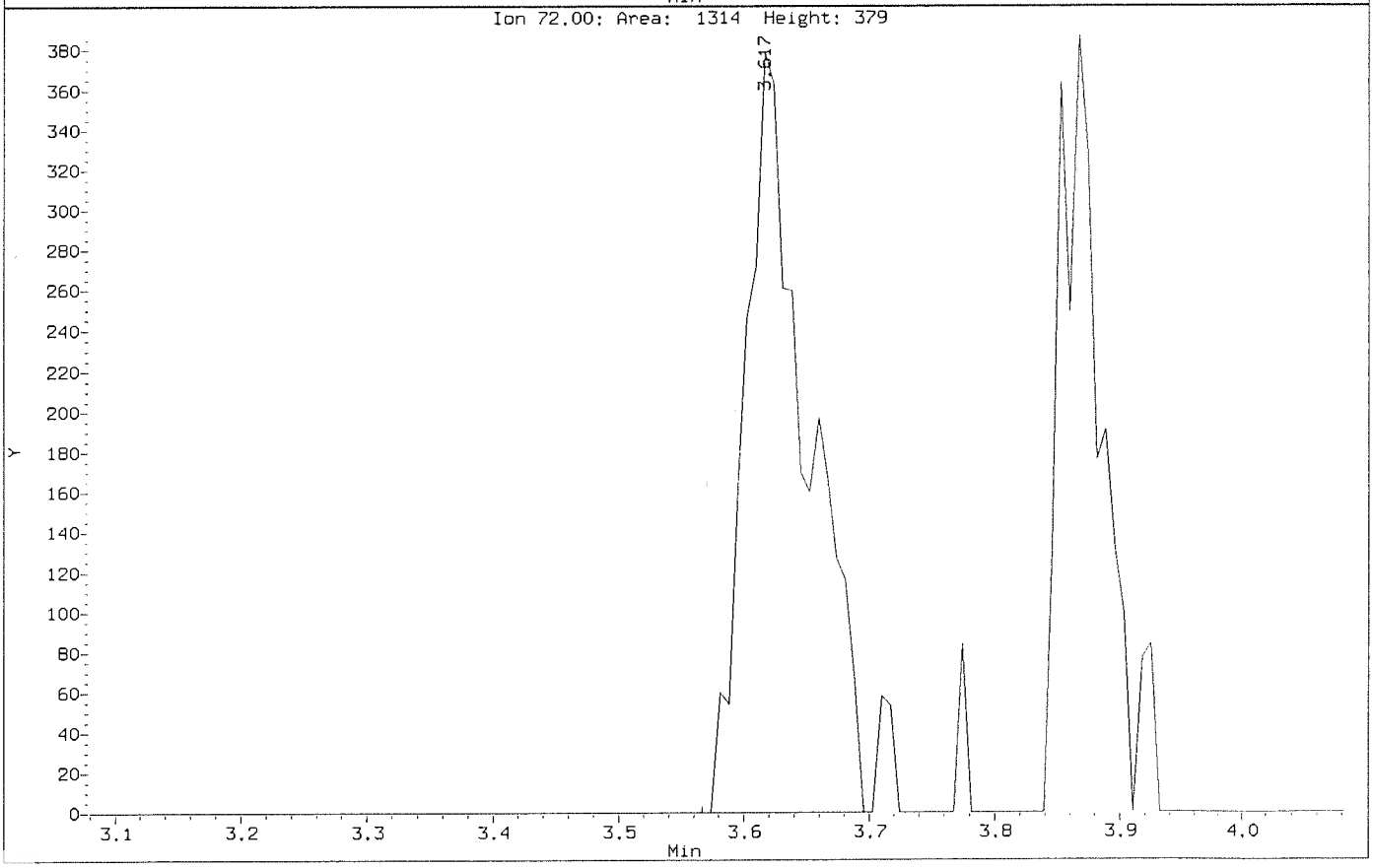




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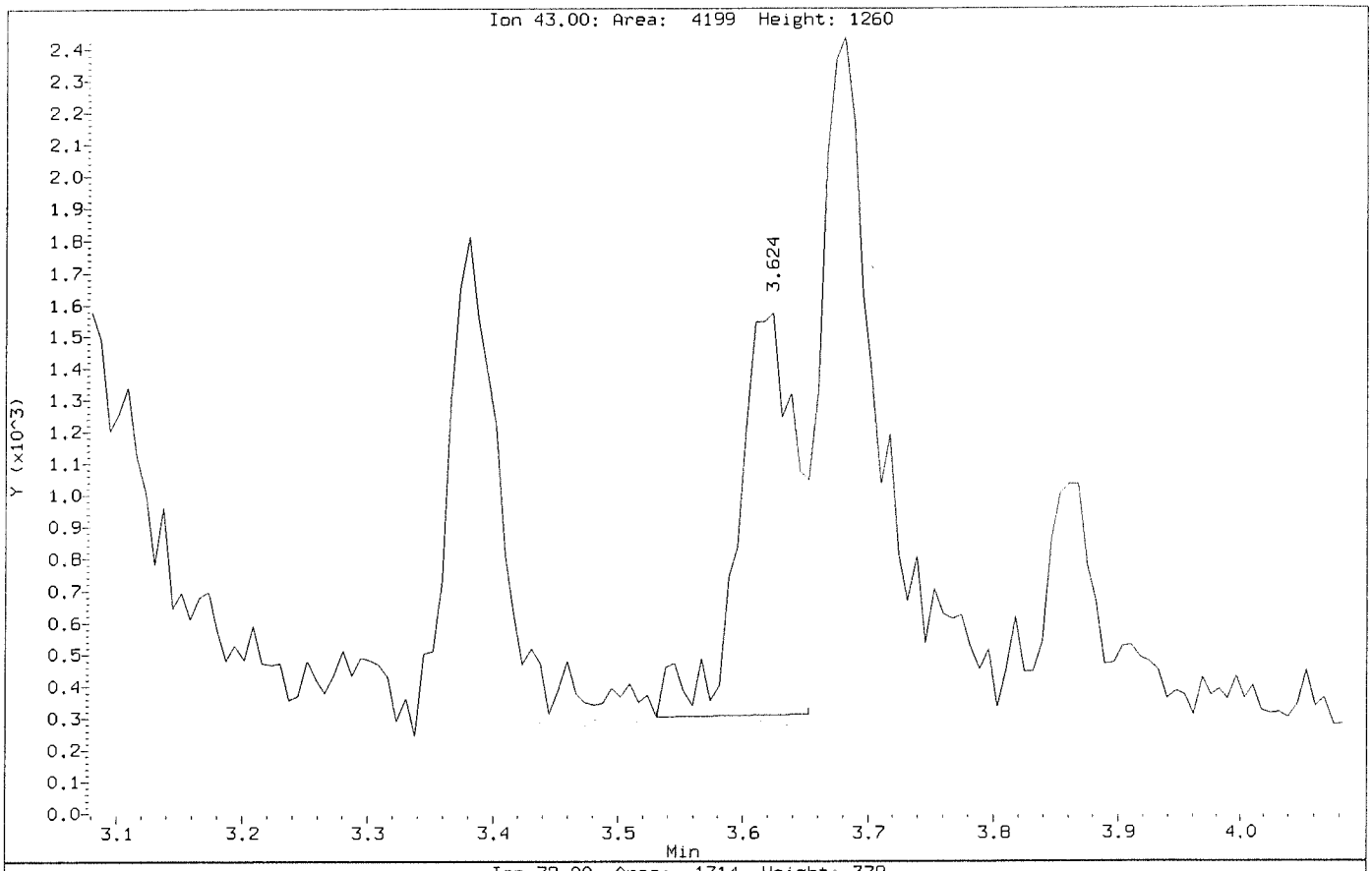
Compound: 2-Butanone
CAS Number: 78-93-3

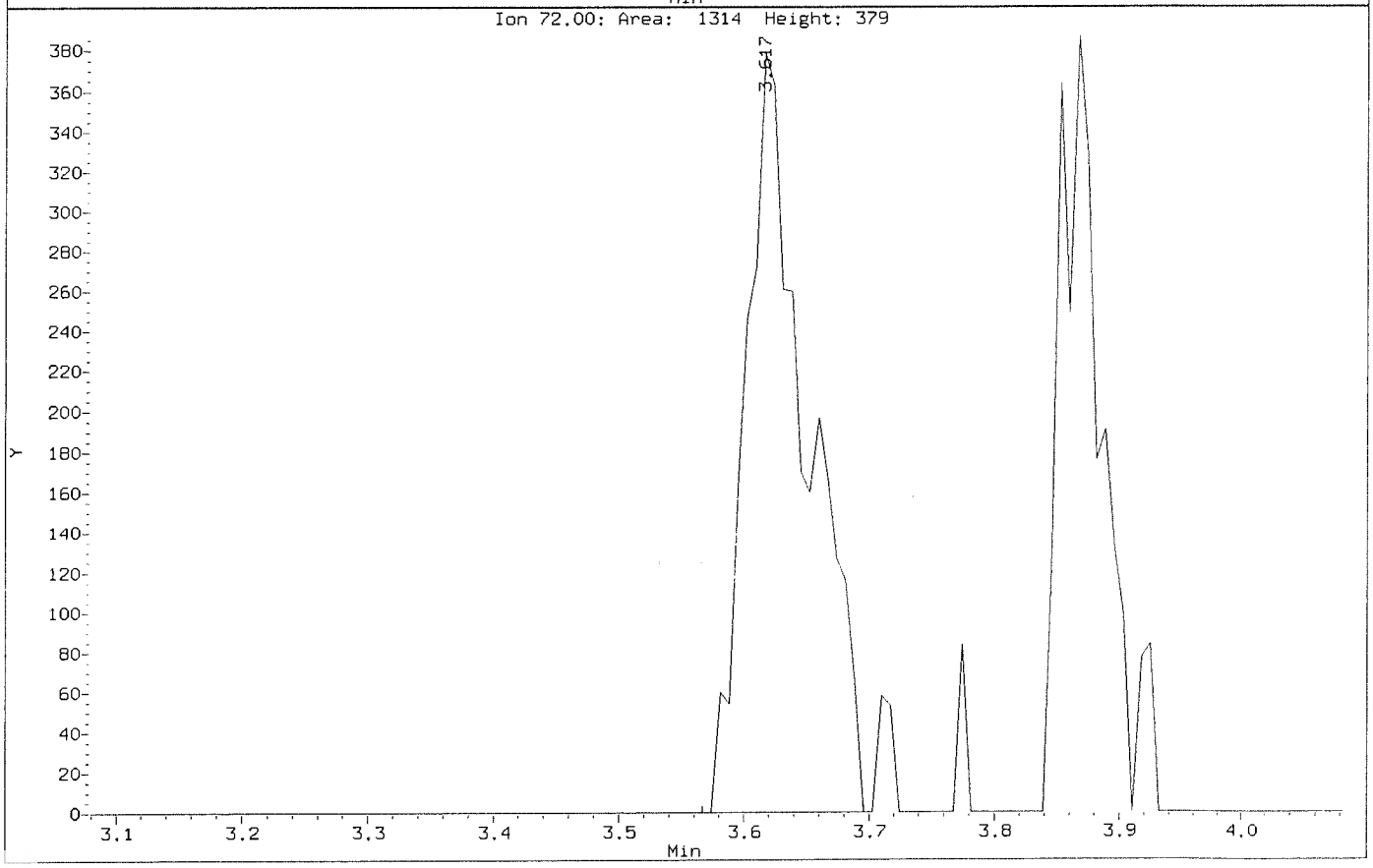




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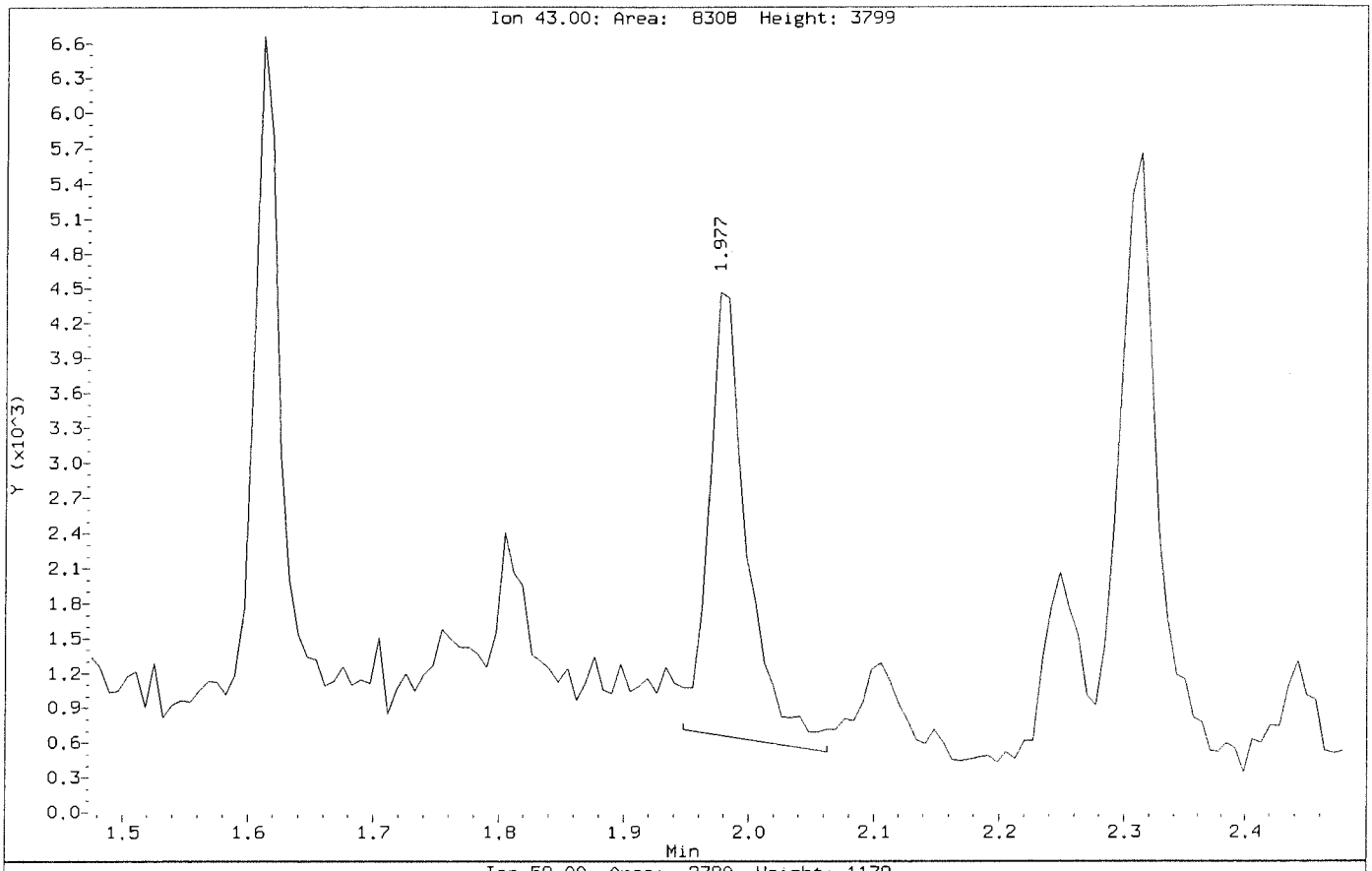
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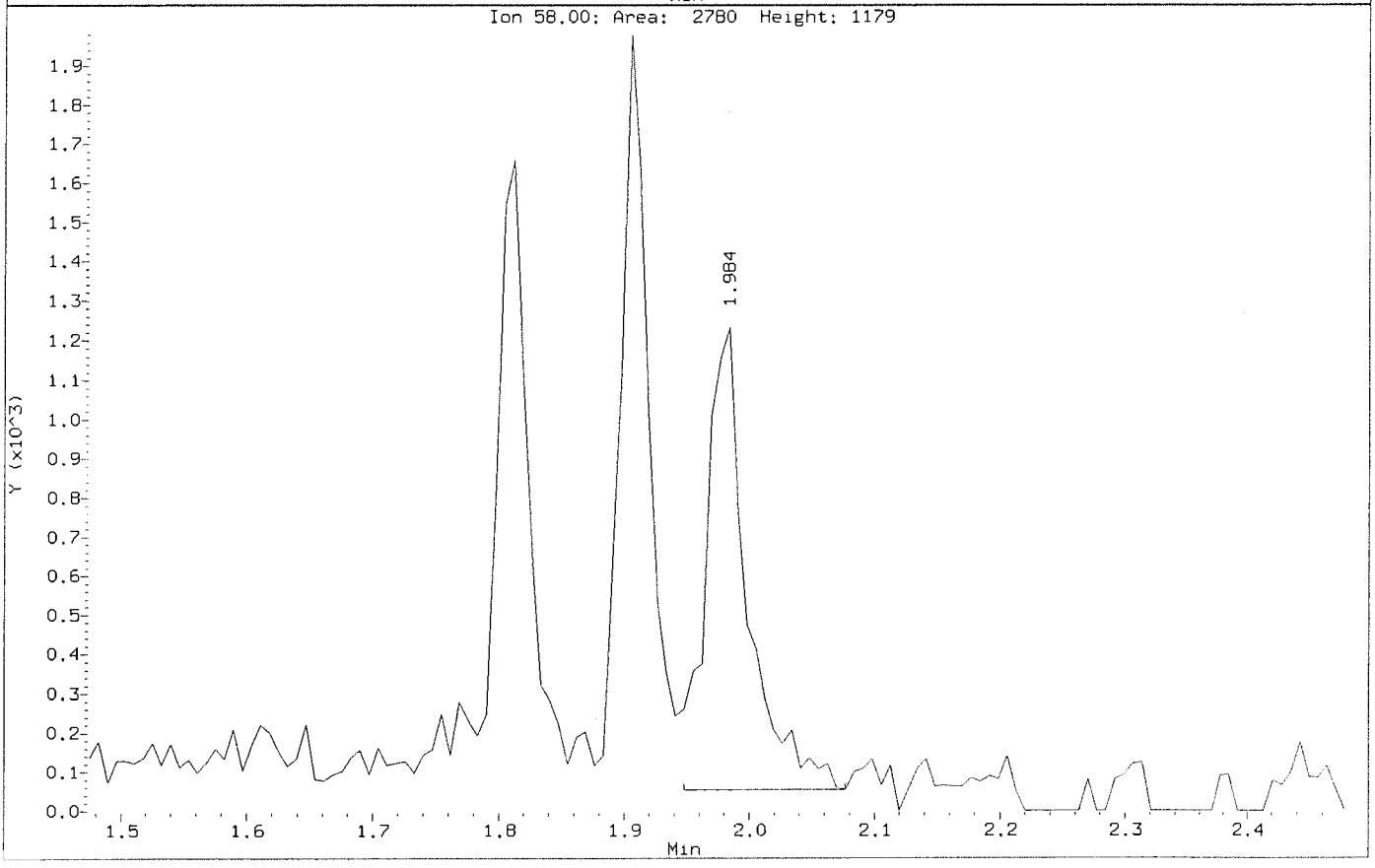




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Instrument: voa6.i
Client Sample ID: VSTD001

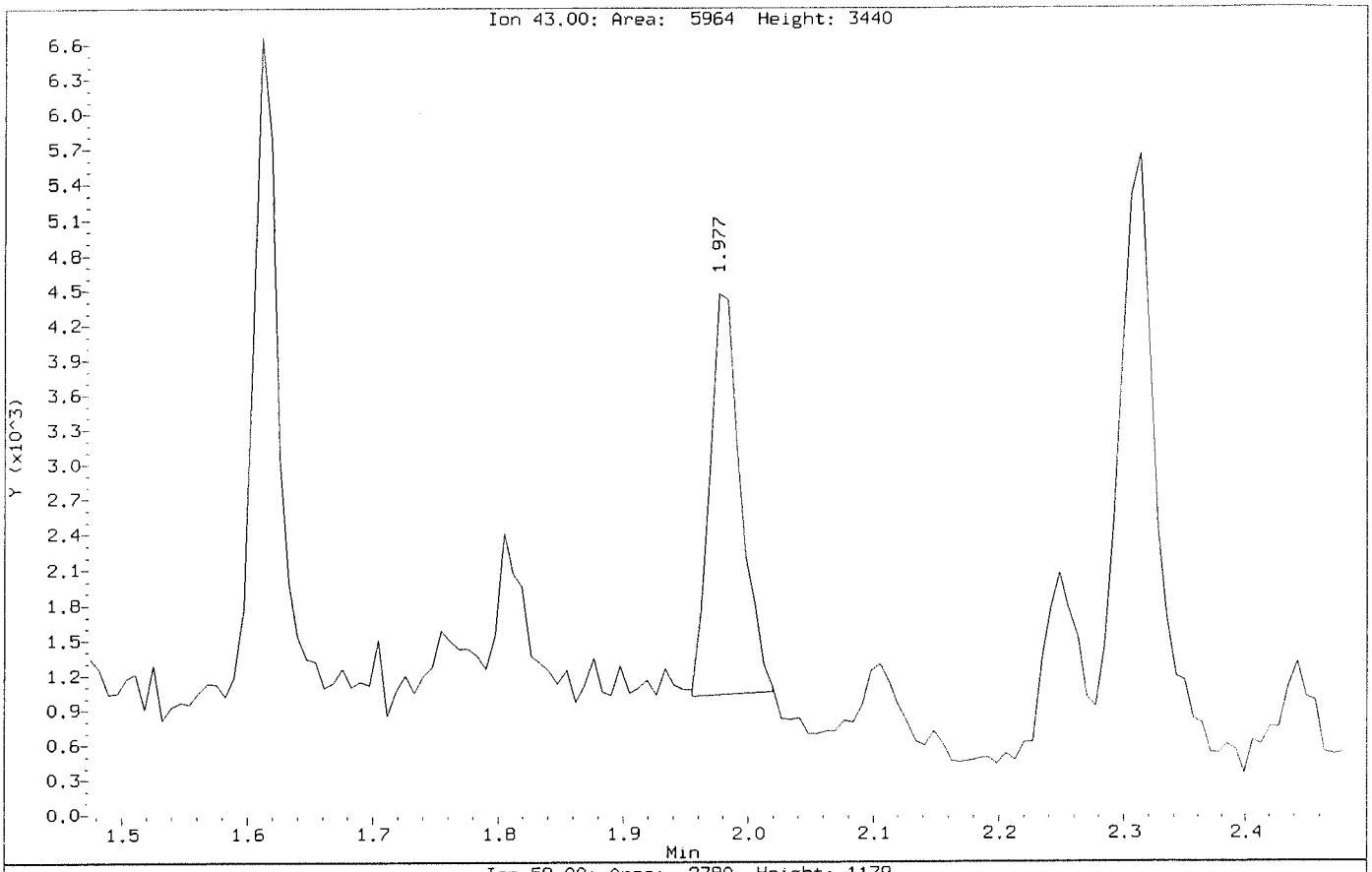
Compound: Acetone
CAS Number: 67-64-1

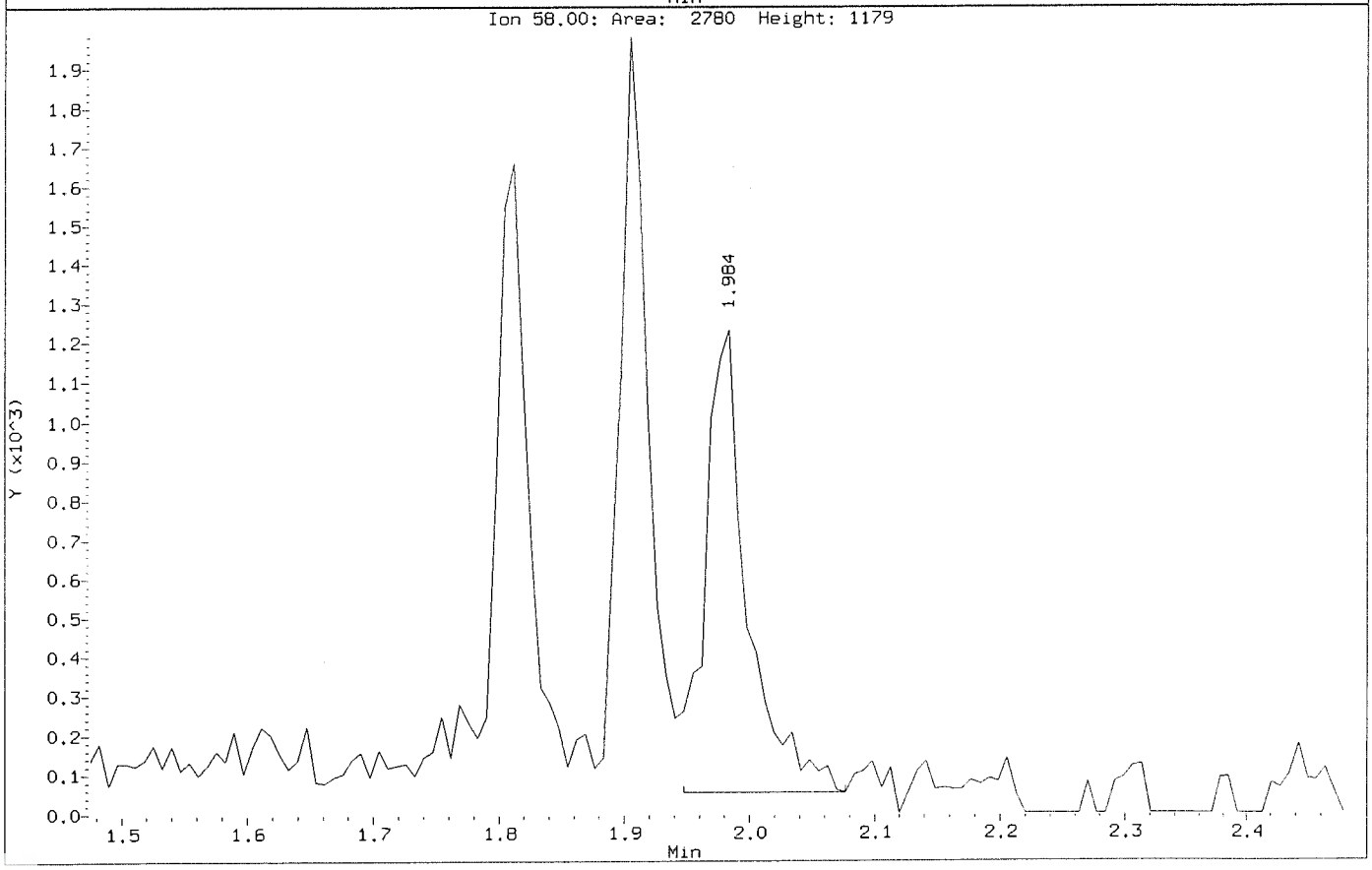




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Instrument: voa6.i
Client Sample ID: VSTD001

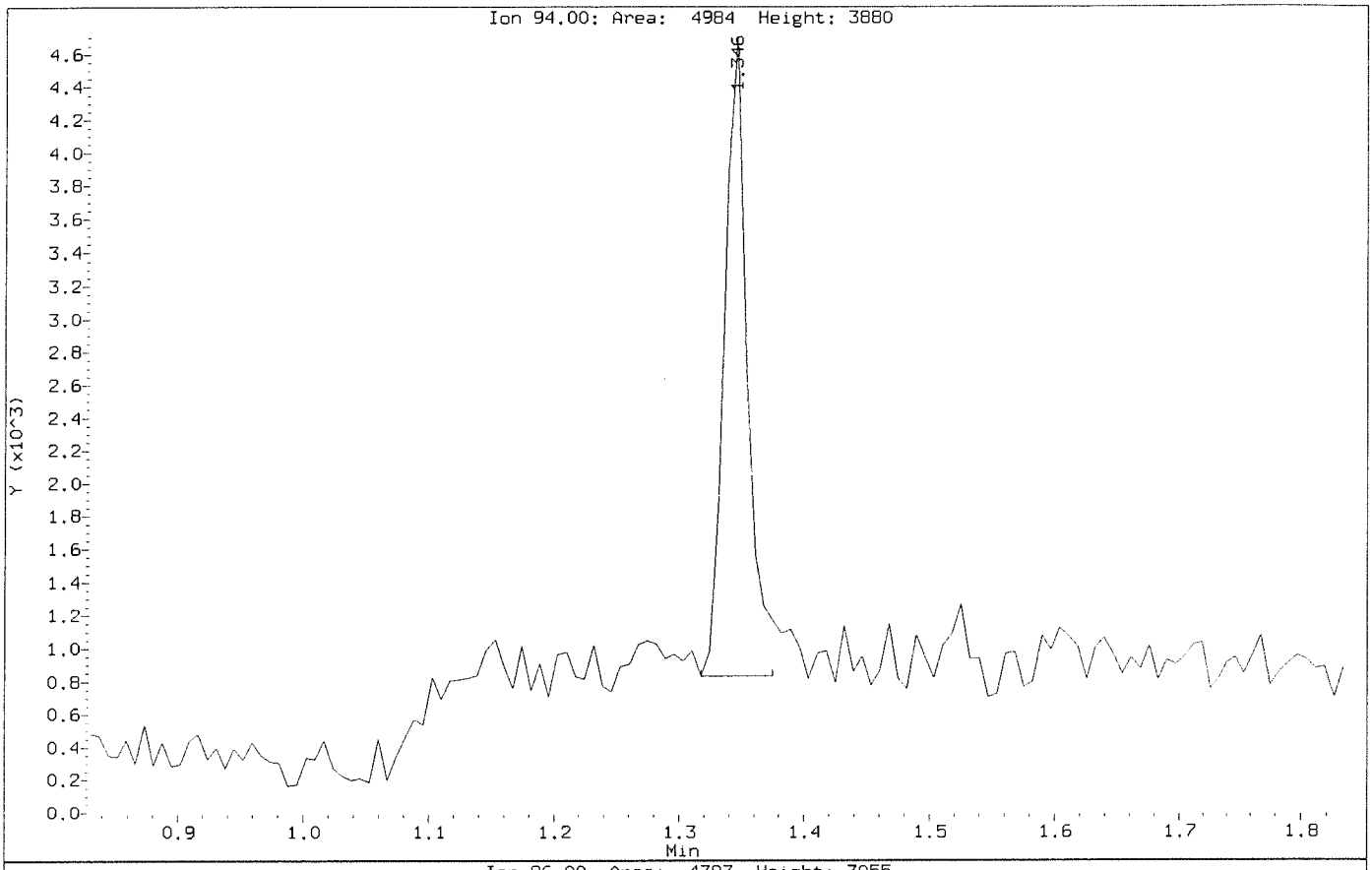
Compound: Acetone
CAS Number: 67-64-1

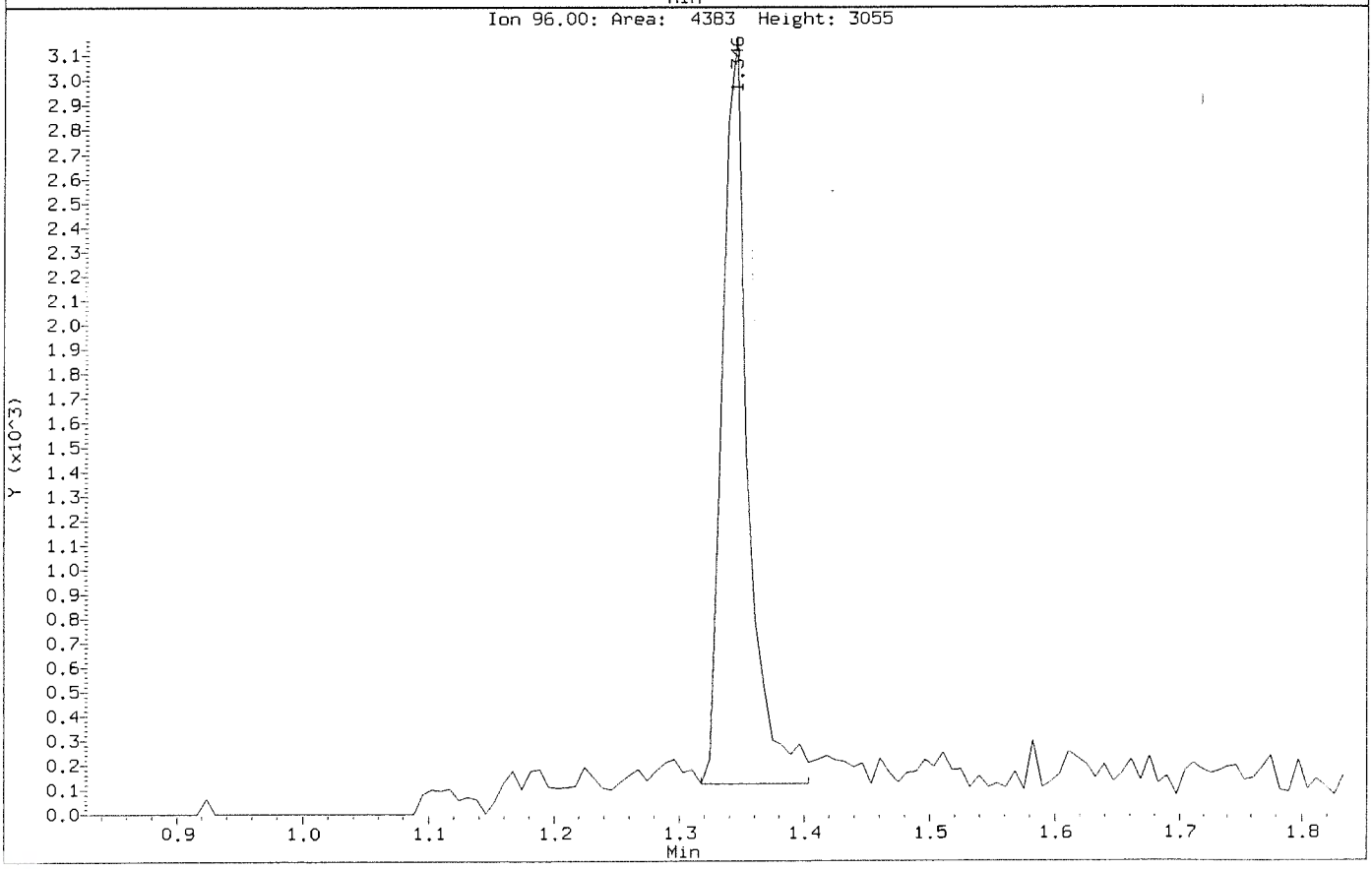




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Instrument: voa6.i
Client Sample ID: VSTD001

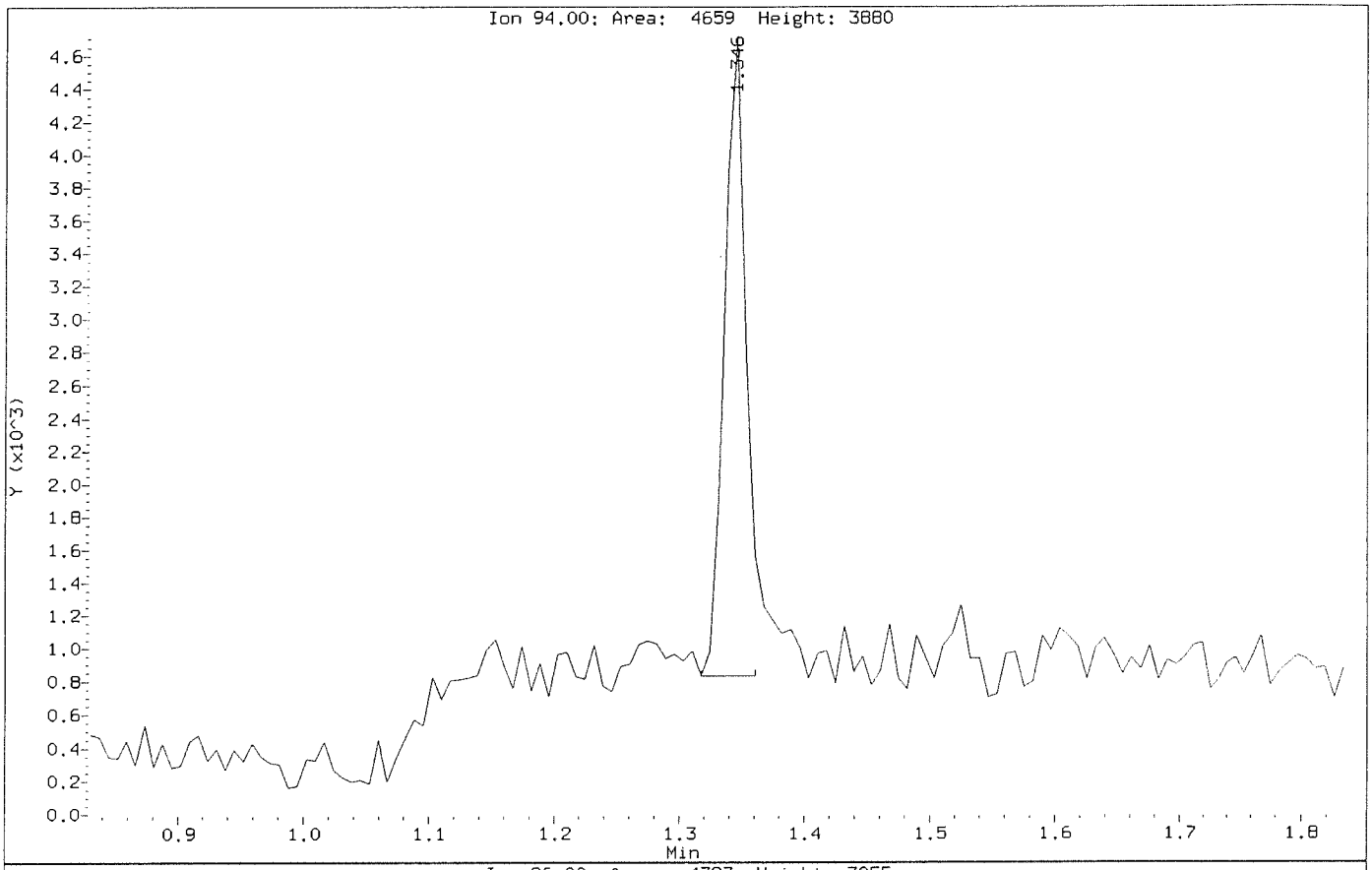
Compound: Bromomethane
CAS Number: 74-83-9

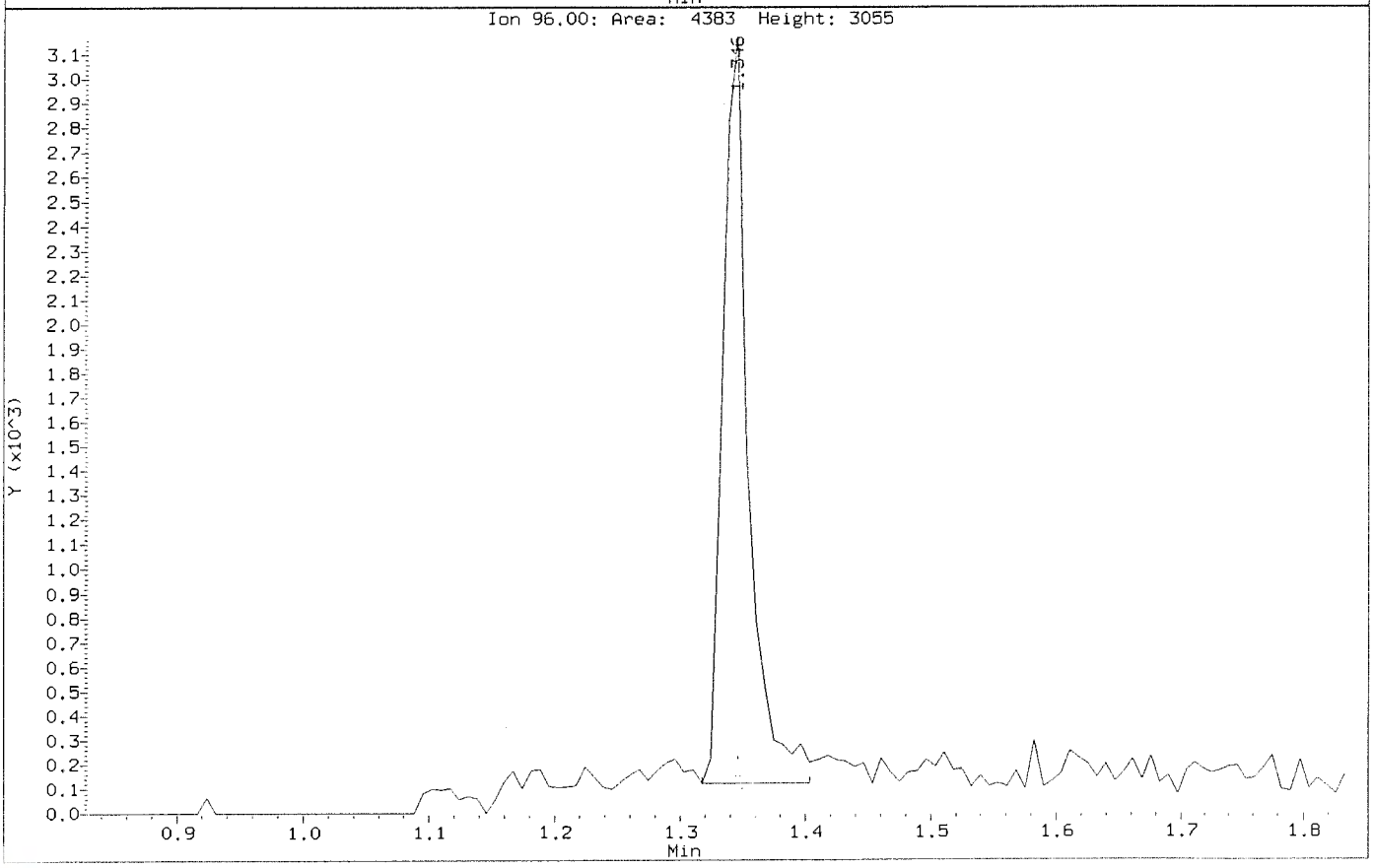




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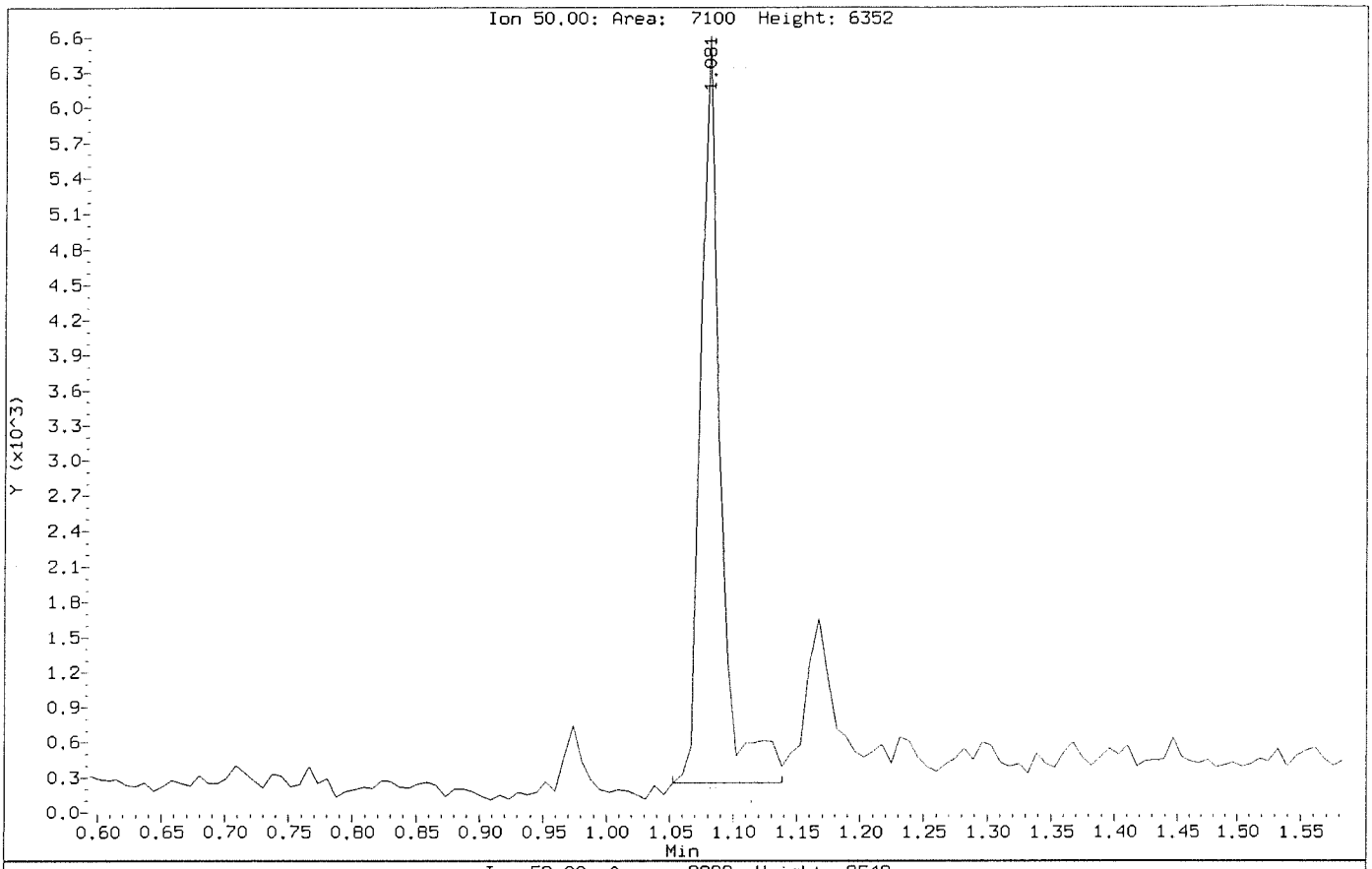
Compound: Bromomethane
CAS Number: 74-83-9

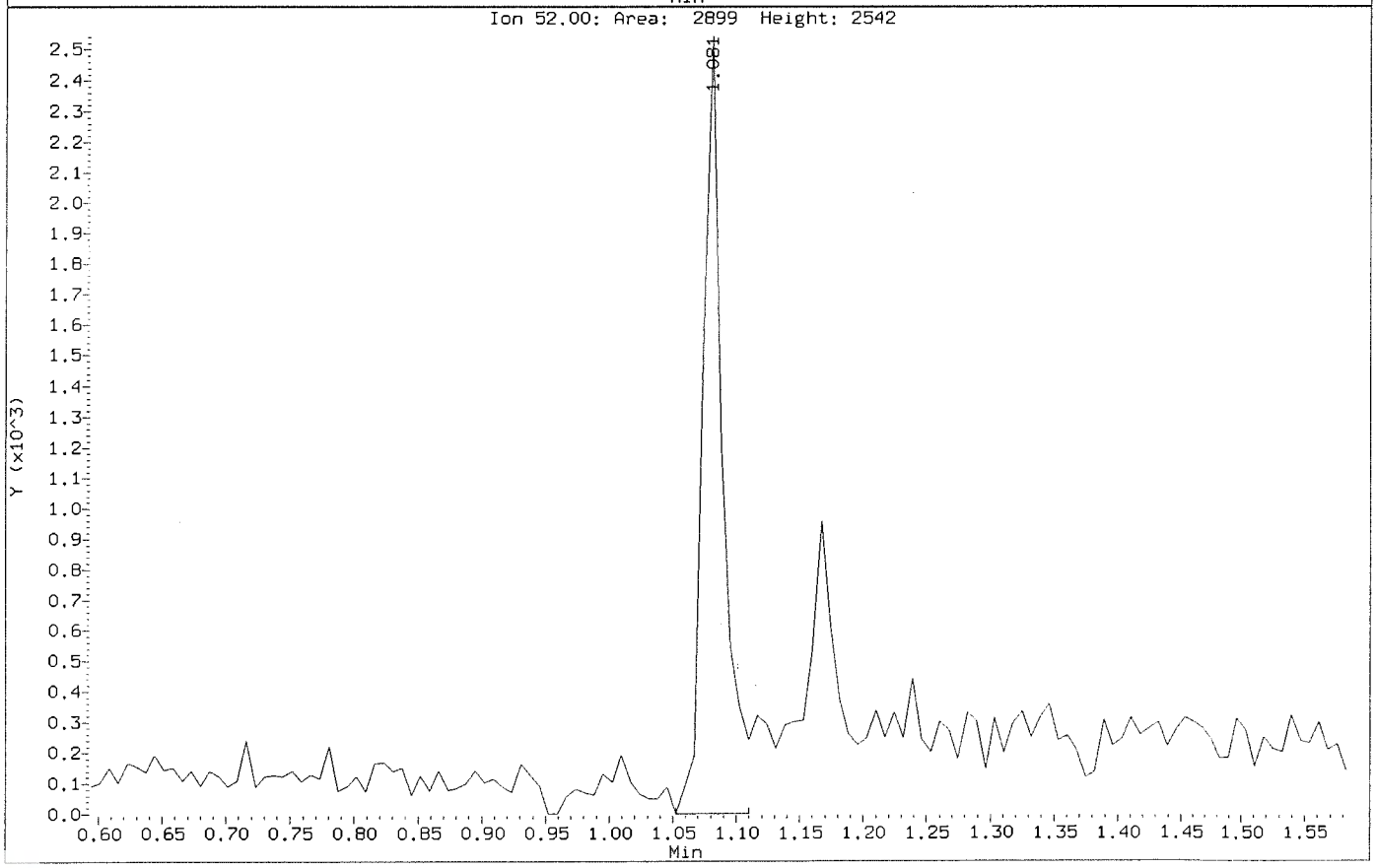




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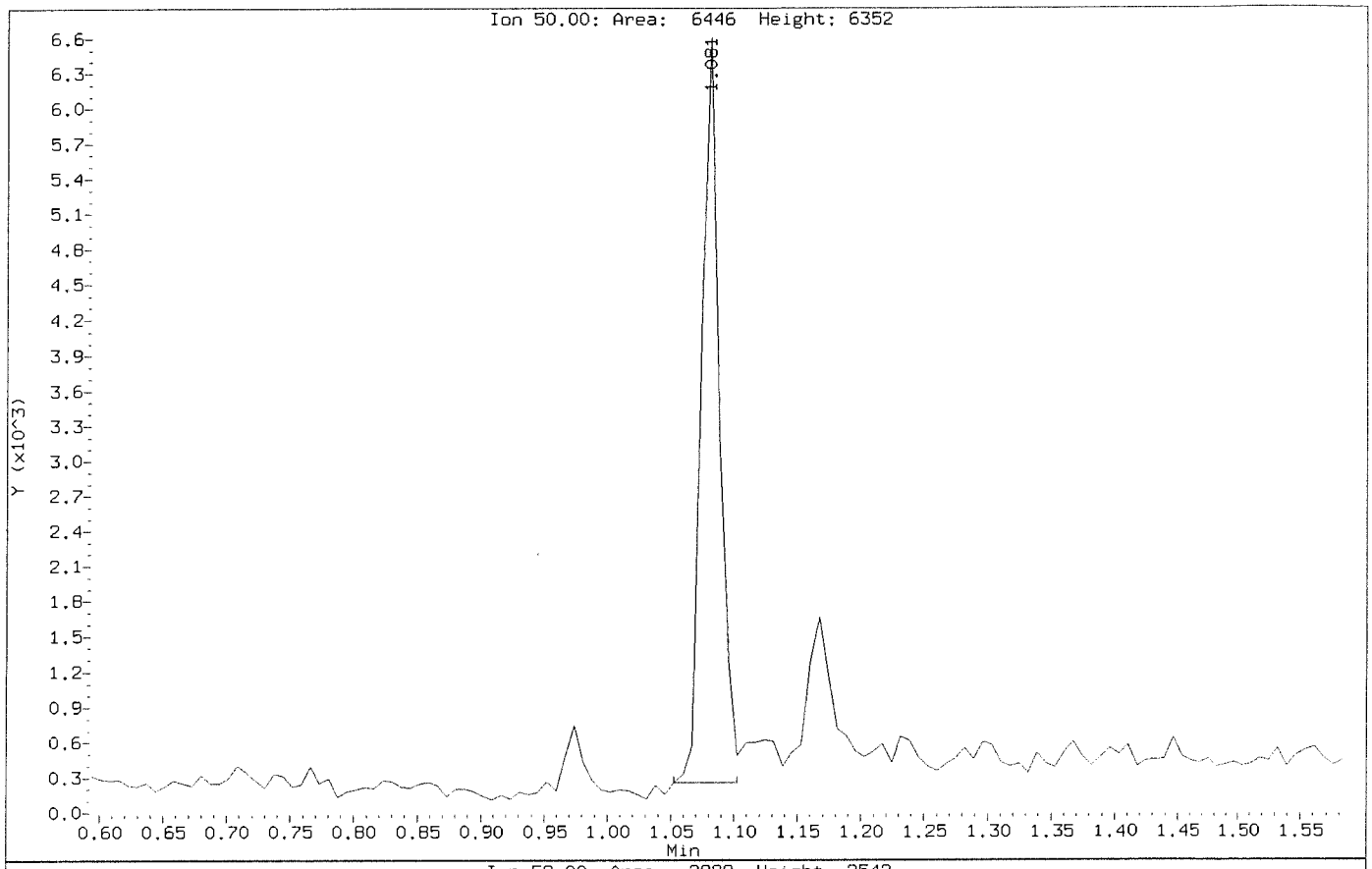
Compound: Chloromethane
CAS Number: 74-87-3

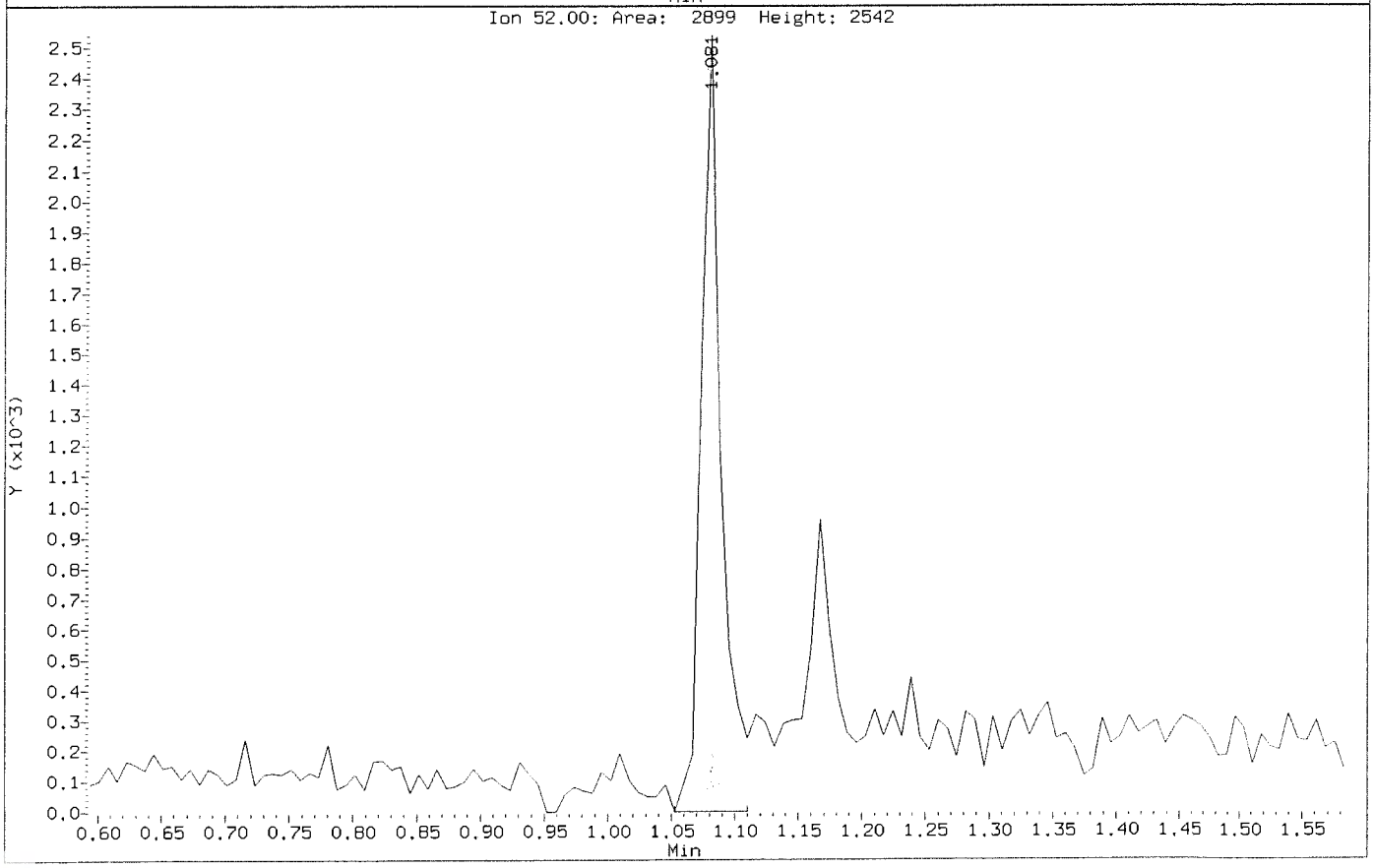




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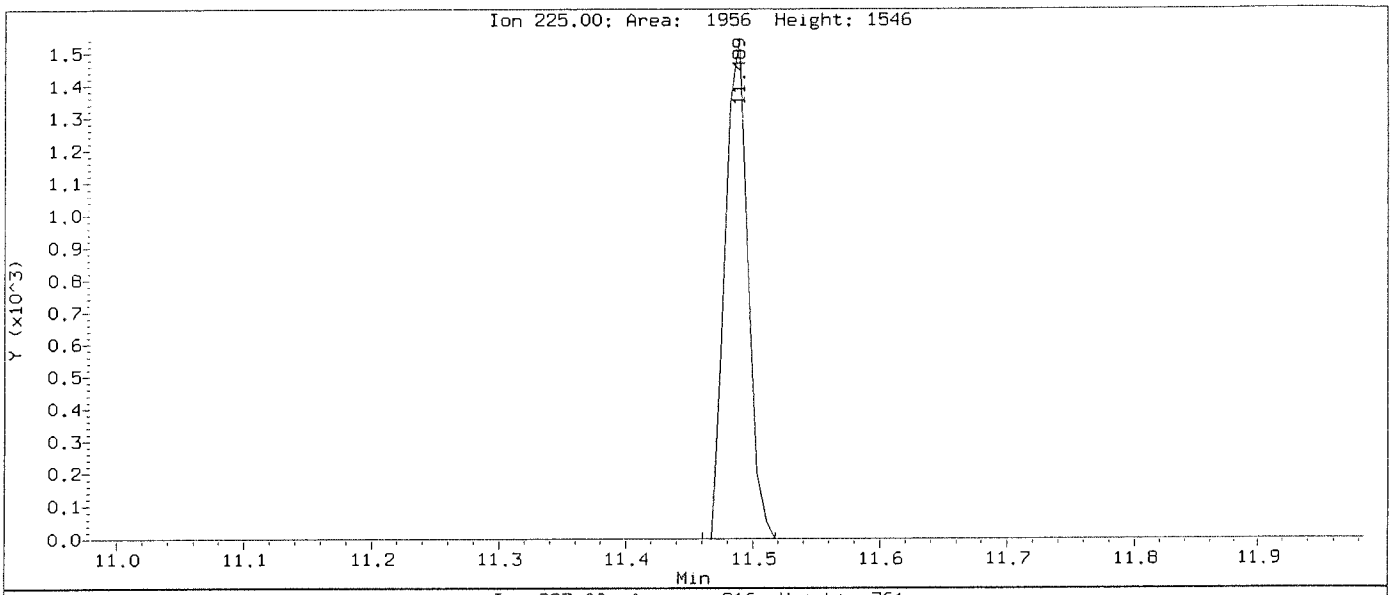
Compound: Chloromethane
CAS Number: 74-87-3

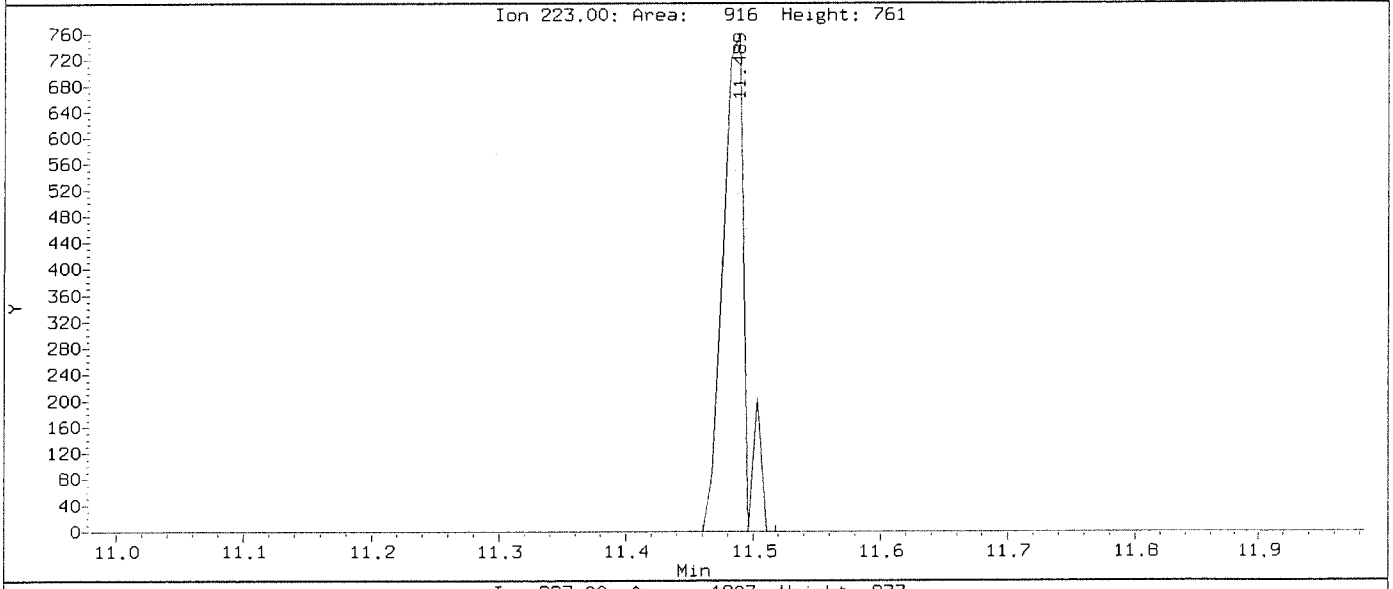


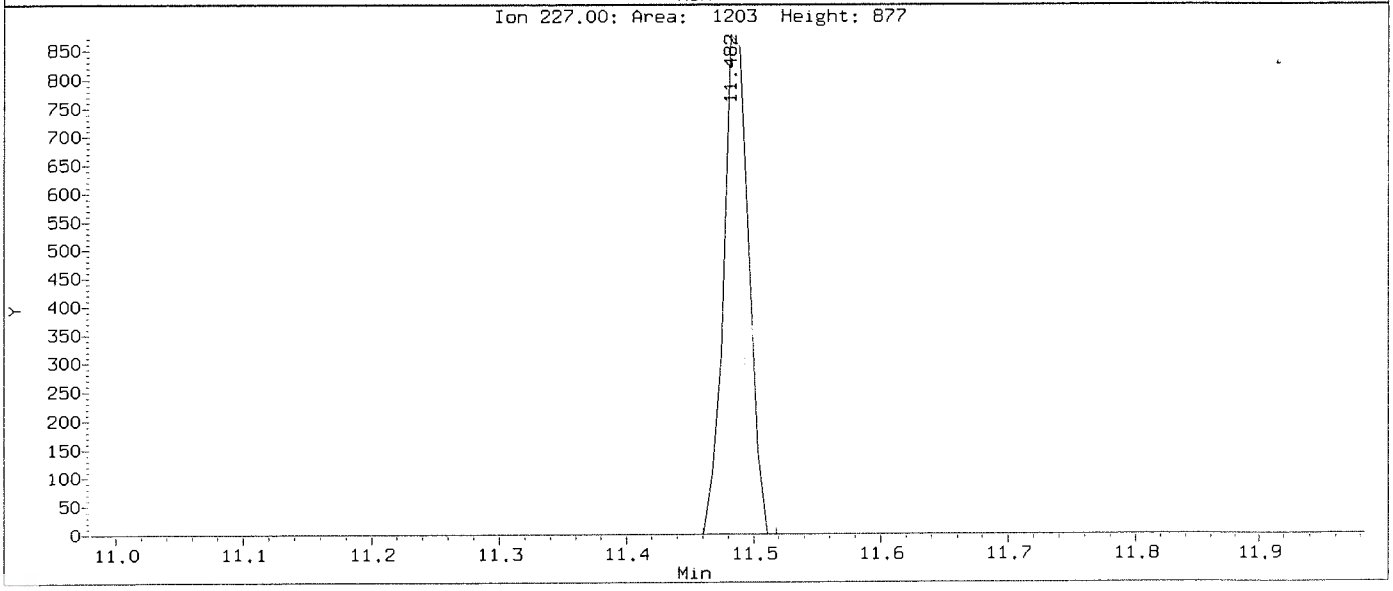


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

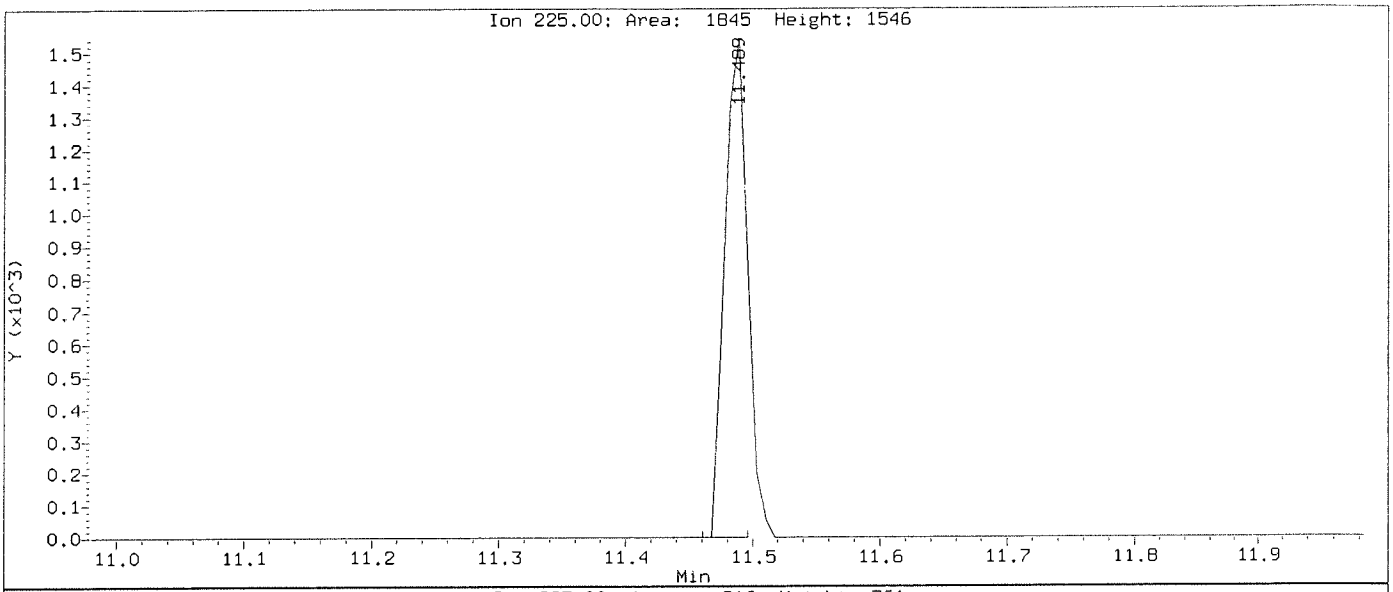


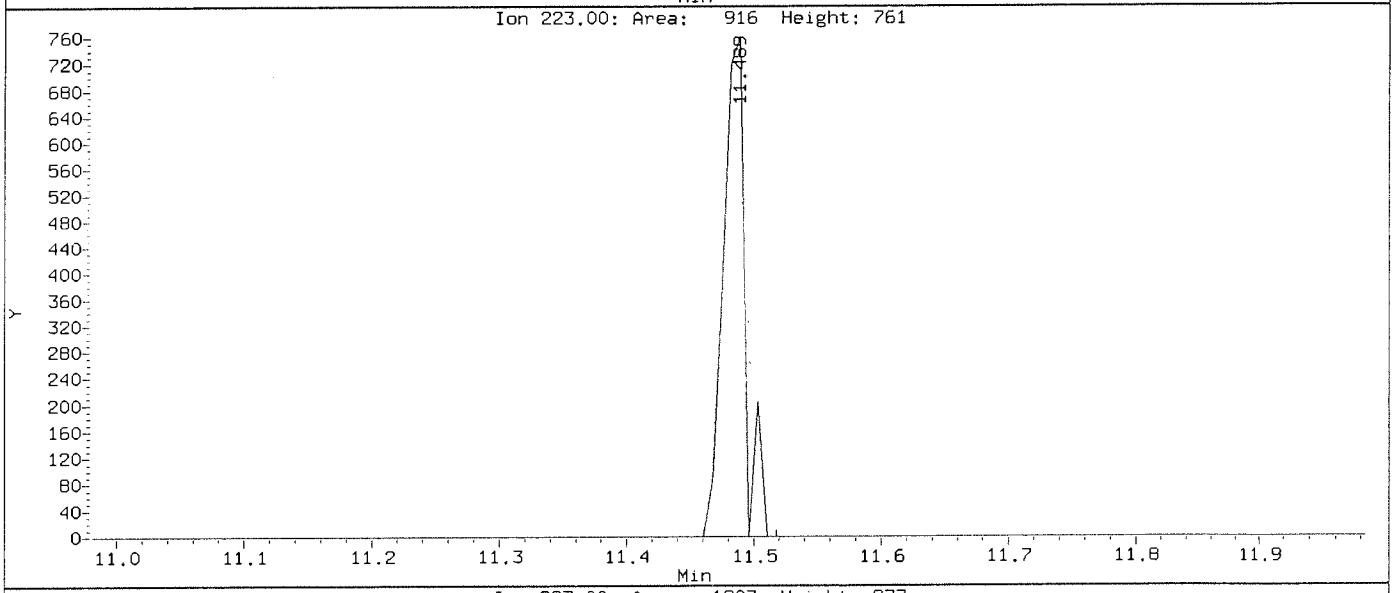


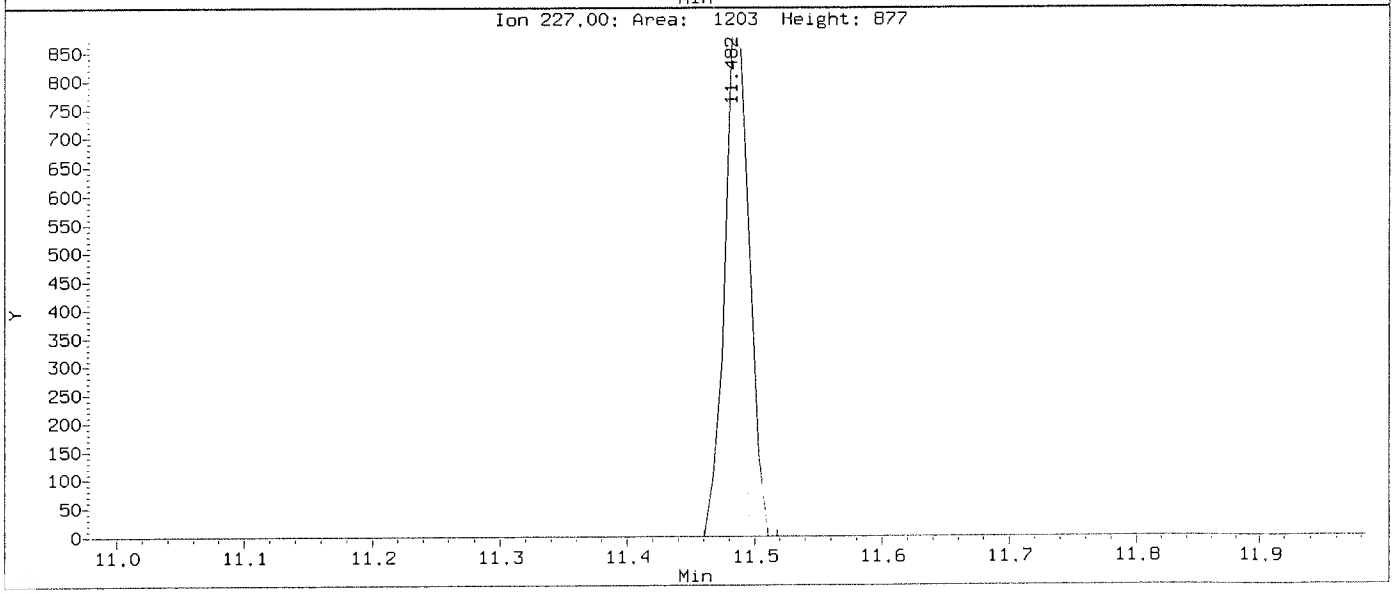


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3







Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-AUG-2020 13:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:52 Cal File: X080304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

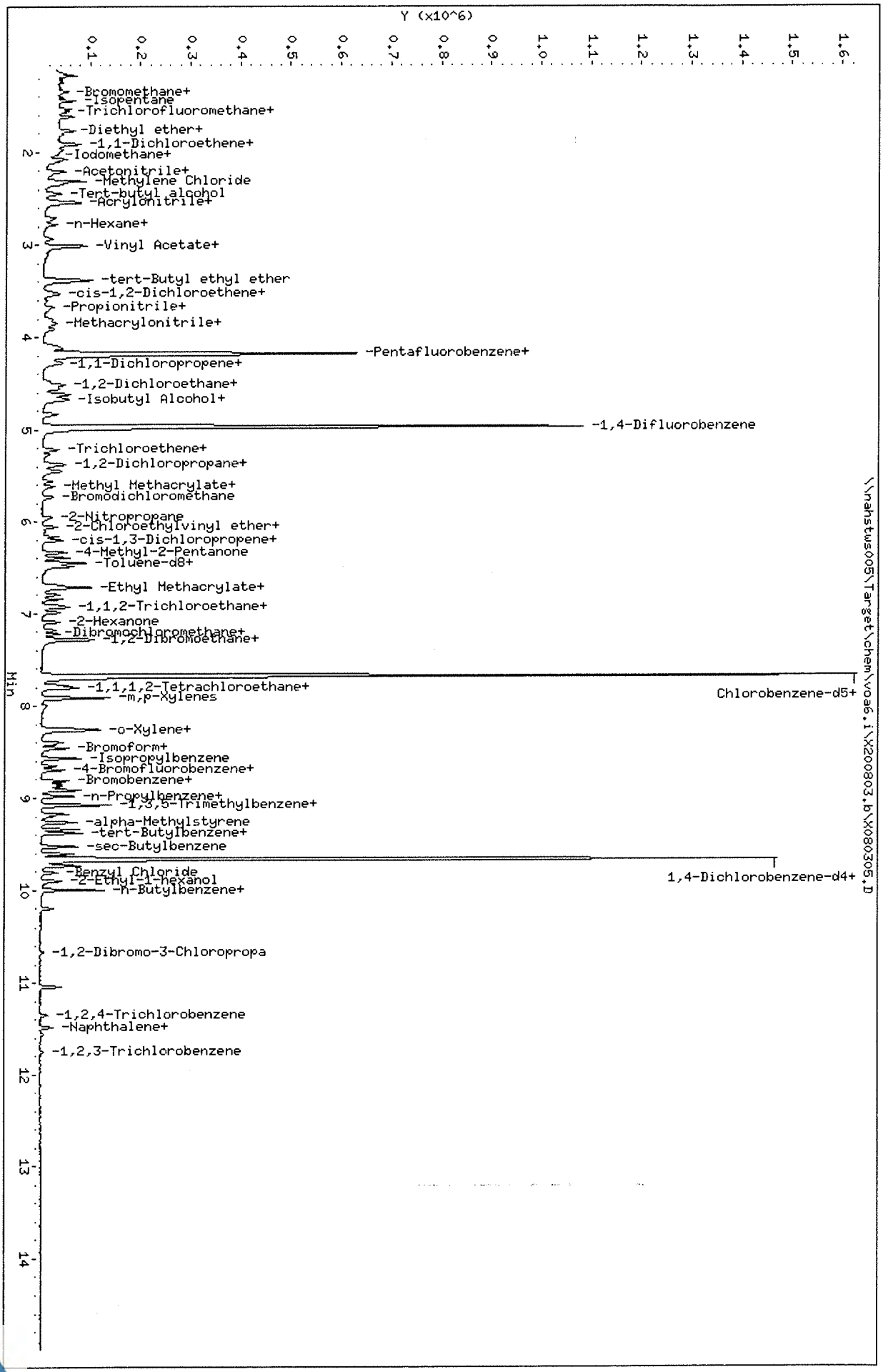
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.190	4.190	(1.000)	543911	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	829677	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	750905	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351595	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	9821	2.00000	1.83(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	10904	2.00000	1.72(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	33751	2.00000	1.85(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	13431	2.00000	1.91(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	11831	2.00000	2.06(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	15930	2.00000	1.90(a)
	68 1,1,2,2-Tetrachloroethane	83	8.846	8.846	(0.915)	17450	2.00000	3.44(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	9338	2.00000	2.18(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	20241	2.00000	1.90(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	8194	2.00000	1.90(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	14129	2.00000	2.02(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2318	2.00000	2.19(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12900	2.00000	2.50(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5020	2.00000	2.01(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	38643	2.00000	2.05(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	1468	2.00000	3.66(a)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	11414	2.00000	2.07(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	22043	2.00000	2.21(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	16305	2.00000	2.02(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	11836	2.00000	1.94(a)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	38031	2.00000	2.07(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	23923	2.00000	2.16(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	16738	2.00000	1.98(a)
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	23830	2.00000	2.18(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	15659	2.00000	2.01(aM)
24	2-Butanone	43	3.602	3.602	(0.860)	10002	4.00000	3.75(a)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	32223	2.00000	2.11(a)
52	2-Hexanone	43	7.091	7.091	(0.924)	23886	4.00000	5.06
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	36388	2.00000	2.05(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	39097	2.00000	2.00(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	32995	4.00000	4.74(a)
10	Acetone	43	1.976	1.976	(0.472)	9756	4.00000	4.12(aM)
37	Benzene	78	4.519	4.519	(0.909)	39024	2.00000	1.89(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	14653	2.00000	2.13(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	7080	2.00000	2.15(a)
39	Bromodichloromethane	83	5.730	5.730	(1.153)	14467	2.00000	1.93(a)
66	Bromoform	173	8.416	8.416	(1.097)	9196	2.00000	2.20(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	9294	2.00000	3.10(a)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	47873	4.00000	3.57(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	13935	2.00000	1.88(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	29194	2.00000	1.98(a)
7	Chloroethane	64	1.403	1.403	(0.335)	7130	2.00000	1.84(a)
28	Chloroform	83	3.910	3.910	(0.933)	19377	2.00000	1.99(a)
3	Chloromethane	50	1.081	1.081	(0.258)	15093	2.00000	1.97(a)
27	cis-1,2-Dichloroethene	96	3.531	3.531	(0.843)	11409	2.00000	1.90(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	16717	2.00000	1.91(a)
55	Dibromochloromethane	129	7.177	7.177	(0.936)	13023	2.00000	2.16(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	6946	2.00000	1.92(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	9815	2.00000	1.84(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	14170	2.00000	1.86(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	4418	2.00000	2.34(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	42458	2.00000	1.90(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	35460	4.00000	3.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	20318	2.00000	2.34(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	30052	2.00000	1.93(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	49004	2.00000	1.93(a)
92	Naphthalene	128	11.553	11.553	(1.195)	6258	2.00000	2.17(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	17455	2.00000	1.93(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	41975	2.00000	1.96(a)
64	Styrene	104	8.265	8.265	(1.078)	33224	2.00000	2.12(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	31980	2.00000	2.00(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8697	2.00000	1.82(a)
50	Toluene	91	6.453	6.453	(0.841)	43608	2.00000	1.98(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	9831	2.00000	1.92(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	15714	2.00000	1.96(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	11482	2.00000	1.95(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	14481	2.00000	1.80(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	12969	2.00000	1.85(a)

QC Flag Legend

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

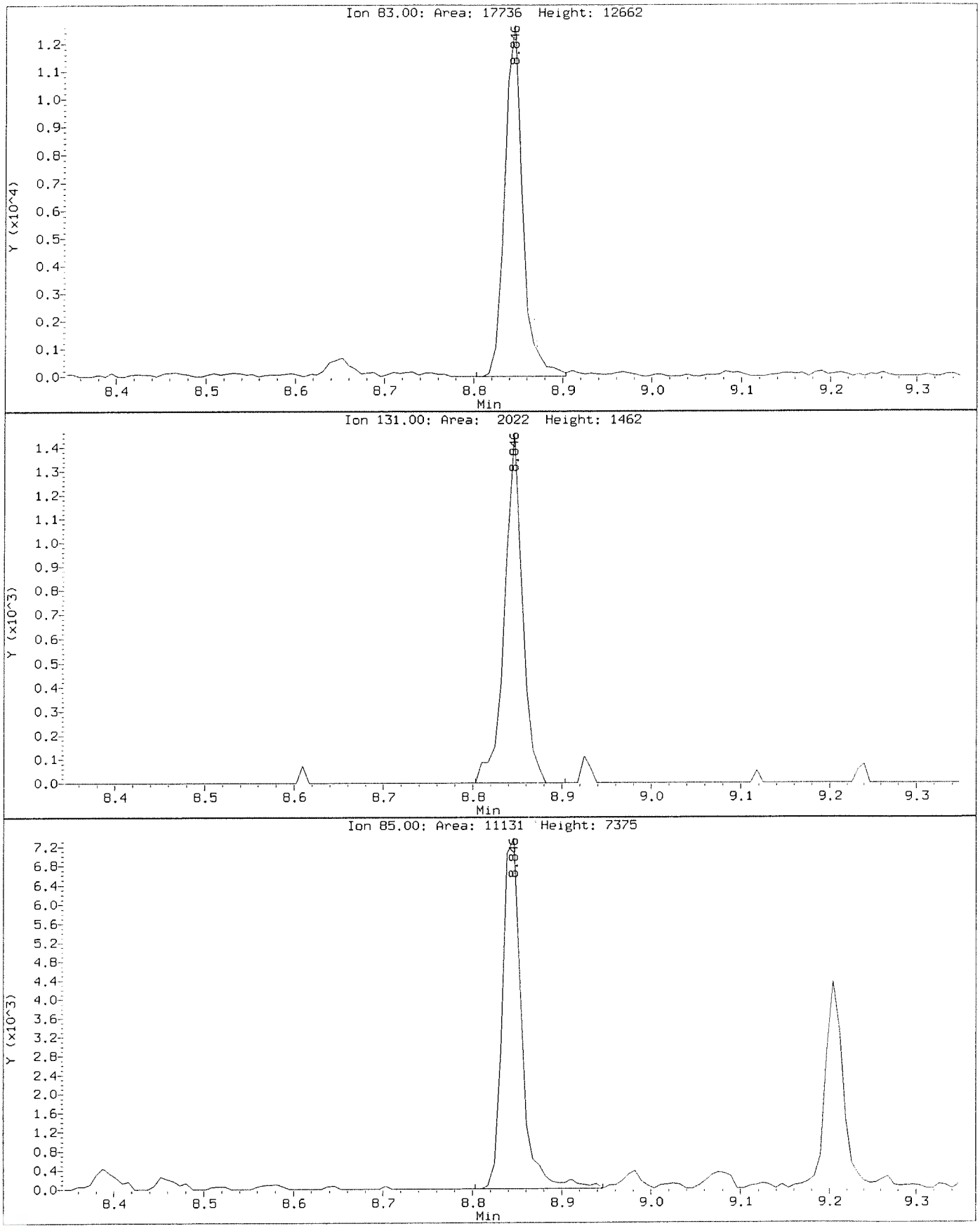


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Date : 03-AUG-2020 13:16
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

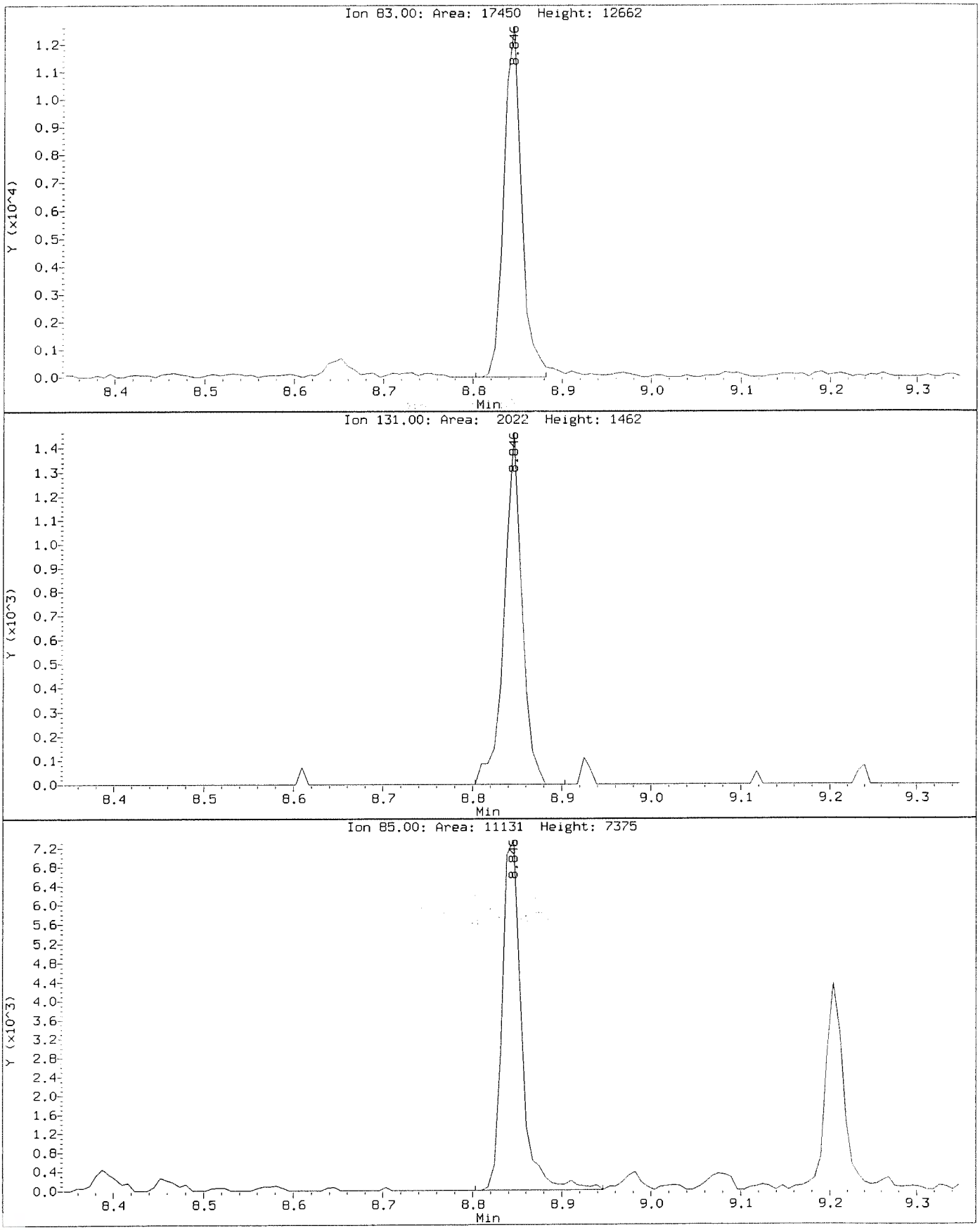
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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



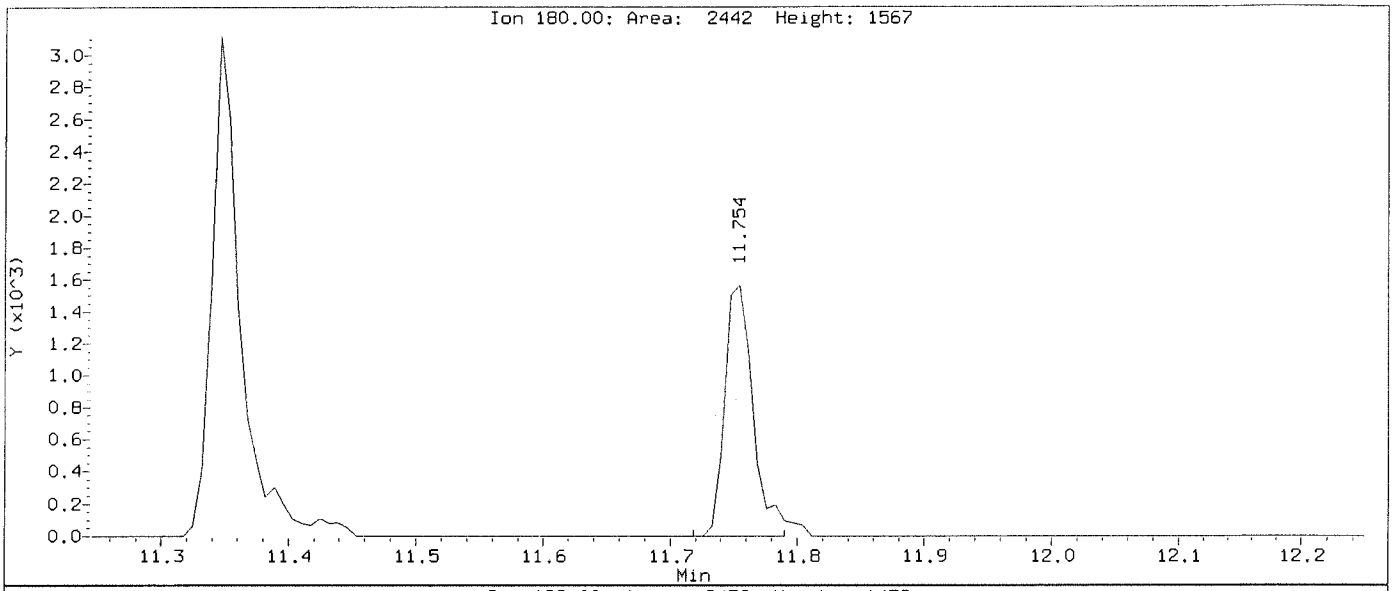
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Client Sample ID: VSTD002

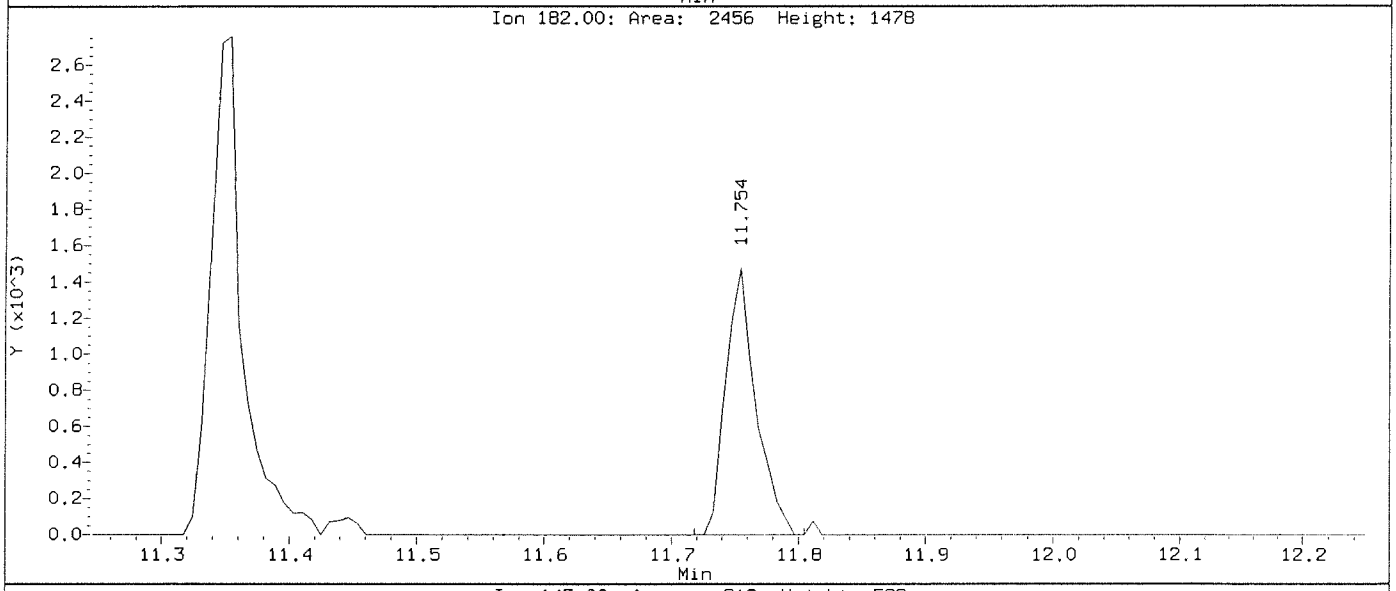
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

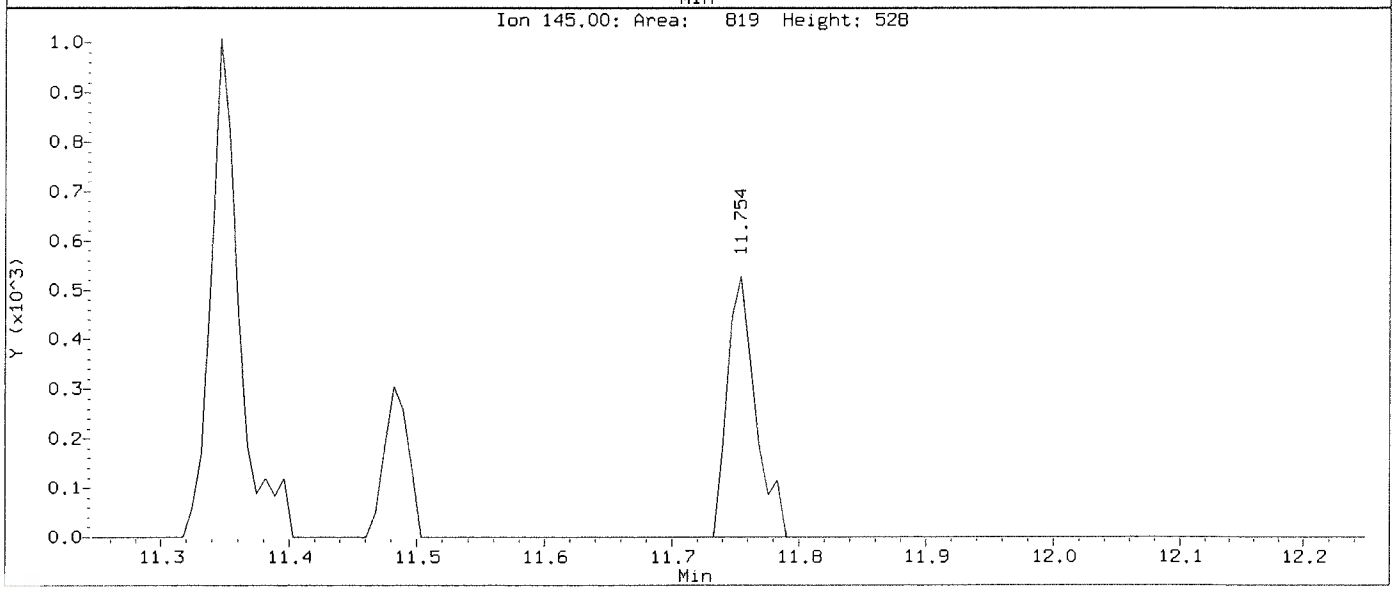


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

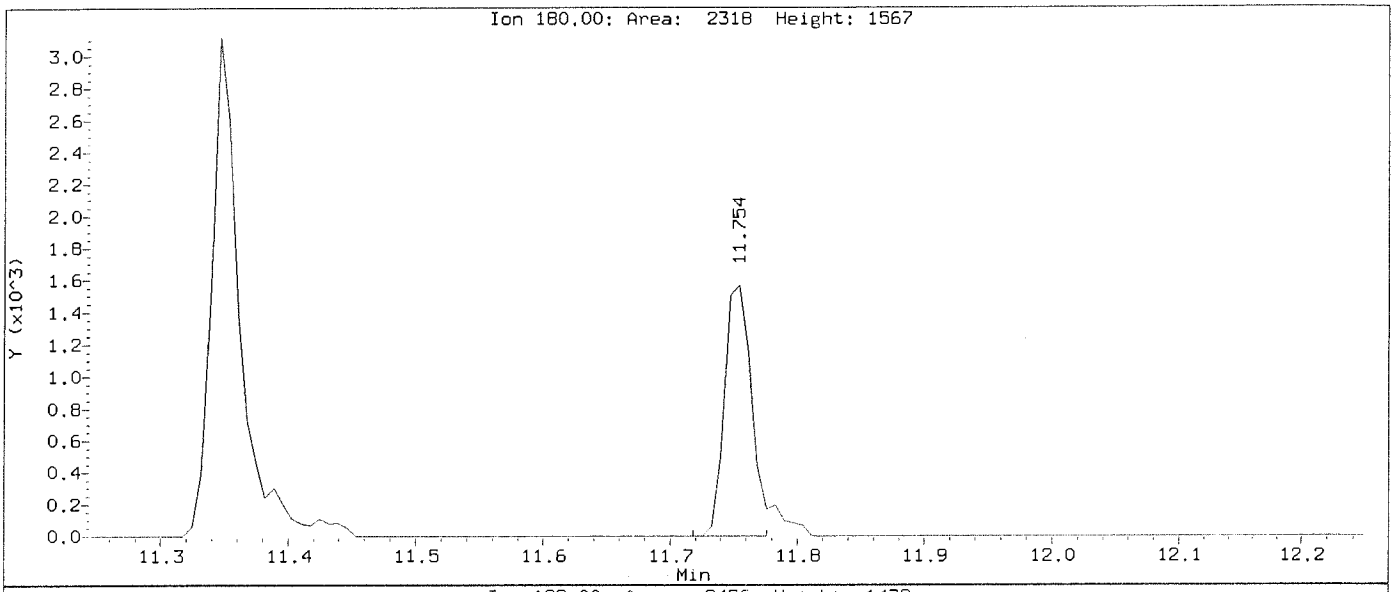


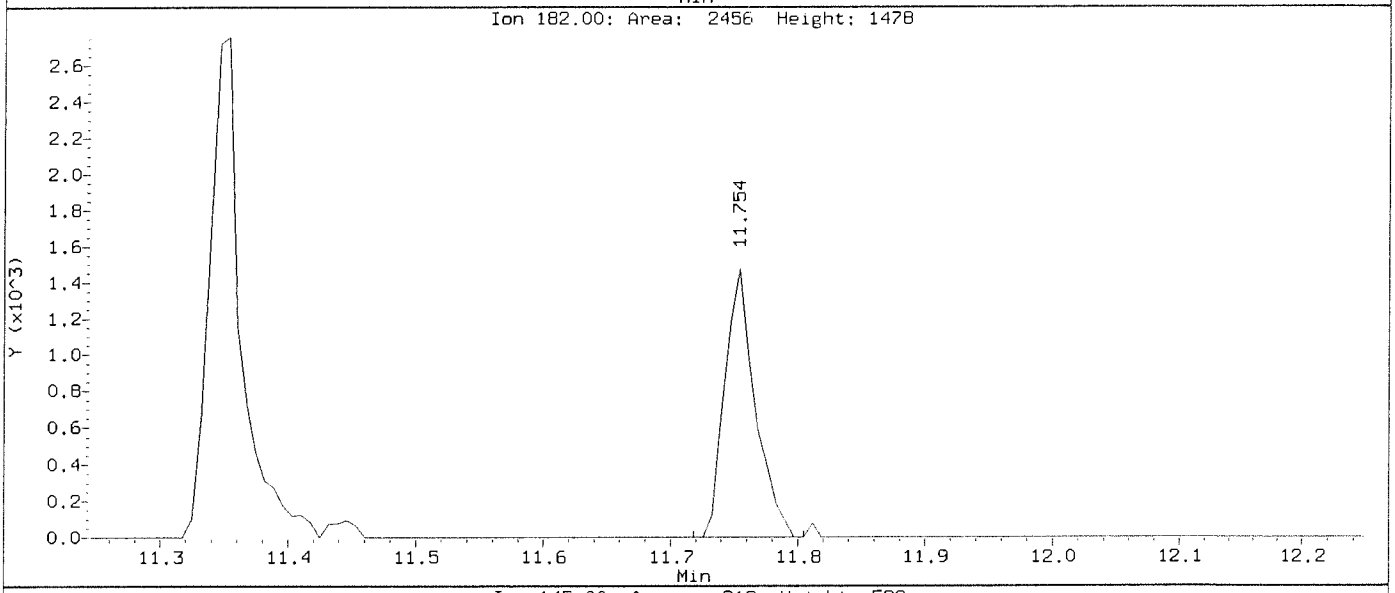


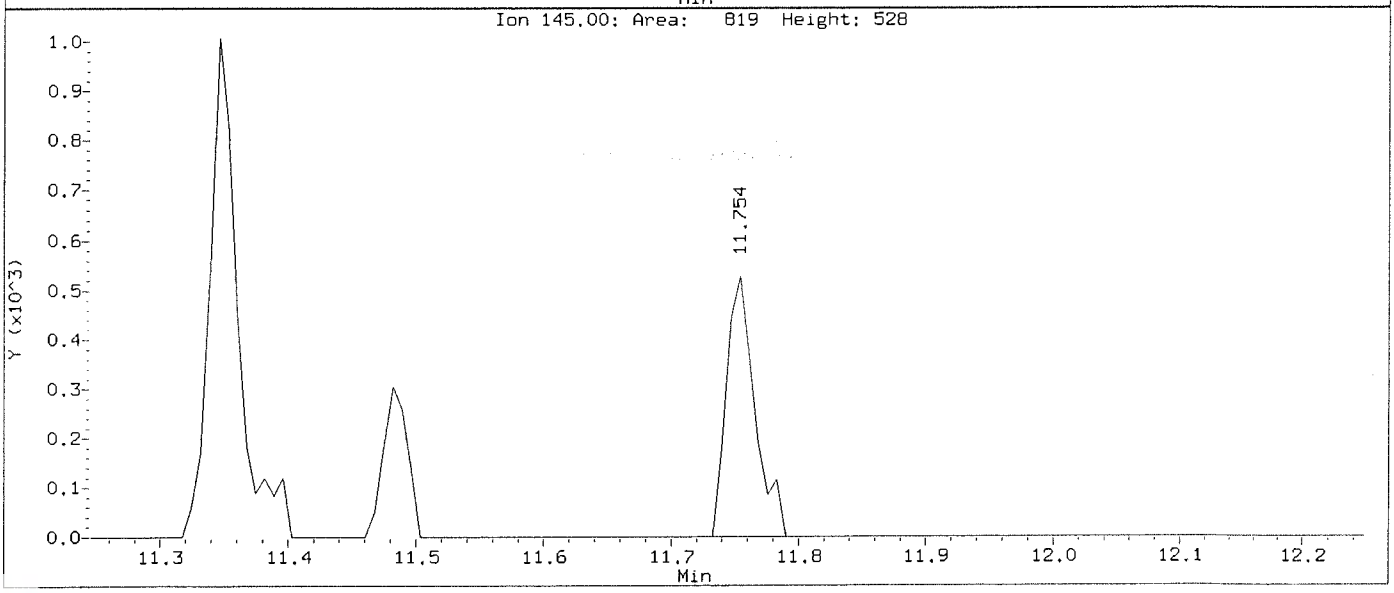


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

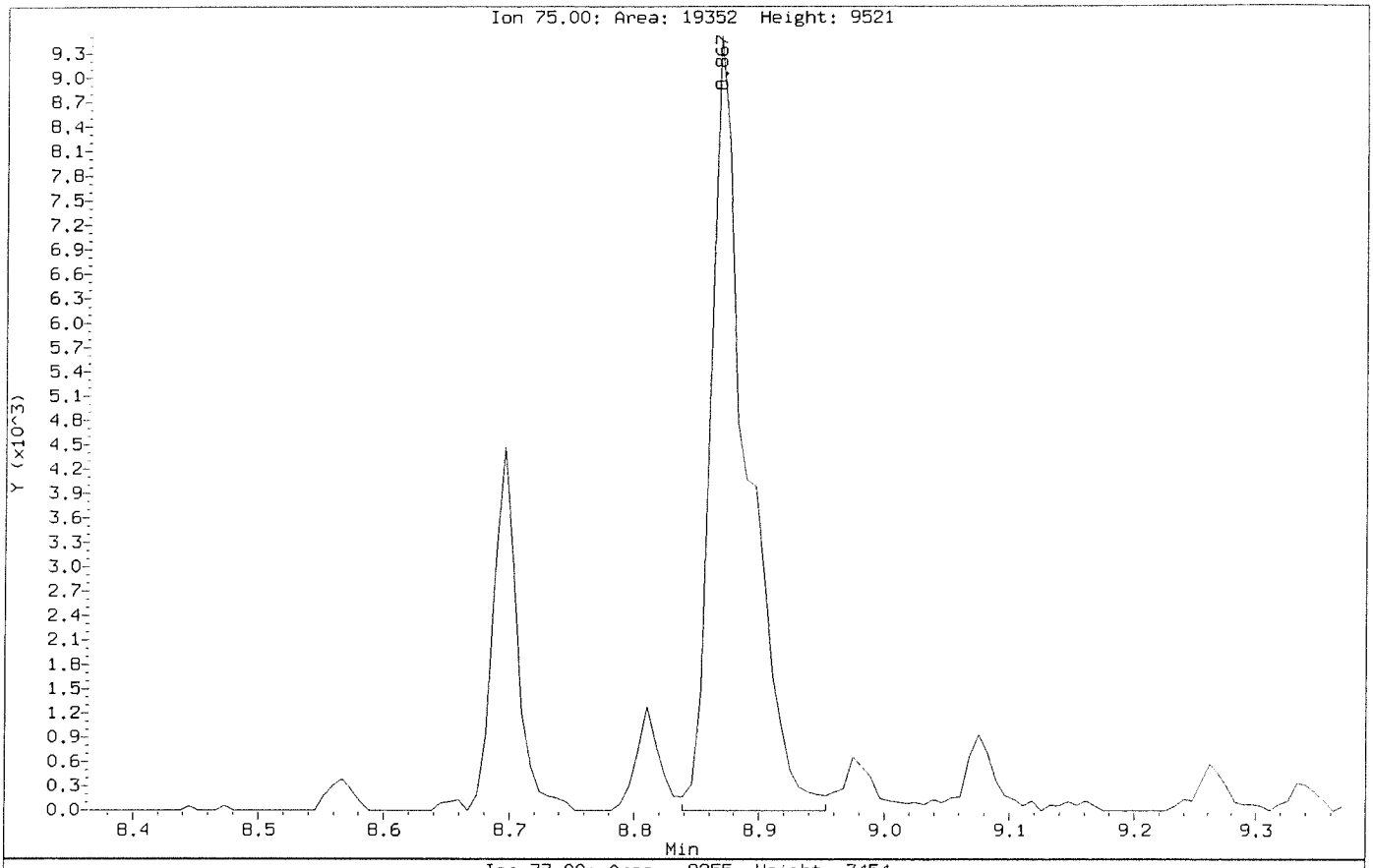


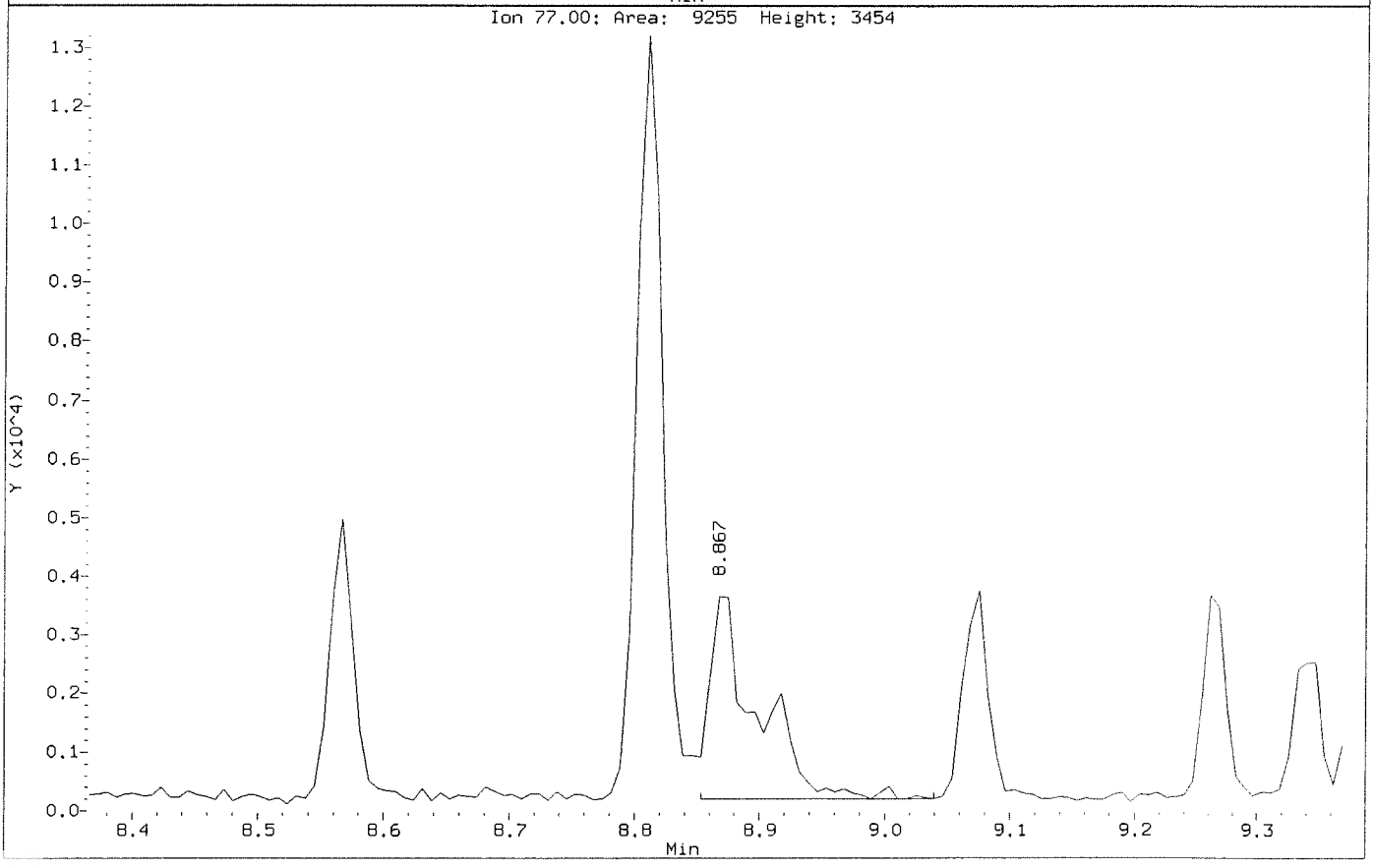




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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

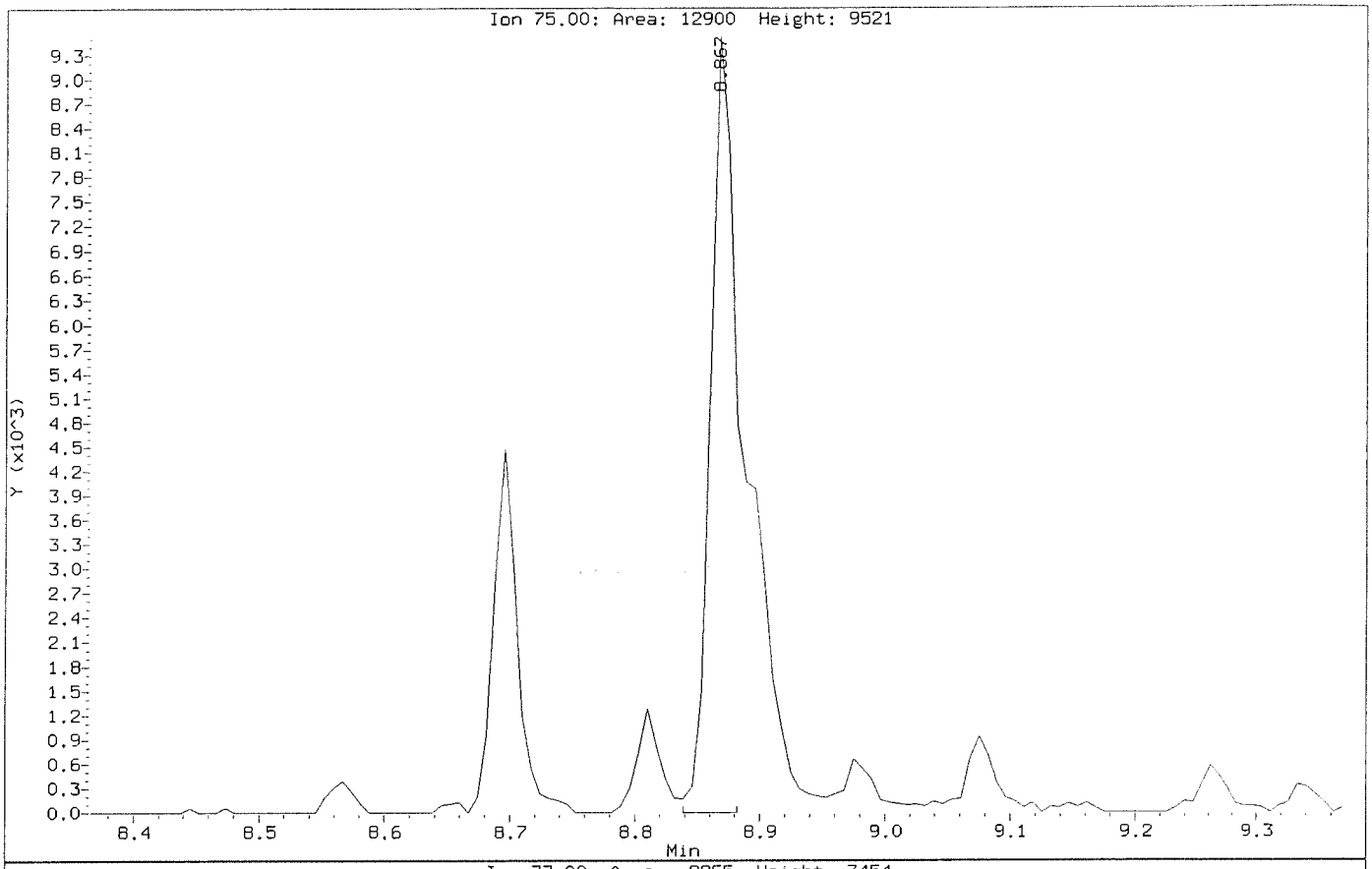
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

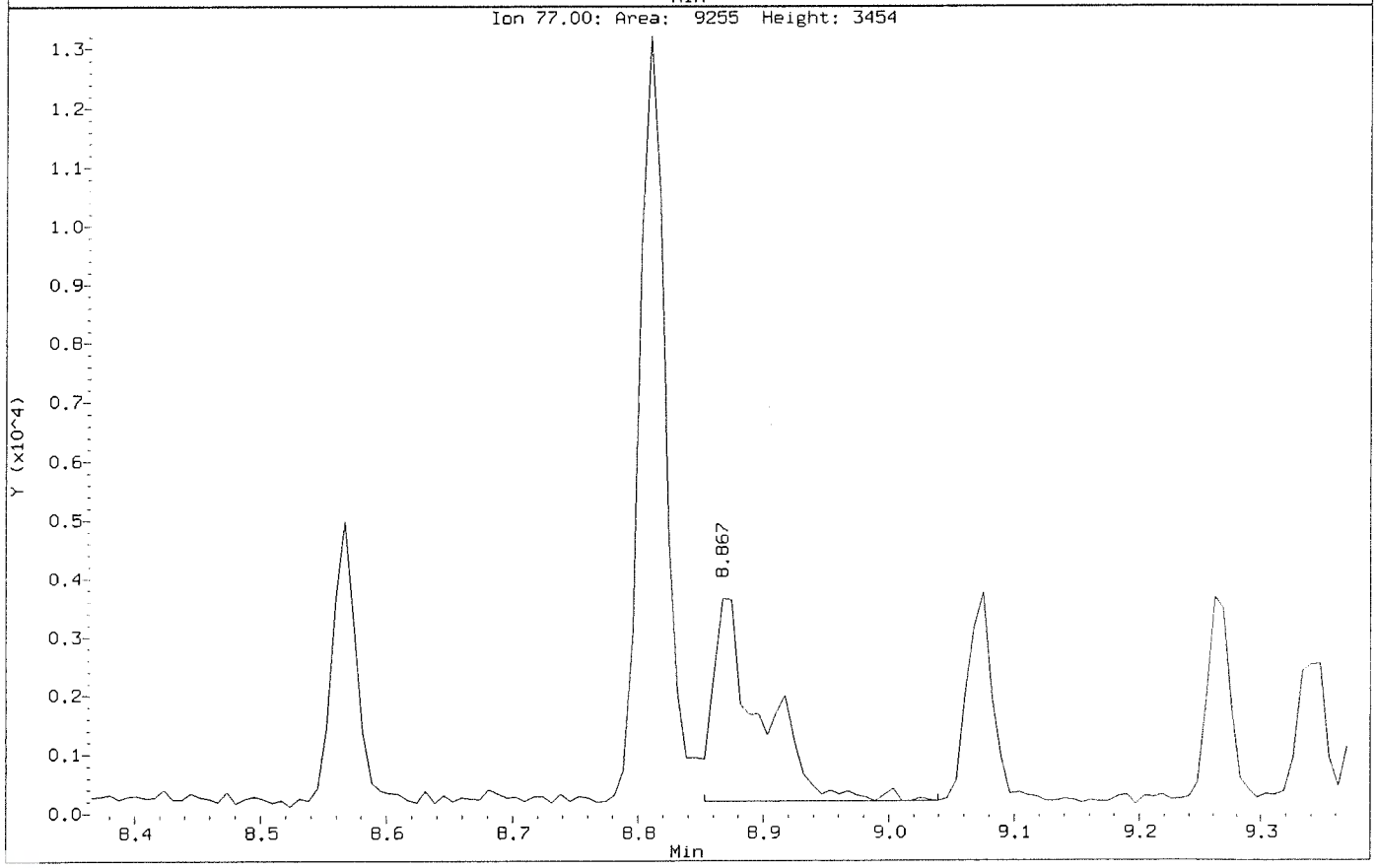




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Instrument: voa6.i
Client Sample ID: VSTD002

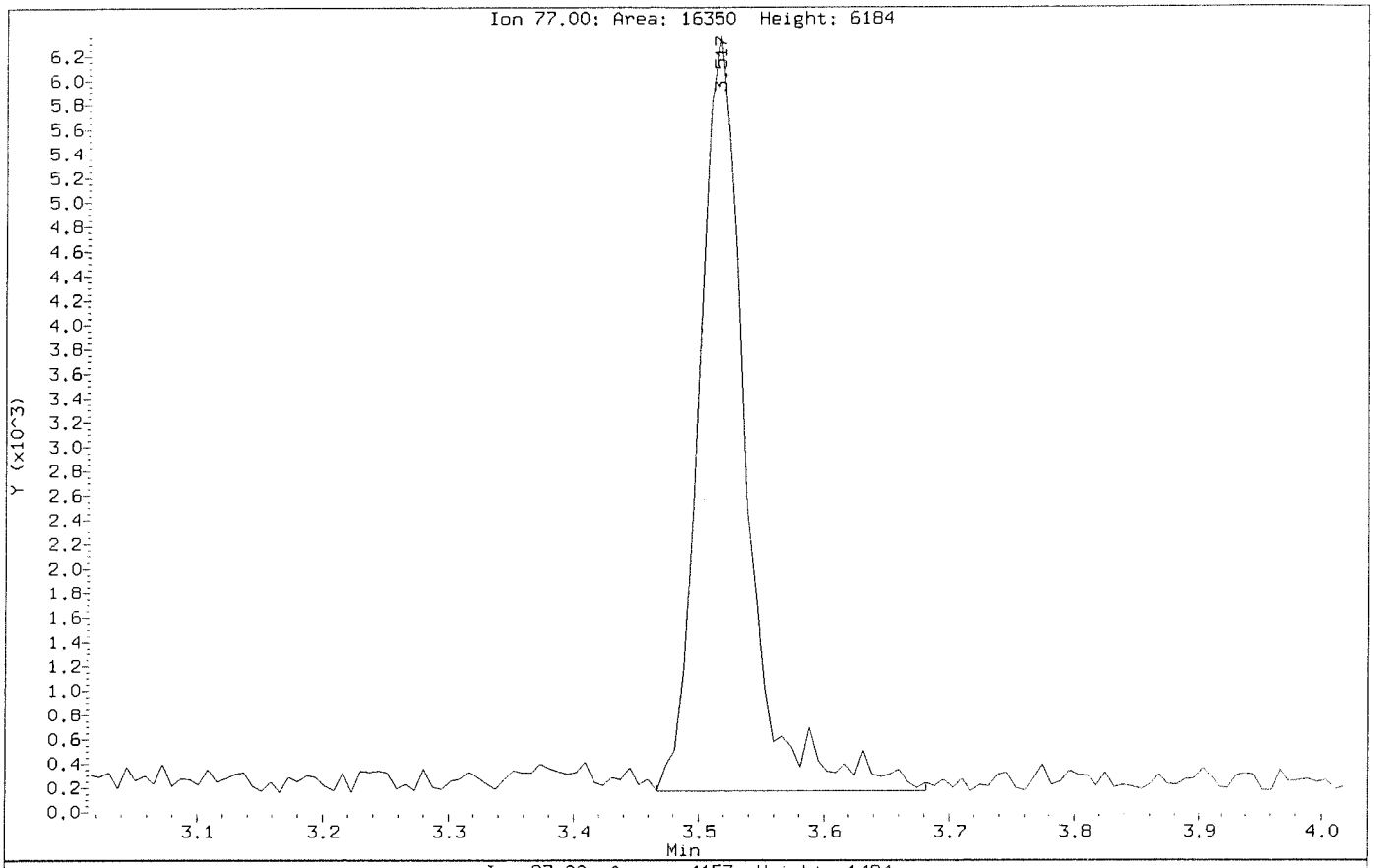
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

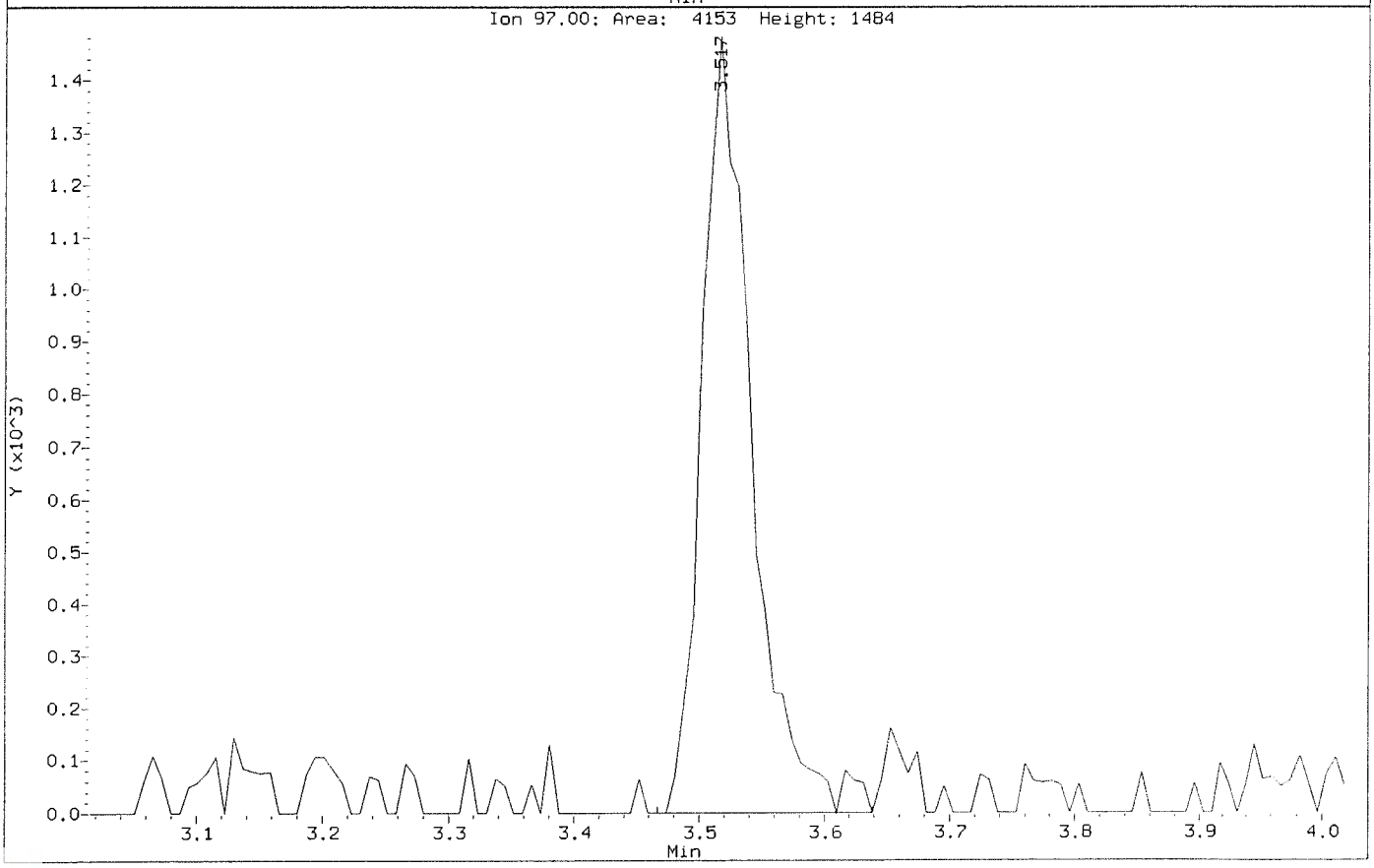




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Client Sample ID: VSTD002

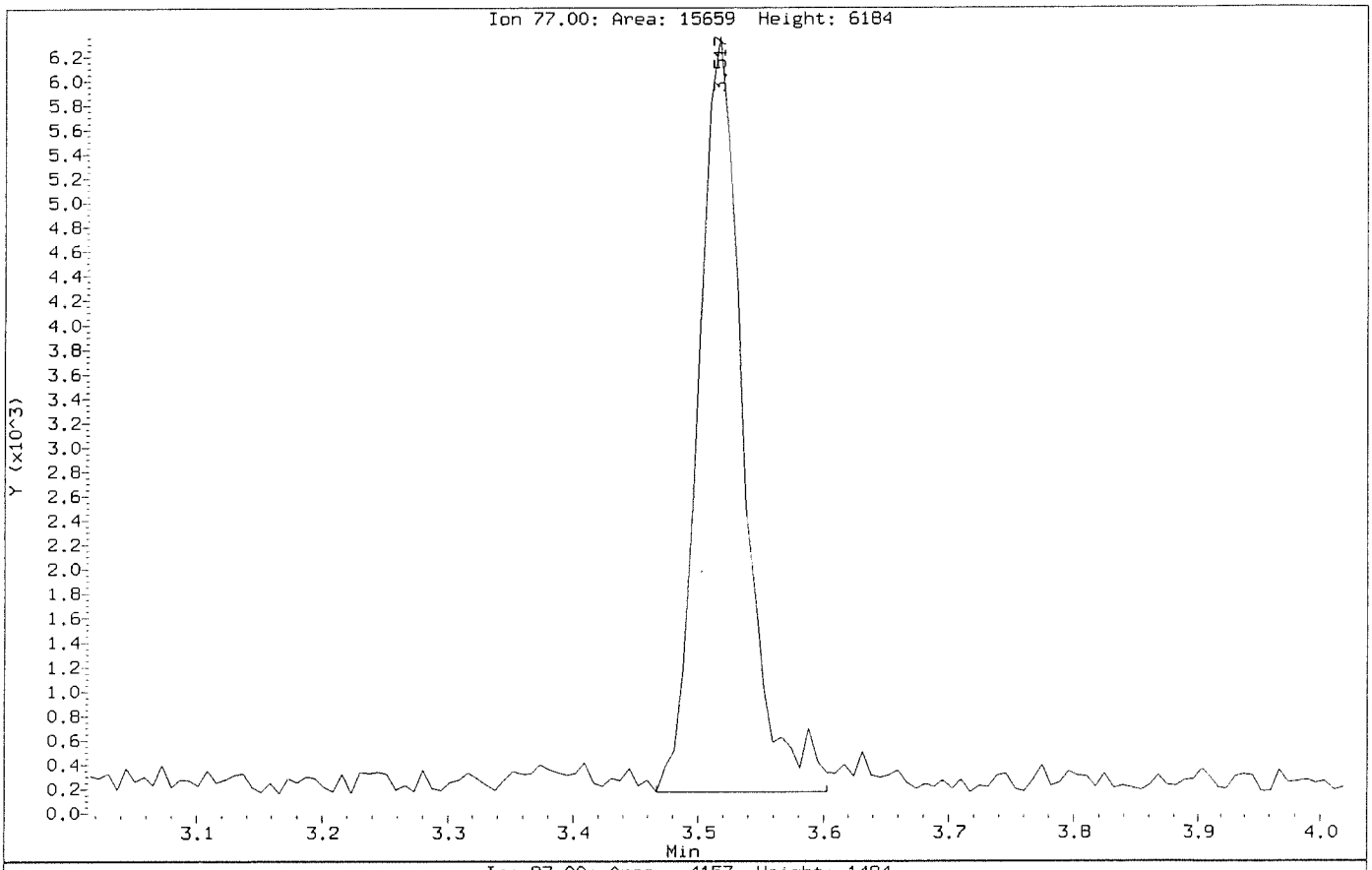
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

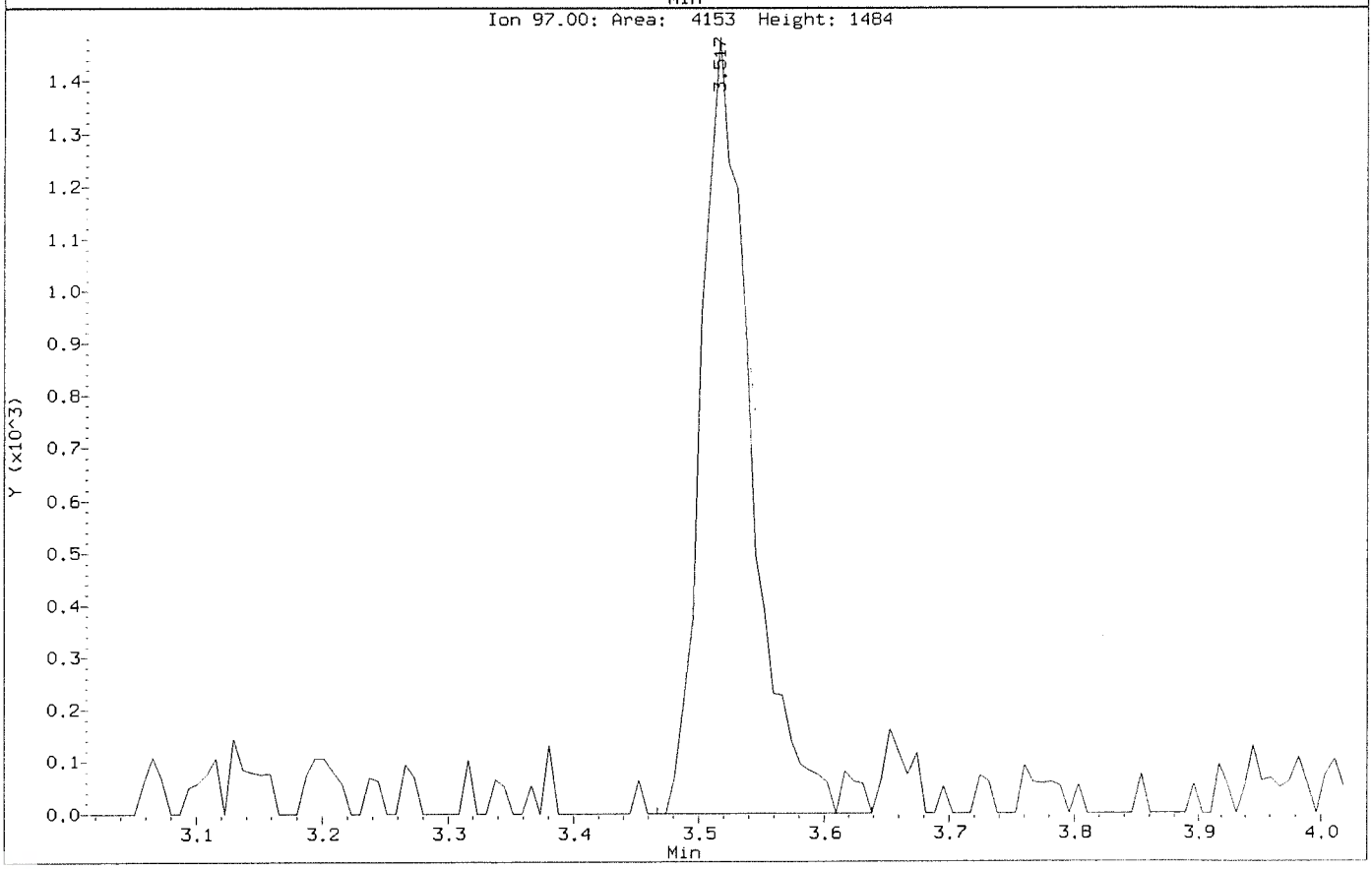




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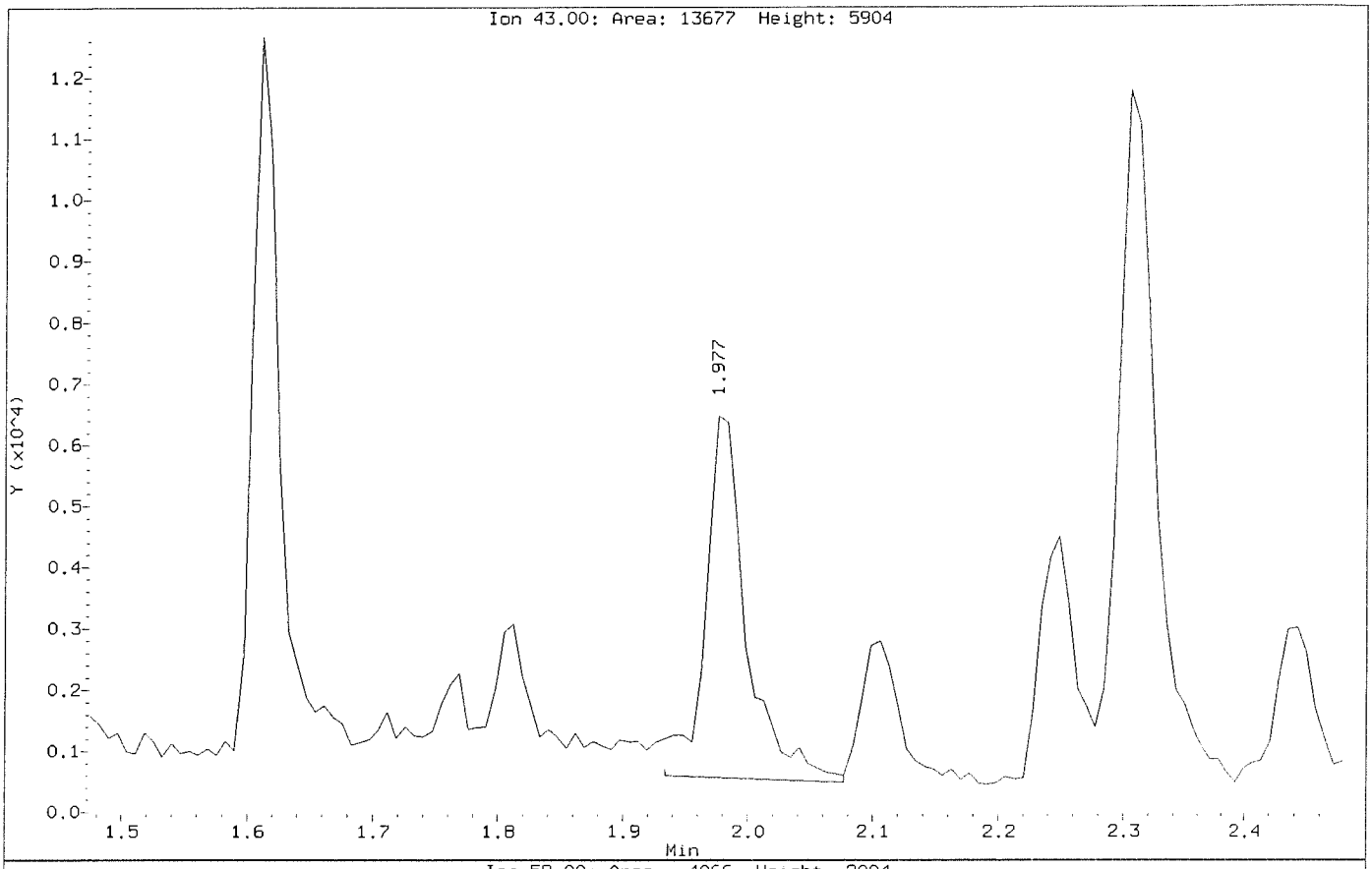
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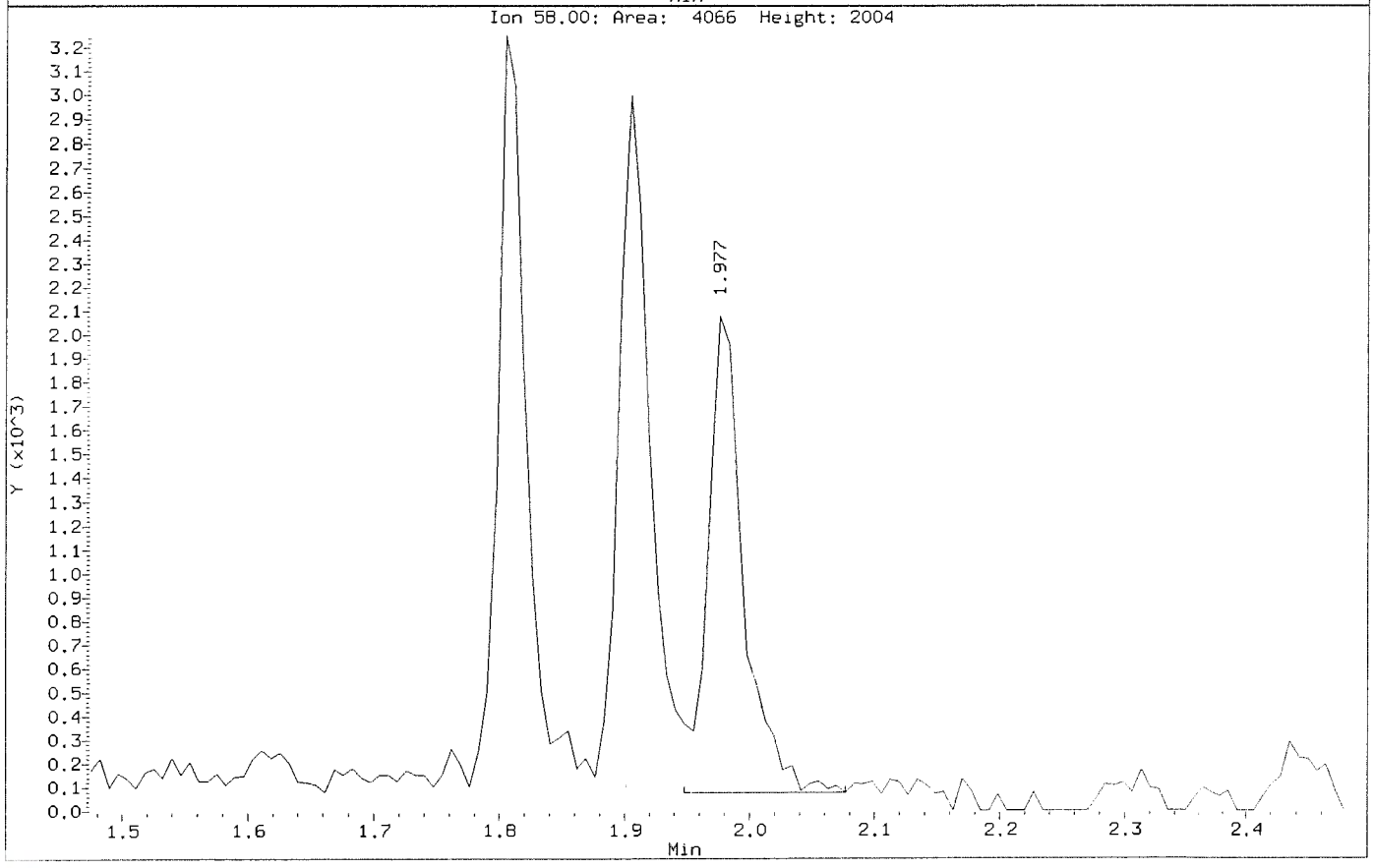




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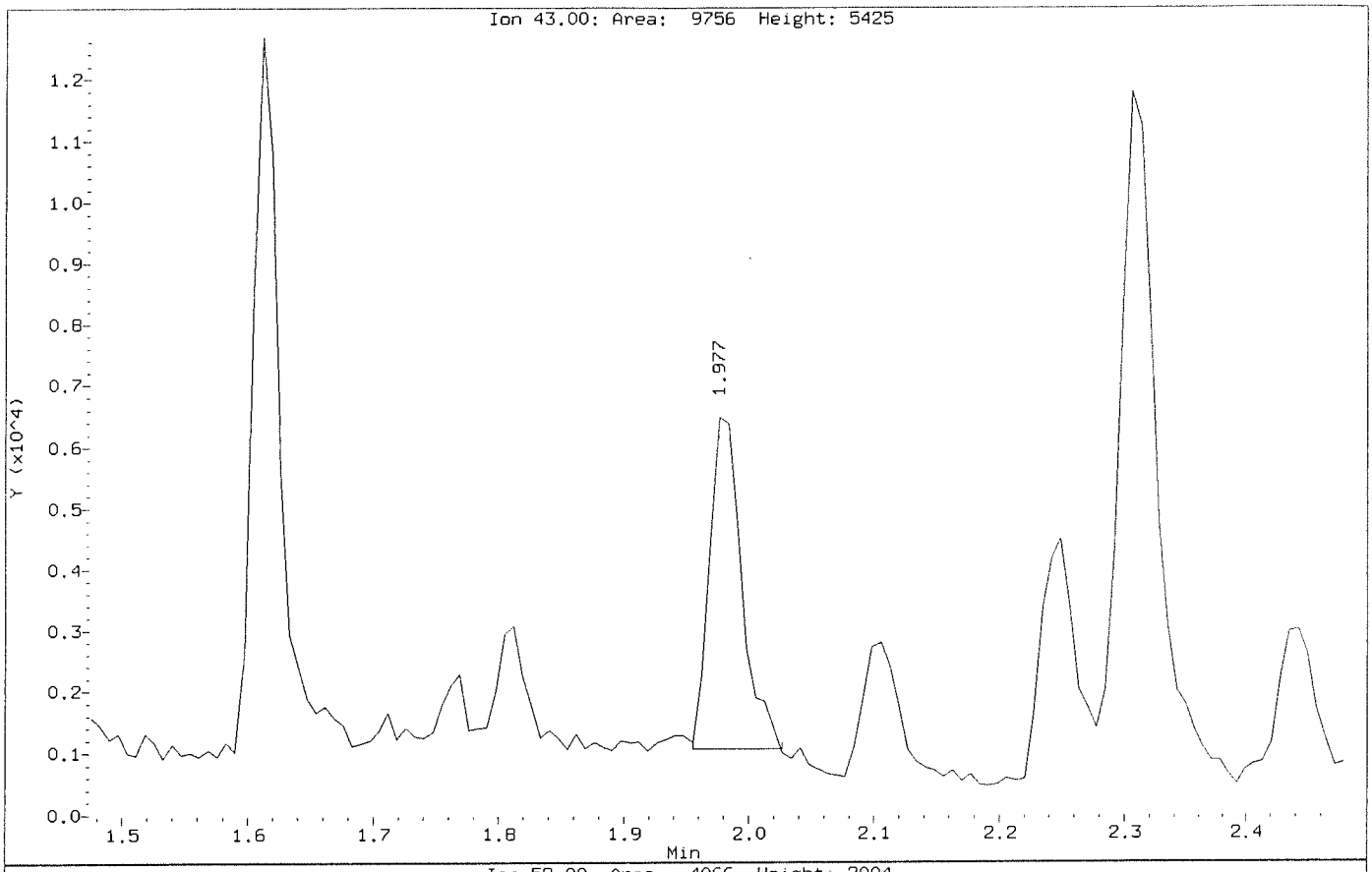
Compound: Acetone
CAS Number: 67-64-1

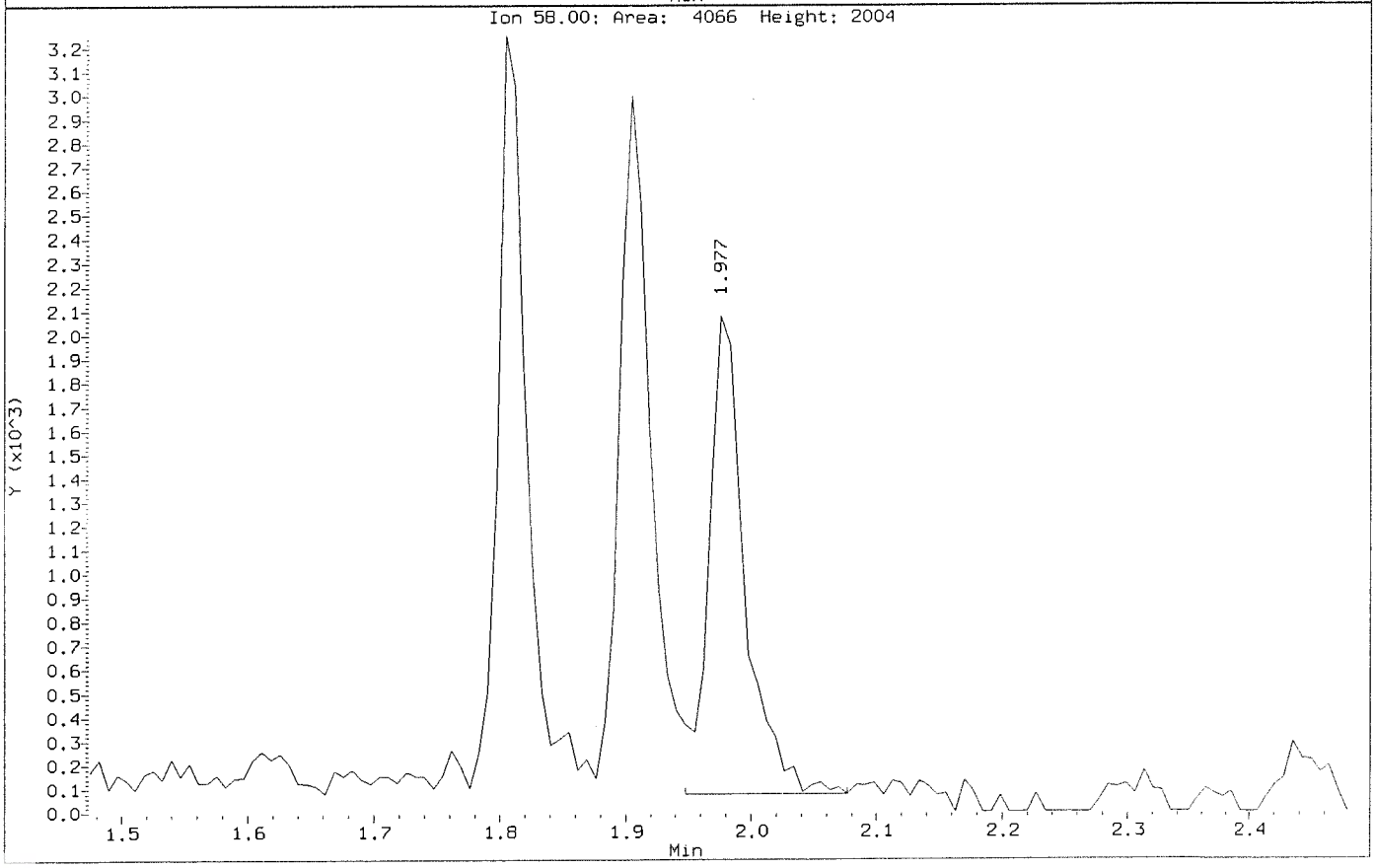




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Client Sample ID: VSTD002

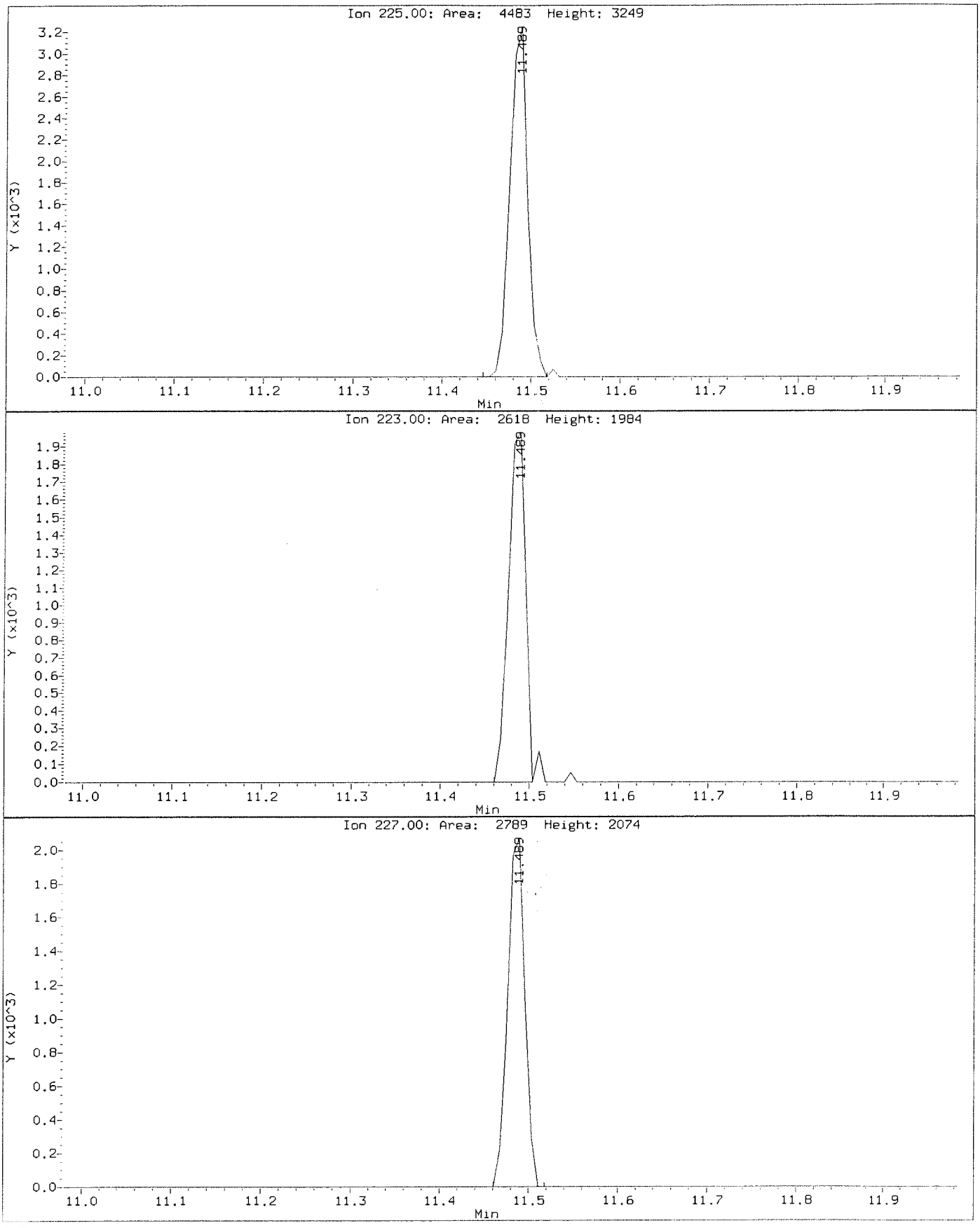
Compound: Acetone
CAS Number: 67-64-1





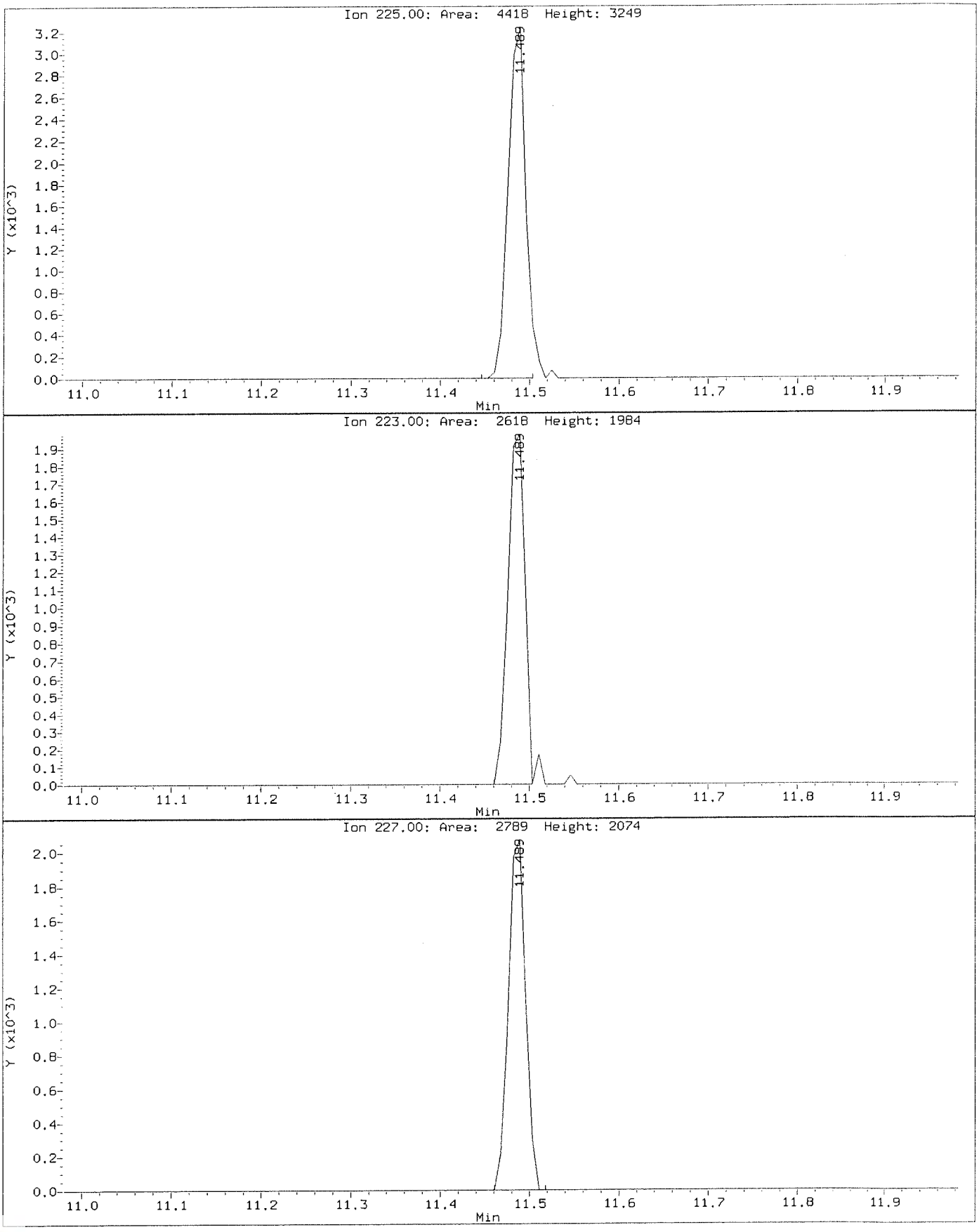
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



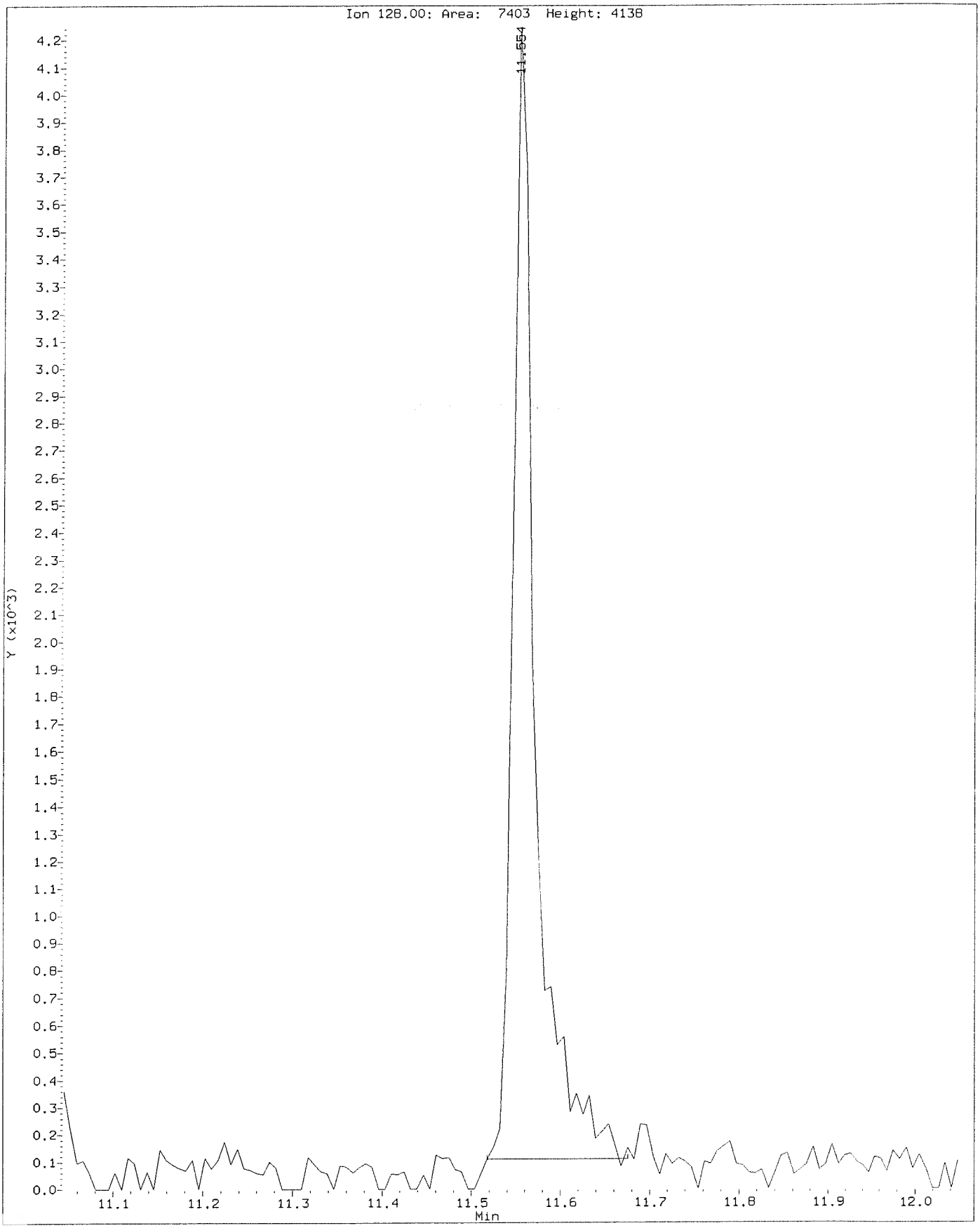
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



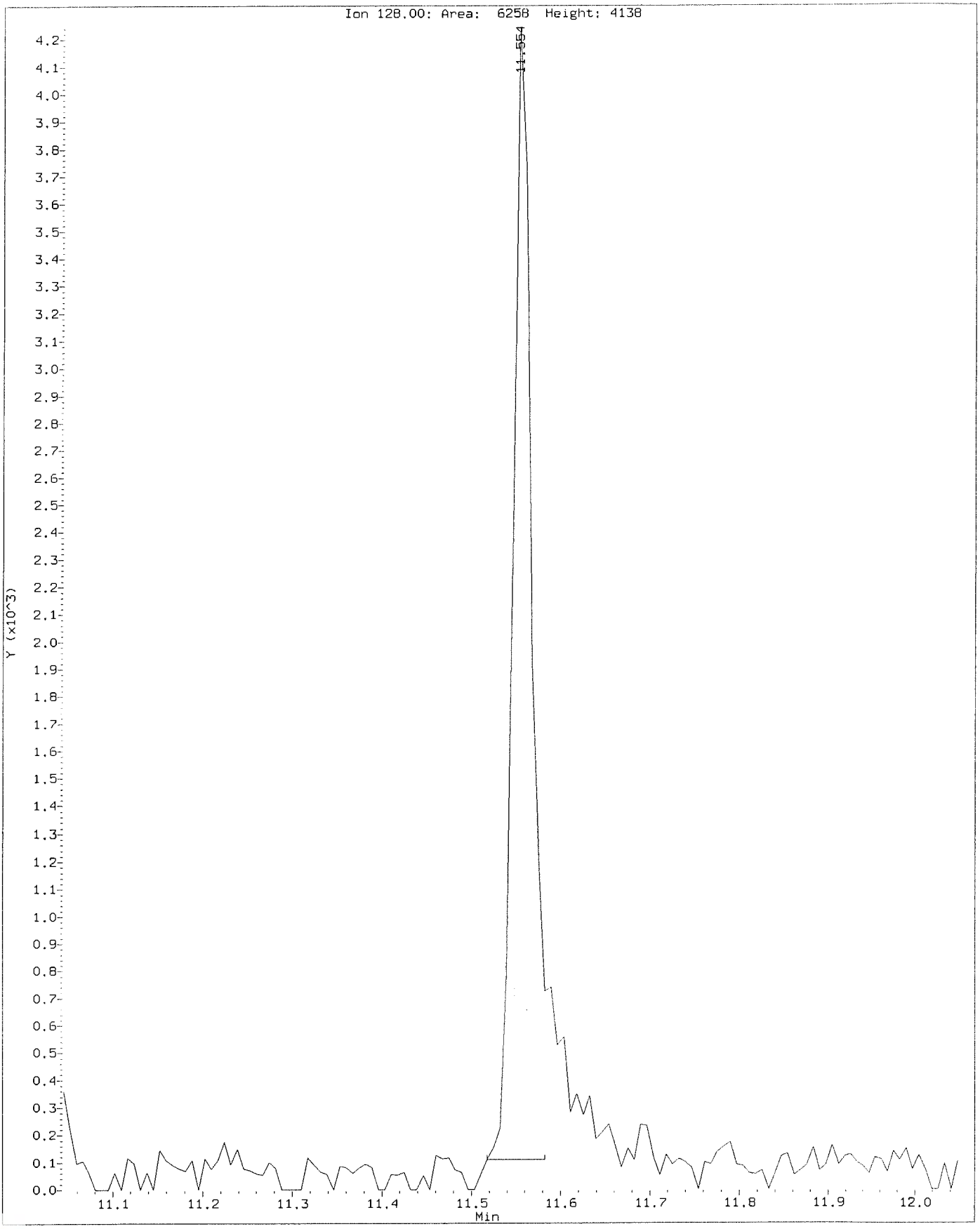
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-AUG-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:16 Cal File: X080305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

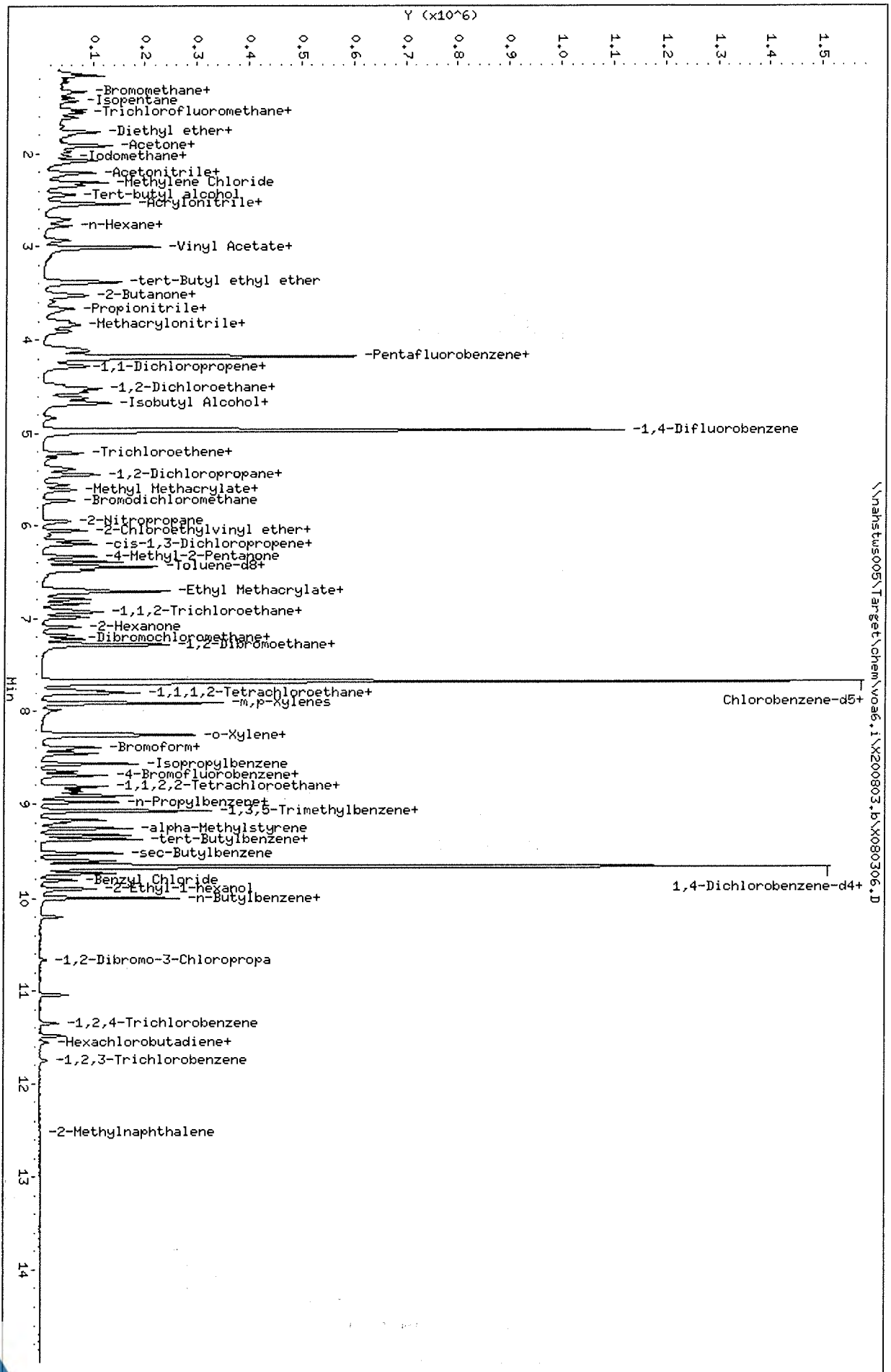
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	516466	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	799737	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721427	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	341252	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	26560	5.00000	5.23
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	31226	5.00000	5.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	87842	5.00000	5.01
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	32773	5.00000	4.85(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	26918	5.00000	4.90(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	38495	5.00000	4.83(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	30714	5.00000	5.92
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	20819	5.00000	5.07
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	51675	5.00000	5.12
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	18682	5.00000	4.56(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	29787	5.00000	4.43(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	4970	5.00000	4.83(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	24998	5.00000	5.00(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	11491	5.00000	5.47
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	87365	5.00000	4.79(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	2687	5.00000	6.21
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	26427	5.00000	4.99(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	47718	5.00000	4.94(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 2
Report Date: 22-Aug-2020 11:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	39206	5.00000	5.06
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	30120	5.00000	5.13
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	84150	5.00000	4.71(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	51371	5.00000	4.78(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	41882	5.00000	5.16
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	50800	5.00000	4.78(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	37924	5.00000	5.14
24 2-Butanone	43	3.595	3.595	(0.858)	24626	10.0000	9.72
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	73756	5.00000	4.98(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	46666	10.0000	10.30
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	84320	5.00000	4.89(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	82617	5.00000	4.37(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	67354	10.0000	10.08
10 Acetone	43	1.976	1.976	(0.472)	22417	10.0000	11.51
37 Benzene	78	4.519	4.519	(0.909)	96422	5.00000	4.85(a)
74 Bromobenzene	156	8.810	8.810	(0.911)	32917	5.00000	4.93(a)
29 Bromochloromethane	128	3.803	3.803	(0.908)	14966	5.00000	4.80(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	34225	5.00000	4.75(a)
66 Bromoform	173	8.416	8.416	(1.097)	19261	5.00000	4.81(a)
6 Bromomethane	94	1.339	1.339	(0.320)	19557	5.00000	6.08
19 Carbon Disulfide	76	2.069	2.069	(0.494)	115343	10.0000	9.07
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	32904	5.00000	4.60(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	69656	5.00000	4.92(a)
7 Chloroethane	64	1.403	1.403	(0.335)	16878	5.00000	4.61(a)
28 Chloroform	83	3.910	3.910	(0.933)	45810	5.00000	4.96(a)
3 Chloromethane	50	1.081	1.081	(0.258)	36080	5.00000	4.97(a)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	28232	5.00000	4.96(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	41664	5.00000	4.94(a)
55 Dibromochloromethane	129	7.184	7.184	(0.937)	28435	5.00000	4.92(a)
44 Dibromomethane	93	5.558	5.558	(1.118)	17438	5.00000	5.01
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	20209	5.00000	3.99(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	34866	5.00000	4.77(a)
91 Hexachlorobutadiene	225	11.489	11.489	(1.188)	8440	5.00000	4.60(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	99162	5.00000	4.62(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	85878	10.0000	9.74
17 Methylene Chloride	84	2.306	2.306	(0.550)	36047	5.00000	5.57
87 n-Butylbenzene	91	9.999	9.999	(1.034)	63779	5.00000	4.22(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	111502	5.00000	4.53(a)
92 Naphthalene	128	11.553	11.553	(1.195)	16632	5.00000	6.16
63 o-Xylene	106	8.244	8.244	(1.075)	42060	5.00000	4.85(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	89332	5.00000	4.30(a)
64 Styrene	104	8.265	8.265	(1.078)	74772	5.00000	4.97(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	69721	5.00000	4.50(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	21403	5.00000	4.66(a)
50 Toluene	91	6.453	6.453	(0.841)	104074	5.00000	4.93(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	23352	5.00000	4.82(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	38875	5.00000	5.03
38 Trichloroethene	130	5.214	5.214	(1.049)	27117	5.00000	4.78(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	33185	5.00000	4.36(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	28782	5.00000	4.32(a)

QC Flag Legend

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

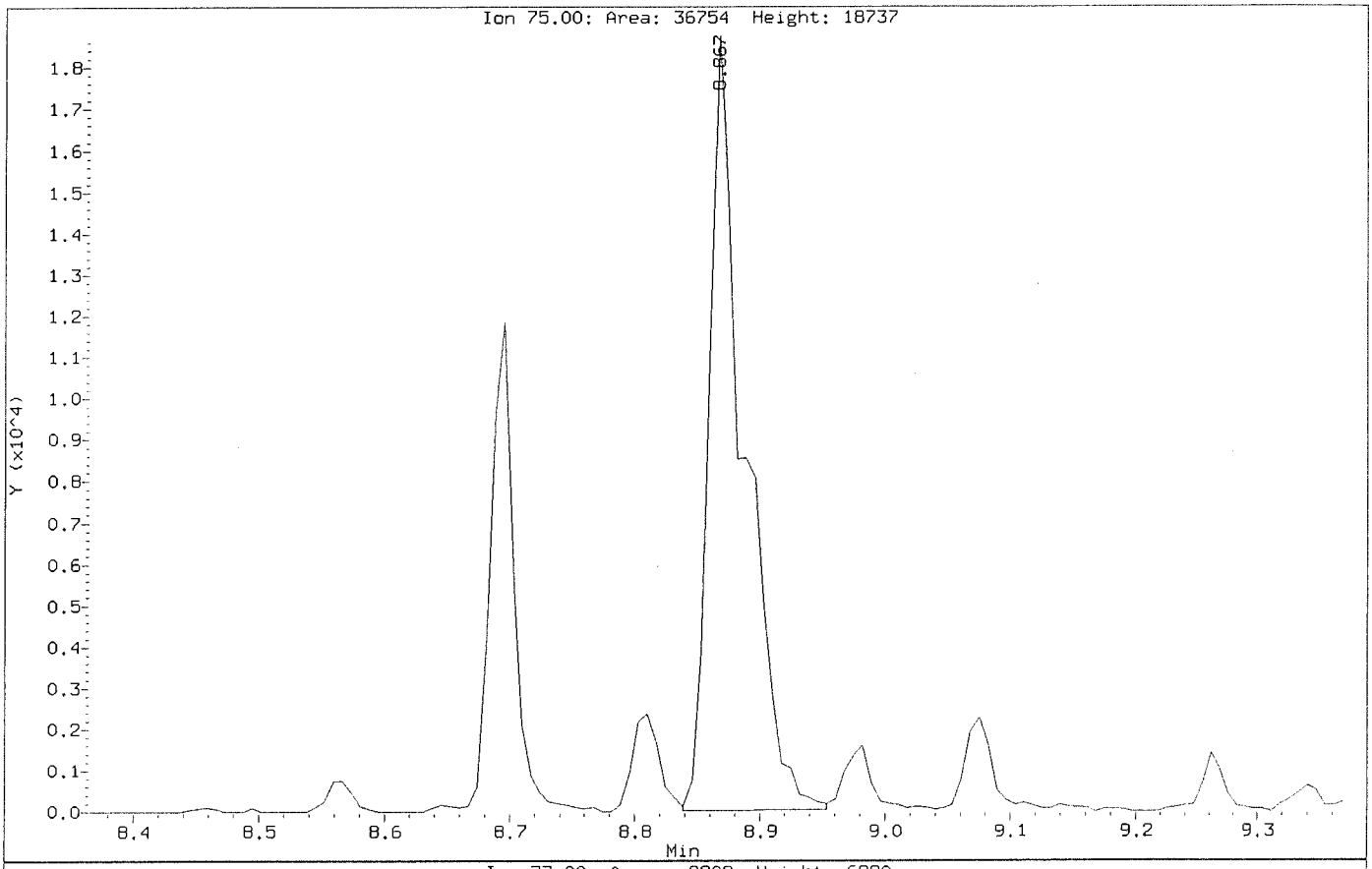


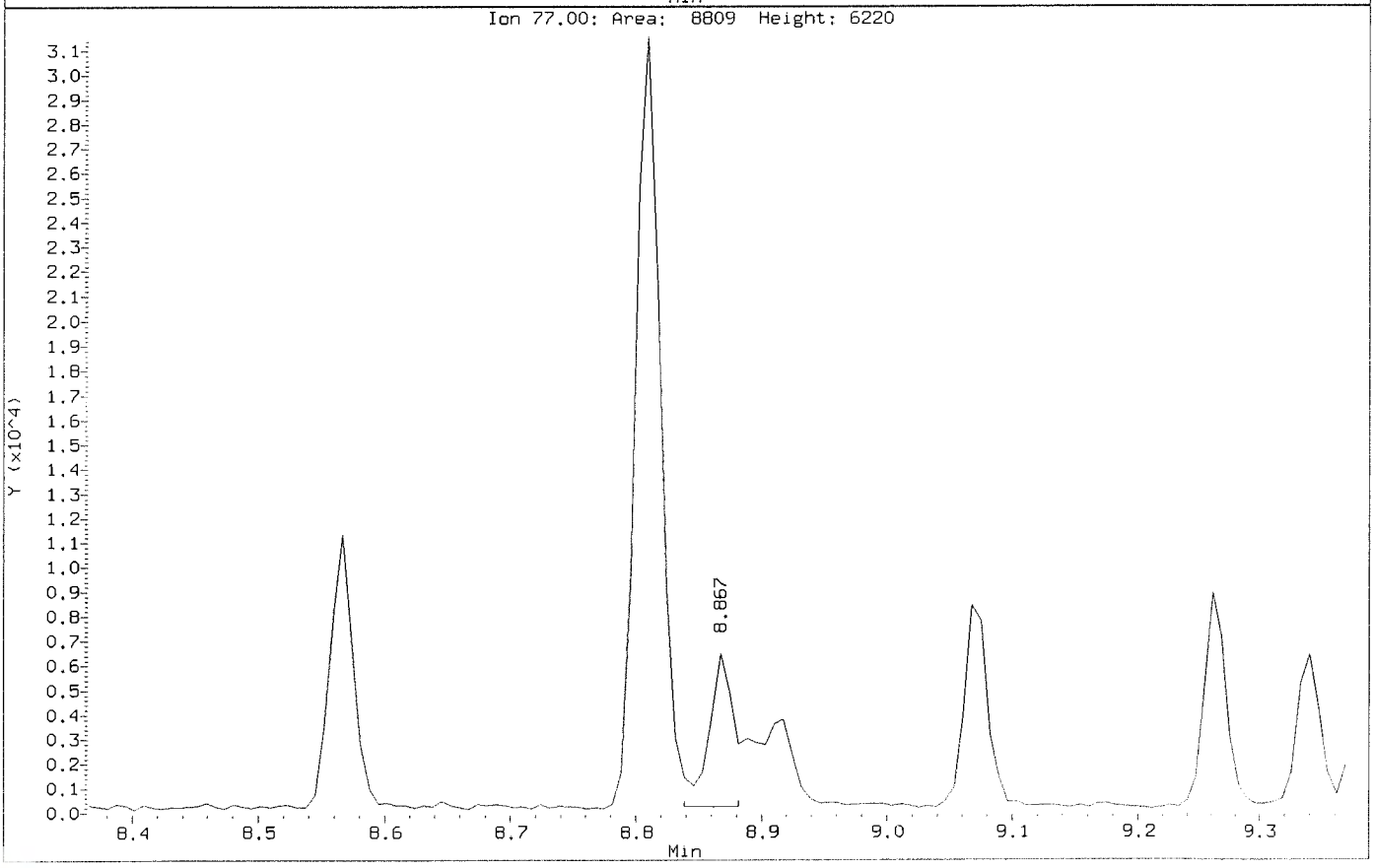
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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

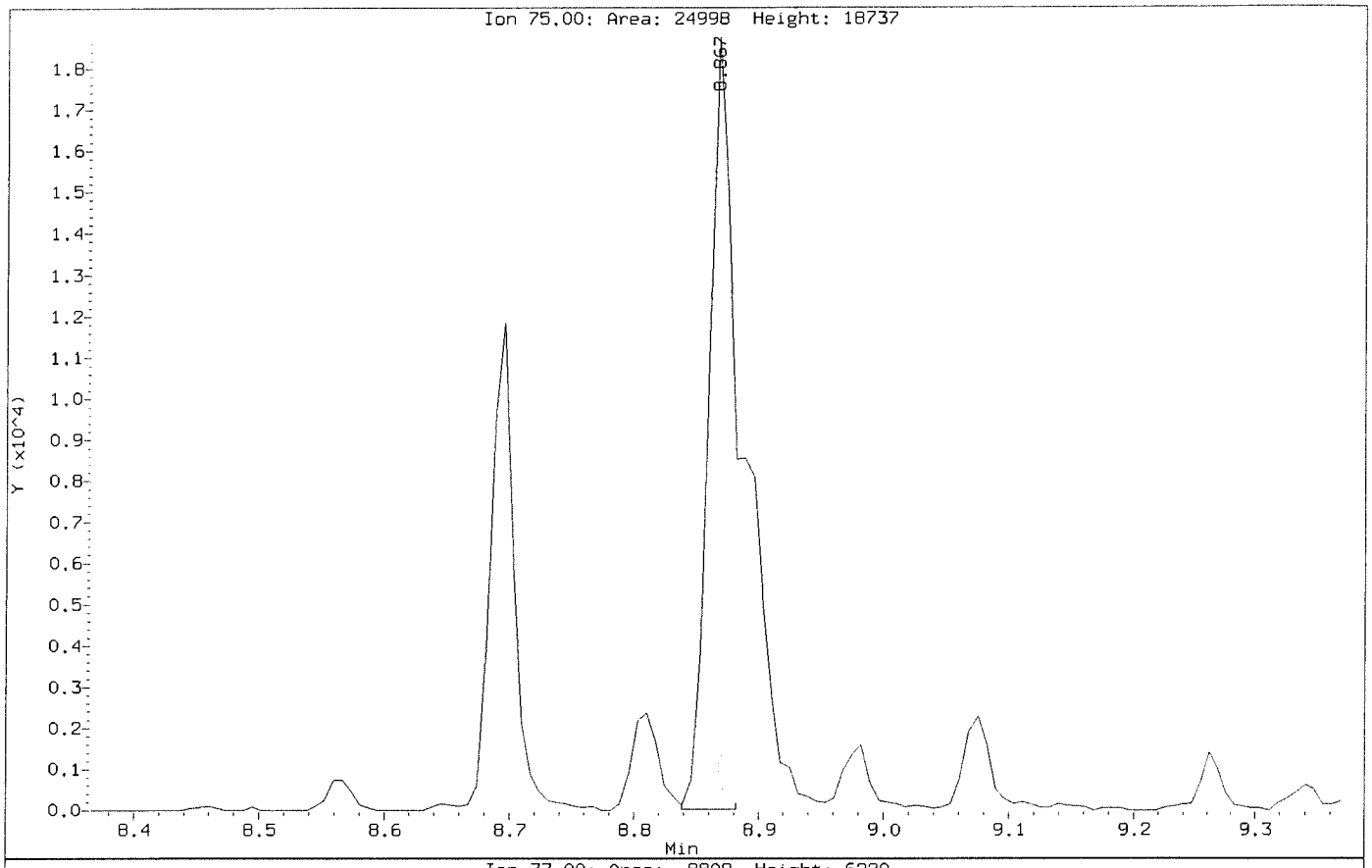
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

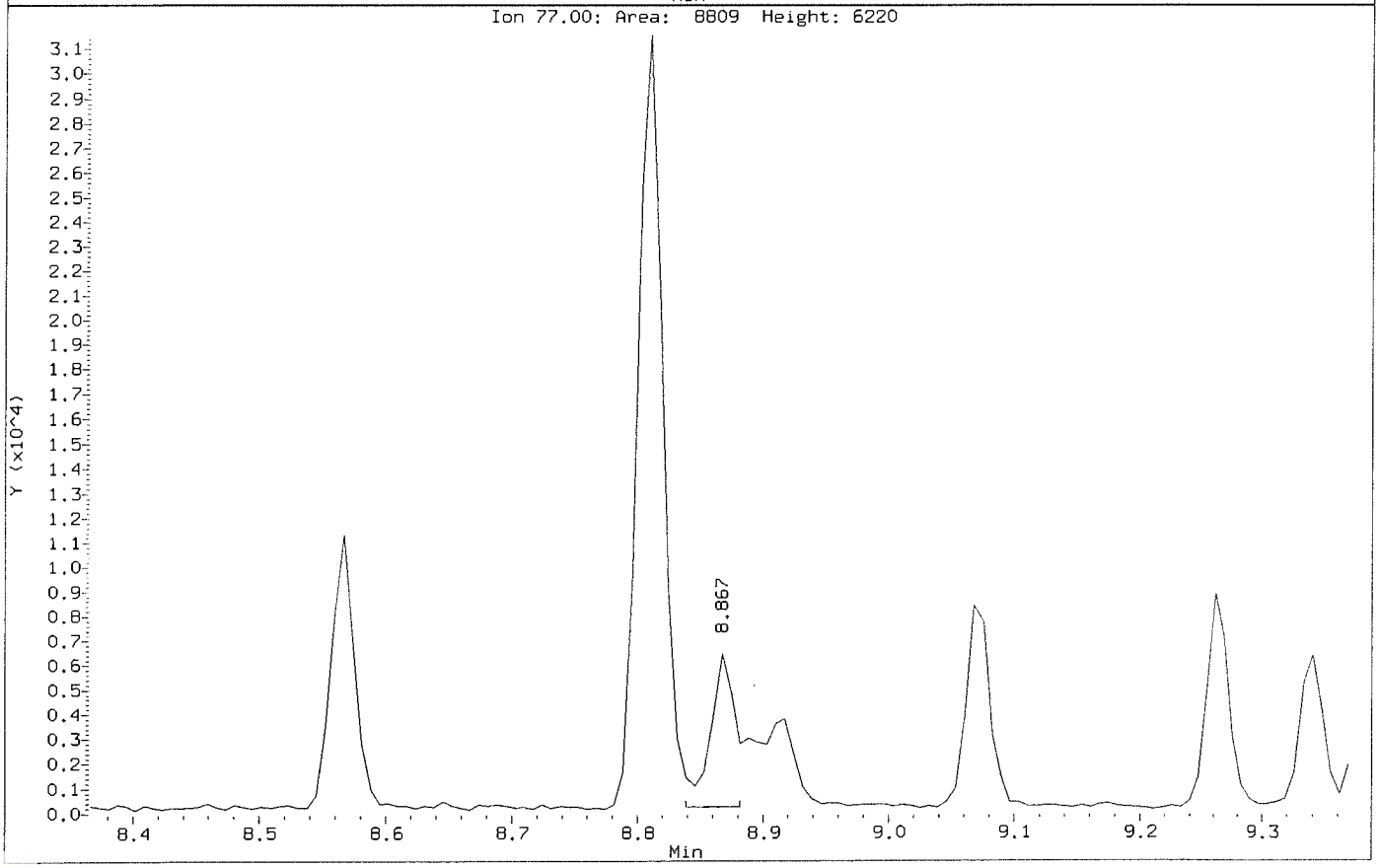




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Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D Page 1
Report Date: 22-Aug-2020 11:54

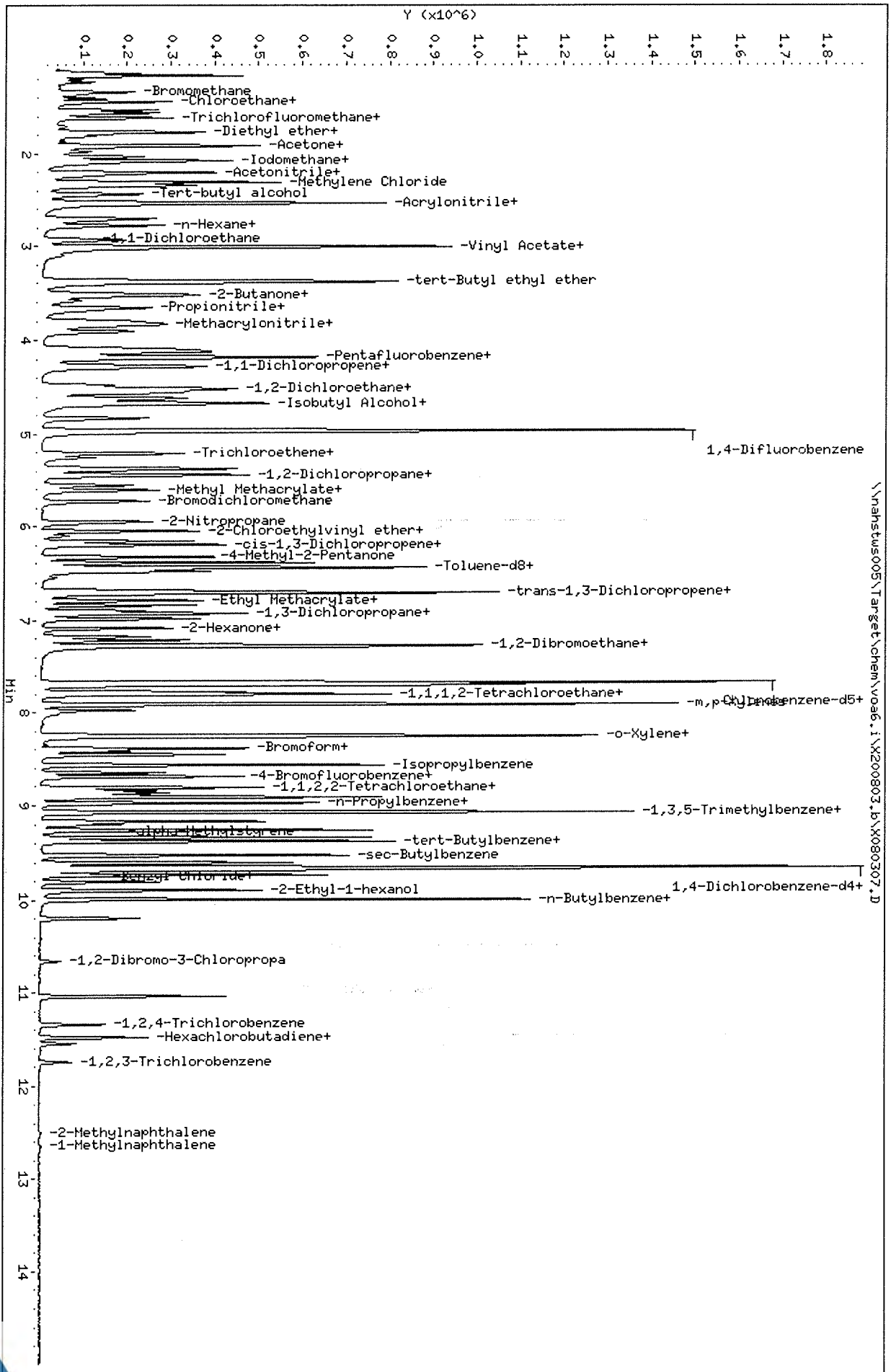
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-AUG-2020 14:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:40 Cal File: X080306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	527399	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	802950	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	728191	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	344410	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	100526	20.0000	19.40
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	118997	20.0000	19.38
$	48 Toluene-d8	98	6.388	6.388	(0.833)	349779	20.0000	19.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	131285	20.0000	19.26
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105143	20.0000	18.96
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	157003	20.0000	19.32
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	110449	20.0000	20.13
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	79259	20.0000	19.12
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	204692	20.0000	19.86
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	85725	20.0000	20.51
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	129183	20.0000	19.14
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	20139	20.0000	19.43
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	95152	20.0000	18.87(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	44232	20.0000	22.24
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	352711	20.0000	19.16
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9119	20.0000	19.01
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	103868	20.0000	19.45
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	184161	20.0000	18.90

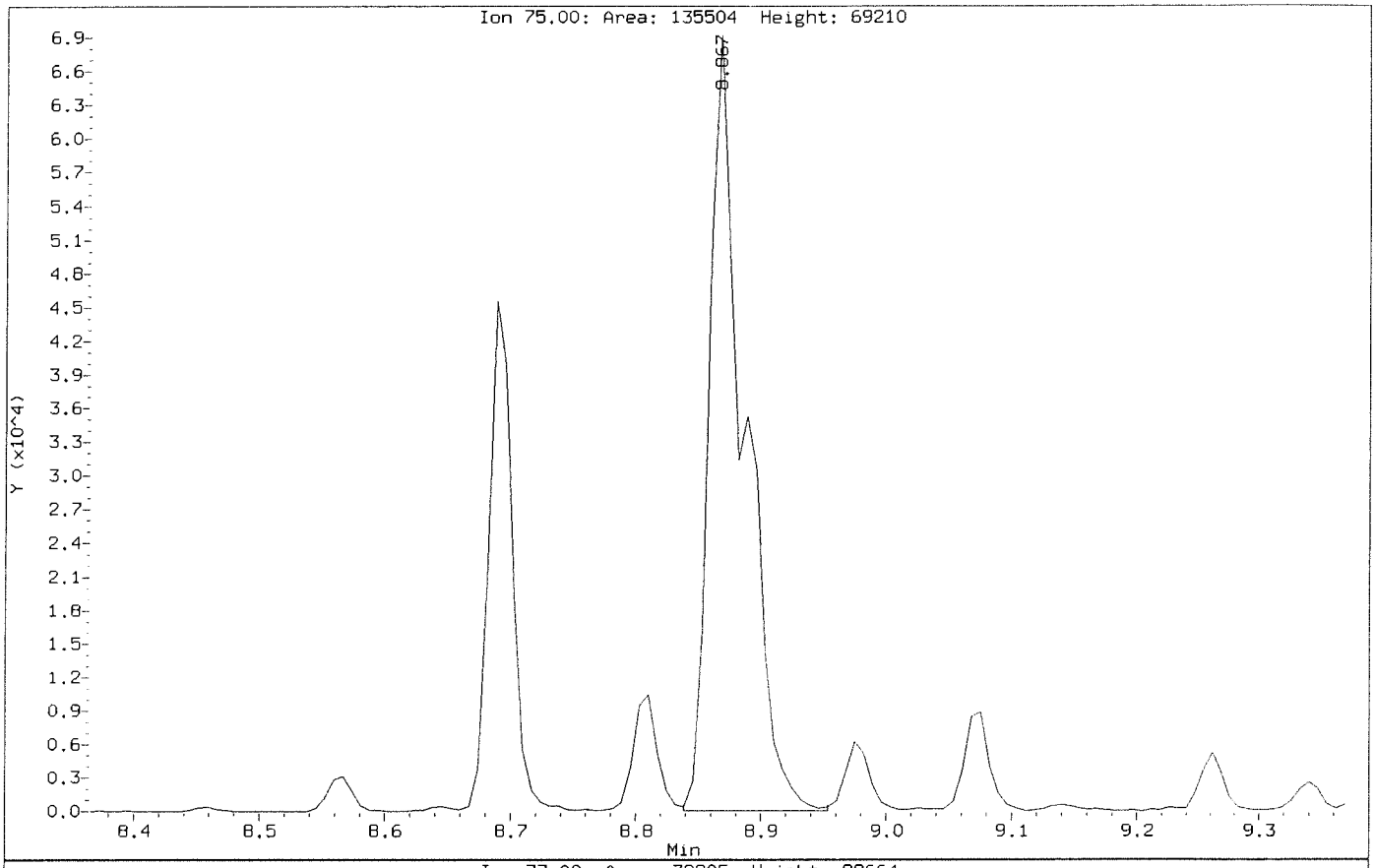


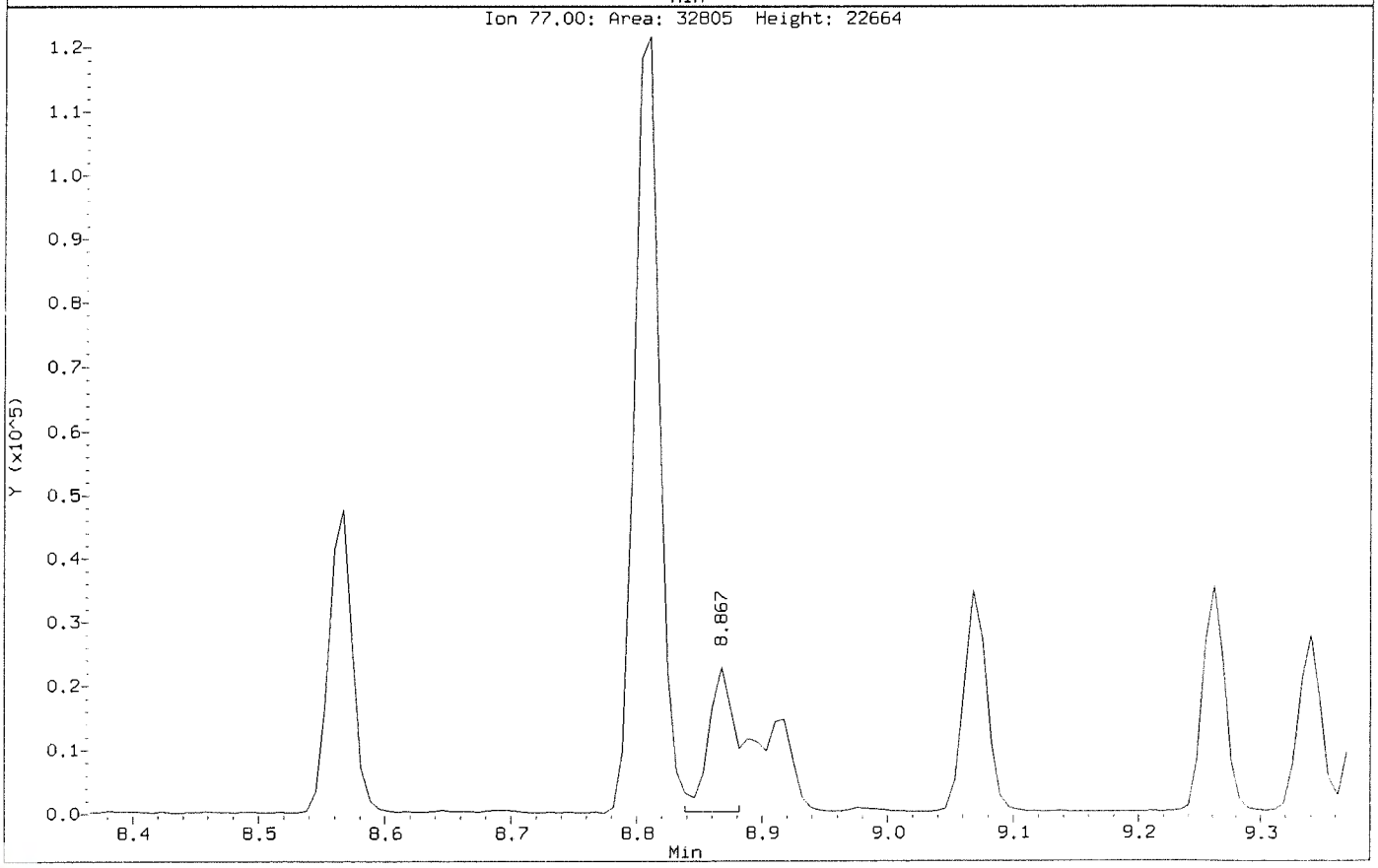
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Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

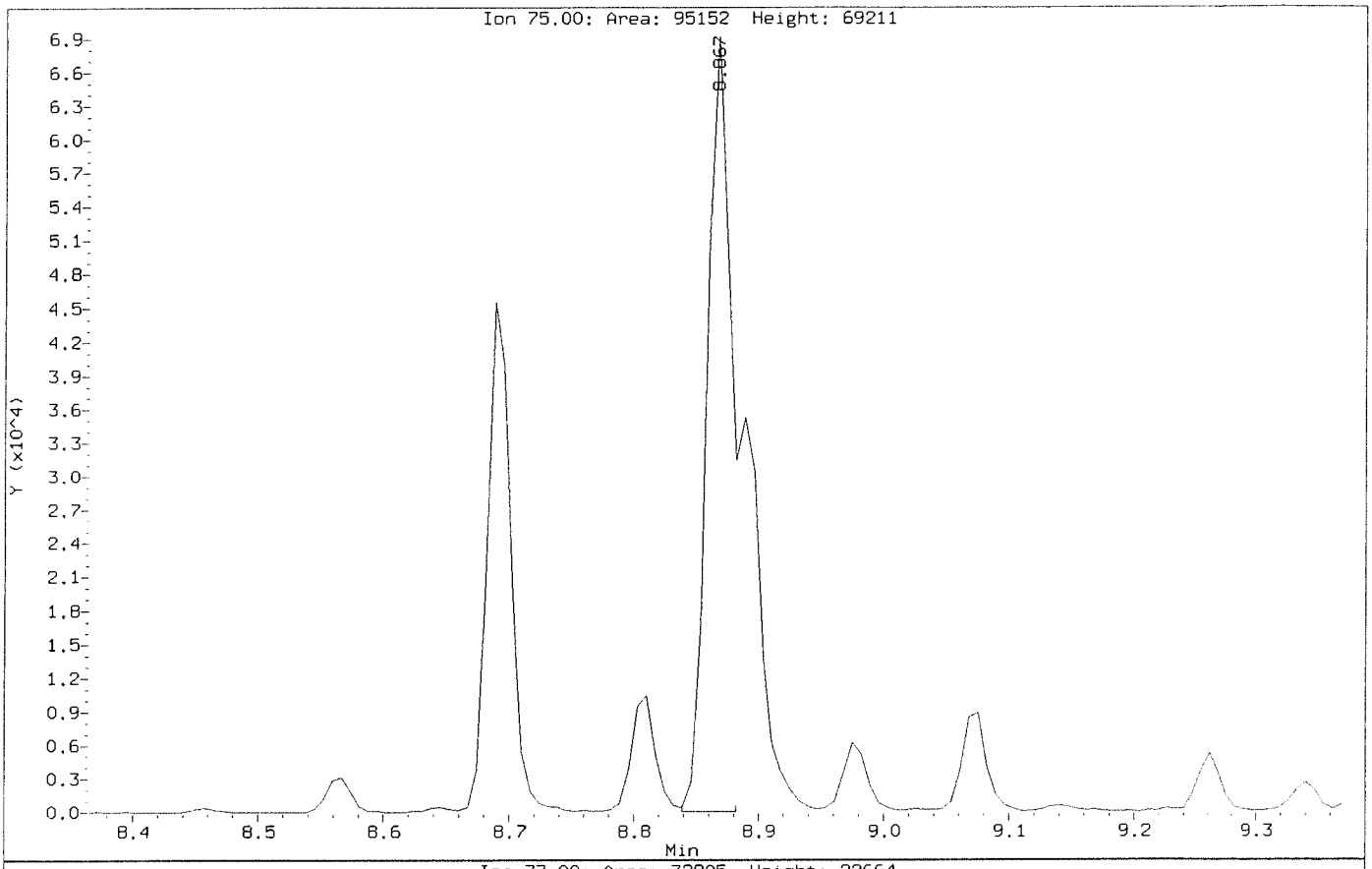
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

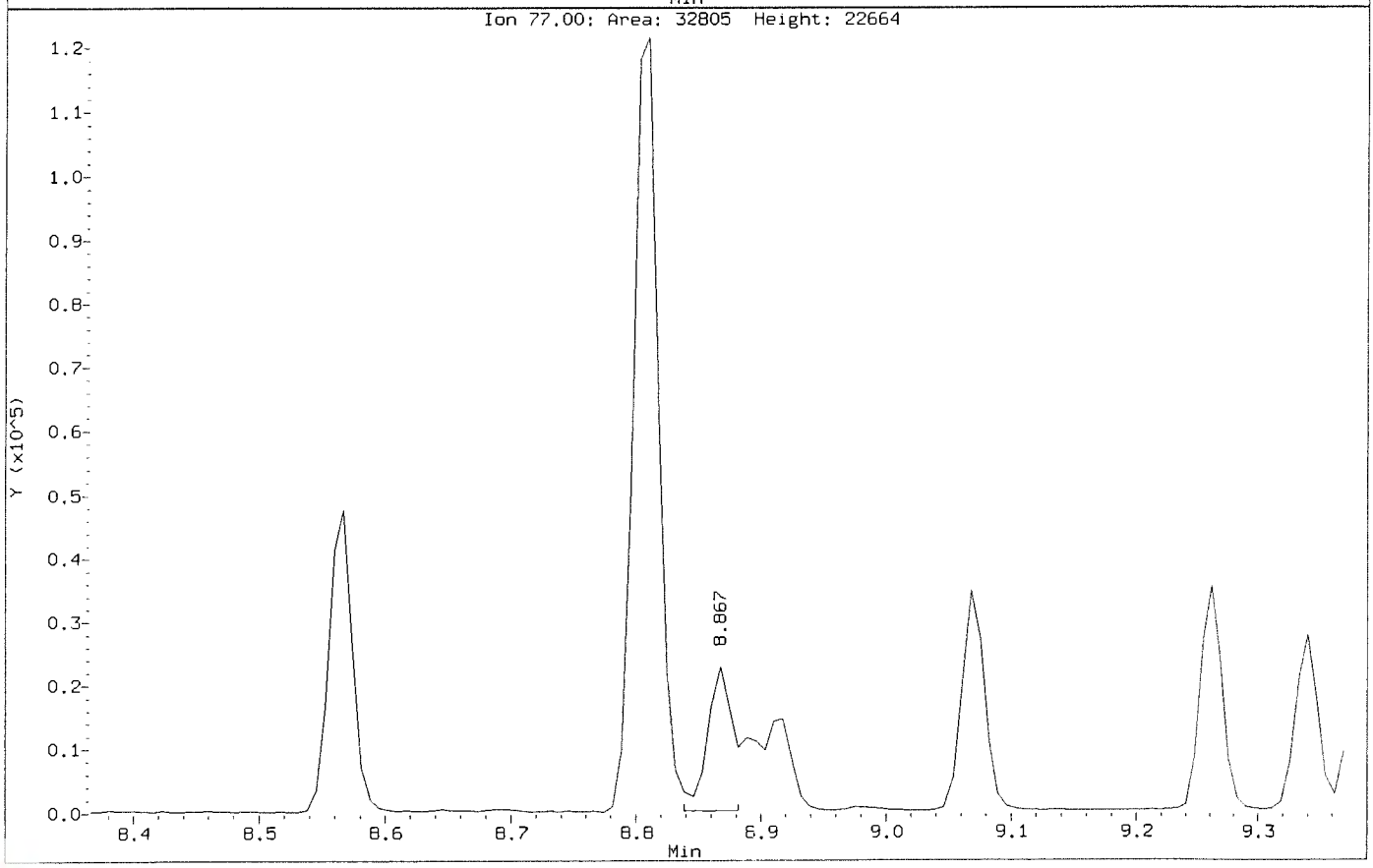




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Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-AUG-2020 14:28
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:04 Cal File: X080307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

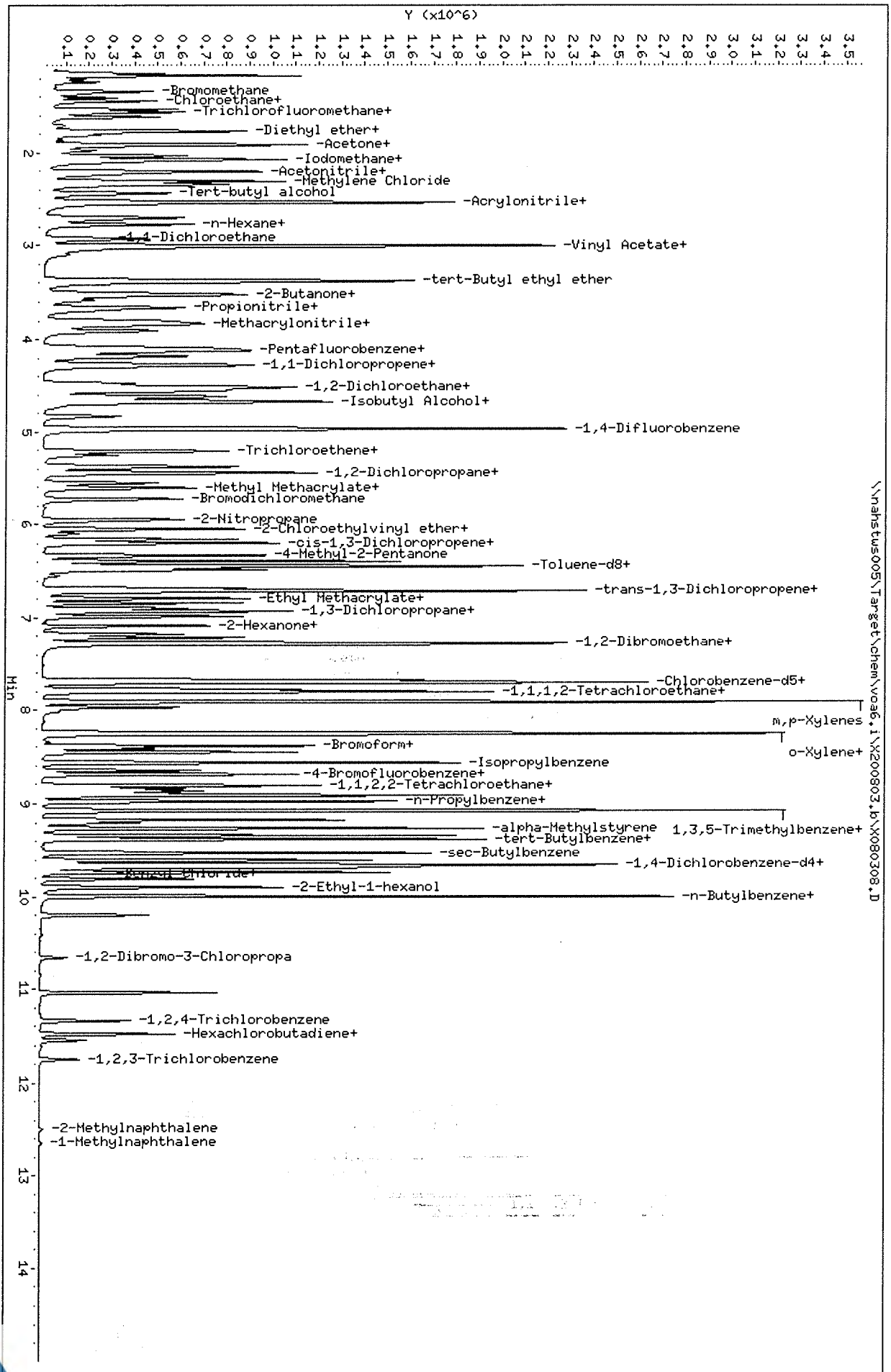
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	511920	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	771177	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	702771	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	336517	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	239584	50.0000	47.65
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	283572	50.0000	47.58
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	830682	50.0000	48.73
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	313797	50.0000	47.71
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	256851	50.0000	48.01
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	376263	50.0000	47.71
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	259509	50.0000	47.88
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	188669	50.0000	47.18
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	496869	50.0000	49.68
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	203794	50.0000	50.24
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	311586	50.0000	48.08
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	48796	50.0000	48.18
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	230185	50.0000	46.73(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	104906	50.0000	53.93
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	851116	50.0000	47.34
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22898	50.0000	47.61
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	248315	50.0000	48.20
88 1,2-Dichlorobenzene	146	9.992	9.992	(1.033)	448782	50.0000	47.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	363525	50.0000	48.68
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	280124	50.0000	49.49
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	841136	50.0000	47.83
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	505958	50.0000	47.83
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	384017	50.0000	48.63
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	496379	50.0000	47.45
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	350133	50.0000	47.95
24	2-Butanone	43	3.581	3.581	(0.855)	256334	100.000	102.14
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	694810	50.0000	47.59
52	2-Hexanone	43	7.090	7.090	(0.924)	414221	100.000	93.88
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	801352	50.0000	47.17
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	892538	50.0000	47.89
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	601864	100.000	92.53
10	Acetone	43	1.976	1.976	(0.472)	170545	100.000	95.52
37	Benzene	78	4.519	4.519	(0.909)	930097	50.0000	48.61
74	Bromobenzene	156	8.810	8.810	(0.911)	308037	50.0000	46.79
29	Bromochloromethane	128	3.803	3.803	(0.908)	143774	50.0000	46.59
39	Bromodichloromethane	83	5.730	5.730	(1.153)	331518	50.0000	47.75
66	Bromoform	173	8.416	8.416	(1.097)	185248	50.0000	47.50
6	Bromomethane	94	1.339	1.339	(0.320)	165840	50.0000	47.10
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1239571	100.000	98.42
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	332646	50.0000	48.29
59	Chlorobenzene	112	7.699	7.699	(1.004)	660196	50.0000	47.93
7	Chloroethane	64	1.403	1.403	(0.335)	180055	50.0000	49.62
28	Chloroform	83	3.910	3.910	(0.933)	434838	50.0000	47.54
3	Chloromethane	50	1.081	1.081	(0.258)	348334	50.0000	48.46
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	270912	50.0000	48.07
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	396564	50.0000	48.85
55	Dibromochloromethane	129	7.176	7.176	(0.936)	267830	50.0000	47.57
44	Dibromomethane	93	5.558	5.558	(1.118)	161578	50.0000	48.14
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	250906	50.0000	50.07
61	Ethylbenzene	106	7.800	7.800	(1.017)	343587	50.0000	48.31
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	97456	50.0000	53.94
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1013032	50.0000	48.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	825892	100.000	96.22
17	Methylene Chloride	84	2.306	2.306	(0.550)	256910	50.0000	48.65
87	n-Butylbenzene	91	9.999	9.999	(1.034)	730650	50.0000	49.09
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1164933	50.0000	48.05
92	Naphthalene	128	11.546	11.546	(1.194)	137510	50.0000	51.02
63	o-Xylene	106	8.244	8.244	(1.075)	409054	50.0000	48.52
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	982268	50.0000	48.04
64	Styrene	104	8.258	8.258	(1.077)	713459	50.0000	48.73
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	726881	50.0000	47.67
56	Tetrachloroethene	164	6.933	6.933	(0.904)	211124	50.0000	47.25
50	Toluene	91	6.446	6.446	(0.840)	981156	50.0000	47.80
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	233416	50.0000	48.63
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	353535	50.0000	47.51
38	Trichloroethene	130	5.207	5.207	(1.048)	272294	50.0000	49.82
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	377358	50.0000	50.05
5	Vinyl Chloride	62	1.145	1.145	(0.273)	331269	50.0000	50.27

QC Flag Legend

M - Compound response manually integrated.

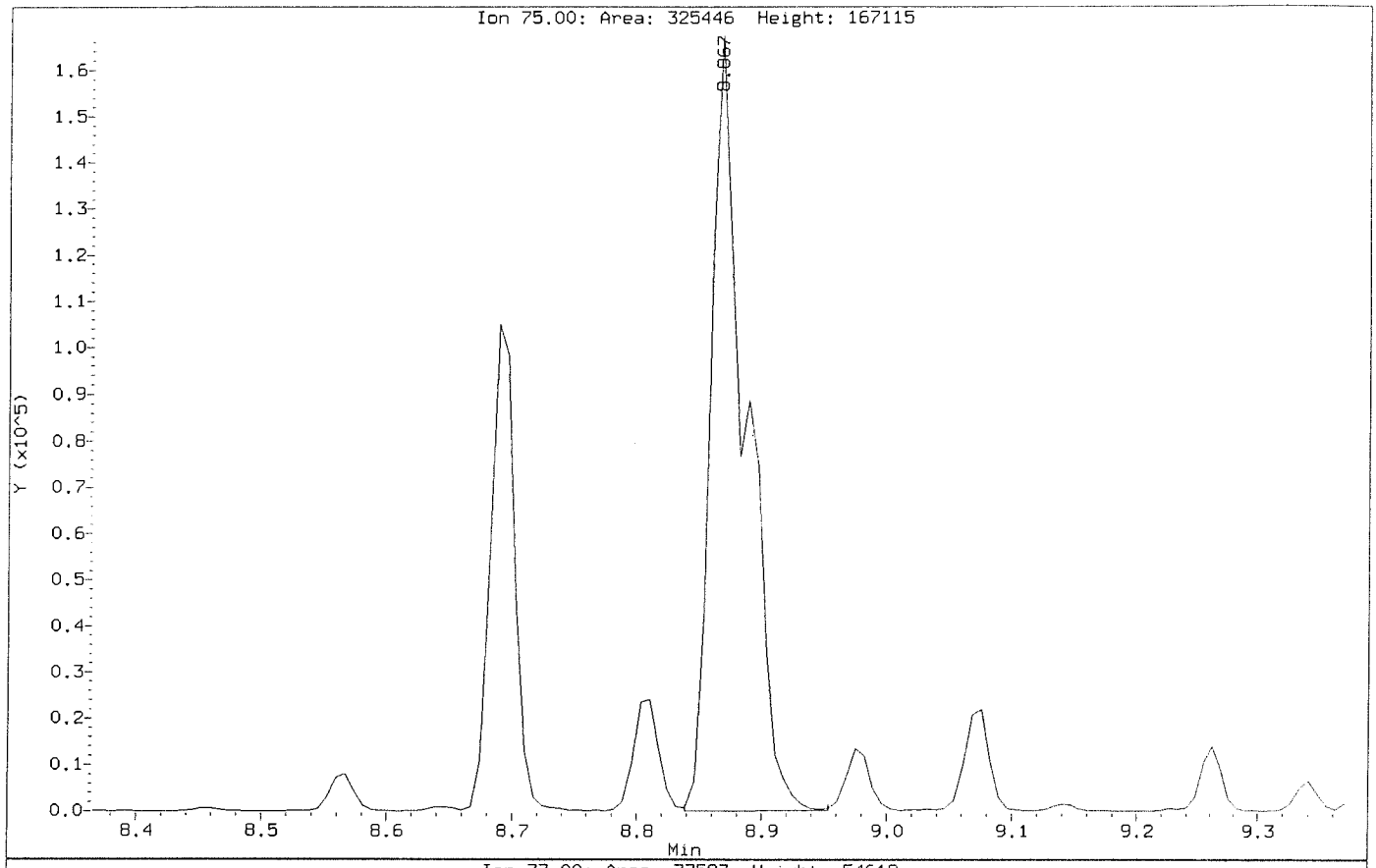


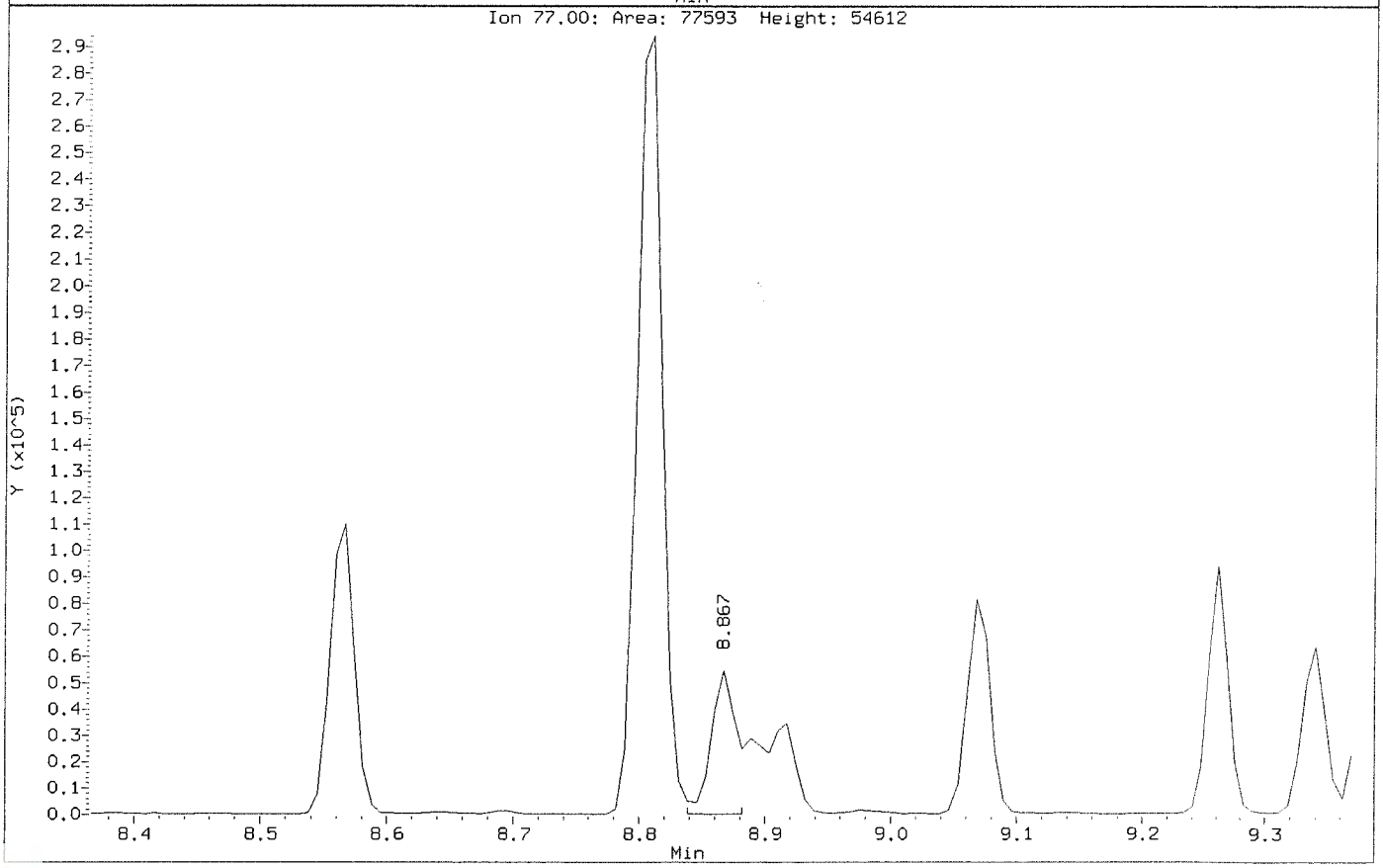
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Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

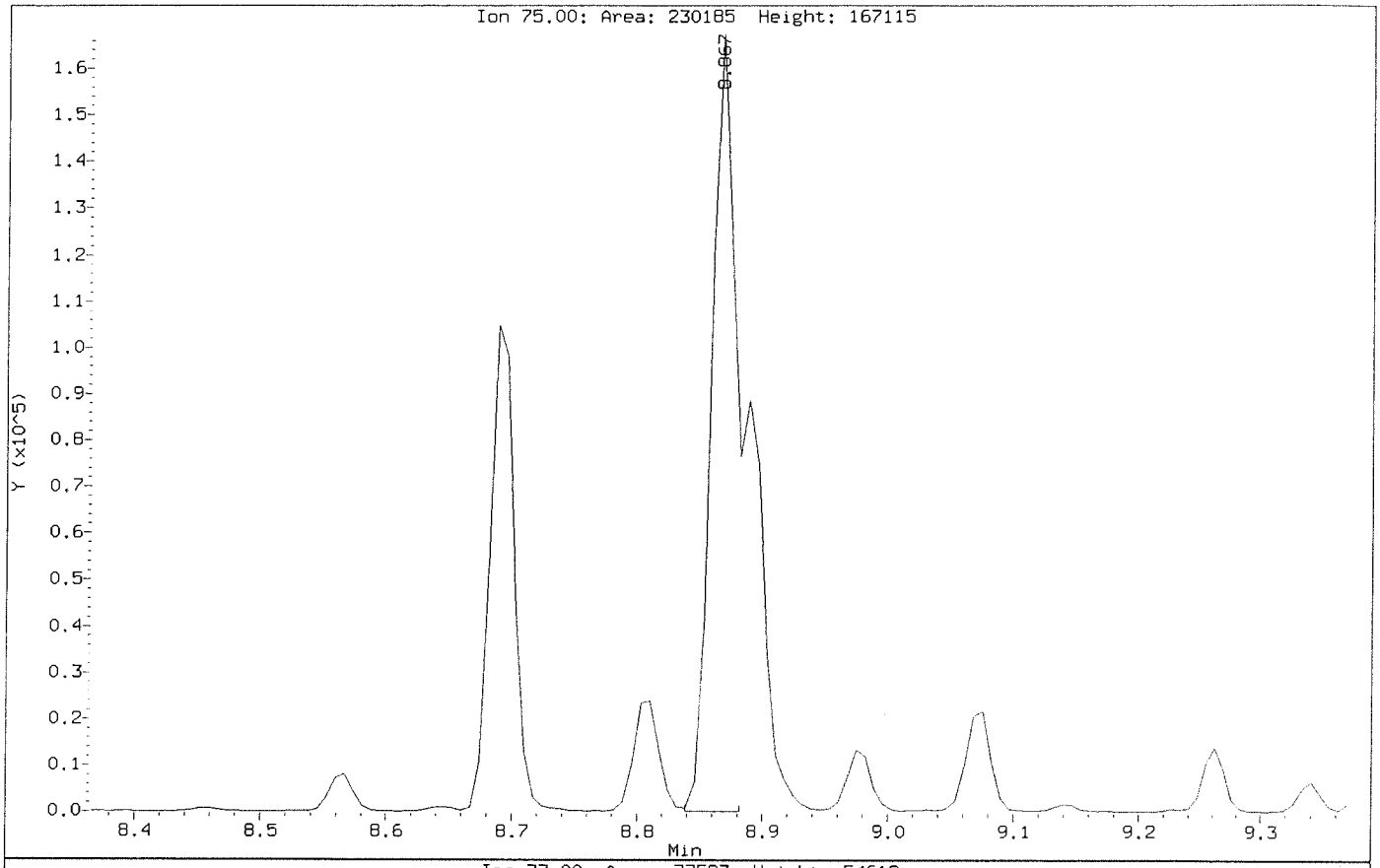
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CAS Number: 96-18-4

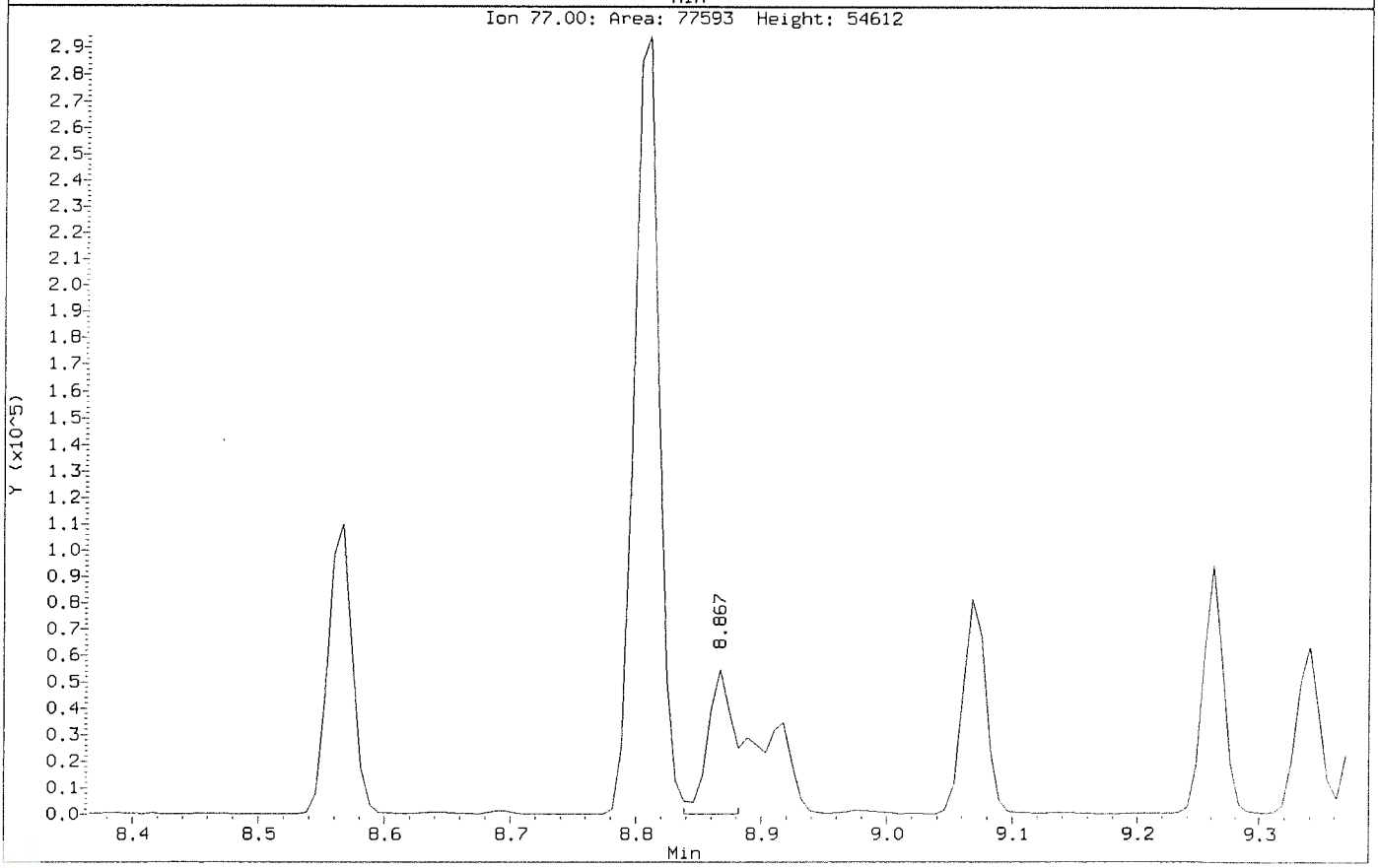




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Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
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Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

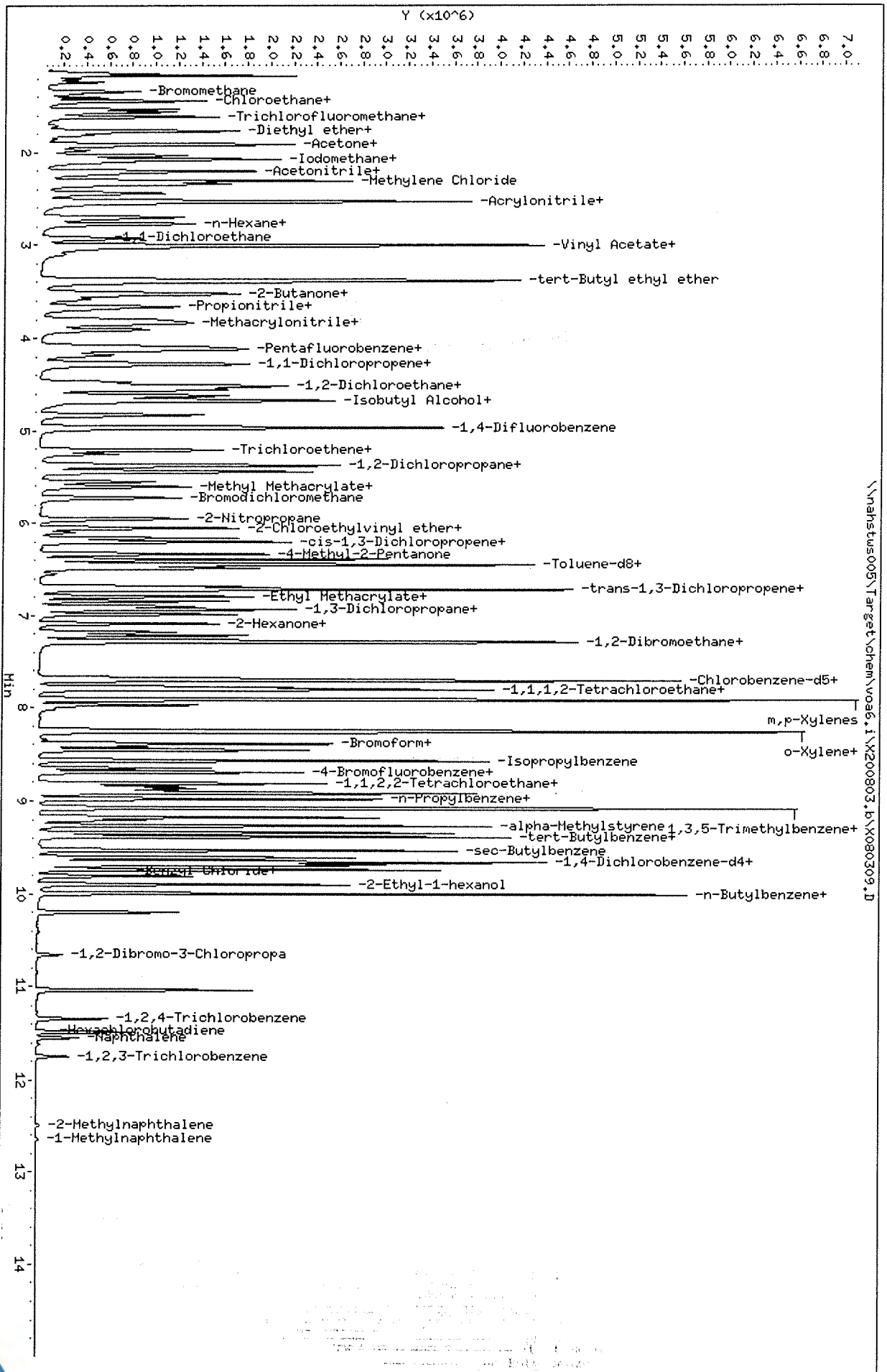
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	486833	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	732825	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	684816	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	323663	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	473016	100.000	98.93
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	567807	100.000	100.19
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1639713	100.000	98.71
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	621420	100.000	96.97
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	508756	100.000	97.59
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	743006	100.000	99.08
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	505068	100.000	96.50
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	371422	100.000	95.31
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	966853	100.000	101.67
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	399194	100.000	103.48
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	619847	100.000	100.65
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	78990	100.000	81.10
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	447455	100.000	94.44(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	167486	100.000	88.32
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1744071	100.000	100.86
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	44175	100.000	94.71
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	486059	100.000	96.82
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	860972	100.000	94.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	709131	100.000	99.94
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	549204	100.000	102.11
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1711898	100.000	101.21
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1000056	100.000	98.30
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	751120	100.000	97.62
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	985559	100.000	97.96
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	681466	100.000	98.14
24	2-Butanone	43	3.580	3.580	(0.855)	505532	200.000	211.82(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1388843	100.000	98.90
52	2-Hexanone	43	7.090	7.090	(0.924)	827198	200.000	192.40
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1630167	100.000	99.78
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1843729	100.000	102.86
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1209781	200.000	190.87
10	Acetone	43	1.976	1.976	(0.472)	340970	200.000	202.00(A)
37	Benzene	78	4.519	4.519	(0.909)	1833540	100.000	100.84
74	Bromobenzene	156	8.809	8.809	(0.911)	616831	100.000	97.42
29	Bromochloromethane	128	3.802	3.802	(0.908)	282659	100.000	96.32
39	Bromodichloromethane	83	5.729	5.729	(1.153)	654091	100.000	99.14
66	Bromoform	173	8.415	8.415	(1.097)	369358	100.000	97.21
6	Bromomethane	94	1.338	1.338	(0.320)	329463	100.000	97.68
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2437326	200.000	203.50(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	660151	100.000	100.85
59	Chlorobenzene	112	7.699	7.699	(1.004)	1320195	100.000	98.36
7	Chloroethane	64	1.403	1.403	(0.335)	350986	100.000	101.71
28	Chloroform	83	3.910	3.910	(0.933)	844067	100.000	97.04
3	Chloromethane	50	1.080	1.080	(0.258)	661182	100.000	96.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	527504	100.000	98.43
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	783645	100.000	101.58
55	Dibromochloromethane	129	7.176	7.176	(0.936)	530960	100.000	96.79
44	Dibromomethane	93	5.557	5.557	(1.118)	314468	100.000	98.60
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	502379	100.000	105.43
61	Ethylbenzene	106	7.799	7.799	(1.017)	683526	100.000	98.63
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	144027	100.000	82.88
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2047430	100.000	100.64
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1666940	200.000	199.31
17	Methylene Chloride	84	2.305	2.305	(0.550)	487953	100.000	98.54
87	n-Butylbenzene	91	9.998	9.998	(1.034)	1490980	100.000	104.16
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2376809	100.000	101.93
92	Naphthalene	128	11.546	11.546	(1.194)	244768	100.000	91.71
63	o-Xylene	106	8.244	8.244	(1.075)	812131	100.000	98.85
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2014765	100.000	102.46
64	Styrene	104	8.265	8.265	(1.078)	1389708	100.000	97.42
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	1474330	100.000	100.54
56	Tetrachloroethene	164	6.933	6.933	(0.904)	429146	100.000	98.57
50	Toluene	91	6.453	6.453	(0.841)	1938369	100.000	96.92
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	450443	100.000	98.69
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	699866	100.000	98.98
38	Trichloroethene	130	5.214	5.214	(1.049)	540855	100.000	104.13
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	735408	100.000	102.57
5	Vinyl Chloride	62	1.145	1.145	(0.273)	656263	100.000	104.72

QC Flag Legend

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

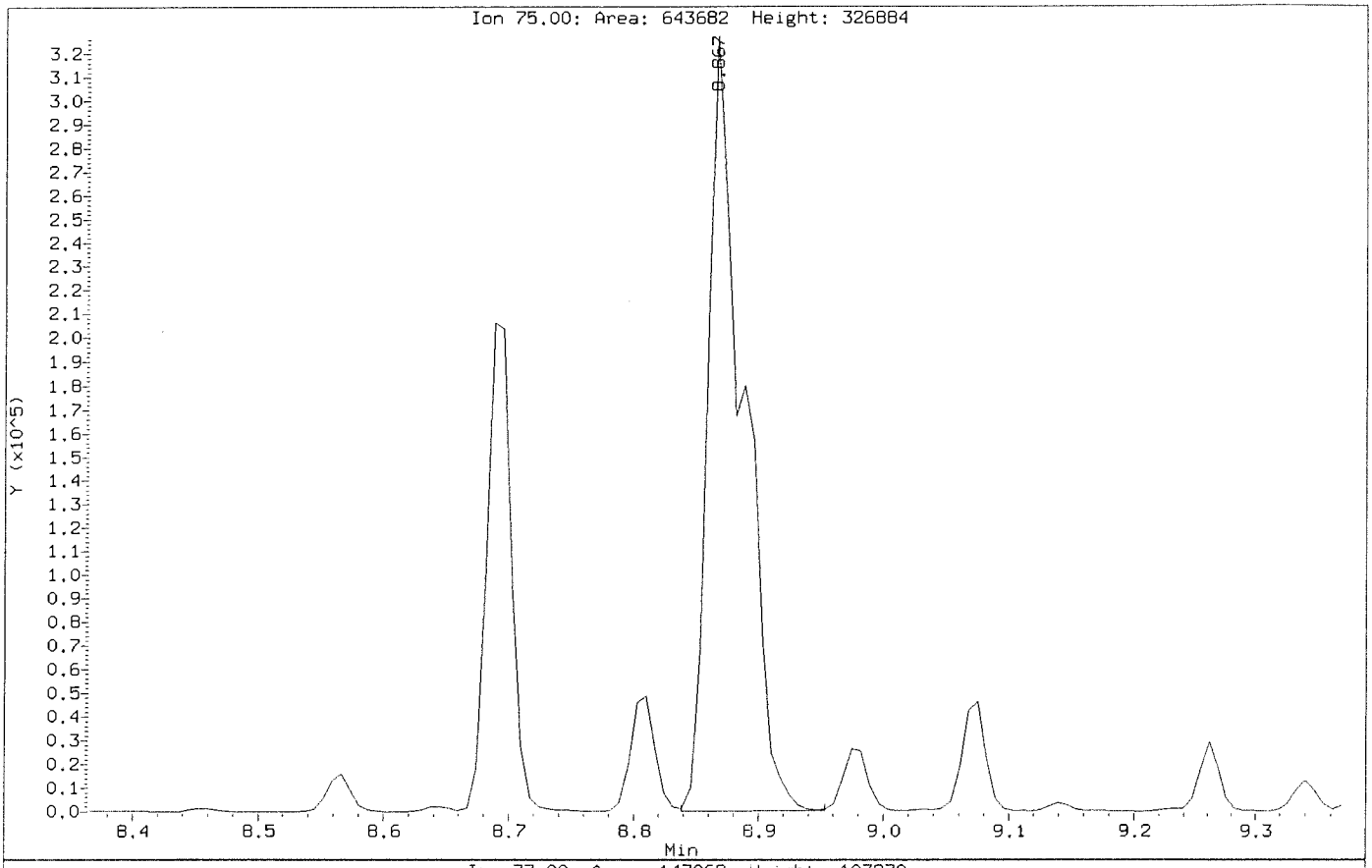


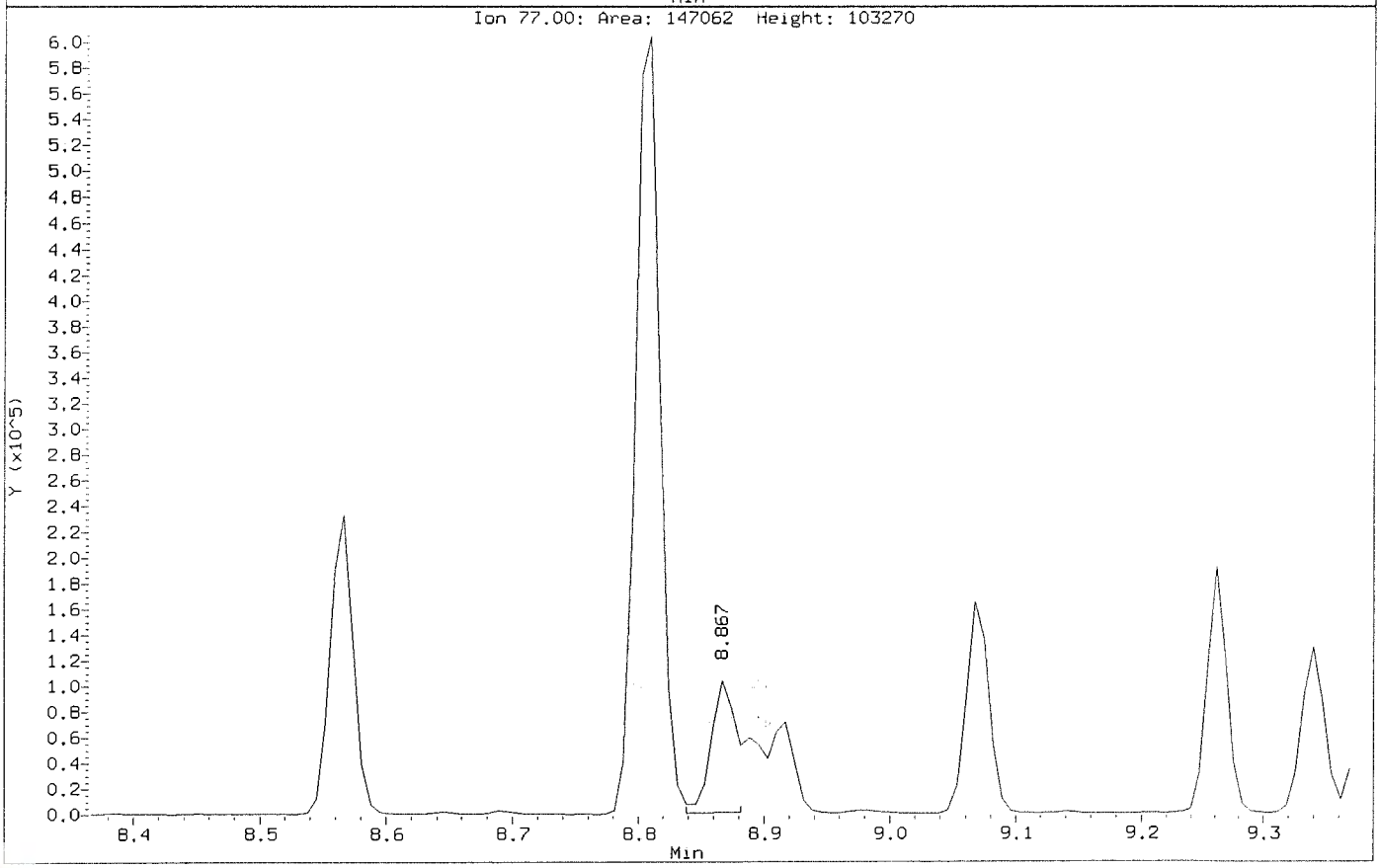
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Date : 03-AUG-2020 14:52
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

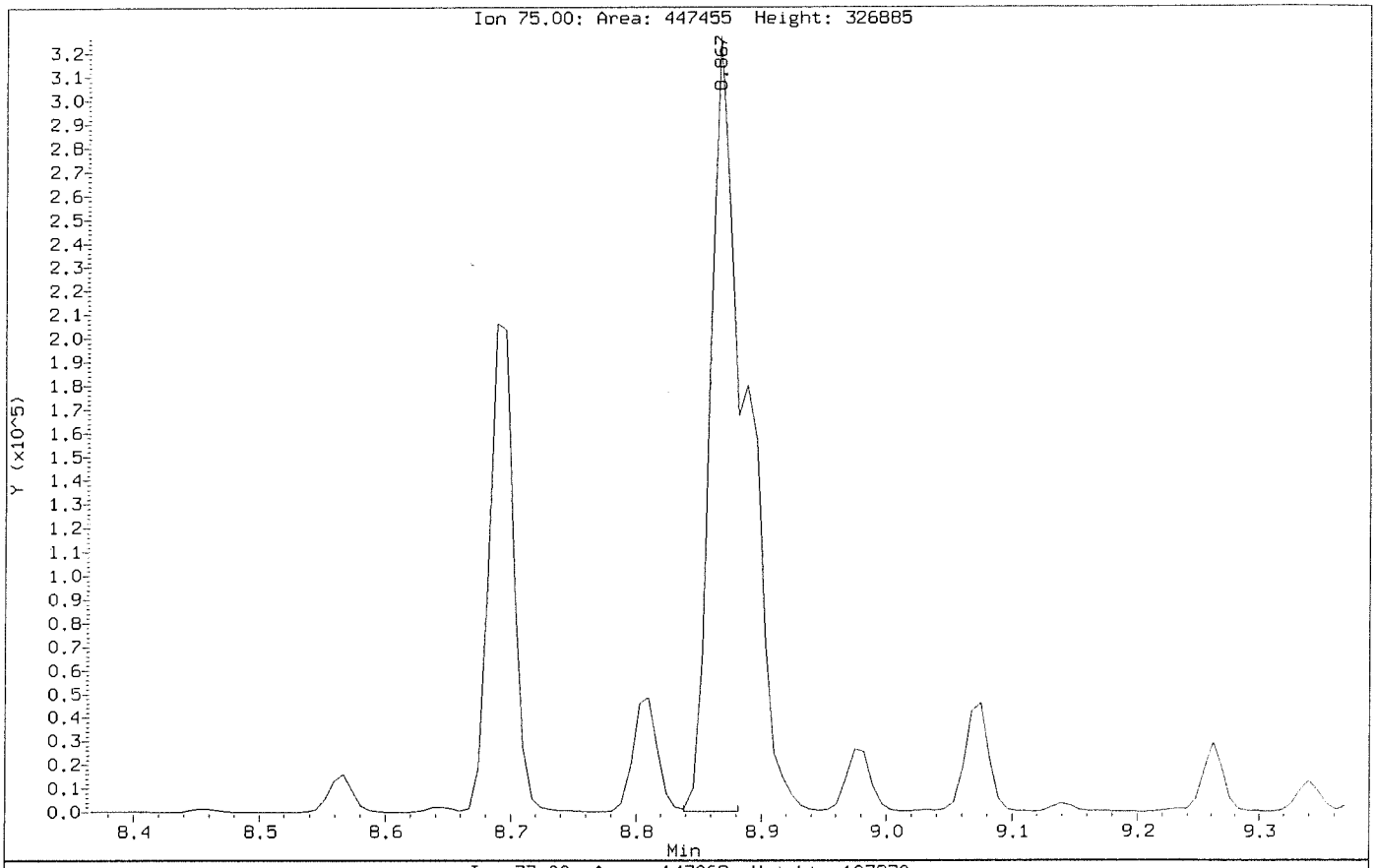
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

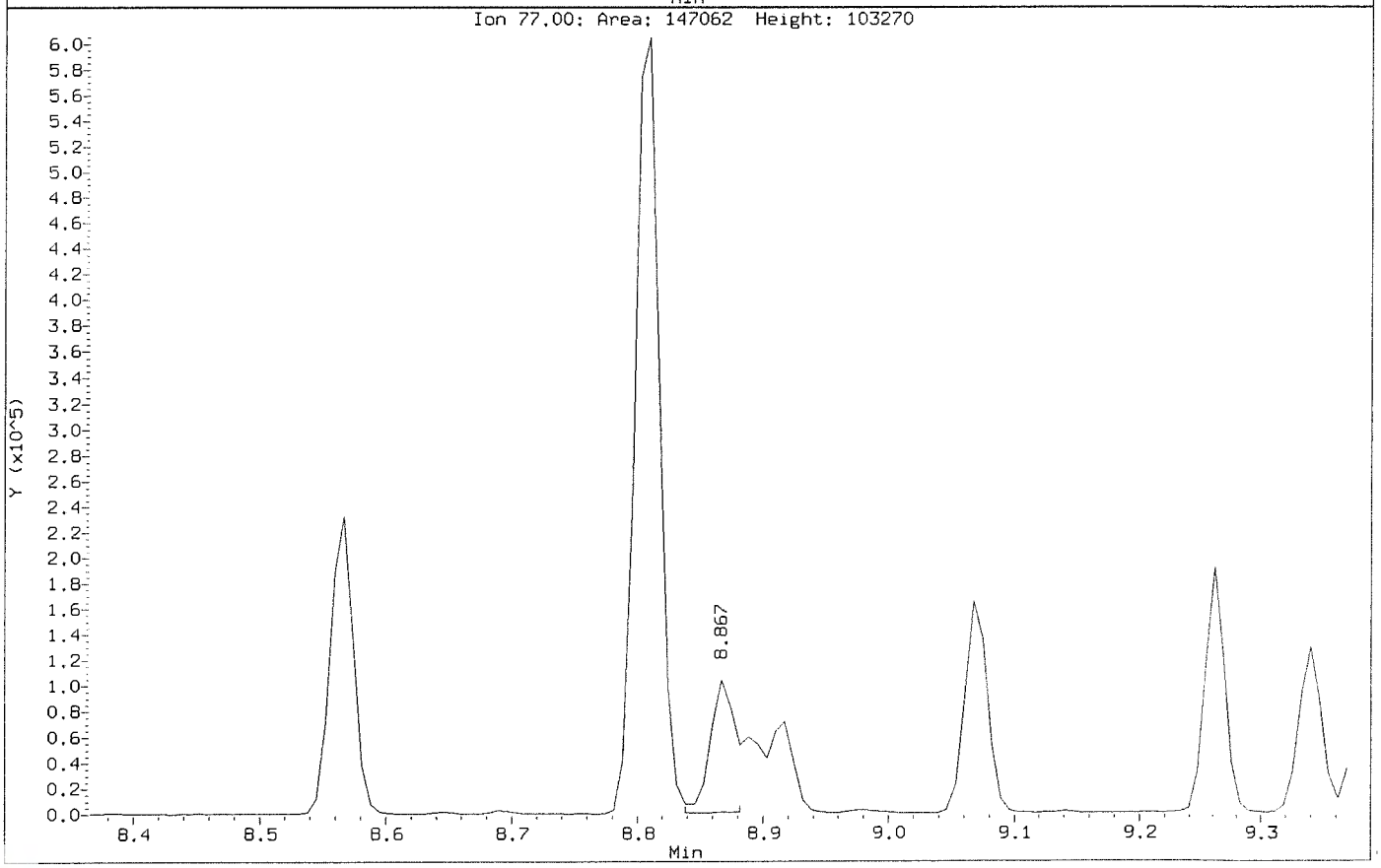




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Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-AUG-2020 15:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:52 Cal File: X080309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

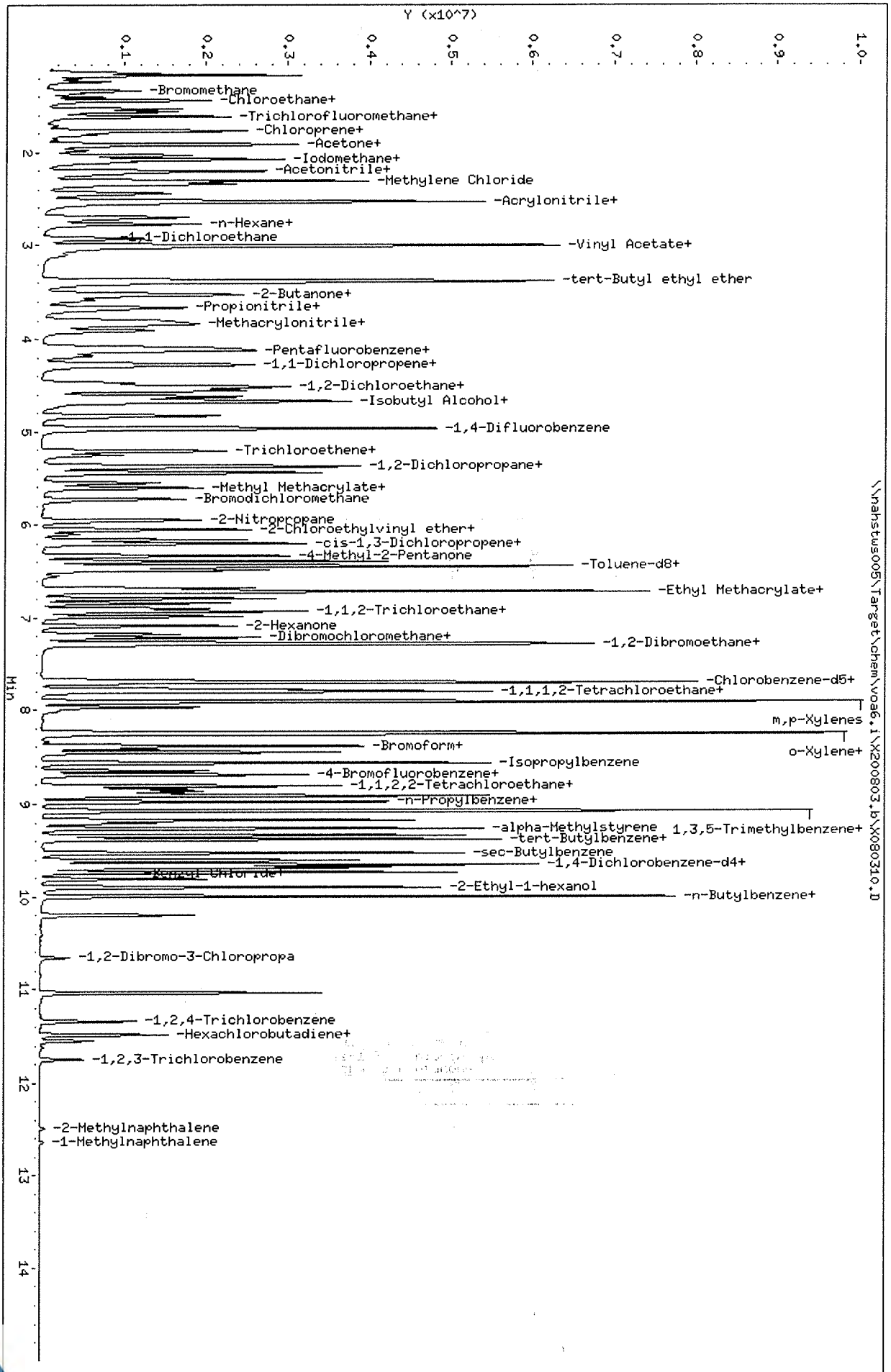
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457081	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697946	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	658557	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	308838	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	673356	150.000	150.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	814725	150.000	153.12
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2334447	150.000	146.14
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	886803	150.000	143.91
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	731767	150.000	145.97
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1070397	150.000	152.03
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	753290	150.000	150.61
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	538173	150.000	143.61
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1382538	150.000	154.84
11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	571714	150.000	157.86
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	893917	150.000	152.41
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	147859	150.000	159.09
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	653947	150.000	144.66(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	308625	150.000	163.97
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2442964	150.000	148.06
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	68839	150.000	154.17
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	709453	150.000	146.95
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	1244688	150.000	142.48

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1020218	150.000	150.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	786675	150.000	153.57
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2403624	150.000	148.94
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1420086	150.000	146.29
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1090826	150.000	147.42
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1405102	150.000	146.36
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	969504	150.000	148.71
24	2-Butanone	43	3.581	3.581	(0.855)	733748	300.000	327.46(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1990724	150.000	148.57
52	2-Hexanone	43	7.090	7.090	(0.924)	1228653	300.000	297.18(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	2300761	150.000	147.59
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2591814	150.000	151.54
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1784918	300.000	292.84(A)
10	Acetone	43	1.976	1.976	(0.472)	481556	300.000	304.39(A)
37	Benzene	78	4.519	4.519	(0.909)	2633133	150.000	152.06
74	Bromobenzene	156	8.810	8.810	(0.911)	875955	150.000	144.99
29	Bromochloromethane	128	3.803	3.803	(0.908)	397087	150.000	144.12
39	Bromodichloromethane	83	5.729	5.729	(1.153)	949497	150.000	151.12
66	Bromoform	173	8.416	8.416	(1.097)	545501	150.000	149.29
6	Bromomethane	94	1.339	1.339	(0.320)	475898	150.000	149.93
19	Carbon Disulfide	76	2.069	2.069	(0.494)	3493168	300.000	310.65(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	955431	150.000	153.26
59	Chlorobenzene	112	7.699	7.699	(1.004)	1894718	150.000	146.79
7	Chloroethane	64	1.403	1.403	(0.335)	503418	150.000	155.38
28	Chloroform	83	3.910	3.910	(0.933)	1203889	150.000	147.42
3	Chloromethane	50	1.081	1.081	(0.258)	952989	150.000	148.49
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	755671	150.000	150.19
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1139019	150.000	155.03
55	Dibromochloromethane	129	7.176	7.176	(0.936)	768555	150.000	145.69
44	Dibromomethane	93	5.558	5.558	(1.118)	458909	150.000	151.08
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	732272	150.000	163.68
61	Ethylbenzene	106	7.800	7.800	(1.017)	984064	150.000	147.65
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	270400	150.000	163.08
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2911603	150.000	148.83
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2378815	300.000	295.77(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	693942	150.000	149.97
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2113477	150.000	154.74
73	n-Propylbenzene	91	8.917	8.917	(0.922)	3384136	150.000	152.10
92	Naphthalene	128	11.546	11.546	(1.194)	435994	150.000	161.36
63	o-Xylene	106	8.244	8.244	(1.075)	1165295	150.000	147.50
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2872495	150.000	153.10
64	Styrene	104	8.258	8.258	(1.077)	2029238	150.000	147.92
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2094345	150.000	149.68
56	Tetrachloroethene	164	6.933	6.933	(0.904)	610841	150.000	145.91
50	Toluene	91	6.453	6.453	(0.841)	2766929	150.000	143.87
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	647458	150.000	151.10
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1027204	150.000	152.54
38	Trichloroethene	130	5.214	5.214	(1.049)	766453	150.000	154.95
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1054115	150.000	156.59
5	Vinyl Chloride	62	1.145	1.145	(0.273)	956993	150.000	162.65

QC Flag Legend

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

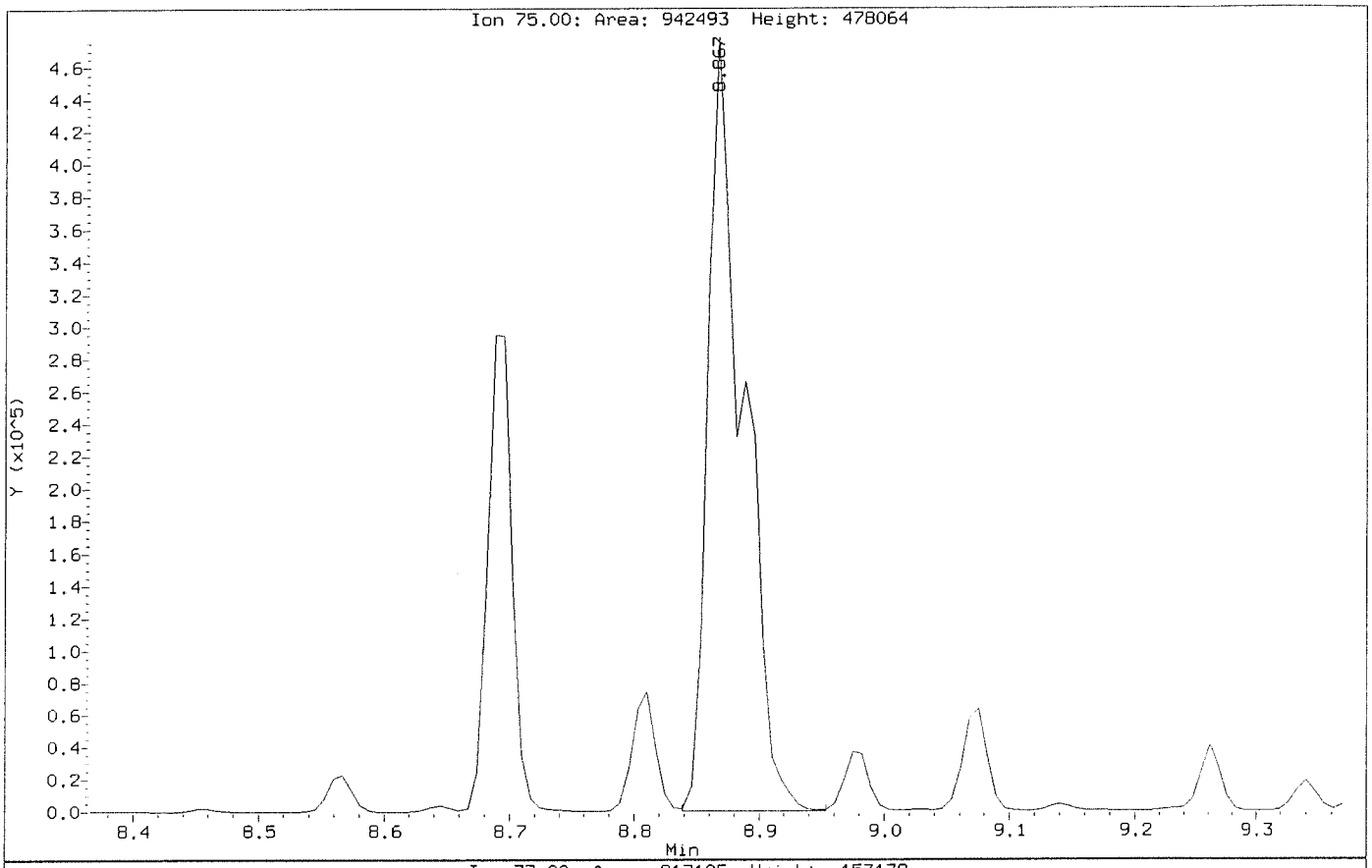


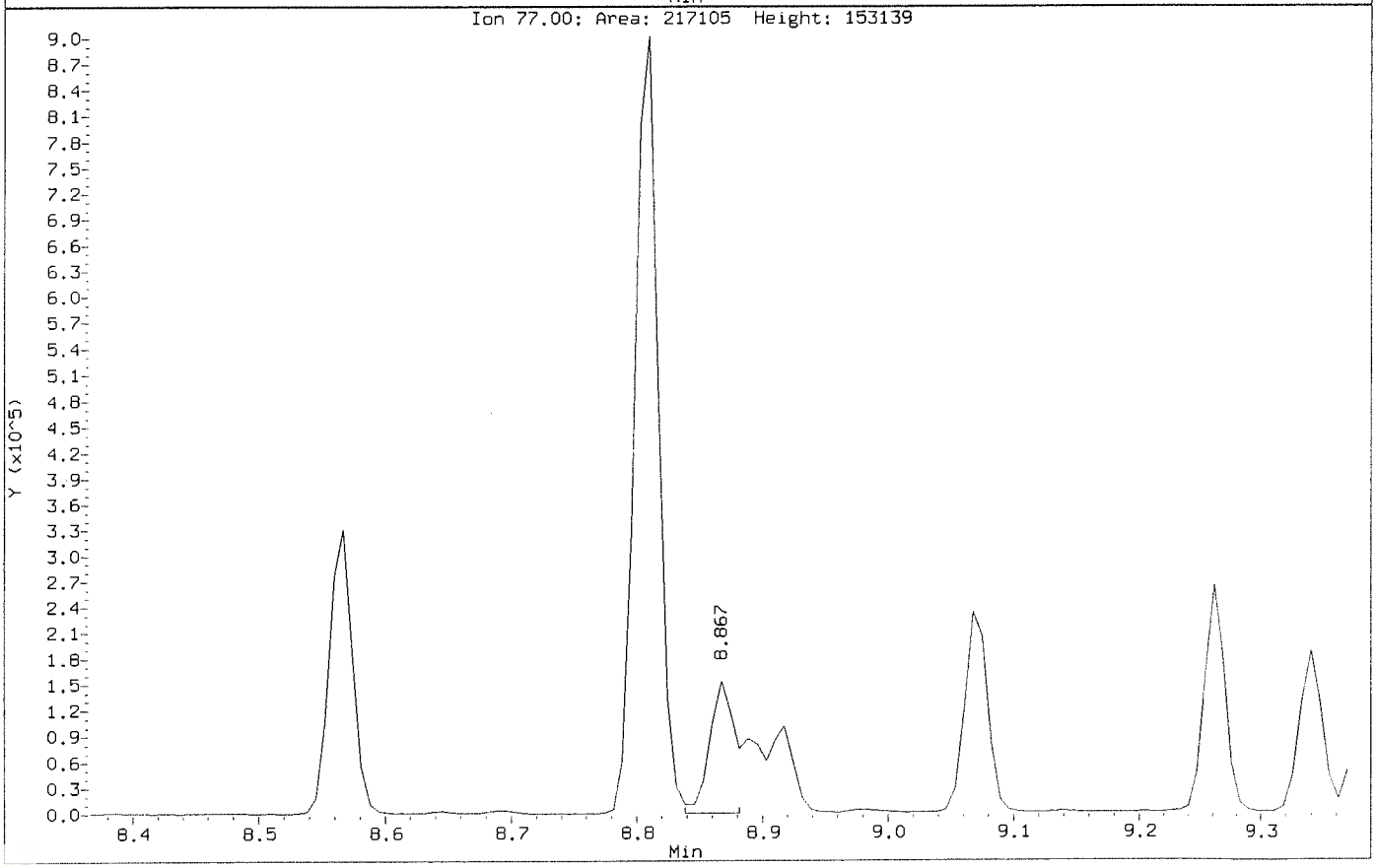
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Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

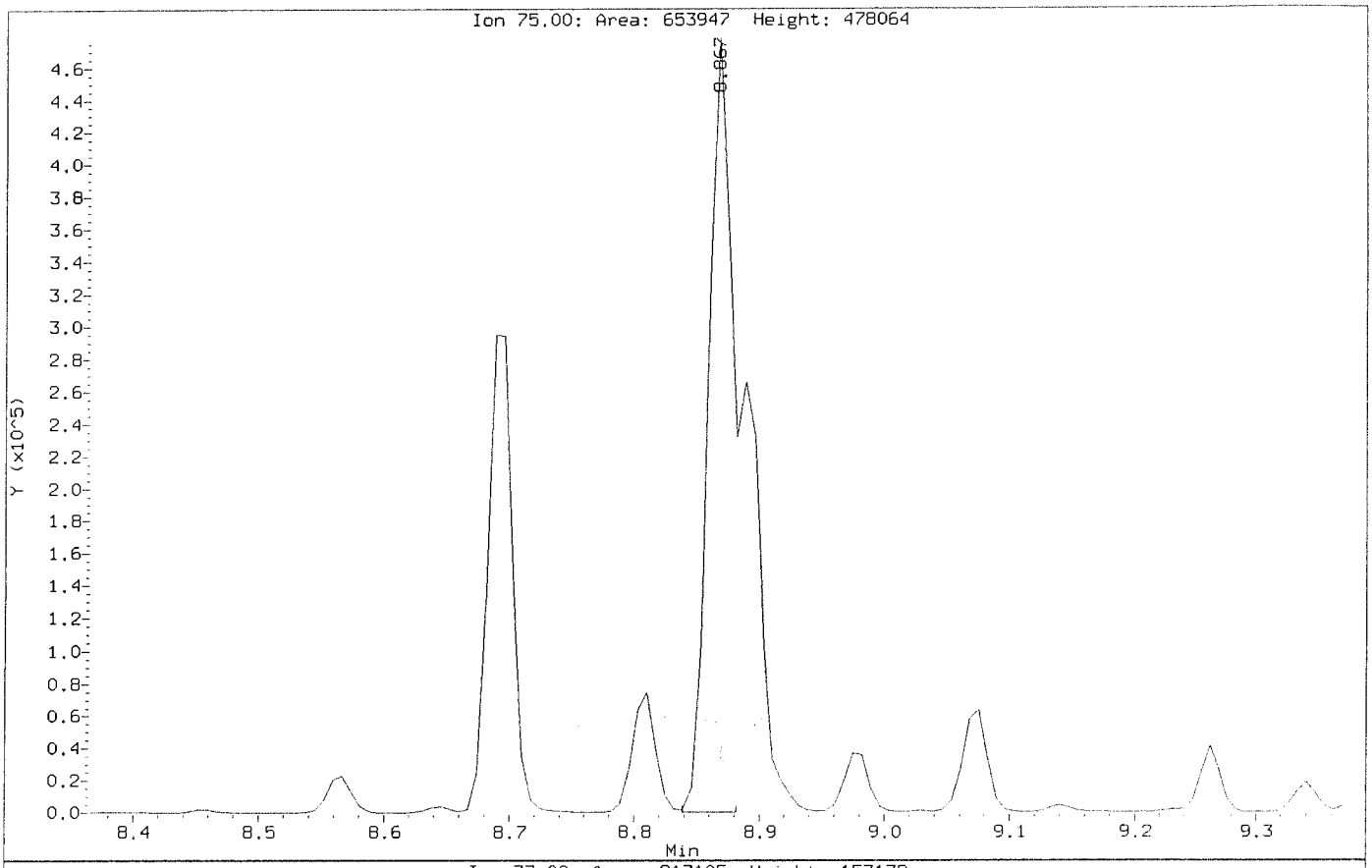
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

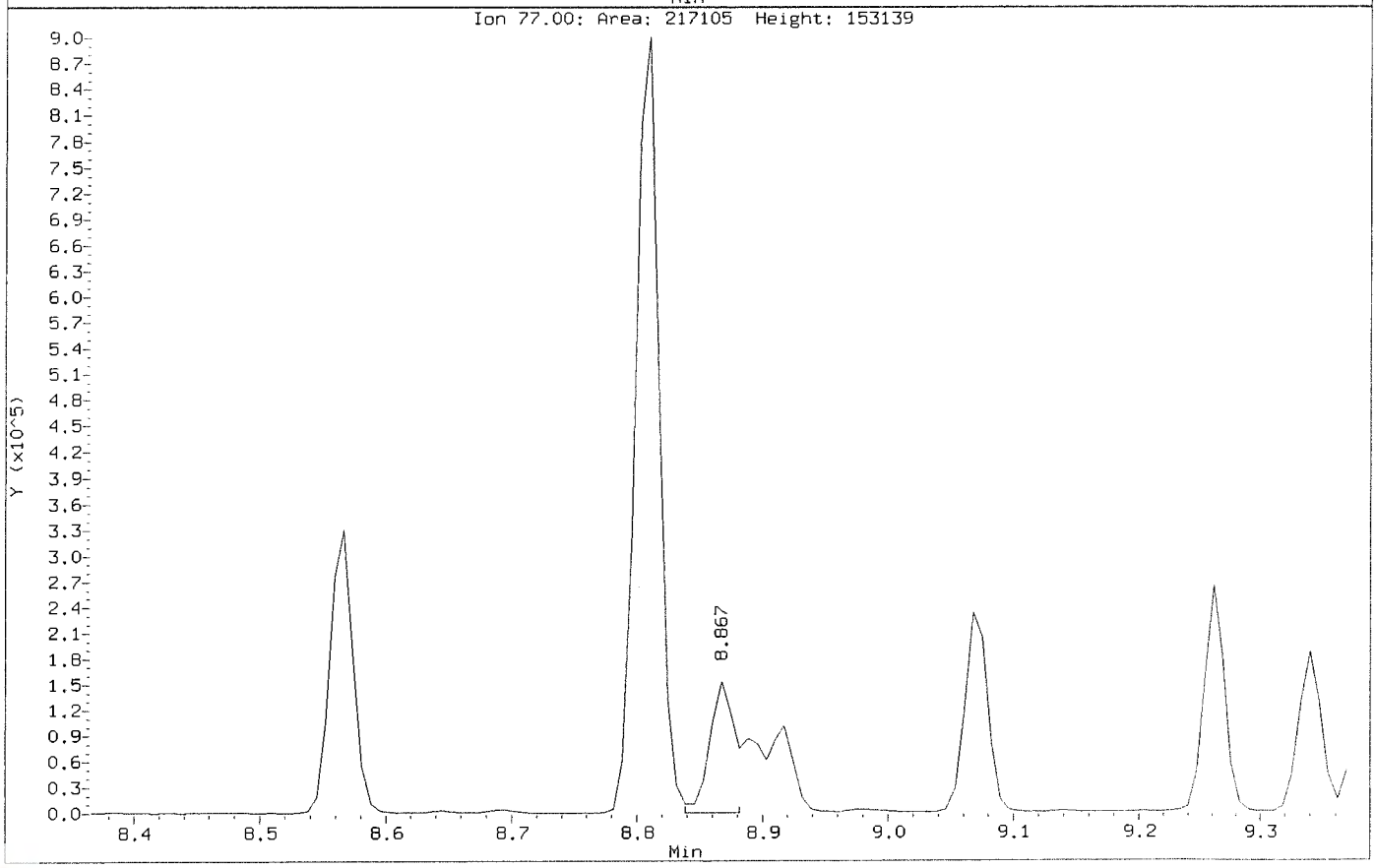




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Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-AUG-2020 15:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:16 Cal File: X080310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

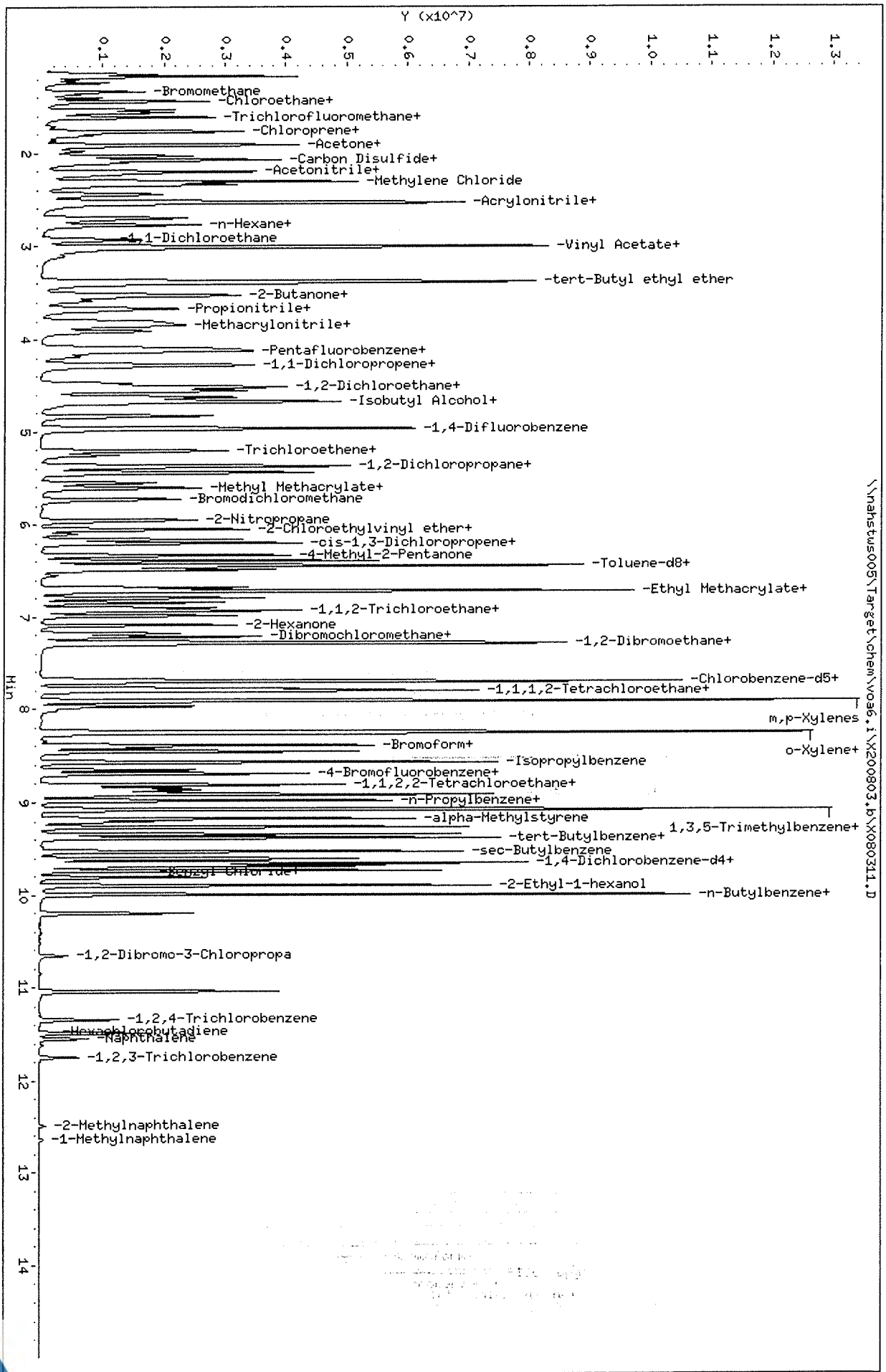
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450865	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	691821	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	647390	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	303189	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	891470	200.000	201.34(A)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	1069168	200.000	203.72(A)
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	3098306	200.000	197.30
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1172448	200.000	193.54
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	957096	200.000	194.21
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1427757	200.000	205.58(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	990670	200.000	201.64(A)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	709380	200.000	192.57
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1845041	200.000	209.49(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	760300	200.000	212.82(A)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1199113	200.000	206.26(A)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	174820	200.000	191.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	839680	200.000	189.20(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	360898	200.000	192.06
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	3263670	200.000	201.49(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	87710	200.000	199.86
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	931649	200.000	196.31
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1639229	200.000	191.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1348617	200.000	201.33(A)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1043924	200.000	205.60(A)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	3217418	200.000	203.08(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1875338	200.000	196.78
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1423457	200.000	195.70
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1859620	200.000	197.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1273388	200.000	198.01
24	2-Butanone	43	3.581	3.581	(0.855)	968566	400.000	438.21(A)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	2643071	200.000	200.93(A)
52	2-Hexanone	43	7.090	7.090	(0.924)	1629397	400.000	400.90(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	3060362	200.000	199.98
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3478638	200.000	207.19(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2352996	400.000	392.71(A)
10	Acetone	43	1.976	1.976	(0.472)	618700	400.000	396.80(A)
37	Benzene	78	4.519	4.519	(0.909)	3502746	200.000	204.07(A)
74	Bromobenzene	156	8.810	8.810	(0.911)	1163775	200.000	196.22
29	Bromochloromethane	128	3.803	3.803	(0.908)	510770	200.000	187.94
39	Bromodichloromethane	83	5.730	5.730	(1.153)	1253129	200.000	201.21(A)
66	Bromoform	173	8.416	8.416	(1.097)	720436	200.000	200.57(A)
6	Bromomethane	94	1.331	1.331	(0.318)	632580	200.000	201.82(A)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	4690853	400.000	422.91(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1290058	200.000	208.77(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2498297	200.000	196.90
7	Chloroethane	64	1.396	1.396	(0.333)	661534	200.000	207.00(A)
28	Chloroform	83	3.910	3.910	(0.933)	1599662	200.000	198.59
3	Chloromethane	50	1.081	1.081	(0.258)	1298797	200.000	205.16(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1003656	200.000	202.23(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1492460	200.000	204.94(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1019362	200.000	196.57
44	Dibromomethane	93	5.558	5.558	(1.118)	603267	200.000	200.37(A)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	990164	200.000	224.38(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1305080	200.000	199.20
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	306426	200.000	188.25
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3908287	200.000	203.22(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3158365	400.000	399.48(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	915440	200.000	201.03(A)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2826639	200.000	210.81(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	4530646	200.000	207.43(A)
92	Naphthalene	128	11.546	11.546	(1.194)	531999	200.000	194.12
63	o-Xylene	106	8.244	8.244	(1.075)	1537247	200.000	197.93
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3856474	200.000	209.37(A)
64	Styrene	104	8.265	8.265	(1.078)	2646814	200.000	196.27
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2815545	200.000	204.97(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	820612	200.000	199.39
50	Toluene	91	6.453	6.453	(0.841)	3655728	200.000	193.36
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	856683	200.000	202.68(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1360653	200.000	203.85(A)
38	Trichloroethene	130	5.207	5.207	(1.048)	1027730	200.000	209.61(A)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1414911	200.000	213.08(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1294651	200.000	223.07(A)

QC Flag Legend

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

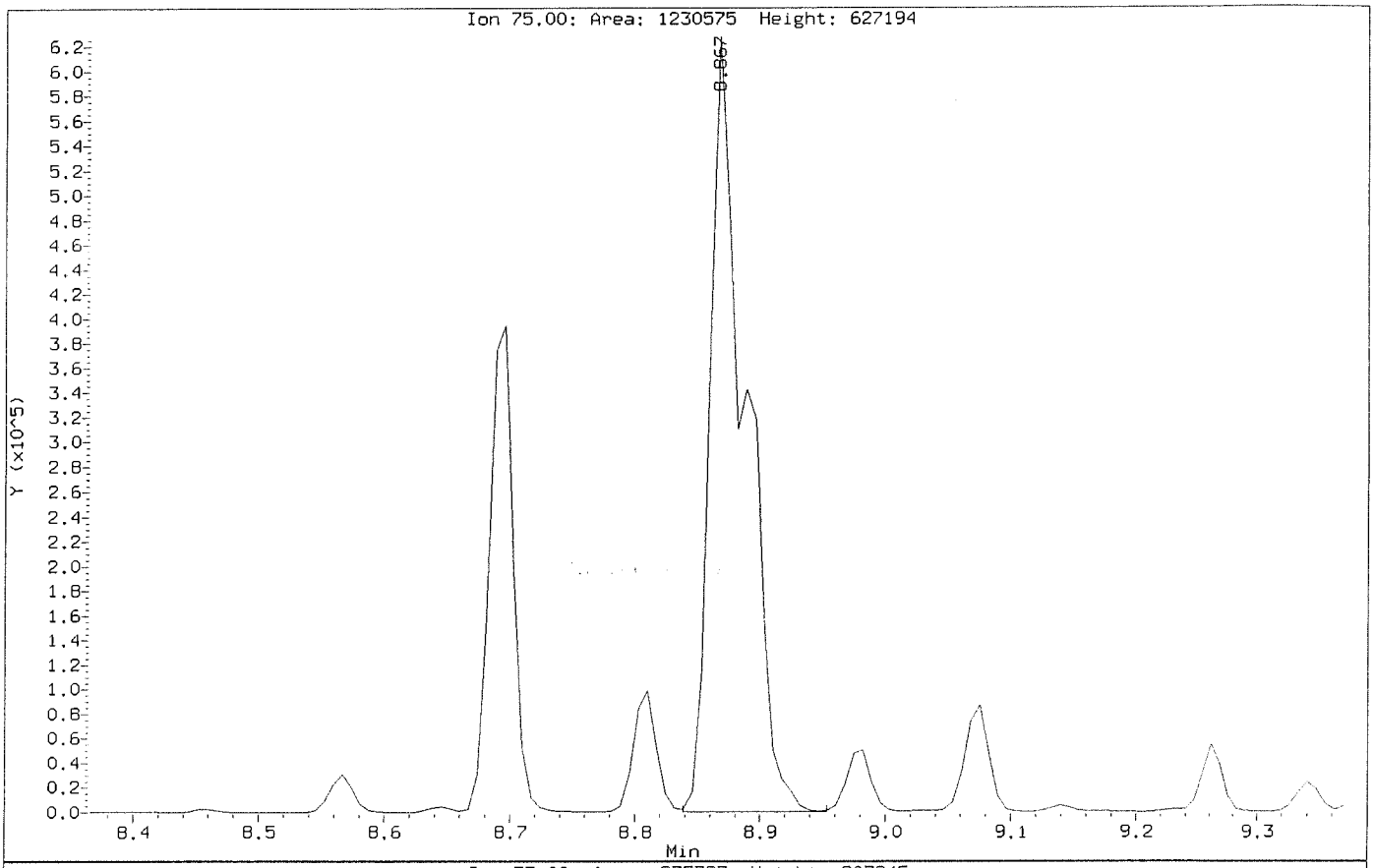


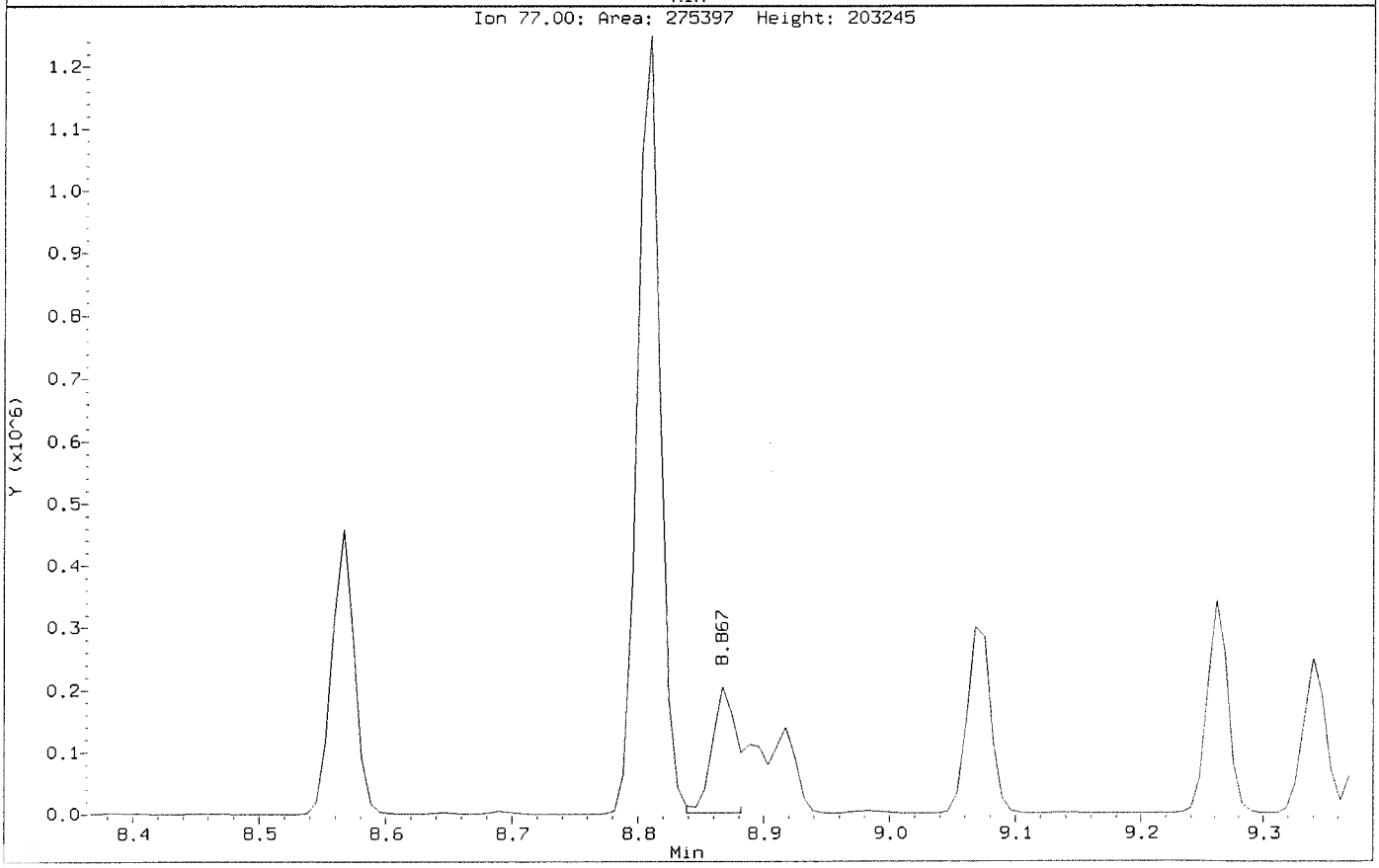
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Date : 03-AUG-2020 15:40
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

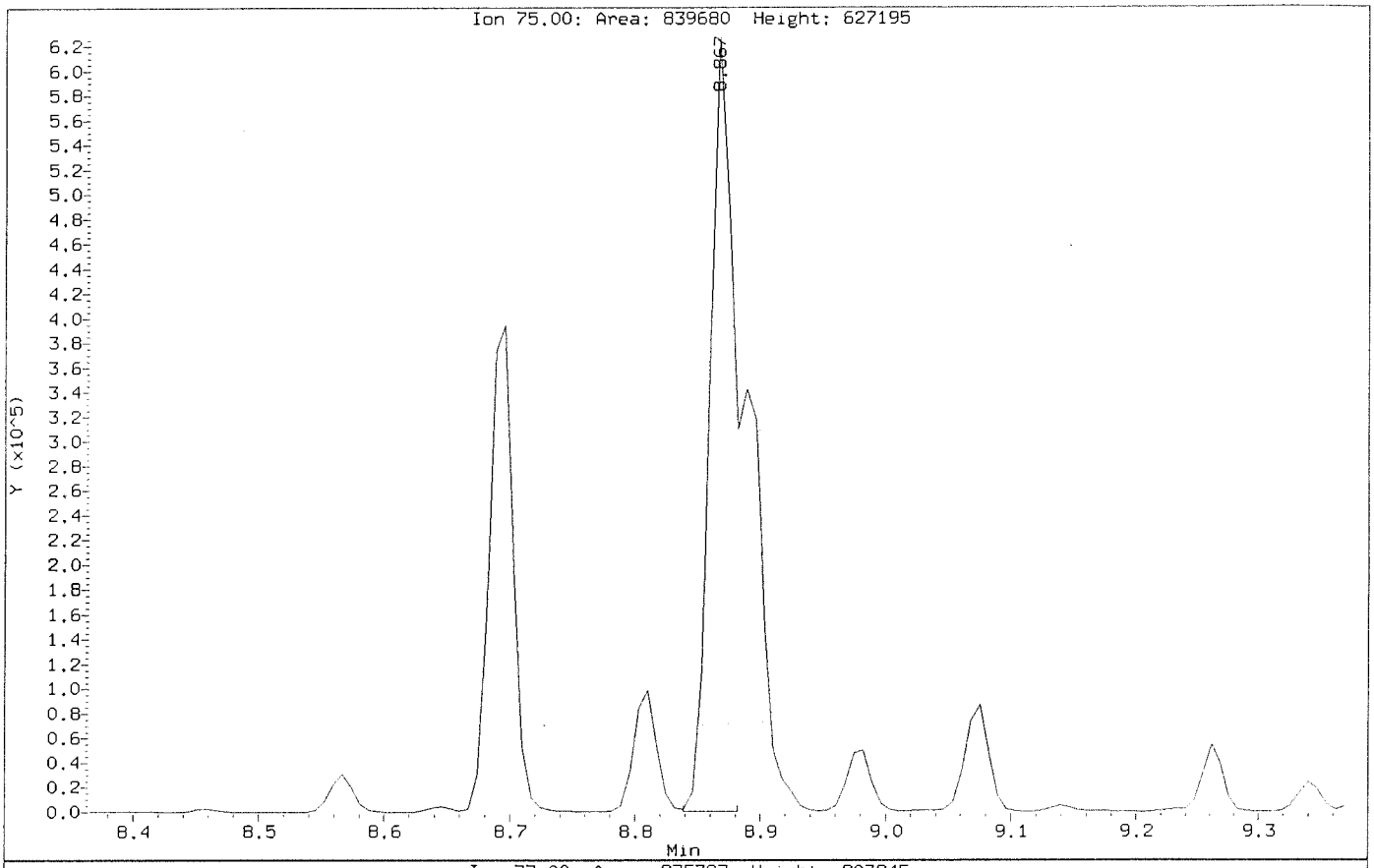
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

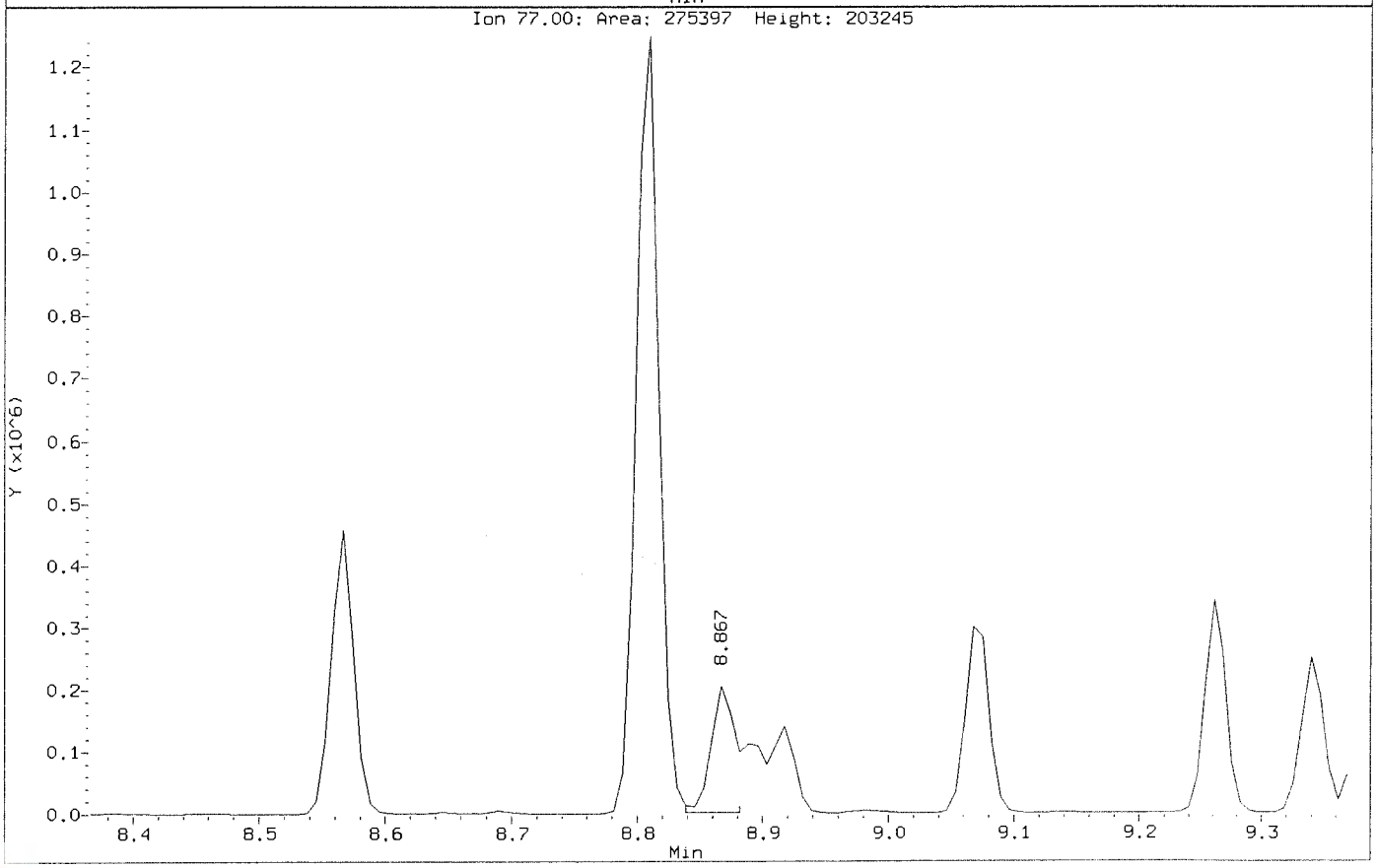




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Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-AUG-2020 16:51
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

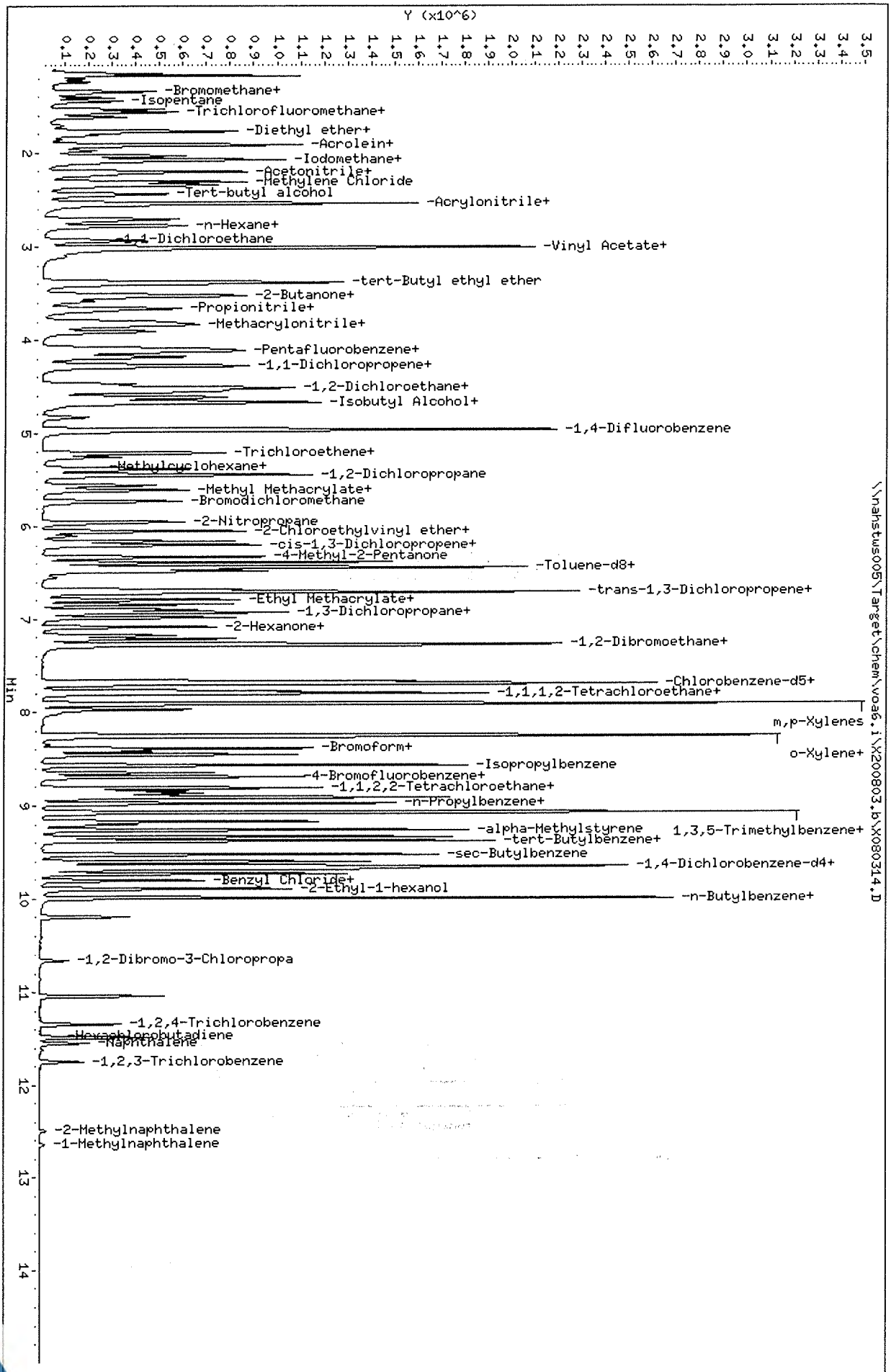
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	487811	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	737194	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	676175	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	325984	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	235982	49.2610	49.26
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	277053	48.7922	48.79
$	48 Toluene-d8	98	6.388	6.389	(0.833)	810392	49.4111	49.41
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	309544	48.9242	48.92
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	245824	47.7596	47.75
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	362002	48.1775	48.17
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	253503	48.2847	48.28
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	183527	47.7003	47.70
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	478275	50.1934	50.19
	11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	198134	51.2626	51.26
	32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	303153	48.9364	48.93
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	49347	50.3044	50.30
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	225070	47.1692	47.16(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	94358	50.1387	50.13
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	838876	48.1702	48.17
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22001	47.2364	47.23
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	241523	48.7266	48.72
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	433731	47.0400	47.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	349700	48.9941	48.99
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	272227	50.3156	50.31
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	818750	48.0653	48.06
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	489054	47.7302	47.73
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	370552	48.7766	48.77
84	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	489689	48.3269	48.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	354577	50.9627	50.96
24	2-Butanone	43	3.580	3.581	(0.855)	250811	104.882	104.88
76	2-Chlorotoluene	91	8.974	8.982	(0.928)	683359	48.3181	48.31
52	2-Hexanone	43	7.090	7.090	(0.924)	404545	95.3001	95.30
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	792702	48.1785	48.17
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	869988	48.1945	48.19
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	585620	93.5781	93.57
10	Acetone	43	1.976	1.976	(0.472)	173872	102.274	102.27
37	Benzene	78	4.519	4.519	(0.909)	904308	49.4427	49.44
74	Bromobenzene	156	8.809	8.810	(0.911)	302326	47.4100	47.40
29	Bromochloromethane	128	3.802	3.803	(0.908)	138253	47.0189	47.01
39	Bromodichloromethane	83	5.729	5.730	(1.153)	323350	48.7242	48.72
66	Bromoform	173	8.415	8.416	(1.097)	181296	48.3252	48.32
6	Bromomethane	94	1.338	1.331	(0.320)	179720	53.4789	53.47
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1217324	101.439	101.43
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	315836	47.9659	47.96
59	Chlorobenzene	112	7.699	7.699	(1.004)	648373	48.9257	48.92
7	Chloroethane	64	1.403	1.396	(0.335)	176540	51.0584	51.05
28	Chloroform	83	3.910	3.910	(0.933)	417889	47.9496	47.94
3	Chloromethane	50	1.081	1.081	(0.258)	337755	49.3134	49.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	262524	48.8914	48.89
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	387446	49.9295	49.92
55	Dibromochloromethane	129	7.176	7.176	(0.936)	256809	47.4144	47.41
44	Dibromomethane	93	5.557	5.558	(1.118)	155222	48.3826	48.38
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	241678	50.6204	50.62
61	Ethylbenzene	106	7.799	7.807	(1.017)	332949	48.6572	48.65
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	84278	48.1556	48.15
67	Isopropylbenzene	105	8.566	8.566	(1.117)	975427	48.5621	48.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	807125	97.7420	97.74
17	Methylene Chloride	84	2.305	2.306	(0.550)	246540	49.0057	49.00
87	n-Butylbenzene	91	9.999	9.999	(1.034)	708345	49.1343	49.13
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1130932	48.1580	48.15
92	Naphthalene	128	11.546	11.546	(1.194)	139595	53.3922	53.39
63	o-Xylene	106	8.244	8.244	(1.075)	395537	48.7621	48.76
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	948593	47.8994	47.89
64	Styrene	104	8.258	8.265	(1.077)	697467	49.5184	49.51
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	699293	47.3494	47.34
56	Tetrachloroethene	164	6.933	6.933	(0.904)	204313	47.5322	47.53
50	Toluene	91	6.446	6.453	(0.840)	953134	48.2682	48.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	223973	48.9770	48.97
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	345851	48.6275	48.62
38	Trichloroethene	130	5.214	5.207	(1.049)	264166	50.5627	50.56
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	357713	49.7923	49.79
5	Vinyl Chloride	62	1.145	1.145	(0.273)	318745	50.7622	50.76

QC Flag Legend

M - Compound response manually integrated.

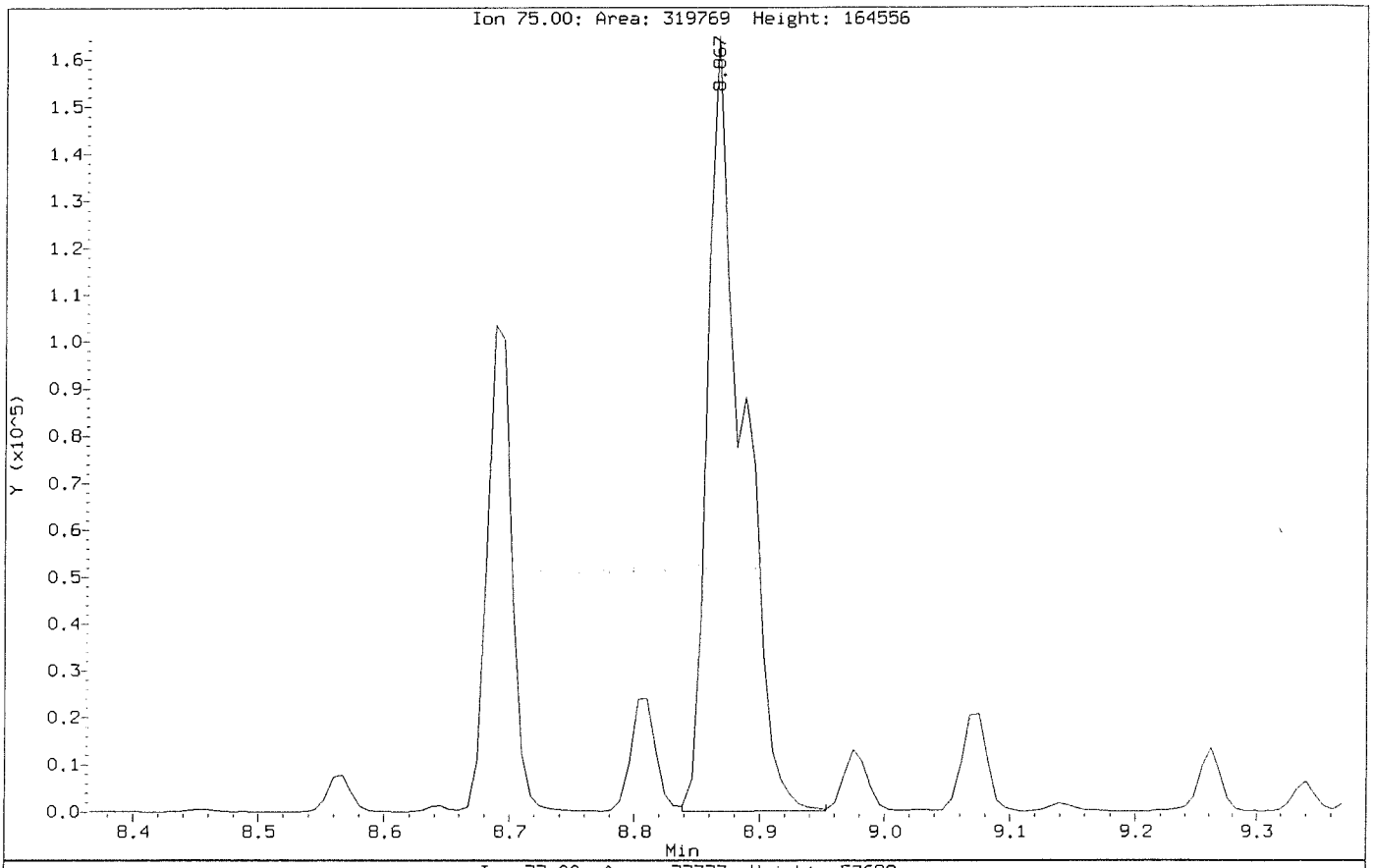


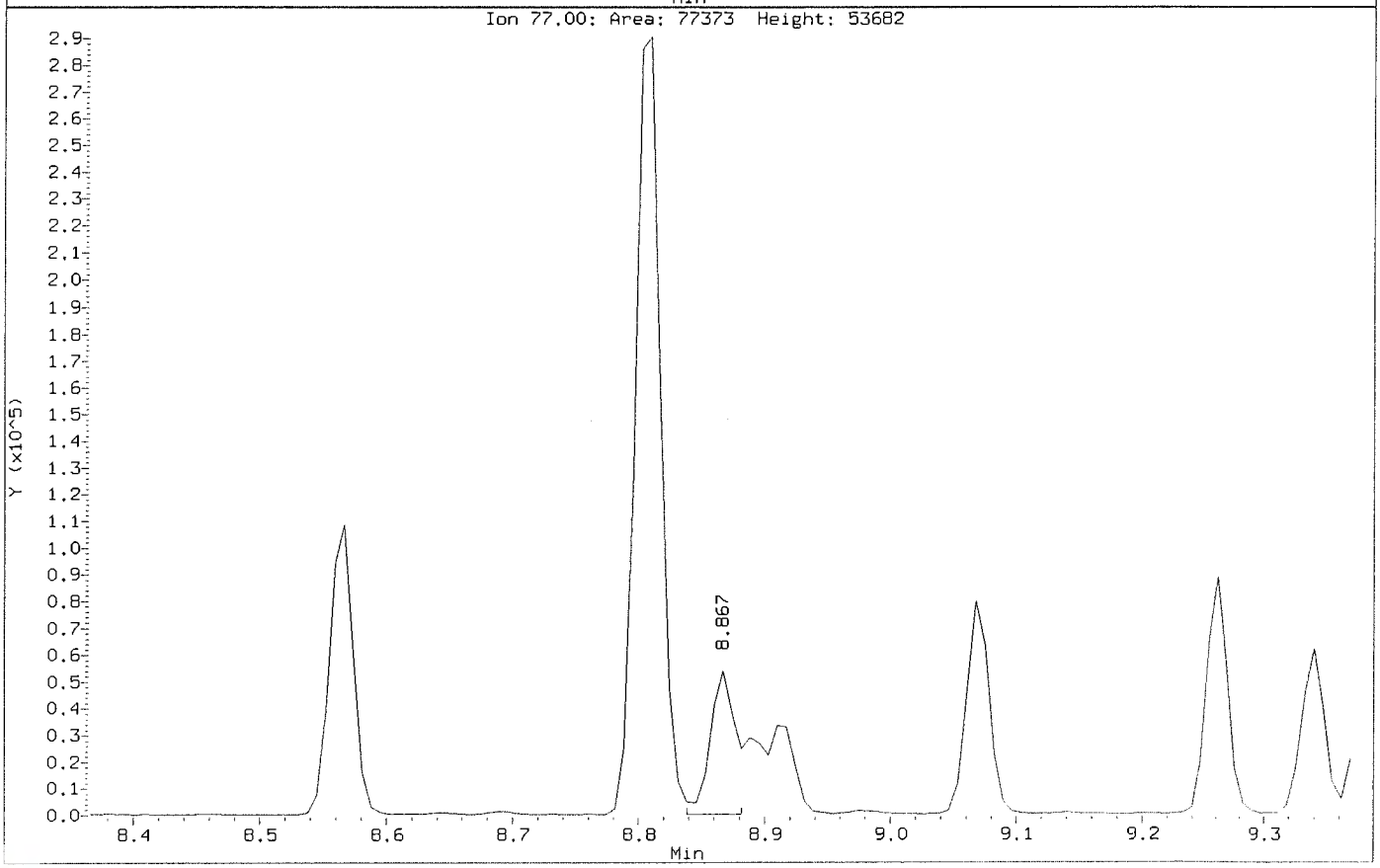
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Date : 03-AUG-2020 16:51
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Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

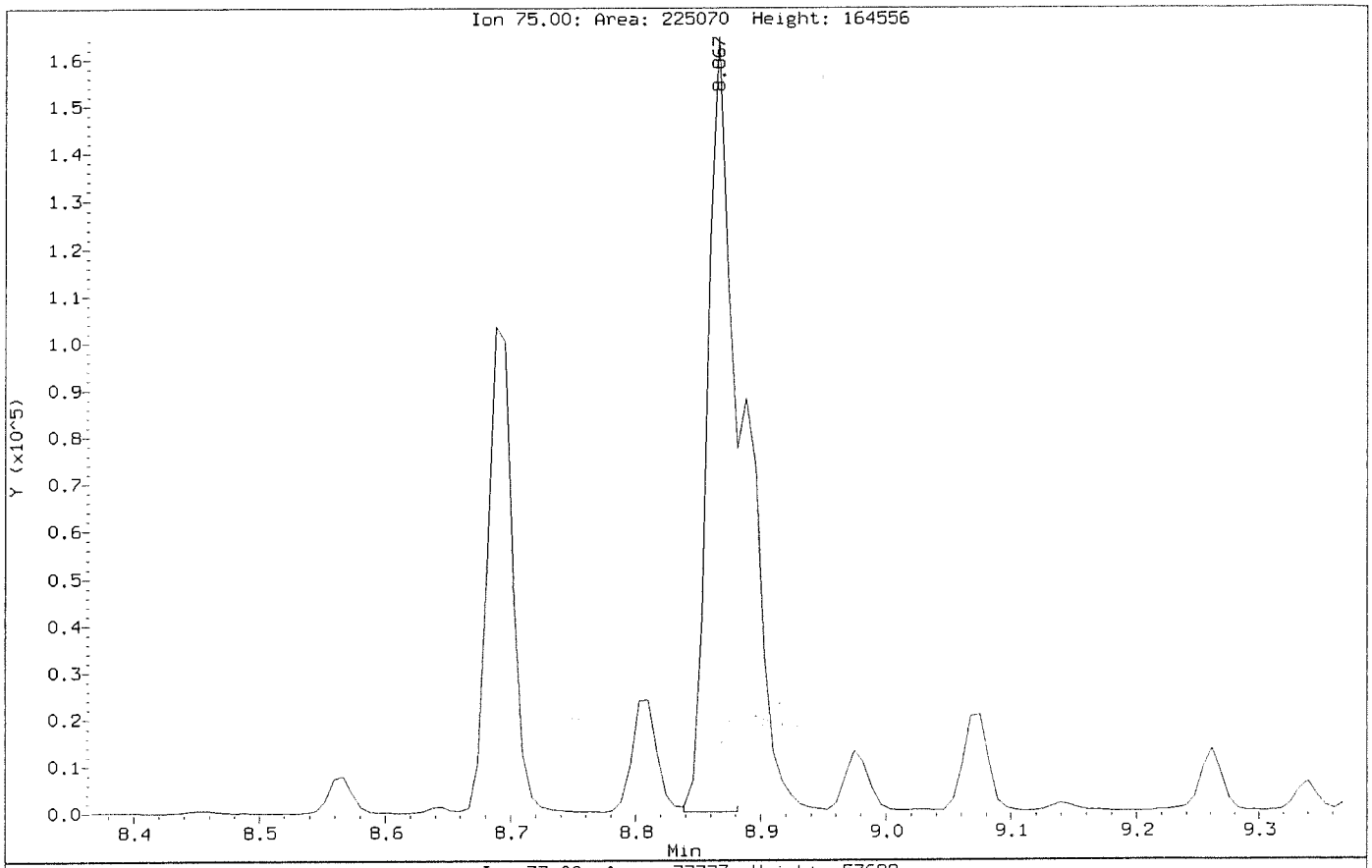
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

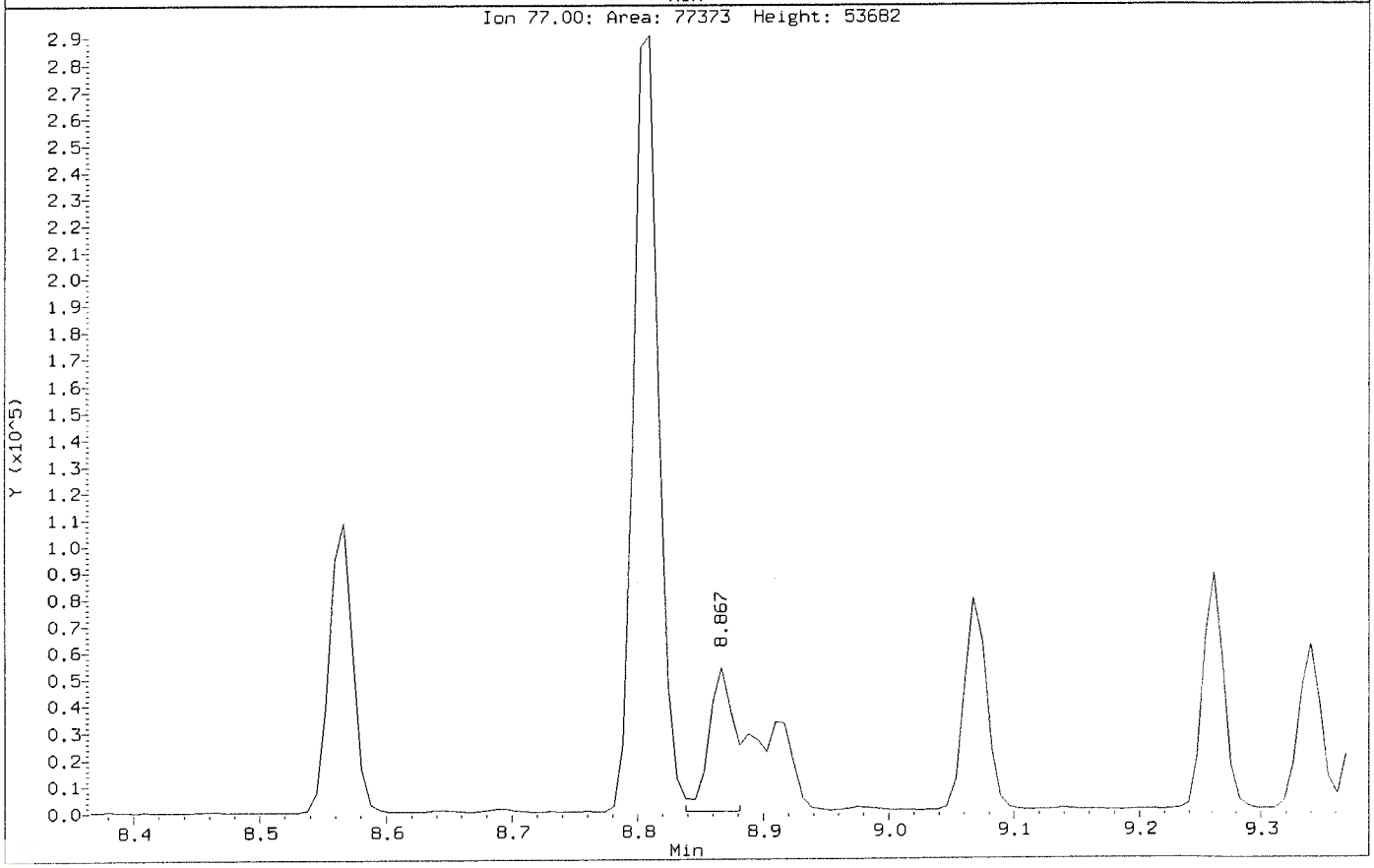




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Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 41515 **Analyst:** Presenta Cabascango

Date: 08-20-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	08-20-2020 10:09 am	1.00	50 mL	50 mL	X082001a.D	Liquid	Y	NA
	Auto find/ purged									
2	BFB	TUNE	08-20-2020 10:33 am	1.00	50 mL	50 mL	X082002.D	Liquid	Y	NA
	Auto find/ purged									
3	CCV	CCV	08-20-2020 10:57 am	1.00	50 mL	50 mL	X082003.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	08-20-2020 11:21 am	1.00	50 mL	50 mL	X082004.D	Liquid	Y	NA
5	VLCSW-200820	LCS	08-20-2020 11:45 am	1.00	50 mL	50 mL	X082005.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	08-20-2020 12:09 pm	1.00	50 mL	50 mL	X082006.D	Liquid	Y	NA
7	VBLKW-200820	MBLK	08-20-2020 12:34 pm	1.00	50 mL	50 mL	X082007.D	Liquid	Y	NA
8	HS20080801-02	SAMP	08-20-2020 12:58 pm	1.00	50 mL	50 mL	X082008.D	Liquid	Y	<2
9	HS20080801-01	SAMP	08-20-2020 01:22 pm	1.00	50 mL	50 mL	X082009.D	Liquid	Y	<2
10	HS20080776-06	SAMP	08-20-2020 01:46 pm	1.00	50 mL	50 mL	X082010.D	Liquid	Y	<2
11	HS20080776-12	SAMP	08-20-2020 02:10 pm	1.00	50 mL	50 mL	X082011.D	Liquid	Y	<2
12	HS20080776-14	SAMP	08-20-2020 02:34 pm	1.00	50 mL	50 mL	X082012.D	Liquid	Y	<2
13	HS20080776-01	SAMP	08-20-2020 02:58 pm	1.00	50 mL	50 mL	X082013.D	Liquid	Y	<2
14	HS20080776-02	SAMP	08-20-2020 03:22 pm	1.00	50 mL	50 mL	X082014.D	Liquid	Y	<2
15	HS20080801-01MS	MS	08-20-2020 03:46 pm	1.00	50 mL	50 mL	X082015.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
16	HS20080801-01MSD	MSD	08-20-2020 04:10 pm	1.00	50 mL	50 mL	X082016.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
17	CCV-END	CCV	08-20-2020 04:34 pm	1.00	50 mL	50 mL	X082017.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
18	HS20080776-01	SAMP	08-20-2020 04:58 pm	25.00	2 mL	50 mL	X082018.D	Liquid	Y	<2
19	HS20080776-02	SAMP	08-20-2020 05:22 pm	10.00	5 mL	50 mL	X082019.D	Liquid	Y	<2
20	HS20080776-03	SAMP	08-20-2020 05:46 pm	5.00	10 mL	50 mL	X082020.D	Liquid	Y	<2
21	HS20080776-03	SAMP	08-20-2020 06:10 pm	25.00	2 mL	50 mL	X082021.D	Liquid	Y	<2
22	HS20080776-15	SAMP	08-20-2020 06:34 pm	5.00	10 mL	50 mL	X082022.D	Liquid	Y	<2
23	HS20080776-15	SAMP	08-20-2020 06:58 pm	25.00	2 mL	50 mL	X082023.D	Liquid	Y	<2
24	HS20080776-05	SAMP	08-20-2020 07:22 pm	5.00	10 mL	50 mL	X082024.D	Liquid	Y	<2
25	HS20080776-05	SAMP	08-20-2020 07:46 pm	50.00	1 mL	50 mL	X082025.D	Liquid	Y	<2
26	HS20080776-04	SAMP	08-20-2020 08:10 pm	10.00	5 mL	50 mL	X082026.D	Liquid	Y	<2
27	HS20080776-04	SAMP	08-20-2020 08:34 pm	100.0(	500 µL	50 mL	X082027.D	Liquid	Y	<2
28	HS20080776-08	SAMP	08-20-2020 08:58 pm	25.00	2 mL	50 mL	X082028.D	Liquid	Y	<2
29	HS20080776-08	SAMP	08-20-2020 09:22 pm	250.0(	200 µL	50 mL	X082029.D	Liquid	Y	<2
30	HS20080776-07	SAMP	08-20-2020 09:47 pm	50.00	1 mL	50 mL	X082030.D	Liquid	Y	<2
31	HS20080776-07	SAMP	08-20-2020 10:11 pm	500.0(	100 µL	50 mL	X082031.D	Liquid	Y	<2
32	BFB	TUNE	08-20-2020 10:35 pm	1.00	50 mL	50 mL	Y082001.D	Liquid	Y	na
	Auto find/ purged									
33	CCV	CCV	08-20-2020 10:58 pm	1.00	50 mL	50 mL	Y082002a.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
34	CCV	CCV	08-20-2020 11:22 pm	1.00	50 mL	50 mL	Y082003.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
35	CCB	SAMP	08-20-2020 11:46 pm	1.00	50 mL	50 mL	Y082004.D	Liquid	Y	na
36	VLCSW-200820	LCS	08-21-2020 12:10 am	1.00	50 mL	50 mL	Y082005.D	Liquid	Y	na

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
37	BLANK	SAMP	08-21-2020 12:34 am	1.00	50 mL	50 mL	Y082006.D	Liquid	Y	na
38	VBLKW-200820	MBLK	08-21-2020 12:58 am	1.00	50 mL	50 mL	Y082007.D	Liquid	Y	na
39	HS20080737-05	SAMP	08-21-2020 01:23 am	1.00	50 mL	50 mL	Y082008.D	Liquid	Y	<2
40	HS20080631-83n/r	SAMP	08-21-2020 01:47 am	5.00	10 mL	50 mL	Y082009.D	Liquid	Y	<2
41	HS20080737-05MS	MS	08-21-2020 02:11 am	1.00	50 mL	50 mL	Y082010.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
42	HS20080737-05MSD	MSD	08-21-2020 02:35 am	1.00	50 mL	50 mL	Y082011.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
43	HS20080631-89	SAMP	08-21-2020 02:59 am	1.00	50 mL	50 mL	Y082012.D	Liquid	Y	<2
44	HS20080631-72	SAMP	08-21-2020 03:23 am	1.00	50 mL	50 mL	Y082013.D	Liquid	Y	<2
45	HS20080631-73	SAMP	08-21-2020 03:47 am	1.00	50 mL	50 mL	Y082014.D	Liquid	Y	<2
46	HS20080631-74	SAMP	08-21-2020 04:11 am	1.00	50 mL	50 mL	Y082015.D	Liquid	Y	<2
47	HS20080631-75	SAMP	08-21-2020 04:35 am	1.00	50 mL	50 mL	Y082016.D	Liquid	Y	<2
48	HS20080631-76	SAMP	08-21-2020 04:59 am	1.00	50 mL	50 mL	Y082017.D	Liquid	Y	<2
49	HS20080631-77	SAMP	08-21-2020 05:23 am	1.00	50 mL	50 mL	Y082018.D	Liquid	Y	<2
50	HS20080631-78	SAMP	08-21-2020 05:47 am	1.00	50 mL	50 mL	Y082019.D	Liquid	Y	<2
51	HS20080631-79	SAMP	08-21-2020 06:11 am	1.00	50 mL	50 mL	Y082020.D	Liquid	Y	<2
52	HS20080631-80	SAMP	08-21-2020 06:35 am	1.00	50 mL	50 mL	Y082021.D	Liquid	Y	<2
53	HS20080631-81	SAMP	08-21-2020 06:59 am	1.00	50 mL	50 mL	Y082022.D	Liquid	Y	<2
54	HS20080631-82	SAMP	08-21-2020 07:23 am	1.00	50 mL	50 mL	Y082023.D	Liquid	Y	<2
55	HS20080631-84	SAMP	08-21-2020 07:48 am	1.00	50 mL	50 mL	Y082024.D	Liquid	Y	<2
56	HS20080631-85	SAMP	08-21-2020 08:12 am	1.00	50 mL	50 mL	Y082025.D	Liquid	Y	<2
57	HS20080631-86	SAMP	08-21-2020 08:36 am	1.00	50 mL	50 mL	Y082026.D	Liquid	Y	<2
58	HS20080631-87	SAMP	08-21-2020 09:00 am	1.00	50 mL	50 mL	Y082027.D	Liquid	Y	<2
59	HS20080631-88	SAMP	08-21-2020 09:24 am	1.00	50 mL	50 mL	Y082028.D	Liquid	Y	<2
60	HS20080631-91	SAMP	08-21-2020 09:48 am	1.00	50 mL	50 mL	Y082029.D	Liquid	Y	<2
61	HS20080631-83	SAMP	08-21-2020 10:12 am	1.00	50 mL	50 mL	Y082030.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-42-06
IS ID	31106-42-06
CAL STD ID	31106-43-01/02
BFB ID	31106-42-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200820	102	104	105	101	0
02	VBLKW-200820	86	91	107	95	0
03	HS20080801-02	88	93	107	99	0
04	HS20080801-01	87	92	106	96	0
05	HS20080801-01	89	95	105	97	0
06	HS20080801-01	90	94	104	96	0
07						
08						
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28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200820

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Lab File ID: X082007 Lab Sample ID: VBLKW-200820

Date Analyzed: 08/20/20 Time Analyzed: 1234

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-200820	VLCSW-200820	X082005	1145
02	HS20080801-0	HS20080801-02	X082008	1258
03	HS20080801-0	HS20080801-01	X082009	1322
04	HS20080801-0	HS20080801-01M	X082015	1546
05	HS20080801-0	HS20080801-01M	X082016	1610
06				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Lab File ID: X082002 BFB Injection Date: 08/20/20

Instrument ID: VOA6 BFB Injection Time: 1033

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	22.6
75	30.0 - 60.0% of mass 95	47.9
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	0.5 (0.7)1
174	Greater than 50.0% of mass 95	67.3
175	5.0 - 9.0% of mass 174	5.4 (8.1)1
176	95.0 - 101.0% of mass 174	66.3 (98.4)1
177	5.0 - 9.0% of mass 176	4.8 (7.3)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	X082003	08/20/20	1057
02	VLCSW-200820	VLCSW-200820	X082005	08/20/20	1145
03	VBLKW-200820	VBLKW-200820	X082007	08/20/20	1234
04	HS20080801-0	HS20080801-02	X082008	08/20/20	1258
05	HS20080801-0	HS20080801-01	X082009	08/20/20	1322
06	HS20080801-0	HS20080801-01M	X082015	08/20/20	1546
07	HS20080801-0	HS20080801-01M	X082016	08/20/20	1610
08	CCV-END	CCV-END	X082017	08/20/20	1634
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.: HS20080801

Instrument ID: VOA6 Calibration Date: 08/20/20 Time: 1057

Lab File ID: X082003 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5720014	0.5720014	0.2	-8.74	20.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.4949655	0.4949655	0.1	-2.69	20.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.6928884	1.6928884	0.6	-7.69	20.00	AVRG
2,2-Dichloropropane	0.7130000	0.7882114	0.7882114	0.1	-10.55	20.00	AVRG
1,1-Dichloropropene	0.4200000	0.4534053	0.4534053	0.1	-7.95	20.00	AVRG
Dibromomethane	0.2170000	0.2281980	0.2281980	0.1	-5.16	20.00	AVRG
1,2-Dibromoethane	0.3660000	0.3859601	0.3859601	0.1	-5.45	20.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.5229343	0.5229343	0.1	-11.50	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3991378	0.3991378	0.1	-5.04	20.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.8193933	0.8193933	0.1	-6.41	20.00	AVRG
1,1,2,2-Tetrachloroethane	52.117306	50.000000	0.8398795	0.3	-4.23	20.00	LINR
1,1,2-Trichloroethane	0.2840000	0.2984812	0.2984812	0.1	-5.10	20.00	AVRG
1,1-Dichloroethane	0.9760000	1.1078203	1.1078203	0.2	-13.51	20.00	AVRG
1,1-Dichloroethene	0.3960000	0.4498891	0.4498891	0.1	-13.61	20.00	AVRG
Trichloroethene	0.3540000	0.3919738	0.3919738	0.2	-10.73	20.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1492669	0.1492669	0.01	0.49	20.00	AVRG
Trichlorofluoromethane	0.7360000	0.7939533	0.7939533	0.1	-7.87	20.00	AVRG
1,2,4-Trichlorobenzene	56.727501	50.000000	0.3281526	0.1	-13.46	20.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	3.0215332	3.0215332	0.1	-13.12	20.00	AVRG
Tetrachloroethene	0.3180000	0.3523514	0.3523514	0.2	-10.80	20.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.4676170	1.4676170	0.4	-3.79	20.00	AVRG
1,2-Dichloroethane	0.4840000	0.5041655	0.5041655	0.1	-4.17	20.00	AVRG
1,2-Dichloropropane	0.3670000	0.4153195	0.4153195	0.1	-13.17	20.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.9675096	2.9675096	0.1	-13.57	20.00	AVRG
1,3-Dichloropropane	0.5620000	0.5974282	0.5974282	0.1	-6.30	20.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.6937099	1.6937099	0.4	-8.99	20.00	AVRG
Toluene	1.4600000	1.6002148	1.6002148	0.4	-9.60	20.00	AVRG
2-Butanone	0.2450000	0.2619115	0.2619115	0.1	-6.90	20.00	AVRG
2-Chlorotoluene	2.1690000	2.4197066	2.4197066	0.1	-11.56	20.00	AVRG
2-Hexanone	0.3140000	0.3021764	0.3021764	0.1	3.76	20.00	AVRG
4-Chlorotoluene	2.5230000	2.8062420	2.8062420	0.1	-11.23	20.00	AVRG
tert-Butylbenzene	2.2650000	2.5612950	2.5612950	0.1	-13.08	20.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4436386	0.4436386	0.1	4.18	20.00	AVRG
Acetone	103.03647	100.00000	0.1795312	0.1	-3.04	20.00	LINR
Benzene	1.2410000	1.3779919	1.3779919	0.5	-11.04	20.00	AVRG
Bromobenzene	0.9780000	1.0578166	1.0578166	0.1	-8.16	20.00	AVRG
Bromochloromethane	0.3010000	0.3166361	0.3166361	0.1	-5.19	20.00	AVRG
Bromodichloromethane	0.4500000	0.4669675	0.4669675	0.2	-3.77	20.00	AVRG
Bromoform	0.2780000	0.2670698	0.2670698	0.1	3.93	20.00	AVRG
Bromomethane	46.477088	50.000000	0.3195873	0.1	7.04	20.00	LINR
Carbon Disulfide	1.2300000	1.3883542	1.3883542	0.1	-12.87	20.00	AVRG
Carbon Tetrachloride	0.4460000	0.4532181	0.4532181	0.1	-1.62	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date: 08/20/20 Time: 1057

Lab File ID: X082003 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Chlorobenzene	0.9800000	1.0674675	1.0674675	0.5	-8.92	20.00	AVRG	
Chloroethane	0.3540000	0.3798670	0.3798670	0.1	-7.31	20.00	AVRG	
Chloroform	0.8930000	0.9620892	0.9620892	0.2	-7.74	20.00	AVRG	
Chloromethane	0.7020000	0.6270487	0.6270487	0.1	10.68	20.00	AVRG	
cis-1,2-Dichloroethene	0.5500000	0.6079975	0.6079975	0.1	-10.54	20.00	AVRG	
Dibromochloromethane	0.4000000	0.4069136	0.4069136	0.1	-1.73	20.00	AVRG	
Dichlorodifluoromethane	0.4890000	0.4590039	0.4590039	0.1	6.13	20.00	AVRG	
Ethylbenzene	0.5060000	0.5642014	0.5642014	0.1	-11.50	20.00	AVRG	
Hexachlorobutadiene	0.2680000	0.3382661	0.3382661	0.1	-26.22	20.00	AVRG	<-
Isopropylbenzene	1.4850000	1.6632292	1.6632292	0.1	-12.00	20.00	AVRG	
m,p-Xylenes	0.6100000	0.6742977	0.6742977	0.1	-10.54	20.00	AVRG	
Methylene Chloride	53.834793	50.000000	0.5538407	0.1	-7.67	20.00	LINR	
n-Butylbenzene	2.2110000	2.6317895	2.6317895	0.5	-19.03	20.00	AVRG	
n-Propylbenzene	3.6020000	4.1451705	4.1451705	0.1	-15.08	20.00	AVRG	
Naphthalene	53.458800	50.000000	0.4287802	0.2	-6.92	20.00	2RDR	
o-Xylene	0.6000000	0.6495600	0.6495600	0.3	-8.26	20.00	AVRG	
sec-Butylbenzene	3.0380000	3.4883471	3.4883471	0.1	-14.82	20.00	AVRG	
Styrene	1.0410000	1.1243042	1.1243042	0.3	-8.00	20.00	AVRG	
Vinyl Chloride	0.6440000	0.6987764	0.6987764	0.1	-8.50	20.00	AVRG	
1,2,3-Trichloropropane	0.7320000	0.7254713	0.7254713	0.1	0.89	20.00	AVRG	
p-Isopropyltoluene	2.7680000	3.1857353	3.1857353	0.1	-15.09	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	43.138215	50.000000	6.15e-002	0.05	13.72	20.00	LINR	
1,2-Dichloroethane-d4	0.5820000	0.5648550	0.5648550	0.1	2.94	20.00	AVRG	
Dibromofluoromethane	0.4910000	0.4951683	0.4951683	0.1	-0.85	20.00	AVRG	
Toluene-d8	1.2130000	1.2295629	1.2295629	0.1	-1.36	20.00	AVRG	
4-Bromofluorobenzene	0.4680000	0.4591088	0.4591088	0.1	1.90	20.00	AVRG	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Instrument ID: VOA6 Calibration Date: 08/20/20 Time: 1634

Lab File ID: X082017 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5211339	0.5211339	0.2	0.92	50.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.4604023	0.4604023	0.1	4.48	50.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.5944261	1.5944261	0.6	-1.43	50.00	AVRG
2,2-Dichloropropane	0.7130000	0.6771494	0.6771494	0.1	5.03	50.00	AVRG
1,1-Dichloropropene	0.4200000	0.4222250	0.4222250	0.1	-0.53	50.00	AVRG
Dibromomethane	0.2170000	0.2133569	0.2133569	0.1	1.68	50.00	AVRG
1,2-Dibromoethane	0.3660000	0.3637416	0.3637416	0.1	0.62	50.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.4888100	0.4888100	0.1	-4.22	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3701081	0.3701081	0.1	2.60	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7721703	0.7721703	0.1	-0.28	50.00	AVRG
1,1,2,2-Tetrachloroethane	51.132717	50.000000	0.8238943	0.3	-2.26	50.00	LINR
1,1,2-Trichloroethane	0.2840000	0.2779807	0.2779807	0.1	2.12	50.00	AVRG
1,1-Dichloroethane	0.9760000	1.0418275	1.0418275	0.2	-6.74	50.00	AVRG
1,1-Dichloroethene	0.3960000	0.4277227	0.4277227	0.1	-8.01	50.00	AVRG
Trichloroethene	0.3540000	0.3677079	0.3677079	0.2	-3.87	50.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1210138	0.1210138	0.01	19.32	50.00	AVRG
Trichlorofluoromethane	0.7360000	0.7491488	0.7491488	0.1	-1.79	50.00	AVRG
1,2,4-Trichlorobenzene	45.906268	50.000000	0.2647339	0.1	8.19	50.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	2.8133124	2.8133124	0.1	-5.33	50.00	AVRG
Tetrachloroethene	0.3180000	0.3205950	0.3205950	0.2	-0.82	50.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.3676043	1.3676043	0.4	3.28	50.00	AVRG
1,2-Dichloroethane	0.4840000	0.4701865	0.4701865	0.1	2.85	50.00	AVRG
1,2-Dichloropropane	0.3670000	0.3845537	0.3845537	0.1	-4.78	50.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.7702550	2.7702550	0.1	-6.02	50.00	AVRG
1,3-Dichloropropane	0.5620000	0.5661326	0.5661326	0.1	-0.74	50.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.5787924	1.5787924	0.4	-1.60	50.00	AVRG
Toluene	1.4600000	1.4807123	1.4807123	0.4	-1.42	50.00	AVRG
2-Butanone	0.2450000	0.2536933	0.2536933	0.1	-3.55	50.00	AVRG
2-Chlorotoluene	2.1690000	2.3043180	2.3043180	0.1	-6.24	50.00	AVRG
2-Hexanone	0.3140000	0.2911099	0.2911099	0.1	7.29	50.00	AVRG
4-Chlorotoluene	2.5230000	2.6403888	2.6403888	0.1	-4.65	50.00	AVRG
tert-Butylbenzene	2.2650000	2.4134735	2.4134735	0.1	-6.56	50.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4307235	0.4307235	0.1	6.97	50.00	AVRG
Acetone	94.680196	100.00000	0.1651209	0.1	5.32	50.00	LINR
Benzene	1.2410000	1.2916018	1.2916018	0.5	-4.08	50.00	AVRG
Bromobenzene	0.9780000	0.9932115	0.9932115	0.1	-1.56	50.00	AVRG
Bromochloromethane	0.3010000	0.2989790	0.2989790	0.1	0.67	50.00	AVRG
Bromodichloromethane	0.4500000	0.4430551	0.4430551	0.2	1.54	50.00	AVRG
Bromoform	0.2780000	0.2534567	0.2534567	0.1	8.83	50.00	AVRG
Bromomethane	45.543480	50.000000	0.3130759	0.1	8.91	50.00	LINR
Carbon Disulfide	1.2300000	1.2952139	1.2952139	0.1	-5.30	50.00	AVRG
Carbon Tetrachloride	0.4460000	0.4262348	0.4262348	0.1	4.43	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008080

Instrument ID: VOA6 Calibration Date: 08/20/20 Time: 1634

Lab File ID: X082017 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9800000	0.9920366	0.9920366	0.5	-1.23	50.00	AVRG
Chloroethane	0.3540000	0.3627741	0.3627741	0.1	-2.48	50.00	AVRG
Chloroform	0.8930000	0.9060075	0.9060075	0.2	-1.46	50.00	AVRG
Chloromethane	0.7020000	0.6160667	0.6160667	0.1	12.24	50.00	AVRG
cis-1,2-Dichloroethene	0.5500000	0.5808314	0.5808314	0.1	-5.60	50.00	AVRG
Dibromochloromethane	0.4000000	0.3835780	0.3835780	0.1	4.10	50.00	AVRG
Dichlorodifluoromethane	0.4890000	0.4283666	0.4283666	0.1	12.40	50.00	AVRG
Ethylbenzene	0.5060000	0.5167604	0.5167604	0.1	-2.13	50.00	AVRG
Hexachlorobutadiene	0.2680000	0.2559390	0.2559390	0.1	4.50	50.00	AVRG
Isopropylbenzene	1.4850000	1.5280143	1.5280143	0.1	-2.90	50.00	AVRG
m,p-Xylenes	0.6100000	0.6168593	0.6168593	0.1	-1.12	50.00	AVRG
Methylene Chloride	51.869395	50.000000	0.5341258	0.1	-3.74	50.00	LINR
n-Butylbenzene	2.2110000	2.3286063	2.3286063	0.5	-5.32	50.00	AVRG
n-Propylbenzene	3.6020000	3.8525369	3.8525369	0.1	-6.96	50.00	AVRG
Naphthalene	44.598864	50.000000	0.3556453	0.2	10.80	50.00	2RDR
o-Xylene	0.6000000	0.6089697	0.6089697	0.3	-1.49	50.00	AVRG
sec-Butylbenzene	3.0380000	3.2296336	3.2296336	0.1	-6.31	50.00	AVRG
Styrene	1.0410000	1.0629797	1.0629797	0.3	-2.11	50.00	AVRG
Vinyl Chloride	0.6440000	0.6646461	0.6646461	0.1	-3.20	50.00	AVRG
1,2,3-Trichloropropane	0.7320000	0.7036931	0.7036931	0.1	3.87	50.00	AVRG
p-Isopropyltoluene	2.7680000	2.9293535	2.9293535	0.1	-5.83	50.00	AVRG
1,2-Dibromo-3-Chloropropane	42.140885	50.000000	6.01e-002	0.05	15.72	50.00	LINR
1,2-Dichloroethane-d4	0.5820000	0.5522947	0.5522947	0.1	5.10	50.00	AVRG
Dibromofluoromethane	0.4910000	0.4769205	0.4769205	0.1	2.87	50.00	AVRG
Toluene-d8	1.2130000	1.1780718	1.1780718	0.1	2.88	50.00	AVRG
4-Bromofluorobenzene	0.4680000	0.4415883	0.4415883	0.1	5.64	50.00	AVRG

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Lab File ID (Standard): X082003 Date Analyzed: 08/20/20

Instrument ID: VOA6 Time Analyzed: 1057

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	583866	7.67	640974	4.97	270234	9.66
	UPPER LIMIT	1167732	8.17	1281948	5.47	540468	10.16
	LOWER LIMIT	291933	7.17	320487	4.47	135117	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200820	568613	7.67	626486	4.97	265495	9.67
02	VBLKW-200820	577312	7.67	673274	4.97	255038	9.67
03	HS20080801-02	597988	7.67	686943	4.97	268483	9.67
04	HS20080801-01	603286	7.67	692365	4.97	278071	9.67
05	HS20080801-01	561449	7.67	635152	4.97	258565	9.67
06	HS20080801-01	556790	7.67	628831	4.97	250525	9.67
07							
08							
09							
10							
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16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080801

Lab File ID (Standard): X082003 Date Analyzed: 08/20/20

Instrument ID: VOA6 Time Analyzed: 1057

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	417454	4.19				
	UPPER LIMIT	834908	4.69				
	LOWER LIMIT	208727	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200820	408777	4.19				
02	VBLKW-200820	457575	4.19				
03	HS20080801-02	464780	4.19				
04	HS20080801-01	467501	4.19				
05	HS20080801-01	427526	4.19				
06	HS20080801-01	420317	4.19				
07							
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

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082002.D Page 1

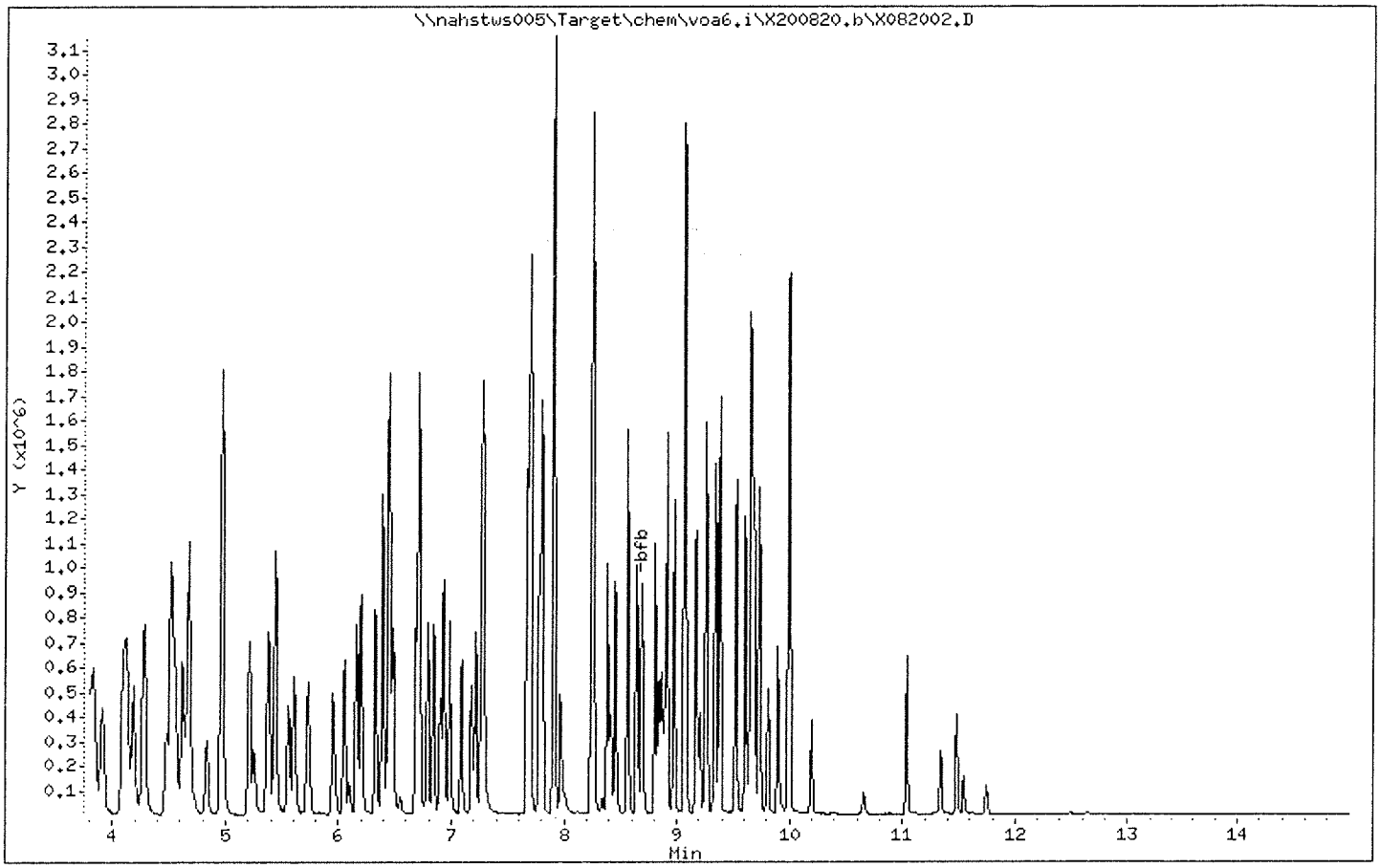
Date : 20-AUG-2020 10:33

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082002.D

Date : 20-AUG-2020 10:33

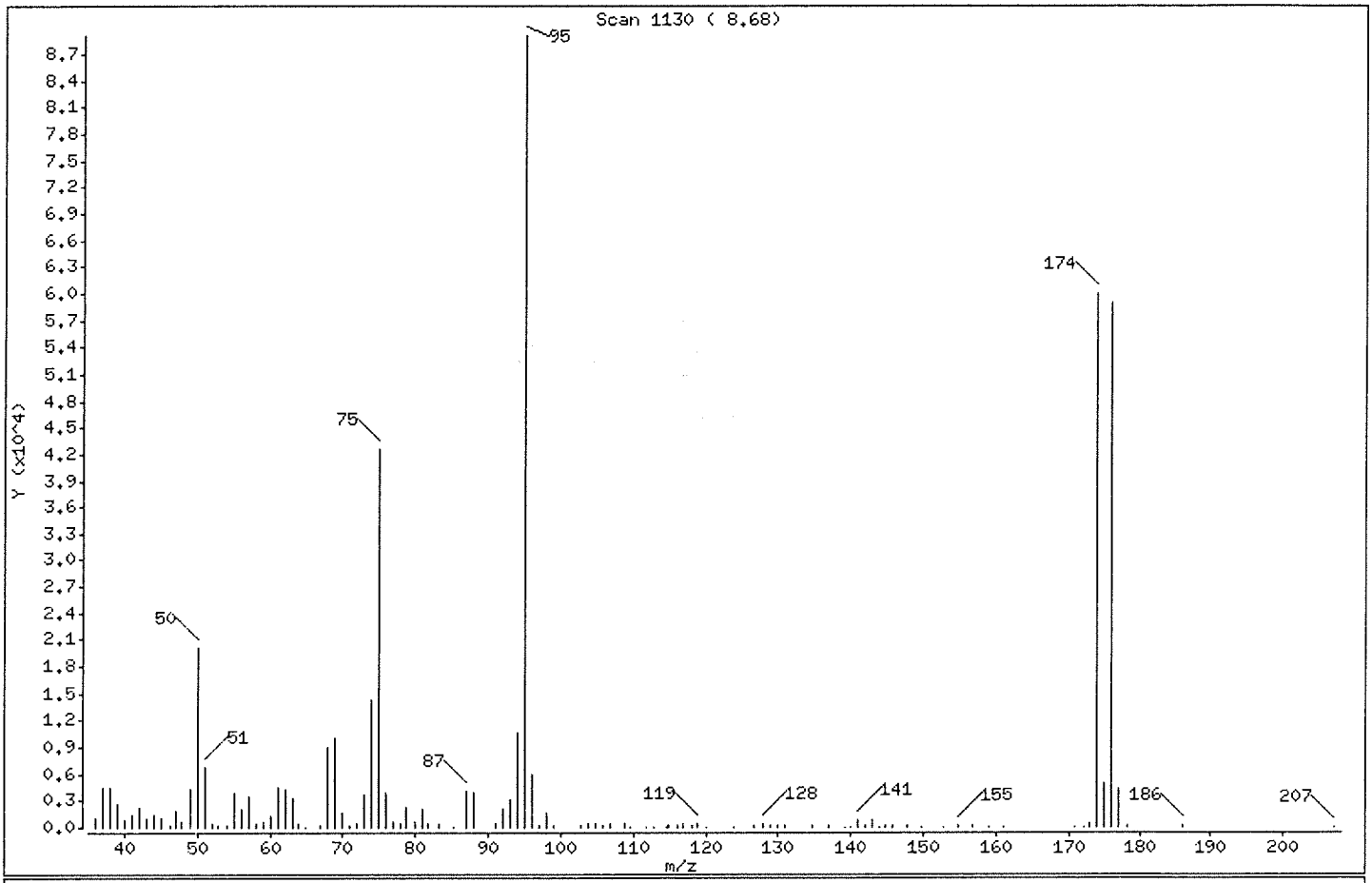
Client ID: BFB Instrument: voa6.i

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	22.55
75	30.00 - 60.00% of mass 95	47.92
96	5.00 - 9.00% of mass 95	6.72
173	Less than 2.00% of mass 174	0.46 (0.69)
174	Greater than 50.00% of mass 95	67.33
175	5.00 - 9.00% of mass 174	5.43 (8.06)
176	95.00 - 101.00% of mass 174	66.26 (98.41)
177	5.00 - 9.00% of mass 176	4.84 (7.30)

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082002.D

Date : 20-AUG-2020 10:33

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: X082002.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1019	64.00	436	97.00	282	140.00	102
37.00	4606	65.00	83	98.00	1619	140.90	901
38.00	4458	67.00	303	99.00	122	141.90	203
39.00	2762	68.00	9092	102.70	109	142.90	753
39.90	806	69.00	10069	103.90	402	143.90	53
41.00	1444	70.00	1601	104.90	329	144.80	153
42.00	2329	71.00	250	105.80	266	145.80	107
43.10	995	71.90	499	106.90	405	147.80	210
44.00	1371	73.00	3686	108.80	353	149.80	69
45.10	1096	74.00	14304	109.60	50	152.70	58
46.20	116	75.00	42680	111.90	76	154.80	270
47.00	1754	76.00	3955	112.90	66	156.90	157
47.90	654	76.90	657	114.50	59	159.00	68
49.00	4286	77.90	417	114.90	118	161.00	59
50.00	20088	78.80	2172	116.00	261	170.90	74
51.00	6712	80.00	691	116.80	454	172.00	89
52.00	332	80.90	1963	118.00	238	172.80	414
52.90	231	81.70	495	118.90	474	173.90	59968
54.00	288	83.10	405	120.10	53	174.90	4833
55.00	3986	85.10	85	123.80	68	175.90	59016
56.00	2038	87.00	4085	126.70	179	176.90	4309
57.00	3402	87.90	3966	127.90	342	178.00	173
58.00	329	90.90	356	128.90	241	185.90	148
59.00	543	92.00	1997	129.80	196	207.00	52
60.00	1140	92.90	3077	130.80	174		
61.00	4506	94.00	10564	134.80	178		
62.00	4373	95.00	89072	136.90	138		
63.00	3288	96.00	5983	139.10	81		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082003.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 20-AUG-2020 10:57
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:39 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

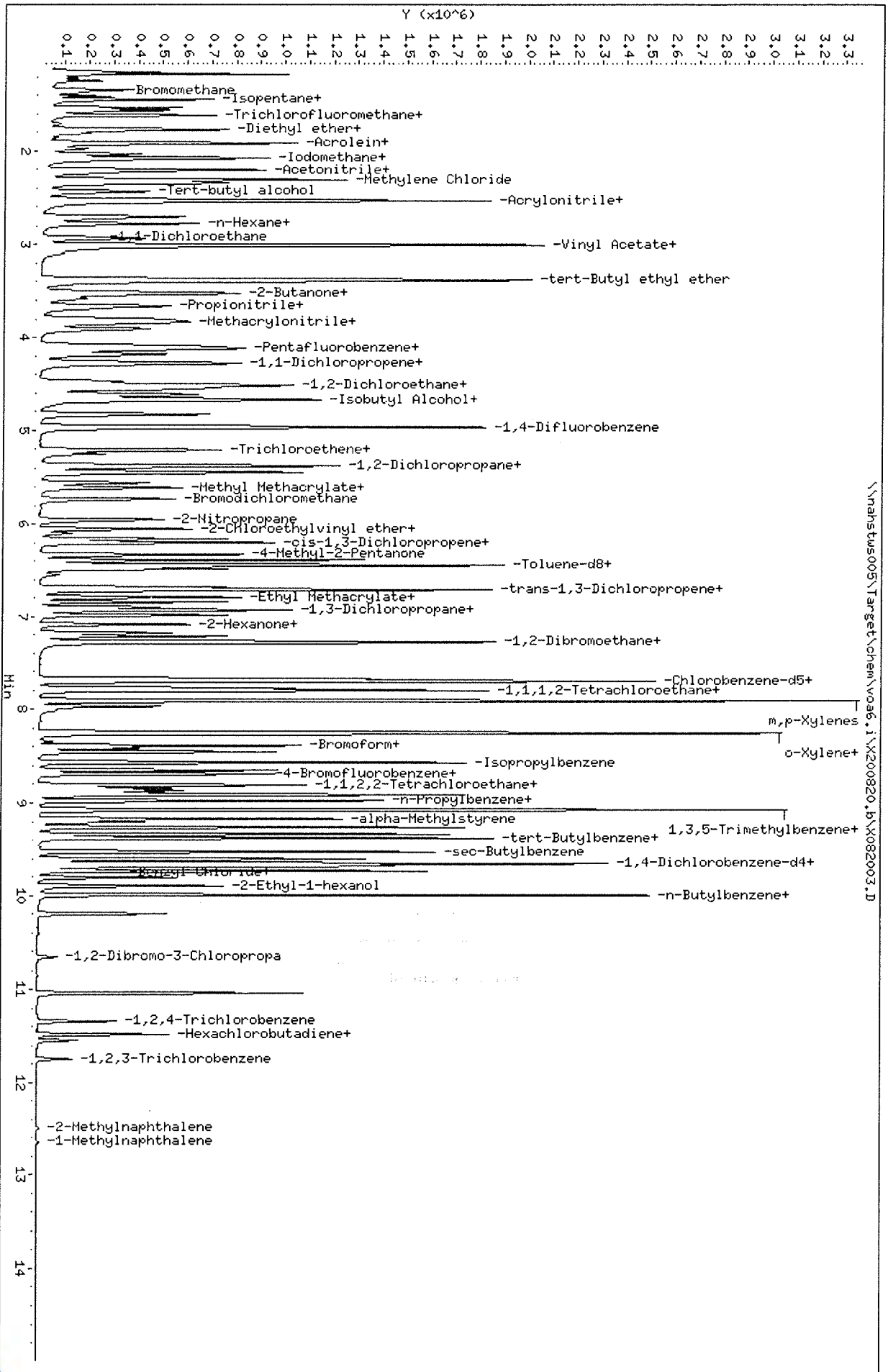
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	417454	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	640974	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	583866	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	270234	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	206710	50.0000	50.42
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	235801	50.0000	48.52
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	717900	50.0000	50.69
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	268058	50.0000	49.06
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	233043	50.0000	52.43
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	342059	50.0000	53.19
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	226964	50.0000	52.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	174273	50.0000	52.45
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	462464	50.0000	56.71
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	187808	50.0000	56.78
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	290621	50.0000	53.95
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	40337	50.0000	49.60
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	196047	50.0000	49.56(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	88678	50.0000	56.72
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	816521	50.0000	56.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	16629	50.0000	43.13
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	225349	50.0000	52.65
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	396600	50.0000	51.88

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082003.D Page 2
Report Date: 11-Sep-2020 15:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	323157	50.0000	52.07
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	266209	50.0000	56.58
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	801922	50.0000	56.78
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	457476	50.0000	53.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	348818	50.0000	53.17
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	457698	50.0000	54.48
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	329042	50.0000	55.26
24	2-Butanone	43	3.580	3.580	(0.855)	218672	100.000	106.85
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	653887	50.0000	55.77
52	2-Hexanone	43	7.090	7.090	(0.924)	352861	100.000	96.26
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	758342	50.0000	55.59
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	860894	50.0000	57.52
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	518051	100.000	95.86
10	Acetone	43	1.976	1.976	(0.472)	149892	100.000	103.03
37	Benzene	78	4.519	4.519	(0.909)	883257	50.0000	55.54
74	Bromobenzene	156	8.810	8.810	(0.912)	285858	50.0000	54.07
29	Bromochloromethane	128	3.803	3.803	(0.908)	132181	50.0000	52.53
39	Bromodichloromethane	83	5.729	5.729	(1.153)	299314	50.0000	51.87
66	Bromoform	173	8.416	8.416	(1.097)	155933	50.0000	48.13
6	Bromomethane	94	1.346	1.346	(0.321)	133413	50.0000	46.47
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1159148	100.000	112.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	290501	50.0000	50.74
59	Chlorobenzene	112	7.699	7.699	(1.004)	623258	50.0000	54.46
7	Chloroethane	64	1.403	1.403	(0.335)	158577	50.0000	53.59(M)
28	Chloroform	83	3.910	3.910	(0.933)	401628	50.0000	53.85
3	Chloromethane	50	1.081	1.081	(0.258)	261764	50.0000	44.65
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	253811	50.0000	55.23
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	366638	50.0000	54.34
55	Dibromochloromethane	129	7.176	7.176	(0.936)	237583	50.0000	50.79
44	Dibromomethane	93	5.557	5.557	(1.118)	146269	50.0000	52.43
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	191613	50.0000	46.89
61	Ethylbenzene	106	7.800	7.800	(1.017)	329418	50.0000	55.75
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	91411	50.0000	63.00
67	Isopropylbenzene	105	8.566	8.566	(1.117)	971103	50.0000	55.99
62	m,p-Xylenes	106	7.907	7.907	(1.031)	787399	100.000	110.42
17	Methylene Chloride	84	2.305	2.305	(0.550)	231203	50.0000	53.83
87	n-Butylbenzene	91	9.999	9.999	(1.035)	711199	50.0000	59.50
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1120166	50.0000	57.54
92	Naphthalene	128	11.546	11.546	(1.195)	115871	50.0000	53.45
63	o-Xylene	106	8.244	8.244	(1.075)	379256	50.0000	54.14
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	942670	50.0000	57.42
64	Styrene	104	8.258	8.258	(1.077)	656443	50.0000	53.97
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	692149	50.0000	56.53
56	Tetrachloroethene	164	6.933	6.933	(0.904)	205726	50.0000	55.42
50	Toluene	91	6.446	6.446	(0.840)	934311	50.0000	54.79
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	218301	50.0000	55.78
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	317260	50.0000	51.30
38	Trichloroethene	130	5.207	5.207	(1.048)	251245	50.0000	55.30
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	331439	50.0000	53.91
5	Vinyl Chloride	62	1.145	1.145	(0.273)	291707	50.0000	54.28

QC Flag Legend

M - Compound response manually integrated.

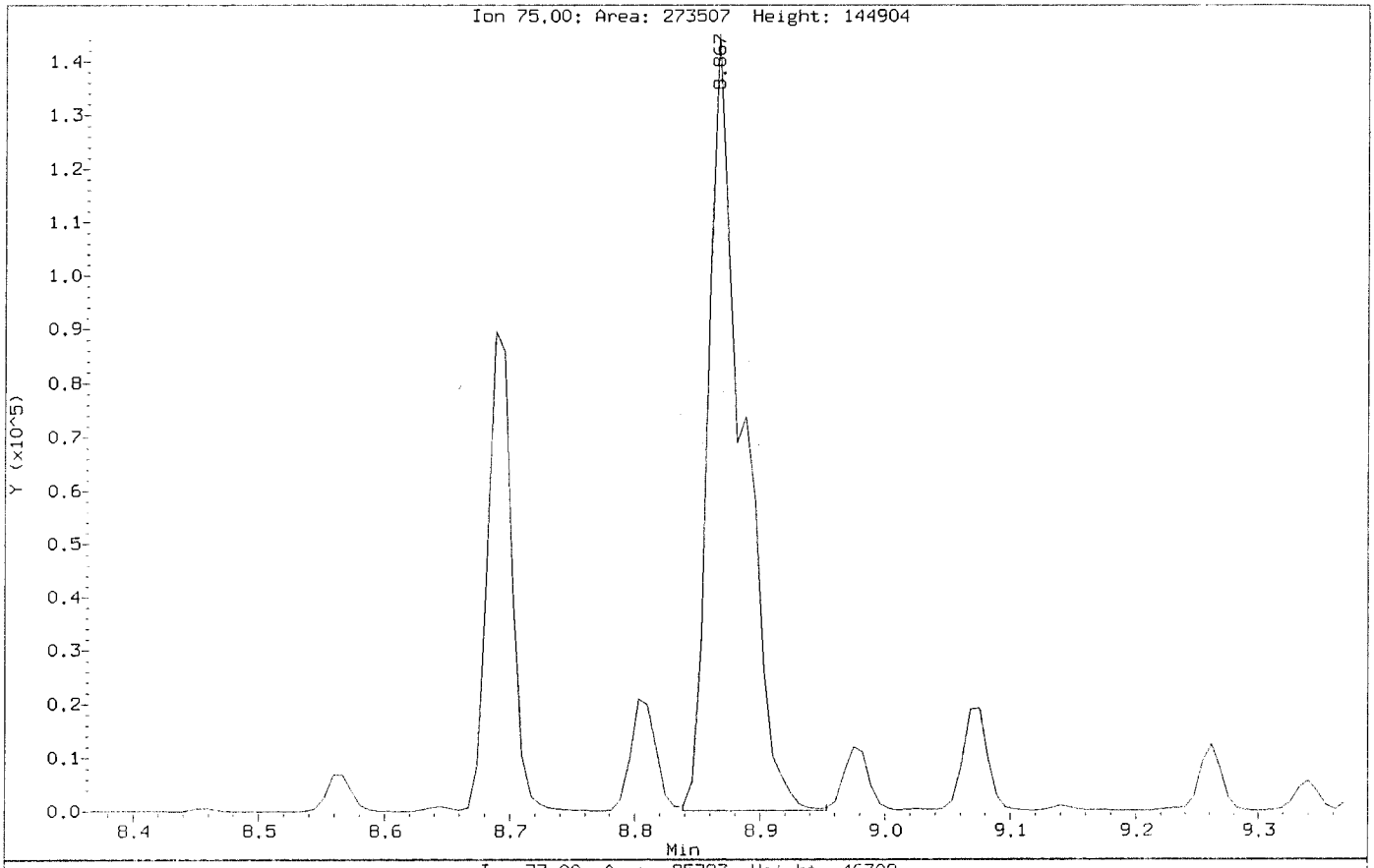


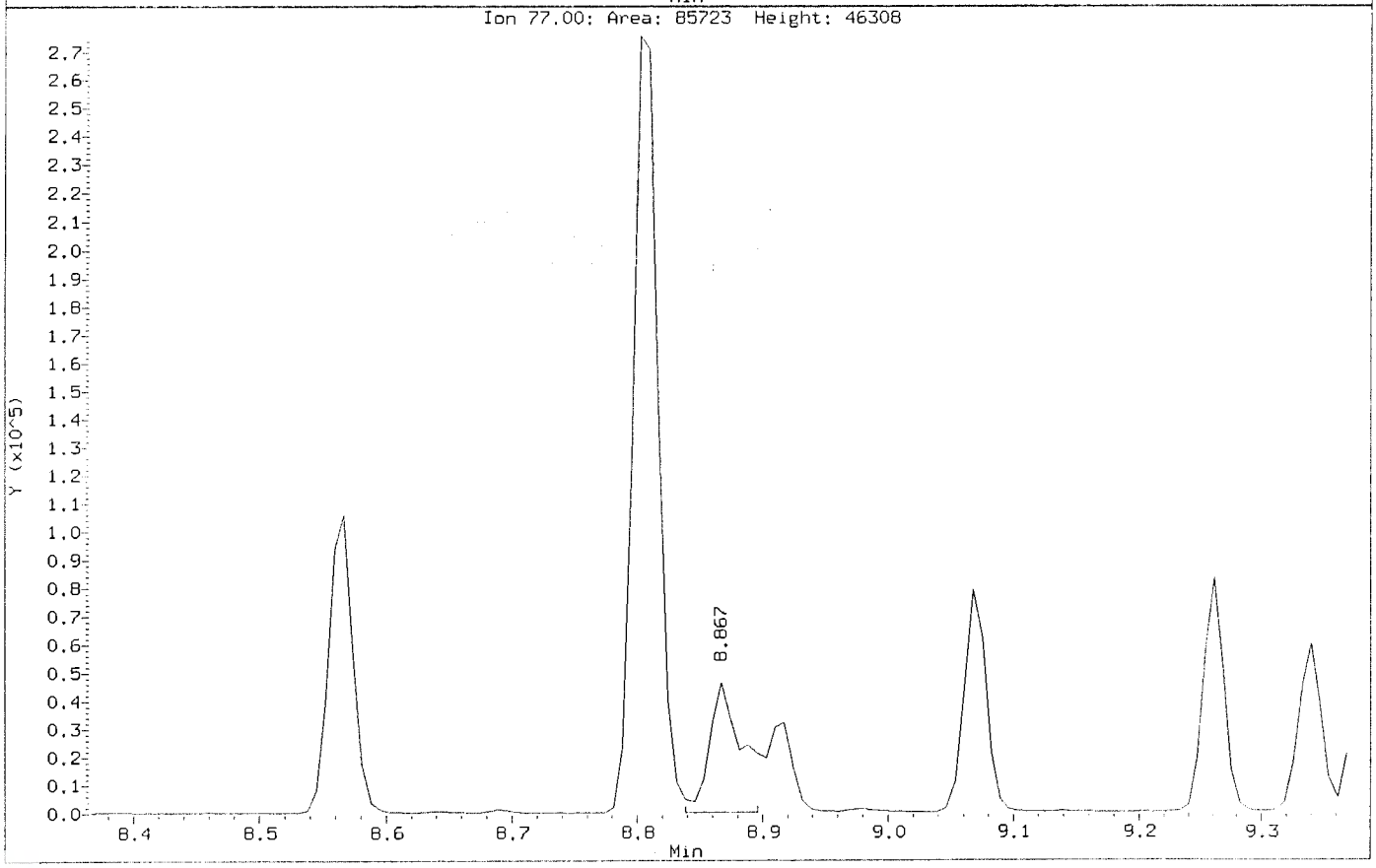
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Date : 20-AUG-2020 10:57
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\Before\X082003.D
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Instrument: voa6.i
Client Sample ID: CCV

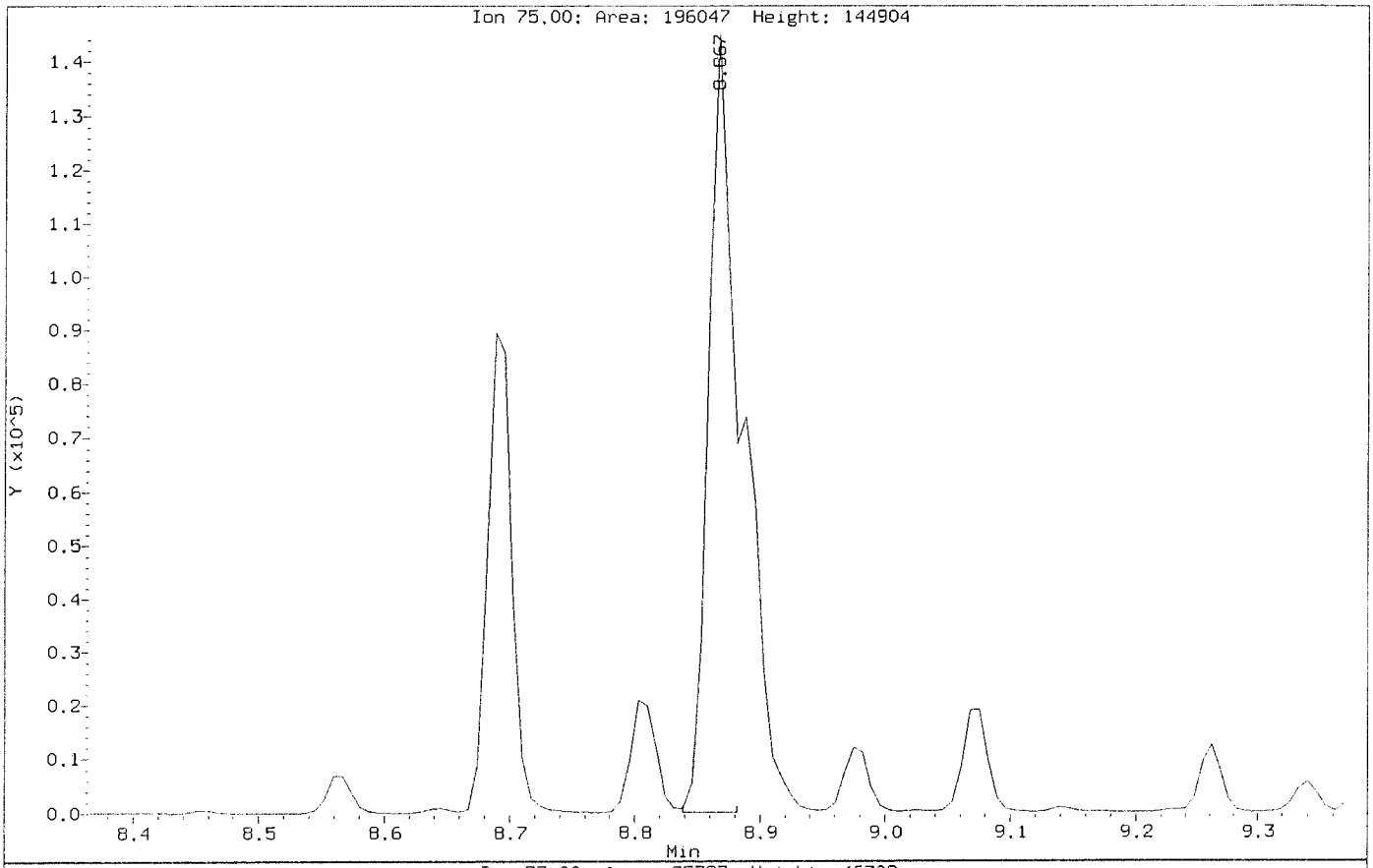
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CAS Number: 96-18-4

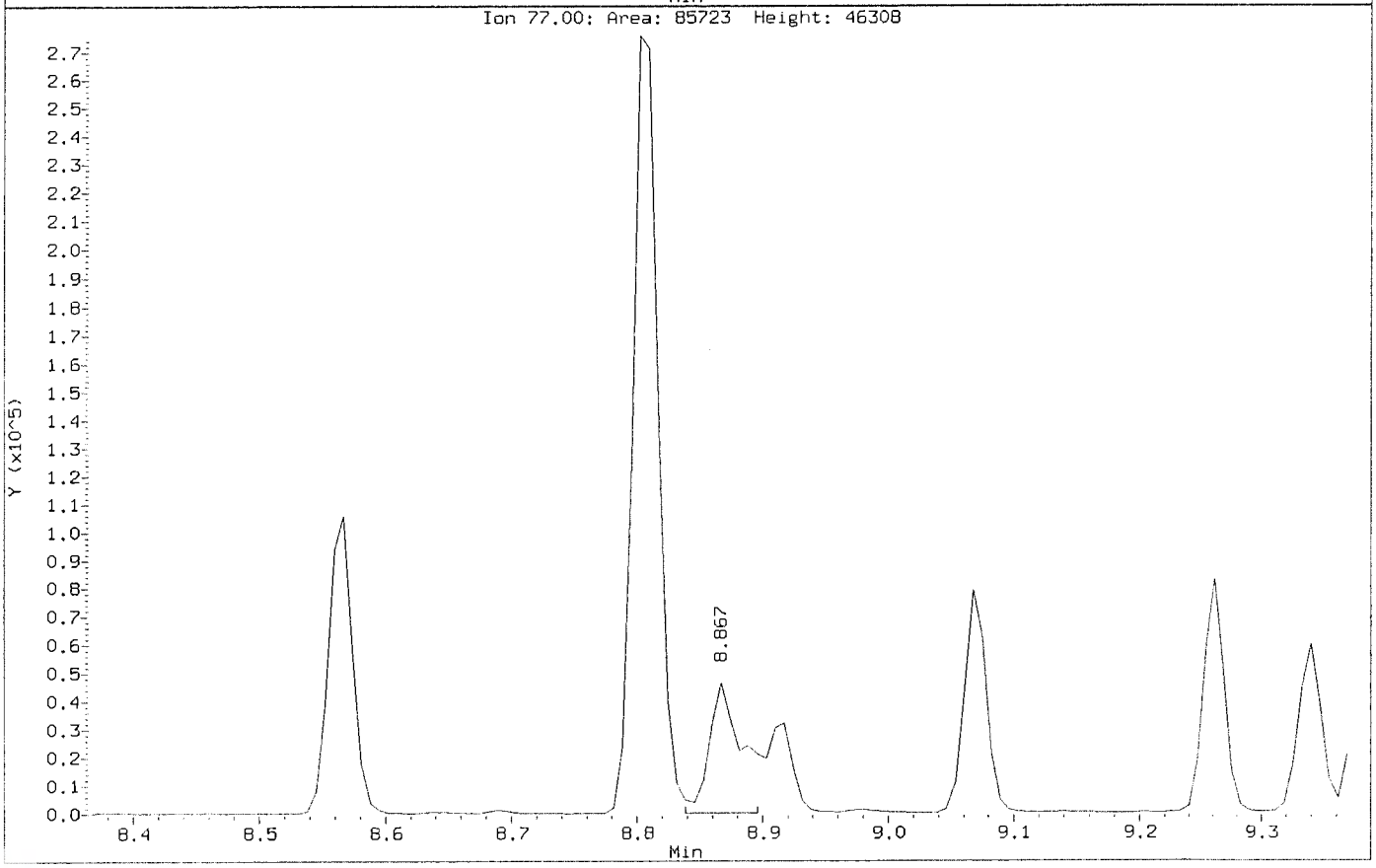




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Instrument: voa6.i
Client Sample ID: CCV

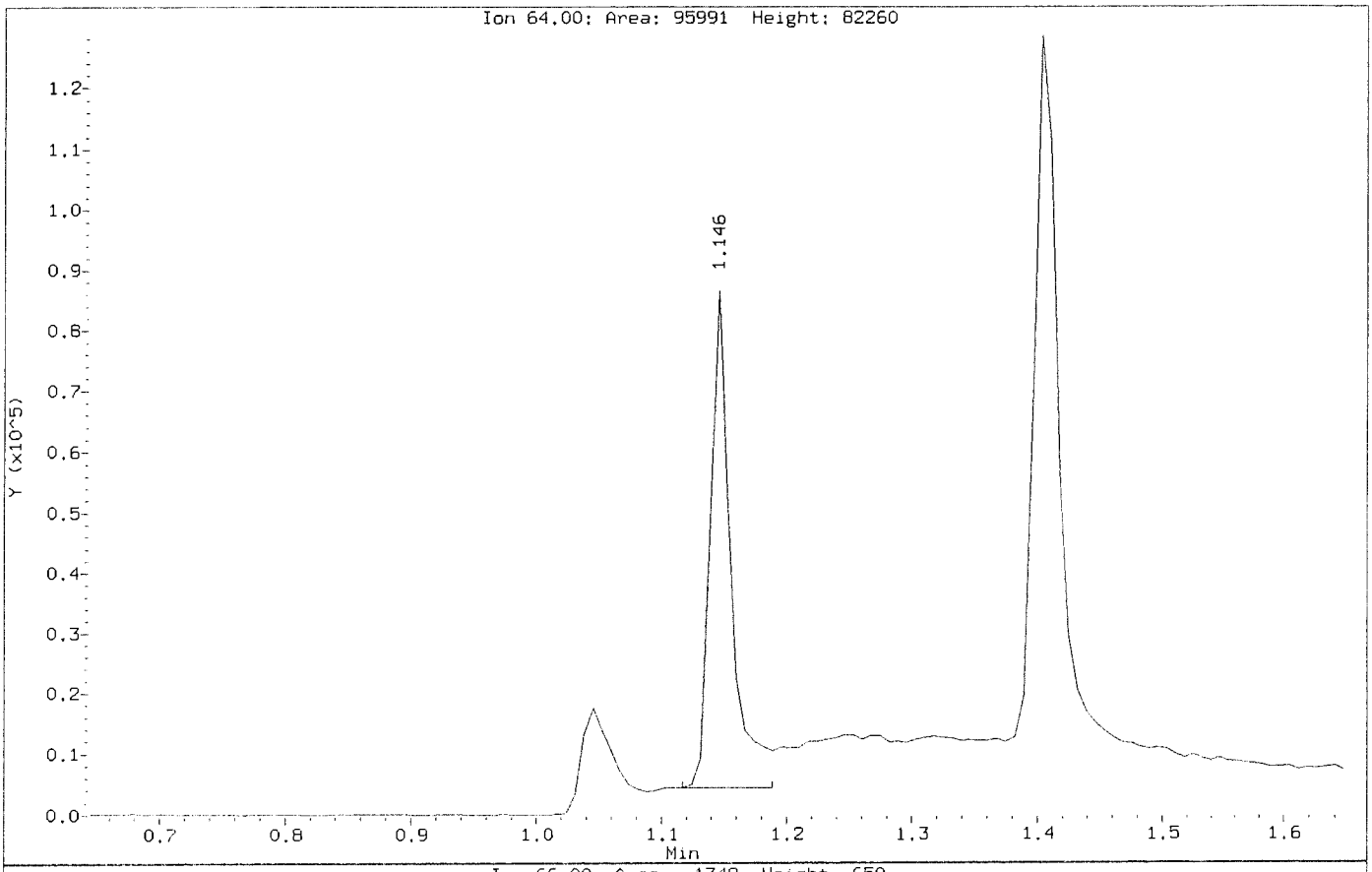
Compound: 1,2,3-Trichloropropane
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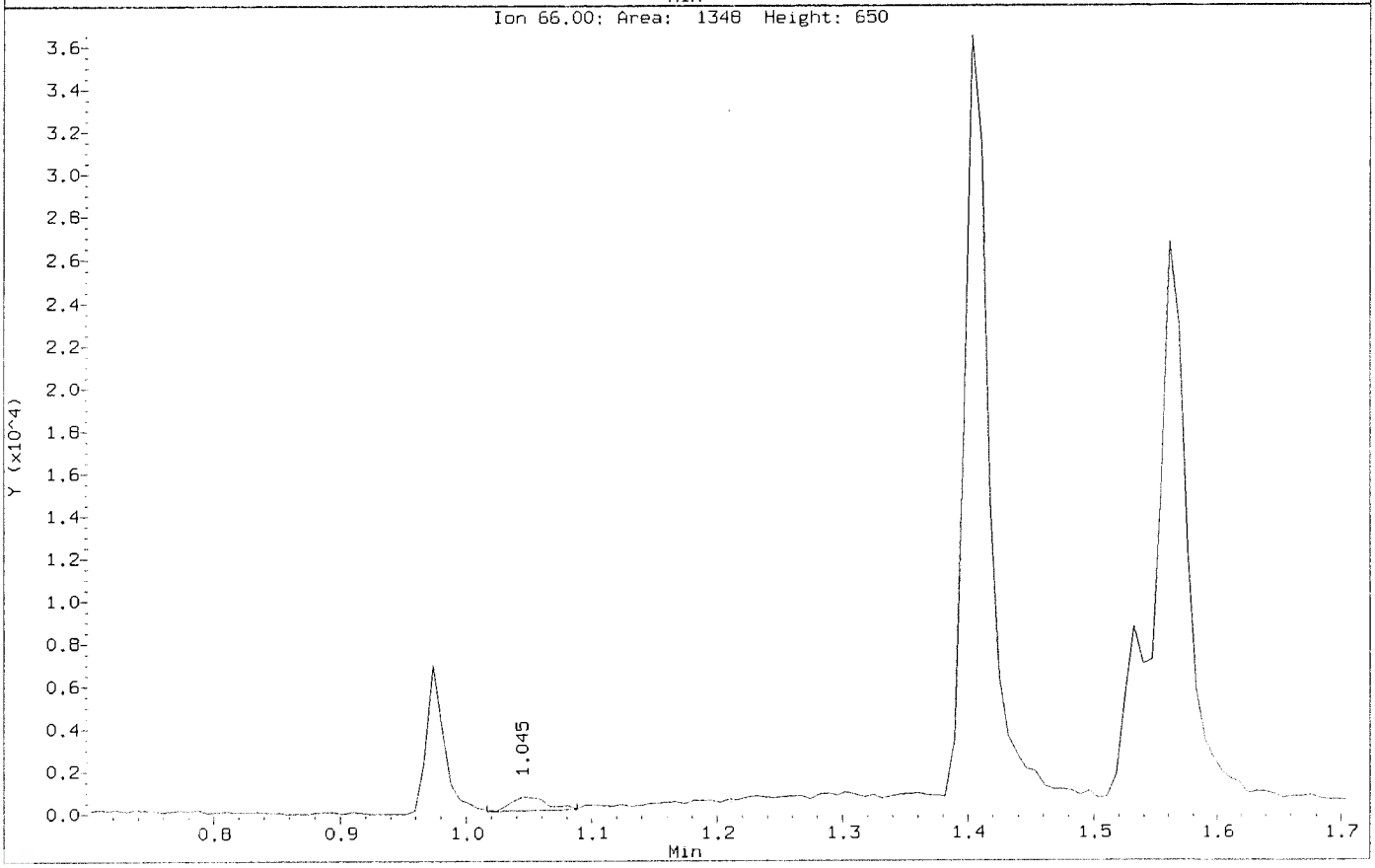




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Client Sample ID: CCV

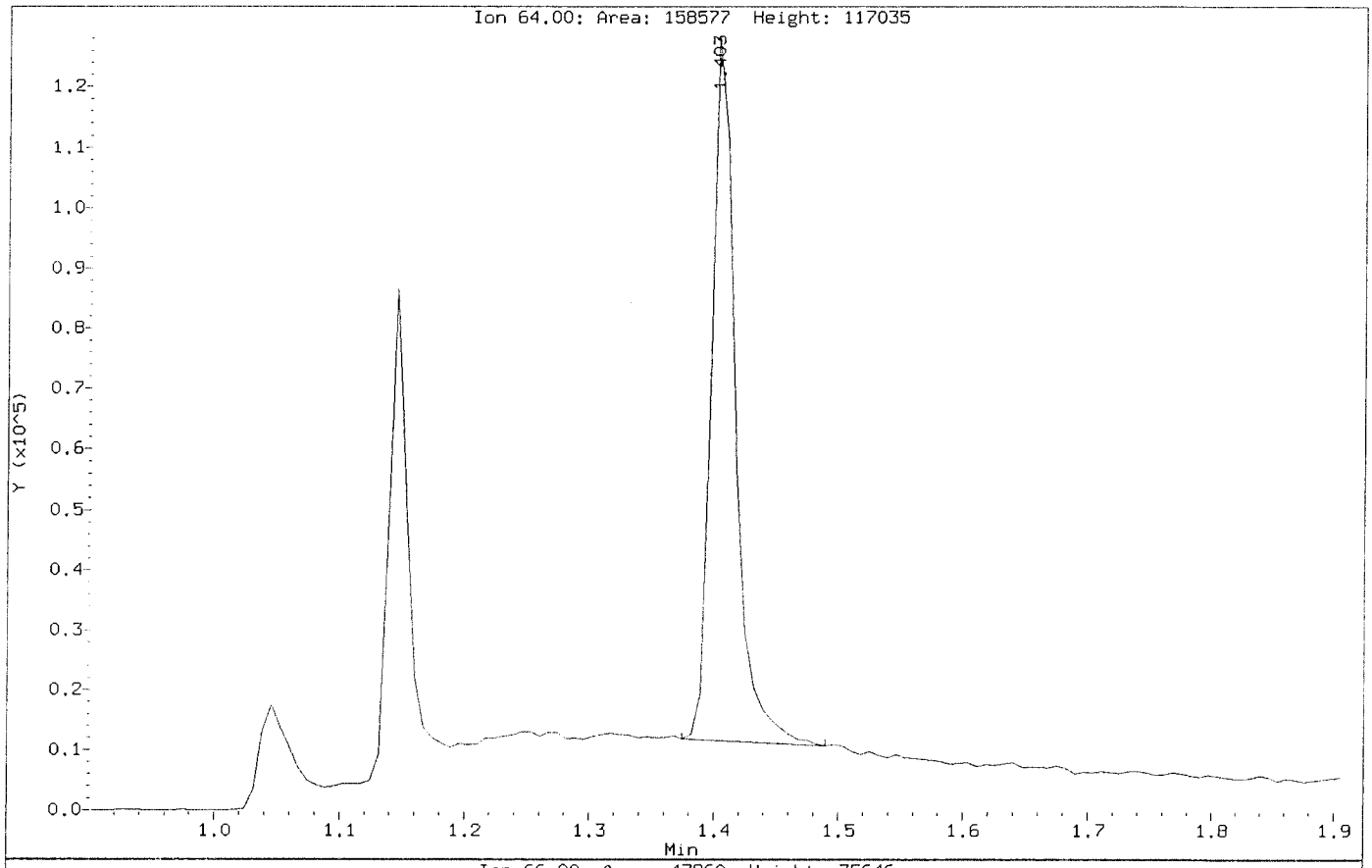
Compound: Chloroethane
CAS Number: 75-00-3

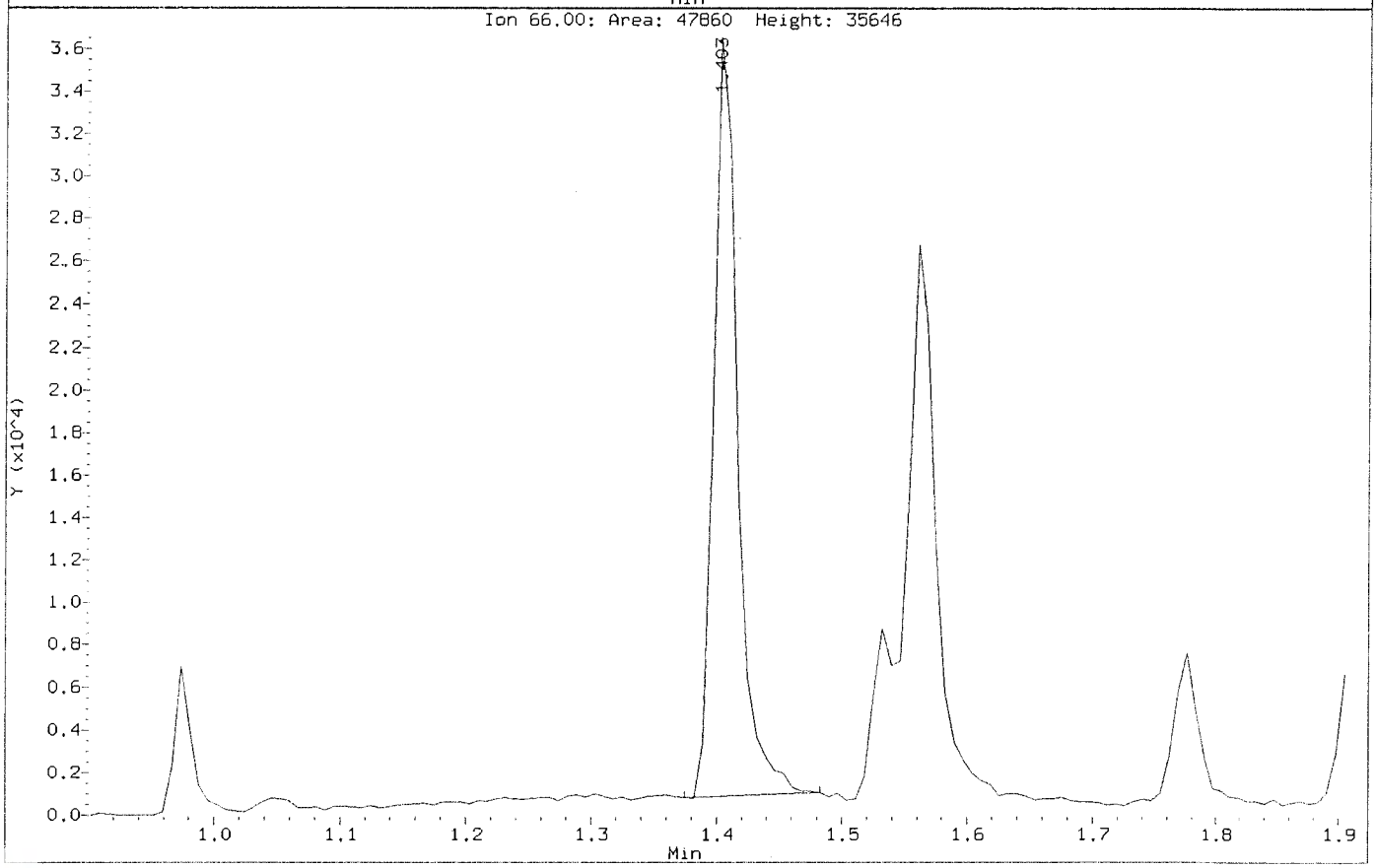




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Injection Date: 20-AUG-2020 10:57
Instrument: voa6.i
Client Sample ID: CCV

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082005.D
Lab Smp Id: VLCSW-200820 Client Smp ID: VLCSW-200820
Inj Date : 20-AUG-2020 11:45
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200820;VLCSW-200820;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:39 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

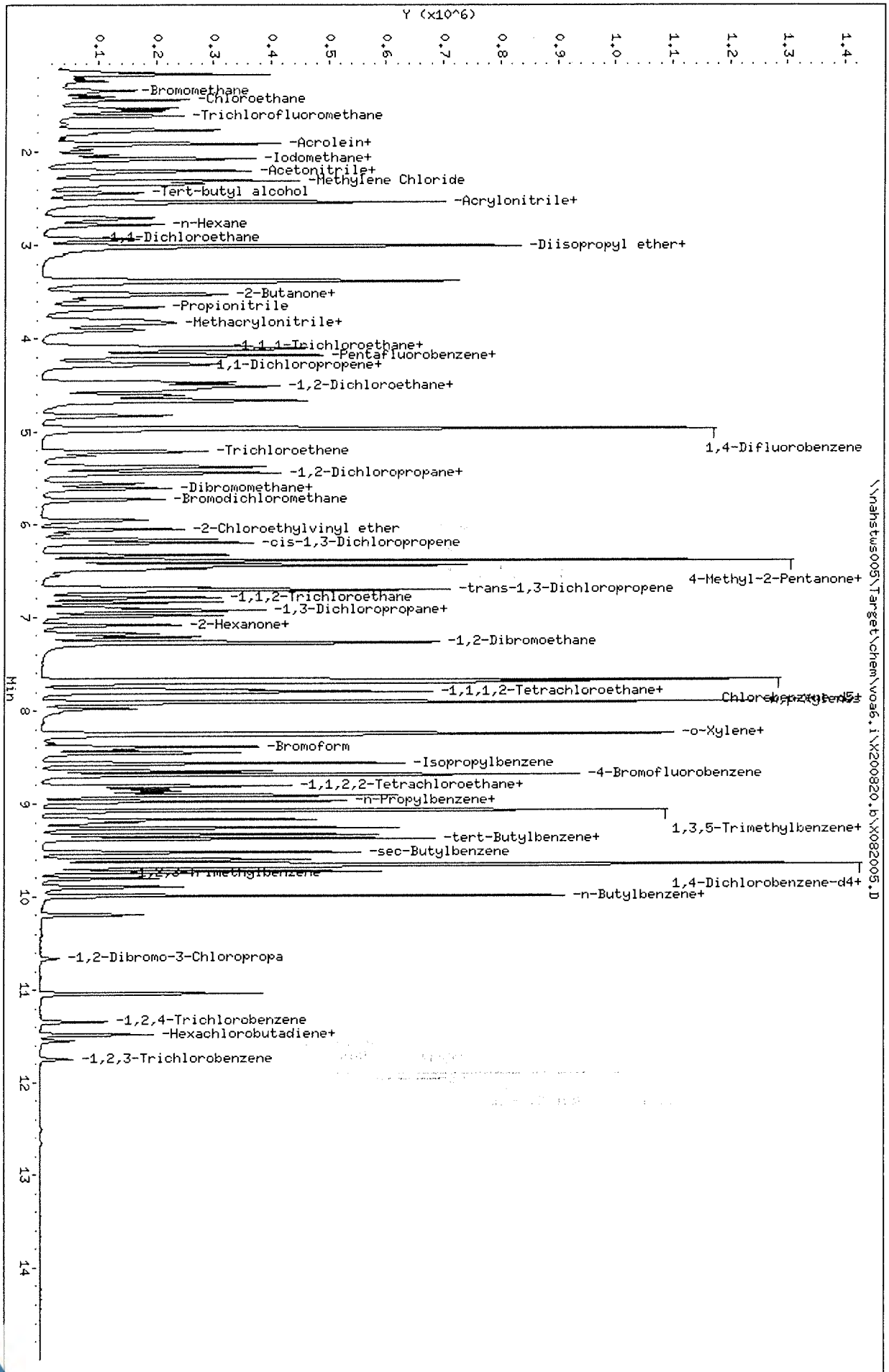
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	408777	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	626486	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	568613	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	265495	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	207889	51.7870	51.78
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	242971	51.0631	51.06
$	48 Toluene-d8	98	6.388	6.388	(0.833)	725070	52.5717	52.57
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	267663	50.3074	50.30
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	89553	20.6899	20.68
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	132104	20.9804	20.98
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	91813	21.6863	21.68
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	70890	21.9103	21.91
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	184806	23.1446	23.14
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	73730	22.7641	22.76
	32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	112134	21.2999	21.29
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	16403	20.5309	20.53
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	77370	19.9092	19.90(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	32634	21.2783	21.27
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	298267	21.0293	21.02
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6621	17.9546	17.95
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	90501	21.7122	21.71
	88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	150158	19.9957	19.99

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082005.D Page 2
Report Date: 11-Sep-2020 15:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	131129	21.6181	21.61
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	105428	22.9297	22.92
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	286898	20.6799	20.67
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	171488	20.5499	20.54
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	141323	22.1217	22.12
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	169666	20.5591	20.55
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	131449	22.5457	22.54
24	2-Butanone	43	3.588	3.580	(0.856)	85148	42.4909	42.49
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	245310	21.2969	21.29
52	2-Hexanone	43	7.090	7.090	(0.924)	139010	38.9417	38.94
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	279552	20.8615	20.86
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	300987	20.4726	20.47
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	210526	40.0043	40.00
10	Acetone	43	1.976	1.976	(0.472)	64603	44.7515	44.75
37	Benzene	78	4.519	4.519	(0.909)	350562	22.5539	22.55
74	Bromobenzene	156	8.810	8.810	(0.911)	109942	21.1689	21.16
29	Bromochloromethane	128	3.803	3.803	(0.908)	53483	21.7059	21.70
39	Bromodichloromethane	83	5.729	5.729	(1.153)	118257	20.9686	20.96
66	Bromoform	173	8.416	8.416	(1.097)	59871	18.9777	18.97
6	Bromomethane	94	1.346	1.346	(0.321)	55399	20.0861	20.08
19	Carbon Disulfide	76	2.076	2.076	(0.496)	451539	44.9012	44.90
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	109347	19.5411	19.54
59	Chlorobenzene	112	7.699	7.699	(1.004)	241818	21.6992	21.69
7	Chloroethane	64	1.403	1.403	(0.335)	56802	19.6044	19.60(M)
28	Chloroform	83	3.917	3.910	(0.935)	161729	22.1451	22.14
3	Chloromethane	50	1.081	1.081	(0.258)	103109	17.9649	17.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	101934	22.6541	22.65
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	143879	21.8179	21.81
55	Dibromochloromethane	129	7.176	7.176	(0.936)	93531	20.5351	20.53
44	Dibromomethane	93	5.558	5.557	(1.118)	58362	21.4060	21.40
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	71977	17.9907	17.99
61	Ethylbenzene	106	7.800	7.800	(1.017)	121544	21.1225	21.12
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	35323	24.7816	24.78
67	Isopropylbenzene	105	8.566	8.566	(1.117)	348054	20.6059	20.60
62	m,p-Xylenes	106	7.907	7.907	(1.031)	294844	42.4595	42.45
17	Methylene Chloride	84	2.313	2.305	(0.552)	93679	21.4679	21.46
87	n-Butylbenzene	91	9.999	9.999	(1.034)	242112	20.6204	20.62
73	n-Propylbenzene	91	8.917	8.917	(0.922)	396827	20.7479	20.74
92	Naphthalene	128	11.546	11.546	(1.194)	42693	20.4331	20.43
63	o-Xylene	106	8.244	8.244	(1.075)	145779	21.3714	21.37
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	322608	20.0016	20.00
64	Styrene	104	8.265	8.258	(1.078)	252979	21.3585	21.35
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	242931	20.1966	20.19
56	Tetrachloroethene	164	6.933	6.933	(0.904)	77295	21.3838	21.38
50	Toluene	91	6.446	6.446	(0.840)	369016	22.2226	22.22
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	86401	22.5466	22.54
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	125284	20.7281	20.72
38	Trichloroethene	130	5.214	5.207	(1.049)	98963	22.2893	22.28
8	Trichlorofluoromethane	101	1.568	1.561	(0.374)	125559	20.8565	20.85
5	Vinyl Chloride	62	1.145	1.145	(0.273)	111088	21.1120	21.11

QC Flag Legend

M - Compound response manually integrated.

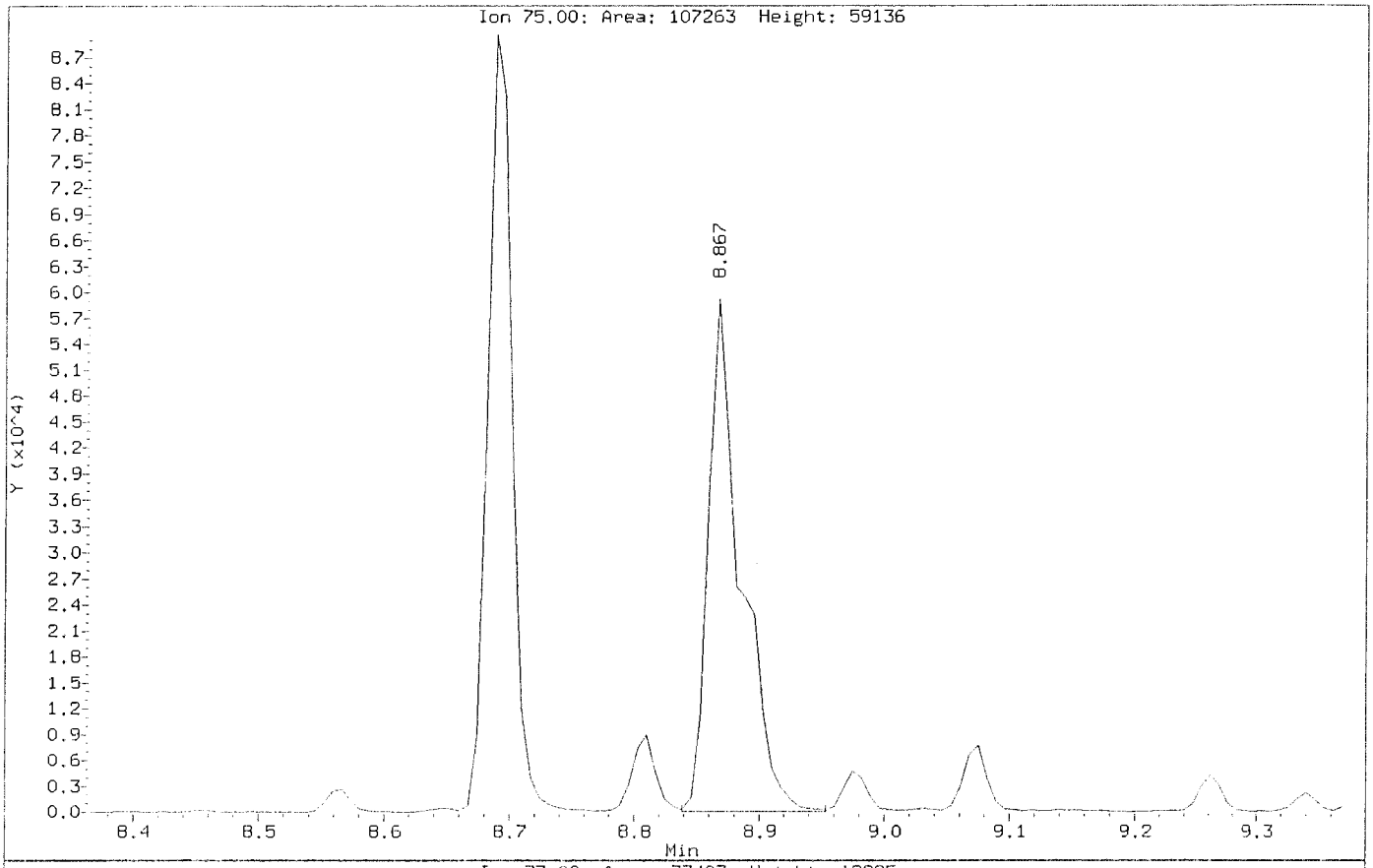


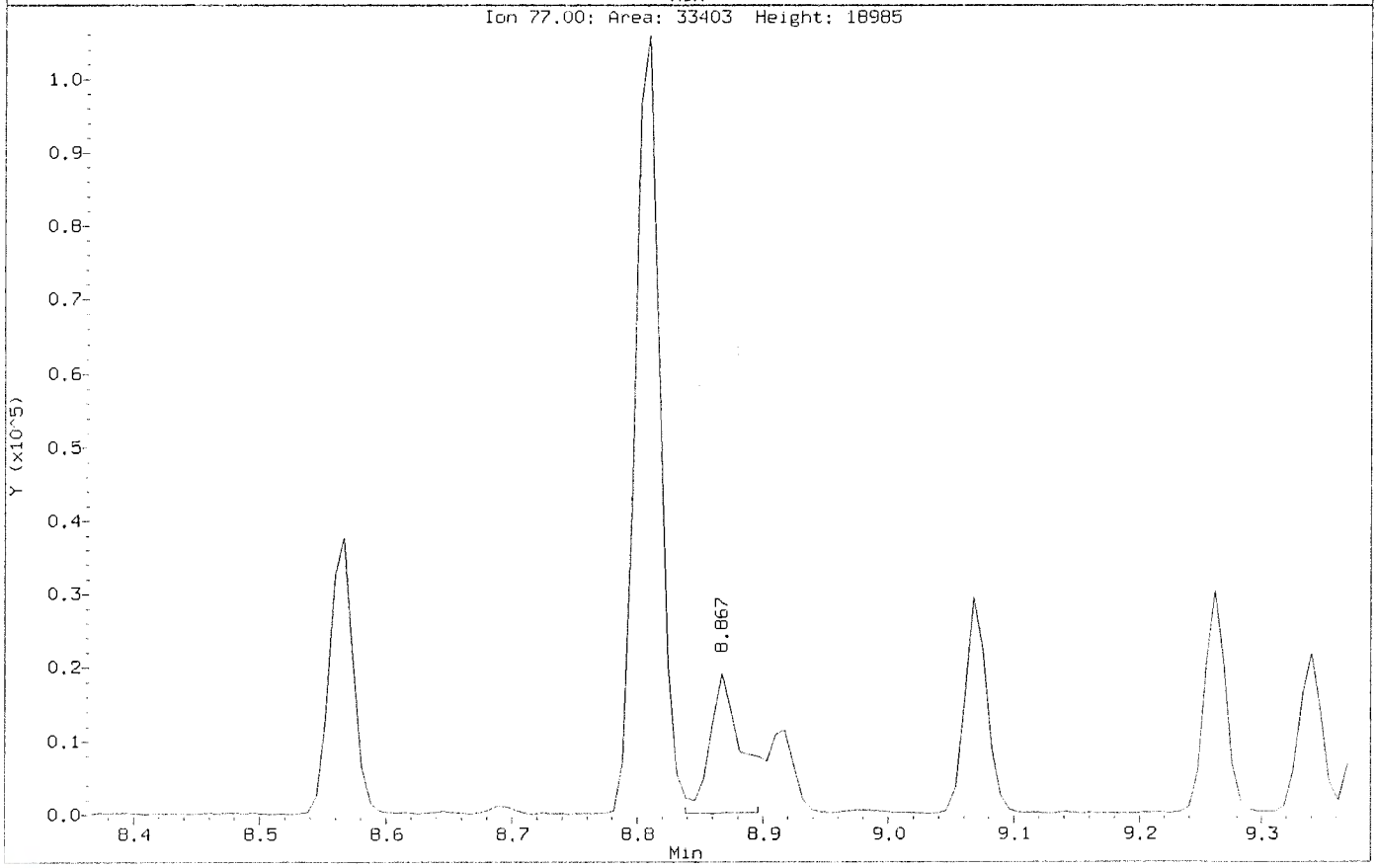
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Sample Info: VLCSW-200820;VLCSW-200820;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\Before\X082005.D
Injection Date: 20-AUG-2020 11:45
Instrument: voa6.i
Client Sample ID: VLCSW-200820

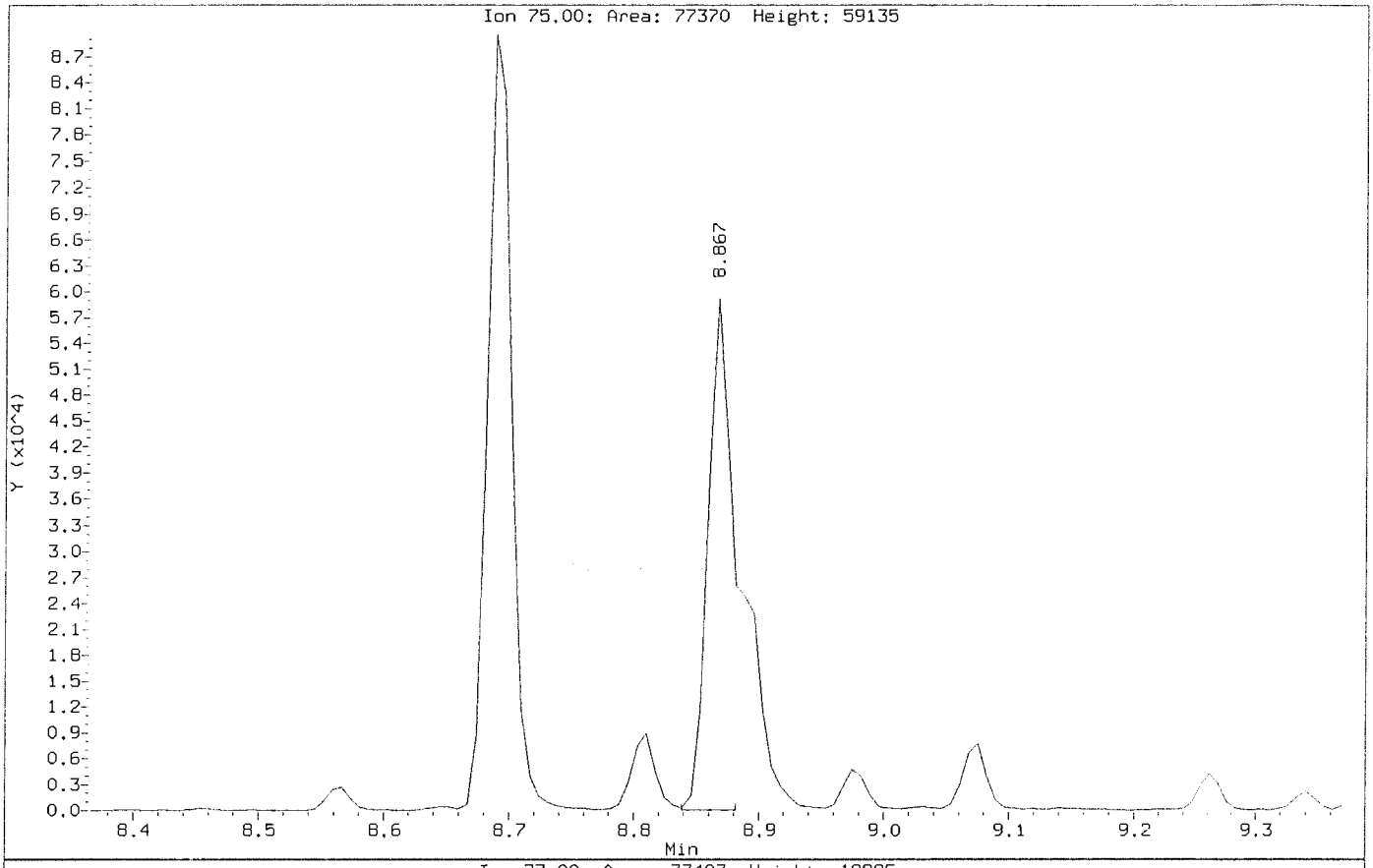
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

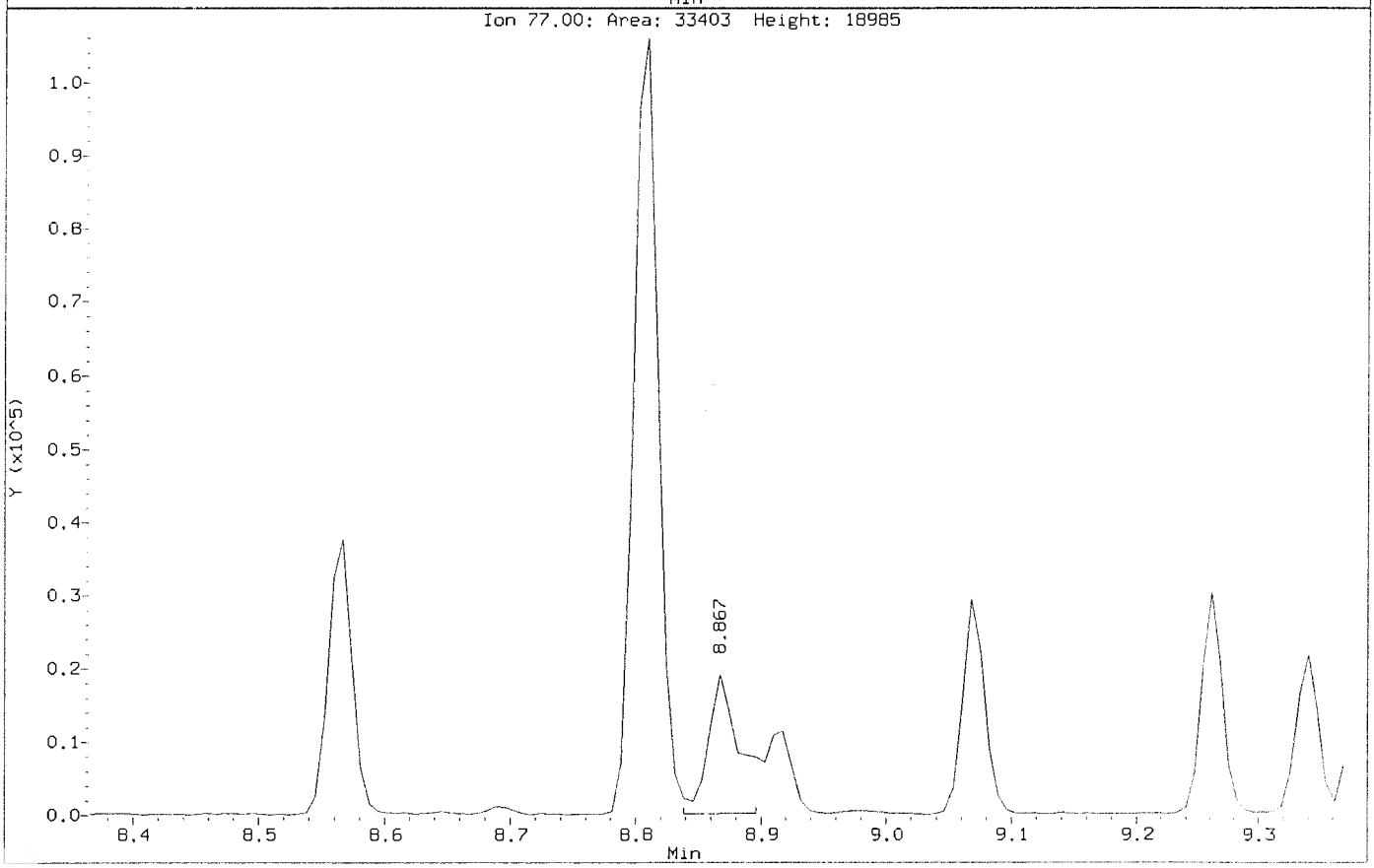




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Instrument: voa6.i
Client Sample ID: VLCSW-200820

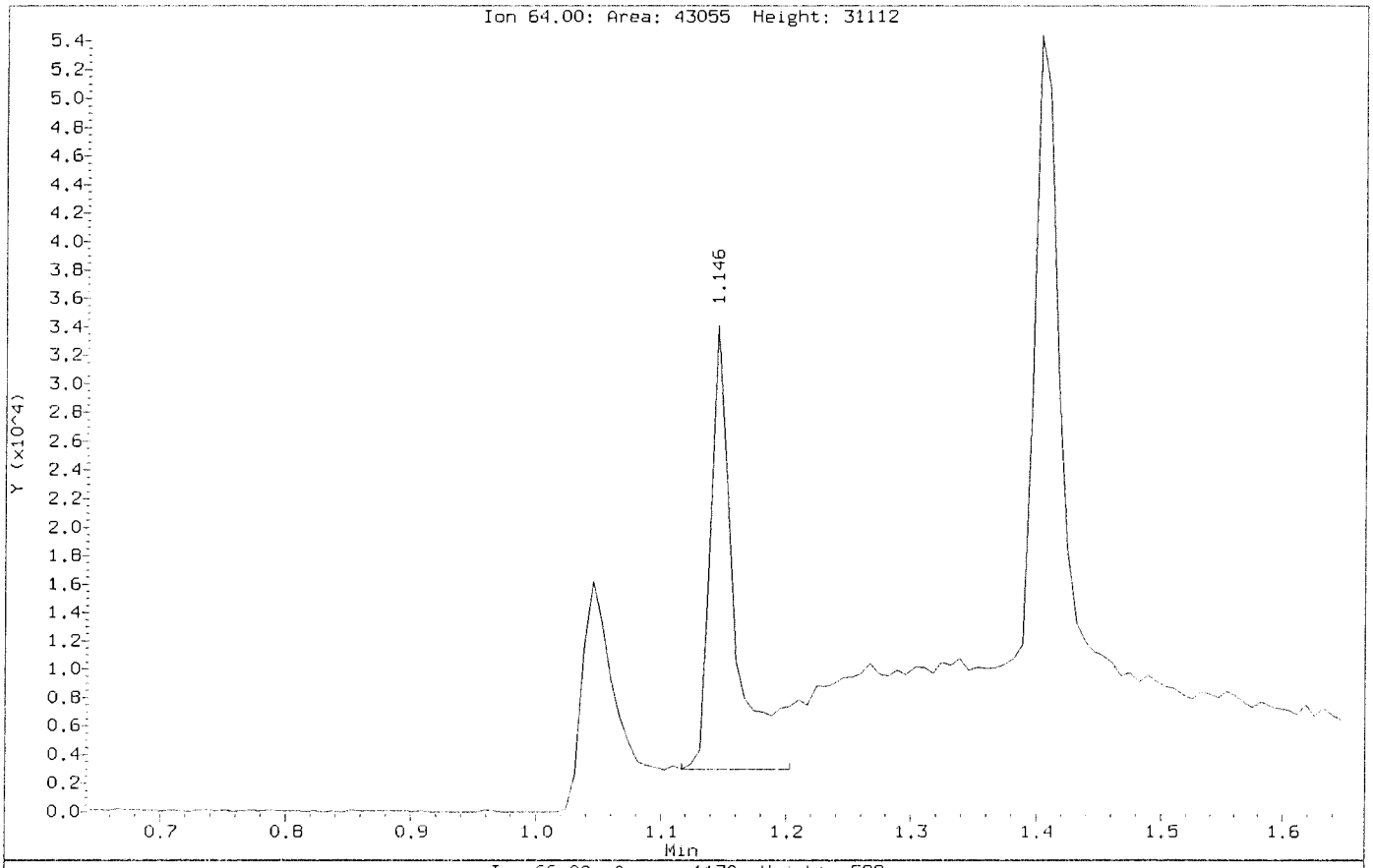
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

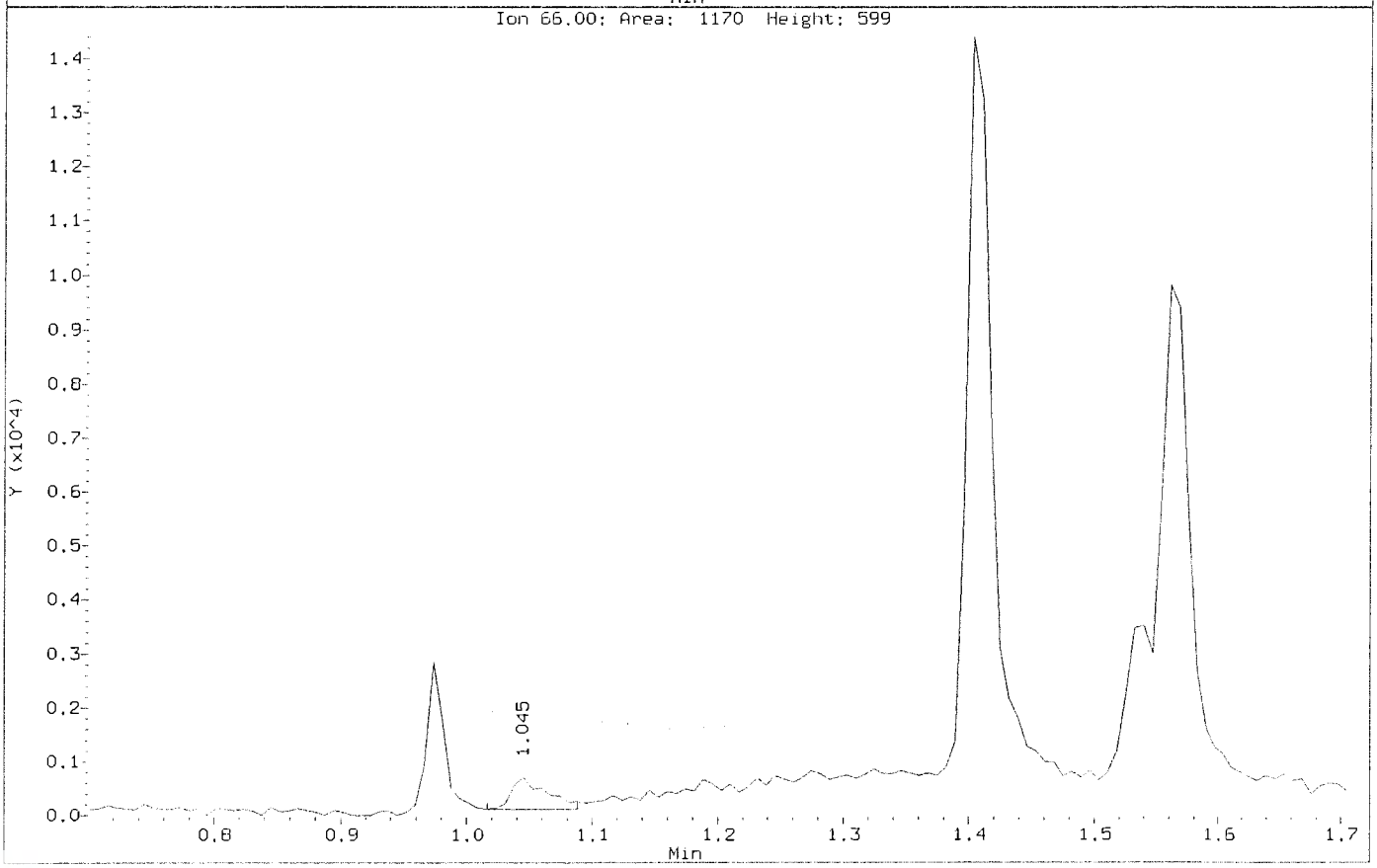




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Instrument: voa6.i
Client Sample ID: VLCSW-200820

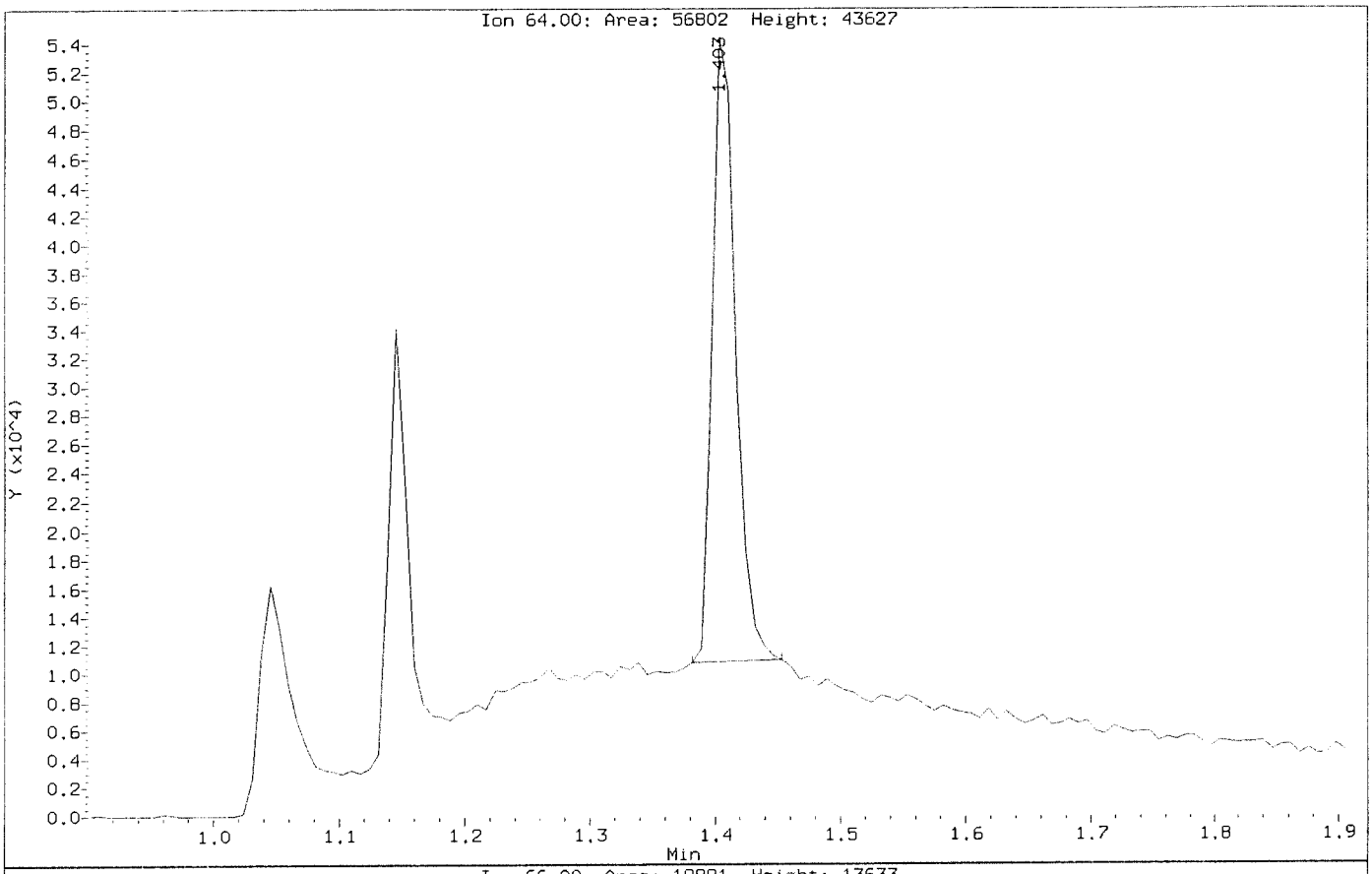
Compound: Chloroethane
CAS Number: 75-00-3

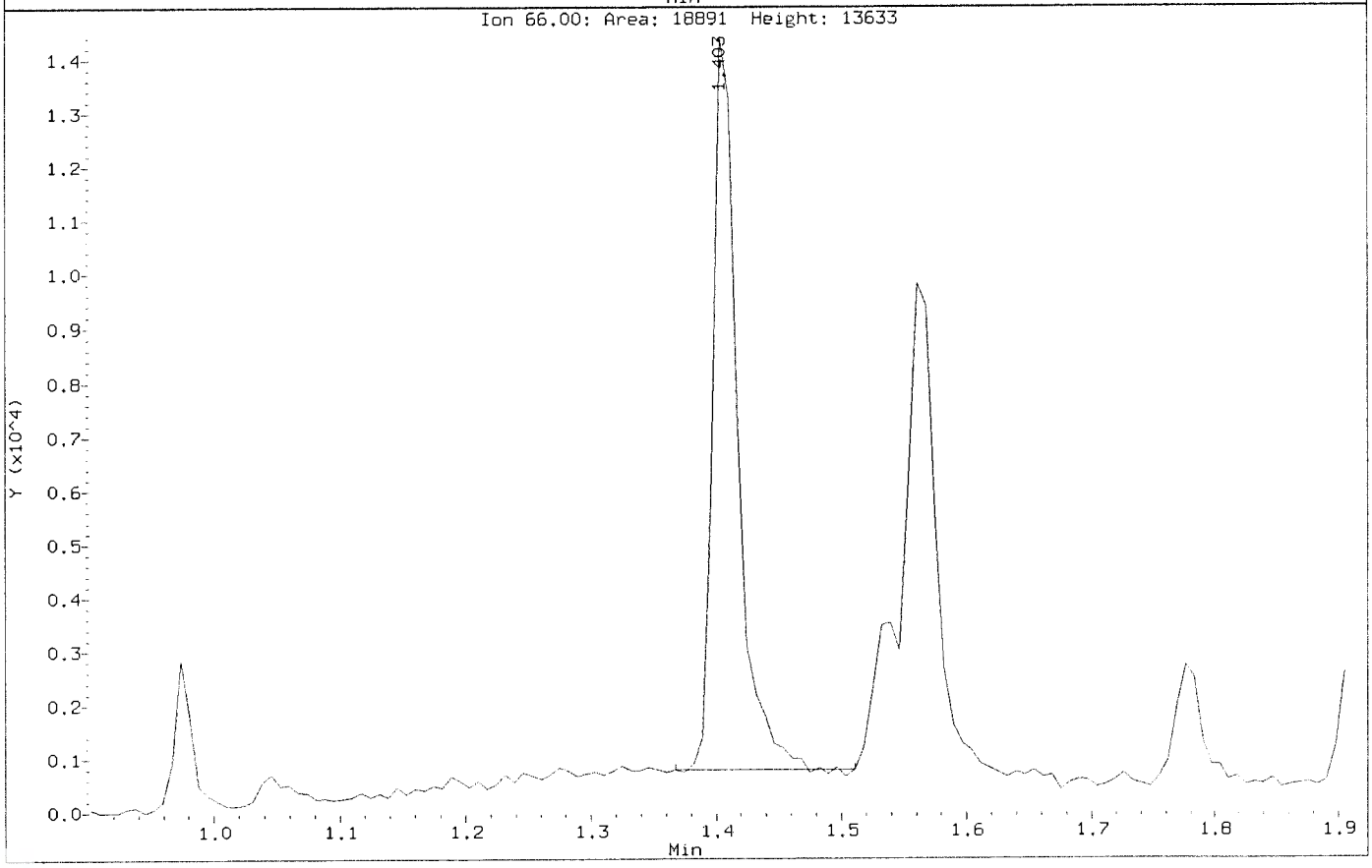




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Injection Date: 20-AUG-2020 11:45
Instrument: voa6.i
Client Sample ID: VLCSW-200820

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082007.D Page 1
Report Date: 11-Sep-2020 15:39

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Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082007.D
Lab Smp Id: VBLKW-200820 Client Smp ID: VBLKW-200820
Inj Date : 20-AUG-2020 12:34
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200820;VBLKW-200820;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:39 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

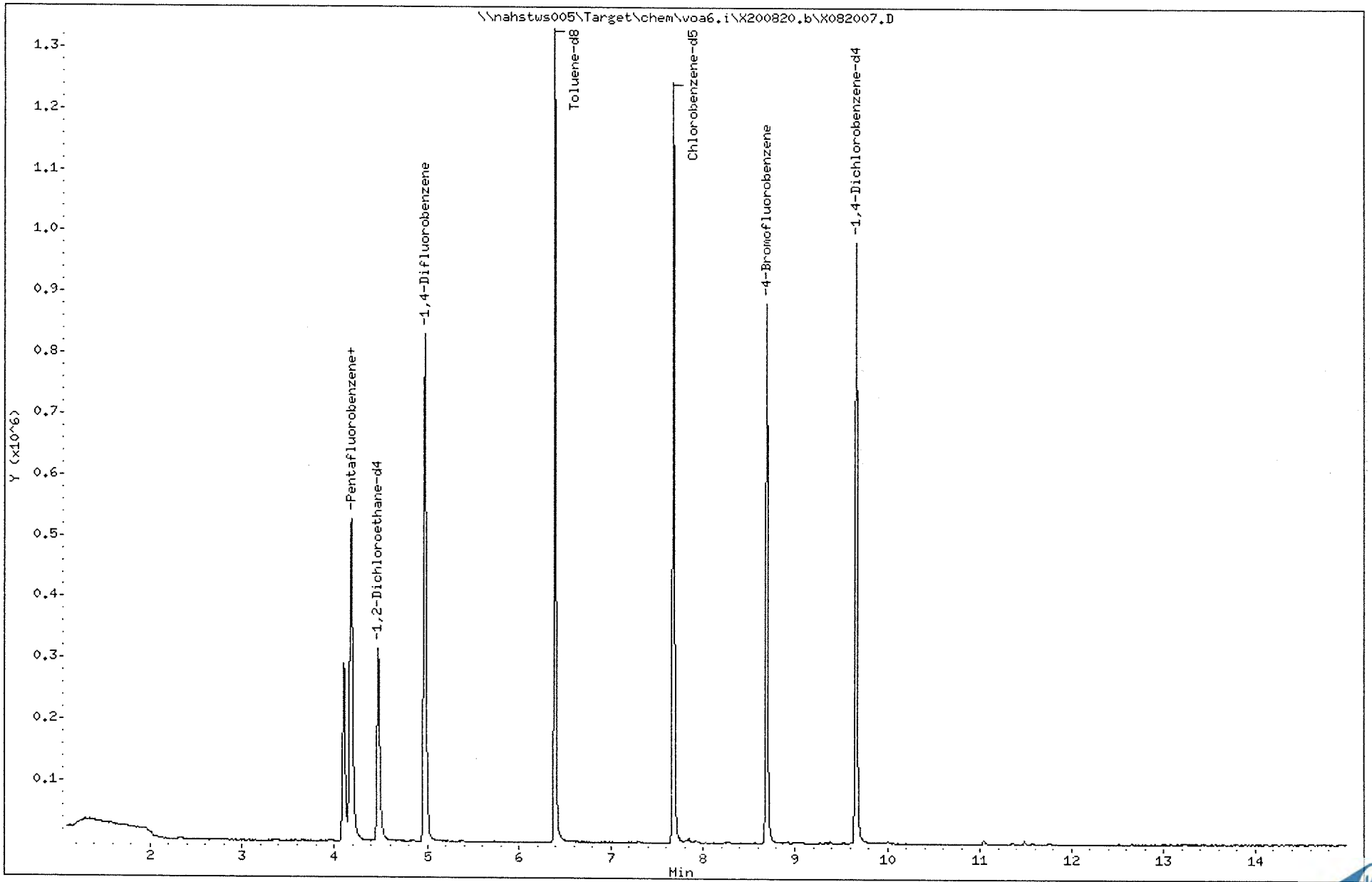
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457575	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	673274	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	577312	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	255038	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	205202	45.6662	45.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	229095	43.0123	43.01
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	752378	53.7297	53.72
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	256158	47.4196	47.41

00993141

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082007.D
Date : 20-AUG-2020 12:34
Client ID: VBLKW-200820
Sample Info: VBLKW-200820;VBLKW-200820;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082008.D Page 1
Report Date: 11-Sep-2020 15:38

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082008.D
Lab Smp Id: HS20080801-02 Client Smp ID: HS20080801-02
Inj Date : 20-AUG-2020 12:58
Operator : PC Inst ID: voa6.i
Smp Info : HS20080801-02;HS20080801-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:37 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

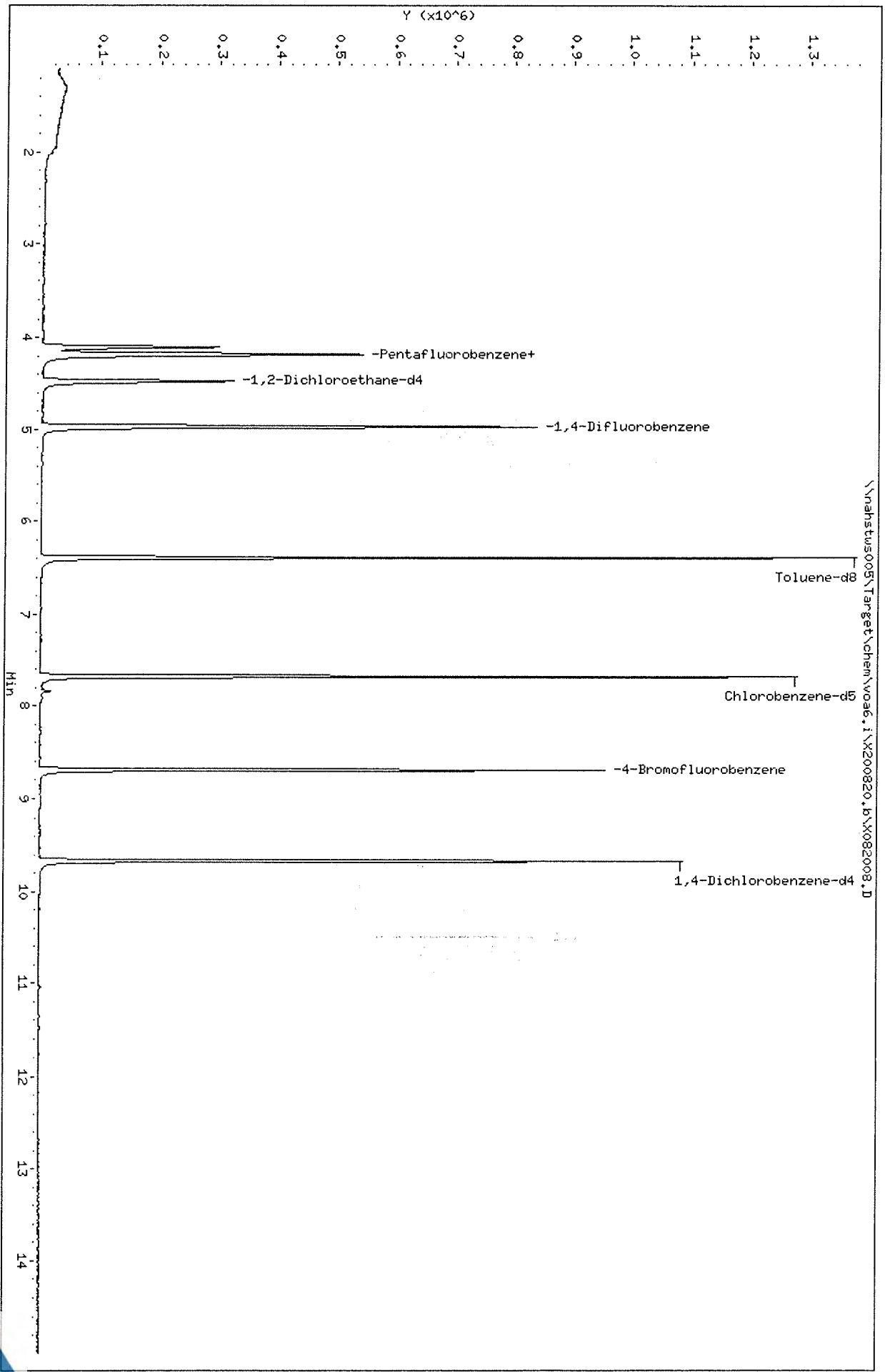
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	464780	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	686943	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	597988	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	268483	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	212603	46.5798	46.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	238018	43.9948	43.99
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	775409	53.4597	53.45
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	277537	49.6008	49.60

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082008.D
Date : 20-AUG-2020 12:58
Client ID: HS20080801-02
Sample Info: HS20080801-02;HS20080801-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D Page 1
Report Date: 11-Sep-2020 15:38

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D
Lab Smp Id: HS20080801-01 Client Smp ID: HS20080801-01
Inj Date : 20-AUG-2020 13:22
Operator : PC Inst ID: voa6.i
Smp Info : HS20080801-01;HS20080801-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:37 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

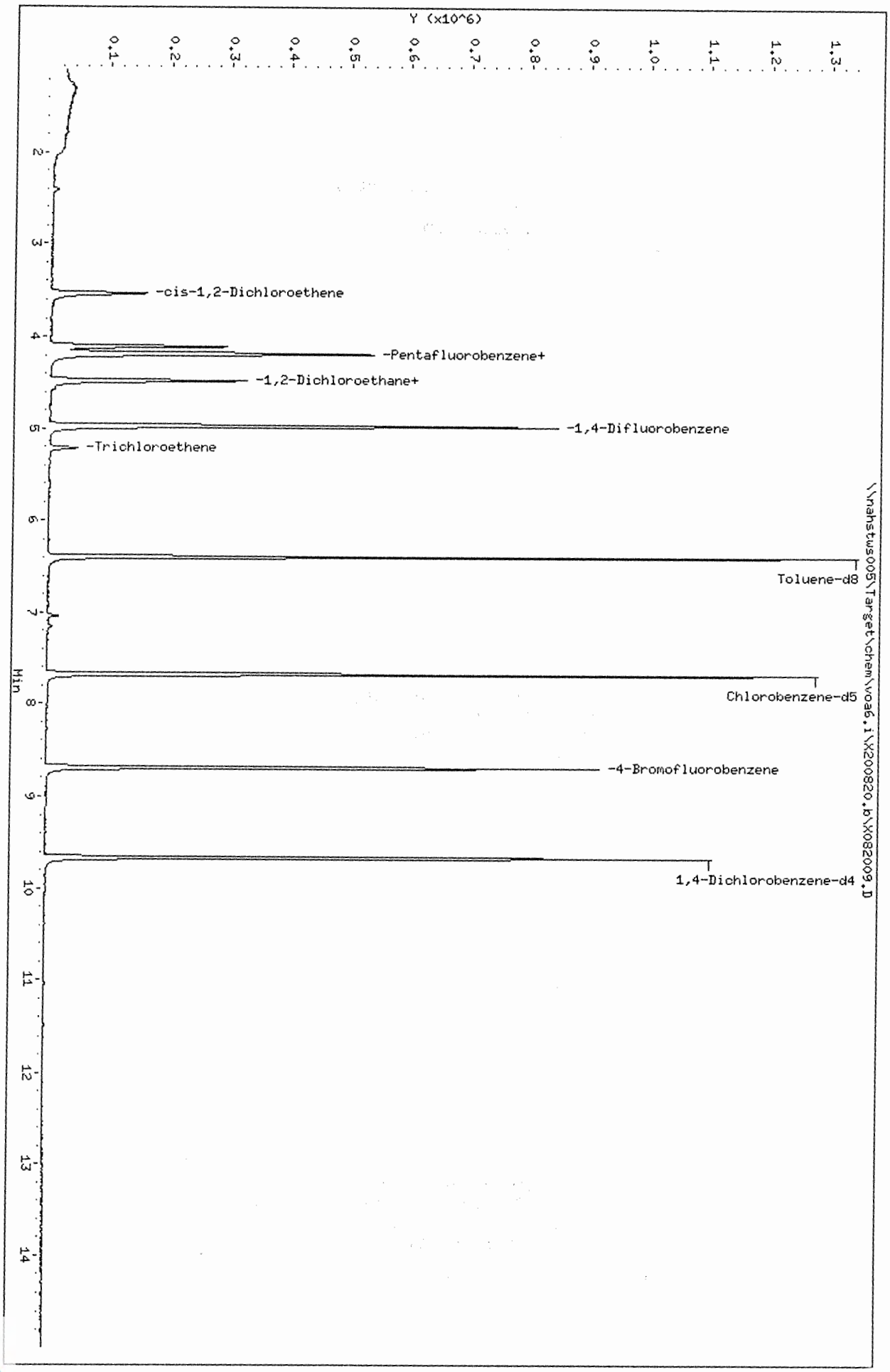
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	467501	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	692365	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	603286	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	278071	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	212477	46.2812	46.28
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	237705	43.6812	43.68
$	48 Toluene-d8	98	6.388	6.388	(0.833)	773877	52.8856	52.88
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	271210	48.0444	48.04
	33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	4308	0.64264	0.64(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	81355	15.8094	15.80
	38 Trichloroethene	130	5.214	5.207	(1.049)	16547	3.37225	3.37(a)

QC Flag Legend

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



Date : 20-AUG-2020 13:22
Client ID: HS20080801-01
Sample Info: HS20080801-01;HS20080801-01;;;
Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D

Date : 20-AUG-2020 13:22

Client ID: HS20080801-01

Instrument: voa6.i

Sample Info: HS20080801-01;HS20080801-01;;;

Purge Volume: 5.0

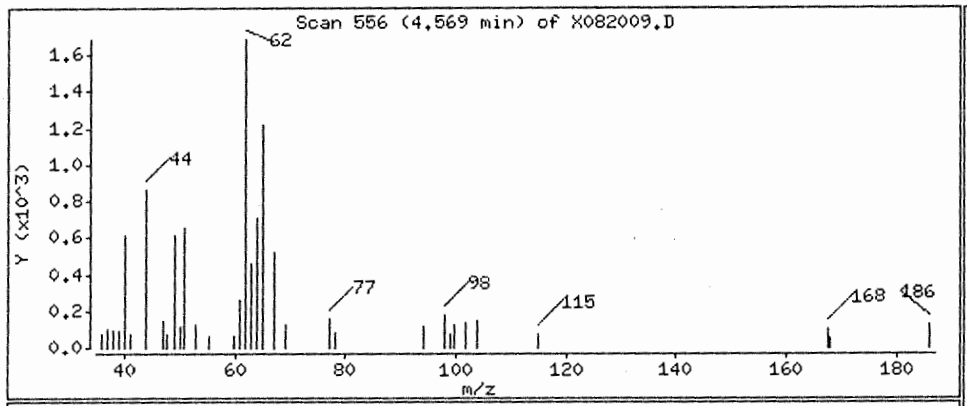
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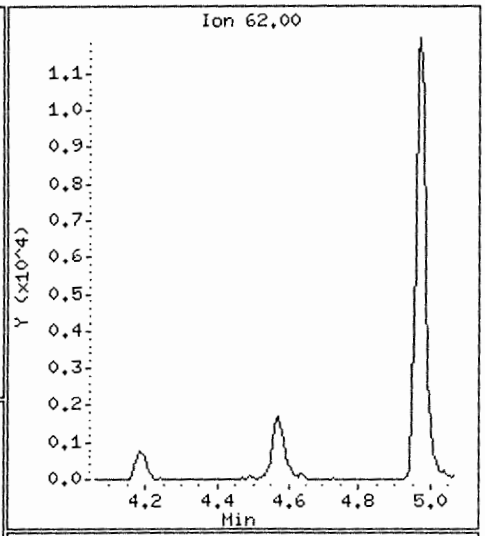
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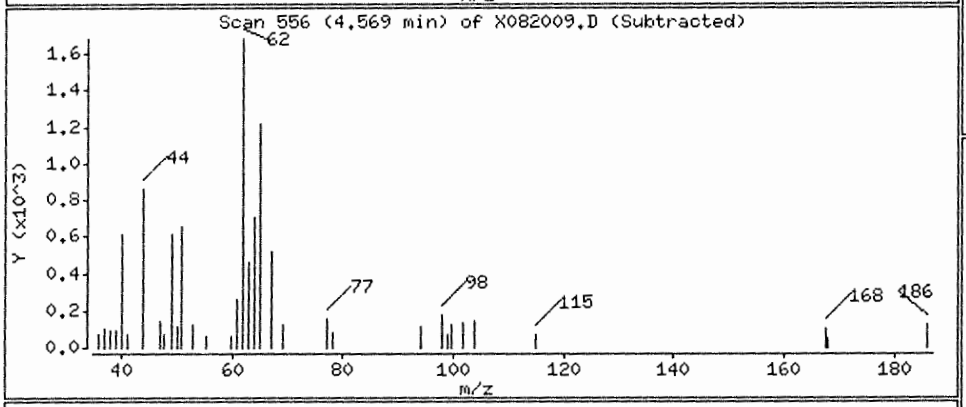
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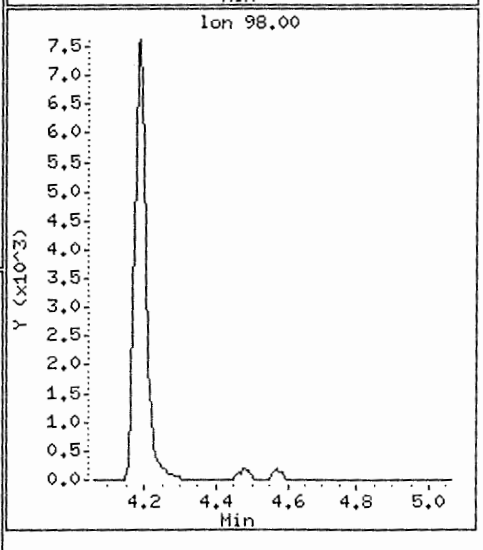
33 1,2-Dichloroethane

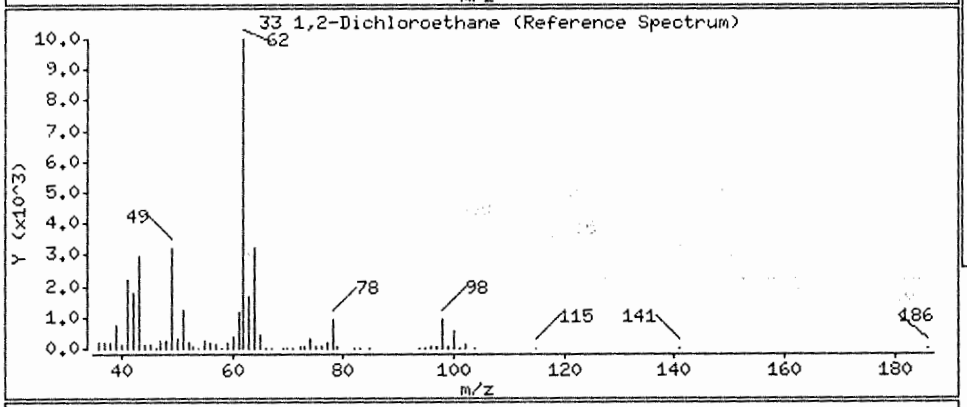
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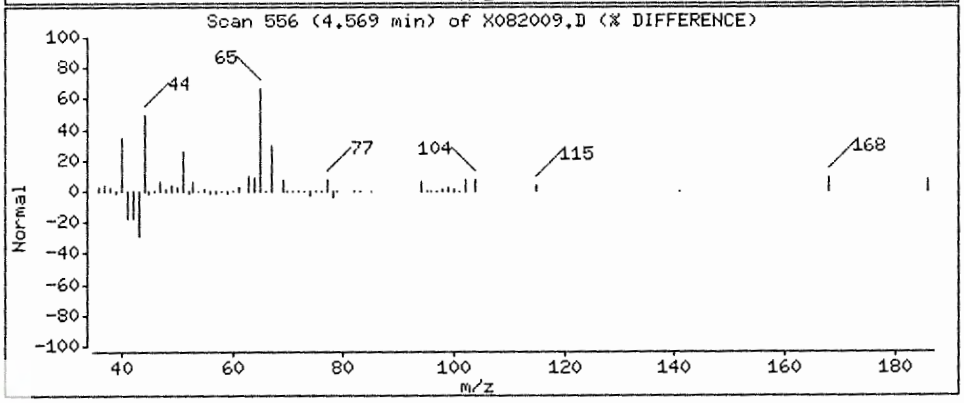












Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D

Date : 20-AUG-2020 13:22

Client ID: HS20080801-01

Instrument: voa6.i

Sample Info: HS20080801-01;HS20080801-01;;;

Purge Volume: 5.0

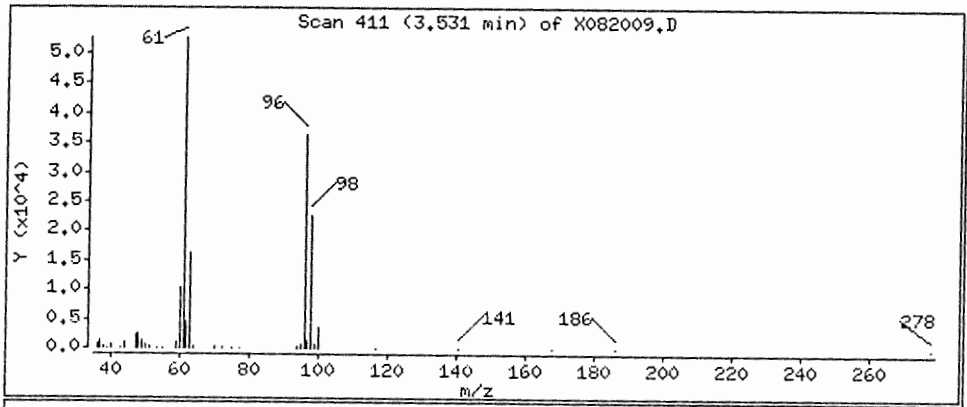
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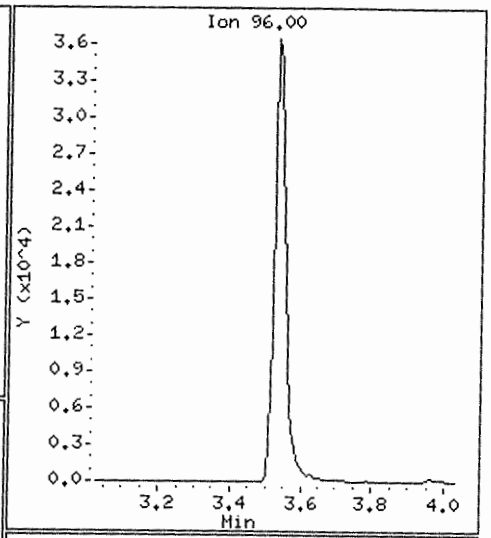
Column phase: DB624

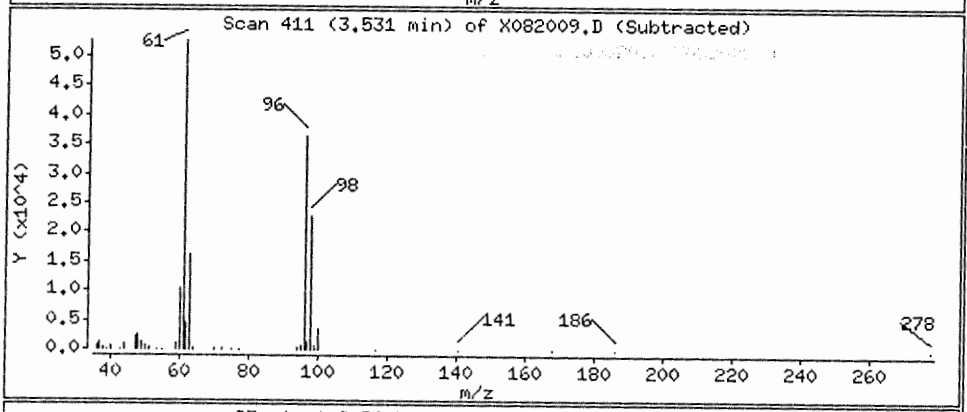
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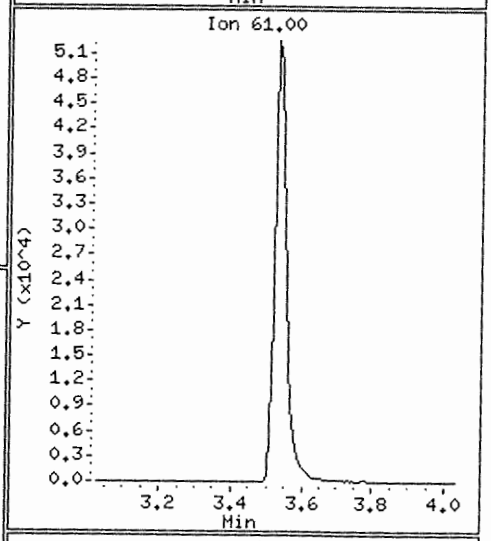
27 cis-1,2-Dichloroethene

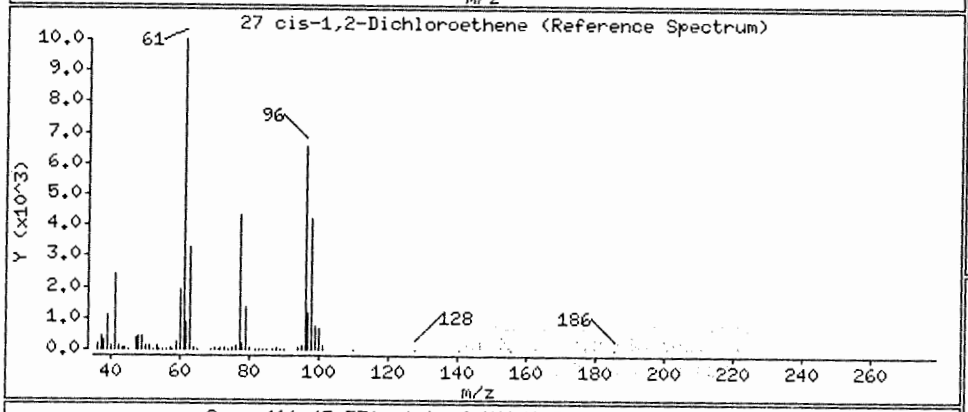
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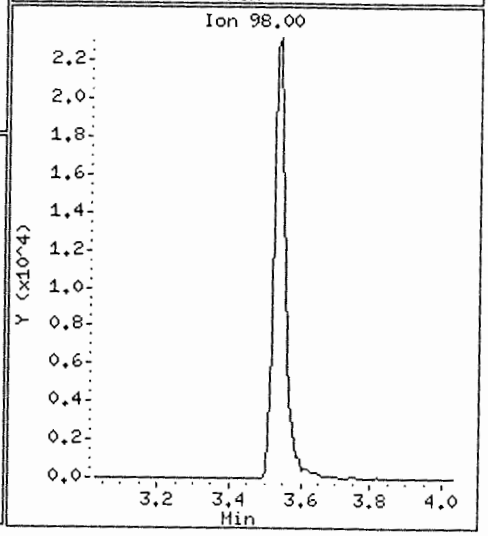


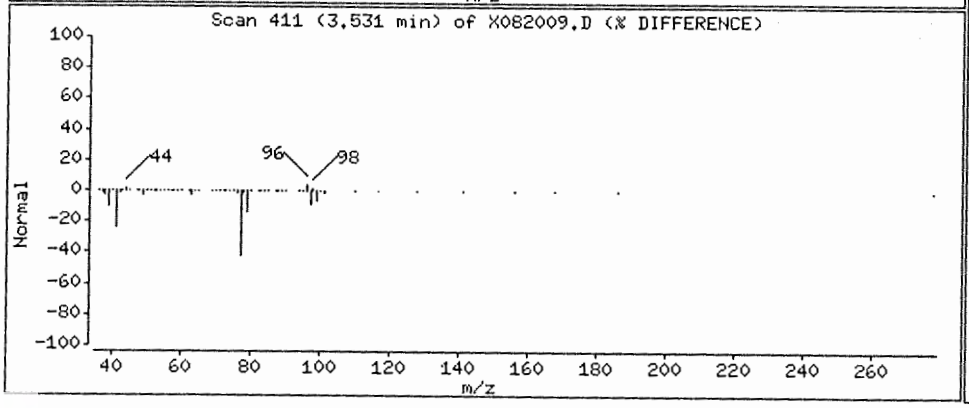












Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082009.D

Date : 20-AUG-2020 13:22

Client ID: HS20080801-01

Instrument: voa6.i

Sample Info: HS20080801-01;HS20080801-01;;;

Purge Volume: 5.0

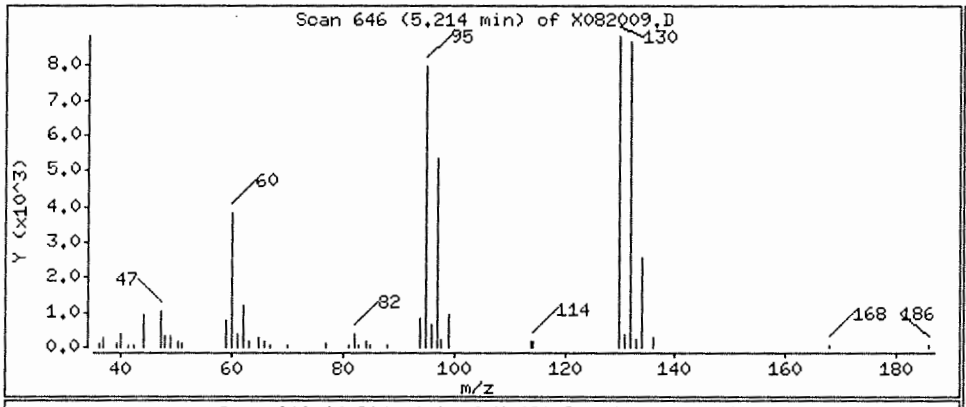
Operator: PC

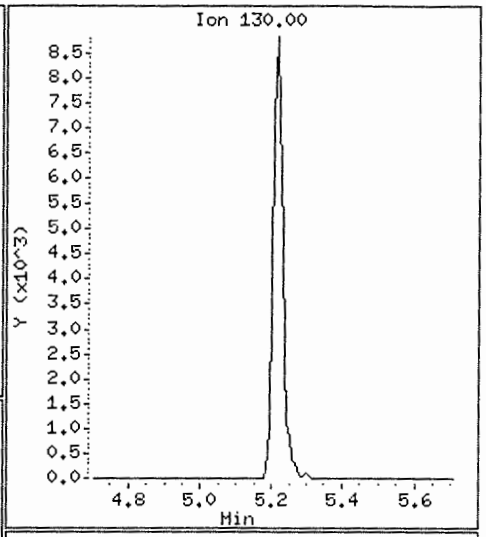
Column phase: DB624

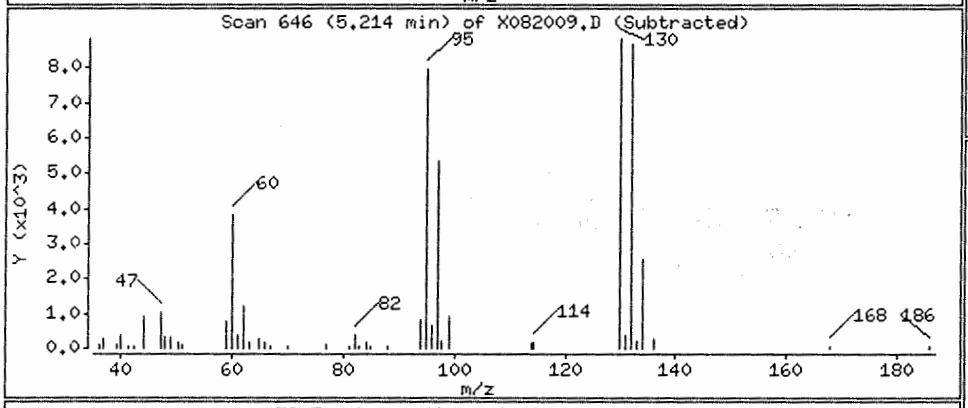
Column diameter: 0.18

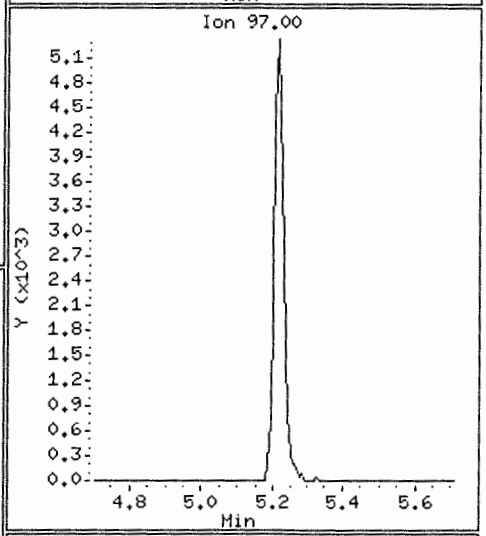
38 Trichloroethene

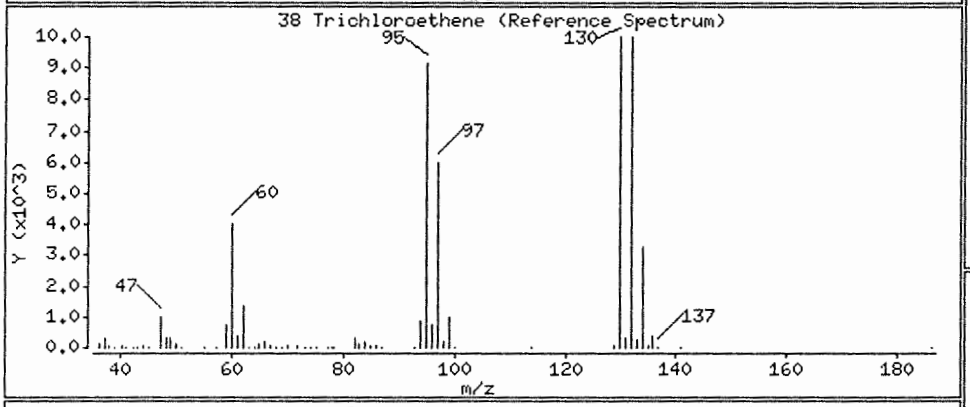
Concentration: 3.37 ug/l

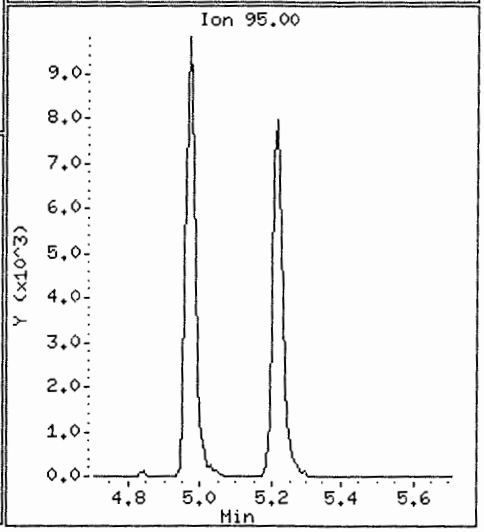


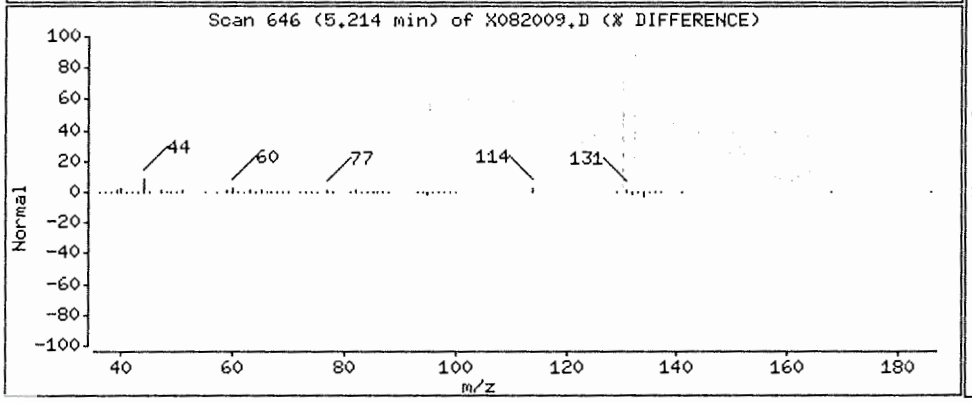












Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082015.D Page 1
Report Date: 11-Sep-2020 15:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082015.D
Lab Smp Id: HS20080801-01MS Client Smp ID: HS20080801-01MS
Inj Date : 20-AUG-2020 15:46
Operator : PC Inst ID: voa6.i
Smp Info : HS20080801-01MS;HS20080801-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:39 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

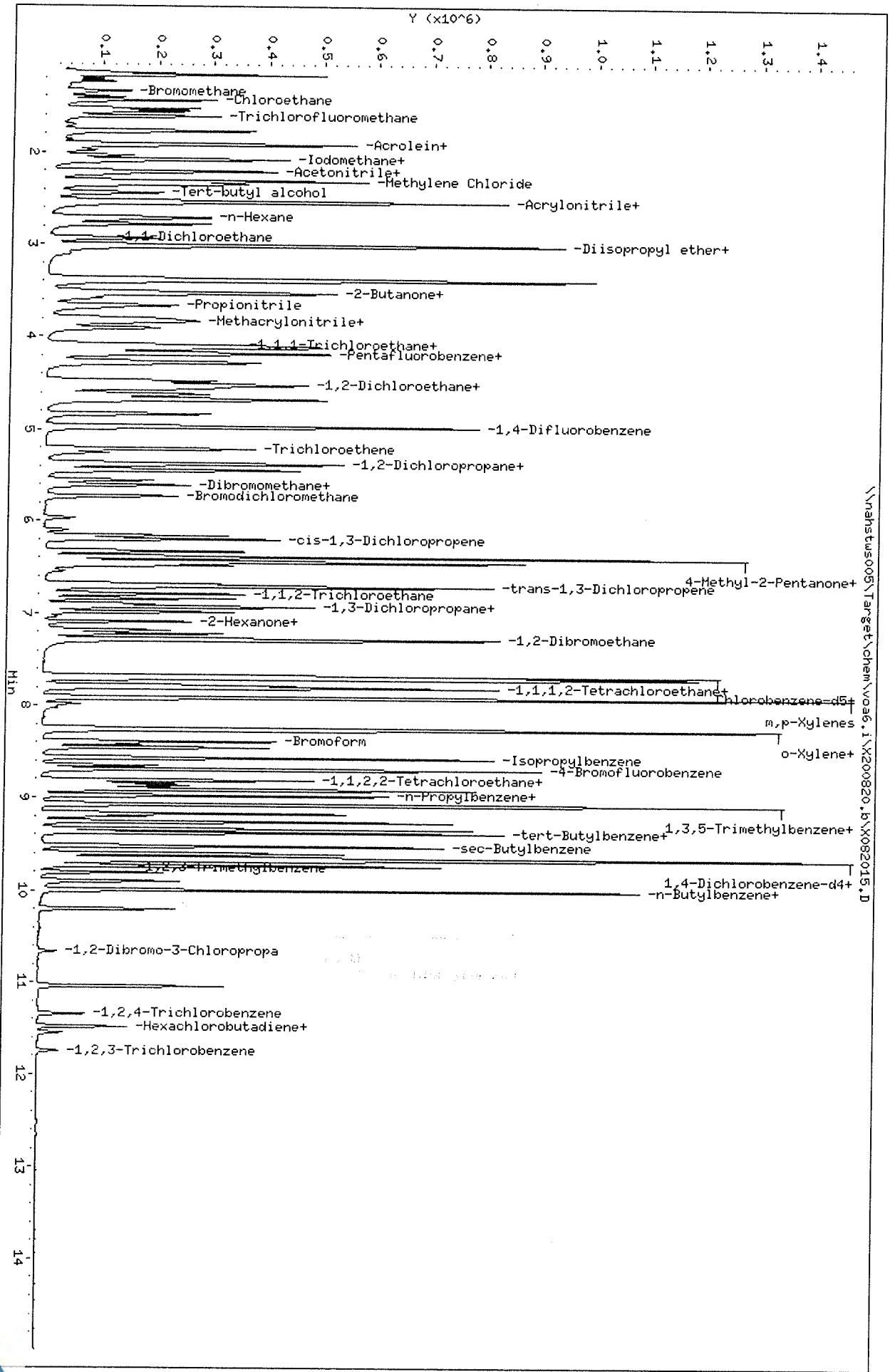
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	427526	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	635152	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	561449	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	258565	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	199064	47.4139	47.41
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	221186	44.4462	44.44
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	713148	52.3670	52.36
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	253823	48.3149	48.31
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	102236	23.9215	23.92
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	159796	24.2655	24.26
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	99801	24.1600	24.16
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	77540	24.2715	24.27
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	213254	25.5362	25.53
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	93436	27.5832	27.58
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	138258	25.9039	25.90
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	11515	14.7991	14.79
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84942	22.4435	22.44(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	26563	17.7246	17.72
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	362220	26.2228	26.22
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6442	17.9381	17.93
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	98021	23.8164	23.81
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	170170	23.2679	23.26

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082015.D Page 2
Report Date: 11-Sep-2020 15:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	147438	23.9752	23.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	119919	25.7255	25.72
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	359961	26.6417	26.64
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	201788	24.8289	24.82
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	155132	24.5931	24.59
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	197773	24.6072	24.60
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	153848	25.2303	25.23
24	2-Butanone	43	3.581	3.580	(0.855)	92908	44.3300	44.33
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	297365	26.5080	26.50
52	2-Hexanone	43	7.090	7.090	(0.924)	150779	42.7776	42.77
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	338707	25.9534	25.95
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	383531	26.7862	26.78
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	235575	45.3353	45.33
10	Acetone	43	1.976	1.976	(0.472)	61033	40.3208	40.32
37	Benzene	78	4.519	4.519	(0.909)	402352	25.5327	25.53
74	Bromobenzene	156	8.810	8.810	(0.911)	127075	25.1235	25.12
29	Bromochloromethane	128	3.803	3.803	(0.908)	58865	22.8425	22.84
39	Bromodichloromethane	83	5.729	5.729	(1.153)	133995	23.4350	23.43
66	Bromoform	173	8.416	8.416	(1.097)	66313	21.2879	21.28
6	Bromomethane	94	1.346	1.346	(0.321)	63934	22.0963	22.09
19	Carbon Disulfide	76	2.076	2.076	(0.496)	538875	51.2360	51.23
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	137191	24.1825	24.18
59	Chlorobenzene	112	7.699	7.699	(1.004)	278282	25.2898	25.28
7	Chloroethane	64	1.403	1.403	(0.335)	72171	23.8164	23.81(M)
28	Chloroform	83	3.917	3.910	(0.935)	183590	24.0360	24.03
3	Chloromethane	50	1.081	1.081	(0.258)	112664	18.7688	18.76
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	188958	40.1530	40.15
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	160443	23.9978	23.99
55	Dibromochloromethane	129	7.176	7.176	(0.936)	102360	22.7603	22.76
44	Dibromomethane	93	5.558	5.557	(1.118)	64347	23.2792	23.27
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	80022	19.1243	19.12
61	Ethylbenzene	106	7.800	7.800	(1.017)	150856	26.5510	26.55
91	Hexachlorobutadiene	225	11.489	11.481	(1.188)	29257	21.0760	21.07
67	Isopropylbenzene	105	8.566	8.566	(1.117)	442994	26.5613	26.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	355932	51.9106	51.91
17	Methylene Chloride	84	2.306	2.305	(0.550)	107658	23.7256	23.72
87	n-Butylbenzene	91	9.999	9.999	(1.034)	304542	26.6326	26.63
73	n-Propylbenzene	91	8.917	8.917	(0.922)	510601	27.4120	27.41
92	Naphthalene	128	11.546	11.546	(1.194)	33418	16.4417	16.44
63	o-Xylene	106	8.244	8.244	(1.075)	173273	25.7261	25.72
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	426918	27.1783	27.17
64	Styrene	104	8.258	8.258	(1.077)	292470	25.0077	25.00
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	313374	26.7513	26.75
56	Tetrachloroethene	164	6.933	6.933	(0.904)	97022	27.1838	27.18
50	Toluene	91	6.446	6.446	(0.840)	426073	25.9860	25.98
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	101520	25.3301	25.33
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	138922	22.6709	22.67
38	Trichloroethene	130	5.214	5.207	(1.049)	130490	28.9891	28.98
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	153349	24.3555	24.35
5	Vinyl Chloride	62	1.145	1.145	(0.273)	132615	24.0979	24.09

QC Flag Legend

M - Compound response manually integrated.

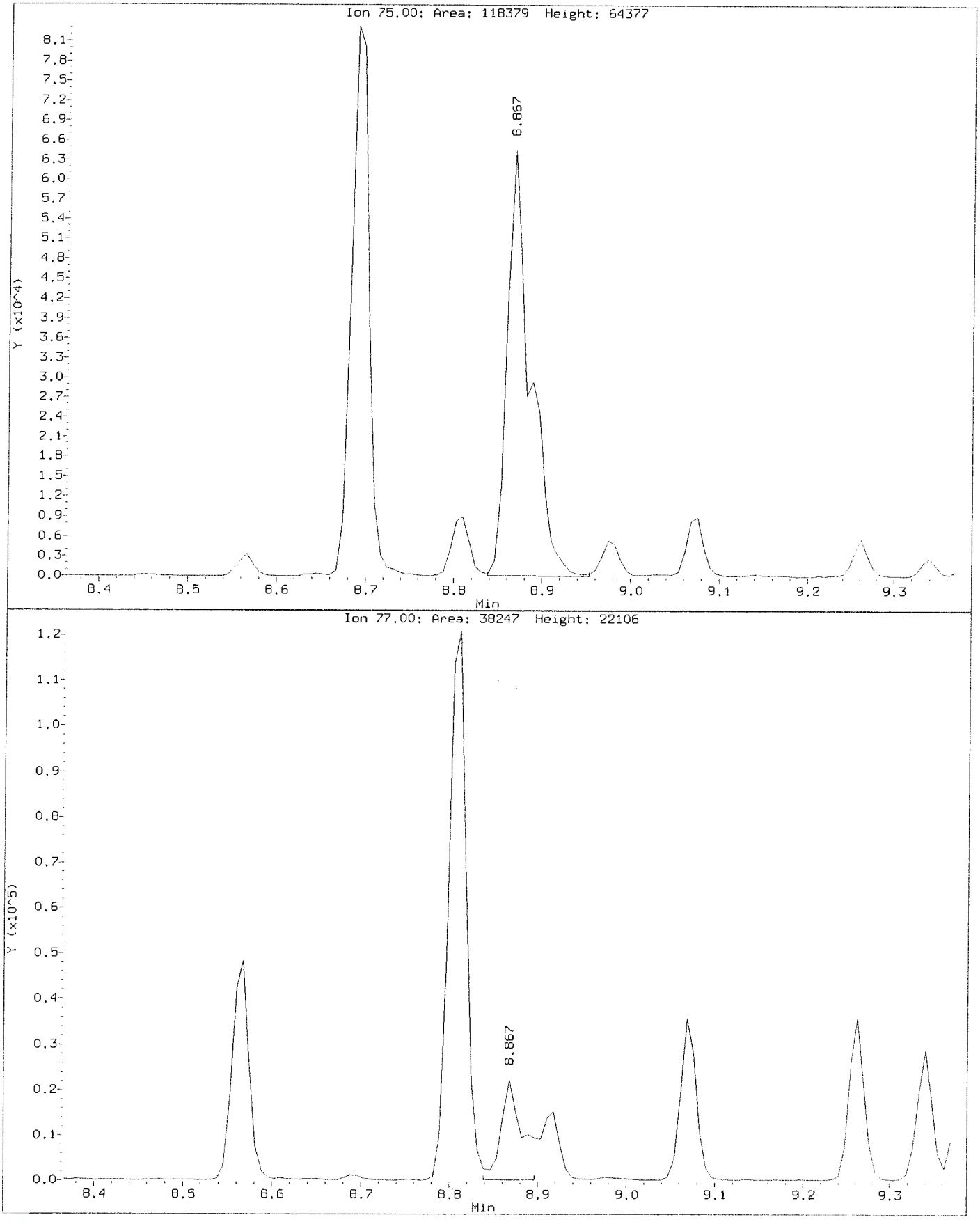


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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

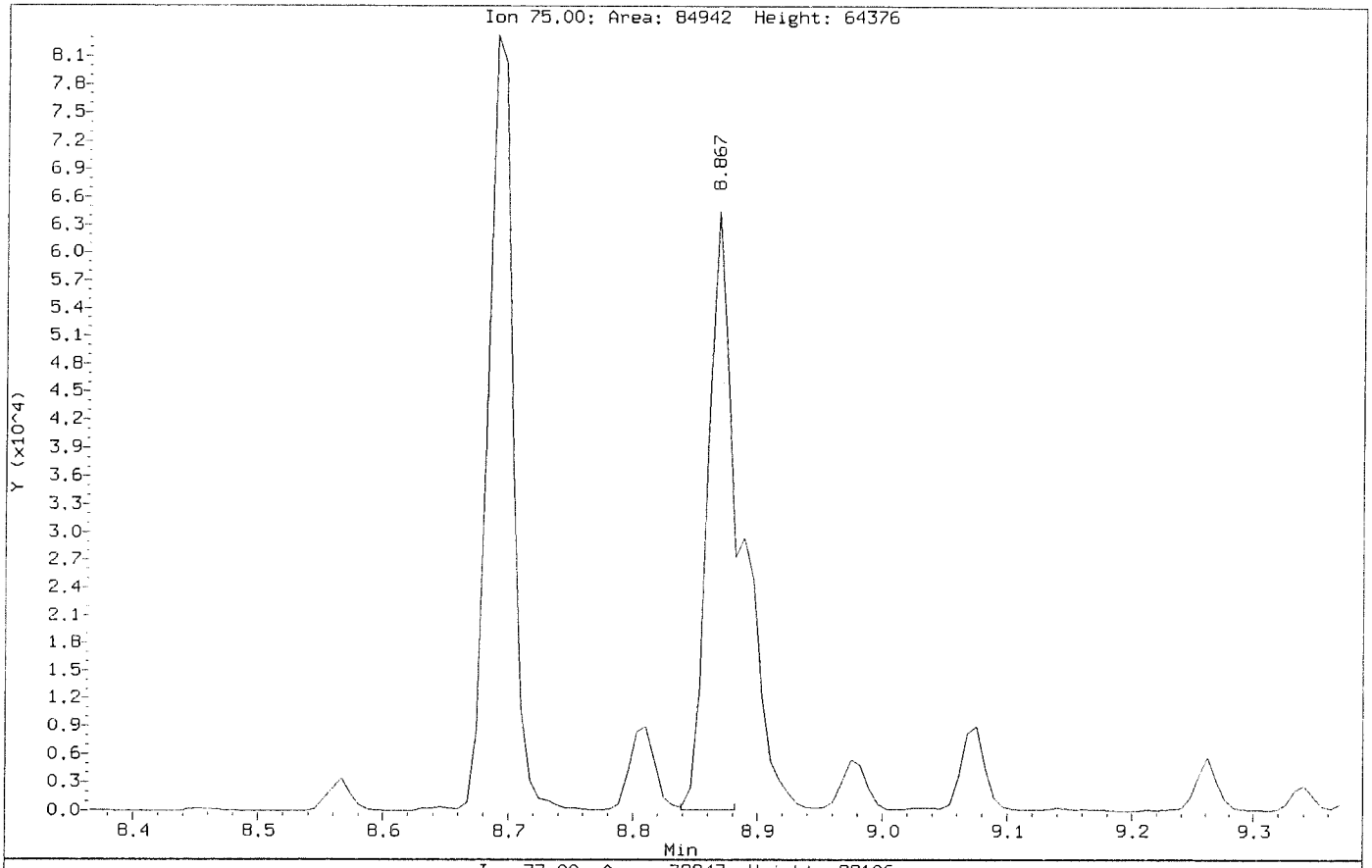
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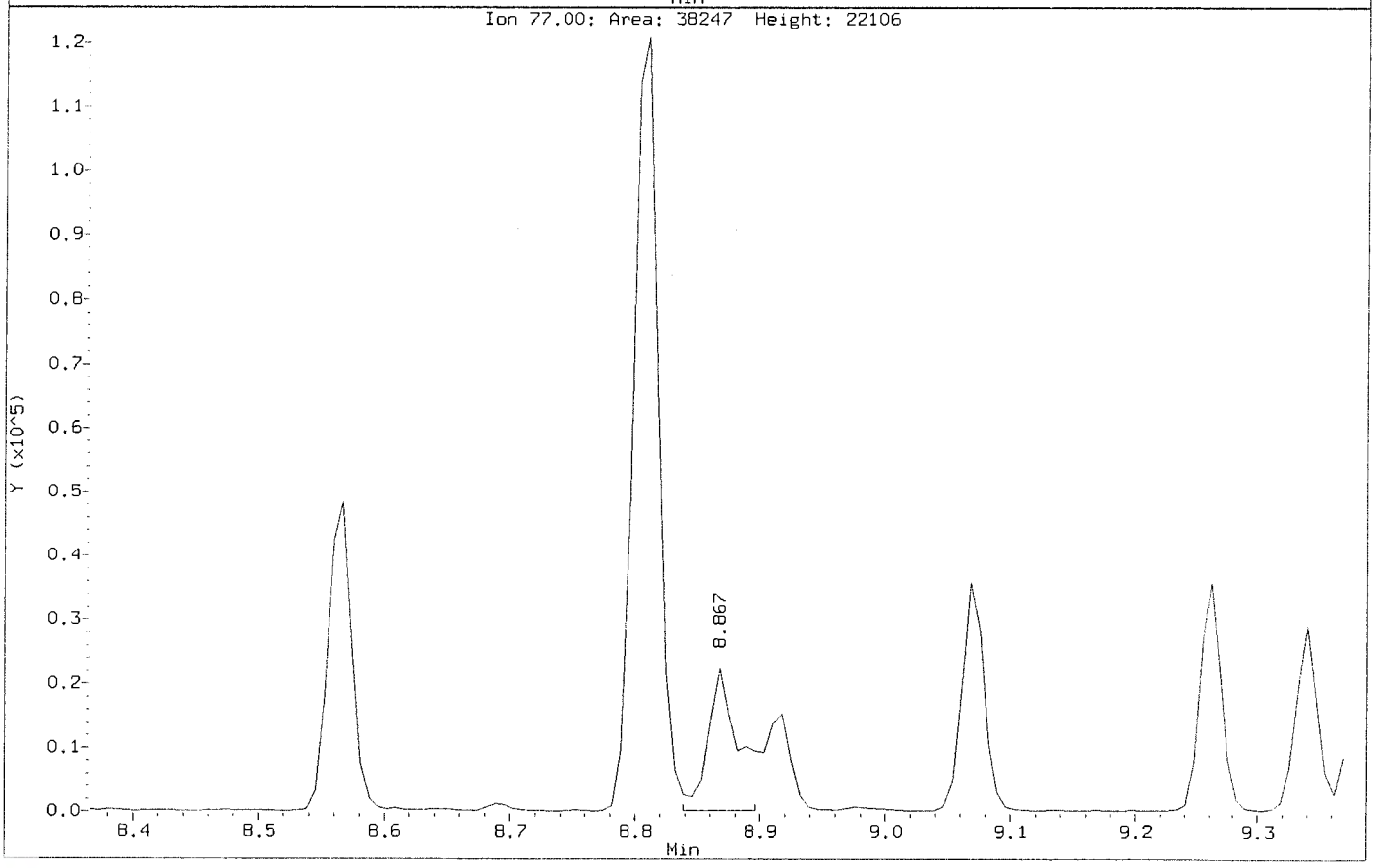
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: HS20080801-01MS

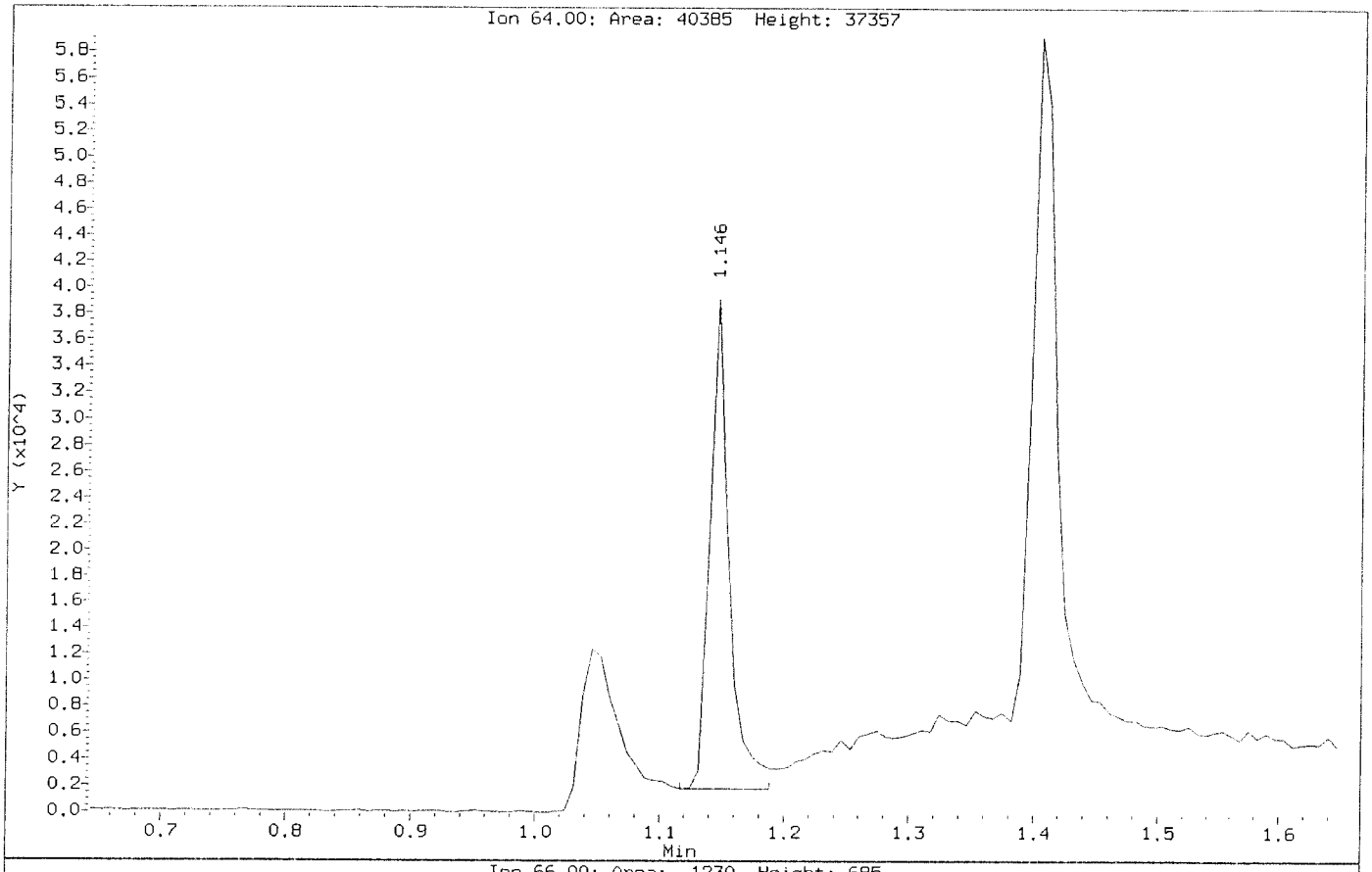
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

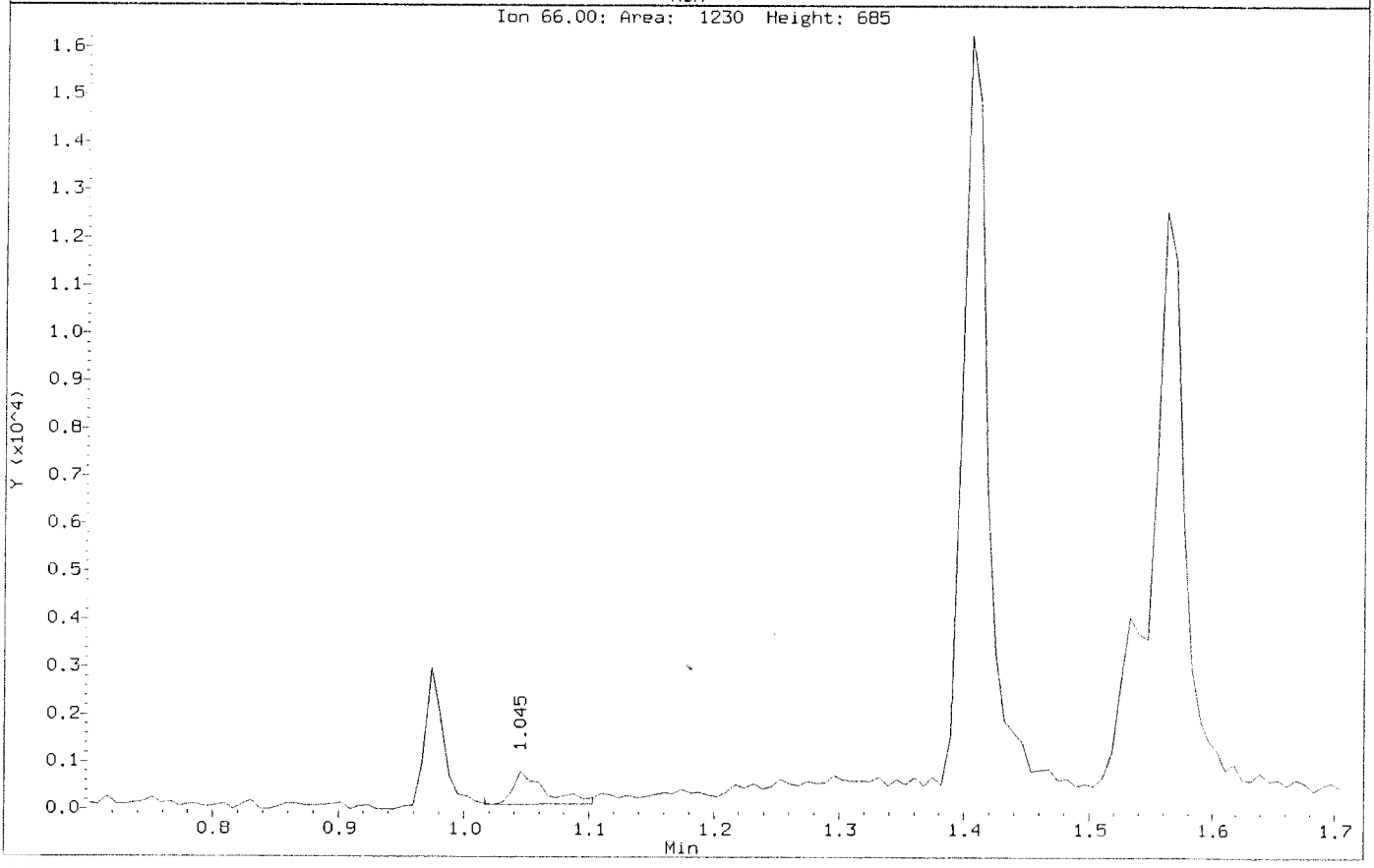




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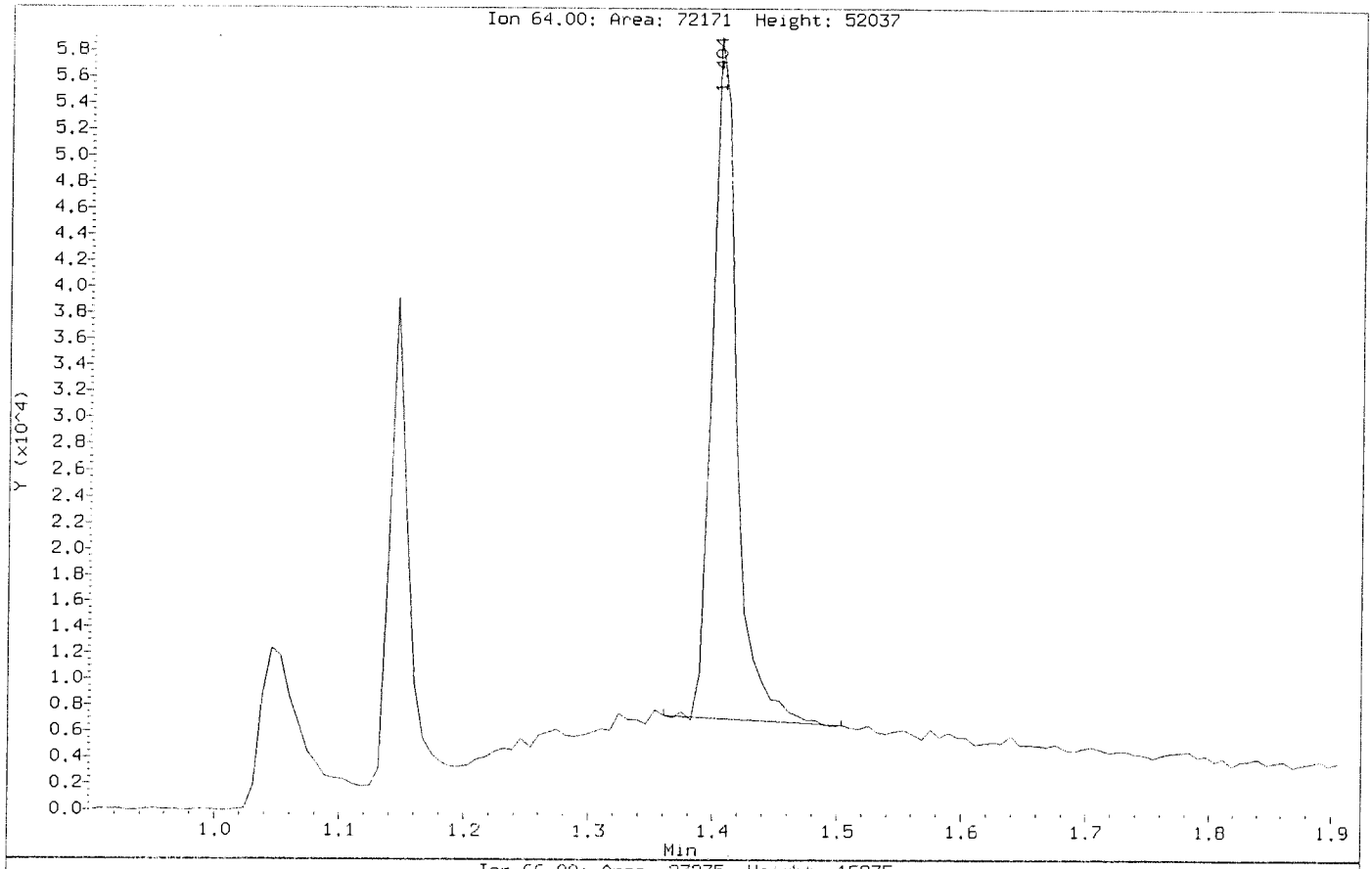
Compound: Chloroethane
CAS Number: 75-00-3

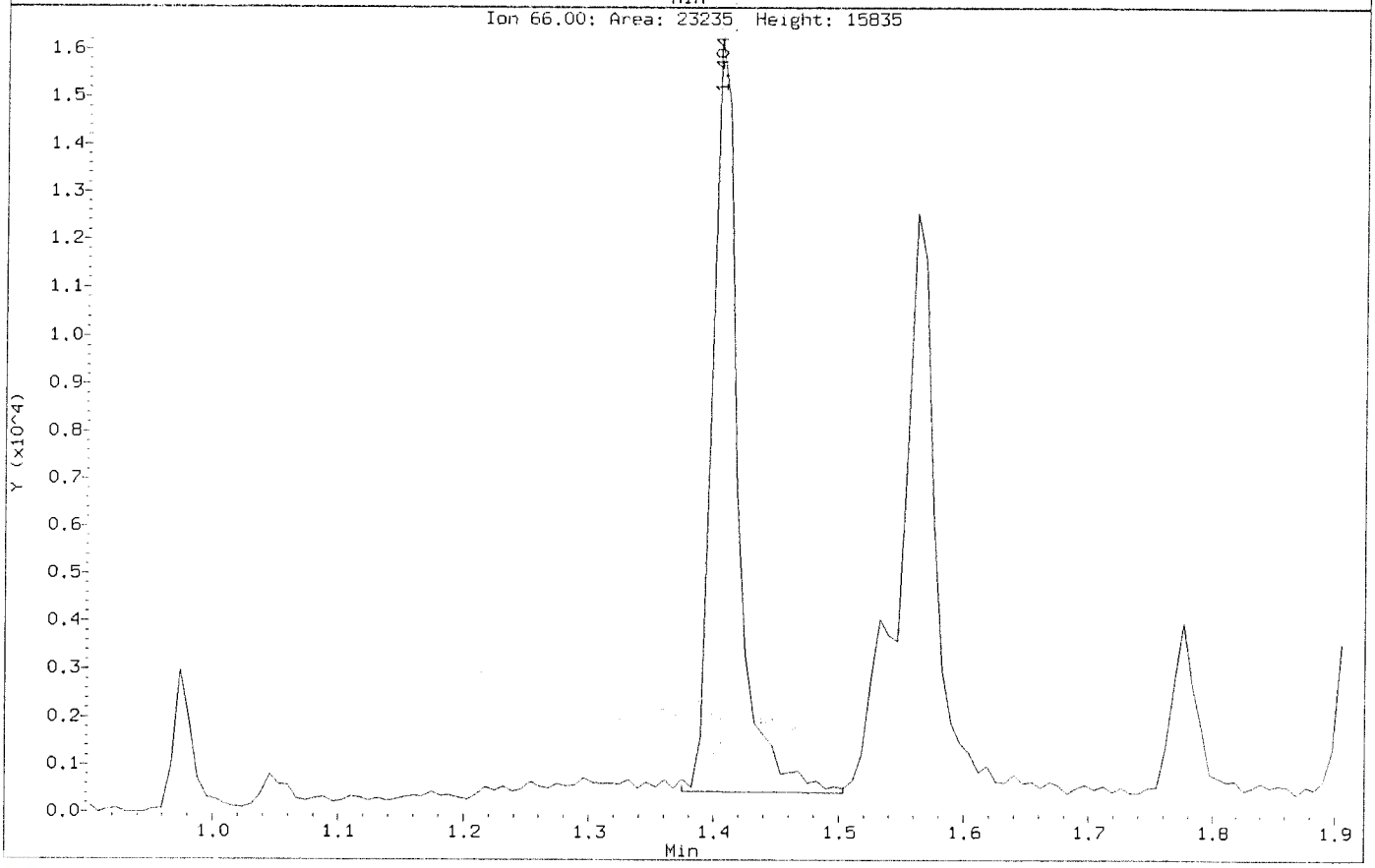




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Instrument: voa6.i
Client Sample ID: HS20080801-01MS

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082016.D Page 1
Report Date: 11-Sep-2020 15:40

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082016.D
Lab Smp Id: HS20080801-01MSD Client Smp ID: HS20080801-01MSD
Inj Date : 20-AUG-2020 16:10
Operator : PC Inst ID: voa6.i
Smp Info : HS20080801-01MSD;HS20080801-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:39 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 15 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

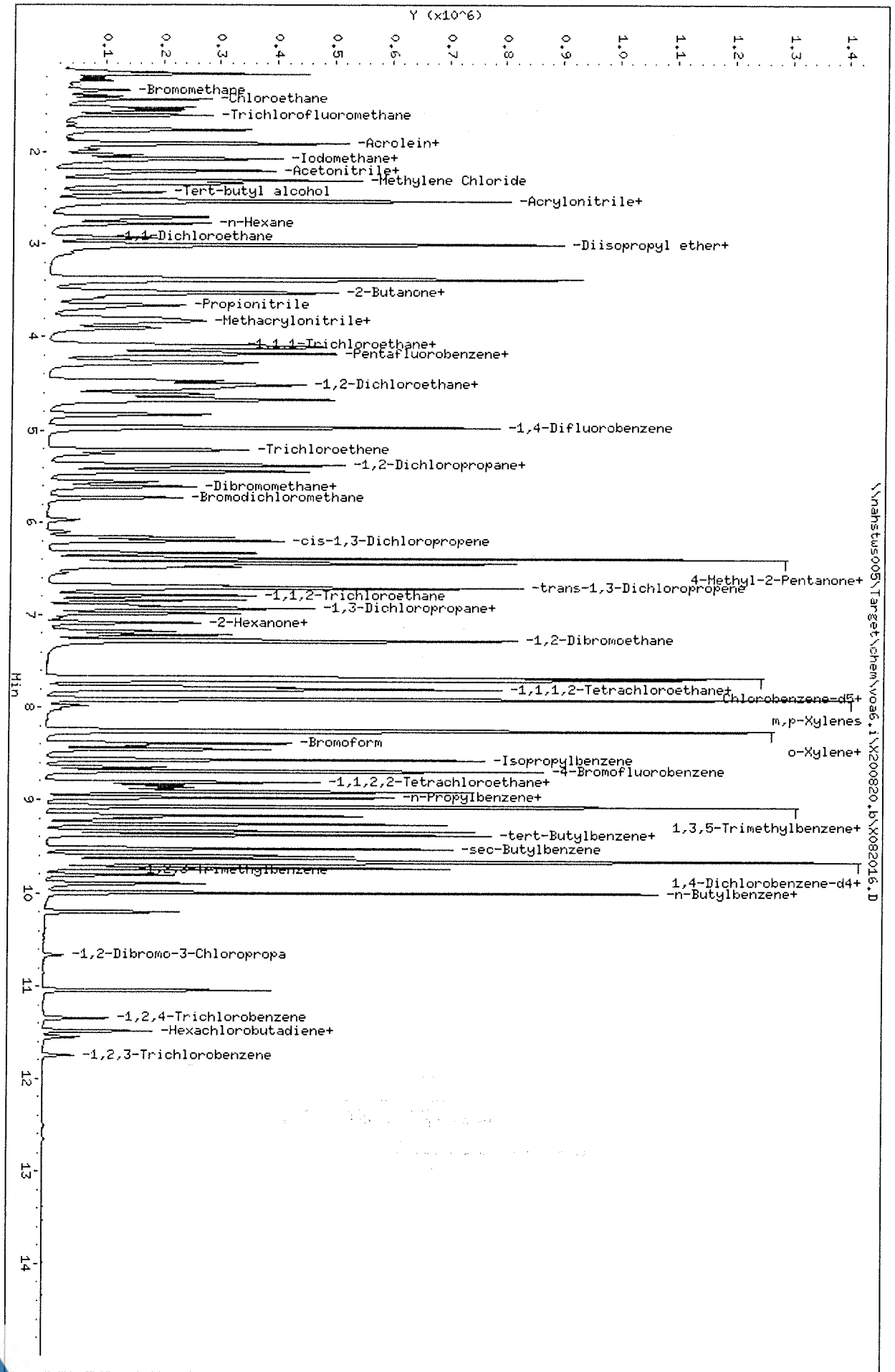
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	420317	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	628831	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	556790	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	250525	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	193624	46.9092	46.90
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	219896	44.9448	44.94
$	48 Toluene-d8	98	6.388	6.388	(0.833)	706032	52.2783	52.27
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	249948	47.9754	47.97
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	97555	23.0173	23.01
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	151212	23.3558	23.35
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	102865	25.6763	25.67
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	76605	24.1794	24.17
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	204297	24.8832	24.88
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	85297	25.6124	25.61
	32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	130156	24.6310	24.63
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	14835	19.6779	19.67
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84995	23.1782	23.17(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	33200	22.9649	22.96
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	349045	26.0800	26.07
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.658	(1.103)	7142	20.4111	20.41
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	97170	23.8071	23.80
	88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	165906	23.4129	23.41

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082016.D Page 2
Report Date: 11-Sep-2020 15:40

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	147672	24.2546	24.25
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	115391	25.0030	25.00
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	344585	26.3222	26.32
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	194287	24.6732	24.67
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	151961	24.2919	24.29
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	192796	24.7578	24.75
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	144504	24.1044	24.10
24	2-Butanone	43	3.588	3.580	(0.856)	91444	44.3798	44.37
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	288590	26.5514	26.55
52	2-Hexanone	43	7.090	7.090	(0.924)	156139	44.6689	44.66
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	331838	26.2431	26.24
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	369759	26.6531	26.65
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	235453	45.6910	45.69
10	Acetone	43	1.976	1.976	(0.472)	58961	39.6014	39.60
37	Benzene	78	4.519	4.519	(0.909)	382485	24.5159	24.51
74	Bromobenzene	156	8.810	8.810	(0.911)	121348	24.7612	24.76
29	Bromochloromethane	128	3.803	3.803	(0.908)	58056	22.9150	22.91
39	Bromodichloromethane	83	5.729	5.729	(1.153)	130039	22.9717	22.97
66	Bromoform	173	8.416	8.416	(1.097)	65508	21.2054	21.20
6	Bromomethane	94	1.346	1.346	(0.321)	59682	21.0136	21.01
19	Carbon Disulfide	76	2.076	2.076	(0.496)	501701	48.5196	48.51
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	129952	23.1367	23.13
59	Chlorobenzene	112	7.699	7.699	(1.004)	265409	24.3218	24.32
7	Chloroethane	64	1.403	1.403	(0.335)	67670	22.7141	22.71(M)
28	Chloroform	83	3.910	3.910	(0.933)	174955	23.2984	23.29
3	Chloromethane	50	1.081	1.081	(0.258)	109008	18.4712	18.47
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	181733	39.2800	39.28
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	155234	23.4520	23.45
55	Dibromochloromethane	129	7.176	7.176	(0.936)	99750	22.3656	22.36
44	Dibromomethane	93	5.558	5.557	(1.118)	63348	23.1482	23.14
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	72574	17.6418	17.64
61	Ethylbenzene	106	7.800	7.800	(1.017)	139674	24.7887	24.78
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	33804	25.1331	25.13
67	Isopropylbenzene	105	8.566	8.566	(1.117)	425678	25.7366	25.73
62	m,p-Xylenes	106	7.907	7.907	(1.031)	339463	49.9230	49.92
17	Methylene Chloride	84	2.306	2.305	(0.550)	101344	22.6586	22.65
87	n-Butylbenzene	91	9.999	9.999	(1.034)	301967	27.2549	27.25
73	n-Propylbenzene	91	8.917	8.917	(0.922)	480480	26.6227	26.62
92	Naphthalene	128	11.546	11.546	(1.194)	45270	22.9381	22.93
63	o-Xylene	106	8.244	8.244	(1.075)	164088	24.5663	24.56
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	408354	26.8307	26.83
64	Styrene	104	8.265	8.258	(1.078)	276216	23.8155	23.81
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	302774	26.6759	26.67
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90900	25.6817	25.68
50	Toluene	91	6.453	6.446	(0.841)	408357	25.1139	25.11
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	94565	23.9995	23.99
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	136110	22.4353	22.43
38	Trichloroethene	130	5.214	5.207	(1.049)	123314	27.6703	27.67
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	141933	22.9290	22.92
5	Vinyl Chloride	62	1.145	1.145	(0.273)	123098	22.7521	22.75

QC Flag Legend

M - Compound response manually integrated.

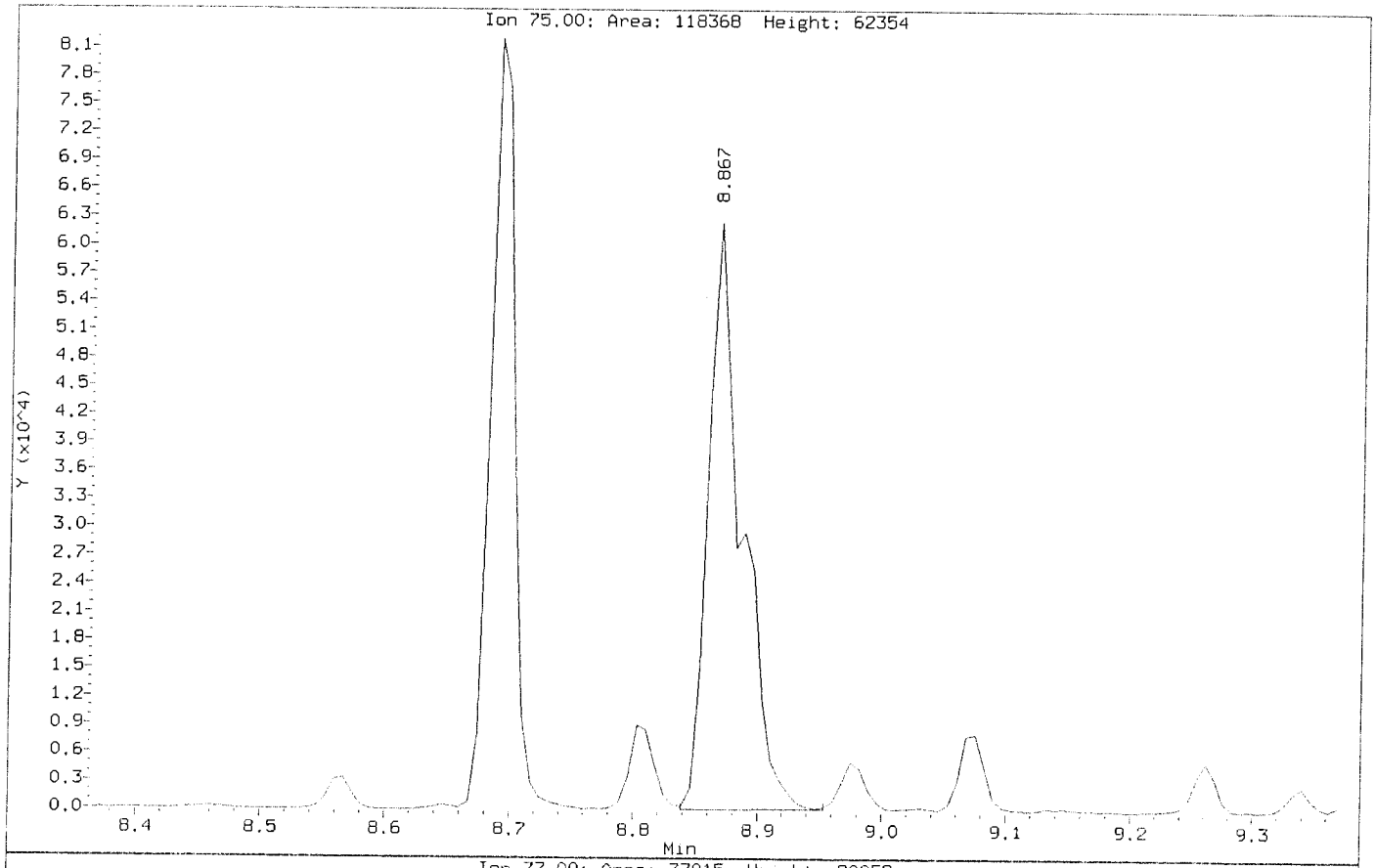


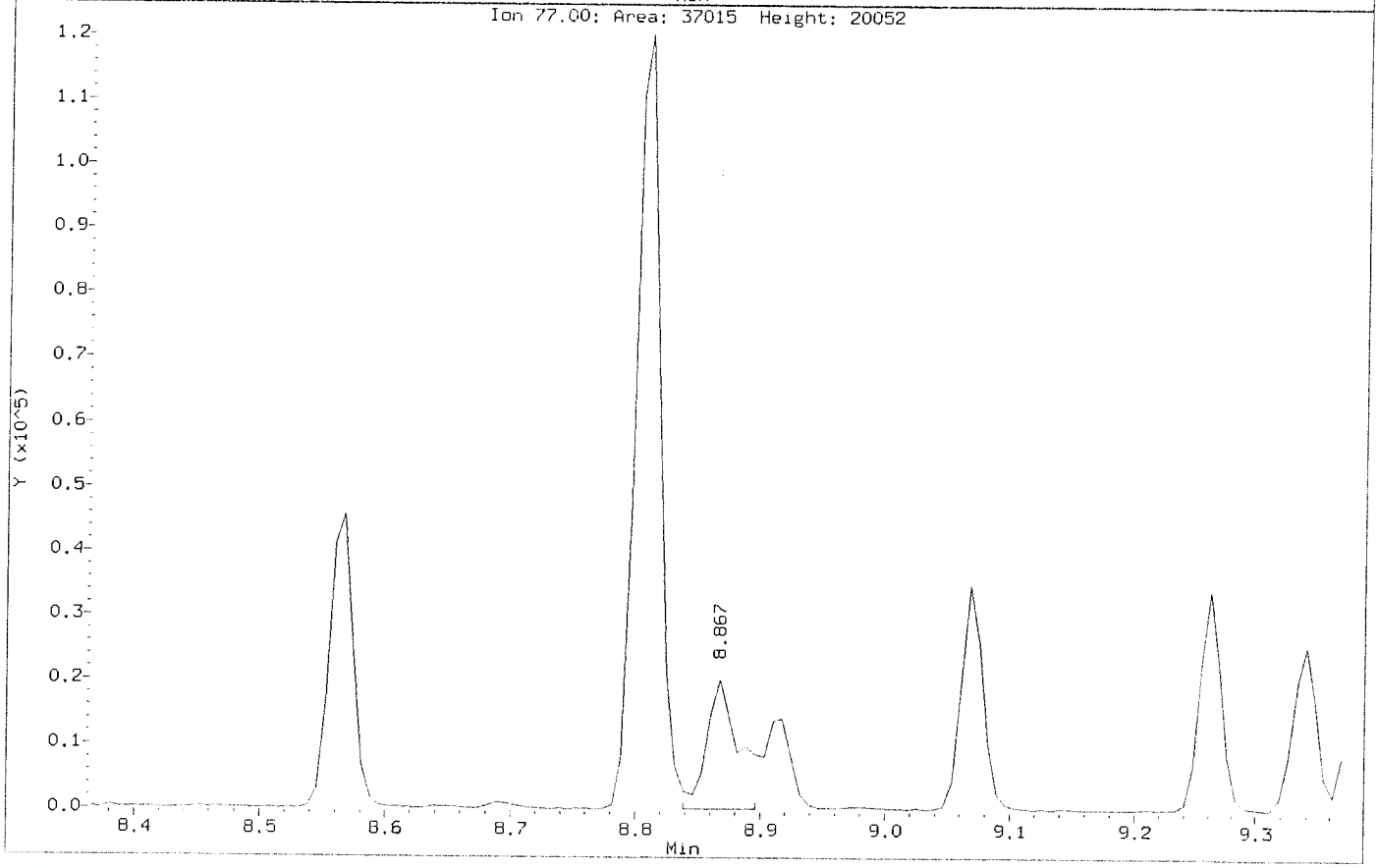
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Sample Info: HS20080801-01MSD;HS20080801-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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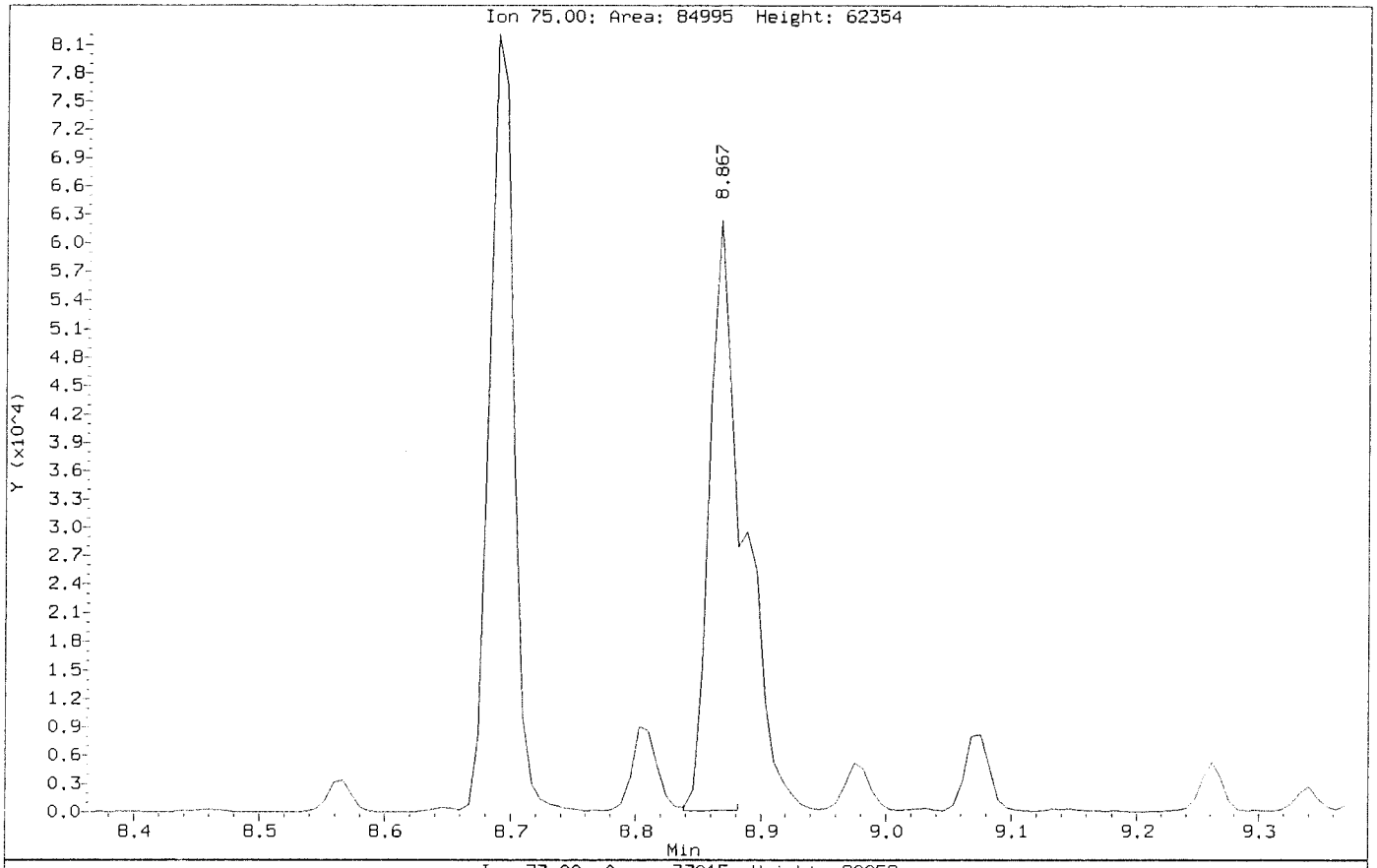
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

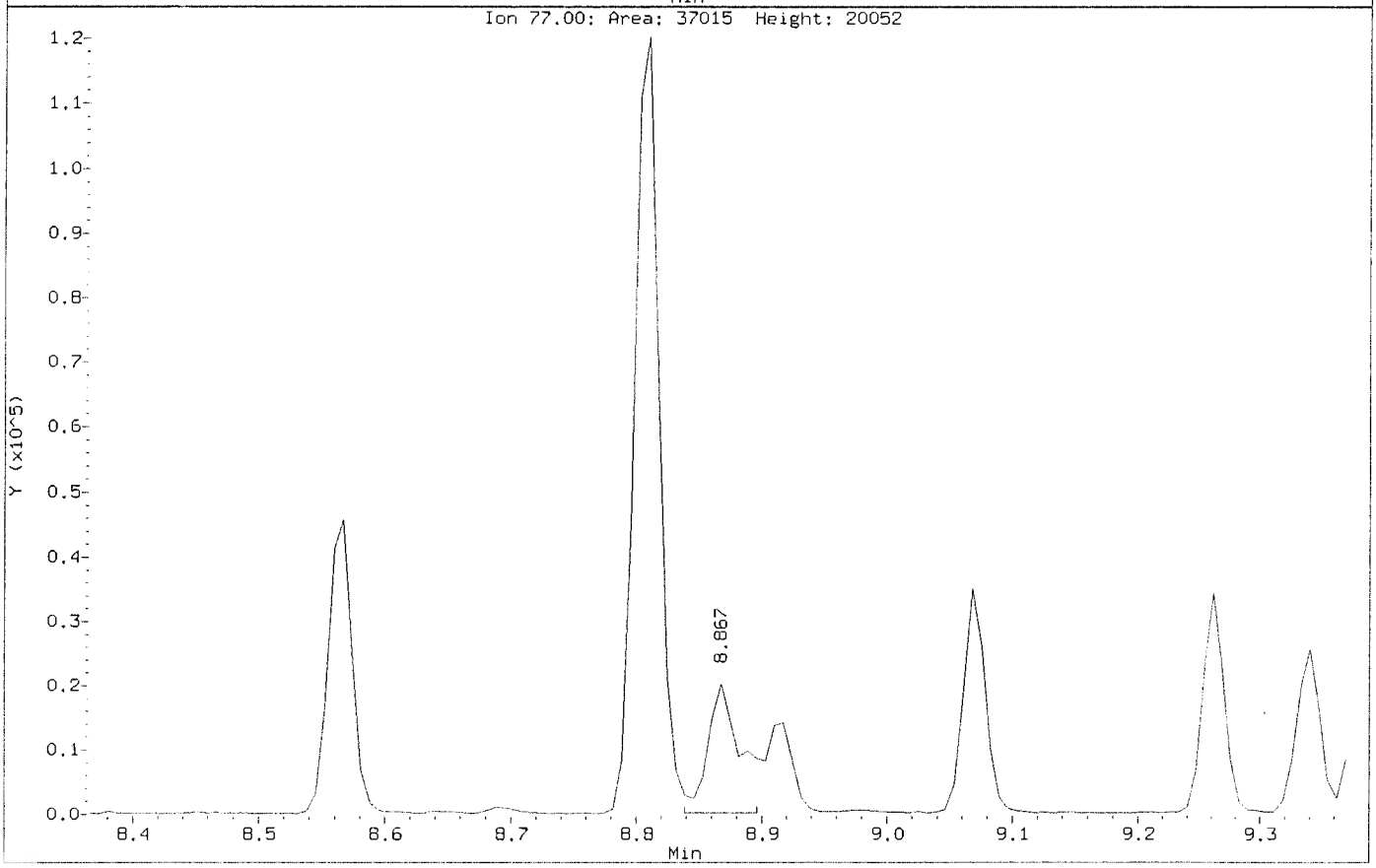




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Client Sample ID: HS20080801-01MSD

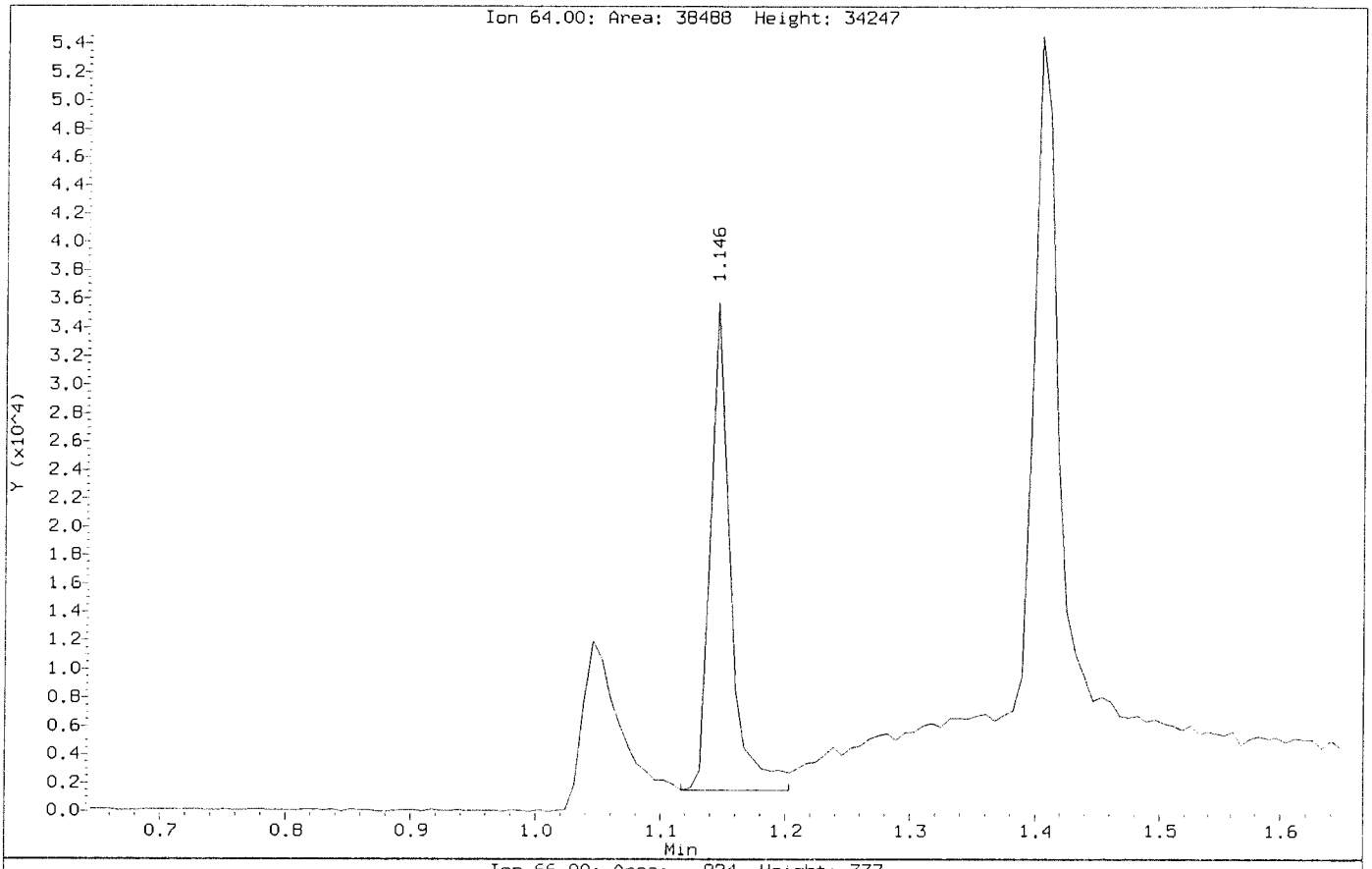
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

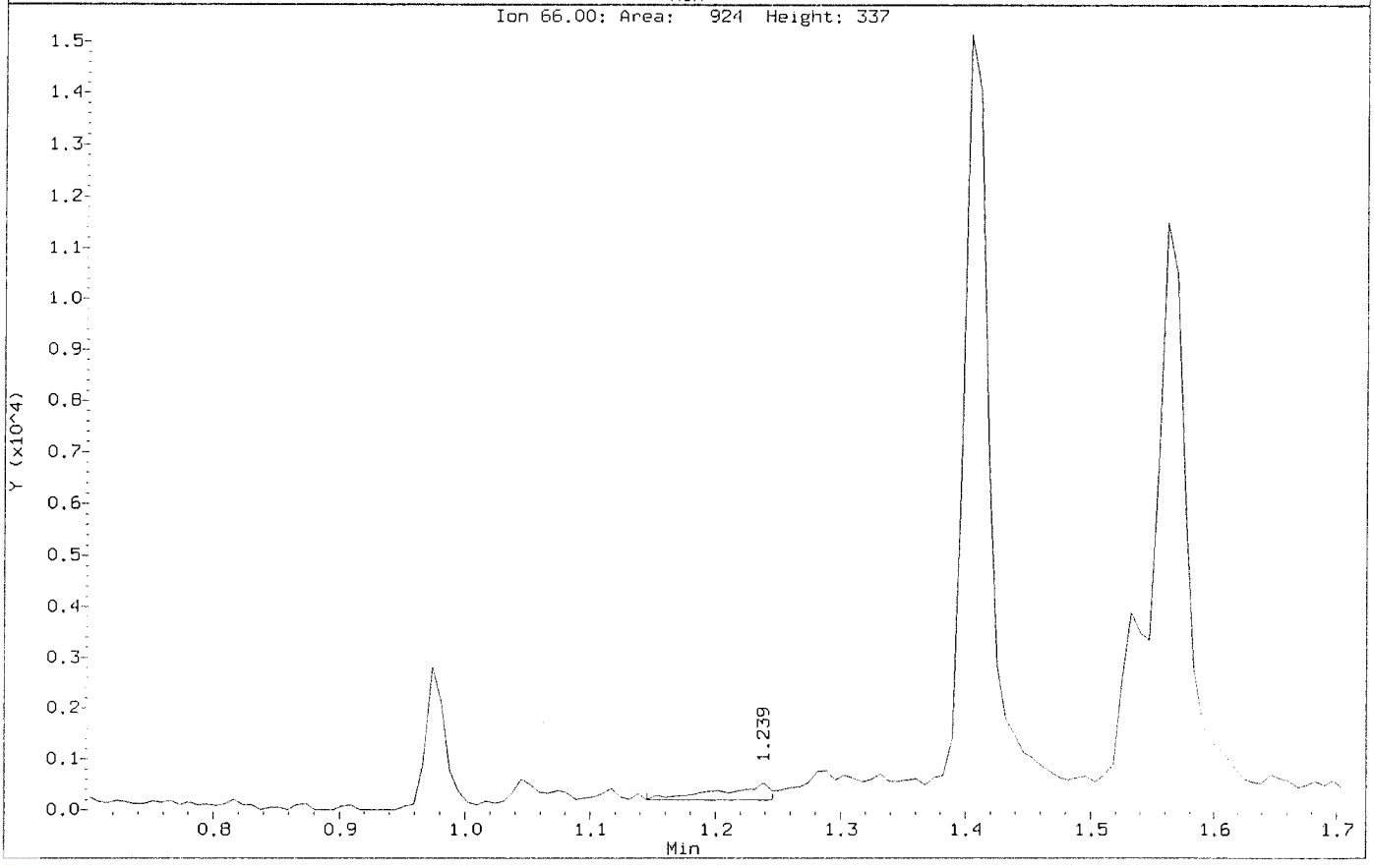




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Client Sample ID: HS20080801-01MSD

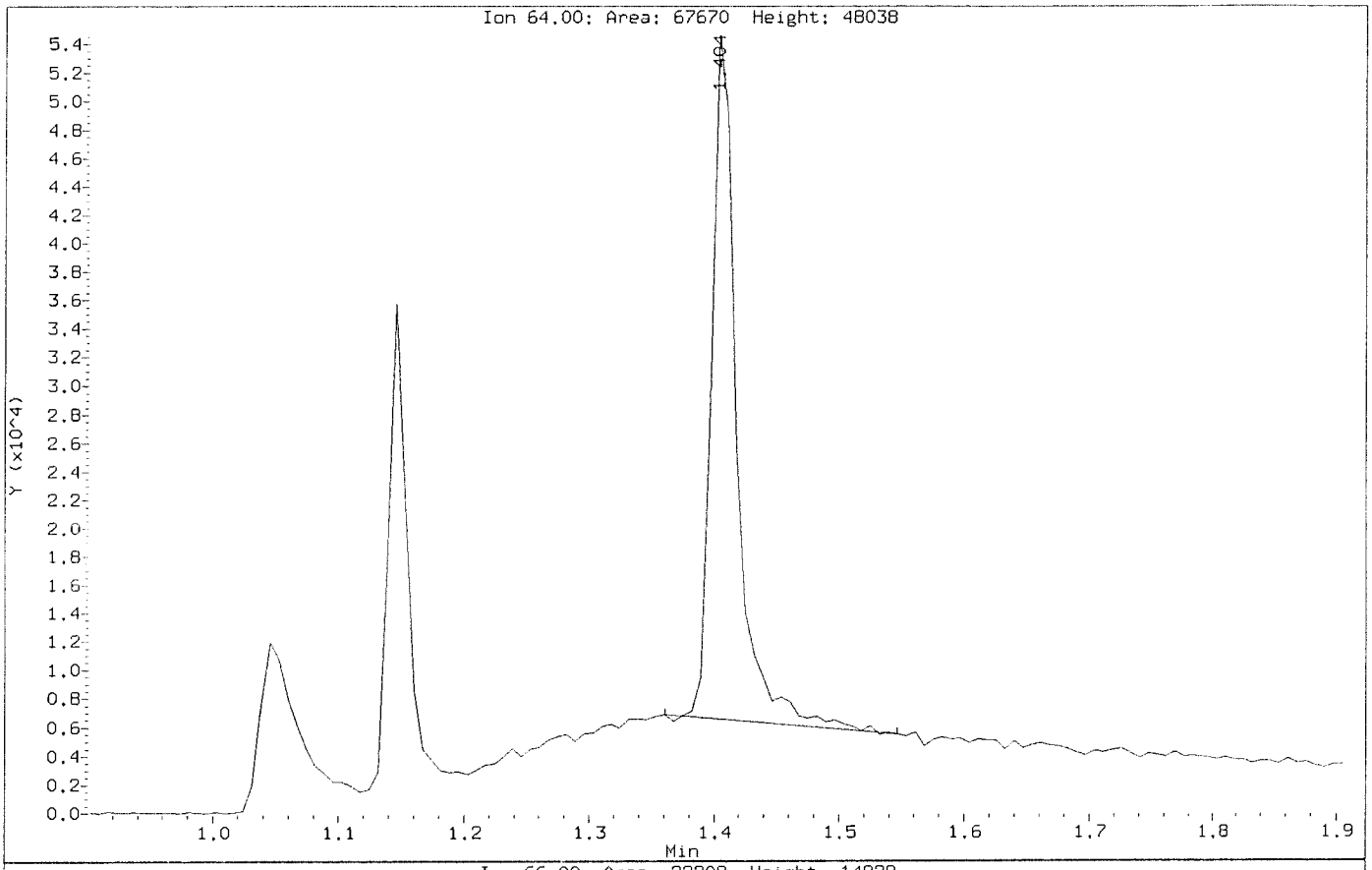
Compound: Chloroethane
CAS Number: 75-00-3

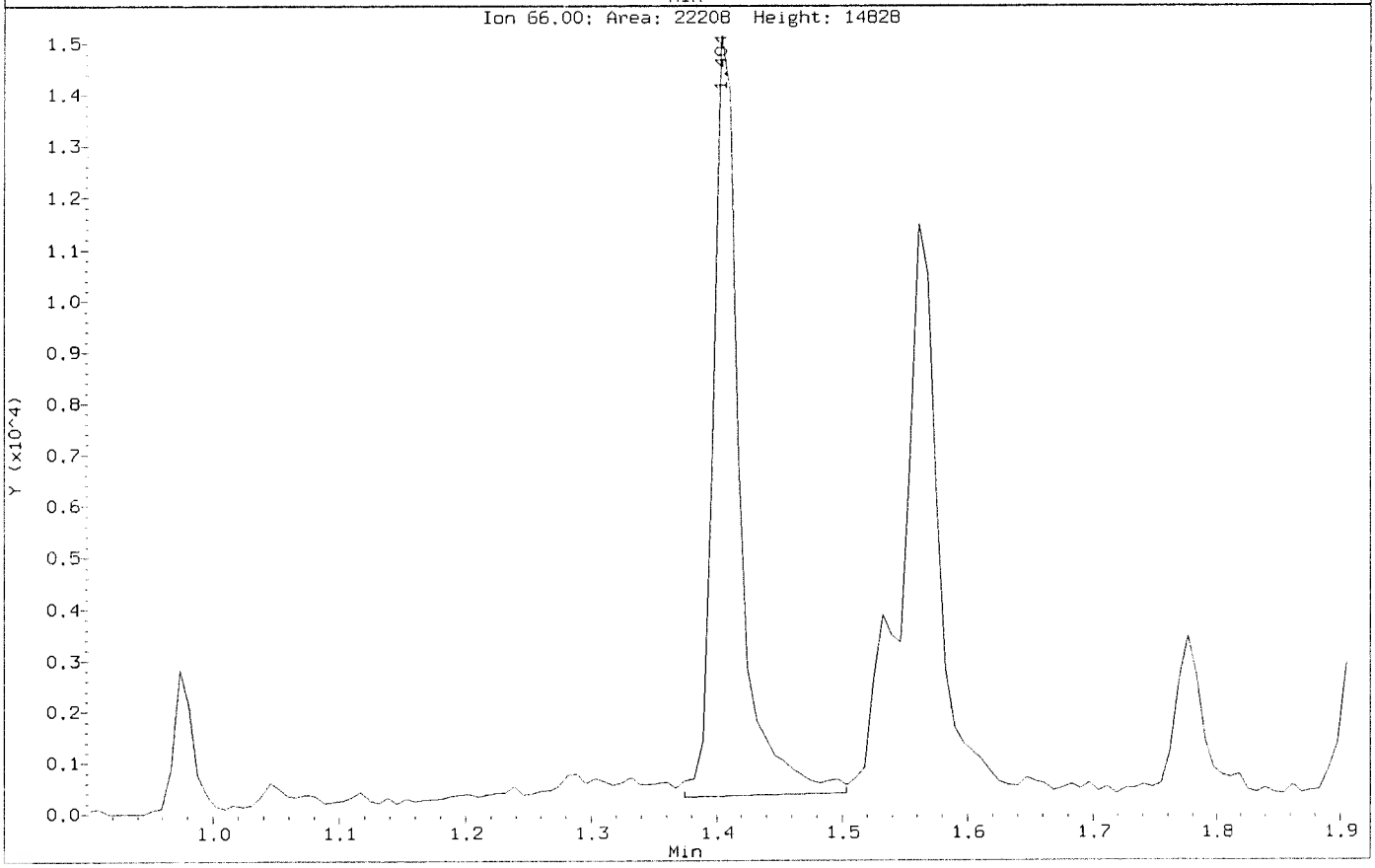




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Injection Date: 20-AUG-2020 16:10
Instrument: voa6.i
Client Sample ID: HS200B0801-01MSD

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082017.D Page 1
Report Date: 11-Sep-2020 15:40

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200820.b\X082017.D
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Inj Date : 20-AUG-2020 16:34
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200820.b\8260W.m
Meth Date : 11-Sep-2020 15:40 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

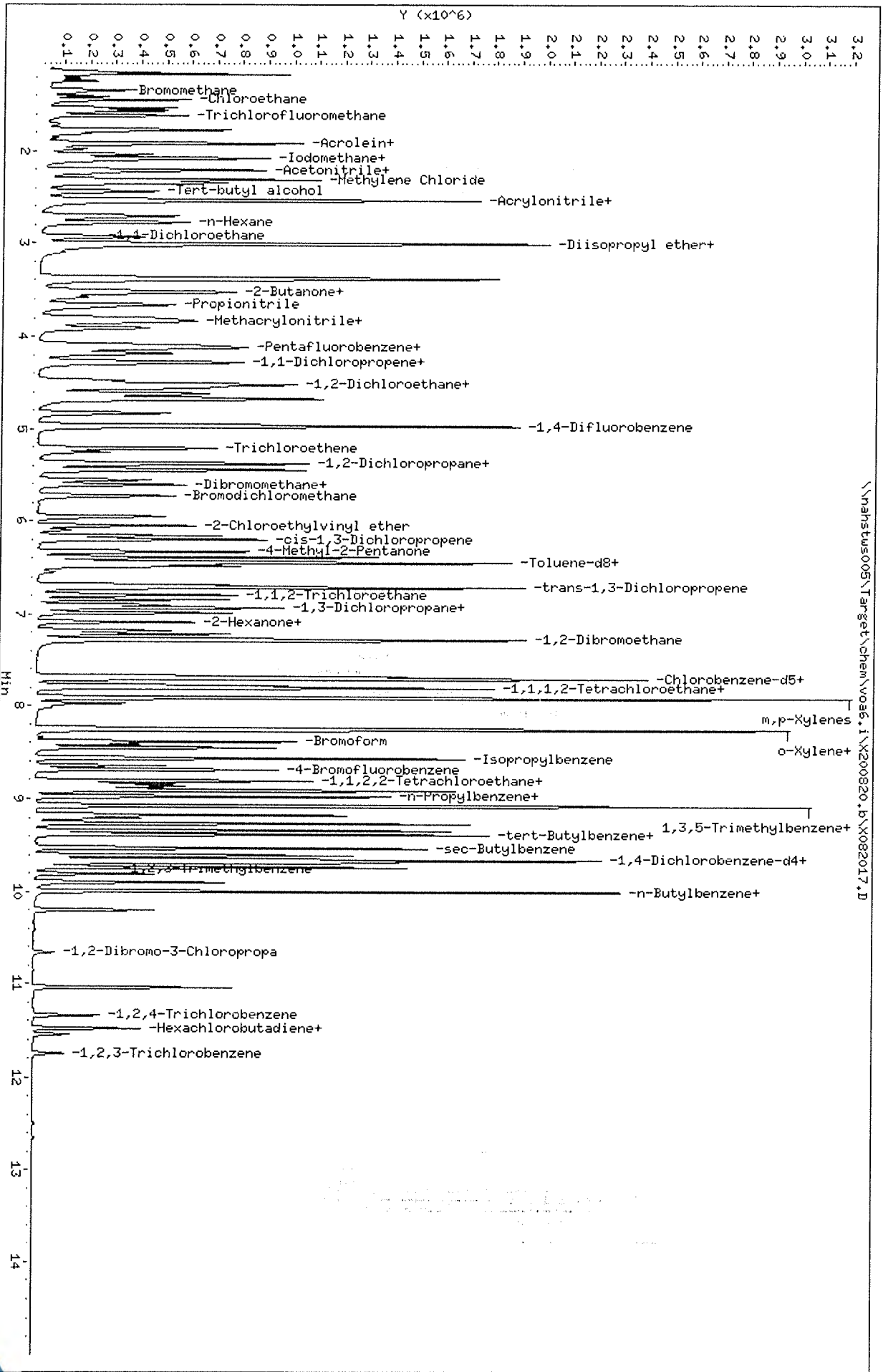
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	431726	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	668120	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	610546	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	278117	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	205899	50.0000	48.56
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	238440	50.0000	47.44
$	48 Toluene-d8	98	6.388	6.388	(0.833)	719267	50.0000	48.56
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269610	50.0000	47.19
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	225968	50.0000	48.62
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	333366	50.0000	50.13
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	229139	50.0000	51.13
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	169720	50.0000	48.85
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	449784	50.0000	53.33
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	184659	50.0000	53.98
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	282097	50.0000	50.24
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	33656	50.0000	40.21
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	195709	50.0000	48.07(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	73627	50.0000	45.90
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	782430	50.0000	52.66
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	16711	50.0000	42.14
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	222081	50.0000	49.62
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	380354	50.0000	48.35

Data File: \\nahstws005\Target\chem\voa6.i\X200820.b\X082017.D Page 2
Report Date: 11-Sep-2020 15:40

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	314141	50.0000	48.56
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	256928	50.0000	52.39
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	770455	50.0000	53.01
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	443437	50.0000	50.72
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	345650	50.0000	50.38
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	439089	50.0000	50.79
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	292343	50.0000	47.47
24	2-Butanone	43	3.580	3.580	(0.855)	219052	100.000	103.50
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	640870	50.0000	53.11
52	2-Hexanone	43	7.090	7.090	(0.924)	355472	100.000	92.74
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	734337	50.0000	52.31
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	814703	50.0000	52.89
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	525953	100.000	93.07
10	Acetone	43	1.976	1.976	(0.472)	142574	100.000	94.68
37	Benzene	78	4.519	4.519	(0.909)	862945	50.0000	52.05
74	Bromobenzene	156	8.809	8.809	(0.912)	276229	50.0000	50.77
29	Bromochloromethane	128	3.802	3.802	(0.908)	129077	50.0000	49.60
39	Bromodichloromethane	83	5.729	5.729	(1.153)	296014	50.0000	49.21
66	Bromoform	173	8.415	8.415	(1.097)	154747	50.0000	45.68
6	Bromomethane	94	1.346	1.346	(0.321)	135163	50.0000	45.54
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1118355	100.000	105.29
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	284776	50.0000	47.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	605684	50.0000	50.61
7	Chloroethane	64	1.403	1.403	(0.335)	156619	50.0000	51.18 (M)
28	Chloroform	83	3.917	3.917	(0.935)	391147	50.0000	50.71
3	Chloromethane	50	1.081	1.081	(0.258)	265972	50.0000	43.87
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	250760	50.0000	52.76
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	348180	50.0000	49.50
55	Dibromochloromethane	129	7.176	7.176	(0.936)	234192	50.0000	47.88
44	Dibromomethane	93	5.557	5.557	(1.118)	142548	50.0000	49.02
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	184937	50.0000	43.76
61	Ethylbenzene	106	7.799	7.799	(1.017)	315506	50.0000	51.06
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	71181	50.0000	47.67
67	Isopropylbenzene	105	8.566	8.566	(1.117)	932923	50.0000	51.43
62	m,p-Xylenes	106	7.907	7.907	(1.031)	753242	100.000	101.02
17	Methylene Chloride	84	2.305	2.305	(0.550)	230596	50.0000	51.86
87	n-Butylbenzene	91	9.998	9.998	(1.035)	647625	50.0000	52.65
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1071456	50.0000	53.47
92	Naphthalene	128	11.546	11.546	(1.195)	98911	50.0000	44.59
63	o-Xylene	106	8.244	8.244	(1.075)	371804	50.0000	50.76
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	898216	50.0000	53.16
64	Styrene	104	8.258	8.258	(1.077)	648998	50.0000	51.03
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	671228	50.0000	53.27
56	Tetrachloroethene	164	6.933	6.933	(0.904)	195738	50.0000	50.43
50	Toluene	91	6.446	6.446	(0.840)	904043	50.0000	50.70
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	211032	50.0000	52.14
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	307604	50.0000	47.72
38	Trichloroethene	130	5.214	5.214	(1.049)	245673	50.0000	51.88
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	323427	50.0000	50.86
5	Vinyl Chloride	62	1.145	1.145	(0.273)	286945	50.0000	51.63

QC Flag Legend

M - Compound response manually integrated.

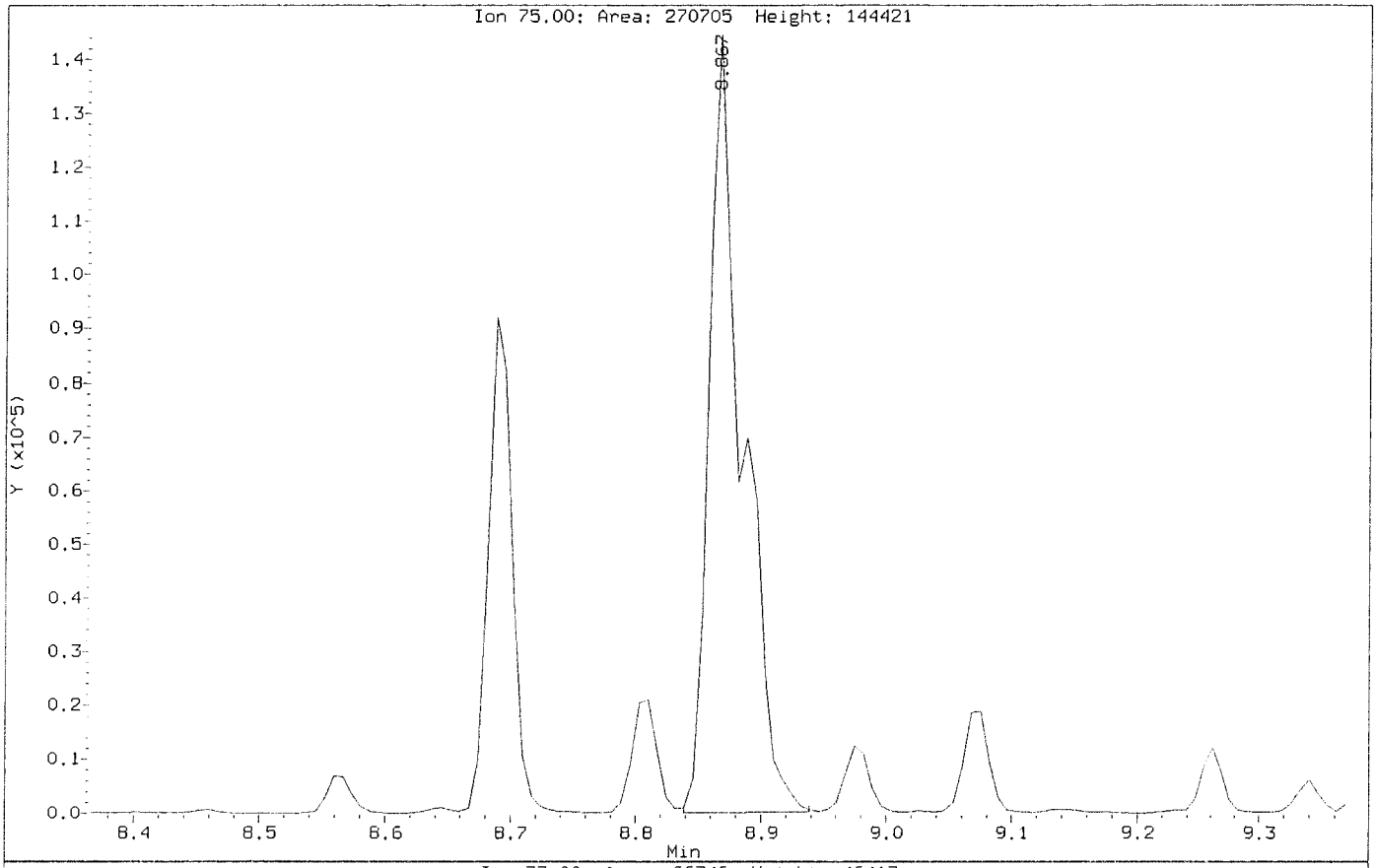


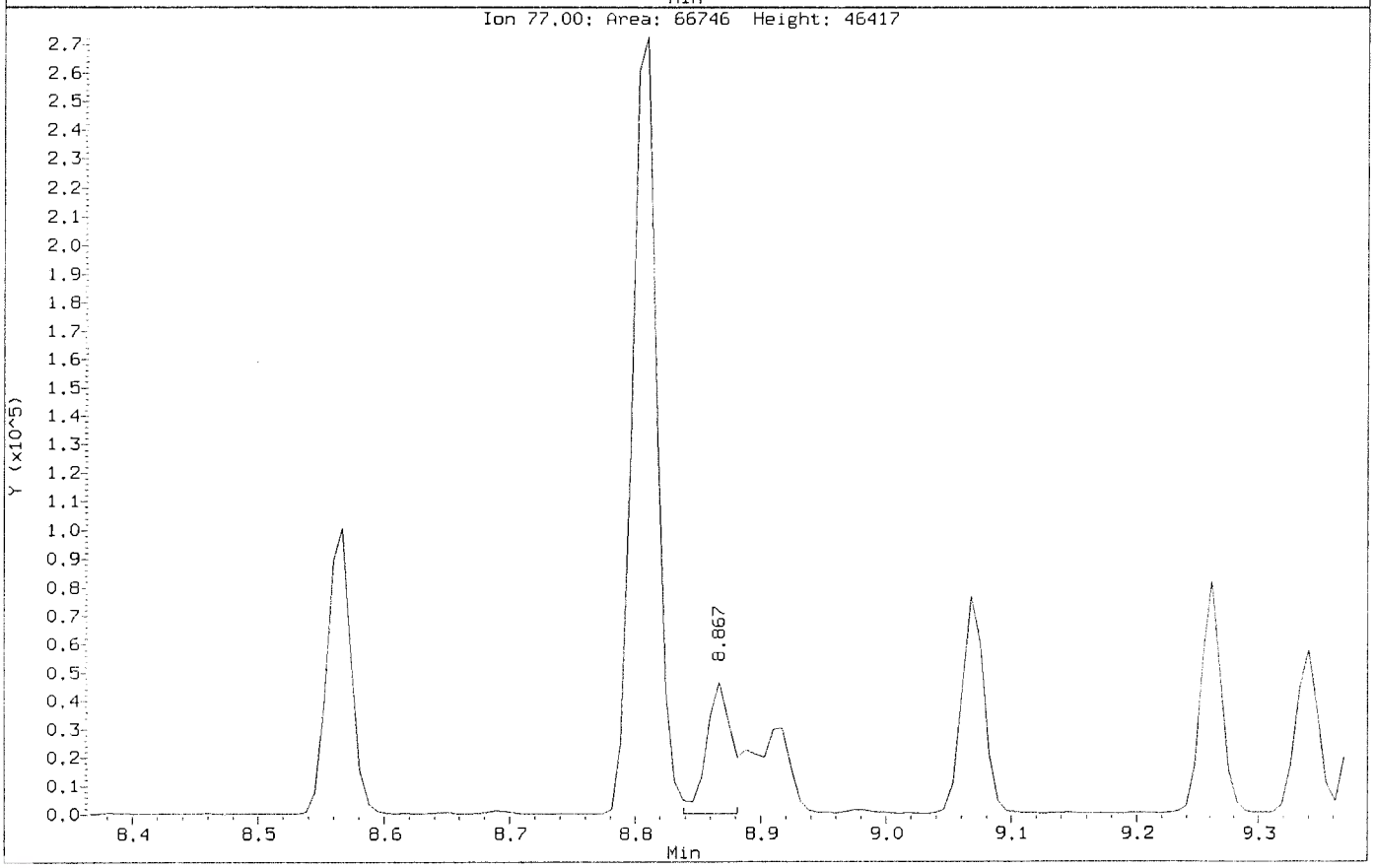
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Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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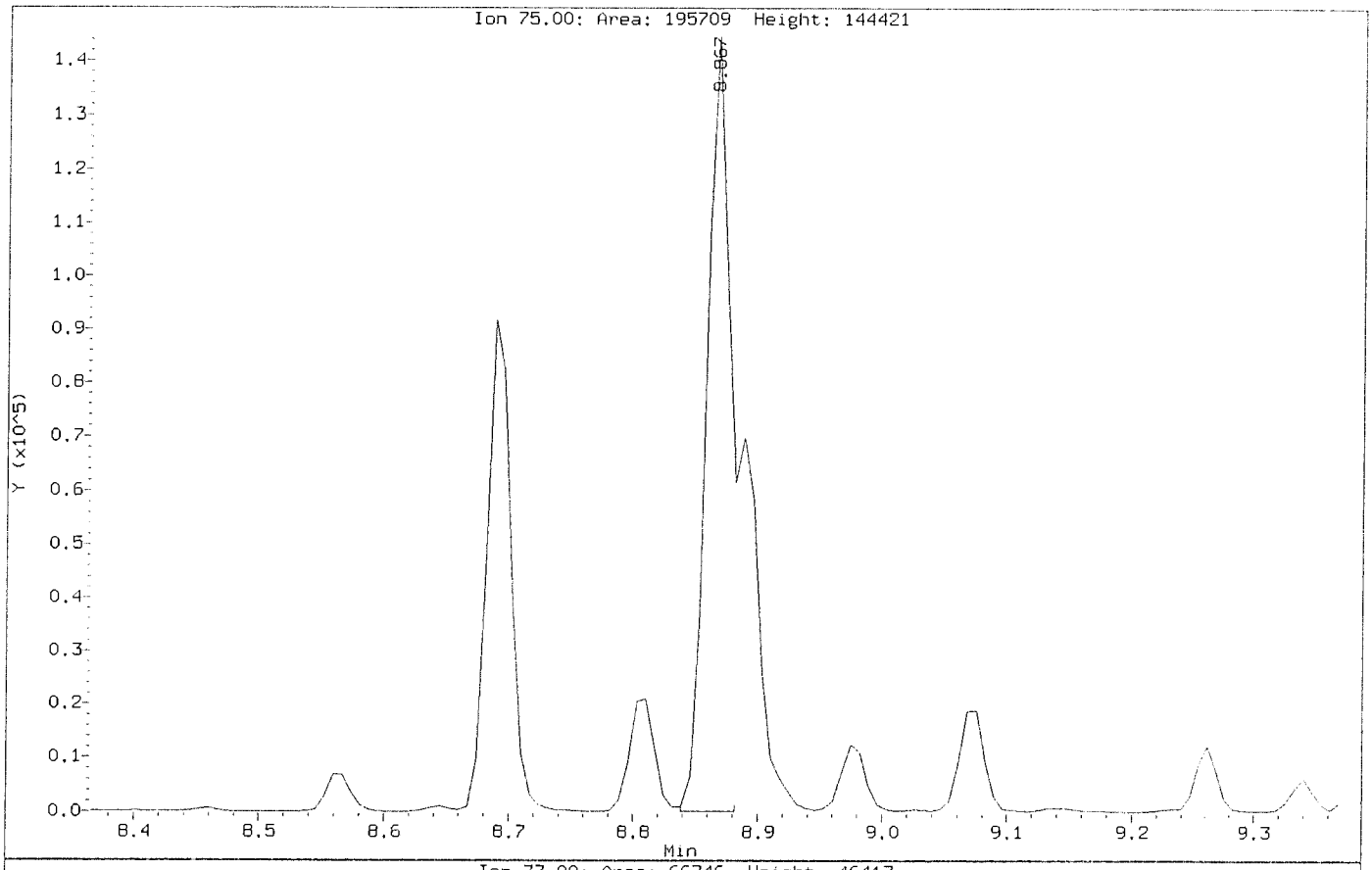
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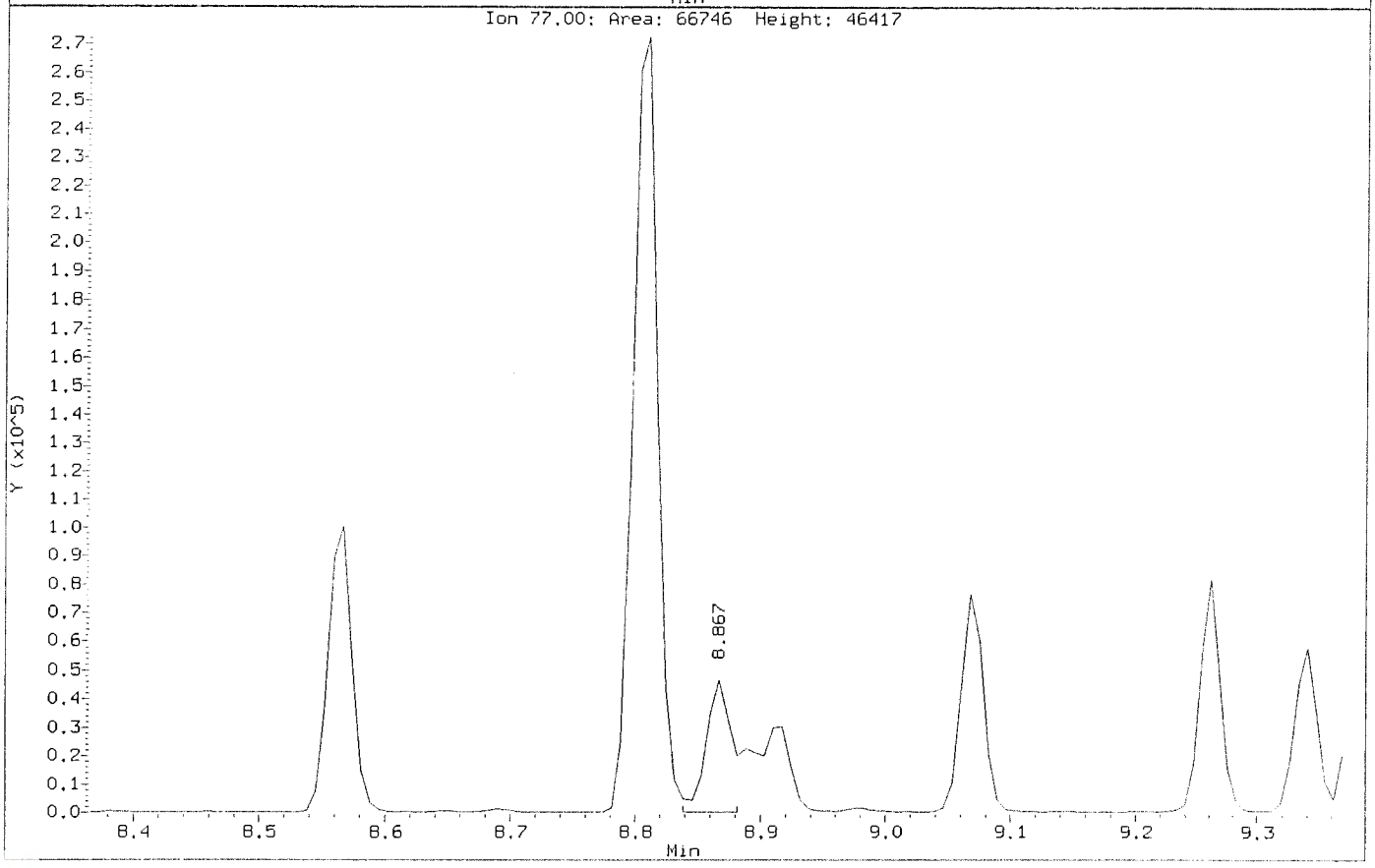




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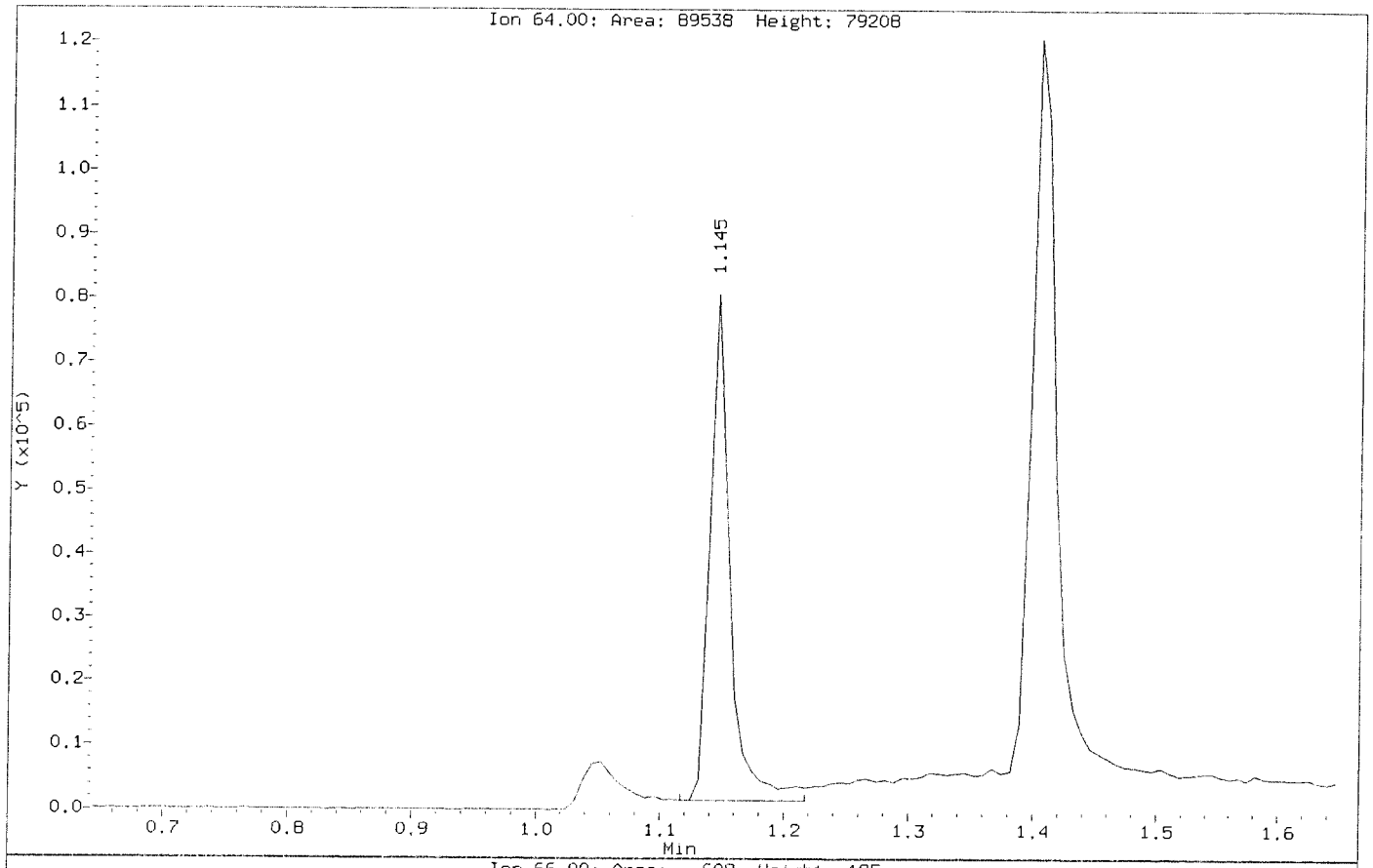
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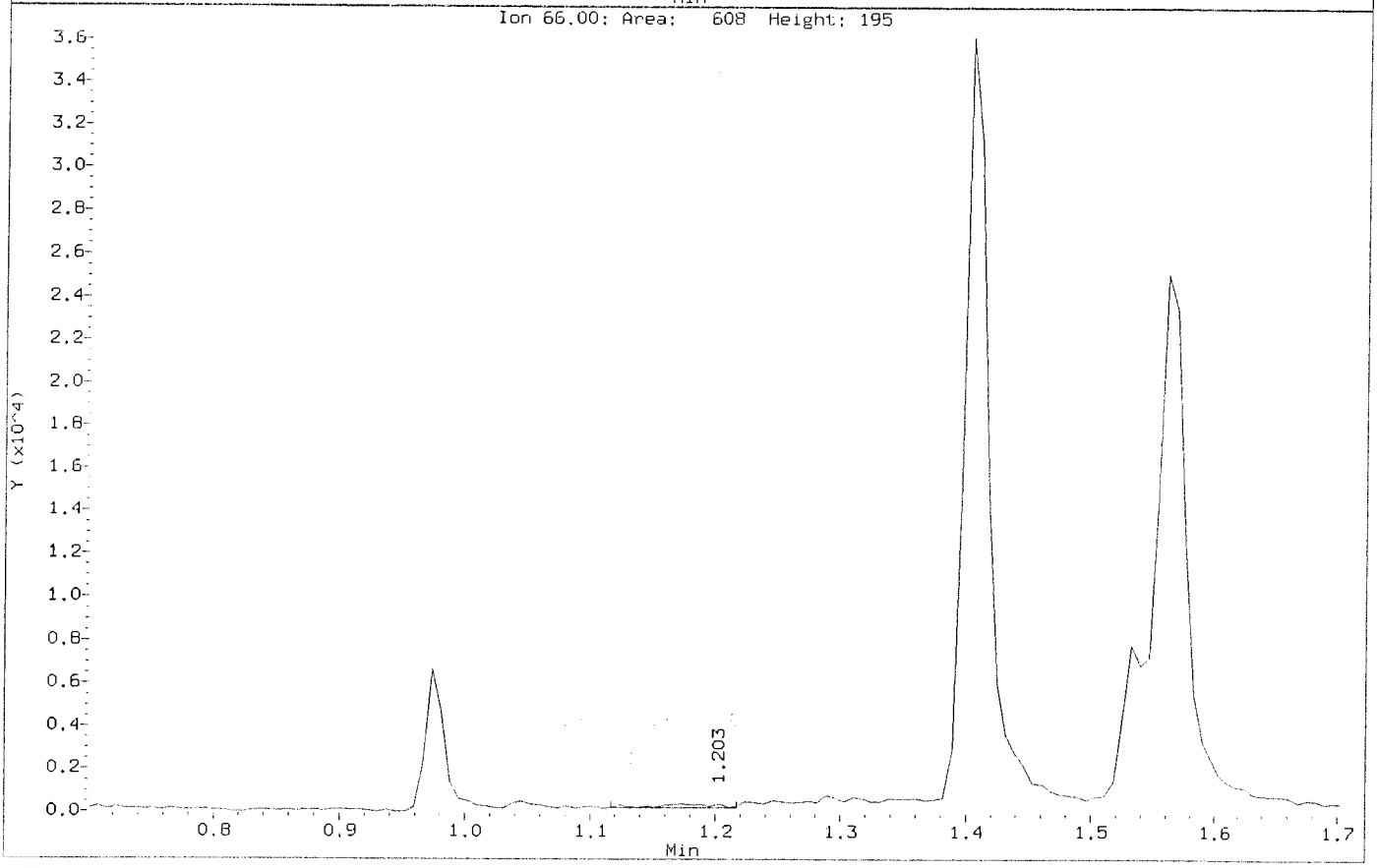




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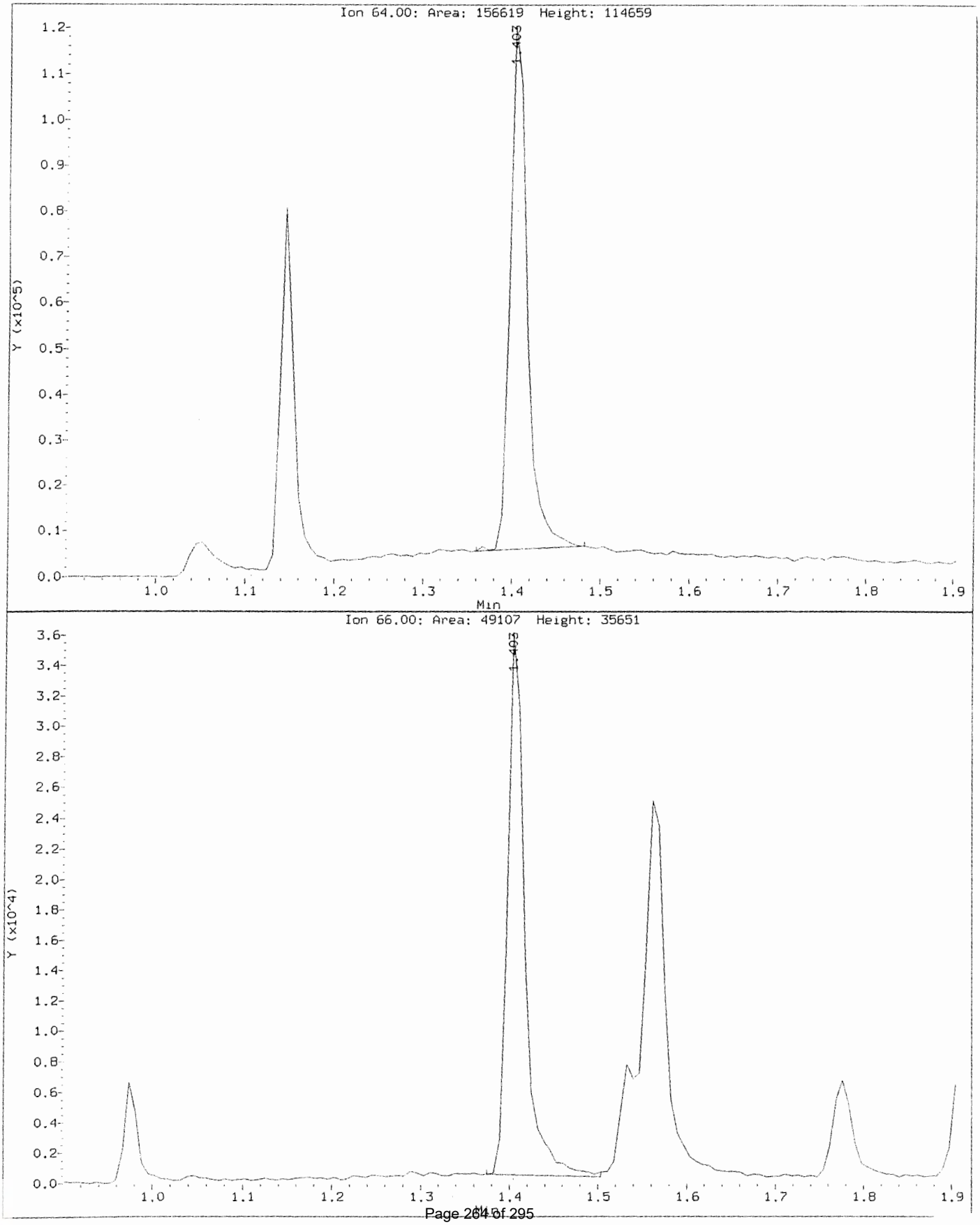
Compound: Chloroethane
CAS Number: 75-00-3





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strument: voa6.i
lient Sample ID: CCV-END

Compound: Chloroethane
CAS Number: 75-00-3



HS20080801 (9056_anions_W) Wet Chem Raw Data

ALS WO# HS20080801

Sequence: 082720
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status
	STD1		Calibration	BD1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD2		Calibration	BD2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD3		Calibration	BD3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD4		Calibration	BD4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD5		Calibration	BD5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD6		Calibration	BD6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICV		Unknown	BD7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICB		Unknown	BD8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	MBLK-082720		Unknown	BB1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	LCS-082720		Unknown	BB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20080801-01		Unknown	GB8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20080801-01MS		Unknown	GC1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20080801-01MSD		Unknown	GC2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20080801-01DF20		Unknown	GC3	20.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished

Sequence: 082720
Last Update Operator: alshs.nouser

Inject Time
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8/11/2020 11:22:45 AM -05:00
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8/27/2020 10:02:32 AM -05:00
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Sequence: 082720
Injection #6: STD6

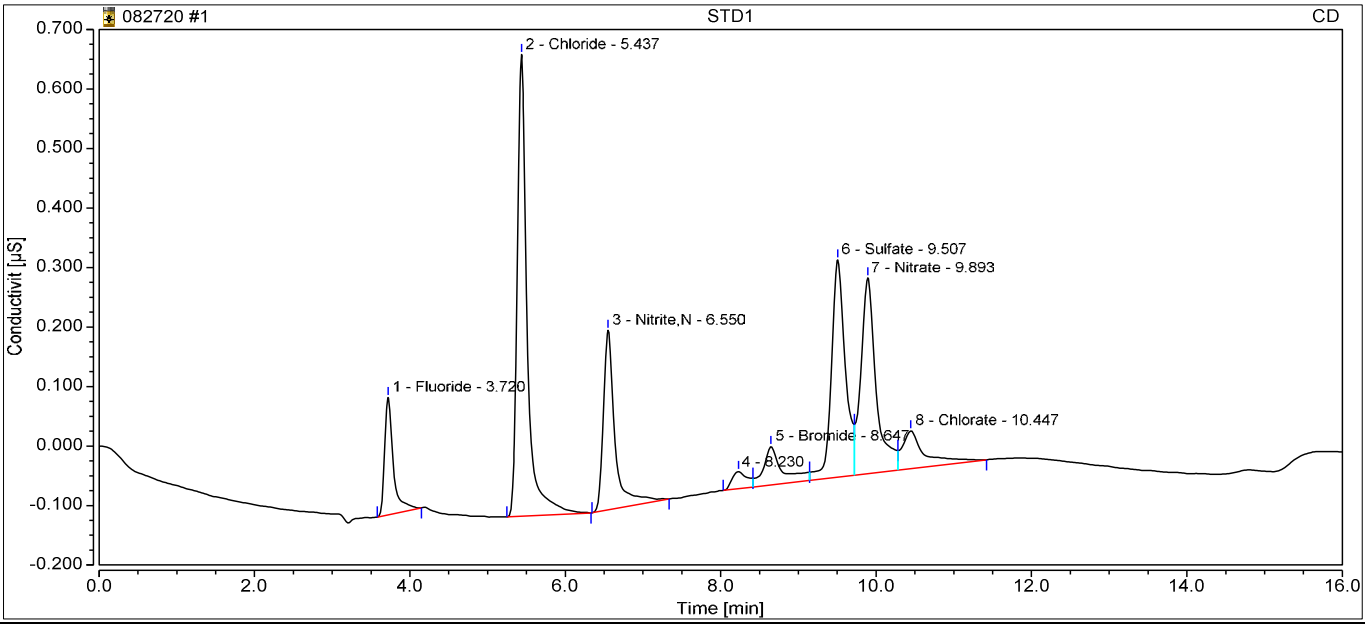
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*17.3553*	*0.99849*	*-0.0040*	*0.3537*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	5.4804	0.99983	0.0129	0.2289	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	26.1376	0.99573	0.0186	0.4711	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	0.9346	0.99999	0.0083	0.1008	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	5.2843	0.99985	-0.0019	0.1602	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	4.5248	0.99988	0.0144	0.6154	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	13.4374	0.99837	0.0139	0.1019	0.0000
10	Phosphate	Lin, WithOffset, 1/	Area	5	18.5357	0.99714	-0.0737	0.1942	0.0000
Maximum					**26.1376**	0.99999			
Minimum					0.9346	**0.99573**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BD1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 10:46**	*Sample Weight:*	**1.0000**

Run Time:



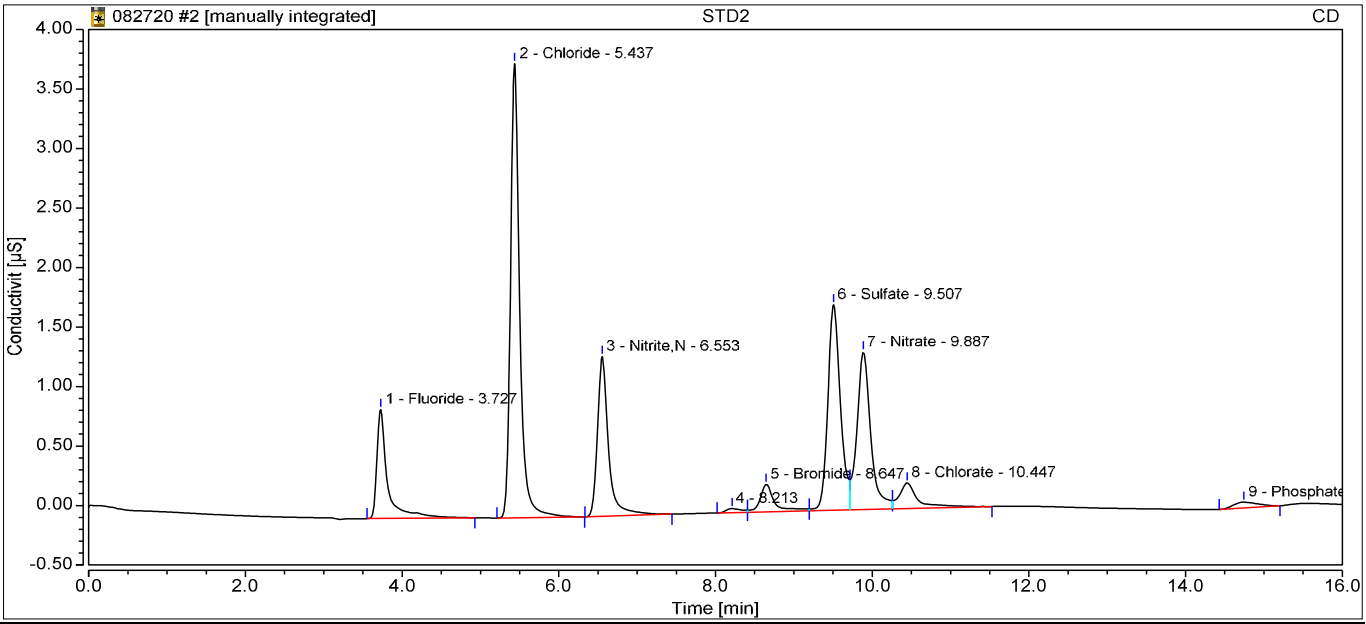
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.025	0.0833	0.0833	1.0000
2	5.44	Chloride	BMB	0.116	0.4487	0.4487	1.0000
3	6.55	Nitrite,N	BMB	0.052	0.0715	0.0715	1.0000
5	8.65	Bromide	M	0.018	0.0997	0.0997	1.0000
6	9.51	Sulfate	M	0.076	0.4861	0.4861	1.0000
7	9.89	Nitrate	M	0.075	0.0985	0.0985	1.0000
8	10.45	Chlorate	MB	0.021	0.0734	0.0734	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.384**		**1.36**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BD2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 11:04**	*Sample Weight:*	**1.0000**

Run Time:



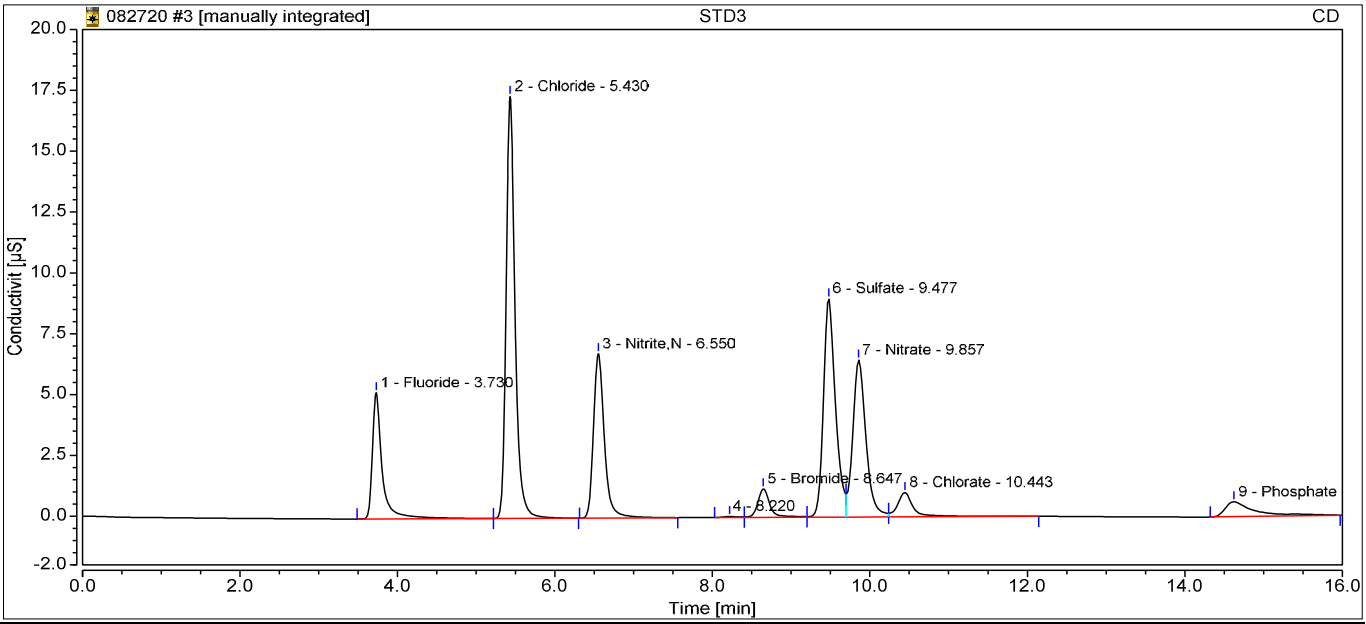
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.145	0.4204	0.4204	1.0000
2	5.44	Chloride	BMB	0.518	2.2084	2.2084	1.0000
3	6.55	Nitrite,N	BMB	0.221	0.4294	0.4294	1.0000
5	8.65	Bromide	M	0.049	0.4041	0.4041	1.0000
6	9.51	Sulfate	M	0.321	2.0151	2.0151	1.0000
7	9.89	Nitrate	M	0.270	0.4147	0.4147	1.0000
8	10.45	Chlorate	MB	0.060	0.4536	0.4536	1.0000
9	14.74	Phosphate	BMB	0.018	0.4703	0.4703	1.0000
Total:			**0.000**	**1.601**		**6.82**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BD3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 11:22**	*Sample Weight:*	**1.0000**

Run Time:



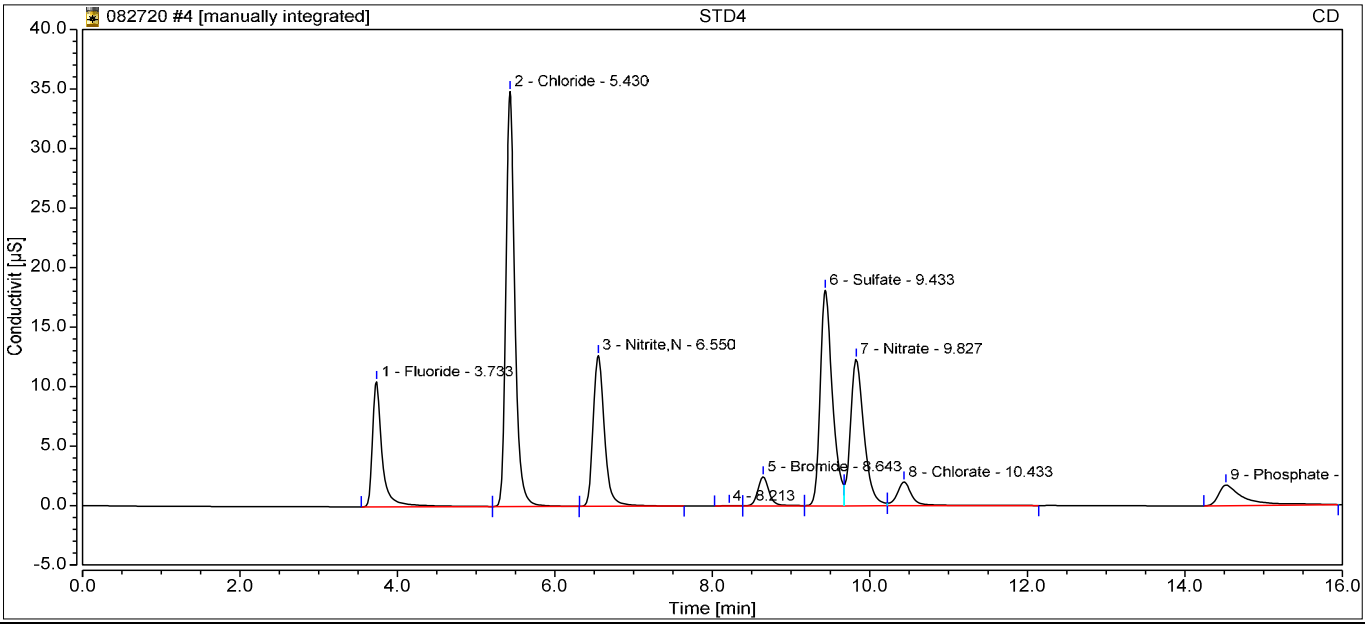
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.745	2.1166	2.1166	1.0000
2	5.43	Chloride	BMB	2.291	9.9533	9.9533	1.0000
3	6.55	Nitrite,N	BMB	1.077	2.2460	2.2460	1.0000
5	8.65	Bromide	M	0.209	1.9882	1.9882	1.0000
6	9.48	Sulfate	M	1.595	9.9688	9.9688	1.0000
7	9.86	Nitrate	M	1.238	1.9883	1.9883	1.0000
8	10.44	Chlorate	MB	0.239	2.2038	2.2038	1.0000
9	14.62	Phosphate	BM *	0.269	1.7634	1.7634	1.0000
Total:			**0.000**	**7.661**		**32.23**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BD4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 11:40**	*Sample Weight:*	**1.0000**

Run Time:



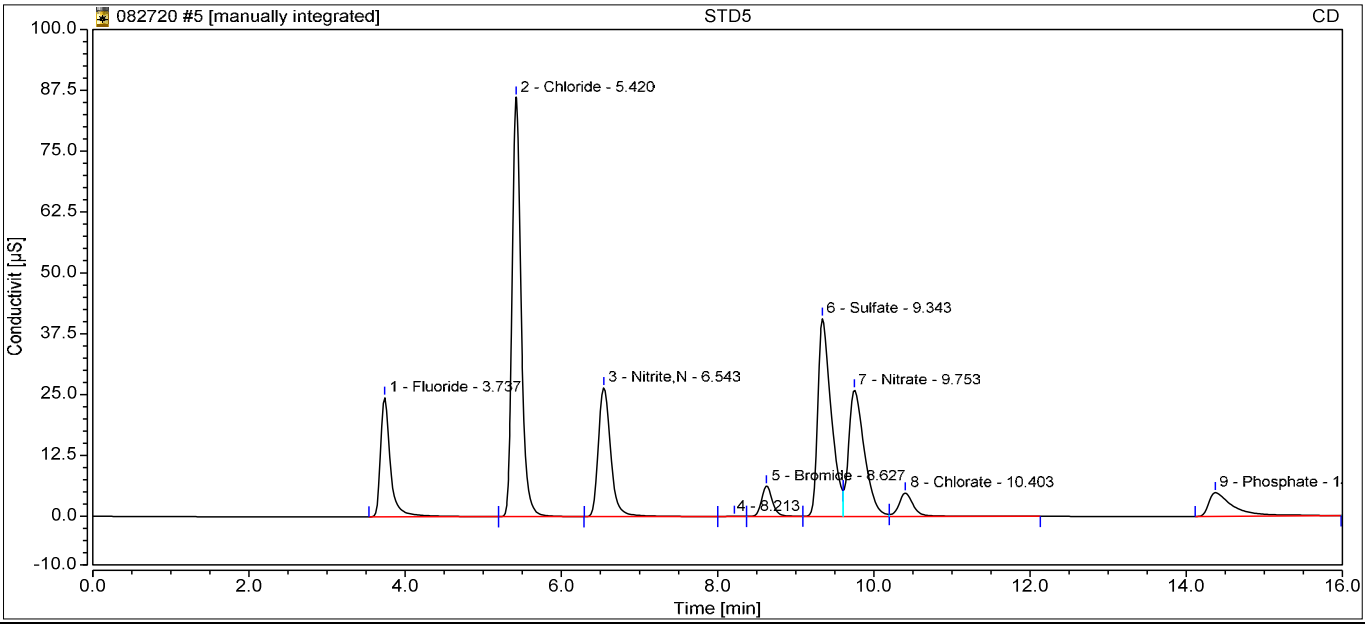
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.504	4.2630	4.2630	1.0000
2	5.43	Chloride	BMB	4.613	20.0986	20.0986	1.0000
3	6.55	Nitrite,N	BMB*	2.104	4.4276	4.4276	1.0000
5	8.64	Bromide	M	0.411	3.9946	3.9946	1.0000
6	9.43	Sulfate	M	3.273	20.4465	20.4465	1.0000
7	9.83	Nitrate	M	2.444	3.9482	3.9482	1.0000
8	10.43	Chlorate	MB	0.443	4.2079	4.2079	1.0000
9	14.52	Phosphate	BM *	0.648	3.7157	3.7157	1.0000
Total:			**0.000**	**15.439**		**65.10**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BD5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 11:58**	*Sample Weight:*	**1.0000**

Run Time:



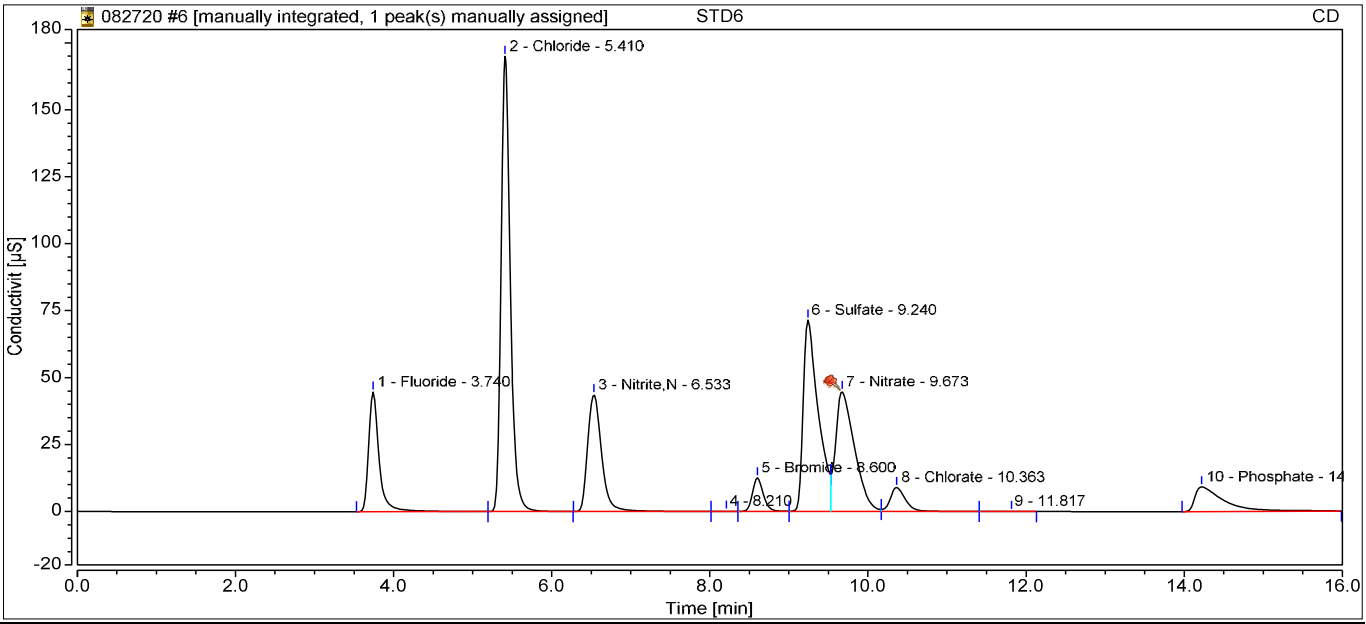
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.611	10.2228	10.2228	1.0000
2	5.42	Chloride	BMB	11.462	50.0272	50.0272	1.0000
3	6.54	Nitrite,N	BMB	4.877	10.3135	10.3135	1.0000
5	8.63	Bromide	M	1.014	9.9796	9.9796	1.0000
6	9.34	Sulfate	M	8.089	50.5200	50.5200	1.0000
7	9.75	Nitrate	M	6.097	9.8832	9.8832	1.0000
8	10.40	Chlorate	MB	1.032	9.9918	9.9918	1.0000
9	14.37	Phosphate	BM *	1.834	9.8223	9.8223	1.0000
Total:			**0.000**	**38.017**		**160.76**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BD6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 12:16**	*Sample Weight:*	**1.0000**

Run Time:



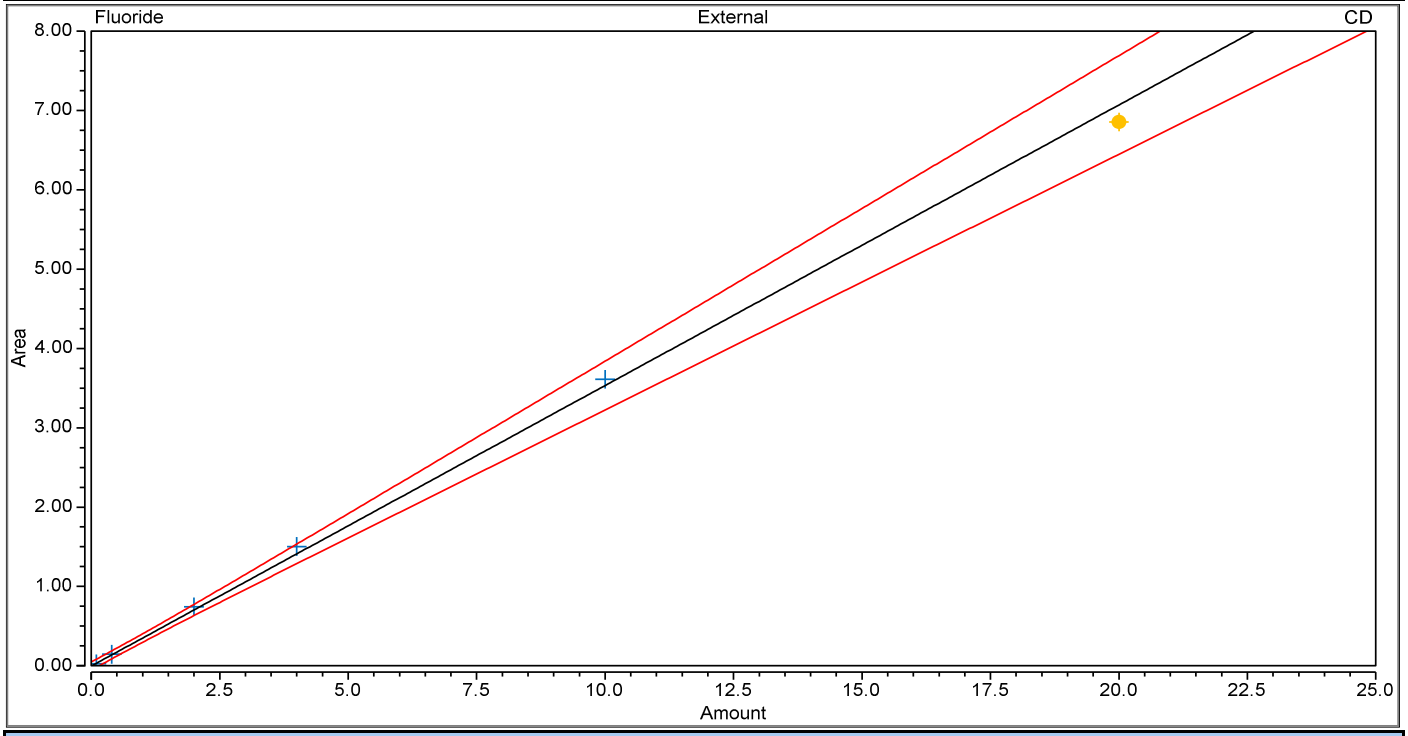
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	6.855	19.3940	19.3940	1.0000
2	5.41	Chloride	BMB	22.844	99.7639	99.7639	1.0000
3	6.53	Nitrite,N	BMB	8.975	19.0121	19.0121	1.0000
5	8.60	Bromide	M	2.028	20.0338	20.0338	1.0000
6	9.24	Sulfate	M	15.864	99.0635	99.0635	1.0000
7	9.67	Nitrate	M ^	12.426	20.1671	20.1671	1.0000
8	10.36	Chlorate	M	2.009	19.5694	19.5694	1.0000
10	14.22	Phosphate	BM *	3.933	20.6283	20.6283	1.0000
Total:			**0.000**	**74.933**		**317.63**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0040
Evaluation Type	Area	*Slope (C1)*	0.3537
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9985

Calibration Plot **Fluoride**



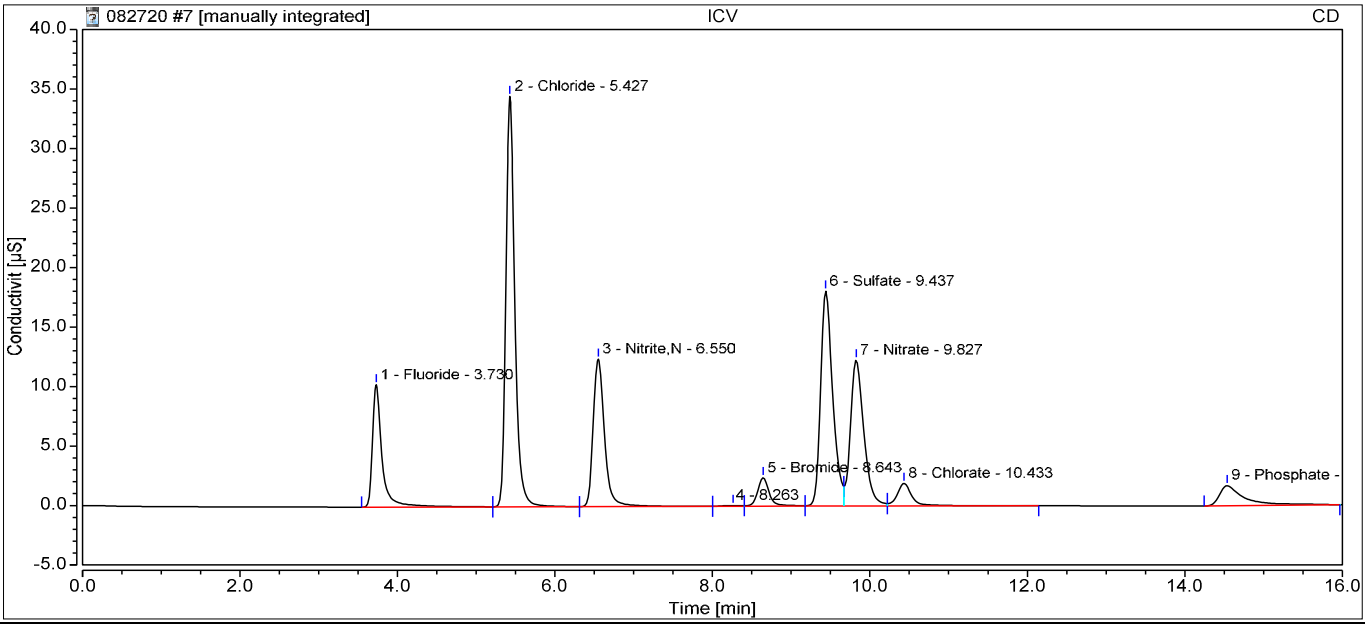
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0254	0.0254	0.025	0.197
2	STD2	2	0.4000	0.1446	0.1446	0.145	0.916
3	STD3	3	2.0000	0.7445	0.7445	0.745	5.182
4	STD4	4	4.0000	1.5036	1.5036	1.504	10.507
5	STD5	5	10.0000	3.6113	3.6113	3.611	24.538
6	STD6	6	20.0000	6.8547	6.8547	6.855	44.677

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BD7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 12:34**	*Sample Weight:*	**1.0000**

Run Time:



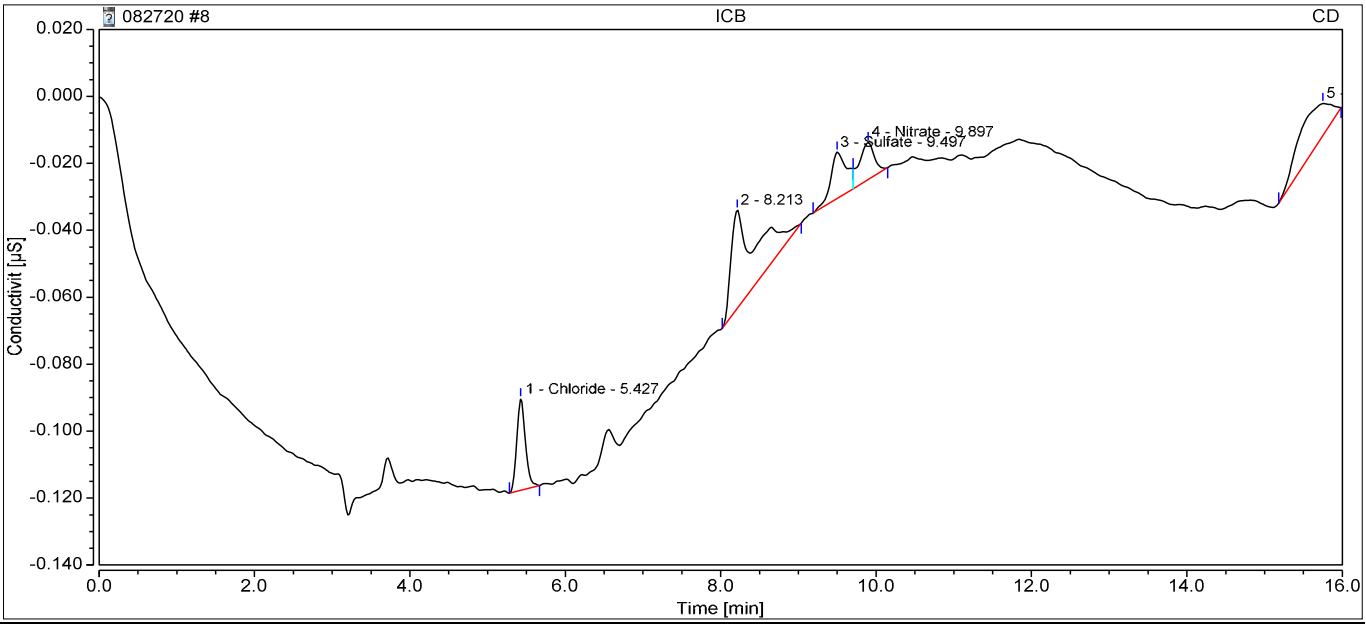
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.447	4.1020	4.1020	1.0000
2	5.43	Chloride	BMB	4.553	19.8399	19.8399	1.0000
3	6.55	Nitrite,N	BMB	2.061	4.3359	4.3359	1.0000
5	8.64	Bromide	M	0.413	4.0106	4.0106	1.0000
6	9.44	Sulfate	M	3.227	20.1622	20.1622	1.0000
7	9.83	Nitrate	M	2.405	3.8850	3.8850	1.0000
8	10.43	Chlorate	MB	0.422	4.0019	4.0019	1.0000
9	14.54	Phosphate	BM *	0.631	3.6292	3.6292	1.0000
Total:			**0.000**	**15.159**		**63.97**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BD8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/11/2020 12:52**	*Sample Weight:*	**1.0000**

Run Time:



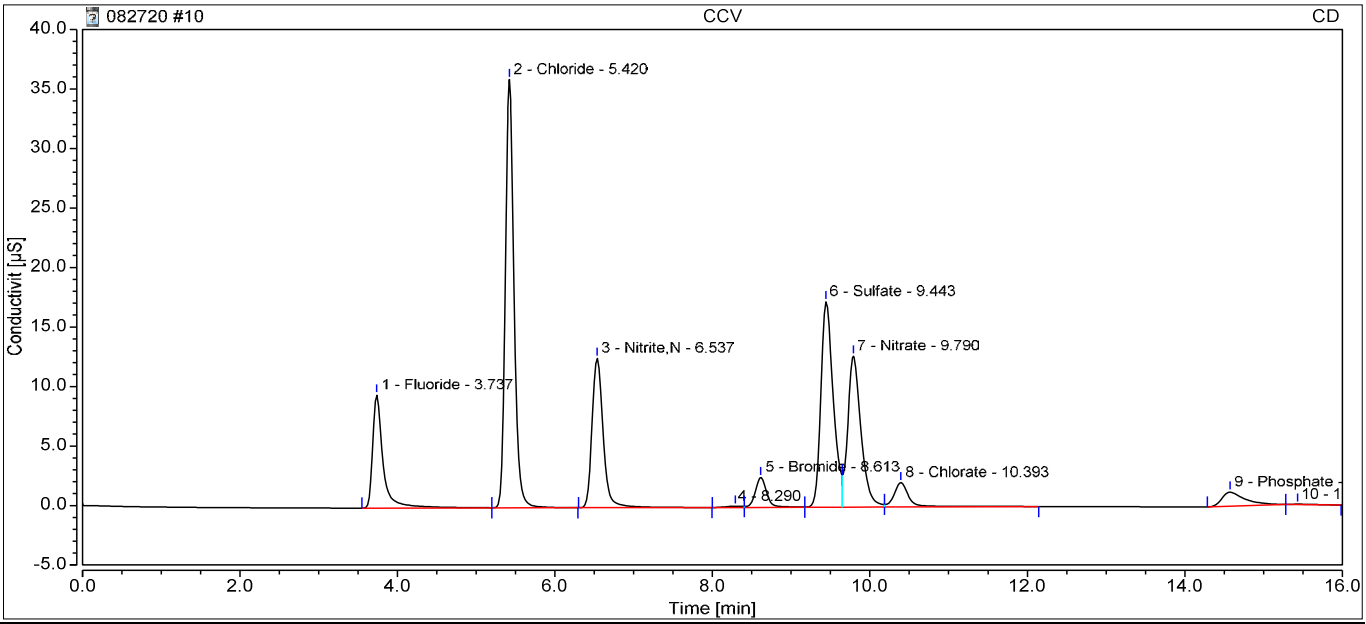
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.43	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.50	Sulfate	BM	0.003	0.0318	0.0318	1.0000
4	9.90	Nitrate	MB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.009**		**0.03**	

10 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 09:44**	*Sample Weight:*	**1.0000**

Run Time:



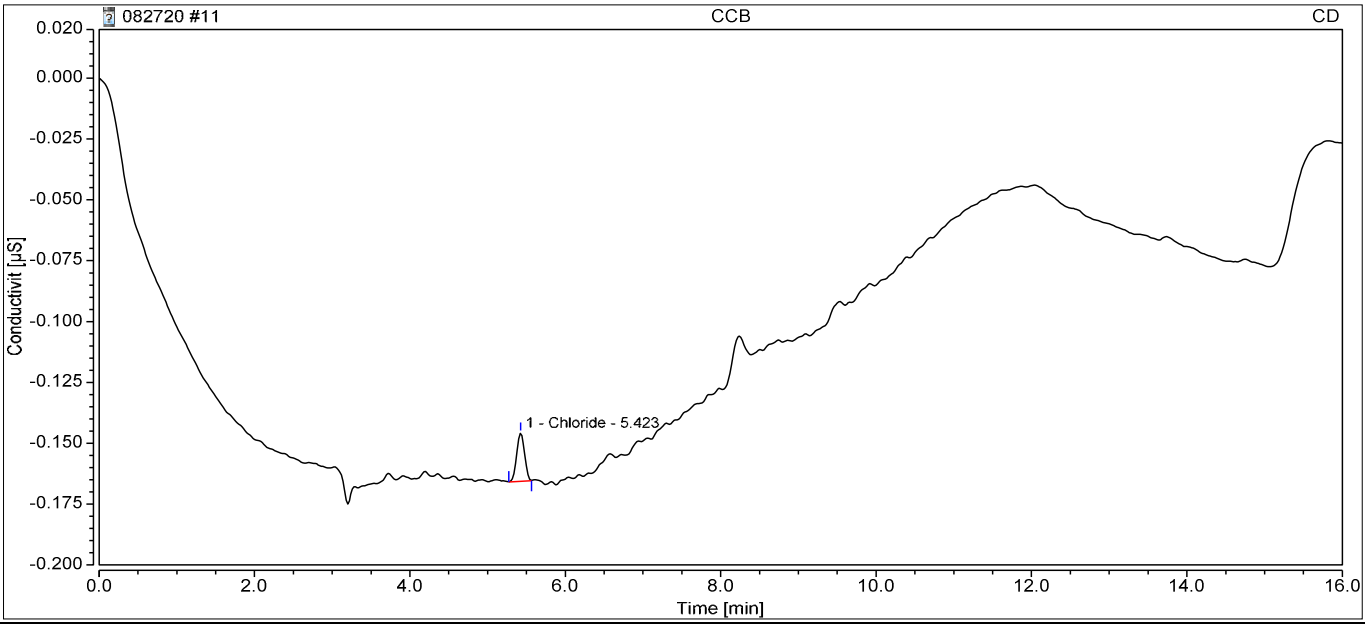
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.456	4.1278	4.1278	1.0000
2	5.42	Chloride	BMB	4.618	20.1216	20.1216	1.0000
3	6.54	Nitrite,N	BMB	2.056	4.3251	4.3251	1.0000
5	8.61	Bromide	M	0.418	4.0626	4.0626	1.0000
6	9.44	Sulfate	M	3.164	19.7652	19.7652	1.0000
7	9.79	Nitrate	M	2.470	3.9898	3.9898	1.0000
8	10.39	Chlorate	MB	0.450	4.2826	4.2826	1.0000
9	14.57	Phosphate	BMB	0.400	2.4387	2.4387	1.0000
Total:			**0.000**	**15.031**		**63.11**	

11 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 10:02**	*Sample Weight:*	**1.0000**

Run Time:



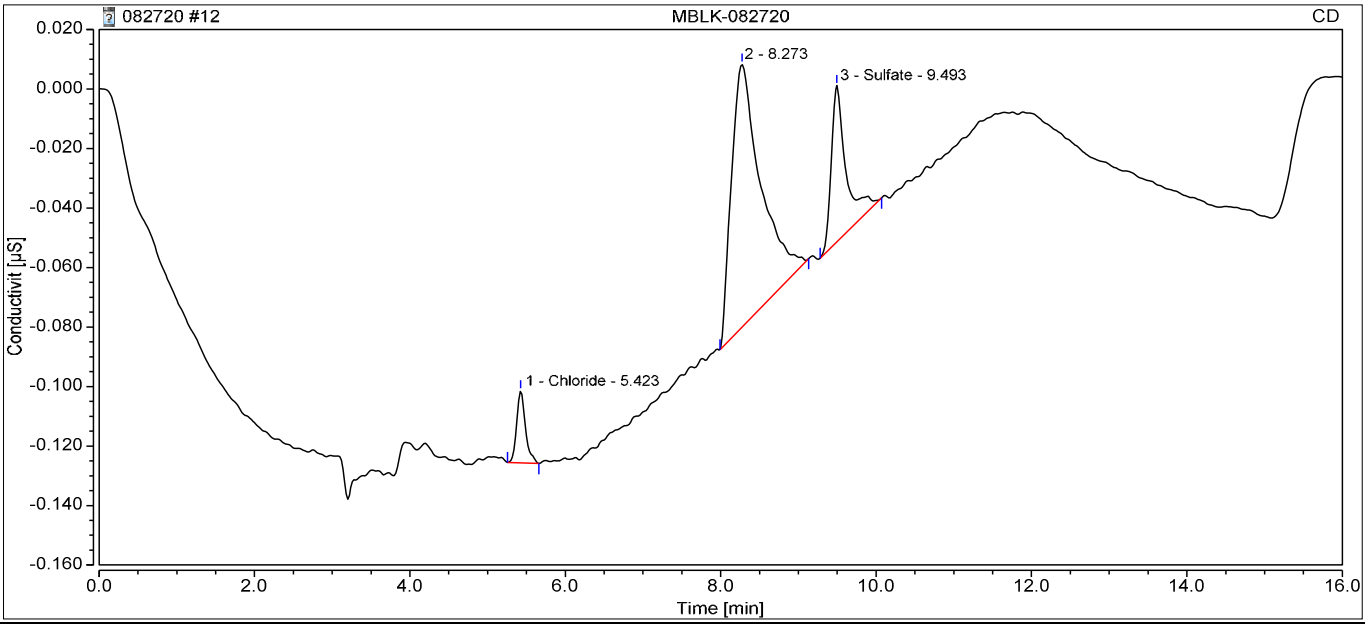
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

12 MBLK-082720

Sample Name:	**MBLK-082720**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 10:20**	*Sample Weight:*	**1.0000**

Run Time:



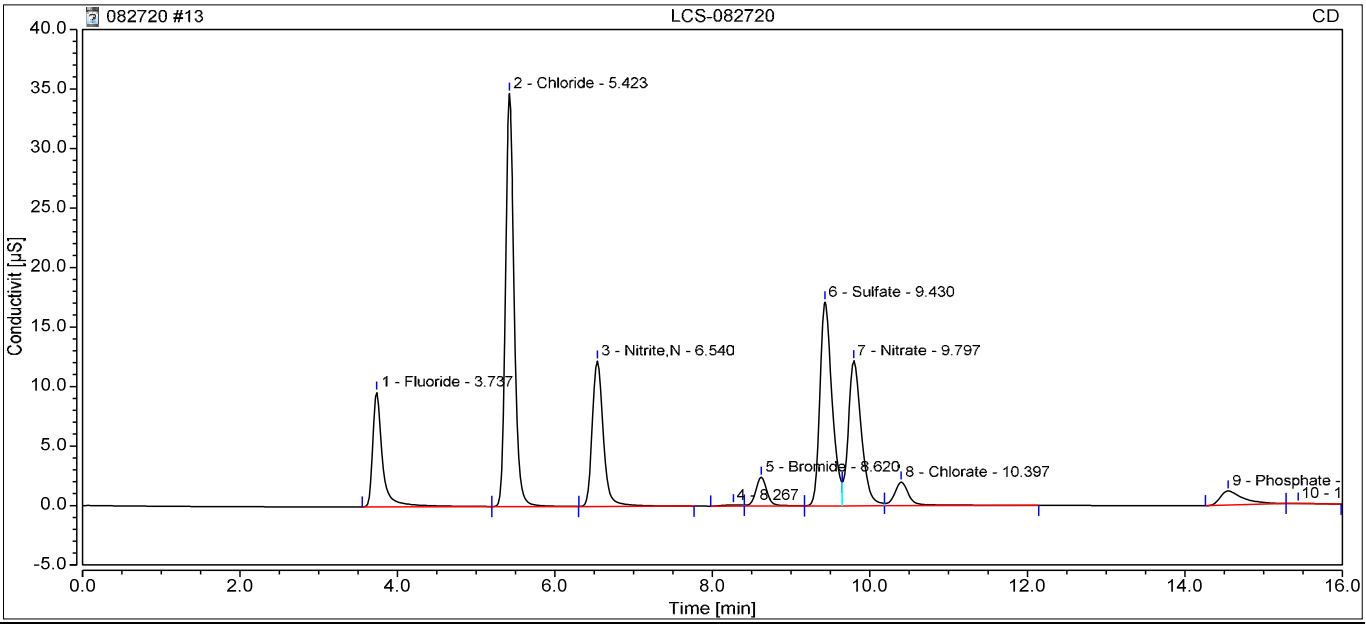
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.49	Sulfate	BMB	0.011	0.0835	0.0835	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.015**		**0.08**	

13 LCS-082720

Sample Name:	**LCS-082720**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 10:38**	*Sample Weight:*	**1.0000**

Run Time:



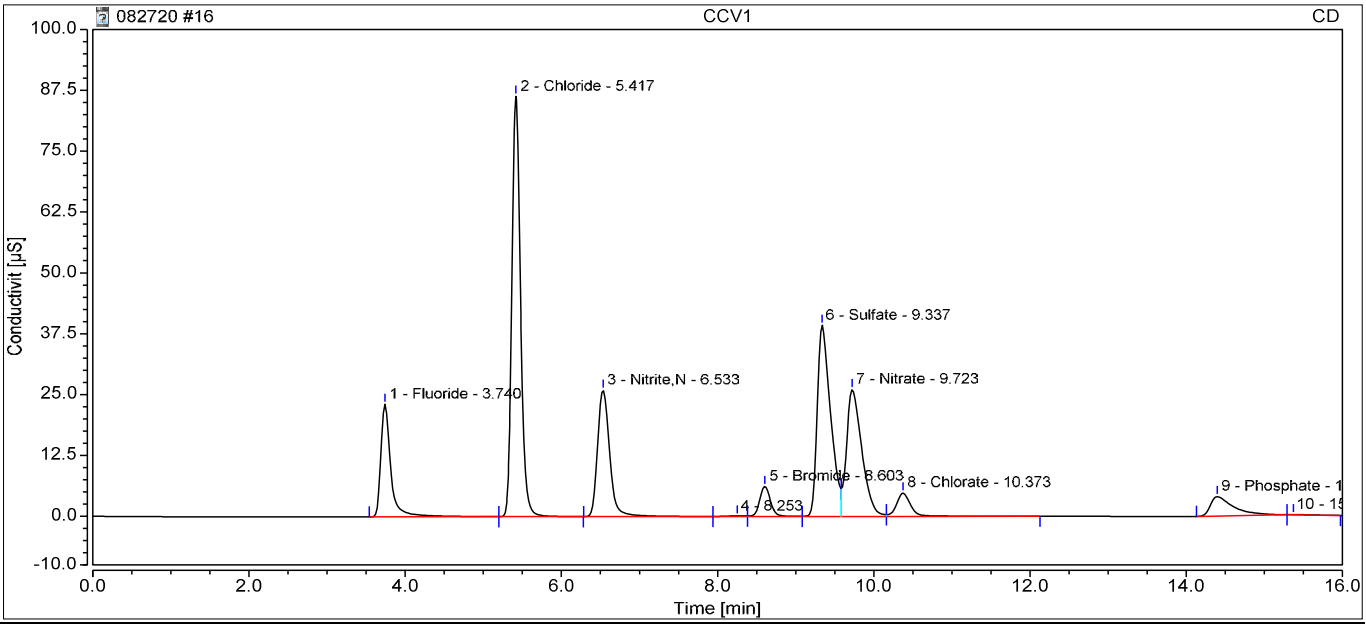
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.394	3.9538	3.9538	1.0000
2	5.42	Chloride	BMB	4.433	19.3153	19.3153	1.0000
3	6.54	Nitrite,N	BMB	1.994	4.1926	4.1926	1.0000
5	8.62	Bromide	M	0.400	3.8888	3.8888	1.0000
6	9.43	Sulfate	M	3.077	19.2235	19.2235	1.0000
7	9.80	Nitrate	M	2.350	3.7942	3.7942	1.0000
8	10.40	Chlorate	MB	0.438	4.1563	4.1563	1.0000
9	14.55	Phosphate	BMB	0.400	2.4380	2.4380	1.0000
Total:			**0.000**	**14.485**		**60.96**	

16 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 11:32**	*Sample Weight:*	**1.0000**

Run Time:



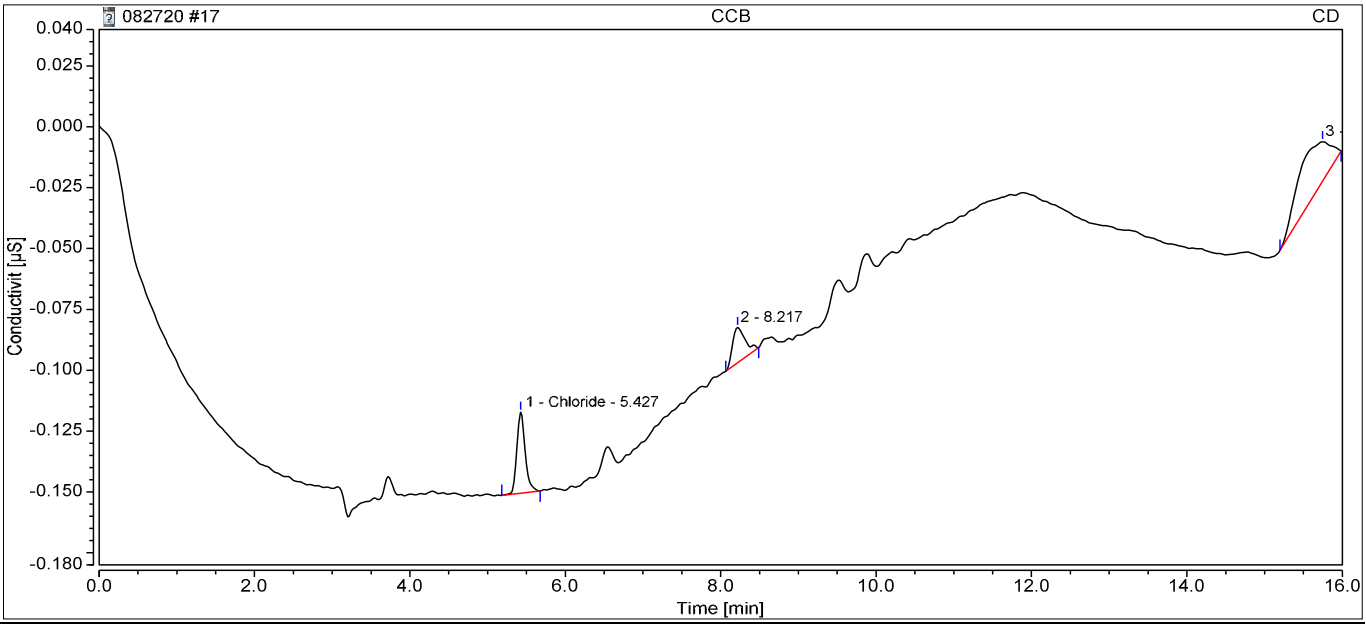
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.426	9.7000	9.7000	1.0000
2	5.42	Chloride	BMB	11.061	48.2771	48.2771	1.0000
3	6.53	Nitrite,N	BMB	4.685	9.9053	9.9053	1.0000
5	8.60	Bromide	M	0.990	9.7336	9.7336	1.0000
6	9.34	Sulfate	M	7.759	48.4593	48.4593	1.0000
7	9.72	Nitrate	M	5.912	9.5832	9.5832	1.0000
8	10.37	Chlorate	MB	1.016	9.8351	9.8351	1.0000
9	14.40	Phosphate	BMB	1.376	7.4658	7.4658	1.0000
Total:			**0.000**	**36.226**		**152.96**	

17 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 11:50**	*Sample Weight:*	**1.0000**

Run Time:



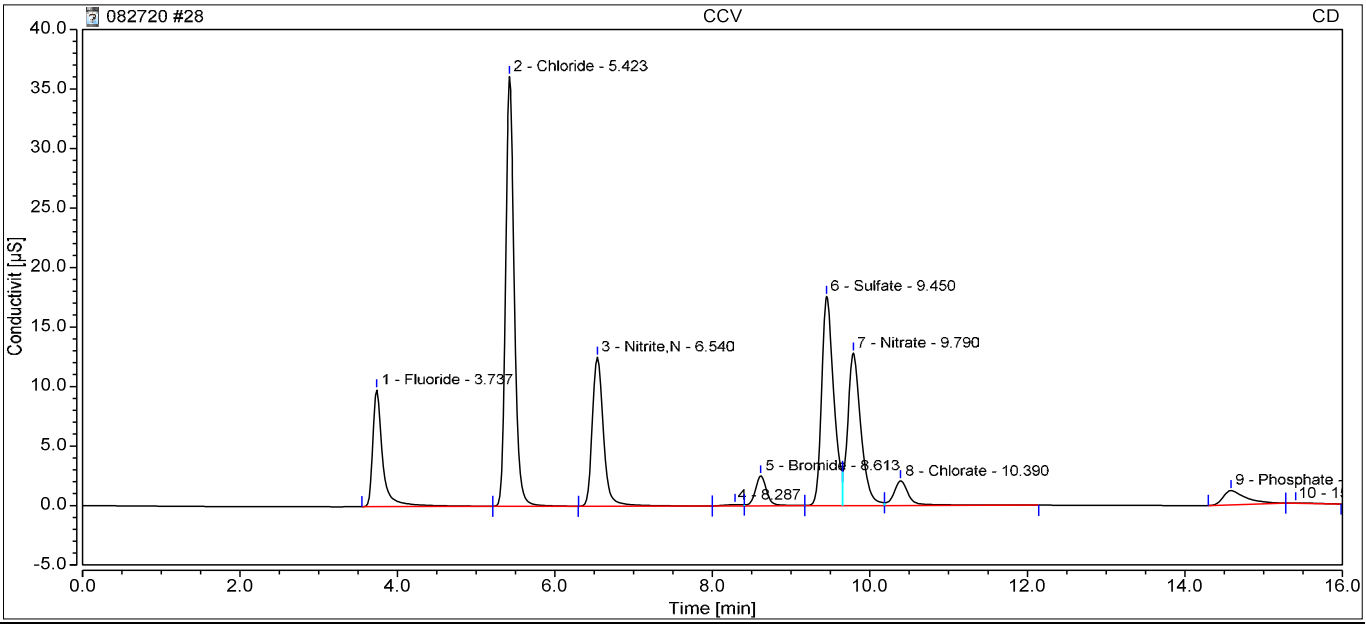
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.43	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.00**	

28 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 15:09**	*Sample Weight:*	**1.0000**

Run Time:



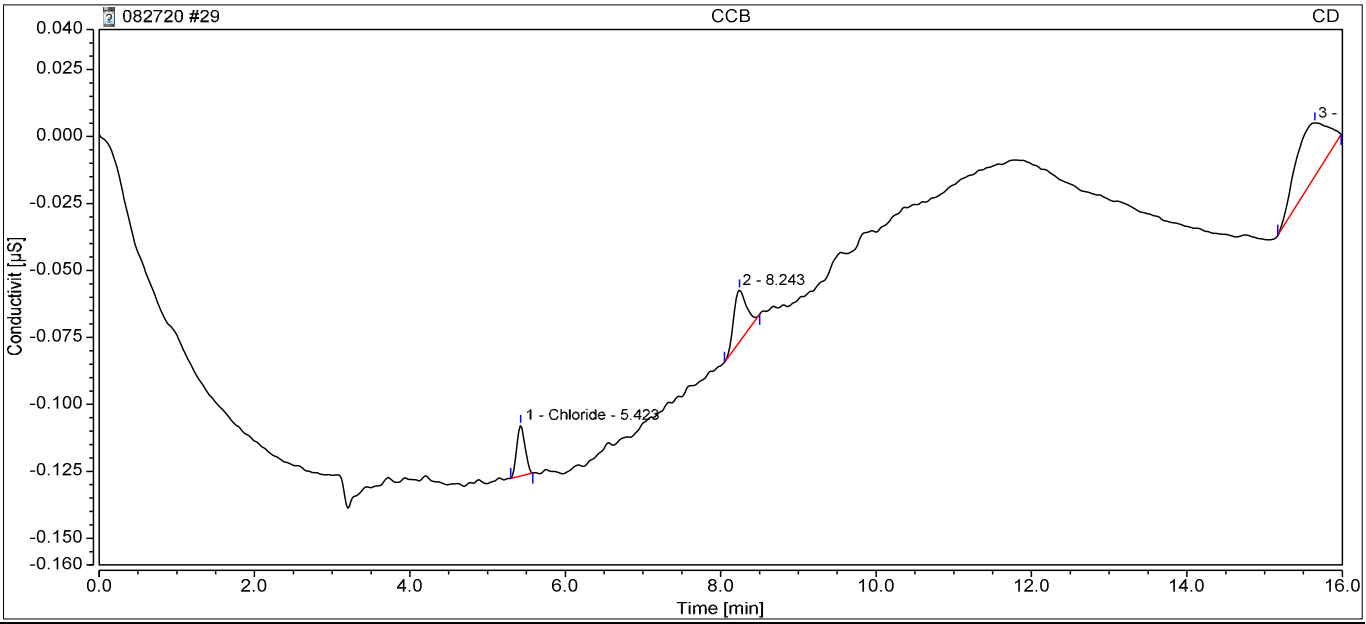
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.438	4.0765	4.0765	1.0000
2	5.42	Chloride	BMB	4.618	20.1235	20.1235	1.0000
3	6.54	Nitrite,N	BMB	2.061	4.3361	4.3361	1.0000
5	8.61	Bromide	M	0.420	4.0855	4.0855	1.0000
6	9.45	Sulfate	M	3.158	19.7306	19.7306	1.0000
7	9.79	Nitrate	M	2.488	4.0195	4.0195	1.0000
8	10.39	Chlorate	MB	0.466	4.4363	4.4363	1.0000
9	14.59	Phosphate	BMB	0.398	2.4301	2.4301	1.0000
Total:			**0.000**	**15.048**		**63.24**	

29 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 15:27**	*Sample Weight:*	**1.0000**

Run Time:



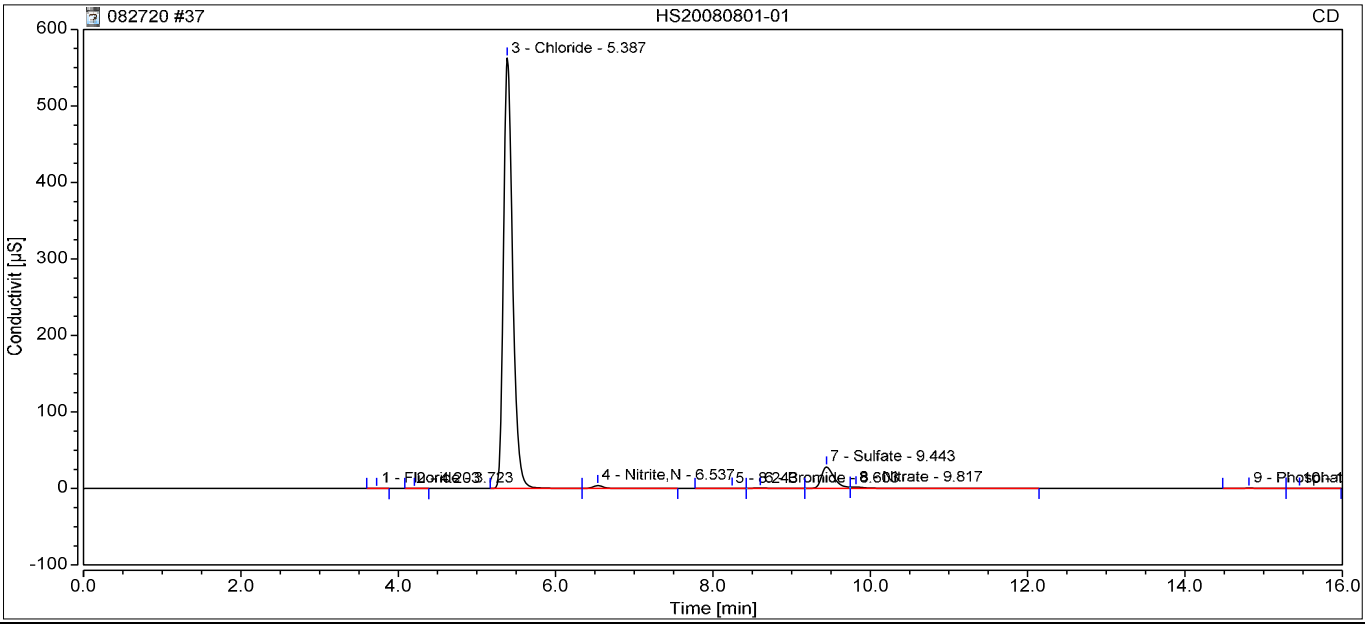
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

37 HS20080801-01

Sample Name:	**HS20080801-01**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 18:00**	*Sample Weight:*	**1.0000**

Run Time:



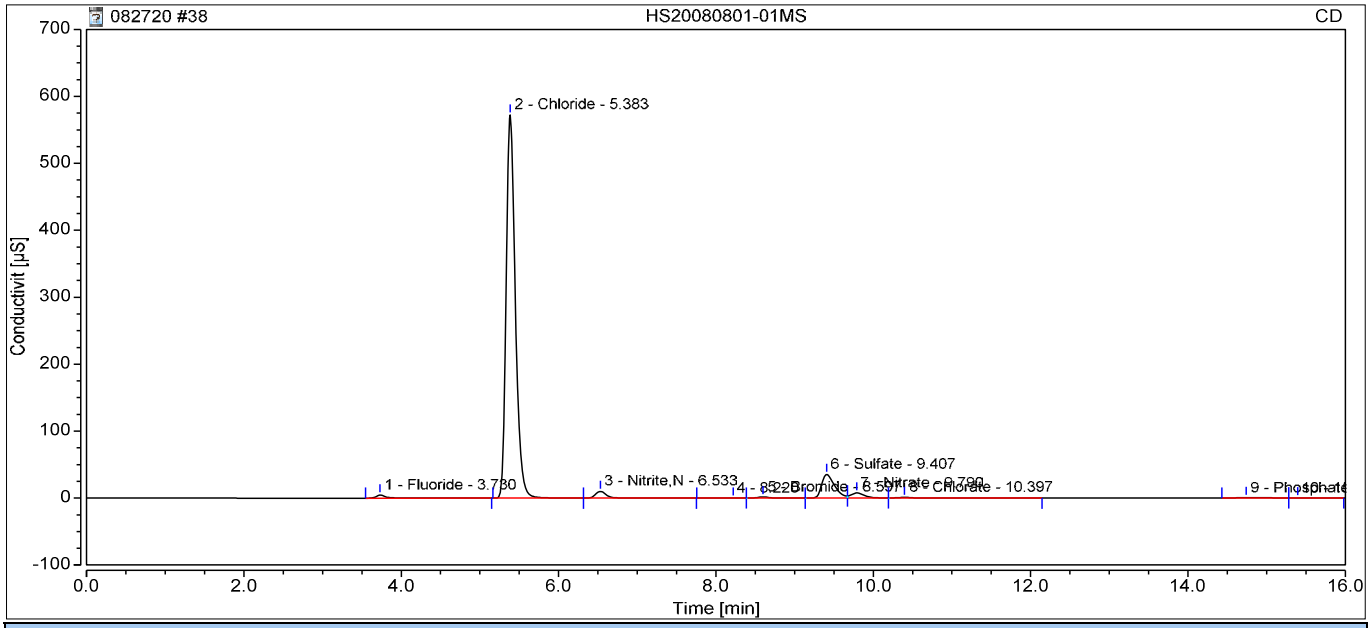
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.018	0.0620	0.0620	1.0000
3	5.39	Chloride	BMB	75.754	330.9554	330.9554	1.0000
4	6.54	Nitrite,N	BMB	0.575	1.1805	1.1805	1.0000
6	8.60	Bromide	M	0.133	1.2334	1.2334	1.0000
7	9.44	Sulfate	M	5.244	32.7550	32.7550	1.0000
8	9.82	Nitrate	MB	0.449	0.7070	0.7070	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	14.81	Phosphate	BMB	0.080	0.7912	0.7912	1.0000
Total:			**0.000**	**82.253**		**367.68**	

38 HS20080801-01MS

Sample Name:	**HS20080801-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**GC1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 18:18**	*Sample Weight:*	**1.0000**

Run Time:



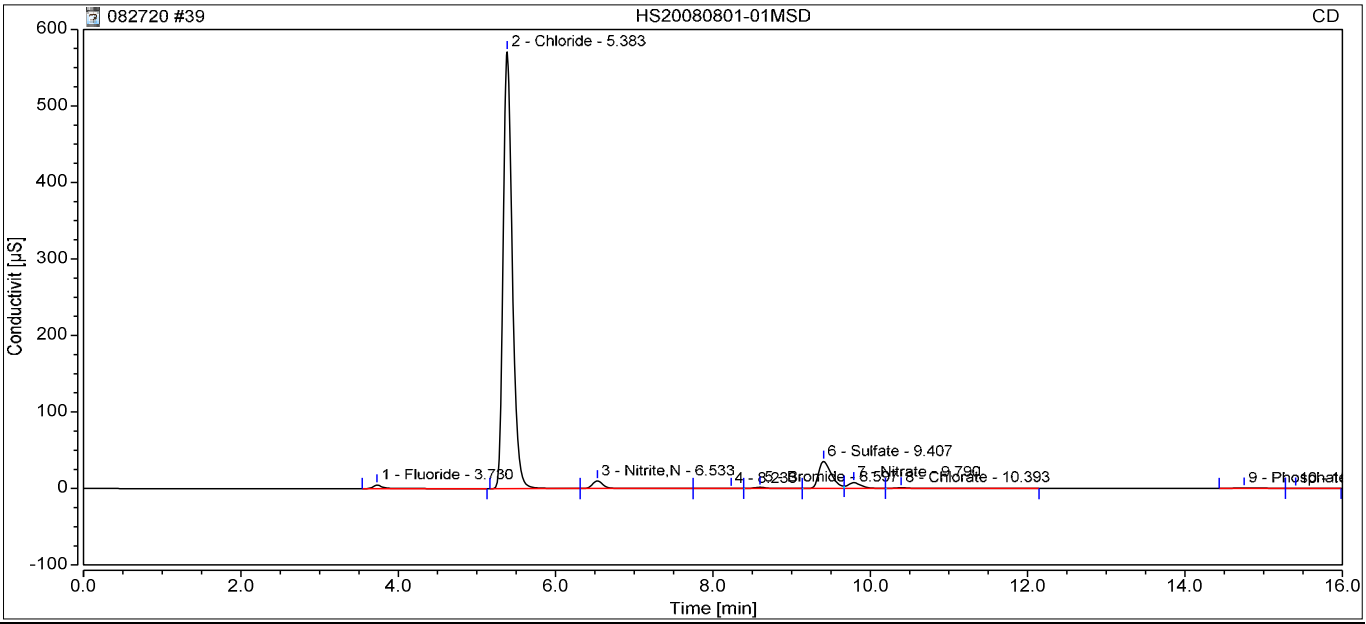
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.717	2.0402	2.0402	1.0000
2	5.38	Chloride	BMB	76.860	335.7856	335.7856	1.0000
3	6.53	Nitrite,N	BMB	1.582	3.3196	3.3196	1.0000
5	8.60	Bromide	M	0.313	3.0248	3.0248	1.0000
6	9.41	Sulfate	M	6.715	41.9368	41.9368	1.0000
7	9.79	Nitrate	M	1.557	2.5057	2.5057	1.0000
8	10.40	Chlorate	MB	0.257	2.3865	2.3865	1.0000
9	14.74	Phosphate	BMB	0.227	1.5488	1.5488	1.0000
Total:			**0.000**	**88.228**		**392.55**	

39 HS20080801-01MSD

Sample Name:	**HS20080801-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GC2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 18:36**	*Sample Weight:*	**1.0000**

Run Time:



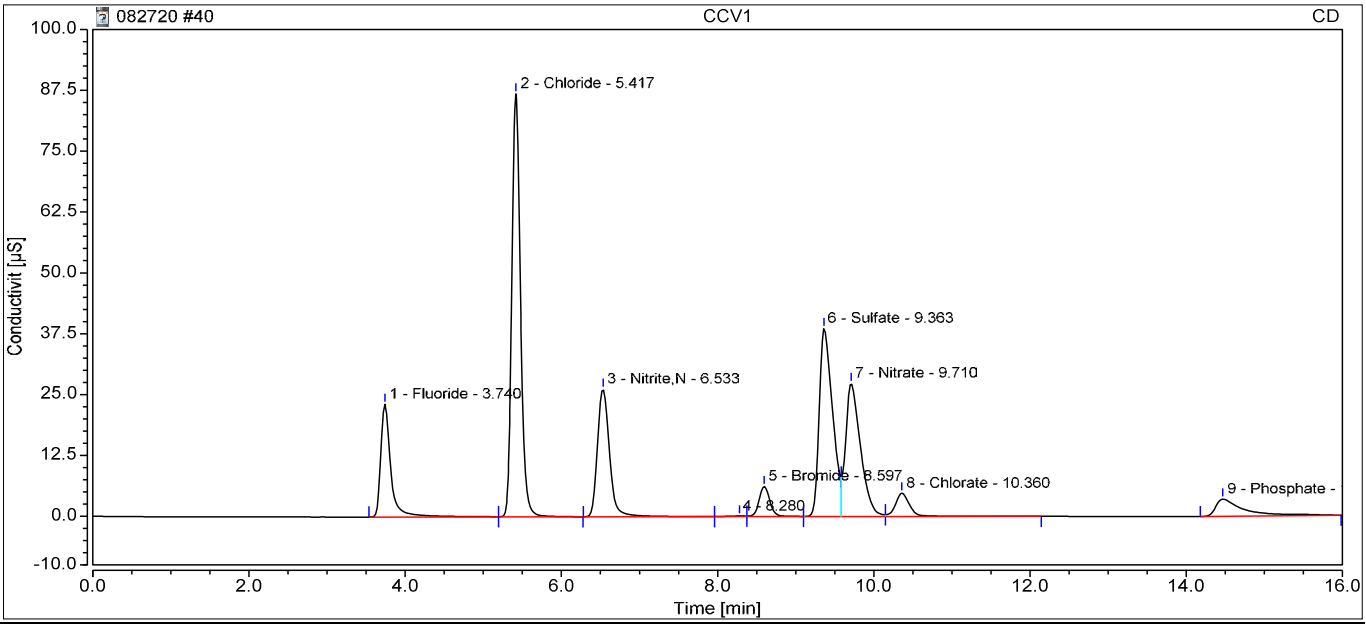
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.716	2.0353	2.0353	1.0000
2	5.38	Chloride	BMB	76.651	334.8740	334.8740	1.0000
3	6.53	Nitrite,N	BMB	1.573	3.2990	3.2990	1.0000
5	8.60	Bromide	M	0.311	3.0042	3.0042	1.0000
6	9.41	Sulfate	M	6.683	41.7408	41.7408	1.0000
7	9.79	Nitrate	M	1.537	2.4745	2.4745	1.0000
8	10.39	Chlorate	MB	0.253	2.3426	2.3426	1.0000
9	14.75	Phosphate	BMB	0.213	1.4783	1.4783	1.0000
Total:			**0.000**	**87.937**		**391.25**	

40 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 18:54**	*Sample Weight:*	**1.0000**

Run Time:



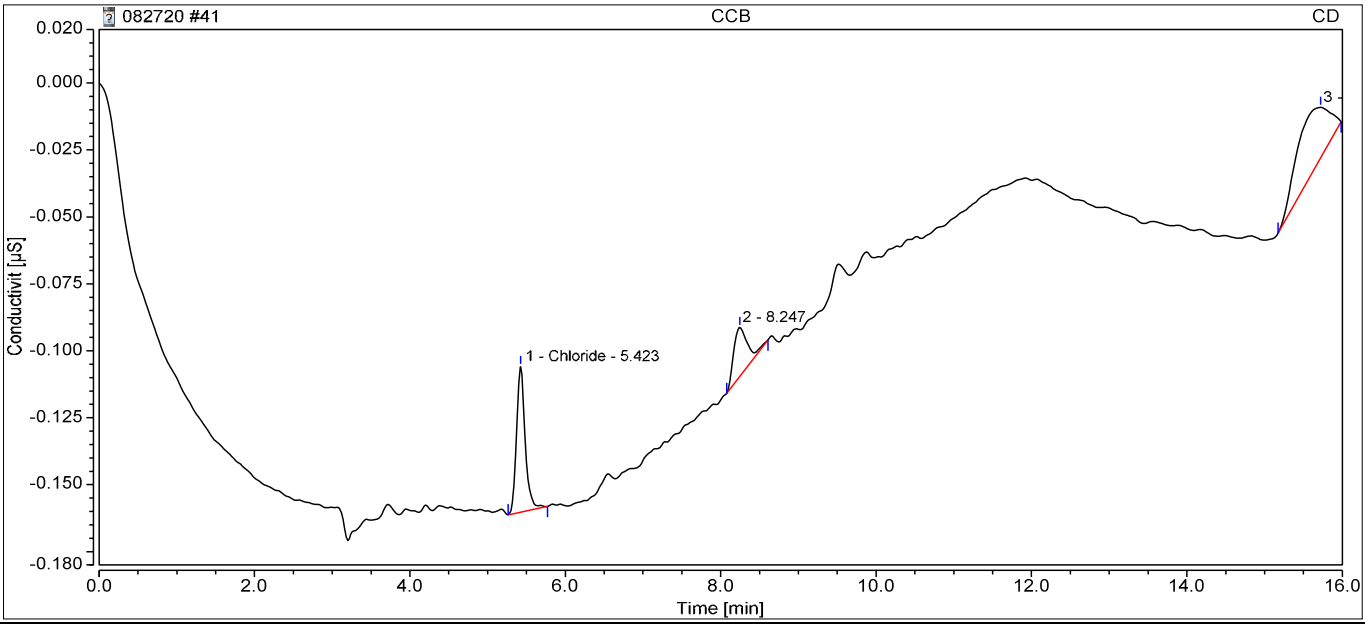
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.437	9.7304	9.7304	1.0000
2	5.42	Chloride	BMB	11.115	48.5106	48.5106	1.0000
3	6.53	Nitrite,N	BMB	4.698	9.9339	9.9339	1.0000
5	8.60	Bromide	M	0.997	9.8023	9.8023	1.0000
6	9.36	Sulfate	M	7.677	47.9480	47.9480	1.0000
7	9.71	Nitrate	M	6.052	9.8102	9.8102	1.0000
8	10.36	Chlorate	MB	1.025	9.9140	9.9140	1.0000
9	14.47	Phosphate	BMB	1.507	8.1387	8.1387	1.0000
Total:			**0.000**	**36.508**		**153.79**	

41 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 19:13**	*Sample Weight:*	**1.0000**

Run Time:



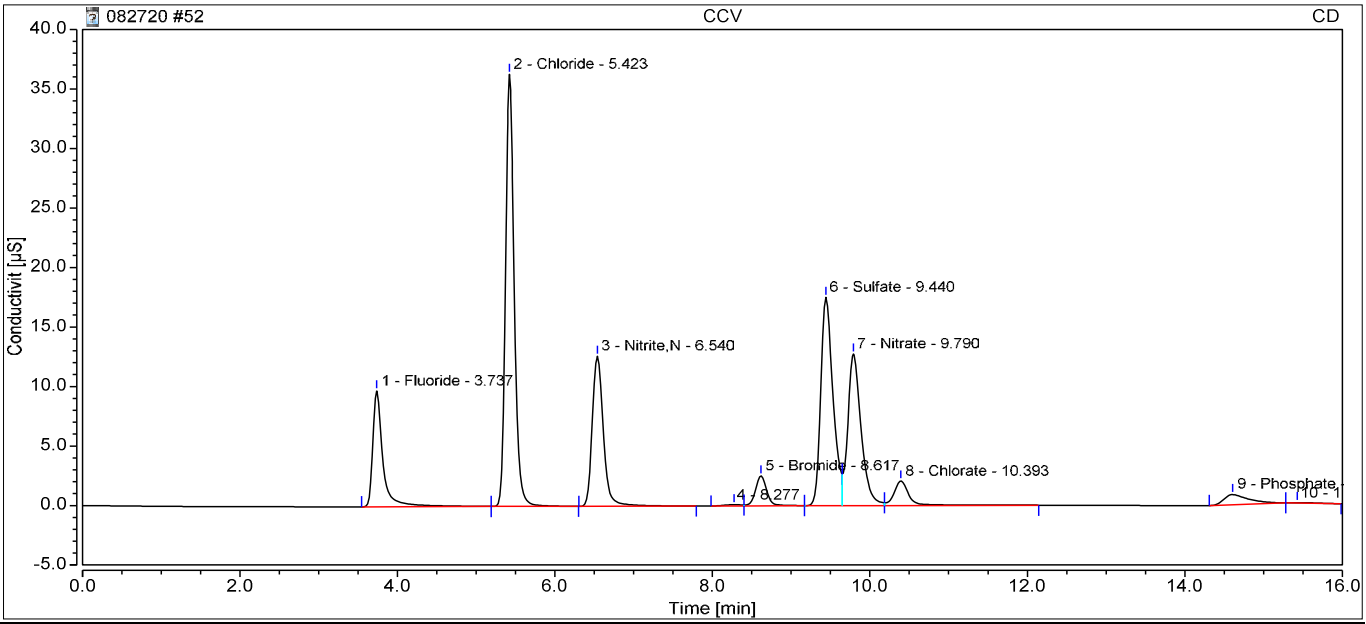
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.007	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.00**	

52 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 22:31**	*Sample Weight:*	**1.0000**

Run Time:



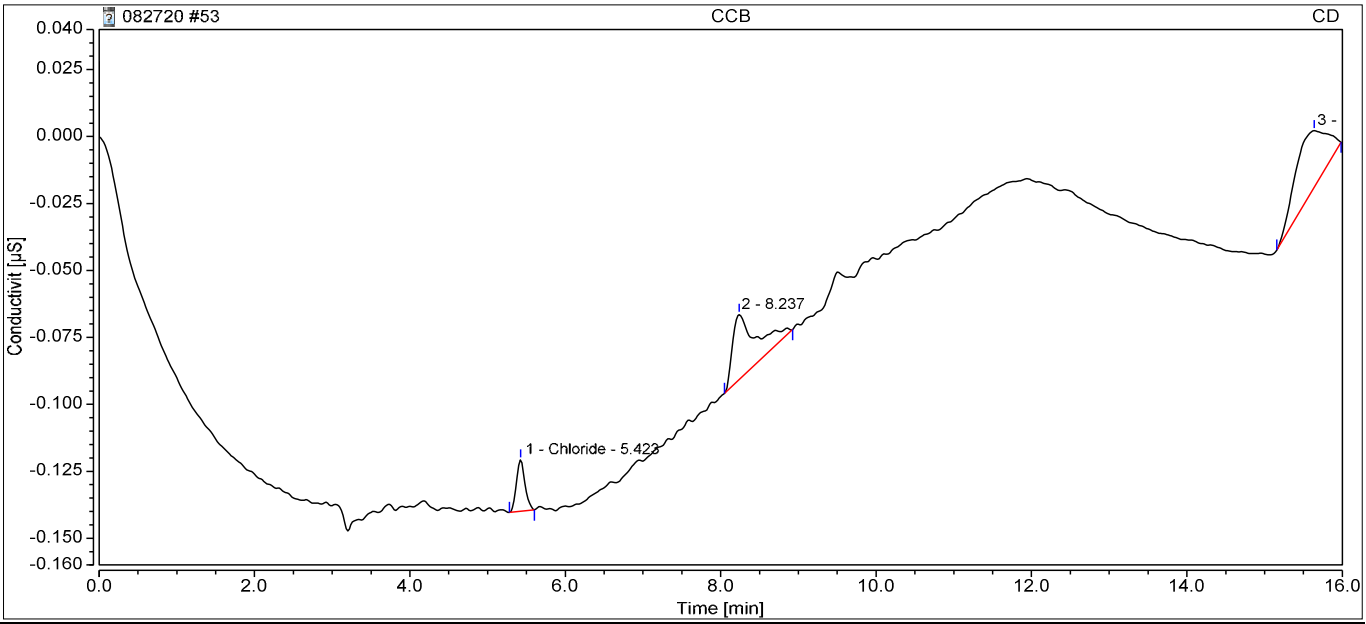
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.445	4.0964	4.0964	1.0000
2	5.42	Chloride	BMB	4.644	20.2379	20.2379	1.0000
3	6.54	Nitrite,N	BMB	2.063	4.3408	4.3408	1.0000
5	8.62	Bromide	M	0.421	4.0939	4.0939	1.0000
6	9.44	Sulfate	M	3.176	19.8420	19.8420	1.0000
7	9.79	Nitrate	M	2.497	4.0338	4.0338	1.0000
8	10.39	Chlorate	MB	0.464	4.4120	4.4120	1.0000
9	14.61	Phosphate	BMB	0.311	1.9809	1.9809	1.0000
Total:			**0.000**	**15.021**		**63.04**	

53 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/27/2020 22:49**	*Sample Weight:*	**1.0000**

Run Time:



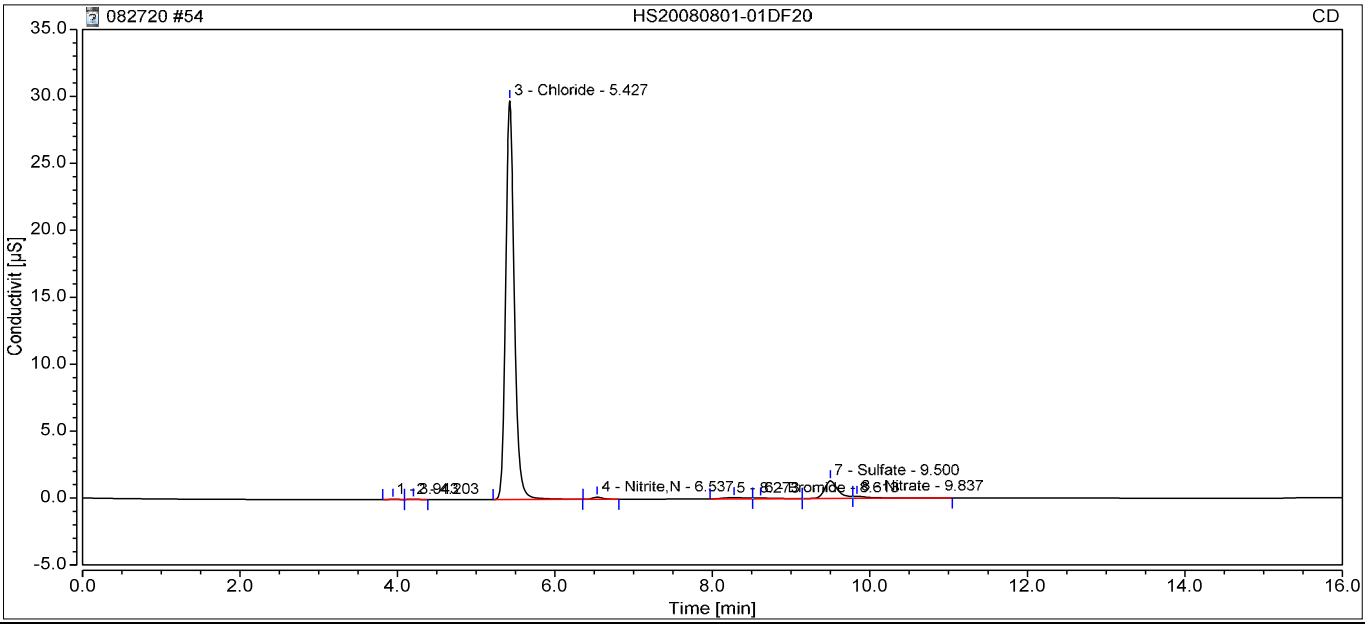
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

54 HS20080801-01DF20

Sample Name:	**HS20080801-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**GC3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**08/27/2020 23:07**	*Sample Weight:*	**1.0000**

Run Time:



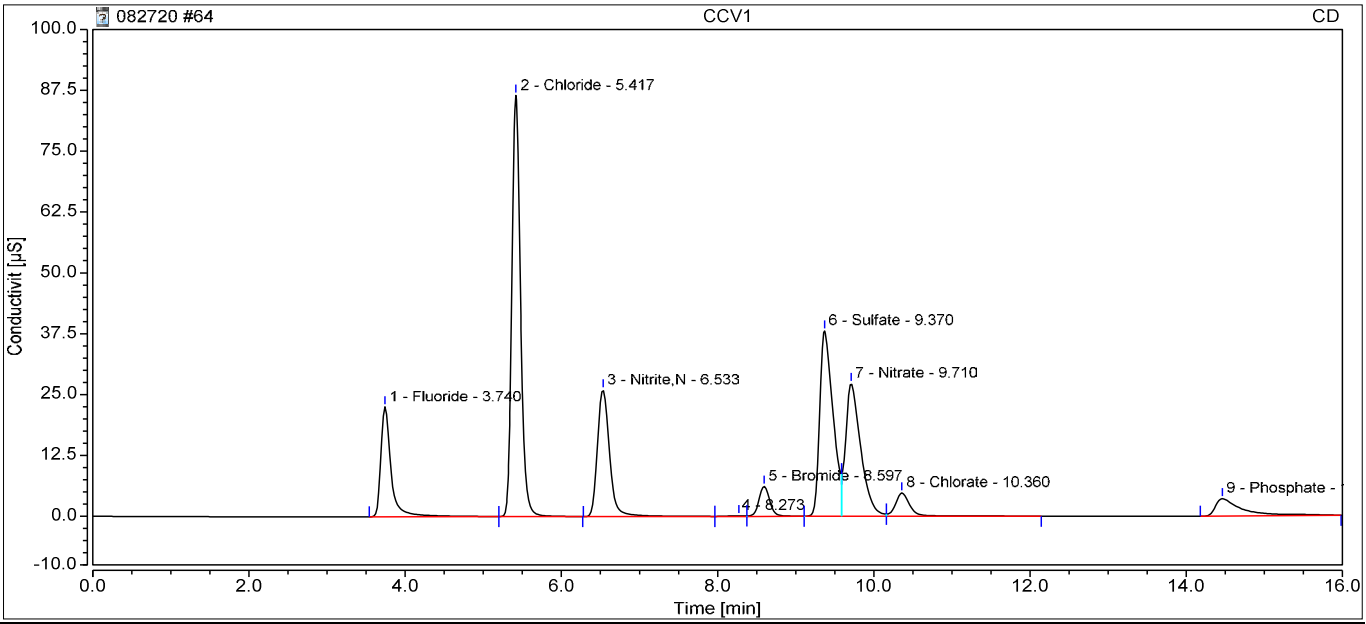
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
3	5.43	Chloride	BMB	3.810	16.5930	331.8605	20.0000
4	6.54	Nitrite,N	BMB	0.022	0.0080	0.1600	20.0000
6	8.61	Bromide	M	0.018	0.0963	1.9264	20.0000
7	9.50	Sulfate	M	0.263	1.6539	33.0783	20.0000
8	9.84	Nitrate	MB	0.043	0.0472	0.9440	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**4.157**		**367.97**	

64 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/28/2020 02:07**	*Sample Weight:*	**1.0000**

Run Time:



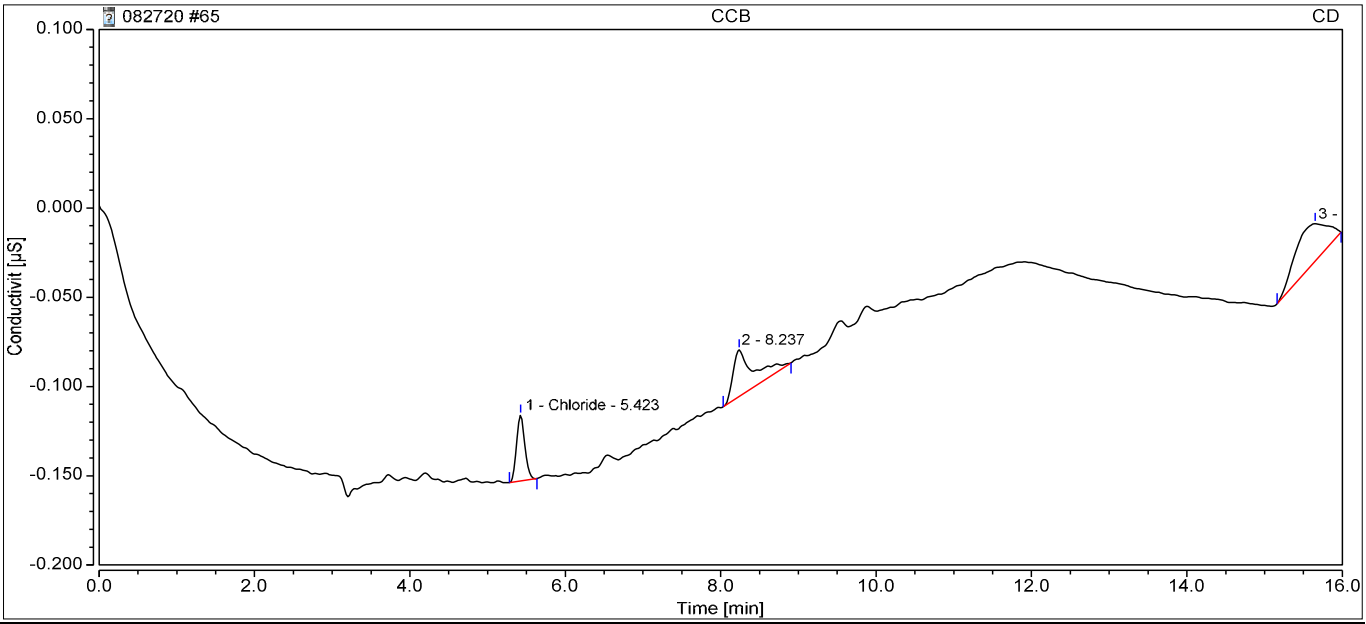
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.431	9.7138	9.7138	1.0000
2	5.42	Chloride	BMB	11.085	48.3782	48.3782	1.0000
3	6.53	Nitrite,N	BMB	4.694	9.9242	9.9242	1.0000
5	8.60	Bromide	M	0.998	9.8157	9.8157	1.0000
6	9.37	Sulfate	M	7.530	47.0259	47.0259	1.0000
7	9.71	Nitrate	M	6.142	9.9569	9.9569	1.0000
8	10.36	Chlorate	MB	1.036	10.0218	10.0218	1.0000
9	14.46	Phosphate	BMB	1.467	7.9307	7.9307	1.0000
Total:			**0.000**	**36.381**		**152.77**	

65 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**08/28/2020 02:25**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.42	Chloride	BMB	0.005	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.005**		**0.00**	

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WorkOrder: HS20081133

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

03-Sep-2020

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ALS Group USA, Corp
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Table of Contents

HS20081133 Cover Page
- CoverPage
- HS20081133 Longhorn GW Treatment Plant Weekly Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP650_082520
  - LH18/24-SP650_082520-BIX
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS20081133 - Sub Perch IV (E2000798)
  - HS20081133 ALS Kelso Report K2007399
- HS20081133 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)
- HS20081133 Wet Chem Raw Data (P-ORTHO)

HS20081133 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20081133

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September 03, 2020

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

Work Order: **HS20081133**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 26, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20081133

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20081133-01	LH18/24-SP650_082520	Water		25-Aug-2020 14:00	26-Aug-2020 10:00	☐
HS20081133-02	LH18/24-SP650_082520-BIX	Water		25-Aug-2020 14:00	26-Aug-2020 10:00	☐

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20081133

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

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

WetChemistry by Method E350.3

Batch ID: R367820

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

WetChemistry by Method E365.3

Batch ID: R367638

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20081133
Sample ID: LH18/24-SP650_082520
Lab ID:HS20081133-01
Collection Date: 25-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**11**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	01-Sep-2020 09:30
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.65**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	26-Aug-2020 12:57
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	03-Sep-2020 09:24

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20081133
Sample ID: LH18/24-SP650_082520-BIX
Lab ID:HS20081133-02
Collection Date: 25-Aug-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	03-Sep-2020 13:54

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20081133

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R367638 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20081133-01	LH18/24-SP650_082520	25 Aug 2020 14:00			26 Aug 2020 12:57	10
Batch ID: R367820 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20081133-01	LH18/24-SP650_082520	25 Aug 2020 14:00			01 Sep 2020 09:30	1
Batch ID: R367918 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20081133-01	LH18/24-SP650_082520	25 Aug 2020 14:00			03 Sep 2020 09:24	1
Batch ID: R367952 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20081133-02	LH18/24-SP650_082520-BIX	25 Aug 2020 14:00			03 Sep 2020 13:54	1

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20081133

QC BATCH REPORT

Batch ID: R367638 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-367638** Units: **mg/L** Analysis Date: **26-Aug-2020 12:57**
Client ID: Run ID: **UV-2450_367638** SeqNo: **5718877** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-367638** Units: **mg/L** Analysis Date: **26-Aug-2020 12:57**
Client ID: Run ID: **UV-2450_367638** SeqNo: **5718878** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.262	0.0250	0.25	0	105	85 - 115				

MS Sample ID: **HS20081133-01MS** Units: **mg/L** Analysis Date: **26-Aug-2020 12:57**
Client ID: **LH18/24-SP650_082520** Run ID: **UV-2450_367638** SeqNo: **5718880** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.27	0.250	2.5	2.65	105	80 - 120				

MSD Sample ID: **HS20081133-01MSD** Units: **mg/L** Analysis Date: **26-Aug-2020 12:57**
Client ID: **LH18/24-SP650_082520** Run ID: **UV-2450_367638** SeqNo: **5718881** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.37	0.250	2.5	2.65	109	80 - 120	5.27	1.88	20	

The following samples were analyzed in this batch: HS20081133-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20081133

QC BATCH REPORT

Batch ID: R367820 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R367820** Units: **mg/L** Analysis Date: **01-Sep-2020 09:30**
Client ID: Run ID: **WetChem_HS_367820** SeqNo: **5722470** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-R367820** Units: **mg/L** Analysis Date: **01-Sep-2020 09:30**
Client ID: Run ID: **WetChem_HS_367820** SeqNo: **5722469** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.7	0.20	10	0	107	80 - 120				

MS Sample ID: **HS20081073-01MS** Units: **mg/L** Analysis Date: **01-Sep-2020 09:30**
Client ID: Run ID: **WetChem_HS_367820** SeqNo: **5722493** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.28	0.20	10	0.474	108	80 - 120				

MSD Sample ID: **HS20081073-01MSD** Units: **mg/L** Analysis Date: **01-Sep-2020 09:30**
Client ID: Run ID: **WetChem_HS_367820** SeqNo: **5722494** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.2	0.20	10	0.474	107	80 - 120	11.28	0.721	20	

The following samples were analyzed in this batch: HS20081133-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20081133**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V010	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20081133

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20081133-01	LH18/24-SP650_082520	Login	8/26/2020 11:28:24 AM	JRM	WET176
HS20081133-01	LH18/24-SP650_082520	Login	8/26/2020 11:28:24 AM	JRM	WET176
HS20081133-01	LH18/24-SP650_082520	Login	8/26/2020 11:28:24 AM	JRM	Sub
HS20081133-02	LH18/24-SP650_082520-BIX	Login	8/26/2020 11:28:24 AM	JRM	Sub

ALS Houston, US Date: 03-Sep-20

Sample Receipt Checklist

Work Order ID: HS20081133 **Date/Time Received:** **26-Aug-2020 10:00**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By:	/S/ Jared R. Makan	26-Aug-2020 11:30	**Reviewed by:**	/S/ RJ Modashia	26-Aug-2020 14:27
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8°C/0.8°C UC/C	IR31
Cooler(s)/Kit(s):	45313	
Date/Time sample(s) sent to storage:	08/26/2020 11:30	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_082520	Water	08/25/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_082520	Water	08/25/20 / 14:00		1			X		NONE	
LH18/24–SP650_082520_AIX	Water	08/25/20 / 14:00		1				X	NONE	

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	08/25/20	14:30		8/26/2020	10:55						

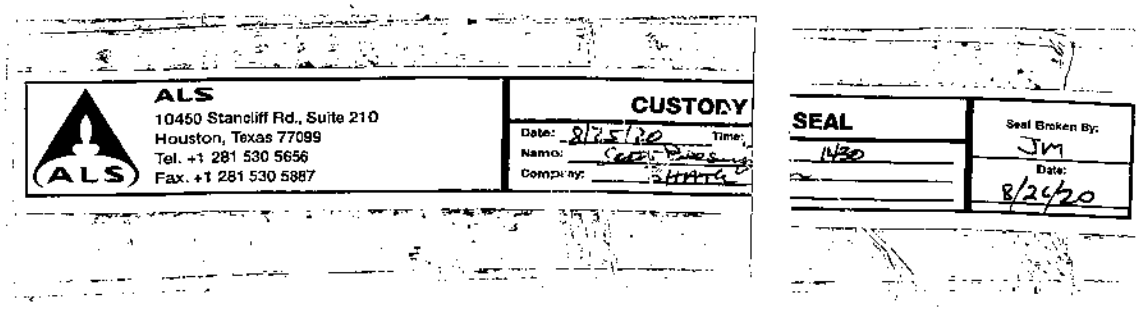
For Lab Use Only

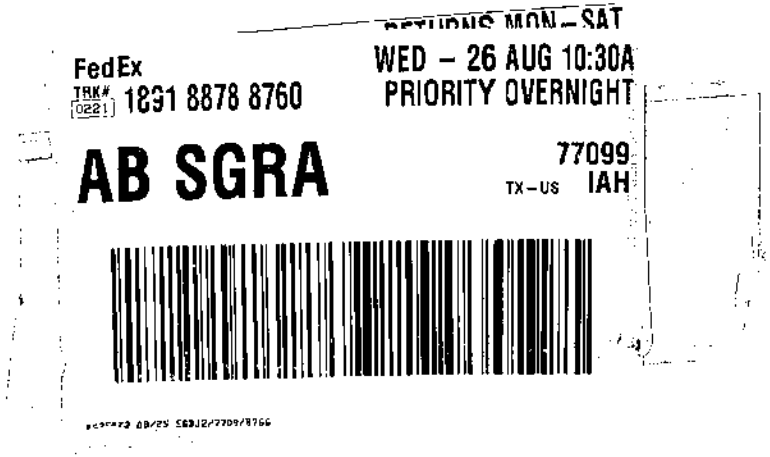
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:
d5313 0.8°
#31
9F 0.0°

HS20081133
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

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


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTODY
Date: 8/25/20 Time:
Name:
Company:
SEAL
1430
Seal Broken By:
JM
Date:
8/26/20


RETURNS MON – SAT
FedEx
TRK# 0221 1891 8878 8760
WED – 26 AUG 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US IAH

September 03, 2020 Service Request No:E2000798

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

Laboratory Results for: HS20081133

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 26, 2020
For your reference, these analyses have been assigned our service request number **E2000798.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000798
Project:	HS20081133	**Date Received:**	08/26/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/26/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000392: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DOD Certification is held for the method/matrix/analytes provided in this report.

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

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

Client: ALS Environmental - US
Project: HS20081133

Service Request:E2000798

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000798-001	LH18/24-SP650_082520-BIX	8/25/2020	1400

Service Request Summary

Folder #: **E2000798**
Client Name: ALS Environmental - US
Project Name: HS20081133
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/26/20
Internal Due Date: 9/9/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20081131
EDD: No EDD Specified

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

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000798-001	LH18/24-SP650_082520-BIX	Water	08/25/20 1400	**IV**

Service Request Summary

Folder #: **E2000798**
Client Name: ALS Environmental - US
Project Name: HS20081133
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/26/20
Internal Due Date: 9/9/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20081131
EDD: No EDD Specified

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

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/9,level IV 9/17

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

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

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New York Department of Health	11707	3/31/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

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

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

E2000798 5
ALS Laboratory Group
HS20081131

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14566**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20081133
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20081133-02**	**LH18/24-SP650_082520-BIX**	**Water**	**25 Aug 2020 14:00**
	SUB_Perch-6850			03 Sep 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Jimenez Date/Time: 8/26/20 14:30

Received By: CG Date/Time: 8126120 14:30

Cooler ID(s): Temperature(s):

00993233

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1021

Date/Time Received: 8/26/20 Initials: CH

Date/Time Logged in: 8/26/20 Initials CH

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

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

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
–		8/26/20	1430	CH	3.0	☒
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label: E2000798 5

ALS Laboratory Group HS20081131



HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 364887
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/2/20 12:56

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000760-001	LH18/24-SP650_081820-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000796-001	LH18/24-SP650_082520-AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2000797-001	LH18/24-SP140_082520	.01	6850/ClO4 DOD			Water	10mL	
4	E2000798-001	LH18/24-SP650_082520-BIX	.01	6850/ClO4 DOD			Water	10mL	
5	EQ2000392-01	MB		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000392-02	LCS		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000392-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

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

E2000760-001 100.00µL E2000796-001 100.00µL E2000797-001 100.00µL E2000798-001 100.00µL EQ2000392-01 100.00µL EQ2000392-02 100.00µL
EQ2000392-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

E2000796-001 1.00µL E2000797-001 1.00µL E2000798-001 1.00µL EQ2000392-01 1.00µL EQ2000392-02 1.00µL EQ2000392-03 1.00µL

Preparation Steps

Step: Preparation
Started: 9/2/20 12:56
Finished: 9/2/20 16:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081133	**Date Collected:**	8/25/20 1400
Sample Matrix:	Water	**Date Received:**	8/26/20
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 17:55
Sample Name:	LH18/24-SP650_082520-BIX	**Units:**	µg/L
Lab Code:	E2000798-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_018	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**1.08**		0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081133	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 16:18
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000392-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_007	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081133	**Date Analyzed:**	9/ 2/20
Sample Matrix:	Water		

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	364887

	Lab Control Sample EQ2000392-02			Duplicate Lab Control Sample EQ2000392-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.116	0.100	116	84 - 119	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081133	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:03
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_019	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.118**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081133	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:11
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_020	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.116**		0.100	0.0500	0.0250	

Initial Calibration

ALS Environmental - Houston HRMS
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20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: EC2000023

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

Initial Calibration - Detailed Report

Calibration ID: EC2000023 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000023-01	PERCHLORATE1	20200826_024	08/26/2020 11:55
02	EC2000023-02	PERCHLORATE2	20200826_025	08/26/2020 12:03
03	EC2000023-03	PERCHLORATE3	20200826_026	08/26/2020 12:11
04	EC2000023-04	PERCHLORATE4	20200826_027	08/26/2020 12:19
05	EC2000023-05	PERCHLORATE5	20200826_028	08/26/2020 12:27
06	EC2000023-06	PERCHLORATE6	20200826_029	08/26/2020 12:35
07	EC2000023-07	PERCHLORATE7	20200826_030	08/26/2020 12:42
08	EC2000023-08	PERCHLORATE8	20200826_031	08/26/2020 12:50
09	EC2000023-09	PERCHLORATE9	20200826_032	08/26/2020 12:58
10	EC2000023-10	PERCHLORATE10	20200826_033	08/26/2020 13:06

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

Perchlorate **Average RF** **RSD = 5.546** **Average RF = 0.1085**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1181	02	0.5000	0.1137	03	0.7000	0.1087	04	1.0000	0.1168
05	2.0000	0.1092	06	5.0000	0.1056	07	10.0000	0.1014	08	20.0000	0.1048
09	30.0000	0.1049	10	50.0000	0.1012						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.109	8.9	02	0.5000	0.524	4.8	03	0.7000	0.702	0.2
04	1.0000	1.08	7.7	05	2.0000	2.01	0.7	06	5.0000	4.87	-2.6
07	10.0000	9.35	-6.5	08	20.0000	19.3	-3.3	09	30.0000	29.0	-3.3
10	50.0000	46.7	-6.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000023	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200826_035	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000023-11	T	Average RF	10	9.690	ng/mL	-3.1	<= 15

ALS Group Houston

PERCHLORATE1

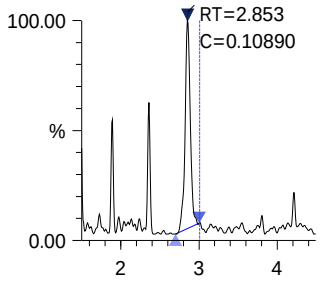
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/26/2020 11:55:32 AM	2254	0.10890	20200826_024	2.853	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/26/2020 11:55:32 AM	190859	1.00000	20200826_024	2.852	25.0000	1.0000	5

Perchlorate

Conc 0.10890
Area 2254

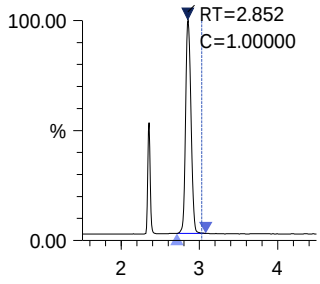
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

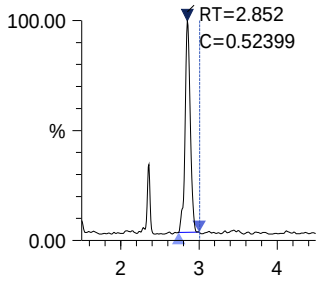
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/26/2020 12:03:28 PM	11013	0.52399	20200826_025	2.852	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/26/2020 12:03:28 PM	193789	1.00000	20200826_025	2.850	25.0000	1.0000	6

Perchlorate

Conc 0.52399
Area 11013

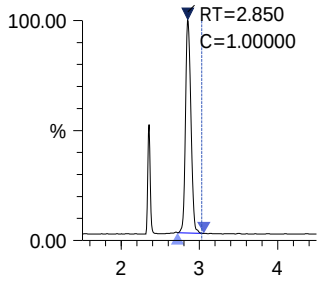
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

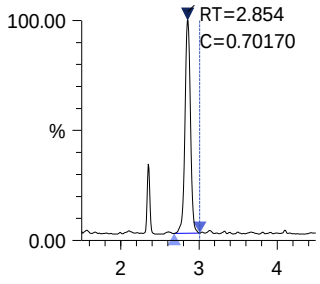
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/26/2020 12:11:22 PM	15252	0.70170	20200826_026	2.854	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/26/2020 12:11:22 PM	200410	1.00000	20200826_026	2.849	25.0000	1.0000	7

Perchlorate

Conc 0.70170
Area 15252

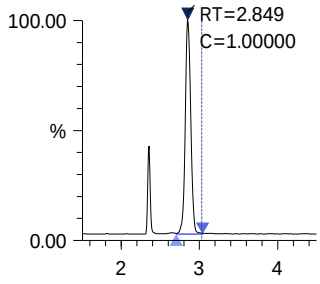
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

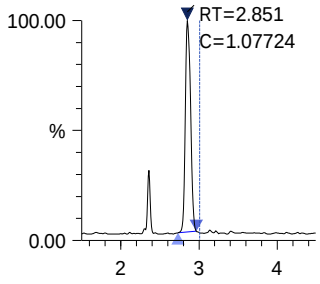
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/26/2020 12:19:17 PM	21473	1.07724	20200826_027	2.851	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/26/2020 12:19:17 PM	183791	1.00000	20200826_027	2.851	25.0000	1.0000	8

Perchlorate

Conc 1.07724
Area 21473

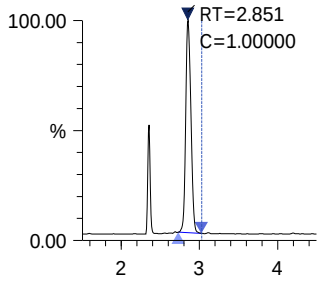
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

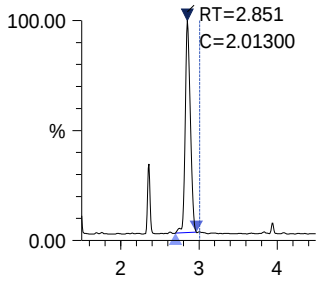
PERCHLORATE5

Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/26/2020 12:27:10 PM	40038	2.01300	20200826_028	2.851	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/26/2020 12:27:10 PM	183386	1.00000	20200826_028	2.849	25.0000	1.0000	9

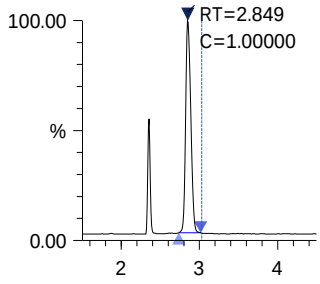
Perchlorate

Conc 2.01300
Area 40038
Q 99.00>83.00 (-) 8.76e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386
ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE6

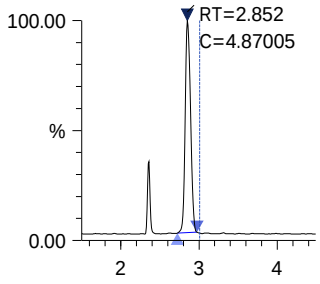
Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/26/2020 12:35:02 PM	98121	4.87005	20200826_029	2.852	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/26/2020 12:35:02 PM	185768	1.00000	20200826_029	2.850	25.0000	1.0000	10

Perchlorate

Conc 4.87005
Area 98121

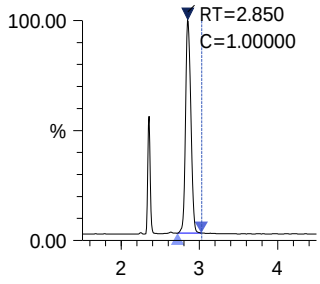
Q 99.00>83.00 (-) 2.04e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768

ISTD 107.00>89.00 (-) 3.86e4



ALS Group Houston

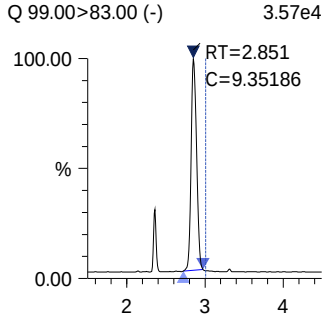
PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 12:42:57 PM	174248	9.35186	20200826_030	2.851	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 12:42:57 PM	171796	1.00000	20200826_030	2.850	25.0000	1.0000	4

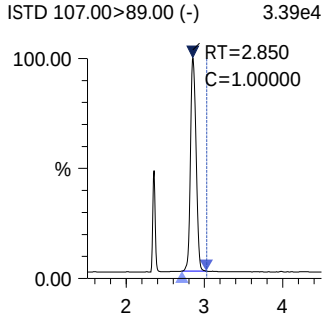
Perchlorate

Conc 9.35186
Area 174248



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

PERCHLORATE8

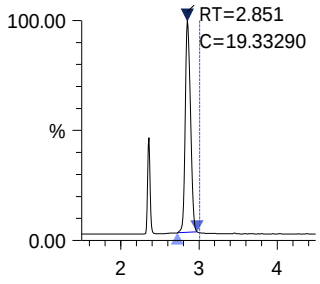
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/26/2020 12:50:51 PM	337010	19.33290	20200826_031	2.851	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/26/2020 12:50:51 PM	160727	1.00000	20200826_031	2.850	25.0000	1.0000	11

Perchlorate

Conc 19.33290
Area 337010

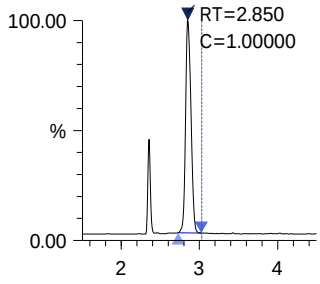
Q 99.00>83.00 (-) 7.14e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



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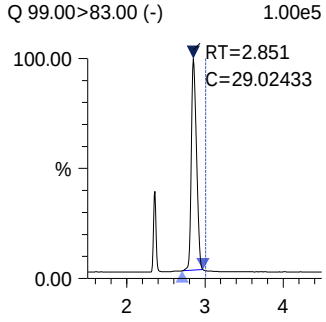
PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/26/2020 12:58:44 PM	466342	29.02433	20200826_032	2.851	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/26/2020 12:58:44 PM	148144	1.00000	20200826_032	2.849	25.0000	1.0000	12

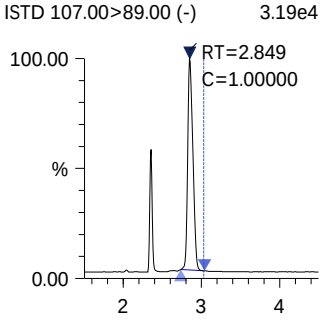
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



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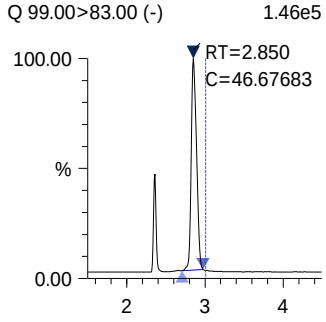
PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/26/2020 1:06:40 PM	694738	46.67683	20200826_033	2.850	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/26/2020 1:06:40 PM	137234	1.00000	20200826_033	2.849	25.0000	1.0000	13

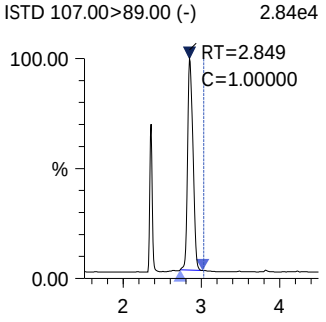
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



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PERCHLORATEICV

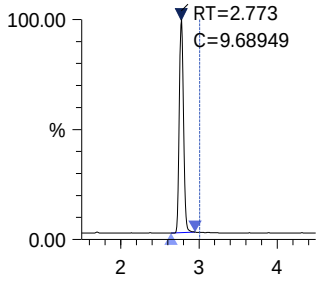
Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/26/2020 2:26:45 PM	257692	9.68949	20200826_035	2.773	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/26/2020 2:26:45 PM	245213	1.00000	20200826_035	2.771	25.0000	1.0000	14

Perchlorate

Conc 9.68949
Area 257692

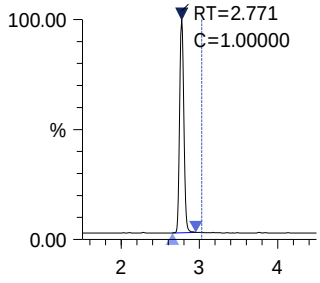
Q 99.00>83.00 (-) 7.12e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213

ISTD 107.00>89.00 (-) 6.83e4



Chromatograms and Selected Ion Monitoring

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

20200902

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20200902_001	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:32
2	null		20200902_002	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:36
3	IB		20200902_003	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:42
4	IB		20200902_004	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:50
5	LODV		20200902_005	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:58
6	PERCHLORATE7		20200902_006	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 16:10
7	EQ2000392-01		20200902_007	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:18
8	E2000760-001		20200902_008	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:26
9	E2000796-001		20200902_009	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:34
10	E2000797-001		20200902_010	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:42
11	E2000798-001		20200902_011	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:50
12	EQ2000392-02		20200902_012	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:58
13	EQ2000392-03		20200902_013	Perchlorate6850b.lcm	1x	☒		9/2/2020 17:06
14	PERCHLORATE7		20200902_014	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 17:13
15	E2000760-001X2		20200902_015	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:32
16	E2000796-001X2		20200902_016	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:40
17	E2000797-001X10		20200902_017	Perchlorate6850b.lcm	10x	☒		9/2/2020 17:48
18	E2000798-001X2		20200902_018	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:55
19	EQ2000392-02		20200902_019	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:03
20	EQ2000392-03		20200902_020	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:11
21	PERCHLORATE7		20200902_021	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 18:19
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1085	0.1092	0.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_014

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.80	0.1085	0.1063	-2.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_021

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.0	0.1085	0.1086	0.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.58	0.1085	0.1039	-4.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_008

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.45	0.1085	0.1025	-5.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/2/20 16:10

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

File ID: I:\LCMS01\DATA\20200902\20200902_006
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-01
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-01	199,073	2.74
Method Blank	EQ2000392-01	207,056	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081131

Service Request: E2000798
Date Analyzed: 9/2/20 17:13

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

File ID: I:\LCMS01\DATA\20200902\20200902_014
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-02
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-02	181,498	2.85
LH18/24-SP650_082520-BIX	E2000798-001	125,600	2.80
Lab Control Sample	EQ2000392-02	236,222	2.85
Duplicate Lab Control Sample	EQ2000392-03	222,560	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081131	**Date Analyzed:**	9/2/20 18:19

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200902\20200902_021	**Lab Code:**	EQ2000396-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-03	186,696	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081131	**Date Analyzed:**	9/3/20 09:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_006	**Lab Code:**	EQ2000396-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-04	165,769	2.84

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000798
Project:	HS20081131	**Date Analyzed:**	9/3/20 10:03

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_008	**Lab Code:**	EQ2000396-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-05	166,758	2.84

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

ALS Group Houston

PERCHLORATE7

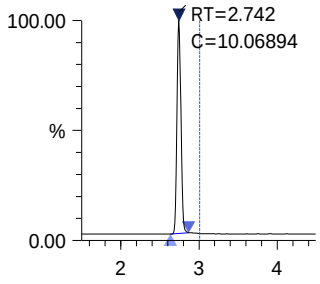
Date acquired: 9/2/2020 4:10:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_006.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 4:10:48 PM	217480	10.06894	20200902_006	2.742	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 4:10:48 PM	199073	1.00000	20200902_006	2.741	25.0000	1.0000	4

Perchlorate

Conc 10.06894
Area 217480

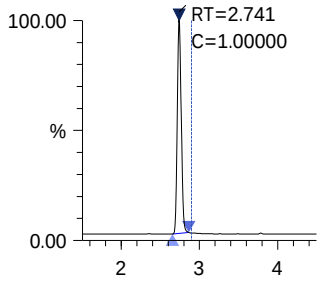
Q 99.00>83.00 (-) 6.33e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 199073

ISTD 107.00>89.00 (-) 5.76e4



ALS Group Houston

EQ2000392-01

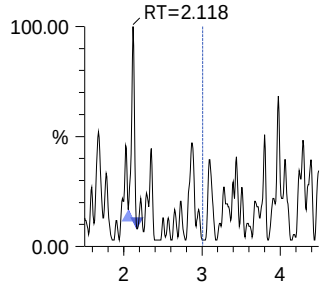
Date acquired: 9/2/2020 4:18:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_007.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-01	9/2/2020 4:18:42 PM	----	----	20200902_007	----	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000392-01	9/2/2020 4:18:42 PM	207056	1.00000	20200902_007	2.845	25.0000	1.0000	19

Perchlorate

Conc ----
Area ----

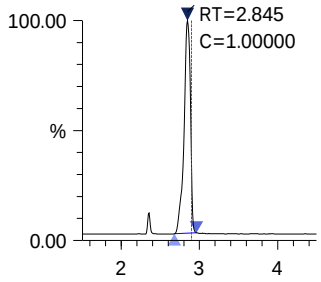
Q 99.00>83.00 (-) 7.70e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 207056

ISTD 107.00>89.00 (-) 3.61e4



ALS Group Houston

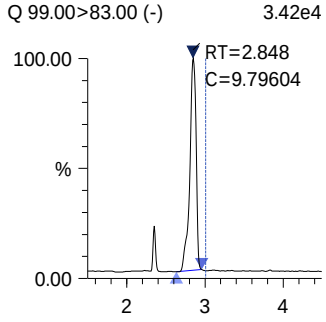
PERCHLORATE7

Date acquired: 9/2/2020 5:13:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_014.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 5:13:58 PM	192905	9.79604	20200902_014	2.848	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 5:13:58 PM	181498	1.00000	20200902_014	2.845	25.0000	1.0000	4

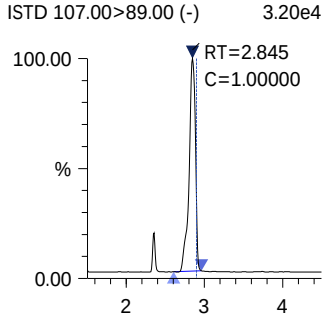
Perchlorate

Conc 9.79604
Area 192905



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181498



ALS Group Houston

EQ2000392-02

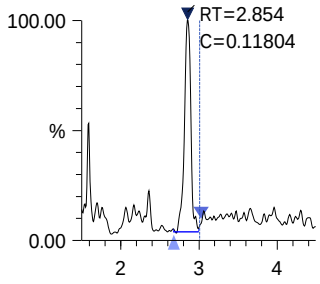
Date acquired: 9/2/2020 6:03:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_019.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-02	9/2/2020 6:03:47 PM	3025	0.11804	20200902_019	2.854	25.0000	1.0000	24
Sodium Perchlorate-18O4_IS	EQ2000392-02	9/2/2020 6:03:47 PM	236222	1.00000	20200902_019	2.846	25.0000	1.0000	24

Perchlorate

Conc 0.11804
Area 3025

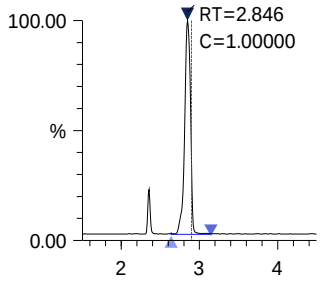
Q 99.00>83.00 (-) 7.27e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 236222

ISTD 107.00>89.00 (-) 4.27e4



ALS Group Houston

EQ2000392-03

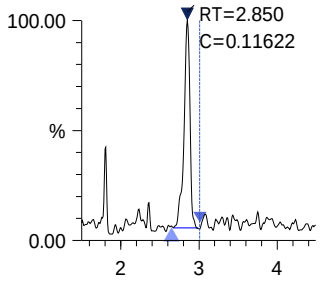
Date acquired: 9/2/2020 6:11:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_020.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-03	9/2/2020 6:11:38 PM	2806	0.11622	20200902_020	2.850	25.0000	1.0000	25
Sodium Perchlorate-18O4_IS	EQ2000392-03	9/2/2020 6:11:38 PM	222560	1.00000	20200902_020	2.848	25.0000	1.0000	25

Perchlorate

Conc 0.11622
Area 2806

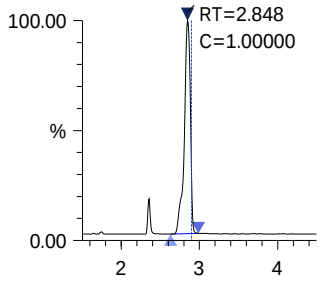
Q 99.00>83.00 (-) 5.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222560

ISTD 107.00>89.00 (-) 4.10e4



ALS Group Houston

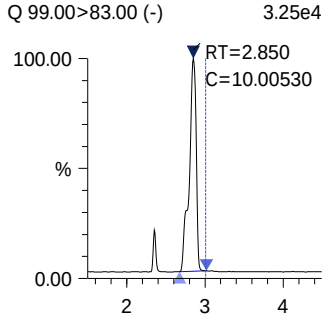
PERCHLORATE7

Date acquired: 9/2/2020 6:19:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_021.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 6:19:32 PM	202669	10.00530	20200902_021	2.850	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 6:19:32 PM	186696	1.00000	20200902_021	2.848	25.0000	1.0000	4

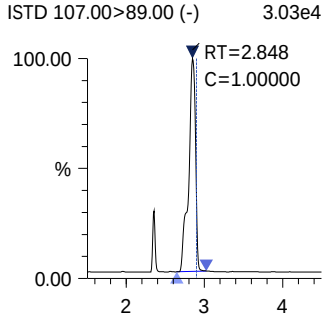
Perchlorate

Conc 10.00530
Area 202669



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 186696



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September 02, 2020 **Analytical Report for Service Request No:** K2007399

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

RE: HS20081133

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 28, 2020
For your reference, these analyses have been assigned our service request number **K2007399.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
General Chemistry
Raw Data
    General Chemistry

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20081133
Sample Matrix: Water

Service Request: K2007399
Date Received: 08/28/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 08/28/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 09/02/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14565**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20081133
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20081133-01**	**LH18/24-SP650_082520**	**Water**	**25 Aug 2020 14:00**
	TOC Analysis for DOD Level IV			03 Sep 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 8/27/2020 1800

Received By: _____ Date/Time: 8/28/20 0950

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: HS20081133

VENDOR:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	14565
TSR:	Danielle Winnings

Item	Catalog No	Unit Price	Quantity	Ext Price
1. TOC Analysis for DOD Level IV	NA	$9.00	1	$9.00
			Order Total:	$9.00

PM_____

Cooler Receipt and Preservation Form

Client ALY - Houston Service Request K20

Received: 8/28/20 Opened: 8/28/20 By: BR Unloaded: 8/28/20 By: BR

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2-front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / (NA)	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number (NA)	Filed
0.0	—	1201					

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled ~~out (ink, signed,~~ etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2007399
Project:	HS20081133	**Date Collected:**	08/25/20
Sample Matrix:	Water	**Date Received:**	08/28/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_082520	K2007399-001	**1.13**	0.50	0.20	0.07	1	09/01/20 08:19	
Method Blank	K2007399-MB	ND U	0.50	0.20	0.07	1	09/02/20 08:19	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007399
Project	HS20081133	**Date Collected:**	08/25/20
Sample Matrix:	Water	**Date Received:**	08/28/20
		Date Analyzed:	09/01/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	LH18/24-SP650_082520	**Units:**	mg/L
Lab Code:	K2007399-001	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2007399-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	1.13	1.17	1.15	3	10

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007399
Project:	HS20081133	**Date Collected:**	08/25/20
Sample Matrix:	Water	**Date Received:**	08/28/20
		Date Analyzed:	09/1/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	LH18/24-SP650_082520	**Units:**	mg/L
Lab Code:	K2007399-001	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2007399-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	1.13	27.1	25.0	104	83-117

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007399
Project:	HS20081133	**Date Analyzed:**	09/01/20
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	693648

	Lab Control Sample K2007399-LCS1			Duplicate Lab Control Sample K2007399-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon, Total Organic	24.1	25.0	96	24.0	25.0	96	83-117	<1	10

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007399
Project:	HS20081133	**Date Analyzed:**	09/01/20
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	693648

	Lab Control Sample K2007399-LCS2			Duplicate Lab Control Sample K2007399-DLCS2					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon, Total Organic	23.8	25.0	95	23.7	25.0	95	83-117	<1	10

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2007399
Project: HS20081133

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	693648	KQ2012465-07	09/01/20 08:19	25.0	24.6	98	90-110
CCV2	693648	KQ2012465-08	09/01/20 08:19	25.0	23.3	93	90-110
CCV3	693648	KQ2012465-09	09/01/20 08:19	25.0	23.5	94	90-110
CCV4	693648	KQ2012465-10	09/01/20 08:19	25.0	23.9	96	90-110
CCV5	693648	KQ2012465-11	09/01/20 08:19	25.0	23.5	94	90-110
CCV6	693648	KQ2012465-12	09/01/20 08:19	25.0	23.4	94	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2007399
Project: HS20081133

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	693648	KQ2012465-01	09/01/20 08:19	0.50	0.20	0.07	ND	U
CCB2	693648	KQ2012465-02	09/01/20 08:19	0.50	0.20	0.07	ND	U
CCB3	693648	KQ2012465-03	09/01/20 08:19	0.50	0.20	0.07	ND	U
CCB4	693648	KQ2012465-04	09/01/20 08:19	0.50	0.20	0.07	ND	U
CCB5	693648	KQ2012465-05	09/01/20 08:19	0.50	0.20	0.07	ND	U
CCB6	693648	KQ2012465-06	09/01/20 08:19	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # 7167 7399 7456 J1393 T1402

Tier: II IV II IV IV

Date Analyzed: 9-1-20

Analyst: MK Run # 693650 / 693648

Analysis: TOC / DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

T1393 / 1402 limited sample LCS/DLCS

Final Approved by: _____ Date: 9/2/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 693650 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2012464-01	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012464-03	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012464-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012464-05	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012464-06	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012464-07	Carbon, Dissolved Organic (DOC)	CCV		Water	24.58 mg/L	10 mL	24.6 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012464-08	Carbon, Dissolved Organic (DOC)	CCV		Water	23.32 mg/L	10 mL	23.3 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012464-09	Carbon, Dissolved Organic (DOC)	CCV		Water	23.45 mg/L	10 mL	23.5 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012464-10	Carbon, Dissolved Organic (DOC)	CCV		Water	23.90 mg/L	10 mL	23.9 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012464-11	Carbon, Dissolved Organic (DOC)	LCS		Water	24.10 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		9/1/20 08:19:00	N	IV
KQ2012464-12	Carbon, Dissolved Organic (DOC)	DLCS		Water	23.96 mg/L	10 mL	24.0 mg/L	1	0.07	0.50	96	<1	9/1/20 08:19:00	N	IV
T2001393-001	Carbon, Dissolved Organic (DOC)	N/A		Water	4.66 mg/L	10 mL	4.66 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-002	Carbon, Dissolved Organic (DOC)	N/A		Water	4.60 mg/L	10 mL	4.60 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-003	Carbon, Dissolved Organic (DOC)	N/A		Water	4.43 mg/L	10 mL	4.43 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-004	Carbon, Dissolved Organic (DOC)	N/A		Water	4.35 mg/L	10 mL	4.35 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-005	Carbon, Dissolved Organic (DOC)	N/A		Water	4.34 mg/L	10 mL	4.34 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-006	Carbon, Dissolved Organic (DOC)	N/A		Water	4.42 mg/L	10 mL	4.42 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-007	Carbon, Dissolved Organic (DOC)	N/A		Water	4.51 mg/L	10 mL	4.51 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-008	Carbon, Dissolved Organic (DOC)	N/A		Water	4.37 mg/L	10 mL	4.37 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-009	Carbon, Dissolved Organic (DOC)	N/A		Water	4.33 mg/L	10 mL	4.33 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001393-010	Carbon, Dissolved Organic (DOC)	N/A		Water	4.45 mg/L	10 mL	4.45 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-001	Carbon, Dissolved Organic (DOC)	N/A		Water	4.42 mg/L	10 mL	4.42 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-002	Carbon, Dissolved Organic (DOC)	N/A		Water	4.40 mg/L	10 mL	4.40 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 693650 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
T2001402-003	Carbon, Dissolved Organic (DOC)	N/A		Water	4.30 mg/L	10 mL	4.30 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-004	Carbon, Dissolved Organic (DOC)	N/A		Water	4.32 mg/L	10 mL	4.32 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-005	Carbon, Dissolved Organic (DOC)	N/A		Water	4.48 mg/L	10 mL	4.48 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-006	Carbon, Dissolved Organic (DOC)	N/A		Water	4.50 mg/L	10 mL	4.50 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-007	Carbon, Dissolved Organic (DOC)	N/A		Water	0.09 mg/L	10 mL	0.09 mg/L J	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-008	Carbon, Dissolved Organic (DOC)	N/A		Water	4.30 mg/L	10 mL	4.30 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
T2001402-009	Carbon, Dissolved Organic (DOC)	N/A		Water	4.36 mg/L	10 mL	4.36 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 693648 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2007167-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.65 mg/L	10 mL	1.65 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.53 mg/L	10 mL	1.53 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-003	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.58 mg/L	10 mL	0.58 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-004	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.14 mg/L	10 mL	1.14 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-005	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.76 mg/L	10 mL	0.76 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-006	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.82 mg/L	10 mL	1.82 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-007	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.83 mg/L	10 mL	1.83 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-008	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.73 mg/L	10 mL	1.73 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-009	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.02 mg/L	10 mL	2.02 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-010	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.91 mg/L	10 mL	0.91 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-011	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.78 mg/L	10 mL	1.78 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007167-012	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	II
K2007399-001	Carbon, Total Organic	N/A		Water	1.13 mg/L	10 mL	1.13 mg/L	1	0.07	0.50			9/1/20 08:19:00	N	IV
K2007456-001	Carbon, Total Organic	N/A		Water	13.66 mg/L	10 mL	342 mg/L	25	2	13			9/1/20 08:19:00	N	I
KQ2012465-01	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-01	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-02	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-02	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-03	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-03	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-05	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-06	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV
KQ2012465-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/1/20 08:19:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 693648 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2012465-07	Carbon, Dissolved Organic (DOC)	CCV		Water	24.58 mg/L	10 mL	24.6 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-07	Carbon, Total Organic	CCV		Water	24.58 mg/L	10 mL	24.6 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-08	Carbon, Dissolved Organic (DOC)	CCV		Water	23.32 mg/L	10 mL	23.3 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-08	Carbon, Total Organic	CCV		Water	23.32 mg/L	10 mL	23.3 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-09	Carbon, Dissolved Organic (DOC)	CCV		Water	23.45 mg/L	10 mL	23.5 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-09	Carbon, Total Organic	CCV		Water	23.45 mg/L	10 mL	23.5 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-10	Carbon, Dissolved Organic (DOC)	CCV		Water	23.90 mg/L	10 mL	23.9 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-10	Carbon, Total Organic	CCV		Water	23.90 mg/L	10 mL	23.9 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-11	Carbon, Dissolved Organic (DOC)	CCV		Water	23.48 mg/L	10 mL	23.5 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-11	Carbon, Total Organic	CCV		Water	23.48 mg/L	10 mL	23.5 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-12	Carbon, Dissolved Organic (DOC)	CCV		Water	23.44 mg/L	10 mL	23.4 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-12	Carbon, Total Organic	CCV		Water	23.44 mg/L	10 mL	23.4 mg/L	1					9/1/20 08:19:00	N	IV
KQ2012465-13	Carbon, Total Organic	DUP	K2007399-001	Water	1.17 mg/L	10 mL	1.17 mg/L	1	0.07	0.50		3	9/1/20 08:19:00	N	IV
KQ2012465-14	Carbon, Total Organic	MS	K2007399-001	Water	27.14 mg/L	10 mL	27.1 mg/L	1	0.07	0.50	104		9/1/20 08:19:00	N	IV
KQ2012465-15	Carbon, Dissolved Organic (DOC)	DUP	K2007167-007	Surface Water	1.75 mg/L	10 mL	1.75 mg/L	1	0.07	0.50		4	9/1/20 08:19:00	N	II
KQ2012465-16	Carbon, Dissolved Organic (DOC)	MS	K2007167-007	Surface Water	27.68 mg/L	10 mL	27.7 mg/L	1	0.07	0.50	103		9/1/20 08:19:00	N	II
KQ2012465-17	Carbon, Dissolved Organic (DOC)	LCS		Water	24.10 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		9/1/20 08:19:00	N	IV
KQ2012465-17	Carbon, Total Organic	LCS		Water	24.10 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		9/1/20 08:19:00	N	IV
KQ2012465-18	Carbon, Dissolved Organic (DOC)	DLCS		Water	23.96 mg/L	10 mL	24.0 mg/L	1	0.07	0.50	96	<1	9/1/20 08:19:00	N	IV
KQ2012465-18	Carbon, Total Organic	DLCS		Water	23.96 mg/L	10 mL	24.0 mg/L	1	0.07	0.50	96	<1	9/1/20 08:19:00	N	IV
KQ2012465-19	Carbon, Dissolved Organic (DOC)	LCS		Water	23.82 mg/L	10 mL	23.8 mg/L	1	0.07	0.50	95		9/1/20 08:19:00	N	IV
KQ2012465-19	Carbon, Total Organic	LCS		Water	23.82 mg/L	10 mL	23.8 mg/L	1	0.07	0.50	95		9/1/20 08:19:00	N	IV
KQ2012465-20	Carbon, Dissolved Organic (DOC)	DLCS		Water	23.74 mg/L	10 mL	23.7 mg/L	1	0.07	0.50	95	<1	9/1/20 08:19:00	N	IV
KQ2012465-20	Carbon, Total Organic	DLCS		Water	23.74 mg/L	10 mL	23.7 mg/L	1	0.07	0.50	95	<1	9/1/20 08:19:00	N	IV
KQ2012465-21	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/2/20 08:19:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental - Laboratory Note Sheet

Service Request Number(s):
K2007167

Sample Number	Filter	9N H_2SO_4	Time			
K2007167-001	40mL	2 Drops	8:20			
2	↓	↓	↓			
3						
4						
5						
6						
7						
8						
9						
10						
11						
12	↓					
FB	↓	↓	↓			

Comments/Notes:

Analyst: MK	Date: 8.20.20
Reviewed:	Date:

Schedule: 090120

Version: 11
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/09/02 08:19 - Wednesday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Done
(Clean)	Clean	Clean		1	True	Done
(Clean)	Clean	Clean		1	True	Done
(Blank)	Blank	Reagent/Acid Blank		1	True	Done
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
3	Sample	BOTTLE CHECK LOT 081720-3DQL	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
4	Sample	K2007399-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
5	Sample	K2007399-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
6	Sample	K2007399-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
7	Sample	T2001393-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
8	Sample	T2001393-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
9	Sample	T2001393-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
10	Sample	T2001393-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
11	Sample	T2001393-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
12	Sample	T2001393-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
13	Sample	T2001393-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
14	Sample	T2001393-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
15	Sample	T2001393-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
16	Sample	T2001393-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
17	Sample	T2001402-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
18	Sample	T2001402-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
19	Sample	T2001402-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
22	Sample	T2001402-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
23	Sample	T2001402-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
24	Sample	T2001402-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
25	Sample	T2001402-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
26	Sample	T2001402-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
27	Sample	T2001402-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
28	Sample	K2007456-001 25X	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
29	Sample	K2007167-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
30	Sample	K2007167-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
31	Sample	K2007167-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
32	Sample	K2007167-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
33	Sample	K2007167-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
34	Sample	K2007167-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
35	Sample	K2007167-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
36	Sample	K2007167-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
37	Sample	K2007167-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
38	Sample	K2007167-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done

Schedule: 090120

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
20	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
42	Sample	K2007167-011	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
43	Sample	K2007137-012	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
51	Sample	K2007167-007DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
52	Sample	K2007167-007MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Done
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Done
1	Sample		CAS_salt_010711 (CAS_salt_010711)	1	True	Running
					False	

Fusion Report - 090120
Tuesday, September 01, 2020 09:45 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/09/02 12:40 - Wednesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	090120	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v4) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7) Fusion1 (Fusion1) (v8) Fusion1 (Fusion1) (v11)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/01 09:45

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.11	27.27	13.17	49.67	05:31
2	TC Clean	22.77	35.86	13.09	49.79	07:17
3	TC Clean	2.98	16.25	13.27	49.75	07:02
4	TC Clean	1.40	14.49	13.09	49.80	07:02

Sample Type: Clean — From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/01 10:17

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.22	13.21	12.99	49.60	05:17

2	TC Clean	4.61	17.50	12.89	49.78	07:17
3	TC Clean	0.60	13.68	13.08	49.73	06:58
4	TC Clean	0.59	13.52	12.93	50.00	07:00

Sample Type: Clean From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/01 10:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.32	12.72	13.04	49.62	05:15
2	TC Clean	3.31	16.16	12.85	49.79	07:16
3	TC Clean	0.80	13.78	12.97	49.99	07:03
4	TC Clean	0.69	13.55	12.86	49.84	07:02

Sample Type: Blank (Creating v1441) From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/09/01 11:19

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.10	12.76	12.86	49.57	05:11
2	TC Clean	3.39	16.41	13.02	49.96	07:18
3	TC Clean	1.32	13.93	12.61	49.86	07:00
4	TC Clean	0.58	13.49	12.91	49.82	07:03
5	Reagent Blank	4.52	17.25	12.73	50.01	08:12
6	Acid Blank	0.46	13.03	12.56	49.60	05:30

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0535 ppm	0.0000 ppm	0.0000%	2020/09/01 12:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0535	0.5346	9.58	22.32	12.74	50.02	10:31

Dilution **Blank Contribution** **Method** **Calibration**

1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5759 ppm (PASS)	0.0000 ppm	0%	2020/09/01 12:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5759	245.7594	182.29	195.10	12.81	50.00	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/01 12:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.00	21.73	12.74	50.08	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/01 12:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.29	21.25	12.96	50.01	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 4

	Pos	BAT	Concentration	Dil	Sample ID	Min / Max	Result	Std. Dev.	RSD	Start Time

			(ppm)			(% dev)				
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	21.6020 ppm (PASS)	0.0000 ppm	0%	2020/09/01 13:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	21.6020	216.0195	161.43	174.24	12.81	50.00	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.0620 ppm	0.0000 ppm	0.0000%	2020/09/01 13:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0620	0.6201	9.64	22.55	12.91	50.13	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	BOTTLE CHECK LOT 081720-3DQL	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/01 13:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.86	20.89	13.03	50.07	10:27
2	TOC	0.0000	0.0000	8.55	21.47	12.92	50.08	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2007399-001	1.1297 ppm	0.0150 ppm	1.3300%	2020/09/01 14:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1403	11.4030	17.20	30.27	13.07	50.10	10:24
2	TOC	1.1191	11.1906	17.05	30.12	13.07	50.04	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2007399-001DUP	1.1670 ppm	0.0185 ppm	1.5900%	2020/09/01 14:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1801	11.8007	17.48	30.44	12.96	50.00	10:29
2	TOC	1.1538	11.5384	17.30	30.17	12.87	50.05	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2007399-001MS	27.1367 ppm	0.2656 ppm	0.9800%	2020/09/01 14:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.9489	269.4892	198.25	211.22	12.97	50.10	10:29
2	TOC	27.3246	273.2456	200.88	213.77	12.89	50.15	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	T2001393-001	4.6626 ppm	0.0860 ppm	1.8400%	2020/09/01 15:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7234	47.2343	42.34	55.15	12.81	50.07	10:27
2	TOC	4.6018	46.0183	41.48	54.51	13.03	50.06	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	T2001393-002	4.5968 ppm	0.0115 ppm	0.2500%	2020/09/01 15:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5887	45.8871	41.39	54.65	13.26	49.97	10:29
2	TOC	4.6050	46.0496	41.51	54.31	12.80	49.90	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	T2001393-003	4.4346 ppm	0.0460 ppm	1.0400%	2020/09/01 16:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4671	44.6711	40.54	53.39	12.85	49.99	10:31

2	TOC	4.4021	44.0211	40.08	53.04	12.96	50.09	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.3173 ppm (PASS)	0.0000 ppm	0%	2020/09/01 16:50

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.3173	233.1732	173.46	186.58	13.12	50.11	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/01 17:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.71	21.62	12.90	50.16	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	T2001393-004	4.3535 ppm	0.0109 ppm	0.2500%	2020/09/01 17:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3458	43.4580	39.69	52.44	12.75	50.00	10:29
2	TOC	4.3612	43.6119	39.80	52.97	13.17	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	T2001393-005	4.3426 ppm	0.0037 ppm	0.0900%	2020/09/01 17:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3452	43.4523	39.68	52.71	13.03	49.94	10:30
2	TOC	4.3400	43.3995	39.65	52.51	12.87	50.01	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	T2001393-006	4.4156 ppm	0.0301 ppm	0.6800%	2020/09/01 18:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3943	43.9427	40.03	52.95	12.92	50.16	10:27
2	TOC	4.4369	44.3689	40.33	53.21	12.88	50.21	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	T2001393-007	4.5137 ppm	0.0252 ppm	0.5600%	2020/09/01 18:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4959	44.9591	40.74	53.74	12.99	50.22	10:27
2	TOC	4.5315	45.3155	40.99	53.87	12.88	50.25	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	T2001393-008	4.3661 ppm	0.0053 ppm	0.1200%	2020/09/01 19:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3623	43.6233	39.80	52.84	13.04	50.19	10:26
2	TOC	4.3699	43.6989	39.86	52.96	13.10	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	15	TOC	T2001393-009	4.3343 ppm	0.0383 ppm	0.8800%	2020/09/01 19:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3072	43.0717	39.42	52.80	13.38	50.23	10:29
2	TOC	4.3613	43.6134	39.80	52.70	12.91	50.11	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	T2001393-010	4.4547 ppm	0.0446 ppm	1.0000%	2020/09/01 20:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4862	44.8621	40.67	53.51	12.83	50.23	10:26
2	TOC	4.4232	44.2321	40.23	53.31	13.08	50.16	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	T2001402-001	4.4169 ppm	0.1054 ppm	2.3900%	2020/09/01 20:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3424	43.4238	39.66	52.92	13.25	50.07	10:28
2	TOC	4.4915	44.9149	40.71	53.75	13.04	50.11	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	T2001402-002	4.4049 ppm	0.0386 ppm	0.8800%	2020/09/01 21:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3776	43.7759	39.91	52.89	12.98	50.11	10:27
2	TOC	4.4322	44.3219	40.30	53.27	12.98	50.03	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	T2001402-003	4.3004 ppm	0.0354 ppm	0.8200%	2020/09/01 21:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.2754	42.7538	39.20	52.20	13.00	50.08	10:25
2	TOC	4.3254	43.2541	39.55	52.37	12.83	50.03	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.4543 ppm (PASS)	0.0000 ppm	0%	2020/09/01 22:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.4543	234.5431	174.42	187.38	12.96	50.12	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/01 22:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.60	21.58	12.98	49.97	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/01 22:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.90	21.85	12.95	50.13	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.1008 ppm (PASS)	0.0000 ppm	0%	2020/09/01 22:44

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.1008	241.0080	178.96	191.91	12.96	49.97	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.9611 ppm (PASS)	0.0000 ppm	0%	2020/09/01 22:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.9611	239.6110	177.98	191.11	13.13	49.91	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	T2001402-004	4.3195 ppm	0.0568 ppm	1.3100%	2020/09/01 23:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3596	43.5963	39.79	52.90	13.11	49.90	10:29
2	TOC	4.2794	42.7937	39.22	52.16	12.94	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	T2001402-005	4.4836 ppm	0.0370 ppm	0.8300%	2020/09/01 23:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5097	45.0974	40.84	53.67	12.83	49.91	10:27
2	TOC	4.4574	44.5742	40.47	53.52	13.05	49.96	10:24

Dilution	Blank Contribution	Method	Calibration

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	T2001402-006	4.4981 ppm	0.0142 ppm	0.3200%	2020/09/02 00:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5082	45.0817	40.83	53.58	12.75	49.91	10:29
2	TOC	4.4881	44.8807	40.69	53.46	12.78	49.90	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	T2001402-007	0.0881 ppm	0.0262 ppm	29.7500%	2020/09/02 00:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1066	1.0663	9.95	23.02	13.07	50.03	10:26
2	TOC	0.0696	0.6957	9.69	22.61	12.92	49.94	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	26	TOC	T2001402-008	4.3047 ppm	0.0155 ppm	0.3600%	2020/09/02 01:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3157	43.1572	39.48	52.35	12.88	49.88	10:25
2	TOC	4.2938	42.9377	39.32	52.31	12.99	49.84	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	27	TOC	T2001402-009	4.3635 ppm	0.0268 ppm	0.6100%	2020/09/02 01:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3824	43.8243	39.95	52.87	12.92	50.00	10:25
2	TOC	4.3445	43.4451	39.68	52.67	12.99	49.89	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K2007456-001 25X	13.6623 ppm	0.3809 ppm	2.7900%	2020/09/02 02:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.3929	133.9292	103.15	115.98	12.83	49.87	10:30
2	TOC	13.9316	139.3164	106.93	119.93	13.00	49.80	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.9029 ppm (PASS)	0.0000 ppm	0%	2020/09/02 02:30

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.9029	239.0294	177.57	190.62	13.05	49.80	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/02 02:44

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.80	22.69	12.89	49.91	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2007167-001	1.6486 ppm	0.0344 ppm	2.0900%	2020/09/02 02:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6729	16.7289	20.94	33.85	12.91	50.04	10:27
2	TOC	1.6243	16.2428	20.60	33.62	13.03	49.96	10:30

Dilution	Blank Contribution	Method	Calibration

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	30	TOC	K2007167-002	1.5310 ppm	0.0123 ppm	0.8000%	2020/09/02 03:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5223	15.2235	19.88	32.91	13.03	49.90	10:26
2	TOC	1.5397	15.3974	20.00	33.14	13.13	49.91	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K2007167-003	0.5840 ppm	0.0193 ppm	3.3000%	2020/09/02 03:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5976	5.9759	13.40	26.20	12.81	49.91	10:28
2	TOC	0.5704	5.7037	13.21	26.28	13.08	49.89	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K2007167-004	1.1407 ppm	0.0445 ppm	3.9000%	2020/09/02 04:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1092	11.0922	16.98	30.15	13.17	49.91	10:27
2	TOC	1.1721	11.7209	17.43	30.48	13.06	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2007167-005	0.7550 ppm	0.0158 ppm	2.1000%	2020/09/02 04:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7439	7.4386	14.42	27.57	13.15	49.90	10:25
2	TOC	0.7662	7.6624	14.58	27.72	13.14	49.93	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2007167-006	1.8184 ppm	0.0430 ppm	2.3700%	2020/09/02 05:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8488	18.4880	22.17	35.27	13.09	49.88	10:29
2	TOC	1.7879	17.8793	21.75	34.92	13.17	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2007167-007	1.8283 ppm	0.0264 ppm	1.4400%	2020/09/02 05:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8469	18.4695	22.16	35.21	13.05	49.89	10:29
2	TOC	1.8096	18.0960	21.90	35.11	13.21	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	K2007167-008	1.7289 ppm	0.0298 ppm	1.7300%	2020/09/02 06:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7078	17.0781	21.18	34.22	13.04	49.86	10:28
2	TOC	1.7500	17.5001	21.48	34.55	13.07	49.88	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	37	TOC	K2007167-009	2.0249 ppm	0.0015 ppm	0.0700%	2020/09/02 06:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0239	20.2386	23.40	36.66	13.26	49.86	10:25
2	TOC	2.0260	20.2600	23.42	36.50	13.09	49.86	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	38	TOC	K2007167-010	0.9116 ppm	0.0276 ppm	3.0300%	2020/09/02 07:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9312	9.3117	15.74	28.91	13.18	49.84	10:23
2	TOC	0.8921	8.9211	15.46	28.65	13.19	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC)	CAS_salt_010711	CAS_salt_010711

(v1441) (v4) (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.4820 ppm (PASS)	0.0000 ppm	0%	2020/09/02 07:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.4820	234.8197	174.61	187.54	12.92	49.99	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/02 07:54

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.98	22.02	13.04	49.90	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/02 08:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.75	21.78	13.03	49.88	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 11

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.8155 ppm (PASS)	0.0000 ppm	0%	2020/09/02 08:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.8155	238.1555	176.95	189.88	12.93	49.85	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 11

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.7436 ppm (PASS)	0.0000 ppm	0%	2020/09/02 08:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.7436	237.4356	176.45	189.19	12.74	50.00	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 11

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	42	TOC	K2007167-011	1.7803 ppm	0.1158 ppm	6.5100%	2020/09/02 08:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8622	18.6220	22.27	35.37	13.10	49.93	10:28
2	TOC	1.6984	16.9841	21.12	34.37	13.25	50.03	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	43	TOC	K2007137-012	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/02 09:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.73	21.85	13.12	49.93	10:27
2	TOC	0.0000	0.0000	9.03	21.92	12.89	49.96	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	51	TOC	K2007167-007DUP	1.7546 ppm	0.0134 ppm	0.7600%	2020/09/02 09:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7452	17.4516	21.45	34.49	13.05	49.94	10:26
2	TOC	1.7641	17.6412	21.58	34.45	12.87	49.94	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	52	TOC	K2007167-007MS	27.6818 ppm	0.0415 ppm	0.1500%	2020/09/02 10:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.7112	277.1117	203.59	216.42	12.83	49.92	10:26
2	TOC	27.6524	276.5243	203.18	216.31	13.13	49.97	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 11

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.4368 ppm (PASS)	0.0000 ppm	0%	2020/09/02 10:44

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.4368	234.3678	174.30	186.94	12.64	49.88	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 11

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/09/02 10:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.99	21.80	12.81	50.05	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D

Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 11

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/09/02 11:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.71	21.59	12.88	49.87	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2040 (IC) (v1441)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1440	1.5697	-0.0820	0.0000	0.0000	0.0000	2020/08/28 17:03	Fusion1 (Fusion1)
v1441	1.5057	0.4650	0.0000	0.0000	0.0000	2020/09/01 12:06	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25

50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4 Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/09/02 11:29

HS20081133 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20081133

NH3 AMN-W - ISE / 350.3

ALS Laboratory Group

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD				Date: 9/1/20 9:30 AM	
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F					
Probe Calibration Date: 9/1/20		Cal Std ID: 3140644(5 -10)		Probe ID: X01-11806	
Std Level		mV	Conc., mg/L:	Sodium Thiosulfate ID: 3100601115	
STD 1 (mg/L): 0.2	0.2	134.2	0.204	Std Level	mV / Conc., mg/L:
STD 2 (mg/L): 1	1	93.7	0.991	STD 4 (mg/L): 10	354 / 10.004
STD 3 (mg/L): 5	5	52.9	5.003	STD 5 (mg/L): 50	-54 / 49.988
LSC / MS Spike ID: 3100602320				ICAL Date & Slope:	
ICV Cal STD ID: 3140644(5				98.64.1 - 58.2mV	
DPD Reagent ID: 3100602305					

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/-)	Comments
ICV		50ml	50ml		10.105			
CCB		"	"		0.012			
MBLK		25ml	50ml		0.013			
LCS					10.702			
HS200811133-01					10.637		+ve	Rechecked
1228-01					2.833		+ve	"
1073-01					0.474		-ve	
1073-01MS					11.277			
1073-01 MSD					11.196			
1169-01		0.5ml	50ml	100X	5.302		+ve	Rechecked
1165-01		"	"	"	5.365		+ve	
1167-01		"	"	"	4.303		+ve	"
CCV		50ml	50ml		9.748			
CCB		"	"		0.03			

Batch ID:	Reported By	Reviewed By:
367814 / 367820	MD	YP

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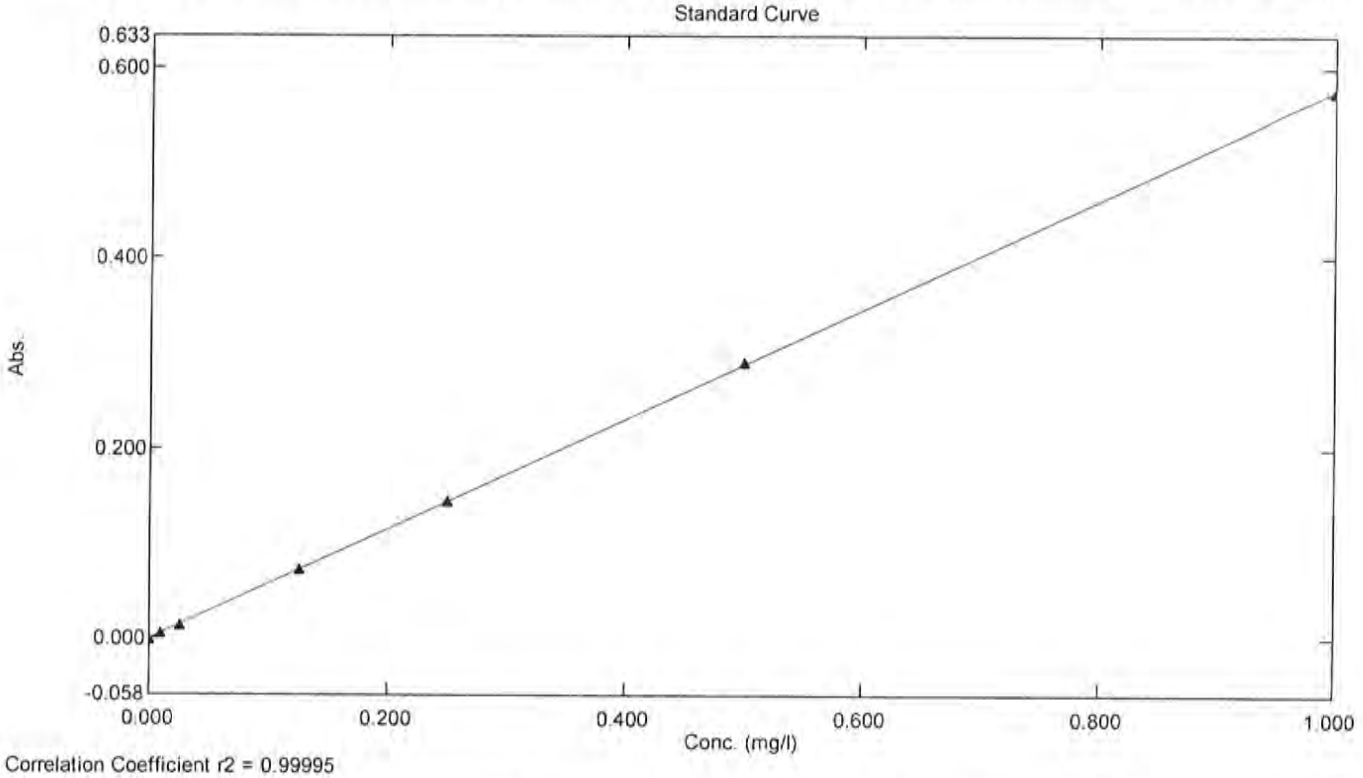
HS20081133 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20081133

Standard Table Report

09/03/2020 04:52:35 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\082620_P_ORTHO.pho..p



Correlation Coefficient r2 = 0.99995

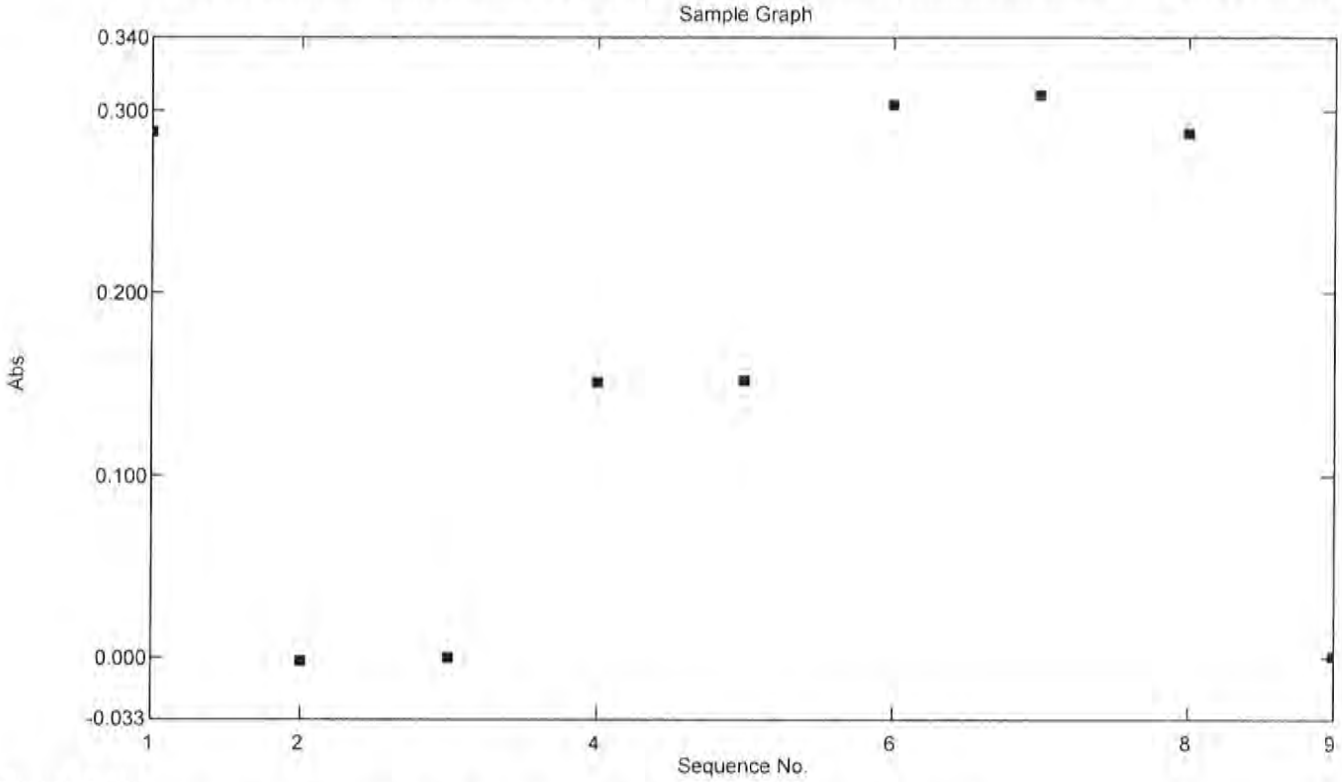
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.073	1.000	
5	STD5	Standard		0.250	0.145	1.000	
6	STD6	Standard		0.500	0.290	1.000	
7	STD7	Standard		1.000	0.575	1.000	
8							

Sample Table Report

09/03/2020 04:52:38 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\082620_P_ORTHO.pho..p



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.502	0.289	314064002 WC-14
2	CCB	Unknown		-0.004	-0.002	
3	MBLK	Unknown		0.000	0.000	
4	LCS	Unknown		0.262	0.151	314064001 WC-14
5	HS20081133.01	Unknown		0.265	0.153	PF:10X,12:57PM
6	HS20081133.01MS	Unknown		0.527	0.304	PF:10X,12:58PM
7	HS20081133.01MS D	Unknown		0.537	0.309	PF:10X,12:29PM
8	CCV2	Unknown		0.499	0.287	
9	CCB2	Unknown		0.001	0.001	C-314064004 UV-11
10						

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WorkOrder: HS20081150

Groundwater Treatment Plant Quarterly Influent Samples

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26-Sep-2020

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Table of Contents

HS20081150 Cover Page
- CoverPage
- HS20081150 Groundwater Treatment Plant Quarterly Influent Samples Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - LH18/24-SP140_082520
  - Trip Blank
  - Weight/Volume Log
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS20081150 - Sub Perch IV (E2000797)
- HS20081150 8260 Raw Data
- HS20081150 8270 Raw Data
- HS20081150 - ME - HG_W_DODICP_W_DOD
  - Form 12 - HG03_367830 Preparation Log
  - Form 12 - ICPMS06_367914 Preparation Log

Table of Contents (continued)

- Form 13 - HG03_367830 Run Log
- Form 13 - ICPMS06_367914 Run Log
- Form 2 - HG03_367830 CCV
- Form 2 - ICPMS06_367914 CCV
- Form 3 - HG03_367830 CCB
- Form 3 - ICPMS06_367914 CCB
- Form 4 - ICPMS06_367914 ICSA
- Form 5A - HG03_367830 MS
- Form 5A - ICPMS06_367914 MS
- Form 5B - ICPMS06_367914 PDS
- Form 7 - HG03_367830 LCS
- Form 7 - ICPMS06_367914 LCS
- Form 8 - ICPMS06_367914 SD

HS20081150 Wet Chem Raw Data (9056_anions_W)

HS20081150 Wet Chem Raw Data (COD)

HS20081150 Wet Chem Raw Data (O&G_1664_W_HS)

HS20081150 Groundwater Treatment Plant Quarterly Influent Samples Final

ALS WO# HS20081150

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September 03, 2020

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

Work Order: **HS20081150**

Laboratory Results for: **Groundwater Treatment Plant Quarterly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 26, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20081150

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20081150-01	LH18/24-SP140_082520	Water		25-Aug-2020 14:00	26-Aug-2020 10:00	☐
HS20081150-02	Trip Blank	Water	CG 042320 -59	25-Aug-2020 00:00	26-Aug-2020 10:00	☐

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20081150

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 156817

Sample ID: LH18/24-SP140_082520 (HS20081150-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

GCMS Volatiles by Method SW8260

Batch ID: R367697

Sample ID: CCV

• Naphthalene exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: HS20081151-01MS

• MS and MSD are for an unrelated sample

Sample ID: VLCSW-200828

• Naphthalene, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for these compounds.

Metals by Method SW7470

Batch ID: 156890

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

Metals by Method SW6020

Batch ID: 156822

Sample ID: LH18/24-SP140_082520 (HS20081150-01MS)

• The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Barium, Calcium, Magnesium, Manganese, Sodium

Sample ID: LH18/24-SP140_082520 (HS20081150-01SD)

• The percent difference between the results of the sample and the serial dilution were greater than 10%. Zinc

WetChemistry by Method E1664A

Batch ID: R367779

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

WetChemistry by Method E410.4

Batch ID: R367736

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20081150

WetChemistry by Method SW9056

Batch ID: R367721

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20081150
Sample ID: LH18/24-SP140_082520 Lab ID:HS20081150-01
Collection Date: 25-Aug-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
1,1,2,2-Tetrachloroethane	5.0	U	2.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,1,2-Trichloroethane	**3.3**	J	**1.5**	**5.0**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
1,1-Dichloroethane	**17**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
1,1-Dichloropropene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2,4-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,2-Dichloroethane	**66**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
1,2-Dichloropropane	5.0	U	2.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,3-Dichloropropane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	28-Aug-2020 16:24
2-Chlorotoluene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
2-Hexanone	10	U	5.0	10	10	UG/L	5	28-Aug-2020 16:24
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
4-Isopropyltoluene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
4-Methyl-2-pentanone	10	U	3.5	10	10	UG/L	5	28-Aug-2020 16:24
Acetone	5.0	U	2.0	5.0	10	UG/L	5	28-Aug-2020 16:24
Benzene	**4.0**	J	**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
Bromobenzene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Bromochloromethane	**5.1**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
Bromoform	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Bromomethane	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	28-Aug-2020 16:24
Carbon tetrachloride	**8.2**		**2.5**	**5.0**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
Chlorobenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Chloroethane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Chloroform	**20**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20081150
Sample ID: LH18/24-SP140_082520 Lab ID:HS20081150-01
Collection Date: 25-Aug-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
cis-1,2-Dichloroethene	**6,300**		**20**	**50**	**100**	**UG/L**	100	28-Aug-2020 17:36
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	28-Aug-2020 16:24
Dibromochloromethane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
Dichlorodifluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Ethylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Isopropylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	28-Aug-2020 16:24
Methylene chloride	**3,200**		**40**	**100**	**200**	**UG/L**	100	28-Aug-2020 17:36
n-Butylbenzene	5.0	U	2.0	5.0	5.0	UG/L	5	28-Aug-2020 16:24
n-Propylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Naphthalene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
o-Xylene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
sec-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Styrene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
tert-Butylbenzene	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Tetrachloroethene	**81**		**1.5**	**5.0**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
Toluene	**3.6**	J	**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
trans-1,2-Dichloroethene	**20**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Aug-2020 16:24
Trichloroethene	**9,200**		**20**	**50**	**100**	**UG/L**	100	28-Aug-2020 17:36
Trichlorofluoromethane	5.0	U	1.5	5.0	5.0	UG/L	5	28-Aug-2020 16:24
Vinyl chloride	**130**		**1.0**	**2.5**	**5.0**	**UG/L**	5	28-Aug-2020 16:24
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*5*	*28-Aug-2020 16:24*
Surr: 1,2-Dichloroethane-d4	*88.9*			**0**	*81-118*	*%REC*	*100*	*28-Aug-2020 17:36*
Surr: 4-Bromofluorobenzene	*97.6*			**0**	*85-114*	*%REC*	*5*	*28-Aug-2020 16:24*
Surr: 4-Bromofluorobenzene	*97.3*			**0**	*85-114*	*%REC*	*100*	*28-Aug-2020 17:36*
Surr: Dibromofluoromethane	*94.4*			**0**	*80-119*	*%REC*	*100*	*28-Aug-2020 17:36*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*5*	*28-Aug-2020 16:24*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*100*	*28-Aug-2020 17:36*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*28-Aug-2020 16:24*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 28-Aug-2020		Analyst: ACN
1,4-Dioxane	1.0	U	1.0	1.0	1.0	ug/L	100	01-Sep-2020 22:45
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 22:45*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 22:45*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 22:45*

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
Sample ID: LH18/24-SP140_082520
Collection Date: 25-Aug-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20081150
Lab ID:HS20081150-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Aug-2020		Analyst: ALR
Aluminum	**0.0427**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	02-Sep-2020 16:33
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	02-Sep-2020 16:33
Arsenic	**0.00127**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Barium	**0.737**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:33
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:33
Calcium	**36.1**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	02-Sep-2020 16:33
Chromium	**0.00138**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Cobalt	**0.00855**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Iron	**0.998**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:33
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	02-Sep-2020 16:33
Magnesium	**26.5**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:33
Manganese	**0.559**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Nickel	**0.00928**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Potassium	**1.23**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:33
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	02-Sep-2020 16:33
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	02-Sep-2020 16:33
Sodium	**180**		**0.280**	**1.00**	**4.00**	**mg/L**	20	02-Sep-2020 21:44
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:33
Vanadium	**0.000758**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
Zinc	**0.0263**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:33
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 31-Aug-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	01-Sep-2020 13:15
OIL & GREASE (HEM) BY E1664A		**Method:E1664A**						Analyst: KAH
Oil and Grease	1.00	U	0.610	1.00	2.00	mg/L	1	31-Aug-2020 13:45
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**						Analyst: TH
Chemical Oxygen Demand	**15.0**		**5.00**	**15.0**	**15.0**	**mg/L**	1	31-Aug-2020 10:30
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**383**		**4.00**	**10.0**	**10.0**	**mg/L**	20	29-Aug-2020 17:03
Sulfate	**32.2**		**0.200**	**0.500**	**0.500**	**mg/L**	1	29-Aug-2020 16:45
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	03-Sep-2020 13:54

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20081150
Sample ID: Trip Blank Lab ID:HS20081150-02
Collection Date: 25-Aug-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 15:12
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	28-Aug-2020 15:12
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	28-Aug-2020 15:12
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 15:12
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	28-Aug-2020 15:12
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12

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

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20081150
Sample ID: Trip Blank Lab ID:HS20081150-02
Collection Date: 25-Aug-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 15:12
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 15:12
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:12
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:12
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:12
Surr: 1,2-Dichloroethane-d4	*87.3*			**0**	*81-118*	*%REC*	*1*	*28-Aug-2020 15:12*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*1*	*28-Aug-2020 15:12*
Surr: Dibromofluoromethane	*93.6*			**0**	*80-119*	*%REC*	*1*	*28-Aug-2020 15:12*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*28-Aug-2020 15:12*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Batch ID: 156817 **Start Date:** 28 Aug 2020 07:00 **End Date:** 28 Aug 2020 13:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20081150-01	1	1000 (mL)	1 (mL)	0.001

Batch ID: 156822 **Start Date:** 28 Aug 2020 10:00 **End Date:** 28 Aug 2020 14:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20081150-01		10 (mL)	10 (mL)	1

Batch ID: 156890 **Start Date:** 31 Aug 2020 08:30 **End Date:** 01 Sep 2020 10:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20081150-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 156817 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00		28 Aug 2020 08:16	01 Sep 2020 22:45	100
Batch ID: 156822 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00		28 Aug 2020 14:00	02 Sep 2020 21:44	20
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00		28 Aug 2020 14:00	02 Sep 2020 16:33	1
Batch ID: 156890 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00		31 Aug 2020 14:44	01 Sep 2020 13:15	1
Batch ID: R367697 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			28 Aug 2020 17:36	100
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			28 Aug 2020 16:24	5
HS20081150-02	Trip Blank	25 Aug 2020 00:00			28 Aug 2020 15:12	1
Batch ID: R367721 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			29 Aug 2020 17:03	20
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			29 Aug 2020 16:45	1
Batch ID: R367736 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			31 Aug 2020 10:30	1
Batch ID: R367779 (0)	**Test Name :** OIL & GREASE (HEM) BY E1664A				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			31 Aug 2020 13:45	1
Batch ID: R367952 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20081150-01	LH18/24-SP140_082520	25 Aug 2020 14:00			03 Sep 2020 13:54	1

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-156822** Units: **mg/L** Analysis Date: **02-Sep-2020 16:29**
Client ID: Run ID: **ICPMS06_367914** SeqNo: **5724337** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002604	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.03415	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.002601	0.00500								J

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-156822** Units: **mg/L** Analysis Date: **02-Sep-2020 16:31**
Client ID: Run ID: **ICPMS06_367914** SeqNo: **5724338** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0909	0.0100	0.1	0	90.9	84 - 117				
Antimony	0.05155	0.00500	0.05	0	103	85 - 117				
Arsenic	0.04911	0.00500	0.05	0	98.2	84 - 116				
Barium	0.05213	0.00500	0.05	0	104	86 - 114				
Beryllium	0.04843	0.00200	0.05	0	96.9	83 - 121				
Cadmium	0.05241	0.00200	0.05	0	105	87 - 115				
Calcium	4.654	0.500	5	0	93.1	87 - 118				
Chromium	0.04828	0.00500	0.05	0	96.6	85 - 116				
Cobalt	0.05046	0.00500	0.05	0	101	86 - 115				
Iron	4.866	0.200	5	0	97.3	87 - 118				
Lead	0.05154	0.00500	0.05	0	103	88 - 115				
Magnesium	4.642	0.200	5	0	92.8	83 - 118				
Manganese	0.0479	0.00500	0.05	0	95.8	87 - 115				
Nickel	0.04932	0.00500	0.05	0	98.6	85 - 117				
Potassium	4.594	0.200	5	0	91.9	87 - 115				
Selenium	0.05028	0.00500	0.05	0	101	80 - 120				
Silver	0.05097	0.00500	0.05	0	102	85 - 116				
Sodium	4.699	0.200	5	0	94.0	85 - 117				
Thallium	0.04798	0.00200	0.05	0	96.0	82 - 116				
Vanadium	0.04788	0.00500	0.05	0	95.8	86 - 115				
Zinc	0.05404	0.00500	0.05	0	108	83 - 119				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument:** ICPMS06 **Method:** METALS BY ICPMS BY SW6020A

MS Sample ID: **HS20081150-01MS** Units: **mg/L** Analysis Date: **02-Sep-2020 16:37**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724341** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1326	0.0100	0.1	0.04269	89.9	84 - 117				
Antimony	0.05118	0.00500	0.05	0.000246	102	85 - 117				
Arsenic	0.05063	0.00500	0.05	0.001267	98.7	84 - 116				
Barium	0.7344	0.00500	0.05	0.7368	-4.97	86 - 114				SO
Beryllium	0.04895	0.00200	0.05	0.000157	97.6	83 - 121				
Cadmium	0.05006	0.00200	0.05	0.000167	99.8	87 - 115				
Calcium	37.97	0.500	5	36.13	36.8	87 - 118				SO
Chromium	0.04821	0.00500	0.05	0.001381	93.6	85 - 116				
Cobalt	0.05623	0.00500	0.05	0.008549	95.4	86 - 115				
Iron	5.702	0.200	5	0.9982	94.1	87 - 118				
Lead	0.05138	0.00500	0.05	0.000165	102	88 - 115				
Magnesium	30.18	0.200	5	26.54	72.7	83 - 118				SO
Manganese	0.5724	0.00500	0.05	0.5592	26.3	87 - 115				SO
Nickel	0.05503	0.00500	0.05	0.009277	91.5	85 - 117				
Potassium	5.711	0.200	5	1.231	89.6	87 - 115				
Selenium	0.04941	0.00500	0.05	0.000639	97.5	80 - 120				
Silver	0.04796	0.00500	0.05	0.000005	95.9	85 - 116				
Sodium	169.1	0.200	5	174.6	-110	85 - 117				SO
Thallium	0.04728	0.00200	0.05	0.000058	94.4	82 - 116				
Vanadium	0.0492	0.00500	0.05	0.000758	96.9	86 - 115				
Zinc	0.0729	0.00500	0.05	0.02626	93.3	83 - 119				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument:** ICPMS06 **Method:** METALS BY ICPMS BY SW6020A

MSD Sample ID: **HS20081150-01MSD** Units: **mg/L** Analysis Date: **02-Sep-2020 16:39**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724342** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1391	0.0100	0.1	0.04269	96.4	84 - 117	0.1326	4.82	20	
Antimony	0.05072	0.00500	0.05	0.000246	101	85 - 117	0.05118	0.893	20	
Arsenic	0.05109	0.00500	0.05	0.001267	99.6	84 - 116	0.05063	0.914	20	
Barium	0.7476	0.00500	0.05	0.7368	21.6	86 - 114	0.7344	1.79	20	SO
Beryllium	0.04893	0.00200	0.05	0.000157	97.5	83 - 121	0.04895	0.0531	20	
Cadmium	0.05116	0.00200	0.05	0.000167	102	87 - 115	0.05006	2.17	20	
Calcium	38.67	0.500	5	36.13	50.8	87 - 118	37.97	1.84	20	SO
Chromium	0.05024	0.00500	0.05	0.001381	97.7	85 - 116	0.04821	4.12	20	
Cobalt	0.05682	0.00500	0.05	0.008549	96.5	86 - 115	0.05623	1.05	20	
Iron	5.728	0.200	5	0.9982	94.6	87 - 118	5.702	0.451	20	
Lead	0.05224	0.00500	0.05	0.000165	104	88 - 115	0.05138	1.66	20	
Magnesium	30.29	0.200	5	26.54	74.9	83 - 118	30.18	0.363	20	SO
Manganese	0.5896	0.00500	0.05	0.5592	60.7	87 - 115	0.5724	2.96	20	SO
Nickel	0.05581	0.00500	0.05	0.009277	93.1	85 - 117	0.05503	1.42	20	
Potassium	5.857	0.200	5	1.231	92.5	87 - 115	5.711	2.52	20	
Selenium	0.05027	0.00500	0.05	0.000639	99.3	80 - 120	0.04941	1.73	20	
Silver	0.04907	0.00500	0.05	0.000005	98.1	85 - 116	0.04796	2.29	20	
Sodium	173.9	0.200	5	174.6	-13.2	85 - 117	169.1	2.83	20	SO
Thallium	0.04889	0.00200	0.05	0.000058	97.7	82 - 116	0.04728	3.34	20	
Vanadium	0.05066	0.00500	0.05	0.000758	99.8	86 - 115	0.0492	2.93	20	
Zinc	0.07519	0.00500	0.05	0.02626	97.8	83 - 119	0.0729	3.08	20	

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20081150-01PDS** Units: **mg/L** Analysis Date: **02-Sep-2020 16:41**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724343** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1533	0.0100	0.1	0.04269	111	80 - 120				
Antimony	0.1097	0.00500	0.1	0.000246	109	80 - 120				
Arsenic	0.1126	0.00500	0.1	0.001267	111	80 - 120				
Barium	0.8464	0.00500	0.1	0.7368	110	80 - 120				O
Beryllium	0.107	0.00200	0.1	0.000157	107	80 - 120				
Cadmium	0.1129	0.00200	0.1	0.000167	113	80 - 120				
Calcium	46.63	0.500	10	36.13	105	80 - 120				
Chromium	0.1089	0.00500	0.1	0.001381	107	80 - 120				
Cobalt	0.1184	0.00500	0.1	0.008549	110	80 - 120				
Iron	11.73	0.200	10	0.9982	107	80 - 120				
Lead	0.1147	0.00500	0.1	0.000165	115	80 - 120				
Magnesium	37.7	0.200	10	26.54	112	80 - 120				
Manganese	0.6768	0.00500	0.1	0.5592	118	80 - 120				O
Nickel	0.1128	0.00500	0.1	0.009277	104	80 - 120				
Potassium	11.95	0.200	10	1.231	107	80 - 120				
Selenium	0.1114	0.00500	0.1	0.000639	111	80 - 120				
Silver	0.1093	0.00500	0.1	0.000005	109	80 - 120				
Thallium	0.1072	0.00200	0.1	0.000058	107	80 - 120				
Vanadium	0.1095	0.00500	0.1	0.000758	109	80 - 120				
Zinc	0.1367	0.00500	0.1	0.02626	110	80 - 120				

PDS Sample ID: **HS20081150-01PDS** Units: **mg/L** Analysis Date: **02-Sep-2020 21:48**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724378** PrepDate: **28-Aug-2020** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	373.3	4.00	200	179.7	96.8	80 - 120				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156822 (0) **Instrument:** ICPMS06 **Method:** METALS BY ICPMS BY SW6020A

SD Sample ID: **HS20081150-01SD** Units: **mg/L** Analysis Date: **02-Sep-2020 16:35**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724340** PrepDate: **28-Aug-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.04646	0.0500					0.04269	0	10	J
Antimony	0.00500	0.0250					0.000246	0	10	U
Arsenic	0.002057	0.0250					0.001267	0	10	J
Barium	0.7437	0.0250					0.7368	0.931	10	
Beryllium	0.00250	0.0100					0.000157	0	10	U
Cadmium	0.00250	0.0100					0.000167	0	10	U
Calcium	36.61	2.50					36.13	1.31	10	
Chromium	0.00500	0.0250					0.001381	0	10	U
Cobalt	0.009184	0.0250					0.008549	0	10	J
Iron	1.094	1.00					0.9982	0	10	
Lead	0.00500	0.0250					0.000165	0	10	U
Magnesium	27.29	1.00					26.54	2.83	10	
Manganese	0.5899	0.0250					0.5592	5.48	10	
Nickel	0.01029	0.0250					0.009277	0	10	J
Potassium	1.219	1.00					1.231	0.991	10	
Selenium	0.0125	0.0250					0.000639	0	10	U
Silver	0.00250	0.0250					0.000005	0	10	U
Thallium	0.00250	0.0100					0.000058	0	10	U
Vanadium	0.004585	0.0250					0.000758	0	10	J
Zinc	0.02956	0.0250					0.02626	12.6	10	R

SD Sample ID: **HS20081150-01SD** Units: **mg/L** Analysis Date: **02-Sep-2020 21:46**
Client ID: **LH18/24-SP140_082520** Run ID: **ICPMS06_367914** SeqNo: **5724377** PrepDate: **28-Aug-2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Sodium	174.2	20.0					179.7	3.06	10	

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156890 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-156890** Units: **mg/L** Analysis Date: **01-Sep-2020 13:12**
Client ID: Run ID: **HG03_367830** SeqNo: **5722646** PrepDate: **31-Aug-2020** 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-156890** Units: **mg/L** Analysis Date: **01-Sep-2020 13:13**
Client ID: Run ID: **HG03_367830** SeqNo: **5722647** PrepDate: **31-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00511	0.000200	0.005	0	102	82 - 119				

MS Sample ID: **HS20081150-01MS** Units: **mg/L** Analysis Date: **01-Sep-2020 13:17**
Client ID: **LH18/24-SP140_082520** Run ID: **HG03_367830** SeqNo: **5722649** PrepDate: **31-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00504	0.000200	0.005	0.00001700	100	82 - 119				

MSD Sample ID: **HS20081150-01MSD** Units: **mg/L** Analysis Date: **01-Sep-2020 13:19**
Client ID: **LH18/24-SP140_082520** Run ID: **HG03_367830** SeqNo: **5722650** PrepDate: **31-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00501	0.000200	0.005	0.00001700	99.9	82 - 119	0.005040	0.597	20	

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: 156817 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-156817** Units: **ug/L** Analysis Date: **01-Sep-2020 21:29**
Client ID: Run ID: **SV-6_367851** SeqNo: **5723244** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0622*	*0*	*0.08*	*0*	*77.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07969*	*0*	*0.08*	*0*	*99.6*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06116*	*0*	*0.08*	*0*	*76.5*	*40 - 140*				

LCS Sample ID: **LCS-156817** Units: **ug/L** Analysis Date: **01-Sep-2020 21:48**
Client ID: Run ID: **SV-6_367851** SeqNo: **5723245** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.0555	0.010	0.08	0	69.4	40 - 140				
Surr: 2-Fluorobiphenyl	*0.06507*	*0*	*0.08*	*0*	*81.3*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.08187*	*0*	*0.08*	*0*	*102*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.08058*	*0*	*0.08*	*0*	*101*	*40 - 140*				

LCSD Sample ID: **LCSD-156817** Units: **ug/L** Analysis Date: **01-Sep-2020 22:07**
Client ID: Run ID: **SV-6_367851** SeqNo: **5723246** PrepDate: **28-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.046	0.010	0.08	0	57.5	40 - 140	0.0555	18.7	20	
Surr: 2-Fluorobiphenyl	*0.07101*	*0*	*0.08*	*0*	*88.8*	*40 - 140*	*0.06507*	*8.74*	*20*	
Surr: 4-Terphenyl-d14	*0.07265*	*0*	*0.08*	*0*	*90.8*	*40 - 140*	*0.08187*	*11.9*	*20*	
Surr: Nitrobenzene-d5	*0.0746*	*0*	*0.08*	*0*	*93.3*	*40 - 140*	*0.08058*	*7.71*	*20*	

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200828** Units: **UG/L** Analysis Date: **28-Aug-2020 14:48**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720247** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200828** Units: **UG/L** Analysis Date: **28-Aug-2020 14:48**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720247** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.77*	*1.0*	*50*	*0*	*87.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.6*	*1.0*	*50*	*0*	*97.2*	*85 - 114*				
Surr: Dibromofluoromethane	*46.5*	*1.0*	*50*	*0*	*93.0*	*80 - 119*				
Surr: Toluene-d8	*52.91*	*1.0*	*50*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200828** Units: **UG/L** Analysis Date: **28-Aug-2020 14:00**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720246** 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	19.16	1.0	20	0	95.8	78 - 124				
1,1,1-Trichloroethane	19.51	1.0	20	0	97.5	74 - 131				
1,1,2,2-Tetrachloroethane	21.61	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	20.52	1.0	20	0	103	80 - 119				
1,1-Dichloroethane	21.52	1.0	20	0	108	77 - 125				
1,1-Dichloroethene	20.11	1.0	20	0	101	71 - 131				
1,1-Dichloropropene	19.17	1.0	20	0	95.8	78 - 125				
1,2,3-Trichlorobenzene	28.78	1.0	20	0	144	69 - 129				S
1,2,3-Trichloropropane	19.64	1.0	20	0	98.2	73 - 122				
1,2,4-Trichlorobenzene	28.02	1.0	20	0	140	69 - 130				S
1,2,4-Trimethylbenzene	19.66	1.0	20	0	98.3	76 - 124				
1,2-Dibromo-3-chloropropane	22.39	1.0	20	0	112	62 - 128				
1,2-Dibromoethane	20.7	1.0	20	0	103	77 - 121				
1,2-Dichlorobenzene	19.78	1.0	20	0	98.9	80 - 119				
1,2-Dichloroethane	19.4	1.0	20	0	97.0	73 - 128				
1,2-Dichloropropane	21.33	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	19.24	1.0	20	0	96.2	75 - 124				
1,3-Dichlorobenzene	19.53	1.0	20	0	97.6	80 - 119				
1,3-Dichloropropane	20.64	1.0	20	0	103	80 - 119				
1,4-Dichlorobenzene	19.54	1.0	20	0	97.7	79 - 118				
2,2-Dichloropropane	21.1	1.0	20	0	105	60 - 139				
2-Butanone	44.31	2.0	40	0	111	56 - 143				
2-Chlorotoluene	19.7	1.0	20	0	98.5	79 - 122				
2-Hexanone	40.74	2.0	40	0	102	57 - 139				
4-Chlorotoluene	19.5	1.0	20	0	97.5	78 - 122				
4-Isopropyltoluene	18.68	1.0	20	0	93.4	77 - 127				
4-Methyl-2-pentanone	41.19	2.0	40	0	103	67 - 130				
Acetone	40.85	2.0	40	0	102	39 - 160				
Benzene	20.84	1.0	20	0	104	79 - 120				
Bromobenzene	19.25	1.0	20	0	96.2	80 - 120				
Bromochloromethane	20.3	1.0	20	0	102	78 - 123				
Bromodichloromethane	19.31	1.0	20	0	96.6	79 - 125				
Bromoform	19.19	1.0	20	0	96.0	66 - 130				
Bromomethane	22.18	1.0	20	0	111	53 - 141				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200828** Units: **UG/L** Analysis Date: **28-Aug-2020 14:00**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720246** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.11	2.0	40	0	103	64 - 133				
Carbon tetrachloride	17.65	1.0	20	0	88.2	72 - 136				
Chlorobenzene	20.01	1.0	20	0	100	82 - 118				
Chloroethane	19.23	1.0	20	0	96.2	60 - 138				
Chloroform	20.5	1.0	20	0	102	79 - 124				
Chloromethane	19.13	1.0	20	0	95.6	50 - 139				
cis-1,2-Dichloroethene	21.24	1.0	20	0	106	78 - 123				
cis-1,3-Dichloropropene	20.13	1.0	20	0	101	75 - 124				
Dibromochloromethane	19.44	1.0	20	0	97.2	74 - 126				
Dibromomethane	20.11	1.0	20	0	101	79 - 123				
Dichlorodifluoromethane	18.52	1.0	20	0	92.6	32 - 152				
Ethylbenzene	19.81	1.0	20	0	99.1	79 - 121				
Hexachlorobutadiene	25.97	1.0	20	0	130	66 - 134				
Isopropylbenzene	19.43	1.0	20	0	97.1	72 - 131				
m,p-Xylene	39.72	2.0	40	0	99.3	80 - 121				
Methylene chloride	20.3	2.0	20	0	102	74 - 124				
Naphthalene	27.65	1.0	20	0	138	61 - 128				S
n-Butylbenzene	18.9	1.0	20	0	94.5	75 - 128				
n-Propylbenzene	18.99	1.0	20	0	95.0	76 - 126				
o-Xylene	20.07	1.0	20	0	100	78 - 122				
sec-Butylbenzene	18.26	1.0	20	0	91.3	77 - 126				
Styrene	20	1.0	20	0	100	78 - 123				
tert-Butylbenzene	18.56	1.0	20	0	92.8	78 - 124				
Tetrachloroethene	19.64	1.0	20	0	98.2	74 - 129				
Toluene	20.48	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	21.34	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	19.48	1.0	20	0	97.4	73 - 127				
Trichloroethene	20.13	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	18.39	1.0	20	0	91.9	65 - 141				
Vinyl chloride	19.45	1.0	20	0	97.3	58 - 137				
Surr: 1,2-Dichloroethane-d4	*47.92*	*1.0*	*50*	*0*	*95.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.68*	*1.0*	*50*	*0*	*95.4*	*85 - 114*				
Surr: Dibromofluoromethane	*48.98*	*1.0*	*50*	*0*	*98.0*	*80 - 119*				
Surr: Toluene-d8	*49.6*	*1.0*	*50*	*0*	*99.2*	*89 - 112*				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20081151-01MS** Units: **UG/L** Analysis Date: **28-Aug-2020 16:48**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720252** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	24.42	1.0	20	0	122	78 - 124				
1,1,1-Trichloroethane	24.57	1.0	20	0	123	74 - 131				
1,1,2,2-Tetrachloroethane	27.31	1.0	20	0	137	71 - 121				S
1,1,2-Trichloroethane	24.95	1.0	20	0	125	80 - 119				S
1,1-Dichloroethane	25.69	1.0	20	0	128	77 - 125				S
1,1-Dichloroethene	26.02	1.0	20	0	130	71 - 131				
1,1-Dichloropropene	25.82	1.0	20	0	129	78 - 125				S
1,2,3-Trichlorobenzene	30.61	1.0	20	0	153	69 - 129				S
1,2,3-Trichloropropane	24.77	1.0	20	0	124	73 - 122				S
1,2,4-Trichlorobenzene	33.18	1.0	20	0	166	69 - 130				S
1,2,4-Trimethylbenzene	26.25	1.0	20	0	131	76 - 124				S
1,2-Dibromo-3-chloropropane	25.8	1.0	20	0	129	62 - 128				S
1,2-Dibromoethane	25.16	1.0	20	0	126	77 - 121				S
1,2-Dichlorobenzene	24.9	1.0	20	0	124	80 - 119				S
1,2-Dichloroethane	24.05	1.0	20	0.5175	118	73 - 128				
1,2-Dichloropropane	26.4	1.0	20	0	132	78 - 122				S
1,3,5-Trimethylbenzene	26.48	1.0	20	0	132	75 - 124				S
1,3-Dichlorobenzene	25.1	1.0	20	0	126	80 - 119				S
1,3-Dichloropropane	25.68	1.0	20	0	128	80 - 119				S
1,4-Dichlorobenzene	25.17	1.0	20	0	126	79 - 118				S
2,2-Dichloropropane	24.62	1.0	20	0	123	60 - 139				
2-Butanone	52.57	2.0	40	0	131	56 - 143				
2-Chlorotoluene	26.22	1.0	20	0	131	79 - 122				S
2-Hexanone	48.58	2.0	40	0	121	57 - 139				
4-Chlorotoluene	25.5	1.0	20	0	128	78 - 122				S
4-Isopropyltoluene	26.87	1.0	20	0	134	77 - 127				S
4-Methyl-2-pentanone	48.74	2.0	40	0	122	67 - 130				
Acetone	41.61	2.0	40	0	104	39 - 160				
Benzene	26.04	1.0	20	0	130	79 - 120				S
Bromobenzene	24.57	1.0	20	0	123	80 - 120				S
Bromochloromethane	23.21	1.0	20	0	116	78 - 123				
Bromodichloromethane	24.15	1.0	20	0	121	79 - 125				
Bromoform	23.52	1.0	20	0	118	66 - 130				
Bromomethane	24.59	1.0	20	0	123	53 - 141				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20081151-01MS** Units: **UG/L** Analysis Date: **28-Aug-2020 16:48**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720252** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	49.28	2.0	40	0	123	64 - 133				
Carbon tetrachloride	24.65	1.0	20	0	123	72 - 136				
Chlorobenzene	25.56	1.0	20	0	128	82 - 118				S
Chloroethane	22.89	1.0	20	0	114	60 - 138				
Chloroform	24.29	1.0	20	0	121	79 - 124				
Chloromethane	20.52	1.0	20	0	103	50 - 139				
cis-1,2-Dichloroethene	46.87	1.0	20	20.67	131	78 - 123				S
cis-1,3-Dichloropropene	24.92	1.0	20	0	125	75 - 124				S
Dibromochloromethane	24.24	1.0	20	0	121	74 - 126				
Dibromomethane	24.21	1.0	20	0	121	79 - 123				
Dichlorodifluoromethane	13.77	1.0	20	0	68.9	32 - 152				
Ethylbenzene	26.56	1.0	20	0	133	79 - 121				S
Hexachlorobutadiene	33.05	1.0	20	0	165	66 - 134				S
Isopropylbenzene	27.09	1.0	20	0	135	72 - 131				S
m,p-Xylene	52.51	2.0	40	0	131	80 - 121				S
Methylene chloride	23.86	2.0	20	0	119	74 - 124				
Naphthalene	30.96	1.0	20	0	155	61 - 128				S
n-Butylbenzene	27.33	1.0	20	0	137	75 - 128				S
n-Propylbenzene	26.92	1.0	20	0	135	76 - 126				S
o-Xylene	25.84	1.0	20	0	129	78 - 122				S
sec-Butylbenzene	27.28	1.0	20	0	136	77 - 126				S
Styrene	25.24	1.0	20	0	126	78 - 123				S
tert-Butylbenzene	26.86	1.0	20	0	134	78 - 124				S
Tetrachloroethene	27.59	1.0	20	0	138	74 - 129				S
Toluene	26.5	1.0	20	0	133	80 - 121				S
trans-1,2-Dichloroethene	25.99	1.0	20	0	130	75 - 124				S
trans-1,3-Dichloropropene	23.51	1.0	20	0	118	73 - 127				
Trichloroethene	32.34	1.0	20	3.419	145	79 - 123				S
Trichlorofluoromethane	23.68	1.0	20	0	118	65 - 141				
Vinyl chloride	23.05	1.0	20	0	115	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44*	*1.0*	*50*	*0*	*88.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.95*	*1.0*	*50*	*0*	*97.9*	*85 - 114*				
Surr: Dibromofluoromethane	*46.92*	*1.0*	*50*	*0*	*93.8*	*80 - 119*				
Surr: Toluene-d8	*51.78*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20081151-01MSD** Units: **UG/L** Analysis Date: **28-Aug-2020 17:12**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720253** 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	23.67	1.0	20	0	118	78 - 124	24.42	3.09	20	
1,1,1-Trichloroethane	23.94	1.0	20	0	120	74 - 131	24.57	2.6	20	
1,1,2,2-Tetrachloroethane	27.21	1.0	20	0	136	71 - 121	27.31	0.377	20	S
1,1,2-Trichloroethane	25.13	1.0	20	0	126	80 - 119	24.95	0.718	20	S
1,1-Dichloroethane	24.92	1.0	20	0	125	77 - 125	25.69	3.02	20	
1,1-Dichloroethene	24.17	1.0	20	0	121	71 - 131	26.02	7.4	20	
1,1-Dichloropropene	24.88	1.0	20	0	124	78 - 125	25.82	3.67	20	
1,2,3-Trichlorobenzene	27.87	1.0	20	0	139	69 - 129	30.61	9.39	20	S
1,2,3-Trichloropropane	24.86	1.0	20	0	124	73 - 122	24.77	0.34	20	S
1,2,4-Trichlorobenzene	28.26	1.0	20	0	141	69 - 130	33.18	16	20	S
1,2,4-Trimethylbenzene	26.18	1.0	20	0	131	76 - 124	26.25	0.283	20	S
1,2-Dibromo-3-chloropropane	25.69	1.0	20	0	128	62 - 128	25.8	0.409	20	S
1,2-Dibromoethane	25.37	1.0	20	0	127	77 - 121	25.16	0.817	20	S
1,2-Dichlorobenzene	25.04	1.0	20	0	125	80 - 119	24.9	0.571	20	S
1,2-Dichloroethane	23.8	1.0	20	0.5175	116	73 - 128	24.05	1.02	20	
1,2-Dichloropropane	25.64	1.0	20	0	128	78 - 122	26.4	2.94	20	S
1,3,5-Trimethylbenzene	26.68	1.0	20	0	133	75 - 124	26.48	0.768	20	S
1,3-Dichlorobenzene	25.67	1.0	20	0	128	80 - 119	25.1	2.25	20	S
1,3-Dichloropropane	25.39	1.0	20	0	127	80 - 119	25.68	1.11	20	S
1,4-Dichlorobenzene	25.64	1.0	20	0	128	79 - 118	25.17	1.85	20	S
2,2-Dichloropropane	24.22	1.0	20	0	121	60 - 139	24.62	1.64	20	
2-Butanone	49.45	2.0	40	0	124	56 - 143	52.57	6.1	20	
2-Chlorotoluene	26.03	1.0	20	0	130	79 - 122	26.22	0.74	20	S
2-Hexanone	48.87	2.0	40	0	122	57 - 139	48.58	0.6	20	
4-Chlorotoluene	25.53	1.0	20	0	128	78 - 122	25.5	0.113	20	S
4-Isopropyltoluene	27.18	1.0	20	0	136	77 - 127	26.87	1.15	20	S
4-Methyl-2-pentanone	49.08	2.0	40	0	123	67 - 130	48.74	0.684	20	
Acetone	42.48	2.0	40	0	106	39 - 160	41.61	2.08	20	
Benzene	25.19	1.0	20	0	126	79 - 120	26.04	3.31	20	S
Bromobenzene	24.88	1.0	20	0	124	80 - 120	24.57	1.24	20	S
Bromochloromethane	23.31	1.0	20	0	117	78 - 123	23.21	0.449	20	
Bromodichloromethane	23.25	1.0	20	0	116	79 - 125	24.15	3.8	20	
Bromoform	23.55	1.0	20	0	118	66 - 130	23.52	0.104	20	
Bromomethane	23.15	1.0	20	0	116	53 - 141	24.59	6.04	20	

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367697 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20081151-01MSD** Units: **UG/L** Analysis Date: **28-Aug-2020 17:12**
Client ID: Run ID: **VOA6_367697** SeqNo: **5720253** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	47.19	2.0	40	0	118	64 - 133	49.28	4.34	20	
Carbon tetrachloride	23.59	1.0	20	0	118	72 - 136	24.65	4.38	20	
Chlorobenzene	24.78	1.0	20	0	124	82 - 118	25.56	3.09	20	S
Chloroethane	21.49	1.0	20	0	107	60 - 138	22.89	6.31	20	
Chloroform	23.68	1.0	20	0	118	79 - 124	24.29	2.52	20	
Chloromethane	19.48	1.0	20	0	97.4	50 - 139	20.52	5.18	20	
cis-1,2-Dichloroethene	44.95	1.0	20	20.67	121	78 - 123	46.87	4.2	20	
cis-1,3-Dichloropropene	24.26	1.0	20	0	121	75 - 124	24.92	2.7	20	
Dibromochloromethane	23.89	1.0	20	0	119	74 - 126	24.24	1.45	20	
Dibromomethane	23.74	1.0	20	0	119	79 - 123	24.21	1.96	20	
Dichlorodifluoromethane	13.52	1.0	20	0	67.6	32 - 152	13.77	1.83	20	
Ethylbenzene	25.47	1.0	20	0	127	79 - 121	26.56	4.2	20	S
Hexachlorobutadiene	25.04	1.0	20	0	125	66 - 134	33.05	27.6	20	R
Isopropylbenzene	26.32	1.0	20	0	132	72 - 131	27.09	2.88	20	S
m,p-Xylene	51.23	2.0	40	0	128	80 - 121	52.51	2.46	20	S
Methylene chloride	23.24	2.0	20	0	116	74 - 124	23.86	2.64	20	
Naphthalene	29.13	1.0	20	0	146	61 - 128	30.96	6.09	20	S
n-Butylbenzene	27.47	1.0	20	0	137	75 - 128	27.33	0.507	20	S
n-Propylbenzene	26.86	1.0	20	0	134	76 - 126	26.92	0.213	20	S
o-Xylene	25.51	1.0	20	0	128	78 - 122	25.84	1.29	20	S
sec-Butylbenzene	27.07	1.0	20	0	135	77 - 126	27.28	0.778	20	S
Styrene	24.83	1.0	20	0	124	78 - 123	25.24	1.62	20	S
tert-Butylbenzene	27.09	1.0	20	0	135	78 - 124	26.86	0.854	20	S
Tetrachloroethene	26.29	1.0	20	0	131	74 - 129	27.59	4.81	20	S
Toluene	25.96	1.0	20	0	130	80 - 121	26.5	2.08	20	S
trans-1,2-Dichloroethene	24.7	1.0	20	0	124	75 - 124	25.99	5.09	20	
trans-1,3-Dichloropropene	23.14	1.0	20	0	116	73 - 127	23.51	1.58	20	
Trichloroethene	29.59	1.0	20	3.419	131	79 - 123	32.34	8.89	20	S
Trichlorofluoromethane	22.64	1.0	20	0	113	65 - 141	23.68	4.48	20	
Vinyl chloride	22.1	1.0	20	0	110	58 - 137	23.05	4.21	20	
Surr: 1,2-Dichloroethane-d4	*44.2*	*1.0*	*50*	*0*	*88.4*	*81 - 118*	*44*	*0.447*	*20*	
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*85 - 114*	*48.95*	*1.32*	*20*	
Surr: Dibromofluoromethane	*47.02*	*1.0*	*50*	*0*	*94.0*	*80 - 119*	*46.92*	*0.194*	*20*	
Surr: Toluene-d8	*51.81*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.78*	*0.062*	*20*	

ALS Houston, US Date: 03-Sep-20

Client:	Bhate Environmental Associates, Inc.
Project:	Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder:	HS20081150

QC BATCH REPORT

Batch ID:	**R367697 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20081150-01 HS20081150-02

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367721 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-082820** Units: **mg/L** Analysis Date: **28-Aug-2020 12:04**
Client ID: Run ID: **ICS-Integrion_367721** SeqNo: **5720704** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-082820** Units: **mg/L** Analysis Date: **28-Aug-2020 12:22**
Client ID: Run ID: **ICS-Integrion_367721** SeqNo: **5720705** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.36	0.500	20	0	96.8	80 - 120				
Sulfate	19.1	0.500	20	0	95.5	80 - 120				

MS Sample ID: **HS20080995-04MS** Units: **mg/L** Analysis Date: **29-Aug-2020 08:02**
Client ID: Run ID: **ICS-Integrion_367721** SeqNo: **5720712** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	180.6	5.00	100	85.96	94.6	80 - 120				
Sulfate	201.8	5.00	100	115.2	86.6	80 - 120				

MSD Sample ID: **HS20080995-04MSD** Units: **mg/L** Analysis Date: **29-Aug-2020 08:20**
Client ID: Run ID: **ICS-Integrion_367721** SeqNo: **5720713** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	180.4	5.00	100	85.96	94.4	80 - 120	180.6	0.127	20	
Sulfate	202.8	5.00	100	115.2	87.7	80 - 120	201.8	0.527	20	

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367736 (0) **Instrument: WetChem_HS** **Method: CHEMICAL OXYGEN DEMAND BY E410.4**

MBLK Sample ID: **MBLK-R367736** Units: **mg/L** Analysis Date: **31-Aug-2020 10:30**
Client ID: Run ID: **WetChem_HS_367736** SeqNo: **5720957** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	15.0	15.0								U

LCS Sample ID: **LCS-R367736** Units: **mg/L** Analysis Date: **31-Aug-2020 10:30**
Client ID: Run ID: **WetChem_HS_367736** SeqNo: **5720956** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	102	15.0	100	0	102	85 - 115				

MS Sample ID: **HS20081253-01MS** Units: **mg/L** Analysis Date: **31-Aug-2020 10:30**
Client ID: Run ID: **WetChem_HS_367736** SeqNo: **5720959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	85	15.0	50	36	98.0	80 - 120				

MSD Sample ID: **HS20081253-01MSD** Units: **mg/L** Analysis Date: **31-Aug-2020 10:30**
Client ID: Run ID: **WetChem_HS_367736** SeqNo: **5720958** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	87	15.0	50	36	102	80 - 120	85	2.33	20	

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

QC BATCH REPORT

Batch ID: R367779 (0) **Instrument: Balance1** **Method: OIL & GREASE (HEM) BY E1664A**

MBLK Sample ID: **WBLKW-083120** Units: **mg/L** Analysis Date: **31-Aug-2020 13:45**
Client ID: Run ID: **Balance1_367779** SeqNo: **5721622** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	1.00	2.00								U

LCS Sample ID: **WLCSW-083120** Units: **mg/L** Analysis Date: **31-Aug-2020 13:45**
Client ID: Run ID: **Balance1_367779** SeqNo: **5721624** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	36	2.00	40	0	90.0	78 - 114				

LCSD Sample ID: **WLCSDW-083120** Units: **mg/L** Analysis Date: **31-Aug-2020 13:45**
Client ID: Run ID: **Balance1_367779** SeqNo: **5721623** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	38	2.00	40	0	95.0	78 - 114	36	5.41	18	

MS Sample ID: **HS20081143-02MS** Units: **mg/L** Analysis Date: **31-Aug-2020 13:45**
Client ID: Run ID: **Balance1_367779** SeqNo: **5721605** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.15	2.00	40	0	97.9	78 - 114				

The following samples were analyzed in this batch: HS20081150-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: **HS20081150**

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	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V010	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20081150

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Sub
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-01	LH18/24-SP140_082520	Login	8/26/2020 1:24:40 PM	JRM	Disposed
HS20081150-02	Trip Blank	Login	8/26/2020 1:24:40 PM	JRM	Disposed

ALS Houston, US Date: 03-Sep-20

Sample Receipt Checklist

Work Order ID: HS20081150 **Date/Time Received:** **26-Aug-2020 10:00**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By:	/S/ Jared R. Makan	26-Aug-2020 13:29	**Reviewed by:**	/S/ RJ Modashia	27-Aug-2020 09:35
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8°C/0.8°C UC/C	IR31
Cooler(s)/Kit(s):	45313	
Date/Time sample(s) sent to storage:	08/26/2020 13:30	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, Tx. 77099 ATTN: RJ Modashia

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT QUARTERLY INFLUENT SAMPLES

Prepared By:
Scott Beesinger

P. O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: ROD Volatiles	Total Metals	Oil & Grease	Chemical Oxygen Demand	Chloride & Sulfate	1, 4 - DIOXANE	Perchlorate				Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_082520	Water	08/25/20 / 14:00		4	3		1								HCL	
LH18/24-SP140_082520	Water	08/25/20 / 14:00		1		1									HNO3	
LH18/24-SP140_082520	Water	08/25/20 / 14:00		2					1	1					NONE	
LH18/24-SP140_082520	Water	08/25/20 / 14:00		1				1							H2SO4	
LH18/24-SP140_082520	Water	08/25/20 / 14:00		1							1				NONE	
Trip Blank	Water	08/25/20		2	2										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	08/25/20	14:30		8/26/2020	10:35						

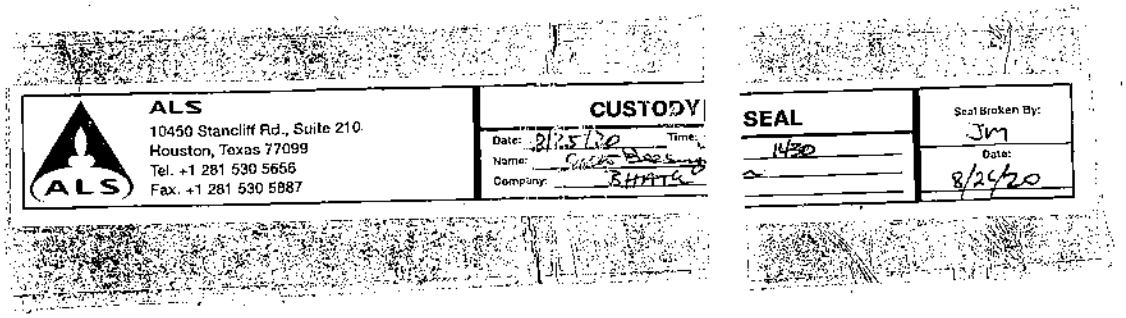
For Lab Use Only

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

Remarks:
45313 0.2° 431 elf 8-26

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

HS20081150
Bhate Environmental Associates, Inc.
Groundwater Treatment Plant Quarterly Influent Sam

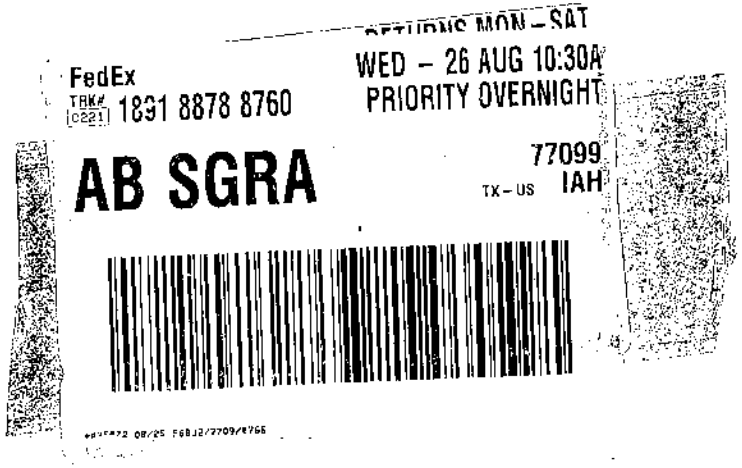


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY
Date: 8/25/20 Time:
Name: Sucio Baeza
Company: BHATE

SEAL
1430

Seal Broken By:
JM
Date:
8/26/20



FedEx
TRK# 1891 8878 8760
[0221]

WED – 26 AUG 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX – US IAH

September 03, 2020 Service Request No:E2000797

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

Laboratory Results for: HS20081150

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 26, 2020
For your reference, these analyses have been assigned our service request number **E2000797.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000797
Project:	HS20081150	**Date Received:**	08/26/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/26/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000392: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DOD Certification is held for the method/matrix/analytes provided in this report.

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

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

Client: ALS Environmental - US
Project: HS20081150 **Service Request:**E2000797

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000797-001	LH18/24-SP140_082520	8/25/2020	1400

Service Request Summary

Folder #: **E2000797**
Client Name: ALS Environmental - US
Project Name: HS20081150
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/26/20
Internal Due Date: 9/9/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20081150
EDD: No EDD Specified

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

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000797-001	LH18/24-SP140_082520	Water	08/25/20 1400	II

Service Request Summary

Folder #: **E2000797**
Client Name: ALS Environmental - US
Project Name: HS20081150
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/26/20
Internal Due Date: 9/9/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20081150
EDD: No EDD Specified

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

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/9,level IV 9/17

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

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

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New York Department of Health	11707	3/31/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

ALS Environmental - Houston HRMS
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www.alsglobal.com

E2000797 5
ALS Laboratory Group
HS20081150

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Colorado** **COC ID:** **14568**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20081150
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20081150-01**	**LH18/24-SP140_082520**	**Water**	**25 Aug 2020 14:00**
	SUB_Perch-6850			03 Sep 2020

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 8/26/20 14:30

Received By: [signature] Date/Time: 8/26/20 14:30

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1041

Date/Time Received: 8/26/20 Initials: CH

Date/Time Logged in: 8/26/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ⊘ ALS Courier ○ Client
2. Samples received in: ⊘ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ⊘ No
   Were they intact? ○ Yes ○ No ⊘ N/A
   Were they signed and dated? ○ Yes ○ No ⊘ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ⊘ Baggies ○ Bubble Wrap ○ Gel Packs ⊘ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
–		8/26/20	1430	CH	3.0	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ⊘ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ⊘ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ⊘ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ⊘ Yes ○ No
10. Did sample labels and tags agree with custody documents? ⊘ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000797 5

ALS Laboratory Group HS20081150

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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 364887
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/2/20 12:56

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000760-001	LH18/24-SP650_081820-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000796-001	LH18/24-SP650_082520-AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2000797-001	LH18/24-SP140_082520	.01	6850/ClO4 DOD			Water	10mL	
4	E2000798-001	LH18/24-SP650_082520-BIX	.01	6850/ClO4 DOD			Water	10mL	
5	EQ2000392-01	MB		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000392-02	LCS		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000392-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

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

E2000760-001 100.00µL E2000796-001 100.00µL E2000797-001 100.00µL E2000798-001 100.00µL EQ2000392-01 100.00µL EQ2000392-02 100.00µL
EQ2000392-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

E2000796-001 1.00µL E2000797-001 1.00µL E2000798-001 1.00µL EQ2000392-01 1.00µL EQ2000392-02 1.00µL EQ2000392-03 1.00µL

Preparation Steps

Step: Preparation
Started: 9/2/20 12:56
Finished: 9/2/20 16:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Collected:**	8/25/20 1400
Sample Matrix:	Water	**Date Received:**	8/26/20
		Date Extracted:	9/2/20
		Date Analyzed:	9/3/20 09:55
Sample Name:	LH18/24-SP140_082520	**Units:**	µg/L
Lab Code:	E2000797-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200903\20200903_007	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	500

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**11500**		50.0	25.0	12.5	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 16:18
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000392-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_007	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150
Sample Matrix: Water

Service Request: E2000797
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 364887

	Lab Control Sample EQ2000392-02			Duplicate Lab Control Sample EQ2000392-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.116	0.100	116	84 - 119	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:03
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_019	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.118**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 18:11
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000392-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	693736
Prep Method:	Method	**Extraction Lot:**	364887
Data File Name:	I:\LCMS01\DATA\20200902\20200902_020	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.116**		0.100	0.0500	0.0250	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
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20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20200826_024	Perchlorate6850b.lcm	1x	☒	3100806-05	8/26/2020 11:55
2	PERCHLORATE2		20200826_025	Perchlorate6850b.lcm	1x	☒	3100806-06	8/26/2020 12:03
3	PERCHLORATE3		20200826_026	Perchlorate6850b.lcm	1x	☒	3100806-07	8/26/2020 12:11
4	PERCHLORATE4		20200826_027	Perchlorate6850b.lcm	1x	☒	3100807-01	8/26/2020 12:19
5	PERCHLORATE5		20200826_028	Perchlorate6850b.lcm	1x	☒	3100807-02	8/26/2020 12:27
6	PERCHLORATE6		20200826_029	Perchlorate6850b.lcm	1x	☒	3100807-03	8/26/2020 12:35
7	PERCHLORATE7		20200826_030	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 12:42
8	PERCHLORATE8		20200826_031	Perchlorate6850b.lcm	1x	☒	3100807-05	8/26/2020 12:50
9	PERCHLORATE9		20200826_032	Perchlorate6850b.lcm	1x	☒	3100807-06	8/26/2020 12:58
10	PERCHLORATE10		20200826_033	Perchlorate6850b.lcm	1x	☒	3100807-07	8/26/2020 13:06
11	IB		20200826_034	Perchlorate6850b.lcm	1x	☒		8/26/2020 13:14
12	PERCHLORATEICV		20200826_035	Perchlorate6850b.lcm	1x	☒	3100807-08	8/26/2020 14:26
13	IB		20200826_036	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:34
14	LODV		20200826_037	Perchlorate6850b.lcm	1x	☒		8/26/2020 14:42
15	PERCHLORATE7		20200826_038	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 14:50
16	EQ2000359-01		20200826_039	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:12
17	EQ2000359-02		20200826_040	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:19
18	EQ2000359-03		20200826_041	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:27
19	EQ2000359-02		20200826_042	Perchlorate6850b.lcm	1x	☒		8/26/2020 15:35
20	EQ2000359-04X10		20200826_043	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:43
21	EQ2000359-05X10		20200826_044	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:51
22	EQ2000359-06X10		20200826_045	Perchlorate6850b.lcm	10x	☒		8/26/2020 15:59
23	EQ2000359-07X10		20200826_046	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:07
24	E2000716-001X10		20200826_047	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:15
25	E2000739-001X10		20200826_048	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:23
26	PERCHLORATE7		20200826_049	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 16:30
27	E2000740-001X200		20200826_050	Perchlorate6850b.lcm	200x	☒		8/26/2020 16:38
28	E2000741-001X10		20200826_051	Perchlorate6850b.lcm	10x	☒		8/26/2020 16:46
29	E2000742-001X2		20200826_052	Perchlorate6850b.lcm	2x	☒		8/26/2020 16:54
30	E2000742-002X2		20200826_053	Perchlorate6850b.lcm	2x	☒		8/26/2020 17:02
31	E2000742-003X10		20200826_054	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:10
32	E2000742-004X10		20200826_055	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:18
33	E2000742-006X10		20200826_056	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:26
34	PERCHLORATE7		20200826_057	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 17:33
35	E2000742-009X10		20200826_058	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:41
36	E2000742-010X10		20200826_059	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:49
37	E2000742-011X10		20200826_060	Perchlorate6850b.lcm	10x	☒		8/26/2020 17:57
38	E2000742-012X10		20200826_061	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:05
39	E2000742-013X10		20200826_062	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:13
40	E2000742-014X10		20200826_063	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:21
41	E2000759-001X10		20200826_064	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:29
42	E2000759-002X10		20200826_065	Perchlorate6850b.lcm	10x	☒		8/26/2020 18:36
43	PERCHLORATE7		20200826_066	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 18:44
44	EQ2000369-01		20200826_067	Perchlorate6850b.lcm	1x	☒		8/26/2020 18:52
45	EQ2000369-02		20200826_068	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:00
46	EQ2000369-03		20200826_069	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:08
47	EQ2000369-04		20200826_070	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:16
48	EQ2000369-05		20200826_071	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:24
49	E2000764-001		20200826_072	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:32
50	E2000764-002		20200826_073	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:40
51	E2000764-003		20200826_074	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:47
52	E2000764-004		20200826_075	Perchlorate6850b.lcm	1x	☒		8/26/2020 19:55
53	E2000764-005		20200826_076	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:03
54	PERCHLORATE7		20200826_077	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 20:11
55	E2000764-006		20200826_078	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:19
56	E2000764-007		20200826_079	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:27
57	E2000764-008		20200826_080	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:35
58	E2000764-009		20200826_081	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:43
59	E2000764-010		20200826_082	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:51
60	E2000764-011		20200826_083	Perchlorate6850b.lcm	1x	☒		8/26/2020 20:58
61	E2000764-012		20200826_084	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:06

20200826

ALS Environmental

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
62	E2000764-013		20200826_085	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:14
63	E2000764-014		20200826_086	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:22
64	E2000764-015		20200826_087	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:30
65	PERCHLORATE7		20200826_088	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 21:38
66	E2000764-016		20200826_089	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:46
67	E2000764-017		20200826_090	Perchlorate6850b.lcm	1x	☒		8/26/2020 21:54
68	E2000764-018		20200826_091	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:01
69	PERCHLORATE7		20200826_092	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 22:09
70	EQ2000367-01		20200826_093	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:17
71	EQ2000367-02		20200826_094	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:25
72	EQ2000367-03		20200826_095	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:33
73	EQ2000367-04		20200826_096	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:41
74	EQ2000367-05		20200826_097	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:49
75	R2006746-001		20200826_098	Perchlorate6850b.lcm	1x	☒		8/26/2020 22:57
76	R2006746-002		20200826_099	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:04
77	R2006777-001		20200826_100	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:12
78	R2006777-002		20200826_101	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:20
79	R2006777-003		20200826_102	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:28
80	PERCHLORATE7		20200826_103	Perchlorate6850b.lcm	1x	☒	3100807-04	8/26/2020 23:36
81	R2006777-004		20200826_104	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:44
82	R2006777-005		20200826_105	Perchlorate6850b.lcm	1x	☒		8/26/2020 23:52
83	R2006777-006		20200826_106	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:00
84	R2006777-007		20200826_107	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:08
85	R2006777-008		20200826_108	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:15
86	R2006805-001		20200826_109	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:23
87	R2006805-002		20200826_110	Perchlorate6850b.lcm	1x	☒		8/27/2020 0:31
88	PERCHLORATE7		20200826_111	Perchlorate6850b.lcm	1x	☒	3100807-04	8/27/2020 0:39
89								
90								
91								
92								

Initial Calibration - Detailed Report

Calibration ID: EC2000023 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000023-01	PERCHLORATE1	20200826_024	08/26/2020 11:55
02	EC2000023-02	PERCHLORATE2	20200826_025	08/26/2020 12:03
03	EC2000023-03	PERCHLORATE3	20200826_026	08/26/2020 12:11
04	EC2000023-04	PERCHLORATE4	20200826_027	08/26/2020 12:19
05	EC2000023-05	PERCHLORATE5	20200826_028	08/26/2020 12:27
06	EC2000023-06	PERCHLORATE6	20200826_029	08/26/2020 12:35
07	EC2000023-07	PERCHLORATE7	20200826_030	08/26/2020 12:42
08	EC2000023-08	PERCHLORATE8	20200826_031	08/26/2020 12:50
09	EC2000023-09	PERCHLORATE9	20200826_032	08/26/2020 12:58
10	EC2000023-10	PERCHLORATE10	20200826_033	08/26/2020 13:06

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

Perchlorate **Average RF** **RSD = 5.546** **Average RF = 0.1085**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1181	02	0.5000	0.1137	03	0.7000	0.1087	04	1.0000	0.1168
05	2.0000	0.1092	06	5.0000	0.1056	07	10.0000	0.1014	08	20.0000	0.1048
09	30.0000	0.1049	10	50.0000	0.1012						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.109	8.9	02	0.5000	0.524	4.8	03	0.7000	0.702	0.2
04	1.0000	1.08	7.7	05	2.0000	2.01	0.7	06	5.0000	4.87	-2.6
07	10.0000	9.35	-6.5	08	20.0000	19.3	-3.3	09	30.0000	29.0	-3.3
10	50.0000	46.7	-6.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000023	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200826_035	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000023-11	T	Average RF	10	9.690	ng/mL	-3.1	<= 15

ALS Group Houston

PERCHLORATE1

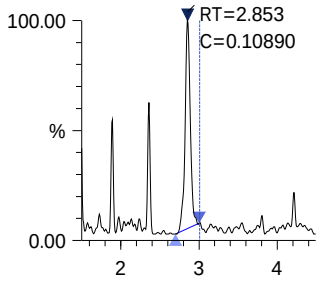
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	8/26/2020 11:55:32 AM	2254	0.10890	20200826_024	2.853	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	8/26/2020 11:55:32 AM	190859	1.00000	20200826_024	2.852	25.0000	1.0000	5

Perchlorate

Conc 0.10890
Area 2254

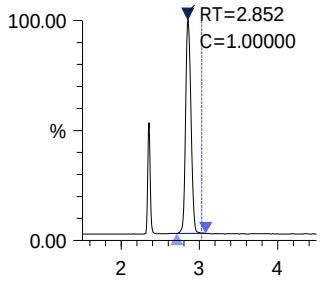
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

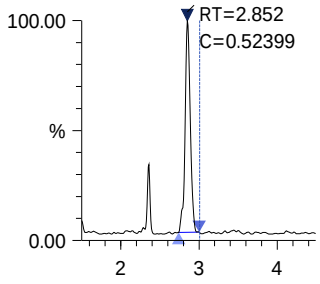
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	8/26/2020 12:03:28 PM	11013	0.52399	20200826_025	2.852	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	8/26/2020 12:03:28 PM	193789	1.00000	20200826_025	2.850	25.0000	1.0000	6

Perchlorate

Conc 0.52399
Area 11013

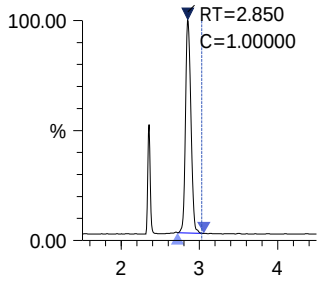
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

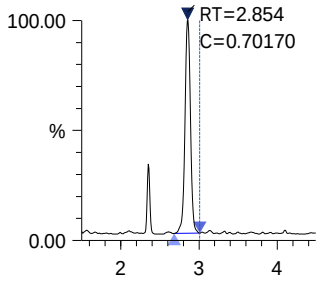
Date acquired: 8/26/2020 12:11:22 PM
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Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	8/26/2020 12:11:22 PM	15252	0.70170	20200826_026	2.854	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	8/26/2020 12:11:22 PM	200410	1.00000	20200826_026	2.849	25.0000	1.0000	7

Perchlorate

Conc 0.70170
Area 15252

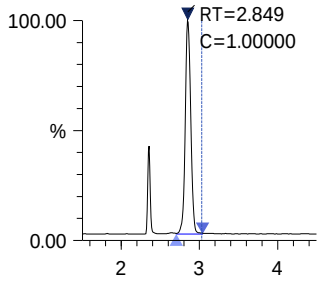
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

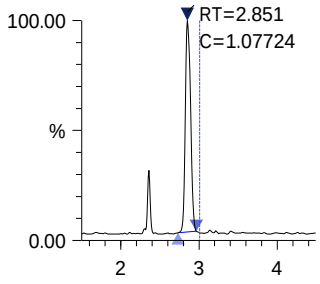
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	8/26/2020 12:19:17 PM	21473	1.07724	20200826_027	2.851	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	8/26/2020 12:19:17 PM	183791	1.00000	20200826_027	2.851	25.0000	1.0000	8

Perchlorate

Conc 1.07724
Area 21473

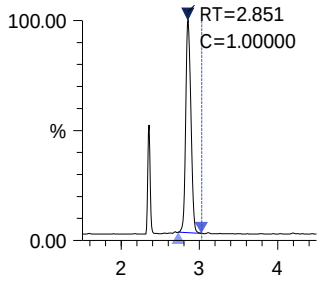
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

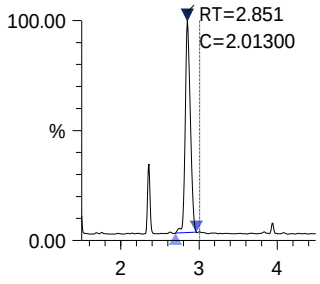
PERCHLORATE5

Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	8/26/2020 12:27:10 PM	40038	2.01300	20200826_028	2.851	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	8/26/2020 12:27:10 PM	183386	1.00000	20200826_028	2.849	25.0000	1.0000	9

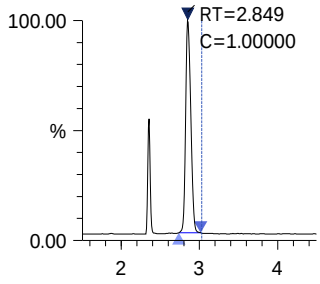
Perchlorate

Conc 2.01300
Area 40038
Q 99.00>83.00 (-) 8.76e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386
ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE6

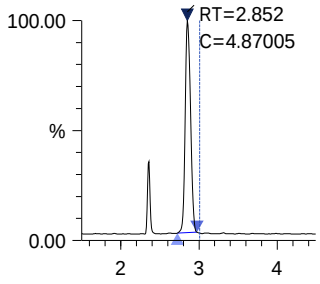
Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	8/26/2020 12:35:02 PM	98121	4.87005	20200826_029	2.852	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	8/26/2020 12:35:02 PM	185768	1.00000	20200826_029	2.850	25.0000	1.0000	10

Perchlorate

Conc 4.87005
Area 98121

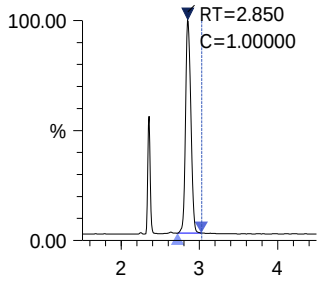
Q 99.00>83.00 (-) 2.04e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768

ISTD 107.00>89.00 (-) 3.86e4



ALS Group Houston

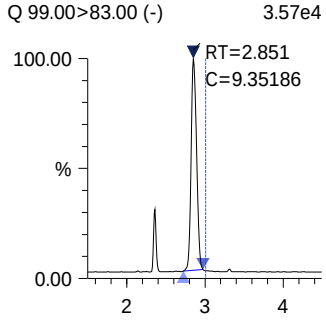
PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	8/26/2020 12:42:57 PM	174248	9.35186	20200826_030	2.851	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	8/26/2020 12:42:57 PM	171796	1.00000	20200826_030	2.850	25.0000	1.0000	4

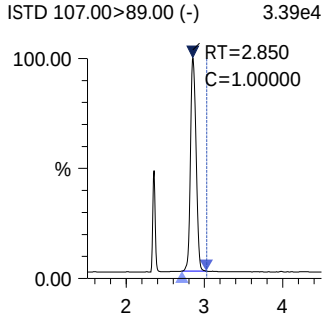
Perchlorate

Conc 9.35186
Area 174248



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

PERCHLORATE8

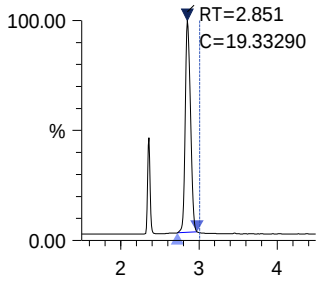
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	8/26/2020 12:50:51 PM	337010	19.33290	20200826_031	2.851	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	8/26/2020 12:50:51 PM	160727	1.00000	20200826_031	2.850	25.0000	1.0000	11

Perchlorate

Conc 19.33290
Area 337010

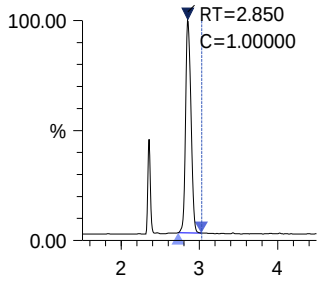
Q 99.00>83.00 (-) 7.14e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

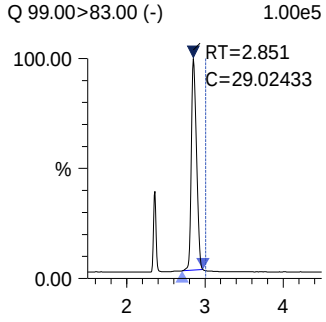
PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	8/26/2020 12:58:44 PM	466342	29.02433	20200826_032	2.851	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	8/26/2020 12:58:44 PM	148144	1.00000	20200826_032	2.849	25.0000	1.0000	12

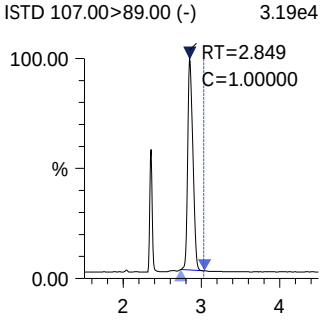
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



ALS Group Houston

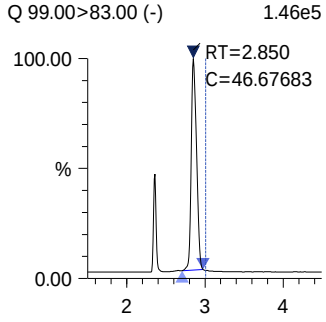
PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	8/26/2020 1:06:40 PM	694738	46.67683	20200826_033	2.850	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	8/26/2020 1:06:40 PM	137234	1.00000	20200826_033	2.849	25.0000	1.0000	13

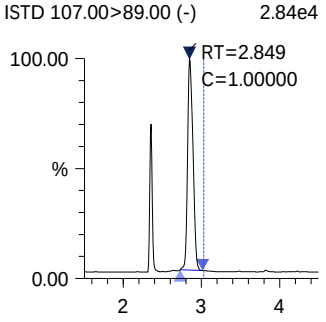
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



ALS Group Houston

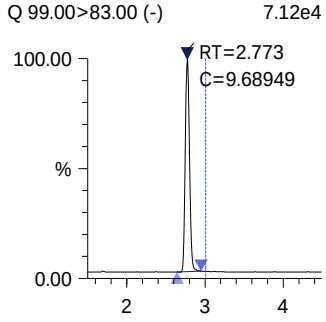
PERCHLORATEICV

Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	8/26/2020 2:26:45 PM	257692	9.68949	20200826_035	2.773	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	8/26/2020 2:26:45 PM	245213	1.00000	20200826_035	2.771	25.0000	1.0000	14

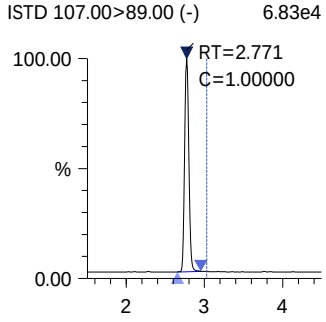
Perchlorate

Conc 9.68949
Area 257692



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213



Chromatograms and Selected Ion Monitoring

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

20200902

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20200902_001	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:32
2	null		20200902_002	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:36
3	IB		20200902_003	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:42
4	IB		20200902_004	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:50
5	LODV		20200902_005	Perchlorate6850b.lcm	1x	☒		9/2/2020 15:58
6	PERCHLORATE7		20200902_006	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 16:10
7	EQ2000392-01		20200902_007	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:18
8	E2000760-001		20200902_008	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:26
9	E2000796-001		20200902_009	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:34
10	E2000797-001		20200902_010	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:42
11	E2000798-001		20200902_011	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:50
12	EQ2000392-02		20200902_012	Perchlorate6850b.lcm	1x	☒		9/2/2020 16:58
13	EQ2000392-03		20200902_013	Perchlorate6850b.lcm	1x	☒		9/2/2020 17:06
14	PERCHLORATE7		20200902_014	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 17:13
15	E2000760-001X2		20200902_015	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:32
16	E2000796-001X2		20200902_016	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:40
17	E2000797-001X10		20200902_017	Perchlorate6850b.lcm	10x	☒		9/2/2020 17:48
18	E2000798-001X2		20200902_018	Perchlorate6850b.lcm	2x	☒		9/2/2020 17:55
19	EQ2000392-02		20200902_019	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:03
20	EQ2000392-03		20200902_020	Perchlorate6850b.lcm	1x	☒		9/2/2020 18:11
21	PERCHLORATE7		20200902_021	Perchlorate6850b.lcm	1x	☒	3100807-04	9/2/2020 18:19
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20200903

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/26/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000023**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20200903_001	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:14
2	null		20200903_002	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:19
3	IB		20200903_003	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:24
4	IB		20200903_004	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:32
5	LODV		20200903_005	Perchlorate6850b.lcm	1x	☒		9/3/2020 9:40
6	PERCHLORATE7		20200903_006	Perchlorate6850b.lcm	1x	☒	3100807-04	9/3/2020 9:48
7	E2000797-001X500		20200903_007	Perchlorate6850b.lcm	500x	☒		9/3/2020 9:55
8	PERCHLORATE7		20200903_008	Perchlorate6850b.lcm	1x	☒	3100807-04	9/3/2020 10:03
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1085	0.1092	0.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_014

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.80	0.1085	0.1063	-2.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/ 2/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200902\20200902_021

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.0	0.1085	0.1086	0.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_006

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.58	0.1085	0.1039	-4.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/ 3/20

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

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200903\20200903_008

Calibration Date: 8/26/20
Calibration ID: EC2000023
Analysis Lot: 693736
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.45	0.1085	0.1025	-5.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Analyzed:**	9/2/20 16:10

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200902\20200902_006	**Lab Code:**	EQ2000396-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-01	199,073	2.74
Method Blank	EQ2000392-01	207,056	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/2/20 17:13

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

File ID: I:\LCMS01\DATA\20200902\20200902_014
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-02
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-02	181,498	2.85
Lab Control Sample	EQ2000392-02	236,222	2.85
Duplicate Lab Control Sample	EQ2000392-03	222,560	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20081150

Service Request: E2000797
Date Analyzed: 9/2/20 18:19

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

File ID: I:\LCMS01\DATA\20200902\20200902_021
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000396-03
Analysis Lot: 693736
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-03	186,696	2.85

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Analyzed:**	9/3/20 09:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_006	**Lab Code:**	EQ2000396-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-04	165,769	2.84
LH18/24-SP140_082520	E2000797-001	131,190	2.84

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000797
Project:	HS20081150	**Date Analyzed:**	9/3/20 10:03

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200903\20200903_008	**Lab Code:**	EQ2000396-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	693736
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	175,590	2.85
	Upper Limit ==>	263,385	4.85
	Lower Limit ==>	87,795	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2000396-05	166,758	2.84

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

ALS Group Houston

PERCHLORATE7

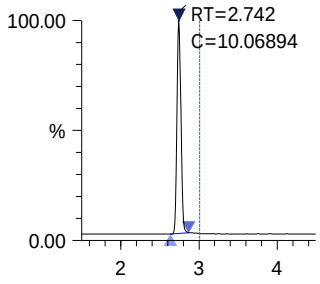
Date acquired: 9/2/2020 4:10:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_006.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 4:10:48 PM	217480	10.06894	20200902_006	2.742	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 4:10:48 PM	199073	1.00000	20200902_006	2.741	25.0000	1.0000	4

Perchlorate

Conc 10.06894
Area 217480

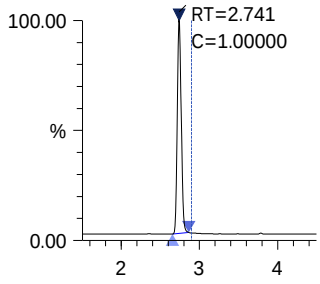
Q 99.00>83.00 (-) 6.33e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 199073

ISTD 107.00>89.00 (-) 5.76e4



ALS Group Houston

EQ2000392-01

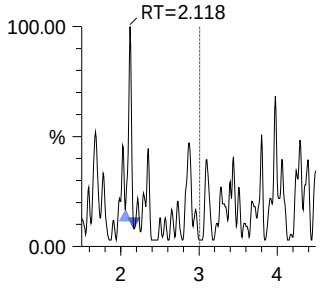
Date acquired: 9/2/2020 4:18:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_007.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-01	9/2/2020 4:18:42 PM	----	----	20200902_007	----	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000392-01	9/2/2020 4:18:42 PM	207056	1.00000	20200902_007	2.845	25.0000	1.0000	19

Perchlorate

Conc ----
Area ----

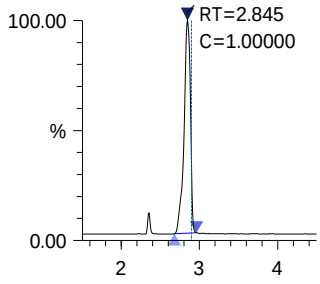
Q 99.00>83.00 (-) 7.70e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 207056

ISTD 107.00>89.00 (-) 3.61e4



ALS Group Houston

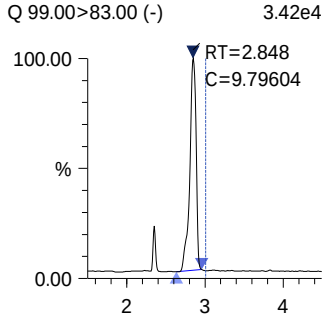
PERCHLORATE7

Date acquired: 9/2/2020 5:13:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_014.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 5:13:58 PM	192905	9.79604	20200902_014	2.848	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 5:13:58 PM	181498	1.00000	20200902_014	2.845	25.0000	1.0000	4

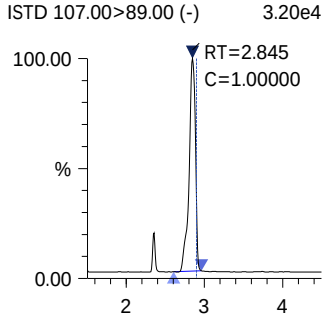
Perchlorate

Conc 9.79604
Area 192905



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181498



ALS Group Houston

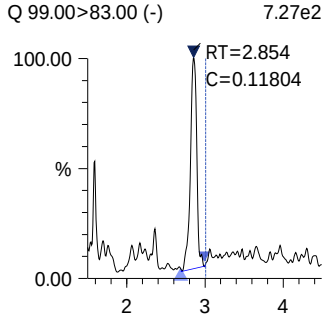
EQ2000392-02

Date acquired: 9/2/2020 6:03:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_019.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-02	9/2/2020 6:03:47 PM	3025	0.11804	20200902_019	2.854	25.0000	1.0000	24
Sodium Perchlorate-18O4_IS	EQ2000392-02	9/2/2020 6:03:47 PM	236222	1.00000	20200902_019	2.846	25.0000	1.0000	24

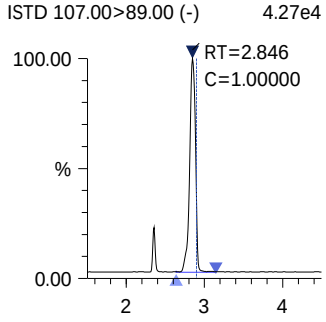
Perchlorate

Conc 0.11804
Area 3025



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 236222



ALS Group Houston

EQ2000392-03

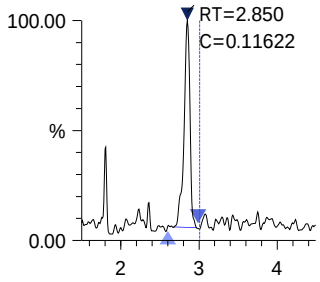
Date acquired: 9/2/2020 6:11:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_020.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000392-03	9/2/2020 6:11:38 PM	2806	0.11622	20200902_020	2.850	25.0000	1.0000	25
Sodium Perchlorate-18O4_IS	EQ2000392-03	9/2/2020 6:11:38 PM	222560	1.00000	20200902_020	2.848	25.0000	1.0000	25

Perchlorate

Conc 0.11622
Area 2806

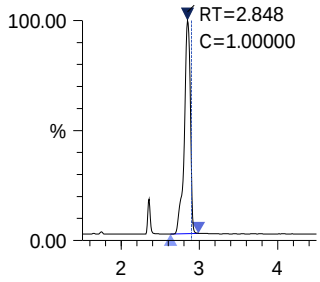
Q 99.00>83.00 (-) 5.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222560

ISTD 107.00>89.00 (-) 4.10e4



ALS Group Houston

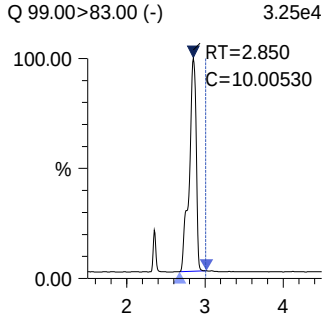
PERCHLORATE7

Date acquired: 9/2/2020 6:19:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_021.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	9/2/2020 6:19:32 PM	202669	10.00530	20200902_021	2.850	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/2/2020 6:19:32 PM	186696	1.00000	20200902_021	2.848	25.0000	1.0000	4

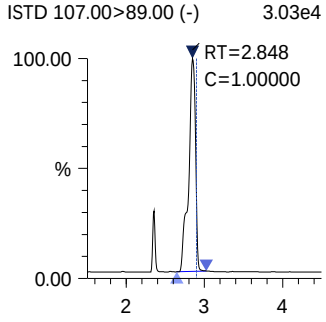
Perchlorate

Conc 10.00530
Area 202669



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 186696



HS20081150 8260 Raw Data

ALS WO# HS20081150

MSVOA06 -Logbook

Batch: 41322 **Analyst:** Presenta Cabascango

Date: 08-03-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	08-03-2020 11:16 am	1.00	50 mL	50 mL	X080301.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	08-03-2020 11:40 am	1.00	50 mL	50 mL	X080302.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	08-03-2020 12:04 pm	1.00	50 mL	50 mL	X080303.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	08-03-2020 12:52 pm	1.00	50 mL	50 mL	X080304.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	08-03-2020 01:16 pm	1.00	50 mL	50 mL	X080305.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	08-03-2020 01:40 pm	1.00	50 mL	50 mL	X080306.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	08-03-2020 02:04 pm	1.00	50 mL	50 mL	X080307.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	08-03-2020 02:28 pm	1.00	50 mL	50 mL	X080308.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	08-03-2020 02:52 pm	1.00	50 mL	50 mL	X080309.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	08-03-2020 03:16 pm	1.00	50 mL	50 mL	X080310.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	08-03-2020 03:40 pm	1.00	50 mL	50 mL	X080311.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	08-03-2020 04:04 pm	1.00	50 mL	50 mL	X080312.D	Liquid	Y	NA
13	BLANK	SAMP	08-03-2020 04:28 pm	1.00	50 mL	50 mL	X080313.D	Liquid	Y	NA
14	ICV	CCV	08-03-2020 04:51 pm	1.00	50 mL	50 mL	X080314.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
15	BLANK	SAMP	08-03-2020 05:16 pm	1.00	50 mL	50 mL	X080315.D	Liquid	Y	NA
16	VLCSW-200803	LCS	08-03-2020 05:39 pm	1.00	50 mL	50 mL	X080316.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
17	BLANK	SAMP	08-03-2020 06:04 pm	1.00	50 mL	50 mL	X080317.D	Liquid	Y	NA
18	BLANK	SAMP	08-03-2020 06:28 pm	1.00	50 mL	50 mL	X080318.D	Liquid	Y	NA
19	VBLKW-200803	MBLK	08-03-2020 06:52 pm	1.00	50 mL	50 mL	X080319.D	Liquid	Y	NA
20	HS20070575-13	SAMP	08-03-2020 07:16 pm	1.00	50 mL	50 mL	X080320.D	Liquid	Y	NA
21	HS20070575-14	SAMP	08-03-2020 07:40 pm	1.00	50 mL	50 mL	X080321.D	Liquid	Y	NA
22	HS20070575-15	SAMP	08-03-2020 08:03 pm	1.00	50 mL	50 mL	X080322.D	Liquid	Y	NA
23	HS20070575-16	SAMP	08-03-2020 08:27 pm	1.00	50 mL	50 mL	X080323.D	Liquid	Y	NA
24	HS20070984-02	SAMP	08-03-2020 08:51 pm	1.00	50 mL	50 mL	X080324.D	Liquid	Y	<2
25	HS20070984-01	SAMP	08-03-2020 09:15 pm	1.00	50 mL	50 mL	X080325.D	Liquid	Y	<2
26	HS20070984-01MS	MS	08-03-2020 09:39 pm	1.00	50 mL	50 mL	X080326.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	HS20070984-01MSD	MSD	08-03-2020 10:04 pm	1.00	50 mL	50 mL	X080327.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
28	CCV-END	CCV	08-03-2020 10:27 pm	1.00	50 mL	50 mL	X080328.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-38-06
IS ID	31106-38-06
CAL STD ID	31106-41-01/02
BFB ID	31106-38-06
pH Paper	634-64-10

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	49.92	100	80-120
trans-1,3-Dichloroprope	50.00	48.62	97	80-120
1,3-Dichlorobenzene	50.00	47.73	95	80-120
2,2-Dichloropropane	50.00	50.96	102	80-120
1,1-Dichloropropene	50.00	48.93	98	80-120
Dibromomethane	50.00	48.38	97	80-120
1,2-Dibromoethane	50.00	48.72	97	80-120
trans-1,2-Dichloroethen	50.00	48.97	98	80-120
1,1,1,2-Tetrachloroetha	50.00	47.75	96	80-120
1,1,1-Trichloroethane	50.00	48.17	96	80-120
1,1,2,2-Tetrachloroetha	50.00	48.28	96	80-120
1,1,2-Trichloroethane	50.00	47.70	95	80-120
1,1-Dichloroethane	50.00	50.19	100	80-120
1,1-Dichloroethene	50.00	51.26	102	80-120
Trichloroethene	50.00	50.56	101	80-120
1,2,3-Trichlorobenzene	50.00	50.30	101	80-120
Trichlorofluoromethane	50.00	49.79	100	80-120
1,2,4-Trichlorobenzene	50.00	50.13	100	80-120
1,2,4-Trimethylbenzene	50.00	48.17	96	80-120
Tetrachloroethene	50.00	47.53	95	80-120
1,2-Dichlorobenzene	50.00	47.04	94	80-120
1,2-Dichloroethane	50.00	48.99	98	80-120
1,2-Dichloropropane	50.00	50.31	101	80-120
1,3,5-Trimethylbenzene	50.00	48.06	96	80-120
1,3-Dichloropropane	50.00	48.77	98	80-120
1,4-Dichlorobenzene	50.00	48.32	97	80-120
Toluene	50.00	48.26	96	80-120
2-Butanone	100.00	104.88	105	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	48.31	97	80-120
2-Hexanone	100.00	95.30	95	80-120
4-Chlorotoluene	50.00	48.17	96	80-120
tert-Butylbenzene	50.00	47.34	95	80-120
4-Methyl-2-Pentanone	100.00	93.57	94	80-120
Acetone	100.00	102.27	102	80-120
Benzene	50.00	49.44	99	80-120
Bromobenzene	50.00	47.40	95	80-120
Bromochloromethane	50.00	47.01	94	80-120
Bromodichloromethane	50.00	48.72	97	80-120
Bromoform	50.00	48.32	97	80-120
Bromomethane	50.00	53.47	107	80-120
Carbon Disulfide	100.00	101.43	101	80-120
Carbon Tetrachloride	50.00	47.96	96	80-120
Chlorobenzene	50.00	48.92	98	80-120
Chloroethane	50.00	51.05	102	80-120
Chloroform	50.00	47.94	96	80-120
Chloromethane	50.00	49.31	99	80-120
cis-1,2-Dichloroethene	50.00	48.89	98	80-120
Dibromochloromethane	50.00	47.41	95	80-120
Dichlorodifluoromethane	50.00	50.62	101	80-120
Ethylbenzene	50.00	48.65	97	80-120
Hexachlorobutadiene	50.00	48.15	96	80-120
Isopropylbenzene	50.00	48.56	97	80-120
m,p-Xylenes	100.00	97.74	98	80-120
Methylene Chloride	50.00	49.00	98	80-120
n-Butylbenzene	50.00	49.13	98	80-120
n-Propylbenzene	50.00	48.15	96	80-120

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

* Values outside of QC limits

COMMENTS: _____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	53.39	107	80-120
o-Xylene	50.00	48.76	98	80-120
sec-Butylbenzene	50.00	47.89	96	80-120
Styrene	50.00	49.51	99	80-120
Vinyl Chloride	50.00	50.76	102	80-120
1,2,3-Trichloropropane	50.00	47.16	94	80-120
p-Isopropyltoluene	50.00	48.19	96	80-120
1,2-Dibromo-3-Chloropro	50.00	47.23	94	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID: X080301 BFB Injection Date: 08/03/20

Instrument ID: VOA6 BFB Injection Time: 1116

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.4
75	30.0 - 60.0% of mass 95	50.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	67.3
175	5.0 - 9.0% of mass 174	5.2 (7.8)1
176	95.0 - 101.0% of mass 174	64.3 (95.6)1
177	5.0 - 9.0% of mass 176	4.7 (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	VSTD000.25	VSTD000.25	X080302	08/03/20	1140
02	VSTD000.5	VSTD000.5	X080303	08/03/20	1204
03	VSTD001	VSTD001	X080304	08/03/20	1252
04	VSTD002	VSTD002	X080305	08/03/20	1316
05	VSTD005	VSTD005	X080306	08/03/20	1340
06	VSTD020	VSTD020	X080307	08/03/20	1404
07	VSTD050	VSTD050	X080308	08/03/20	1428
08	VSTD100	VSTD100	X080309	08/03/20	1452
09	VSTD150	VSTD150	X080310	08/03/20	1516
10	VSTD200	VSTD200	X080311	08/03/20	1540
11	ICV	ICV	X080314	08/03/20	1651
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.618	0.462	0.504	0.521	0.500
trans-1,3-Dichloropropene		0.569	0.433	0.473	0.486	0.461
1,3-Dichlorobenzene		1.974	1.344	1.701	1.505	1.492
2,2-Dichloropropane		0.884	0.578	0.720	0.734	0.705
1,1-Dichloropropene		0.496	0.398	0.426	0.372	0.402
Dibromomethane		0.256	0.205	0.209	0.218	0.208
1,2-Dibromoethane		0.419	0.349	0.380	0.366	0.356
trans-1,2-Dichloroethene		0.547	0.446	0.452	0.452	0.455
1,1,1,2-Tetrachloroethane		0.480	0.340	0.394	0.373	0.361
1,1,1-Trichloroethane		0.921	0.718	0.732	0.745	0.744
1,1,2,2-Tetrachloroethane		3887	5190	17450	30714	110449
1,1,2-Trichloroethane		0.347	0.256	0.311	0.288	0.272
1,1-Dichloroethane		1.097	0.797	0.930	1.000	0.970
1,1-Dichloroethene		0.394	0.380	0.377	0.362	0.406
Trichloroethene		0.395	0.297	0.346	0.339	0.352
1,2,3-Trichlorobenzene		0.182	0.144	0.165	0.146	0.146
Trichlorofluoromethane		0.868	0.679	0.666	0.642	0.726
1,2,4-Trichlorobenzene		1350	1766	5020	11491	44232
1,2,4-Trimethylbenzene		3.392	2.228	2.748	2.560	2.560
Tetrachloroethene		0.427	0.296	0.290	0.297	0.311
1,2-Dichlorobenzene		1.790	1.277	1.567	1.398	1.337
1,2-Dichloroethane		0.539	0.434	0.491	0.490	0.473
1,2-Dichloropropane		0.391	0.323	0.357	0.377	0.365
1,3,5-Trimethylbenzene		3.105	2.294	2.704	2.466	2.554
1,3-Dichloropropane		0.666	0.506	0.557	0.580	0.549
1,4-Dichlorobenzene		1.897	1.388	1.694	1.489	1.472
Toluene		1.857	1.349	1.452	1.443	1.418
2-Butanone		0.257	0.195	0.230	0.238	0.240
2-Chlorotoluene		2.466	1.986	2.291	2.161	2.080
2-Hexanone		0.338	0.248	0.398	0.323	0.295
4-Chlorotoluene		3.038	2.301	2.587	2.471	2.409
tert-Butylbenzene		2.850	1.958	2.274	2.043	2.244
4-Methyl-2-Pentanone		0.544	0.403	0.549	0.467	0.426
Acetone		6244	5964	9756	22417	71506
Benzene		1.472	1.124	1.176	1.206	1.207
Bromobenzene		1.240	0.860	1.042	0.964	0.923
Bromochloromethane		0.351	0.320	0.325	0.290	0.282
Bromodichloromethane		0.576	0.402	0.436	0.428	0.426
Bromoform		0.354	0.228	0.306	0.267	0.255
Bromomethane		2498	4659	9294	19557	69521
Carbon Disulfide		1.479	1.134	1.100	1.117	1.204
Carbon Tetrachloride		0.528	0.430	0.420	0.411	0.425
Chlorobenzene		1.247	0.874	0.972	0.966	0.933
Chloroethane		0.430	0.304	0.328	0.327	0.355

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.068	0.851	0.891	0.887	0.861
Chloromethane		0.888	0.598	0.694	0.698	0.666
cis-1,2-Dichloroethene		0.641	0.522	0.524	0.547	0.541
Dibromochloromethane		0.509	0.342	0.434	0.394	0.374
Dichlorodifluoromethane		0.532	0.464	0.451	0.391	0.476
Ethylbenzene		0.637	0.480	0.472	0.483	0.491
Hexachlorobutadiene		0.235	0.256	0.314	0.247	0.306
Isopropylbenzene		1.798	1.398	1.414	1.374	1.464
m,p-Xylenes		0.741	0.568	0.590	0.595	0.593
Methylene Chloride		13006	14851	20318	36047	113086
n-Butylbenzene		2.783	1.821	2.137	1.869	2.205
n-Propylbenzene		4.521	3.069	3.484	3.267	3.554
Naphthalene		1670	3475	6258	16632	55065
o-Xylene		0.741	0.556	0.581	0.583	0.578
sec-Butylbenzene		3.747	2.660	2.985	2.618	3.017
Styrene		1.248	0.896	1.106	1.036	1.008
Vinyl Chloride		0.723	0.546	0.596	0.557	0.633
1,2,3-Trichloropropane		0.874	0.599	0.917	0.732	0.691
p-Isopropyltoluene		3.431	2.390	2.780	2.421	2.730
1,2-Dibromo-3-Chloropropane		394	461	1468	2687	9119
1,2-Dichloroethane-d4		0.669	0.575	0.501	0.605	0.564
Dibromofluoromethane		0.528	0.509	0.451	0.514	0.476
Toluene-d8		1.258	1.357	1.124	1.218	1.201
4-Bromofluorobenzene		0.521	0.535	0.447	0.454	0.451

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.514	0.535	0.544	0.539
trans-1,3-Dichloropropene	0.458	0.478	0.490	0.492
1,3-Dichlorobenzene	1.504	1.545	1.533	1.546
2,2-Dichloropropane	0.684	0.700	0.707	0.706
1,1-Dichloropropene	0.404	0.423	0.427	0.433
Dibromomethane	0.210	0.214	0.219	0.218
1,2-Dibromoethane	0.353	0.355	0.359	0.360
trans-1,2-Dichloroethene	0.456	0.463	0.472	0.475
1,1,1,2-Tetrachloroethane	0.365	0.371	0.370	0.370
1,1,1-Trichloroethane	0.735	0.763	0.781	0.792
1,1,2,2-Tetrachloroethane	259509	505068	753290	990670
1,1,2-Trichloroethane	0.268	0.271	0.272	0.274
1,1-Dichloroethane	0.970	0.993	1.008	1.023
1,1-Dichloroethene	0.398	0.410	0.417	0.422
Trichloroethene	0.353	0.369	0.366	0.371
1,2,3-Trichlorobenzene	0.145	0.122	0.160	0.144
Trichlorofluoromethane	0.737	0.755	0.769	0.784
1,2,4-Trichlorobenzene	104906	167486	308625	360898
1,2,4-Trimethylbenzene	2.529	2.694	2.637	2.691
Tetrachloroethene	0.300	0.313	0.309	0.317
1,2-Dichlorobenzene	1.334	1.330	1.343	1.352
1,2-Dichloroethane	0.471	0.484	0.487	0.487
1,2-Dichloropropane	0.363	0.375	0.376	0.377
1,3,5-Trimethylbenzene	2.500	2.644	2.594	2.653
1,3-Dichloropropane	0.546	0.548	0.552	0.550
1,4-Dichlorobenzene	1.475	1.522	1.516	1.533
Toluene	1.396	1.415	1.400	1.412
2-Butanone	0.250	0.260	0.268	0.268
2-Chlorotoluene	2.065	2.146	2.149	2.179
2-Hexanone	0.295	0.302	0.311	0.315
4-Chlorotoluene	2.381	2.518	2.483	2.523
tert-Butylbenzene	2.160	2.278	2.260	2.322
4-Methyl-2-Pentanone	0.428	0.442	0.452	0.454
Acetone	170545	340970	481556	618700
Benzene	1.206	1.251	1.258	1.266
Bromobenzene	0.915	0.953	0.945	0.960
Bromochloromethane	0.281	0.290	0.290	0.283
Bromodichloromethane	0.430	0.446	0.453	0.453
Bromoform	0.264	0.270	0.276	0.278
Bromomethane	165840	329463	475898	632580
Carbon Disulfide	1.211	1.252	1.274	1.300
Carbon Tetrachloride	0.431	0.450	0.456	0.466
Chlorobenzene	0.939	0.964	0.959	0.965
Chloroethane	0.352	0.360	0.367	0.367

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.849	0.867	0.878	0.887
Chloromethane	0.680	0.679	0.695	0.720
cis-1,2-Dichloroethene	0.529	0.542	0.551	0.556
Dibromochloromethane	0.381	0.388	0.389	0.394
Dichlorodifluoromethane	0.490	0.516	0.534	0.549
Ethylbenzene	0.489	0.499	0.498	0.504
Hexachlorobutadiene	0.290	0.222	0.292	0.253
Isopropylbenzene	1.441	1.495	1.474	1.509
m,p-Xylenes	0.588	0.608	0.602	0.610
Methylene Chloride	256910	487953	693942	915440
n-Butylbenzene	2.171	2.303	2.281	2.331
n-Propylbenzene	3.462	3.672	3.652	3.736
Naphthalene	137510	244768	435994	531999
o-Xylene	0.582	0.593	0.590	0.594
sec-Butylbenzene	2.919	3.112	3.100	3.180
Styrene	1.015	1.015	1.027	1.022
Vinyl Chloride	0.647	0.674	0.698	0.718
1,2,3-Trichloropropane	0.684	0.691	0.706	0.692
p-Isopropyltoluene	2.652	2.848	2.797	2.868
1,2-Dibromo-3-Chloropropane	22898	44175	68839	87710
1,2-Dichloroethane-d4	0.554	0.583	0.594	0.593
Dibromofluoromethane	0.468	0.486	0.491	0.494
Toluene-d8	1.182	1.197	1.182	1.196
4-Bromofluorobenzene	0.446	0.454	0.449	0.453

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.52631108		8.055	15.000
trans-1,3-Dichloropropene	AVRG		0.48238639		7.750	15.000
1,3-Dichlorobenzene	AVRG		1.57158280		11.203	15.000
2,2-Dichloropropane	AVRG		0.71314301		10.968	15.000
1,1-Dichloropropene	AVRG		0.42016302		8.160	15.000
Dibromomethane	AVRG		0.21759689		7.106	15.000
1,2-Dibromoethane	AVRG		0.36652489		5.926	15.000
trans-1,2-Dichloroethene	AVRG		0.46872891		6.594	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.38060507		10.480	15.000
1,1,1-Trichloroethane	AVRG		0.77016692		7.945	15.000
1,1,2,2-Tetrachloroethane	LINR	7.722e-003	1.23187232		0.9994783	0.9900000
1,1,2-Trichloroethane	AVRG		0.28450466		9.857	15.000
1,1-Dichloroethane	AVRG		0.97667293		8.336	15.000
1,1-Dichloroethene	AVRG		0.39616599		5.052	15.000
Trichloroethene	AVRG		0.35435187		7.661	15.000
1,2,3-Trichlorobenzene	AVRG		0.15046244		11.203	15.000
Trichlorofluoromethane	AVRG		0.73636136		9.380	15.000
1,2,4-Trichlorobenzene	2ORDR	-1.1e-002	3.58766703	-0.2952283	0.9906334	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.67111779		11.604	15.000
Tetrachloroethene	AVRG		0.31784777		13.220	15.000
1,2-Dichlorobenzene	AVRG		1.41425088		11.530	15.000
1,2-Dichloroethane	AVRG		0.48410523		5.599	15.000
1,2-Dichloropropane	AVRG		0.36695807		5.225	15.000
1,3,5-Trimethylbenzene	AVRG		2.61272360		8.480	15.000
1,3-Dichloropropane	AVRG		0.56175693		7.766	15.000
1,4-Dichlorobenzene	AVRG		1.55419344		9.792	15.000
Toluene	AVRG		1.46017119		10.382	15.000
2-Butanone	AVRG		0.24511086		9.425	15.000
2-Chlorotoluene	AVRG		2.16926792		6.442	15.000
2-Hexanone	AVRG		0.31389491		12.771	15.000
4-Chlorotoluene	AVRG		2.52365549		8.359	15.000
tert-Butylbenzene	AVRG		2.26526404		11.041	15.000
4-Methyl-2-Pentanone	AVRG		0.46275648		11.014	15.000
Acetone	LINR	-2.14e-002	5.79885157		0.9996587	0.9900000
Benzene	AVRG		1.24051491		7.846	15.000
Bromobenzene	AVRG		0.97809166		11.206	15.000
Bromochloromethane	AVRG		0.30138449		8.187	15.000
Bromodichloromethane	AVRG		0.45010731		11.069	15.000
Bromoform	AVRG		0.27741236		12.753	15.000
Bromomethane	LINR	1.309e-002	2.86760046		0.9995243	0.9900000
Carbon Disulfide	AVRG		1.23004403		9.502	15.000
Carbon Tetrachloride	AVRG		0.44659821		7.968	15.000
Chlorobenzene	AVRG		0.97993823		10.682	15.000
Chloroethane	AVRG		0.35440033		9.973	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.89329334		7.561	15.000
Chloromethane	AVRG		0.70202961		11.036	15.000
cis-1,2-Dichloroethene	AVRG		0.55037038		6.534	15.000
Dibromochloromethane	AVRG		0.40050806		11.789	15.000
Dichlorodifluoromethane	AVRG		0.48936200		10.210	15.000
Ethylbenzene	AVRG		0.50598922		9.941	15.000
Hexachlorobutadiene	AVRG		0.26843621		12.210	15.000
Isopropylbenzene	AVRG		1.48528003		8.449	15.000
m,p-Xylenes	AVRG		0.61061949		8.238	15.000
Methylene Chloride	LINR	-2.76e-002	1.99382468		0.9998680	0.9900000
n-Butylbenzene	AVRG		2.21122856		12.709	15.000
n-Propylbenzene	AVRG		3.60198062		11.195	15.000
Naphthalene	2ORDR	-2.54e-003	2.59173673	-0.2152357	0.9947090	0.9900000
o-Xylene	AVRG		0.59981322		9.042	15.000
sec-Butylbenzene	AVRG		3.03754823		10.849	15.000
Styrene	AVRG		1.04152018		9.045	15.000
Vinyl Chloride	AVRG		0.64360842		10.284	15.000
1,2,3-Trichloropropane	AVRG		0.73186776		13.664	15.000
p-Isopropyltoluene	AVRG		2.76878531		10.947	15.000
1,2-Dibromo-3-Chloropropane	LINR	1.588e-002	13.7625896		0.9986959	0.9900000
1,2-Dichloroethane-d4	AVRG		0.58201048		7.676	15.000
Dibromofluoromethane	AVRG		0.49101450		4.895	15.000
Toluene-d8	AVRG		1.21277844		5.331	15.000
4-Bromofluorobenzene	AVRG		0.46785309		7.389	15.000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

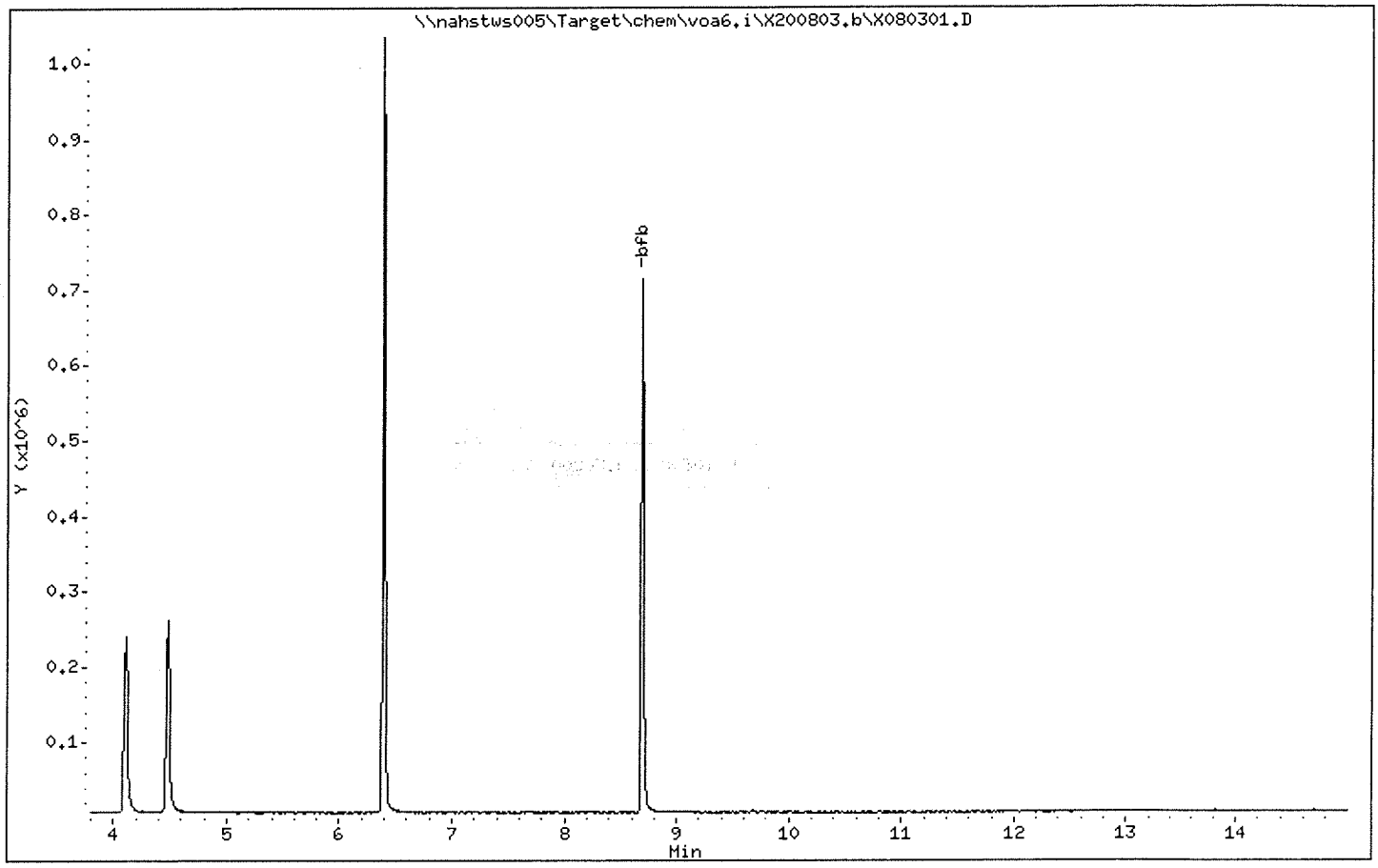
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

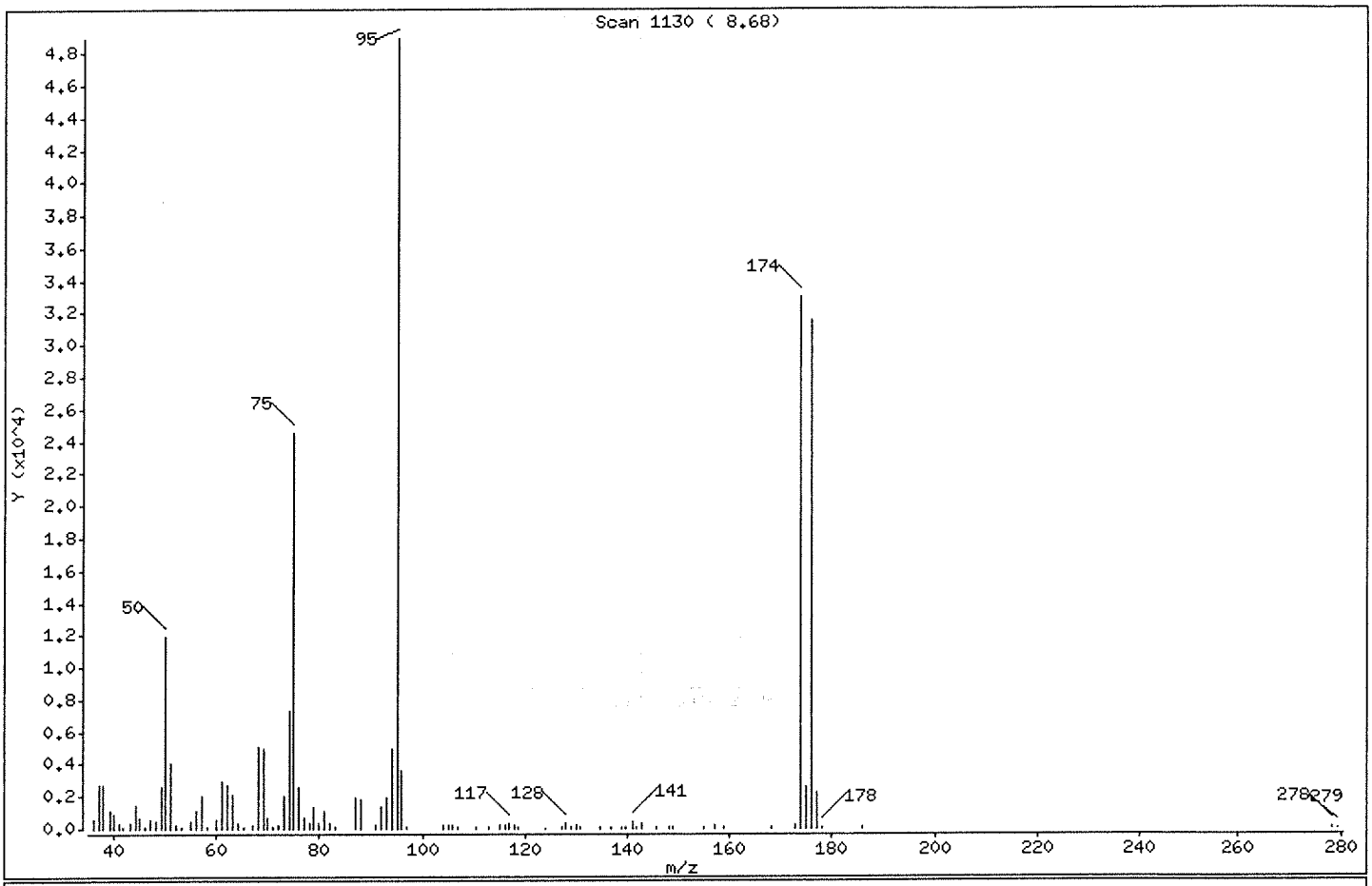
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.40
75	30.00 - 60.00% of mass 95	50.11
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.63)
174	Greater than 50.00% of mass 95	67.28
175	5.00 - 9.00% of mass 174	5.25 (7.80)
176	95.00 - 101.00% of mass 174	64.32 (95.60)
177	5.00 - 9.00% of mass 176	4.66 (7.25)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

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: X080301.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	531	62.00	2722	92.00	1357	136.80	58
37.00	2708	63.00	2090	93.00	1937	139.00	114
38.00	2689	64.10	333	94.00	5003	139.80	109
39.10	1102	65.10	152	95.00	48920	141.00	492
39.90	914	67.00	172	96.00	3597	141.70	68
41.00	390	68.00	5065	97.10	159	142.90	325
41.80	147	69.00	4934	104.10	247	145.60	116
43.10	318	70.00	640	105.00	192	148.00	163
44.10	1442	71.10	132	105.90	238	149.00	64
44.90	624	71.90	198	107.00	73	155.00	128
46.10	63	73.00	2073	110.60	59	156.90	179
47.00	559	74.00	7325	113.00	90	159.00	102
48.00	397	75.00	24512	114.90	227	168.00	114
49.10	2563	76.00	2607	116.00	174	172.90	208
50.00	11935	76.90	632	116.80	351	173.90	32912
51.00	4006	78.00	348	117.80	175	174.90	2566
52.10	210	78.90	1387	118.70	154	175.90	31464
53.00	122	79.90	370	123.90	56	176.90	2280
55.00	461	80.90	1139	127.10	81	178.00	150
56.10	1076	81.90	296	127.90	291	186.00	89
57.00	2018	82.90	133	128.80	113	277.90	149
58.20	143	87.00	1966	129.90	205	279.20	55
60.00	526	87.90	1834	130.90	98		
61.00	2907	91.00	222	134.80	63		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-AUG-2020 11:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	572408	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	867920	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	763638	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	355732	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	1662	0.25000	0.29(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	2175	0.25000	0.32(Ta)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	6945	0.25000	0.37(a)
$	69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	3200	0.25000	0.44(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1428	0.25000	0.24(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	2319	0.25000	0.26(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1974	0.25000	0.72(aM)
	53 1,1,2-Trichloroethane	83	6.854	6.854	(0.894)	1511	0.25000	0.34(aM)
	22 1,1-Dichloroethane	63	2.936	2.936	(0.701)	3028	0.25000	0.27(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1378	0.25000	0.30(a)
	32 1,1-Dichloropropene	75	4.297	4.297	(0.865)	2193	0.25000	0.30(a)
	93 1,2,3-Trichlorobenzene	180	11.768	11.768	(1.217)	168	0.25000	0.15(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1435	0.25000	0.27(aM)
	90 1,2,4-Trichlorobenzene	180	11.374	11.374	(1.176)	428	0.25000	(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	5138	0.25000	0.27(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.686	10.686	(1.105)	50	0.25000	0.89(aM)
	57 1,2-Dibromoethane	107	7.277	7.277	(0.949)	1365	0.25000	0.24(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	2418	0.25000	0.24(a)

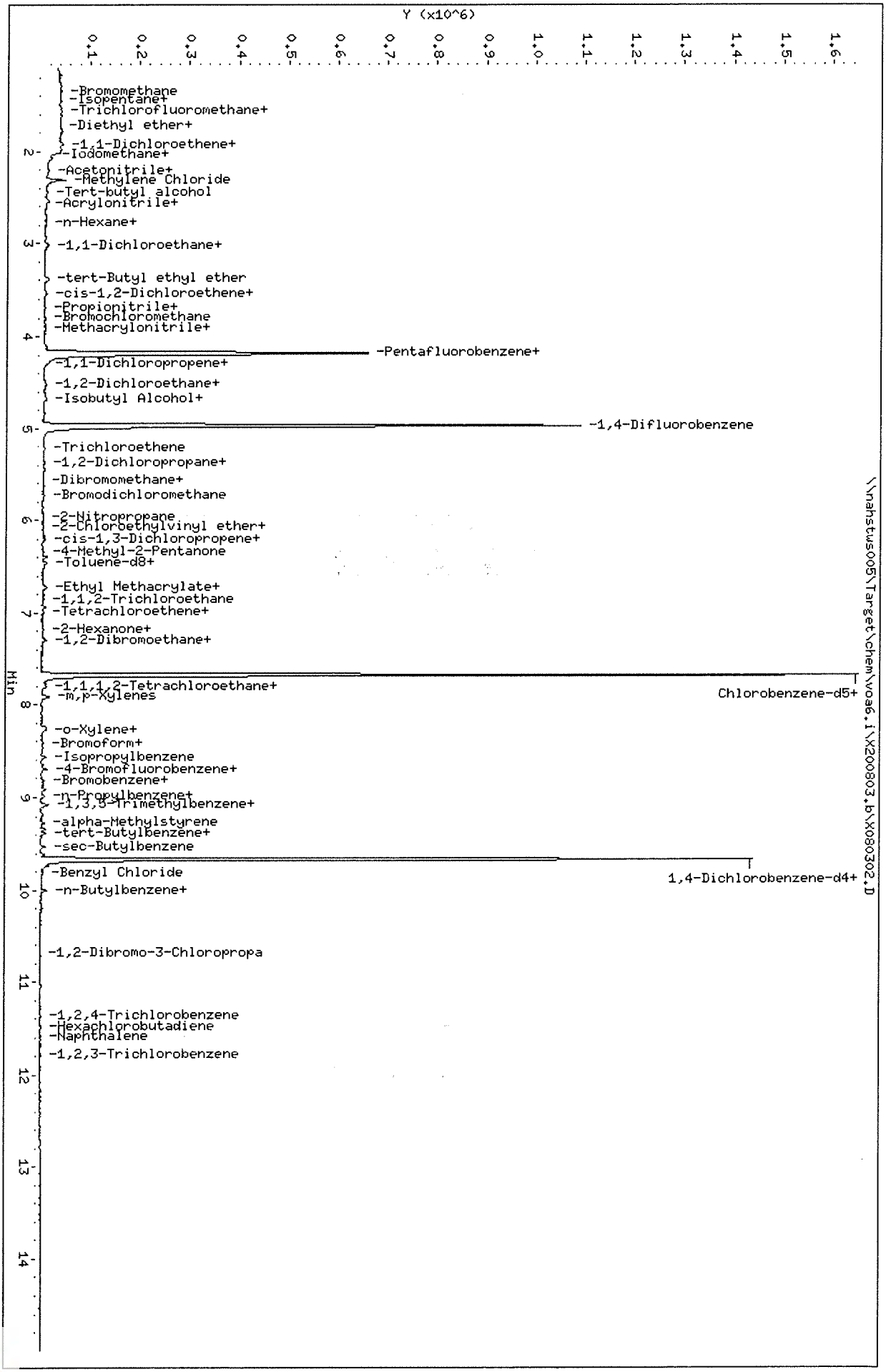
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	2225	0.25000	0.26 (a)
42	1,2-Dichloropropane	63	5.450	5.450	(1.097)	1294	0.25000	0.20 (aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	4991	0.25000	0.26 (a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2610	0.25000	0.23 (a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	2288	0.25000	0.26 (aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	3060	0.25000	0.27 (a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	2227	0.25000	0.27 (aM)
24	2-Butanone	43	3.638	3.638	(0.868)	1048	0.50000	0.37 (aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	4316	0.25000	0.27 (a)
52	2-Hexanone	43	7.112	7.112	(0.927)	2498	0.50000	0.52 (a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	4822	0.25000	0.26 (a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	5222	0.25000	0.26 (a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	3501	0.50000	0.49 (a)
10	Acetone	43	1.976	1.976	(0.472)	4869	0.50000	1.39 (aM)
37	Benzene	78	4.526	4.526	(0.911)	5575	0.25000	0.25 (a)
74	Bromobenzene	156	8.817	8.817	(0.912)	1749	0.25000	0.25 (a)
29	Bromochloromethane	128	3.795	3.795	(0.906)	1013	0.25000	0.29 (aM)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	2345	0.25000	0.30 (aM)
66	Bromoform	173	8.416	8.416	(1.097)	1002	0.25000	0.23 (aM)
6	Bromomethane	94	1.346	1.346	(0.321)	1280	0.25000	0.97 (aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	6971	0.50000	0.49 (a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	2189	0.25000	0.28 (a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	4245	0.25000	0.28 (a)
7	Chloroethane	64	1.410	1.410	(0.337)	1194	0.25000	0.29 (aM)
28	Chloroform	83	3.910	3.910	(0.933)	2183	0.25000	0.21 (a)
3	Chloromethane	50	1.081	1.081	(0.258)	2410	0.25000	0.29 (a)
27	cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	1634	0.25000	0.25 (a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	2355	0.25000	0.25 (a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	1646	0.25000	0.26 (a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1127	0.25000	0.29 (a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1555	0.25000	0.27 (aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	2026	0.25000	0.26 (aM)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	351	0.25000	0.18 (aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	5606	0.25000	0.24 (a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	4680	0.50000	0.50 (a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	13192	0.25000	0.91 (aM)
87	n-Butylbenzene	91	10.006	10.006	(1.035)	4073	0.25000	0.25 (a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	6307	0.25000	0.24 (a)
92	Naphthalene	128	11.589	11.589	(1.199)	698	0.25000	0.12 (aM)
63	o-Xylene	106	8.251	8.251	(1.076)	2471	0.25000	0.26 (a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	5521	0.25000	0.25 (a)
64	Styrene	104	8.272	8.272	(1.078)	3575	0.25000	0.22 (a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	4130	0.25000	0.25 (a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1260	0.25000	0.25 (a)
50	Toluene	91	6.460	6.460	(0.842)	6876	0.25000	0.30 (aM)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1215	0.25000	0.22 (aM)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2328	0.25000	0.27 (aM)
38	Trichloroethene	130	5.214	5.214	(1.049)	1542	0.25000	0.25 (a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1948	0.25000	0.23 (a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1889	0.25000	0.25 (a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page
Report Date: 22-Aug-2020 11:54

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
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Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-AUG-2020 12:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 11:40 Cal File: X080302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

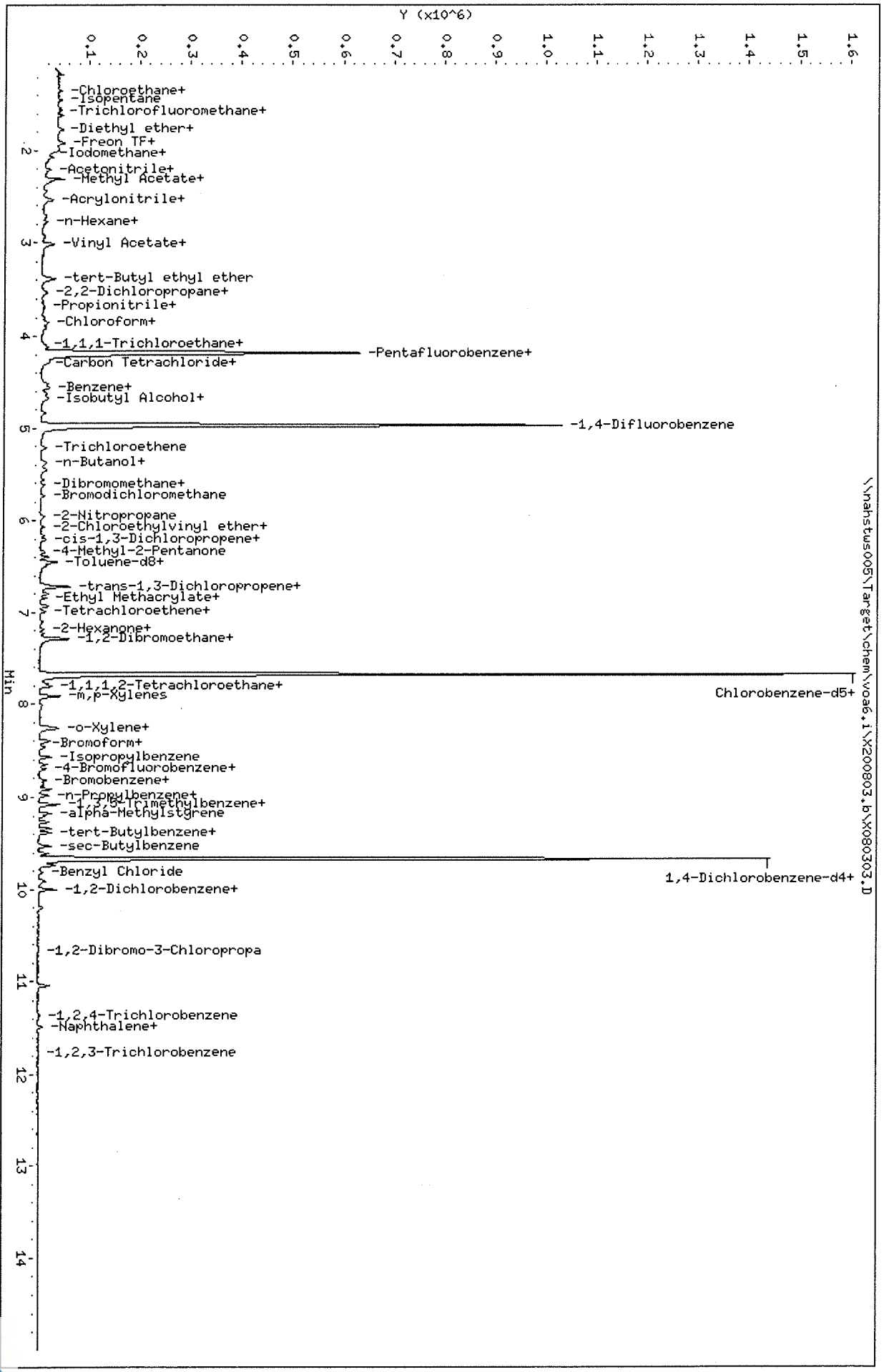
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	544079	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	825062	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	734728	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351808	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	2875	0.50000	0.53(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	3638	0.50000	0.57(aM)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	9247	0.50000	0.51(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3831	0.50000	0.55(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3529	0.50000	0.63(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	5010	0.50000	0.59(aM)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3887	0.50000	1.06(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2550	0.50000	0.60(aM)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	5969	0.50000	0.56(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	2144	0.50000	0.49(aM)
	32 1,1-Dichloropropene	75	4.297	4.297	(0.865)	4094	0.50000	0.59(aM)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	642	0.50000	0.60(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	3074	0.50000	0.59(aM)
	90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	1350	0.50000	0.14(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	11934	0.50000	0.63(aM)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	394	0.50000	1.56(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3081	0.50000	0.57(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	6299	0.50000	0.63(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	4445	0.50000	0.55(aM)
42	1,2-Dichloropropane	63	5.450	5.450	(1.097)	3223	0.50000	0.53(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	10923	0.50000	0.59(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6943	0.50000	0.62(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	4895	0.50000	0.59(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	6675	0.50000	0.61(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	4808	0.50000	0.61(aM)
24	2-Butanone	43	3.609	3.609	(0.862)	2796	1.00000	1.04(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	8675	0.50000	0.56(aM)
52	2-Hexanone	43	7.105	7.105	(0.926)	4973	1.00000	1.07(aM)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	10688	0.50000	0.60(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	12071	0.50000	0.61(aM)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7990	1.00000	1.17(a)
10	Acetone	43	1.976	1.976	(0.472)	6244	1.00000	2.25(aM)
37	Benzene	78	4.526	4.526	(0.911)	12142	0.50000	0.59(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4364	0.50000	0.63(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	1908	0.50000	0.58(aM)
39	Bromodichloromethane	83	5.736	5.736	(1.154)	4753	0.50000	0.63(aM)
66	Bromoform	173	8.415	8.415	(1.097)	2599	0.50000	0.63(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	2498	0.50000	1.31(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	16094	1.00000	1.20(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4361	0.50000	0.59(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	9164	0.50000	0.63(a)
7	Chloroethane	64	1.403	1.403	(0.335)	2338	0.50000	0.60(a)
28	Chloroform	83	3.917	3.917	(0.935)	5814	0.50000	0.59(a)
3	Chloromethane	50	1.080	1.080	(0.258)	4829	0.50000	0.63(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	3487	0.50000	0.58(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	5096	0.50000	0.58(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3742	0.50000	0.63(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	2117	0.50000	0.58(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2895	0.50000	0.54(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	4683	0.50000	0.62(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	828	0.50000	0.43(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	13211	0.50000	0.60(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	10883	1.00000	1.21(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	13006	0.50000	1.00(aM)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	9792	0.50000	0.62(aM)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	15904	0.50000	0.62(a)
92	Naphthalene	128	11.560	11.560	(1.196)	1670	0.50000	0.48(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5447	0.50000	0.61(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	13181	0.50000	0.61(a)
64	Styrene	104	8.272	8.272	(1.078)	9169	0.50000	0.59(aM)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	10025	0.50000	0.62(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	3139	0.50000	0.67(a)
50	Toluene	91	6.453	6.453	(0.841)	13642	0.50000	0.63(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	2977	0.50000	0.58(aM)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	4694	0.50000	0.58(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3262	0.50000	0.55(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4721	0.50000	0.58(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	3935	0.50000	0.56(a)

QC Flag Legend

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

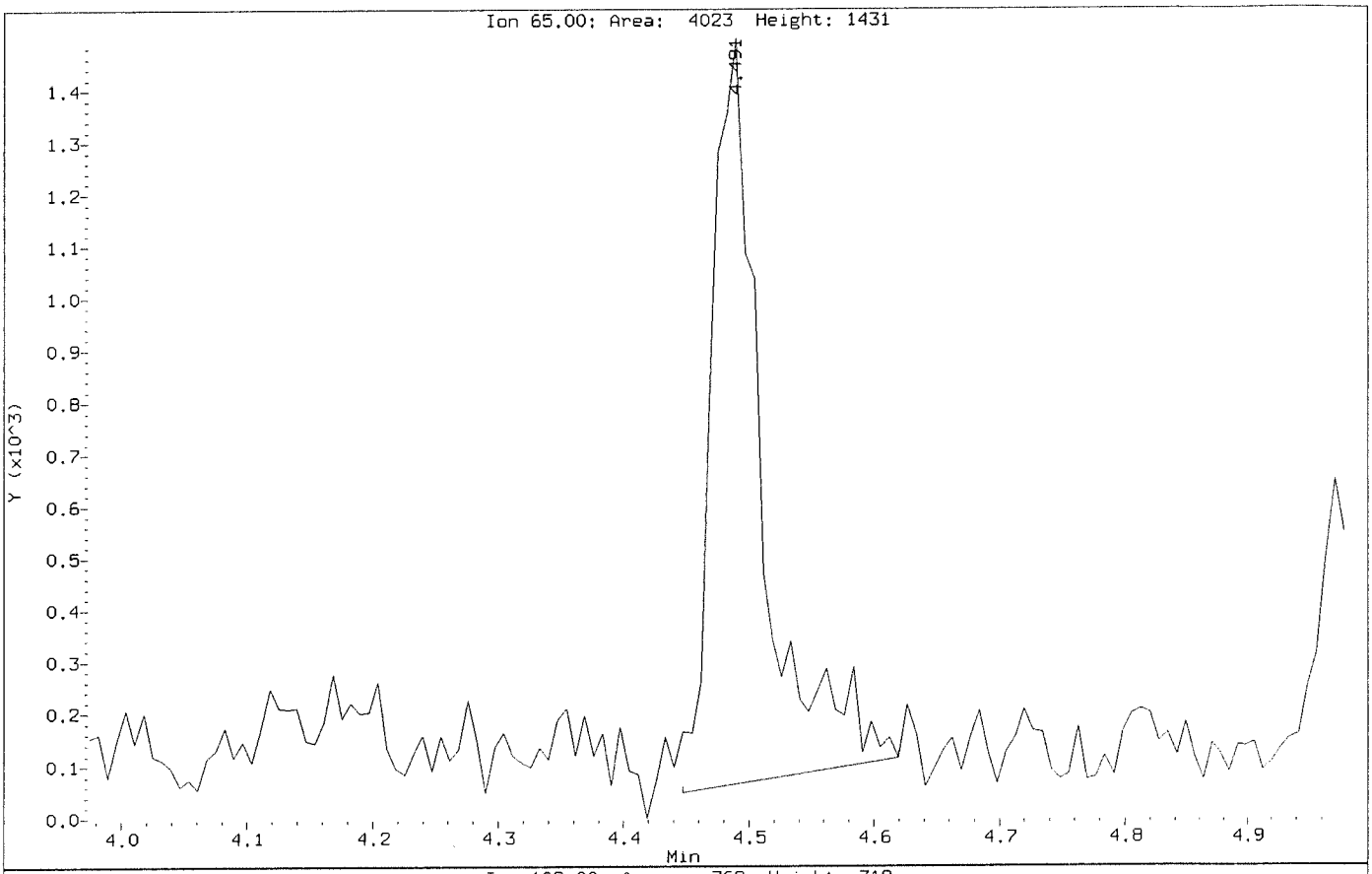


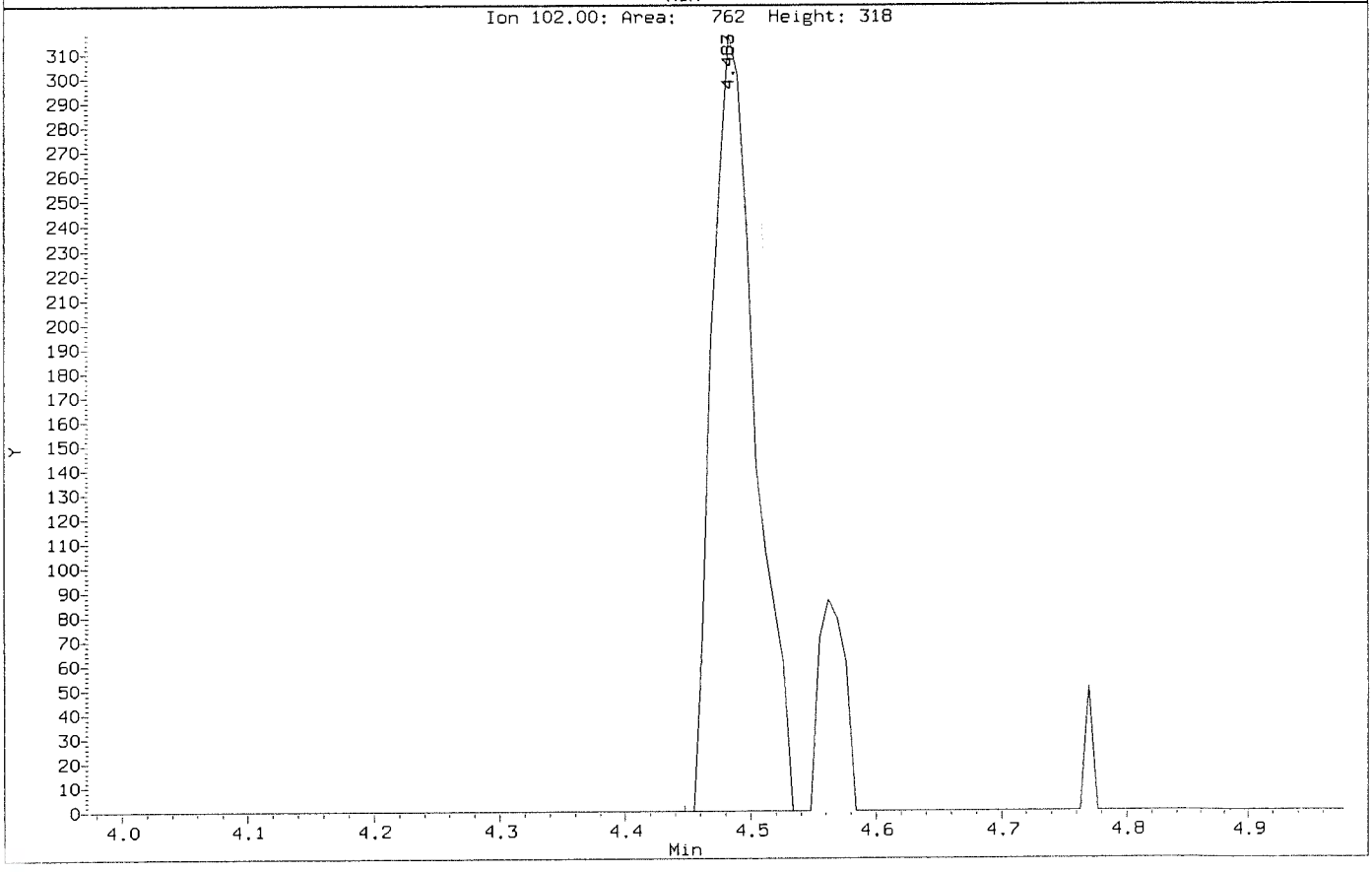
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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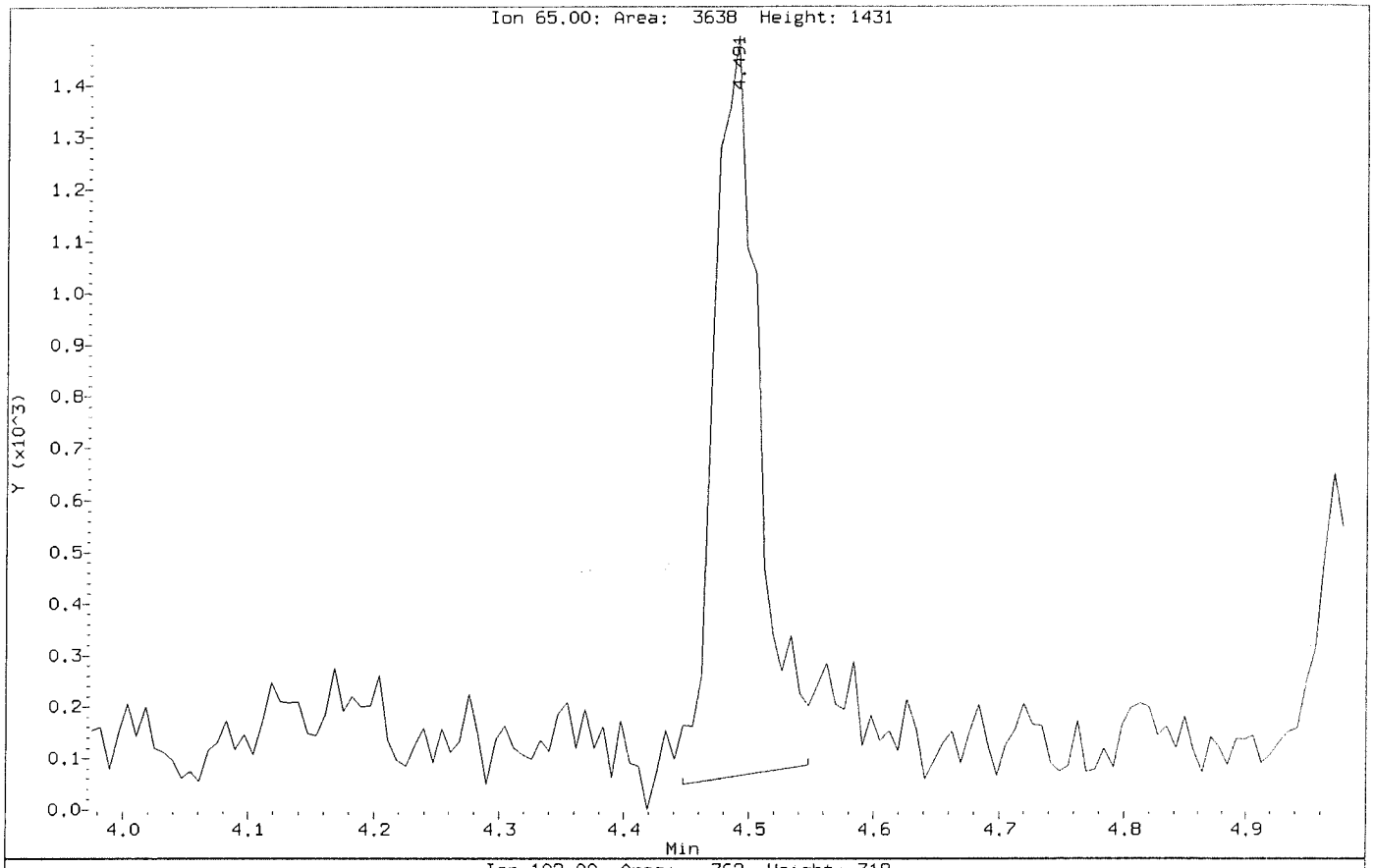
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CAS Number: 17060-07-0

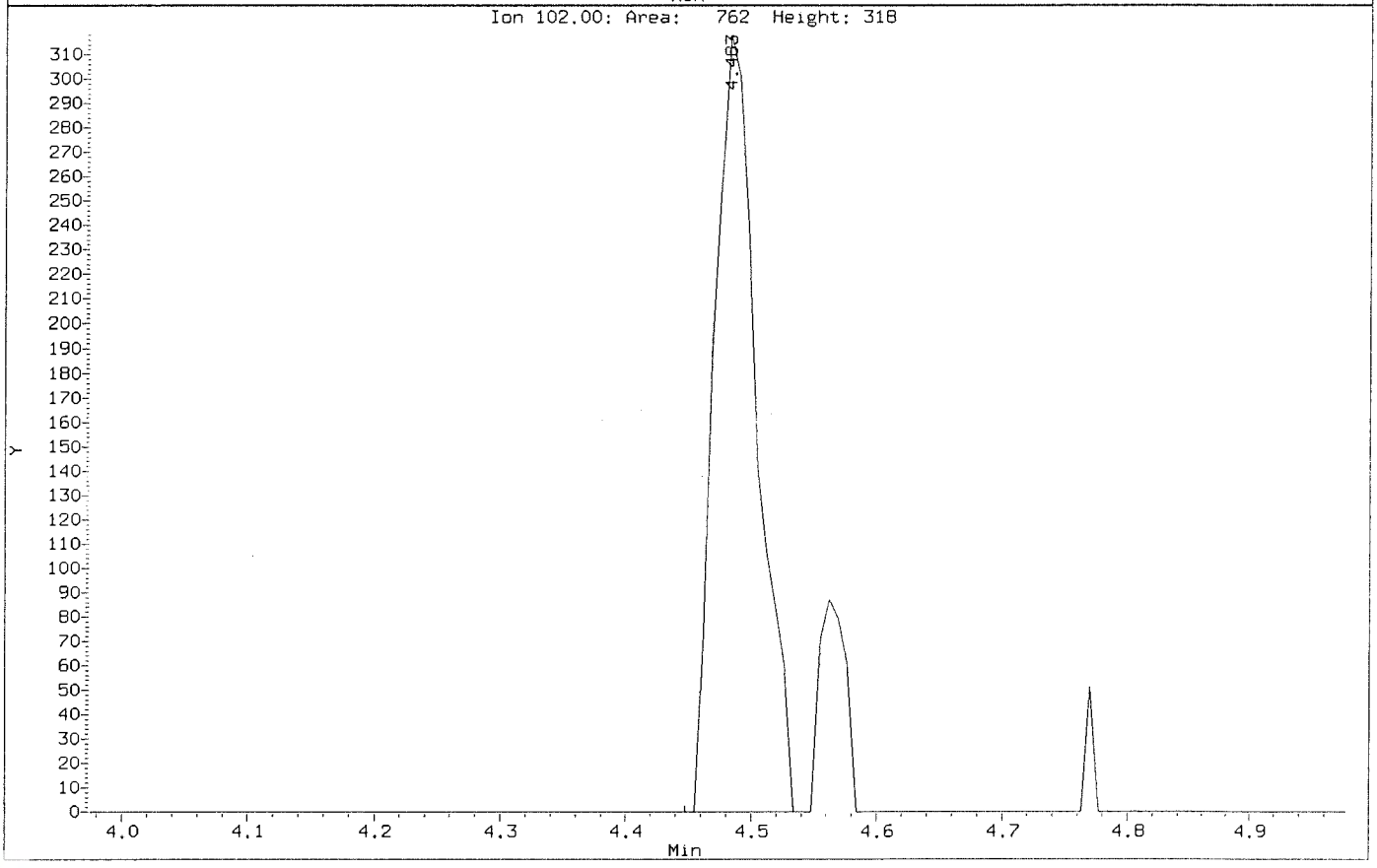




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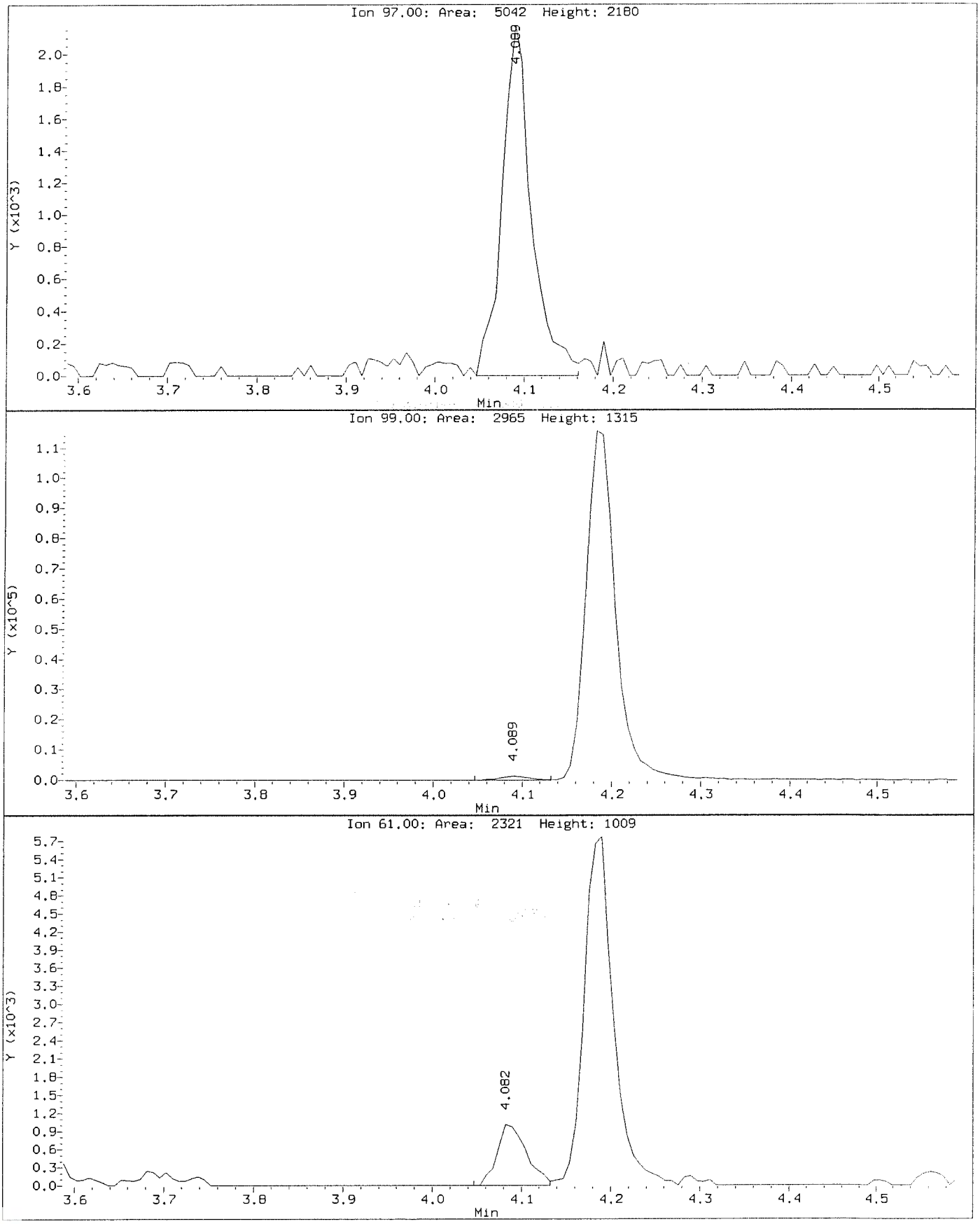
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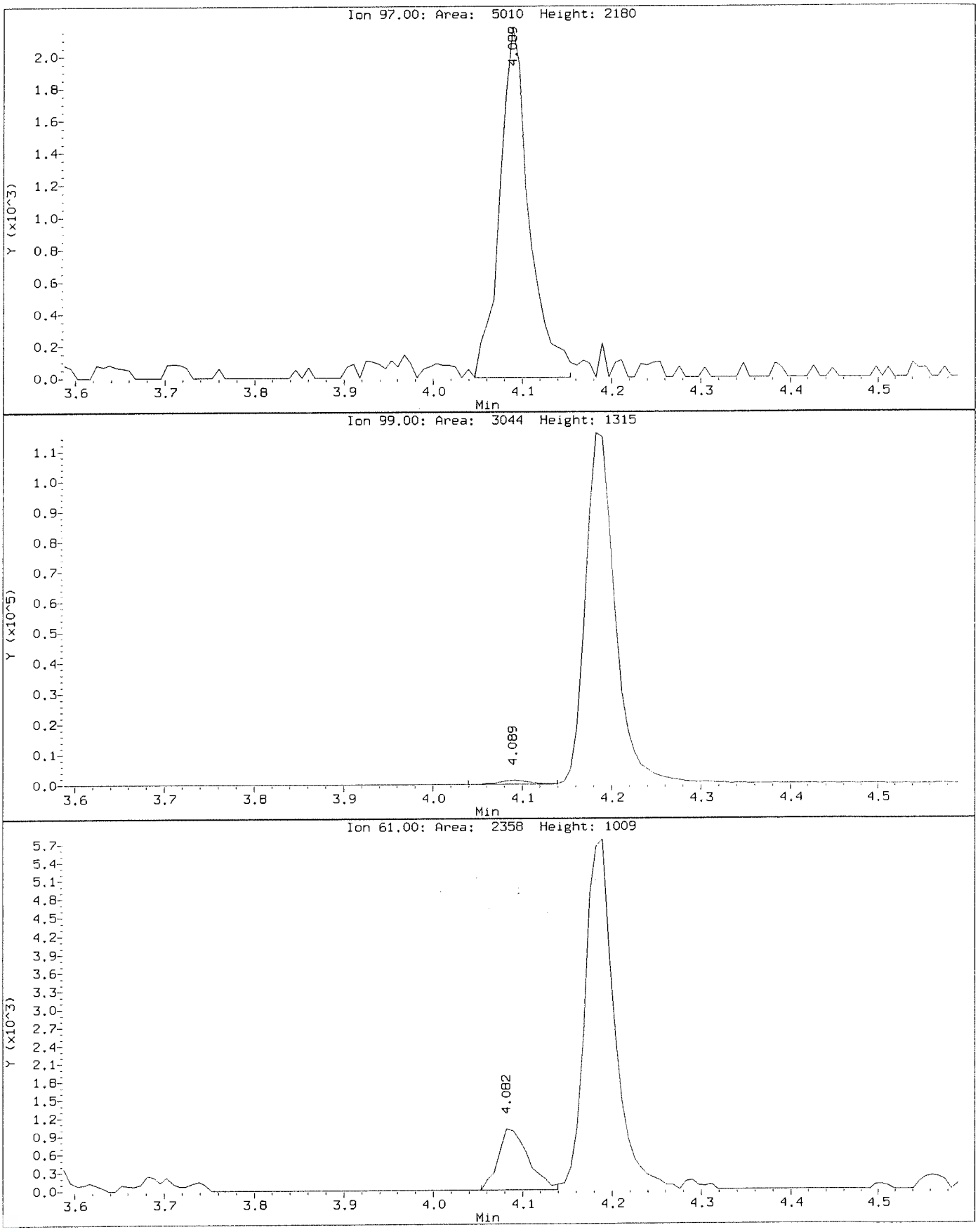
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



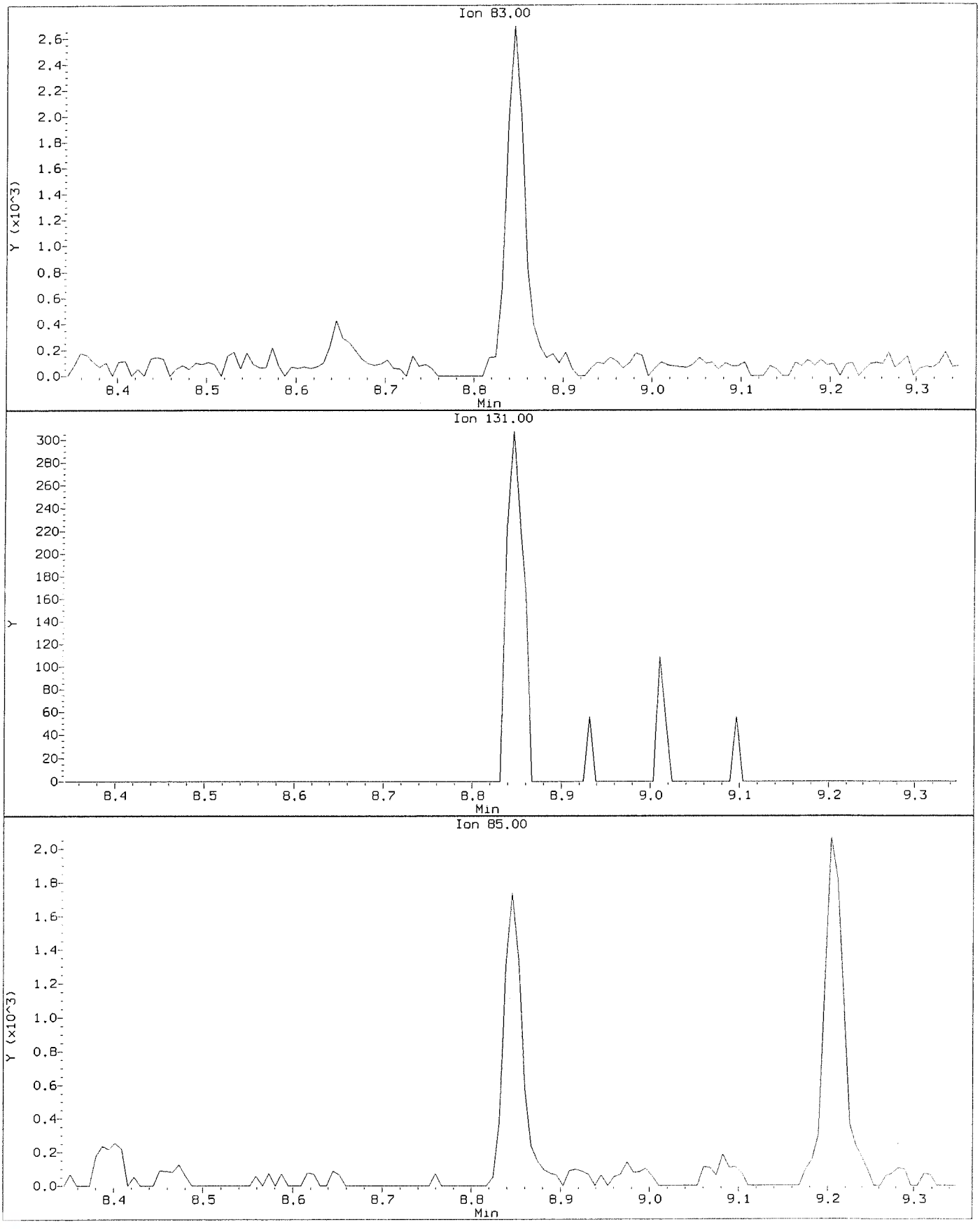
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



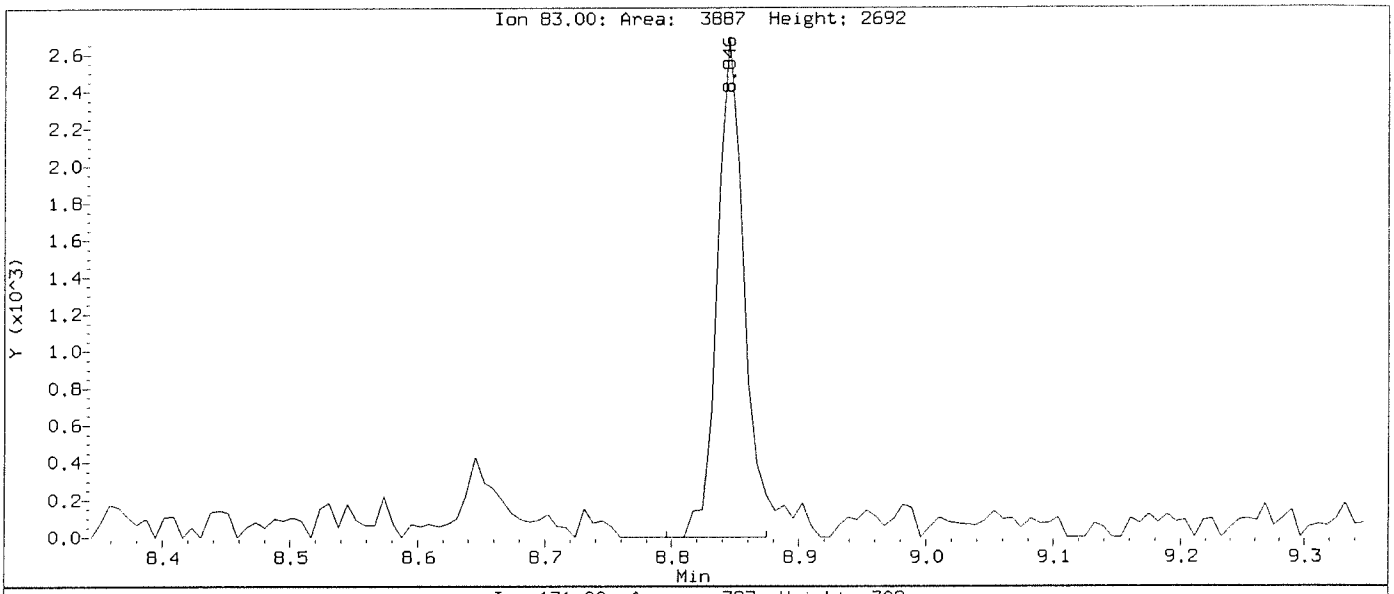
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Instrument: voa6.i
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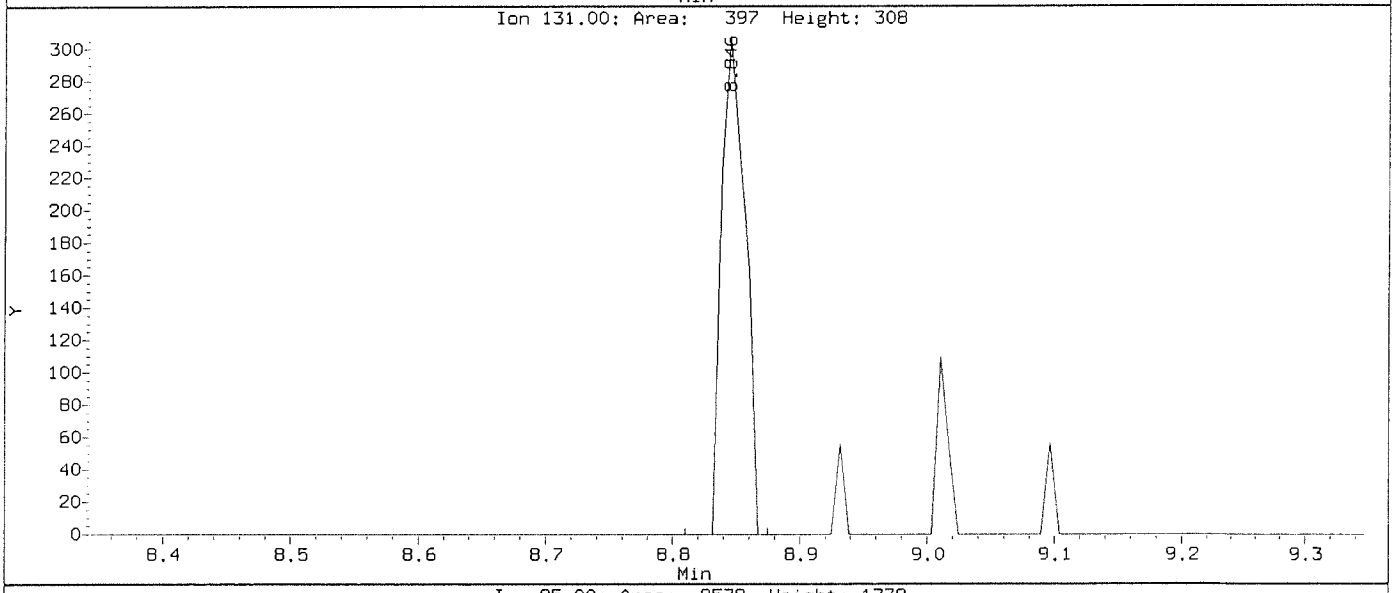
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

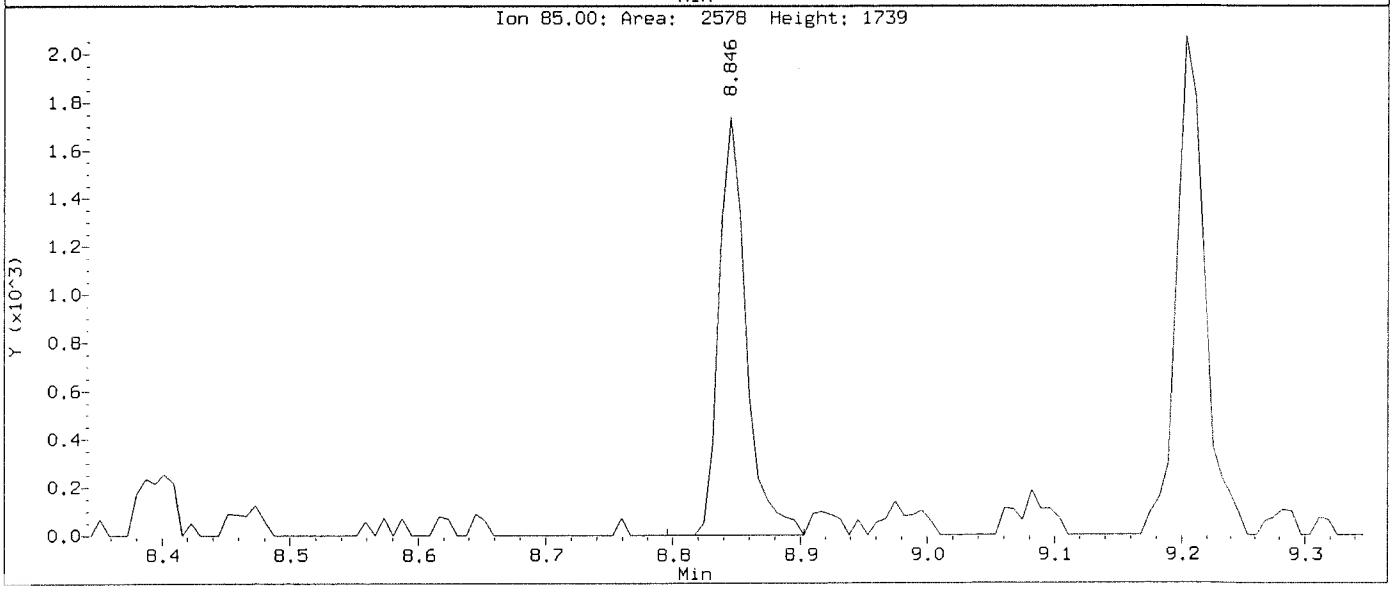


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

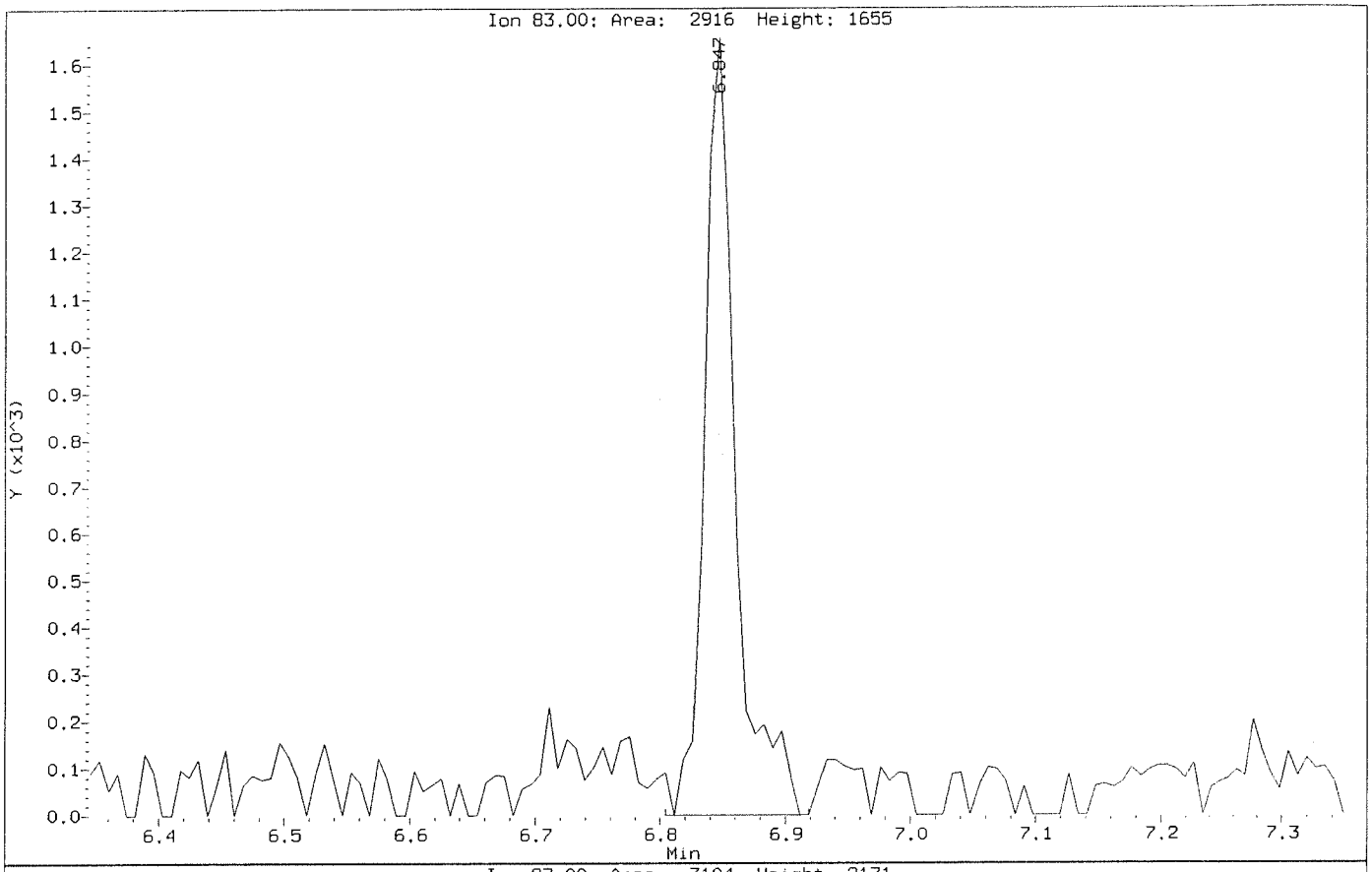


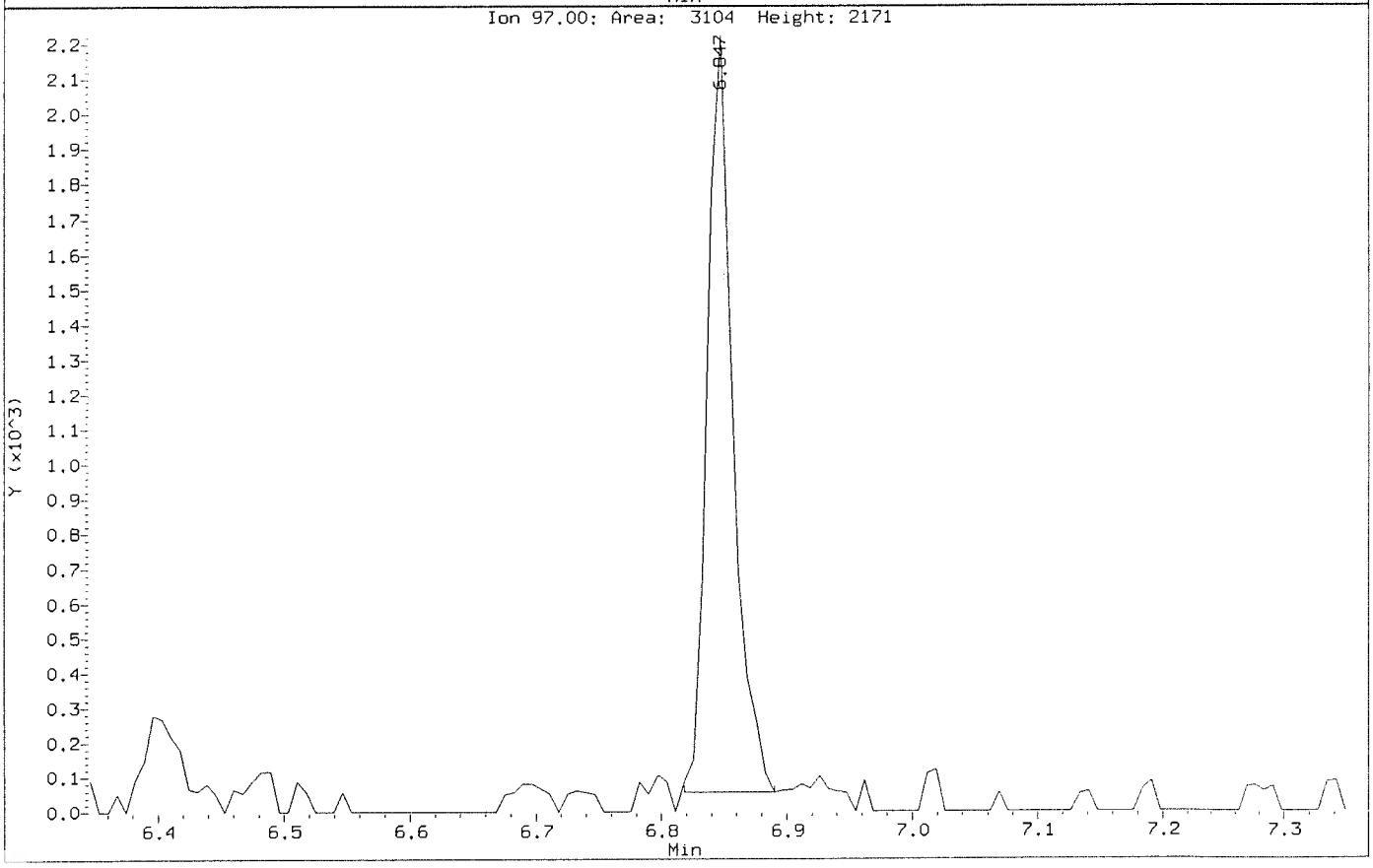




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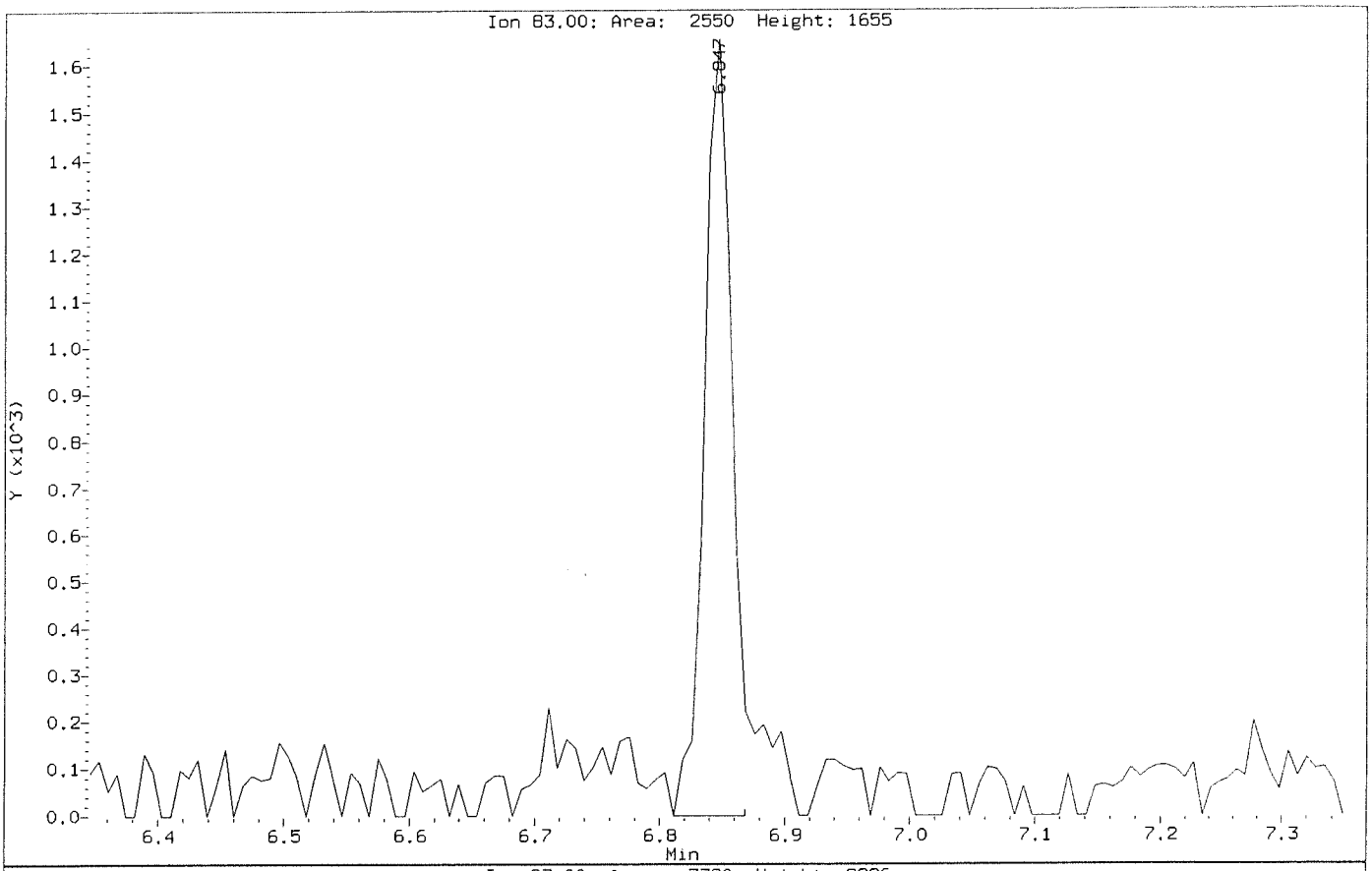
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

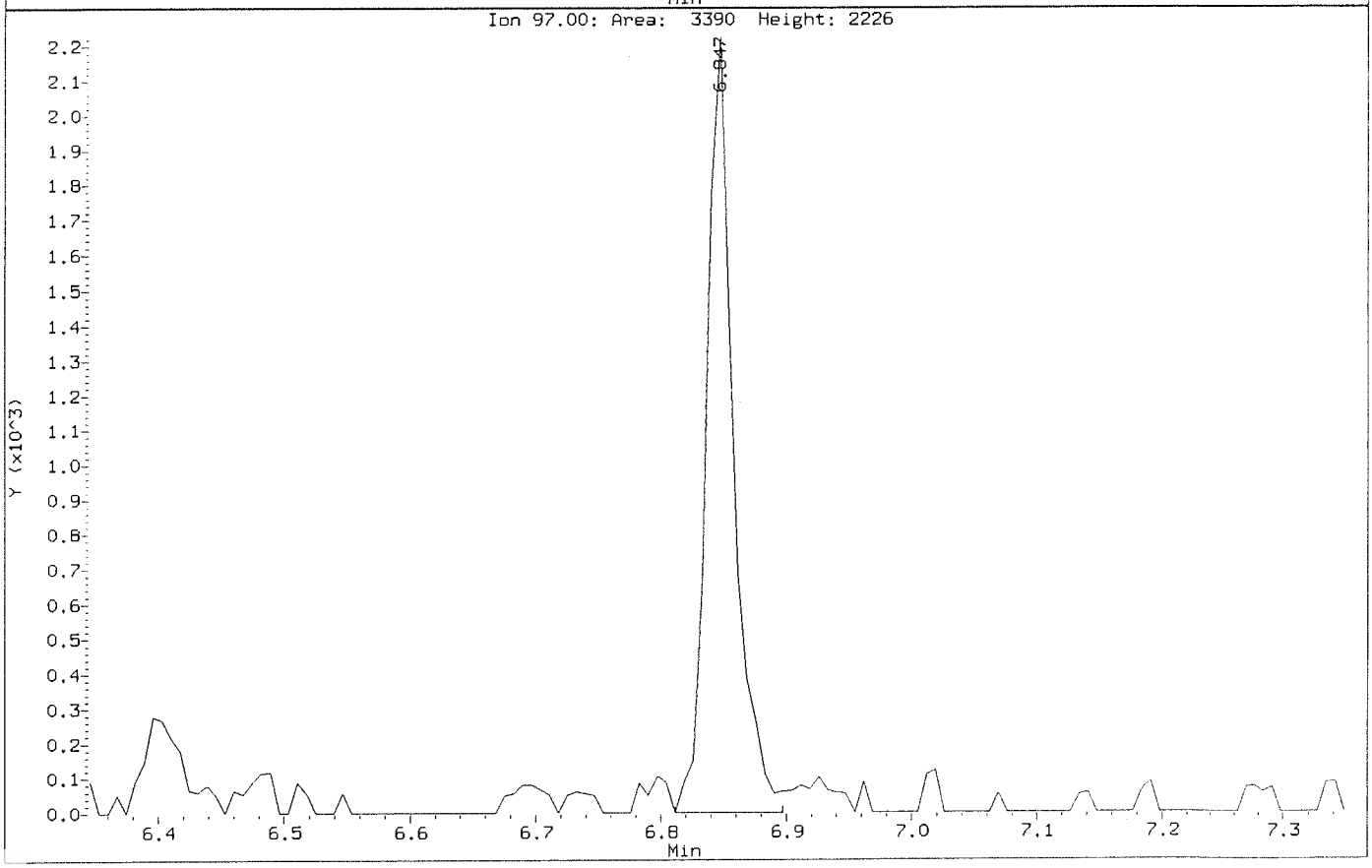




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Client Sample ID: VSTD000.5

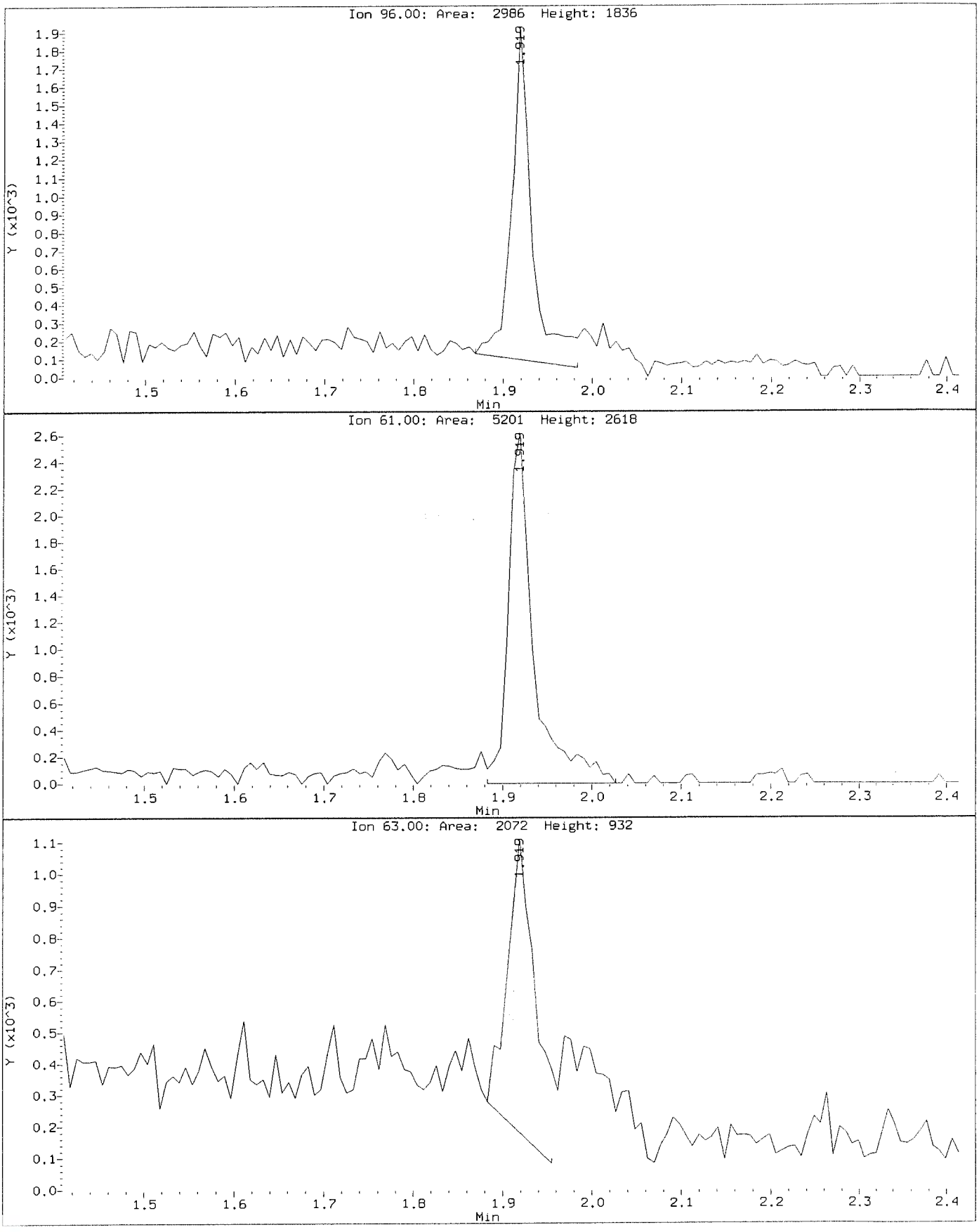
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CAS Number: 79-00-5





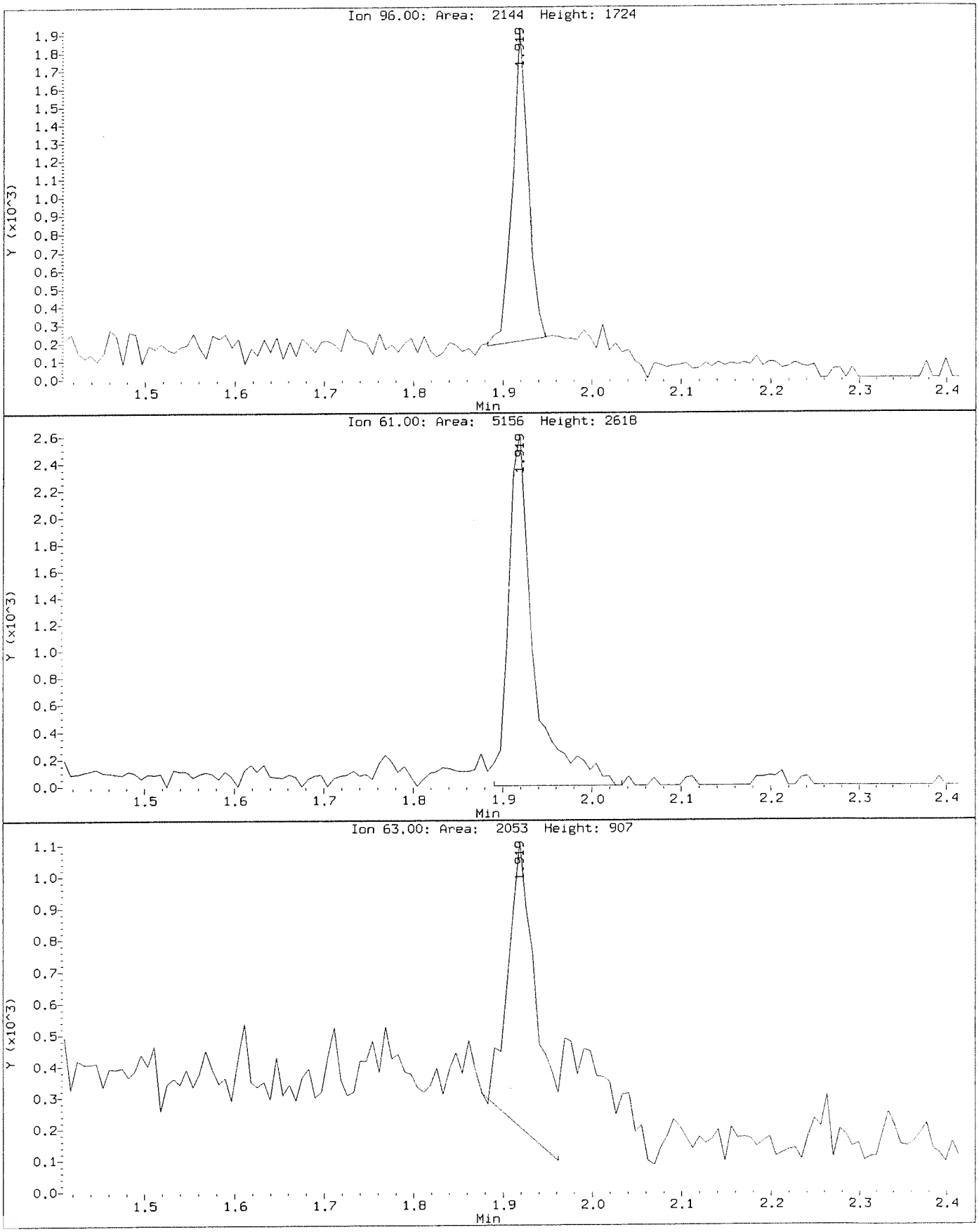
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



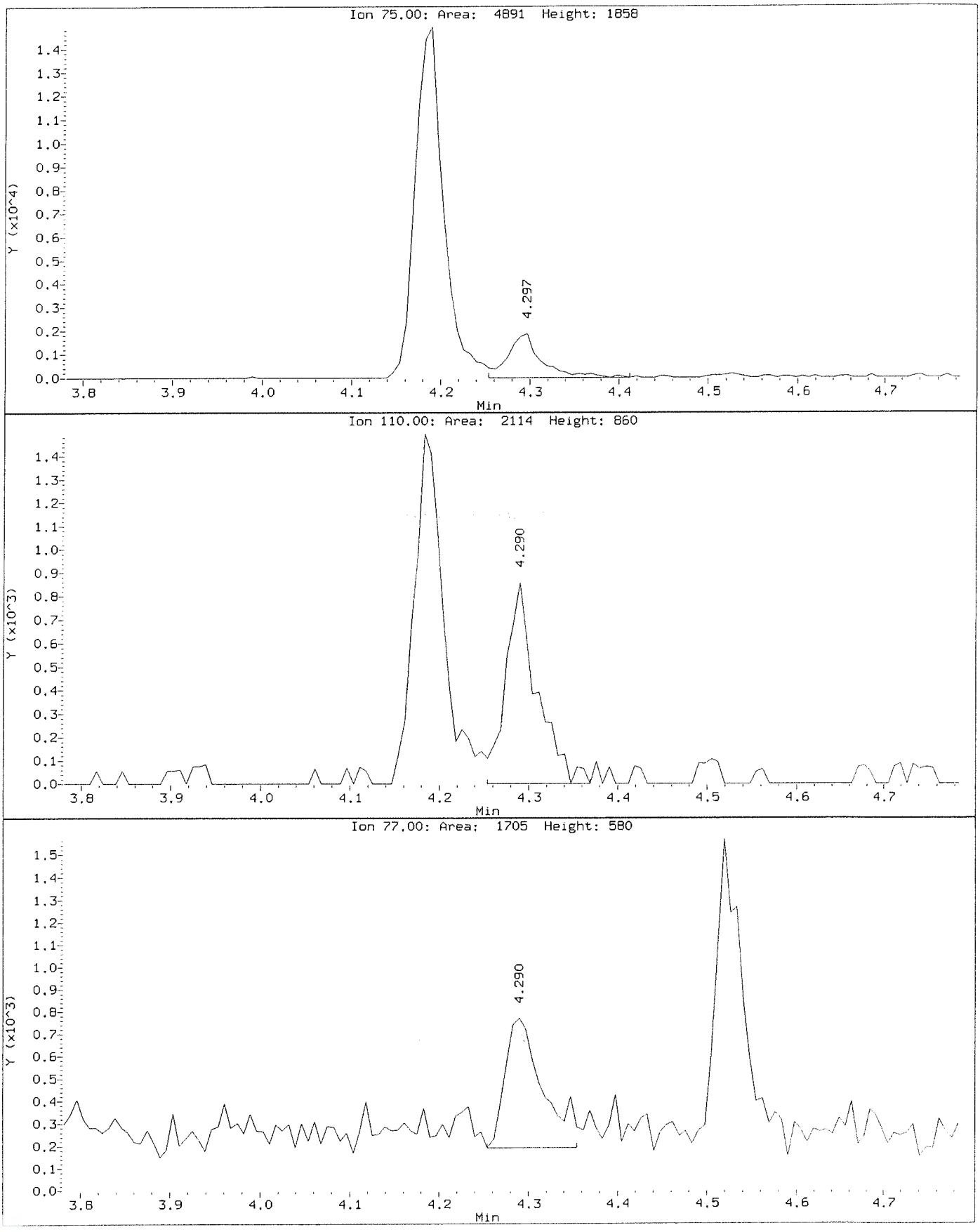
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Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



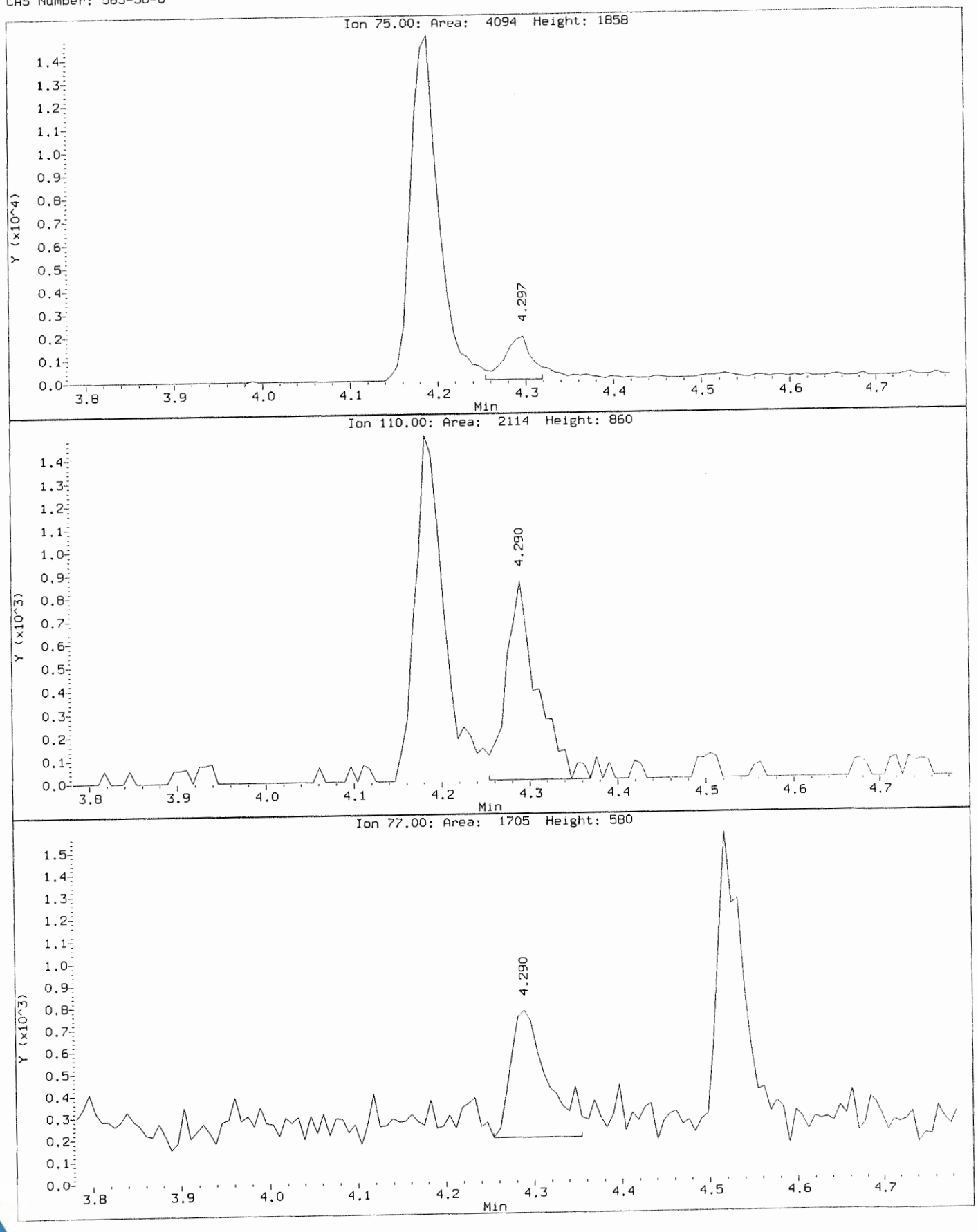
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



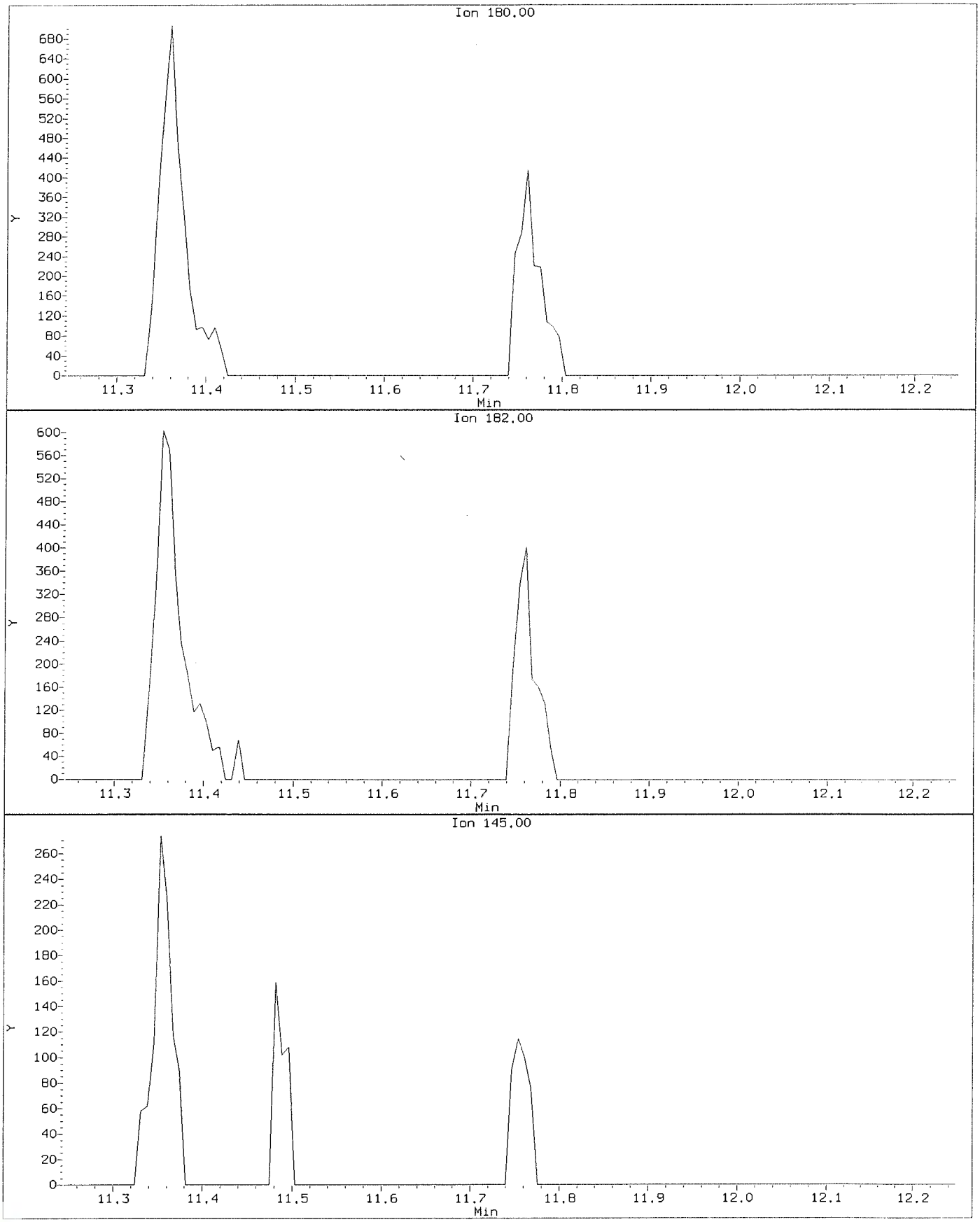
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



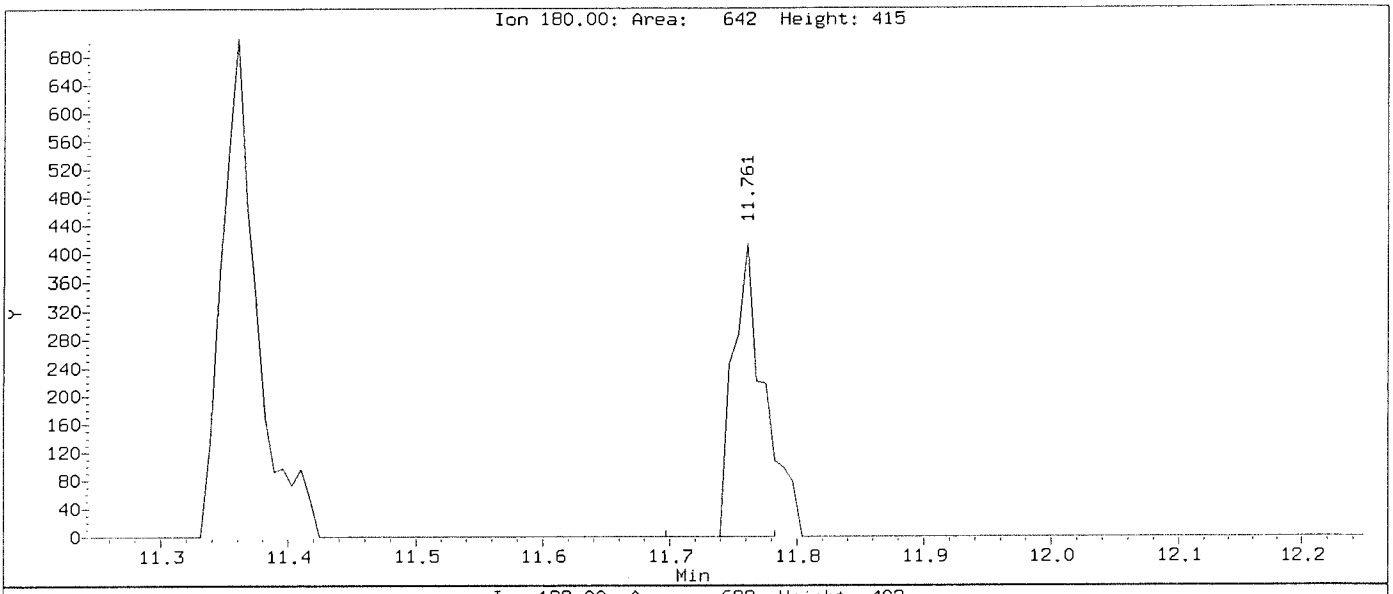
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Client Sample ID: VSTD000.5

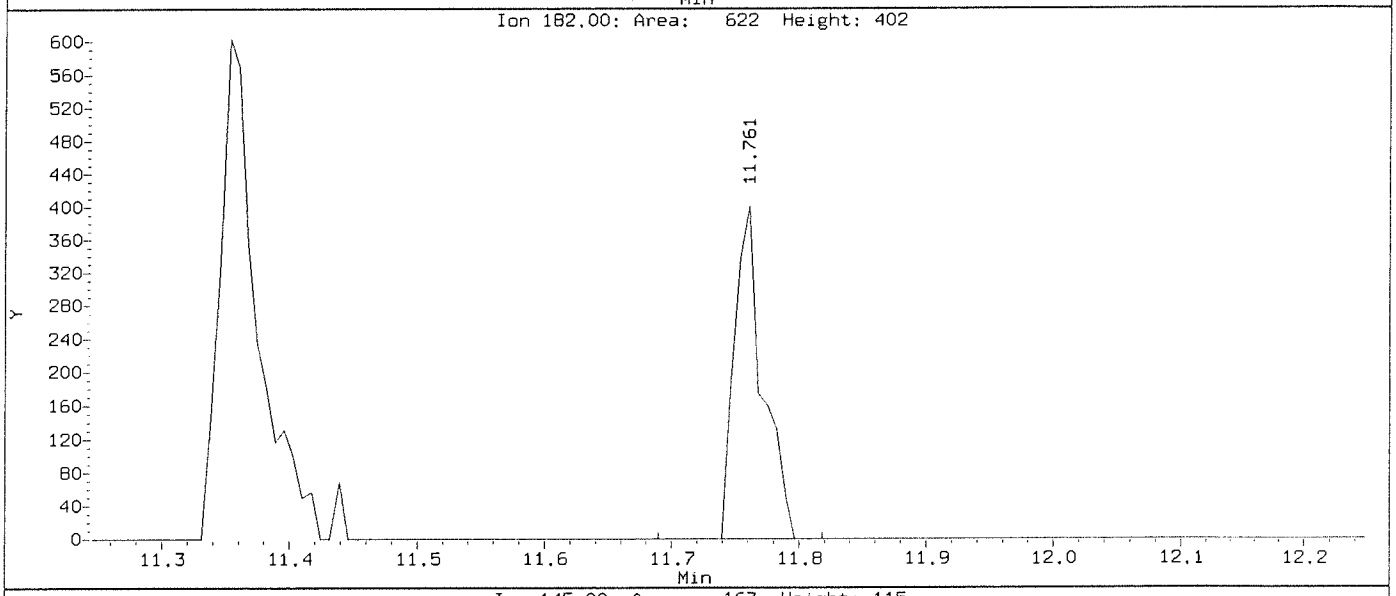
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

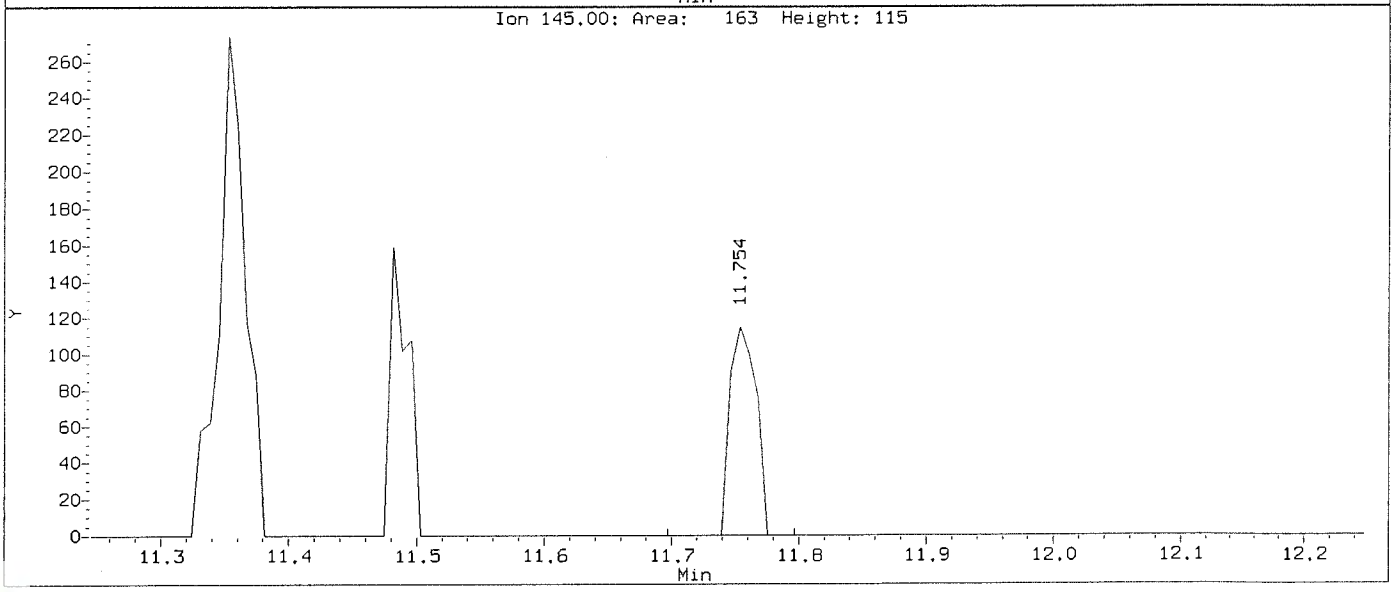


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

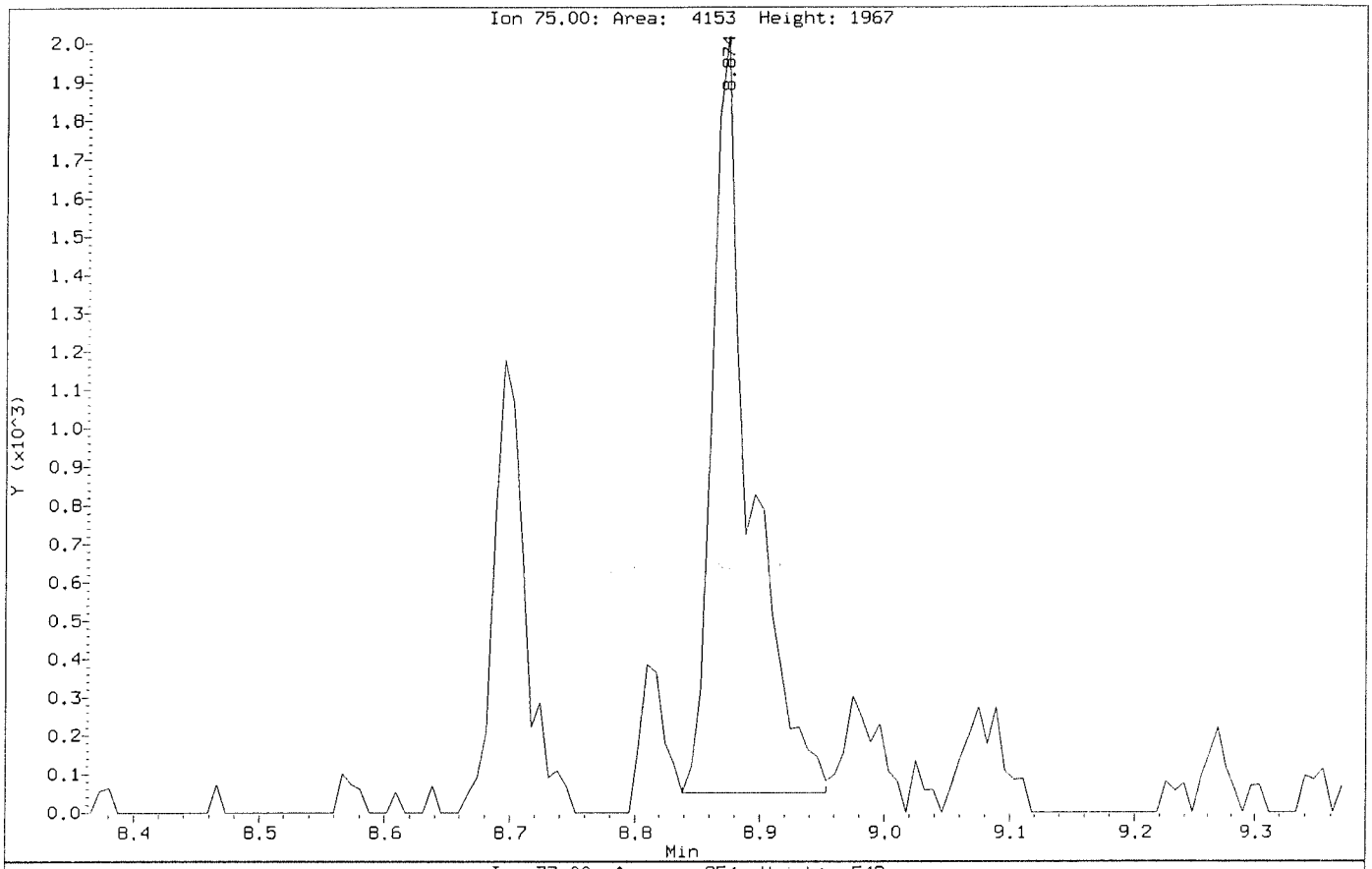


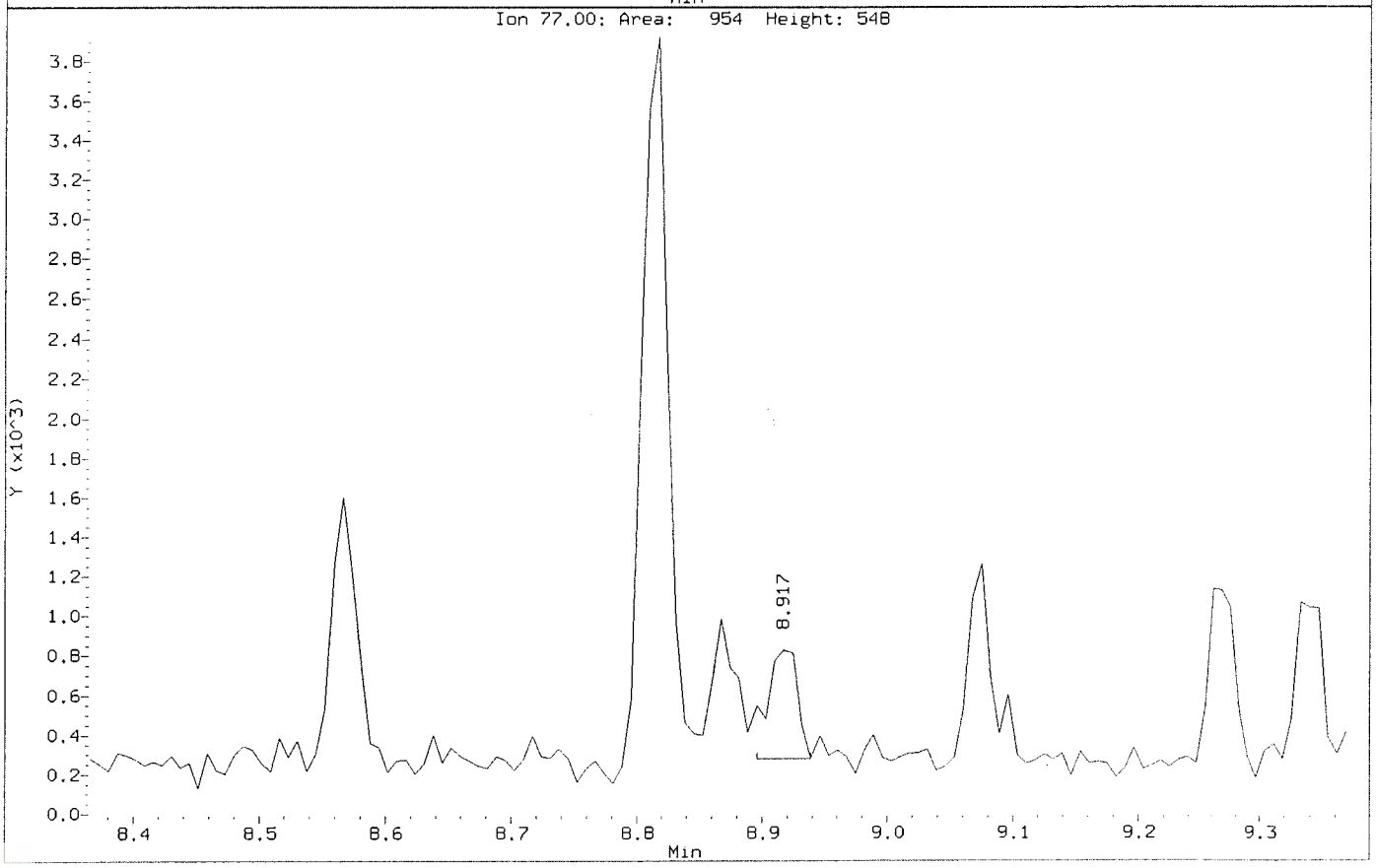




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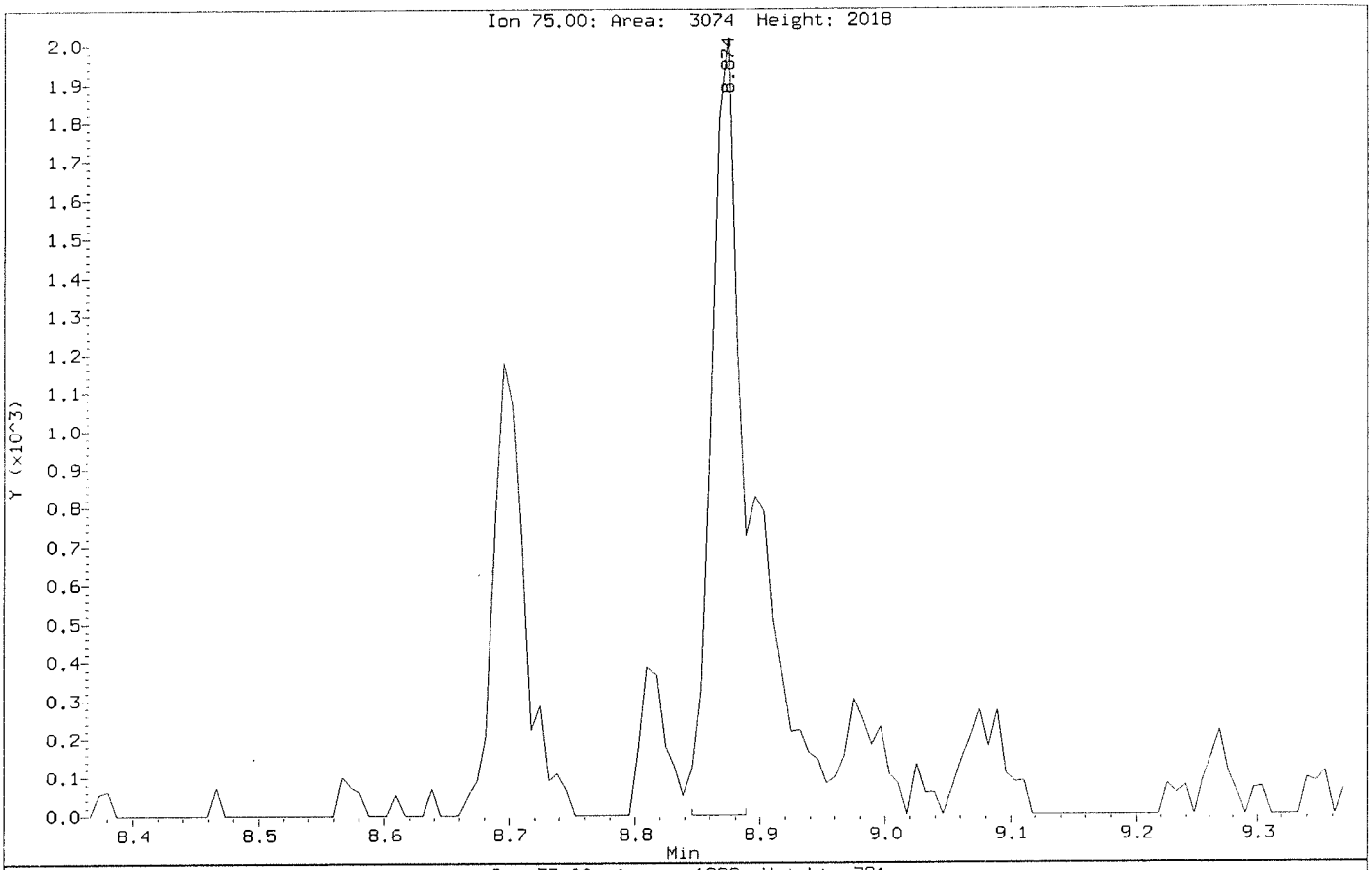
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

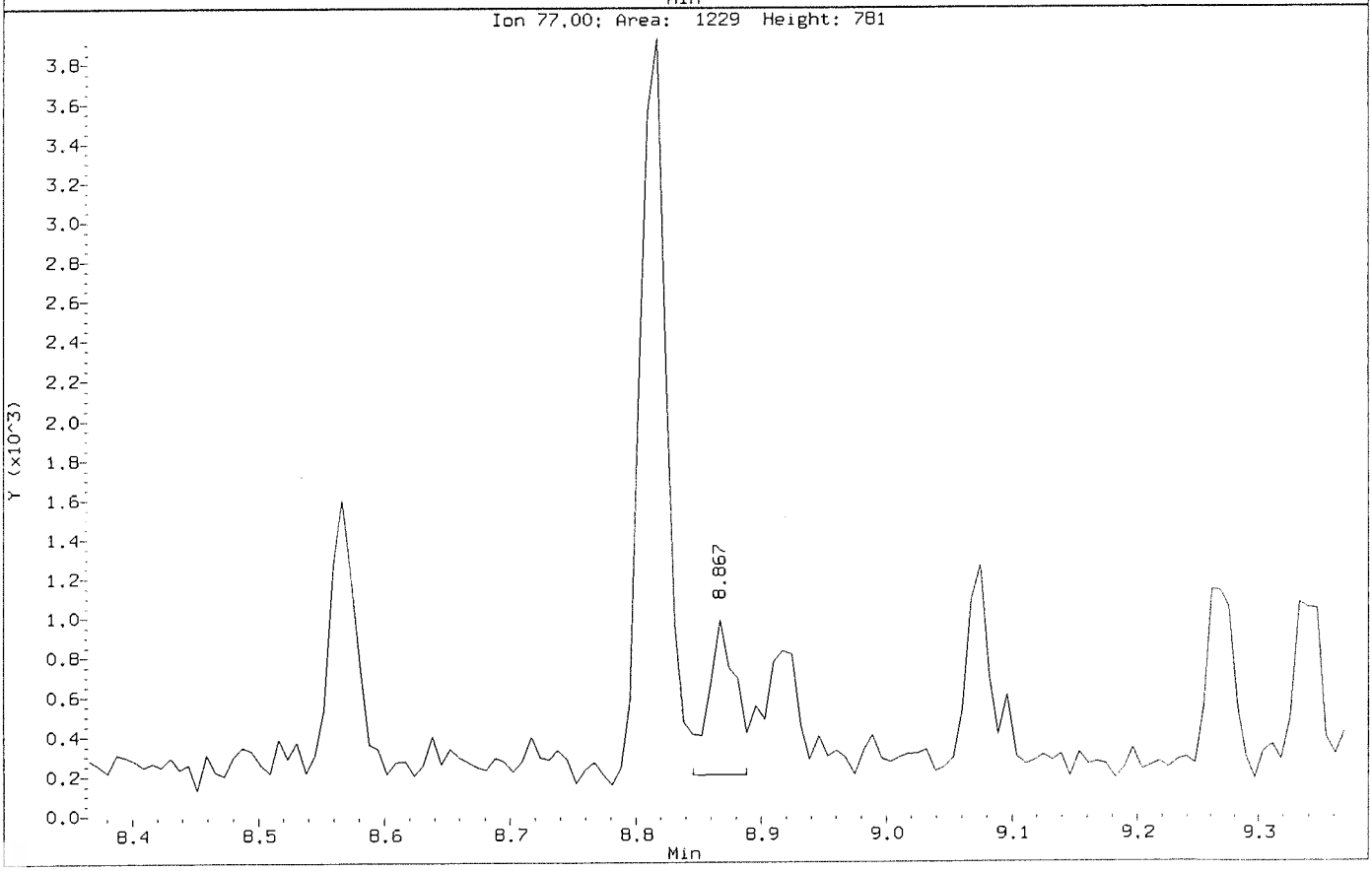




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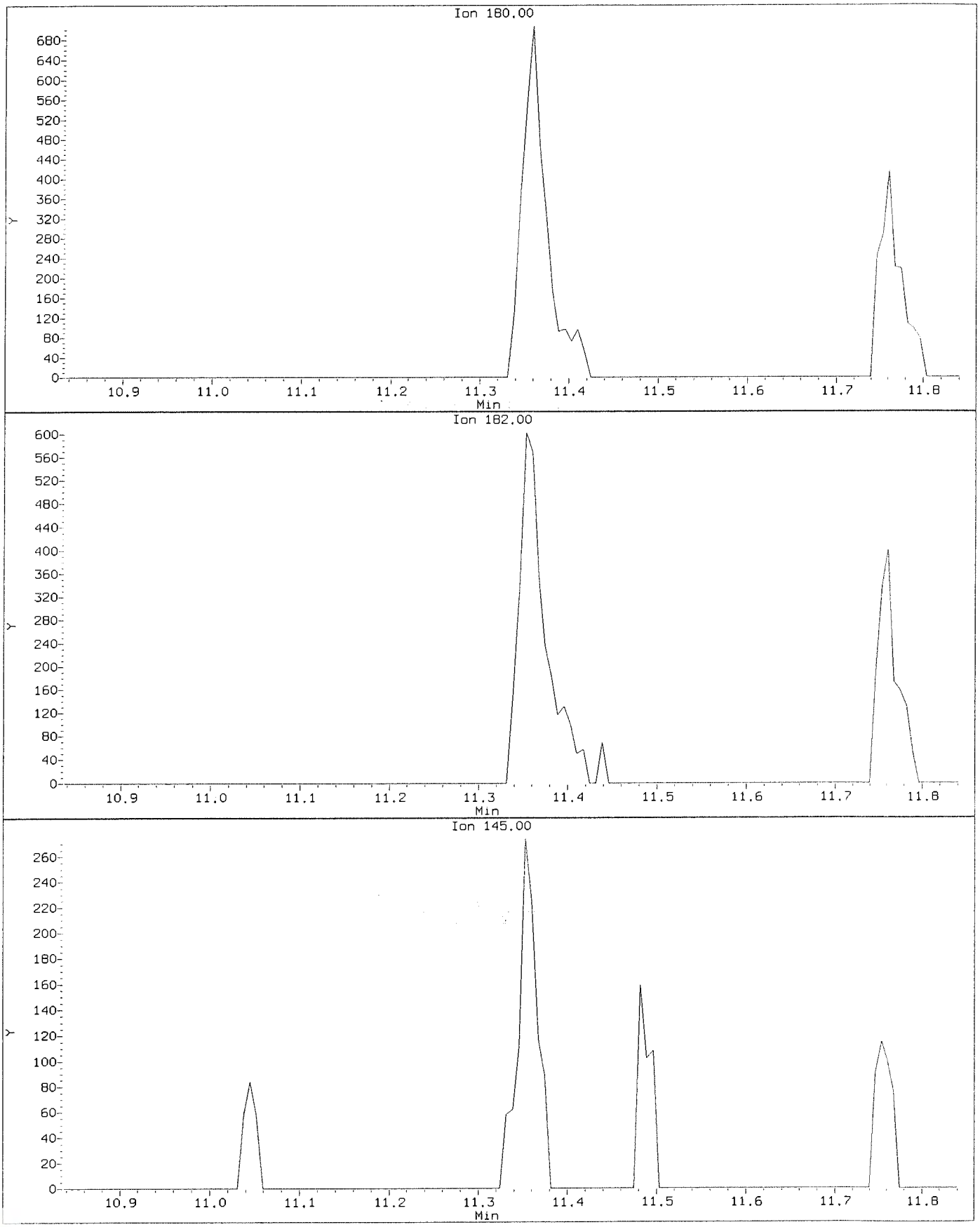
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





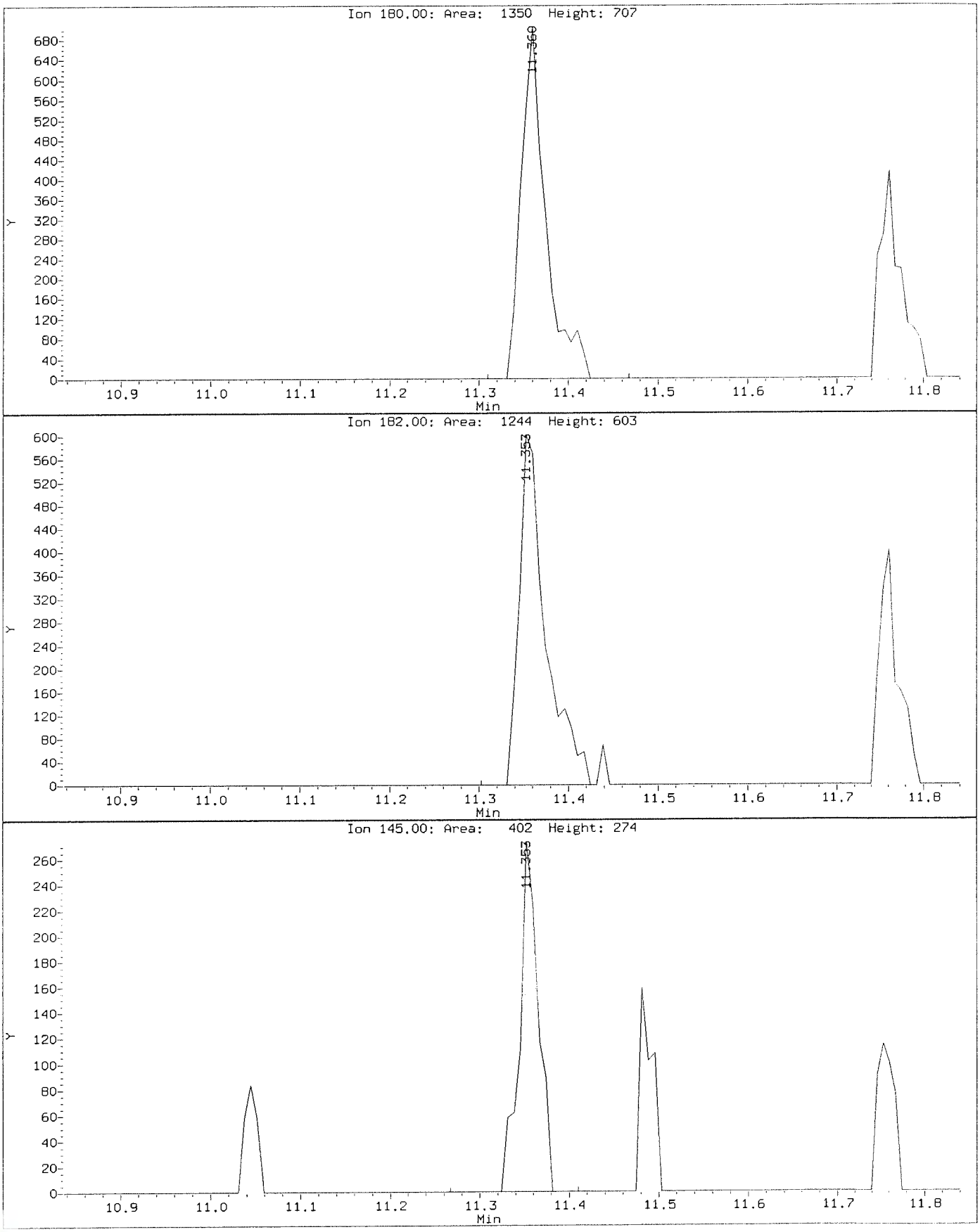
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



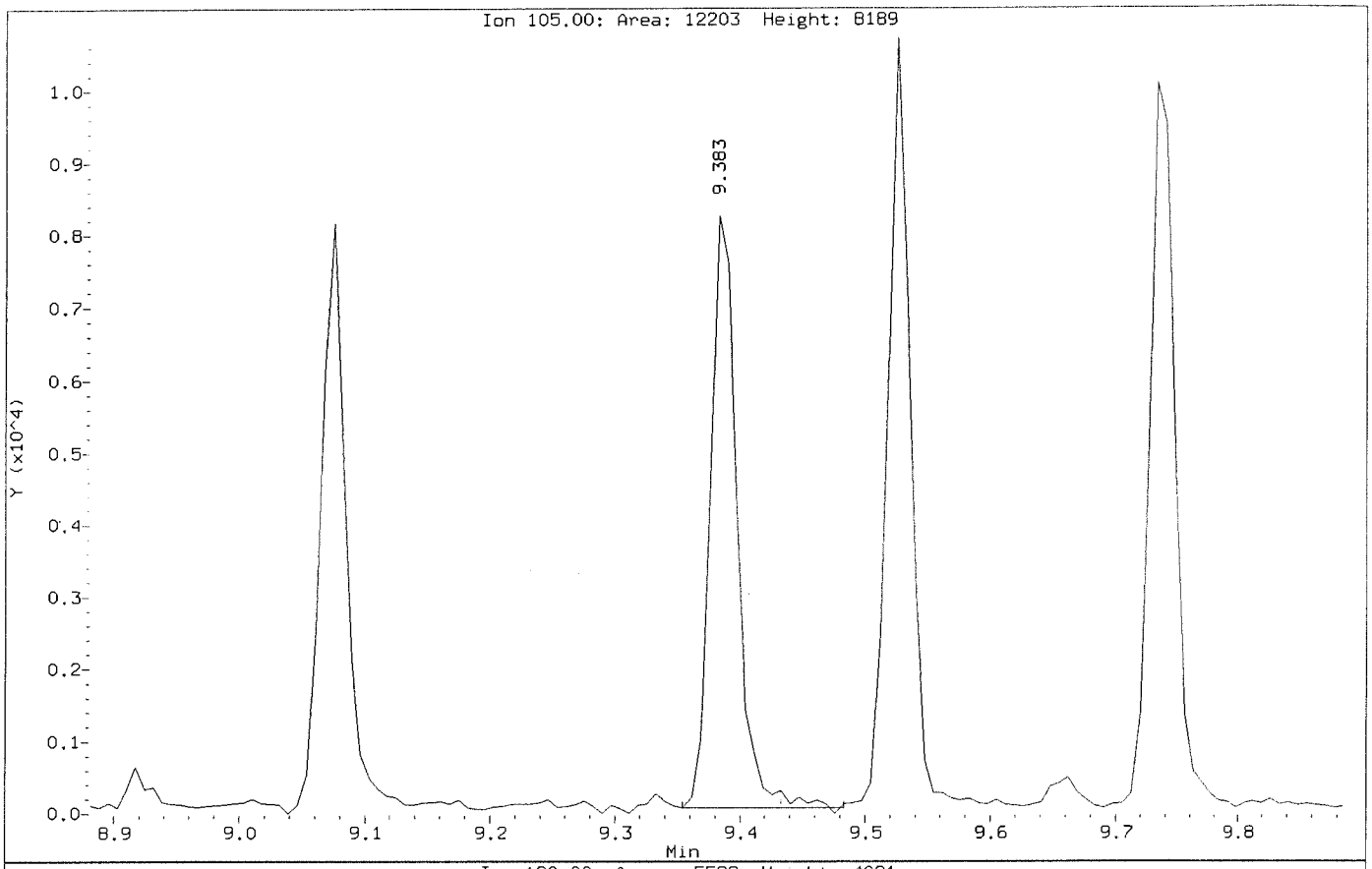
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Client Sample ID: VSTD000.5

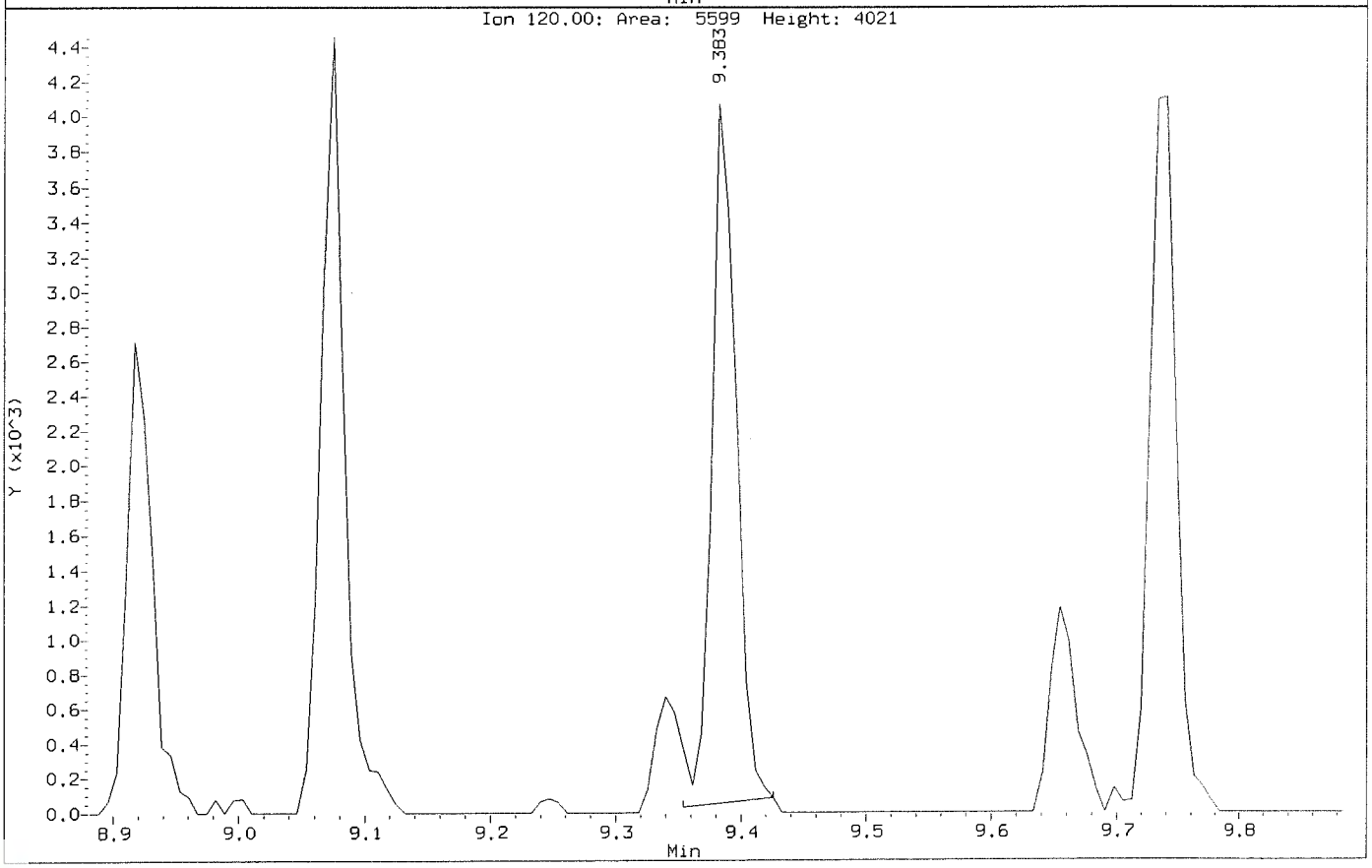
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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Client Sample ID: VSTD000.5

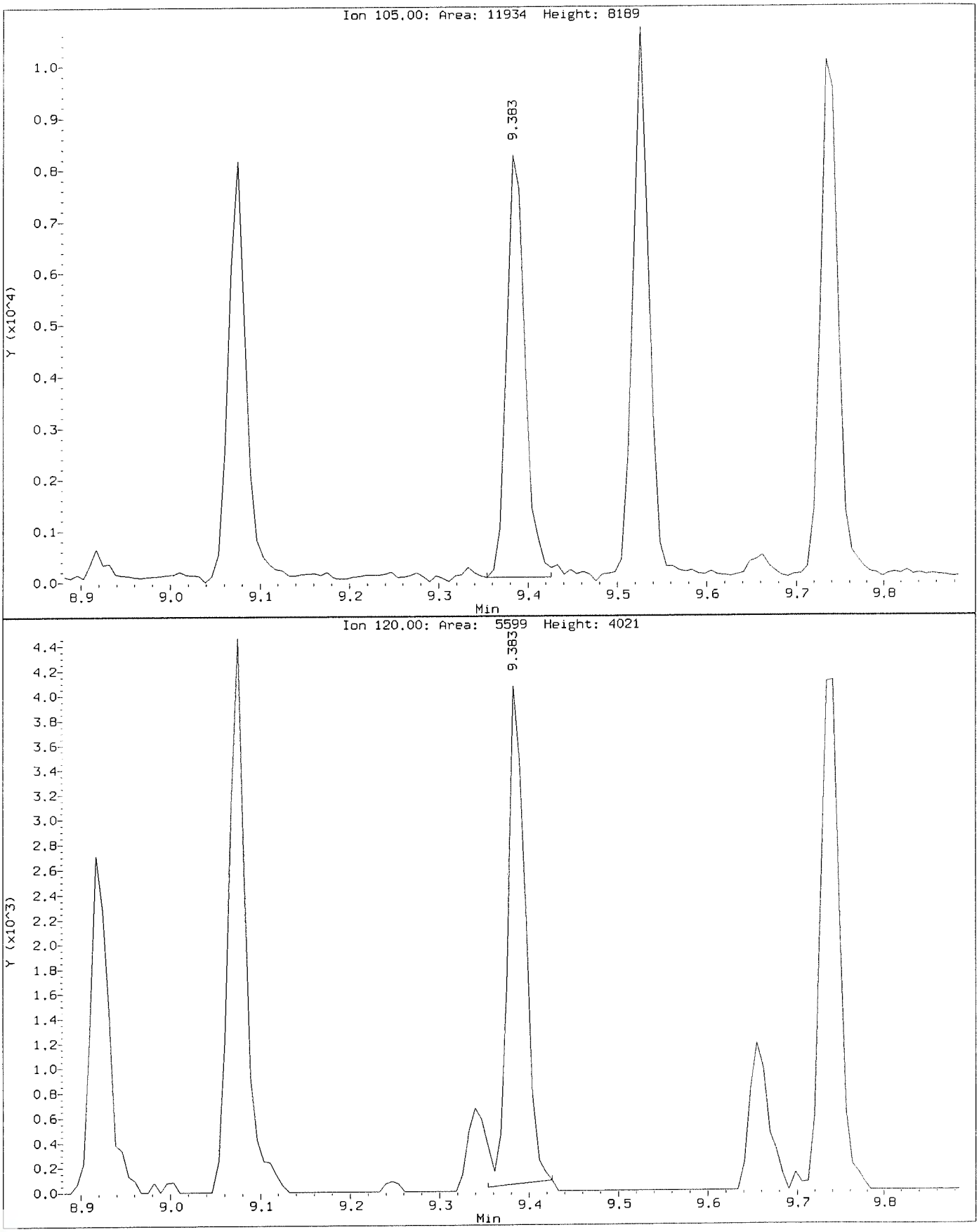
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





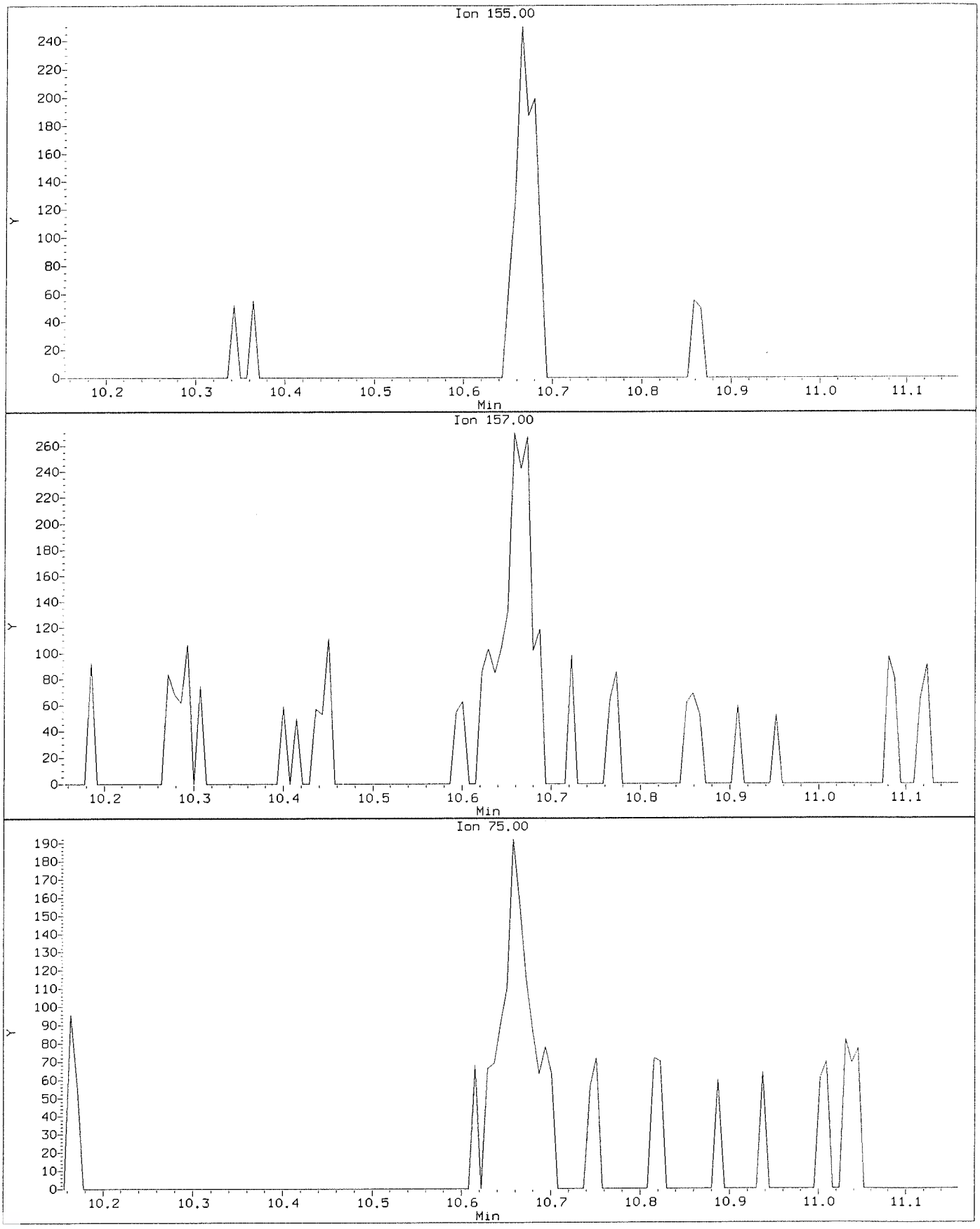
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Client Sample ID: VSTD000.5

Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



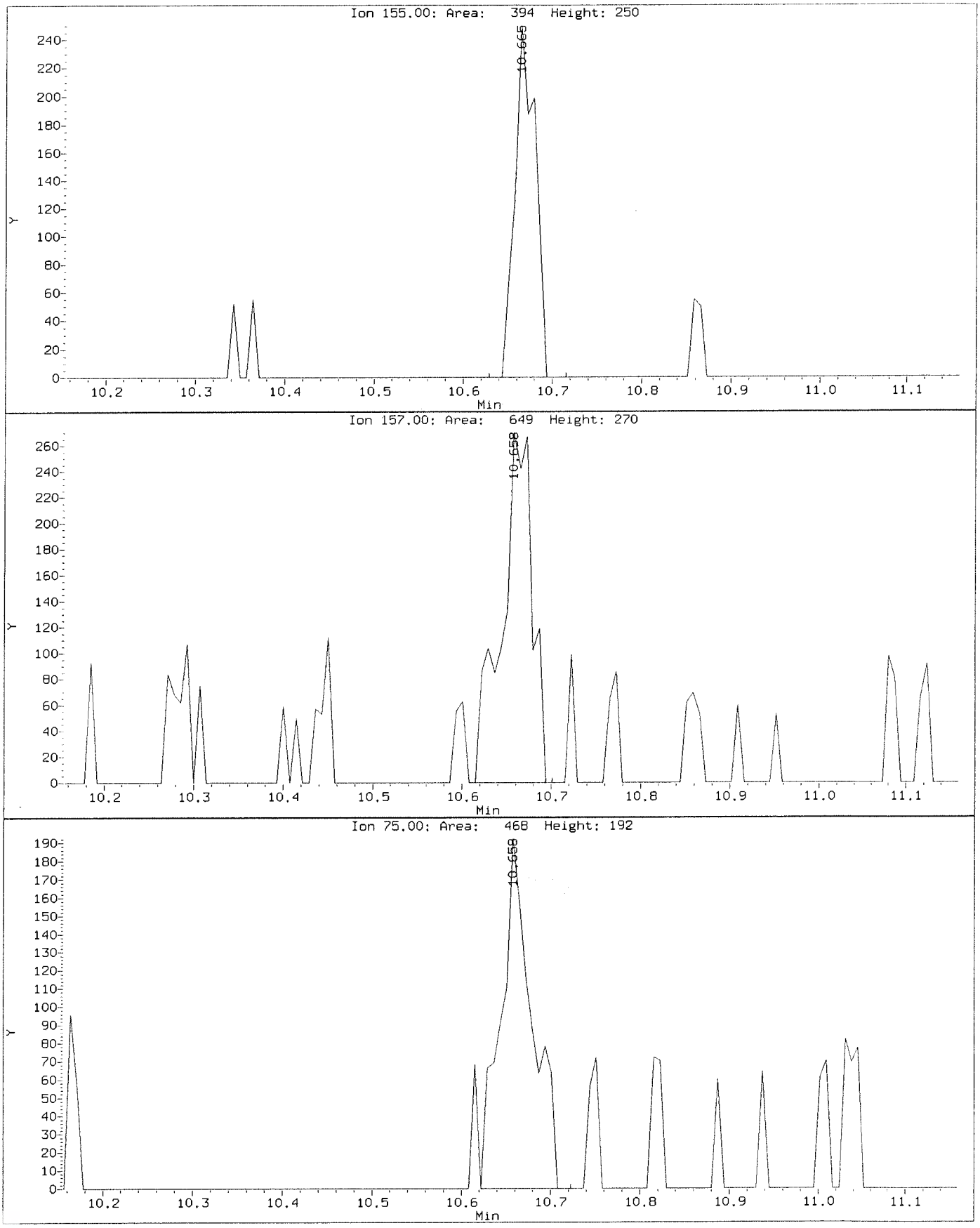
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



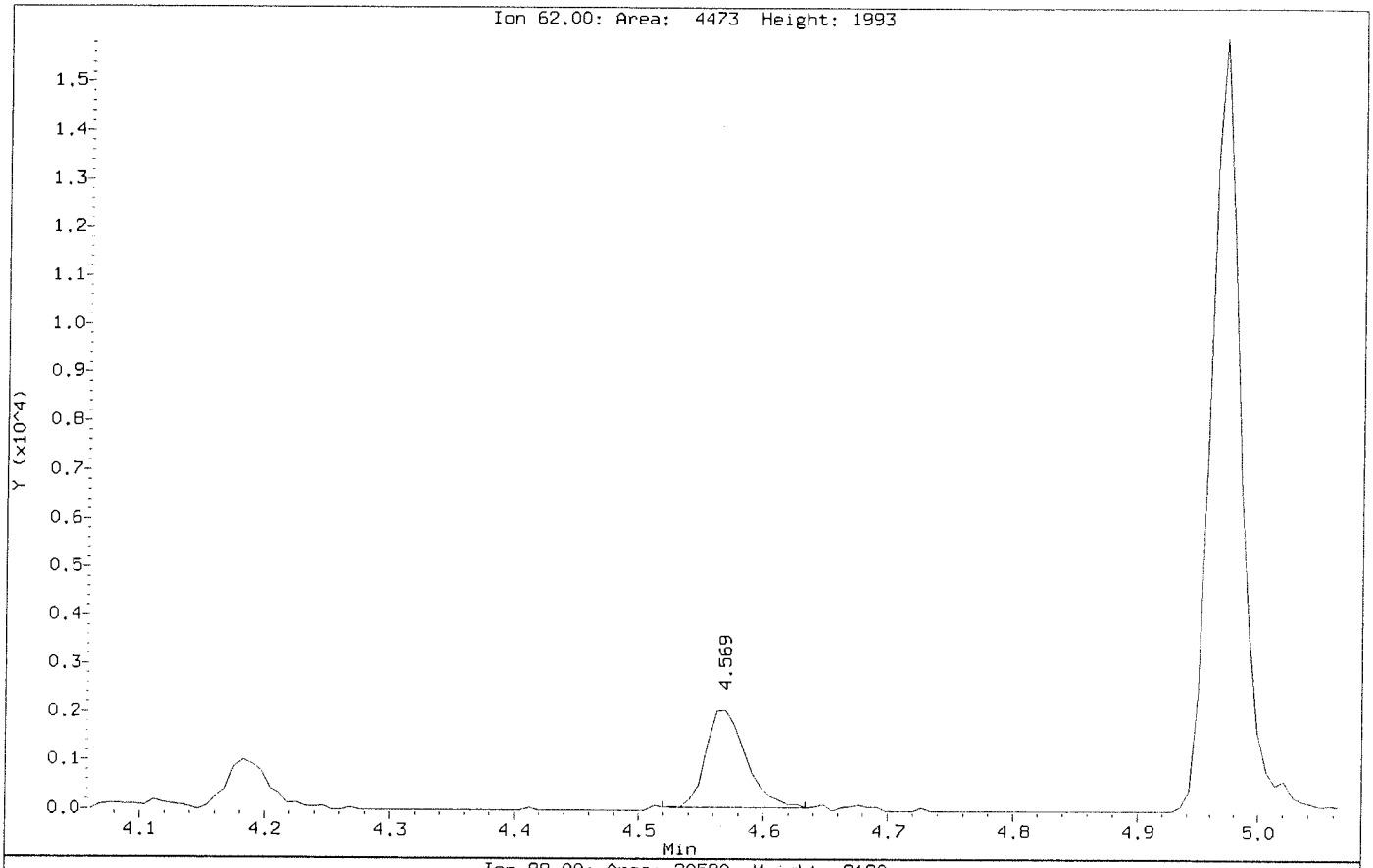
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Client Sample ID: VSTD000.5

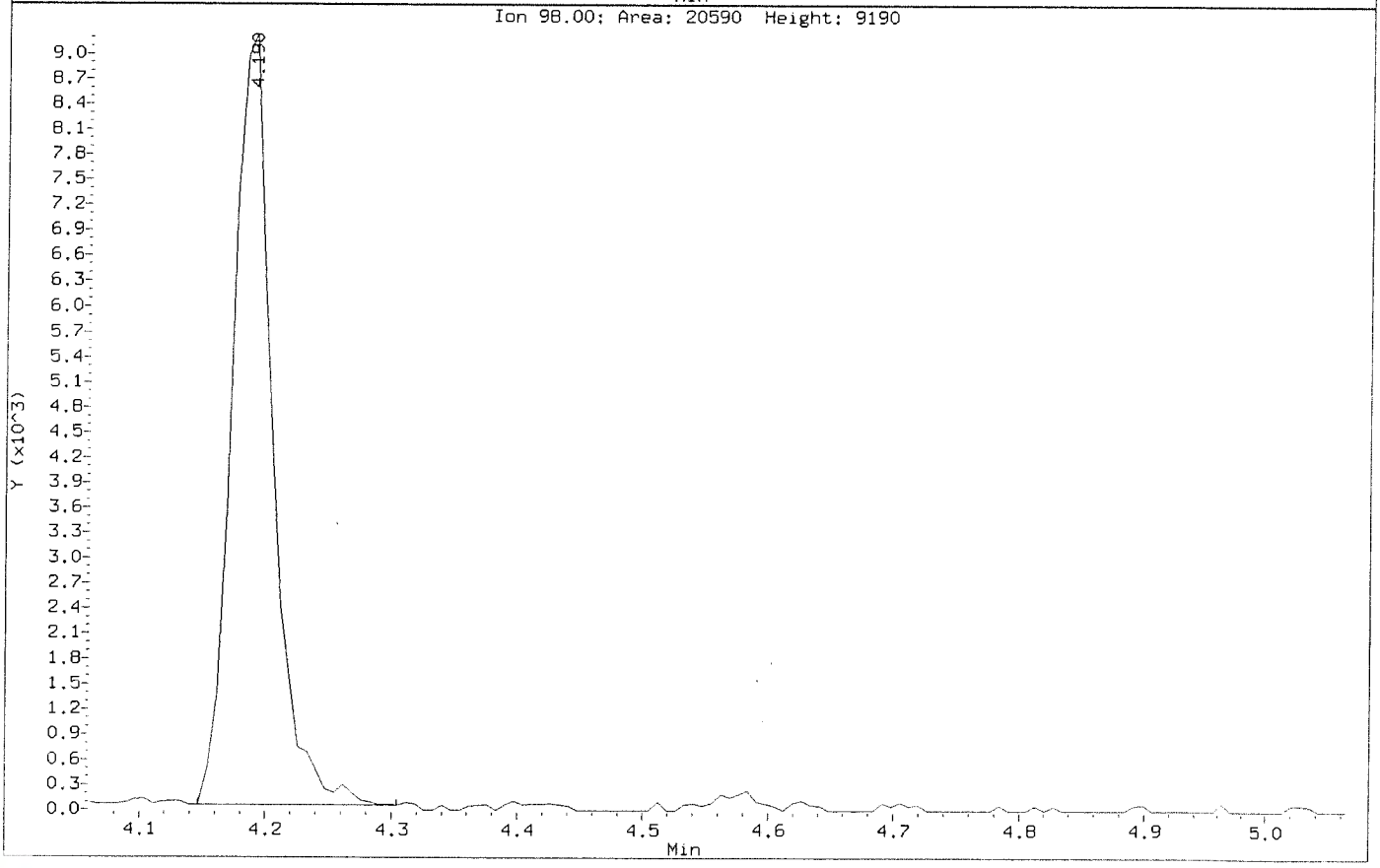
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 03-AUG-2020 12:04
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Client Sample ID: VSTD000.5

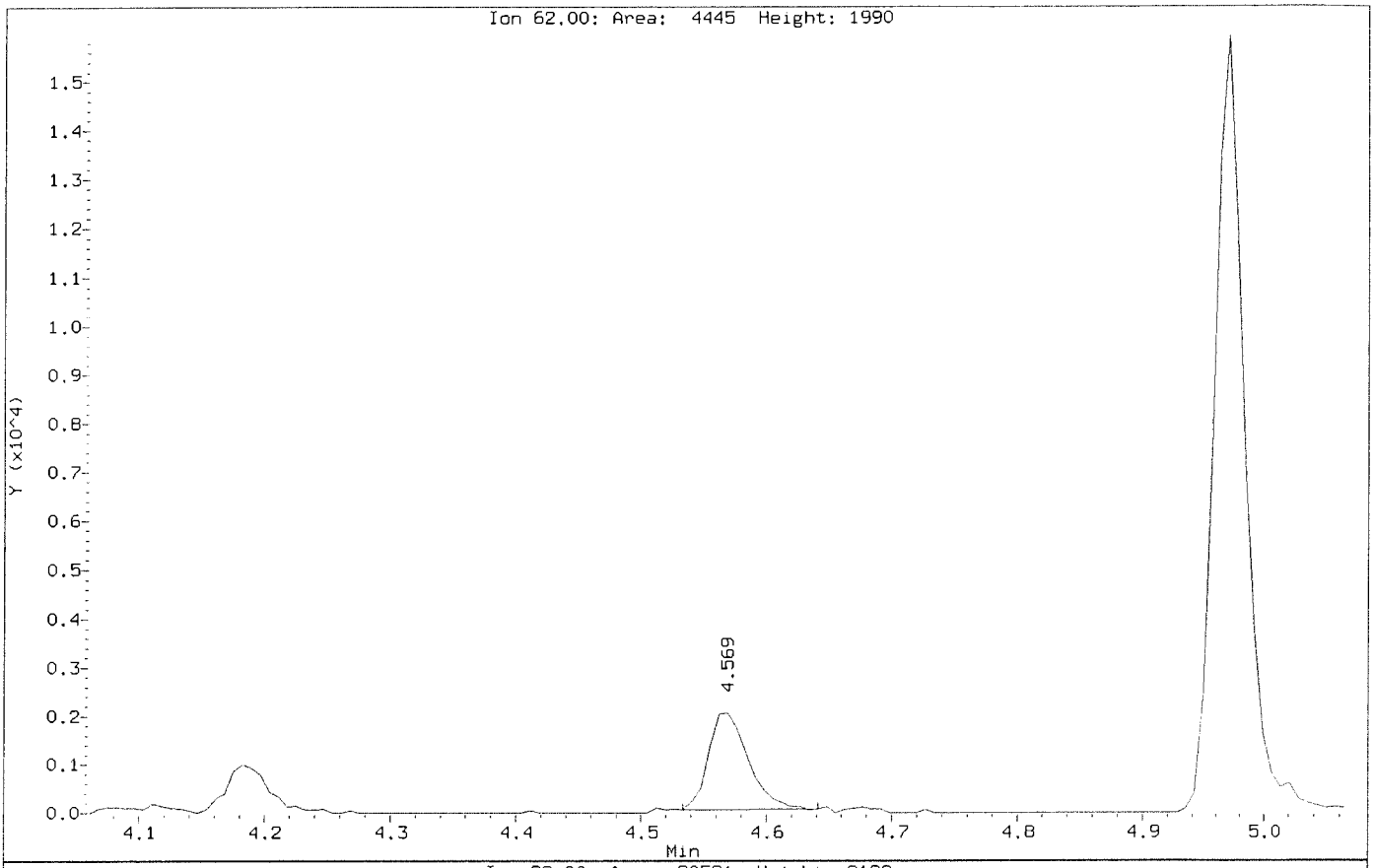
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

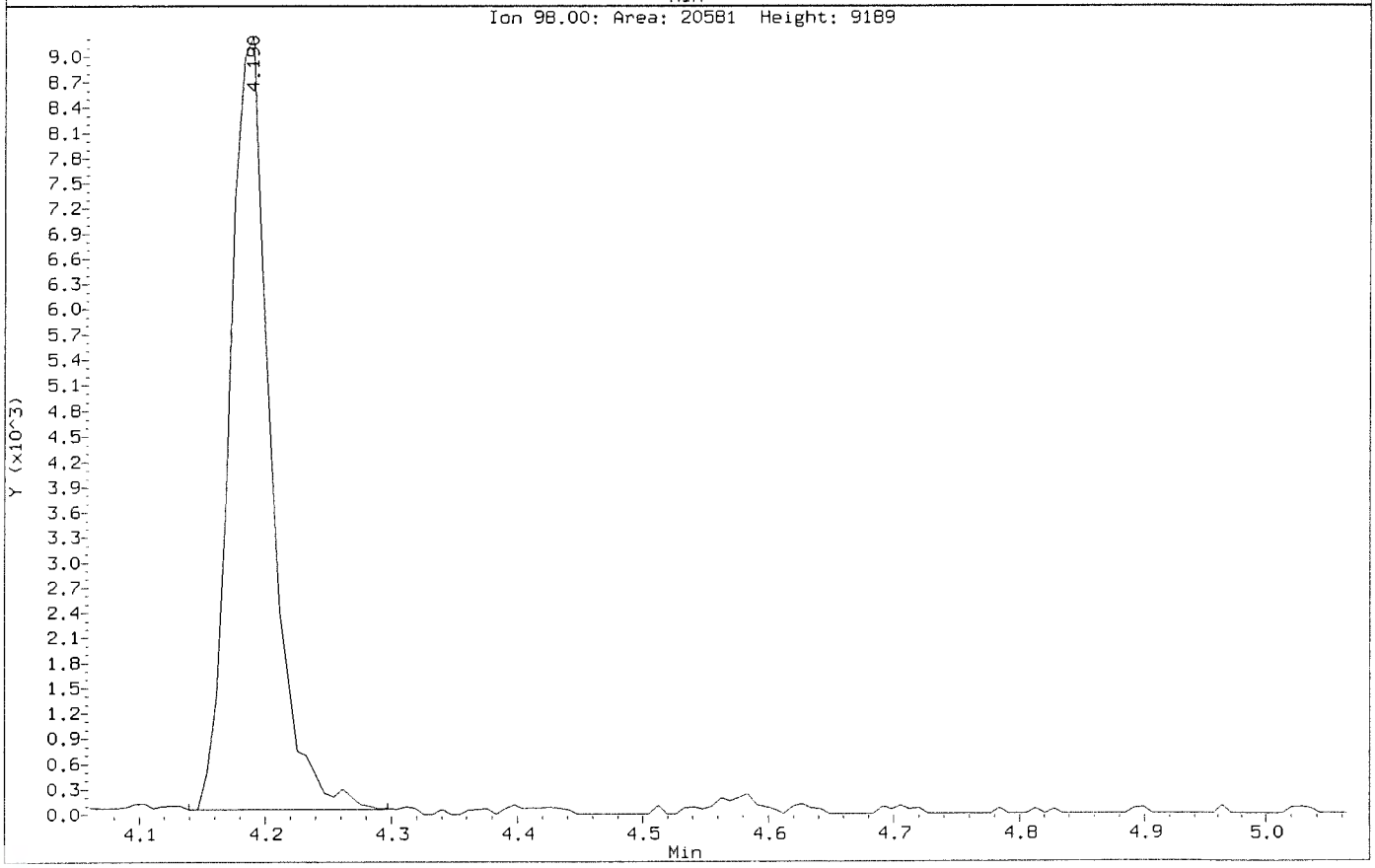




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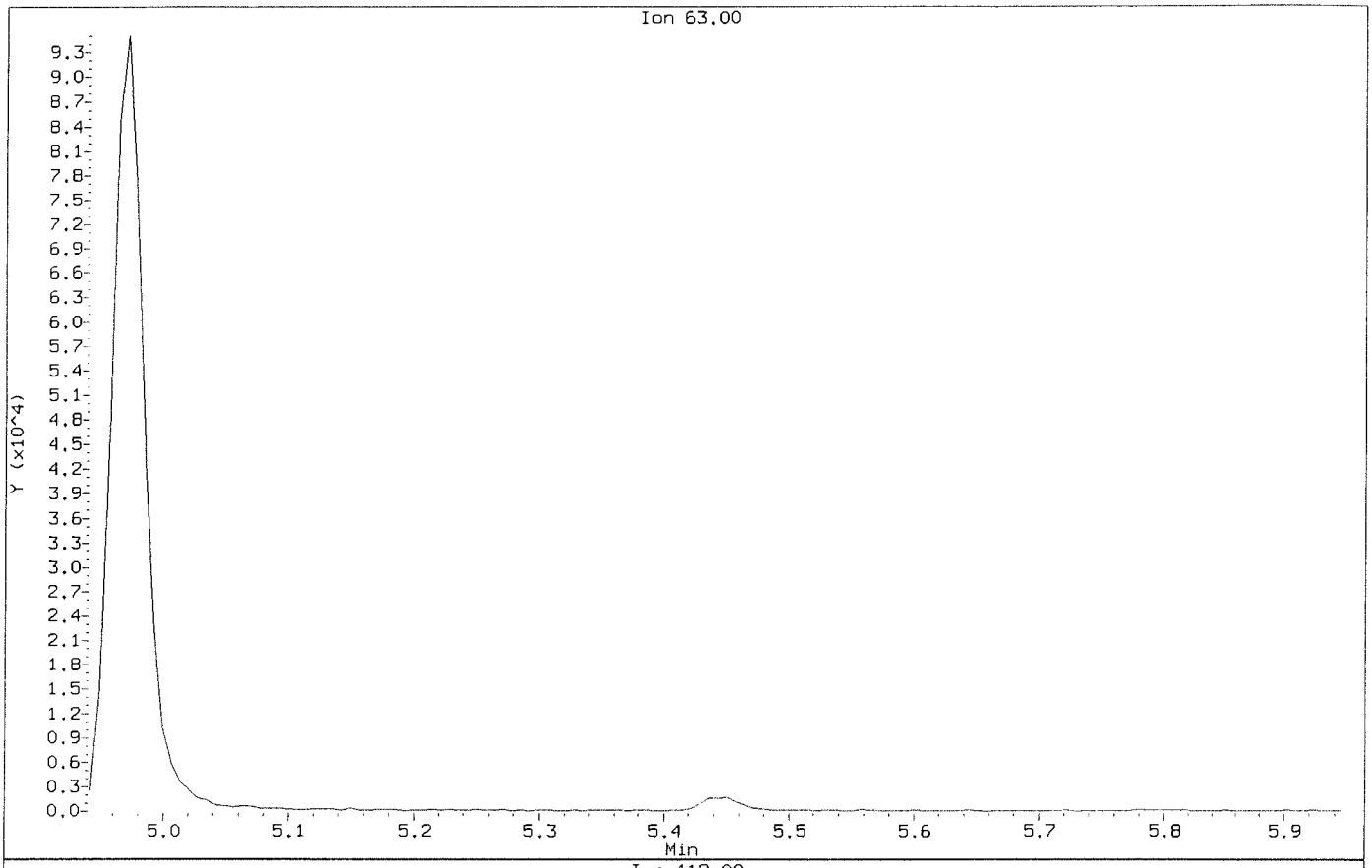
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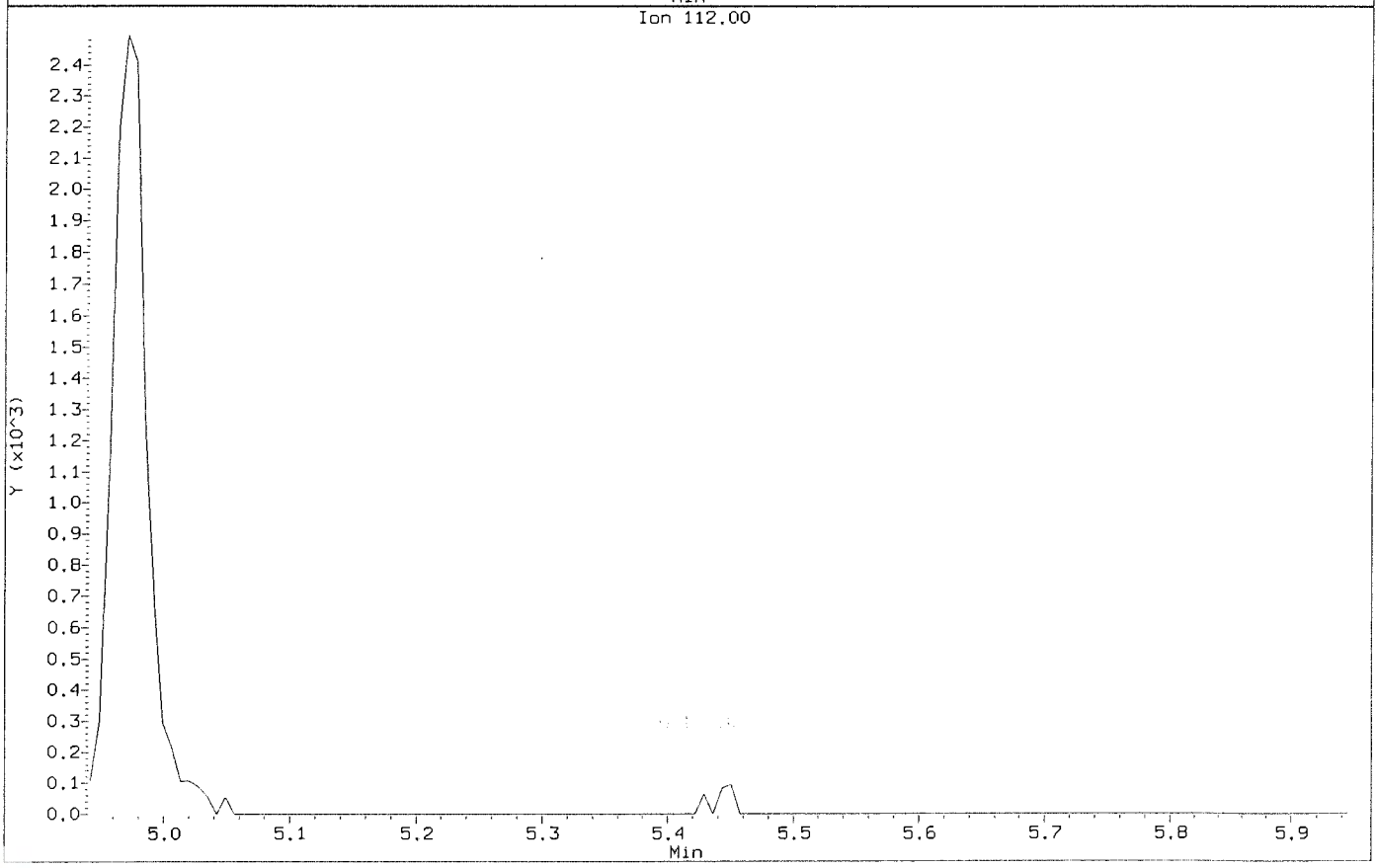




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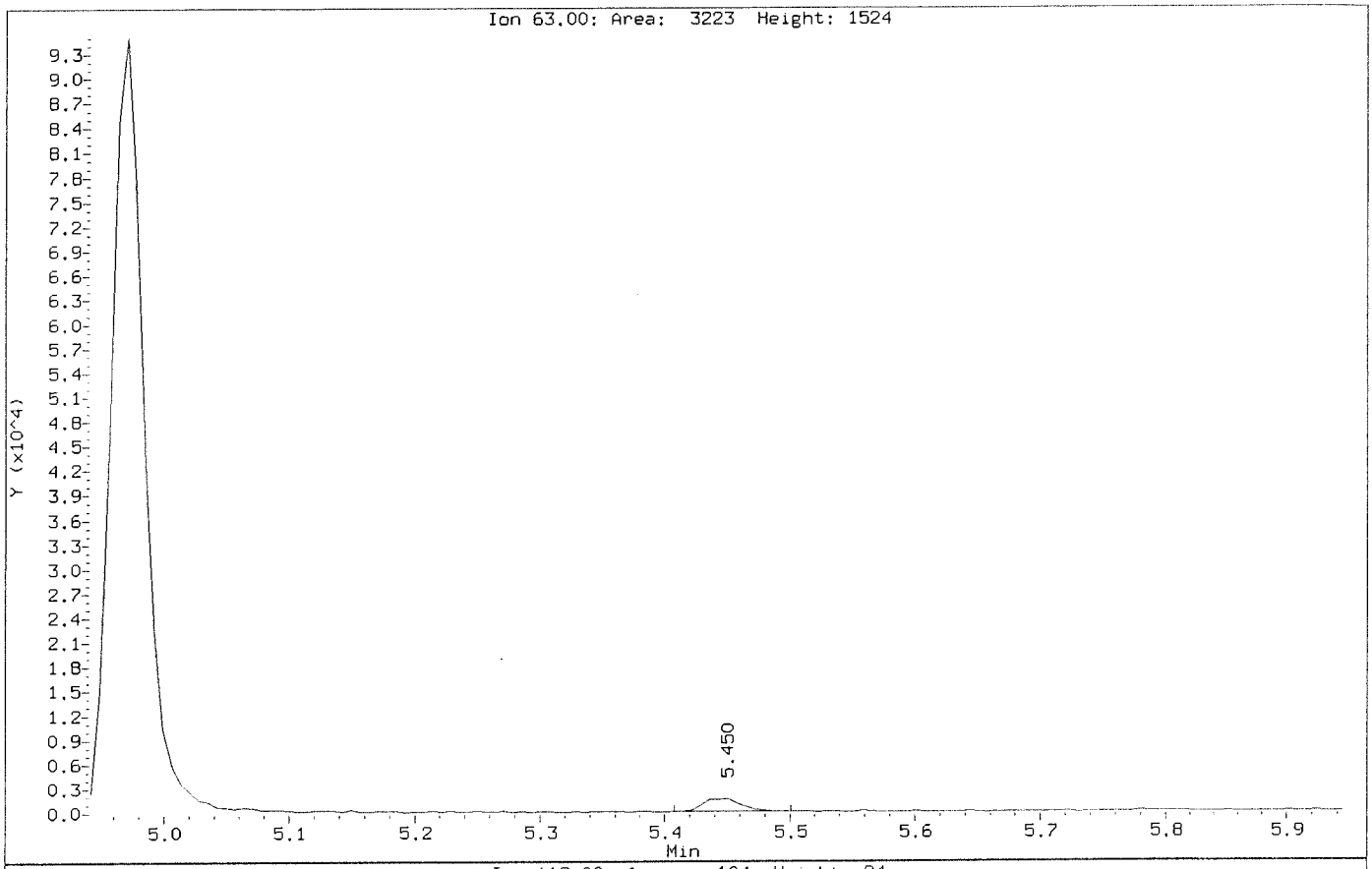
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

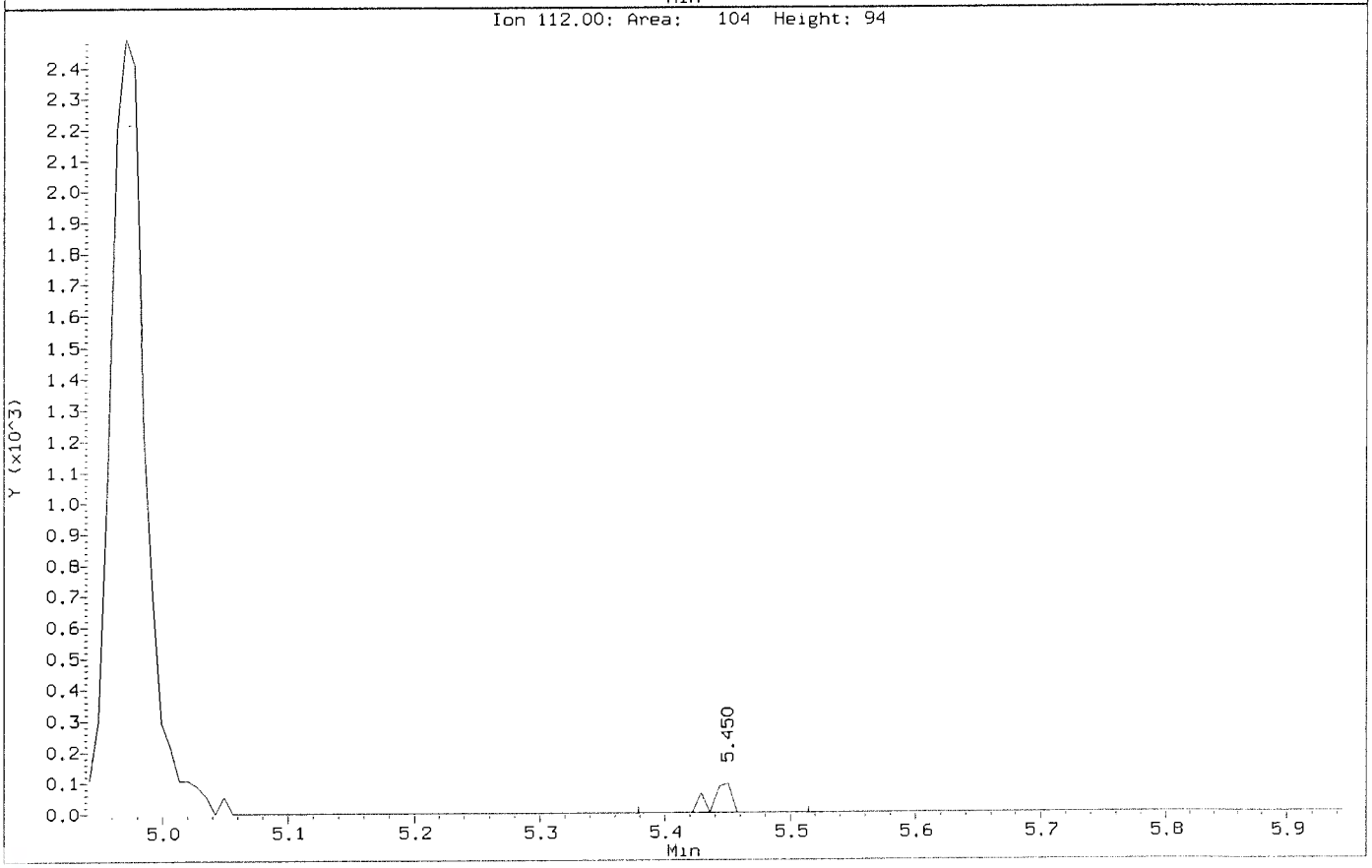




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Instrument: voa6.i
Client Sample ID: VSTD000.5

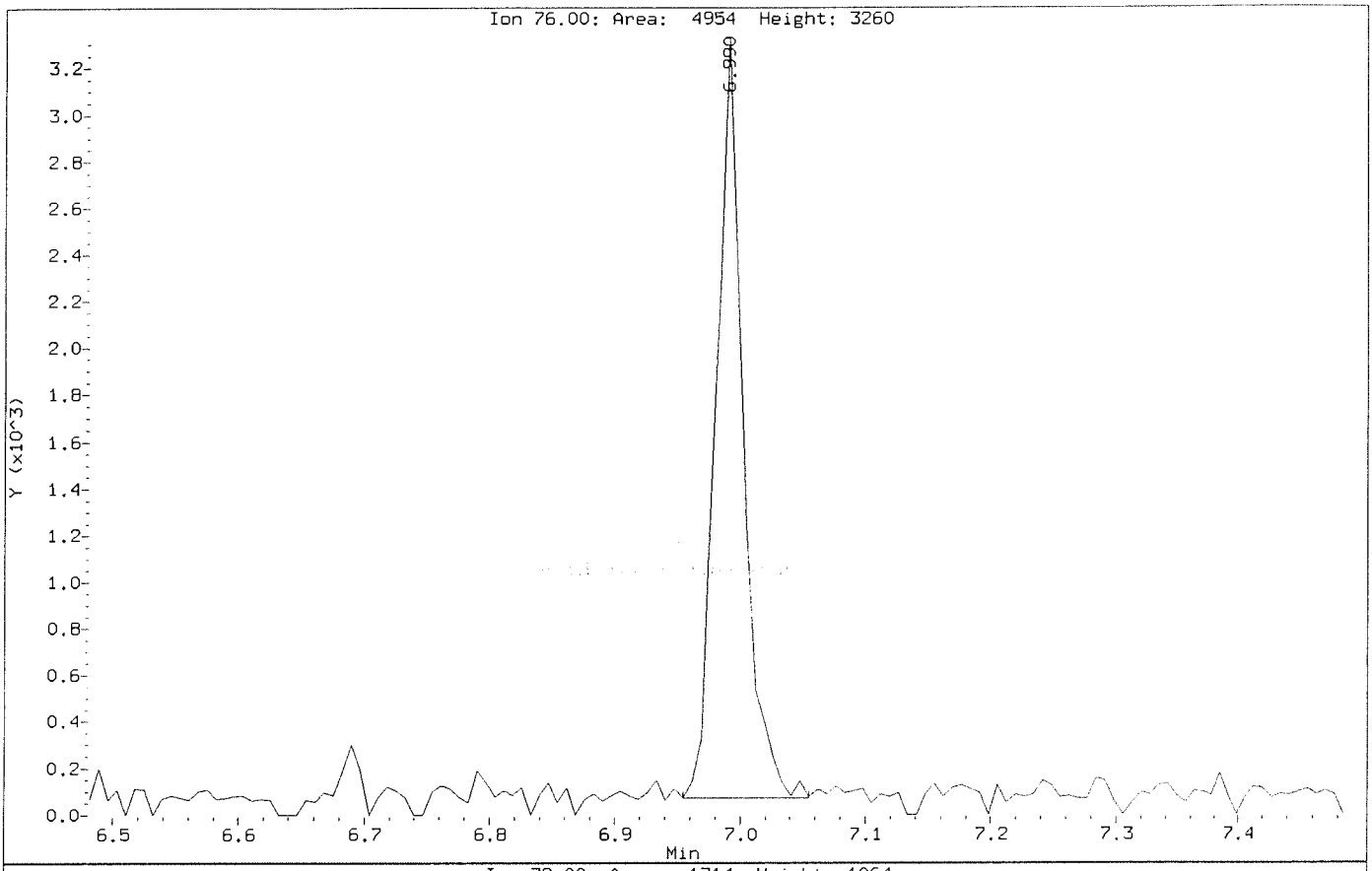
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

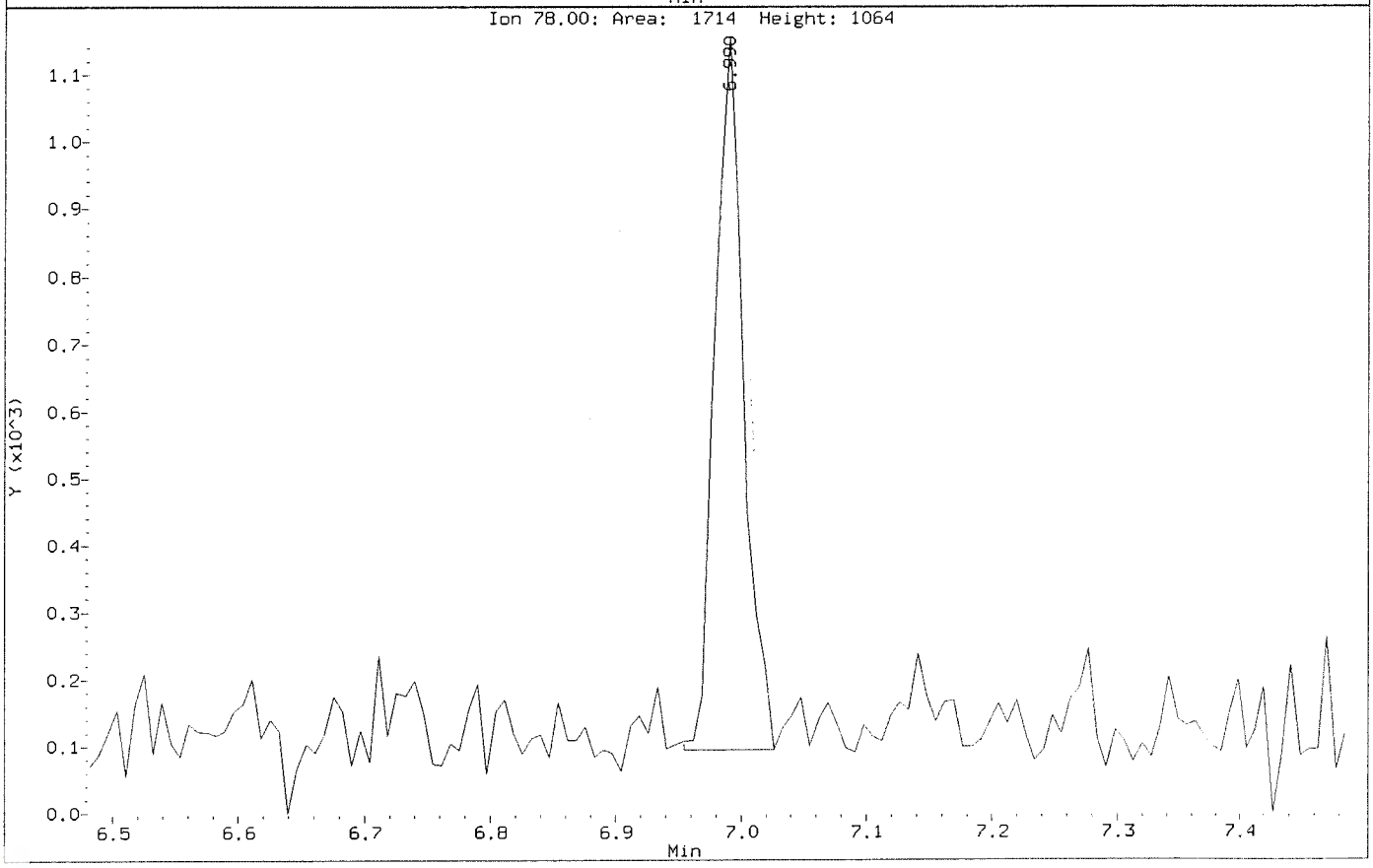




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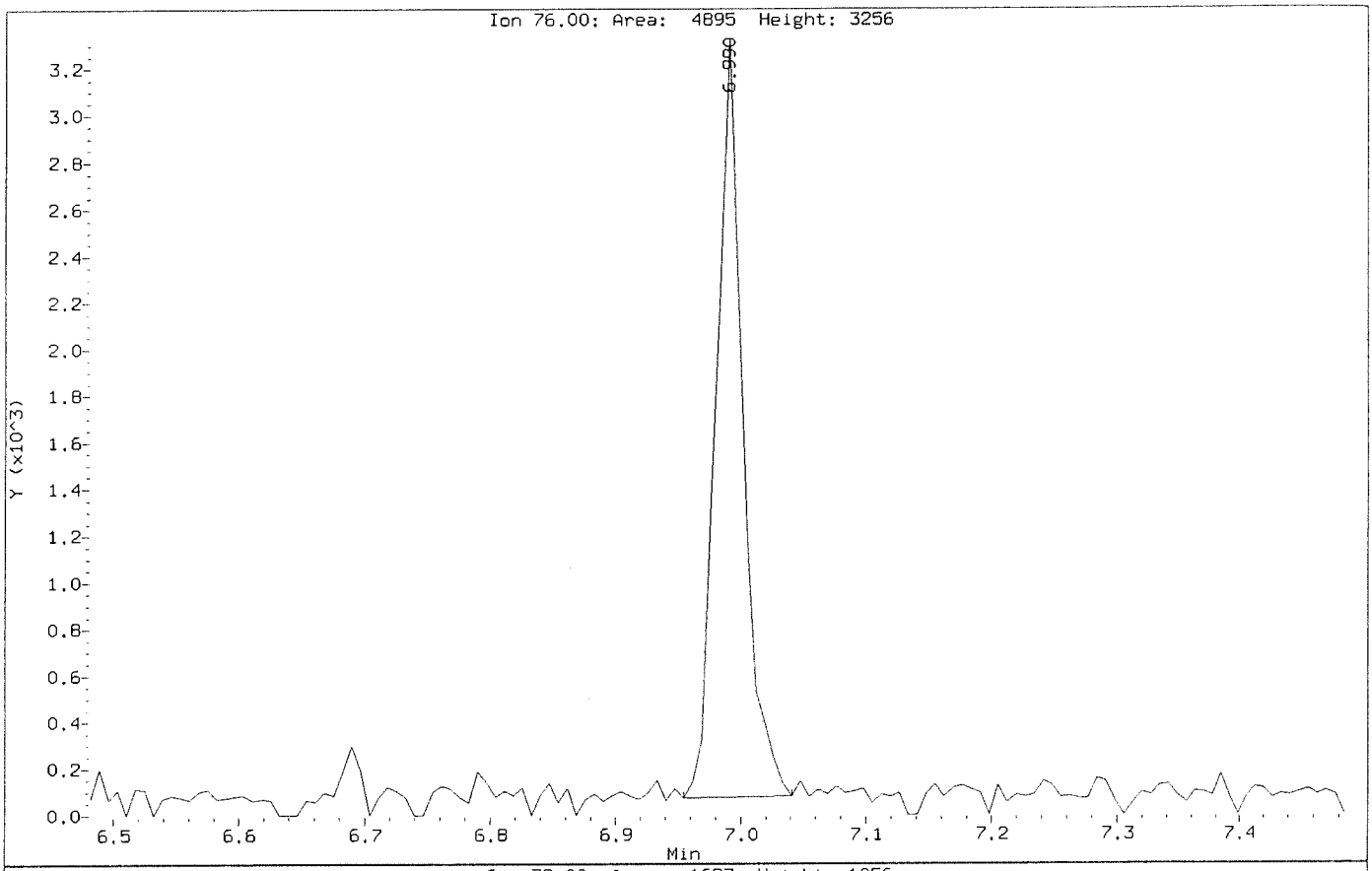
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

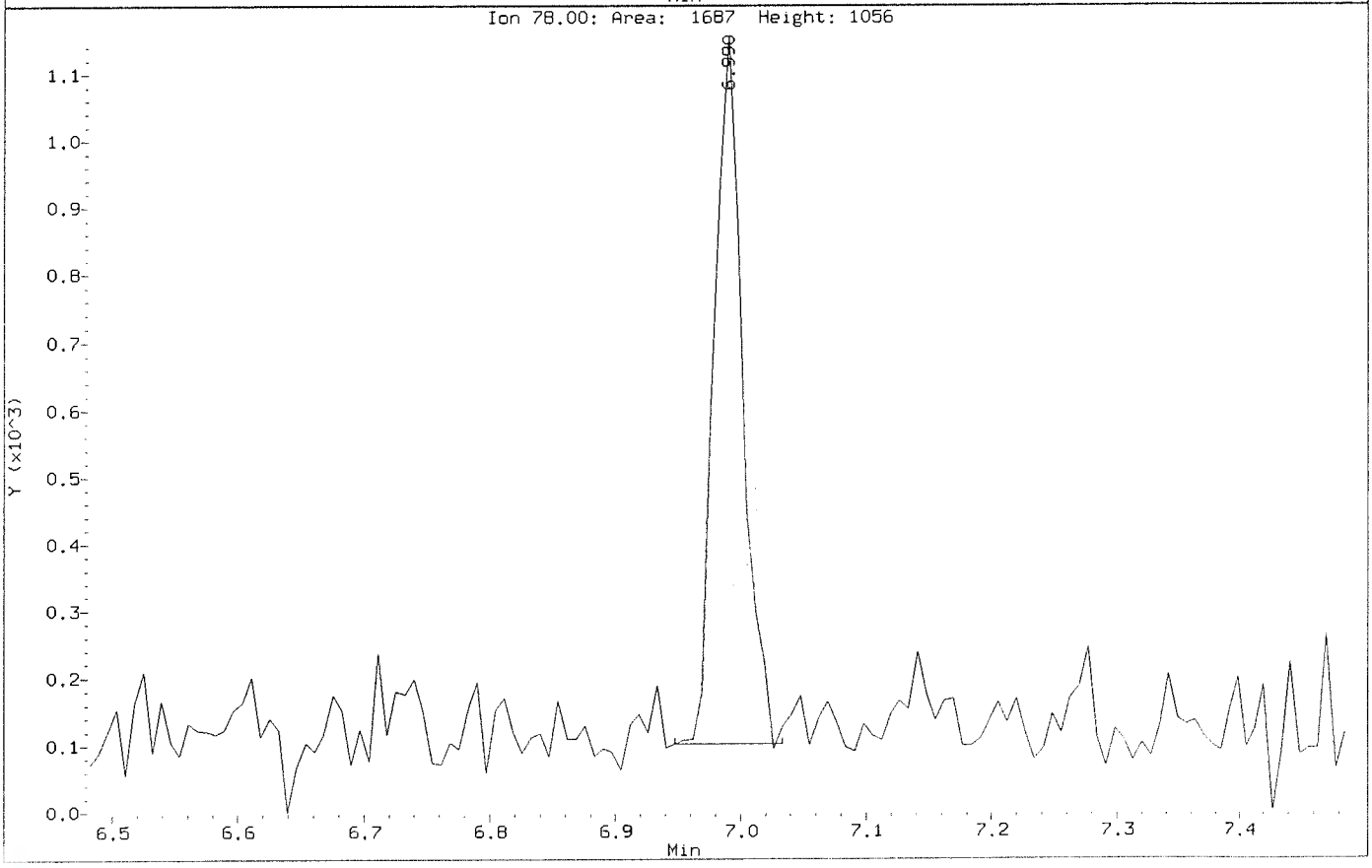




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Instrument: voa6.i
Client Sample ID: VSTD000.5

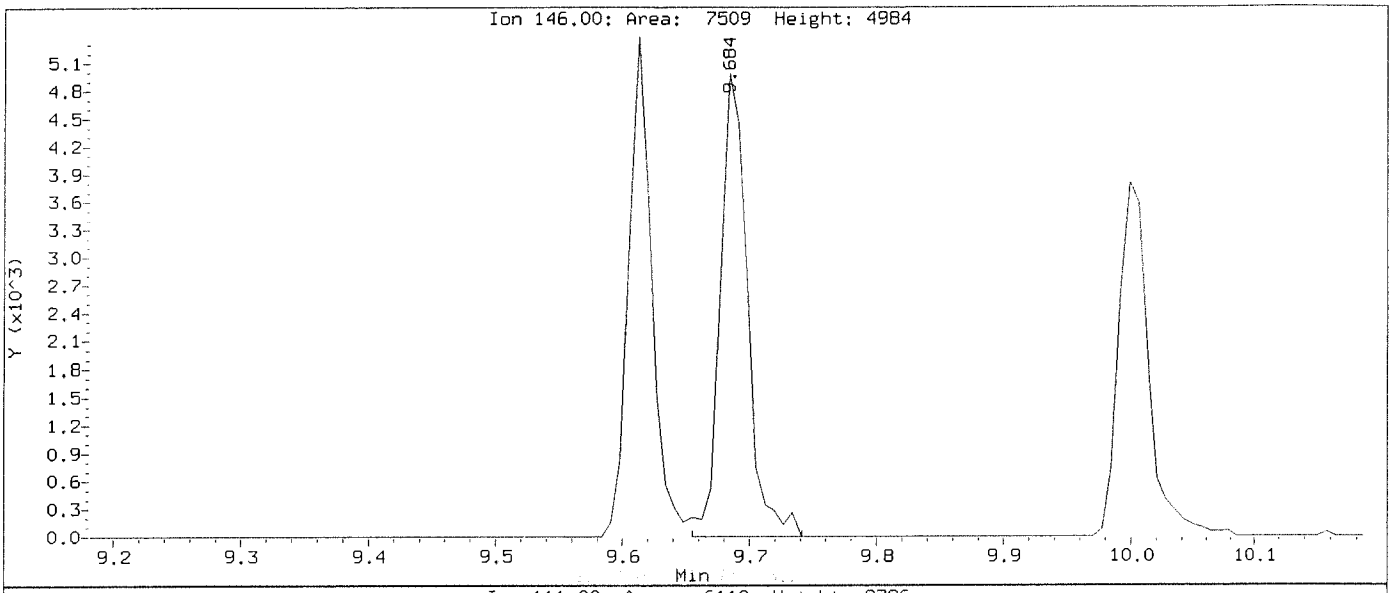
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CAS Number: 142-28-9

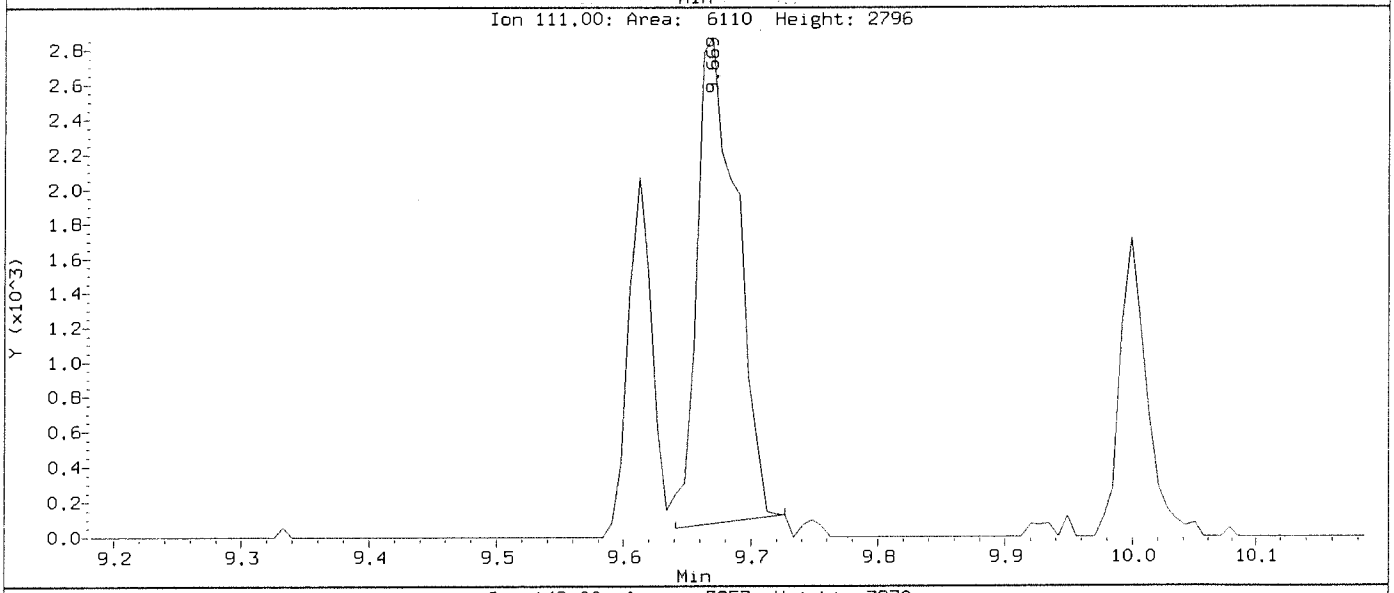


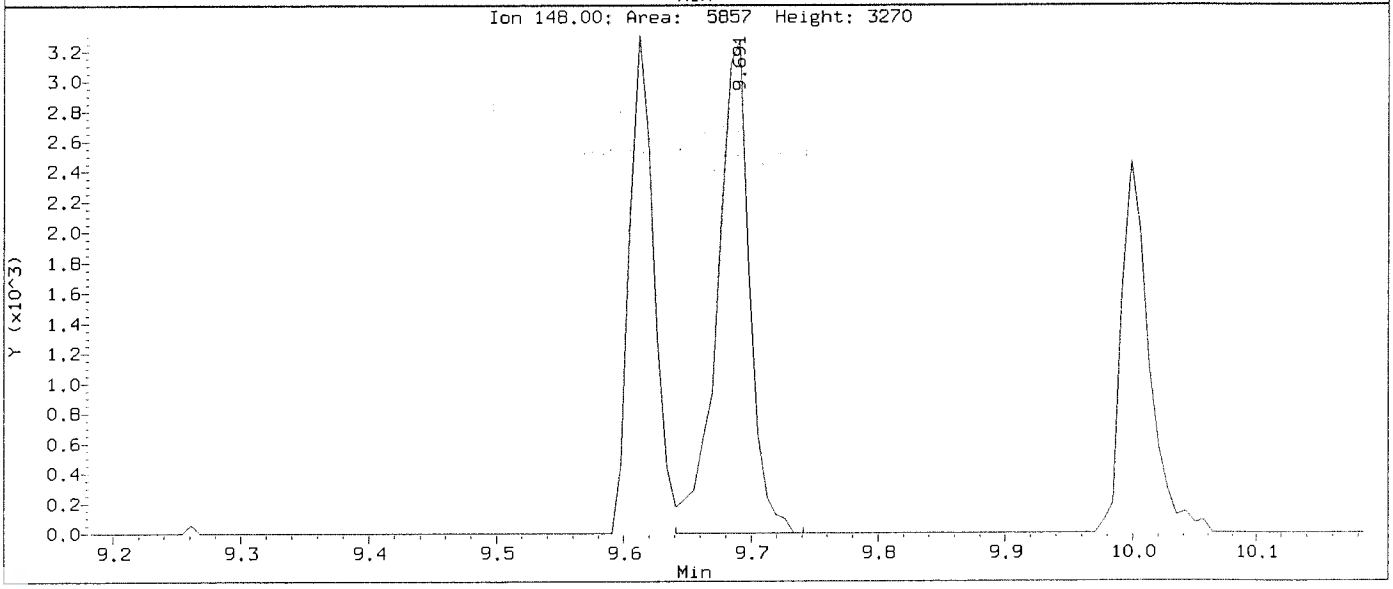


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

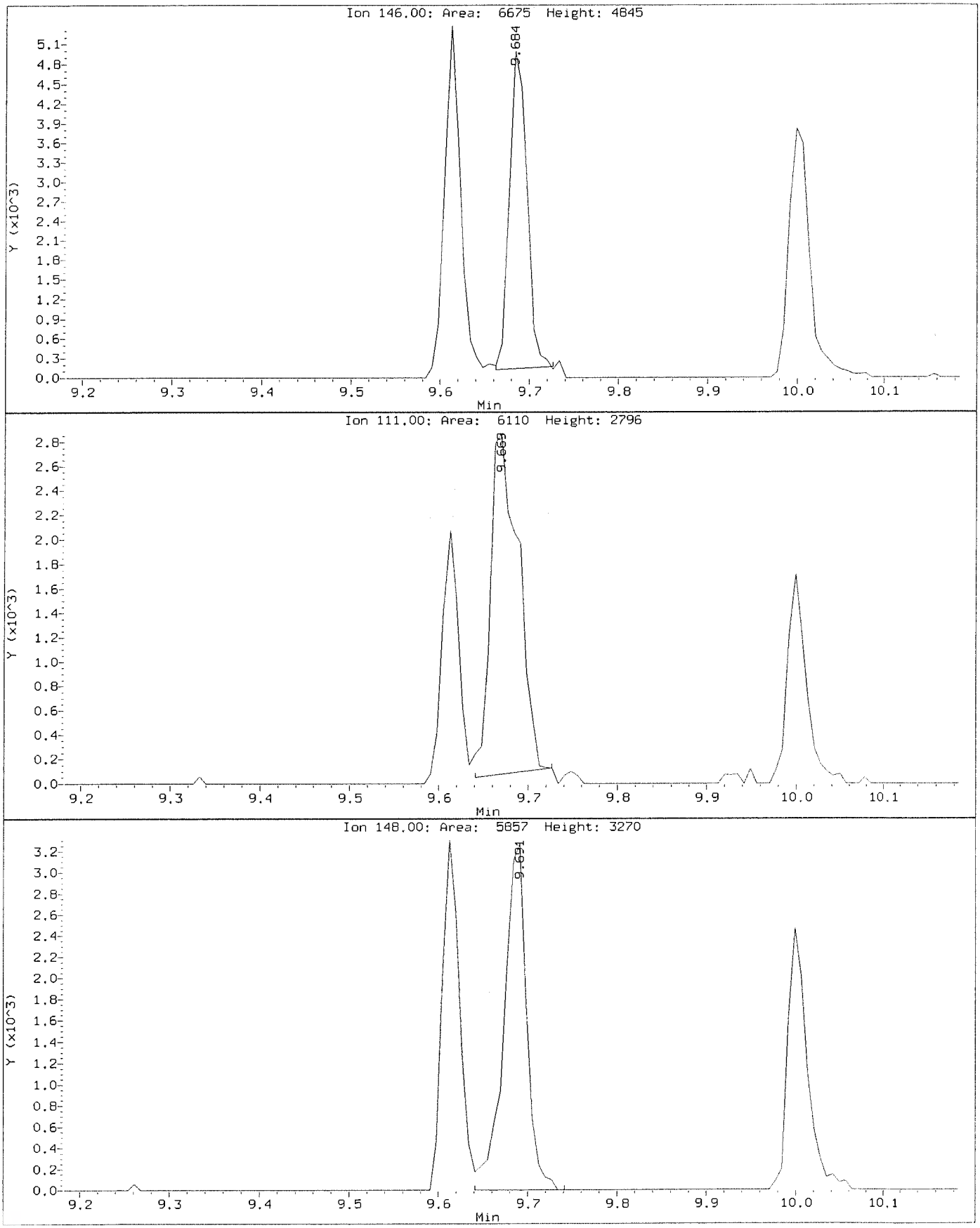






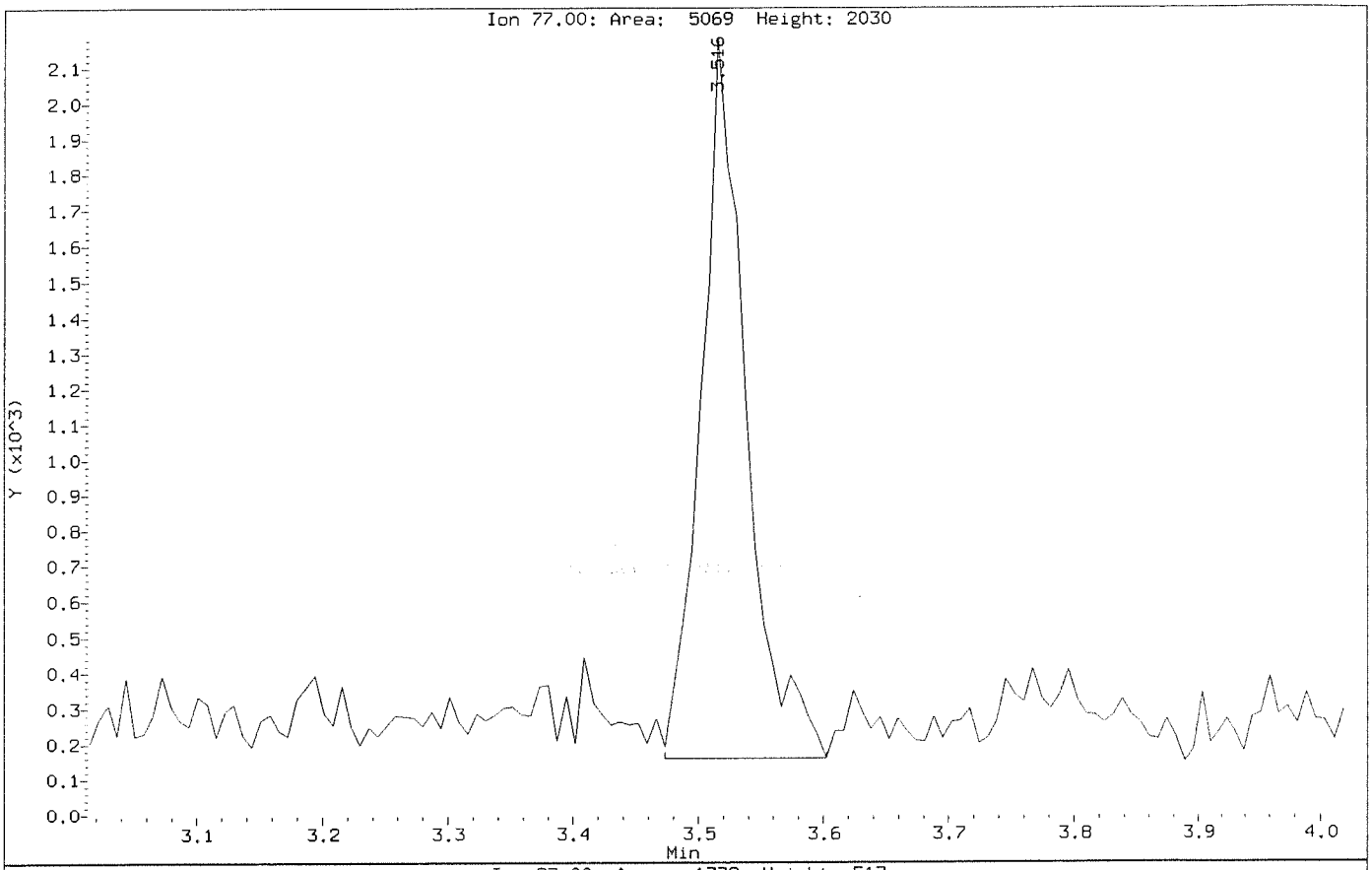
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Instrument: voa6.i
Client Sample ID: VSTD000.5

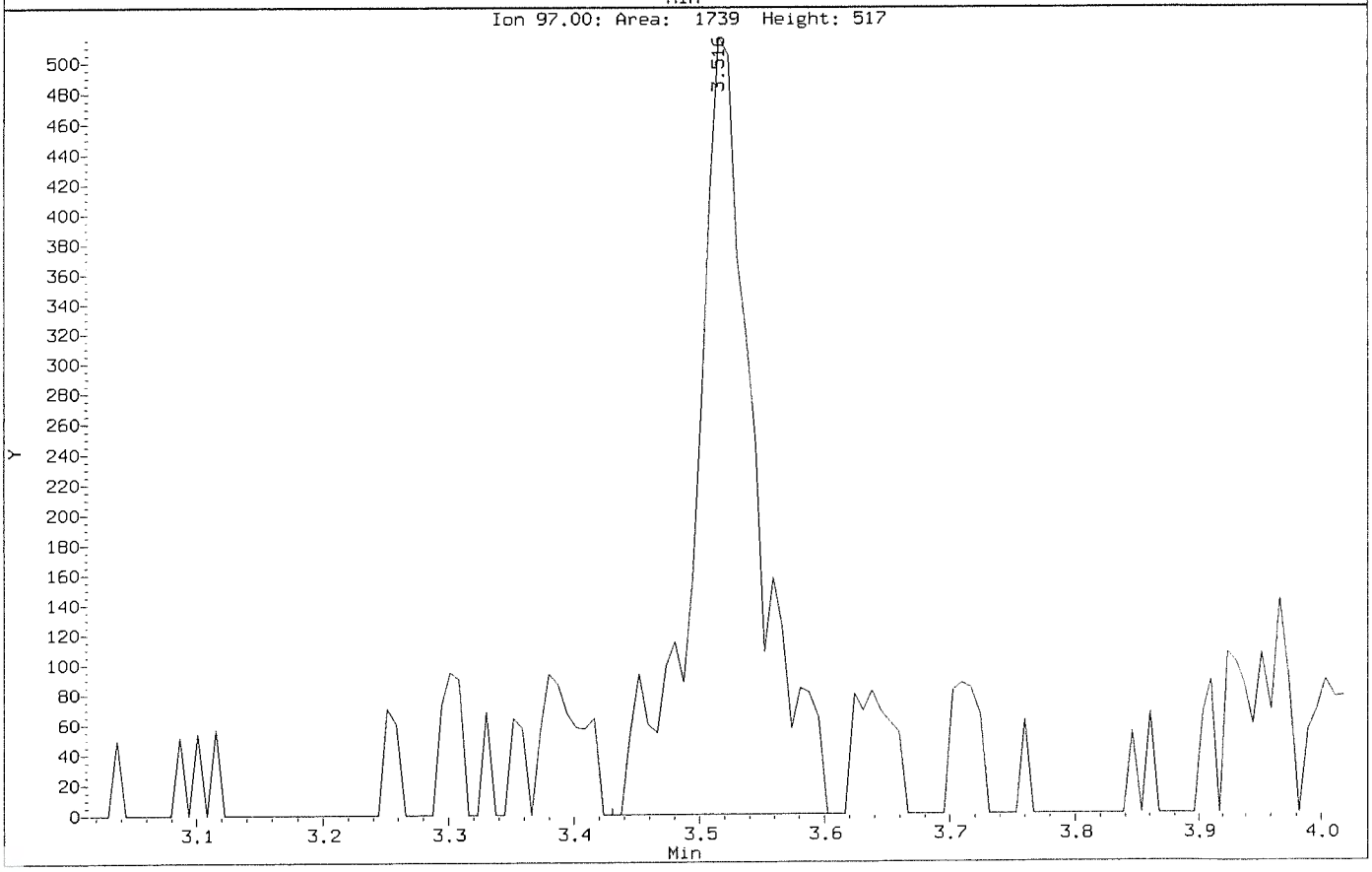
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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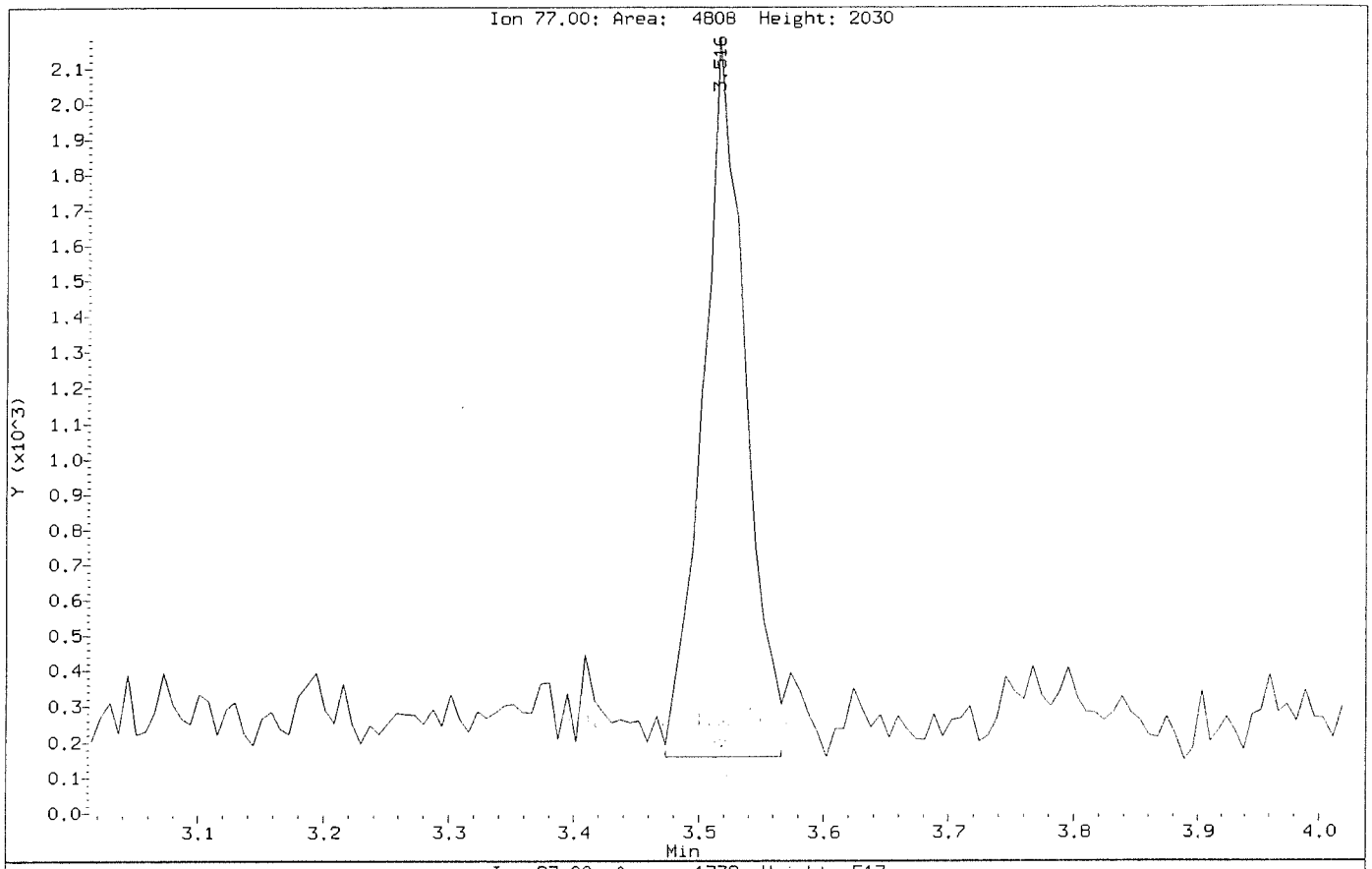
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

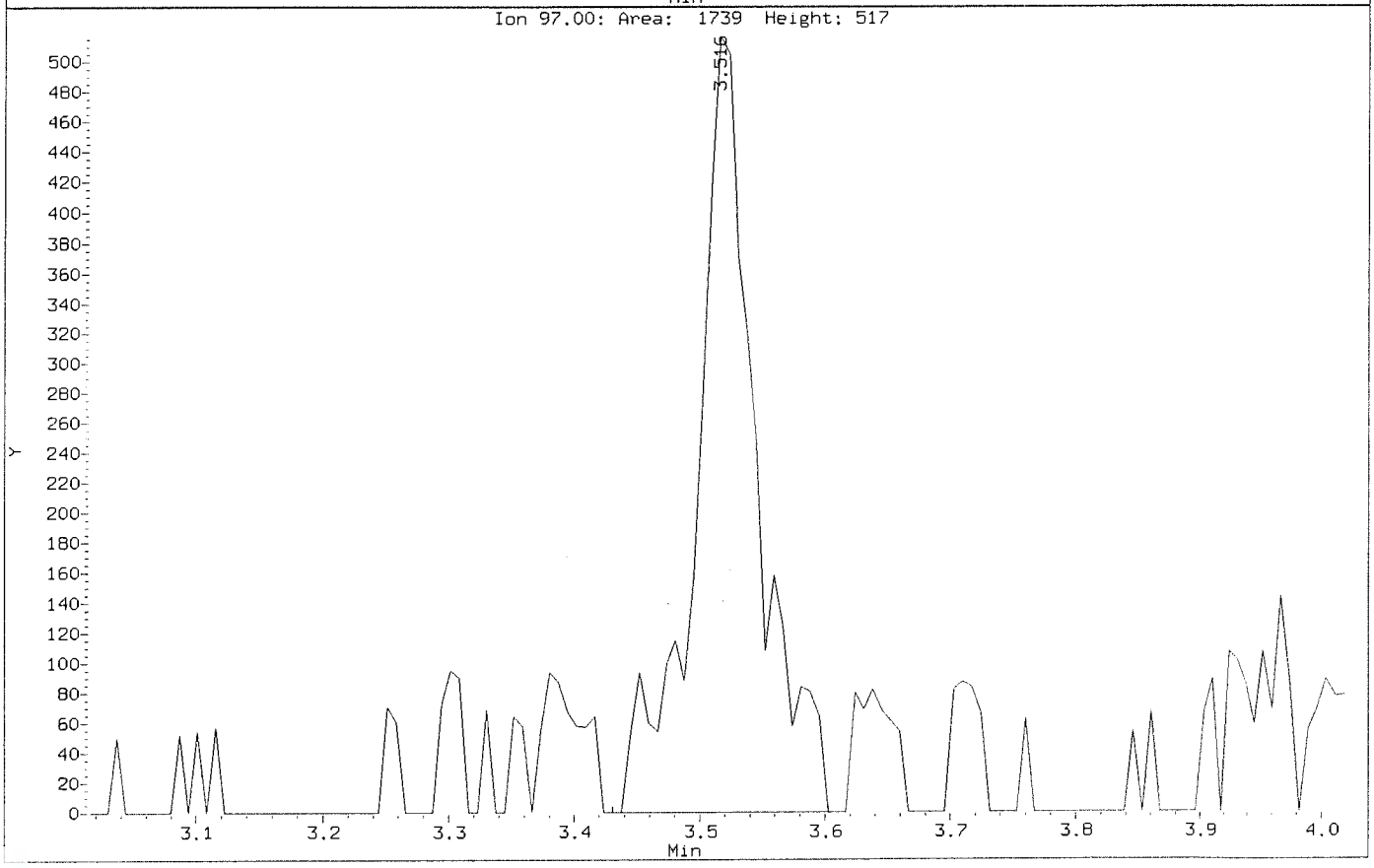




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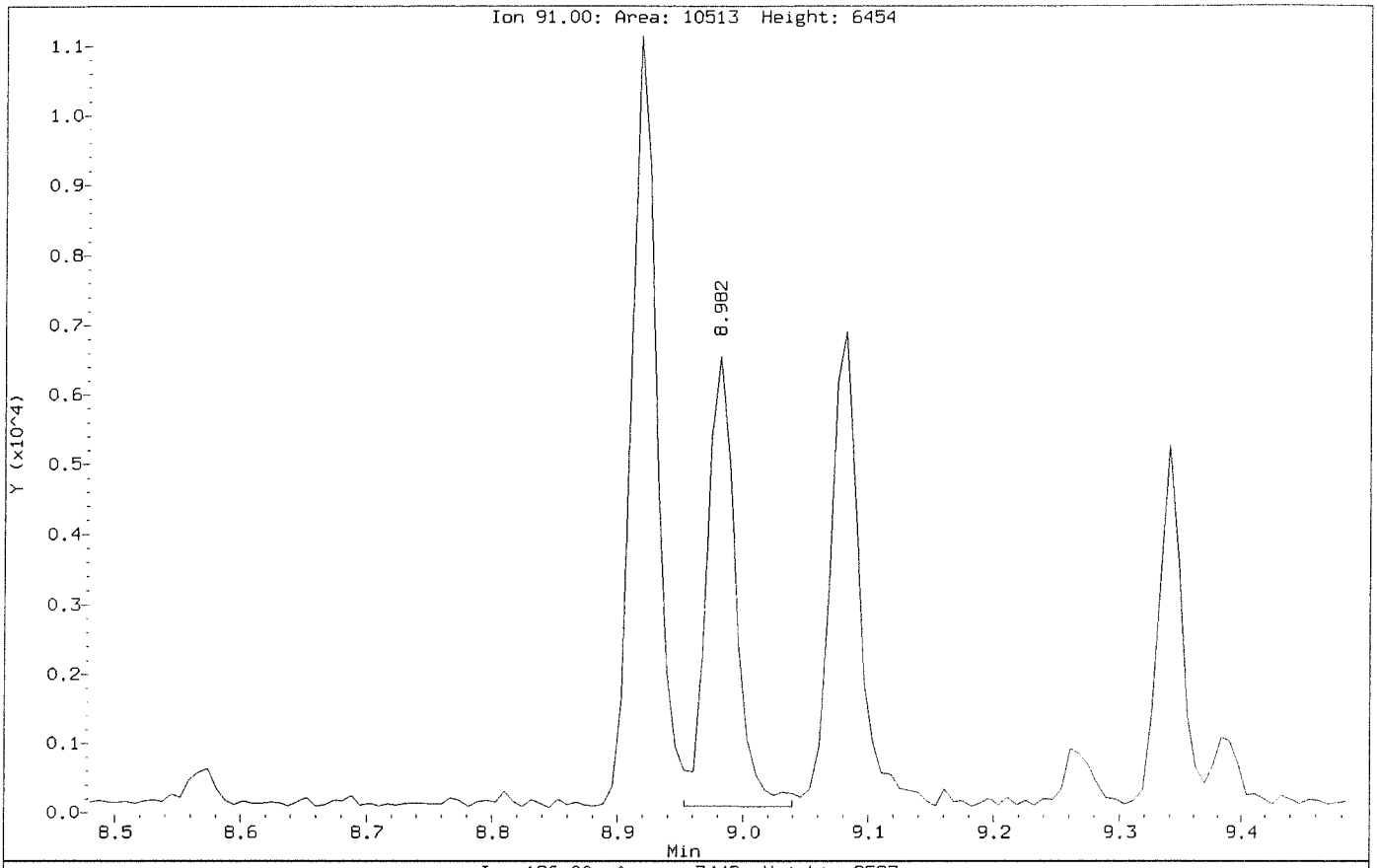
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CAS Number: 594-20-7

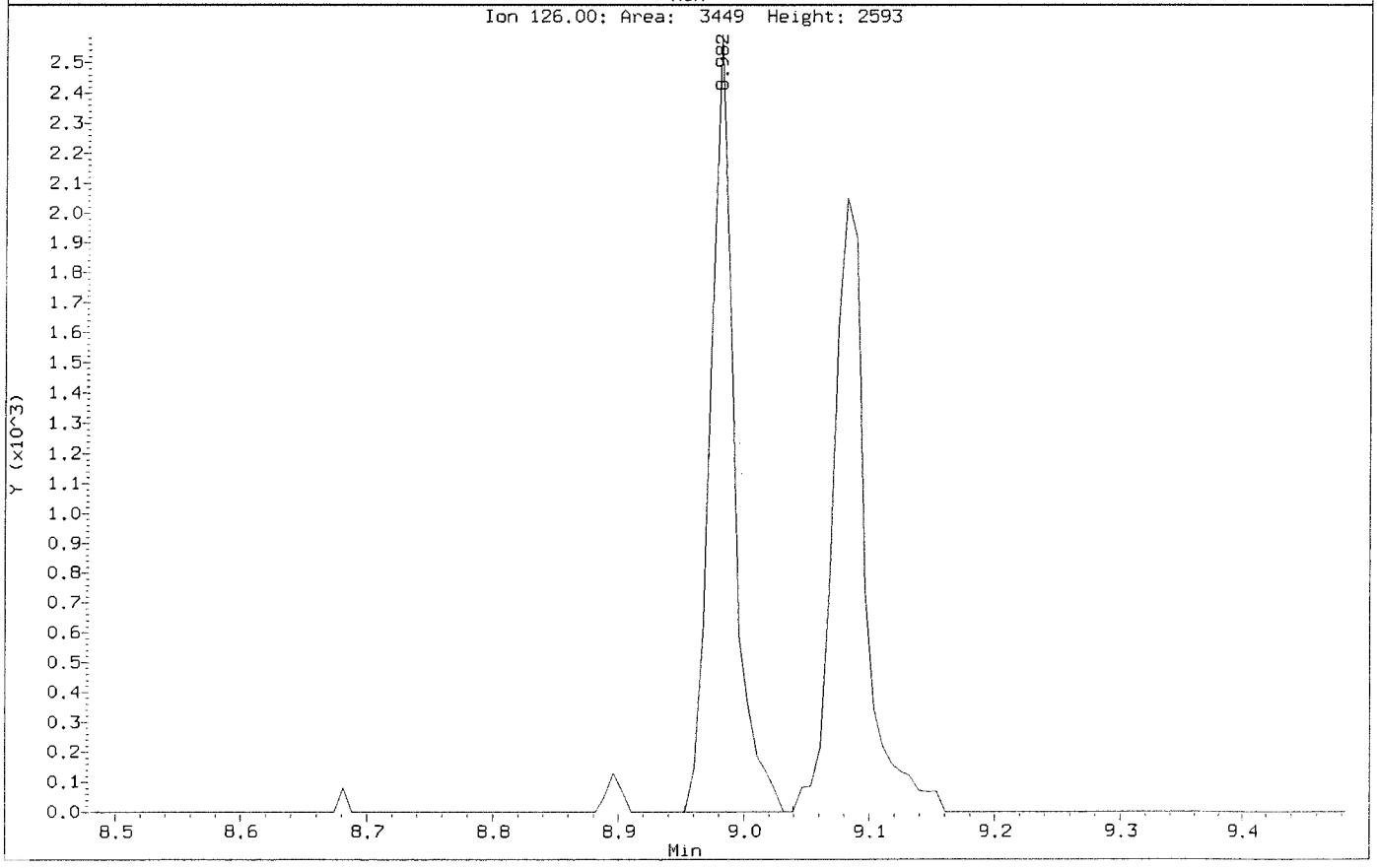




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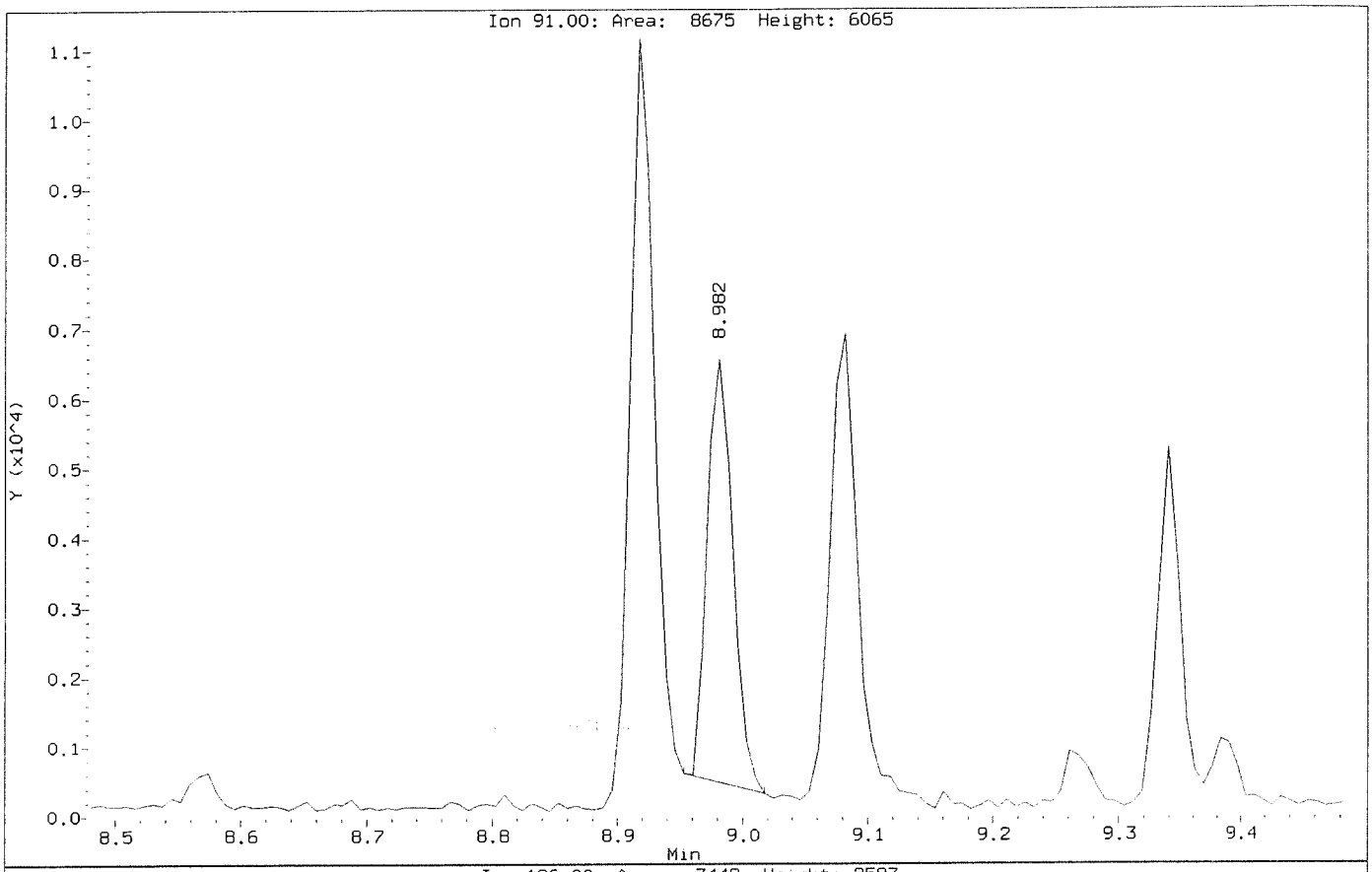
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

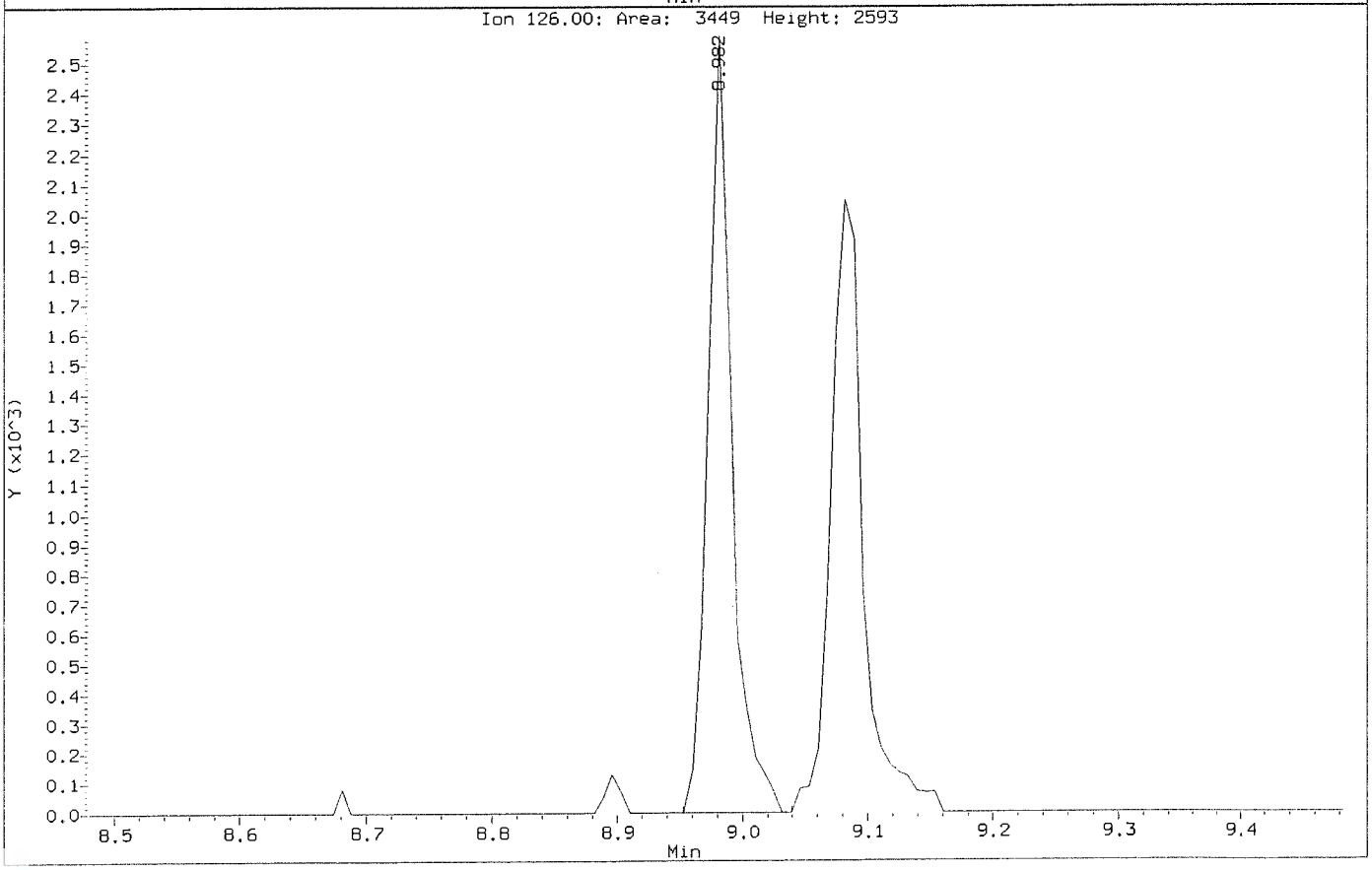




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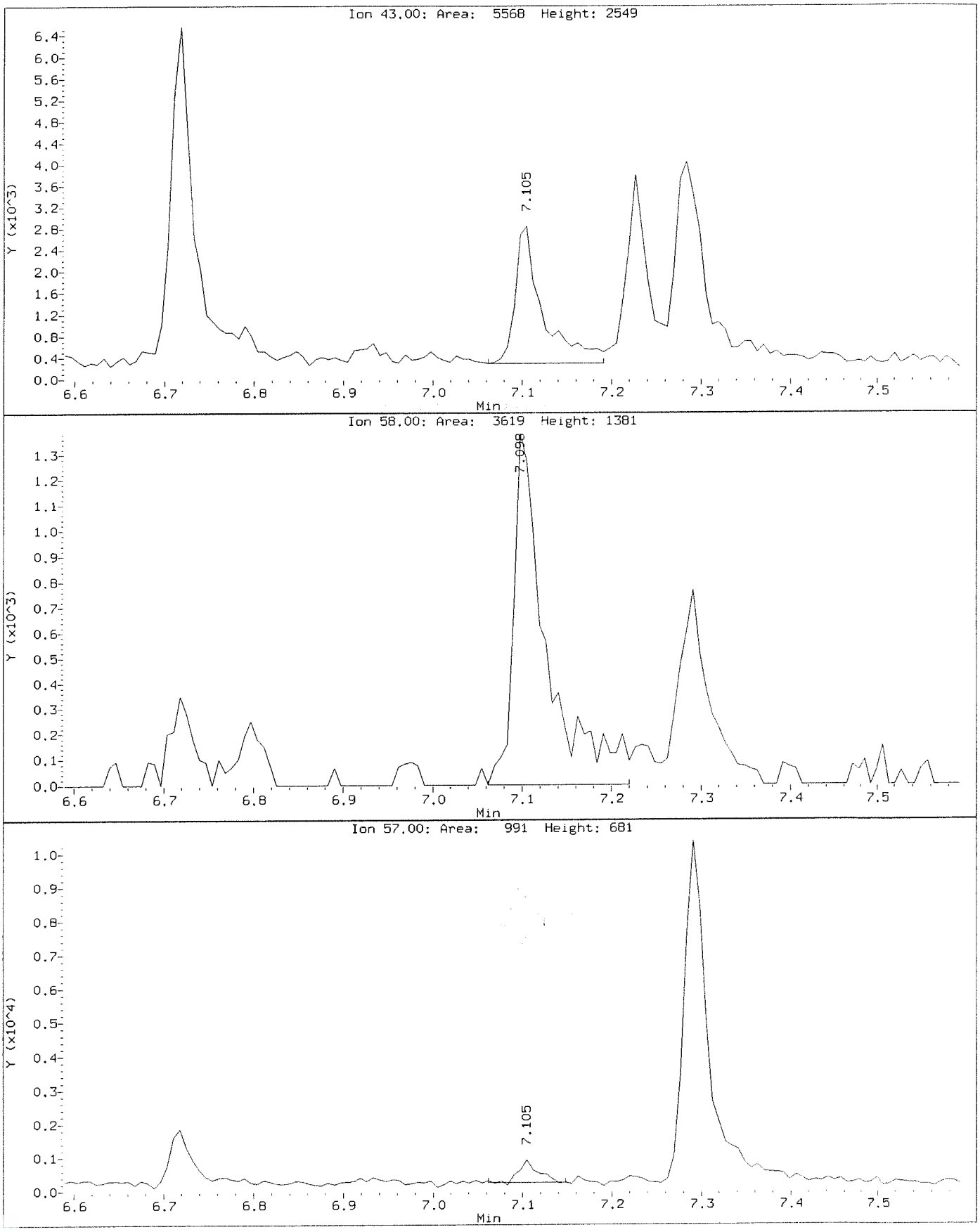
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





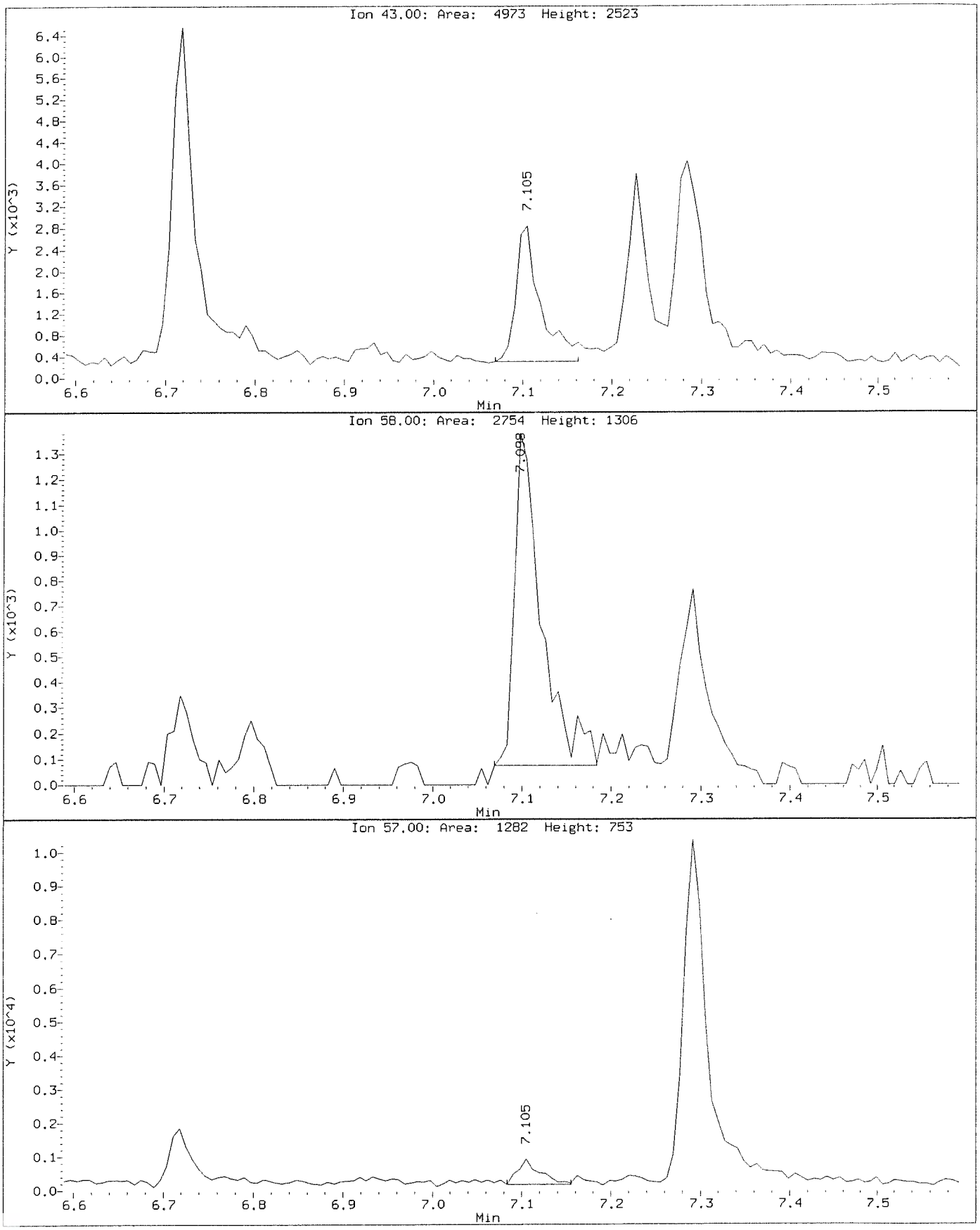
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



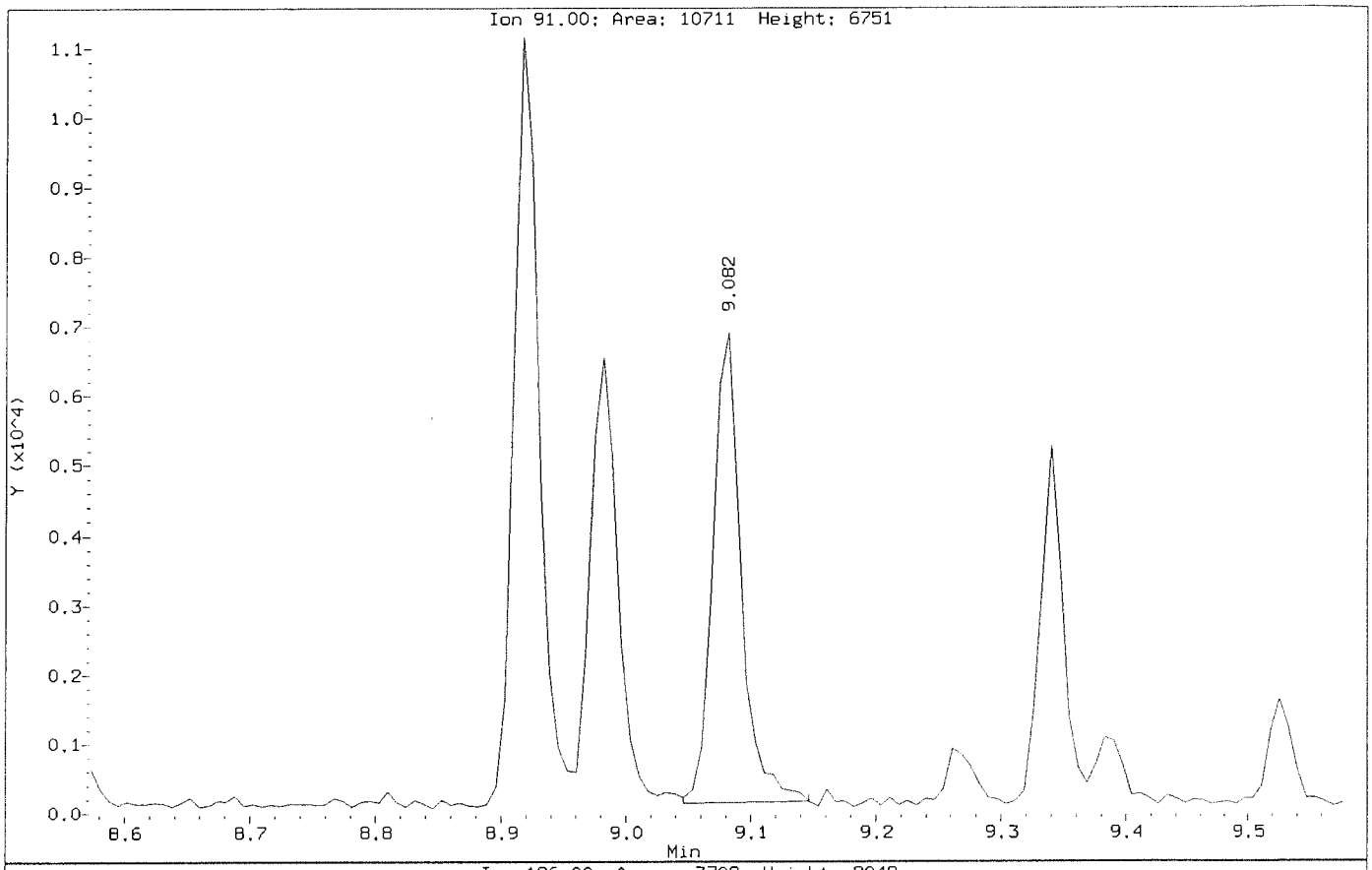
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Client Sample ID: VSTD000.5

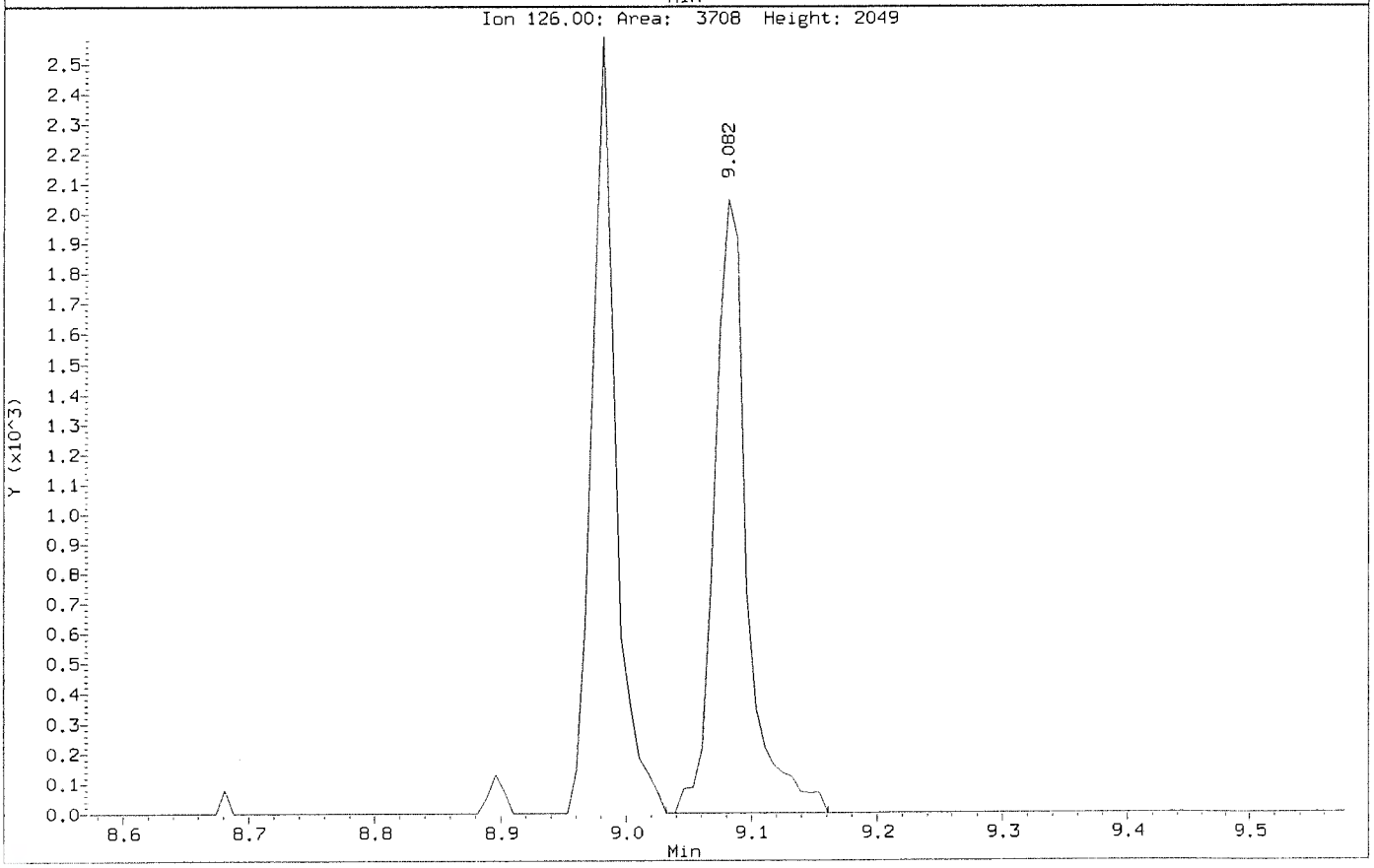
Compound: 2-Hexanone
CAS Number: 591-78-6



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Client Sample ID: VSTD000.5

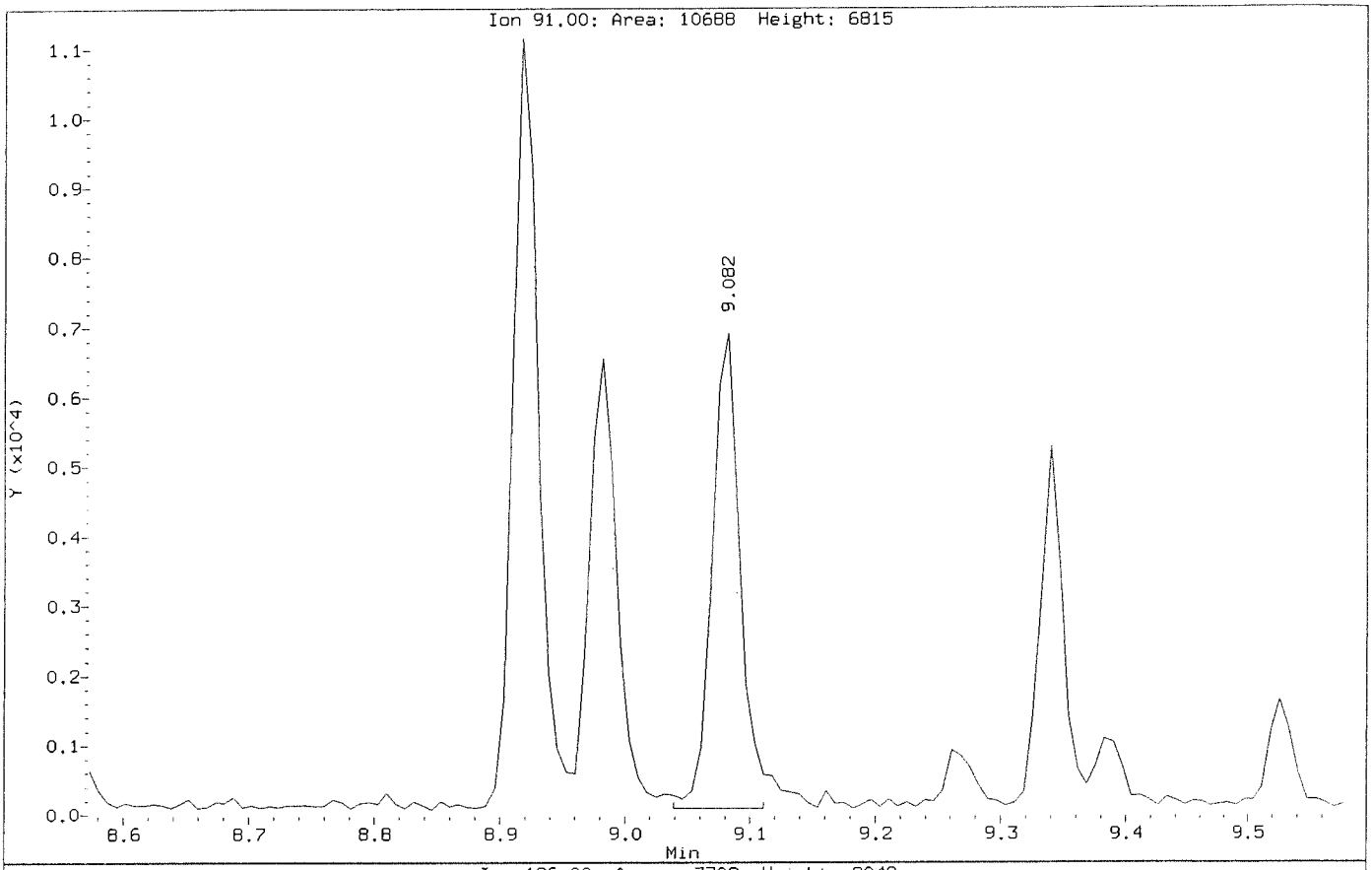
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

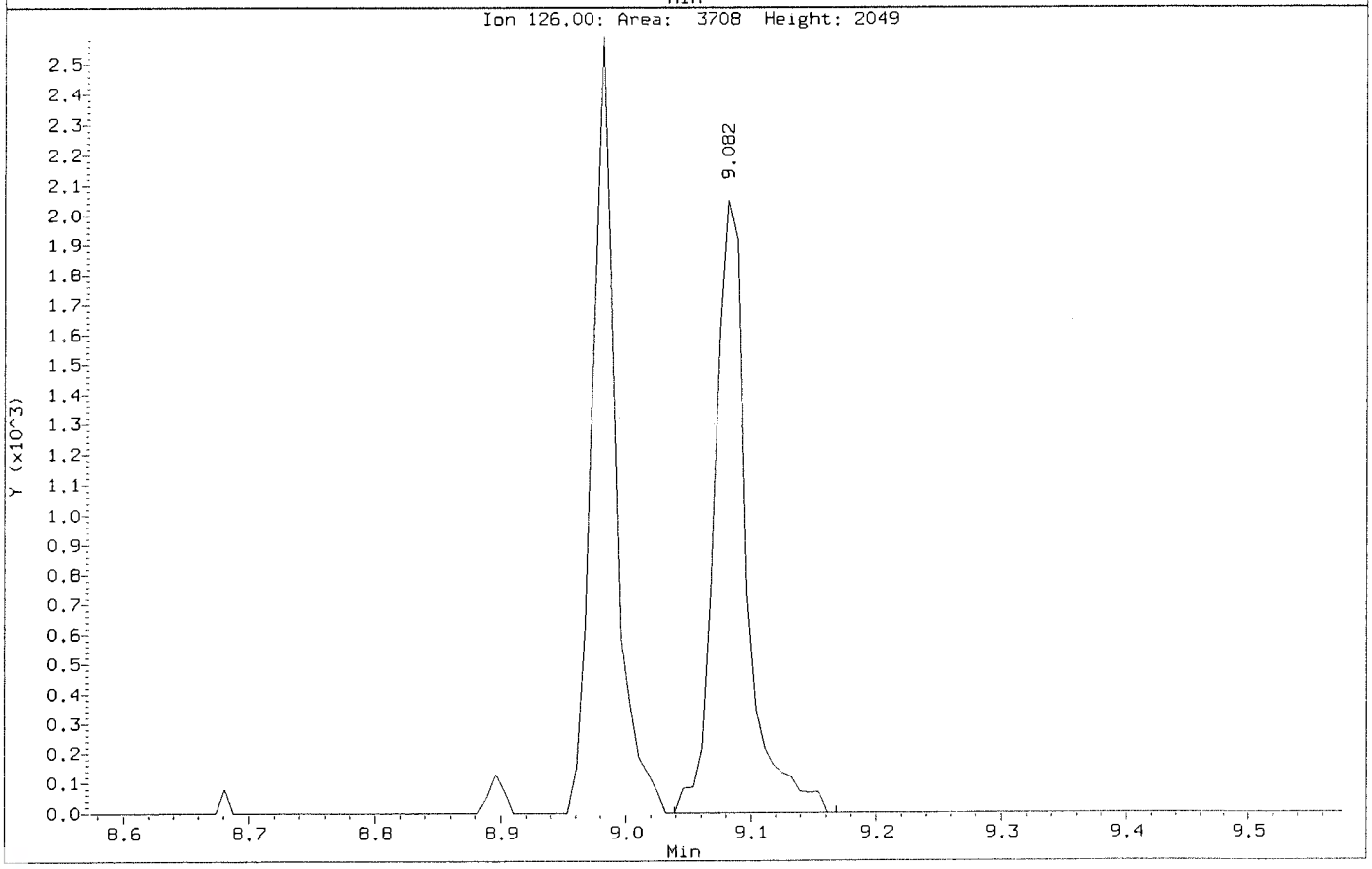




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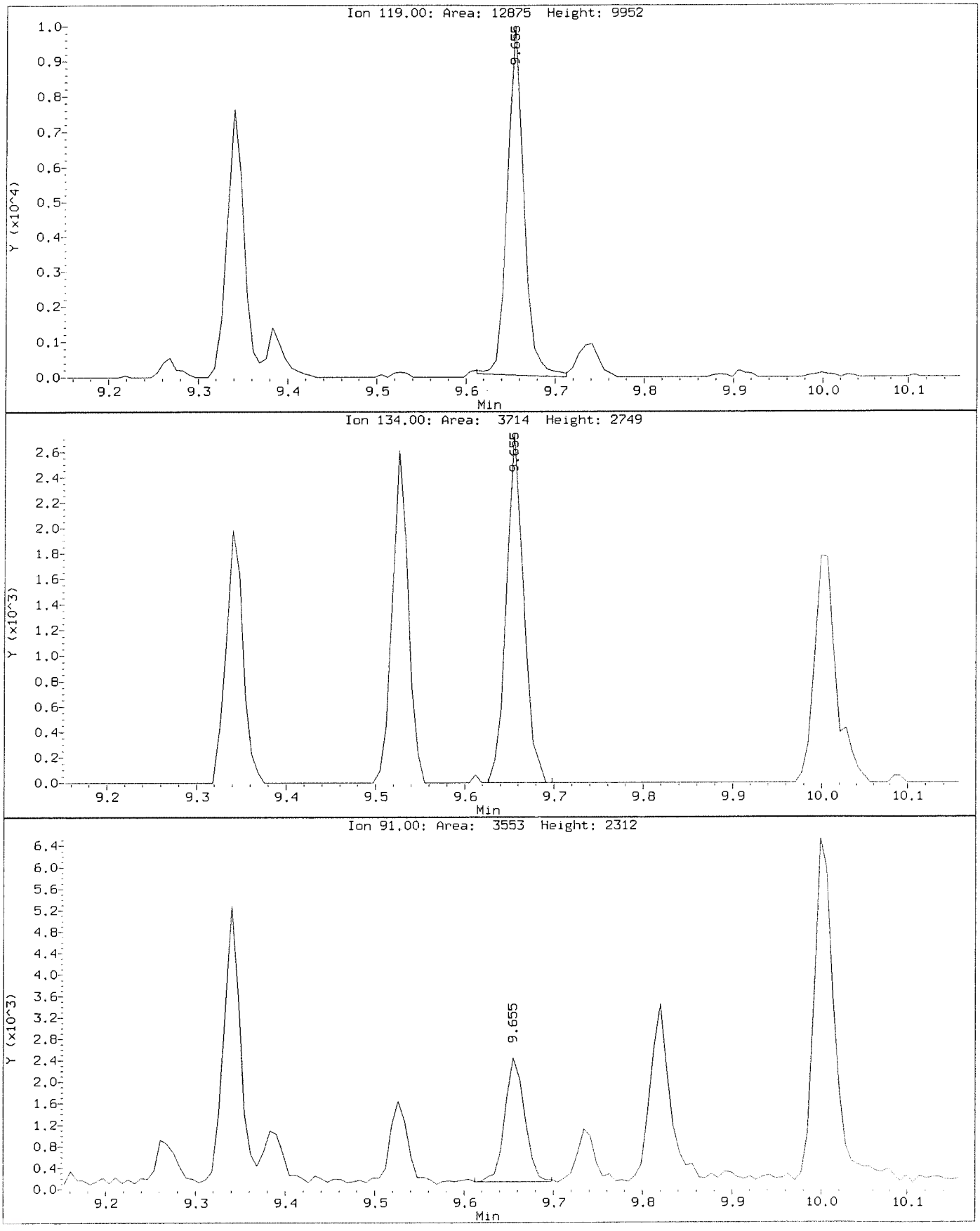
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





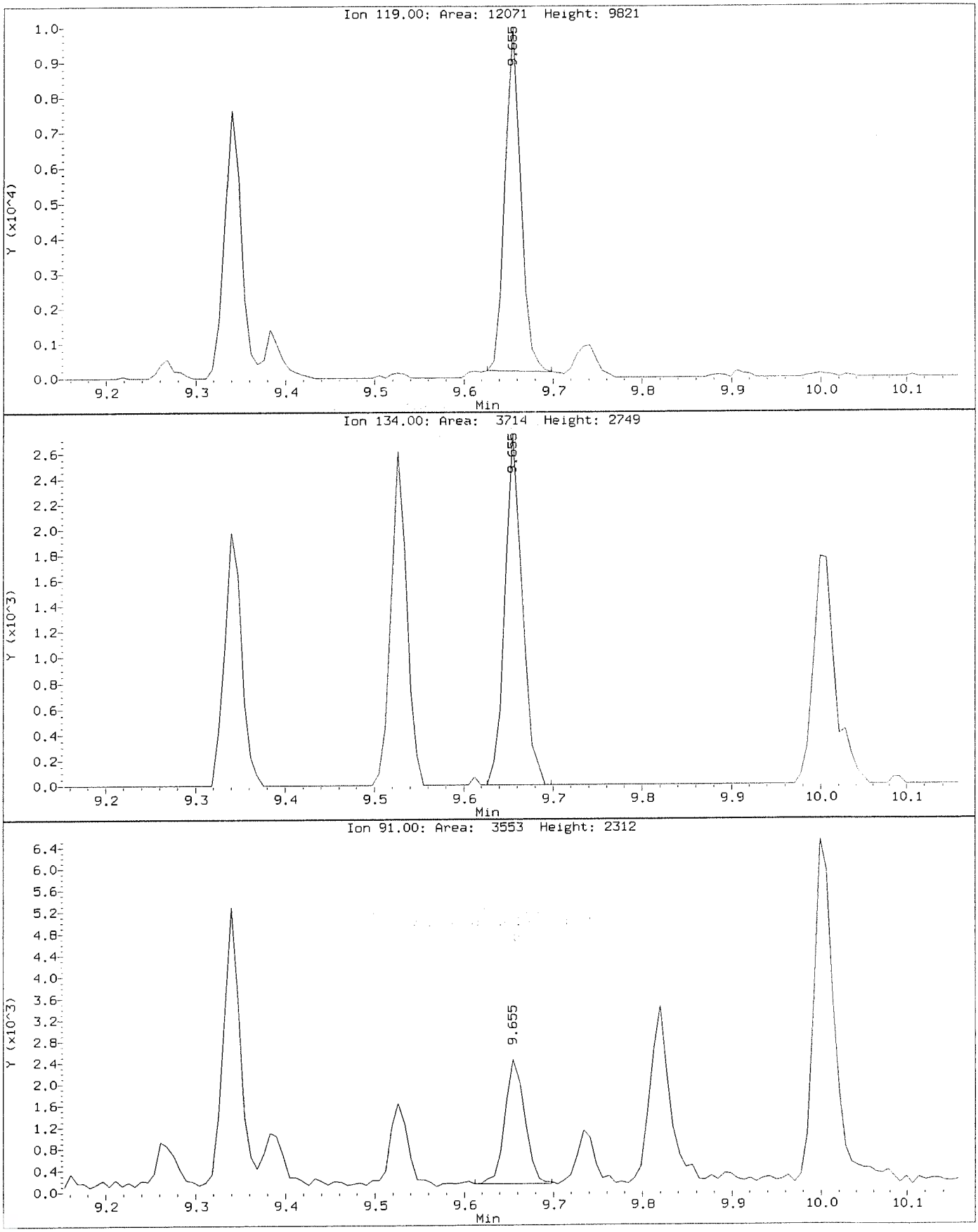
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



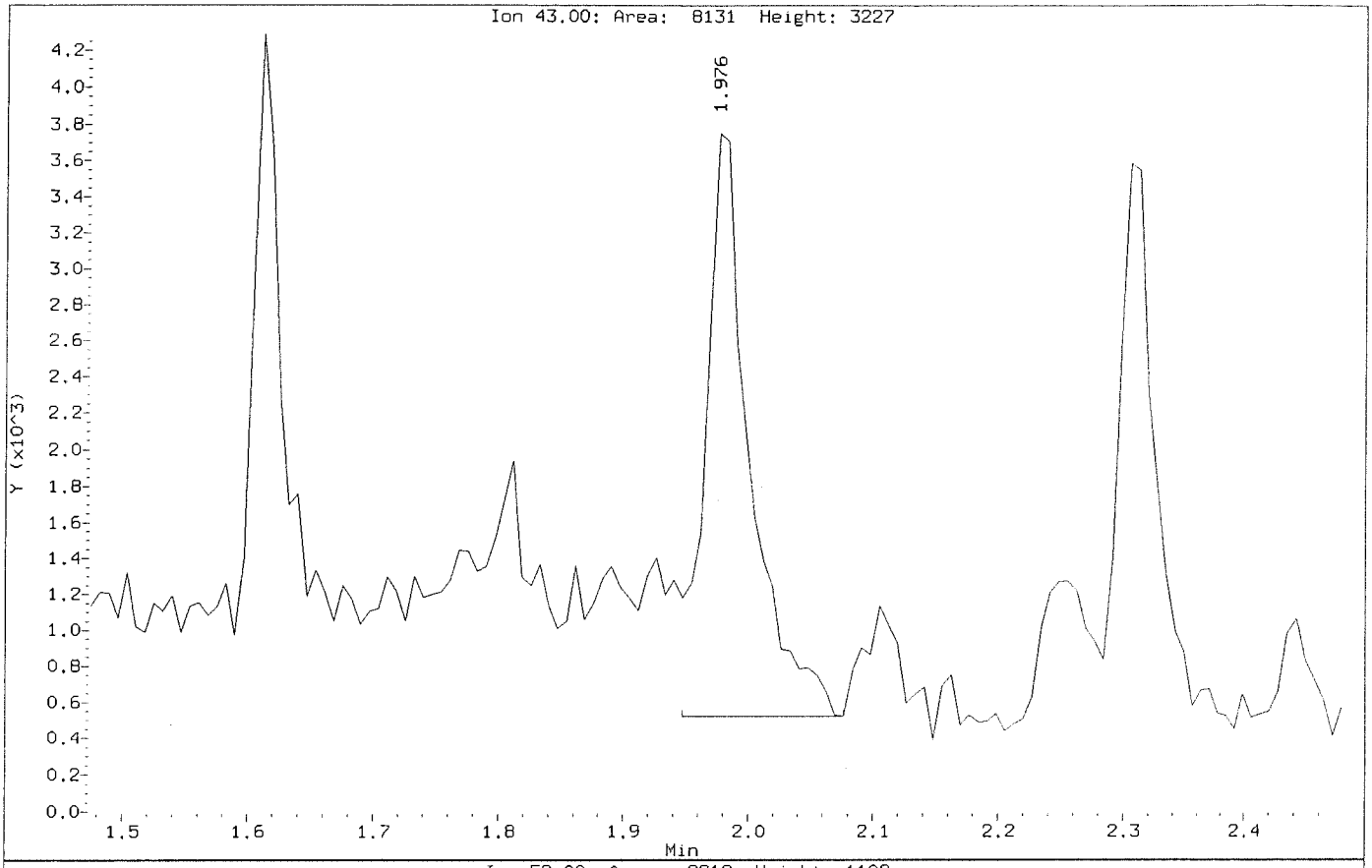
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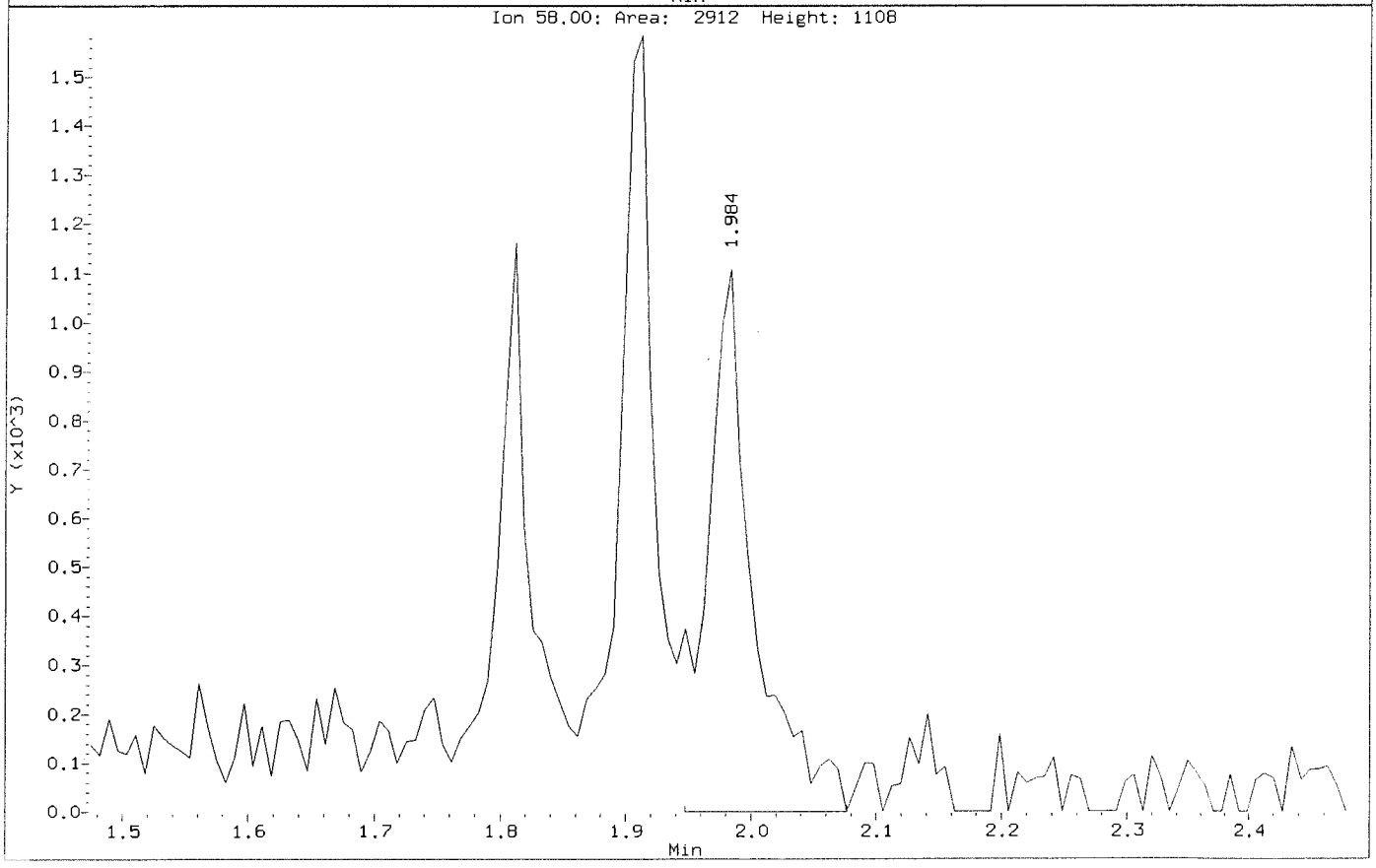
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



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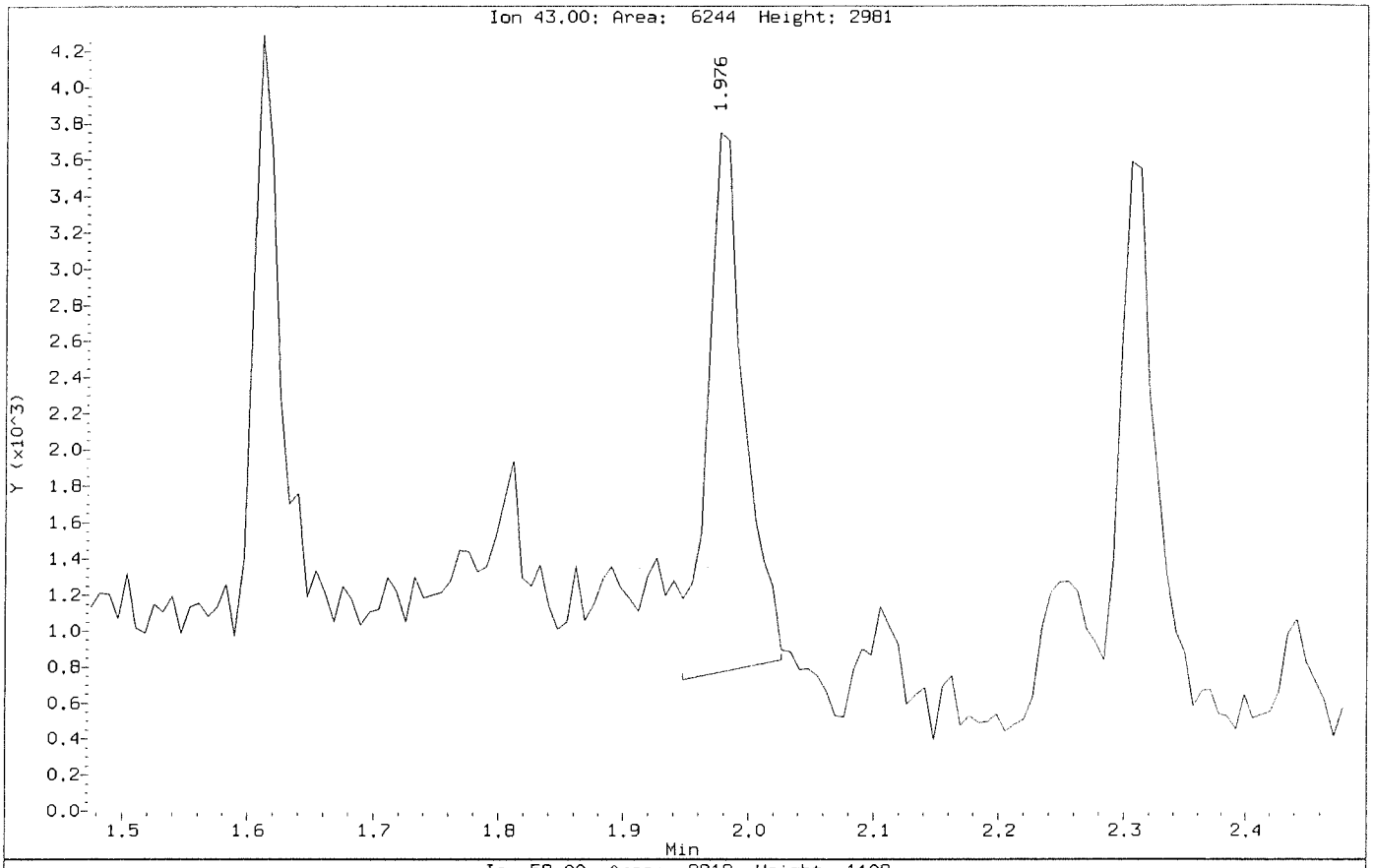
Compound: Acetone
CAS Number: 67-64-1

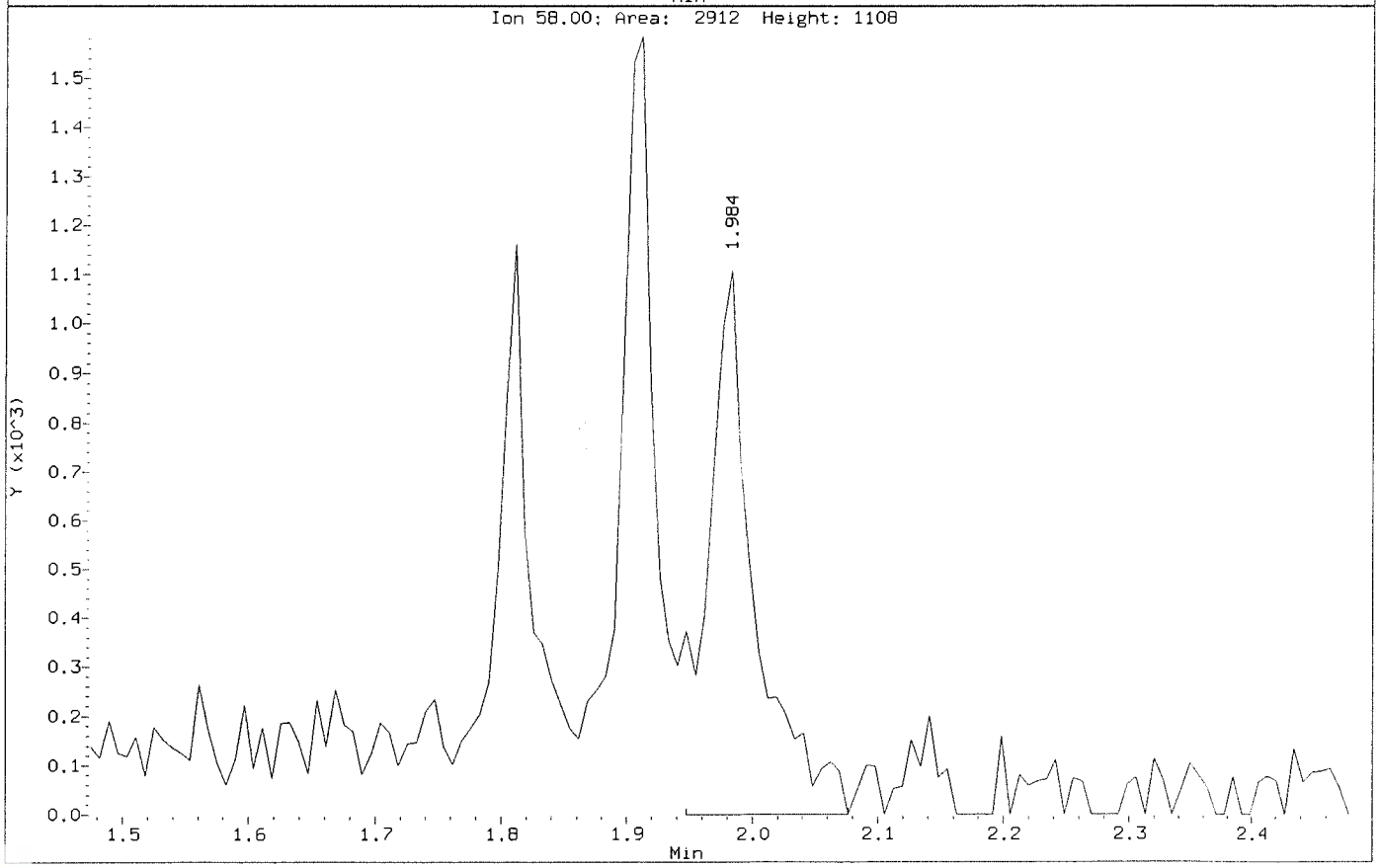




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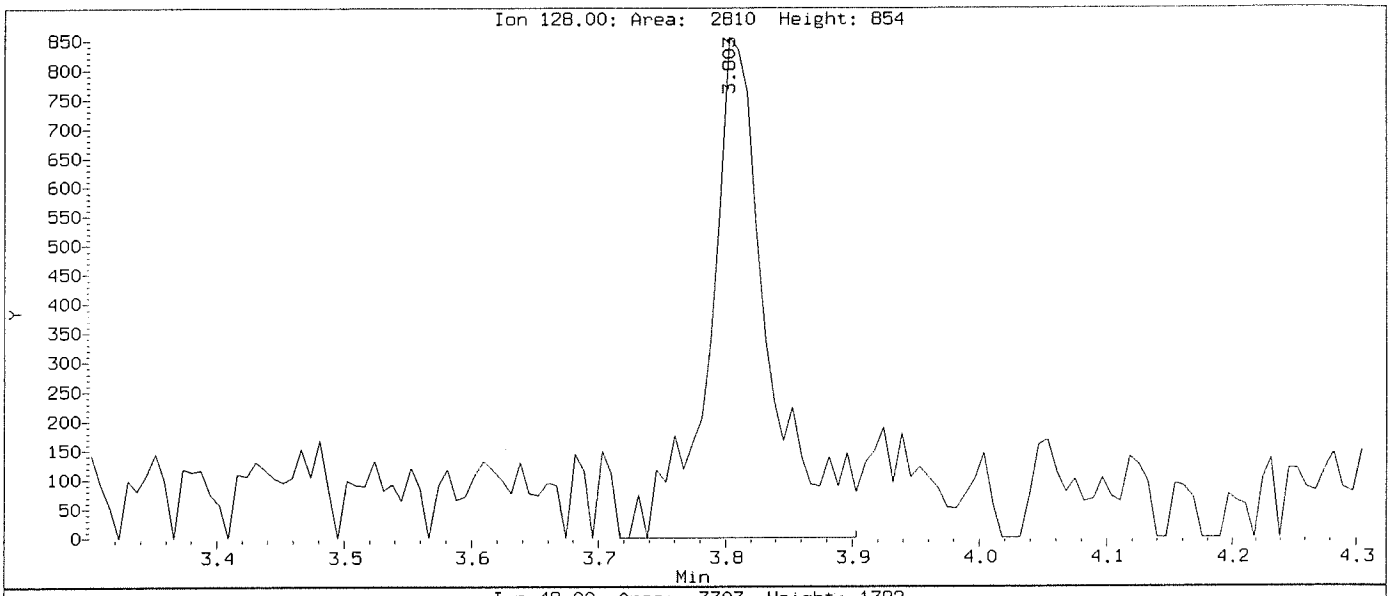
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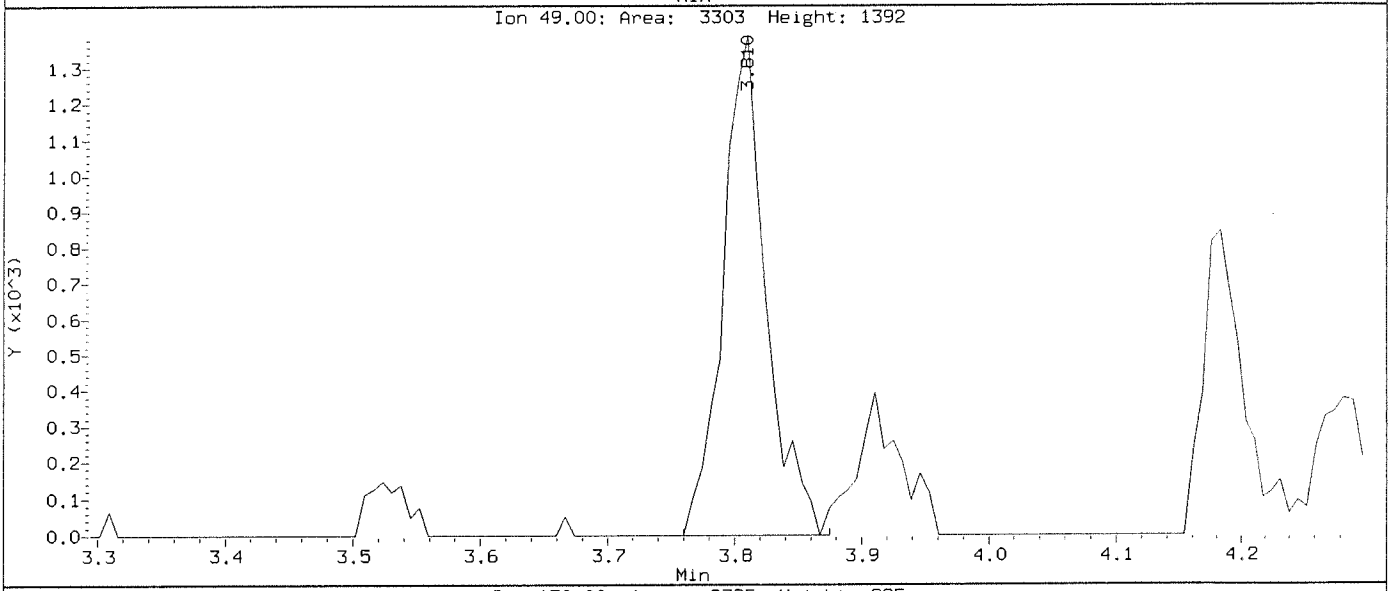


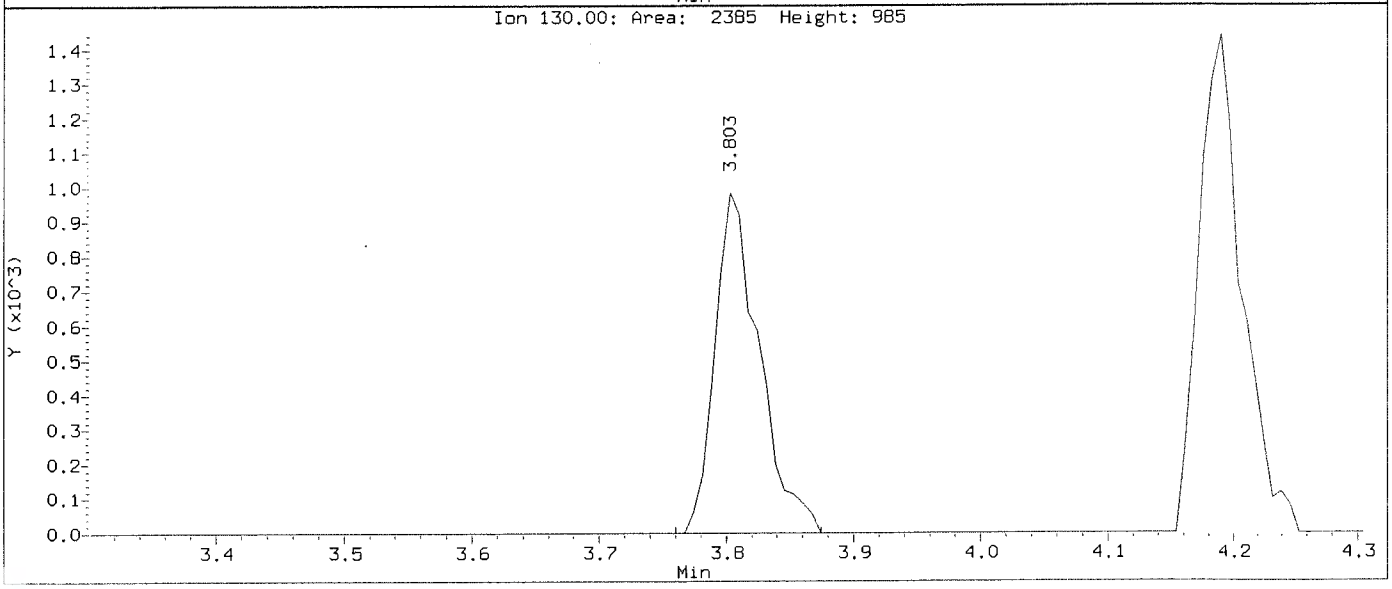


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

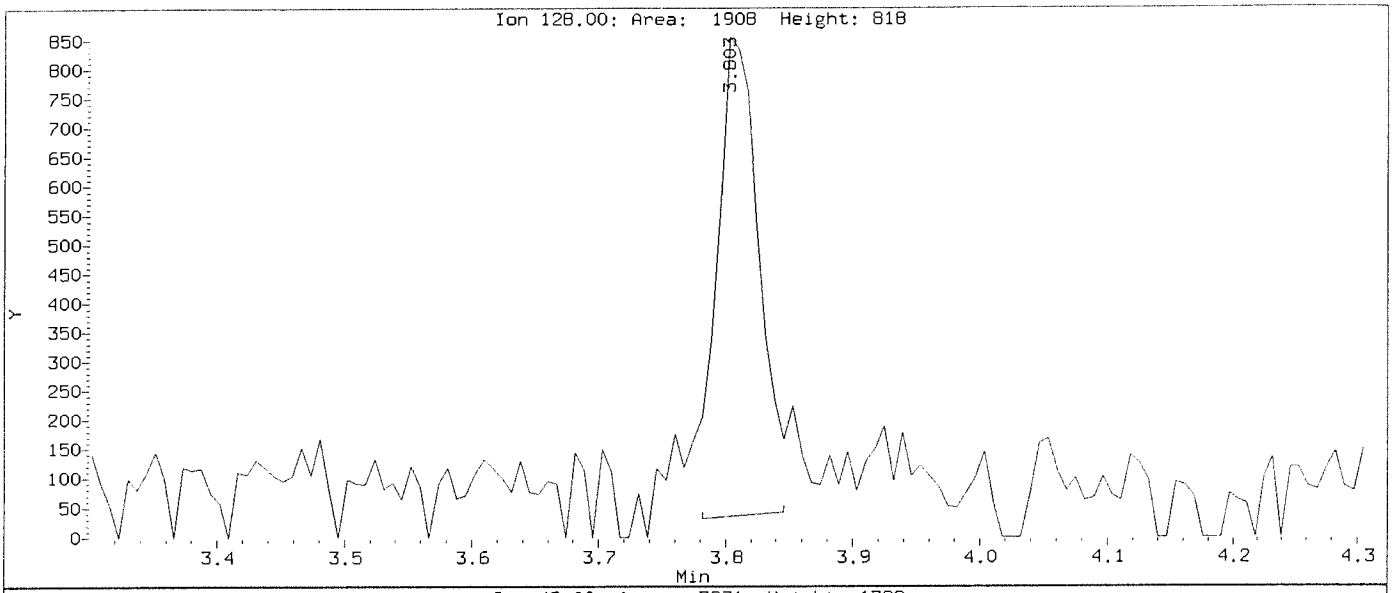


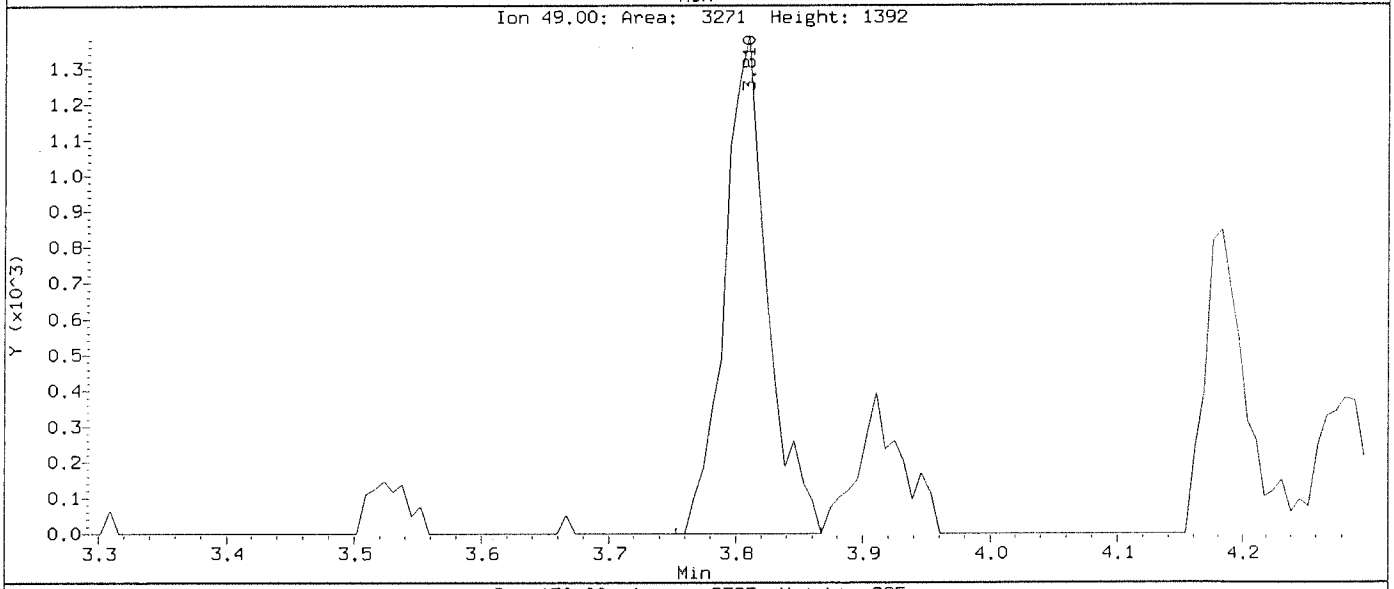


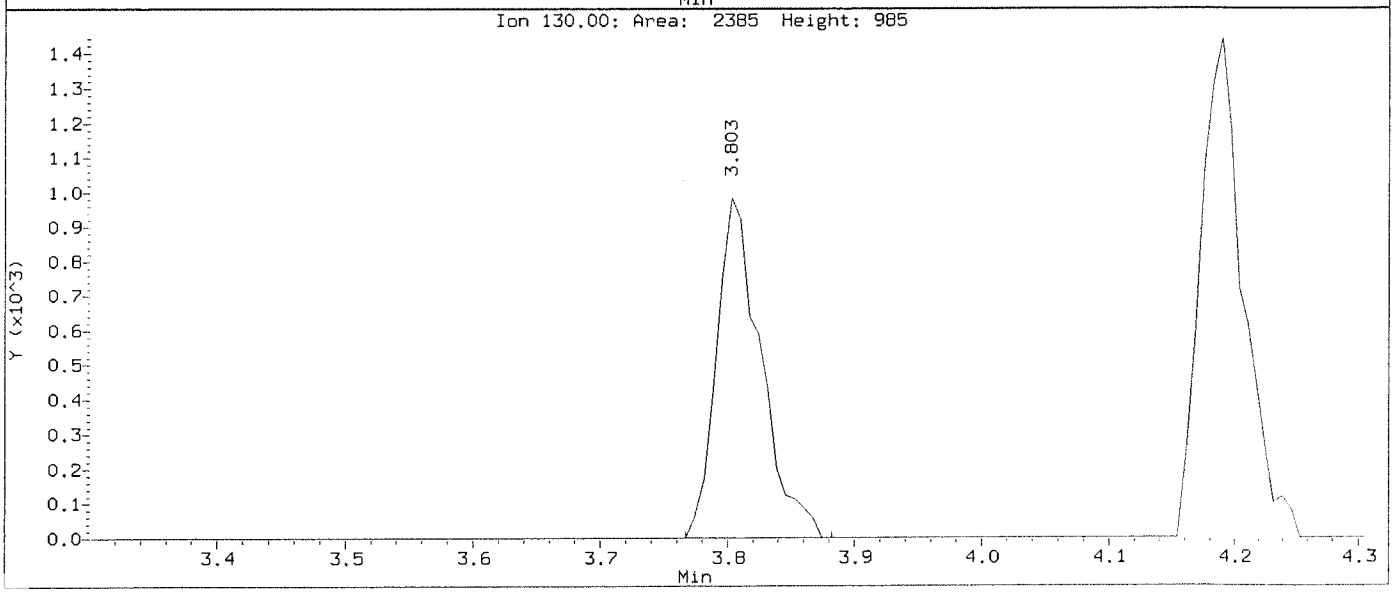


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Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

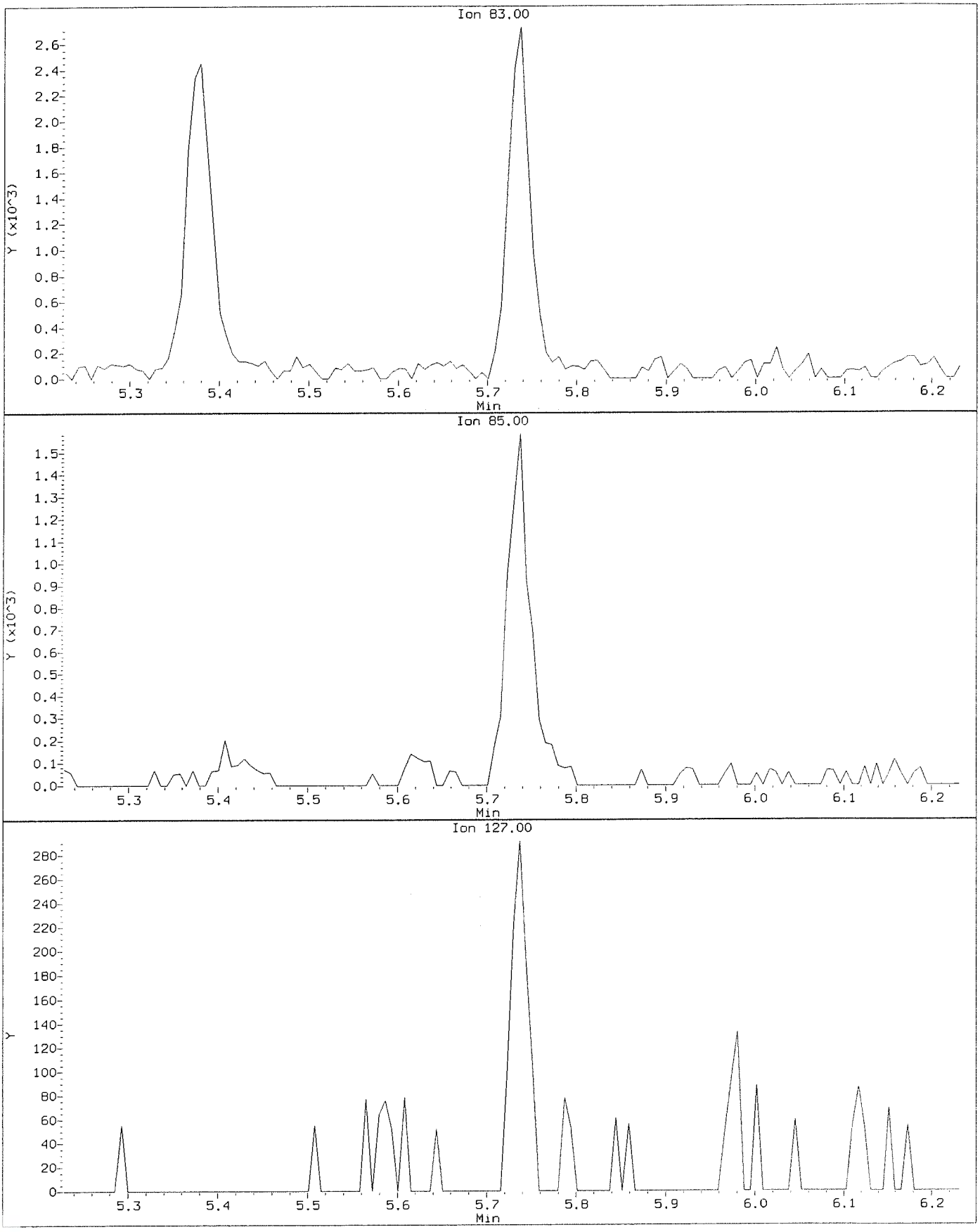






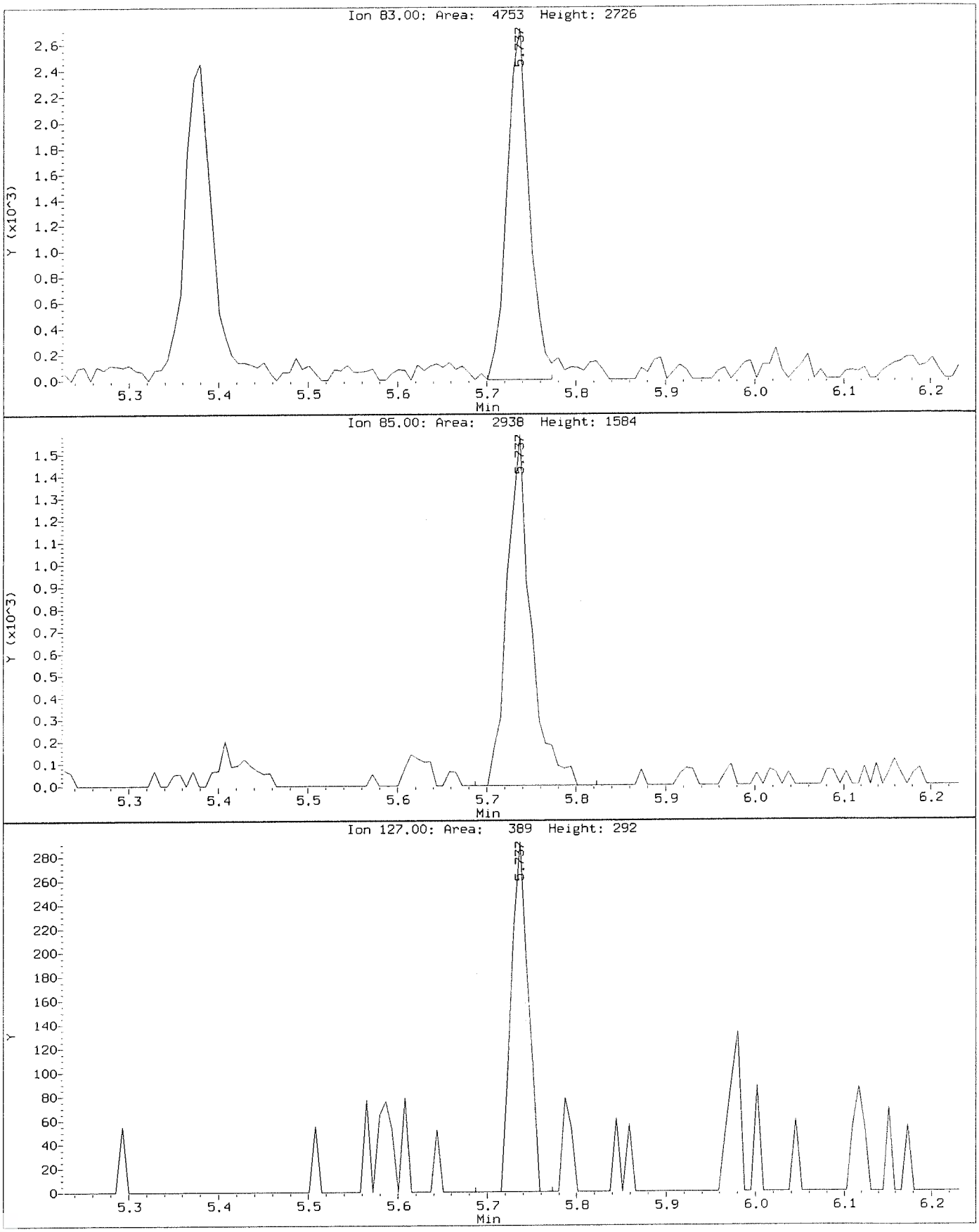
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



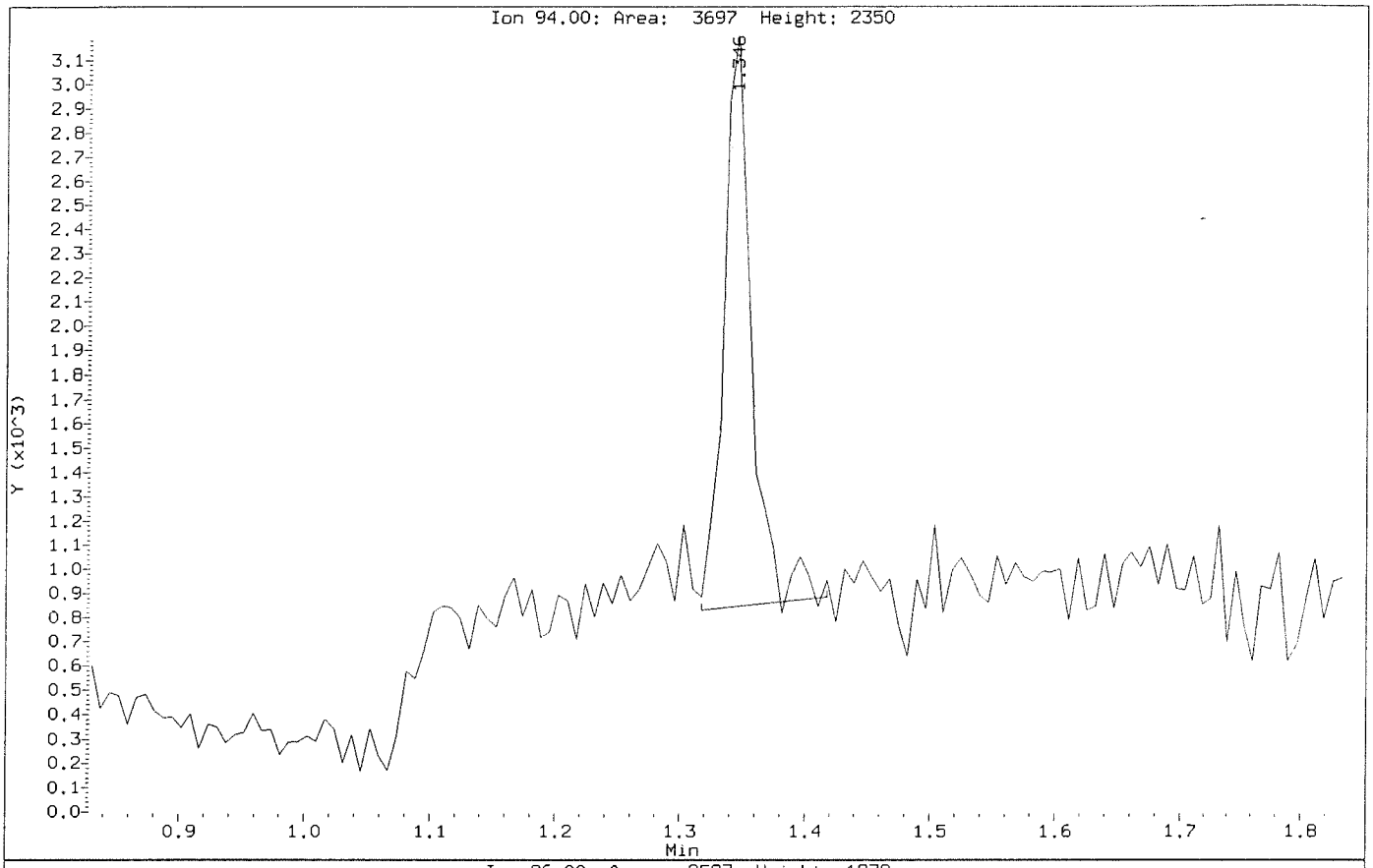
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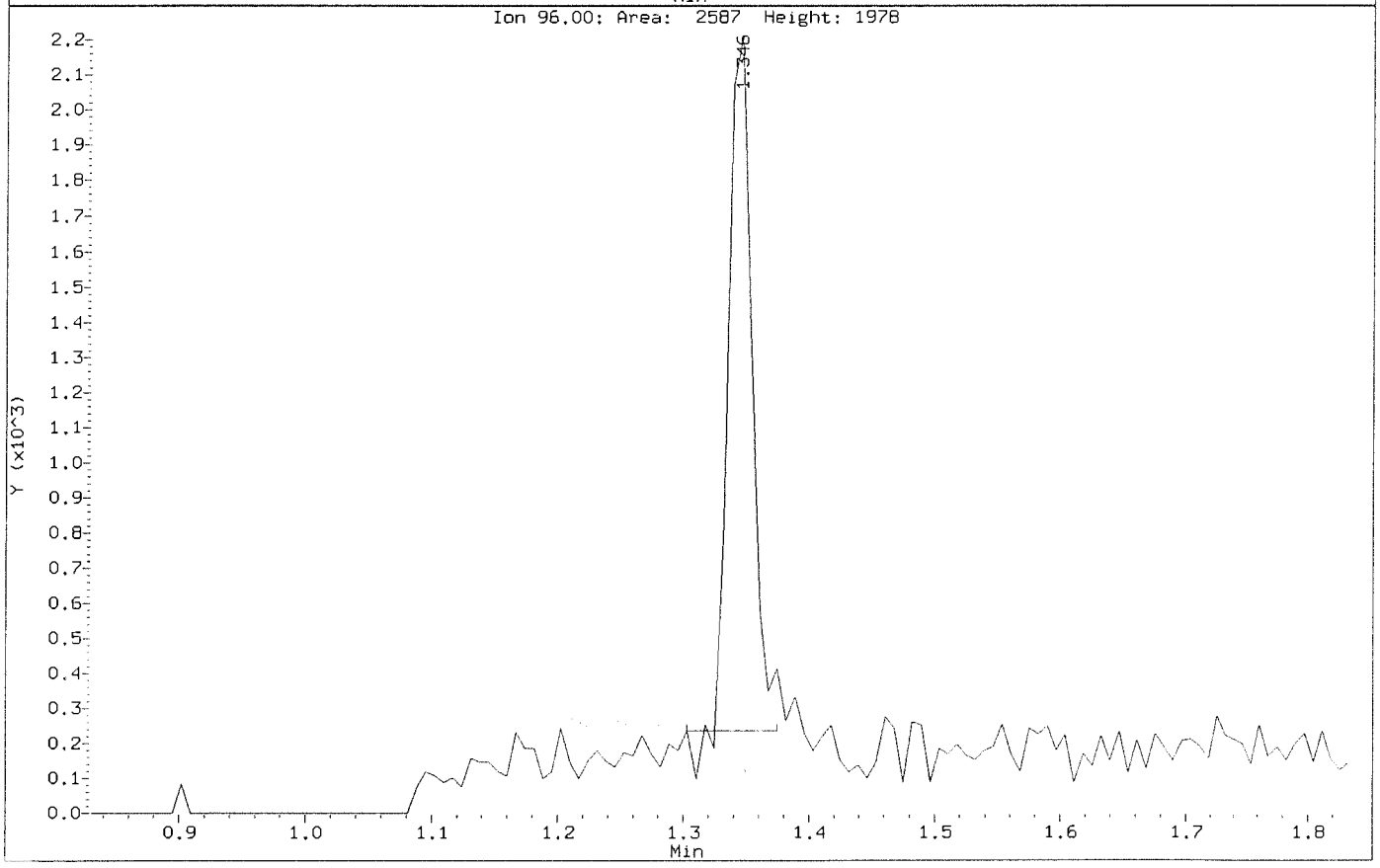
Compound: Bromodichloromethane
CAS Number: 75-27-4



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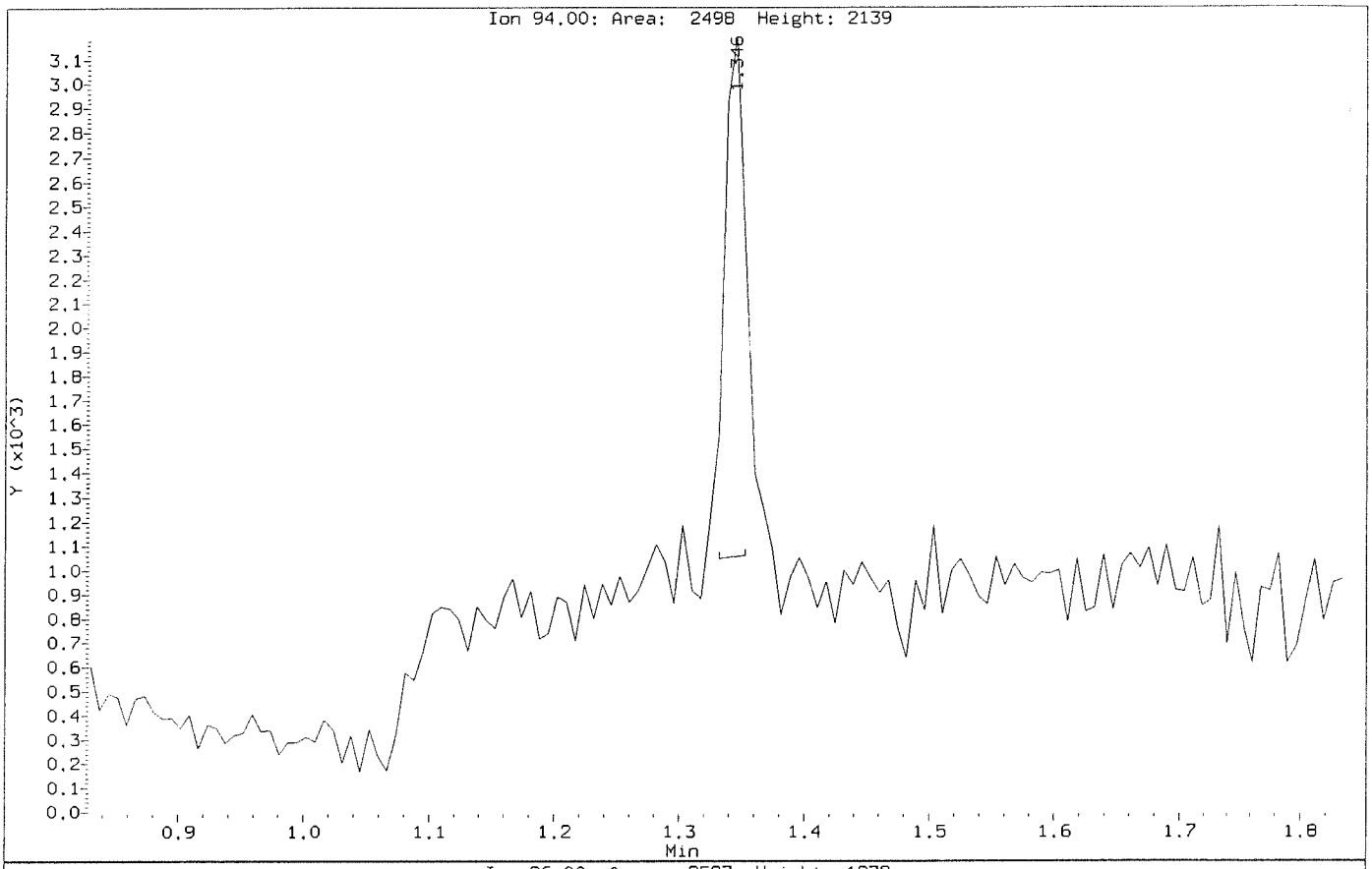
Compound: Bromomethane
CAS Number: 74-83-9

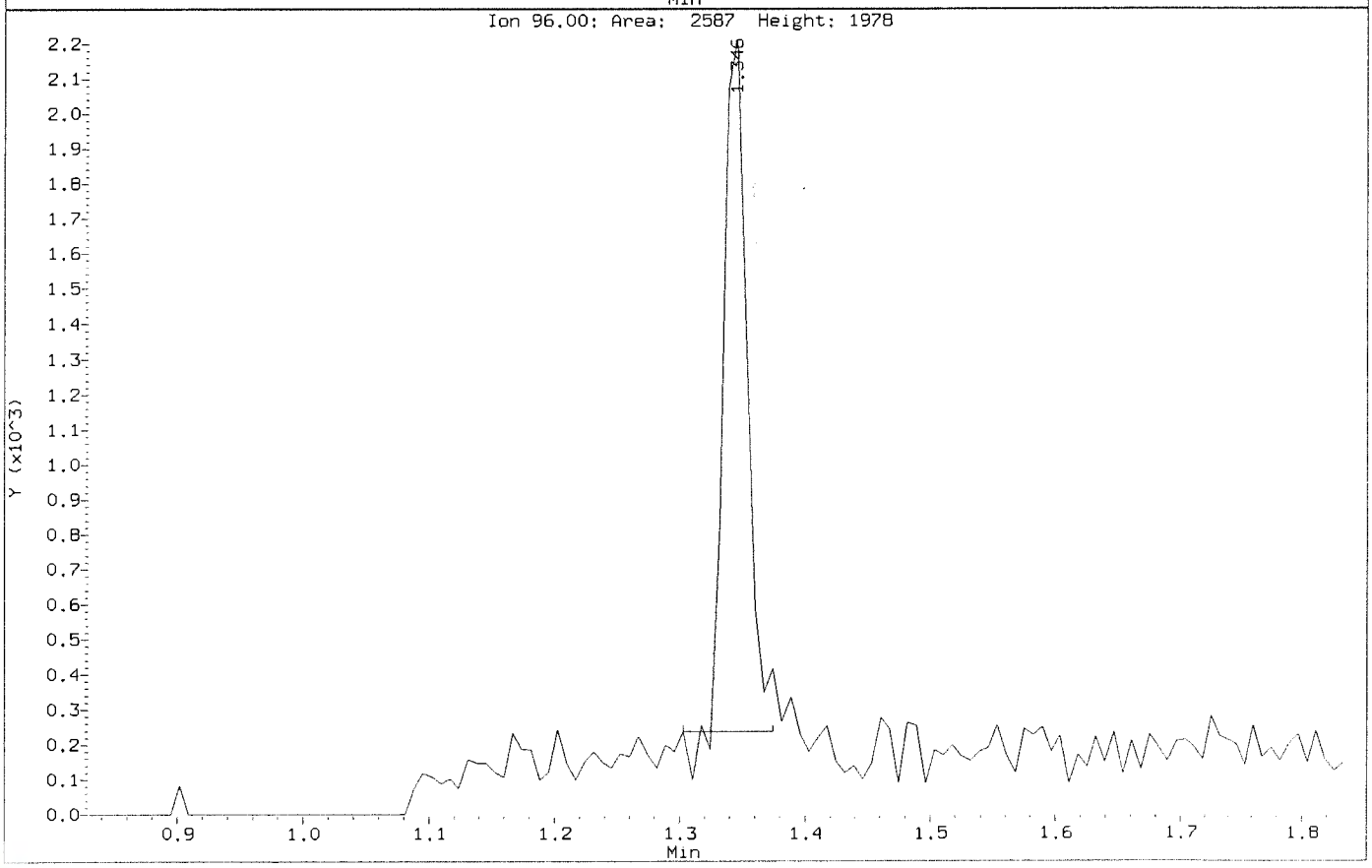




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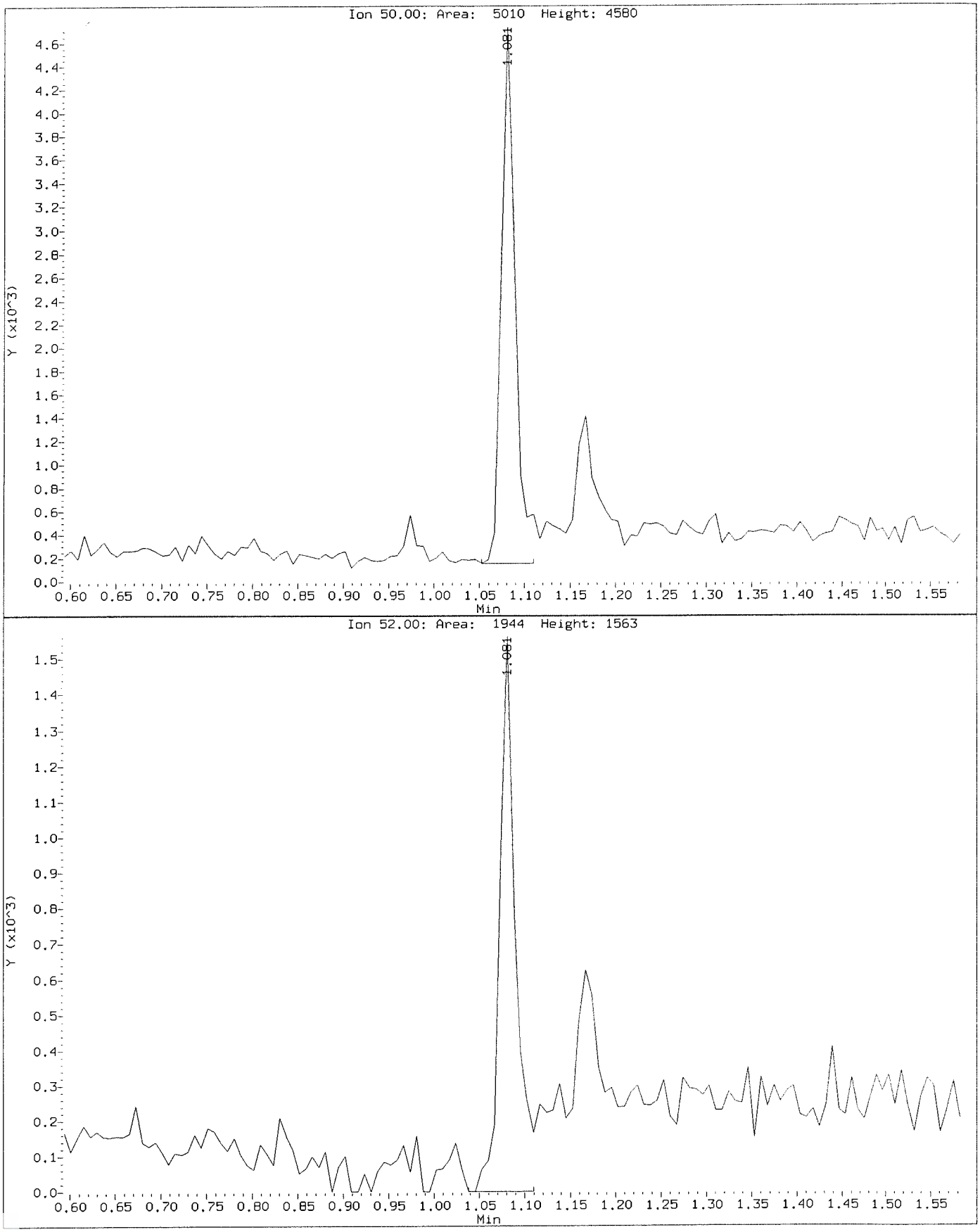
Compound: Bromomethane
CAS Number: 74-83-9





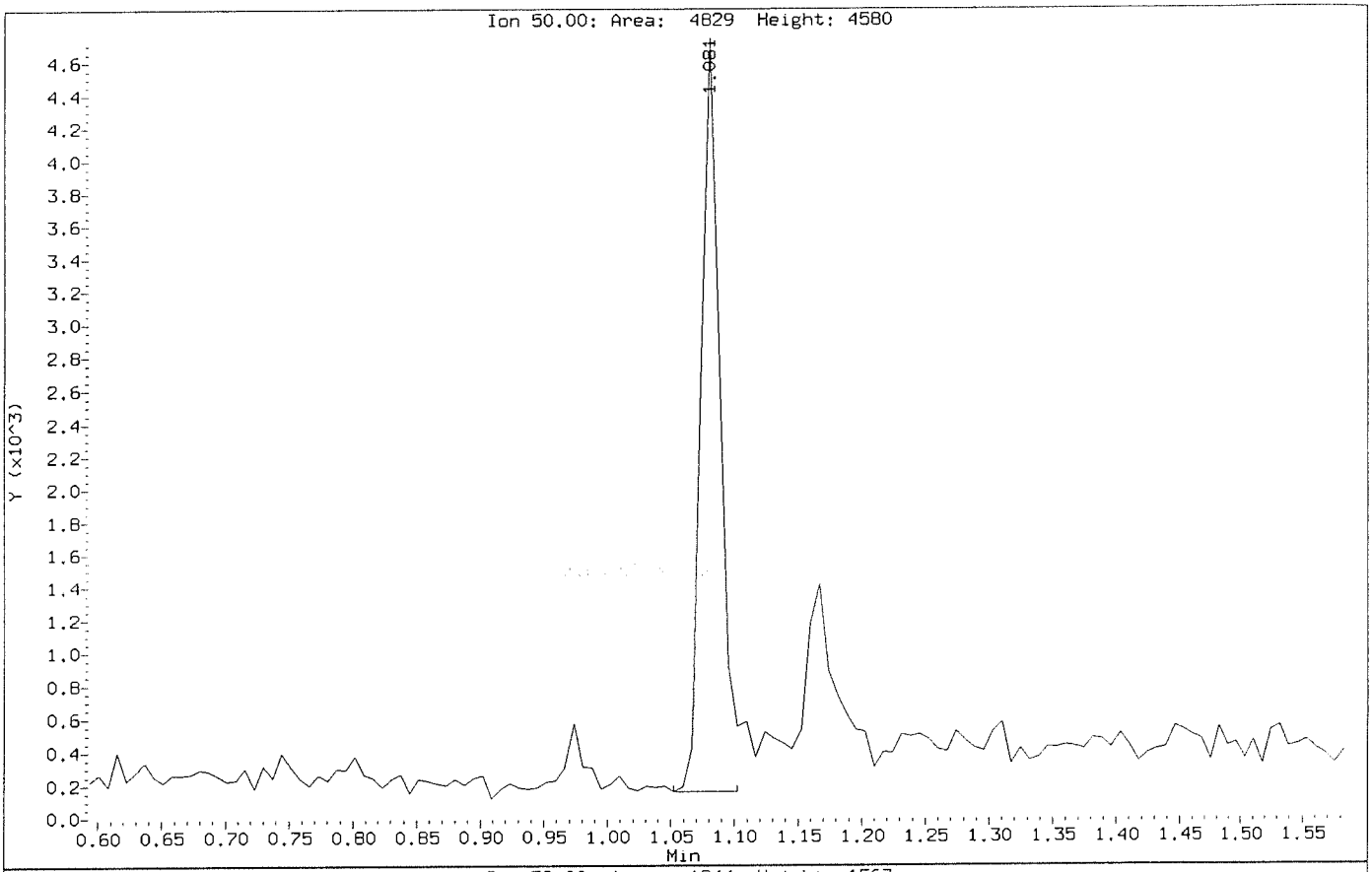
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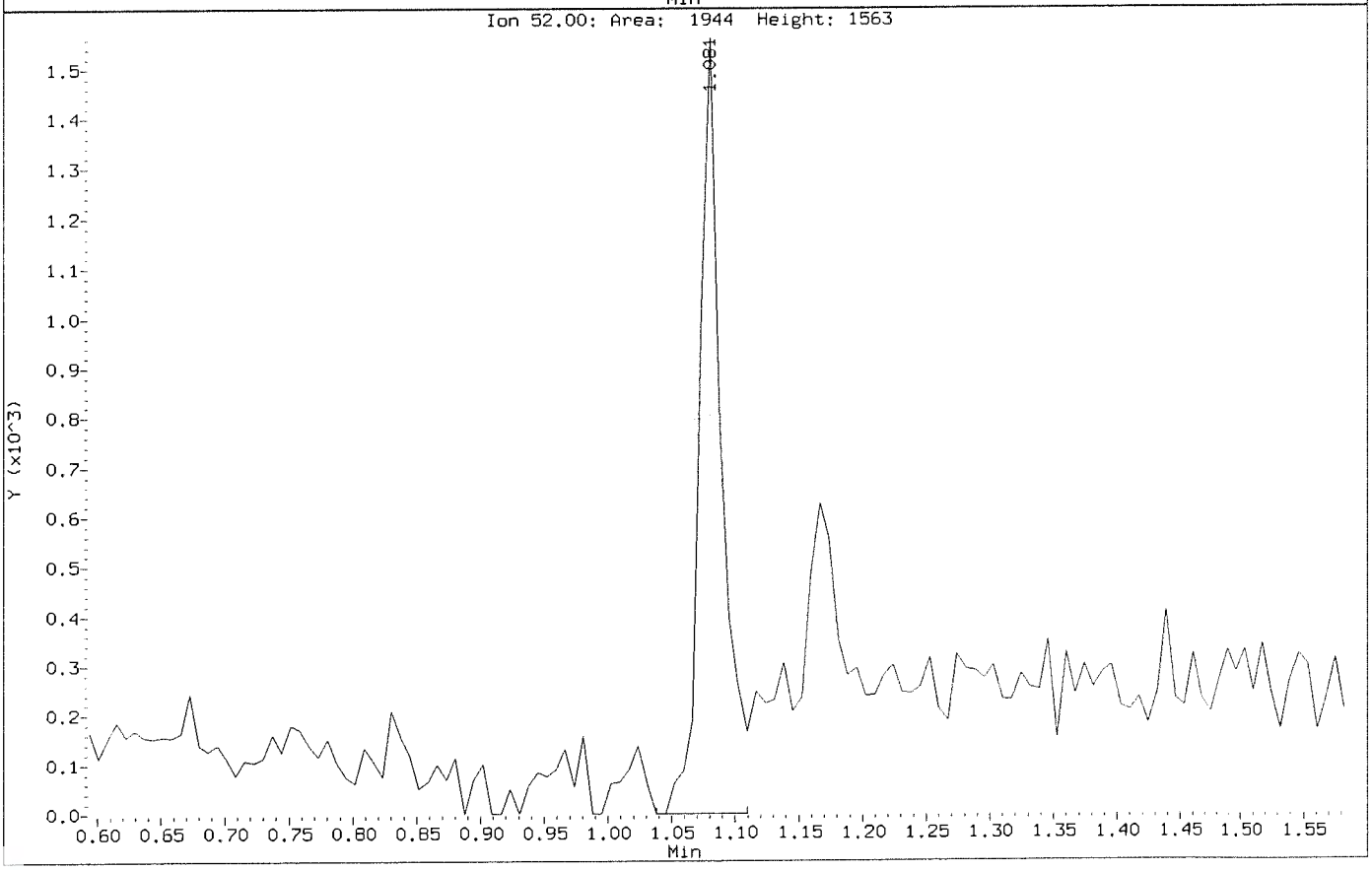
Compound: Chloromethane
CAS Number: 74-87-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

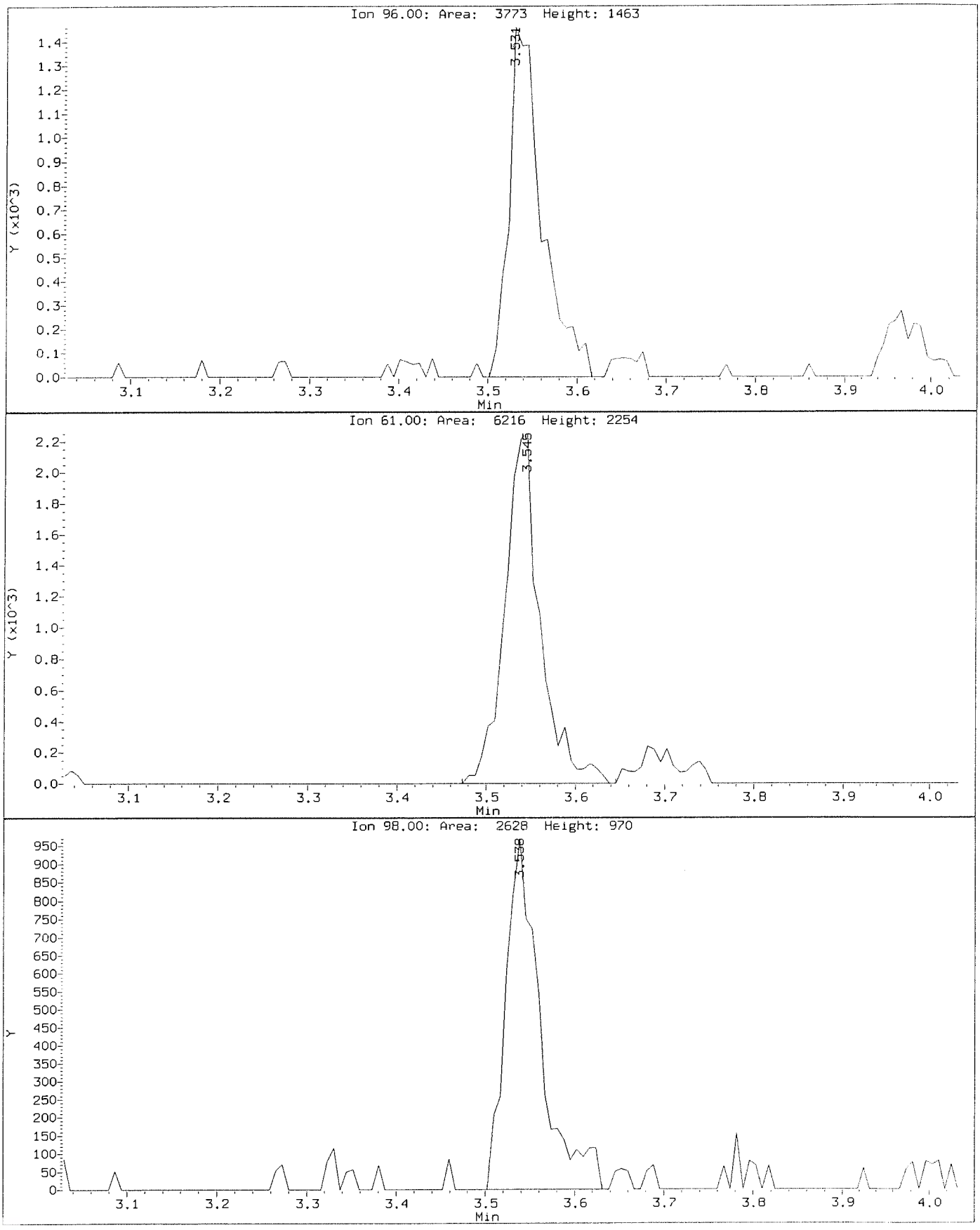
Compound: Chloromethane
CAS Number: 74-87-3





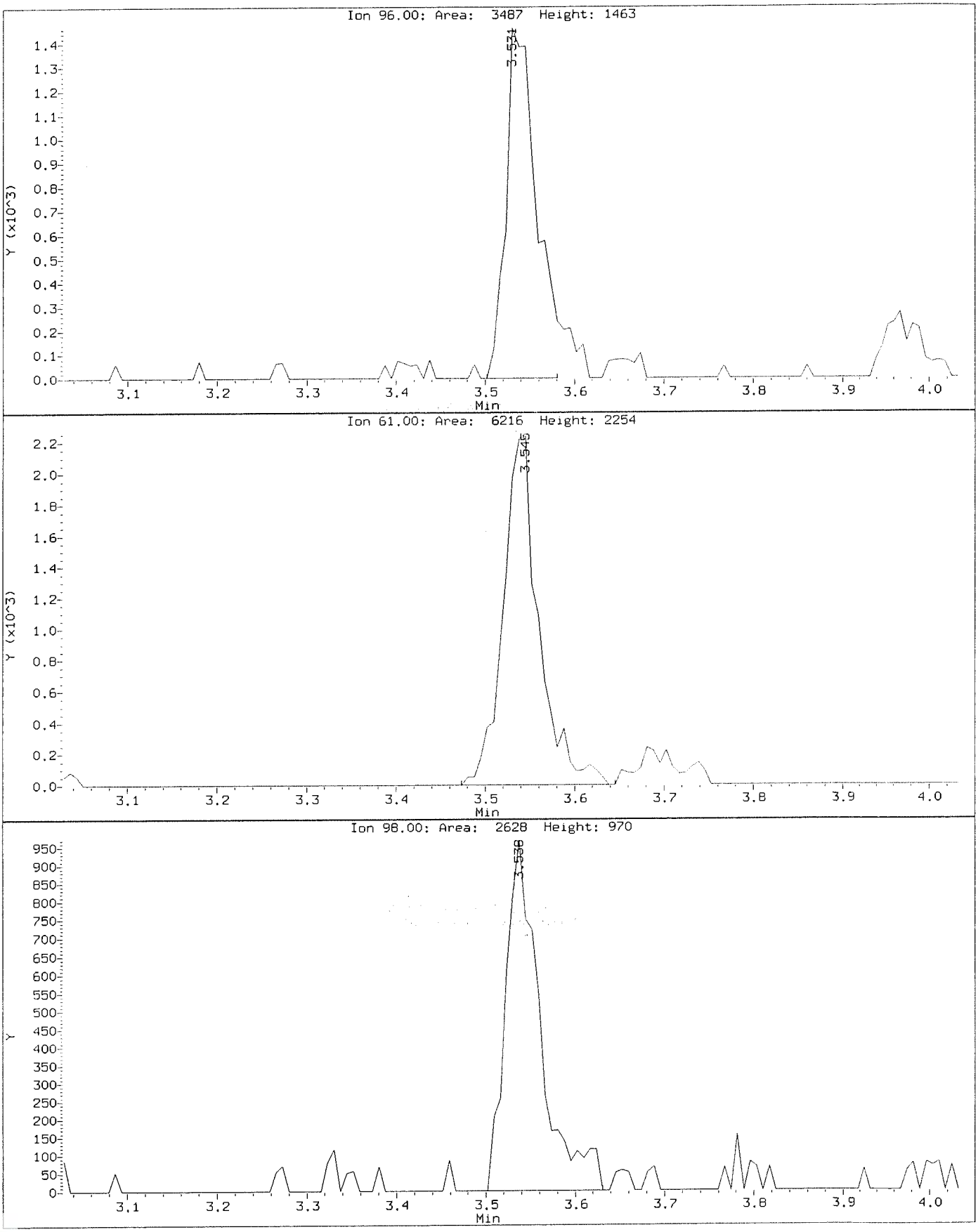
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



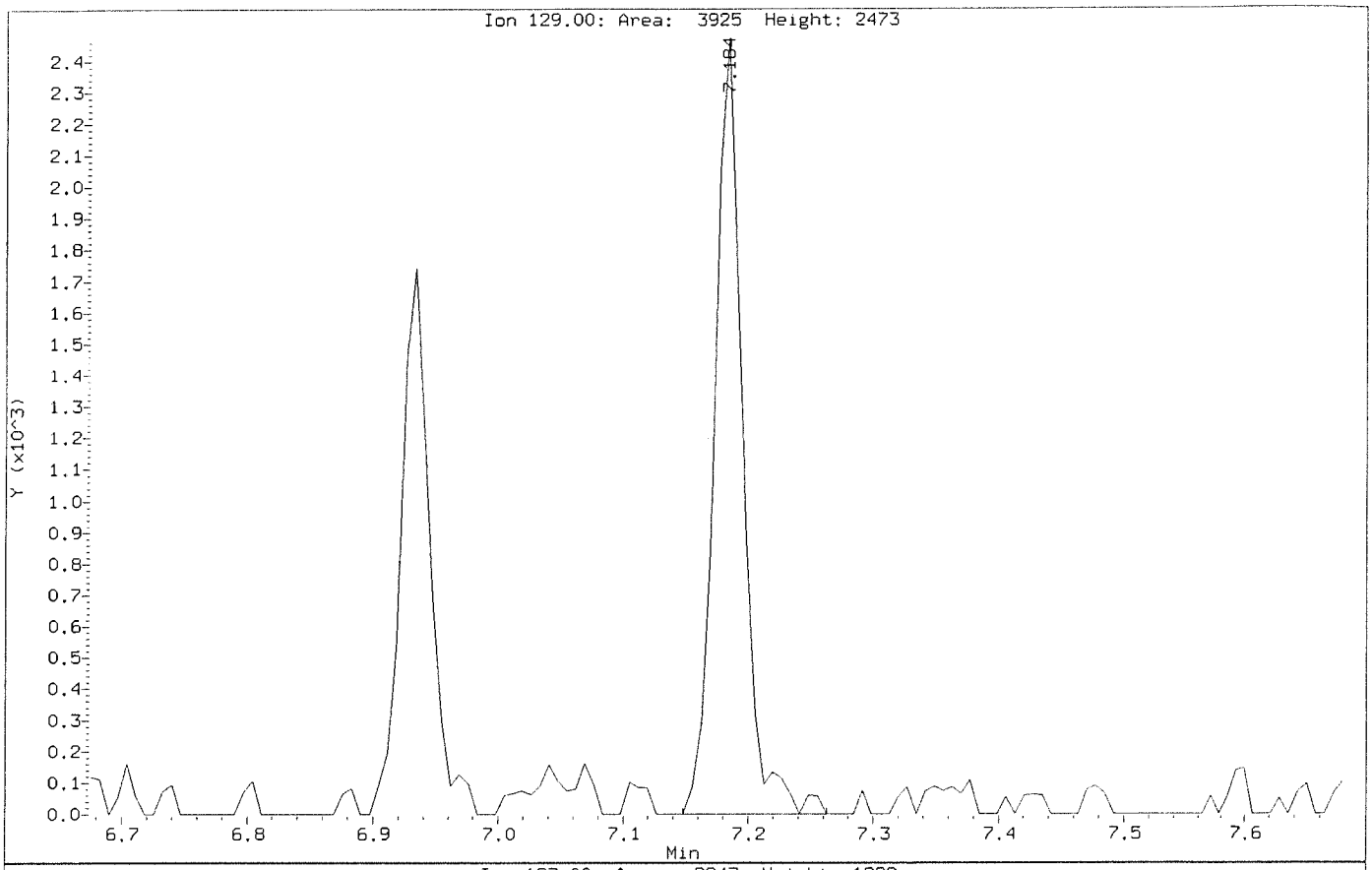
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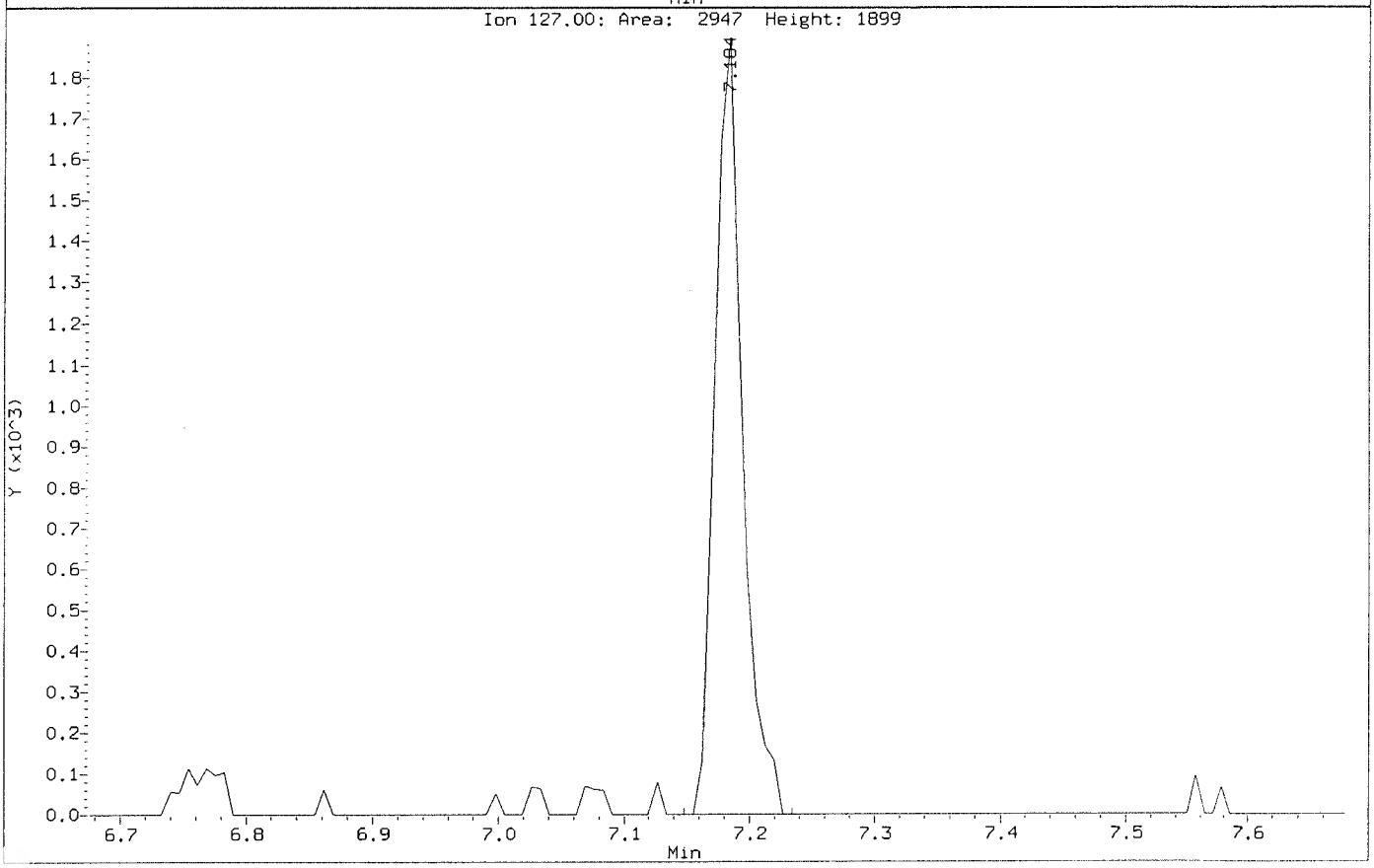
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

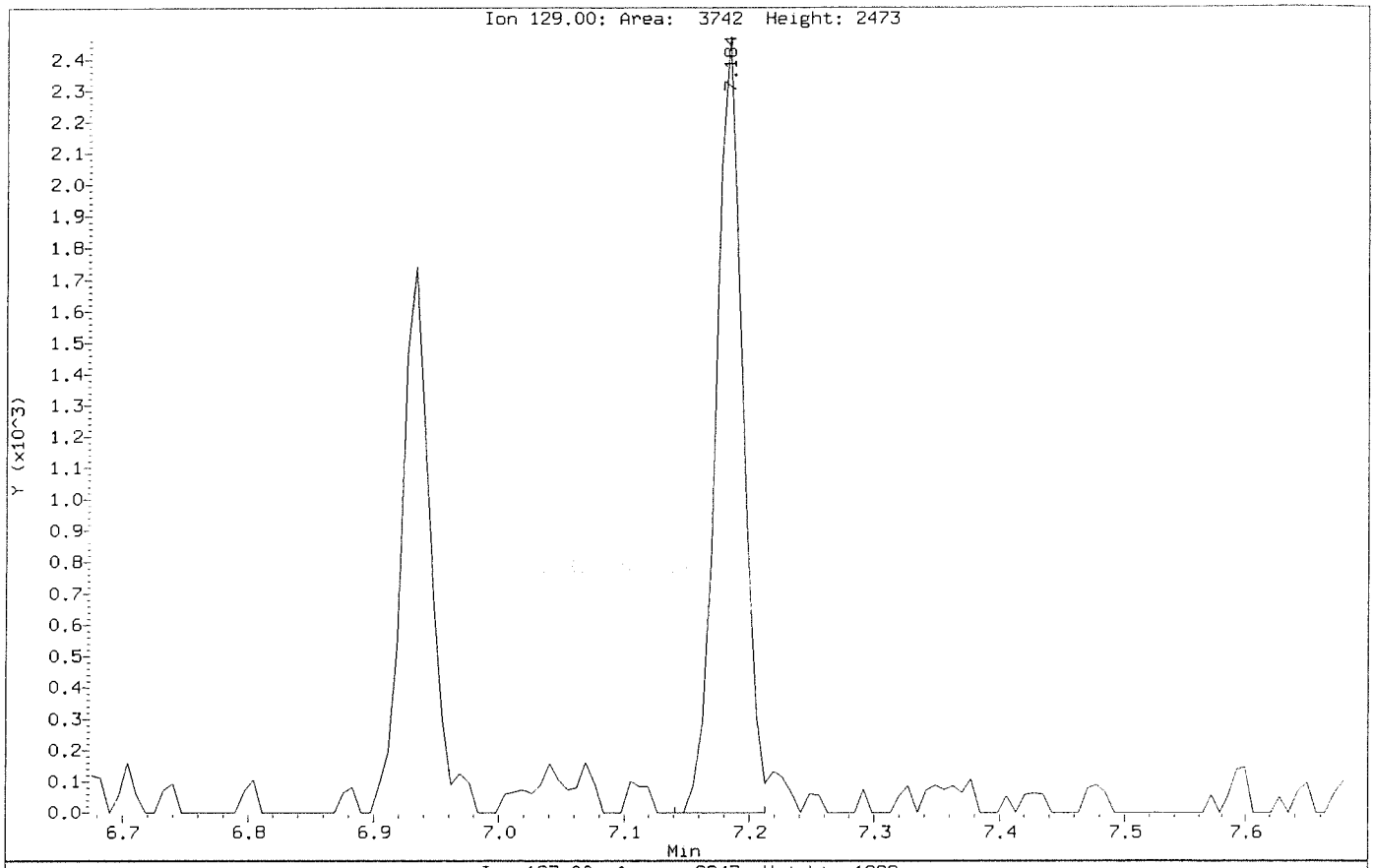
Compound: Dibromochloromethane
CAS Number: 124-48-1

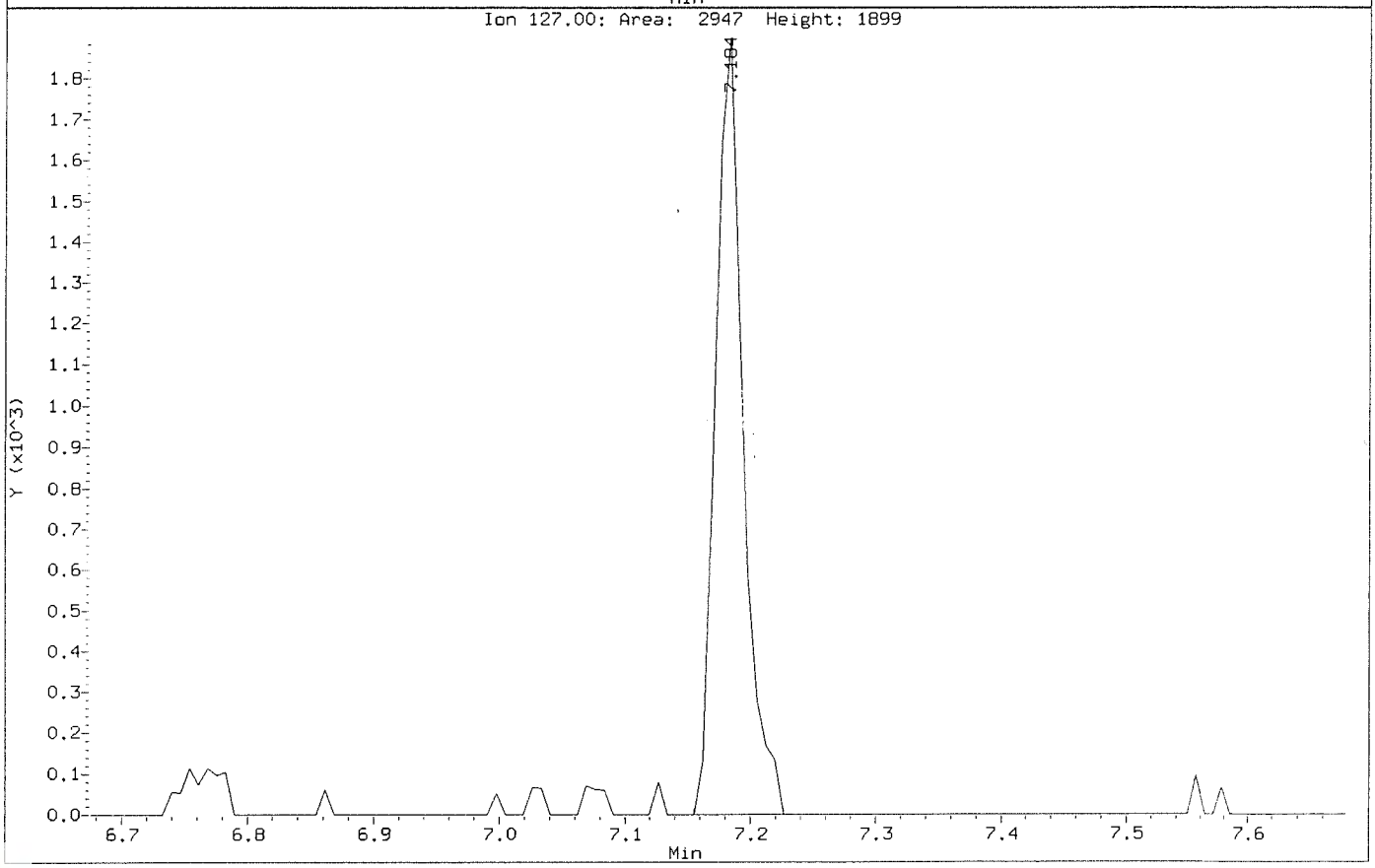




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Instrument: voa6.i
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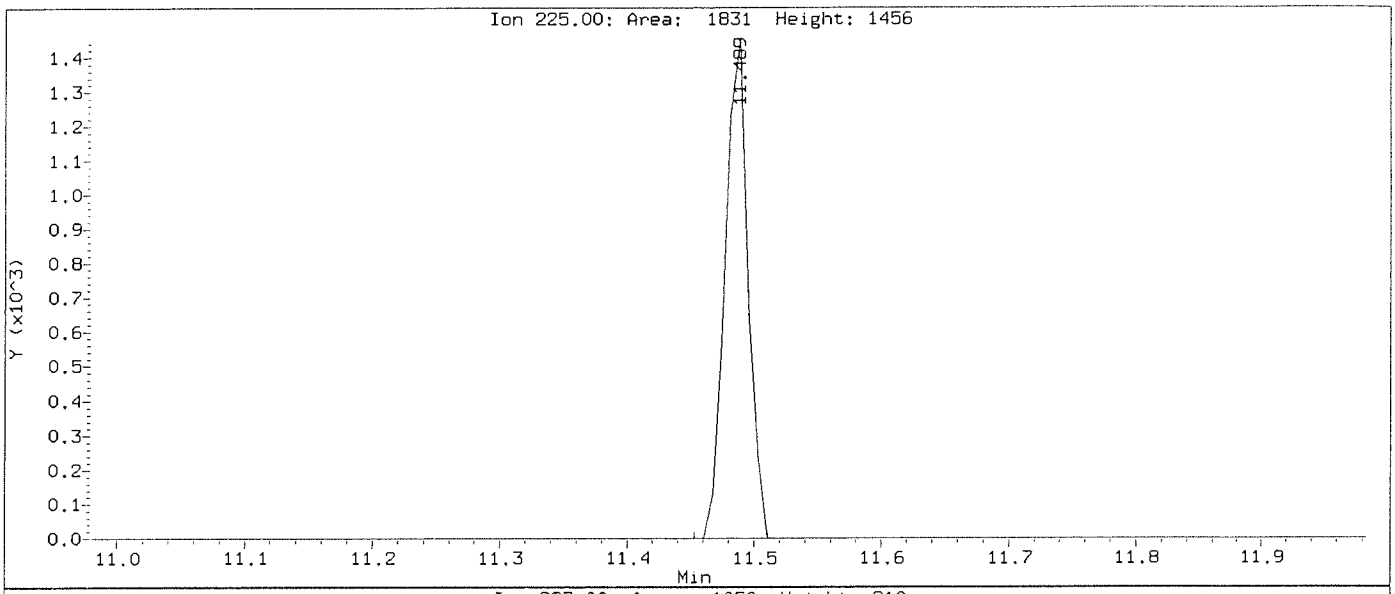
Compound: Dibromochloromethane
CAS Number: 124-48-1

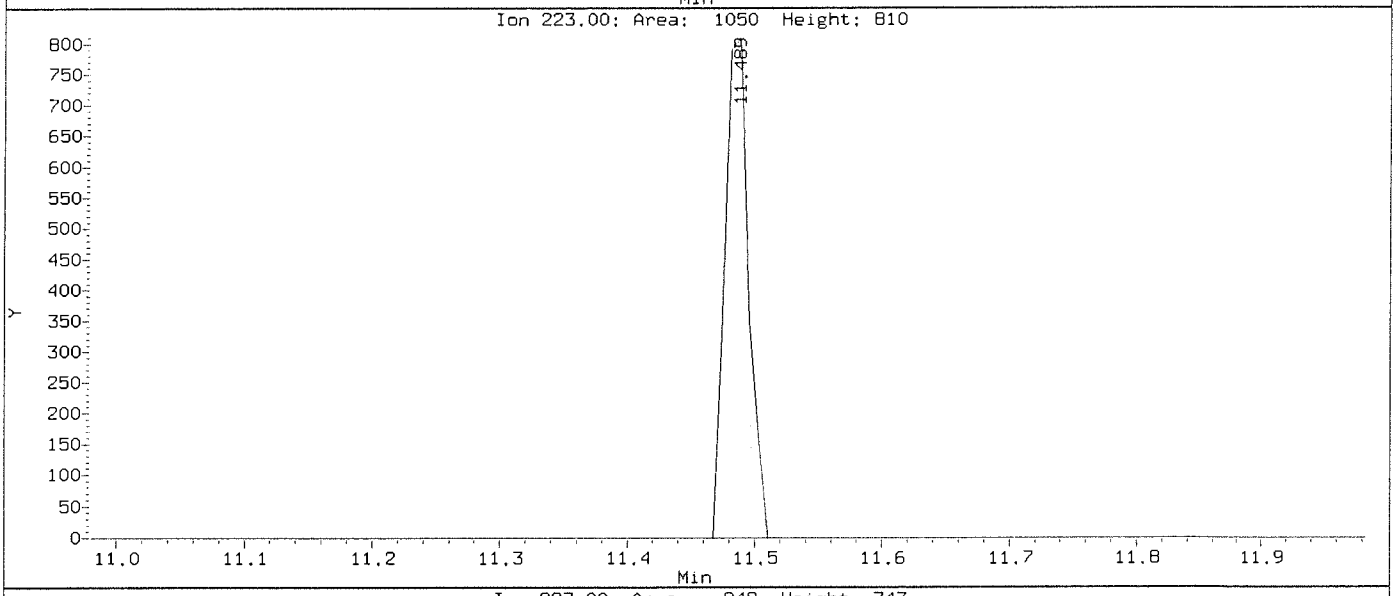


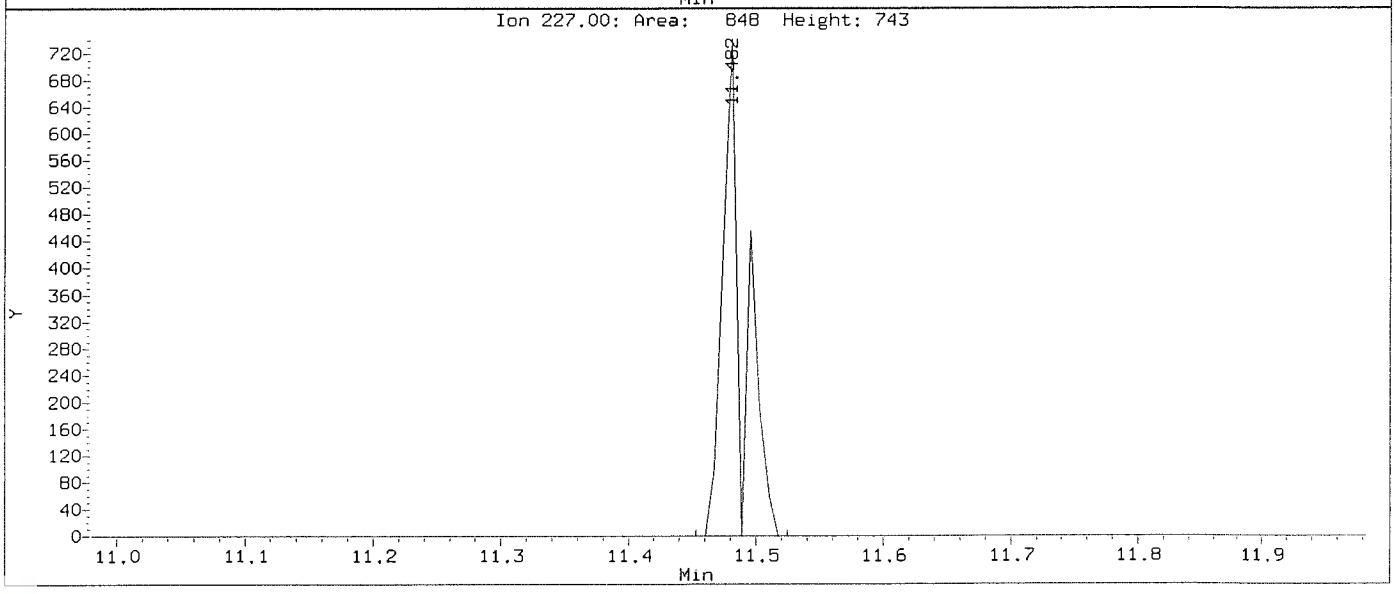


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

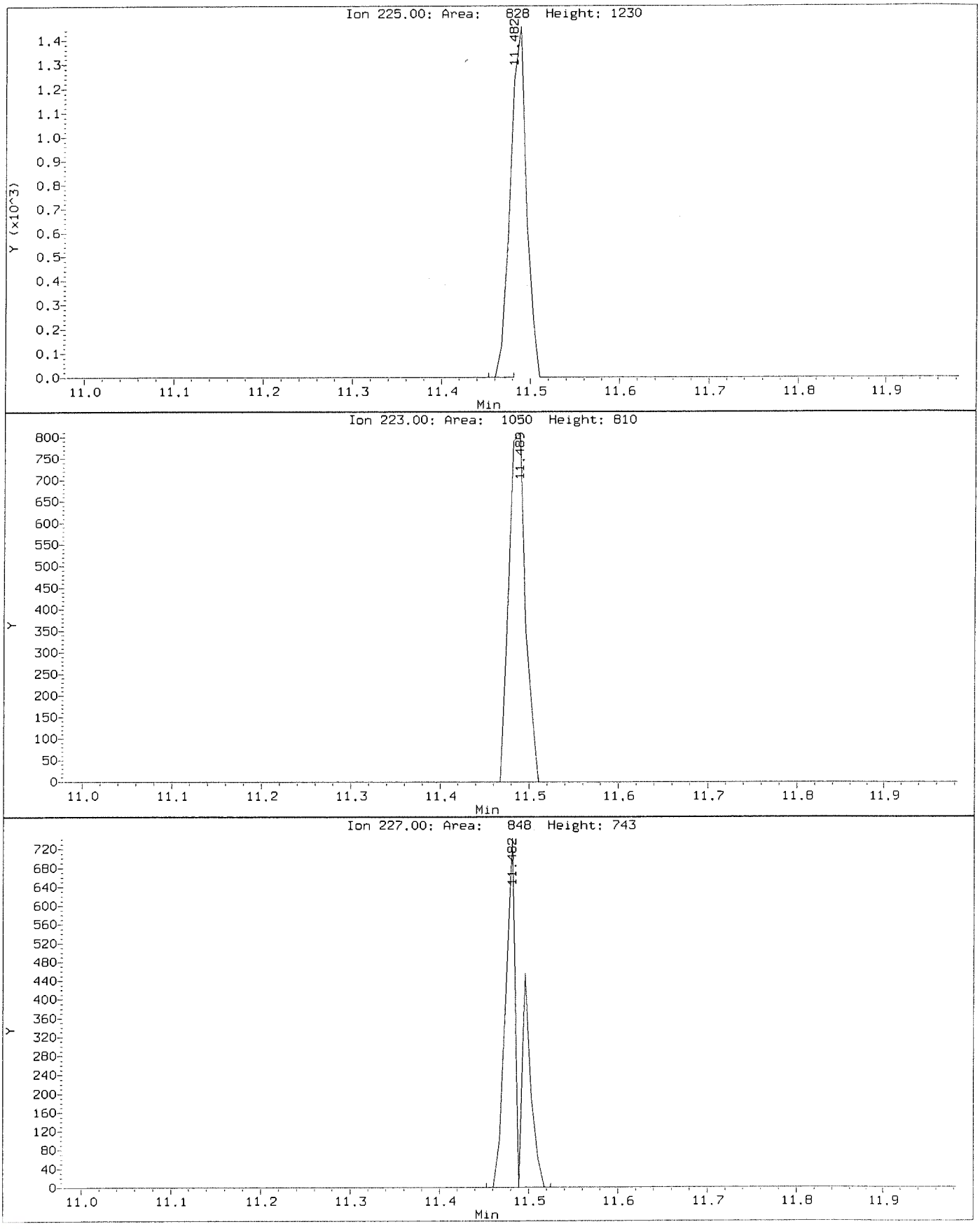






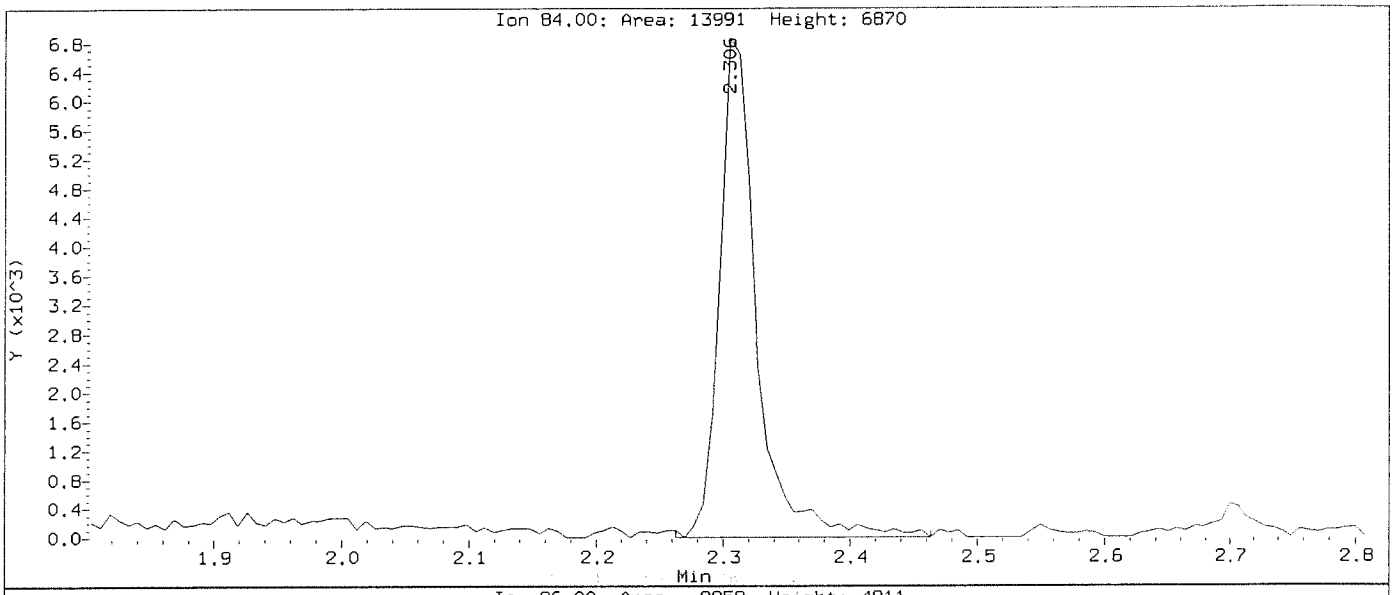
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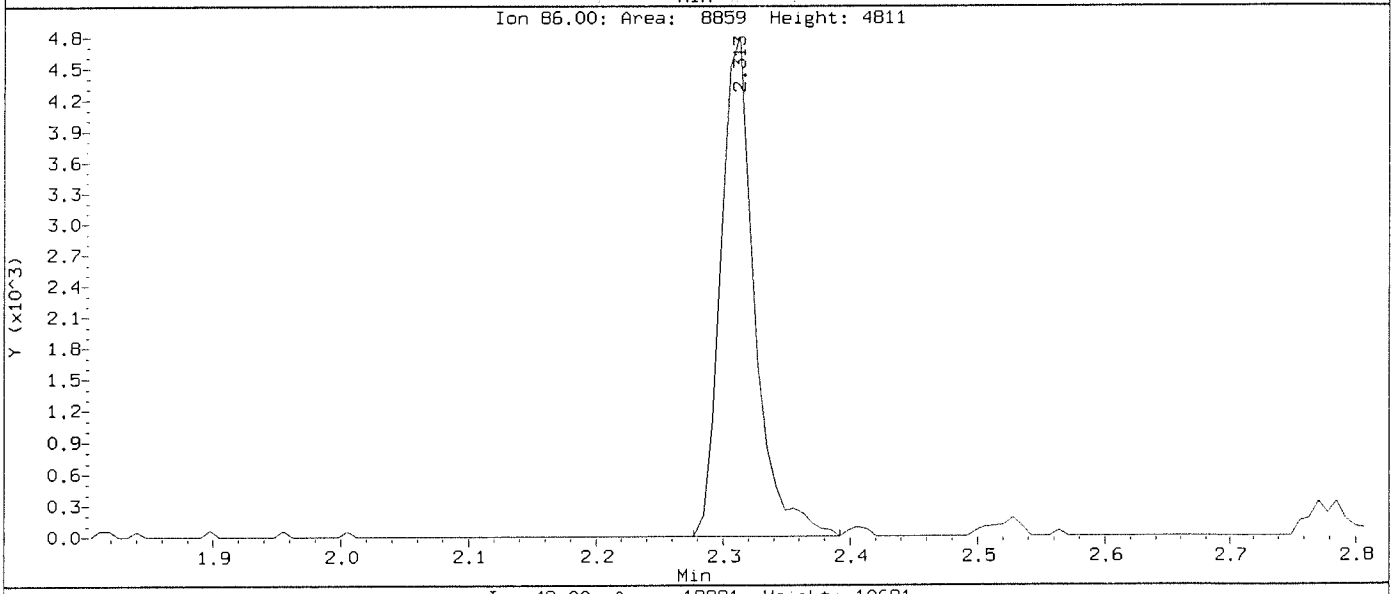
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

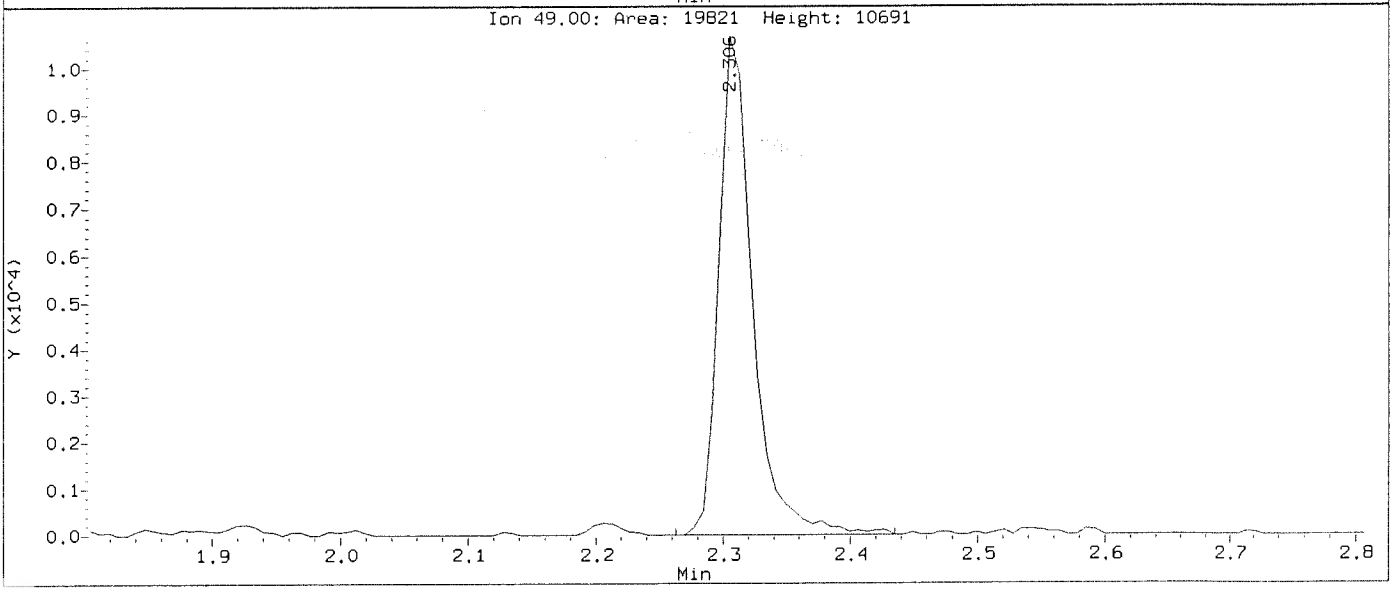


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

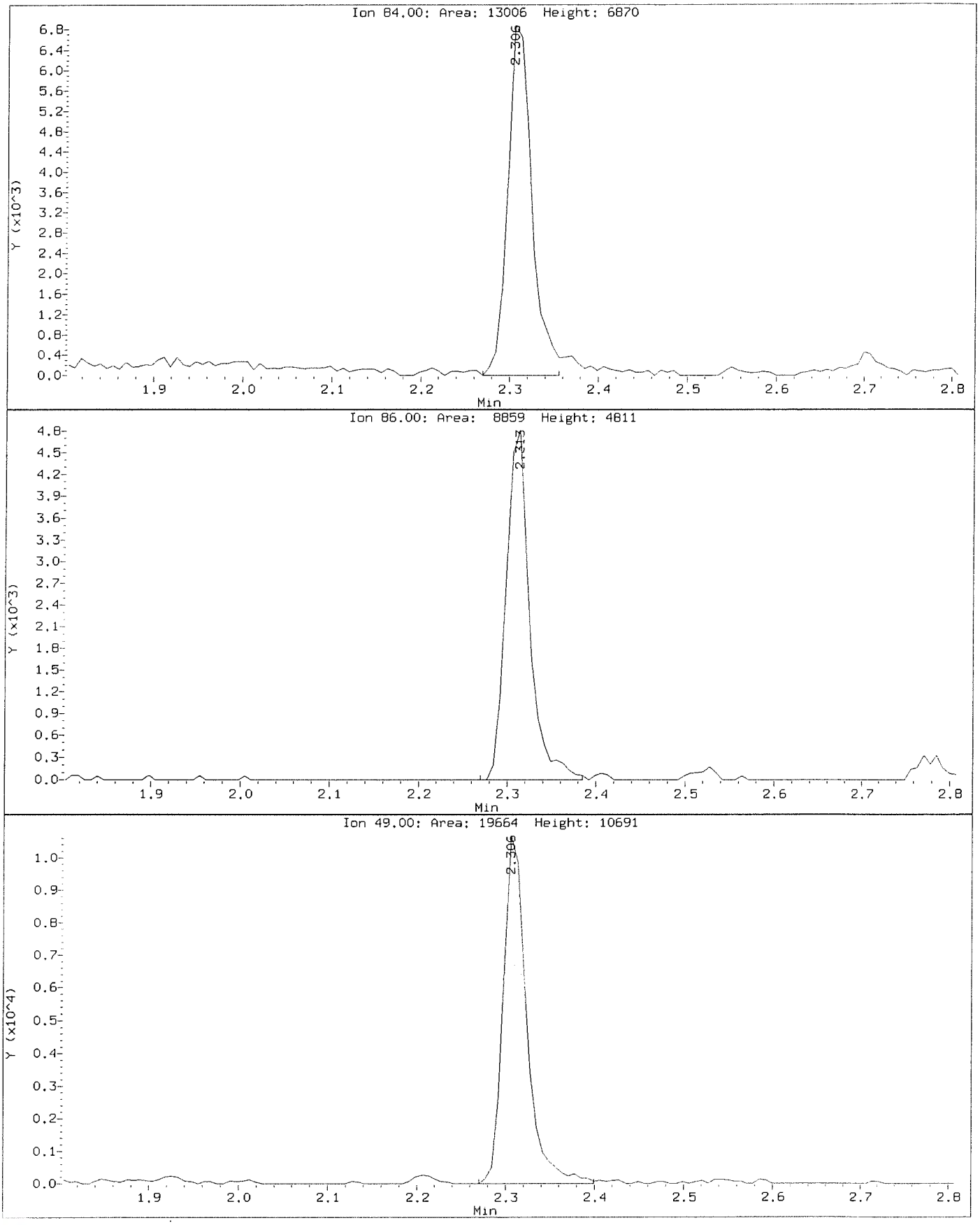






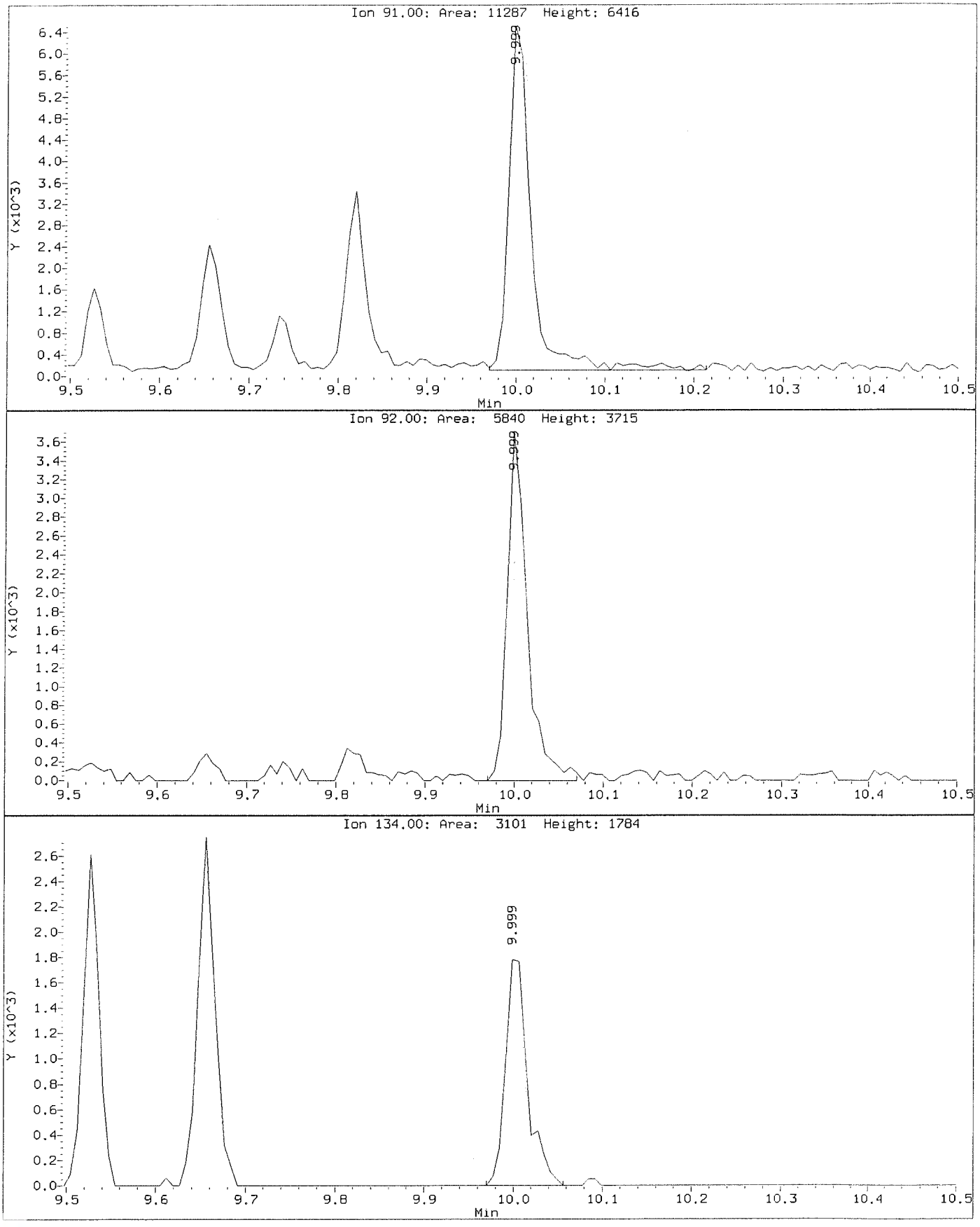
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



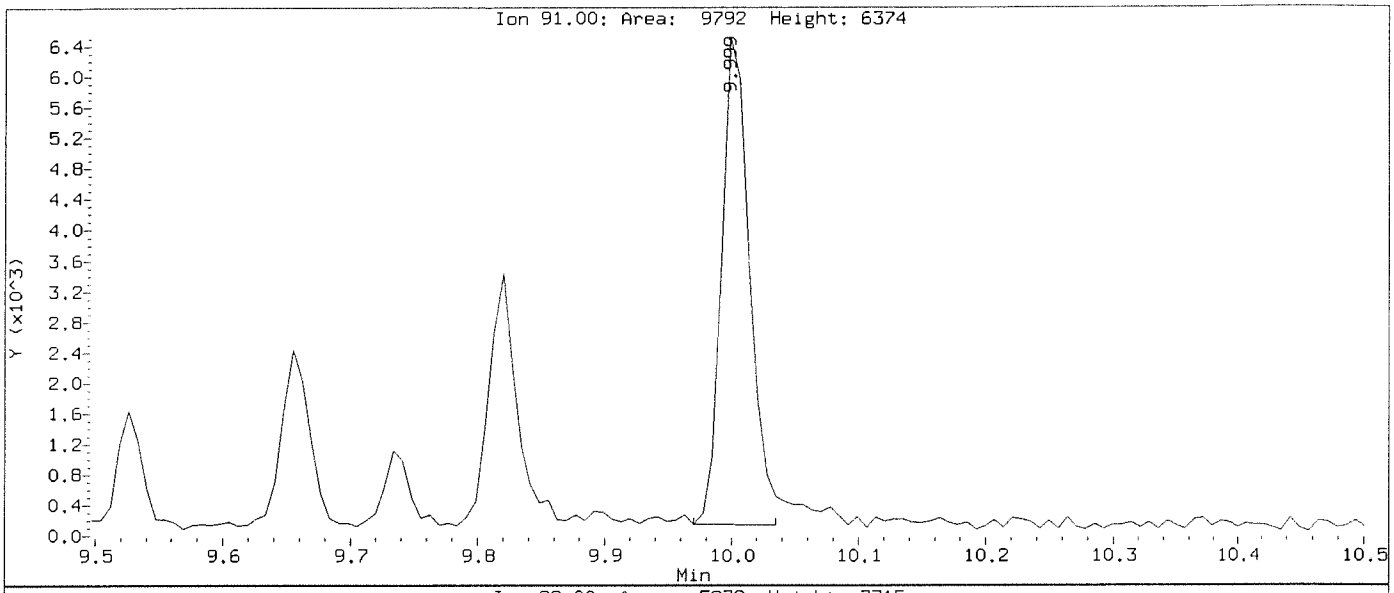
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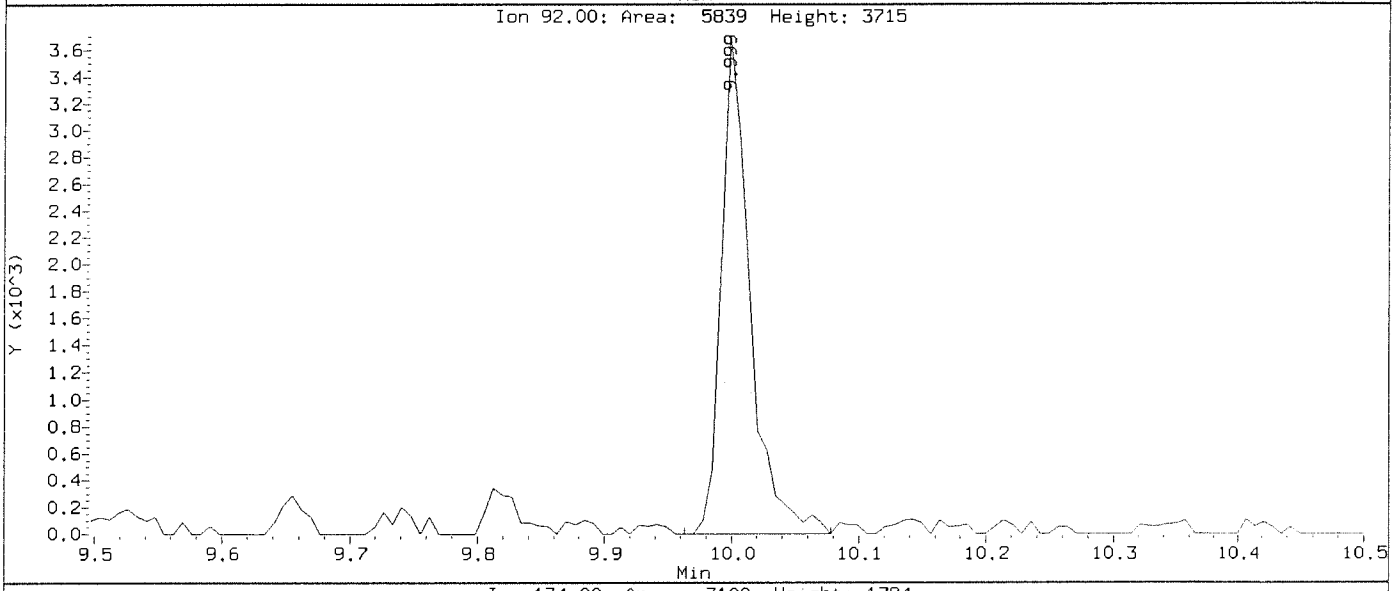
Compound: n-Butylbenzene
CAS Number: 104-51-8

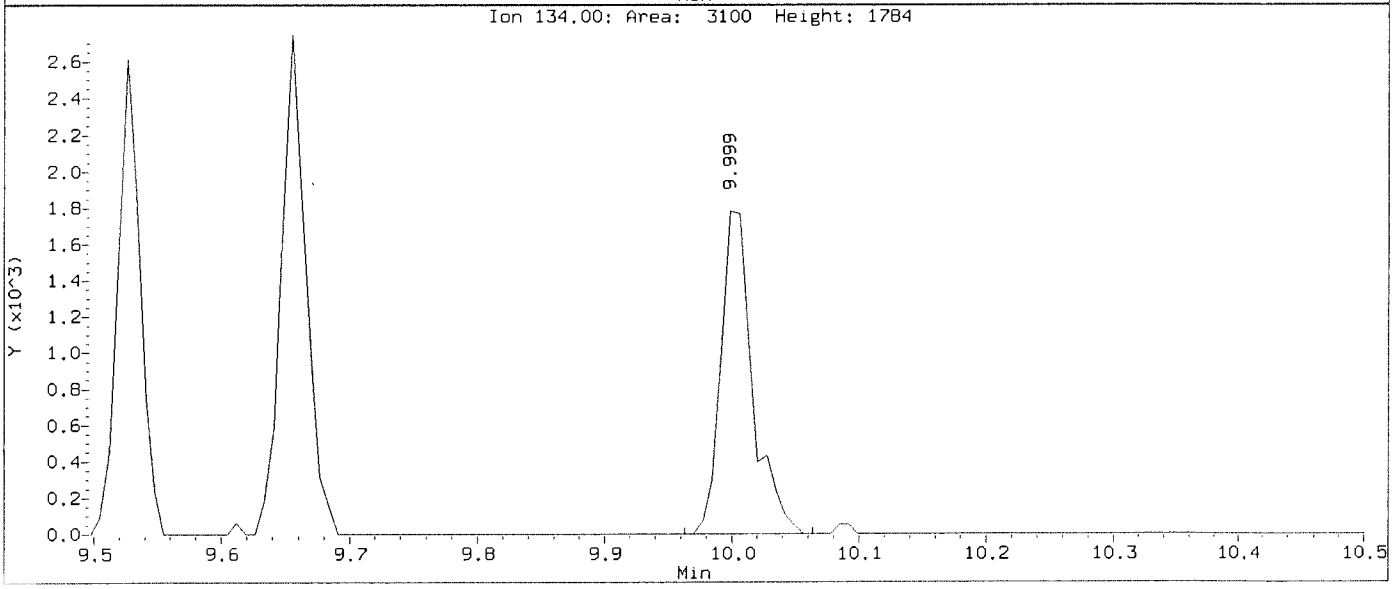


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Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

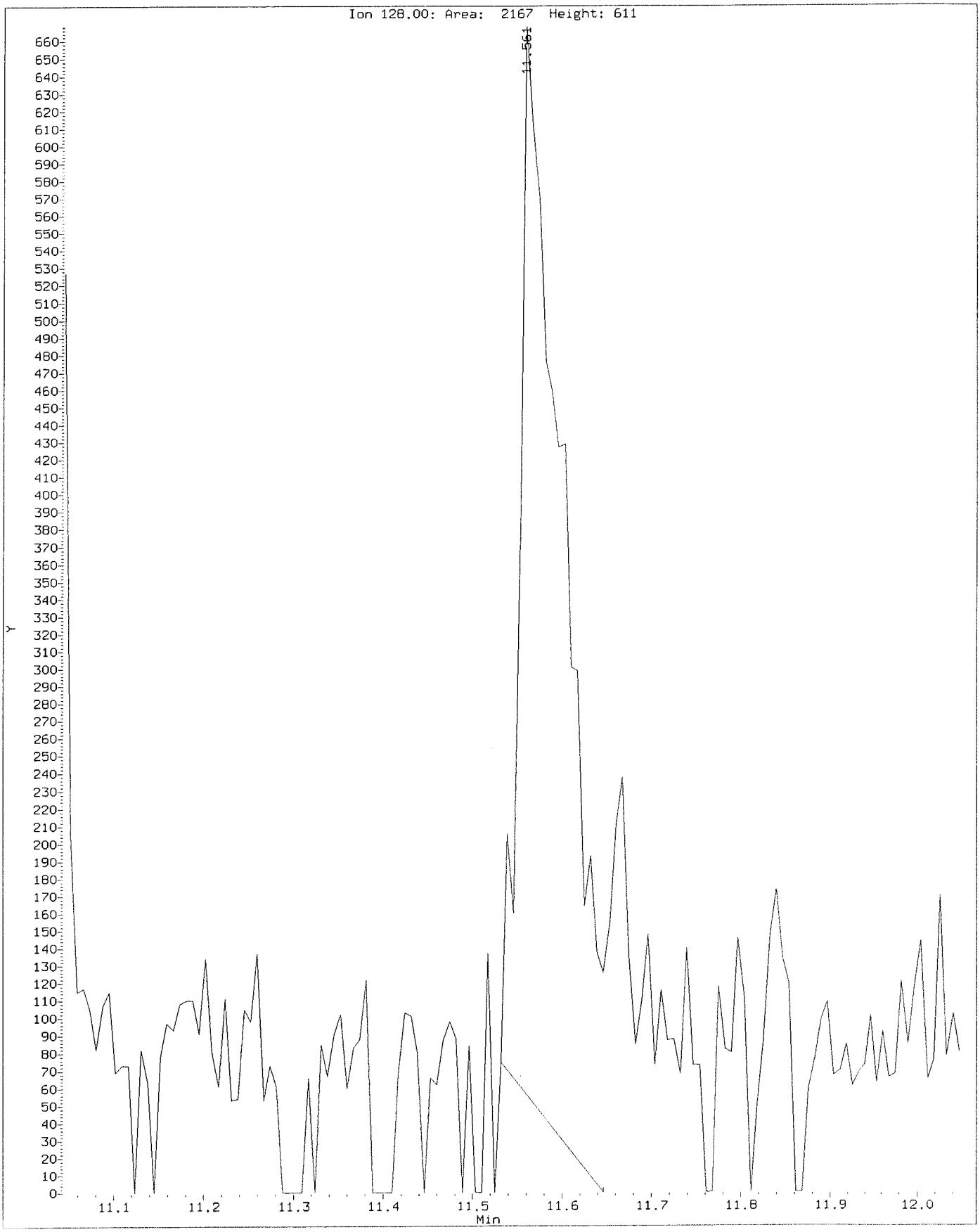






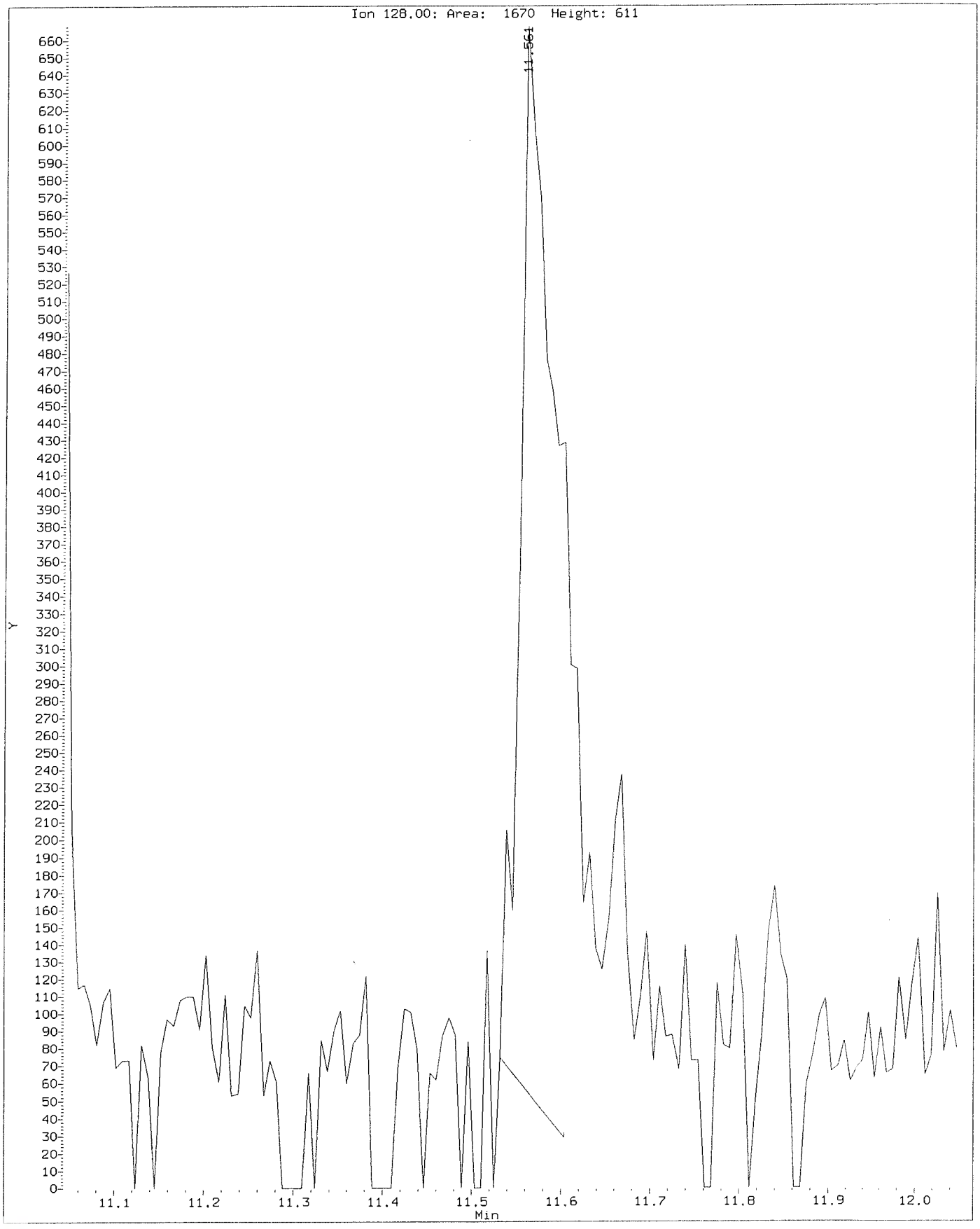
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



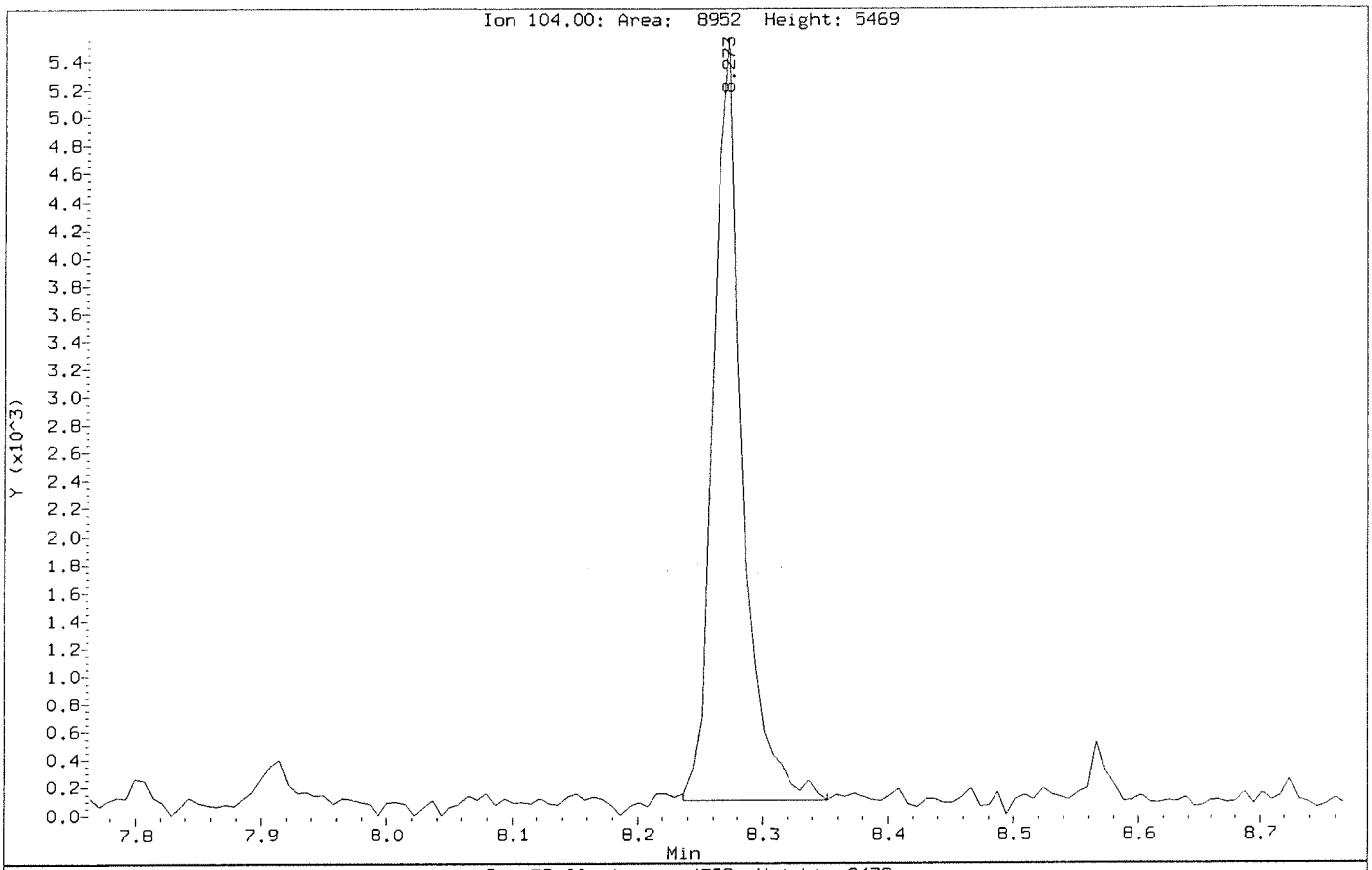
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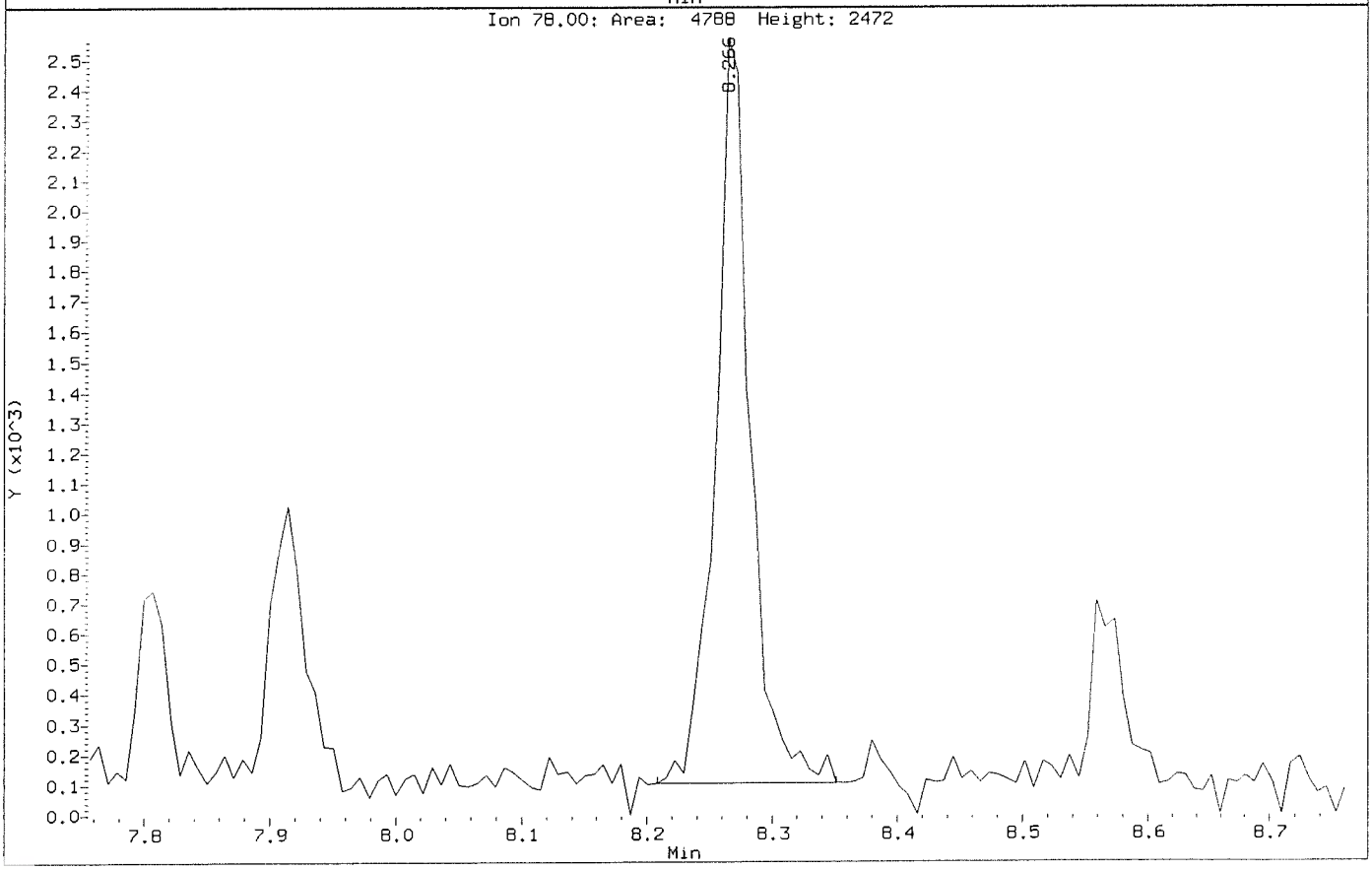
Compound: Naphthalene
CAS Number: 91-20-3



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Instrument: voa6.i
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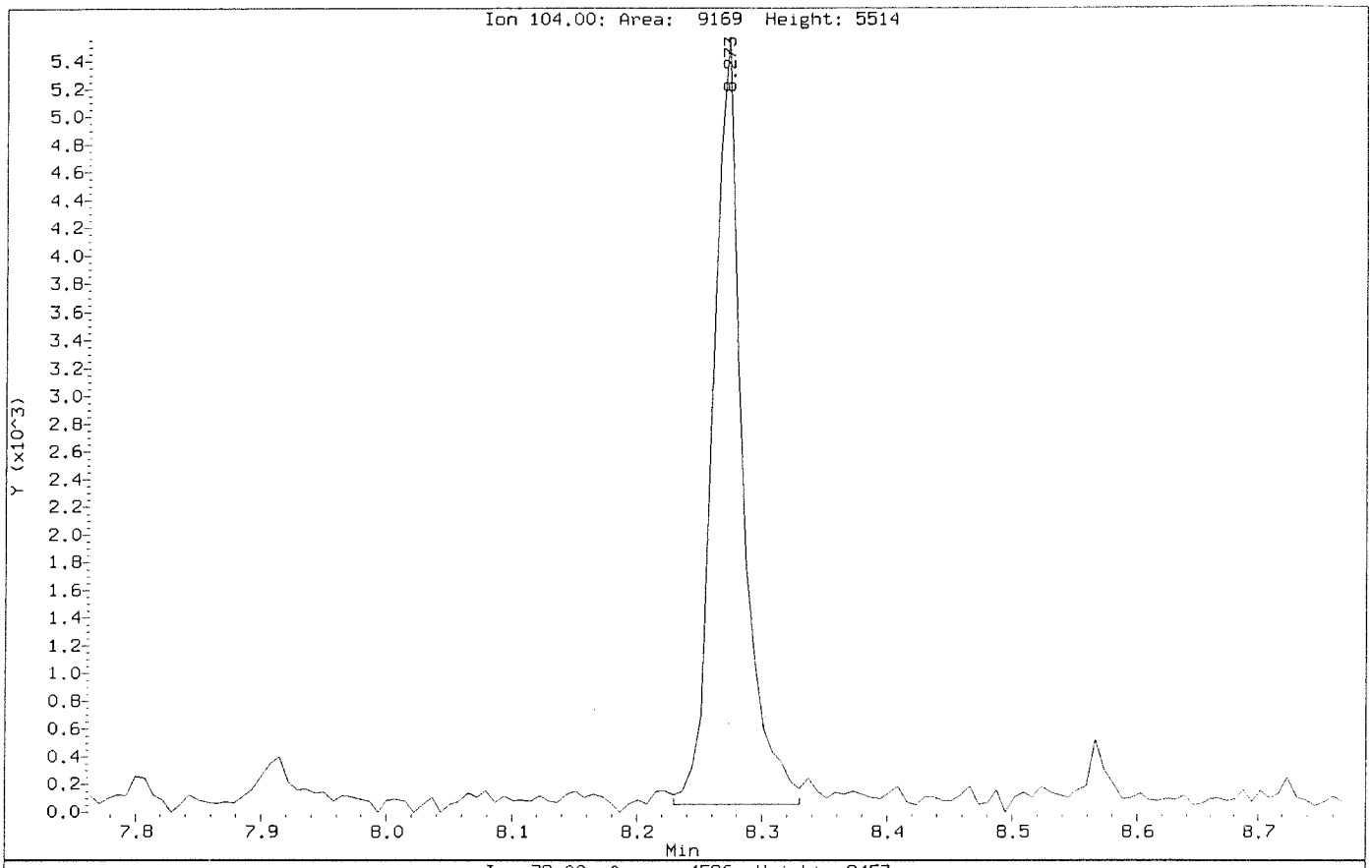
Compound: Styrene
CAS Number: 100-42-5

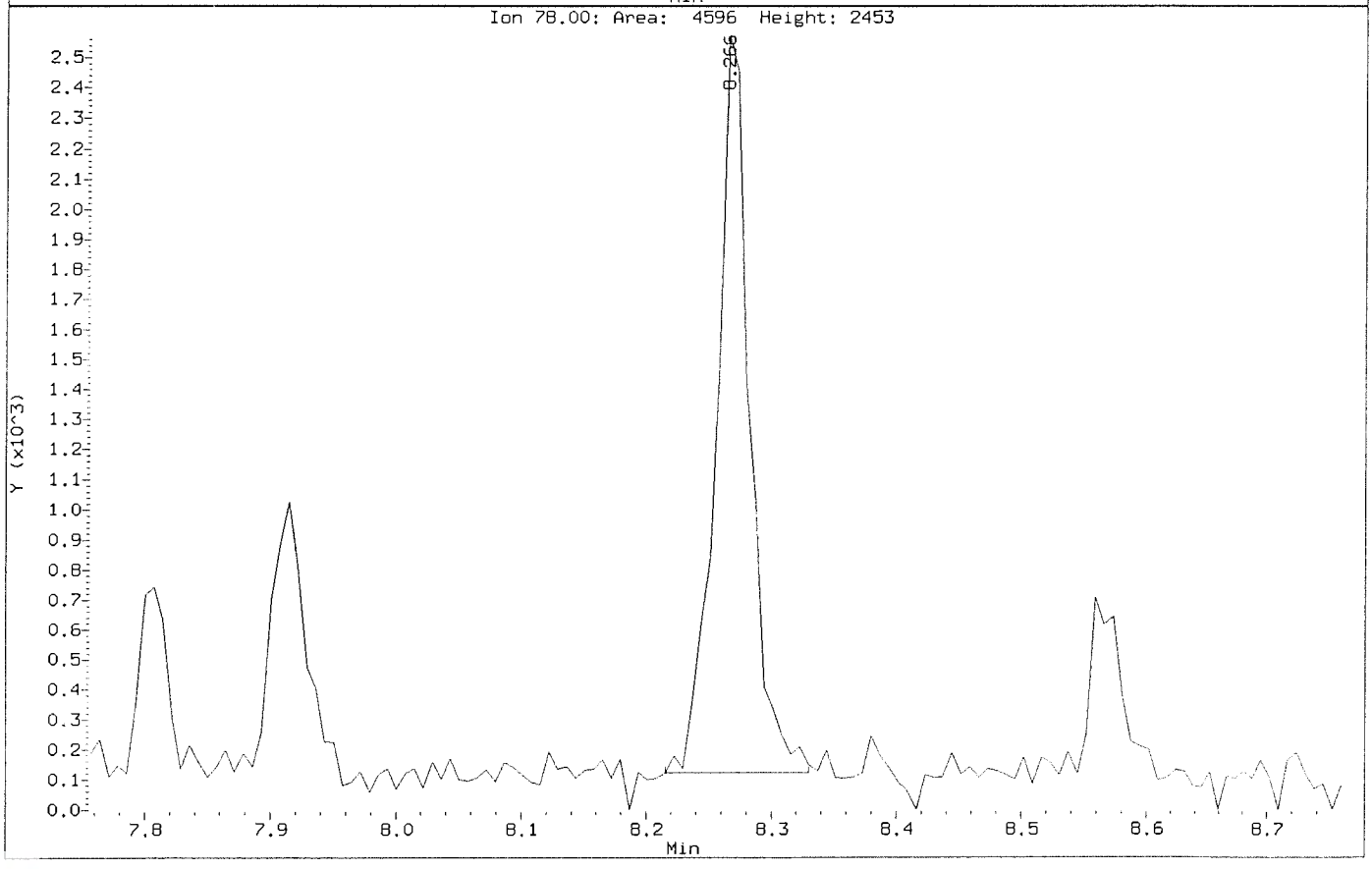




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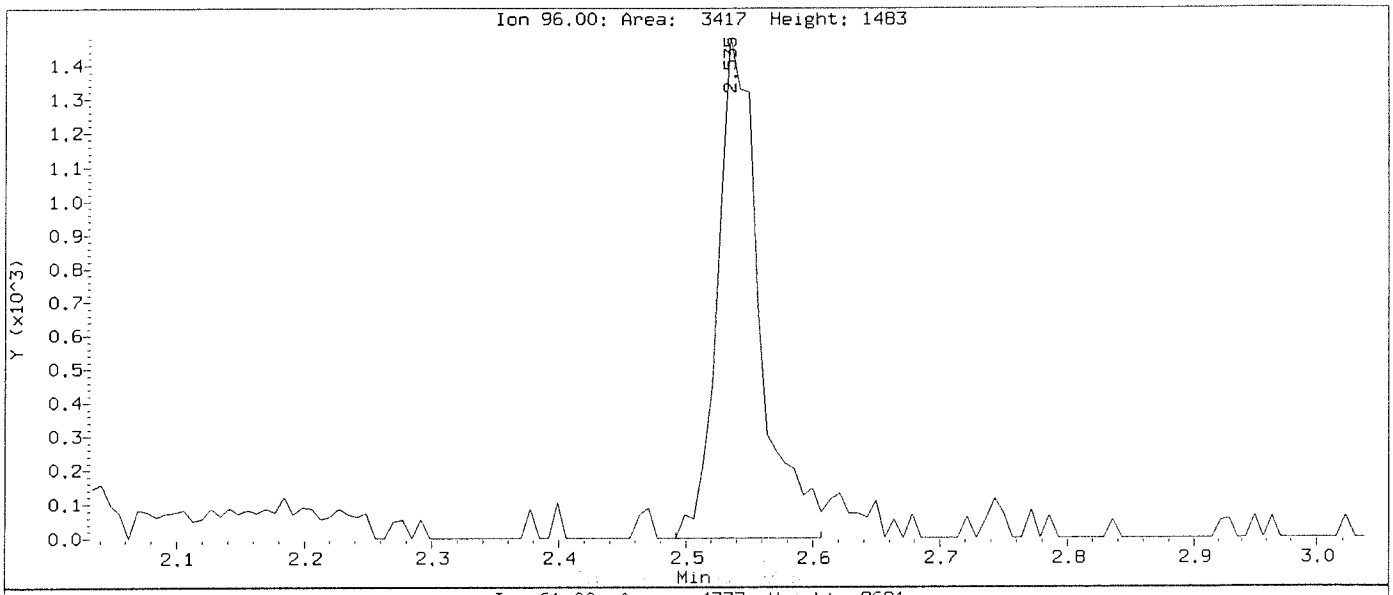
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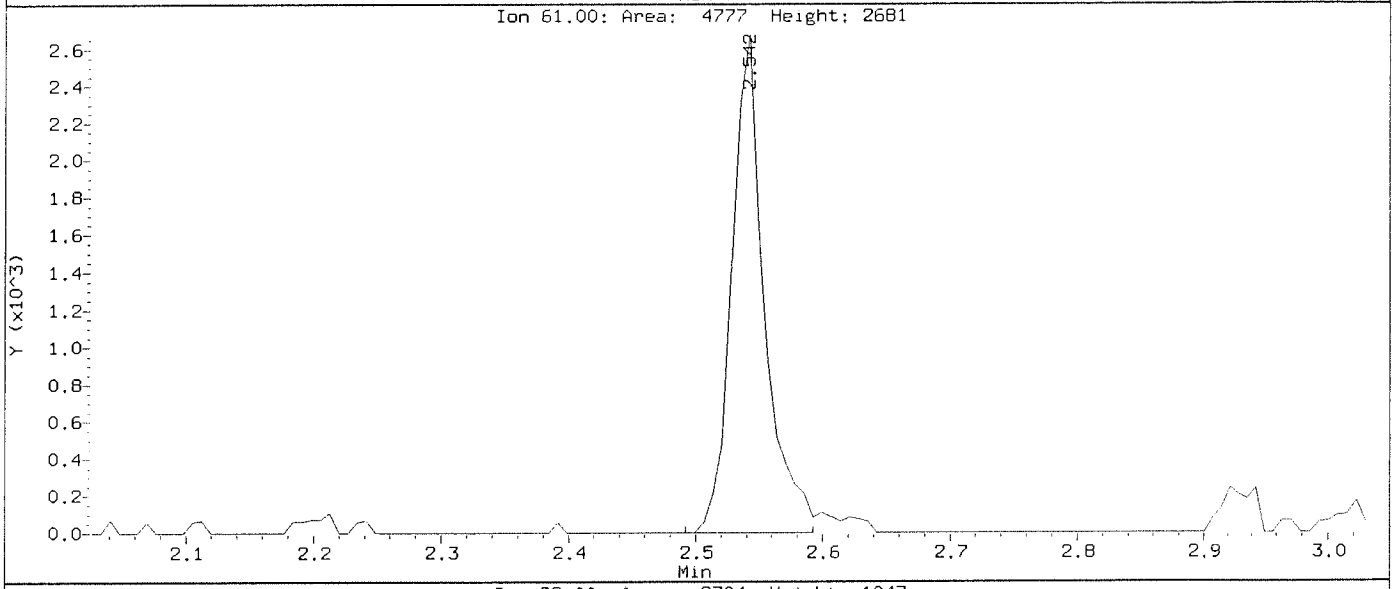


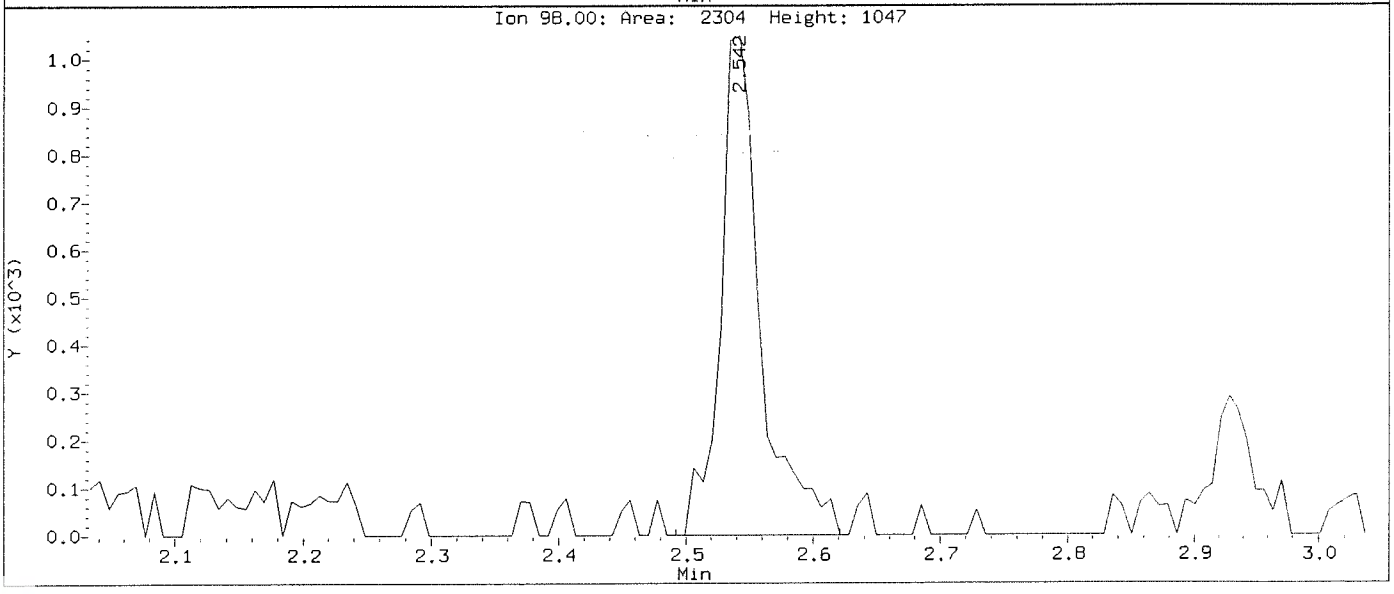


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

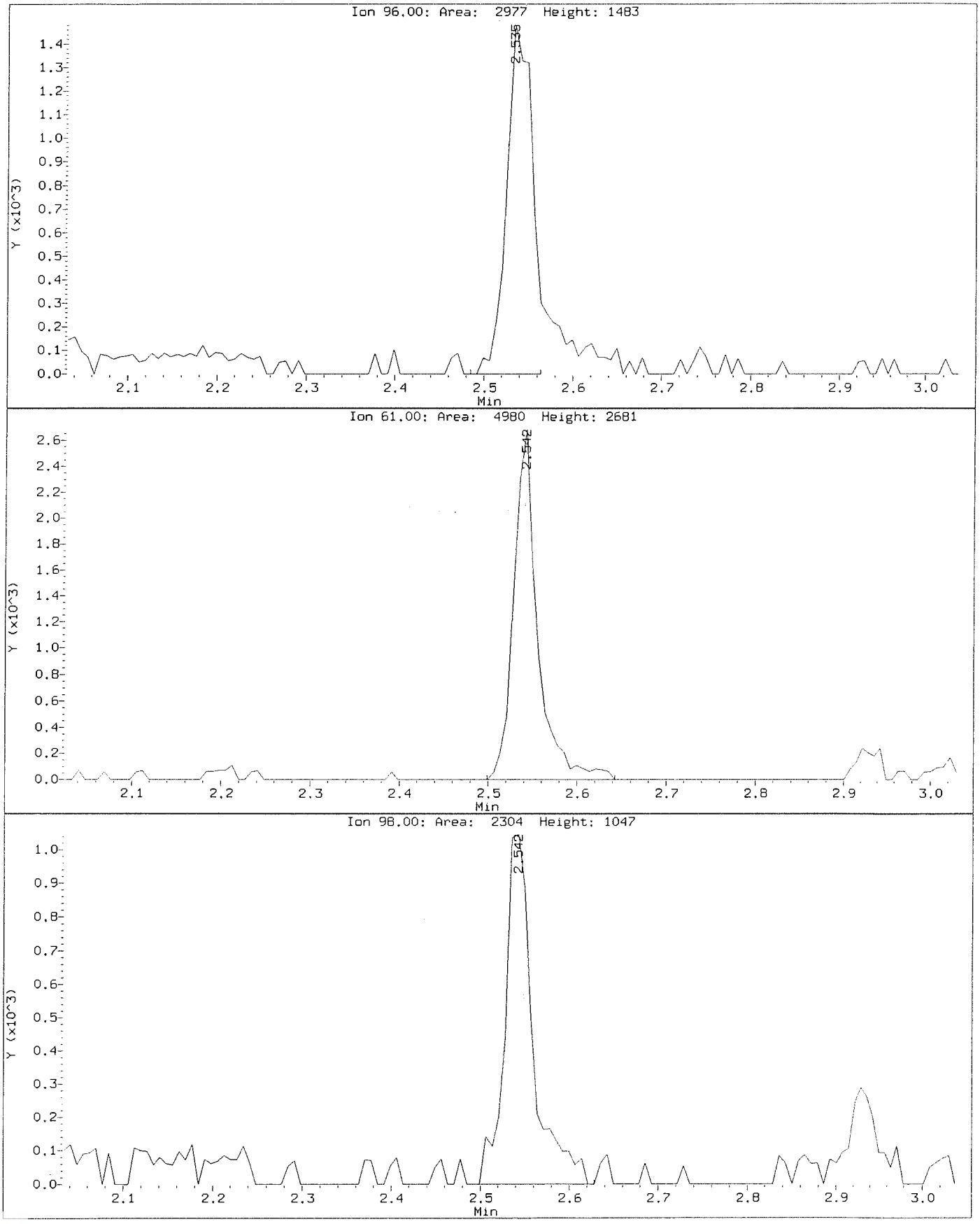






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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-AUG-2020 12:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:04 Cal File: X080303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

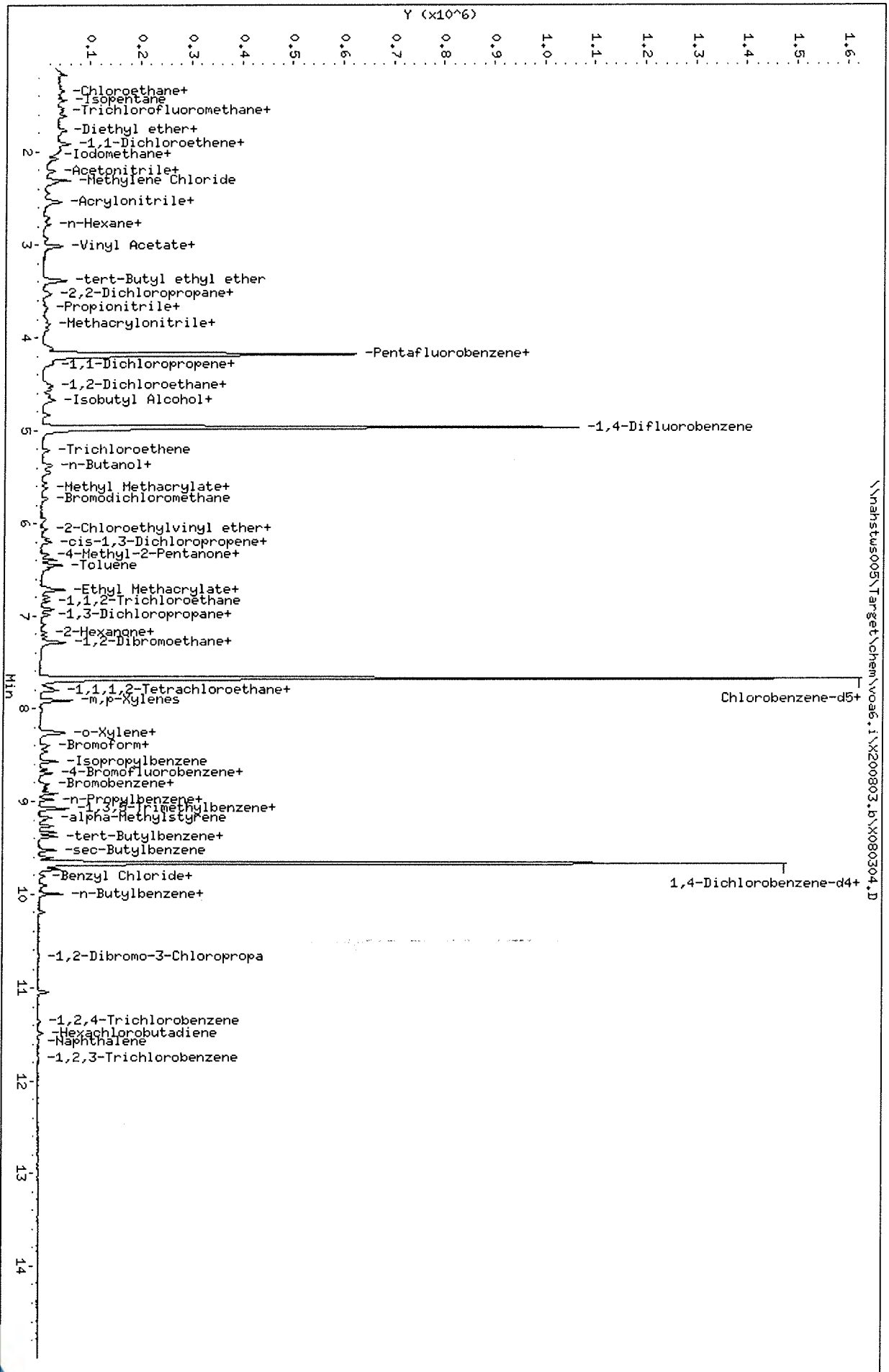
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539031	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	824218	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	742459	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	360447	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	5491	1.00000	1.03(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	6204	1.00000	0.98(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	20151	1.00000	1.11(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7948	1.00000	1.14(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5052	1.00000	0.89(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	7746	1.00000	0.93(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	5190	1.00000	1.27(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	3800	1.00000	0.89(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	8591	1.00000	0.81(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	4098	1.00000	0.95(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	6555	1.00000	0.94(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1040	1.00000	0.95(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	4319	1.00000	0.81(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1766	1.00000	0.33(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	16065	1.00000	0.83(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	461	1.00000	1.67(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	5188	1.00000	0.95(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	9203	1.00000	0.90(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	7158	1.00000	0.89(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	5327	1.00000	0.88(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	16539	1.00000	0.87(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	9693	1.00000	0.85(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	7511	1.00000	0.90(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	10004	1.00000	0.89(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.838)	6234	1.00000	0.81(a)
24	2-Butanone	43	3.624	3.624	(0.865)	4199	2.00000	1.58(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	14320	1.00000	0.91(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	7382	2.00000	1.58(a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	16588	1.00000	0.91(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	17233	1.00000	0.86(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	11981	2.00000	1.74(a)
10	Acetone	43	1.976	1.976	(0.472)	5964	2.00000	2.13(aM)
37	Benzene	78	4.526	4.526	(0.911)	18524	1.00000	0.90(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	6199	1.00000	0.87(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	3452	1.00000	1.06(a)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	6632	1.00000	0.89(a)
66	Bromoform	173	8.416	8.416	(1.097)	3380	1.00000	0.82(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	4659	1.00000	1.89(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	24456	2.00000	1.84(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	7095	1.00000	0.96(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	12980	1.00000	0.89(a)
7	Chloroethane	64	1.403	1.403	(0.335)	3283	1.00000	0.85(a)
28	Chloroform	83	3.917	3.917	(0.935)	9174	1.00000	0.95(a)
3	Chloromethane	50	1.081	1.081	(0.258)	6446	1.00000	0.85(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	5626	1.00000	0.94(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	7619	1.00000	0.87(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	5073	1.00000	0.85(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	3381	1.00000	0.94(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	5003	1.00000	0.94(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	7129	1.00000	0.94(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	1845	1.00000	0.95(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	20764	1.00000	0.94(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	16885	2.00000	1.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	14851	1.00000	1.36(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	13125	1.00000	0.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	22125	1.00000	0.85(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3475	1.00000	1.12(a)
63	o-Xylene	106	8.244	8.244	(1.075)	8262	1.00000	0.92(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	19175	1.00000	0.87(a)
64	Styrene	104	8.265	8.265	(1.078)	13312	1.00000	0.86(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	14112	1.00000	0.86(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	4400	1.00000	0.93(a)
50	Toluene	91	6.453	6.453	(0.841)	20029	1.00000	0.92(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	4813	1.00000	0.95(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	7143	1.00000	0.89(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	4900	1.00000	0.83(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	7321	1.00000	0.92(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	5889	1.00000	0.84(a)

QC Flag Legend

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

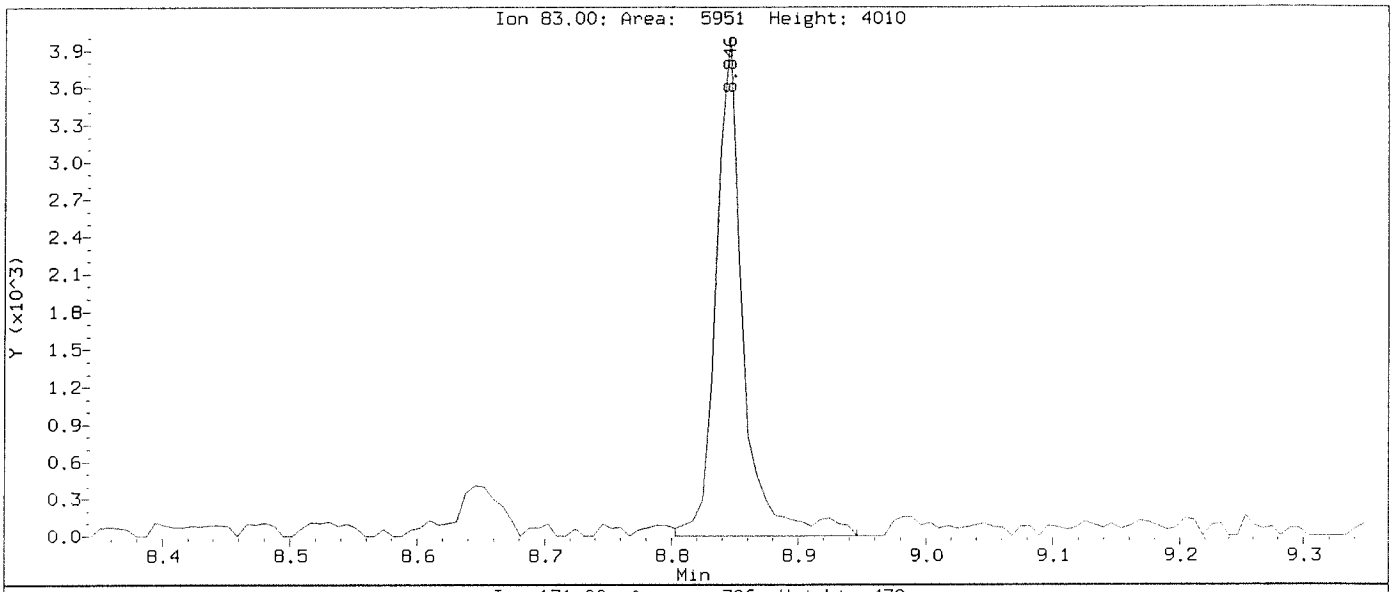


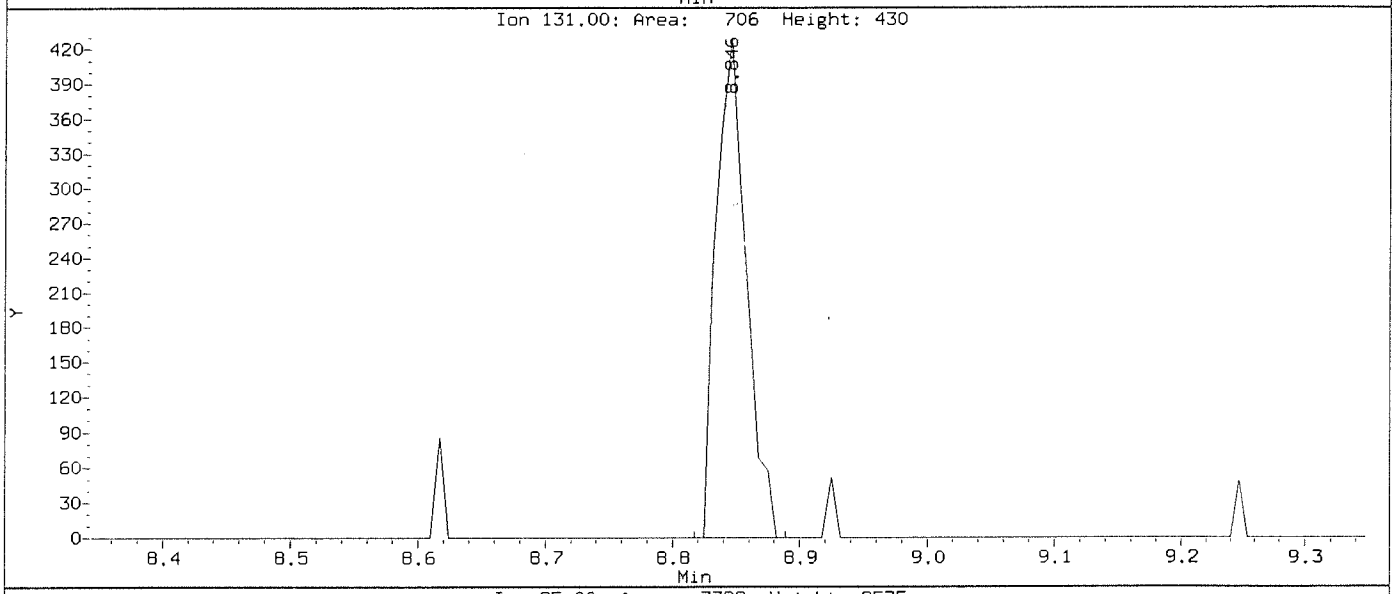
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Column phase: DB624

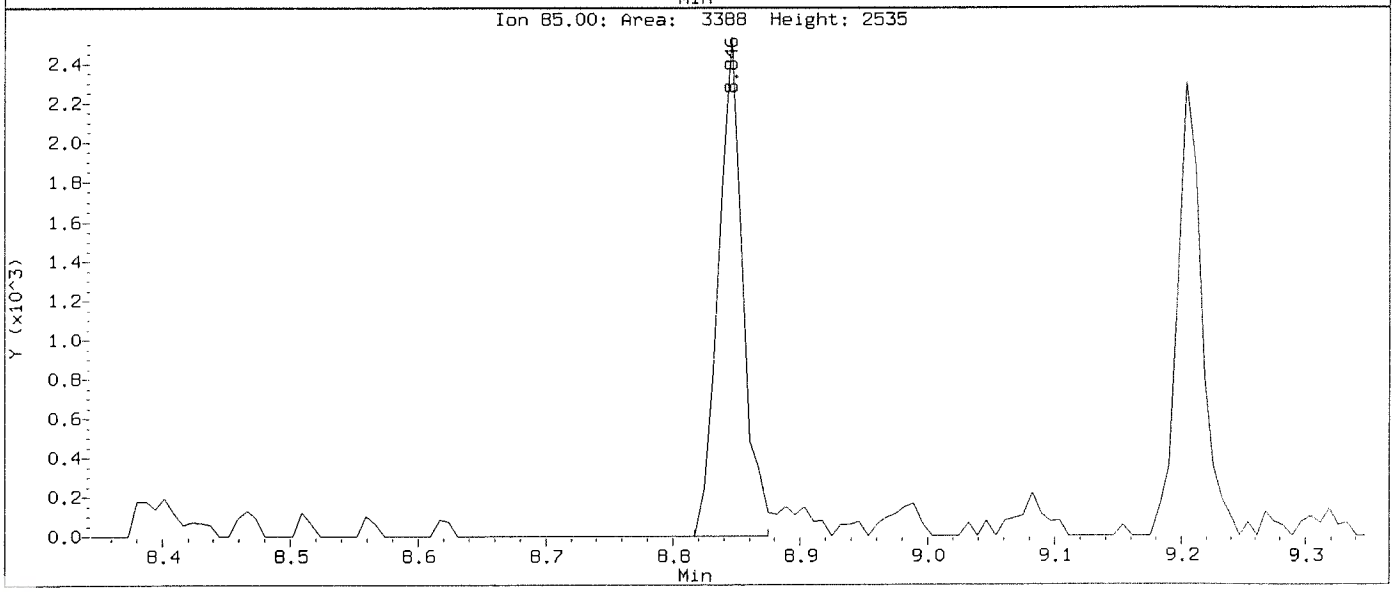
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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

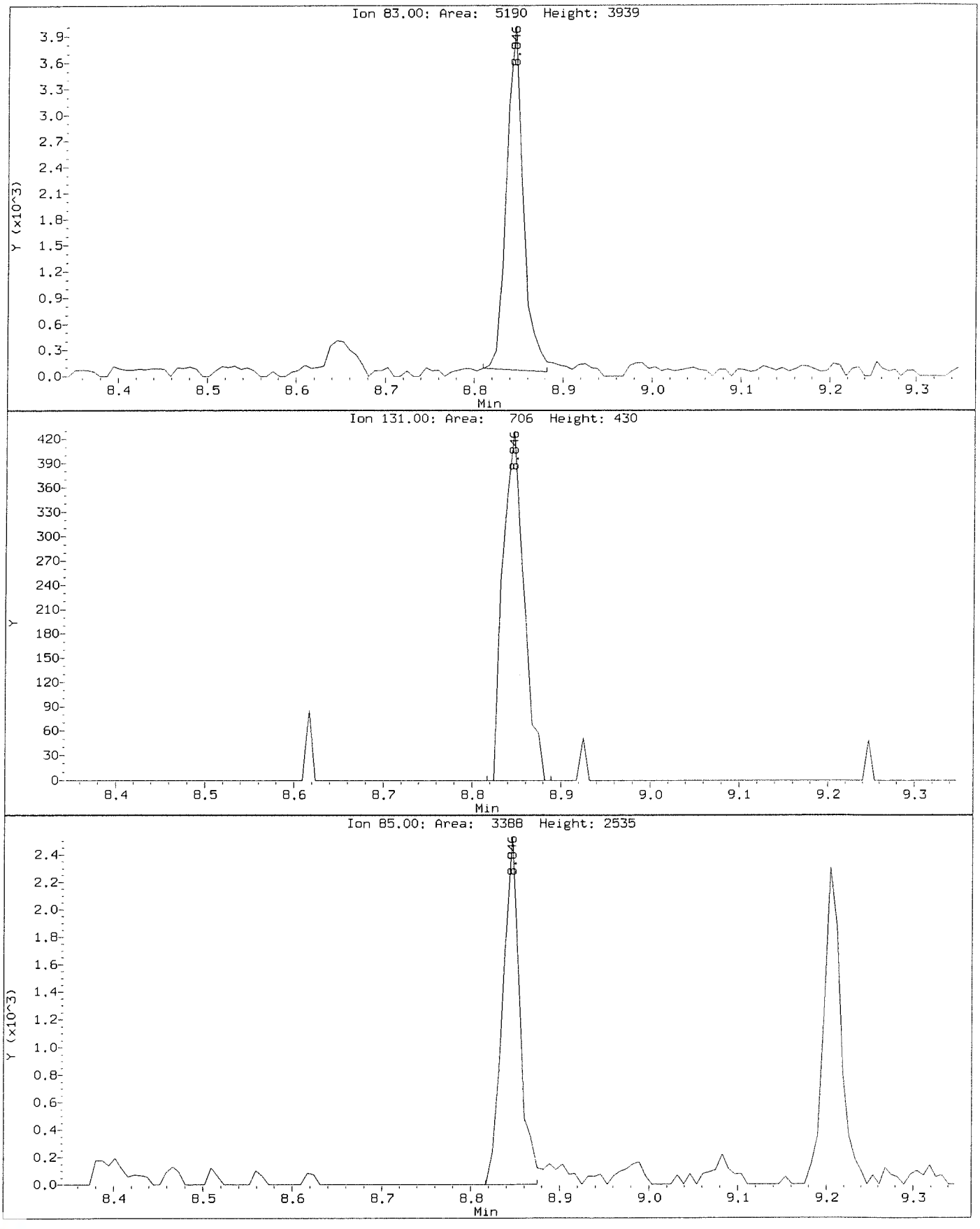






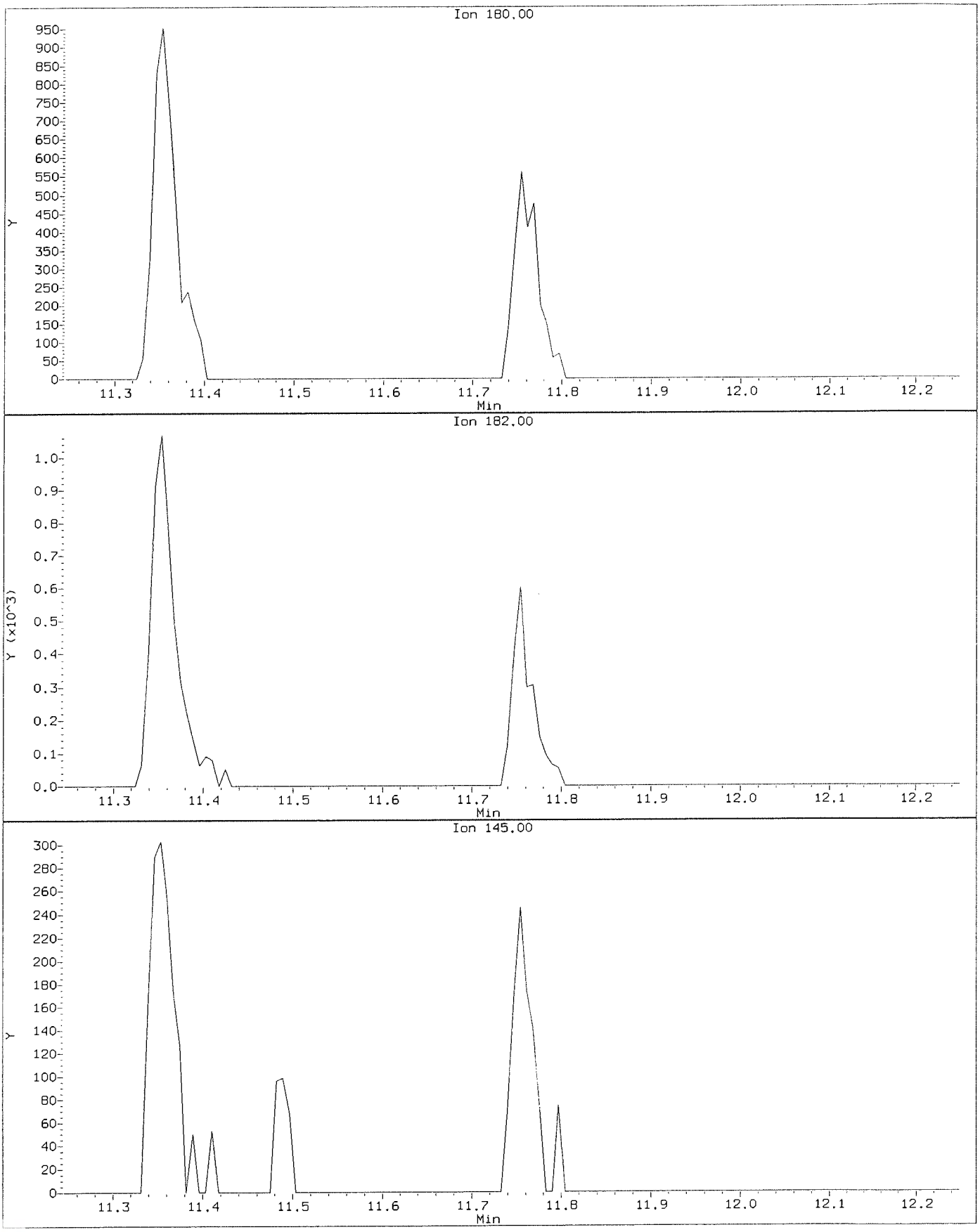
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Instrument: voa6.i
Client Sample ID: VSTD001

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



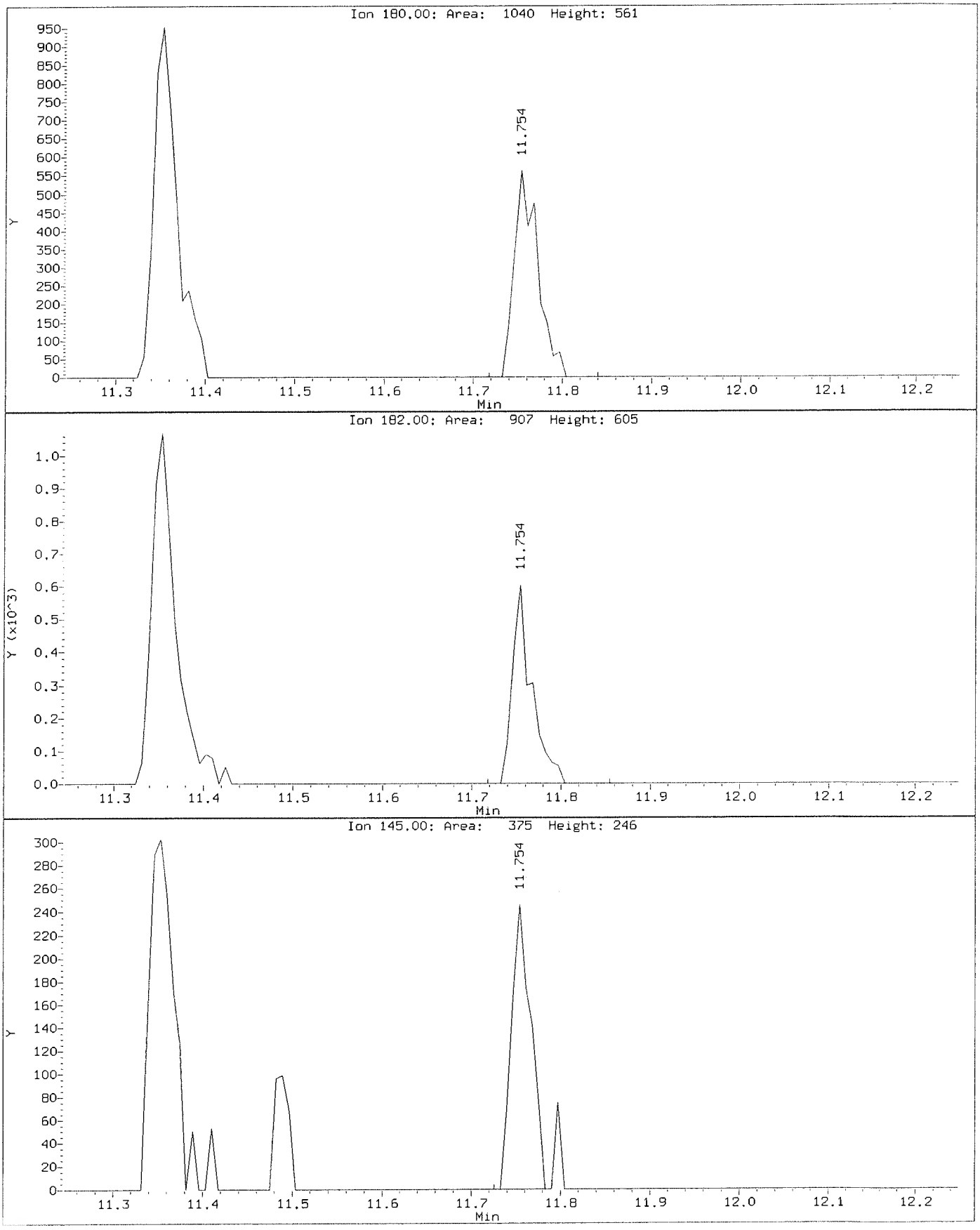
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



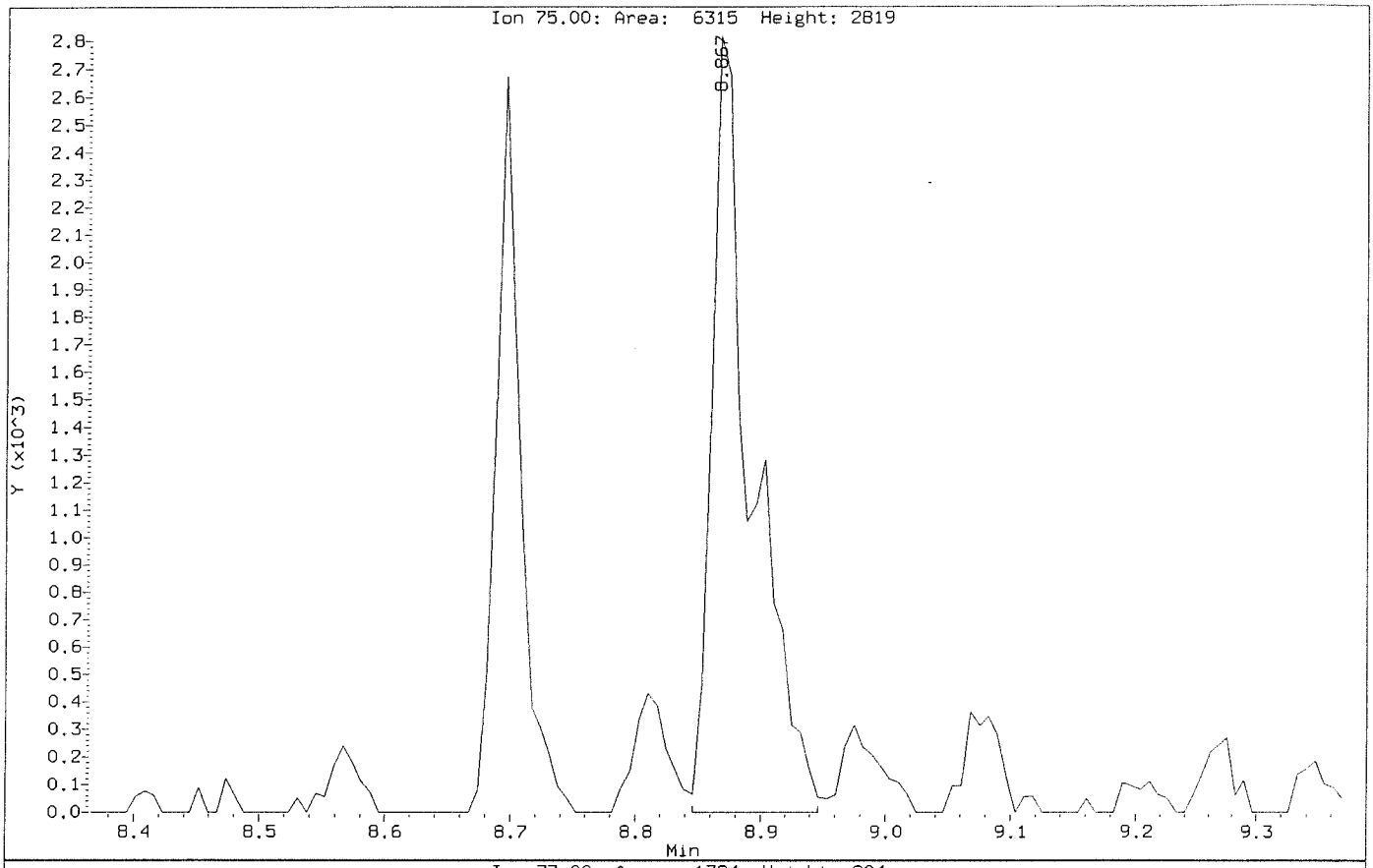
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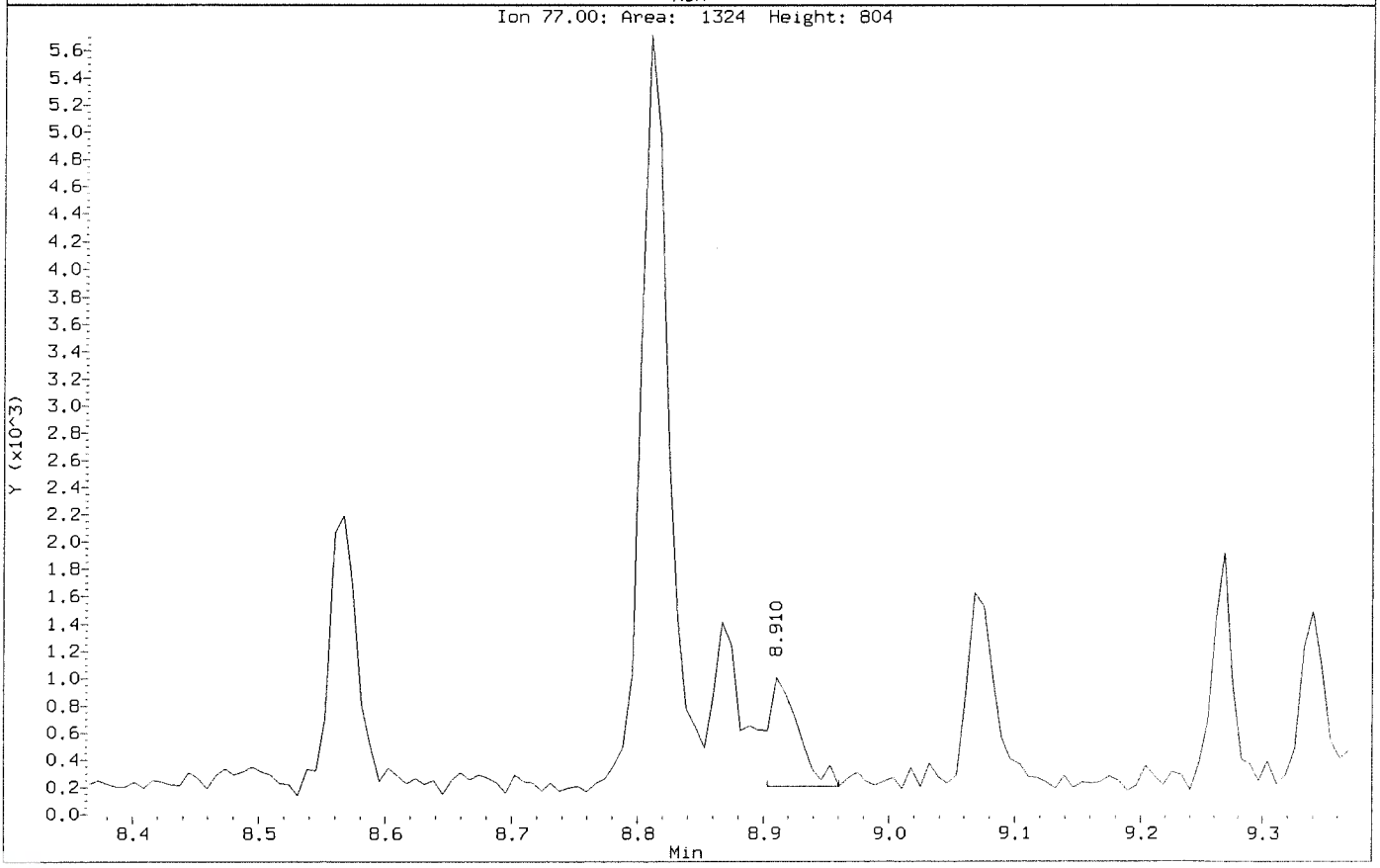
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD001

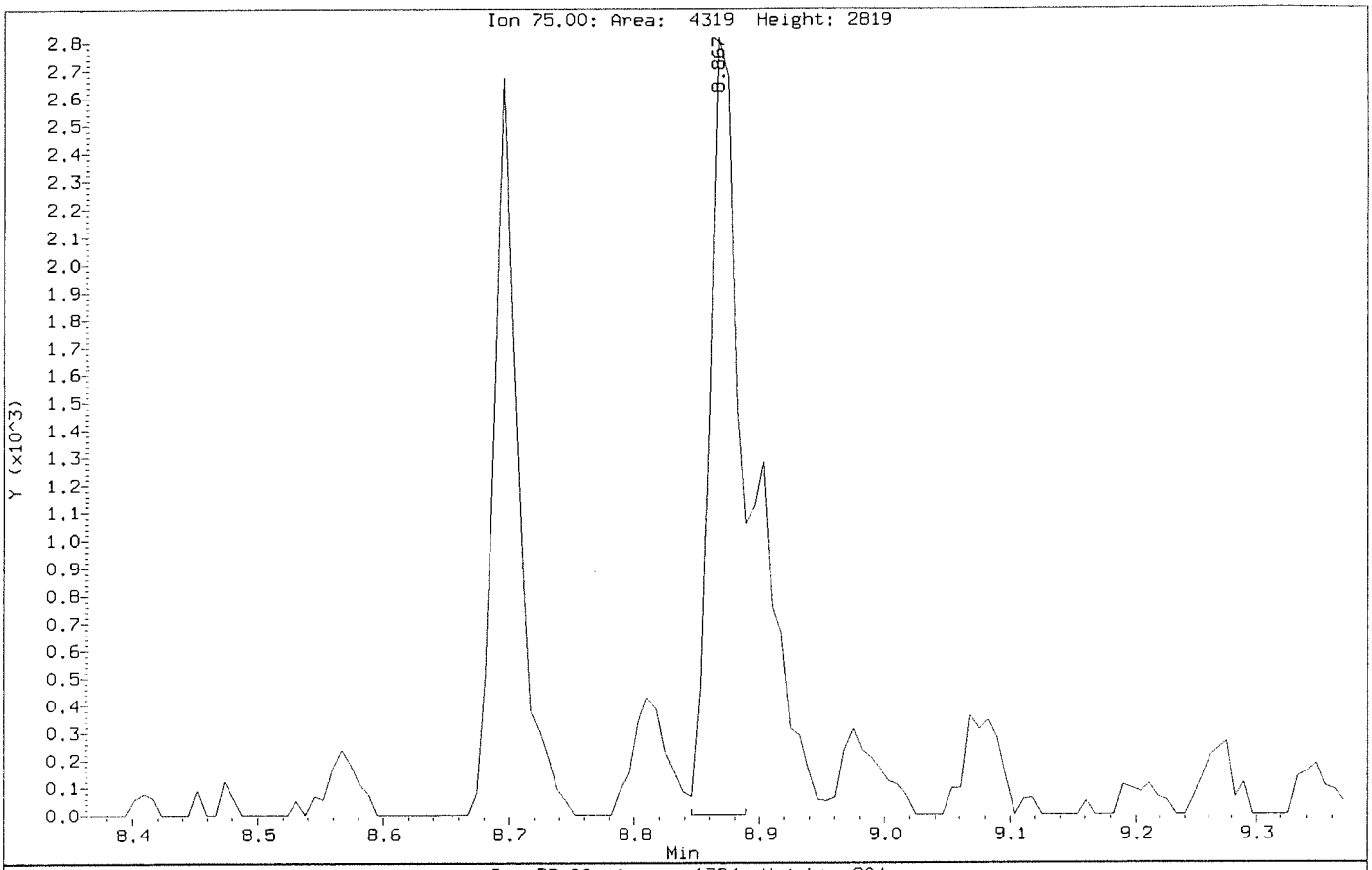
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

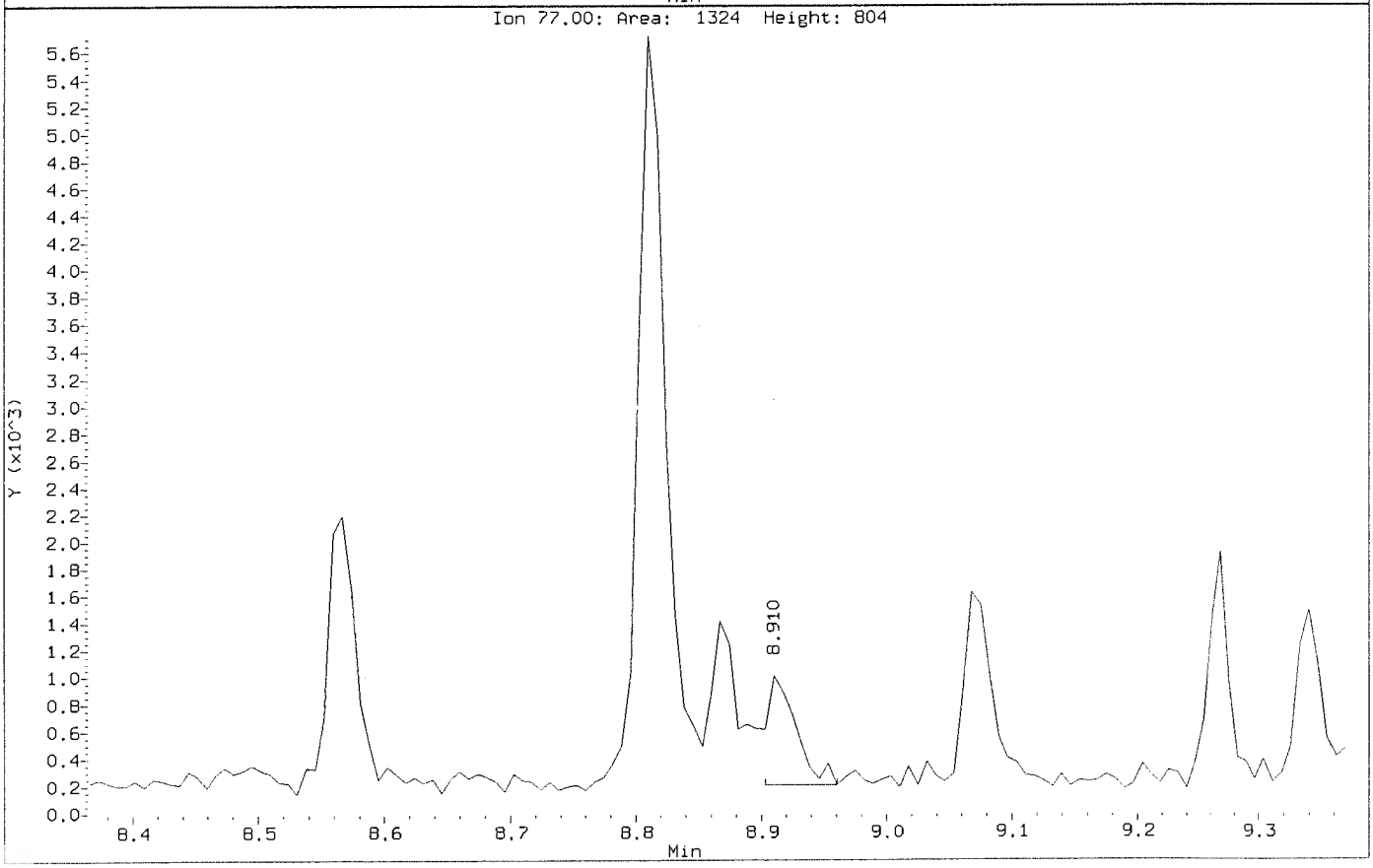




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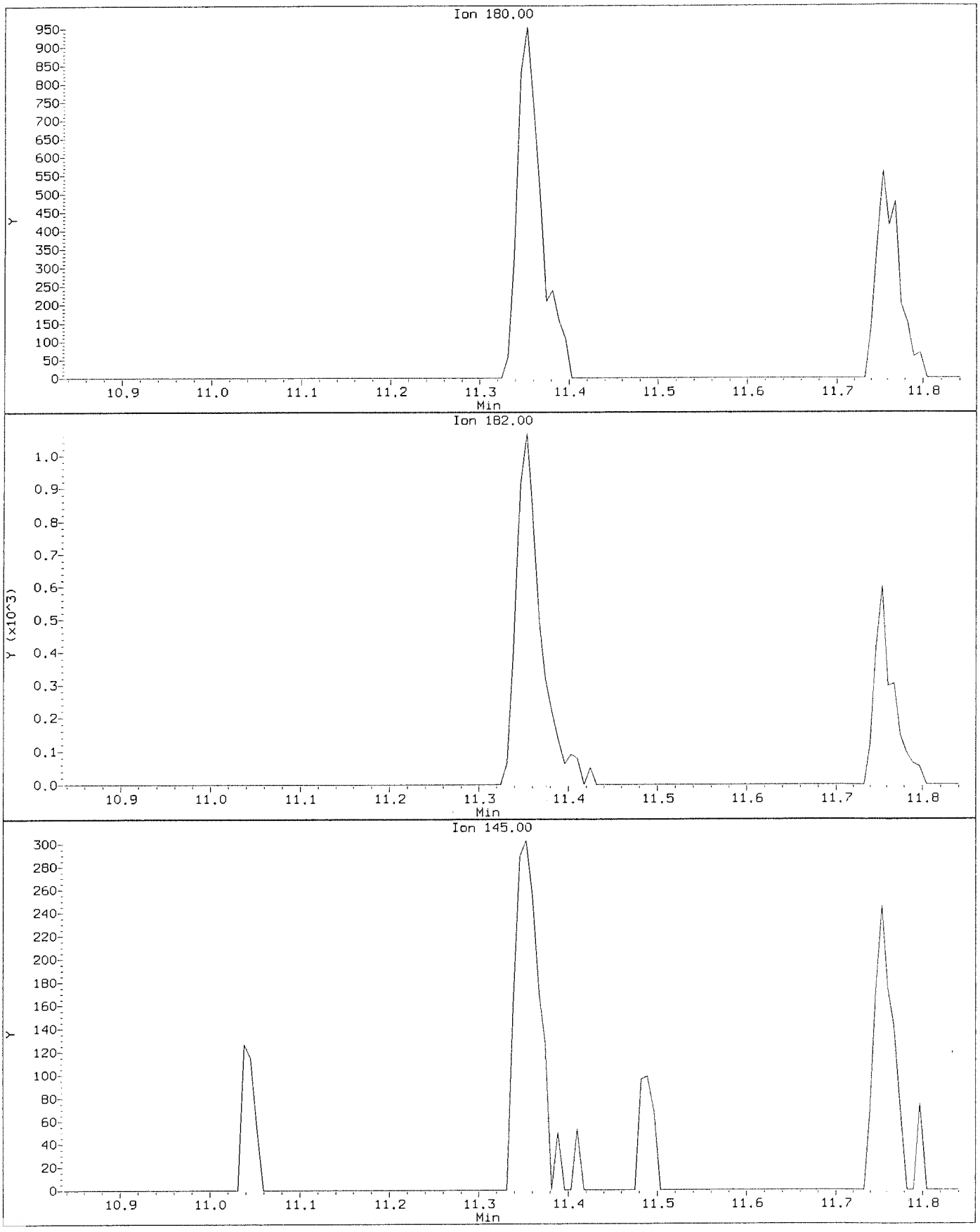
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





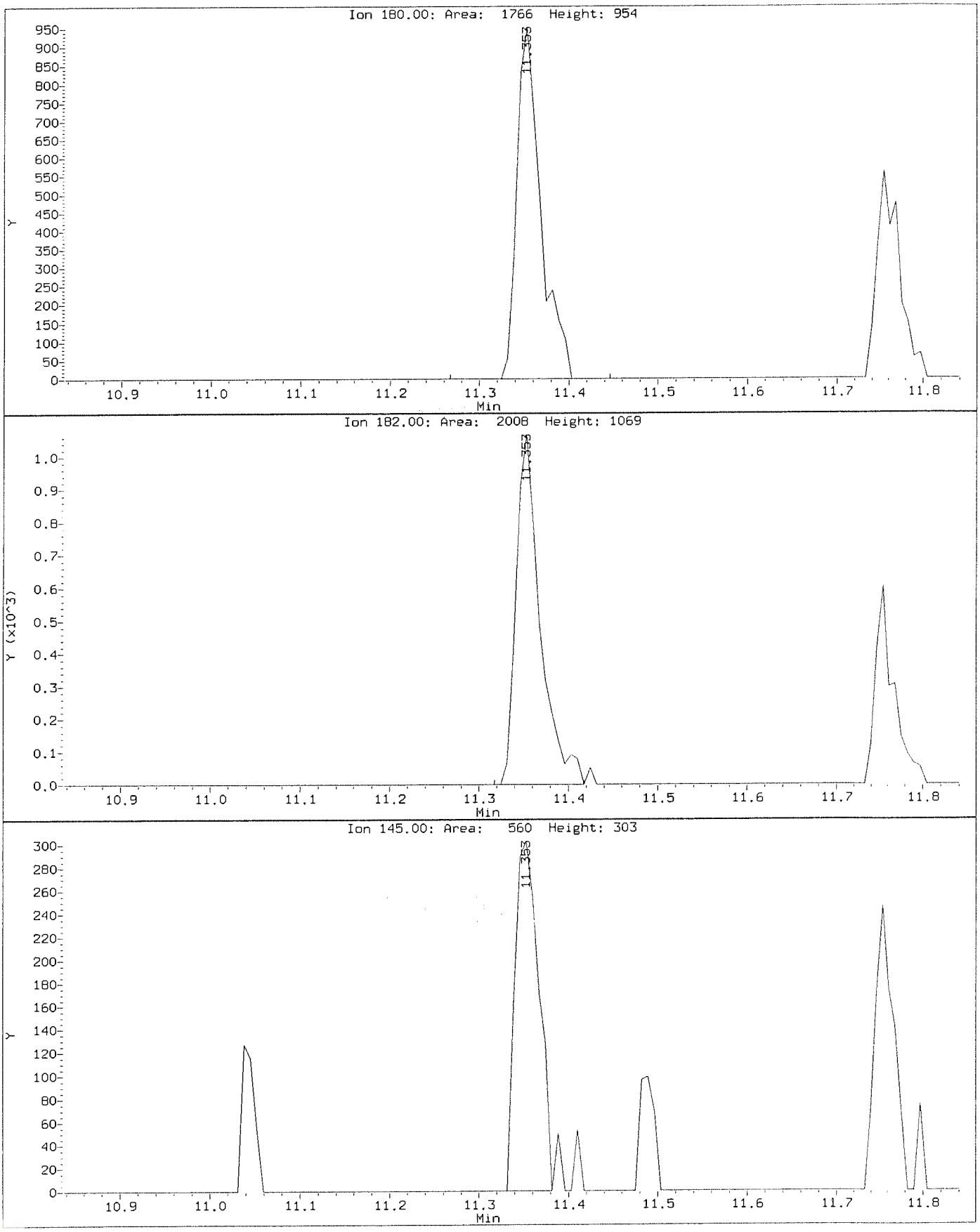
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



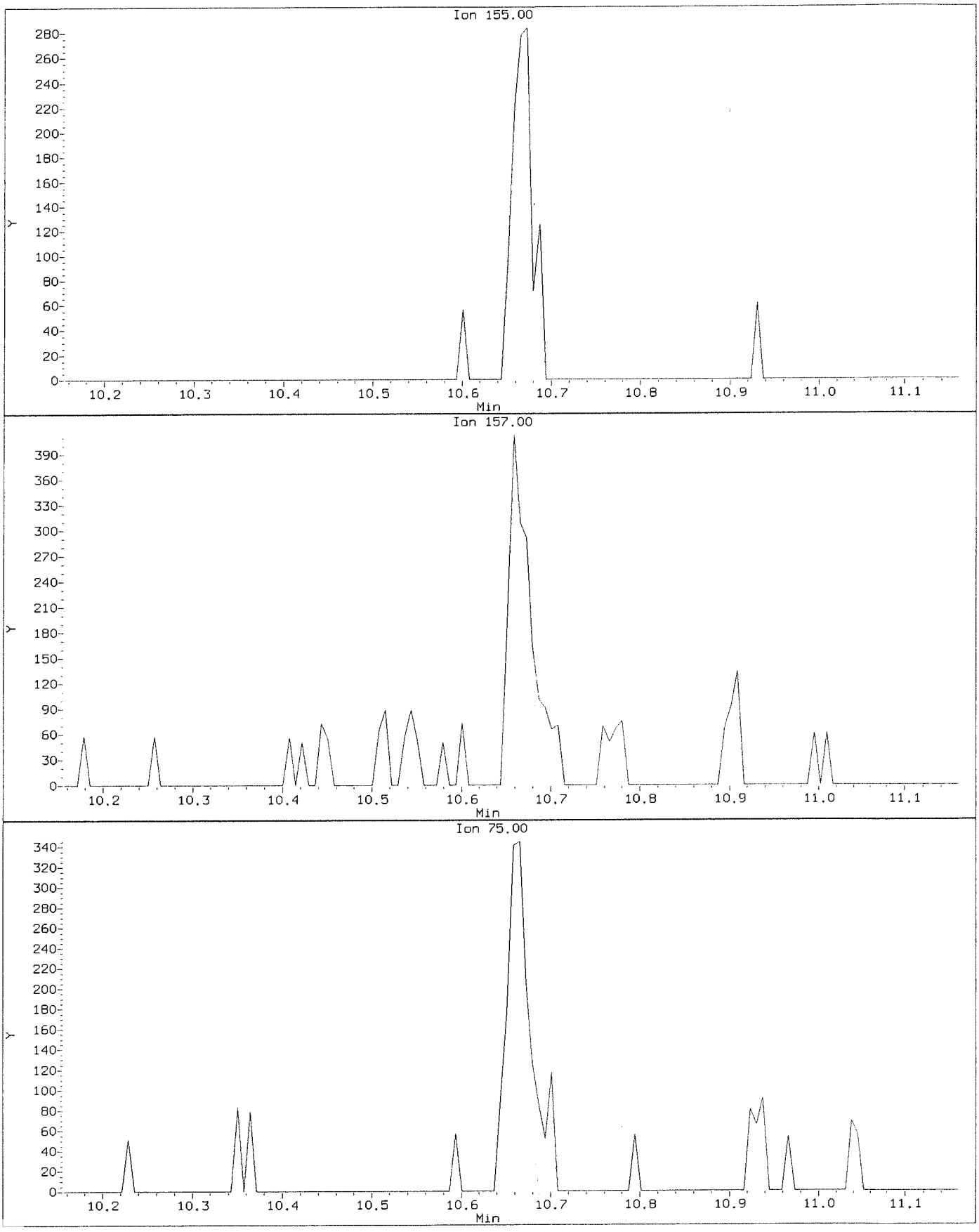
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Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



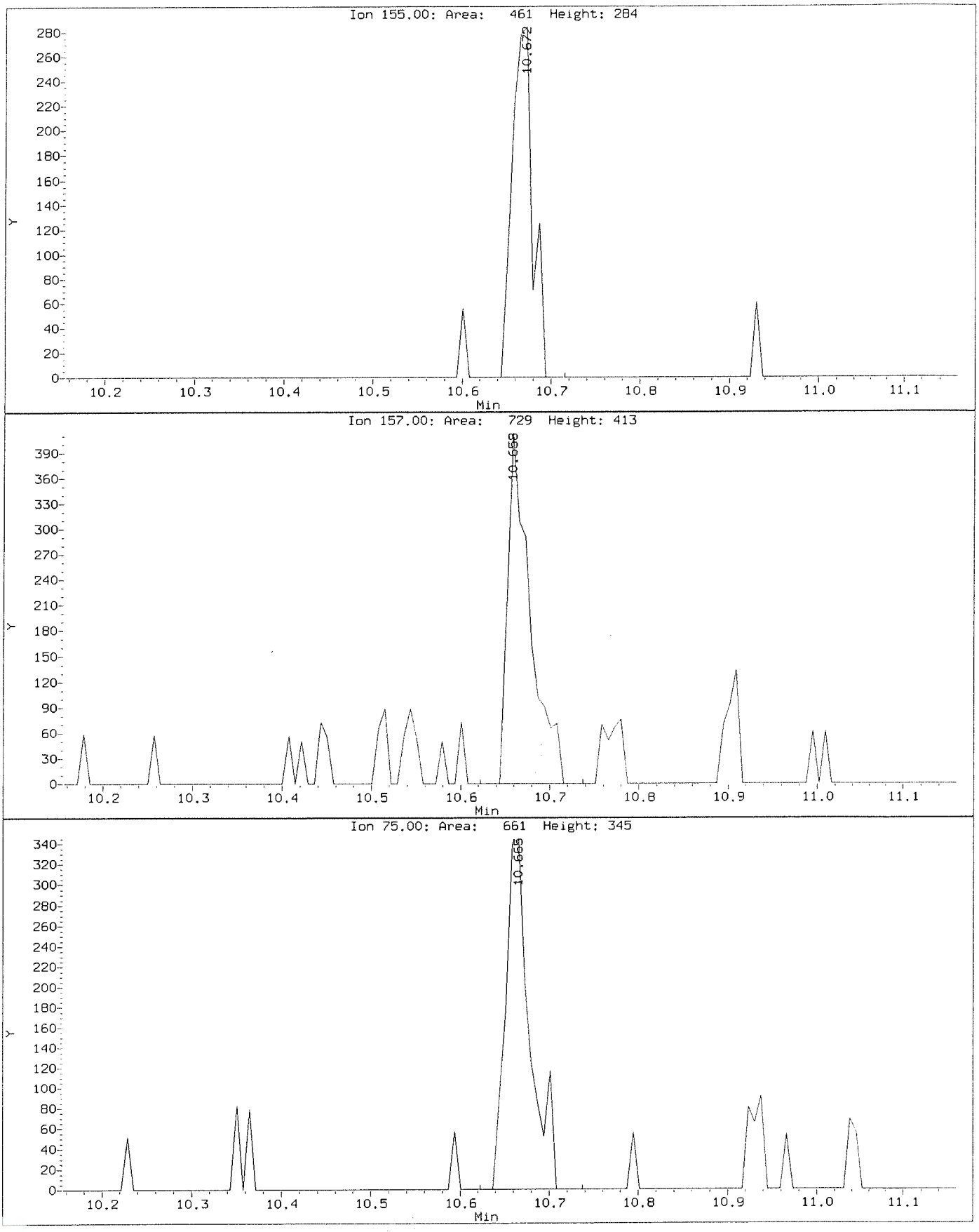
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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



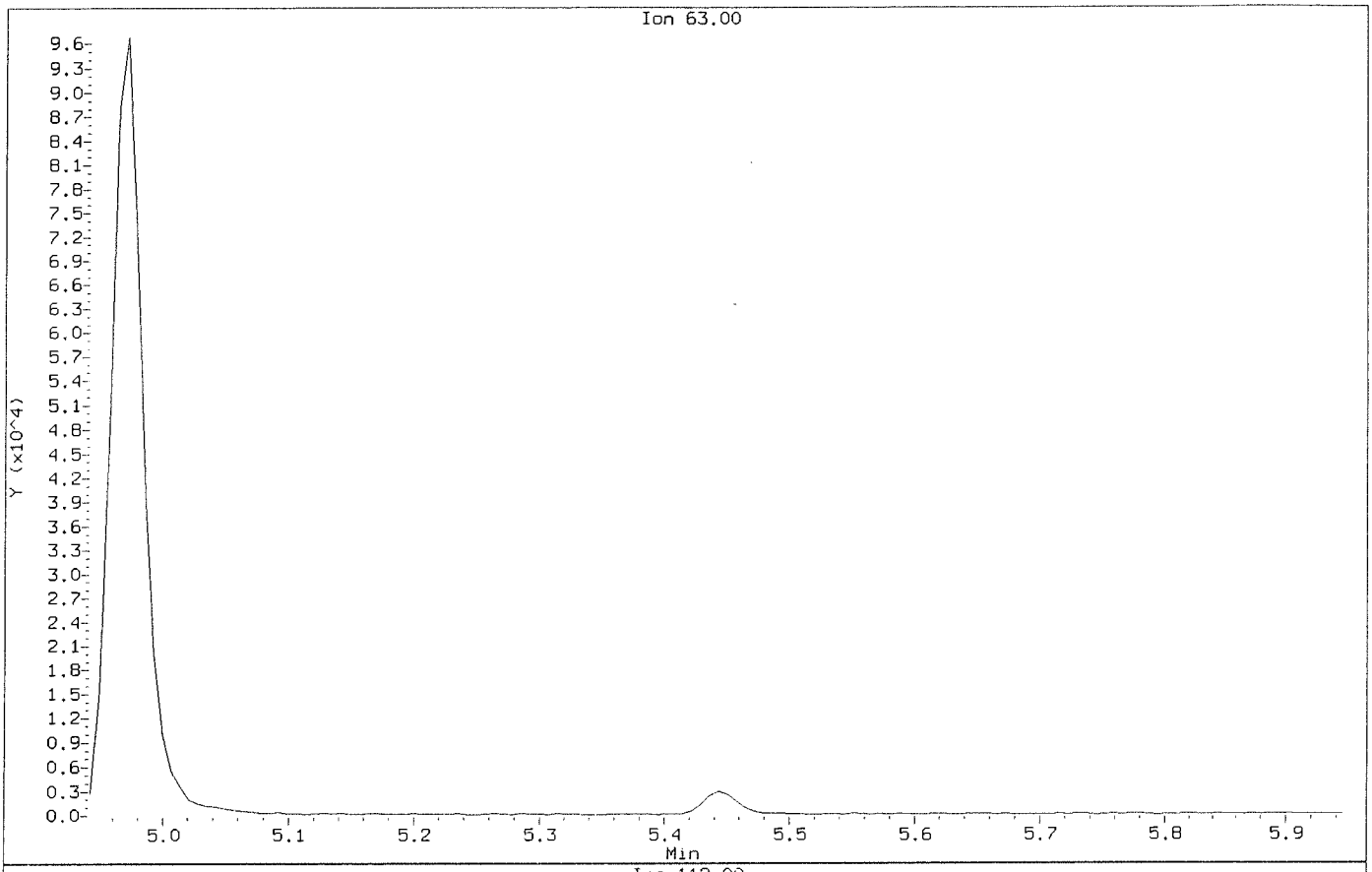
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Client Sample ID: VSTD001

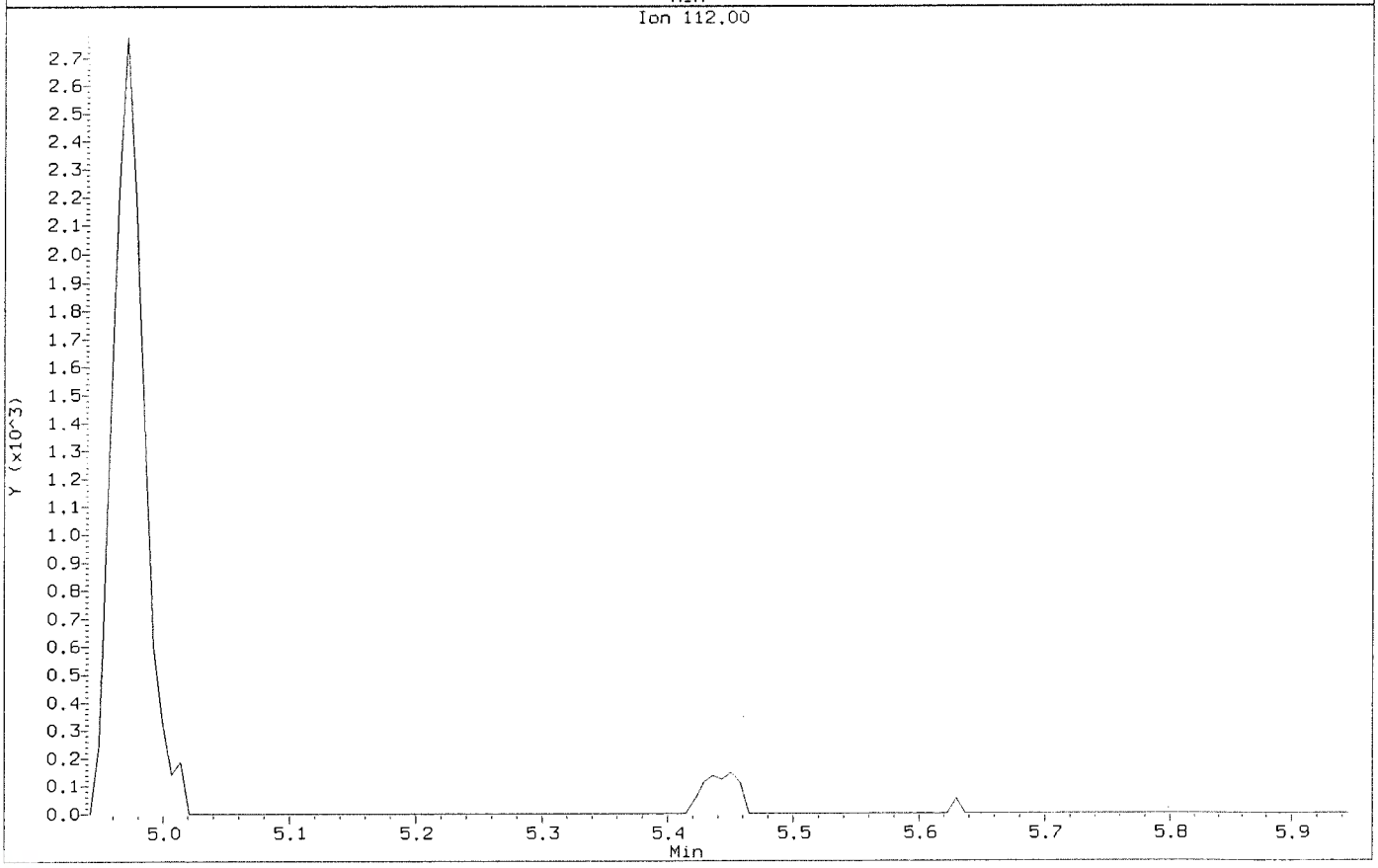
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 03-AUG-2020 12:52
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Client Sample ID: VSTD001

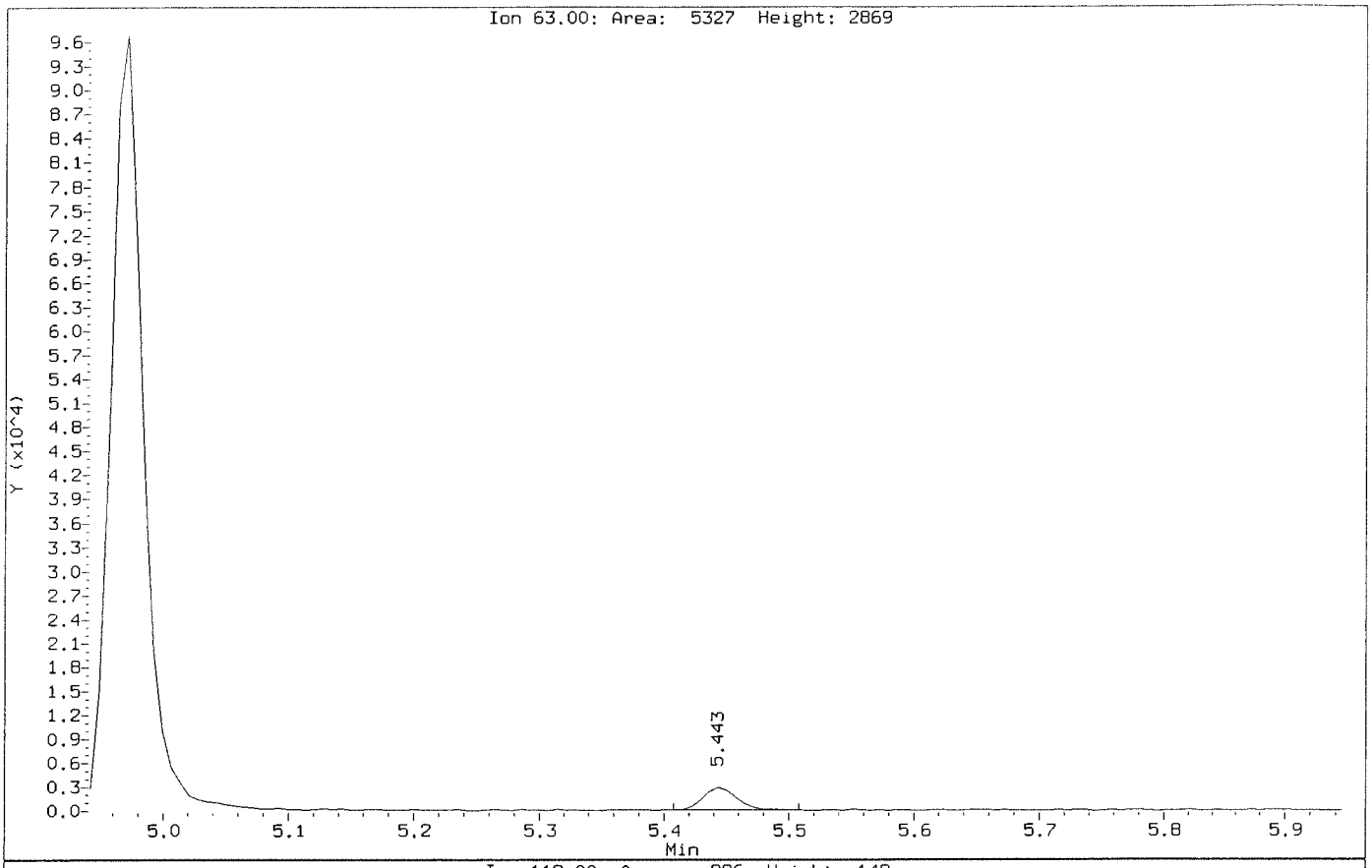
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

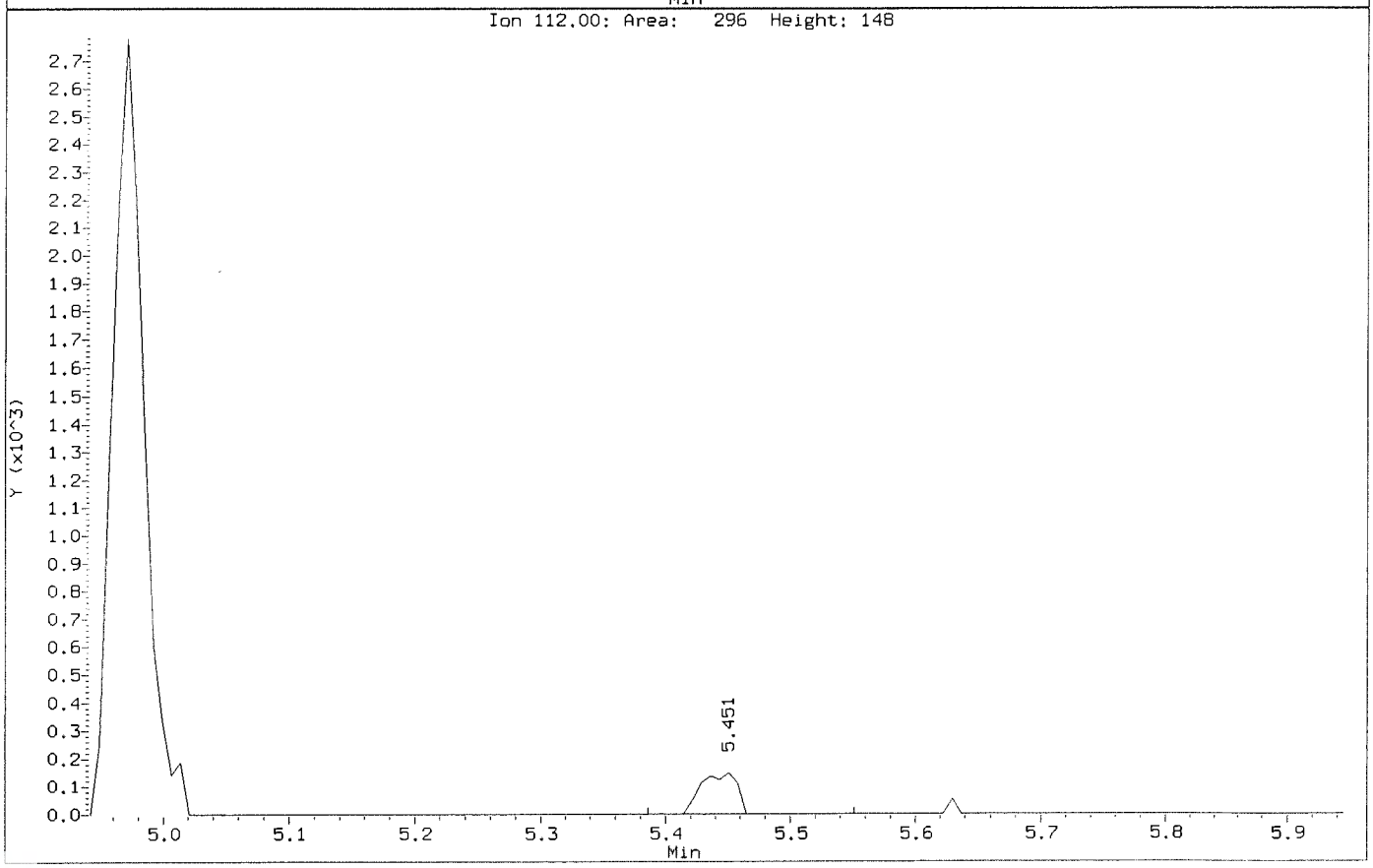




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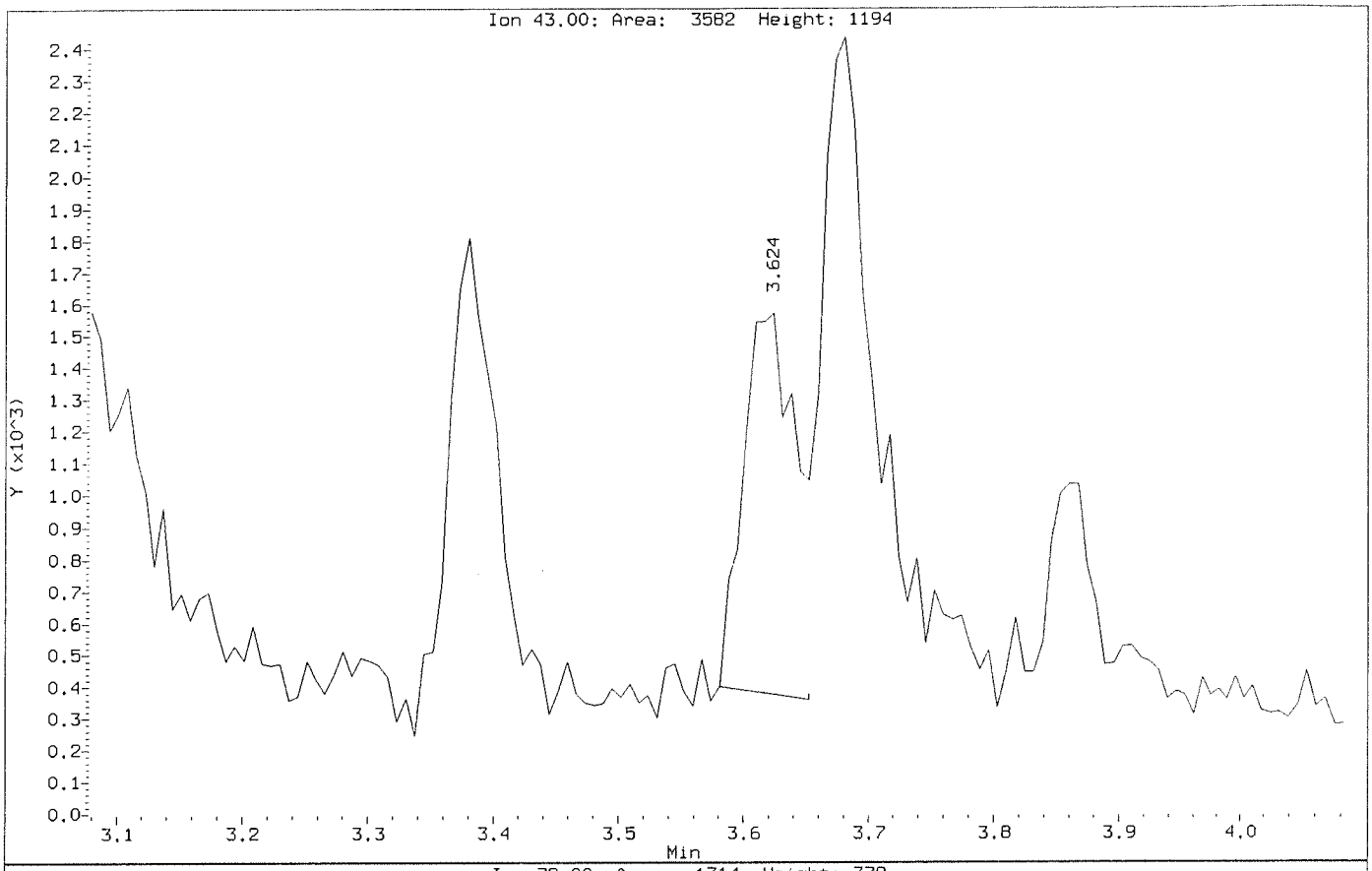
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

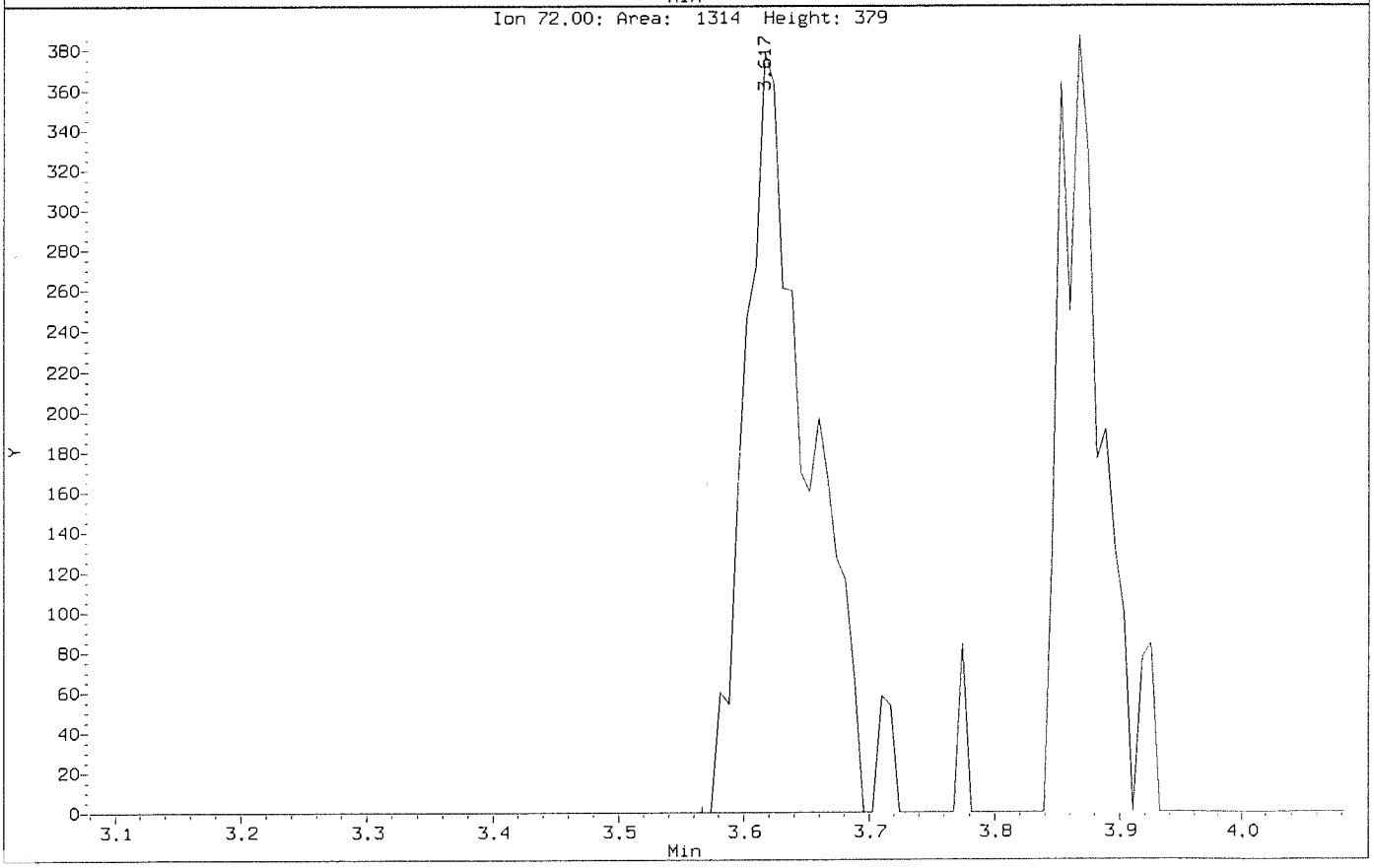




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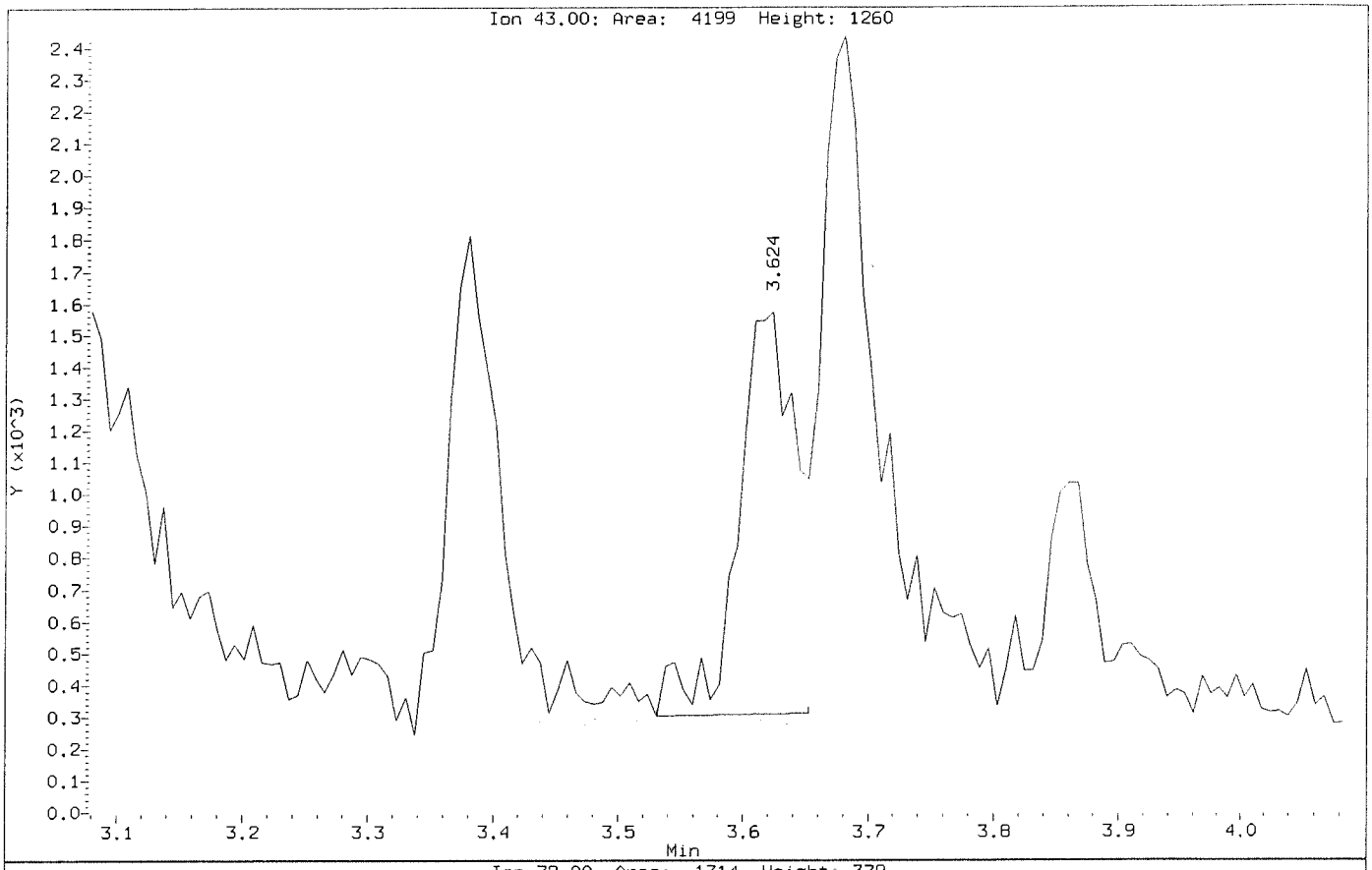
Compound: 2-Butanone
CAS Number: 78-93-3

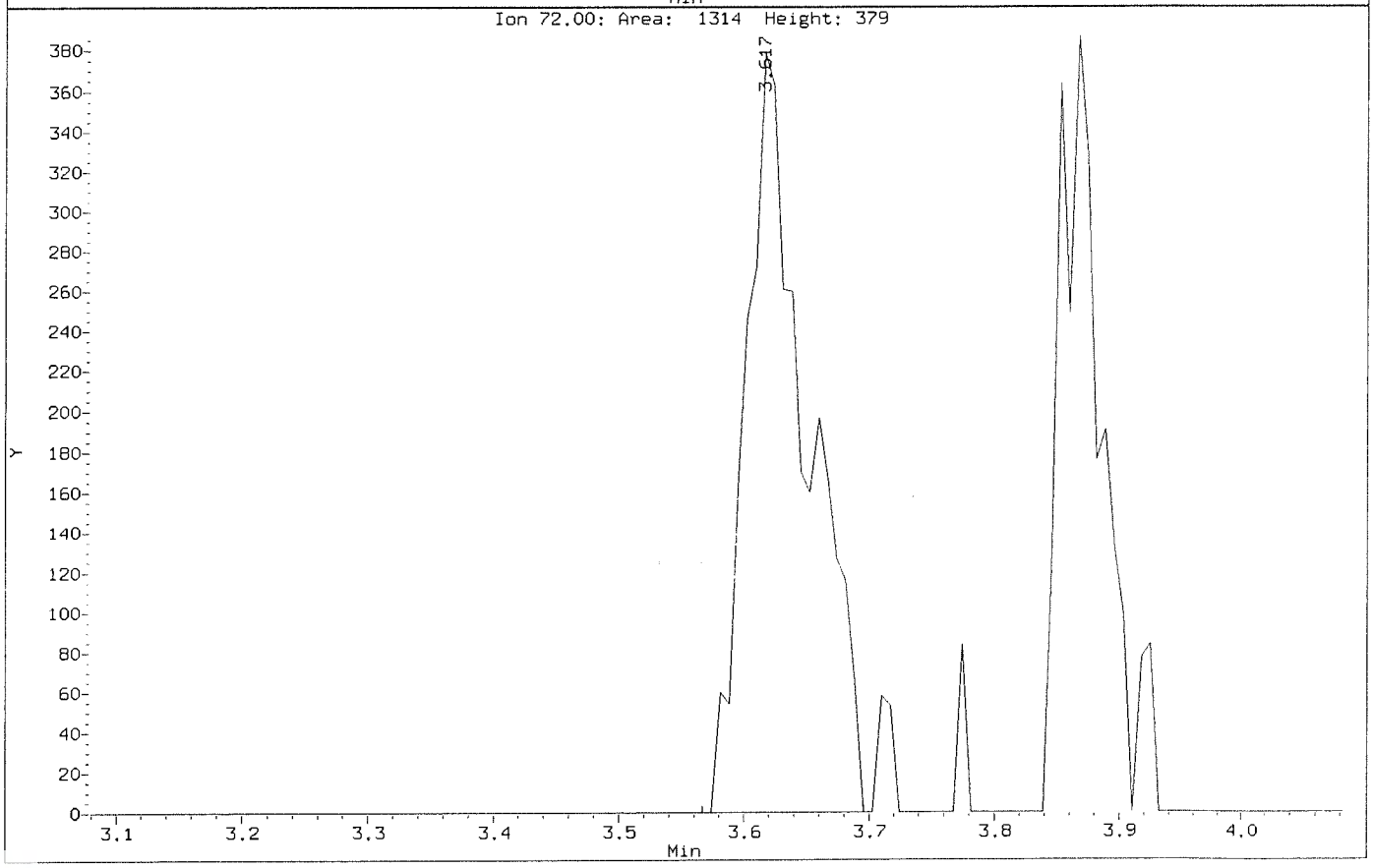




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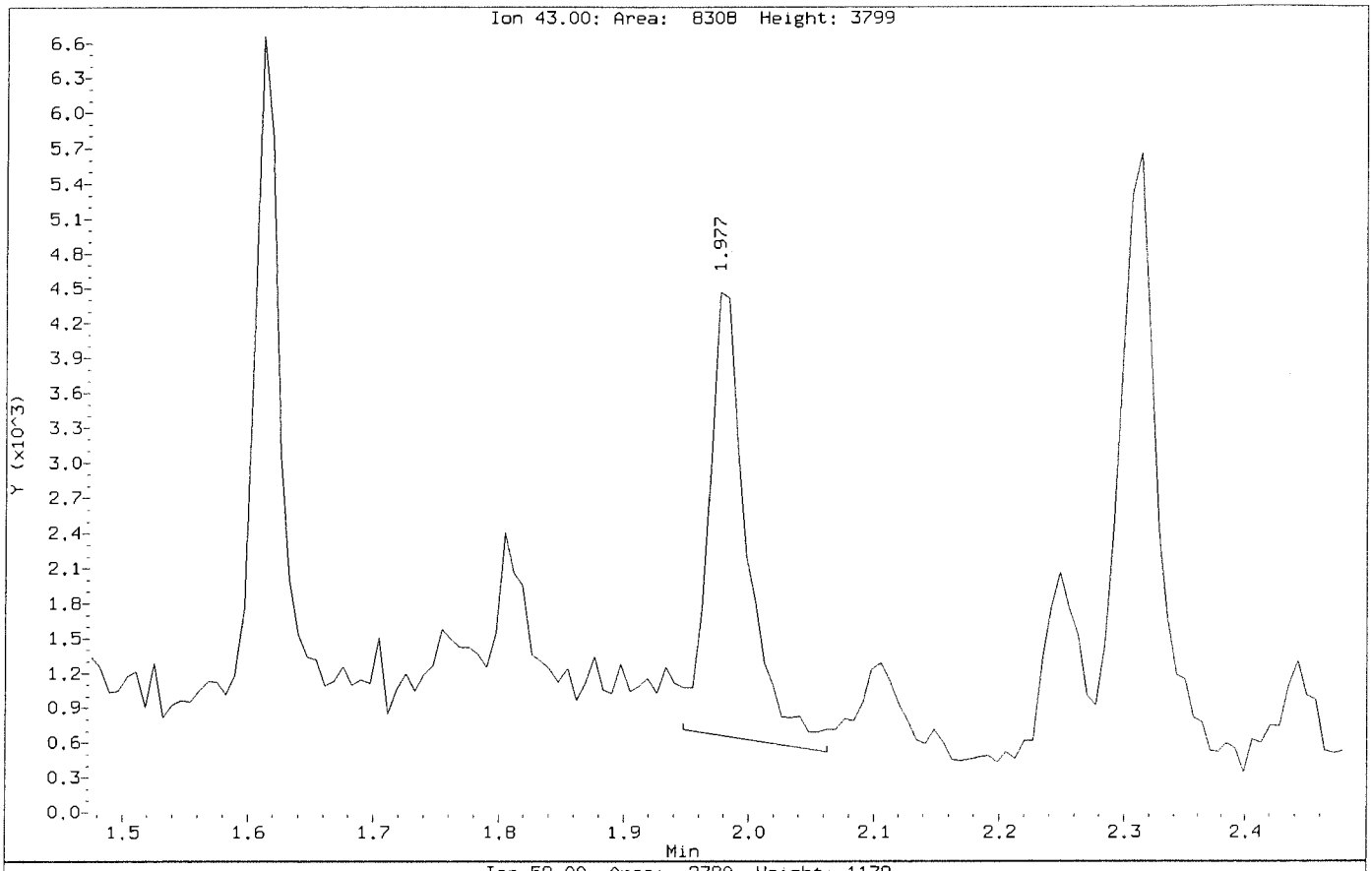
Compound: 2-Butanone
CAS Number: 78-93-3

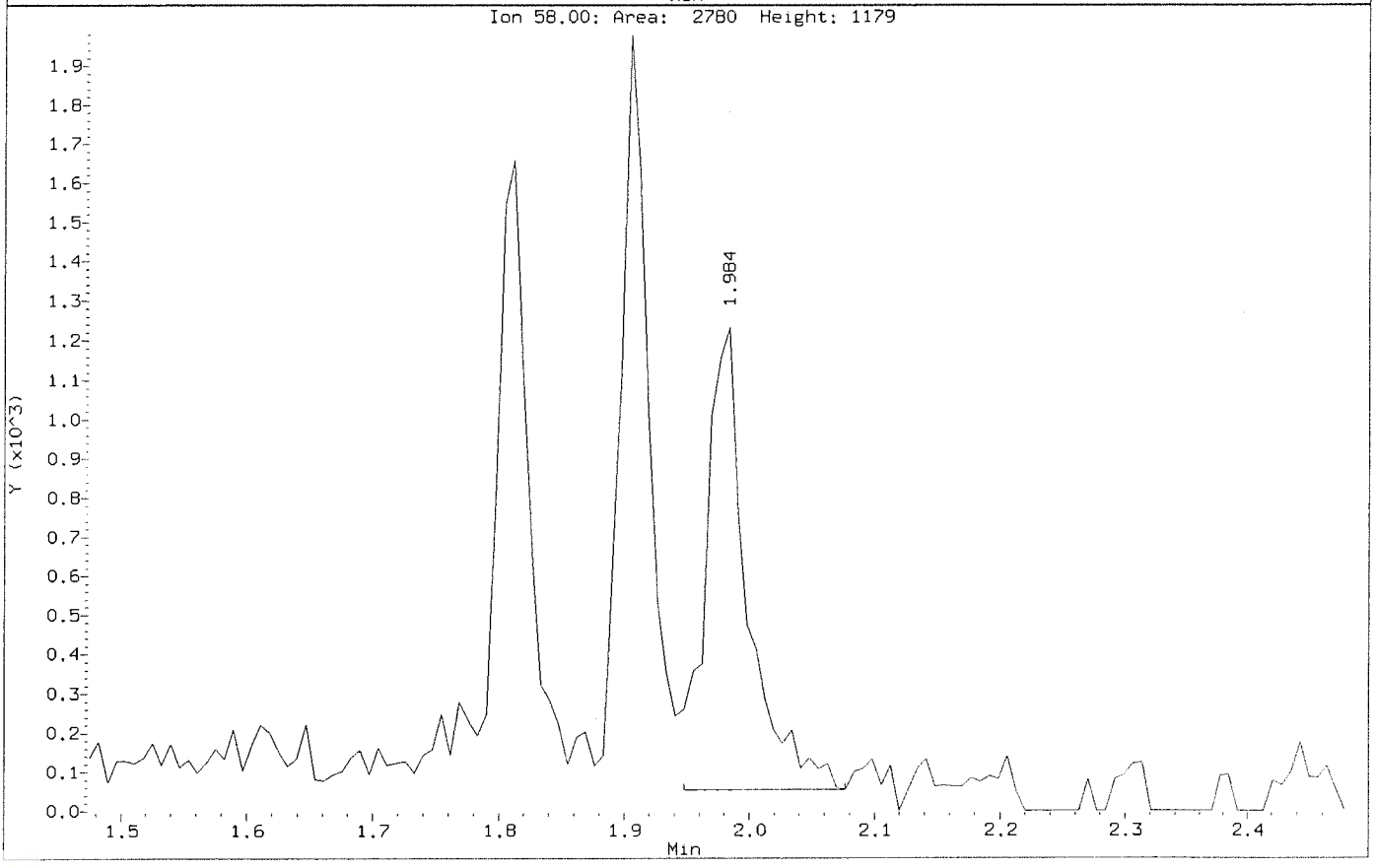




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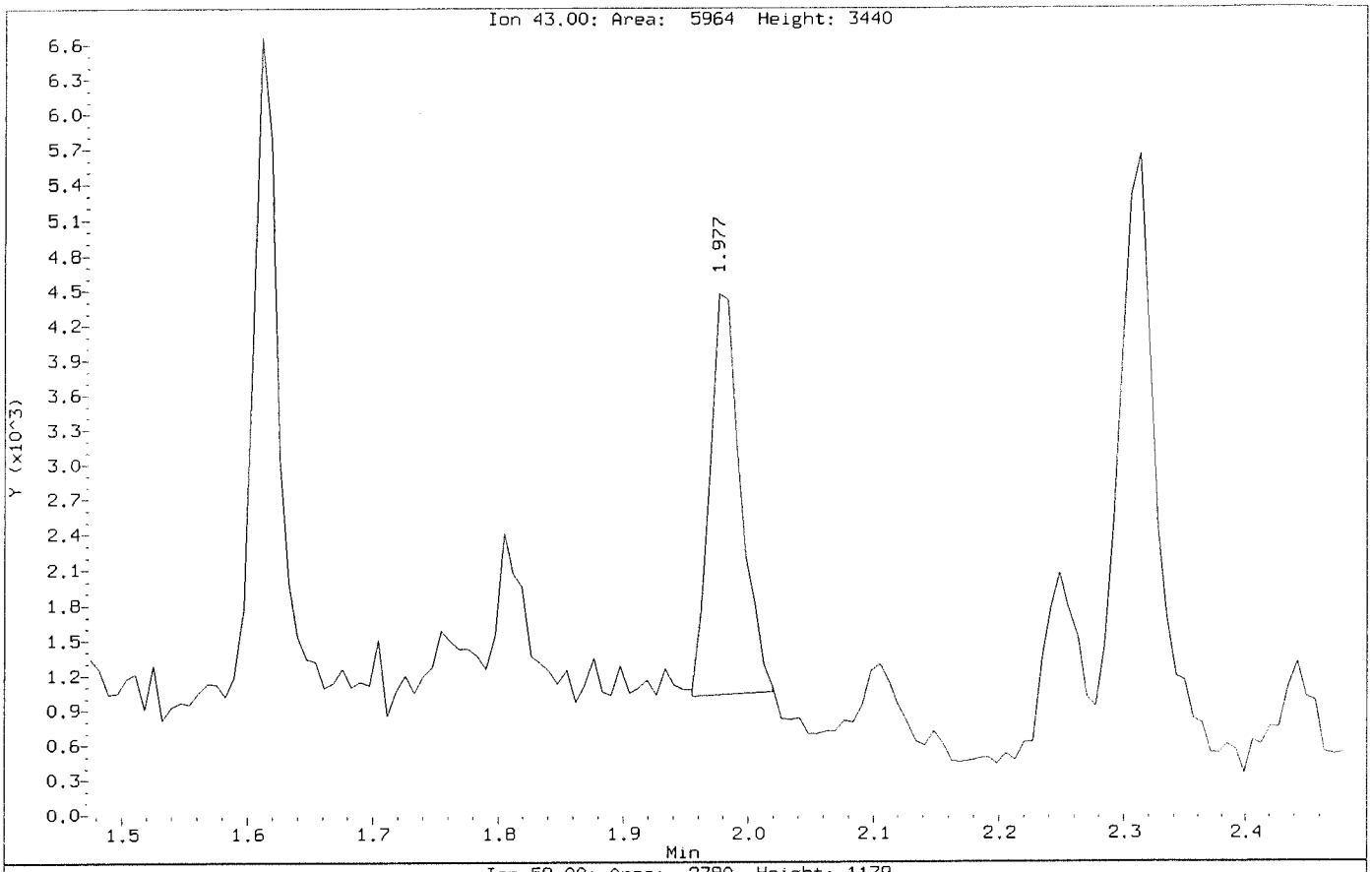
Compound: Acetone
CAS Number: 67-64-1

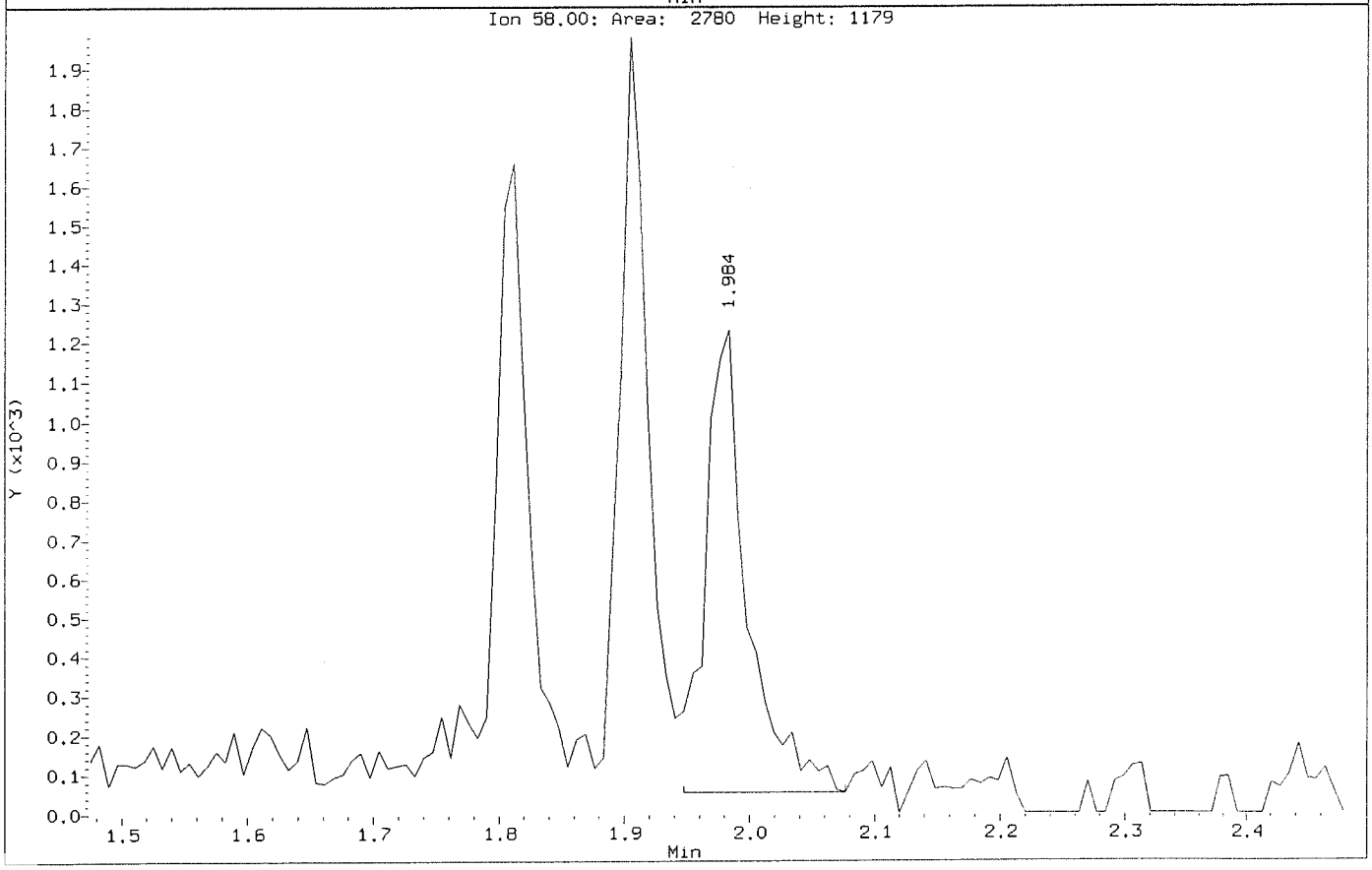




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Client Sample ID: VSTD001

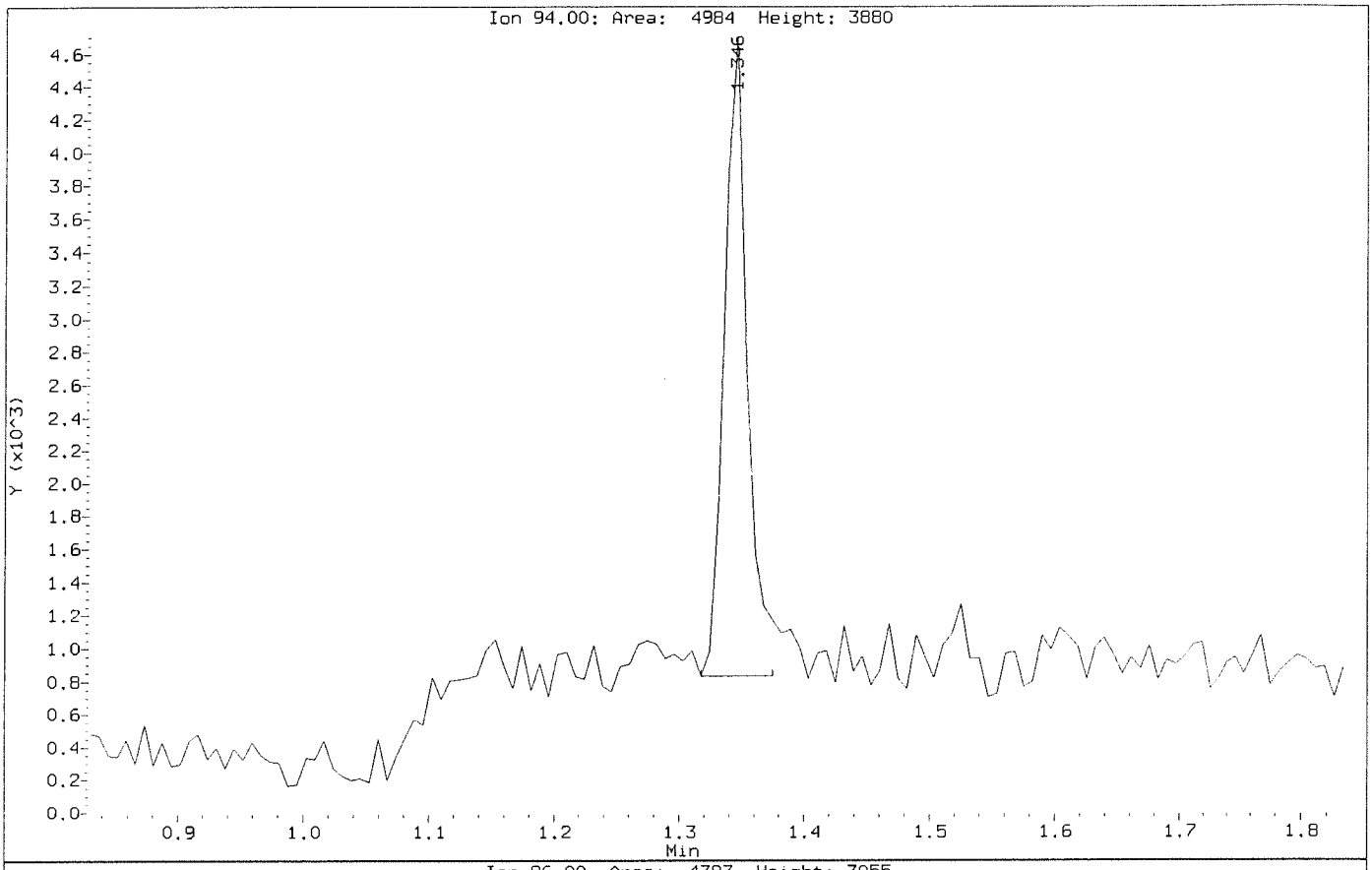
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CAS Number: 67-64-1

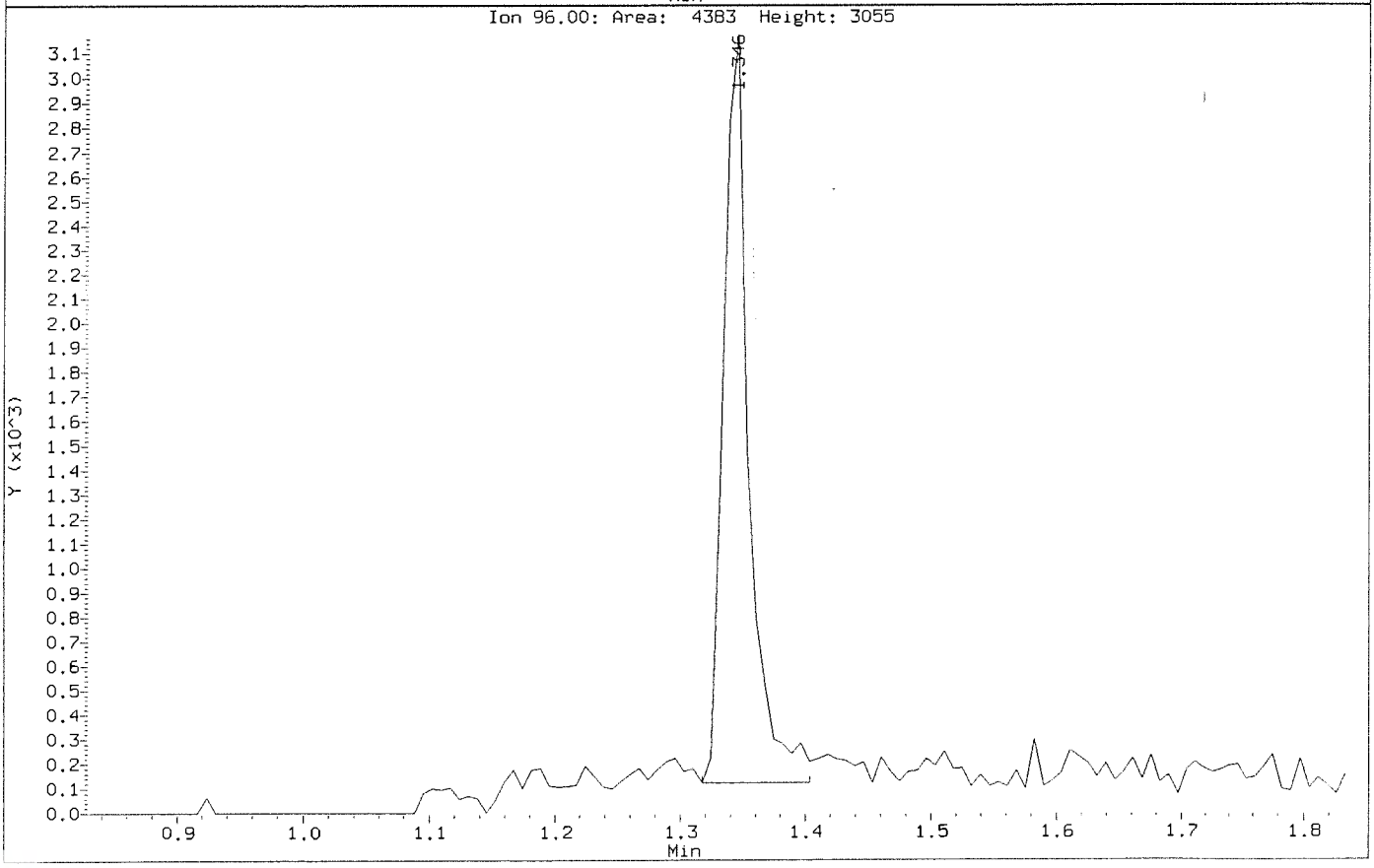




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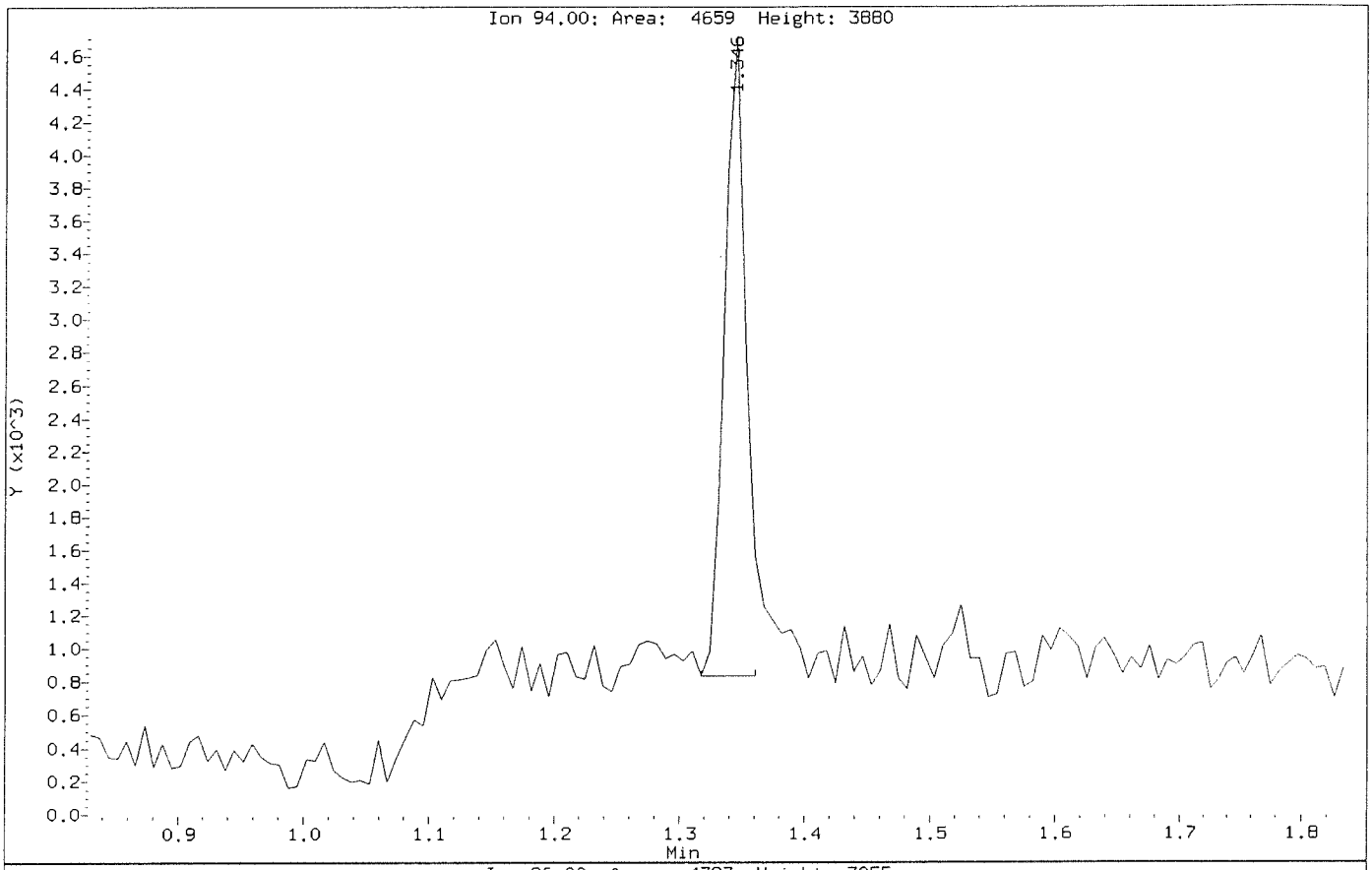
Compound: Bromomethane
CAS Number: 74-83-9

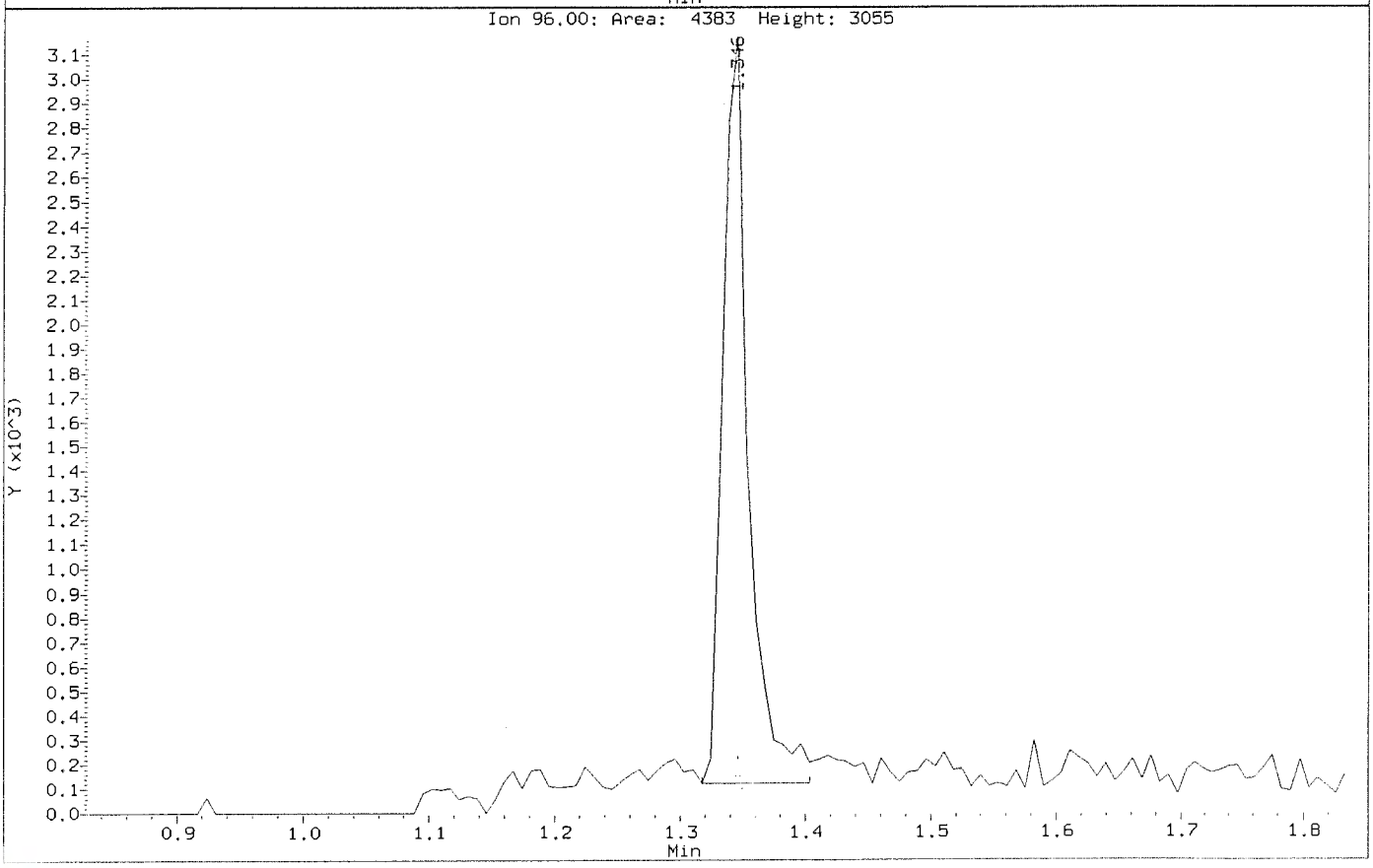




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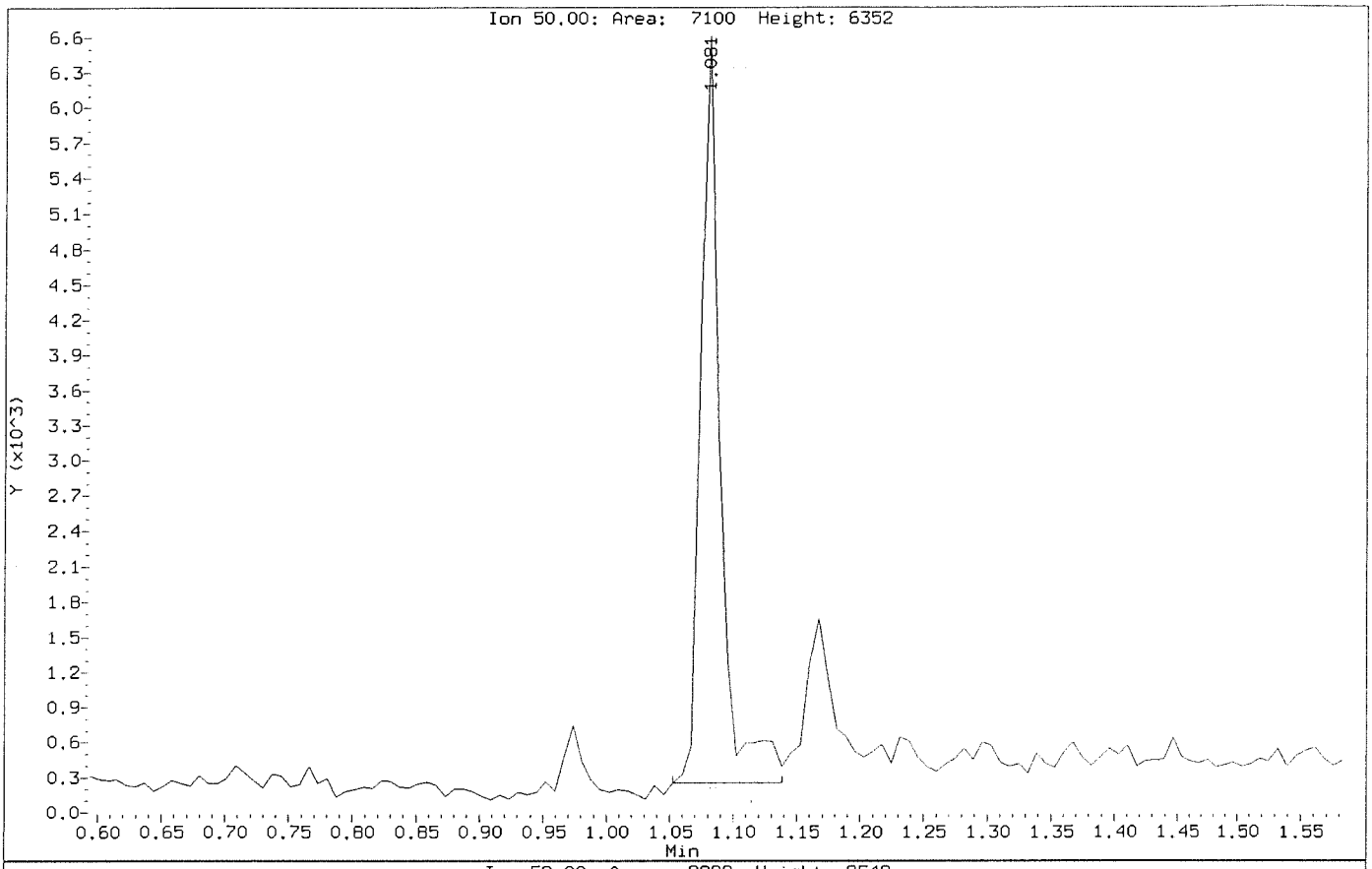
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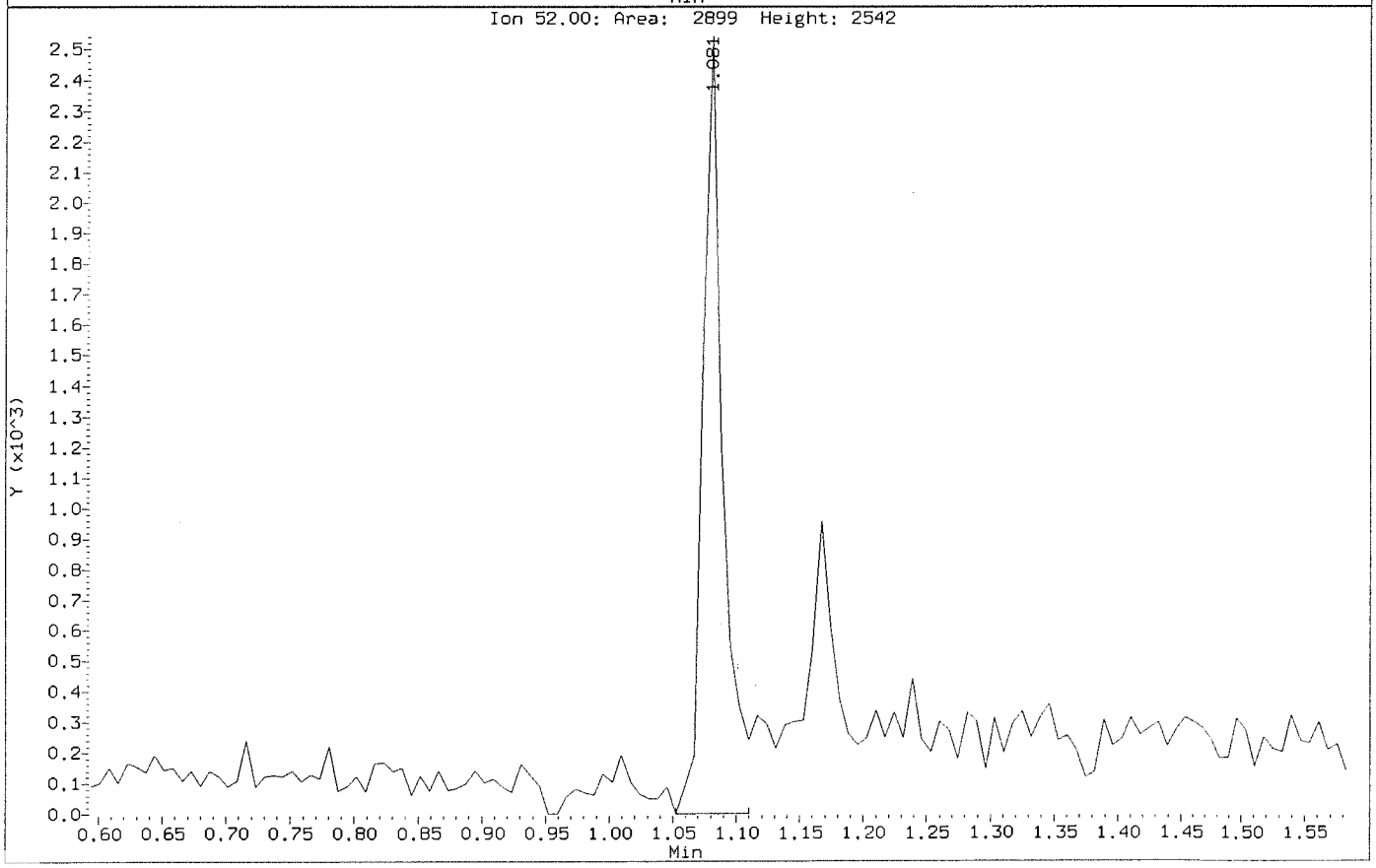




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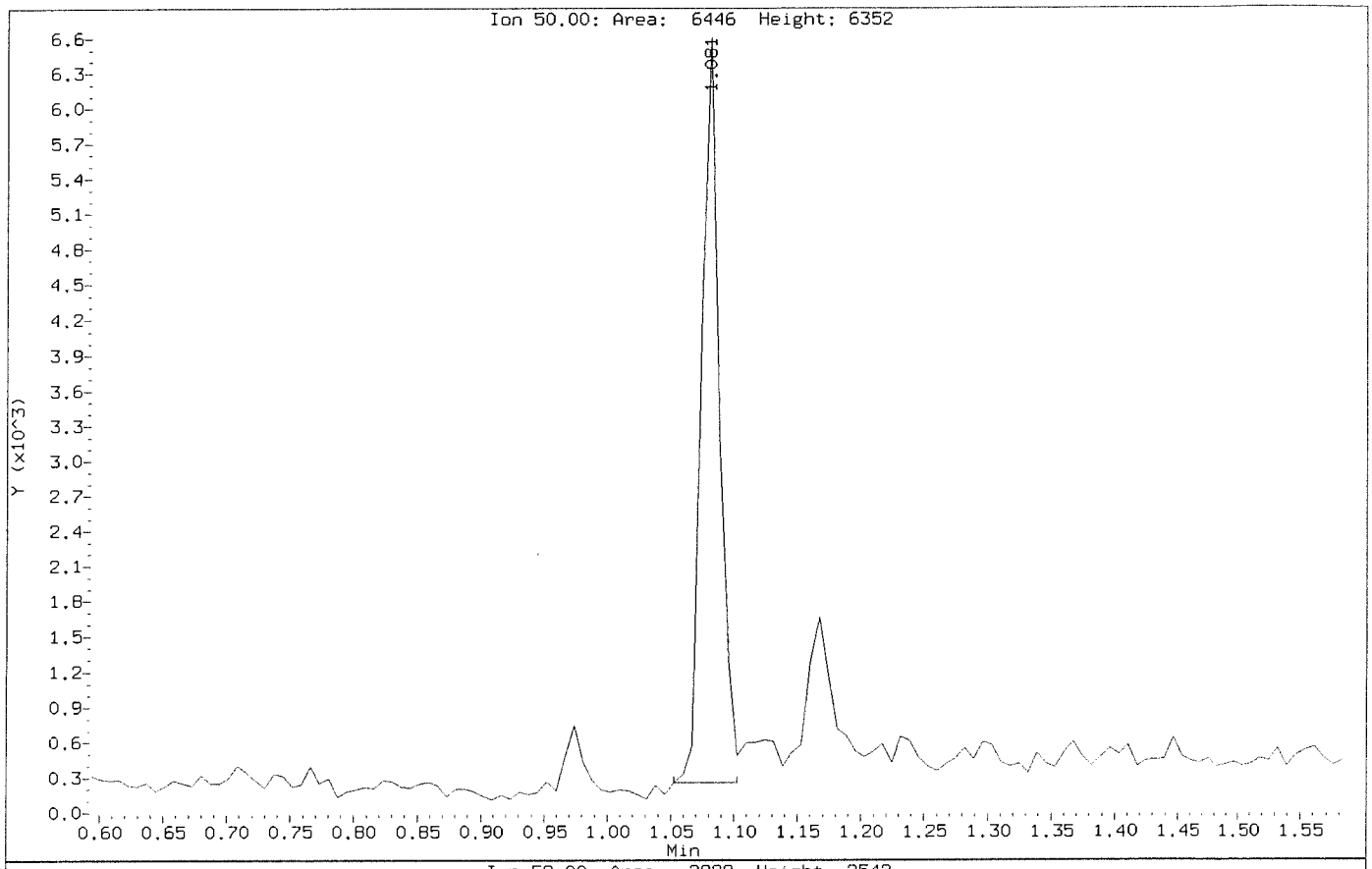
Compound: Chloromethane
CAS Number: 74-87-3

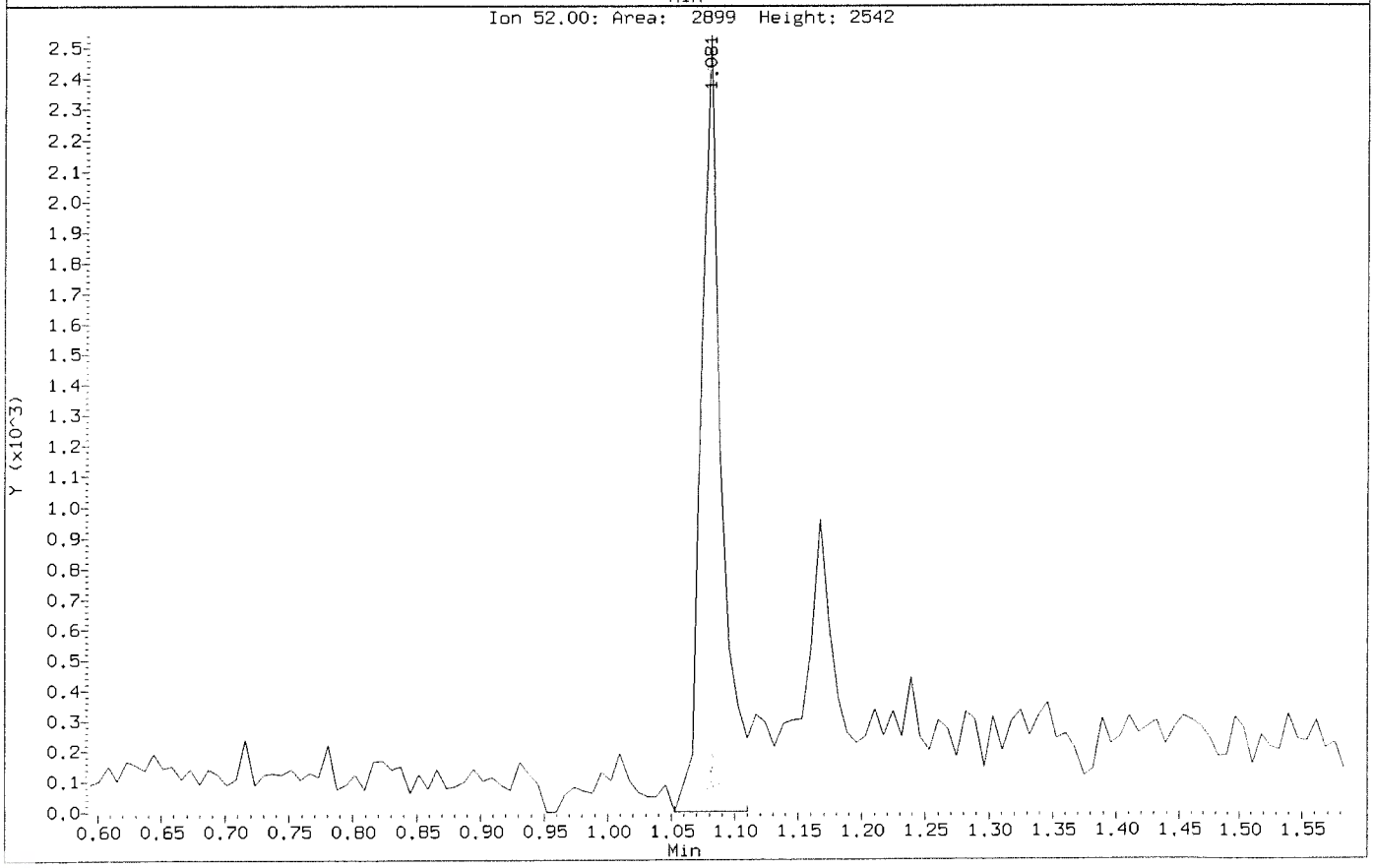




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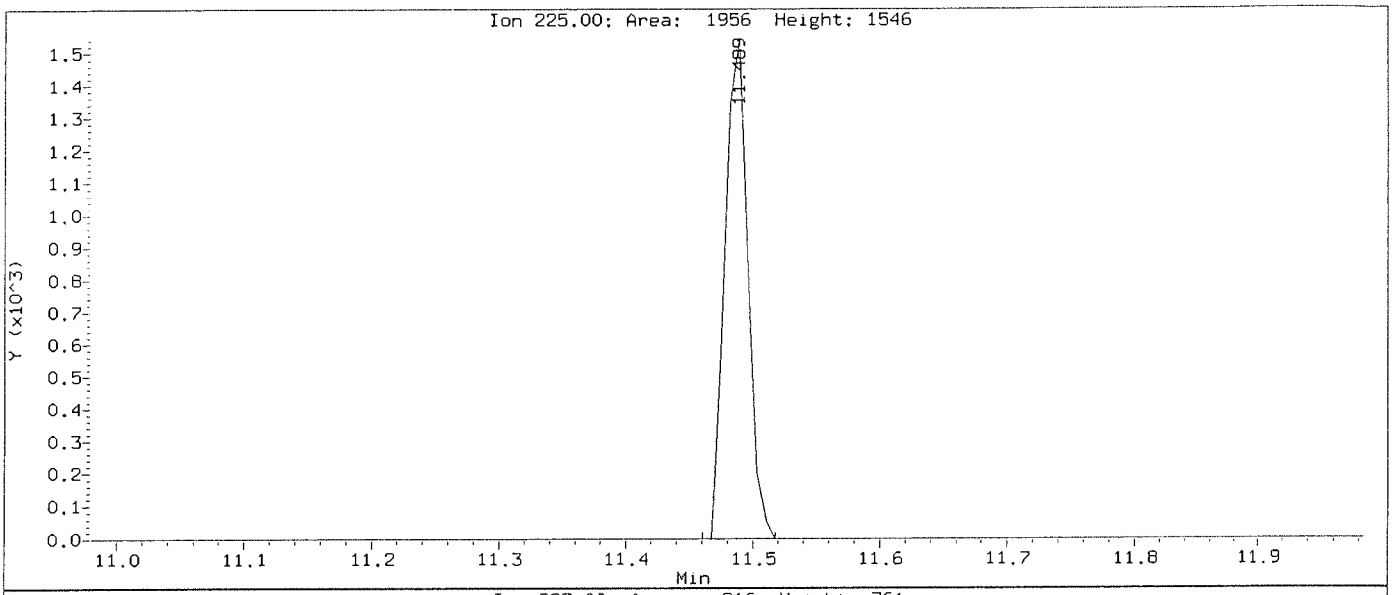
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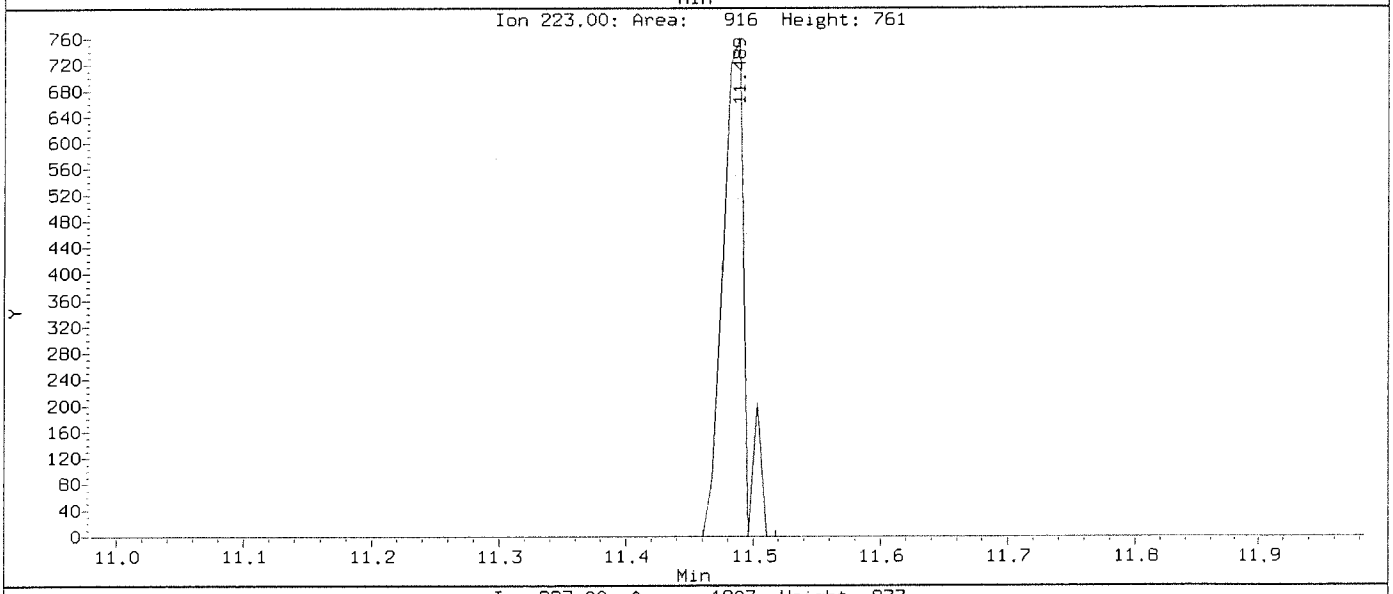


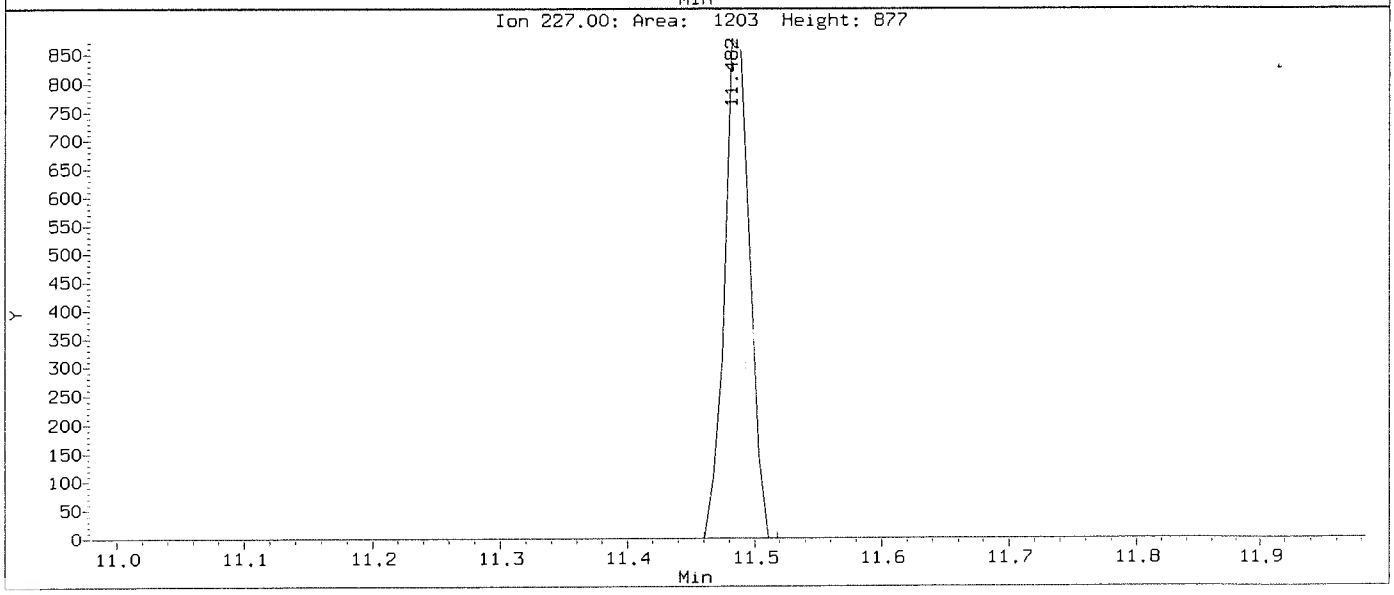


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

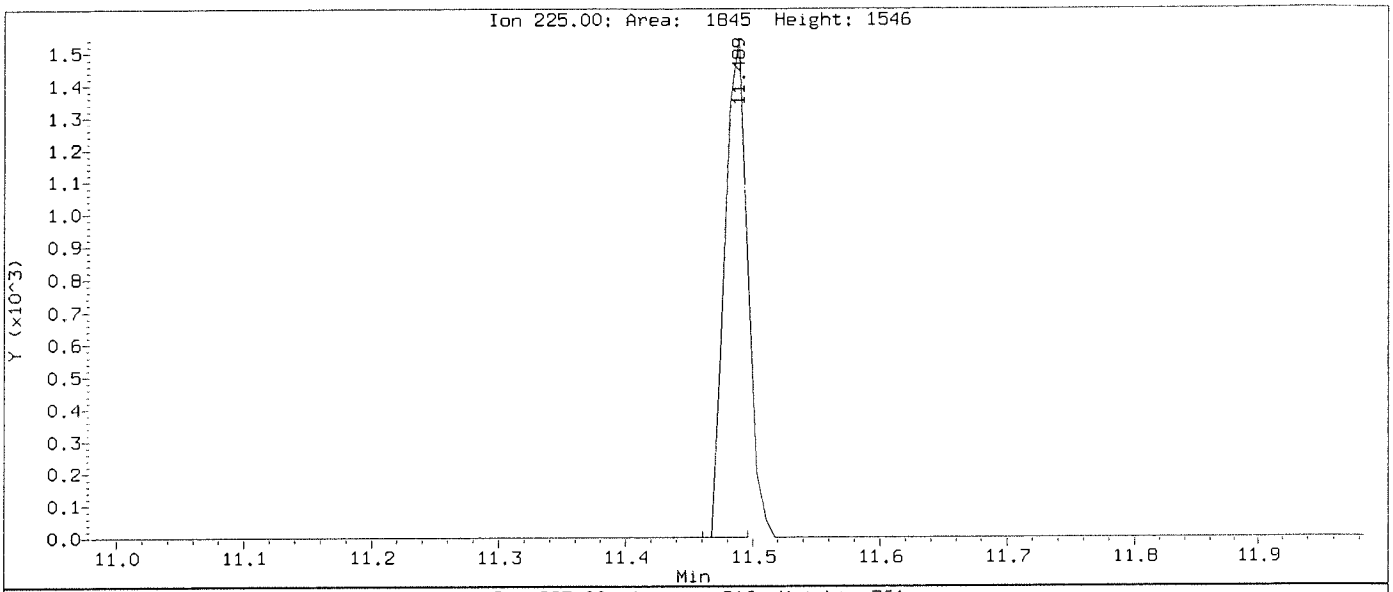


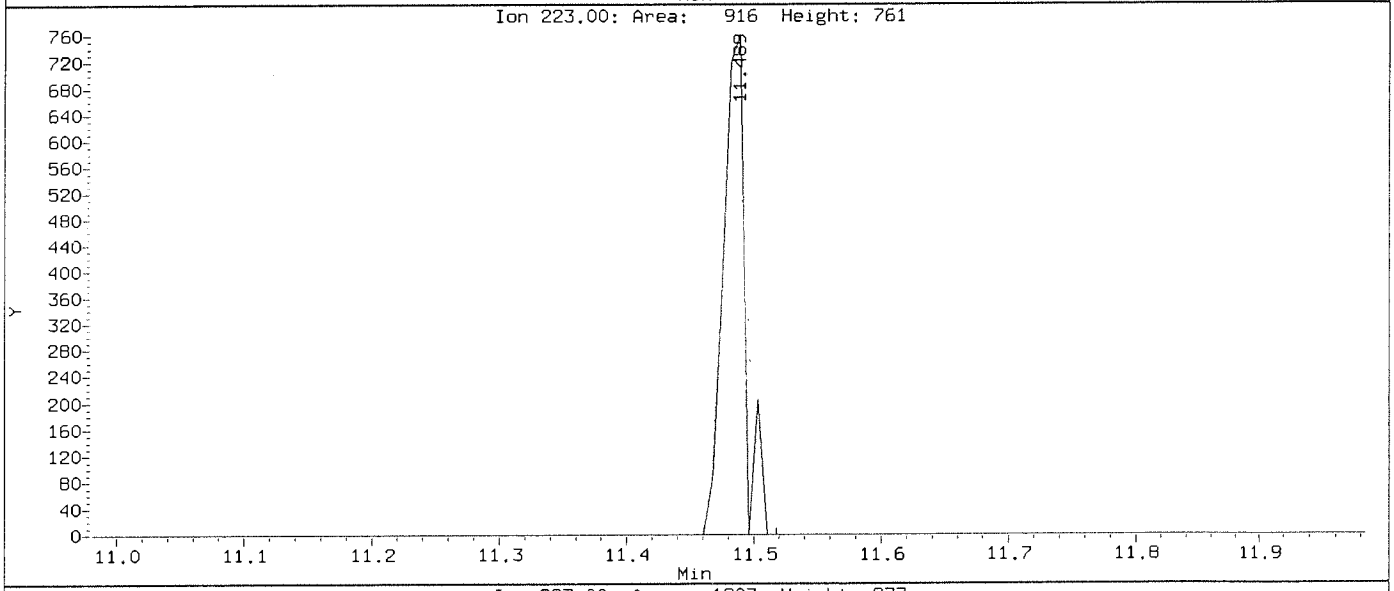


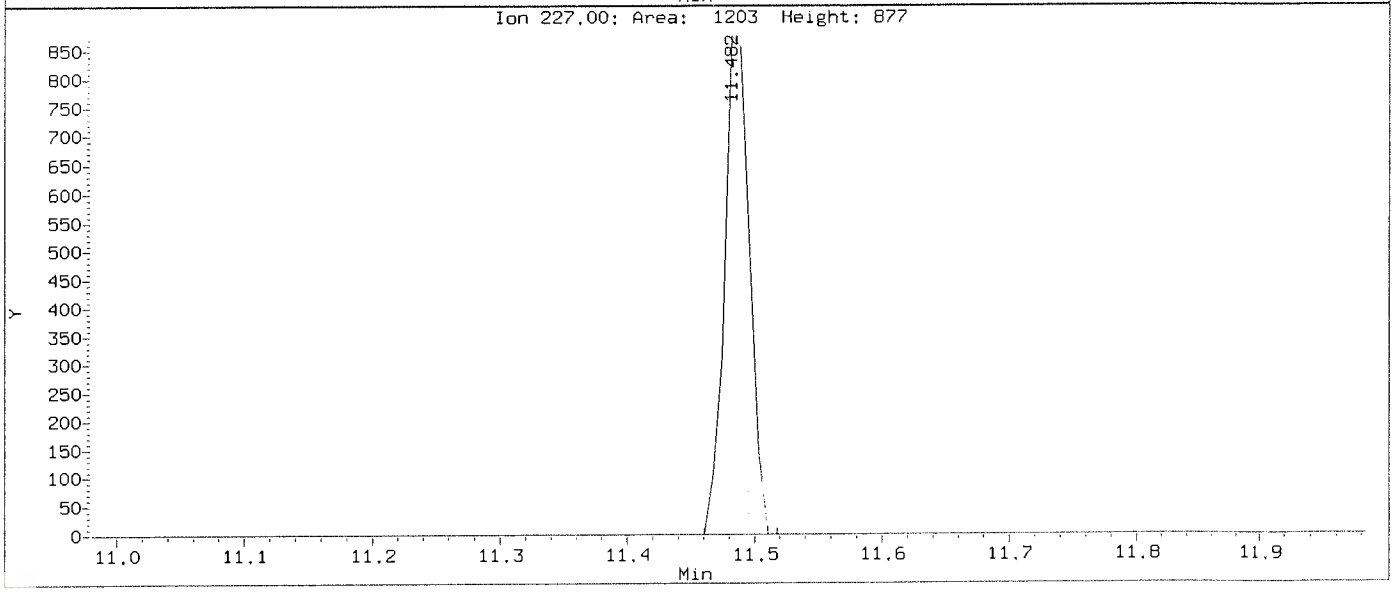


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3







ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-AUG-2020 13:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:52 Cal File: X080304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

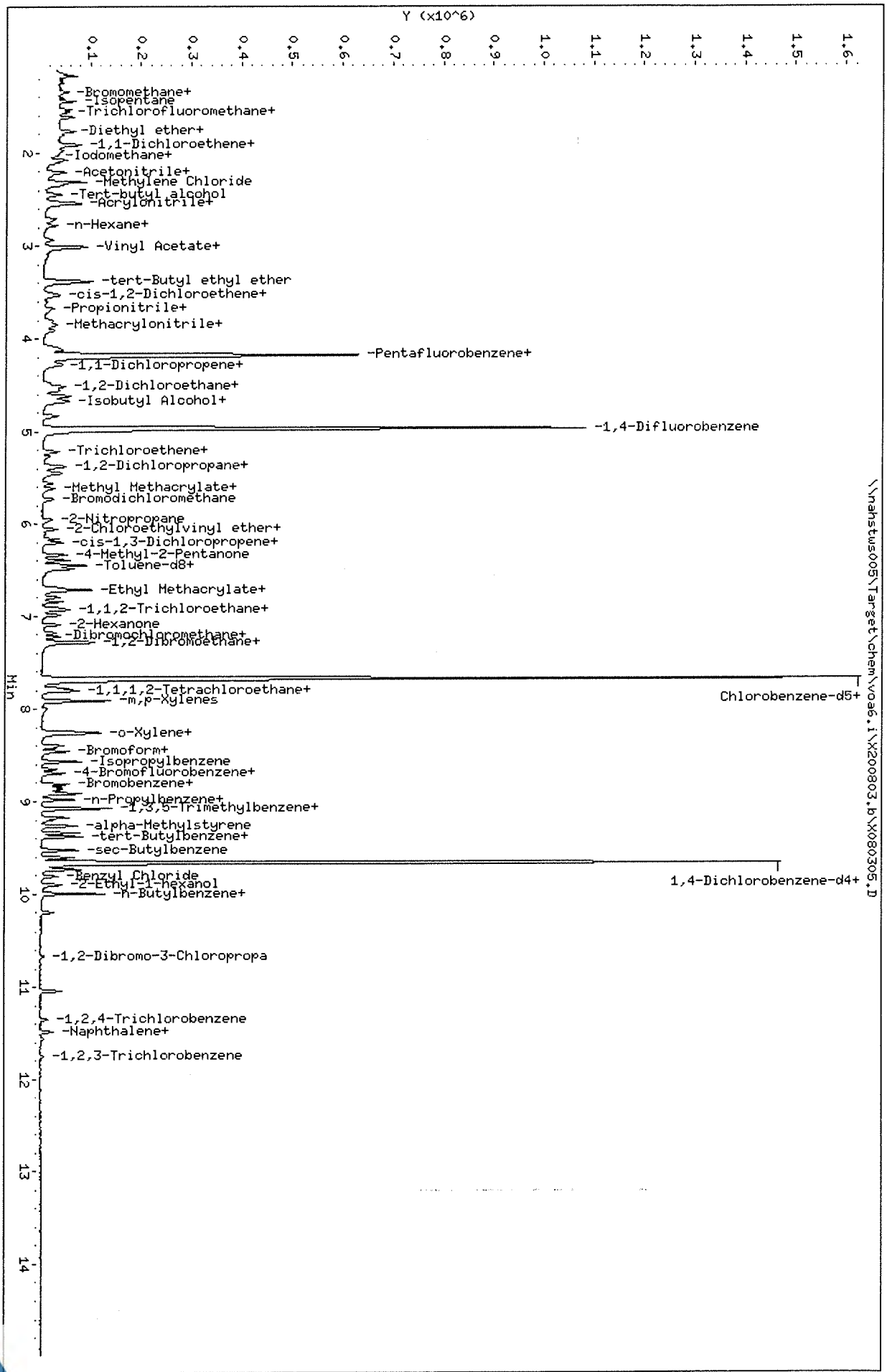
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.190	4.190	(1.000)	543911	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	829677	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	750905	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	351595	50.0000	
$ 30	Dibromofluoromethane	113	4.111	4.111	(0.981)	9821	2.00000	1.83(a)
$ 35	1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	10904	2.00000	1.72(a)
$ 48	Toluene-d8	98	6.396	6.396	(0.834)	33751	2.00000	1.85(a)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	13431	2.00000	1.91(a)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	11831	2.00000	2.06(a)
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	15930	2.00000	1.90(a)
68	1,1,2,2-Tetrachloroethane	83	8.846	8.846	(0.915)	17450	2.00000	3.44(aM)
53	1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	9338	2.00000	2.18(a)
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	20241	2.00000	1.90(a)
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	8194	2.00000	1.90(a)
32	1,1-Dichloropropene	75	4.290	4.290	(0.863)	14129	2.00000	2.02(a)
93	1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2318	2.00000	2.19(aM)
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12900	2.00000	2.50(aM)
90	1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5020	2.00000	2.01(a)
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	38643	2.00000	2.05(a)
89	1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	1468	2.00000	3.66(a)
57	1,2-Dibromoethane	107	7.270	7.270	(0.948)	11414	2.00000	2.07(a)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	22043	2.00000	2.21(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	16305	2.00000	2.02(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	11836	2.00000	1.94(a)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	38031	2.00000	2.07(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	23923	2.00000	2.16(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	16738	2.00000	1.98(a)
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	23830	2.00000	2.18(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	15659	2.00000	2.01(aM)
24	2-Butanone	43	3.602	3.602	(0.860)	10002	4.00000	3.75(a)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	32223	2.00000	2.11(a)
52	2-Hexanone	43	7.091	7.091	(0.924)	23886	4.00000	5.06
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	36388	2.00000	2.05(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	39097	2.00000	2.00(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	32995	4.00000	4.74(a)
10	Acetone	43	1.976	1.976	(0.472)	9756	4.00000	4.12(aM)
37	Benzene	78	4.519	4.519	(0.909)	39024	2.00000	1.89(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	14653	2.00000	2.13(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	7080	2.00000	2.15(a)
39	Bromodichloromethane	83	5.730	5.730	(1.153)	14467	2.00000	1.93(a)
66	Bromoform	173	8.416	8.416	(1.097)	9196	2.00000	2.20(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	9294	2.00000	3.10(a)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	47873	4.00000	3.57(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	13935	2.00000	1.88(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	29194	2.00000	1.98(a)
7	Chloroethane	64	1.403	1.403	(0.335)	7130	2.00000	1.84(a)
28	Chloroform	83	3.910	3.910	(0.933)	19377	2.00000	1.99(a)
3	Chloromethane	50	1.081	1.081	(0.258)	15093	2.00000	1.97(a)
27	cis-1,2-Dichloroethene	96	3.531	3.531	(0.843)	11409	2.00000	1.90(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	16717	2.00000	1.91(a)
55	Dibromochloromethane	129	7.177	7.177	(0.936)	13023	2.00000	2.16(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	6946	2.00000	1.92(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	9815	2.00000	1.84(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	14170	2.00000	1.86(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	4418	2.00000	2.34(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	42458	2.00000	1.90(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	35460	4.00000	3.86(a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	20318	2.00000	2.34(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	30052	2.00000	1.93(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	49004	2.00000	1.93(a)
92	Naphthalene	128	11.553	11.553	(1.195)	6258	2.00000	2.17(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	17455	2.00000	1.93(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	41975	2.00000	1.96(a)
64	Styrene	104	8.265	8.265	(1.078)	33224	2.00000	2.12(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	31980	2.00000	2.00(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8697	2.00000	1.82(a)
50	Toluene	91	6.453	6.453	(0.841)	43608	2.00000	1.98(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	9831	2.00000	1.92(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	15714	2.00000	1.96(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	11482	2.00000	1.95(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	14481	2.00000	1.80(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	12969	2.00000	1.85(a)

QC Flag Legend

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

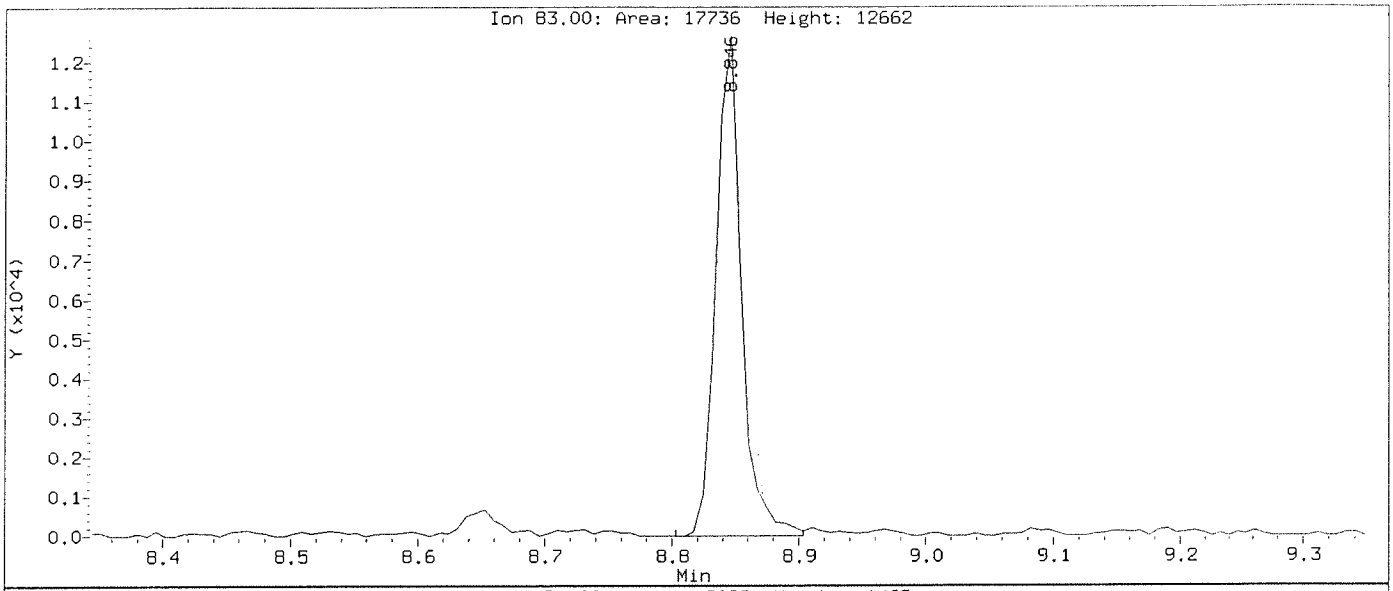


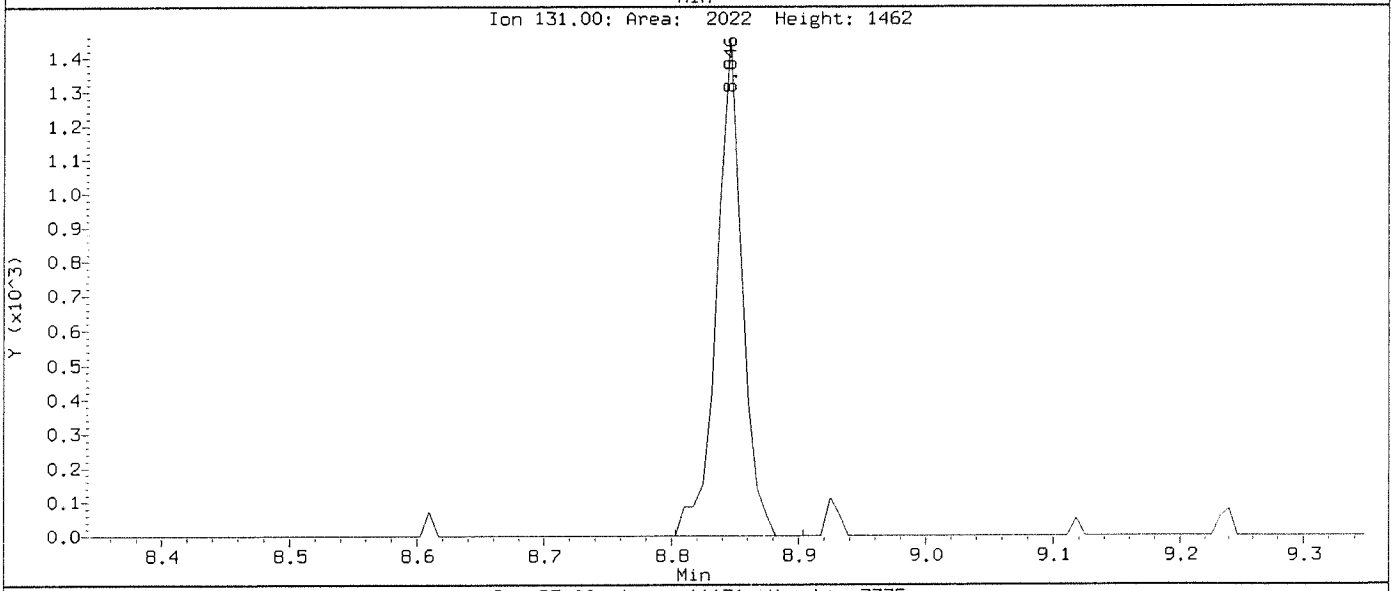
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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

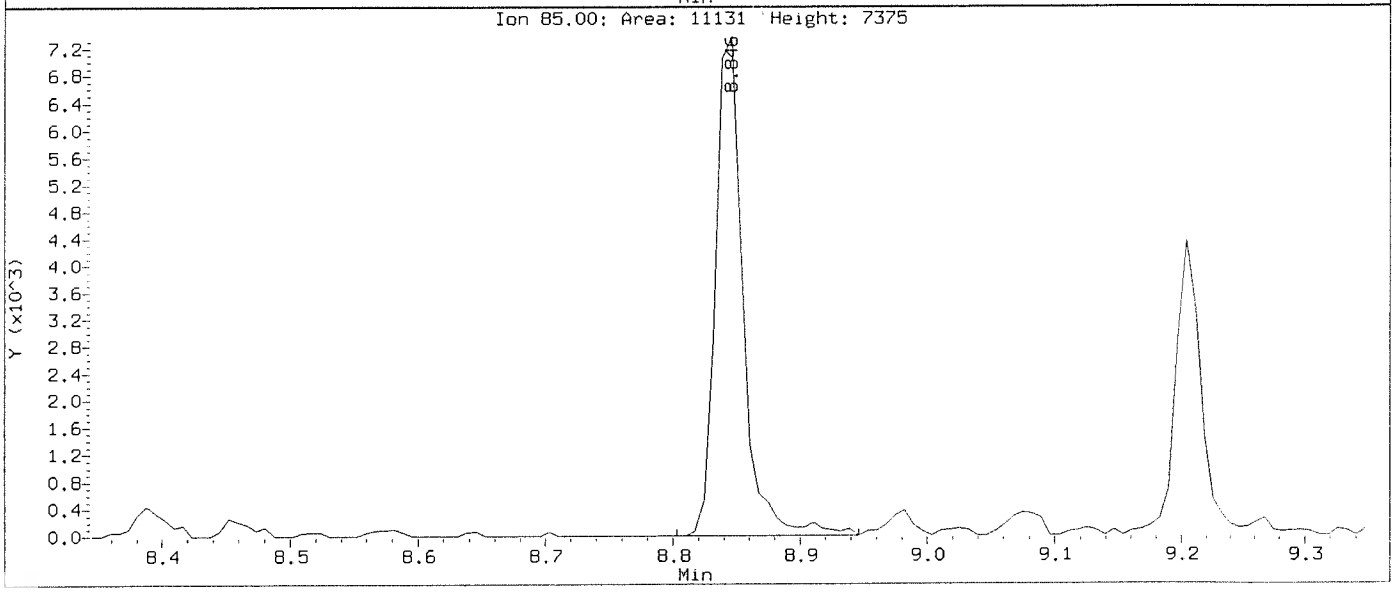
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Operator: PC
Column diameter: 0.18

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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

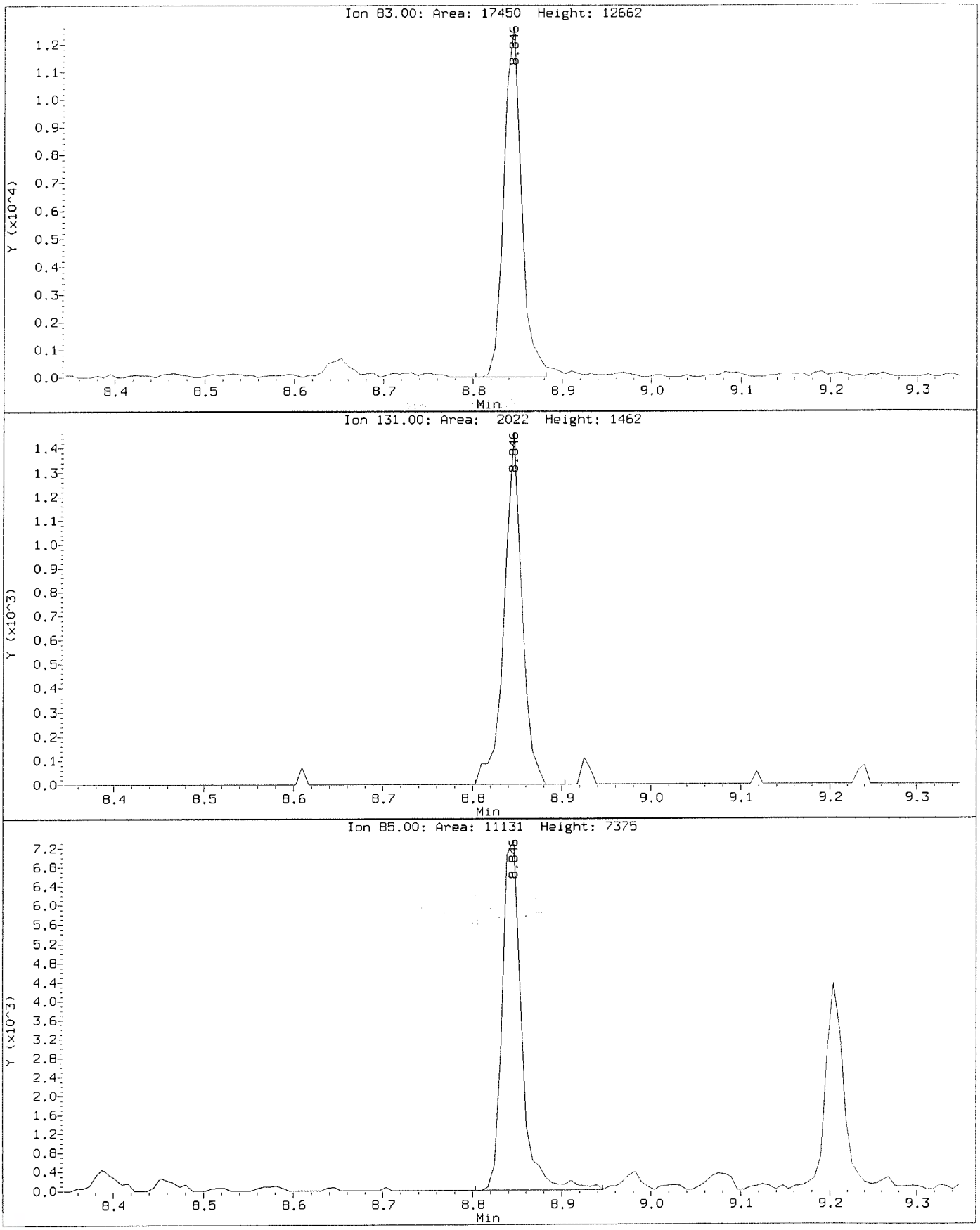






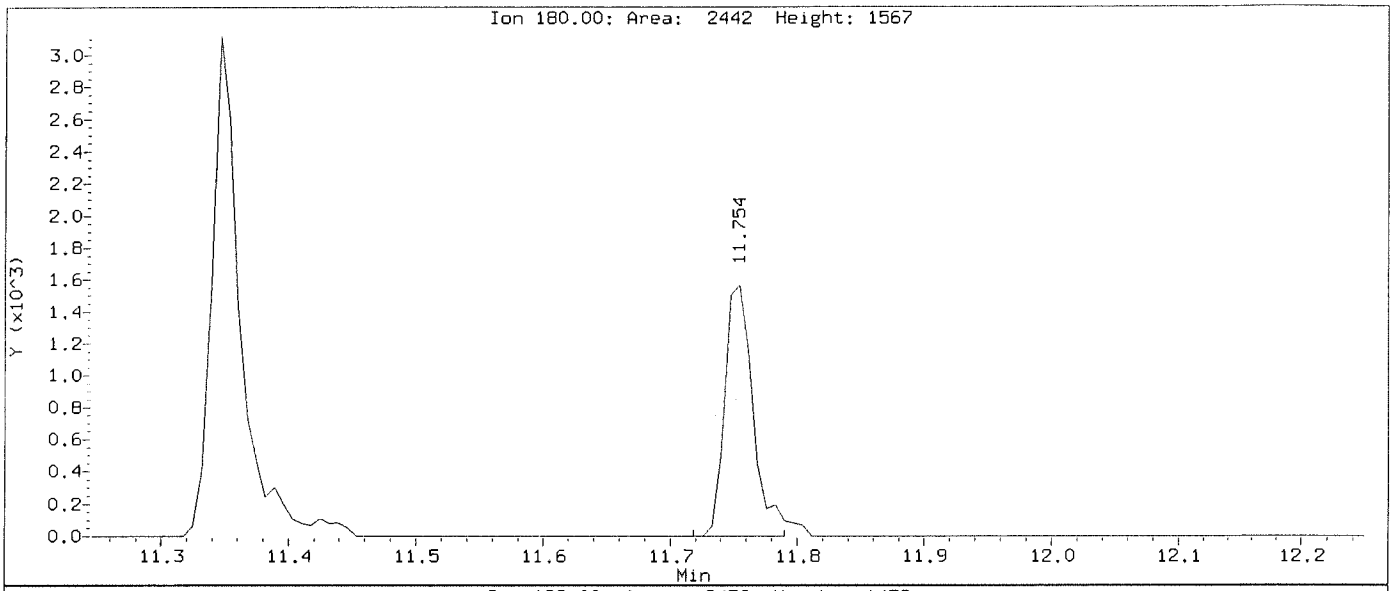
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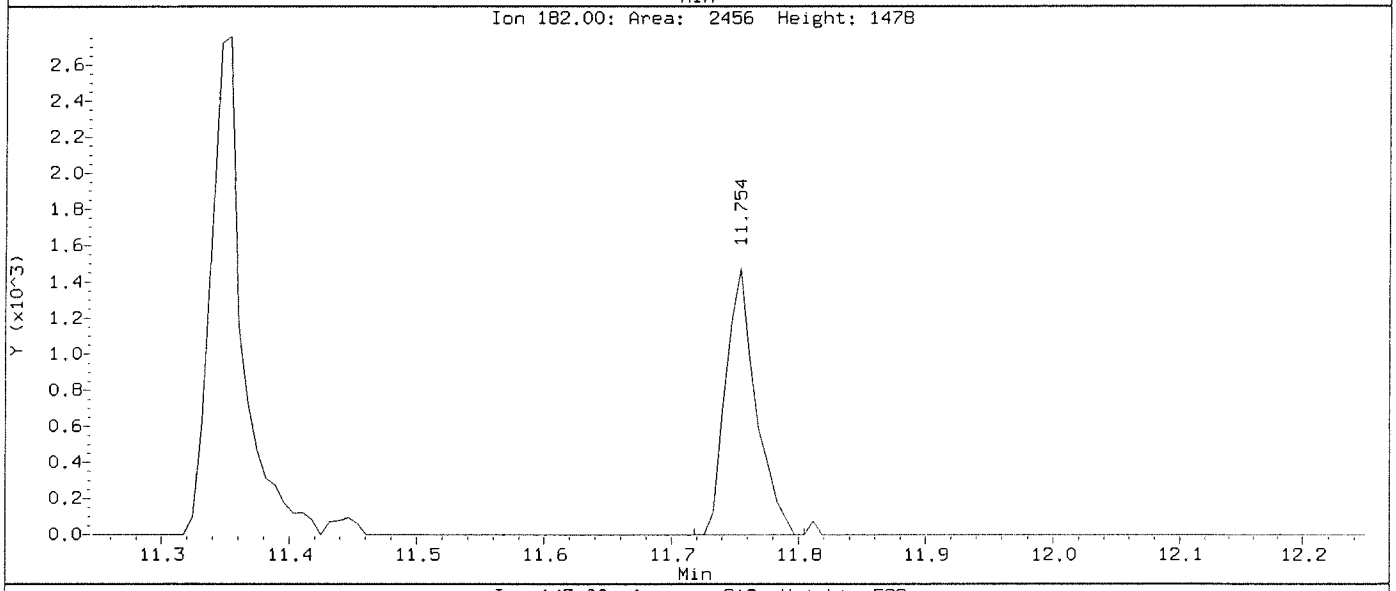
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

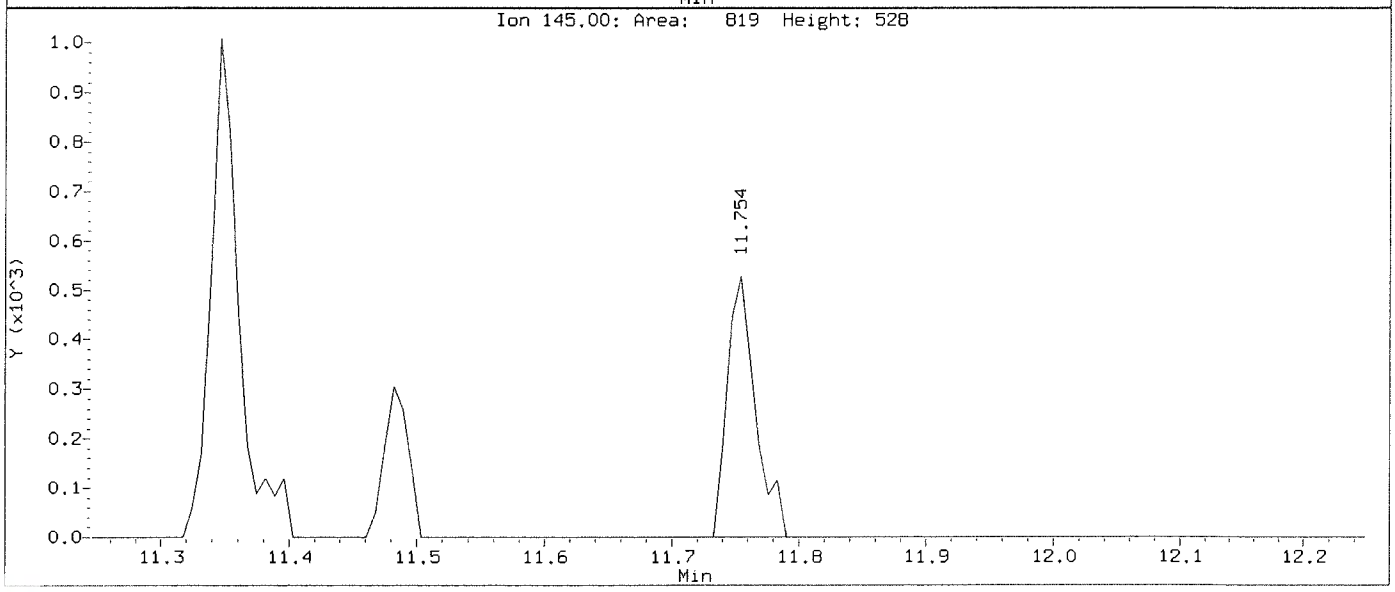


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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

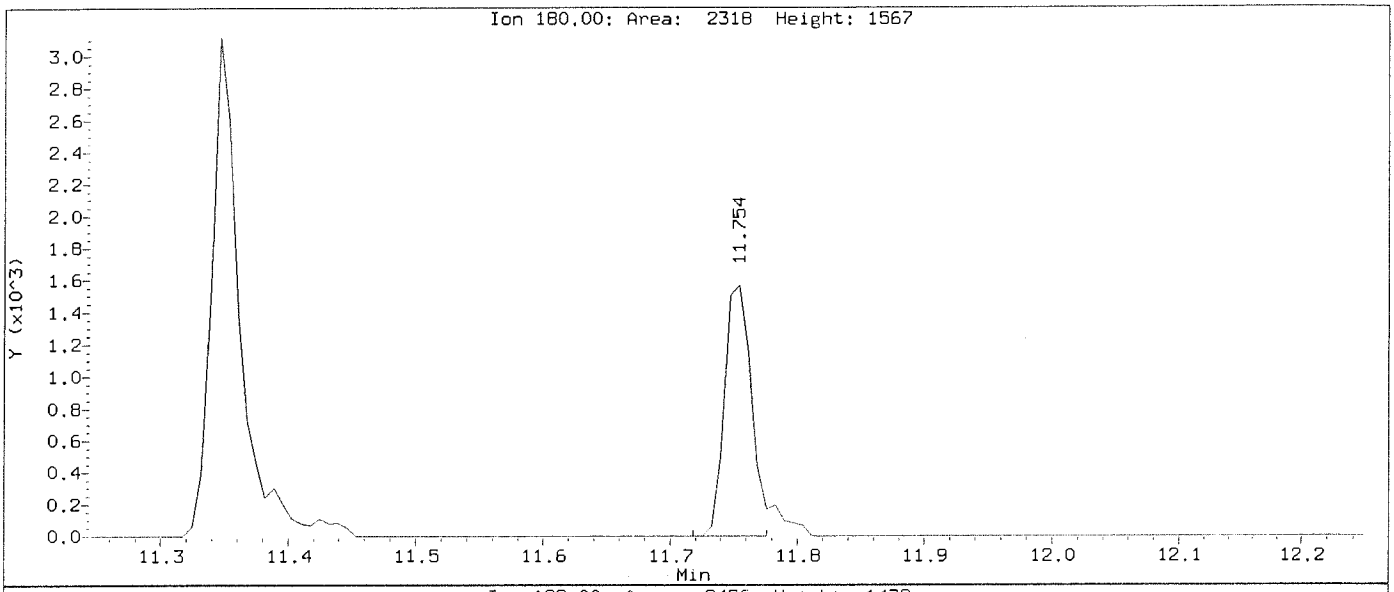


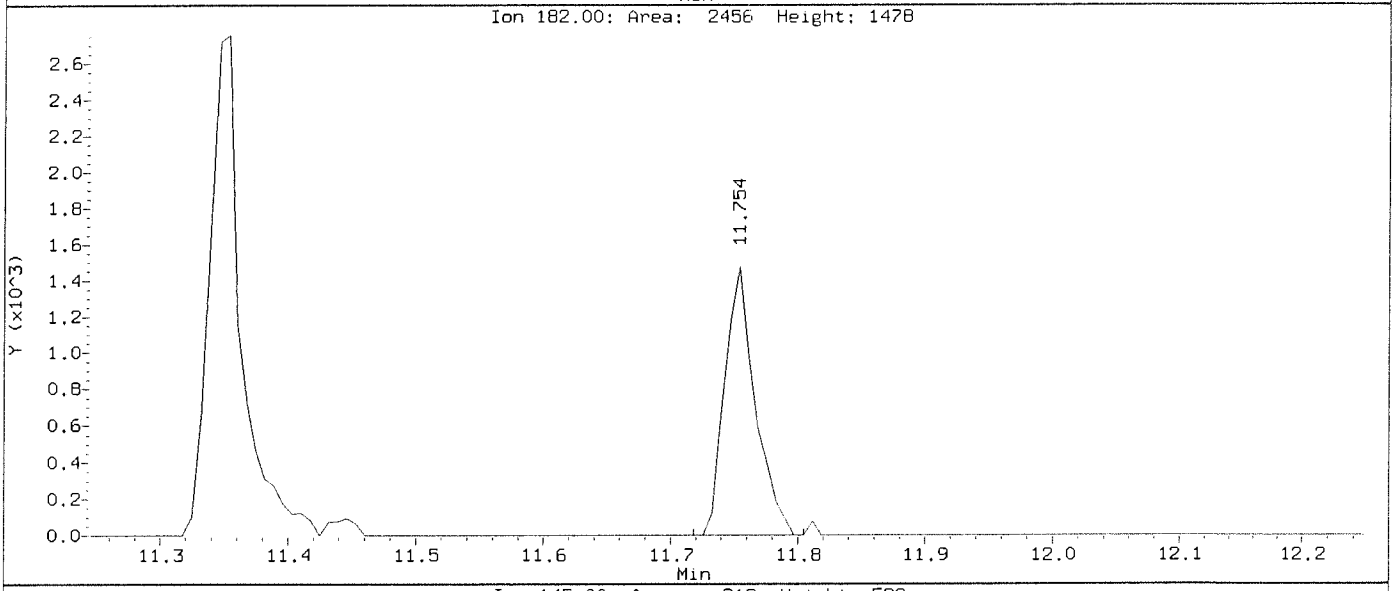


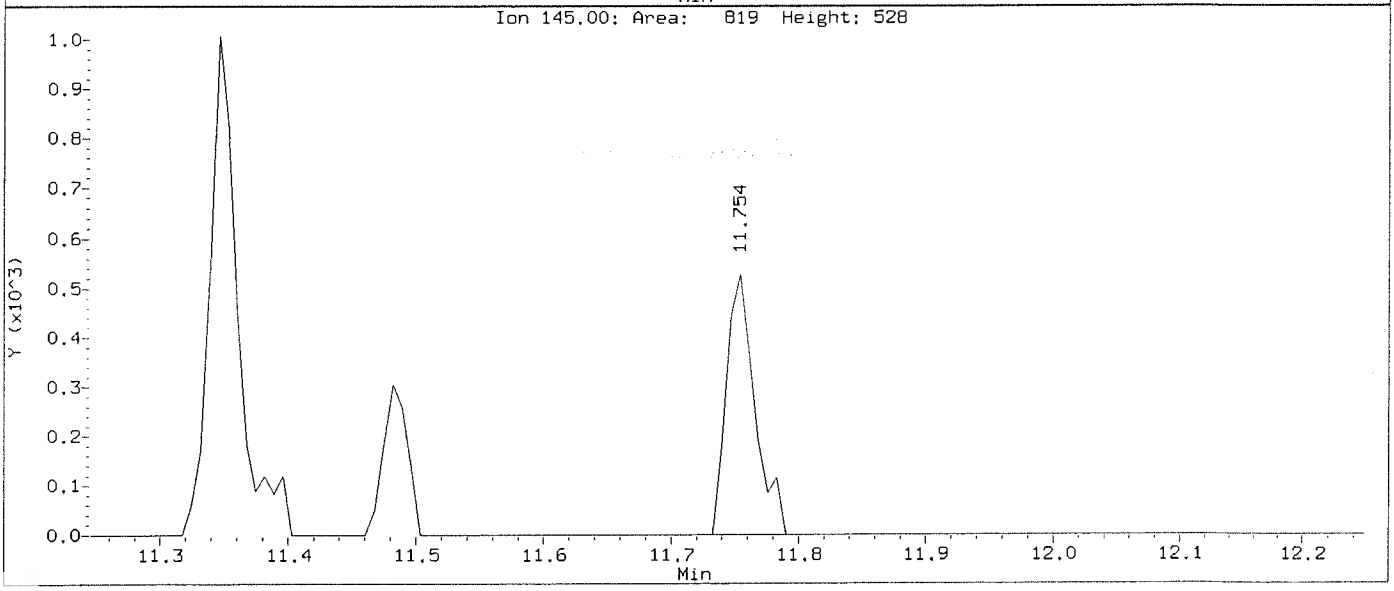


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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

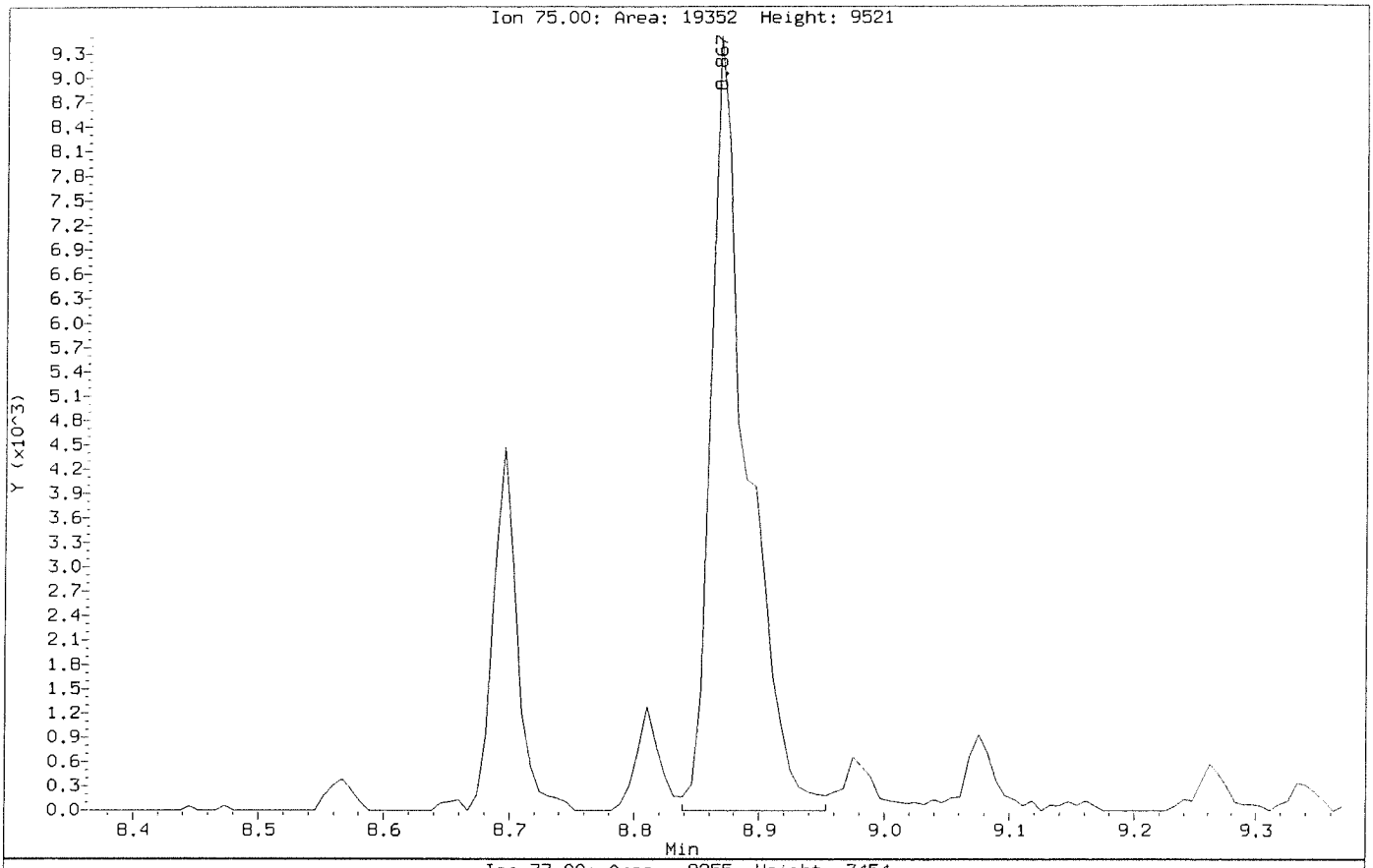


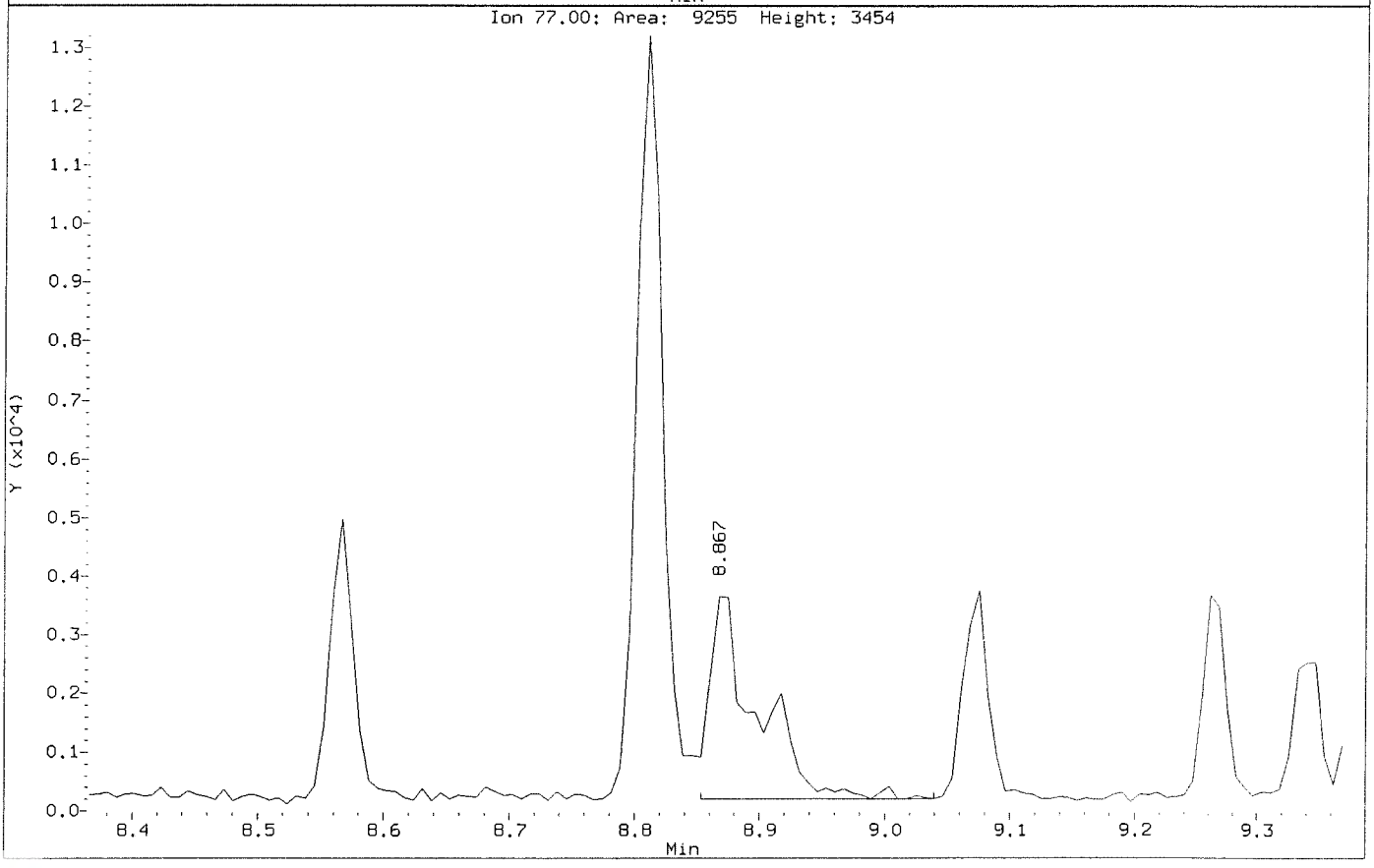




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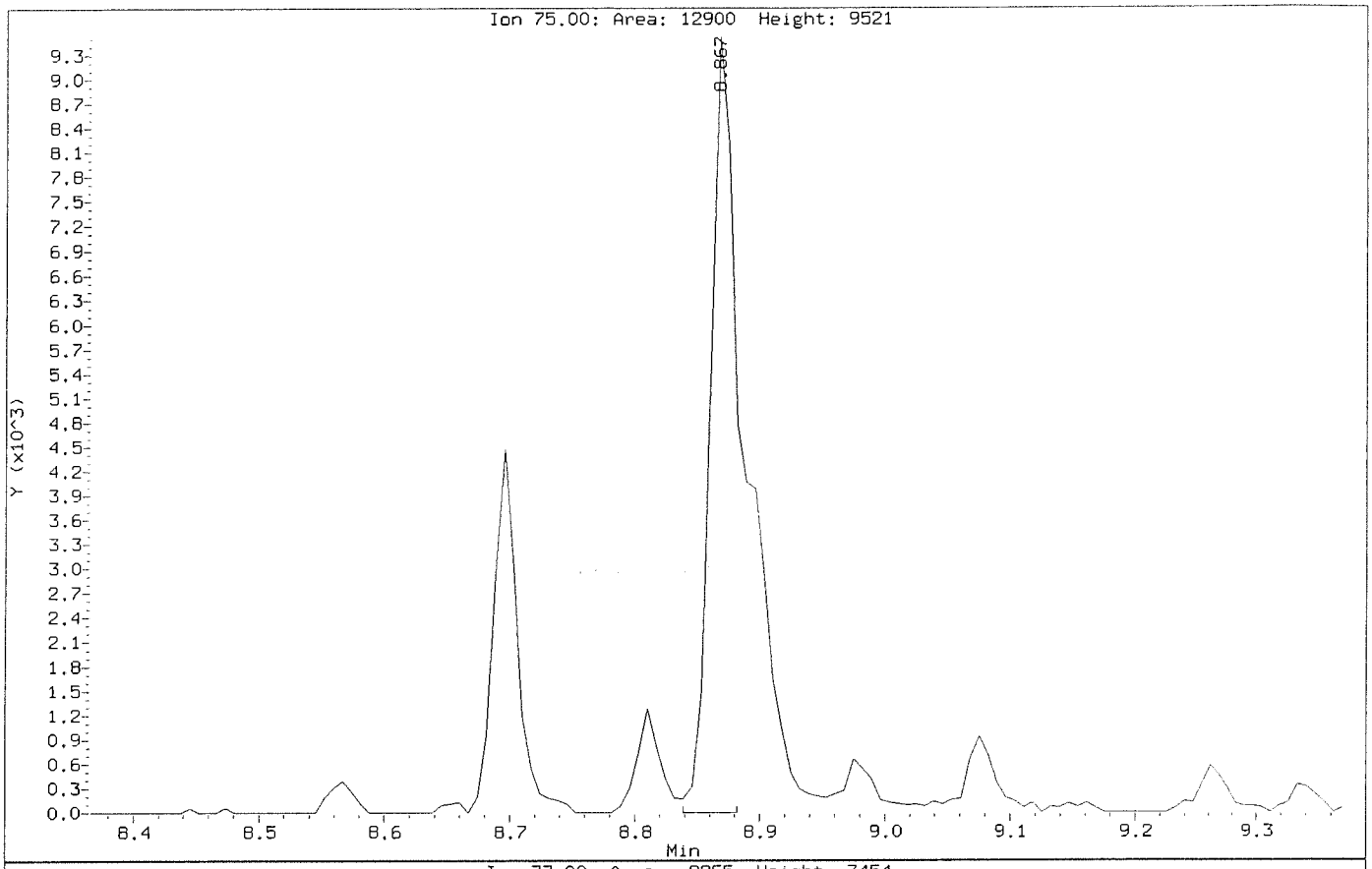
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

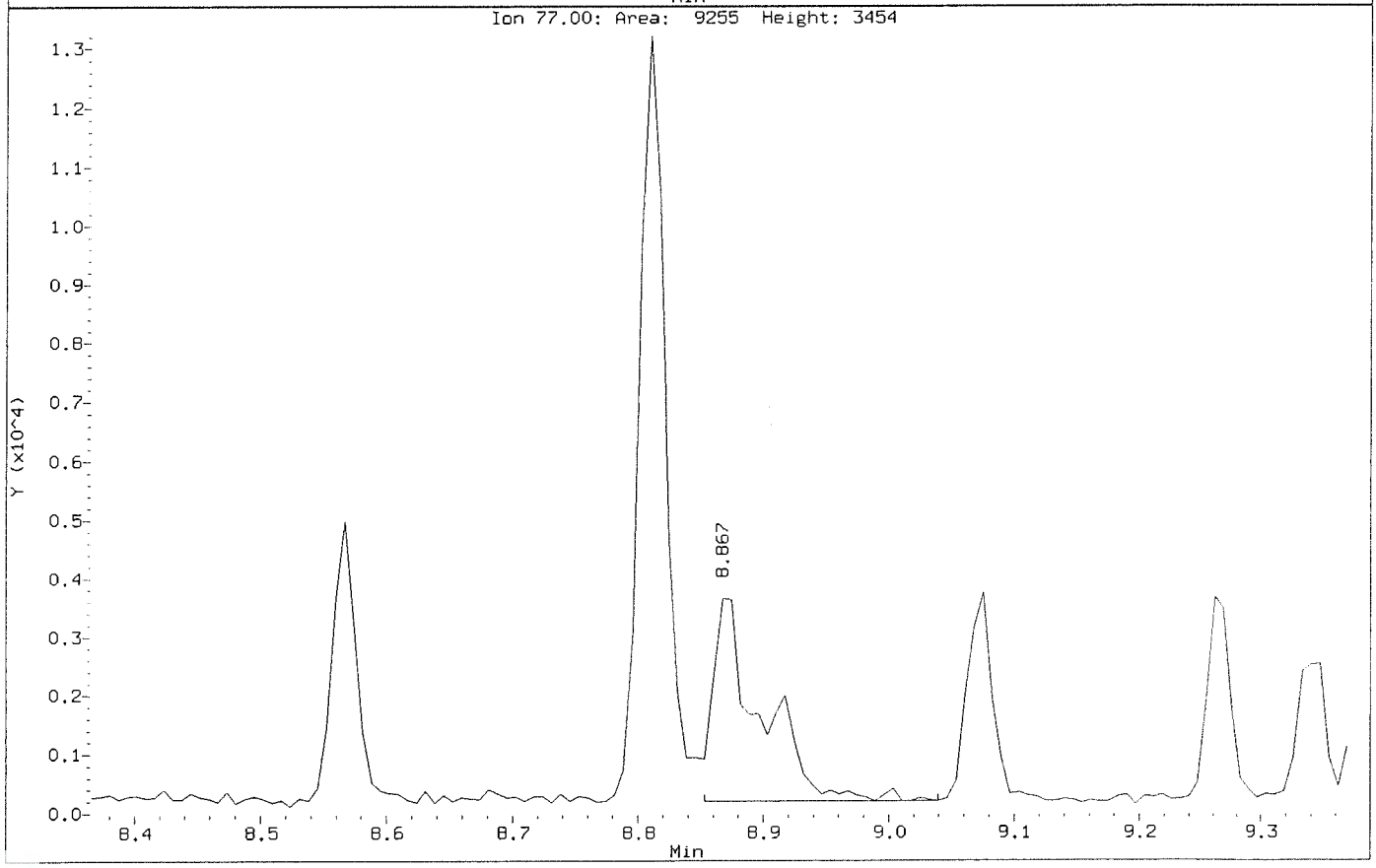




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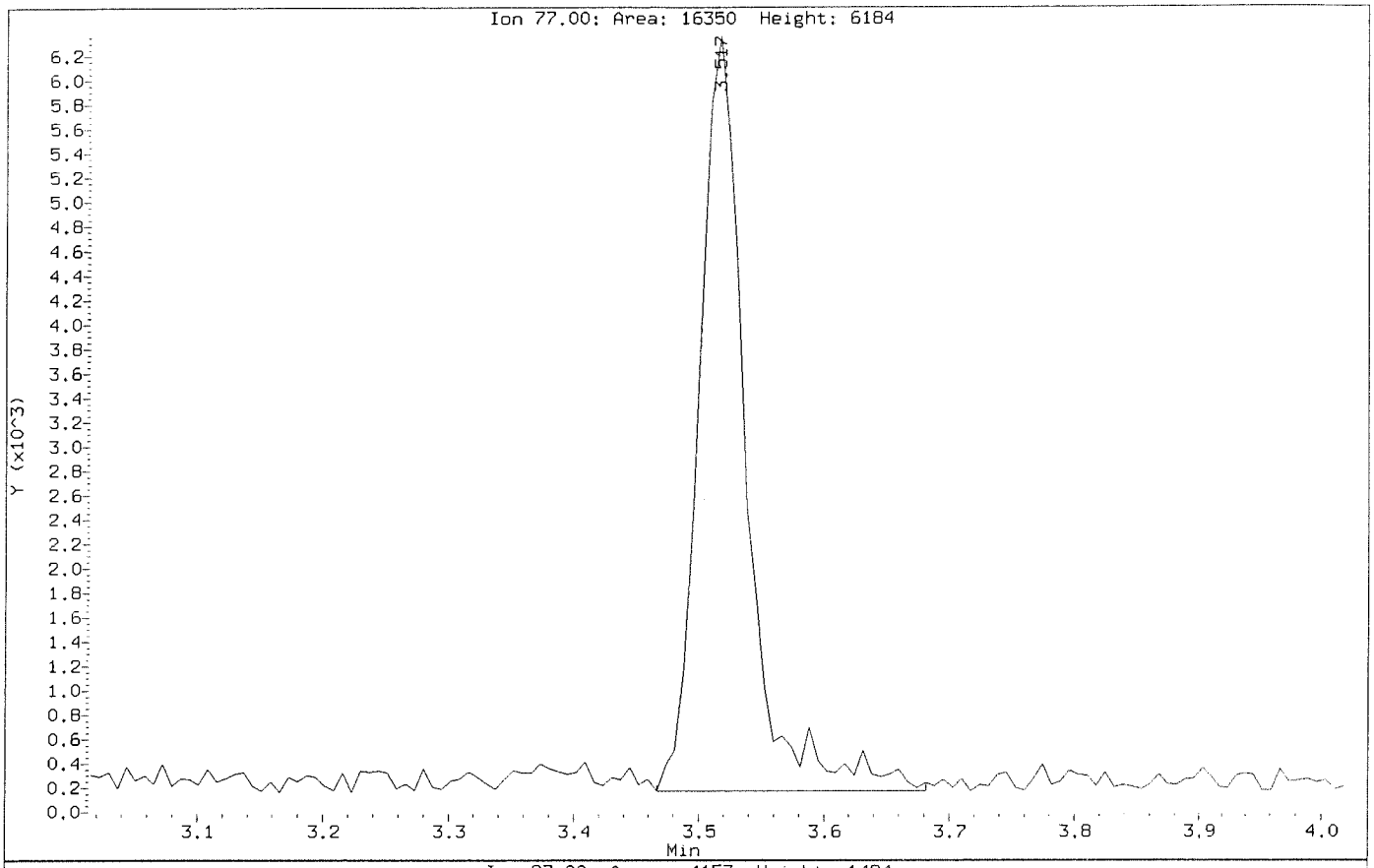
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

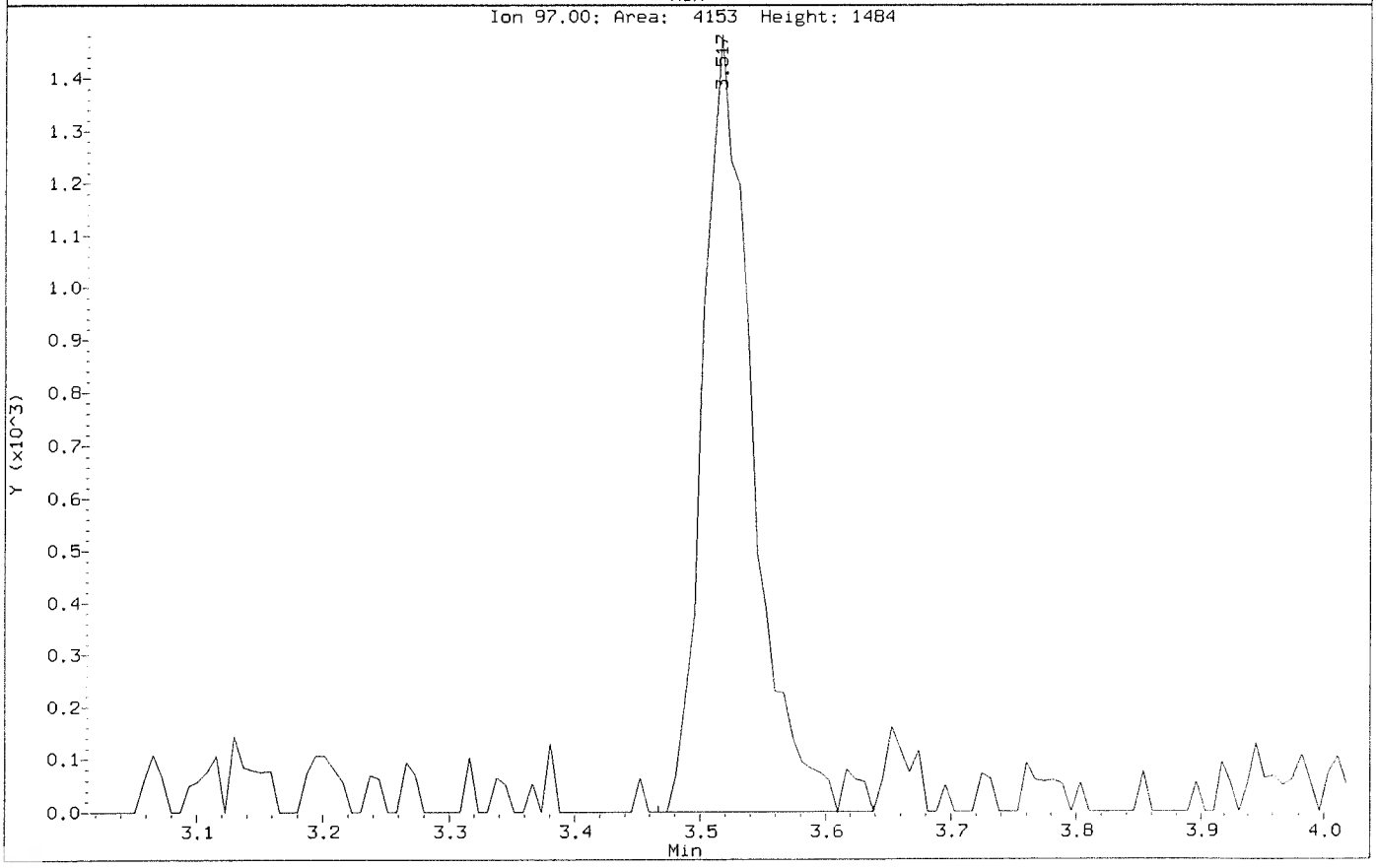




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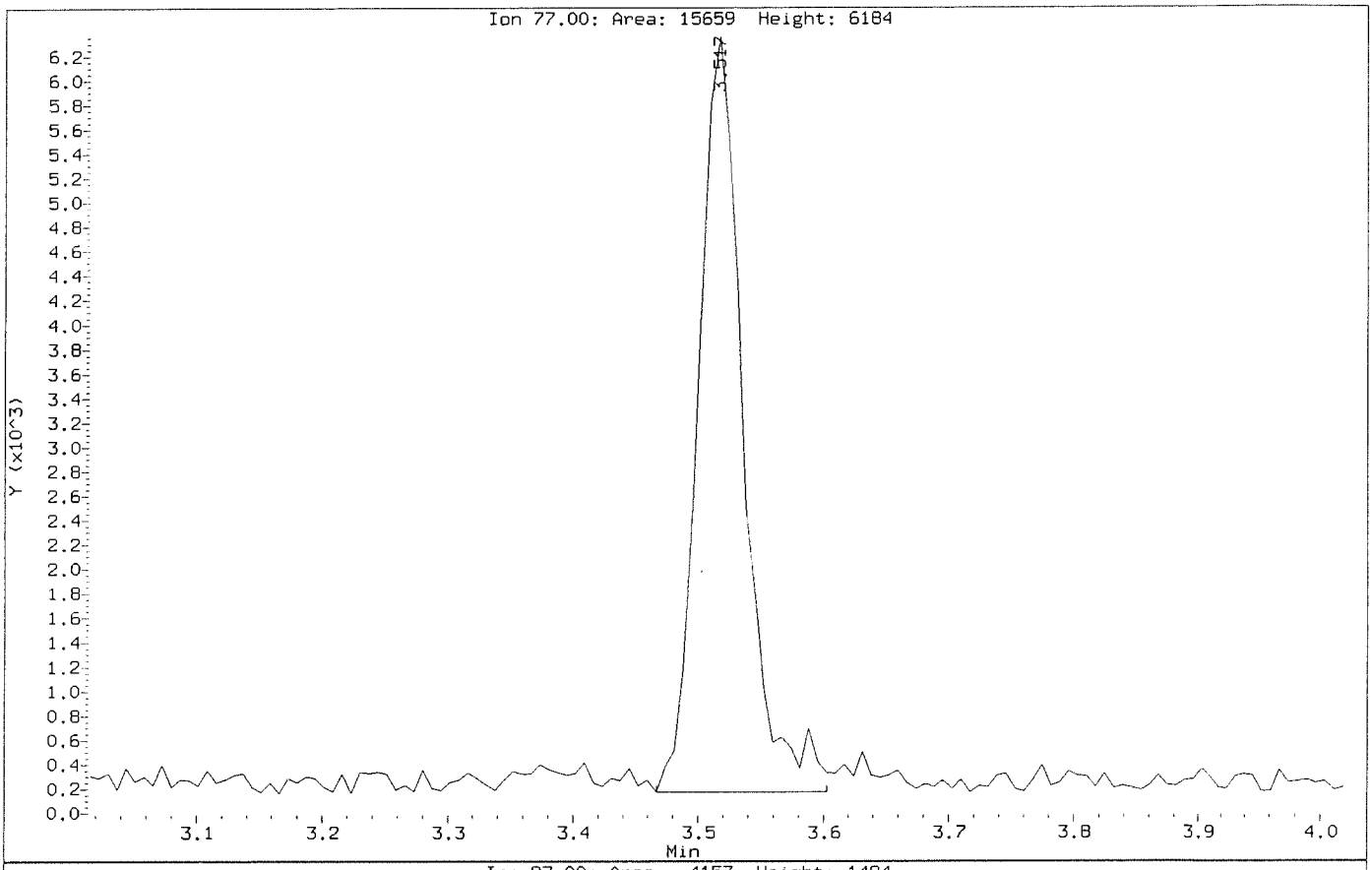
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

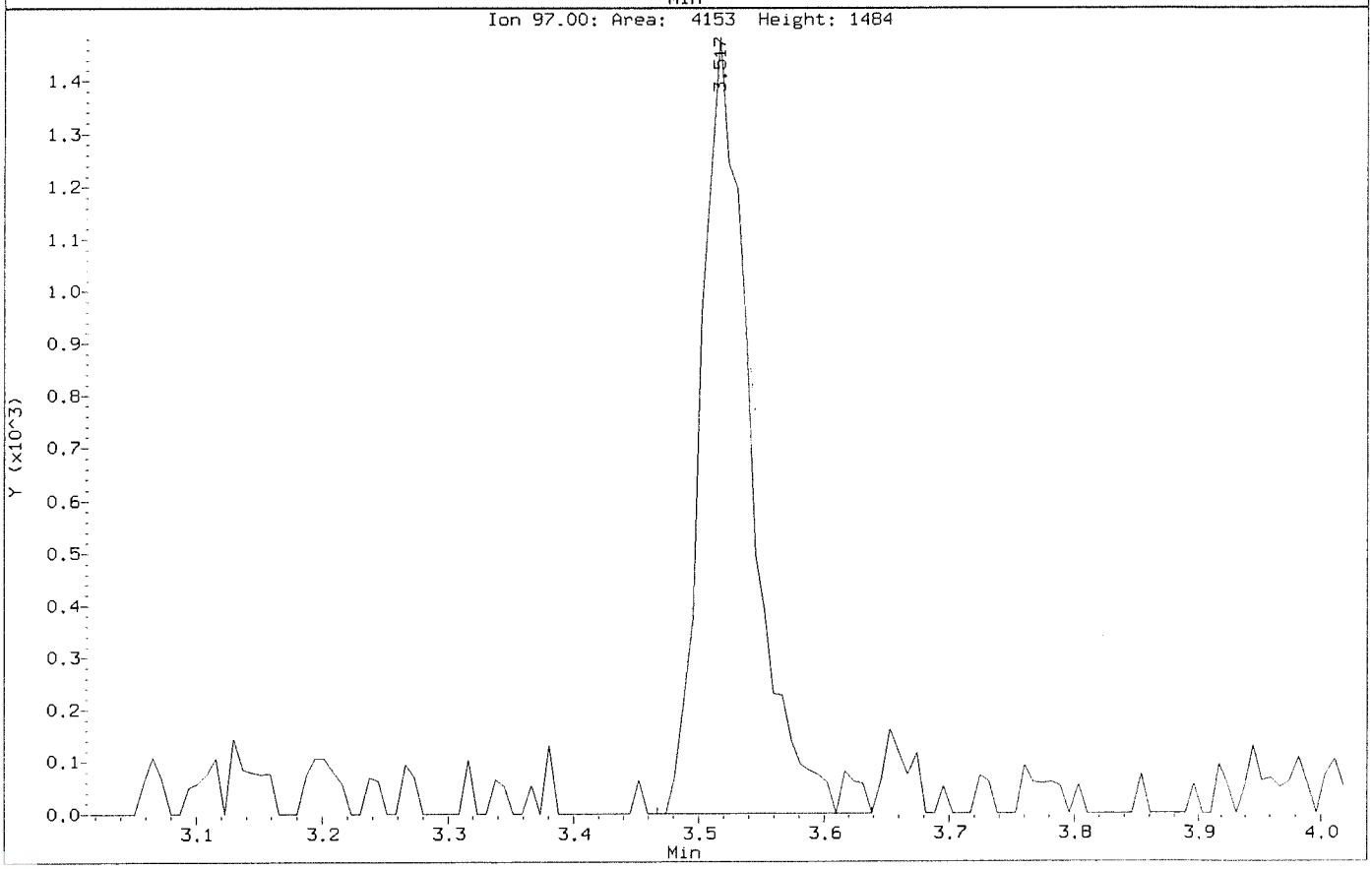




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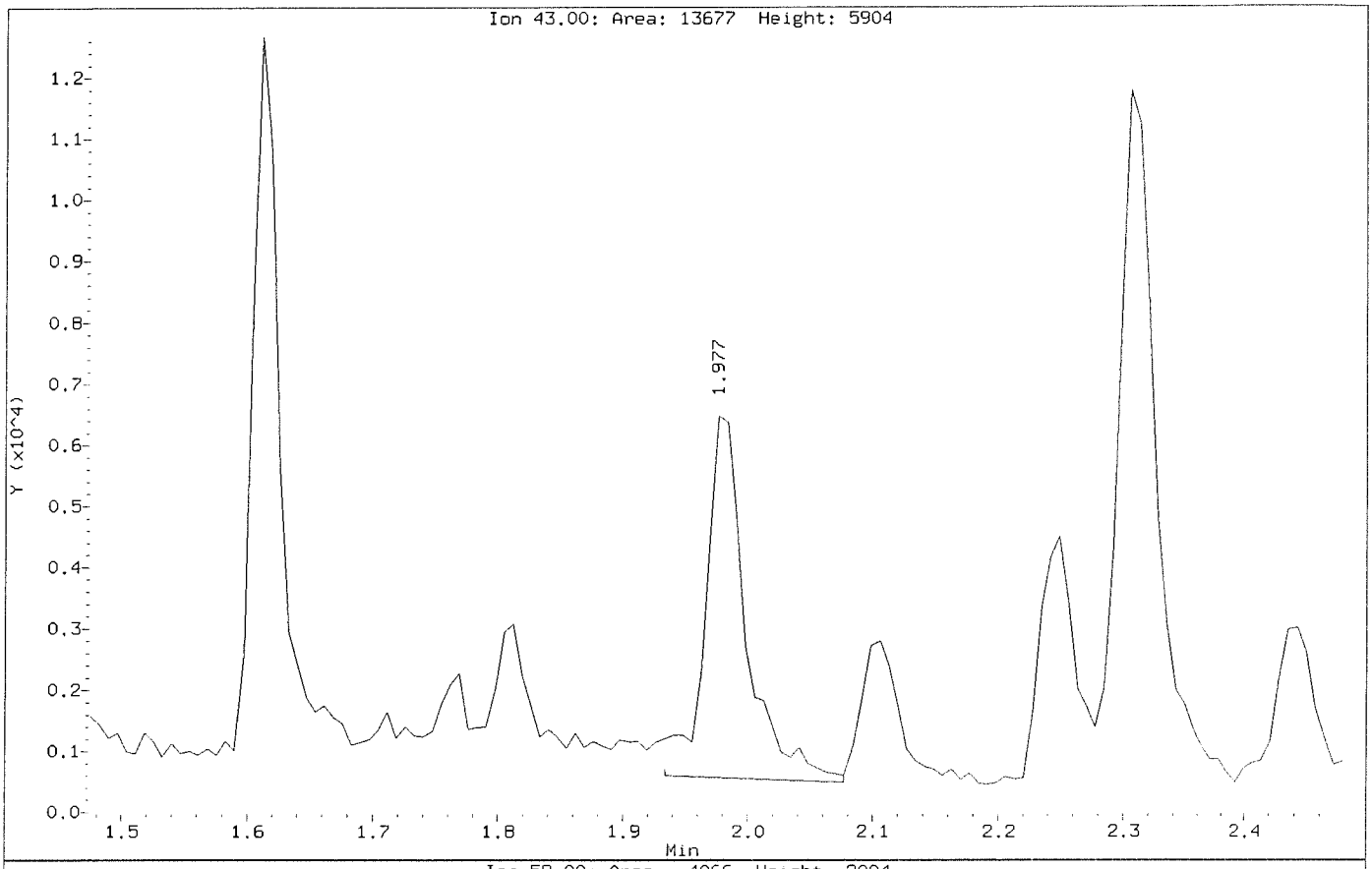
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

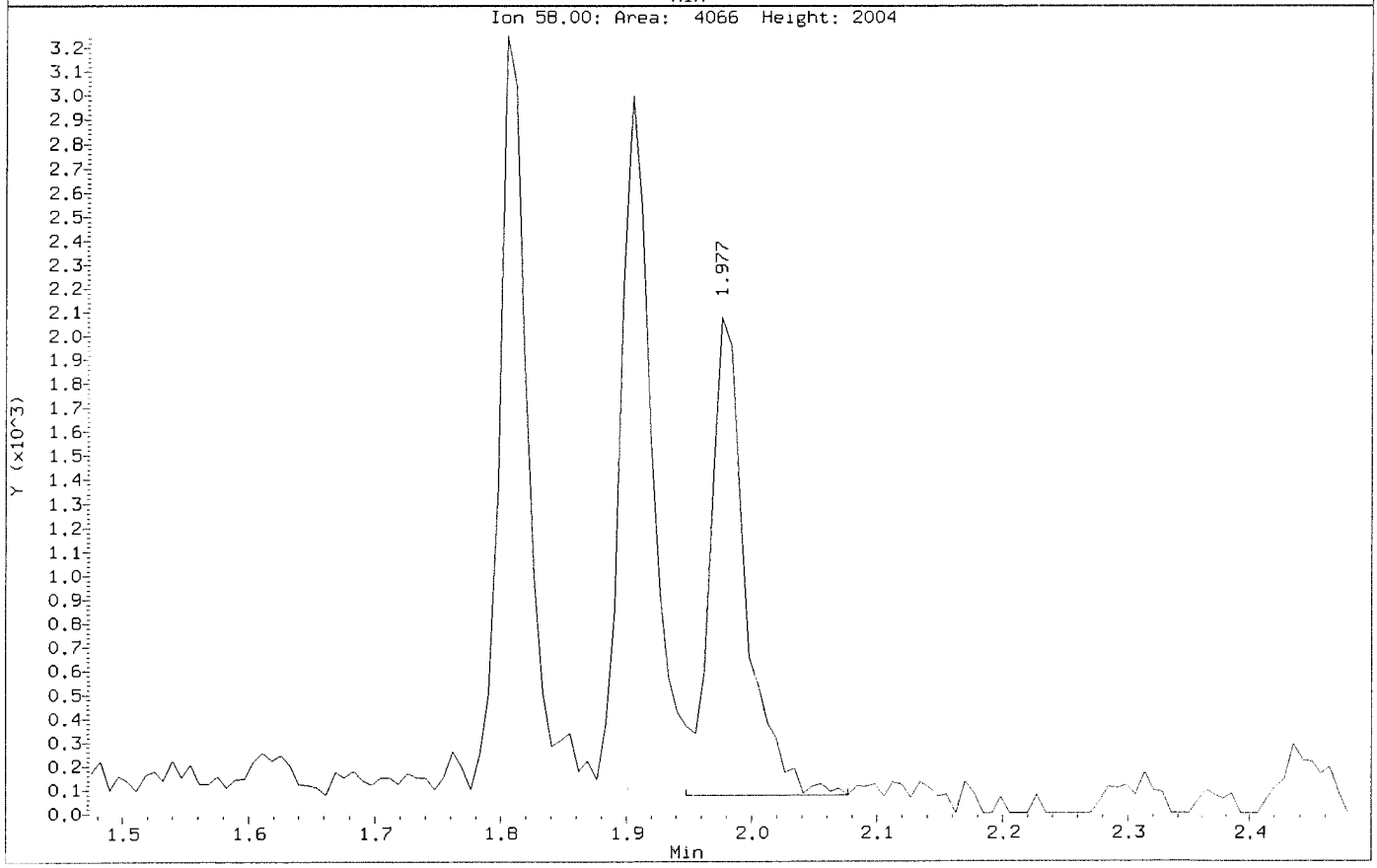




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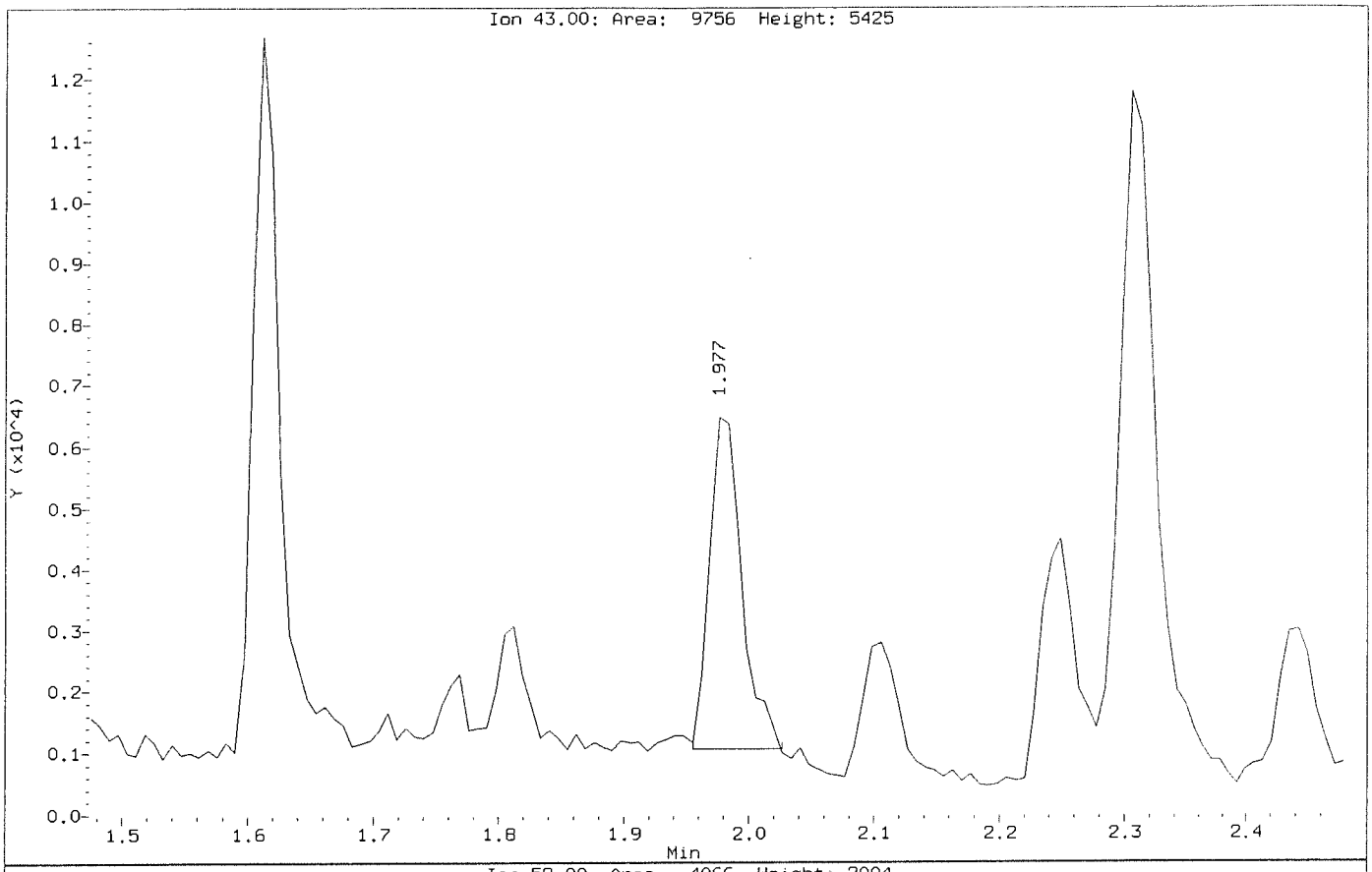
Compound: Acetone
CAS Number: 67-64-1

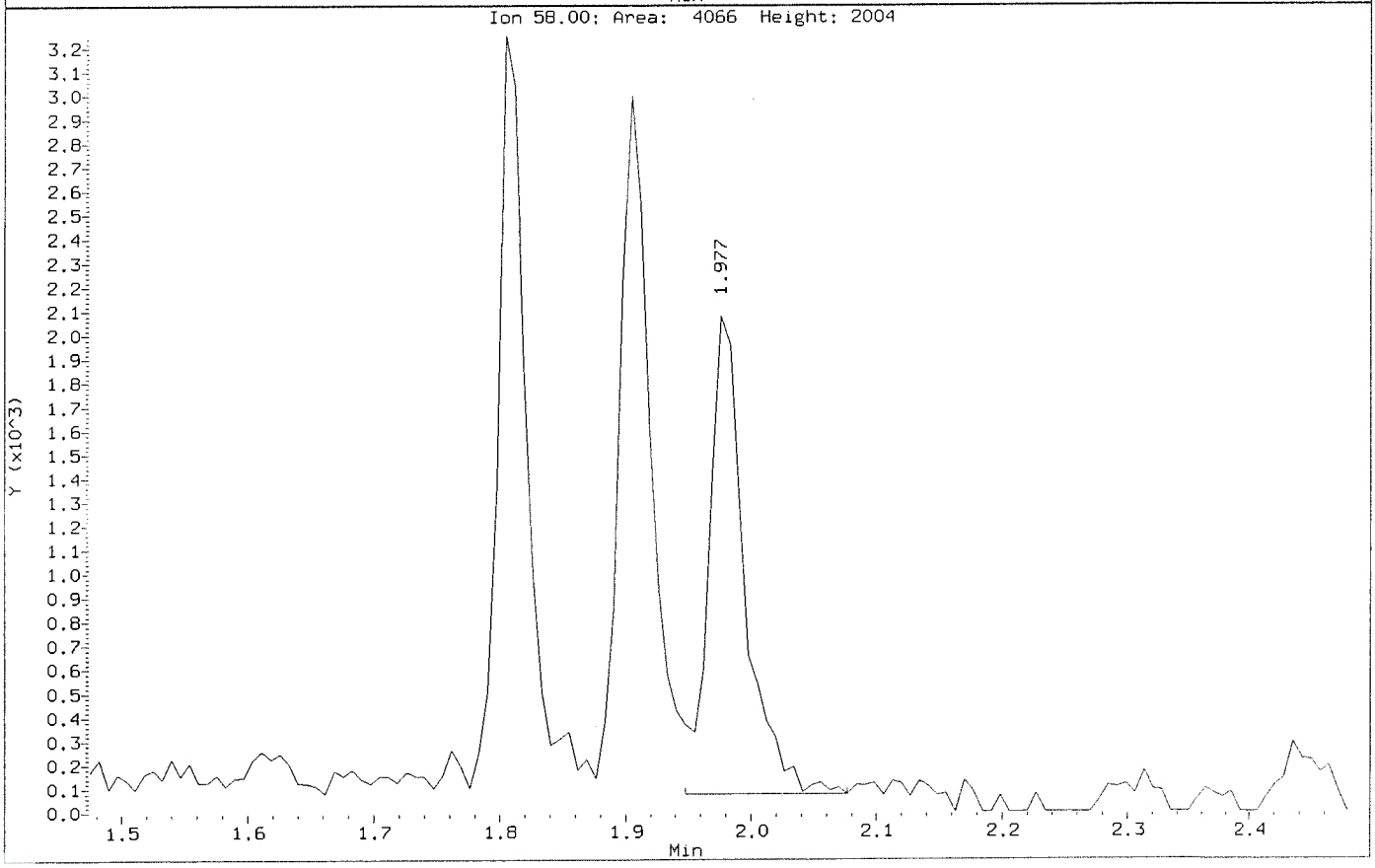




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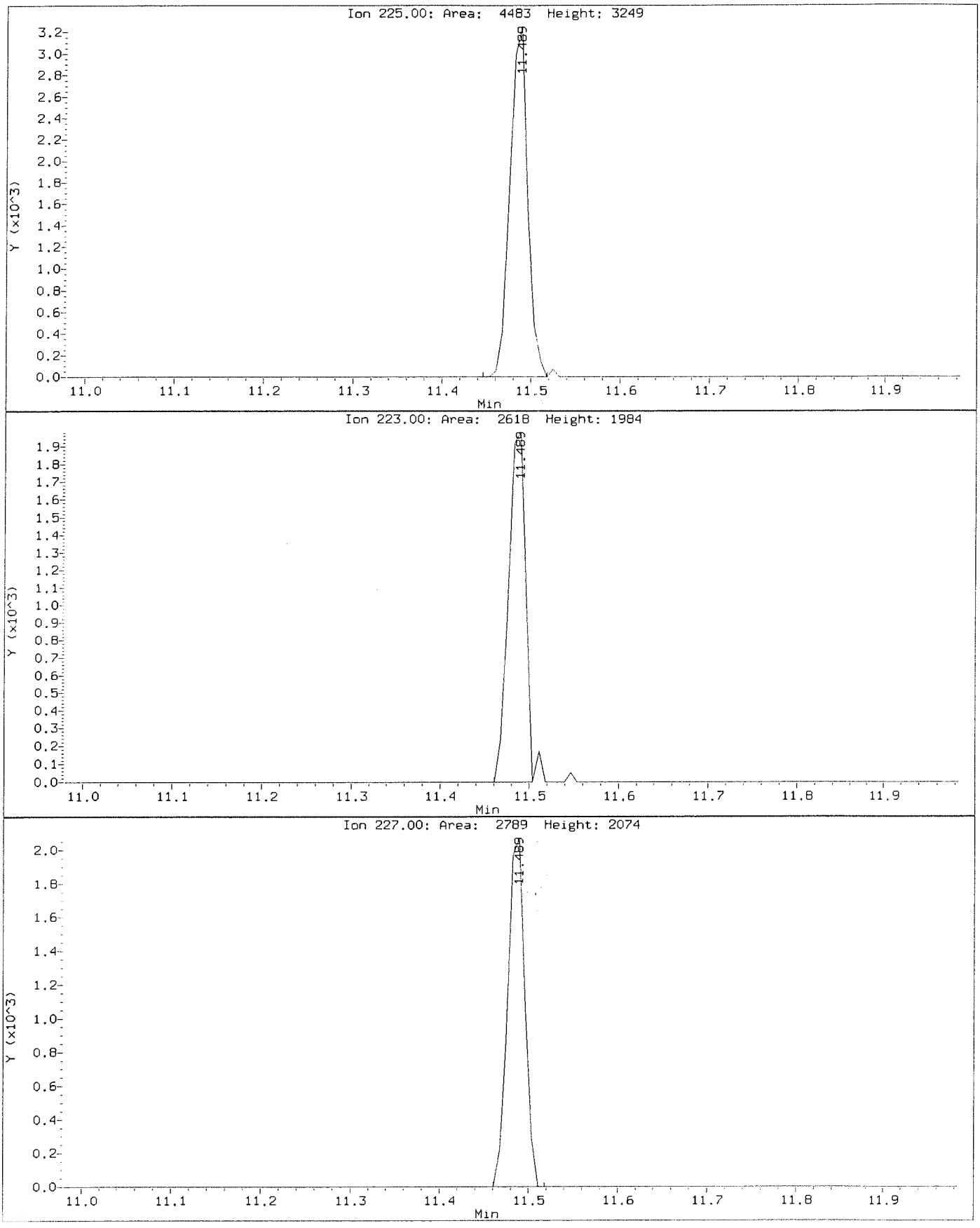
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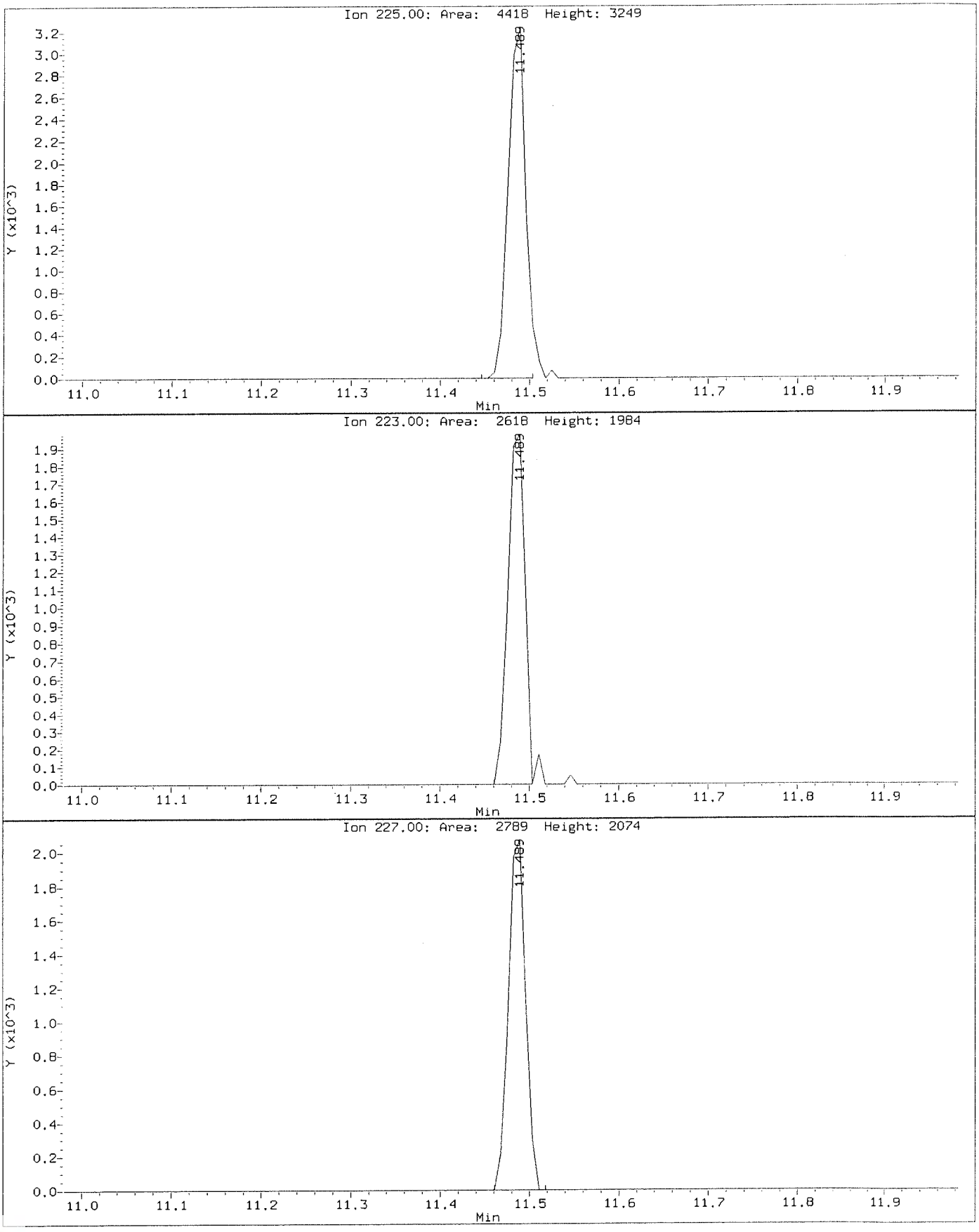
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Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



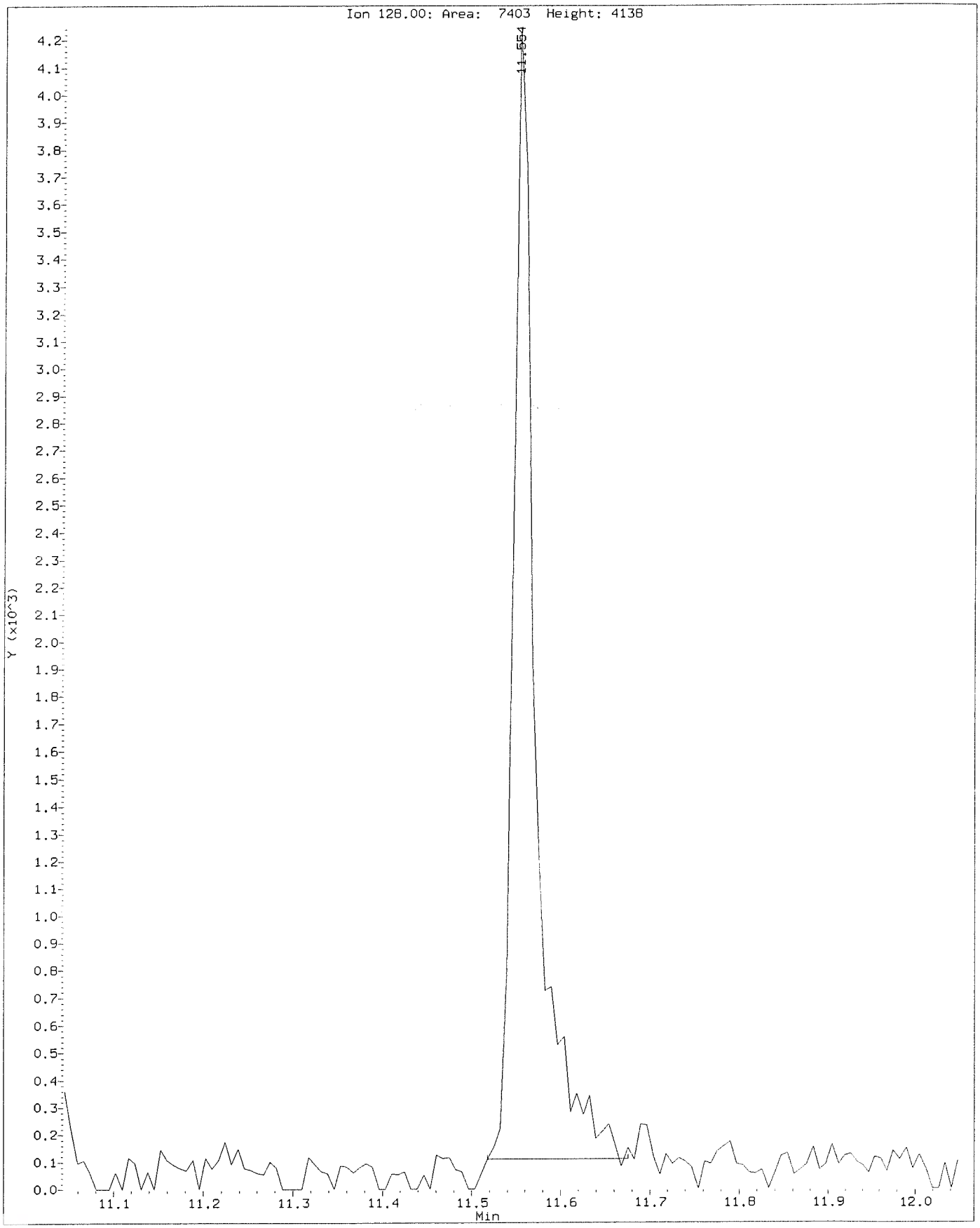
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



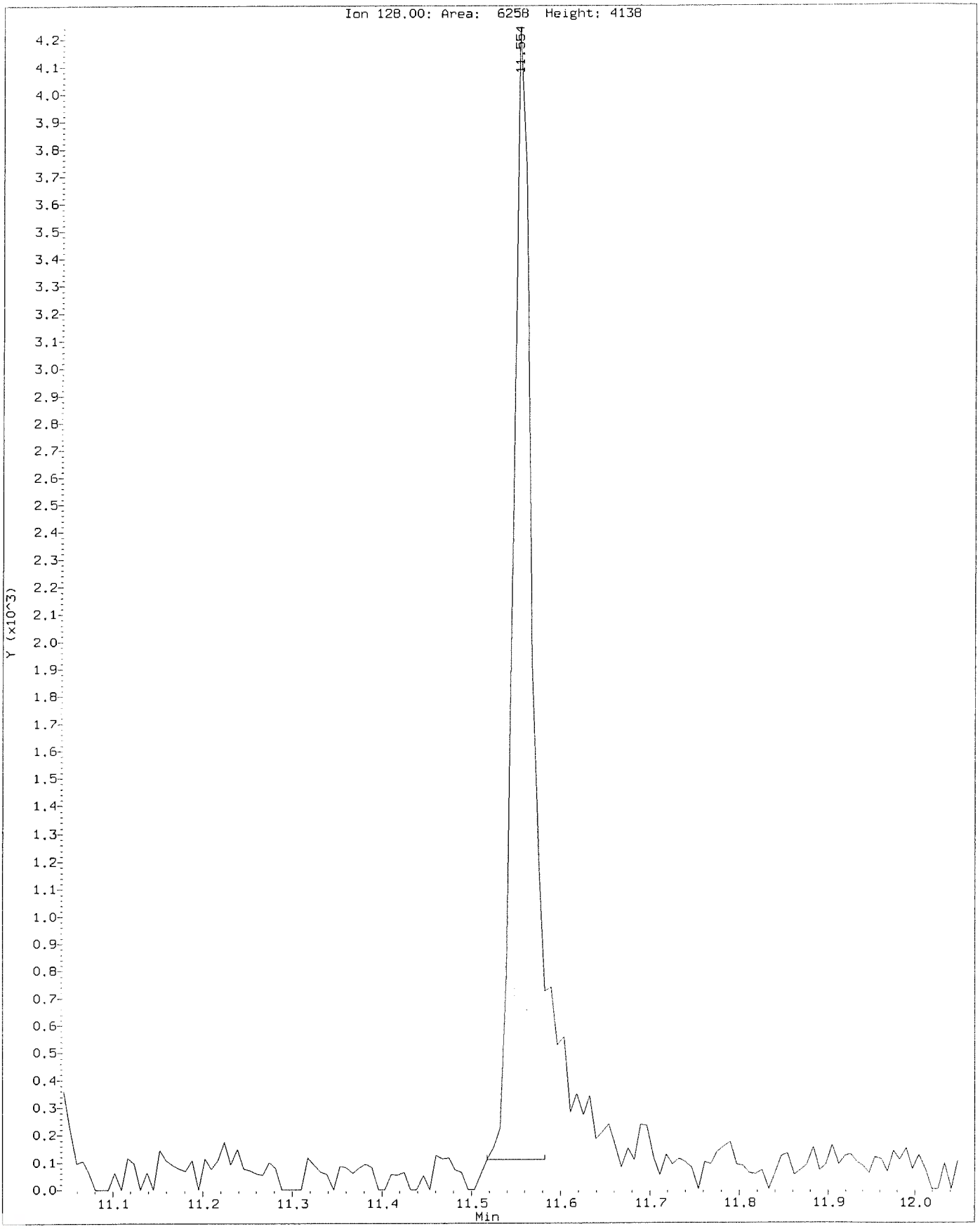
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-AUG-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:16 Cal File: X080305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

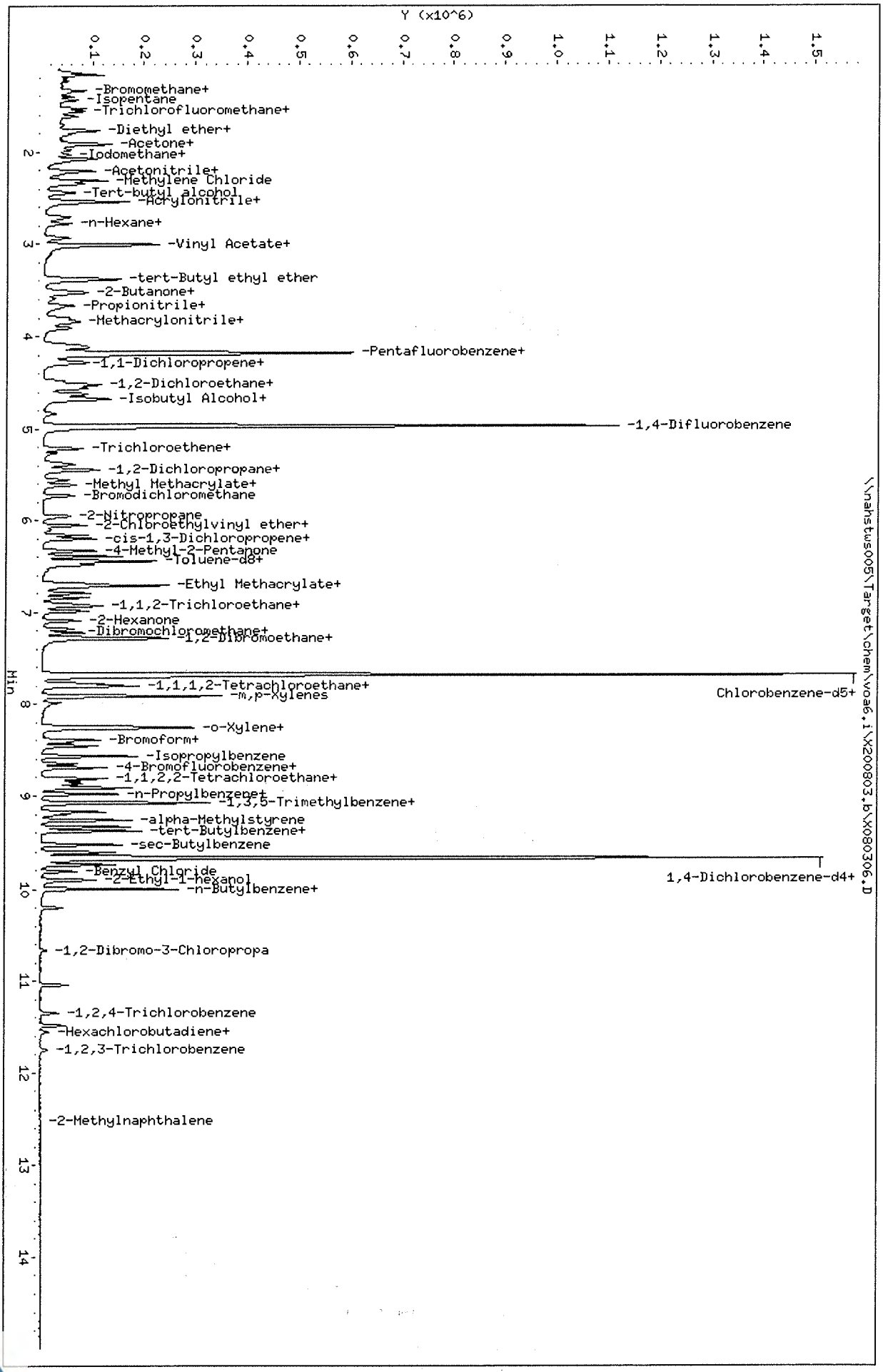
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	516466	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	799737	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721427	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	341252	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	26560	5.00000	5.23
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	31226	5.00000	5.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	87842	5.00000	5.01
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	32773	5.00000	4.85(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	26918	5.00000	4.90(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	38495	5.00000	4.83(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	30714	5.00000	5.92
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	20819	5.00000	5.07
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	51675	5.00000	5.12
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	18682	5.00000	4.56(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	29787	5.00000	4.43(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	4970	5.00000	4.83(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	24998	5.00000	5.00(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	11491	5.00000	5.47
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	87365	5.00000	4.79(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	2687	5.00000	6.21
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	26427	5.00000	4.99(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	47718	5.00000	4.94(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	39206	5.00000	5.06
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	30120	5.00000	5.13
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	84150	5.00000	4.71(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	51371	5.00000	4.78(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	41882	5.00000	5.16
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	50800	5.00000	4.78(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	37924	5.00000	5.14
24	2-Butanone	43	3.595	3.595	(0.858)	24626	10.0000	9.72
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	73756	5.00000	4.98(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	46666	10.0000	10.30
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	84320	5.00000	4.89(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	82617	5.00000	4.37(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	67354	10.0000	10.08
10	Acetone	43	1.976	1.976	(0.472)	22417	10.0000	11.51
37	Benzene	78	4.519	4.519	(0.909)	96422	5.00000	4.85(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	32917	5.00000	4.93(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	14966	5.00000	4.80(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	34225	5.00000	4.75(a)
66	Bromoform	173	8.416	8.416	(1.097)	19261	5.00000	4.81(a)
6	Bromomethane	94	1.339	1.339	(0.320)	19557	5.00000	6.08
19	Carbon Disulfide	76	2.069	2.069	(0.494)	115343	10.0000	9.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	32904	5.00000	4.60(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	69656	5.00000	4.92(a)
7	Chloroethane	64	1.403	1.403	(0.335)	16878	5.00000	4.61(a)
28	Chloroform	83	3.910	3.910	(0.933)	45810	5.00000	4.96(a)
3	Chloromethane	50	1.081	1.081	(0.258)	36080	5.00000	4.97(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	28232	5.00000	4.96(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	41664	5.00000	4.94(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	28435	5.00000	4.92(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	17438	5.00000	5.01
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	20209	5.00000	3.99(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	34866	5.00000	4.77(a)
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	8440	5.00000	4.60(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	99162	5.00000	4.62(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	85878	10.0000	9.74
17	Methylene Chloride	84	2.306	2.306	(0.550)	36047	5.00000	5.57
87	n-Butylbenzene	91	9.999	9.999	(1.034)	63779	5.00000	4.22(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	111502	5.00000	4.53(a)
92	Naphthalene	128	11.553	11.553	(1.195)	16632	5.00000	6.16
63	o-Xylene	106	8.244	8.244	(1.075)	42060	5.00000	4.85(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	89332	5.00000	4.30(a)
64	Styrene	104	8.265	8.265	(1.078)	74772	5.00000	4.97(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	69721	5.00000	4.50(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	21403	5.00000	4.66(a)
50	Toluene	91	6.453	6.453	(0.841)	104074	5.00000	4.93(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	23352	5.00000	4.82(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	38875	5.00000	5.03
38	Trichloroethene	130	5.214	5.214	(1.049)	27117	5.00000	4.78(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	33185	5.00000	4.36(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	28782	5.00000	4.32(a)

QC Flag Legend

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

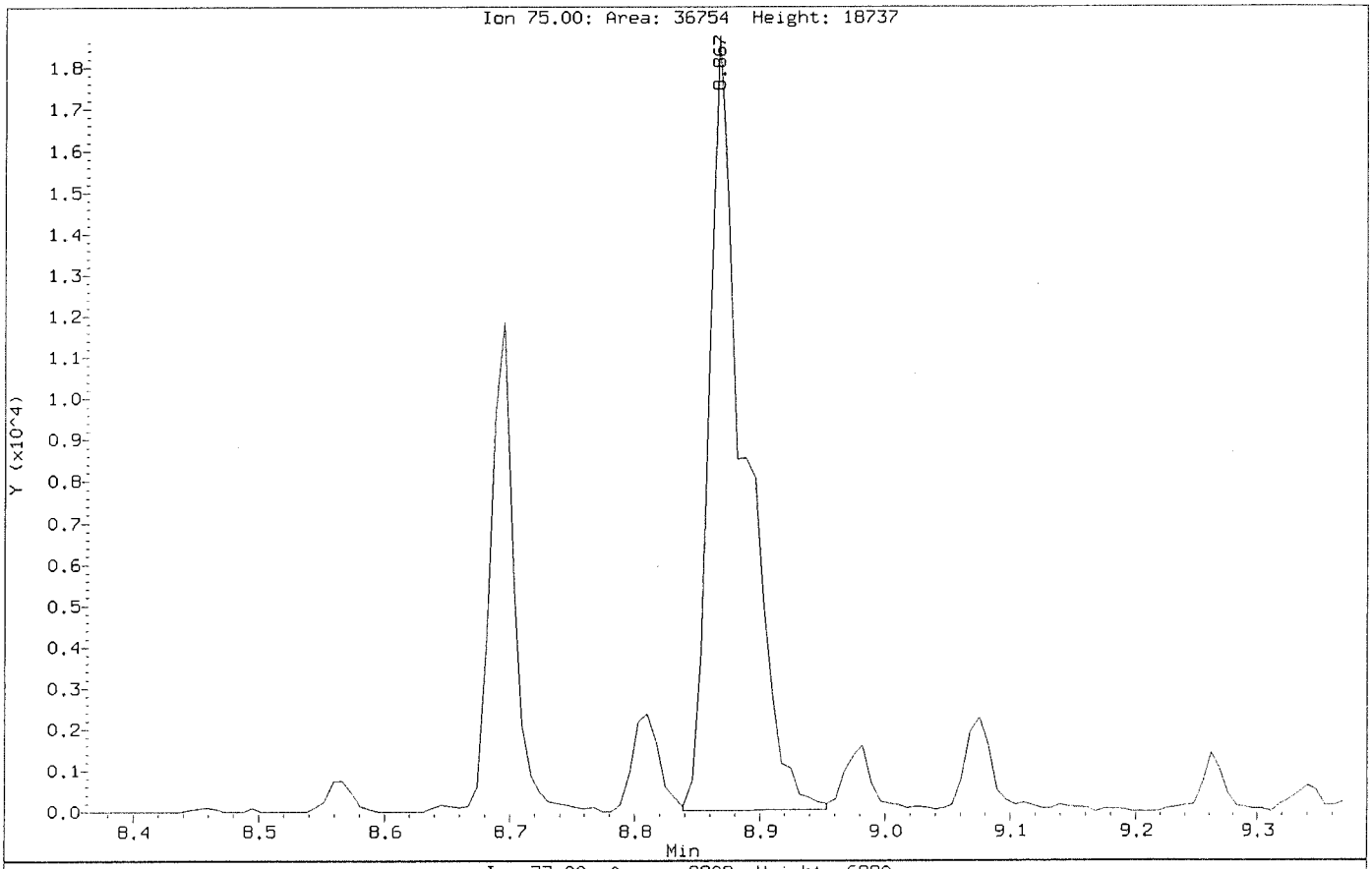


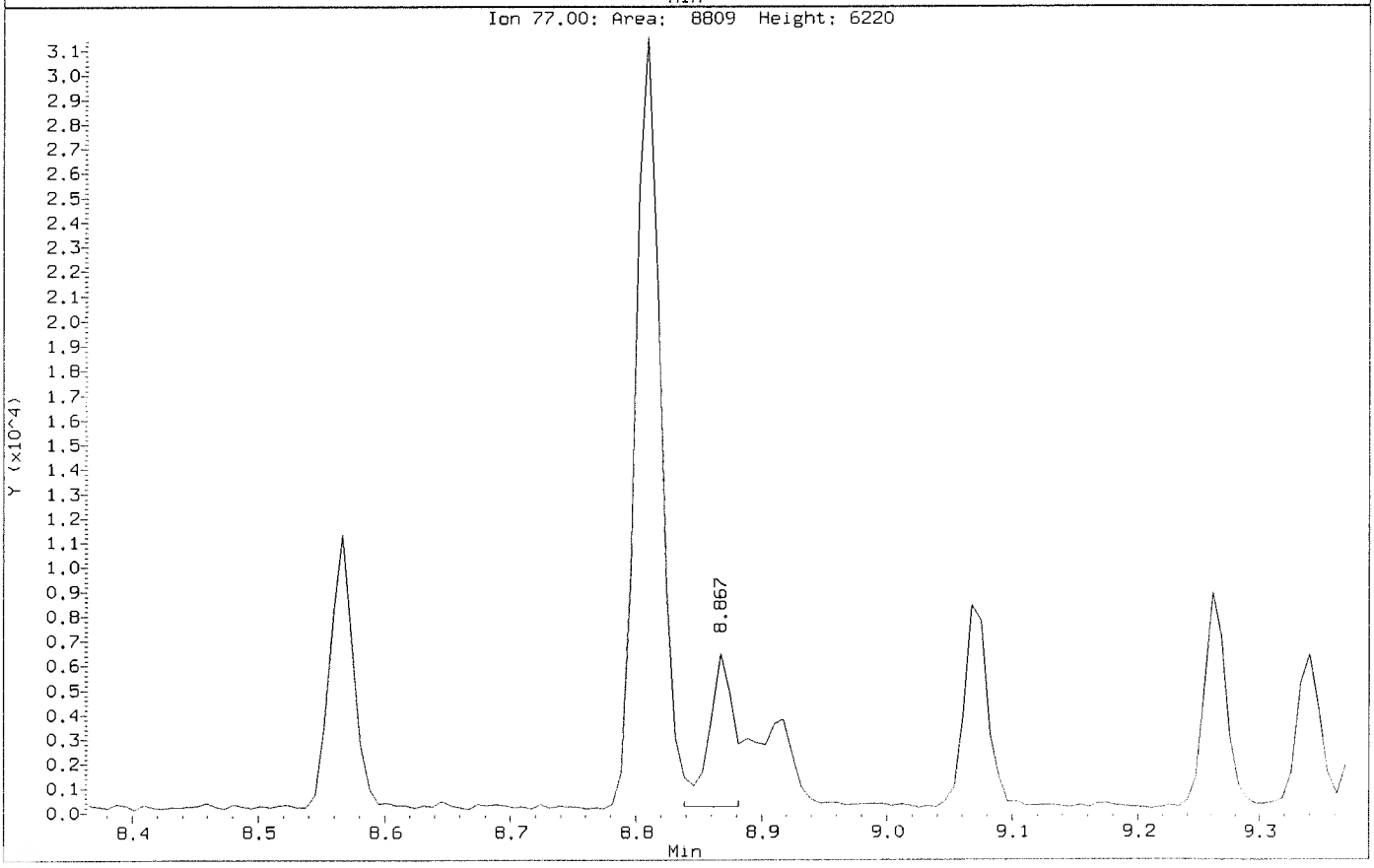
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Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

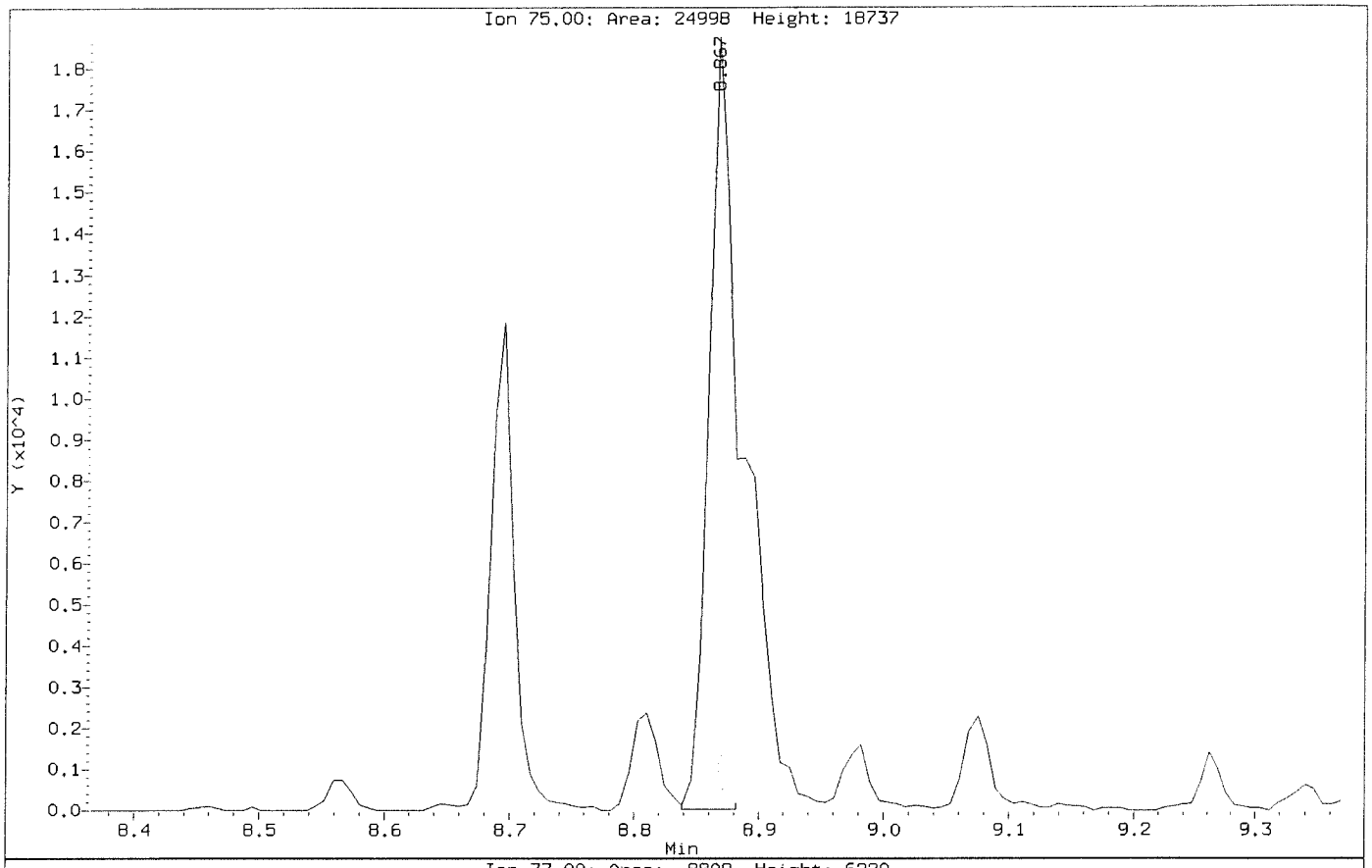
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CAS Number: 96-18-4

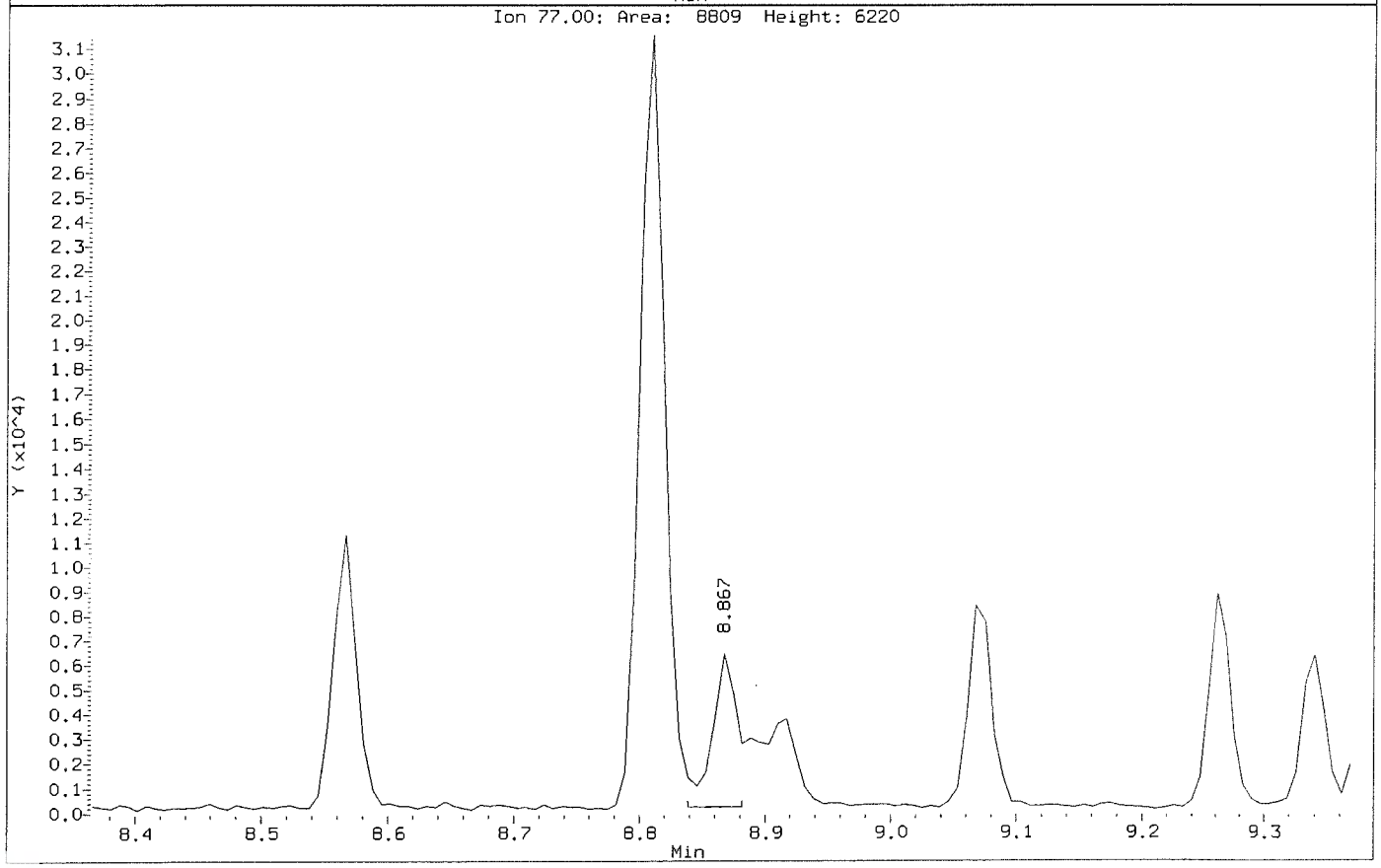




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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D Page 1
Report Date: 22-Aug-2020 11:54

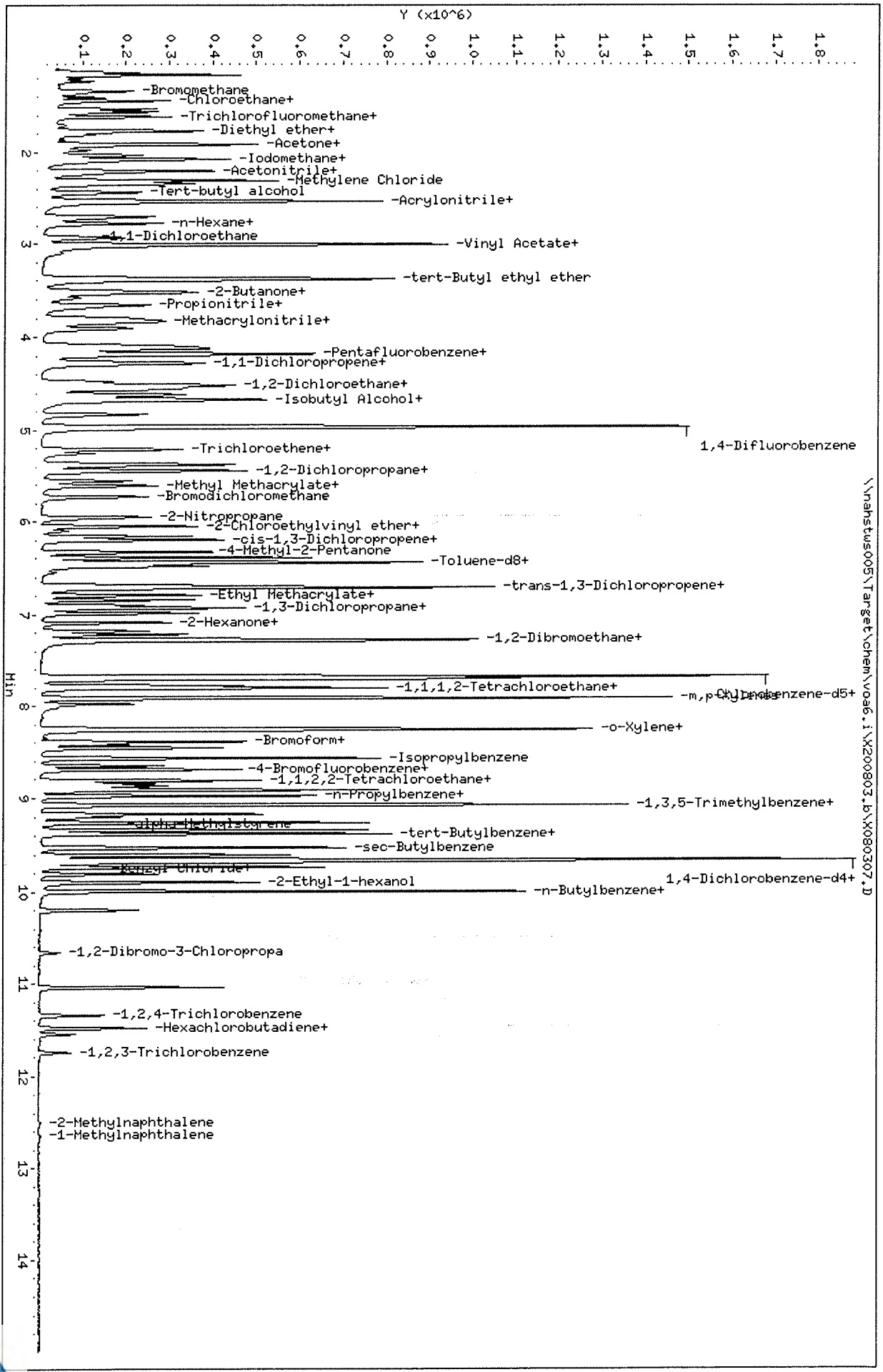
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-AUG-2020 14:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:40 Cal File: X080306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	527399	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	802950	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	728191	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	344410	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	100526	20.0000	19.40
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	118997	20.0000	19.38
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	349779	20.0000	19.80
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	131285	20.0000	19.26
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105143	20.0000	18.96
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	157003	20.0000	19.32
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	110449	20.0000	20.13
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	79259	20.0000	19.12
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	204692	20.0000	19.86
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	85725	20.0000	20.51
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	129183	20.0000	19.14
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	20139	20.0000	19.43
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	95152	20.0000	18.87(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	44232	20.0000	22.24
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	352711	20.0000	19.16
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9119	20.0000	19.01
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	103868	20.0000	19.45
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	184161	20.0000	18.90

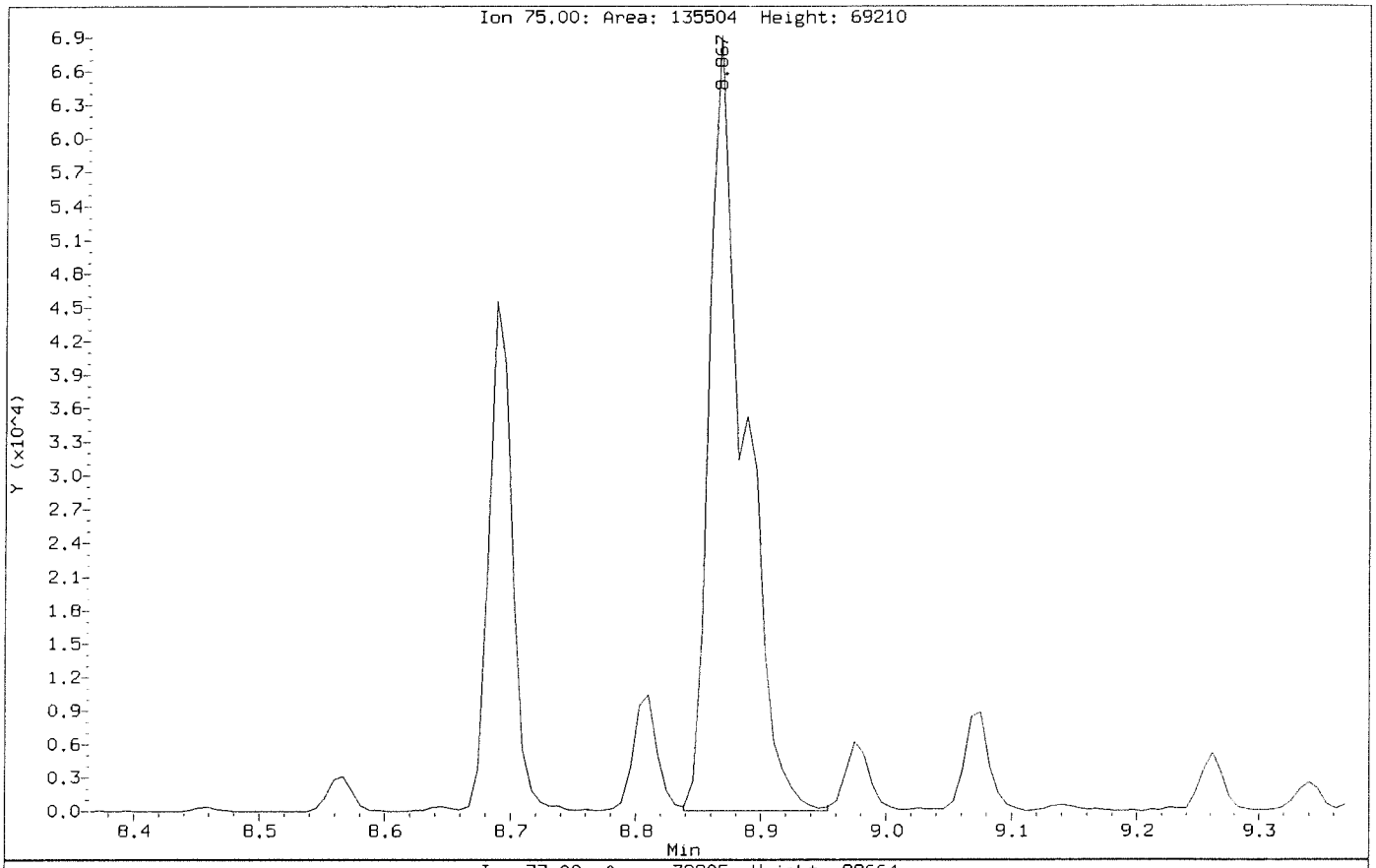


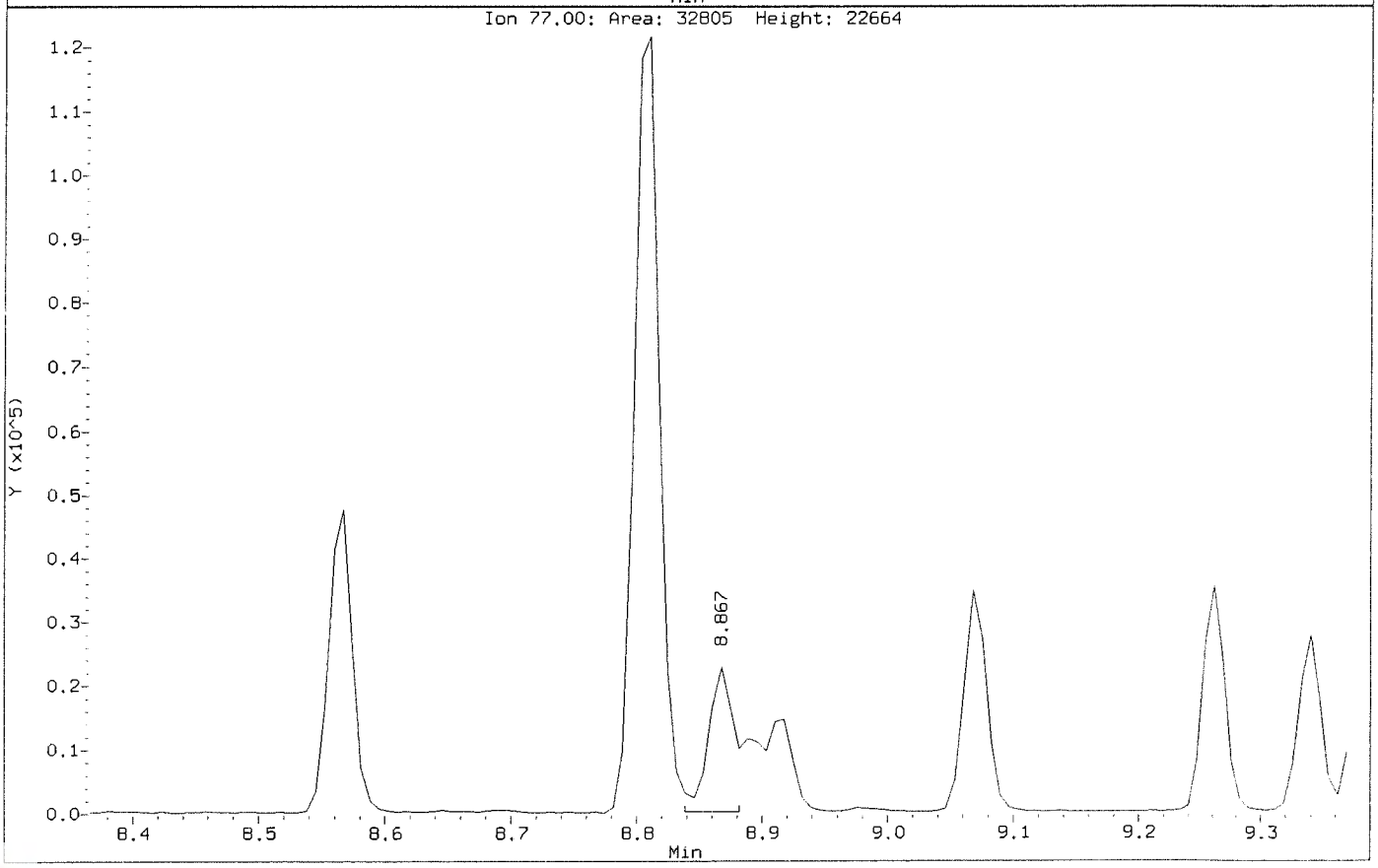
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Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

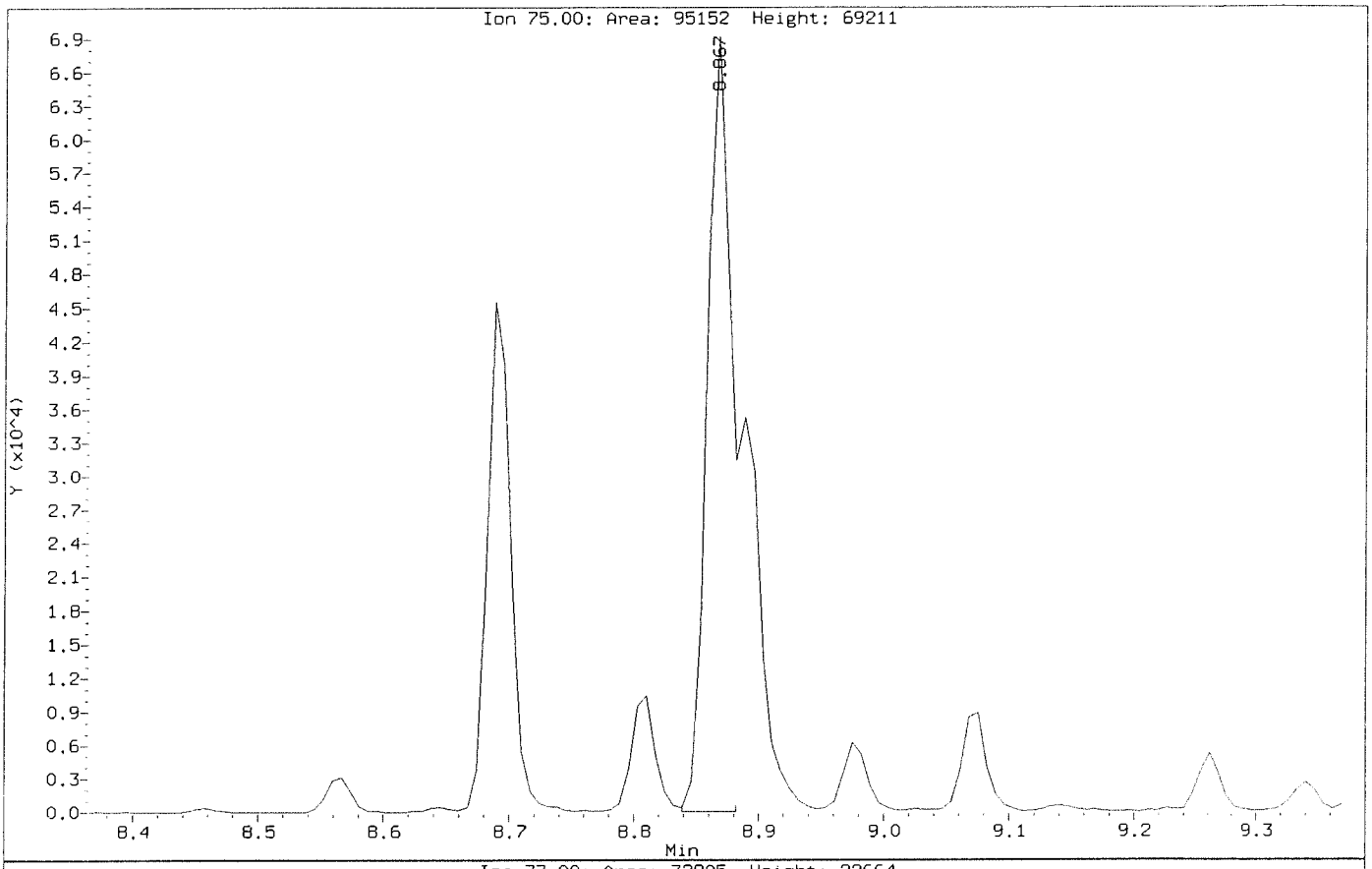
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

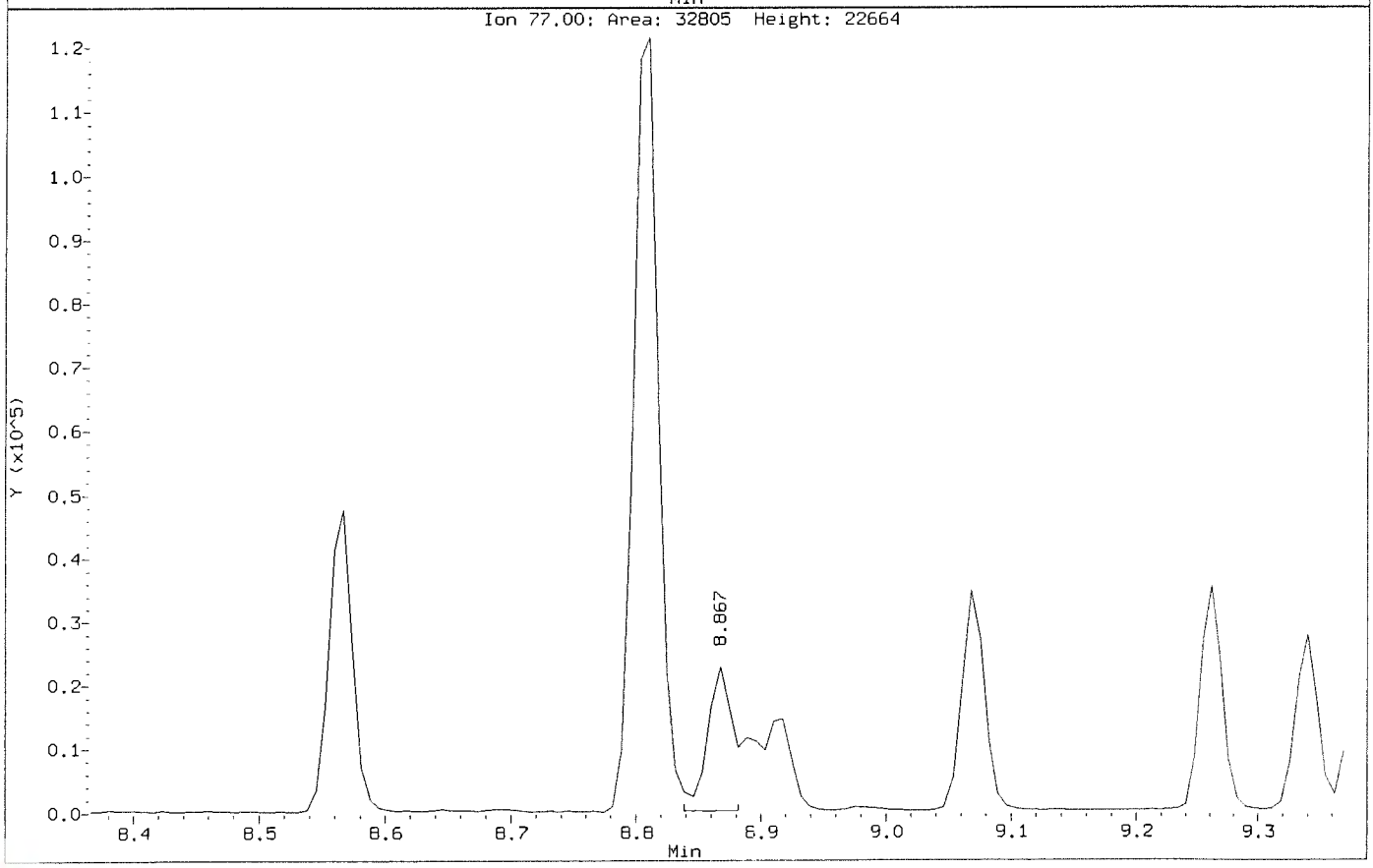




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Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-AUG-2020 14:28
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:04 Cal File: X080307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

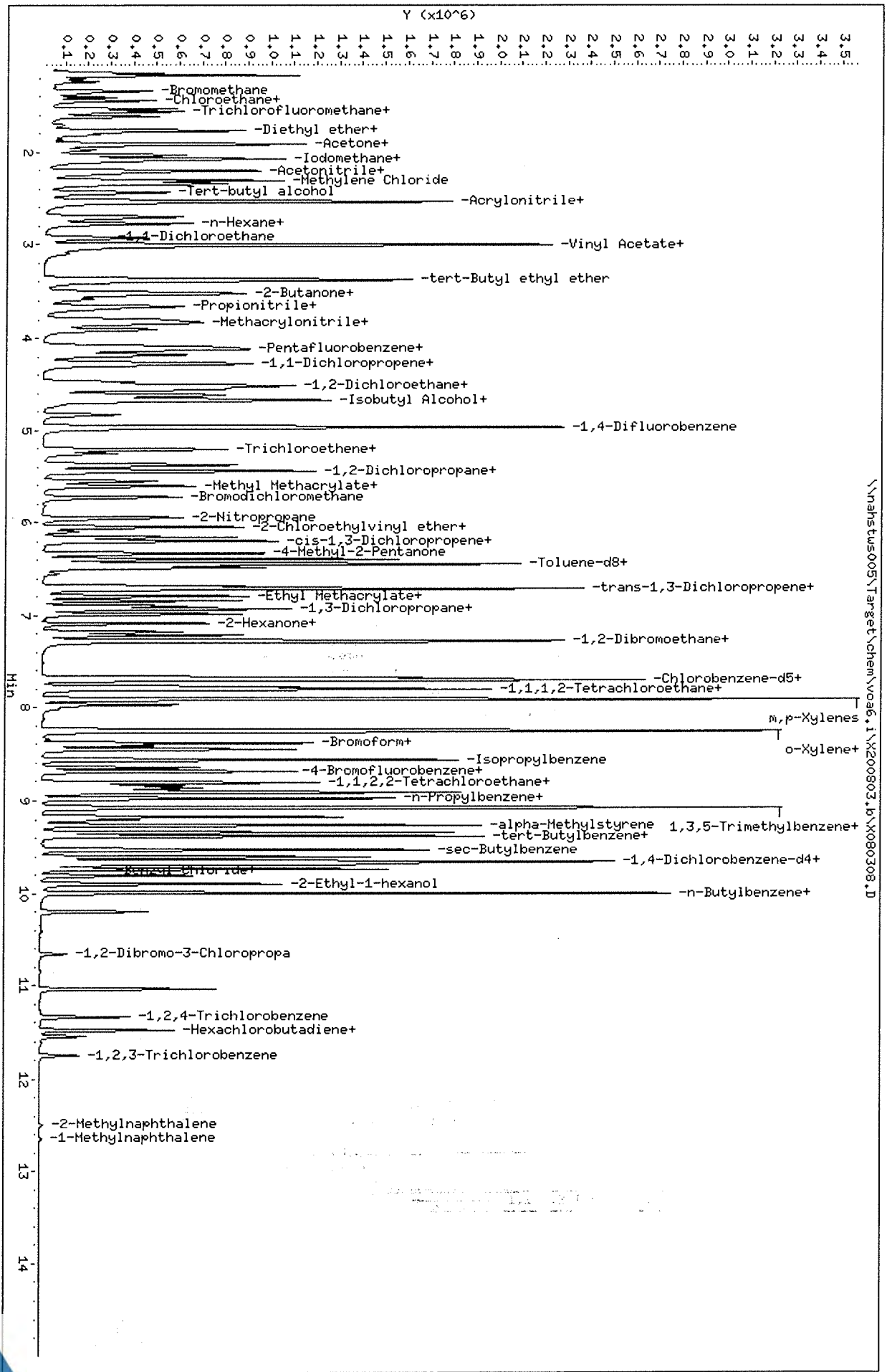
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	511920	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	771177	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	702771	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	336517	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	239584	50.0000	47.65
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	283572	50.0000	47.58
$ 48	Toluene-d8	98	6.389	6.389	(0.833)	830682	50.0000	48.73
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	313797	50.0000	47.71
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	256851	50.0000	48.01
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	376263	50.0000	47.71
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	259509	50.0000	47.88
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	188669	50.0000	47.18
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	496869	50.0000	49.68
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	203794	50.0000	50.24
32	1,1-Dichloropropene	75	4.283	4.283	(0.862)	311586	50.0000	48.08
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	48796	50.0000	48.18
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	230185	50.0000	46.73(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	104906	50.0000	53.93
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	851116	50.0000	47.34
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22898	50.0000	47.61
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	248315	50.0000	48.20
88	1,2-Dichlorobenzene	146	9.992	9.992	(1.033)	448782	50.0000	47.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 2
Report Date: 22-Aug-2020 11:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	363525	50.0000	48.68
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	280124	50.0000	49.49
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	841136	50.0000	47.83
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	505958	50.0000	47.83
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	384017	50.0000	48.63
84 1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	496379	50.0000	47.45
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	350133	50.0000	47.95
24 2-Butanone	43	3.581	3.581	(0.855)	256334	100.000	102.14
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	694810	50.0000	47.59
52 2-Hexanone	43	7.090	7.090	(0.924)	414221	100.000	93.88
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	801352	50.0000	47.17
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	892538	50.0000	47.89
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	601864	100.000	92.53
10 Acetone	43	1.976	1.976	(0.472)	170545	100.000	95.52
37 Benzene	78	4.519	4.519	(0.909)	930097	50.0000	48.61
74 Bromobenzene	156	8.810	8.810	(0.911)	308037	50.0000	46.79
29 Bromochloromethane	128	3.803	3.803	(0.908)	143774	50.0000	46.59
39 Bromodichloromethane	83	5.730	5.730	(1.153)	331518	50.0000	47.75
66 Bromoform	173	8.416	8.416	(1.097)	185248	50.0000	47.50
6 Bromomethane	94	1.339	1.339	(0.320)	165840	50.0000	47.10
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1239571	100.000	98.42
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	332646	50.0000	48.29
59 Chlorobenzene	112	7.699	7.699	(1.004)	660196	50.0000	47.93
7 Chloroethane	64	1.403	1.403	(0.335)	180055	50.0000	49.62
28 Chloroform	83	3.910	3.910	(0.933)	434838	50.0000	47.54
3 Chloromethane	50	1.081	1.081	(0.258)	348334	50.0000	48.46
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	270912	50.0000	48.07
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	396564	50.0000	48.85
55 Dibromochloromethane	129	7.176	7.176	(0.936)	267830	50.0000	47.57
44 Dibromomethane	93	5.558	5.558	(1.118)	161578	50.0000	48.14
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	250906	50.0000	50.07
61 Ethylbenzene	106	7.800	7.800	(1.017)	343587	50.0000	48.31
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	97456	50.0000	53.94
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1013032	50.0000	48.52
62 m,p-Xylenes	106	7.907	7.907	(1.031)	825892	100.000	96.22
17 Methylene Chloride	84	2.306	2.306	(0.550)	256910	50.0000	48.65
87 n-Butylbenzene	91	9.999	9.999	(1.034)	730650	50.0000	49.09
73 n-Propylbenzene	91	8.917	8.917	(0.922)	1164933	50.0000	48.05
92 Naphthalene	128	11.546	11.546	(1.194)	137510	50.0000	51.02
63 o-Xylene	106	8.244	8.244	(1.075)	409054	50.0000	48.52
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	982268	50.0000	48.04
64 Styrene	104	8.258	8.258	(1.077)	713459	50.0000	48.73
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	726881	50.0000	47.67
56 Tetrachloroethene	164	6.933	6.933	(0.904)	211124	50.0000	47.25
50 Toluene	91	6.446	6.446	(0.840)	981156	50.0000	47.80
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	233416	50.0000	48.63
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	353535	50.0000	47.51
38 Trichloroethene	130	5.207	5.207	(1.048)	272294	50.0000	49.82
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	377358	50.0000	50.05
5 Vinyl Chloride	62	1.145	1.145	(0.273)	331269	50.0000	50.27

QC Flag Legend

M - Compound response manually integrated.

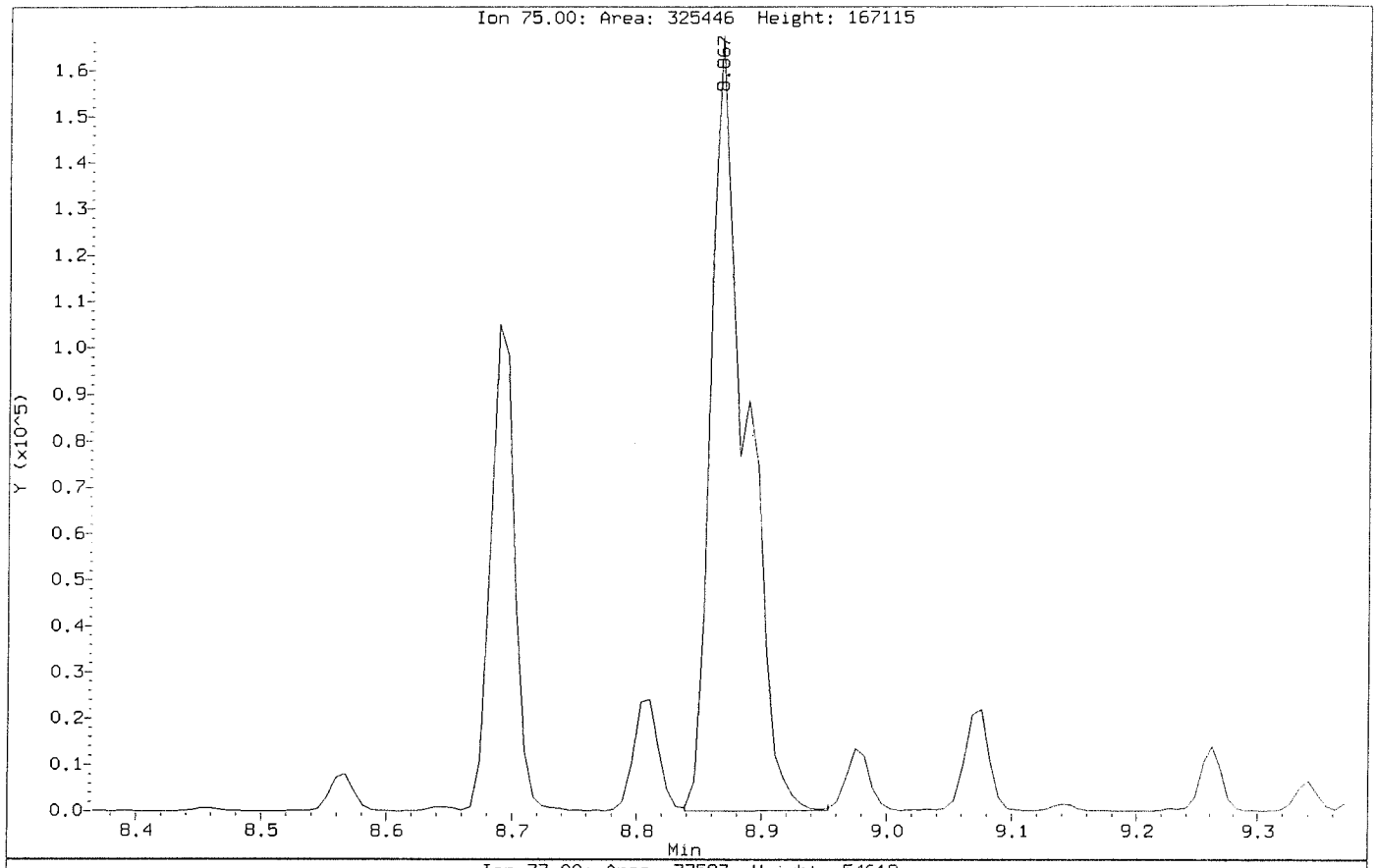


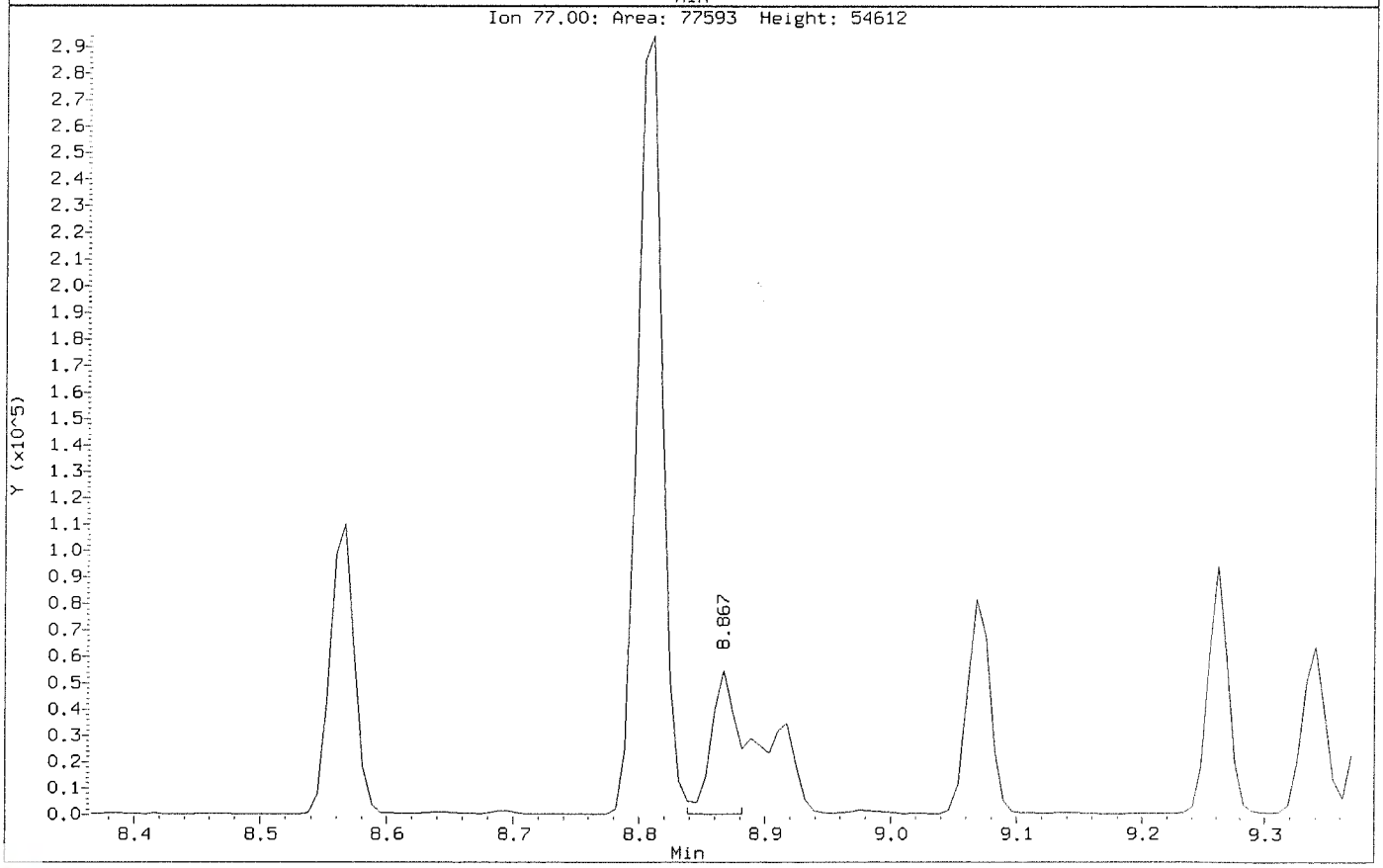
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Date : 03-AUG-2020 14:28
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

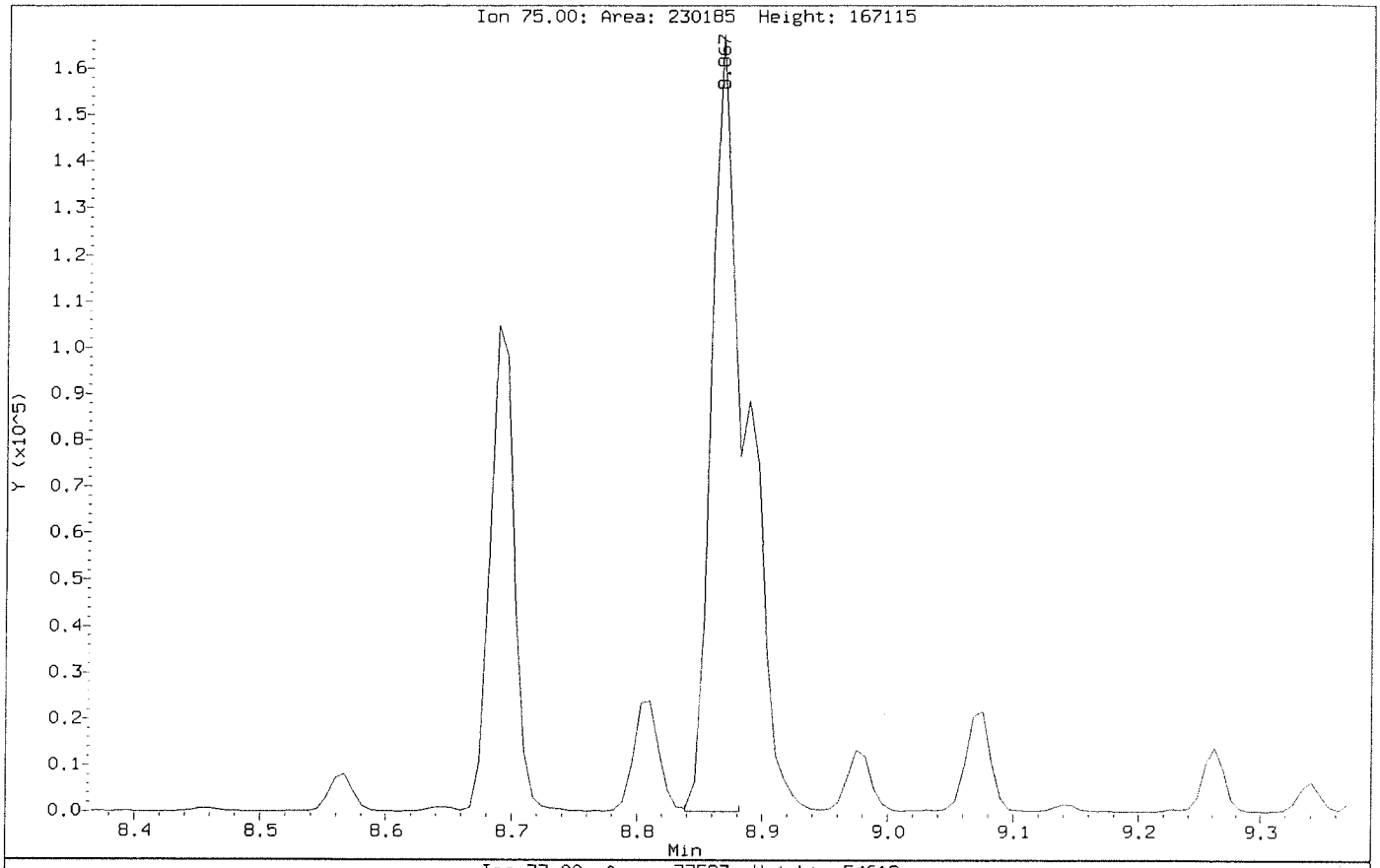
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

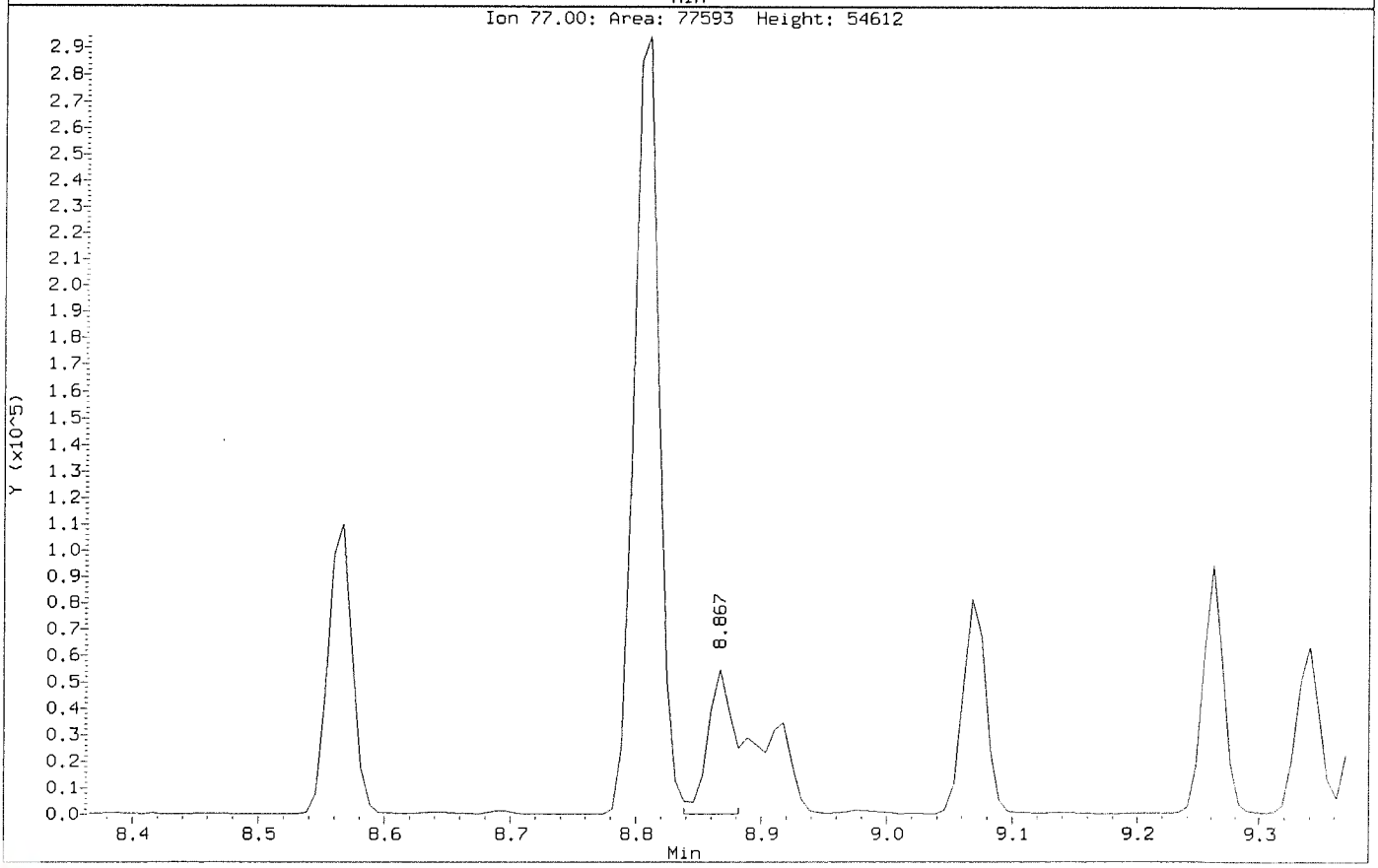




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Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 03-AUG-2020 14:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

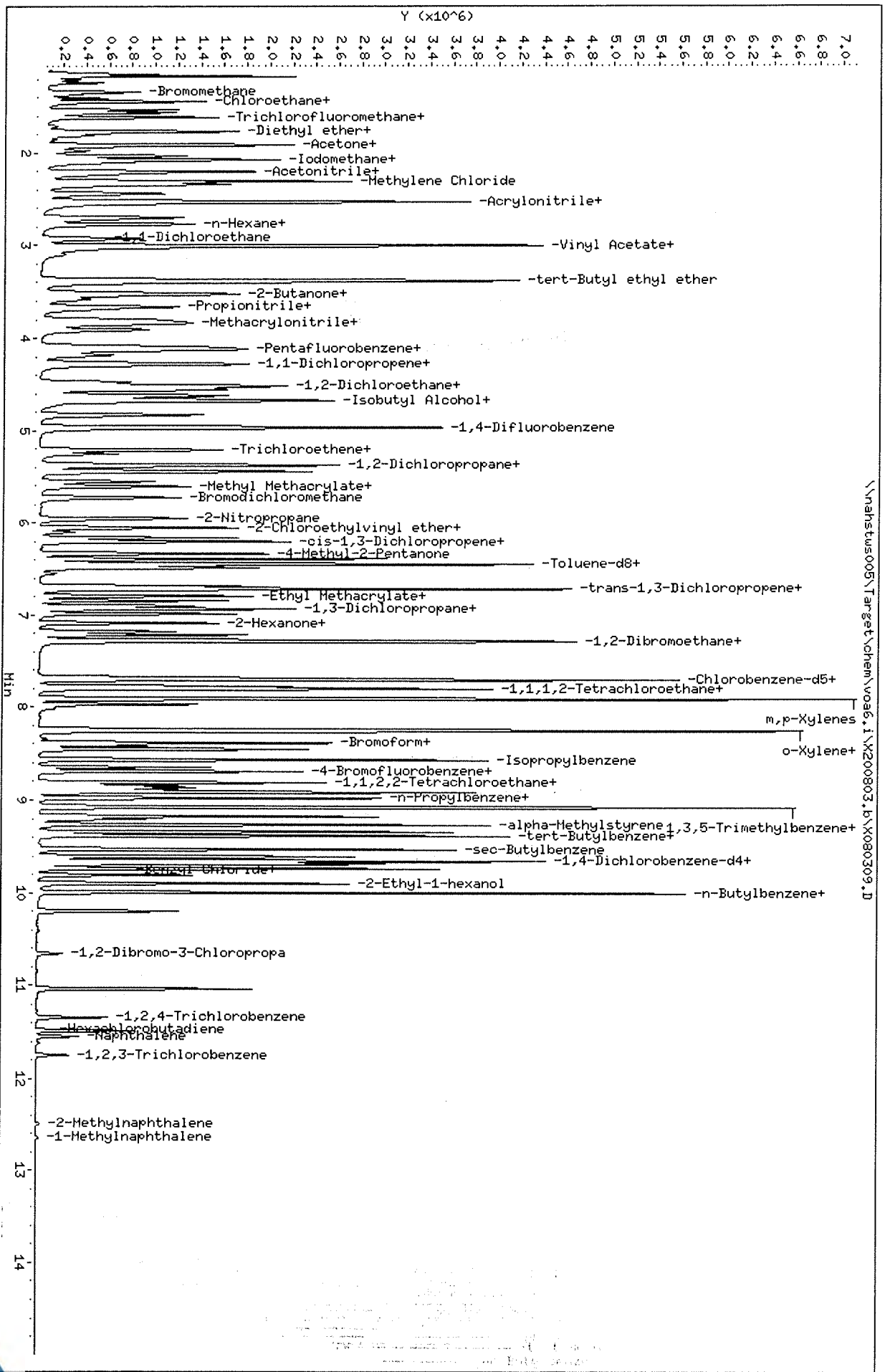
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	486833	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	732825	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	684816	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	323663	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	473016	100.000	98.93
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	567807	100.000	100.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1639713	100.000	98.71
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	621420	100.000	96.97
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	508756	100.000	97.59
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	743006	100.000	99.08
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	505068	100.000	96.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	371422	100.000	95.31
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	966853	100.000	101.67
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	399194	100.000	103.48
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	619847	100.000	100.65
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	78990	100.000	81.10
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	447455	100.000	94.44(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	167486	100.000	88.32
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1744071	100.000	100.86
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	44175	100.000	94.71
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	486059	100.000	96.82
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	860972	100.000	94.04

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	709131	100.000	99.94
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	549204	100.000	102.11
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1711898	100.000	101.21
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1000056	100.000	98.30
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	751120	100.000	97.62
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	985559	100.000	97.96
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	681466	100.000	98.14
24	2-Butanone	43	3.580	3.580	(0.855)	505532	200.000	211.82(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1388843	100.000	98.90
52	2-Hexanone	43	7.090	7.090	(0.924)	827198	200.000	192.40
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1630167	100.000	99.78
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1843729	100.000	102.86
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1209781	200.000	190.87
10	Acetone	43	1.976	1.976	(0.472)	340970	200.000	202.00(A)
37	Benzene	78	4.519	4.519	(0.909)	1833540	100.000	100.84
74	Bromobenzene	156	8.809	8.809	(0.911)	616831	100.000	97.42
29	Bromochloromethane	128	3.802	3.802	(0.908)	282659	100.000	96.32
39	Bromodichloromethane	83	5.729	5.729	(1.153)	654091	100.000	99.14
66	Bromoform	173	8.415	8.415	(1.097)	369358	100.000	97.21
6	Bromomethane	94	1.338	1.338	(0.320)	329463	100.000	97.68
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2437326	200.000	203.50(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	660151	100.000	100.85
59	Chlorobenzene	112	7.699	7.699	(1.004)	1320195	100.000	98.36
7	Chloroethane	64	1.403	1.403	(0.335)	350986	100.000	101.71
28	Chloroform	83	3.910	3.910	(0.933)	844067	100.000	97.04
3	Chloromethane	50	1.080	1.080	(0.258)	661182	100.000	96.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	527504	100.000	98.43
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	783645	100.000	101.58
55	Dibromochloromethane	129	7.176	7.176	(0.936)	530960	100.000	96.79
44	Dibromomethane	93	5.557	5.557	(1.118)	314468	100.000	98.60
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	502379	100.000	105.43
61	Ethylbenzene	106	7.799	7.799	(1.017)	683526	100.000	98.63
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	144027	100.000	82.88
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2047430	100.000	100.64
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1666940	200.000	199.31
17	Methylene Chloride	84	2.305	2.305	(0.550)	487953	100.000	98.54
87	n-Butylbenzene	91	9.998	9.998	(1.034)	1490980	100.000	104.16
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2376809	100.000	101.93
92	Naphthalene	128	11.546	11.546	(1.194)	244768	100.000	91.71
63	o-Xylene	106	8.244	8.244	(1.075)	812131	100.000	98.85
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2014765	100.000	102.46
64	Styrene	104	8.265	8.265	(1.078)	1389708	100.000	97.42
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	1474330	100.000	100.54
56	Tetrachloroethene	164	6.933	6.933	(0.904)	429146	100.000	98.57
50	Toluene	91	6.453	6.453	(0.841)	1938369	100.000	96.92
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	450443	100.000	98.69
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	699866	100.000	98.98
38	Trichloroethene	130	5.214	5.214	(1.049)	540855	100.000	104.13
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	735408	100.000	102.57
5	Vinyl Chloride	62	1.145	1.145	(0.273)	656263	100.000	104.72

QC Flag Legend

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

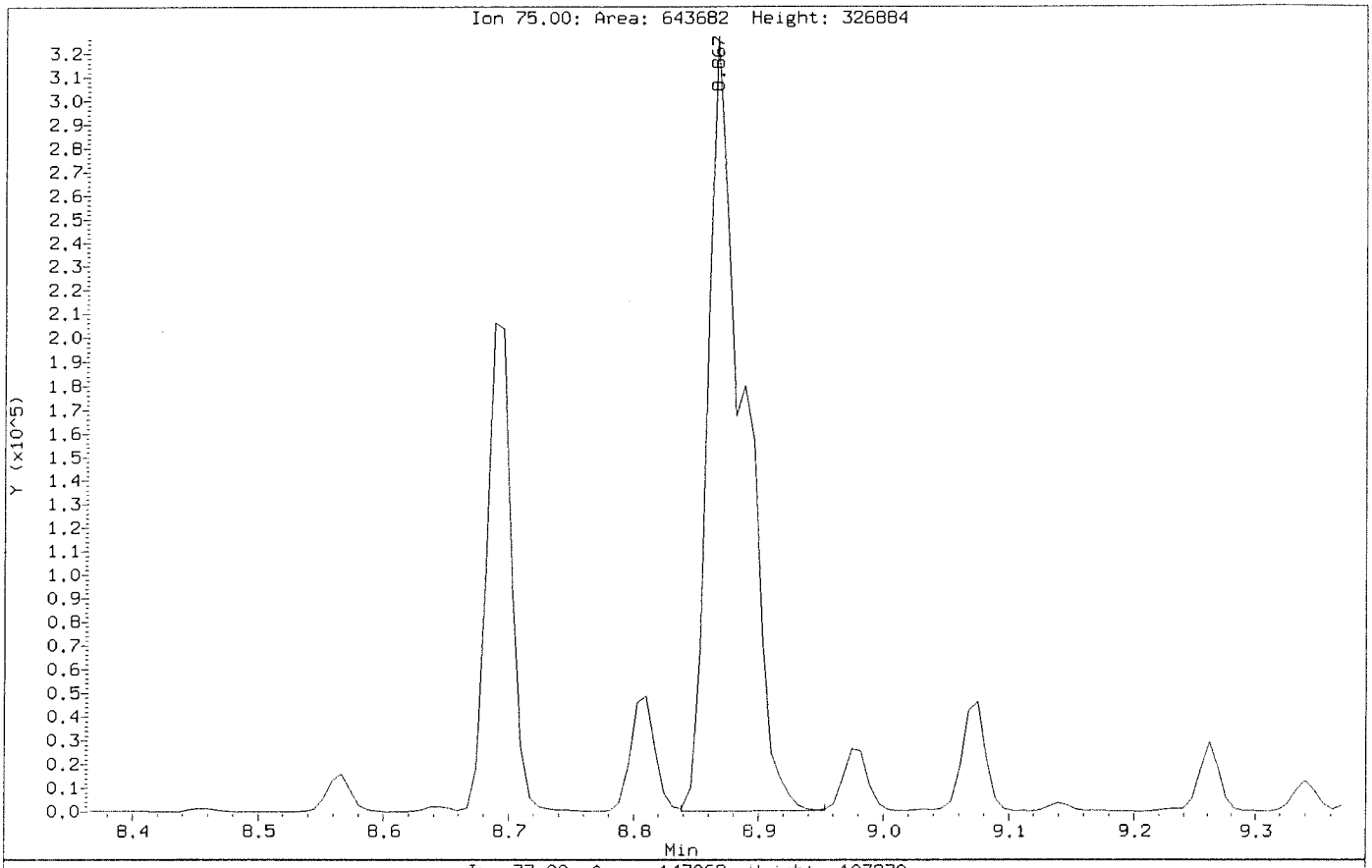


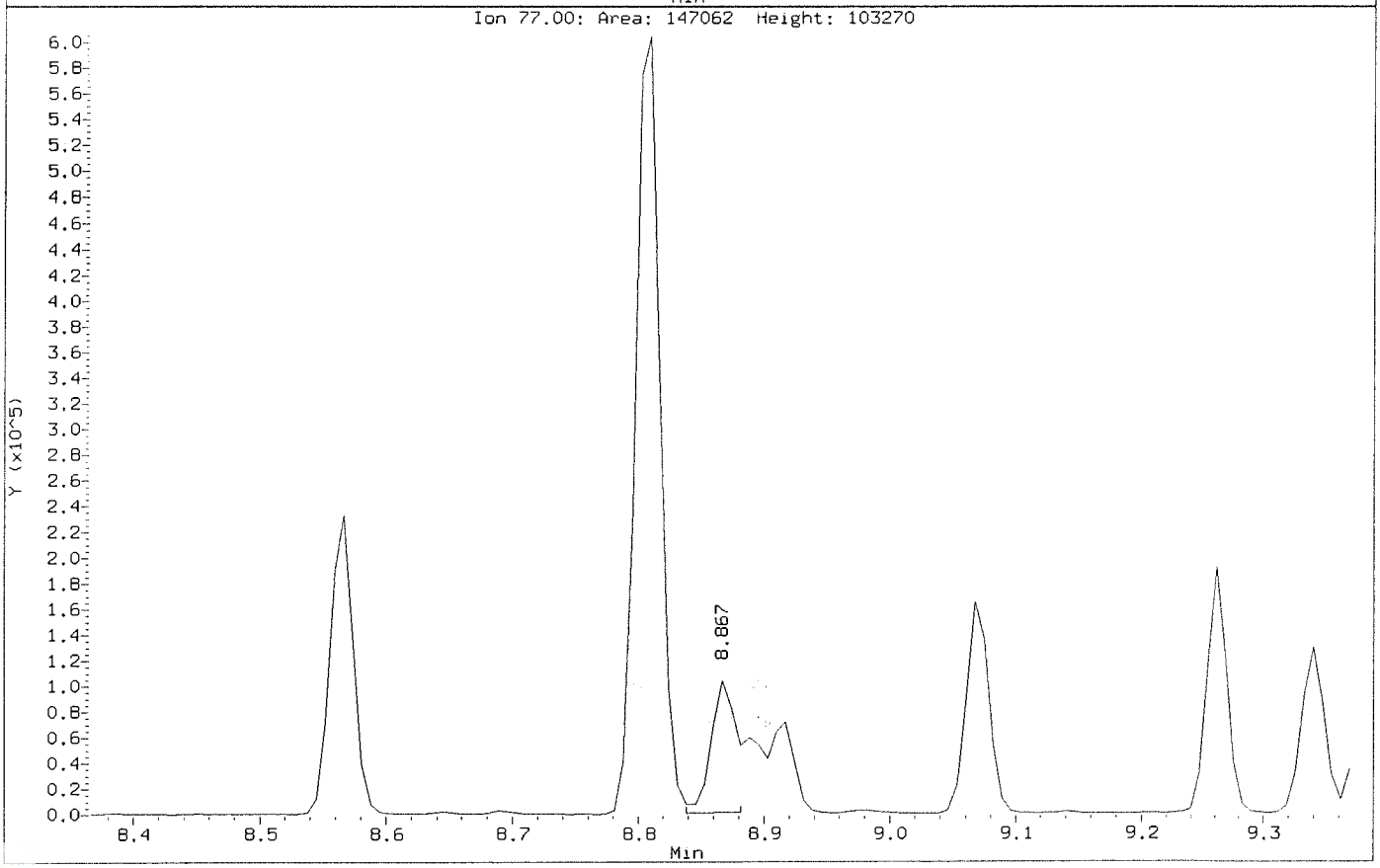
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Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

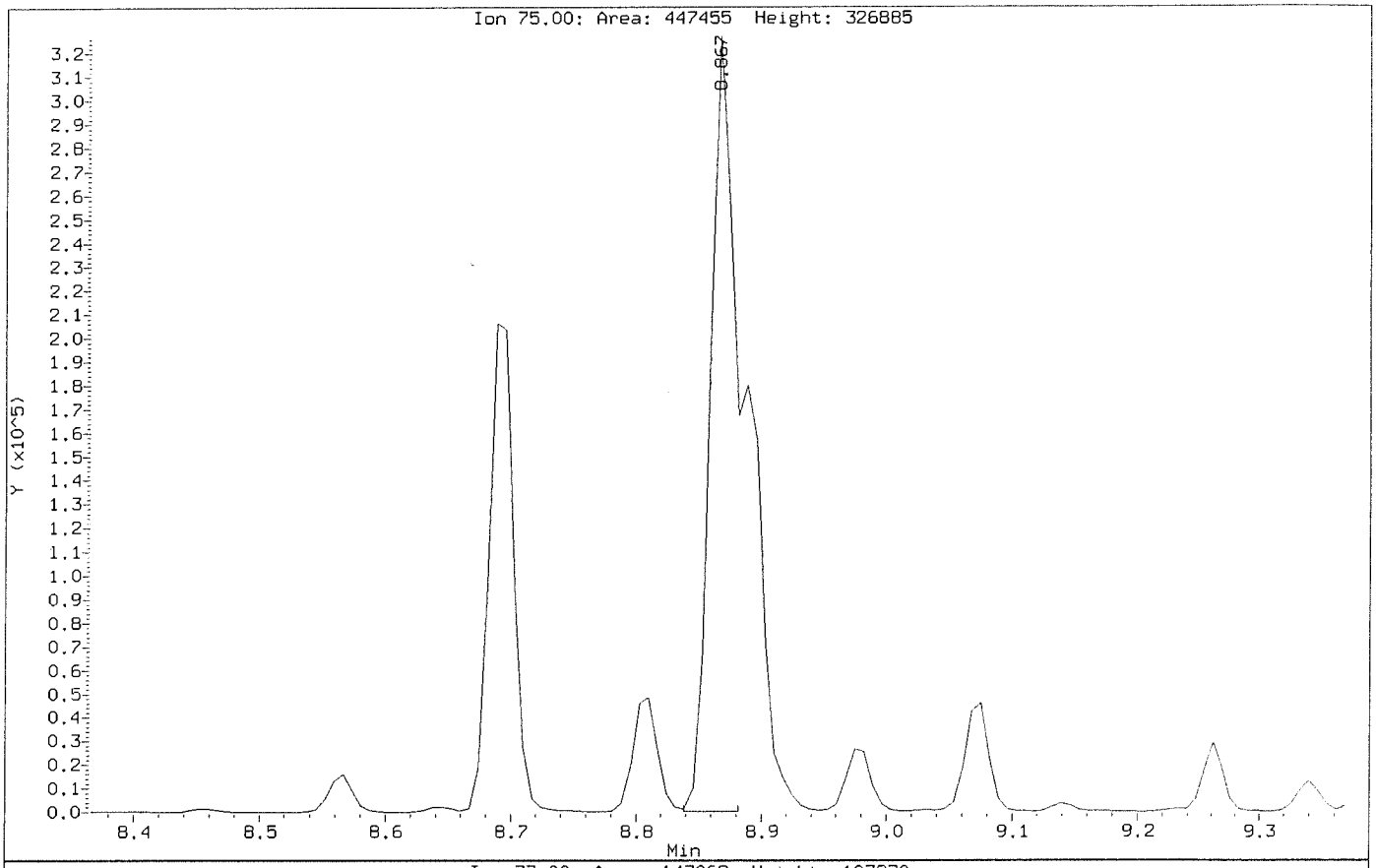
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

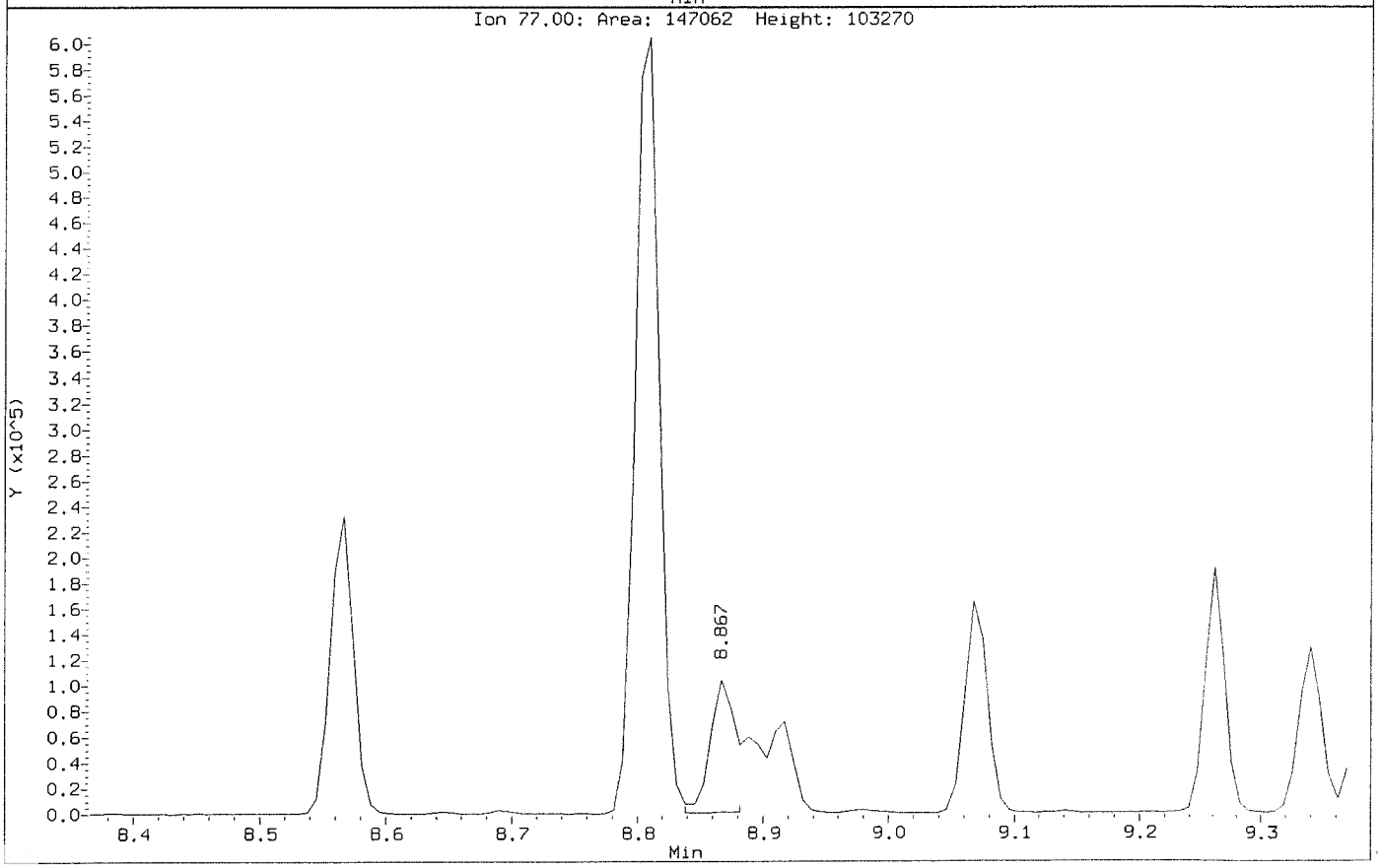




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Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-AUG-2020 15:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:52 Cal File: X080309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

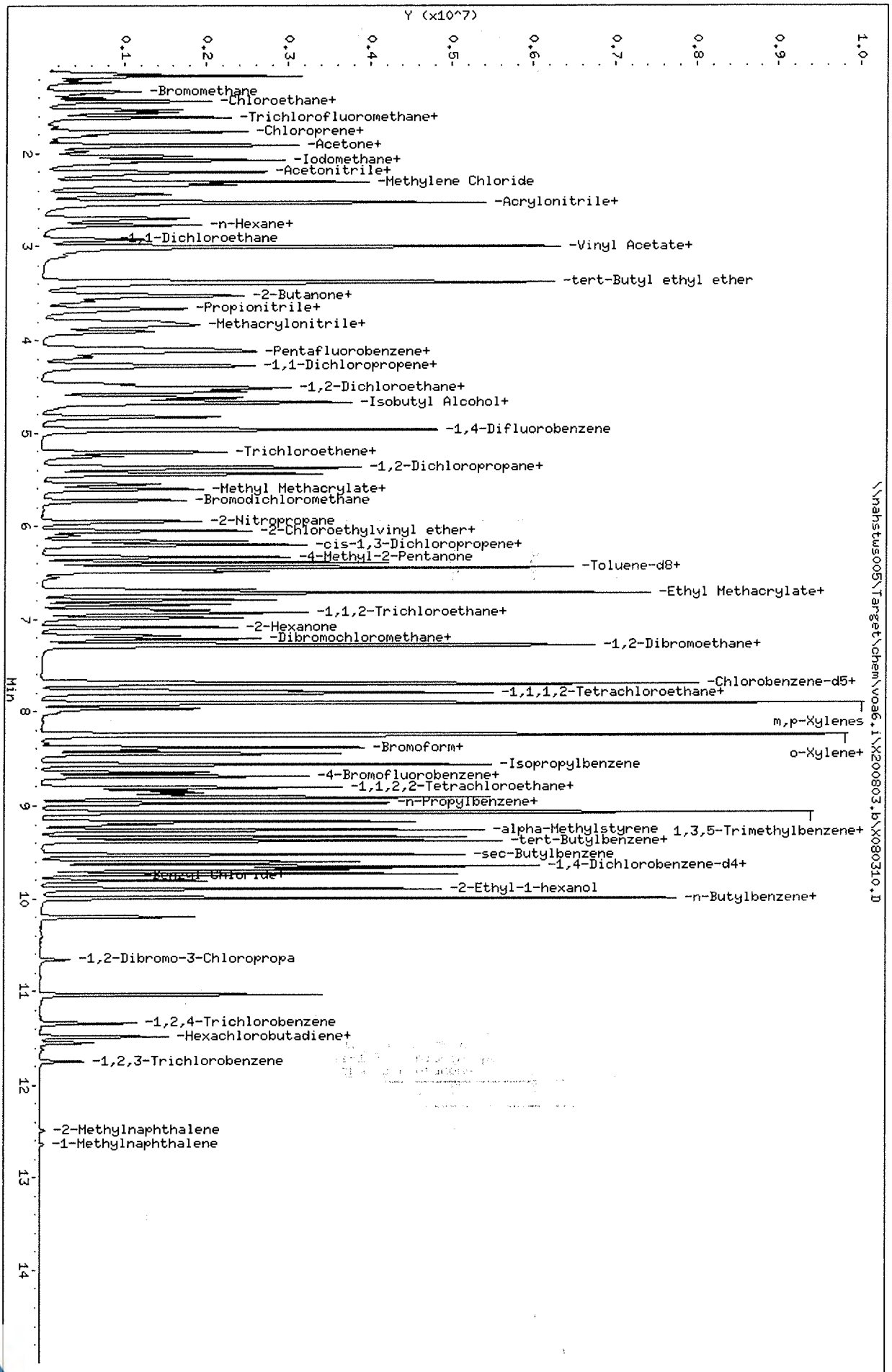
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457081	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697946	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	658557	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	308838	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	673356	150.000	150.01
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	814725	150.000	153.12
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2334447	150.000	146.14
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	886803	150.000	143.91
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	731767	150.000	145.97
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1070397	150.000	152.03
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	753290	150.000	150.61
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	538173	150.000	143.61
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1382538	150.000	154.84
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	571714	150.000	157.86
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	893917	150.000	152.41
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	147859	150.000	159.09
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	653947	150.000	144.66(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	308625	150.000	163.97
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2442964	150.000	148.06
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	68839	150.000	154.17
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	709453	150.000	146.95
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	1244688	150.000	142.48

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 2
Report Date: 22-Aug-2020 11:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	1020218	150.000	150.97
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	786675	150.000	153.57
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2403624	150.000	148.94
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1420086	150.000	146.29
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	1090826	150.000	147.42
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1405102	150.000	146.36
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	969504	150.000	148.71
24 2-Butanone	43	3.581	3.581	(0.855)	733748	300.000	327.46(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1990724	150.000	148.57
52 2-Hexanone	43	7.090	7.090	(0.924)	1228653	300.000	297.18(A)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	2300761	150.000	147.59
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2591814	150.000	151.54
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1784918	300.000	292.84(A)
10 Acetone	43	1.976	1.976	(0.472)	481556	300.000	304.39(A)
37 Benzene	78	4.519	4.519	(0.909)	2633133	150.000	152.06
74 Bromobenzene	156	8.810	8.810	(0.911)	875955	150.000	144.99
29 Bromochloromethane	128	3.803	3.803	(0.908)	397087	150.000	144.12
39 Bromodichloromethane	83	5.729	5.729	(1.153)	949497	150.000	151.12
66 Bromoform	173	8.416	8.416	(1.097)	545501	150.000	149.29
6 Bromomethane	94	1.339	1.339	(0.320)	475898	150.000	149.93
19 Carbon Disulfide	76	2.069	2.069	(0.494)	3493168	300.000	310.65(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	955431	150.000	153.26
59 Chlorobenzene	112	7.699	7.699	(1.004)	1894718	150.000	146.79
7 Chloroethane	64	1.403	1.403	(0.335)	503418	150.000	155.38
28 Chloroform	83	3.910	3.910	(0.933)	1203889	150.000	147.42
3 Chloromethane	50	1.081	1.081	(0.258)	952989	150.000	148.49
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	755671	150.000	150.19
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1139019	150.000	155.03
55 Dibromochloromethane	129	7.176	7.176	(0.936)	768555	150.000	145.69
44 Dibromomethane	93	5.558	5.558	(1.118)	458909	150.000	151.08
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	732272	150.000	163.68
61 Ethylbenzene	106	7.800	7.800	(1.017)	984064	150.000	147.65
91 Hexachlorobutadiene	225	11.489	11.489	(1.188)	270400	150.000	163.08
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2911603	150.000	148.83
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2378815	300.000	295.77(A)
17 Methylene Chloride	84	2.306	2.306	(0.550)	693942	150.000	149.97
87 n-Butylbenzene	91	9.999	9.999	(1.034)	2113477	150.000	154.74
73 n-Propylbenzene	91	8.917	8.917	(0.922)	3384136	150.000	152.10
92 Naphthalene	128	11.546	11.546	(1.194)	435994	150.000	161.36
63 o-Xylene	106	8.244	8.244	(1.075)	1165295	150.000	147.50
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2872495	150.000	153.10
64 Styrene	104	8.258	8.258	(1.077)	2029238	150.000	147.92
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	2094345	150.000	149.68
56 Tetrachloroethene	164	6.933	6.933	(0.904)	610841	150.000	145.91
50 Toluene	91	6.453	6.453	(0.841)	2766929	150.000	143.87
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	647458	150.000	151.10
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1027204	150.000	152.54
38 Trichloroethene	130	5.214	5.214	(1.049)	766453	150.000	154.95
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	1054115	150.000	156.59
5 Vinyl Chloride	62	1.145	1.145	(0.273)	956993	150.000	162.65

QC Flag Legend

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

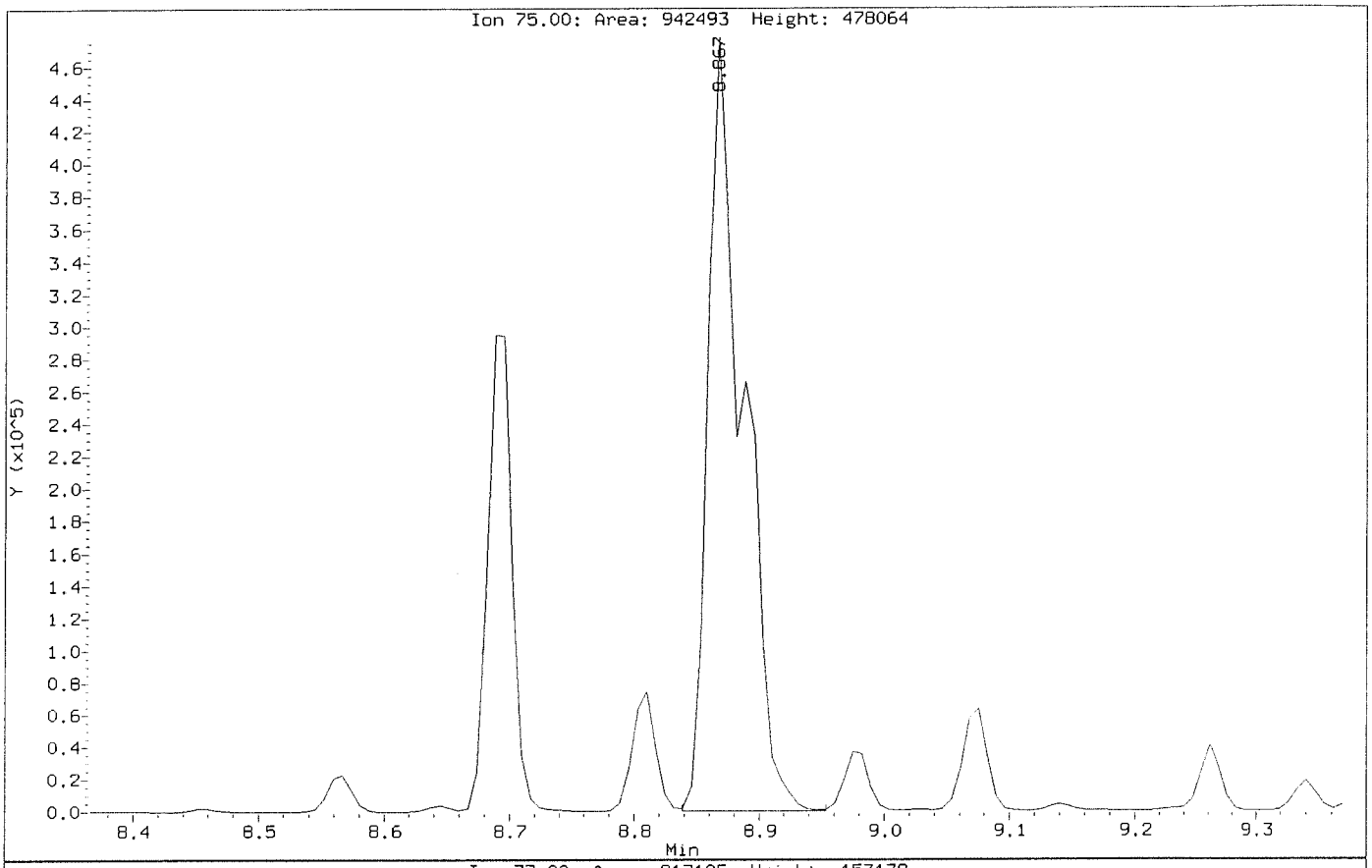


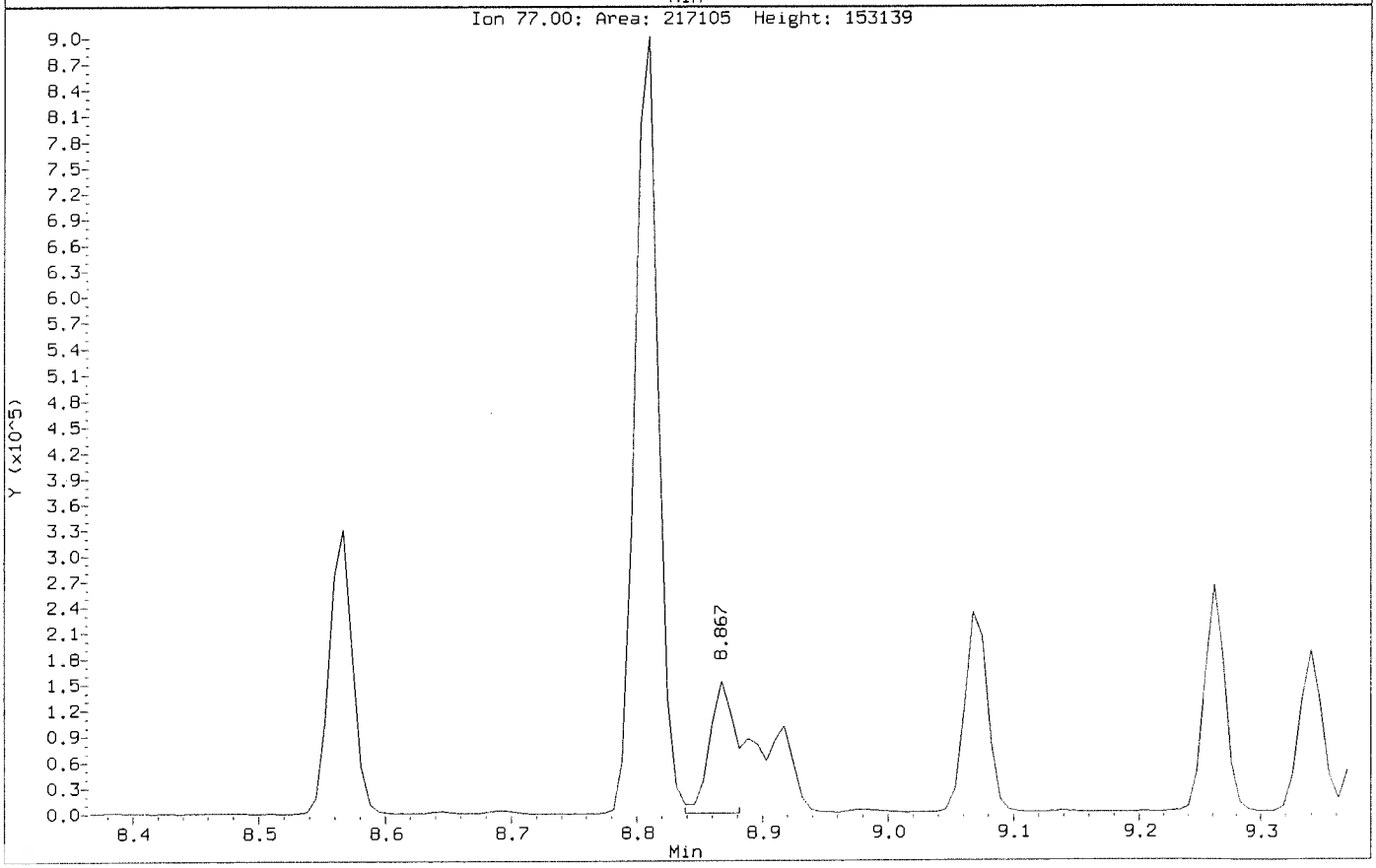
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Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

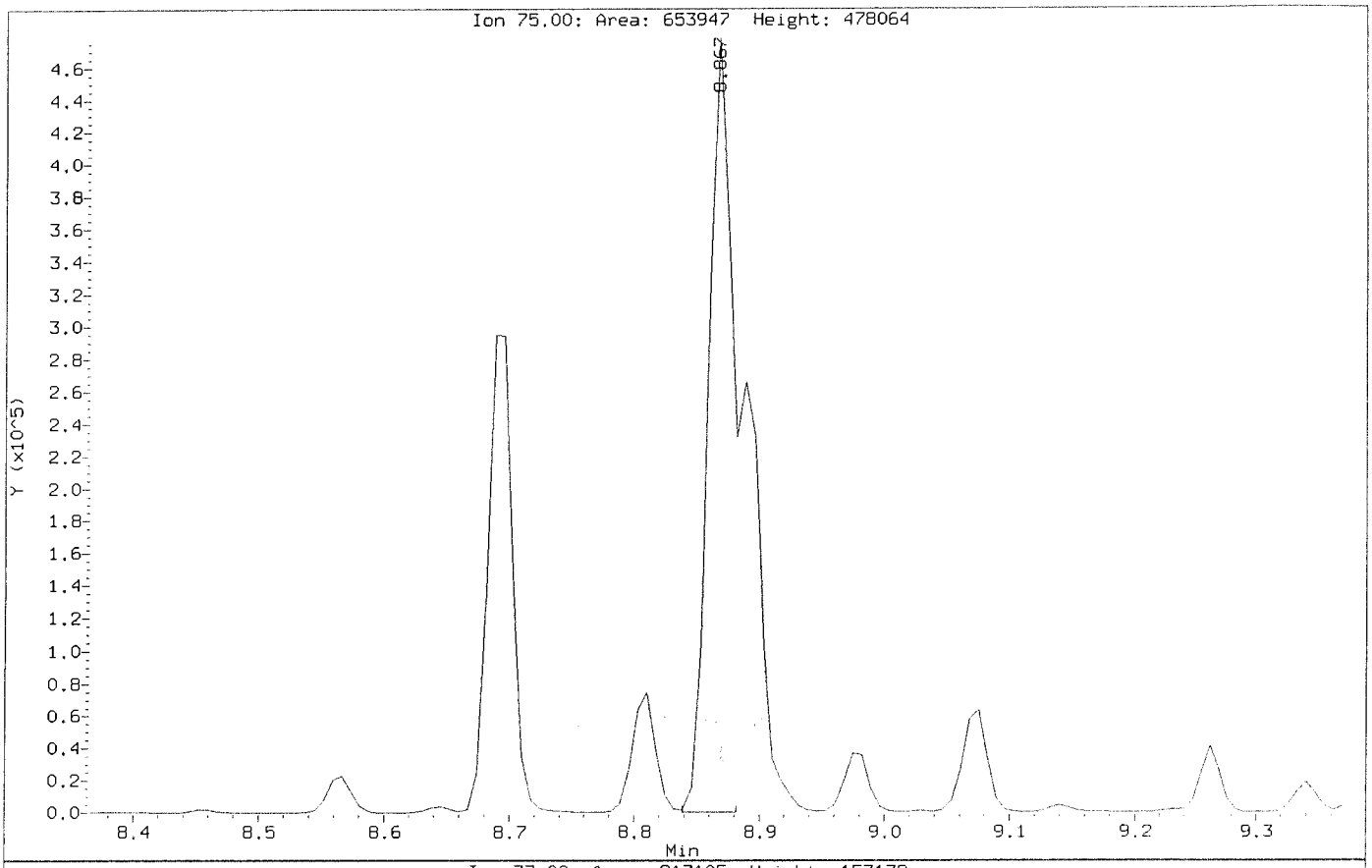
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

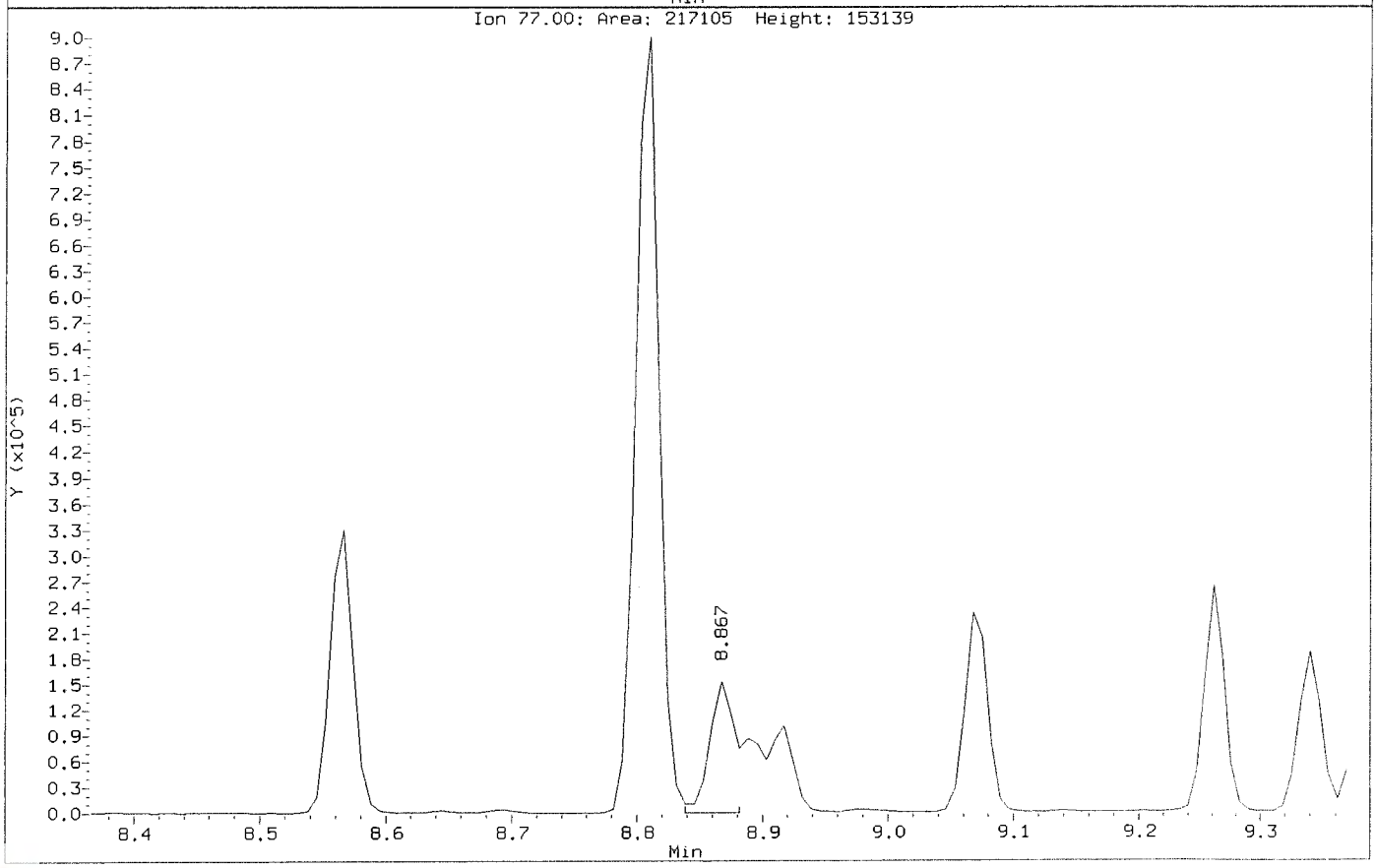




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Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-AUG-2020 15:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:16 Cal File: X080310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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

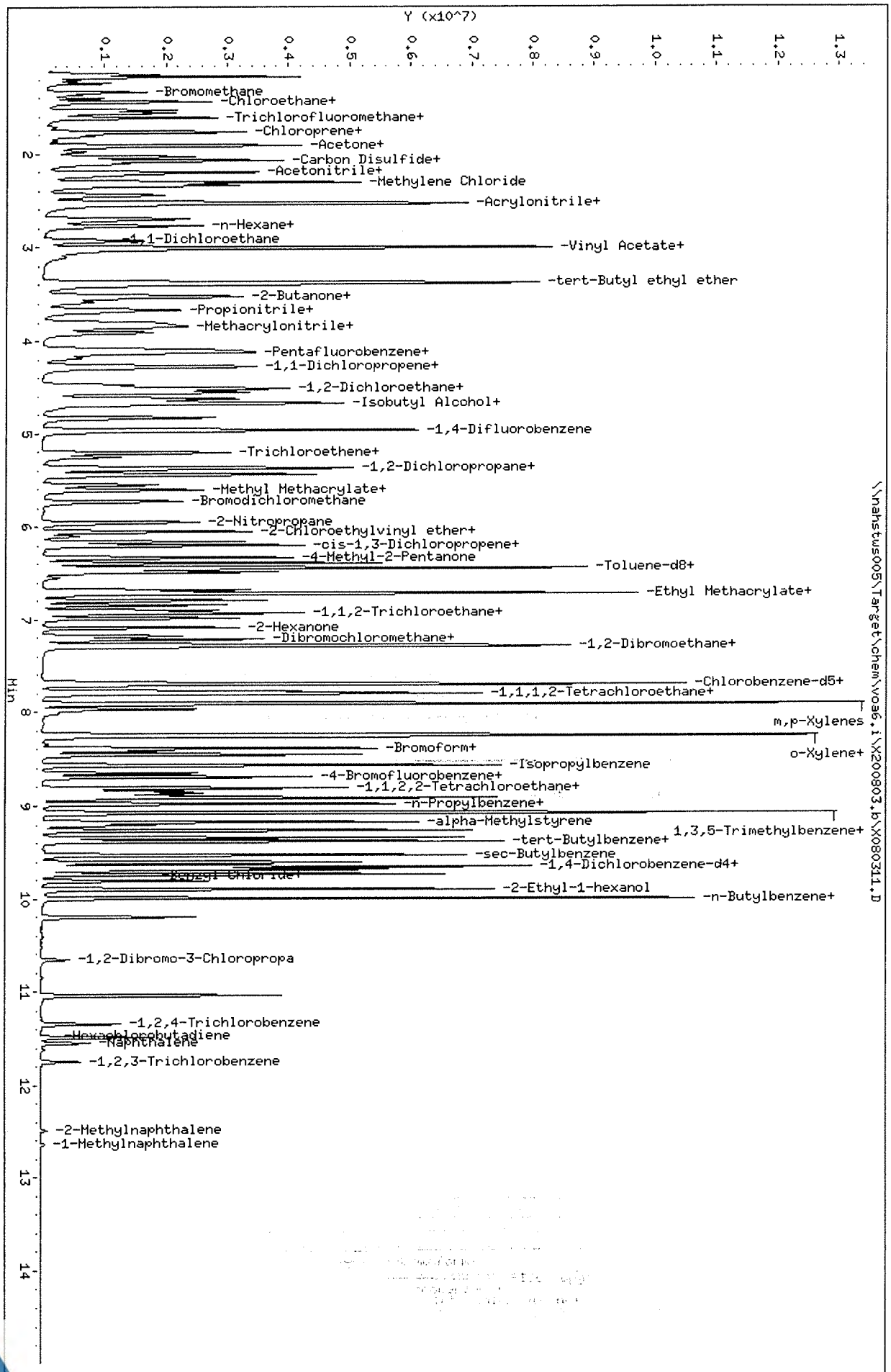
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450865	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	691821	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	647390	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	303189	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	891470	200.000	201.34(A)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	1069168	200.000	203.72(A)
$	48 Toluene-d8	98	6.389	6.389	(0.833)	3098306	200.000	197.30
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1172448	200.000	193.54
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	957096	200.000	194.21
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1427757	200.000	205.58(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	990670	200.000	201.64(A)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	709380	200.000	192.57
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1845041	200.000	209.49(A)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	760300	200.000	212.82(A)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1199113	200.000	206.26(A)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	174820	200.000	191.61
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	839680	200.000	189.20(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	360898	200.000	192.06
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	3263670	200.000	201.49(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	87710	200.000	199.86
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	931649	200.000	196.31
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1639229	200.000	191.14

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D Page 2
Report Date: 22-Aug-2020 11:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1348617	200.000	201.33(A)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1043924	200.000	205.60(A)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	3217418	200.000	203.08(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1875338	200.000	196.78
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1423457	200.000	195.70
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1859620	200.000	197.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1273388	200.000	198.01
24	2-Butanone	43	3.581	3.581	(0.855)	968566	400.000	438.21(A)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	2643071	200.000	200.93(A)
52	2-Hexanone	43	7.090	7.090	(0.924)	1629397	400.000	400.90(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	3060362	200.000	199.98
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3478638	200.000	207.19(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2352996	400.000	392.71(A)
10	Acetone	43	1.976	1.976	(0.472)	618700	400.000	396.80(A)
37	Benzene	78	4.519	4.519	(0.909)	3502746	200.000	204.07(A)
74	Bromobenzene	156	8.810	8.810	(0.911)	1163775	200.000	196.22
29	Bromochloromethane	128	3.803	3.803	(0.908)	510770	200.000	187.94
39	Bromodichloromethane	83	5.730	5.730	(1.153)	1253129	200.000	201.21(A)
66	Bromoform	173	8.416	8.416	(1.097)	720436	200.000	200.57(A)
6	Bromomethane	94	1.331	1.331	(0.318)	632580	200.000	201.82(A)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	4690853	400.000	422.91(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1290058	200.000	208.77(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2498297	200.000	196.90
7	Chloroethane	64	1.396	1.396	(0.333)	661534	200.000	207.00(A)
28	Chloroform	83	3.910	3.910	(0.933)	1599662	200.000	198.59
3	Chloromethane	50	1.081	1.081	(0.258)	1298797	200.000	205.16(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1003656	200.000	202.23(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1492460	200.000	204.94(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1019362	200.000	196.57
44	Dibromomethane	93	5.558	5.558	(1.118)	603267	200.000	200.37(A)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	990164	200.000	224.38(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1305080	200.000	199.20
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	306426	200.000	188.25
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3908287	200.000	203.22(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3158365	400.000	399.48(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	915440	200.000	201.03(A)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2826639	200.000	210.81(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	4530646	200.000	207.43(A)
92	Naphthalene	128	11.546	11.546	(1.194)	531999	200.000	194.12
63	o-Xylene	106	8.244	8.244	(1.075)	1537247	200.000	197.93
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3856474	200.000	209.37(A)
64	Styrene	104	8.265	8.265	(1.078)	2646814	200.000	196.27
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2815545	200.000	204.97(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	820612	200.000	199.39
50	Toluene	91	6.453	6.453	(0.841)	3655728	200.000	193.36
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	856683	200.000	202.68(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1360653	200.000	203.85(A)
38	Trichloroethene	130	5.207	5.207	(1.048)	1027730	200.000	209.61(A)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1414911	200.000	213.08(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1294651	200.000	223.07(A)

QC Flag Legend

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

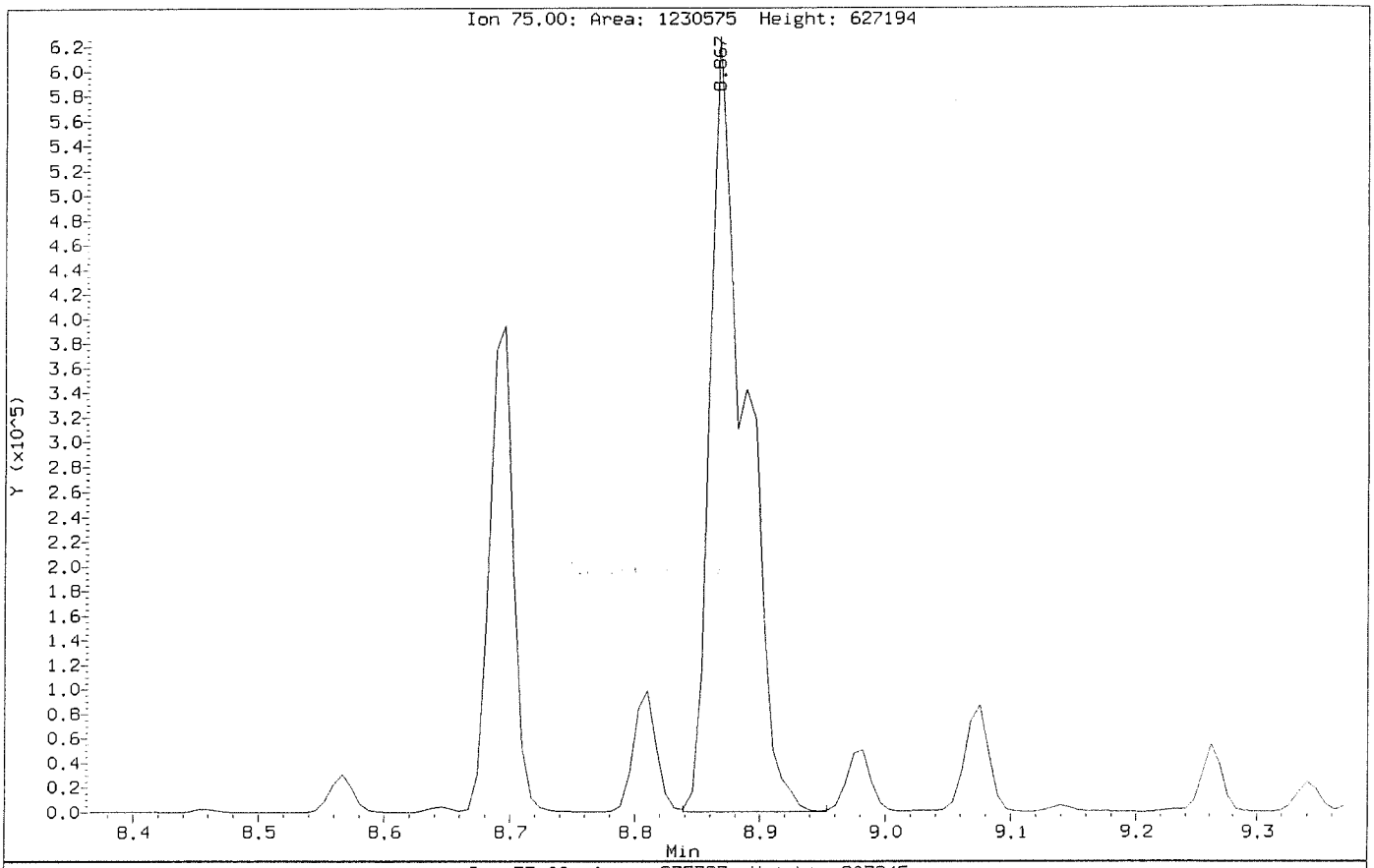


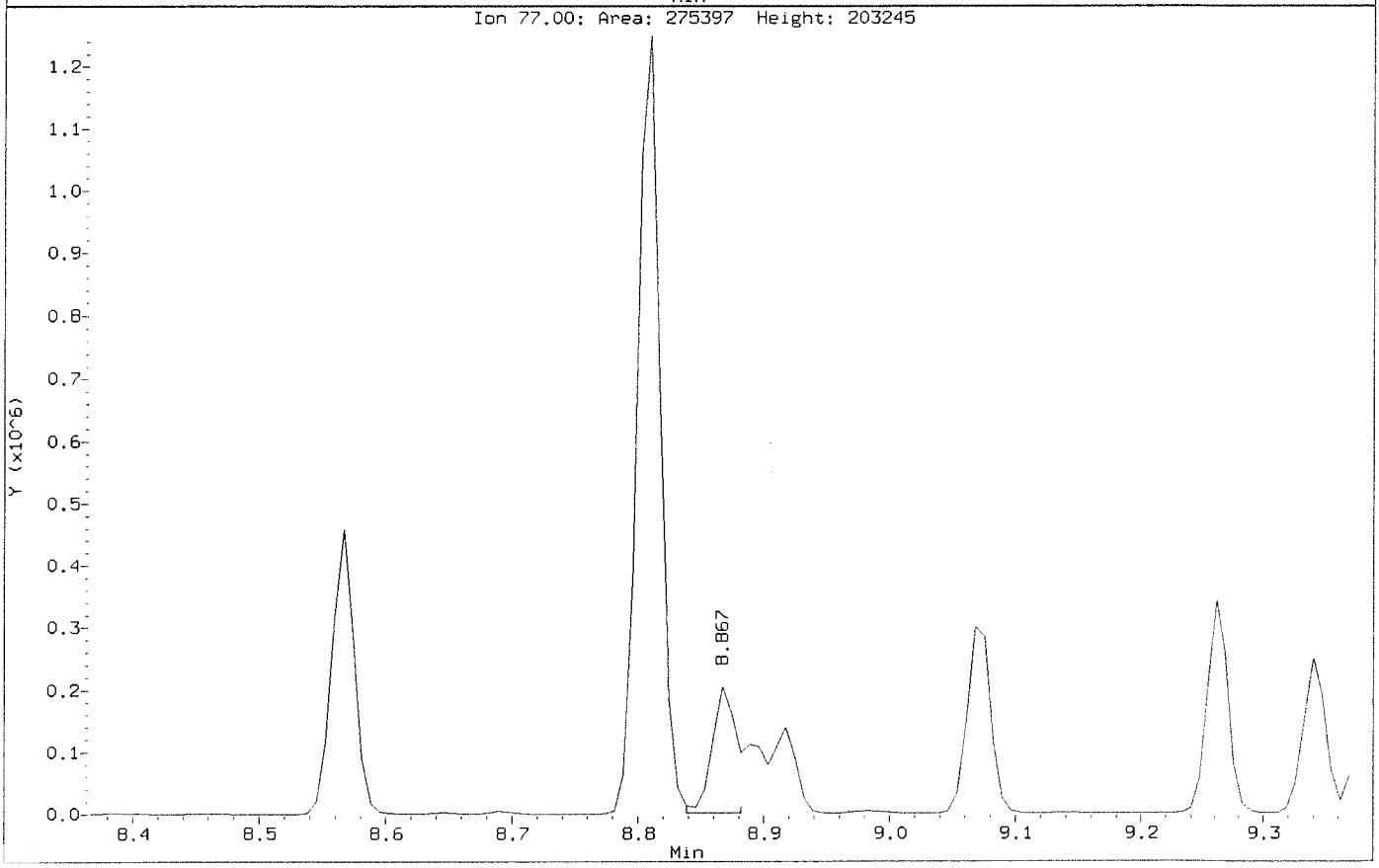
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Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

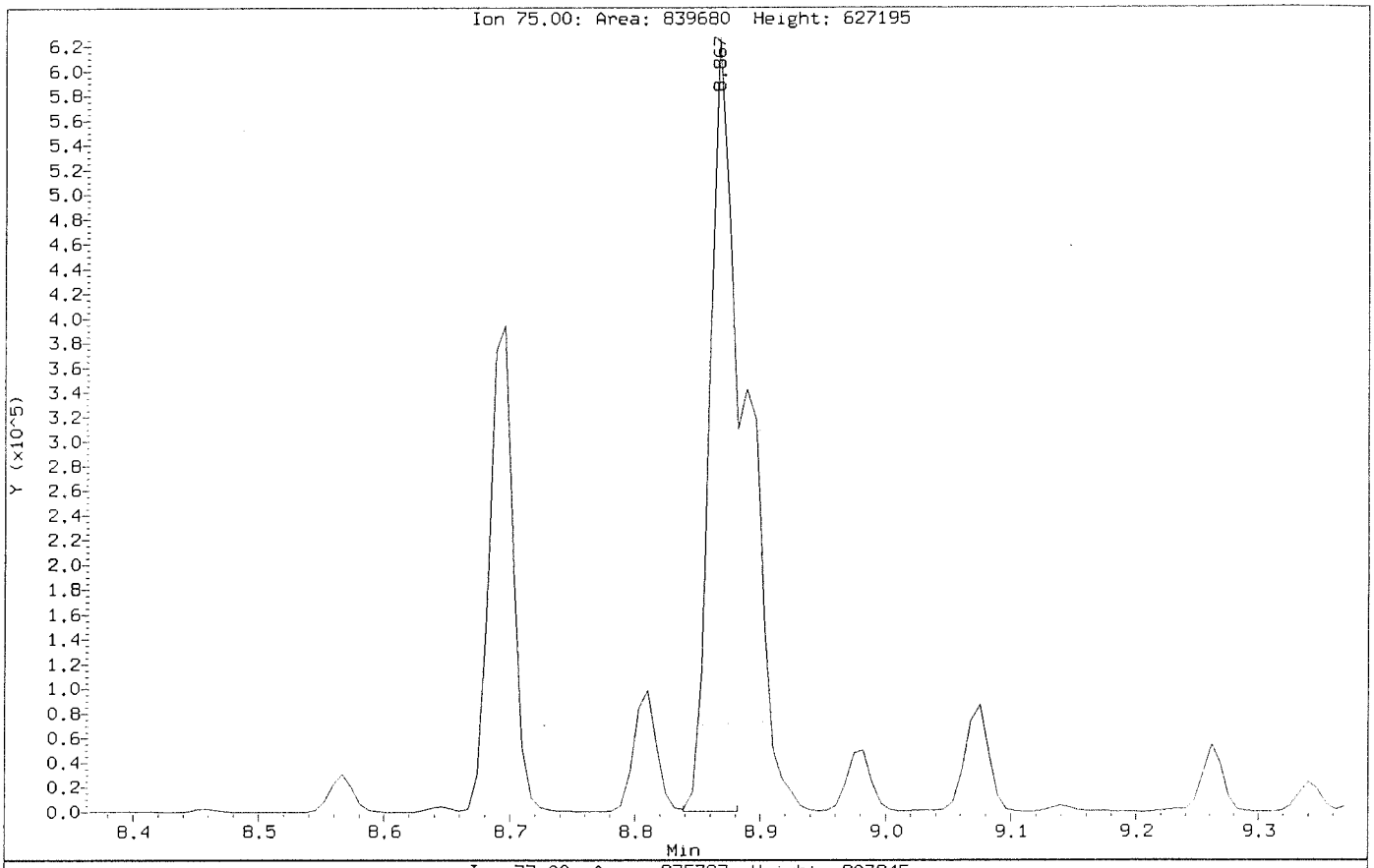
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

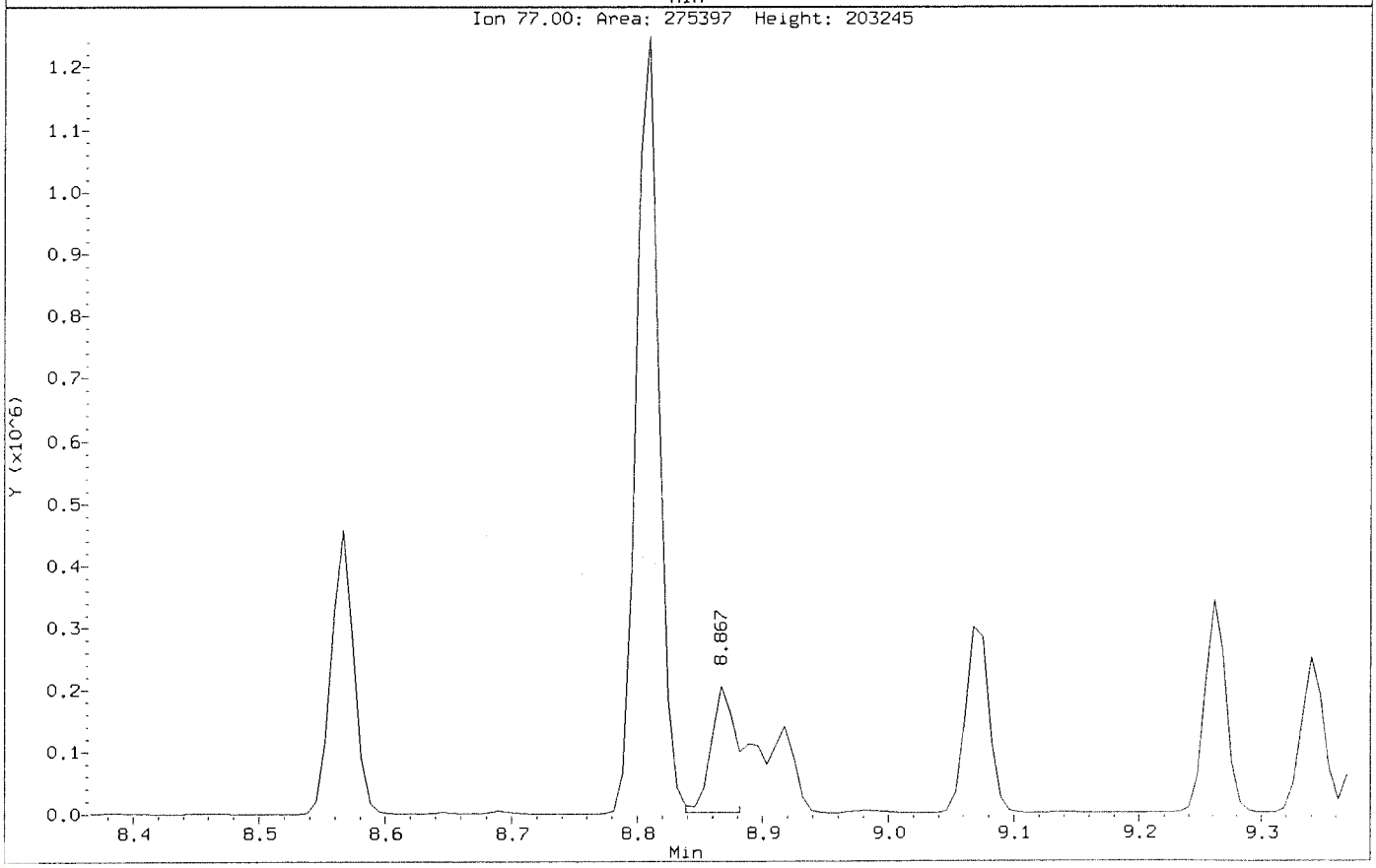




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Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-AUG-2020 16:51
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

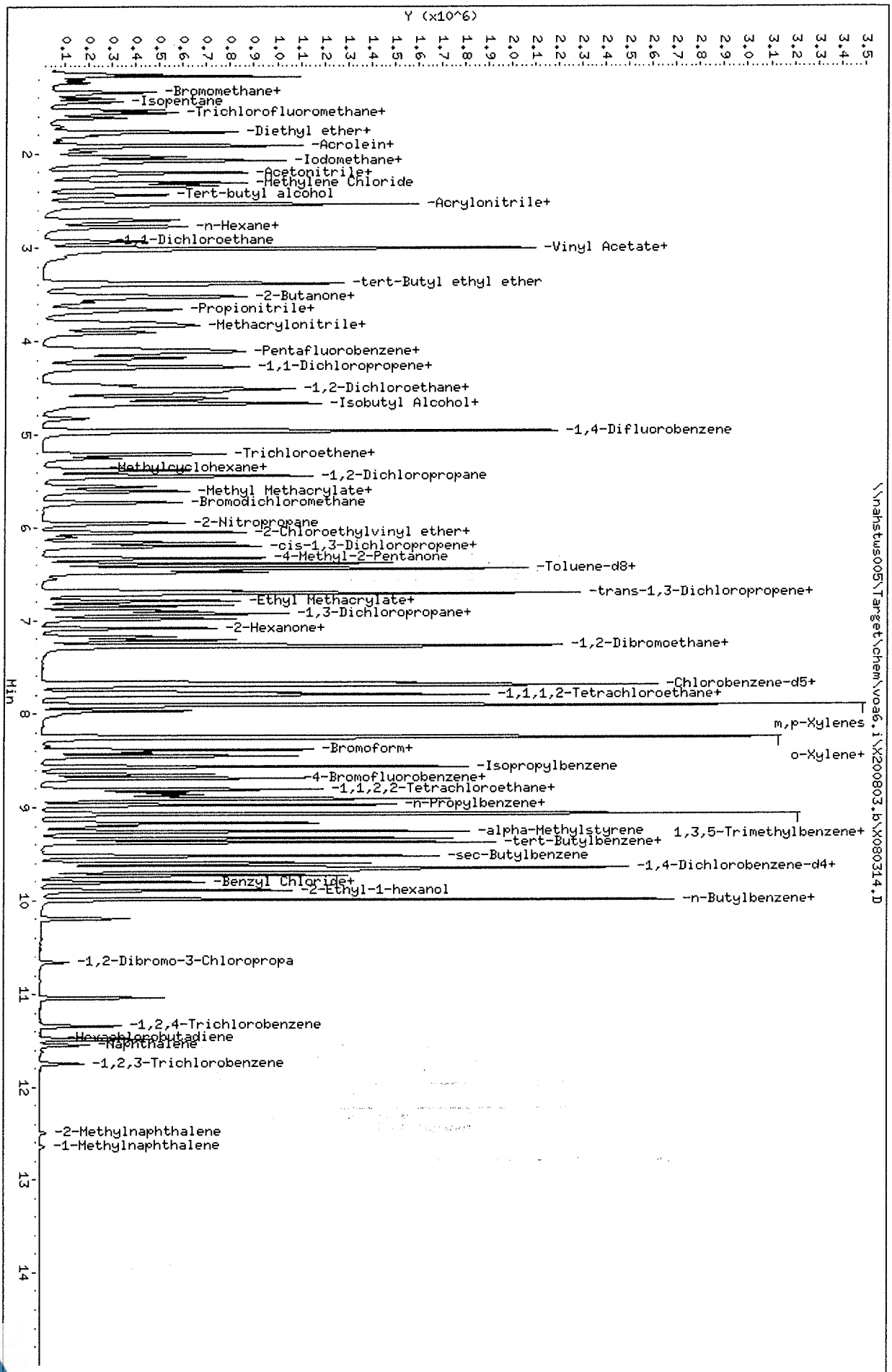
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	487811	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	737194	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	676175	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	325984	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	235982	49.2610	49.26
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	277053	48.7922	48.79
$	48 Toluene-d8	98	6.388	6.389	(0.833)	810392	49.4111	49.41
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	309544	48.9242	48.92
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	245824	47.7596	47.75
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	362002	48.1775	48.17
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	253503	48.2847	48.28
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	183527	47.7003	47.70
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	478275	50.1934	50.19
	11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	198134	51.2626	51.26
	32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	303153	48.9364	48.93
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	49347	50.3044	50.30
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	225070	47.1692	47.16(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	94358	50.1387	50.13
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	838876	48.1702	48.17
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	22001	47.2364	47.23
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	241523	48.7266	48.72
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	433731	47.0400	47.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	349700	48.9941	48.99
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	272227	50.3156	50.31
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	818750	48.0653	48.06
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	489054	47.7302	47.73
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	370552	48.7766	48.77
84	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	489689	48.3269	48.32
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	354577	50.9627	50.96
24	2-Butanone	43	3.580	3.581	(0.855)	250811	104.882	104.88
76	2-Chlorotoluene	91	8.974	8.982	(0.928)	683359	48.3181	48.31
52	2-Hexanone	43	7.090	7.090	(0.924)	404545	95.3001	95.30
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	792702	48.1785	48.17
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	869988	48.1945	48.19
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	585620	93.5781	93.57
10	Acetone	43	1.976	1.976	(0.472)	173872	102.274	102.27
37	Benzene	78	4.519	4.519	(0.909)	904308	49.4427	49.44
74	Bromobenzene	156	8.809	8.810	(0.911)	302326	47.4100	47.40
29	Bromochloromethane	128	3.802	3.803	(0.908)	138253	47.0189	47.01
39	Bromodichloromethane	83	5.729	5.730	(1.153)	323350	48.7242	48.72
66	Bromoform	173	8.415	8.416	(1.097)	181296	48.3252	48.32
6	Bromomethane	94	1.338	1.331	(0.320)	179720	53.4789	53.47
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1217324	101.439	101.43
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	315836	47.9659	47.96
59	Chlorobenzene	112	7.699	7.699	(1.004)	648373	48.9257	48.92
7	Chloroethane	64	1.403	1.396	(0.335)	176540	51.0584	51.05
28	Chloroform	83	3.910	3.910	(0.933)	417889	47.9496	47.94
3	Chloromethane	50	1.081	1.081	(0.258)	337755	49.3134	49.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	262524	48.8914	48.89
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	387446	49.9295	49.92
55	Dibromochloromethane	129	7.176	7.176	(0.936)	256809	47.4144	47.41
44	Dibromomethane	93	5.557	5.558	(1.118)	155222	48.3826	48.38
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	241678	50.6204	50.62
61	Ethylbenzene	106	7.799	7.807	(1.017)	332949	48.6572	48.65
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	84278	48.1556	48.15
67	Isopropylbenzene	105	8.566	8.566	(1.117)	975427	48.5621	48.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	807125	97.7420	97.74
17	Methylene Chloride	84	2.305	2.306	(0.550)	246540	49.0057	49.00
87	n-Butylbenzene	91	9.999	9.999	(1.034)	708345	49.1343	49.13
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1130932	48.1580	48.15
92	Naphthalene	128	11.546	11.546	(1.194)	139595	53.3922	53.39
63	o-Xylene	106	8.244	8.244	(1.075)	395537	48.7621	48.76
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	948593	47.8994	47.89
64	Styrene	104	8.258	8.265	(1.077)	697467	49.5184	49.51
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	699293	47.3494	47.34
56	Tetrachloroethene	164	6.933	6.933	(0.904)	204313	47.5322	47.53
50	Toluene	91	6.446	6.453	(0.840)	953134	48.2682	48.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	223973	48.9770	48.97
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	345851	48.6275	48.62
38	Trichloroethene	130	5.214	5.207	(1.049)	264166	50.5627	50.56
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	357713	49.7923	49.79
5	Vinyl Chloride	62	1.145	1.145	(0.273)	318745	50.7622	50.76

QC Flag Legend

M - Compound response manually integrated.

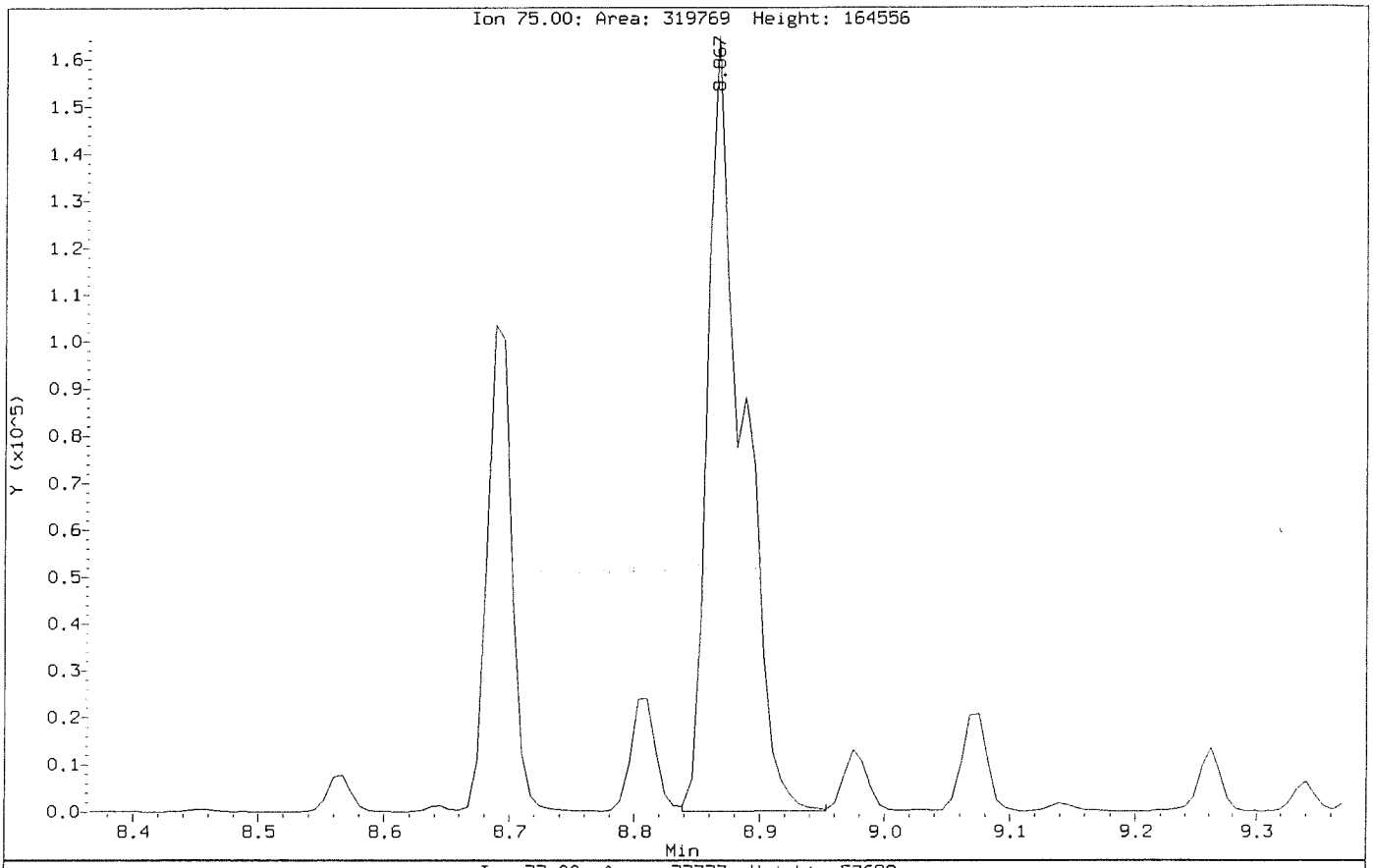


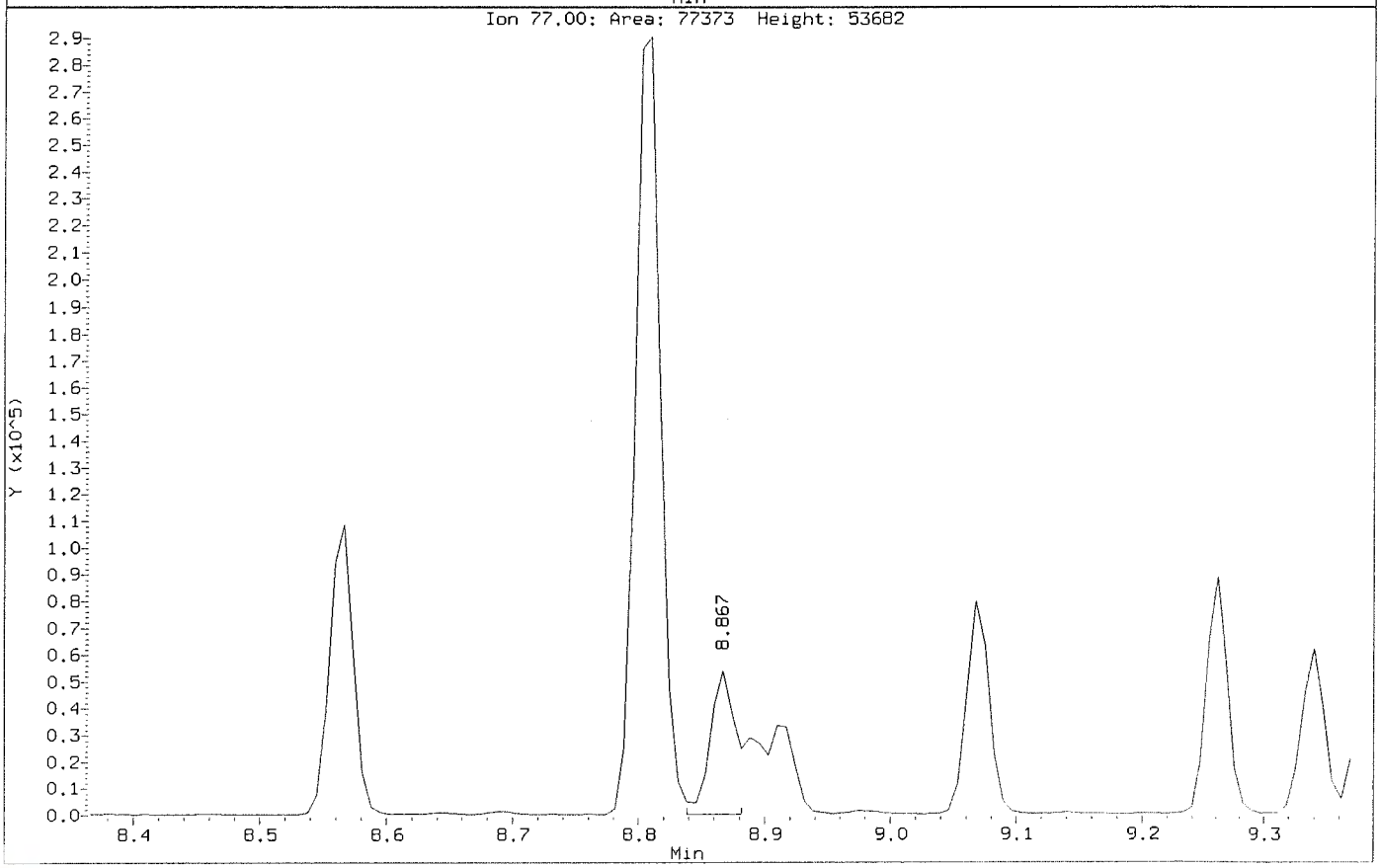
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Date : 03-AUG-2020 16:51
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

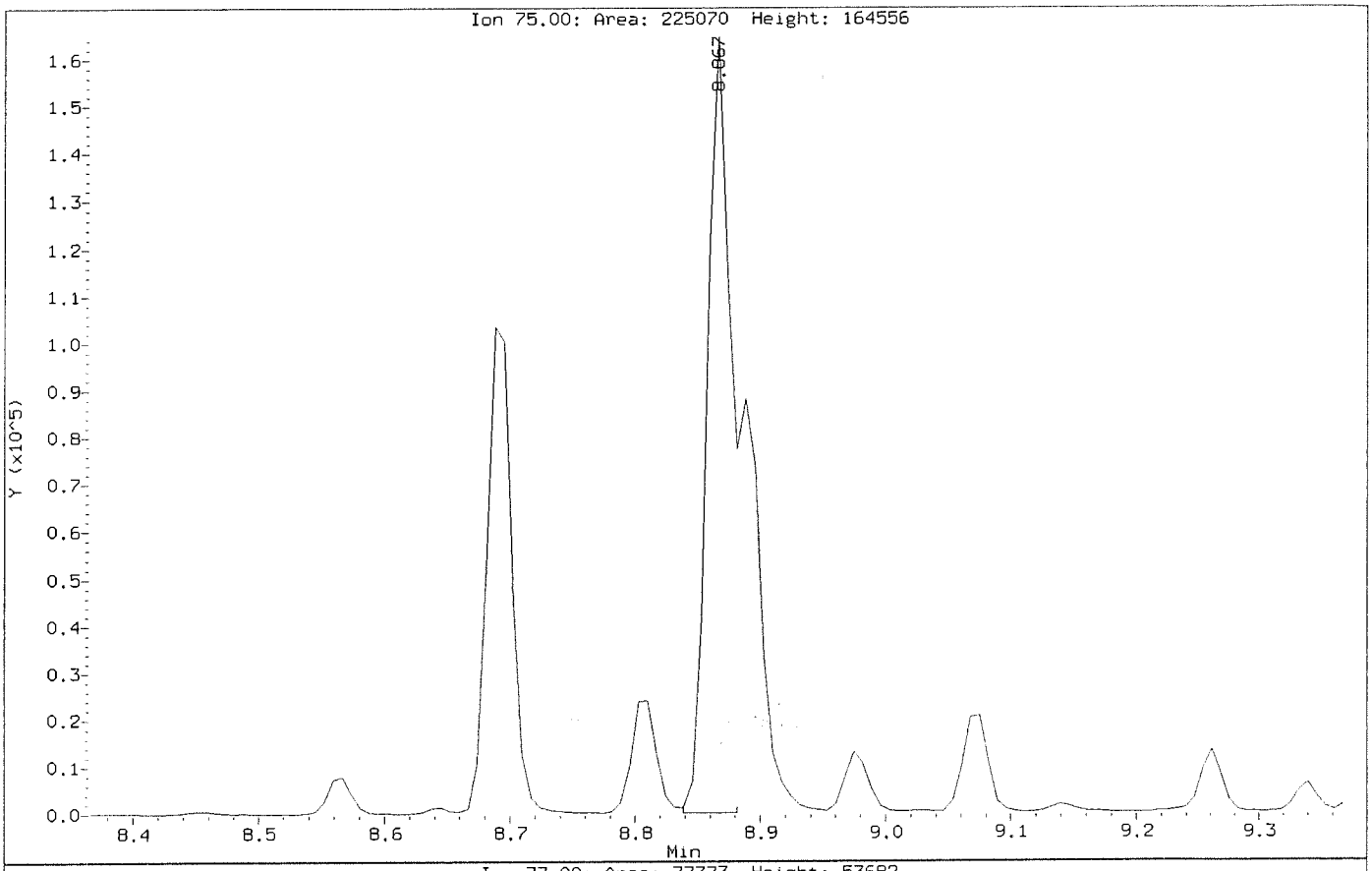
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

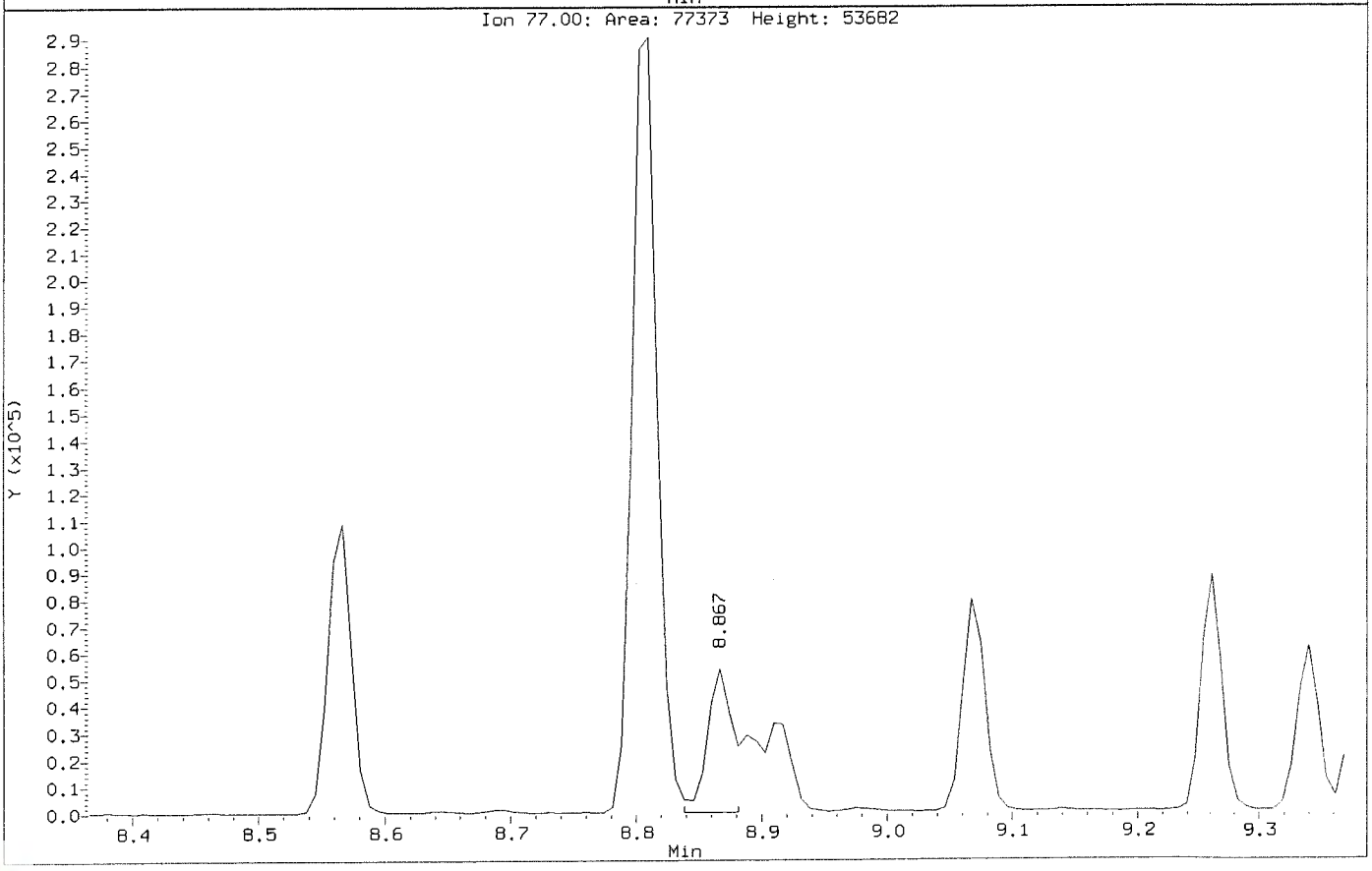




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 41559 **Analyst:** Presenta Cabascango

Date: 08-28-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	08-28-2020 12:24 pm	1.00	50 mL	50 mL	X082801.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	08-28-2020 12:48 pm	1.00	50 mL	50 mL	X082802.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCB	SAMP	08-28-2020 01:36 pm	1.00	50 mL	50 mL	X082803.D	Liquid	Y	NA
4	VLCSW-200828	LCS	08-28-2020 02:00 pm	1.00	50 mL	50 mL	X082804.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
5	BLANK	SAMP	08-28-2020 02:24 pm	1.00	50 mL	50 mL	X082805.D	Liquid	Y	NA
6	VBLKW-200828	MBLK	08-28-2020 02:48 pm	1.00	50 mL	50 mL	X082806.D	Liquid	Y	NA
7	HS20081150-02	SAMP	08-28-2020 03:12 pm	1.00	50 mL	50 mL	X082807.D	Liquid	Y	<2
8	HS20081151-03	SAMP	08-28-2020 03:36 pm	1.00	50 mL	50 mL	X082808.D	Liquid	Y	<2
9	HS20081151-01	SAMP	08-28-2020 04:00 pm	1.00	50 mL	50 mL	X082809.D	Liquid	Y	<2
10	HS20081150-01	SAMP	08-28-2020 04:24 pm	5.00	10 mL	50 mL	X082810.D	Liquid	Y	<2
11	HS20081151-01MS	MS	08-28-2020 04:48 pm	1.00	50 mL	50 mL	X082811.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
12	HS20081151-01MSD	MSD	08-28-2020 05:12 pm	1.00	50 mL	50 mL	X082812.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
13	HS20081150-01	SAMP	08-28-2020 05:36 pm	100.0(	500 µL	50 mL	X082813.D	Liquid	Y	<2
14	CCV-END	CCV	08-28-2020 06:00 pm	1.00	50 mL	50 mL	X082814.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	HS20081205-02	SAMP	08-28-2020 06:24 pm	1.00	50 mL	50 mL	X082815.D	Liquid	Y	NA
	job hs20081205 is neat									
16	HS20081205-03	SAMP	08-28-2020 06:48 pm	1.00	50 mL	50 mL	X082816.D	Liquid	Y	NA
17	HS20081205-04	SAMP	08-28-2020 07:12 pm	1.00	50 mL	50 mL	X082817.D	Liquid	Y	NA
18	HS20081205-05	SAMP	08-28-2020 07:36 pm	1.00	50 mL	50 mL	X082818.D	Liquid	Y	NA
19	HS20081205-06	SAMP	08-28-2020 08:00 pm	1.00	50 mL	50 mL	X082819.D	Liquid	Y	NA
20	HS20081205-10	SAMP	08-28-2020 08:24 pm	1.00	50 mL	50 mL	X082820.D	Liquid	Y	NA
21	HS20081205-11	SAMP	08-28-2020 08:48 pm	1.00	50 mL	50 mL	X082821.D	Liquid	Y	NA
22	HS20081205-12	SAMP	08-28-2020 09:12 pm	1.00	50 mL	50 mL	X082822.D	Liquid	Y	NA
23	HS20081205-13	SAMP	08-28-2020 09:36 pm	1.00	50 mL	50 mL	X082823.D	Liquid	Y	NA
24	HS20081205-14	SAMP	08-28-2020 10:00 pm	1.00	50 mL	50 mL	X082824.D	Liquid	Y	NA
25	HS20081205-15	SAMP	08-28-2020 10:24 pm	1.00	50 mL	50 mL	X082825.D	Liquid	Y	NA
26	HS20081205-07	SAMP	08-28-2020 10:48 pm	1.00	50 mL	50 mL	X082826.D	Liquid	Y	NA
27	HS20081205-09	SAMP	08-28-2020 11:12 pm	1.00	50 mL	50 mL	X082827.D	Liquid	Y	NA
28	HS20081205-08	SAMP	08-28-2020 11:36 pm	1.00	50 mL	50 mL	X082828.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-42-06
IS ID	31106-42-06
CAL STD ID	31106-44-01/02
BFB ID	31106-42-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200828	96	98	99	95	0
02	VBLKW-200828	88	93	106	97	0
03	HS20081150-02	87	94	105	96	0
04	HS20081150-01	90	93	104	98	0
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200828

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID: X082806 Lab Sample ID: VBLKW-200828

Date Analyzed: 08/28/20 Time Analyzed: 1448

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-200828	VLCSW-200828	X082804	1400
02	HS20081150-0	HS20081150-02	X082807	1512
03	HS20081150-0	HS20081150-01	X082810	1624
04	HS20081151-0	HS20081151-01M	X082811	1648
05	HS20081151-0	HS20081151-01M	X082812	1712
06				
07				
08				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID: X082801 BFB Injection Date: 08/28/20

Instrument ID: VOA6 BFB Injection Time: 1224

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.4
75	30.0 - 60.0% of mass 95	48.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	66.8
175	5.0 - 9.0% of mass 174	5.1 (7.6)1
176	95.0 - 101.0% of mass 174	64.4 (96.3)1
177	5.0 - 9.0% of mass 176	4.8 (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	X082802	08/28/20	1248
02	VLCSW-200828	VLCSW-200828	X082804	08/28/20	1400
03	VBLKW-200828	VBLKW-200828	X082806	08/28/20	1448
04	HS20081150-0	HS20081150-02	X082807	08/28/20	1512
05	HS20081150-0	HS20081150-01	X082810	08/28/20	1624
06	HS20081151-0	HS20081151-01M	X082811	08/28/20	1648
07	HS20081151-0	HS20081151-01M	X082812	08/28/20	1712
08	CCV-END	CCV-END	X082814	08/28/20	1800
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Instrument ID: VOA6 Calibration Date: 08/28/20 Time: 1248

Lab File ID: X082802 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5750185	0.5750185	0.2	-9.32	20.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.5075456	0.5075456	0.1	-5.30	20.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.6561340	1.6561340	0.6	-5.35	20.00	AVRG
2,2-Dichloropropane	0.7130000	0.7793629	0.7793629	0.1	-9.31	20.00	AVRG
1,1-Dichloropropene	0.4200000	0.4224406	0.4224406	0.1	-0.58	20.00	AVRG
Dibromomethane	0.2170000	0.2307759	0.2307759	0.1	-6.35	20.00	AVRG
1,2-Dibromoethane	0.3660000	0.3909941	0.3909941	0.1	-6.83	20.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.5172580	0.5172580	0.1	-10.29	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3916788	0.3916788	0.1	-3.07	20.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7728662	0.7728662	0.1	-0.37	20.00	AVRG
1,1,2,2-Tetrachloroethane	55.603637	50.000000	0.8964817	0.3	-11.21	20.00	LINR
1,1,2-Trichloroethane	0.2840000	0.3018905	0.3018905	0.1	-6.30	20.00	AVRG
1,1-Dichloroethane	0.9760000	1.0961661	1.0961661	0.2	-12.31	20.00	AVRG
1,1-Dichloroethene	0.3960000	0.4181211	0.4181211	0.1	-5.59	20.00	AVRG
Trichloroethene	0.3540000	0.3773948	0.3773948	0.2	-6.61	20.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1622650	0.1622650	0.01	-8.18	20.00	AVRG
Trichlorofluoromethane	0.7360000	0.6771786	0.6771786	0.1	7.99	20.00	AVRG
1,2,4-Trichlorobenzene	55.882296	50.000000	0.3231741	0.1	-11.76	20.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	2.7538405	2.7538405	0.1	-3.10	20.00	AVRG
Tetrachloroethene	0.3180000	0.3153650	0.3153650	0.2	0.83	20.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.4587688	1.4587688	0.4	-3.17	20.00	AVRG
1,2-Dichloroethane	0.4840000	0.4856077	0.4856077	0.1	-0.33	20.00	AVRG
1,2-Dichloropropane	0.3670000	0.4110346	0.4110346	0.1	-12.00	20.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.6478219	2.6478219	0.1	-1.33	20.00	AVRG
1,3-Dichloropropane	0.5620000	0.5981652	0.5981652	0.1	-6.44	20.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.6381123	1.6381123	0.4	-5.41	20.00	AVRG
Toluene	1.4600000	1.5439385	1.5439385	0.4	-5.75	20.00	AVRG
2-Butanone	0.2450000	0.2861627	0.2861627	0.1	-16.80	20.00	AVRG
2-Chlorotoluene	2.1690000	2.2705480	2.2705480	0.1	-4.68	20.00	AVRG
2-Hexanone	0.3140000	0.3258372	0.3258372	0.1	-3.77	20.00	AVRG
4-Chlorotoluene	2.5230000	2.6232705	2.6232705	0.1	-3.97	20.00	AVRG
tert-Butylbenzene	2.2650000	2.1769750	2.1769750	0.1	3.89	20.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4773054	0.4773054	0.1	-3.09	20.00	AVRG
Acetone	104.11424	100.00000	0.1813897	0.1	-4.11	20.00	LINR
Benzene	1.2410000	1.3611743	1.3611743	0.5	-9.68	20.00	AVRG
Bromobenzene	0.9780000	1.0222870	1.0222870	0.1	-4.53	20.00	AVRG
Bromochloromethane	0.3010000	0.3144015	0.3144015	0.1	-4.45	20.00	AVRG
Bromodichloromethane	0.4500000	0.4715023	0.4715023	0.2	-4.78	20.00	AVRG
Bromoform	0.2780000	0.2867148	0.2867148	0.1	-3.13	20.00	AVRG
Bromomethane	53.514558	50.000000	0.3686700	0.1	-7.03	20.00	LINR
Carbon Disulfide	1.2300000	1.3206961	1.3206961	0.1	-7.37	20.00	AVRG
Carbon Tetrachloride	0.4460000	0.4081525	0.4081525	0.1	8.48	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date: 08/28/20 Time: 1248

Lab File ID: X082802 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Chlorobenzene	0.9800000	1.0367143	1.0367143	0.5	-5.79	20.00	AVRG	
Chloroethane	0.3540000	0.4044773	0.4044773	0.1	-14.26	20.00	AVRG	
Chloroform	0.8930000	0.9422311	0.9422311	0.2	-5.51	20.00	AVRG	
Chloromethane	0.7020000	0.6902510	0.6902510	0.1	1.67	20.00	AVRG	
cis-1,2-Dichloroethene	0.5500000	0.6052410	0.6052410	0.1	-10.04	20.00	AVRG	
Dibromochloromethane	0.4000000	0.4147133	0.4147133	0.1	-3.68	20.00	AVRG	
Dichlorodifluoromethane	0.4890000	0.4380827	0.4380827	0.1	10.41	20.00	AVRG	
Ethylbenzene	0.5060000	0.5214524	0.5214524	0.1	-3.05	20.00	AVRG	
Hexachlorobutadiene	0.2680000	0.2394876	0.2394876	0.1	10.64	20.00	AVRG	
Isopropylbenzene	1.4850000	1.4784688	1.4784688	0.1	0.44	20.00	AVRG	
m,p-Xylenes	0.6100000	0.6309797	0.6309797	0.1	-3.44	20.00	AVRG	
Methylene Chloride	53.931629	50.000000	0.5548120	0.1	-7.86	20.00	LINR	
n-Butylbenzene	2.2110000	2.1638254	2.1638254	0.5	2.13	20.00	AVRG	
n-Propylbenzene	3.6020000	3.6093823	3.6093823	0.1	-0.20	20.00	AVRG	
Naphthalene	62.029230	50.000000	0.5004473	0.2	-24.06	20.00	2RDR	<-
o-Xylene	0.6000000	0.6284707	0.6284707	0.3	-4.74	20.00	AVRG	
sec-Butylbenzene	3.0380000	2.8679423	2.8679423	0.1	5.60	20.00	AVRG	
Styrene	1.0410000	1.0958557	1.0958557	0.3	-5.27	20.00	AVRG	
Vinyl Chloride	0.6440000	0.6558953	0.6558953	0.1	-1.85	20.00	AVRG	
1,2,3-Trichloropropane	0.7320000	0.7653360	0.7653360	0.1	-4.55	20.00	AVRG	
p-Isopropyltoluene	2.7680000	2.6790765	2.6790765	0.1	3.21	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	53.372189	50.000000	7.64e-002	0.05	-6.74	20.00	LINR	
1,2-Dichloroethane-d4	0.5820000	0.5381347	0.5381347	0.1	7.54	20.00	AVRG	
Dibromofluoromethane	0.4910000	0.4727891	0.4727891	0.1	3.71	20.00	AVRG	
Toluene-d8	1.2130000	1.1728082	1.1728082	0.1	3.31	20.00	AVRG	
4-Bromofluorobenzene	0.4680000	0.4392027	0.4392027	0.1	6.15	20.00	AVRG	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Instrument ID: VOA6 Calibration Date: 08/28/20 Time: 1800

Lab File ID: X082814 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

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
cis-1,3-Dichloropropene	0.5260000	0.5184825	0.5184825	0.2	1.43	50.00	AVRG
trans-1,3-Dichloropropene	0.4820000	0.4621178	0.4621178	0.1	4.12	50.00	AVRG
1,3-Dichlorobenzene	1.5720000	1.4649892	1.4649892	0.6	6.81	50.00	AVRG
2,2-Dichloropropane	0.7130000	0.6197988	0.6197988	0.1	13.07	50.00	AVRG
1,1-Dichloropropene	0.4200000	0.3766857	0.3766857	0.1	10.31	50.00	AVRG
Dibromomethane	0.2170000	0.2144494	0.2144494	0.1	1.18	50.00	AVRG
1,2-Dibromoethane	0.3660000	0.3630989	0.3630989	0.1	0.79	50.00	AVRG
trans-1,2-Dichloroethene	0.4690000	0.4733222	0.4733222	0.1	-0.92	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3800000	0.3525120	0.3525120	0.1	7.23	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7079220	0.7079220	0.1	8.06	50.00	AVRG
1,1,2,2-Tetrachloroethane	53.708923	50.000000	0.8657201	0.3	-7.42	50.00	LINR
1,1,2-Trichloroethane	0.2840000	0.2816506	0.2816506	0.1	0.83	50.00	AVRG
1,1-Dichloroethane	0.9760000	1.0187105	1.0187105	0.2	-4.38	50.00	AVRG
1,1-Dichloroethene	0.3960000	0.3879138	0.3879138	0.1	2.04	50.00	AVRG
Trichloroethene	0.3540000	0.3447245	0.3447245	0.2	2.62	50.00	AVRG
1,2,3-Trichlorobenzene	0.1500000	0.1512307	0.1512307	0.01	-0.82	50.00	AVRG
Trichlorofluoromethane	0.7360000	0.6445449	0.6445449	0.1	12.42	50.00	AVRG
1,2,4-Trichlorobenzene	52.622190	50.000000	0.3040111	0.1	-5.24	50.00	2RDR
1,2,4-Trimethylbenzene	2.6710000	2.4107189	2.4107189	0.1	9.74	50.00	AVRG
Tetrachloroethene	0.3180000	0.2794605	0.2794605	0.2	12.12	50.00	AVRG
1,2-Dichlorobenzene	1.4140000	1.3232794	1.3232794	0.4	6.42	50.00	AVRG
1,2-Dichloroethane	0.4840000	0.4597592	0.4597592	0.1	5.01	50.00	AVRG
1,2-Dichloropropane	0.3670000	0.3814060	0.3814060	0.1	-3.92	50.00	AVRG
1,3,5-Trimethylbenzene	2.6130000	2.3291879	2.3291879	0.1	10.86	50.00	AVRG
1,3-Dichloropropane	0.5620000	0.5595657	0.5595657	0.1	0.43	50.00	AVRG
1,4-Dichlorobenzene	1.5540000	1.4438033	1.4438033	0.4	7.09	50.00	AVRG
Toluene	1.4600000	1.3930583	1.3930583	0.4	4.58	50.00	AVRG
2-Butanone	0.2450000	0.2777203	0.2777203	0.1	-13.36	50.00	AVRG
2-Chlorotoluene	2.1690000	2.0050347	2.0050347	0.1	7.56	50.00	AVRG
2-Hexanone	0.3140000	0.3130765	0.3130765	0.1	0.29	50.00	AVRG
4-Chlorotoluene	2.5230000	2.3180926	2.3180926	0.1	8.12	50.00	AVRG
tert-Butylbenzene	2.2650000	1.9448665	1.9448665	0.1	14.13	50.00	AVRG
4-Methyl-2-Pentanone	0.4630000	0.4608288	0.4608288	0.1	0.47	50.00	AVRG
Acetone	98.824373	100.00000	0.1722675	0.1	1.18	50.00	LINR
Benzene	1.2410000	1.2499646	1.2499646	0.5	-0.72	50.00	AVRG
Bromobenzene	0.9780000	0.9223856	0.9223856	0.1	5.69	50.00	AVRG
Bromochloromethane	0.3010000	0.2973211	0.2973211	0.1	1.22	50.00	AVRG
Bromodichloromethane	0.4500000	0.4332273	0.4332273	0.2	3.73	50.00	AVRG
Bromoform	0.2780000	0.2698556	0.2698556	0.1	2.93	50.00	AVRG
Bromomethane	50.020266	50.000000	0.3442991	0.1	-0.04	50.00	LINR
Carbon Disulfide	1.2300000	1.2035610	1.2035610	0.1	2.15	50.00	AVRG
Carbon Tetrachloride	0.4460000	0.3784375	0.3784375	0.1	15.15	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: VOA6 Calibration Date: 08/28/20 Time: 1800

Lab File ID: X082814 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9800000	0.9297901	0.9297901	0.5	5.12	50.00	AVRG
Chloroethane	0.3540000	0.3850292	0.3850292	0.1	-8.76	50.00	AVRG
Chloroform	0.8930000	0.8816164	0.8816164	0.2	1.27	50.00	AVRG
Chloromethane	0.7020000	0.6685952	0.6685952	0.1	4.76	50.00	AVRG
cis-1,2-Dichloroethene	0.5500000	0.5683867	0.5683867	0.1	-3.34	50.00	AVRG
Dibromochloromethane	0.4000000	0.3831593	0.3831593	0.1	4.21	50.00	AVRG
Dichlorodifluoromethane	0.4890000	0.4335332	0.4335332	0.1	11.34	50.00	AVRG
Ethylbenzene	0.5060000	0.4659187	0.4659187	0.1	7.92	50.00	AVRG
Hexachlorobutadiene	0.2680000	0.2317321	0.2317321	0.1	13.53	50.00	AVRG
Isopropylbenzene	1.4850000	1.3035722	1.3035722	0.1	12.22	50.00	AVRG
m,p-Xylenes	0.6100000	0.5595042	0.5595042	0.1	8.28	50.00	AVRG
Methylene Chloride	51.056352	50.000000	0.5259702	0.1	-2.11	50.00	LINR
n-Butylbenzene	2.2110000	1.8183314	1.8183314	0.5	17.76	50.00	AVRG
n-Propylbenzene	3.6020000	3.1501622	3.1501622	0.1	12.54	50.00	AVRG
Naphthalene	53.083163	50.000000	0.4256601	0.2	-6.17	50.00	2RDR
o-Xylene	0.6000000	0.5613953	0.5613953	0.3	6.43	50.00	AVRG
sec-Butylbenzene	3.0380000	2.5284230	2.5284230	0.1	16.77	50.00	AVRG
Styrene	1.0410000	0.9833993	0.9833993	0.3	5.53	50.00	AVRG
Vinyl Chloride	0.6440000	0.6155699	0.6155699	0.1	4.41	50.00	AVRG
1,2,3-Trichloropropane	0.7320000	0.7349040	0.7349040	0.1	-0.40	50.00	AVRG
p-Isopropyltoluene	2.7680000	2.3270403	2.3270403	0.1	15.93	50.00	AVRG
1,2-Dibromo-3-Chloropropane	53.954179	50.000000	7.73e-002	0.05	-7.91	50.00	LINR
1,2-Dichloroethane-d4	0.5820000	0.5648842	0.5648842	0.1	2.94	50.00	AVRG
Dibromofluoromethane	0.4910000	0.4932804	0.4932804	0.1	-0.46	50.00	AVRG
Toluene-d8	1.2130000	1.1982648	1.1982648	0.1	1.21	50.00	AVRG
4-Bromofluorobenzene	0.4680000	0.4451885	0.4451885	0.1	4.87	50.00	AVRG

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID (Standard): X082802 Date Analyzed: 08/28/20

Instrument ID: VOA6 Time Analyzed: 1248

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	608999	7.67	662370	4.97	288374	9.66
	UPPER LIMIT	1217998	8.17	1324740	5.47	576748	10.16
	LOWER LIMIT	304500	7.17	331185	4.47	144187	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200828	612811	7.67	678331	4.97	294624	9.67
02	VBLKW-200828	580023	7.67	664384	4.97	267168	9.67
03	HS20081150-02	592521	7.67	668366	4.97	274516	9.67
04	HS20081150-01	542192	7.67	613110	4.97	254457	9.67
05	HS20081151-01	556086	7.67	623828	4.97	263621	9.67
06	HS20081151-01	538508	7.67	606212	4.97	252520	9.67
07							
08							
09							
10							
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12							
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16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID (Standard): X082802 Date Analyzed: 08/28/20

Instrument ID: VOA6 Time Analyzed: 1248

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

	CLIENT SAMPLE NO.	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	430526	4.19				
	UPPER LIMIT	861052	4.69				
	LOWER LIMIT	215263	3.69				
01	VLCSW-200828	435559	4.19				
02	VBLKW-200828	447810	4.19				
03	HS20081150-02	450383	4.19				
04	HS20081150-01	400363	4.19				
05	HS20081151-01	418519	4.19				
06	HS20081151-01	404957	4.19				
07							
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.

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082801.D

Date : 28-AUG-2020 12:24

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

