LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 26

2020

Bate Stamp Numbers
00993616 – 00995429

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2020

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

VOLUME 26

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: 00993616 – 00995429

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

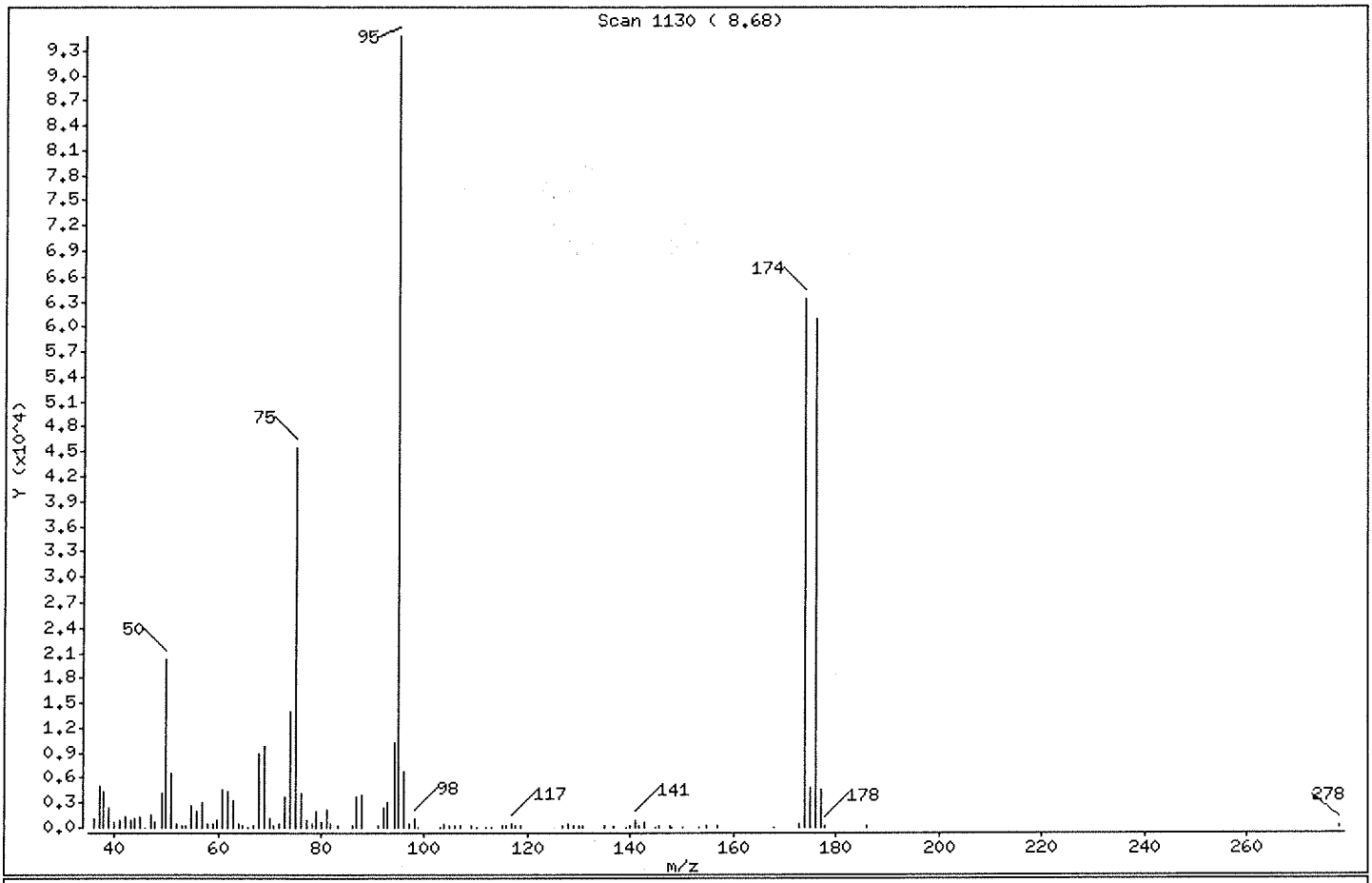
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.39
75	30.00 - 60.00% of mass 95	48.06
96	5.00 - 9.00% of mass 95	7.07
173	Less than 2.00% of mass 174	0.38 (0.56)
174	Greater than 50.00% of mass 95	66.84
175	5.00 - 9.00% of mass 174	5.07 (7.58)
176	95.00 - 101.00% of mass 174	64.38 (96.31)
177	5.00 - 9.00% of mass 176	4.84 (7.51)

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

Data File: X082801.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1156	62.00	4432	92.00	2435	130.80	135
37.00	5078	63.00	3174	92.90	3017	134.90	207
38.00	4322	64.00	407	94.00	10291	136.80	125
39.00	2393	64.90	152	95.00	94680	139.00	92
39.90	628	65.90	70	96.00	6693	139.80	115
41.00	921	66.80	217	97.00	407	140.90	793
42.00	1296	68.00	8848	98.00	982	141.80	306
43.00	770	69.00	9692	98.80	76	142.80	698
44.00	1088	70.10	1148	102.90	102	145.00	66
45.00	1364	70.90	136	103.90	390	145.70	161
45.90	51	72.00	544	104.80	275	147.60	143
47.00	1508	73.00	3735	105.90	300	148.00	102
47.90	579	74.00	13937	106.80	316	150.00	105
49.00	4137	75.00	45504	108.90	323	153.50	55
50.00	20256	76.00	4080	110.20	100	154.90	282
51.00	6502	77.00	778	111.90	78	156.80	183
51.90	330	78.10	541	112.90	71	167.80	77
52.90	150	78.90	2058	114.90	192	172.80	357
53.90	151	79.90	709	115.80	254	173.90	63288
55.00	2526	80.90	2134	116.80	539	174.90	4796
56.00	2042	81.90	480	117.70	288	175.90	60952
57.00	2987	83.10	194	118.70	310	176.90	4579
58.10	354	85.90	153	126.80	218	177.80	175
59.00	494	86.90	3747	127.90	394	186.00	160
59.90	952	87.90	3887	128.80	146	278.10	300
61.00	4616	90.90	316	129.80	261		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082802.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 28-AUG-2020 12:48
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

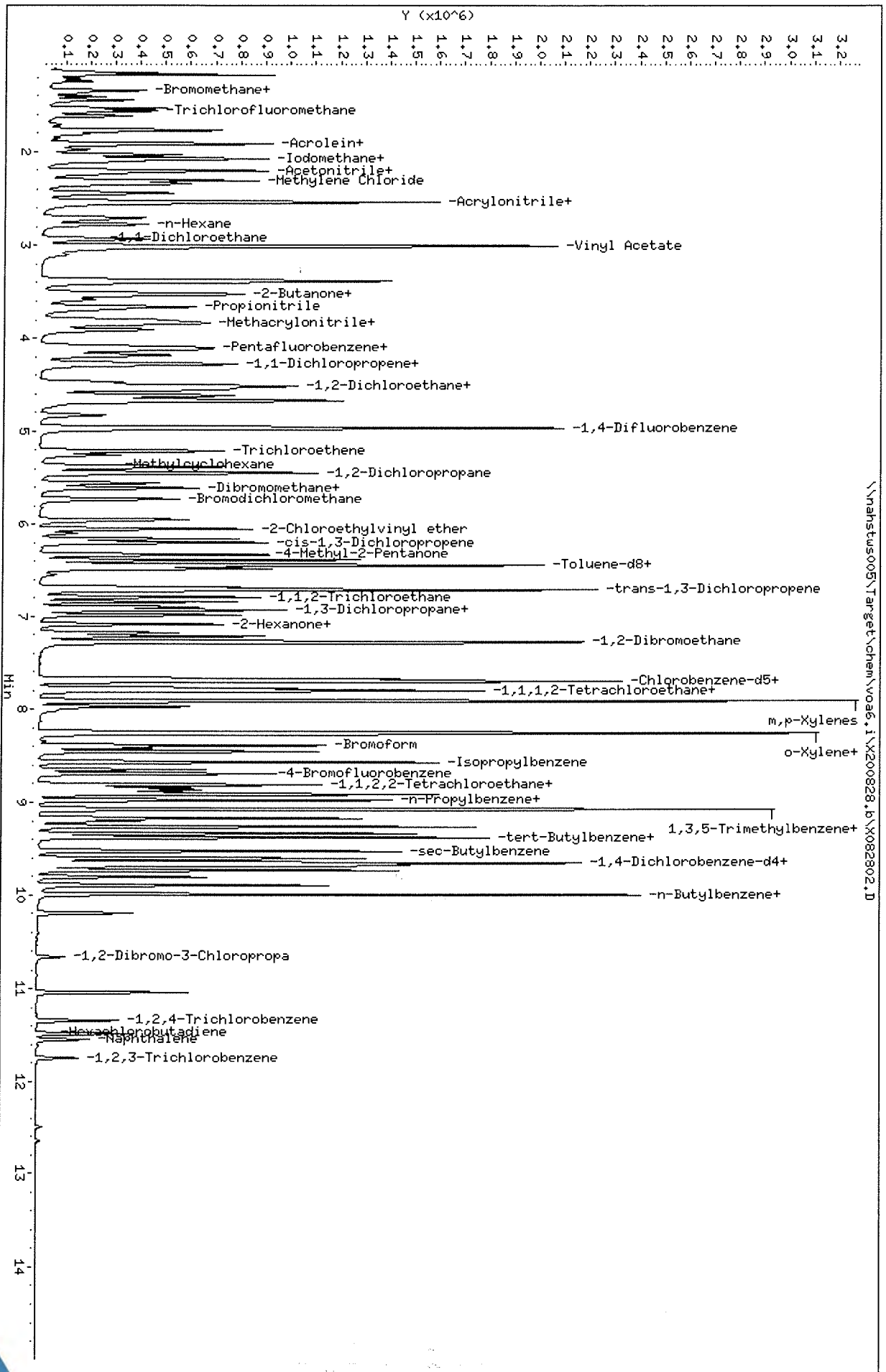
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	430526	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	662370	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	608999	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	288374	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	203548	50.0000	48.14
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	231681	50.0000	46.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	714239	50.0000	48.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267474	50.0000	46.93
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	238532	50.0000	51.45
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	332739	50.0000	50.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	258522	50.0000	55.60
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	183851	50.0000	53.05
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	471928	50.0000	56.11
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	180012	50.0000	52.77
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	279812	50.0000	50.27
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	46793	50.0000	53.92
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	220703	50.0000	52.28(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	93195	50.0000	55.88
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	794136	50.0000	51.54
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	22034	50.0000	53.37
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	238115	50.0000	53.33
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	420671	50.0000	51.57

	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)	321652	50.0000	50.15
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	272257	50.0000	56.00
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	763563	50.0000	50.67
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	477586	50.0000	52.69
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	364282	50.0000	53.24
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	472389	50.0000	52.69
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	335536	50.0000	54.64
24	2-Butanone	43	3.580	3.580	(0.855)	246401	100.000	116.74
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	654767	50.0000	52.33
52	2-Hexanone	43	7.090	7.090	(0.924)	396869	100.000	103.80
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	756483	50.0000	51.97
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	772576	50.0000	48.38
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	581357	100.000	103.14
10	Acetone	43	1.976	1.976	(0.472)	156186	100.000	104.11
37	Benzene	78	4.519	4.519	(0.909)	901601	50.0000	54.86
74	Bromobenzene	156	8.809	8.809	(0.912)	294801	50.0000	52.25
29	Bromochloromethane	128	3.802	3.802	(0.908)	135358	50.0000	52.15
39	Bromodichloromethane	83	5.729	5.729	(1.153)	312309	50.0000	52.37
66	Bromoform	173	8.415	8.415	(1.097)	174609	50.0000	51.67
6	Bromomethane	94	1.346	1.346	(0.321)	158722	50.0000	53.51
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1137188	100.000	107.36
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	270348	50.0000	45.69
59	Chlorobenzene	112	7.699	7.699	(1.004)	631358	50.0000	52.89
7	Chloroethane	64	1.403	1.403	(0.335)	174138	50.0000	57.06
28	Chloroform	83	3.910	3.910	(0.933)	405655	50.0000	52.73
3	Chloromethane	50	1.081	1.081	(0.258)	297171	50.0000	49.16
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	260572	50.0000	54.98
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	380875	50.0000	54.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	252560	50.0000	51.77
44	Dibromomethane	93	5.557	5.557	(1.118)	152859	50.0000	53.02
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	188606	50.0000	44.76
61	Ethylbenzene	106	7.799	7.799	(1.017)	317564	50.0000	51.52
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	69062	50.0000	44.60
67	Isopropylbenzene	105	8.566	8.566	(1.117)	900386	50.0000	49.77
62	m,p-Xylenes	106	7.907	7.907	(1.031)	768532	100.000	103.33
17	Methylene Chloride	84	2.305	2.305	(0.550)	238861	50.0000	53.93
87	n-Butylbenzene	91	9.998	9.998	(1.035)	623991	50.0000	48.92
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1040852	50.0000	50.10
92	Naphthalene	128	11.546	11.546	(1.195)	144316	50.0000	62.02
63	o-Xylene	106	8.244	8.244	(1.075)	382738	50.0000	52.38
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	827040	50.0000	47.20
64	Styrene	104	8.258	8.258	(1.077)	667375	50.0000	52.60
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	627783	50.0000	48.05
56	Tetrachloroethene	164	6.933	6.933	(0.904)	192057	50.0000	49.60
50	Toluene	91	6.453	6.453	(0.841)	940257	50.0000	52.86
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	222693	50.0000	55.17
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	336183	50.0000	52.60
38	Trichloroethene	130	5.214	5.214	(1.049)	249975	50.0000	53.25
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	291543	50.0000	45.98
5	Vinyl Chloride	62	1.145	1.145	(0.273)	282380	50.0000	50.95

QC Flag Legend

M - Compound response manually integrated.

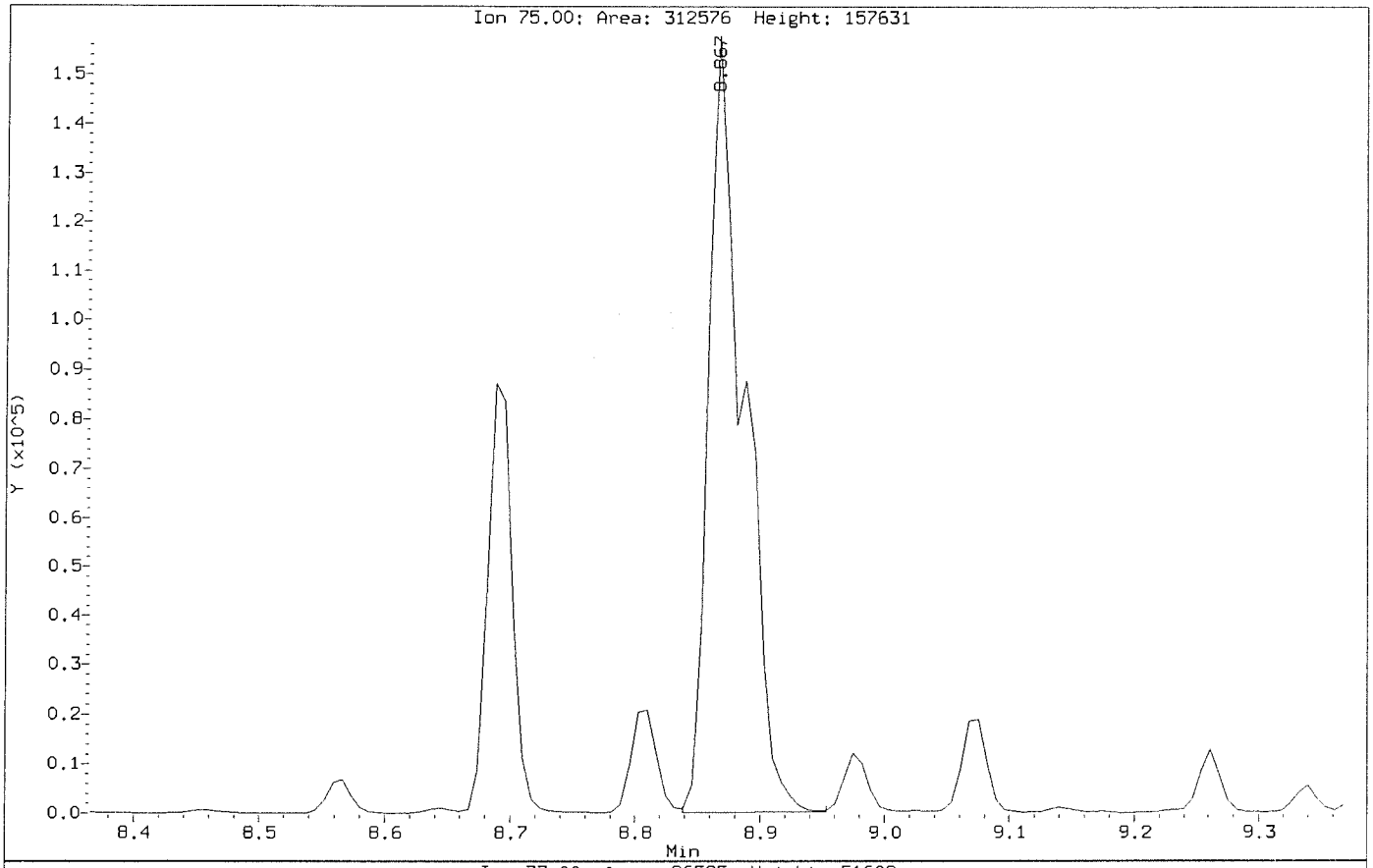


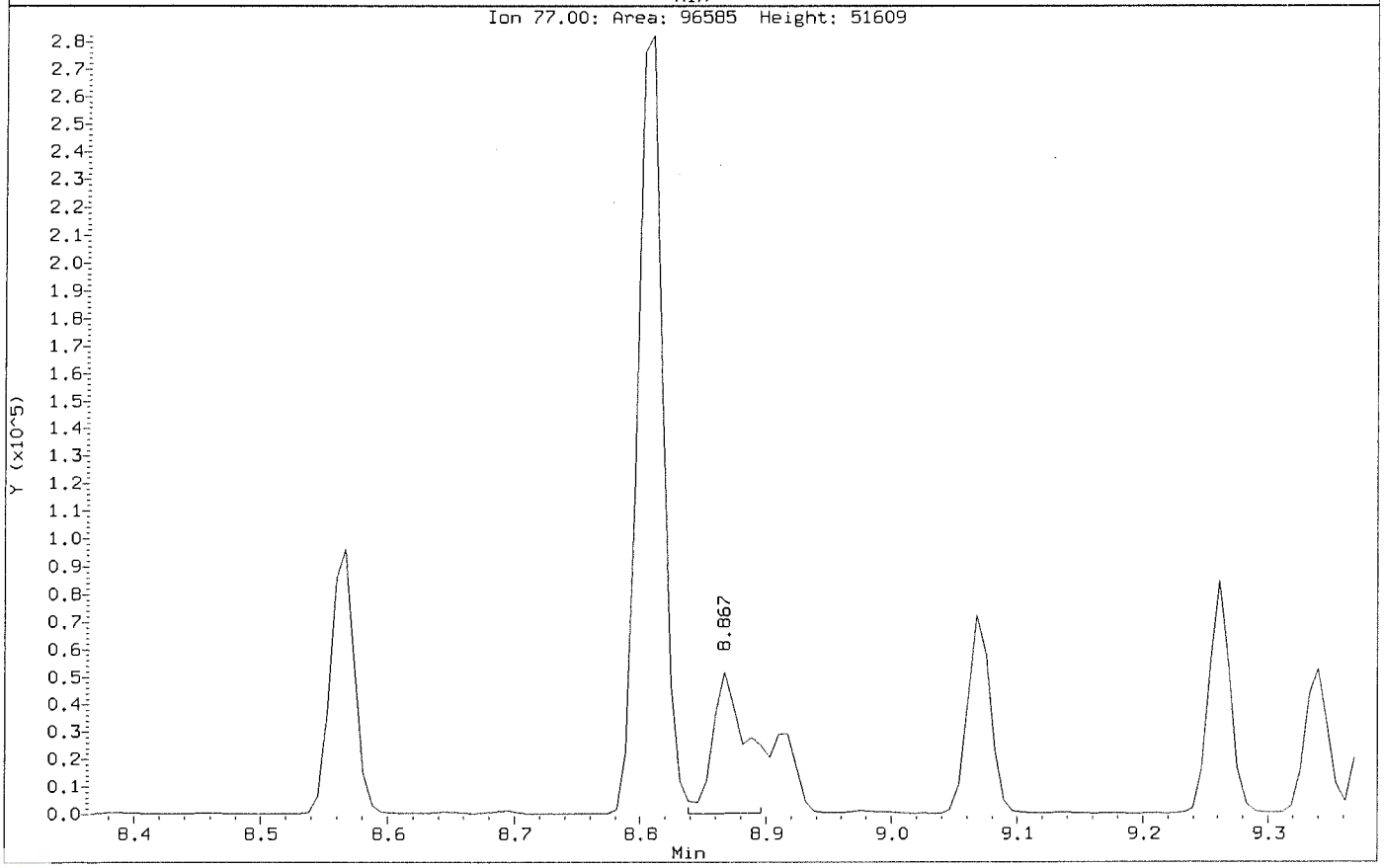
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Date : 28-AUG-2020 12:48
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082802.D
Injection Date: 28-AUG-2020 12:48
Instrument: voa6.i
Client Sample ID: CCV

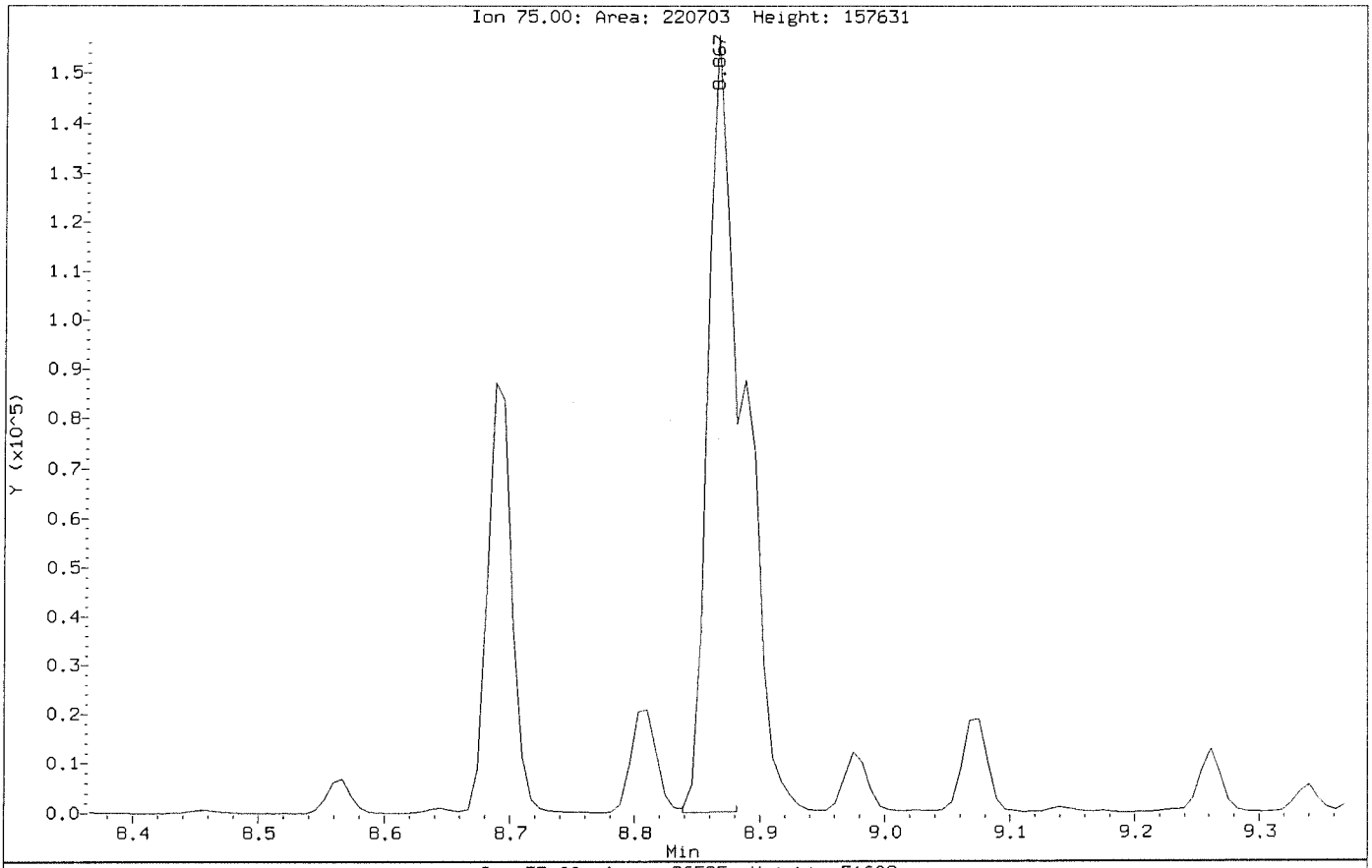
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

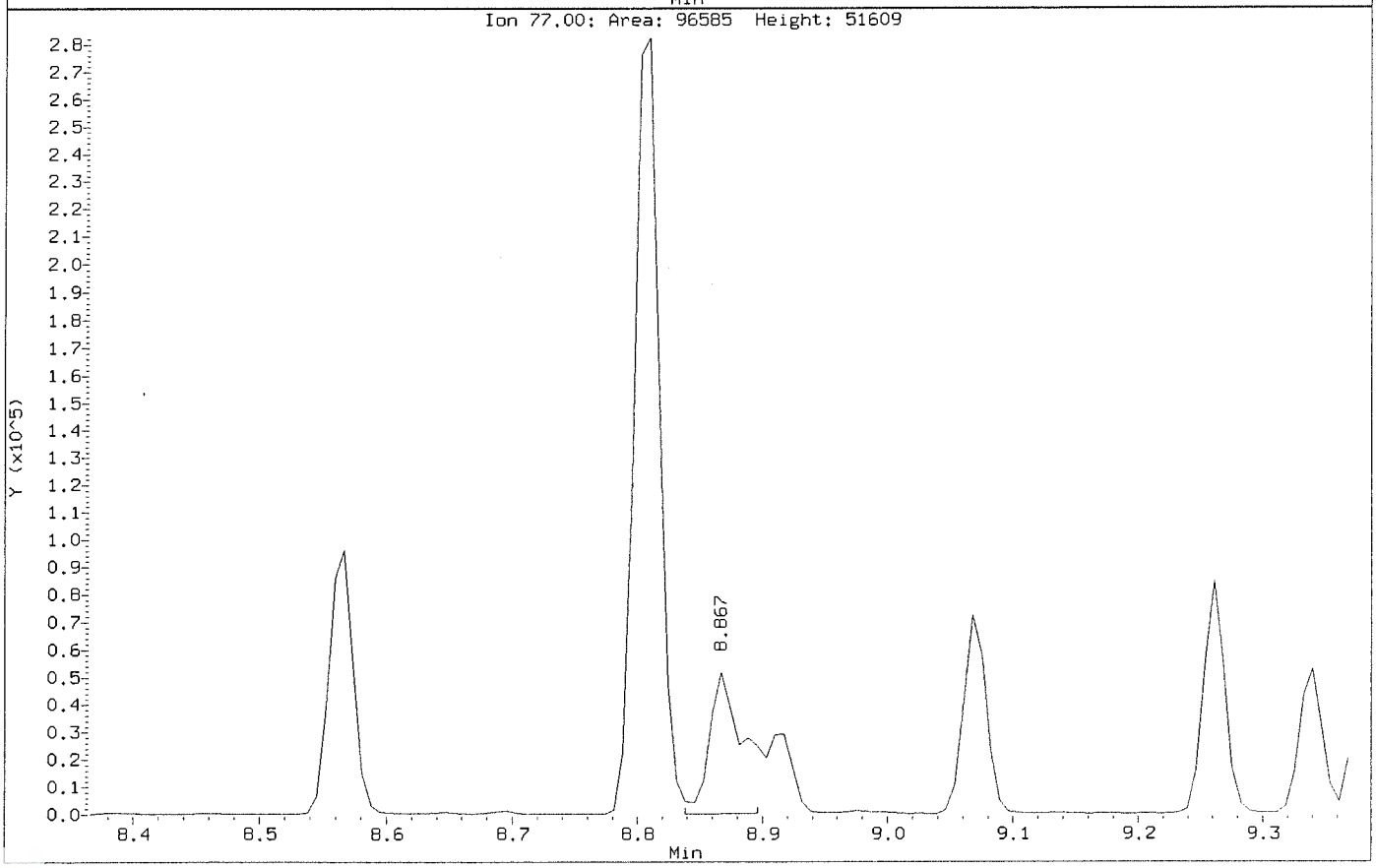




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Injection Date: 28-AUG-2020 12:48
Instrument: voa6.i
Client Sample ID: CCV

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
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Inj Date : 28-AUG-2020 14:00
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200828;VLCSW-200828;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 voa6.i Quant Type: ISTD
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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

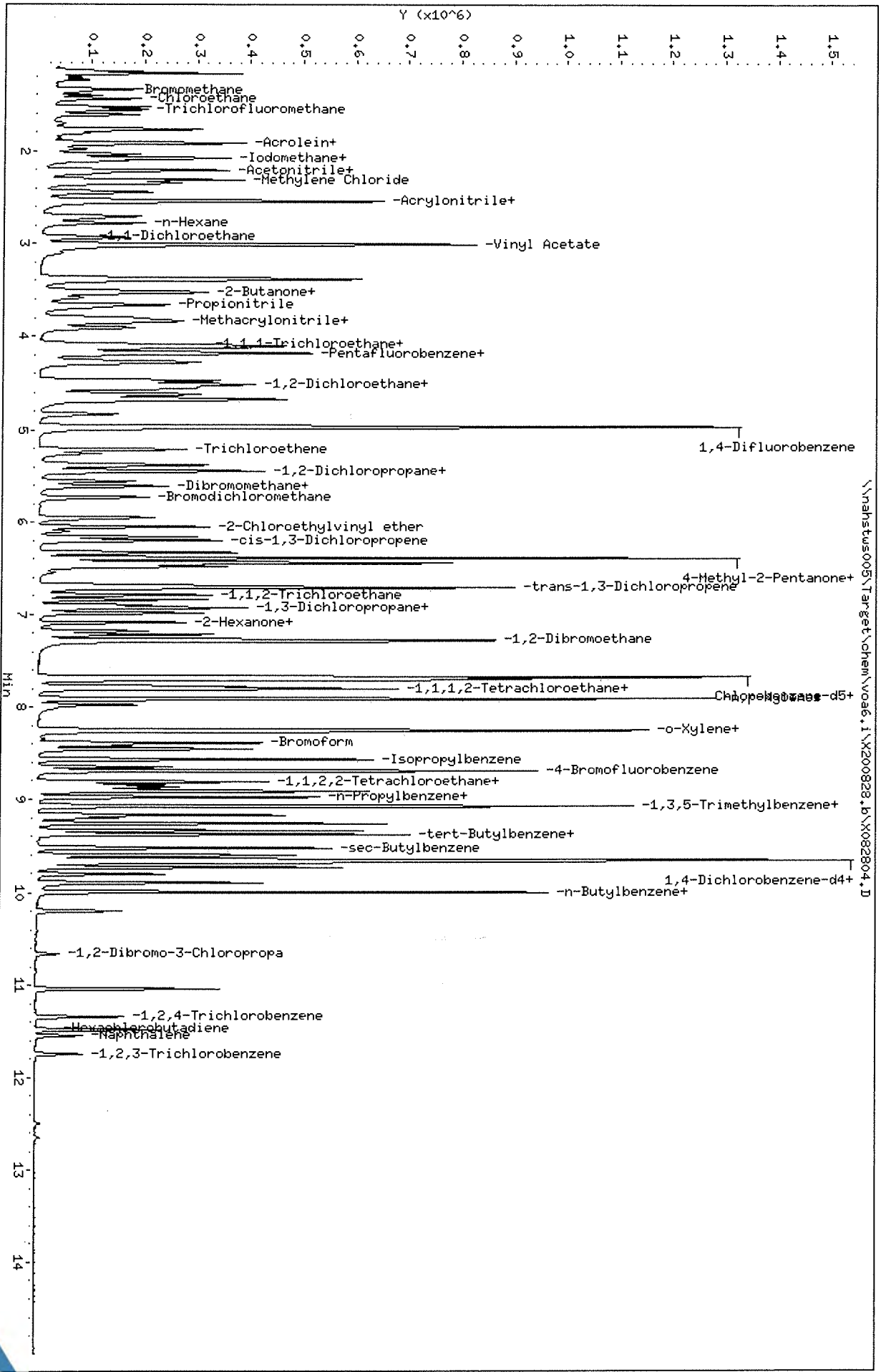
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	435559	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	678331	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	612811	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	294624	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.103	(0.979)	209501	48.9796	48.97
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	242929	47.9150	47.91
$	48 Toluene-d8	98	6.389	6.388	(0.833)	737288	49.6020	49.60
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	273397	47.6791	47.67
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	89394	19.1636	19.16
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	130883	19.5084	19.50
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	101523	21.6103	21.61
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	71539	20.5162	20.51
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	183055	21.5157	21.51
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	69416	20.1143	20.11
	32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	109245	19.1651	19.16
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25514	28.7775	28.77
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84698	19.6400	19.64(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	47549	28.0179	28.01
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	309498	19.6638	19.66
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9247	22.3913	22.39
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	92985	20.6992	20.69
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	164811	19.7771	19.77

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D Page 2
Report Date: 25-Sep-2020 10:00

	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)	127399	19.3979	19.39
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	106203	21.3328	21.33
75	1,3,5-Trimethylbenzene	105	9.068	9.067	(0.938)	296267	19.2438	19.24
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	180839	19.5280	19.52
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	142111	20.6406	20.64
84	1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	178951	19.5403	19.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	131049	21.0950	21.09
24	2-Butanone	43	3.588	3.580	(0.856)	94615	44.3119	44.31
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	251843	19.7024	19.70
52	2-Hexanone	43	7.091	7.090	(0.924)	156735	40.7404	40.74
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	289979	19.5002	19.50
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	304824	18.6837	18.68
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	233597	41.1868	41.18
10	Acetone	43	1.976	1.976	(0.472)	62982	40.8548	40.85
37	Benzene	78	4.519	4.519	(0.909)	350769	20.8424	20.84
74	Bromobenzene	156	8.810	8.809	(0.911)	110937	19.2486	19.24
29	Bromochloromethane	128	3.803	3.802	(0.908)	53304	20.3031	20.30
39	Bromodichloromethane	83	5.730	5.729	(1.153)	117925	19.3116	19.31
66	Bromoform	173	8.416	8.415	(1.097)	65255	19.1925	19.19
6	Bromomethane	94	1.346	1.346	(0.321)	65397	22.1824	22.18
19	Carbon Disulfide	76	2.069	2.076	(0.494)	440452	41.1056	41.10
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	106920	17.6470	17.64
59	Chlorobenzene	112	7.699	7.699	(1.004)	240338	20.0109	20.01
7	Chloroethane	64	1.403	1.403	(0.335)	59382	19.2346	19.23(M)
28	Chloroform	83	3.910	3.910	(0.933)	159517	20.4992	20.49
3	Chloromethane	50	1.081	1.081	(0.258)	116965	19.1260	19.12
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	101819	21.2372	21.23
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	143718	20.1278	20.12
55	Dibromochloromethane	129	7.176	7.176	(0.936)	95424	19.4397	19.43
44	Dibromomethane	93	5.558	5.557	(1.118)	59362	20.1087	20.10
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	78944	18.5188	18.51
61	Ethylbenzene	106	7.800	7.799	(1.017)	122865	19.8121	19.81
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	41085	25.9743	25.97
67	Isopropylbenzene	105	8.566	8.566	(1.117)	353641	19.4266	19.42
62	m,p-Xylenes	106	7.907	7.907	(1.031)	297291	39.7241	39.72
17	Methylene Chloride	84	2.306	2.305	(0.550)	94725	20.3025	20.30
87	n-Butylbenzene	91	9.999	9.998	(1.034)	246274	18.9011	18.90
73	n-Propylbenzene	91	8.917	8.917	(0.922)	403073	18.9908	18.99
92	Naphthalene	128	11.546	11.546	(1.194)	64310	27.6463	27.64
63	o-Xylene	106	8.244	8.244	(1.075)	147521	20.0669	20.06
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	326898	18.2638	18.26
64	Styrene	104	8.265	8.258	(1.077)	255335	20.0026	20.00
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	247735	18.5597	18.55
56	Tetrachloroethene	164	6.933	6.933	(0.904)	76493	19.6357	19.63
50	Toluene	91	6.453	6.453	(0.841)	366566	20.4829	20.48
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	87147	21.3429	21.34
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	127467	19.4774	19.47
38	Trichloroethene	130	5.214	5.214	(1.049)	96778	20.1312	20.13
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	117958	18.3891	18.38
5	Vinyl Chloride	62	1.145	1.145	(0.273)	109054	19.4510	19.45

QC Flag Legend

M - Compound response manually integrated.

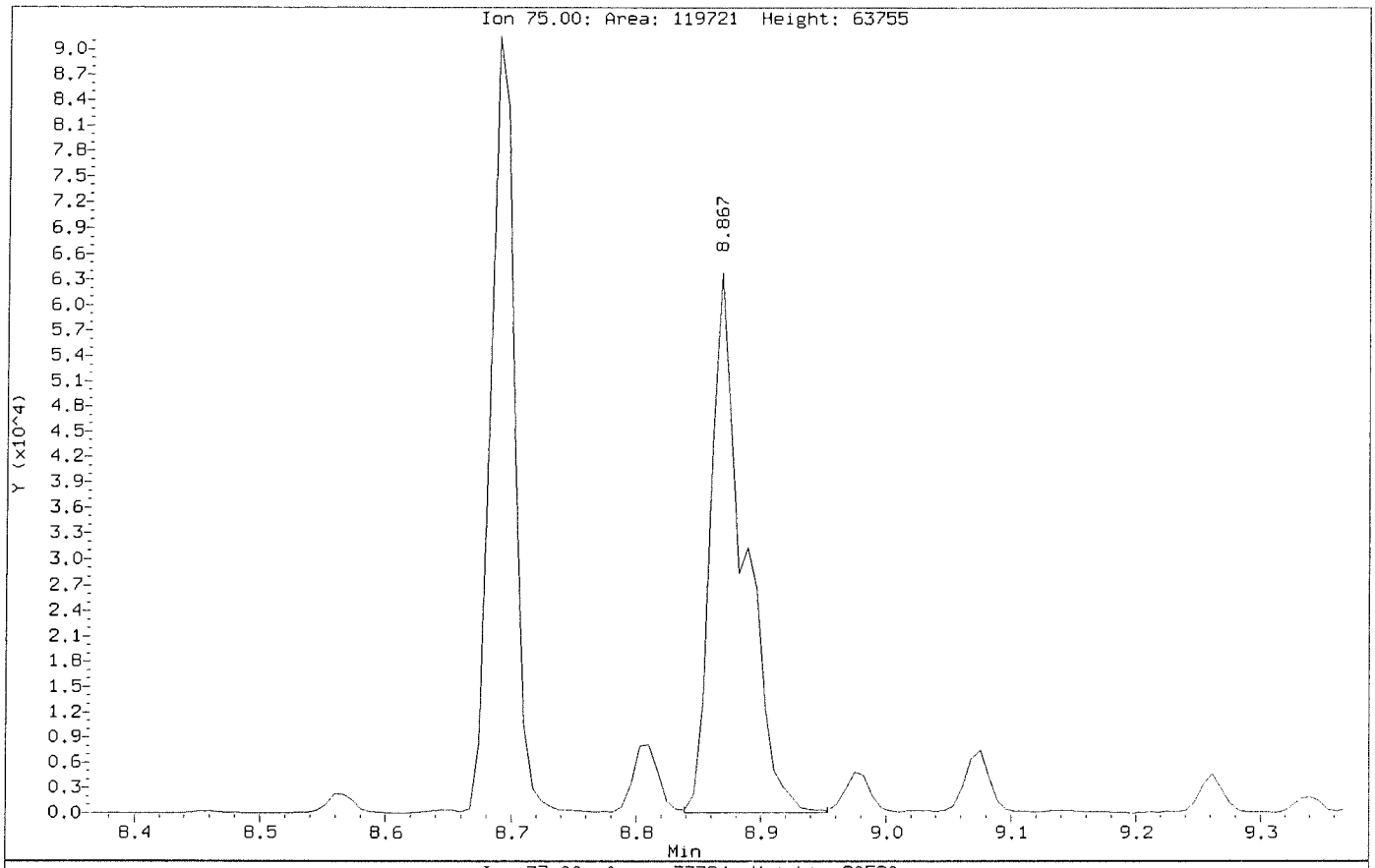


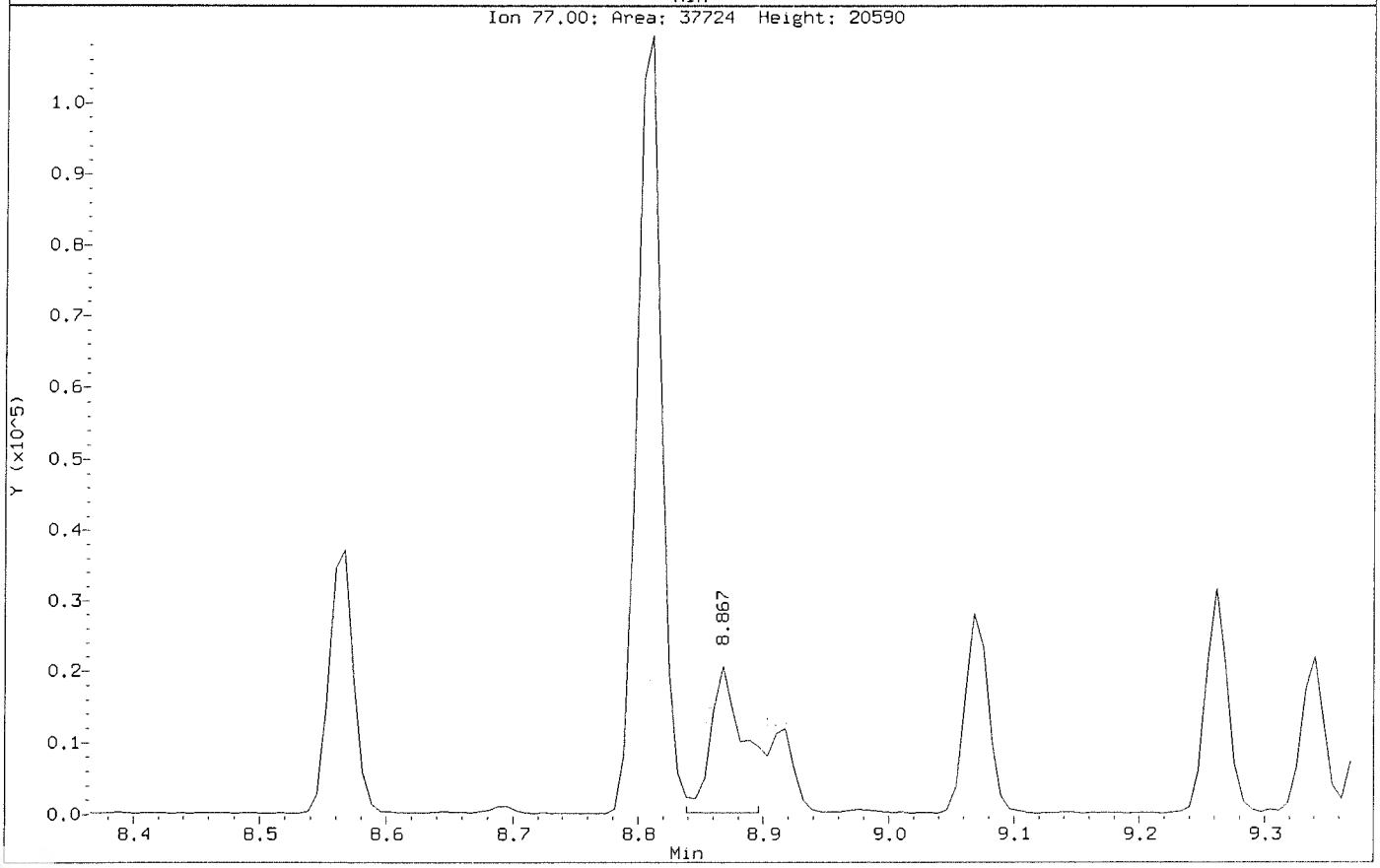
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Client ID: VLCSW-200828
Sample Info: VLCSW-200828;VLCSW-200828;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

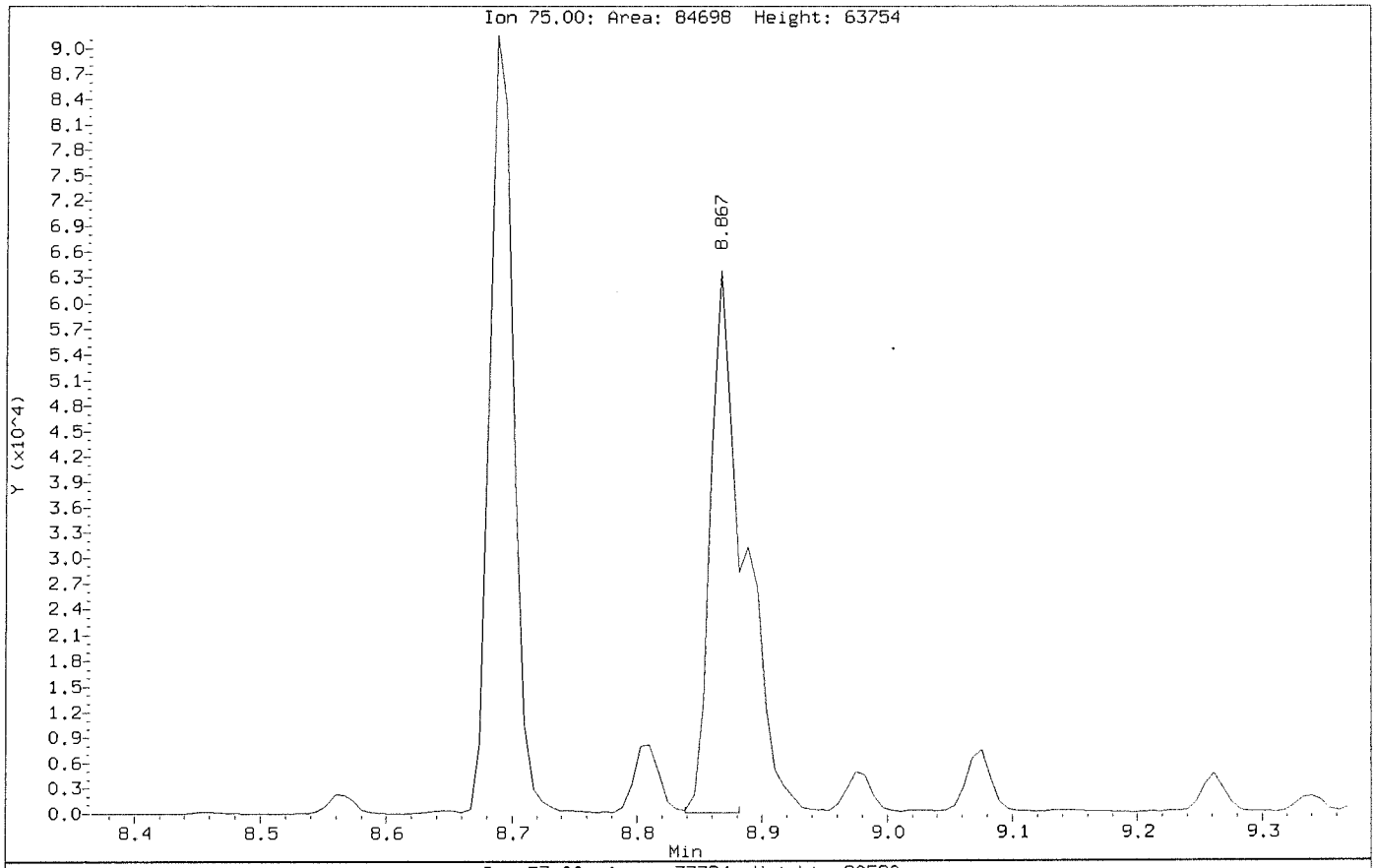
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

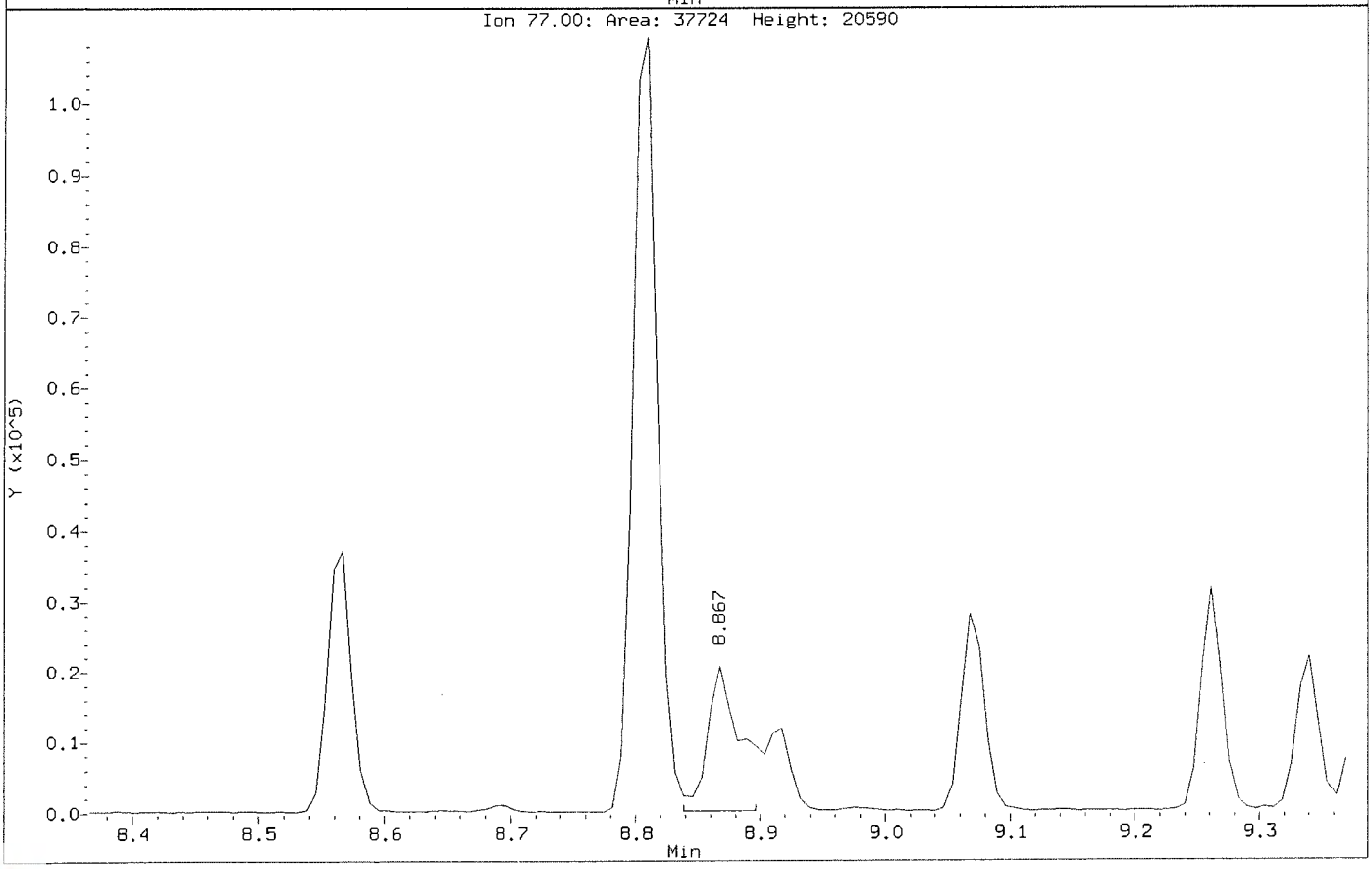




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
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Instrument: voa6.i
Client Sample ID: VLCSW-200828

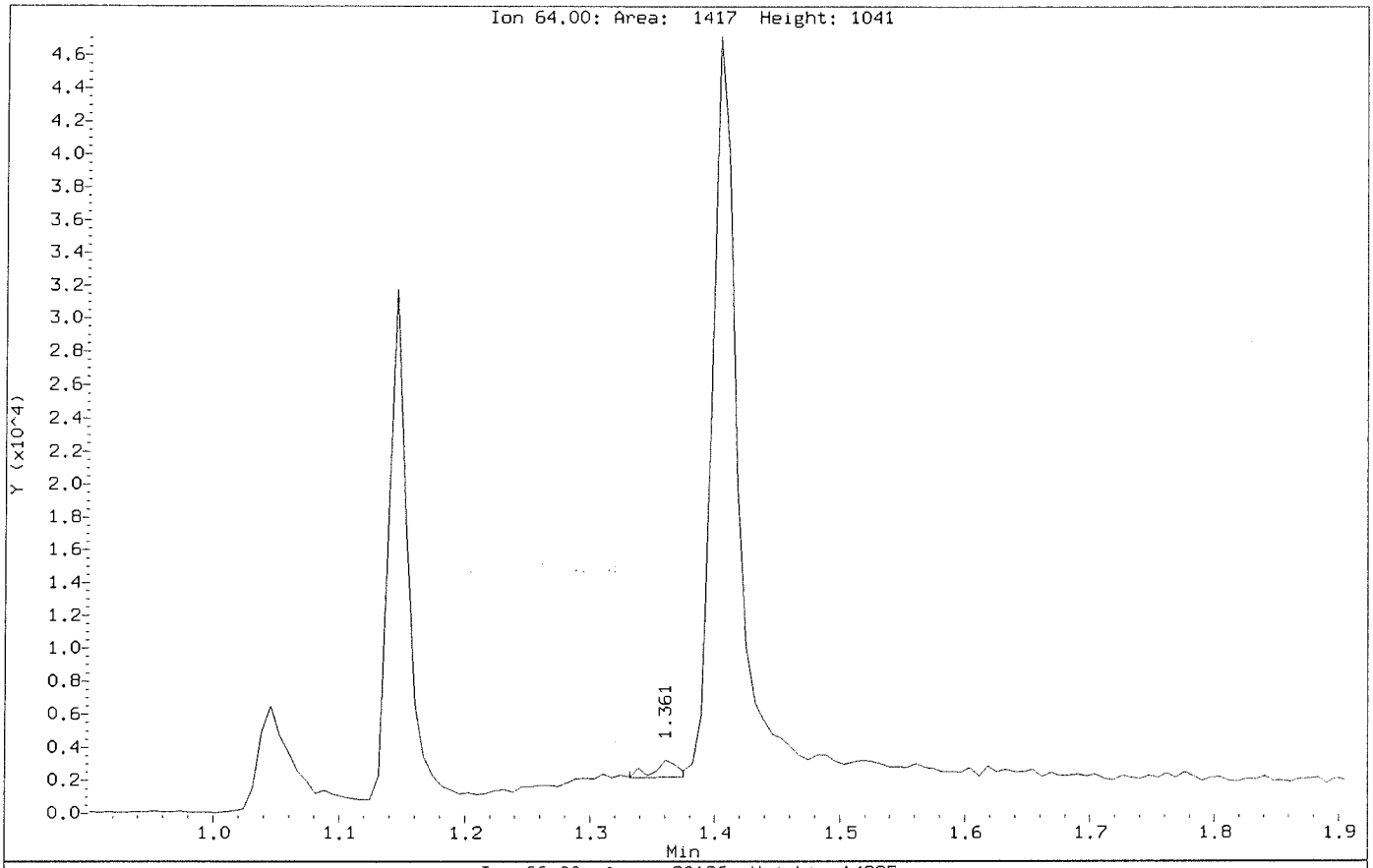
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CAS Number: 96-18-4

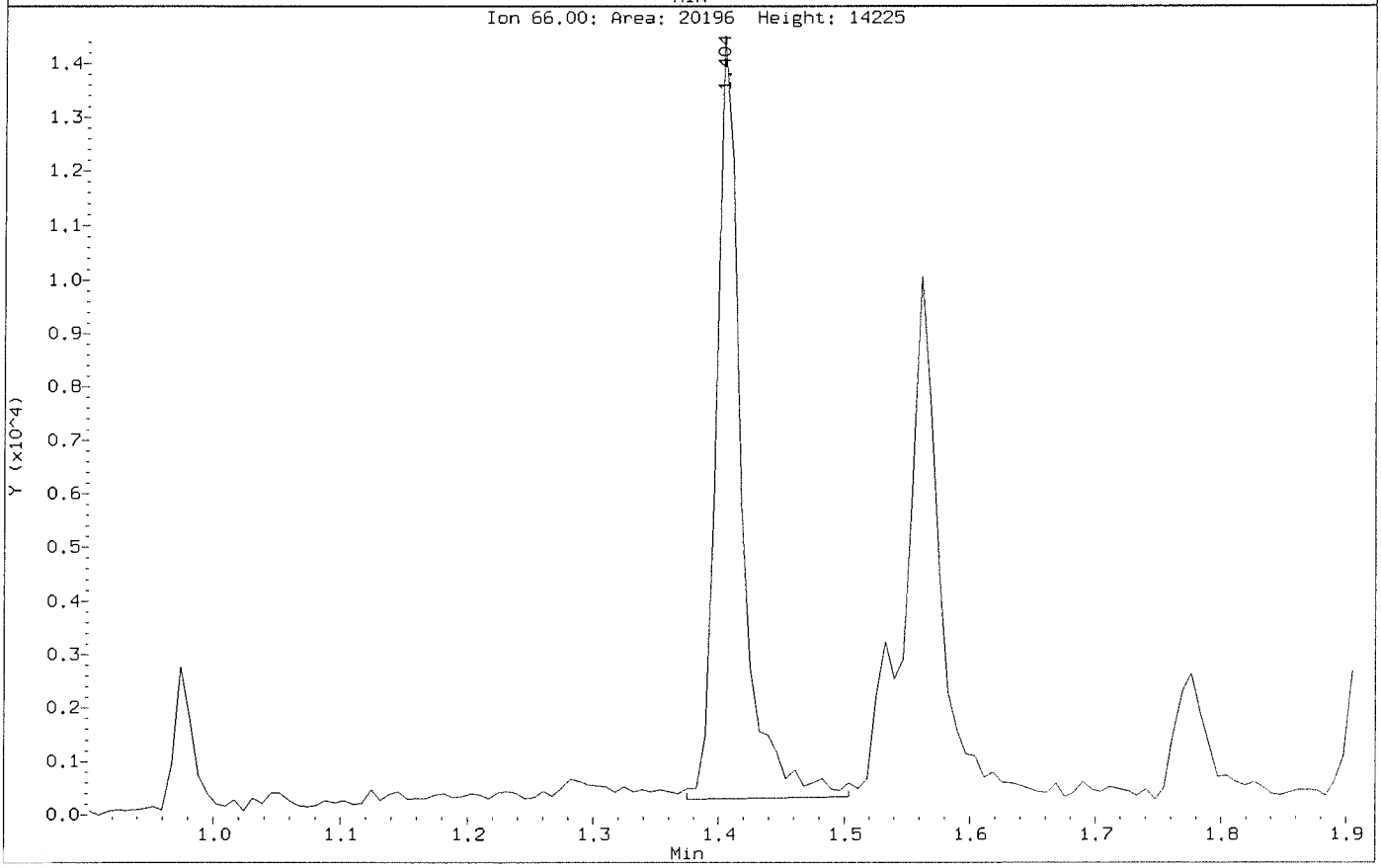




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

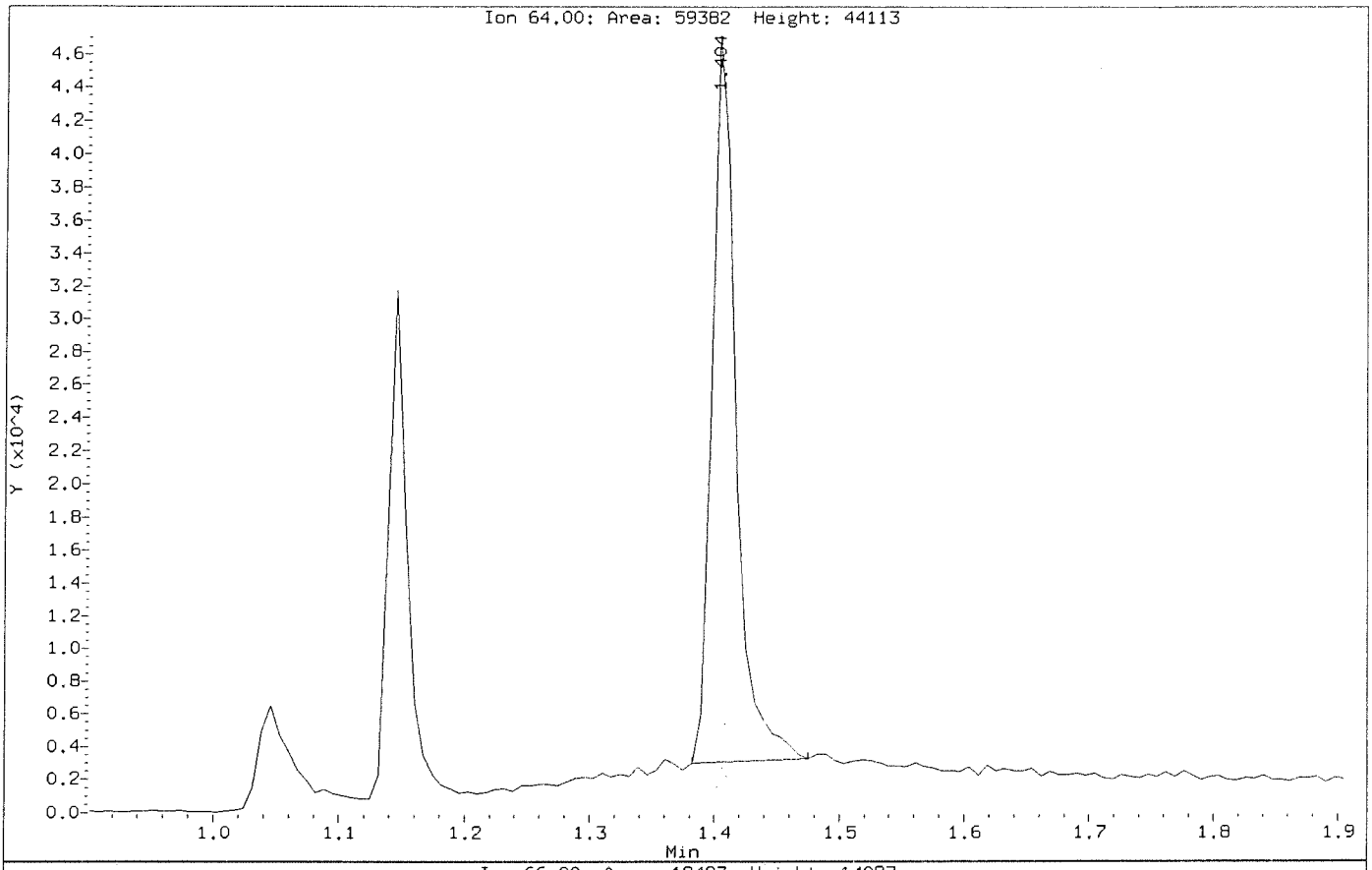
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CAS Number: 75-00-3

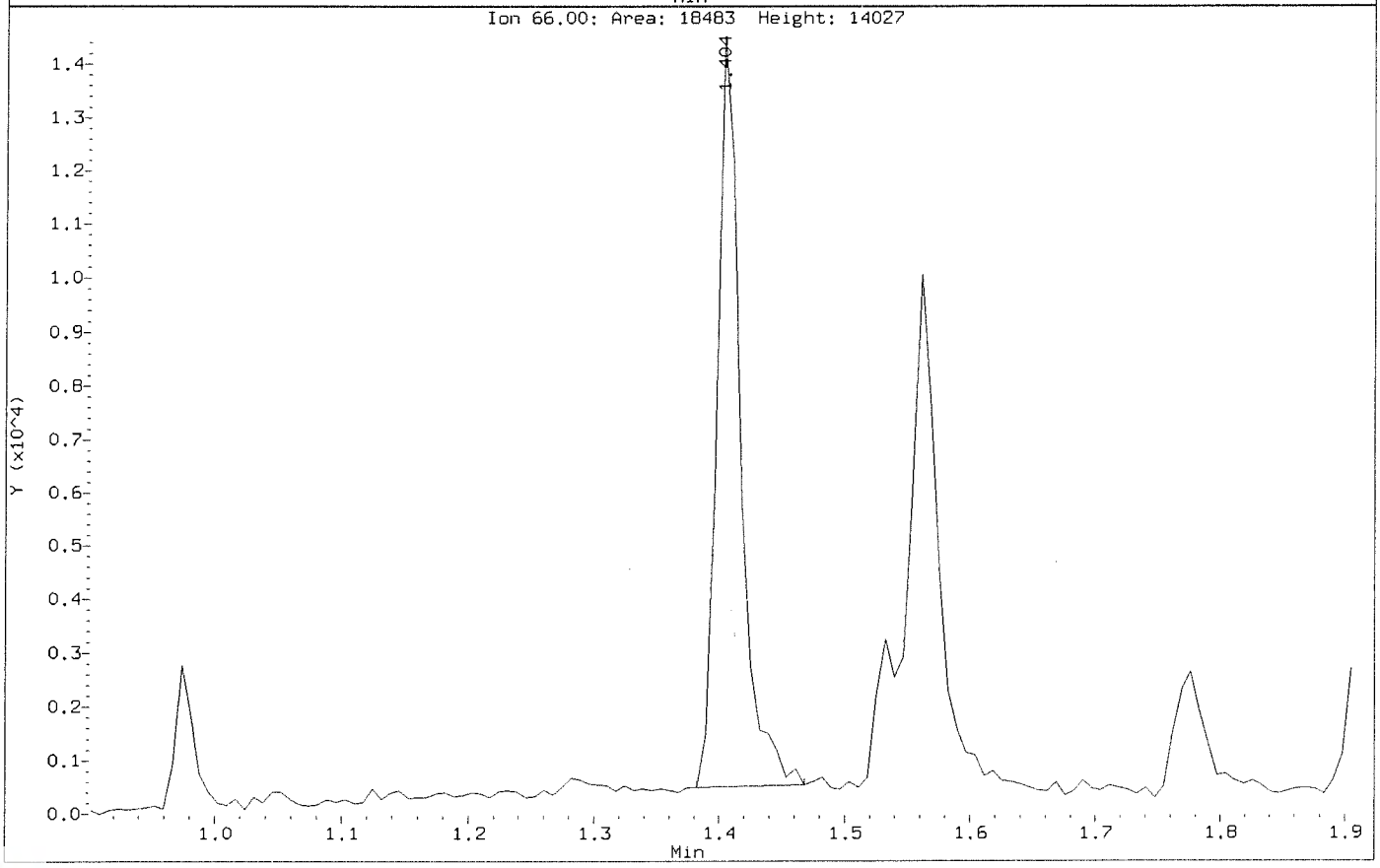




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D Page 1
Report Date: 25-Sep-2020 10:00

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Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D
Lab Smp Id: VBLKW-200828 Client Smp ID: VBLKW-200828
Inj Date : 28-AUG-2020 14:48
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200828;VBLKW-200828;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

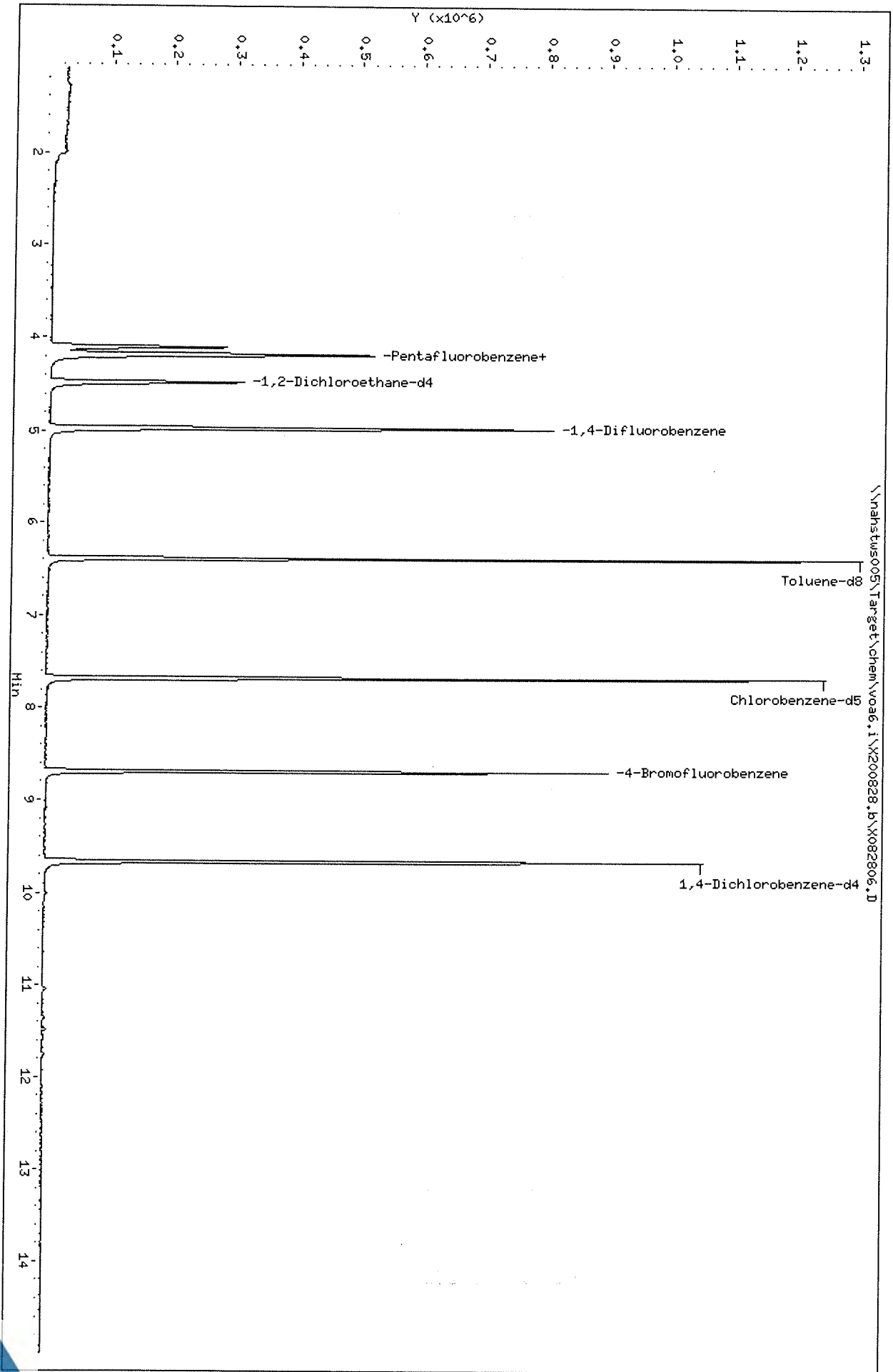
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	447810	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	664384	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	580023	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	267168	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	204504	46.5033	46.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	228138	43.7666	43.76
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	744413	52.9124	52.91
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	263771	48.6007	48.60

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D
Date : 28-AUG-2020 14:48
Client ID: VBLKW-200828
Sample Info: VBLKW-200828;VBLKW-200828;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\X200828.b\X082807.D Page 1
Report Date: 25-Sep-2020 09:51

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Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082807.D
Lab Smp Id: HS20081150-02 Client Smp ID: HS20081150-02
Inj Date : 28-AUG-2020 15:12
Operator : PC Inst ID: voa6.i
Smp Info : HS20081150-02;HS20081150-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 09:48 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

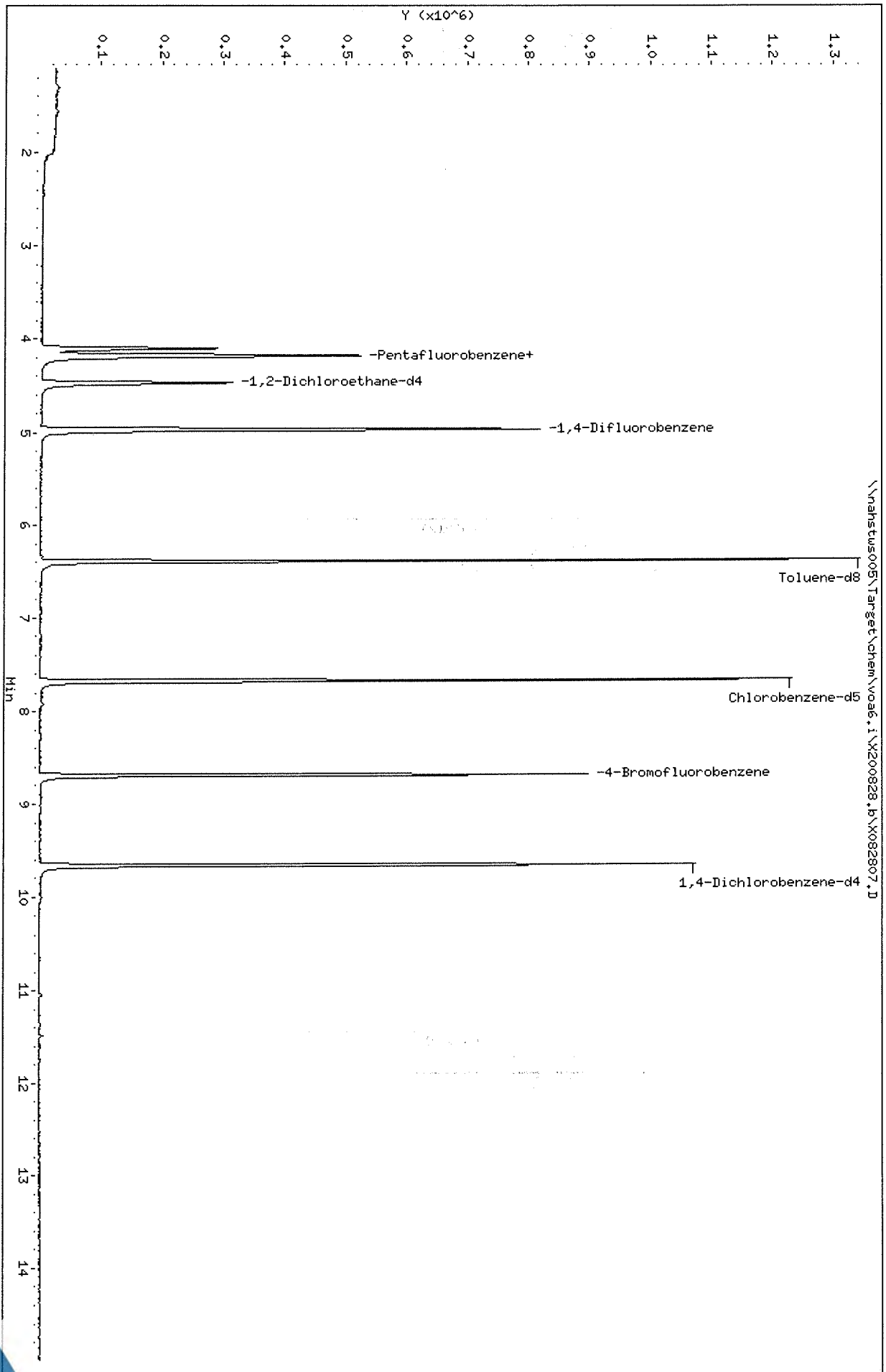
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450383	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	668366	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	592521	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	274516	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.104	(0.981)	207073	46.8185	46.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	228761	43.6354	43.63
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	755693	52.5812	52.58
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	266631	48.0914	48.09

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082807.D
Date : 28-AUG-2020 15:12
Client ID: HS20081150-02
Sample Info: HS20081150-02;HS20081150-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D Page 1
Report Date: 25-Sep-2020 09:52

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D
Lab Smp Id: HS20081150-01 Client Smp ID: HS20081150-01
Inj Date : 28-AUG-2020 16:24
Operator : PC Inst ID: voa6.i
Smp Info : HS20081150-01;HS20081150-01;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 09:48 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 11
Dil Factor: 5.00000
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	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

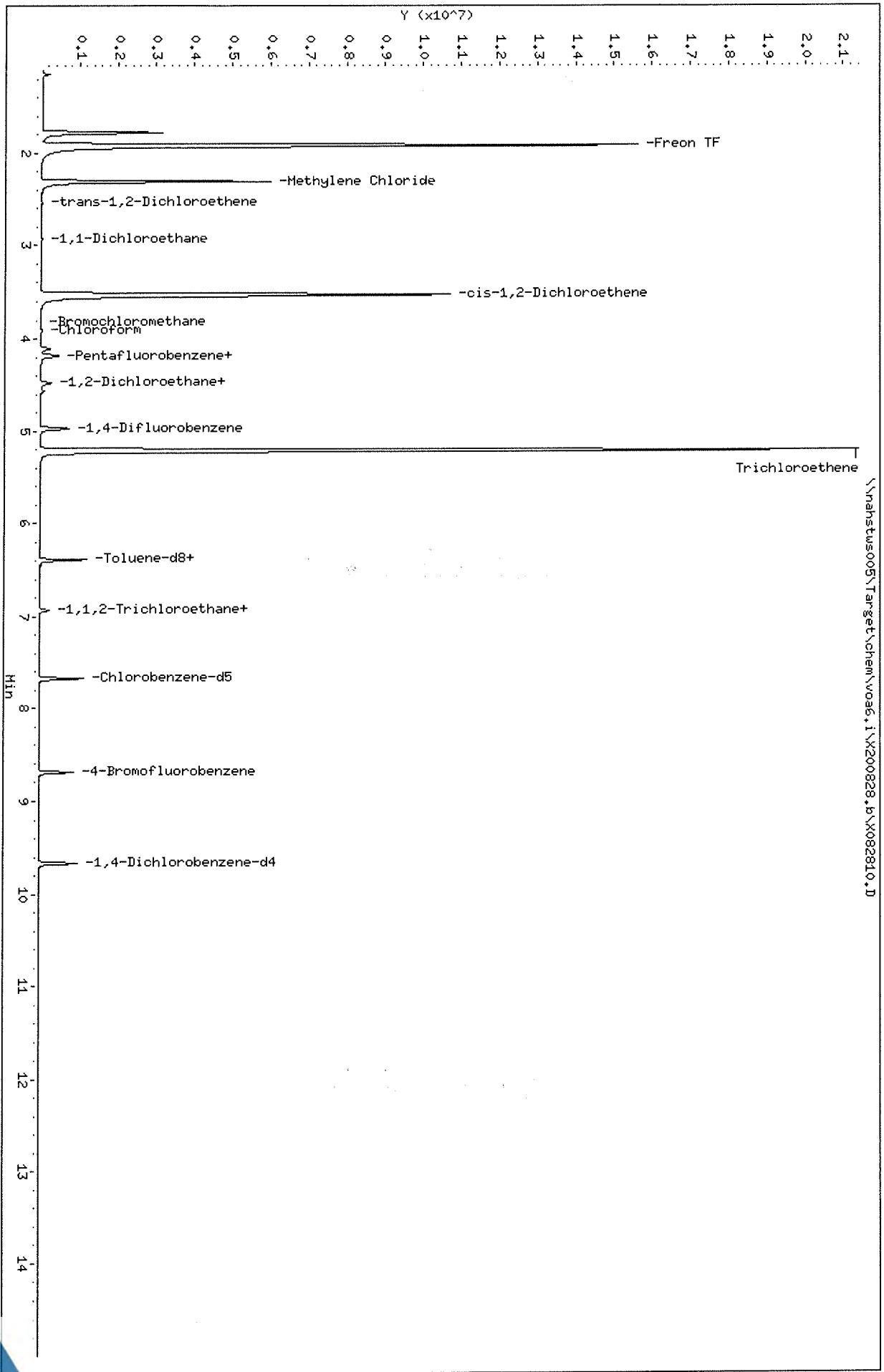
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	400363	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	613110	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	542192	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	254457	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.104	(0.979)	183186	46.5923	46.59
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	210313	45.1286	45.12
$	48 Toluene-d8	98	6.388	6.389	(0.833)	682221	51.8753	51.87
$	69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	247559	48.7962	48.79
	53 1,1,2-Trichloroethane	83	6.847	6.840	(0.893)	2045	0.66286	3.31(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	26043	3.33011	16.65(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	78421	13.2107	66.05
	37 Benzene	78	4.526	4.519	(0.911)	12070	0.79348	3.96(a)
	29 Bromochloromethane	128	3.817	3.803	(0.911)	2481	1.02807	5.14(a)
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	8928	1.63030	8.15(a)
	28 Chloroform	83	3.917	3.910	(0.935)	29086	4.06636	20.33(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	5242010	1189.48	5947.42(A)
	17 Methylene Chloride	84	2.305	2.306	(0.550)	2546076	632.600	3163.00(A)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	55645	16.1445	80.72
	50 Toluene	91	6.453	6.446	(0.841)	11558	0.72995	3.64(a)
	20 trans-1,2-Dichloroethene	96	2.542	2.535	(0.607)	15160	4.03918	20.19(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	7160247	1647.88	8239.38(A)
	5 Vinyl Chloride	62	1.145	1.145	(0.273)	136558	26.4979	132.48

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D
Date : 28-AUG-2020 16:24
Client ID: HS20081150-01
Sample Info: HS20081150-01;HS20081150-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

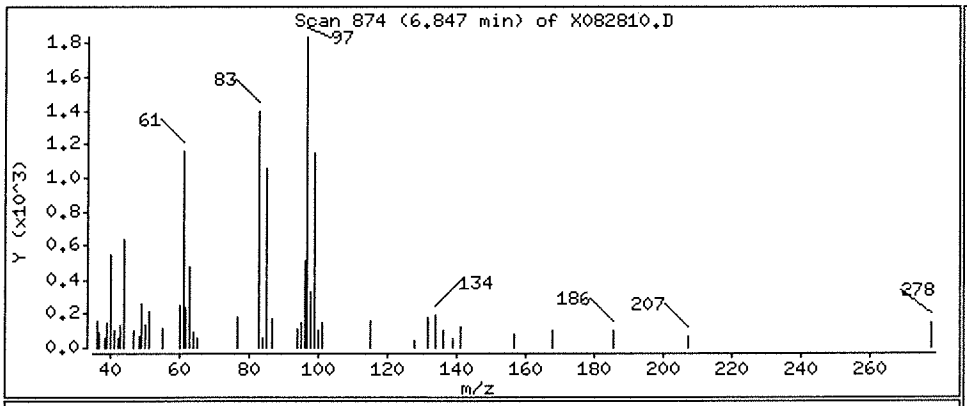
Operator: PC

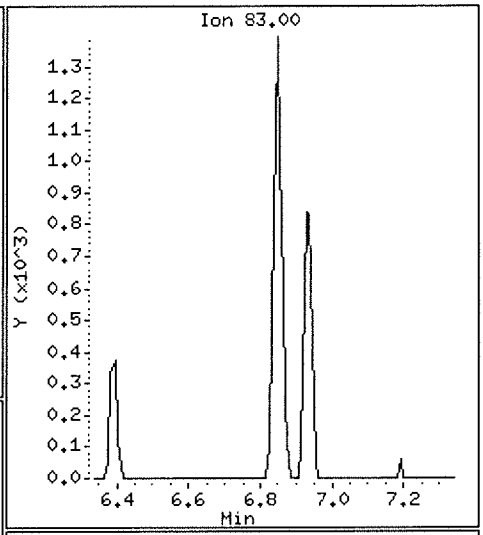
Column phase: DB624

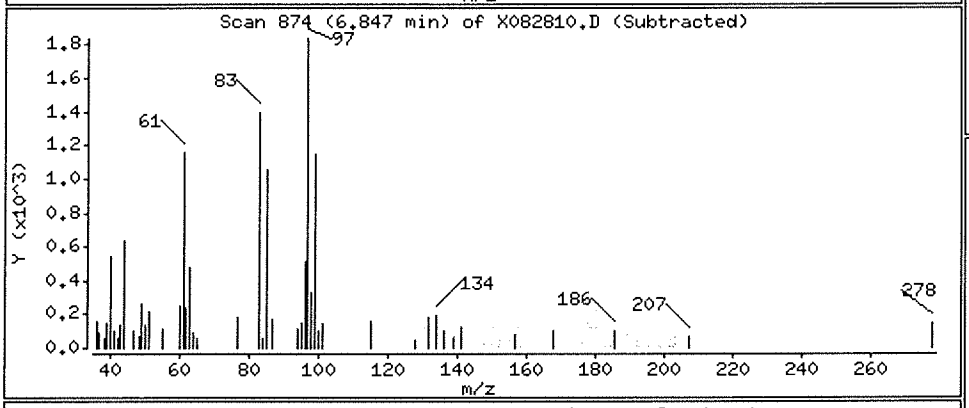
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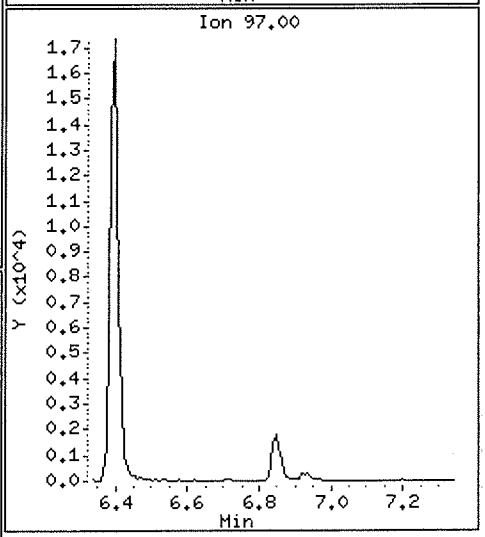
53 1,1,2-Trichloroethane

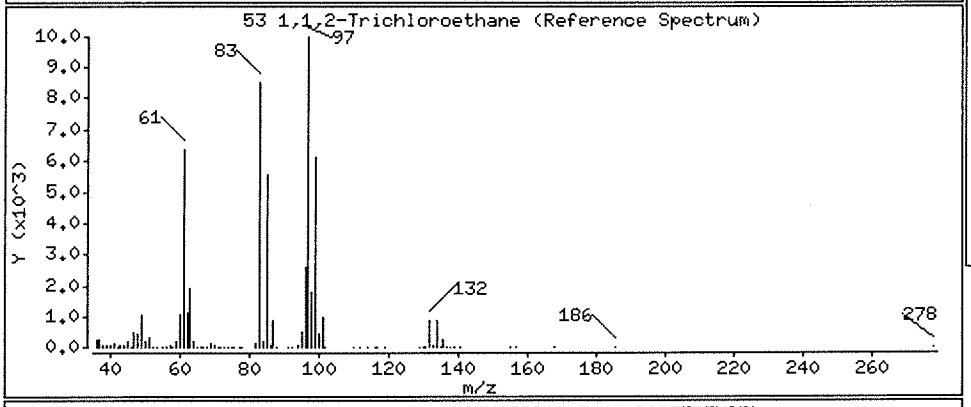
Concentration: 3.31 ug/l

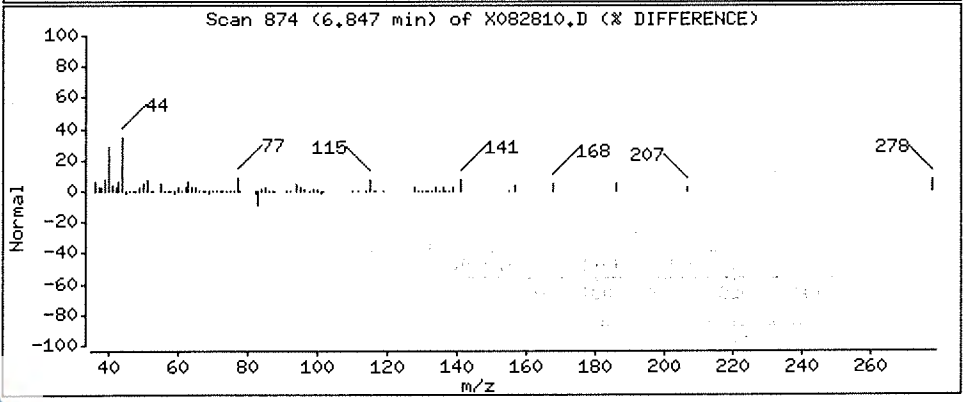












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

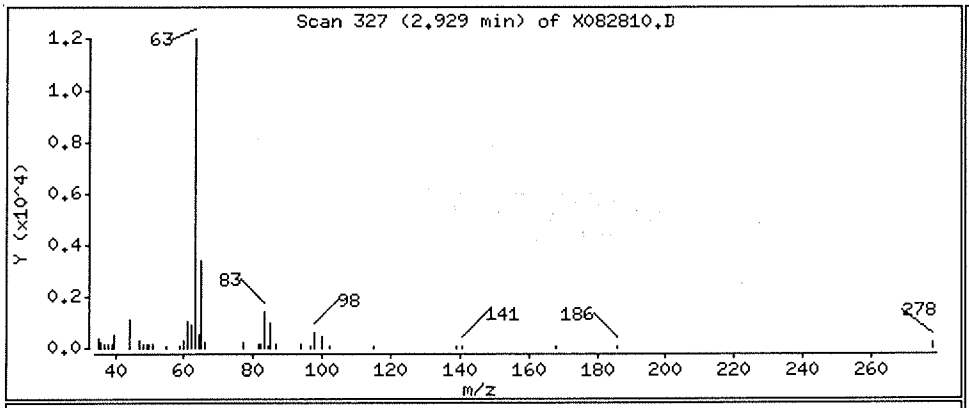
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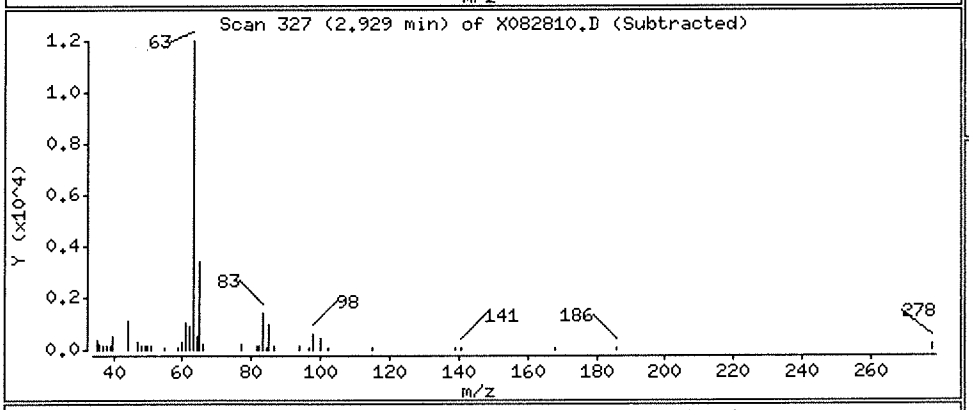
Column phase: DB624

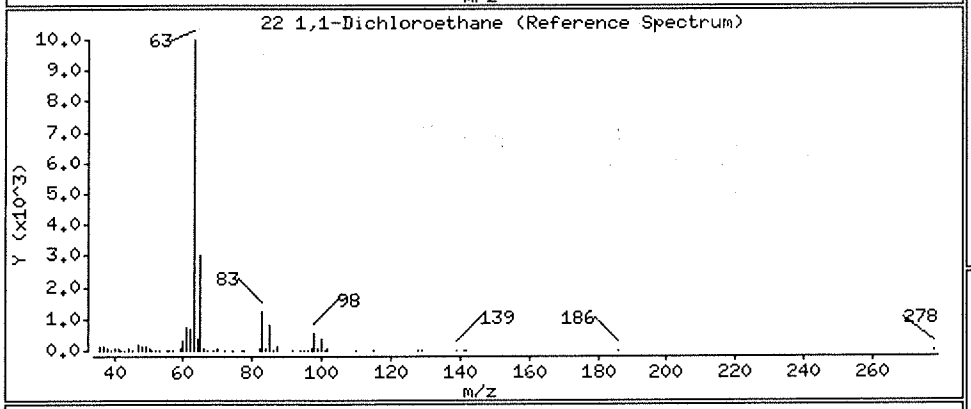
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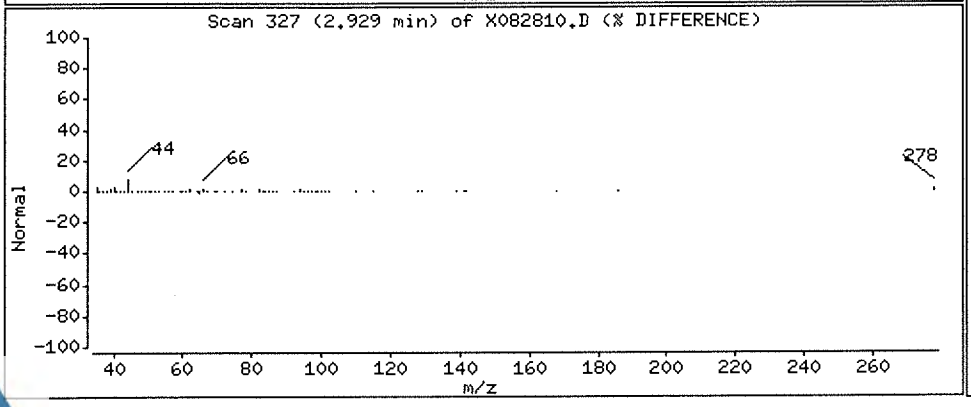
22 1,1-Dichloroethane

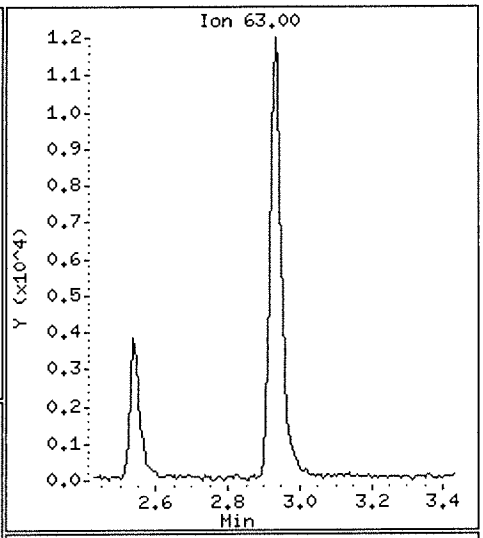
Concentration: 16.65 ug/l

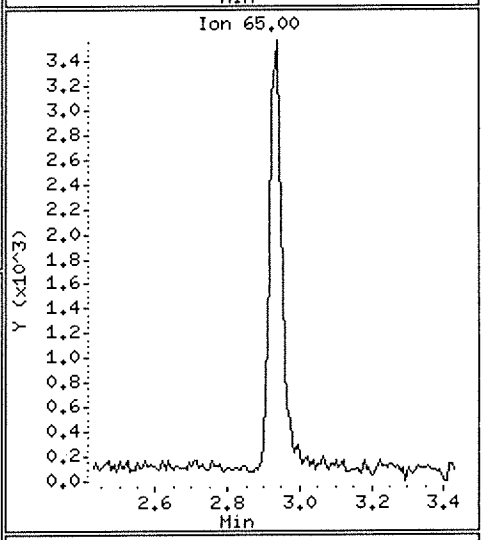


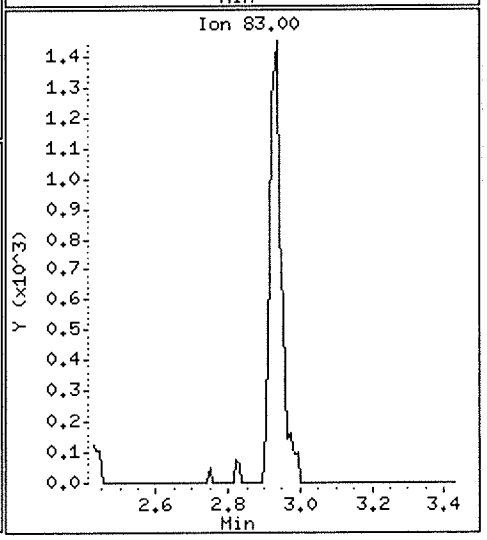












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

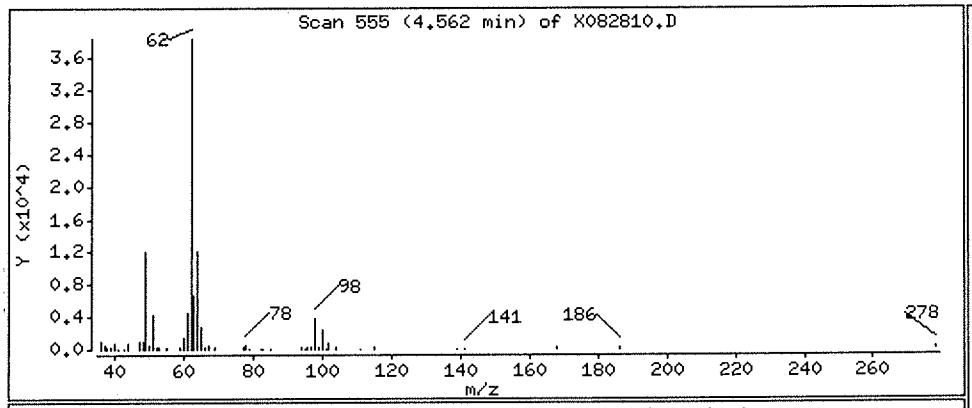
Operator: PC

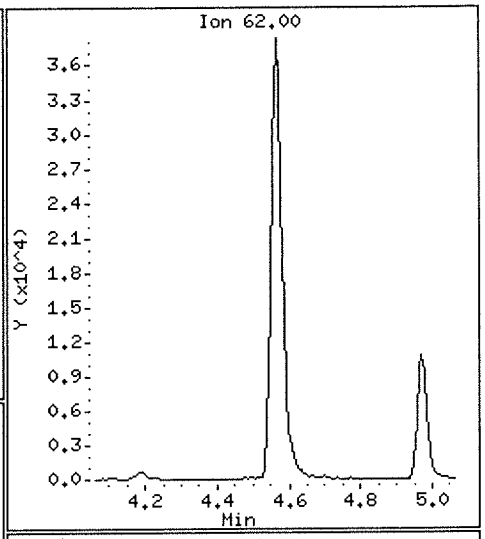
Column phase: DB624

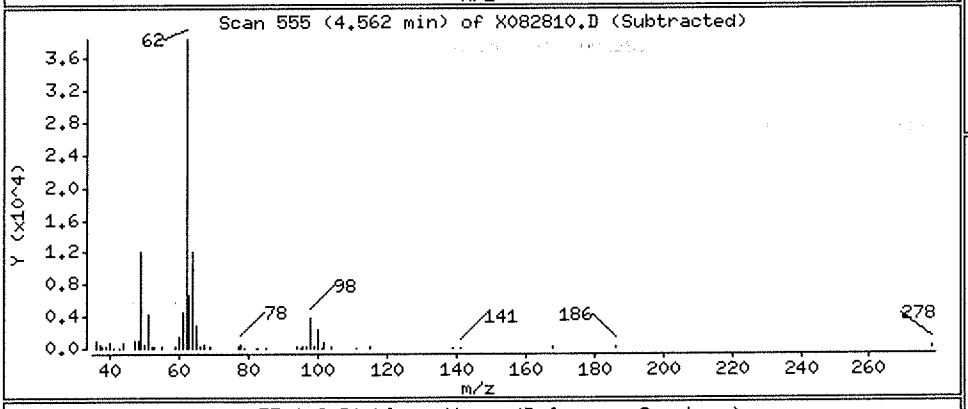
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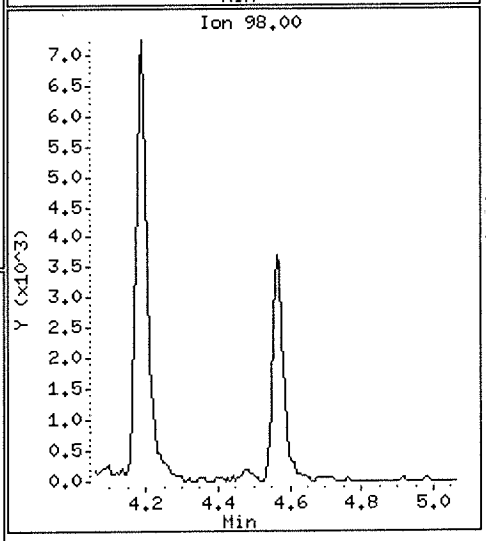
33 1,2-Dichloroethane

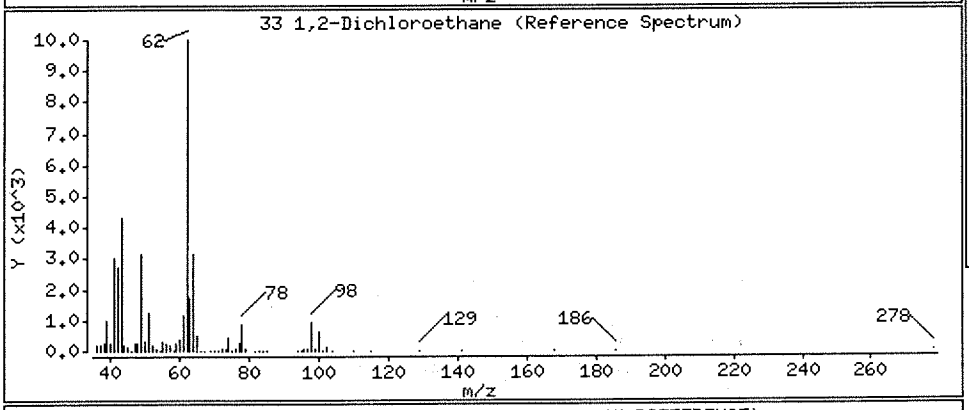
Concentration: 66.05 ug/l

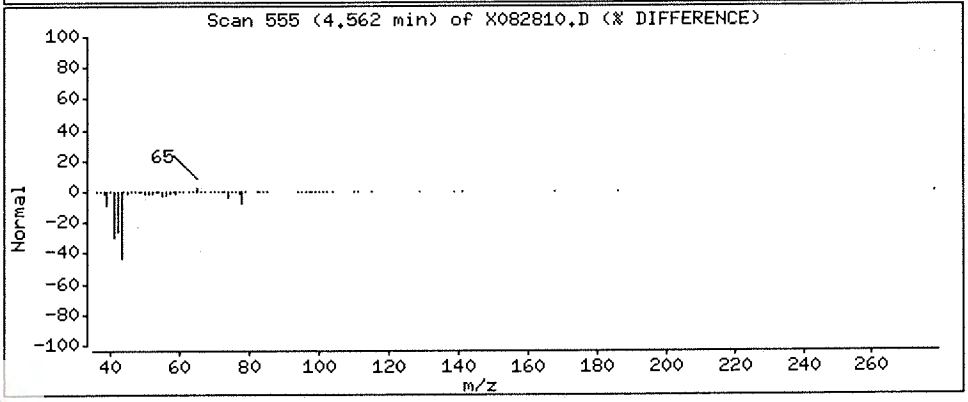












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

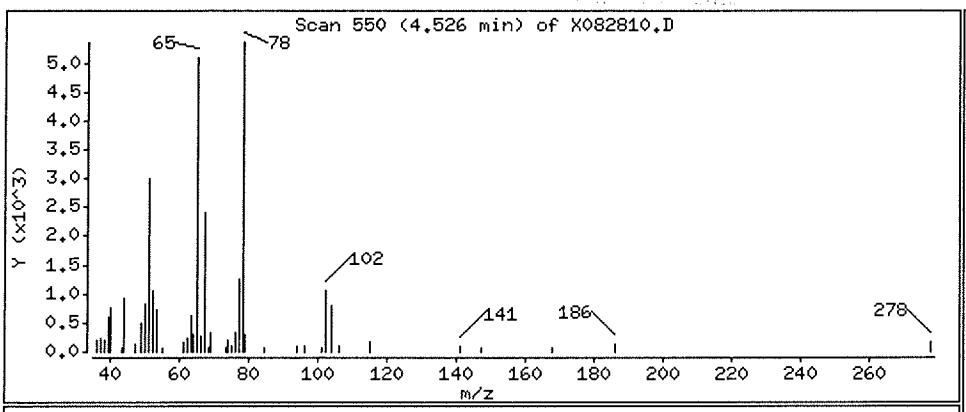
Operator: PC

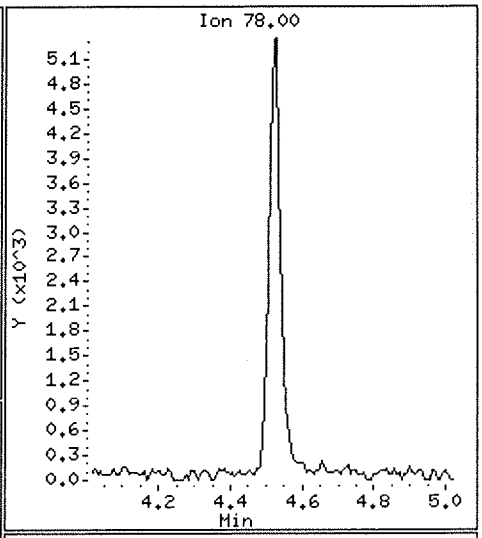
Column phase: DB624

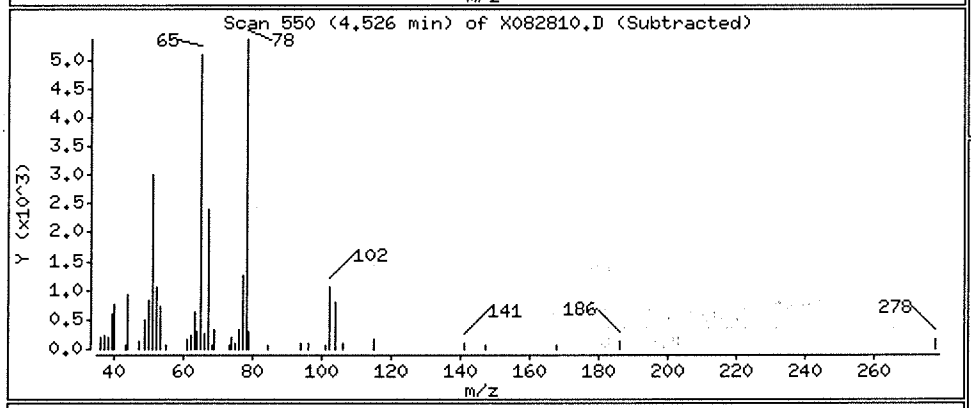
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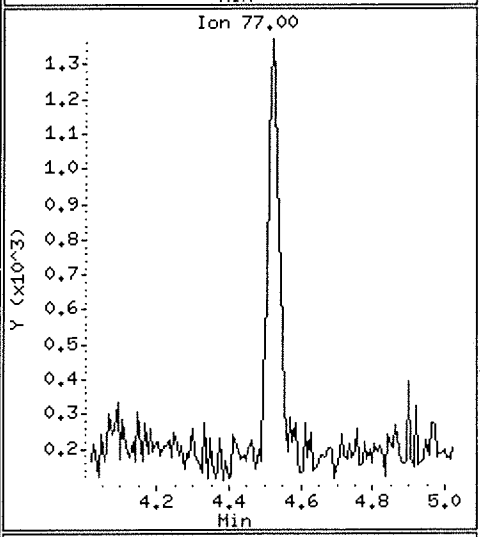
37 Benzene

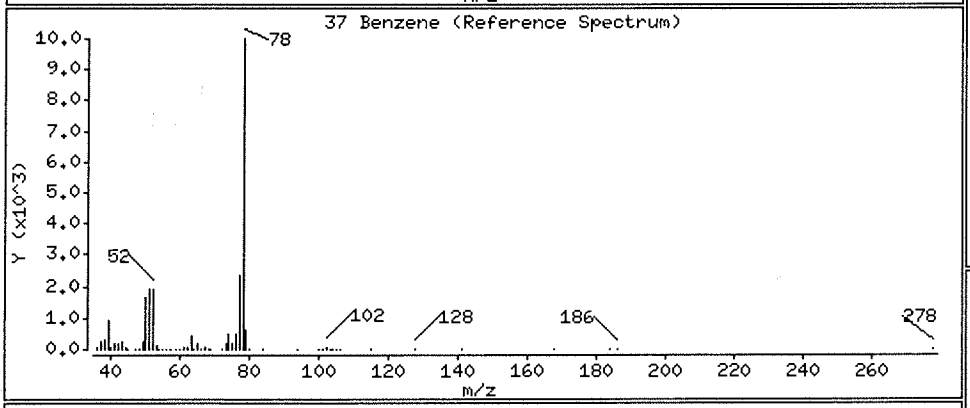
Concentration: 3.96 ug/l

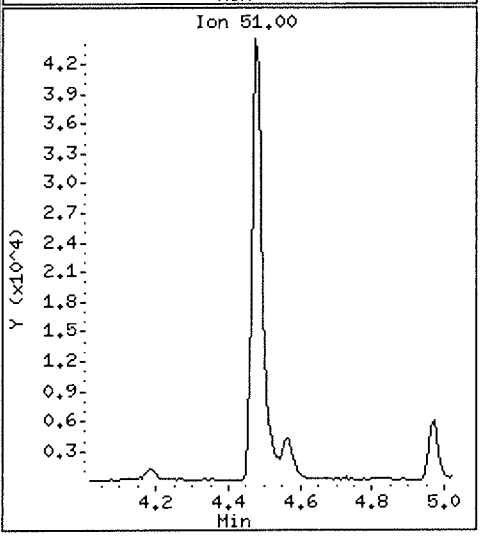


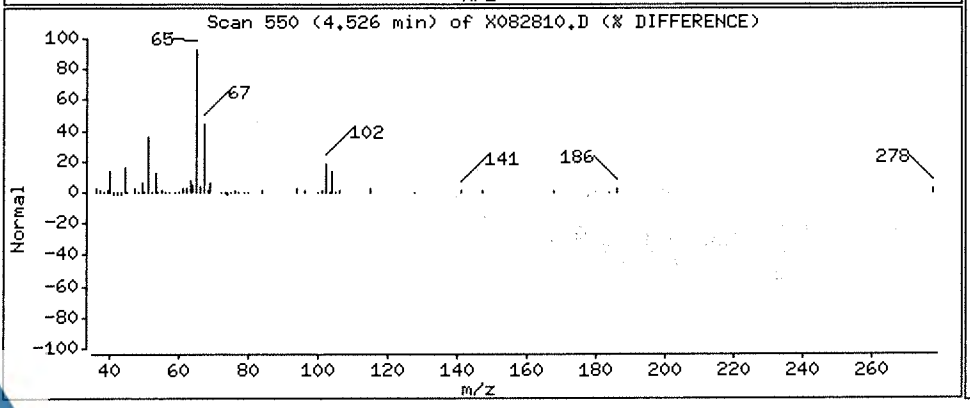












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

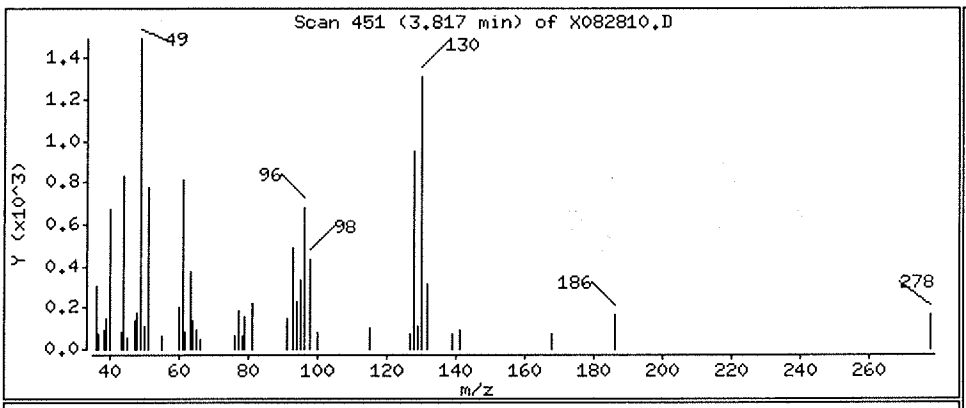
Operator: PC

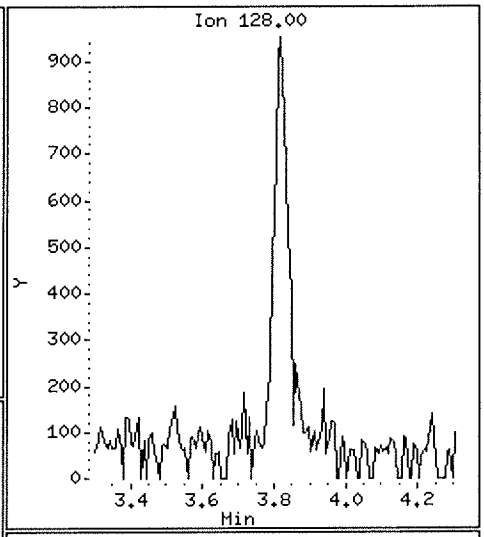
Column phase: DB624

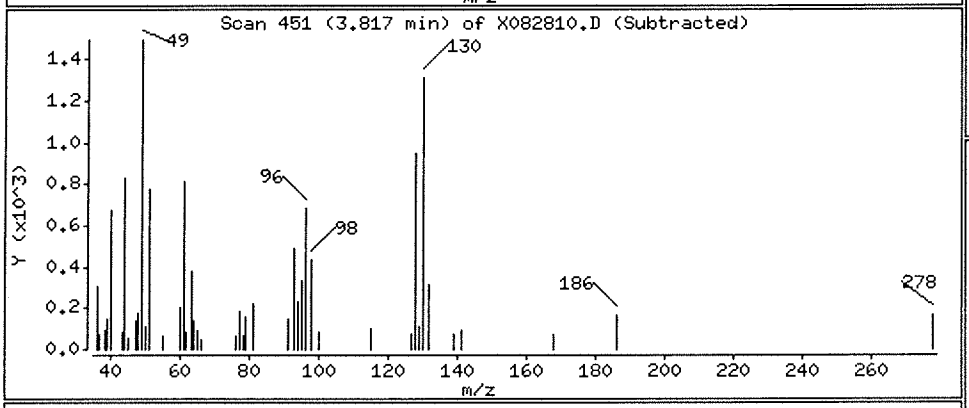
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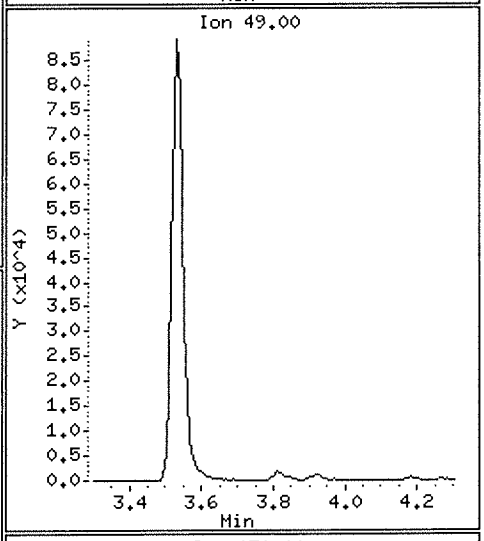
29 Bromochloromethane

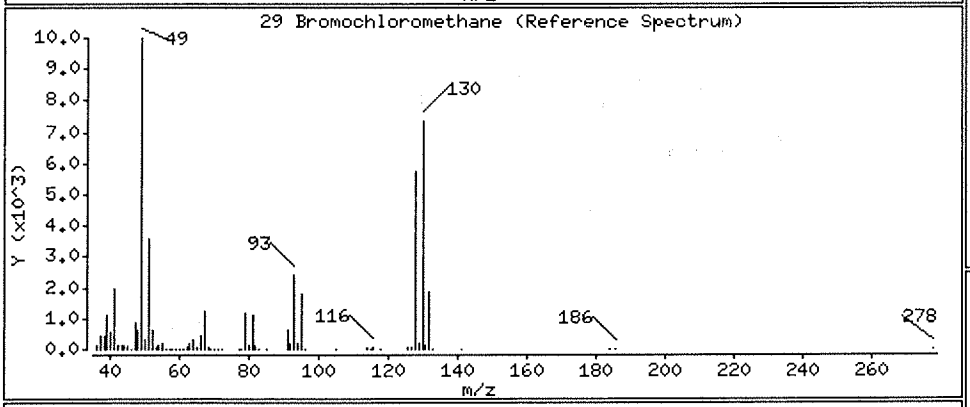
Concentration: 5.14 ug/l

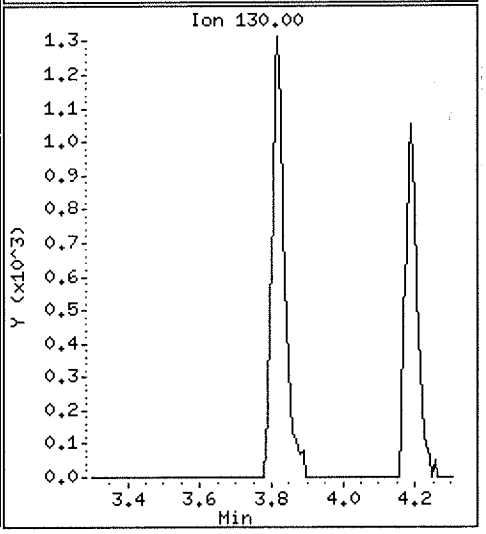


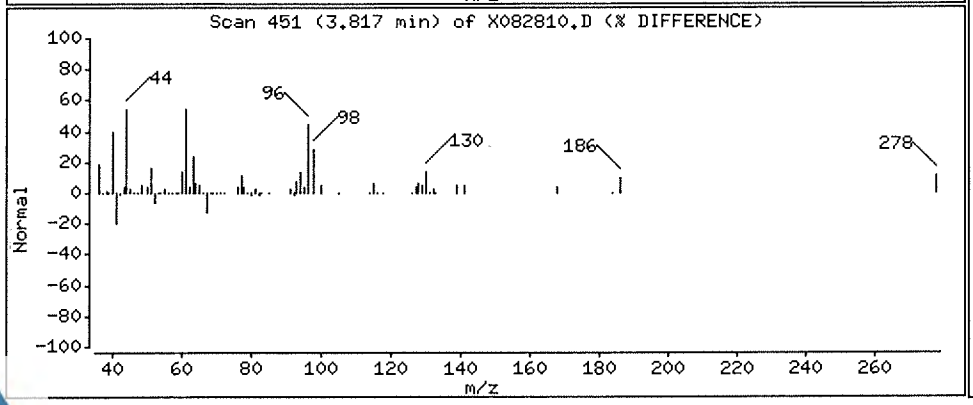












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

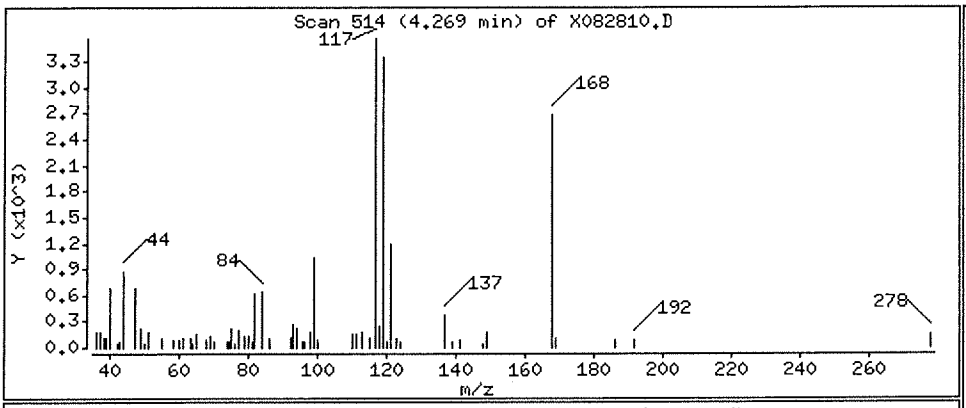
Operator: PC

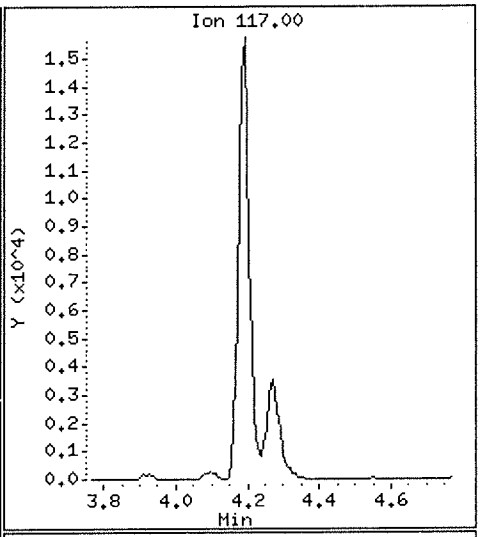
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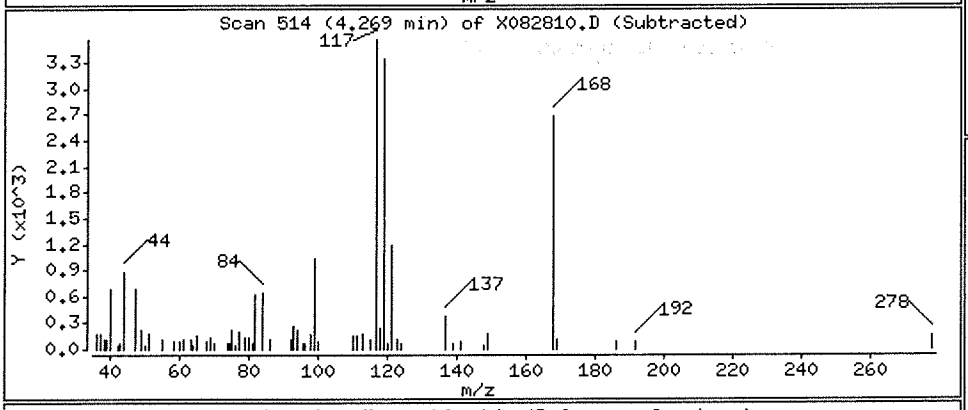
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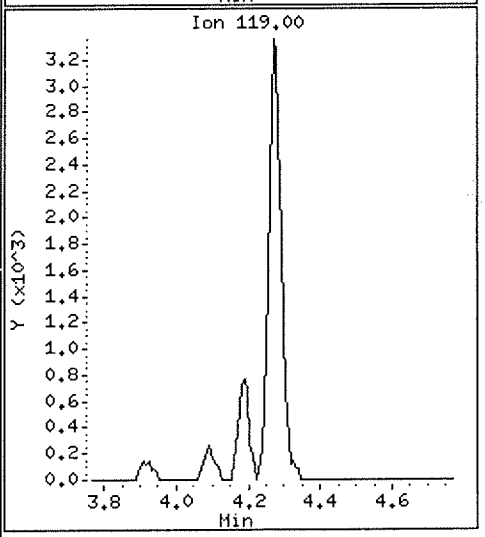
34 Carbon Tetrachloride

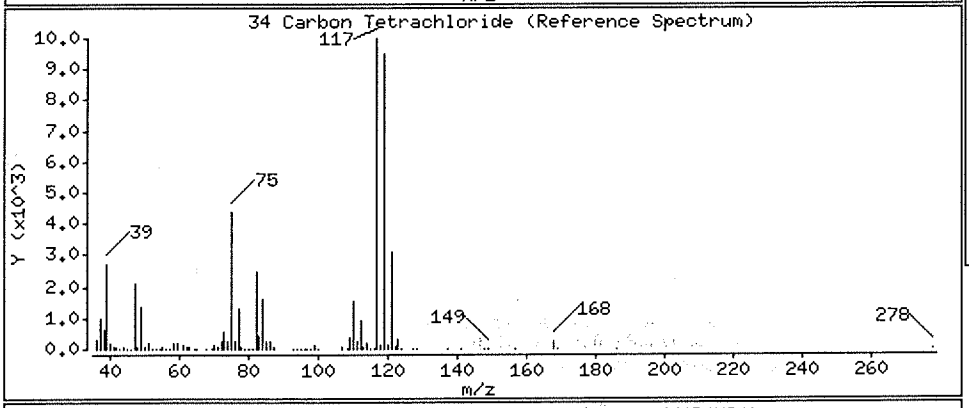
Concentration: 8.15 ug/l

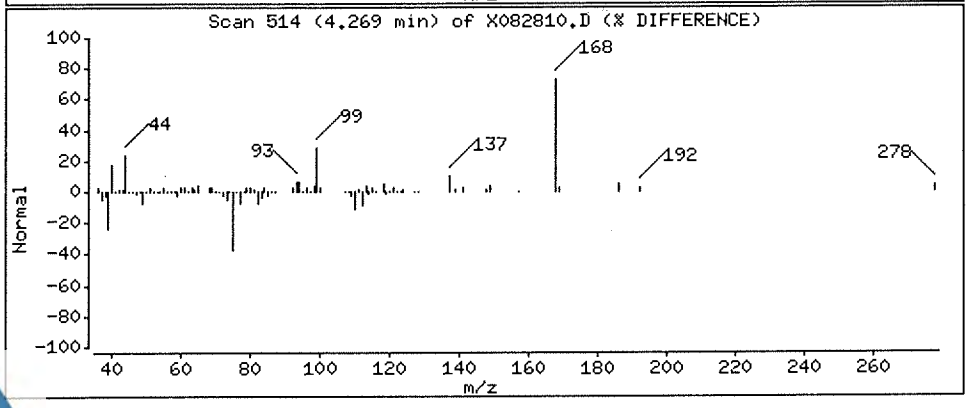












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Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

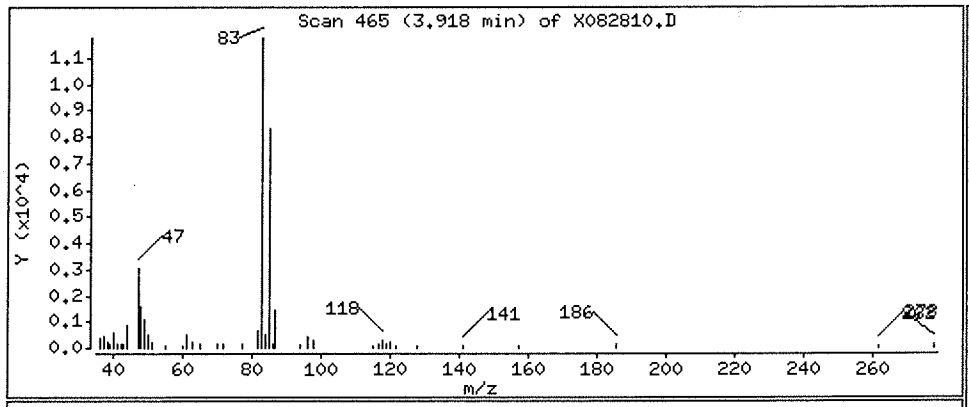
Operator: PC

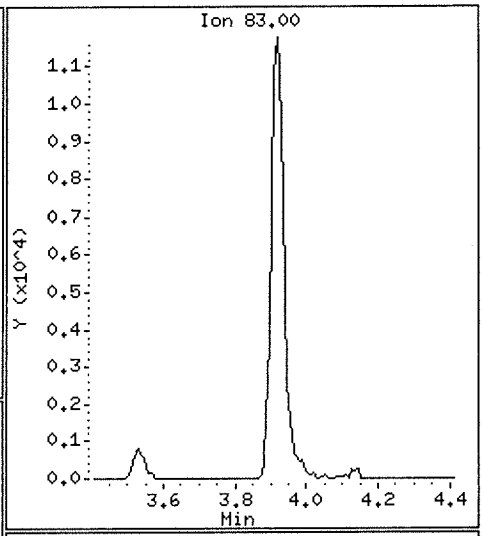
Column phase: DB624

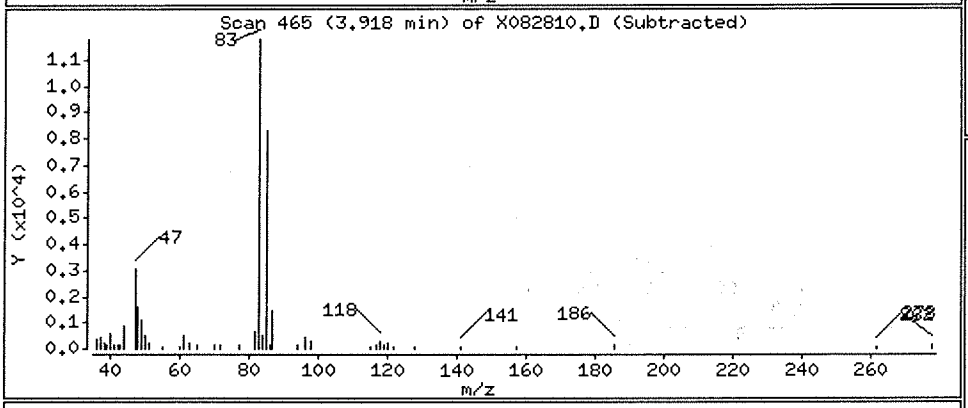
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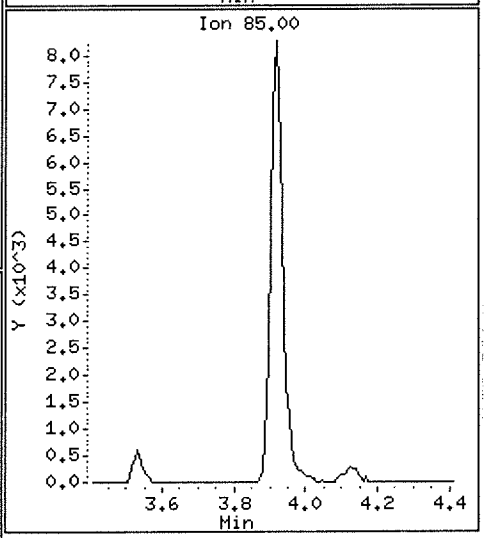
28 Chloroform

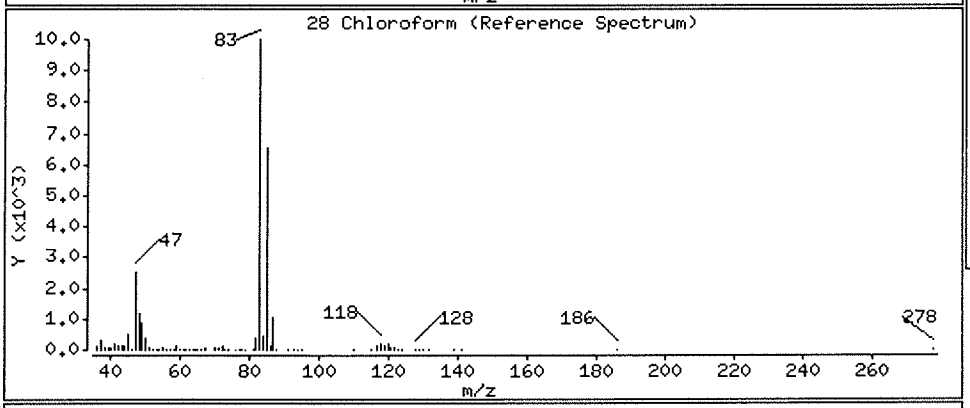
Concentration: 20.33 ug/l

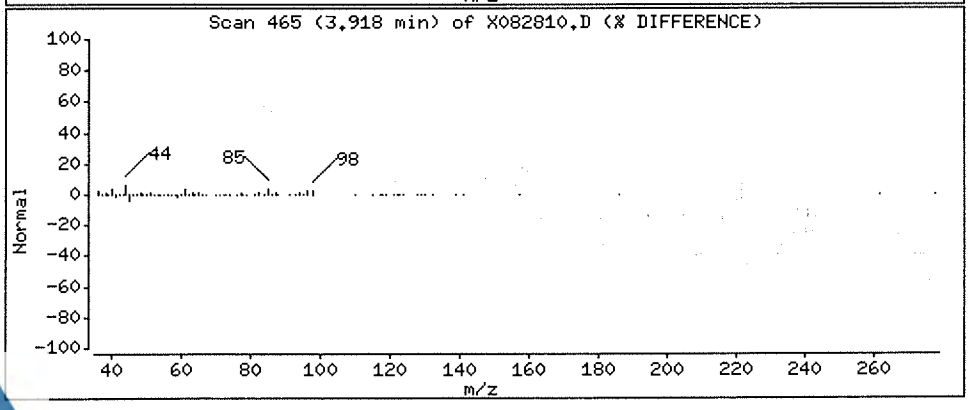












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Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

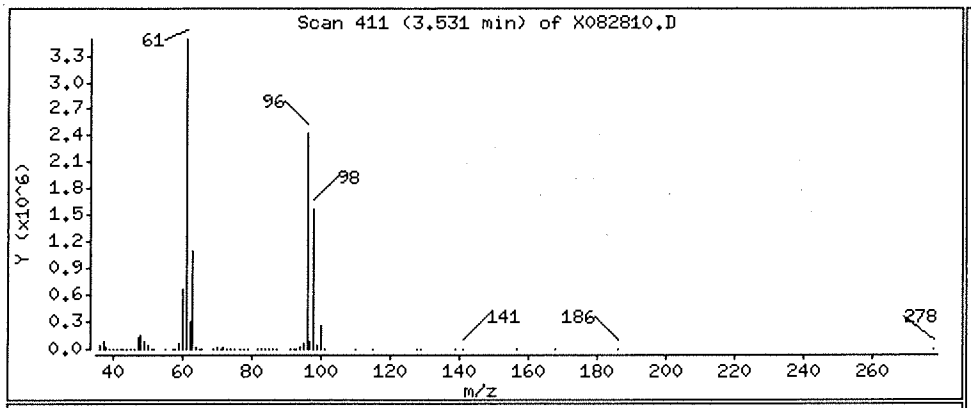
Operator: PC

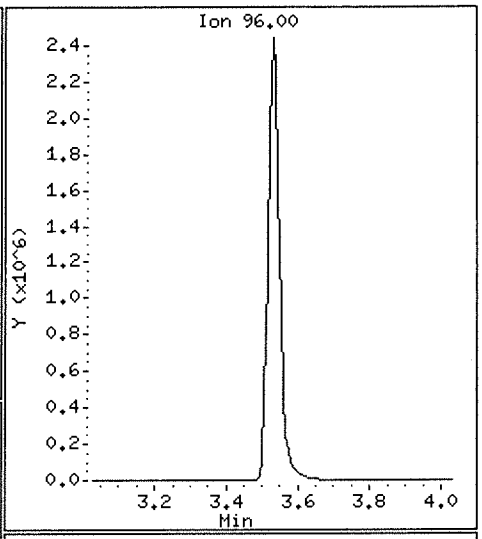
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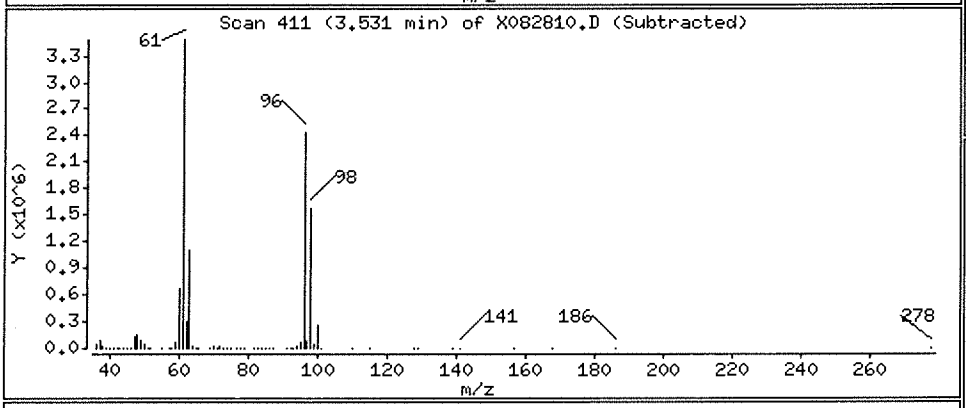
Column diameter: 0.18

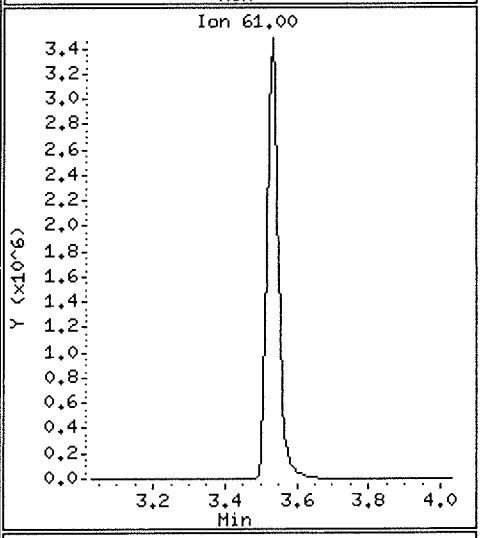
27 cis-1,2-Dichloroethene

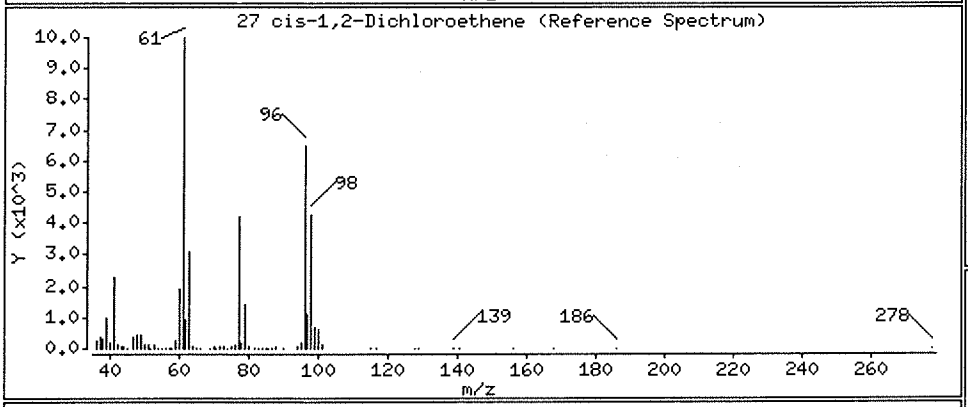
Concentration: 5947.42 ug/l

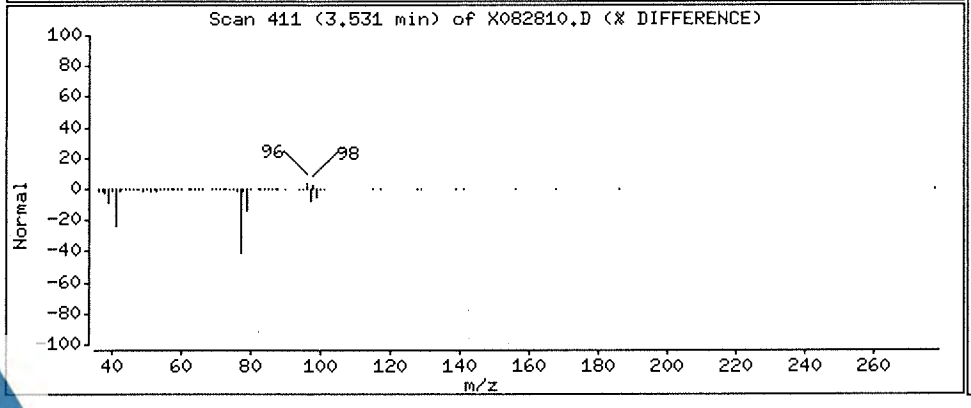


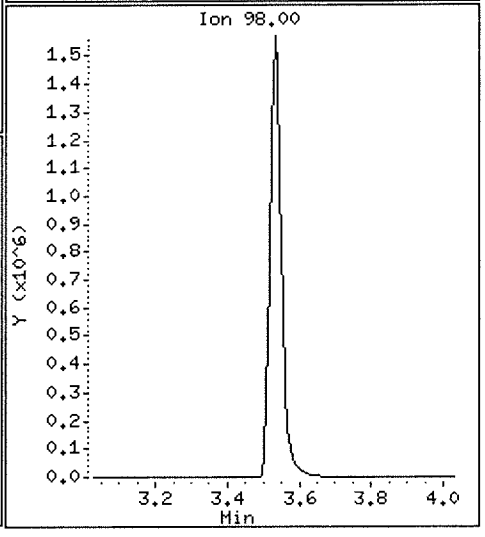












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Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

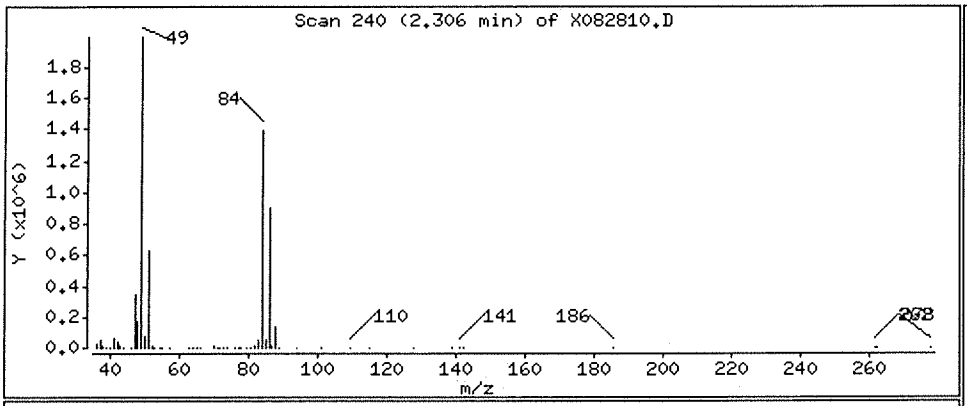
Operator: PC

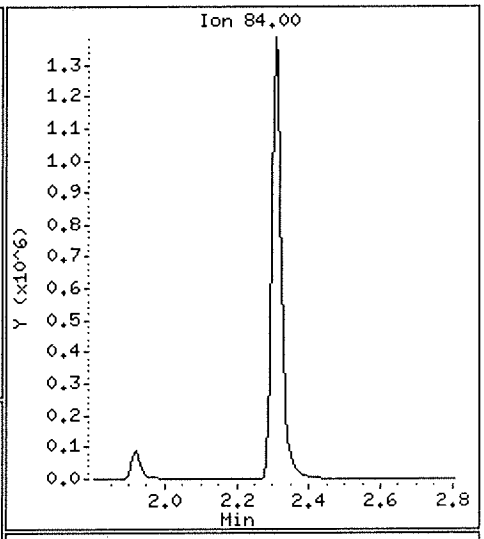
Column phase: DB624

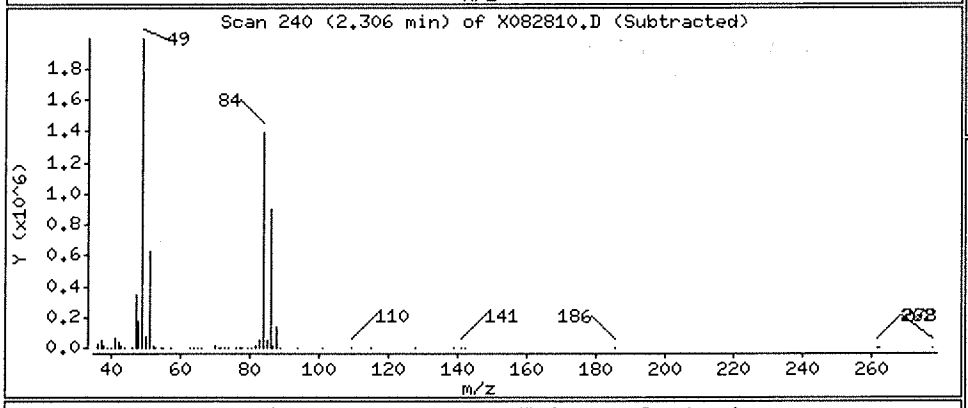
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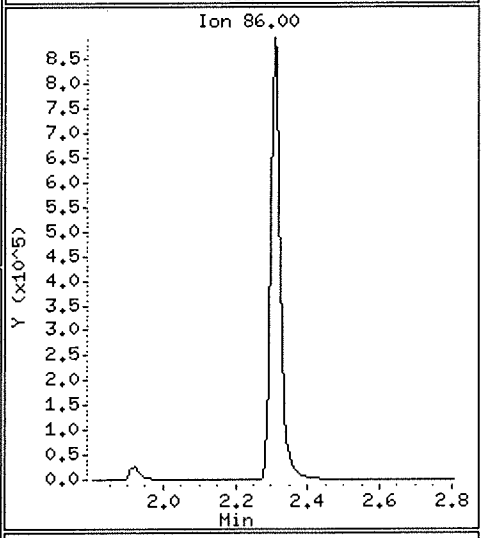
17 Methylene Chloride

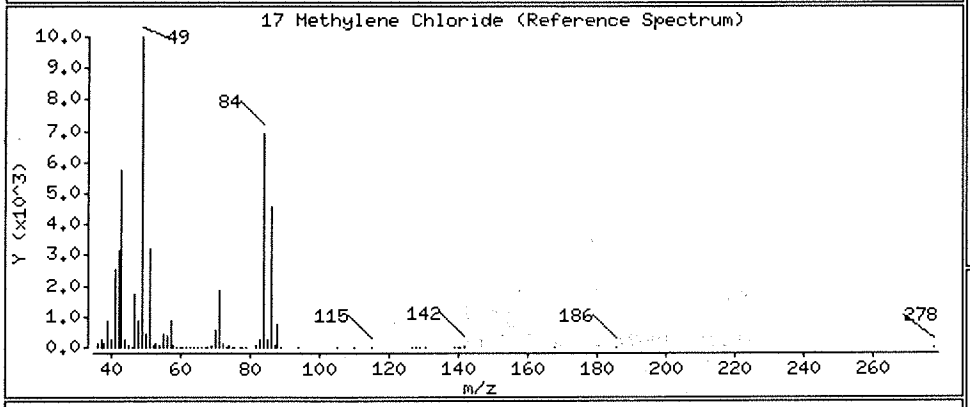
Concentration: 3163.00 ug/l

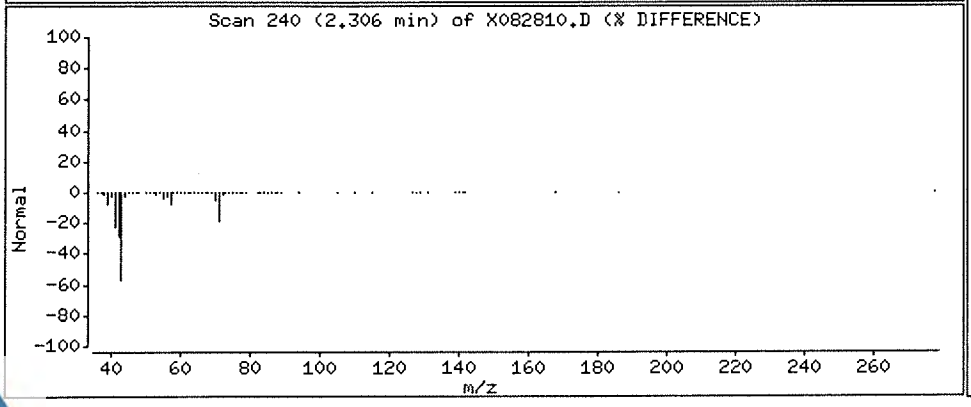


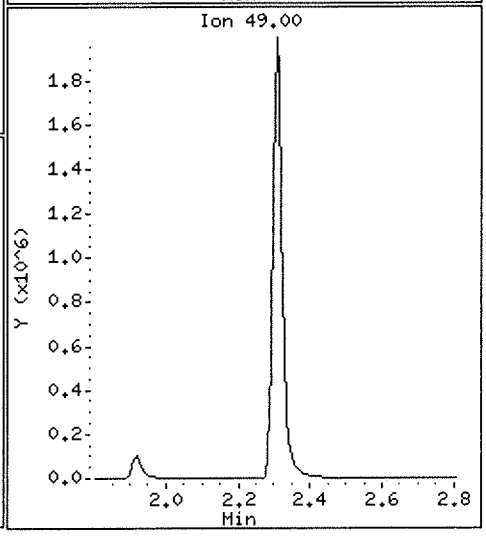












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

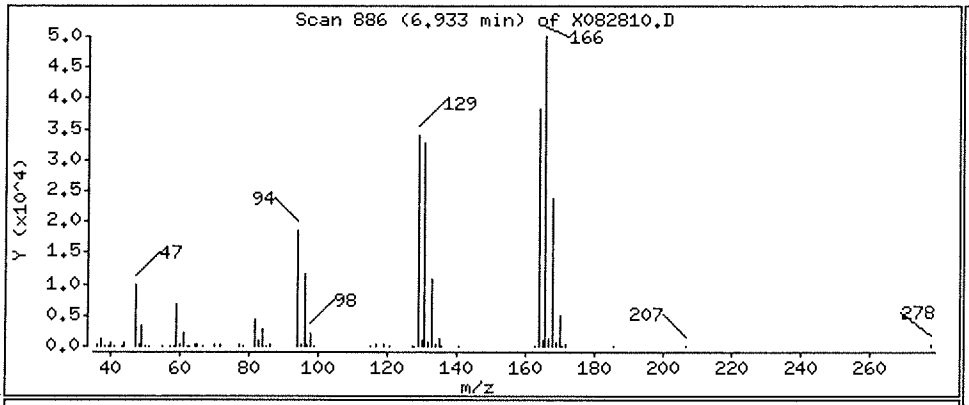
Operator: PC

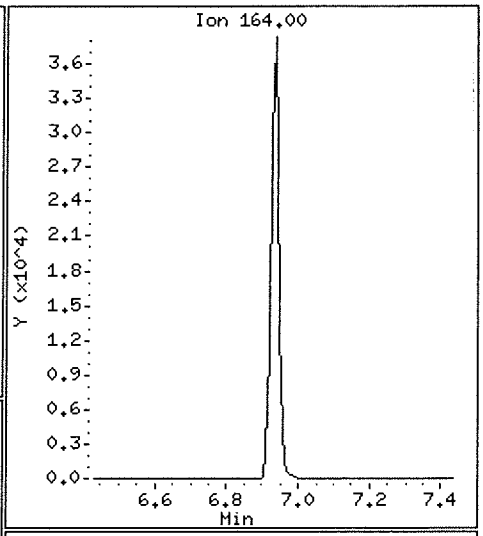
Column phase: DB624

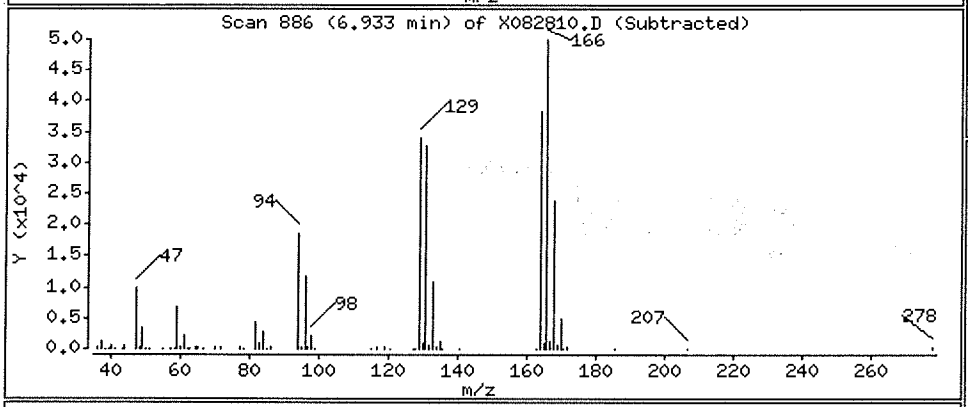
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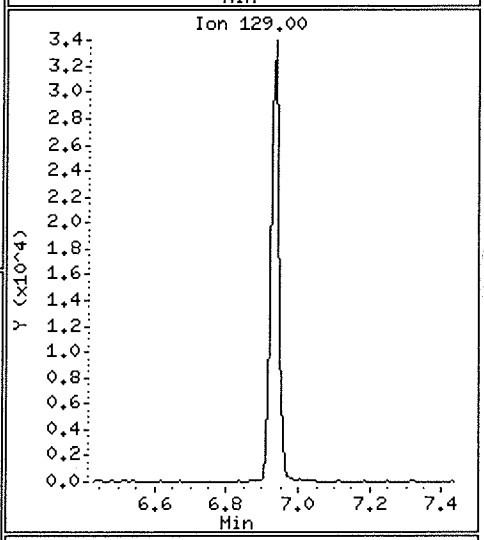
56 Tetrachloroethene

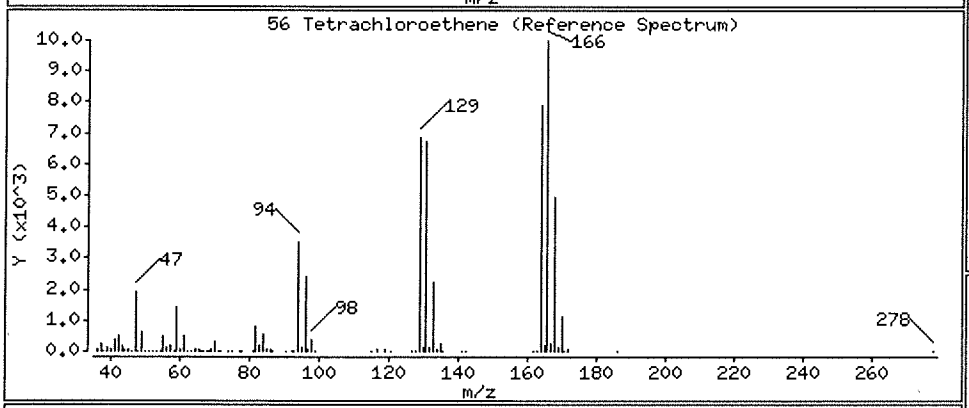
Concentration: 80.72 ug/l

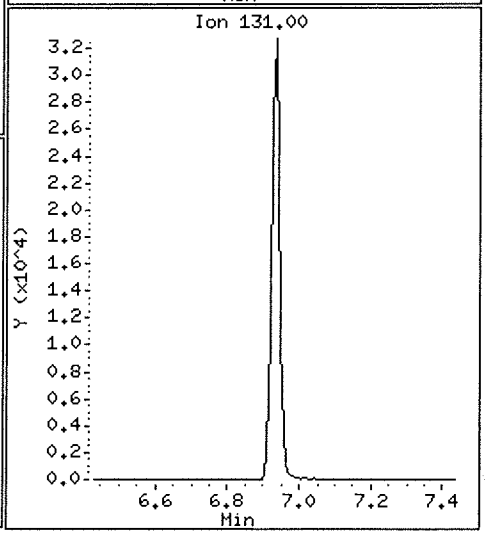


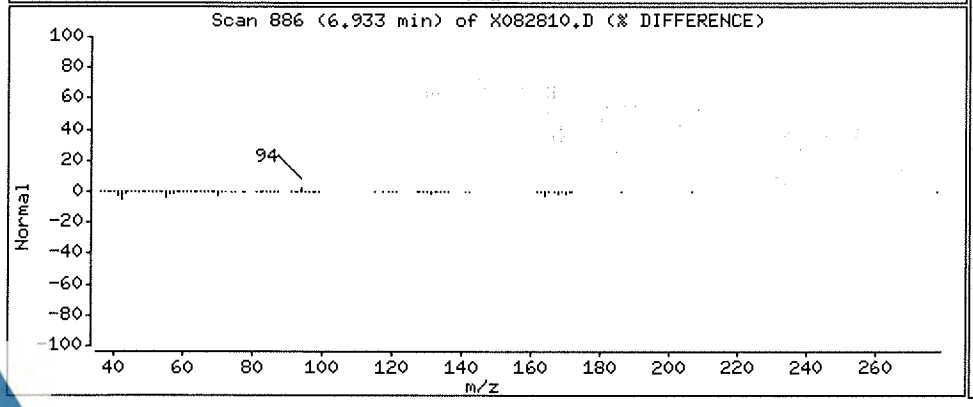












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

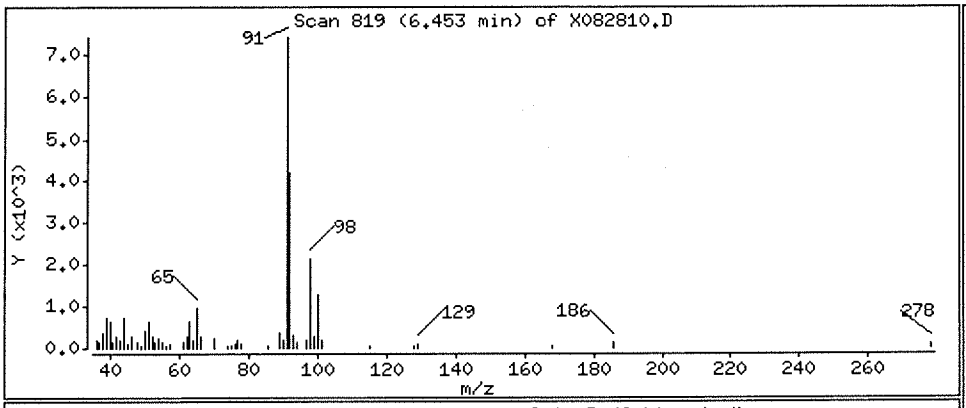
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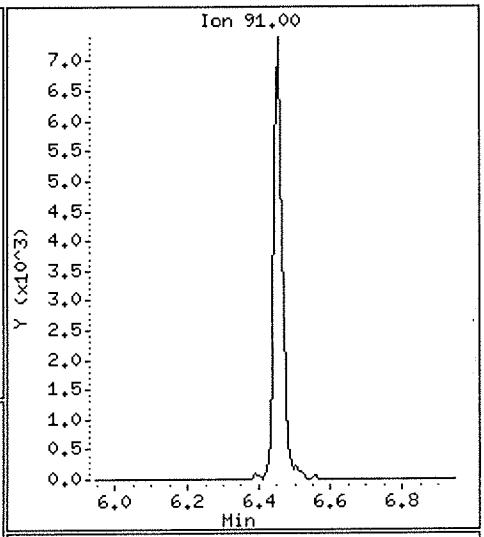
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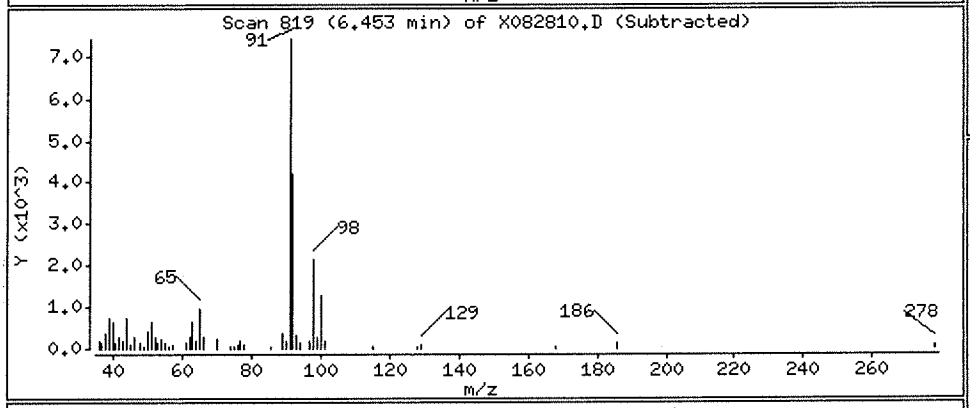
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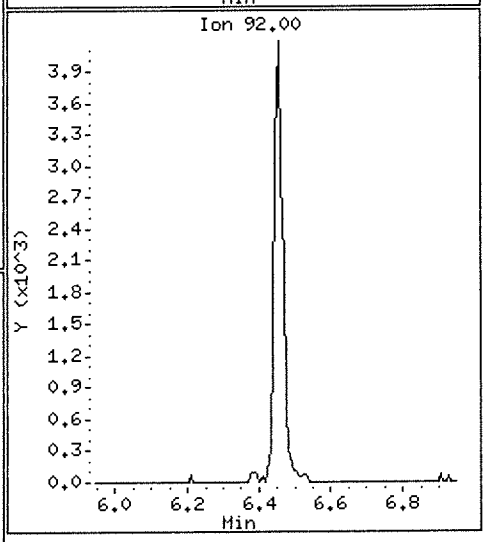
50 Toluene

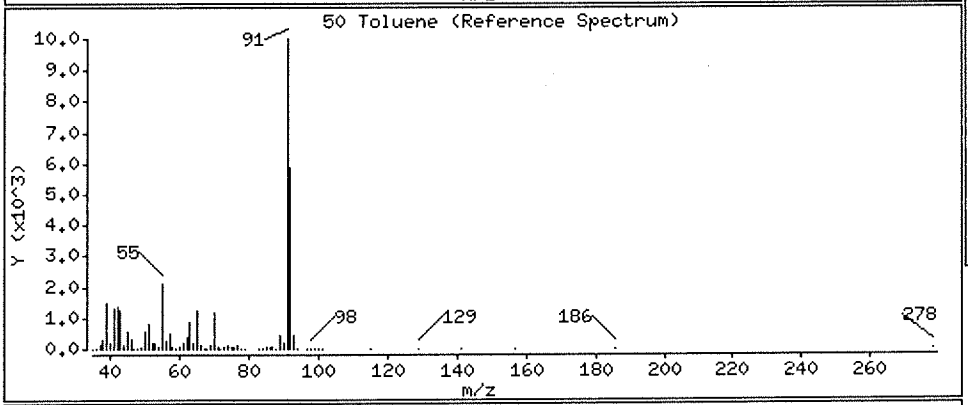
Concentration: 3.64 ug/l

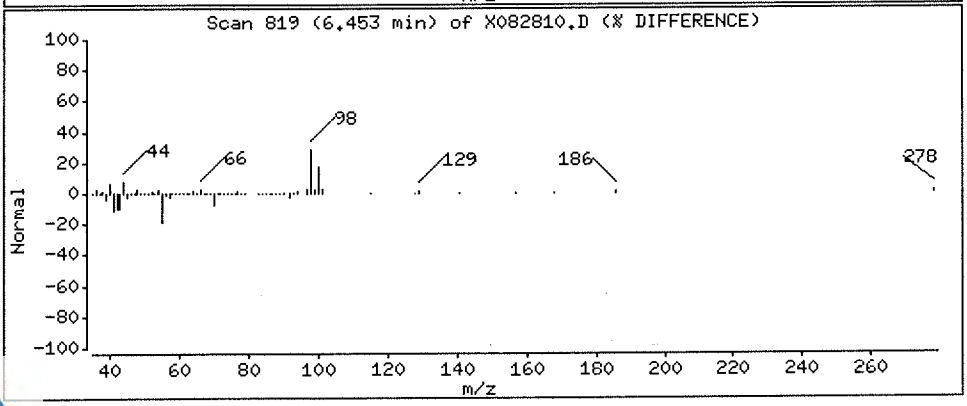












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

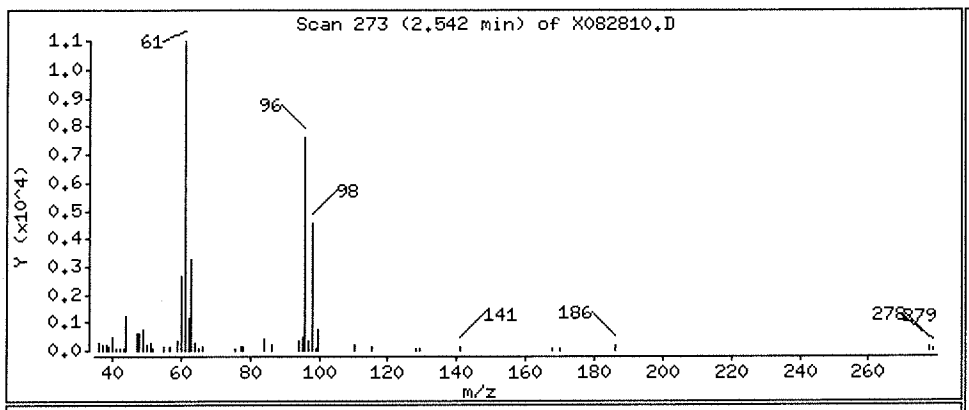
Operator: PC

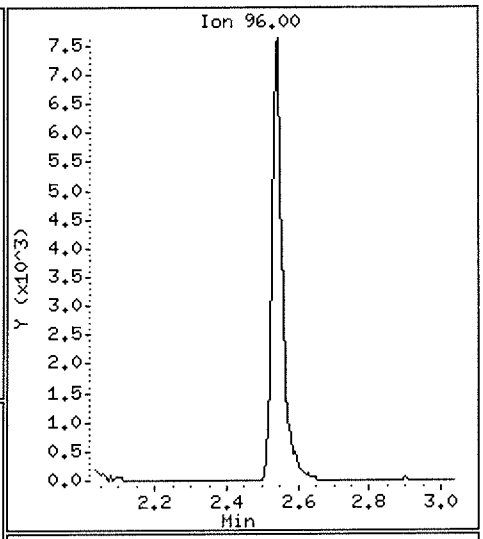
Column phase: DB624

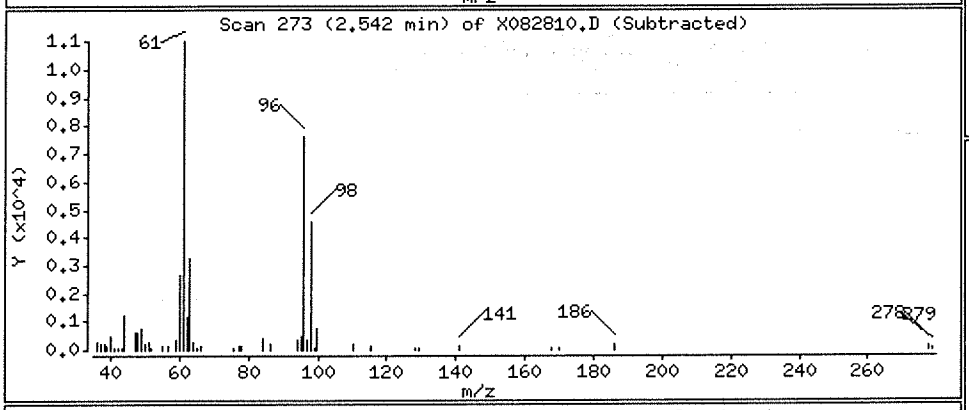
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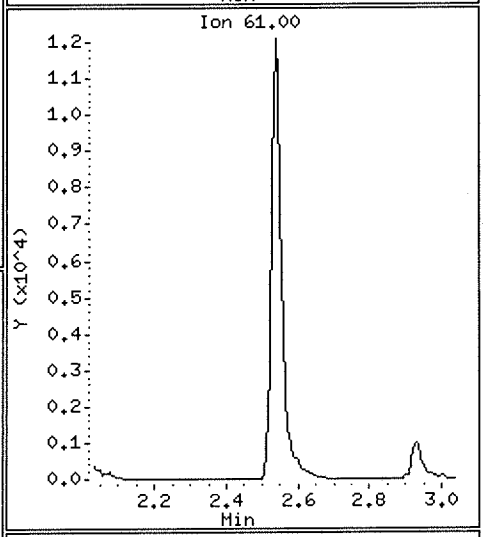
20 trans-1,2-Dichloroethene

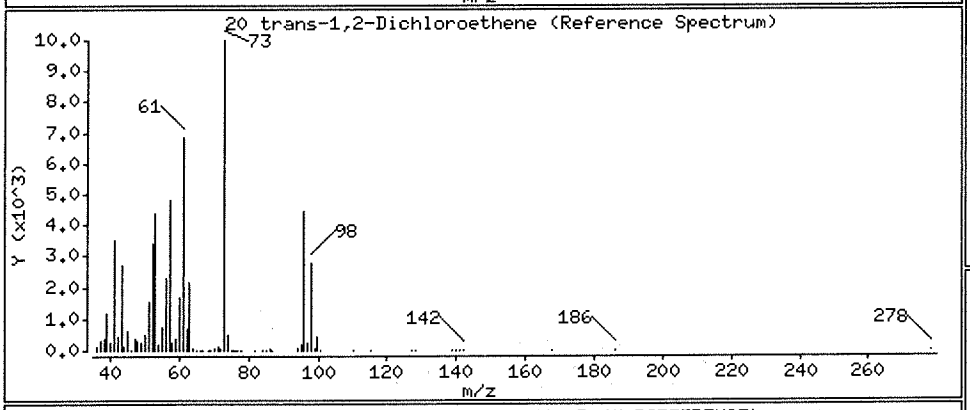
Concentration: 20.19 ug/l

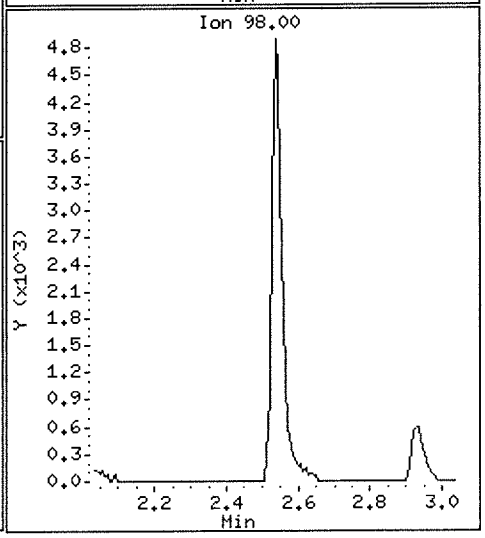


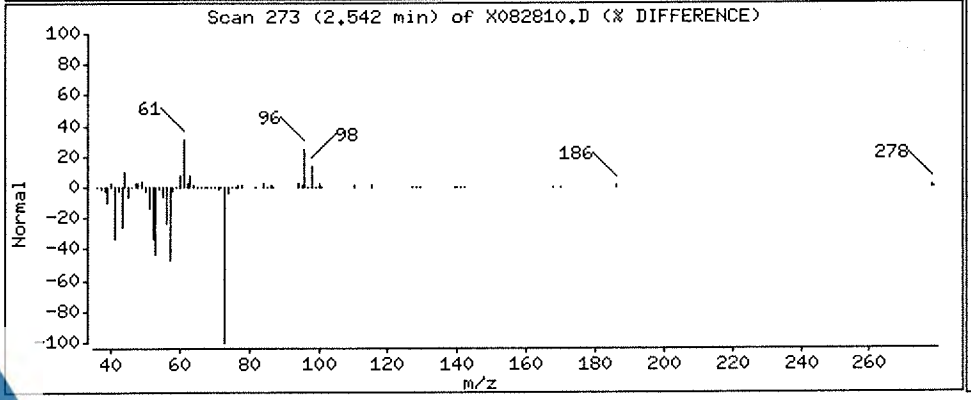












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

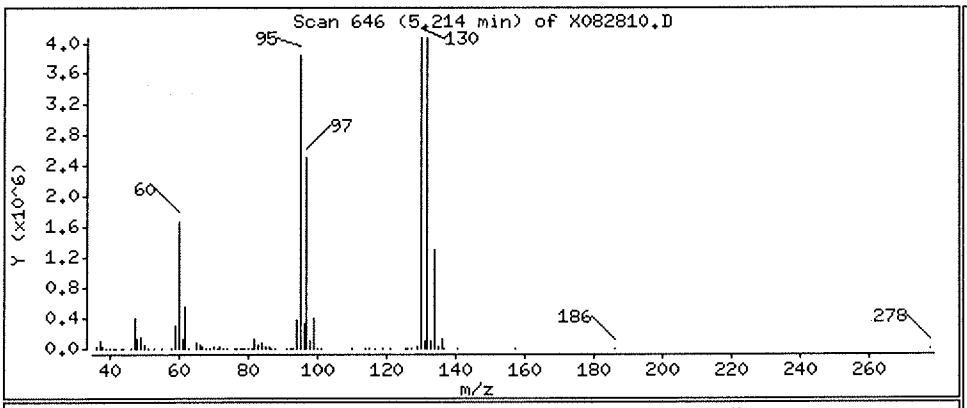
Operator: PC

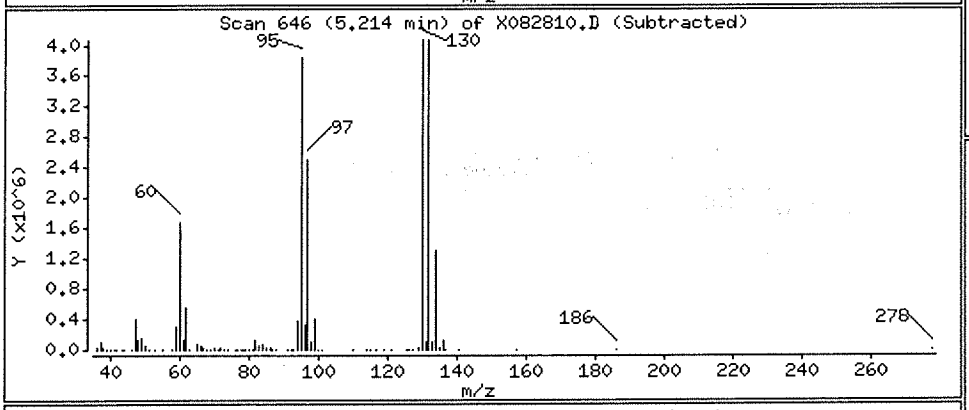
Column phase: DB624

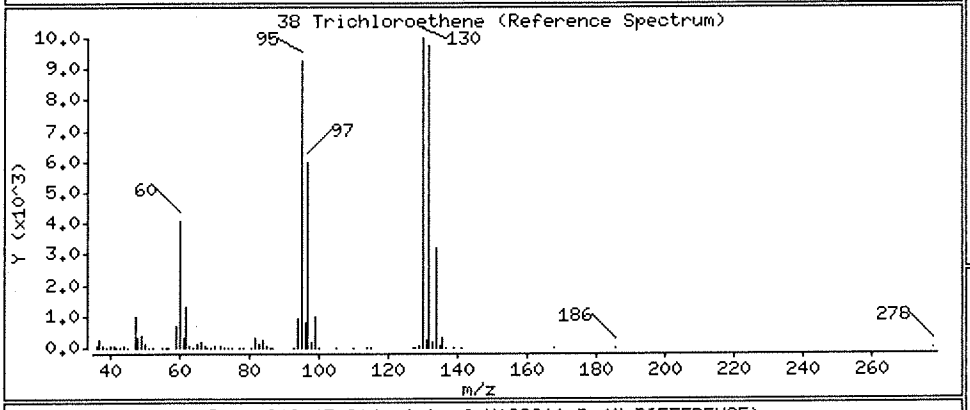
Column diameter: 0.18

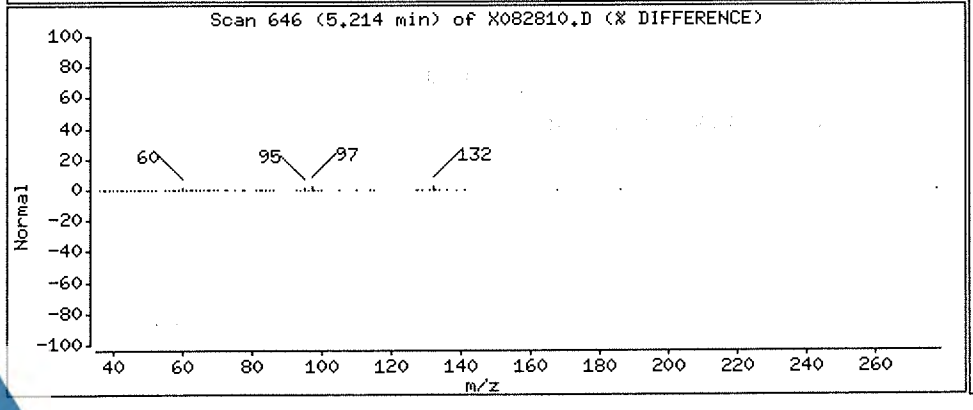
38 Trichloroethene

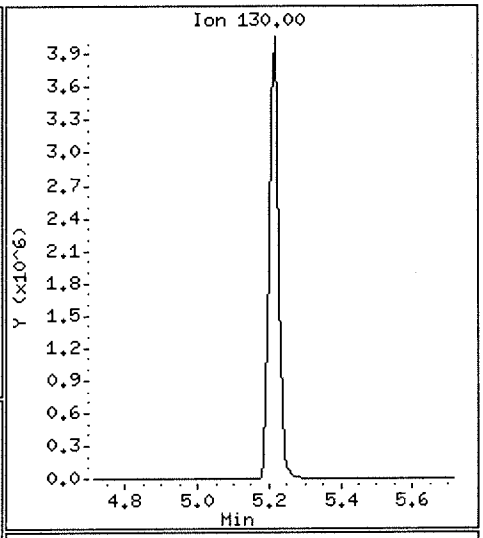
Concentration: 8239.38 ug/l

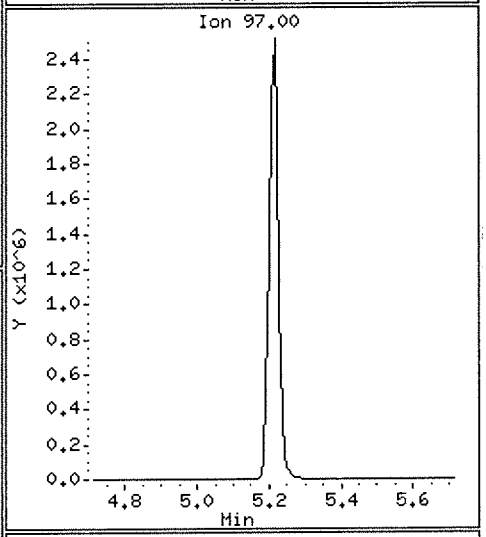


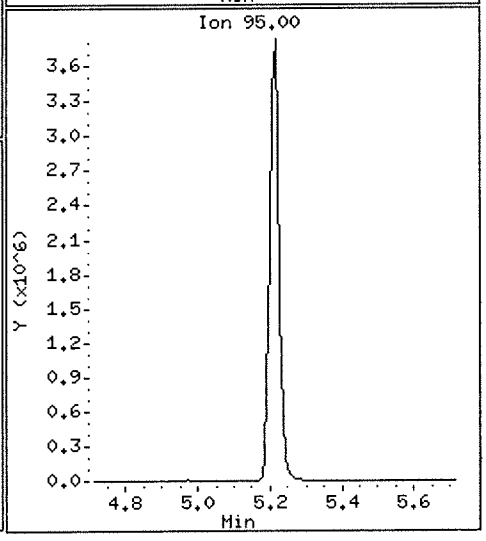












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082810.D

Date : 28-AUG-2020 16:24

Client ID: HS20081150-01

Instrument: voa6.i

Sample Info: HS20081150-01;HS20081150-01;;;

Purge Volume: 5.0

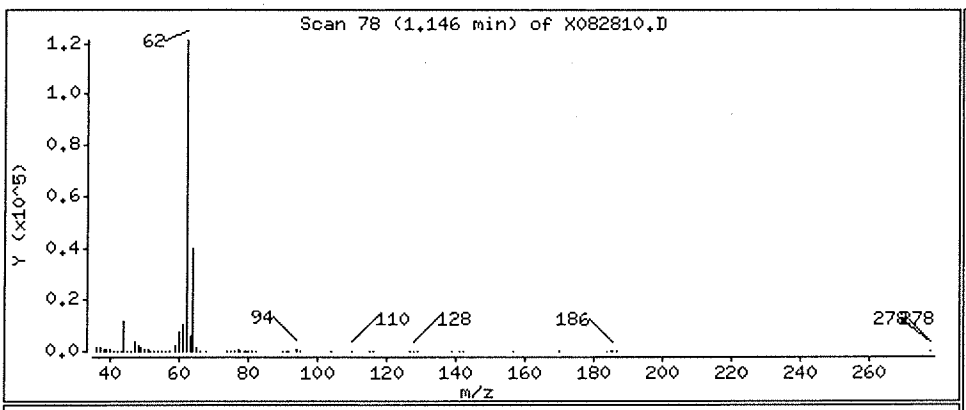
Operator: PC

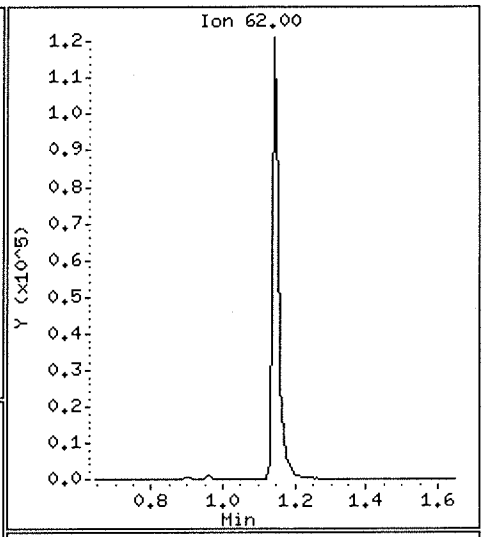
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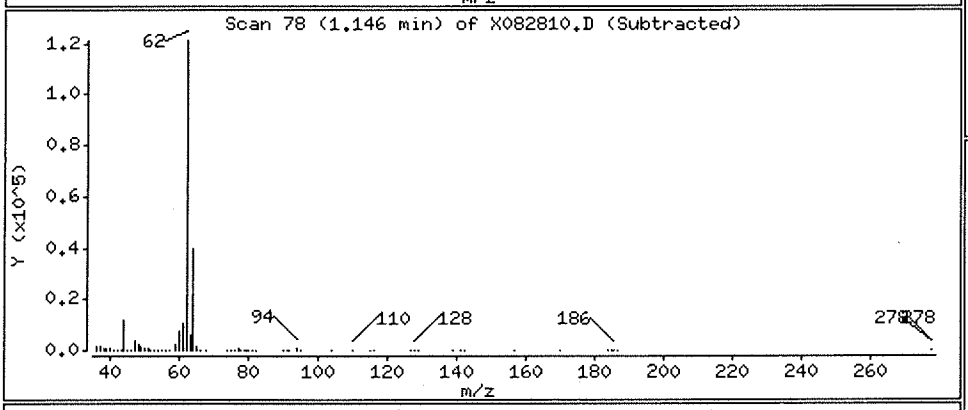
Column diameter: 0.18

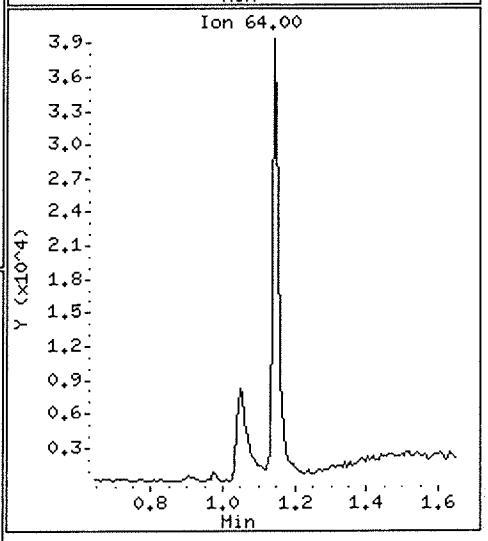
5 Vinyl Chloride

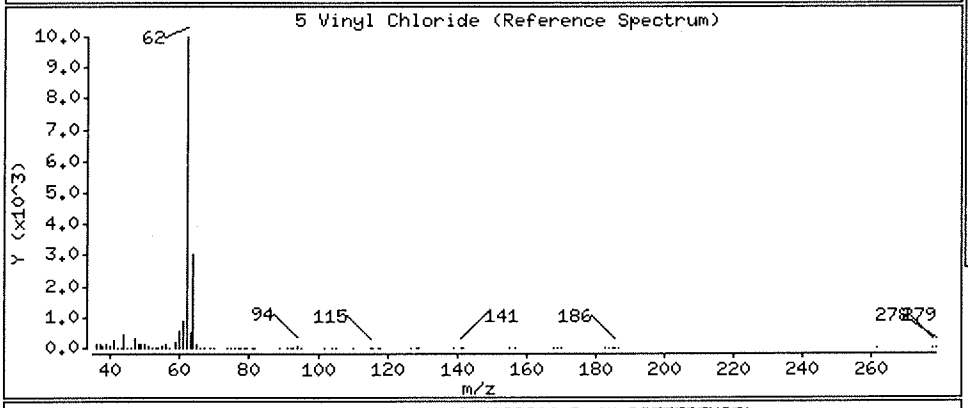
Concentration: 132.48 ug/l

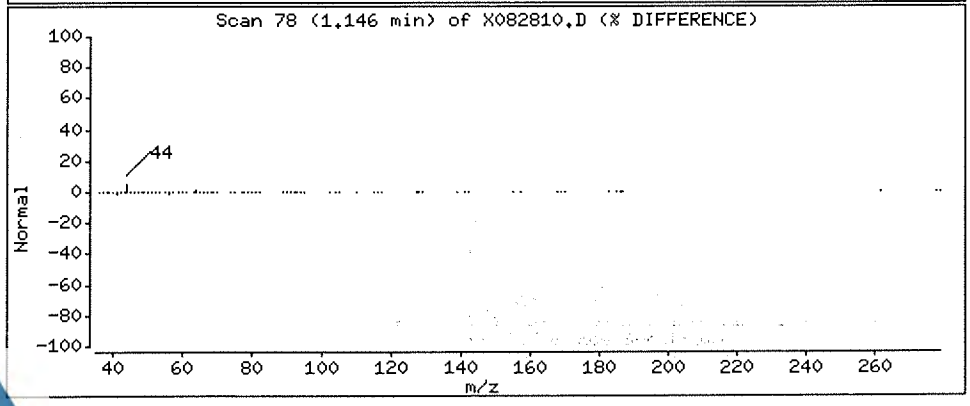












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D
Lab Smp Id: HS20081151-01MS Client Smp ID: HS20081151-01MS
Inj Date : 28-AUG-2020 16:48
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-01MS;HS20081151-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 12 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

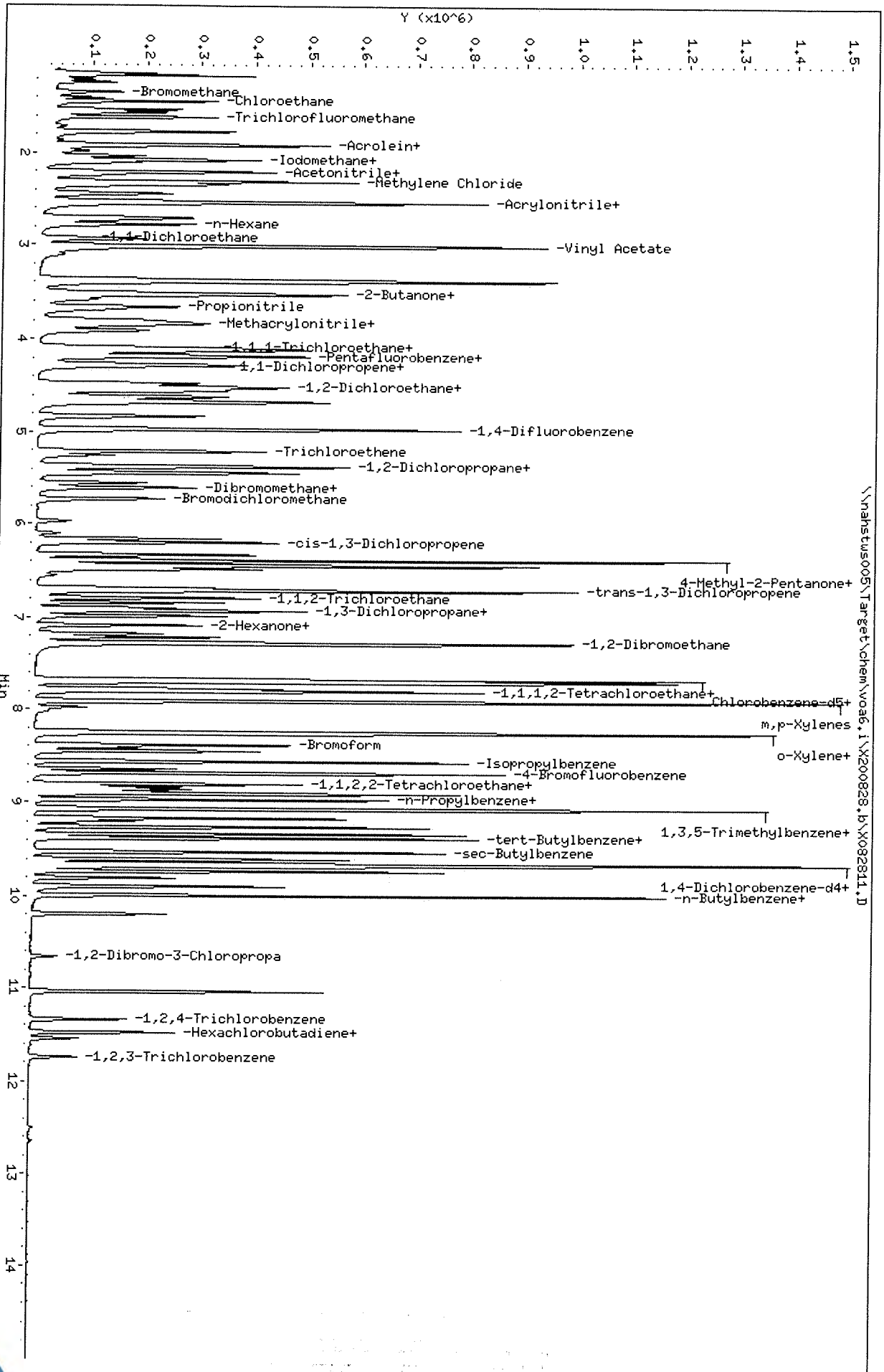
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	418519	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	623828	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	556086	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	263621	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	192860	46.9248	46.92
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	214354	44.0003	44.00
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	698429	51.7808	51.78
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	254710	48.9513	48.95
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	103349	24.4152	24.41
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	158364	24.5655	24.56
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	115243	27.3120	27.31
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	78952	24.9518	24.95
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	210000	25.6877	25.68
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	86298	26.0243	26.02
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	135332	25.8159	25.81
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	24283	30.6101	30.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	95589	24.7722	24.77(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	50353	33.1766	33.17
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	369723	26.2527	26.25
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9578	25.7952	25.79
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	102557	25.1588	25.15
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	185653	24.8981	24.89

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D Page 2
Report Date: 25-Sep-2020 10:00

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)	145249	24.0480	24.04
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	120875	26.4013	26.40
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	364744	26.4780	26.47
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	207985	25.1006	25.10
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	160429	25.6781	25.67
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	206278	25.1732	25.17
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	146963	24.6199	24.61
24 2-Butanone	43	3.588	3.580	(0.856)	107851	52.5674	52.56
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	299913	26.2224	26.22
52 2-Hexanone	43	7.090	7.090	(0.924)	169590	48.5785	48.57
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	339326	25.5022	25.50
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	392229	26.8683	26.86
45 4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	250855	48.7414	48.74
10 Acetone	43	1.983	1.976	(0.473)	61601	41.6051	41.60
37 Benzene	78	4.519	4.519	(0.909)	402979	26.0367	26.03
74 Bromobenzene	156	8.810	8.809	(0.911)	126715	24.5719	24.57
29 Bromochloromethane	128	3.803	3.802	(0.908)	58540	23.2053	23.20
39 Bromodichloromethane	83	5.729	5.729	(1.153)	135599	24.1460	24.14
66 Bromoform	173	8.416	8.415	(1.097)	72571	23.5215	23.52
6 Bromomethane	94	1.346	1.346	(0.321)	69859	24.5876	24.58
19 Carbon Disulfide	76	2.076	2.076	(0.496)	507397	49.2813	49.28
34 Carbon Tetrachloride	117	4.275	4.268	(0.860)	137345	24.6491	24.64
59 Chlorobenzene	112	7.699	7.699	(1.004)	278540	25.5574	25.55
7 Chloroethane	64	1.403	1.403	(0.335)	67908	22.8919	22.89(M)
28 Chloroform	83	3.917	3.910	(0.935)	181586	24.2853	24.28
3 Chloromethane	50	1.081	1.081	(0.258)	120580	20.5199	20.51
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	215935	46.8730	46.87
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	163659	24.9231	24.92
55 Dibromochloromethane	129	7.176	7.176	(0.936)	107974	24.2402	24.24
44 Dibromomethane	93	5.557	5.557	(1.118)	65735	24.2130	24.21
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	56410	13.7715	13.77
61 Ethylbenzene	106	7.800	7.799	(1.017)	149475	26.5617	26.56
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	46783	33.0550	33.05
67 Isopropylbenzene	105	8.566	8.566	(1.117)	447429	27.0859	27.08
62 m,p-Xylenes	106	7.907	7.907	(1.031)	356595	52.5089	52.50
17 Methylene Chloride	84	2.313	2.305	(0.552)	105960	23.8614	23.86
87 n-Butylbenzene	91	9.999	9.998	(1.034)	318599	27.3276	27.32
73 n-Propylbenzene	91	8.917	8.917	(0.922)	511188	26.9172	26.91
92 Naphthalene	128	11.546	11.546	(1.194)	64563	30.9645	30.96
63 o-Xylene	106	8.244	8.244	(1.075)	172369	25.8387	25.83
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	436903	27.2805	27.28
64 Styrene	104	8.265	8.258	(1.078)	292323	25.2362	25.23
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	320838	26.8632	26.86
56 Tetrachloroethene	164	6.933	6.933	(0.904)	97537	27.5917	27.59
50 Toluene	91	6.453	6.453	(0.841)	430364	26.5009	26.50
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	101986	25.9940	25.99
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	141491	23.5093	23.50
38 Trichloroethene	130	5.214	5.214	(1.049)	142990	32.3427	32.34
8 Trichlorofluoromethane	101	1.568	1.560	(0.374)	145927	23.6755	23.67
5 Vinyl Chloride	62	1.145	1.145	(0.273)	124163	23.0476	23.04

QC Flag Legend

M - Compound response manually integrated.

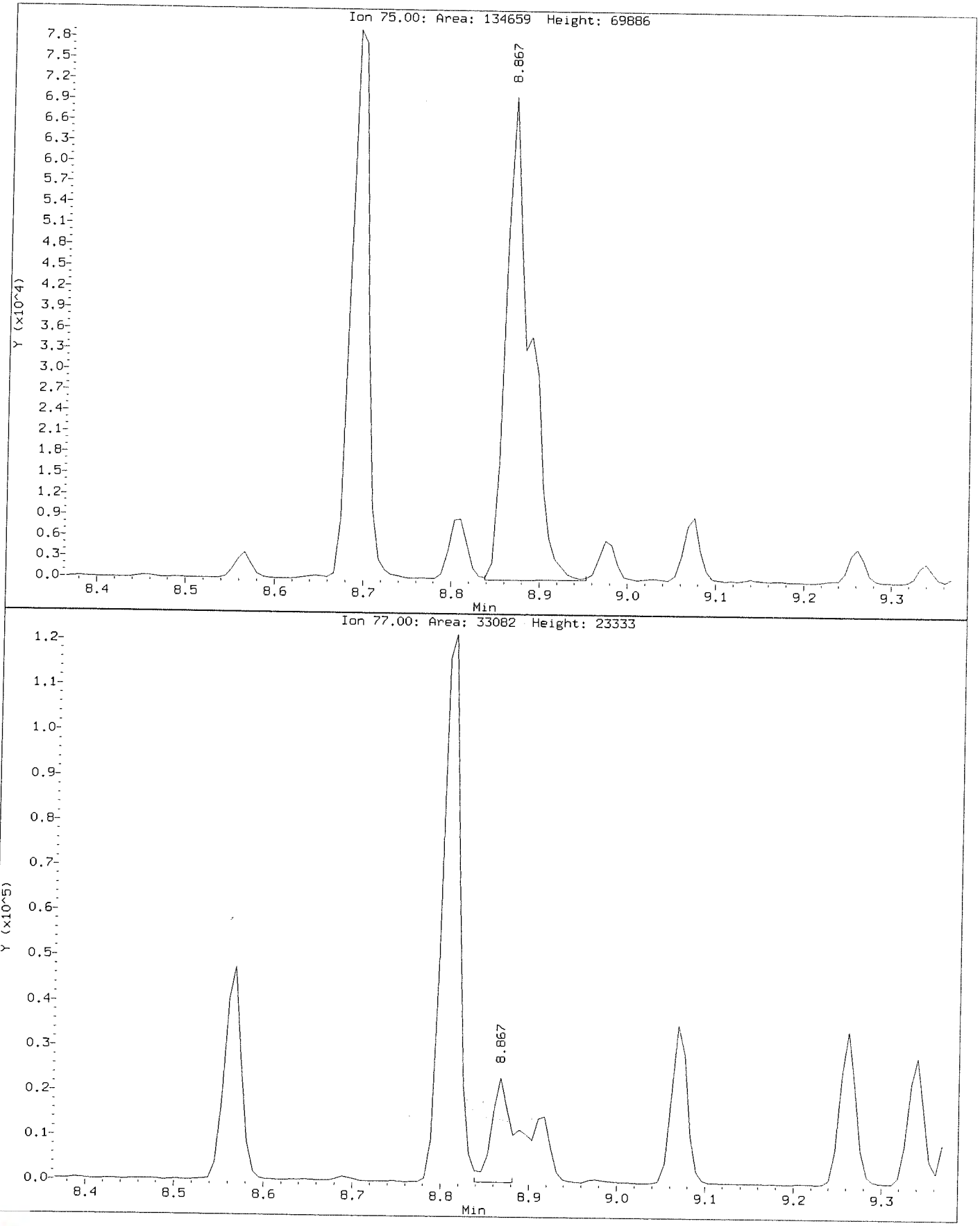


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Client ID: HS20081151-01MS
Sample Info: HS20081151-01MS;HS20081151-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

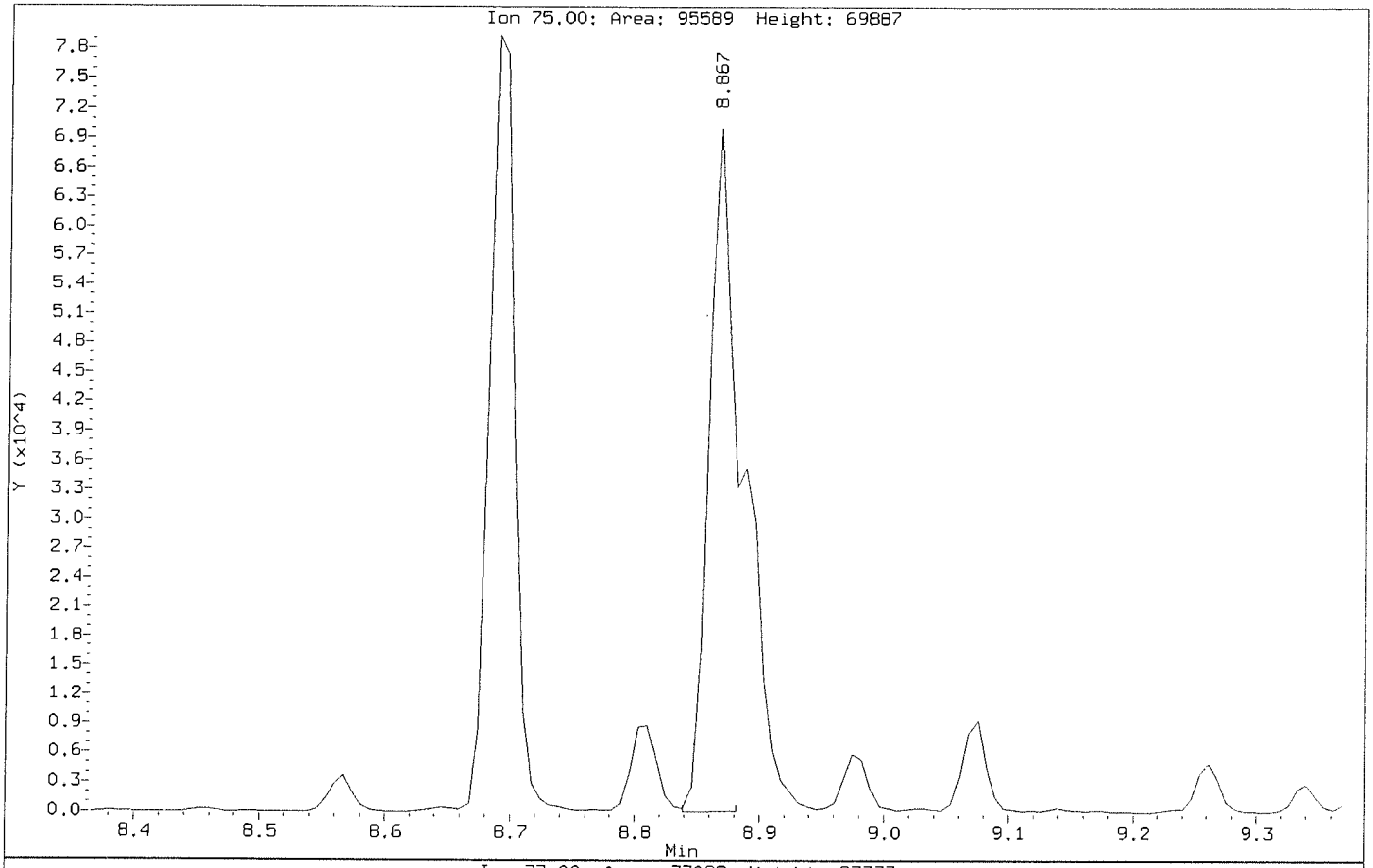
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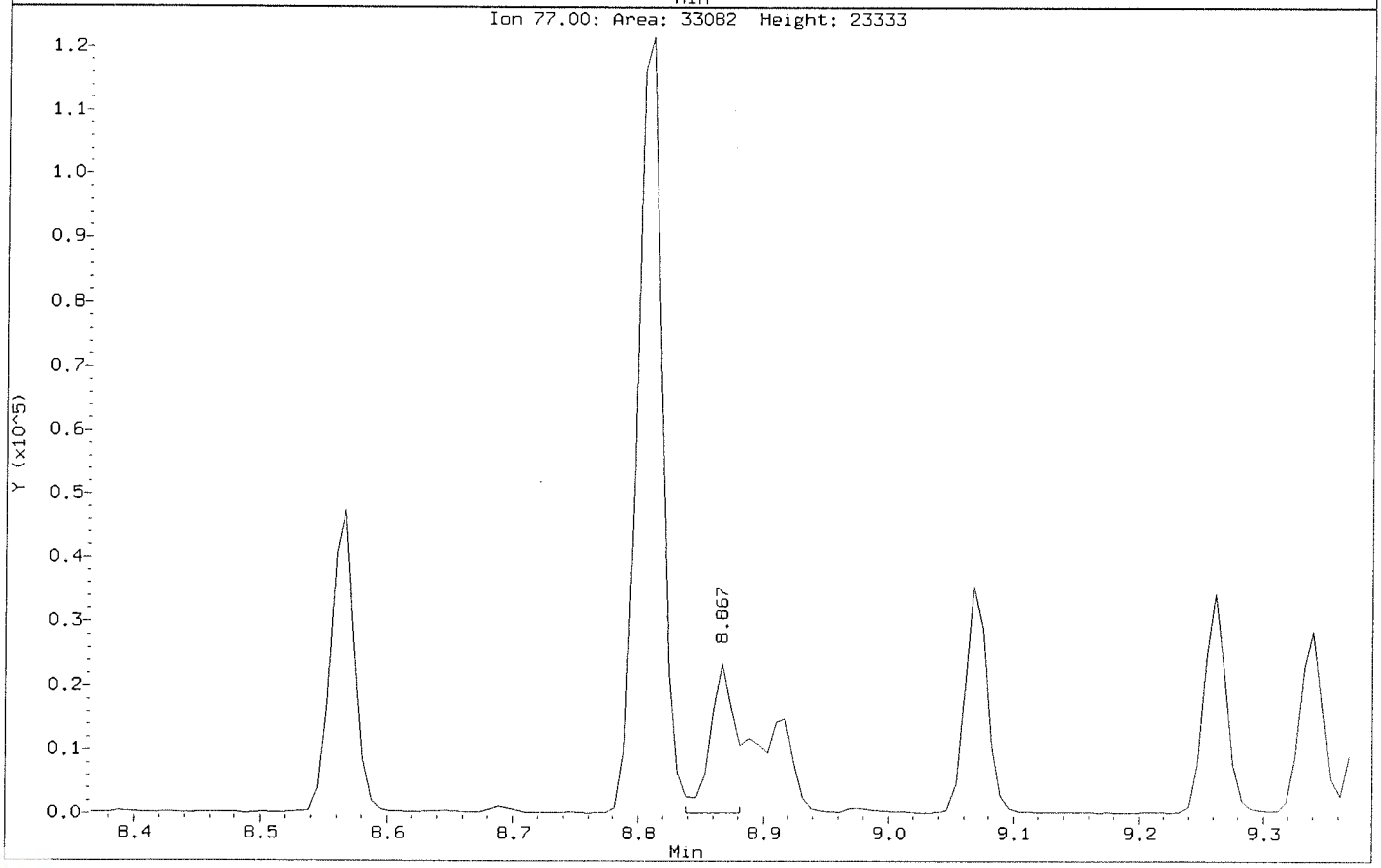
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: HS20081151-01MS

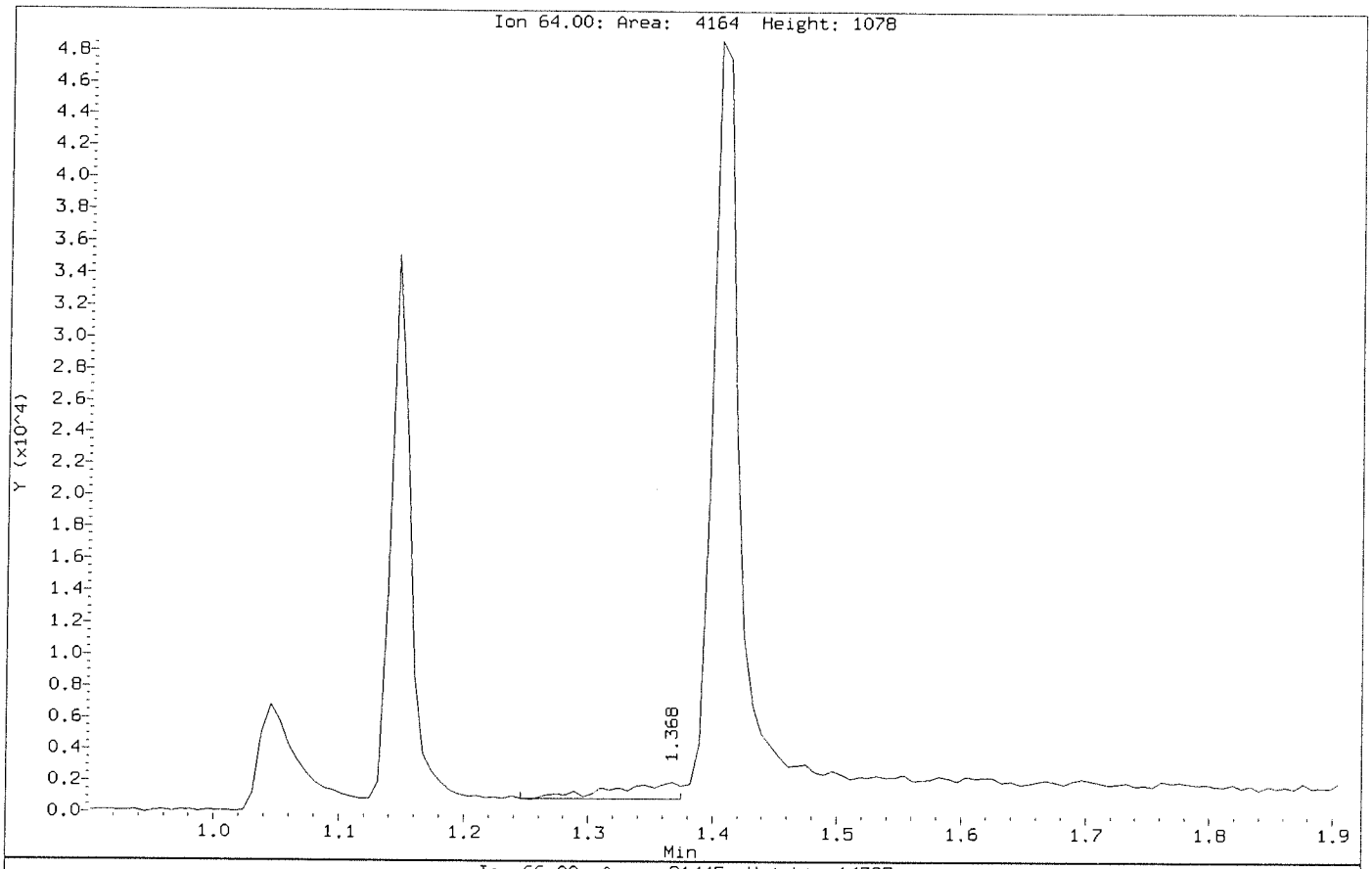
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

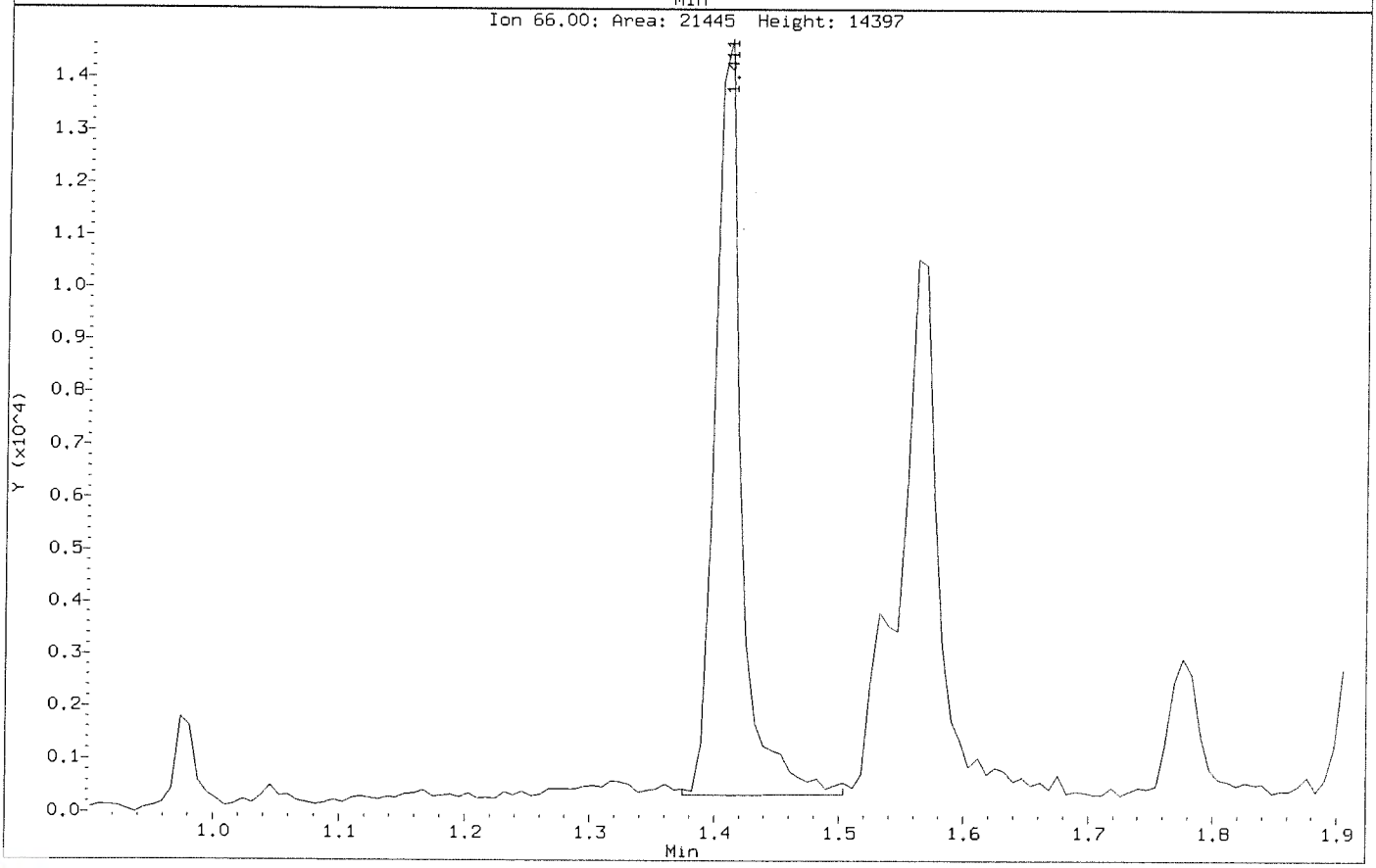




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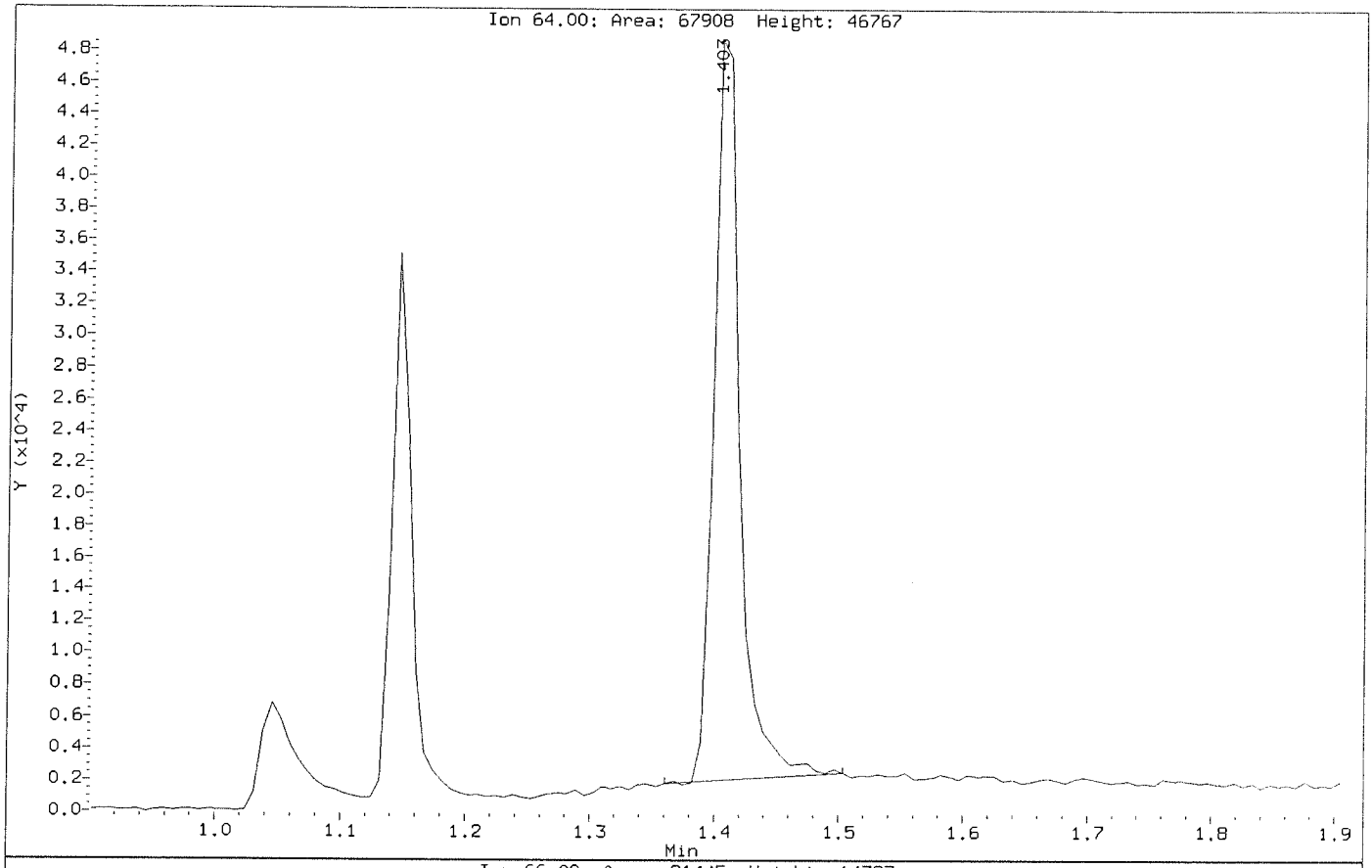
Compound: Chloroethane
CAS Number: 75-00-3

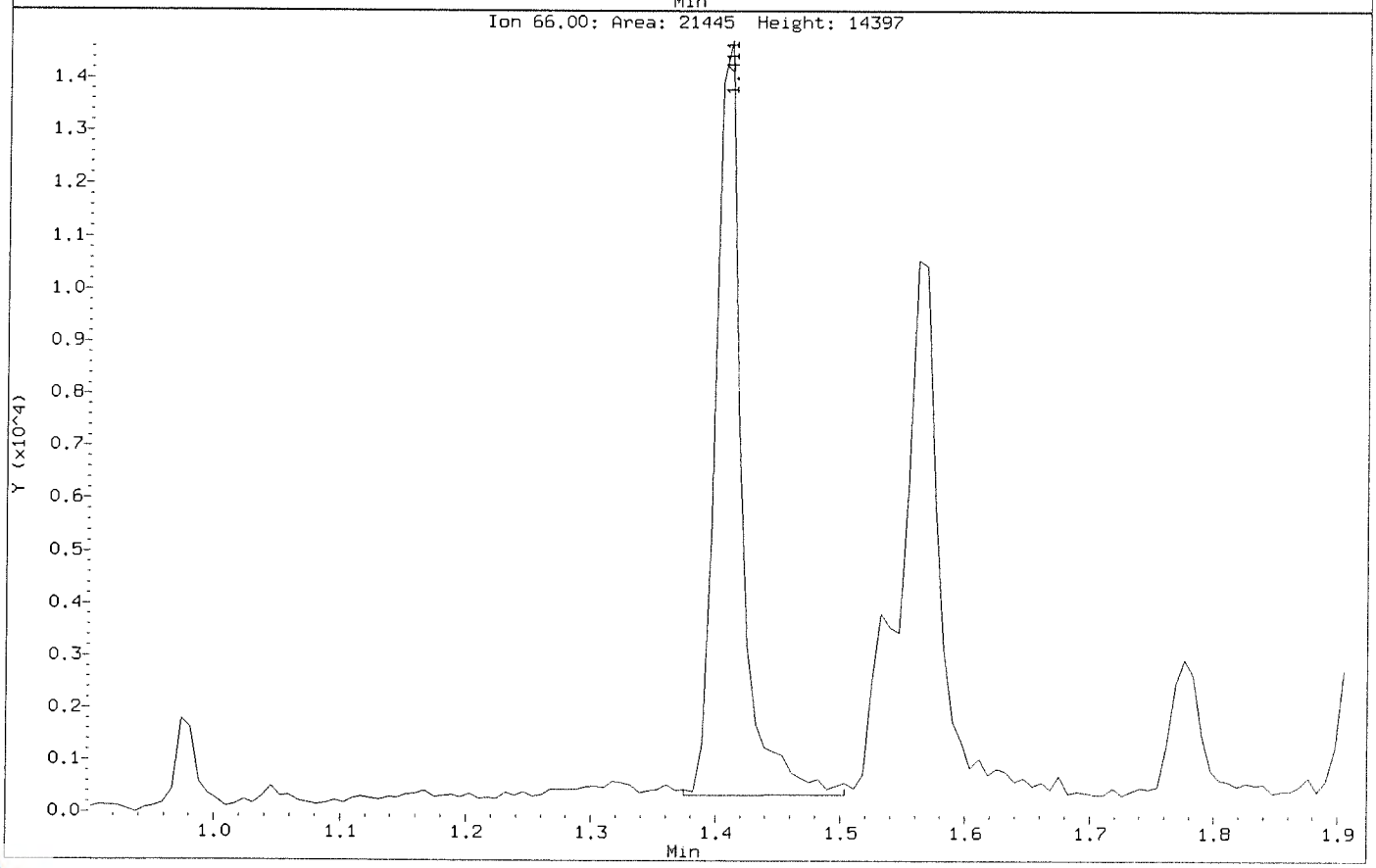




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Injection Date: 28-AUG-2020 16:48
Instrument: voa6.i
Client Sample ID: HS20081151-01MS

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D
Lab Smp Id: HS20081151-01MSD Client Smp ID: HS20081151-01MSD
Inj Date : 28-AUG-2020 17:12
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-01MSD;HS20081151-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 12 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

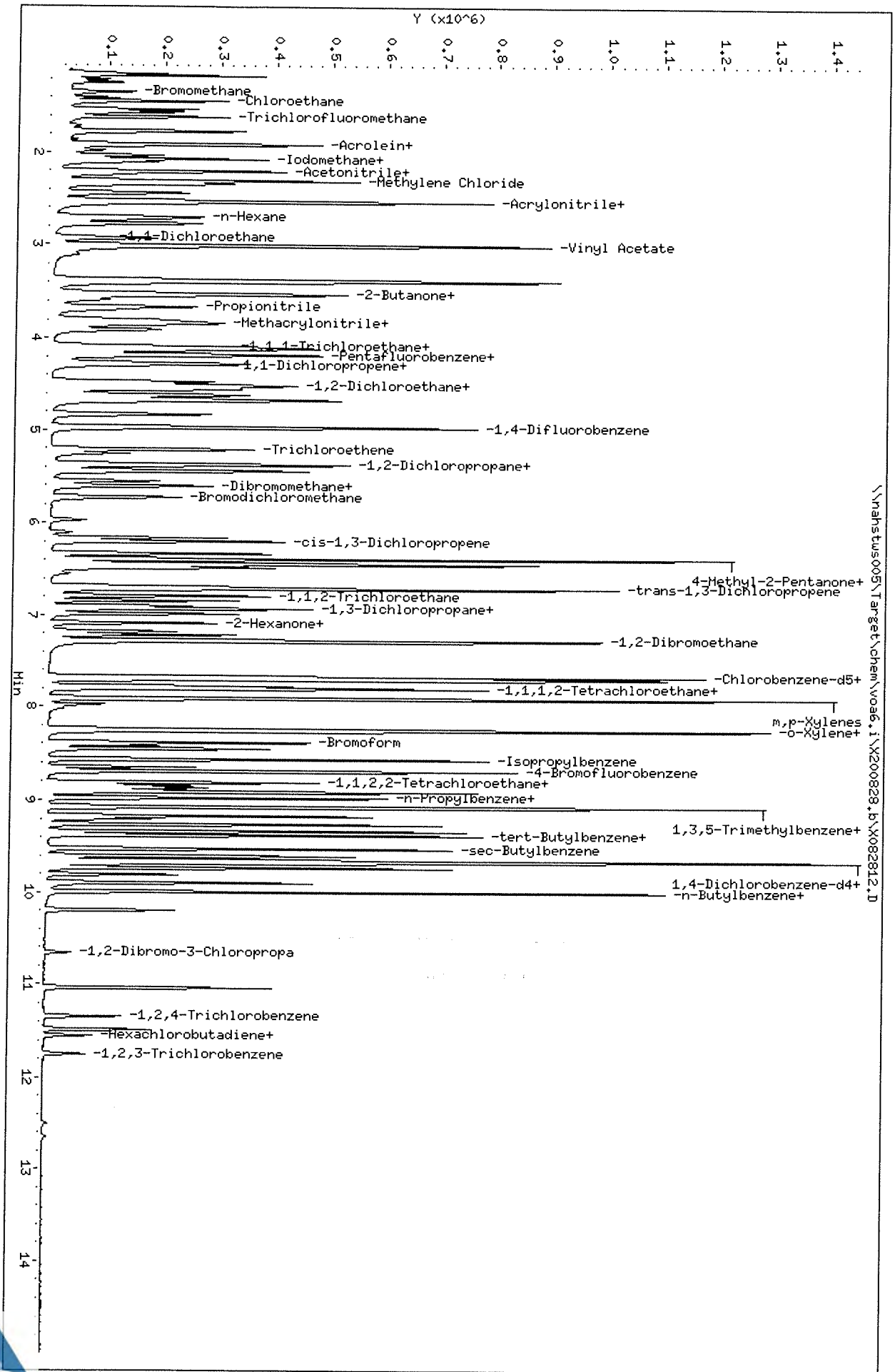
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	404957	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	606212	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	538508	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	252520	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	186973	47.0160	47.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	208338	44.1976	44.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	676771	51.8129	51.81
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	243420	48.3086	48.30
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	97035	23.6718	23.67
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	149305	23.9359	23.93
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	109969	27.2093	27.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	77007	25.1315	25.13
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	197157	24.9244	24.92
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	77542	24.1669	24.16
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	126766	24.8846	24.88
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	21175	27.8657	27.86
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	91876	24.8567	24.85(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	41099	28.2565	28.25
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	353153	26.1785	26.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	9136	25.6898	25.68
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	100130	25.3652	25.36
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	178854	25.0407	25.04

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D Page 2
Report Date: 25-Sep-2020 10:00

	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)	139714	23.8038	23.80
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	114063	25.6374	25.63
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	352079	26.6822	26.68
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	203757	25.6714	25.67
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	153645	25.3950	25.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	201282	25.6433	25.64
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	139887	24.2193	24.21
24	2-Butanone	43	3.588	3.580	(0.856)	98175	49.4538	49.45
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	285166	26.0291	26.02
52	2-Hexanone	43	7.090	7.090	(0.924)	165217	48.8707	48.87
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	325403	25.5309	25.53
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	380052	27.1787	27.17
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	244593	49.0760	49.07
10	Acetone	43	1.976	1.976	(0.472)	60827	42.4802	42.48
37	Benzene	78	4.519	4.519	(0.909)	378847	25.1888	25.18
74	Bromobenzene	156	8.809	8.809	(0.911)	122891	24.8780	24.87
29	Bromochloromethane	128	3.802	3.802	(0.908)	56898	23.3097	23.30
39	Bromodichloromethane	83	5.729	5.729	(1.153)	126861	23.2465	23.24
66	Bromoform	173	8.415	8.415	(1.097)	70350	23.5459	23.54
6	Bromomethane	94	1.338	1.346	(0.320)	63522	23.1454	23.14
19	Carbon Disulfide	76	2.069	2.076	(0.494)	470103	47.1882	47.18
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	127741	23.5917	23.59
59	Chlorobenzene	112	7.699	7.699	(1.004)	261533	24.7802	24.78
7	Chloroethane	64	1.403	1.403	(0.335)	61691	21.4926	21.49(M)
28	Chloroform	83	3.910	3.910	(0.933)	171328	23.6807	23.68
3	Chloromethane	50	1.080	1.081	(0.258)	110777	19.4830	19.48
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	200345	44.9453	44.94
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	154804	24.2597	24.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	103057	23.8915	23.89
44	Dibromomethane	93	5.557	5.557	(1.118)	62637	23.7424	23.74
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	53592	13.5217	13.52
61	Ethylbenzene	106	7.799	7.799	(1.017)	138790	25.4680	25.46
91	Hexachlorobutadiene	225	11.488	11.481	(1.188)	33952	25.0437	25.04
67	Isopropylbenzene	105	8.566	8.566	(1.117)	420964	26.3157	26.31
62	m,p-Xylenes	106	7.907	7.907	(1.031)	336921	51.2313	51.23
17	Methylene Chloride	84	2.305	2.305	(0.550)	100000	23.2395	23.23
87	n-Butylbenzene	91	9.998	9.998	(1.034)	306734	27.4664	27.46
73	n-Propylbenzene	91	8.917	8.917	(0.922)	488622	26.8600	26.85
92	Naphthalene	128	11.546	11.546	(1.194)	58129	29.1332	29.13
63	o-Xylene	106	8.244	8.244	(1.075)	164786	25.5083	25.50
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	415261	27.0690	27.06
64	Styrene	104	8.265	8.258	(1.078)	278524	24.8298	24.82
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	309963	27.0935	27.09
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90014	26.2947	26.29
50	Toluene	91	6.453	6.453	(0.841)	408192	25.9560	25.95
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	93786	24.7046	24.70
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	135339	23.1405	23.14
38	Trichloroethene	130	5.214	5.214	(1.049)	127121	29.5888	29.58
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	135010	22.6379	22.63
5	Vinyl Chloride	62	1.145	1.145	(0.273)	115186	22.0973	22.09

QC Flag Legend

M - Compound response manually integrated.

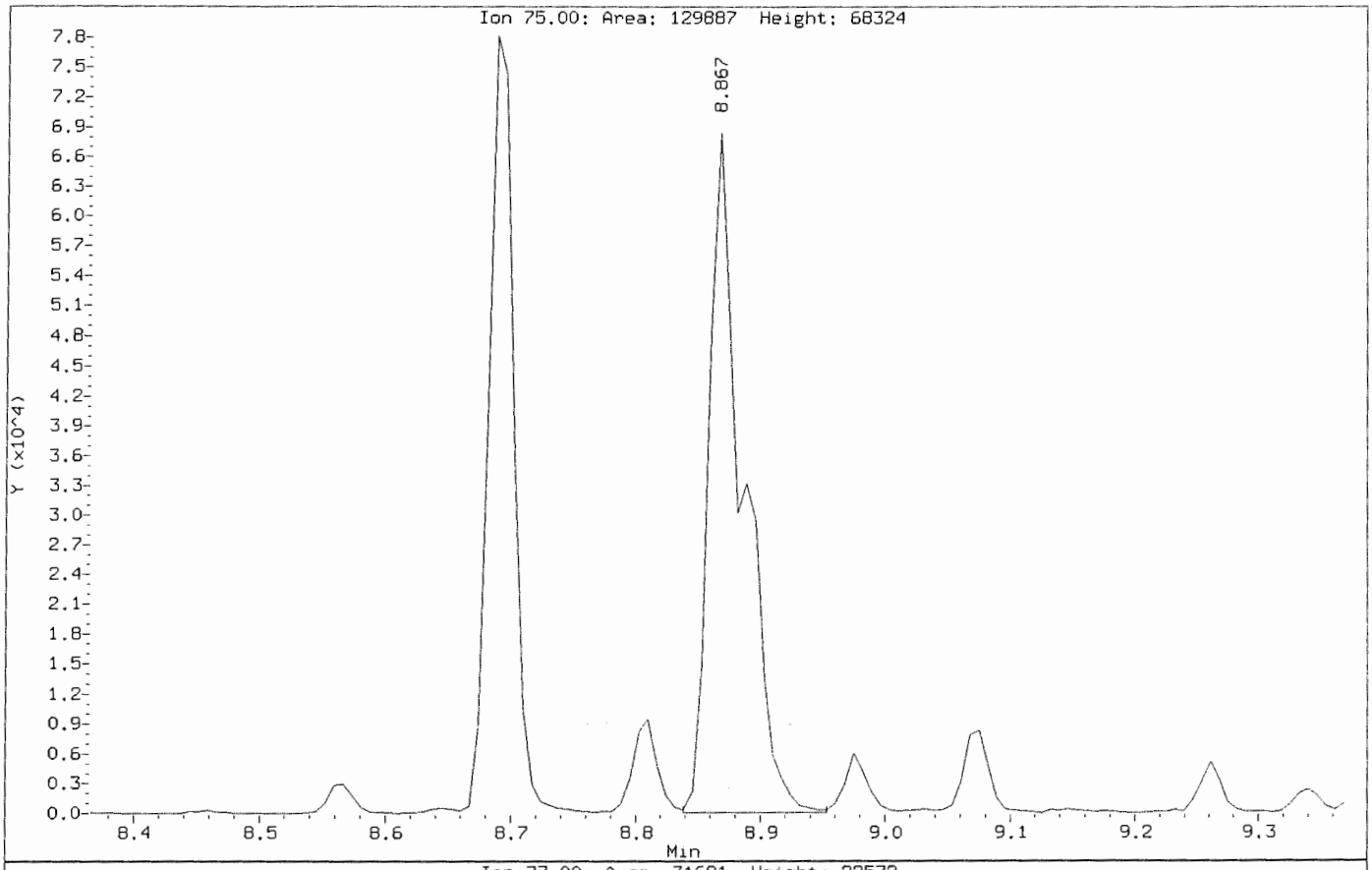


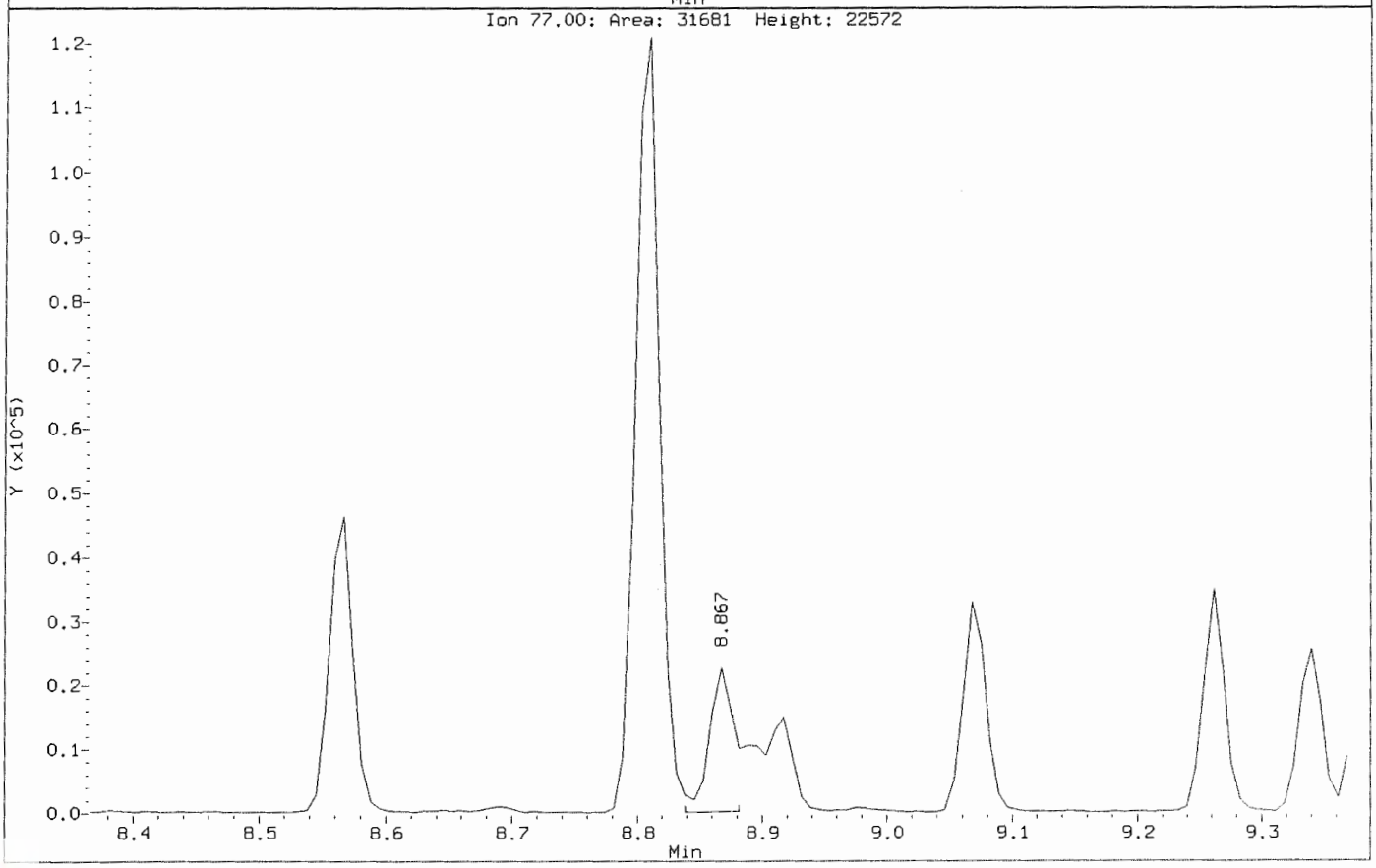
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Sample Info: HS20081151-01MSD;HS20081151-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082812.D
Injection Date: 28-AUG-2020 17:12
Instrument: voa6.i
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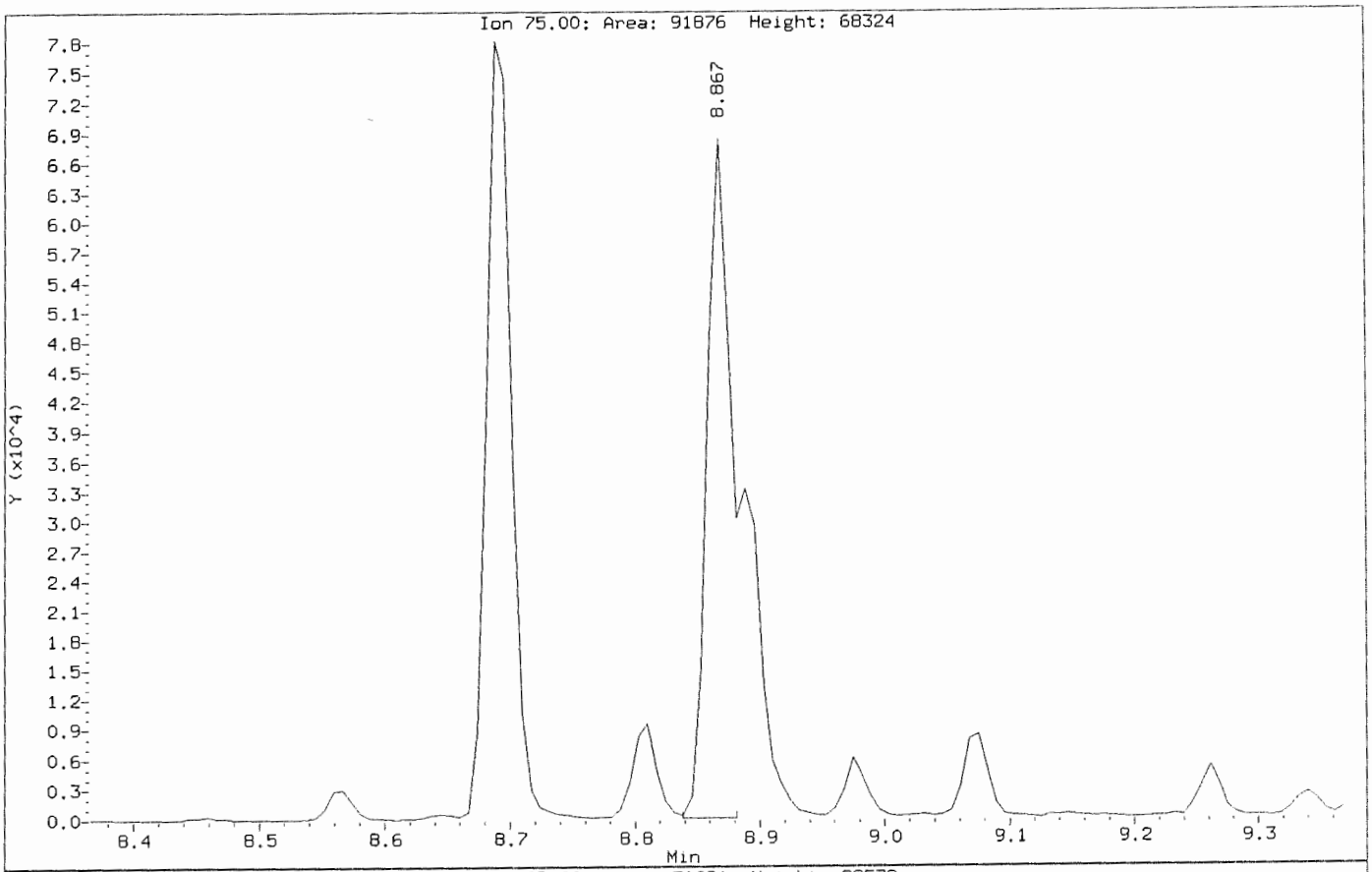
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CAS Number: 96-18-4

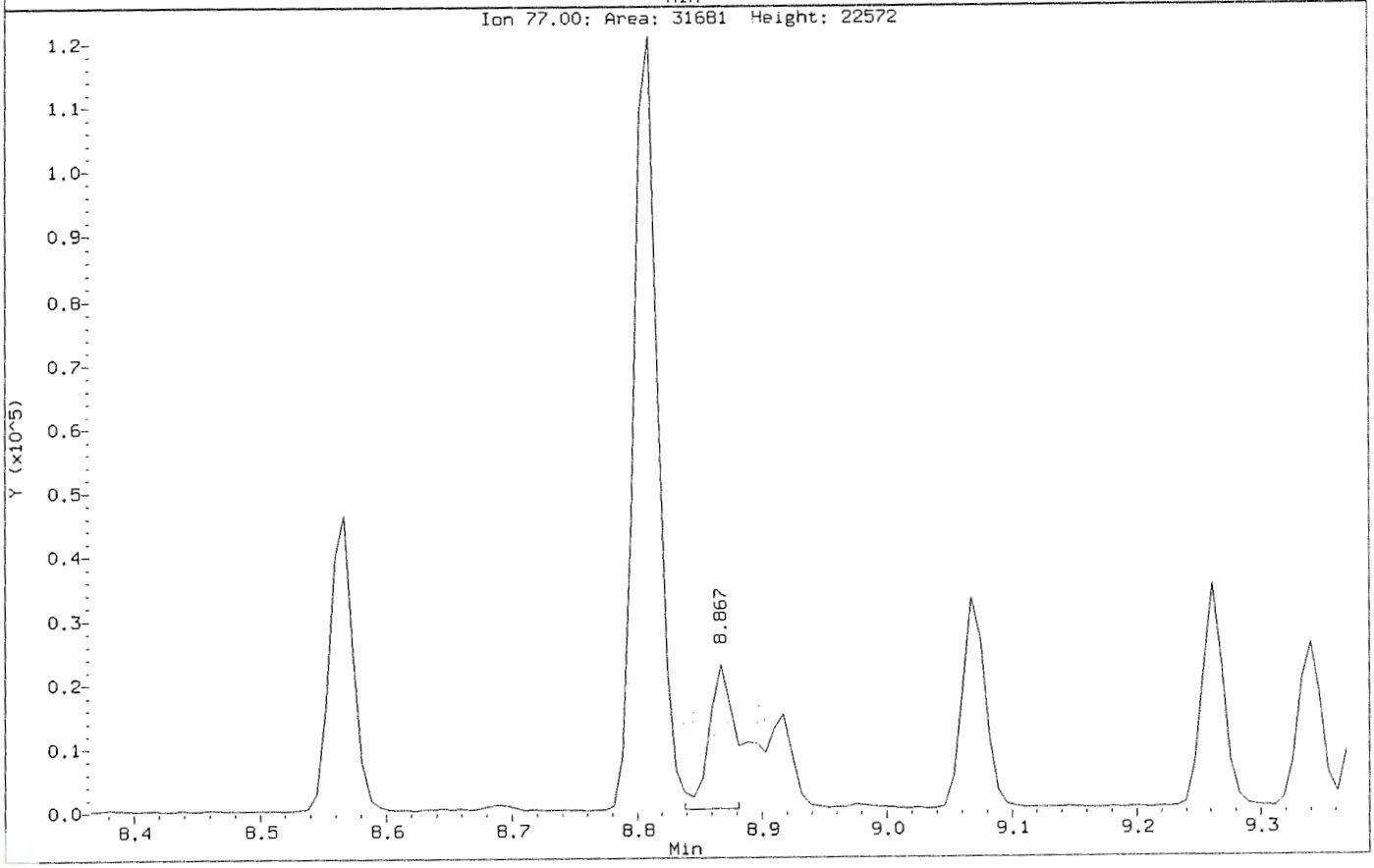




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Instrument: voa6.i
Client Sample ID: HS20081151-01MSD

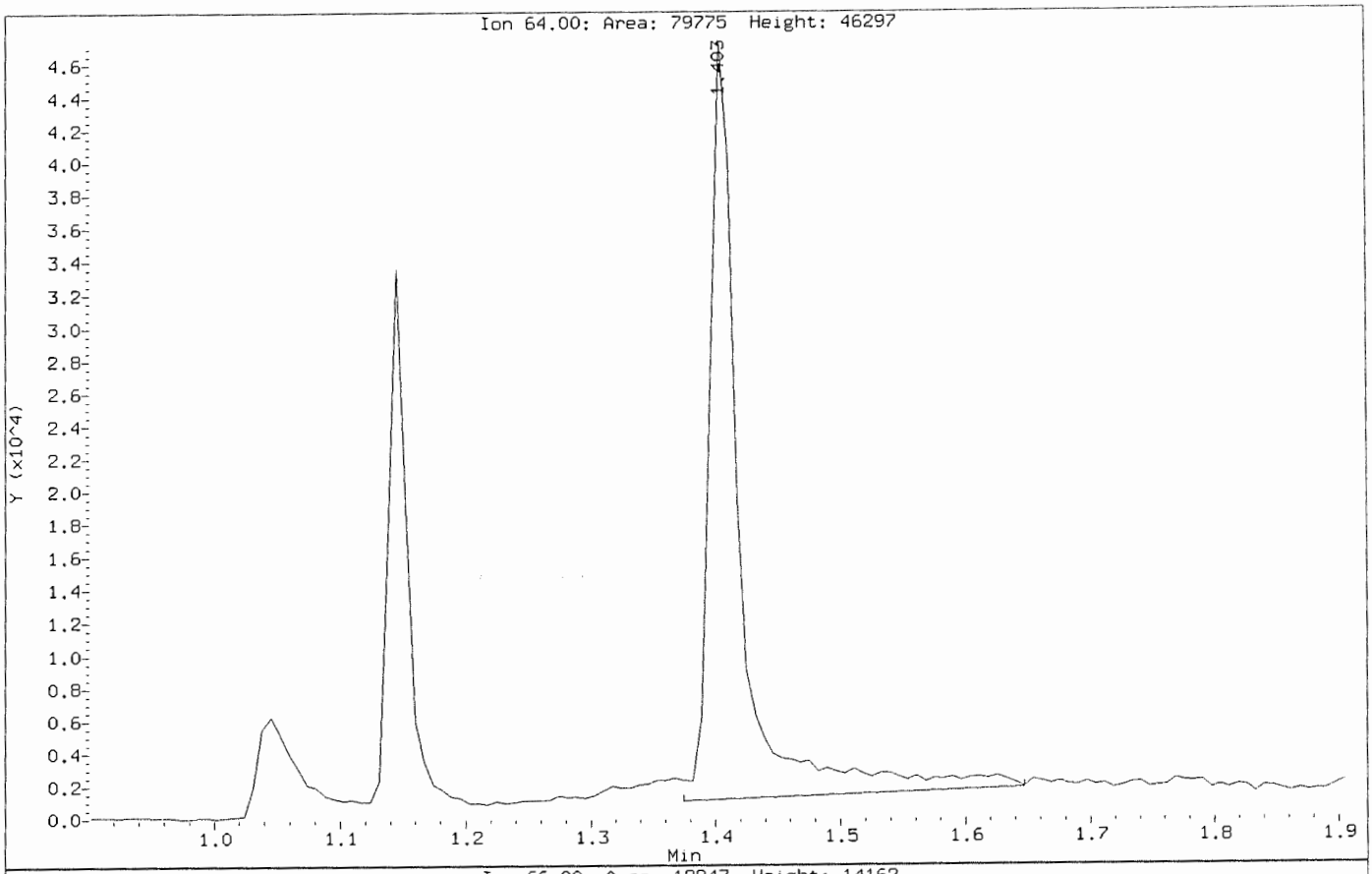
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

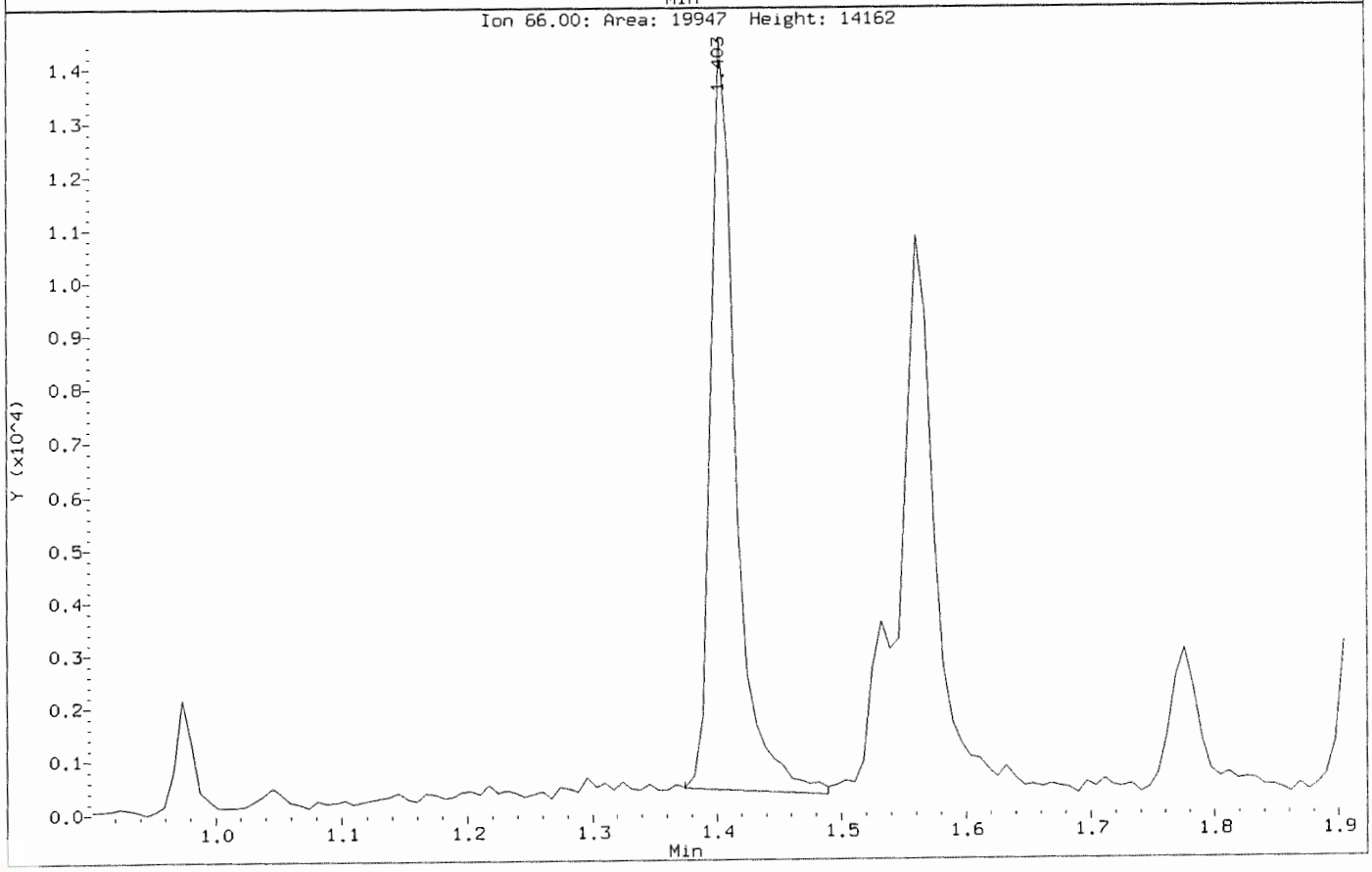




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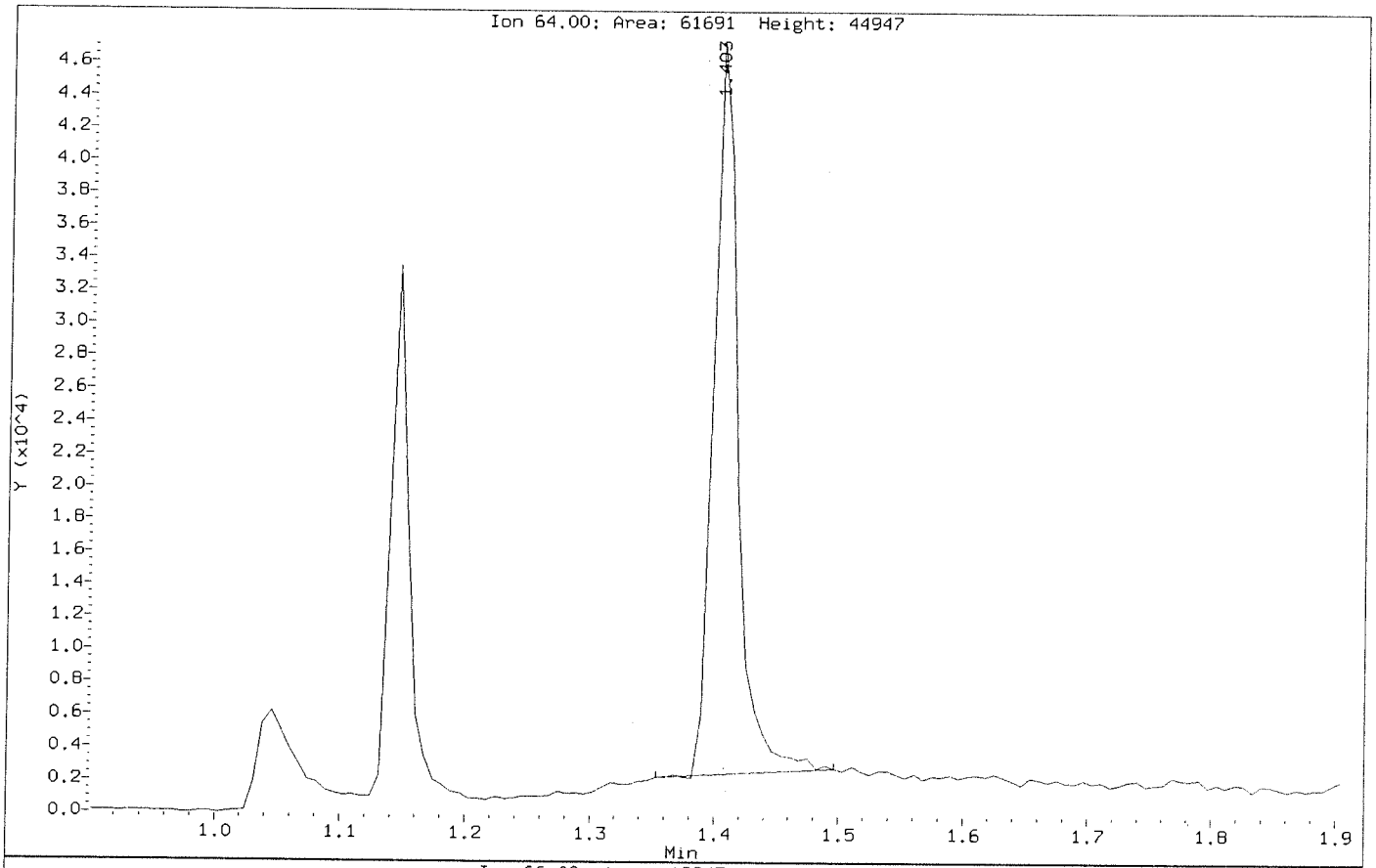
Compound: Chloroethane
CAS Number: 75-00-3

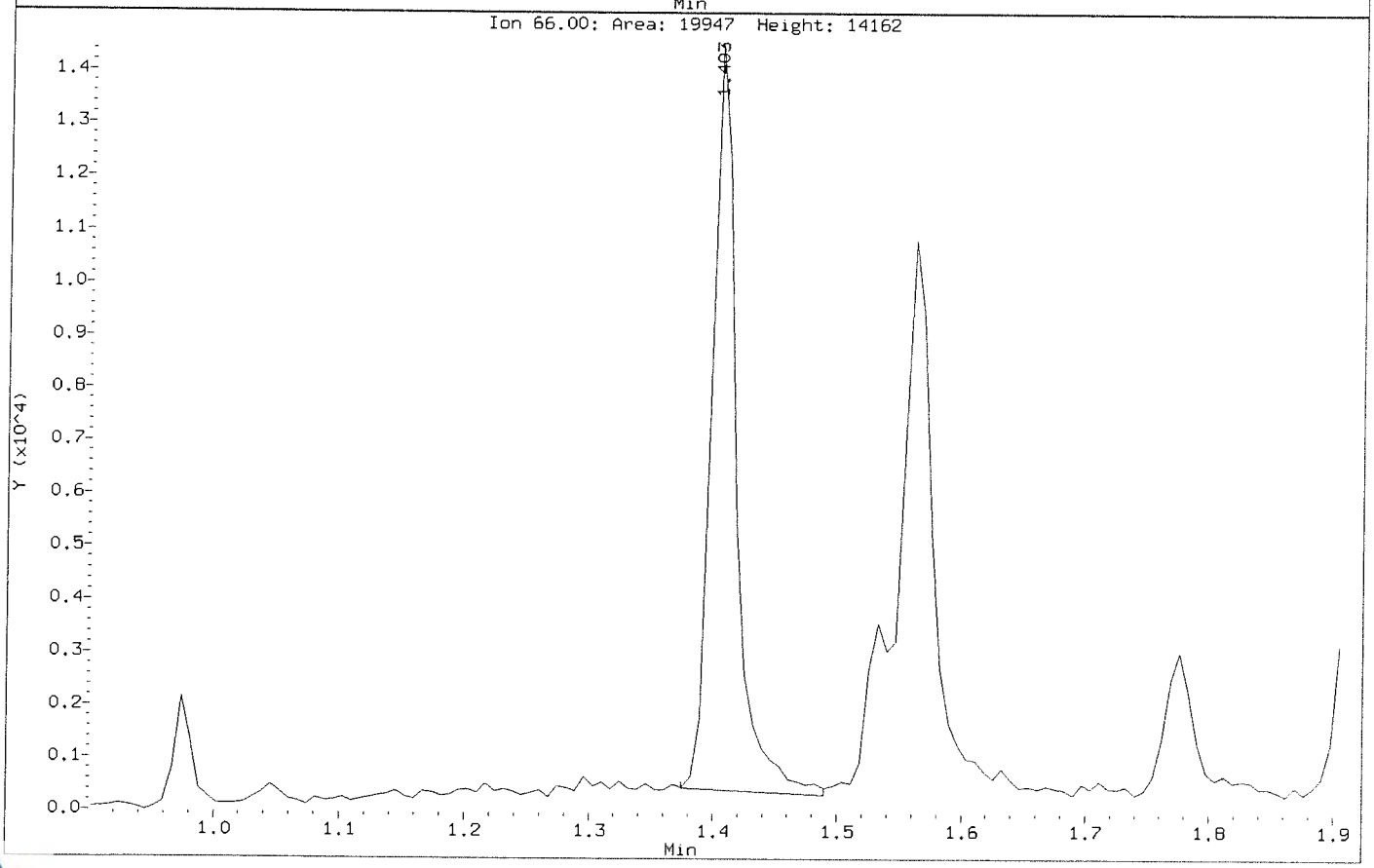




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D
Injection Date: 28-AUG-2020 17:12
Instrument: voa6.i
Client Sample ID: HS20081151-01MSD

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082814.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 28-AUG-2020 18:00
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\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

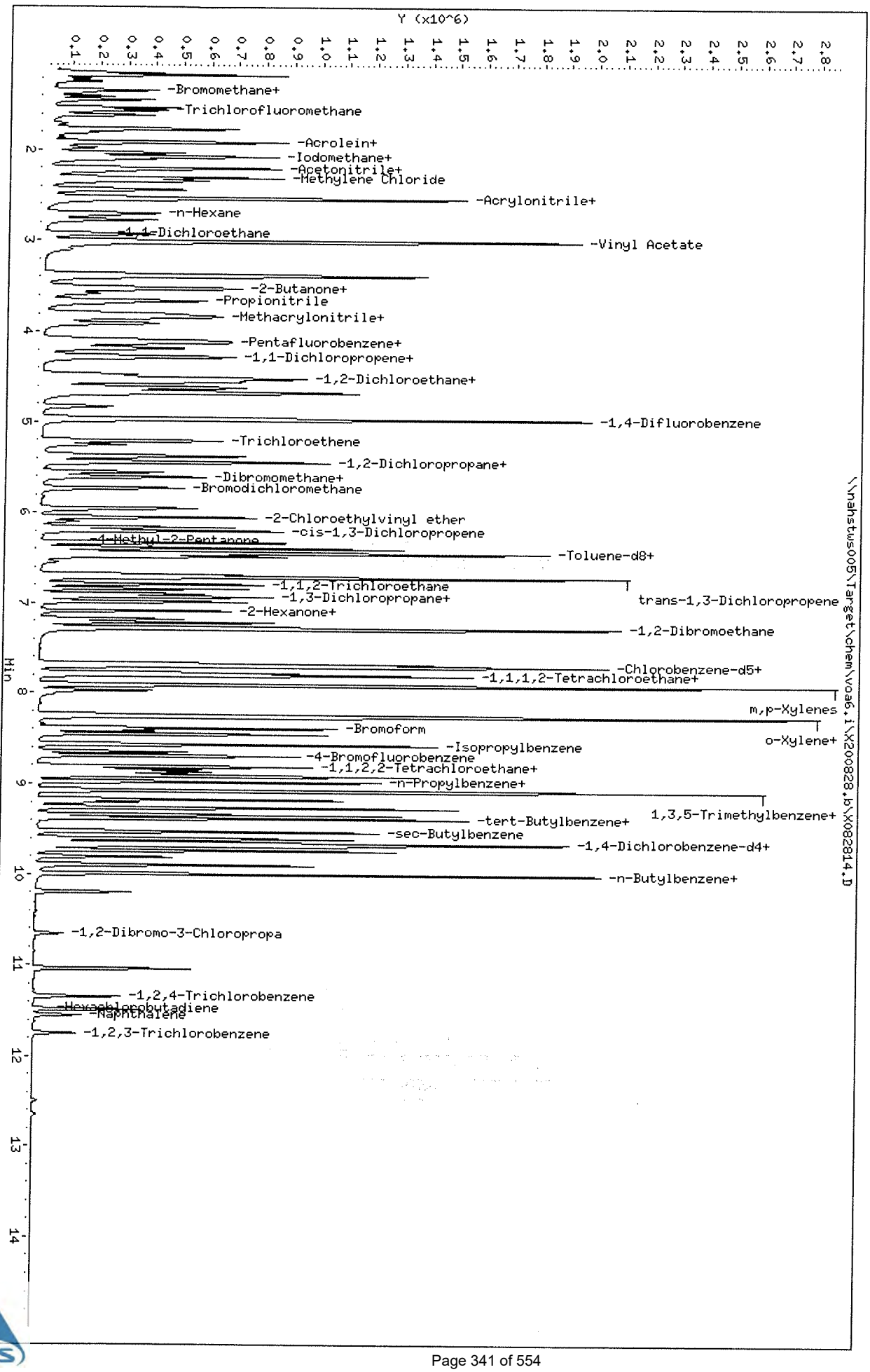
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	423986	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	655889	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	601781	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	282641	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.979)	209144	50.0000	50.23
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	239503	50.0000	48.52
$	48 Toluene-d8	98	6.389	6.389	(0.833)	721093	50.0000	49.40
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267906	50.0000	47.57
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	212135	50.0000	46.30
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	300149	50.0000	45.95
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	244688	50.0000	53.70
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	169492	50.0000	49.49
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	431919	50.0000	52.15
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	164470	50.0000	48.95
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	247064	50.0000	44.82
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	42744	50.0000	50.25
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	207714	50.0000	50.20(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	85926	50.0000	52.62
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	681368	50.0000	45.12
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	21835	50.0000	53.95
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	218506	50.0000	49.53
	88 1,2-Dichlorobenzene	146	9.992	9.992	(1.034)	374013	50.0000	46.78

	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)	301551	50.0000	47.48
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	250160	50.0000	51.96
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	658324	50.0000	44.57
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	414066	50.0000	46.60
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	336736	50.0000	49.80
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	408078	50.0000	46.44
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	262786	50.0000	43.45
24	2-Butanone	43	3.581	3.581	(0.855)	235499	100.000	113.30
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	566705	50.0000	46.21
52	2-Hexanone	43	7.090	7.090	(0.924)	376807	100.000	99.73
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	655188	50.0000	45.92
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	657717	50.0000	42.02
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	554636	100.000	99.58
10	Acetone	43	1.976	1.976	(0.472)	146078	100.000	98.82
37	Benzene	78	4.519	4.519	(0.909)	819838	50.0000	50.38
74	Bromobenzene	156	8.810	8.810	(0.912)	260704	50.0000	47.15
29	Bromochloromethane	128	3.803	3.803	(0.908)	126060	50.0000	49.32
39	Bromodichloromethane	83	5.730	5.730	(1.153)	284149	50.0000	48.12
66	Bromoform	173	8.416	8.416	(1.097)	162394	50.0000	48.63
6	Bromomethane	94	1.339	1.339	(0.320)	145978	50.0000	50.02
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1020586	100.000	97.84
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	248213	50.0000	42.36
59	Chlorobenzene	112	7.699	7.699	(1.004)	559530	50.0000	47.44
7	Chloroethane	64	1.403	1.403	(0.335)	163247	50.0000	54.32
28	Chloroform	83	3.910	3.910	(0.933)	373793	50.0000	49.34
3	Chloromethane	50	1.081	1.081	(0.258)	283475	50.0000	47.61
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	240988	50.0000	51.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	340067	50.0000	49.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	230578	50.0000	47.83
44	Dibromomethane	93	5.558	5.558	(1.118)	140655	50.0000	49.27
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	183812	50.0000	44.29
61	Ethylbenzene	106	7.800	7.800	(1.017)	280381	50.0000	46.04
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	65497	50.0000	43.16
67	Isopropylbenzene	105	8.566	8.566	(1.117)	784465	50.0000	43.88
62	m,p-Xylenes	106	7.907	7.907	(1.031)	673398	100.000	91.62
17	Methylene Chloride	84	2.306	2.306	(0.550)	223004	50.0000	51.05
87	n-Butylbenzene	91	9.999	9.999	(1.035)	513935	50.0000	41.11
73	n-Propylbenzene	91	8.917	8.917	(0.923)	890365	50.0000	43.72
92	Naphthalene	128	11.546	11.546	(1.195)	120309	50.0000	53.08
63	o-Xylene	106	8.244	8.244	(1.075)	337837	50.0000	46.79
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	714636	50.0000	41.61
64	Styrene	104	8.258	8.258	(1.077)	591791	50.0000	47.20
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	549699	50.0000	42.92
56	Tetrachloroethene	164	6.933	6.933	(0.904)	168174	50.0000	43.96
50	Toluene	91	6.446	6.446	(0.840)	838316	50.0000	47.70
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	200682	50.0000	50.48
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	303098	50.0000	47.89
38	Trichloroethene	130	5.214	5.214	(1.049)	226101	50.0000	48.64
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	273278	50.0000	43.76
5	Vinyl Chloride	62	1.145	1.145	(0.273)	260993	50.0000	47.82

QC Flag Legend

M - Compound response manually integrated.

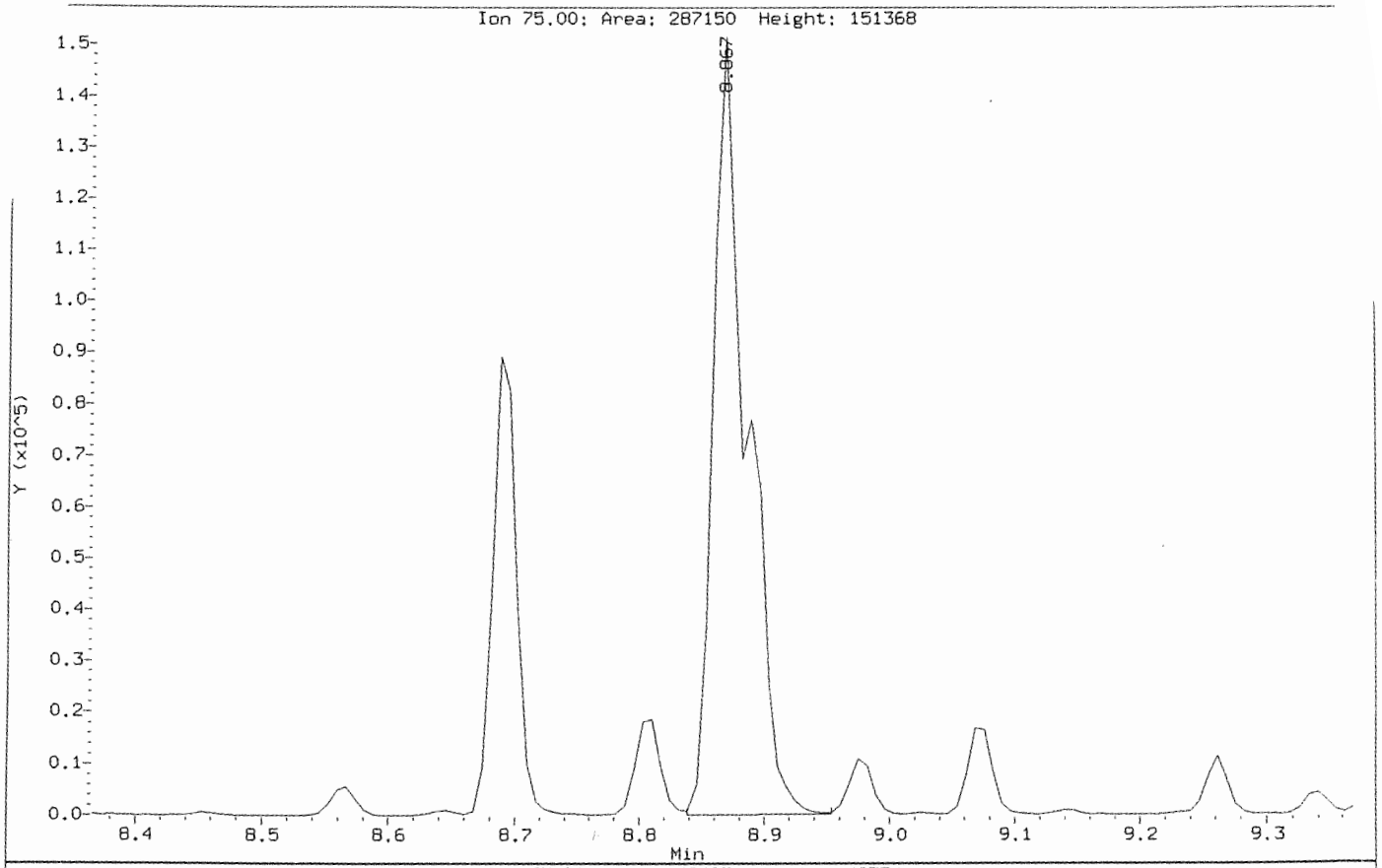


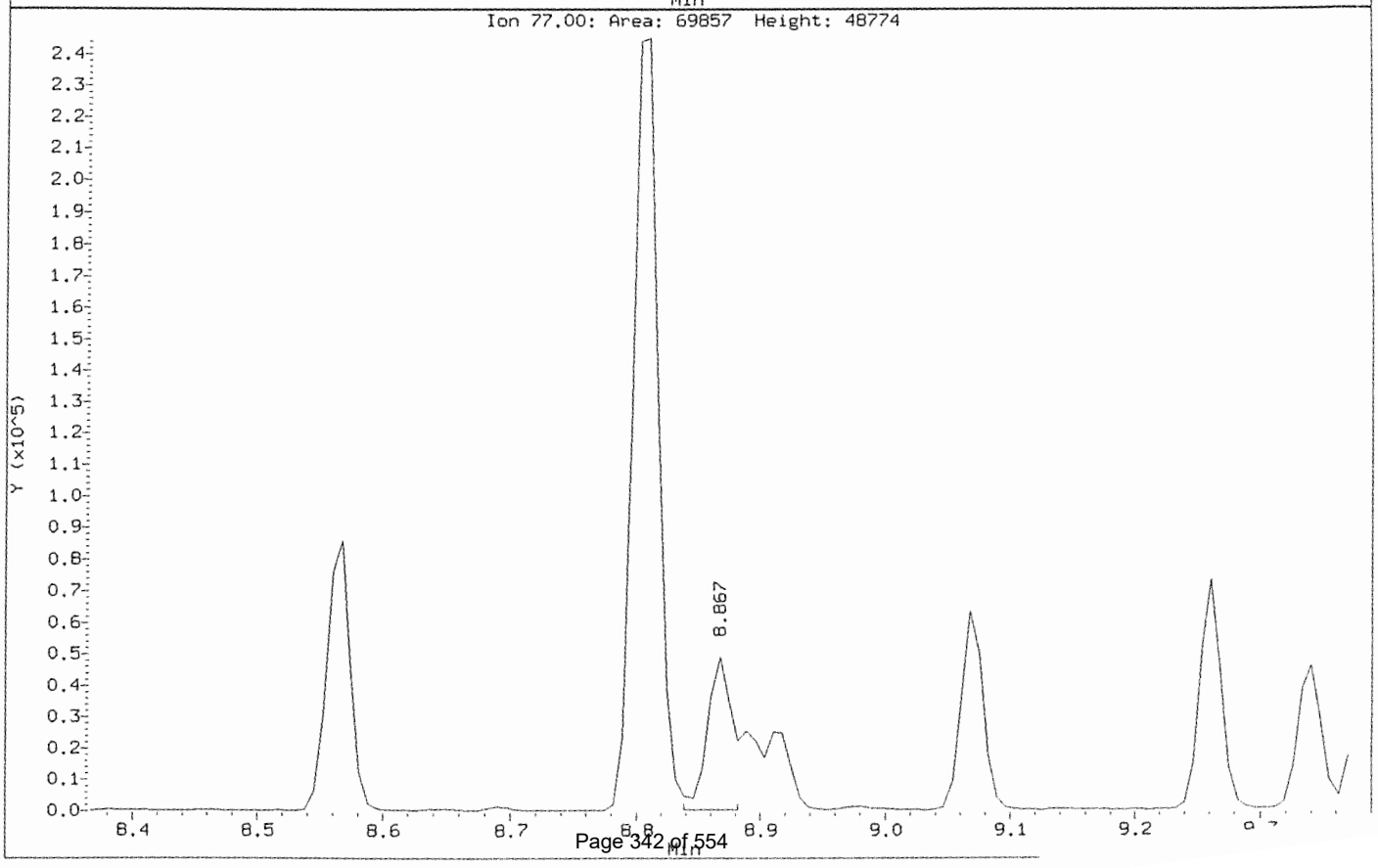
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Date : 28-AUG-2020 18:00
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

e: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082814.D
on Date: 28-AUG-2020 18:00
ent: voa6.i
Sample ID: CCV-END

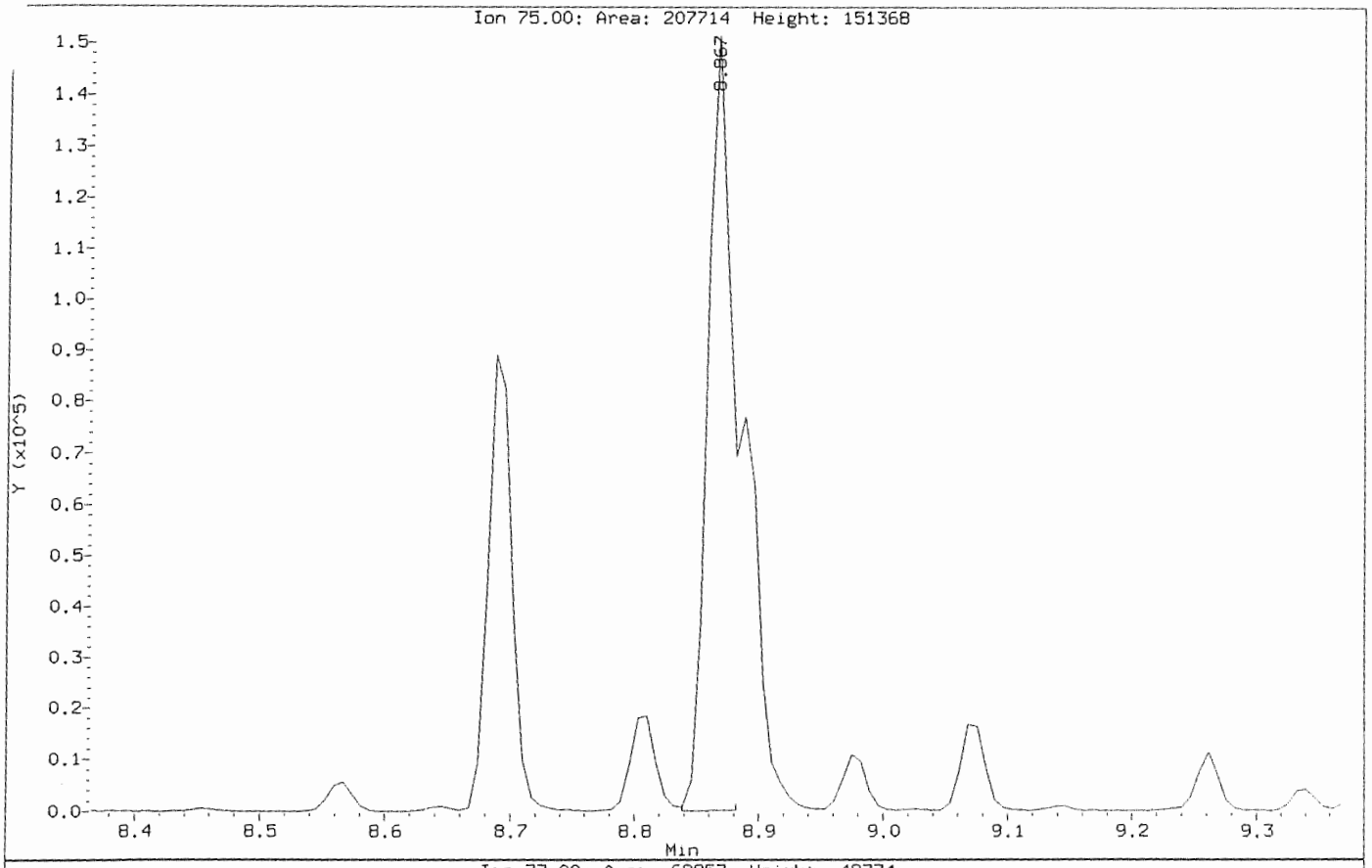
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mber: 96-18-4

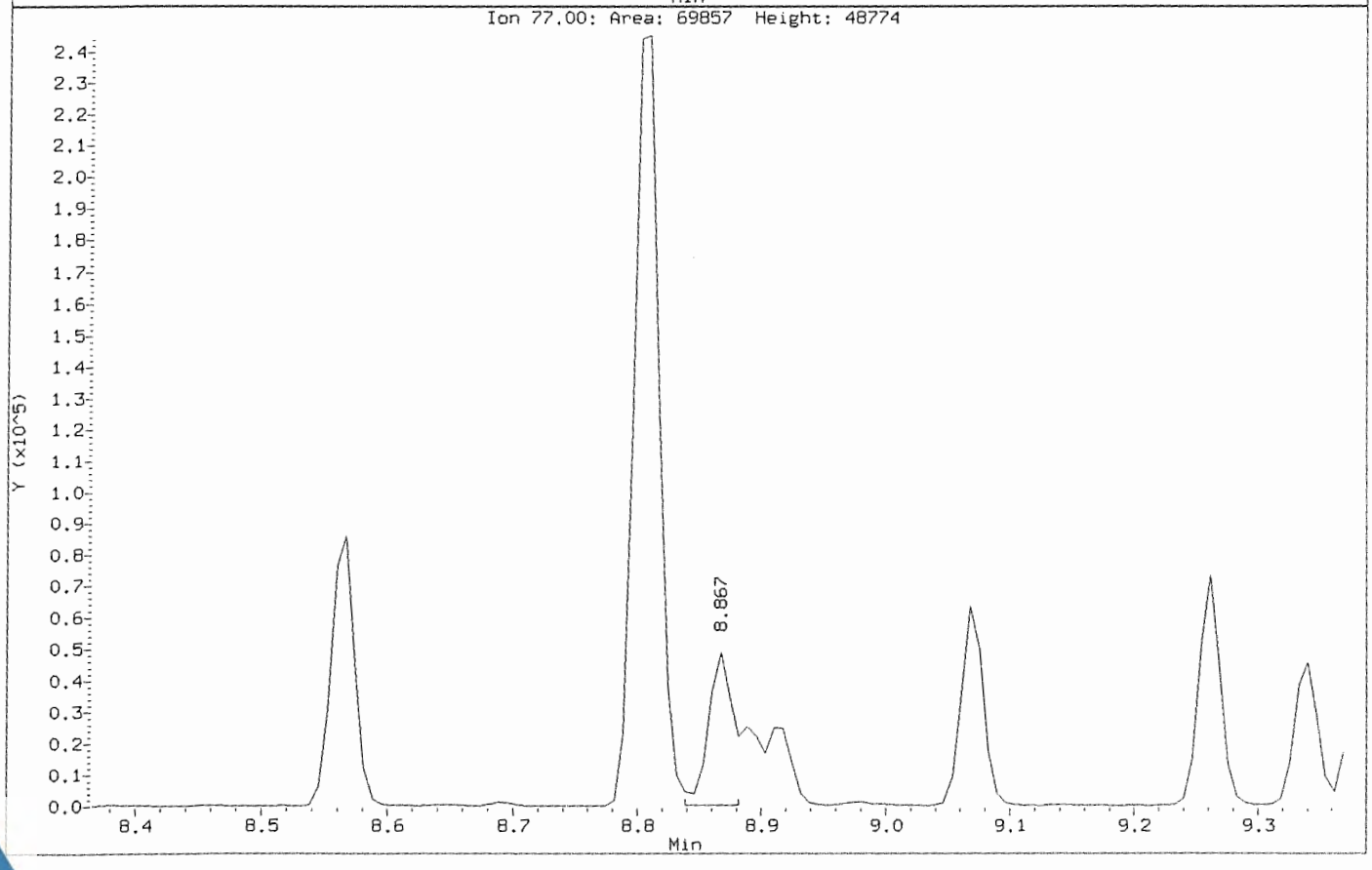




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ection Date: 28-AUG-2020 18:00
trument: voa6.i
ent Sample ID: CCV-END

mpound: 1,2,3-Trichloropropane
S Number: 96-18-4





HS20081150 8270 Raw Data

ALS WO# HS20081150

SV06 -Logbook

Batch: 41634 **Analyst:** Andrew Neir

Date: 09-01-2020 **Reviewer:**

Method: 8270DLL **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	09-01-2020 01:52 pm	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	09-01-2020 02:04 pm	1.00			002.D		Y	NA
3	DXSIM-0.08	SAMP	09-01-2020 02:41 pm	1.00			003.D		Y	NA
4	DXSIM-0.01	SAMP	09-01-2020 03:03 pm	1.00			004.D		Y	NA
5	DXSIM-0.03	SAMP	09-01-2020 03:22 pm	1.00			005.D		Y	NA
6	DXSIM-0.05	SAMP	09-01-2020 03:41 pm	1.00			006.D		Y	NA
7	DXSIM-0.10	SAMP	09-01-2020 04:00 pm	1.00			007.D		Y	NA
8	DXSIM-0.15	SAMP	09-01-2020 04:19 pm	1.00			008.D		Y	NA
9	DXSIM-0.2	SAMP	09-01-2020 04:38 pm	1.00			009.D		Y	NA
10	DXSIM-0.5	SAMP	09-01-2020 04:57 pm	1.00			010.D		Y	NA
11	DXSIM-ICV	SAMP	09-01-2020 05:16 pm	1.00			011.D		Y	NA
12	MBLK-156910	MBLK	09-01-2020 05:36 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-156910	LCS	09-01-2020 05:55 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-156910	LCSD	09-01-2020 06:15 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS20090012-01	SAMP	09-01-2020 06:34 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS20070585-01	SAMP	09-01-2020 06:53 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	HS20070585-02	SAMP	09-01-2020 07:13 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS20070585-09	SAMP	09-01-2020 07:33 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS20070585-10	SAMP	09-01-2020 07:52 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS20070586-01	SAMP	09-01-2020 08:11 pm	1.00	30.00 gm	1.00 mL	020.D	Solid	Y	NA
21	HS20070586-02	SAMP	09-01-2020 08:31 pm	1.00	30.00 gm	1.00 mL	021.D	Solid	Y	NA
22	HS20070586-05	SAMP	09-01-2020 08:50 pm	1.00	30.00 gm	1.00 mL	022.D	Solid	Y	NA
23	HS20070586-06	SAMP	09-01-2020 09:10 pm	1.00	30.00 gm	1.00 mL	023.D	Solid	Y	NA
24	MBLK-156817	MBLK	09-01-2020 09:29 pm	1.00	1000.00 mL	1.00 mL	024.D	Liquid	Y	NA
25	LCS-156817	LCS	09-01-2020 09:48 pm	1.00	1000.00 mL	1.00 mL	025.D	Liquid	Y	NA
26	LCSD-156817	LCSD	09-01-2020 10:07 pm	1.00	1000.00 mL	1.00 mL	026.D	Liquid	Y	NA
27	HS20081150-01	SAMP	09-01-2020 10:26 pm	1.00	1000.00 mL	1.00 mL	027.D	Liquid	Y	NA
28	HS20081150-01	SAMP	09-01-2020 10:45 pm	100.0(	1000.00 mL	1.00 mL	028.D	Liquid	Y	NA
29	HS20081151-01	SAMP	09-01-2020 11:04 pm	1.00	1000.00 mL	1.00 mL	029.D	Liquid	Y	NA
30	HS20081151-01	SAMP	09-01-2020 11:23 pm	100.0(	1000.00 mL	1.00 mL	030.D	Liquid	Y	NA
31	DXSIM-0.08	SAMP	09-01-2020 11:42 pm	100.0(	1000.00 mL	1.00 mL	031.D	Liquid	Y	NA
32	HS20081309-03	SAMP	09-02-2020 12:02 am	1.00	1000.00 mL	1.00 mL	032.D	Liquid	Y	NA
33	HS20081238-01	SAMP	09-02-2020 12:21 am	1.00	1000.00 mL	1.00 mL	033.D	Liquid	Y	NA
34	HS20081238-02	SAMP	09-02-2020 12:40 am	1.00	1000.00 mL	1.00 mL	034.D	Liquid	Y	NA
35	HS20081238-03	SAMP	09-02-2020 01:00 am	1.00	1000.00 mL	1.00 mL	035.D	Liquid	Y	NA
36	HS20081238-04	SAMP	09-02-2020 01:19 am	1.00	1000.00 mL	1.00 mL	036.D	Liquid	Y	NA
37	HS20081238-05	SAMP	09-02-2020 01:39 am	1.00	1000.00 mL	1.00 mL	037.D	Liquid	Y	NA
38	HS20081238-06	SAMP	09-02-2020 01:58 am	1.00	1000.00 mL	1.00 mL	038.D	Liquid	Y	NA
39	HS20081238-07	SAMP	09-02-2020 02:18 am	1.00	1000.00 mL	1.00 mL	039.D	Liquid	Y	NA
40	HS20081238-08	SAMP	09-02-2020 02:37 am	1.00	1000.00 mL	1.00 mL	040.D	Liquid	Y	NA
41	HS20081238-09	SAMP	09-02-2020 02:57 am	1.00	1000.00 mL	1.00 mL	041.D	Liquid	Y	NA

SV06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20081238-10	SAMP	09-02-2020 03:16 am	1.00	1000.00 mL	1.00 mL	042.D	Liquid	Y	NA
43	HS20081238-11	SAMP	09-02-2020 03:35 am	1.00	1000.00 mL	1.00 mL	043.D	Liquid	Y	NA
44	HS20081238-12	SAMP	09-02-2020 03:55 am	1.00	1000.00 mL	1.00 mL	044.D	Liquid	Y	NA
45	HS20081238-13	SAMP	09-02-2020 04:14 am	1.00	1000.00 mL	1.00 mL	045.D	Liquid	Y	NA
46	HS20081238-14	SAMP	09-02-2020 04:34 am	1.00	1000.00 mL	1.00 mL	046.D	Liquid	Y	NA
47	HS20081238-15	SAMP	09-02-2020 04:53 am	1.00	1000.00 mL	1.00 mL	047.D	Liquid	Y	NA
48	HS20081238-16	SAMP	09-02-2020 05:13 am	1.00	1000.00 mL	1.00 mL	048.D	Liquid	Y	NA
49	HS20081238-17	SAMP	09-02-2020 05:32 am	1.00	1000.00 mL	1.00 mL	049.D	Liquid	Y	NA
50	HS20081238-18	SAMP	09-02-2020 05:52 am	1.00	1000.00 mL	1.00 mL	050.D	Liquid	Y	NA

Chemical	Value
IS ID	3111842-01
CAL STD ID	3111832-06
DFTPP ID	3111843-07
PCP Tailing	0.82
Benz. Tailing	0.78
Routine SOP Maintenance	ACN

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

	CLIENT SAMPLE NO.	S1 #	S2 (2FP)#	S3 (NBZ)#	S4 (FBP)#	S5 (TBP)#	S6 #	S7 (TCX)#	S8 (DCB)#	TOT OUT
01	MBLK-156817	0D	0D	30D	21D	0D	24D	0D	0D	0
02	LCS-156817			101	81		102			0
03	LCSD-156817			93	89		91			0
04	HS20081150-01			0D	0D		0D			0
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
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25										
26										
27										
28										

		QC LIMITS	
S1	= Phenol-d6	(20-120)	
S2 (2FP)	= 2-Fluorophenol	(20-120)	
S3 (NBZ)	= Nitrobenzene-d5	(41-120)	
S4 (FBP)	= 2-Fluorobiphenyl	(40-125)	
S5 (TBP)	= 2,4,6-Tribromophenol	(34-129)	
S6	= 4-Terphenyl-d14	(40-135)	
S7 (TCX)	= Tetrachloro-m-xylene	(40-150)	
S8 (DCB)	= Decachlorobiphenyl	(40-150)	(advisory)

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

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Matrix Spike - Sample No.: DXSIM-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.07779	97	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: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID: 001 DFTPP Injection Date: 09/01/20

Instrument ID: SV6 DFTPP Injection Time: 1352

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	46.9
68	Less than 2.0% of mass 69	0.5 (0.9)1
69	Mass 69 relative abundance	50.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	57.0
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.7
365	1.0 - 100.0% of mass 198	4.0
441	Present, but less than mass 443	14.5
442	50.0 - 150.0% of mass 198	97.1
443	15.0 - 24.0% of mass 442	18.6 (19.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DXSIM-0.08	DXSIM-0.08	003	09/01/20	1441
02	DXSIM-0.01	DXSIM-0.01	004	09/01/20	1503
03	DXSIM-0.03	DXSIM-0.03	005	09/01/20	1522
04	DXSIM-0.05	DXSIM-0.05	006	09/01/20	1541
05	DXSIM-0.10	DXSIM-0.10	007	09/01/20	1600
06	DXSIM-0.15	DXSIM-0.15	008	09/01/20	1619
07	DXSIM-0.2	DXSIM-0.2	009	09/01/20	1638
08	DXSIM-0.5	DXSIM-0.5	010	09/01/20	1657
09	DXSIM-ICV	DXSIM-ICV	011	09/01/20	1716
10	MBLK-156817	MBLK-156817	024	09/01/20	2129
11	LCS-156817	LCS-156817	025	09/01/20	2148
12	LCSD-156817	LCSD-156817	026	09/01/20	2207
13	HS20081150-0	HS20081150-01	028	09/01/20	2245
14	DXSIM-0.08	DXSIM-0.08	031	09/01/20	2342
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.01: 004 RF0.03: 005 RF0.05: 006
RF0.08: 003 RF0.1: 007 RF0.15: 008

COMPOUND	RF0.01	RF0.03	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.301	0.225	0.233	0.205	0.272	0.298
Nitrobenzene-d5	0.475	0.356	0.285	0.364	0.296	0.373
4-Terphenyl-d14	0.997	0.901	0.769	0.929	0.708	0.713
2-Fluorobiphenyl	1.354	1.207	1.318	1.119	1.138	1.054

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.2: 009 RF0.5: 010

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.332	0.280	AVRG	0.26820713	16.222	20.000
Nitrobenzene-d5	0.330	0.356	AVRG	0.35440929	16.461	20.000
4-Terphenyl-d14	0.774	0.841	AVRG	0.82891532	12.765	20.000
2-Fluorobiphenyl	1.123	1.017	AVRG	1.16642898	10.235	20.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Instrument ID: SV6 Calibration Date: 09/01/20 Time: 2342

Lab File ID: 031 Init. Calib. Date(s): 09/01/20 09/01/20

Init. Calib. Times: 1441 1657

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	0.2680000	0.2908345	0.01	8.52	50.00	AVRG
Nitrobenzene-d5	0.3540000	0.3027902	0.01	-14.47	50.00	AVRG
4-Terphenyl-d14	0.8290000	0.8113480	0.01	-2.13	50.00	AVRG
2-Fluorobiphenyl	1.1660000	1.2482041	0.01	7.05	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID (Standard): 003 Date Analyzed: 09/01/20

Instrument ID: SV6 Time Analyzed: 1441

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	8895	3.68	35367	4.81	22159	6.50
	UPPER LIMIT	17790	4.18	70734	5.31	44318	7.00
	LOWER LIMIT	4448	3.18	17684	4.31	11080	6.00
	CLIENT SAMPLE NO.						
01	MBLK-156817	13204	3.69	54334	4.81	29825	6.49
02	LCS-156817	10614	3.69	36720	4.81	23957	6.50
03	LCSD-156817	13263	3.69	42229	4.81	23775	6.49
04	HS20081150-01	15467	3.69	58563	4.81	30506	6.50
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081150

Lab File ID (Standard): 003 Date Analyzed: 09/01/20

Instrument ID: SV6 Time Analyzed: 1441

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	43559		7.95		35410		10.85		41042		12.97	
	UPPER LIMIT	87118		8.45		70820		11.35		82084		13.47	
	LOWER LIMIT	21780		7.45		17705		10.35		20521		12.47	
	CLIENT SAMPLE NO.												
01	MBLK-156817	64312		7.95		51452		10.84		52021		12.97	
02	LCS-156817	47492		7.95		34942		10.85		31820		12.97	
03	LCSD-156817	38270		7.95		39135		10.85		33668		12.97	
04	HS20081150-01	58569		7.95		59851		10.85		50283		12.97	
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.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

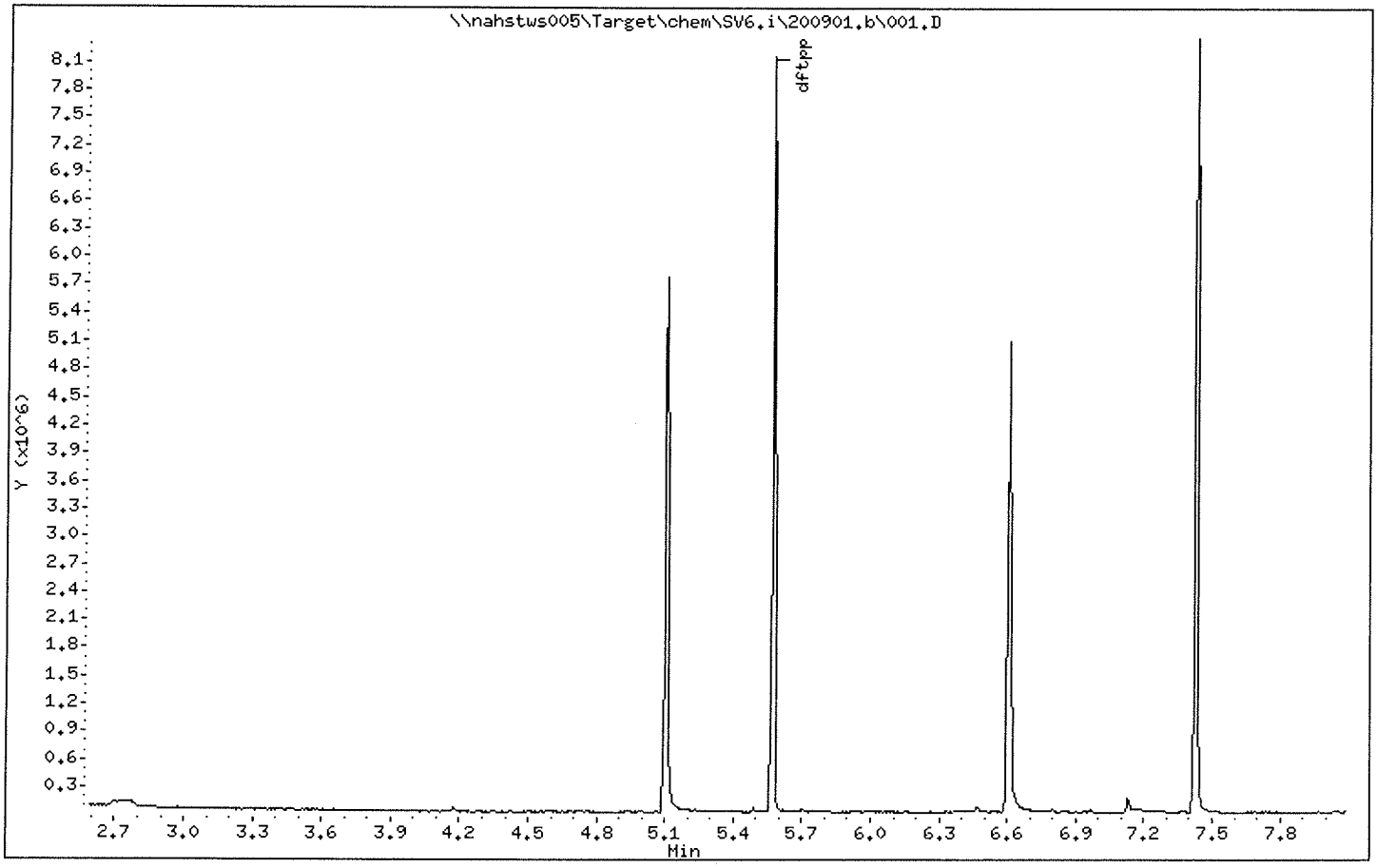
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

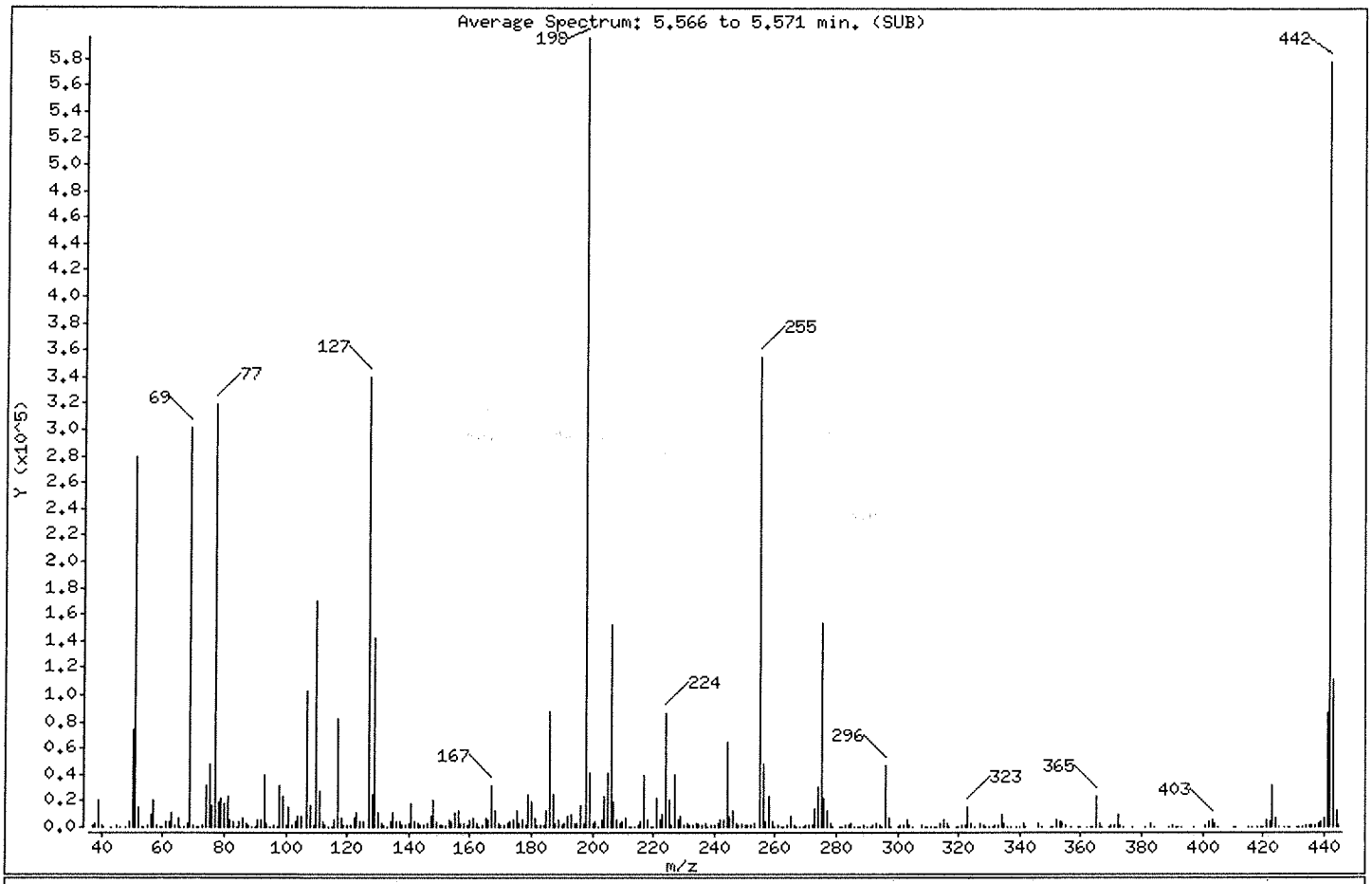
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.88
68	Less than 2.00% of mass 69	0.48 (0.94)
69	Mass 69 relative abundance	50.68
70	Less than 2.00% of mass 69	0.31 (0.60)
127	10.00 - 80.00% of mass 198	56.99
197	Less than 2.00% of mass 198	0.41
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	25.68
365	1.00 - 100.00% of mass 198	4.01
441	Present, but less than mass 443	14.46
442	50.00 - 150.00% of mass 198	97.09
443	15.00 - 24.00% of mass 442	18.56 (19.12)

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

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: 5.566 to 5.571 min. (SUB)
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1132	133.00	523	224.00	85920	321.00	1936
38.00	3168	134.00	3567	225.00	20560	322.00	1358
39.00	20240	135.00	10509	226.00	1905	323.00	14582
40.00	847	136.00	4080	227.00	40272	324.00	3093
41.00	359	137.00	4659	228.00	6109	325.00	247
43.00	637	138.00	1176	229.00	8104	327.00	2927
45.00	726	139.00	691	230.00	865	328.00	1591
46.00	246	140.00	2173	231.00	3342	329.00	359
48.00	286	141.00	17232	232.00	803	330.00	103
49.00	3524	142.00	4786	233.00	880	331.00	218
50.00	74392	143.00	3273	234.00	2655	332.00	1451
51.00	279360	144.00	1143	235.00	3054	333.00	1368
52.00	14715	145.00	1076	236.00	1716	334.00	9177
53.00	159	146.00	3257	237.00	2356	335.00	2757
54.00	143	147.00	8842	238.00	432	336.00	112
55.00	1240	148.00	20160	239.00	1632	337.00	81
56.00	9103	149.00	3787	240.00	840	339.00	506
57.00	20872	150.00	1314	241.00	2253	340.00	133
58.00	1121	151.00	1875	242.00	5114	341.00	2506
59.00	664	152.00	1877	243.00	5015	342.00	537
60.00	26	153.00	5718	244.00	65016	346.00	3406
61.00	3531	154.00	4312	245.00	8277	347.00	505
62.00	3772	155.00	11251	246.00	11826	350.00	102
63.00	11375	156.00	12646	247.00	2935	351.00	344
64.00	1278	157.00	2476	248.00	921	352.00	5264
65.00	6226	158.00	2412	249.00	3014	353.00	3632
66.00	463	159.00	1824	250.00	749	354.00	4465
67.00	118	160.00	5511	251.00	954	355.00	955
68.00	2831	161.00	7151	252.00	1849	357.00	279
69.00	302016	162.00	2988	253.00	2849	359.00	276
70.00	1818	163.00	269	255.00	355200	360.00	121
71.00	296	164.00	816	256.00	47456	362.00	107
72.00	314	165.00	7317	257.00	3953	363.00	617
73.00	1963	166.00	5545	258.00	23384	364.00	541
74.00	30928	167.00	31856	259.00	3869	365.00	23912

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\003.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\003.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 01-SEP-2020 14:41 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\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

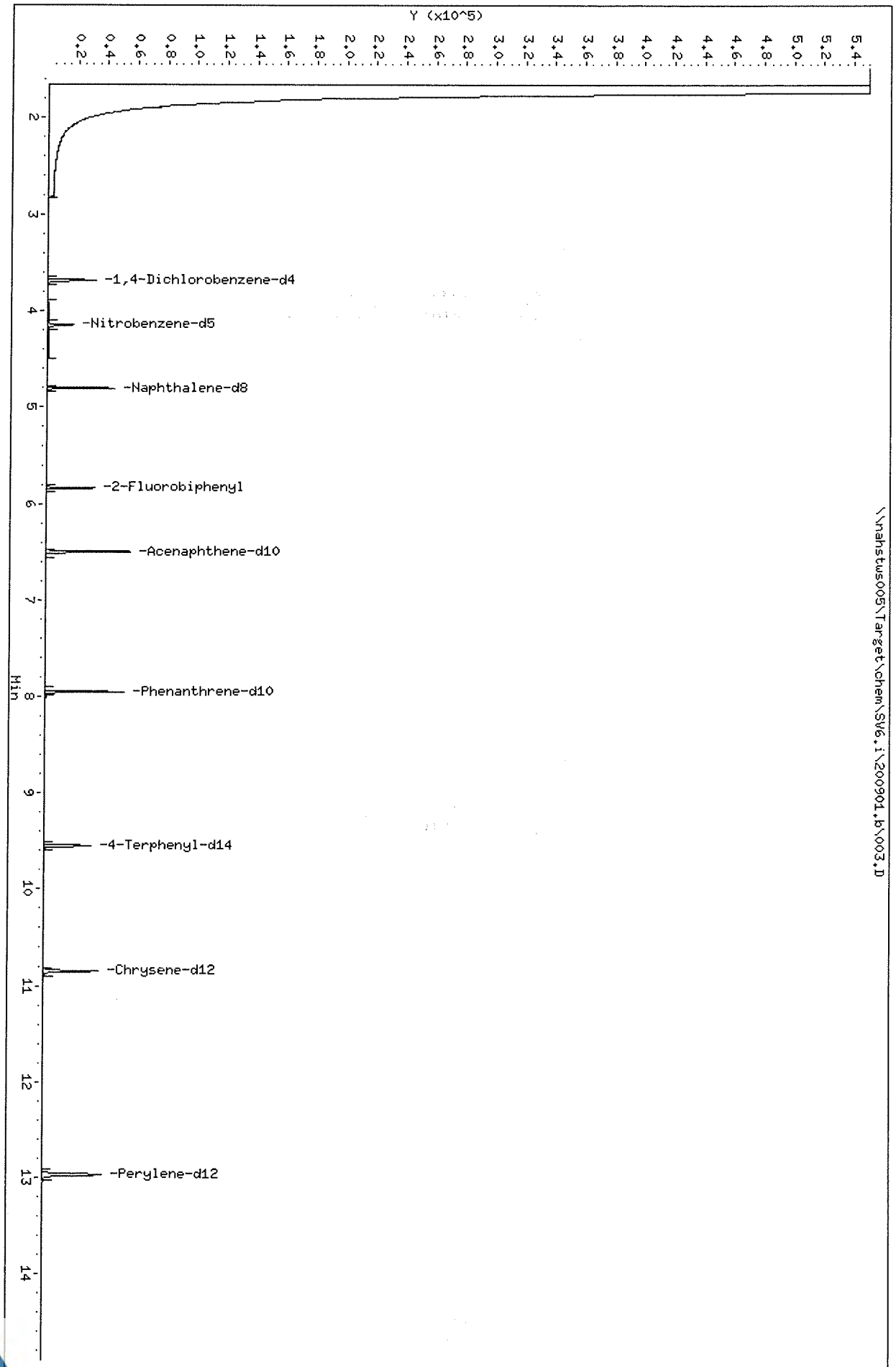
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.688	(1.000)	8895	0.10000		(aH)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	35367	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.902)	10301	0.08000	0.08218	(H)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	22159	0.10000		(H)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.945)	19840	0.08000	0.07676	(H)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	43559	0.10000		(H)
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	35410	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.937)	26311	0.08000	0.08964	
* 198 Perylene-d12	264	12.972	12.967	(1.000)	41042	0.10000		
1 1,4-Dioxane	58	1.895	1.910	(0.583)	1458	0.08000	0.06111	(aH)

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\200901.b\003.D
Date : 01-SEP-2020 14:41
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\200901.b\004.D
Lab Smp Id: DXSIM-0.01 Client Smp ID: DXSIM-0.01
Inj Date : 01-SEP-2020 15:03 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.01;DXSIM-0.01
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.688	(1.000)	8796	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32119	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1526	0.01000	0.01340	(QM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	19919	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2697	0.01000	0.01161	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	38069	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	32361	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	3227	0.01000	0.01203	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	42122	0.10000		(M)

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\200901.b\004.D

Date : 01-SEP-2020 15:03

Client ID: DXSIM-0.01

Instrument: SV6.i

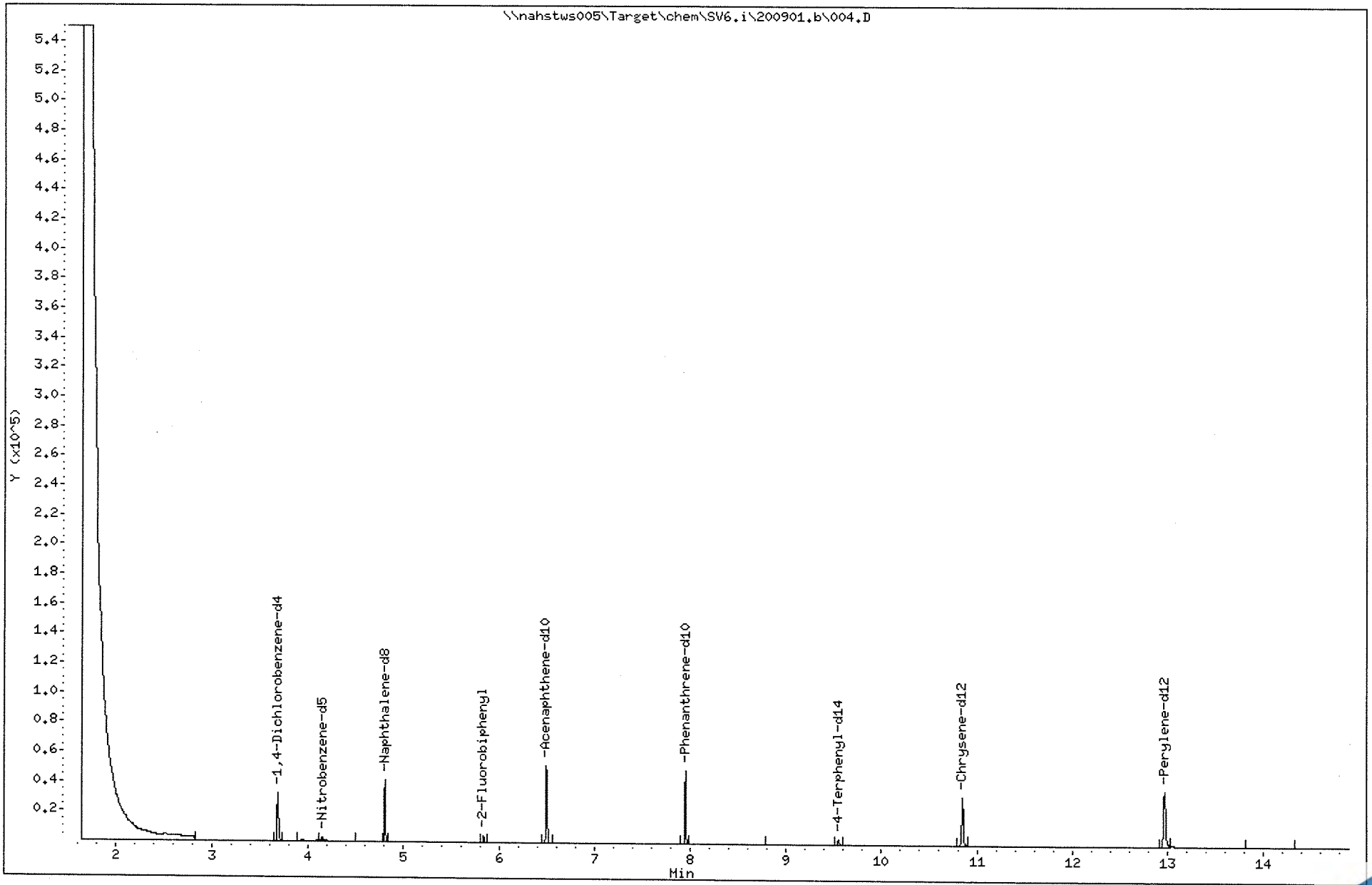
Sample Info: DXSIM-0.01;DXSIM-0.01

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\005.D
Lab Smp Id: DXSIM-0.03 Client Smp ID: DXSIM-0.03
Inj Date : 01-SEP-2020 15:22 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.03;DXSIM-0.03
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.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

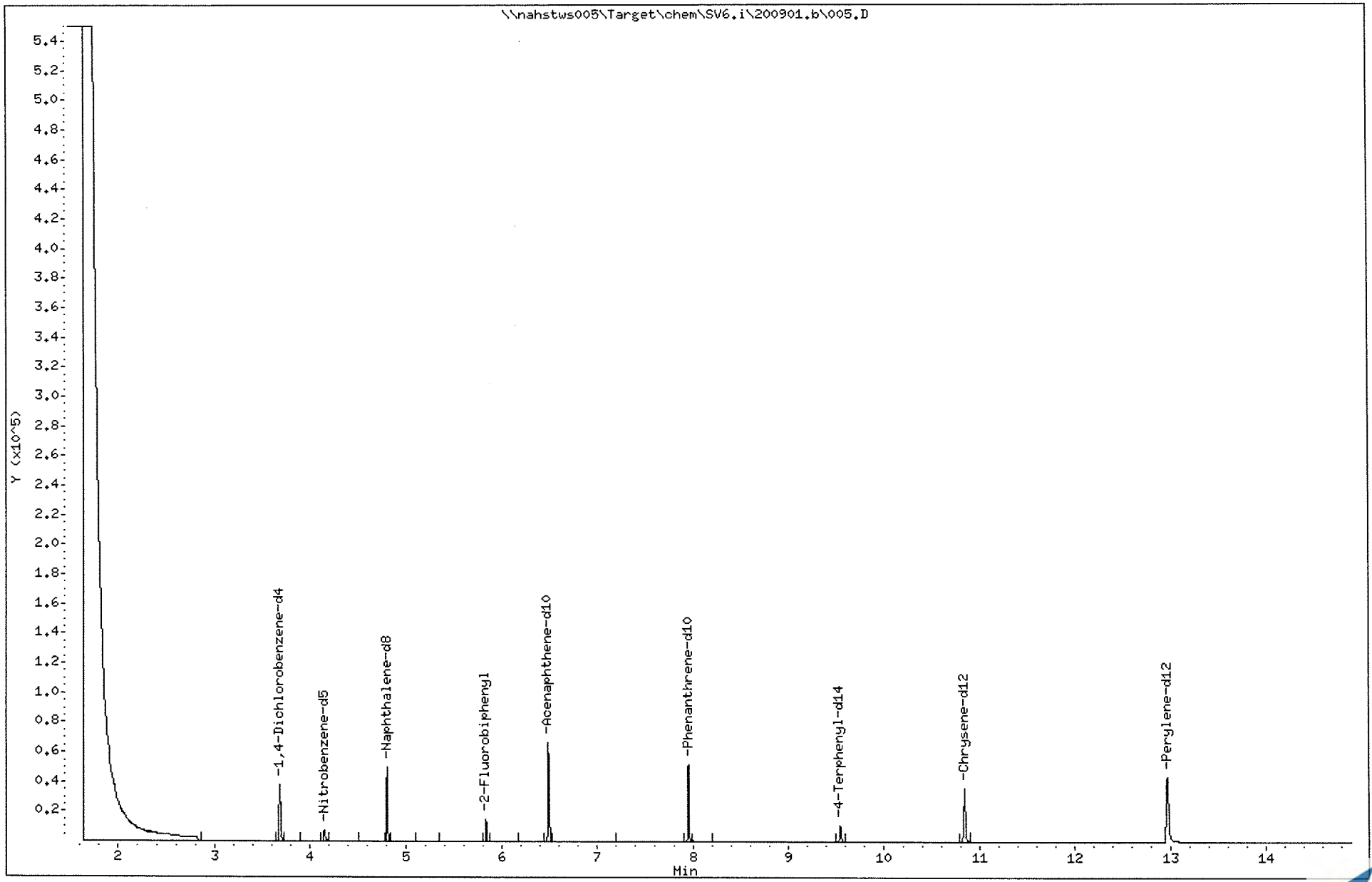
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	11206	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	37822	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4046	0.03000	0.03018	(QM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	24426	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	8846	0.03000	0.03105	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	45805	0.10000		(M)
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	35939	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.927)	9716	0.03000	0.03261	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	49371	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\200901.b\005.D
Date : 01-SEP-2020 15:22
Client ID: DXSIM-0.03
Sample Info: DXSIM-0.03;DXSIM-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\200901.b\006.D
Lab Smp Id: DXSIM-0.05 Client Smp ID: DXSIM-0.05
Inj Date : 01-SEP-2020 15:41 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.05;DXSIM-0.05
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.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

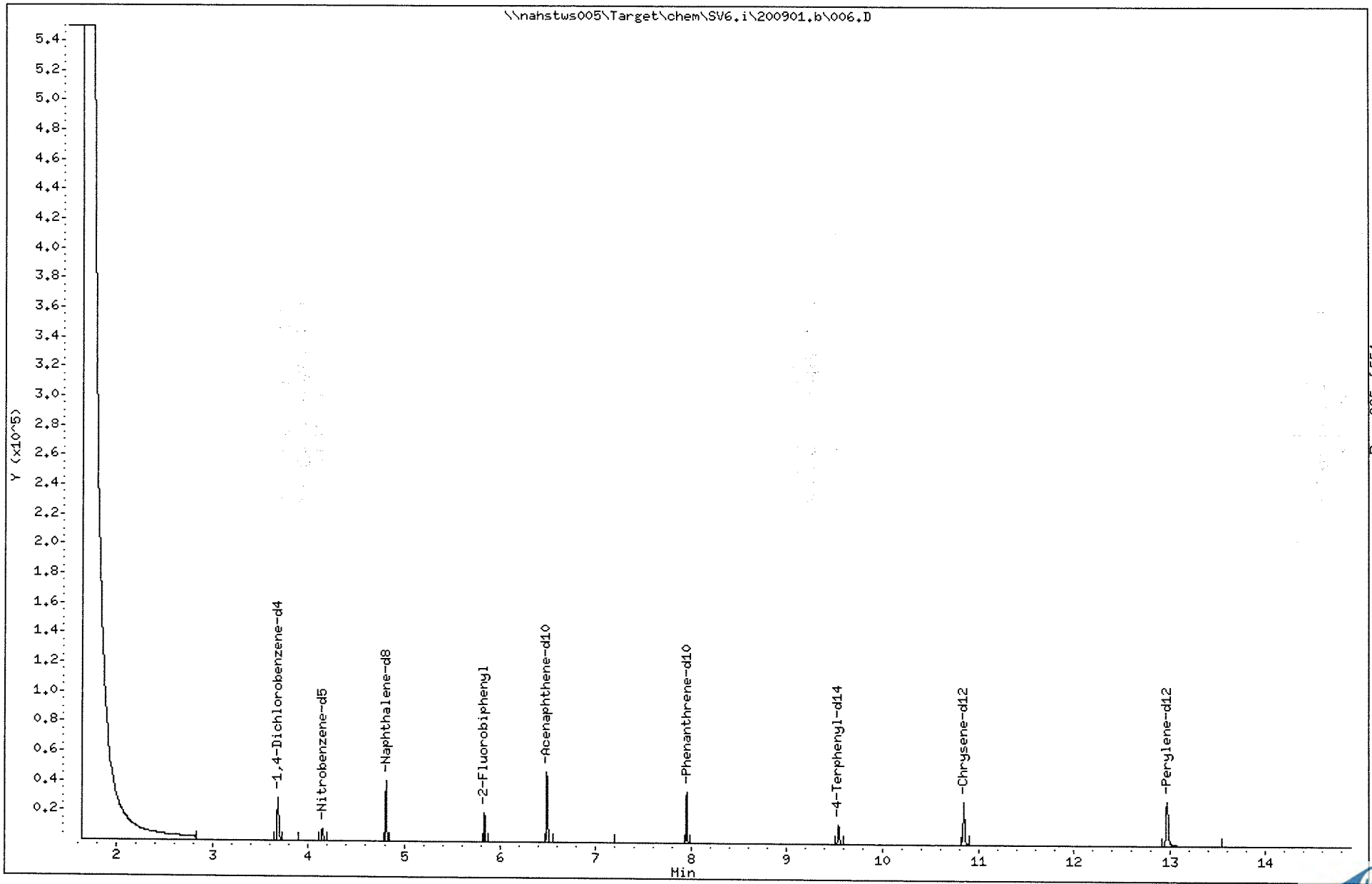
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8859	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32258	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4593	0.05000	0.04017	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	17615	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	11613	0.05000	0.05652	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	28977	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	28714	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.934)	11038	0.05000	0.04638	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	33234	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\200901.b\006.D
Date : 01-SEP-2020 15:41
Client ID: DXSIM-0.05
Sample Info: DXSIM-0.05;DXSIM-0.05
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\200901.b\007.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\007.D
Lab Smp Id: DXSIM-0.10 Client Smp ID: DXSIM-0.10
Inj Date : 01-SEP-2020 16:00 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.10;DXSIM-0.10
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

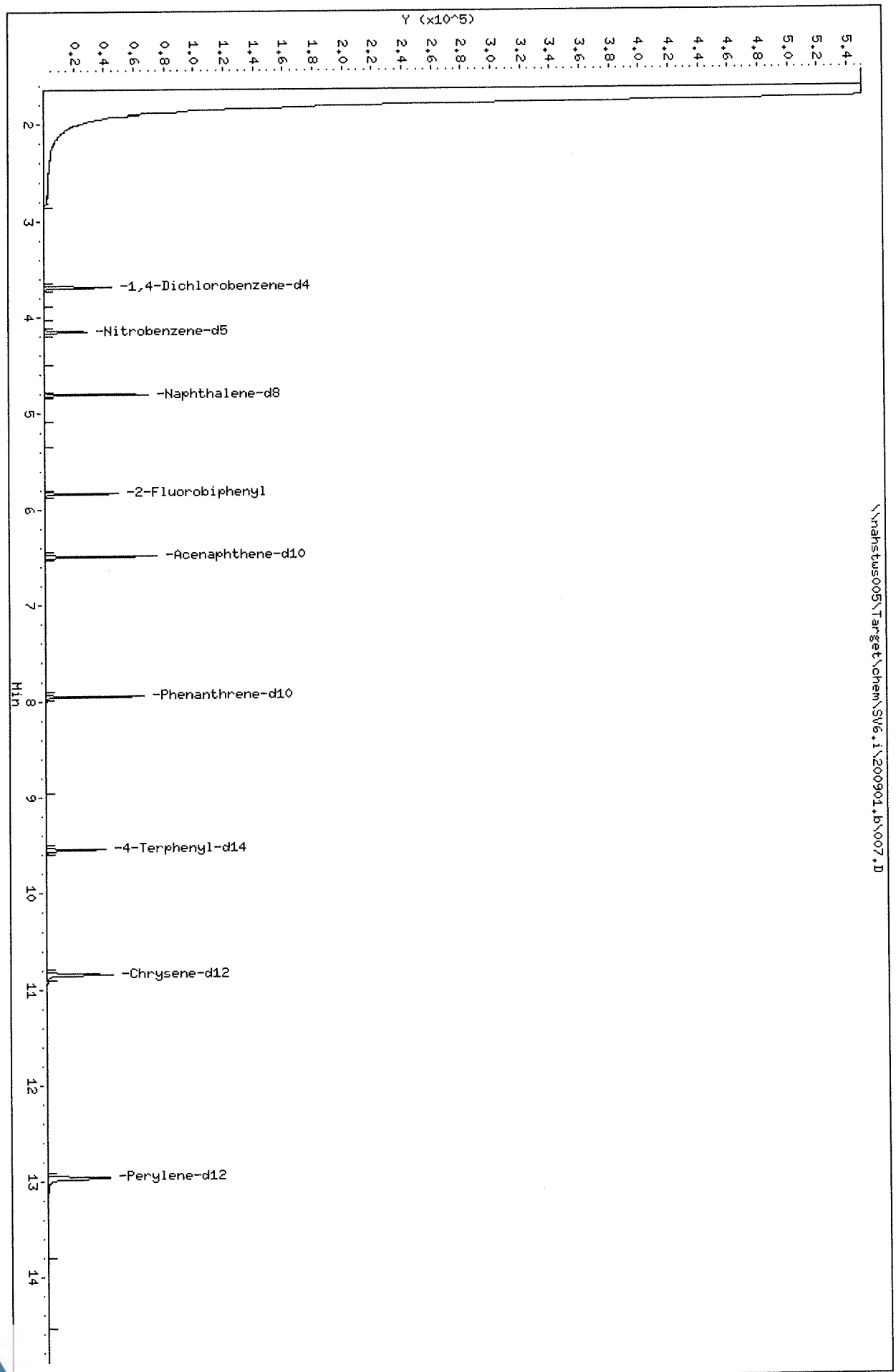
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	11640	0.10000	(aM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	55315	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	16389	0.10000	0.08360(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	27614	0.10000	(QM)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	31424	0.10000	0.09756(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	55479	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	48676	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(1.000)	34456	0.10000	0.08540
* 198 Perylene-d12	264	12.962	12.967	(1.000)	53866	0.10000	
1 1,4-Dioxane	58	1.918	1.910	(0.567)	3169	0.10000	0.1015(aQH)

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\SW6.i\200901.b\007.D
Date : 01-SEP-2020 16:00
Client ID: DXSIM-0.10
Sample Info: DXSIM-0.10;DXSIM-0.10
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SW6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\008.D
Lab Smp Id: DXSIM-0.15 Client Smp ID: DXSIM-0.15
Inj Date : 01-SEP-2020 16:19 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.15;DXSIM-0.15
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	15270	0.10000		(aQM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	61912	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	34608	0.15000	0.1577	(AM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	37191	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	58798	0.15000	0.1355	(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	72506	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	63837	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	68288	0.15000	0.1290	(M)
* 198 Perylene-d12	264	12.961	12.967	(1.000)	62319	0.10000		(M)
1 1,4-Dioxane	58	1.932	1.910	(0.555)	6821	0.15000	0.1665	(aQH)

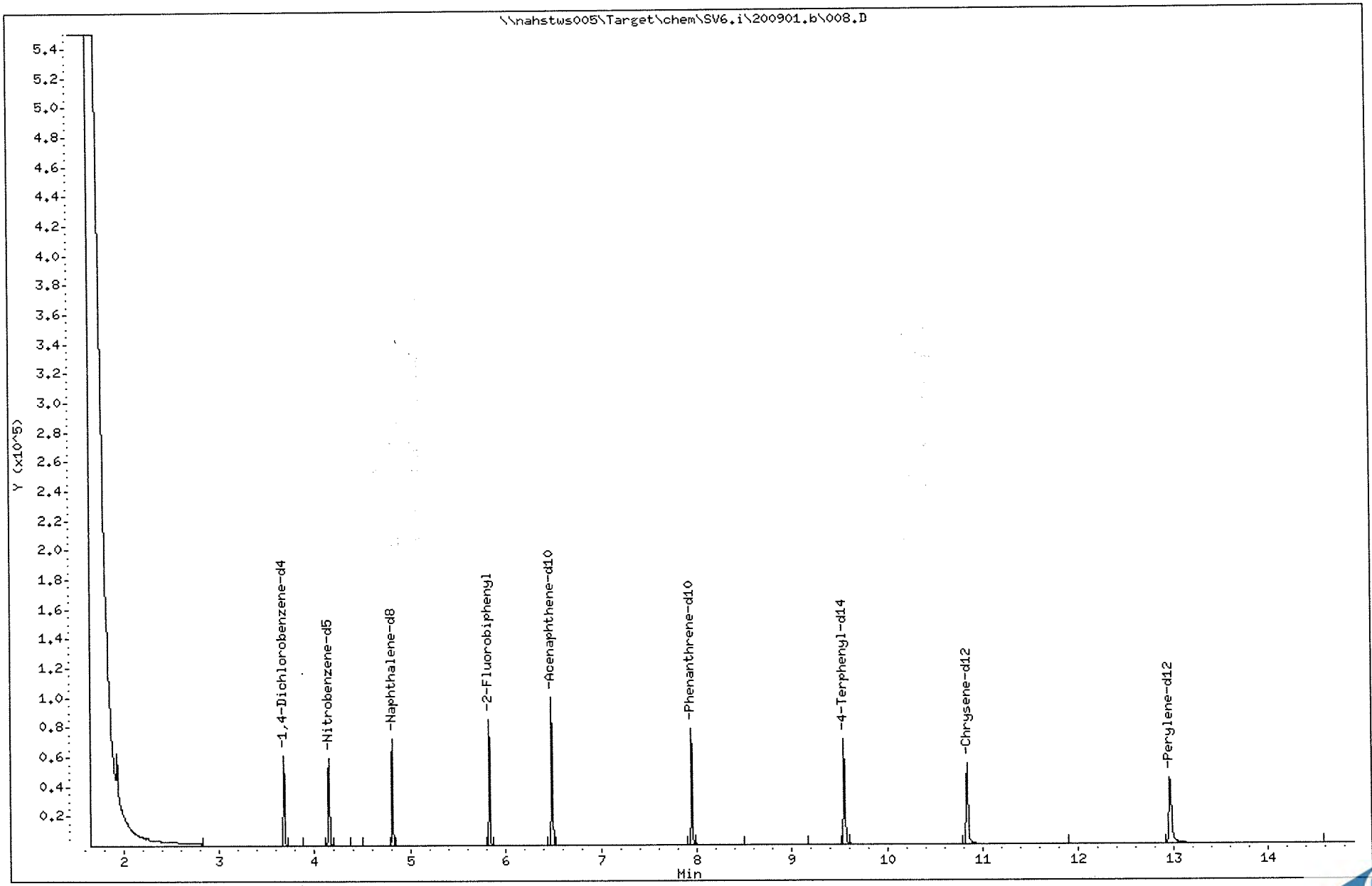
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
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\200901.b\008.D
Date : 01-SEP-2020 16:19
Client ID: DXSIM-0.15
Sample Info: DXSIM-0.15;DXSIM-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\200901.b\009.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Lab Smp Id: DXSIM-0.2 Client Smp ID: DXSIM-0.2
Inj Date : 01-SEP-2020 16:38 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.2;DXSIM-0.2
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

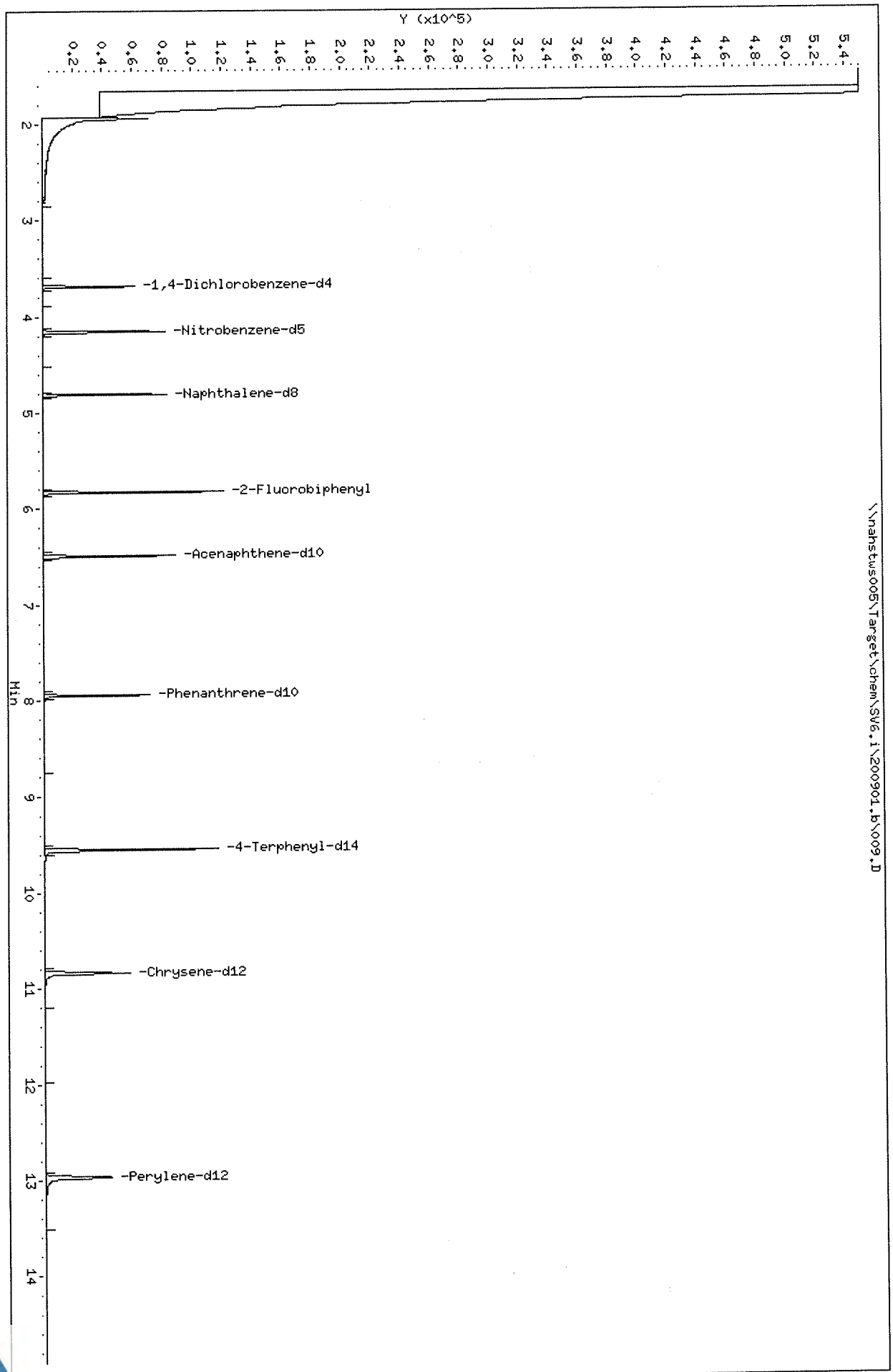
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.694	3.688	(1.000)	16191	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	71876	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	47444	0.20000	0.1862	(AM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	37058	0.10000		(Q)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	83257	0.20000	0.1926	(A)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	66839	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	69577	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.933)	107656	0.20000	0.1867	(A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	67389	0.10000		(M)
1 1,4-Dioxane	58	1.943	1.910	(0.526)	10742	0.20000	0.2474	(QM)

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.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Date : 01-SEP-2020 16:38
Client ID: DXSIM-0.2
Sample Info: DXSIM-0.2;DXSIM-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\200901.b\010.D
Lab Smp Id: DXSIM-0.5 Client Smp ID: DXSIM-0.5
Inj Date : 01-SEP-2020 16:57 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.5;DXSIM-0.5
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

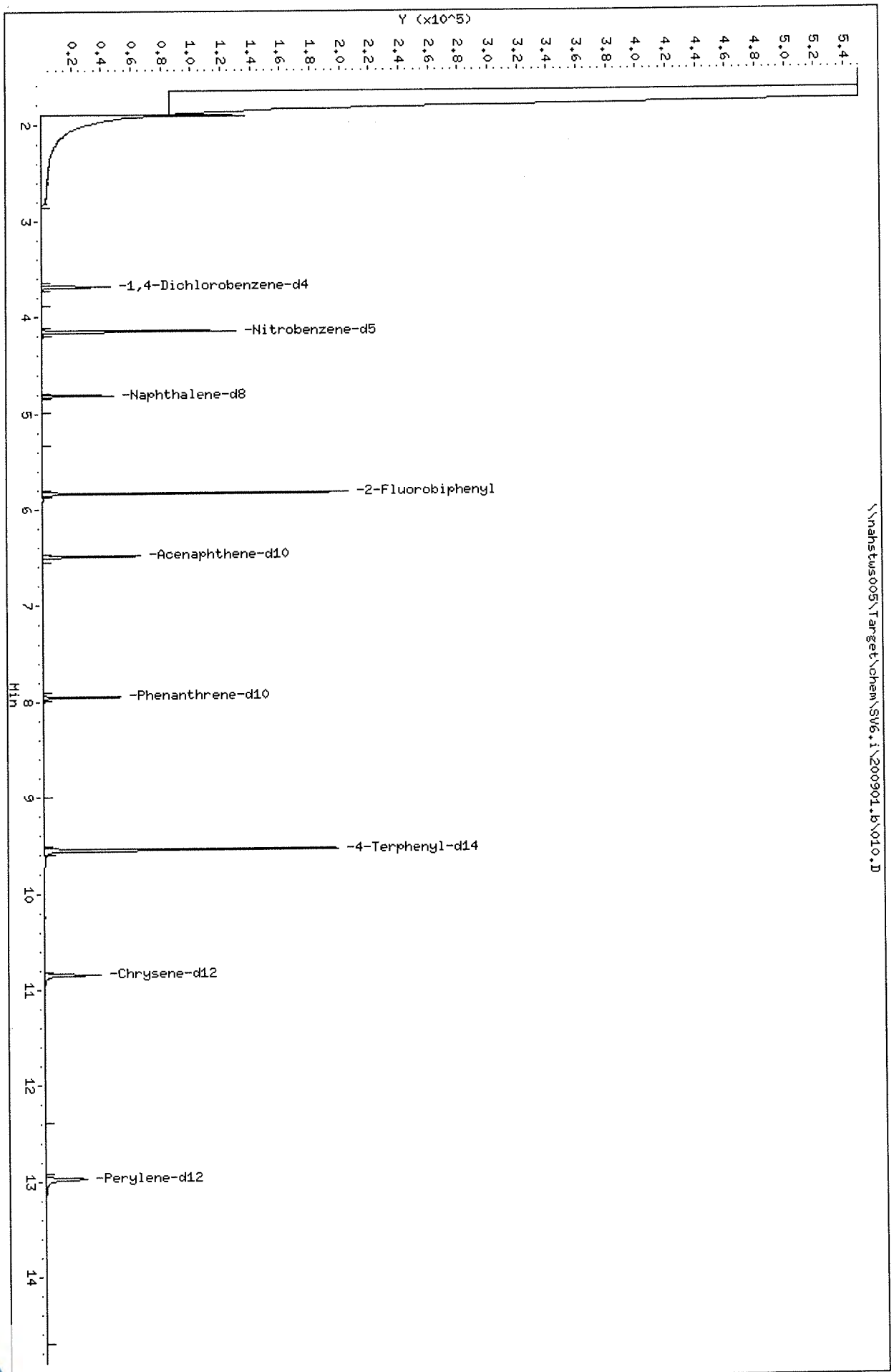
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	12162	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	42331	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	75298	0.50000	0.5019	(AM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	25766	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	131053	0.50000	0.4360	(AQM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	46874	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	42265	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.934)	177660	0.50000	0.5071	(A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	40372	0.10000		(M)
1 1,4-Dioxane	58	1.910	1.910	(0.518)	17000	0.50000	0.5212	(AQH)

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.
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\200901.b\010.D
Date : 01-SEP-2020 16:57
Client ID: DXSIM-0.5
Sample Info: DXSIM-0.5;DXSIM-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\200901.b\011.D
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\011.D
Lab Smp Id: DXSIM-ICV Client Smp ID: DXSIM-ICV
Inj Date : 01-SEP-2020 17:16 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-ICV;DXSIM-ICV
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 11 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

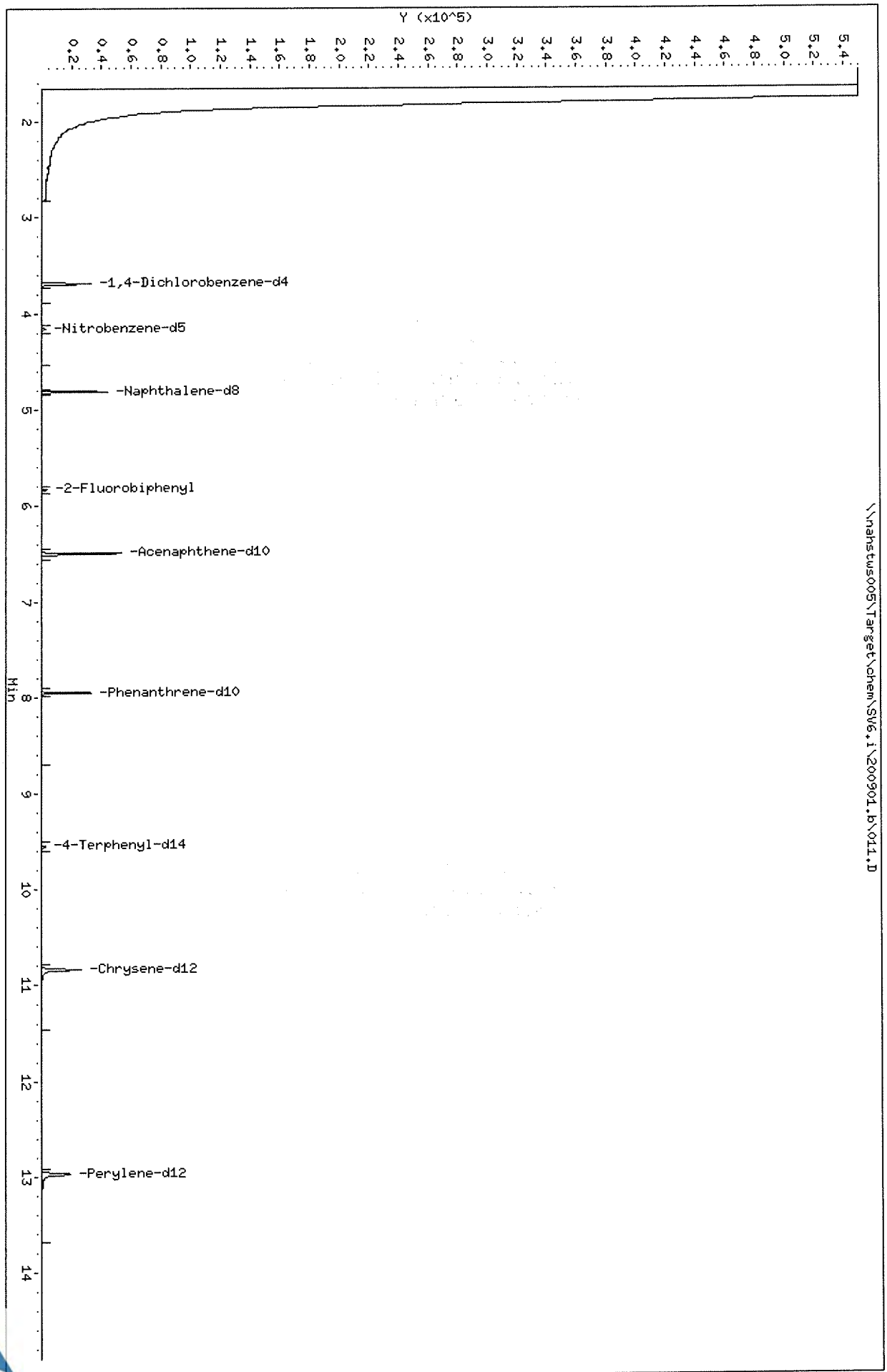
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8963	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	36304	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1344	0.01045	0.01044	(RM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	20841	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2375	0.00977	0.009770	(RM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	29957	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	32572	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	3102	0.01149	0.01149	(RM)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	29891	0.10000		(M)
1 1,4-Dioxane	58	1.906	1.910	(0.517)	1870	0.07779	0.07779	(aQH)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\011.D
Date : 01-SEP-2020 17:16
Client ID: DXSIM-ICV
Sample Info: DXSIM-ICV;DXSIM-ICV
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\200901.b\024.D Page 1
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\024.D
Lab Smp Id: MBLK-156817 Client Smp ID: MBLK-156817
Inj Date : 01-SEP-2020 21:29 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-156817;MBLK-156817;3;;BLANK
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 24 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)	CONCENTRATIONS FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.694	3.688	(1.000)	13204	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	54334	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	11778	0.06116	0.06116	(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	29825	0.10000		(QM)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	21640	0.06220	0.06220	(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	64312	0.10000		(M)
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	51452	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	33988	0.07969	0.07969	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	52021	0.10000		(M)

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\200901.b\024.D

Date : 01-SEP-2020 21:29

Client ID: MBLK-156817

Sample Info: MBLK-156817;MBLK-156817;3;;BLANK

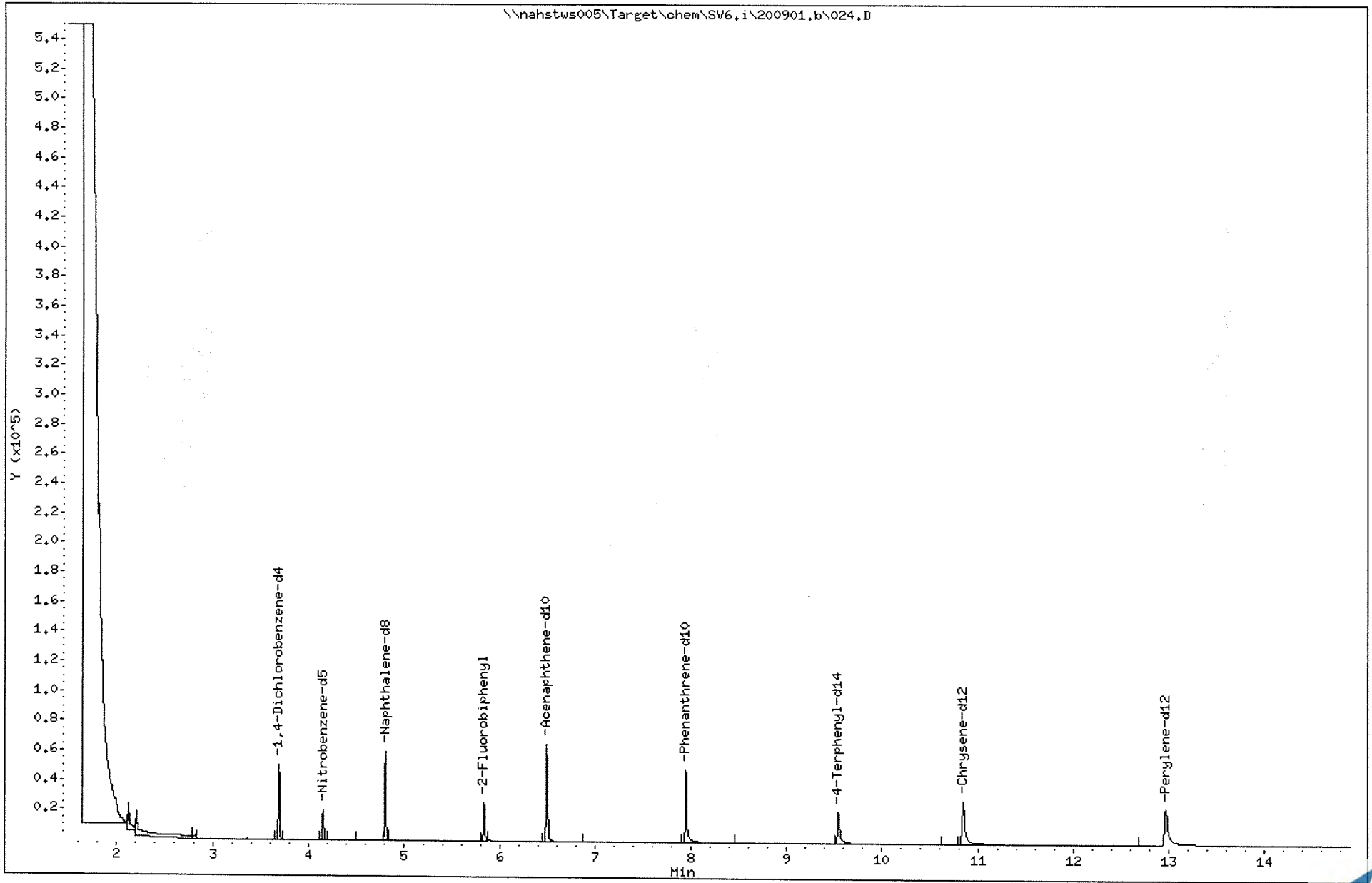
Purge Volume: 1000.0

Column phase: RTX-5SIL MS

Instrument: SV6.i

Operator: LG

Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\025.D
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\025.D
Lab Smp Id: LCS-156817 Client Smp ID: LCS-156817
Inj Date : 01-SEP-2020 21:48 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCS-156817;LCS-156817;3;;LCS
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 25 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

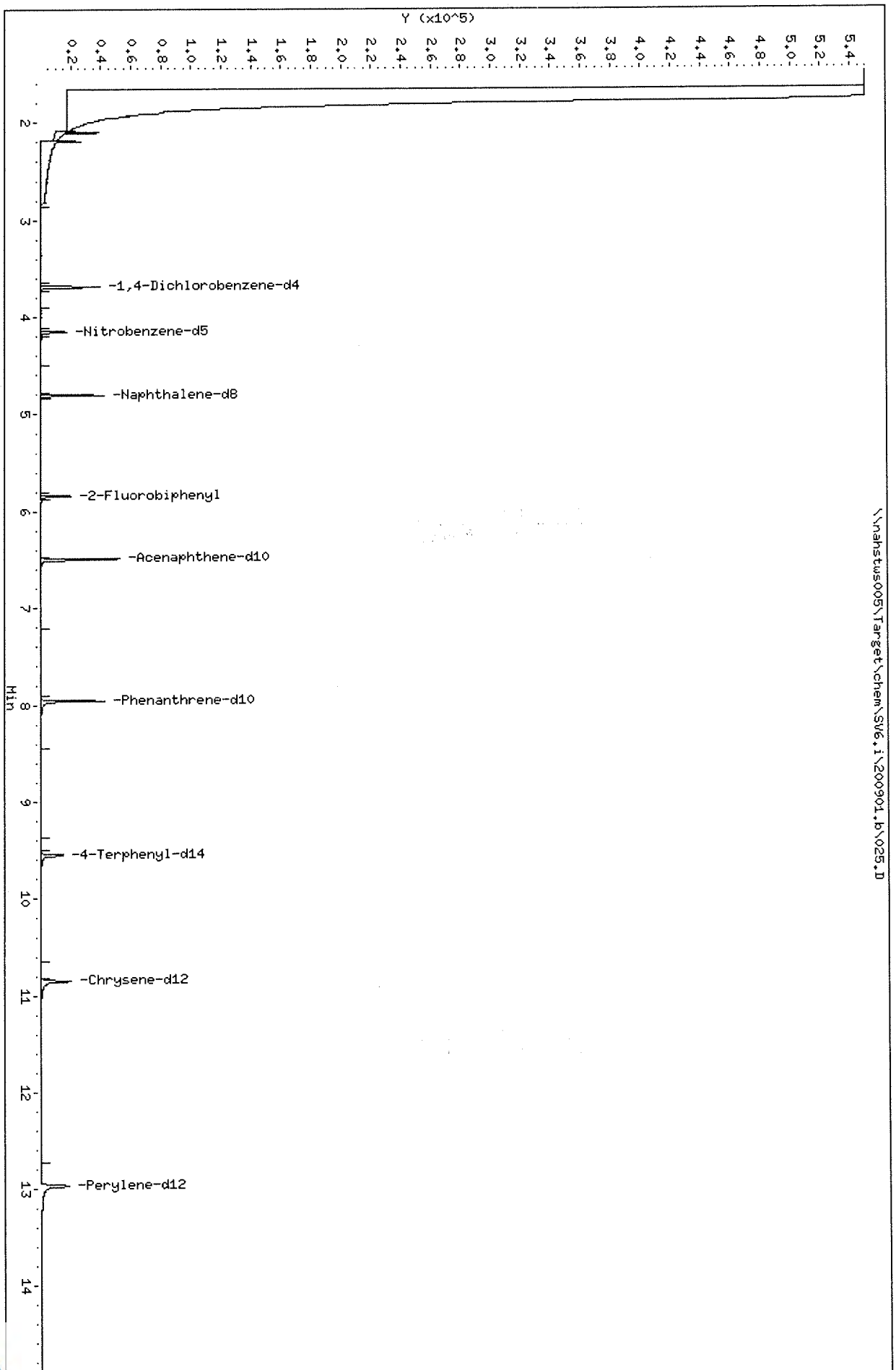
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	10614	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	36720	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	10487	0.08058	0.08058	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	23957	0.10000		
$ 69 2-Fluorobiphenyl	172	5.837	5.834	(0.899)	18182	0.06507	0.06506	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	47492	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	34942	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	23713	0.08187	0.08187	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	31820	0.10000		(M)
1 1,4-Dioxane	58	1.906	1.910	(0.517)	1580	0.05550	0.05550	(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\200901.b\025.D
Date : 01-SEP-2020 21:48
Client ID: LCS-156817
Sample Info: LCS-156817;LCS-156817;3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\026.D Page 1
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\026.D
Lab Smp Id: LCSD-156817 Client Smp ID: LCSD-156817
Inj Date : 01-SEP-2020 22:07 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-156817;LCSD-156817;3;;LCSD
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 26 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

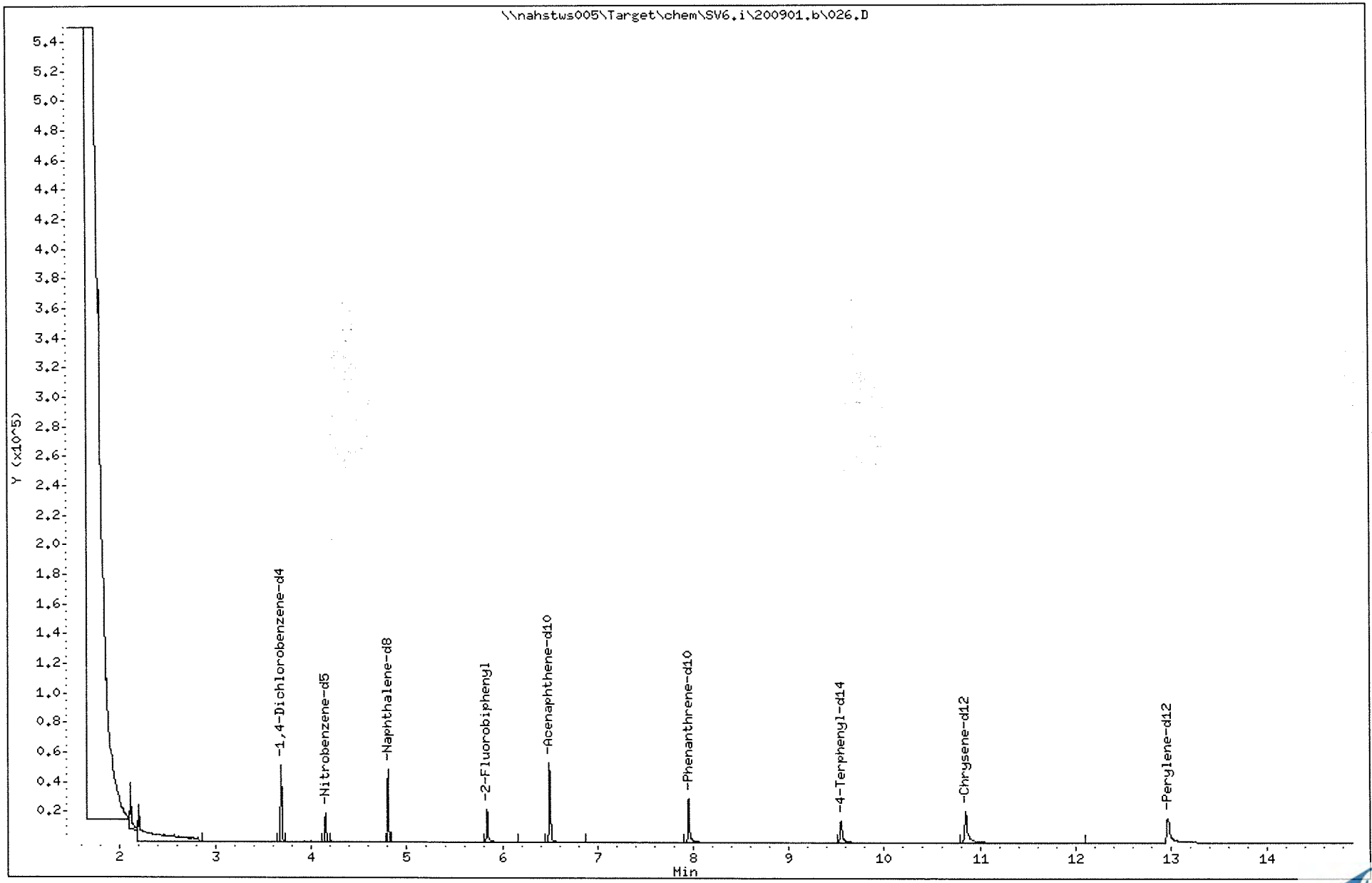
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	13263	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	42229	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	11165	0.07460	0.07460	(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	23775	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	19693	0.07101	0.07101	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	38270	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	39135	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	23569	0.07266	0.07266	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	33668	0.10000		(M)

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\200901.b\026.D
Date : 01-SEP-2020 22:07
Client ID: LCSD-156817
Sample Info: LCSD-156817;LCSD-156817;3;;LCSD
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\200901.b\028.D
Lab Smp Id: HS20081150-01 Client Smp ID: HS20081150-01
Inj Date : 01-SEP-2020 22:45 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : HS20081150-01;HS20081150-01
Misc Info : HS20081150;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 10:41 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 28
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

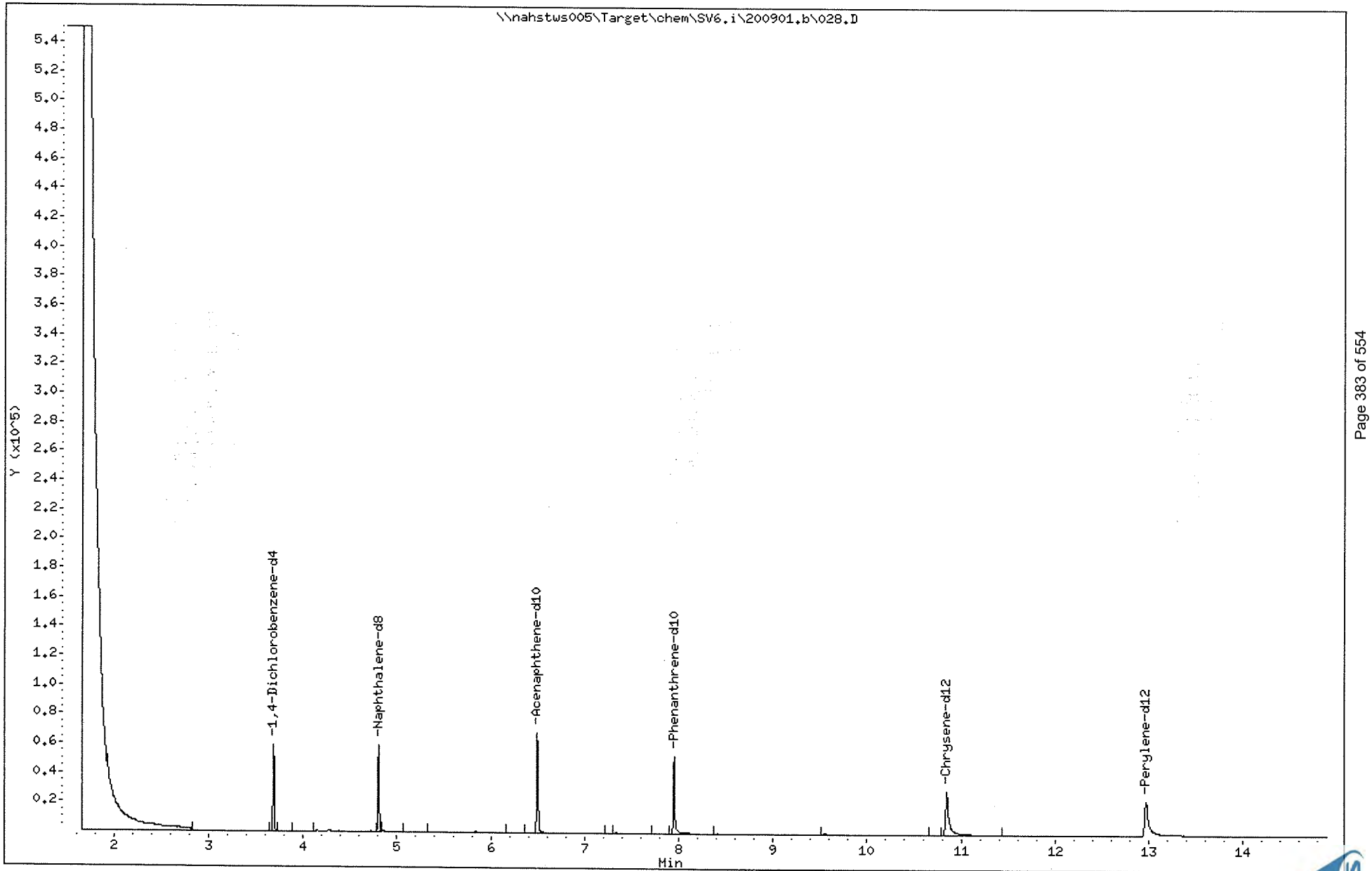
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.683	(1.000)	15467	0.10000		(a)
* 45 Naphthalene-d8	136	4.813	4.809	(1.000)	58563	0.10000		(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	30506	0.10000		(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	58569	0.10000		
* 182 Chrysene-d12	240	10.845	10.845	(1.000)	59851	0.10000		(M)
* 198 Perylene-d12	264	12.972	12.972	(1.000)	50283	0.10000		(M)

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\200901.b\028.D
Date : 01-SEP-2020 22:45
Client ID: HS20081150-01
Sample Info: HS20081150-01;HS20081150-01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\031.D
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\031.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 01-SEP-2020 23:42 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : HS20081151;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:27 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 31 Continuing Calibration Sample
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

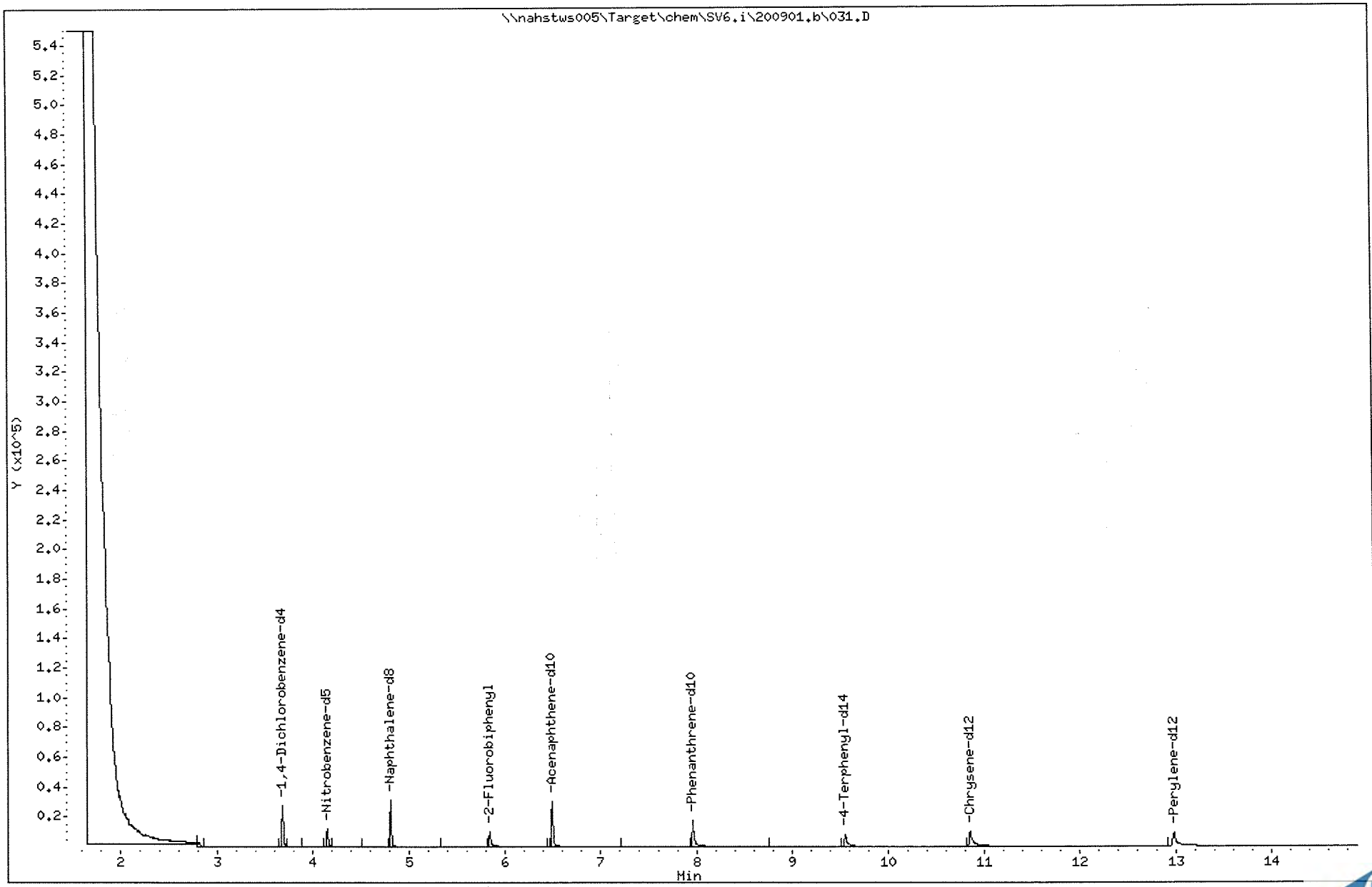
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8712	0.10000		(aM)
* 45 Naphthalene-d8	136	4.813	4.813	(1.000)	29191	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.863)	7071	0.08000	0.06835	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	14617	0.10000		
$ 69 2-Fluorobiphenyl	172	5.841	5.841	(0.899)	14596	0.08000	0.08561	(M)
* 126 Phenanthrene-d10	188	7.957	7.957	(1.000)	25985	0.10000		
* 182 Chrysene-d12	240	10.851	10.851	(1.000)	23709	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.559	9.559	(0.881)	15389	0.08000	0.07830	(M)
* 198 Perylene-d12	264	12.978	12.978	(1.000)	20825	0.10000		(M)
1 1,4-Dioxane	58	1.888	1.888	(0.512)	2027	0.08000	0.08675	(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\200901.b\031.D
Date : 01-SEP-2020 23:42
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



HS20081150 - ME - HG_W_DODICP_W_DOD

ALS WO# HS20081150

ALS Houston, US Date: 25-Sep-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150
Start Date: 31-Aug-2020 08:30 End Date: 01-Sep-2020 10:30

Batch ID: 156890
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20081150-01	LH18/24-SP140_082520	Water		10	10	1
HS20081150-01MS				10	10	1
HS20081150-01MSD				10	10	1
LCS-156890				10	10	1
MBLK-156890				10	10	1

ALS Houston, US Date: 25-Sep-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150
Start Date: 28-Aug-2020 10:00 End Date: 28-Aug-2020 14:00

Batch ID: 156822
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20081150-01	LH18/24-SP140_082520	Water		10	10	1
HS20081150-01MS				10	10	1
HS20081150-01MSD				10	10	1
HS20081150-01PDS				10	10	1
HS20081150-01SD				10	10	1
LCS-156822				10	10	1
MBLK-156822				10	10	1

ALS Houston, US

Date: 25-Sep-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150
Start Date: 01-Sep-2020 End Date: 01-Sep-2020

Run ID:HG03_367830
Instrument:HG03
Method:SW7470

Sample No.	D/F	Time	FileID	Analytes
ICCV 1	1	01-Sep-2020 11:10	_5722597	HG
ICV	1	01-Sep-2020 11:14	_5722598	HG
ICB	1	01-Sep-2020 11:15	_5722599	HG
CRA	1	01-Sep-2020 11:17	_5722600	HG
CCV 2	1	01-Sep-2020 11:39	_5722607	HG
CCB 1	1	01-Sep-2020 11:40	_5722608	HG
CCV 3	1	01-Sep-2020 12:01	_5722619	HG
CCB 2	1	01-Sep-2020 12:03	_5722620	HG
CCV 4	1	01-Sep-2020 12:35	_5722627	HG
CCB 3	1	01-Sep-2020 12:36	_5722628	HG
CCV 5	1	01-Sep-2020 12:55	_5722629	HG
CCB 4	1	01-Sep-2020 12:57	_5722630	HG
CCV 6	1	01-Sep-2020 13:08	HG03_367830 Raw Data_5722593	HG
CCB 5	1	01-Sep-2020 13:10	_5722594	HG
MBLK-156890	1	01-Sep-2020 13:12	_5722646	HG
LCS-156890	1	01-Sep-2020 13:13	_5722647	HG
LH18/24-SP140_082520	1	01-Sep-2020 13:15	_5722648	HG
LH18/24-SP140_082520MS	1	01-Sep-2020 13:17	_5722649	HG
LH18/24-SP140_082520MSD	1	01-Sep-2020 13:19	_5722650	HG
CCV 7	1	01-Sep-2020 13:22	_5722595	HG
CCB 6	1	01-Sep-2020 13:24	_5722596	HG
CCV 8	1	01-Sep-2020 14:12	_5722791	HG
CCB 7	1	01-Sep-2020 14:14	_5722792	HG
CCV 9	1	01-Sep-2020 14:41	_5722803	HG
CCB 8	1	01-Sep-2020 14:43	_5722804	HG
CCV 10	1	01-Sep-2020 15:06	_5722811	HG
CCB 9	1	01-Sep-2020 15:08	_5722812	HG
CCV 11	1	01-Sep-2020 15:33	_5722833	HG
CCB 10	1	01-Sep-2020 15:35	_5722834	HG
CCV 12	1	01-Sep-2020 15:51	_5722839	HG
CCB 11	1	01-Sep-2020 15:52	_5722840	HG

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150
Start Date: 02-Sep-2020 End Date: 02-Sep-2020

Run ID:ICPMS06_367914
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_367914_Tune	1	02-Sep-2020 00:00	ICPMS06_367914_Tune_1	
CAL BLK	1	02-Sep-2020 10:34	011CALB.d_5724320	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	02-Sep-2020 10:36	012CALS.d_5724321	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	02-Sep-2020 10:38	013CALS.d_5724322	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
10/50/100	1	02-Sep-2020 10:40	014CALS.d_5724323	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	02-Sep-2020 10:42	015CALS.d_5724324	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	02-Sep-2020 10:43	016CALS.d_5724325	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	02-Sep-2020 10:47	018_ICV.d_5724327	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	02-Sep-2020 10:49	019LCV2.d_5724328	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	02-Sep-2020 10:51	020LCV5.d_5724329	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	02-Sep-2020 10:53	021_ICB.d_5724330	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	02-Sep-2020 10:58	023ICSA.d_5724332	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	02-Sep-2020 11:00	024ICSB.d_5724333	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCV 1	1	02-Sep-2020 16:23	145_CCV.d_5724335	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	02-Sep-2020 16:25	146_CCB.d_5724336	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
MBLK-156822	1	02-Sep-2020 16:29	147SMPL.d_5724337	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LCS-156822	1	02-Sep-2020 16:31	148SMPL.d_5724338	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LH18/24-SP140_082520	1	02-Sep-2020 16:33	149SMPL.d_5724339	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
LH18/24-SP140_082520SD	5	02-Sep-2020 16:35	150SMPL.d_5724340	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
LH18/24-SP140_082520MS	1	02-Sep-2020 16:37	151SMPL.d_5724341	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LH18/24-SP140_082520MSD	1	02-Sep-2020 16:39	152SMPL.d_5724342	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LH18/24-SP140_082520PDS	1	02-Sep-2020 16:41	153SMPL.d_5724343	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
CCV 2	1	02-Sep-2020 16:49	156_CCV.d_5724346	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	02-Sep-2020 16:51	157_CCB.d_5724347	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCV 3	1	02-Sep-2020 21:41	186_CCV.d_5724374	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 3	1	02-Sep-2020 21:43	187_CCB.d_5724375	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LH18/24-SP140_082520	20	02-Sep-2020 21:44	188SMPL.d_5724376	NA
LH18/24-SP140_082520SD	100	02-Sep-2020 21:46	189SMPL.d_5724377	NA
LH18/24-SP140_082520PDS	20	02-Sep-2020 21:48	190SMPL.d_5724378	NA
CCV 4	1	02-Sep-2020 21:52	192_CCV.d_5724380	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 4	1	02-Sep-2020 21:54	193_CCB.d_5724381	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN

ALS Houston, US Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: HG03_367830
Project: Groundwater Treatment Plant Quarterly Influent Samples Instrument: HG03
WorkOrder: HS20081150 Method: SW7470

ICCV1	Date: 01-Sep-2020 11:10		Seq: 5722597	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.82	96	90-110	

ICV	Date: 01-Sep-2020 11:14		Seq: 5722598	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.88	98	90-110	

CCV2	Date: 01-Sep-2020 11:39		Seq: 5722607	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	5.1	102	90-110	

CCV3	Date: 01-Sep-2020 12:01		Seq: 5722619	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.93	99	90-110	

CCV4	Date: 01-Sep-2020 12:35		Seq: 5722627	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	5.12	102	90-110	

CCV5	Date: 01-Sep-2020 12:55		Seq: 5722629	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	5.08	102	90-110	

CCV6	Date: 01-Sep-2020 13:08		Seq: 5722593	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.91	98	90-110	

CCV7	Date: 01-Sep-2020 13:22		Seq: 5722595	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.96	99	90-110	

CCV8	Date: 01-Sep-2020 14:12		Seq: 5722791	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.95	99	90-110	

CCV9	Date: 01-Sep-2020 14:41		Seq: 5722803	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.83	97	90-110	

CCV10	Date: 01-Sep-2020 15:06		Seq: 5722811	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.95	99	90-110	

CCV11	Date: 01-Sep-2020 15:33		Seq: 5722833	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.66	93	90-110	

CCV12	Date: 01-Sep-2020 15:51		Seq: 5722839	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.86	97	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

ICV Date: 02-Sep-2020 10:47 Seq: 5724327 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.569	104	90-110	
Antimony	100	103.493	103	90-110	
Arsenic	100	106.455	106	90-110	
Barium	100	105.959	106	90-110	
Beryllium	100	104.568	105	90-110	
Cadmium	100	103.997	104	90-110	
Calcium	10000	10624.992	106	90-110	
Chromium	100	103.7	104	90-110	
Cobalt	100	107.538	108	90-110	
Iron	10000	10525.975	105	90-110	
Lead	100	106.911	107	90-110	
Magnesium	10000	10461.979	105	90-110	
Manganese	100	104.687	105	90-110	
Nickel	100	104.844	105	90-110	
Potassium	10000	10405.514	104	90-110	
Selenium	100	106.573	107	90-110	
Silver	100	106.845	107	90-110	
Sodium	10000	10360.247	104	90-110	
Thallium	100	101.552	102	90-110	
Vanadium	100	102.74	103	90-110	
Zinc	100	104.434	104	90-110	

CCV1 Date: 02-Sep-2020 16:23 Seq: 5724335 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.786	92	90-110	
Antimony	100	103.914	104	90-110	
Arsenic	100	98.847	99	90-110	
Barium	100	102.716	103	90-110	
Beryllium	100	97.299	97	90-110	
Cadmium	100	102.139	102	90-110	
Calcium	10000	9474.657	95	90-110	
Chromium	100	95.967	96	90-110	
Cobalt	100	101.973	102	90-110	
Iron	10000	9842.383	98	90-110	
Lead	100	100.577	101	90-110	
Magnesium	10000	9425.533	94	90-110	
Manganese	100	98.956	99	90-110	
Nickel	100	99.089	99	90-110	
Potassium	10000	9511.014	95	90-110	
Selenium	100	98.33	98	90-110	
Silver	100	101.005	101	90-110	
Sodium	10000	9615.129	96	90-110	
Thallium	100	94.514	95	90-110	
Vanadium	100	96.543	97	90-110	
Zinc	100	101.815	102	90-110	

CCV2 Date: 02-Sep-2020 16:49 Seq: 5724346 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.695	94	90-110	
Antimony	100	105.807	106	90-110	
Arsenic	100	99.107	99	90-110	
Barium	100	106.604	107	90-110	
Beryllium	100	97.623	98	90-110	
Cadmium	100	104.867	105	90-110	
Calcium	10000	9469.541	95	90-110	

ALS Houston, US Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

CCV2 Date: 02-Sep-2020 16:49 Seq: 5724346 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Chromium	100	99.508	100	90-110	
Cobalt	100	102.436	102	90-110	
Iron	10000	10037.89	100	90-110	
Lead	100	104.597	105	90-110	
Magnesium	10000	9426.896	94	90-110	
Manganese	100	100.619	101	90-110	
Nickel	100	101.589	102	90-110	
Potassium	10000	9435.35	94	90-110	
Selenium	100	98.068	98	90-110	
Silver	100	103.315	103	90-110	
Sodium	10000	9507.653	95	90-110	
Thallium	100	98.246	98	90-110	
Vanadium	100	97.542	98	90-110	
Zinc	100	101.856	102	90-110	

CCV3 Date: 02-Sep-2020 21:41 Seq: 5724374 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.394	97	90-110	
Antimony	100	107.348	107	90-110	
Arsenic	100	99.811	100	90-110	
Barium	100	105.656	106	90-110	
Beryllium	100	98.189	98	90-110	
Cadmium	100	103.958	104	90-110	
Calcium	10000	9866.479	99	90-110	
Chromium	100	102.152	102	90-110	
Cobalt	100	105.267	105	90-110	
Iron	10000	10095.632	101	90-110	
Lead	100	105	105	90-110	
Magnesium	10000	9620.903	96	90-110	
Manganese	100	101.774	102	90-110	
Nickel	100	102.025	102	90-110	
Potassium	10000	9705.619	97	90-110	
Selenium	100	100.67	101	90-110	
Silver	100	103.739	104	90-110	
Sodium	10000	9779.216	98	90-110	
Thallium	100	97.727	98	90-110	
Vanadium	100	100.577	101	90-110	
Zinc	100	103.813	104	90-110	

CCV4 Date: 02-Sep-2020 21:52 Seq: 5724380 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.432	99	90-110	
Antimony	100	108.022	108	90-110	
Arsenic	100	101.715	102	90-110	
Barium	100	106.992	107	90-110	
Beryllium	100	98.234	98	90-110	
Cadmium	100	104.43	104	90-110	
Calcium	10000	9955.2	100	90-110	
Chromium	100	101.404	101	90-110	
Cobalt	100	106.484	106	90-110	
Iron	10000	10426.924	104	90-110	
Lead	100	105.155	105	90-110	
Magnesium	10000	9688.361	97	90-110	
Manganese	100	103.315	103	90-110	
Nickel	100	103.376	103	90-110	

ALS Houston, US Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

CCV4 Date: 02-Sep-2020 21:52 Seq: 5724380 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9795.375	98	90-110	
Selenium	100	101.696	102	90-110	
Silver	100	106.392	106	90-110	
Sodium	10000	9822.265	98	90-110	
Thallium	100	97.667	98	90-110	
Vanadium	100	99.392	99	90-110	
Zinc	100	104.087	104	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: HG03_367830
Instrument: HG03
Method: SW7470

ICB	Date: 01-Sep-2020 11:15		Seq: 5722599	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB1	Date: 01-Sep-2020 11:40		Seq: 5722608	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB2	Date: 01-Sep-2020 12:03		Seq: 5722620	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB3	Date: 01-Sep-2020 12:36		Seq: 5722628	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB4	Date: 01-Sep-2020 12:57		Seq: 5722630	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB5	Date: 01-Sep-2020 13:10		Seq: 5722594	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
MBLK-156890	Date: 01-Sep-2020 13:12		Seq: 5722646	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB6	Date: 01-Sep-2020 13:24		Seq: 5722596	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB7	Date: 01-Sep-2020 14:14		Seq: 5722792	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB8	Date: 01-Sep-2020 14:43		Seq: 5722804	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB9	Date: 01-Sep-2020 15:08		Seq: 5722812	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB10	Date: 01-Sep-2020 15:35		Seq: 5722834	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB11	Date: 01-Sep-2020 15:52		Seq: 5722840	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

ICB	Date: 02-Sep-2020 10:53		Seq: 5724330	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	5	0.4	5	U	
Arsenic	5	0.4	5	U	
Barium	5	1.9	5	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	5	0.4	5	U	
Cobalt	5	0.1	5	U	
Iron	200	12	200	U	
Lead	5	0.6	5	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	5	0.6	5	U	
Potassium	200	18	200	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	5	2	5	U	

CCB1	Date: 02-Sep-2020 16:25		Seq: 5724336	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	-47.96	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	33.18	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

MBLK-156822	Date: 02-Sep-2020 16:29		Seq: 5724337	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	2.604	1.8	10	J	
Antimony	5	0.4	5	U	
Arsenic	5	0.4	5	U	
Barium	5	1.9	5	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

MBLK-156822 Date: 02-Sep-2020 16:29 Seq: 5724337 MBLK Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Chromium	5	0.4	5	U
Cobalt	5	0.1	5	U
Iron	200	12	200	U
Lead	5	0.6	5	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	5	0.6	5	U
Potassium	200	18	200	U
Selenium	5	1.1	5	U
Silver	5	0.2	5	U
Sodium	34.15	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	2.601	2	5	J

CCB2 Date: 02-Sep-2020 16:51 Seq: 5724347 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	-47.61	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	45.85	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB3 Date: 02-Sep-2020 21:43 Seq: 5724375 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	-46.8	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

CCB3	Date: 02-Sep-2020 21:43		Seq: 5724375	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB4	Date: 02-Sep-2020 21:54		Seq: 5724381	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	-45.86	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	15.59	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ALS Houston, US Date: 25-Sep-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS06_367914
Project: Groundwater Treatment Plant Quarterly Influent Samples Instrument:ICPMS06
WorkOrder: HS20081150 Method:SW6020

ICSA	Date: 02-Sep-2020 10:58	Seq: 5724332	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	97900	97.9	
Antimony		0.027	0	
Arsenic		0.089	0	
Barium		0.033	0	
Beryllium		0.001	0	
Cadmium		1.243	0	
Calcium	100000	99070	99.1	
Chromium		1.002	0	
Cobalt		0.21	0	
Iron	100000	105400	105	
Lead		0.043	0	
Magnesium	100000	105300	105	
Manganese		0.206	0	
Nickel		0.241	0	
Potassium	100000	105700	106	
Selenium		0.247	0	
Silver		0.039	0	
Sodium	100000	104000	104	
Thallium		0.008	0	
Vanadium		-0.004	0	
Zinc		0.373	0	

ICSAB	Date: 02-Sep-2020 11:00	Seq: 5724333	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	97660	97.2	
Antimony	100	97.95	98.0	
Arsenic	100	100.3	100	
Barium	100	101.6	102	
Beryllium	100	95.6	95.6	
Cadmium	100	100.1	100	
Calcium	110000	111000	101	
Chromium	100	100.2	100	
Cobalt	100	98.05	98.1	
Iron	110000	112100	102	
Lead	100	102.2	102	
Magnesium	110000	112600	102	
Manganese	100	99.86	99.9	
Nickel	100	96.64	96.6	
Potassium	110000	114000	104	
Selenium	100	101	101	
Silver	100	100.9	101	
Sodium	110000	112500	102	
Thallium	100	95.37	95.4	
Vanadium	100	99.63	99.6	
Zinc	100	98.39	98.4	

ALS Houston, US Date: 25-Sep-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 01-Sep-2020 13:19
Date Extracted: 31-Aug-2020 14:44
Units: ug/L

Matrix Spike: HS20081150-01MS
Client Sample ID: LH18/24-SP140_082520

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.2000	5.040	5.000	100	5.010	5.000	99.9	82-119	0.597	20

ALS Houston, US Date: 25-Sep-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 02-Sep-2020 16:39
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Matrix Spike: HS20081150-01MS
Client Sample ID: LH18/24-SP140_082520

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	42.69	132.6	100.0	89.9	139.1	100.0	96.4	84-117	4.82	20
Antimony	5.000	51.18	50.00	102	50.72	50.00	101	85-117	0.893	20
Arsenic	1.267	50.63	50.00	98.7	51.09	50.00	99.6	84-116	0.914	20
Barium	736.8	734.4	50.00	-4.97	747.6	50.00	21.6	86-114	1.79	20
Beryllium	2.000	48.95	50.00	97.6	48.93	50.00	97.5	83-121	0.0531	20
Cadmium	2.000	50.06	50.00	99.8	51.16	50.00	102	87-115	2.17	20
Calcium	36130	37970	5000	36.8	38670	5000	50.8	87-118	1.84	20
Chromium	1.381	48.21	50.00	93.6	50.24	50.00	97.7	85-116	4.12	20
Cobalt	8.549	56.23	50.00	95.4	56.82	50.00	96.5	86-115	1.05	20
Iron	998.2	5702	5000	94.1	5728	5000	94.6	87-118	0.451	20
Lead	5.000	51.38	50.00	102	52.24	50.00	104	88-115	1.66	20
Magnesium	26540	30180	5000	72.7	30290	5000	74.9	83-118	0.363	20
Manganese	559.2	572.4	50.00	26.3	589.6	50.00	60.7	87-115	2.96	20
Nickel	9.277	55.03	50.00	91.5	55.81	50.00	93.1	85-117	1.42	20
Potassium	1231	5711	5000	89.6	5857	5000	92.5	87-115	2.52	20
Selenium	5.000	49.41	50.00	97.5	50.27	50.00	99.3	80-120	1.73	20
Silver	5.000	47.96	50.00	95.9	49.07	50.00	98.1	85-116	2.29	20
Sodium	174600	169100	5000	-110	173900	5000	-13.2	85-117	2.83	20
Thallium	2.000	47.28	50.00	94.4	48.89	50.00	97.7	82-116	3.34	20
Vanadium	0.7580	49.20	50.00	96.9	50.66	50.00	99.8	86-115	2.93	20
Zinc	26.26	72.90	50.00	93.3	75.19	50.00	97.8	83-119	3.08	20

ALS Houston, US Date: 25-Sep-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 02-Sep-2020 16:41
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: HS20081150-01PDS
Client Sample ID: LH18/24-SP140_082520
Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	42.69	153.3	100	111	80-120
Antimony	0	109.7	100	109	80-120
Arsenic	1.267	112.6	100	111	80-120
Barium	736.8	846.4	100	110	80-120
Beryllium	0	107	100	107	80-120
Cadmium	0	112.9	100	113	80-120
Calcium	36130	46630	10000	105	80-120
Chromium	1.381	108.9	100	107	80-120
Cobalt	8.549	118.4	100	110	80-120
Iron	998.2	11730	10000	107	80-120
Lead	0	114.7	100	115	80-120
Magnesium	26540	37700	10000	112	80-120
Manganese	559.2	676.8	100	118	80-120
Nickel	9.277	112.8	100	104	80-120
Potassium	1231	11950	10000	107	80-120
Selenium	0	111.4	100	111	80-120
Silver	0	109.3	100	109	80-120
Thallium	0	107.2	100	107	80-120
Vanadium	0.758	109.5	100	109	80-120
Zinc	26.26	136.7	100	110	80-120
Sodium	179700	373300	200000	97	80-120

ALS Houston, US

Date: 25-Sep-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 01-Sep-2020 13:13
Date Extracted: 31-Aug-2020 14:44
Units: ug/L

Lab Sample ID: LCS-156890
Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.11	102	82-119

ALS Houston, US Date: 25-Sep-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 02-Sep-2020 16:31
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: LCS-156822 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	90.9	91	84-117
Antimony	50	51.55	103	85-117
Arsenic	50	49.11	98	84-116
Barium	50	52.13	104	86-114
Beryllium	50	48.43	97	83-121
Cadmium	50	52.41	105	87-115
Calcium	5000	4654	93	87-118
Chromium	50	48.28	97	85-116
Cobalt	50	50.46	101	86-115
Iron	5000	4866	97	87-118
Lead	50	51.54	103	88-115
Magnesium	5000	4642	93	83-118
Manganese	50	47.9	96	87-115
Nickel	50	49.32	99	85-117
Potassium	5000	4594	92	87-115
Selenium	50	50.28	101	80-120
Silver	50	50.97	102	85-116
Sodium	5000	4699	94	85-117
Thallium	50	47.98	96	82-116
Vanadium	50	47.88	96	86-115
Zinc	50	54.04	108	83-119

ALS Houston, US Date: 25-Sep-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20081150

Date Analyzed: 02-Sep-2020 16:35
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: HS20081150-01SD
Client Sample ID:LH18/24-SP140_082520

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	42.69		46.46	J	9	
Antimony	0	U	0	U	0	
Arsenic	1.267	J	2.057	J	62	
Barium	736.8		743.7		1	
Beryllium	0	U	0	U	0	
Cadmium	0	U	0	U	0	
Calcium	36130		36610		1	
Chromium	1.381	J	0	U	0	
Cobalt	8.549		9.184	J	7	
Iron	998.2		1094		10	
Lead	0	U	0	U	0	
Magnesium	26540		27290		3	
Manganese	559.2		589.9		5	
Nickel	9.277		10.29	J	11	
Potassium	1231		1219		1	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0	U	0	U	0	
Vanadium	0.758	J	4.585	J	505	
Zinc	26.26		29.56		13	E
Sodium	179700		174200		3	

Report Generated By Teledyne Leeman QuickTrace

Analyst: ALSHS.NoUser

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\09012020AW.wszf

Creation Date: 9/1/2020 9:41:28 AM

Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
Calibration Blank					STD	09/01/20 10:58:36 am	0.000	-19	58.31	15.33	
	Replicates	-27.2	-6.8	-12.1	-28.6						
Standard #1 (0.2 ppb)					STD	09/01/20 11:00:17 am	0.200	864	2.03	-14.40	
	Replicates	873.7	844.9	854.4	883.4						
Standard #2 (0.5 ppb)					STD	09/01/20 11:01:59 am	0.500	2379	2.47	-22.28	
	Replicates	2304.2	2363.9	2405.7	2440.7						
Standard #3 (2.0 ppb)					STD	09/01/20 11:03:41 am	2.000	10021	1.45	-48.16	
	Replicates	9831.9	9982.5	10129.3	10141.0						
Standard #4 (5.0 ppb)					STD	09/01/20 11:05:23 am	5.000	25865	0.78	7.92	
	Replicates	25576.9	25877.3	25987.3	26020.1						
Standard #5 (10.0 ppb)					STD	09/01/20 11:07:06 am	10.000	51950	0.92	39.28	
	Replicates	51268.8	51967.0	52251.7	52314.2						

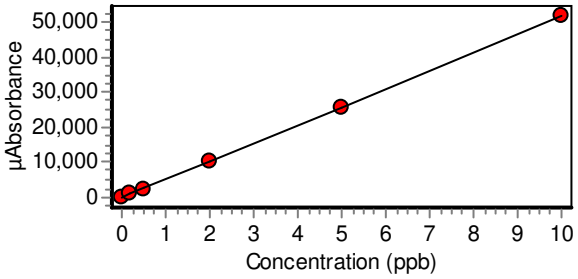
Calibration

Equation: Abs = 5184.494x + -98.132

R2: 0.99994

SEE: 180.7850

Flags:



ICCV					UNK	09/01/20 11:10:24 am	4.820	25004	1.49		
	Replicates	24552.2	24881.3	25165.8	25417.3						
ICV					UNK	09/01/20 11:14:18 am	4.880	25311	1.78		
	Replicates	24737.0	25203.5	25507.5	25794.3						
ICB					UNK	09/01/20 11:15:59 am	-0.004	-40	40.84		
	Replicates	-46.9	-48.3	-35.8	-30.0						
CRA					UNK	09/01/20 11:17:41 am	0.169	857	2.50		
	Replicates	833.4	844.8	879.3	872.3						
MBLK-156886					UNK	09/01/20 11:21:28 am	0.009	26	43.80		
	Replicates	9.8	52.9	13.7	26.9						
LCS-156886					UNK	09/01/20 11:25:43 am	5.210	27016	0.34		
	Replicates	26879.0	27045.4	27081.4	27058.4						
HS20081194-18					UNK	09/01/20 11:27:25 am	0.009	28	52.28		
	Replicates	17.6	5.4	28.1	62.6						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081194-18MS					UNK	09/01/20 11:29:07 am	5.330	27631	0.18		
	Replicates	27559.5	27652.7	27673.7	27639.2						
HS20081194-18MSD					UNK	09/01/20 11:33:08 am	5.170	26788	0.23		
	Replicates	26706.6	26820.8	26845.1	26779.6						
HS20081194-21					UNK	09/01/20 11:34:51 am	0.005	9	73.14		
	Replicates	0.4	-11.0	9.2	35.7						
CCV					UNK	09/01/20 11:39:11 am	5.100	26452	0.73		
	Replicates	26227.0	26380.3	26523.5	26677.0						
CCB					UNK	09/01/20 11:40:54 am	0.007	15	40.92		
	Replicates	26.6	21.4	-4.9	18.4						
HS20081194-22					UNK	09/01/20 11:42:37 am	0.009	27	65.42		
	Replicates	-9.7	60.9	18.9	39.2						
HS20081194-23					UNK	09/01/20 11:44:19 am	0.013	46	48.17		
	Replicates	30.2	49.4	17.2	89.2						
HS20081194-24					UNK	09/01/20 11:46:00 am	0.003	-2	156.70		
	Replicates	-1.8	-37.9	22.4	8.4						
HS20081194-25					UNK	09/01/20 11:47:41 am	0.007	19	62.95		
	Replicates	-14.9	35.7	20.4	35.4						
HS20081194-26					UNK	09/01/20 11:49:22 am	0.006	11	99.75		
	Replicates	41.1	15.4	-30.1	18.4						
HS20081194-27					UNK	09/01/20 11:51:04 am	0.010	35	39.66		
	Replicates	40.6	3.8	50.0	47.0						
HS20081194-28					UNK	09/01/20 11:52:45 am	0.015	58	36.75		s
	Replicates	32.8	44.8	98.1	58.3						
HS20081194-29					UNK	09/01/20 11:54:27 am	0.006	14	80.10		
	Replicates	38.9	-4.5	-12.5	32.8						
HS20081194-30					UNK	09/01/20 11:56:09 am	0.029	132	18.76		s
	Replicates	104.4	168.6	116.4	139.6						
HS20081194-31					UNK	09/01/20 11:57:51 am	0.009	27	16.57		
	Replicates	34.8	17.3	30.8	25.5						
CCV					UNK	09/01/20 12:01:56 pm	4.930	25527	1.24		
	Replicates	25139.9	25436.6	25646.1	25885.6						
CCB					UNK	09/01/20 12:03:39 pm	0.003	-4	126.63		
	Replicates	-23.4	-15.5	15.3	6.3						
HS20081194-32					UNK	09/01/20 12:05:21 pm	0.011	37	67.11		
	Replicates	2.3	58.8	79.0	9.0						
HS20081194-33					UNK	09/01/20 12:07:04 pm	0.018	76	22.94		s
	Replicates	90.3	92.2	76.7	45.2						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081194-34				UNK	09/01/20 12:08:46 pm	0.011	37	52.11		
Replicates	10.4	77.4	23.4	36.9						
HS20081194-35				UNK	09/01/20 12:10:29 pm	0.004	4	53.47		
Replicates	15.1	-12.6	3.4	11.1						
HS20081194-36				UNK	09/01/20 12:12:10 pm	0.010	31	25.29		
Replicates	48.4	21.2	22.7	30.9						
HS20081194-37				UNK	09/01/20 12:13:51 pm	0.008	24	75.68		
Replicates	-15.8	47.7	11.2	51.7						
MBLK-156893				UNK	09/01/20 12:20:46 pm	0.011	37	38.37		
Replicates	10.2	38.2	62.7	37.9						
LCS-156893				UNK	09/01/20 12:22:27 pm	5.160	26763	0.50		
Replicates	26562.6	26829.8	26808.8	26851.0						
HS20081222-02				UNK	09/01/20 12:24:09 pm	0.045	215	4.73		
Replicates	219.2	228.5	206.0	205.8						
HS20081222-03				UNK	09/01/20 12:25:50 pm	0.032	147	12.75		s
Replicates	131.4	146.7	176.7	132.4						
CCV				UNK	09/01/20 12:35:12 pm	5.120	26520	0.26		
Replicates	26420.3	26533.5	26547.5	26578.0						
CCB				UNK	09/01/20 12:36:55 pm	0.004	4	92.01		
Replicates	25.9	-24.2	10.6	4.1						
HS20081222-04				UNK	09/01/20 12:38:37 pm	0.029	129	20.80		s
Replicates	88.8	131.6	133.4	163.6						
HS20081222-05				UNK	09/01/20 12:40:19 pm	0.093	466	2.59		
Replicates	452.5	479.5	459.0	473.7						
HS20081222-10				UNK	09/01/20 12:42:01 pm	0.062	301	5.77		s
Replicates	298.4	318.3	309.8	275.8						
HS20081236-01				UNK	09/01/20 12:43:44 pm	0.013	48	32.95		
Replicates	67.3	29.8	67.8	28.8						
HS20081236-01MS				UNK	09/01/20 12:45:26 pm	5.170	26782	0.70		
Replicates	26525.4	26753.9	26921.9	26925.4						
HS20081236-01MSD				UNK	09/01/20 12:47:09 pm	5.140	26627	0.84		
Replicates	26313.3	26624.2	26765.2	26803.5						
CCV				UNK	09/01/20 12:55:26 pm	5.080	26350	0.81		
Replicates	26059.0	26323.6	26475.8	26541.6						
CCB				UNK	09/01/20 12:57:09 pm	0.009	26	79.37		
Replicates	-9.0	43.0	67.5	2.8						
MBLK-156892				UNK	09/01/20 12:58:50 pm	0.009	27	37.31		
Replicates	43.0	39.2	6.2	20.5						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
LCS-156892					UNK	09/01/20 01:00:32 pm	5.260	27252	0.63		
	Replicates	27023.1	27236.5	27323.8	27425.8						
HS20081298-01					UNK	09/01/20 01:02:13 pm	0.018	74	12.30		s
	Replicates	84.3	81.3	59.8	68.8						
HS20081298-01MS					UNK	09/01/20 01:03:54 pm	5.050	26166	0.50		
	Replicates	25998.6	26131.7	26245.0	26290.7						
HS20081298-01MSD					UNK	09/01/20 01:05:36 pm	5.090	26403	0.87		
	Replicates	26107.4	26340.7	26538.2	26624.7						
CCV					UNK	09/01/20 01:08:48 pm	4.910	25436	0.78		
	Replicates	25197.1	25376.8	25498.3	25670.8						
CCB					UNK	09/01/20 01:10:31 pm	0.004	2	108.52		
	Replicates	35.5	-7.0	-5.5	-14.5						
MBLK-156890					UNK	09/01/20 01:12:13 pm	0.007	17	88.20		
	Replicates	-12.3	11.8	6.3	60.5						
LCS-156890					UNK	09/01/20 01:13:55 pm	5.110	26470	0.99		
	Replicates	26121.2	26423.3	26617.3	26718.3						
HS20081150-01					UNK	09/01/20 01:15:37 pm	0.017	68	15.91		s
	Replicates	83.5	70.2	69.2	49.9						
HS20081150-01MS					UNK	09/01/20 01:17:19 pm	5.040	26098	1.25		
	Replicates	25662.1	26050.2	26264.2	26414.7						
HS20081150-01MSD					UNK	09/01/20 01:19:01 pm	5.010	25975	1.43		
	Replicates	25484.8	25907.3	26159.6	26346.8						
HS20081151-01					UNK	09/01/20 01:20:44 pm	0.007	17	64.74		
	Replicates	38.8	-14.1	27.4	13.9						
CCV					UNK	09/01/20 01:22:27 pm	4.960	25705	0.82		
	Replicates	25416.4	25691.0	25814.0	25897.2						
CCB					UNK	09/01/20 01:24:10 pm	0.006	12	72.09		
	Replicates	32.3	16.6	16.4	-19.1						
CCV					UNK	09/01/20 02:12:41 pm	4.950	25676	0.83		
	Replicates	25417.2	25621.7	25744.2	25922.9						
CCB					UNK	09/01/20 02:14:24 pm	0.005	8	101.85		
	Replicates	-10.9	-6.4	0.6	47.1						
MBLK-156908					UNK	09/01/20 02:16:06 pm	-0.002	-30	202.56		
	Replicates	-57.3	-15.7	-39.7	-7.2						
LCS-156908					UNK	09/01/20 02:17:48 pm	4.760	24664	1.72		
	Replicates	24115.2	24570.9	24872.7	25095.9						
HS20081197-04					UNK	09/01/20 02:19:29 pm	-0.001	-22	290.16		
	Replicates	-32.4	-15.6	-28.9	-11.6						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081197-04MS					UNK	09/01/20 02:25:55 pm	4.450	23047	1.66		
	Replicates	22544.1	22978.7	23234.9	23429.2						
HS20081197-04MSD					UNK	09/01/20 02:27:36 pm	4.540	23552	0.68		
	Replicates	23385.1	23476.4	23587.6	23757.1						
HS20081194-38					UNK	09/01/20 02:29:18 pm	0.000	-16	191.14		
	Replicates	-52.1	4.7	-29.5	12.5						
HS20081197-01					UNK	09/01/20 02:31:00 pm	0.009	27	51.09		
	Replicates	55.0	8.0	35.8	7.5						
HS20081197-02					UNK	09/01/20 02:32:41 pm	0.008	23	67.04		
	Replicates	18.9	-6.8	61.0	19.5						
HS20081197-03					UNK	09/01/20 02:34:23 pm	0.003	-6	220.81		
	Replicates	1.3	12.5	12.0	-48.2						
HS20081197-05					UNK	09/01/20 02:36:05 pm	-0.001	-23	753.94		
	Replicates	-37.3	-47.6	-34.9	27.1						
CCV					UNK	09/01/20 02:41:35 pm	4.830	25021	0.56		
	Replicates	24837.5	25003.6	25074.9	25168.6						
CCB					UNK	09/01/20 02:43:18 pm	0.007	15	32.13		
	Replicates	30.5	15.8	9.0	6.0						
HS20081197-06					UNK	09/01/20 02:45:00 pm	0.009	28	67.08		
	Replicates	32.8	31.0	-13.5	63.0						
HS20081197-07					UNK	09/01/20 02:46:42 pm	0.009	27	36.61		
	Replicates	30.6	49.9	12.9	16.2						
HS20081243-01					UNK	09/01/20 02:48:25 pm	-0.005	-46	50.32		
	Replicates	-45.4	-48.2	-61.9	-28.4						
HS20081243-02					UNK	09/01/20 02:50:07 pm	-0.007	-57	82.21		
	Replicates	-67.6	-10.0	-75.0	-76.3						
HS20081248-01					UNK	09/01/20 02:51:48 pm	0.231	1181	2.18		
	Replicates	1184.6	1204.0	1192.3	1143.8						
HS20081248-02					UNK	09/01/20 02:53:30 pm	0.055	264	14.67		s
	Replicates	256.5	218.2	264.0	319.0						
MBLK-156920					UNK	09/01/20 02:58:26 pm	0.006	10	55.33		
	Replicates	12.4	18.8	22.6	-12.9						
MBLKT1-156920					UNK	09/01/20 03:00:08 pm	0.008	25	53.00		
	Replicates	36.2	-7.4	46.3	26.3						
MBLKT2-156920					UNK	09/01/20 03:01:50 pm	0.009	29	60.33		
	Replicates	37.9	5.1	65.4	6.9						
MBLKT3-156920					UNK	09/01/20 03:03:32 pm	0.005	7	111.27		
	Replicates	31.0	21.0	10.5	-34.0						

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
CCV	UNK	09/01/20 03:06:36 pm	4.950	25654	1.22		
Replicates	25220.9	25644.4	25813.7	25935.9			
CCB	UNK	09/01/20 03:08:19 pm	0.007	16	60.08		
Replicates	17.1	18.3	-10.9	40.1			
MBLKT4-156920	UNK	09/01/20 03:10:01 pm	0.001	-11	530.22		
Replicates	-17.1	-3.8	34.9	-59.3			
LCS-156920	UNK	09/01/20 03:15:09 pm	4.720	24449	2.18		
Replicates	23667.9	24611.8	24877.6	24637.3			
HS20081159-01	UNK	09/01/20 03:16:51 pm	0.020	86	27.09		s
Replicates	108.9	104.5	85.3	46.5			
HS20081159-01MS	UNK	09/01/20 03:18:34 pm	5.370	27837	0.14		
Replicates	27781.7	27865.2	27854.2	27848.5			
HS20081159-01MSD	UNK	09/01/20 03:20:16 pm	5.310	27510	0.08		
Replicates	27523.4	27523.2	27513.2	27479.2			
HS20081087-01	UNK	09/01/20 03:23:39 pm	0.051	248	6.06		s
Replicates	248.3	224.7	261.0	256.5			
HS20081087-02	UNK	09/01/20 03:25:21 pm	0.048	228	18.41		s
Replicates	178.2	270.4	201.2	262.4			
HS20081087-03	UNK	09/01/20 03:27:03 pm	0.008	24	57.76		
Replicates	-0.6	28.9	11.9	56.7			
HS20081185-01	UNK	09/01/20 03:28:45 pm	0.022	95	22.85		s
Replicates	116.7	110.8	59.1	92.6			
HS20081188-01	UNK	09/01/20 03:30:26 pm	0.005	6	72.63		
Replicates	-15.5	-0.3	12.5	25.8			
CCV	UNK	09/01/20 03:33:17 pm	4.660	24148	1.22		
Replicates	23717.6	24201.9	24307.4	24367.1			
CCB	UNK	09/01/20 03:35:00 pm	0.004	3	130.07		
Replicates	-10.7	38.8	-26.9	11.8			
HS20081269-01	UNK	09/01/20 03:36:42 pm	0.013	48	25.75		
Replicates	25.7	67.6	50.1	48.6			
HS20081273-01	UNK	09/01/20 03:43:10 pm	-0.006	-50	102.15		
Replicates	-4.1	-71.2	-72.0	-52.0			
HS20081279-01	UNK	09/01/20 03:44:52 pm	-0.005	-45	66.78		
Replicates	-35.3	-64.3	-52.8	-25.8			
HS20081280-01	UNK	09/01/20 03:46:34 pm	-0.009	-64	47.78		
Replicates	-52.3	-88.2	-40.4	-76.2			
HS20081248-01 RR	UNK	09/01/20 03:49:33 pm	0.226	1156	1.70		
Replicates	1143.9	1136.4	1180.9	1162.4			

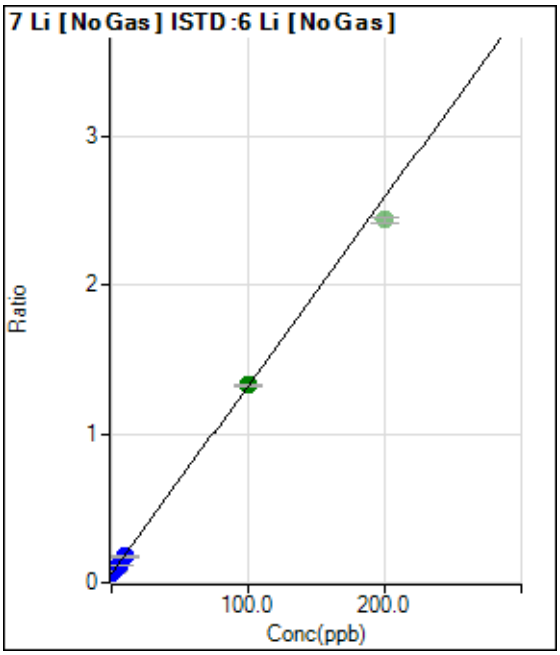
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CCV				UNK	09/01/20 03:51:16 pm	4.860	25179	0.40		
	Replicates	25034.8	25190.1	25221.1	25269.3					
CCB				UNK	09/01/20 03:52:59 pm	0.005	7	18.76		
	Replicates	2.0	5.7	5.5	13.2					

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\090220A.b\
Analysis File: 090220A.batch.bin
DA Date-Time: 9/2/2020 9:38:11 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	9/2/2020 10:34:39 AM
2	012CALS.d	2/10/200	9/2/2020 10:36:32 AM
3	013CALS.d	5/25/500	9/2/2020 10:38:24 AM
4	014CALS.d	10/50/100	9/2/2020 10:40:16 AM
5	015CALS.d	100/500/10K	9/2/2020 10:42:08 AM
6	016CALS.d	200/1000/20K	9/2/2020 10:43:53 AM

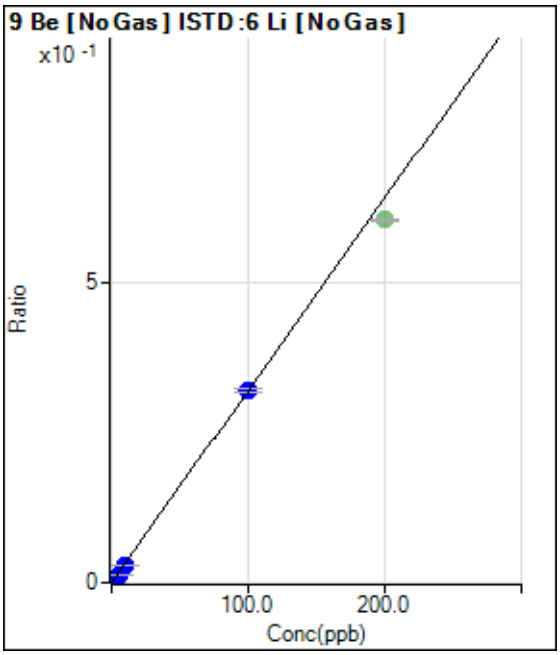
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108009.07	0.0600	P	4.4
2	☐	2.000	1.842	150042.59	0.0833	P	1.4
3	☐	5.000	4.483	210883.45	0.1166	P	2.4
4	☐	10.000	9.105	310345.65	0.1749	P	1.4
5	☐	100.000	100.118	2293137.73	1.3232	A	1.6
6	☑	200.000		4210768.58	2.4349	A	1.6

y = 0.0126 * x + 0.0600
R = 1.0000
DL = 0.6316
BEC = 4.756

Weight: <None>
Min Conc: <None>

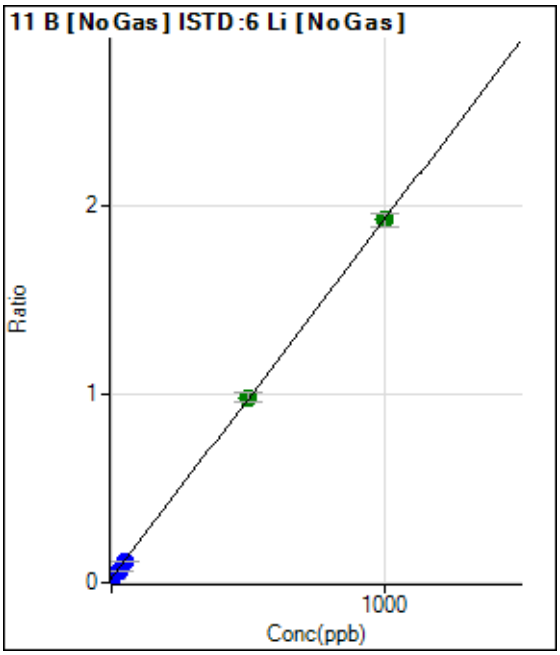


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.6
2	☐	2.000	1.815	10514.05	0.0058	P	1.1
3	☐	5.000	4.308	25014.05	0.0138	P	3.6
4	☐	10.000	8.716	49617.29	0.0280	P	3.6
5	☐	100.000	100.167	556814.36	0.3214	P	2.7
6	☑	200.000		1047985.76	0.6059	A	0.9

y = 0.0032 * x + 9.2788E-006
R = 0.9999
DL = 0.001698
BEC = 0.002892

Weight: <None>
Min Conc: <None>

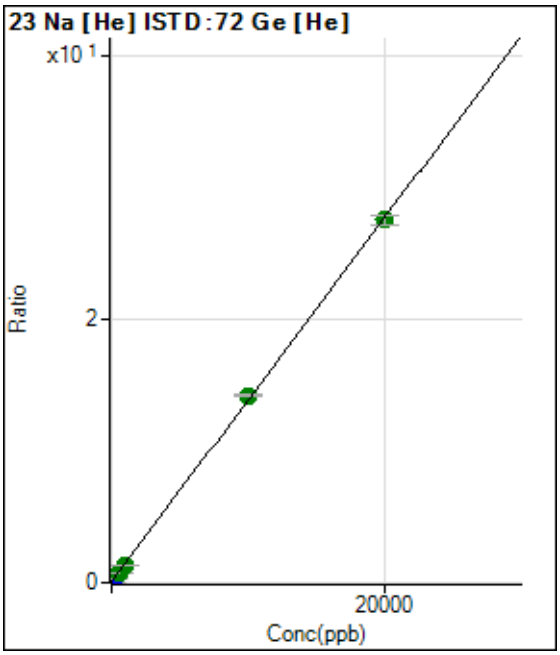
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42928.97	0.0238	P	5.3
2	☐	10.000	8.822	73262.13	0.0407	P	2.5
3	☐	25.000	21.406	116966.00	0.0647	P	1.6
4	☐	50.000	44.617	193192.91	0.1089	P	2.6
5	☐	500.000	502.928	1701436.69	0.9825	A	5.1
6	☐	1000.000	998.907	3332839.22	1.9278	A	3.8

y = 0.0019 * x + 0.0238
R = 1.0000
DL = 1.978
BEC = 12.51

Weight: <None>
Min Conc: <None>

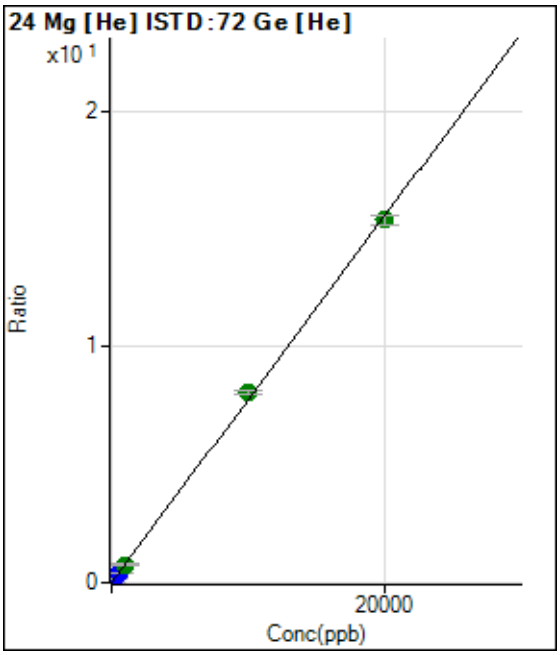


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80780.94	0.0678	P	1.6
2	☐	200.000	194.923	404342.23	0.3372	P	1.5
3	☐	500.000	495.110	873430.90	0.7520	A	2.1
4	☐	1000.000	945.353	1625669.25	1.3743	A	1.3
5	☐	10000.00	10227.20	16867532.66	14.2018	A	1.1
6	☐	20000.00	19889.30	32378185.35	27.5549	A	2.5

y = 0.0014 * x + 0.0678
R = 0.9999
DL = 2.35
BEC = 49.05

Weight: <None>
Min Conc: <None>

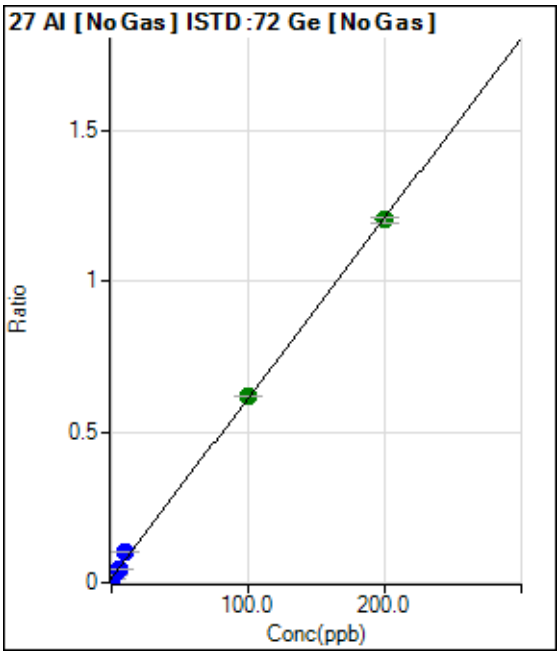
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	15.7
2	☐	200.000	200.089	186908.06	0.1559	P	1.2
3	☐	500.000	505.929	456919.80	0.3934	P	1.2
4	☐	1000.000	975.712	896635.40	0.7583	A	5.0
5	☐	10000.00	10396.23	9590907.77	8.0755	A	1.2
6	☐	20000.00	19802.94	18074599.31	15.3819	A	2.4

y = 7.7673E-004 * x + 4.4215E-004
R = 0.9997
DL = 0.2683
BEC = 0.5693

Weight: <None>
Min Conc: <None>

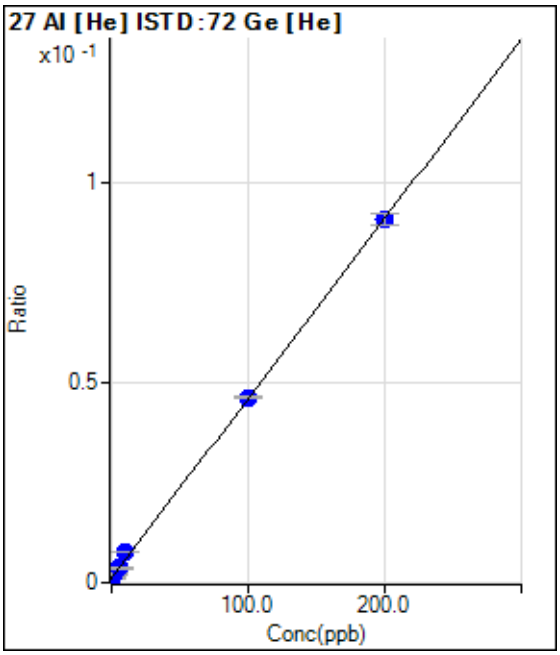


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55193.02	0.0154	P	0.8
2	☐	2.000	2.177	101933.42	0.0284	P	4.5
3	☐	5.000	4.991	162321.35	0.0452	P	3.5
4	☐	10.000	14.430	363860.98	0.1015	P	0.8
5	☐	100.000	101.470	2204238.92	0.6213	A	0.3
6	☐	200.000	199.042	4200675.25	1.2039	A	1.8

y = 0.0060 * x + 0.0154
R = 0.9998
DL = 0.06102
BEC = 2.574

Weight: <None>
Min Conc: <None>

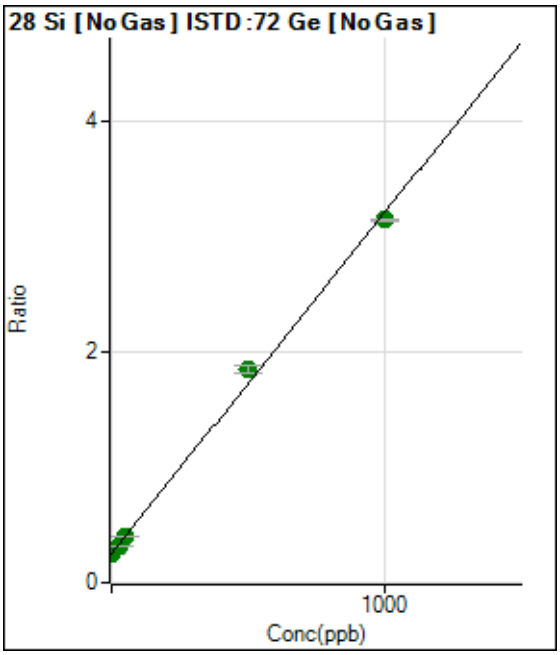
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.77	0.0012	P	11.2
2	☐	2.000	2.154	2543.62	0.0021	P	4.2
3	☐	5.000	5.507	4210.71	0.0036	P	4.7
4	☐	10.000	14.520	9073.08	0.0077	P	5.1
5	☐	100.000	100.586	54975.86	0.0463	P	1.3
6	☐	200.000	199.467	106534.61	0.0907	P	3.1

y = 4.4875E-004 * x + 0.0012
R = 0.9998
DL = 0.8645
BEC = 2.574

Weight: <None>
Min Conc: <None>

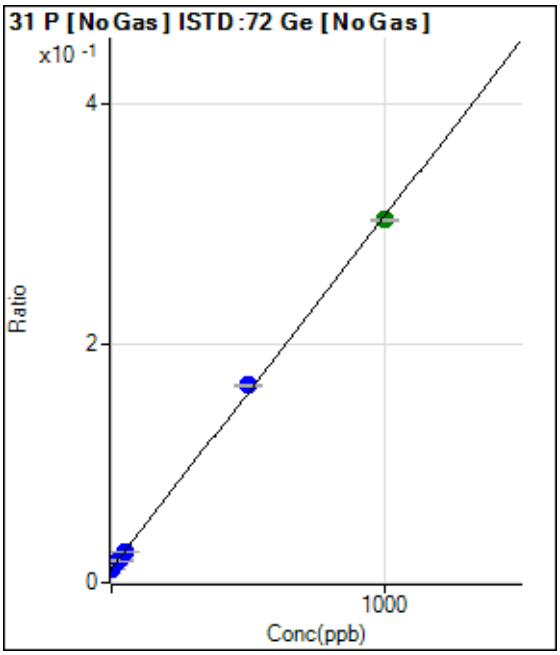


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	907317.07	0.2526	A	0.4
2	☐	10.000	10.293	1017472.07	0.2831	A	2.6
3	☐	25.000	22.790	1150233.08	0.3200	A	2.6
4	☐	50.000	48.327	1417718.10	0.3956	A	0.2
5	☐	500.000	542.160	6585647.19	1.8566	A	3.4
6	☐	1000.000	979.056	10989109.84	3.1492	A	0.8

y = 0.0030 * x + 0.2526
R = 0.9987
DL = 1.006
BEC = 85.38

Weight: <None>
Min Conc: <None>

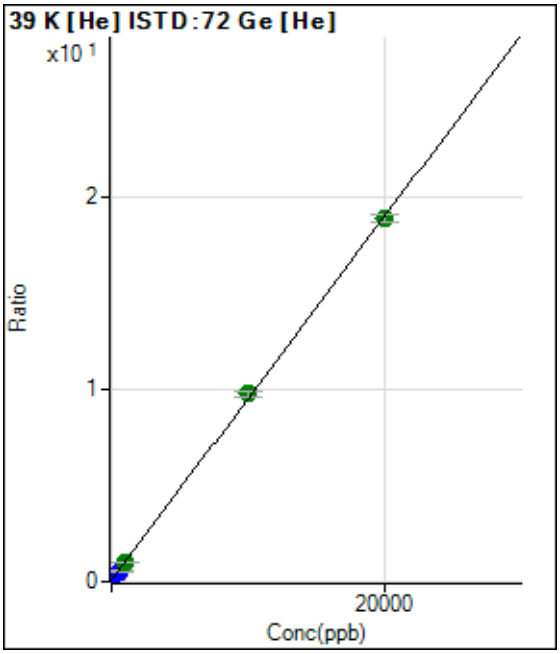
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42187.72	0.0117	P	3.2
2	☐	10.000	9.497	52275.29	0.0145	P	4.0
3	☐	25.000	23.034	66616.44	0.0185	P	2.2
4	☐	50.000	46.671	91379.39	0.0255	P	0.6
5	☐	500.000	520.743	586016.78	0.1652	P	1.5
6	☐	1000.000	989.849	1058710.01	0.3034	A	0.9

y = 2.9466E-004 * x + 0.0117
R = 0.9997
DL = 3.799
BEC = 39.87

Weight: <None>
Min Conc: <None>

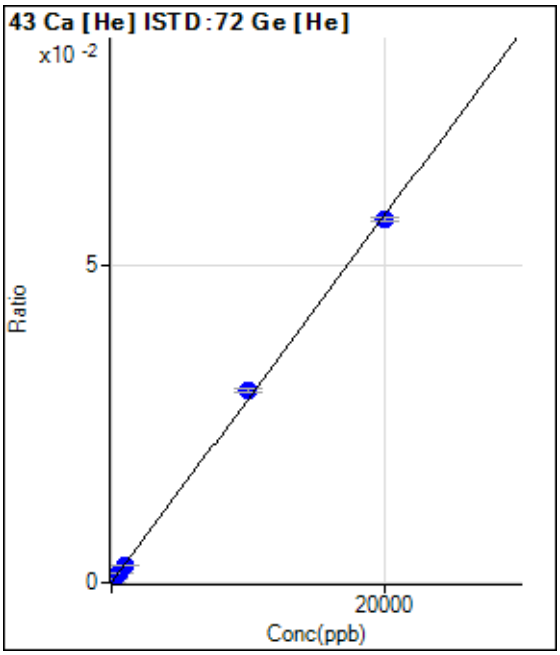


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93559.19	0.0785	P	0.5
2	☐	200.000	195.807	316026.33	0.2635	P	1.6
3	☐	500.000	495.786	635206.18	0.5470	P	2.2
4	☐	1000.000	951.057	1155699.57	0.9772	A	2.9
5	☐	10000.00	10264.10	11610195.24	9.7770	A	3.0
6	☐	20000.00	19870.54	22155299.67	18.8540	A	2.1

y = 9.4489E-004 * x + 0.0785
R = 0.9999
DL = 1.313
BEC = 83.1

Weight: <None>
Min Conc: <None>

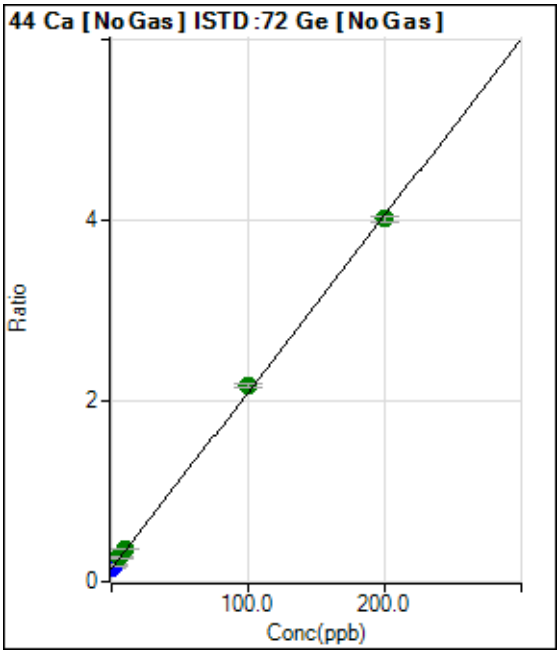
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	11.7
2	☐	200.000	204.122	753.37	0.0006	P	9.6
3	☐	500.000	486.024	1673.47	0.0014	P	10.0
4	☐	1000.000	954.163	3300.46	0.0028	P	5.0
5	☐	10000.00	10488.59	35960.99	0.0303	P	2.2
6	☐	20000.00	19758.30	67003.26	0.0570	P	1.0

y = 2.8835E-006 * x + 3.9141E-005
R = 0.9996
DL = 4.76
BEC = 13.57

Weight: <None>
Min Conc: <None>

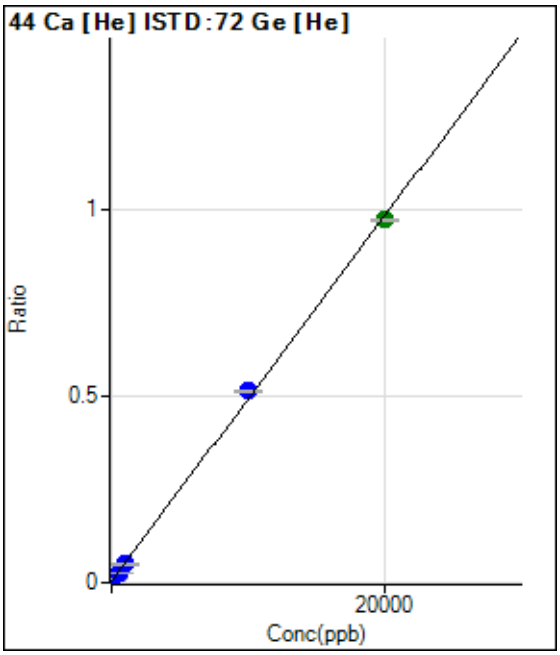


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513846.13	0.1431	P	1.1
2	☐	2.000	1.894	647441.00	0.1801	P	1.9
3	☐	5.000	6.470	968567.56	0.2695	A	3.8
4	☐	10.000	10.902	1276412.51	0.3562	A	0.4
5	☐	100.000	103.629	7693820.09	2.1687	A	1.3
6	☐	200.000	198.105	14010336.46	4.0154	A	1.6

y = 0.0195 * x + 0.1431
R = 0.9998
DL = 0.2452
BEC = 7.319

Weight: <None>
Min Conc: <None>

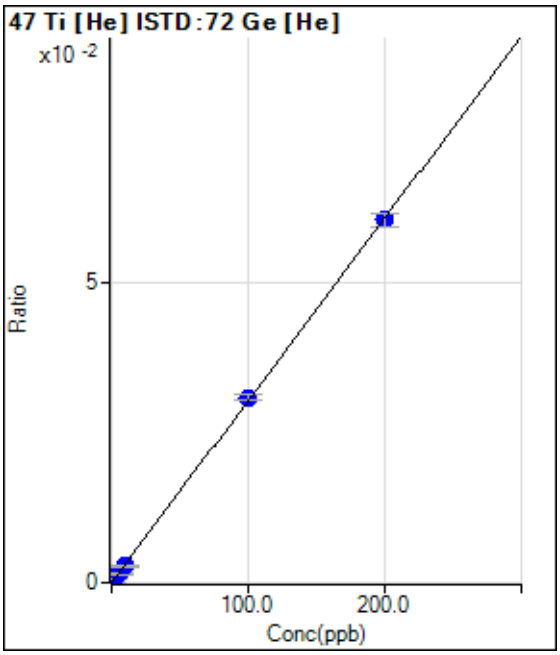
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4700.89	0.0039	P	3.8
2	☐	200.000	186.506	15662.56	0.0131	P	3.1
3	☐	500.000	475.218	31559.78	0.0272	P	2.7
4	☐	1000.000	924.253	58113.30	0.0491	P	1.9
5	☐	10000.00	10410.21	608957.09	0.5128	P	1.8
6	☐	20000.00	19799.43	1142335.37	0.9718	A	0.7

y = 4.8881E-005 * x + 0.0039
R = 0.9997
DL = 9.142
BEC = 80.71

Weight: <None>
Min Conc: <None>

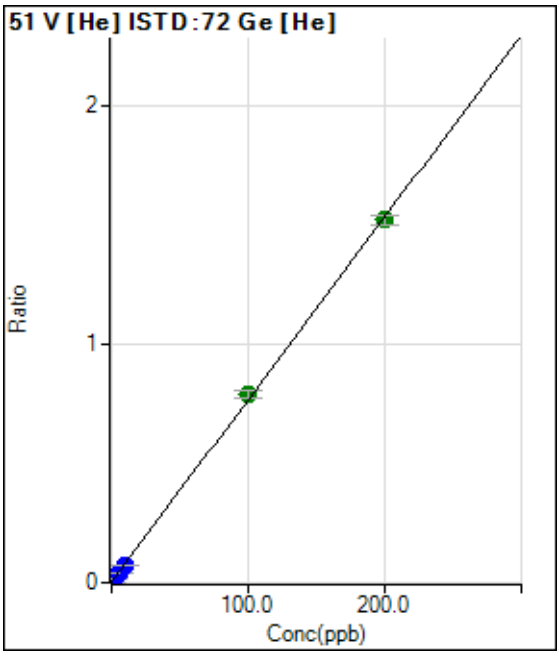


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.4
2	☐	2.000	1.695	630.03	0.0005	P	14.6
3	☐	5.000	4.843	1720.14	0.0015	P	6.5
4	☐	10.000	8.980	3237.11	0.0027	P	3.6
5	☐	100.000	101.543	36615.85	0.0308	P	3.1
6	☐	200.000	199.287	71091.34	0.0605	P	3.5

y = 3.0358E-004 * x + 1.1192E-005
R = 0.9999
DL = 0.04797
BEC = 0.03687

Weight: <None>
Min Conc: <None>

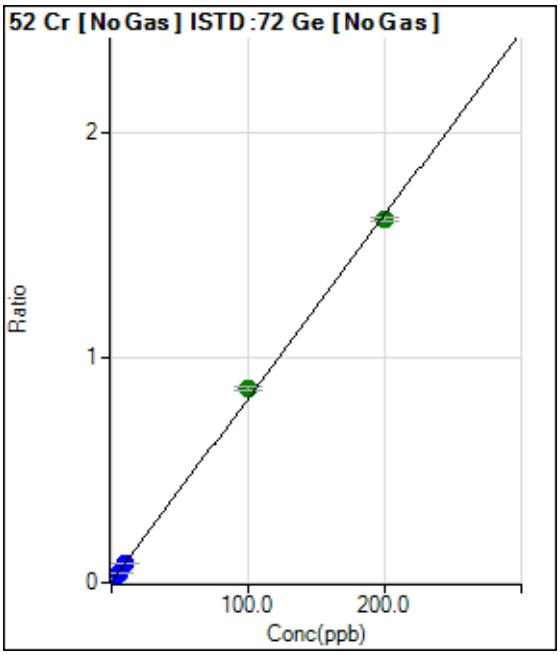
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3679.40	0.0031	P	2.7
2	☐	2.000	1.850	20644.53	0.0172	P	2.8
3	☐	5.000	4.702	45290.34	0.0390	P	1.9
4	☐	10.000	9.130	86140.58	0.0728	P	1.1
5	☐	100.000	102.908	936802.63	0.7890	A	3.5
6	☐	200.000	198.599	1785920.48	1.5199	A	2.6

y = 0.0076 * x + 0.0031
R = 0.9998
DL = 0.03322
BEC = 0.4043

Weight: <None>
Min Conc: <None>

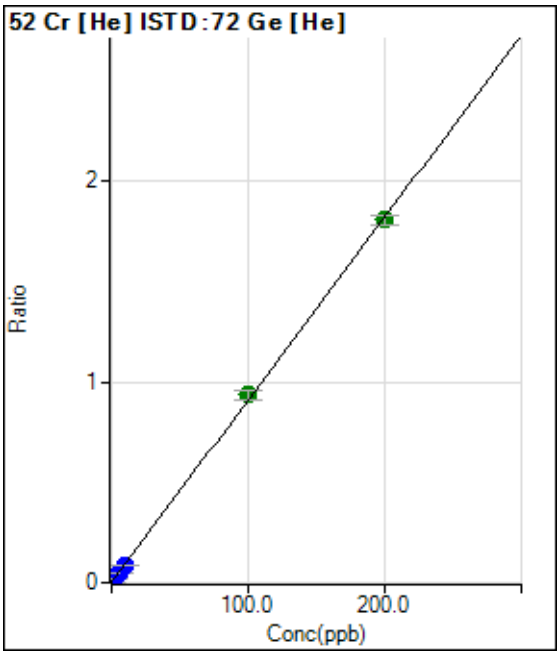


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16043.12	0.0045	P	3.5
2	☐	2.000	1.997	74422.98	0.0207	P	3.0
3	☐	5.000	4.812	156704.50	0.0436	P	2.3
4	☐	10.000	9.636	296842.20	0.0828	P	2.0
5	☐	100.000	105.337	3054745.27	0.8611	A	2.8
6	☐	200.000	197.354	5616165.96	1.6095	A	1.0

y = 0.0081 * x + 0.0045
R = 0.9995
DL = 0.05827
BEC = 0.5493

Weight: <None>
Min Conc: <None>

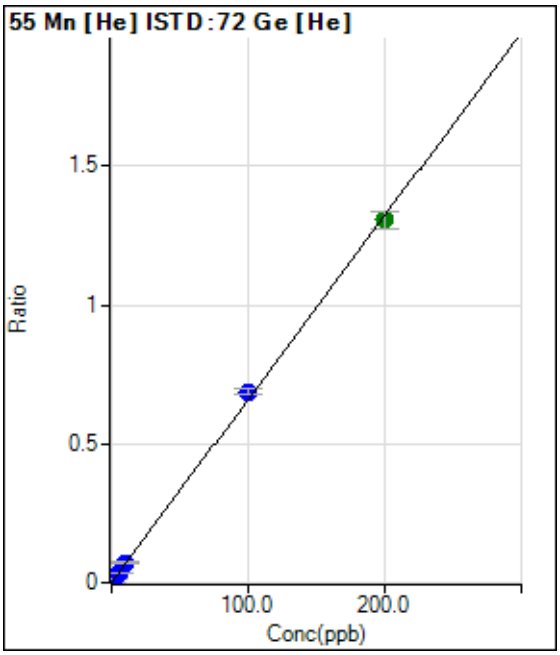
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2286.90	0.0019	P	7.8
2	☐	2.000	1.941	23443.77	0.0195	P	0.7
3	☐	5.000	4.864	53541.80	0.0461	P	1.7
4	☐	10.000	9.621	105636.97	0.0893	P	1.9
5	☐	100.000	102.613	1108771.73	0.9340	A	4.3
6	☐	200.000	198.716	2123073.09	1.8069	A	2.7

y = 0.0091 * x + 0.0019
R = 0.9999
DL = 0.04948
BEC = 0.2113

Weight: <None>
Min Conc: <None>

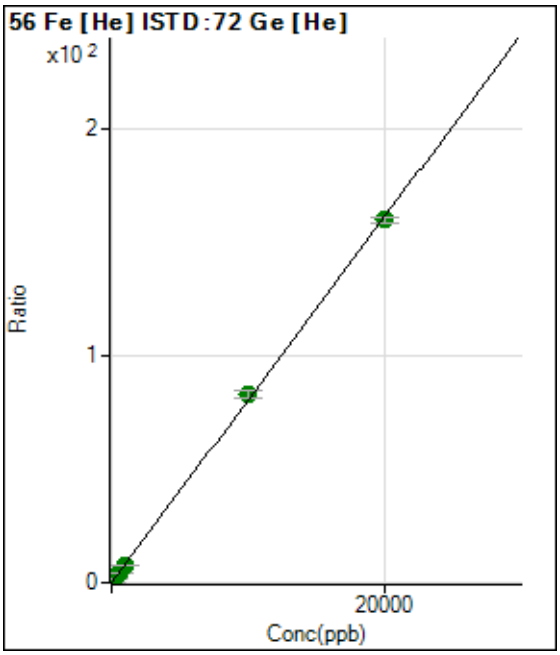


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0004	P	7.2
2	☐	2.000	1.905	15615.89	0.0130	P	5.2
3	☐	5.000	4.865	37802.81	0.0326	P	4.1
4	☐	10.000	10.902	85644.62	0.0724	P	2.3
5	☐	100.000	104.048	816044.78	0.6873	P	2.7
6	☐	200.000	197.935	1535362.69	1.3070	A	4.5

y = 0.0066 * x + 4.4473E-004
R = 0.9997
DL = 0.0146
BEC = 0.06737

Weight: <None>
Min Conc: <None>

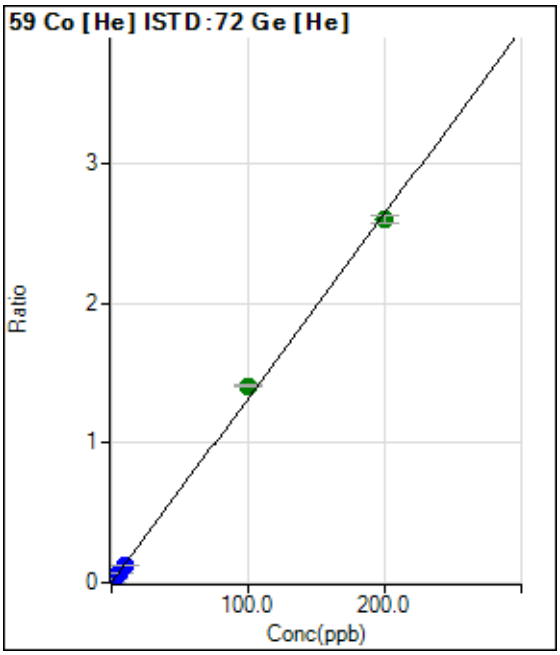
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10347.41	0.0087	P	1.0
2	☐	200.000	195.725	1899902.84	1.5841	A	0.7
3	☐	500.000	494.490	4631792.85	3.9888	A	2.9
4	☐	1000.000	938.903	8949056.95	7.5659	A	2.1
5	☐	10000.00	10325.29	98684135.20	83.1168	A	3.6
6	☐	20000.00	19840.59	187675623.8	159.705	A	1.8

y = 0.0080 * x + 0.0087
R = 0.9998
DL = 0.03159
BEC = 1.079

Weight: <None>
Min Conc: <None>

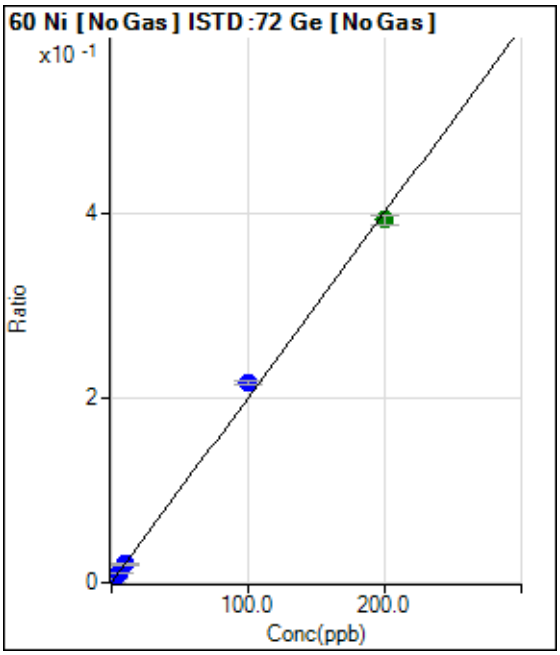


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0002	P	14.8
2	☐	2.000	1.977	31476.70	0.0262	P	2.7
3	☐	5.000	4.961	76199.45	0.0656	P	2.4
4	☐	10.000	9.522	148805.44	0.1258	P	1.4
5	☐	100.000	106.623	1671076.90	1.4070	A	1.3
6	☐	200.000	196.714	3050253.49	2.5957	A	2.0

y = 0.0132 * x + 1.5959E-004
R = 0.9992
DL = 0.005369
BEC = 0.01209

Weight: <None>
Min Conc: <None>

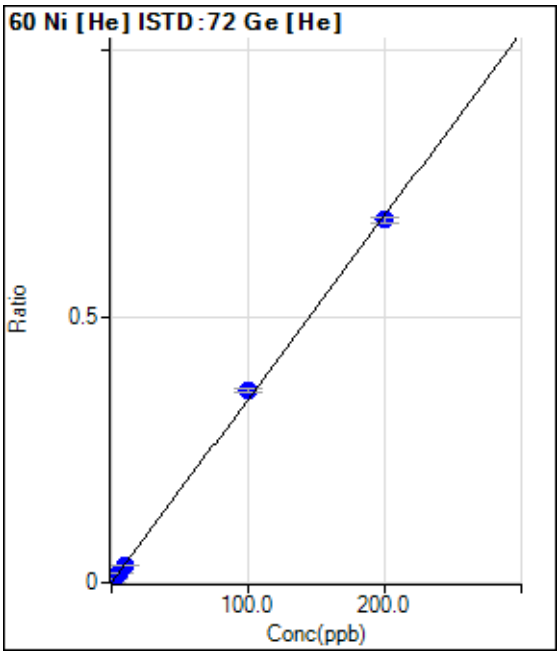
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.02	0.0001	P	9.5
2	☐	2.000	2.000	14871.71	0.0041	P	6.9
3	☐	5.000	4.984	36425.76	0.0101	P	2.4
4	☐	10.000	9.857	71394.62	0.0199	P	2.2
5	☐	100.000	107.982	770019.31	0.2170	P	2.0
6	☐	200.000	196.016	1374360.60	0.3939	A	2.7

y = 0.0020 * x + 1.2254E-004
R = 0.9989
DL = 0.0173
BEC = 0.061

Weight: <None>
Min Conc: <None>

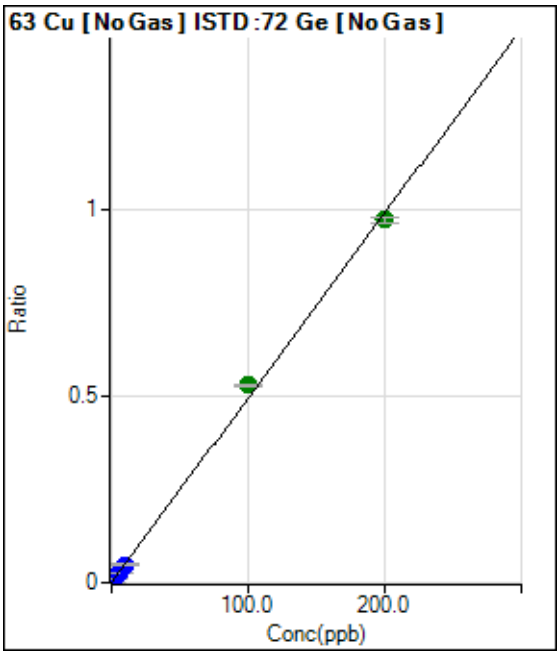


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0002	P	10.4
2	☐	2.000	1.909	8112.56	0.0068	P	3.2
3	☐	5.000	4.874	19734.66	0.0170	P	4.5
4	☐	10.000	9.431	38695.35	0.0327	P	1.7
5	☐	100.000	104.604	428734.17	0.3610	P	2.6
6	☐	200.000	197.731	801857.49	0.6823	P	1.7

y = 0.0034 * x + 1.7913E-004
R = 0.9996
DL = 0.01622
BEC = 0.05192

Weight: <None>
Min Conc: <None>

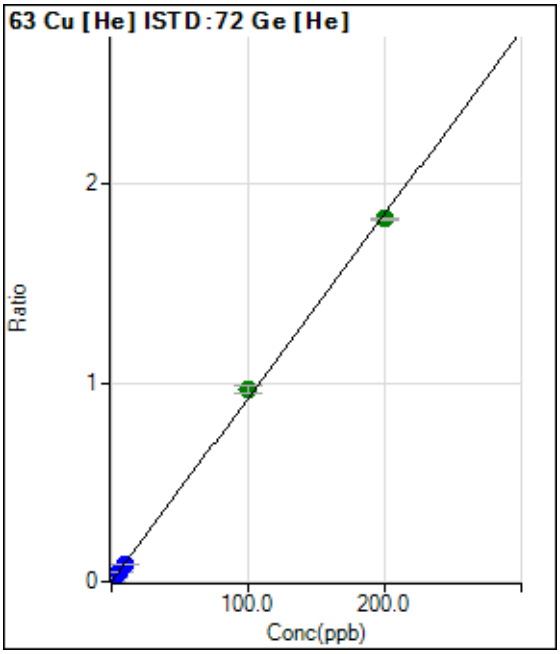
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.08	0.0003	P	2.7
2	☐	2.000	2.029	37325.02	0.0104	P	0.9
3	☐	5.000	4.933	89018.20	0.0248	P	2.4
4	☐	10.000	9.828	175667.47	0.0490	P	1.4
5	☐	100.000	107.047	1882747.78	0.5307	A	0.8
6	☐	200.000	196.486	3397954.53	0.9738	A	1.3

y = 0.0050 * x + 3.2576E-004
R = 0.9991
DL = 0.005329
BEC = 0.06575

Weight: <None>
Min Conc: <None>

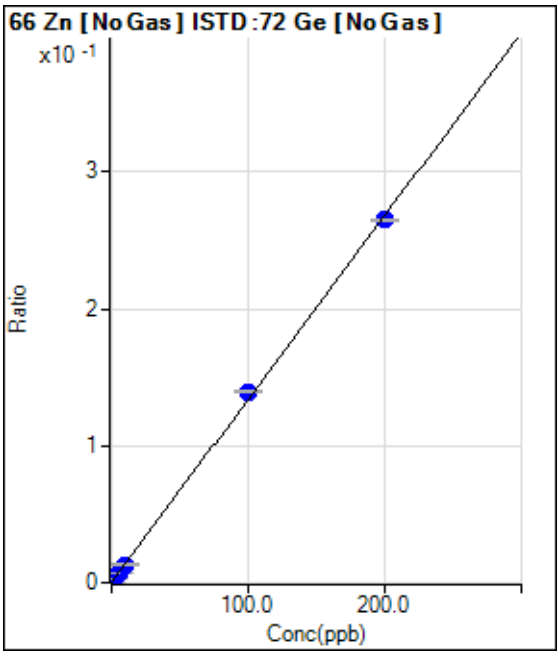


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.37	0.0006	P	18.1
2	☐	2.000	1.926	22061.71	0.0184	P	2.2
3	☐	5.000	4.861	52859.85	0.0455	P	2.0
4	☐	10.000	9.385	103262.08	0.0873	P	2.2
5	☐	100.000	104.924	1151693.99	0.9700	A	3.6
6	☐	200.000	197.573	2146156.22	1.8260	A	0.7

y = 0.0092 * x + 5.9830E-004
R = 0.9996
DL = 0.03515
BEC = 0.06476

Weight: <None>
Min Conc: <None>

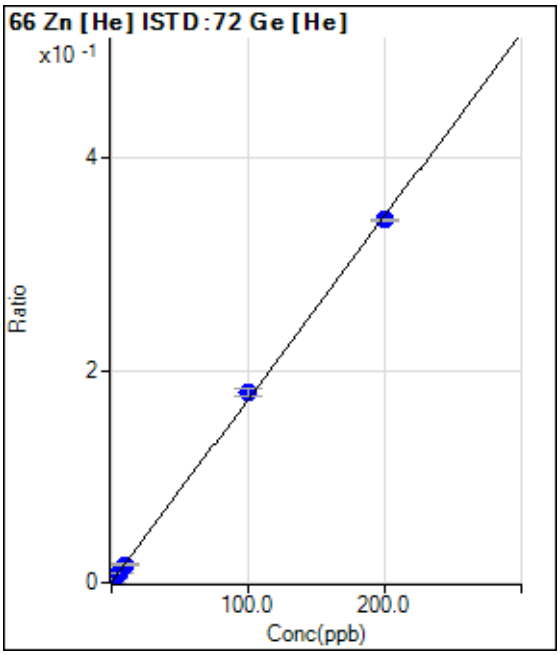
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0002	P	4.6
2	☐	2.000	1.989	10240.69	0.0028	P	1.8
3	☐	5.000	4.744	23484.09	0.0065	P	1.8
4	☐	10.000	9.802	47654.10	0.0133	P	1.5
5	☐	100.000	104.262	495383.08	0.1396	P	1.4
6	☐	200.000	197.886	924160.12	0.2649	P	0.6

y = 0.0013 * x + 1.8748E-004
R = 0.9997
DL = 0.0192
BEC = 0.1402

Weight: <None>
Min Conc: <None>

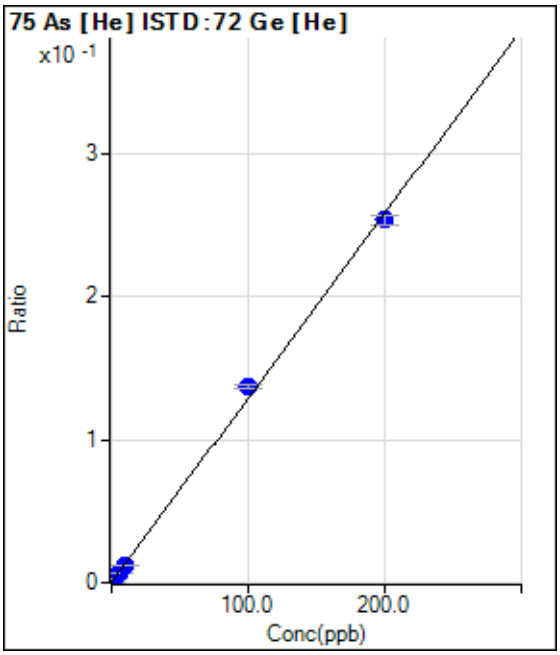


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	21.4
2	☐	2.000	1.972	4397.46	0.0037	P	5.1
3	☐	5.000	4.817	9953.83	0.0086	P	4.2
4	☐	10.000	9.809	20328.96	0.0172	P	3.3
5	☐	100.000	104.039	213429.28	0.1798	P	3.5
6	☐	200.000	197.995	401796.06	0.3419	P	0.7

y = 0.0017 * x + 2.6302E-004
R = 0.9997
DL = 0.09776
BEC = 0.1525

Weight: <None>
Min Conc: <None>

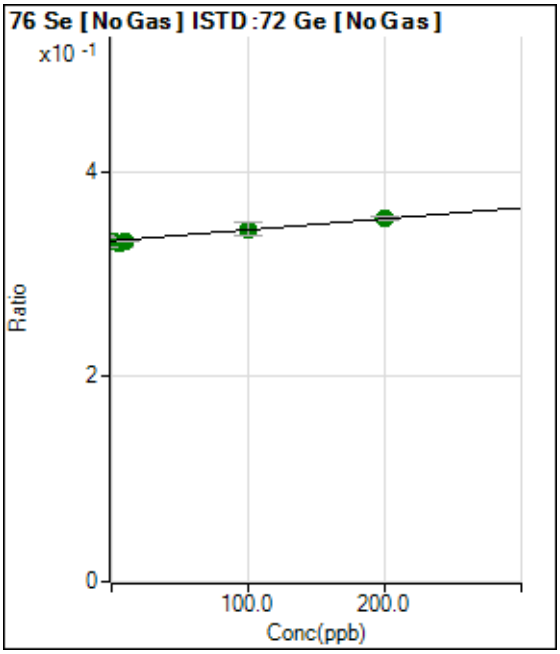
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.67	0.0002	P	10.4
2	☐	2.000	1.816	3042.59	0.0025	P	4.4
3	☐	5.000	4.784	7385.38	0.0064	P	1.7
4	☐	10.000	9.266	14348.77	0.0121	P	1.3
5	☐	100.000	106.660	163329.11	0.1375	P	2.0
6	☐	200.000	196.714	297884.41	0.2535	P	2.5

y = 0.0013 * x + 1.9852E-004
R = 0.9992
DL = 0.04818
BEC = 0.1542

Weight: <None>
Min Conc: <None>

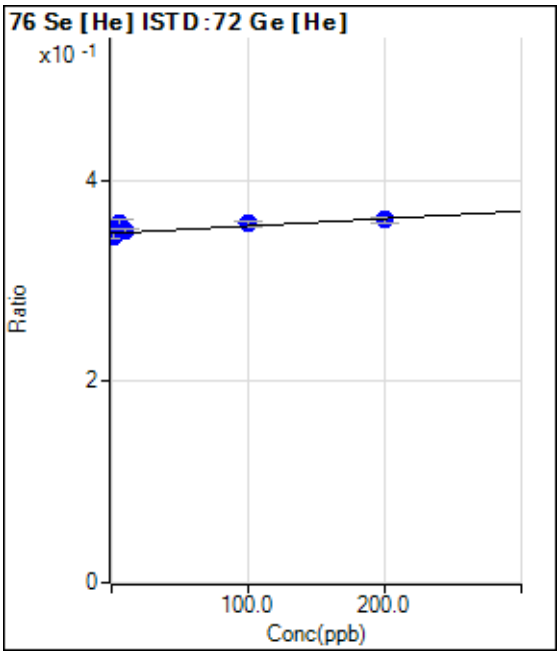


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1193927.35	0.3324	A	1.1
2	☐	2.000	-0.194	1194776.34	0.3324	A	2.7
3	☐	5.000	-17.863	1187715.89	0.3305	A	2.9
4	☐	10.000	0.671	1191578.47	0.3325	A	0.1
5	☐	100.000	106.492	1219964.44	0.3439	A	3.6
6	☐	200.000	197.814	1234562.35	0.3538	A	1.2

y = 1.0818E-004 * x + 0.3324
R = 0.9941
DL = 98.39
BEC = 3073

Weight: <None>
Min Conc: <None>

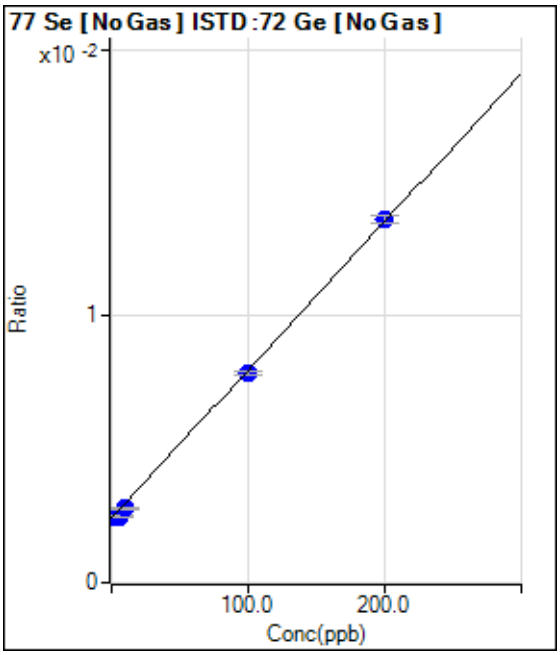
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413926.97	0.3474	P	2.4
2	☐	2.000	-32.078	413775.62	0.3450	P	1.3
3	☐	5.000	130.646	414641.32	0.3571	P	2.9
4	☐	10.000	39.267	414424.55	0.3503	P	0.8
5	☐	100.000	128.778	423891.83	0.3569	P	1.3
6	☐	200.000	181.347	424056.57	0.3608	P	1.3

y = 7.3996E-005 * x + 0.3474
R = 0.7669
DL = 334.9
BEC = 4695

Weight: <None>
Min Conc: <None>

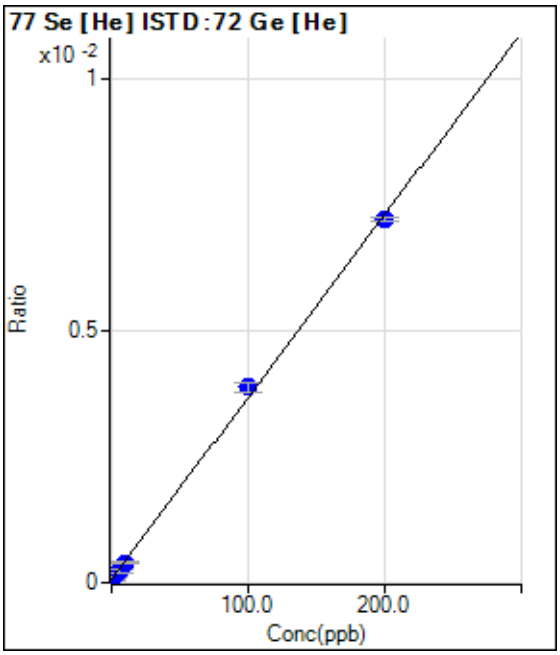


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8679.64	0.0024	P	4.4
2	☐	2.000	1.155	8923.11	0.0025	P	5.5
3	☐	5.000	1.185	8923.13	0.0025	P	2.2
4	☐	10.000	6.726	10000.54	0.0028	P	2.7
5	☐	100.000	98.336	27969.51	0.0079	P	2.0
6	☐	200.000	201.100	47444.02	0.0136	P	2.0

y = 5.5602E-005 * x + 0.0024
R = 0.9998
DL = 5.768
BEC = 43.46

Weight: <None>
Min Conc: <None>

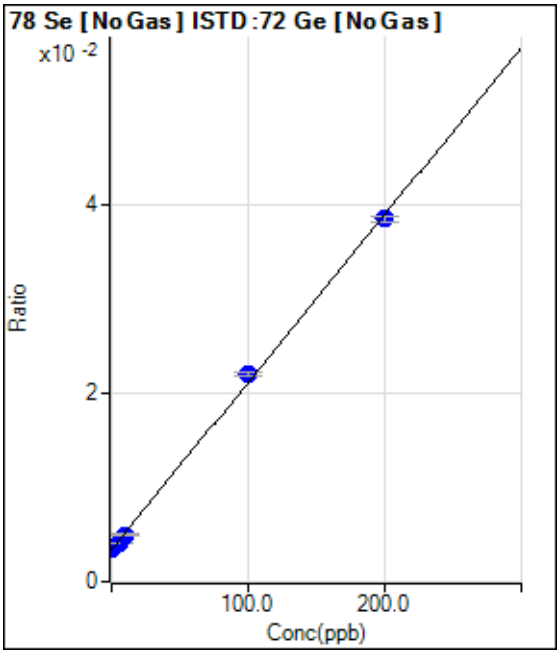
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	32.0
2	☐	2.000	1.525	143.33	0.0001	P	20.0
3	☐	5.000	4.634	270.01	0.0002	P	30.8
4	☐	10.000	9.124	466.68	0.0004	P	14.1
5	☐	100.000	105.476	4614.22	0.0039	P	4.6
6	☐	200.000	197.319	8479.50	0.0072	P	0.9

y = 3.6237E-005 * x + 6.4217E-005
R = 0.9994
DL = 1.703
BEC = 1.772

Weight: <None>
Min Conc: <None>

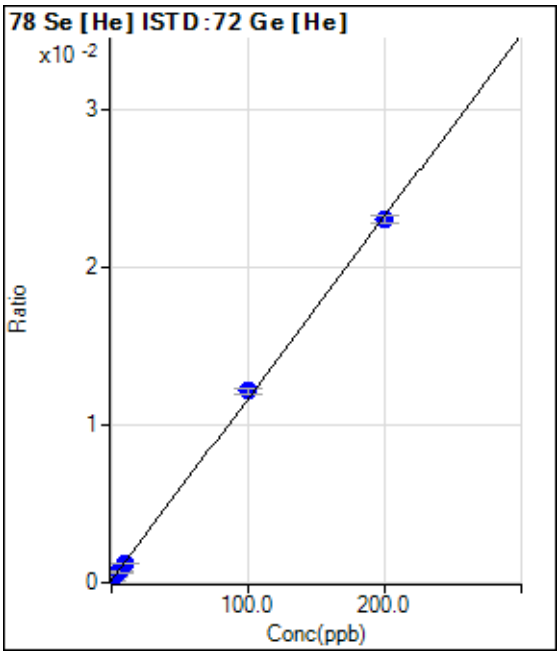


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12302.47	0.0034	P	2.0
2	☐	2.000	1.808	13466.91	0.0037	P	3.8
3	☐	5.000	3.868	14791.71	0.0041	P	1.1
4	☐	10.000	8.766	17865.42	0.0050	P	2.5
5	☐	100.000	104.933	78408.32	0.0221	P	1.0
6	☐	200.000	197.626	134677.45	0.0386	P	1.3

y = 1.7798E-004 * x + 0.0034
R = 0.9995
DL = 1.166
BEC = 19.25

Weight: <None>
Min Conc: <None>

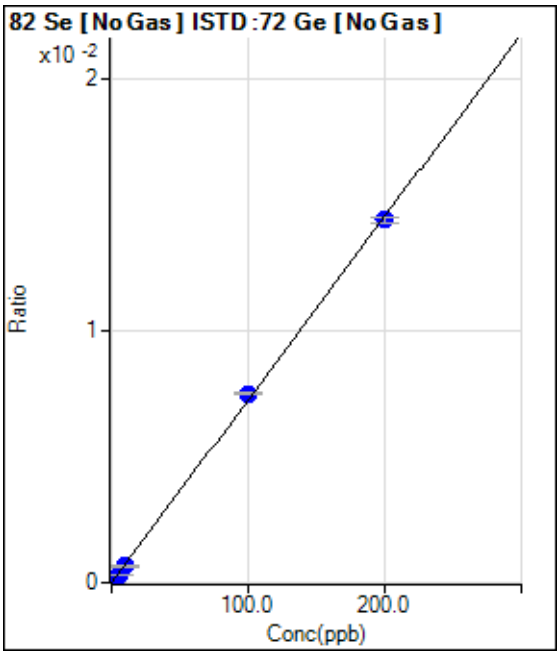
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.00	0.0002	P	5.3
2	☐	2.000	1.907	450.68	0.0004	P	9.4
3	☐	5.000	4.459	778.02	0.0007	P	3.3
4	☐	10.000	9.407	1466.08	0.0012	P	3.4
5	☐	100.000	103.908	14391.71	0.0121	P	3.6
6	☐	200.000	198.090	26988.99	0.0230	P	2.0

y = 1.1515E-004 * x + 1.5612E-004
R = 0.9997
DL = 0.2166
BEC = 1.356

Weight: <None>
Min Conc: <None>

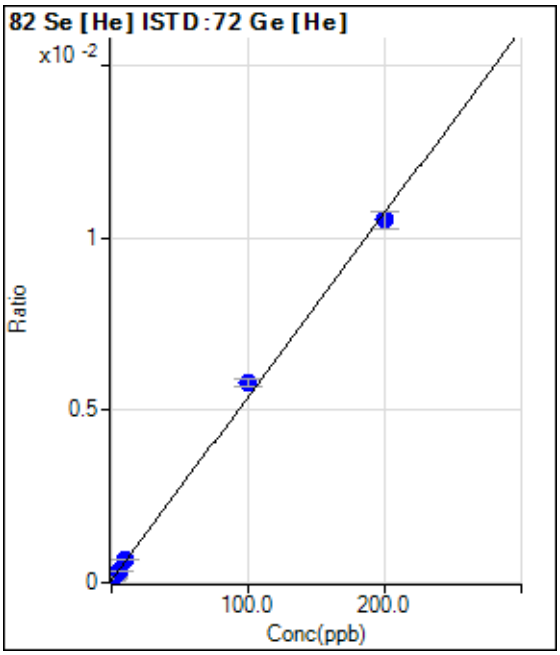


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-5.97	0.0000	P	-2242.
2	☐	2.000	1.888	487.60	0.0001	P	21.4
3	☐	5.000	4.147	1077.09	0.0003	P	6.6
4	☐	10.000	9.207	2391.15	0.0007	P	9.6
5	☐	100.000	103.421	26644.38	0.0075	P	1.7
6	☐	200.000	198.352	50262.49	0.0144	P	1.7

y = 7.2633E-005 * x - 1.5913E-006
R = 0.9998
DL = 1.474
BEC = -0.02191

Weight: <None>
Min Conc: <None>

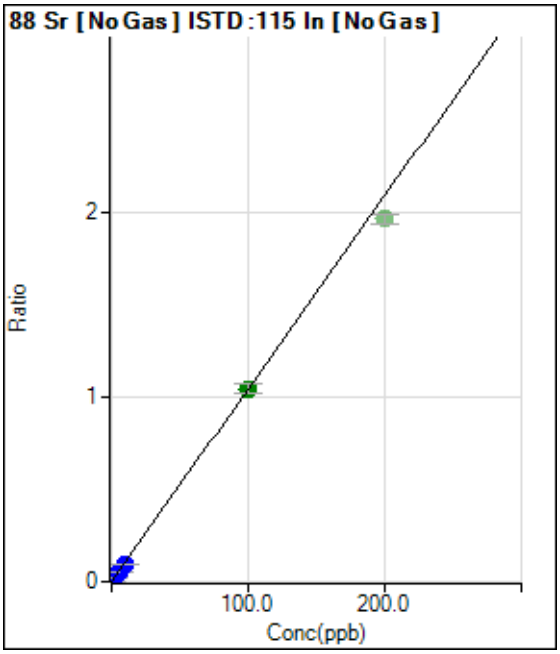
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	45.2
2	☐	2.000	1.401	173.34	0.0001	P	17.9
3	☐	5.000	4.979	390.01	0.0003	P	11.8
4	☐	10.000	11.262	793.37	0.0007	P	7.2
5	☐	100.000	107.402	6881.86	0.0058	P	4.1
6	☐	200.000	196.243	12379.26	0.0105	P	4.5

y = 5.3305E-005 * x + 6.9901E-005
R = 0.9990
DL = 1.78
BEC = 1.311

Weight: <None>
Min Conc: <None>

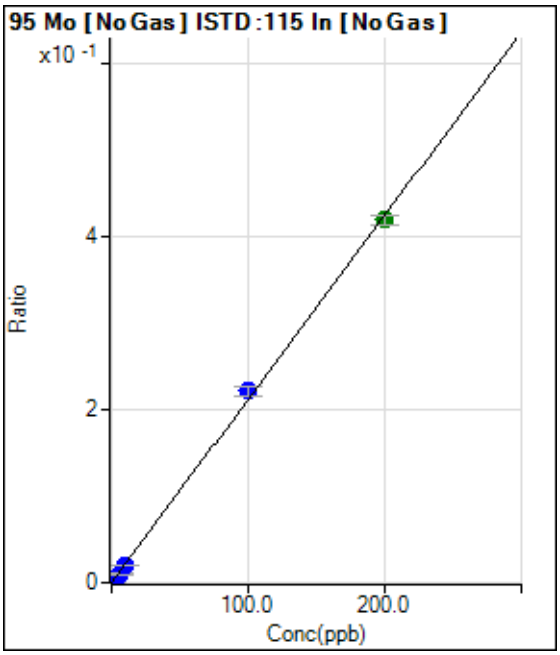


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1886.84	0.0005	P	5.5
2	☐	2.000	1.875	83802.86	0.0200	P	4.7
3	☐	5.000	4.728	205253.74	0.0498	P	2.8
4	☐	10.000	9.323	403813.07	0.0977	P	1.3
5	☐	100.000	100.084	4226592.33	1.0446	A	5.0
6	☑	200.000		7867354.05	1.9638	A	2.5

y = 0.0104 * x + 4.5220E-004
R = 1.0000
DL = 0.007144
BEC = 0.04334

Weight: <None>
Min Conc: <None>

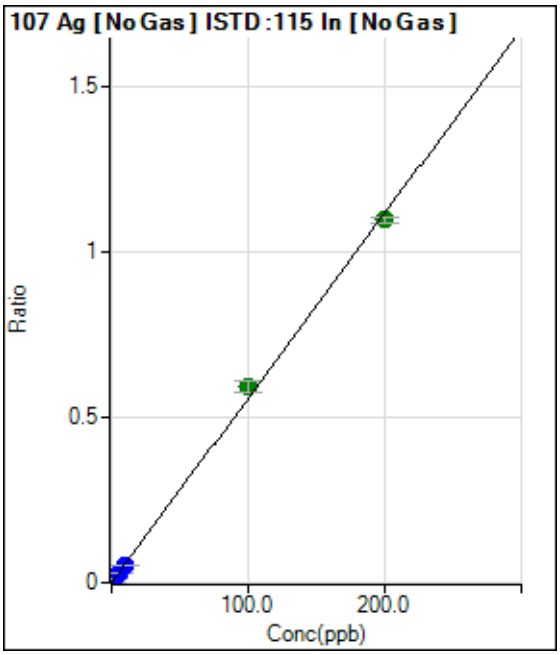
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	69.1
2	☐	2.000	1.881	16767.55	0.0040	P	5.5
3	☐	5.000	4.670	40933.59	0.0099	P	3.5
4	☐	10.000	9.449	82965.14	0.0201	P	1.1
5	☐	100.000	104.568	898269.02	0.2221	P	4.8
6	☐	200.000	197.753	1682506.07	0.4200	A	2.6

y = 0.0021 * x + 1.1219E-005
R = 0.9996
DL = 0.01095
BEC = 0.005283

Weight: <None>
Min Conc: <None>

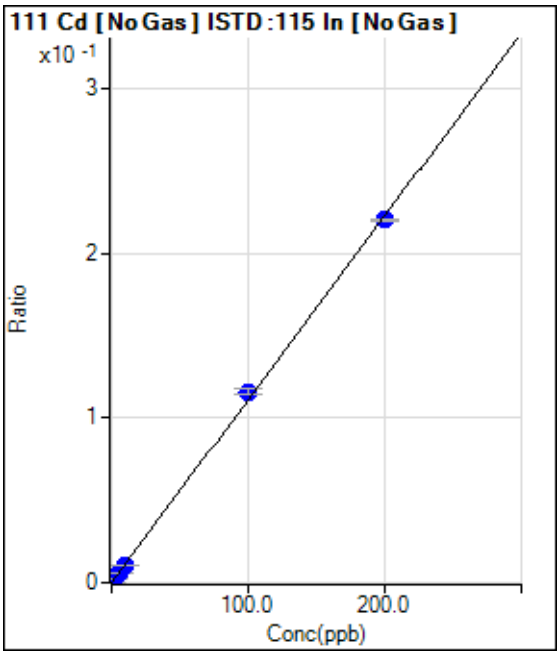


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0001	P	13.7
2	☐	2.000	1.935	45789.77	0.0109	P	2.4
3	☐	5.000	4.813	111388.45	0.0270	P	2.1
4	☐	10.000	9.496	219767.38	0.0532	P	0.3
5	☐	100.000	106.769	2413307.52	0.5968	A	5.9
6	☐	200.000	196.646	4403544.21	1.0990	A	1.3

y = 0.0056 * x + 1.1814E-004
R = 0.9992
DL = 0.008677
BEC = 0.02114

Weight: <None>
Min Conc: <None>

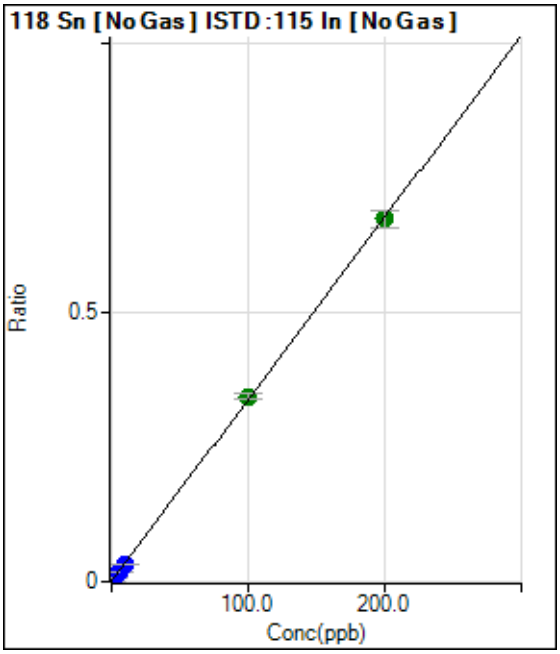
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.7
2	☐	2.000	1.918	8963.19	0.0021	P	2.6
3	☐	5.000	4.797	22045.46	0.0053	P	1.5
4	☐	10.000	9.144	42101.19	0.0102	P	1.0
5	☐	100.000	103.989	468779.91	0.1158	P	3.0
6	☐	200.000	198.054	883953.03	0.2206	P	0.4

y = 0.0011 * x + 3.1977E-006
R = 0.9997
DL = 0.00376
BEC = 0.002871

Weight: <None>
Min Conc: <None>

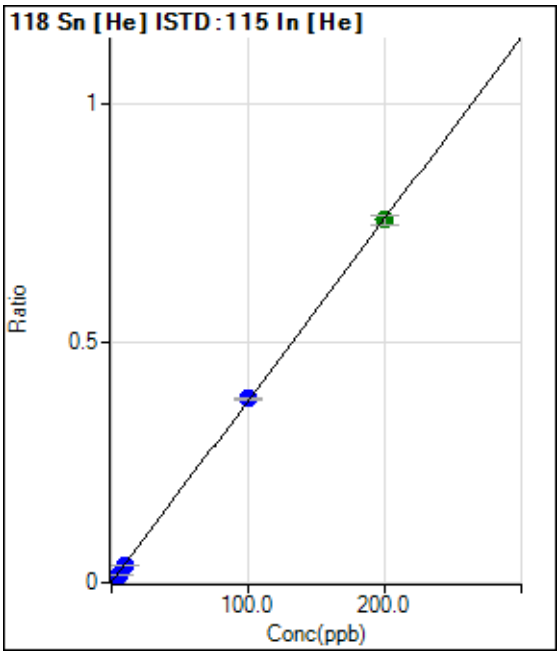


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.29	0.0006	P	5.5
2	☐	2.000	1.850	28772.06	0.0069	P	1.7
3	☐	5.000	4.671	67664.69	0.0164	P	2.2
4	☐	10.000	9.346	133148.89	0.0322	P	0.6
5	☐	100.000	101.607	1393168.21	0.3443	A	3.3
6	☐	200.000	199.239	2702480.27	0.6745	A	5.0

y = 0.0034 * x + 6.0859E-004
R = 0.9999
DL = 0.02988
BEC = 0.1799

Weight: <None>
Min Conc: <None>

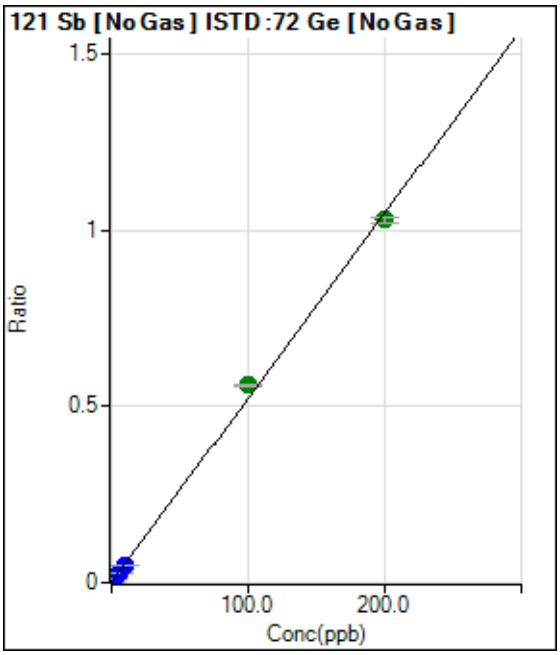
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1667.71	0.0008	P	43.2
2	☐	2.000	1.731	15906.56	0.0073	P	0.9
3	☐	5.000	4.463	37714.58	0.0177	P	2.4
4	☐	10.000	9.246	75953.20	0.0358	P	2.1
5	☐	100.000	101.028	813132.80	0.3835	P	1.6
6	☐	200.000	199.540	1573843.78	0.7566	A	2.6

y = 0.0038 * x + 7.8220E-004
R = 1.0000
DL = 0.2676
BEC = 0.2065

Weight: <None>
Min Conc: <None>

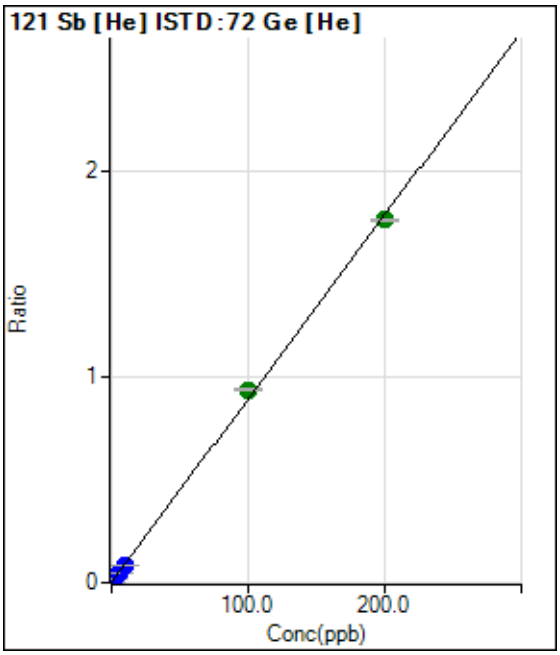


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2787.01	0.0008	P	2.9
2	☐	2.000	1.962	39647.28	0.0110	P	4.0
3	☐	5.000	4.789	92721.06	0.0258	P	3.3
4	☐	10.000	9.437	179509.61	0.0501	P	1.6
5	☐	100.000	106.832	1983478.46	0.5590	A	1.1
6	☐	200.000	196.618	3587743.59	1.0282	A	1.4

y = 0.0052 * x + 7.7591E-004
R = 0.9991
DL = 0.01309
BEC = 0.1485

Weight: <None>
Min Conc: <None>

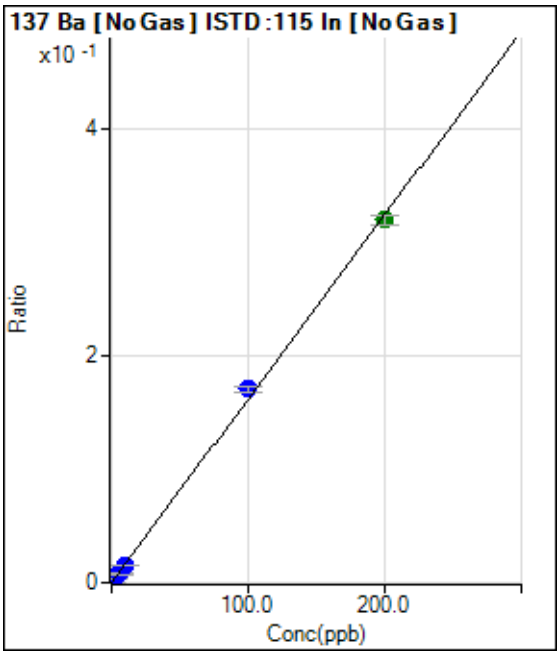
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1483.45	0.0012	P	3.7
2	☐	2.000	1.853	21330.99	0.0178	P	1.6
3	☐	5.000	4.785	51056.33	0.0440	P	2.7
4	☐	10.000	9.348	100175.05	0.0847	P	3.4
5	☐	100.000	105.123	1116029.38	0.9397	A	1.3
6	☐	200.000	197.478	2073584.61	1.7642	A	0.6

y = 0.0089 * x + 0.0012
R = 0.9995
DL = 0.0154
BEC = 0.1395

Weight: <None>
Min Conc: <None>

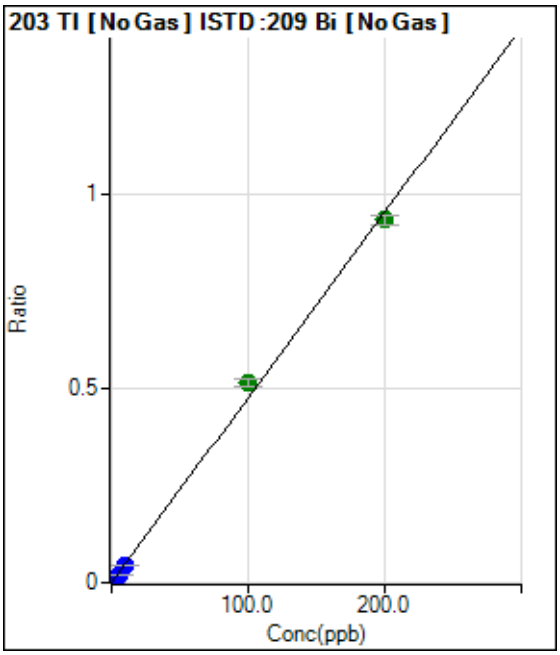


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0001	P	6.6
2	☐	2.000	1.878	13003.43	0.0031	P	2.3
3	☐	5.000	4.682	31532.18	0.0076	P	2.6
4	☐	10.000	9.402	63197.76	0.0153	P	2.9
5	☐	100.000	105.207	689902.15	0.1705	P	3.7
6	☐	200.000	197.436	1281699.28	0.3199	A	2.8

y = 0.0016 * x + 6.0716E-005
R = 0.9995
DL = 0.007372
BEC = 0.03748

Weight: <None>
Min Conc: <None>

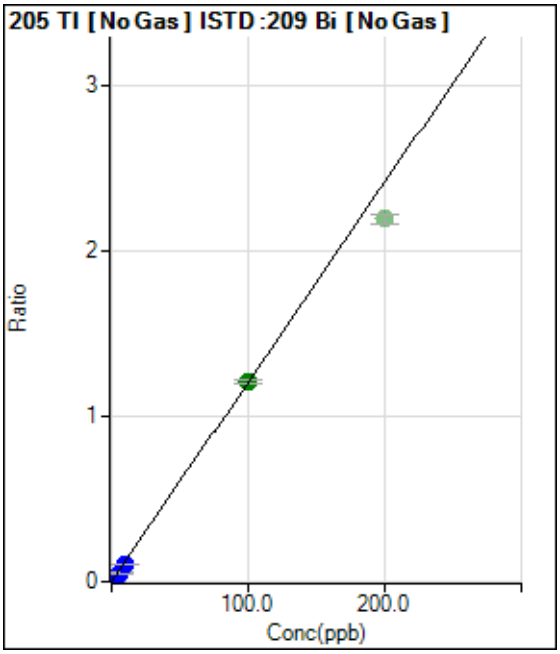
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	32.9
2	☐	2.000	1.847	30297.48	0.0088	P	1.8
3	☐	5.000	4.629	76189.71	0.0220	P	1.7
4	☐	10.000	9.336	153104.22	0.0444	P	1.7
5	☐	100.000	107.947	1745250.86	0.5132	A	3.4
6	☐	200.000	196.070	3066227.56	0.9320	A	2.5

y = 0.0048 * x + 1.8352E-005
R = 0.9988
DL = 0.00381
BEC = 0.003861

Weight: <None>
Min Conc: <None>

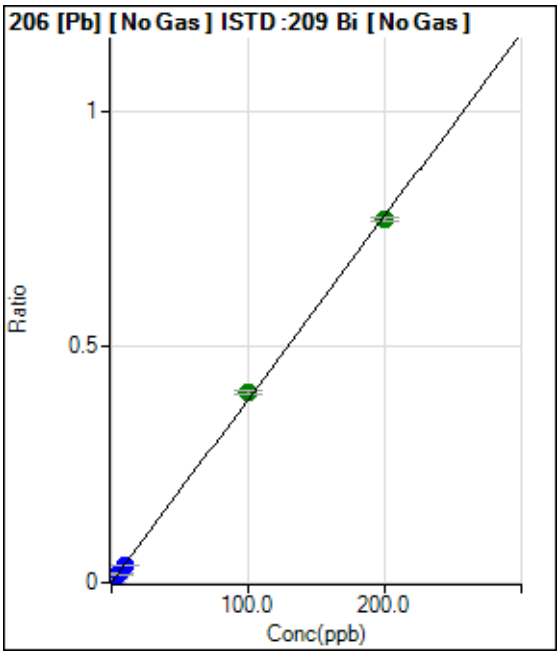


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.67	0.0000	P	14.3
2	☐	2.000	1.792	74593.73	0.0217	P	4.4
3	☐	5.000	4.313	180200.18	0.0521	P	1.1
4	☐	10.000	8.725	363227.00	0.1053	P	3.0
5	☐	100.000	100.166	4111171.92	1.2088	A	2.4
6	☑	200.000		7220635.94	2.1947	A	2.9

y = 0.0121 * x + 4.8271E-005
R = 0.9999
DL = 0.001721
BEC = 0.004

Weight: <None>
Min Conc: <None>

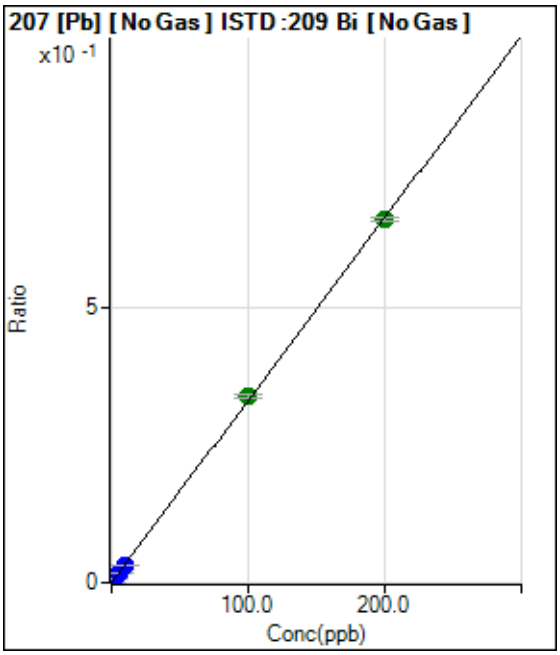
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0001	P	0.6
2	☐	2.000	1.915	26014.27	0.0076	P	4.2
3	☐	5.000	4.693	63495.88	0.0184	P	1.6
4	☐	10.000	9.344	125625.41	0.0364	P	1.7
5	☐	100.000	104.144	1376825.76	0.4048	A	2.3
6	☐	200.000	197.969	2531994.23	0.7694	A	1.1

y = 0.0039 * x + 1.1690E-004
R = 0.9997
DL = 0.0005209
BEC = 0.03008

Weight: <None>
Min Conc: <None>

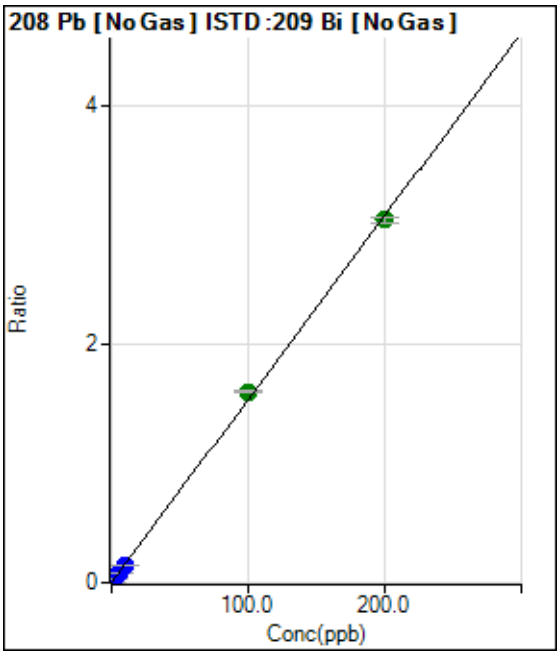


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.35	0.0001	P	42.4
2	☐	2.000	1.985	23008.44	0.0067	P	5.0
3	☐	5.000	4.776	55159.35	0.0159	P	1.9
4	☐	10.000	9.471	108687.52	0.0315	P	1.8
5	☐	100.000	101.919	1150148.45	0.3382	A	1.9
6	☐	200.000	199.072	2173017.89	0.6604	A	0.9

y = 0.0033 * x + 1.0216E-004
R = 0.9999
DL = 0.03914
BEC = 0.0308

Weight: <None>
Min Conc: <None>

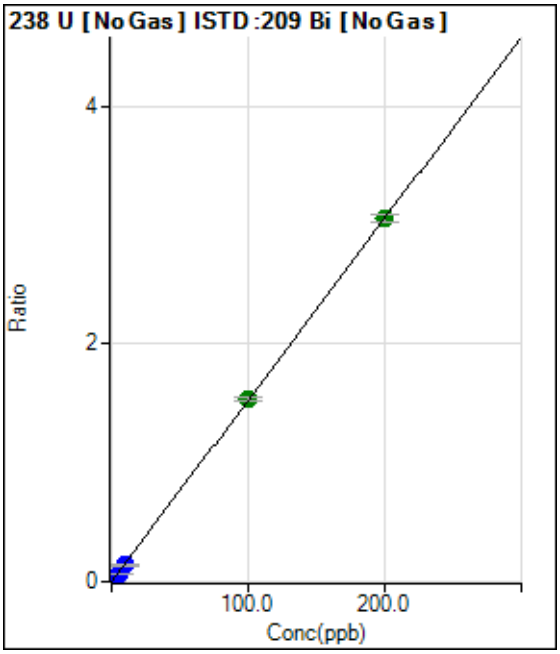
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1490.07	0.0004	P	8.4
2	☐	2.000	1.941	104038.63	0.0302	P	1.9
3	☐	5.000	4.719	251950.33	0.0728	P	1.0
4	☐	10.000	9.502	504275.20	0.1462	P	0.8
5	☐	100.000	104.195	5438819.79	1.5991	A	1.4
6	☐	200.000	197.935	9993004.12	3.0373	A	1.5

y = 0.0153 * x + 4.3166E-004
R = 0.9997
DL = 0.007089
BEC = 0.02813

Weight: <None>
Min Conc: <None>

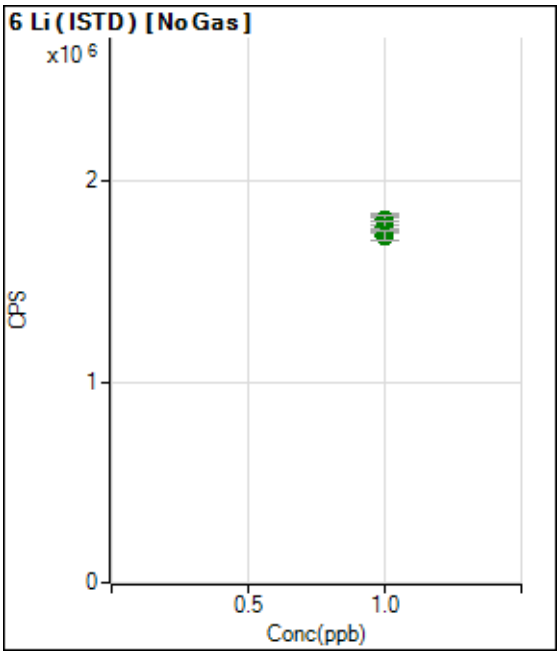


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	44.9
2	☐	2.000	1.863	97989.39	0.0285	P	0.5
3	☐	5.000	4.601	243119.95	0.0703	P	1.3
4	☐	10.000	9.075	477909.90	0.1386	P	1.7
5	☐	100.000	100.328	5210961.07	1.5320	A	1.7
6	☐	200.000	199.894	10041935.48	3.0523	A	2.2

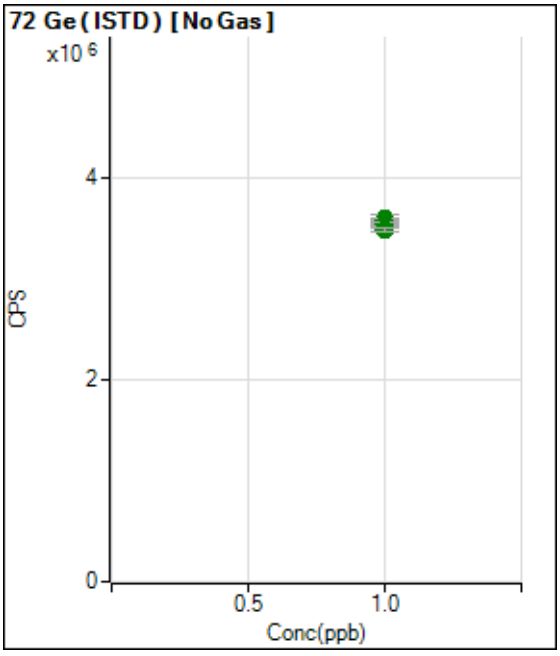
y = 0.0153 * x + 9.6362E-006
R = 1.0000
DL = 0.0008507
BEC = 0.0006311

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

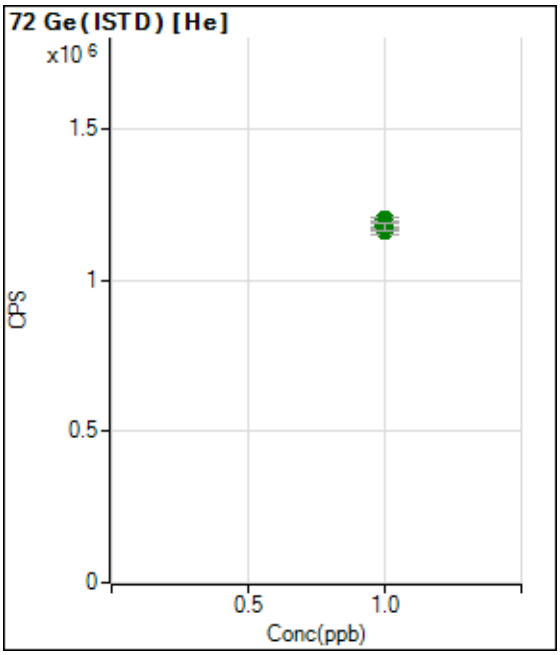


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1801939.61		A	4.0
2	☐	1.000		1802126.72		A	1.8
3	☐	1.000		1809661.71		A	2.5
4	☐	1.000		1775017.52		A	3.0
5	☐	1.000		1733503.92		A	3.2
6	☐	1.000		1729739.48		A	2.5

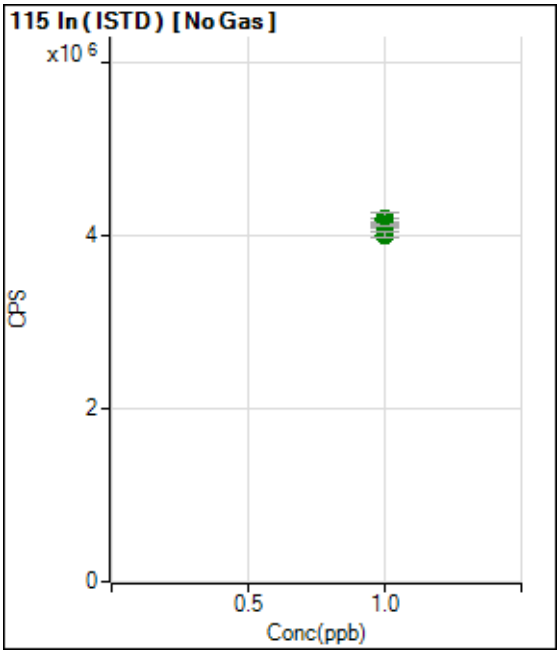


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3591716.40		A	0.4
2	☐	1.000		3595634.63		A	1.9
3	☐	1.000		3595461.51		A	2.4
4	☐	1.000		3583744.95		A	0.6
5	☐	1.000		3547979.84		A	1.1
6	☐	1.000		3489397.97		A	0.9

Calibration for 018_ICV.d

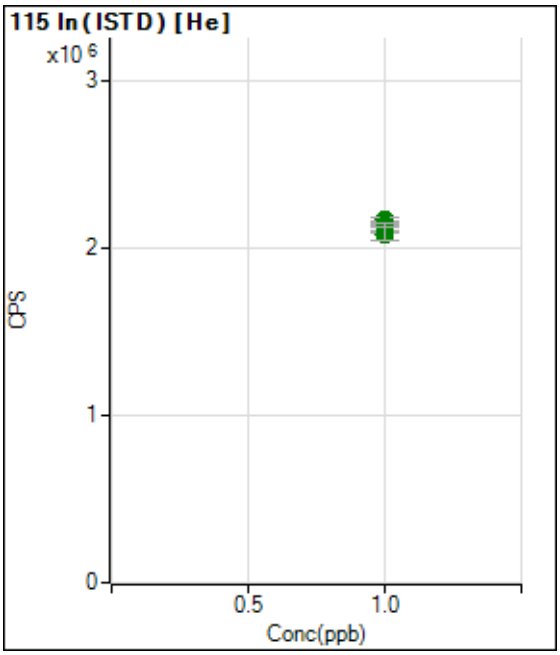


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1191599.30		A	0.9
2	☐	1.000		1199324.23		A	1.1
3	☐	1.000		1161597.90		A	1.8
4	☐	1.000		1183068.11		A	1.6
5	☐	1.000		1187742.17		A	1.8
6	☐	1.000		1175428.92		A	2.1

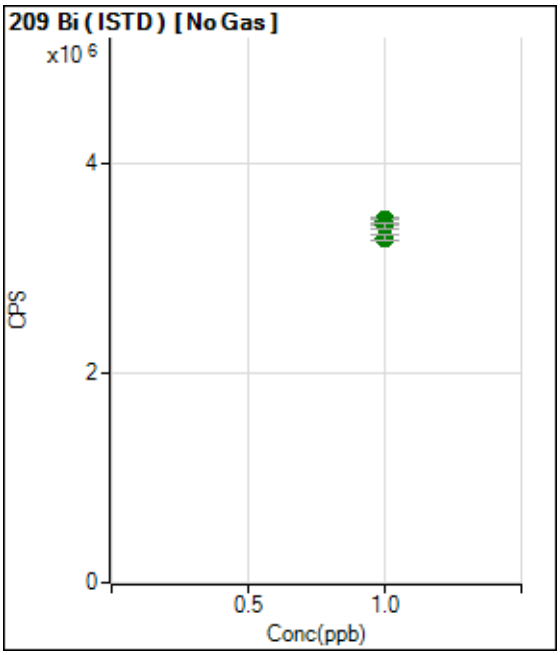


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4173630.42		A	0.7
2	☐	1.000		4191019.42		A	3.1
3	☐	1.000		4124142.74		A	1.3
4	☐	1.000		4132373.46		A	0.4
5	☐	1.000		4049488.71		A	3.4
6	☐	1.000		4007165.63		A	2.0

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2142609.86		A	2.1
2	☐	1.000		2167260.61		A	1.3
3	☐	1.000		2132262.24		A	1.0
4	☐	1.000		2121550.51		A	1.5
5	☐	1.000		2120926.11		A	2.8
6	☐	1.000		2081403.13		A	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3450327.76		A	0.9
2	☐	1.000		3444268.70		A	2.4
3	☐	1.000		3459752.97		A	1.3
4	☐	1.000		3448891.61		A	1.1
5	☐	1.000		3401832.76		A	1.7
6	☐	1.000		3290659.95		A	1.7

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	011CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:34:39-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	108009	0.00
Be	9	1	No Gas	17	103.92
V	51	2	He	3679	0.08
Cr	52	2	He	2287	0.33
Fe	56	2	He	10347	0.01
Se	78	2	He	186	2.65
Sn	118	2	He	1668	2.48
As	75	2	He	237	4.72
Ca	44	2	He	4701	0.08
Na	23	2	He	80781	0.00
Mg	24	2	He	527	2.91
K	39	2	He	93559	0.00
Mn	55	2	He	530	1.42
Co	59	2	He	190	7.33
Ni	60	2	He	213	4.57
Cu	63	2	He	713	2.59
Zn	66	2	He	313	6.78
Al	27	2	He	1377	0.85
B	11	1	No Gas	42929	0.01
Al	27	1	No Gas	55193	0.00
Si	28	1	No Gas	907317	0.00
P	31	1	No Gas	42188	0.01
Ag	107	1	No Gas	493	2.92
Cd	111	1	No Gas	13	324.76
Sr	88	1	No Gas	1887	0.25
Mo	95	1	No Gas	47	147.61
Sn	118	1	No Gas	2540	0.23
Sb	121	1	No Gas	2787	0.12
Ba	137	1	No Gas	253	2.38
Tl	205	1	No Gas	167	9.06
Tl	203	1	No Gas	63	51.90
Pb	208	1	No Gas	1490	0.62
U	238	1	No Gas	33	137.48
Ca	43	2	He	47	26.51
Sb	121	2	He	1483	0.19
Ti	47	2	He	13	324.76
Cu	63	1	No Gas	1170	0.25

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	1801940	3.99
Ge	72	2	He	1191599	0.91

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	3591716	0.44
In	115	1	No Gas	4173630	0.73
Bi	209	1	No Gas	3450328	0.87

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:36:32-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	10514	0.02
V	51	2	He	20645	0.01
Cr	52	2	He	23444	0.00
Fe	56	2	He	1899903	0.00
Se	78	2	He	451	2.20
Sn	118	2	He	15907	0.01
As	75	2	He	3043	0.13
Ca	44	2	He	15663	0.01
Na	23	2	He	404342	0.00
Mg	24	2	He	186908	0.00
K	39	2	He	316026	0.00
Mn	55	2	He	15616	0.03
Co	59	2	He	31477	0.01
Ni	60	2	He	8113	0.04
Cu	63	2	He	22062	0.01
Zn	66	2	He	4397	0.13
Al	27	2	He	2544	0.12
B	11	1	No Gas	73262	0.00
Al	27	1	No Gas	101933	0.00
Si	28	1	No Gas	1017472	0.00
P	31	1	No Gas	52275	0.00
Ag	107	1	No Gas	45790	0.00
Cd	111	1	No Gas	8963	0.04
Sr	88	1	No Gas	83803	0.00
Mo	95	1	No Gas	16768	0.02
Sn	118	1	No Gas	28772	0.01
Sb	121	1	No Gas	39647	0.01
Ba	137	1	No Gas	13003	0.01
Tl	205	1	No Gas	74594	0.00
Tl	203	1	No Gas	30297	0.00
Pb	208	1	No Gas	104039	0.00
U	238	1	No Gas	97989	0.00
Ca	43	2	He	753	1.42
Sb	121	2	He	21331	0.01
Cu	63	1	No Gas	37325	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1802127	1.79	1801940	100.01	70	120	

Calibration Standard Report

Ge	72	2	He	1199324	1.10	1191599	100.65	70	120	
Ge	72	1	No Gas	3595635	1.94	3591716	100.11	70	120	
In	115	1	No Gas	4191019	3.11	4173630	100.42	70	120	
Bi	209	1	No Gas	3444269	2.37	3450328	99.82	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:38:24-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	25014	0.01
V	51	2	He	45290	0.00
Cr	52	2	He	53542	0.00
Fe	56	2	He	4631793	0.00
Se	78	2	He	778	0.66
Sn	118	2	He	37715	0.01
As	75	2	He	7385	0.03
Ca	44	2	He	31560	0.01
Na	23	2	He	873431	0.00
Mg	24	2	He	456920	0.00
K	39	2	He	635206	0.00
Mn	55	2	He	37803	0.01
Co	59	2	He	76199	0.00
Ni	60	2	He	19735	0.02
Cu	63	2	He	52860	0.00
Zn	66	2	He	9954	0.03
Al	27	2	He	4211	0.09
B	11	1	No Gas	116966	0.00
Al	27	1	No Gas	162321	0.00
Si	28	1	No Gas	1150233	0.00
P	31	1	No Gas	66616	0.00
Ag	107	1	No Gas	111388	0.00
Cd	111	1	No Gas	22045	0.00
Sr	88	1	No Gas	205254	0.00
Mo	95	1	No Gas	40934	0.01
Sn	118	1	No Gas	67665	0.00
Sb	121	1	No Gas	92721	0.00
Ba	137	1	No Gas	31532	0.01
Tl	205	1	No Gas	180200	0.00
Tl	203	1	No Gas	76190	0.00
Pb	208	1	No Gas	251950	0.00
U	238	1	No Gas	243120	0.00
Ca	43	2	He	1673	0.61
Sb	121	2	He	51056	0.00
Cu	63	1	No Gas	89018	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1809662	2.46	1801940	100.43	70	120	

Calibration Standard Report

Ge	72	2	He	1161598	1.84	1191599	97.48	70	120	
Ge	72	1	No Gas	3595462	2.37	3591716	100.10	70	120	
In	115	1	No Gas	4124143	1.31	4173630	98.81	70	120	
Bi	209	1	No Gas	3459753	1.29	3450328	100.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:40:16-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	49617	0.00
V	51	2	He	86141	0.00
Cr	52	2	He	105637	0.00
Fe	56	2	He	8949057	0.00
Se	78	2	He	1466	0.23
Sn	118	2	He	75953	0.00
As	75	2	He	14349	0.01
Ca	44	2	He	58113	0.00
Na	23	2	He	1625669	0.00
Mg	24	2	He	896635	0.00
K	39	2	He	1155700	0.00
Mn	55	2	He	85645	0.00
Co	59	2	He	148805	0.00
Ni	60	2	He	38695	0.00
Cu	63	2	He	103262	0.00
Zn	66	2	He	20329	0.01
Al	27	2	He	9073	0.05
B	11	1	No Gas	193193	0.00
Al	27	1	No Gas	363861	0.00
Si	28	1	No Gas	1417718	0.00
P	31	1	No Gas	91379	0.00
Ag	107	1	No Gas	219767	0.00
Cd	111	1	No Gas	42101	0.00
Sr	88	1	No Gas	403813	0.00
Mo	95	1	No Gas	82965	0.00
Sn	118	1	No Gas	133149	0.00
Sb	121	1	No Gas	179510	0.00
Ba	137	1	No Gas	63198	0.00
Tl	205	1	No Gas	363227	0.00
Tl	203	1	No Gas	153104	0.00
Pb	208	1	No Gas	504275	0.00
U	238	1	No Gas	477910	0.00
Ca	43	2	He	3300	0.14
Sb	121	2	He	100175	0.00
Cu	63	1	No Gas	175667	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1775018	3.04	1801940	98.51	70	120	

Calibration Standard Report

Ge	72	2	He	1183068	1.62	1191599	99.28	70	120	
Ge	72	1	No Gas	3583745	0.58	3591716	99.78	70	120	
In	115	1	No Gas	4132373	0.41	4173630	99.01	70	120	
Bi	209	1	No Gas	3448892	1.08	3450328	99.96	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:42:08-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	556814	0.00
V	51	2	He	936803	0.00
Cr	52	2	He	1108772	0.00
Fe	56	2	He	98684135	0.00
Se	78	2	He	14392	0.02
Sn	118	2	He	813133	0.00
As	75	2	He	163329	0.00
Ca	44	2	He	608957	0.00
Na	23	2	He	16867533	0.00
Mg	24	2	He	9590908	0.00
K	39	2	He	11610195	0.00
Mn	55	2	He	816045	0.00
Co	59	2	He	1671077	0.00
Ni	60	2	He	428734	0.00
Cu	63	2	He	1151694	0.00
Zn	66	2	He	213429	0.00
Al	27	2	He	54976	0.00
B	11	1	No Gas	1701437	0.00
Al	27	1	No Gas	2204239	0.00
Si	28	1	No Gas	6585647	0.00
P	31	1	No Gas	586017	0.00
Ag	107	1	No Gas	2413308	0.00
Cd	111	1	No Gas	468780	0.00
Sr	88	1	No Gas	4226592	0.00
Mo	95	1	No Gas	898269	0.00
Sn	118	1	No Gas	1393168	0.00
Sb	121	1	No Gas	1983478	0.00
Ba	137	1	No Gas	689902	0.00
Tl	205	1	No Gas	4111172	0.00
Tl	203	1	No Gas	1745251	0.00
Pb	208	1	No Gas	5438820	0.00
U	238	1	No Gas	5210961	0.00
Ca	43	2	He	35961	0.00
Sb	121	2	He	1116029	0.00
Cu	63	1	No Gas	1882748	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1733504	3.24	1801940	96.20	70	120	

Calibration Standard Report

Ge	72	2	He	1187742	1.76	1191599	99.68	70	120	
Ge	72	1	No Gas	3547980	1.13	3591716	98.78	70	120	
In	115	1	No Gas	4049489	3.44	4173630	97.03	70	120	
Bi	209	1	No Gas	3401833	1.72	3450328	98.59	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:43:53-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1047986	0.00
V	51	2	He	1785920	0.00
Cr	52	2	He	2123073	0.00
Fe	56	2	He	187675624	0.00
Se	78	2	He	26989	0.00
Sn	118	2	He	1573844	0.00
As	75	2	He	297884	0.00
Ca	44	2	He	1142335	0.00
Na	23	2	He	32378185	0.00
Mg	24	2	He	18074599	0.00
K	39	2	He	22155300	0.00
Mn	55	2	He	1535363	0.00
Co	59	2	He	3050253	0.00
Ni	60	2	He	801857	0.00
Cu	63	2	He	2146156	0.00
Zn	66	2	He	401796	0.00
Al	27	2	He	106535	0.00
B	11	1	No Gas	3332839	0.00
Al	27	1	No Gas	4200675	0.00
Si	28	1	No Gas	10989110	0.00
P	31	1	No Gas	1058710	0.00
Ag	107	1	No Gas	4403544	0.00
Cd	111	1	No Gas	883953	0.00
Sr	88	1	No Gas	7867354	0.00
Mo	95	1	No Gas	1682506	0.00
Sn	118	1	No Gas	2702480	0.00
Sb	121	1	No Gas	3587744	0.00
Ba	137	1	No Gas	1281699	0.00
Tl	205	1	No Gas	7220636	0.00
Tl	203	1	No Gas	3066228	0.00
Pb	208	1	No Gas	9993004	0.00
U	238	1	No Gas	10041935	0.00
Ca	43	2	He	67003	0.00
Sb	121	2	He	2073585	0.00
Cu	63	1	No Gas	3397955	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1729739	2.53	1801940	95.99	70	120	

Calibration Standard Report

Ge	72	2	He	1175429	2.07	1191599	98.64	70	120	
Ge	72	1	No Gas	3489398	0.93	3591716	97.15	70	120	
In	115	1	No Gas	4007166	2.04	4173630	96.01	70	120	
Bi	209	1	No Gas	3290660	1.73	3450328	95.37	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	018_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:47:32-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	110.528	1.240	2343234	2.18	100	110.5	90	110	ICV Main CR1 Failed
Be	9	1	No Gas	109.437	1.711	565911	1.59	100	109.4	90	110	
V	51	2	He	102.740	1.565	951327	1.47	100	102.7	90	110	
Cr	52	2	He	103.700	0.777	1139907	1.81	100	103.7	90	110	
Fe	56	2	He	10525.975	2.738	102304452	1.20	10000	105.3	90	110	
Se	78	2	He	106.573	2.940	15005	1.45	100	106.6	90	110	
Sn	118	2	He	100.109	1.613	812553	1.52	100	100.1	90	110	
As	75	2	He	106.455	1.339	165778	0.72	100	106.5	90	110	
Ca	44	2	He	10624.992	2.613	631880	1.61	10000	106.2	90	110	
Na	23	2	He	10360.247	2.787	17370256	1.87	10000	103.6	90	110	
Mg	24	2	He	10461.979	1.301	9813758	1.16	10000	104.6	90	110	
K	39	2	He	10405.514	1.191	11968220	1.02	10000	104.1	90	110	
Mn	55	2	He	104.687	1.343	835082	1.47	100	104.7	90	110	
Co	59	2	He	107.538	1.748	1713733	1.68	100	107.5	90	110	
Ni	60	2	He	104.844	1.681	436975	0.20	100	104.8	90	110	
Cu	63	2	He	104.513	1.866	1166676	0.36	100	104.5	90	110	
Zn	66	2	He	104.434	1.539	217890	0.17	100	104.4	90	110	
Al	27	2	He	103.569	0.572	57523	1.01	100	103.6	90	110	
B	11	1	No Gas	534.520	2.594	1758452	1.40	500	106.9	90	110	
Al	27	1	No Gas	104.095	1.348	2285806	1.19	100	104.1	90	110	
Si	28	1	No Gas	566.643	4.145	6921117	2.09	500	113.3	90	110	ICV Main CR1 Failed
P	31	1	No Gas	538.560	3.522	611529	1.97	500	107.7	90	110	
Ag	107	1	No Gas	106.845	4.003	2432640	1.92	100	106.8	90	110	
Cd	111	1	No Gas	103.997	2.828	471942	0.30	100	104.0	90	110	
Sr	88	1	No Gas	110.202	0.922	4467601	2.95	100	110.2	90	110	ICV Main CR1 Failed
Mo	95	1	No Gas	105.750	3.672	914840	1.32	100	105.8	90	110	
Sn	118	1	No Gas	102.657	2.933	1417252	1.63	100	102.7	90	110	
Sb	121	1	No Gas	107.283	1.884	2014596	1.15	100	107.3	90	110	
Ba	137	1	No Gas	105.959	4.161	699455	1.22	100	106.0	90	110	
Tl	205	1	No Gas	109.472	4.321	4042890	1.19	100	109.5	90	110	
Tl	203	1	No Gas	107.493	5.432	1685346	2.34	100	107.5	90	110	
Pb	208	1	No Gas	106.911	3.890	5413102	0.79	100	106.9	90	110	
U	238	1	No Gas	102.676	3.103	5173421	0.20	100	102.7	90	110	
Ca	43	2	He	10393.634	2.496	36235	1.49	10000	103.9	90	110	
Sb	121	2	He	103.493	2.215	1117397	2.76	100	103.5	90	110	
Ti	47	2	He	103.222	4.012	37846	2.91	100	103.2	90	110	
Cu	63	1	No Gas	107.666	2.786	1915147	1.39	100	107.7	90	110	

QC ISTD Table

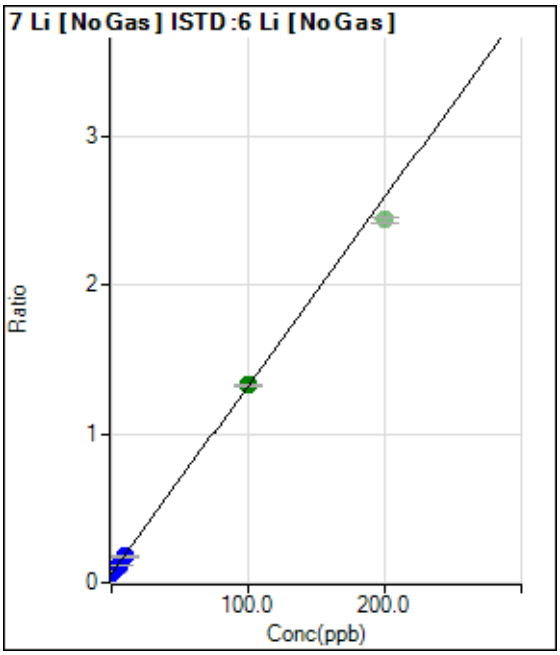
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1686946	1.88	1801940	93.62	70	120	
Ge	72	2	He	1207732	1.57	1191599	101.35	70	120	
Ge	72	1	No Gas	3589107	1.54	3591716	99.93	70	120	
In	115	1	No Gas	4076480	3.06	4173630	97.67	70	120	
Bi	209	1	No Gas	3301847	3.08	3450328	95.70	70	120	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\090220A.b\
Analysis File: 090220A.batch.bin
DA Date-Time: 9/2/2020 9:38:11 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	9/2/2020 10:34:39 AM
2	012CALS.d	2/10/200	9/2/2020 10:36:32 AM
3	013CALS.d	5/25/500	9/2/2020 10:38:24 AM
4	014CALS.d	10/50/100	9/2/2020 10:40:16 AM
5	015CALS.d	100/500/10K	9/2/2020 10:42:08 AM
6	016CALS.d	200/1000/20K	9/2/2020 10:43:53 AM

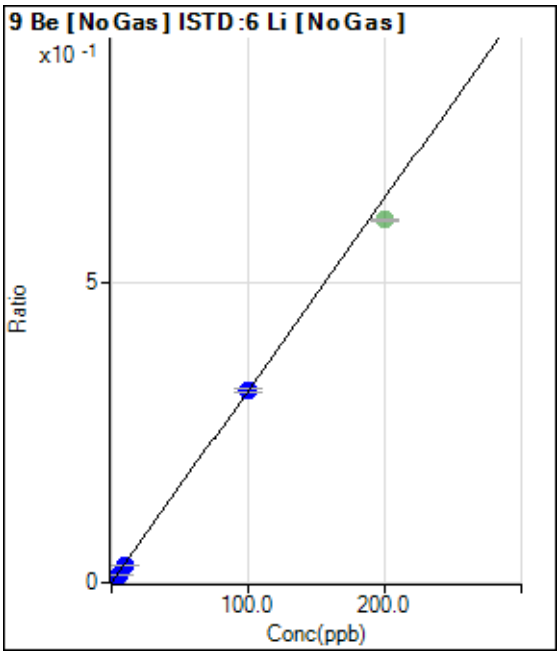
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108009.07	0.0600	P	4.4
2	☐	2.000	1.842	150042.59	0.0833	P	1.4
3	☐	5.000	4.483	210883.45	0.1166	P	2.4
4	☐	10.000	9.105	310345.65	0.1749	P	1.4
5	☐	100.000	100.118	2293137.73	1.3232	A	1.6
6	☑	200.000		4210768.58	2.4349	A	1.6

y = 0.0126 * x + 0.0600
R = 1.0000
DL = 0.6316
BEC = 4.756

Weight: <None>
Min Conc: <None>

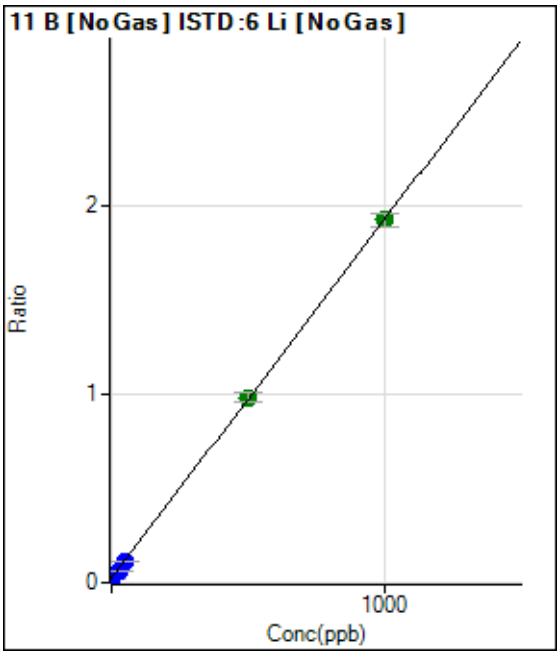


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.6
2	☐	2.000	1.815	10514.05	0.0058	P	1.1
3	☐	5.000	4.308	25014.05	0.0138	P	3.6
4	☐	10.000	8.716	49617.29	0.0280	P	3.6
5	☐	100.000	100.167	556814.36	0.3214	P	2.7
6	☑	200.000		1047985.76	0.6059	A	0.9

y = 0.0032 * x + 9.2788E-006
R = 0.9999
DL = 0.001698
BEC = 0.002892

Weight: <None>
Min Conc: <None>

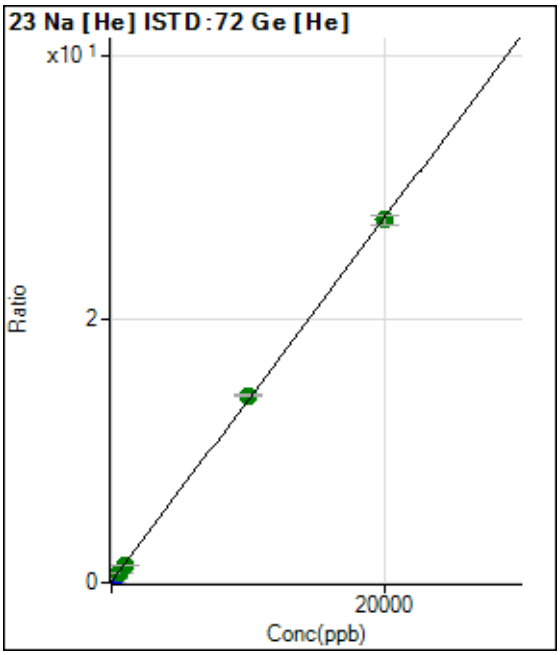
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42928.97	0.0238	P	5.3
2	☐	10.000	8.822	73262.13	0.0407	P	2.5
3	☐	25.000	21.406	116966.00	0.0647	P	1.6
4	☐	50.000	44.617	193192.91	0.1089	P	2.6
5	☐	500.000	502.928	1701436.69	0.9825	A	5.1
6	☐	1000.000	998.907	3332839.22	1.9278	A	3.8

y = 0.0019 * x + 0.0238
R = 1.0000
DL = 1.978
BEC = 12.51

Weight: <None>
Min Conc: <None>

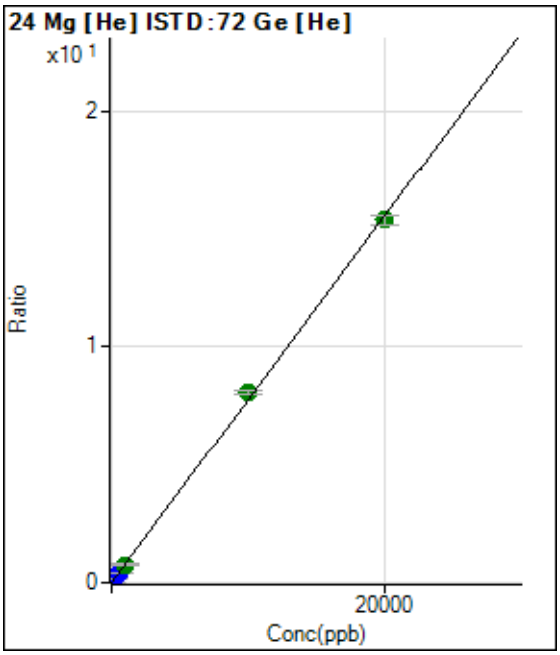


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80780.94	0.0678	P	1.6
2	☐	200.000	194.923	404342.23	0.3372	P	1.5
3	☐	500.000	495.110	873430.90	0.7520	A	2.1
4	☐	1000.000	945.353	1625669.25	1.3743	A	1.3
5	☐	10000.00	10227.20	16867532.66	14.2018	A	1.1
6	☐	20000.00	19889.30	32378185.35	27.5549	A	2.5

y = 0.0014 * x + 0.0678
R = 0.9999
DL = 2.35
BEC = 49.05

Weight: <None>
Min Conc: <None>

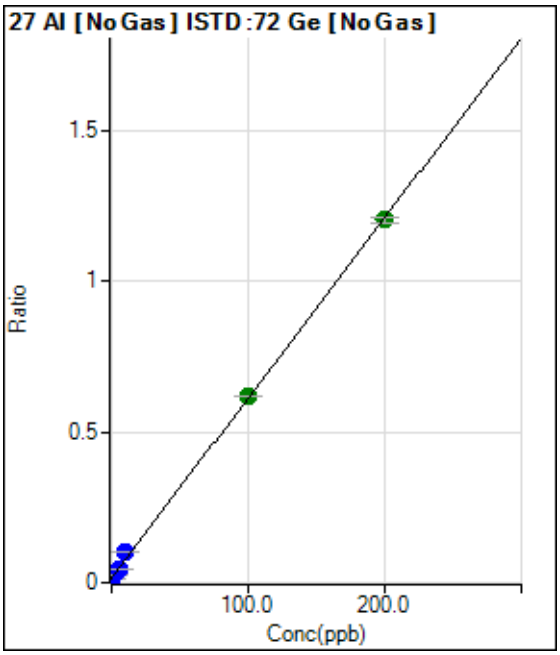
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	15.7
2	☐	200.000	200.089	186908.06	0.1559	P	1.2
3	☐	500.000	505.929	456919.80	0.3934	P	1.2
4	☐	1000.000	975.712	896635.40	0.7583	A	5.0
5	☐	10000.00	10396.23	9590907.77	8.0755	A	1.2
6	☐	20000.00	19802.94	18074599.31	15.3819	A	2.4

y = 7.7673E-004 * x + 4.4215E-004
R = 0.9997
DL = 0.2683
BEC = 0.5693

Weight: <None>
Min Conc: <None>

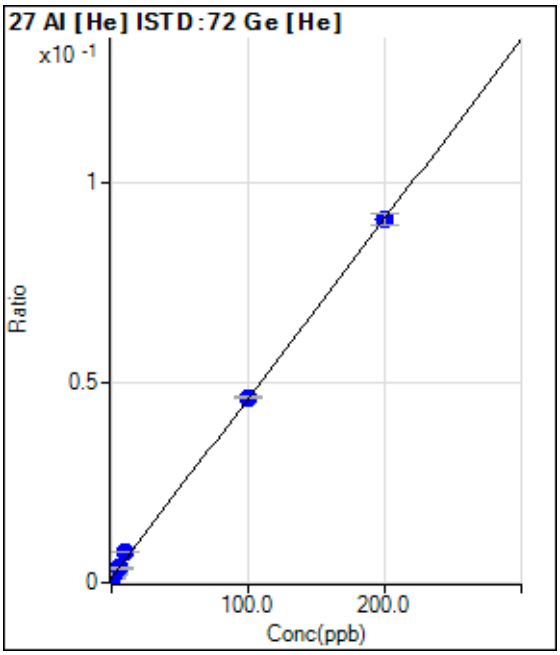


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55193.02	0.0154	P	0.8
2	☐	2.000	2.177	101933.42	0.0284	P	4.5
3	☐	5.000	4.991	162321.35	0.0452	P	3.5
4	☐	10.000	14.430	363860.98	0.1015	P	0.8
5	☐	100.000	101.470	2204238.92	0.6213	A	0.3
6	☐	200.000	199.042	4200675.25	1.2039	A	1.8

y = 0.0060 * x + 0.0154
R = 0.9998
DL = 0.06102
BEC = 2.574

Weight: <None>
Min Conc: <None>

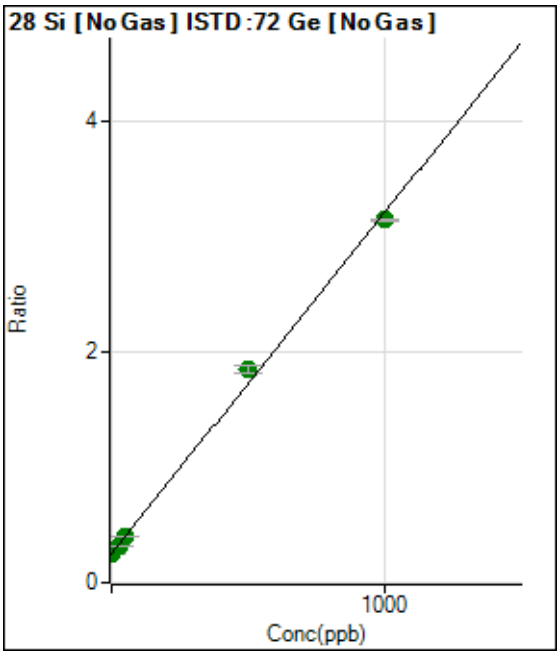
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.77	0.0012	P	11.2
2	☐	2.000	2.154	2543.62	0.0021	P	4.2
3	☐	5.000	5.507	4210.71	0.0036	P	4.7
4	☐	10.000	14.520	9073.08	0.0077	P	5.1
5	☐	100.000	100.586	54975.86	0.0463	P	1.3
6	☐	200.000	199.467	106534.61	0.0907	P	3.1

y = 4.4875E-004 * x + 0.0012
R = 0.9998
DL = 0.8645
BEC = 2.574

Weight: <None>
Min Conc: <None>

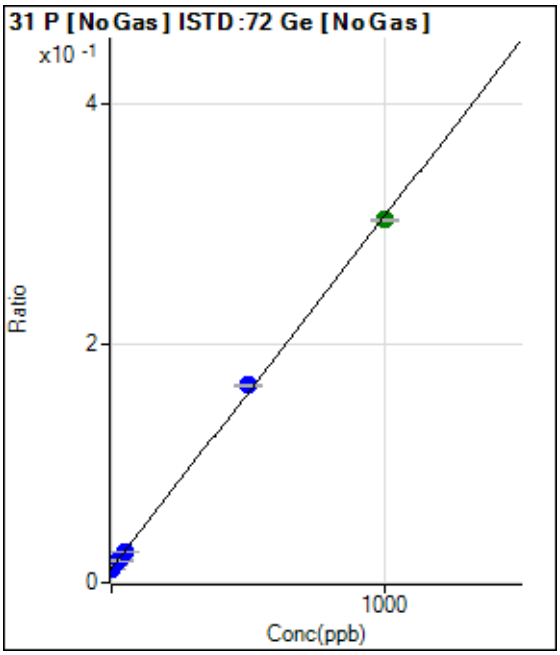


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	907317.07	0.2526	A	0.4
2	☐	10.000	10.293	1017472.07	0.2831	A	2.6
3	☐	25.000	22.790	1150233.08	0.3200	A	2.6
4	☐	50.000	48.327	1417718.10	0.3956	A	0.2
5	☐	500.000	542.160	6585647.19	1.8566	A	3.4
6	☐	1000.000	979.056	10989109.84	3.1492	A	0.8

y = 0.0030 * x + 0.2526
R = 0.9987
DL = 1.006
BEC = 85.38

Weight: <None>
Min Conc: <None>

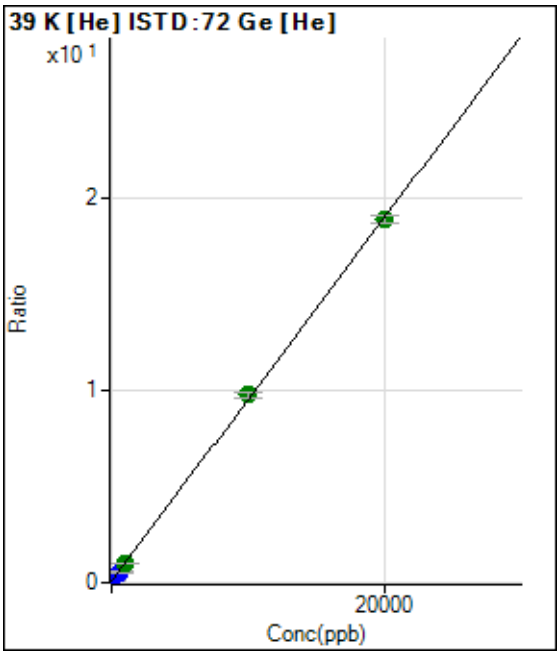
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42187.72	0.0117	P	3.2
2	☐	10.000	9.497	52275.29	0.0145	P	4.0
3	☐	25.000	23.034	66616.44	0.0185	P	2.2
4	☐	50.000	46.671	91379.39	0.0255	P	0.6
5	☐	500.000	520.743	586016.78	0.1652	P	1.5
6	☐	1000.000	989.849	1058710.01	0.3034	A	0.9

y = 2.9466E-004 * x + 0.0117
R = 0.9997
DL = 3.799
BEC = 39.87

Weight: <None>
Min Conc: <None>

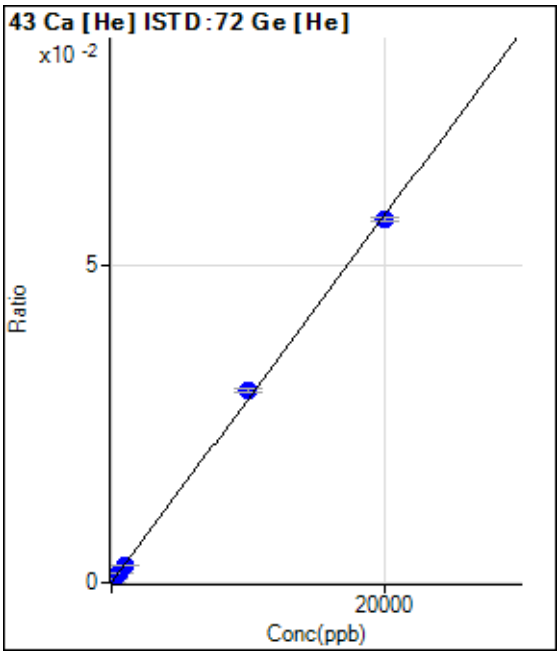


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93559.19	0.0785	P	0.5
2	☐	200.000	195.807	316026.33	0.2635	P	1.6
3	☐	500.000	495.786	635206.18	0.5470	P	2.2
4	☐	1000.000	951.057	1155699.57	0.9772	A	2.9
5	☐	10000.00	10264.10	11610195.24	9.7770	A	3.0
6	☐	20000.00	19870.54	22155299.67	18.8540	A	2.1

y = 9.4489E-004 * x + 0.0785
R = 0.9999
DL = 1.313
BEC = 83.1

Weight: <None>
Min Conc: <None>

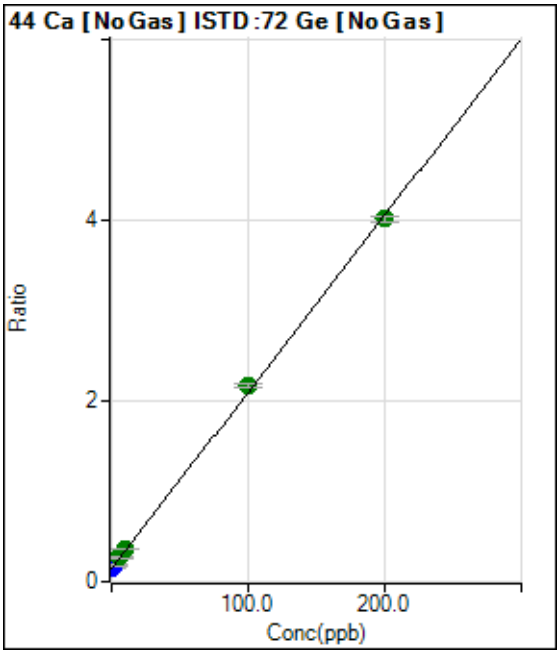
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	11.7
2	☐	200.000	204.122	753.37	0.0006	P	9.6
3	☐	500.000	486.024	1673.47	0.0014	P	10.0
4	☐	1000.000	954.163	3300.46	0.0028	P	5.0
5	☐	10000.00	10488.59	35960.99	0.0303	P	2.2
6	☐	20000.00	19758.30	67003.26	0.0570	P	1.0

y = 2.8835E-006 * x + 3.9141E-005
R = 0.9996
DL = 4.76
BEC = 13.57

Weight: <None>
Min Conc: <None>

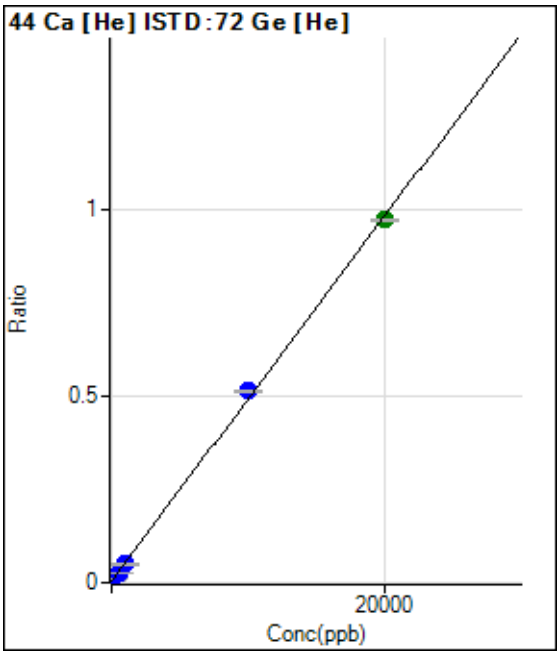


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513846.13	0.1431	P	1.1
2	☐	2.000	1.894	647441.00	0.1801	P	1.9
3	☐	5.000	6.470	968567.56	0.2695	A	3.8
4	☐	10.000	10.902	1276412.51	0.3562	A	0.4
5	☐	100.000	103.629	7693820.09	2.1687	A	1.3
6	☐	200.000	198.105	14010336.46	4.0154	A	1.6

y = 0.0195 * x + 0.1431
R = 0.9998
DL = 0.2452
BEC = 7.319

Weight: <None>
Min Conc: <None>

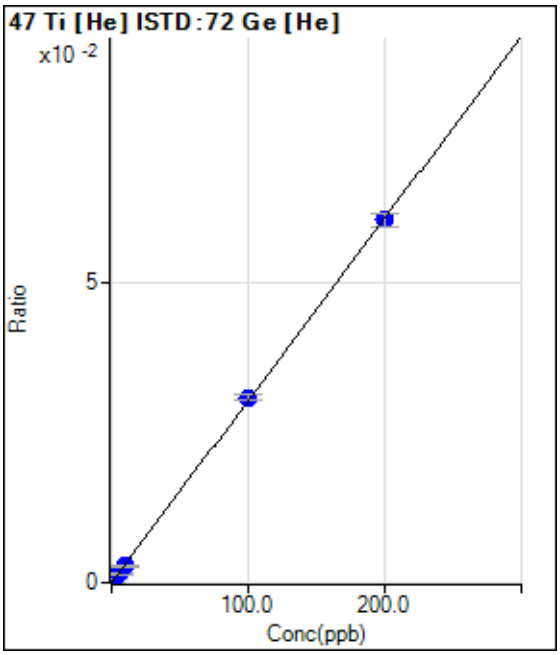
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4700.89	0.0039	P	3.8
2	☐	200.000	186.506	15662.56	0.0131	P	3.1
3	☐	500.000	475.218	31559.78	0.0272	P	2.7
4	☐	1000.000	924.253	58113.30	0.0491	P	1.9
5	☐	10000.00	10410.21	608957.09	0.5128	P	1.8
6	☐	20000.00	19799.43	1142335.37	0.9718	A	0.7

y = 4.8881E-005 * x + 0.0039
R = 0.9997
DL = 9.142
BEC = 80.71

Weight: <None>
Min Conc: <None>

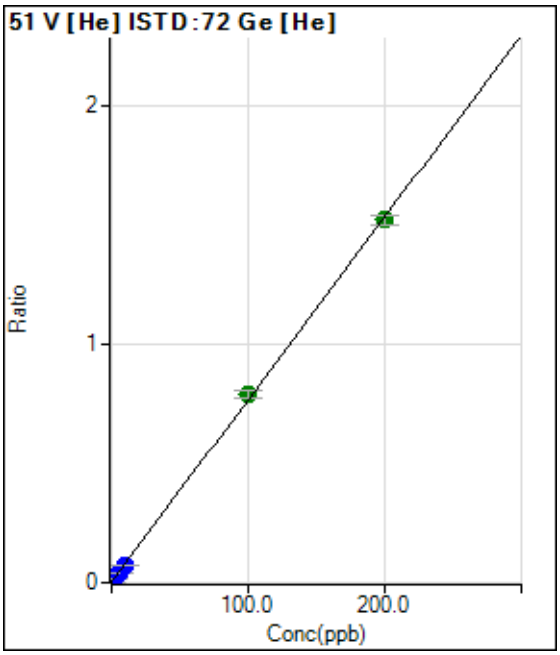


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.4
2	☐	2.000	1.695	630.03	0.0005	P	14.6
3	☐	5.000	4.843	1720.14	0.0015	P	6.5
4	☐	10.000	8.980	3237.11	0.0027	P	3.6
5	☐	100.000	101.543	36615.85	0.0308	P	3.1
6	☐	200.000	199.287	71091.34	0.0605	P	3.5

y = 3.0358E-004 * x + 1.1192E-005
R = 0.9999
DL = 0.04797
BEC = 0.03687

Weight: <None>
Min Conc: <None>

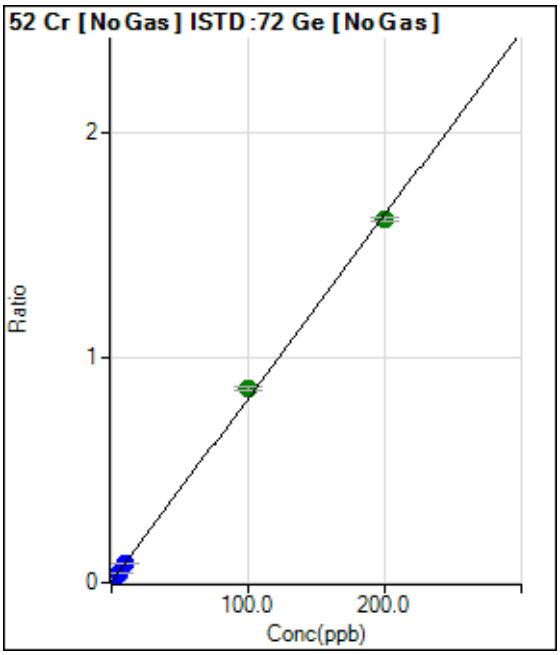
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3679.40	0.0031	P	2.7
2	☐	2.000	1.850	20644.53	0.0172	P	2.8
3	☐	5.000	4.702	45290.34	0.0390	P	1.9
4	☐	10.000	9.130	86140.58	0.0728	P	1.1
5	☐	100.000	102.908	936802.63	0.7890	A	3.5
6	☐	200.000	198.599	1785920.48	1.5199	A	2.6

y = 0.0076 * x + 0.0031
R = 0.9998
DL = 0.03322
BEC = 0.4043

Weight: <None>
Min Conc: <None>

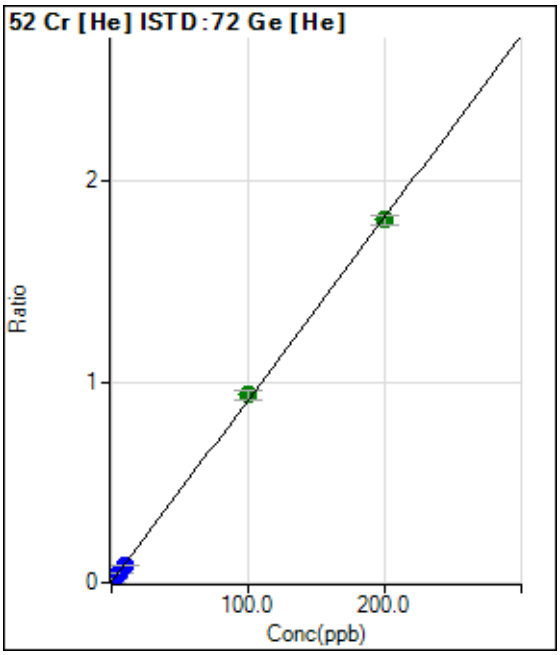


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16043.12	0.0045	P	3.5
2	☐	2.000	1.997	74422.98	0.0207	P	3.0
3	☐	5.000	4.812	156704.50	0.0436	P	2.3
4	☐	10.000	9.636	296842.20	0.0828	P	2.0
5	☐	100.000	105.337	3054745.27	0.8611	A	2.8
6	☐	200.000	197.354	5616165.96	1.6095	A	1.0

y = 0.0081 * x + 0.0045
R = 0.9995
DL = 0.05827
BEC = 0.5493

Weight: <None>
Min Conc: <None>

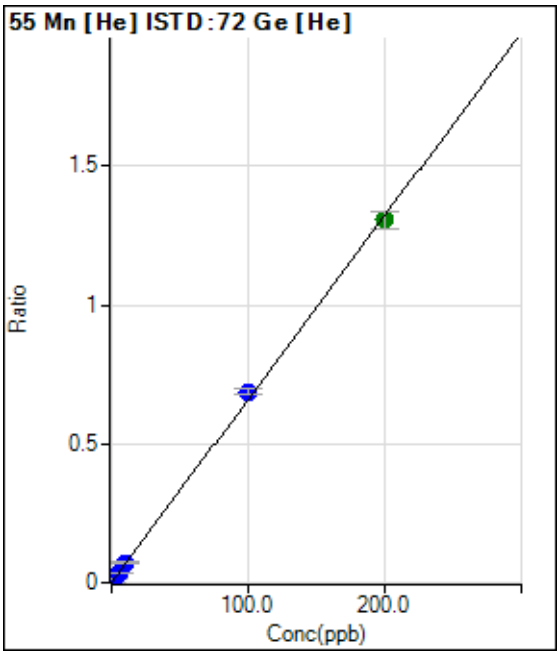
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2286.90	0.0019	P	7.8
2	☐	2.000	1.941	23443.77	0.0195	P	0.7
3	☐	5.000	4.864	53541.80	0.0461	P	1.7
4	☐	10.000	9.621	105636.97	0.0893	P	1.9
5	☐	100.000	102.613	1108771.73	0.9340	A	4.3
6	☐	200.000	198.716	2123073.09	1.8069	A	2.7

y = 0.0091 * x + 0.0019
R = 0.9999
DL = 0.04948
BEC = 0.2113

Weight: <None>
Min Conc: <None>

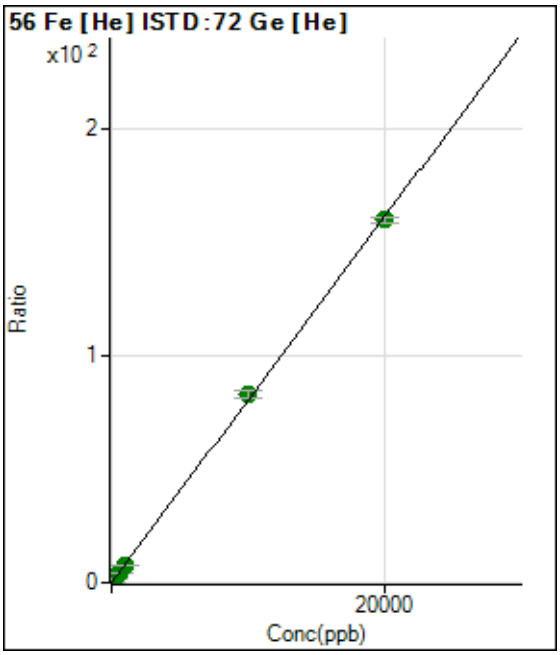


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0004	P	7.2
2	☐	2.000	1.905	15615.89	0.0130	P	5.2
3	☐	5.000	4.865	37802.81	0.0326	P	4.1
4	☐	10.000	10.902	85644.62	0.0724	P	2.3
5	☐	100.000	104.048	816044.78	0.6873	P	2.7
6	☐	200.000	197.935	1535362.69	1.3070	A	4.5

y = 0.0066 * x + 4.4473E-004
R = 0.9997
DL = 0.0146
BEC = 0.06737

Weight: <None>
Min Conc: <None>

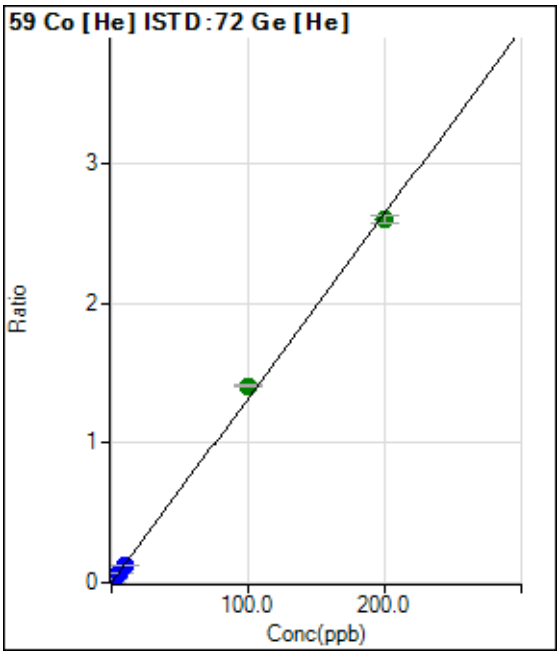
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10347.41	0.0087	P	1.0
2	☐	200.000	195.725	1899902.84	1.5841	A	0.7
3	☐	500.000	494.490	4631792.85	3.9888	A	2.9
4	☐	1000.000	938.903	8949056.95	7.5659	A	2.1
5	☐	10000.00	10325.29	98684135.20	83.1168	A	3.6
6	☐	20000.00	19840.59	187675623.8	159.705	A	1.8

y = 0.0080 * x + 0.0087
R = 0.9998
DL = 0.03159
BEC = 1.079

Weight: <None>
Min Conc: <None>

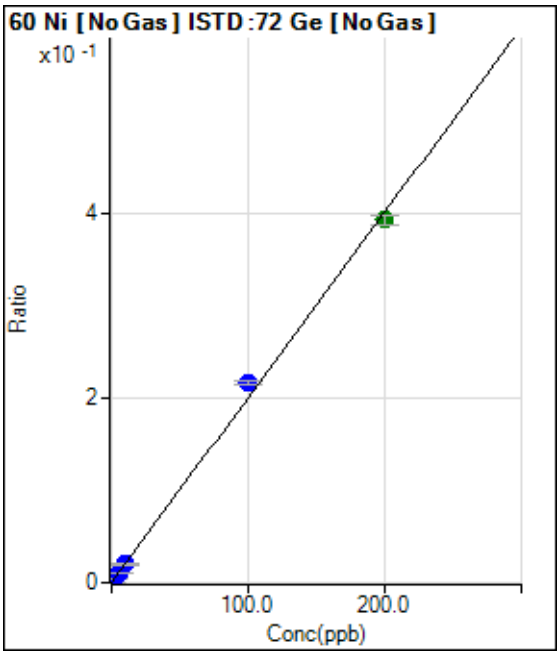


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0002	P	14.8
2	☐	2.000	1.977	31476.70	0.0262	P	2.7
3	☐	5.000	4.961	76199.45	0.0656	P	2.4
4	☐	10.000	9.522	148805.44	0.1258	P	1.4
5	☐	100.000	106.623	1671076.90	1.4070	A	1.3
6	☐	200.000	196.714	3050253.49	2.5957	A	2.0

y = 0.0132 * x + 1.5959E-004
R = 0.9992
DL = 0.005369
BEC = 0.01209

Weight: <None>
Min Conc: <None>

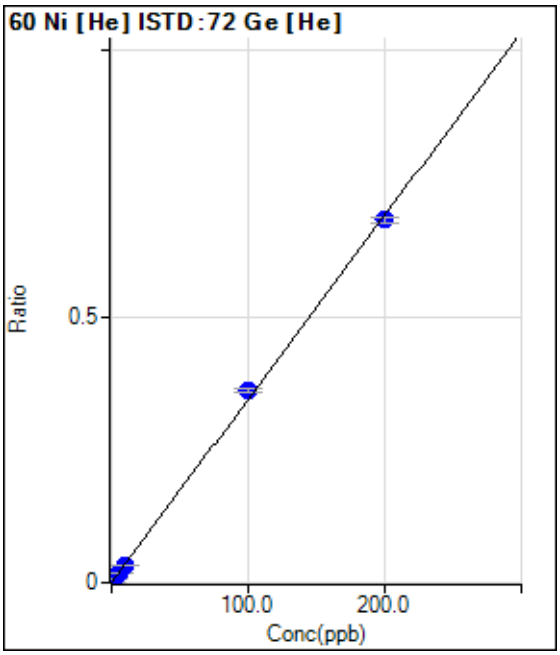
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.02	0.0001	P	9.5
2	☐	2.000	2.000	14871.71	0.0041	P	6.9
3	☐	5.000	4.984	36425.76	0.0101	P	2.4
4	☐	10.000	9.857	71394.62	0.0199	P	2.2
5	☐	100.000	107.982	770019.31	0.2170	P	2.0
6	☐	200.000	196.016	1374360.60	0.3939	A	2.7

y = 0.0020 * x + 1.2254E-004
R = 0.9989
DL = 0.0173
BEC = 0.061

Weight: <None>
Min Conc: <None>

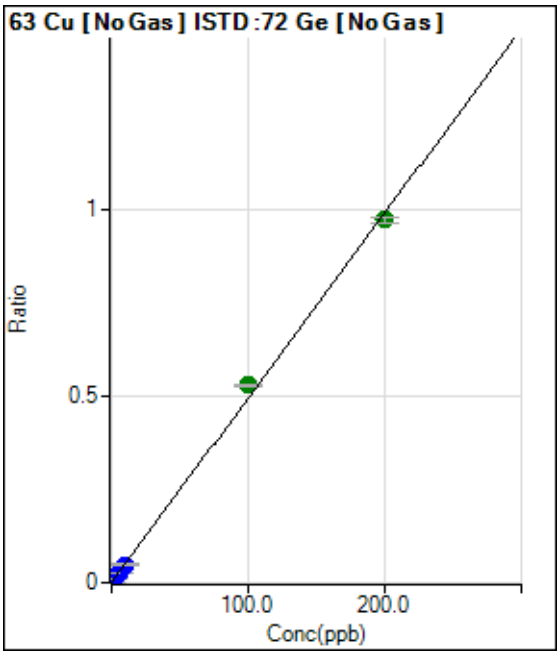


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0002	P	10.4
2	☐	2.000	1.909	8112.56	0.0068	P	3.2
3	☐	5.000	4.874	19734.66	0.0170	P	4.5
4	☐	10.000	9.431	38695.35	0.0327	P	1.7
5	☐	100.000	104.604	428734.17	0.3610	P	2.6
6	☐	200.000	197.731	801857.49	0.6823	P	1.7

y = 0.0034 * x + 1.7913E-004
R = 0.9996
DL = 0.01622
BEC = 0.05192

Weight: <None>
Min Conc: <None>

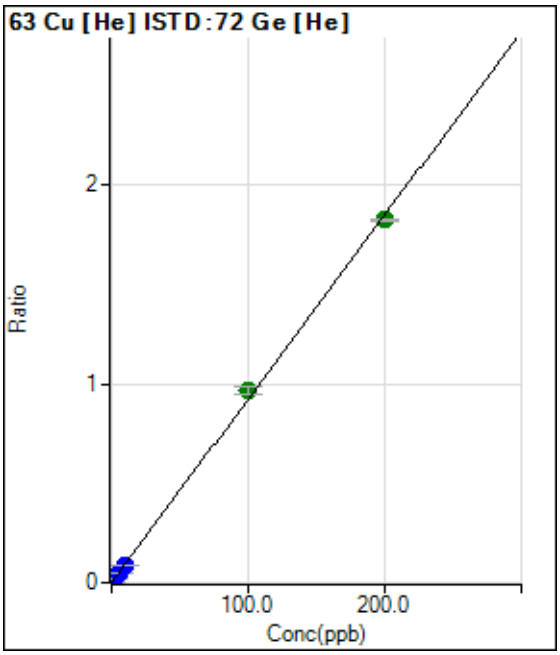
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.08	0.0003	P	2.7
2	☐	2.000	2.029	37325.02	0.0104	P	0.9
3	☐	5.000	4.933	89018.20	0.0248	P	2.4
4	☐	10.000	9.828	175667.47	0.0490	P	1.4
5	☐	100.000	107.047	1882747.78	0.5307	A	0.8
6	☐	200.000	196.486	3397954.53	0.9738	A	1.3

y = 0.0050 * x + 3.2576E-004
R = 0.9991
DL = 0.005329
BEC = 0.06575

Weight: <None>
Min Conc: <None>

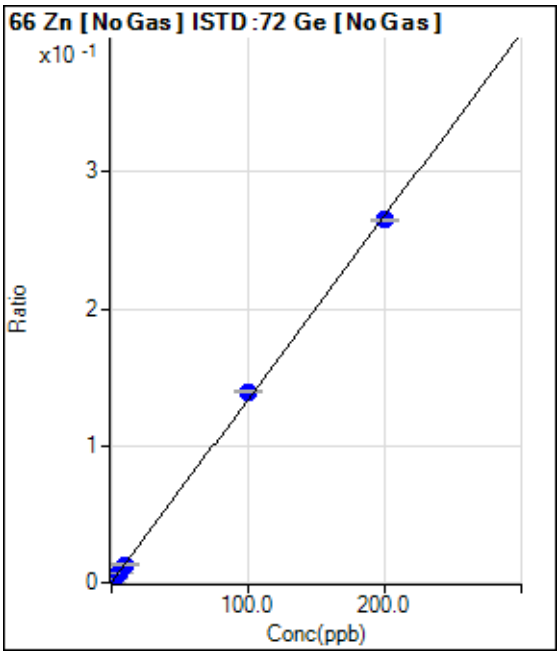


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.37	0.0006	P	18.1
2	☐	2.000	1.926	22061.71	0.0184	P	2.2
3	☐	5.000	4.861	52859.85	0.0455	P	2.0
4	☐	10.000	9.385	103262.08	0.0873	P	2.2
5	☐	100.000	104.924	1151693.99	0.9700	A	3.6
6	☐	200.000	197.573	2146156.22	1.8260	A	0.7

y = 0.0092 * x + 5.9830E-004
R = 0.9996
DL = 0.03515
BEC = 0.06476

Weight: <None>
Min Conc: <None>

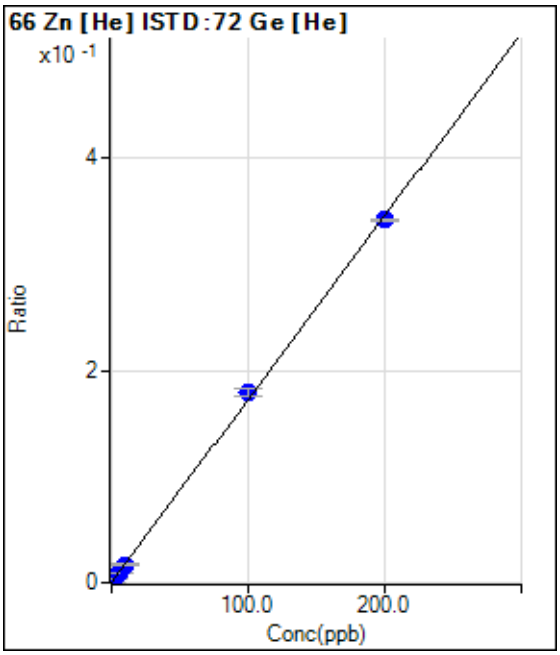
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0002	P	4.6
2	☐	2.000	1.989	10240.69	0.0028	P	1.8
3	☐	5.000	4.744	23484.09	0.0065	P	1.8
4	☐	10.000	9.802	47654.10	0.0133	P	1.5
5	☐	100.000	104.262	495383.08	0.1396	P	1.4
6	☐	200.000	197.886	924160.12	0.2649	P	0.6

y = 0.0013 * x + 1.8748E-004
R = 0.9997
DL = 0.0192
BEC = 0.1402

Weight: <None>
Min Conc: <None>

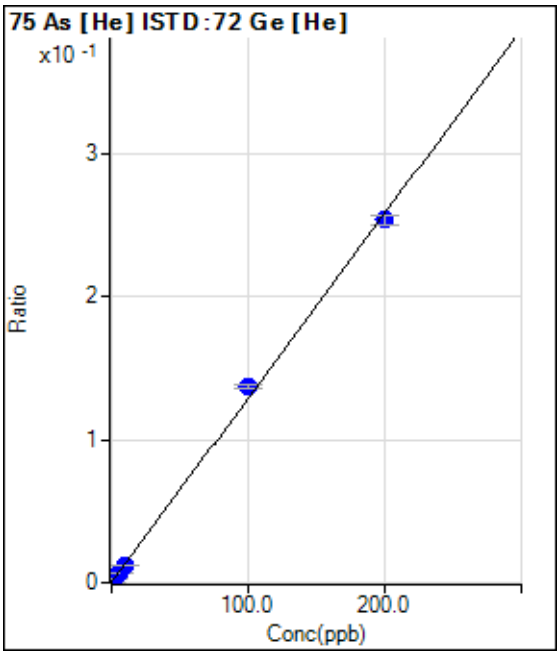


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	21.4
2	☐	2.000	1.972	4397.46	0.0037	P	5.1
3	☐	5.000	4.817	9953.83	0.0086	P	4.2
4	☐	10.000	9.809	20328.96	0.0172	P	3.3
5	☐	100.000	104.039	213429.28	0.1798	P	3.5
6	☐	200.000	197.995	401796.06	0.3419	P	0.7

y = 0.0017 * x + 2.6302E-004
R = 0.9997
DL = 0.09776
BEC = 0.1525

Weight: <None>
Min Conc: <None>

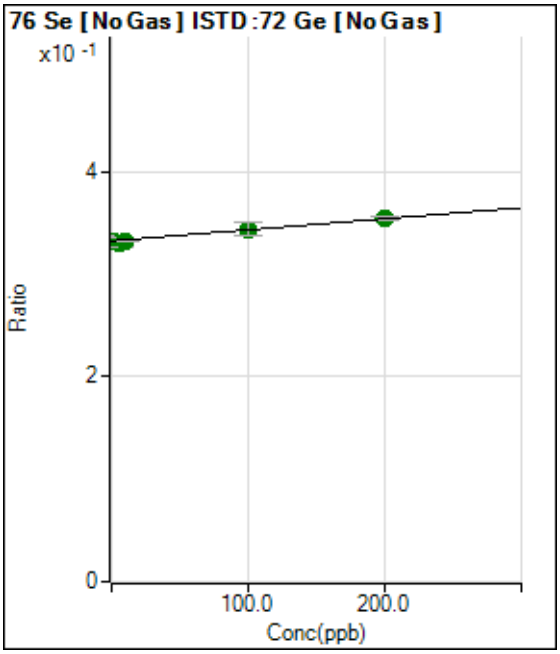
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.67	0.0002	P	10.4
2	☐	2.000	1.816	3042.59	0.0025	P	4.4
3	☐	5.000	4.784	7385.38	0.0064	P	1.7
4	☐	10.000	9.266	14348.77	0.0121	P	1.3
5	☐	100.000	106.660	163329.11	0.1375	P	2.0
6	☐	200.000	196.714	297884.41	0.2535	P	2.5

y = 0.0013 * x + 1.9852E-004
R = 0.9992
DL = 0.04818
BEC = 0.1542

Weight: <None>
Min Conc: <None>

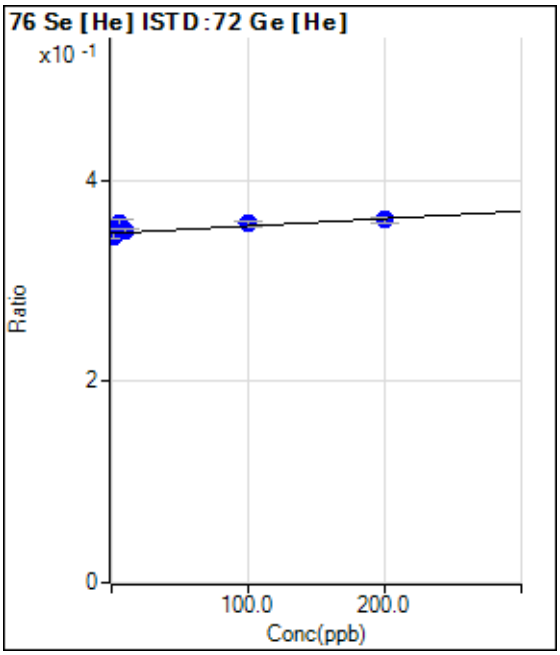


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1193927.35	0.3324	A	1.1
2	☐	2.000	-0.194	1194776.34	0.3324	A	2.7
3	☐	5.000	-17.863	1187715.89	0.3305	A	2.9
4	☐	10.000	0.671	1191578.47	0.3325	A	0.1
5	☐	100.000	106.492	1219964.44	0.3439	A	3.6
6	☐	200.000	197.814	1234562.35	0.3538	A	1.2

y = 1.0818E-004 * x + 0.3324
R = 0.9941
DL = 98.39
BEC = 3073

Weight: <None>
Min Conc: <None>

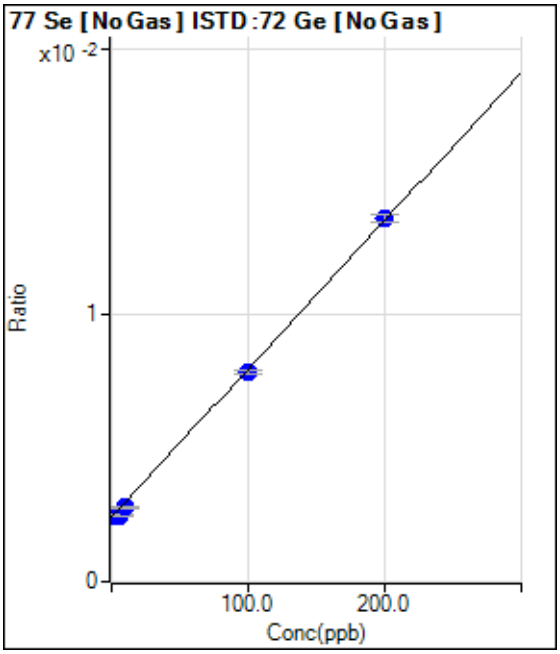
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413926.97	0.3474	P	2.4
2	☐	2.000	-32.078	413775.62	0.3450	P	1.3
3	☐	5.000	130.646	414641.32	0.3571	P	2.9
4	☐	10.000	39.267	414424.55	0.3503	P	0.8
5	☐	100.000	128.778	423891.83	0.3569	P	1.3
6	☐	200.000	181.347	424056.57	0.3608	P	1.3

y = 7.3996E-005 * x + 0.3474
R = 0.7669
DL = 334.9
BEC = 4695

Weight: <None>
Min Conc: <None>

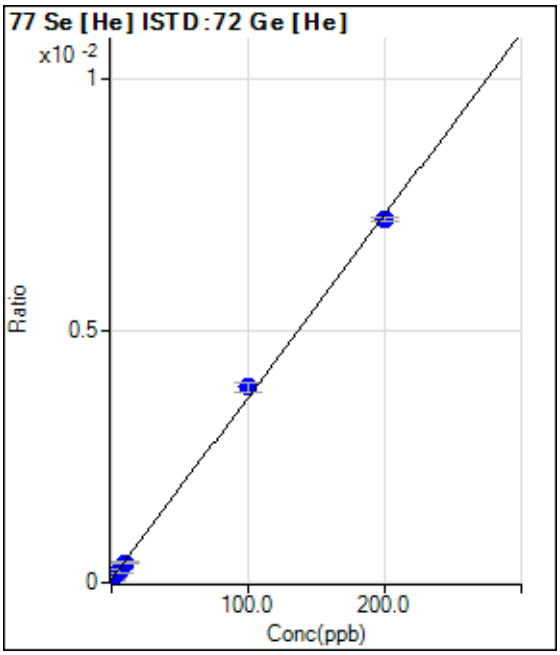


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8679.64	0.0024	P	4.4
2	☐	2.000	1.155	8923.11	0.0025	P	5.5
3	☐	5.000	1.185	8923.13	0.0025	P	2.2
4	☐	10.000	6.726	10000.54	0.0028	P	2.7
5	☐	100.000	98.336	27969.51	0.0079	P	2.0
6	☐	200.000	201.100	47444.02	0.0136	P	2.0

y = 5.5602E-005 * x + 0.0024
R = 0.9998
DL = 5.768
BEC = 43.46

Weight: <None>
Min Conc: <None>

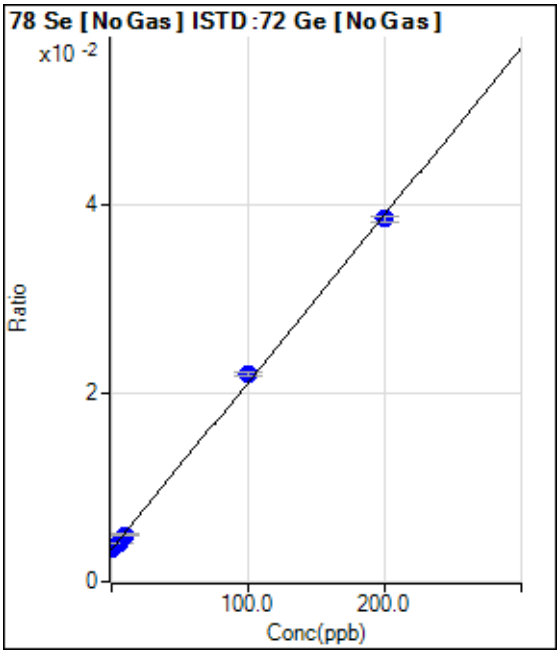
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	32.0
2	☐	2.000	1.525	143.33	0.0001	P	20.0
3	☐	5.000	4.634	270.01	0.0002	P	30.8
4	☐	10.000	9.124	466.68	0.0004	P	14.1
5	☐	100.000	105.476	4614.22	0.0039	P	4.6
6	☐	200.000	197.319	8479.50	0.0072	P	0.9

y = 3.6237E-005 * x + 6.4217E-005
R = 0.9994
DL = 1.703
BEC = 1.772

Weight: <None>
Min Conc: <None>

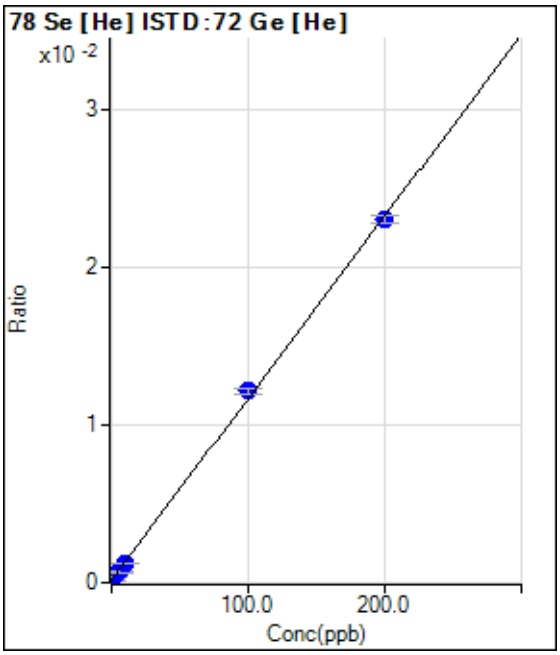


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12302.47	0.0034	P	2.0
2	☐	2.000	1.808	13466.91	0.0037	P	3.8
3	☐	5.000	3.868	14791.71	0.0041	P	1.1
4	☐	10.000	8.766	17865.42	0.0050	P	2.5
5	☐	100.000	104.933	78408.32	0.0221	P	1.0
6	☐	200.000	197.626	134677.45	0.0386	P	1.3

y = 1.7798E-004 * x + 0.0034
R = 0.9995
DL = 1.166
BEC = 19.25

Weight: <None>
Min Conc: <None>

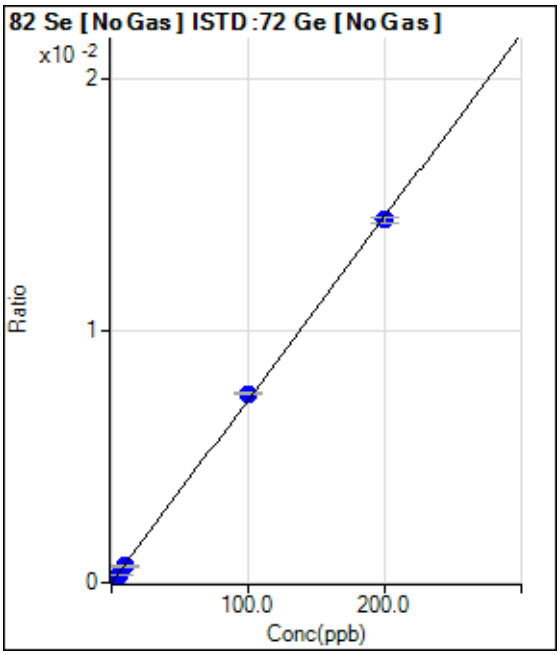
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.00	0.0002	P	5.3
2	☐	2.000	1.907	450.68	0.0004	P	9.4
3	☐	5.000	4.459	778.02	0.0007	P	3.3
4	☐	10.000	9.407	1466.08	0.0012	P	3.4
5	☐	100.000	103.908	14391.71	0.0121	P	3.6
6	☐	200.000	198.090	26988.99	0.0230	P	2.0

y = 1.1515E-004 * x + 1.5612E-004
R = 0.9997
DL = 0.2166
BEC = 1.356

Weight: <None>
Min Conc: <None>

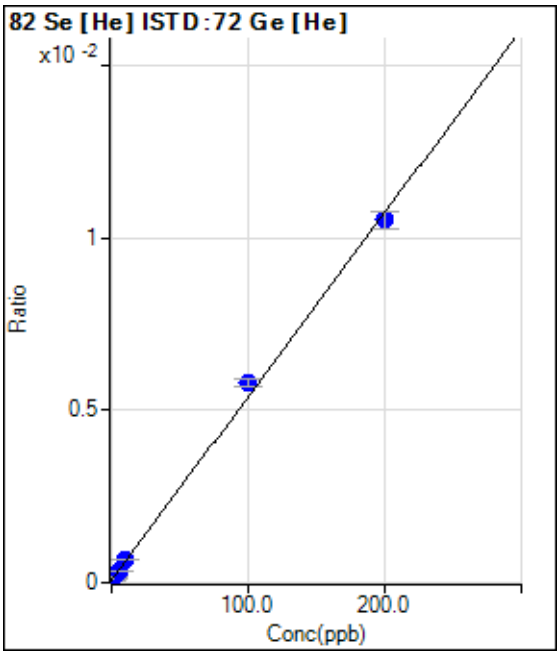


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-5.97	0.0000	P	-2242.
2	☐	2.000	1.888	487.60	0.0001	P	21.4
3	☐	5.000	4.147	1077.09	0.0003	P	6.6
4	☐	10.000	9.207	2391.15	0.0007	P	9.6
5	☐	100.000	103.421	26644.38	0.0075	P	1.7
6	☐	200.000	198.352	50262.49	0.0144	P	1.7

y = 7.2633E-005 * x - 1.5913E-006
R = 0.9998
DL = 1.474
BEC = -0.02191

Weight: <None>
Min Conc: <None>

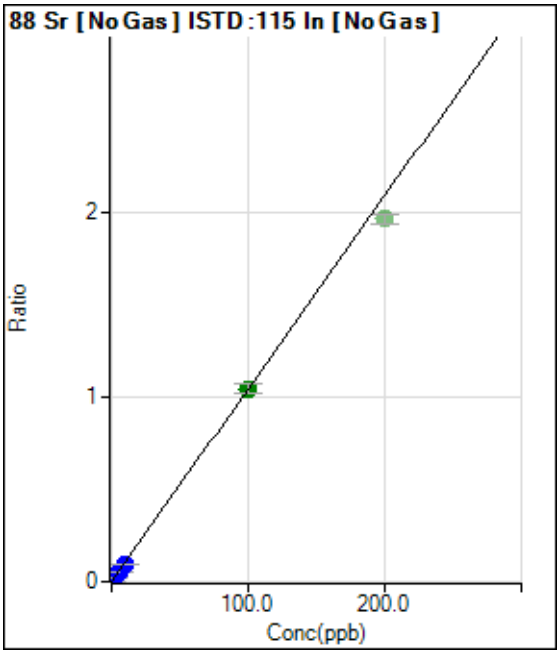
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	45.2
2	☐	2.000	1.401	173.34	0.0001	P	17.9
3	☐	5.000	4.979	390.01	0.0003	P	11.8
4	☐	10.000	11.262	793.37	0.0007	P	7.2
5	☐	100.000	107.402	6881.86	0.0058	P	4.1
6	☐	200.000	196.243	12379.26	0.0105	P	4.5

y = 5.3305E-005 * x + 6.9901E-005
R = 0.9990
DL = 1.78
BEC = 1.311

Weight: <None>
Min Conc: <None>

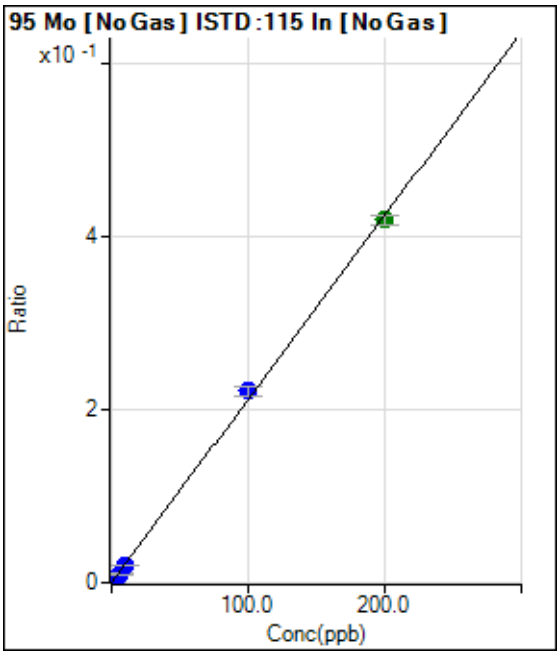


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1886.84	0.0005	P	5.5
2	☐	2.000	1.875	83802.86	0.0200	P	4.7
3	☐	5.000	4.728	205253.74	0.0498	P	2.8
4	☐	10.000	9.323	403813.07	0.0977	P	1.3
5	☐	100.000	100.084	4226592.33	1.0446	A	5.0
6	☑	200.000		7867354.05	1.9638	A	2.5

y = 0.0104 * x + 4.5220E-004
R = 1.0000
DL = 0.007144
BEC = 0.04334

Weight: <None>
Min Conc: <None>

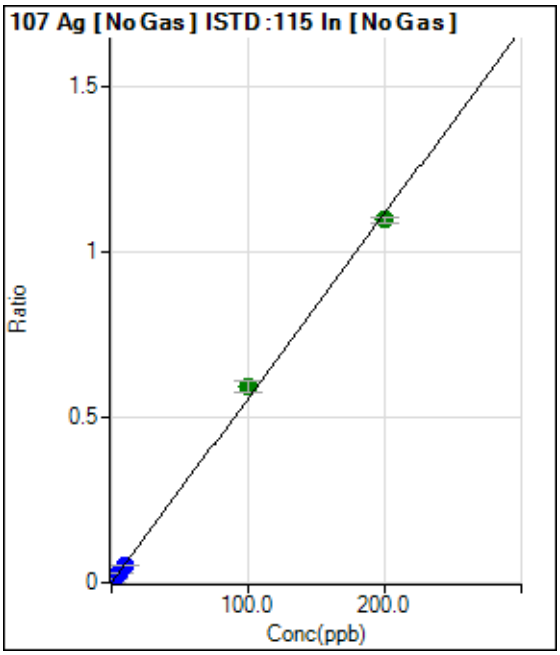
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	69.1
2	☐	2.000	1.881	16767.55	0.0040	P	5.5
3	☐	5.000	4.670	40933.59	0.0099	P	3.5
4	☐	10.000	9.449	82965.14	0.0201	P	1.1
5	☐	100.000	104.568	898269.02	0.2221	P	4.8
6	☐	200.000	197.753	1682506.07	0.4200	A	2.6

y = 0.0021 * x + 1.1219E-005
R = 0.9996
DL = 0.01095
BEC = 0.005283

Weight: <None>
Min Conc: <None>

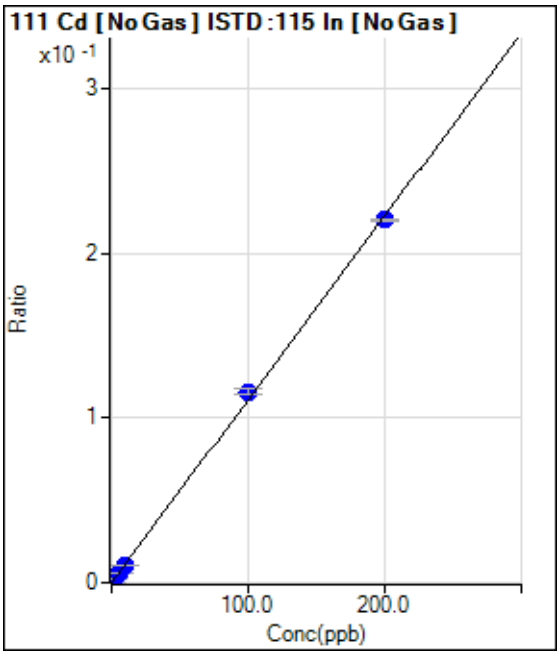


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0001	P	13.7
2	☐	2.000	1.935	45789.77	0.0109	P	2.4
3	☐	5.000	4.813	111388.45	0.0270	P	2.1
4	☐	10.000	9.496	219767.38	0.0532	P	0.3
5	☐	100.000	106.769	2413307.52	0.5968	A	5.9
6	☐	200.000	196.646	4403544.21	1.0990	A	1.3

y = 0.0056 * x + 1.1814E-004
R = 0.9992
DL = 0.008677
BEC = 0.02114

Weight: <None>
Min Conc: <None>

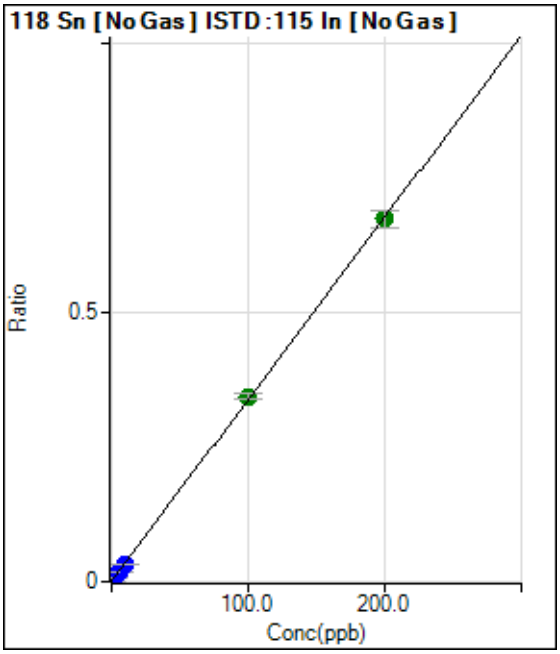
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.7
2	☐	2.000	1.918	8963.19	0.0021	P	2.6
3	☐	5.000	4.797	22045.46	0.0053	P	1.5
4	☐	10.000	9.144	42101.19	0.0102	P	1.0
5	☐	100.000	103.989	468779.91	0.1158	P	3.0
6	☐	200.000	198.054	883953.03	0.2206	P	0.4

y = 0.0011 * x + 3.1977E-006
R = 0.9997
DL = 0.00376
BEC = 0.002871

Weight: <None>
Min Conc: <None>

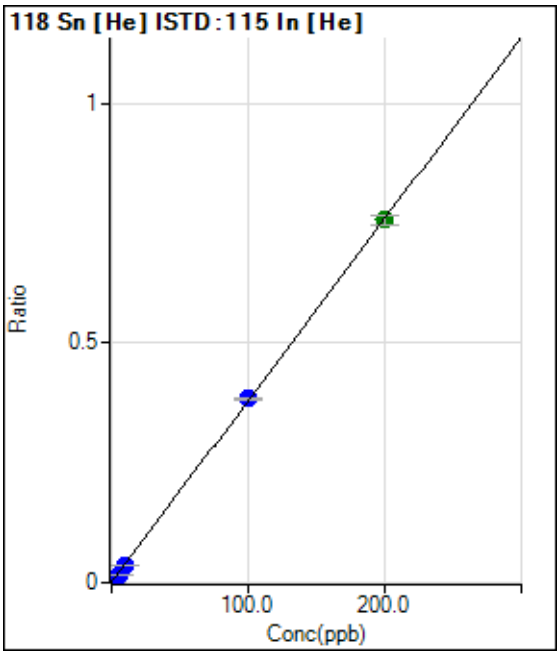


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.29	0.0006	P	5.5
2	☐	2.000	1.850	28772.06	0.0069	P	1.7
3	☐	5.000	4.671	67664.69	0.0164	P	2.2
4	☐	10.000	9.346	133148.89	0.0322	P	0.6
5	☐	100.000	101.607	1393168.21	0.3443	A	3.3
6	☐	200.000	199.239	2702480.27	0.6745	A	5.0

y = 0.0034 * x + 6.0859E-004
R = 0.9999
DL = 0.02988
BEC = 0.1799

Weight: <None>
Min Conc: <None>

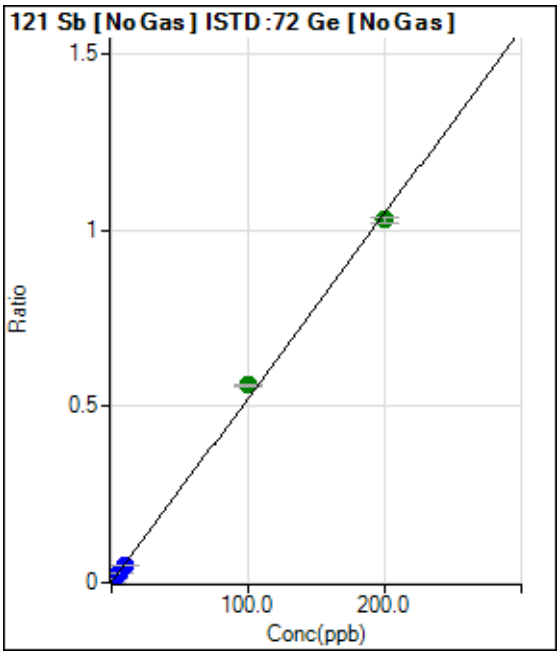
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1667.71	0.0008	P	43.2
2	☐	2.000	1.731	15906.56	0.0073	P	0.9
3	☐	5.000	4.463	37714.58	0.0177	P	2.4
4	☐	10.000	9.246	75953.20	0.0358	P	2.1
5	☐	100.000	101.028	813132.80	0.3835	P	1.6
6	☐	200.000	199.540	1573843.78	0.7566	A	2.6

y = 0.0038 * x + 7.8220E-004
R = 1.0000
DL = 0.2676
BEC = 0.2065

Weight: <None>
Min Conc: <None>

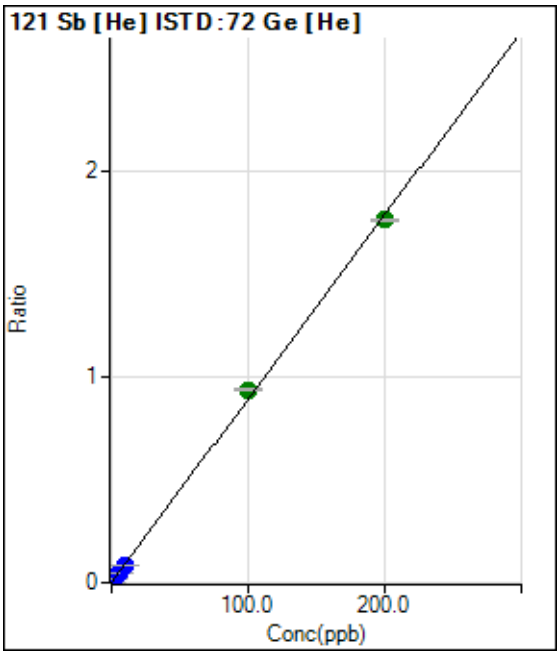


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2787.01	0.0008	P	2.9
2	☐	2.000	1.962	39647.28	0.0110	P	4.0
3	☐	5.000	4.789	92721.06	0.0258	P	3.3
4	☐	10.000	9.437	179509.61	0.0501	P	1.6
5	☐	100.000	106.832	1983478.46	0.5590	A	1.1
6	☐	200.000	196.618	3587743.59	1.0282	A	1.4

y = 0.0052 * x + 7.7591E-004
R = 0.9991
DL = 0.01309
BEC = 0.1485

Weight: <None>
Min Conc: <None>

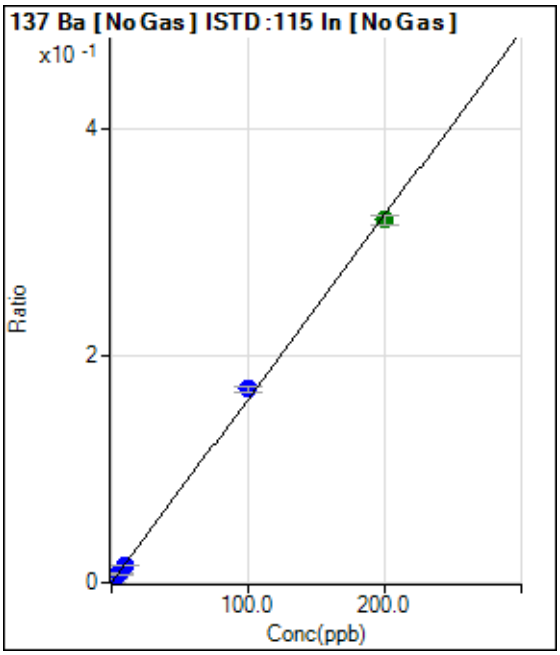
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1483.45	0.0012	P	3.7
2	☐	2.000	1.853	21330.99	0.0178	P	1.6
3	☐	5.000	4.785	51056.33	0.0440	P	2.7
4	☐	10.000	9.348	100175.05	0.0847	P	3.4
5	☐	100.000	105.123	1116029.38	0.9397	A	1.3
6	☐	200.000	197.478	2073584.61	1.7642	A	0.6

y = 0.0089 * x + 0.0012
R = 0.9995
DL = 0.0154
BEC = 0.1395

Weight: <None>
Min Conc: <None>

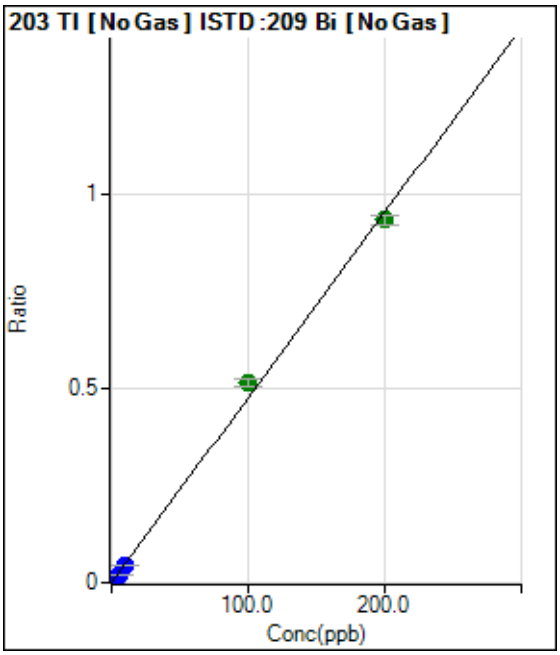


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0001	P	6.6
2	☐	2.000	1.878	13003.43	0.0031	P	2.3
3	☐	5.000	4.682	31532.18	0.0076	P	2.6
4	☐	10.000	9.402	63197.76	0.0153	P	2.9
5	☐	100.000	105.207	689902.15	0.1705	P	3.7
6	☐	200.000	197.436	1281699.28	0.3199	A	2.8

y = 0.0016 * x + 6.0716E-005
R = 0.9995
DL = 0.007372
BEC = 0.03748

Weight: <None>
Min Conc: <None>

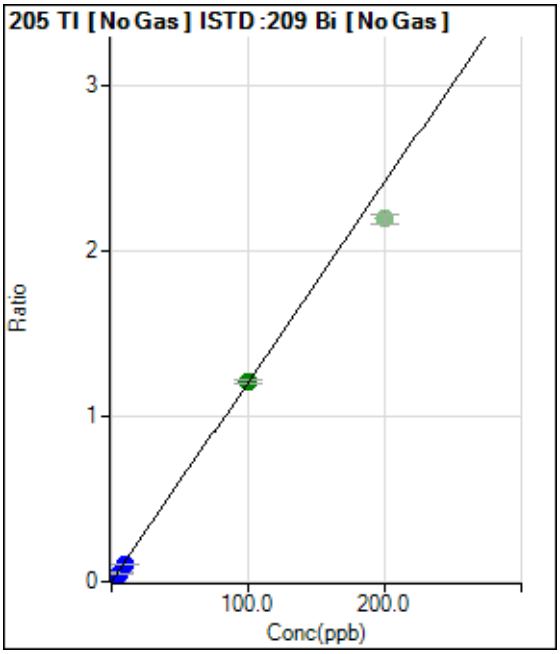
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	32.9
2	☐	2.000	1.847	30297.48	0.0088	P	1.8
3	☐	5.000	4.629	76189.71	0.0220	P	1.7
4	☐	10.000	9.336	153104.22	0.0444	P	1.7
5	☐	100.000	107.947	1745250.86	0.5132	A	3.4
6	☐	200.000	196.070	3066227.56	0.9320	A	2.5

y = 0.0048 * x + 1.8352E-005
R = 0.9988
DL = 0.00381
BEC = 0.003861

Weight: <None>
Min Conc: <None>

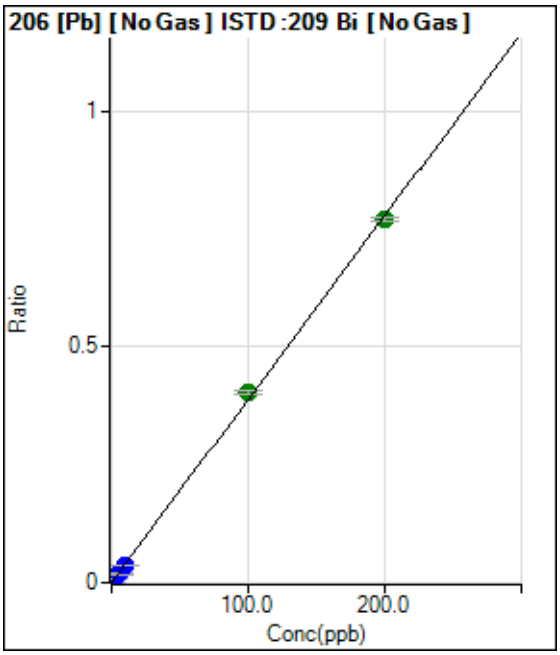


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.67	0.0000	P	14.3
2	☐	2.000	1.792	74593.73	0.0217	P	4.4
3	☐	5.000	4.313	180200.18	0.0521	P	1.1
4	☐	10.000	8.725	363227.00	0.1053	P	3.0
5	☐	100.000	100.166	4111171.92	1.2088	A	2.4
6	☑	200.000		7220635.94	2.1947	A	2.9

y = 0.0121 * x + 4.8271E-005
R = 0.9999
DL = 0.001721
BEC = 0.004

Weight: <None>
Min Conc: <None>

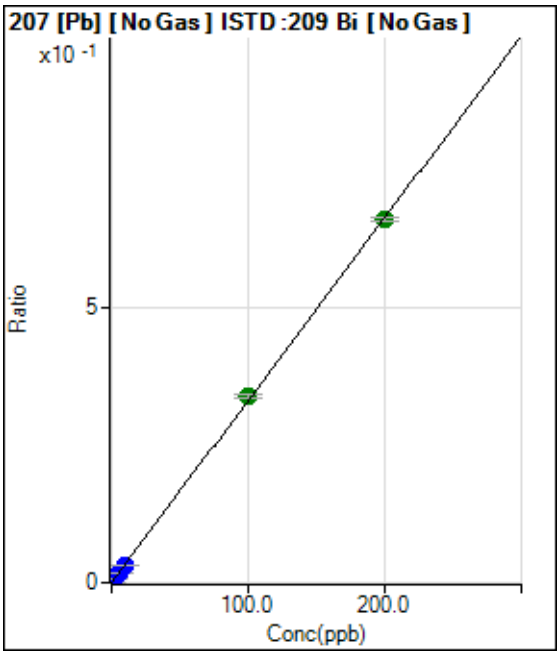
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0001	P	0.6
2	☐	2.000	1.915	26014.27	0.0076	P	4.2
3	☐	5.000	4.693	63495.88	0.0184	P	1.6
4	☐	10.000	9.344	125625.41	0.0364	P	1.7
5	☐	100.000	104.144	1376825.76	0.4048	A	2.3
6	☐	200.000	197.969	2531994.23	0.7694	A	1.1

y = 0.0039 * x + 1.1690E-004
R = 0.9997
DL = 0.0005209
BEC = 0.03008

Weight: <None>
Min Conc: <None>

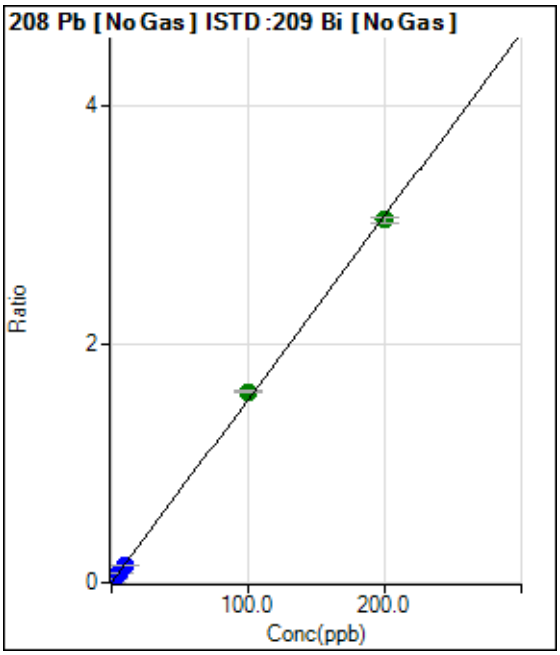


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.35	0.0001	P	42.4
2	☐	2.000	1.985	23008.44	0.0067	P	5.0
3	☐	5.000	4.776	55159.35	0.0159	P	1.9
4	☐	10.000	9.471	108687.52	0.0315	P	1.8
5	☐	100.000	101.919	1150148.45	0.3382	A	1.9
6	☐	200.000	199.072	2173017.89	0.6604	A	0.9

y = 0.0033 * x + 1.0216E-004
R = 0.9999
DL = 0.03914
BEC = 0.0308

Weight: <None>
Min Conc: <None>

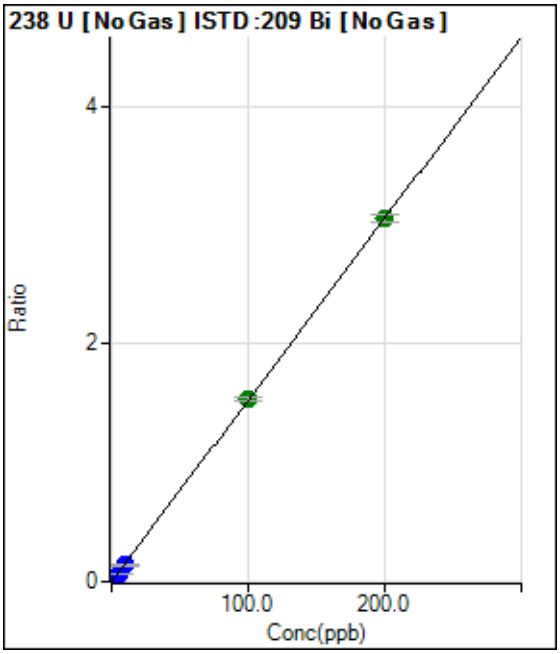
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1490.07	0.0004	P	8.4
2	☐	2.000	1.941	104038.63	0.0302	P	1.9
3	☐	5.000	4.719	251950.33	0.0728	P	1.0
4	☐	10.000	9.502	504275.20	0.1462	P	0.8
5	☐	100.000	104.195	5438819.79	1.5991	A	1.4
6	☐	200.000	197.935	9993004.12	3.0373	A	1.5

y = 0.0153 * x + 4.3166E-004
R = 0.9997
DL = 0.007089
BEC = 0.02813

Weight: <None>
Min Conc: <None>

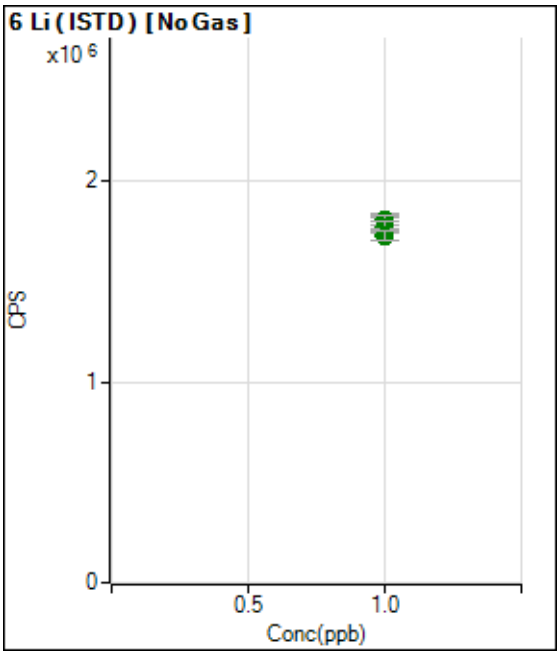


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	44.9
2	☐	2.000	1.863	97989.39	0.0285	P	0.5
3	☐	5.000	4.601	243119.95	0.0703	P	1.3
4	☐	10.000	9.075	477909.90	0.1386	P	1.7
5	☐	100.000	100.328	5210961.07	1.5320	A	1.7
6	☐	200.000	199.894	10041935.48	3.0523	A	2.2

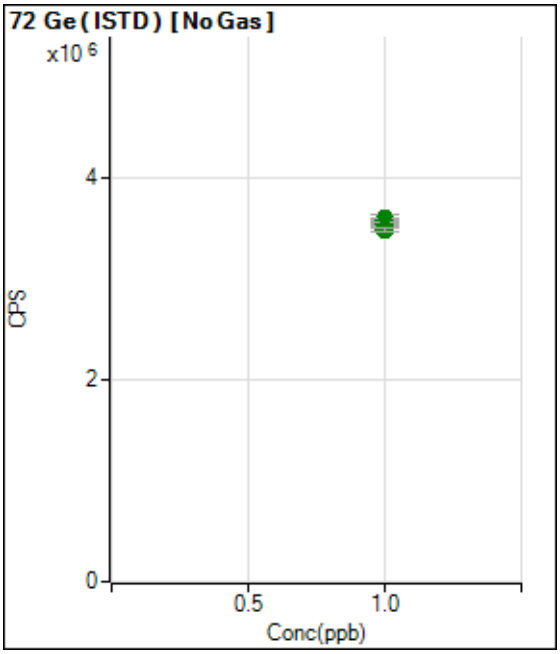
y = 0.0153 * x + 9.6362E-006
R = 1.0000
DL = 0.0008507
BEC = 0.0006311

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

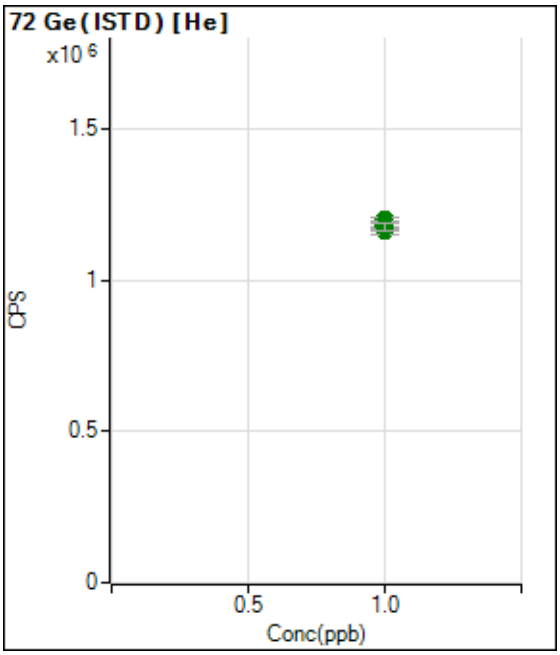


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1801939.61		A	4.0
2	☐	1.000		1802126.72		A	1.8
3	☐	1.000		1809661.71		A	2.5
4	☐	1.000		1775017.52		A	3.0
5	☐	1.000		1733503.92		A	3.2
6	☐	1.000		1729739.48		A	2.5

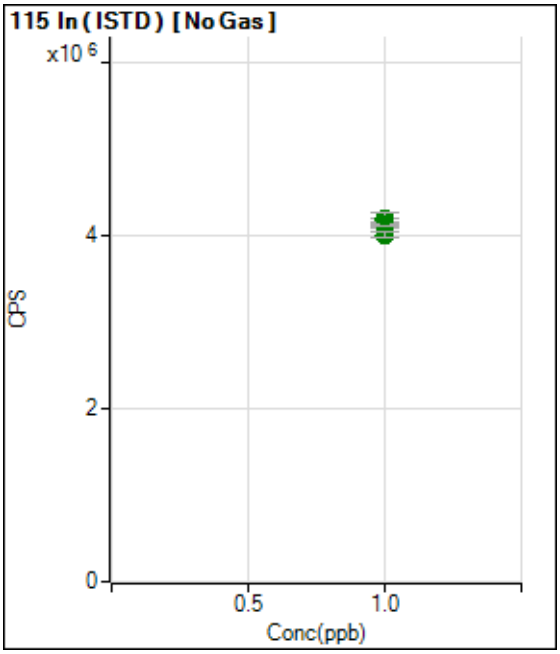


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3591716.40		A	0.4
2	☐	1.000		3595634.63		A	1.9
3	☐	1.000		3595461.51		A	2.4
4	☐	1.000		3583744.95		A	0.6
5	☐	1.000		3547979.84		A	1.1
6	☐	1.000		3489397.97		A	0.9

Calibration for 018_ICV.d

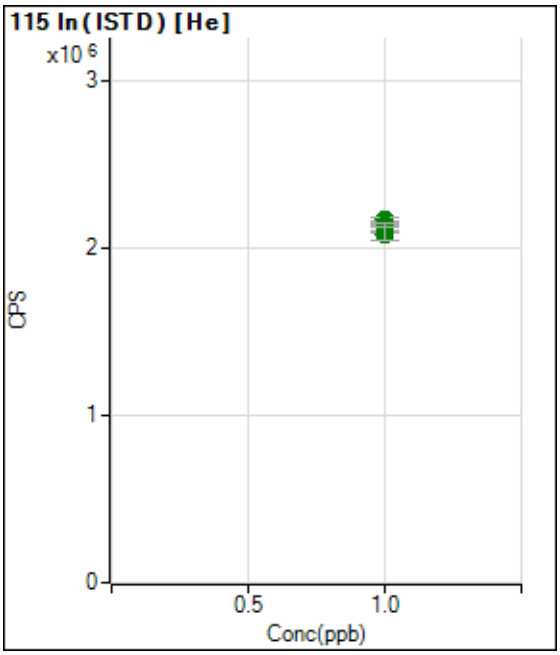


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1191599.30		A	0.9
2	☐	1.000		1199324.23		A	1.1
3	☐	1.000		1161597.90		A	1.8
4	☐	1.000		1183068.11		A	1.6
5	☐	1.000		1187742.17		A	1.8
6	☐	1.000		1175428.92		A	2.1

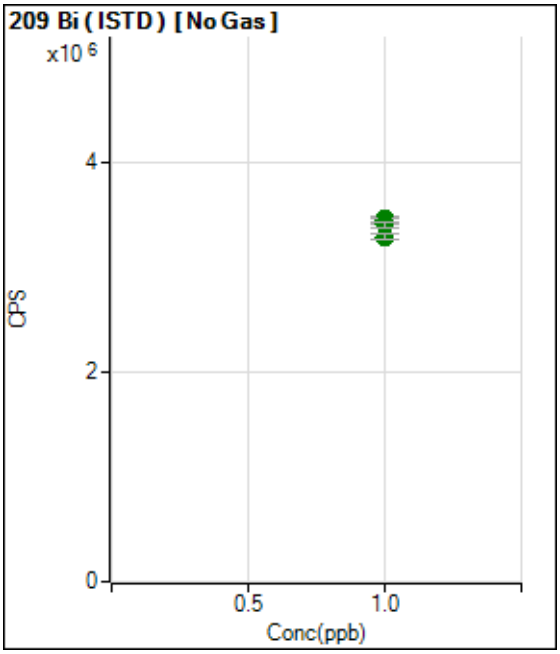


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4173630.42		A	0.7
2	☐	1.000		4191019.42		A	3.1
3	☐	1.000		4124142.74		A	1.3
4	☐	1.000		4132373.46		A	0.4
5	☐	1.000		4049488.71		A	3.4
6	☐	1.000		4007165.63		A	2.0

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2142609.86		A	2.1
2	☐	1.000		2167260.61		A	1.3
3	☐	1.000		2132262.24		A	1.0
4	☐	1.000		2121550.51		A	1.5
5	☐	1.000		2120926.11		A	2.8
6	☐	1.000		2081403.13		A	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3450327.76		A	0.9
2	☐	1.000		3444268.70		A	2.4
3	☐	1.000		3459752.97		A	1.3
4	☐	1.000		3448891.61		A	1.1
5	☐	1.000		3401832.76		A	1.7
6	☐	1.000		3290659.95		A	1.7

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	019LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:49:17-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.893	1.893	5.50	145845	0.00	2	
Be	9	1	No Gas	1.898	1.898	2.86	10267	0.02	2	
V	51	2	He	1.785	1.785	2.70	20545	0.01	2	
Cr	52	2	He	1.907	1.907	2.78	23647	0.01	2	
Fe	56	2	He	194.519	194.519	0.47	1934735	0.01	200	
Se	78	2	He	1.823	1.823	14.83	450	0.41	2	
Sn	118	2	He	2.003	2.003	4.79	18096	0.01	2	
As	75	2	He	1.809	1.809	3.62	3107	0.06	2	
Ca	44	2	He	189.096	189.096	3.48	16206	1.17	200	
Na	23	2	He	207.406	207.406	1.32	435543	0.05	200	
Mg	24	2	He	203.307	203.307	1.47	194593	0.10	200	
K	39	2	He	200.481	200.481	2.91	329257	0.06	200	
Mn	55	2	He	1.849	1.849	0.90	15546	0.01	2	
Co	59	2	He	1.937	1.937	0.41	31597	0.01	2	
Ni	60	2	He	1.847	1.847	3.31	8049	0.02	2	
Cu	63	2	He	1.961	1.961	1.85	22997	0.01	2	
Zn	66	2	He	1.904	1.904	6.28	4361	0.04	2	
Al	27	2	He	1.930	1.930	11.31	2484	0.08	2	
B	11	1	No Gas	25.411	25.411	3.42	127371	0.02	10	NewName Main CR1 Failed
Al	27	1	No Gas	2.228	2.228	5.63	103885	0.00	2	
Si	28	1	No Gas	11.047	11.047	18.52	1033833	0.00	10	
P	31	1	No Gas	12.329	12.329	10.38	55727	0.02	10	
Ag	107	1	No Gas	1.989	1.989	1.02	46148	0.00	2	
Cd	111	1	No Gas	1.985	1.985	0.35	9097	0.02	2	
Sr	88	1	No Gas	2.063	2.063	0.77	86138	0.00	2	
Mo	95	1	No Gas	1.987	1.987	1.20	17382	0.01	2	
Sn	118	1	No Gas	2.163	2.163	1.26	32555	0.01	2	
Sb	121	1	No Gas	2.016	2.016	3.62	40981	0.00	2	
Ba	137	1	No Gas	1.850	1.850	2.84	12563	0.01	2	
Tl	205	1	No Gas	1.986	1.986	4.23	76704	0.00	2	
Tl	203	1	No Gas	1.950	1.950	6.96	31948	0.01	2	
Pb	208	1	No Gas	1.953	1.953	3.10	104632	0.00	2	
U	238	1	No Gas	1.849	1.849	2.08	97238	0.00	2	
Ca	43	2	He	188.553	188.553	14.35	717	26.31	200	
Sb	121	2	He	1.905	1.905	2.10	22429	0.01	2	
Ti	47	2	He	1.679	1.679	1.82	640	0.26	200	
Cu	63	1	No Gas	2.046	2.046	1.68	37917	0.01	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1761937	1.05	1801940	97.78	70	120	
Ge	72	2	He	1228926	0.79	1191599	103.13	70	120	
Ge	72	1	No Gas	3624180	1.28	3591716	100.90	70	120	
In	115	1	No Gas	4108908	1.93	4173630	98.45	70	120	
Bi	209	1	No Gas	3445133	3.50	3450328	99.85	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	020LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:51:10-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.457	4.457	4.18	203352	0.00	5	
Be	9	1	No Gas	4.518	4.518	2.71	24810	0.02	5	
V	51	2	He	4.591	4.591	0.59	46444	0.01	5	
Cr	52	2	He	4.727	4.727	2.30	54592	0.01	5	
Fe	56	2	He	471.411	471.411	3.08	4628536	0.01	500	
Se	78	2	He	5.025	5.025	13.15	894	0.56	5	
Sn	118	2	He	4.593	4.593	3.00	39309	0.01	5	
As	75	2	He	4.497	4.497	1.34	7290	0.06	5	
Ca	44	2	He	458.398	458.398	2.17	32078	1.43	500	
Na	23	2	He	483.604	483.604	1.74	895986	0.05	500	
Mg	24	2	He	490.357	490.357	2.09	464102	0.11	500	
K	39	2	He	482.427	482.427	0.39	650464	0.07	500	
Mn	55	2	He	4.722	4.722	2.49	38481	0.01	5	
Co	59	2	He	4.785	4.785	3.69	77029	0.01	5	
Ni	60	2	He	4.745	4.745	3.81	20142	0.02	5	
Cu	63	2	He	4.713	4.713	0.47	53733	0.01	5	
Zn	66	2	He	4.676	4.676	4.76	10137	0.05	5	
Al	27	2	He	4.999	4.999	3.97	4137	0.12	5	
B	11	1	No Gas	30.499	30.499	0.96	146771	0.02	25	
Al	27	1	No Gas	5.400	5.400	3.69	168018	0.00	5	
Si	28	1	No Gas	27.130	27.130	5.87	1174857	0.00	25	
P	31	1	No Gas	25.772	25.772	3.28	68261	0.04	25	
Ag	107	1	No Gas	4.881	4.881	2.98	113343	0.00	5	
Cd	111	1	No Gas	4.679	4.679	2.89	21578	0.02	5	
Sr	88	1	No Gas	4.964	4.964	2.41	206025	0.00	5	
Mo	95	1	No Gas	4.734	4.734	2.38	41639	0.01	5	
Sn	118	1	No Gas	4.738	4.738	2.17	68824	0.01	5	
Sb	121	1	No Gas	4.867	4.867	3.39	92475	0.01	5	
Ba	137	1	No Gas	4.809	4.809	0.27	32488	0.01	5	
Tl	205	1	No Gas	4.788	4.788	4.20	180138	0.00	5	
Tl	203	1	No Gas	4.694	4.694	1.91	75020	0.01	5	
Pb	208	1	No Gas	4.915	4.915	2.58	254752	0.00	5	
U	238	1	No Gas	4.605	4.605	1.71	236279	0.00	5	
Ca	43	2	He	483.851	483.851	9.11	1747	27.70	500	
Sb	121	2	He	4.617	4.617	1.72	51689	0.01	5	
Ti	47	2	He	4.554	4.554	2.99	1697	0.27	5	
Cu	63	1	No Gas	5.021	5.021	2.63	88921	0.01	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1790225	1.13	1801940	99.35	70	120	
Ge	72	2	He	1217271	0.98	1191599	102.15	70	120	

Sample Report

Ge	72	1	No Gas	3530150	2.45	3591716	98.29	70	120	
In	115	1	No Gas	4137366	0.62	4173630	99.13	70	120	
Bi	209	1	No Gas	3360182	2.62	3450328	97.39	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	021_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:53:02-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.152	-76.6	107301	1.4	0.5	
Be	9	1	No Gas	0.002	160.2	32	72.9	0.5	
V	51	2	He	-0.087	-12.7	2913	3.4	2.5	
Cr	52	2	He	-0.015	-173.0	2140	14.6	2.5	
Fe	56	2	He	0.268	12.2	13030	3.1	100	
Se	78	2	He	0.027	177.3	191	4.0	1	
Sn	118	2	He	0.026	44.4	1870	5.1	2.5	
As	75	2	He	-0.019	-139.4	210	19.5	2.5	
Ca	44	2	He	0.410	1036.7	4768	6.2	100	
Na	23	2	He	6.488	15.5	92247	0.7	100	
Mg	24	2	He	0.297	53.4	810	19.2	100	
K	39	2	He	15.866	4.7	112384	0.3	100	
Mn	55	2	He	0.093	11.9	1277	7.9	2.5	
Co	59	2	He	-0.002	-174.9	160	33.1	2.5	
Ni	60	2	He	0.062	33.0	473	18.9	2.5	
Cu	63	2	He	-0.001	-1369.0	713	12.7	1	
Zn	66	2	He	0.029	139.8	377	22.6	2.5	
Al	27	2	He	0.733	218.3	1788	49.1	5	
B	11	1	No Gas	5.744	14.3	64148	1.1	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.062	103.2	55458	3.0	5	
Si	28	1	No Gas	1.623	41.7	907064	1.6	10	
P	31	1	No Gas	0.970	116.5	42388	1.3	10	
Ag	107	1	No Gas	0.056	6.3	1773	4.7	2.5	
Cd	111	1	No Gas	-0.001	-89.2	7	86.6	1	
Sr	88	1	No Gas	0.008	37.7	2177	5.4	2.5	
Mo	95	1	No Gas	0.005	59.9	90	29.4	2.5	
Sn	118	1	No Gas	0.075	42.9	3545	12.7	5	
Sb	121	1	No Gas	0.004	386.4	2814	11.2	2.5	
Ba	137	1	No Gas	0.028	10.9	433	4.8	2.5	
Tl	205	1	No Gas	0.009	18.1	533	14.2	1	
Tl	203	1	No Gas	0.010	25.9	230	19.9	1	
Pb	208	1	No Gas	0.008	23.1	1897	7.2	2.5	
U	238	1	No Gas	0.002	46.9	117	34.6	2.5	
Ca	43	2	He	16.220	25.7	103	14.8	100	
Sb	121	2	He	0.030	30.6	1824	6.1	2.5	
Ti	47	2	He	0.036	86.3	27	43.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1845414	3.57	1801940	102.41	70	120	
Ge	72	2	He	1201917	1.08	1191599	100.87	70	120	
Ge	72	1	No Gas	3523729	1.51	3591716	98.11	70	120	
In	115	1	No Gas	4104705	0.19	4173630	98.35	70	120	
Bi	209	1	No Gas	3434989	2.25	3450328	99.56	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	023ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:58:15-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.627	22.6	112535	1.7	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.001	100.3	18	15.7	0	ICSA Main CR1 Failed
V	51	2	He	-0.004	-423.9	3545	3.9	0	ICSA Main CR1 Failed
Cr	52	2	He	1.002	1.9	12776	1.2	0	ICSA Main CR1 Failed
Fe	56	2	He	105393.347	1.8	983904385	2.0	0	
Se	78	2	He	0.247	33.5	214	4.9	0	ICSA Main CR1 Failed
Sn	118	2	He	0.026	38.5	1753	6.6	0	ICSA Main CR1 Failed
As	75	2	He	0.089	37.9	363	13.9	0	ICSA Main CR1 Failed
Ca	44	2	He	99066.017	2.6	5620697	2.4	0	
Na	23	2	He	104022.046	2.1	166805761	1.9	0	
Mg	24	2	He	105278.216	1.0	94838135	0.6	0	
K	39	2	He	105705.554	1.8	115927318	1.4	0	
Mn	55	2	He	0.206	8.4	2094	6.5	0	ICSA Main CR1 Failed
Co	59	2	He	0.210	2.9	3404	2.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.241	18.7	1173	15.6	0	ICSA Main CR1 Failed
Cu	63	2	He	0.275	6.5	3644	5.2	0	ICSA Main CR1 Failed
Zn	66	2	He	0.373	26.5	1050	18.4	0	ICSA Main CR1 Failed
Al	27	2	He	97904.537	2.0	50954601	1.6	0	
B	11	1	No Gas	5.233	10.2	56053	3.7	0	
Al	27	1	No Gas	100270.871	2.4	2036531330	2.6	0	
Si	28	1	No Gas	36.069	4.5	1222145	1.1	0	
P	31	1	No Gas	96776.523	0.5	97030805	0.7	0	
Ag	107	1	No Gas	0.039	11.6	1267	7.7	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.243	3.8	5248	3.6	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.010	6.3	41586	6.3	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	2125.654	1.3	17073284	1.5	0	
Sn	118	1	No Gas	0.063	12.0	3107	2.9	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.018	24.1	2960	2.6	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.033	30.5	430	14.0	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.008	33.8	433	20.2	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.008	56.0	170	35.8	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.043	5.7	3270	5.8	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	39.4	187	31.4	0	ICSA Main CR1 Failed
Ca	43	2	He	101420.358	1.4	339208	1.0	0	
Sb	121	2	He	0.027	86.3	1727	14.5	0	ICSA Main CR1 Failed
Ti	47	2	He	2055.322	1.7	723638	1.3	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1657031	1.05	1801940	91.96	70	120	
Ge	72	2	He	1159806	0.43	1191599	97.33	70	120	
Ge	72	1	No Gas	3401299	0.56	3591716	94.70	70	120	
In	115	1	No Gas	3782270	0.25	4173630	90.62	70	120	
Bi	209	1	No Gas	2983106	2.60	3450328	86.46	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	024ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T11:00:13-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	95.751	3.005	2108164	1.45	100	95.8	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	100.054	2.241	509993	1.28	100	100.1	80	120	
V	51	2	He	99.626	2.464	865886	2.46	100	99.6	80	120	
Cr	52	2	He	100.227	0.550	1033960	0.36	100	100.2	80	120	
Fe	56	2	He	112058.180	0.491	1022265665	0.50	100	112058.2	80	120	ICSB Main CR1 Failed
Se	78	2	He	100.964	1.920	13353	1.34	100	101.0	80	120	
Sn	118	2	He	98.044	2.188	746464	0.59	100	98.0	80	120	
As	75	2	He	100.264	1.465	146548	0.70	100	100.3	80	120	
Ca	44	2	He	111017.185	1.403	6155138	1.70	100	111017.2	80	120	
Na	23	2	He	112541.763	1.419	176359104	1.65	100	112541.8	80	120	
Mg	24	2	He	112645.849	3.362	99161875	3.20	100	112645.8	80	120	ICSB Main CR1 Failed
K	39	2	He	114026.694	1.538	122203295	1.61	100	114026.7	80	120	
Mn	55	2	He	99.859	1.518	747554	0.68	100	99.9	80	120	
Co	59	2	He	98.053	0.217	1466577	1.00	100	98.1	80	120	
Ni	60	2	He	96.640	2.589	378017	1.75	100	96.6	80	120	
Cu	63	2	He	94.841	1.888	993711	1.15	100	94.8	80	120	
Zn	66	2	He	98.388	1.410	192682	1.16	100	98.4	80	120	
Al	27	2	He	97656.380	1.485	49670548	1.62	100	97656.4	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	507.930	1.956	1649478	1.95	100	507.9	80	120	
Al	27	1	No Gas	97309.944	1.782	1967840077	0.54	100	97309.9	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	516.497	3.176	6031796	3.25	100	516.5	80	120	
P	31	1	No Gas	94519.746	0.868	94372905	1.45	100	94519.7	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	100.865	1.488	2149447	2.57	100	100.9	80	120	
Cd	111	1	No Gas	100.141	1.184	425211	1.13	100	100.1	80	120	
Sr	88	1	No Gas	100.435	1.924	3995719	1.12	100	100.4	80	120	
Mo	95	1	No Gas	2125.973	1.928	17208611	1.08	100	2126.0	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	101.748	1.055	1314286	1.15	100	101.7	80	120	
Sb	121	1	No Gas	103.149	1.913	1828025	0.48	100	103.1	80	120	
Ba	137	1	No Gas	101.624	2.367	627750	0.51	100	101.6	80	120	
Tl	205	1	No Gas	95.370	3.580	3526194	2.58	100	95.4	80	120	
Tl	203	1	No Gas	100.420	3.905	1462590	3.02	100	100.4	80	120	
Pb	208	1	No Gas	102.226	1.861	4807126	0.49	100	102.2	80	120	
U	238	1	No Gas	104.571	0.450	4893402	1.30	100	104.6	80	120	
Ca	43	2	He	111924.932	1.521	365798	0.68	100	111924.9	80	120	
Sb	121	2	He	97.952	1.189	992486	0.37	100	98.0	80	120	
Ti	47	2	He	2125.479	1.099	731289	0.32	100	2125.5	80	120	ICSB Main CR1 Failed
Cu	63	1	No Gas	99.657	3.397	1672805	1.18	100	99.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1663237	2.83	1801940	92.30	70	120	
Ge	72	2	He	1133405	0.84	1191599	95.12	70	120	
Ge	72	1	No Gas	3387503	2.25	3591716	94.31	70	120	
In	115	1	No Gas	3812676	2.19	4173630	91.35	70	120	
Bi	209	1	No Gas	3064758	1.75	3450328	88.83	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	145_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:23:40-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.585	1.066	2006789	1.00	100	96.6	90	110	
Be	9	1	No Gas	97.299	0.126	489969	0.17	100	97.3	90	110	
V	51	2	He	96.543	2.567	884062	2.03	100	96.5	90	110	
Cr	52	2	He	95.967	1.293	1043204	1.94	100	96.0	90	110	
Fe	56	2	He	9842.383	2.967	94583929	1.30	10000	98.4	90	110	
Se	78	2	He	98.330	3.291	13705	2.73	100	98.3	90	110	
Sn	118	2	He	101.009	1.439	833482	0.29	100	101.0	90	110	
As	75	2	He	98.847	1.641	152213	0.25	100	98.8	90	110	
Ca	44	2	He	9474.657	2.395	557629	0.62	10000	94.7	90	110	
Na	23	2	He	9615.129	3.053	15944408	1.57	10000	96.2	90	110	
Mg	24	2	He	9425.533	2.040	8741939	1.63	10000	94.3	90	110	
K	39	2	He	9511.014	3.549	10821512	1.89	10000	95.1	90	110	
Mn	55	2	He	98.956	1.628	780447	0.22	100	99.0	90	110	
Co	59	2	He	101.973	2.279	1606599	1.14	100	102.0	90	110	
Ni	60	2	He	99.089	0.234	408432	1.55	100	99.1	90	110	
Cu	63	2	He	98.916	1.388	1091889	0.41	100	98.9	90	110	
Zn	66	2	He	101.815	2.892	210014	1.10	100	101.8	90	110	
Al	27	2	He	91.786	1.726	50559	1.07	100	91.8	90	110	
B	11	1	No Gas	513.572	0.685	1573776	0.64	500	102.7	90	110	
Al	27	1	No Gas	96.474	1.218	2128352	1.27	100	96.5	90	110	
Si	28	1	No Gas	448.292	2.948	5681277	1.53	5000	9.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	453.454	3.111	523021	1.91	500	90.7	90	110	
Ag	107	1	No Gas	101.005	1.883	2419077	1.24	100	101.0	90	110	
Cd	111	1	No Gas	102.139	2.605	487422	0.48	100	102.1	90	110	
Sr	88	1	No Gas	95.330	1.882	4263349	0.38	100	95.3	90	110	
Mo	95	1	No Gas	99.365	2.990	904024	1.08	100	99.4	90	110	
Sn	118	1	No Gas	101.260	3.107	1470192	2.60	100	101.3	90	110	
Sb	121	1	No Gas	109.944	1.399	2070360	1.71	100	109.9	90	110	
Ba	137	1	No Gas	102.716	1.716	713342	1.19	100	102.7	90	110	
Tl	205	1	No Gas	94.514	2.425	4359800	0.64	100	94.5	90	110	
Tl	203	1	No Gas	102.002	1.526	1853668	0.35	100	102.0	90	110	
Pb	208	1	No Gas	100.577	3.171	5899587	1.41	100	100.6	90	110	
U	238	1	No Gas	98.193	2.862	5730968	1.16	100	98.2	90	110	
Ca	43	2	He	9633.275	2.792	33210	2.02	10000	96.3	90	110	
Sb	121	2	He	103.914	4.881	1108761	3.30	100	103.9	90	110	
Ti	47	2	He	91.761	3.227	33274	2.99	100	91.8	90	110	
Cu	63	1	No Gas	99.405	0.921	1773535	1.36	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
Li	6	1	No Gas	1569478	0.05	1801940	87.10	70	120	
Ge	72	2	He	1194196	1.78	1191599	100.22	70	120	
Ge	72	1	No Gas	3598754	0.94	3591716	100.20	70	120	
In	115	1	No Gas	4285893	2.17	4173630	102.69	70	120	
Bi	209	1	No Gas	3823544	1.80	3450328	110.82	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	146_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:25:27-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.109	-34.7	90466	1.4	0.5	
Be	9	1	No Gas	0.006	10.8	43	6.7	0.5	
V	51	2	He	-0.036	-22.7	3308	2.9	2.5	
Cr	52	2	He	0.029	67.7	2564	8.4	2.5	
Fe	56	2	He	1.037	5.1	20038	2.8	100	
Se	78	2	He	0.111	19.9	199	1.2	2	
As	75	2	He	0.031	84.4	280	13.3	2.5	
Ca	44	2	He	-47.961	-3.5	1884	5.8	100	
Na	23	2	He	33.184	2.3	133689	0.8	100	
Mg	24	2	He	0.600	41.8	1067	20.6	100	
K	39	2	He	-2.821	-17.4	89228	1.4	100	
Mn	55	2	He	0.124	9.9	1483	5.6	2.5	
Co	59	2	He	0.005	58.2	267	16.9	2.5	
Ni	60	2	He	0.035	48.4	353	20.1	2.5	
Cu	63	2	He	0.039	33.6	1123	11.8	2	
Zn	66	2	He	0.120	26.1	553	12.3	2.5	
Al	27	2	He	1.454	20.9	2127	8.2	5	
B	11	1	No Gas	18.145	8.2	90125	4.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.340	4.6	83384	0.4	5	
Si	28	1	No Gas	-28.809	-1.9	597248	0.2	10	
P	31	1	No Gas	-8.624	-6.5	32846	1.0	10	
Ag	107	1	No Gas	0.015	20.4	870	8.0	2.5	
Cd	111	1	No Gas	0.006	51.4	43	35.3	1	
Sr	88	1	No Gas	0.040	5.3	3754	2.8	2.5	
Mo	95	1	No Gas	0.045	13.9	457	12.5	2.5	
Sn	118	1	No Gas	0.299	3.2	7002	1.6	5	
Sb	121	1	No Gas	0.325	8.1	8830	6.3	2.5	
Ba	137	1	No Gas	0.038	32.5	527	15.8	2.5	
Tl	205	1	No Gas	0.057	56.5	2814	54.0	1	
Tl	203	1	No Gas	0.056	53.7	1083	51.3	1	
Pb	208	1	No Gas	0.033	31.9	3554	17.9	2.5	
U	238	1	No Gas	0.009	9.5	580	7.9	2.5	
Ca	43	2	He	7.115	126.8	70	42.9	100	
Sb	121	2	He	0.271	6.7	4311	5.3	2.5	
Ti	47	2	He	0.057	76.9	33	45.8	2.5	
Cu	63	1	No Gas	0.046	11.5	1980	4.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1542748	0.94	1801940	85.62	70	120	
Ge	72	2	He	1176308	0.85	1191599	98.72	70	120	
Ge	72	1	No Gas	3568438	1.15	3591716	99.35	70	120	
In	115	1	No Gas	4319783	0.47	4173630	103.50	70	120	
Bi	209	1	No Gas	3790444	1.54	3450328	109.86	70	120	

Sample Report

Sample Table

Sample Name	MBLK-156822
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:29:49-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	-0.294	-0.294	-64.49	92608	0.00	2000	
Be	9	1	No Gas	0.003	0.003	119.26	32	0.01	2000	
V	51	2	He	-0.058	-0.058	-26.52	3232	0.00	2000	
Cr	52	2	He	0.134	0.134	11.55	3837	0.00	2000	
Fe	56	2	He	2.744	2.744	2.53	37632	0.01	200000	
Se	78	2	He	-0.110	-0.110	-89.58	175	-0.06	2000	
Sn	118	2	He	0.016	0.016	121.24	1877	0.00	200	
As	75	2	He	-0.015	-0.015	-81.86	219	-0.01	2000	
Ca	44	2	He	-42.962	-42.962	-1.92	2257	-1.90	200000	
Na	23	2	He	34.154	34.154	4.80	140643	0.02	200000	
Mg	24	2	He	5.912	5.912	2.51	6158	0.10	200000	
K	39	2	He	-2.448	-2.448	-53.80	93207	0.00	200000	
Mn	55	2	He	0.353	0.353	3.52	3397	0.01	2000	
Co	59	2	He	0.004	0.004	71.22	260	0.00	2000	
Ni	60	2	He	0.016	0.016	106.06	287	0.01	2000	
Cu	63	2	He	0.100	0.100	5.06	1864	0.01	2000	
Zn	66	2	He	2.601	2.601	5.06	5808	0.04	2000	
Al	27	2	He	2.604	2.604	17.62	2840	0.09	2000	
B	11	1	No Gas	7.230	7.230	5.53	61926	0.01	2000	
Al	27	1	No Gas	2.770	2.770	4.58	117573	0.00	2000	
Si	28	1	No Gas	-33.025	-33.025	-3.86	570835	-0.01	2000	
Ag	107	1	No Gas	-0.001	-0.001	-185.75	483	0.00	2000	
Cd	111	1	No Gas	0.000	0.000	-1416.31	13	0.00	2000	
Sr	88	1	No Gas	0.025	0.025	14.52	3067	0.00	2000	
Mo	95	1	No Gas	0.025	0.025	22.47	280	0.01	2000	
Sn	118	1	No Gas	0.043	0.043	25.83	3264	0.00	2000	
Sb	121	1	No Gas	0.002	0.002	493.52	2894	0.00	2000	
Ba	137	1	No Gas	0.080	0.080	6.82	823	0.01	2000	
Tl	205	1	No Gas	0.000	0.000	178.50	210	0.00	2000	
Tl	203	1	No Gas	0.002	0.002	24.48	117	0.00	2000	
Pb	208	1	No Gas	0.193	0.193	6.24	13426	0.00	2000	
U	238	1	No Gas	0.001	0.001	136.36	77	0.00	2000	
Ca	43	2	He	20.442	20.442	50.18	120	17.03	200000	
Sb	121	2	He	0.052	0.052	25.74	2087	0.00	2000	
Ti	47	2	He	0.152	0.152	36.94	70	0.22	2000	
Cu	63	1	No Gas	0.111	0.111	8.36	3220	0.00	2000	
Zn	66	1	No Gas	2.832	2.832	2.31	14648	0.02	2000	
Se	82	1	No Gas	0.074	0.074	833.34	14	0.53	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1646225	2.65	1801940	91.36	70	120	
Ge	72	2	He	1223267	1.44	1191599	102.66	70	120	
Ge	72	1	No Gas	3686343	2.28	3591716	102.63	70	120	

Sample Report

In	115	1	No Gas	4336037	2.49	4173630	103.89	70	120	
Bi	209	1	No Gas	3964956	4.56	3450328	114.92	70	120	

Sample Report

Sample Table

Sample Name	LCS-156822
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:31:43-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	-0.146	-0.146	-47.01	92225	0.00	2000	
Be	9	1	No Gas	48.433	48.433	0.96	246392	0.02	2000	
V	51	2	He	47.875	47.875	1.85	450455	0.01	2000	
Cr	52	2	He	48.283	48.283	1.92	538101	0.01	2000	
Fe	56	2	He	4865.769	4865.769	4.42	47847748	0.01	200000	
Se	78	2	He	50.281	50.281	3.72	7263	0.69	2000	
Sn	118	2	He	100.855	100.855	0.65	834641	0.01	200	
As	75	2	He	49.113	49.113	1.38	77507	0.06	2000	
Ca	44	2	He	4654.492	4654.492	2.31	282759	1.65	200000	
Na	23	2	He	4699.231	4699.231	1.96	8016494	0.06	200000	
Mg	24	2	He	4642.199	4642.199	4.10	4404198	0.11	200000	
K	39	2	He	4593.633	4593.633	2.90	5397681	0.09	200000	
Mn	55	2	He	47.901	47.901	2.44	386795	0.01	2000	
Co	59	2	He	50.462	50.462	3.20	813532	0.01	2000	
Ni	60	2	He	49.324	49.324	3.50	208048	0.02	2000	
Cu	63	2	He	49.242	49.242	3.58	556390	0.01	2000	
Zn	66	2	He	54.042	54.042	2.72	114216	0.05	2000	
Al	27	2	He	90.904	90.904	2.42	51245	0.18	2000	
B	11	1	No Gas	491.354	491.354	3.08	1522486	0.03	2000	
Al	27	1	No Gas	93.969	93.969	3.49	2155502	0.00	2000	
Si	28	1	No Gas	397.805	397.805	2.26	5346620	0.01	2000	
Ag	107	1	No Gas	50.969	50.969	1.23	1231300	0.00	2000	
Cd	111	1	No Gas	52.407	52.407	3.43	252202	0.02	2000	
Sr	88	1	No Gas	95.777	95.777	1.31	4319607	0.00	2000	
Mo	95	1	No Gas	49.402	49.402	0.61	453360	0.01	2000	
Sn	118	1	No Gas	100.684	100.684	1.21	1474174	0.01	2000	
Sb	121	1	No Gas	52.680	52.680	2.44	1032189	0.01	2000	
Ba	137	1	No Gas	52.127	52.127	2.47	365204	0.01	2000	
Tl	205	1	No Gas	47.982	47.982	4.26	2179620	0.00	2000	
Tl	203	1	No Gas	50.939	50.939	4.12	911526	0.01	2000	
Pb	208	1	No Gas	51.541	51.541	1.29	2980443	0.00	2000	
U	238	1	No Gas	0.002	0.002	23.24	127	0.00	2000	
Ca	43	2	He	4729.005	4729.005	2.91	16704	28.31	200000	
Sb	121	2	He	51.547	51.547	2.39	563668	0.01	2000	
Ti	47	2	He	134.473	134.473	1.48	49888	0.27	2000	
Cu	63	1	No Gas	48.881	48.881	1.02	906853	0.01	2000	
Zn	66	1	No Gas	54.021	54.021	1.06	270921	0.02	2000	
Se	82	1	No Gas	50.348	50.348	2.66	13668	0.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1585523	0.83	1801940	87.99	70	120	
Ge	72	2	He	1221889	1.80	1191599	102.54	70	120	
Ge	72	1	No Gas	3739918	1.78	3591716	104.13	70	120	

Sample Report

In	115	1	No Gas	4321049	1.24	4173630	103.53	70	120	
Bi	209	1	No Gas	3767015	2.79	3450328	109.18	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01
Data File Name	149SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:33:33-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	25.690	25.690	3.03	604229	0.00	2000	
Be	9	1	No Gas	0.157	0.157	13.47	803	0.02	2000	
V	51	2	He	0.758	0.758	9.22	11121	0.01	2000	
Cr	52	2	He	1.381	1.381	4.98	18102	0.01	2000	
Fe	56	2	He	998.180	998.180	0.23	10071674	0.01	200000	
Se	78	2	He	0.639	0.639	31.81	287	0.22	2000	
Sn	118	2	He	0.351	0.351	4.87	4571	0.01	200	
As	75	2	He	1.267	1.267	0.42	2291	0.06	2000	
Ca	44	2	He	36130.674	36130.674	1.70	2216065	1.63	200000	
Na	23	2	He	174568.998	174568.998	2.52	302102069	0.06	200000	
Mg	24	2	He	26543.664	26543.664	0.85	25816565	0.10	200000	
K	39	2	He	1231.144	1231.144	2.49	1554624	0.08	200000	
Mn	55	2	He	559.185	559.185	2.31	4623191	0.01	2000	
Co	59	2	He	8.549	8.549	0.79	141445	0.01	2000	
Ni	60	2	He	9.277	9.277	4.36	40280	0.02	2000	
Cu	63	2	He	13.527	13.527	3.00	157188	0.01	2000	
Zn	66	2	He	26.263	26.263	2.99	57053	0.05	2000	
Al	27	2	He	42.690	42.690	3.50	25436	0.17	2000	
B	11	1	No Gas	66.416	66.416	5.50	236514	0.03	2000	
Al	27	1	No Gas	46.915	46.915	4.39	1061111	0.00	2000	
Si	28	1	No Gas	21968.295	21968.295	0.35	234301163	0.01	2000	>LDR
Ag	107	1	No Gas	0.005	0.005	52.99	617	0.00	2000	
Cd	111	1	No Gas	0.167	0.167	11.92	800	0.02	2000	
Sr	88	1	No Gas	667.663	667.663	1.89	29431914	0.00	2000	
Mo	95	1	No Gas	0.389	0.389	5.98	3534	0.01	2000	
Sn	118	1	No Gas	0.479	0.479	6.27	9414	0.01	2000	
Sb	121	1	No Gas	0.293	0.293	1.04	8289	0.00	2000	
Ba	137	1	No Gas	736.840	736.840	0.37	5044550	0.01	2000	
Tl	205	1	No Gas	0.058	0.058	52.83	2674	0.00	2000	
Tl	203	1	No Gas	0.064	0.064	35.67	1147	0.01	2000	
Pb	208	1	No Gas	0.165	0.165	7.33	10549	0.00	2000	
U	238	1	No Gas	0.127	0.127	6.27	6955	0.00	2000	
Ca	43	2	He	36261.707	36261.707	3.49	130932	27.69	200000	
Sb	121	2	He	0.246	0.246	9.99	4307	0.01	2000	
Ti	47	2	He	0.947	0.947	32.12	373	0.25	2000	
Cu	63	1	No Gas	14.653	14.653	0.68	261856	0.01	2000	
Zn	66	1	No Gas	27.386	27.386	1.67	132210	0.02	2000	
Se	82	1	No Gas	0.560	0.560	84.23	140	0.40	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1573852	3.53	1801940	87.34	70	120	
Ge	72	2	He	1252193	1.67	1191599	105.09	70	120	
Ge	72	1	No Gas	3591023	0.82	3591716	99.98	70	120	
In	115	1	No Gas	4225415	1.26	4173630	101.24	70	120	
Bi	209	1	No Gas	3560468	2.47	3450328	103.19	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01SD
Data File Name	150SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:35:29-05:00
Sample Type	Sample
Dilution	5
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.247	26.237	2.59	197307	0.00	2000	
Be	9	1	No Gas	0.029	0.145	3.43	160	0.02	2000	
V	51	2	He	0.917	4.585	5.62	12008	0.01	2000	
Cr	52	2	He	0.313	1.563	4.92	5665	0.01	2000	
Fe	56	2	He	218.710	1093.552	3.79	2105110	0.01	200000	
Se	78	2	He	0.259	1.294	13.18	221	0.12	2000	
Sn	118	2	He	0.117	0.587	22.38	2694	0.00	200	
As	75	2	He	0.411	2.057	1.87	867	0.05	2000	
Ca	44	2	He	7321.101	36605.504	1.71	430630	1.70	200000	
Na	23	2	He	35397.405	176987.025	1.18	58311731	0.06	200000	
Mg	24	2	He	5458.889	27294.445	3.27	5047048	0.11	200000	
K	39	2	He	243.789	1218.946	1.85	367636	0.07	200000	
Mn	55	2	He	117.970	589.851	3.04	927309	0.01	2000	
Co	59	2	He	1.837	9.184	2.81	29038	0.01	2000	
Ni	60	2	He	2.058	10.292	1.62	8666	0.02	2000	
Cu	63	2	He	3.019	15.095	1.51	33913	0.01	2000	
Zn	66	2	He	5.912	29.562	2.90	12459	0.05	2000	
Al	27	2	He	9.291	46.456	6.48	6339	0.15	2000	
B	11	1	No Gas	22.108	110.538	4.16	103149	0.02	2000	
Al	27	1	No Gas	8.958	44.790	7.94	252836	0.00	2000	
Si	28	1	No Gas	4224.623	21123.114	1.17	46821323	0.01	2000	>LDR
Ag	107	1	No Gas	-0.001	-0.005	-452.43	483	0.00	2000	
Cd	111	1	No Gas	0.038	0.191	18.94	197	0.02	2000	
Sr	88	1	No Gas	133.303	666.515	1.87	5983979	0.00	2000	
Mo	95	1	No Gas	0.089	0.446	8.81	863	0.01	2000	
Sn	118	1	No Gas	0.176	0.878	16.57	5171	0.00	2000	
Sb	121	1	No Gas	0.101	0.507	3.27	4794	0.00	2000	
Ba	137	1	No Gas	148.740	743.702	2.05	1036990	0.01	2000	
Tl	205	1	No Gas	0.004	0.020	43.92	360	0.00	2000	
Tl	203	1	No Gas	0.005	0.026	61.46	160	0.00	2000	
Pb	208	1	No Gas	0.026	0.131	5.16	3117	0.00	2000	
U	238	1	No Gas	0.024	0.120	10.11	1410	0.00	2000	
Ca	43	2	He	7313.676	36568.378	0.58	25150	29.08	200000	
Sb	121	2	He	0.121	0.605	11.07	2767	0.00	2000	
Ti	47	2	He	0.194	0.969	33.24	83	0.23	2000	
Cu	63	1	No Gas	3.028	15.141	2.26	56284	0.01	2000	
Zn	66	1	No Gas	5.722	28.612	3.44	28791	0.02	2000	
Se	82	1	No Gas	0.112	0.559	340.76	24	0.47	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1563366	0.83	1801940	86.76	70	120	
Ge	72	2	He	1190411	1.66	1191599	99.90	70	120	
Ge	72	1	No Gas	3671806	0.09	3591716	102.23	70	120	

Sample Report

In	115	1	No Gas	4301710	0.99	4173630	103.07	70	120	
Bi	209	1	No Gas	3735901	1.18	3450328	108.28	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01MS
Data File Name	151SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:37:22-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.552	24.552	2.17	587958	0.00	2000	
Be	9	1	No Gas	48.954	48.954	2.13	249735	0.02	2000	
V	51	2	He	49.195	49.195	0.65	459139	0.01	2000	
Cr	52	2	He	48.206	48.206	1.04	533025	0.01	2000	
Fe	56	2	He	5702.451	5702.451	1.69	55642494	0.01	200000	
Se	78	2	He	49.413	49.413	1.54	7086	0.70	2000	
Sn	118	2	He	100.782	100.782	1.47	814401	0.01	200	
As	75	2	He	50.626	50.626	0.69	79258	0.06	2000	
Ca	44	2	He	37968.425	37968.425	2.19	2254196	1.68	200000	
Na	23	2	He	169053.434	169053.434	0.56	283262476	0.06	200000	
Mg	24	2	He	30177.900	30177.900	1.88	28412225	0.11	200000	
K	39	2	He	5710.545	5710.545	1.54	6635226	0.09	200000	
Mn	55	2	He	572.351	572.351	1.37	4579931	0.01	2000	
Co	59	2	He	56.228	56.228	0.90	899458	0.01	2000	
Ni	60	2	He	55.027	55.027	0.26	230309	0.02	2000	
Cu	63	2	He	61.798	61.798	0.48	692746	0.01	2000	
Zn	66	2	He	72.903	72.903	1.12	152766	0.05	2000	
Al	27	2	He	132.562	132.562	2.36	73507	0.18	2000	
B	11	1	No Gas	557.991	557.991	3.29	1728592	0.03	2000	
Al	27	1	No Gas	135.715	135.715	6.96	3012638	0.00	2000	
Si	28	1	No Gas	20421.352	20421.352	2.44	221430263	0.01	2000	>LDR
Ag	107	1	No Gas	47.964	47.964	2.15	1142948	0.00	2000	
Cd	111	1	No Gas	50.061	50.061	0.97	237674	0.02	2000	
Sr	88	1	No Gas	726.835	726.835	0.88	32318792	0.00	2000	
Mo	95	1	No Gas	50.121	50.121	0.30	453686	0.01	2000	
Sn	118	1	No Gas	100.996	100.996	1.84	1458299	0.01	2000	
Sb	121	1	No Gas	52.852	52.852	1.15	1010869	0.01	2000	
Ba	137	1	No Gas	734.354	734.354	1.89	5070406	0.01	2000	
Tl	205	1	No Gas	47.282	47.282	2.29	2022944	0.00	2000	
Tl	203	1	No Gas	48.579	48.579	0.88	818816	0.01	2000	
Pb	208	1	No Gas	51.380	51.380	1.67	2796340	0.00	2000	
U	238	1	No Gas	0.126	0.126	3.66	6842	0.00	2000	
Ca	43	2	He	39017.505	39017.505	0.95	136411	28.60	200000	
Sb	121	2	He	51.178	51.178	0.39	555291	0.01	2000	
Ti	47	2	He	139.331	139.331	0.73	51280	0.27	2000	
Cu	63	1	No Gas	64.642	64.642	0.45	1170234	0.01	2000	
Zn	66	1	No Gas	74.145	74.145	1.35	362641	0.02	2000	
Se	82	1	No Gas	50.925	50.925	2.71	13498	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1590324	1.97	1801940	88.26	70	120	
Ge	72	2	He	1212060	0.43	1191599	101.72	70	120	
Ge	72	1	No Gas	3650163	1.08	3591716	101.63	70	120	
In	115	1	No Gas	4261994	1.47	4173630	102.12	70	120	
Bi	209	1	No Gas	3545713	1.30	3450328	102.76	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01MSD
Data File Name	152SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:39:17-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.246	24.246	2.70	602232	0.00	2000	
Be	9	1	No Gas	48.928	48.928	2.93	258343	0.02	2000	
V	51	2	He	50.657	50.657	2.07	480499	0.01	2000	
Cr	52	2	He	50.235	50.235	2.90	564529	0.01	2000	
Fe	56	2	He	5728.218	5728.218	2.04	56821592	0.01	200000	
Se	78	2	He	50.273	50.273	1.66	7326	0.69	2000	
Sn	118	2	He	100.418	100.418	2.14	828982	0.01	200	
As	75	2	He	51.091	51.091	1.67	81310	0.06	2000	
Ca	44	2	He	38672.661	38672.661	3.12	2333613	1.66	200000	
Na	23	2	He	173908.199	173908.199	2.21	296211229	0.06	200000	
Mg	24	2	He	30287.790	30287.790	2.40	28985035	0.10	200000	
K	39	2	He	5856.518	5856.518	2.18	6914845	0.08	200000	
Mn	55	2	He	589.557	589.557	2.39	4795250	0.01	2000	
Co	59	2	He	56.820	56.820	2.49	923862	0.01	2000	
Ni	60	2	He	55.815	55.815	2.77	237442	0.02	2000	
Cu	63	2	He	59.620	59.620	4.14	679202	0.01	2000	
Zn	66	2	He	75.187	75.187	2.47	160141	0.05	2000	
Al	27	2	He	139.105	139.105	4.37	78309	0.18	2000	
B	11	1	No Gas	576.311	576.311	2.97	1846877	0.03	2000	
Al	27	1	No Gas	141.683	141.683	2.90	3097700	0.00	2000	
Si	28	1	No Gas	21543.199	21543.199	3.44	230113590	0.01	2000	>LDR
Ag	107	1	No Gas	49.074	49.074	0.44	1172168	0.00	2000	
Cd	111	1	No Gas	51.157	51.157	0.89	243483	0.02	2000	
Sr	88	1	No Gas	740.711	740.711	1.96	33027643	0.00	2000	
Mo	95	1	No Gas	51.358	51.358	0.86	465987	0.01	2000	
Sn	118	1	No Gas	102.460	102.460	1.55	1483481	0.01	2000	
Sb	121	1	No Gas	55.083	55.083	0.80	1038157	0.01	2000	
Ba	137	1	No Gas	747.638	747.638	3.55	5173084	0.01	2000	
Tl	205	1	No Gas	48.889	48.889	1.46	2071270	0.00	2000	
Tl	203	1	No Gas	51.123	51.123	3.30	852978	0.01	2000	
Pb	208	1	No Gas	52.241	52.241	0.60	2815678	0.00	2000	
U	238	1	No Gas	0.127	0.127	1.85	6825	0.00	2000	
Ca	43	2	He	40121.101	40121.101	2.35	142582	28.14	200000	
Sb	121	2	He	50.723	50.723	2.62	559421	0.01	2000	
Ti	47	2	He	141.331	141.331	2.50	52873	0.27	2000	
Cu	63	1	No Gas	62.897	62.897	1.15	1122170	0.01	2000	
Zn	66	1	No Gas	77.671	77.671	0.64	374351	0.02	2000	
Se	82	1	No Gas	53.801	53.801	1.70	14052	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1646535	3.00	1801940	91.38	70	120	
Ge	72	2	He	1232466	2.23	1191599	103.43	70	120	
Ge	72	1	No Gas	3597281	1.56	3591716	100.15	70	120	
In	115	1	No Gas	4272747	2.13	4173630	102.37	70	120	
Bi	209	1	No Gas	3511266	2.05	3450328	101.77	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01PDS
Data File Name	153SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:41:10-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	25.347	25.347	1.67	627026	0.00	2000	
Be	9	1	No Gas	106.991	106.991	1.63	566699	0.02	2000	
V	51	2	He	109.525	109.525	1.51	1016264	0.01	2000	
Cr	52	2	He	108.877	108.877	2.23	1199186	0.01	2000	
Fe	56	2	He	11734.721	11734.721	1.59	114320025	0.01	200000	
Se	78	2	He	111.437	111.437	1.12	15719	0.71	2000	
Sn	118	2	He	0.424	0.424	4.75	5108	0.01	200	
As	75	2	He	112.626	112.626	1.07	175751	0.06	2000	
Ca	44	2	He	46625.436	46625.436	1.62	2763472	1.69	200000	
Na	23	2	He	191764.142	191764.142	1.25	320796855	0.06	200000	>LDR
Mg	24	2	He	37704.918	37704.918	1.05	35442712	0.11	200000	
K	39	2	He	11947.716	11947.716	0.25	13758497	0.09	200000	
Mn	55	2	He	676.770	676.770	0.89	5407290	0.01	2000	
Co	59	2	He	118.408	118.408	2.54	1890685	0.01	2000	
Ni	60	2	He	112.816	112.816	1.19	471214	0.02	2000	
Cu	63	2	He	117.639	117.639	0.68	1316079	0.01	2000	
Zn	66	2	He	136.656	136.656	1.99	285620	0.05	2000	
Al	27	2	He	153.305	153.305	2.44	84653	0.18	2000	
B	11	1	No Gas	66.281	66.281	0.63	247962	0.03	2000	
Al	27	1	No Gas	150.455	150.455	2.95	3309733	0.00	2000	
Si	28	1	No Gas	21658.760	21658.760	0.91	233038043	0.01	2000	>LDR
Ag	107	1	No Gas	109.293	109.293	1.59	2571517	0.00	2000	
Cd	111	1	No Gas	112.864	112.864	1.44	529222	0.02	2000	
Sr	88	1	No Gas	673.067	673.067	0.71	29563326	0.00	2000	
Mo	95	1	No Gas	111.273	111.273	0.98	994805	0.01	2000	
Sn	118	1	No Gas	0.551	0.551	2.94	10401	0.01	2000	
Sb	121	1	No Gas	117.516	117.516	1.47	2227242	0.01	2000	
Ba	137	1	No Gas	846.426	846.426	2.11	5773242	0.01	2000	
Tl	205	1	No Gas	107.193	107.193	1.47	4575652	0.00	2000	
Tl	203	1	No Gas	114.324	114.324	2.23	1922030	0.01	2000	
Pb	208	1	No Gas	114.707	114.707	1.85	6225986	0.00	2000	
U	238	1	No Gas	0.131	0.131	0.38	7109	0.00	2000	
Ca	43	2	He	47390.069	47390.069	0.29	165432	28.65	200000	
Sb	121	2	He	109.681	109.681	0.92	1186687	0.01	2000	
Ti	47	2	He	104.314	104.314	2.12	38334	0.27	2000	
Cu	63	1	No Gas	120.428	120.428	1.35	2162578	0.01	2000	
Zn	66	1	No Gas	138.693	138.693	0.61	672647	0.02	2000	
Se	82	1	No Gas	117.559	117.559	1.36	30924	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1651046	1.25	1801940	91.63	70	120	
Ge	72	2	He	1210280	1.27	1191599	101.57	70	120	
Ge	72	1	No Gas	3622447	0.45	3591716	100.86	70	120	
In	115	1	No Gas	4210048	0.97	4173630	100.87	70	120	
Bi	209	1	No Gas	3537399	1.49	3450328	102.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	156_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:49:18-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.406	5.106	2178764	2.12	100	99.4	90	110	
Be	9	1	No Gas	97.623	3.657	519379	0.24	100	97.6	90	110	
V	51	2	He	97.542	1.500	921348	1.10	100	97.5	90	110	
Cr	52	2	He	99.508	1.284	1115685	1.89	100	99.5	90	110	
Fe	56	2	He	10037.890	1.955	99517792	1.35	10000	100.4	90	110	
Se	78	2	He	98.068	2.627	14101	2.74	100	98.1	90	110	
Sn	118	2	He	103.658	1.181	877395	0.24	100	103.7	90	110	
As	75	2	He	99.107	1.521	157426	0.99	100	99.1	90	110	
Ca	44	2	He	9469.541	1.424	574961	0.80	10000	94.7	90	110	
Na	23	2	He	9507.653	1.942	16266441	1.42	10000	95.1	90	110	
Mg	24	2	He	9426.896	2.313	9018407	1.76	10000	94.3	90	110	
K	39	2	He	9435.350	1.738	11077058	1.18	10000	94.4	90	110	
Mn	55	2	He	100.619	2.421	818554	1.83	100	100.6	90	110	
Co	59	2	He	102.436	0.382	1664984	0.80	100	102.4	90	110	
Ni	60	2	He	101.589	1.953	431862	1.40	100	101.6	90	110	
Cu	63	2	He	101.287	1.648	1153353	1.75	100	101.3	90	110	
Zn	66	2	He	101.856	0.505	216768	0.42	100	101.9	90	110	
Al	27	2	He	93.695	1.414	53209	1.12	100	93.7	90	110	
B	11	1	No Gas	511.002	6.340	1653732	3.18	500	102.2	90	110	
Al	27	1	No Gas	99.484	5.759	2238324	3.06	100	99.5	90	110	
Si	28	1	No Gas	455.965	3.656	5885367	0.69	5000	9.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	477.643	3.614	560316	1.18	500	95.5	90	110	
Ag	107	1	No Gas	103.315	2.449	2514459	2.33	100	103.3	90	110	
Cd	111	1	No Gas	104.867	1.915	508615	1.64	100	104.9	90	110	
Sr	88	1	No Gas	99.948	1.116	4542337	0.58	100	99.9	90	110	
Mo	95	1	No Gas	102.952	0.892	952055	1.26	100	103.0	90	110	
Sn	118	1	No Gas	104.691	0.376	1544711	1.46	100	104.7	90	110	
Sb	121	1	No Gas	110.201	3.094	2118929	0.56	100	110.2	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	106.604	2.380	752220	1.28	100	106.6	90	110	
Tl	205	1	No Gas	98.246	1.387	4579835	3.18	100	98.2	90	110	
Tl	203	1	No Gas	105.571	2.302	1938776	4.06	100	105.6	90	110	
Pb	208	1	No Gas	104.597	0.454	6199358	1.44	100	104.6	90	110	
U	238	1	No Gas	105.642	0.406	6229891	1.53	100	105.6	90	110	
Ca	43	2	He	9375.747	0.849	33348	1.36	10000	93.8	90	110	
Sb	121	2	He	105.807	2.231	1164890	1.62	100	105.8	90	110	
Ti	47	2	He	95.183	1.731	35603	1.63	100	95.2	90	110	
Cu	63	1	No Gas	102.862	3.182	1874131	2.43	100	102.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1659573	3.51	1801940	92.10	70	120	
Ge	72	2	He	1231700	0.61	1191599	103.37	70	120	
Ge	72	1	No Gas	3676513	2.55	3591716	102.36	70	120	
In	115	1	No Gas	4354611	1.12	4173630	104.34	70	120	
Bi	209	1	No Gas	3862188	1.84	3450328	111.94	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	157_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:51:03-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.126	-103.1	99279	0.3	0.5	
Be	9	1	No Gas	0.013	43.9	88	36.8	0.5	
V	51	2	He	0.141	5.6	5039	4.9	2.5	
Cr	52	2	He	-0.004	-443.4	2274	5.9	2.5	
Fe	56	2	He	1.154	3.3	21728	2.7	100	
Se	78	2	He	-0.081	-84.9	177	3.4	2	
As	75	2	He	0.025	43.2	279	2.8	2.5	
Ca	44	2	He	-47.615	-3.8	1957	7.1	100	
Na	23	2	He	45.850	8.1	158468	1.0	100	
Mg	24	2	He	0.696	34.0	1183	15.7	100	
K	39	2	He	-6.149	-37.8	87862	0.5	100	
Mn	55	2	He	0.125	9.7	1533	3.3	2.5	
Co	59	2	He	0.002	55.5	220	7.9	2.5	
Ni	60	2	He	0.035	33.4	363	15.7	2.5	
Cu	63	2	He	0.027	14.4	1023	3.0	2	
Zn	66	2	He	0.055	68.8	433	20.8	2.5	
Al	27	2	He	1.122	16.2	2004	1.8	5	
B	11	1	No Gas	14.547	11.1	87616	4.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.334	13.9	85232	2.4	5	
Si	28	1	No Gas	-29.204	-5.6	607299	0.9	10	
P	31	1	No Gas	-8.294	-17.7	33992	3.9	10	
Ag	107	1	No Gas	0.004	55.3	620	9.0	2.5	
Cd	111	1	No Gas	0.003	63.8	30	33.3	1	
Sr	88	1	No Gas	0.044	6.3	4041	2.9	2.5	
Mo	95	1	No Gas	0.042	14.6	443	12.8	2.5	
Sn	118	1	No Gas	0.317	8.1	7439	5.3	5	
Sb	121	1	No Gas	0.468	11.8	11786	9.7	2.5	
Ba	137	1	No Gas	0.046	4.8	597	2.6	2.5	
Tl	205	1	No Gas	0.043	39.6	2247	36.9	1	
Tl	203	1	No Gas	0.043	43.0	883	40.1	1	
Pb	208	1	No Gas	0.030	36.2	3490	19.1	2.5	
U	238	1	No Gas	0.009	35.1	557	32.9	2.5	
Ca	43	2	He	15.191	53.4	100	26.5	100	
Sb	121	2	He	0.380	2.6	5601	1.6	2.5	
Ti	47	2	He	0.053	111.6	33	69.3	2.5	
Cu	63	1	No Gas	0.053	6.6	2150	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1700241	3.09	1801940	94.36	70	120	
Ge	72	2	He	1209267	3.43	1191599	101.48	70	120	
Ge	72	1	No Gas	3655324	2.39	3591716	101.77	70	120	
In	115	1	No Gas	4422978	0.43	4173630	105.97	70	120	
Bi	209	1	No Gas	3925292	0.59	3450328	113.77	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	186_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:41:14-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.649	3.020	2053989	1.99	100	96.6	90	110	
Be	9	1	No Gas	98.189	2.847	505723	1.18	100	98.2	90	110	
V	51	2	He	100.577	2.589	940539	2.83	100	100.6	90	110	
Cr	52	2	He	102.152	2.149	1133809	2.07	100	102.2	90	110	
Fe	56	2	He	10095.632	1.541	99094875	0.22	10000	101.0	90	110	
Se	78	2	He	100.670	2.872	14324	1.99	100	100.7	90	110	
Sn	118	2	He	103.143	0.368	876651	1.99	100	103.1	90	110	
As	75	2	He	99.811	1.701	156961	0.61	100	99.8	90	110	
Ca	44	2	He	9866.479	1.542	592916	1.16	10000	98.7	90	110	
Na	23	2	He	9779.216	1.528	16562761	1.03	10000	97.8	90	110	
Mg	24	2	He	9620.903	1.980	9114169	2.65	10000	96.2	90	110	
K	39	2	He	9705.619	1.103	11280388	2.20	10000	97.1	90	110	
Mn	55	2	He	101.774	1.764	819758	1.35	100	101.8	90	110	
Co	59	2	He	105.267	2.017	1693938	1.84	100	105.3	90	110	
Ni	60	2	He	102.025	1.621	429420	1.34	100	102.0	90	110	
Cu	63	2	He	100.359	1.172	1131381	0.65	100	100.4	90	110	
Zn	66	2	He	103.813	1.068	218729	0.80	100	103.8	90	110	
Al	27	2	He	97.394	1.272	54705	1.07	100	97.4	90	110	
B	11	1	No Gas	508.944	3.261	1595527	2.09	500	101.8	90	110	
Al	27	1	No Gas	99.196	3.348	2251558	1.94	100	99.2	90	110	
Si	28	1	No Gas	446.184	4.677	5826777	2.65	5000	8.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	456.846	1.946	542355	0.48	500	91.4	90	110	
Ag	107	1	No Gas	103.739	1.326	2517112	0.94	100	103.7	90	110	
Cd	111	1	No Gas	103.958	1.022	502731	1.75	100	104.0	90	110	
Sr	88	1	No Gas	98.786	1.239	4475963	0.79	100	98.8	90	110	
Mo	95	1	No Gas	100.969	1.586	930922	2.05	100	101.0	90	110	
Sn	118	1	No Gas	106.580	0.584	1567660	0.50	100	106.6	90	110	
Sb	121	1	No Gas	109.274	2.079	2118826	0.74	100	109.3	90	110	
Ba	137	1	No Gas	105.656	1.725	743329	1.07	100	105.7	90	110	
Tl	205	1	No Gas	97.727	3.734	4512669	3.71	100	97.7	90	110	
Tl	203	1	No Gas	104.501	2.420	1900798	2.24	100	104.5	90	110	
Pb	208	1	No Gas	105.000	1.319	6165843	1.16	100	105.0	90	110	
U	238	1	No Gas	103.555	4.147	6050181	3.96	100	103.6	90	110	
Ca	43	2	He	9705.684	2.563	34180	3.23	10000	97.1	90	110	
Sb	121	2	He	107.348	1.283	1170210	1.47	100	107.3	90	110	
Ti	47	2	He	97.300	1.348	36034	1.52	100	97.3	90	110	
Cu	63	1	No Gas	101.720	2.396	1868611	1.06	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
Li	6	1	No Gas	1605764	1.72	1801940	89.11	70	120	
Ge	72	2	He	1219552	1.59	1191599	102.35	70	120	
Ge	72	1	No Gas	3706223	1.33	3591716	103.19	70	120	
In	115	1	No Gas	4341319	0.78	4173630	104.02	70	120	
Bi	209	1	No Gas	3826417	0.20	3450328	110.90	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	187_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:43:01-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.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
Li	7	1	No Gas	-0.180	-58.1	96694	2.3	0.5	
Be	9	1	No Gas	0.004	39.0	38	19.9	0.5	
V	51	2	He	0.098	9.4	4719	0.6	2.5	
Cr	52	2	He	-0.015	-71.1	2194	3.7	2.5	
Fe	56	2	He	0.783	10.6	18429	5.5	100	
Se	78	2	He	-0.131	-112.4	173	11.7	2	
As	75	2	He	0.047	30.7	318	5.8	2.5	
Ca	44	2	He	-46.798	-2.5	2037	1.7	100	
Na	23	2	He	13.058	9.6	105494	0.3	100	
Mg	24	2	He	0.563	15.8	1080	5.6	100	
K	39	2	He	4.904	56.4	102179	1.7	100	
Mn	55	2	He	0.082	32.1	1210	19.1	2.5	
Co	59	2	He	0.001	277.6	217	25.4	2.5	
Ni	60	2	He	0.059	4.0	470	3.7	2.5	
Cu	63	2	He	0.016	21.0	913	6.2	2	
Zn	66	2	He	0.027	74.2	380	9.5	2.5	
Al	27	2	He	-0.017	-536.7	1410	1.2	5	
B	11	1	No Gas	0.123	565.1	40378	8.2	0.5	
Al	27	1	No Gas	-0.090	-51.3	55213	1.4	5	
Si	28	1	No Gas	-31.257	-2.7	596163	0.9	10	
P	31	1	No Gas	-9.608	-2.6	33193	0.7	10	
Ag	107	1	No Gas	0.080	8.9	2510	4.2	2.5	
Cd	111	1	No Gas	-0.001	-7.3	10	0.0	1	
Sr	88	1	No Gas	0.011	25.2	2507	4.8	2.5	
Mo	95	1	No Gas	0.036	29.9	387	24.0	2.5	
Sn	118	1	No Gas	0.282	5.1	6919	0.3	5	
Sb	121	1	No Gas	0.284	9.6	8416	6.9	2.5	
Ba	137	1	No Gas	0.061	23.0	703	12.9	2.5	
Tl	205	1	No Gas	0.070	64.3	3494	60.3	1	
Tl	203	1	No Gas	0.072	51.5	1417	48.5	1	
Pb	208	1	No Gas	0.022	40.5	3040	17.8	2.5	
U	238	1	No Gas	0.008	15.8	520	14.5	2.5	
Ca	43	2	He	12.764	25.9	93	12.4	100	
Sb	121	2	He	0.219	11.6	3937	7.6	2.5	
Ti	47	2	He	0.025	156.2	23	65.5	2.5	
Cu	63	1	No Gas	0.015	17.1	1497	3.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

Li	6	1	No Gas	1675549	4.20	1801940	92.99	70	120	
Ge	72	2	He	1229354	2.35	1191599	103.17	70	120	
Ge	72	1	No Gas	3723013	0.68	3591716	103.66	70	120	
In	115	1	No Gas	4429978	3.04	4173630	106.14	70	120	
Bi	209	1	No Gas	3930711	0.73	3450328	113.92	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01
Data File Name	188SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:44:59-05:00
Sample Type	Sample
Dilution	20
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.082	21.646	4.43	122097	0.00	2000	
Be	9	1	No Gas	0.011	0.211	48.23	72	0.01	2000	
V	51	2	He	0.246	4.923	11.21	5985	0.00	2000	
Cr	52	2	He	0.088	1.765	22.38	3277	0.00	2000	
Fe	56	2	He	55.053	1101.066	0.59	544572	0.01	200000	
Se	78	2	He	0.028	0.568	411.04	192	0.01	2000	
Sn	118	2	He	0.088	1.768	39.08	2530	0.00	200	
As	75	2	He	0.094	1.882	11.74	386	0.02	2000	
Ca	44	2	He	1784.702	35694.046	1.02	109901	1.62	200000	
Na	23	2	He	8984.625	179692.507	1.87	15046166	0.06	200000	
Mg	24	2	He	1403.777	28075.533	2.15	1314574	0.11	200000	
K	39	2	He	57.568	1151.355	3.19	160191	0.04	200000	
Mn	55	2	He	30.559	611.175	1.60	243642	0.01	2000	
Co	59	2	He	0.455	9.093	1.33	7422	0.01	2000	
Ni	60	2	He	0.527	10.544	6.78	2407	0.02	2000	
Cu	63	2	He	0.828	16.553	4.16	9937	0.01	2000	
Zn	66	2	He	1.936	38.716	10.86	4337	0.04	2000	
Al	27	2	He	1.859	37.170	16.27	2397	0.08	2000	
B	11	1	No Gas	-2.727	-54.548	-12.00	30911	-0.01	2000	
Al	27	1	No Gas	2.021	40.429	9.36	101389	0.00	2000	
Si	28	1	No Gas	1020.934	20418.687	2.01	12097073	0.01	2000	
Ag	107	1	No Gas	0.008	0.163	81.54	727	0.00	2000	
Cd	111	1	No Gas	0.009	0.186	44.98	60	0.02	2000	
Sr	88	1	No Gas	33.885	677.709	2.51	1567764	0.00	2000	
Mo	95	1	No Gas	0.025	0.490	23.59	280	0.01	2000	
Sn	118	1	No Gas	0.134	2.689	5.86	4711	0.00	2000	
Sb	121	1	No Gas	0.057	1.146	26.24	3974	0.00	2000	
Ba	137	1	No Gas	37.088	741.769	0.68	266453	0.01	2000	
Tl	205	1	No Gas	0.005	0.101	81.44	433	0.00	2000	
Tl	203	1	No Gas	0.004	0.075	55.54	143	0.00	2000	
Pb	208	1	No Gas	0.019	0.376	7.29	2850	0.00	2000	
U	238	1	No Gas	0.007	0.135	28.94	447	0.00	2000	
Ca	43	2	He	1831.262	36625.249	2.63	6412	28.56	200000	
Sb	121	2	He	0.079	1.575	31.43	2347	0.00	2000	
Ti	47	2	He	0.063	1.264	22.69	37	0.17	2000	
Cu	63	1	No Gas	0.866	17.313	3.52	17054	0.01	2000	
Zn	66	1	No Gas	1.856	37.124	1.39	9870	0.02	2000	
Se	82	1	No Gas	-0.226	-4.516	-51.75	-67	0.34	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1657496	0.80	1801940	91.98	70	120	
Ge	72	2	He	1205412	1.97	1191599	101.16	70	120	
Ge	72	1	No Gas	3696278	1.29	3591716	102.91	70	120	

Sample Report

In	115	1	No Gas	4430123	1.49	4173630	106.15	70	120	
Bi	209	1	No Gas	3958089	1.36	3450328	114.72	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01SD
Data File Name	189SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:46:57-05:00
Sample Type	Sample
Dilution	100
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.058	5.794	93.37	102266	0.00	2000	
Be	9	1	No Gas	0.000	-0.010	-1918.44	15	0.00	2000	
V	51	2	He	0.281	28.114	7.34	6452	0.00	2000	
Cr	52	2	He	0.016	1.624	142.82	2547	0.00	2000	
Fe	56	2	He	10.764	1076.438	0.52	117491	0.01	200000	
Se	78	2	He	-0.027	-2.656	-392.86	189	-0.01	2000	
Sn	118	2	He	0.045	4.514	31.36	2144	0.00	200	
As	75	2	He	0.041	4.117	28.73	310	0.01	2000	
Ca	44	2	He	287.716	28771.564	3.85	22195	1.30	200000	
Na	23	2	He	1741.888	174188.777	1.09	3050546	0.06	200000	
Mg	24	2	He	284.233	28423.307	0.22	272653	0.10	200000	
K	39	2	He	3.278	327.832	48.54	100588	0.00	200000	
Mn	55	2	He	6.029	602.857	2.23	49594	0.01	2000	
Co	59	2	He	0.094	9.391	10.91	1723	0.01	2000	
Ni	60	2	He	0.152	15.191	4.35	867	0.02	2000	
Cu	63	2	He	0.210	21.040	10.33	3134	0.01	2000	
Zn	66	2	He	0.725	72.529	7.20	1867	0.04	2000	
Al	27	2	He	0.590	58.985	24.56	1750	0.03	2000	
B	11	1	No Gas	-5.812	-581.214	-2.02	21503	-0.03	2000	
Al	27	1	No Gas	0.483	48.321	36.29	68167	0.00	2000	
Si	28	1	No Gas	177.476	17747.559	1.76	2905227	0.01	2000	
Ag	107	1	No Gas	0.005	0.507	40.57	670	0.00	2000	
Cd	111	1	No Gas	0.002	0.172	365.48	23	0.01	2000	
Sr	88	1	No Gas	6.480	648.044	3.00	311029	0.00	2000	
Mo	95	1	No Gas	0.006	0.644	55.89	113	0.01	2000	
Sn	118	1	No Gas	0.069	6.859	40.51	3847	0.00	2000	
Sb	121	1	No Gas	0.012	1.223	27.95	3137	0.00	2000	
Ba	137	1	No Gas	7.008	700.790	3.47	52159	0.01	2000	
Tl	205	1	No Gas	0.002	0.177	9.97	270	0.00	2000	
Tl	203	1	No Gas	0.003	0.283	73.53	123	0.00	2000	
Pb	208	1	No Gas	0.007	0.662	28.44	2070	0.00	2000	
U	238	1	No Gas	0.002	0.151	7.26	127	0.00	2000	
Ca	43	2	He	386.044	38604.442	11.48	1420	27.18	200000	
Sb	121	2	He	0.039	3.868	22.21	1960	0.00	2000	
Ti	47	2	He	0.025	2.546	59.58	23	0.11	2000	
Cu	63	1	No Gas	0.210	20.990	9.91	5101	0.00	2000	
Zn	66	1	No Gas	0.835	83.486	8.48	4871	0.02	2000	
Se	82	1	No Gas	-0.047	-4.730	-906.43	-19	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1683663	1.50	1801940	93.44	70	120	
Ge	72	2	He	1232525	0.51	1191599	103.43	70	120	
Ge	72	1	No Gas	3735528	0.86	3591716	104.00	70	120	

Sample Report

In	115	1	No Gas	4571916	2.31	4173630	109.54	70	120	
Bi	209	1	No Gas	3879366	2.73	3450328	112.43	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01PDS
Data File Name	190SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:48:57-05:00
Sample Type	Sample
Dilution	20
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.100	22.009	15.15	122089	0.00	2000	
Be	9	1	No Gas	98.126	1962.519	3.47	520119	0.02	2000	
V	51	2	He	102.864	2057.283	3.50	949809	0.01	2000	
Cr	52	2	He	100.121	2002.412	3.72	1097520	0.01	2000	
Fe	56	2	He	10274.716	205494.329	3.15	99628065	0.01	200000	
Se	78	2	He	102.335	2046.696	4.31	14376	0.71	2000	
Sn	118	2	He	0.037	0.738	50.11	2057	0.00	200	
As	75	2	He	102.420	2048.403	4.06	159043	0.06	2000	
Ca	44	2	He	11662.973	233259.454	5.95	690905	1.69	200000	
Na	23	2	He	18667.187	373343.730	3.03	31152605	0.06	200000	
Mg	24	2	He	11121.526	222430.514	3.75	10402537	0.11	200000	
K	39	2	He	9923.511	198470.223	3.24	11386770	0.09	200000	
Mn	55	2	He	129.260	2585.190	4.11	1028039	0.01	2000	
Co	59	2	He	105.224	2104.486	2.17	1672628	0.01	2000	
Ni	60	2	He	104.060	2081.201	3.37	432536	0.02	2000	
Cu	63	2	He	105.204	2104.080	3.37	1171466	0.01	2000	
Zn	66	2	He	106.525	2130.509	3.70	221626	0.05	2000	
Al	27	2	He	95.150	1902.991	5.41	52791	0.18	2000	
B	11	1	No Gas	-4.304	-86.086	-4.30	25854	-0.02	2000	
Al	27	1	No Gas	97.074	1941.488	1.18	2193112	0.00	2000	
Si	28	1	No Gas	998.722	19974.435	1.85	11821712	0.01	2000	
Ag	107	1	No Gas	106.518	2130.359	1.40	2604112	0.00	2000	
Cd	111	1	No Gas	106.972	2139.431	2.38	521116	0.02	2000	
Sr	88	1	No Gas	33.146	662.930	4.11	1514043	0.00	2000	
Mo	95	1	No Gas	101.492	2029.831	2.44	942604	0.01	2000	
Sn	118	1	No Gas	0.056	1.124	29.91	3494	0.00	2000	
Sb	121	1	No Gas	110.858	2217.164	2.82	2137738	0.01	2000	
Ba	137	1	No Gas	144.216	2884.317	3.26	1021969	0.01	2000	
Tl	205	1	No Gas	101.359	2027.177	2.71	4607753	0.00	2000	
Tl	203	1	No Gas	107.806	2156.112	0.93	1931193	0.01	2000	
Pb	208	1	No Gas	107.216	2144.321	1.76	6199006	0.00	2000	
U	238	1	No Gas	0.007	0.141	12.62	443	0.00	2000	
Ca	43	2	He	11376.612	227532.239	3.48	39551	28.76	200000	
Sb	121	2	He	109.329	2186.572	3.73	1176852	0.01	2000	
Ti	47	2	He	96.804	1936.081	4.66	35396	0.27	2000	
Cu	63	1	No Gas	103.063	2061.258	2.99	1883114	0.01	2000	
Zn	66	1	No Gas	107.122	2142.444	0.98	528756	0.02	2000	
Se	82	1	No Gas	106.191	2123.818	2.78	28419	0.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1653344	3.51	1801940	91.75	70	120	
Ge	72	2	He	1205156	3.35	1191599	101.14	70	120	
Ge	72	1	No Gas	3685909	0.92	3591716	102.62	70	120	

Sample Report

In	115	1	No Gas	4374820	2.09	4173630	104.82	70	120	
Bi	209	1	No Gas	3768193	1.72	3450328	109.21	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	192_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:52:41-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.040	2.063	2074183	3.75	100	96.0	90	110	
Be	9	1	No Gas	98.234	2.408	513810	1.33	100	98.2	90	110	
V	51	2	He	99.392	2.640	928777	1.60	100	99.4	90	110	
Cr	52	2	He	101.404	2.708	1124652	1.23	100	101.4	90	110	
Fe	56	2	He	10426.924	3.909	102263552	2.49	10000	104.3	90	110	
Se	78	2	He	101.696	2.324	14460	1.02	100	101.7	90	110	
Sn	118	2	He	102.347	1.683	886794	0.88	100	102.3	90	110	
As	75	2	He	101.715	1.924	159852	0.44	100	101.7	90	110	
Ca	44	2	He	9955.200	2.930	597747	1.46	10000	99.6	90	110	
Na	23	2	He	9822.265	1.512	16627423	2.13	10000	98.2	90	110	
Mg	24	2	He	9688.361	0.657	9172563	1.79	10000	96.9	90	110	
K	39	2	He	9795.375	1.885	11374984	1.27	10000	98.0	90	110	
Mn	55	2	He	103.315	2.673	831548	1.26	100	103.3	90	110	
Co	59	2	He	106.484	1.647	1712388	0.45	100	106.5	90	110	
Ni	60	2	He	103.376	0.505	434869	0.99	100	103.4	90	110	
Cu	63	2	He	102.046	1.657	1149829	2.19	100	102.0	90	110	
Zn	66	2	He	104.087	1.167	219171	0.36	100	104.1	90	110	
Al	27	2	He	99.432	3.164	55775	1.68	100	99.4	90	110	
B	11	1	No Gas	506.399	4.151	1612003	2.40	500	101.3	90	110	
Al	27	1	No Gas	102.006	1.252	2324640	0.78	100	102.0	90	110	
Si	28	1	No Gas	464.040	0.658	6051538	0.96	5000	9.3	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	474.952	0.886	564731	1.03	500	95.0	90	110	
Ag	107	1	No Gas	106.392	1.536	2607167	1.38	100	106.4	90	110	
Cd	111	1	No Gas	104.430	2.334	509975	2.04	100	104.4	90	110	
Sr	88	1	No Gas	101.304	1.288	4635485	0.28	100	101.3	90	110	
Mo	95	1	No Gas	101.962	1.837	949424	2.31	100	102.0	90	110	
Sn	118	1	No Gas	104.019	0.936	1545316	1.38	100	104.0	90	110	
Sb	121	1	No Gas	109.459	2.593	2132318	2.74	100	109.5	90	110	
Ba	137	1	No Gas	106.992	0.907	760247	0.74	100	107.0	90	110	
Tl	205	1	No Gas	97.667	1.709	4493558	1.49	100	97.7	90	110	
Tl	203	1	No Gas	102.445	2.685	1856628	2.33	100	102.4	90	110	
Pb	208	1	No Gas	105.155	2.288	6152840	2.35	100	105.2	90	110	
U	238	1	No Gas	105.354	1.243	6133616	1.61	100	105.4	90	110	
Ca	43	2	He	9951.512	1.093	35018	0.79	10000	99.5	90	110	
Sb	121	2	He	108.022	0.493	1176964	1.92	100	108.0	90	110	
Ti	47	2	He	97.370	6.085	36021	4.78	100	97.4	90	110	
Cu	63	1	No Gas	99.340	2.938	1833234	2.23	100	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1630723	2.45	1801940	90.50	70	120	
Ge	72	2	He	1218817	1.47	1191599	102.28	70	120	
Ge	72	1	No Gas	3722840	0.76	3591716	103.65	70	120	
In	115	1	No Gas	4384541	1.06	4173630	105.05	70	120	
Bi	209	1	No Gas	3812638	0.37	3450328	110.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	193_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:54:26-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.068	-57.9	96954	0.8	0.5	
Be	9	1	No Gas	0.010	10.8	68	8.4	0.5	
V	51	2	He	-0.007	-176.1	3708	4.0	2.5	
Cr	52	2	He	-0.020	-53.1	2127	6.1	2.5	
Fe	56	2	He	0.982	6.7	20285	3.9	100	
Se	78	2	He	0.130	93.0	209	9.2	2	
As	75	2	He	0.038	71.9	303	14.8	2.5	
Ca	44	2	He	-45.863	-8.2	2084	11.1	100	
Na	23	2	He	15.588	3.2	109255	0.5	100	
Mg	24	2	He	0.652	14.7	1160	7.4	100	
K	39	2	He	5.934	7.0	102885	0.8	100	
Mn	55	2	He	0.106	17.2	1400	9.3	2.5	
Co	59	2	He	0.002	127.5	230	19.0	2.5	
Ni	60	2	He	0.079	12.6	550	6.6	2.5	
Cu	63	2	He	0.011	29.6	857	4.7	2	
Zn	66	2	He	0.050	94.7	427	23.6	2.5	
Al	27	2	He	-0.004	-2435.8	1410	3.7	5	
B	11	1	No Gas	1.605	61.8	44107	7.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.079	-75.8	56733	2.2	5	
Si	28	1	No Gas	-32.522	-2.0	595626	1.1	10	
P	31	1	No Gas	-10.585	-2.0	32859	1.0	10	
Ag	107	1	No Gas	0.065	5.7	2164	2.7	2.5	
Cd	111	1	No Gas	0.003	62.9	30	33.3	1	
Sr	88	1	No Gas	0.011	48.5	2534	8.1	2.5	
Mo	95	1	No Gas	0.043	33.1	463	29.8	2.5	
Sn	118	1	No Gas	0.267	8.5	6789	4.6	5	
Sb	121	1	No Gas	0.335	8.1	9624	5.5	2.5	
Ba	137	1	No Gas	0.067	13.0	757	8.8	2.5	
Tl	205	1	No Gas	0.072	60.3	3594	57.6	1	
Tl	203	1	No Gas	0.088	53.2	1707	51.4	1	
Pb	208	1	No Gas	0.031	20.2	3584	12.4	2.5	
U	238	1	No Gas	0.008	11.5	517	8.1	2.5	
Ca	43	2	He	8.151	120.8	77	45.8	100	
Sb	121	2	He	0.301	8.2	4814	5.5	2.5	
Ti	47	2	He	0.026	118.9	23	49.5	2.5	
Cu	63	1	No Gas	0.014	29.5	1507	5.0	2.5	

QC ISTD Table

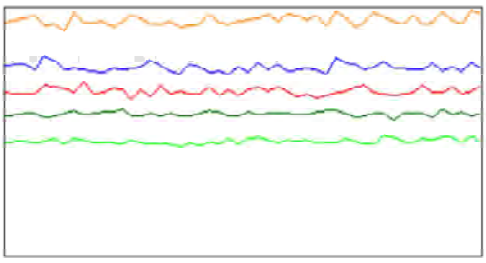
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1639089	0.05	1801940	90.96	70	120	
Ge	72	2	He	1223038	1.14	1191599	102.64	70	120	
Ge	72	1	No Gas	3808445	0.25	3591716	106.03	70	120	
In	115	1	No Gas	4487683	1.62	4173630	107.52	70	120	
Bi	209	1	No Gas	3912220	2.78	3450328	113.39	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq. Date-Time	9/2/2020 9:29:24 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	6656	66564.02		
24	50000	23172	231719.22		
59	50000	38035	380345.10		
115	50000	47673	476725.56		
208	50000	28683	286826.00		

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

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.254	5.000	
24	2.209	5.000	
59	2.212	5.000	
115	1.992	5.000	
208	1.657	5.000	

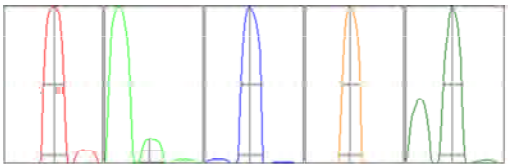
Mass	Background	Background (Required)	Background (Flag)
9	0.100		
24	0.700		
59	0.200		
115	0.200		
208	1.700		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.522 %
Doubly Charged	70 / 140 0.830 %

Tune Check Report

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6555.64	9.05	8.90 - 9.10	
24	23568.99	23.90	23.90 - 24.10	
59	38886.74	58.90	58.90 - 59.10	
115	50217.69	114.90	114.90 - 115.10	
208	29271.85	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.64	0.782		
24	0.64	0.751		
59	0.62	0.740		
115	0.54	0.688		
208	0.56	0.773		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

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

QP Parameters

Mass Gain	131	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

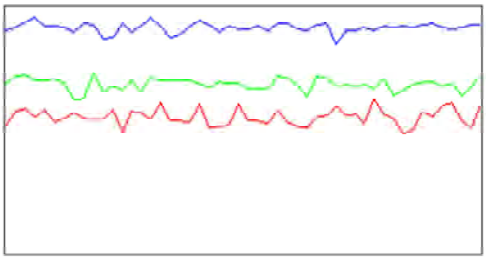
EM

Discriminator	4.5 mV	Analog HV	2413 V	Pulse HV	1207 V

[He]

Tune Check Report

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	276	2763.27		
24	2000	1371	13713.10		
59	20000	18300	183003.07		

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

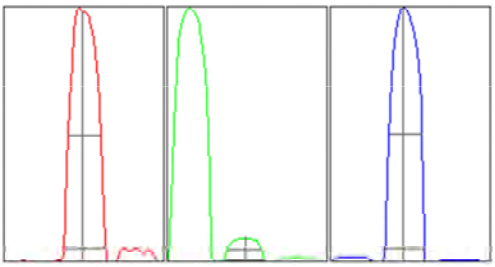
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	6.205	5.000	Fail
24	3.742	5.000	
59	2.169	5.000	

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

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.353 %
Doubly Charged	70 / 140 0.912 %

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	277.79	9.00	8.90 - 9.10	
24	1373.98	24.00	23.90 - 24.10	
59	18643.25	58.90	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.782		
24	0.64	0.745		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.61	0.741		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.2 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

EM

Discriminator	4.5 mV	Analog HV	2413 V	Pulse HV	1207 V

HS20081150 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20081150

Sequence: 082820
Last Update Operator: alshs.nouser

CD	Name	m	Type	Position	Dilution	Level	Instrument Method	Processing Method	me	Status	Inject Time
	STD1		Calibration	BD1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 10:46:45 AM
	STD2		Calibration	BD2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:04:45 AM
	STD3		Calibration	BD3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:22:45 AM
	STD4		Calibration	BD4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:40:48 AM
	STD5		Calibration	BD5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:58:48 AM
	STD6		Calibration	BD6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:16:48 PM
	ICV		Unknown	BD7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:34:48 PM
	ICB		Unknown	BD8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:52:50 PM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 10:52:13 AM
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 11:10:14 AM
	MBLK-082820		Unknown	BB1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:04:18 PM
	LCS-082820		Unknown	BB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:22:18 PM
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:40:19 PM
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:58:19 PM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 6:50:32 AM -
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 7:08:33 AM -
	HS20080995-04MSDF10		Unknown	GA8	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 8:02:36 AM -
	HS20080995-04MSDDF10		Unknown	GB1	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 8:20:38 AM -
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 10:26:49 AM
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 10:44:49 AM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 2:03:18 PM -
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 2:21:19 PM -
	HS20081150-01		Unknown	BC2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 4:45:29 PM -
	HS20081150-01DF20		Unknown	BC3	20.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:03:30 PM -
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:39:34 PM -
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:57:35 PM -

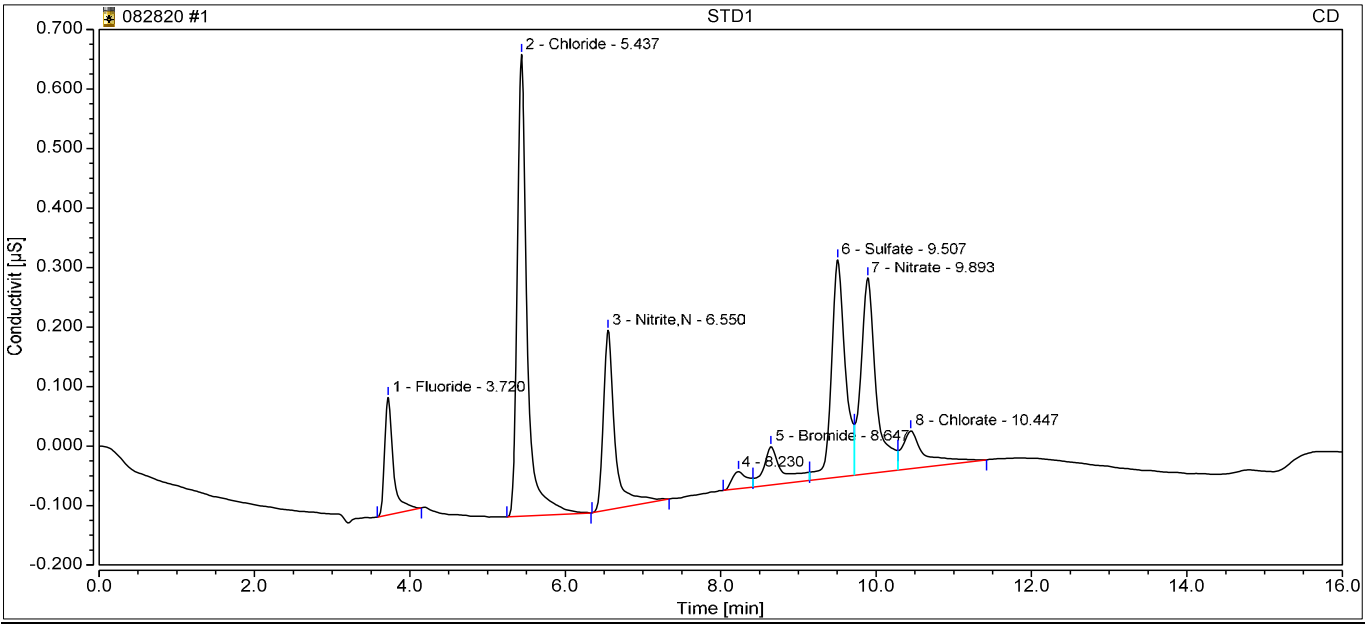
Sequence: 082820
Injection #6: STD6

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:

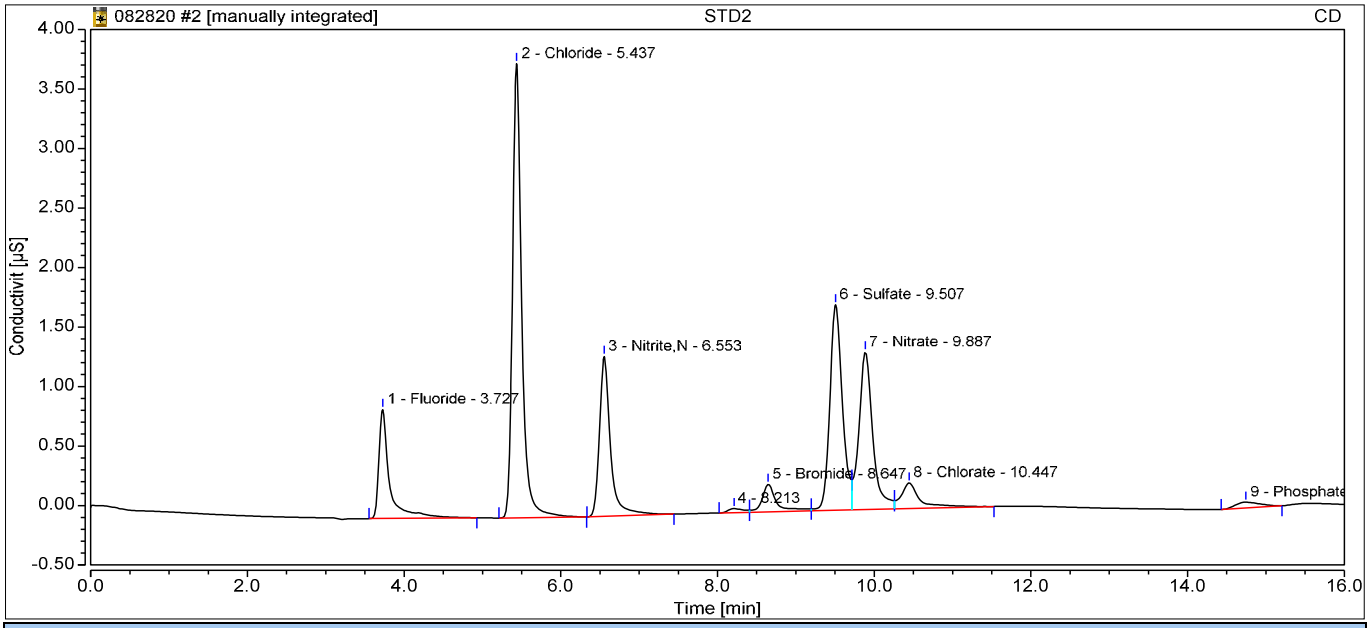


Integration Results

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:

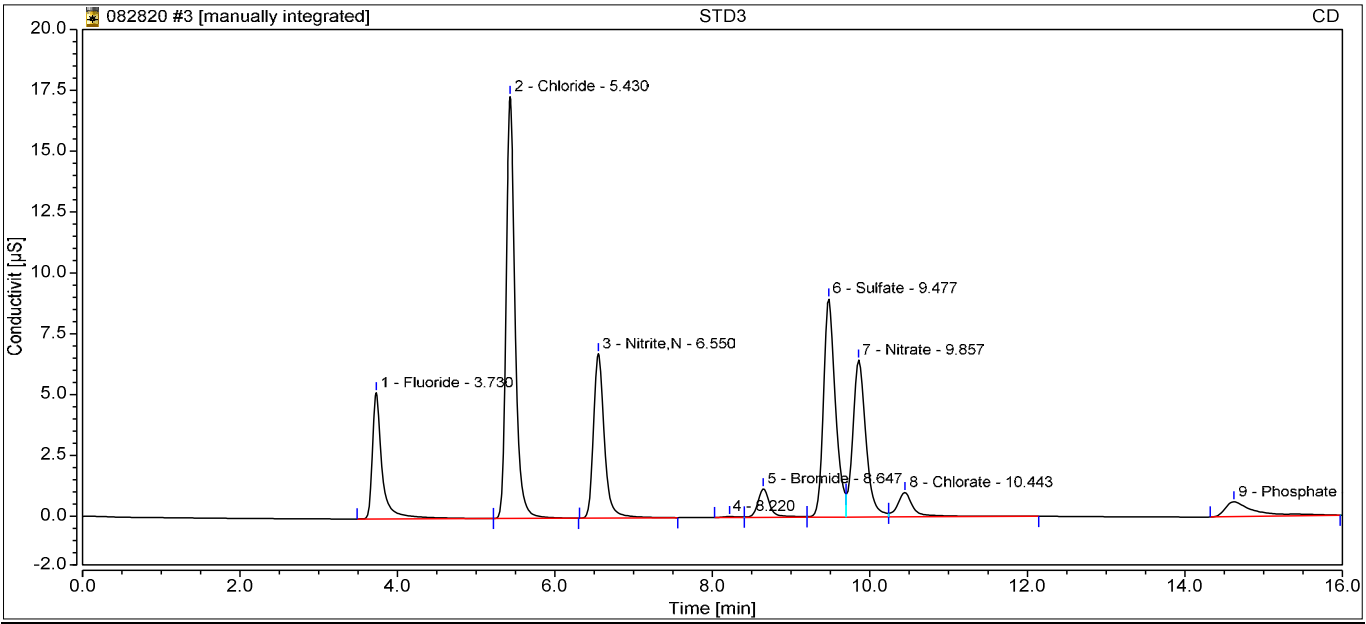


Integration Results

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:



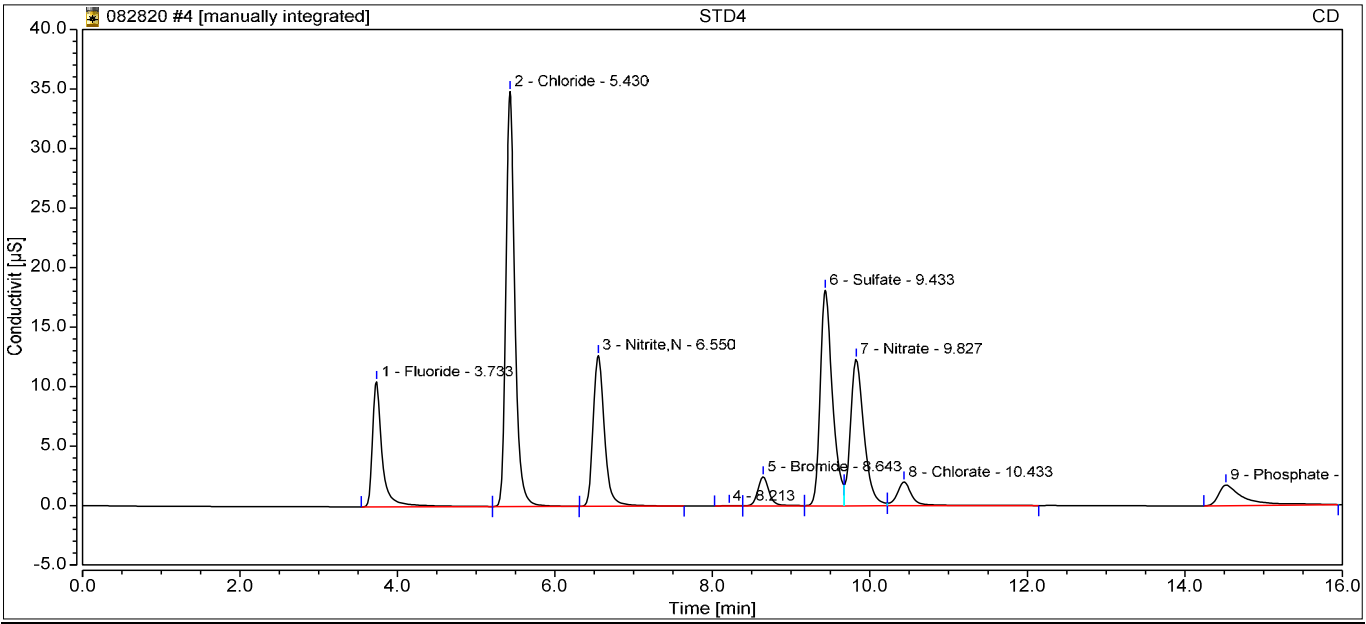
Integration Results

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:



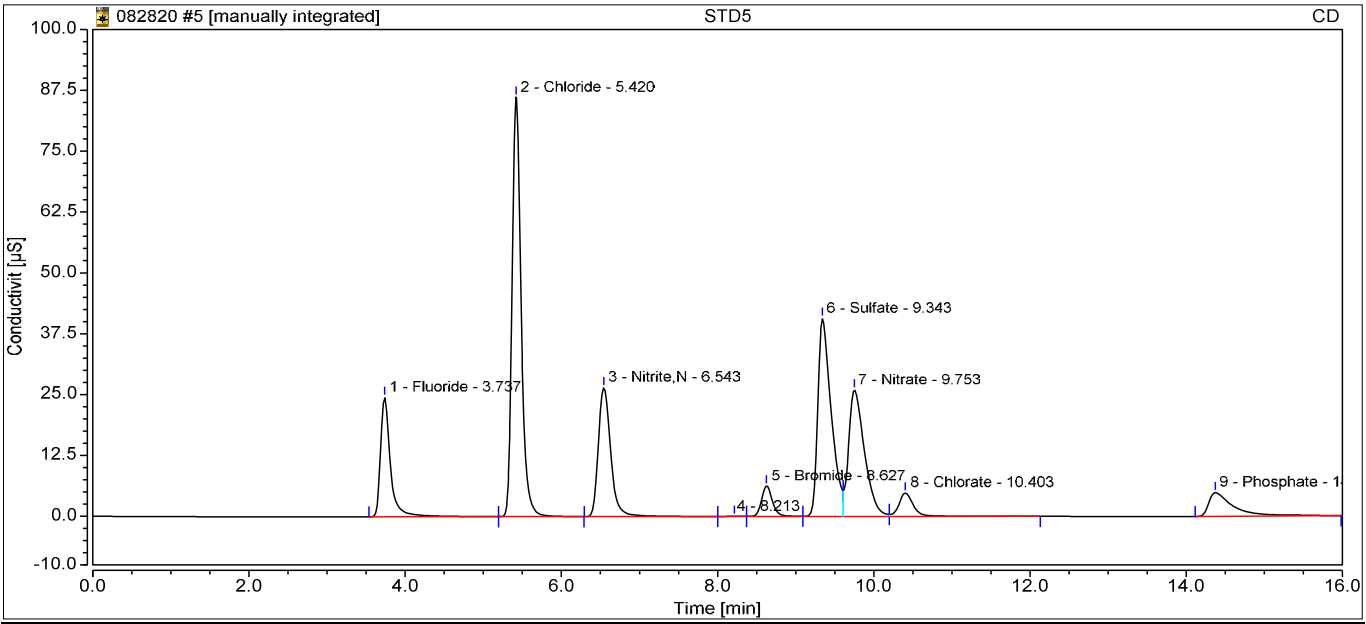
Integration Results

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:



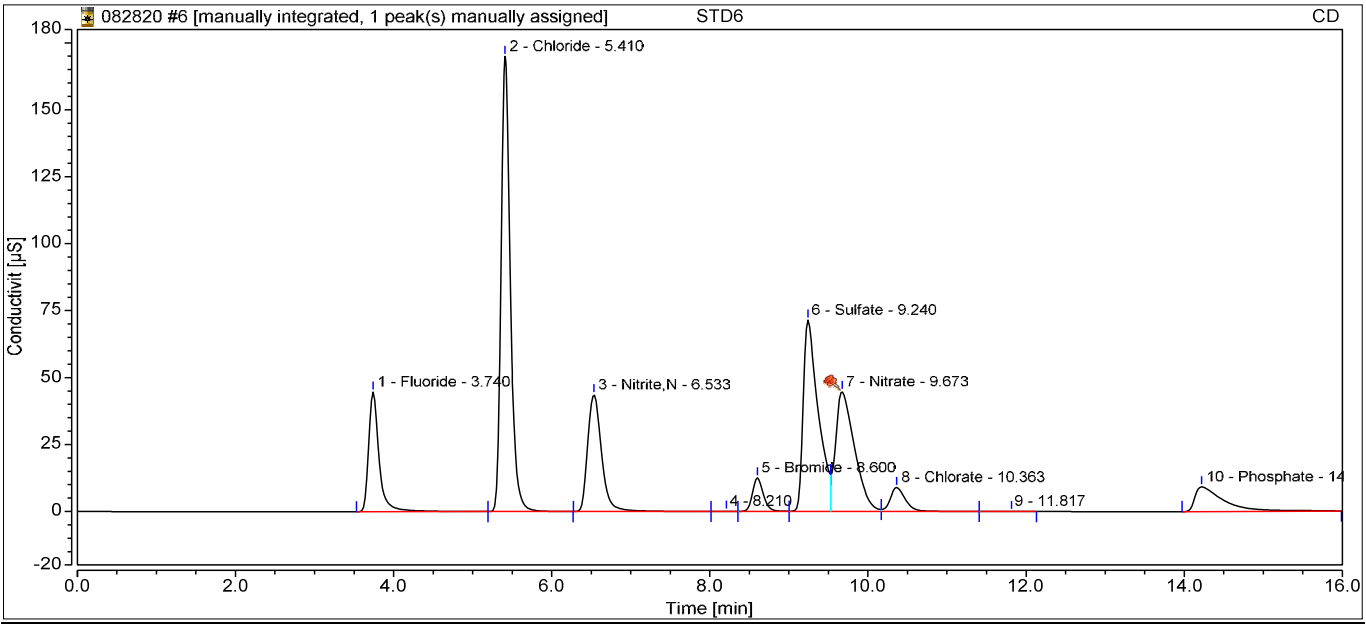
Integration Results

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:



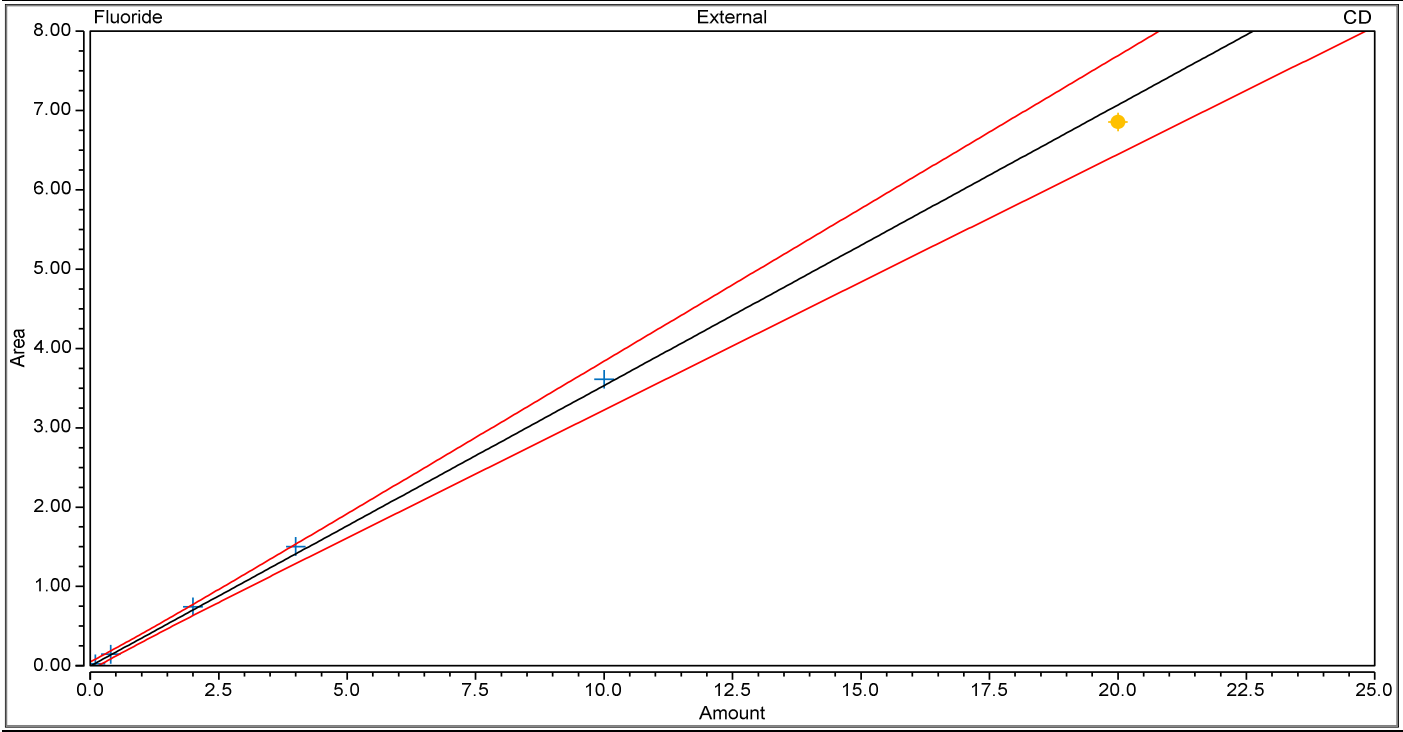
Integration Results

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**

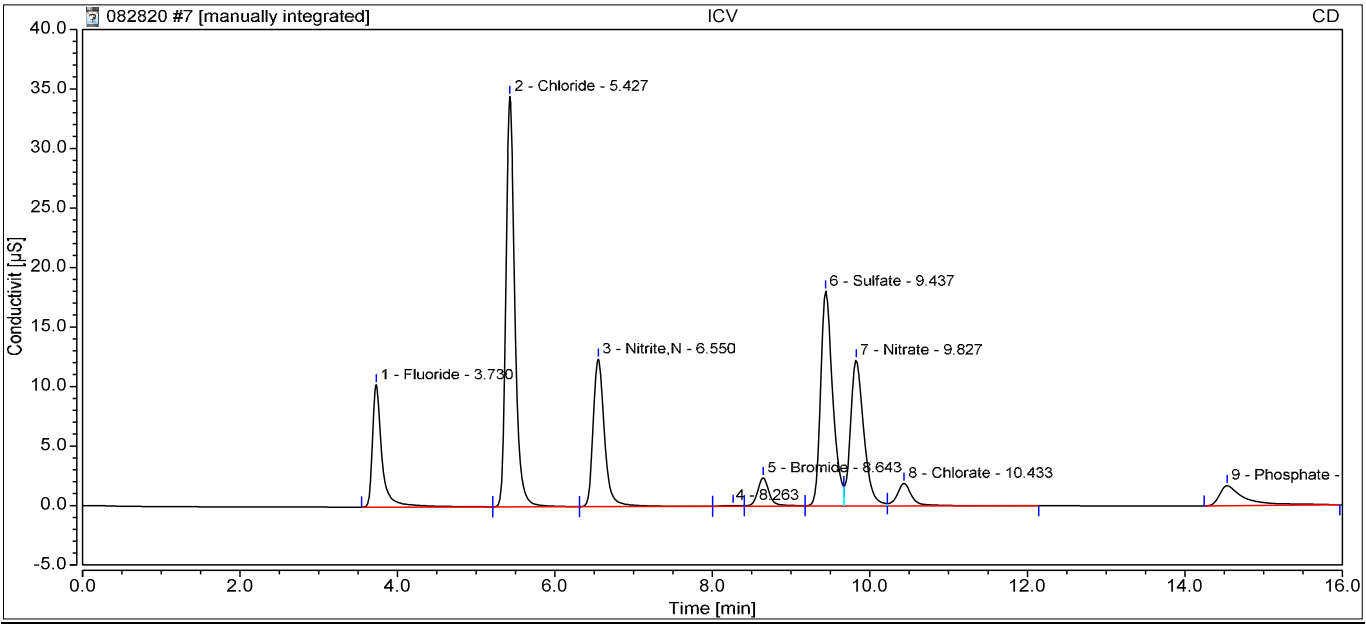


Calibration Results **Fluoride**

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:



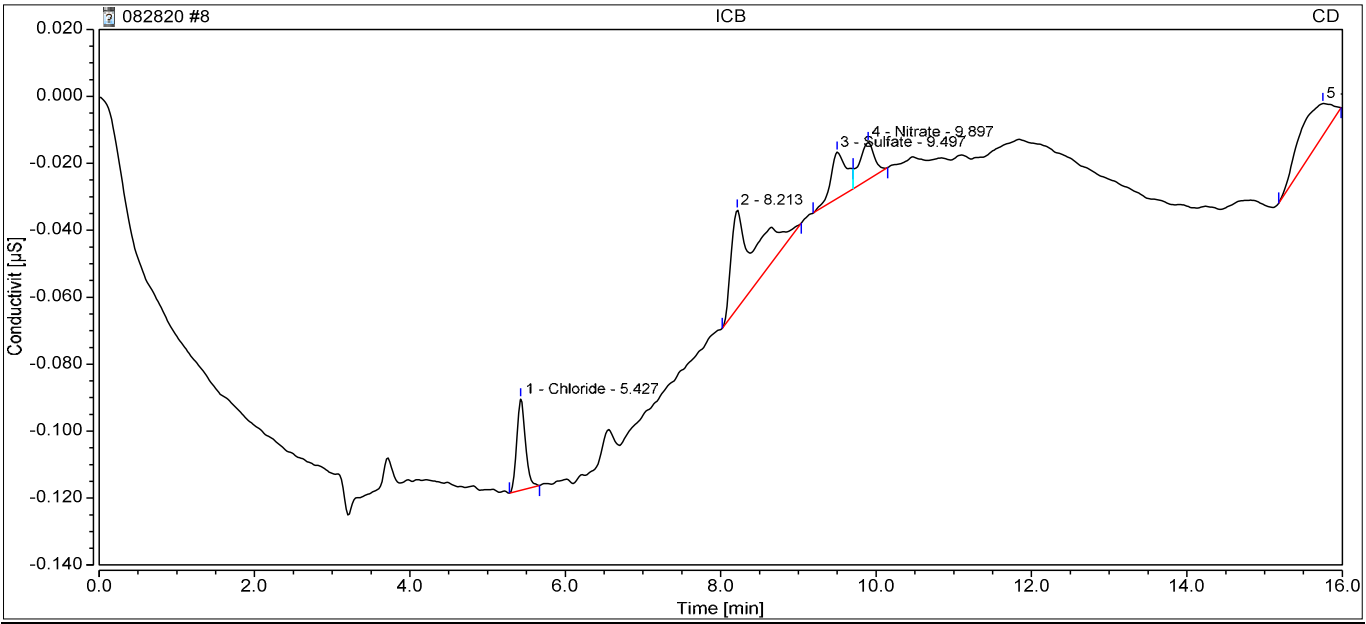
Integration Results

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:

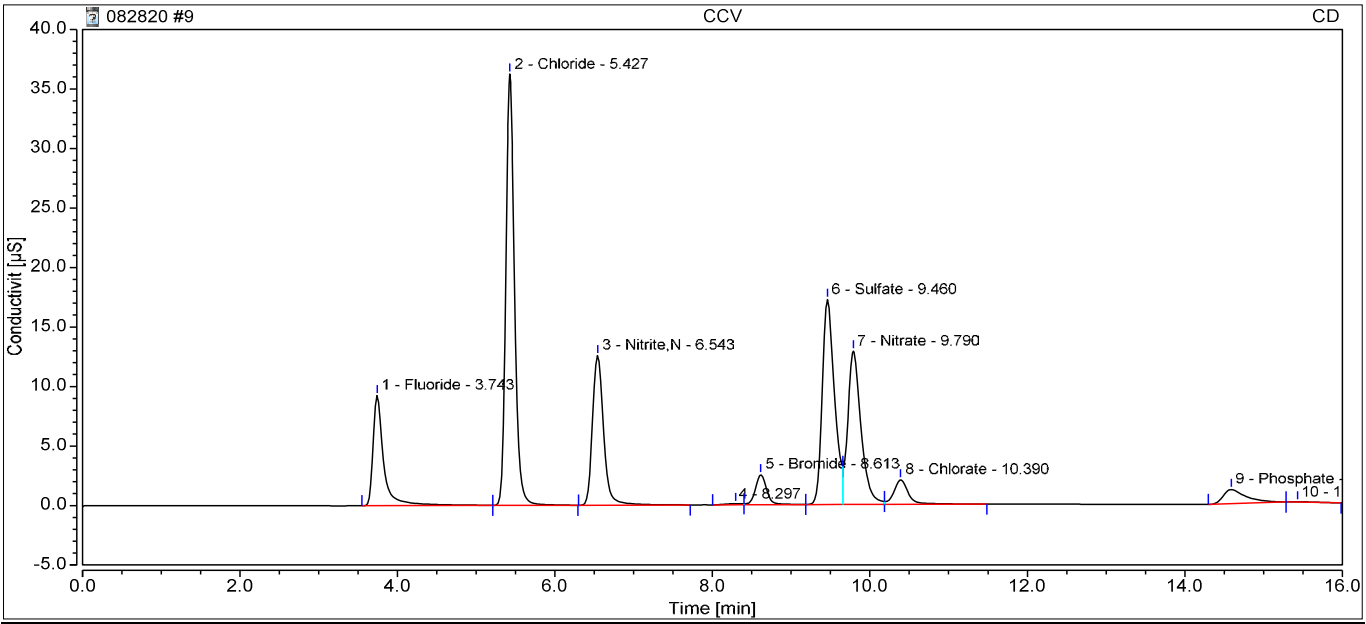


Integration Results

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**	

9 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:	**08/28/2020 10:52**	*Sample Weight:*	**1.0000**

Run Time:



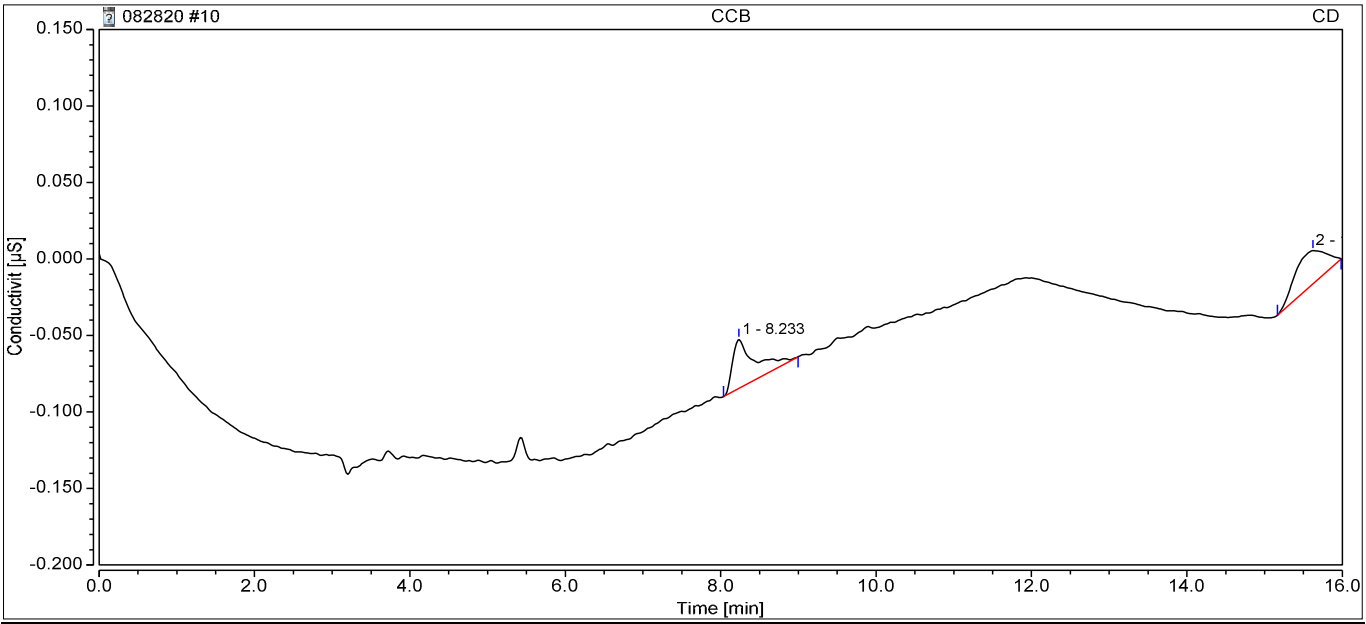
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.440	4.0828	4.0828	1.0000
2	5.43	Chloride	BMB	4.637	20.2040	20.2040	1.0000
3	6.54	Nitrite,N	BMB	2.058	4.3304	4.3304	1.0000
5	8.61	Bromide	M	0.419	4.0781	4.0781	1.0000
6	9.46	Sulfate	M	3.125	19.5238	19.5238	1.0000
7	9.79	Nitrate	M	2.515	4.0625	4.0625	1.0000
8	10.39	Chlorate	MB	0.433	4.1126	4.1126	1.0000
9	14.59	Phosphate	BMB	0.401	2.4437	2.4437	1.0000
Total:			**0.000**	**15.028**		**62.84**	

10 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:	**08/28/2020 11:10**	*Sample Weight:*	**1.0000**

Run Time:



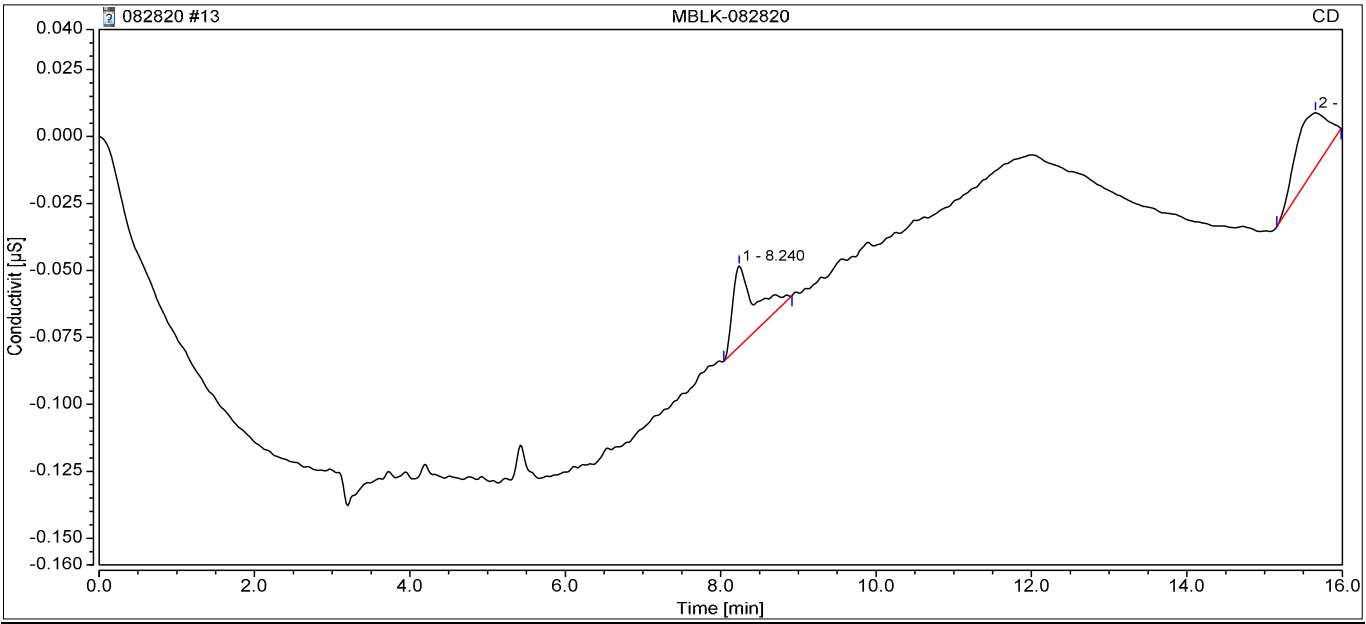
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

13 MBLK-082820

Sample Name:	**MBLK-082820**	*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:	**08/28/2020 12:04**	*Sample Weight:*	**1.0000**

Run Time:



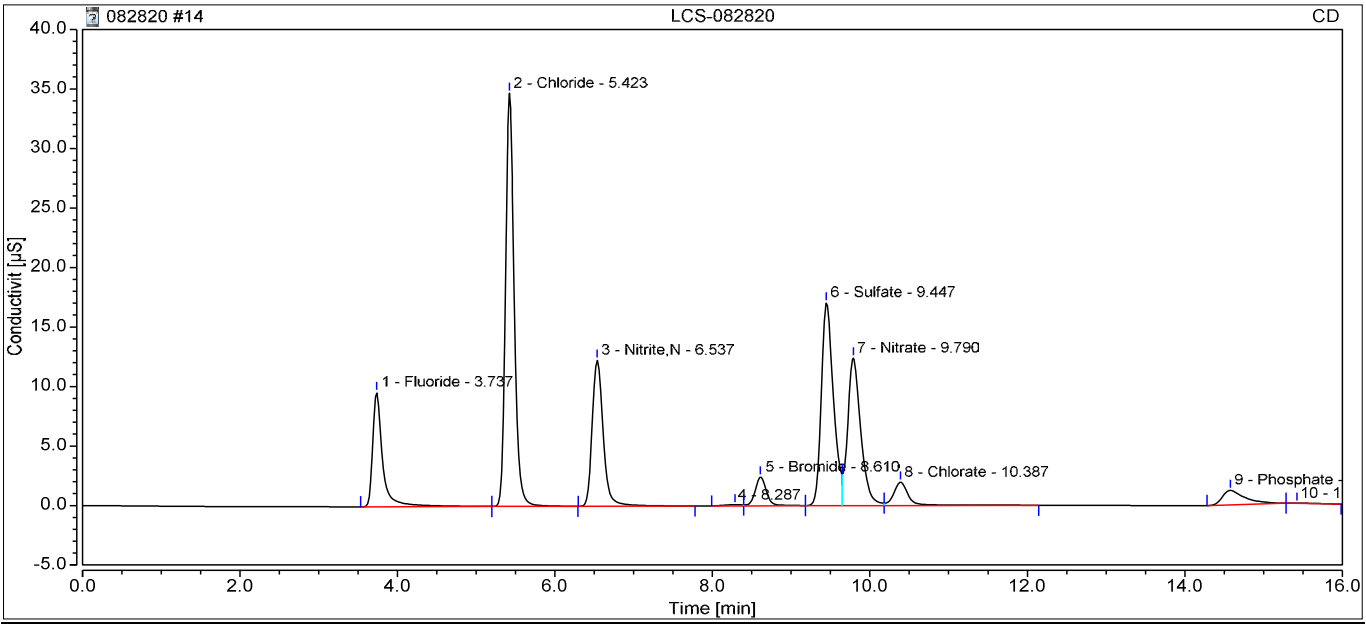
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

14 LCS-082820

Sample Name:	**LCS-082820**	*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:	**08/28/2020 12:22**	*Sample Weight:*	**1.0000**

Run Time:



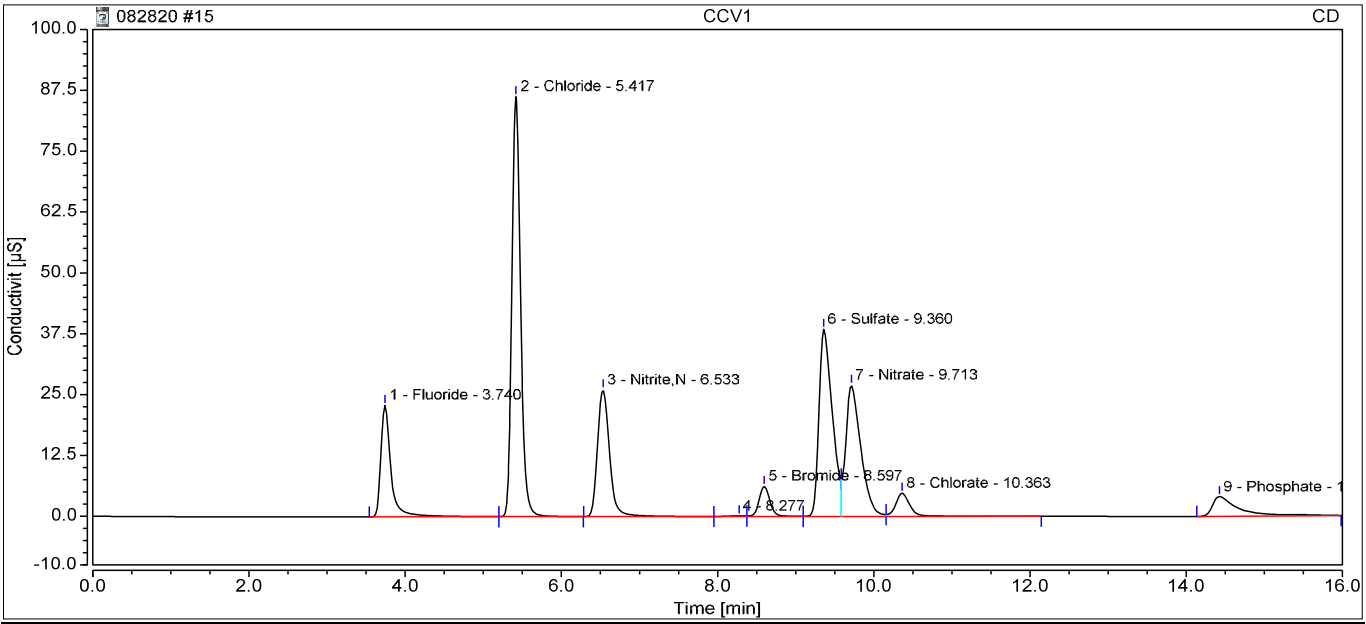
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.404	3.9820	3.9820	1.0000
2	5.42	Chloride	BMB	4.442	19.3547	19.3547	1.0000
3	6.54	Nitrite,N	BMB	1.997	4.1997	4.1997	1.0000
5	8.61	Bromide	M	0.402	3.9068	3.9068	1.0000
6	9.45	Sulfate	M	3.057	19.0994	19.0994	1.0000
7	9.79	Nitrate	M	2.391	3.8614	3.8614	1.0000
8	10.39	Chlorate	MB	0.433	4.1073	4.1073	1.0000
9	14.58	Phosphate	BMB	0.406	2.4713	2.4713	1.0000
Total:			**0.000**	**14.532**		**60.98**	

15 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 12:40**	*Sample Weight:*	**1.0000**

Run Time:



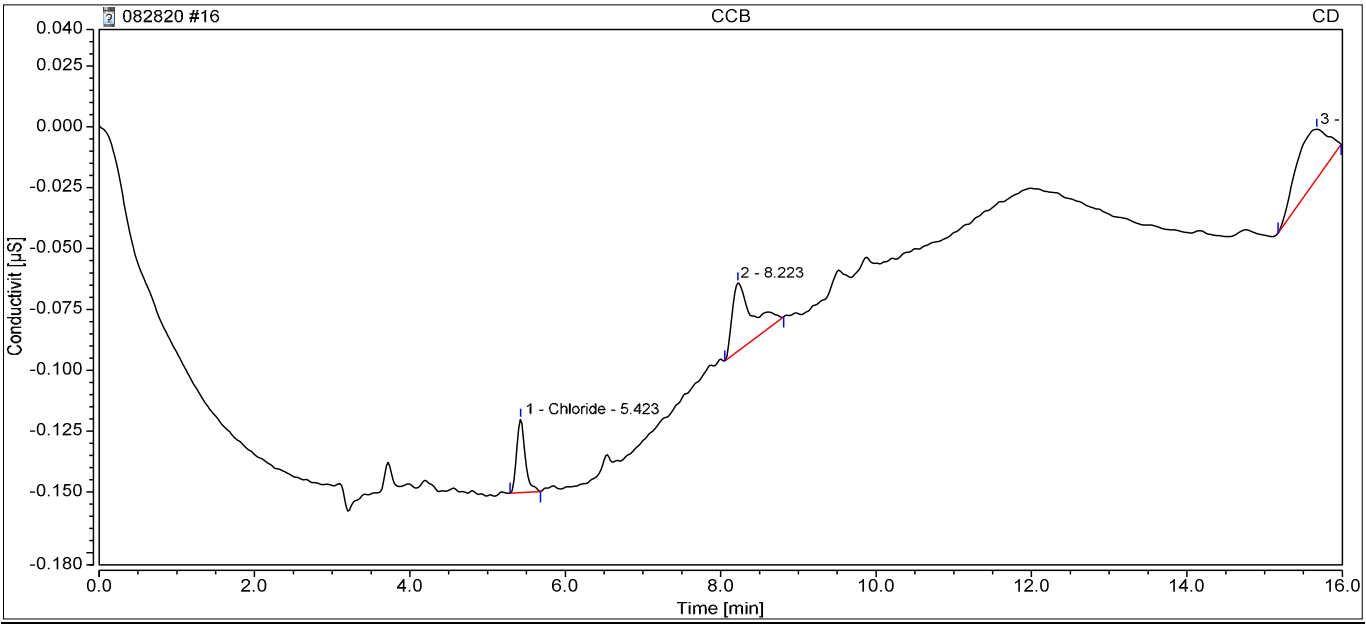
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.427	9.7022	9.7022	1.0000
2	5.42	Chloride	BMB	11.048	48.2188	48.2188	1.0000
3	6.53	Nitrite,N	BMB	4.678	9.8915	9.8915	1.0000
5	8.60	Bromide	M	0.995	9.7843	9.7843	1.0000
6	9.36	Sulfate	M	7.604	47.4928	47.4928	1.0000
7	9.71	Nitrate	M	6.026	9.7683	9.7683	1.0000
8	10.36	Chlorate	MB	1.008	9.7526	9.7526	1.0000
9	14.43	Phosphate	BMB	1.583	8.5316	8.5316	1.0000
Total:			**0.000**	**36.370**		**153.14**	

16 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 12:58**	*Sample Weight:*	**1.0000**

Run Time:



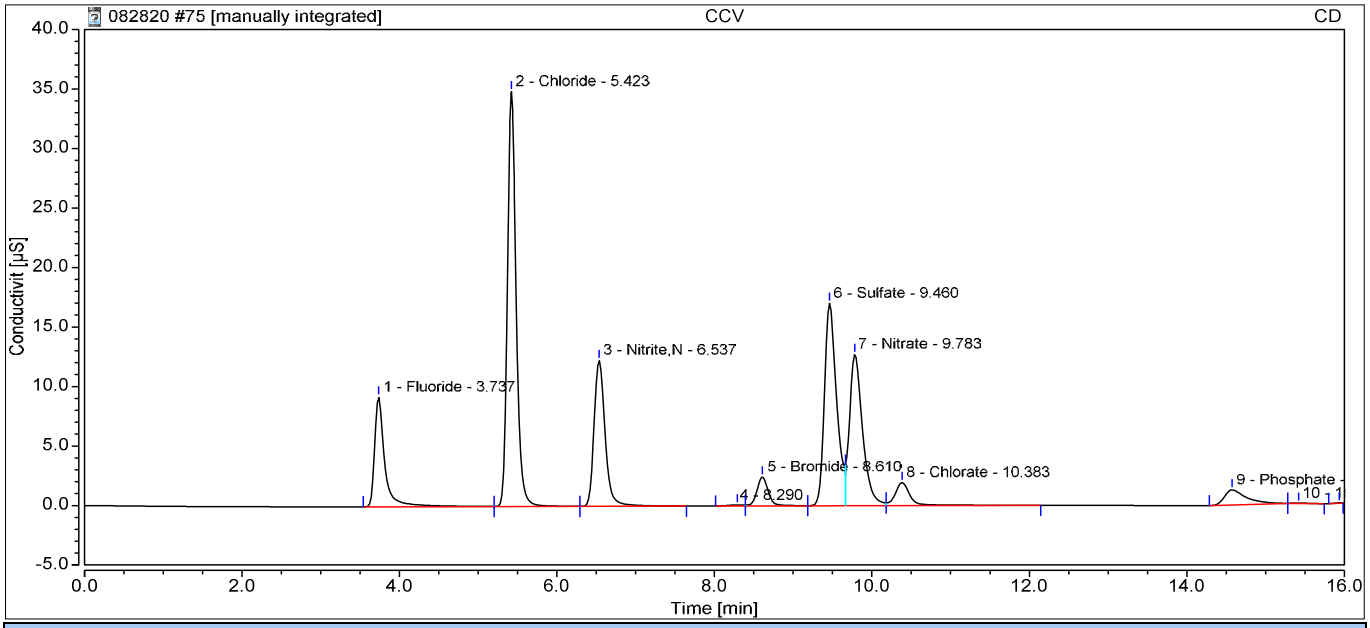
Integration Results

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	0.004	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**	

75 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:	**08/29/2020 06:50**	*Sample Weight:*	**1.0000**

Run Time:



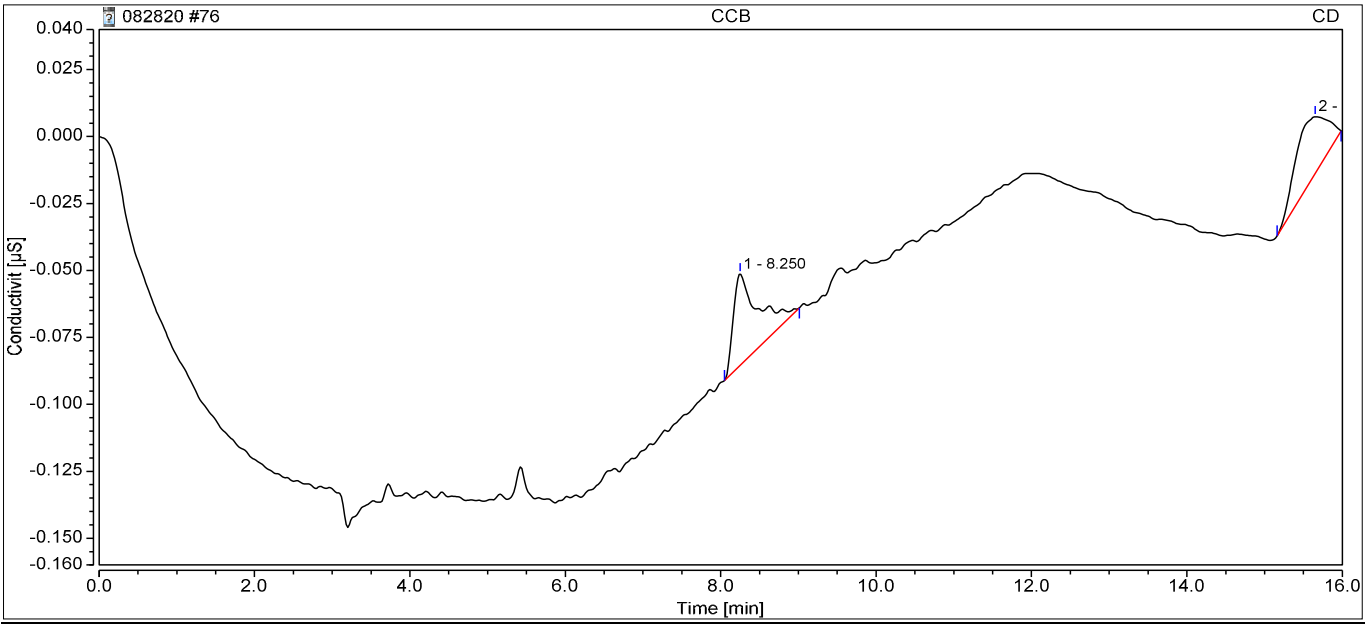
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.376	3.9009	3.9009	1.0000
2	5.42	Chloride	BMB	4.483	19.5325	19.5325	1.0000
3	6.54	Nitrite,N	BMB	1.993	4.1910	4.1910	1.0000
5	8.61	Bromide	M	0.404	3.9254	3.9254	1.0000
6	9.46	Sulfate	M *	3.067	19.1618	19.1618	1.0000
7	9.78	Nitrate	M *	2.451	3.9584	3.9584	1.0000
8	10.38	Chlorate	MB	0.429	4.0692	4.0692	1.0000
9	14.57	Phosphate	BMB	0.411	2.4940	2.4940	1.0000
Total:			**0.000**	**14.612**		**61.23**	

76 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:	**08/29/2020 07:08**	*Sample Weight:*	**1.0000**

Run Time:



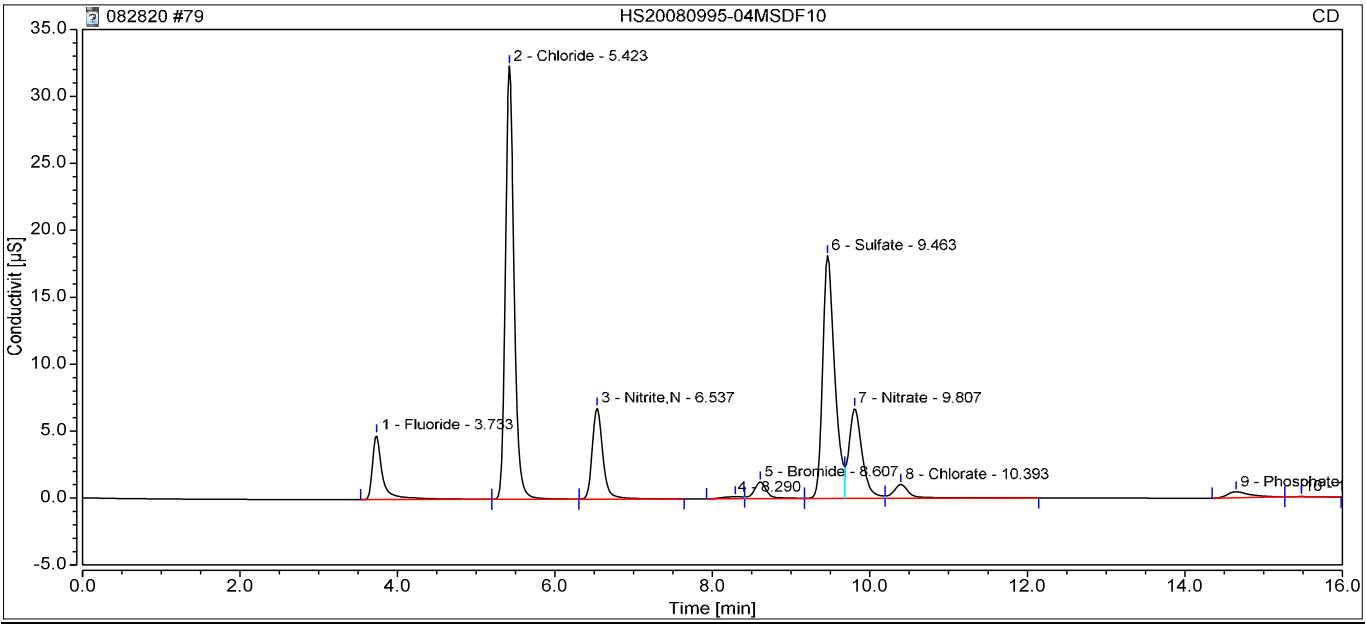
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

79 HS20080995-04MSDF10

Sample Name:	**HS20080995-04MSDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**08/29/2020 08:02**	*Sample Weight:*	**1.0000**

Run Time:



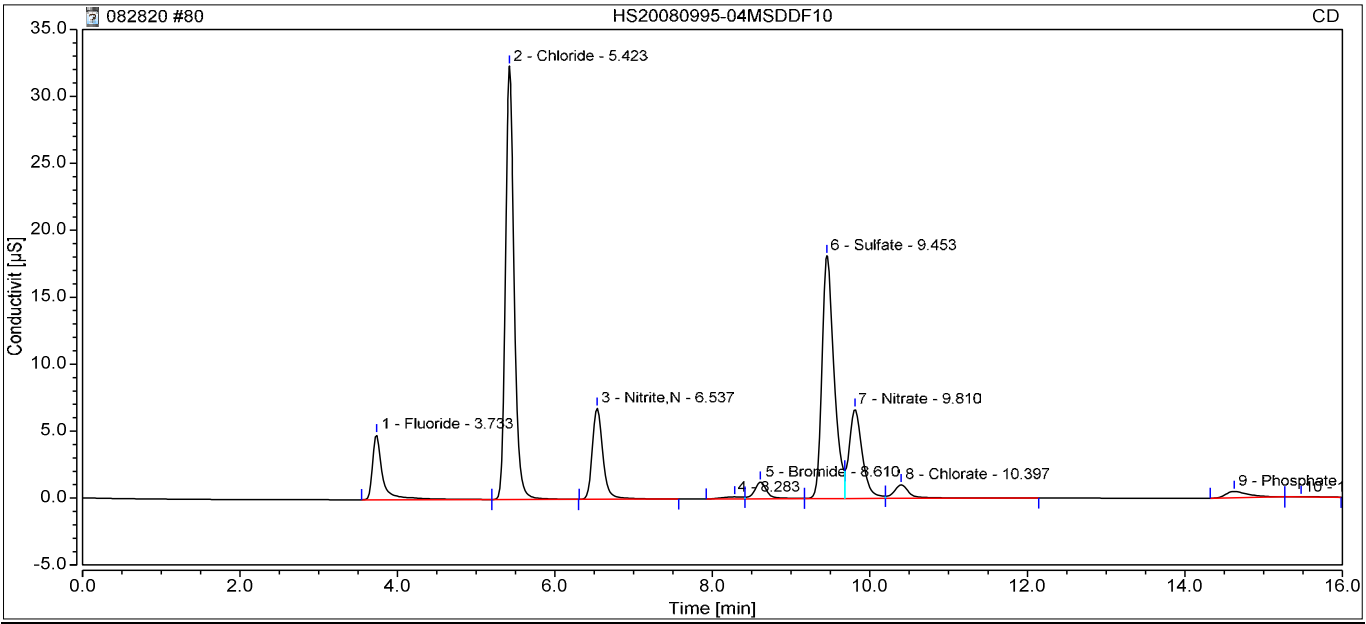
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.722	2.0525	20.5250	10.0000
2	5.42	Chloride	BMB	4.146	18.0604	180.6038	10.0000
3	6.54	Nitrite,N	BMB	1.061	2.2133	22.1329	10.0000
5	8.61	Bromide	M	0.233	2.2258	22.2582	10.0000
6	9.46	Sulfate	M	3.230	20.1765	201.7653	10.0000
7	9.81	Nitrate	M	1.313	2.1103	21.1029	10.0000
8	10.39	Chlorate	MB	0.247	2.2834	22.8336	10.0000
9	14.65	Phosphate	BMB	0.150	1.1502	11.5019	10.0000
Total:			**0.000**	**11.101**		**502.72**	

80 HS20080995-04MSDDF10

Sample Name:	**HS20080995-04MSDDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**08/29/2020 08:20**	*Sample Weight:*	**1.0000**

Run Time:



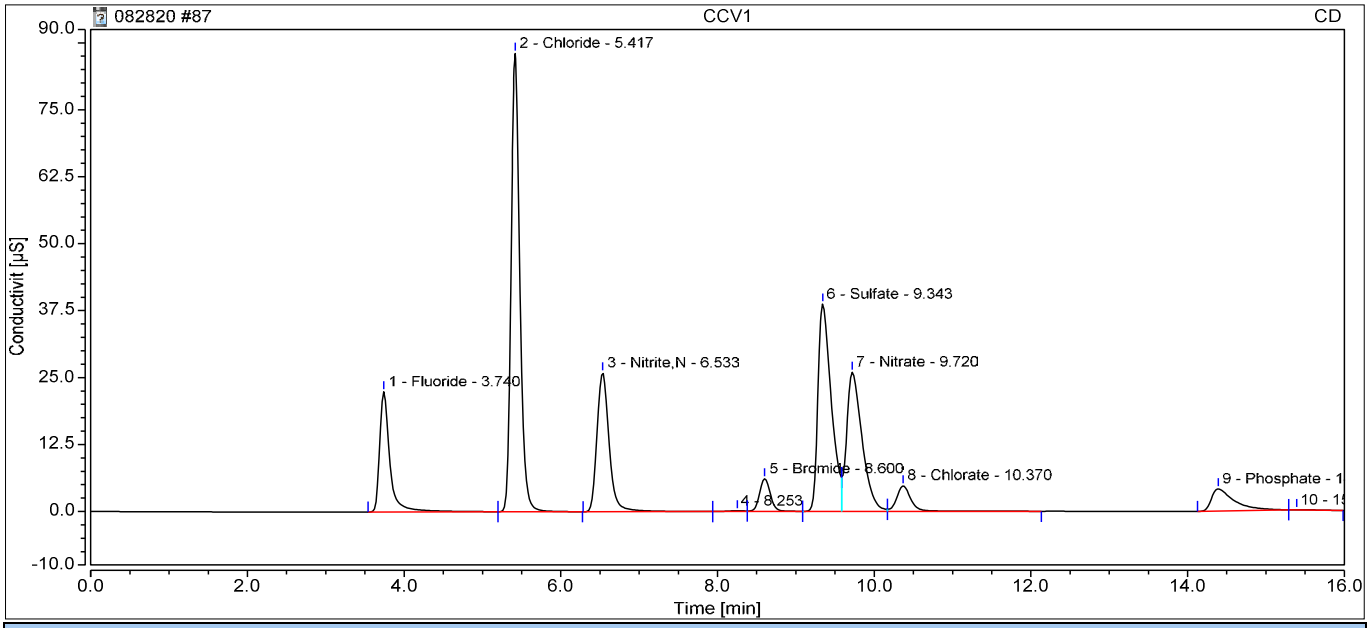
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.725	2.0607	20.6072	10.0000
2	5.42	Chloride	BMB	4.141	18.0367	180.3673	10.0000
3	6.54	Nitrite,N	BMB	1.062	2.2151	22.1508	10.0000
5	8.61	Bromide	M	0.232	2.2163	22.1630	10.0000
6	9.45	Sulfate	M	3.247	20.2831	202.8308	10.0000
7	9.81	Nitrate	M	1.295	2.0815	20.8151	10.0000
8	10.40	Chlorate	MB	0.243	2.2426	22.4258	10.0000
9	14.63	Phosphate	BMB	0.164	1.2239	12.2389	10.0000
Total:			**0.000**	**11.108**		**503.60**	

87 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:	**08/29/2020 10:26**	*Sample Weight:*	**1.0000**

Run Time:



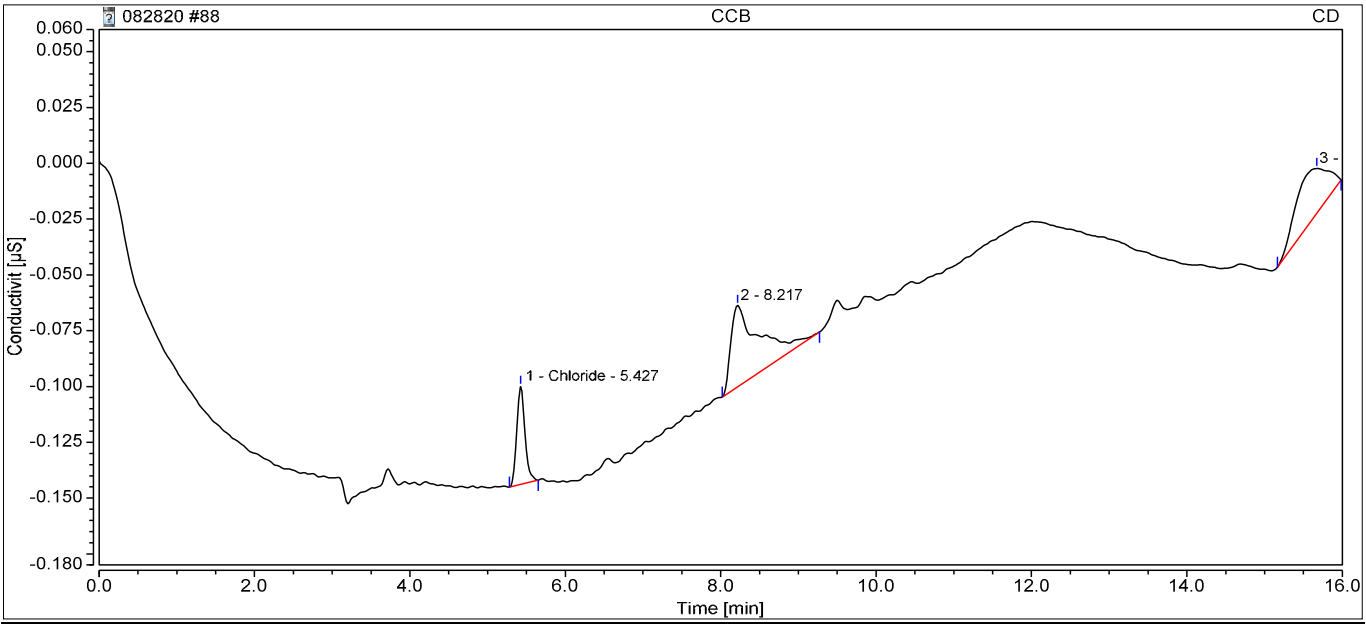
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.387	9.5899	9.5899	1.0000
2	5.42	Chloride	BMB	11.031	48.1464	48.1464	1.0000
3	6.53	Nitrite,N	BMB	4.684	9.9036	9.9036	1.0000
5	8.60	Bromide	M	0.989	9.7309	9.7309	1.0000
6	9.34	Sulfate	M	7.630	47.6531	47.6531	1.0000
7	9.72	Nitrate	M	5.971	9.6784	9.6784	1.0000
8	10.37	Chlorate	MB	1.011	9.7788	9.7788	1.0000
9	14.39	Phosphate	BMB	1.396	7.5674	7.5674	1.0000
Total:			**0.000**	**36.100**		**152.05**	

88 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:	**08/29/2020 10:44**	*Sample Weight:*	**1.0000**

Run Time:



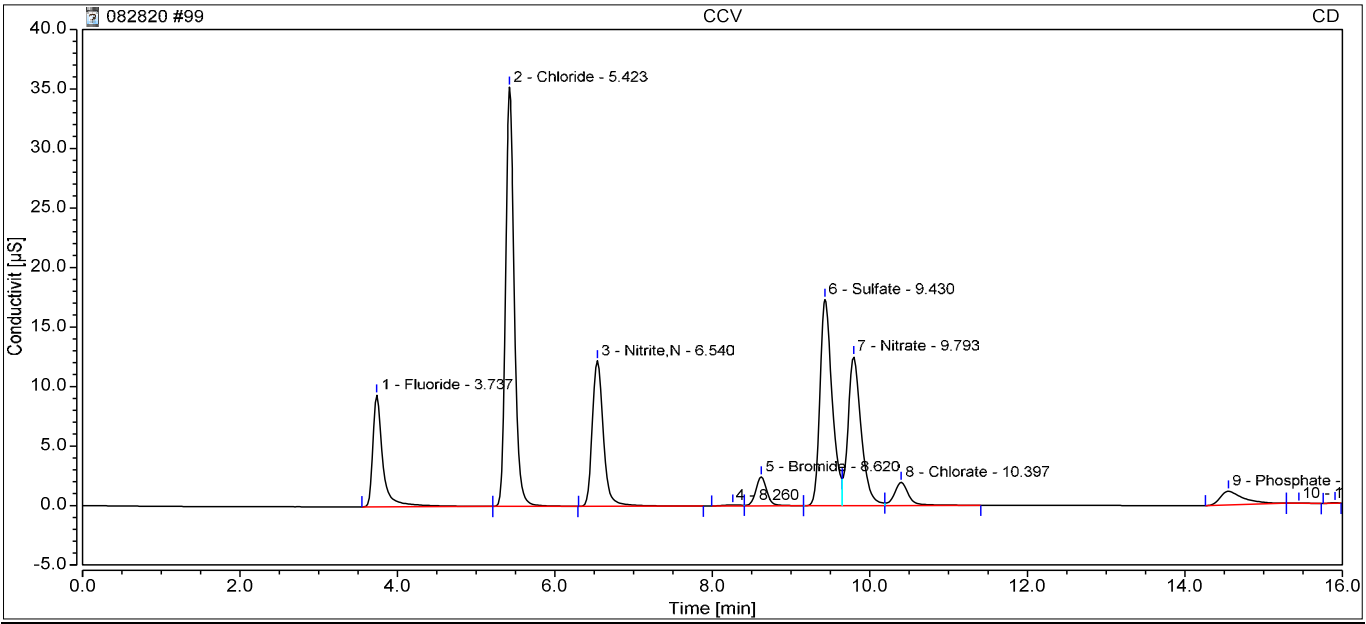
Integration Results

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	0.005	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**	

99 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:	**08/29/2020 14:03**	*Sample Weight:*	**1.0000**

Run Time:



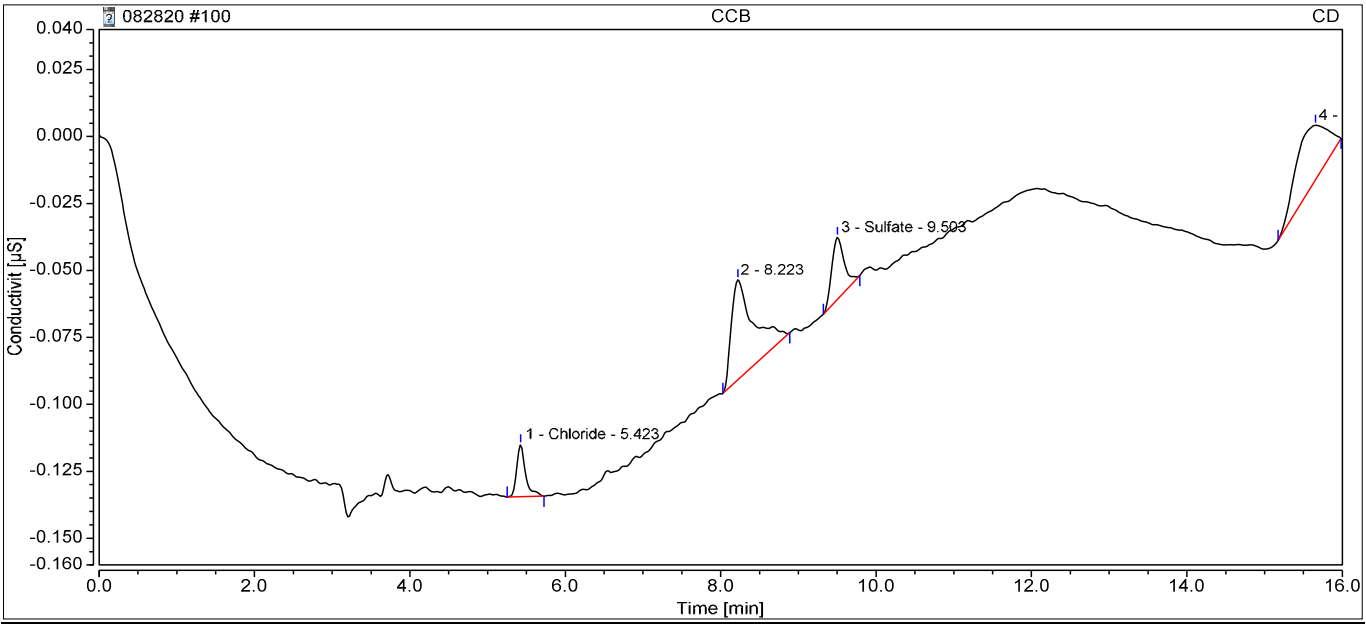
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.388	3.9358	3.9358	1.0000
2	5.42	Chloride	BMB	4.517	19.6819	19.6819	1.0000
3	6.54	Nitrite,N	BMB	2.002	4.2095	4.2095	1.0000
5	8.62	Bromide	M	0.398	3.8635	3.8635	1.0000
6	9.43	Sulfate	M	3.121	19.4980	19.4980	1.0000
7	9.79	Nitrate	M	2.442	3.9444	3.9444	1.0000
8	10.40	Chlorate	MB	0.403	3.8151	3.8151	1.0000
9	14.55	Phosphate	BMB	0.393	2.4016	2.4016	1.0000
Total:			**0.000**	**14.663**		**61.35**	

100 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:	**08/29/2020 14:21**	*Sample Weight:*	**1.0000**

Run Time:



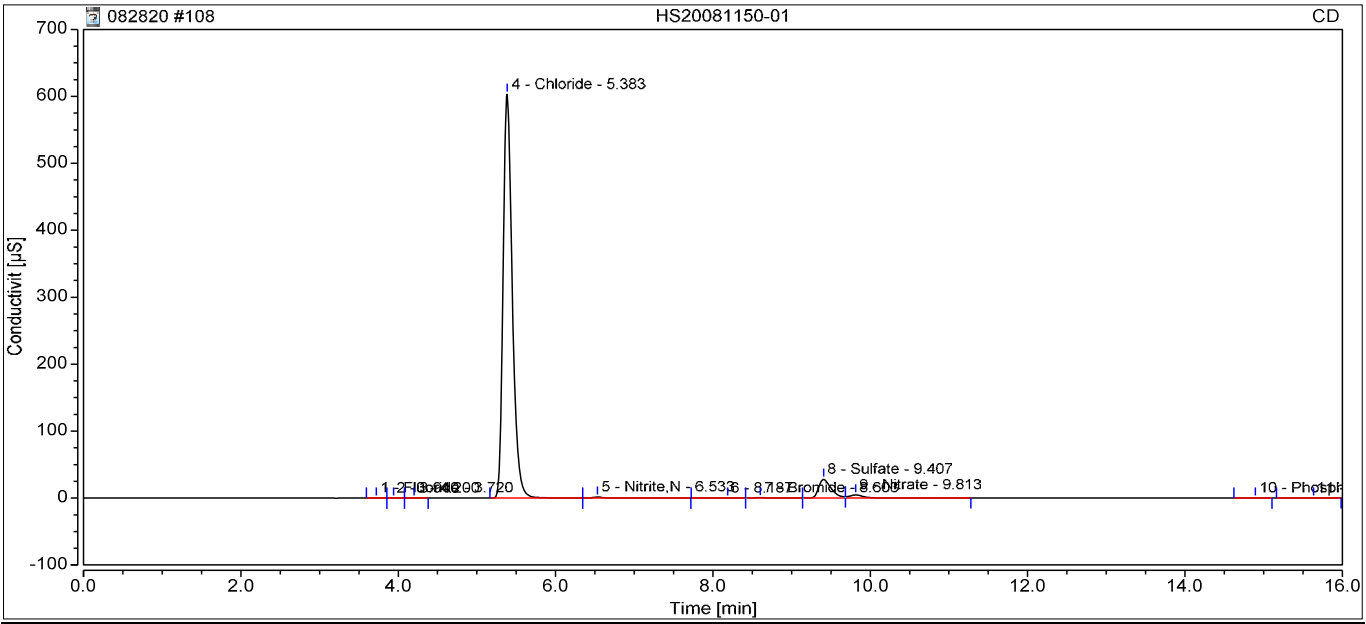
Integration Results

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	9.50	Sulfate	BMB	0.004	0.0384	0.0384	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**		**0.04**	

108 HS20081150-01

Sample Name:	**HS20081150-01**	*Injection Volume:*	**5.00**
Vial Number:	**BC2**	*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:	**08/29/2020 16:45**	*Sample Weight:*	**1.0000**

Run Time:



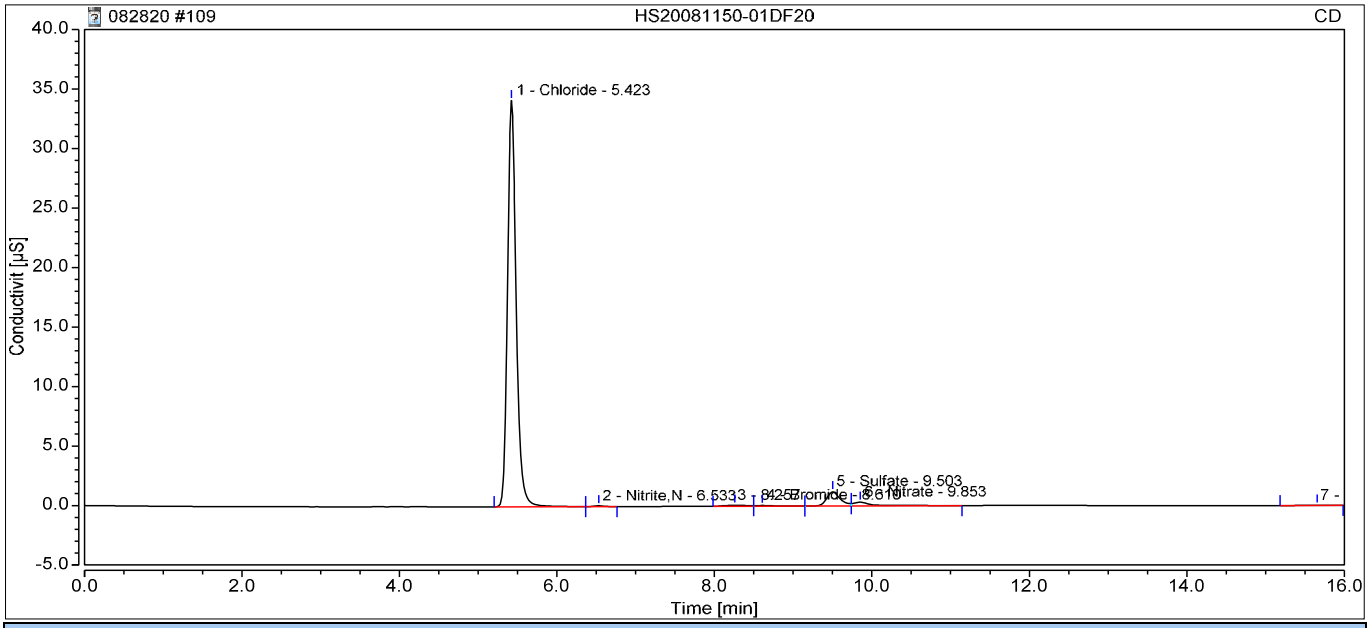
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.020	0.0669	0.0669	1.0000
4	5.38	Chloride	BMB	81.456	355.8703	355.8703	1.0000
5	6.53	Nitrite,N	BMB	0.253	0.4971	0.4971	1.0000
7	8.60	Bromide	M	0.132	1.2241	1.2241	1.0000
8	9.41	Sulfate	M	5.148	32.1538	32.1538	1.0000
9	9.81	Nitrate	MB	1.002	1.6049	1.6049	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
10	14.89	Phosphate	BMB	0.002	0.3902	0.3902	1.0000
Total:			**0.000**	**88.012**		**391.81**	

109 HS20081150-01DF20

Sample Name:	**HS20081150-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**BC3**	*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:	**08/29/2020 17:03**	*Sample Weight:*	**1.0000**

Run Time:



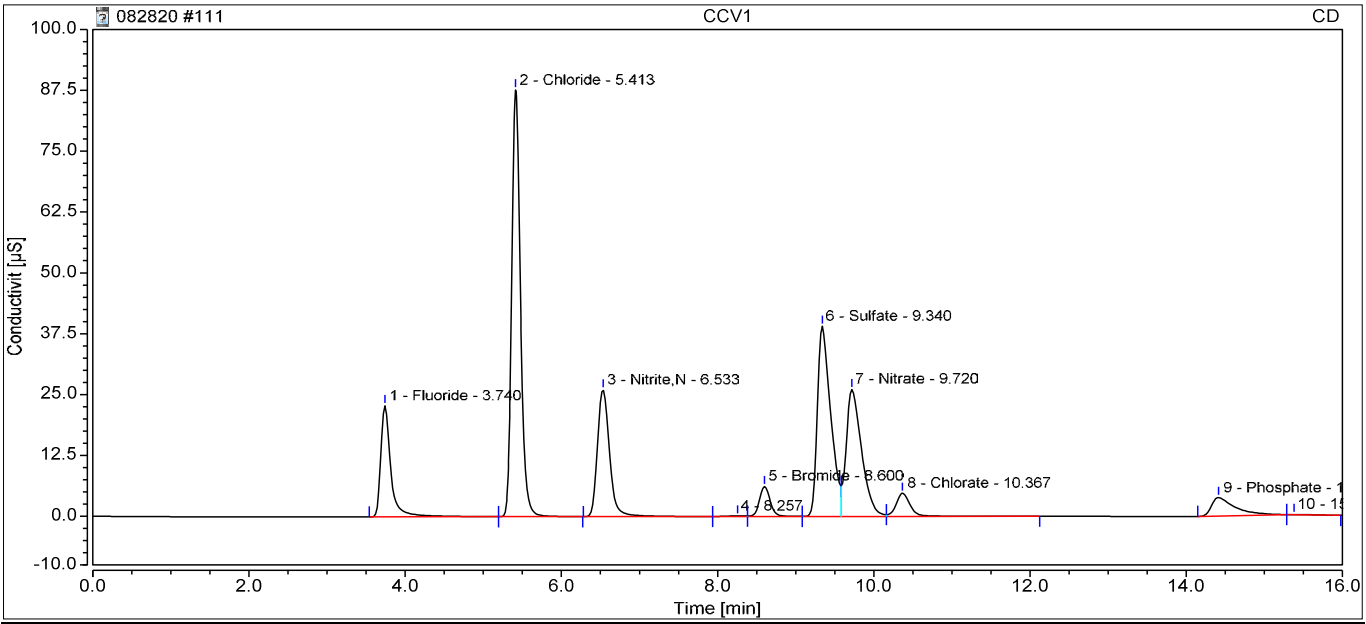
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
1	5.42	Chloride	BMB	4.394	19.1415	382.8300	20.0000
2	6.53	Nitrite,N	BMB	0.010	n.a.	n.a.	20.0000
4	8.61	Bromide	M	0.017	0.0855	1.7106	20.0000
5	9.50	Sulfate	M	0.238	1.4982	29.9639	20.0000
6	9.85	Nitrate	MB	0.086	0.1158	2.3167	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**	**4.744**		**416.82**	

111 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:	**08/29/2020 17:39**	*Sample Weight:*	**1.0000**

Run Time:



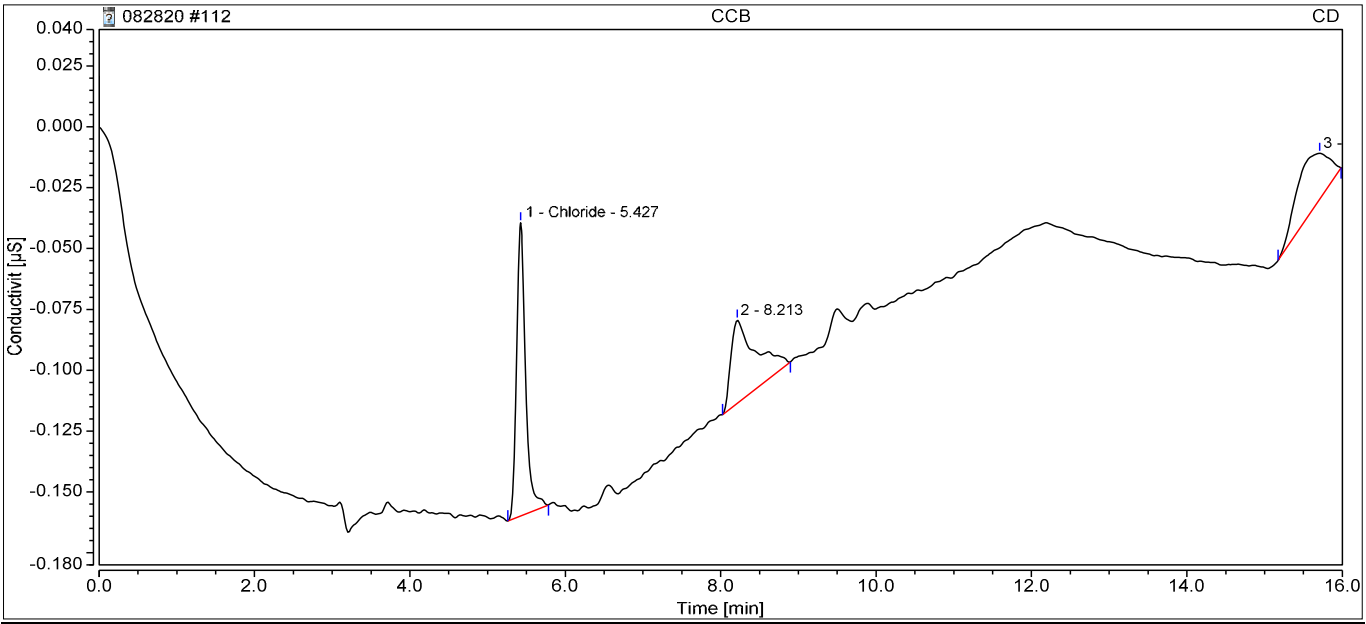
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.416	9.6712	9.6712	1.0000
2	5.41	Chloride	BMB	11.326	49.4313	49.4313	1.0000
3	6.53	Nitrite,N	BMB	4.699	9.9355	9.9355	1.0000
5	8.60	Bromide	M	0.989	9.7325	9.7325	1.0000
6	9.34	Sulfate	M	7.753	48.4219	48.4219	1.0000
7	9.72	Nitrate	M	5.957	9.6551	9.6551	1.0000
8	10.37	Chlorate	MB	1.001	9.6846	9.6846	1.0000
9	14.41	Phosphate	BMB	1.320	7.1751	7.1751	1.0000
Total:			**0.000**	**36.461**		**153.71**	

112 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:	**08/29/2020 17:57**	*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	0.016	0.0141	0.0141	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**	**0.016**		**0.01**	

HS20081150 Wet Chem Raw Data (COD)

ALS WO# HS20081150

ALS Laboratory Group **COD Analysis** **Logbook# 31318**

Method: HACH 8000 / EPA 410.4		Date: 8-31-20		Low COD–420nm		Analyst:	
SOP #: HS-WC025		Time: 10:30		High COD–620nm		TH	
WO # / SX #	Bottle #	Init Sample Vol (mL)	Prep Final Volume (mL)	Dilution Factor	Init Conc. (mg/L)	Final Conc. (mg/L)	Comments
CCV50		2	2	1	52		
MBLK					0		
LCS					102		
HS20081253-01					36		
-01MS					85		
-01MSD					87		
HS20081236-01					80		
HS20081101-01					55		
HS20081147-02					71		
CCV100		2	2	1	101		
HS20081187-01					29		
HS20081150-01					15		
HS20081151-01					8		
HS20081158-01				10	96		
HS20081211-01				1	42		
HS20081245-01				5	19		HI Cl
HS20081246-01				5	15		HI Cl
CCV50		2	2	1	51		

LCS ID #	CCV1 ID#	CCV2 ID#	Vial Lot#:	Reviewed By:
314.061.701	314.061.702	314.061.703	310.060.2218	KL
LCS Prep Date:	**Prep Date:**	**Prep Date:**	**MS ID:**	***Pipette ID:***
07-23-20			310.060.2311	WC9, COD
Digestor ID:	**Digestor *Temp (°C):***	**Date/Time In Digestor:**	**Date/Time Off Digestor:**	**Batch ID:**
DRB 200	150°	8-31-20 8:00	8-31-20 10:00	367736

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HS20081150 Wet Chem Raw Data (O&G_1664_W_HS)

ALS WO# HS20081150

ALS Laboratory Group Confidential 083120O&G

Method: O&G, HEM by EPA 1664A (SOP HS-WC036, Current Revision)

Analyst:	KAH
Review By:	
Batch ID:	
LCS/MS Spike ID:	3110602011
Hexane ID:	3100602319
Filter Lot:	3100602020
Silica Gel:	

Methanol ID:	3100601405
1:1 HCl ID:	309116109
Na2SO4 Cartridge ID:	3100602405
Thermo HotBlock Setting (°C):	40
pH Paper ID:	300107019-06
Pipette ID	TDS

Temp Ranges (°C)
Pan Drying: 105-115
Hex Evap: 68-72
HotBlock: 35-50

	grams	mg	Accept.
Init 2.0 mg wt (1.8mg to 2.2mg required):	0.0020	2.0	Yes
Init 1000 mg wt (995mg to 1005mg required):	0.9999	999.9	Yes
Final 2.0 mg wt (1.8mg to 2.2mg required):	0.0020	2.0	Yes
Final 1000 mg wt (995mg to 1005mg required):	1.0000	1000	Yes

Pan	Temp Deg C	Actual Deg C	Date	Time
Pan 1st In:	105-115	104	08/31/2020	7:40AM
Pan 1st Out:	105-115	104	08/31/2020	9:00AM
Pan 2nd In:	105-115	104	08/31/2020	9:30AM
Pan 2nd Out:	105-115	104	08/31/2020	10:35AM
Pan 3rd In:	105-115			
Pan 3rd Out:	105-115			
Oven ID:	WC Oven 4			
Balance ID:	WC Balance-03			

O&G	Temp Deg C	Actual Deg C	Date	Time
O&G 1st In:	68-72	68	08/31/2020	1:45PM
O&G 1st Out:	68-72	68	08/31/2020	1:55PM
O&G 2nd In:	68-72	68	08/31/2020	2:40PM
O&G 2nd Out:	68-72	68	08/31/2020	2:50PM
O&G 3rd In:	68-72			
O&G 3rd Out:	68-72			
Oven ID:	WC Oven 1A			
Balance ID:	WC Balance-03			

$$\text{O \& G (HEM), mg/L} = \frac{\text{Weight (HEM, mg)}}{\text{Volume (Sample Extracted, L)}}$$

Dish ID	Work Order #	Bottle Number	SGT	Sample Type	pH Check	1st Dry Pan Wt (g)	2nd Dry Pan Wt (g)	3rd Dry Pan Wt (g)	Passes Difference Criteria (Change is <0.0005 g)	Passes % Weight Criteria (Change is <4%)	Pan Weight (g)	Sample Vol (mL)	70 deg C O&G 1st dry Wt (g)	70 deg C O&G 2nd dry Wt (g)	70 deg C O&G 3rd dry Wt (g)	Passes Difference Criteria (Change is <0.0005 g)	Passes % Weight Criteria (Change is <4%)	O&G Weight (g)	O&G (mg/L)
1	WBLKW-083120	1 of 1		MBLK	<2	6.4784	6.4784		Yes	Yes	6.4784	250	6.4785	6.4784		Yes	Yes	0.0000	0.0
2	WLCSW-083120	1 of 1		LCS	<2	6.4883	6.4883		Yes	Yes	6.4883	250	6.4973	6.4973		Yes	Yes	0.0090	36.0
3	WLCSDW-083120	1 of 1		LCSD	<2	6.4668	6.4668		Yes	Yes	6.4668	250	6.4763	6.4763		Yes	Yes	0.0095	38.0
4	HS20081143-02MS	2 of 2		MS	<2	6.4524	6.4525		Yes	Yes	6.4525	235	6.4617	6.4617		Yes	Yes	0.0092	39.1
5	HS20081101-02	1 of 1		Sample	<2	6.4927	6.4926		Yes	Yes	6.4926	235	6.4939	6.4939		Yes	Yes	0.0013	5.5
6	HS20081142-01	1 of 2		Sample	<2	6.4705	6.4705		Yes	Yes	6.4705	235	6.4714	6.4712		Yes	Yes	0.0007	3.0
7	HS20081143-02	1 of 2		Sample	<2	6.4594	6.4592		Yes	Yes	6.4592	235	6.4594	6.4592		Yes	Yes	0.0000	0.0
8	HS20081147-01	1 of 2		Sample	<2	6.4680	6.4679		Yes	Yes	6.4679	235	6.4690	6.4688		Yes	Yes	0.0009	3.8
9	HS20081176-01	1 of 1		Sample	<2	6.5290	6.5288		Yes	Yes	6.5288	235	6.5311	6.5310		Yes	Yes	0.0022	9.4
10	HS20081176-02	1 of 1		Sample	<2	6.4493	6.4491		Yes	Yes	6.4491	235	6.4503	6.4503		Yes	Yes	0.0012	5.1
11	HS20081176-03	1 of 1		Sample	<2	6.4509	6.4510		Yes	Yes	6.4510	235	6.4512	6.4512		Yes	Yes	0.0002	0.9
12	HS20081176-04	1 of 1		Sample	<2	6.4452	6.4450		Yes	Yes	6.4450	235	6.4453	6.4453		Yes	Yes	0.0003	1.3
13	HS20081186-01	1 of 1		Sample	<2	6.5073	6.5074		Yes	Yes	6.5074	235	6.5086	6.5083		Yes	Yes	0.0009	3.8
14	HS20081187-01	1 of 2		Sample	<2	6.4633	6.4633		Yes	Yes	6.4633	235	6.4637	6.4637		Yes	Yes	0.0004	1.7
15	HS20081069-02	1 of 2		Sample	<2	6.4275	6.4274		Yes	Yes	6.4274	235	6.4283	6.4282		Yes	Yes	0.0008	3.4
16	HS20081150-01	1 of 1		Sample	<2	6.4878	6.4878		Yes	Yes	6.4878	980	6.4884	6.4881		Yes	Yes	0.0003	0.3
17	HS20081151-01	1 of 1		Sample	<2	6.4671	6.4669		Yes	Yes	6.4669	980	6.4669	6.4669		Yes	Yes	0.0000	0.0
18	HS20081203-01	1 of 2		Sample	<2	6.4806	6.4805		Yes	Yes	6.4805	235	6.4822	6.4822		Yes	Yes	0.0017	7.2
19	HS20081206-01	1 of 2		Sample	<2	6.4721	6.4721		Yes	Yes	6.4721	235	6.4733	6.4733		Yes	Yes	0.0012	5.1
20	HS20081207-01	1 of 2		Sample	<2	6.4948	6.4948		Yes	Yes	6.4948	235	6.4998	6.4996		Yes	Yes	0.0048	20.4
21	HS20081208-01	1 of 2		Sample	<2	6.4713	6.4713		Yes	Yes	6.4713	235	6.4719	6.4719		Yes	Yes	0.0006	2.6
22	HS20081208-02	1 of 2		Sample	<2	6.4430	6.4429		Yes	Yes	6.4429	235	6.4970	6.4970		Yes	Yes	0.0541	230.2
23	HS20081208-03	1 of 2		Sample	<2	6.4255	6.4255		Yes	Yes	6.4255	235	6.4549	6.4549		Yes	Yes	0.0294	125.1
24	HS20081298-01	1 of 2		Sample	<2	6.4794	6.4794		Yes	Yes	6.4794	235	6.4805	6.4803		Yes	Yes	0.0009	3.8

O&G	Temp Deg C	Actual Deg C	Date	Time
Silica Gel O&G 1st In:	68-72			
Silica Gel O&G 1st Out:	68-72			
Silica Gel O&G 2nd In:	68-72			
Silica Gel O&G 2nd Out:	68-72			
Silica Gel O&G 3rd In:	68-72			
Silica Gel O&G 3rd Out:	68-72			
Oven ID:				
Balance ID:				

$$\text{O \& G (SGT - HEM), mg/L} = \frac{\text{Weight (SGT - HEM, mg)}}{\text{Volume (Sample Extracted, L)}}$$

Dish ID	Work Order #	Silca Gel O&G 70 deg C 1st dry Wt (g)	Silca Gel O&G 70 deg C 2nd dry Wt (g)	Silca Gel O&G 70 deg C 3rd dry Wt (g)	Silica Gell Passes Difference Criteria	Silica Gell Passes % Weight Criteria	Silca Gel O&G Weight (g)	Silica Gel O&G (mg/L)
1	WBLKW-083120							#VALUE!
2	WLCSW-083120							#VALUE!
3	WLCSDW-083120							#VALUE!
4	HS20081143-02MS							#VALUE!
5	HS20081101-02							#VALUE!
6	HS20081142-01							#VALUE!
7	HS20081143-02							#VALUE!
8	HS20081147-01							#VALUE!
9	HS20081176-01							#VALUE!
10	HS20081176-02							#VALUE!
11	HS20081176-03							#VALUE!
12	HS20081176-04							#VALUE!
13	HS20081186-01							#VALUE!
14	HS20081187-01							#VALUE!
15	HS20081069-02							#VALUE!
16	HS20081150-01							#VALUE!
17	HS20081151-01							#VALUE!
18	HS20081203-01							#VALUE!
19	HS20081206-01							#VALUE!
20	HS20081207-01							#VALUE!
21	HS20081208-01							#VALUE!
22	HS20081208-02							#VALUE!
23	HS20081208-03							#VALUE!
24	HS20081298-01							#VALUE!

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WorkOrder: HS20081151

Groundwater Treatment Plant Quarterly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

26-Sep-2020

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HS20081151 Groundwater Treatment Plant Quarterly Effluent Samples Final

ALS WO# HS20081151

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September 03, 2020

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

Work Order: **HS20081151**

Laboratory Results for: **Groundwater Treatment Plant Quarterly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 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 Effluent Samples
Work Order: HS20081151

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20081151-01	LH18/24-SP650_082520	Water		25-Aug-2020 14:00	26-Aug-2020 10:00	☐
HS20081151-02	LH18/24-SP650_082520_AIX	Water		25-Aug-2020 14:00	26-Aug-2020 10:00	☐
HS20081151-03	Trip Blank	Water	CG 042320 -59	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: Groundwater Treatment Plant Quarterly Effluent Samples
Work Order: HS20081151

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.

Work Order Comments

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

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 156817

Sample ID: LH18/24-SP650_082520 (HS20081151-01)

• 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: LH18/24-SP650_082520 (HS20081151-01MS)

• MS/MSD failed QC limits no RPs

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: HS20081150-01MS

• MS and MSD are for an unrelated sample

Sample ID: HS20081150-01SD

• SD is for an unrelated sample

WetChemistry by Method E1664A

Batch ID: R367779

• 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 Effluent Samples
Work Order: HS20081151

WetChemistry by Method E410.4

Batch ID: R367736

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

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 Effluent Samples WorkOrder:HS20081151
Sample ID: LH18/24-SP650_082520 Lab ID:HS20081151-01
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	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,2-Dichloroethane	**0.52**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	28-Aug-2020 16:00
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 16:00
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	28-Aug-2020 16:00
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	28-Aug-2020 16:00
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 16:00
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	28-Aug-2020 16:00
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00

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 Effluent Samples WorkOrder:HS20081151
Sample ID: LH18/24-SP650_082520 Lab ID:HS20081151-01
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	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
cis-1,2-Dichloroethene	**21**		**0.20**	**0.50**	**1.0**	**UG/L**	1	28-Aug-2020 16:00
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 16:00
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 16:00
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 16:00
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Trichloroethene	**3.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	28-Aug-2020 16:00
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 16:00
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 16:00
Surr: 1,2-Dichloroethane-d4	*87.9*			**0**	*81-118*	*%REC*	*1*	*28-Aug-2020 16:00*
Surr: 4-Bromofluorobenzene	*95.1*			**0**	*85-114*	*%REC*	*1*	*28-Aug-2020 16:00*
Surr: Dibromofluoromethane	*92.5*			**0**	*80-119*	*%REC*	*1*	*28-Aug-2020 16:00*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*28-Aug-2020 16:00*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 28-Aug-2020		Analyst: ACN
1,4-Dioxane	**6.4**		**1.0**	**1.0**	**1.0**	**ug/L**	100	01-Sep-2020 23:23
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 23:23*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 23:23*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*01-Sep-2020 23:23*

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 Effluent Samples
WorkOrder:HS20081151
Sample ID: LH18/24-SP650_082520
Lab ID:HS20081151-01
Collection Date: 25-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 / 28-Aug-2020		Analyst: ALR
Aluminum	**0.00864**	J	**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	02-Sep-2020 16:43
Antimony	**0.000883**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Arsenic	**0.000732**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Barium	**0.702**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:43
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:43
Calcium	**41.6**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	02-Sep-2020 16:43
Chromium	**0.000428**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Cobalt	**0.000288**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Iron	**0.0815**	J	**0.0120**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:43
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	02-Sep-2020 16:43
Magnesium	**28.9**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:43
Manganese	**0.0565**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Nickel	**0.00124**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
Potassium	**1.20**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	02-Sep-2020 16:43
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	02-Sep-2020 16:43
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	02-Sep-2020 16:43
Sodium	**173**		**0.280**	**1.00**	**4.00**	**mg/L**	20	02-Sep-2020 21:50
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	02-Sep-2020 16:43
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	02-Sep-2020 16:43
Zinc	**0.0129**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	02-Sep-2020 16:43
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 13:20
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	**8.00**	J	**5.00**	**15.0**	**15.0**	**mg/L**	1	31-Aug-2020 10:30
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**350**		**4.00**	**10.0**	**10.0**	**mg/L**	20	29-Aug-2020 18:15
Sulfate	**24.7**		**0.200**	**0.500**	**0.500**	**mg/L**	1	29-Aug-2020 17:21

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 Effluent Samples WorkOrder:HS20081151

Sample ID: LH18/24-SP650_082520_AIX Lab ID:HS20081151-02

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. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20081151
Sample ID: Trip Blank Lab ID:HS20081151-03
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	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 15:36
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	28-Aug-2020 15:36
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	28-Aug-2020 15:36
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 15:36
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	28-Aug-2020 15:36
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36

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 Effluent Samples WorkOrder:HS20081151
Sample ID: Trip Blank Lab ID:HS20081151-03
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	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	28-Aug-2020 15:36
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	28-Aug-2020 15:36
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	28-Aug-2020 15:36
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	28-Aug-2020 15:36
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	28-Aug-2020 15:36
Surr: 1,2-Dichloroethane-d4	*87.6*			**0**	*81-118*	*%REC*	*1*	*28-Aug-2020 15:36*
Surr: 4-Bromofluorobenzene	*98.2*			**0**	*85-114*	*%REC*	*1*	*28-Aug-2020 15:36*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*1*	*28-Aug-2020 15:36*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*28-Aug-2020 15:36*

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 Effluent Samples
WorkOrder: HS20081151

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
HS20081151-01	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
HS20081151-01		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
HS20081151-01		10 (mL)	10 (mL)	1

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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	
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00		28 Aug 2020 08:16	01 Sep 2020 23:23	100
Batch ID: 156822 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00		28 Aug 2020 14:00	02 Sep 2020 21:50	20
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00		28 Aug 2020 14:00	02 Sep 2020 16:43	1
Batch ID: 156890 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00		31 Aug 2020 14:44	01 Sep 2020 13:20	1
Batch ID: R367697 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00			28 Aug 2020 16:00	1
HS20081151-03	Trip Blank	25 Aug 2020 14:00			28 Aug 2020 15:36	1
Batch ID: R367721 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00			29 Aug 2020 18:15	20
HS20081151-01	LH18/24-SP650_082520	25 Aug 2020 14:00			29 Aug 2020 17:21	1
Batch ID: R367736 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20081151-01	LH18/24-SP650_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	
HS20081151-01	LH18/24-SP650_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	
HS20081151-02	LH18/24-SP650_082520_AIX	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 Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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: 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 Effluent Samples
WorkOrder: HS20081151

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: 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 Effluent Samples
WorkOrder: HS20081151

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: 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: 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 Effluent Samples
WorkOrder: HS20081151

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: 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: 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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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: 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: 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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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 Effluent Samples
WorkOrder: HS20081151

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: **LH18/24-SP650_082520** 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 Effluent Samples
WorkOrder: HS20081151

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: **LH18/24-SP650_082520** 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 Effluent Samples
WorkOrder: HS20081151

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: **LH18/24-SP650_082520** 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 Effluent Samples
WorkOrder: HS20081151

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: **LH18/24-SP650_082520** 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 Effluent Samples
WorkOrder:	HS20081151

QC BATCH REPORT

Batch ID:	**R367697 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20081151-01 HS20081151-03

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

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: HS20081151-01

ALS Houston, US Date: 03-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: **HS20081151**

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 Effluent Samples
Work Order: HS20081151

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-01	LH18/24-SP650_082520	Login	8/26/2020 1:26:31 PM	JRM	Disposed
HS20081151-02	LH18/24-SP650_082520_AIX	Login	8/26/2020 1:26:31 PM	JRM	Sub
HS20081151-03	Trip Blank	Login	8/26/2020 1:26:31 PM	JRM	Disposed

ALS Houston, US Date: 03-Sep-20

Sample Receipt Checklist

Work Order ID: HS20081151 **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 13:38	**Reviewed by:**	/S/ RJ Modashia	27-Aug-2020 09:36
	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 13:40	

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 EFFLUENT 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-SP650_082520	Water	08/25/20 / 14:00		4	3		1								HCL	
LH18/24-SP650_082520	Water	08/25/20 / 14:00		1		1									HNO3	
LH18/24-SP650_082520	Water	08/25/20 / 14:00		2					1	1					NONE	
LH18/24-SP650_082520	Water	08/25/20 / 14:00		1				1							H2SO4	
LH18/24-SP650_082520_AIX	Water	08/25/20 / 14:00		1							1				NONE	
Trip Blank	Water	08/25/20		2	2										HCL	

Additional Remarks: **Standard TAT**

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	10:05						

For Lab Use Only

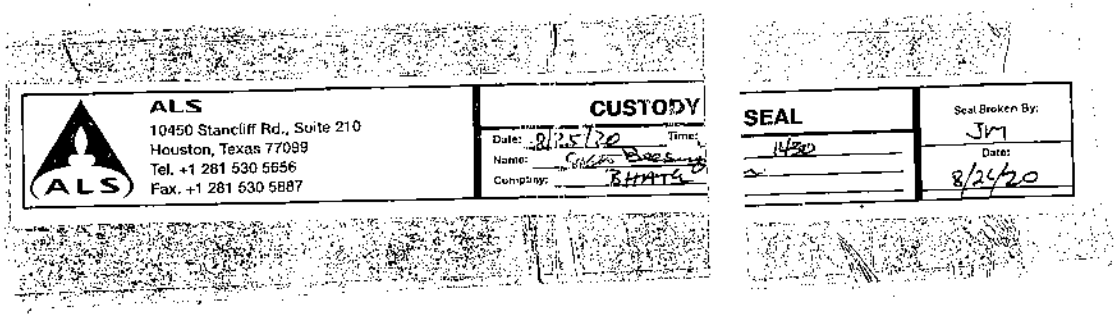
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:
45313 SIC. 080 #31 CFF-ETA

HS20081151

Bhate Environmental Associates, Inc.
Groundwater Treatment Plant Quarterly Effluent Sar

(Word) S:\1-ecs\Forms\Chain of Custody - BiWeekly

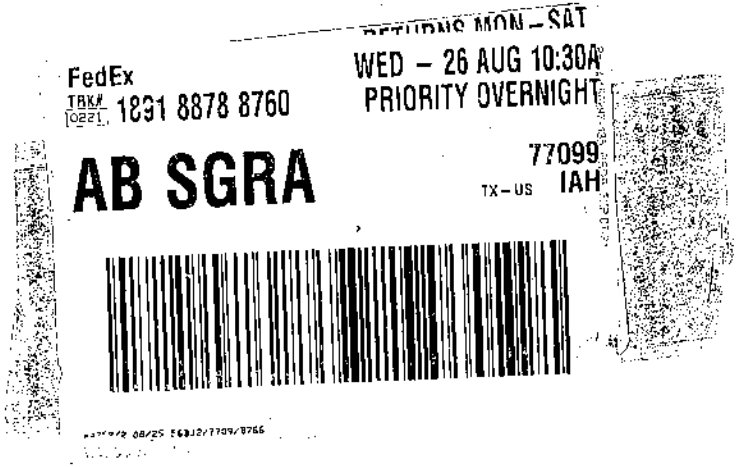


ALS
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Houston, Texas 77099
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Fax. +1 281 530 5887

CUSTODY
Date: 8/25/20 Time:
Name: Sylvia Baeza
Company: BHATS

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:E2000796

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

Laboratory Results for: HS20081151

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 **E2000796.**

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.:**	E2000796
Project:	HS20081154	**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: HS20081151

Service Request:E2000796

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000796-001	LH18/24-SP650_082520-AIX	8/25/2020	1400

Service Request Summary

Folder #: **E2000796**
Client Name: ALS Environmental - US
Project Name: HS20081151
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: HS20081151
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
E2000796-001	LH18/24-SP650_082520-AIX	Water	08/25/20 1400	**IV**

Service Request Summary

Folder #: **E2000796**
Client Name: ALS Environmental - US
Project Name: HS20081151
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: HS20081151
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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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

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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www.alsglobal.com

E2000796 5
ALS Laboratory Group
HS20081151

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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:** **14569**

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:	HS20081151
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20081151-02**	**LH18/24-SP650_082520_AIX**	**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: IG Date/Time: 8/26/20 1430

Cooler ID(s): Temperature(s):

00993940

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1031

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:

E2000796 5

ALS Laboratory Group

HS20081161

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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

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000796
Project:	HS20081151	**Date Collected:**	8/25/20 1400
Sample Matrix:	Water	**Date Received:**	8/26/20
		Date Extracted:	9/2/20
		Date Analyzed:	9/2/20 17:40
Sample Name:	LH18/24-SP650_082520-AIX	**Units:**	µg/L
Lab Code:	E2000796-001	**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_016	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.319**		0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000796
Project:	HS20081151	**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: HS20081151
Sample Matrix: Water

Service Request: E2000796
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:**	E2000796
Project:	HS20081151	**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:**	E2000796
Project:	HS20081151	**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

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

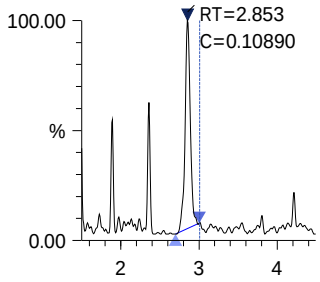
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

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

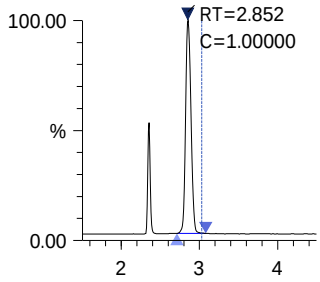
Q 99.00>83.00 (-) 4.92e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

PERCHLORATE2

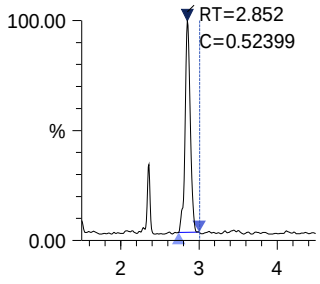
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

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

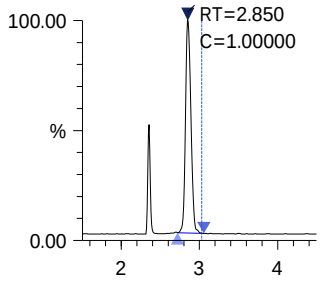
Q 99.00>83.00 (-) 2.37e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

PERCHLORATE3

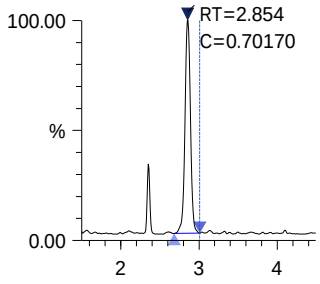
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

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

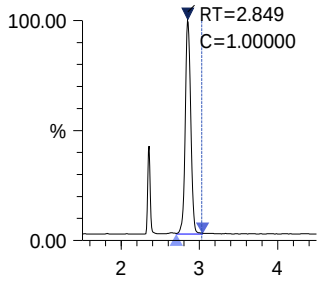
Q 99.00>83.00 (-) 3.07e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

PERCHLORATE4

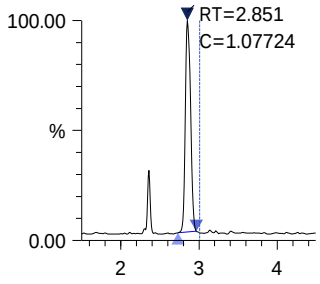
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

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

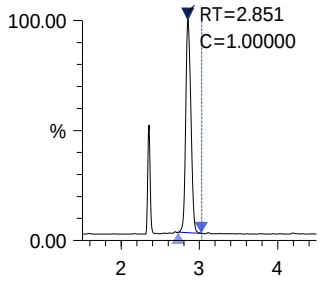
Q 99.00>83.00 (-) 4.54e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

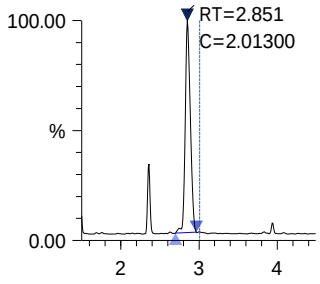
PERCHLORATE5

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

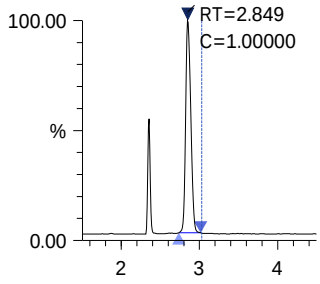
Perchlorate

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

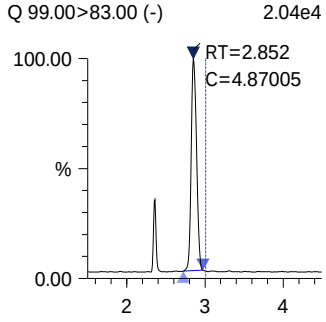
PERCHLORATE6

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

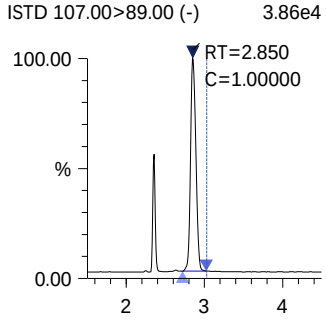
Perchlorate

Conc 4.87005
Area 98121



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768



ALS Group Houston

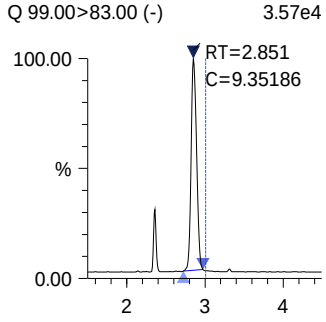
PERCHLORATE7

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

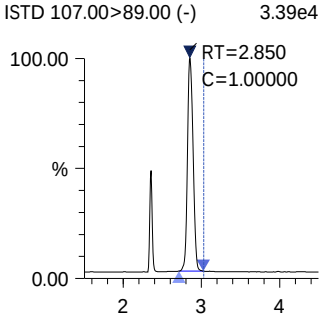
Perchlorate

Conc 9.35186
Area 174248



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

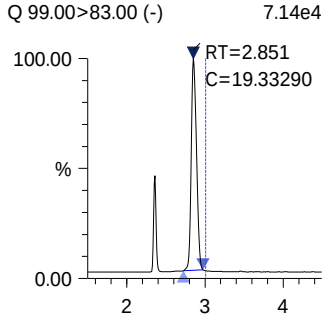
PERCHLORATE8

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

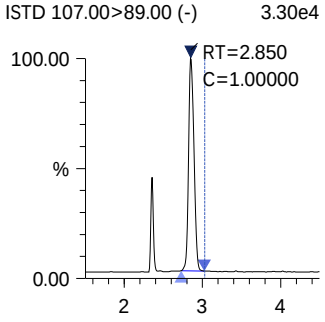
Perchlorate

Conc 19.33290
Area 337010



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727



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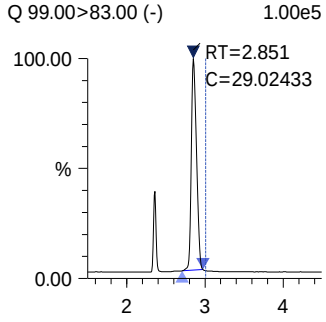
PERCHLORATE9

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

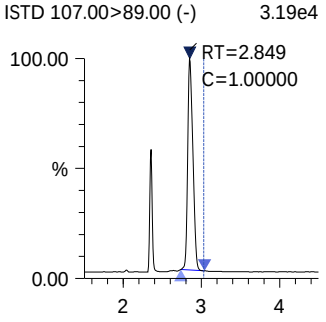
Perchlorate

Conc 29.02433
Area 466342



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



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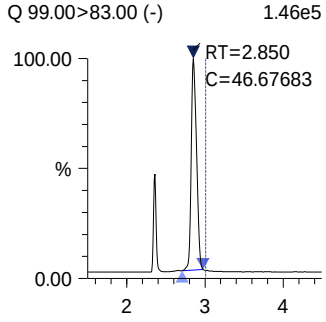
PERCHLORATE10

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

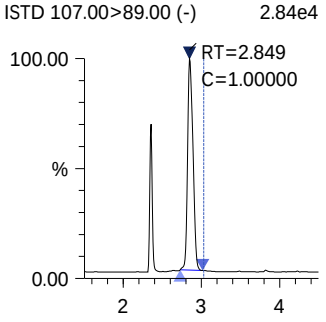
Perchlorate

Conc 46.67683
Area 694738



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



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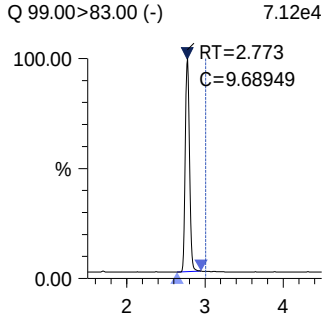
PERCHLORATEICV

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

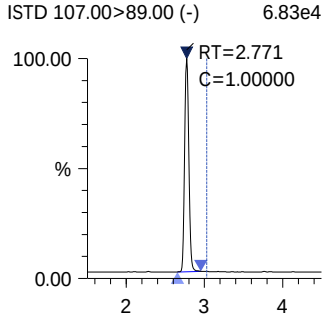
Perchlorate

Conc 9.68949
Area 257692



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

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: HS20081151

Service Request: E2000796
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: HS20081151

Service Request: E2000796
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: HS20081151

Service Request: E2000796
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: HS20081151

Service Request: E2000796
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: HS20081151

Service Request: E2000796
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:**	E2000796
Project:	HS20081151	**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: HS20081151

Service Request: E2000796
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-AIX	E2000796-001	113,440	2.81
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:**	E2000796
Project:	HS20081151	**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:**	E2000796
Project:	HS20081151	**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:**	E2000796
Project:	HS20081151	**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

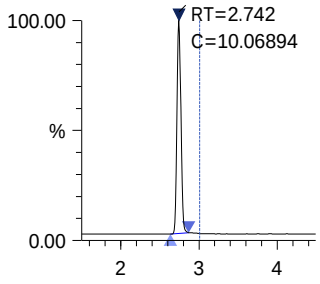
Date acquired: 9/2/2020 4:10:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_006.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

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

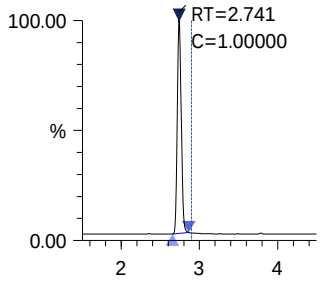
Q 99.00>83.00 (-) 6.33e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 199073

ISTD 107.00>89.00 (-) 5.76e4



ALS Group Houston

EQ2000392-01

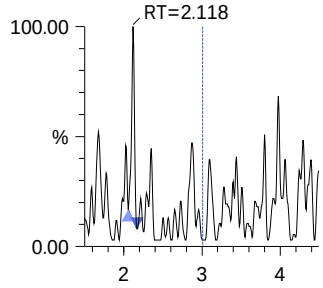
Date acquired: 9/2/2020 4:18:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_007.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 2

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 ----

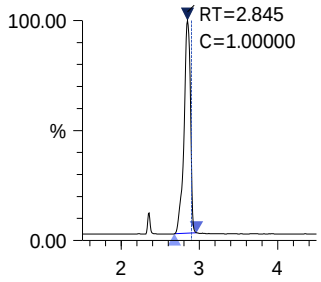
Q 99.00>83.00 (-) 7.70e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 207056

ISTD 107.00>89.00 (-) 3.61e4



ALS Group Houston

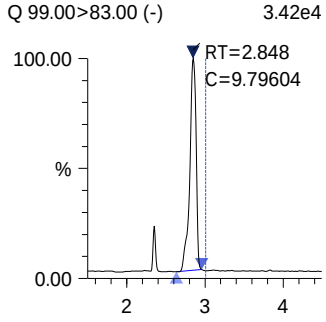
PERCHLORATE7

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

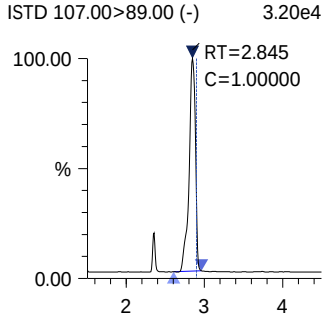
Perchlorate

Conc 9.79604
Area 192905



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181498



ALS Group Houston

EQ2000392-02

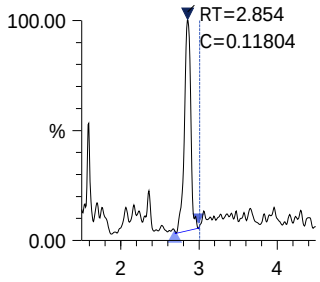
Date acquired: 9/2/2020 6:03:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_019.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

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

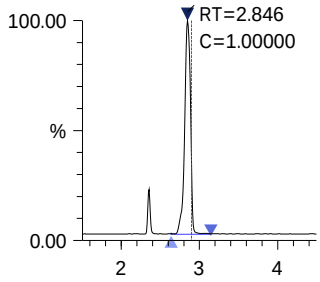
Q 99.00>83.00 (-) 7.27e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 236222

ISTD 107.00>89.00 (-) 4.27e4



ALS Group Houston

EQ2000392-03

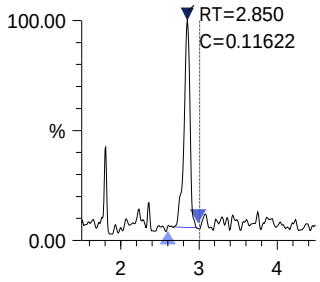
Date acquired: 9/2/2020 6:11:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200902\20200902_020.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

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

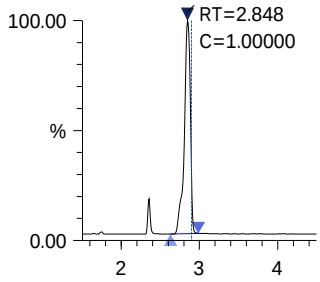
Q 99.00>83.00 (-) 5.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222560

ISTD 107.00>89.00 (-) 4.10e4



ALS Group Houston

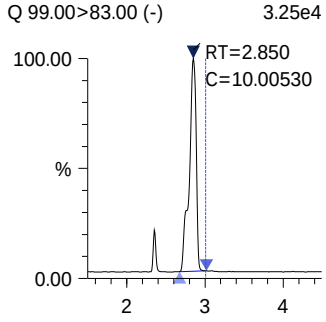
PERCHLORATE7

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

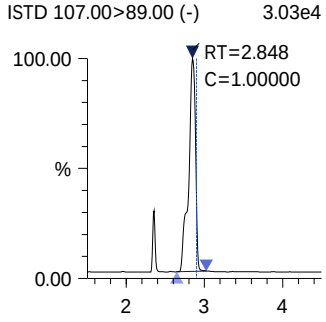
Perchlorate

Conc 10.00530
Area 202669



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 186696



HS20081151 8260 Raw Data

ALS WO# HS20081151

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.: HS20081151

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.: HS20081151

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: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

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.: HS20081151

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.: HS20081151

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: 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 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
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

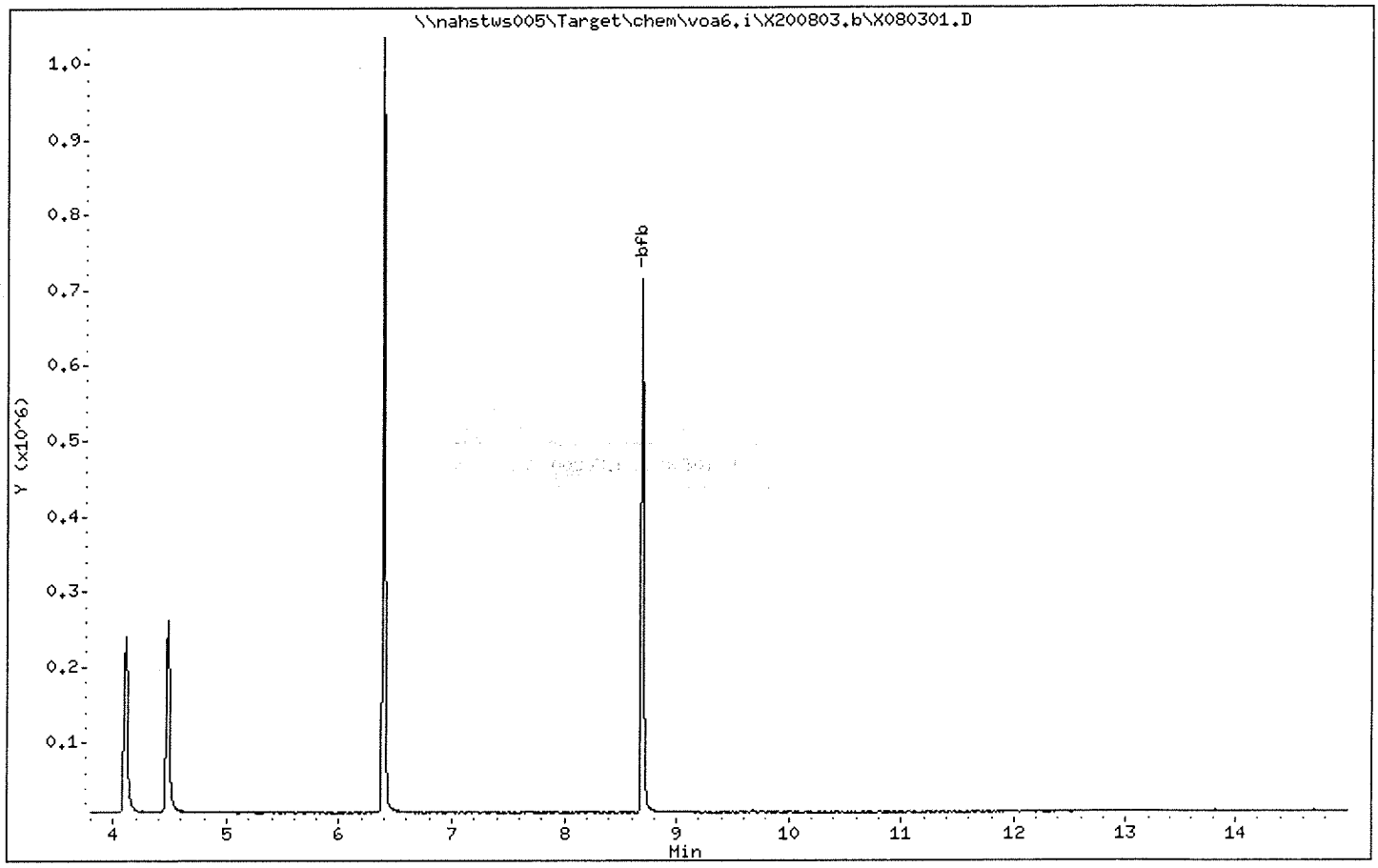
Sample Info: BFB;BFB;3;;BFB

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

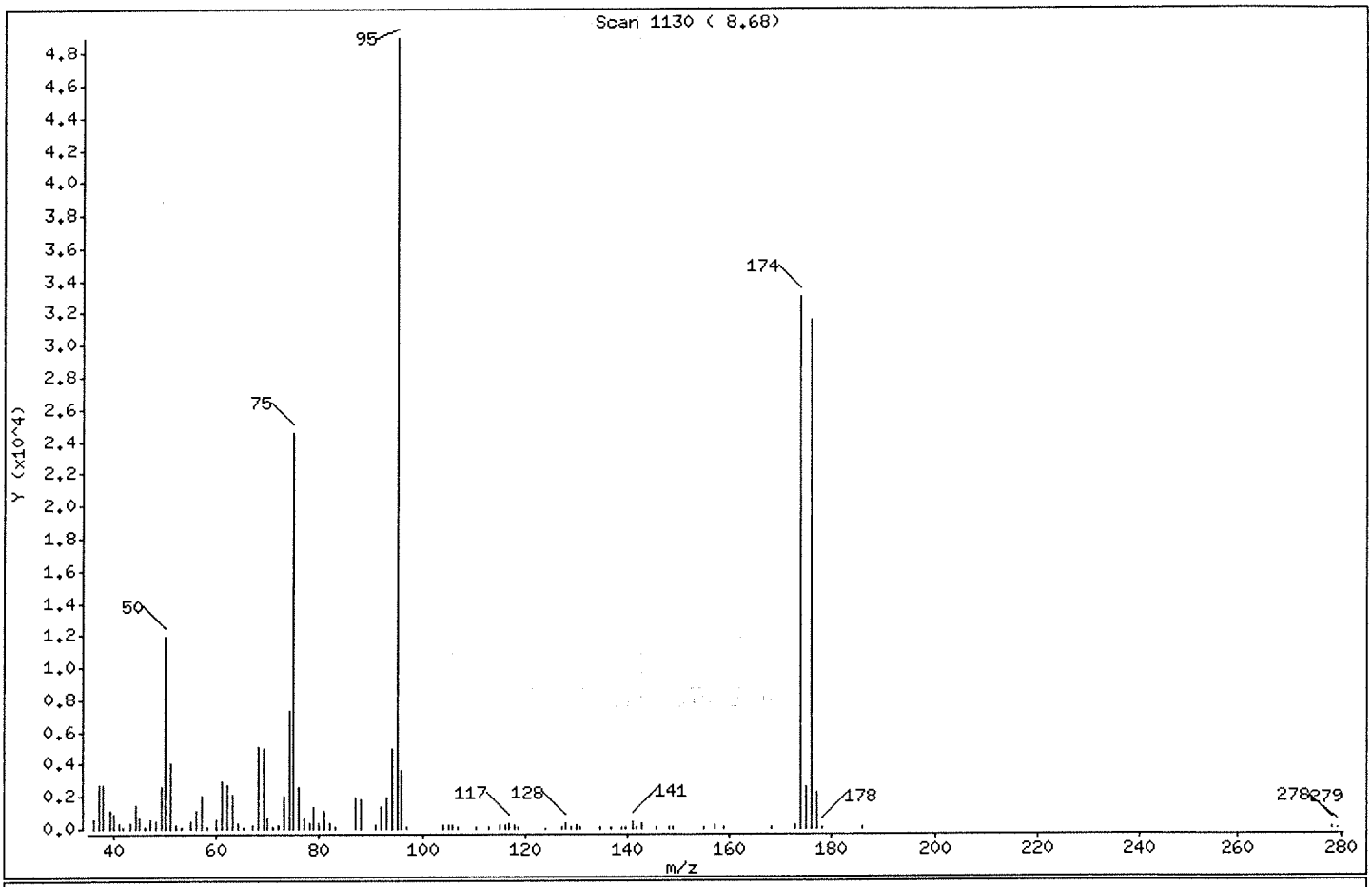
Volume Injected (uL): 2.0

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		

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)

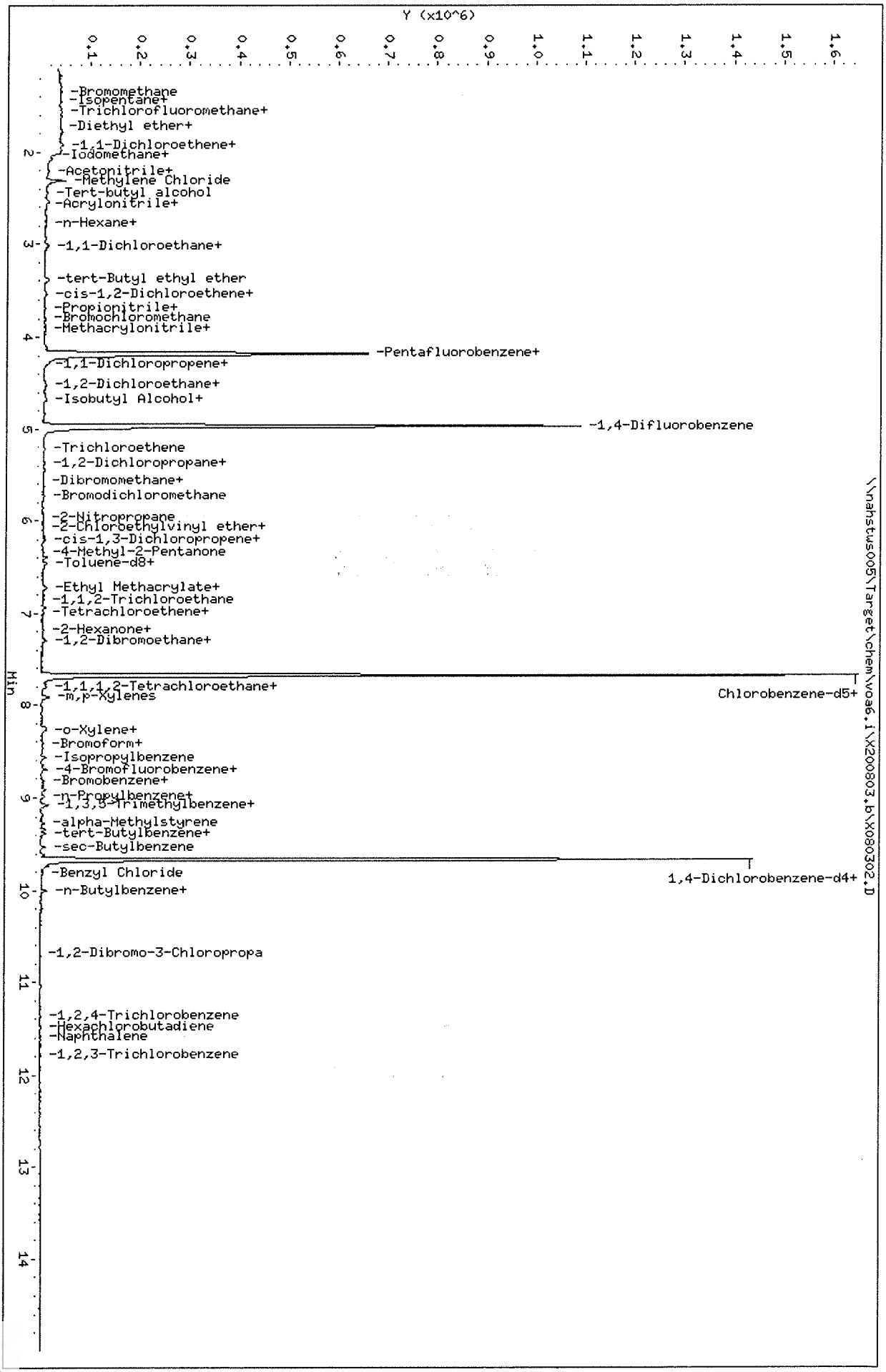
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

	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

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 1
Report Date: 22-Aug-2020 11:54

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

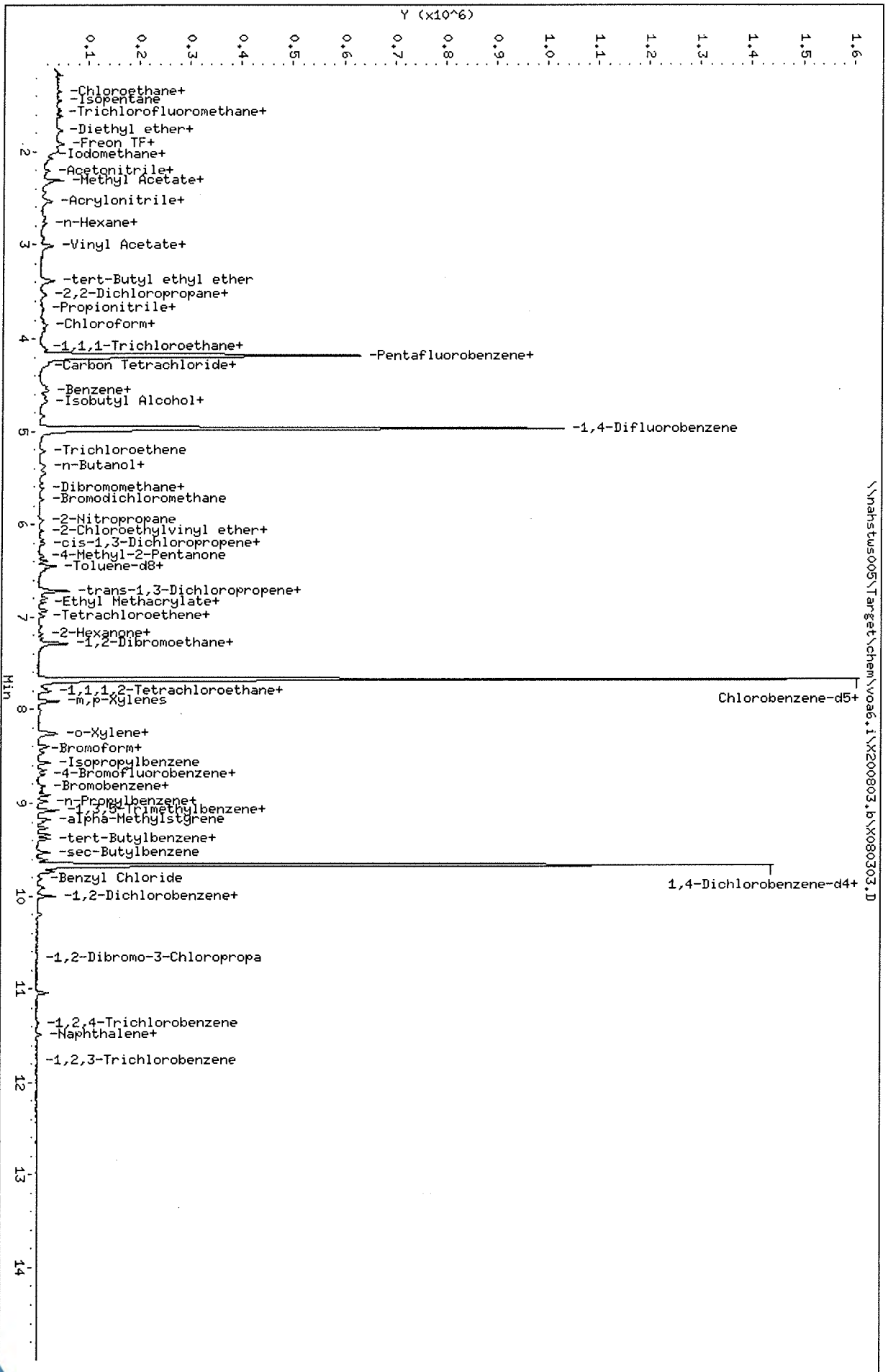
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	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.

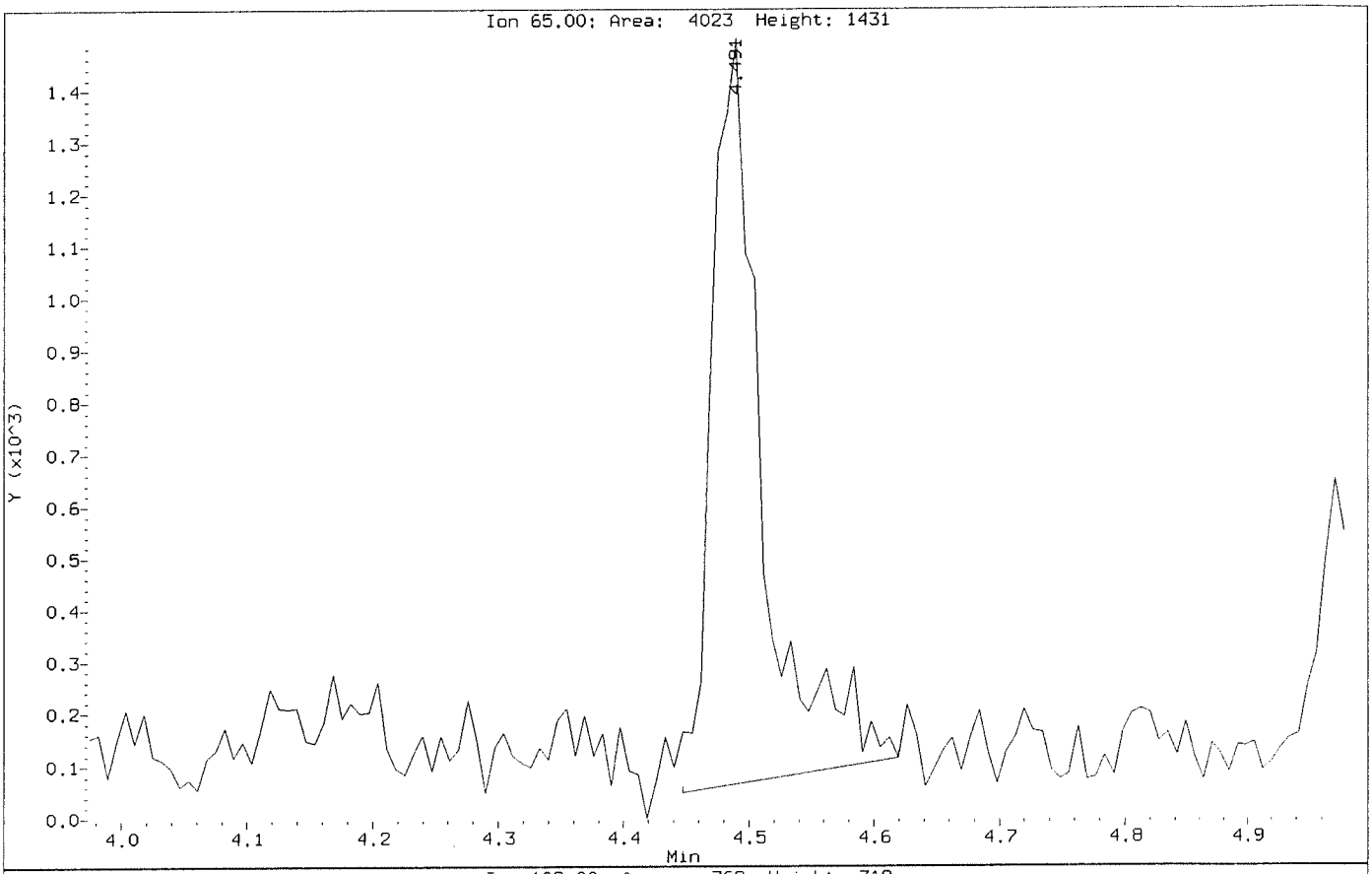


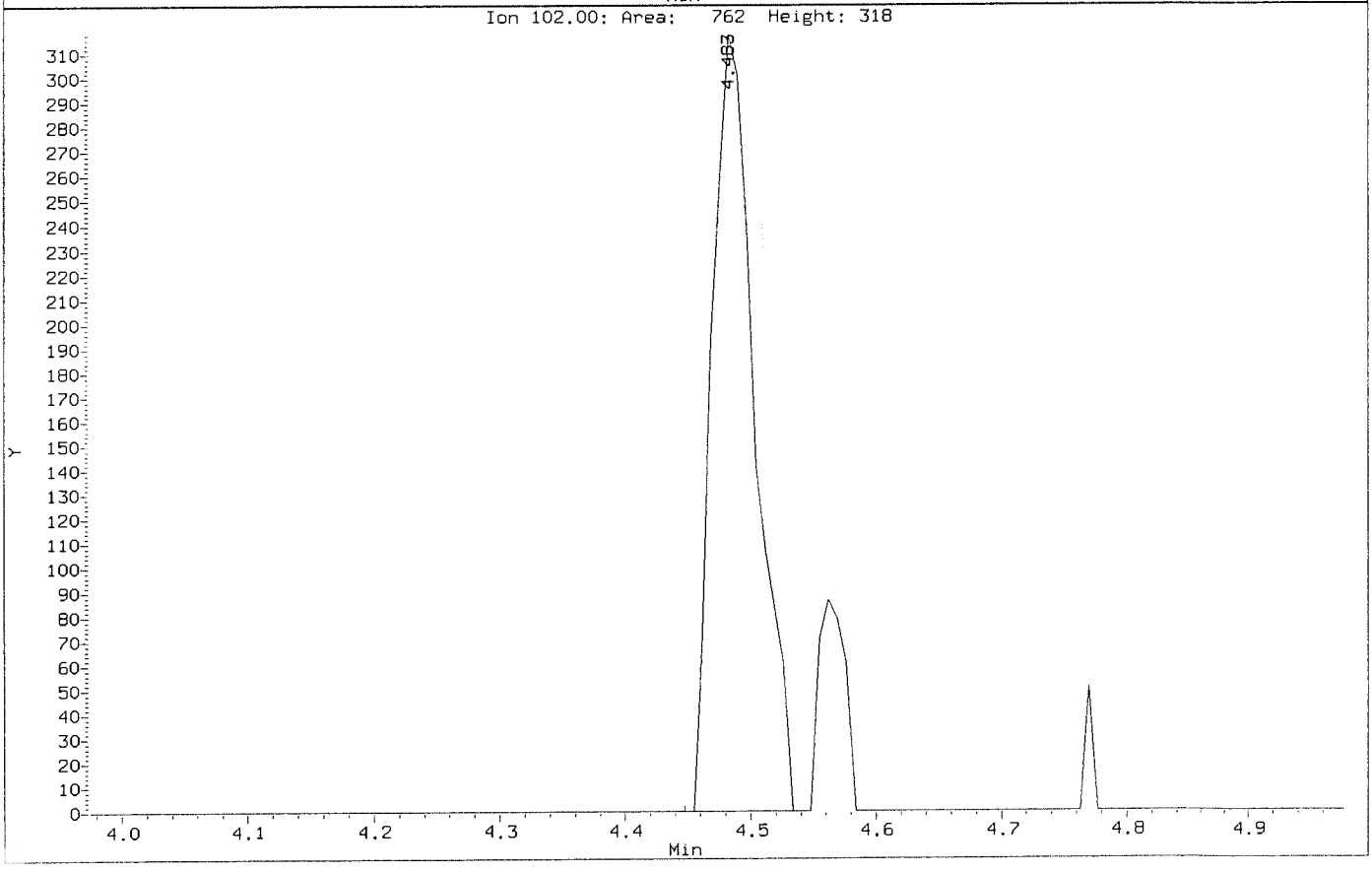
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Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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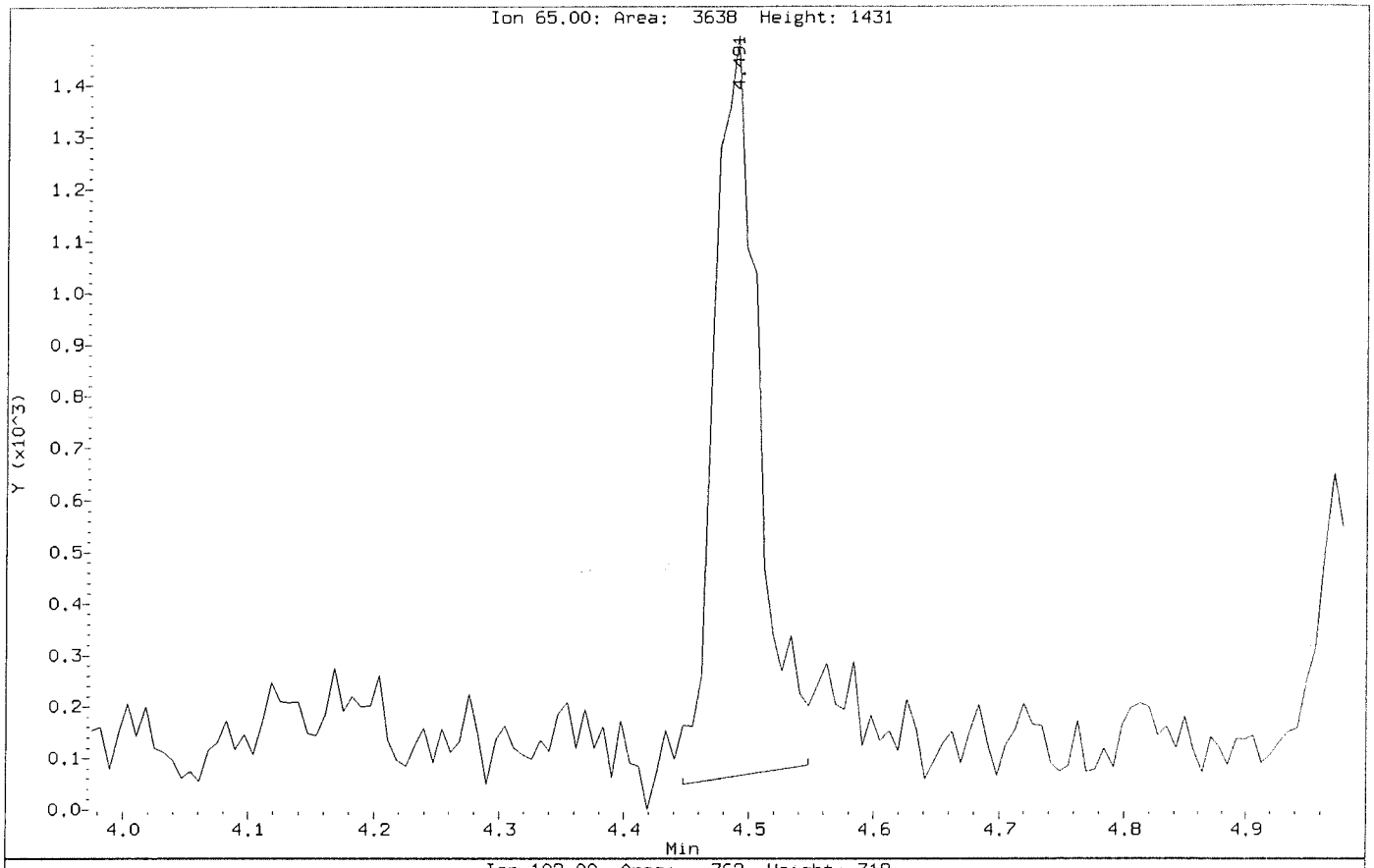
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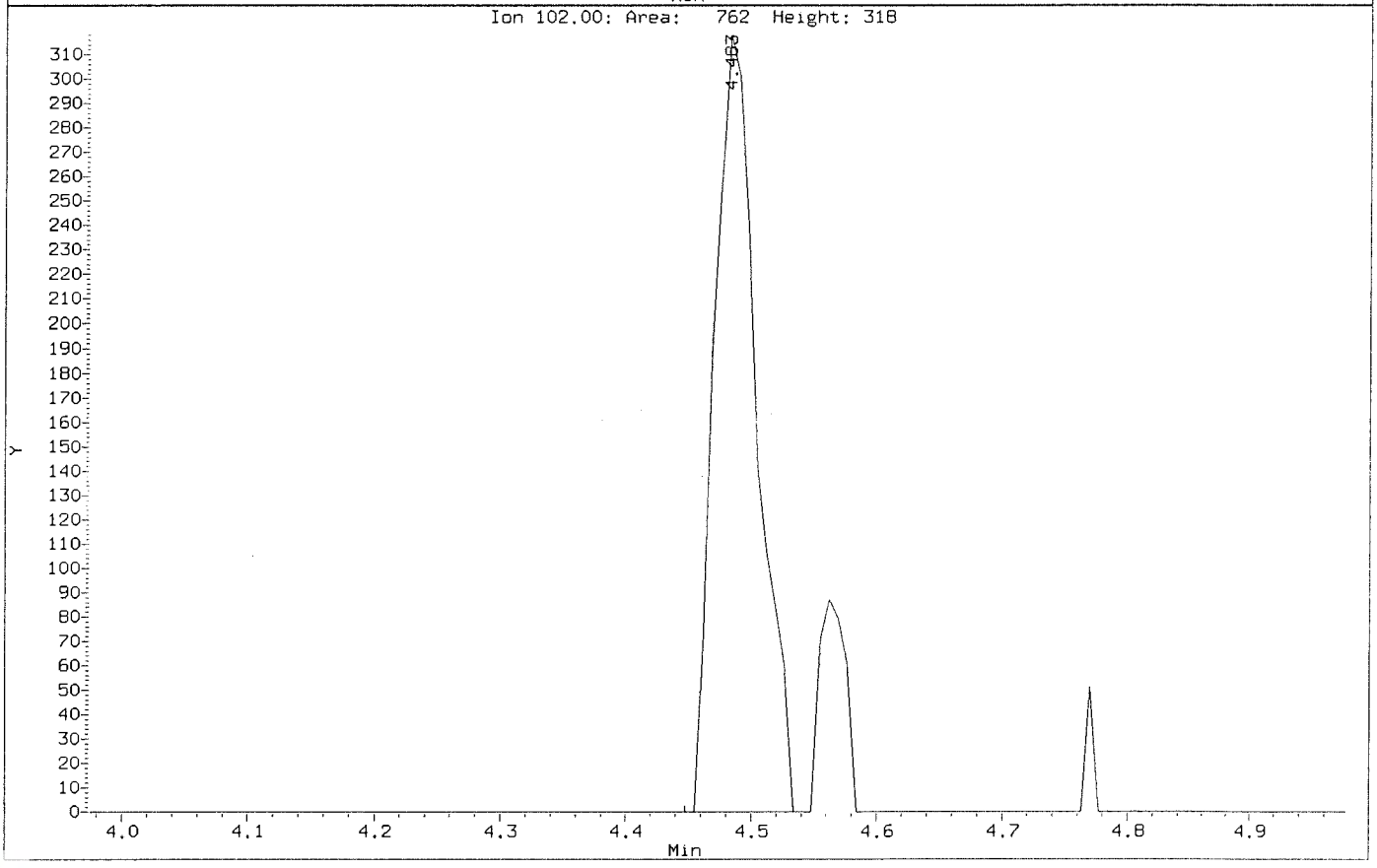




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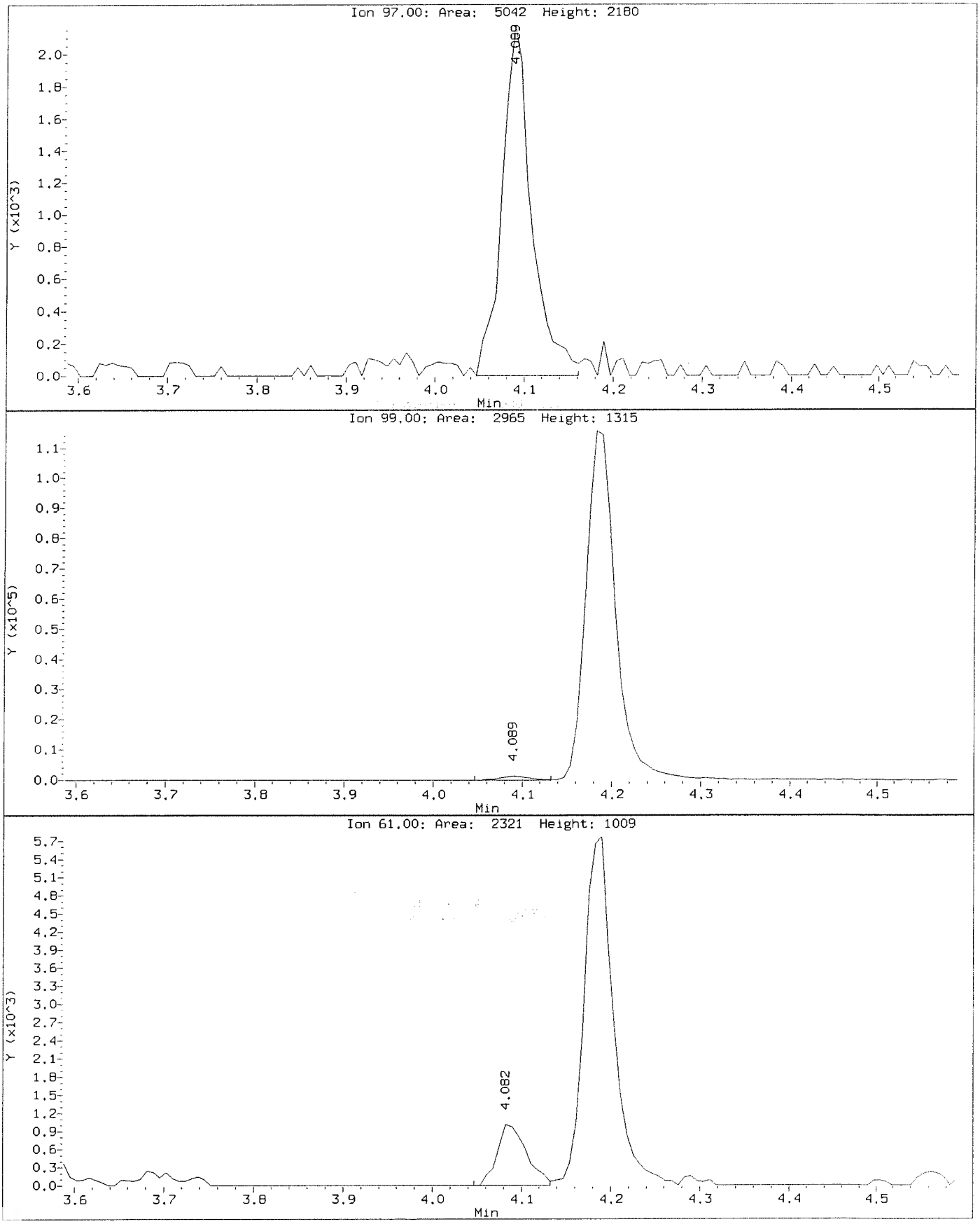
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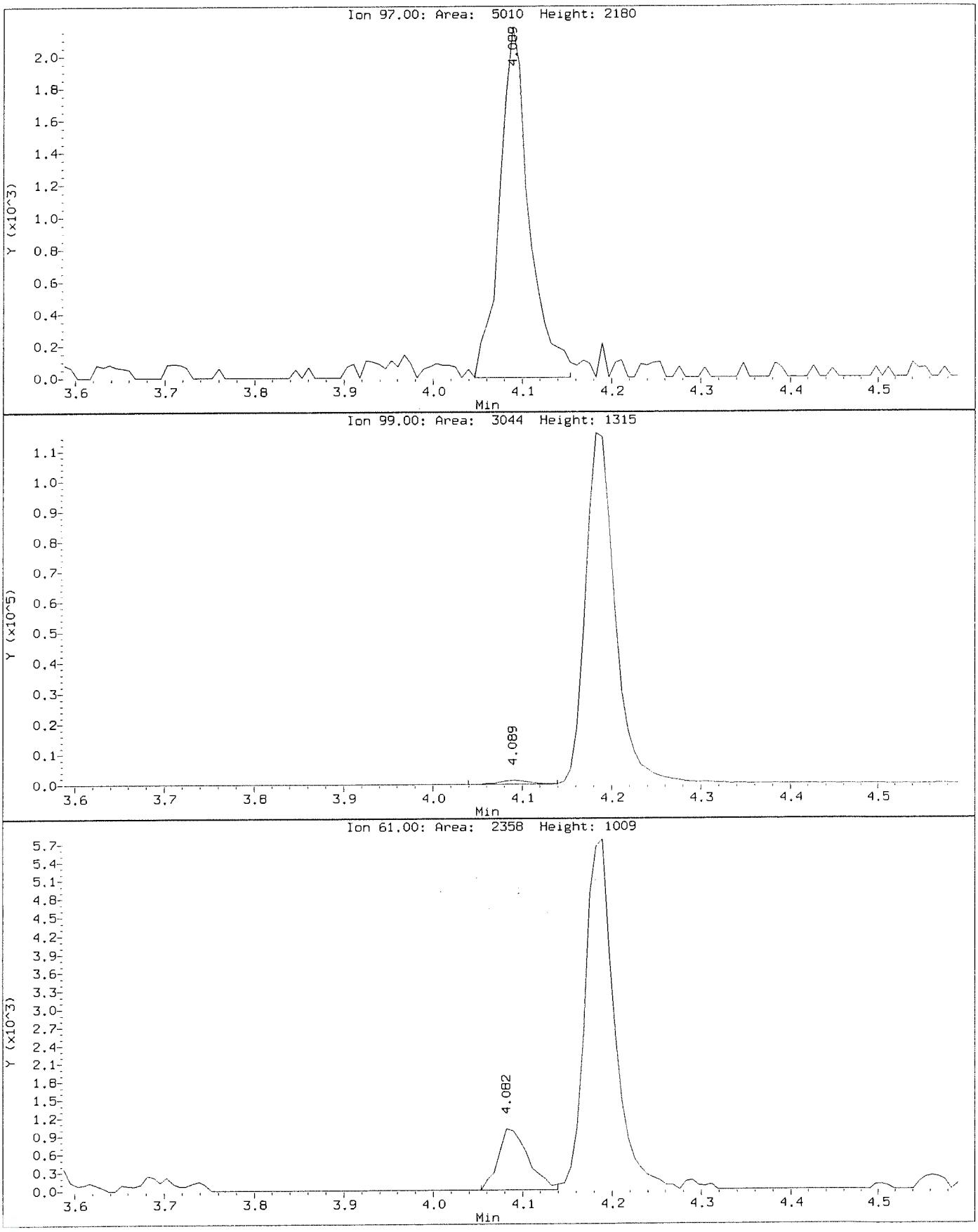
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



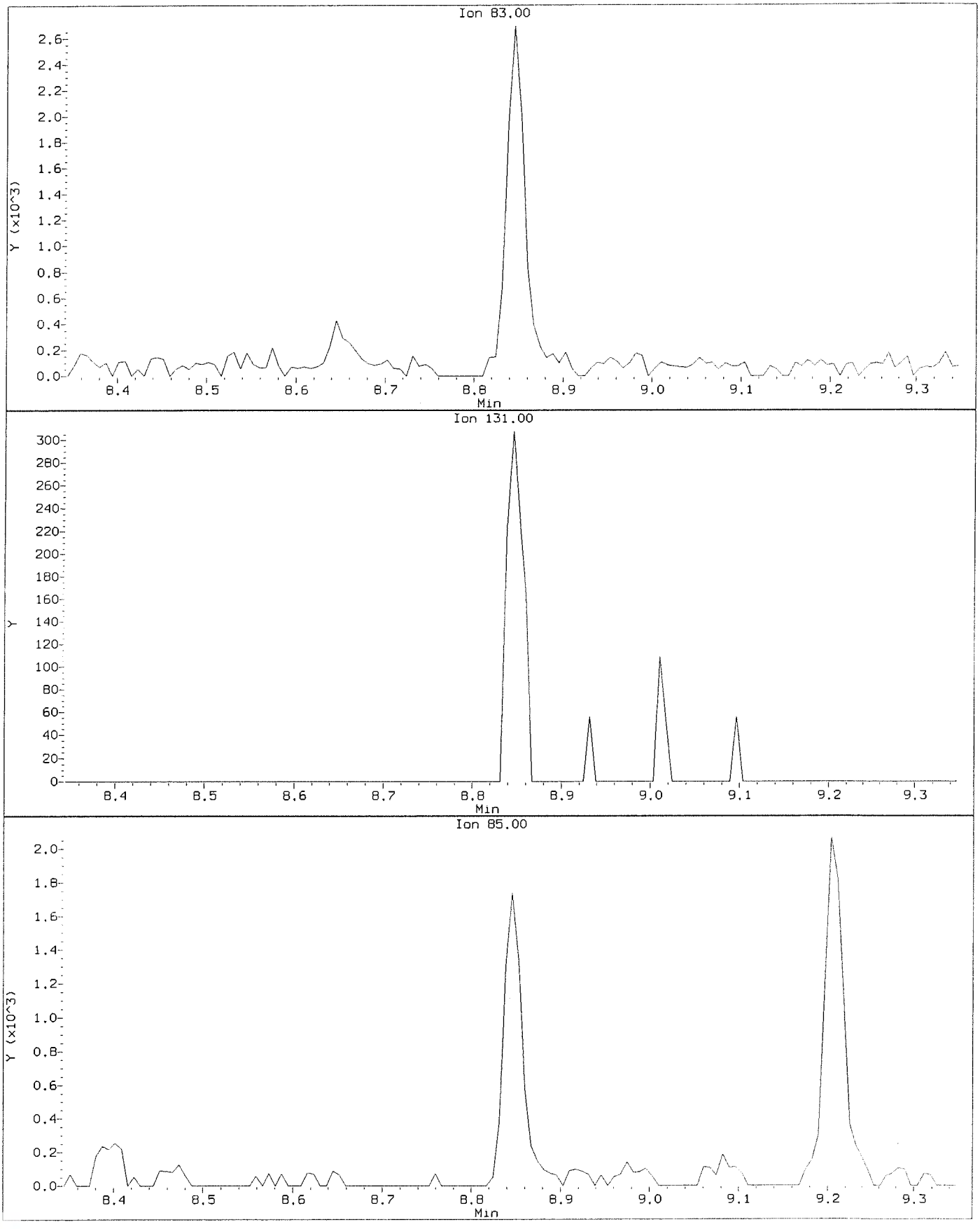
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



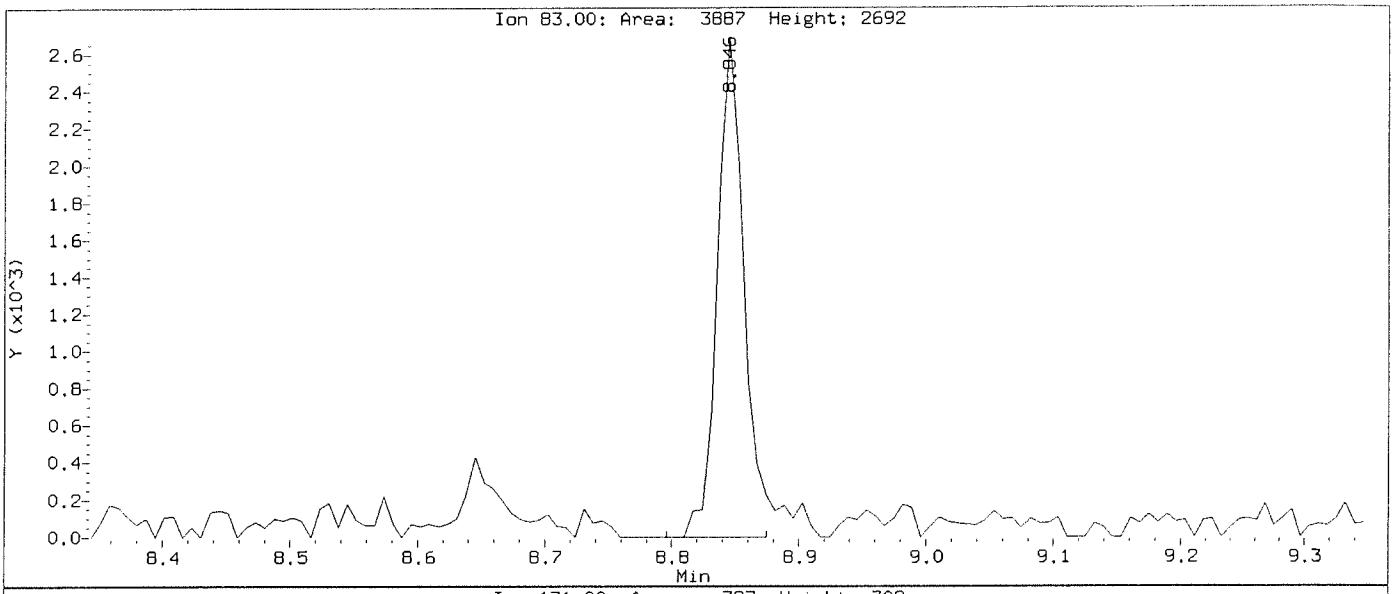
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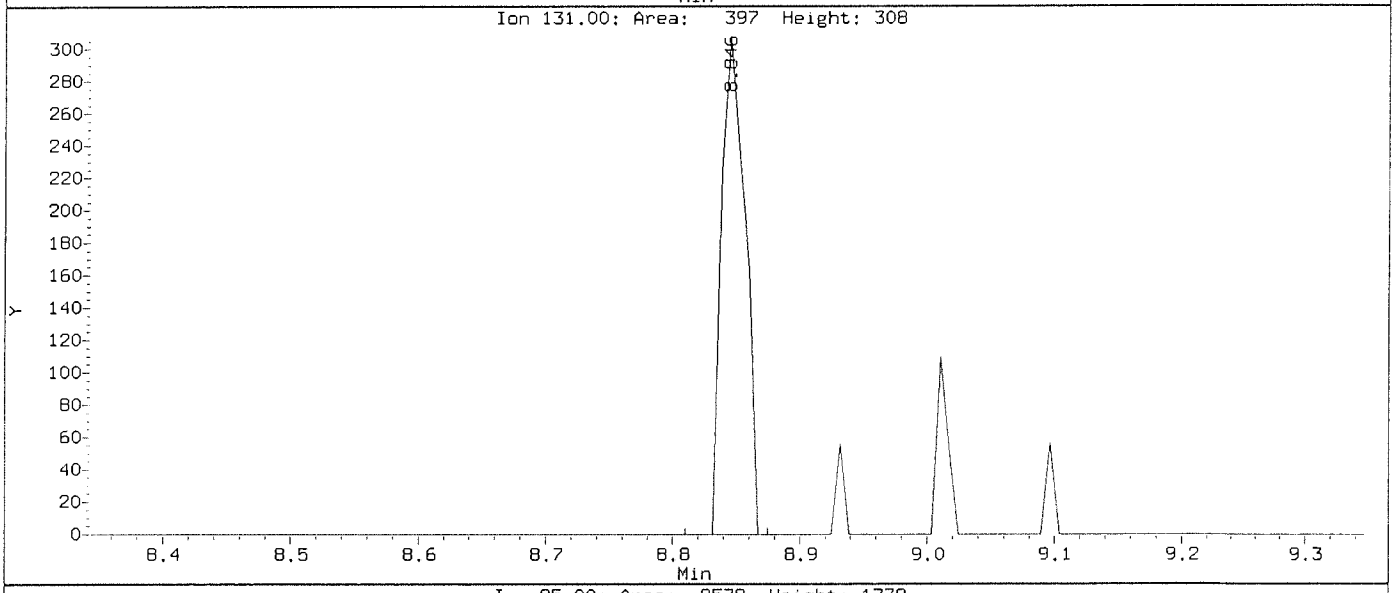
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CAS Number: 79-34-5

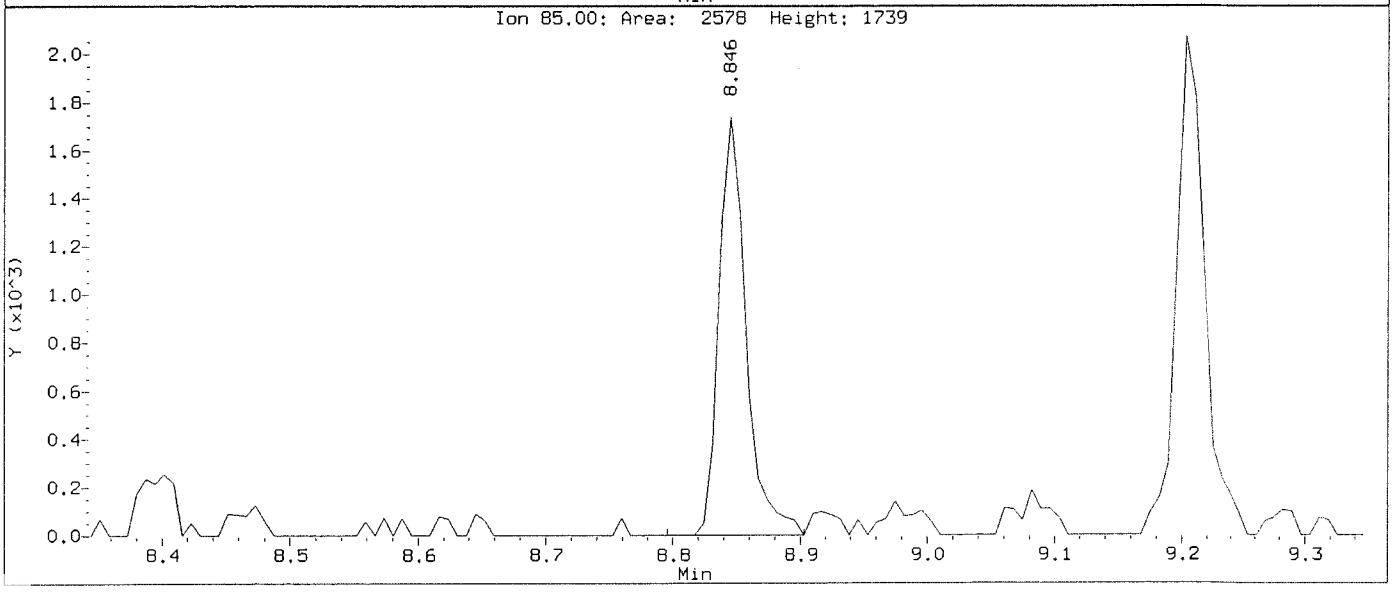


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Compound: 1,1,2,2-Tetrachloroethane
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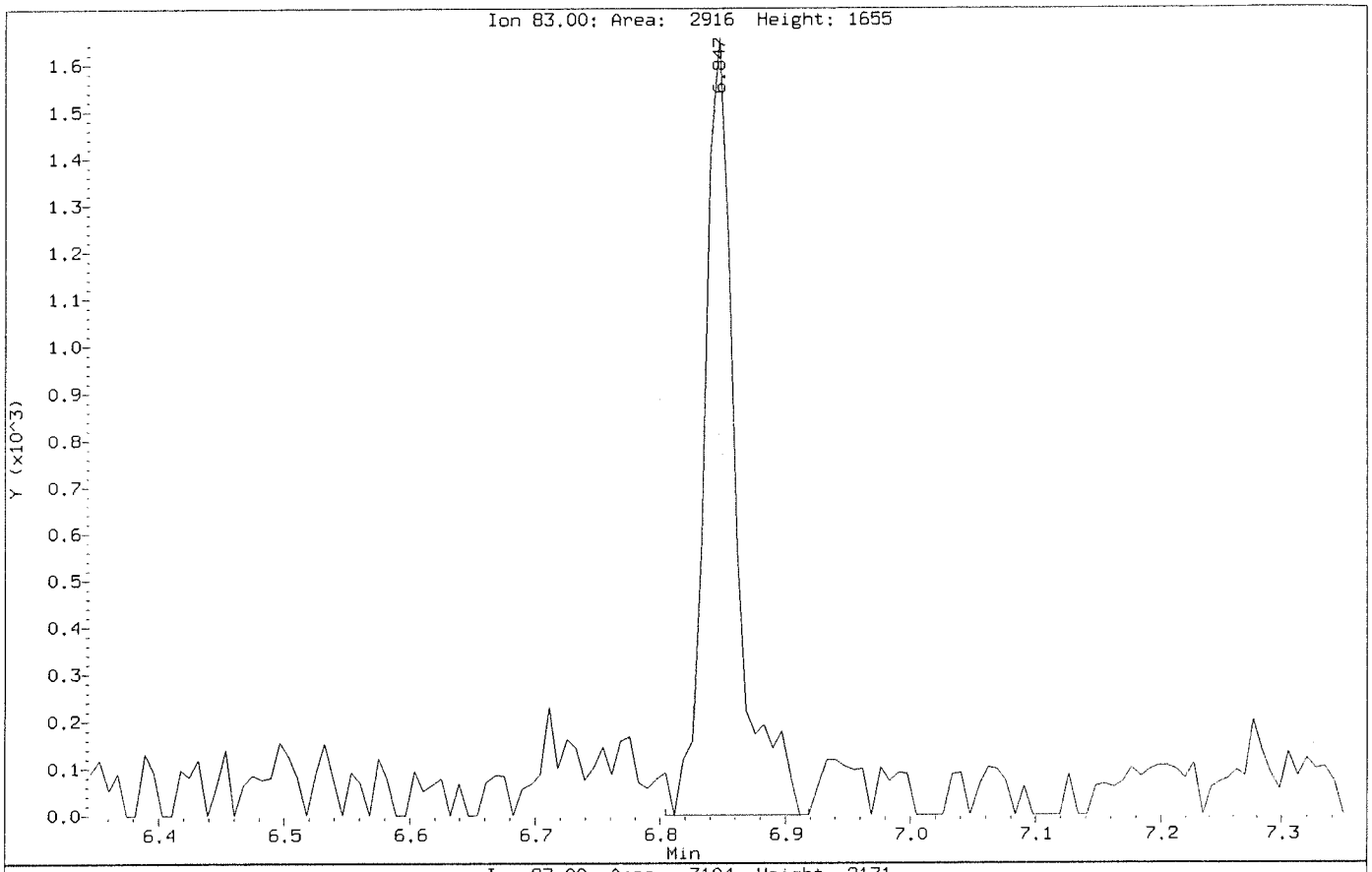


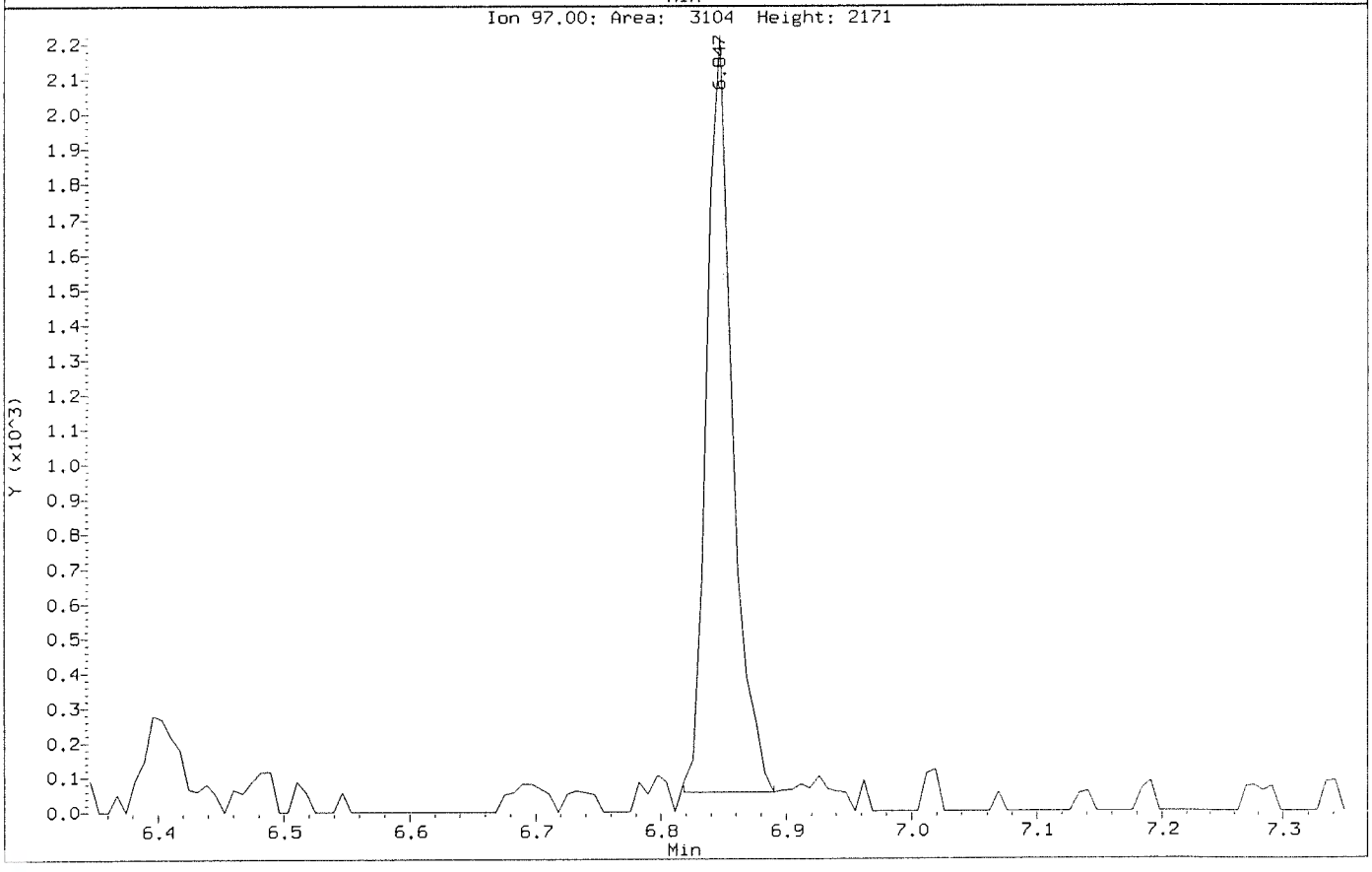




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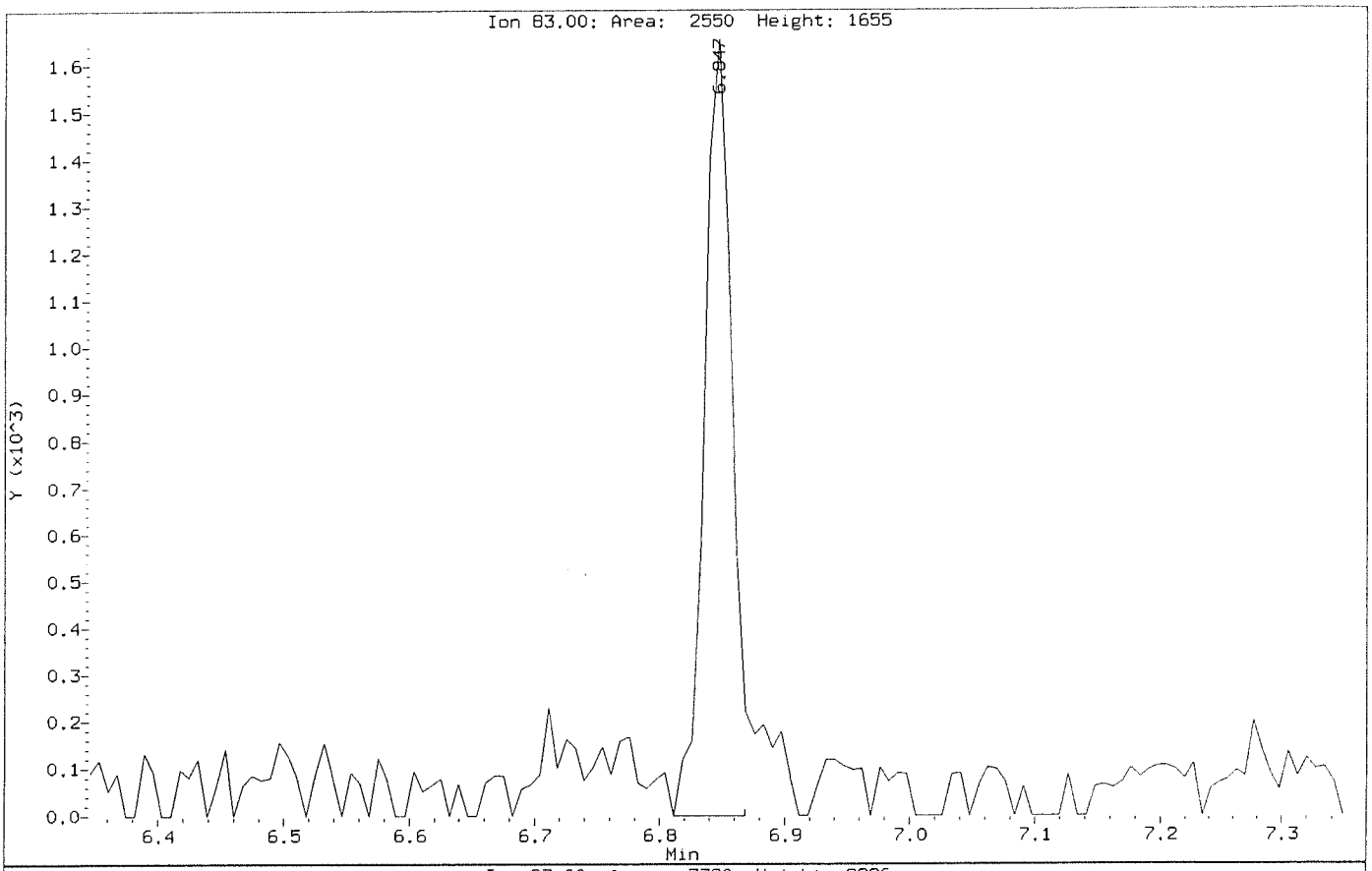
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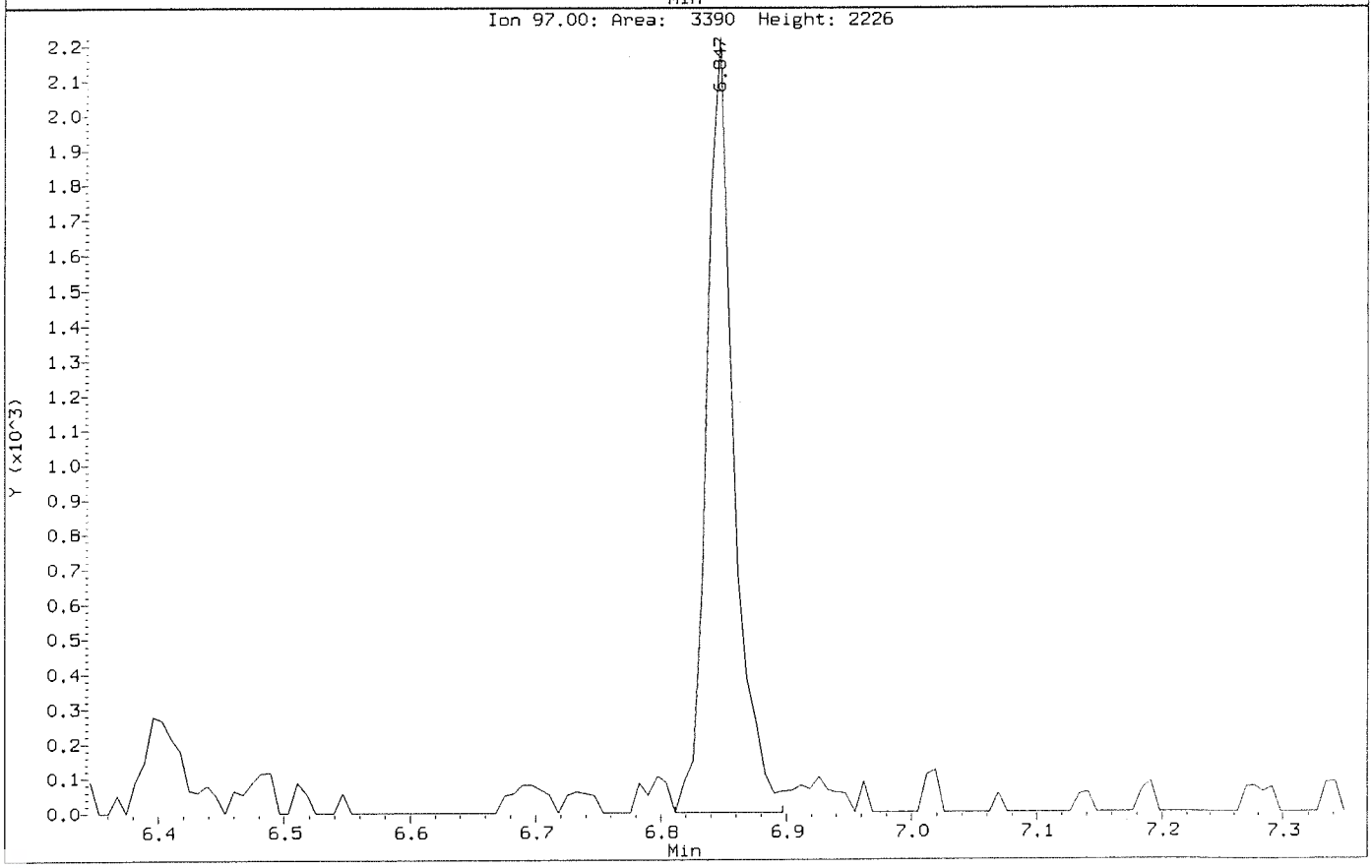




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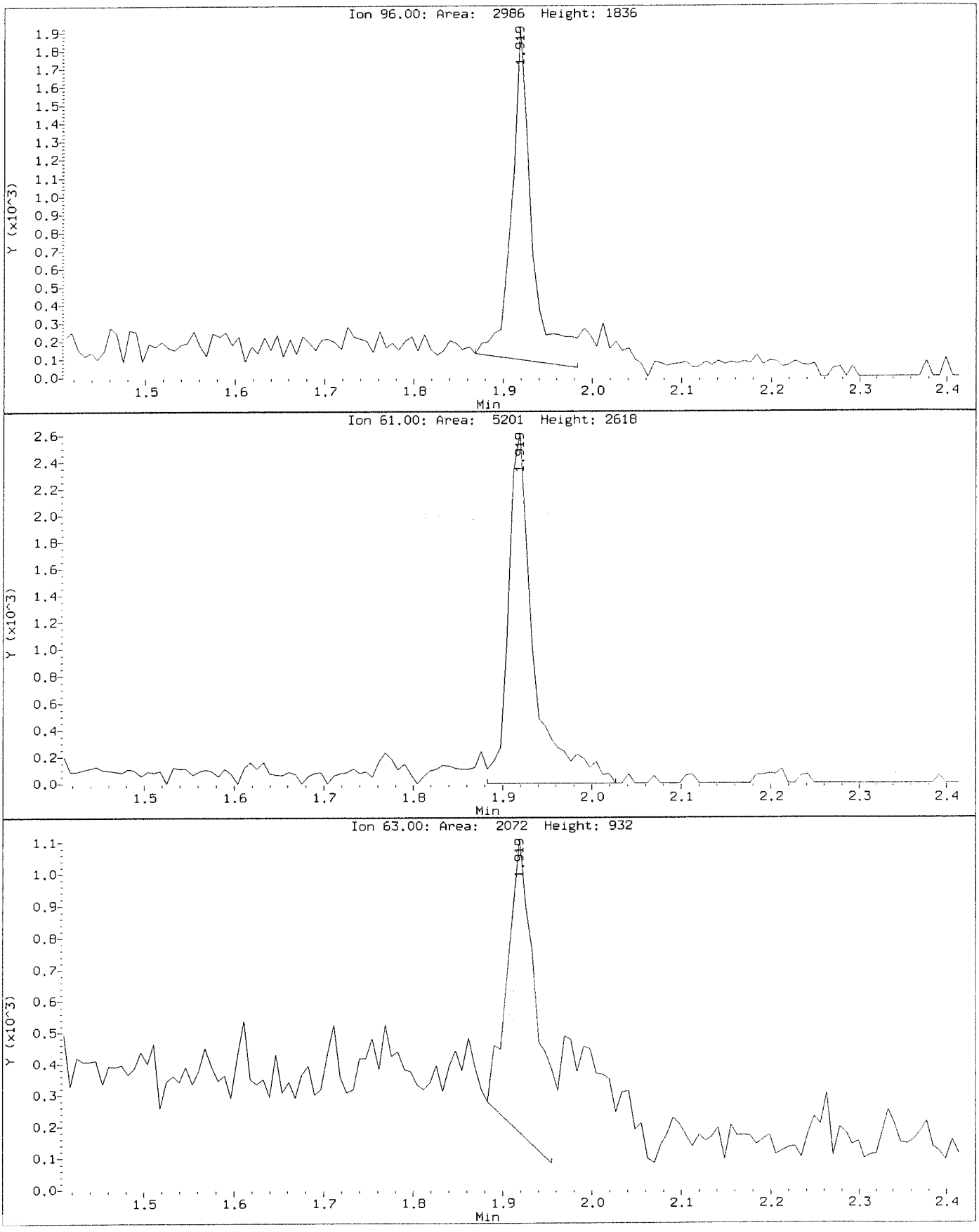
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CAS Number: 79-00-5





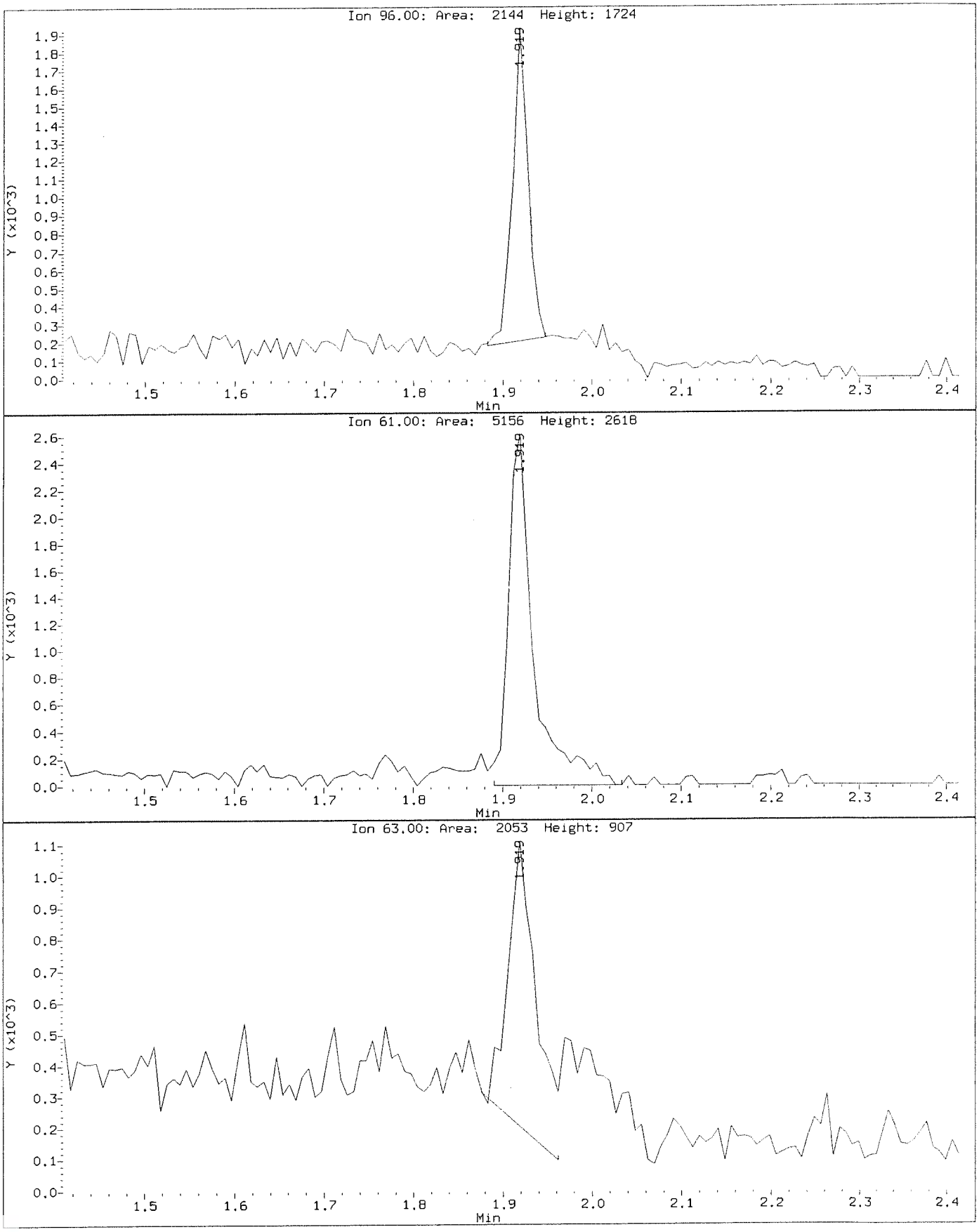
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



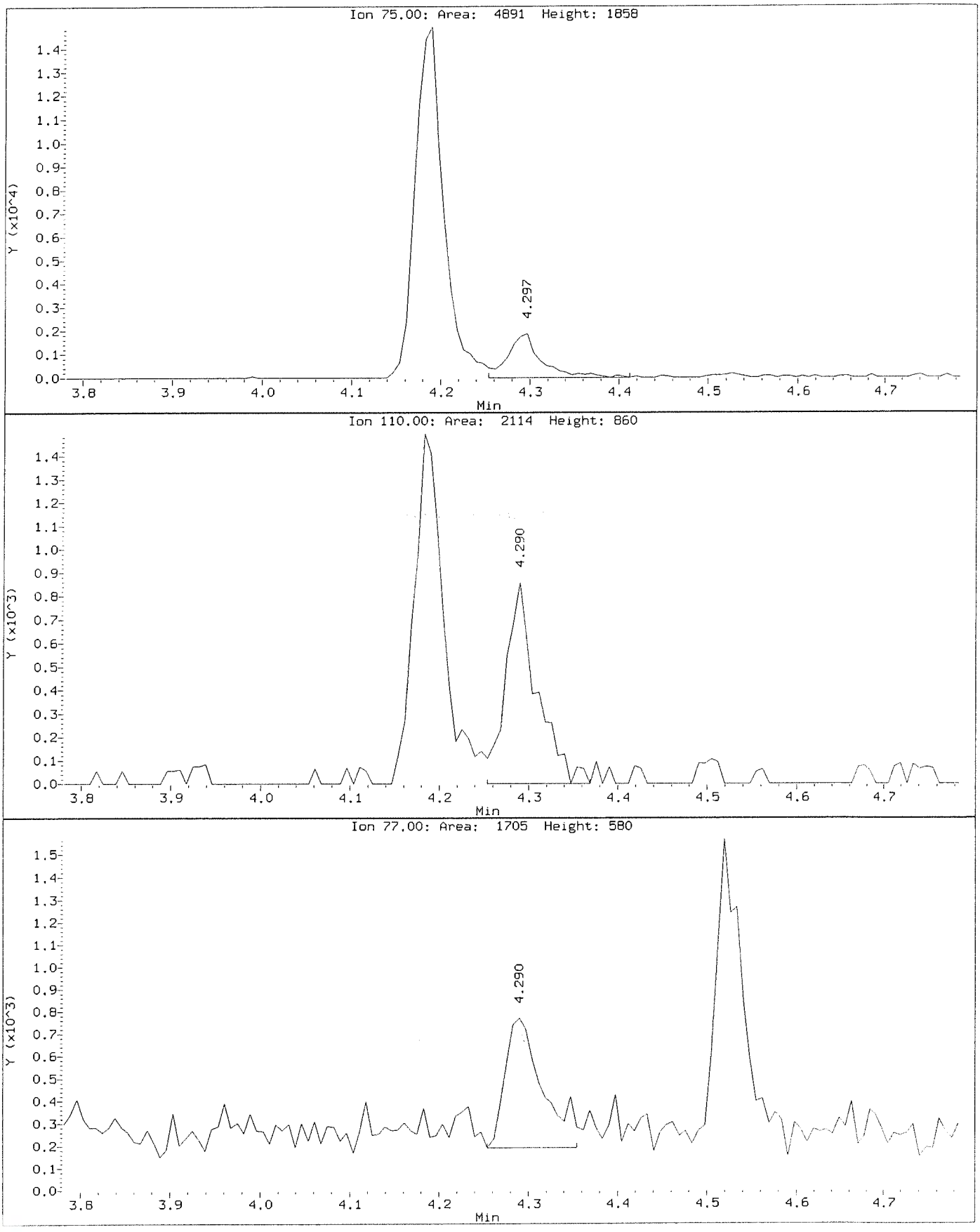
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



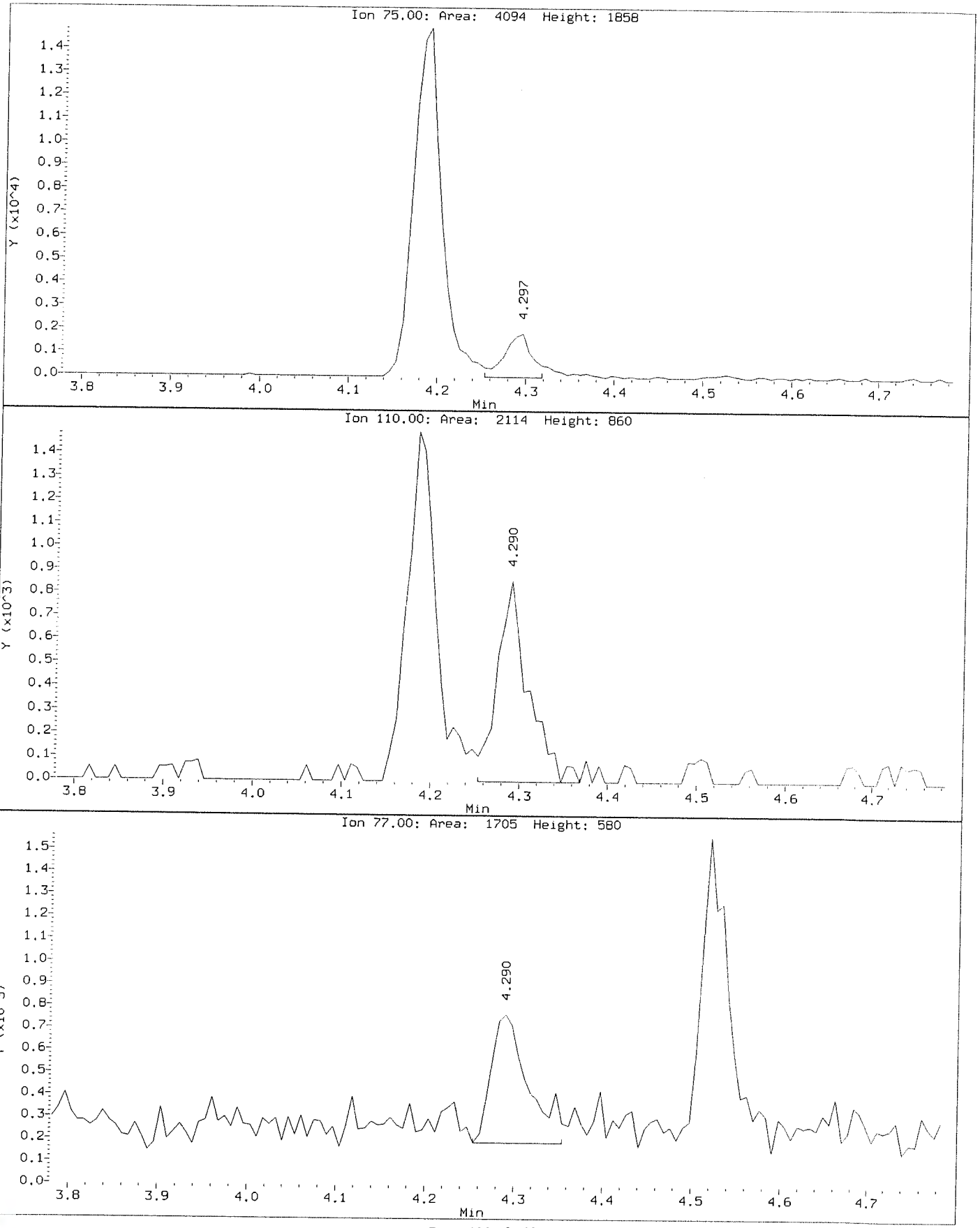
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



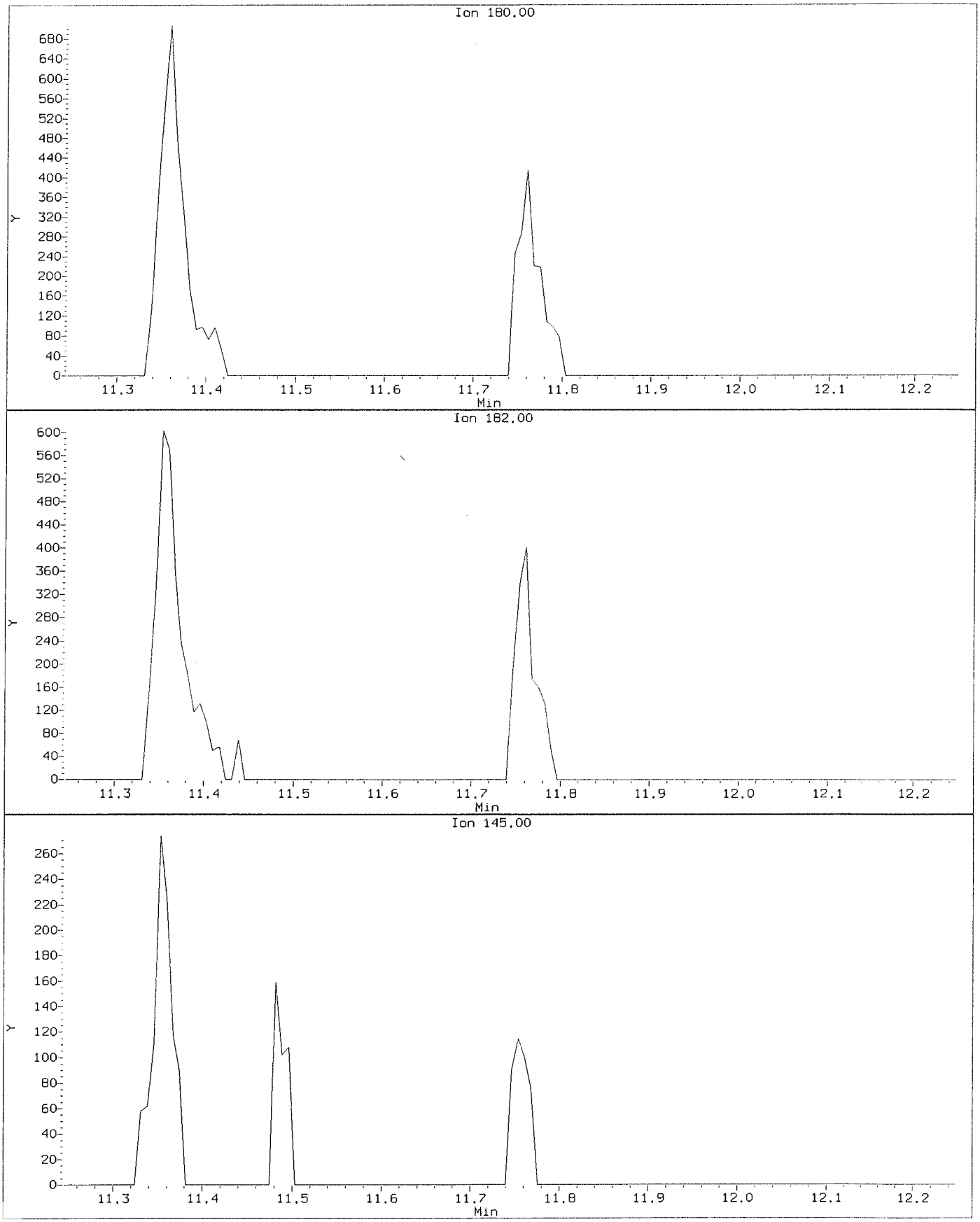
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



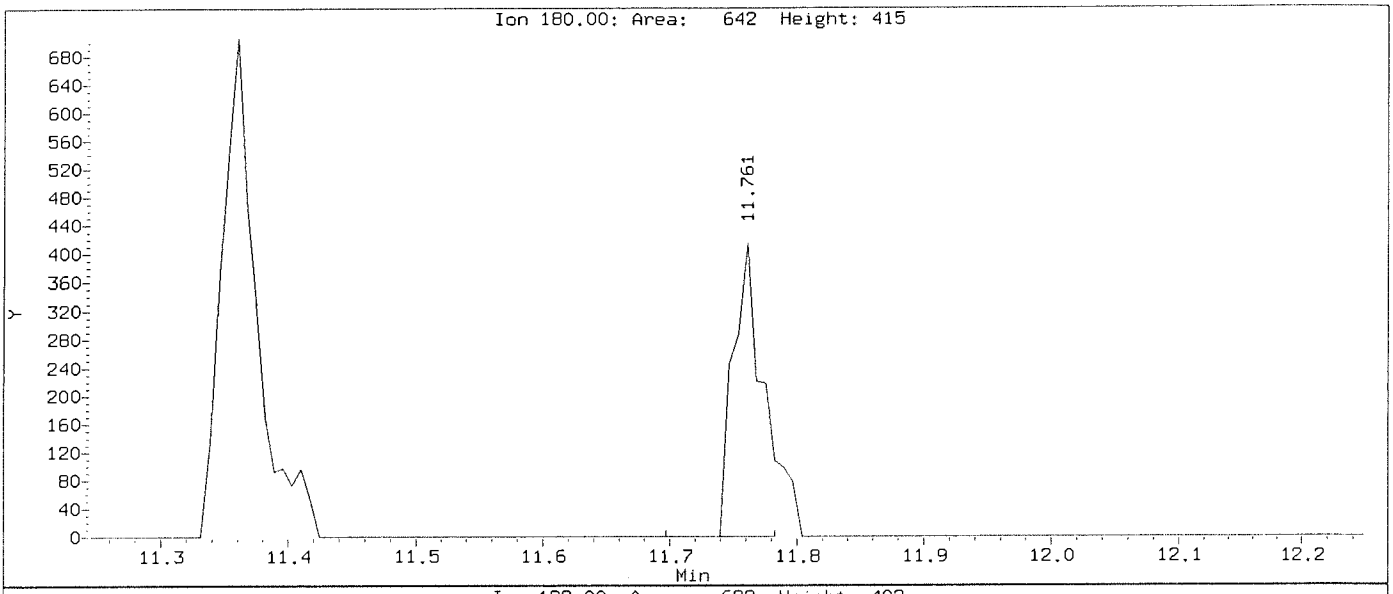
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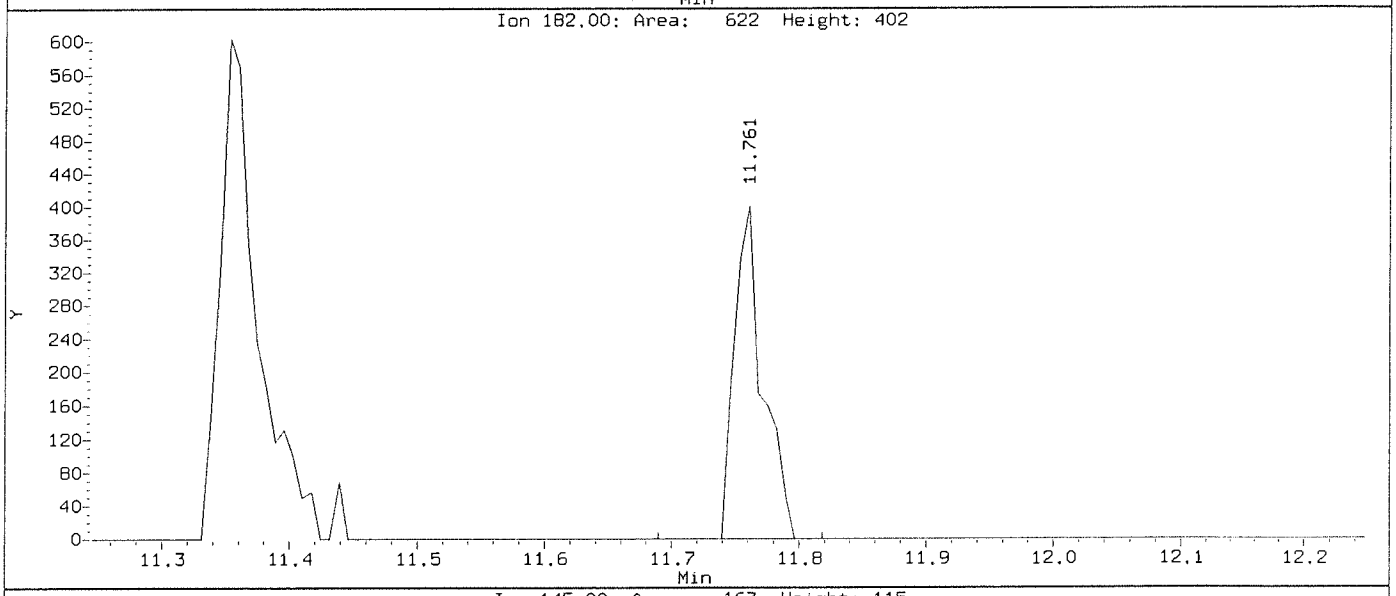
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

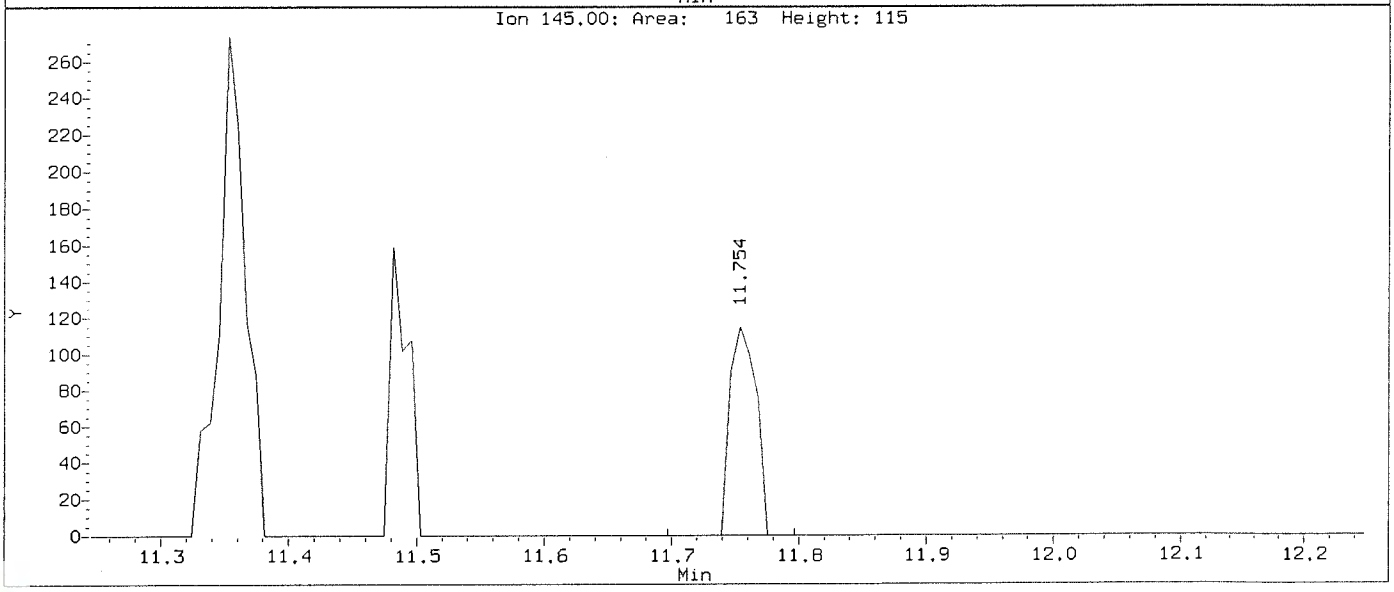


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

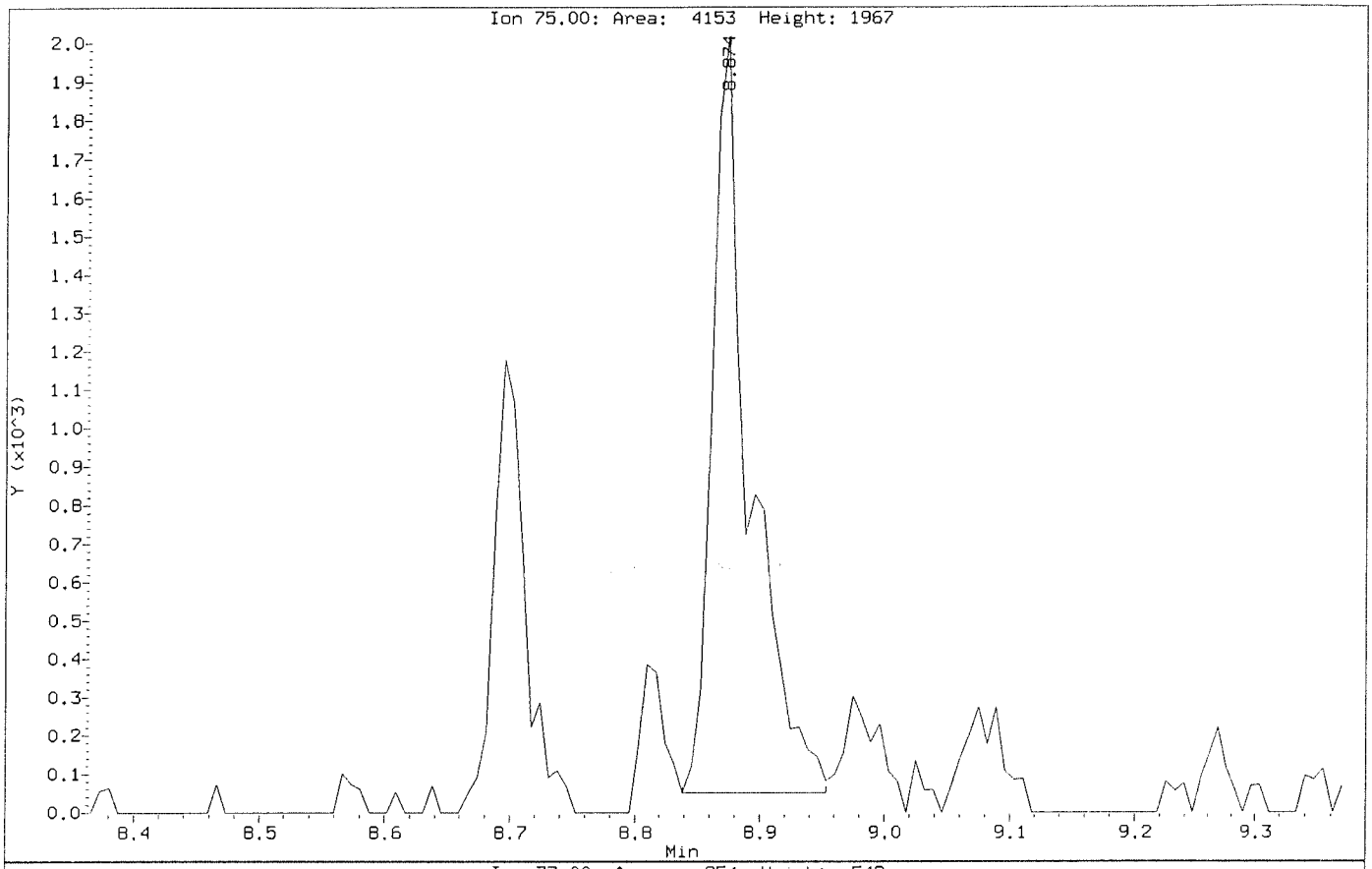


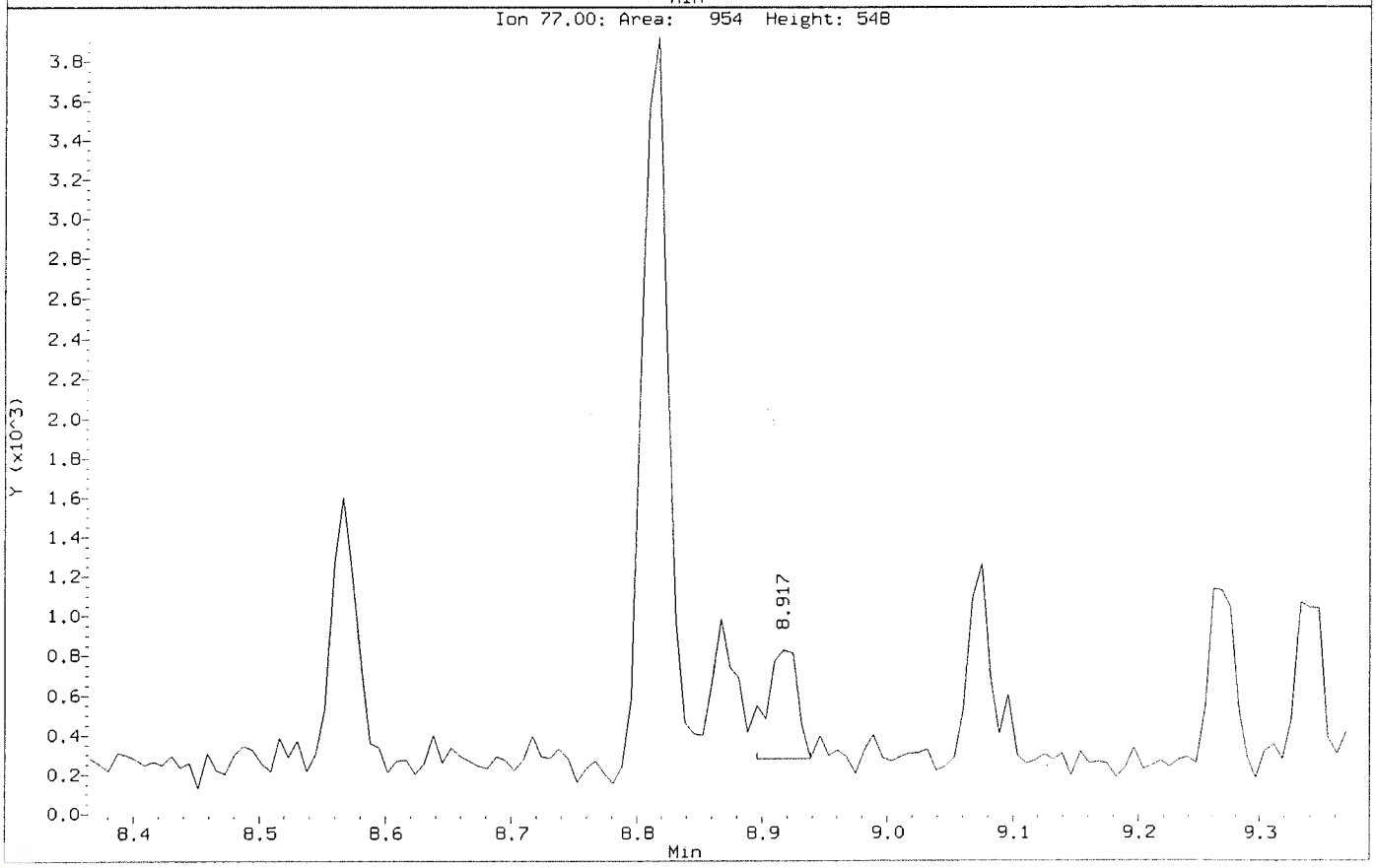




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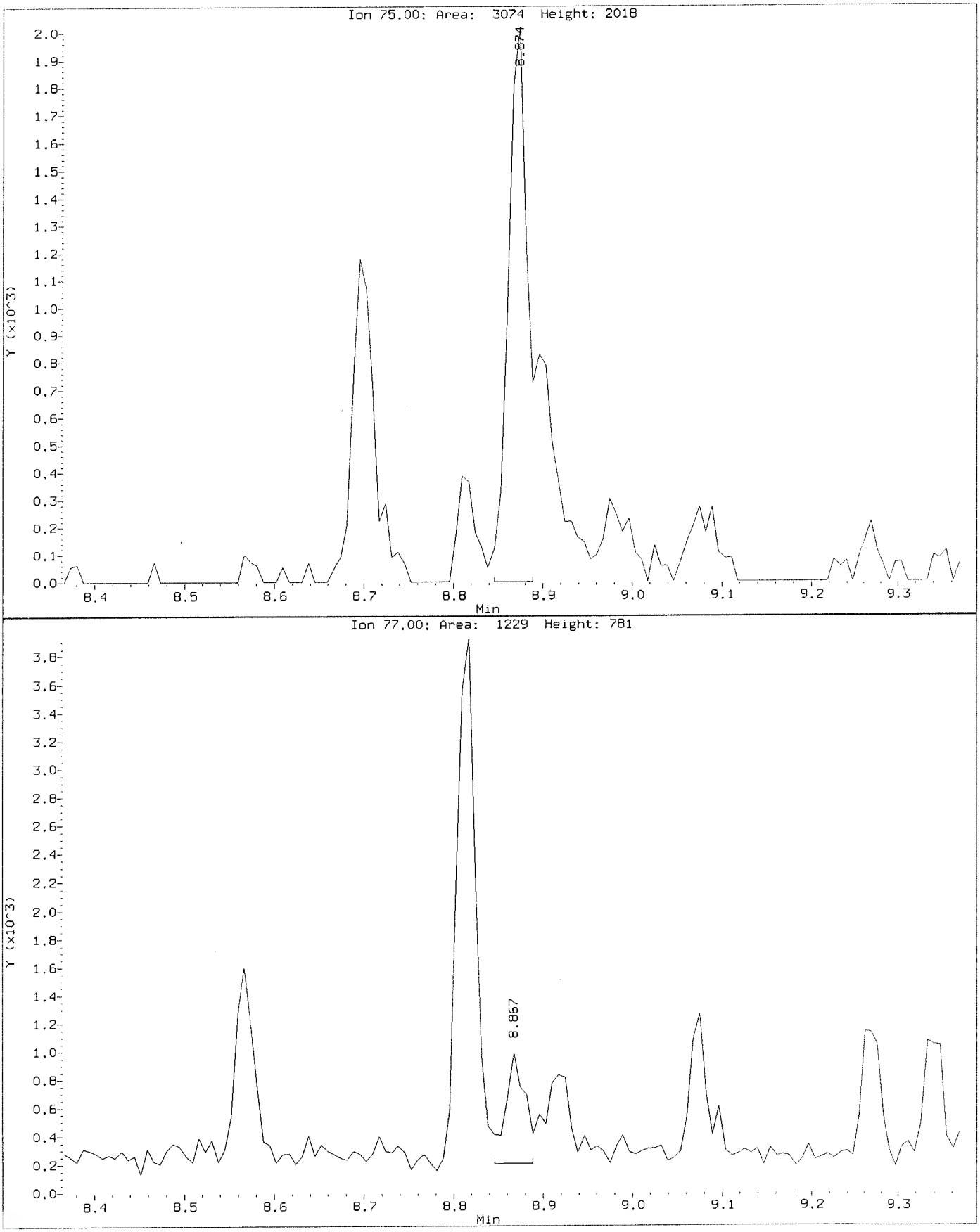
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





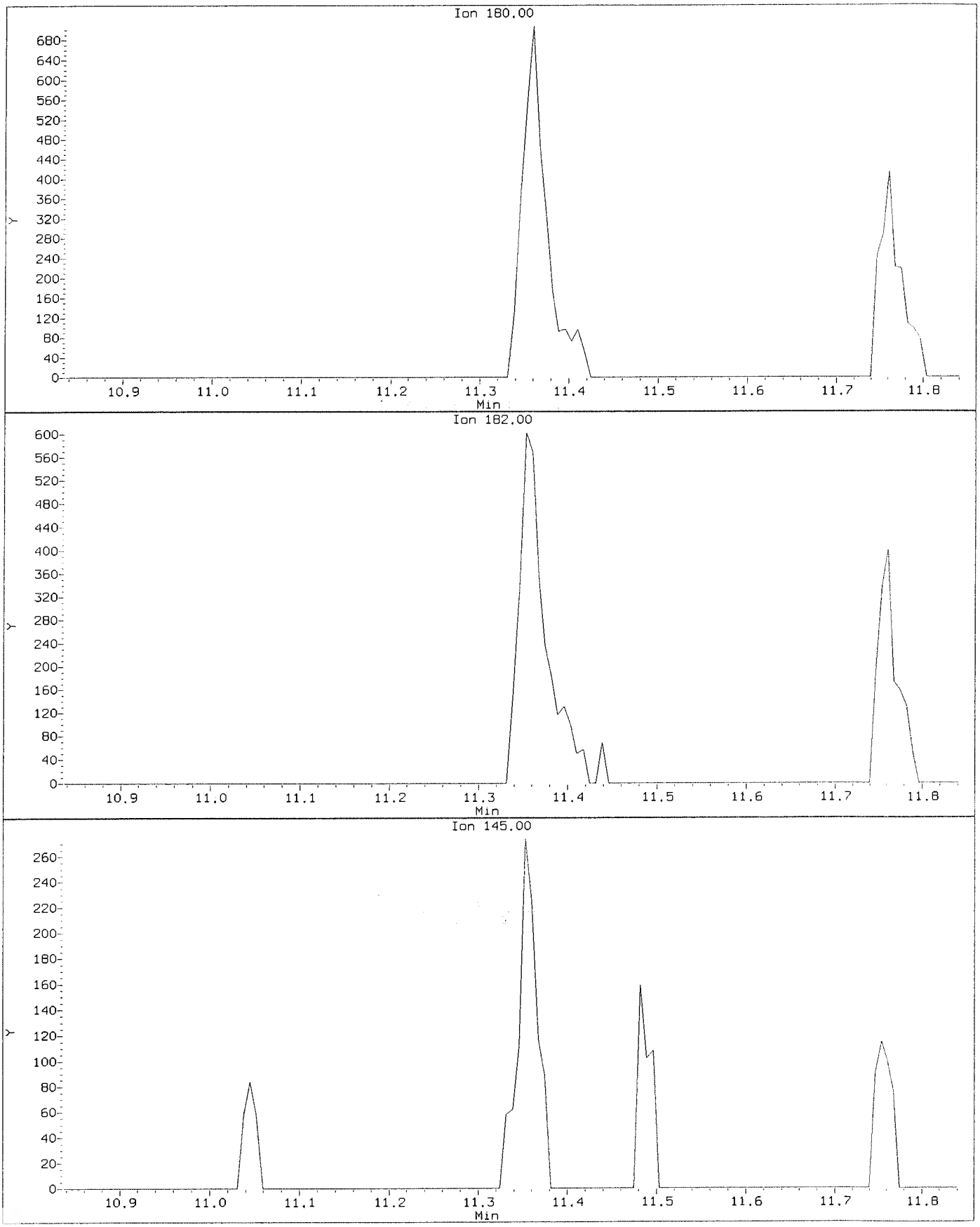
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Client Sample ID: VSTD000.5

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



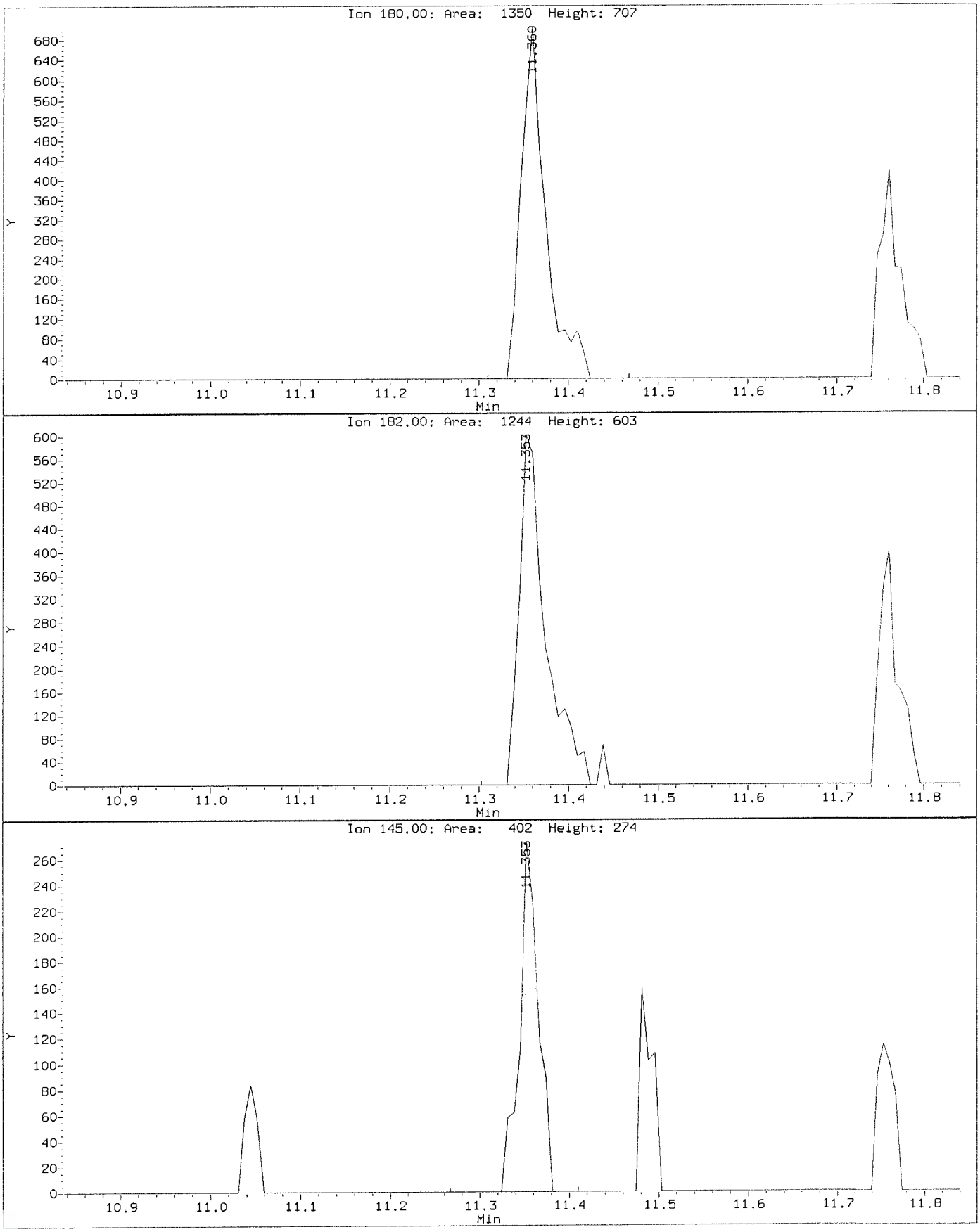
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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



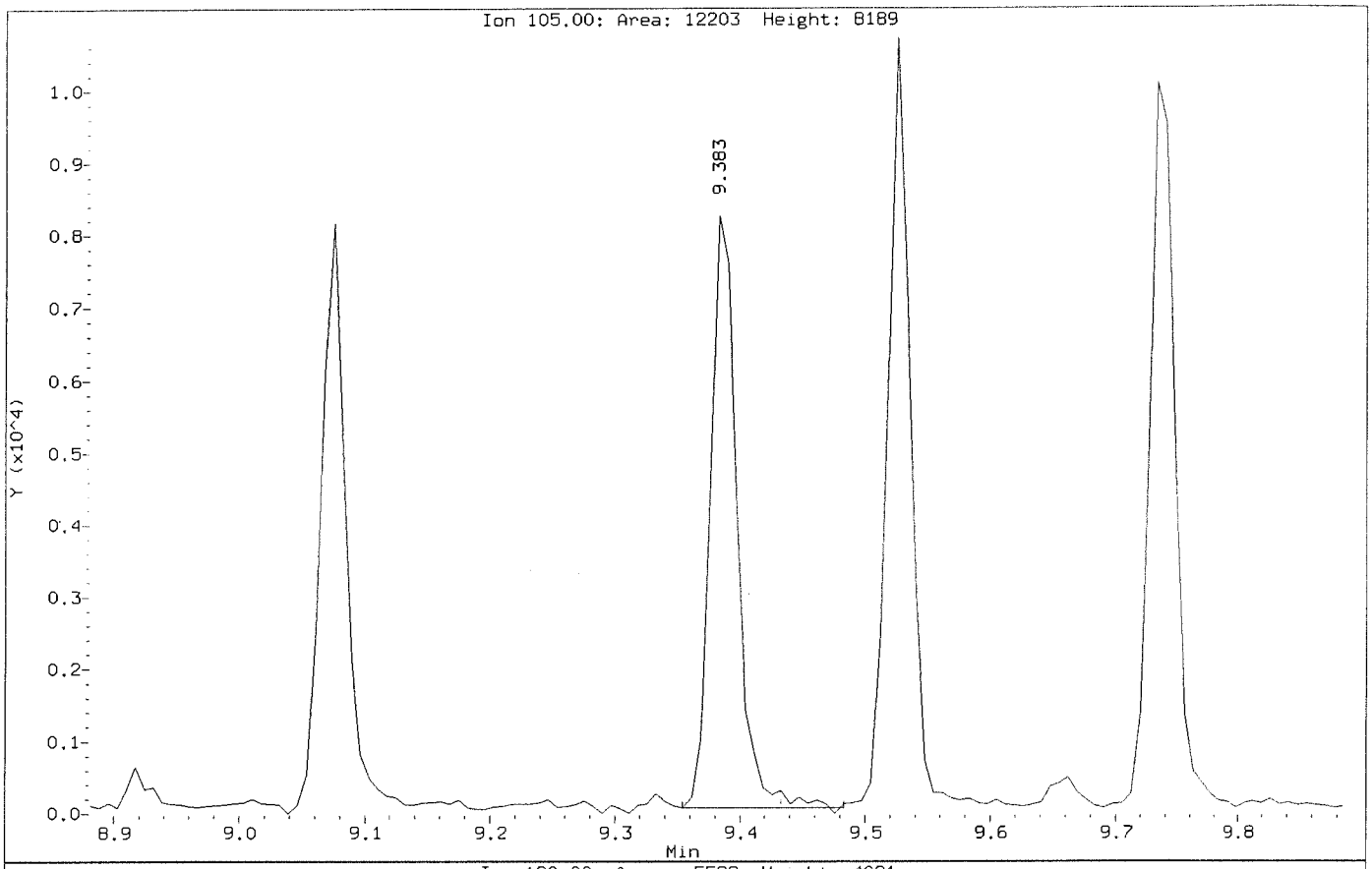
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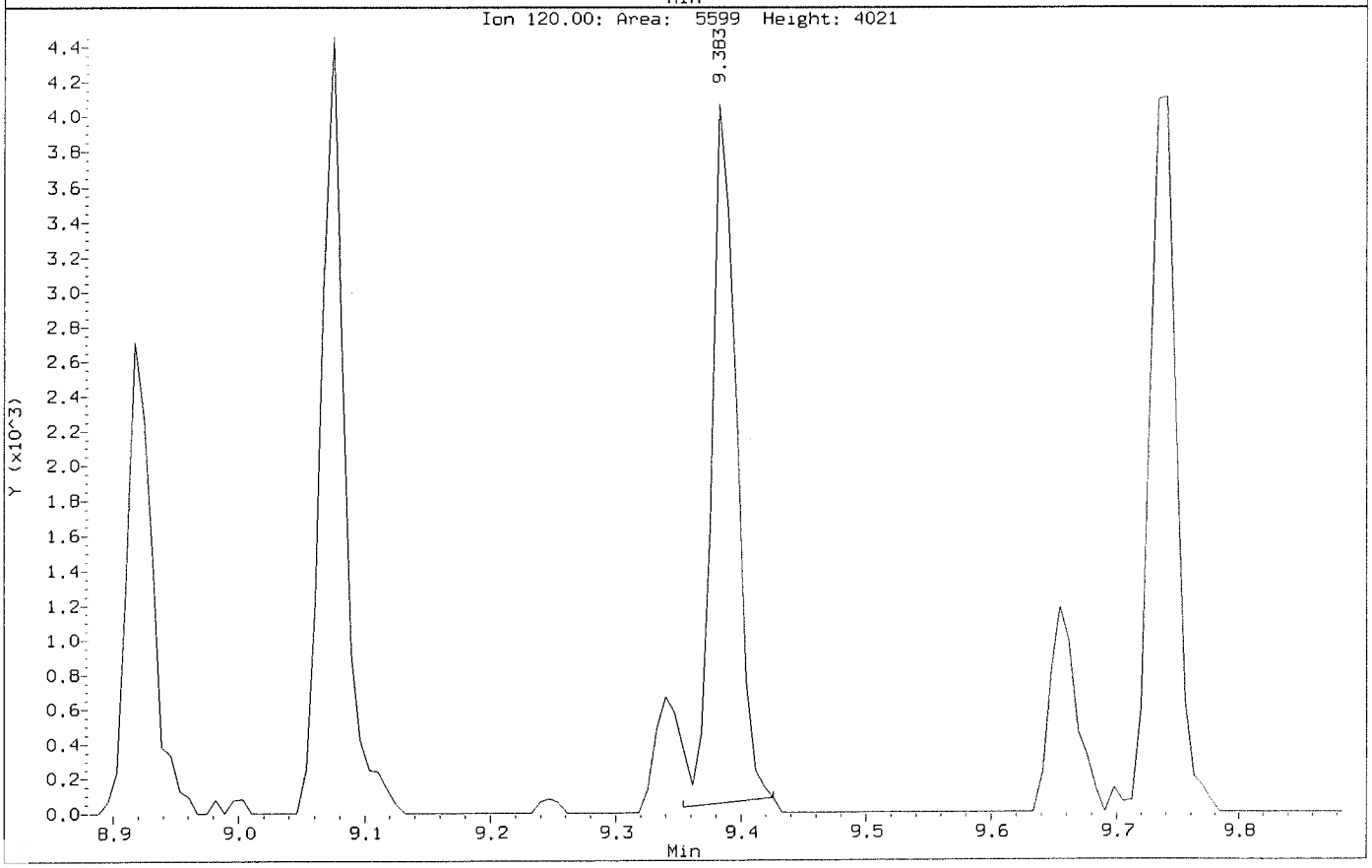
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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

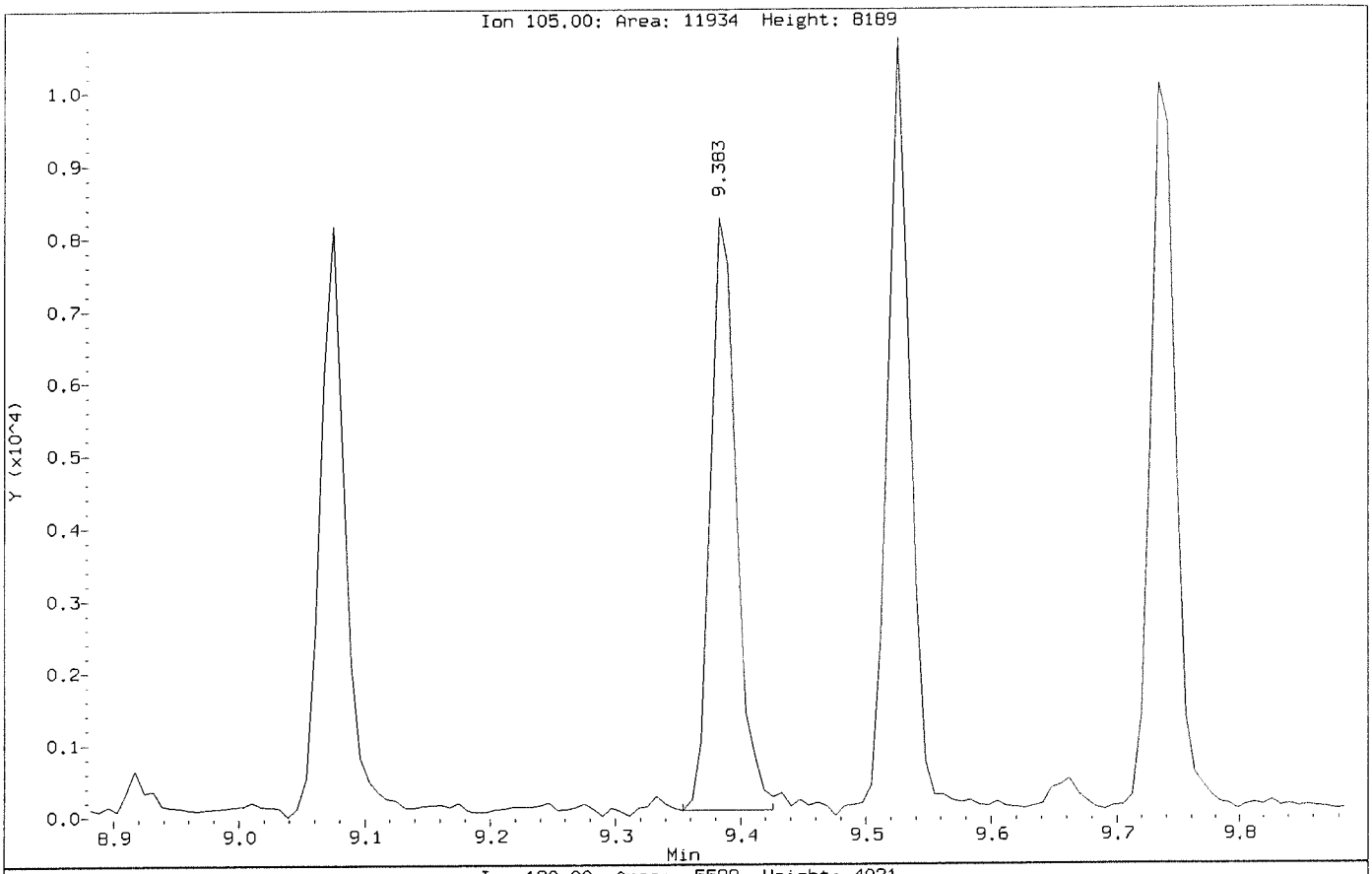
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6

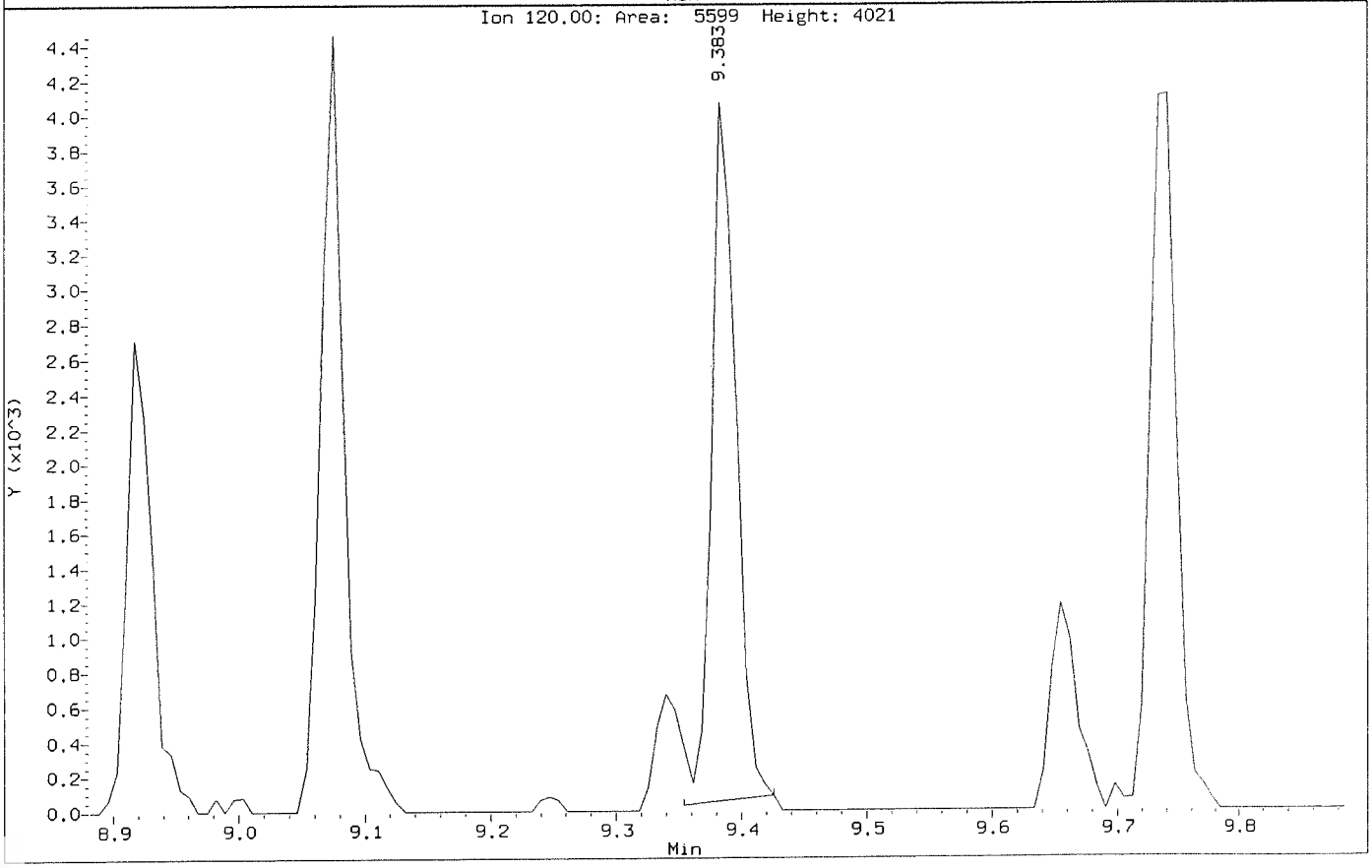




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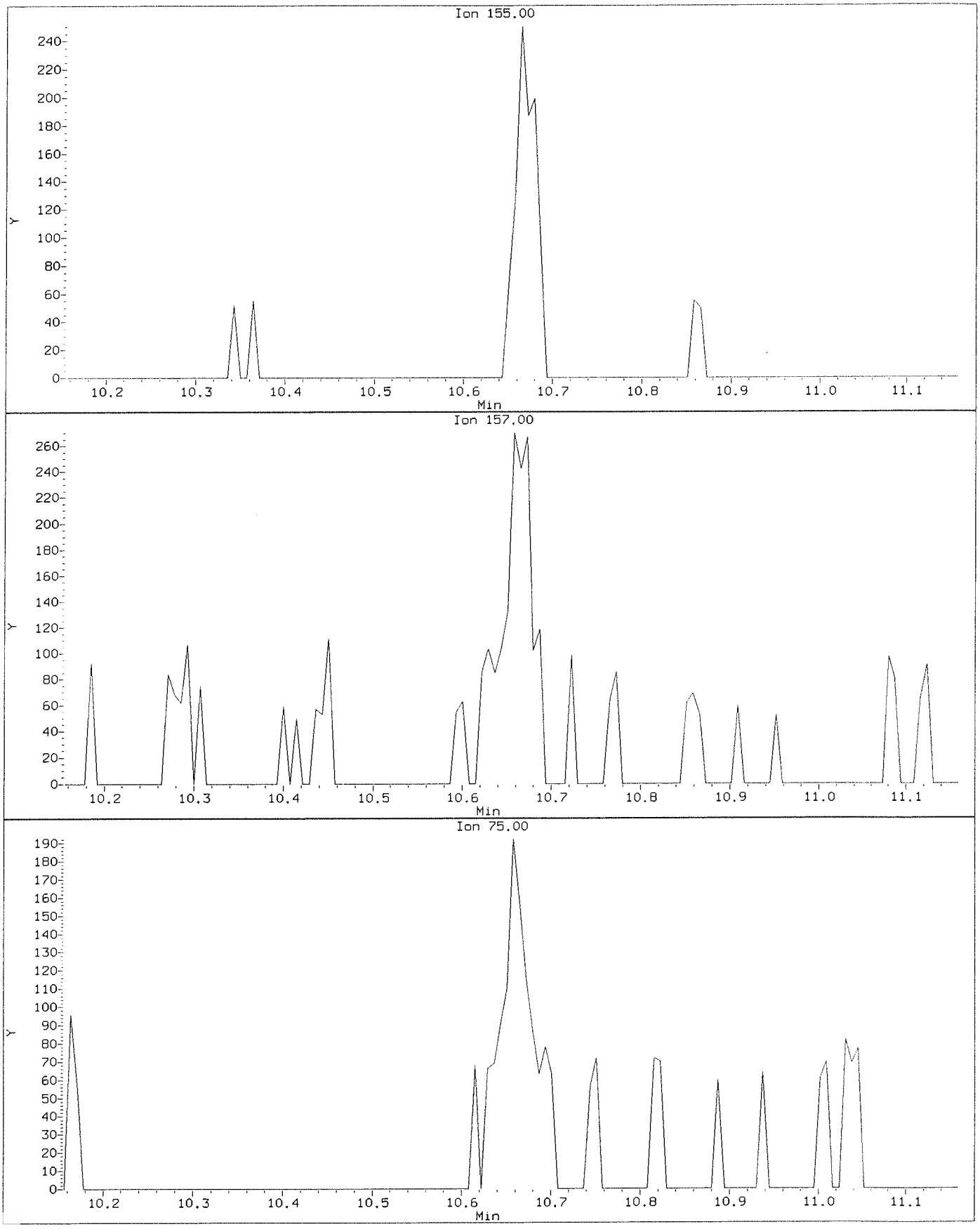
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





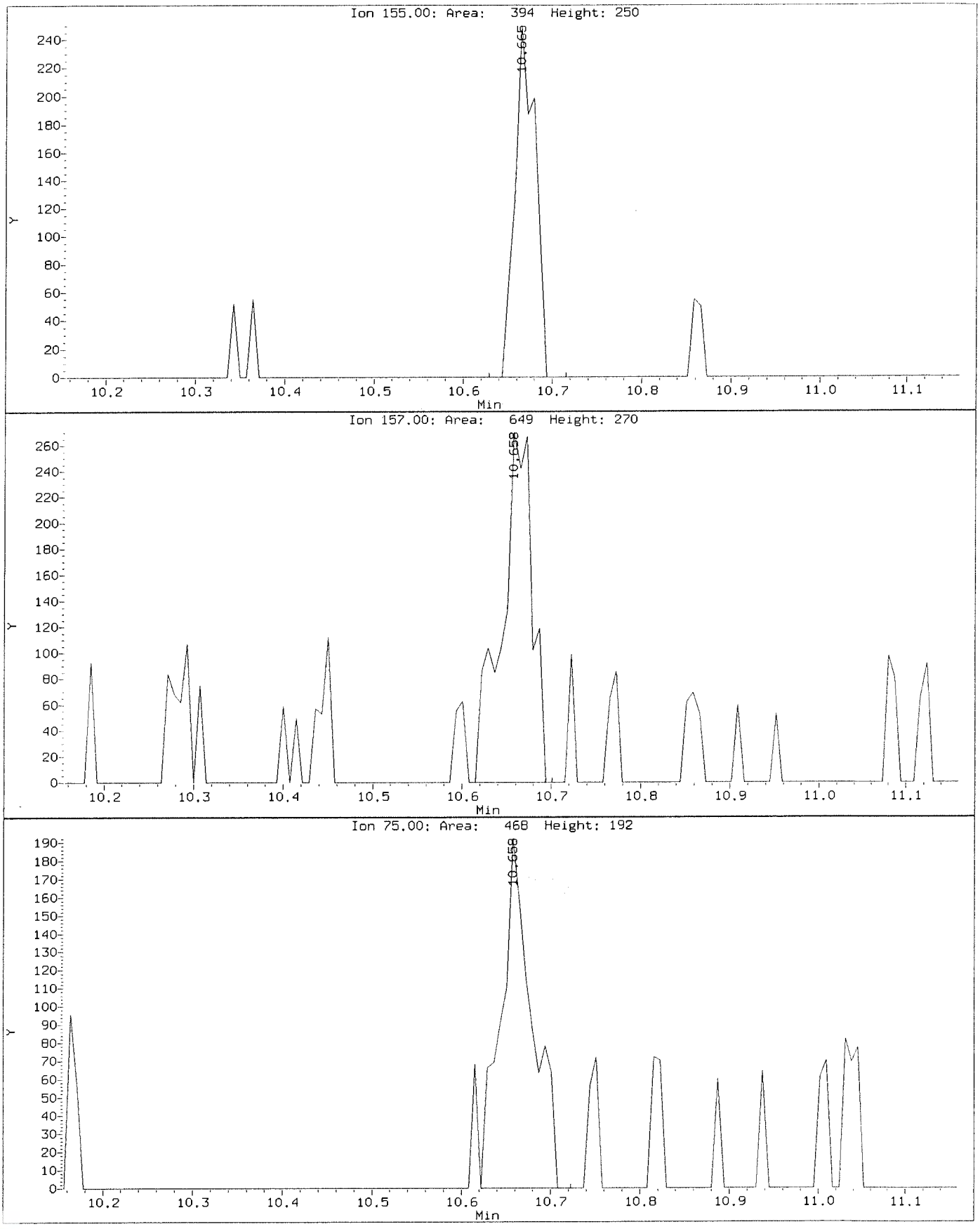
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



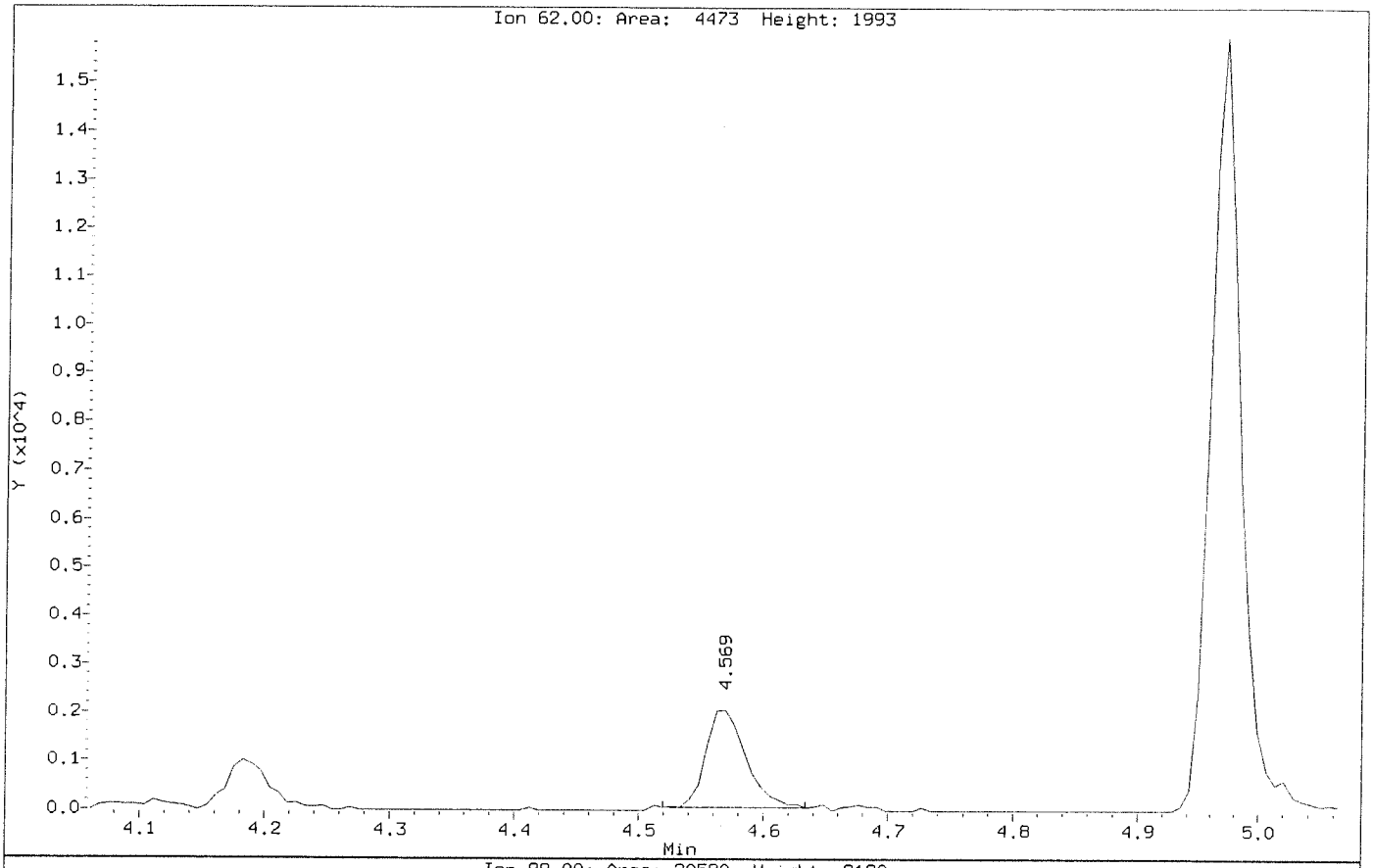
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Client Sample ID: VSTD000.5

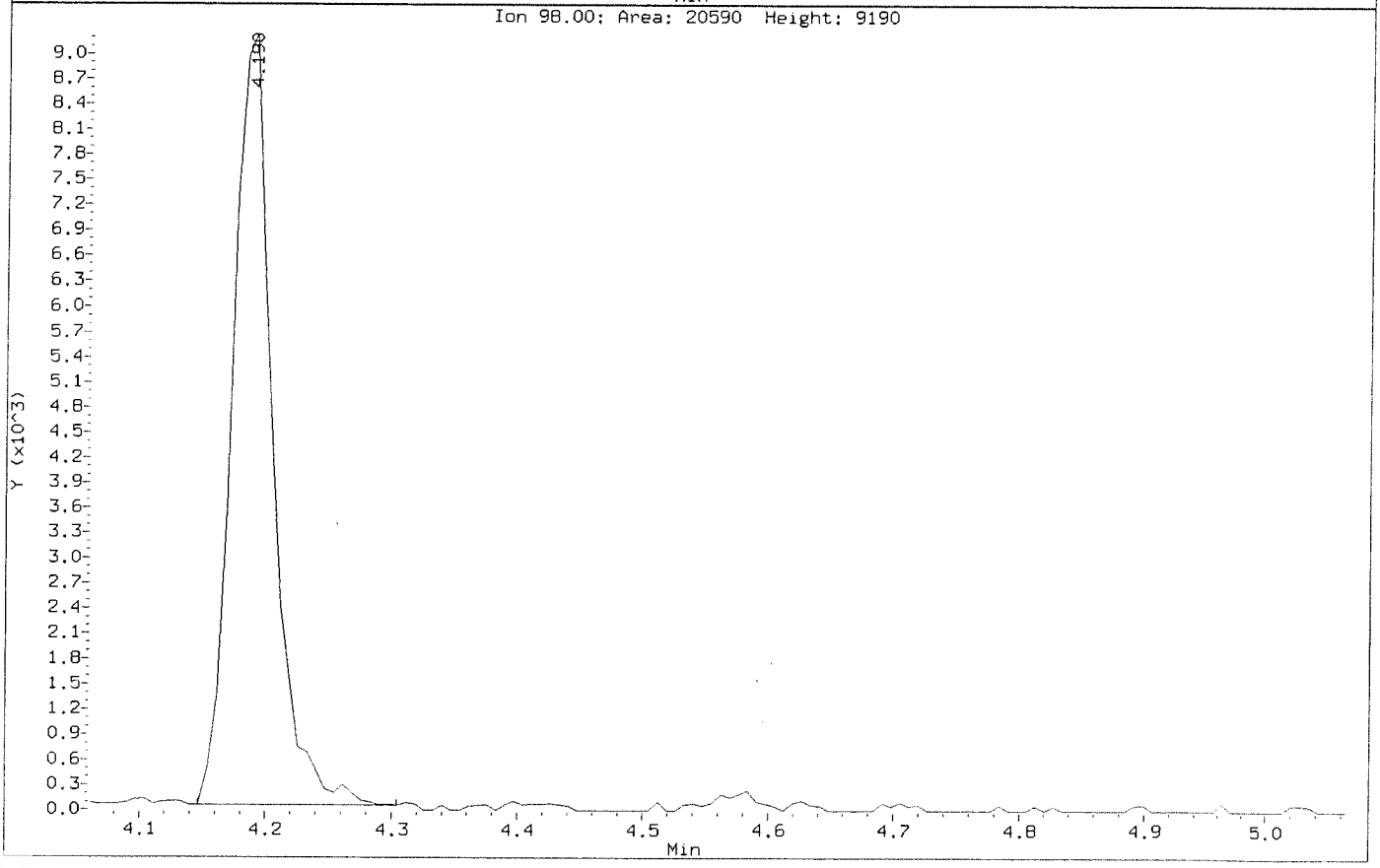
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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

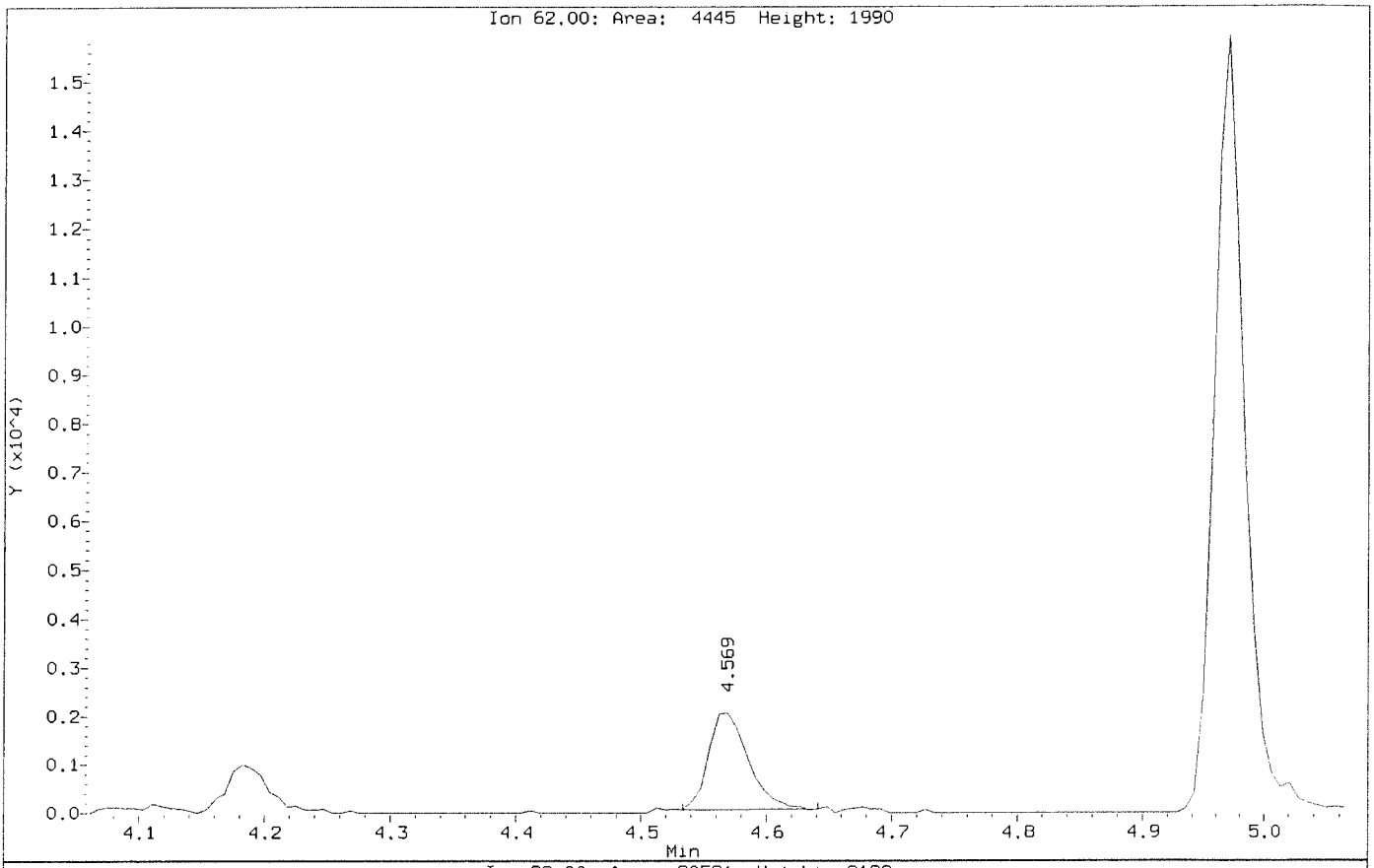
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

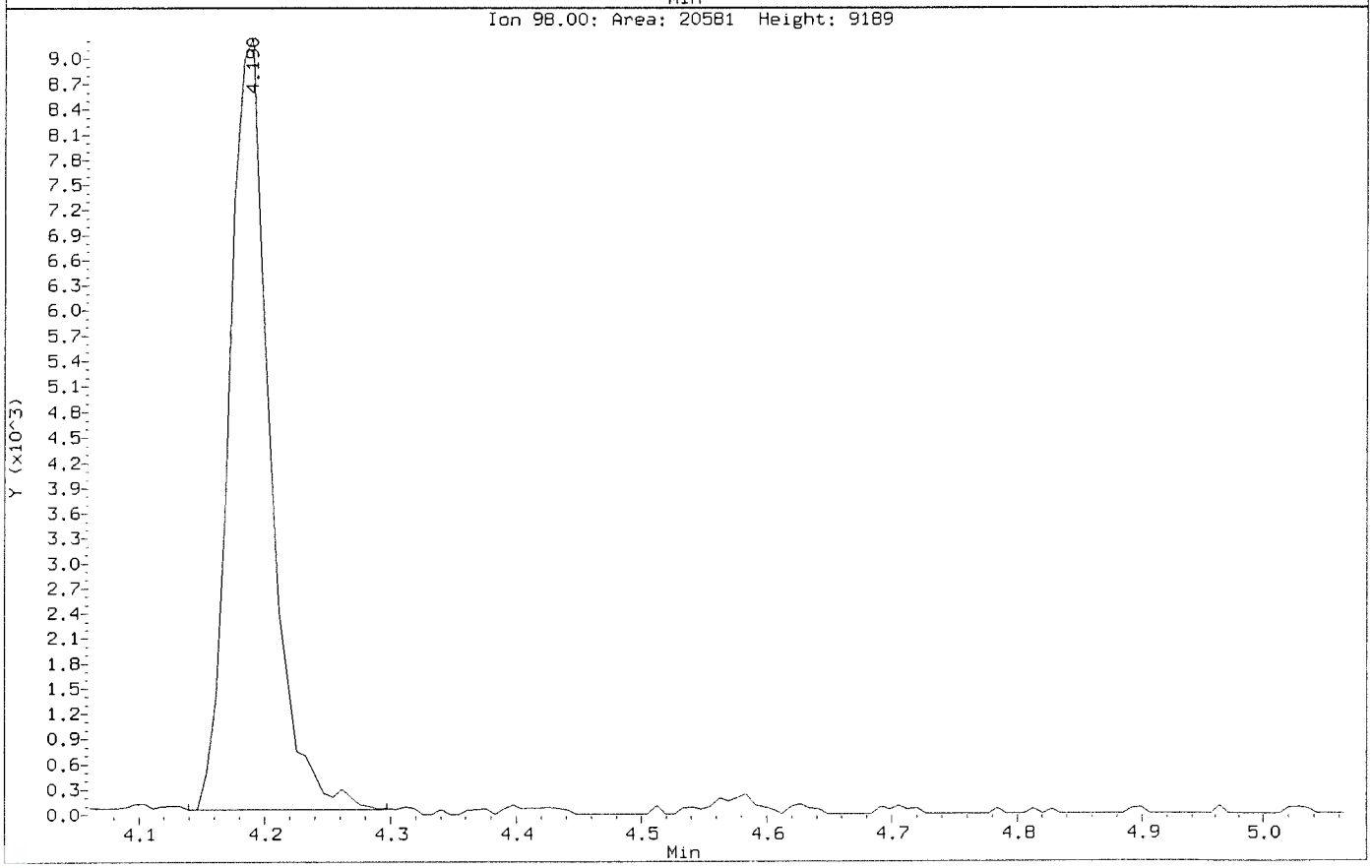




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Client Sample ID: VSTD000.5

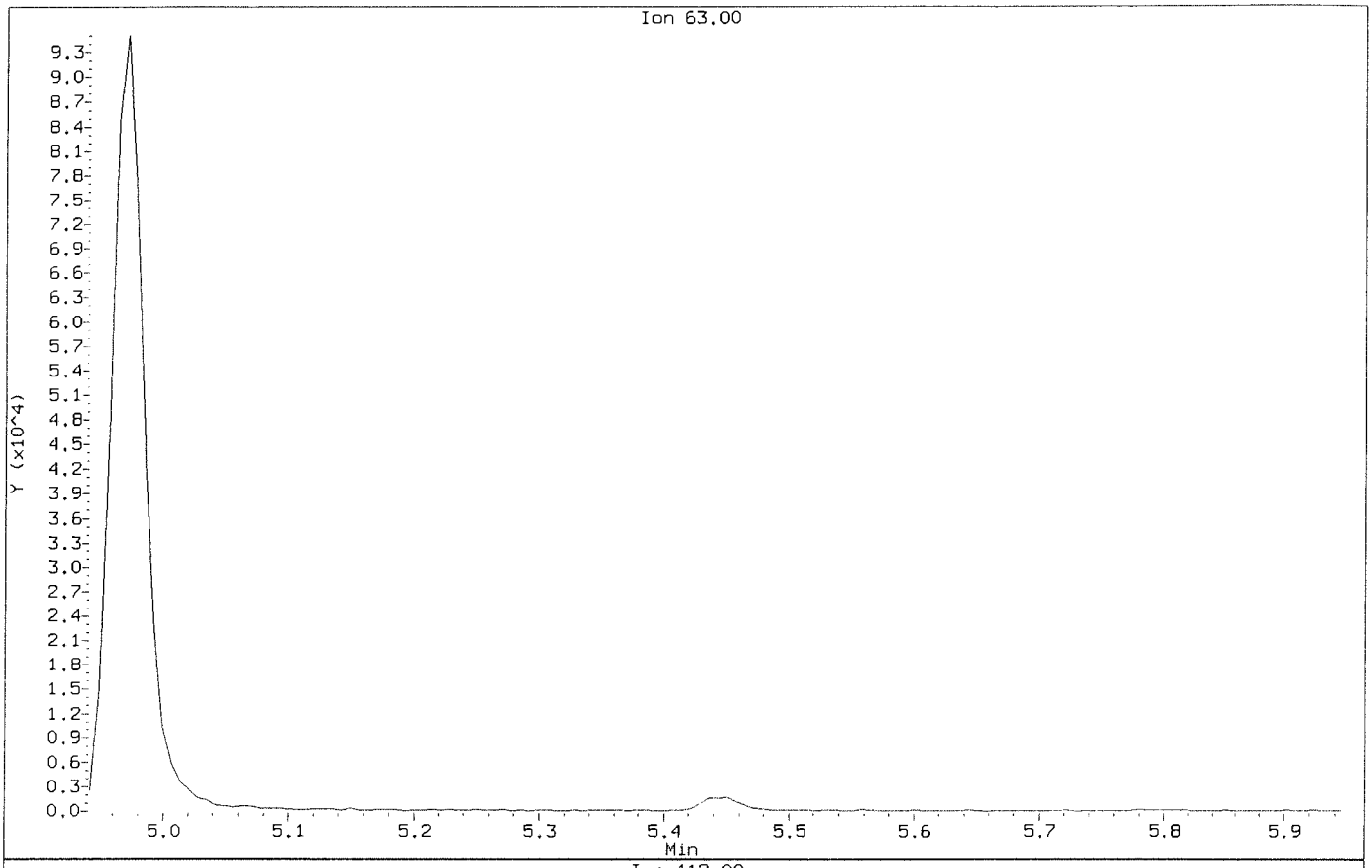
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CAS Number: 107-06-2

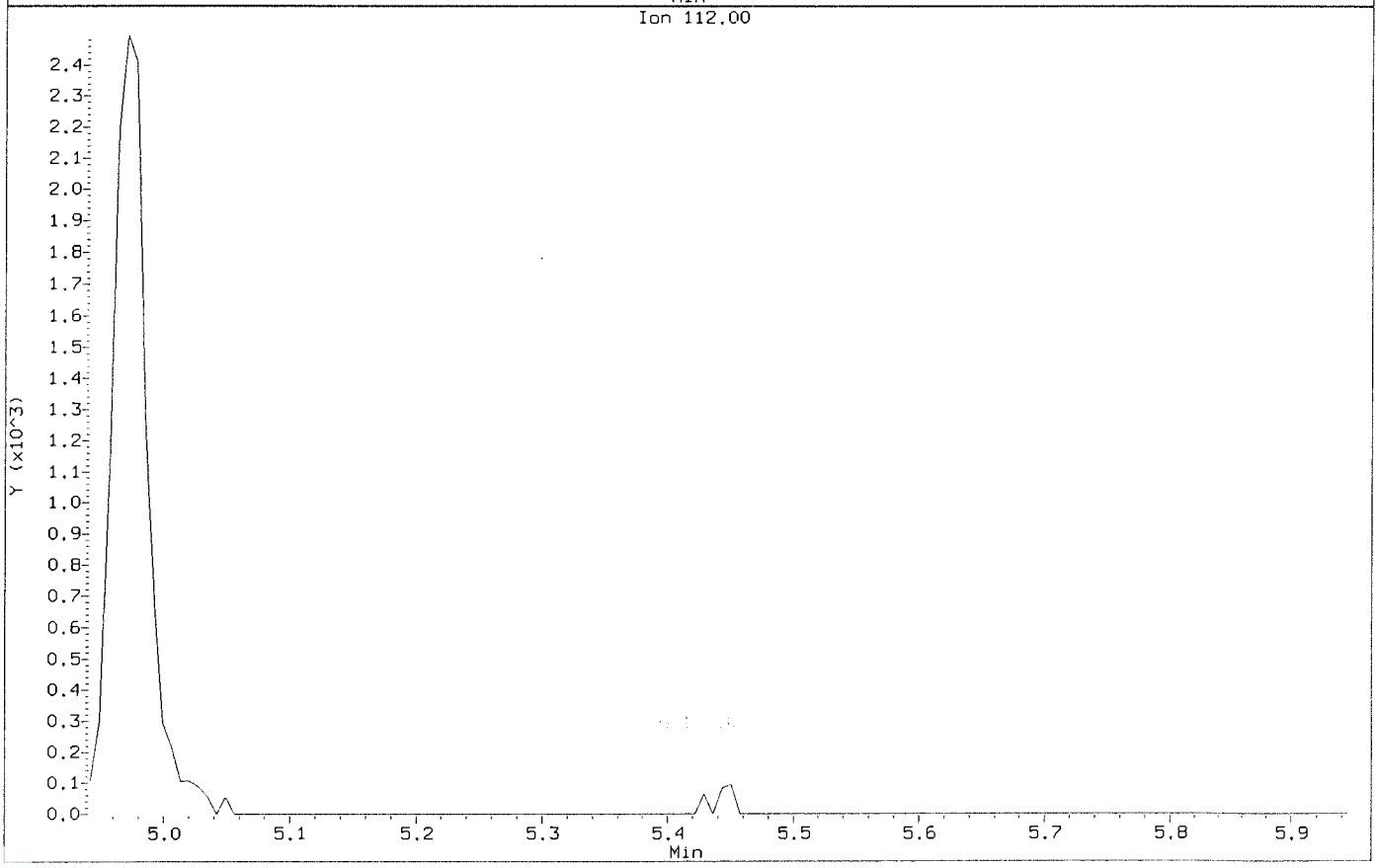




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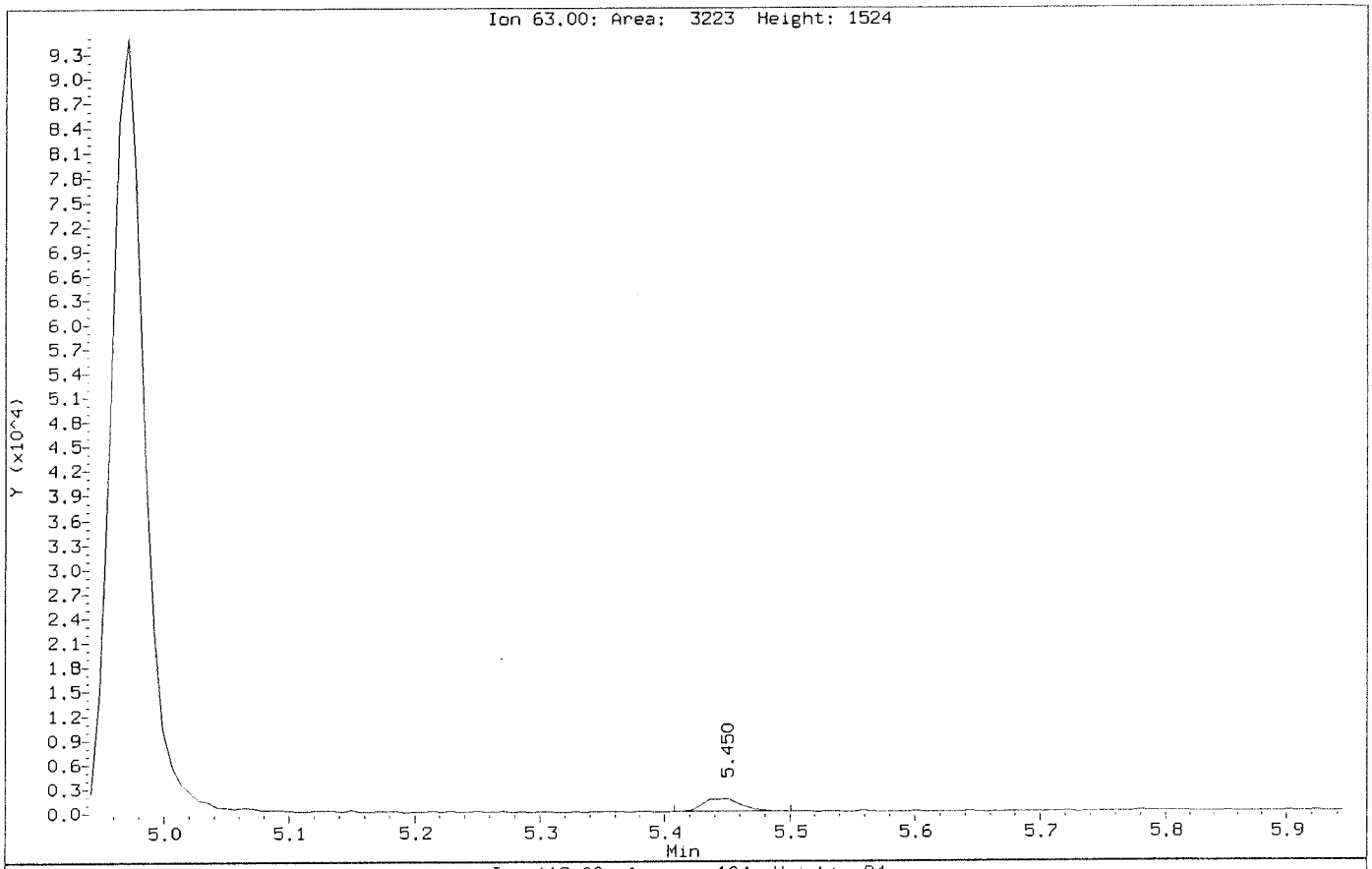
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

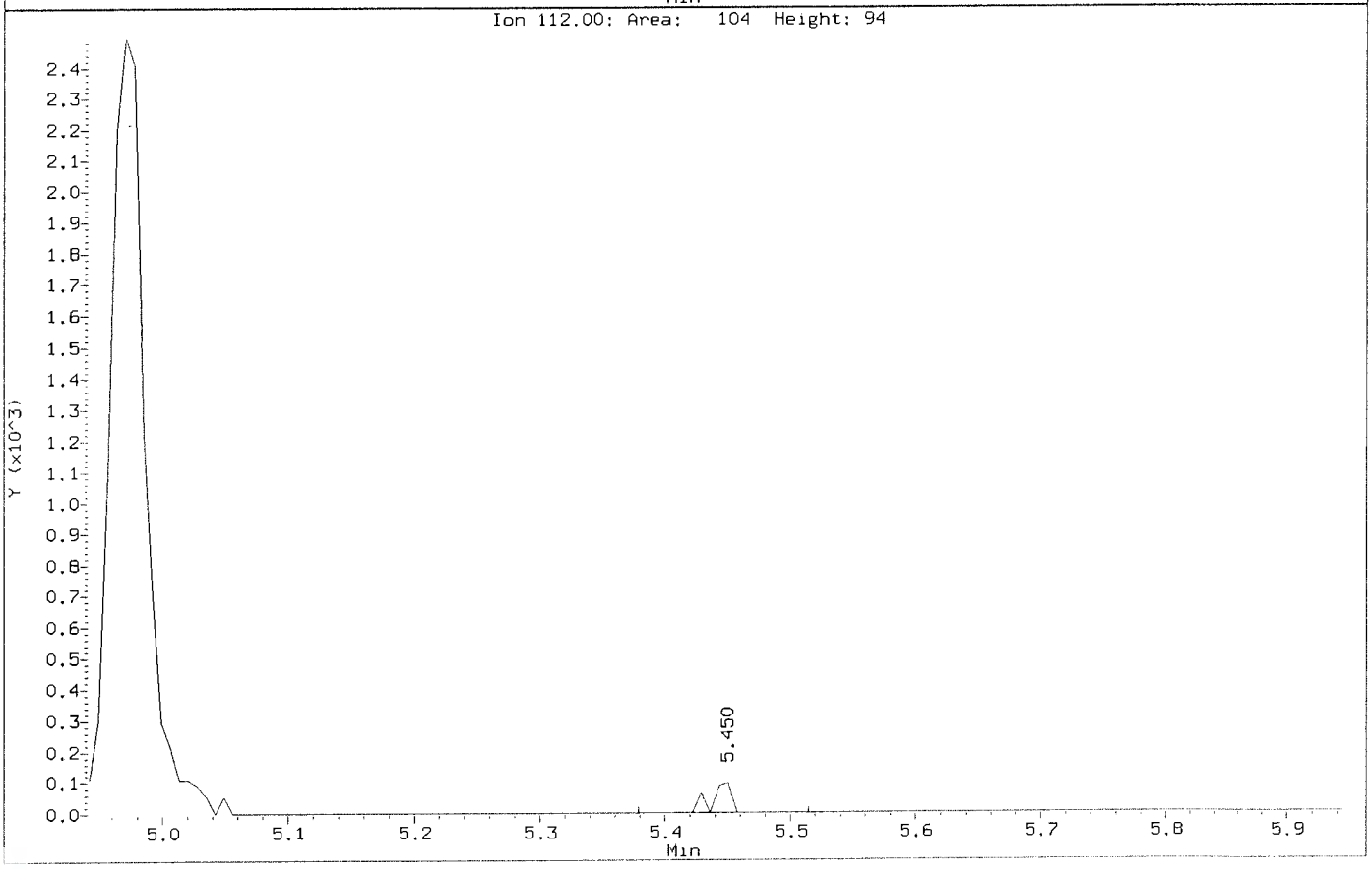




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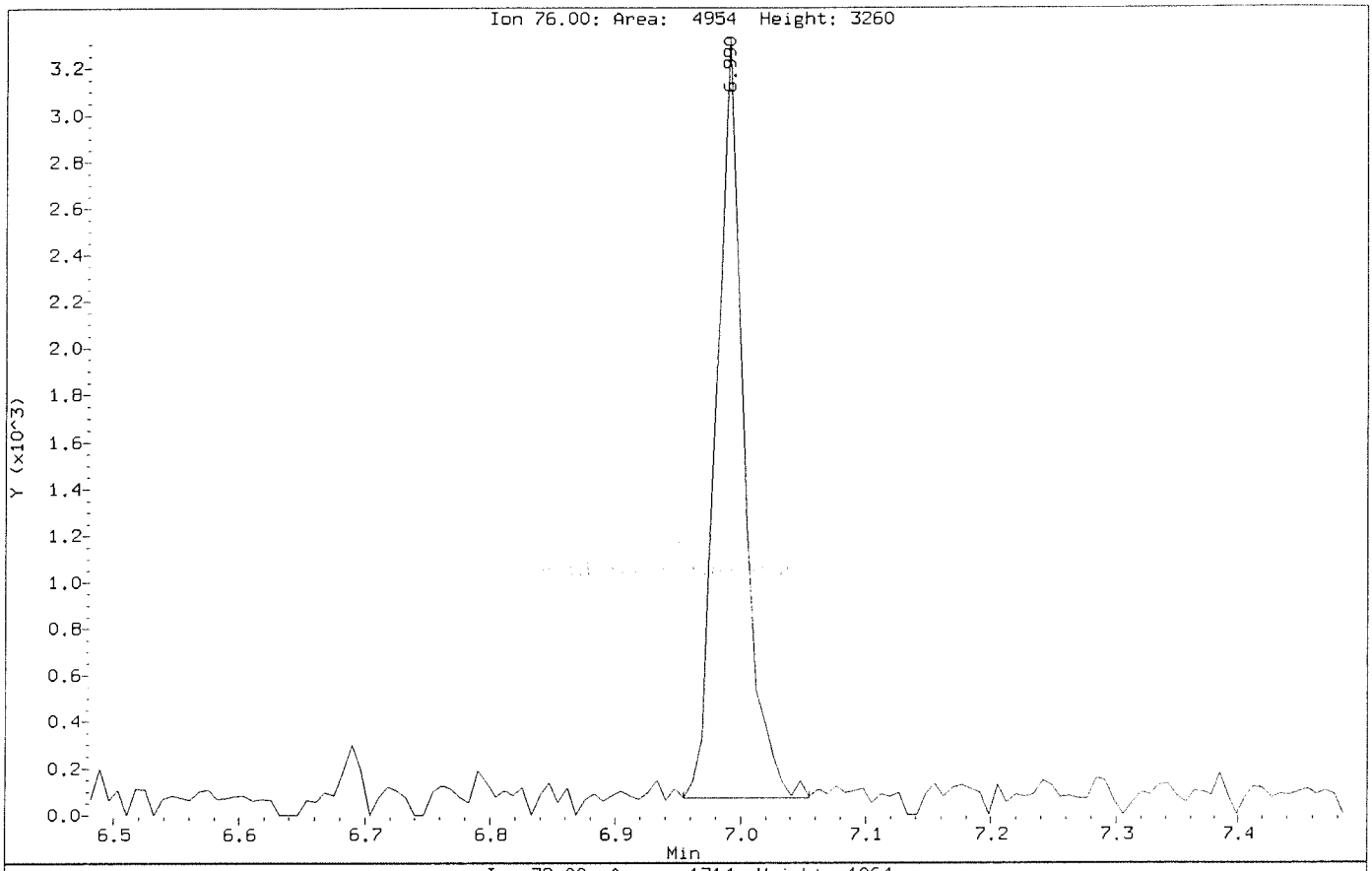
Compound: 1,2-Dichloropropane
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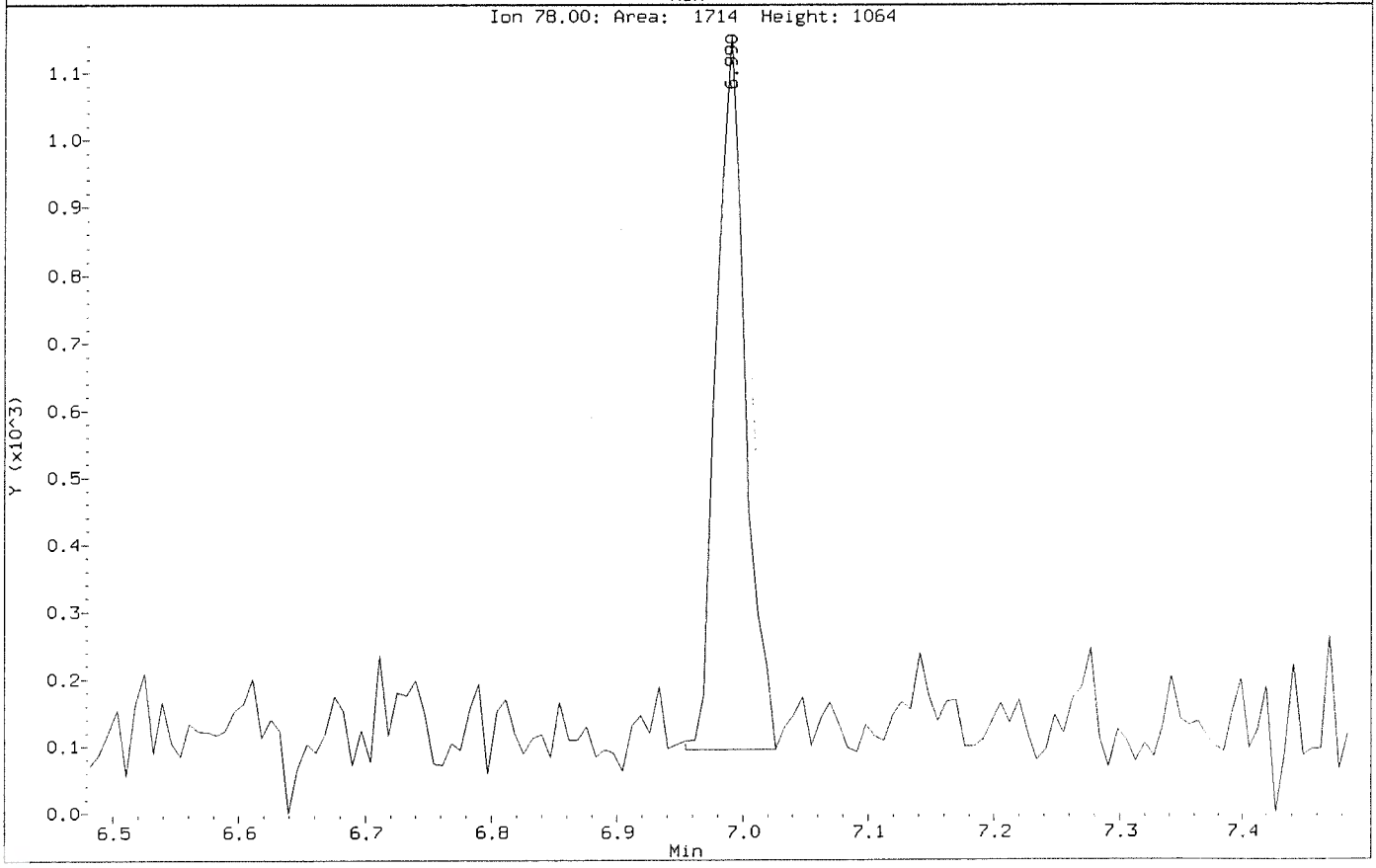




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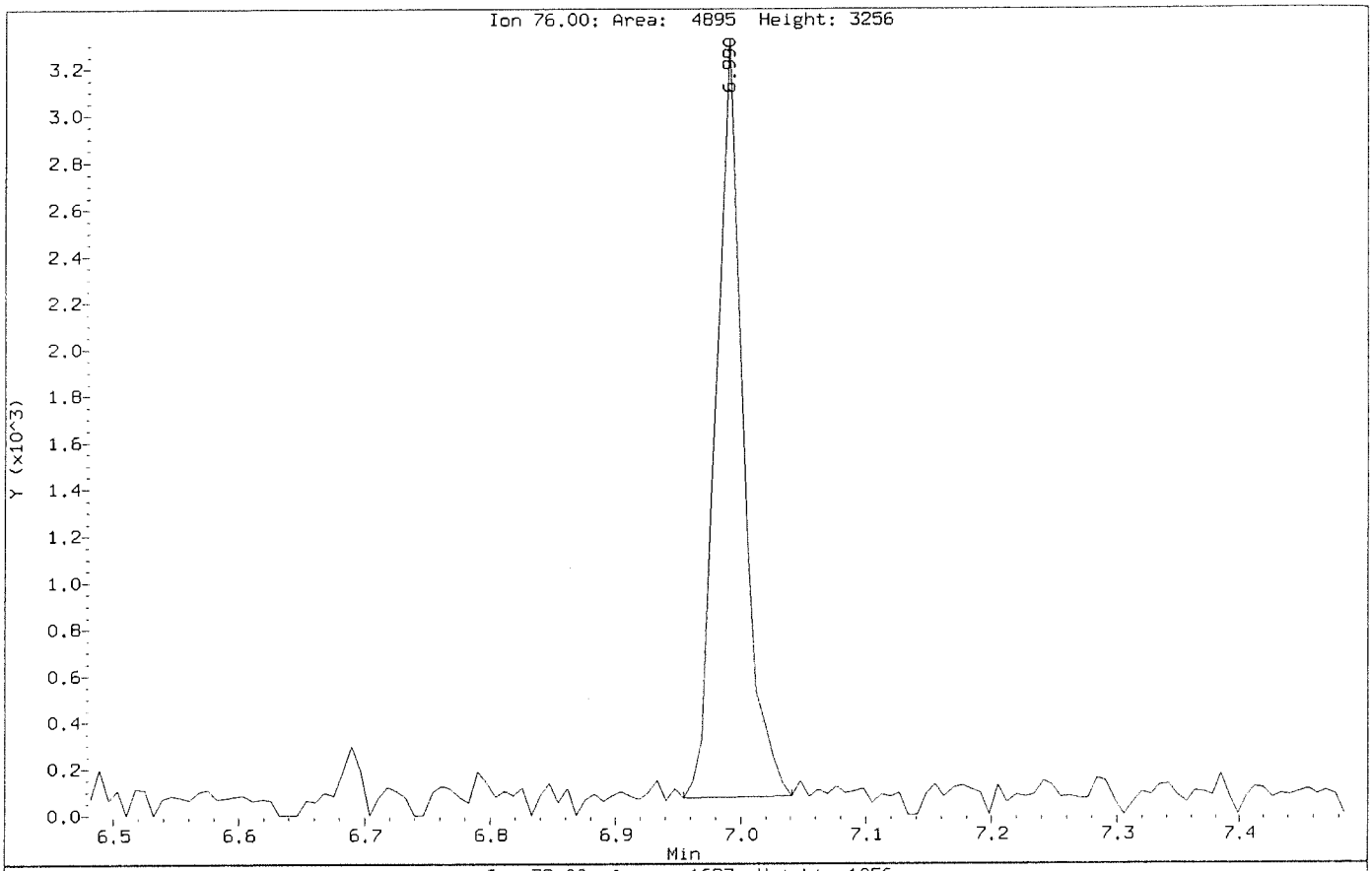
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

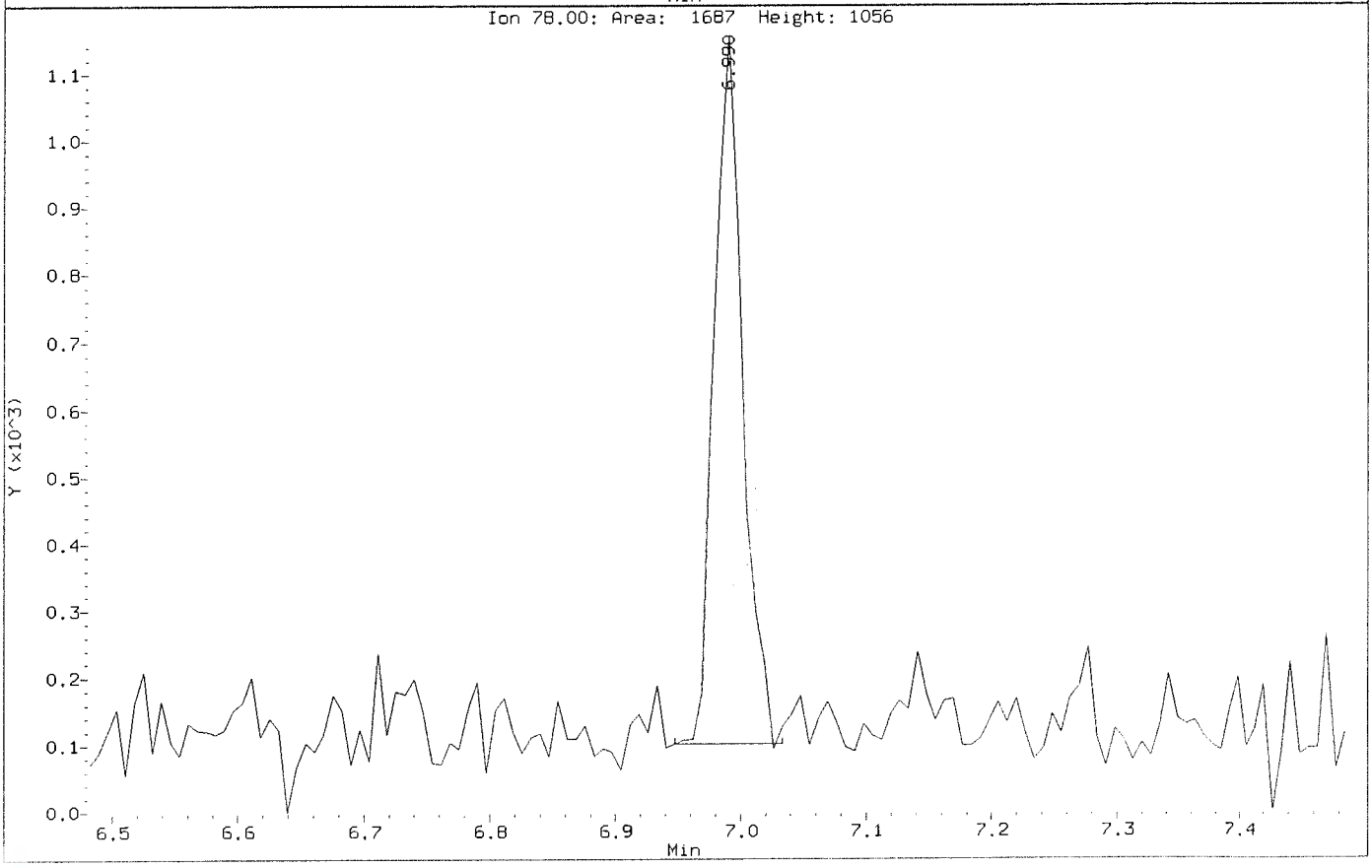




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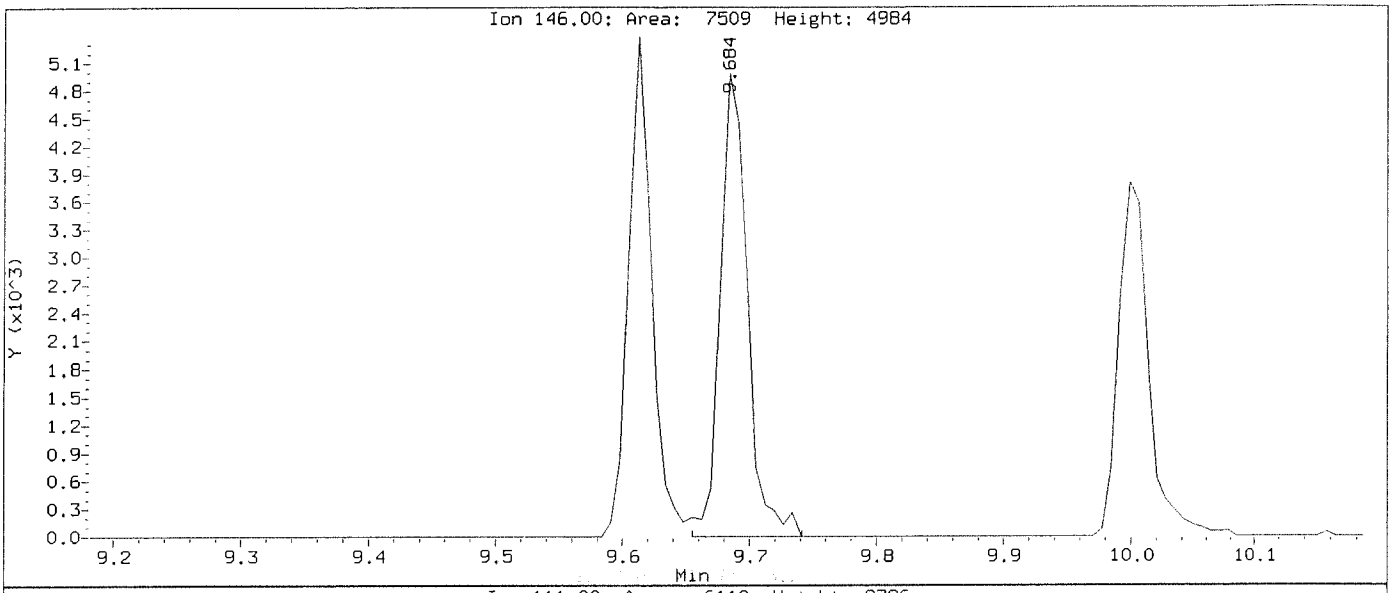
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CAS Number: 142-28-9

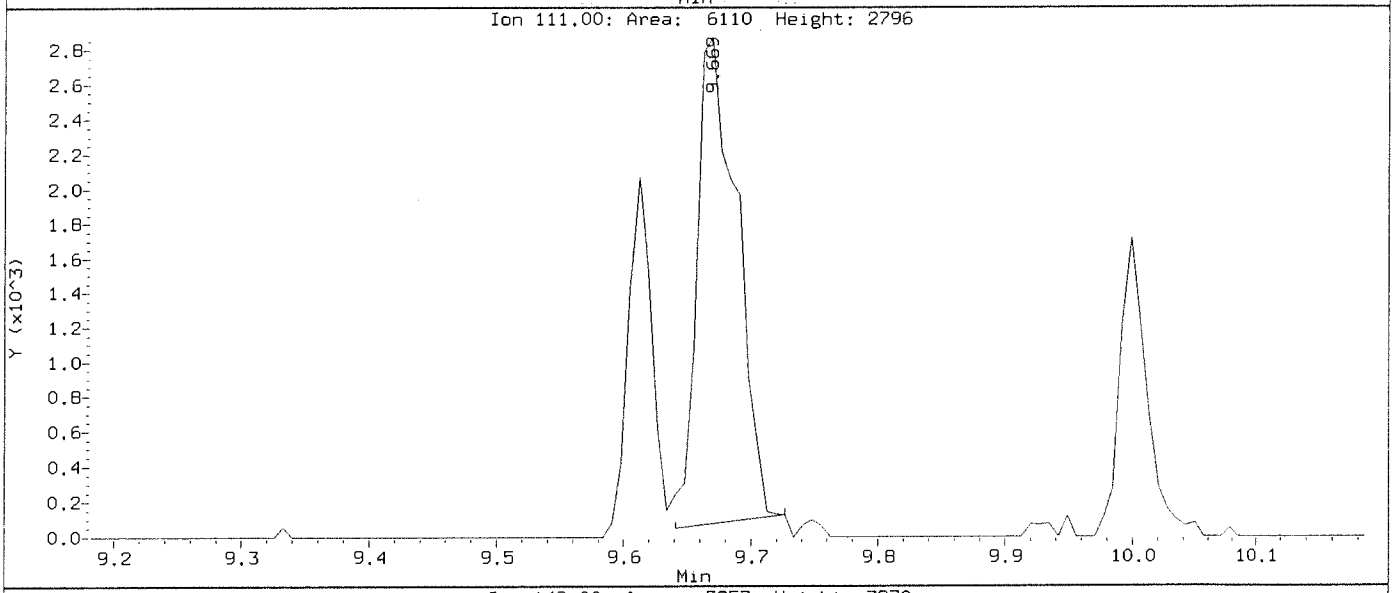


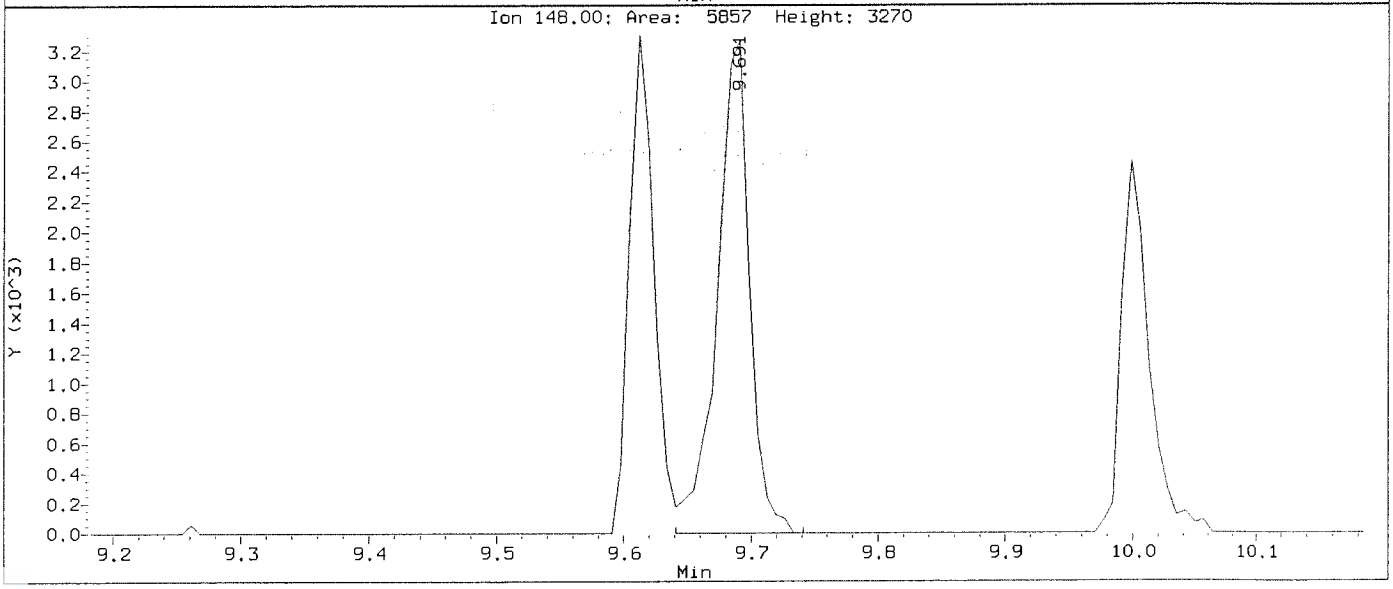


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

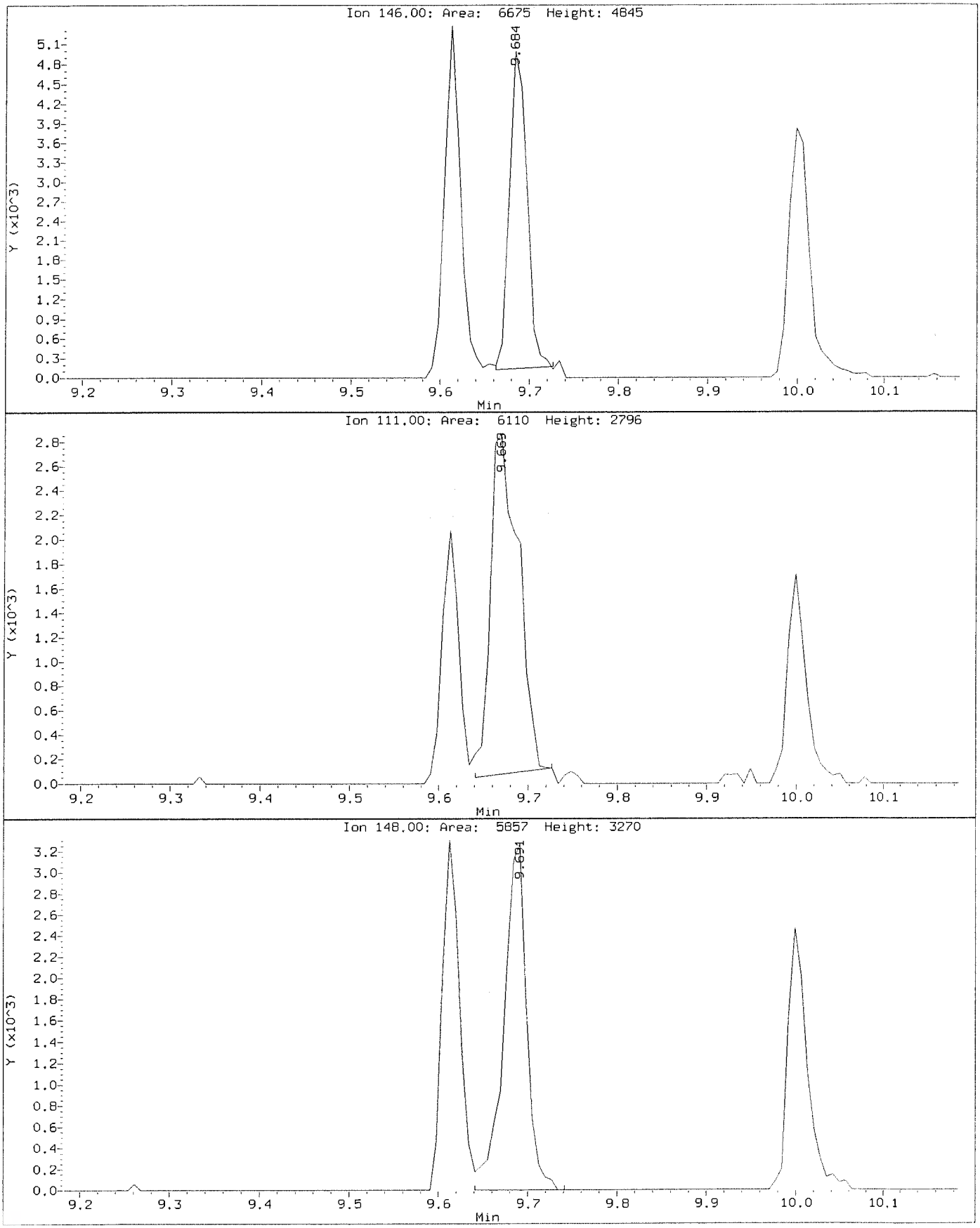






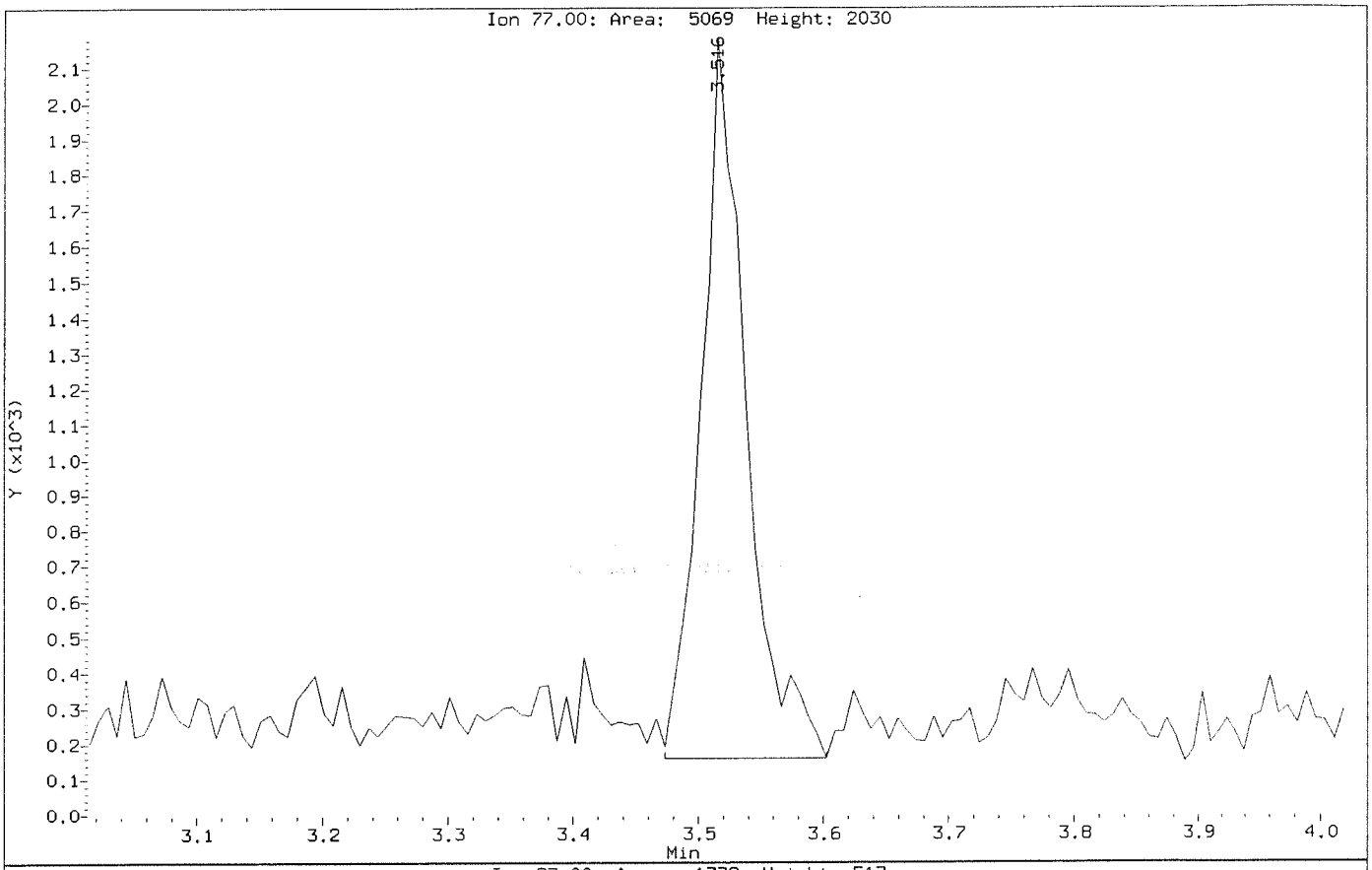
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Client Sample ID: VSTD000.5

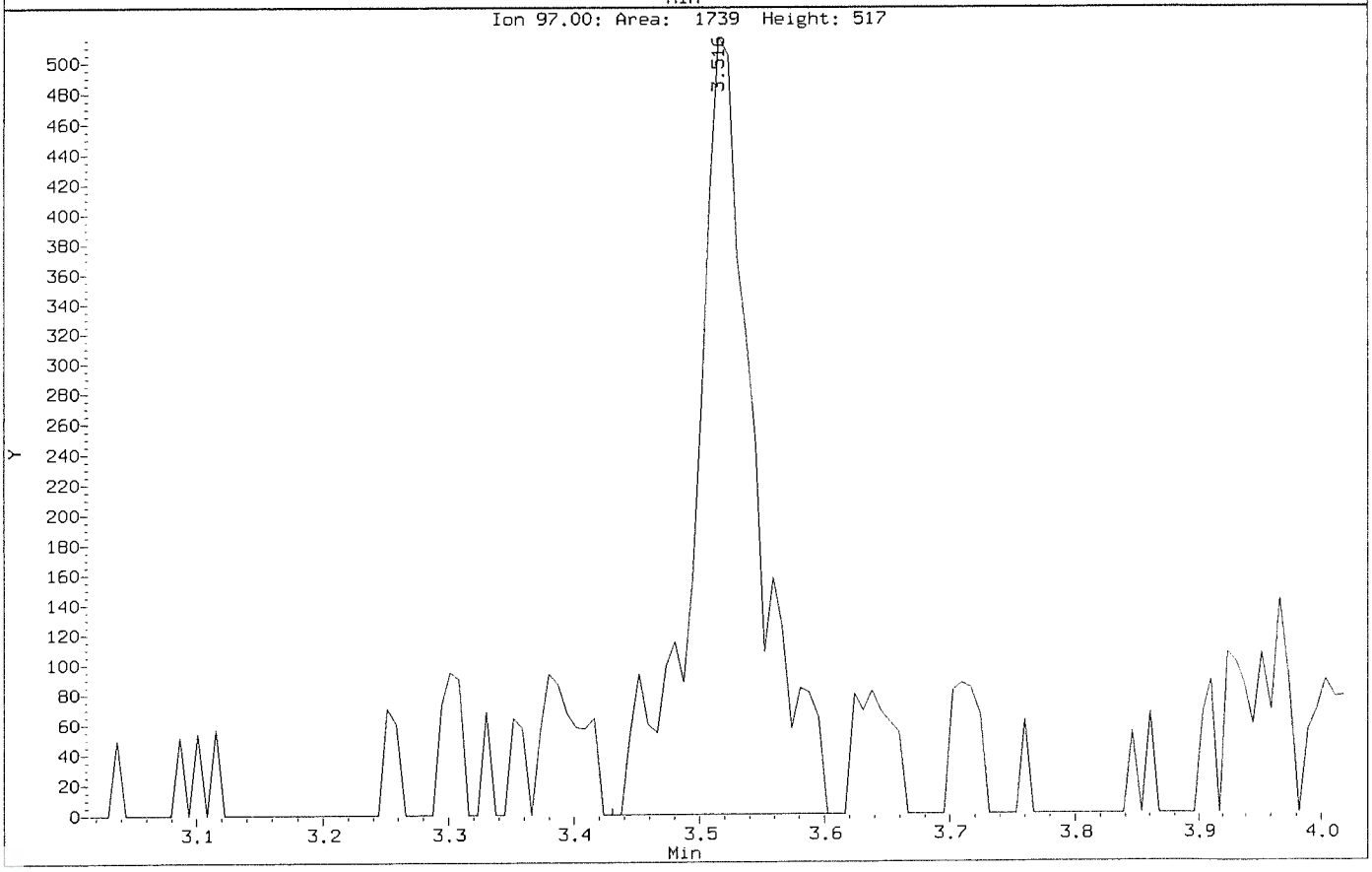
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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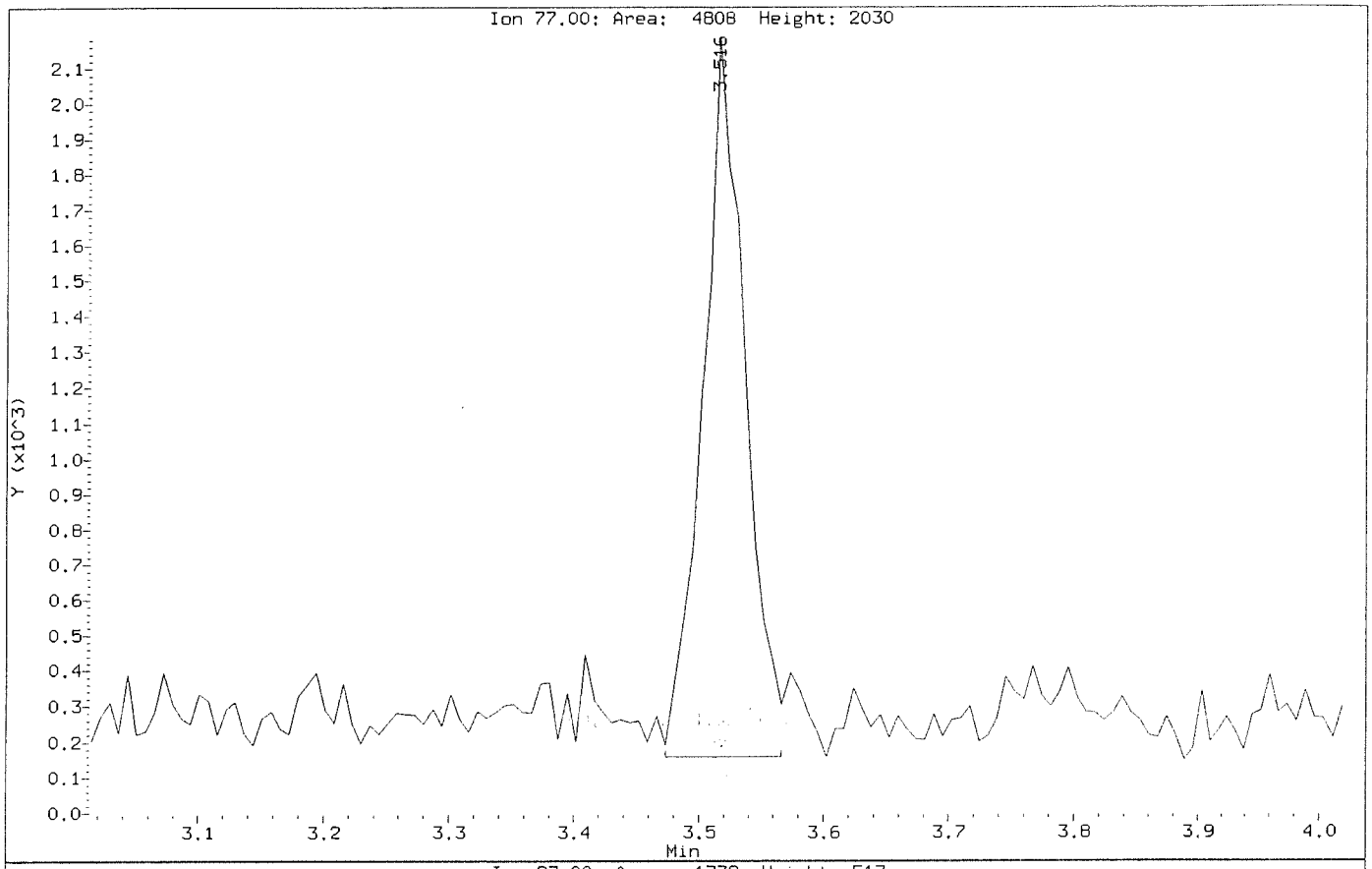
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

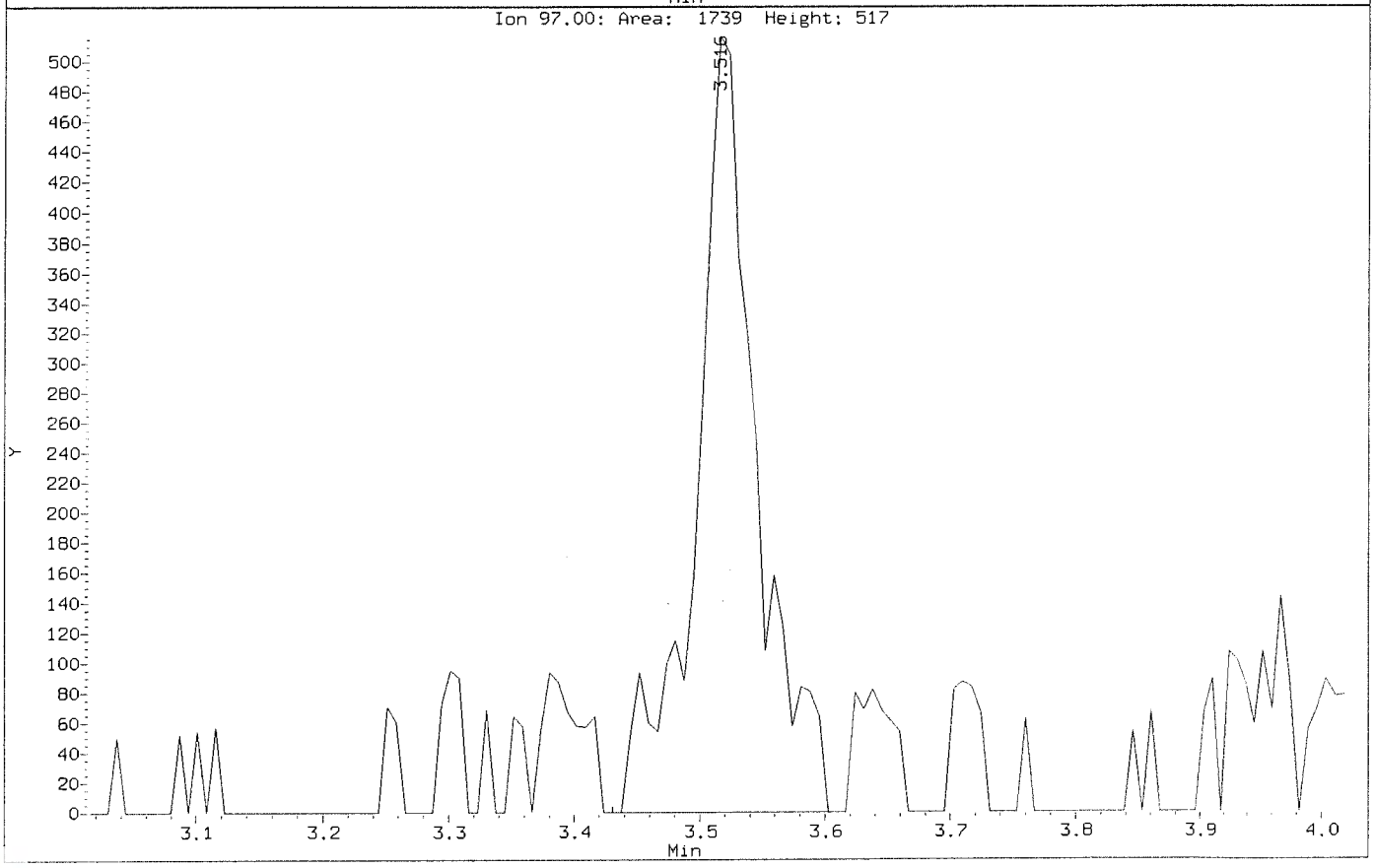




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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

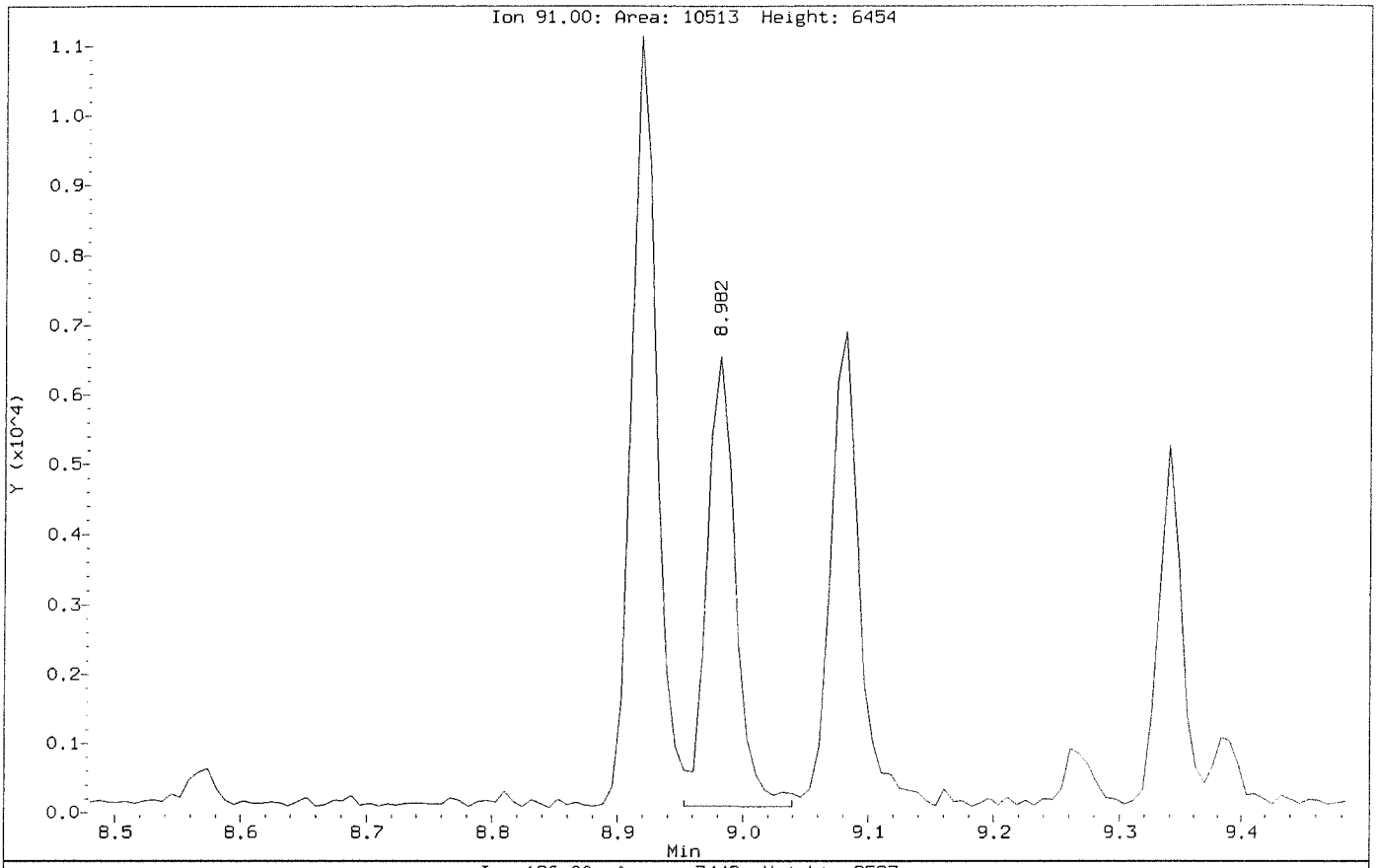
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CAS Number: 594-20-7

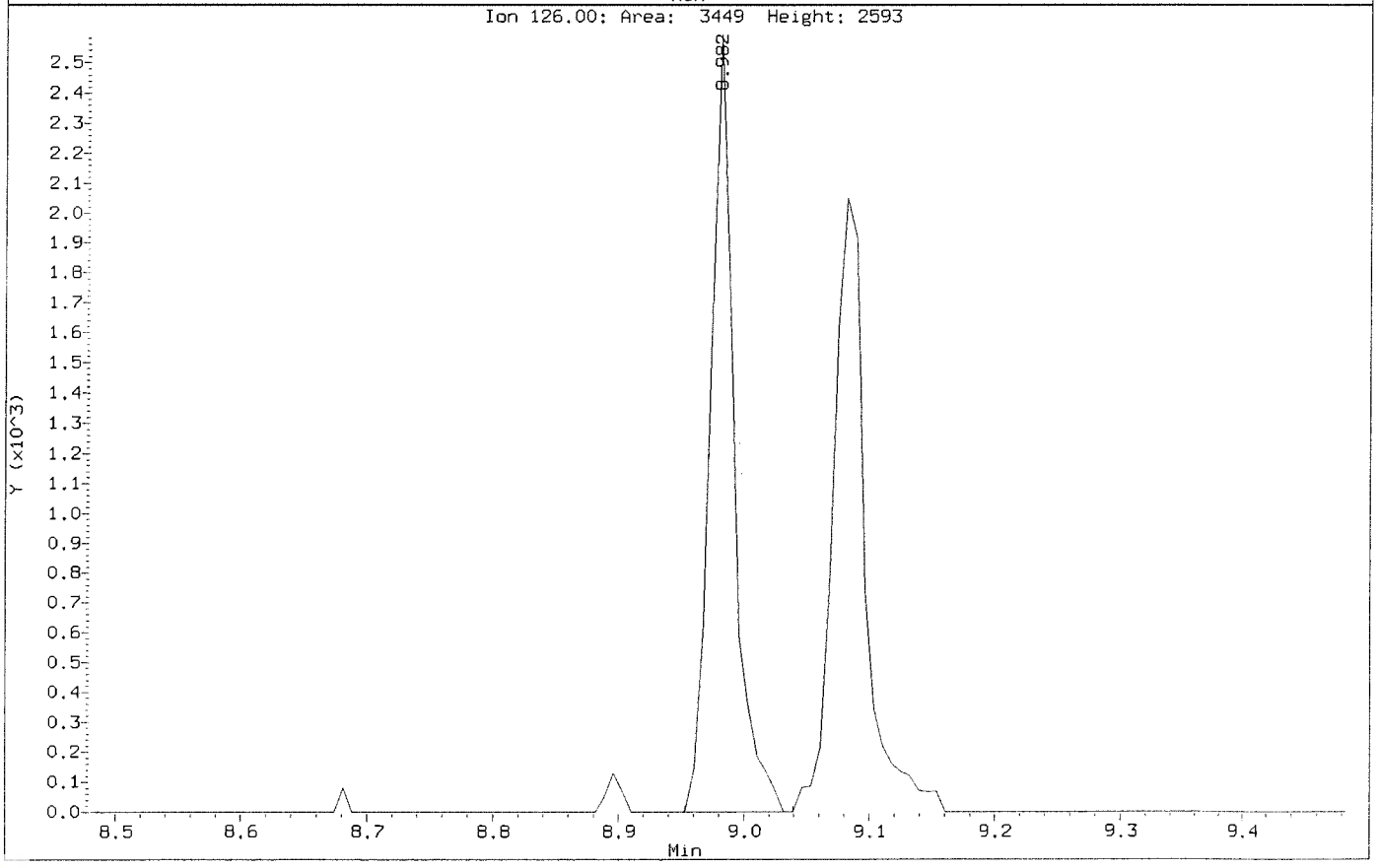




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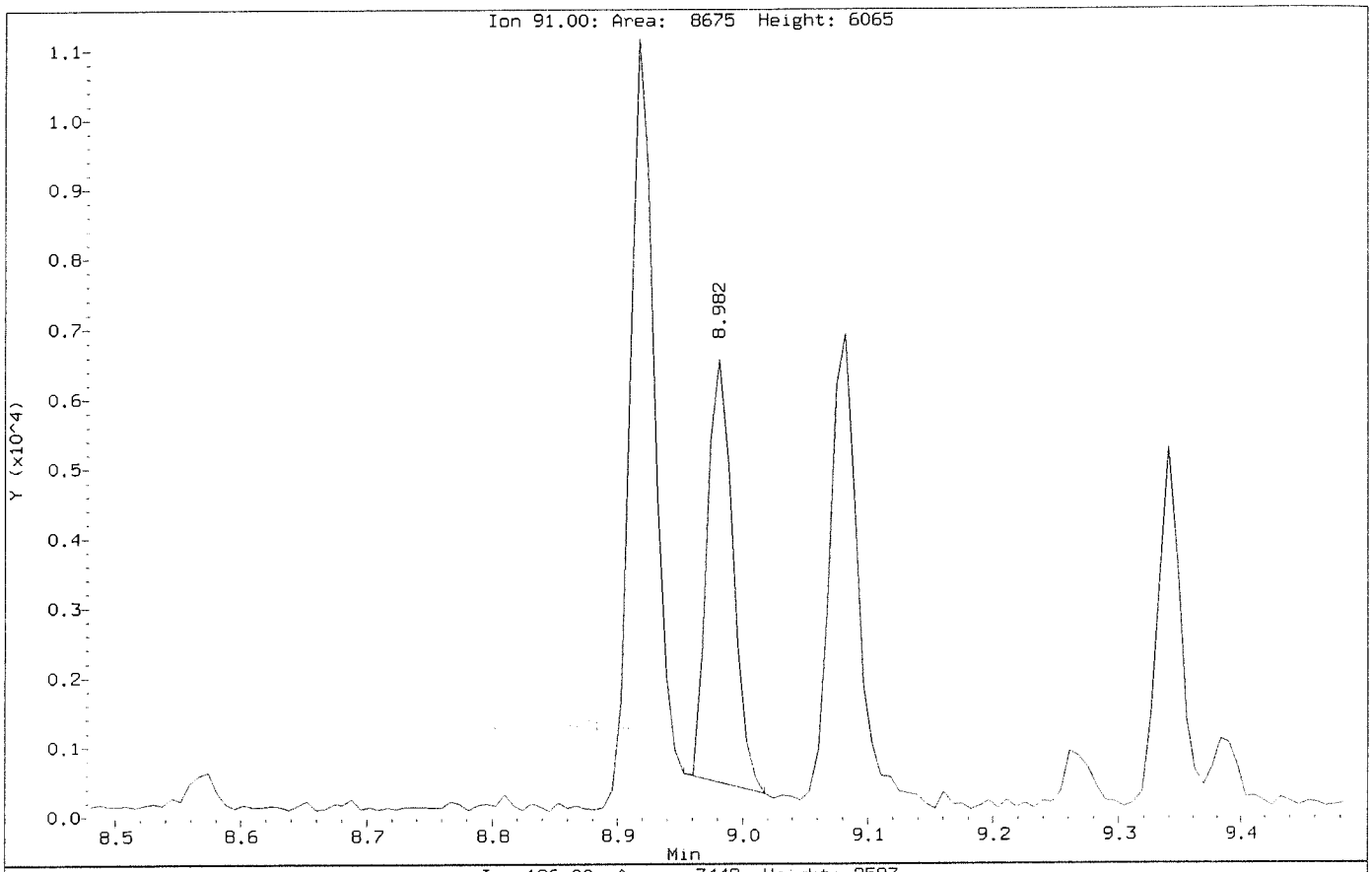
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

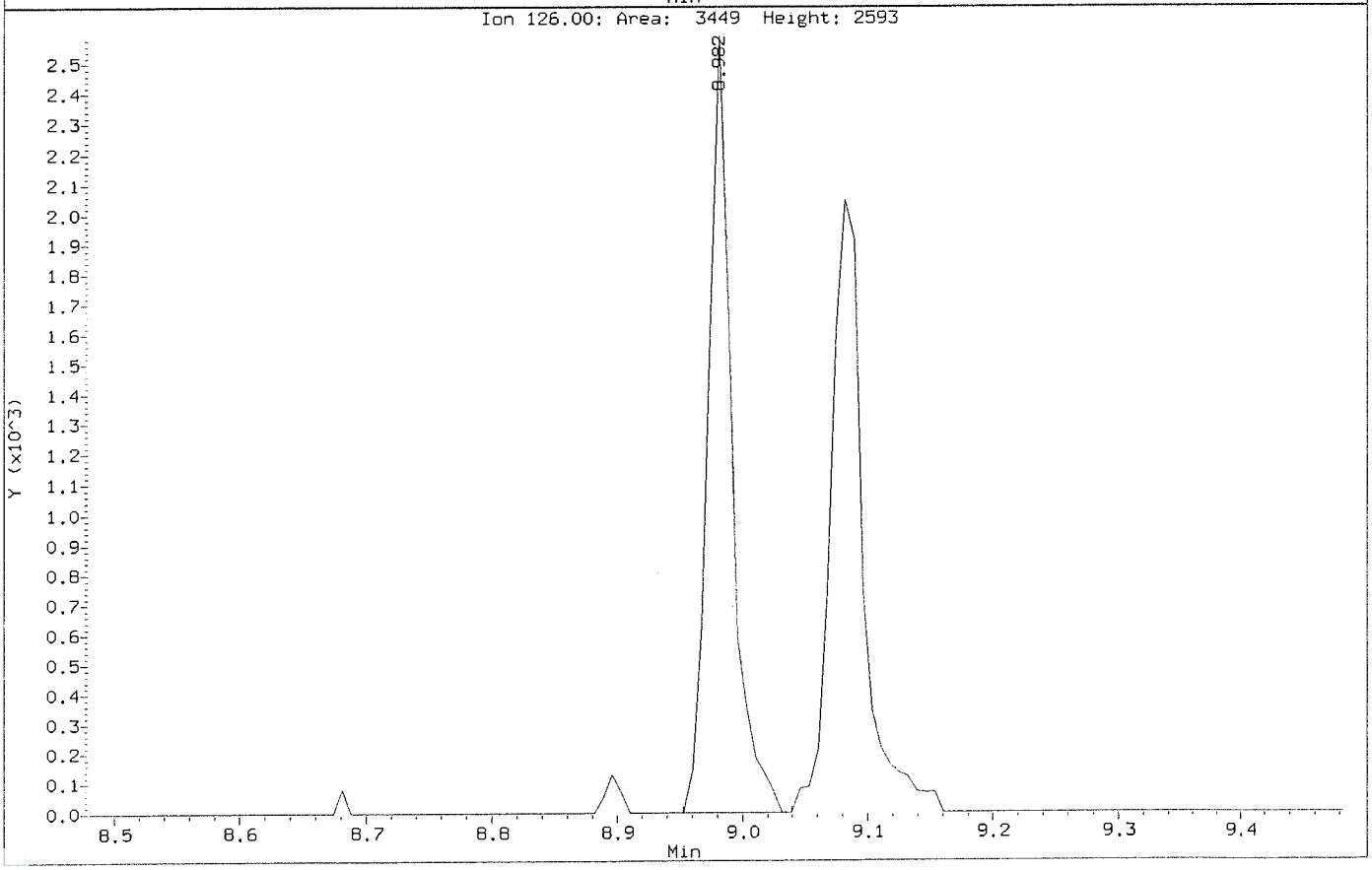




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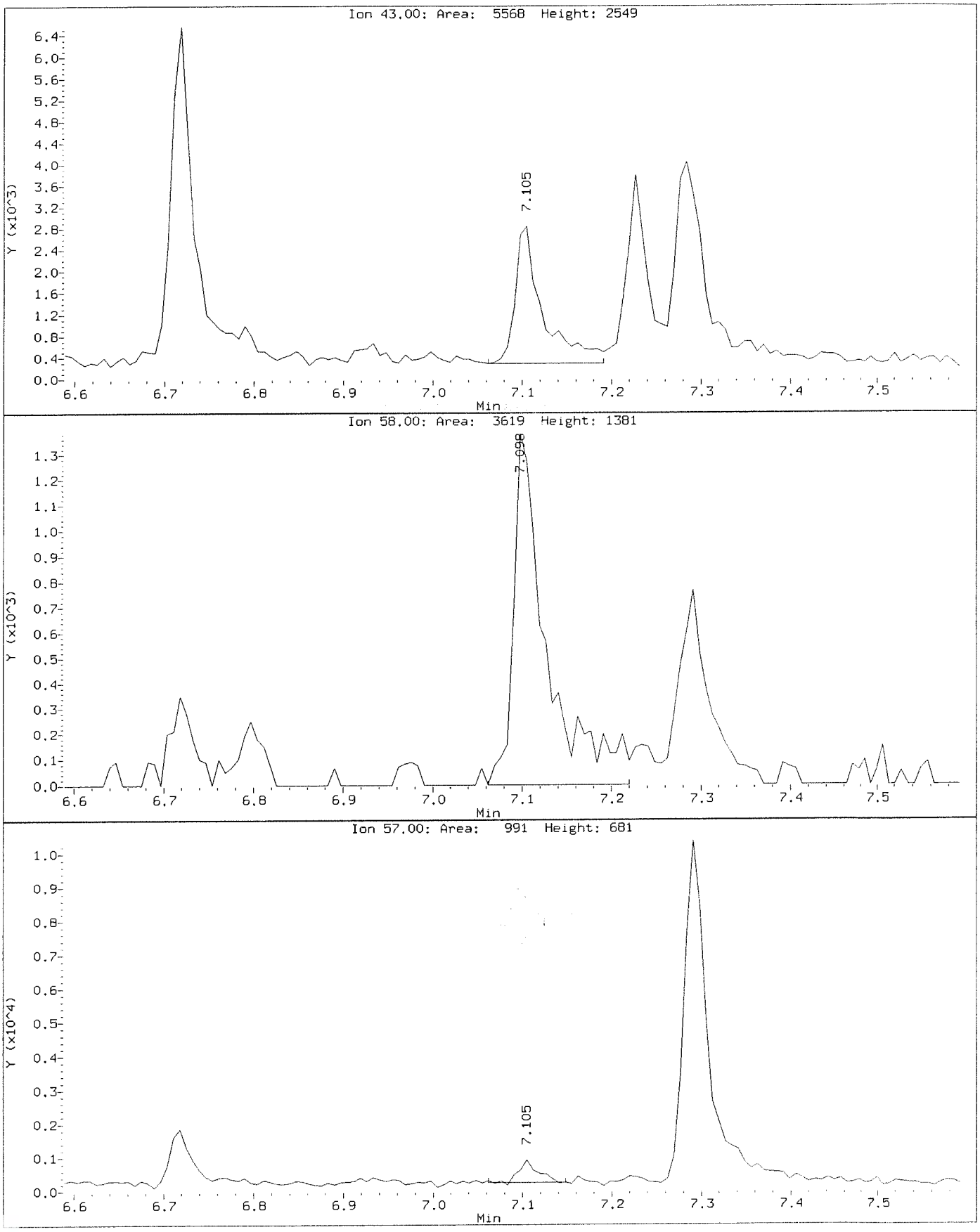
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





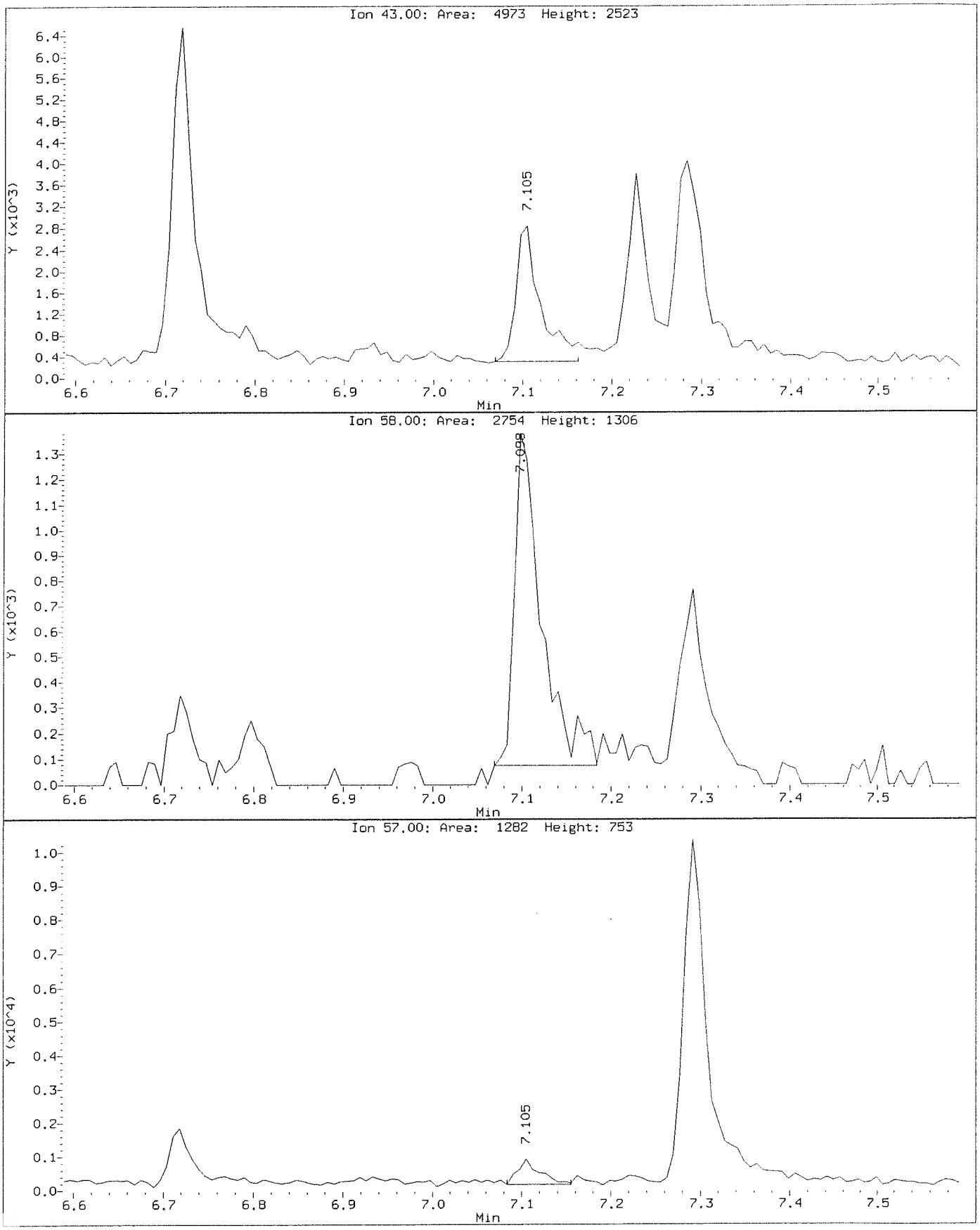
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



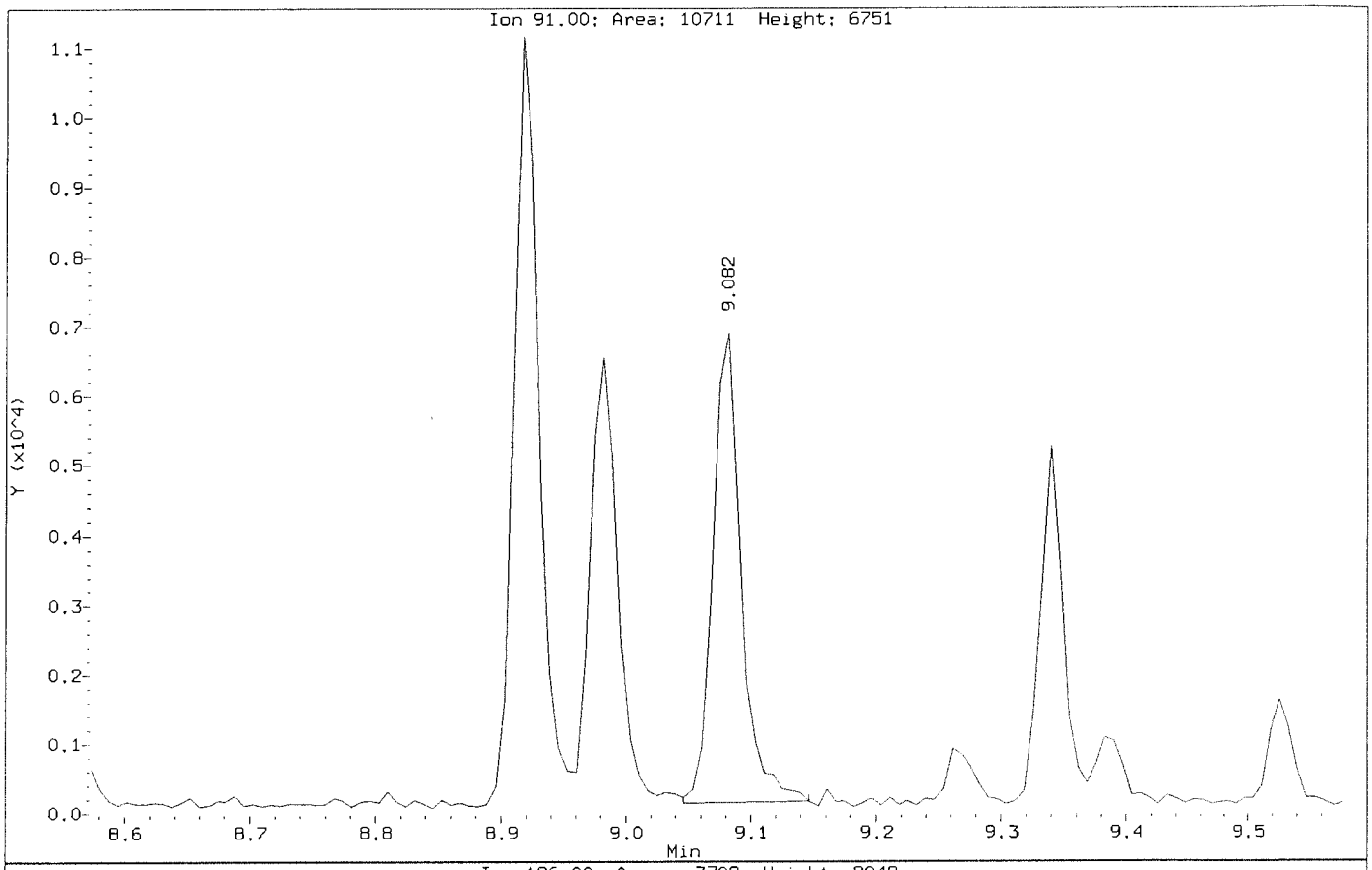
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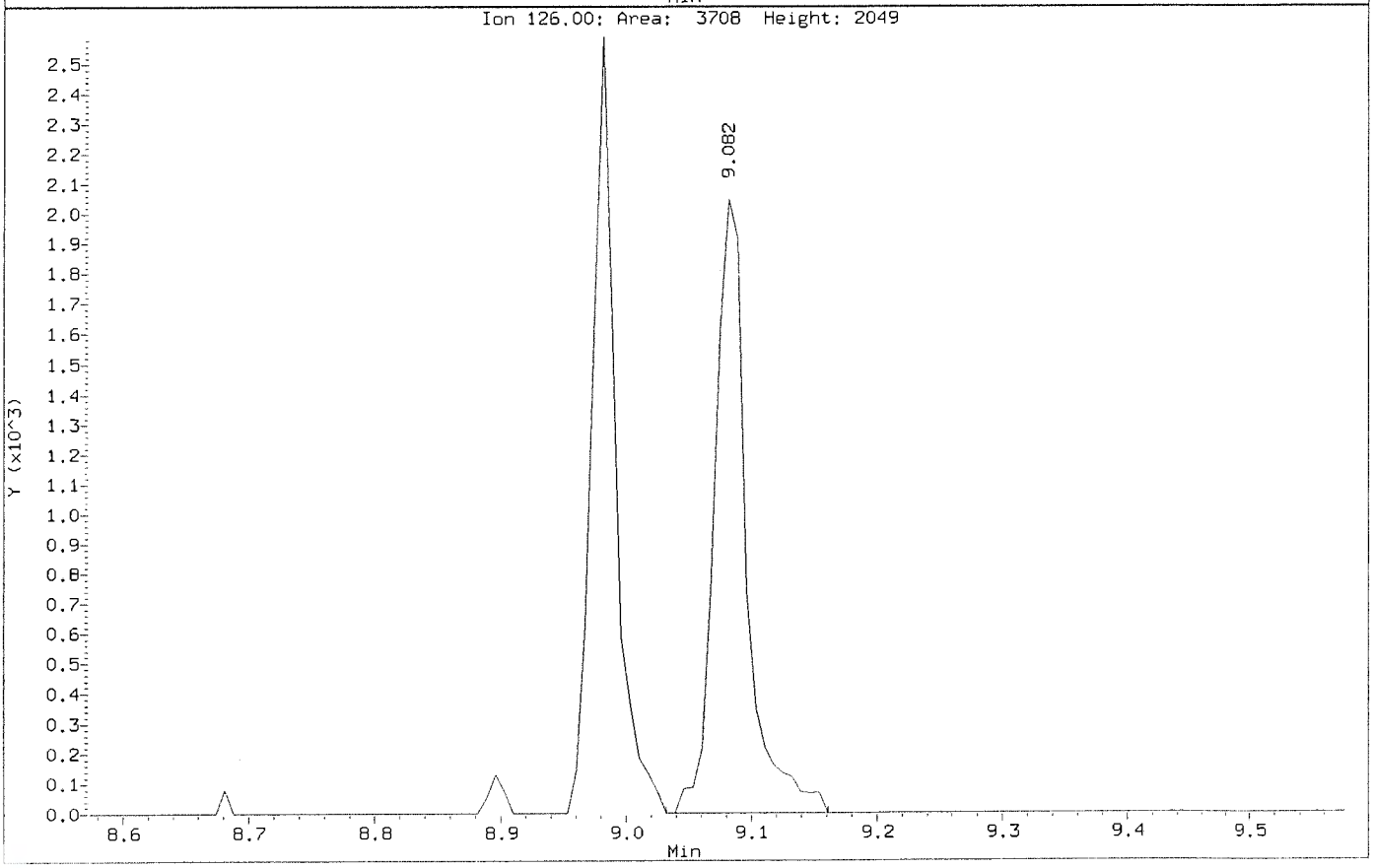
Compound: 2-Hexanone
CAS Number: 591-78-6



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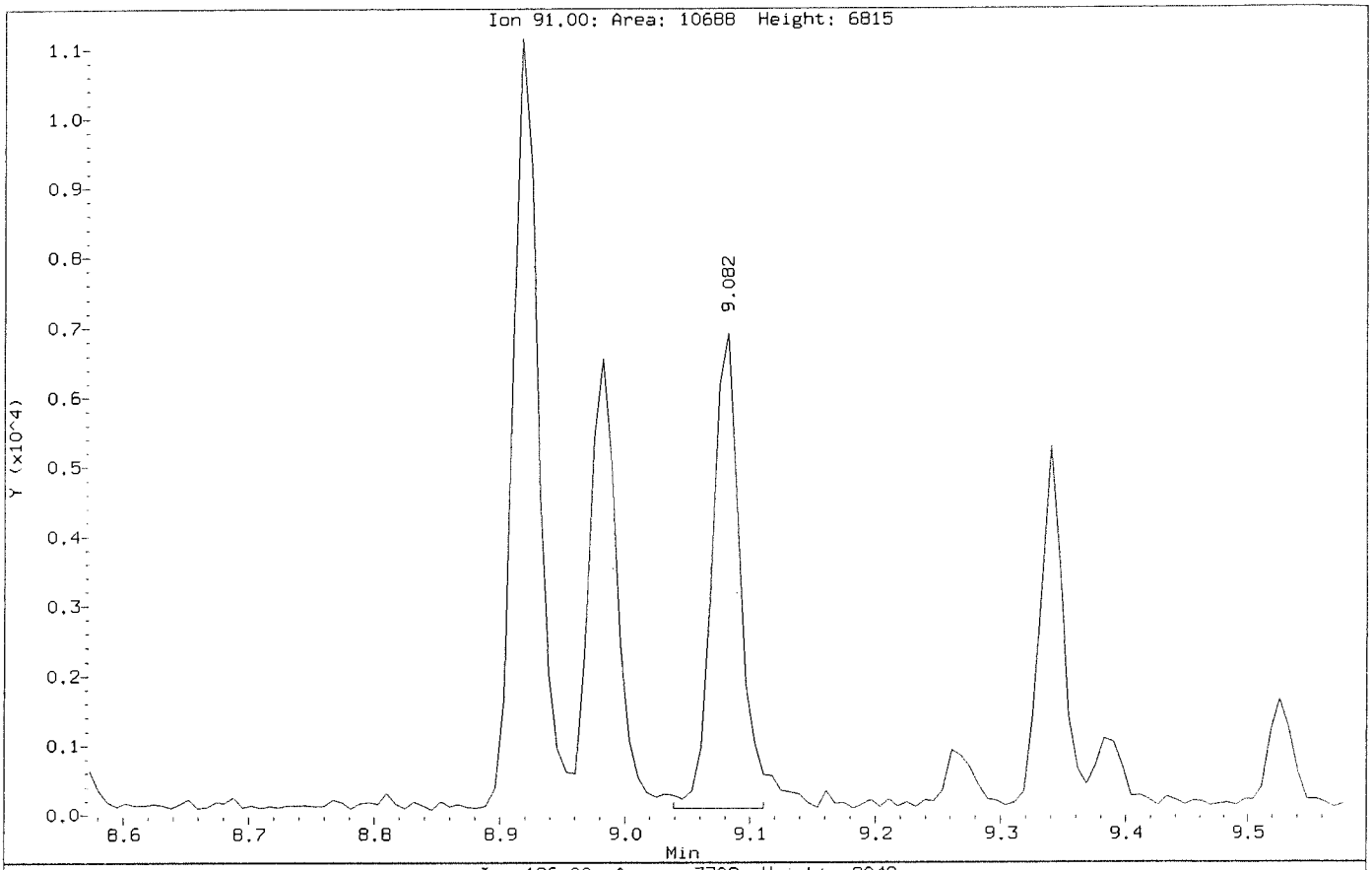
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

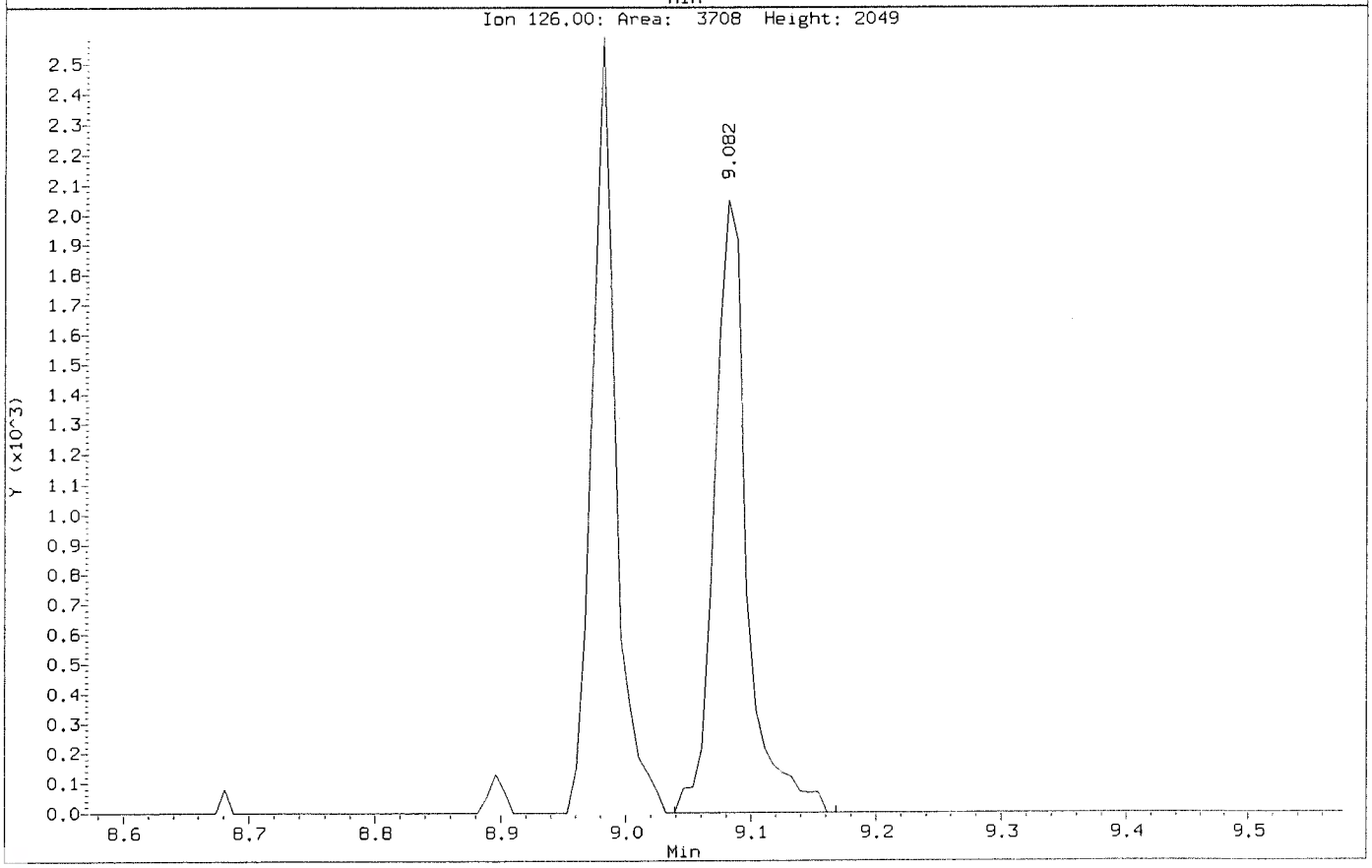




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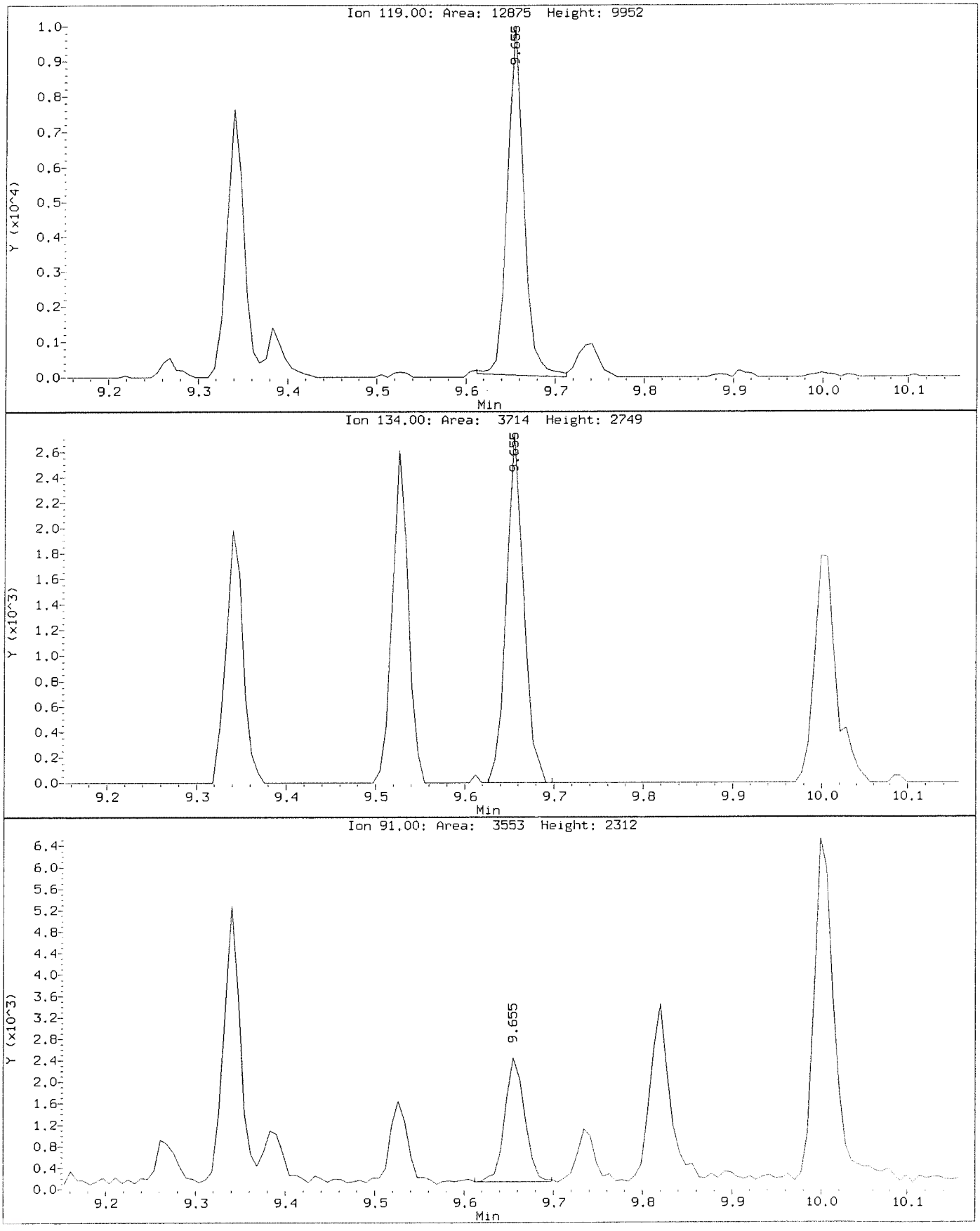
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





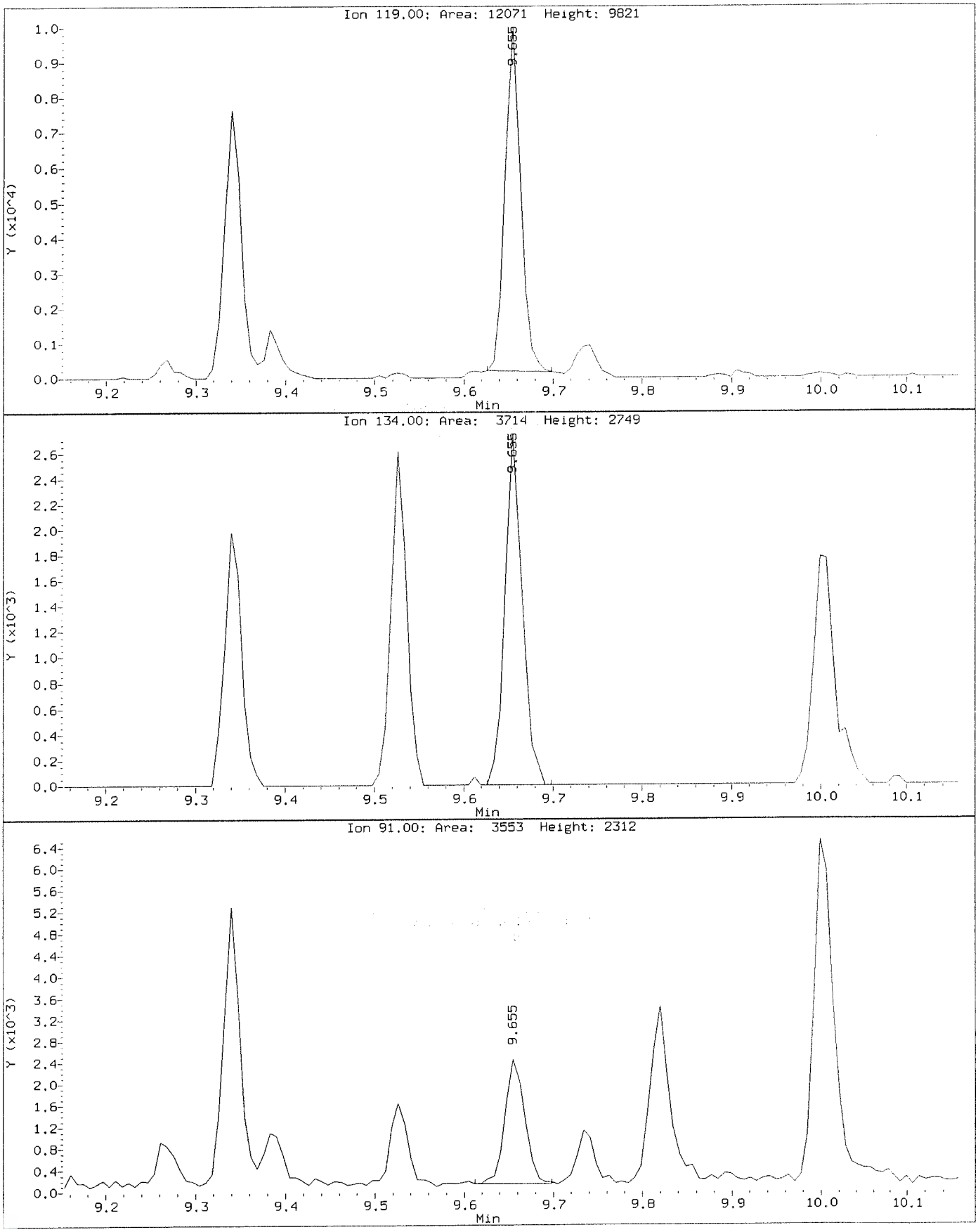
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



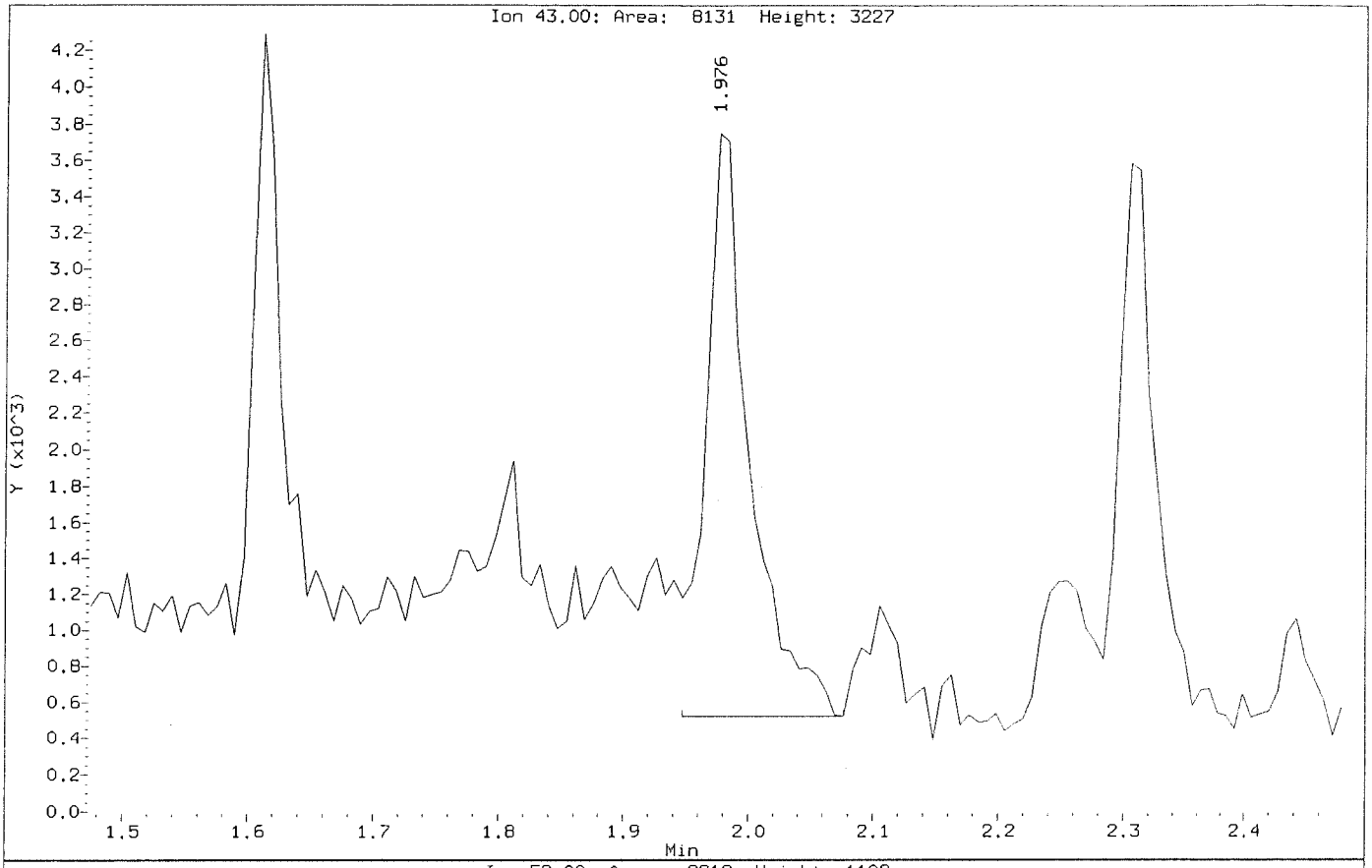
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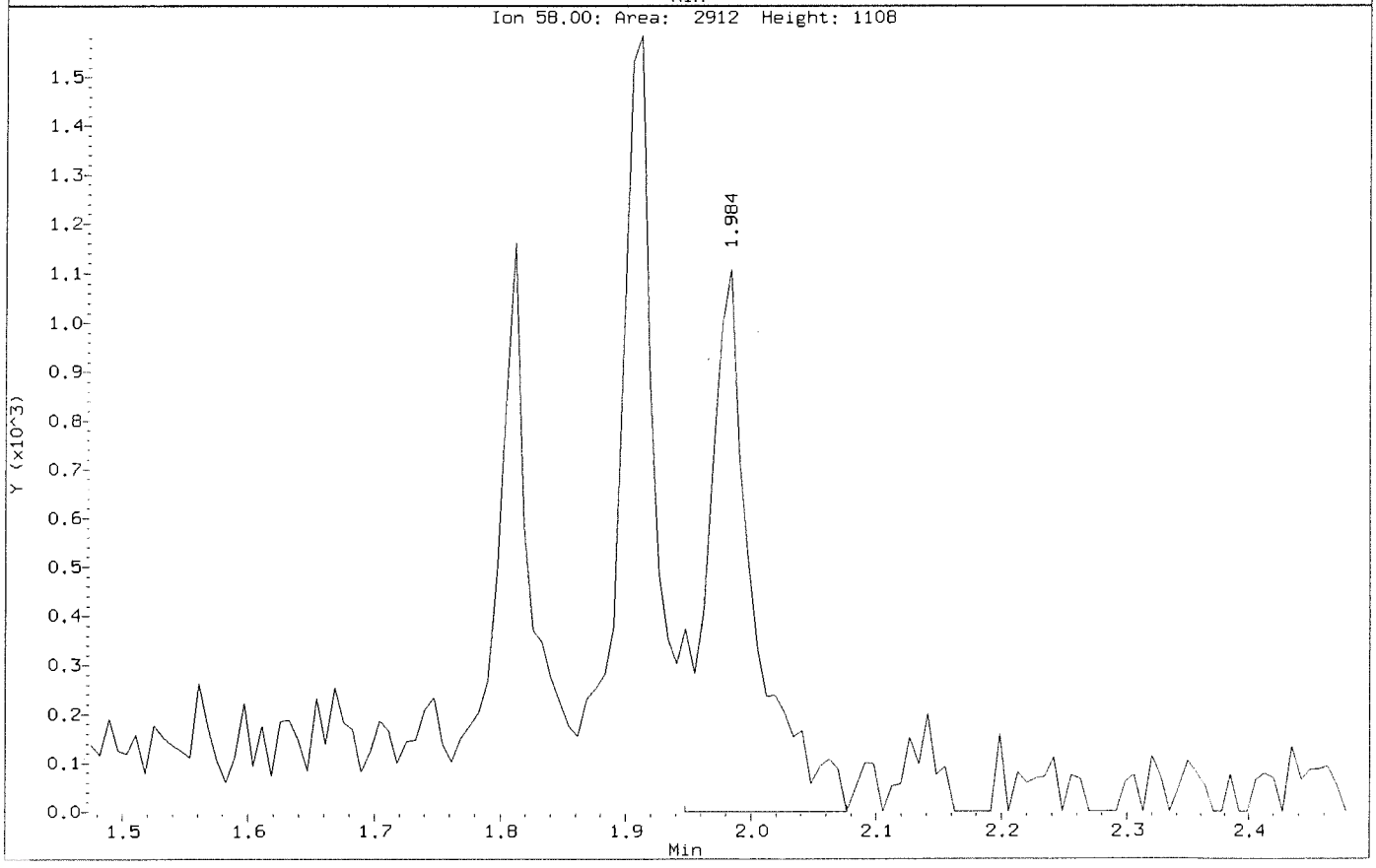
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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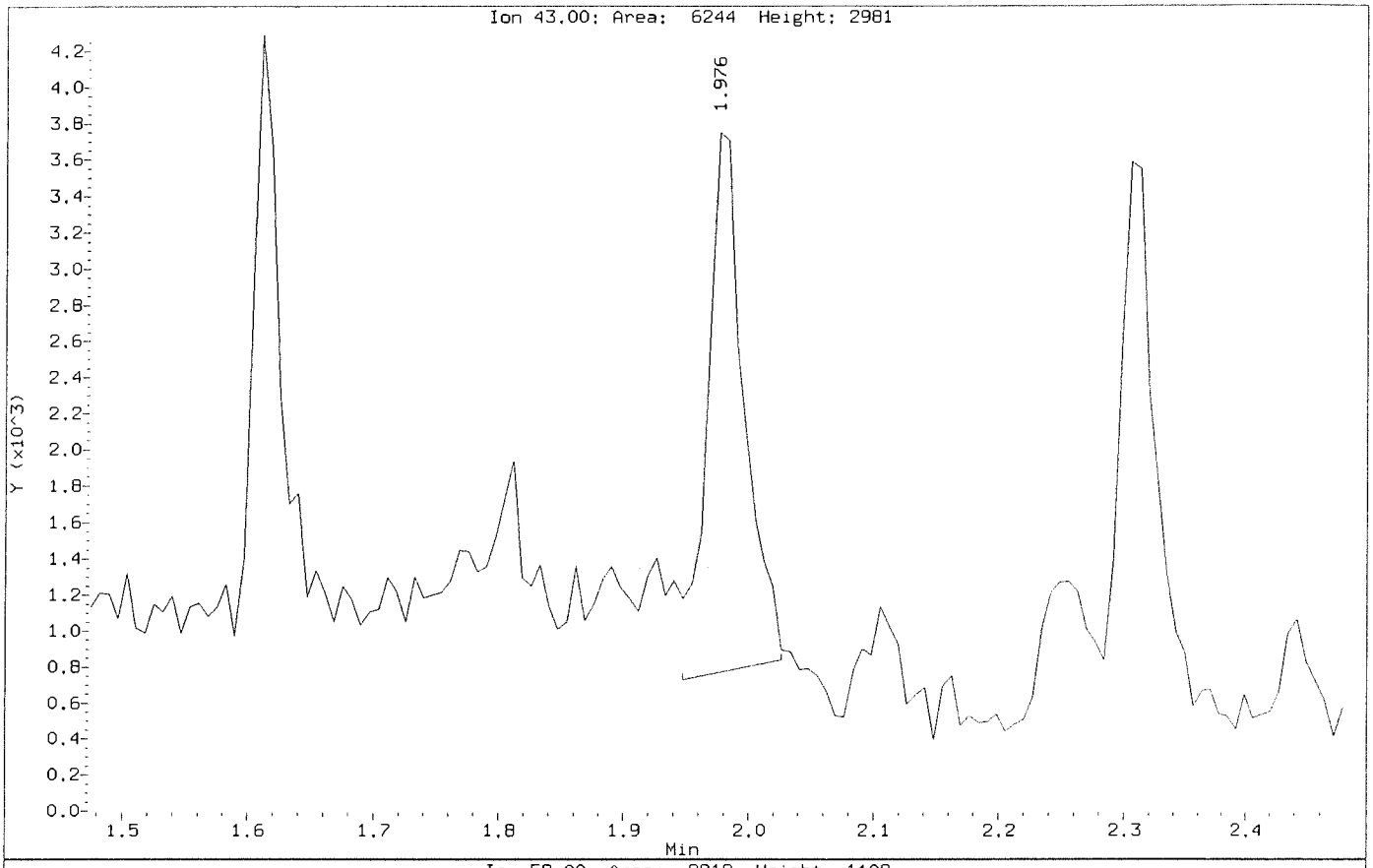
Compound: Acetone
CAS Number: 67-64-1

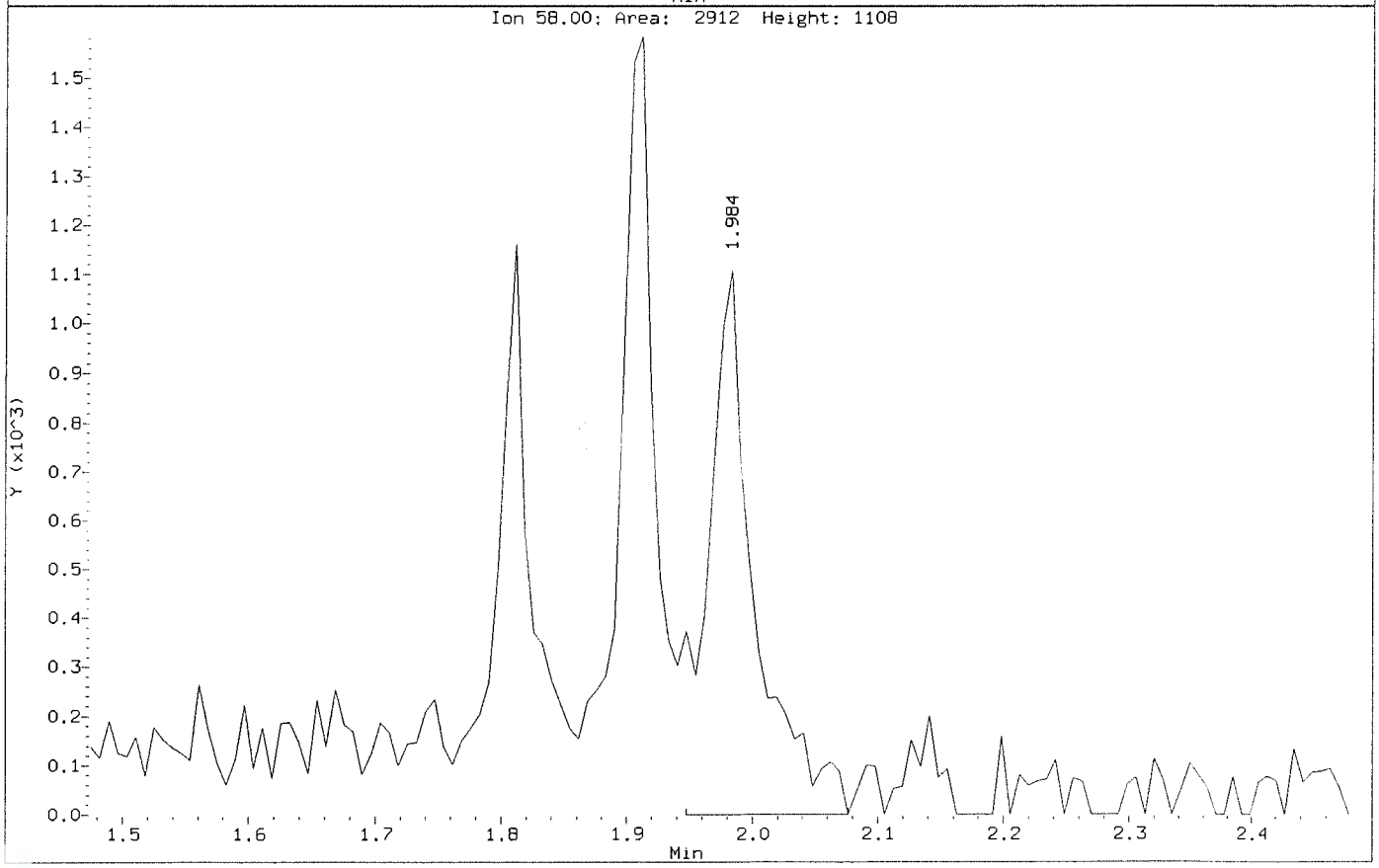




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Instrument: voa6.i
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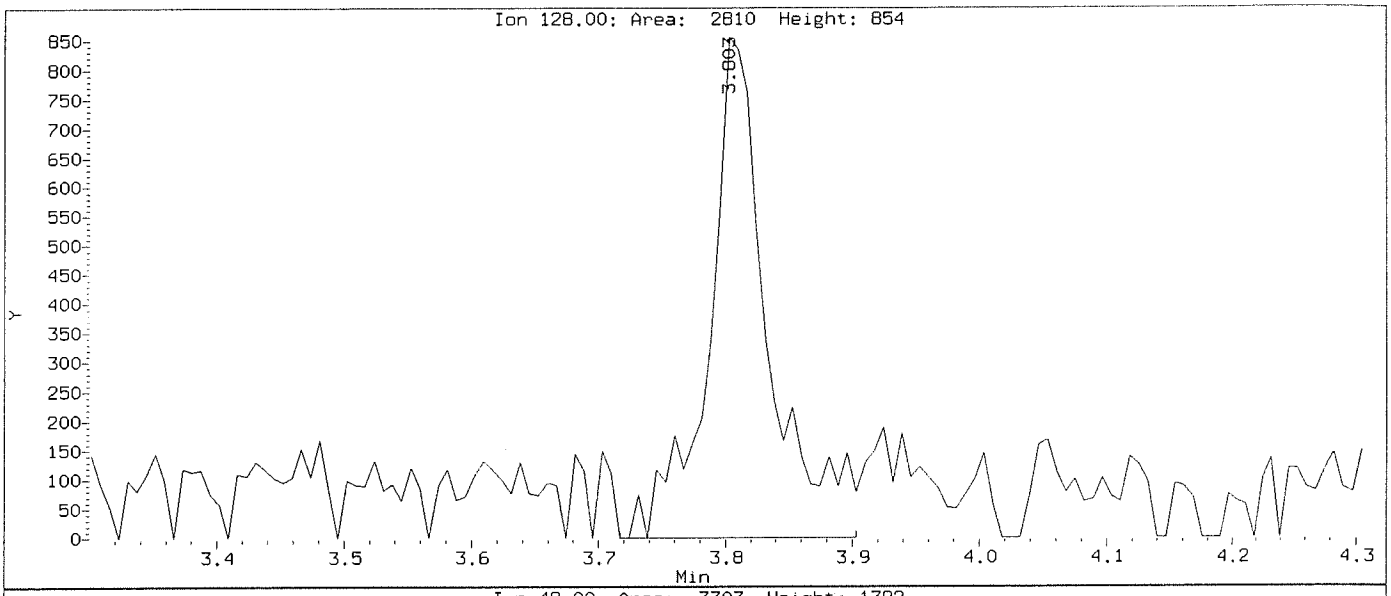
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CAS Number: 67-64-1

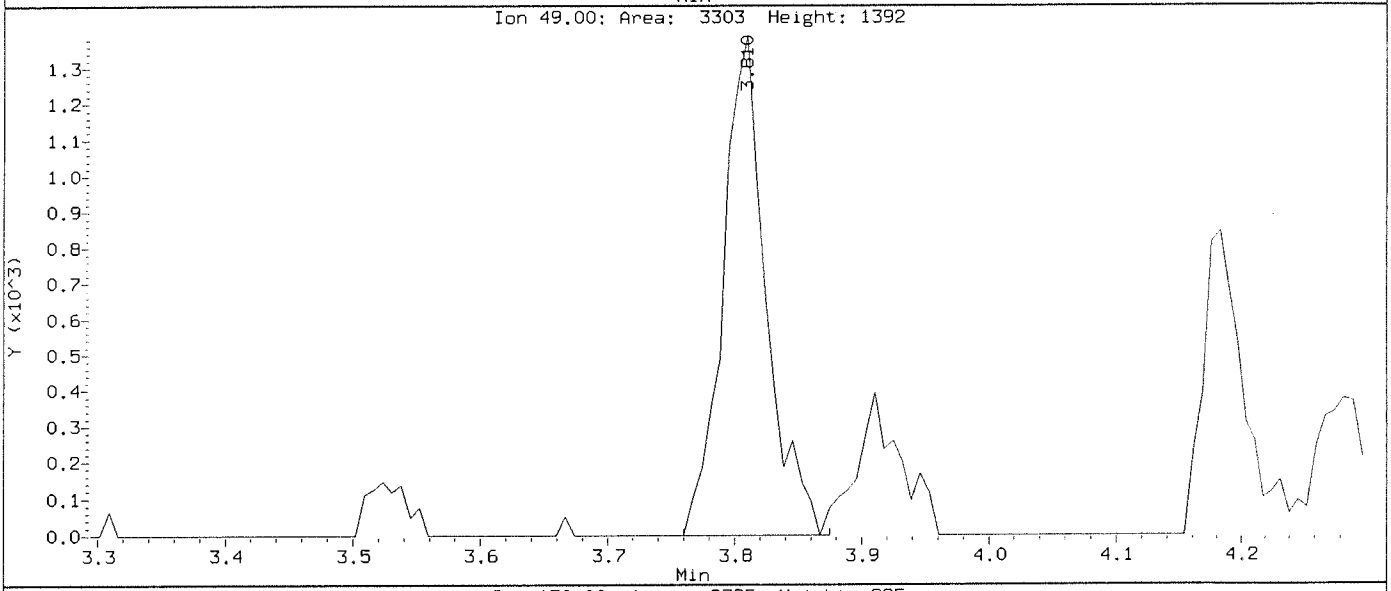


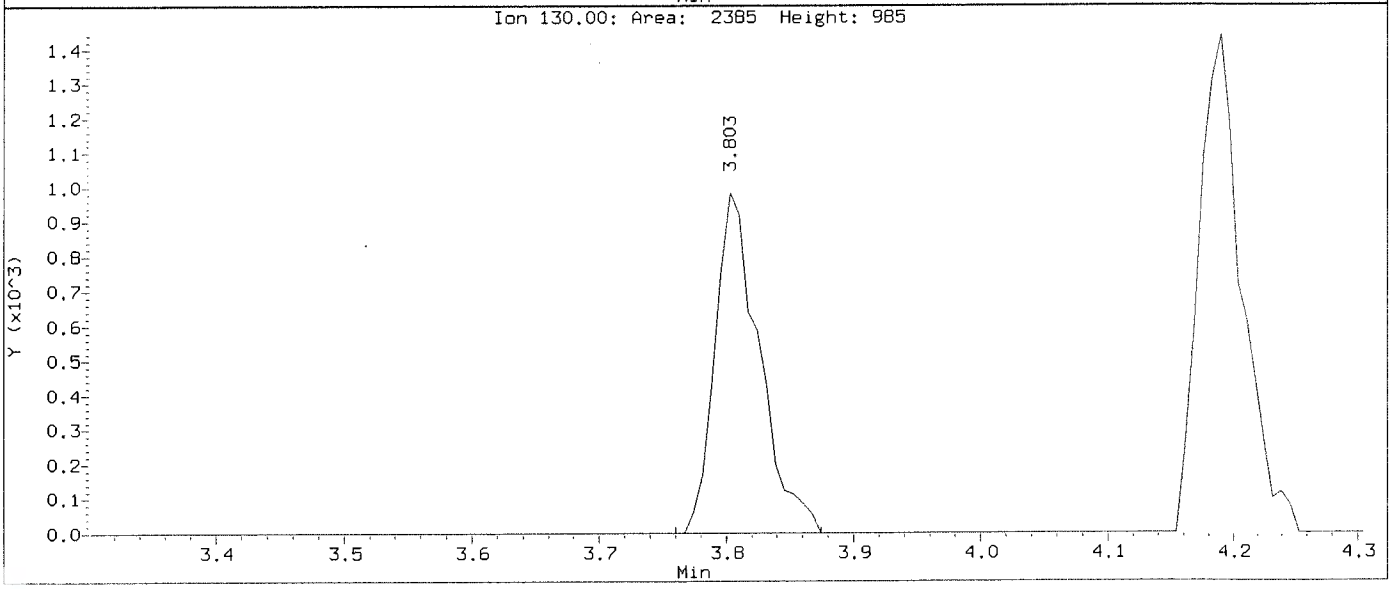


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

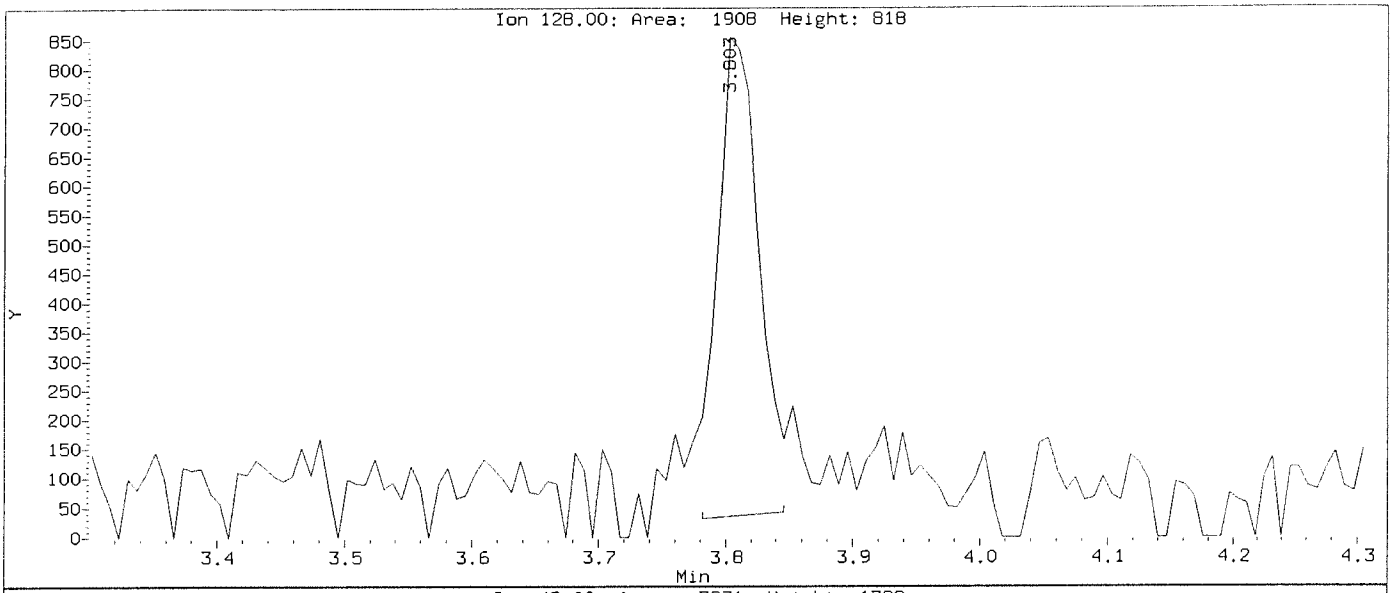


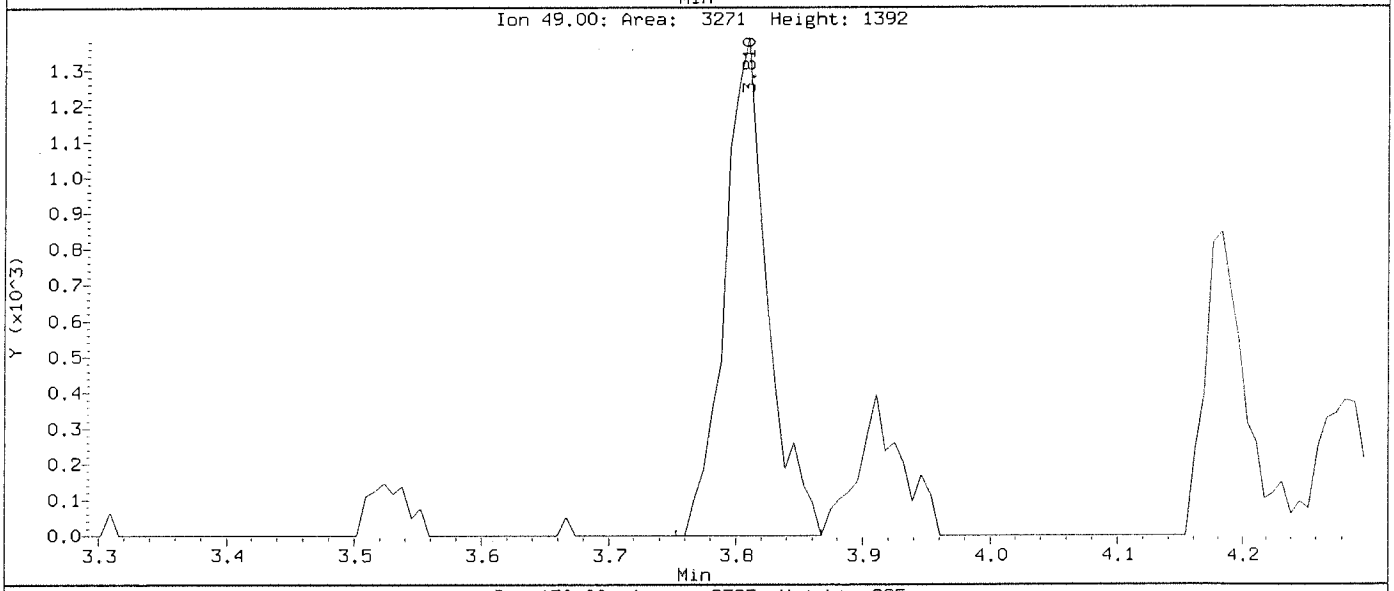


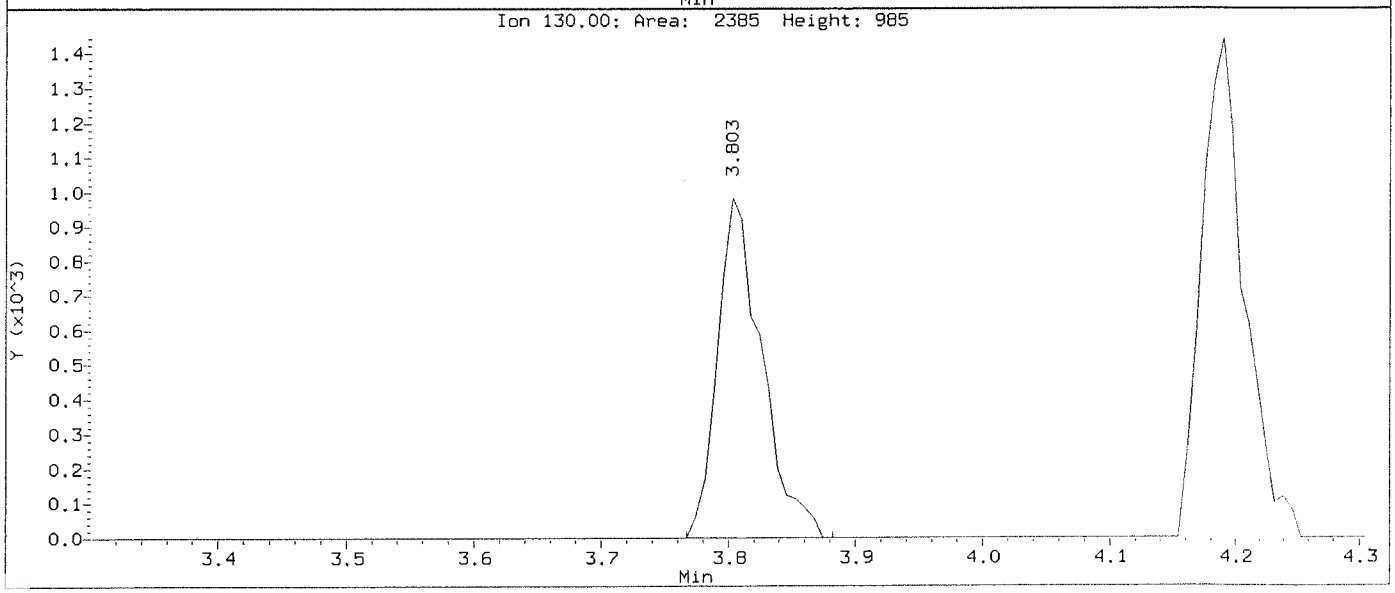


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

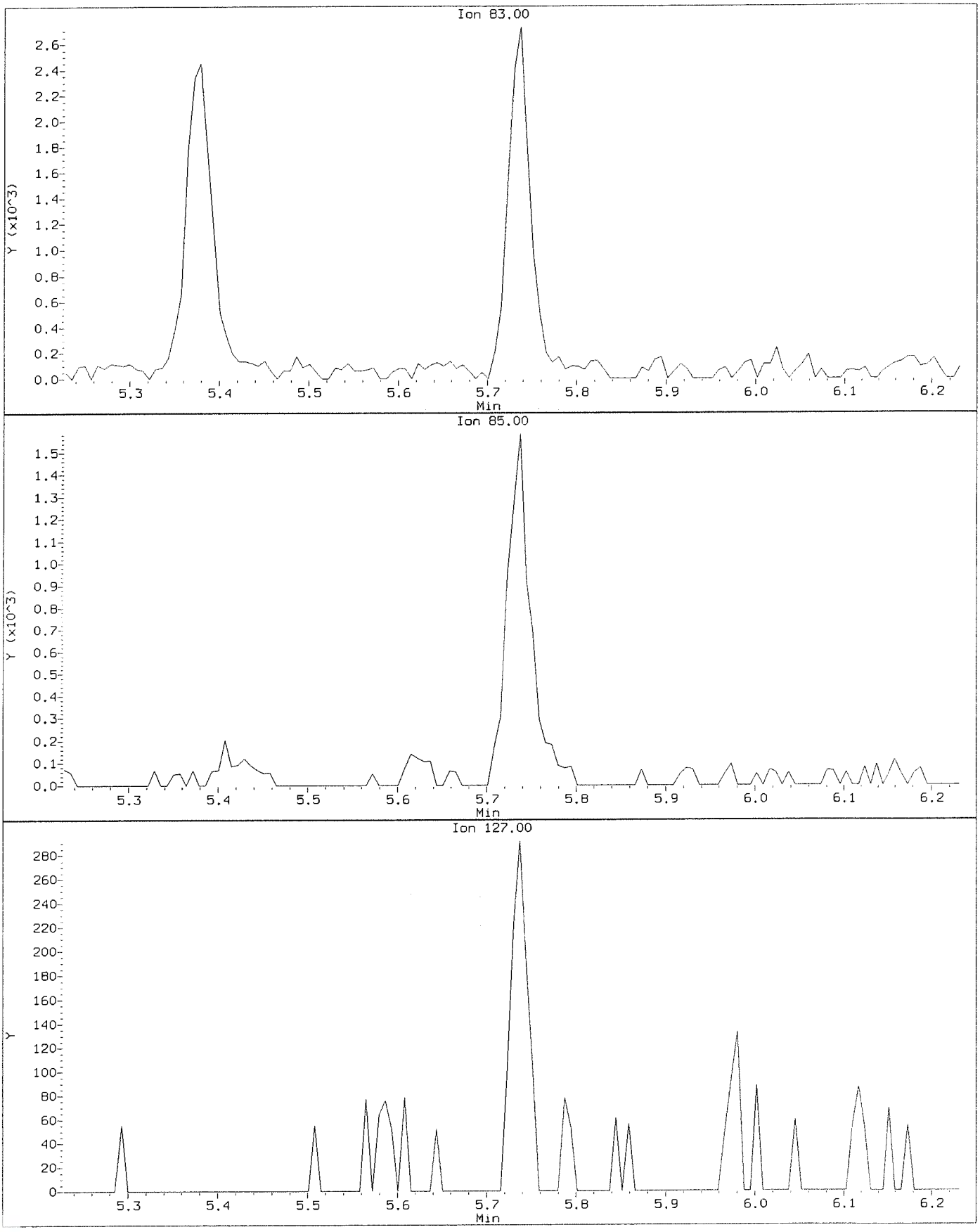






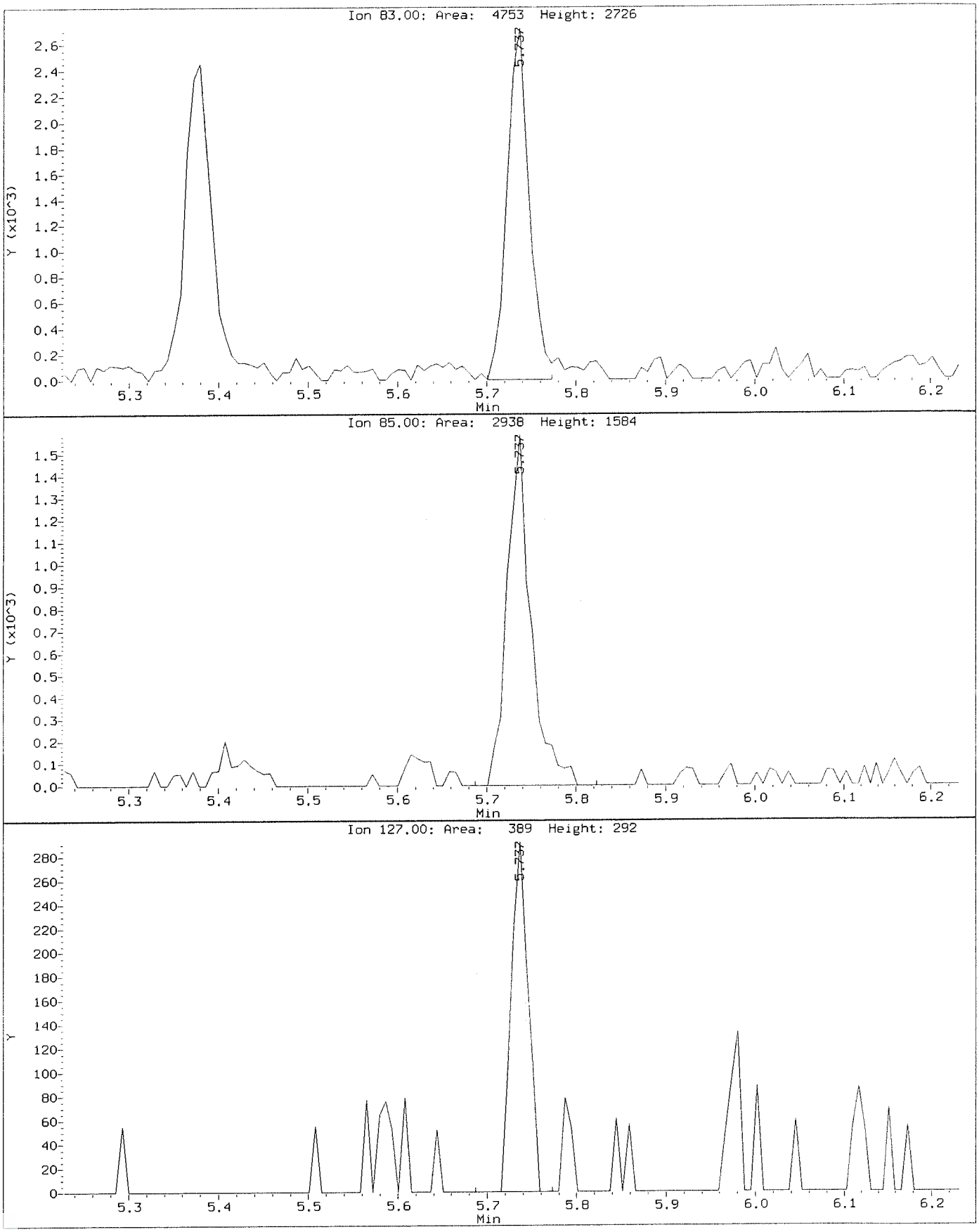
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



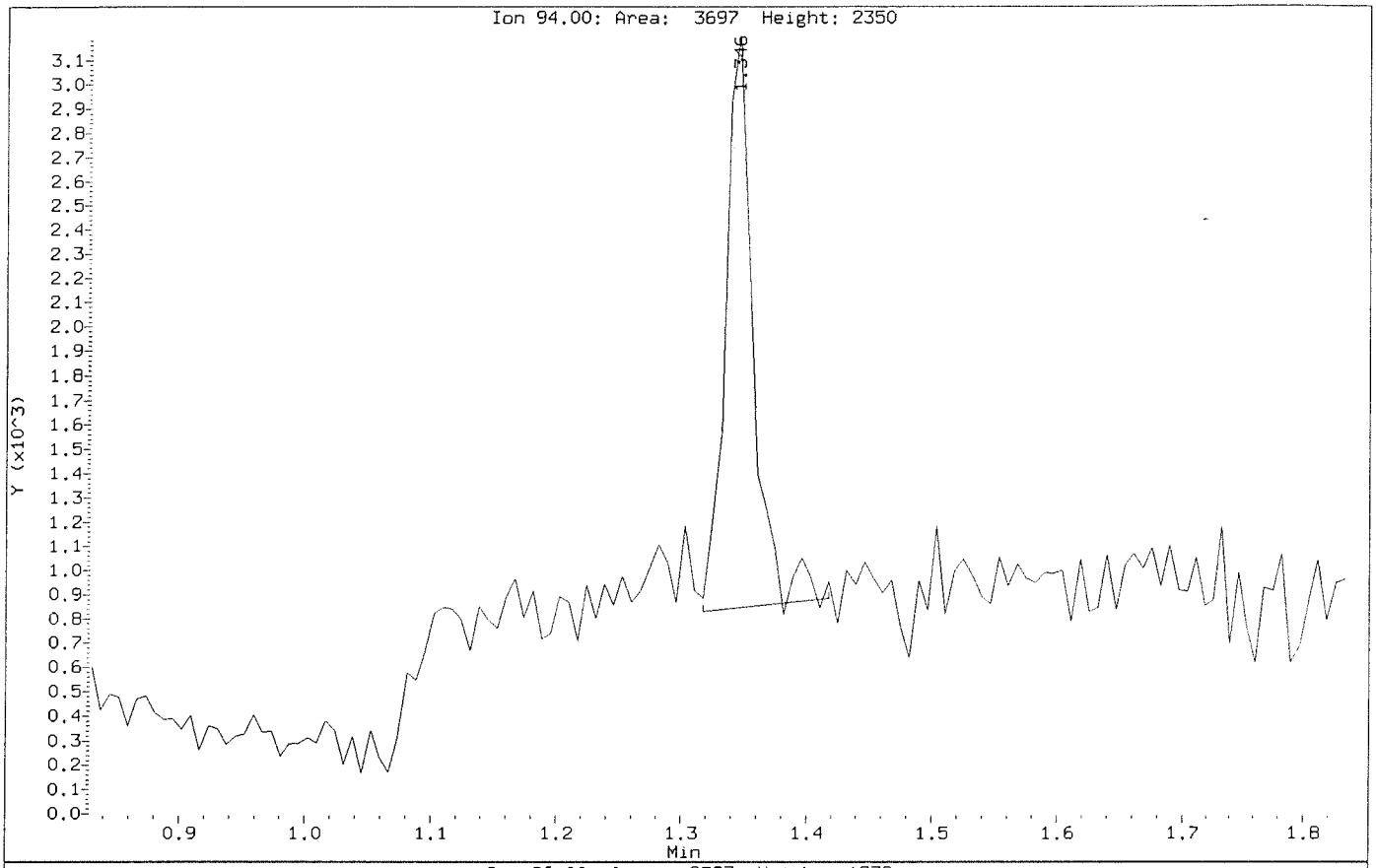
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Client Sample ID: VSTD000.5

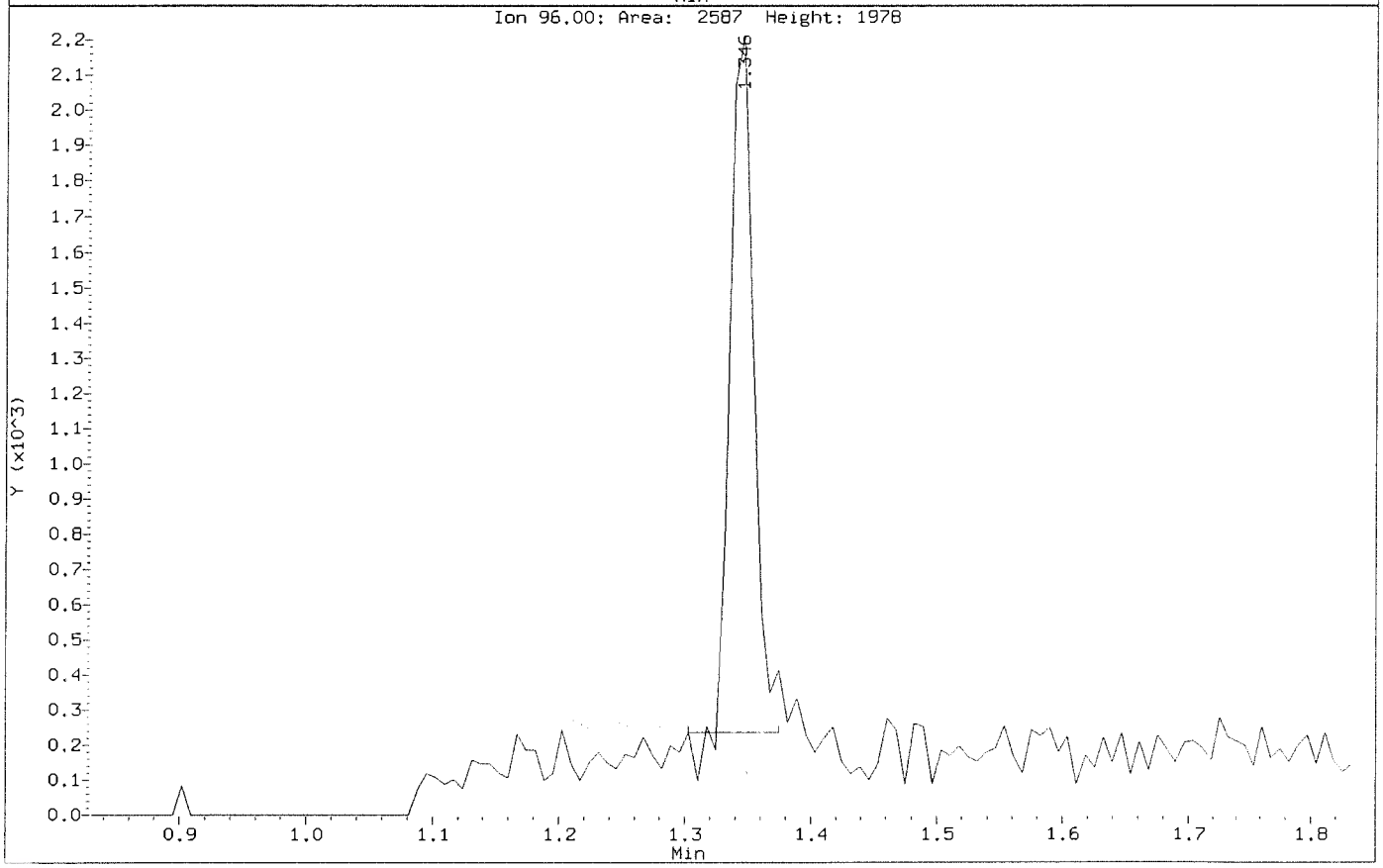
Compound: Bromodichloromethane
CAS Number: 75-27-4



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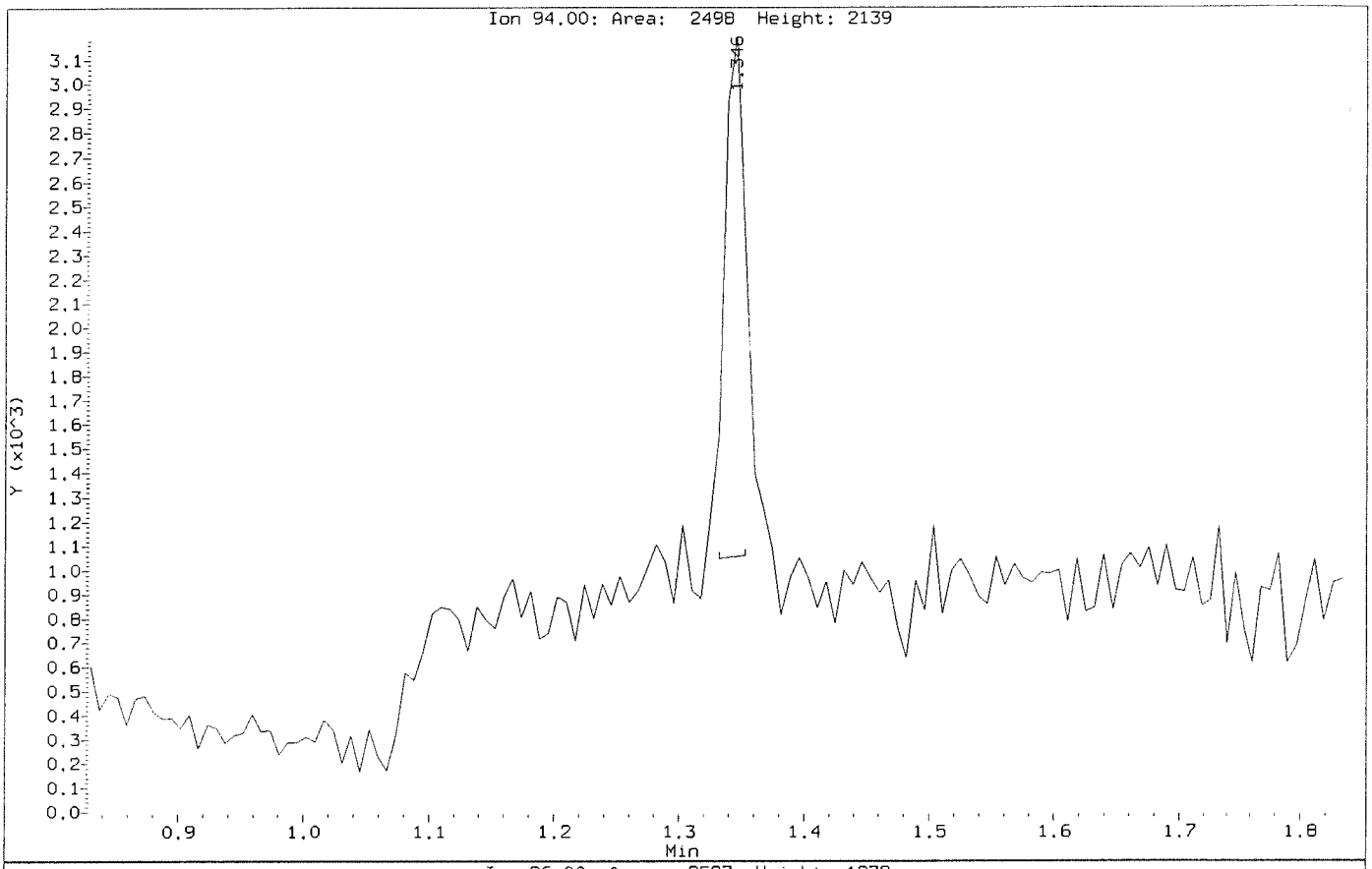
Compound: Bromomethane
CAS Number: 74-83-9

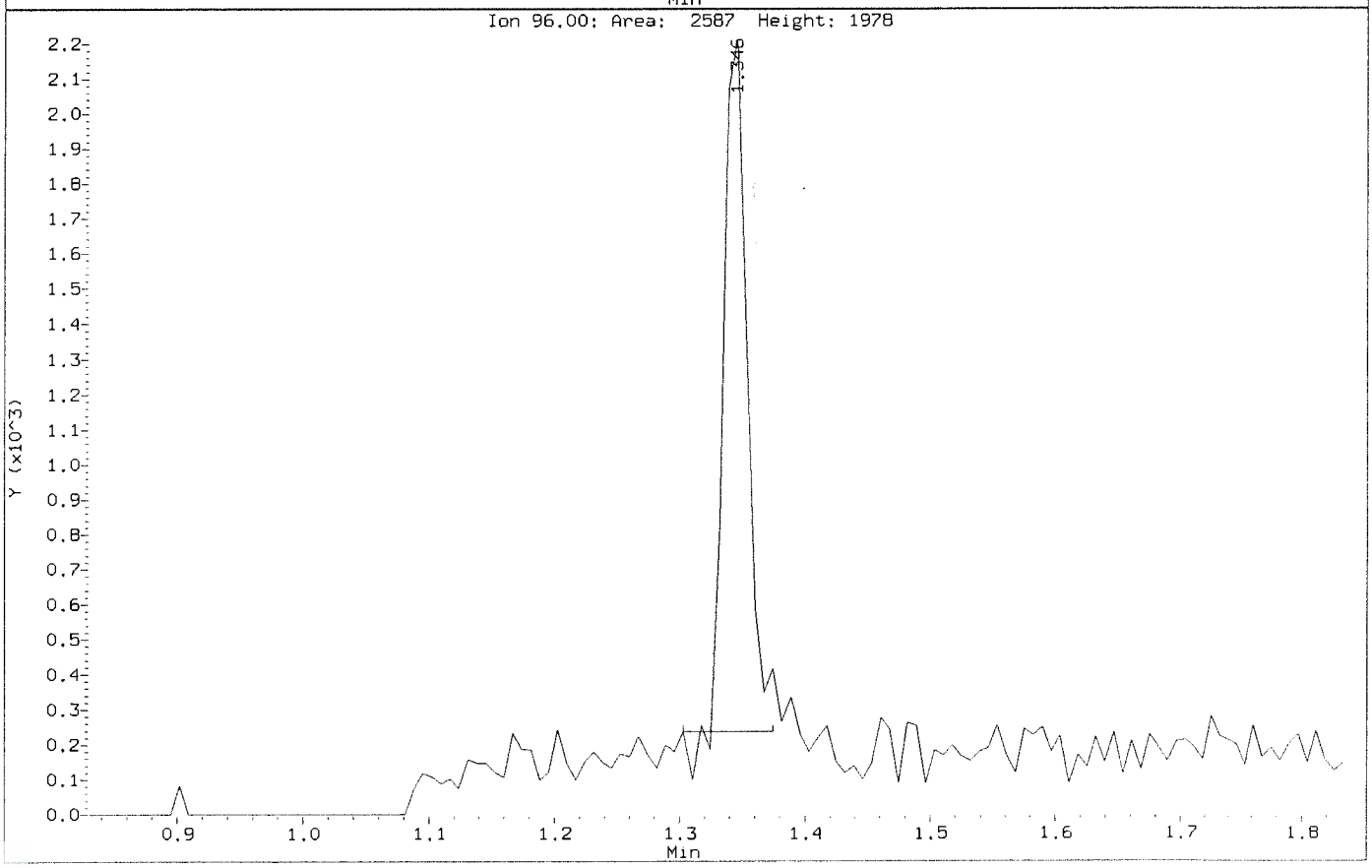




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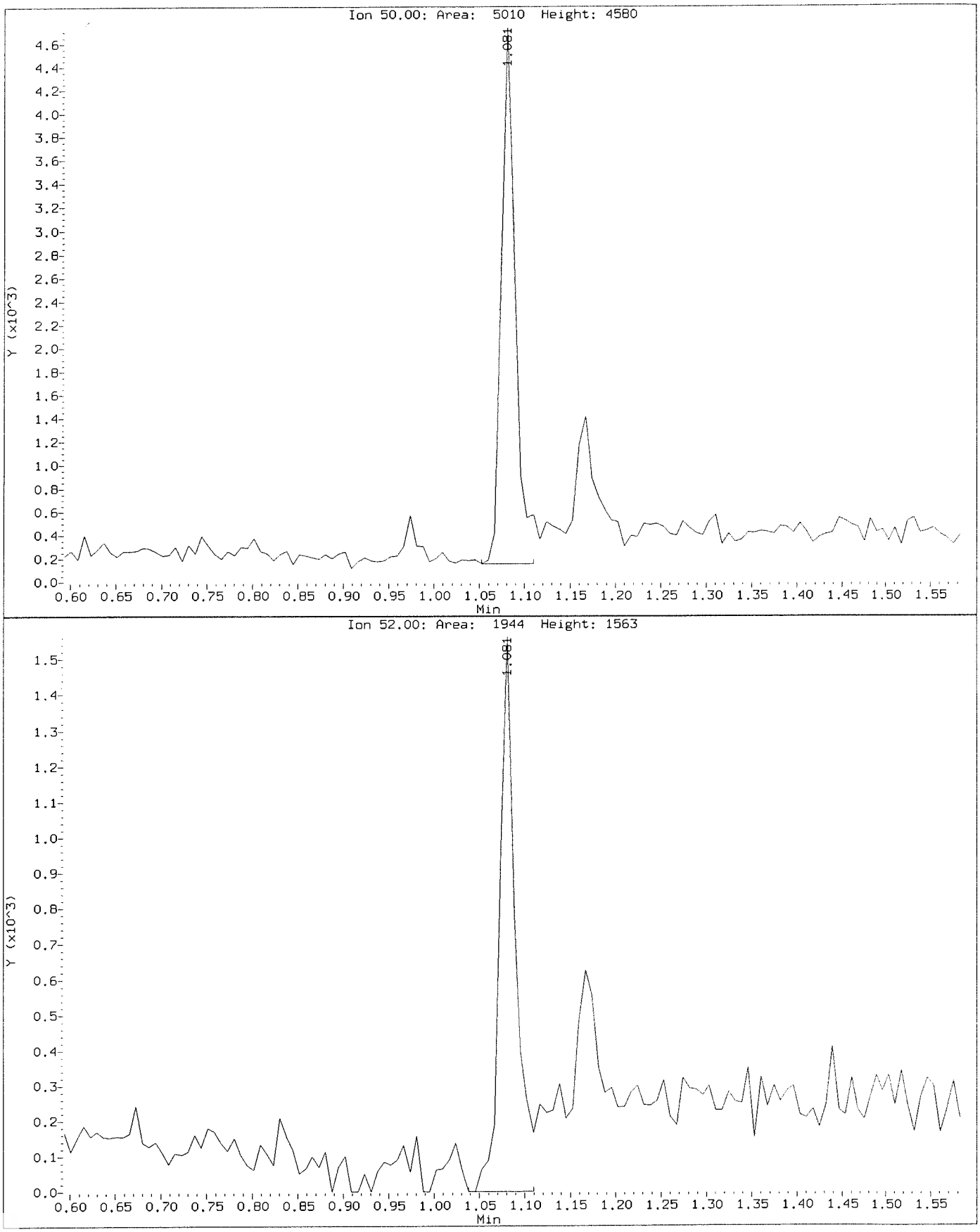
Compound: Bromomethane
CAS Number: 74-83-9





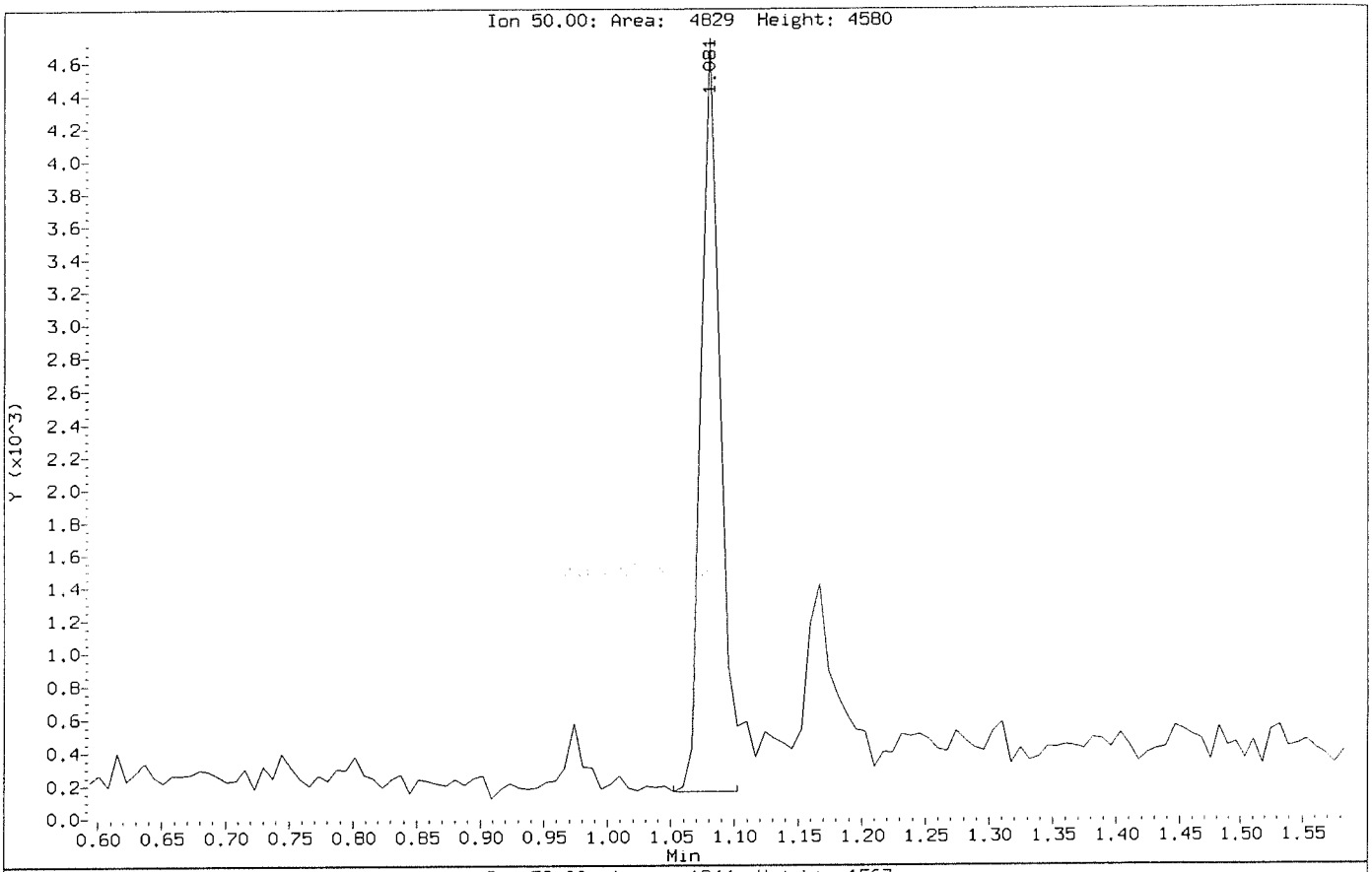
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Client Sample ID: VSTD000.5

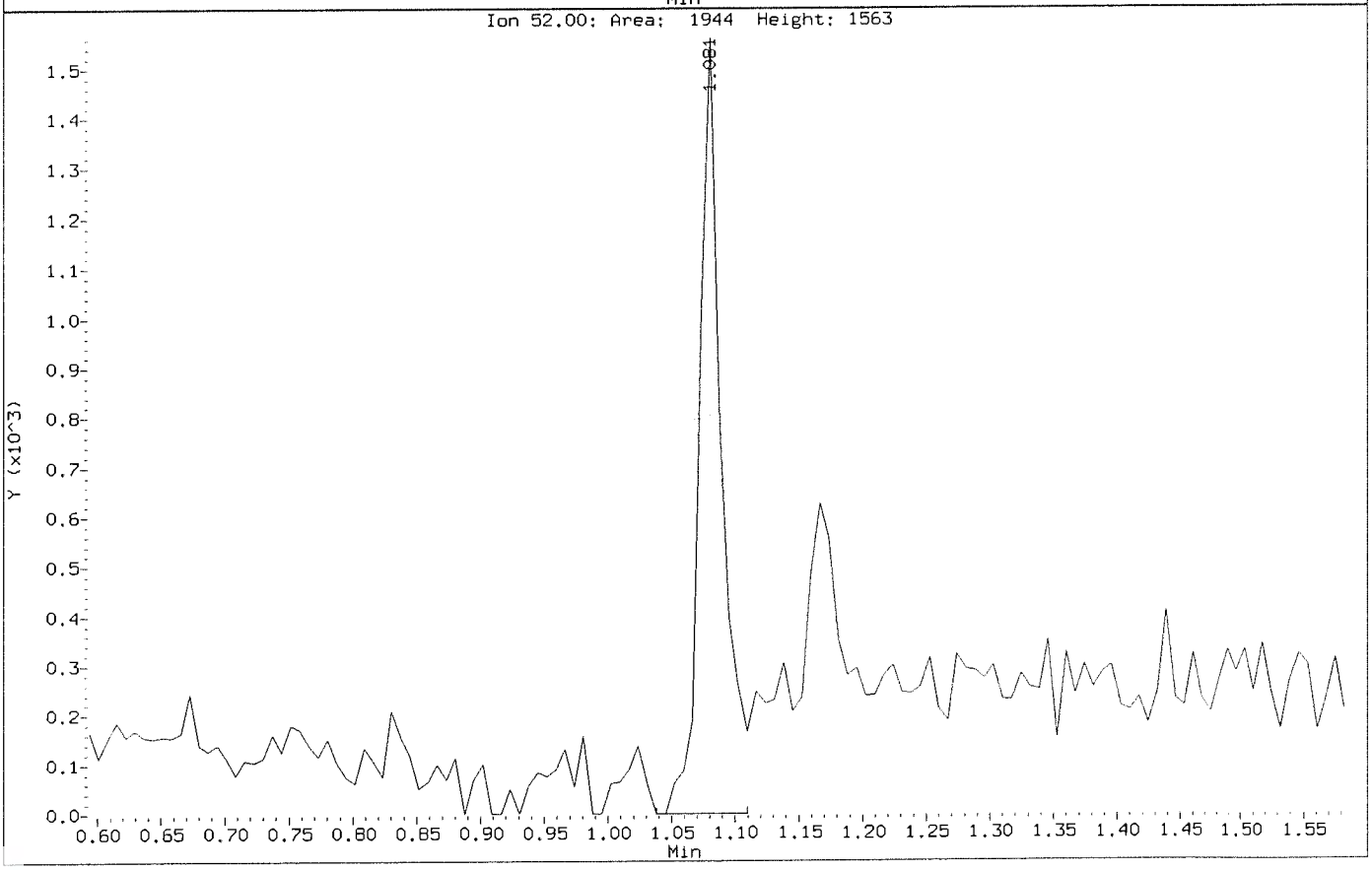
Compound: Chloromethane
CAS Number: 74-87-3



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

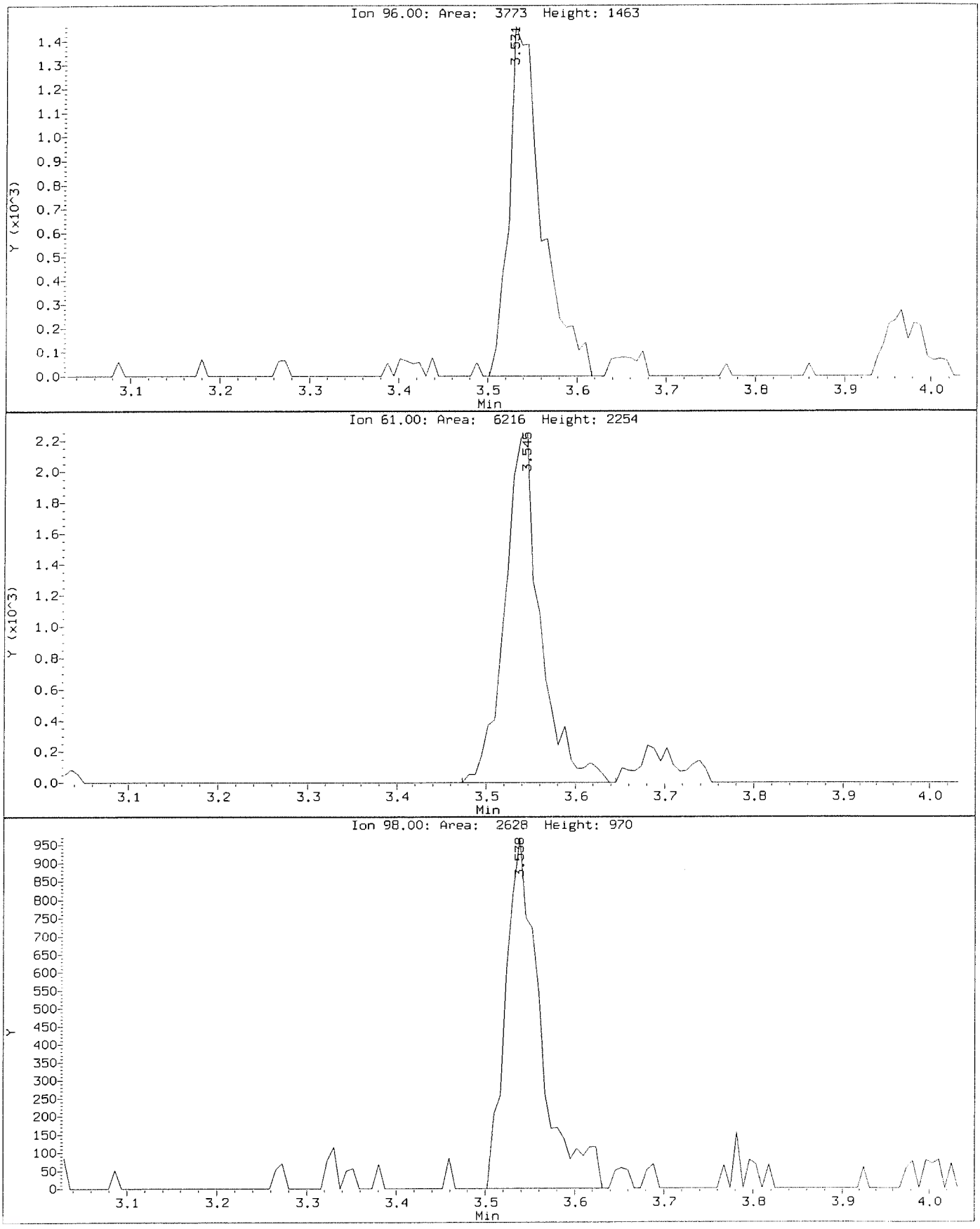
Compound: Chloromethane
CAS Number: 74-87-3





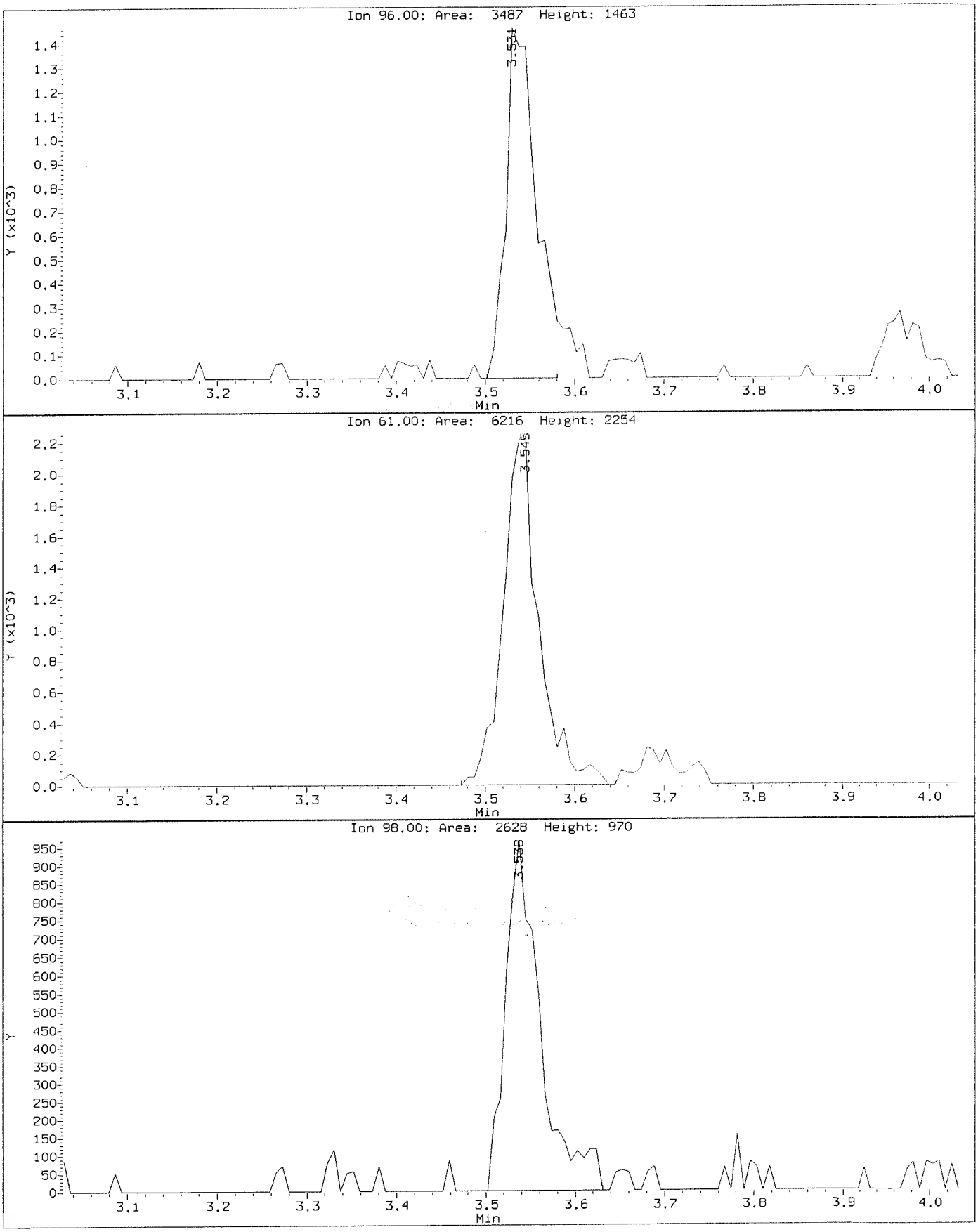
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



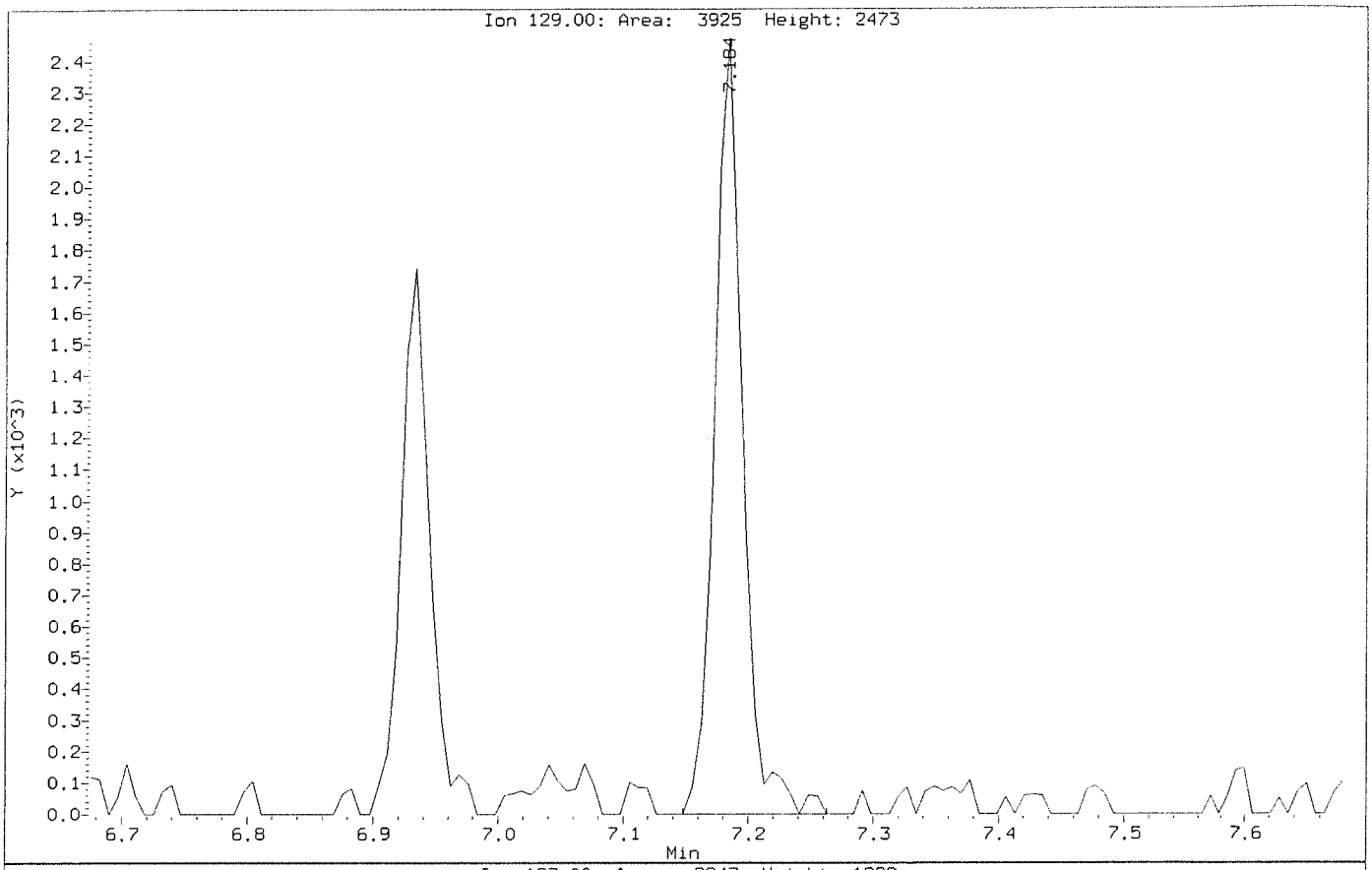
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Client Sample ID: VSTD000.5

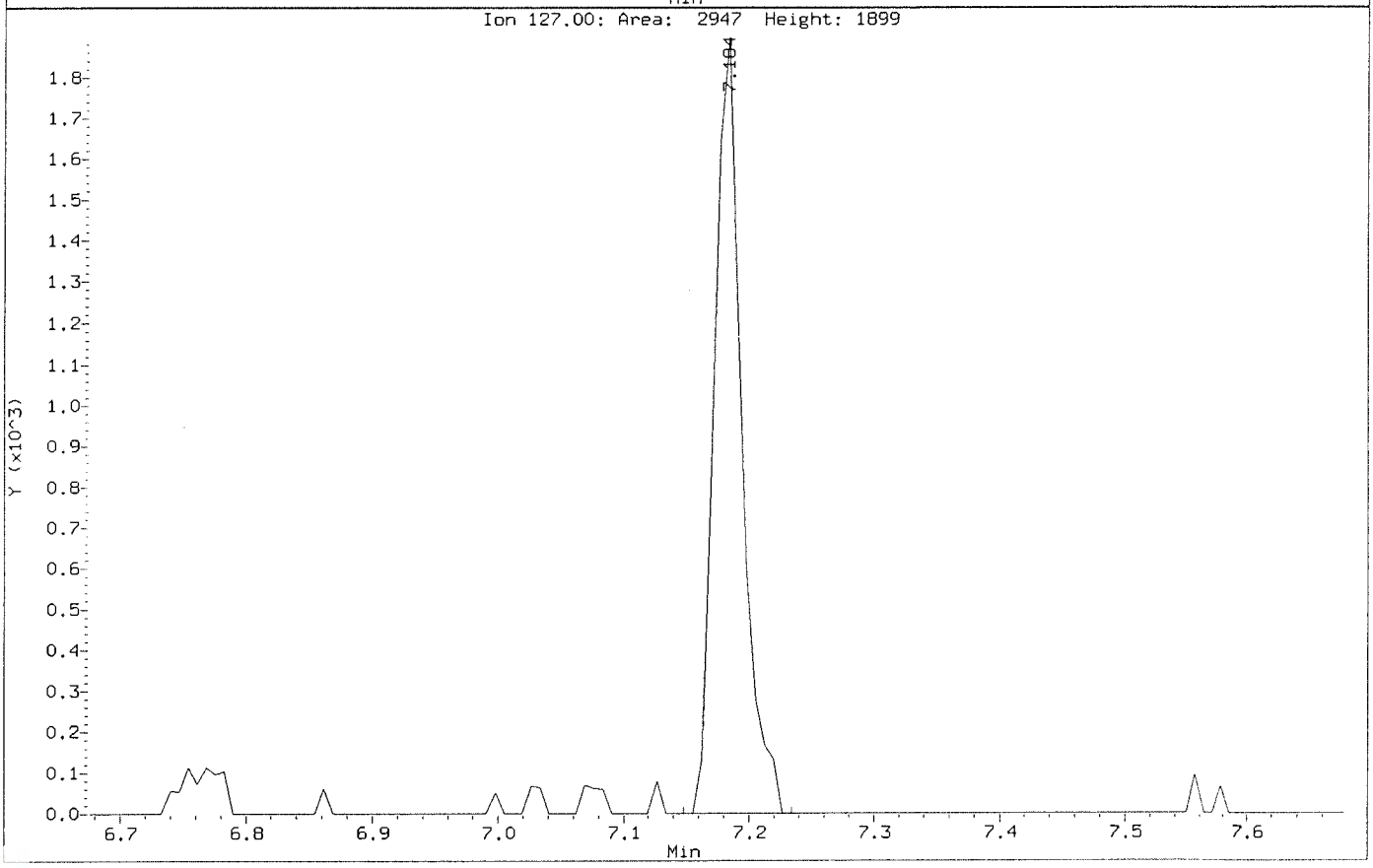
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



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

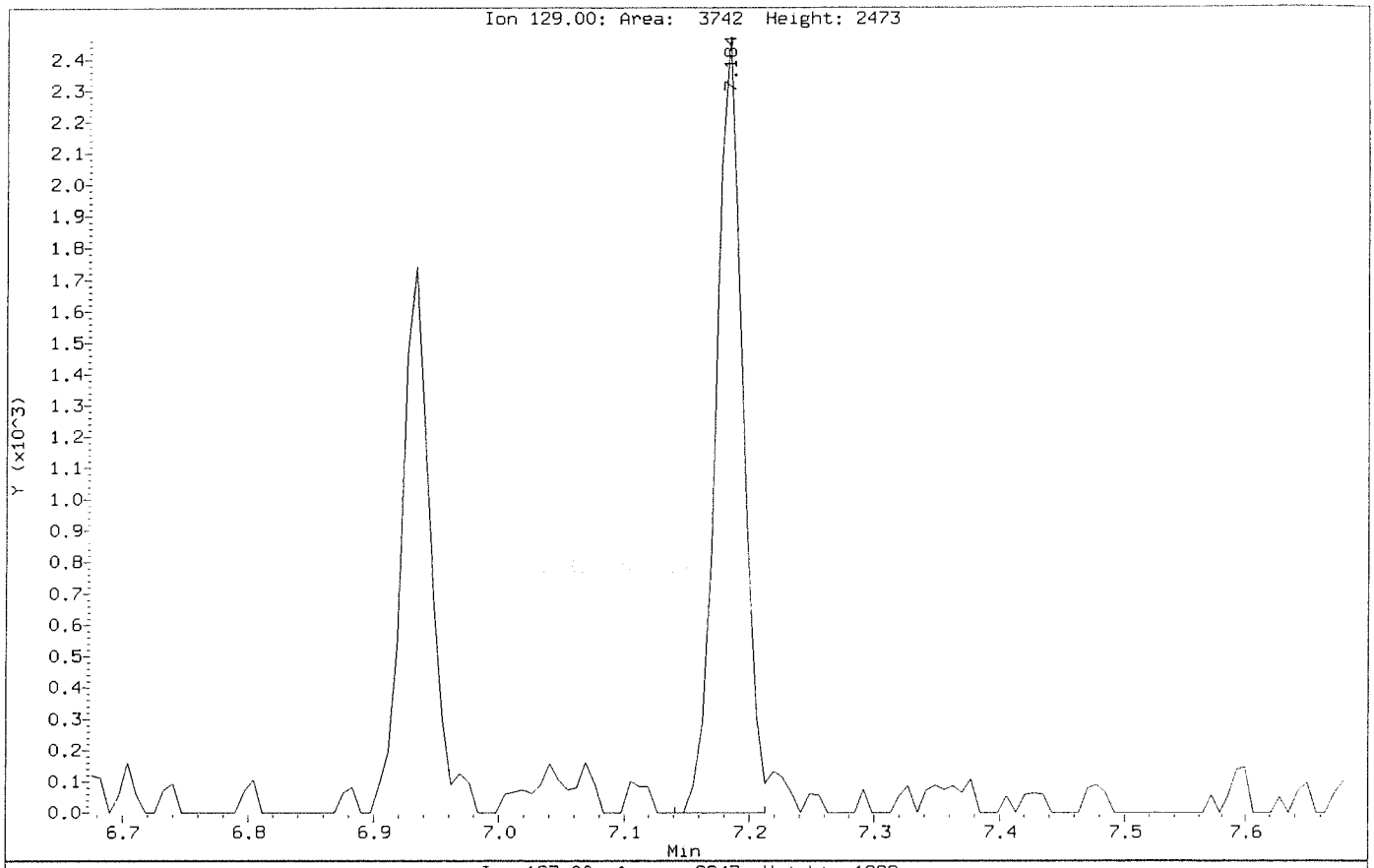
Compound: Dibromochloromethane
CAS Number: 124-48-1

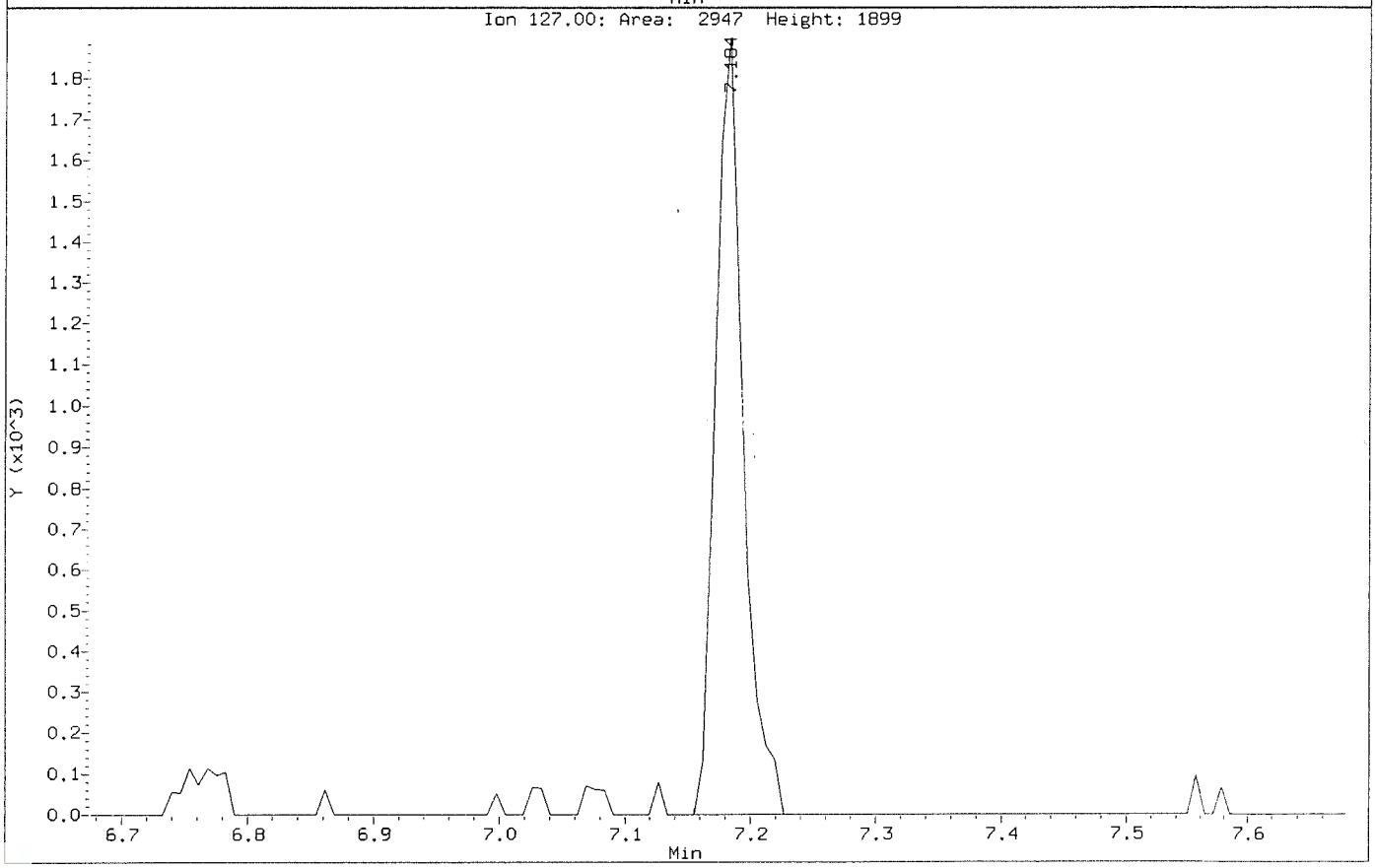




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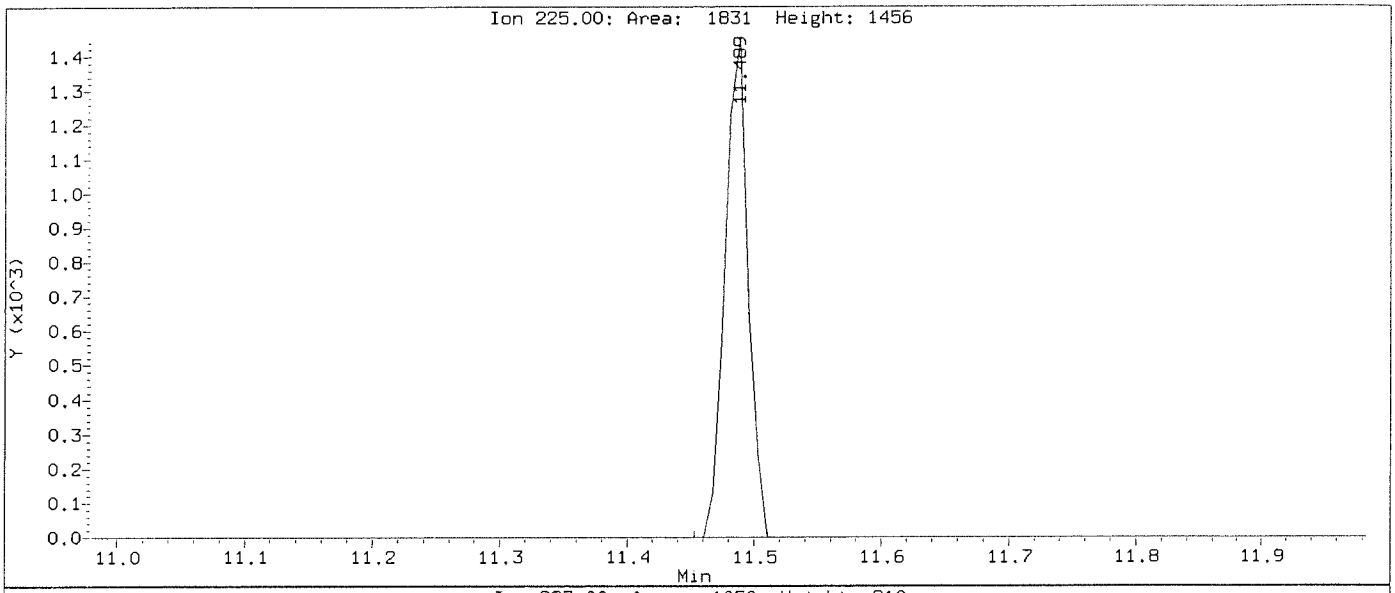
Compound: Dibromochloromethane
CAS Number: 124-48-1

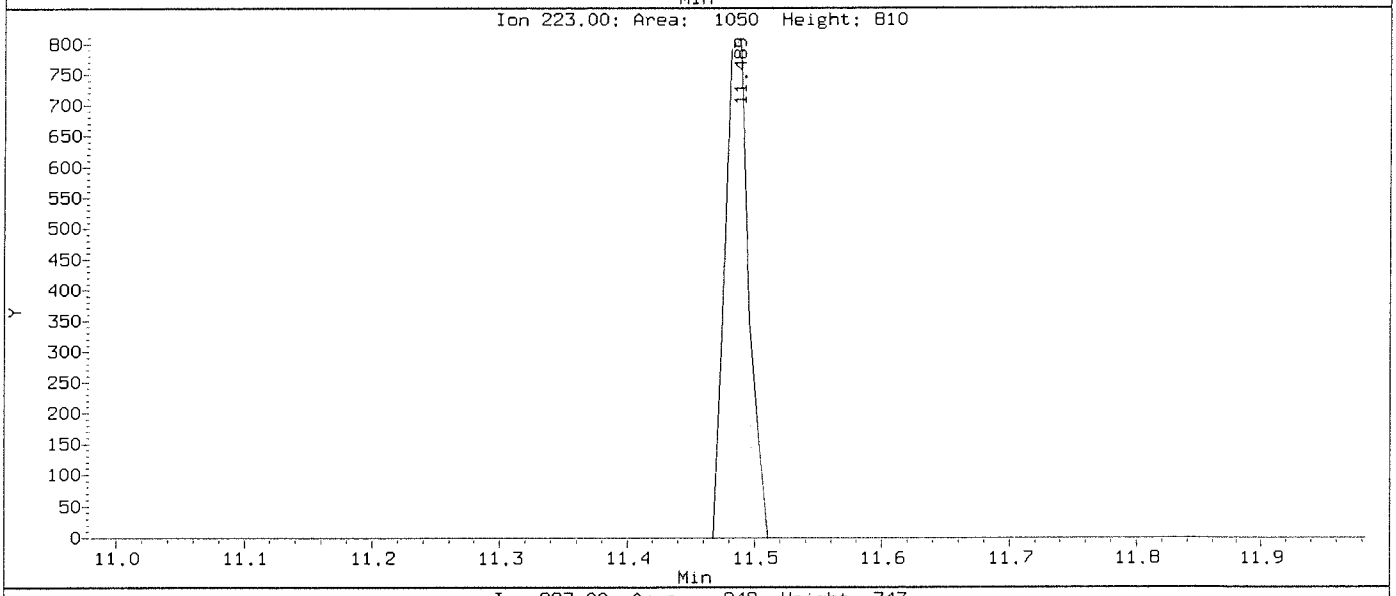


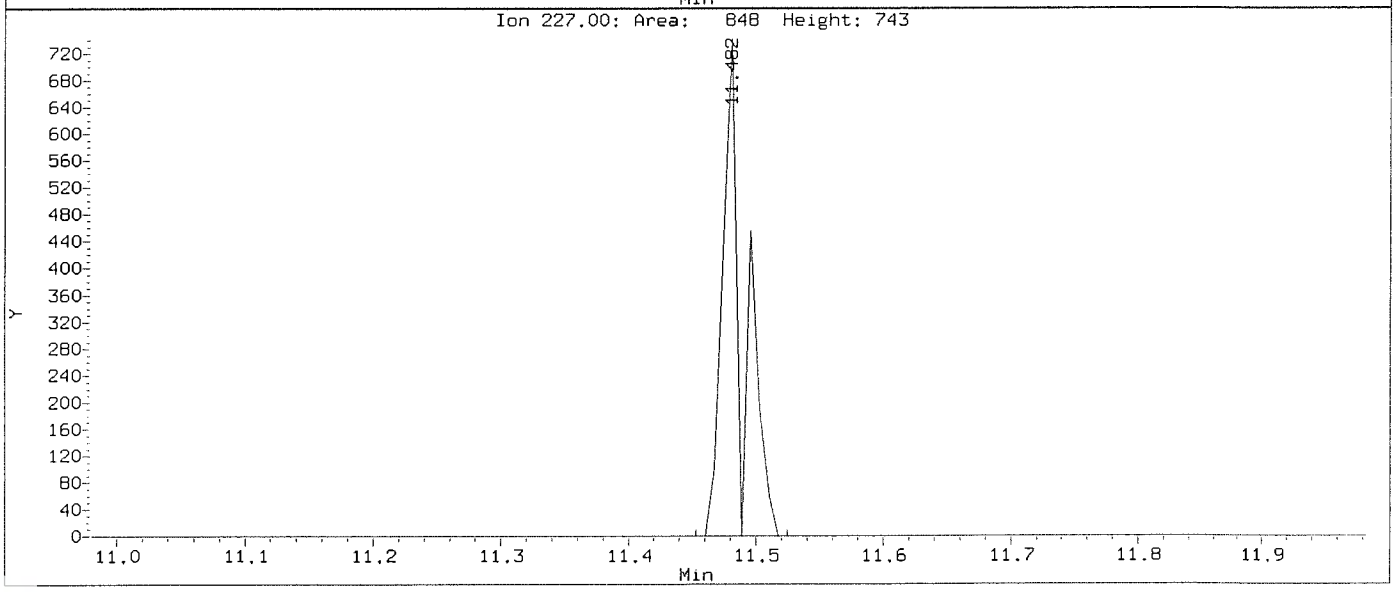


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

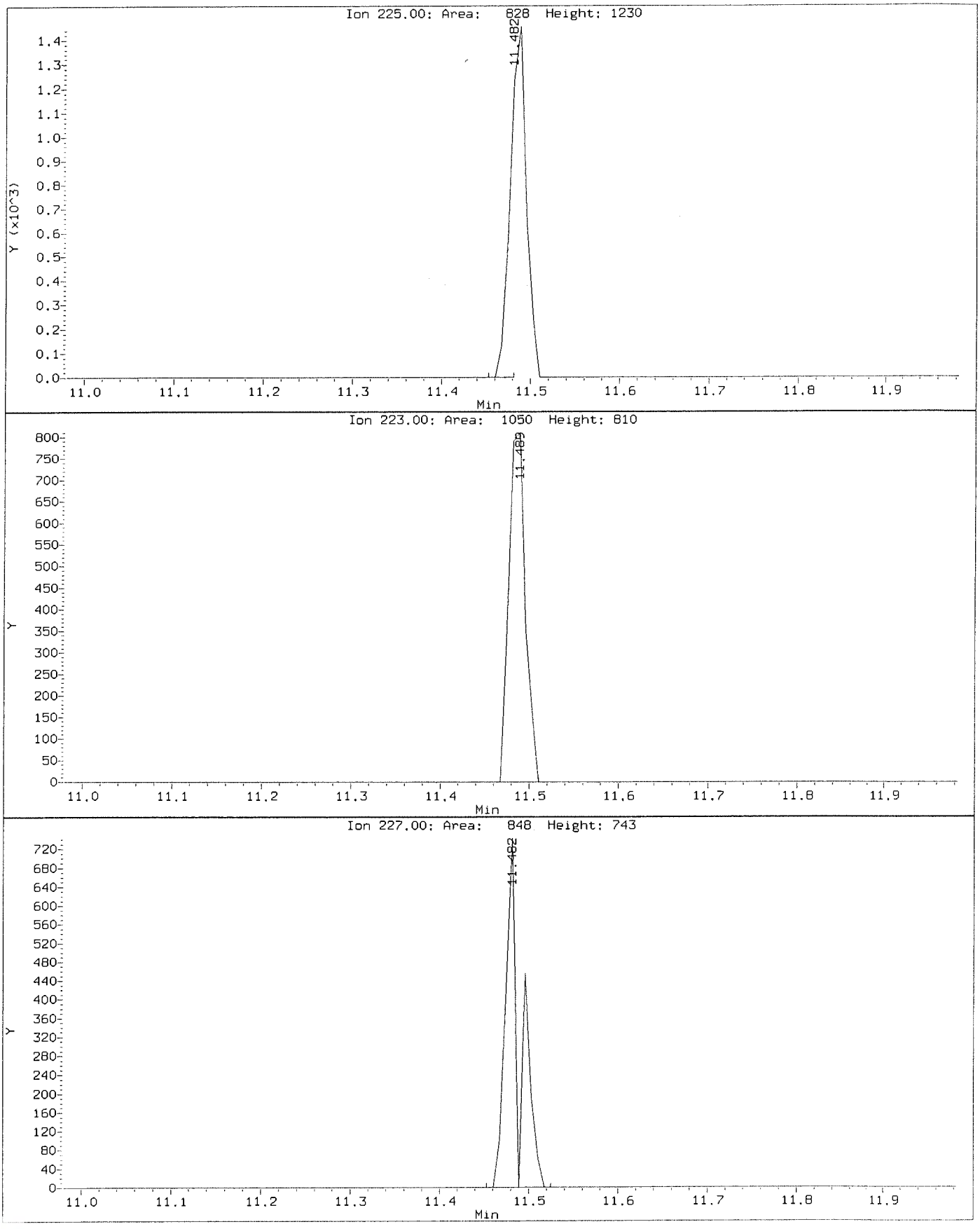






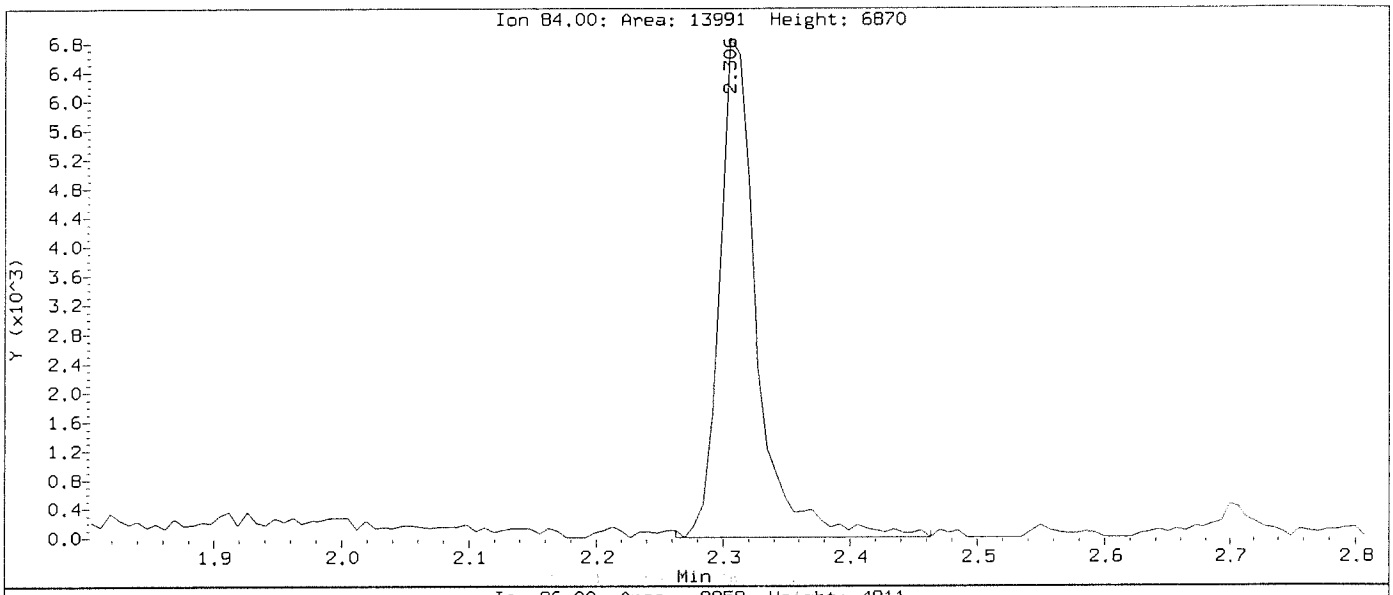
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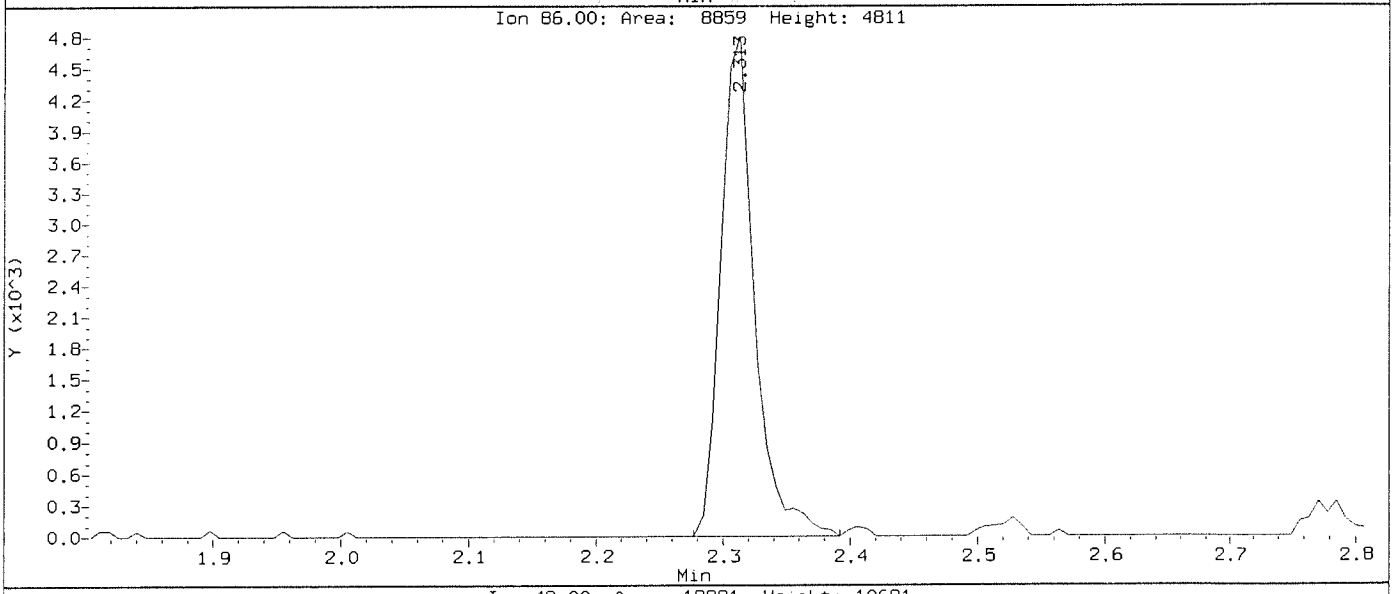
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

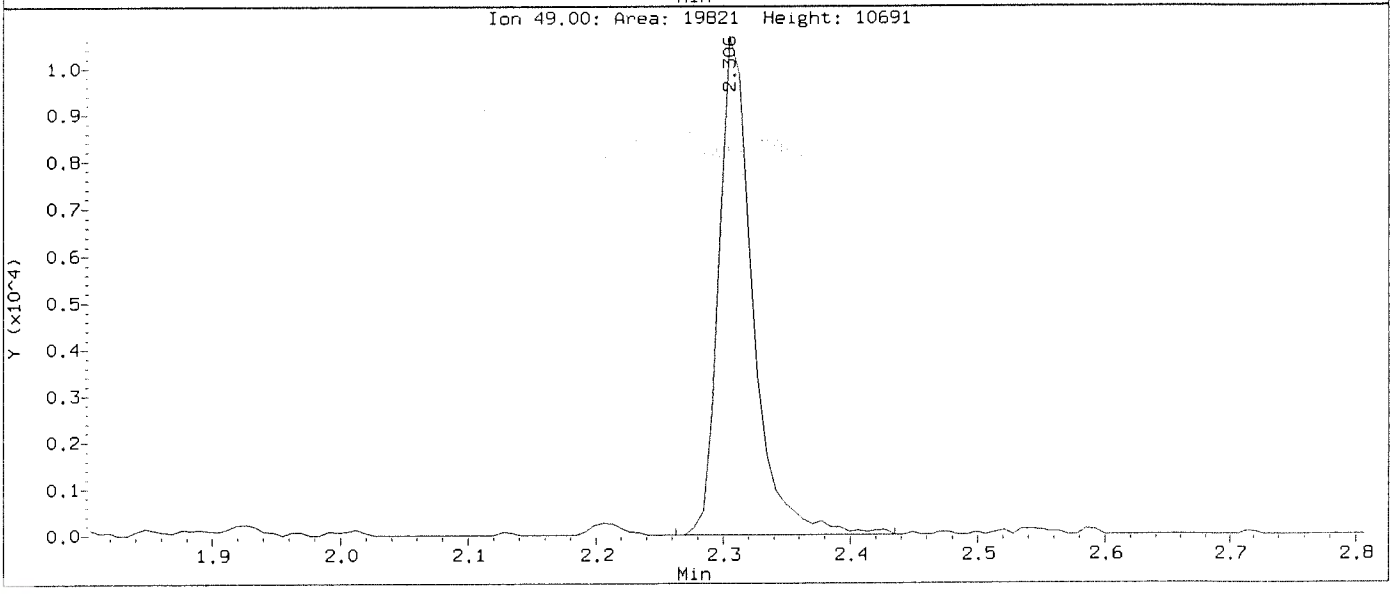


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

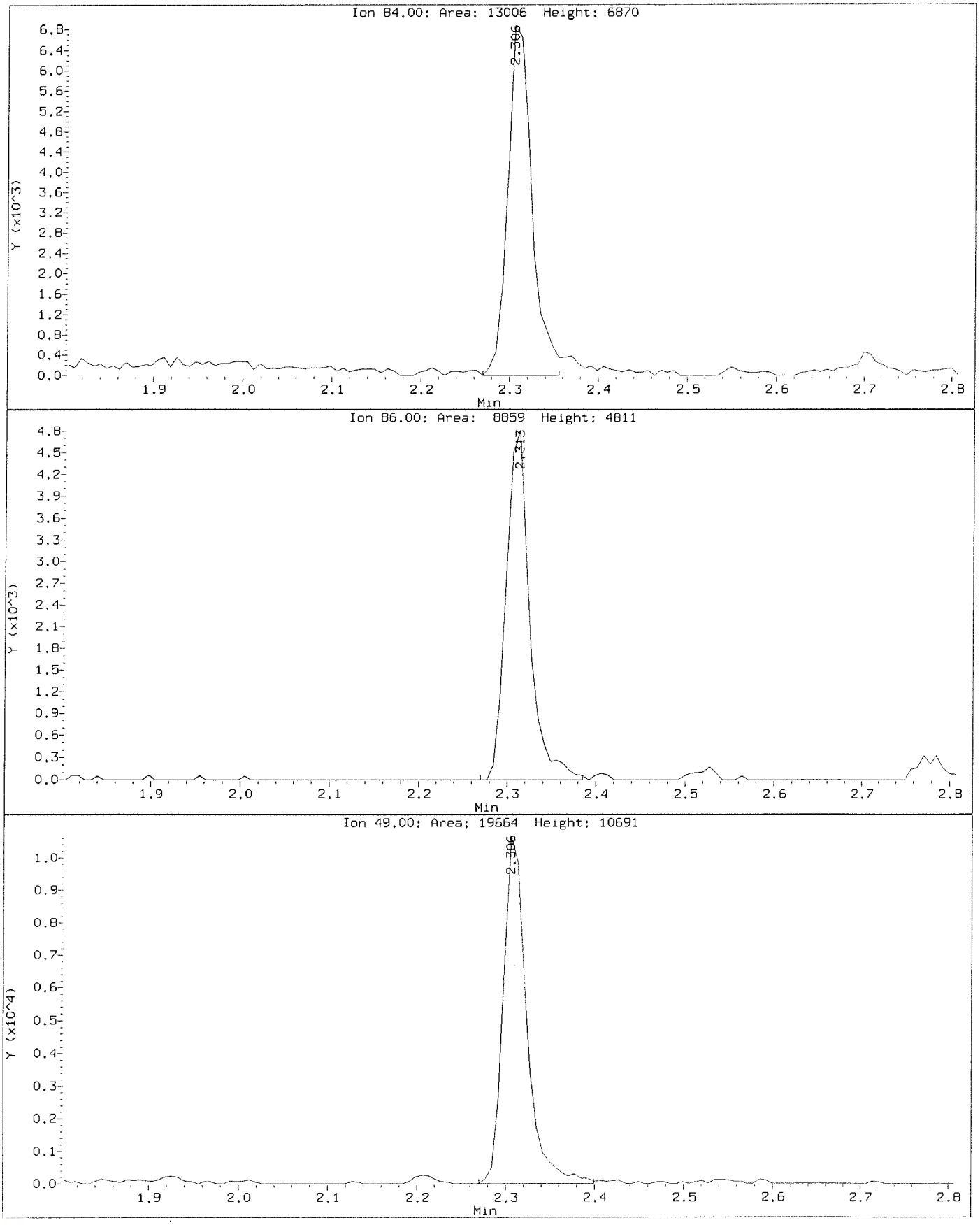






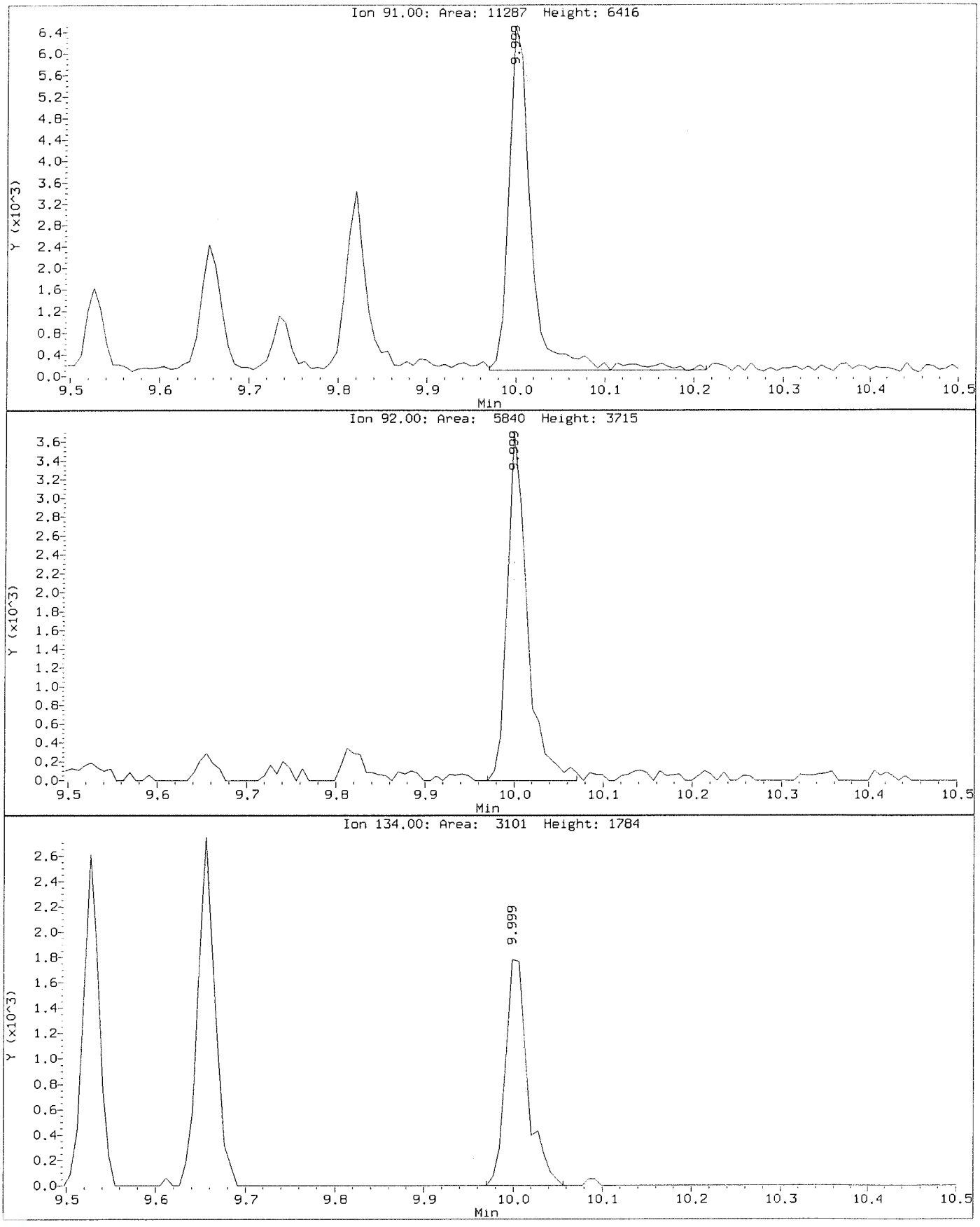
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



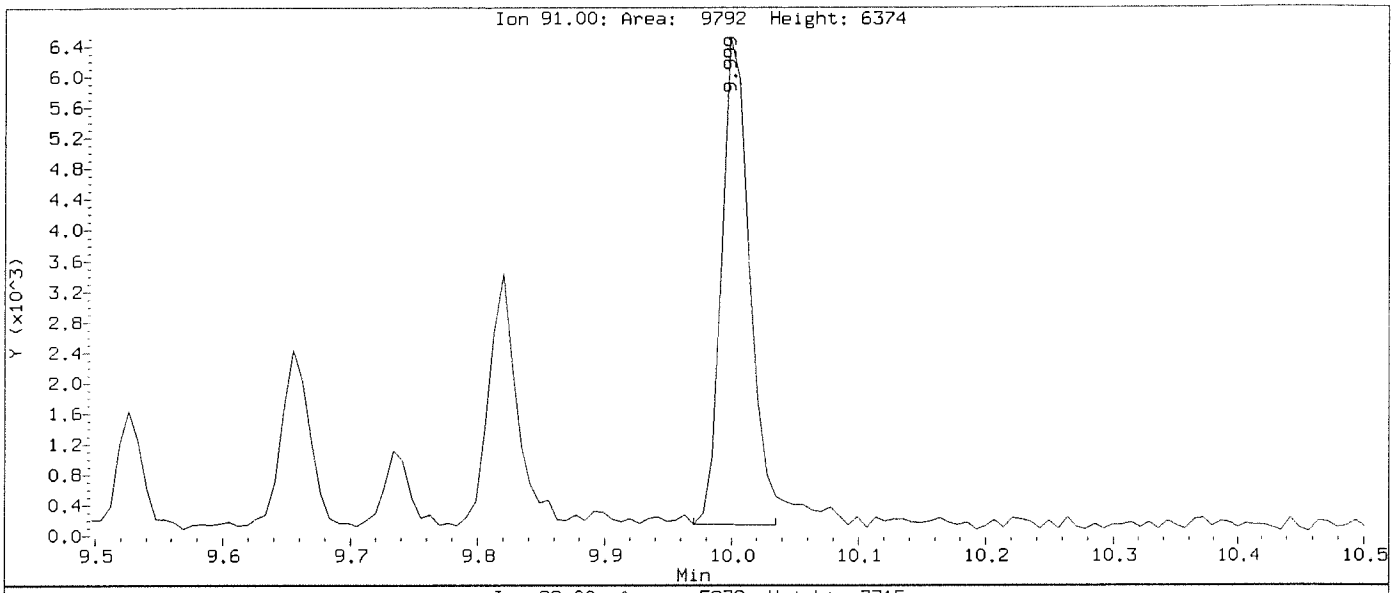
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Injection Date: 03-AUG-2020 12:04
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Client Sample ID: VSTD000.5

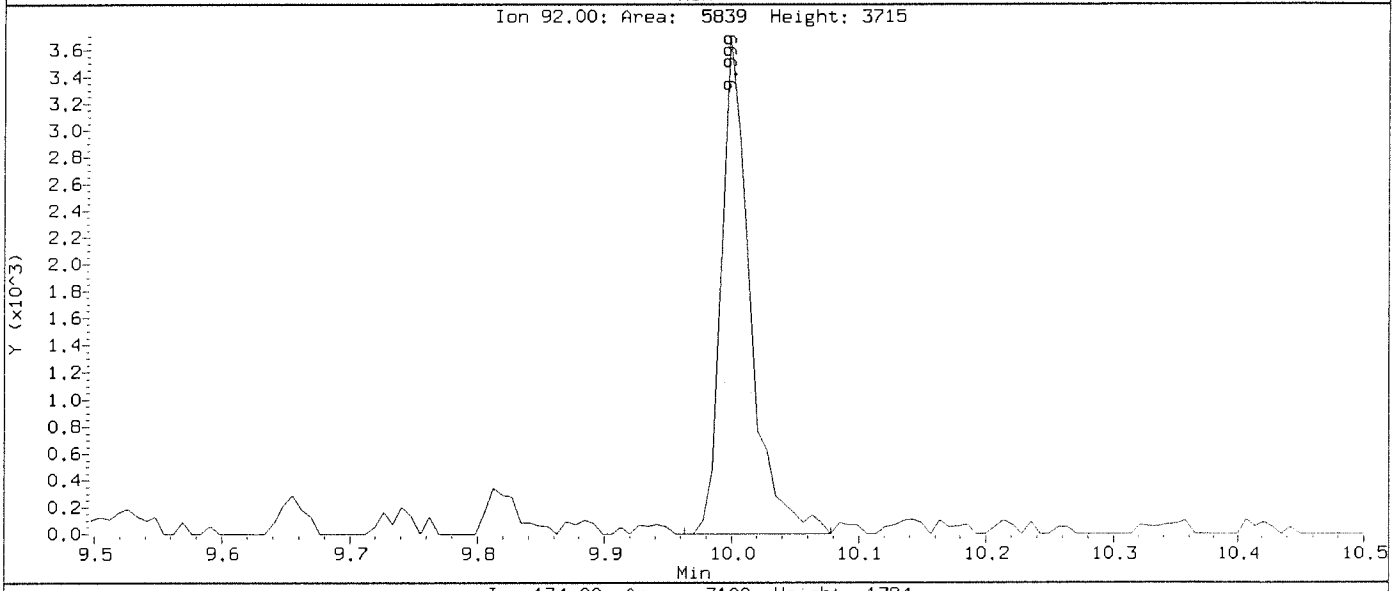
Compound: n-Butylbenzene
CAS Number: 104-51-8

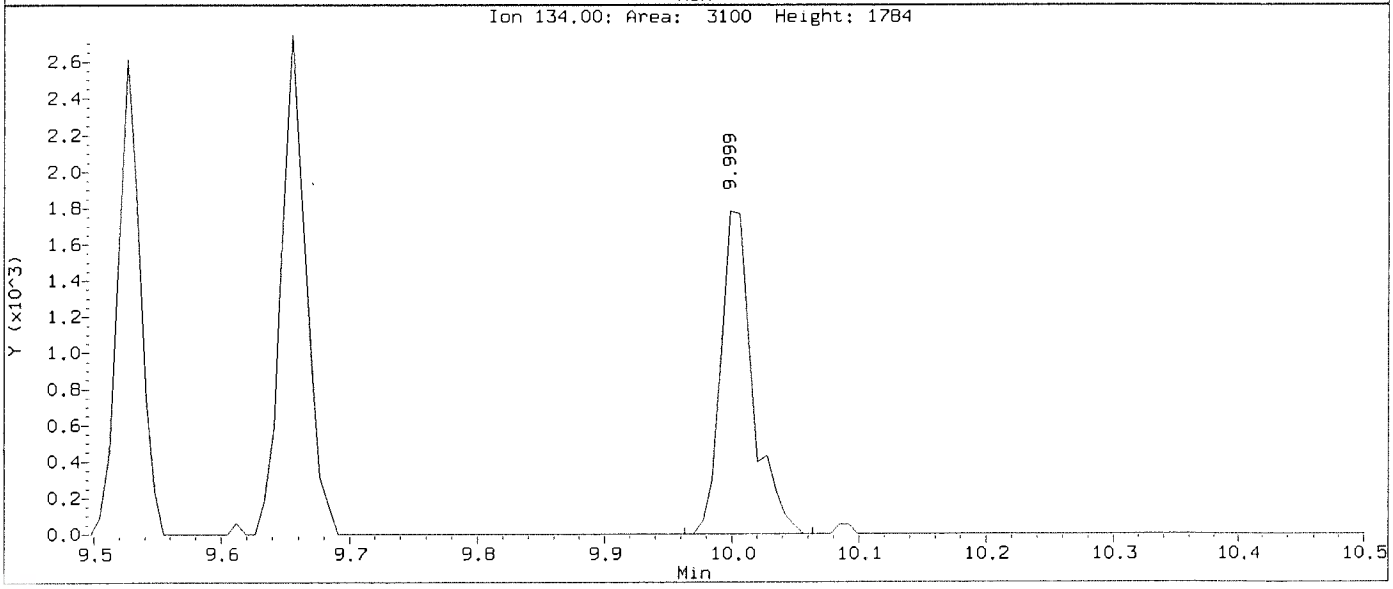


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

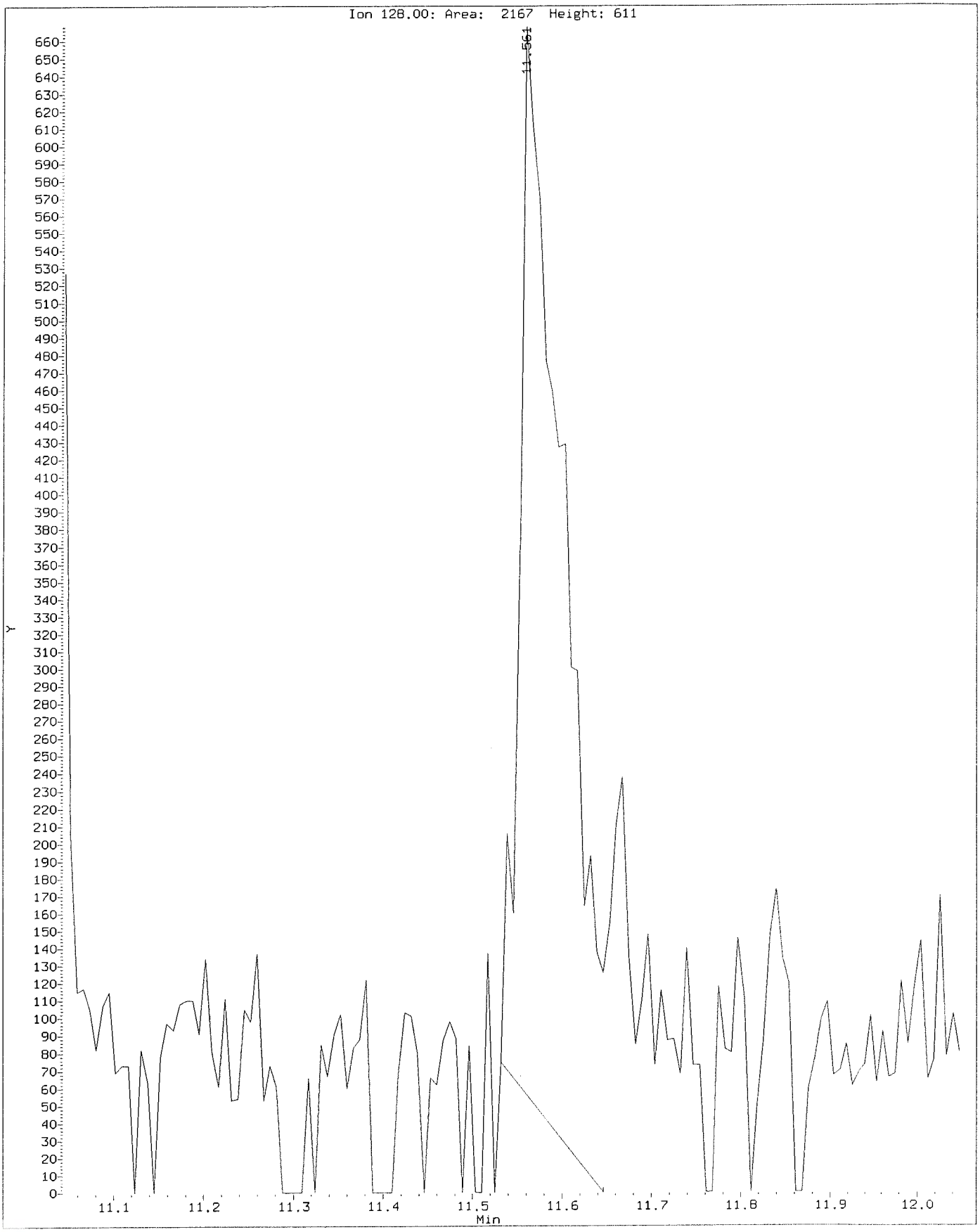






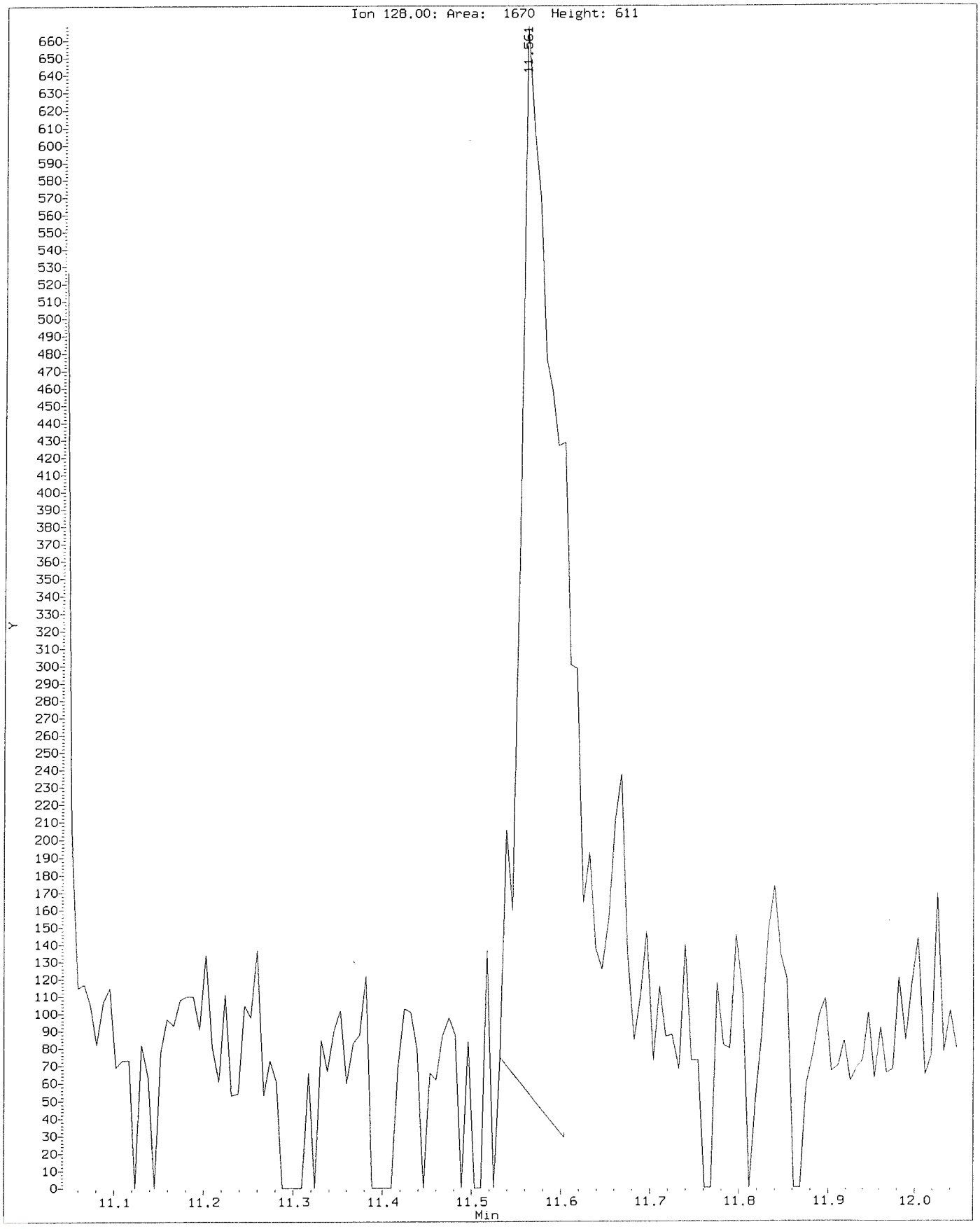
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



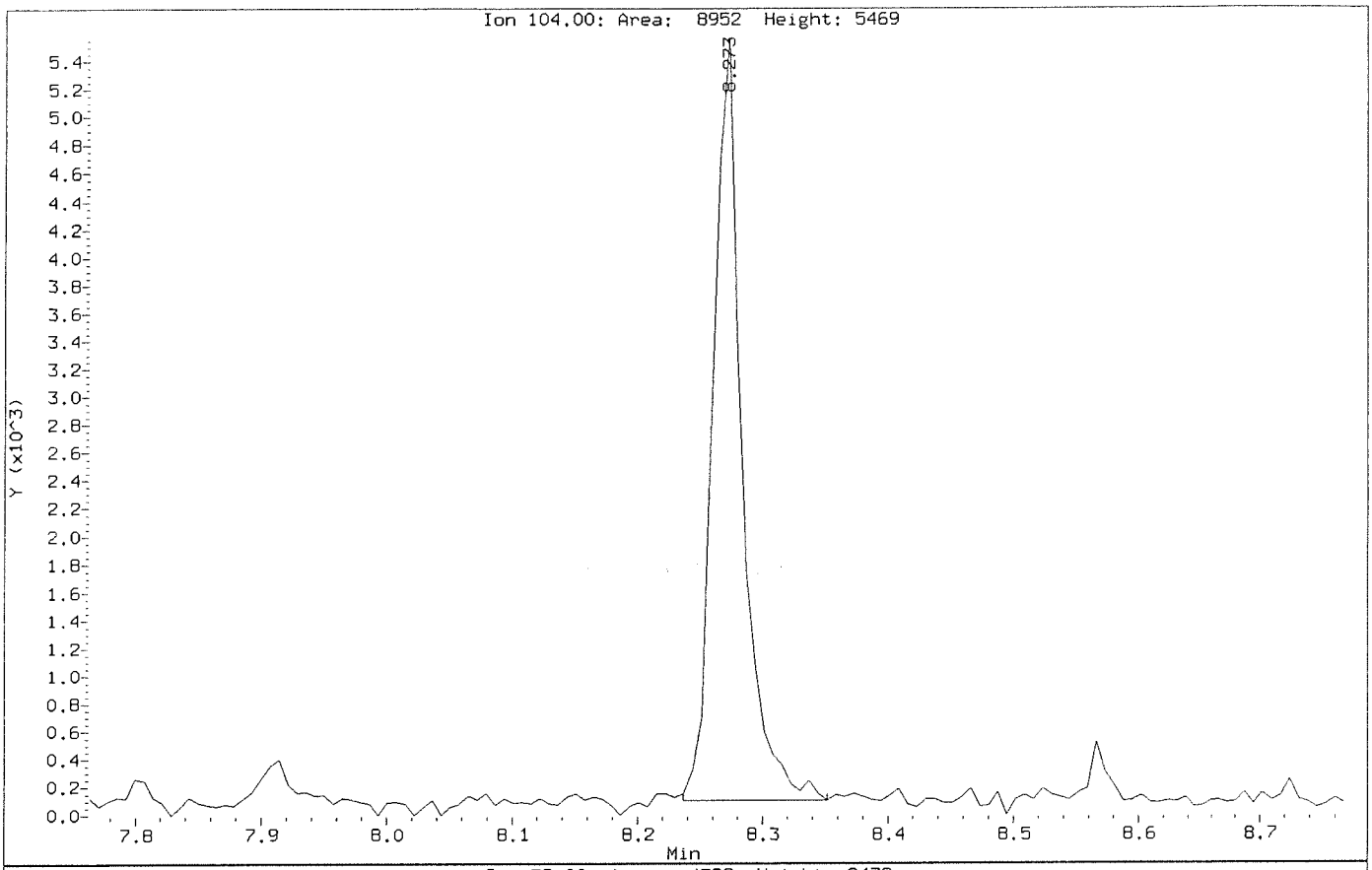
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Client Sample ID: VSTD000.5

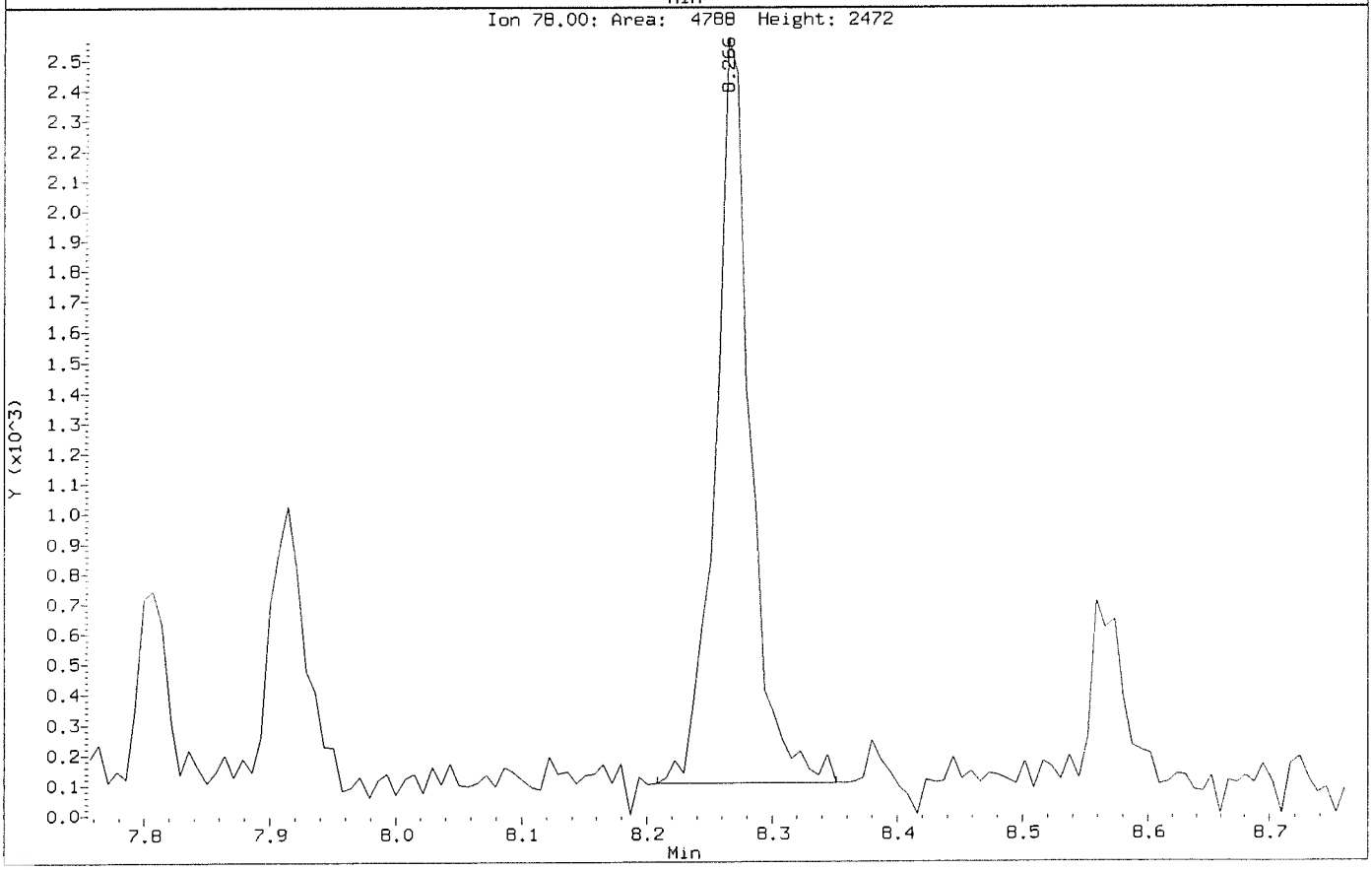
Compound: Naphthalene
CAS Number: 91-20-3



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

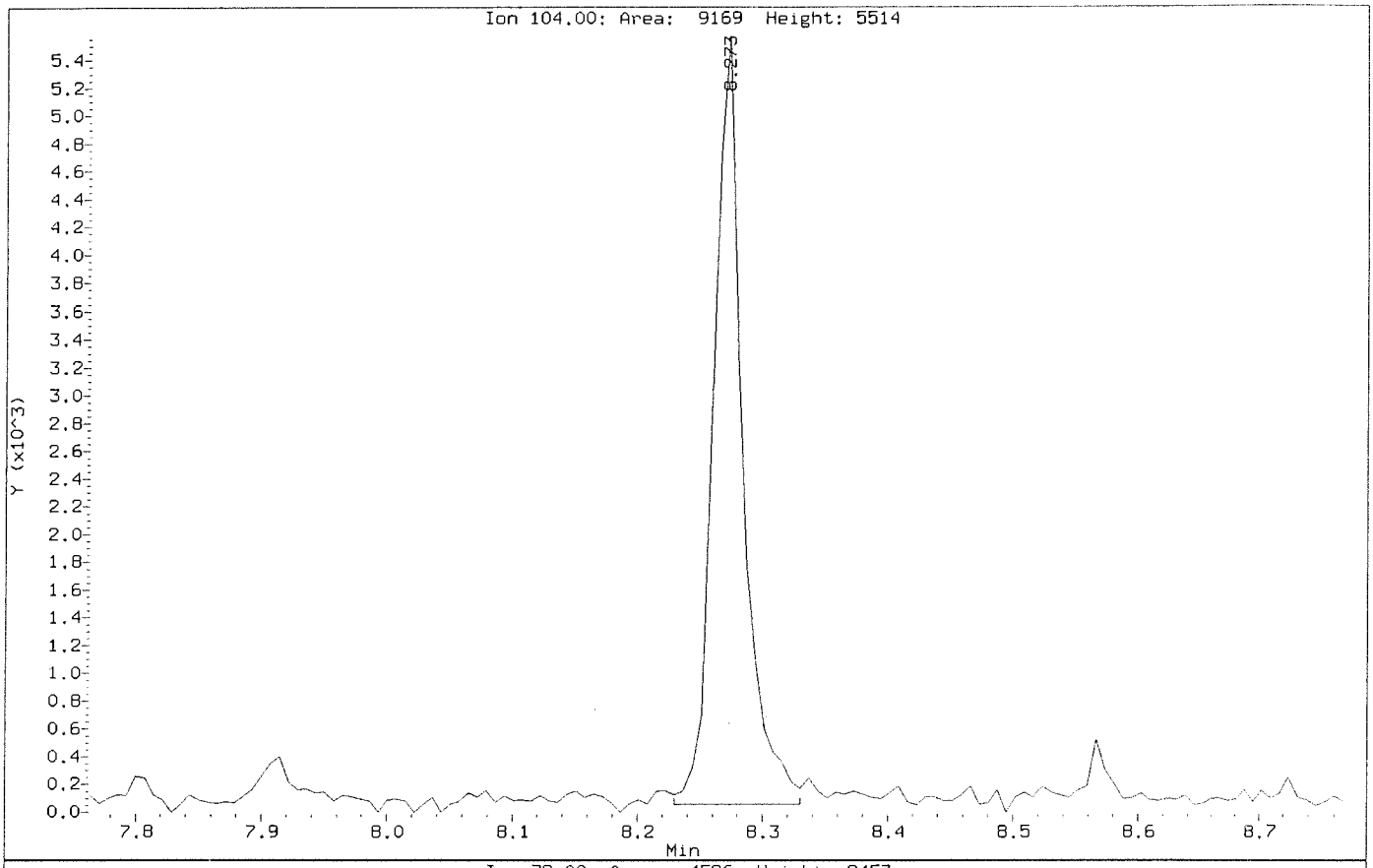
Compound: Styrene
CAS Number: 100-42-5

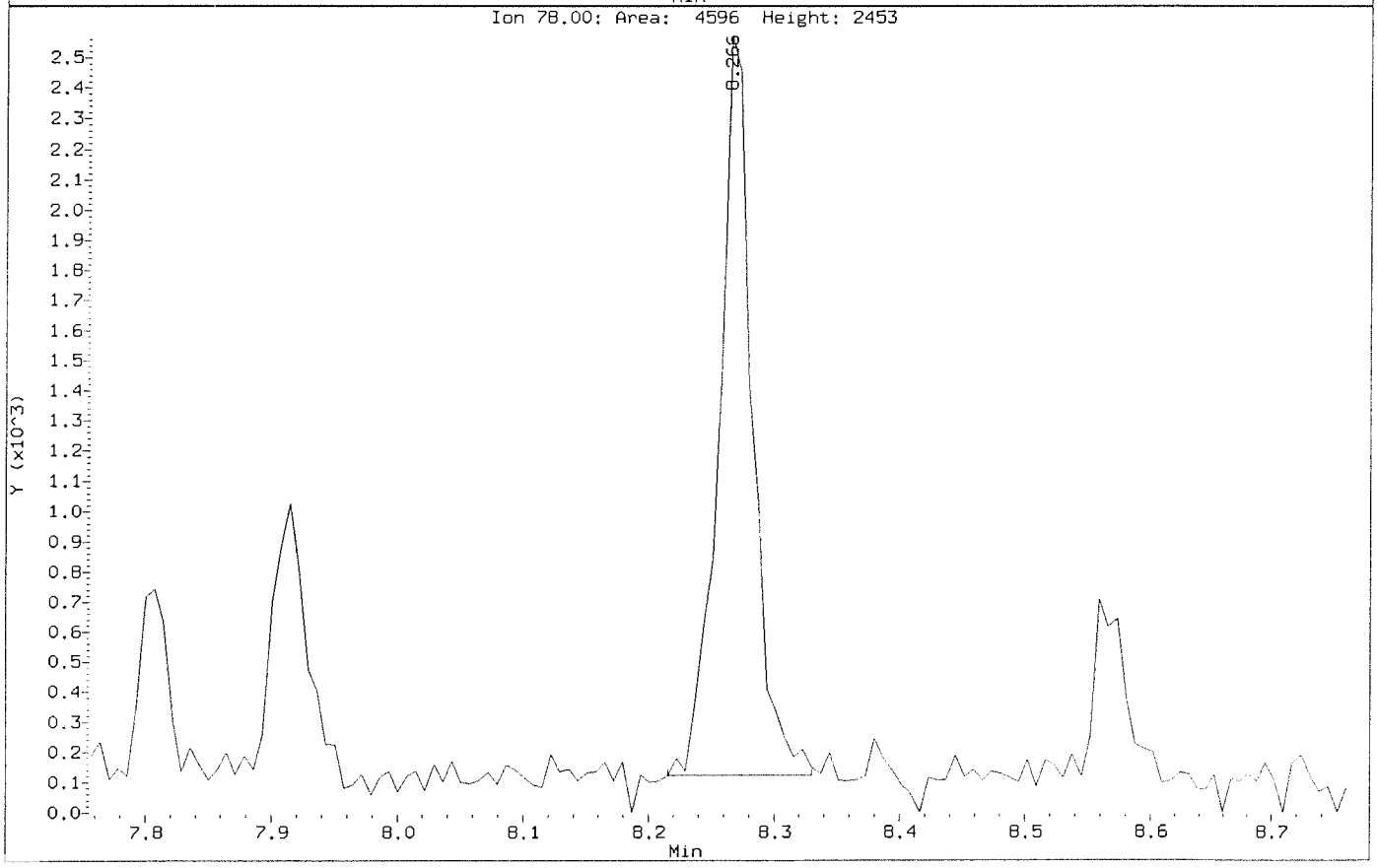




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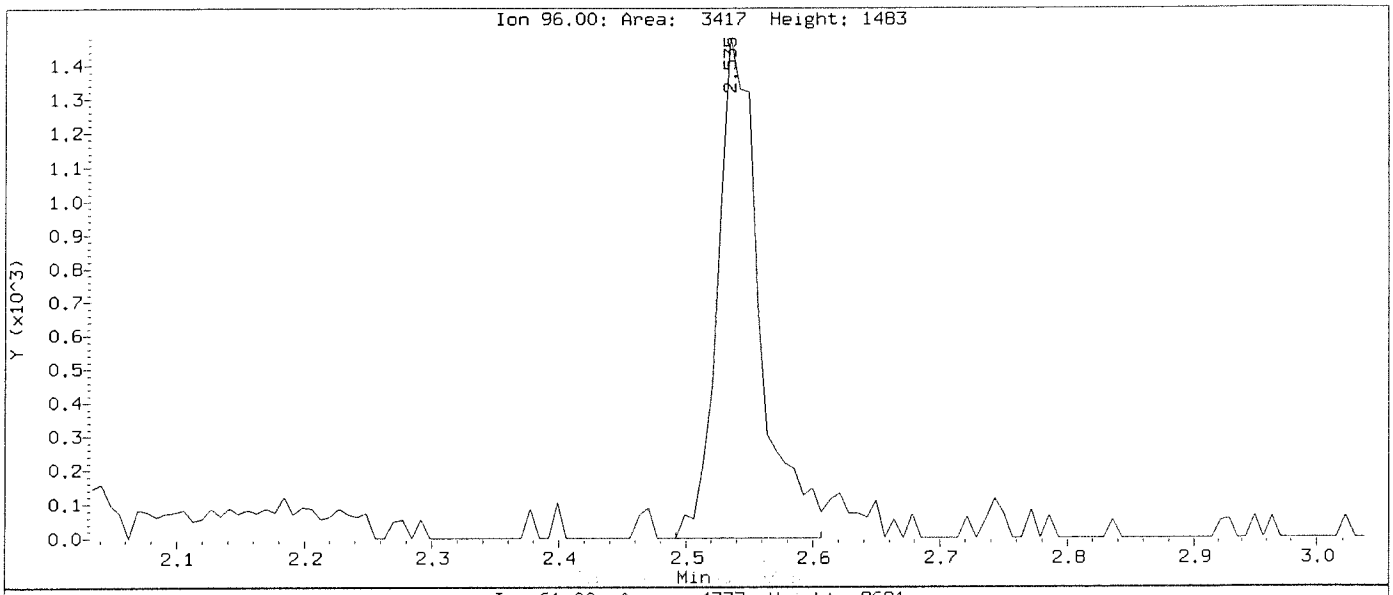
Compound: Styrene
CAS Number: 100-42-5

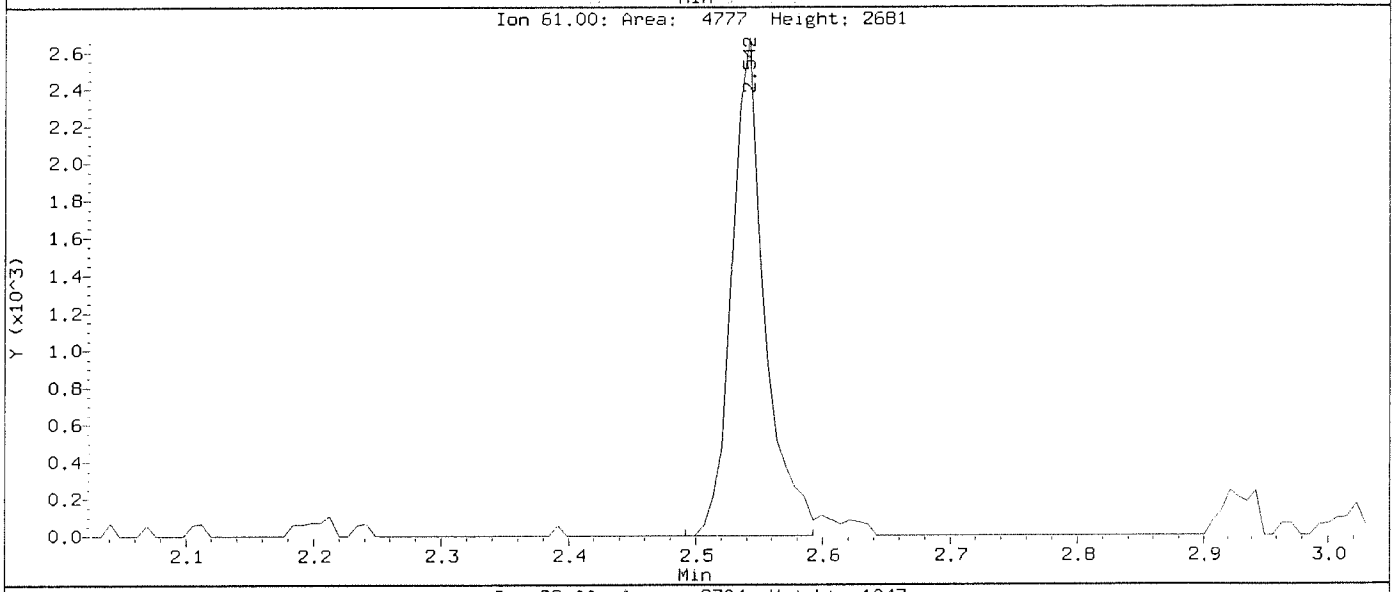


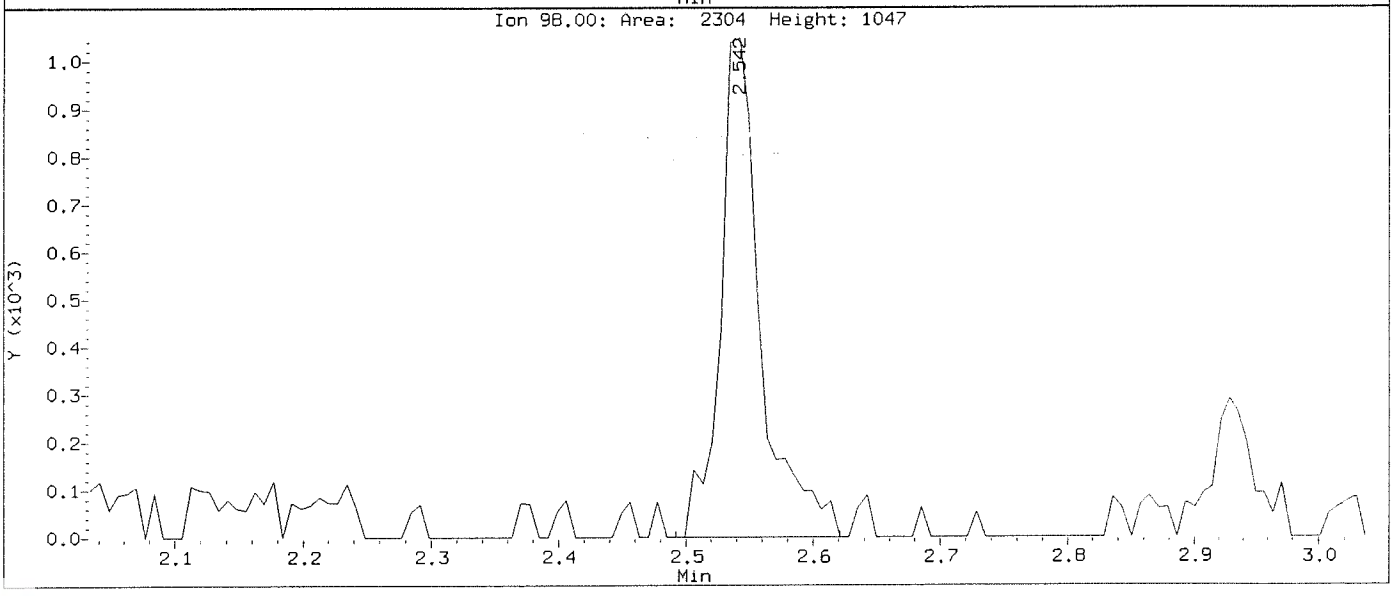


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

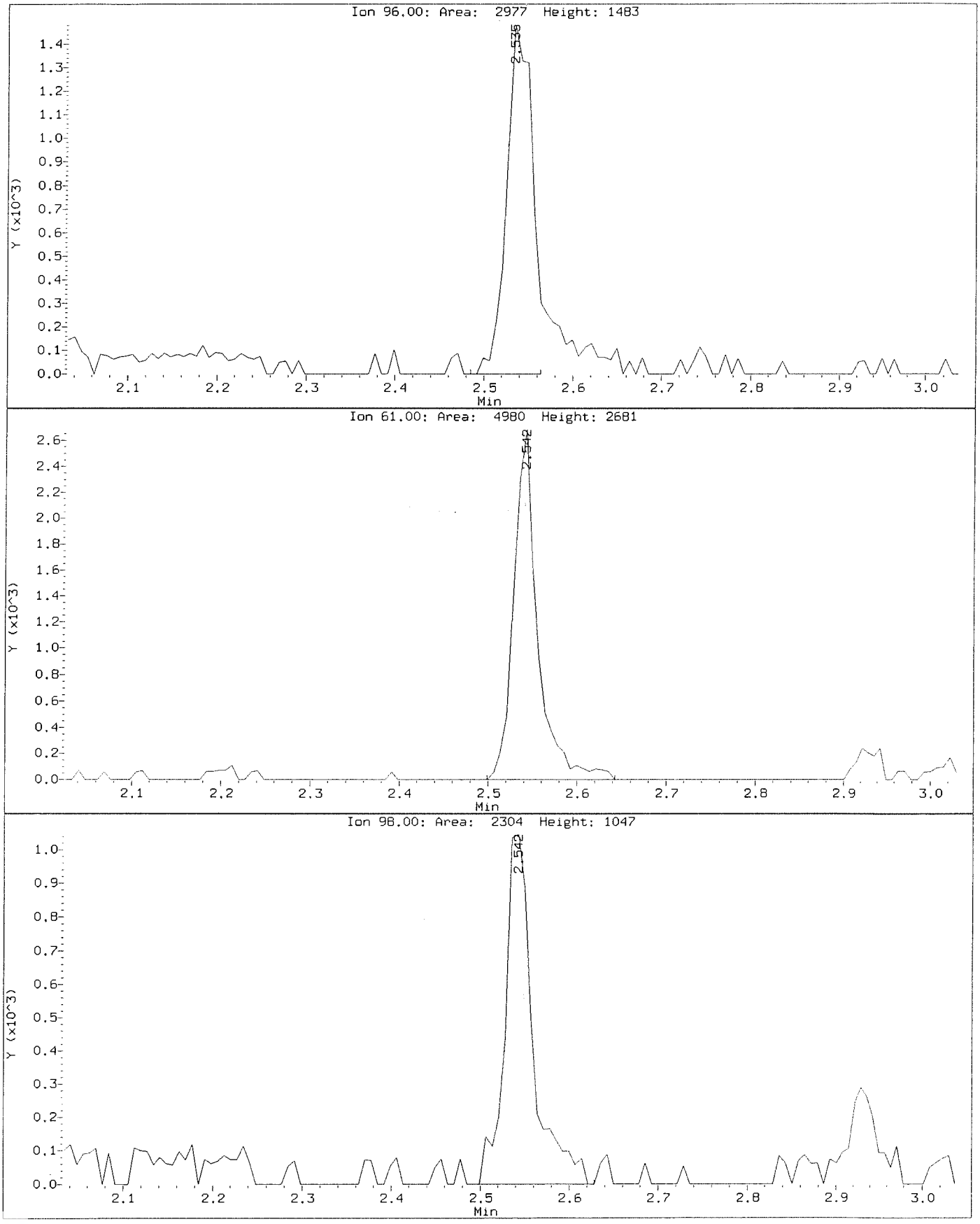






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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 1
Report Date: 22-Aug-2020 11:54

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

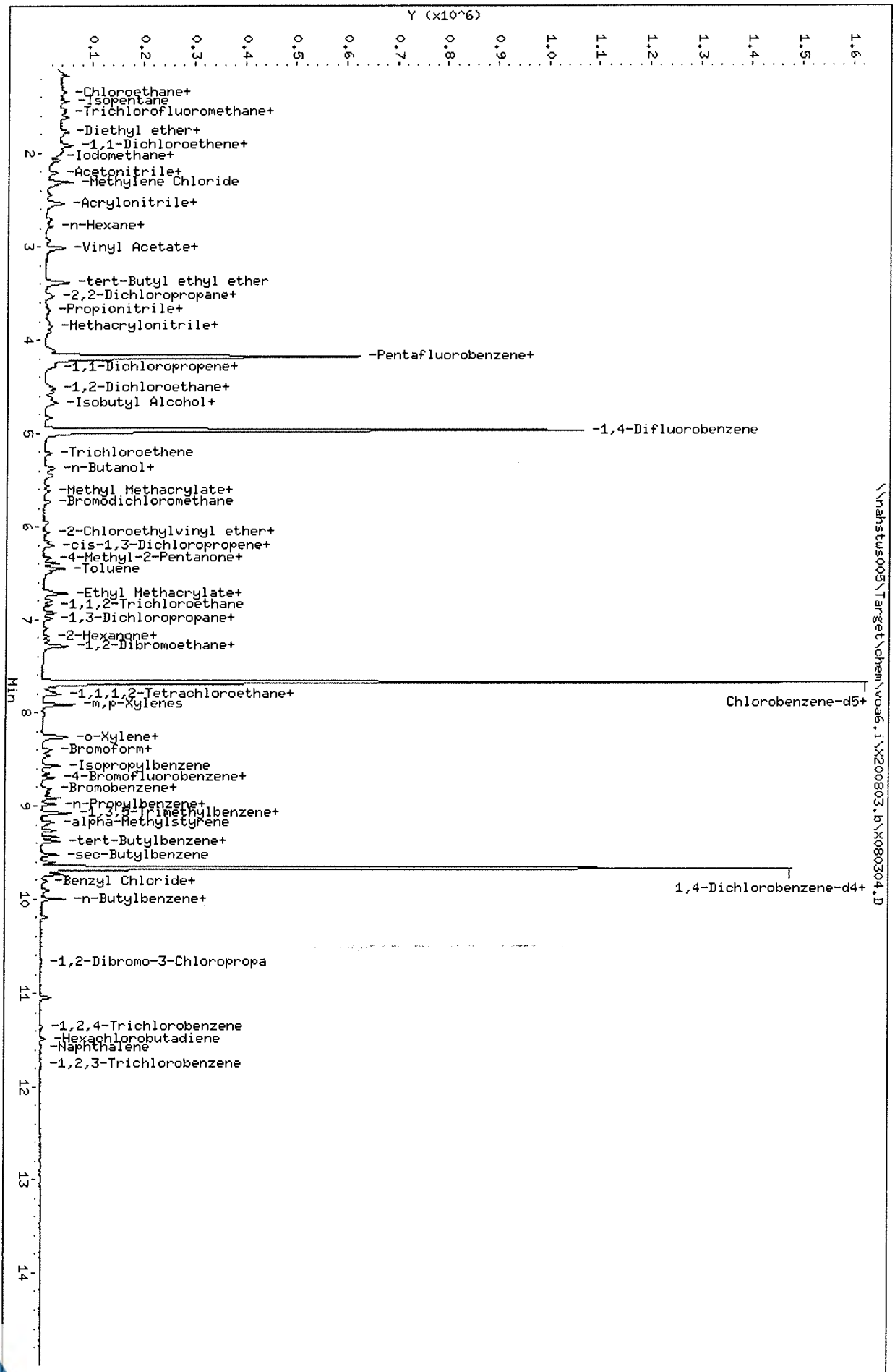
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539031	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	824218	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	742459	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

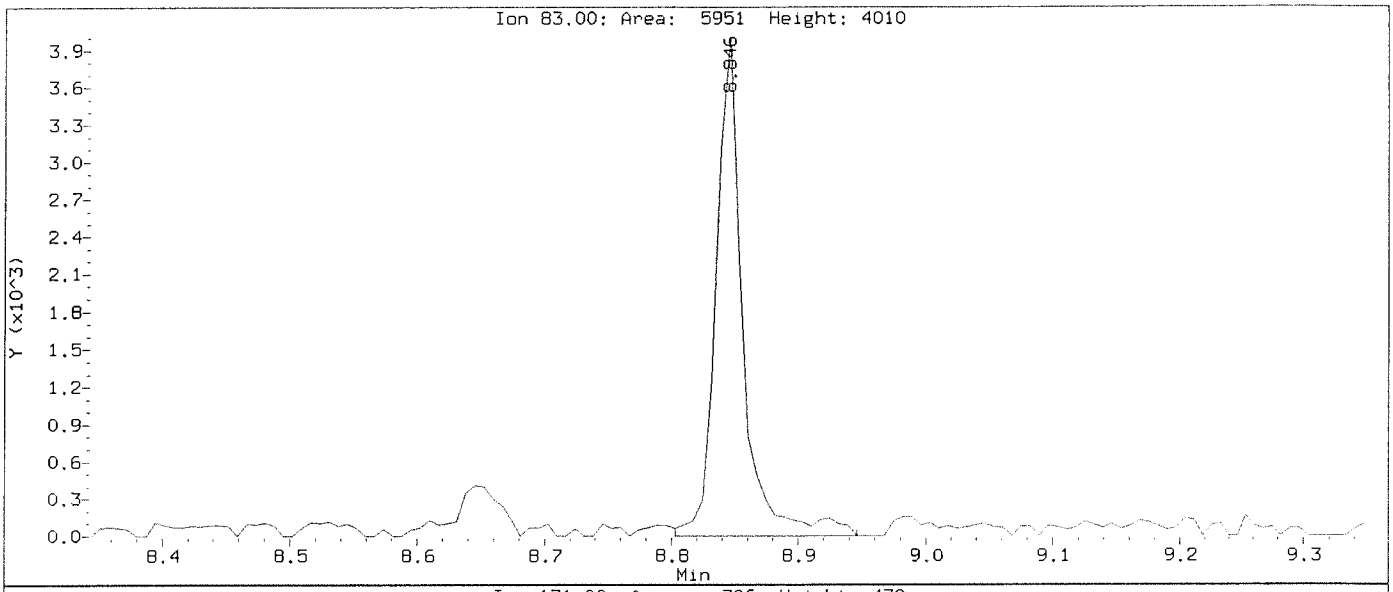


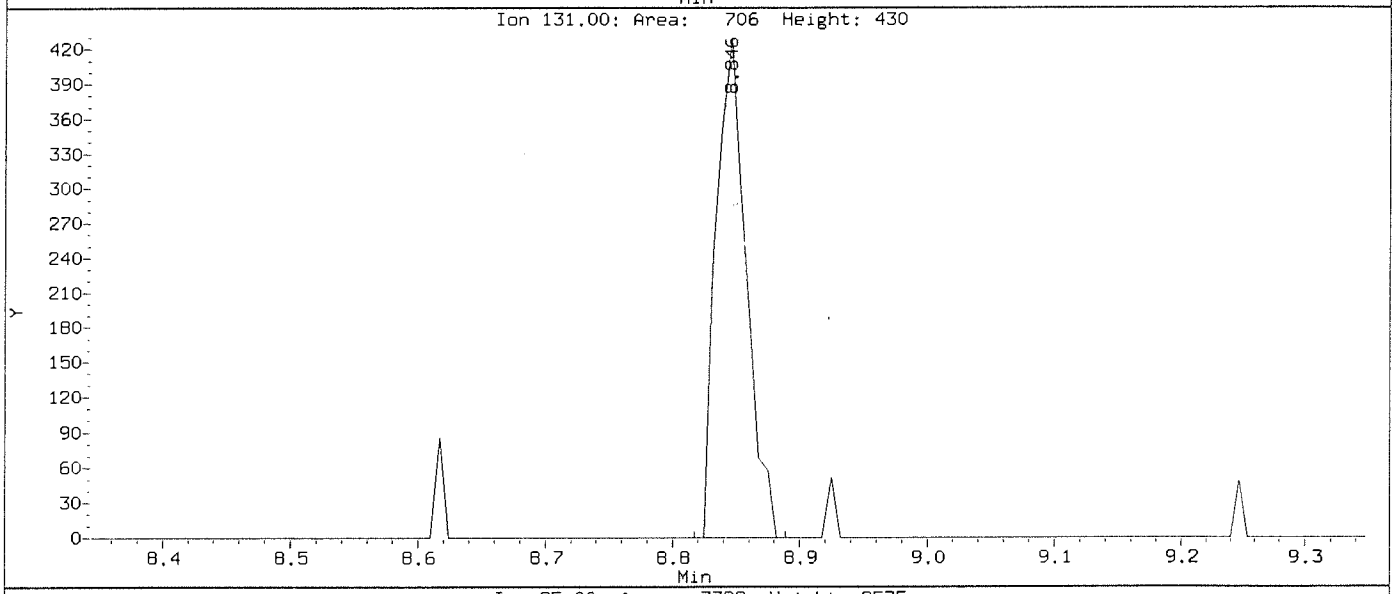
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Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

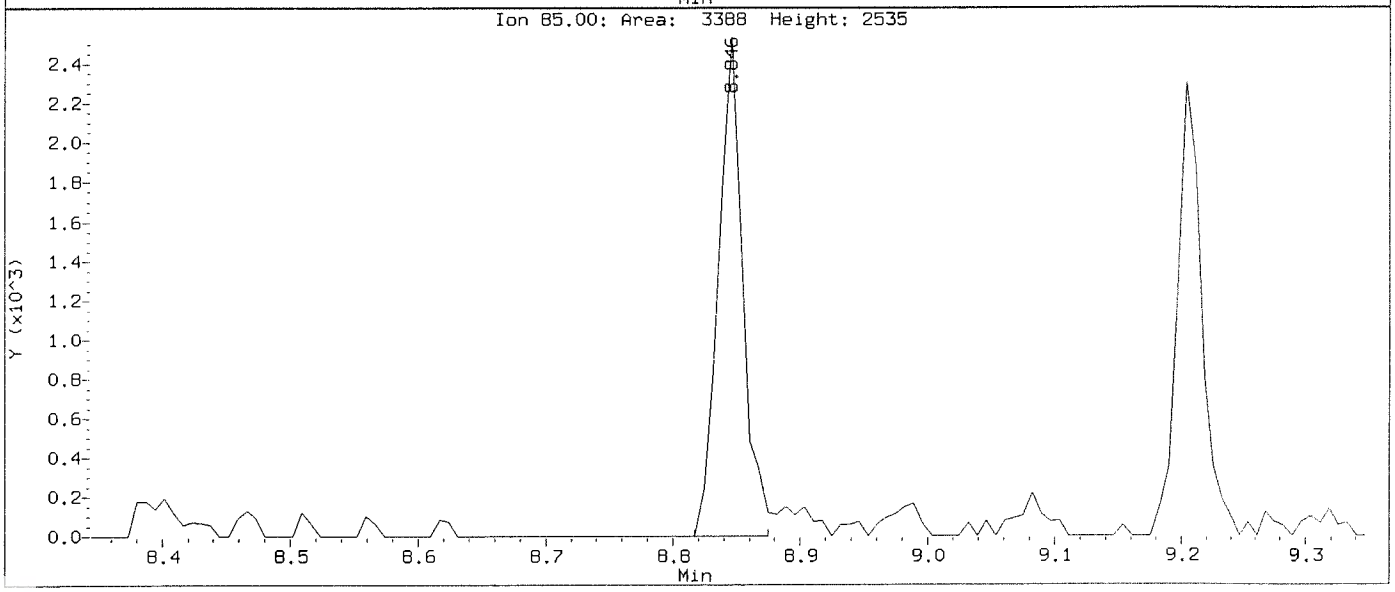
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Instrument: voa6.i
Client Sample ID: VSTD001

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

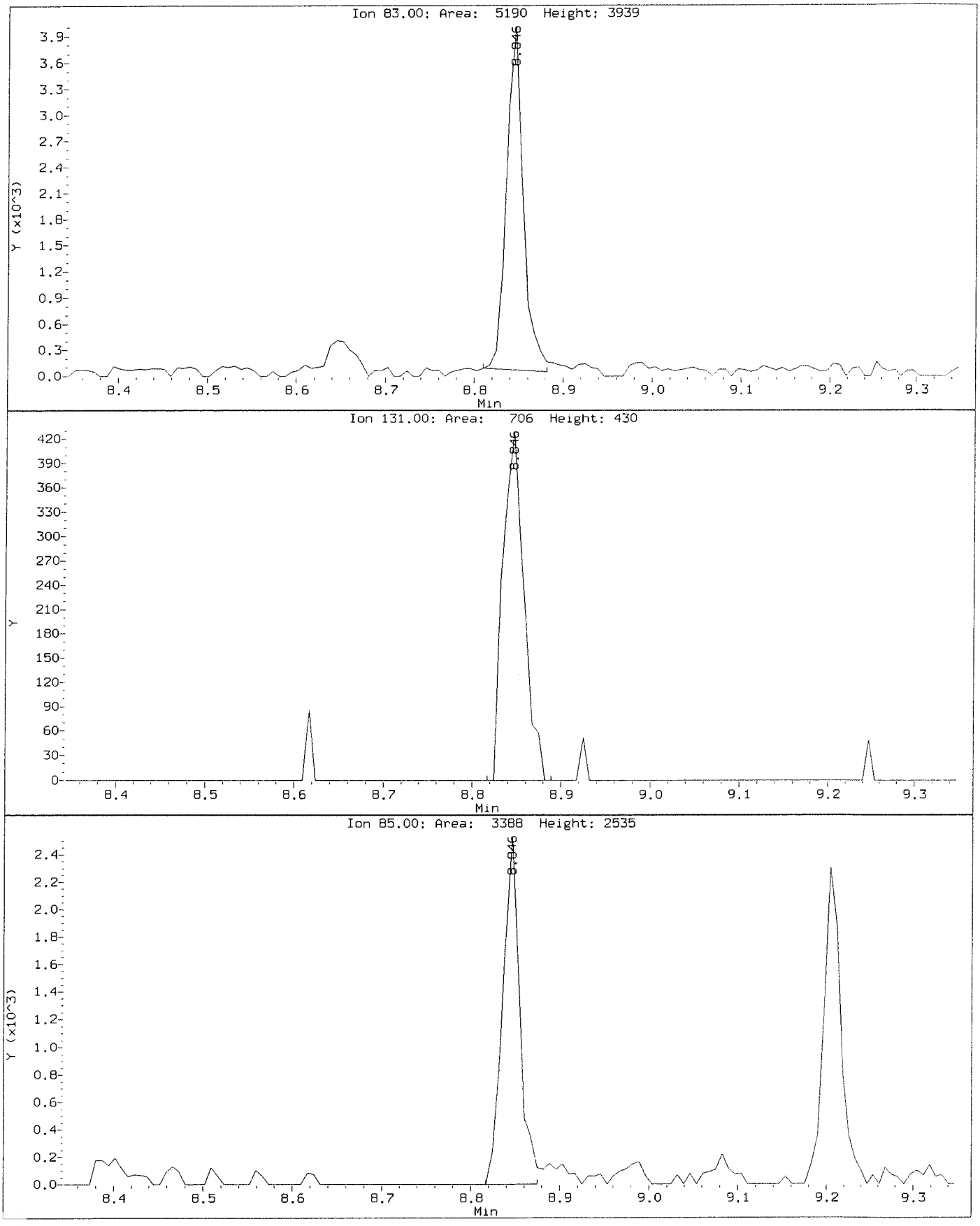






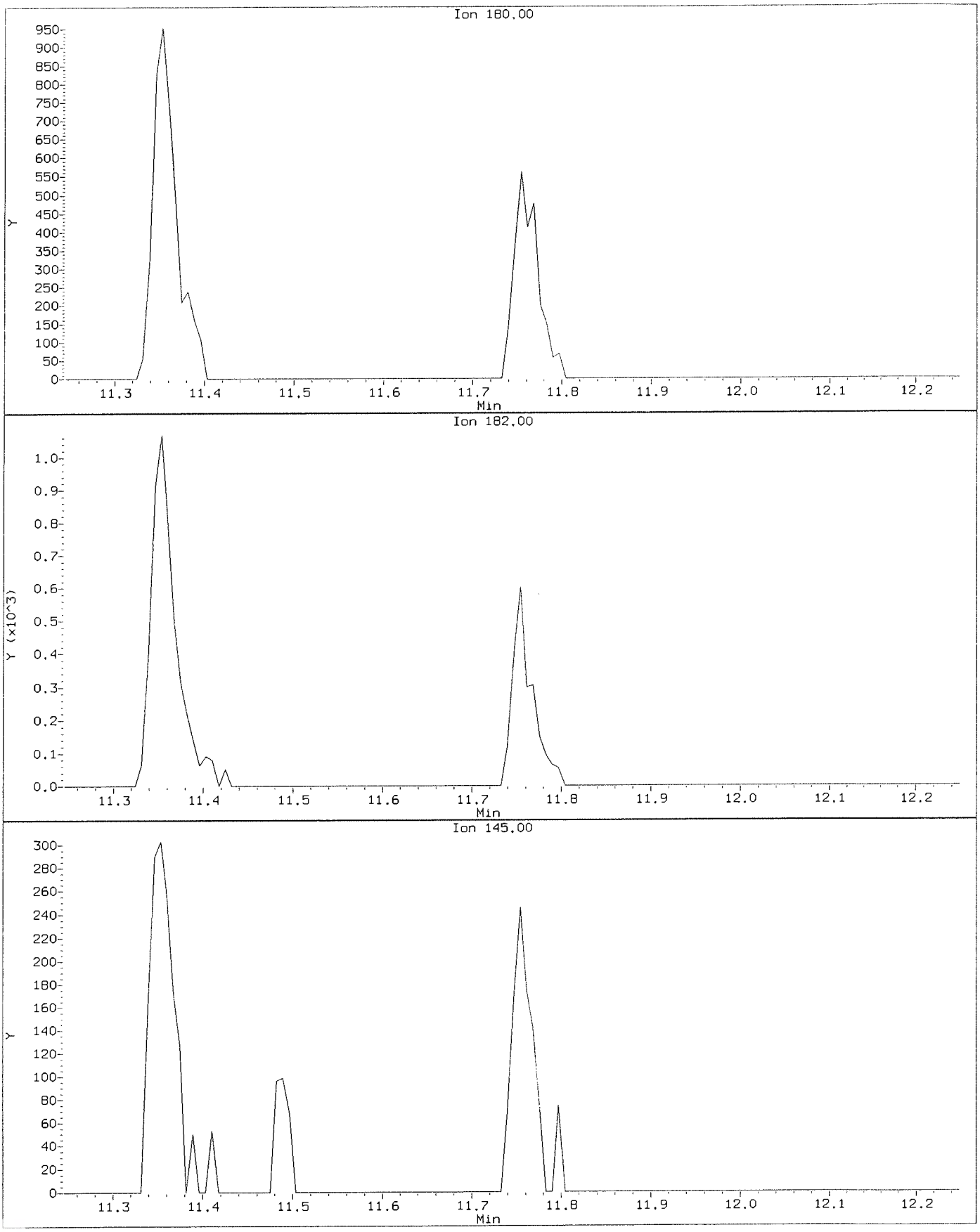
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Client Sample ID: VSTD001

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



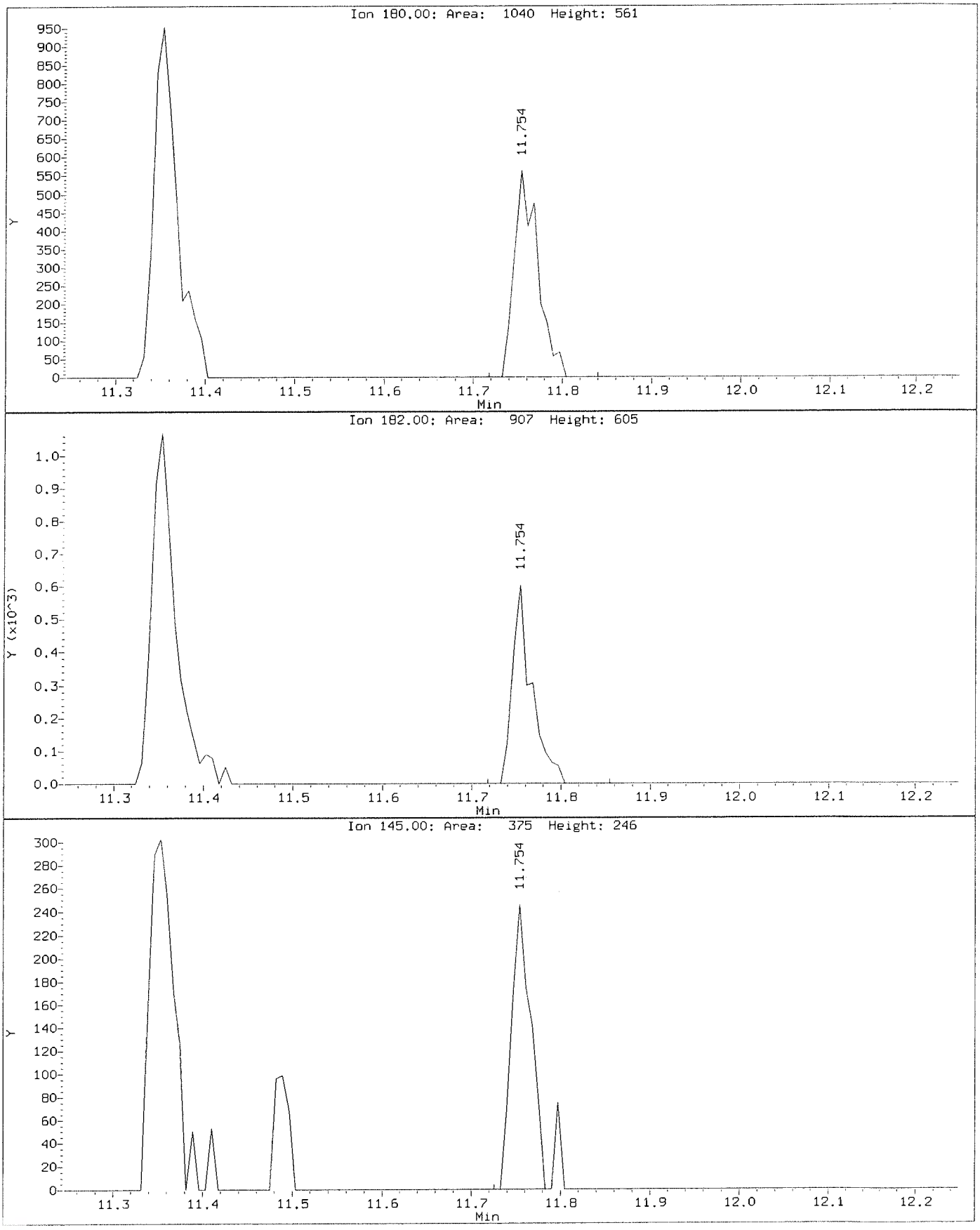
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



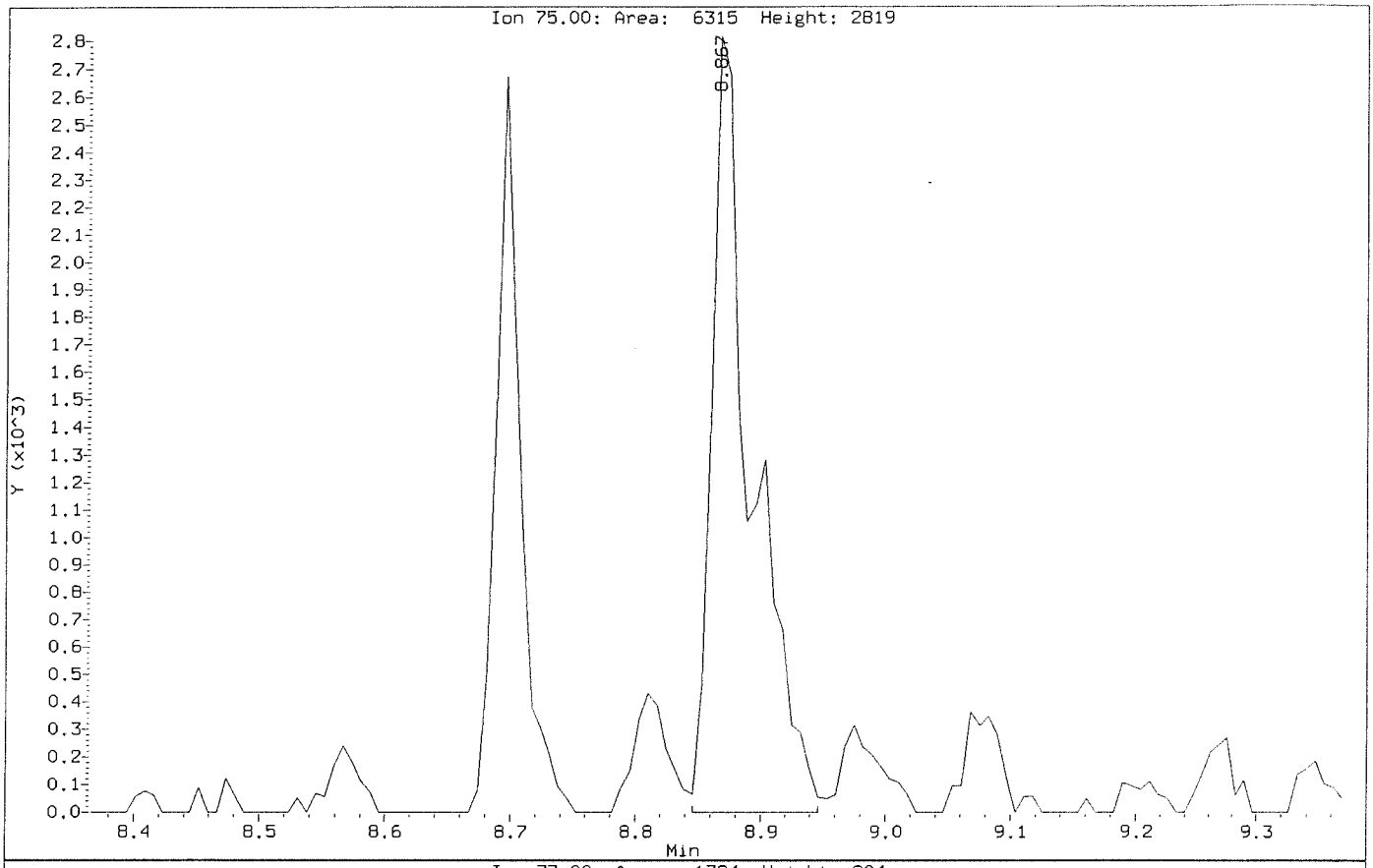
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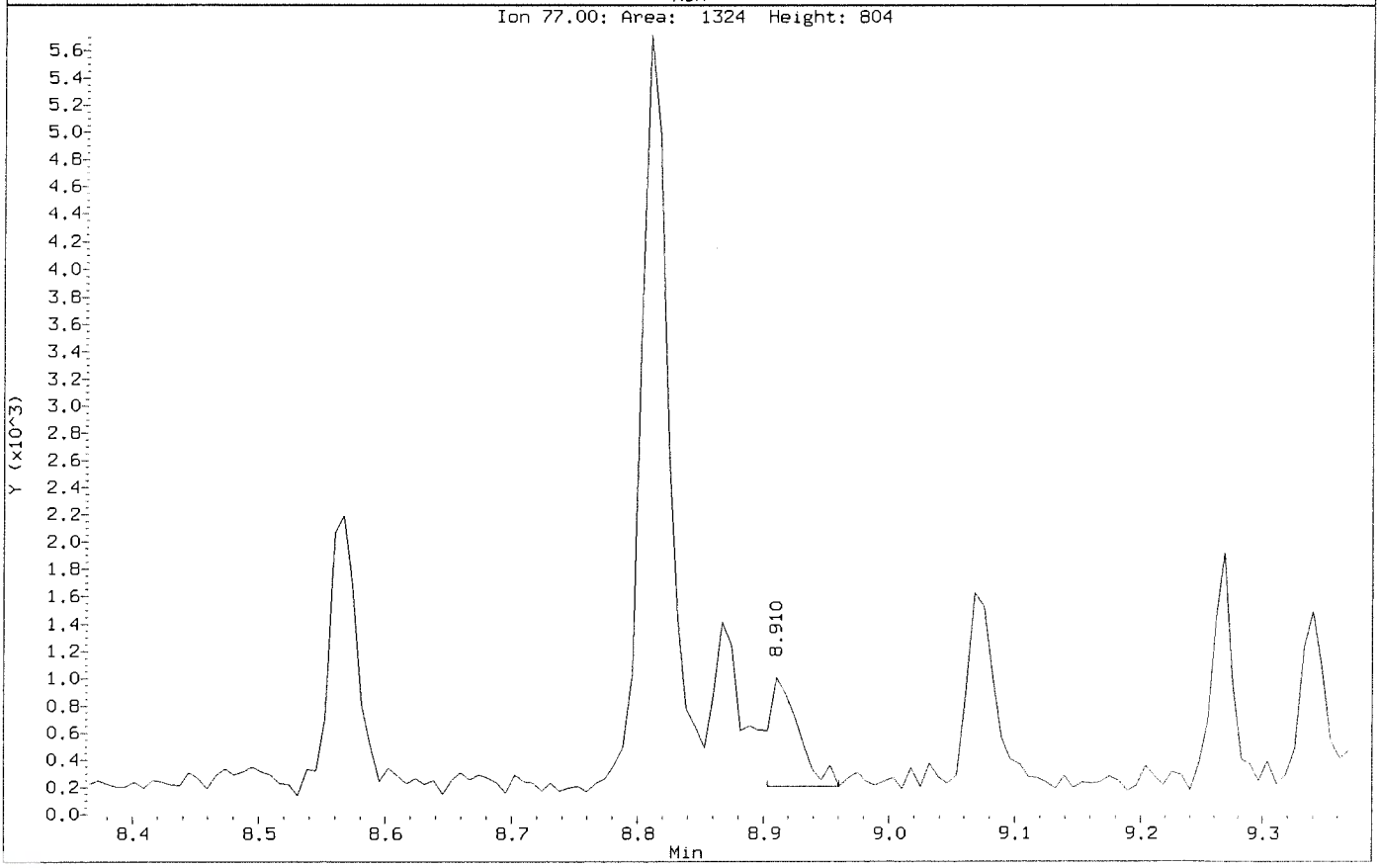
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD001

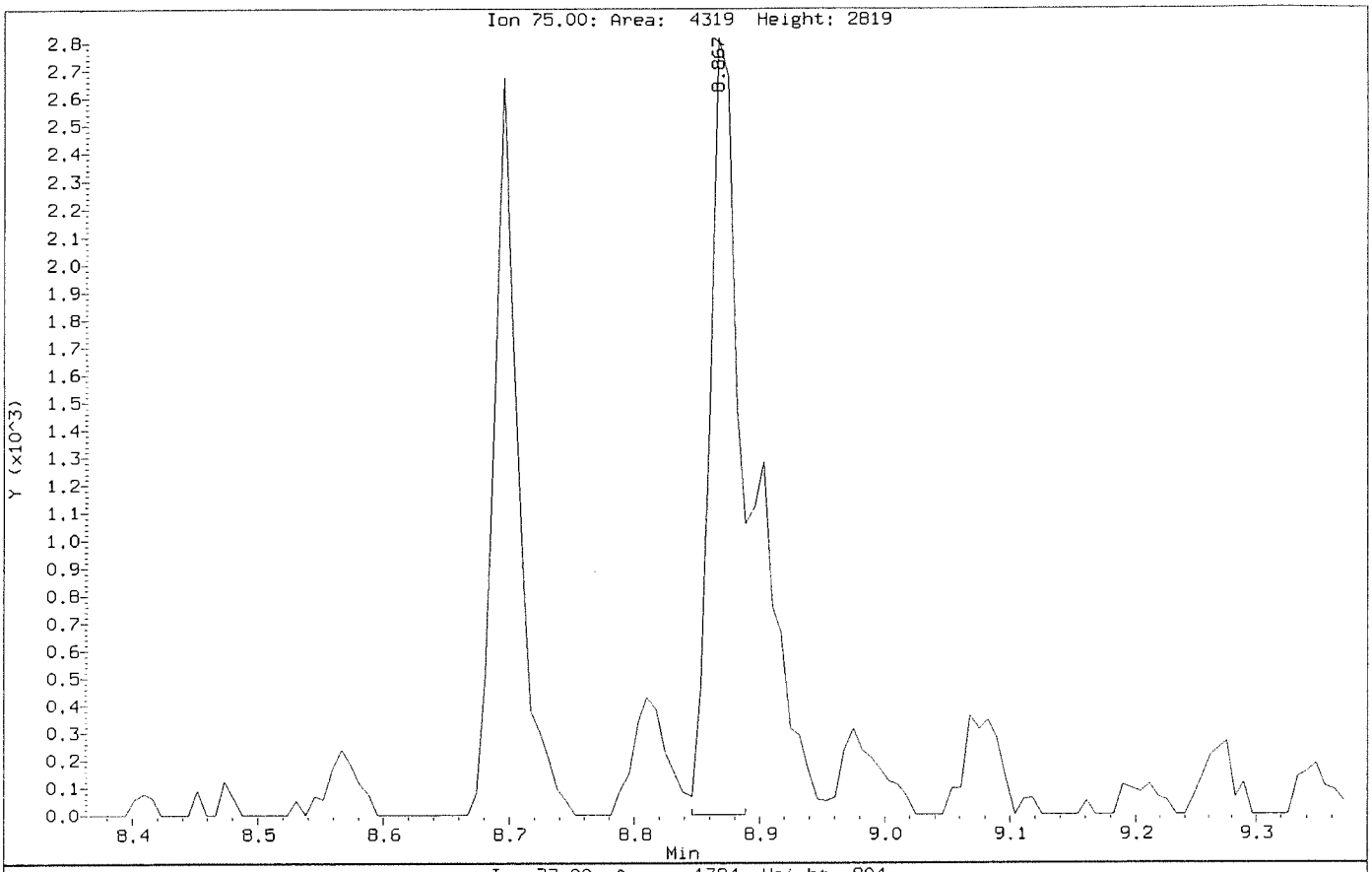
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CAS Number: 96-18-4

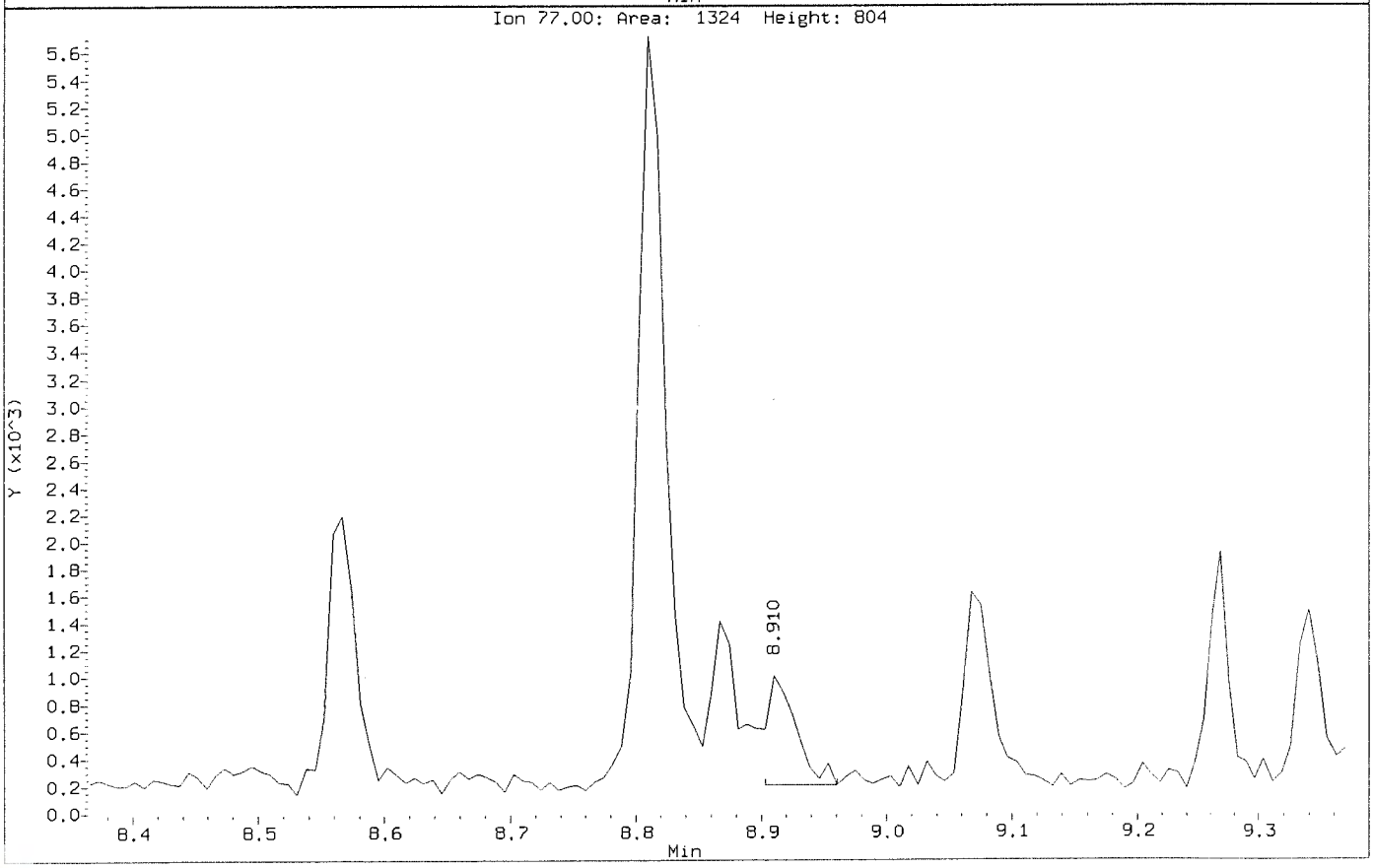




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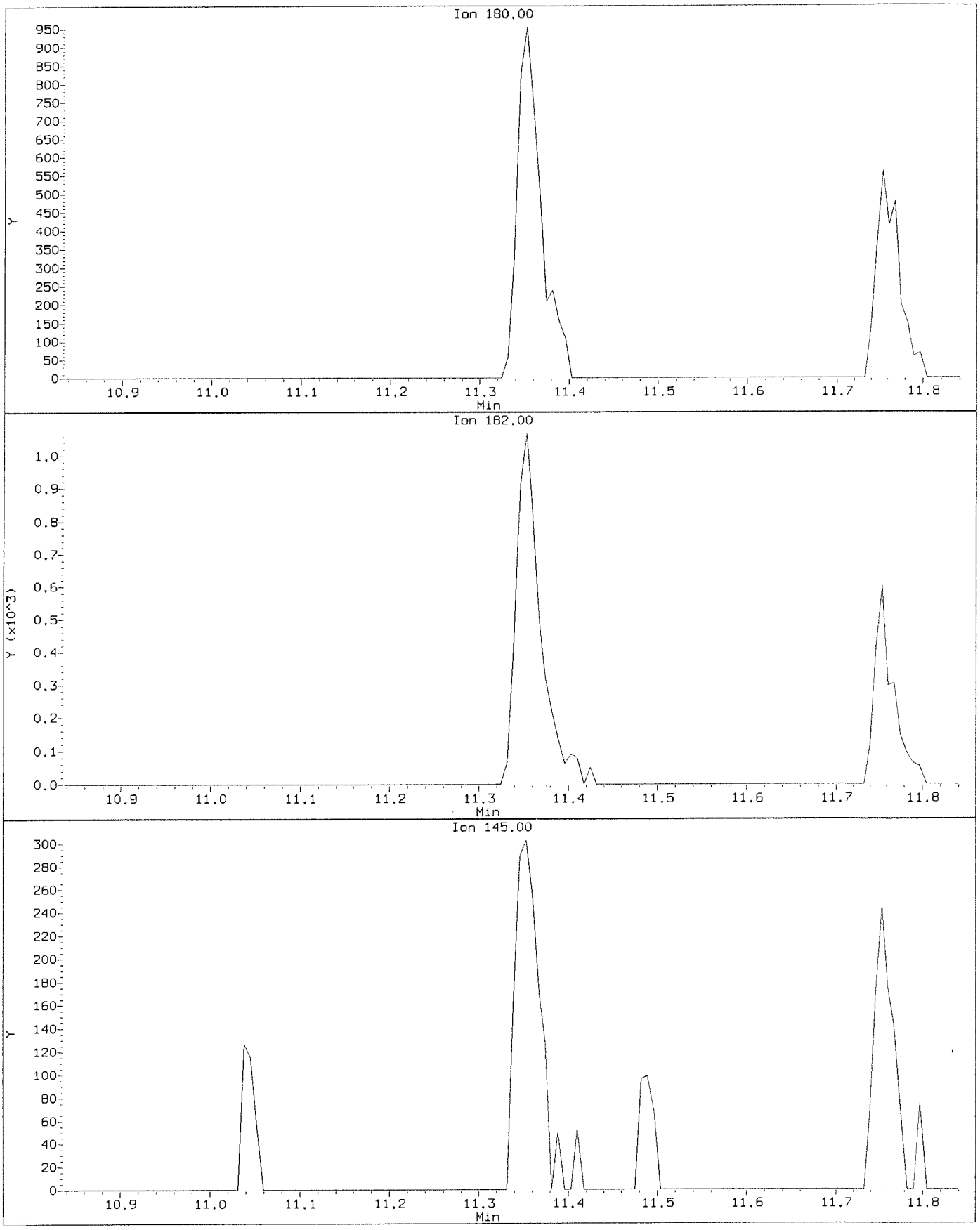
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





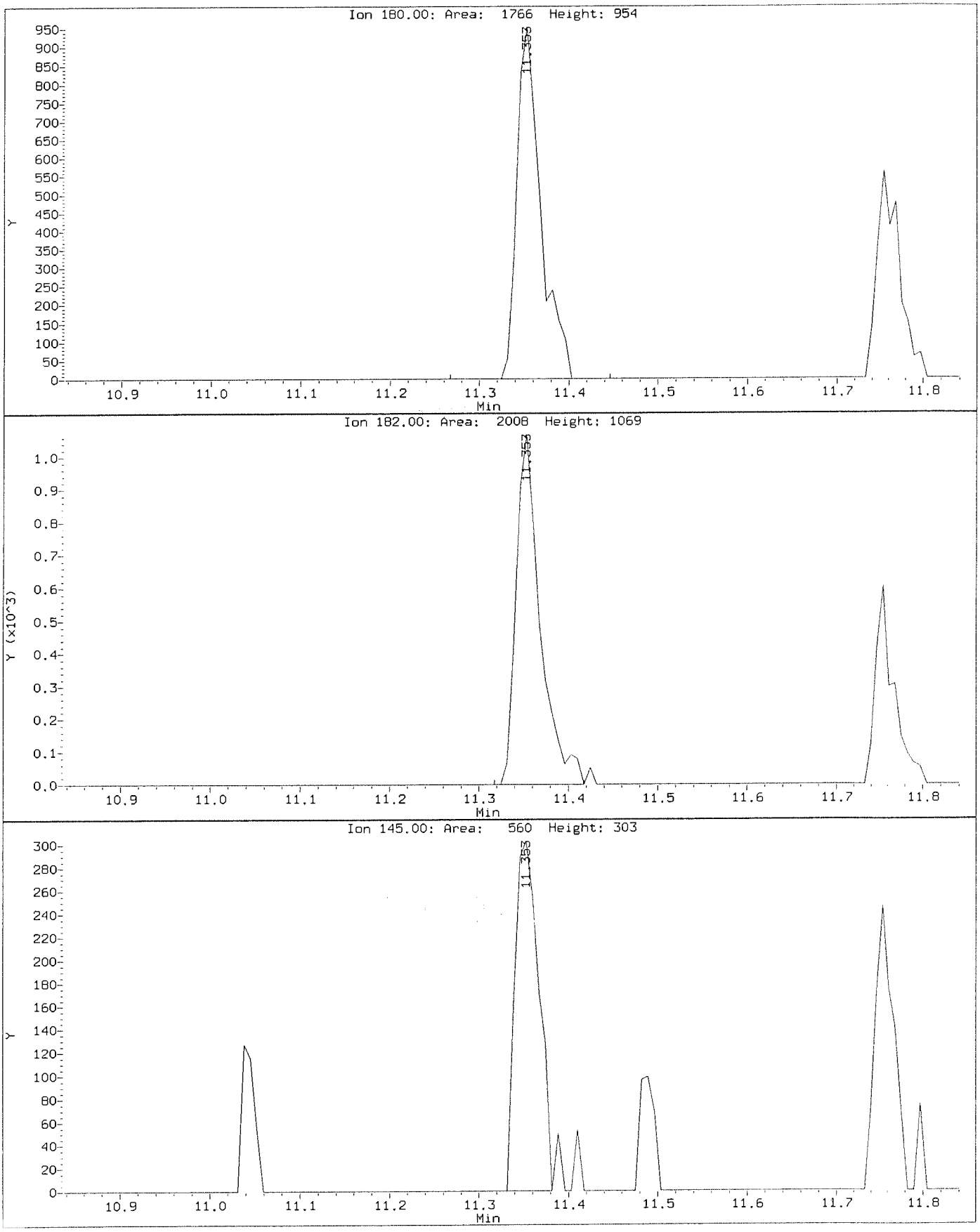
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Client Sample ID: VSTD001

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



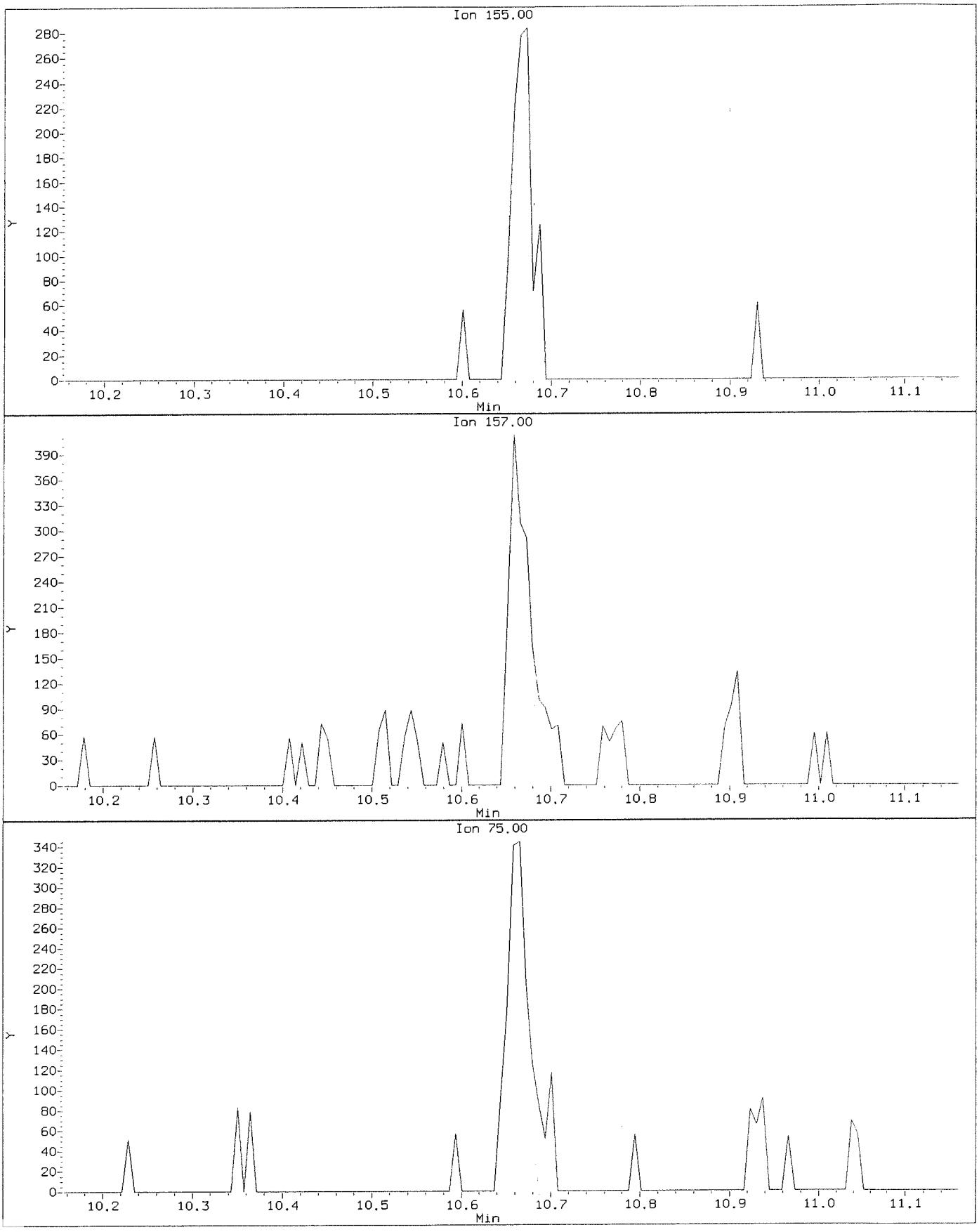
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Instrument: voa6.i
Client Sample ID: VSTD001

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



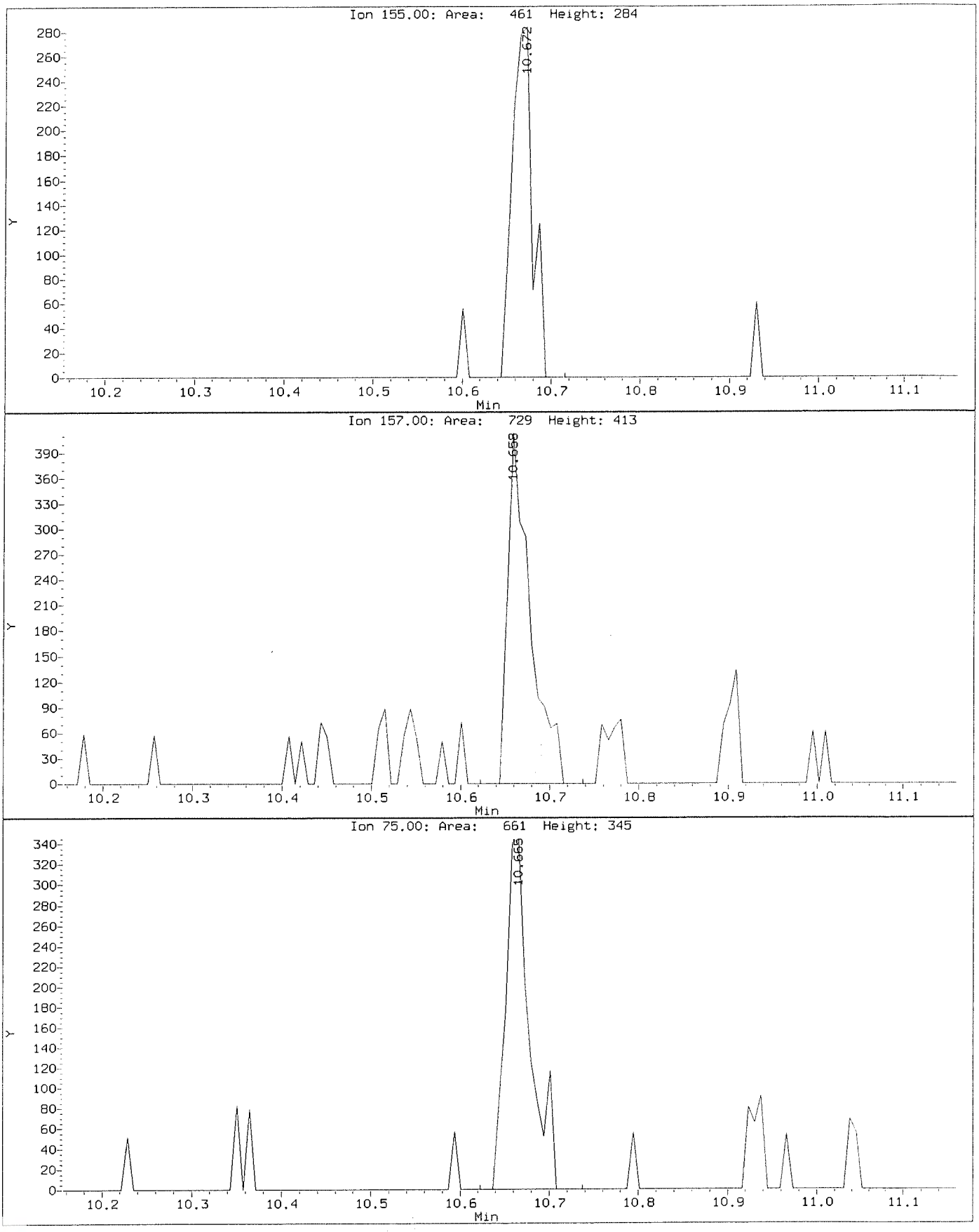
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Instrument: voa6.i
Client Sample ID: VSTD001

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



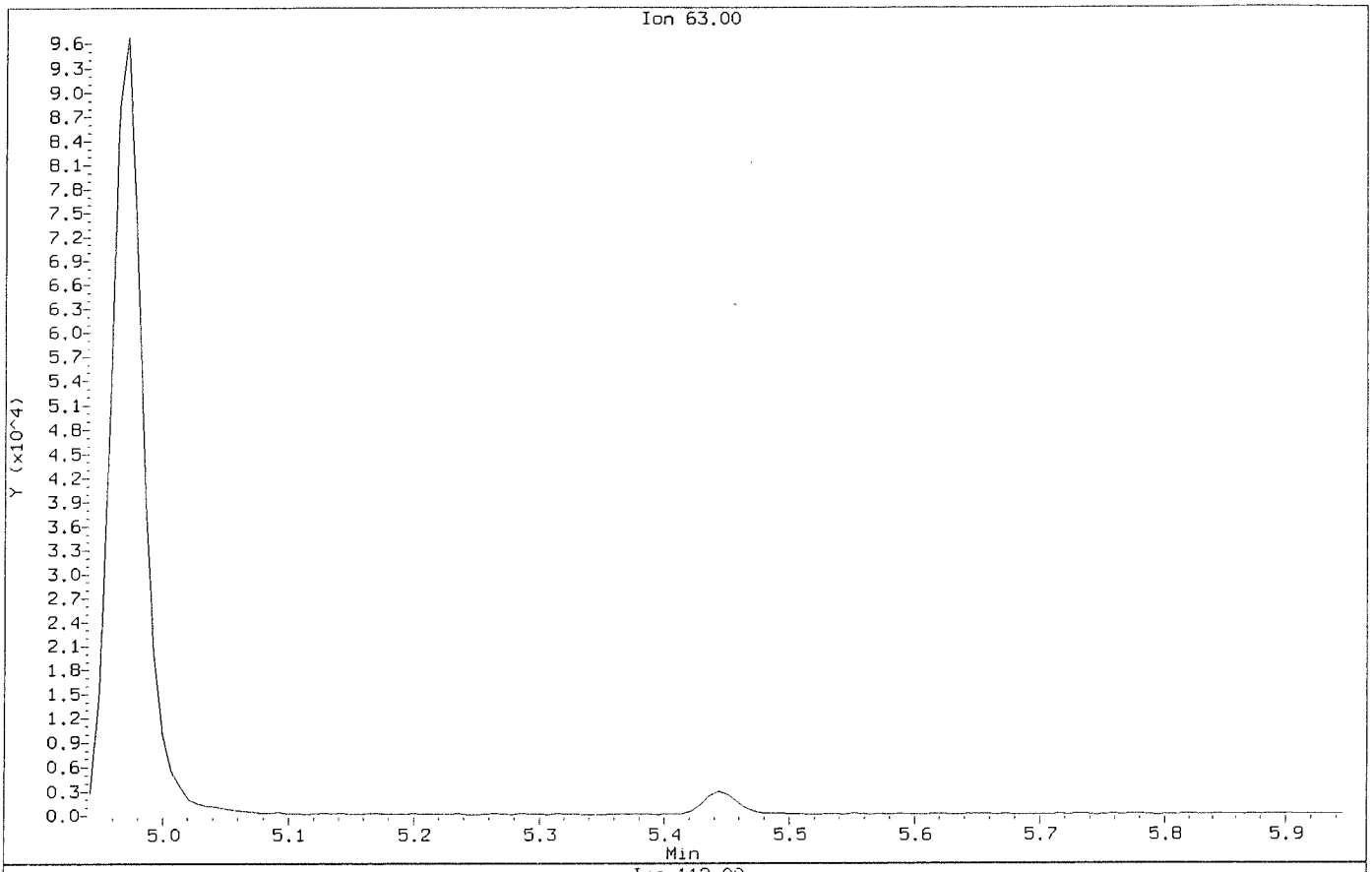
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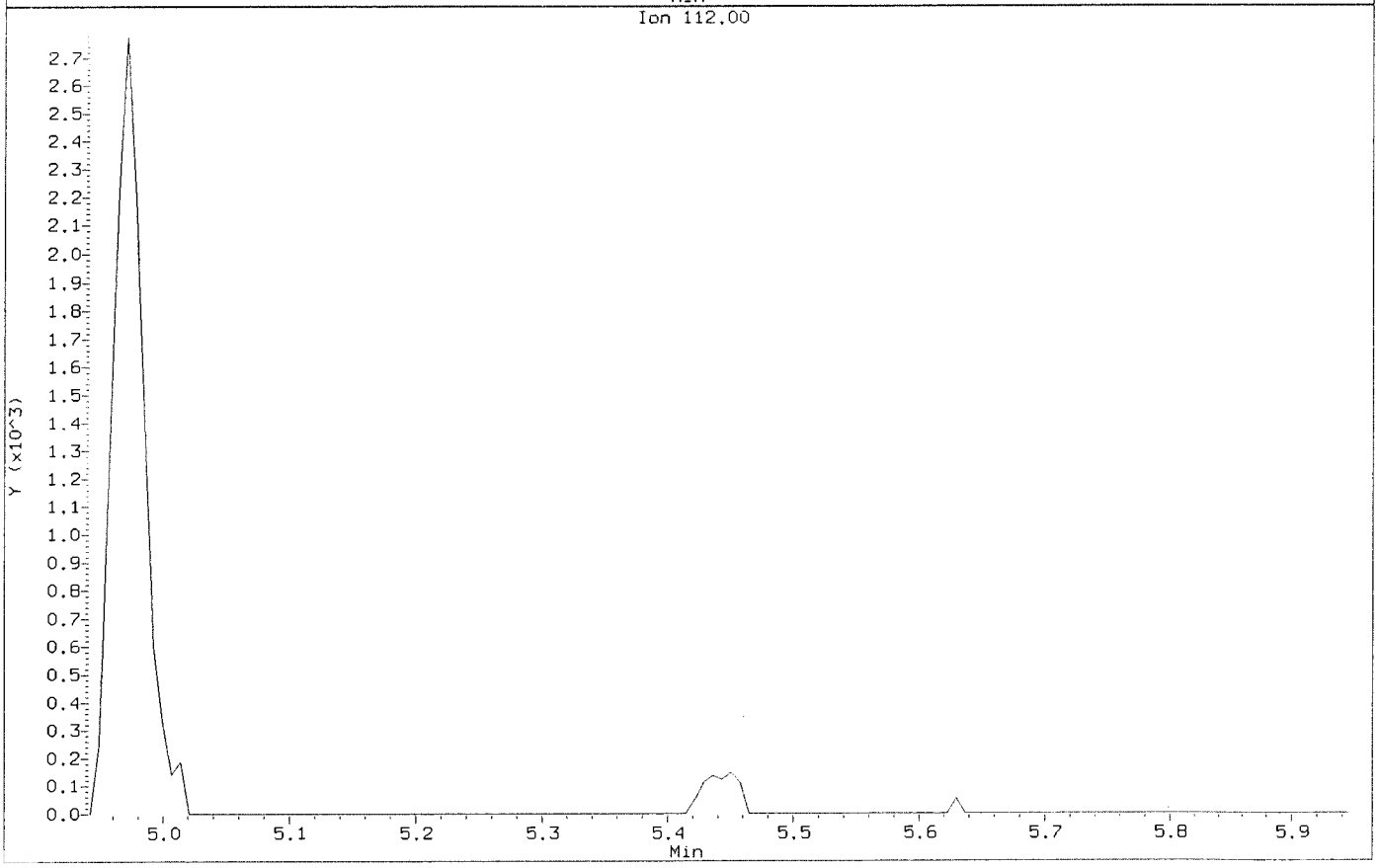
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CAS Number: 96-12-8



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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
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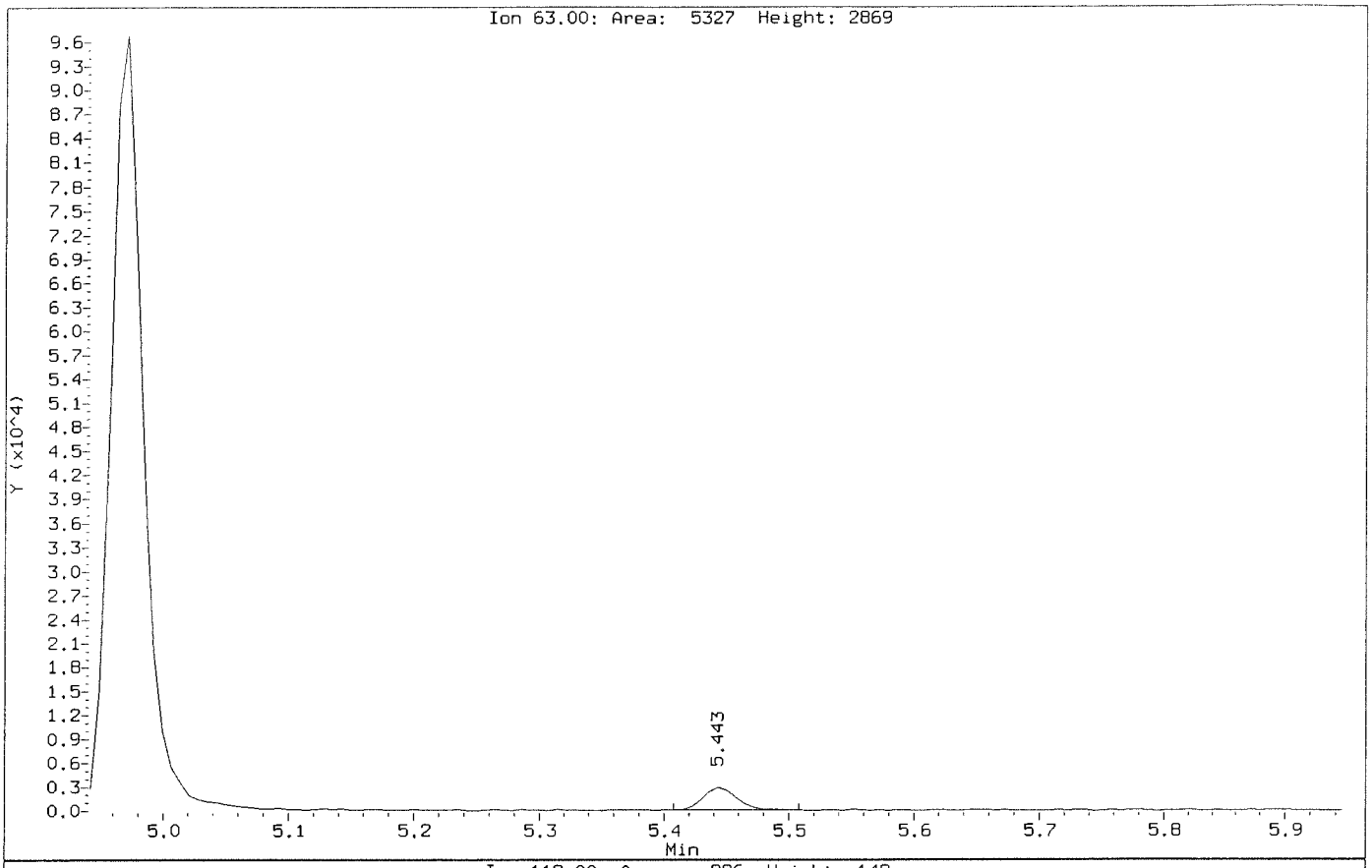
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

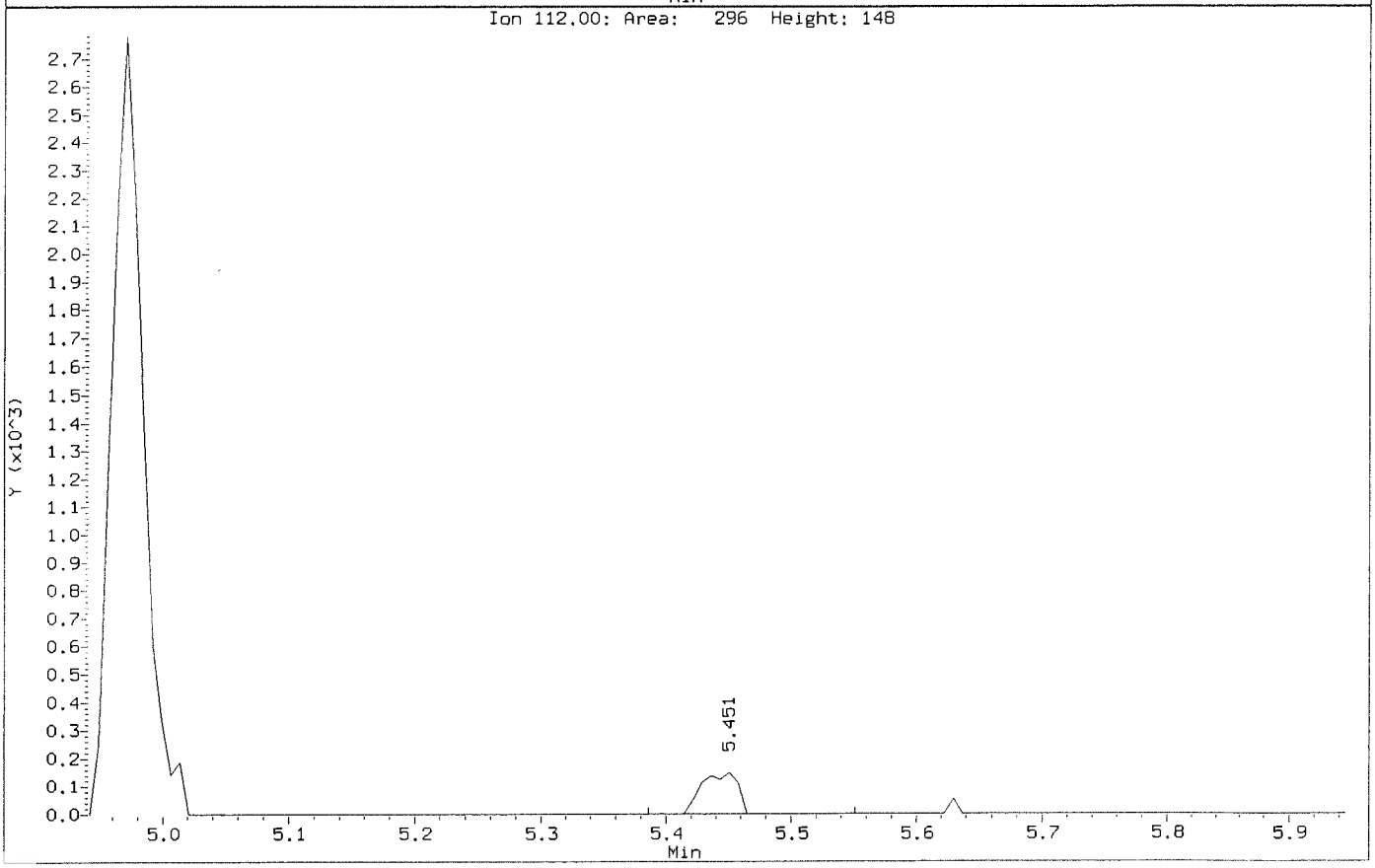




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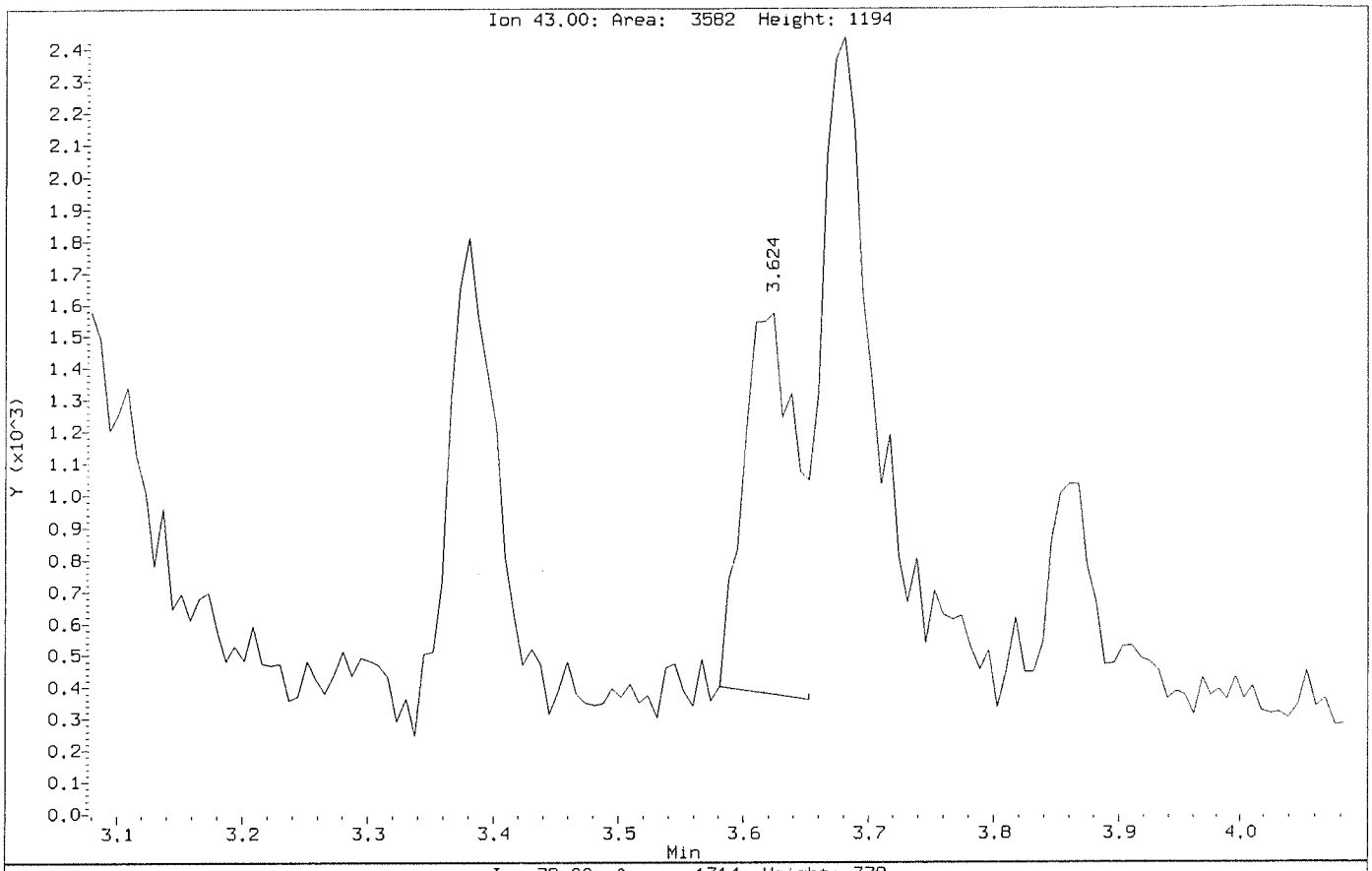
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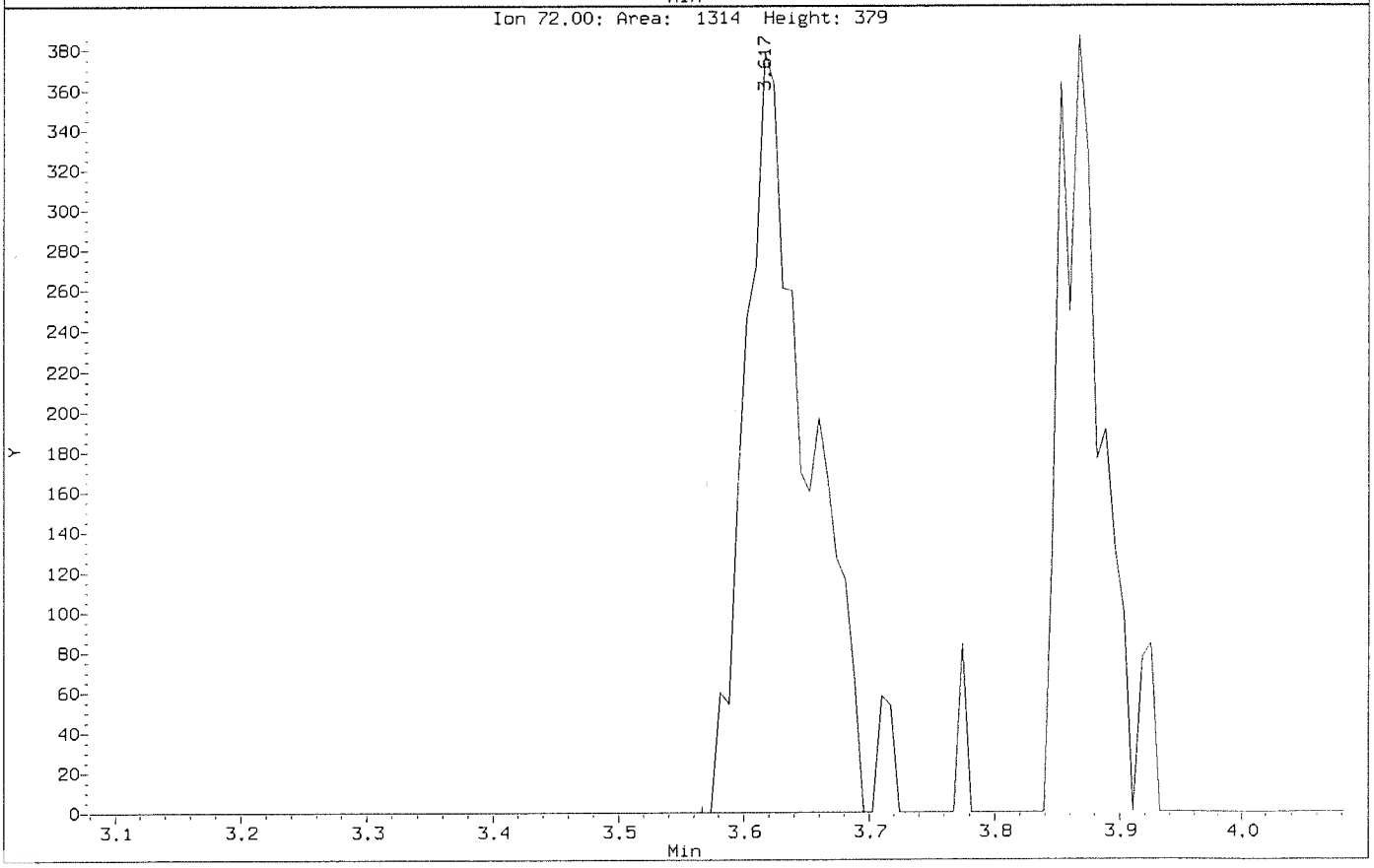




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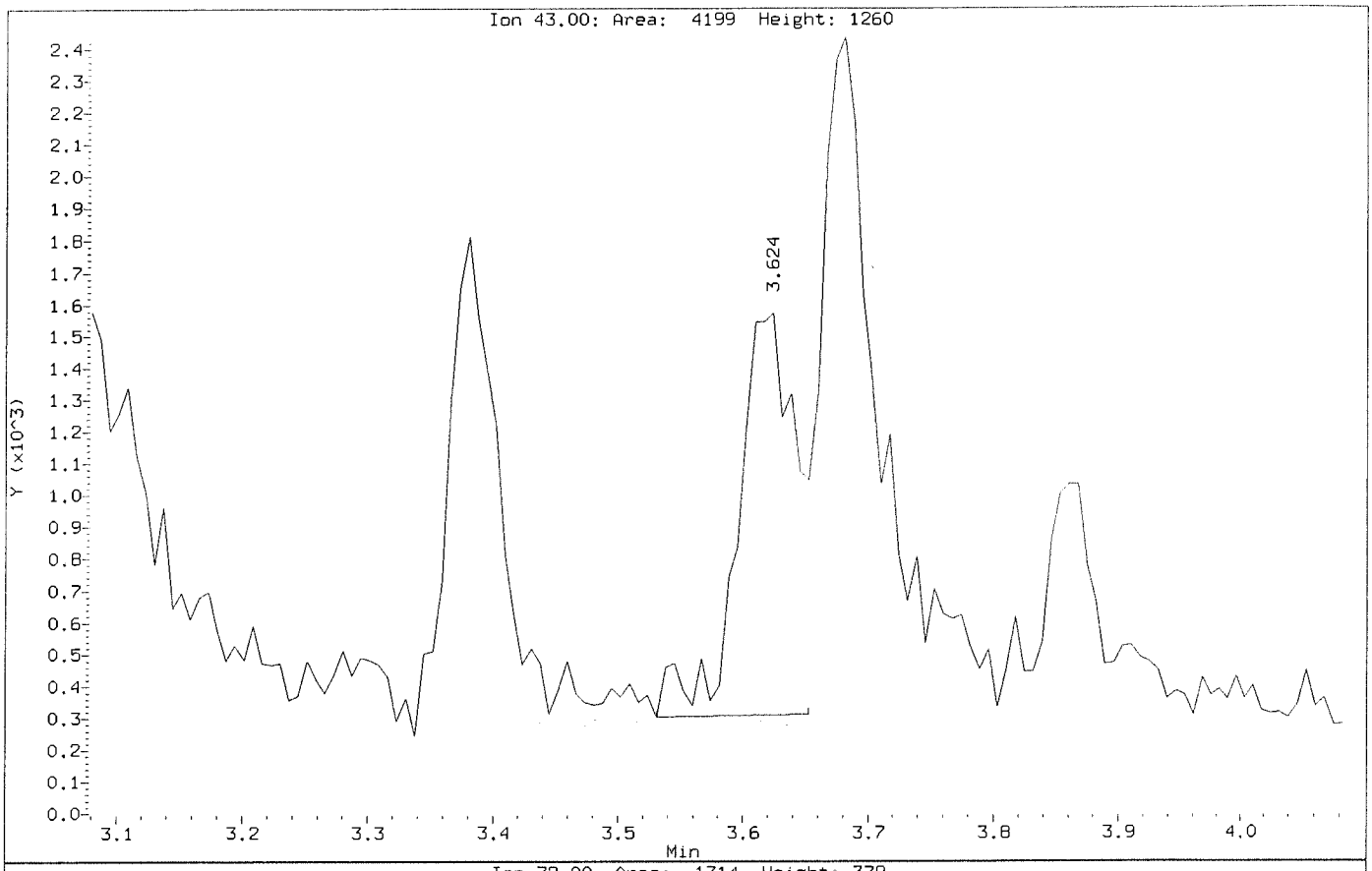
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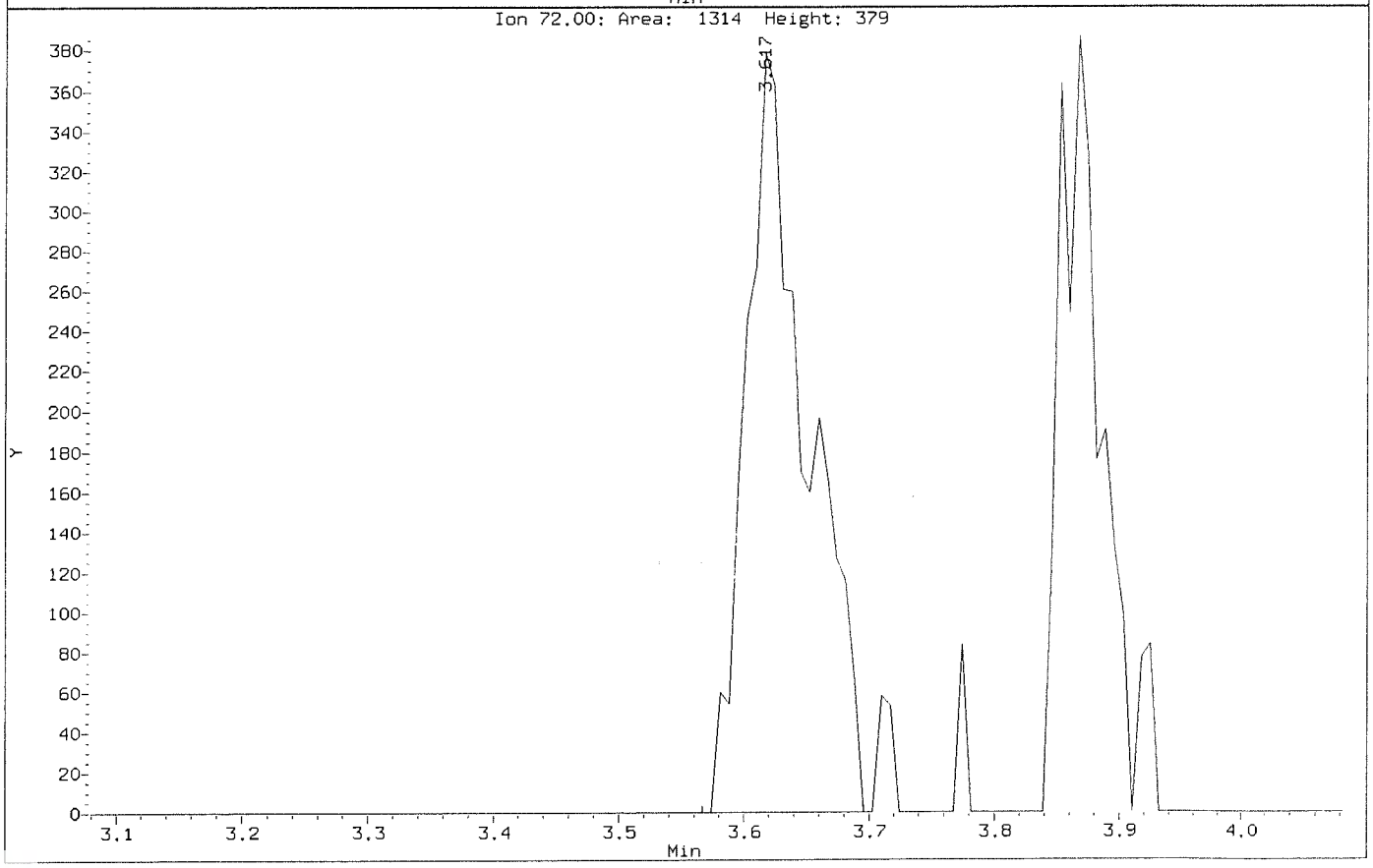




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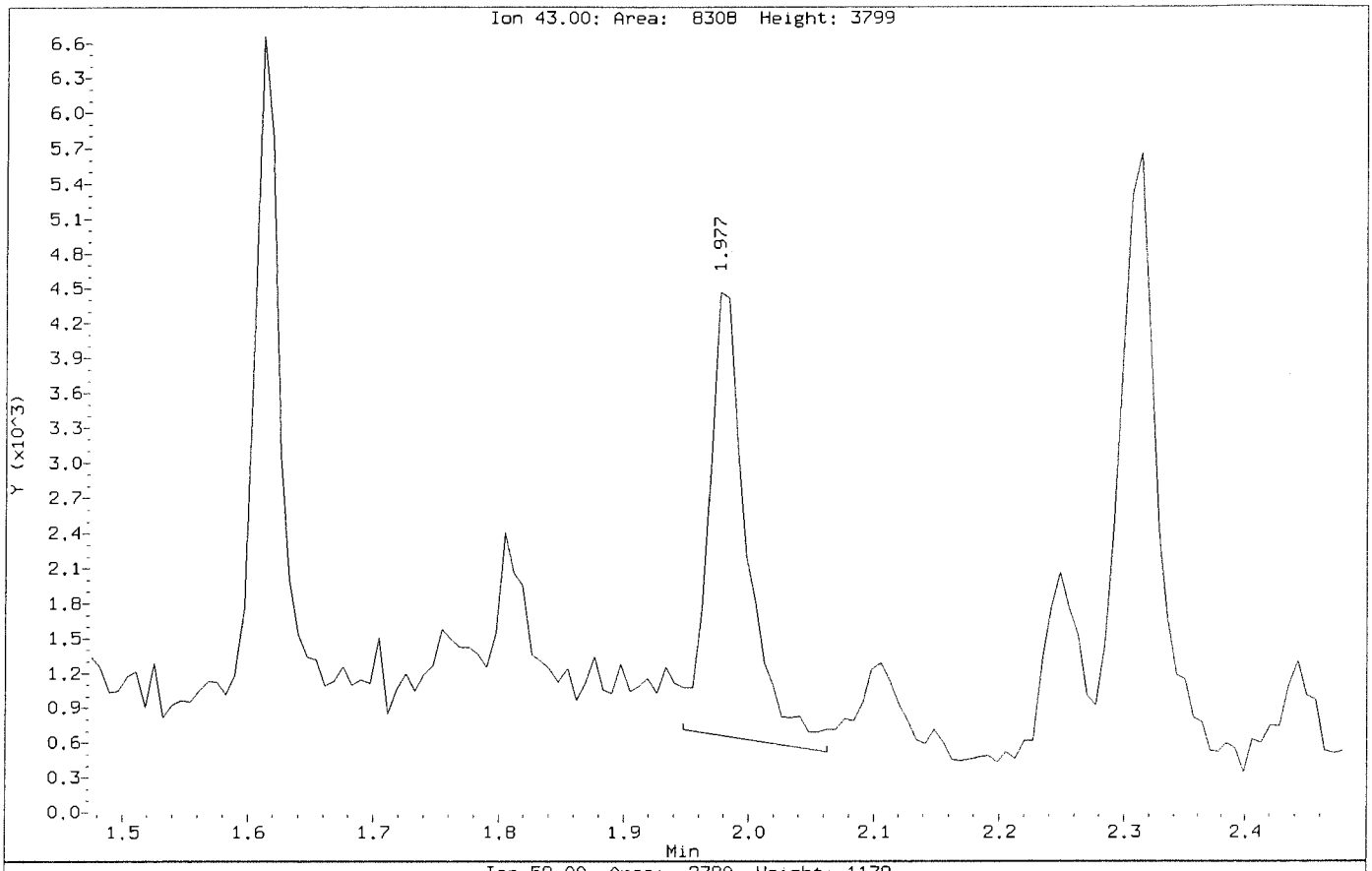
Compound: 2-Butanone
CAS Number: 78-93-3

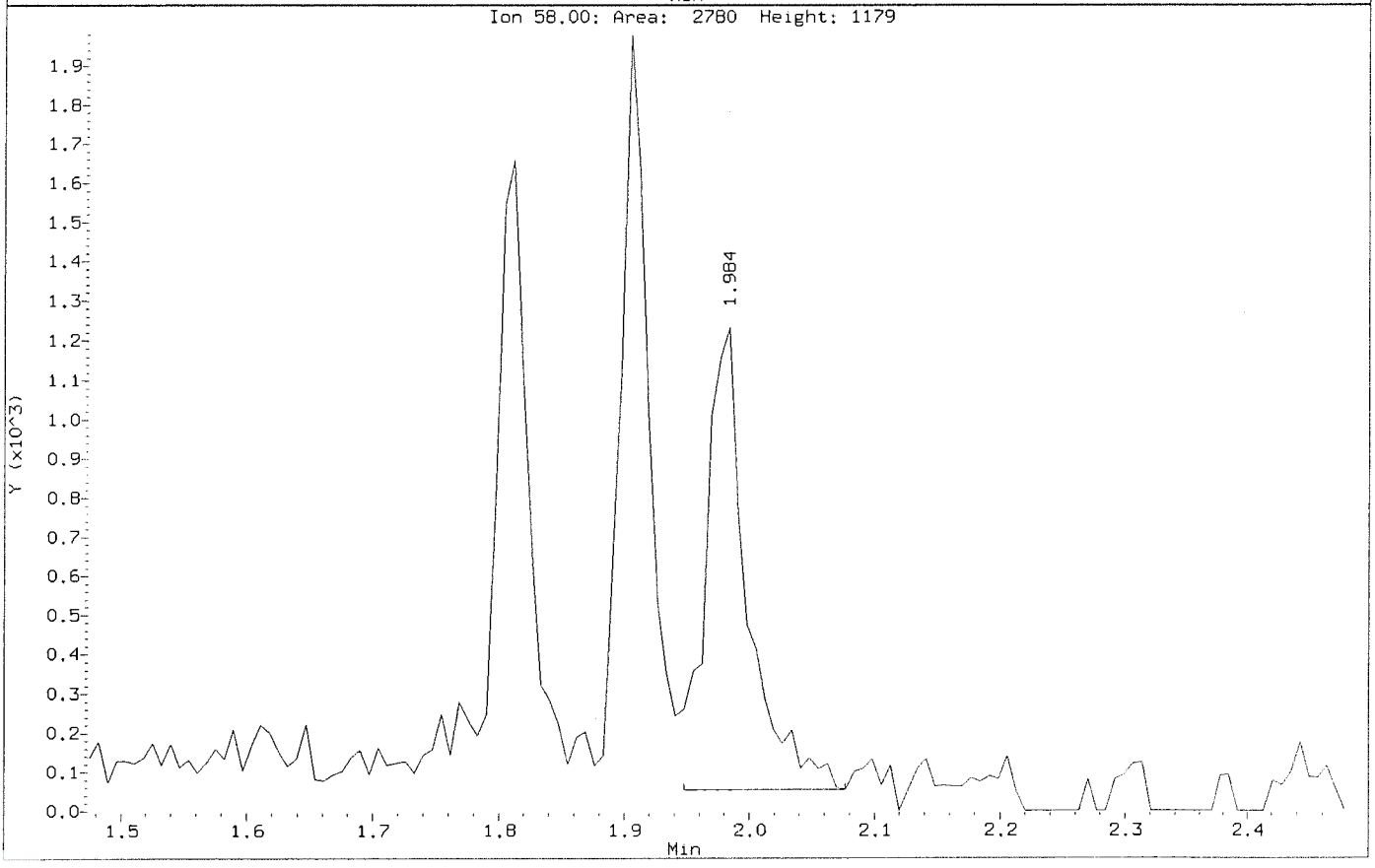




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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

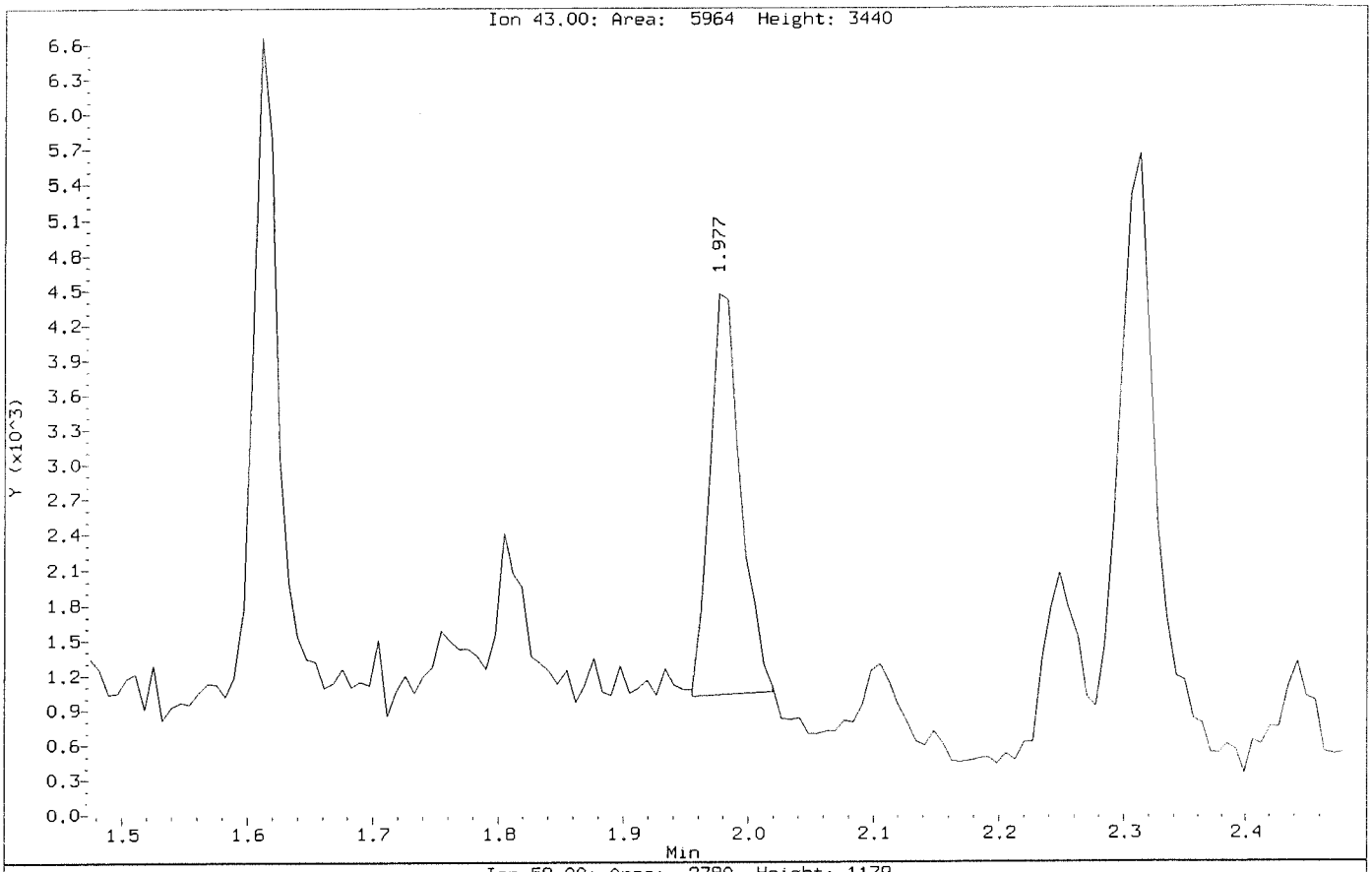
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CAS Number: 67-64-1

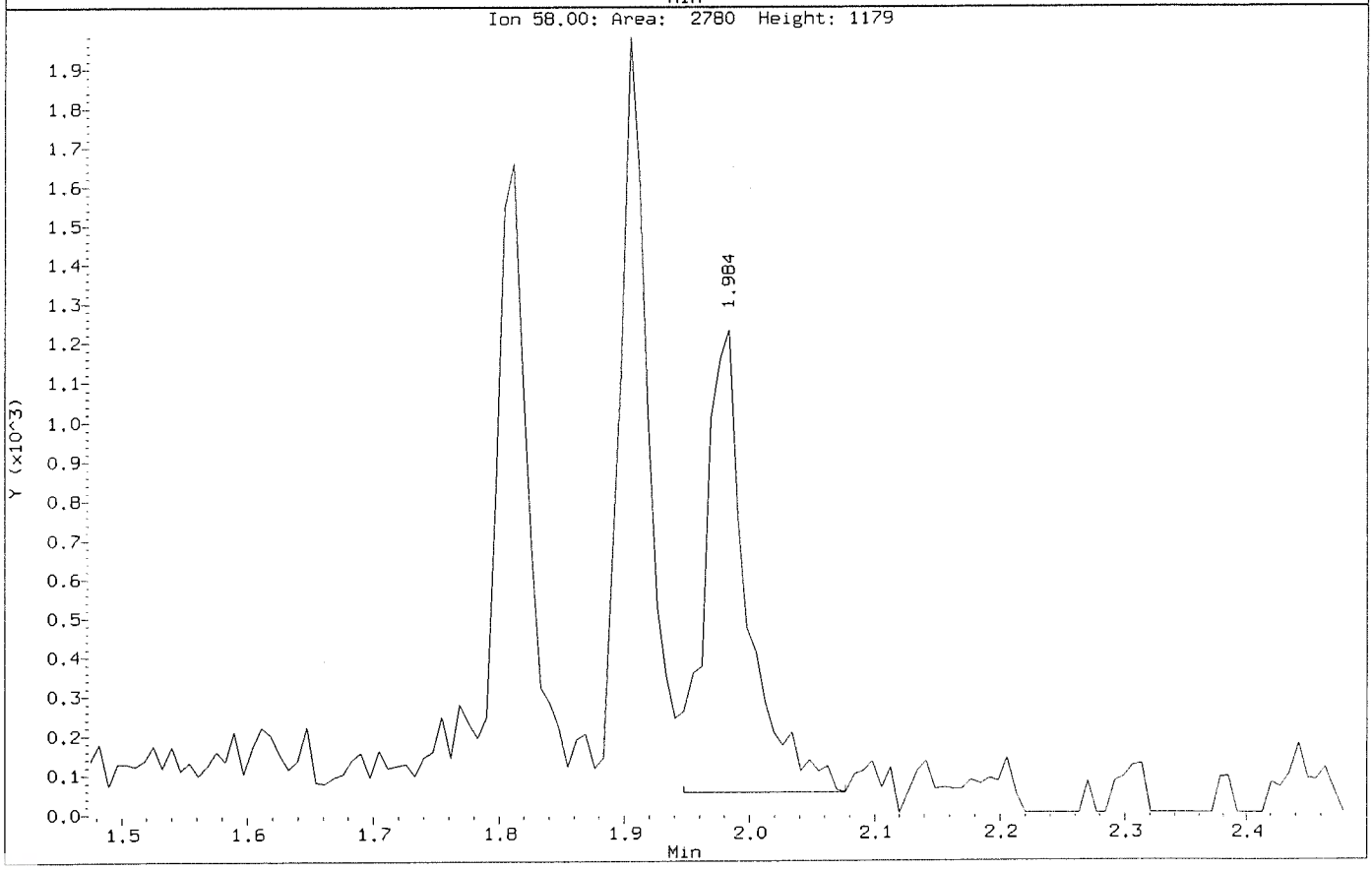




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Client Sample ID: VSTD001

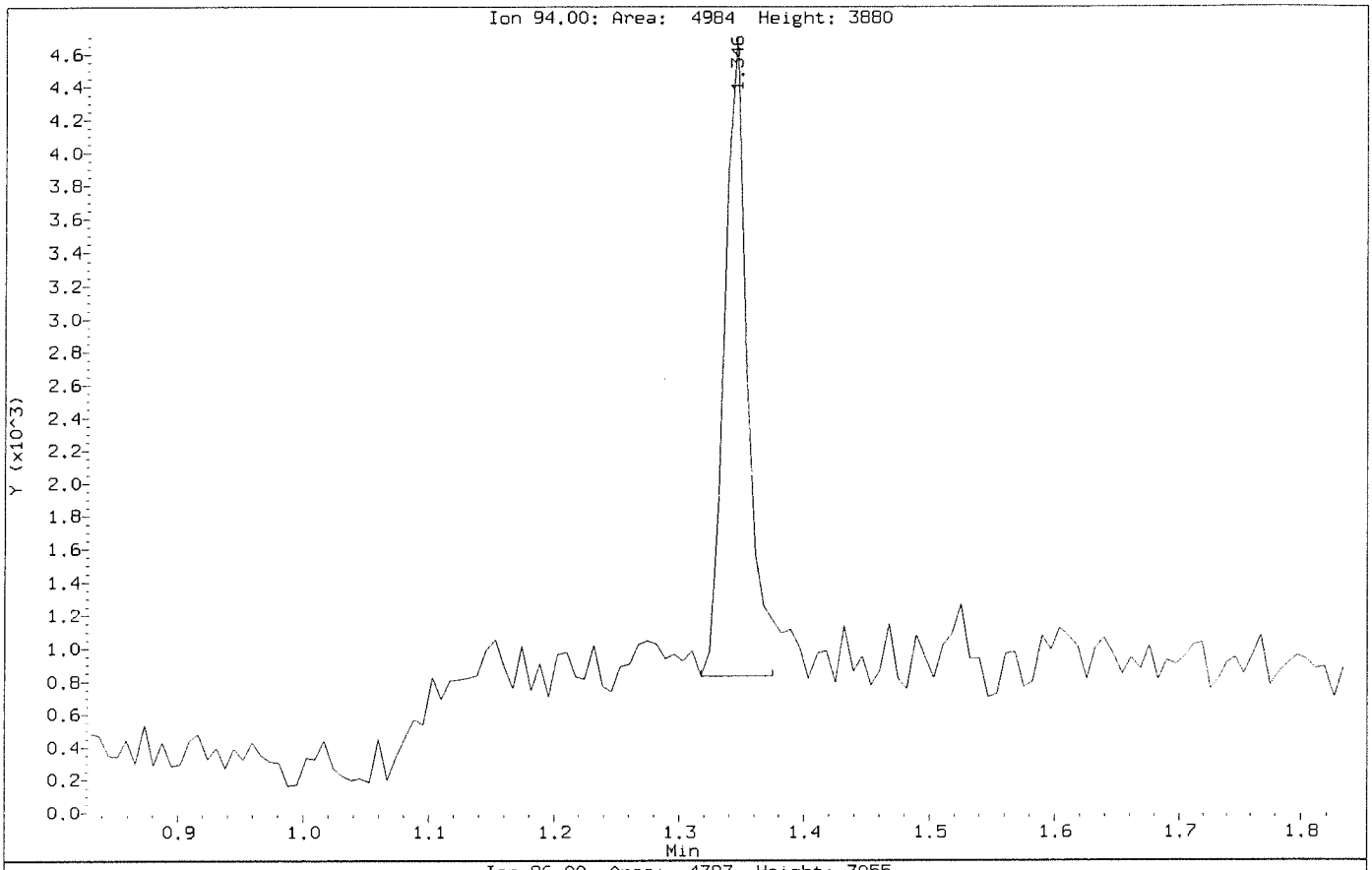
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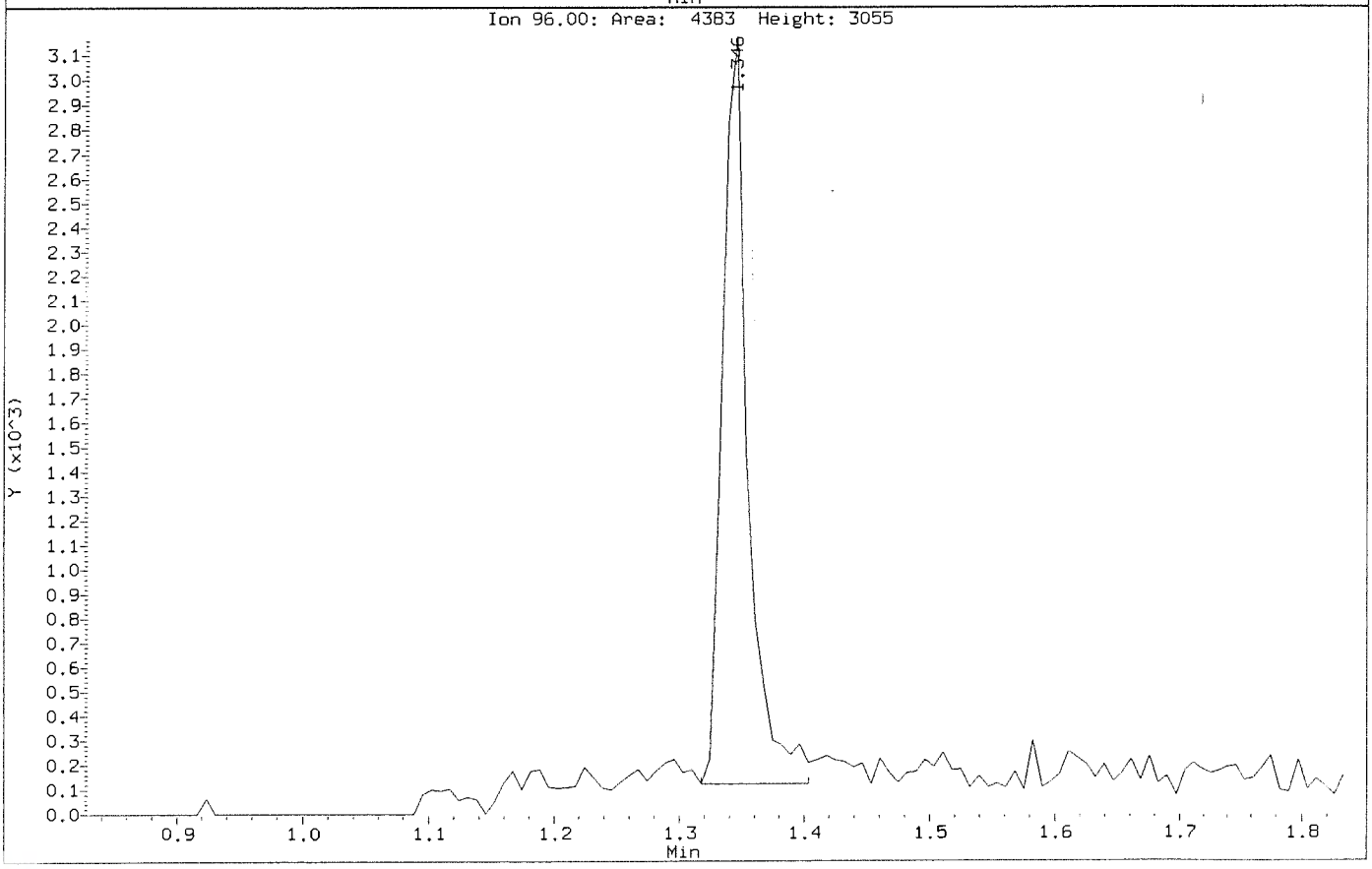




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Instrument: voa6.i
Client Sample ID: VSTD001

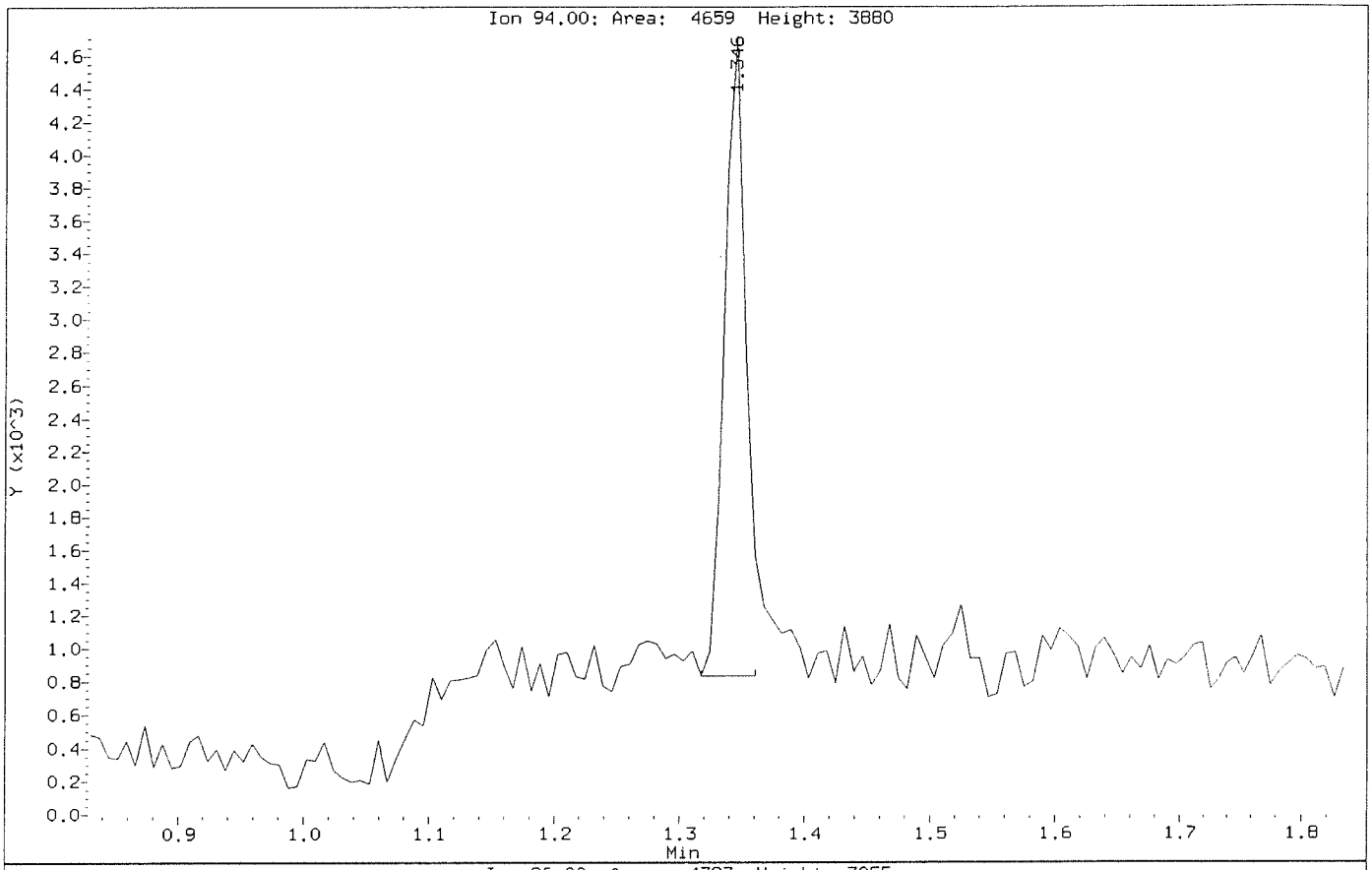
Compound: Bromomethane
CAS Number: 74-83-9

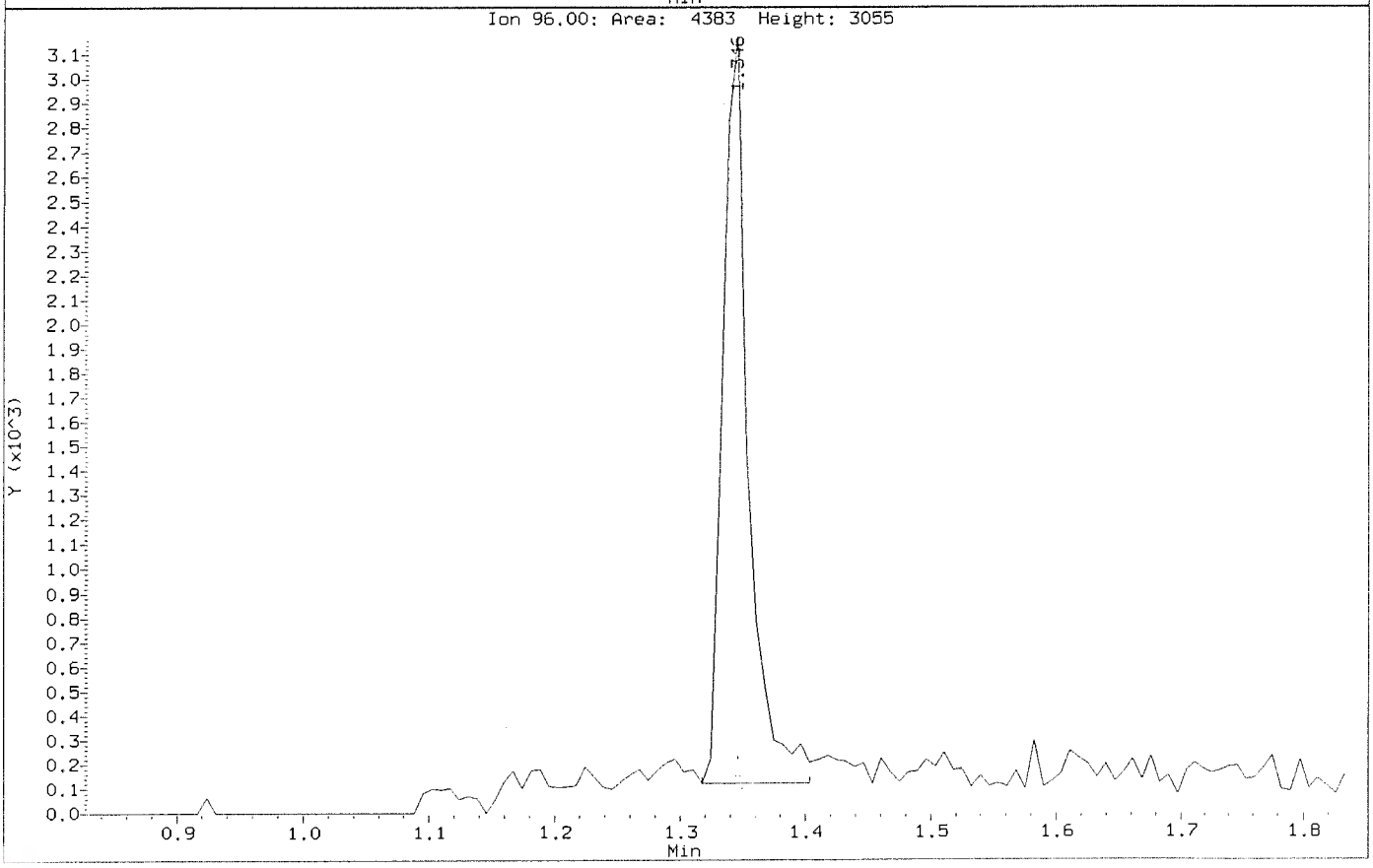




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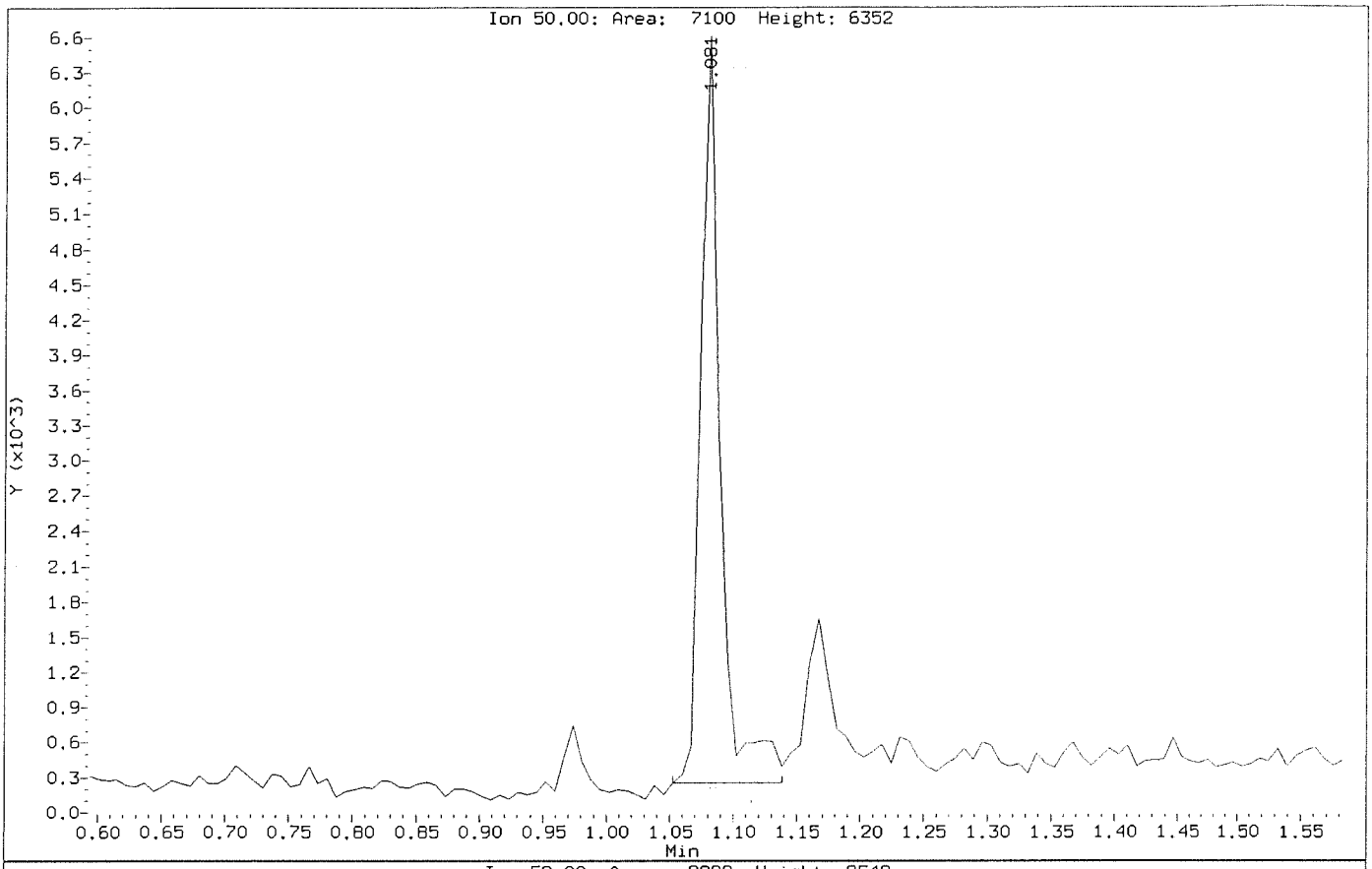
Compound: Bromomethane
CAS Number: 74-83-9

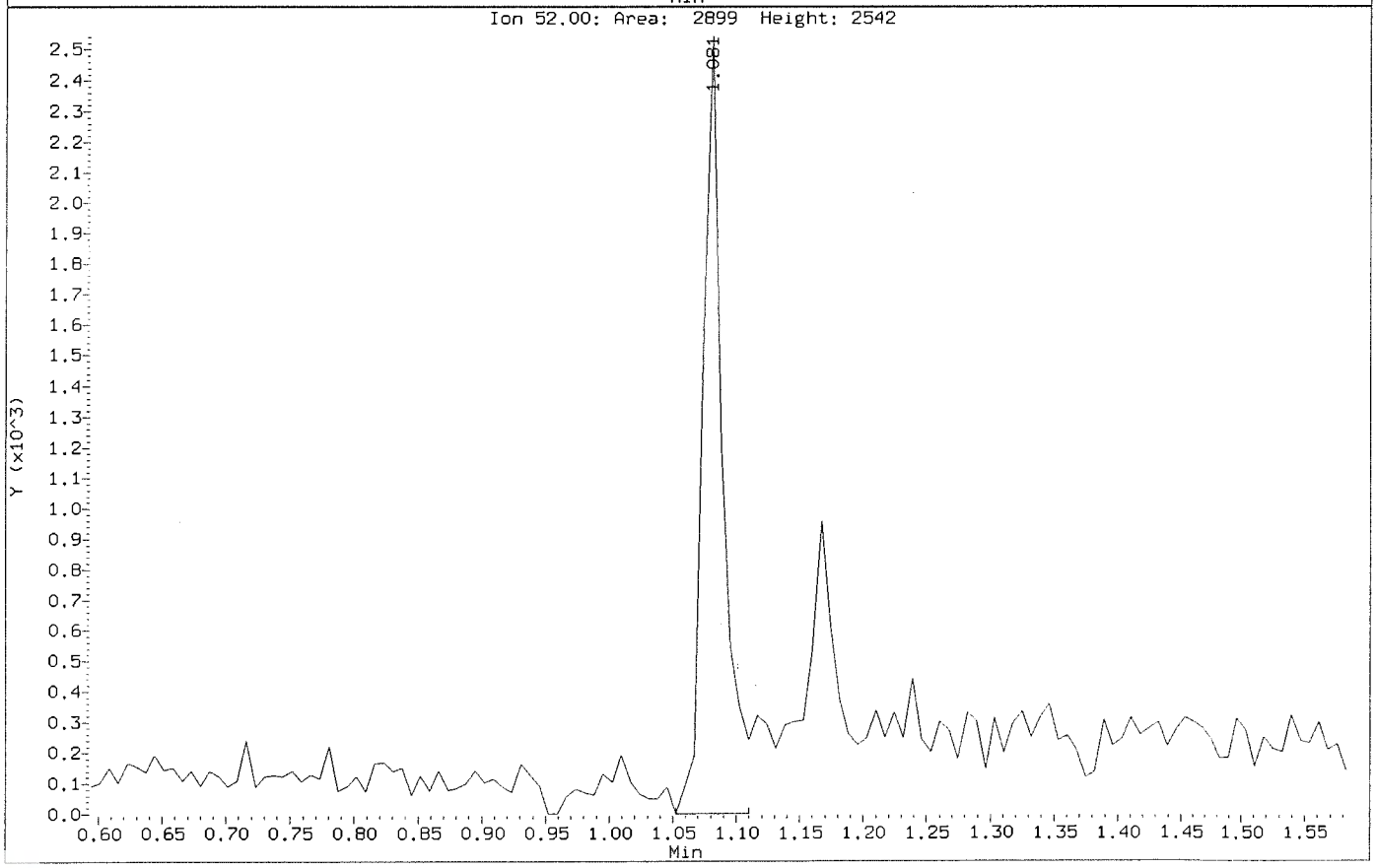




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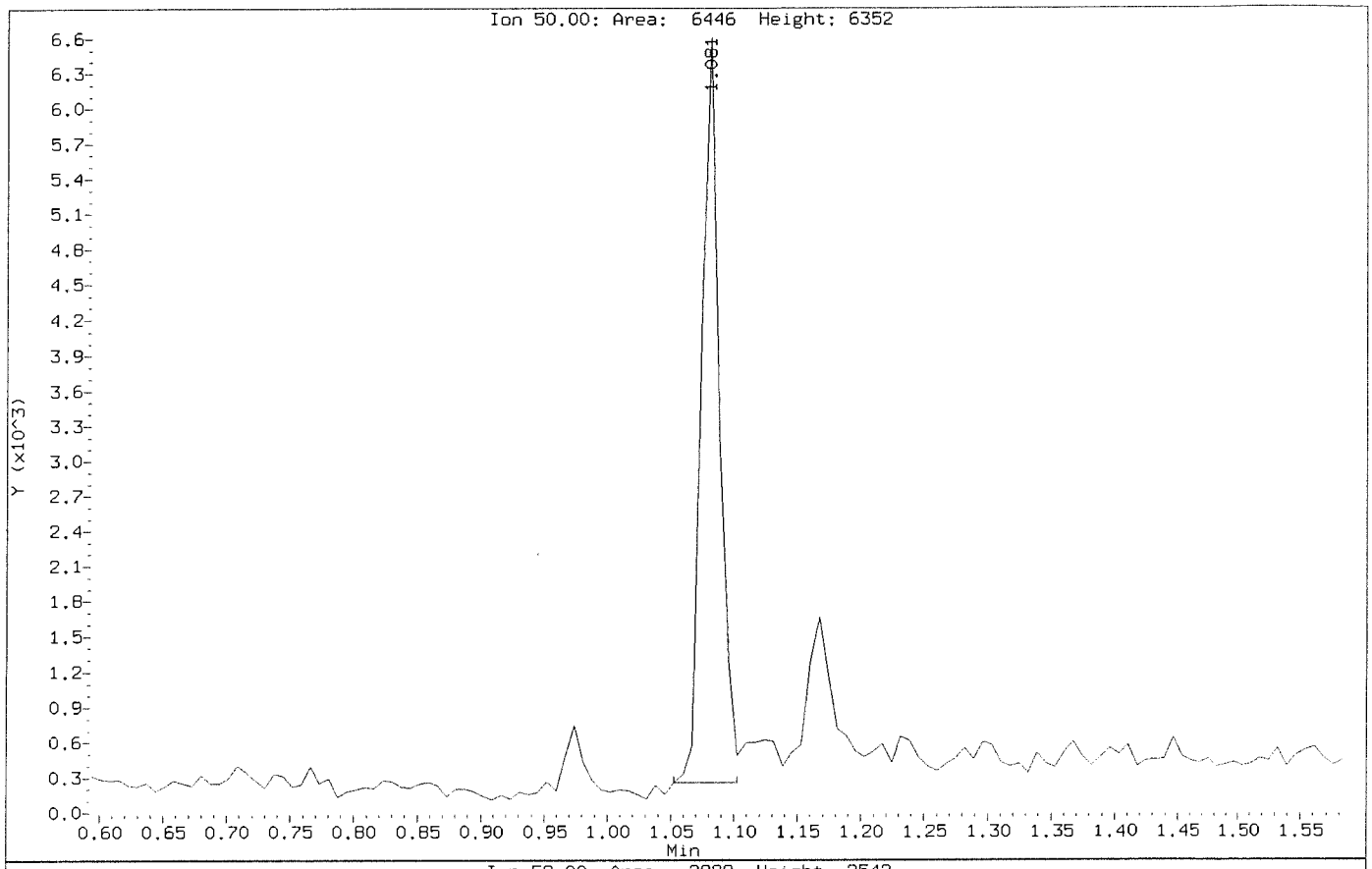
Compound: Chloromethane
CAS Number: 74-87-3

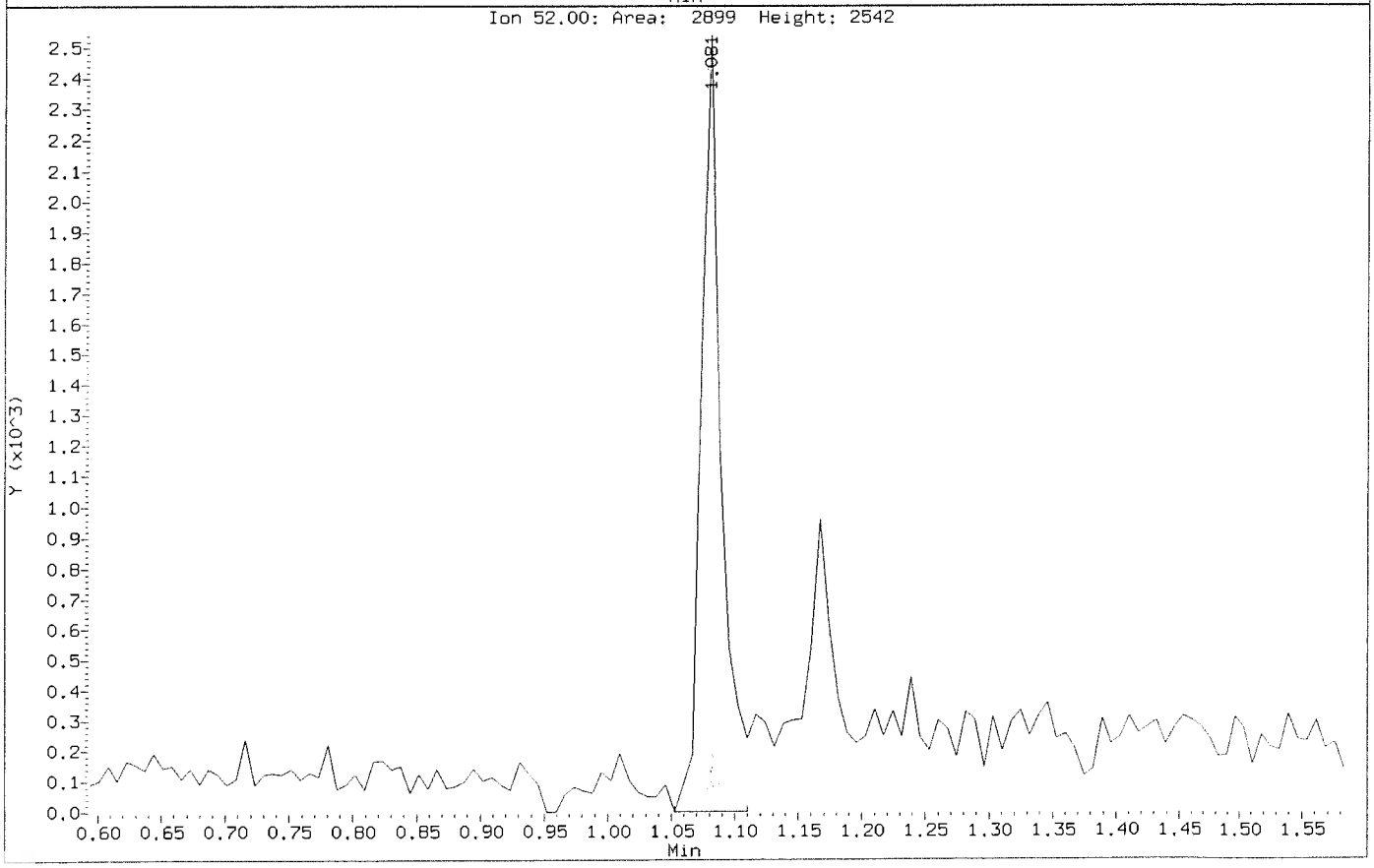




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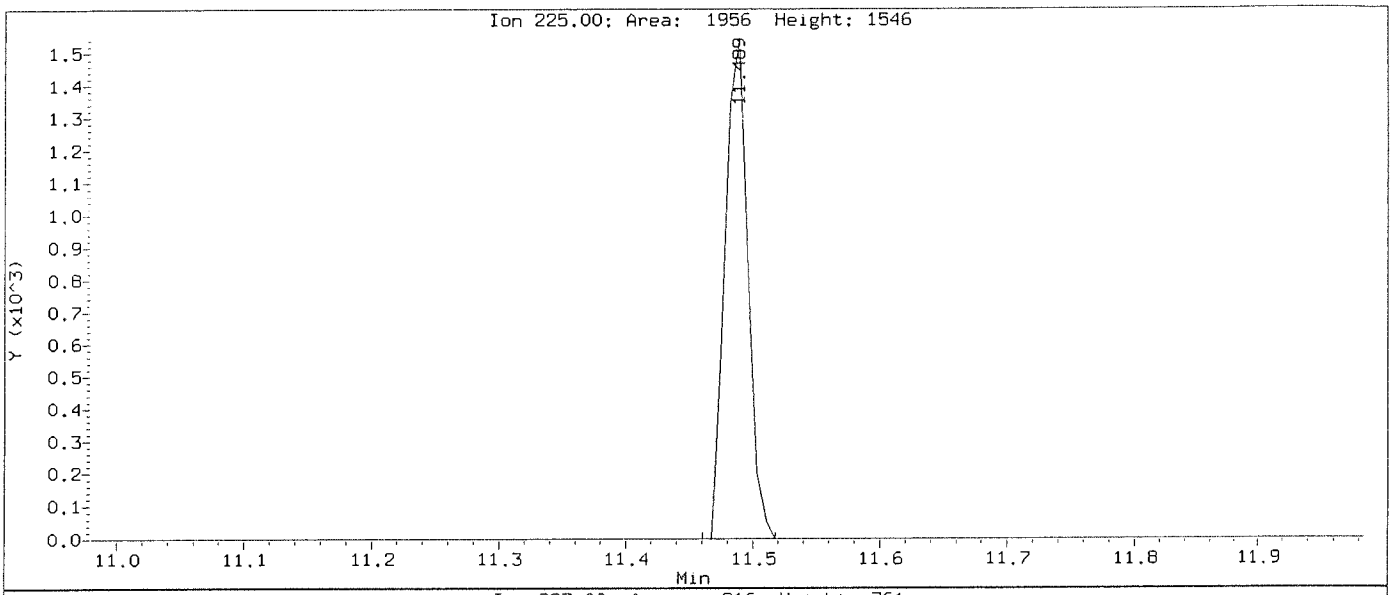
Compound: Chloromethane
CAS Number: 74-87-3

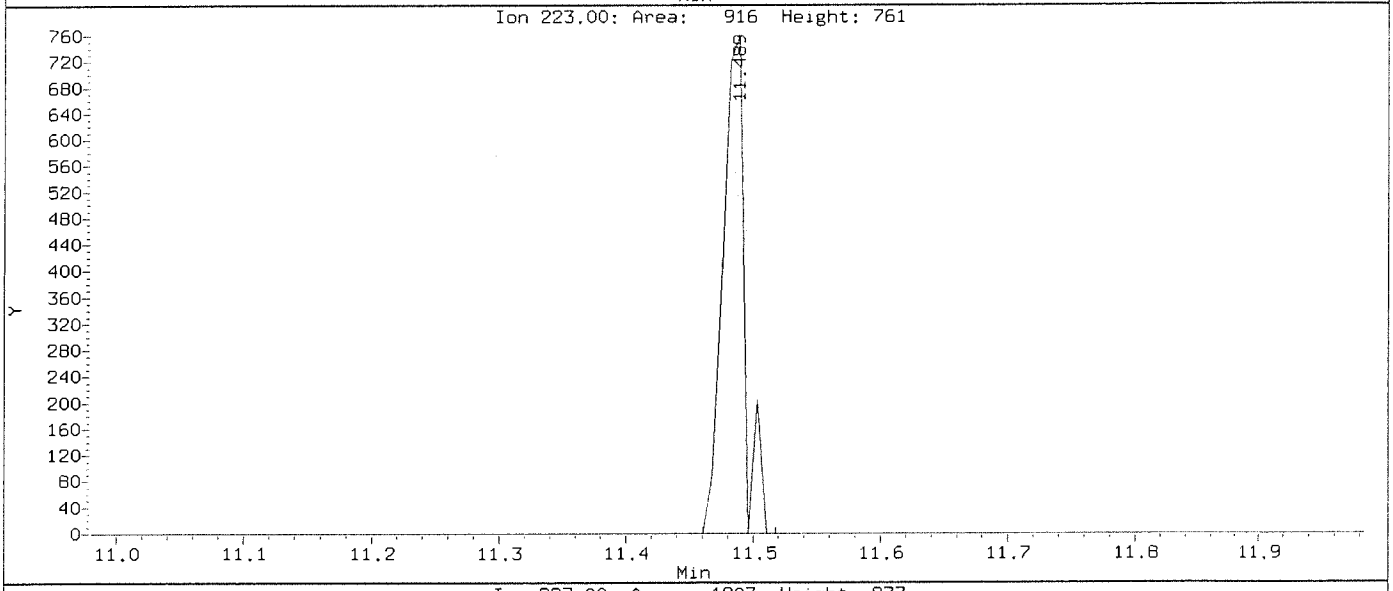


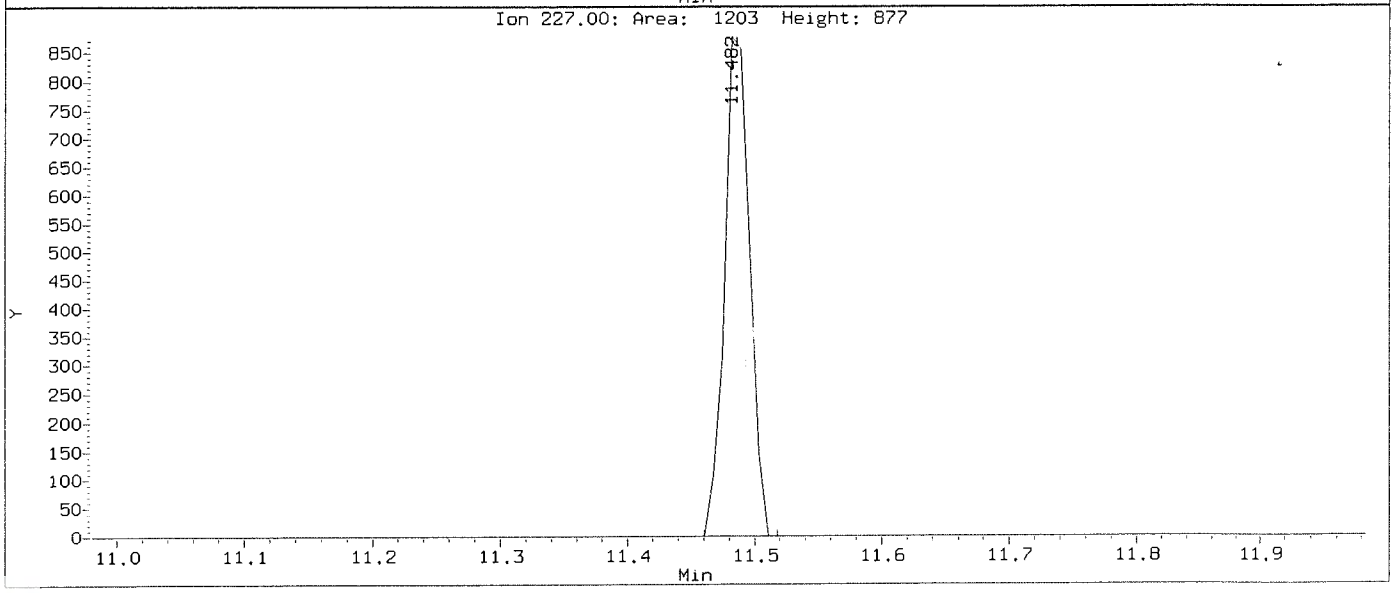


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

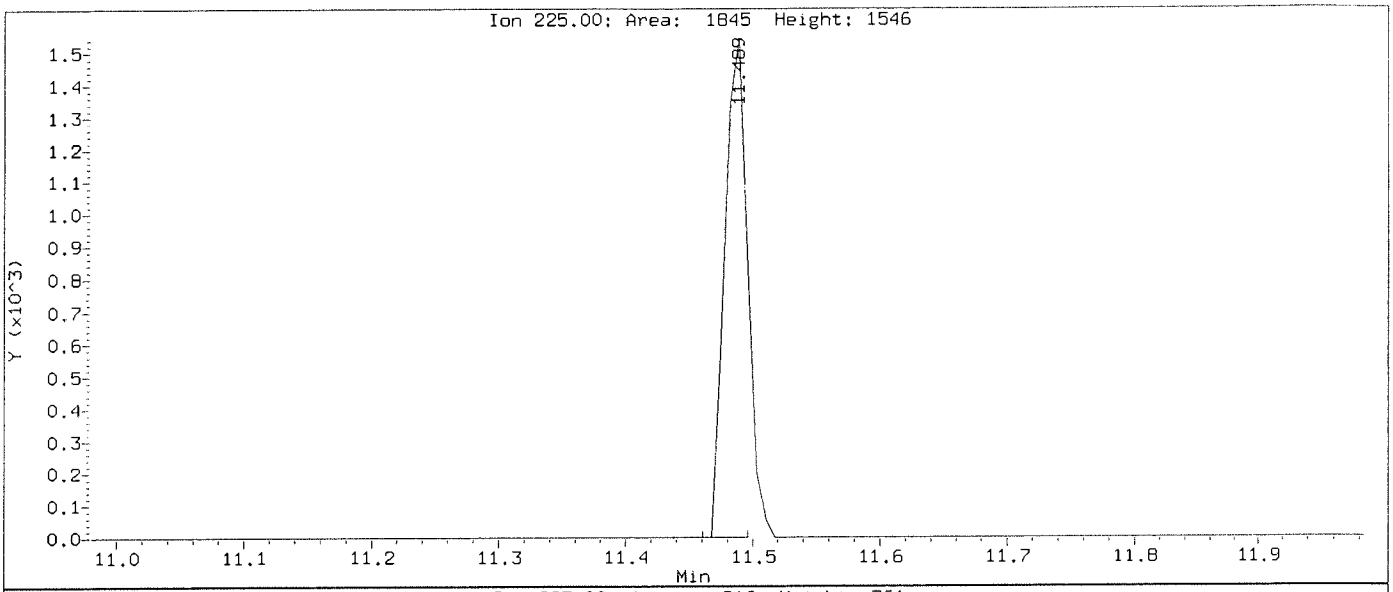


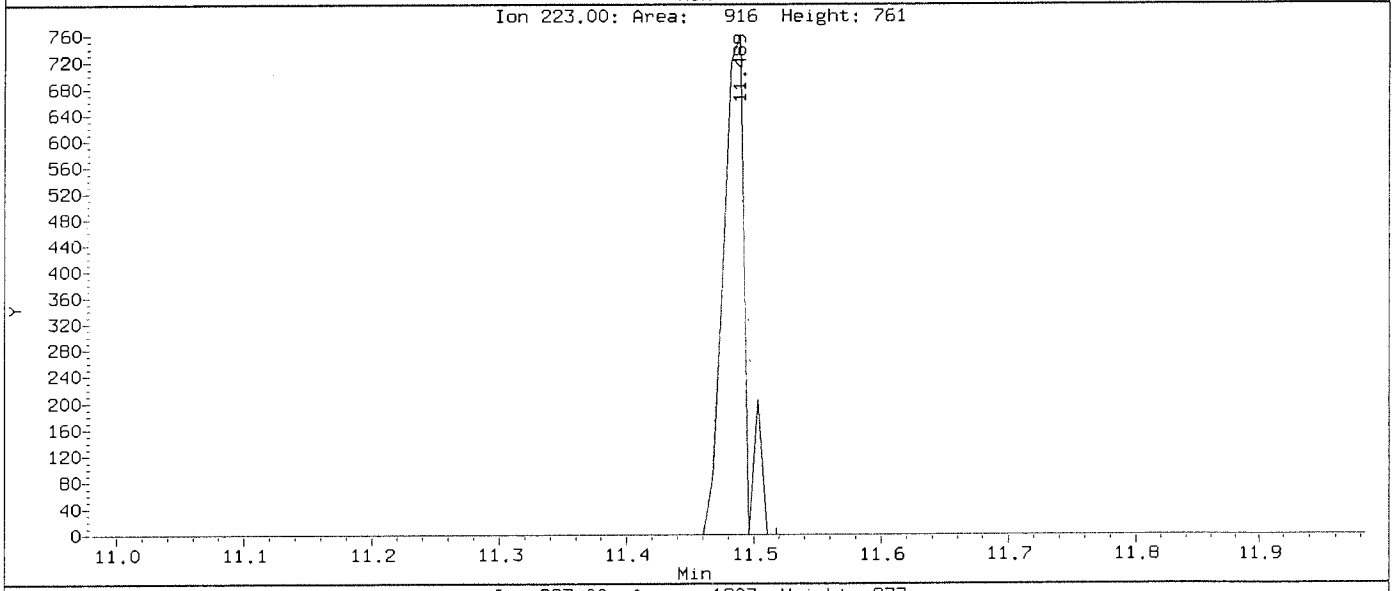


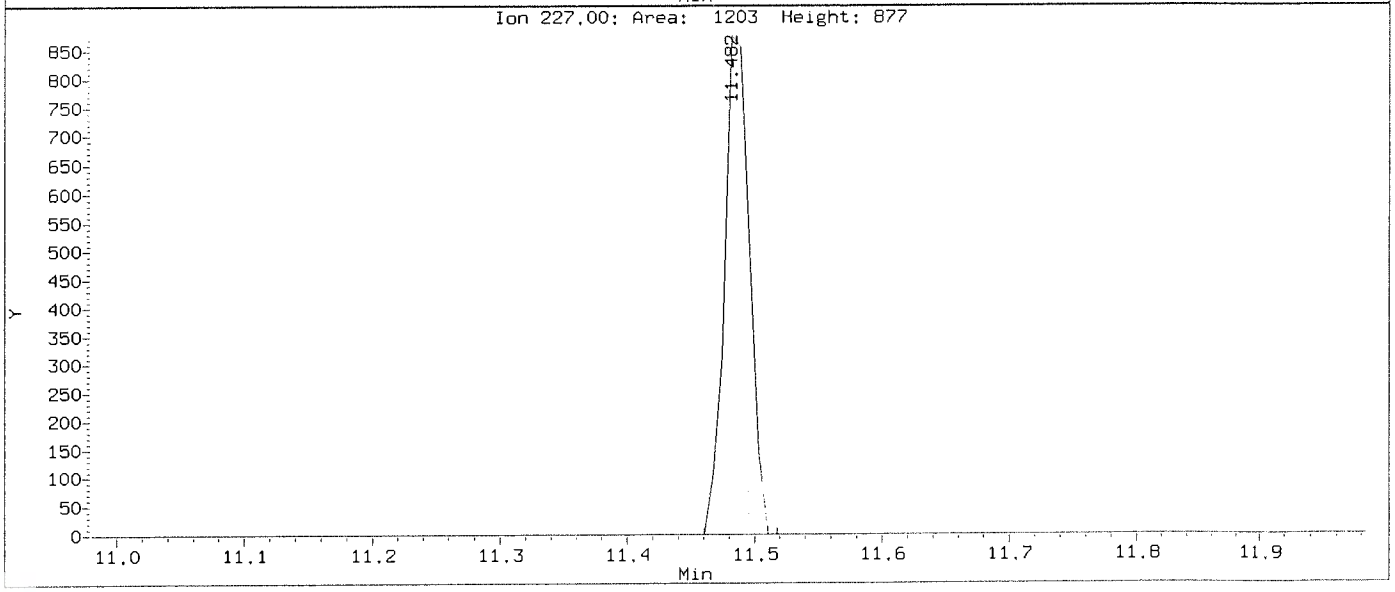


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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

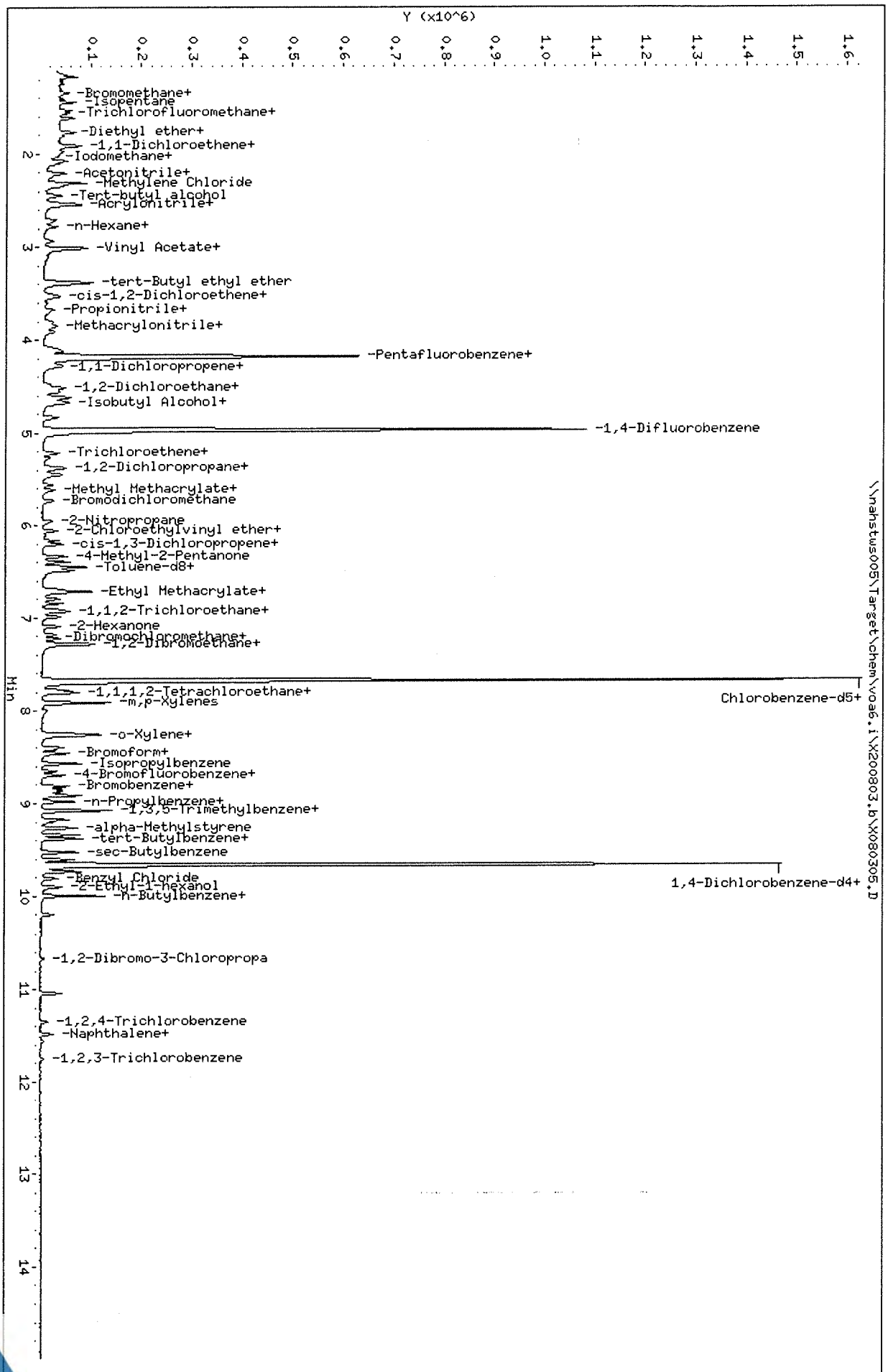
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.190	4.190	(1.000)	543911	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	829677	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	750905	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

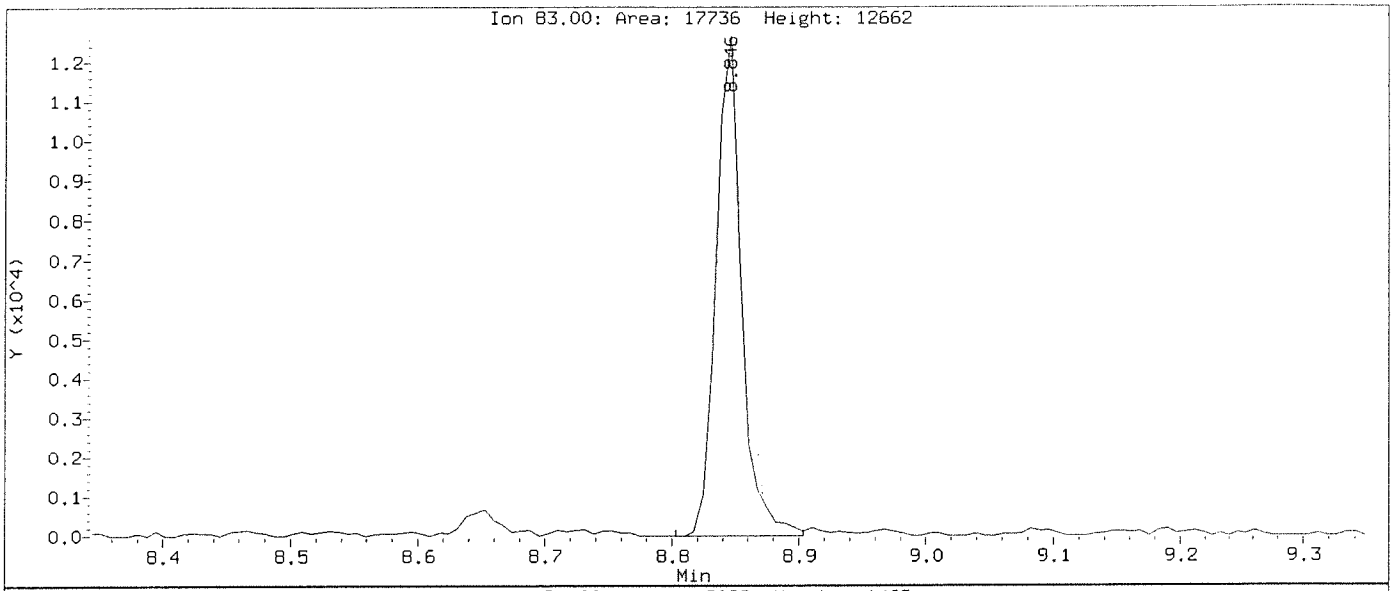


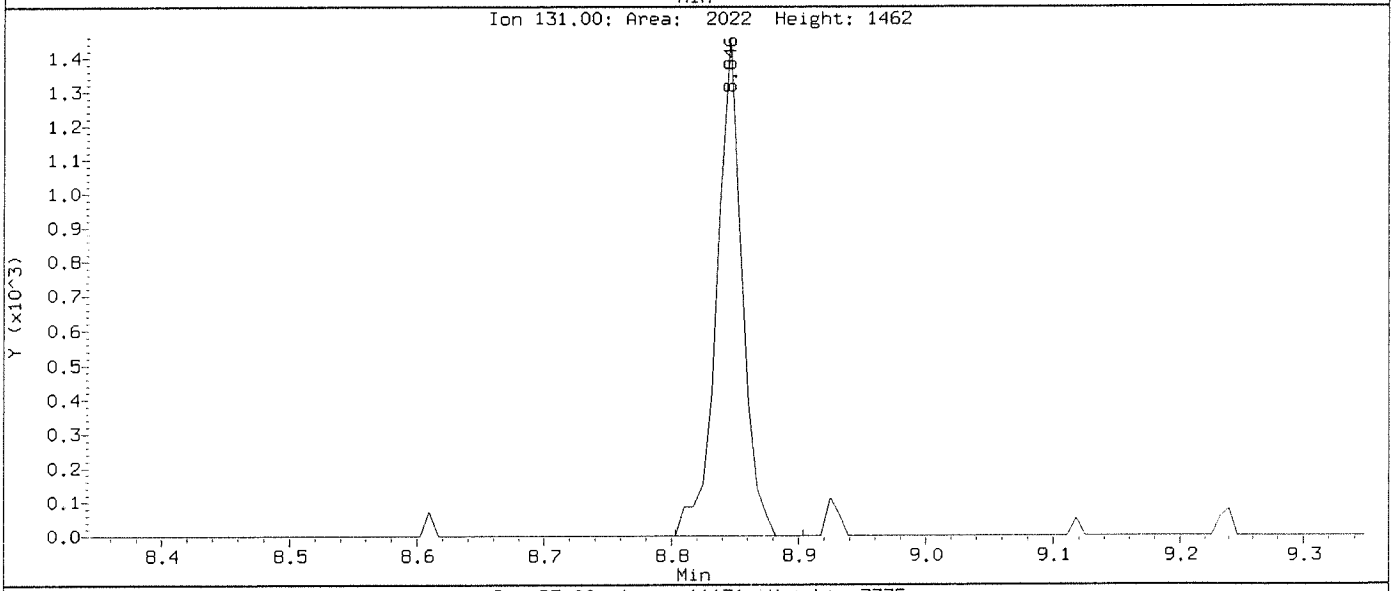
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Date : 03-AUG-2020 13:16
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

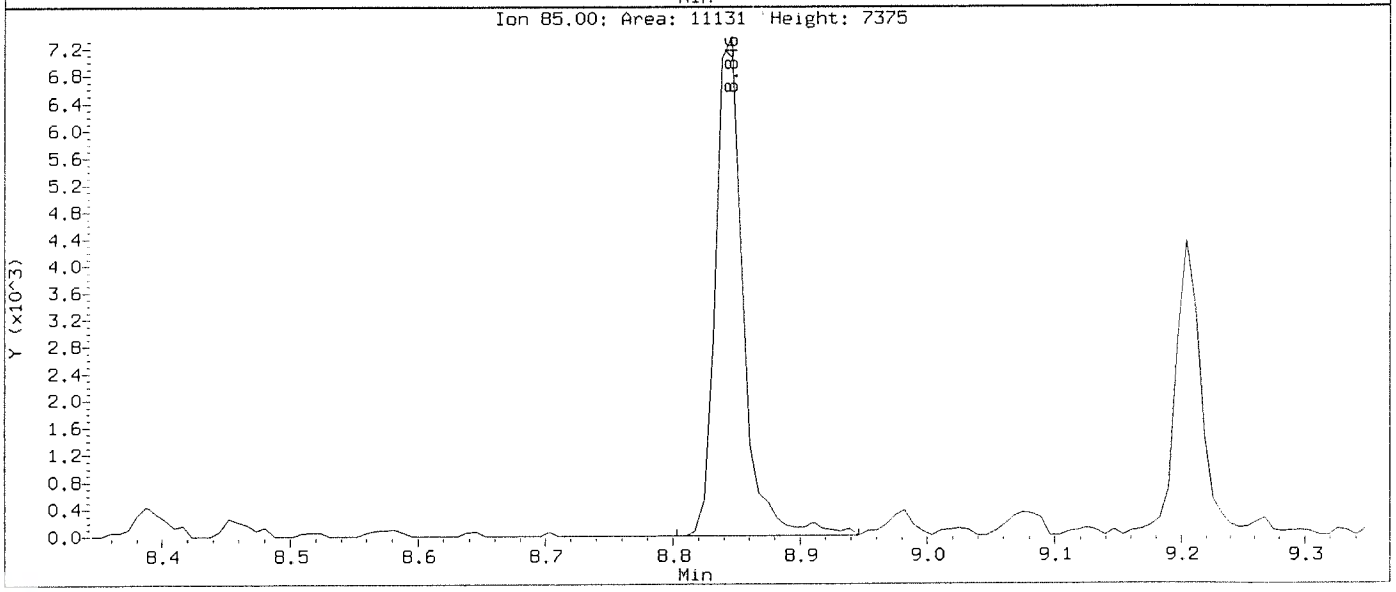
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Operator: PC
Column diameter: 0.18

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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

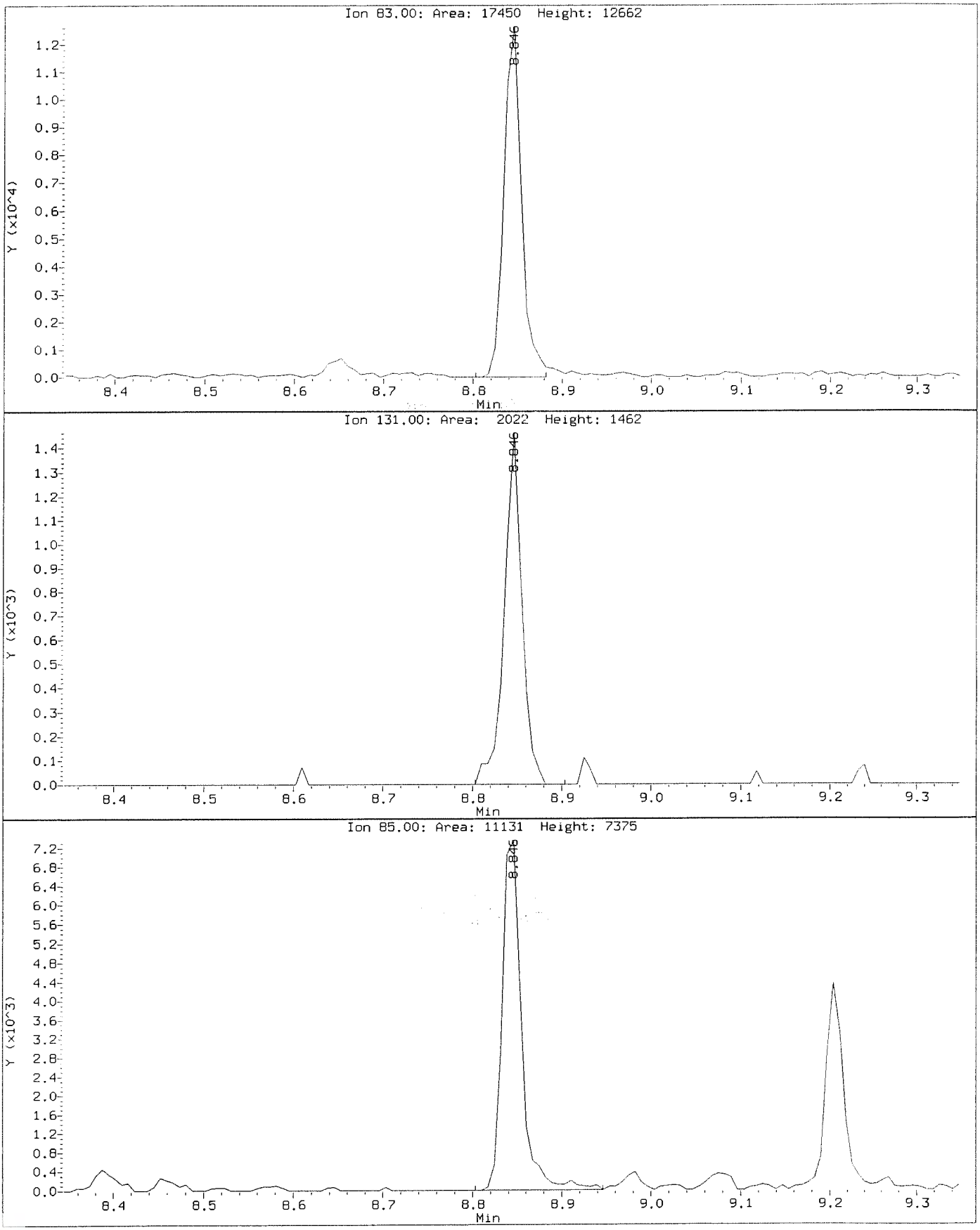






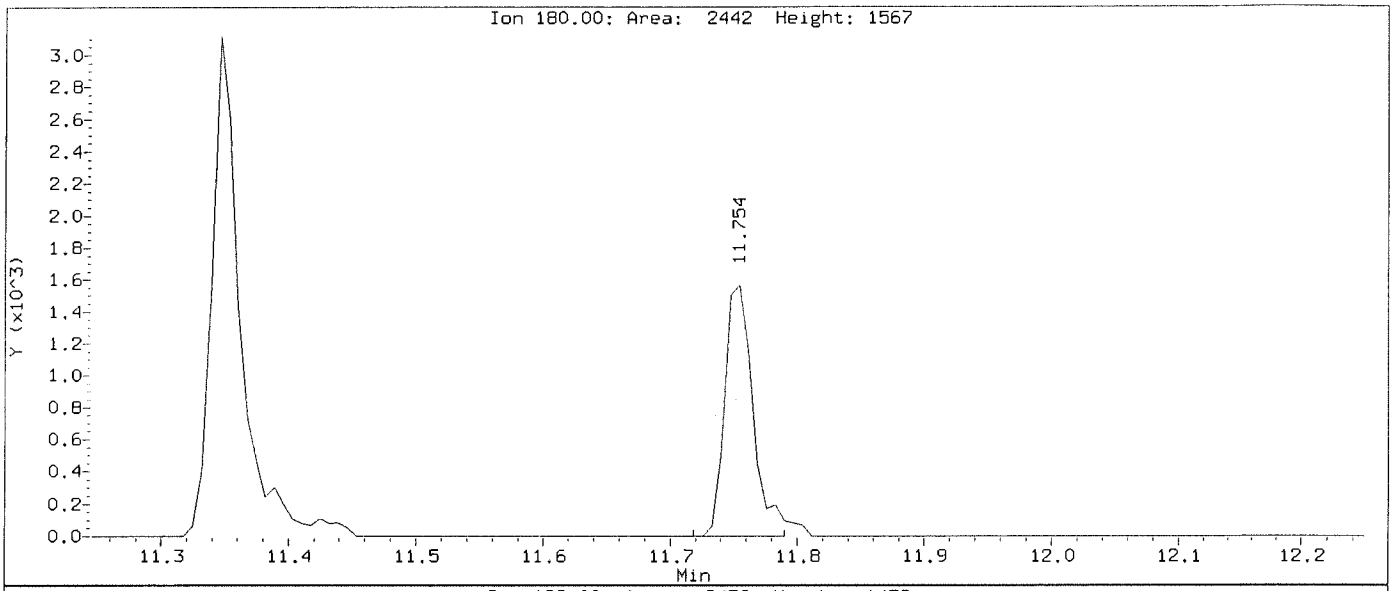
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

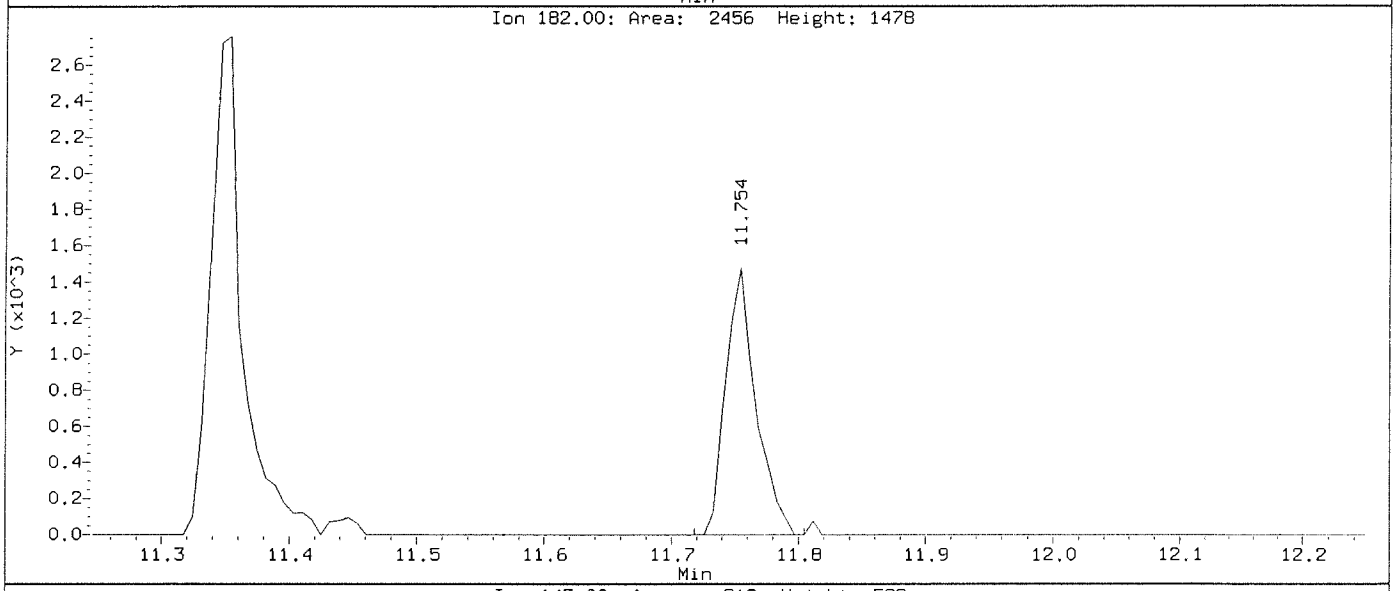
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

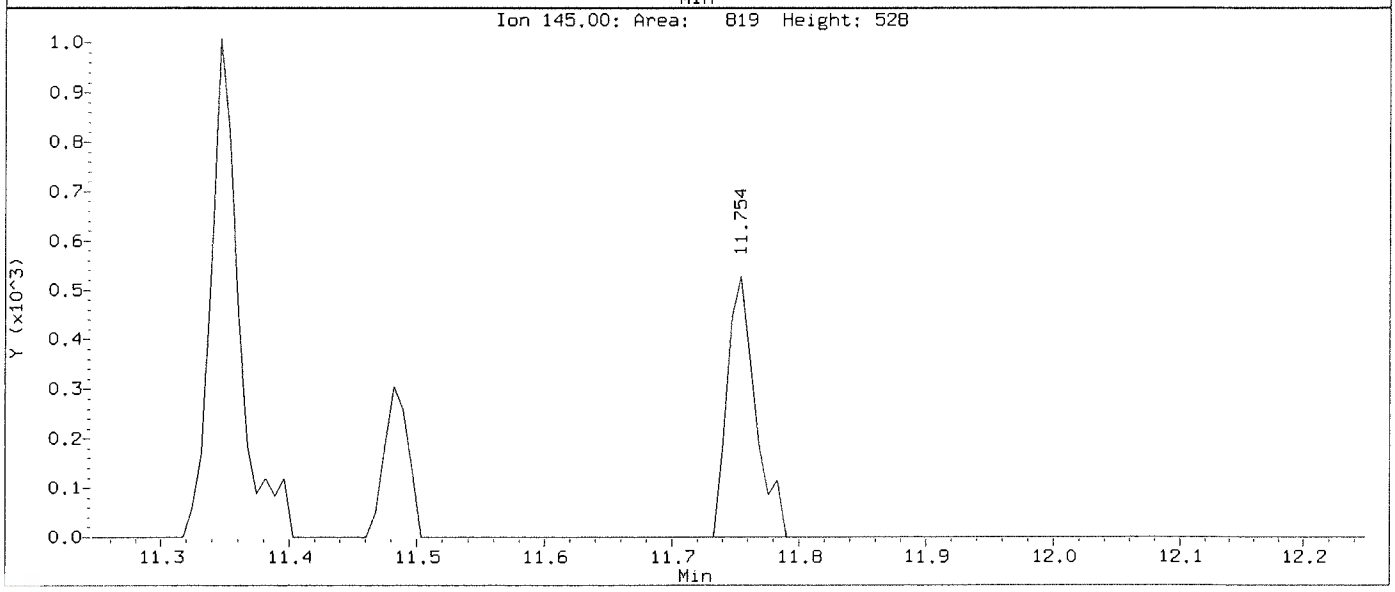


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

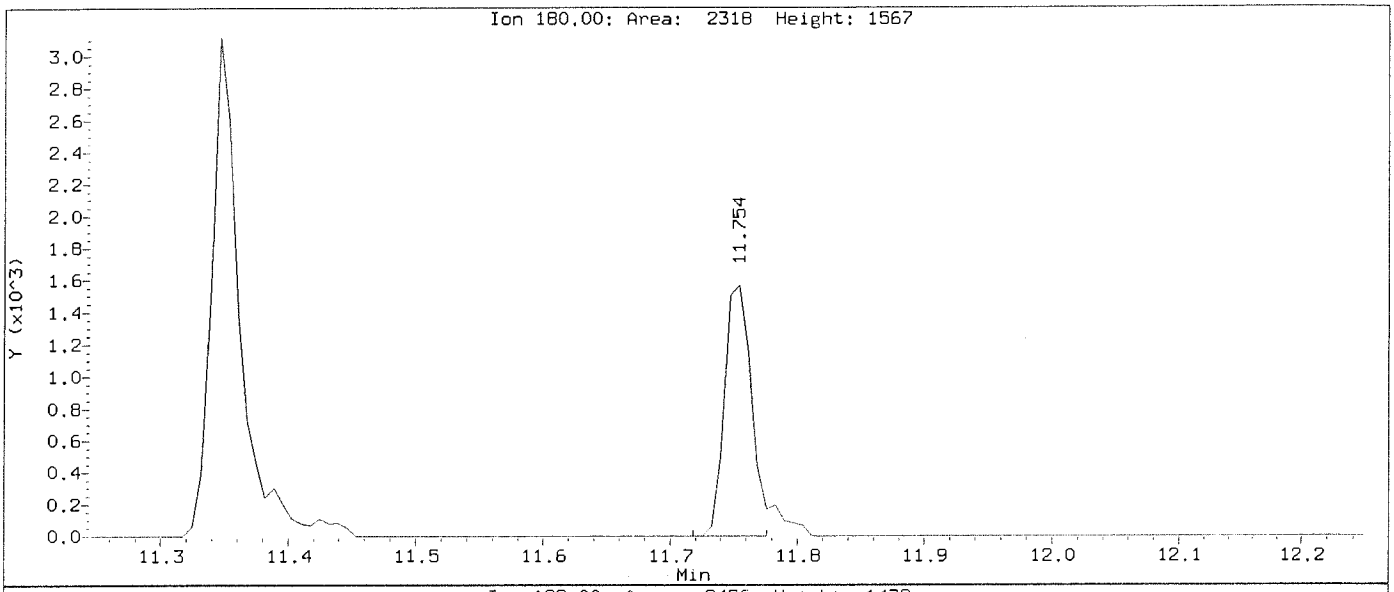


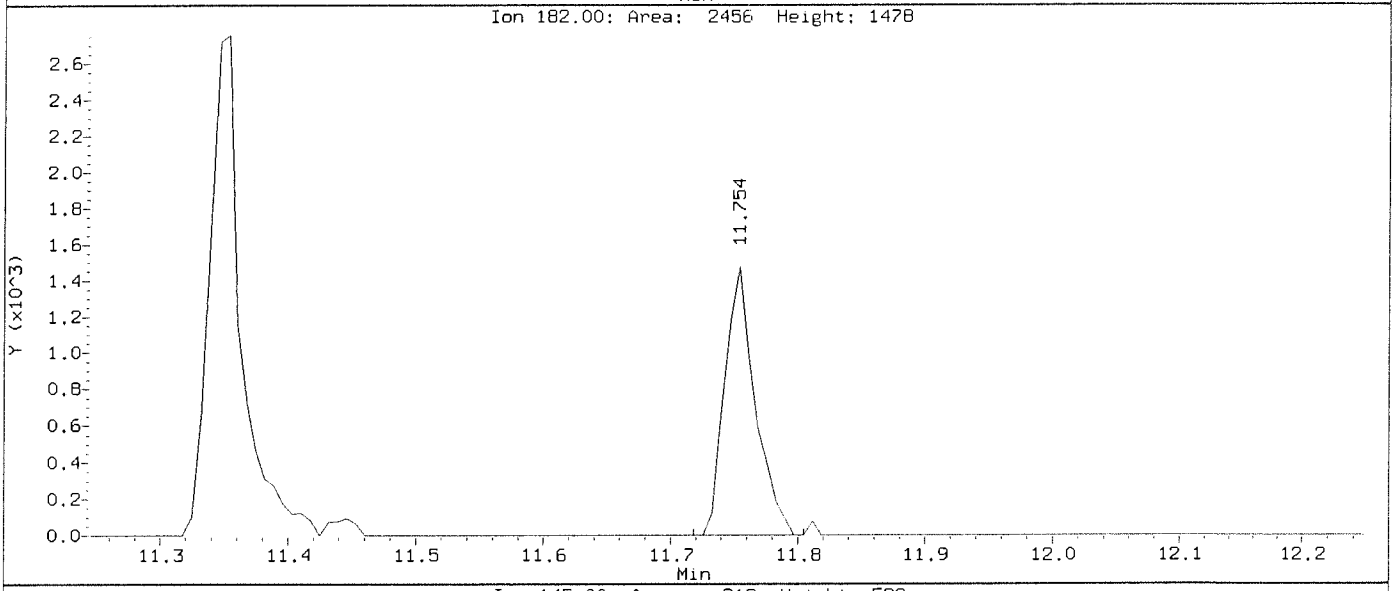


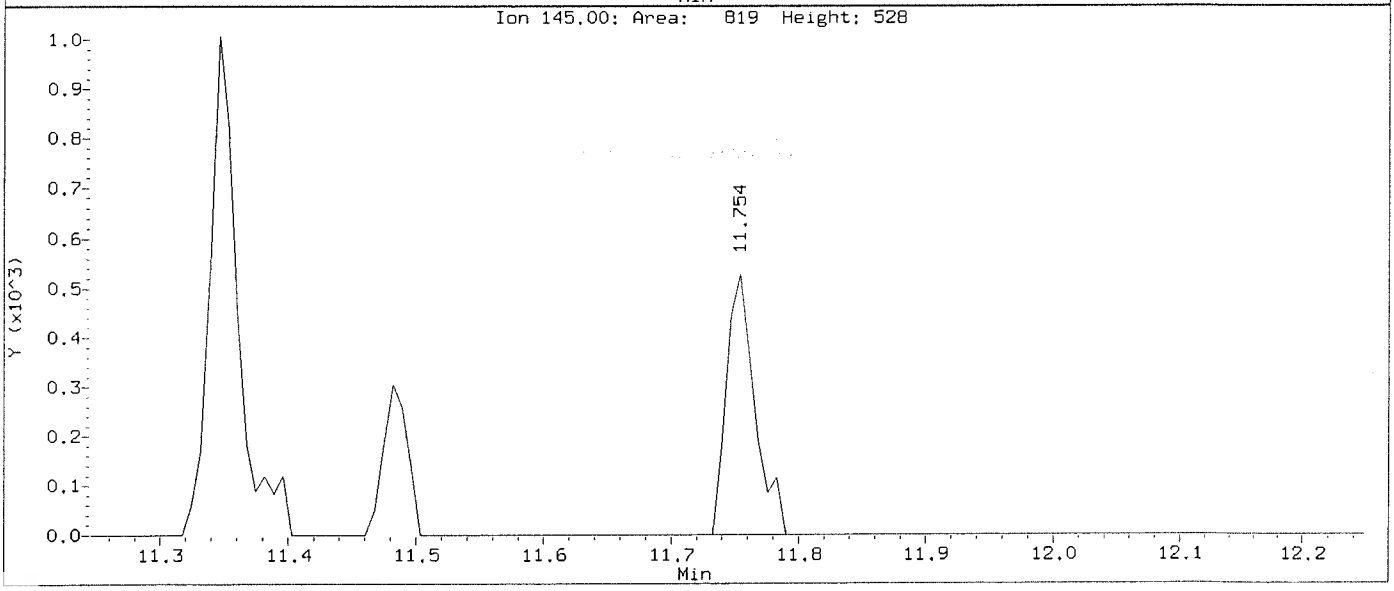


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

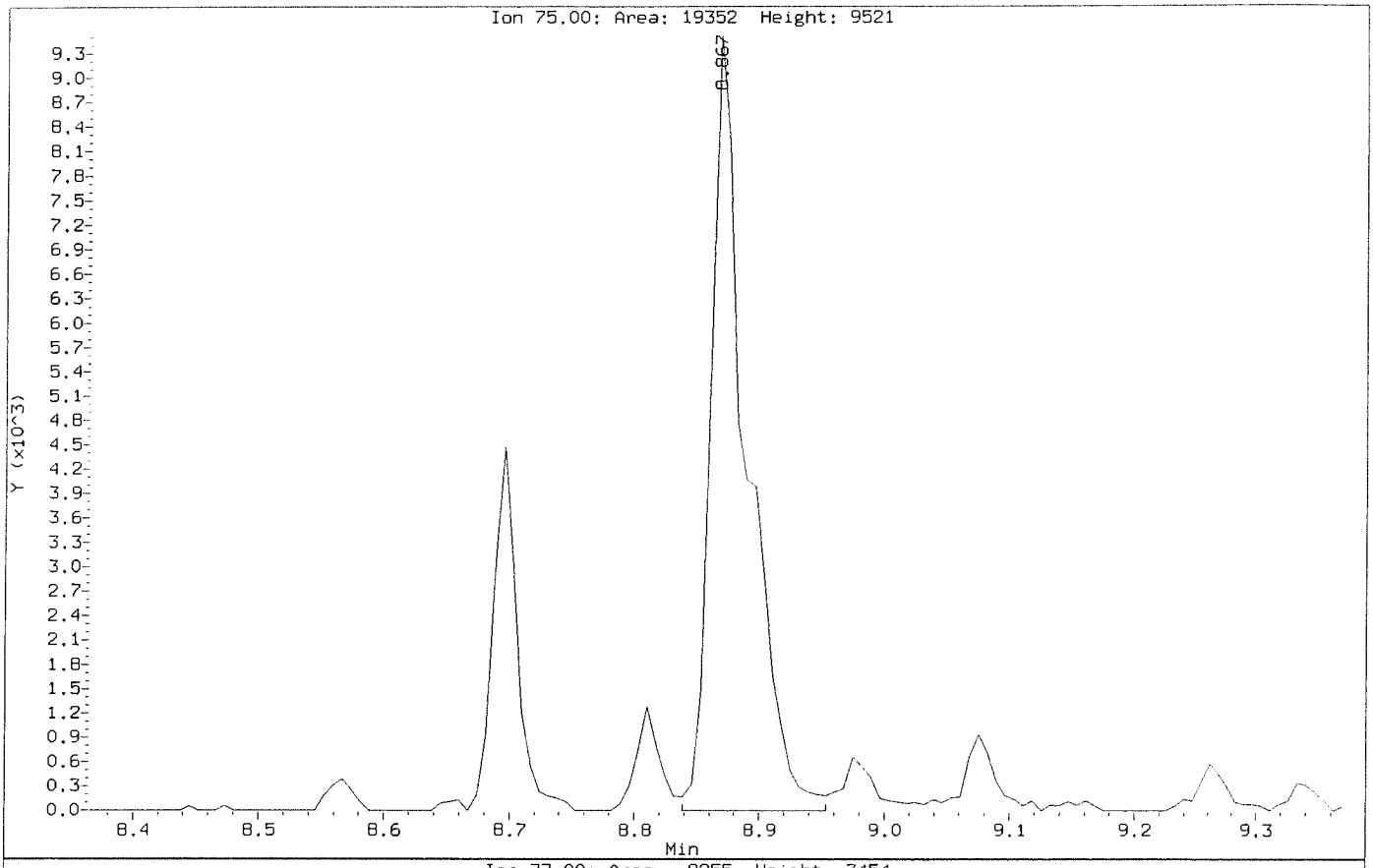


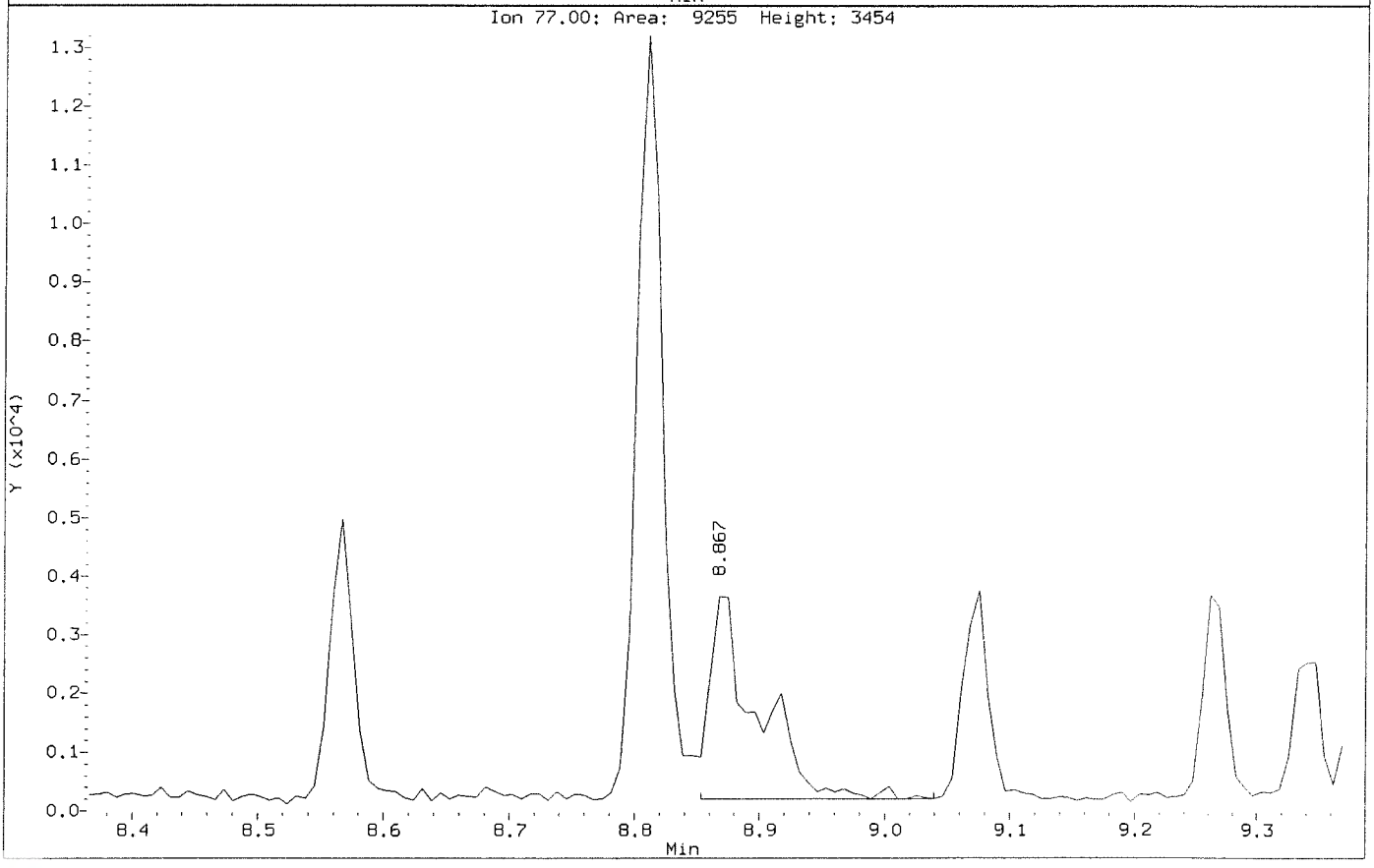




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Instrument: voa6.i
Client Sample ID: VSTD002

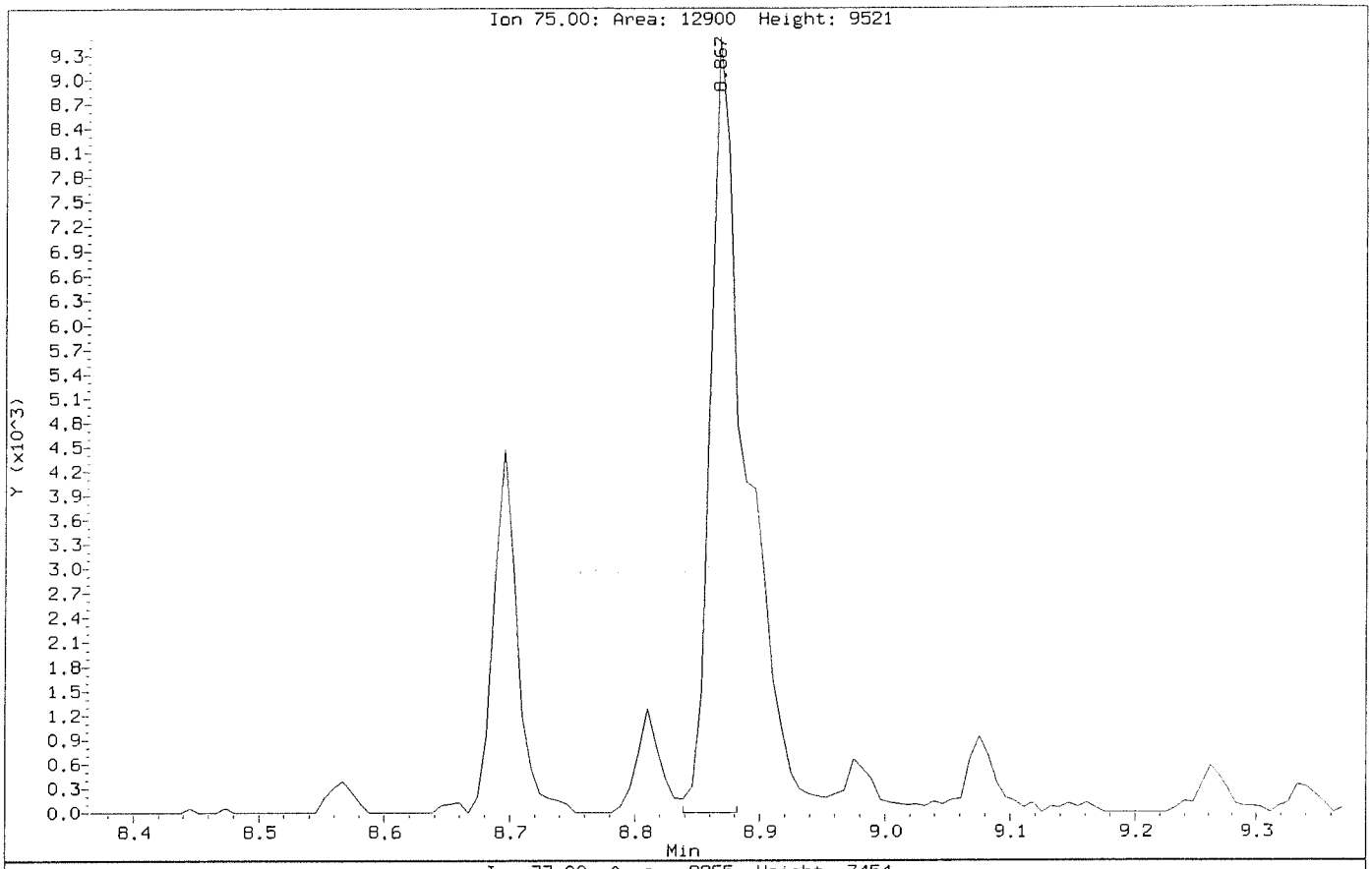
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

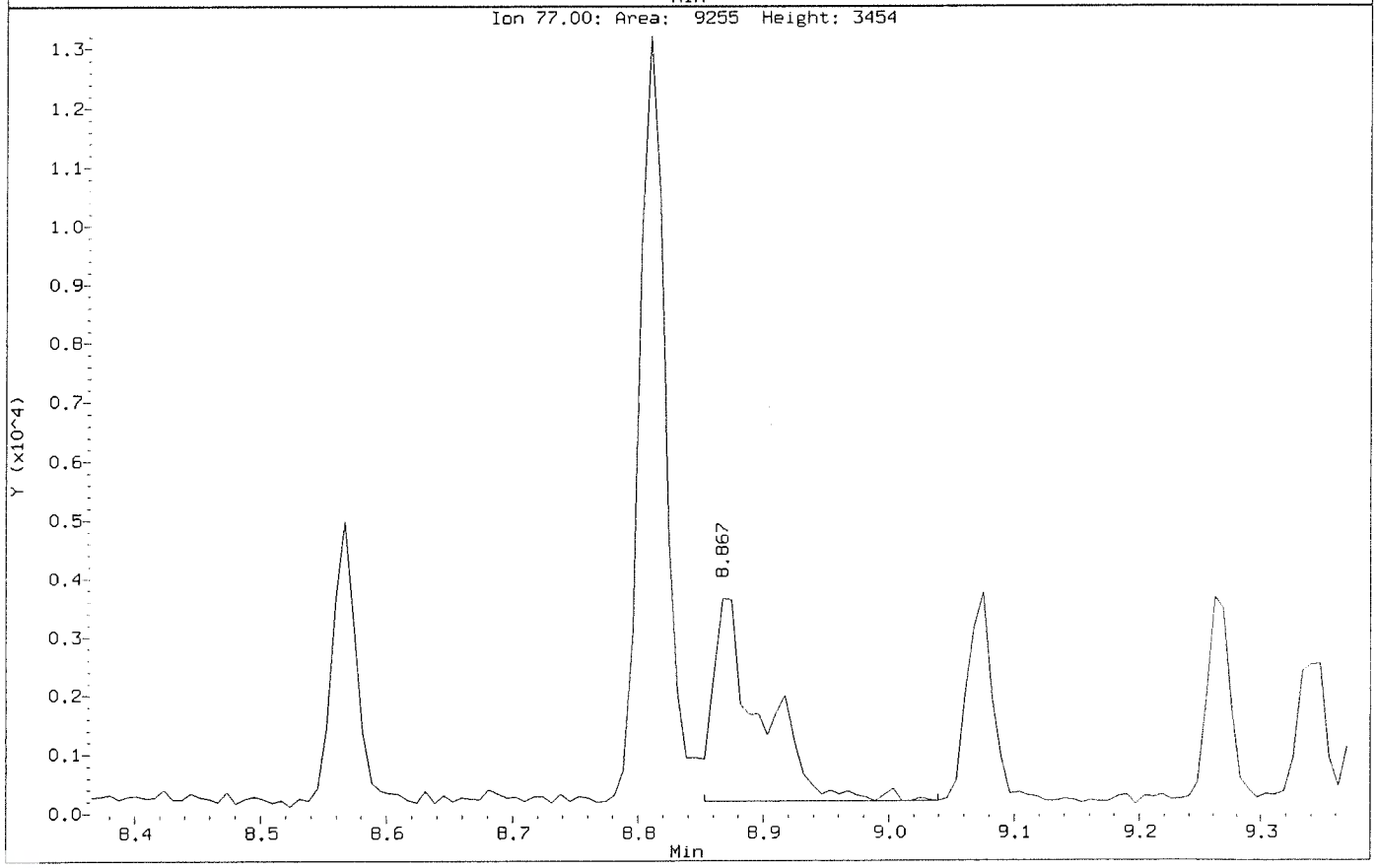




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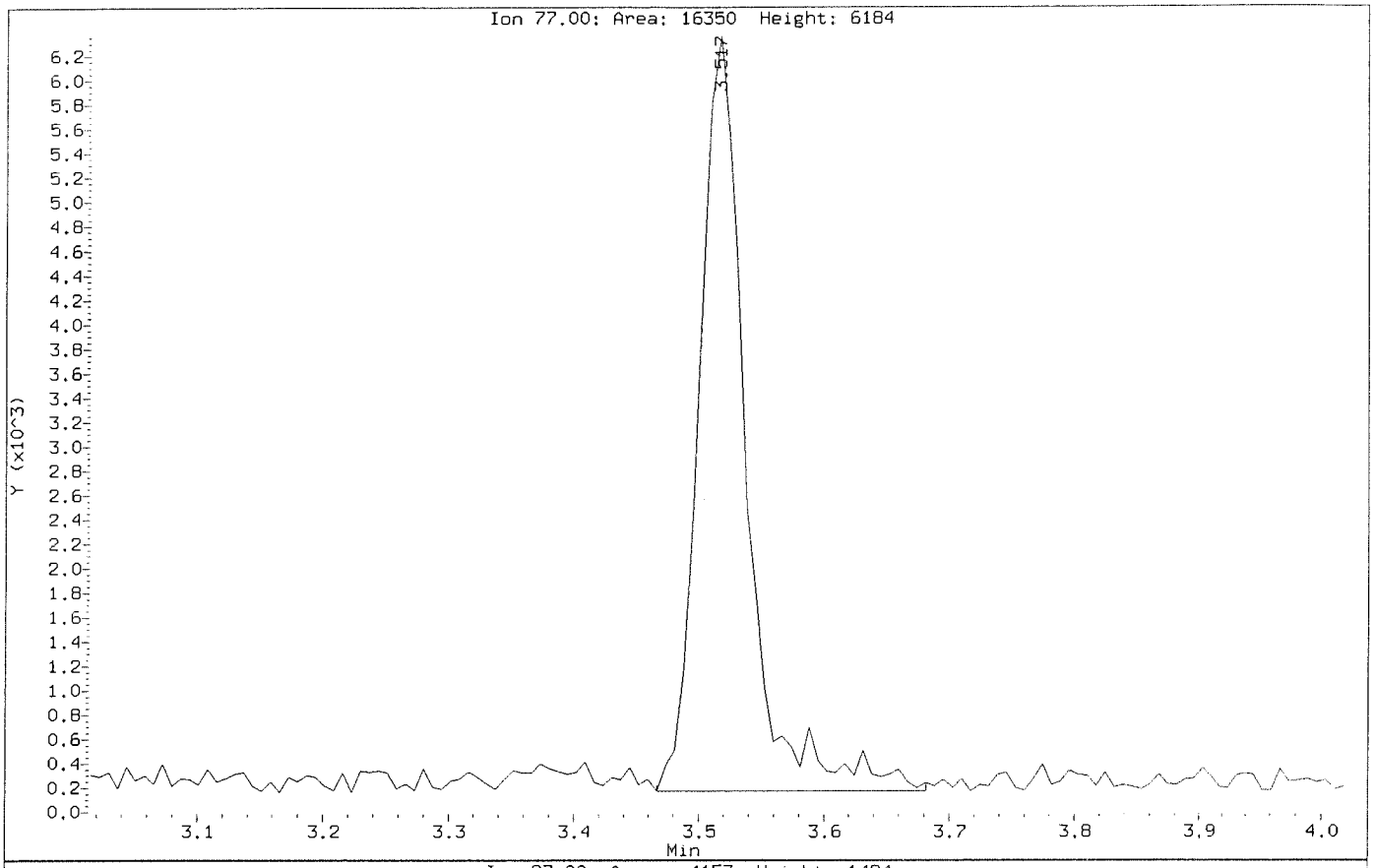
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CAS Number: 96-18-4

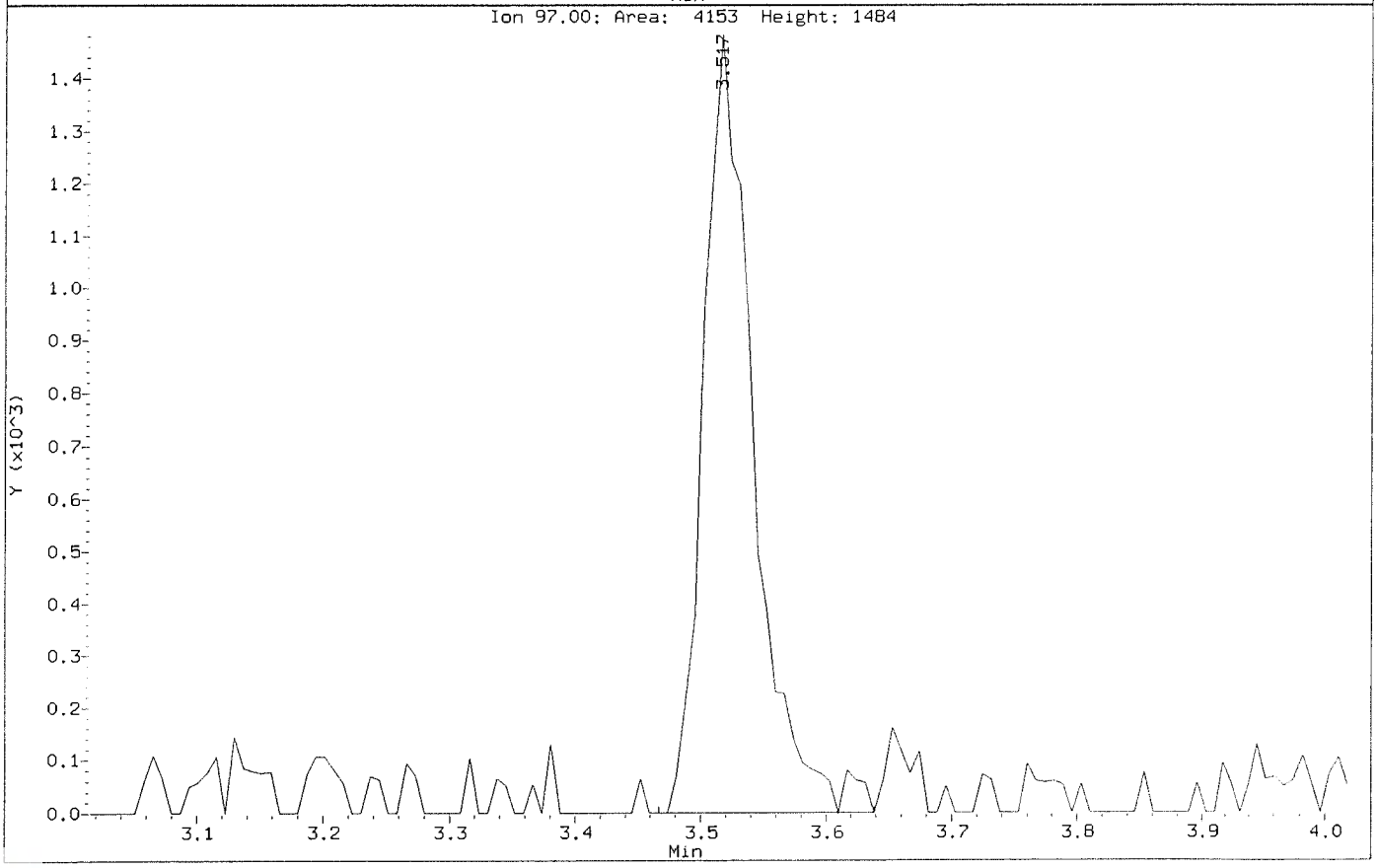




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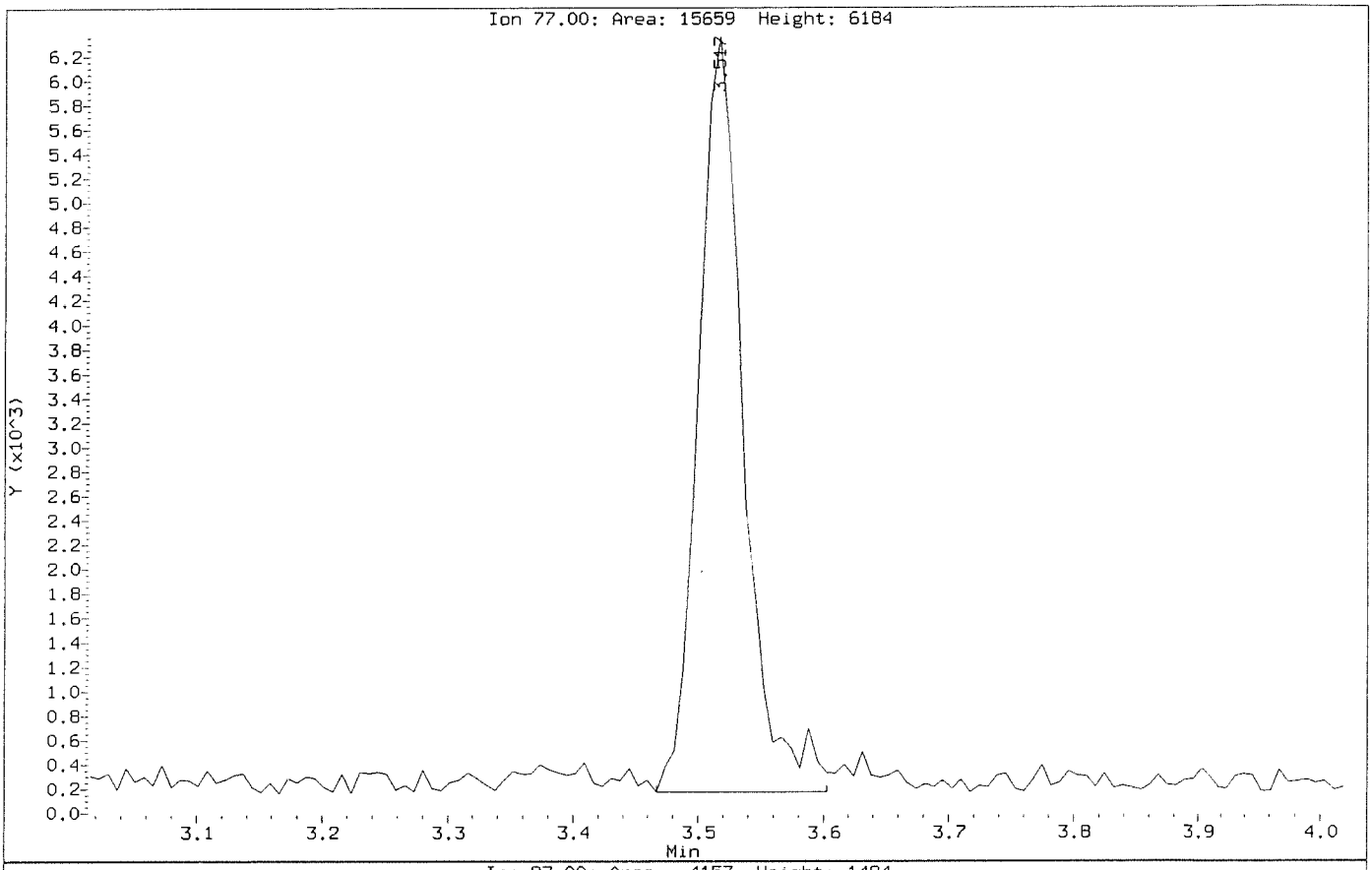
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CAS Number: 594-20-7

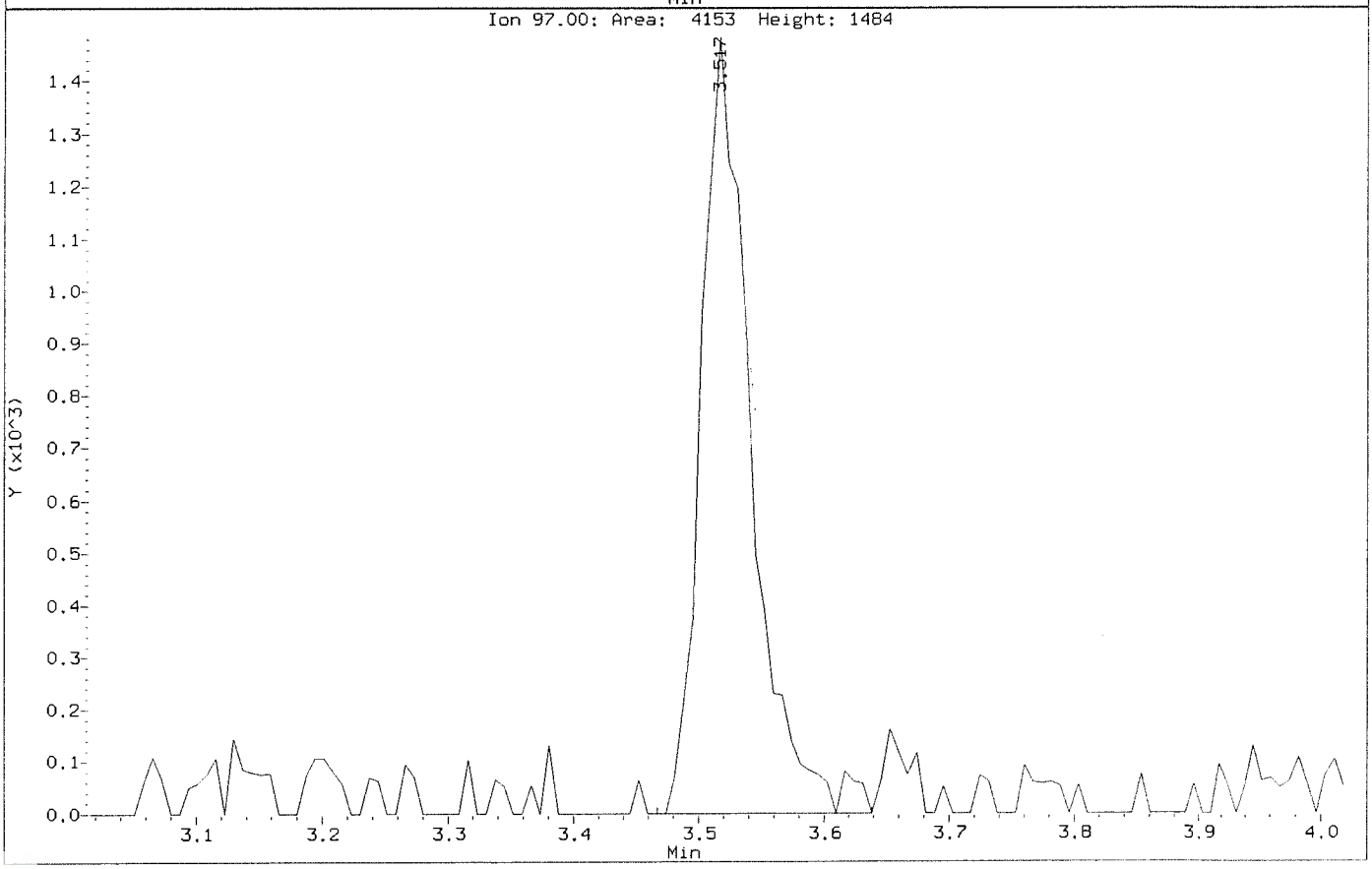




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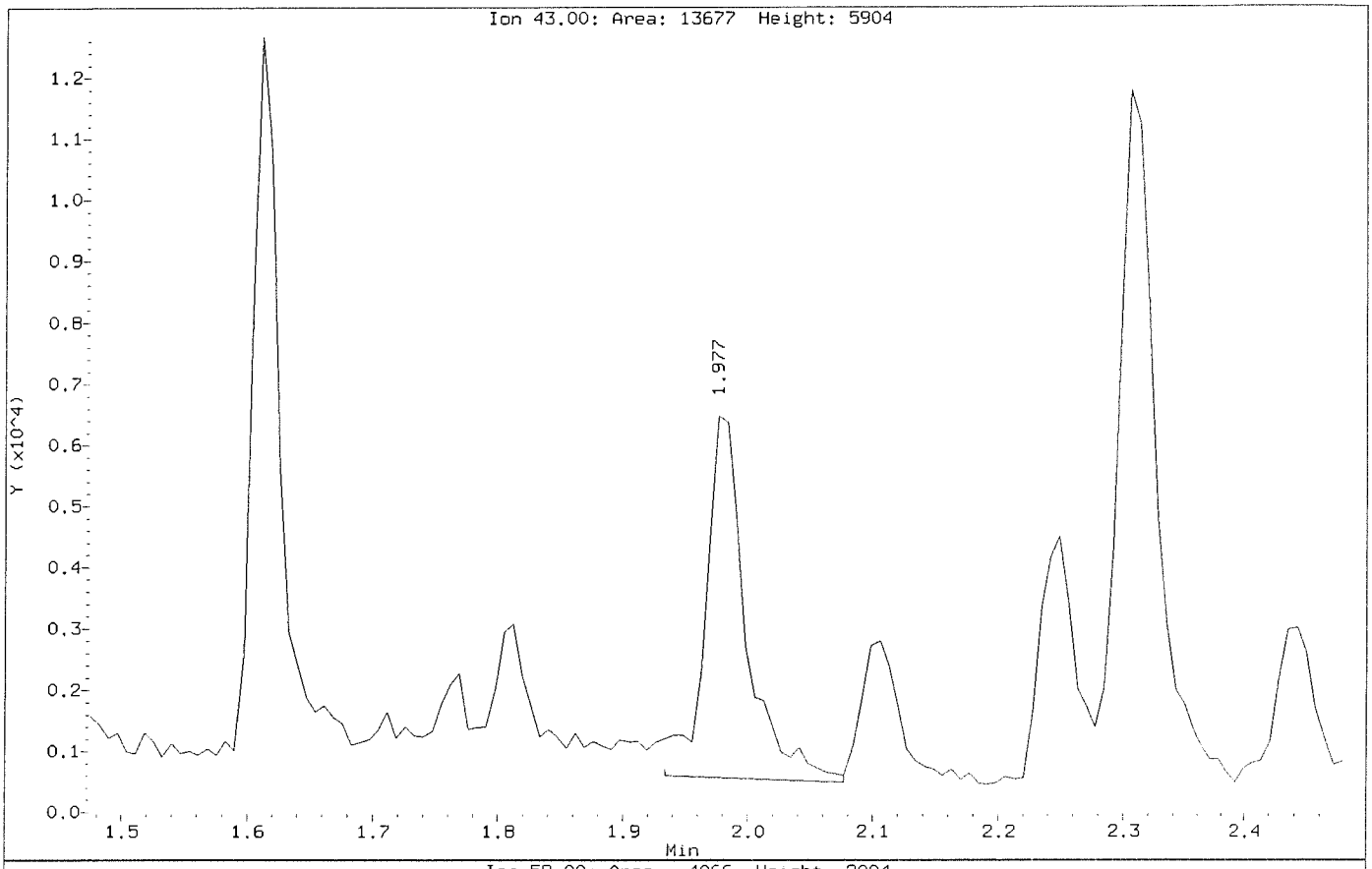
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CAS Number: 594-20-7

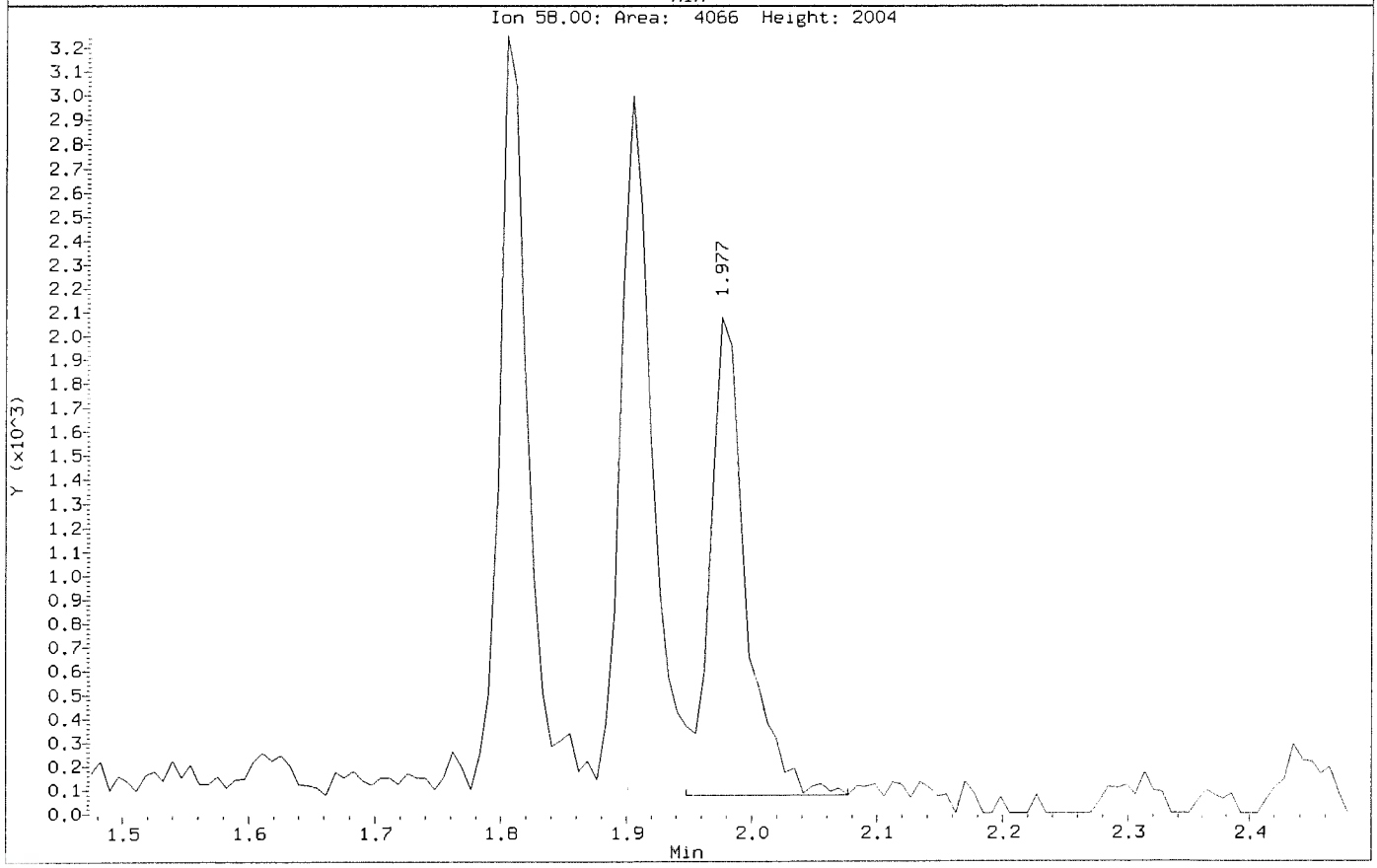




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Client Sample ID: VSTD002

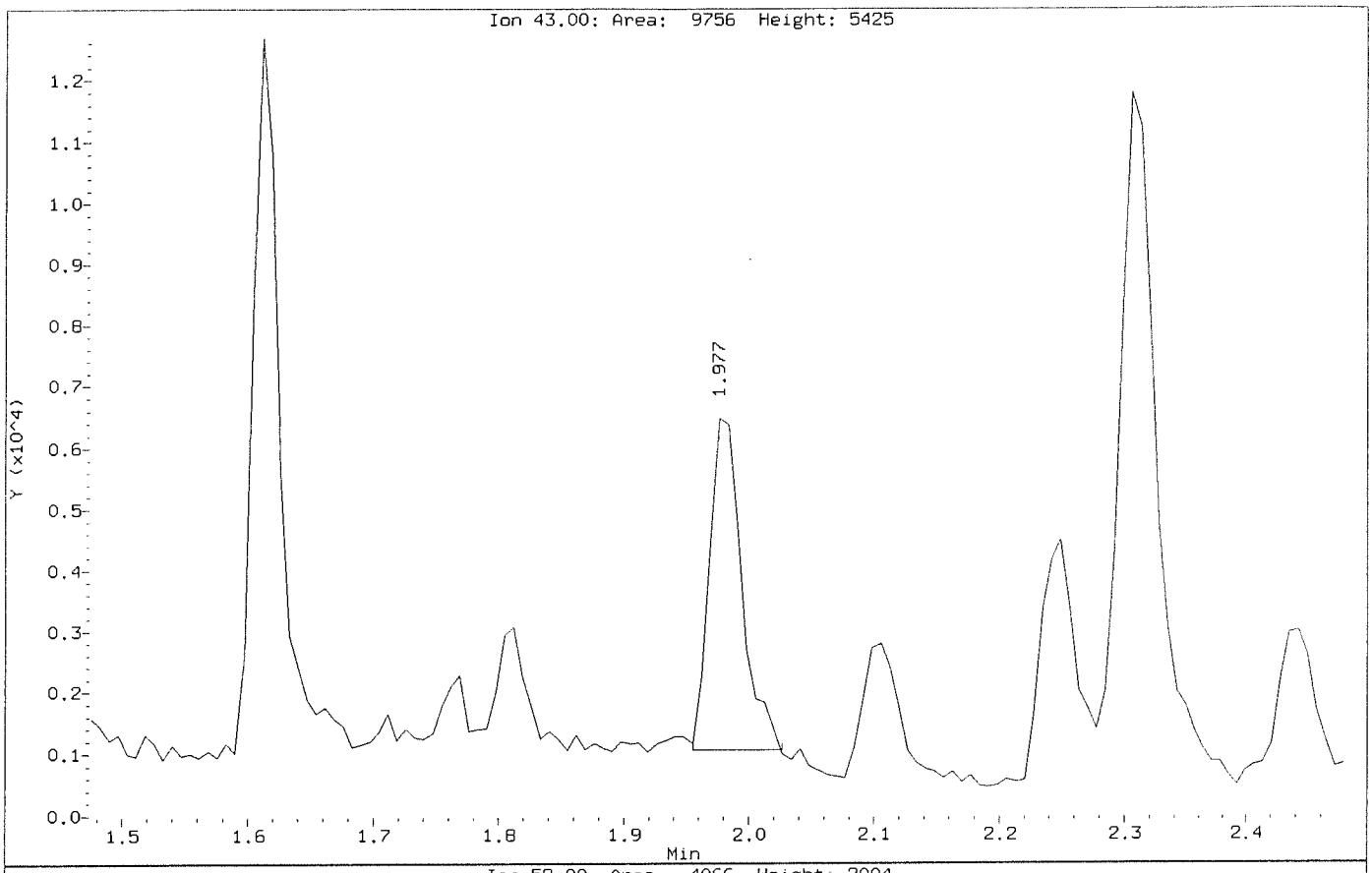
Compound: Acetone
CAS Number: 67-64-1

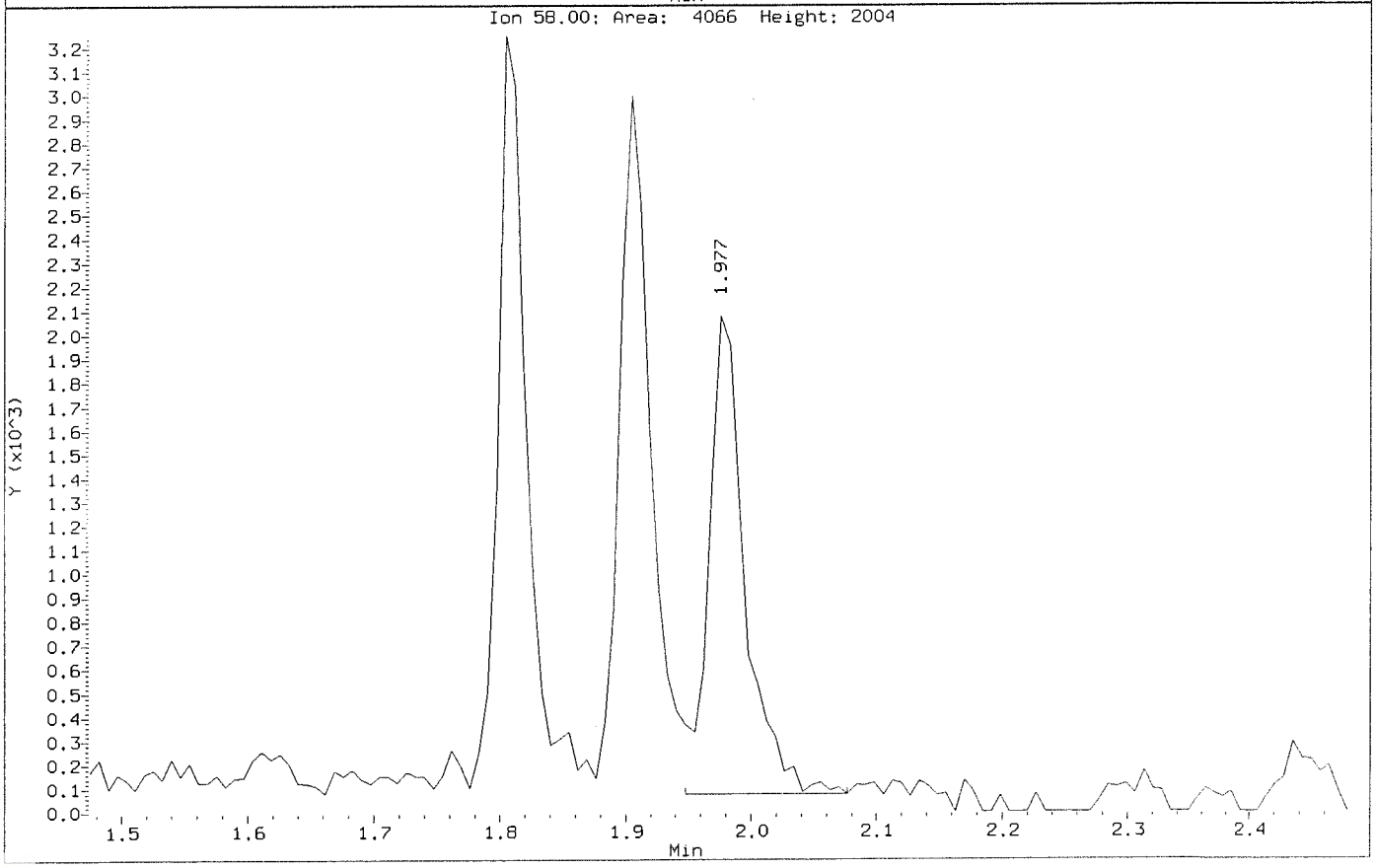




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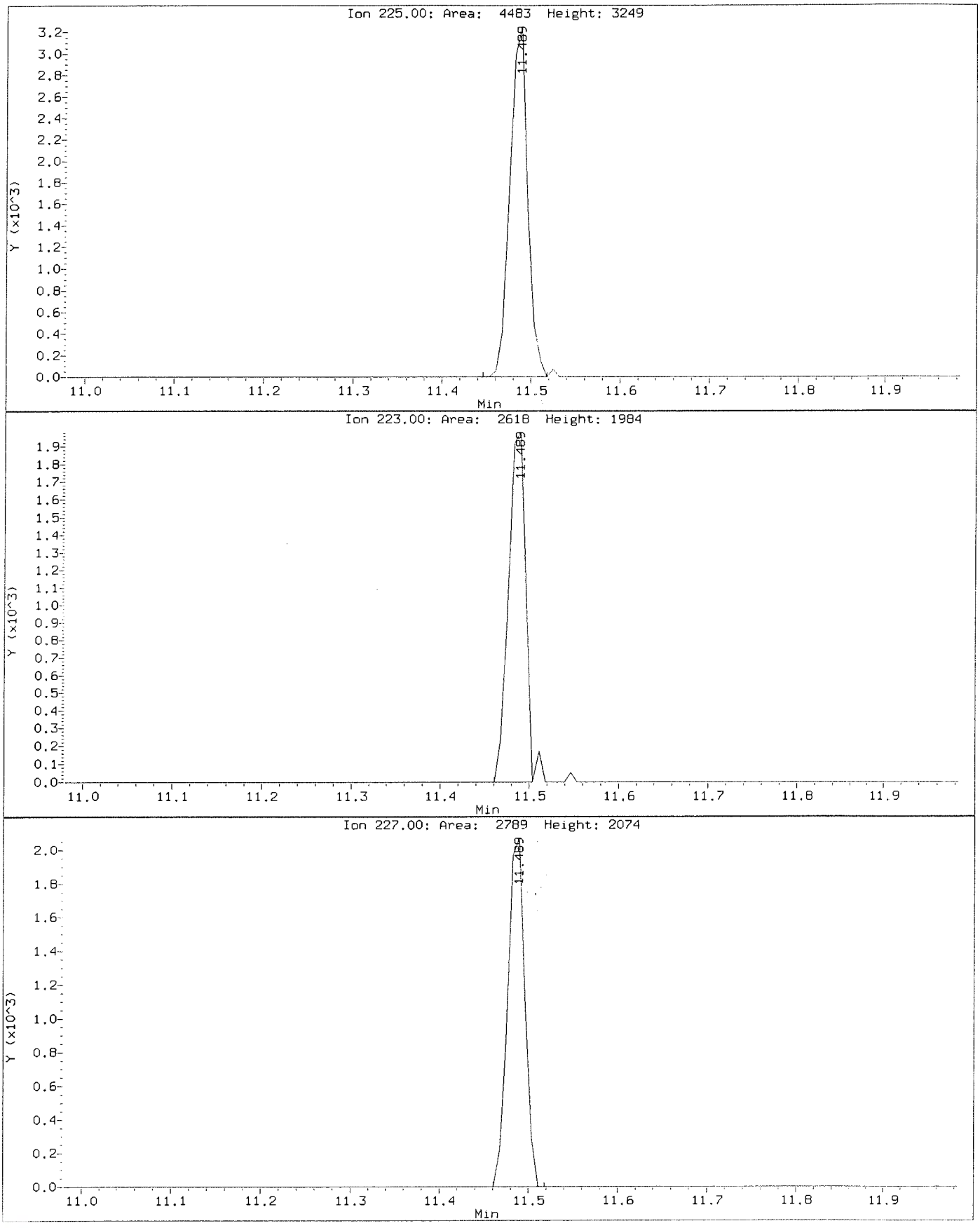
Compound: Acetone
CAS Number: 67-64-1





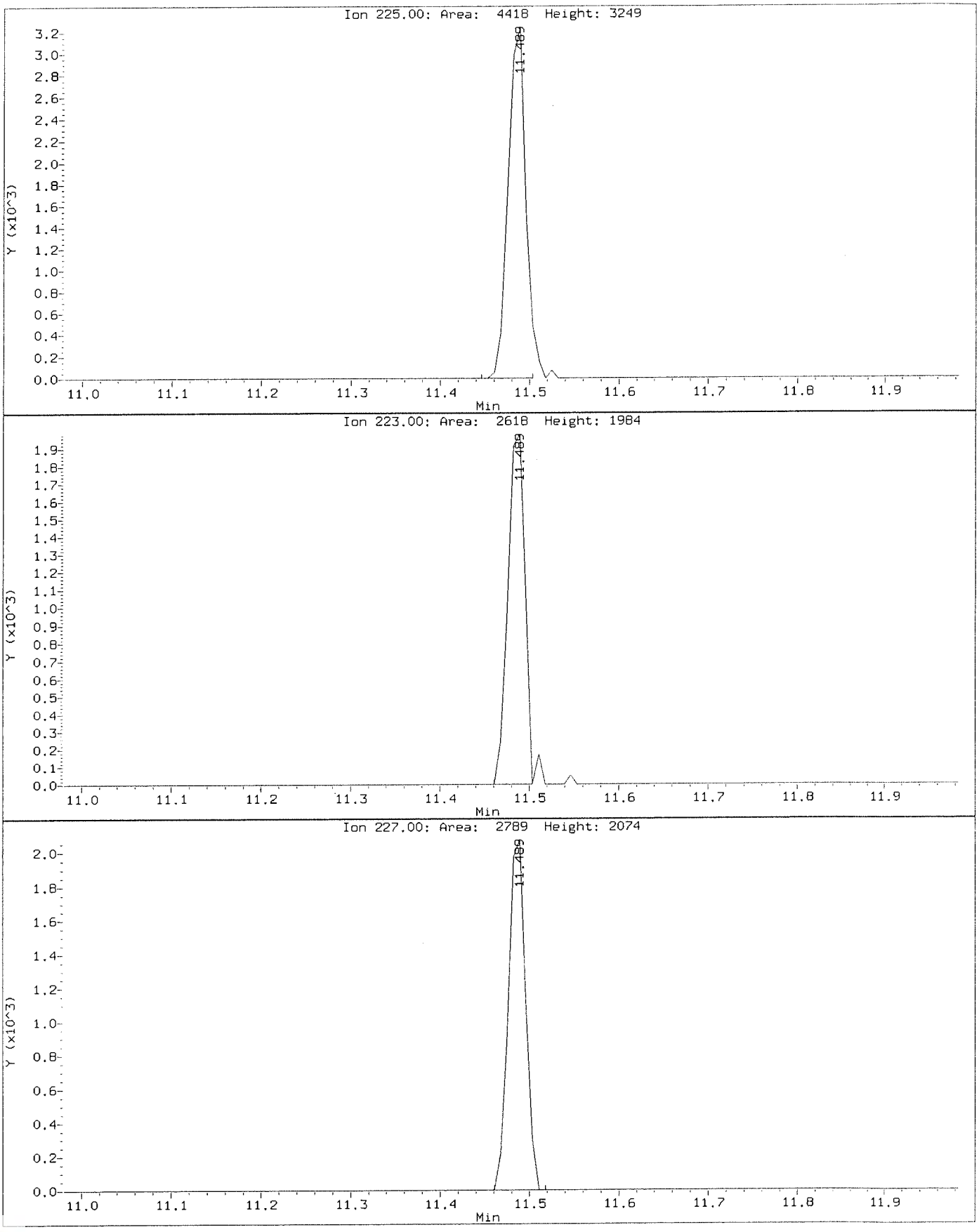
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



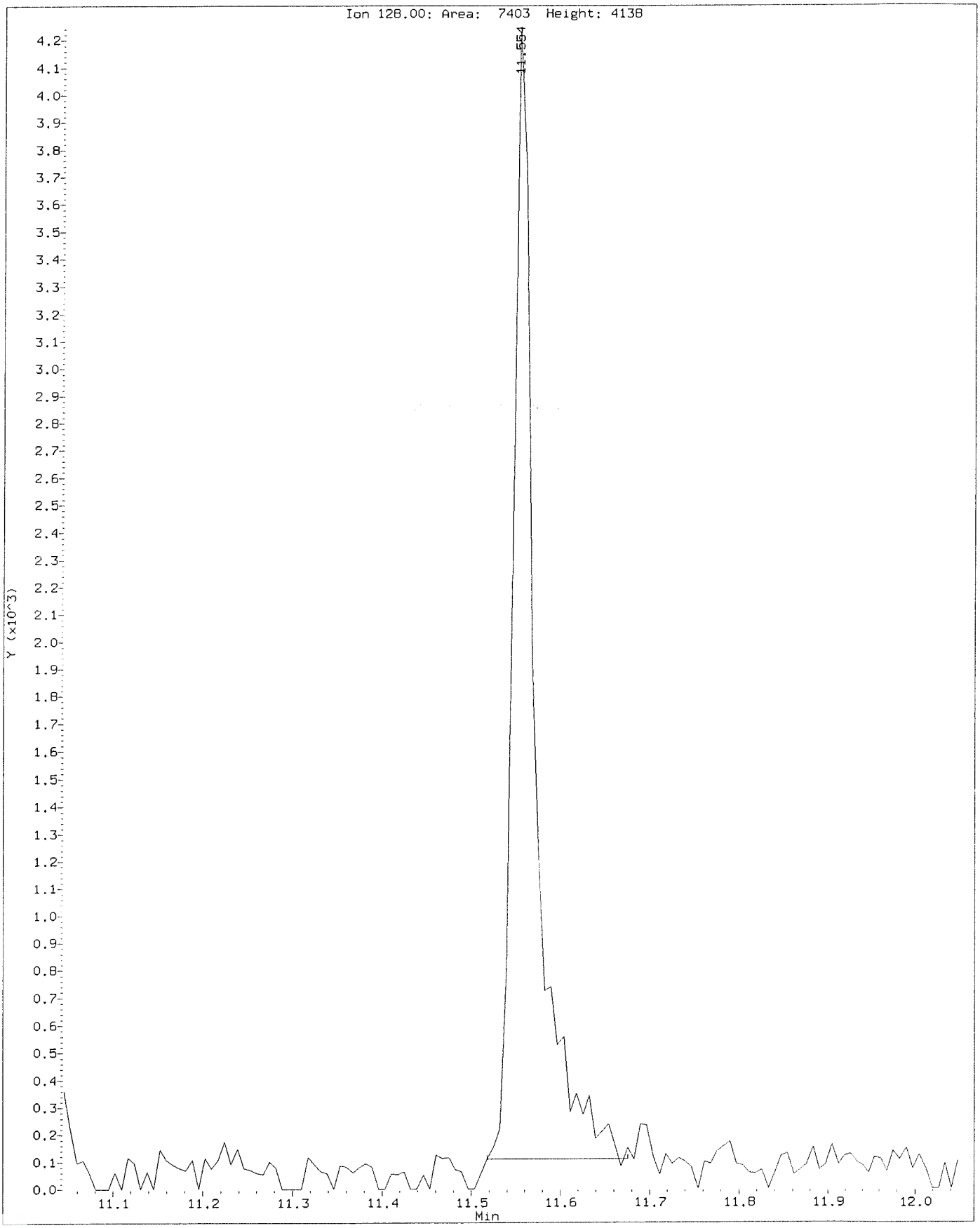
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



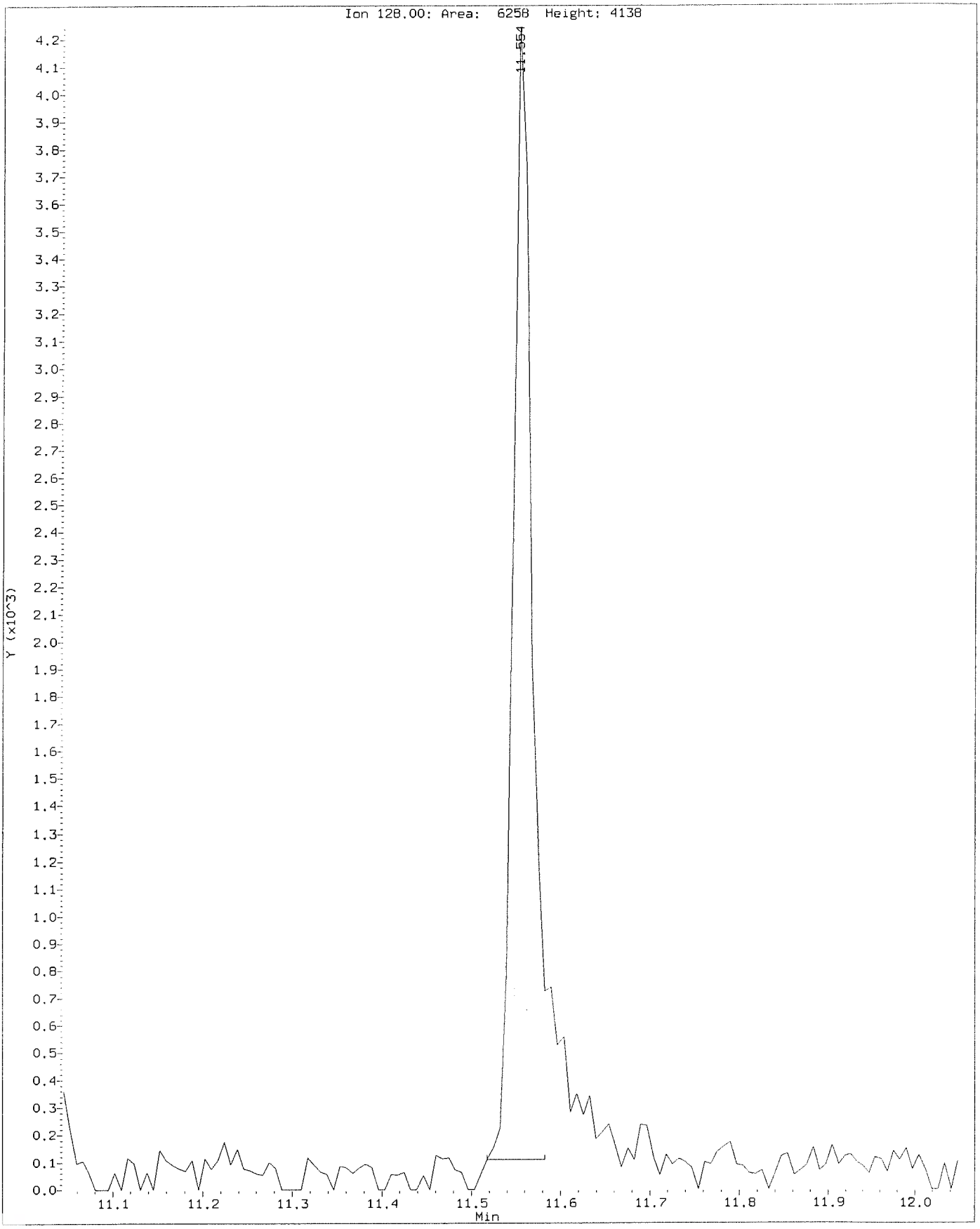
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

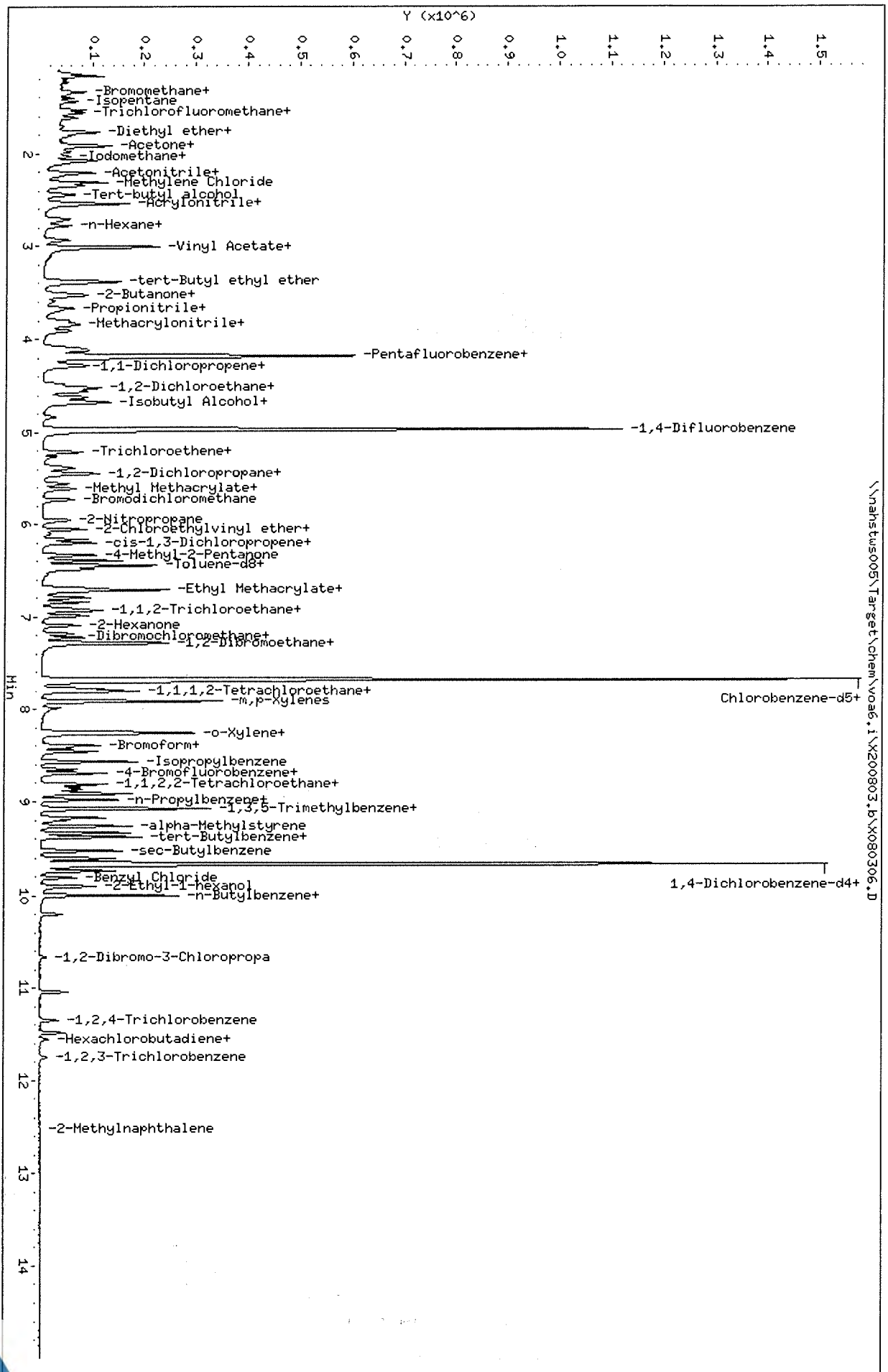
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	516466	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	799737	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721427	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

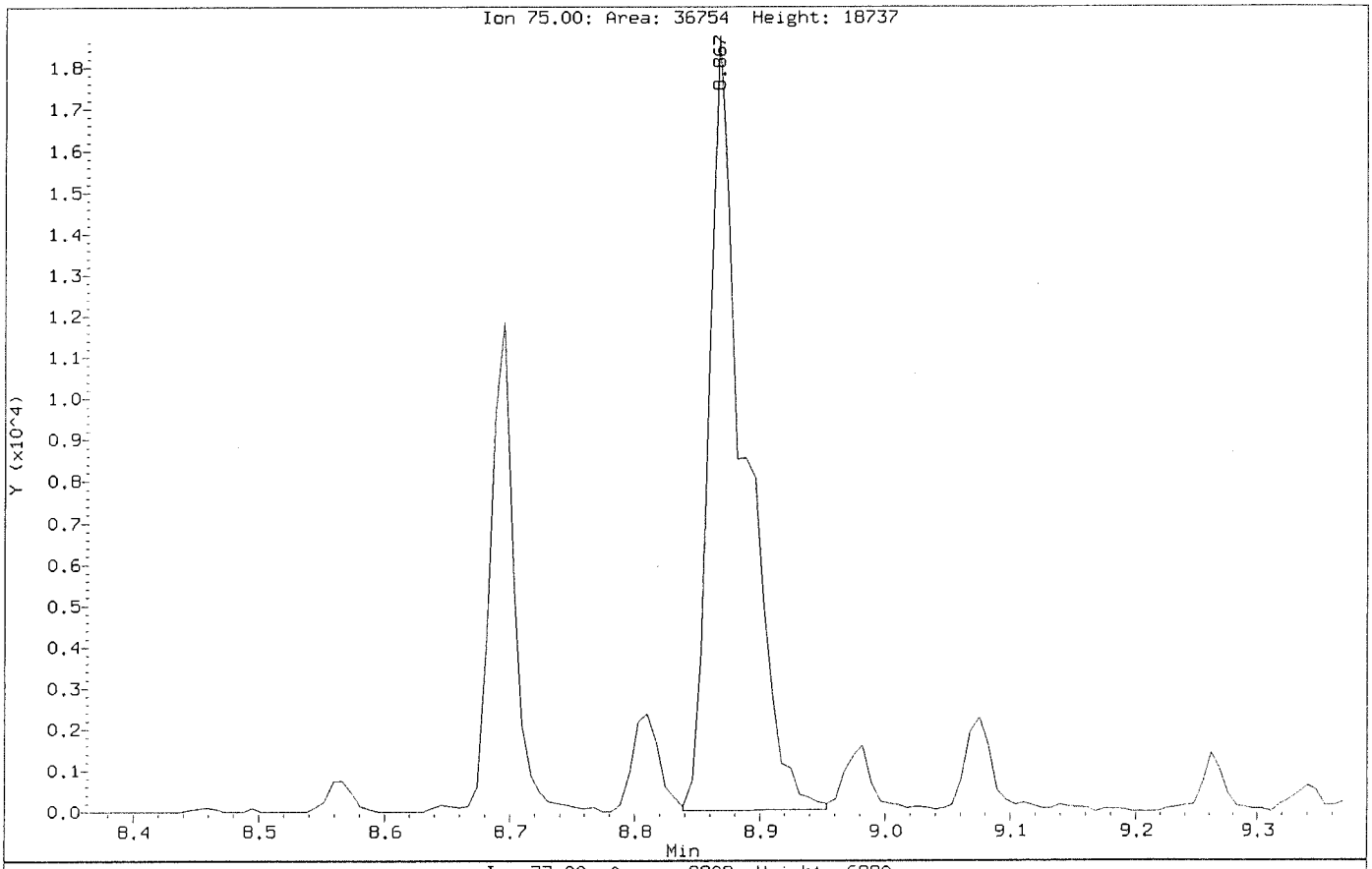


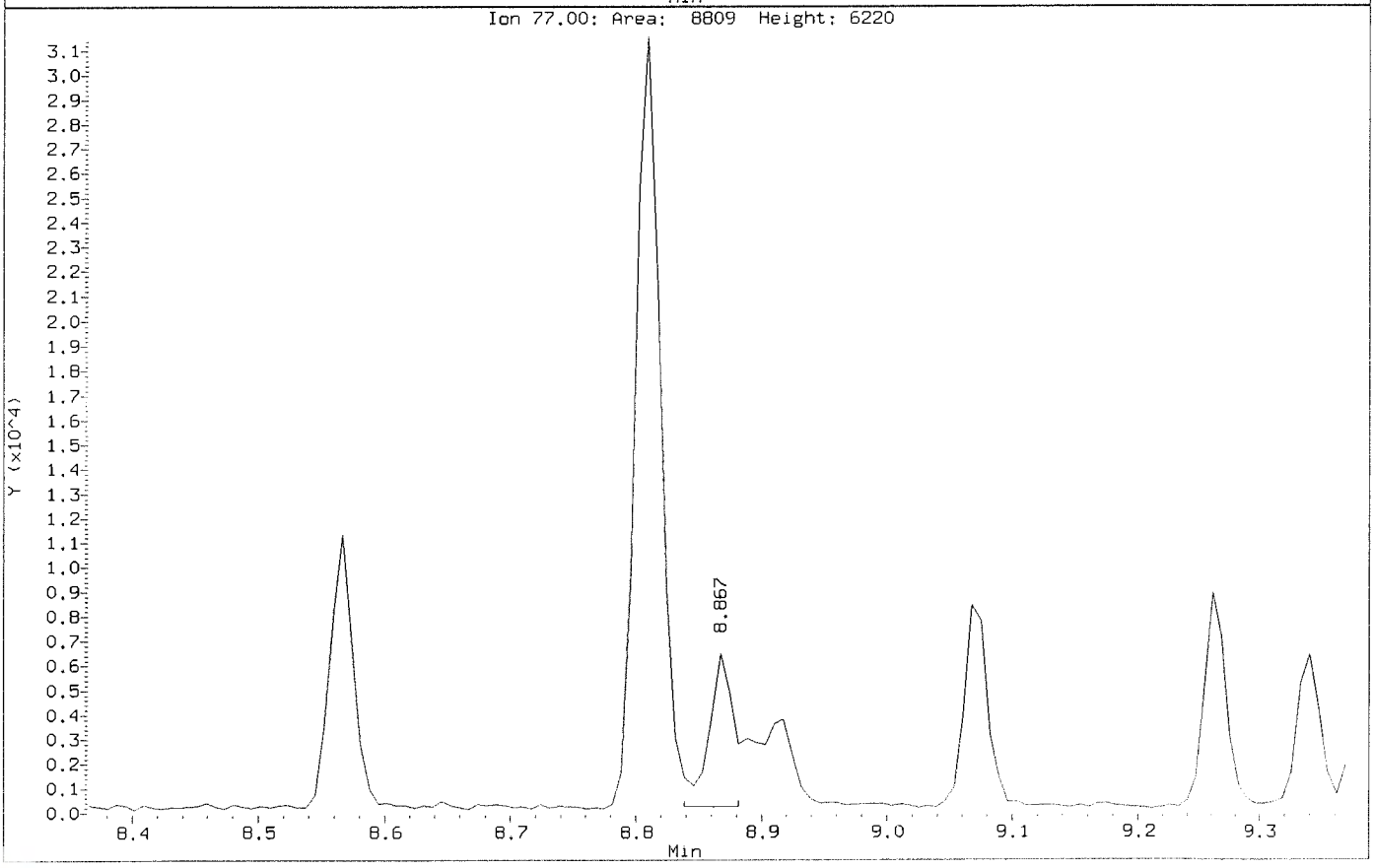
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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

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

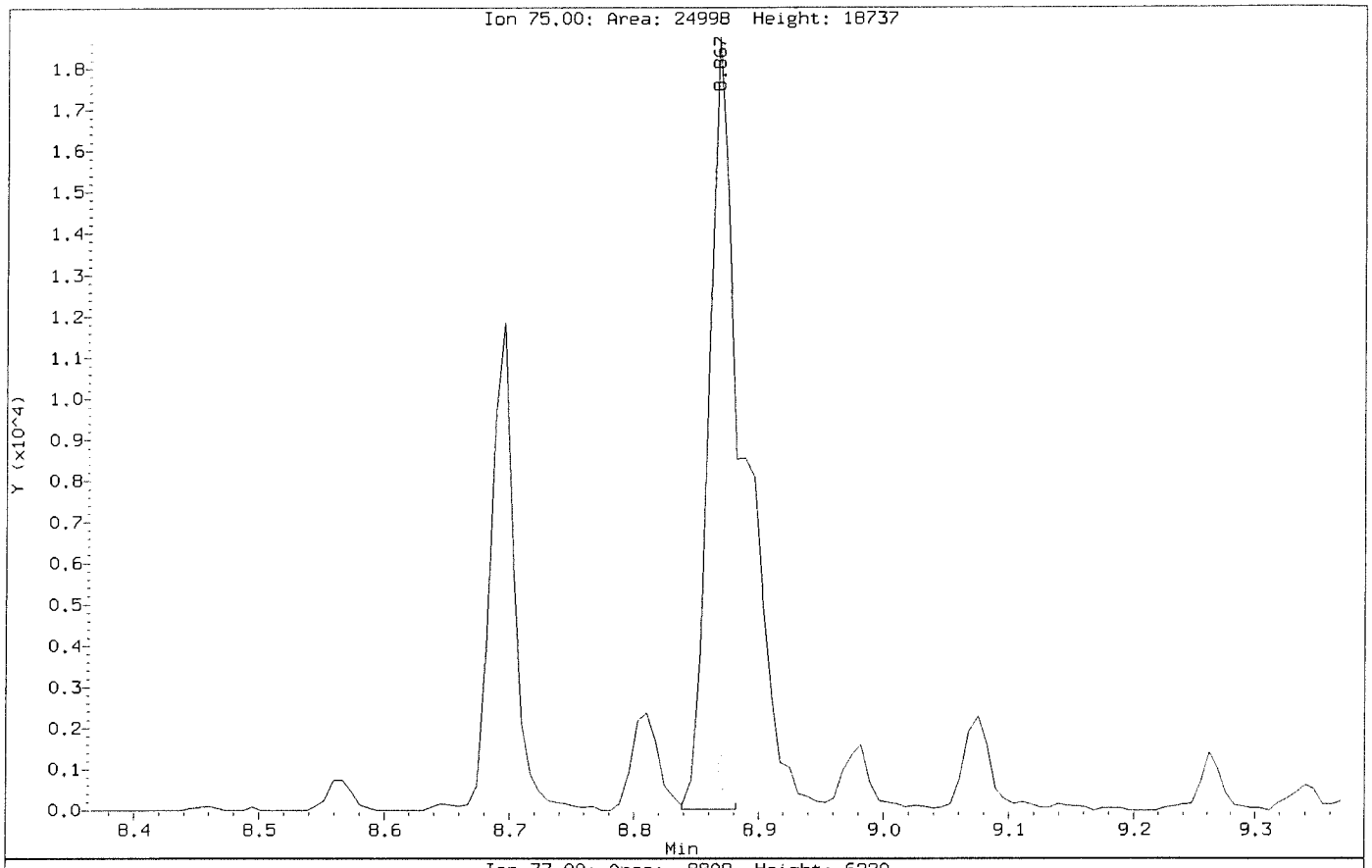
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

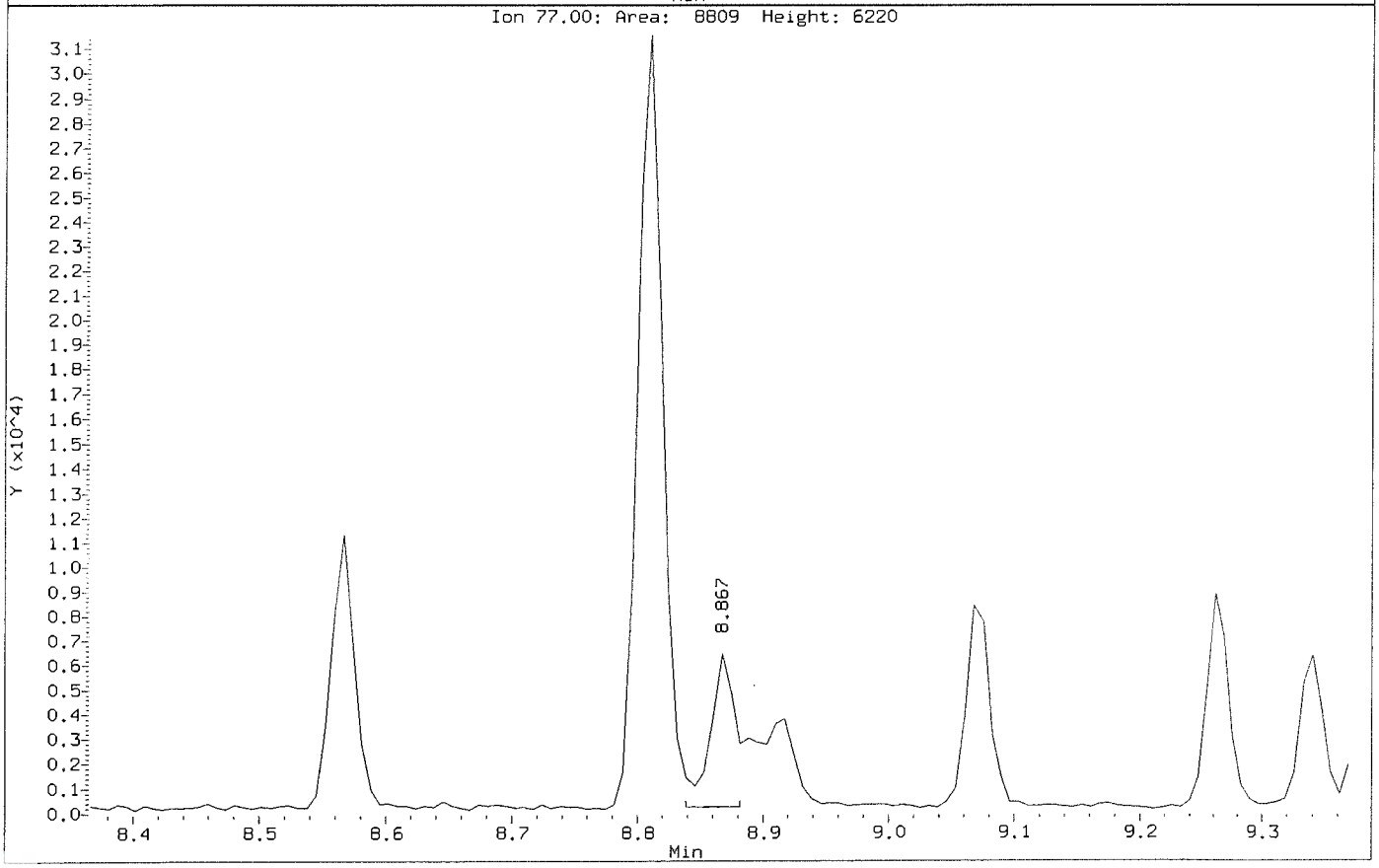




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

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





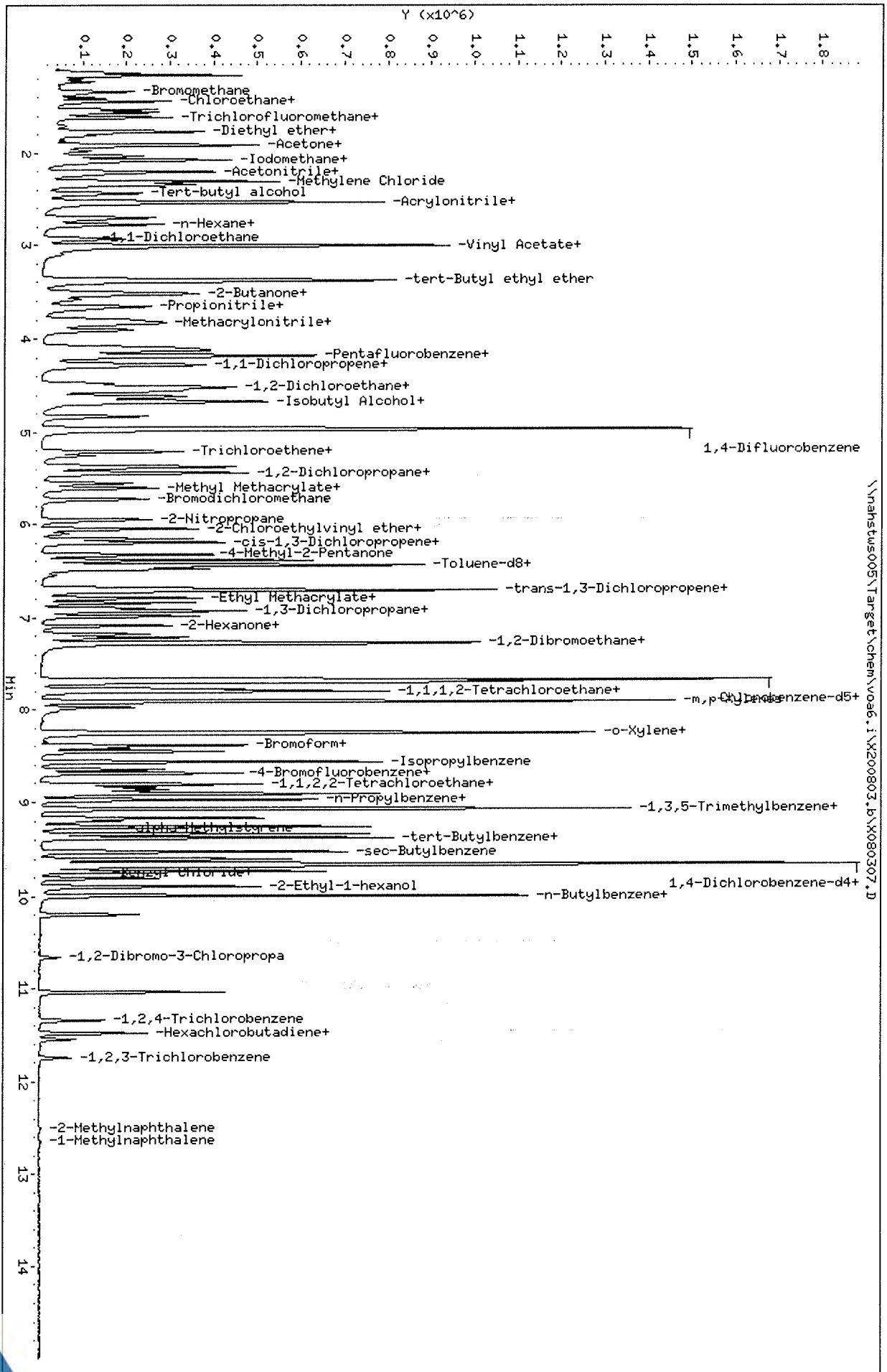
ALS Laboratory Group

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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)	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

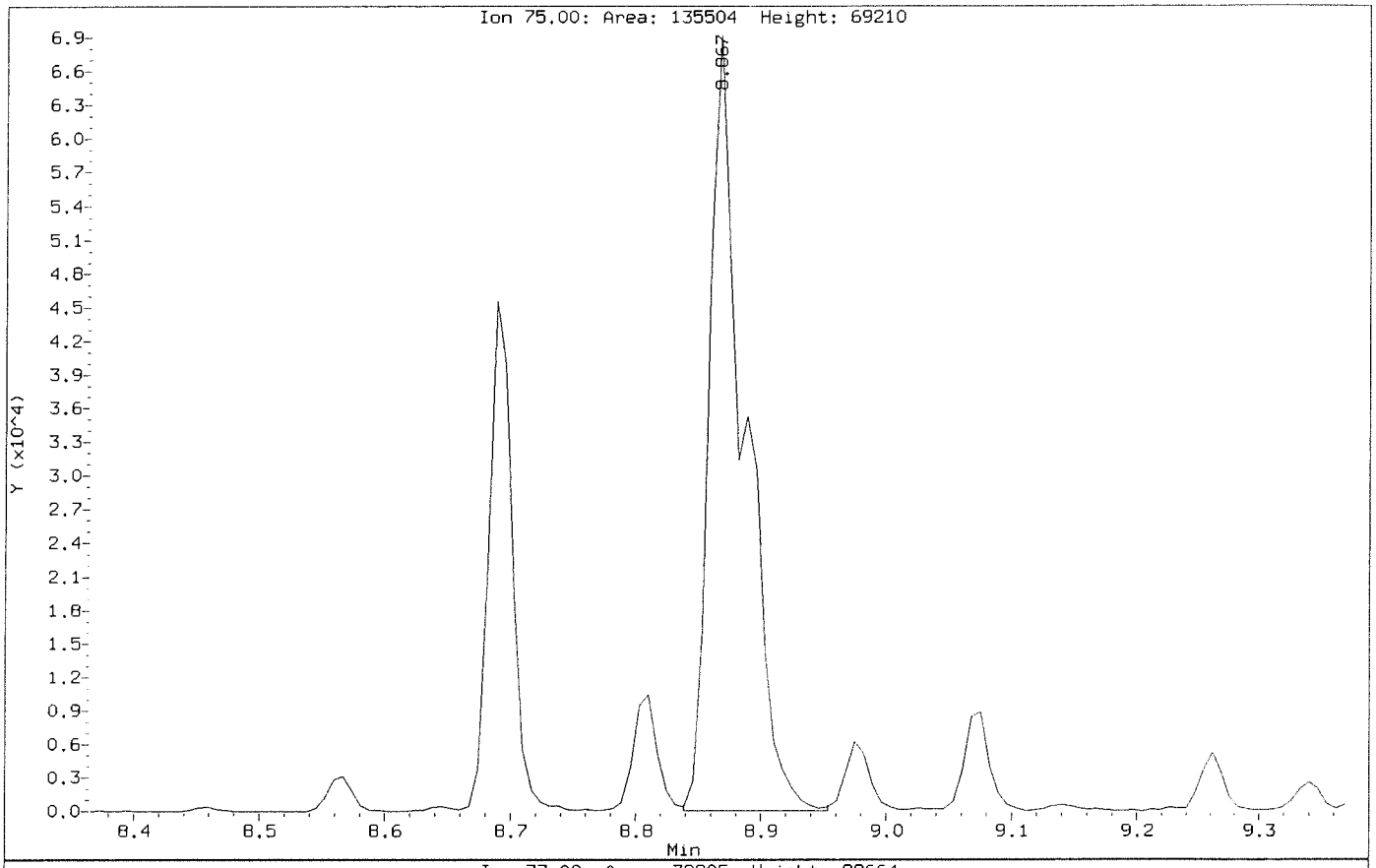


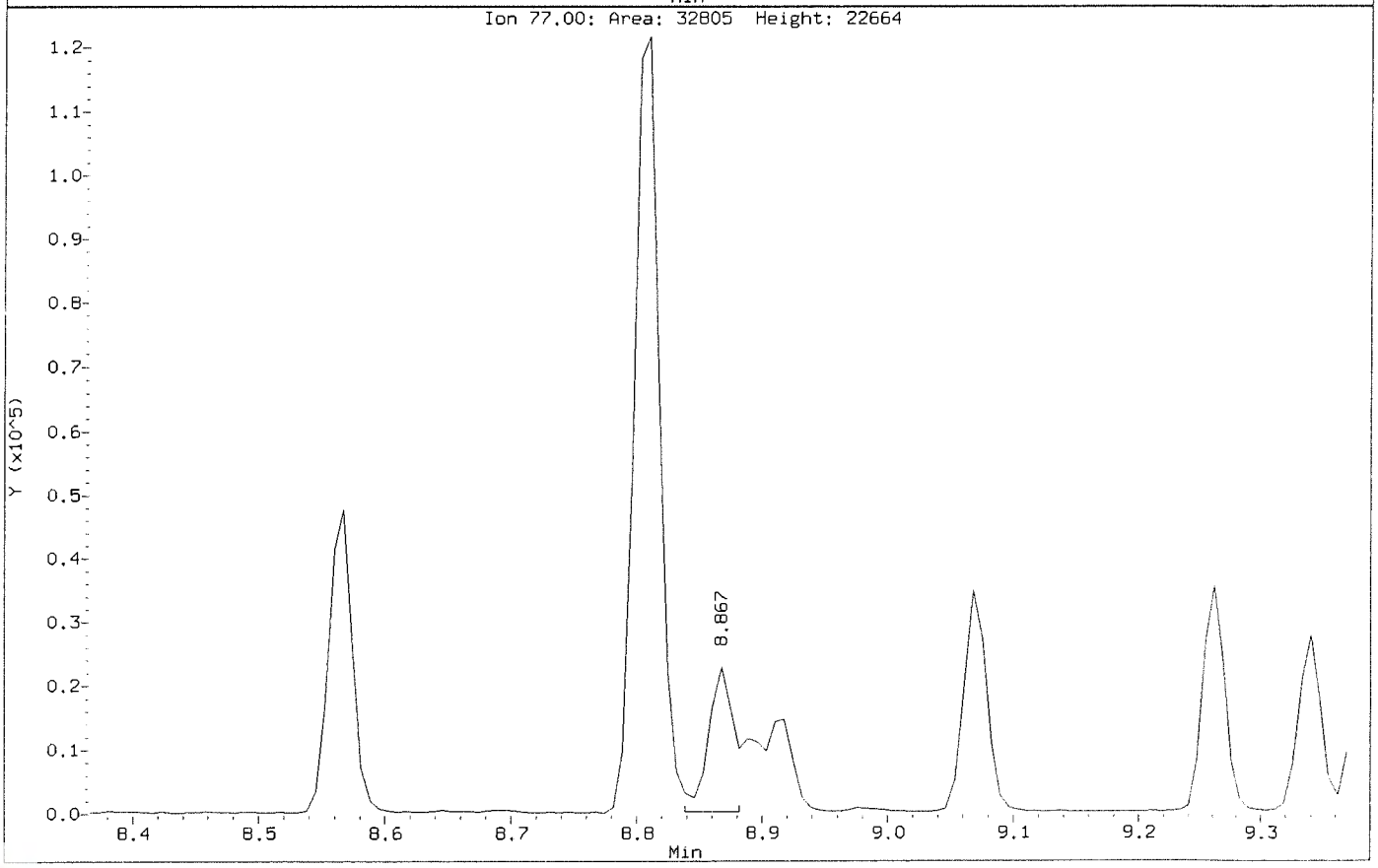
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Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

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

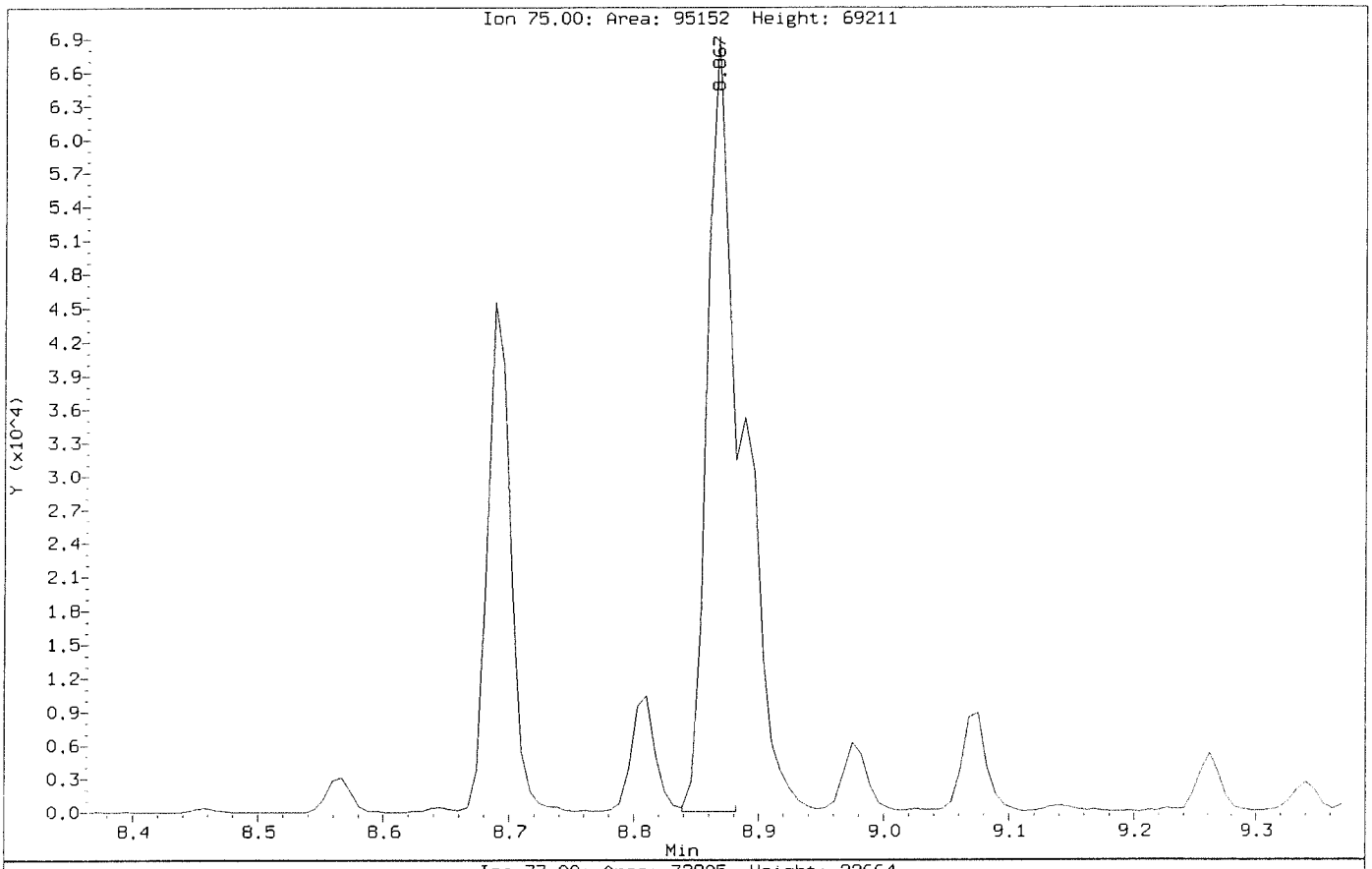
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

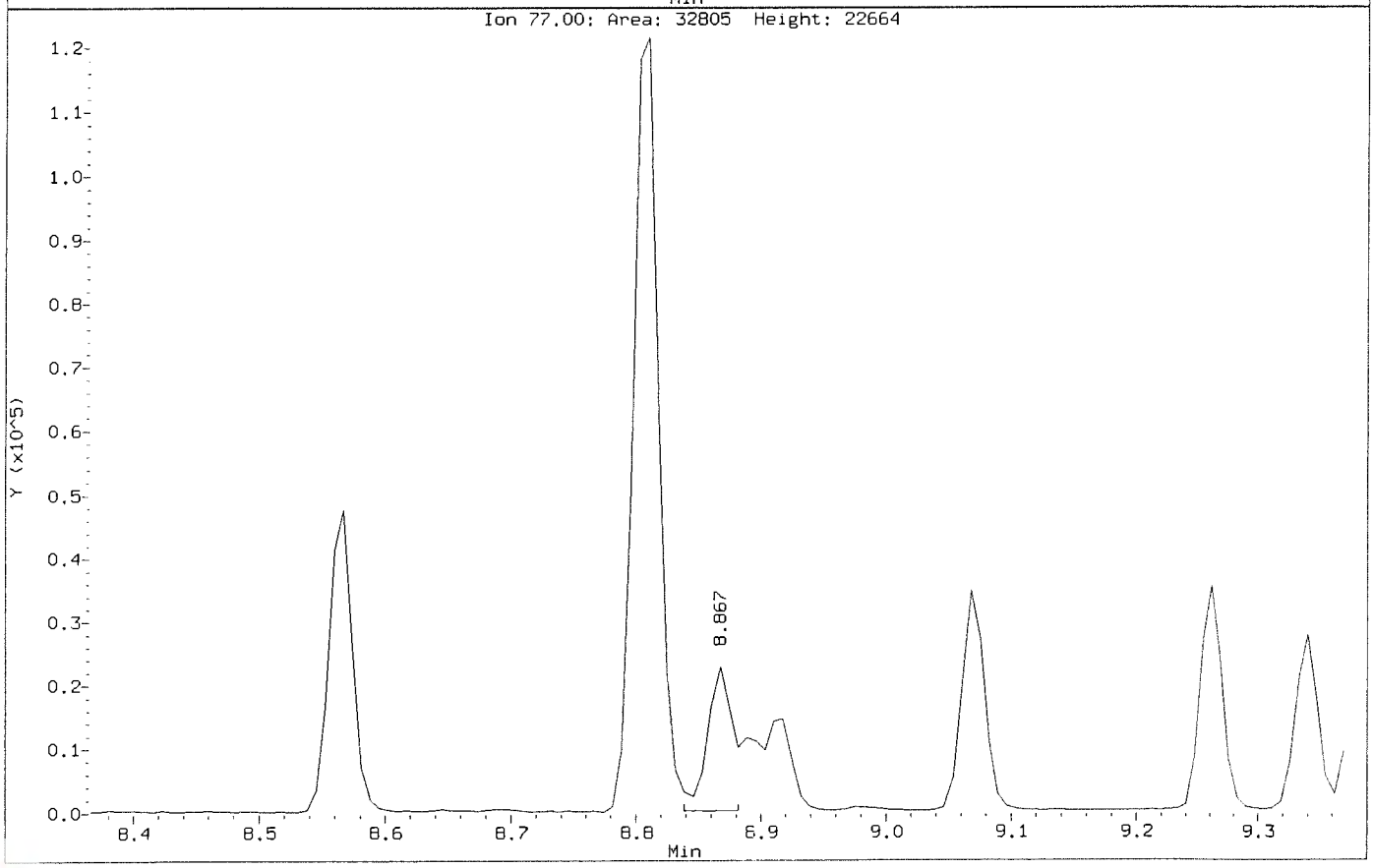




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Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

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

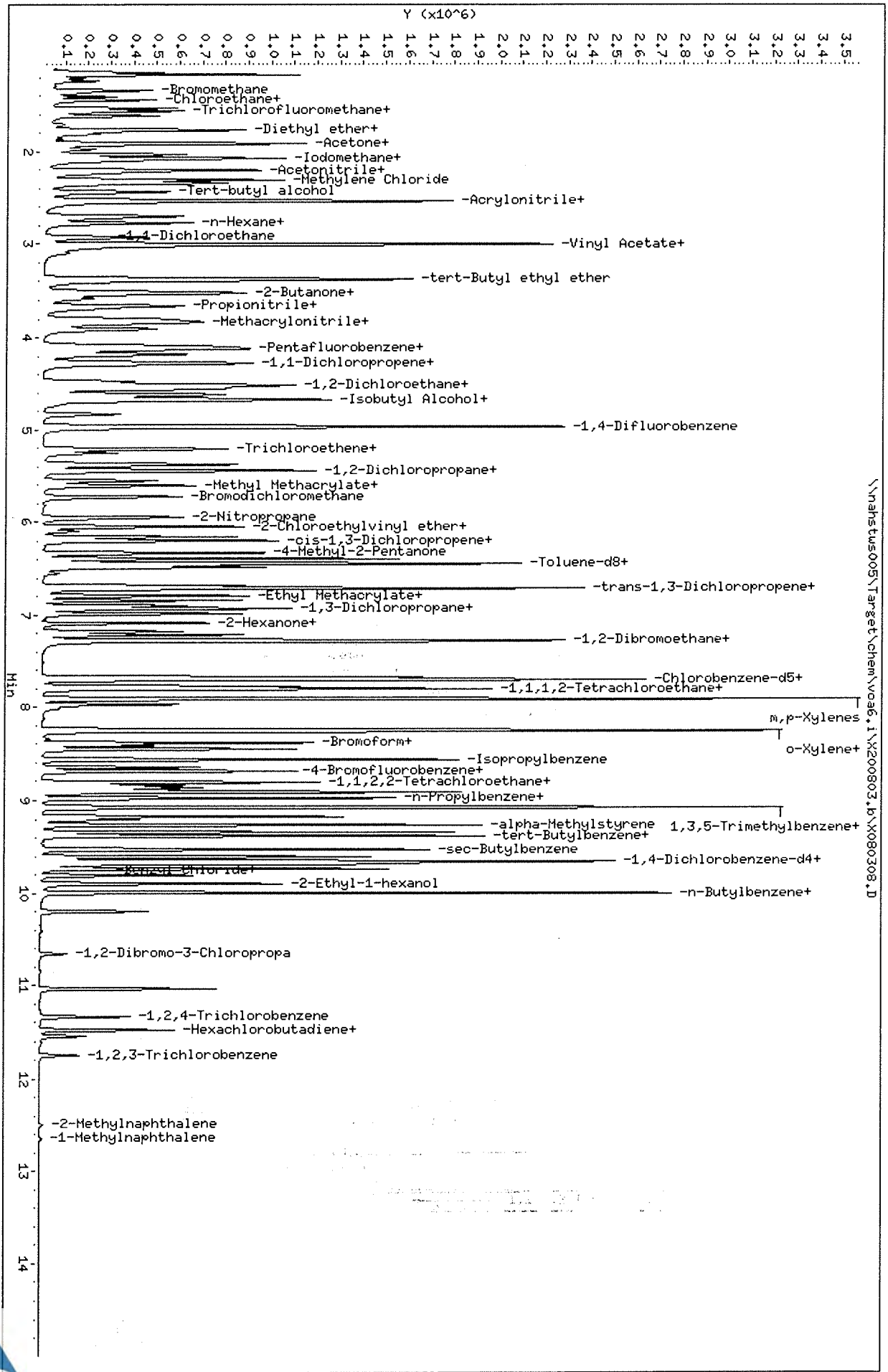
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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

	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.

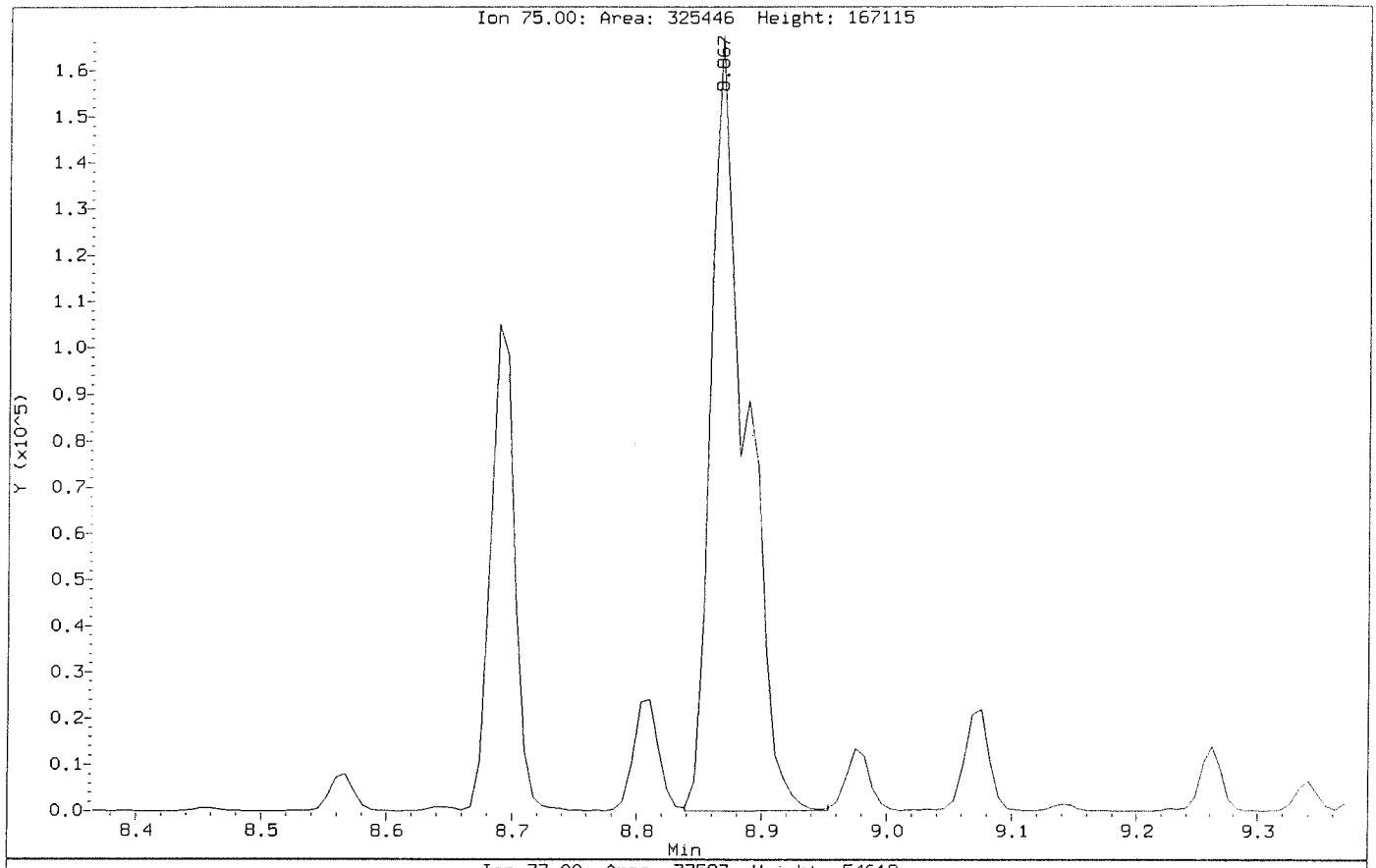


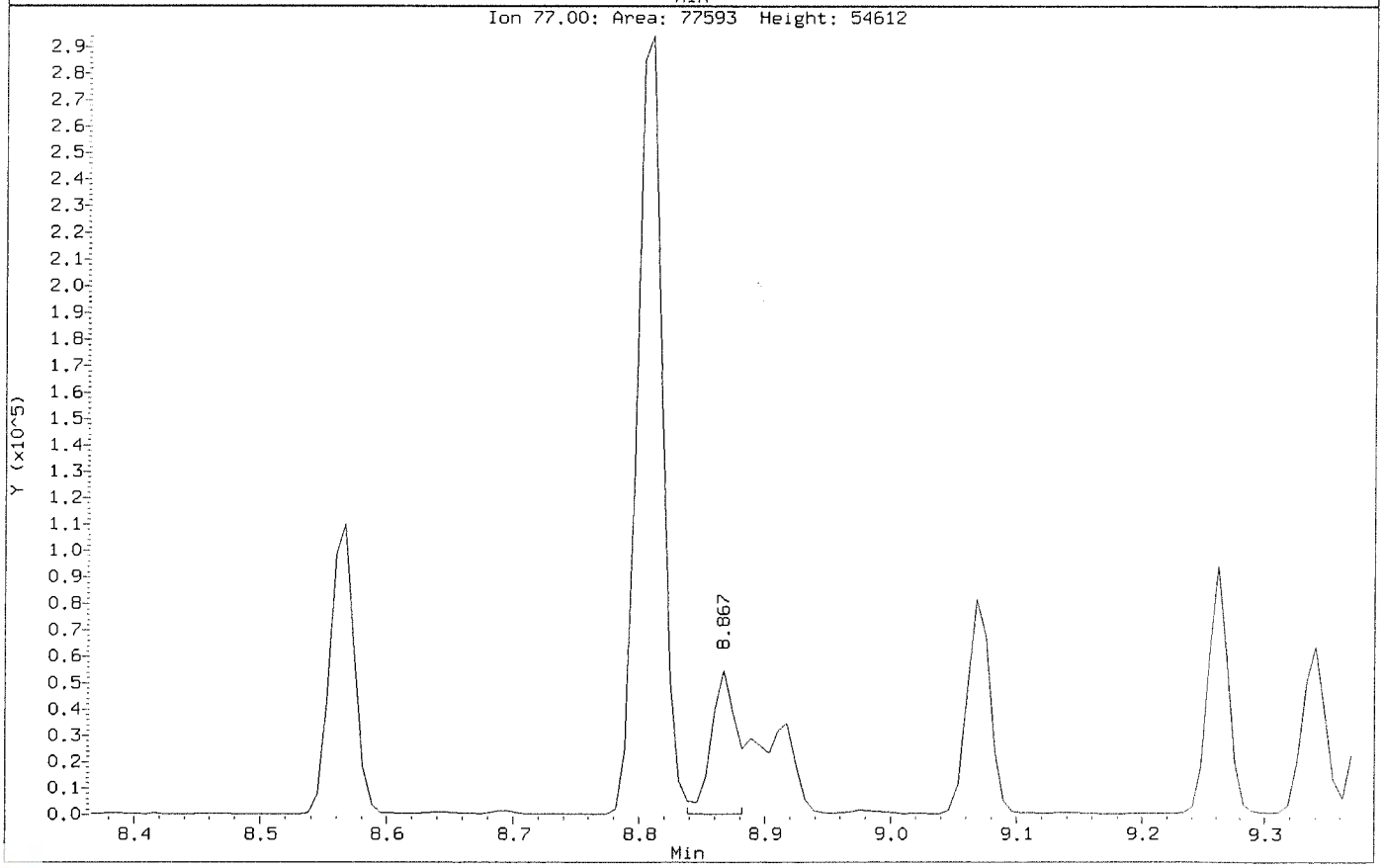
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Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

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

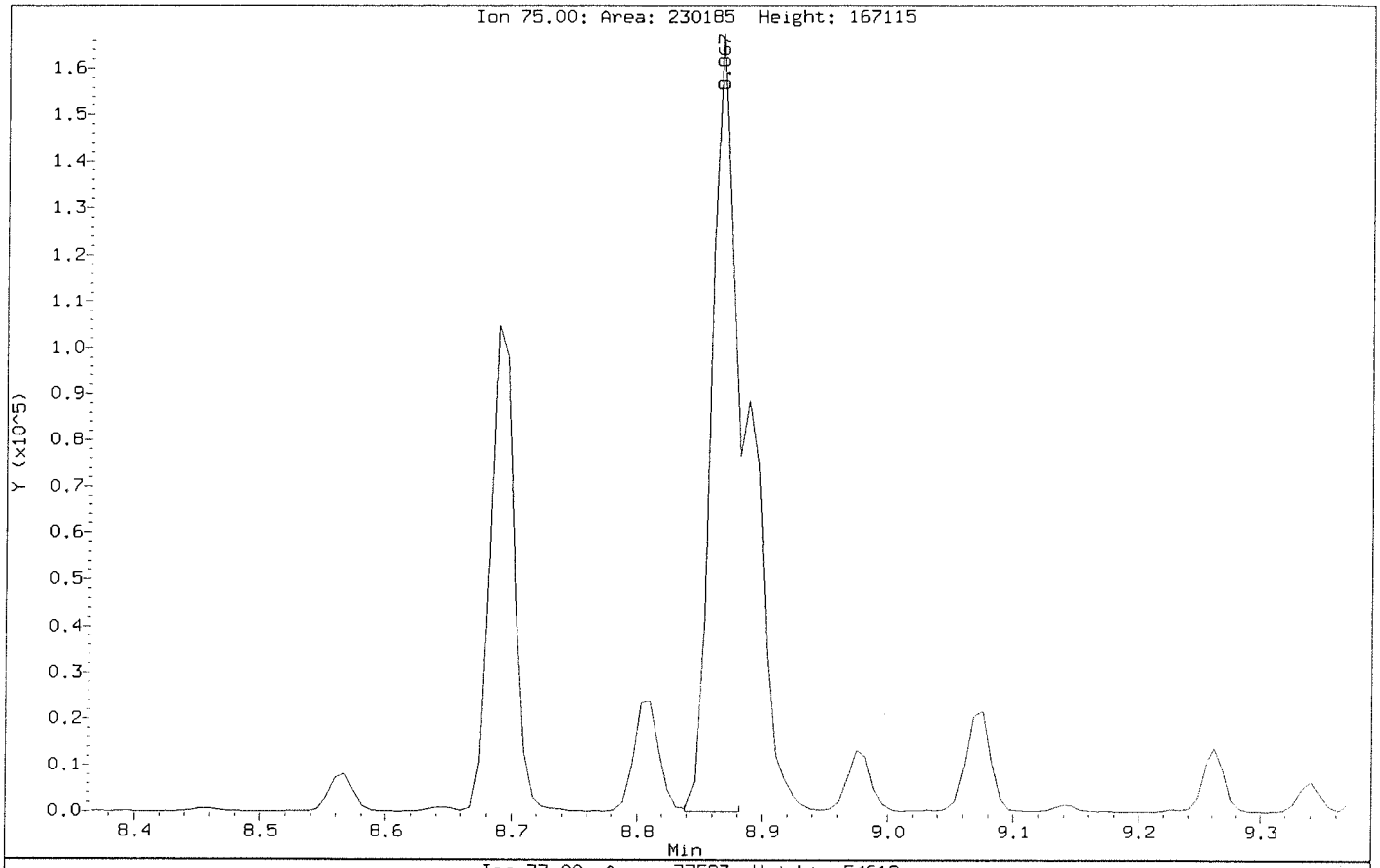
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

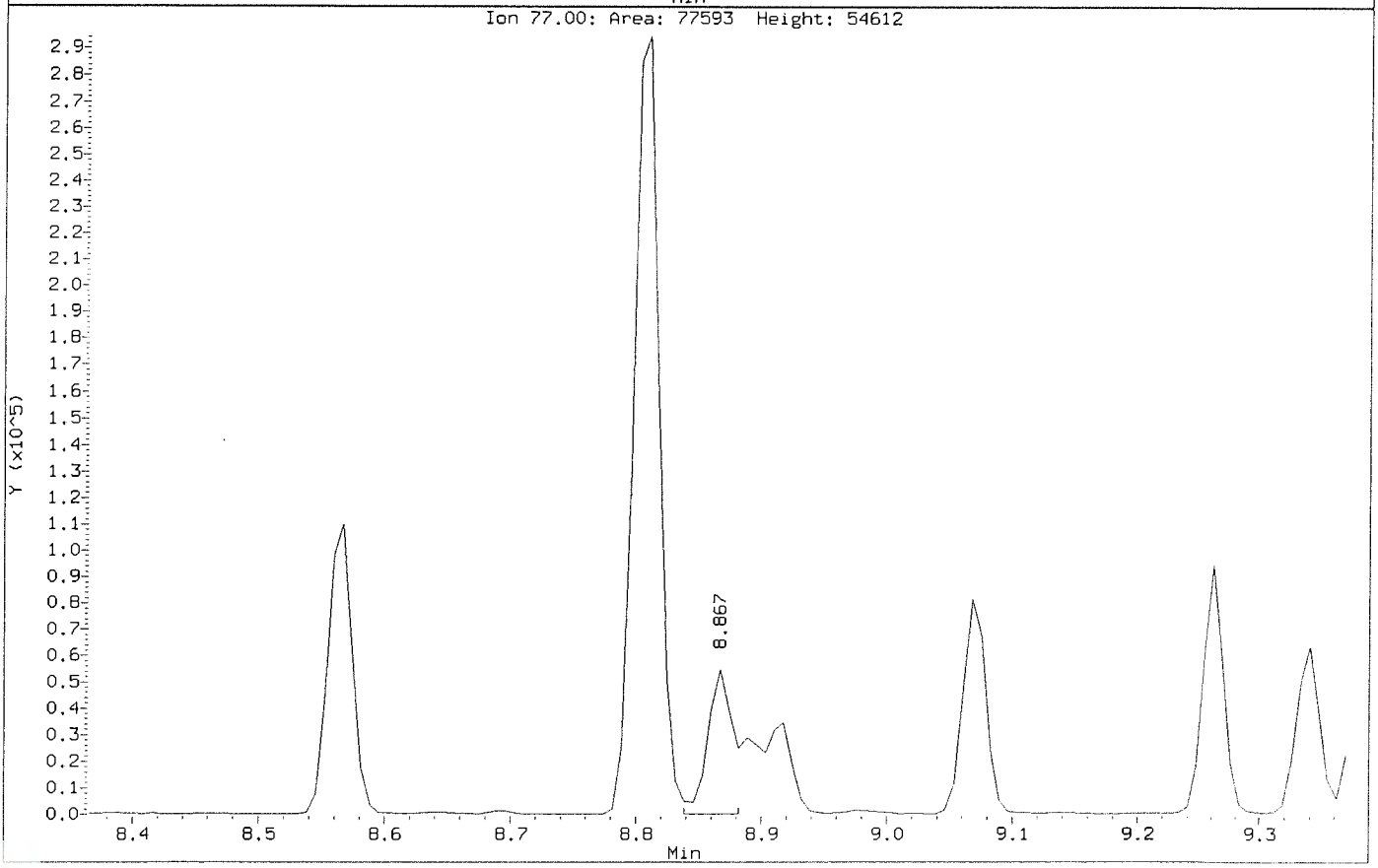




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Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

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





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

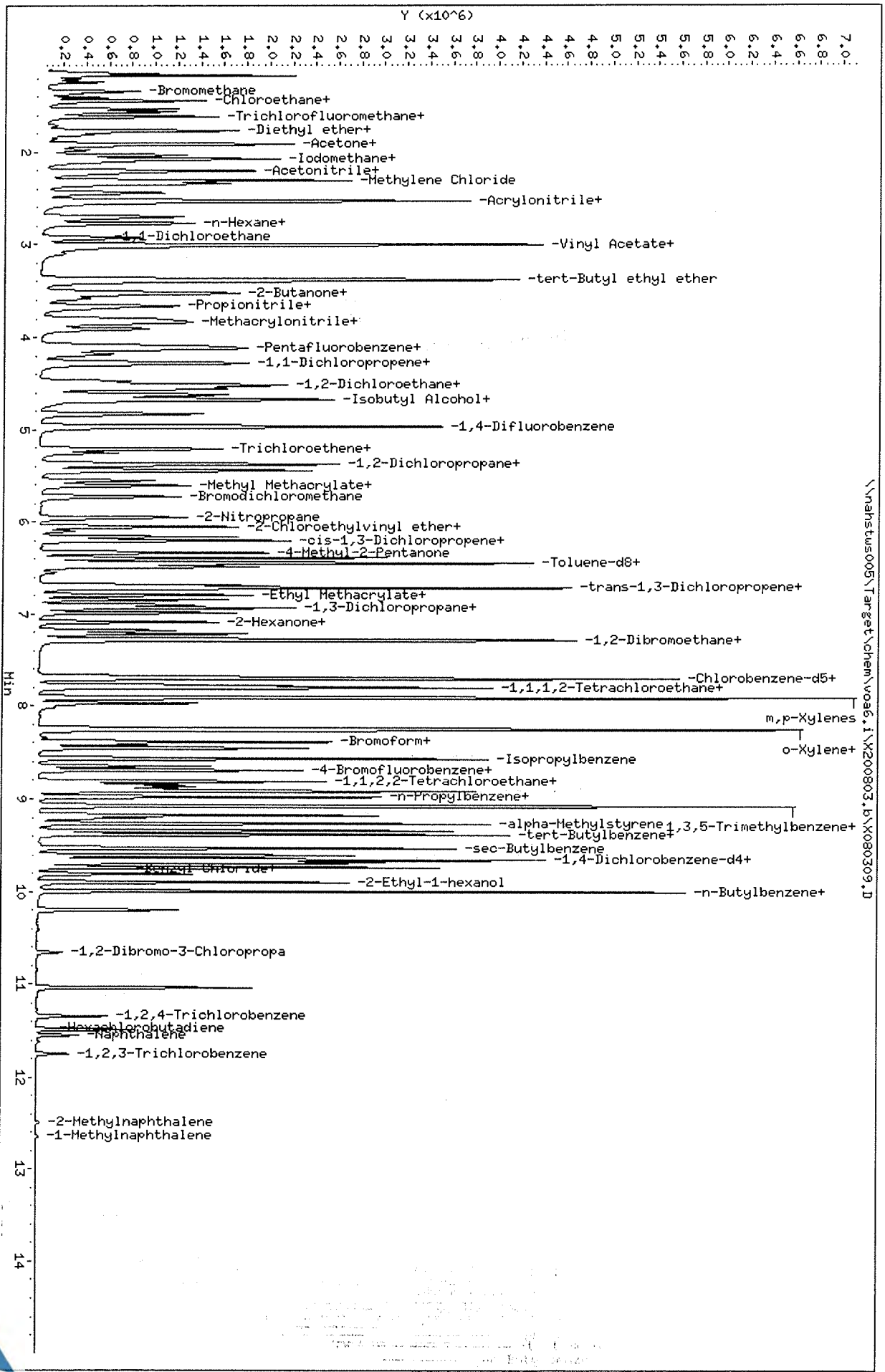
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	486833	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	732825	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	684816	50.0000	
* 70 1,4-Dichlorobenzene-d4	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.

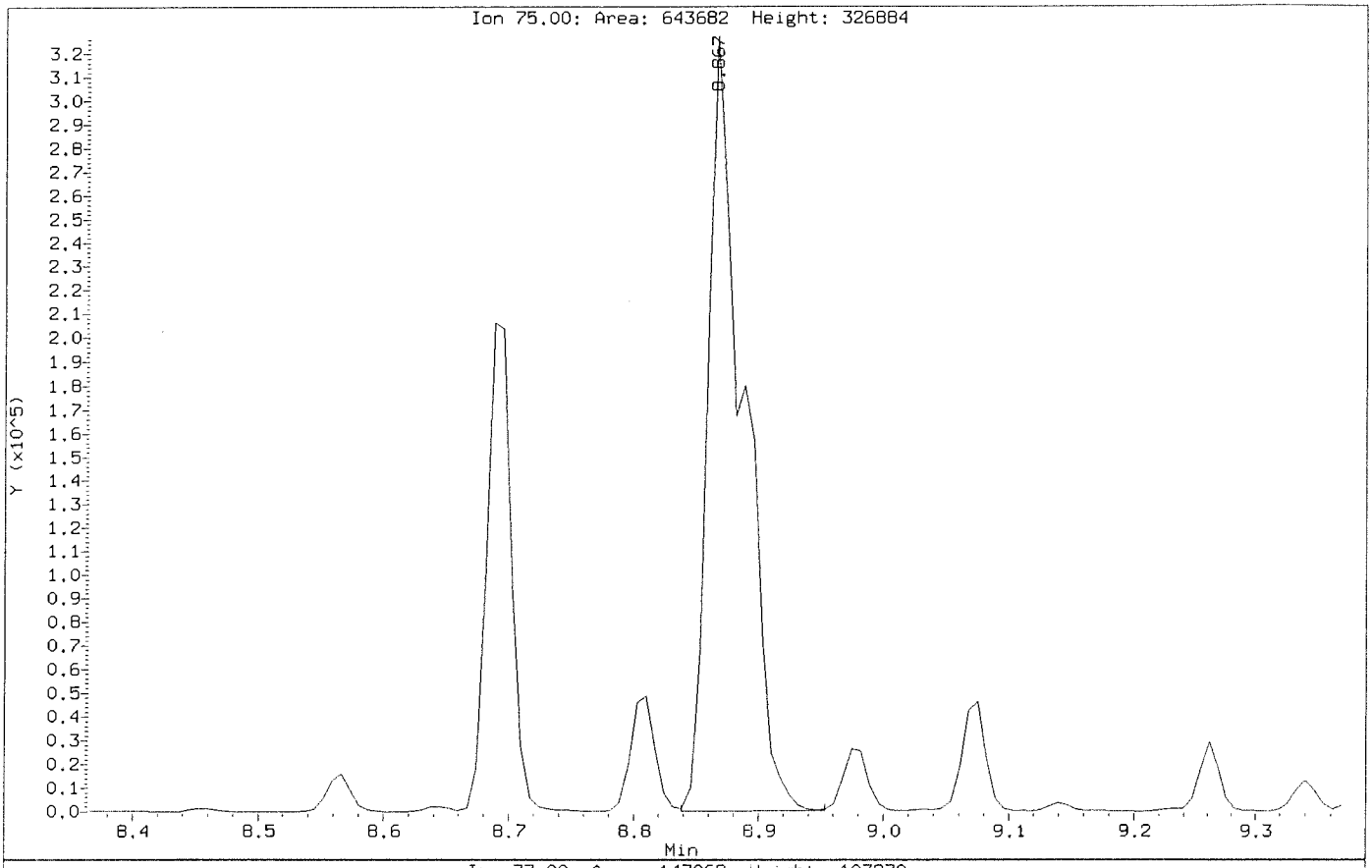


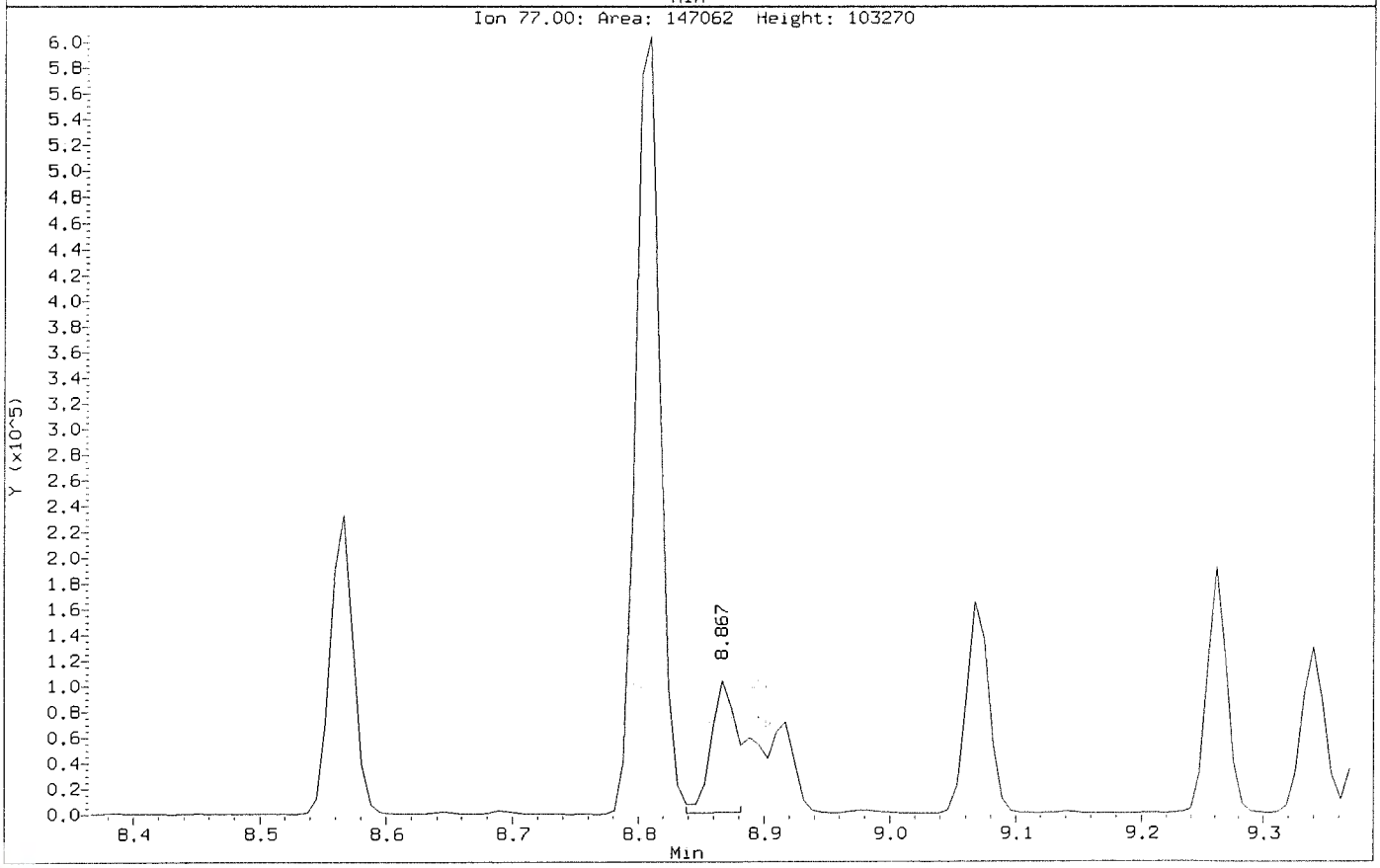
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

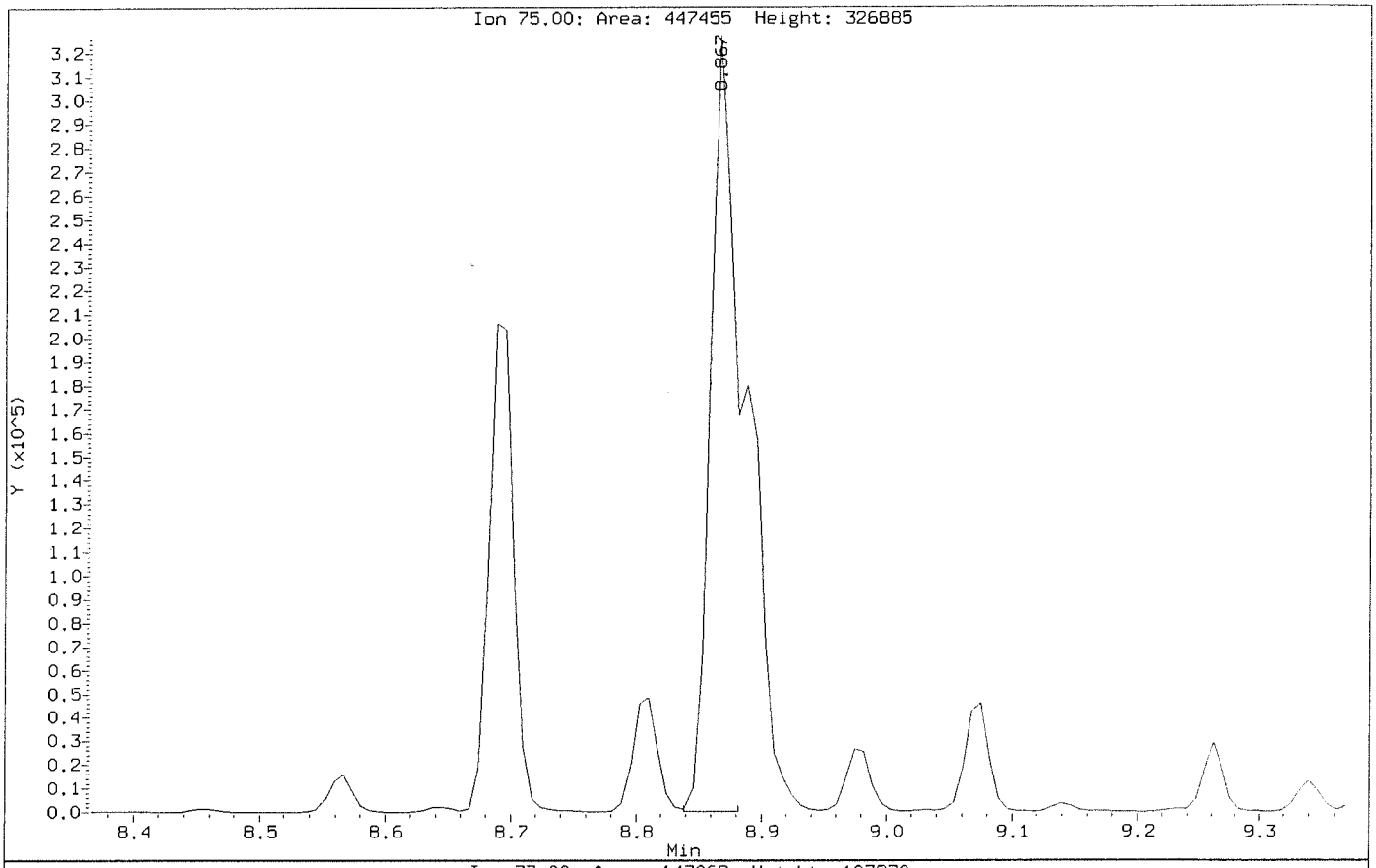
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

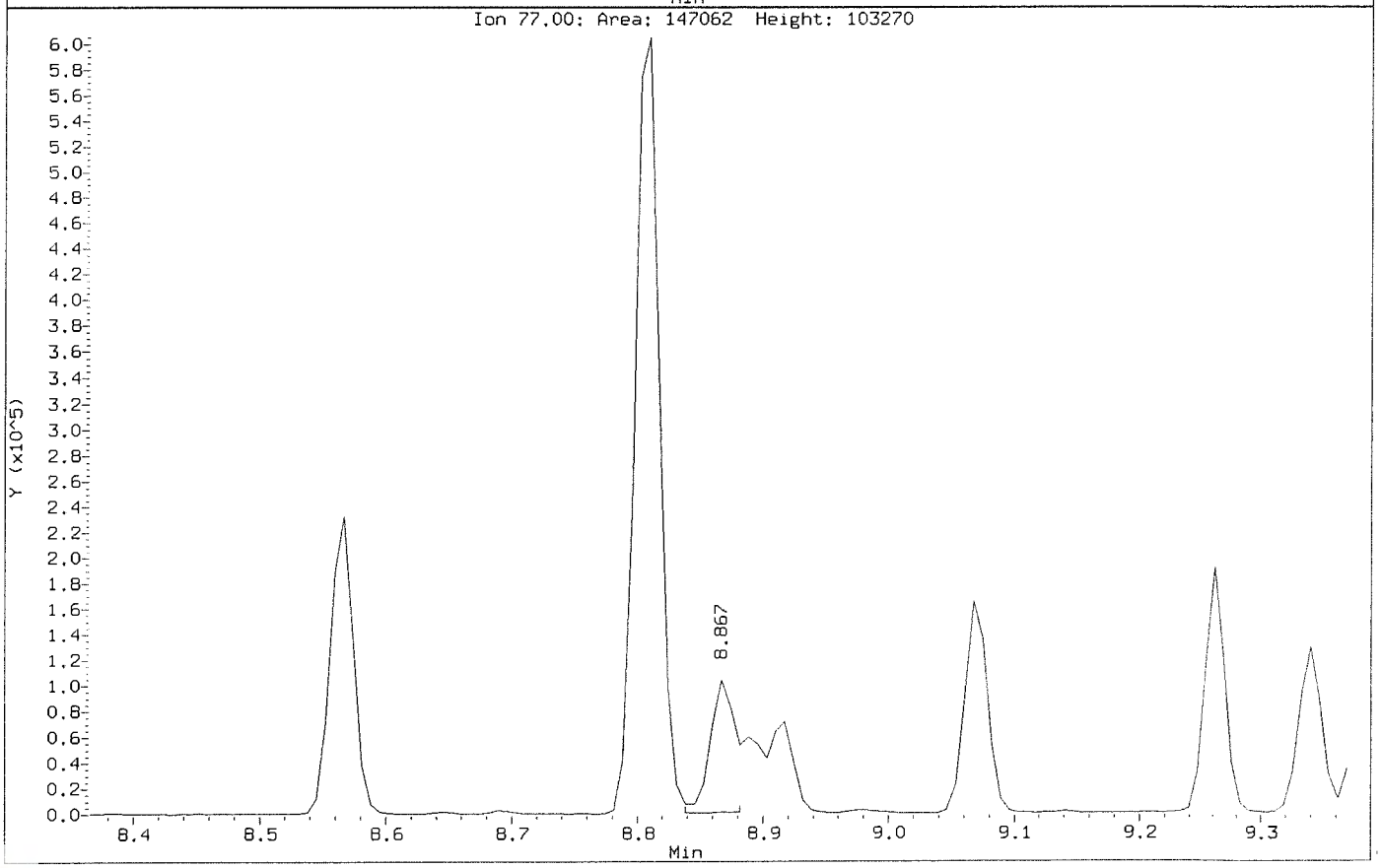




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Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

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





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

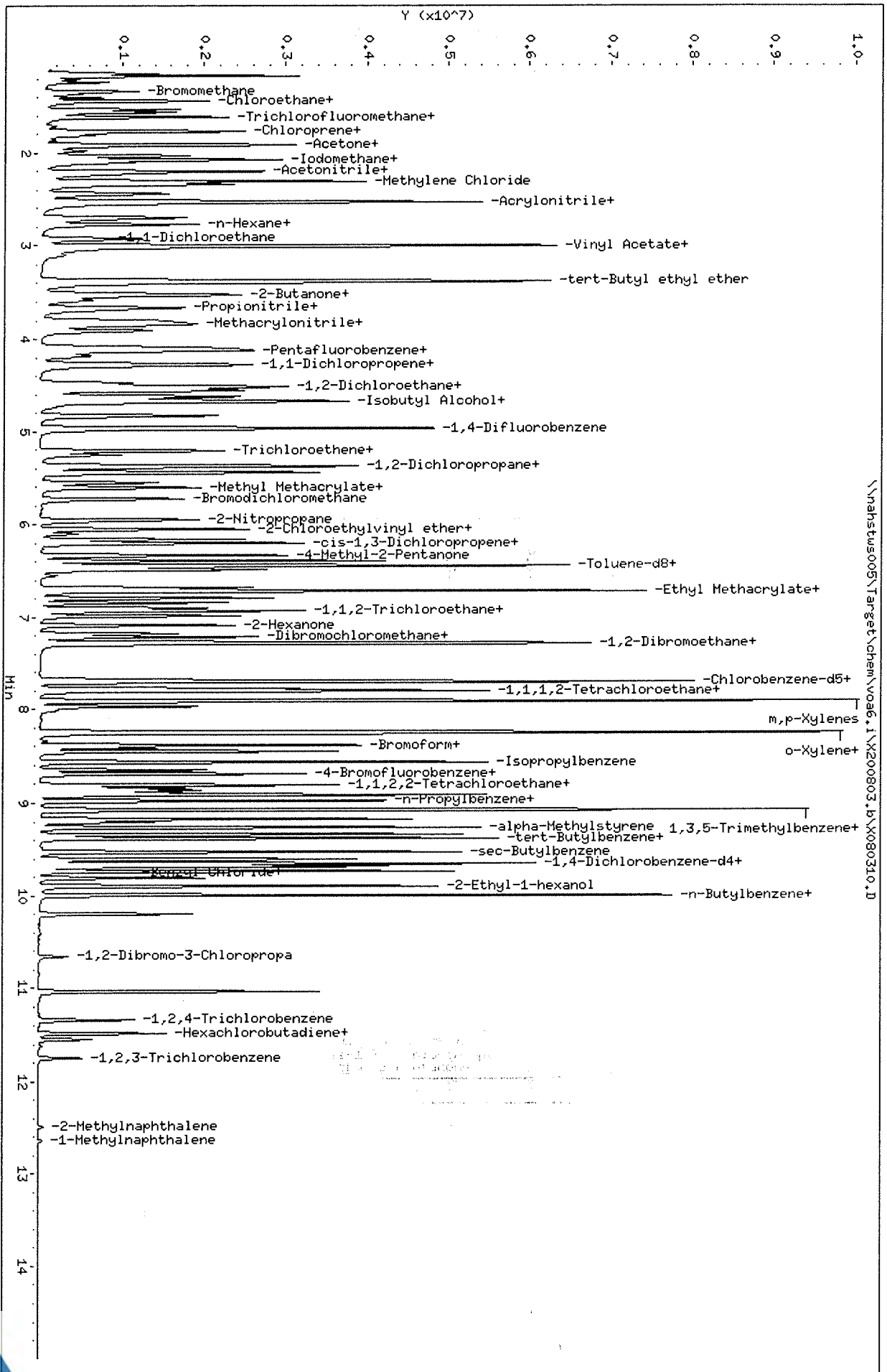
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457081	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697946	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	658557	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

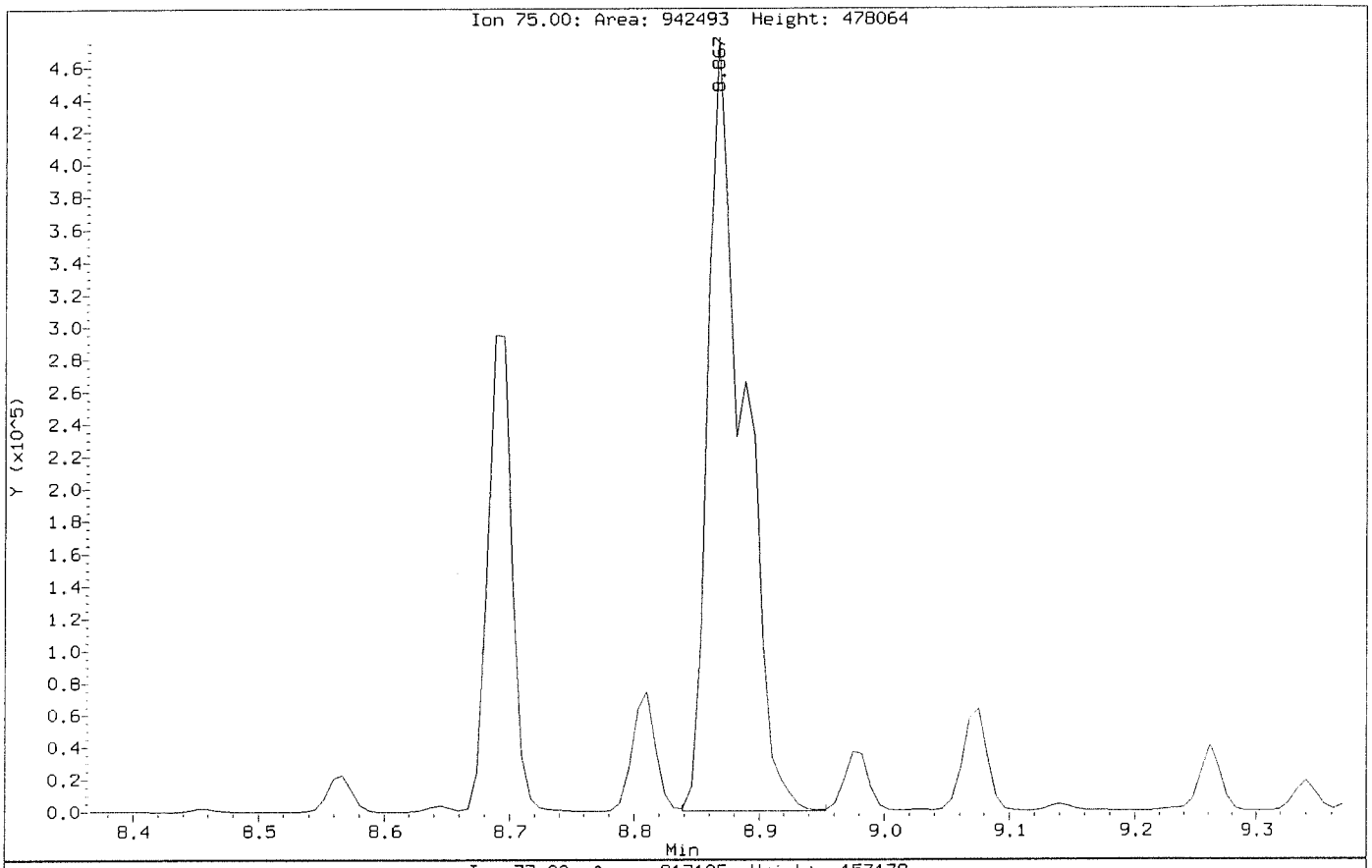


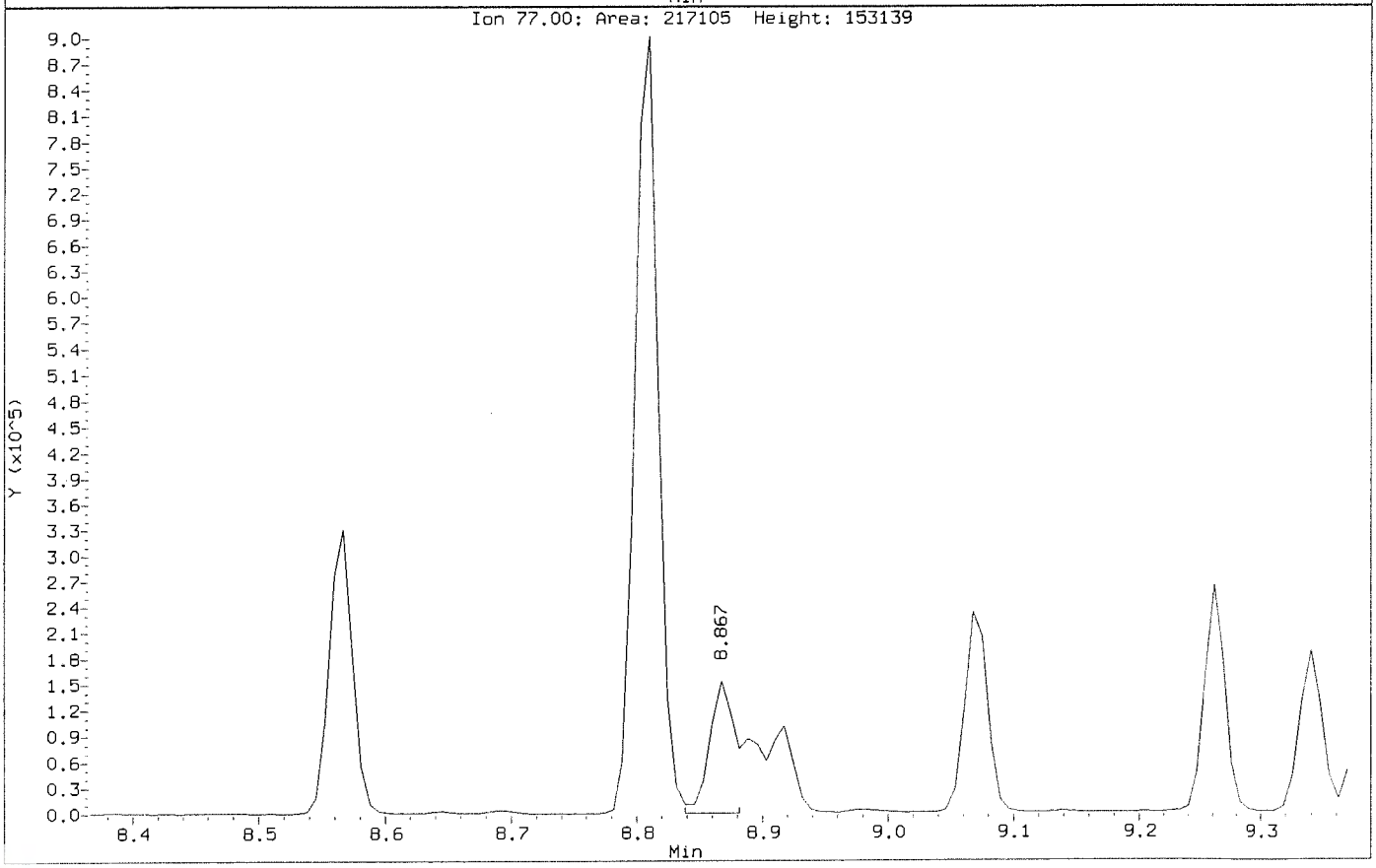
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Purge Volume: 5.0
Column phase: DB624

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

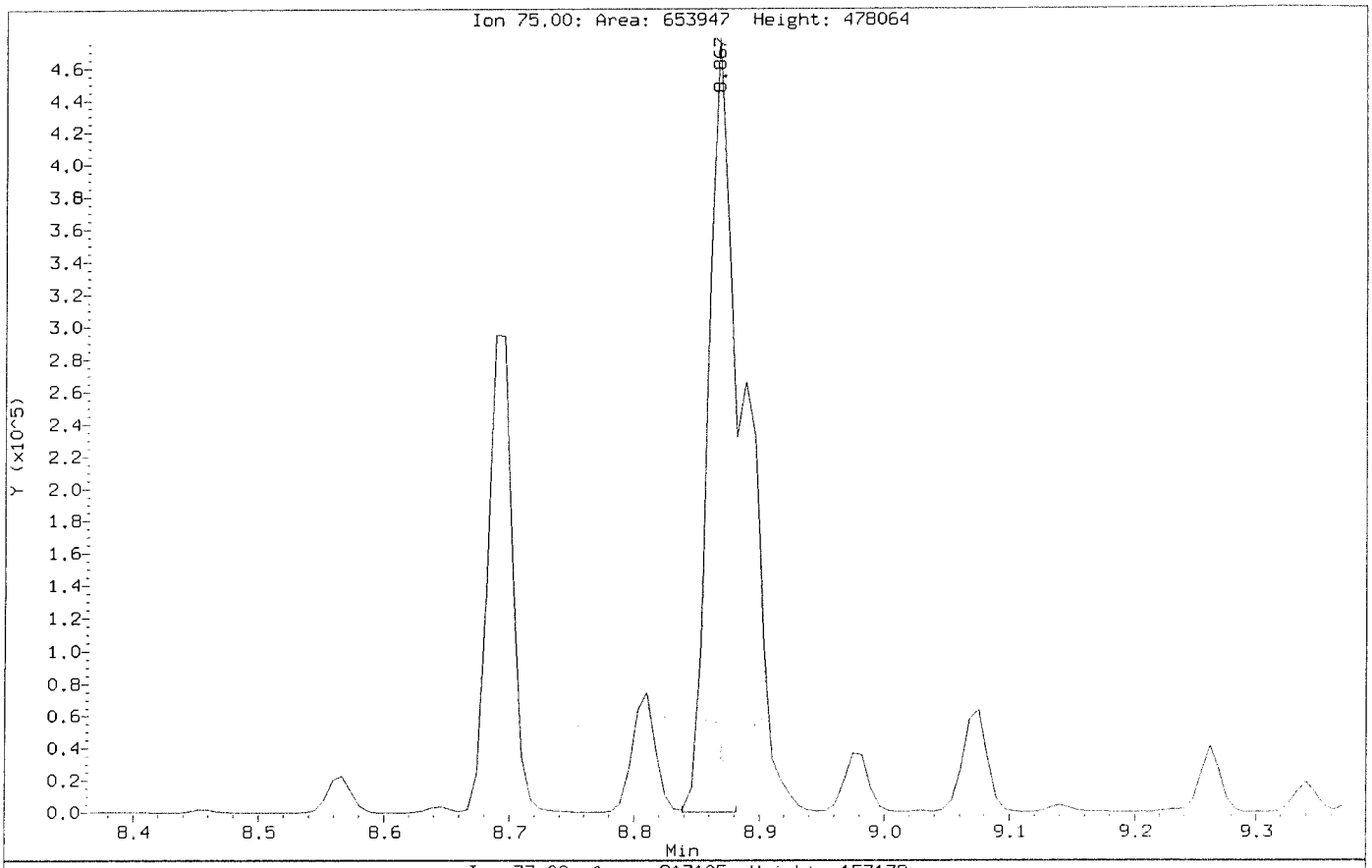
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

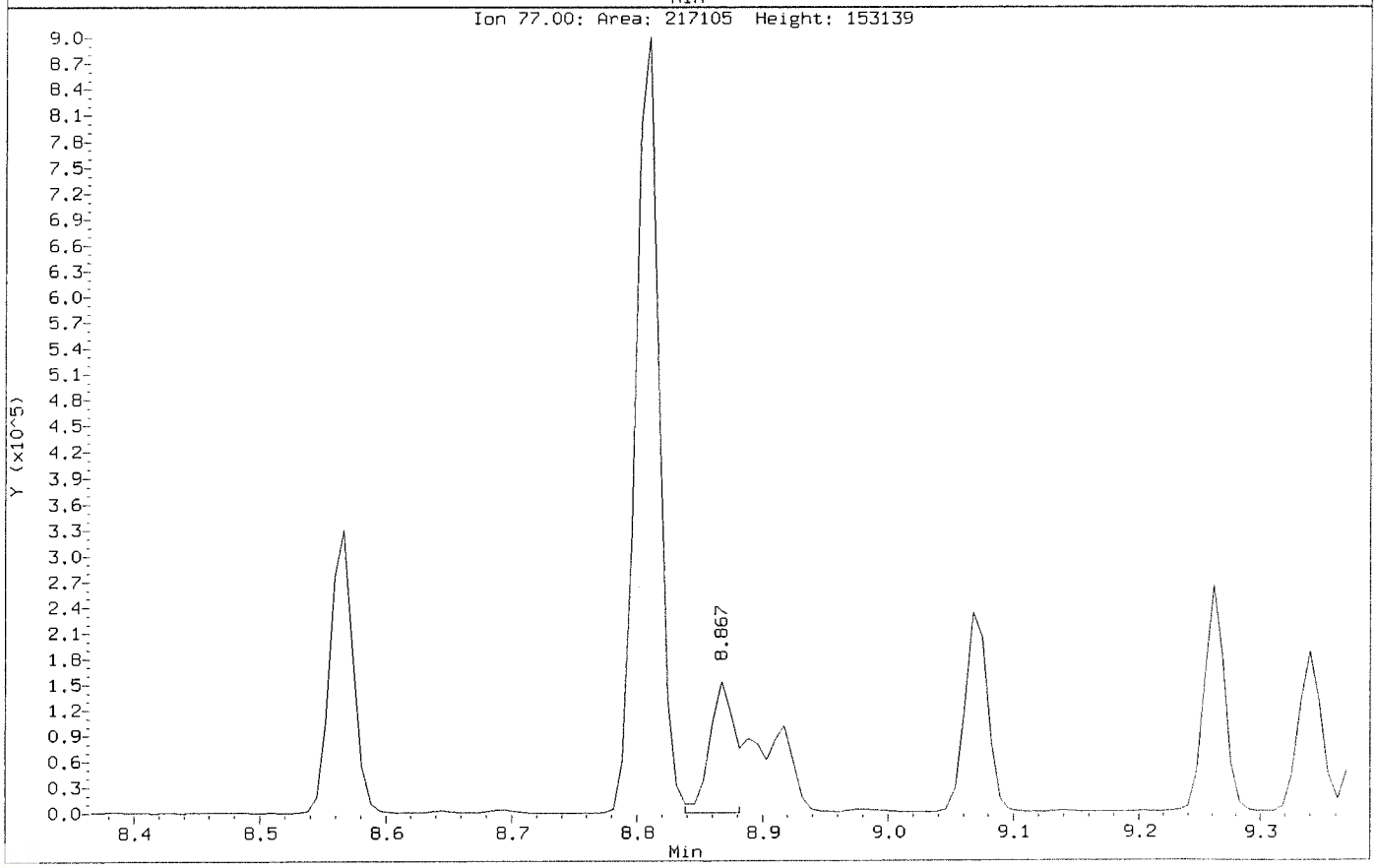




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Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

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 :
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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

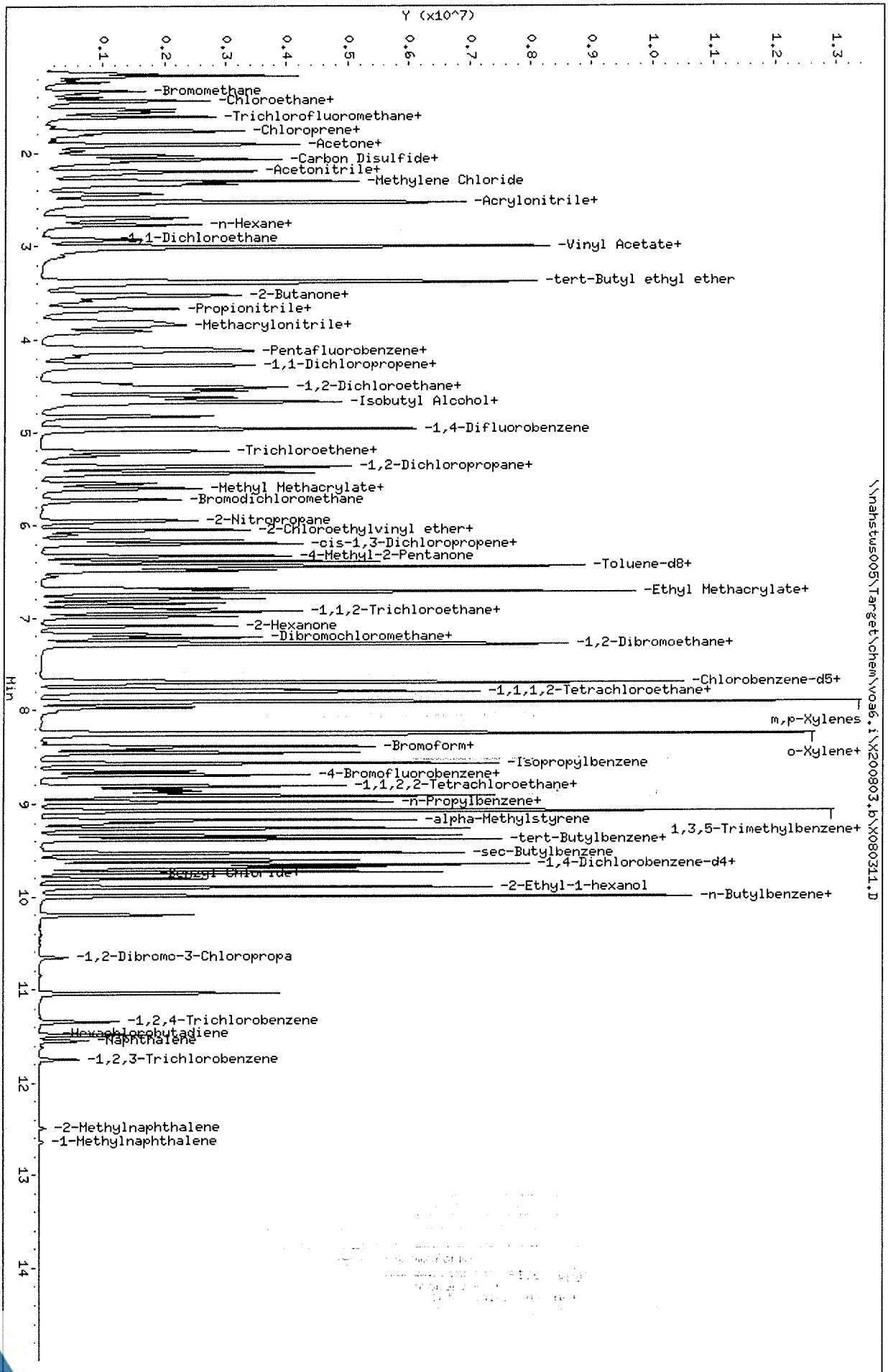
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450865	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	691821	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	647390	50.0000	
* 70 1,4-Dichlorobenzene-d4	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.

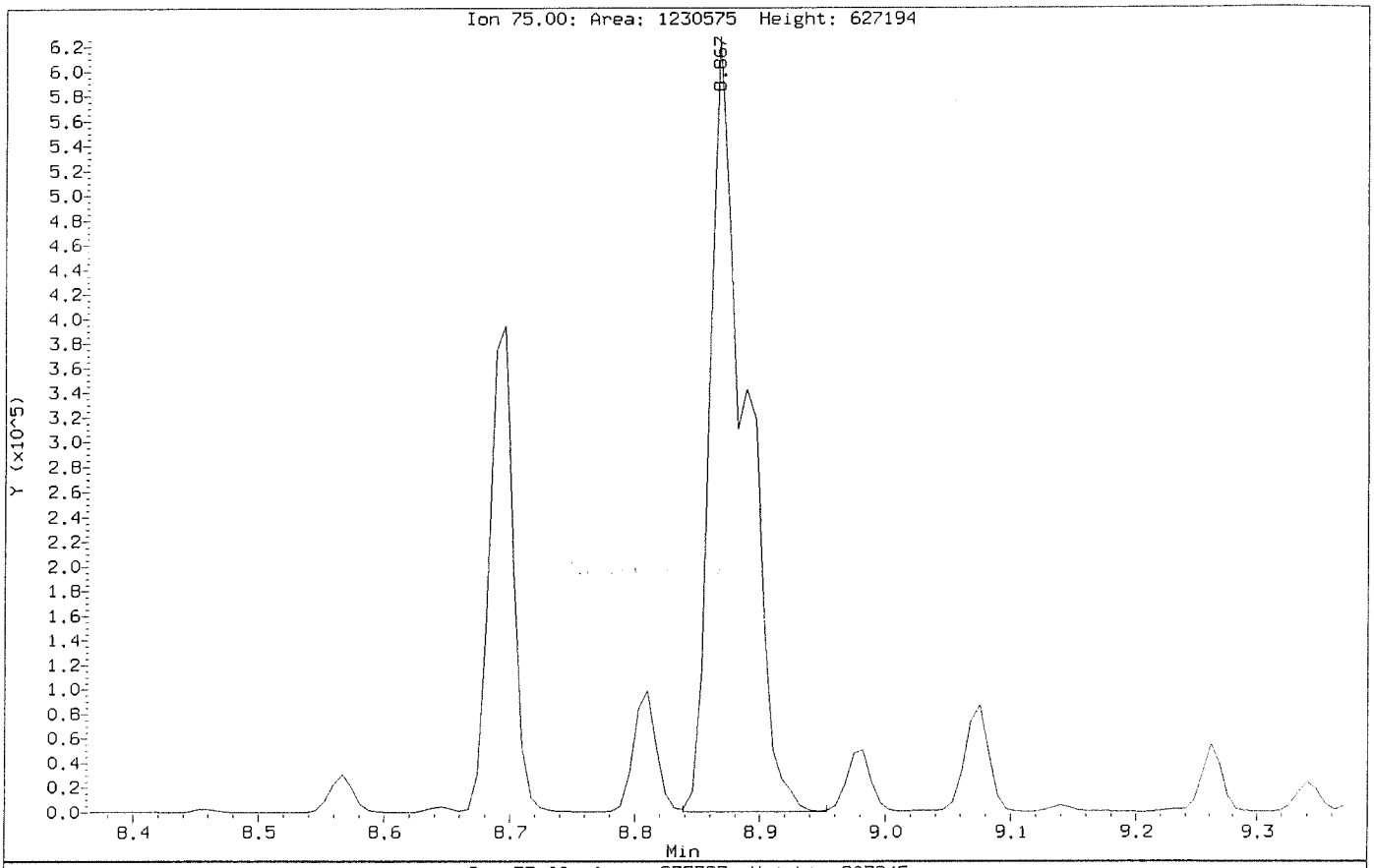


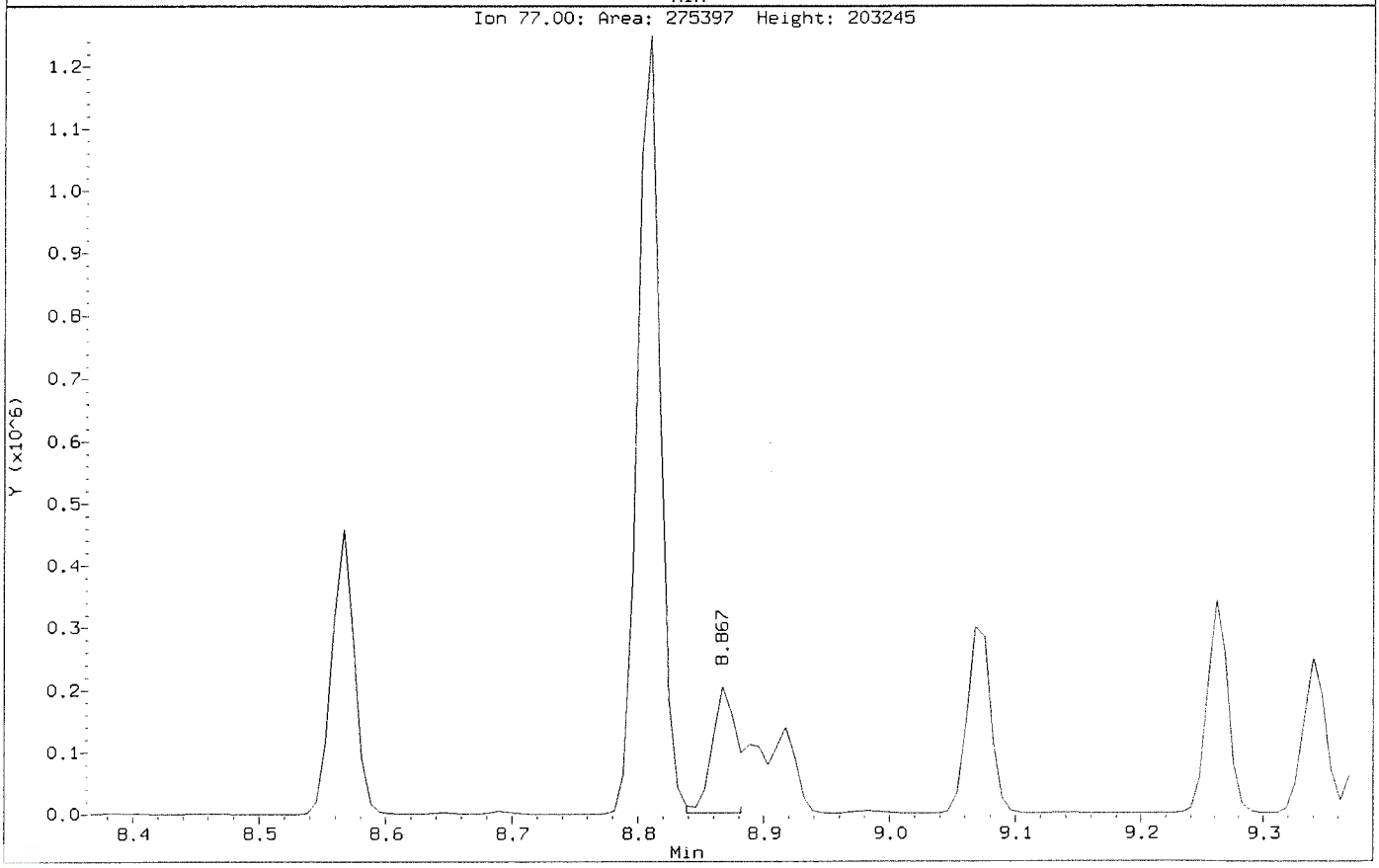
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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

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

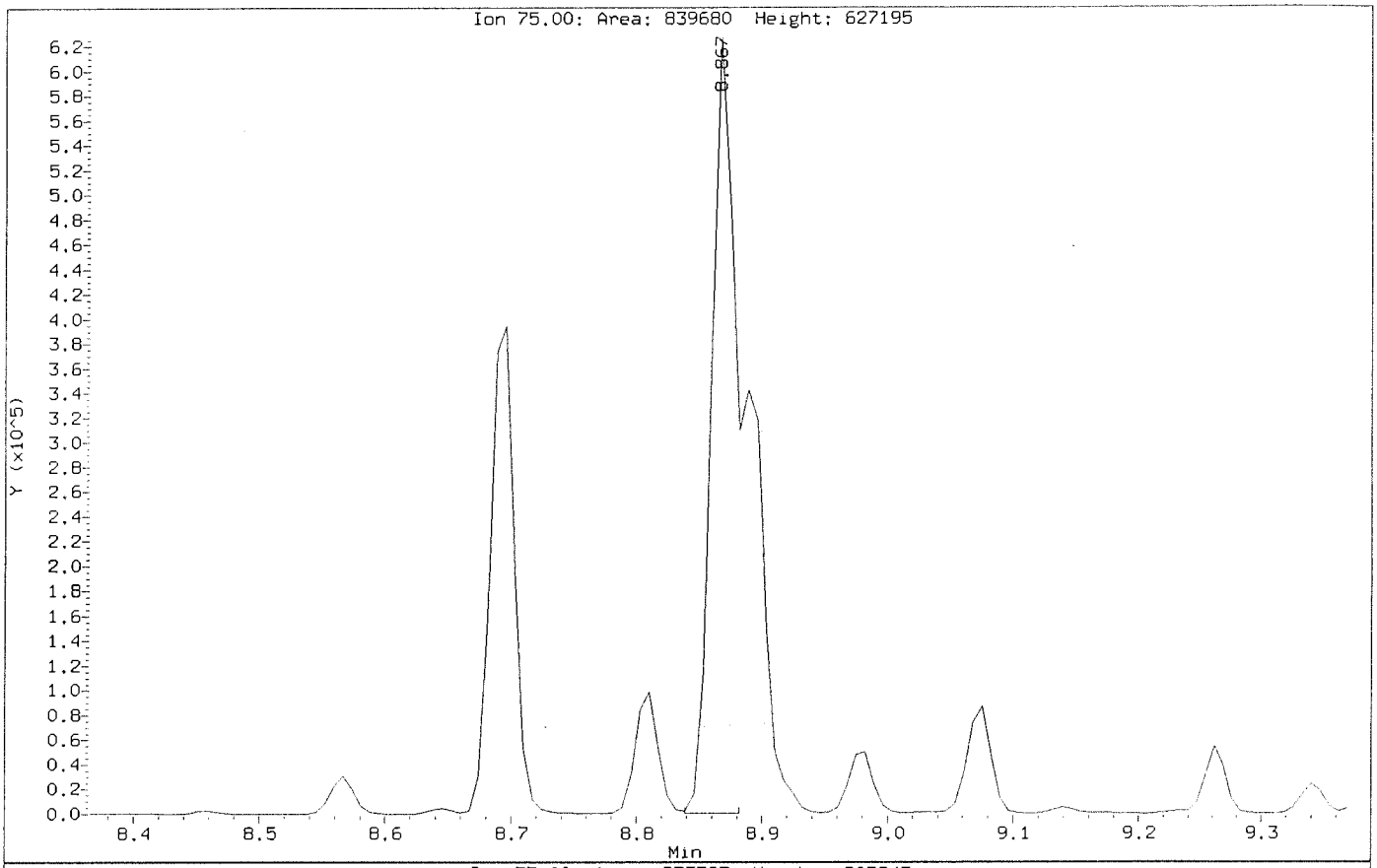
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

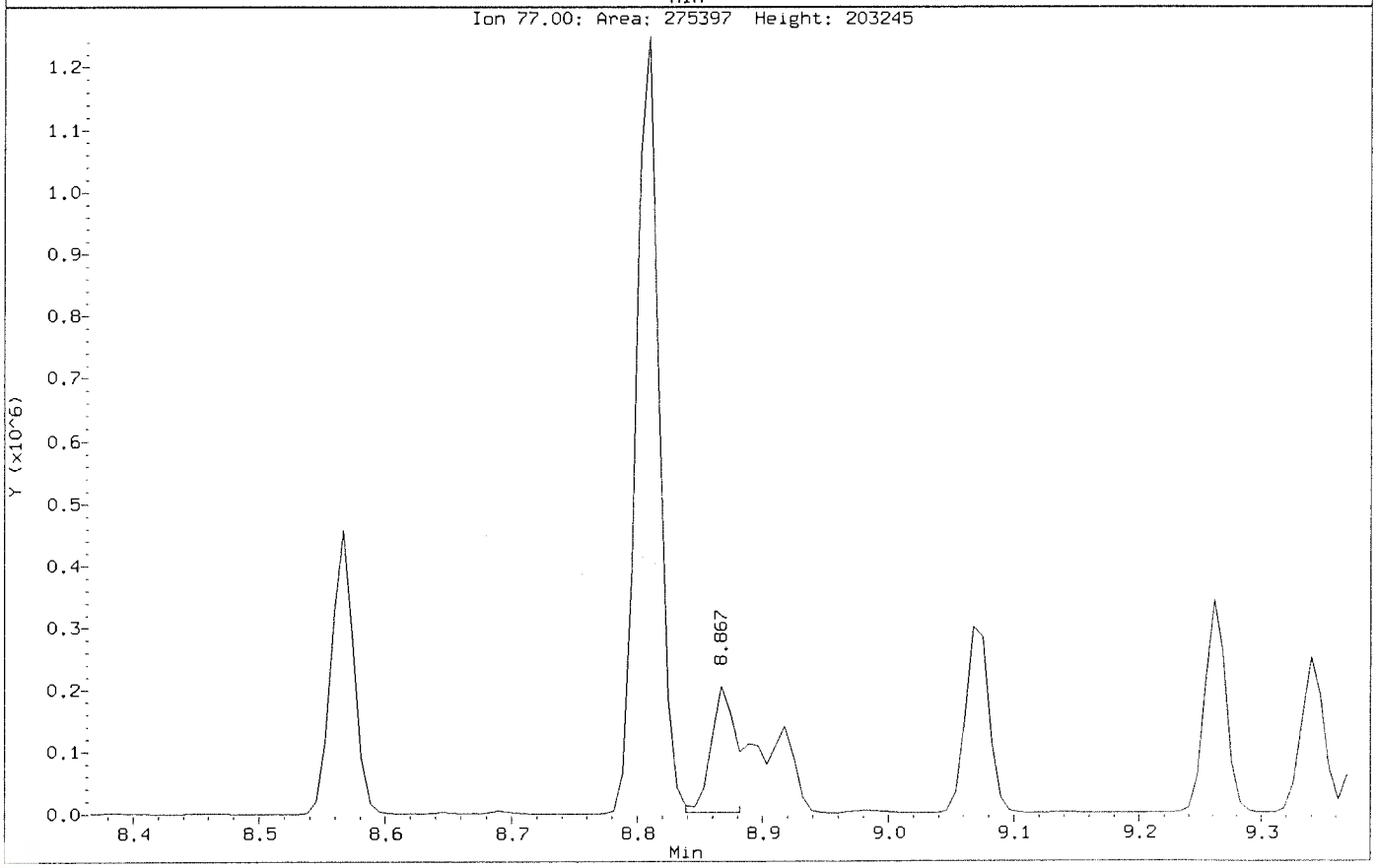




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Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

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





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

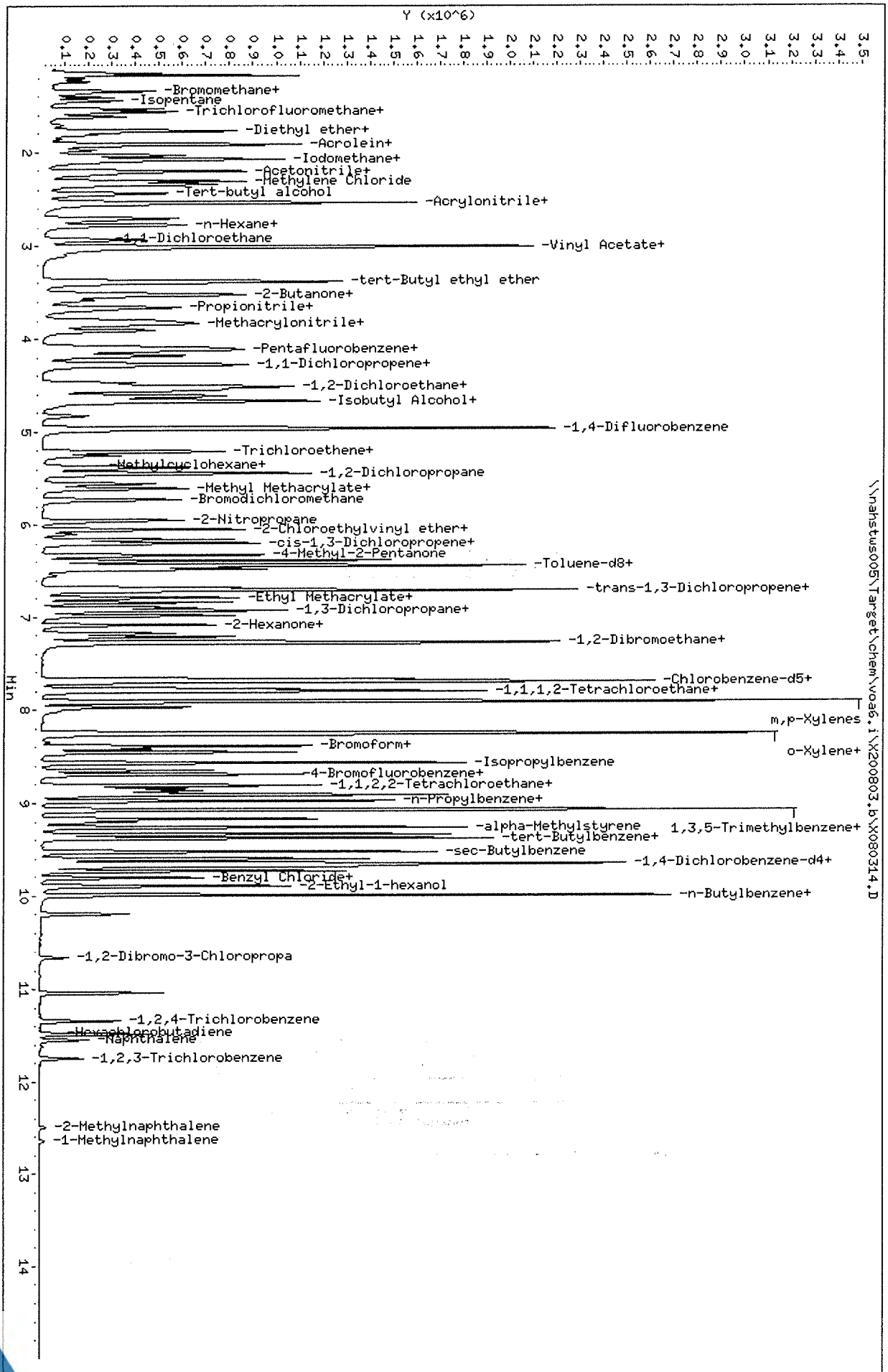
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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

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.

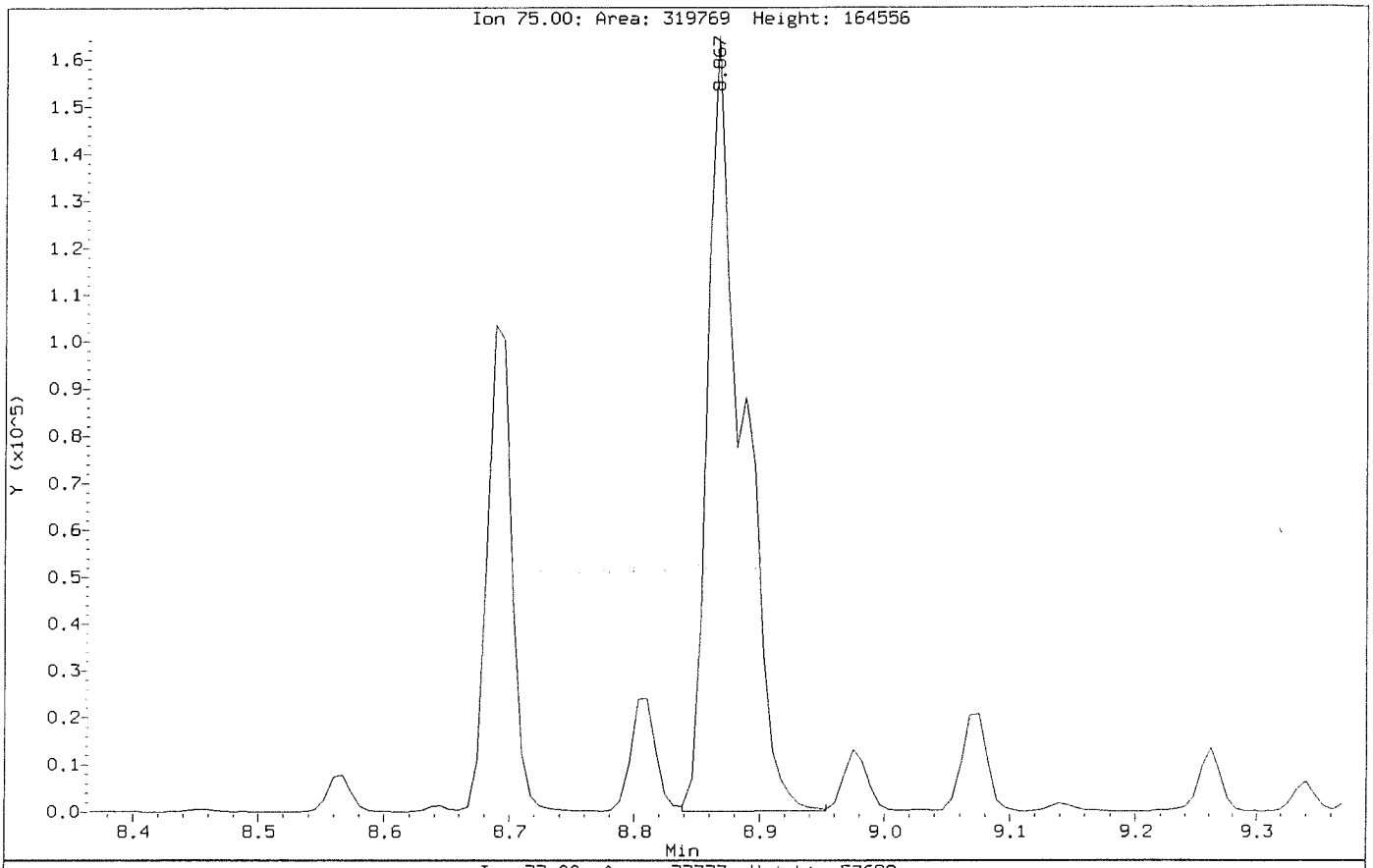


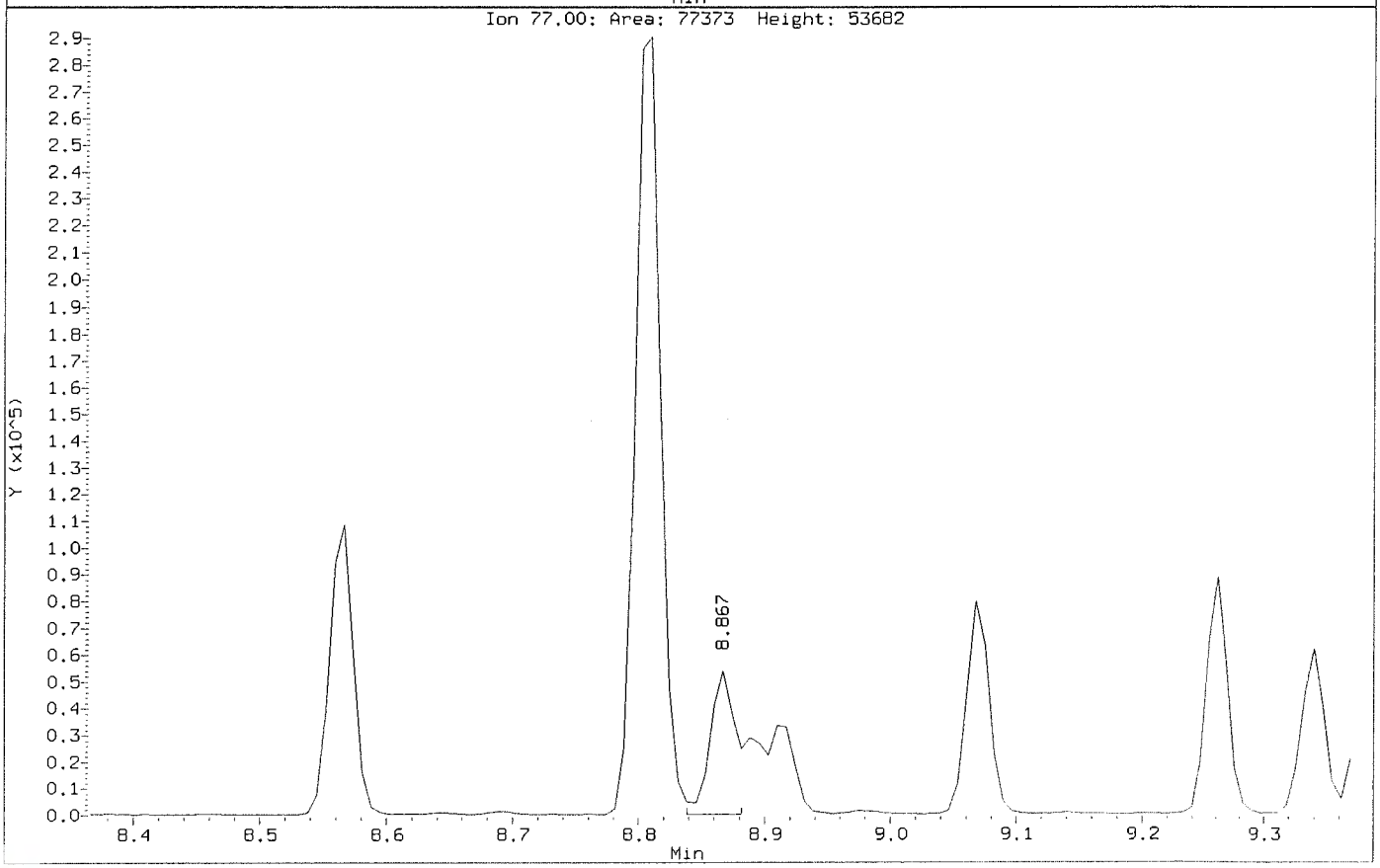
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Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

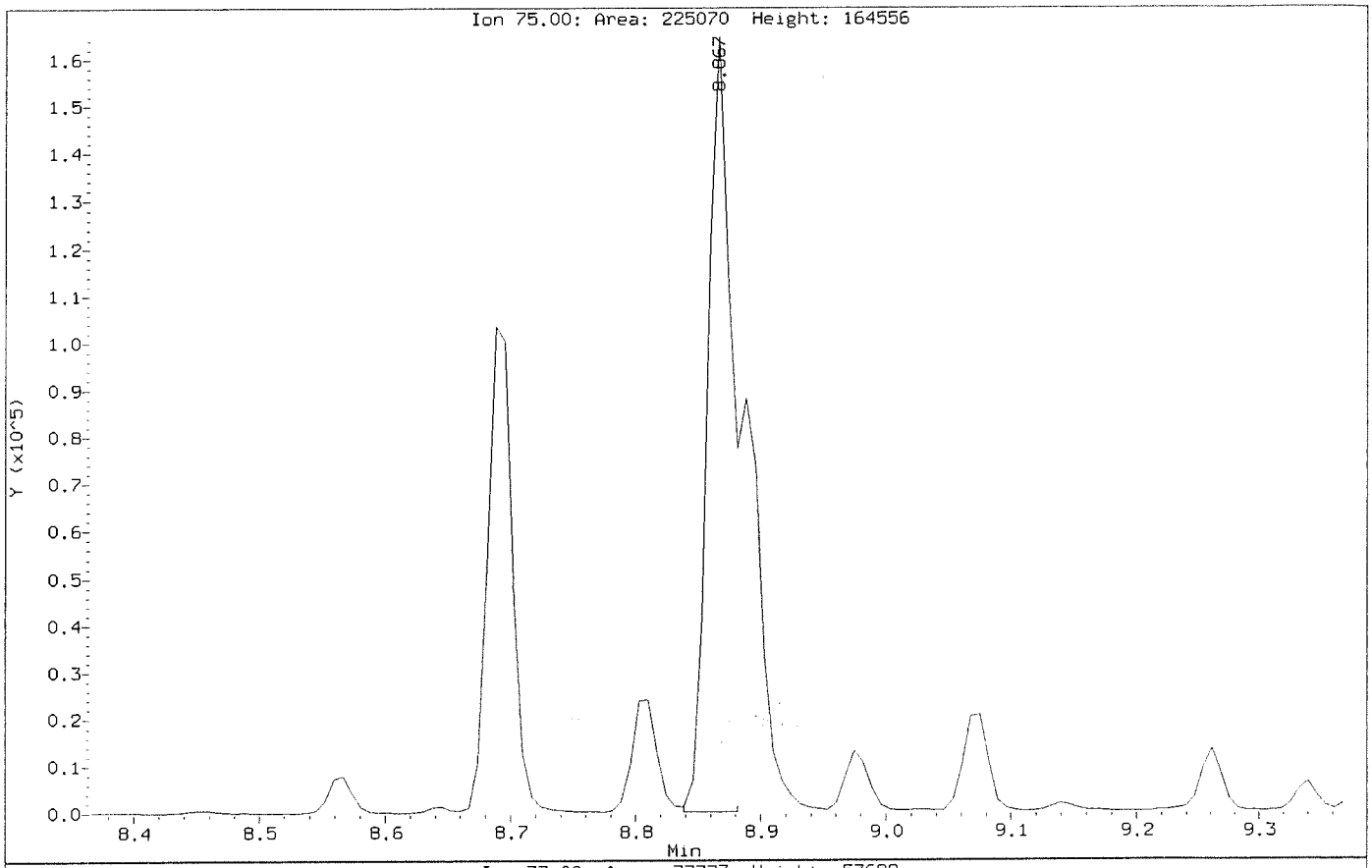
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

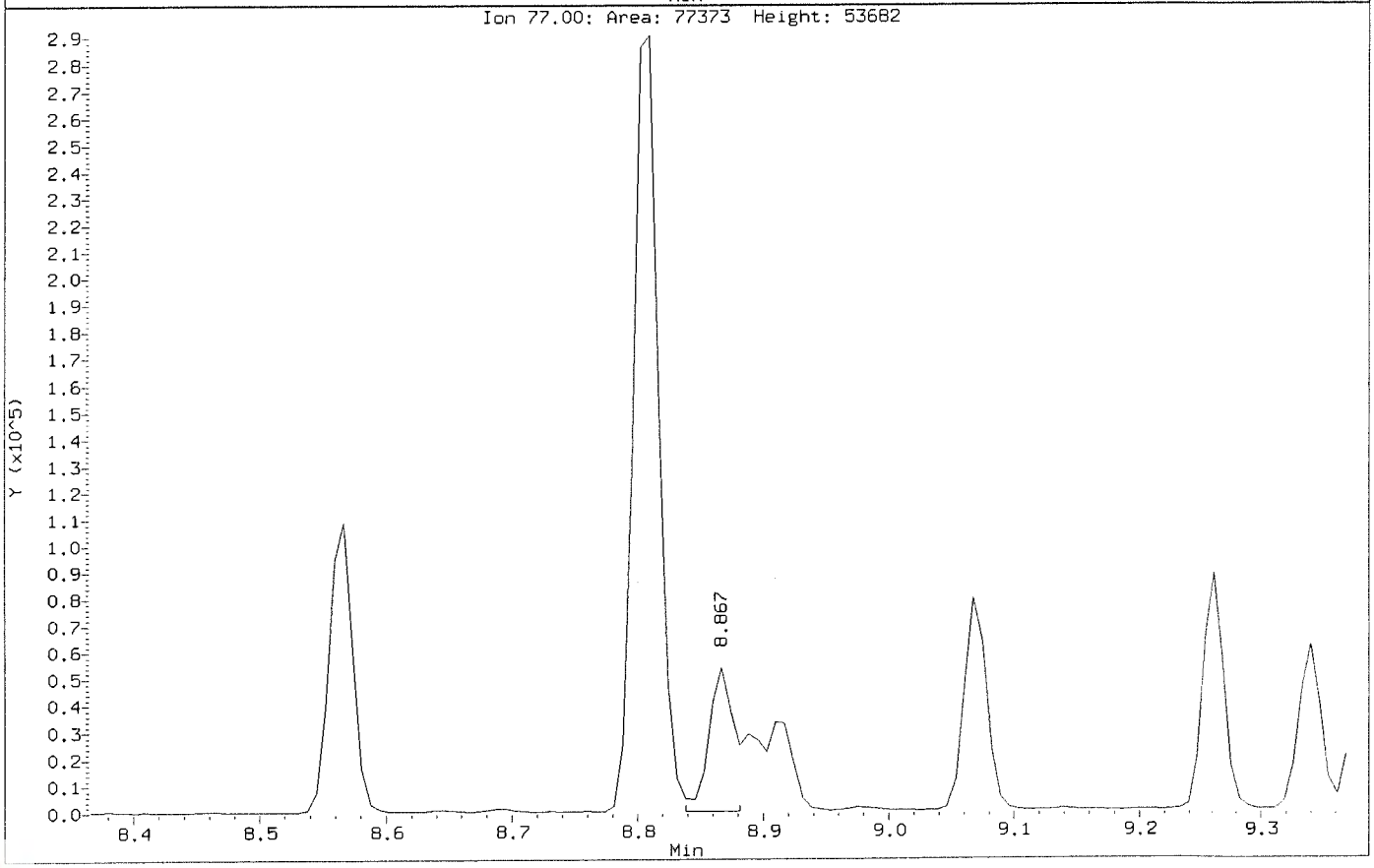




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Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

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





MSVOA06 -Logbook

Batch: 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.: HS20081151

	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	HS20081151-03	88	93	105	98	0
04	HS20081151-01	88	92	106	95	0
05	HS20081151-01	88	94	104	98	0
06	HS20081151-01	88	94	104	97	0
07						
08						
09						
10						
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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-200828

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

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	HS20081151-0	HS20081151-03	X082808	1536
03	HS20081151-0	HS20081151-01	X082809	1600
04	HS20081151-0	HS20081151-01M	X082811	1648
05	HS20081151-0	HS20081151-01M	X082812	1712
06				
07				
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29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

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	HS20081151-0	HS20081151-03	X082808	08/28/20	1536
05	HS20081151-0	HS20081151-01	X082809	08/28/20	1600
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.: HS20081151

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 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 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

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.: HS20081151

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	HS20081151-03	585779	7.67	669762	4.97	275356	9.67
04	HS20081151-01	586276	7.67	669367	4.97	271360	9.66
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 VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	430526	4.19				
	UPPER LIMIT	861052	4.69				
	LOWER LIMIT	215263	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200828	435559	4.19				
02	VBLKW-200828	447810	4.19				
03	HS20081151-03	448125	4.19				
04	HS20081151-01	449325	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

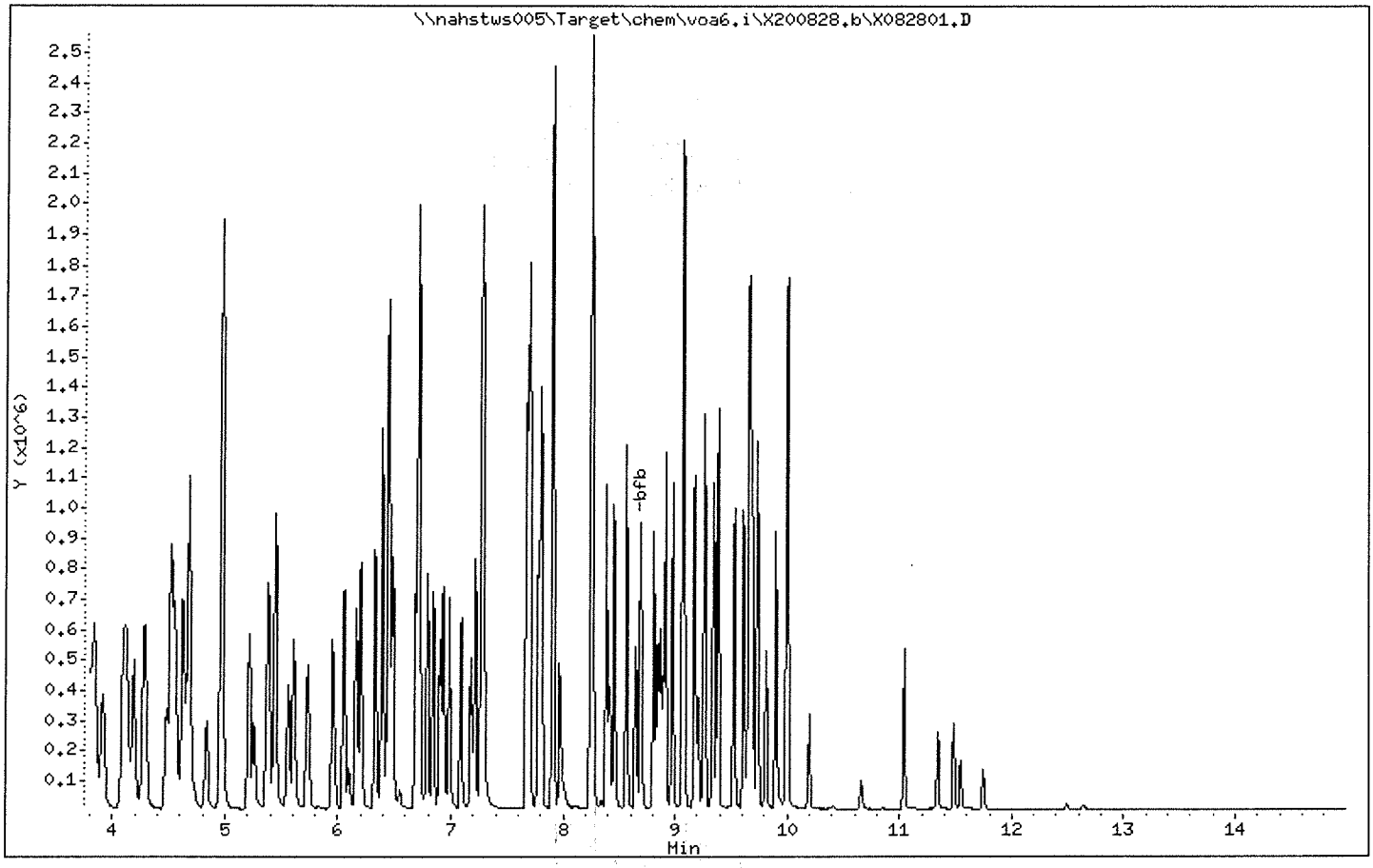
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082801.D Page 2

Date : 28-AUG-2020 12:24

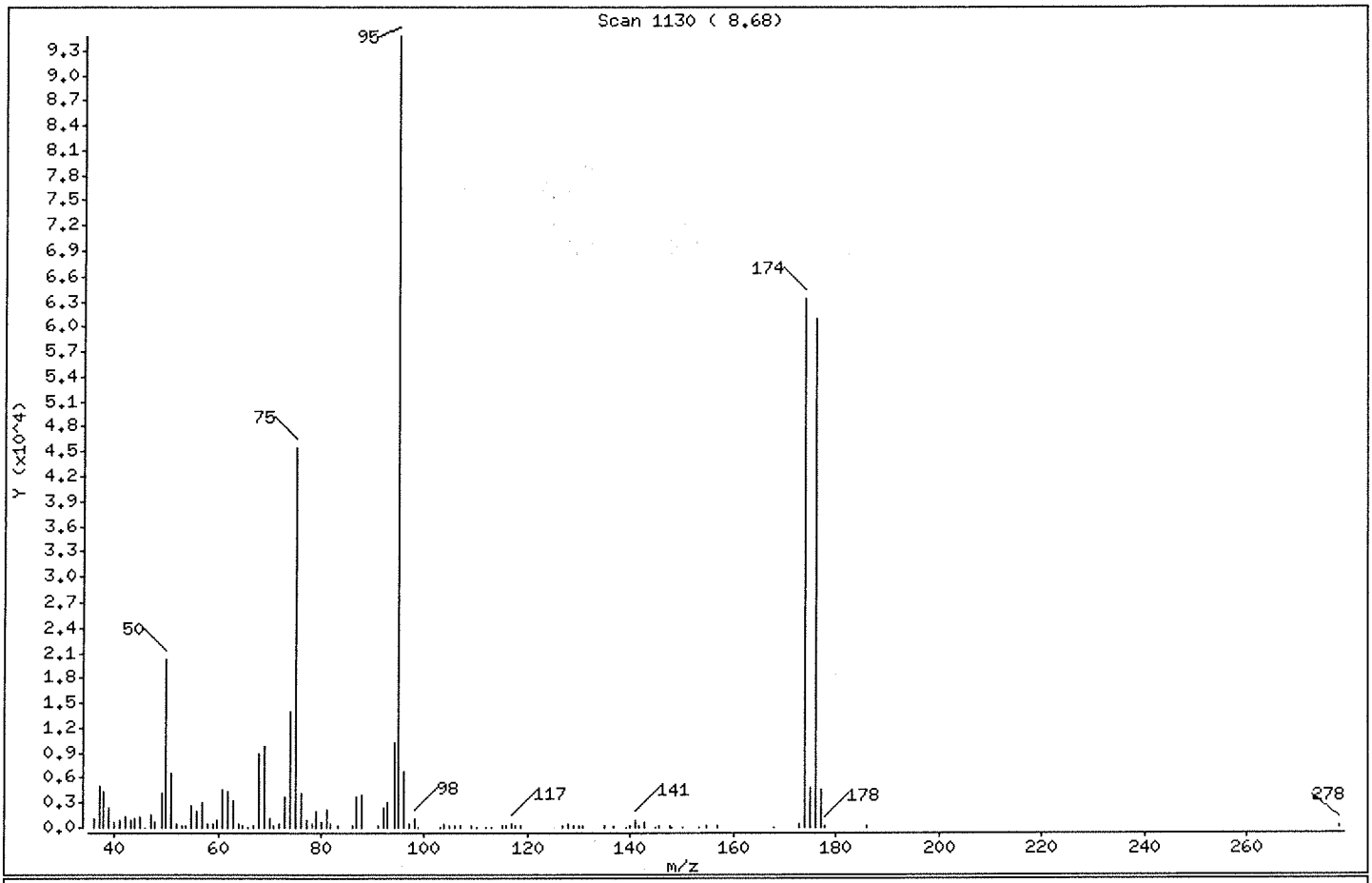
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.39
75	30.00 - 60.00% of mass 95	48.06
96	5.00 - 9.00% of mass 95	7.07
173	Less than 2.00% of mass 174	0.38 (0.56)
174	Greater than 50.00% of mass 95	66.84
175	5.00 - 9.00% of mass 174	5.07 (7.58)
176	95.00 - 101.00% of mass 174	64.38 (96.31)
177	5.00 - 9.00% of mass 176	4.84 (7.51)

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

Data File: X082801.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1156	62.00	4432	92.00	2435	130.80	135
37.00	5078	63.00	3174	92.90	3017	134.90	207
38.00	4322	64.00	407	94.00	10291	136.80	125
39.00	2393	64.90	152	95.00	94680	139.00	92
39.90	628	65.90	70	96.00	6693	139.80	115
41.00	921	66.80	217	97.00	407	140.90	793
42.00	1296	68.00	8848	98.00	982	141.80	306
43.00	770	69.00	9692	98.80	76	142.80	698
44.00	1088	70.10	1148	102.90	102	145.00	66
45.00	1364	70.90	136	103.90	390	145.70	161
45.90	51	72.00	544	104.80	275	147.60	143
47.00	1508	73.00	3735	105.90	300	148.00	102
47.90	579	74.00	13937	106.80	316	150.00	105
49.00	4137	75.00	45504	108.90	323	153.50	55
50.00	20256	76.00	4080	110.20	100	154.90	282
51.00	6502	77.00	778	111.90	78	156.80	183
51.90	330	78.10	541	112.90	71	167.80	77
52.90	150	78.90	2058	114.90	192	172.80	357
53.90	151	79.90	709	115.80	254	173.90	63288
55.00	2526	80.90	2134	116.80	539	174.90	4796
56.00	2042	81.90	480	117.70	288	175.90	60952
57.00	2987	83.10	194	118.70	310	176.90	4579
58.10	354	85.90	153	126.80	218	177.80	175
59.00	494	86.90	3747	127.90	394	186.00	160
59.90	952	87.90	3887	128.80	146	278.10	300
61.00	4616	90.90	316	129.80	261		

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082802.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082802.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 28-AUG-2020 12:48
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

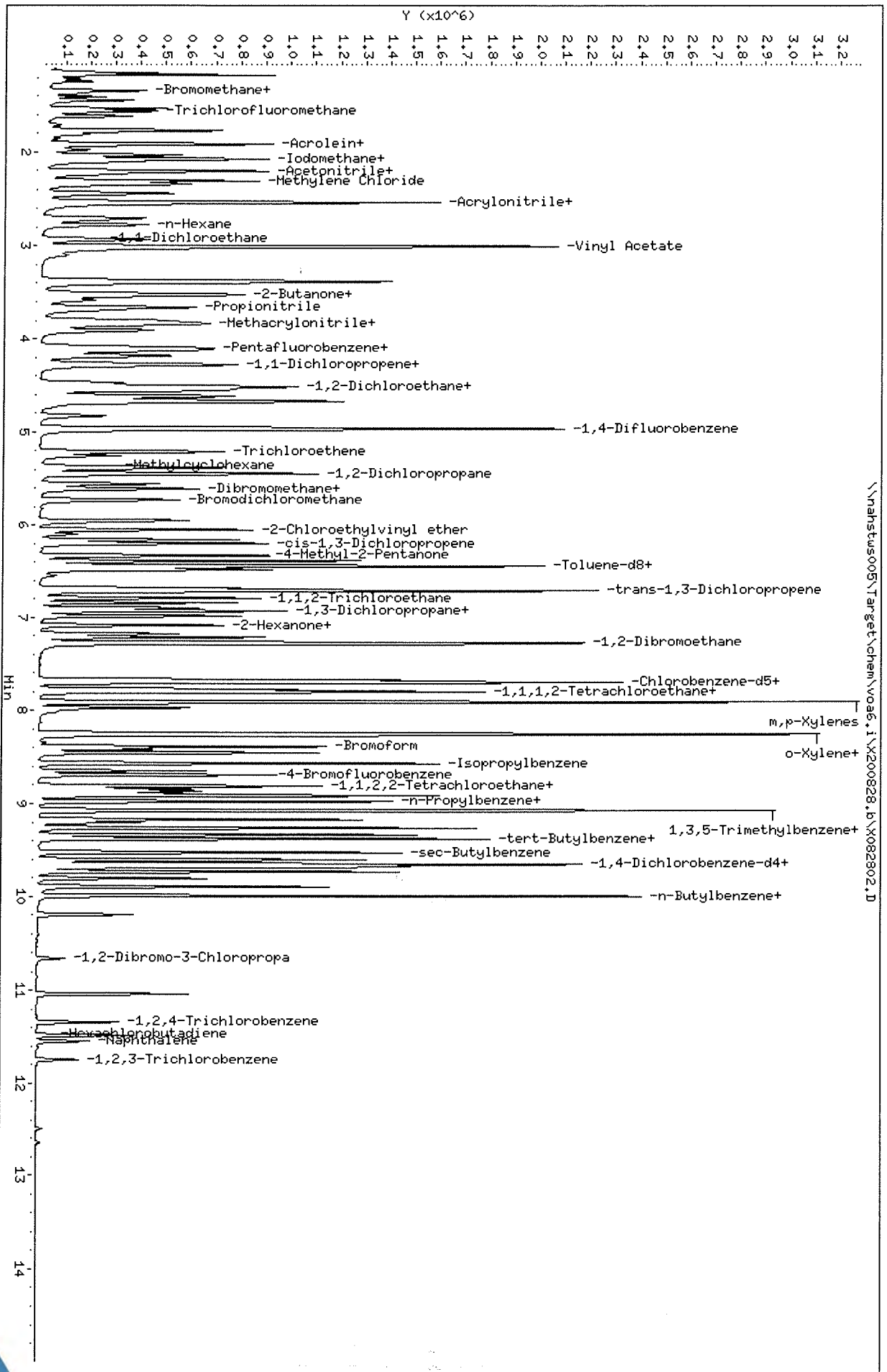
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	430526	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	662370	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	608999	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	288374	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	203548	50.0000	48.14
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	231681	50.0000	46.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	714239	50.0000	48.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267474	50.0000	46.93
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	238532	50.0000	51.45
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	332739	50.0000	50.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	258522	50.0000	55.60
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	183851	50.0000	53.05
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	471928	50.0000	56.11
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	180012	50.0000	52.77
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	279812	50.0000	50.27
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	46793	50.0000	53.92
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	220703	50.0000	52.28(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	93195	50.0000	55.88
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	794136	50.0000	51.54
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	22034	50.0000	53.37
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	238115	50.0000	53.33
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	420671	50.0000	51.57

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082802.D Page 2
Report Date: 25-Sep-2020 10:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	321652	50.0000	50.15
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	272257	50.0000	56.00
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	763563	50.0000	50.67
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	477586	50.0000	52.69
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	364282	50.0000	53.24
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	472389	50.0000	52.69
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	335536	50.0000	54.64
24	2-Butanone	43	3.580	3.580	(0.855)	246401	100.000	116.74
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	654767	50.0000	52.33
52	2-Hexanone	43	7.090	7.090	(0.924)	396869	100.000	103.80
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	756483	50.0000	51.97
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	772576	50.0000	48.38
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	581357	100.000	103.14
10	Acetone	43	1.976	1.976	(0.472)	156186	100.000	104.11
37	Benzene	78	4.519	4.519	(0.909)	901601	50.0000	54.86
74	Bromobenzene	156	8.809	8.809	(0.912)	294801	50.0000	52.25
29	Bromochloromethane	128	3.802	3.802	(0.908)	135358	50.0000	52.15
39	Bromodichloromethane	83	5.729	5.729	(1.153)	312309	50.0000	52.37
66	Bromoform	173	8.415	8.415	(1.097)	174609	50.0000	51.67
6	Bromomethane	94	1.346	1.346	(0.321)	158722	50.0000	53.51
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1137188	100.000	107.36
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	270348	50.0000	45.69
59	Chlorobenzene	112	7.699	7.699	(1.004)	631358	50.0000	52.89
7	Chloroethane	64	1.403	1.403	(0.335)	174138	50.0000	57.06
28	Chloroform	83	3.910	3.910	(0.933)	405655	50.0000	52.73
3	Chloromethane	50	1.081	1.081	(0.258)	297171	50.0000	49.16
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	260572	50.0000	54.98
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	380875	50.0000	54.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	252560	50.0000	51.77
44	Dibromomethane	93	5.557	5.557	(1.118)	152859	50.0000	53.02
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	188606	50.0000	44.76
61	Ethylbenzene	106	7.799	7.799	(1.017)	317564	50.0000	51.52
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	69062	50.0000	44.60
67	Isopropylbenzene	105	8.566	8.566	(1.117)	900386	50.0000	49.77
62	m,p-Xylenes	106	7.907	7.907	(1.031)	768532	100.000	103.33
17	Methylene Chloride	84	2.305	2.305	(0.550)	238861	50.0000	53.93
87	n-Butylbenzene	91	9.998	9.998	(1.035)	623991	50.0000	48.92
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1040852	50.0000	50.10
92	Naphthalene	128	11.546	11.546	(1.195)	144316	50.0000	62.02
63	o-Xylene	106	8.244	8.244	(1.075)	382738	50.0000	52.38
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	827040	50.0000	47.20
64	Styrene	104	8.258	8.258	(1.077)	667375	50.0000	52.60
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	627783	50.0000	48.05
56	Tetrachloroethene	164	6.933	6.933	(0.904)	192057	50.0000	49.60
50	Toluene	91	6.453	6.453	(0.841)	940257	50.0000	52.86
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	222693	50.0000	55.17
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	336183	50.0000	52.60
38	Trichloroethene	130	5.214	5.214	(1.049)	249975	50.0000	53.25
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	291543	50.0000	45.98
5	Vinyl Chloride	62	1.145	1.145	(0.273)	282380	50.0000	50.95

QC Flag Legend

M - Compound response manually integrated.

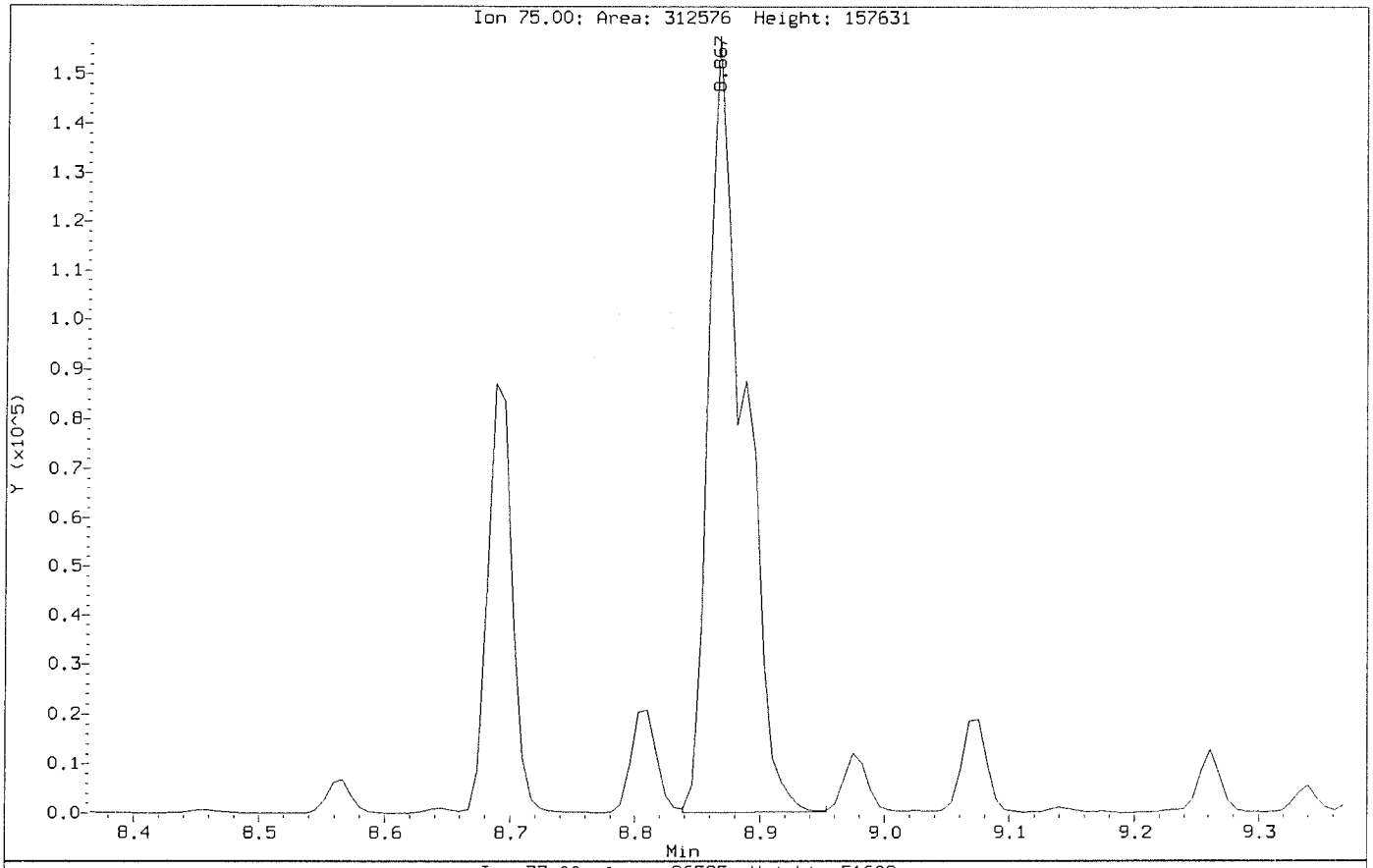


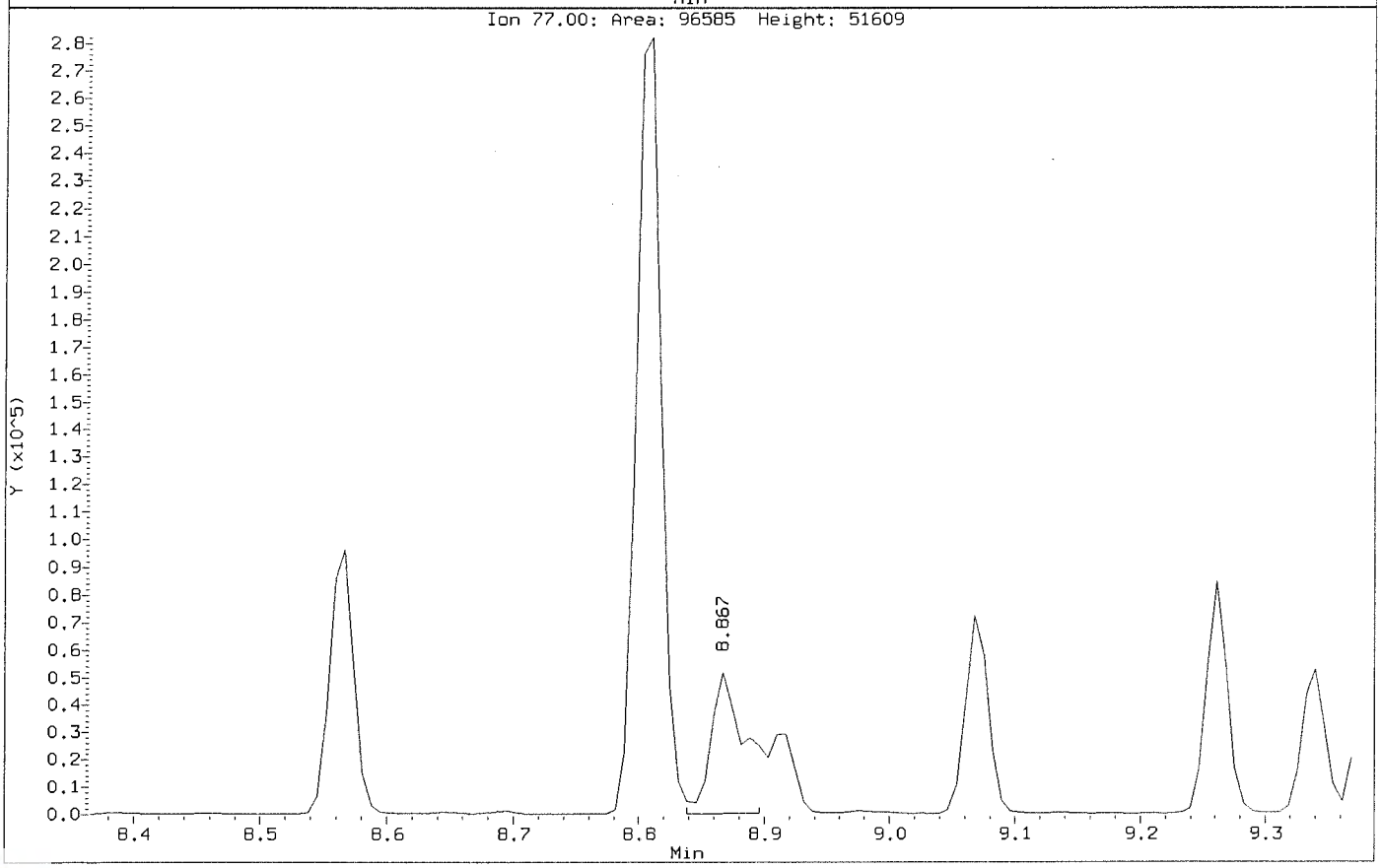
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Date : 28-AUG-2020 12:48
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082802.D
Injection Date: 28-AUG-2020 12:48
Instrument: voa6.i
Client Sample ID: CCV

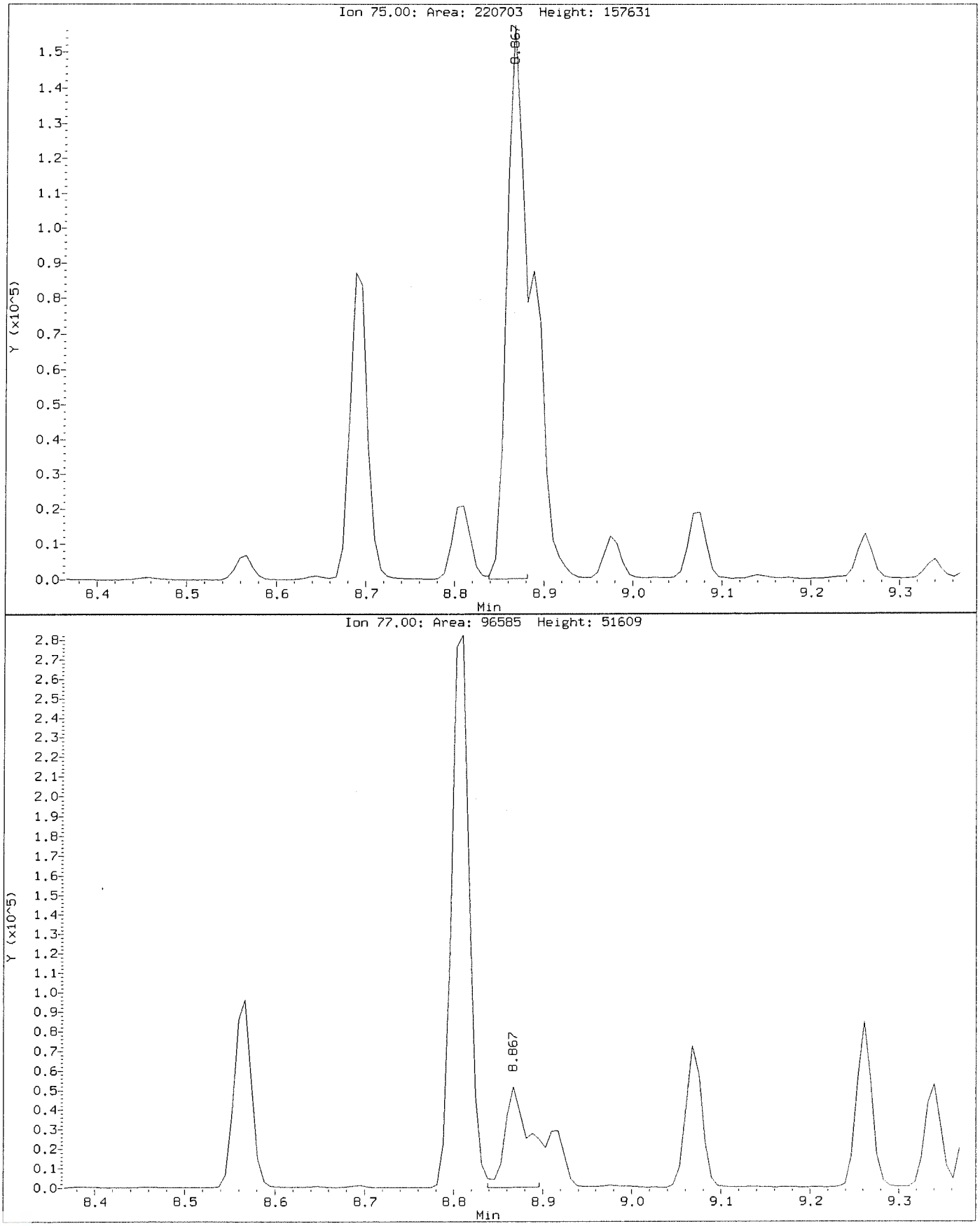
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082802.D
Injection Date: 28-AUG-2020 12:48
Instrument: voa6.i
Client Sample ID: CCV

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



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
Lab Smp Id: VLCSW-200828 Client Smp ID: VLCSW-200828
Inj Date : 28-AUG-2020 14:00
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200828;VLCSW-200828;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

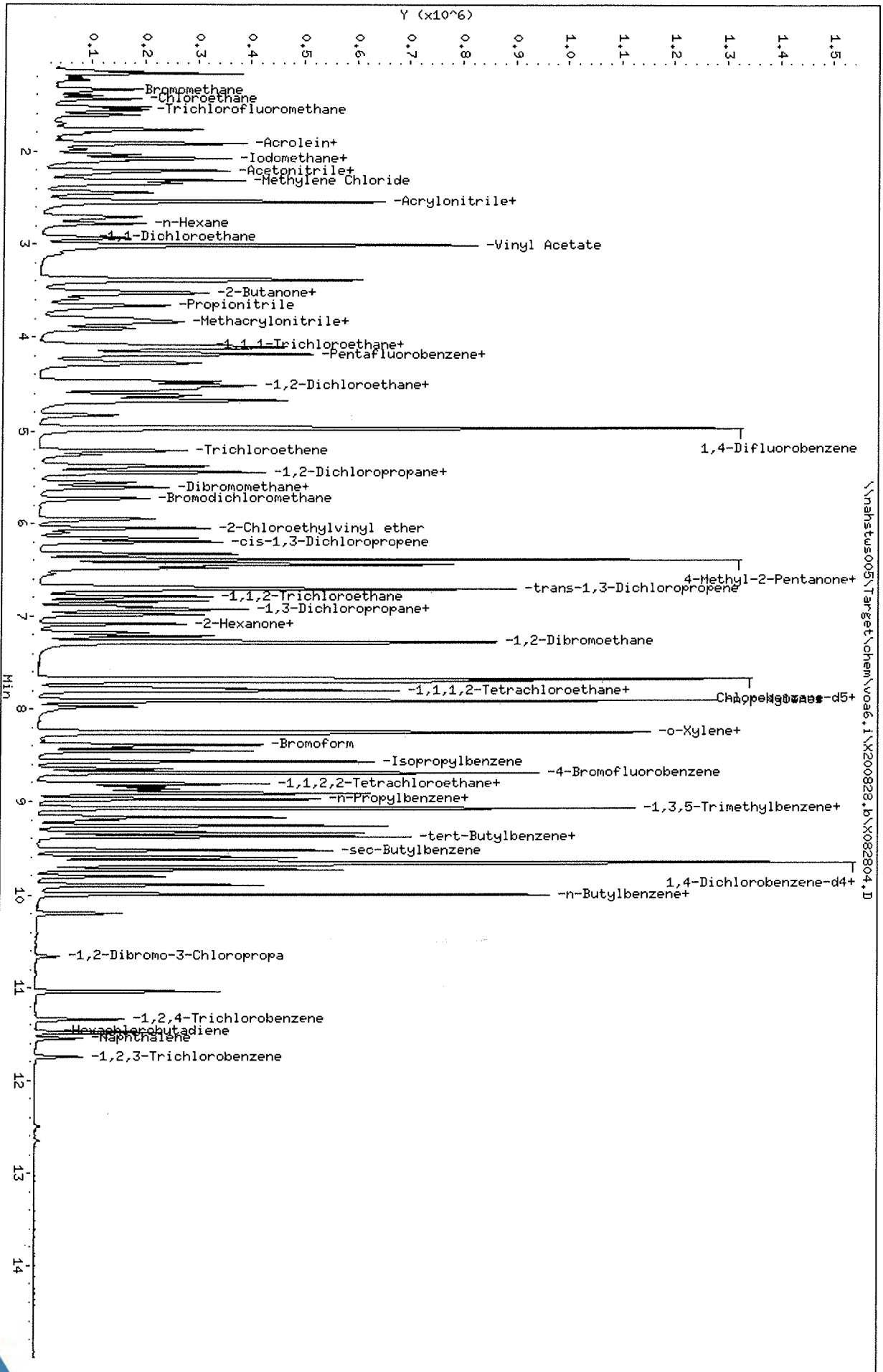
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	435559	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	678331	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	612811	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	294624	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	209501	48.9796	48.97
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	242929	47.9150	47.91
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	737288	49.6020	49.60
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	273397	47.6791	47.67
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	89394	19.1636	19.16
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	130883	19.5084	19.50
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	101523	21.6103	21.61
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	71539	20.5162	20.51
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	183055	21.5157	21.51
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	69416	20.1143	20.11
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	109245	19.1651	19.16
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25514	28.7775	28.77
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84698	19.6400	19.64(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	47549	28.0179	28.01
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	309498	19.6638	19.66
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9247	22.3913	22.39
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	92985	20.6992	20.69
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	164811	19.7771	19.77

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D Page 2
Report Date: 25-Sep-2020 10:00

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)	127399	19.3979	19.39
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	106203	21.3328	21.33
75 1,3,5-Trimethylbenzene	105	9.068	9.067	(0.938)	296267	19.2438	19.24
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	180839	19.5280	19.52
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	142111	20.6406	20.64
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	178951	19.5403	19.54
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	131049	21.0950	21.09
24 2-Butanone	43	3.588	3.580	(0.856)	94615	44.3119	44.31
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	251843	19.7024	19.70
52 2-Hexanone	43	7.091	7.090	(0.924)	156735	40.7404	40.74
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	289979	19.5002	19.50
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	304824	18.6837	18.68
45 4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	233597	41.1868	41.18
10 Acetone	43	1.976	1.976	(0.472)	62982	40.8548	40.85
37 Benzene	78	4.519	4.519	(0.909)	350769	20.8424	20.84
74 Bromobenzene	156	8.810	8.809	(0.911)	110937	19.2486	19.24
29 Bromochloromethane	128	3.803	3.802	(0.908)	53304	20.3031	20.30
39 Bromodichloromethane	83	5.730	5.729	(1.153)	117925	19.3116	19.31
66 Bromoform	173	8.416	8.415	(1.097)	65255	19.1925	19.19
6 Bromomethane	94	1.346	1.346	(0.321)	65397	22.1824	22.18
19 Carbon Disulfide	76	2.069	2.076	(0.494)	440452	41.1056	41.10
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	106920	17.6470	17.64
59 Chlorobenzene	112	7.699	7.699	(1.004)	240338	20.0109	20.01
7 Chloroethane	64	1.403	1.403	(0.335)	59382	19.2346	19.23(M)
28 Chloroform	83	3.910	3.910	(0.933)	159517	20.4992	20.49
3 Chloromethane	50	1.081	1.081	(0.258)	116965	19.1260	19.12
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	101819	21.2372	21.23
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	143718	20.1278	20.12
55 Dibromochloromethane	129	7.176	7.176	(0.936)	95424	19.4397	19.43
44 Dibromomethane	93	5.558	5.557	(1.118)	59362	20.1087	20.10
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	78944	18.5188	18.51
61 Ethylbenzene	106	7.800	7.799	(1.017)	122865	19.8121	19.81
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	41085	25.9743	25.97
67 Isopropylbenzene	105	8.566	8.566	(1.117)	353641	19.4266	19.42
62 m,p-Xylenes	106	7.907	7.907	(1.031)	297291	39.7241	39.72
17 Methylene Chloride	84	2.306	2.305	(0.550)	94725	20.3025	20.30
87 n-Butylbenzene	91	9.999	9.998	(1.034)	246274	18.9011	18.90
73 n-Propylbenzene	91	8.917	8.917	(0.922)	403073	18.9908	18.99
92 Naphthalene	128	11.546	11.546	(1.194)	64310	27.6463	27.64
63 o-Xylene	106	8.244	8.244	(1.075)	147521	20.0669	20.06
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	326898	18.2638	18.26
64 Styrene	104	8.265	8.258	(1.077)	255335	20.0026	20.00
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	247735	18.5597	18.55
56 Tetrachloroethene	164	6.933	6.933	(0.904)	76493	19.6357	19.63
50 Toluene	91	6.453	6.453	(0.841)	366566	20.4829	20.48
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	87147	21.3429	21.34
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	127467	19.4774	19.47
38 Trichloroethene	130	5.214	5.214	(1.049)	96778	20.1312	20.13
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	117958	18.3891	18.38
5 Vinyl Chloride	62	1.145	1.145	(0.273)	109054	19.4510	19.45

QC Flag Legend

M - Compound response manually integrated.

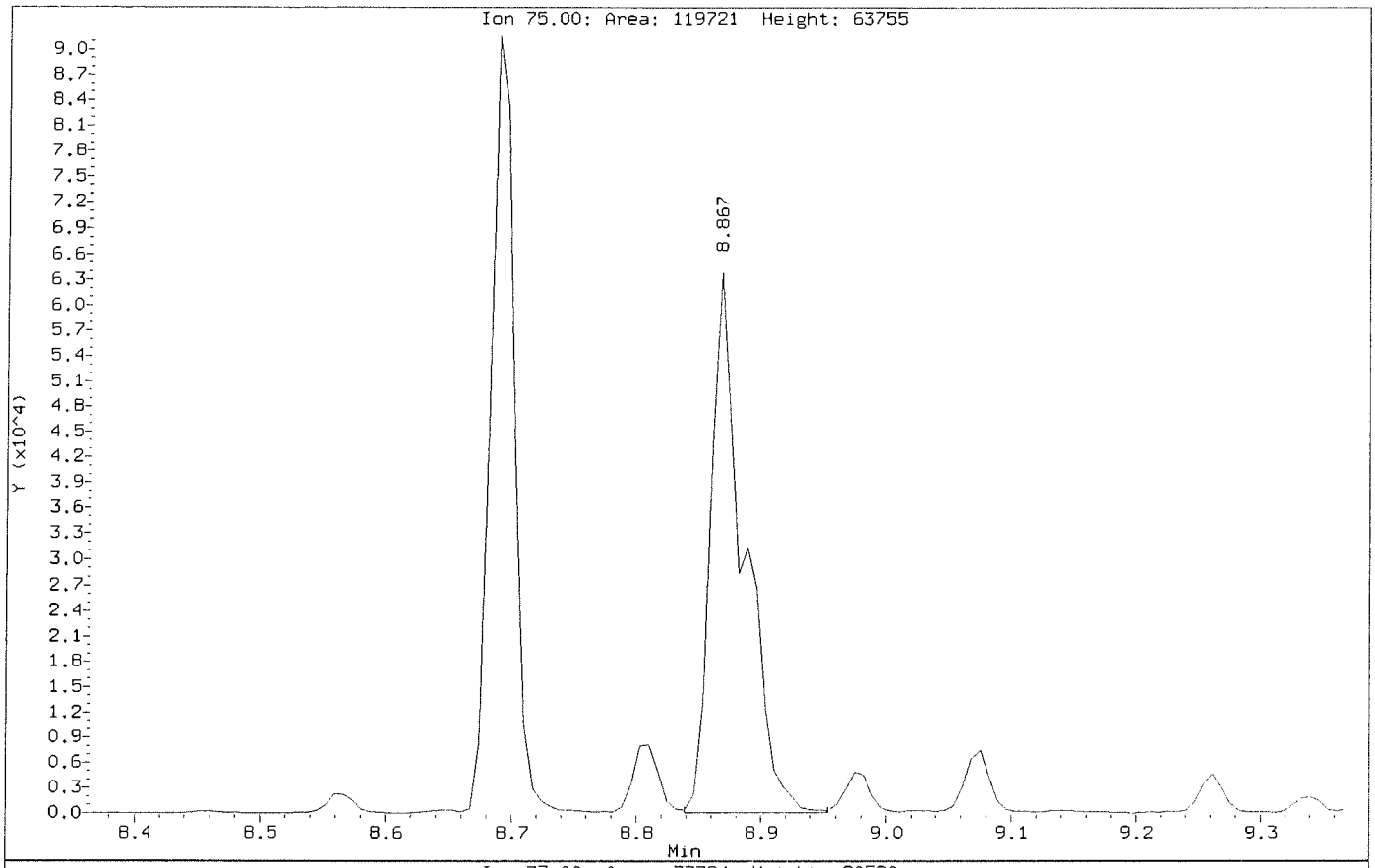


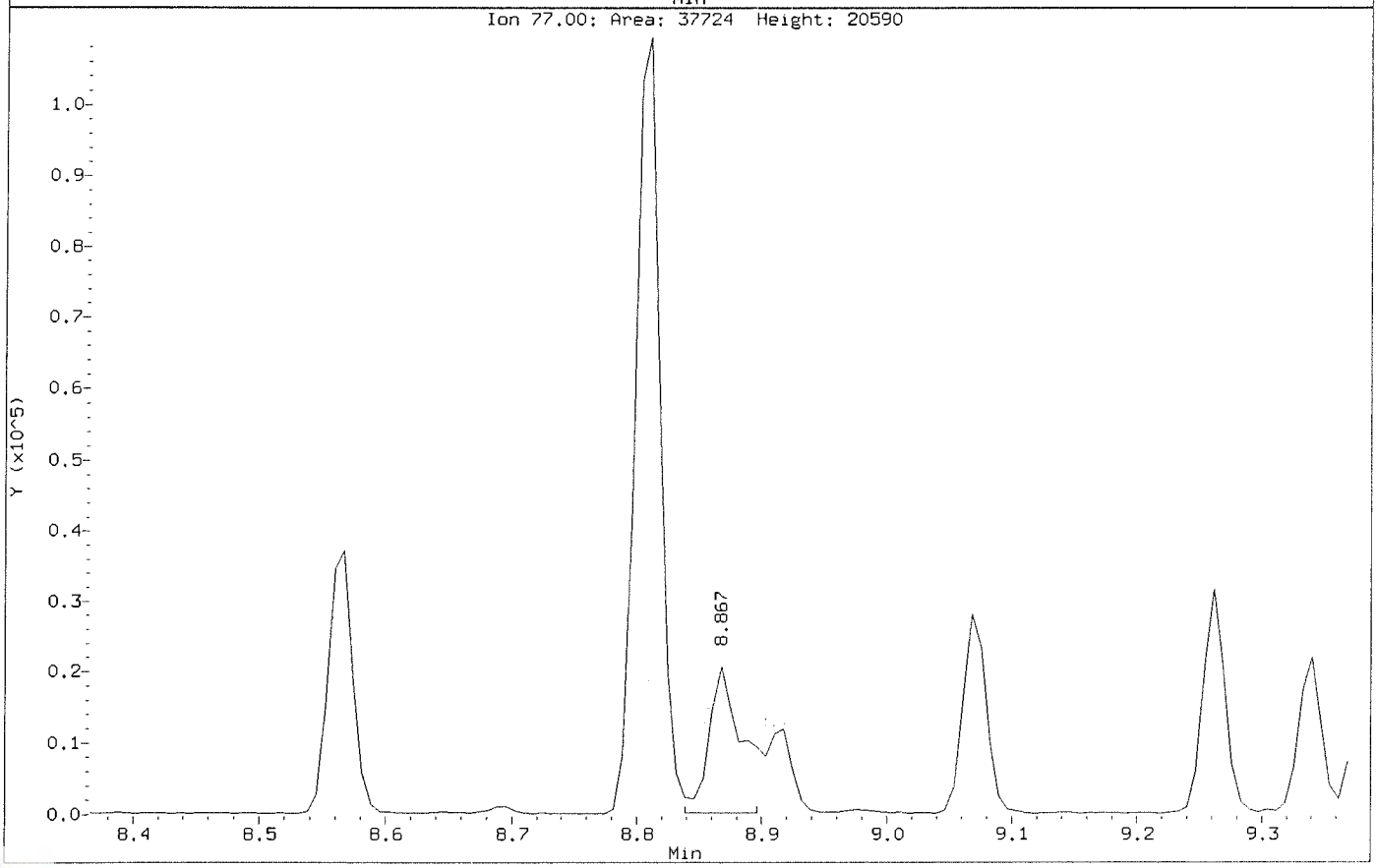
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Client ID: VLCSW-200828
Sample Info: VLCSW-200828;VLCSW-200828;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

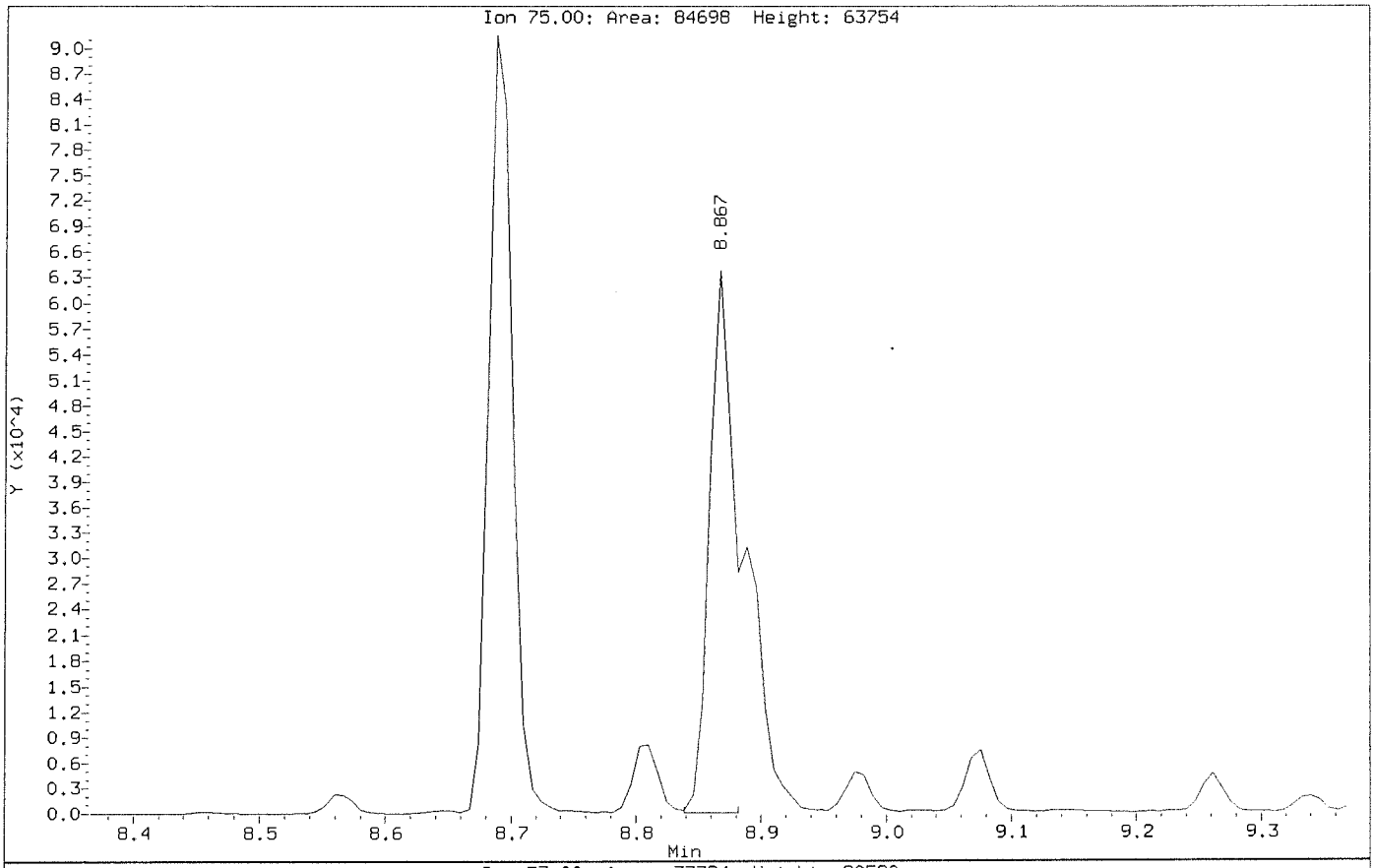
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CAS Number: 96-18-4

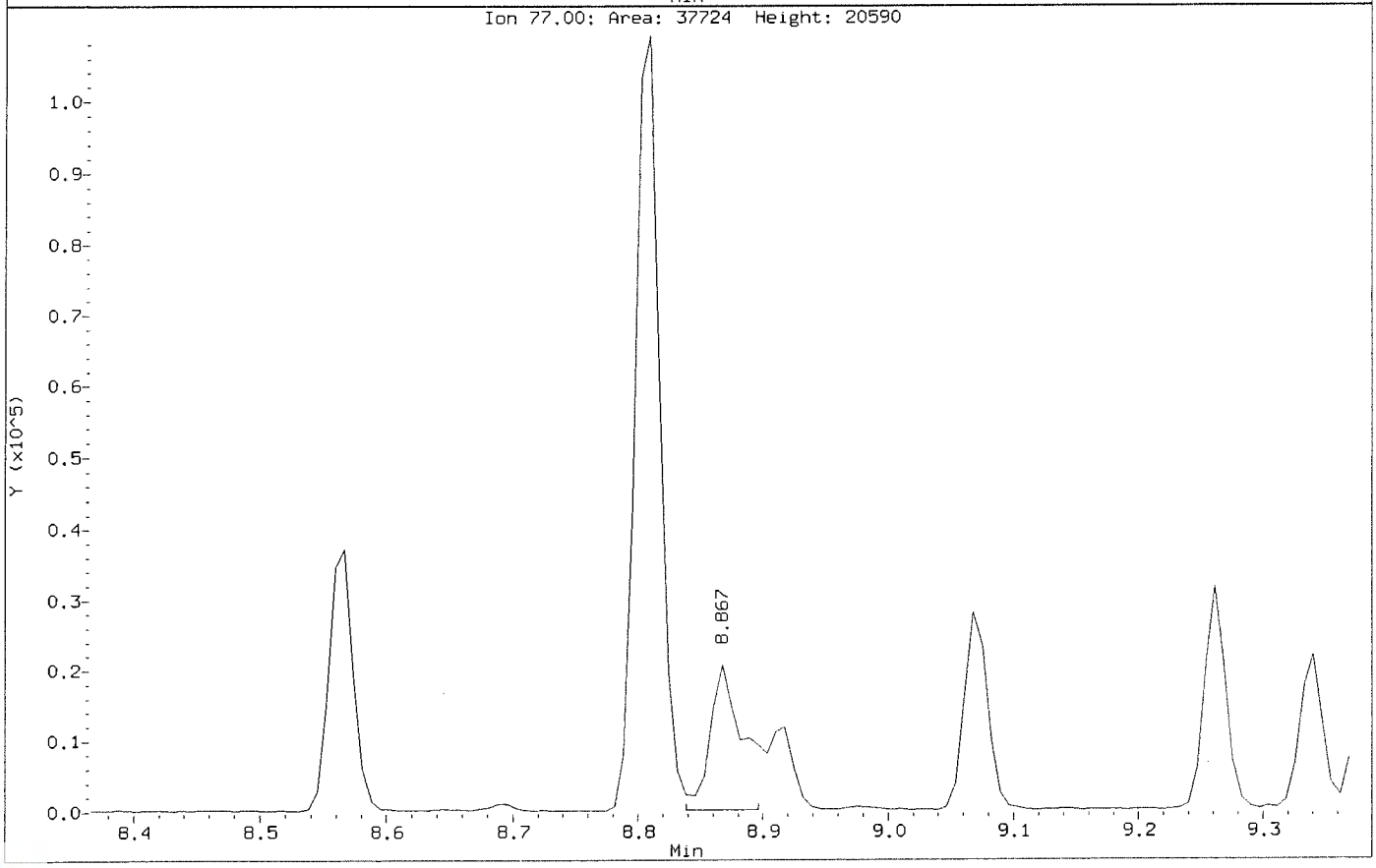




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

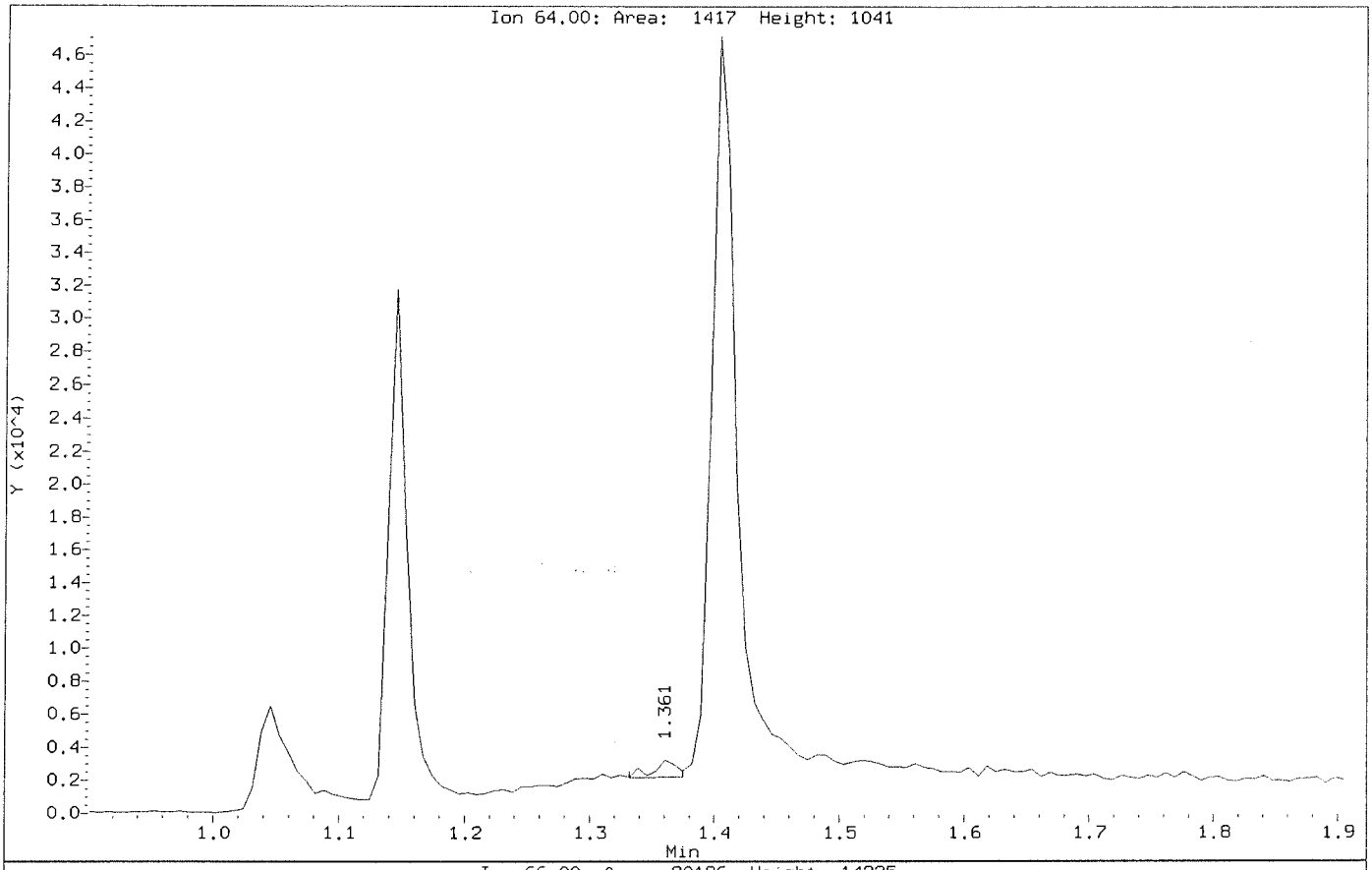
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

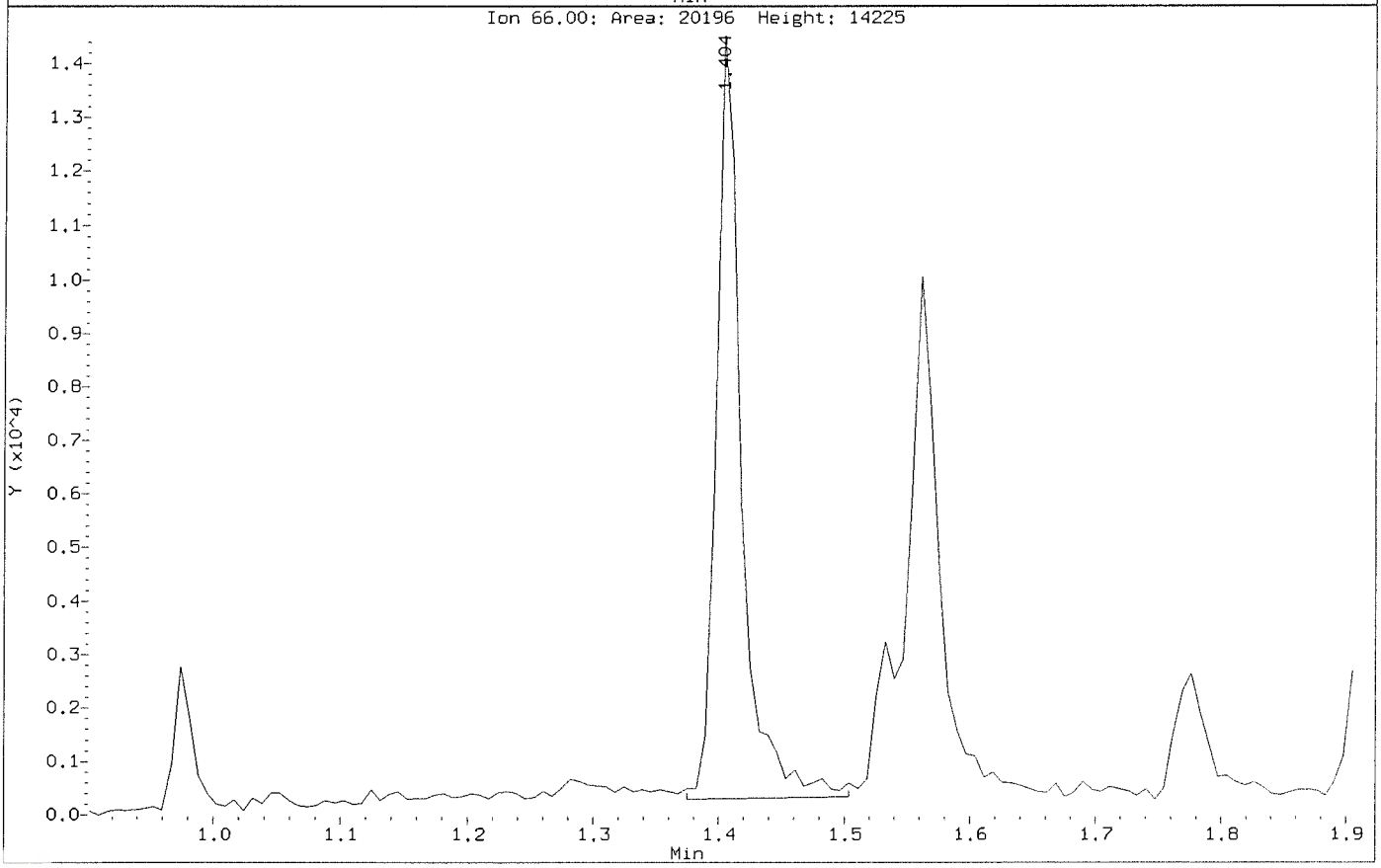




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

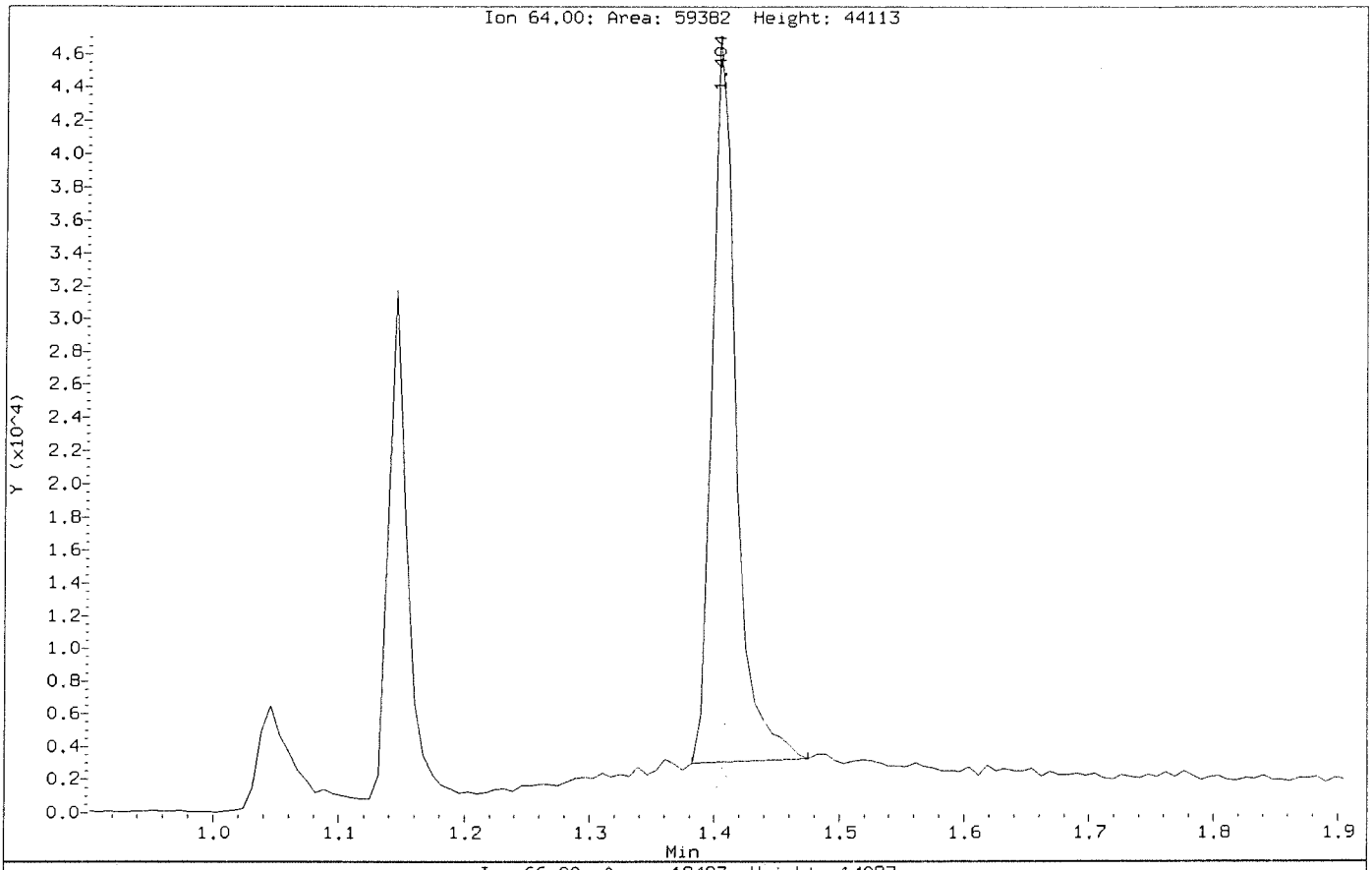
Compound: Chloroethane
CAS Number: 75-00-3

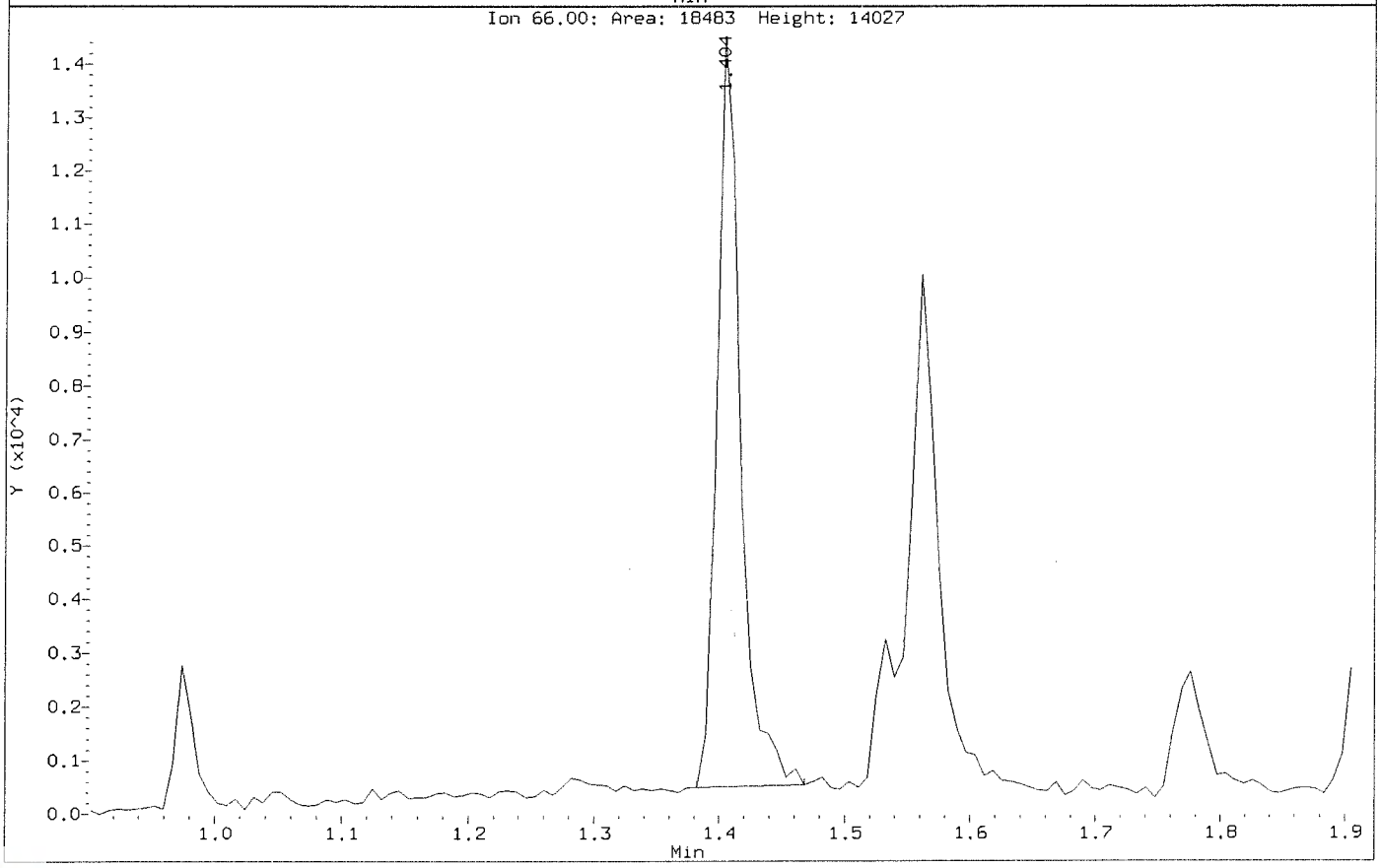




Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082804.D
Injection Date: 28-AUG-2020 14:00
Instrument: voa6.i
Client Sample ID: VLCSW-200828

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D
Lab Smp Id: VBLKW-200828 Client Smp ID: VBLKW-200828
Inj Date : 28-AUG-2020 14:48
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200828;VBLKW-200828;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

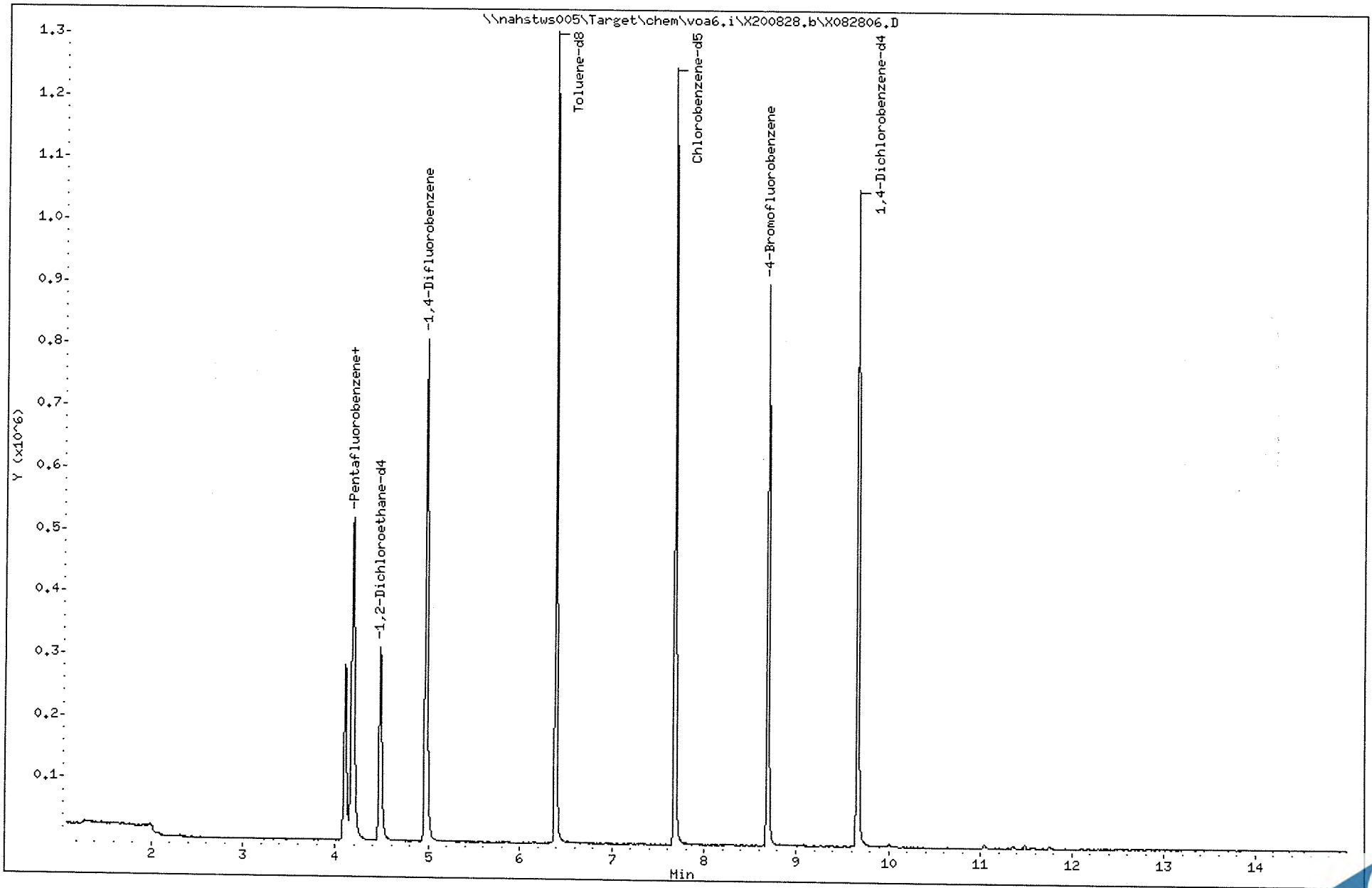
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	447810	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	664384	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	580023	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	267168	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	204504	46.5033	46.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	228138	43.7666	43.76
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	744413	52.9124	52.91
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	263771	48.6007	48.60

00994185

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082806.D
Date : 28-AUG-2020 14:48
Client ID: VBLKW-200828
Sample Info: VBLKW-200828;VBLKW-200828;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\X200828.b\X082808.D
Lab Smp Id: HS20081151-03 Client Smp ID: HS20081151-03
Inj Date : 28-AUG-2020 15:36
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-03;HS20081151-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 09:48 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

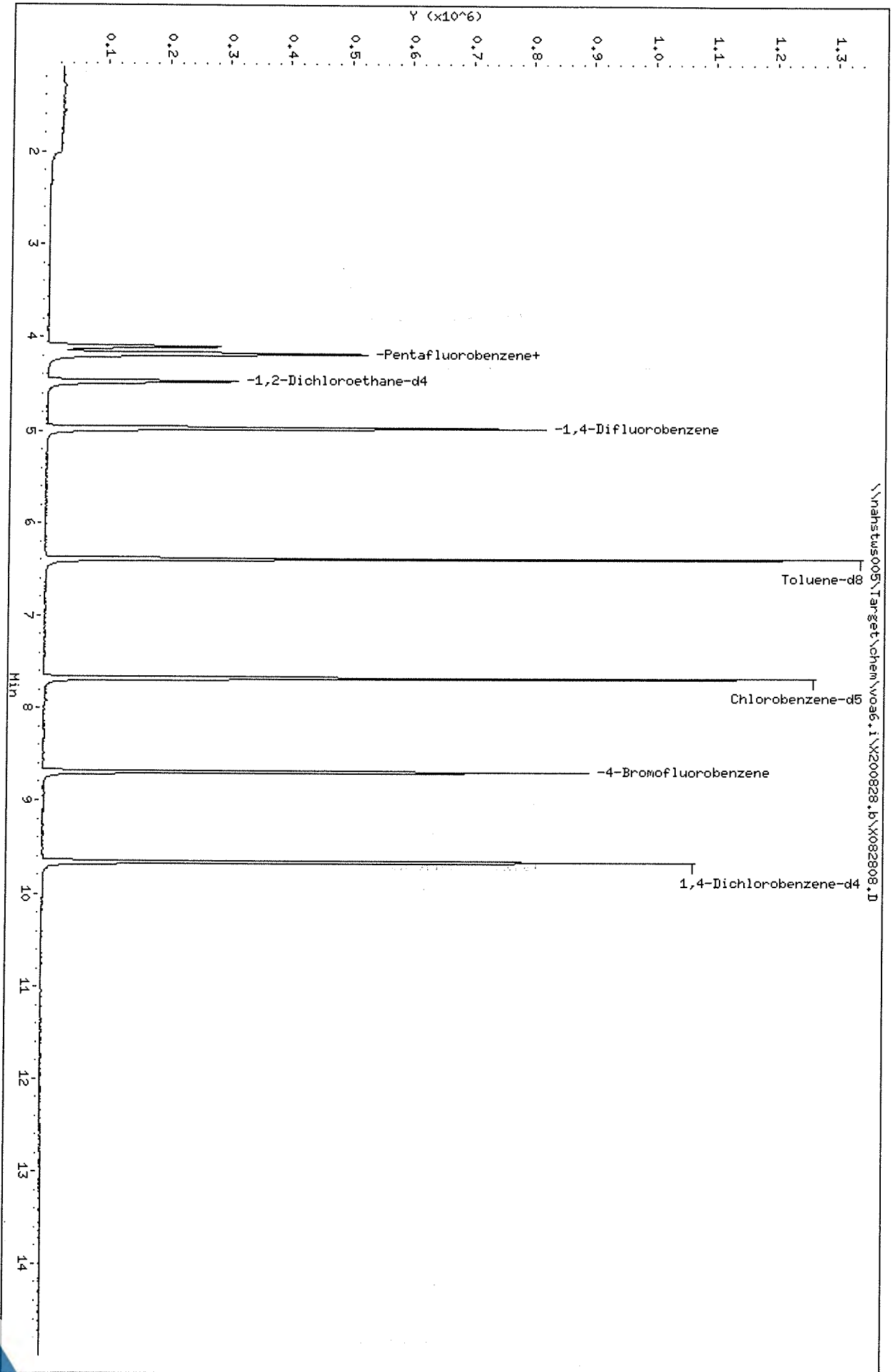
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	448125	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	669762	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	585779	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	275356	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.979)	205055	46.5958	46.59
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	228344	43.7754	43.77
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	747981	52.6436	52.64
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269024	49.0815	49.08

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082808.D
Date : 28-AUG-2020 15:36
Client ID: HS20081151-03
Sample Info: HS20081151-03;HS20081151-03;;;
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\X200828.b\X082809.D
Lab Smp Id: HS20081151-01 Client Smp ID: HS20081151-01
Inj Date : 28-AUG-2020 16:00
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-01;HS20081151-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 09:48 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

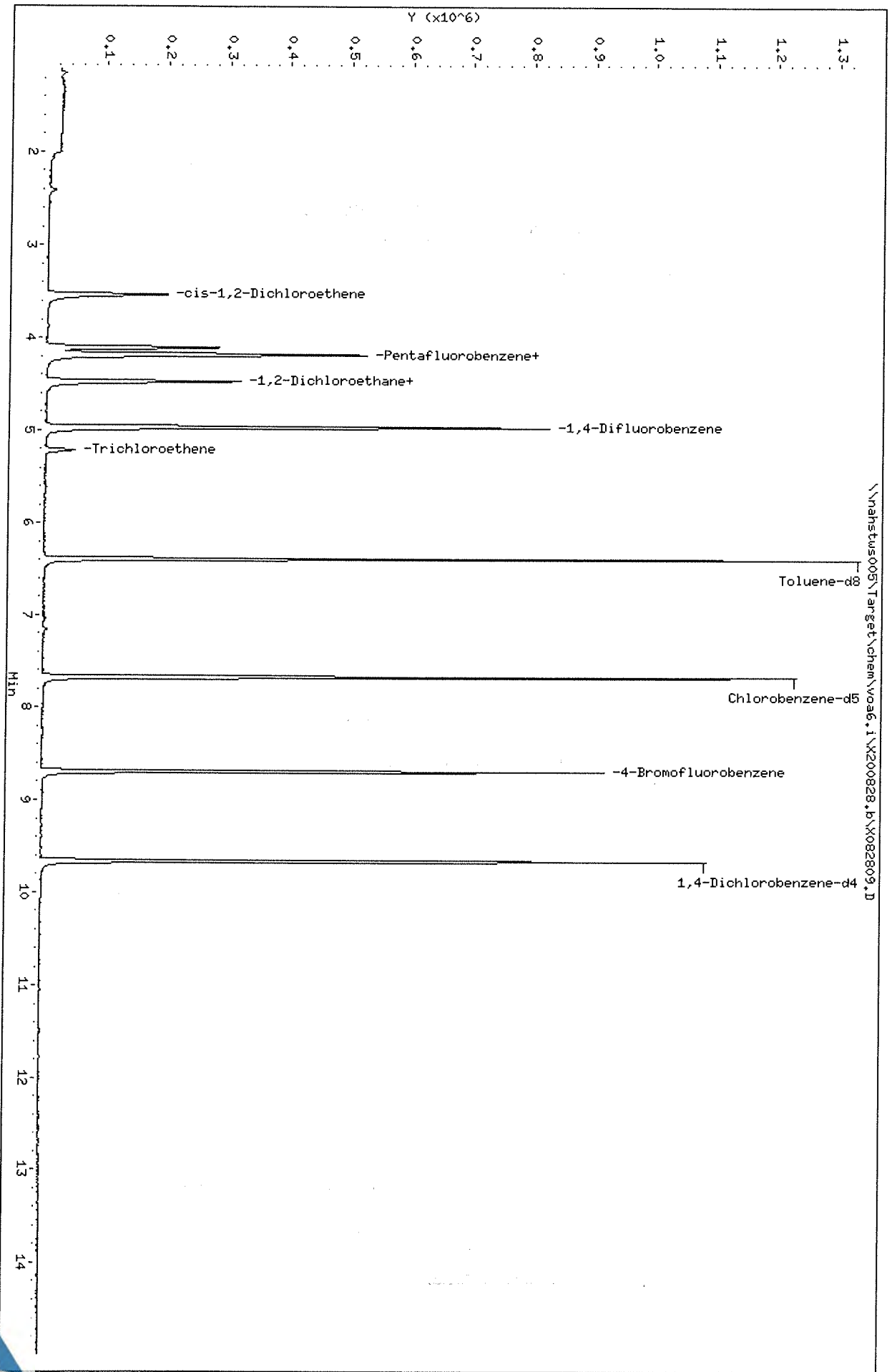
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	449325	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	669367	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	586276	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	271360	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.979)	204187	46.2747	46.27
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	229902	43.9563	43.95
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	756342	53.1869	53.18
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	260977	47.5730	47.57
33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	3354	0.51752	0.51(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	102234	20.6704	20.67
38 Trichloroethene	130	5.214	5.214	(1.049)	16217	3.41855	3.41(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082809.D
Date : 28-AUG-2020 16:00
Client ID: HS20081151-01
Sample Info: HS20081151-01;HS20081151-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082809.D

Date : 28-AUG-2020 16:00

Client ID: HS20081151-01

Instrument: voa6.i

Sample Info: HS20081151-01;HS20081151-01;;;

Purge Volume: 5.0

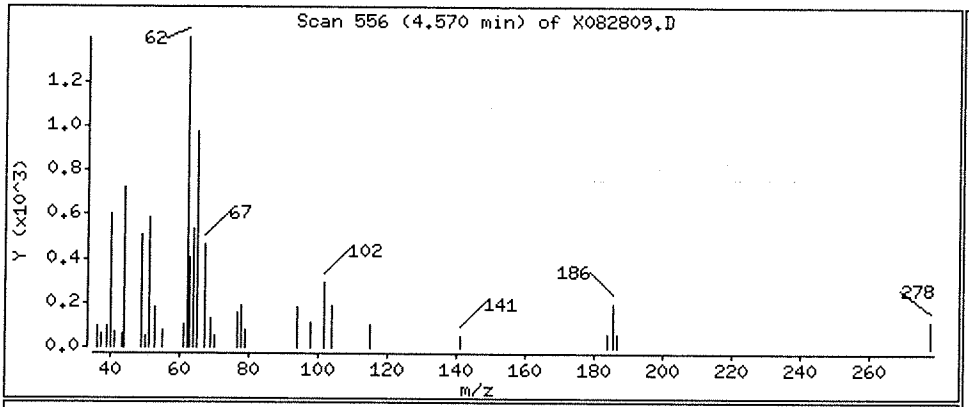
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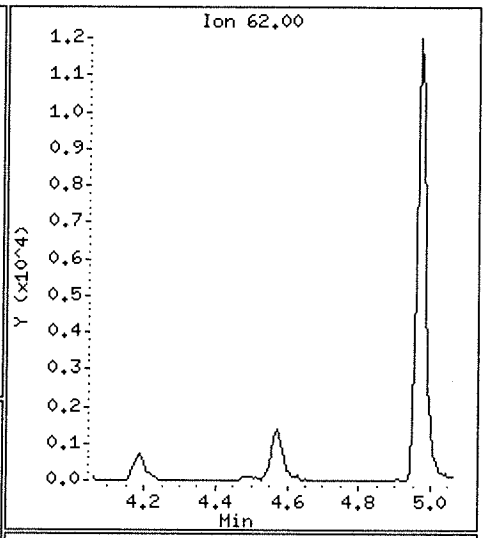
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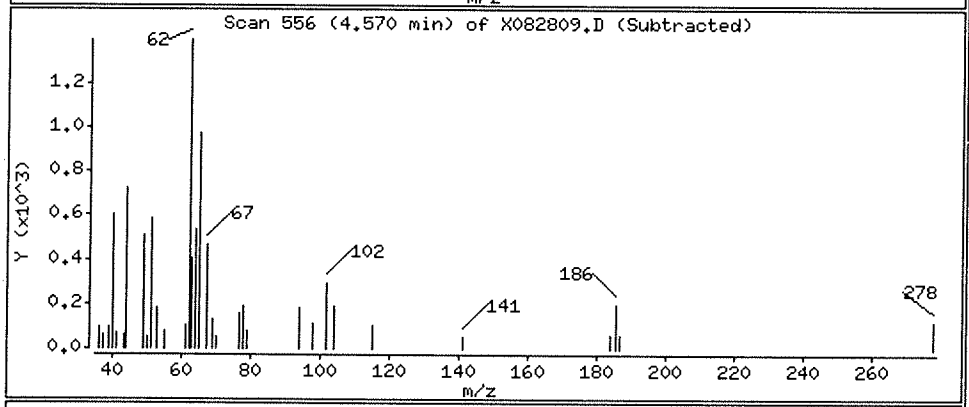
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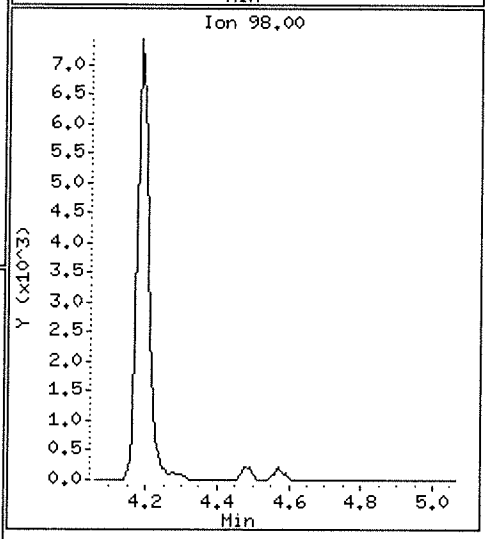
33 1,2-Dichloroethane

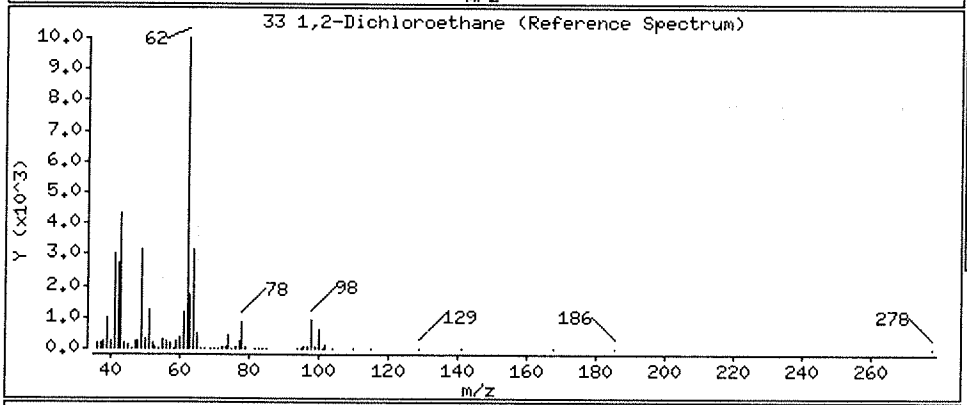
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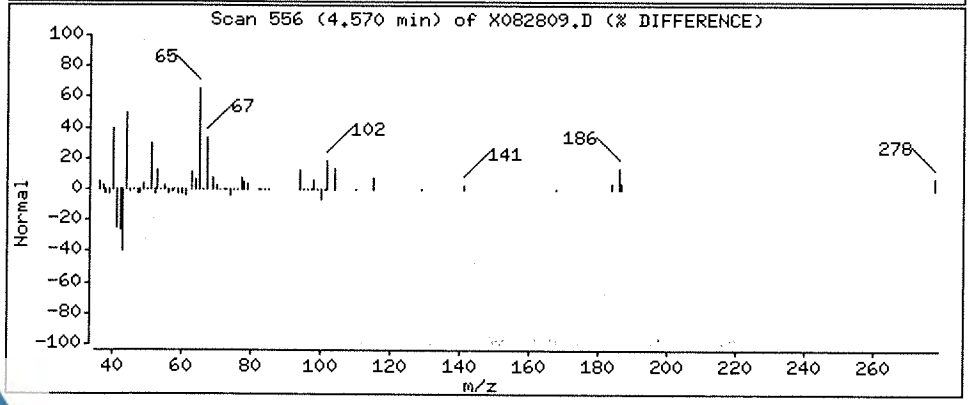












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Date : 28-AUG-2020 16:00

Client ID: HS20081151-01

Instrument: voa6.i

Sample Info: HS20081151-01;HS20081151-01;;;

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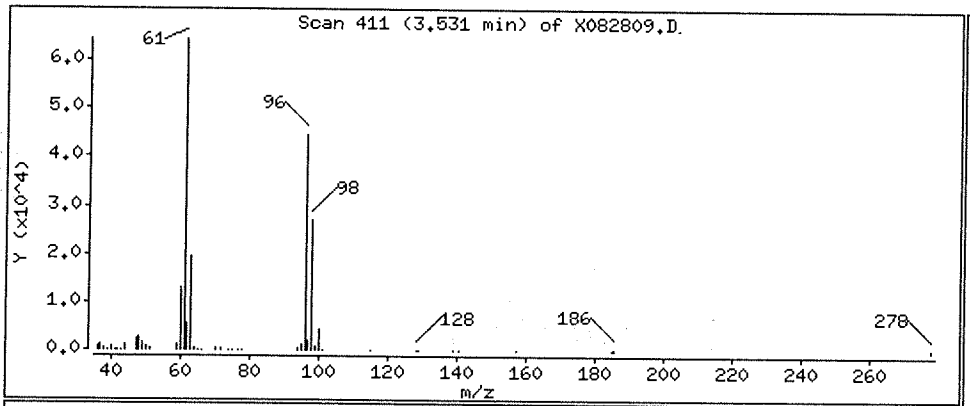
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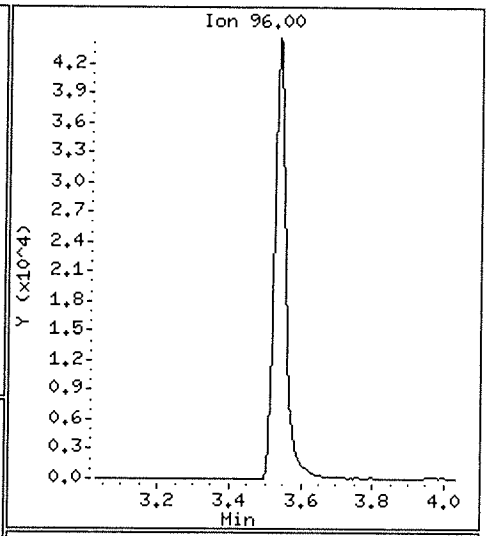
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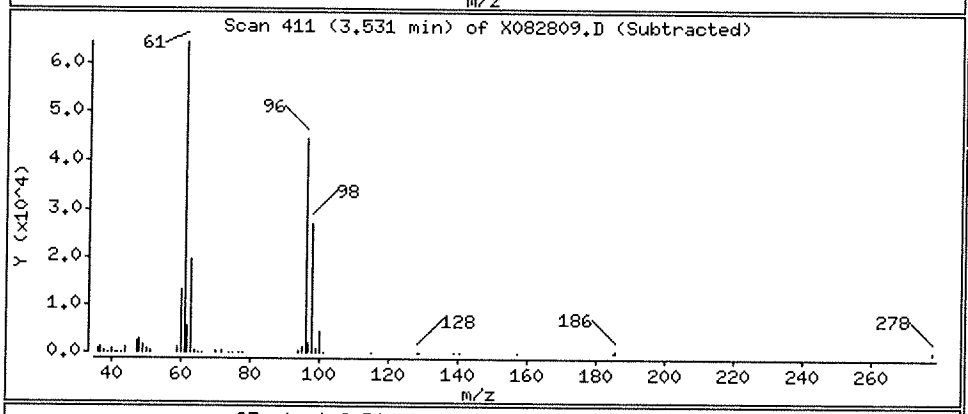
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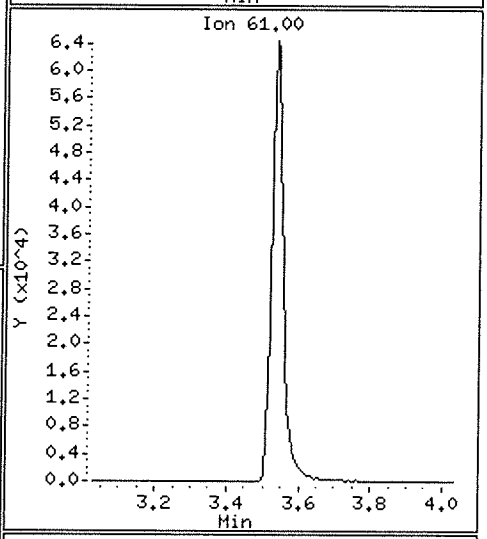
27 cis-1,2-Dichloroethene

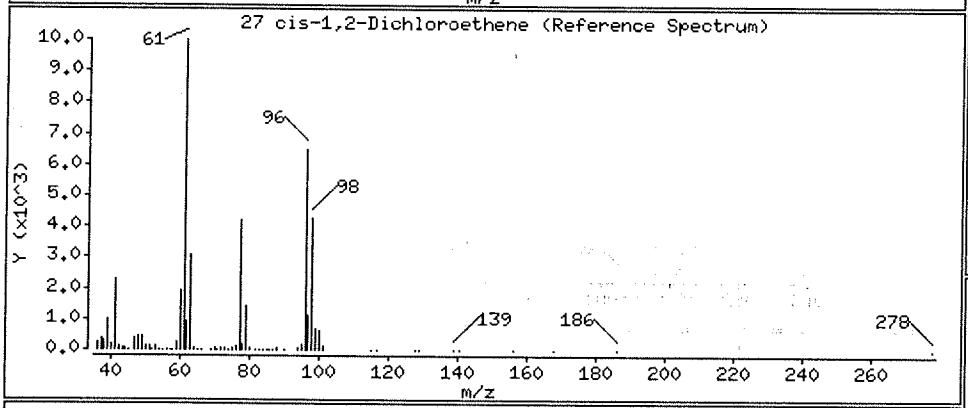
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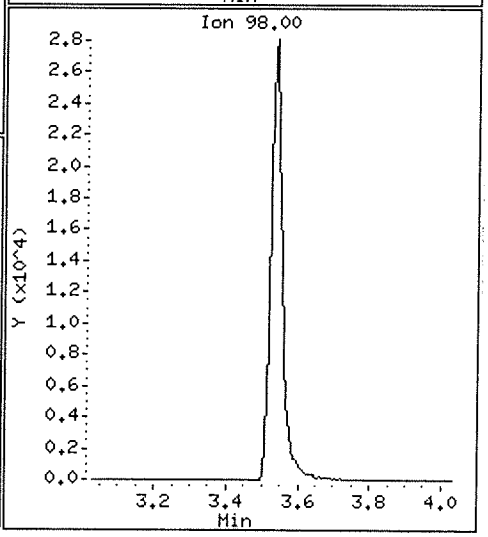


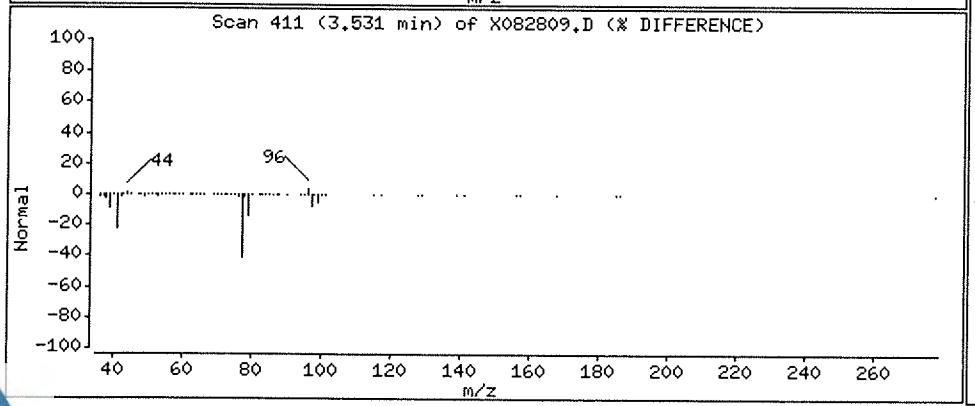












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082809.D

Date : 28-AUG-2020 16:00

Client ID: HS20081151-01

Instrument: voa6.i

Sample Info: HS20081151-01;HS20081151-01;;;

Purge Volume: 5.0

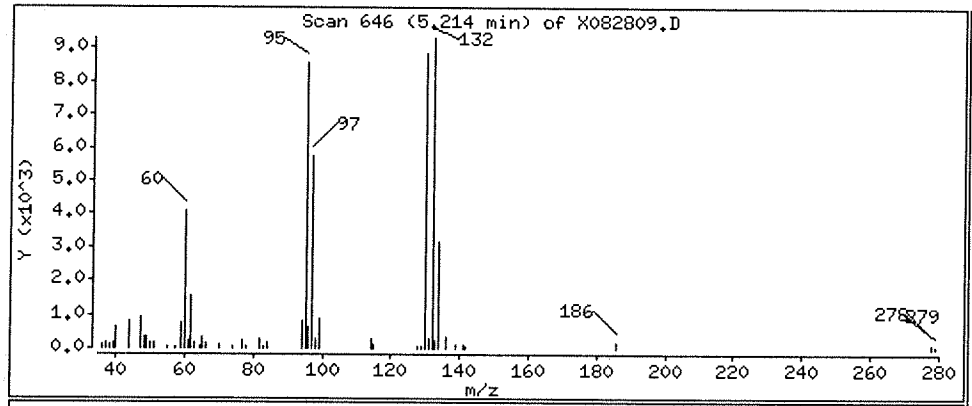
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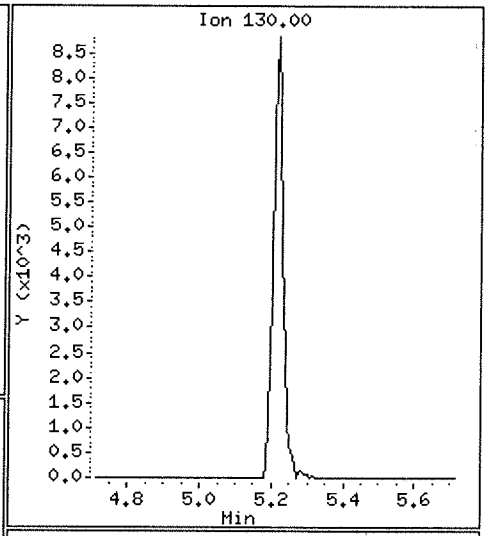
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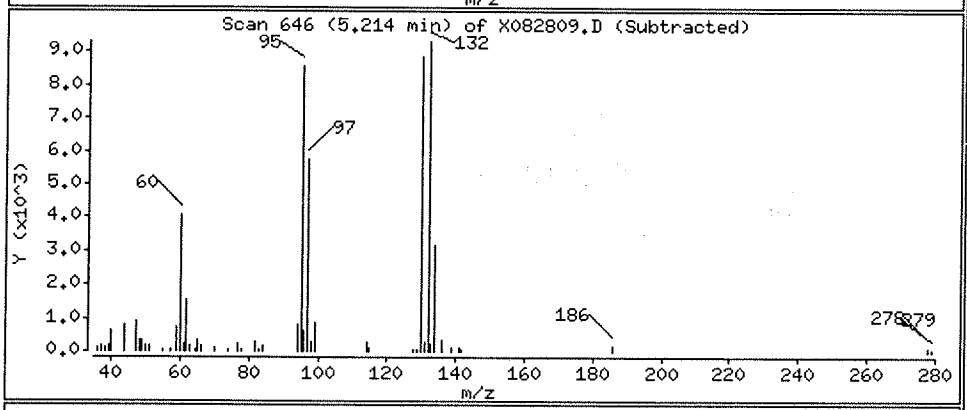
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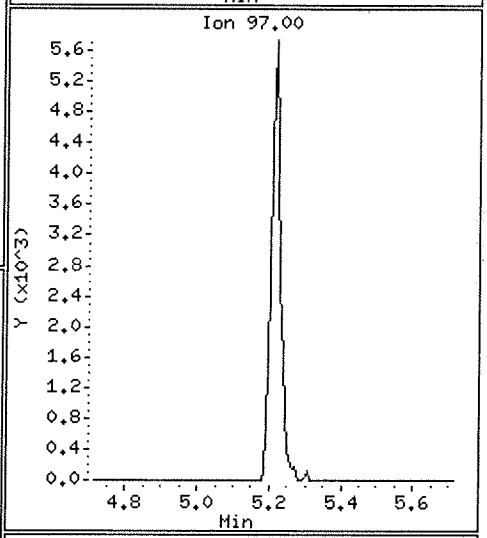
38 Trichloroethene

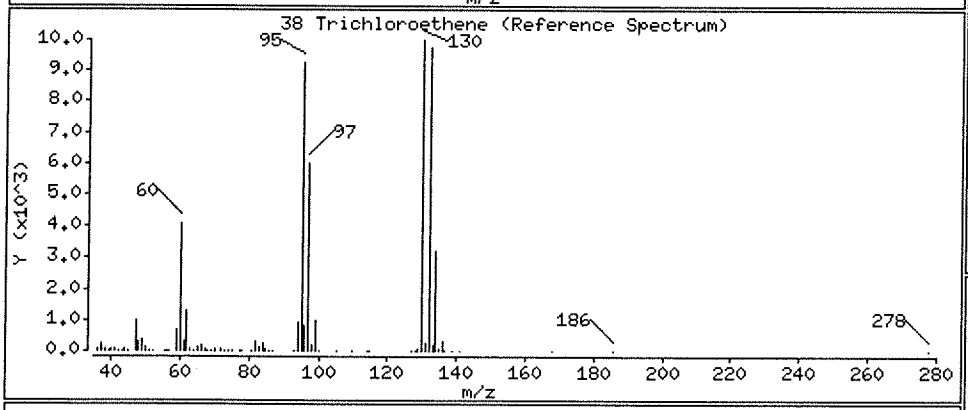
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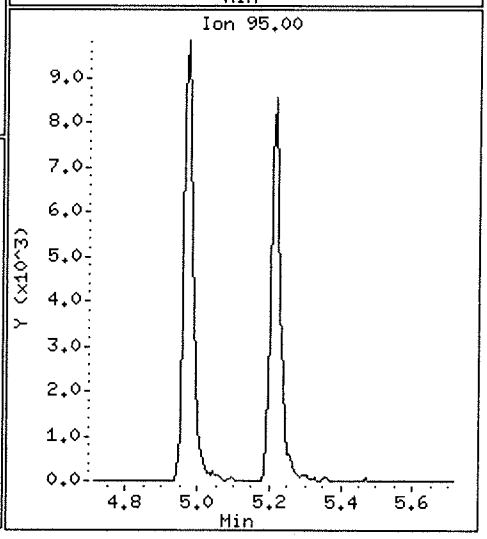


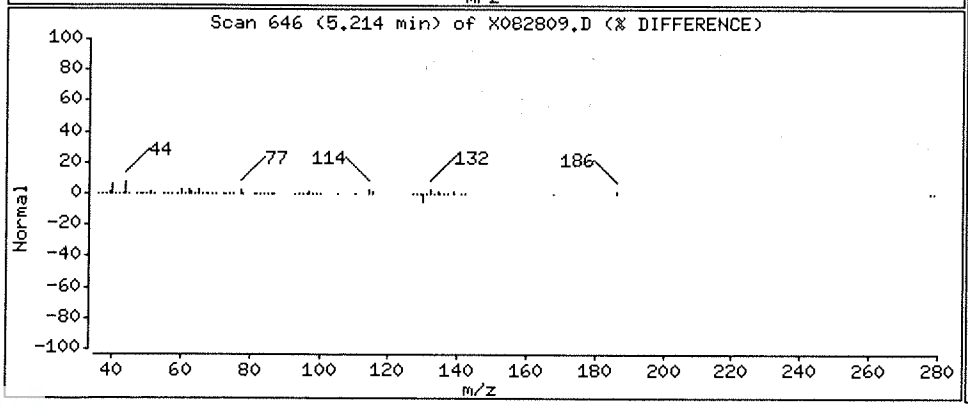












Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D
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Inj Date : 28-AUG-2020 16:48
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-01MS;HS20081151-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 12 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
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

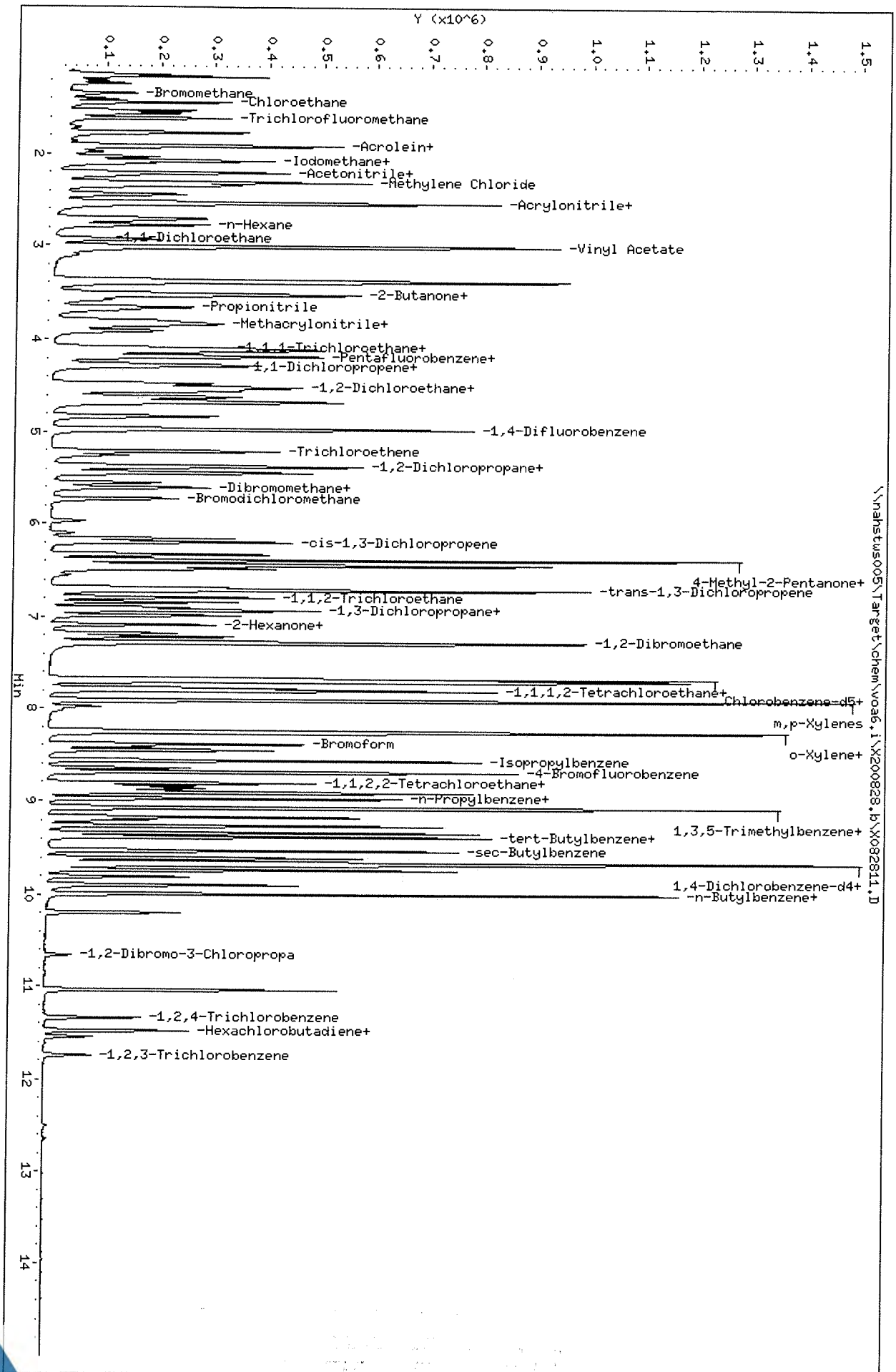
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	418519	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	623828	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	556086	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	263621	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	192860	46.9248	46.92
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	214354	44.0003	44.00
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	698429	51.7808	51.78
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	254710	48.9513	48.95
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	103349	24.4152	24.41
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	158364	24.5655	24.56
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	115243	27.3120	27.31
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	78952	24.9518	24.95
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	210000	25.6877	25.68
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	86298	26.0243	26.02
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	135332	25.8159	25.81
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	24283	30.6101	30.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	95589	24.7722	24.77(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	50353	33.1766	33.17
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	369723	26.2527	26.25
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	9578	25.7952	25.79
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	102557	25.1588	25.15
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	185653	24.8981	24.89

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D Page 2
Report Date: 25-Sep-2020 10:00

	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)	145249	24.0480	24.04
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	120875	26.4013	26.40
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	364744	26.4780	26.47
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	207985	25.1006	25.10
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	160429	25.6781	25.67
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	206278	25.1732	25.17
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	146963	24.6199	24.61
24	2-Butanone	43	3.588	3.580	(0.856)	107851	52.5674	52.56
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	299913	26.2224	26.22
52	2-Hexanone	43	7.090	7.090	(0.924)	169590	48.5785	48.57
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	339326	25.5022	25.50
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	392229	26.8683	26.86
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	250855	48.7414	48.74
10	Acetone	43	1.983	1.976	(0.473)	61601	41.6051	41.60
37	Benzene	78	4.519	4.519	(0.909)	402979	26.0367	26.03
74	Bromobenzene	156	8.810	8.809	(0.911)	126715	24.5719	24.57
29	Bromochloromethane	128	3.803	3.802	(0.908)	58540	23.2053	23.20
39	Bromodichloromethane	83	5.729	5.729	(1.153)	135599	24.1460	24.14
66	Bromoform	173	8.416	8.415	(1.097)	72571	23.5215	23.52
6	Bromomethane	94	1.346	1.346	(0.321)	69859	24.5876	24.58
19	Carbon Disulfide	76	2.076	2.076	(0.496)	507397	49.2813	49.28
34	Carbon Tetrachloride	117	4.275	4.268	(0.860)	137345	24.6491	24.64
59	Chlorobenzene	112	7.699	7.699	(1.004)	278540	25.5574	25.55
7	Chloroethane	64	1.403	1.403	(0.335)	67908	22.8919	22.89(M)
28	Chloroform	83	3.917	3.910	(0.935)	181586	24.2853	24.28
3	Chloromethane	50	1.081	1.081	(0.258)	120580	20.5199	20.51
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	215935	46.8730	46.87
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	163659	24.9231	24.92
55	Dibromochloromethane	129	7.176	7.176	(0.936)	107974	24.2402	24.24
44	Dibromomethane	93	5.557	5.557	(1.118)	65735	24.2130	24.21
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	56410	13.7715	13.77
61	Ethylbenzene	106	7.800	7.799	(1.017)	149475	26.5617	26.56
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	46783	33.0550	33.05
67	Isopropylbenzene	105	8.566	8.566	(1.117)	447429	27.0859	27.08
62	m,p-Xylenes	106	7.907	7.907	(1.031)	356595	52.5089	52.50
17	Methylene Chloride	84	2.313	2.305	(0.552)	105960	23.8614	23.86
87	n-Butylbenzene	91	9.999	9.998	(1.034)	318599	27.3276	27.32
73	n-Propylbenzene	91	8.917	8.917	(0.922)	511188	26.9172	26.91
92	Naphthalene	128	11.546	11.546	(1.194)	64563	30.9645	30.96
63	o-Xylene	106	8.244	8.244	(1.075)	172369	25.8387	25.83
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	436903	27.2805	27.28
64	Styrene	104	8.265	8.258	(1.078)	292323	25.2362	25.23
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	320838	26.8632	26.86
56	Tetrachloroethene	164	6.933	6.933	(0.904)	97537	27.5917	27.59
50	Toluene	91	6.453	6.453	(0.841)	430364	26.5009	26.50
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	101986	25.9940	25.99
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	141491	23.5093	23.50
38	Trichloroethene	130	5.214	5.214	(1.049)	142990	32.3427	32.34
8	Trichlorofluoromethane	101	1.568	1.560	(0.374)	145927	23.6755	23.67
5	Vinyl Chloride	62	1.145	1.145	(0.273)	124163	23.0476	23.04

QC Flag Legend

M - Compound response manually integrated.

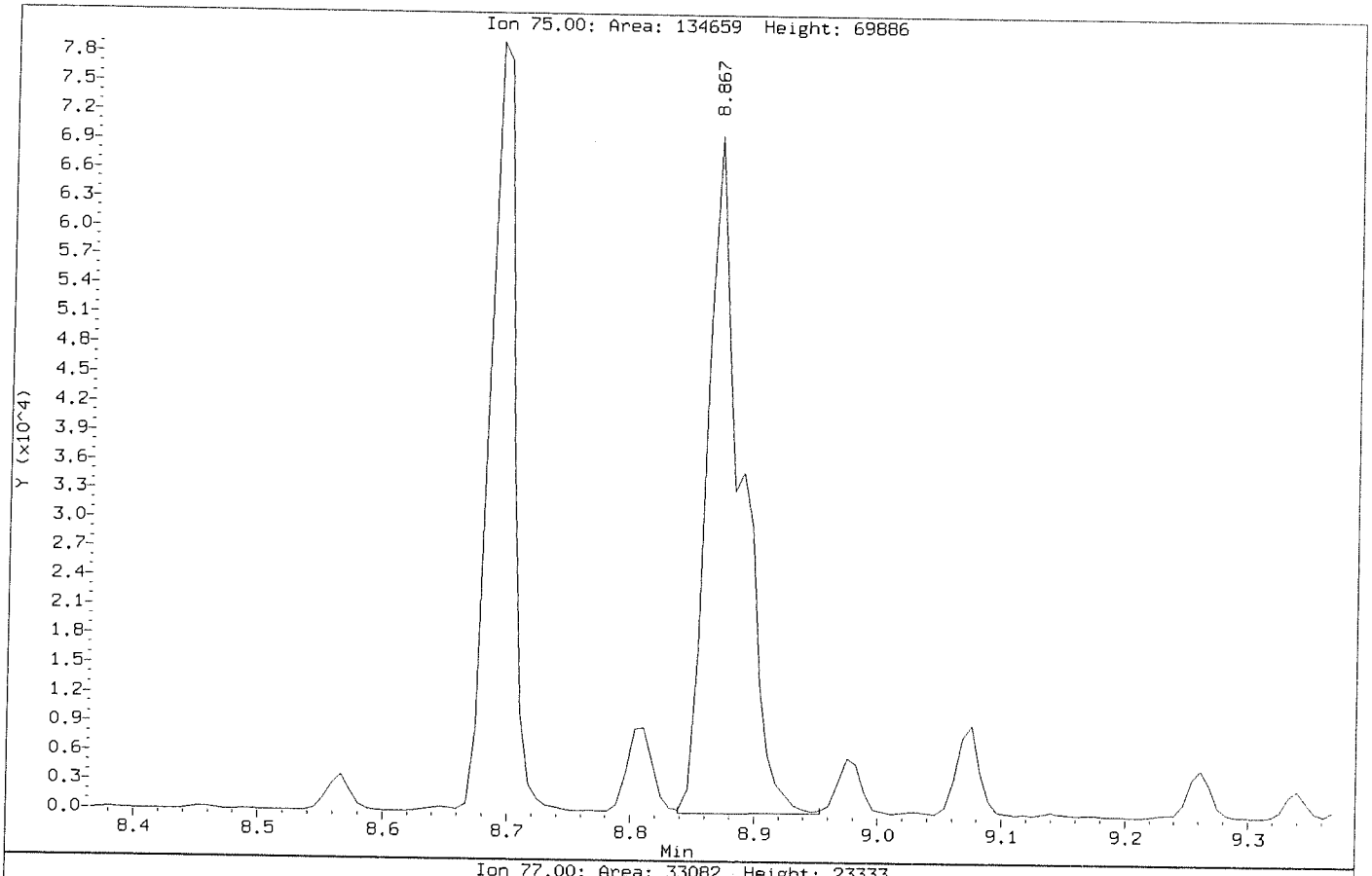


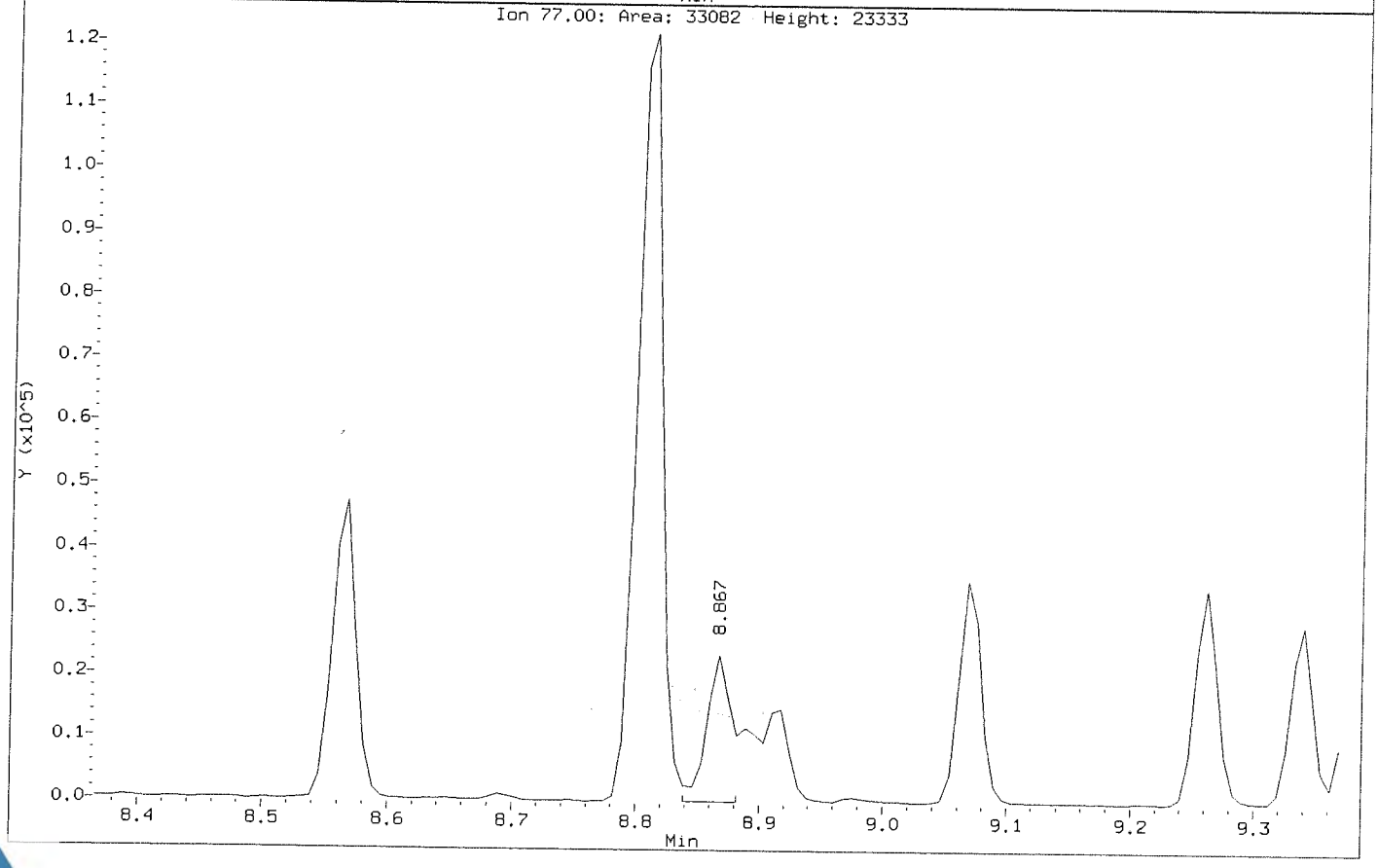
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Purge Volume: 5.0
Column phase: DB624

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

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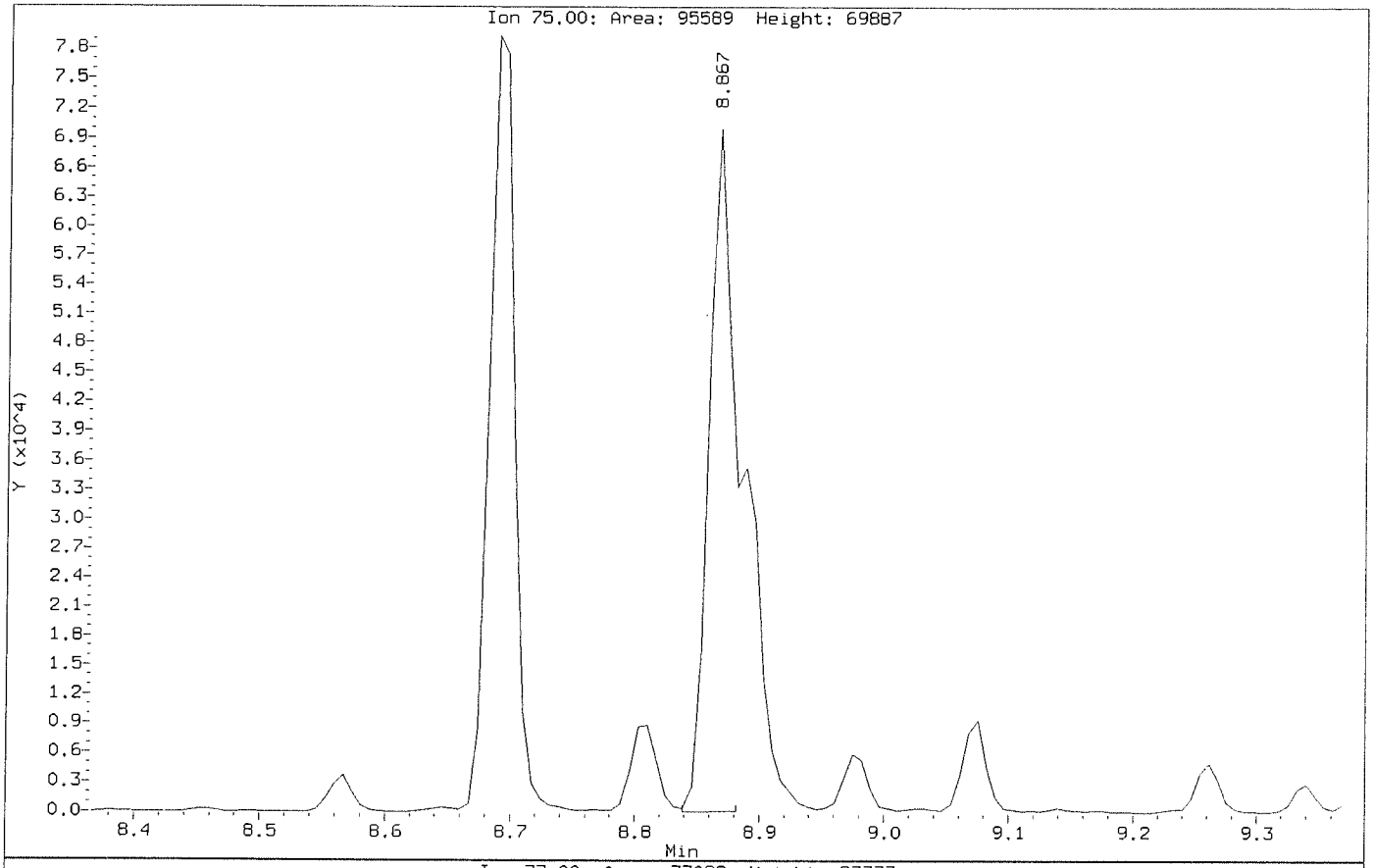
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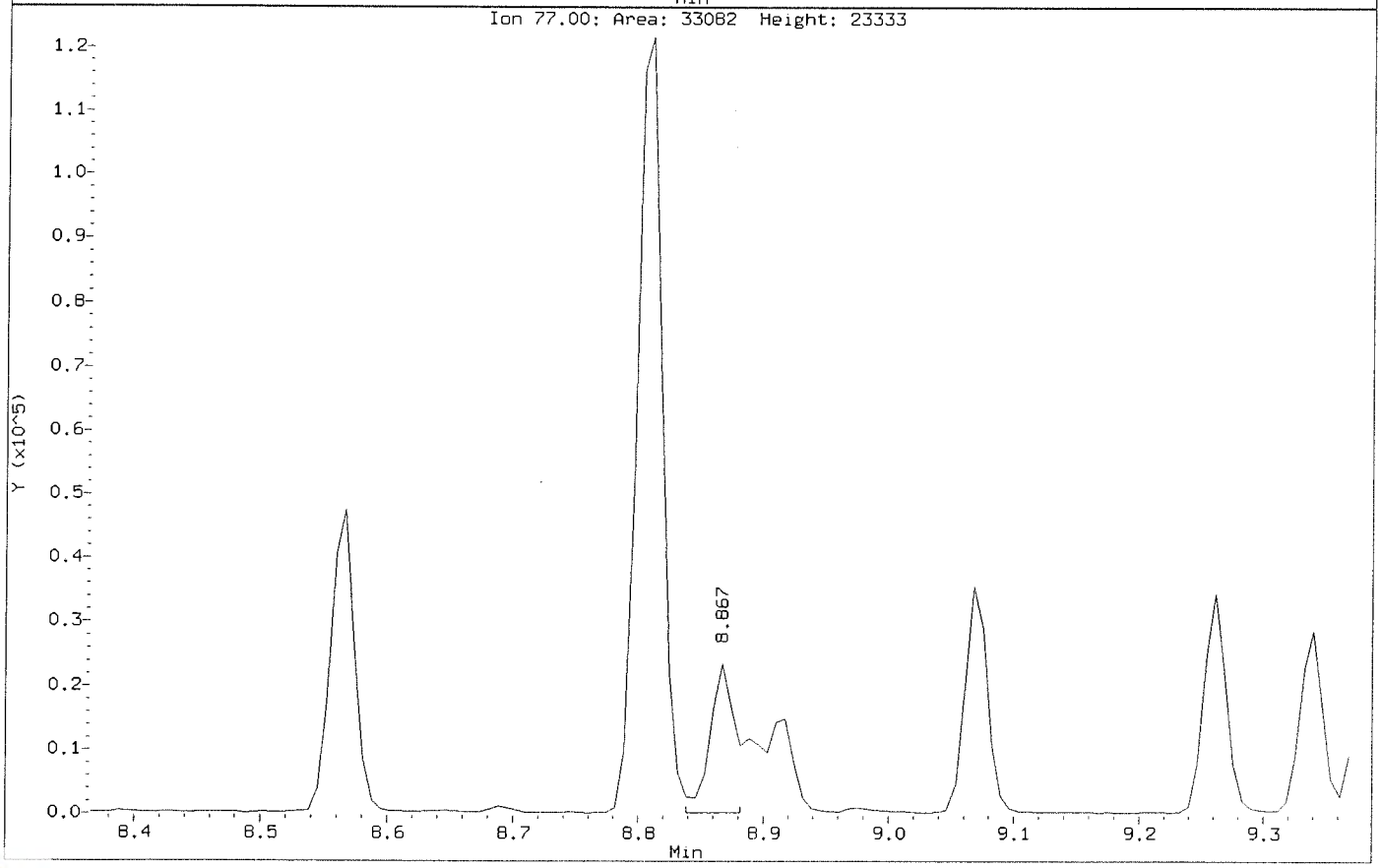




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Injection Date: 28-AUG-2020 16:48
Instrument: voa6.i
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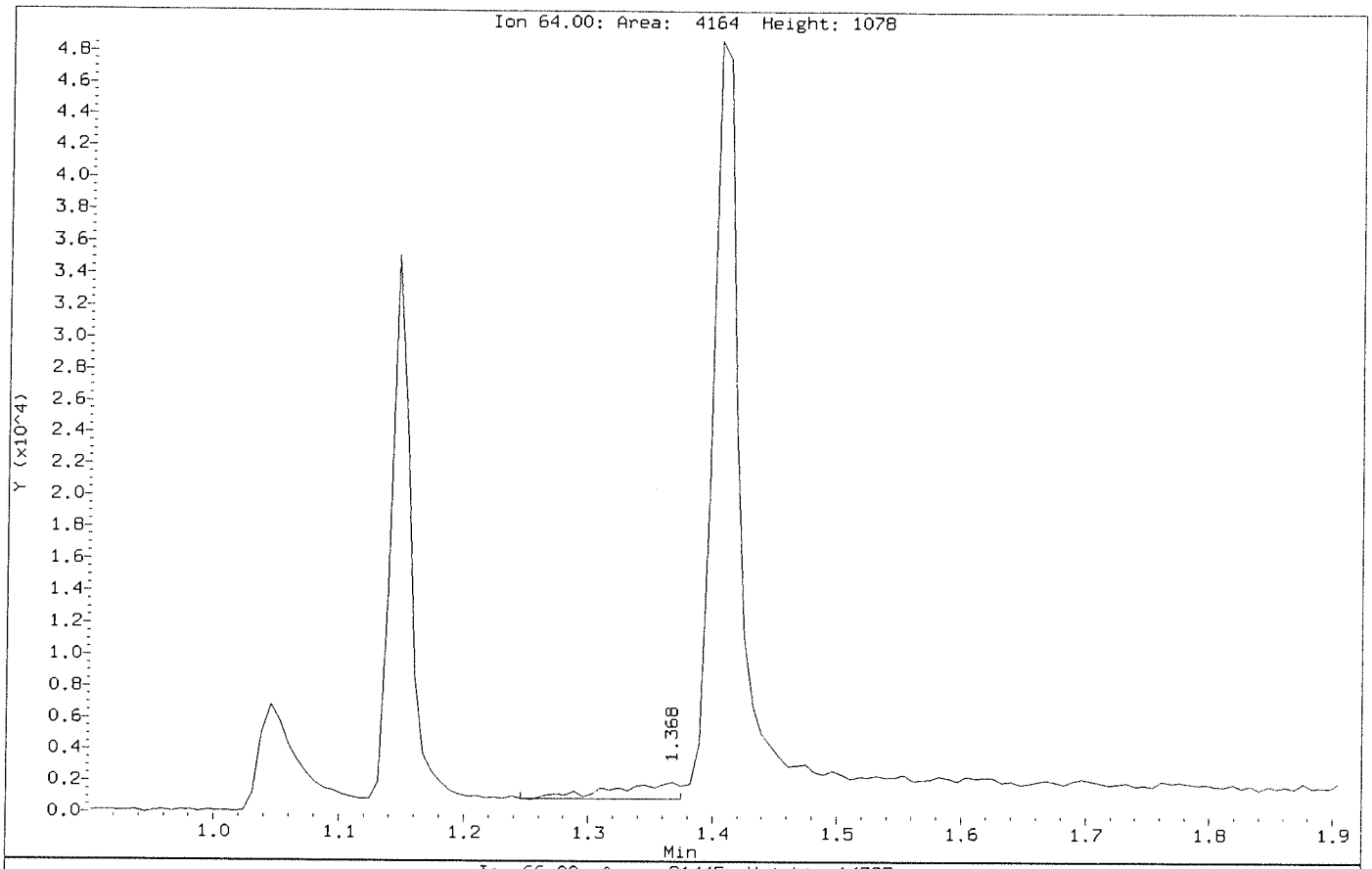
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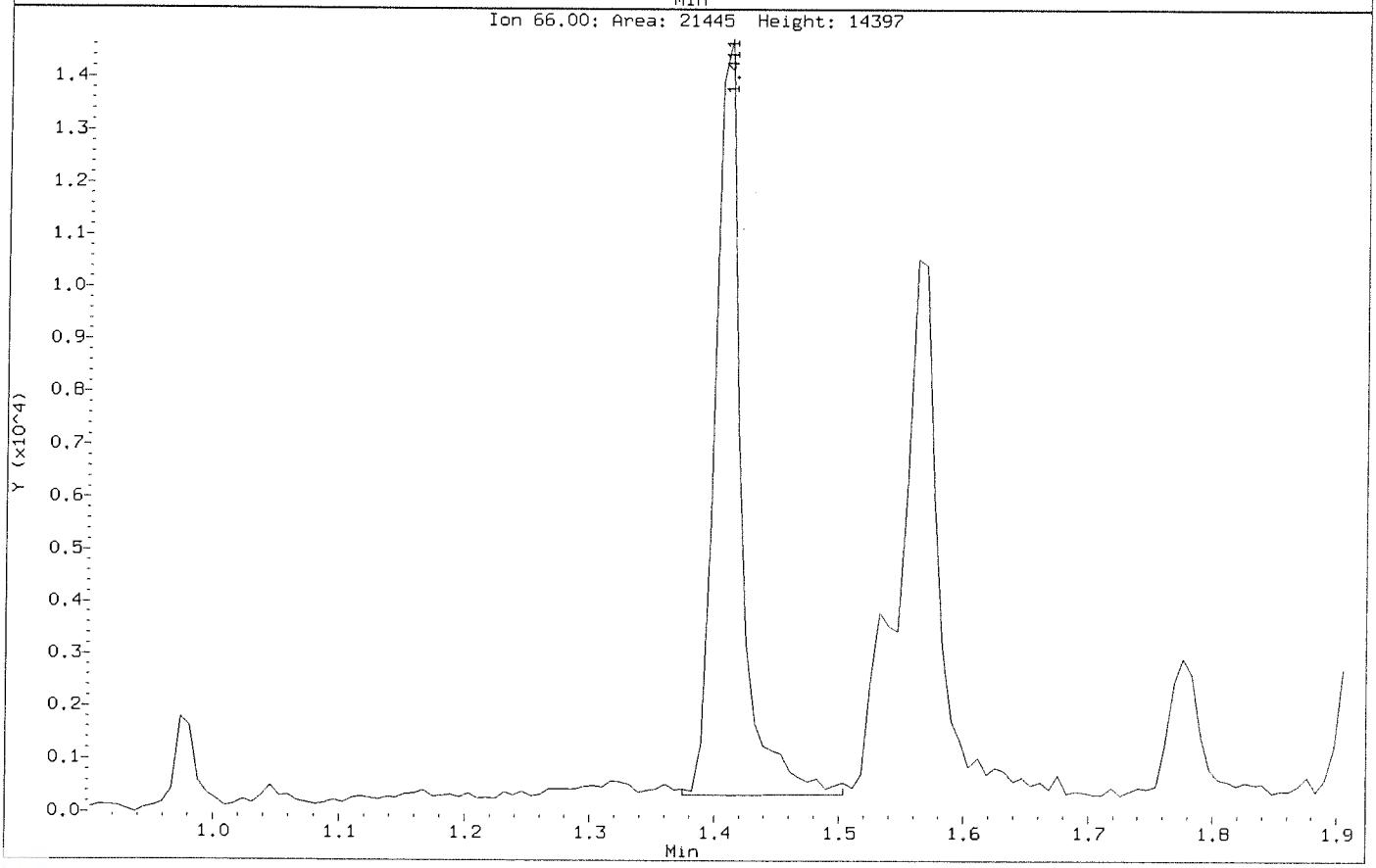




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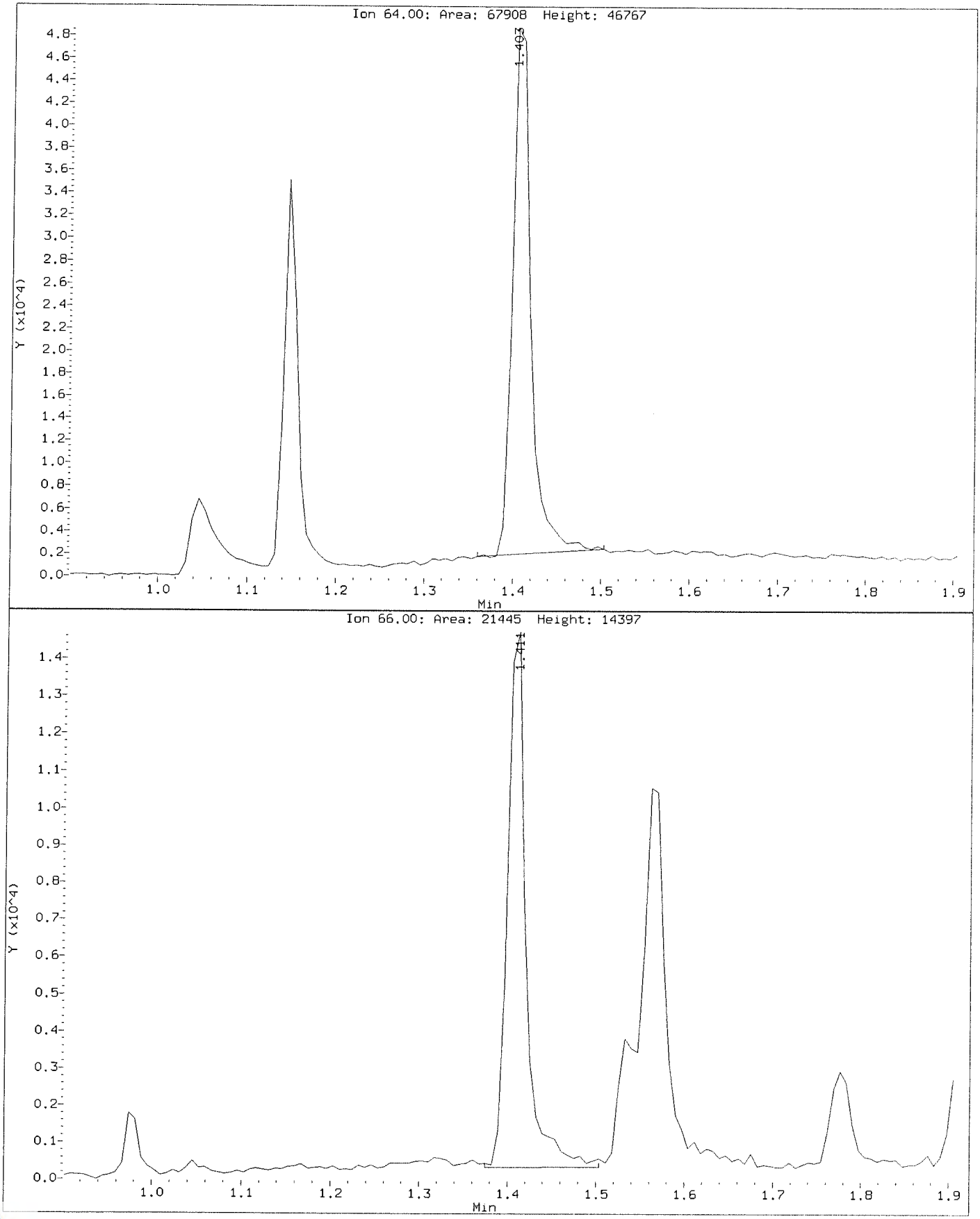
Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082811.D
Injection Date: 28-AUG-2020 16:48
Instrument: voa6.i
Client Sample ID: HS20081151-01MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D Page 1
Report Date: 25-Sep-2020 10:00

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D
Lab Smp Id: HS20081151-01MSD Client Smp ID: HS20081151-01MSD
Inj Date : 28-AUG-2020 17:12
Operator : PC Inst ID: voa6.i
Smp Info : HS20081151-01MSD;HS20081151-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 12 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

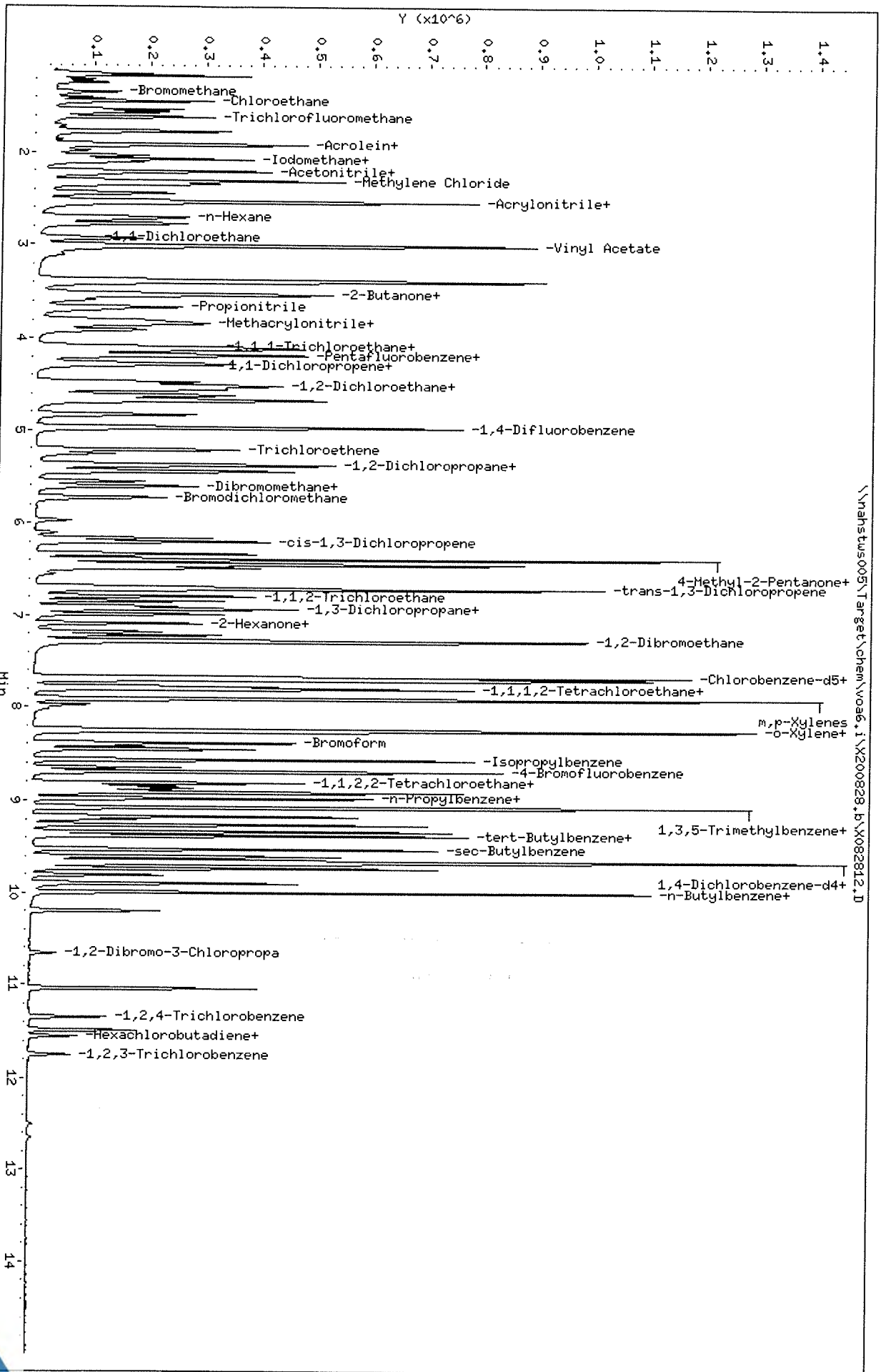
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	404957	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	606212	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	538508	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	252520	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	186973	47.0160	47.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	208338	44.1976	44.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	676771	51.8129	51.81
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	243420	48.3086	48.30
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	97035	23.6718	23.67
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	149305	23.9359	23.93
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	109969	27.2093	27.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	77007	25.1315	25.13
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	197157	24.9244	24.92
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	77542	24.1669	24.16
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	126766	24.8846	24.88
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	21175	27.8657	27.86
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	91876	24.8567	24.85(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	41099	28.2565	28.25
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	353153	26.1785	26.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	9136	25.6898	25.68
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	100130	25.3652	25.36
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	178854	25.0407	25.04

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D Page 2
Report Date: 25-Sep-2020 10:00

	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)	139714	23.8038	23.80
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	114063	25.6374	25.63
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	352079	26.6822	26.68
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	203757	25.6714	25.67
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	153645	25.3950	25.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	201282	25.6433	25.64
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	139887	24.2193	24.21
24	2-Butanone	43	3.588	3.580	(0.856)	98175	49.4538	49.45
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	285166	26.0291	26.02
52	2-Hexanone	43	7.090	7.090	(0.924)	165217	48.8707	48.87
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	325403	25.5309	25.53
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	380052	27.1787	27.17
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	244593	49.0760	49.07
10	Acetone	43	1.976	1.976	(0.472)	60827	42.4802	42.48
37	Benzene	78	4.519	4.519	(0.909)	378847	25.1888	25.18
74	Bromobenzene	156	8.809	8.809	(0.911)	122891	24.8780	24.87
29	Bromochloromethane	128	3.802	3.802	(0.908)	56898	23.3097	23.30
39	Bromodichloromethane	83	5.729	5.729	(1.153)	126861	23.2465	23.24
66	Bromoform	173	8.415	8.415	(1.097)	70350	23.5459	23.54
6	Bromomethane	94	1.338	1.346	(0.320)	63522	23.1454	23.14
19	Carbon Disulfide	76	2.069	2.076	(0.494)	470103	47.1882	47.18
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	127741	23.5917	23.59
59	Chlorobenzene	112	7.699	7.699	(1.004)	261533	24.7802	24.78
7	Chloroethane	64	1.403	1.403	(0.335)	61691	21.4926	21.49 (M)
28	Chloroform	83	3.910	3.910	(0.933)	171328	23.6807	23.68
3	Chloromethane	50	1.080	1.081	(0.258)	110777	19.4830	19.48
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	200345	44.9453	44.94
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	154804	24.2597	24.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	103057	23.8915	23.89
44	Dibromomethane	93	5.557	5.557	(1.118)	62637	23.7424	23.74
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	53592	13.5217	13.52
61	Ethylbenzene	106	7.799	7.799	(1.017)	138790	25.4680	25.46
91	Hexachlorobutadiene	225	11.488	11.481	(1.188)	33952	25.0437	25.04
67	Isopropylbenzene	105	8.566	8.566	(1.117)	420964	26.3157	26.31
62	m,p-Xylenes	106	7.907	7.907	(1.031)	336921	51.2313	51.23
17	Methylene Chloride	84	2.305	2.305	(0.550)	100000	23.2395	23.23
87	n-Butylbenzene	91	9.998	9.998	(1.034)	306734	27.4664	27.46
73	n-Propylbenzene	91	8.917	8.917	(0.922)	488622	26.8600	26.85
92	Naphthalene	128	11.546	11.546	(1.194)	58129	29.1332	29.13
63	o-Xylene	106	8.244	8.244	(1.075)	164786	25.5083	25.50
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	415261	27.0690	27.06
64	Styrene	104	8.265	8.258	(1.078)	278524	24.8298	24.82
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	309963	27.0935	27.09
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90014	26.2947	26.29
50	Toluene	91	6.453	6.453	(0.841)	408192	25.9560	25.95
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	93786	24.7046	24.70
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	135339	23.1405	23.14
38	Trichloroethene	130	5.214	5.214	(1.049)	127121	29.5888	29.58
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	135010	22.6379	22.63
5	Vinyl Chloride	62	1.145	1.145	(0.273)	115186	22.0973	22.09

QC Flag Legend

M - Compound response manually integrated.

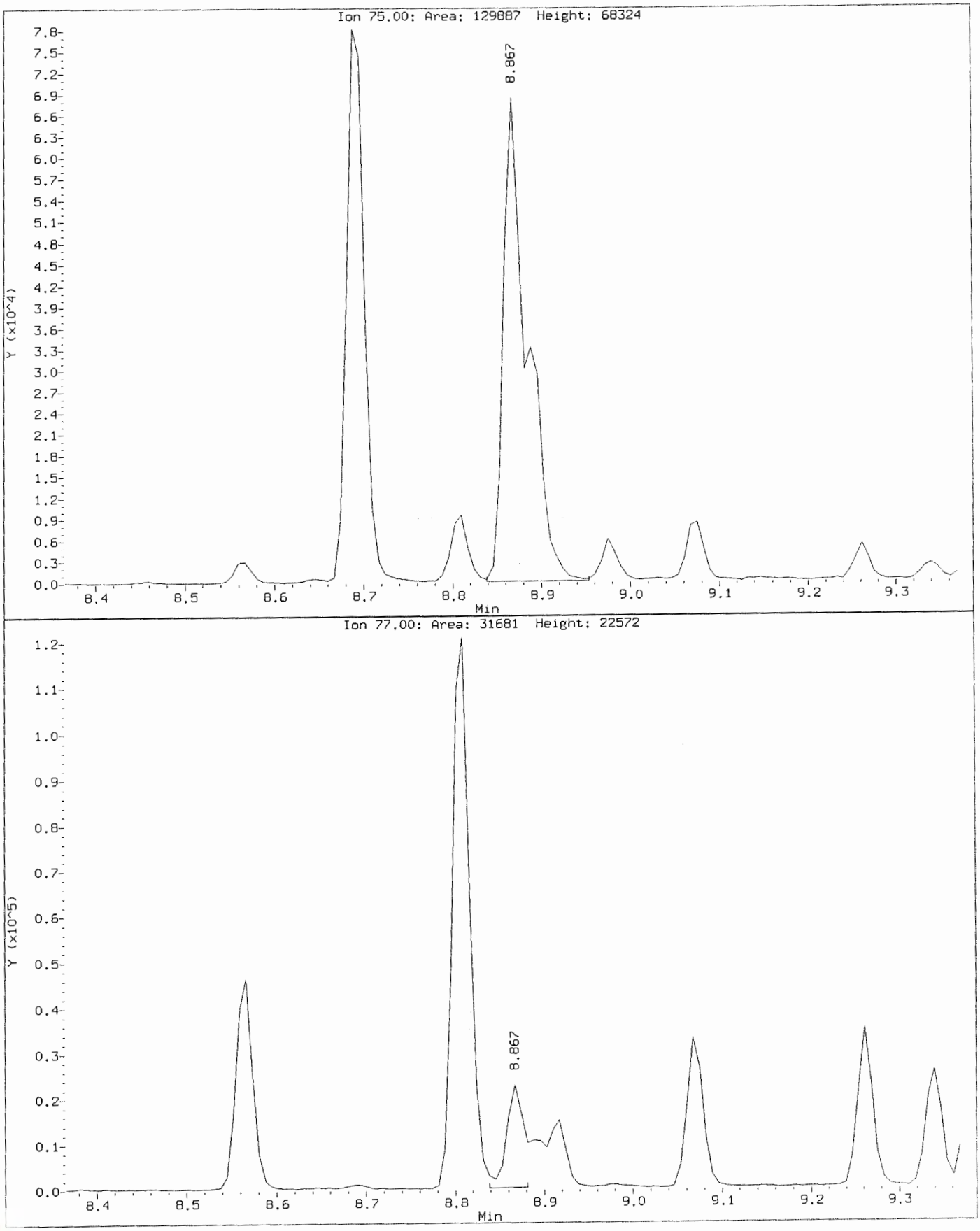


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Column phase: DB624

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

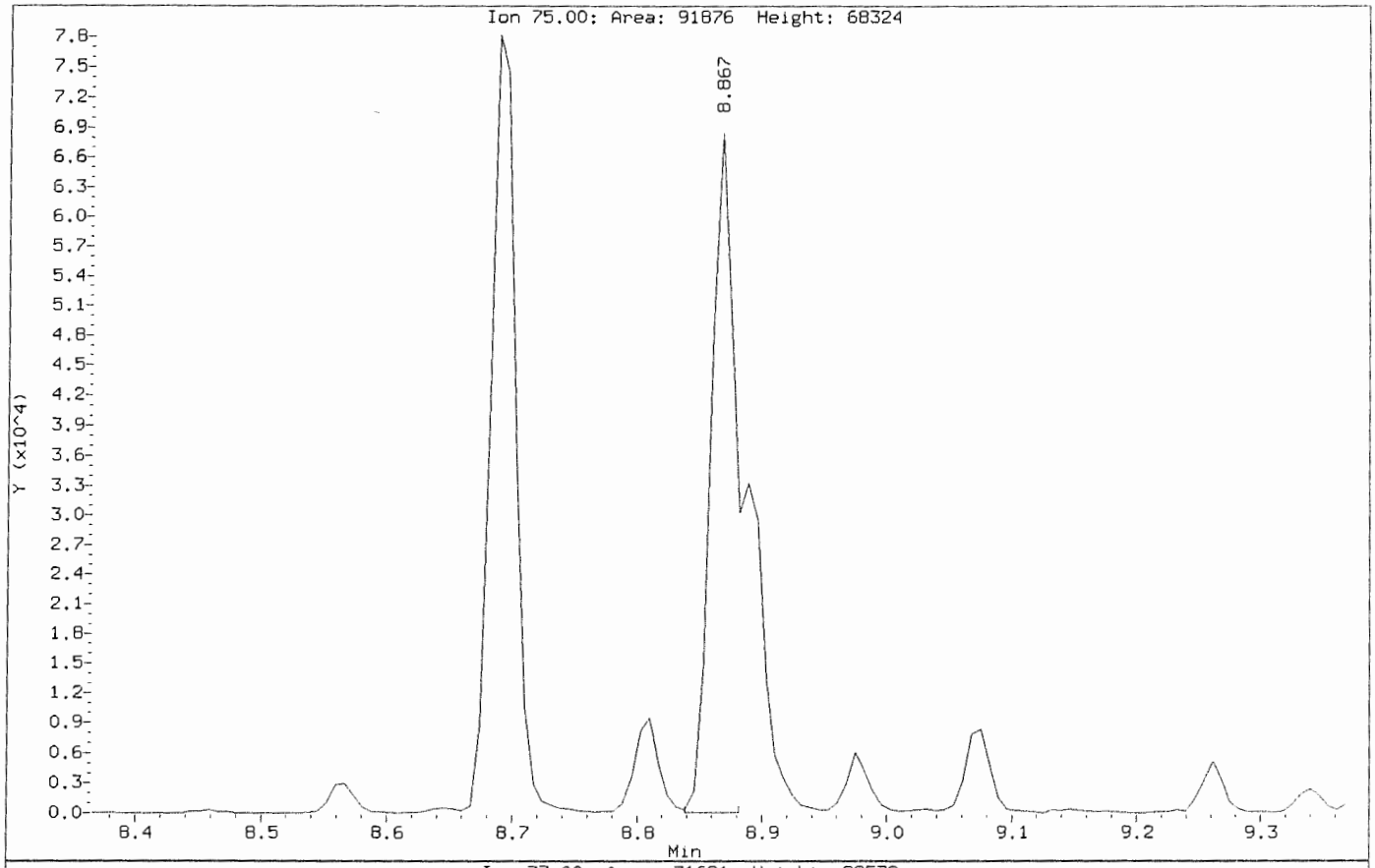
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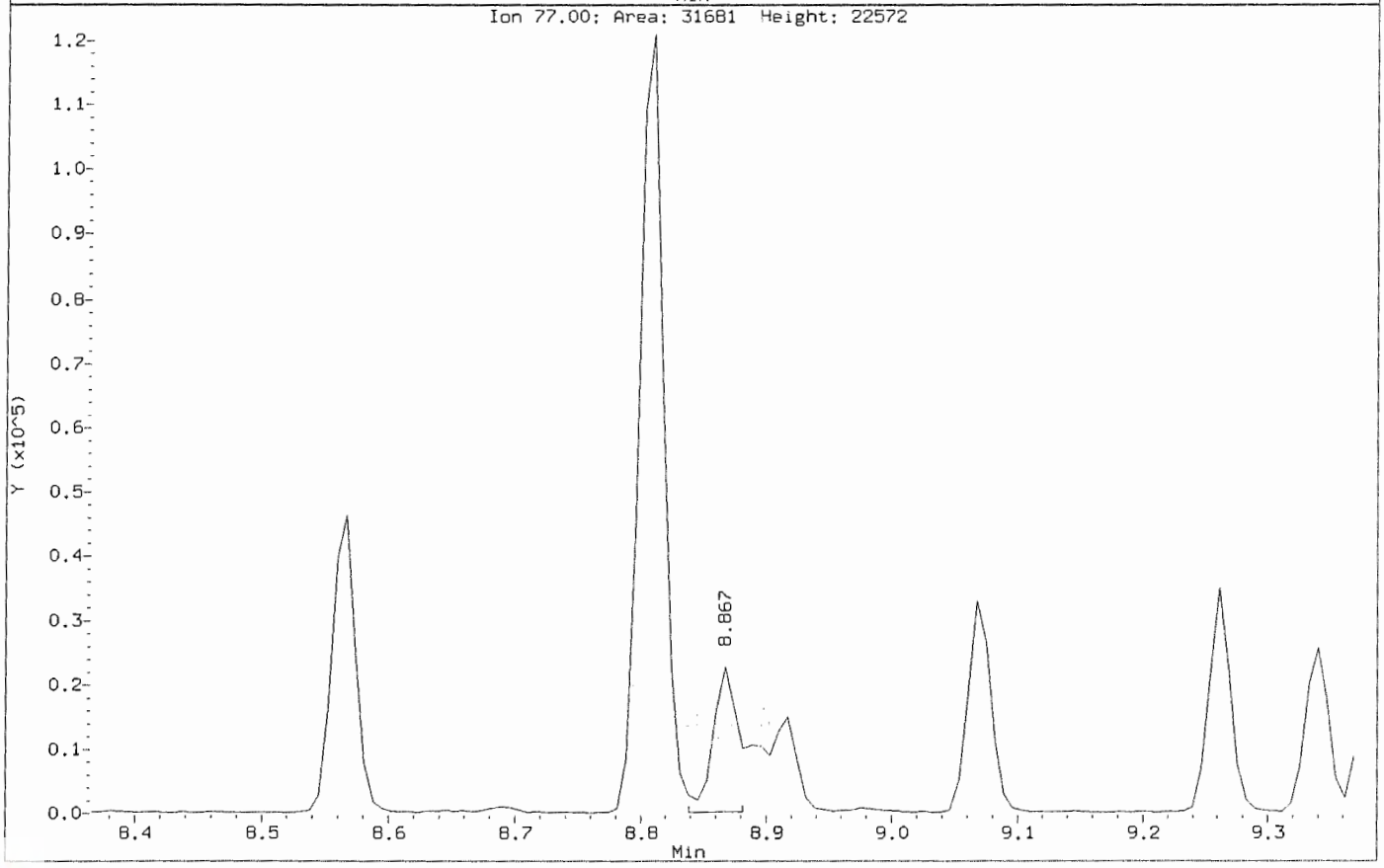
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082812.D
Injection Date: 28-AUG-2020 17:12
Instrument: voa6.i
Client Sample ID: HS20081151-01MSD

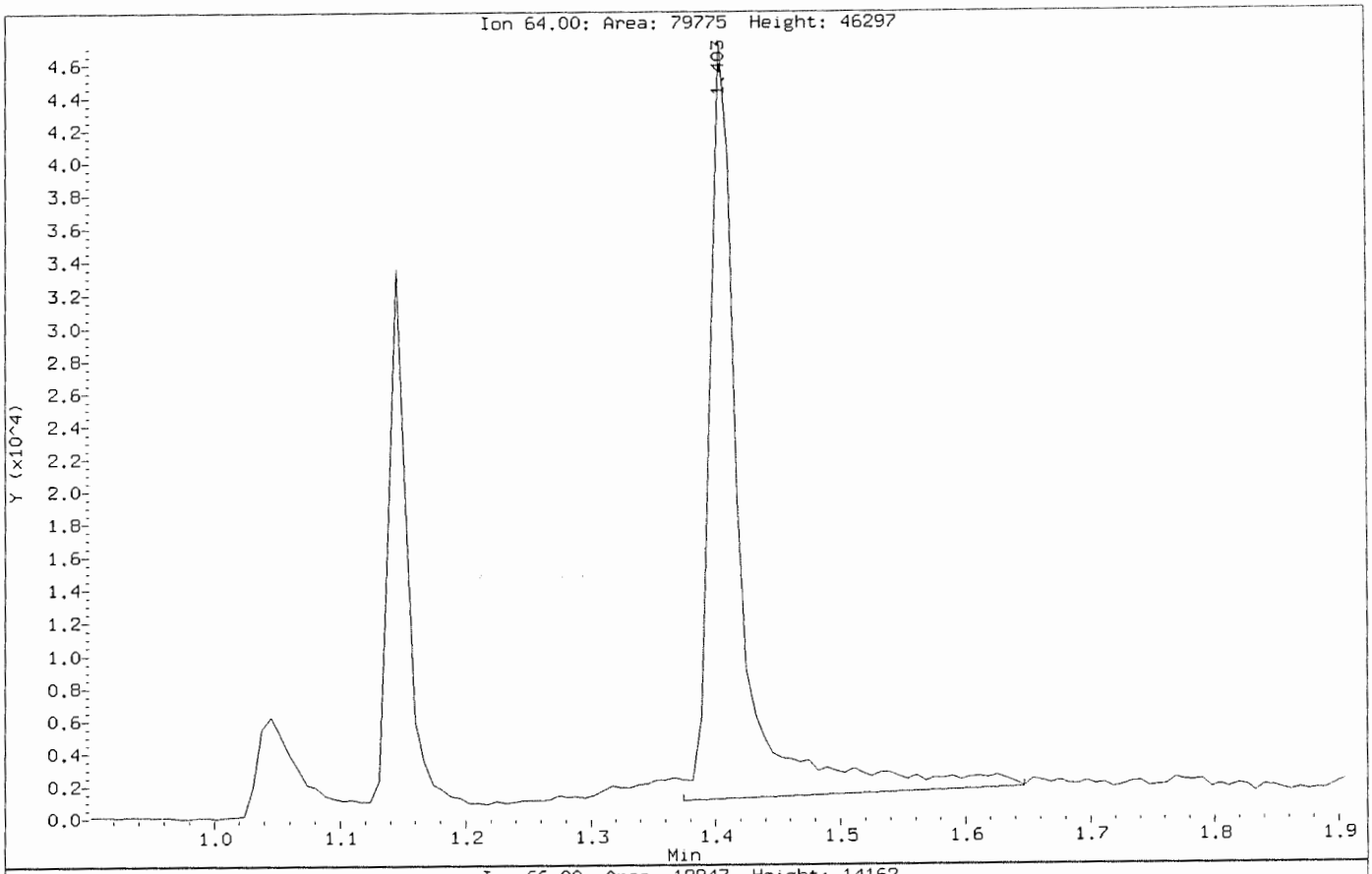
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CAS Number: 96-18-4

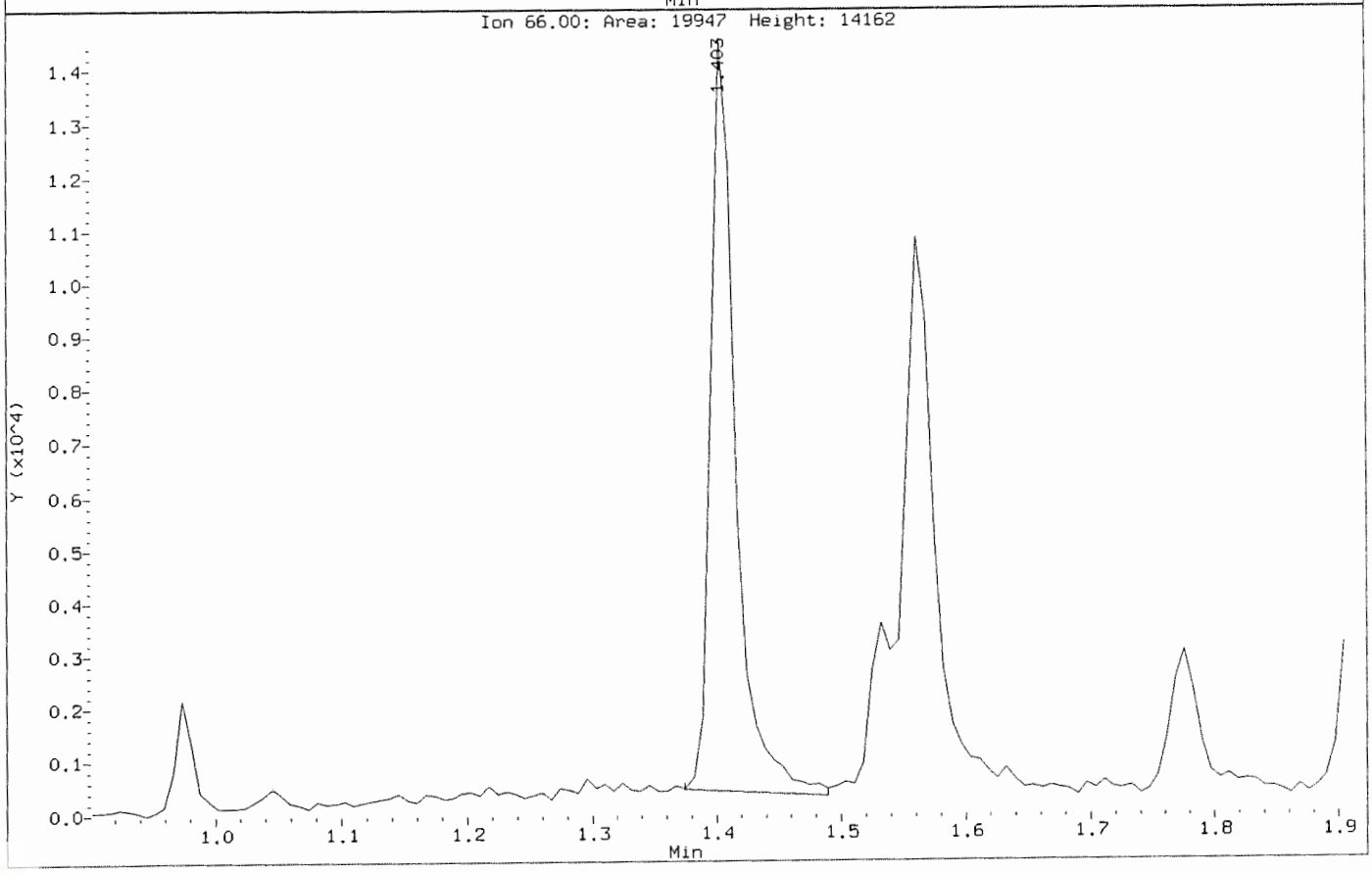




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Injection Date: 28-AUG-2020 17:12
Instrument: voa6.i
Client Sample ID: HS20081151-01MSD

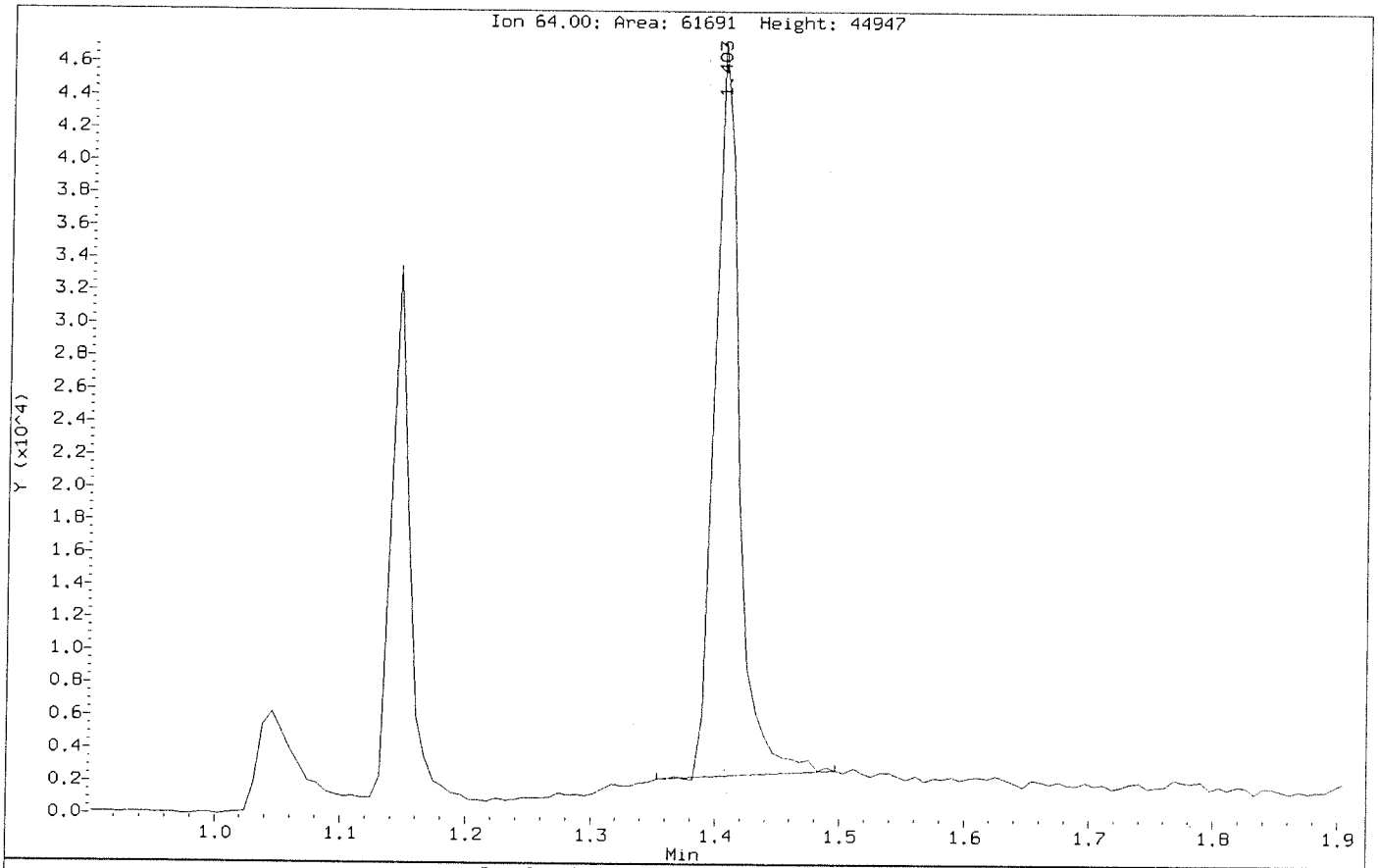
Compound: Chloroethane
CAS Number: 75-00-3

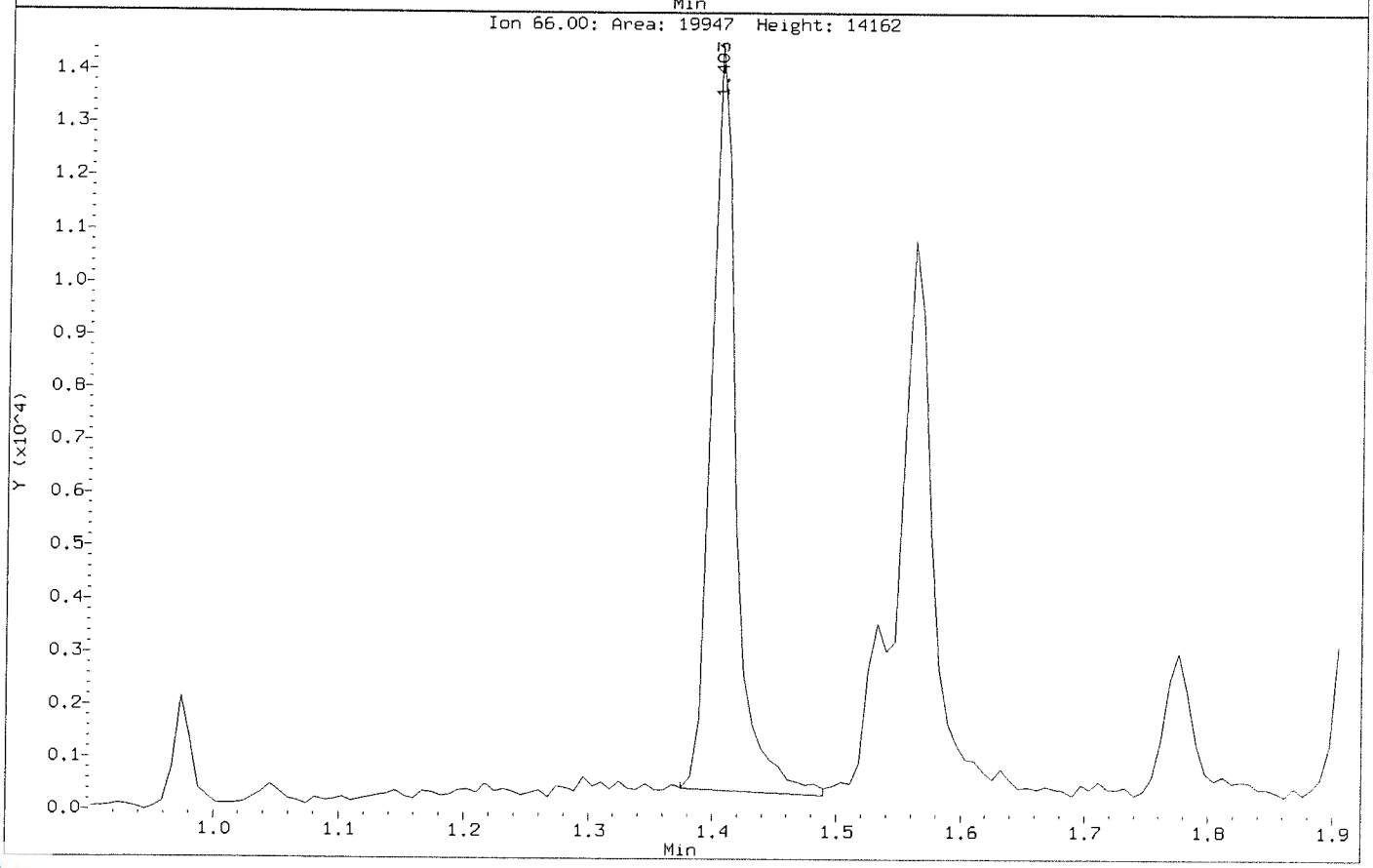




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Injection Date: 28-AUG-2020 17:12
Instrument: voa6.i
Client Sample ID: HS20081151-01MSD

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\nahstws005\Target\chem\voa6.i\X200828.b\X082814.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 28-AUG-2020 18:00
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200828.b\8260W.m
Meth Date : 25-Sep-2020 10:00 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

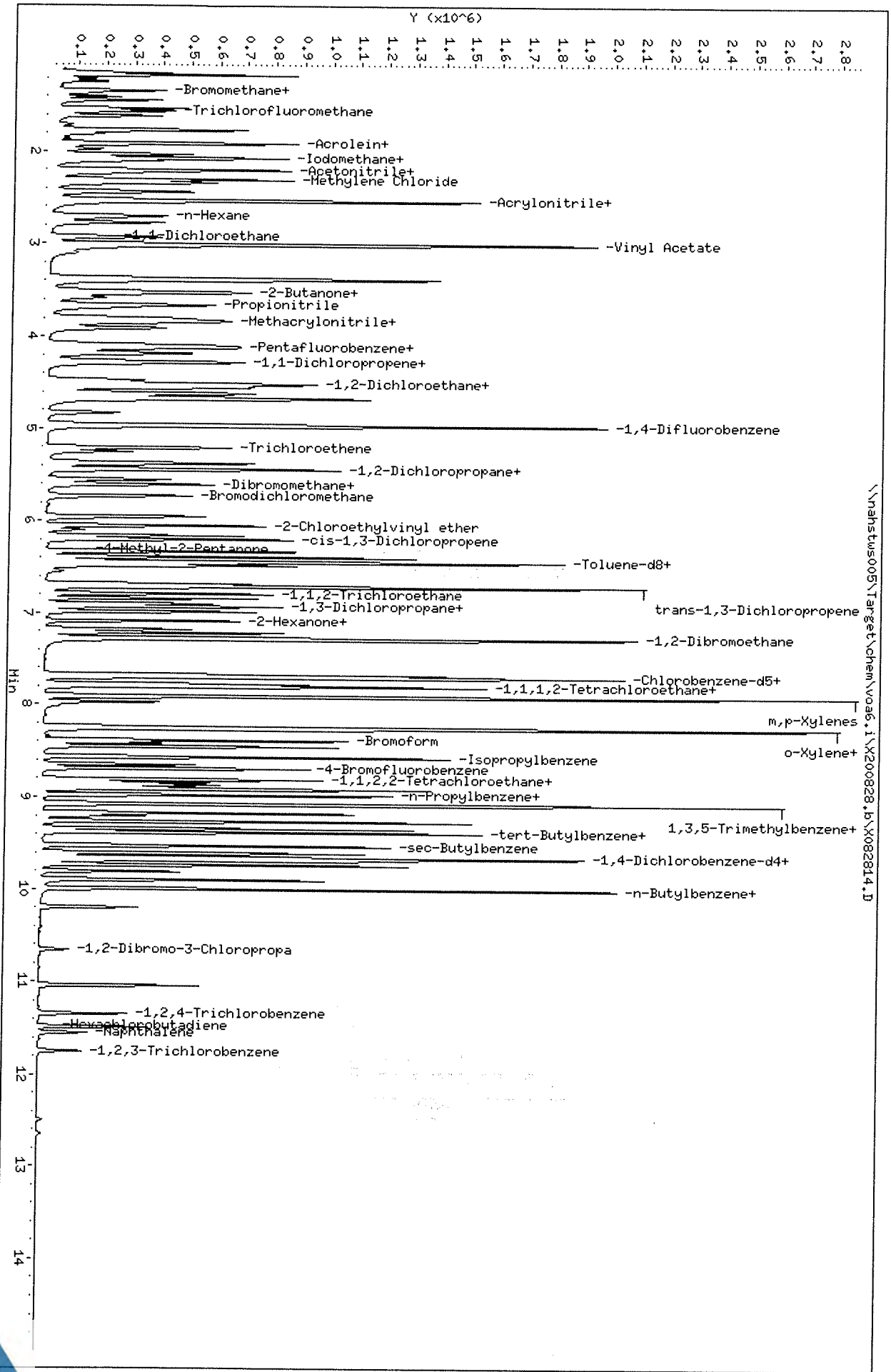
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	423986	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	655889	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	601781	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	282641	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.979)	209144	50.0000	50.23
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	239503	50.0000	48.52
$	48 Toluene-d8	98	6.389	6.389	(0.833)	721093	50.0000	49.40
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267906	50.0000	47.57
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	212135	50.0000	46.30
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	300149	50.0000	45.95
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	244688	50.0000	53.70
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	169492	50.0000	49.49
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	431919	50.0000	52.15
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	164470	50.0000	48.95
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	247064	50.0000	44.82
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	42744	50.0000	50.25
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	207714	50.0000	50.20 (M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	85926	50.0000	52.62
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	681368	50.0000	45.12
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	21835	50.0000	53.95
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	218506	50.0000	49.53
	88 1,2-Dichlorobenzene	146	9.992	9.992	(1.034)	374013	50.0000	46.78

Data File: \\nahstws005\Target\chem\voa6.i\X200828.b\X082814.D Page 2
Report Date: 25-Sep-2020 10:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	301551	50.0000	47.48
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	250160	50.0000	51.96
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	658324	50.0000	44.57
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	414066	50.0000	46.60
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	336736	50.0000	49.80
84 1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	408078	50.0000	46.44
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	262786	50.0000	43.45
24 2-Butanone	43	3.581	3.581	(0.855)	235499	100.000	113.30
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	566705	50.0000	46.21
52 2-Hexanone	43	7.090	7.090	(0.924)	376807	100.000	99.73
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	655188	50.0000	45.92
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	657717	50.0000	42.02
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	554636	100.000	99.58
10 Acetone	43	1.976	1.976	(0.472)	146078	100.000	98.82
37 Benzene	78	4.519	4.519	(0.909)	819838	50.0000	50.38
74 Bromobenzene	156	8.810	8.810	(0.912)	260704	50.0000	47.15
29 Bromochloromethane	128	3.803	3.803	(0.908)	126060	50.0000	49.32
39 Bromodichloromethane	83	5.730	5.730	(1.153)	284149	50.0000	48.12
66 Bromoform	173	8.416	8.416	(1.097)	162394	50.0000	48.63
6 Bromomethane	94	1.339	1.339	(0.320)	145978	50.0000	50.02
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1020586	100.000	97.84
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	248213	50.0000	42.36
59 Chlorobenzene	112	7.699	7.699	(1.004)	559530	50.0000	47.44
7 Chloroethane	64	1.403	1.403	(0.335)	163247	50.0000	54.32
28 Chloroform	83	3.910	3.910	(0.933)	373793	50.0000	49.34
3 Chloromethane	50	1.081	1.081	(0.258)	283475	50.0000	47.61
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	240988	50.0000	51.63
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	340067	50.0000	49.25
55 Dibromochloromethane	129	7.176	7.176	(0.936)	230578	50.0000	47.83
44 Dibromomethane	93	5.558	5.558	(1.118)	140655	50.0000	49.27
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	183812	50.0000	44.29
61 Ethylbenzene	106	7.800	7.800	(1.017)	280381	50.0000	46.04
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	65497	50.0000	43.16
67 Isopropylbenzene	105	8.566	8.566	(1.117)	784465	50.0000	43.88
62 m,p-Xylenes	106	7.907	7.907	(1.031)	673398	100.000	91.62
17 Methylene Chloride	84	2.306	2.306	(0.550)	223004	50.0000	51.05
87 n-Butylbenzene	91	9.999	9.999	(1.035)	513935	50.0000	41.11
73 n-Propylbenzene	91	8.917	8.917	(0.923)	890365	50.0000	43.72
92 Naphthalene	128	11.546	11.546	(1.195)	120309	50.0000	53.08
63 o-Xylene	106	8.244	8.244	(1.075)	337837	50.0000	46.79
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	714636	50.0000	41.61
64 Styrene	104	8.258	8.258	(1.077)	591791	50.0000	47.20
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	549699	50.0000	42.92
56 Tetrachloroethene	164	6.933	6.933	(0.904)	168174	50.0000	43.96
50 Toluene	91	6.446	6.446	(0.840)	838316	50.0000	47.70
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	200682	50.0000	50.48
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	303098	50.0000	47.89
38 Trichloroethene	130	5.214	5.214	(1.049)	226101	50.0000	48.64
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	273278	50.0000	43.76
5 Vinyl Chloride	62	1.145	1.145	(0.273)	260993	50.0000	47.82

QC Flag Legend

M - Compound response manually integrated.

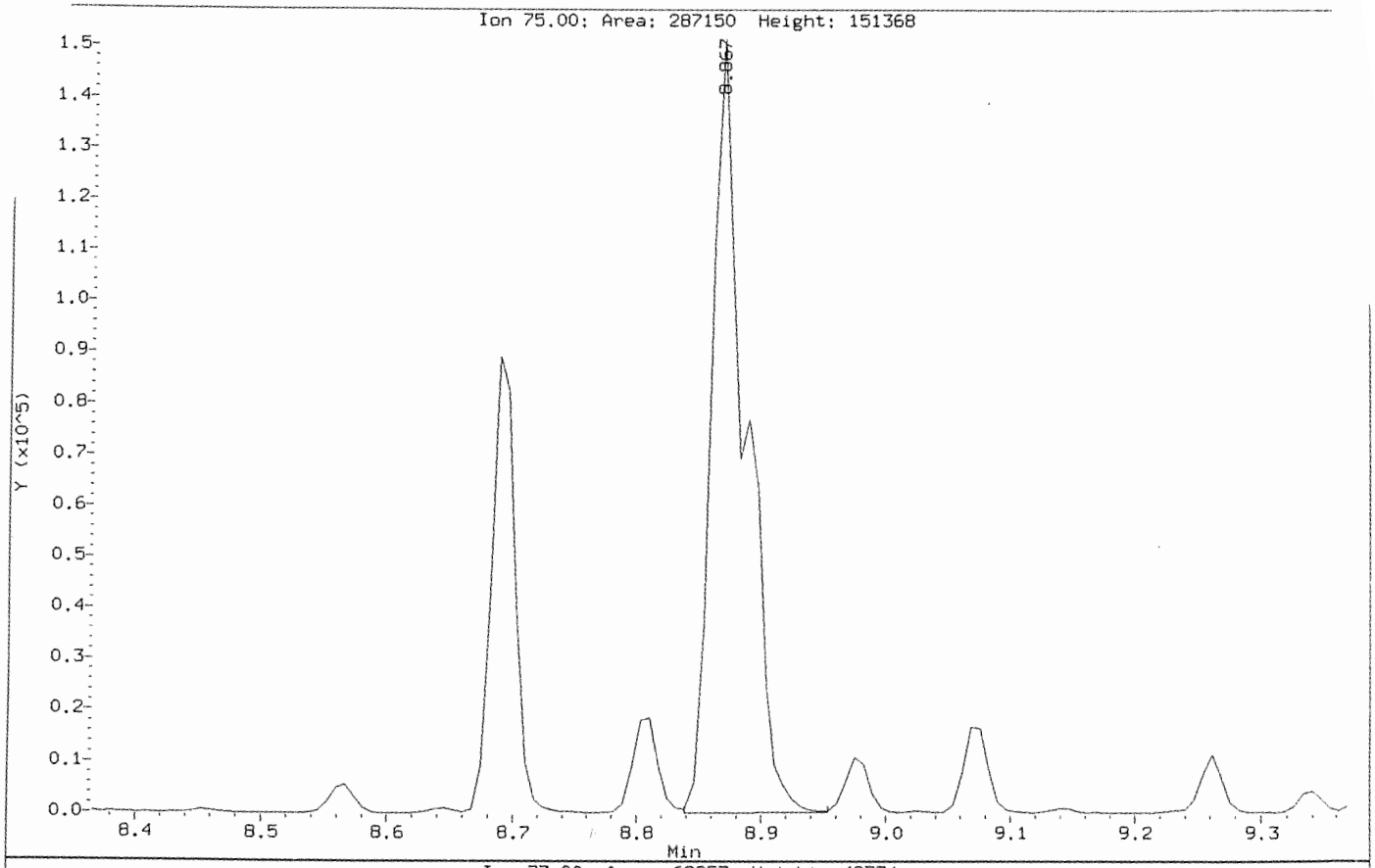


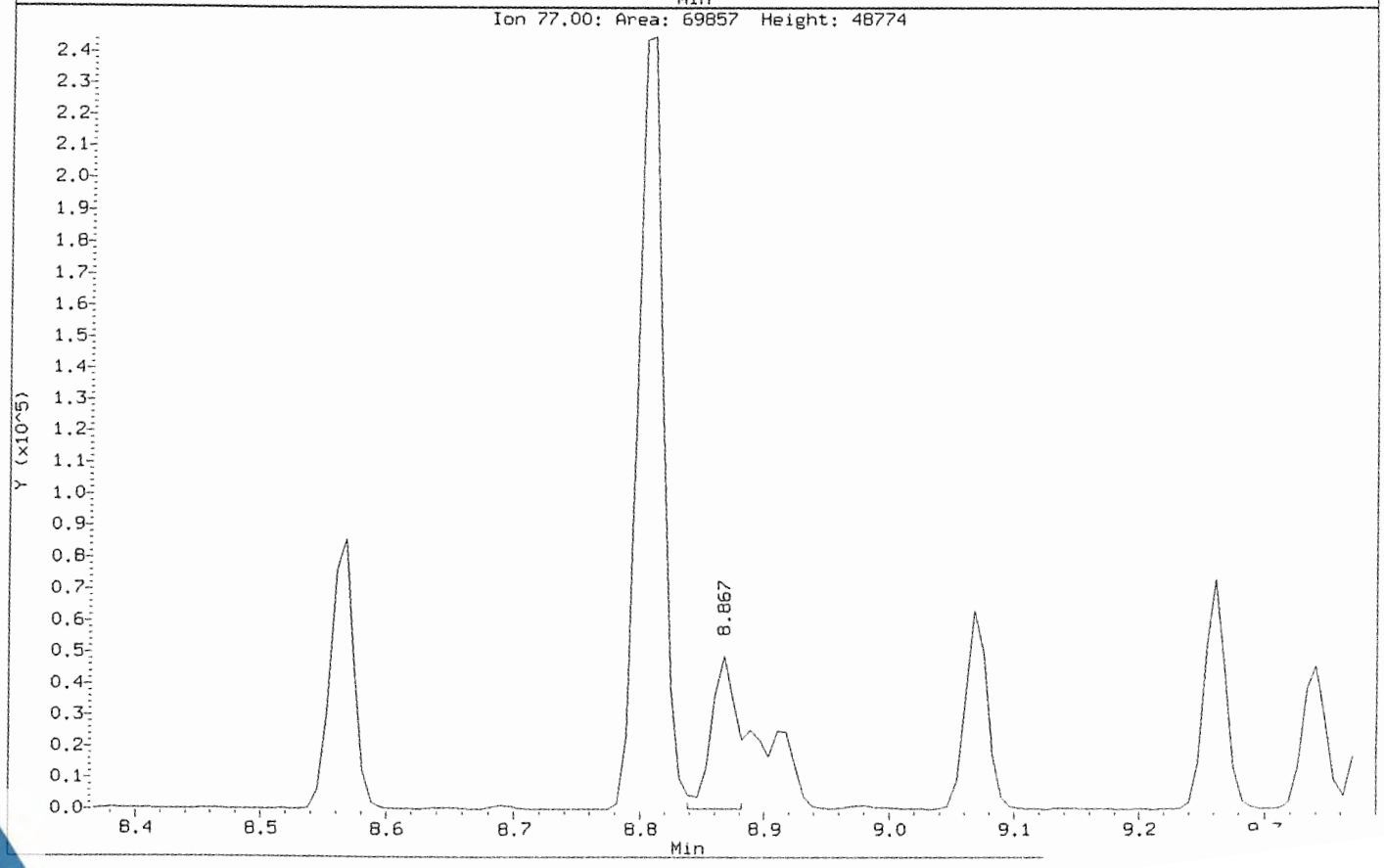
Data File: \\nahstus005\Target\chem\voa6.i\X200828.b\X082814.D
Date : 28-AUG-2020 18:00
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

e: \\nahstws005\Target\chem\voa6.i\X200828.b\Before\X082814.D
on Date: 28-AUG-2020 18:00
ent: voa6.i
Sample ID: CCV-END

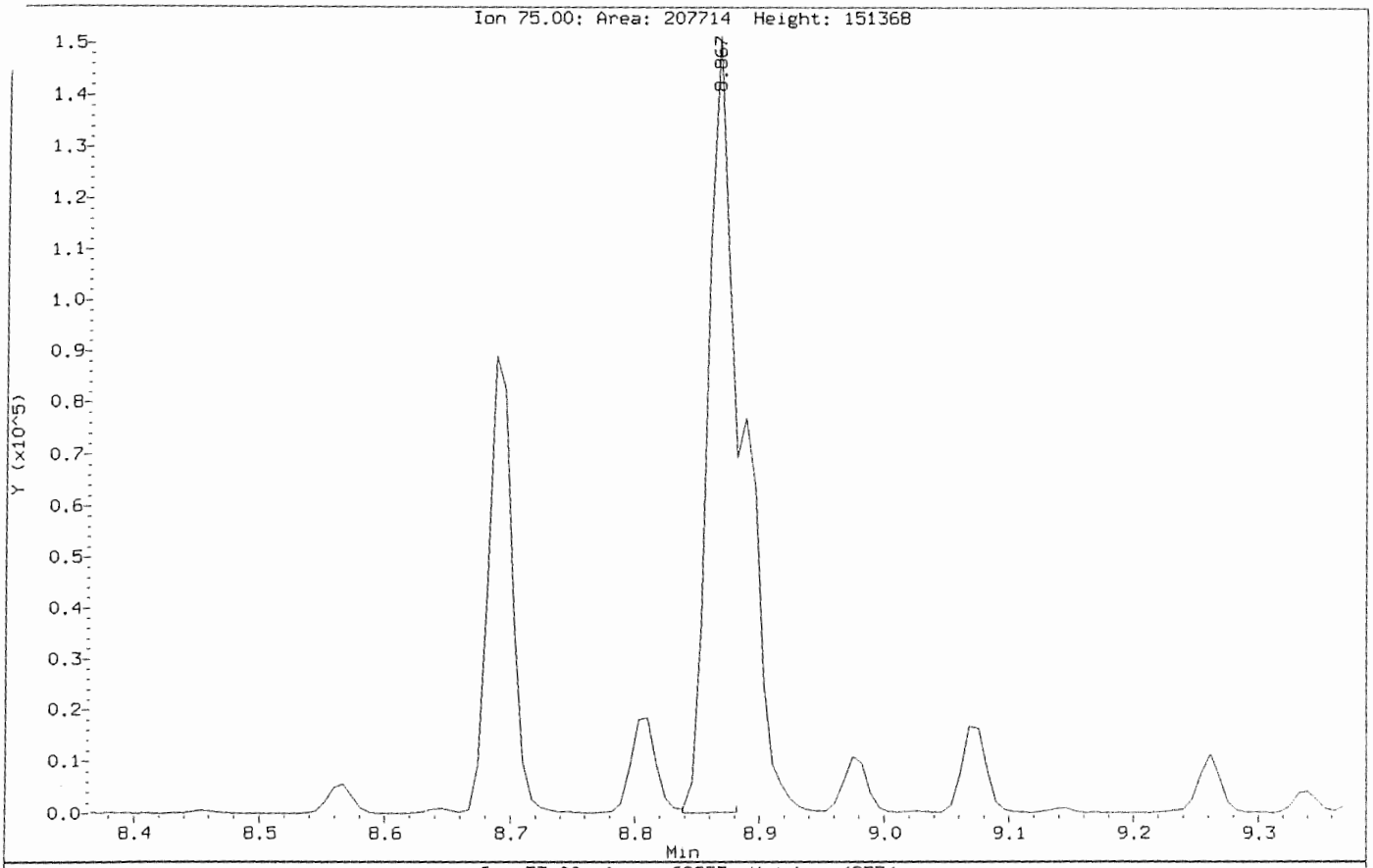
nd: 1,2,3-Trichloropropane
mber: 96-18-4

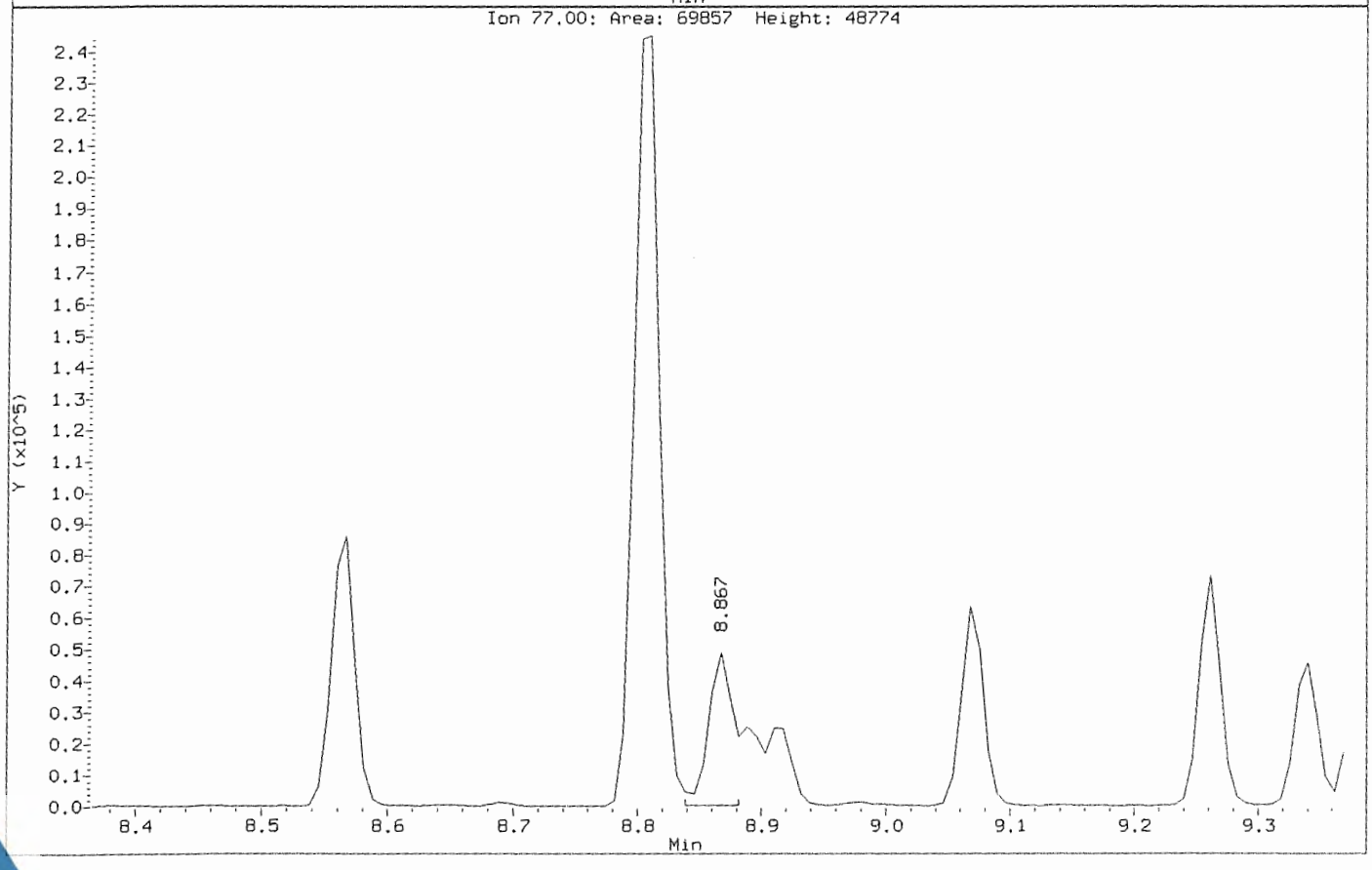




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ection Date: 28-AUG-2020 18:00
trument: voa6.i
.ent Sample ID: CCV-END

mpound: 1,2,3-Trichloropropane
S Number: 96-18-4





HS20081151 8270 Raw Data

ALS WO# HS20081151

SV06 -Logbook

Batch: 41634 **Analyst:** Andrew Neir

Date: 09-01-2020 **Reviewer:**

Method: 8270DLL **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	09-01-2020 01:52 pm	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	09-01-2020 02:04 pm	1.00			002.D		Y	NA
3	DXSIM-0.08	SAMP	09-01-2020 02:41 pm	1.00			003.D		Y	NA
4	DXSIM-0.01	SAMP	09-01-2020 03:03 pm	1.00			004.D		Y	NA
5	DXSIM-0.03	SAMP	09-01-2020 03:22 pm	1.00			005.D		Y	NA
6	DXSIM-0.05	SAMP	09-01-2020 03:41 pm	1.00			006.D		Y	NA
7	DXSIM-0.10	SAMP	09-01-2020 04:00 pm	1.00			007.D		Y	NA
8	DXSIM-0.15	SAMP	09-01-2020 04:19 pm	1.00			008.D		Y	NA
9	DXSIM-0.2	SAMP	09-01-2020 04:38 pm	1.00			009.D		Y	NA
10	DXSIM-0.5	SAMP	09-01-2020 04:57 pm	1.00			010.D		Y	NA
11	DXSIM-ICV	SAMP	09-01-2020 05:16 pm	1.00			011.D		Y	NA
12	MBLK-156910	MBLK	09-01-2020 05:36 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-156910	LCS	09-01-2020 05:55 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-156910	LCSD	09-01-2020 06:15 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS20090012-01	SAMP	09-01-2020 06:34 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS20070585-01	SAMP	09-01-2020 06:53 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	HS20070585-02	SAMP	09-01-2020 07:13 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS20070585-09	SAMP	09-01-2020 07:33 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS20070585-10	SAMP	09-01-2020 07:52 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS20070586-01	SAMP	09-01-2020 08:11 pm	1.00	30.00 gm	1.00 mL	020.D	Solid	Y	NA
21	HS20070586-02	SAMP	09-01-2020 08:31 pm	1.00	30.00 gm	1.00 mL	021.D	Solid	Y	NA
22	HS20070586-05	SAMP	09-01-2020 08:50 pm	1.00	30.00 gm	1.00 mL	022.D	Solid	Y	NA
23	HS20070586-06	SAMP	09-01-2020 09:10 pm	1.00	30.00 gm	1.00 mL	023.D	Solid	Y	NA
24	MBLK-156817	MBLK	09-01-2020 09:29 pm	1.00	1000.00 mL	1.00 mL	024.D	Liquid	Y	NA
25	LCS-156817	LCS	09-01-2020 09:48 pm	1.00	1000.00 mL	1.00 mL	025.D	Liquid	Y	NA
26	LCSD-156817	LCSD	09-01-2020 10:07 pm	1.00	1000.00 mL	1.00 mL	026.D	Liquid	Y	NA
27	HS20081150-01	SAMP	09-01-2020 10:26 pm	1.00	1000.00 mL	1.00 mL	027.D	Liquid	Y	NA
28	HS20081150-01	SAMP	09-01-2020 10:45 pm	100.0(	1000.00 mL	1.00 mL	028.D	Liquid	Y	NA
29	HS20081151-01	SAMP	09-01-2020 11:04 pm	1.00	1000.00 mL	1.00 mL	029.D	Liquid	Y	NA
30	HS20081151-01	SAMP	09-01-2020 11:23 pm	100.0(	1000.00 mL	1.00 mL	030.D	Liquid	Y	NA
31	DXSIM-0.08	SAMP	09-01-2020 11:42 pm	100.0(	1000.00 mL	1.00 mL	031.D	Liquid	Y	NA
32	HS20081309-03	SAMP	09-02-2020 12:02 am	1.00	1000.00 mL	1.00 mL	032.D	Liquid	Y	NA
33	HS20081238-01	SAMP	09-02-2020 12:21 am	1.00	1000.00 mL	1.00 mL	033.D	Liquid	Y	NA
34	HS20081238-02	SAMP	09-02-2020 12:40 am	1.00	1000.00 mL	1.00 mL	034.D	Liquid	Y	NA
35	HS20081238-03	SAMP	09-02-2020 01:00 am	1.00	1000.00 mL	1.00 mL	035.D	Liquid	Y	NA
36	HS20081238-04	SAMP	09-02-2020 01:19 am	1.00	1000.00 mL	1.00 mL	036.D	Liquid	Y	NA
37	HS20081238-05	SAMP	09-02-2020 01:39 am	1.00	1000.00 mL	1.00 mL	037.D	Liquid	Y	NA
38	HS20081238-06	SAMP	09-02-2020 01:58 am	1.00	1000.00 mL	1.00 mL	038.D	Liquid	Y	NA
39	HS20081238-07	SAMP	09-02-2020 02:18 am	1.00	1000.00 mL	1.00 mL	039.D	Liquid	Y	NA
40	HS20081238-08	SAMP	09-02-2020 02:37 am	1.00	1000.00 mL	1.00 mL	040.D	Liquid	Y	NA
41	HS20081238-09	SAMP	09-02-2020 02:57 am	1.00	1000.00 mL	1.00 mL	041.D	Liquid	Y	NA

SV06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20081238-10	SAMP	09-02-2020 03:16 am	1.00	1000.00 mL	1.00 mL	042.D	Liquid	Y	NA
43	HS20081238-11	SAMP	09-02-2020 03:35 am	1.00	1000.00 mL	1.00 mL	043.D	Liquid	Y	NA
44	HS20081238-12	SAMP	09-02-2020 03:55 am	1.00	1000.00 mL	1.00 mL	044.D	Liquid	Y	NA
45	HS20081238-13	SAMP	09-02-2020 04:14 am	1.00	1000.00 mL	1.00 mL	045.D	Liquid	Y	NA
46	HS20081238-14	SAMP	09-02-2020 04:34 am	1.00	1000.00 mL	1.00 mL	046.D	Liquid	Y	NA
47	HS20081238-15	SAMP	09-02-2020 04:53 am	1.00	1000.00 mL	1.00 mL	047.D	Liquid	Y	NA
48	HS20081238-16	SAMP	09-02-2020 05:13 am	1.00	1000.00 mL	1.00 mL	048.D	Liquid	Y	NA
49	HS20081238-17	SAMP	09-02-2020 05:32 am	1.00	1000.00 mL	1.00 mL	049.D	Liquid	Y	NA
50	HS20081238-18	SAMP	09-02-2020 05:52 am	1.00	1000.00 mL	1.00 mL	050.D	Liquid	Y	NA

Chemical	Value
IS ID	3111842-01
CAL STD ID	3111832-06
DFTPP ID	3111843-07
PCP Tailing	0.82
Benz. Tailing	0.78
Routine SOP Maintenance	ACN

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

	CLIENT SAMPLE NO.	S1 #	S2 (2FP)#	S3 (NBZ)#	S4 (FBP)#	S5 (TBP)#	S6 #	S7 (TCX)#	S8 (DCB)#	TOT OUT
01	MBLK-156817	0D	0D	30D	21D	0D	24D	0D	0D	0
02	LCS-156817			101	81		102			0
03	LCSD-156817			93	89		91			0
04	HS20081151-01			0D	0D		0D			0
05										
06										
07										
08										
09										
10										
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27										
28										

		QC LIMITS	
S1	= Phenol-d6	(20-120)	
S2 (2FP)	= 2-Fluorophenol	(20-120)	
S3 (NBZ)	= Nitrobenzene-d5	(41-120)	
S4 (FBP)	= 2-Fluorobiphenyl	(40-125)	
S5 (TBP)	= 2,4,6-Tribromophenol	(34-129)	
S6	= 4-Terphenyl-d14	(40-135)	
S7 (TCX)	= Tetrachloro-m-xylene	(40-150)	
S8 (DCB)	= Decachlorobiphenyl	(40-150)	(advisory)

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

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Matrix Spike - Sample No.: DXSIM-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.07779	97	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: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Lab File ID: 001 DFTPP Injection Date: 09/01/20

Instrument ID: SV6 DFTPP Injection Time: 1352

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	46.9
68	Less than 2.0% of mass 69	0.5 (0.9)1
69	Mass 69 relative abundance	50.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	57.0
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.7
365	1.0 - 100.0% of mass 198	4.0
441	Present, but less than mass 443	14.5
442	50.0 - 150.0% of mass 198	97.1
443	15.0 - 24.0% of mass 442	18.6 (19.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DXSIM-0.08	DXSIM-0.08	003	09/01/20	1441
02	DXSIM-0.01	DXSIM-0.01	004	09/01/20	1503
03	DXSIM-0.03	DXSIM-0.03	005	09/01/20	1522
04	DXSIM-0.05	DXSIM-0.05	006	09/01/20	1541
05	DXSIM-0.10	DXSIM-0.10	007	09/01/20	1600
06	DXSIM-0.15	DXSIM-0.15	008	09/01/20	1619
07	DXSIM-0.2	DXSIM-0.2	009	09/01/20	1638
08	DXSIM-0.5	DXSIM-0.5	010	09/01/20	1657
09	DXSIM-ICV	DXSIM-ICV	011	09/01/20	1716
10	MBLK-156817	MBLK-156817	024	09/01/20	2129
11	LCS-156817	LCS-156817	025	09/01/20	2148
12	LCSD-156817	LCSD-156817	026	09/01/20	2207
13	HS20081151-0	HS20081151-01	030	09/01/20	2323
14	DXSIM-0.08	DXSIM-0.08	031	09/01/20	2342
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.01: 004 RF0.03: 005 RF0.05: 006
RF0.08: 003 RF0.1: 007 RF0.15: 008

COMPOUND	RF0.01	RF0.03	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.301	0.225	0.233	0.205	0.272	0.298
Nitrobenzene-d5	0.475	0.356	0.285	0.364	0.296	0.373
4-Terphenyl-d14	0.997	0.901	0.769	0.929	0.708	0.713
2-Fluorobiphenyl	1.354	1.207	1.318	1.119	1.138	1.054

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008115

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.2: 009 RF0.5: 010

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.332	0.280	AVRG	0.26820713	16.222	20.000
Nitrobenzene-d5	0.330	0.356	AVRG	0.35440929	16.461	20.000
4-Terphenyl-d14	0.774	0.841	AVRG	0.82891532	12.765	20.000
2-Fluorobiphenyl	1.123	1.017	AVRG	1.16642898	10.235	20.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Instrument ID: SV6 Calibration Date: 09/01/20 Time: 2342

Lab File ID: 031 Init. Calib. Date(s): 09/01/20 09/01/20

Init. Calib. Times: 1441 1657

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	0.2680000	0.2908345	0.01	8.52	50.00	AVRG
Nitrobenzene-d5	0.3540000	0.3027902	0.01	-14.47	50.00	AVRG
4-Terphenyl-d14	0.8290000	0.8113480	0.01	-2.13	50.00	AVRG
2-Fluorobiphenyl	1.1660000	1.2482041	0.01	7.05	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Lab File ID (Standard): 003 Date Analyzed: 09/01/20

Instrument ID: SV6 Time Analyzed: 1441

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	8895	3.68	35367	4.81	22159	6.50
	UPPER LIMIT	17790	4.18	70734	5.31	44318	7.00
	LOWER LIMIT	4448	3.18	17684	4.31	11080	6.00
	CLIENT SAMPLE NO.						
01	MBLK-156817	13204	3.69	54334	4.81	29825	6.49
02	LCS-156817	10614	3.69	36720	4.81	23957	6.50
03	LCSD-156817	13263	3.69	42229	4.81	23775	6.49
04	HS20081151-01	7546	3.69	28477	4.81	19455	6.50
05							
06							
07							
08							
09							
10							
11							
12							
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15							
16							
17							
18							
19							
20							

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

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

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

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20081151

Lab File ID (Standard): 003 Date Analyzed: 09/01/20

Instrument ID: SV6 Time Analyzed: 1441

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	43559		7.95		35410		10.85		41042		12.97	
	UPPER LIMIT	87118		8.45		70820		11.35		82084		13.47	
	LOWER LIMIT	21780		7.45		17705		10.35		20521		12.47	
	CLIENT SAMPLE NO.												
01	MBLK-156817	64312		7.95		51452		10.84		52021		12.97	
02	LCS-156817	47492		7.95		34942		10.85		31820		12.97	
03	LCSD-156817	38270		7.95		39135		10.85		33668		12.97	
04	HS20081151-01	35517		7.96		28838		10.85		24864		12.97	
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.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

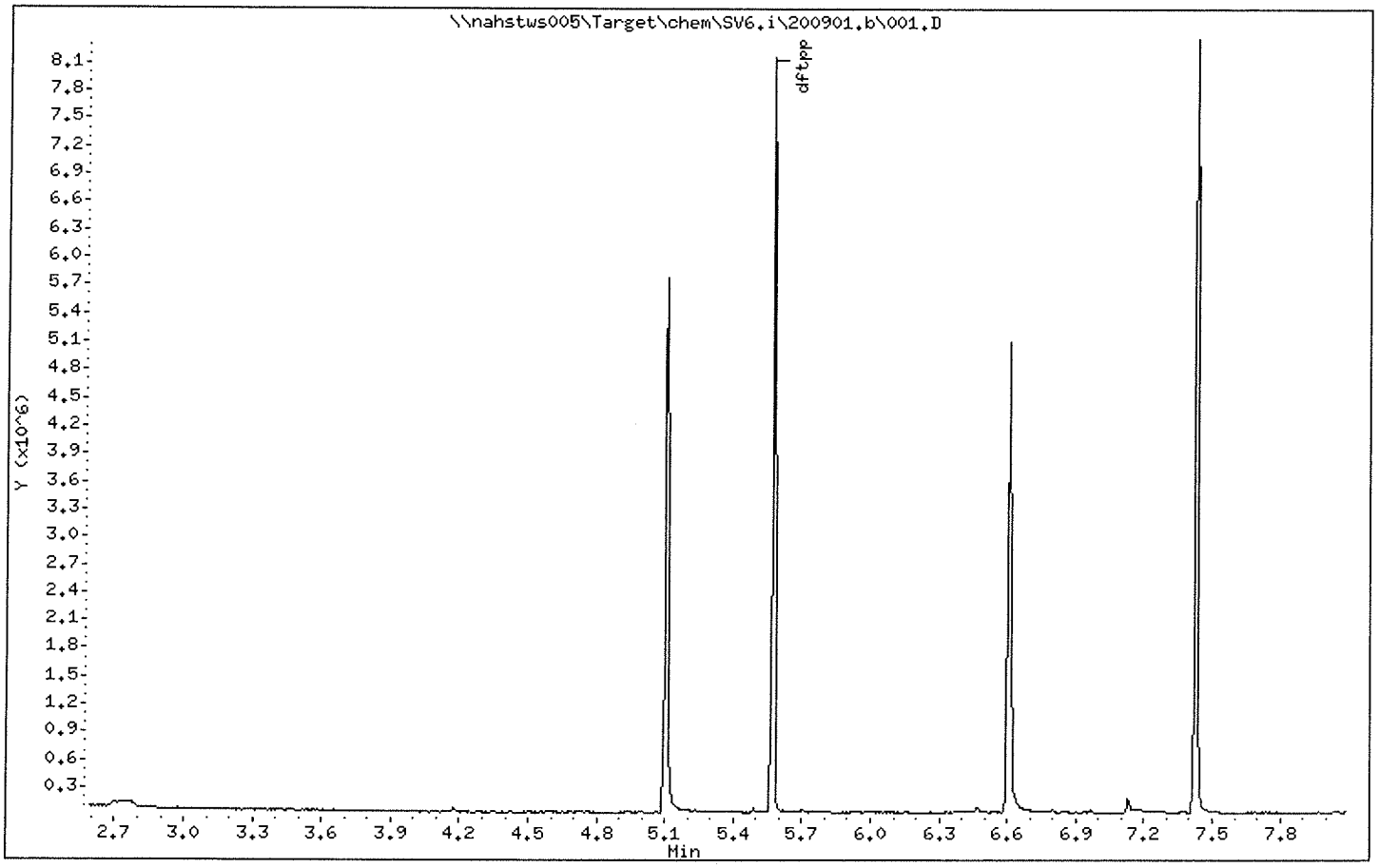
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

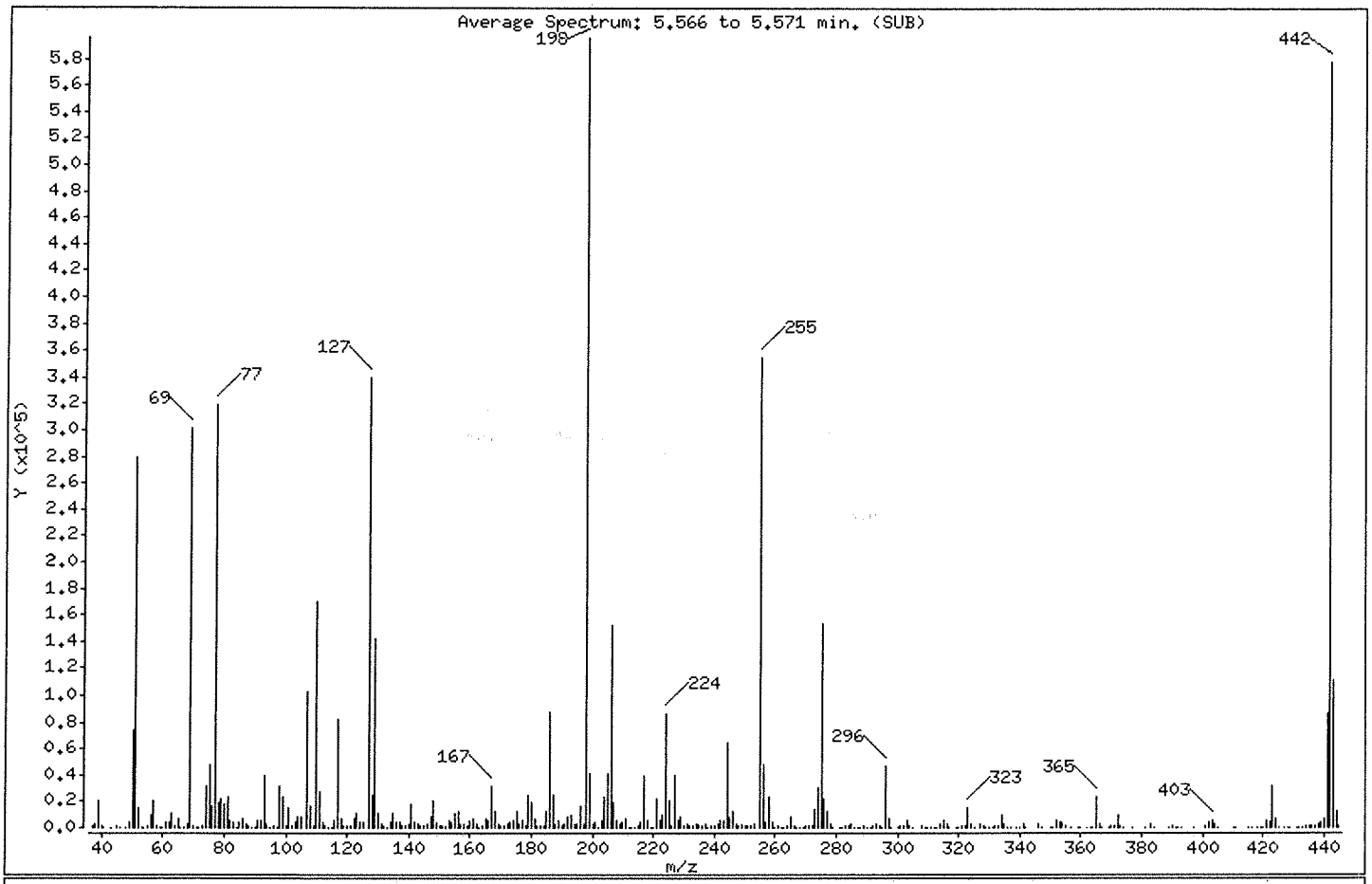
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.88
68	Less than 2.00% of mass 69	0.48 (0.94)
69	Mass 69 relative abundance	50.68
70	Less than 2.00% of mass 69	0.31 (0.60)
127	10.00 - 80.00% of mass 198	56.99
197	Less than 2.00% of mass 198	0.41
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	25.68
365	1.00 - 100.00% of mass 198	4.01
441	Present, but less than mass 443	14.46
442	50.00 - 150.00% of mass 198	97.09
443	15.00 - 24.00% of mass 442	18.56 (19.12)

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

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: 5.566 to 5.571 min. (SUB)
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1132	133.00	523	224.00	85920	321.00	1936
38.00	3168	134.00	3567	225.00	20560	322.00	1358
39.00	20240	135.00	10509	226.00	1905	323.00	14582
40.00	847	136.00	4080	227.00	40272	324.00	3093
41.00	359	137.00	4659	228.00	6109	325.00	247
43.00	637	138.00	1176	229.00	8104	327.00	2927
45.00	726	139.00	691	230.00	865	328.00	1591
46.00	246	140.00	2173	231.00	3342	329.00	359
48.00	286	141.00	17232	232.00	803	330.00	103
49.00	3524	142.00	4786	233.00	880	331.00	218
50.00	74392	143.00	3273	234.00	2655	332.00	1451
51.00	279360	144.00	1143	235.00	3054	333.00	1368
52.00	14715	145.00	1076	236.00	1716	334.00	9177
53.00	159	146.00	3257	237.00	2356	335.00	2757
54.00	143	147.00	8842	238.00	432	336.00	112
55.00	1240	148.00	20160	239.00	1632	337.00	81
56.00	9103	149.00	3787	240.00	840	339.00	506
57.00	20872	150.00	1314	241.00	2253	340.00	133
58.00	1121	151.00	1875	242.00	5114	341.00	2506
59.00	664	152.00	1877	243.00	5015	342.00	537
60.00	26	153.00	5718	244.00	65016	346.00	3406
61.00	3531	154.00	4312	245.00	8277	347.00	505
62.00	3772	155.00	11251	246.00	11826	350.00	102
63.00	11375	156.00	12646	247.00	2935	351.00	344
64.00	1278	157.00	2476	248.00	921	352.00	5264
65.00	6226	158.00	2412	249.00	3014	353.00	3632
66.00	463	159.00	1824	250.00	749	354.00	4465
67.00	118	160.00	5511	251.00	954	355.00	955
68.00	2831	161.00	7151	252.00	1849	357.00	279
69.00	302016	162.00	2988	253.00	2849	359.00	276
70.00	1818	163.00	269	255.00	355200	360.00	121
71.00	296	164.00	816	256.00	47456	362.00	107
72.00	314	165.00	7317	257.00	3953	363.00	617
73.00	1963	166.00	5545	258.00	23384	364.00	541
74.00	30928	167.00	31856	259.00	3869	365.00	23912

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\003.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 01-SEP-2020 14:41 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\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.688	(1.000)	8895	0.10000		(aH)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	35367	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.902)	10301	0.08000	0.08218	(H)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	22159	0.10000		(H)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.945)	19840	0.08000	0.07676	(H)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	43559	0.10000		(H)
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	35410	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.937)	26311	0.08000	0.08964	
* 198 Perylene-d12	264	12.972	12.967	(1.000)	41042	0.10000		
1 1,4-Dioxane	58	1.895	1.910	(0.583)	1458	0.08000	0.06111	(aH)

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\200901.b\003.D

Page 2

Date : 01-SEP-2020 14:41

Client ID: DXSIM-0.08

Instrument: SV6.i

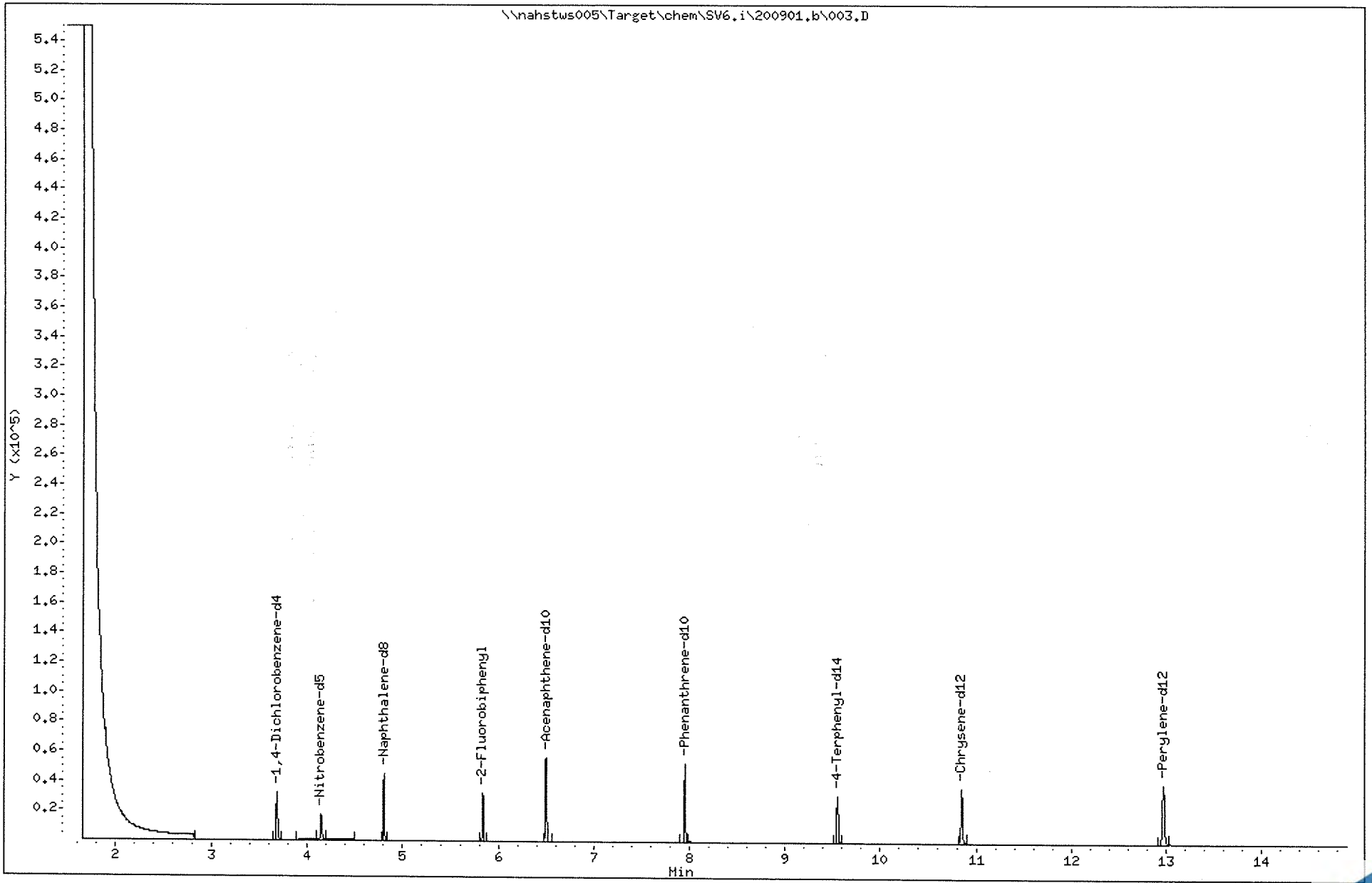
Sample Info: DXSIM-0.08;DXSIM-0.08

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\004.D
Lab Smp Id: DXSIM-0.01 Client Smp ID: DXSIM-0.01
Inj Date : 01-SEP-2020 15:03 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.01;DXSIM-0.01
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

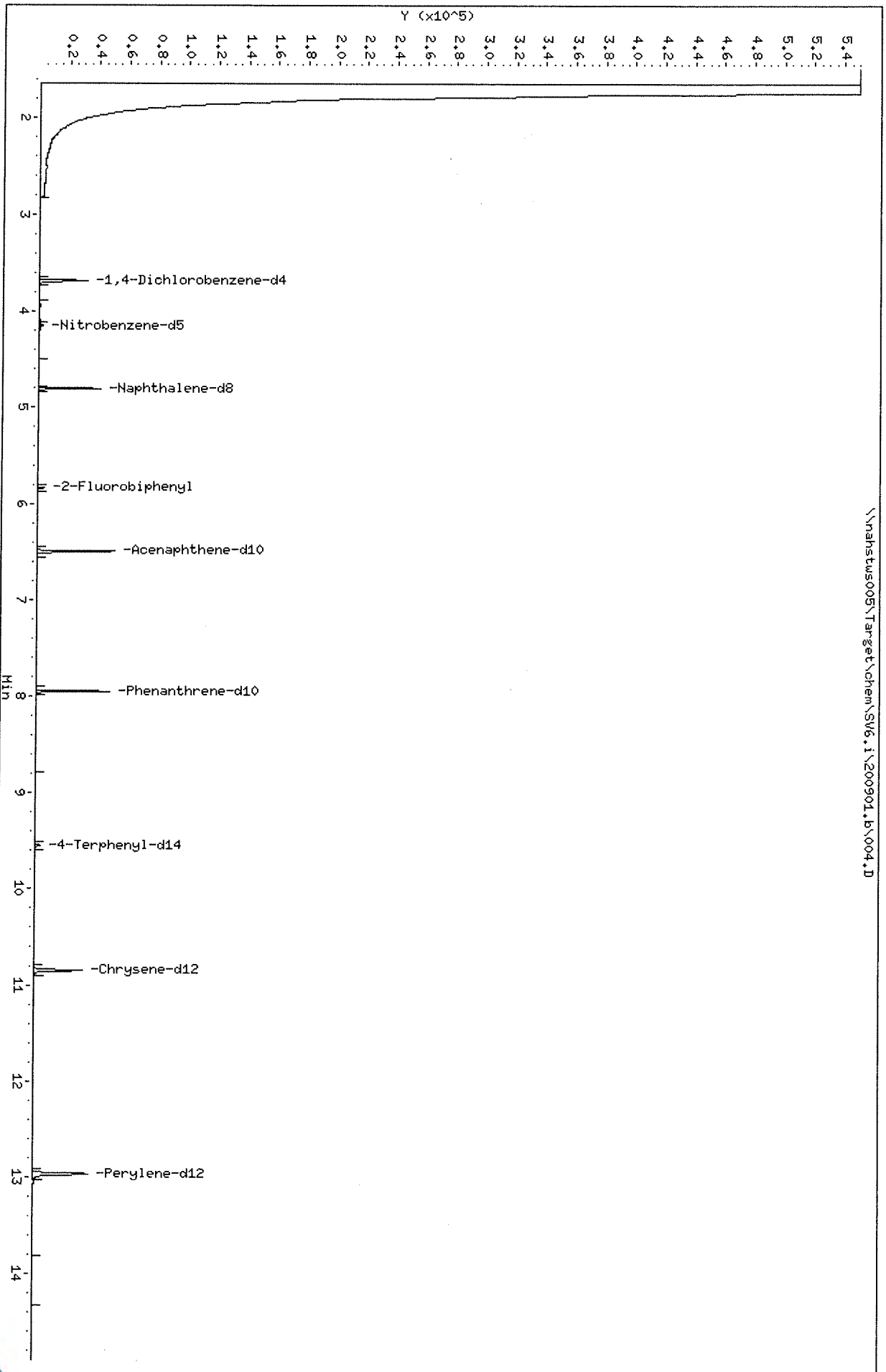
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.688	(1.000)	8796	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32119	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1526	0.01000	0.01340	(QM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	19919	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2697	0.01000	0.01161	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	38069	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	32361	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	3227	0.01000	0.01203	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	42122	0.10000		(M)

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\200901.b\004.D
Date : 01-SEP-2020 15:03
Client ID: DXSIM-0.01
Sample Info: DXSIM-0.01;DXSIM-0.01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\005.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\005.D
Lab Smp Id: DXSIM-0.03 Client Smp ID: DXSIM-0.03
Inj Date : 01-SEP-2020 15:22 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.03;DXSIM-0.03
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.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	3.688	3.688	(1.000)	11206	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	37822	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4046	0.03000	0.03018	(QM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	24426	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	8846	0.03000	0.03105	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	45805	0.10000		(M)
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	35939	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.927)	9716	0.03000	0.03261	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	49371	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\200901.b\005.D

Date : 01-SEP-2020 15:22

Client ID: DXSIM-0.03

Instrument: SV6.i

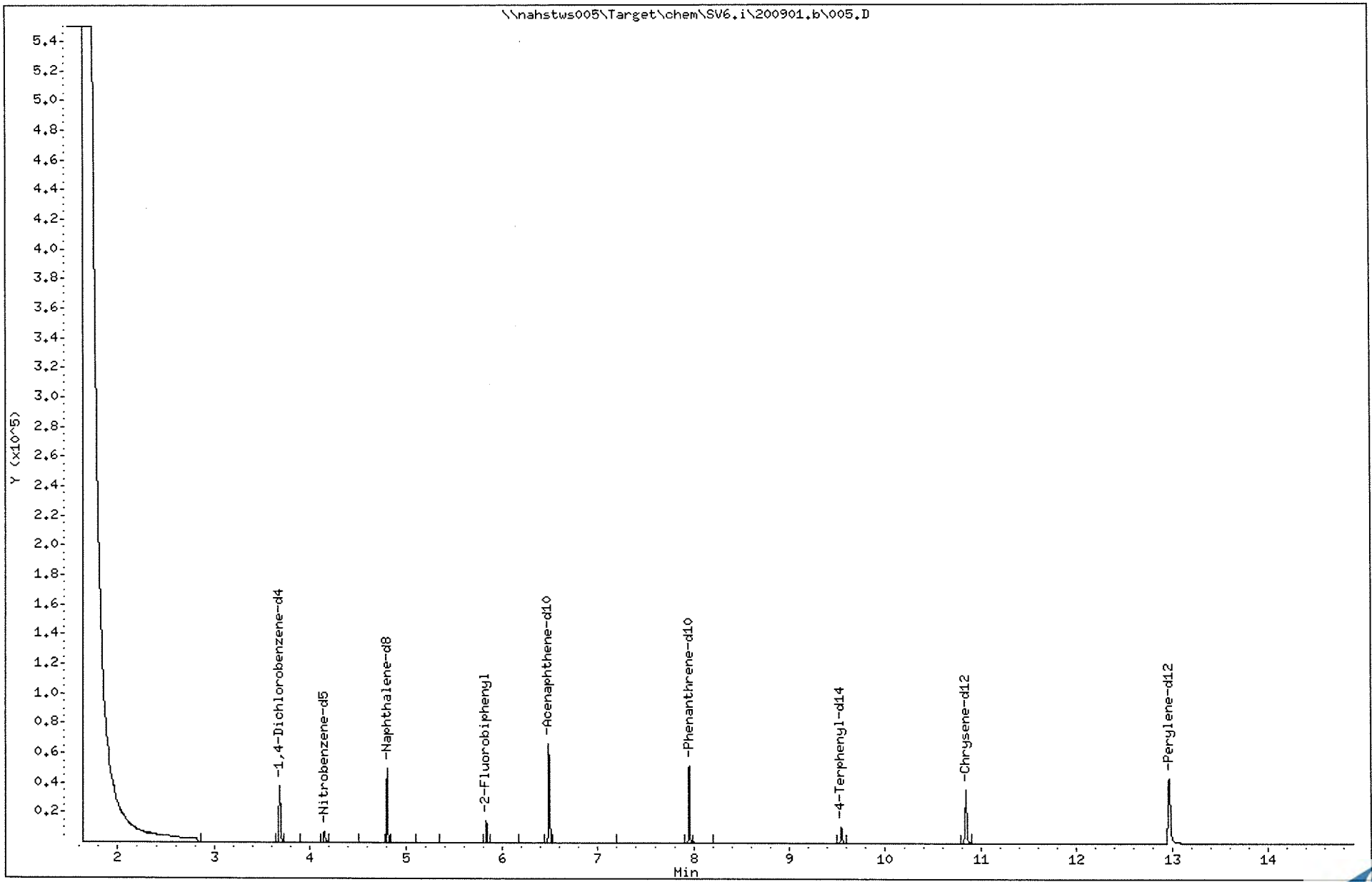
Sample Info: DXSIM-0.03;DXSIM-0.03

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\006.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\006.D
Lab Smp Id: DXSIM-0.05 Client Smp ID: DXSIM-0.05
Inj Date : 01-SEP-2020 15:41 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.05;DXSIM-0.05
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.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

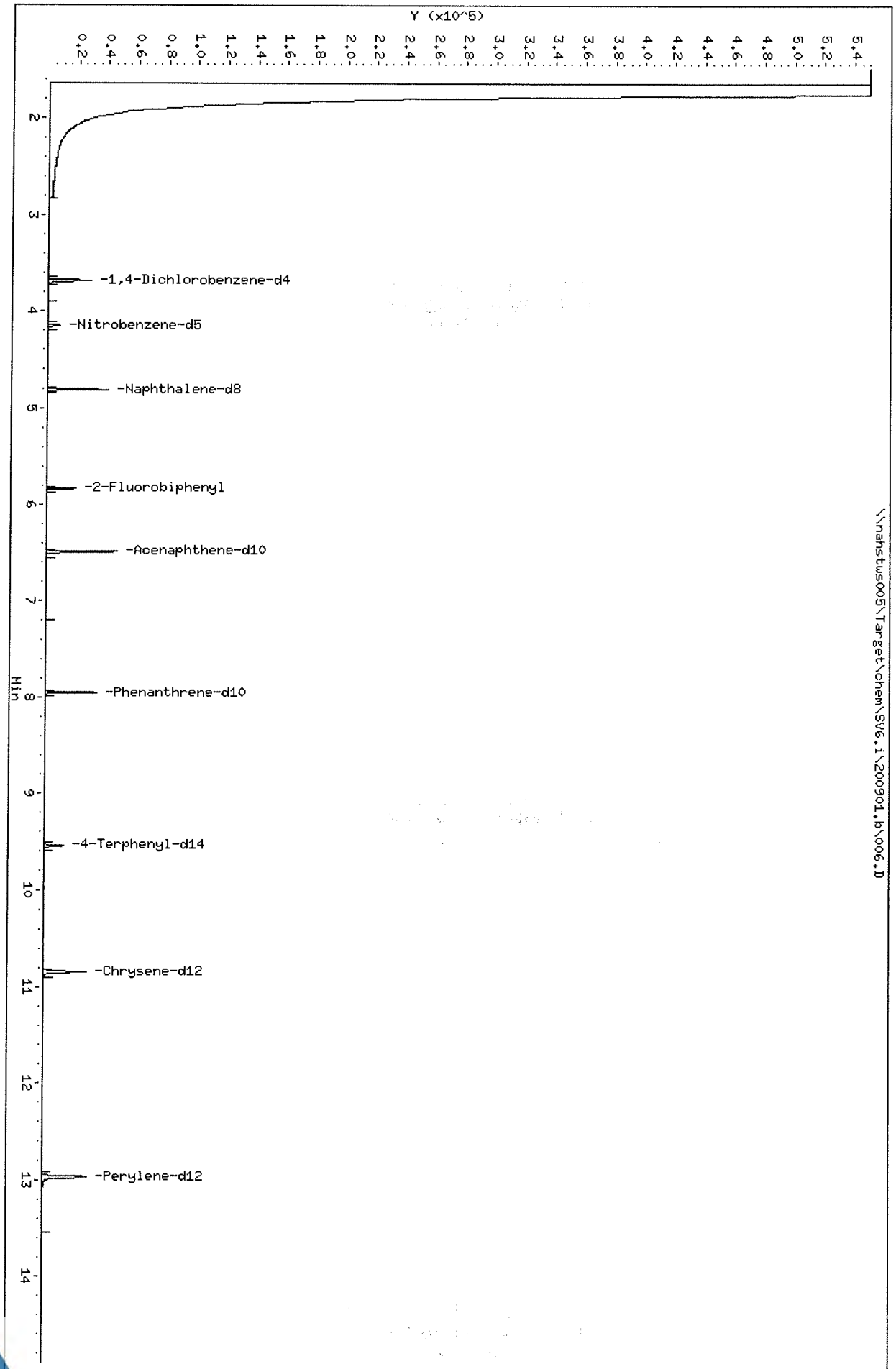
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8859	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32258	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4593	0.05000	0.04017	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	17615	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	11613	0.05000	0.05652	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	28977	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	28714	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.934)	11038	0.05000	0.04638	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	33234	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\200901.b\006.D
Date : 01-SEP-2020 15:41
Client ID: DXSIM-0.05
Sample Info: DXSIM-0.05;DXSIM-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\200901.b\007.D
Lab Smp Id: DXSIM-0.10 Client Smp ID: DXSIM-0.10
Inj Date : 01-SEP-2020 16:00 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.10;DXSIM-0.10
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

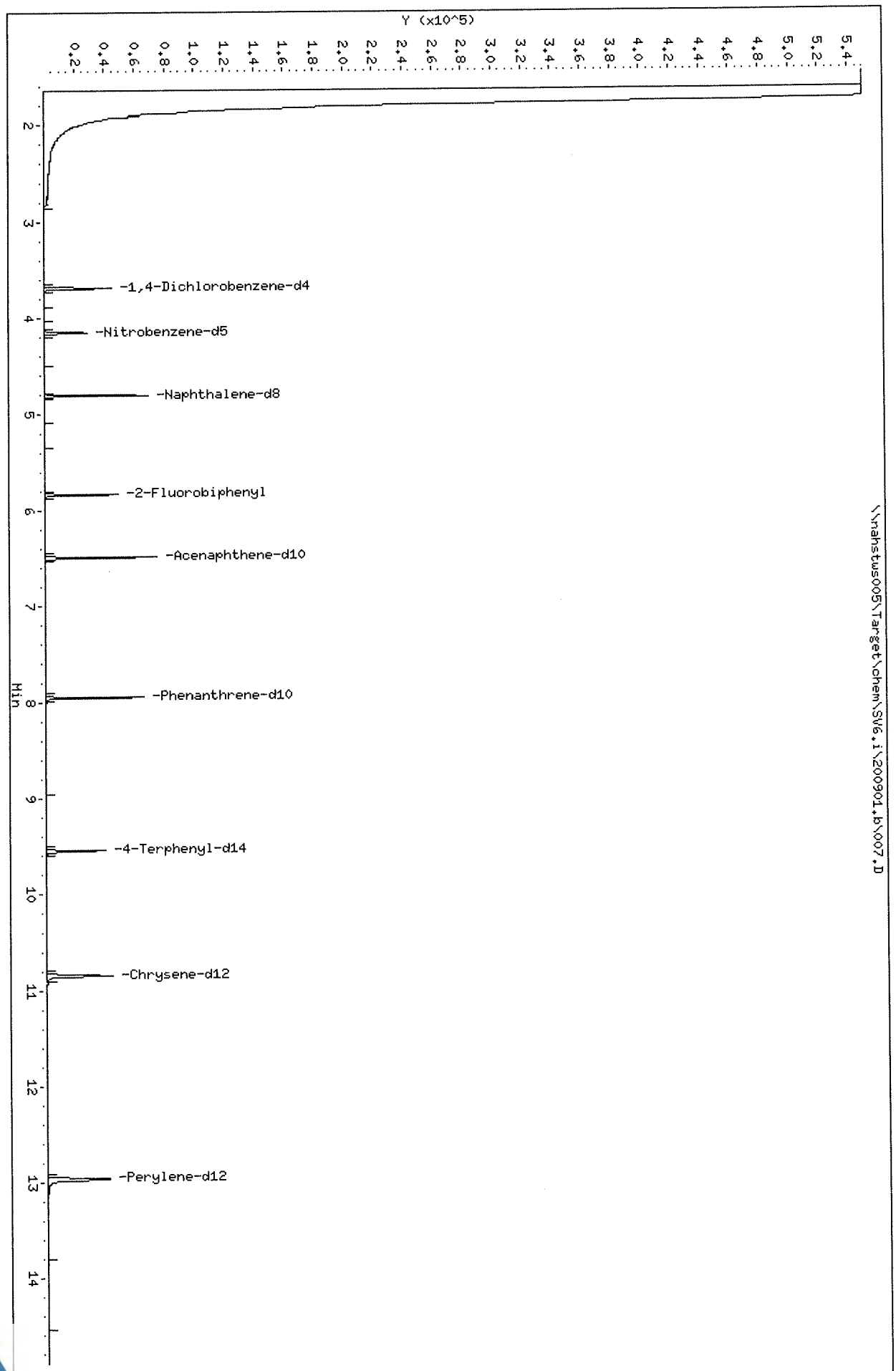
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	11640	0.10000	(aM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	55315	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	16389	0.10000	0.08360(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	27614	0.10000	(QM)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	31424	0.10000	0.09756(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	55479	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	48676	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(1.000)	34456	0.10000	0.08540
* 198 Perylene-d12	264	12.962	12.967	(1.000)	53866	0.10000	
1 1,4-Dioxane	58	1.918	1.910	(0.567)	3169	0.10000	0.1015(aQH)

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\200901.b\007.D
Date : 01-SEP-2020 16:00
Client ID: DXSIM-0.10
Sample Info: DXSIM-0.10;DXSIM-0.10
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\200901.b\008.D
Lab Smp Id: DXSIM-0.15 Client Smp ID: DXSIM-0.15
Inj Date : 01-SEP-2020 16:19 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.15;DXSIM-0.15
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

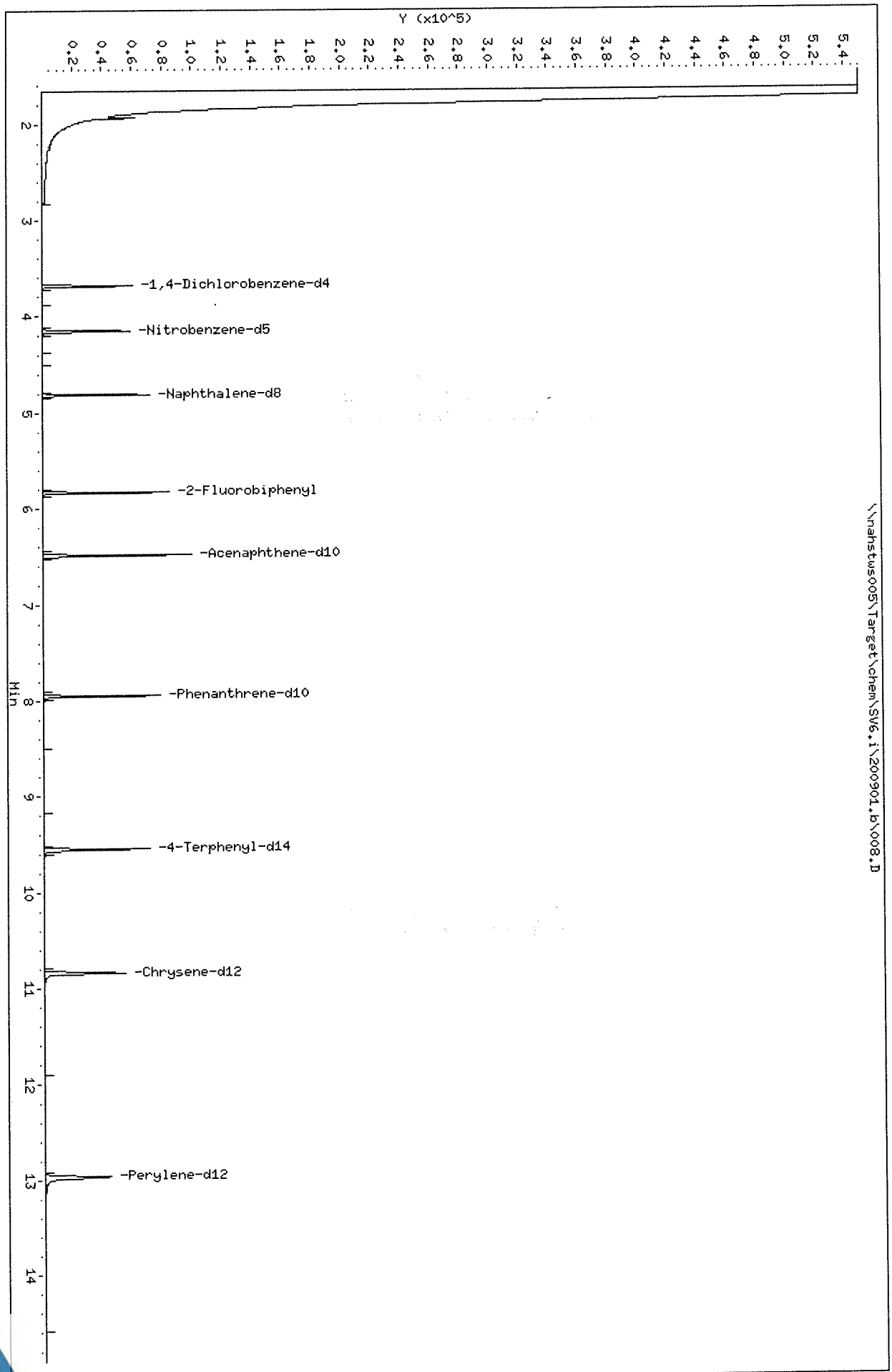
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	15270	0.10000		(aQM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	61912	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	34608	0.15000	0.1577	(AM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	37191	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	58798	0.15000	0.1355	(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	72506	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	63837	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	68288	0.15000	0.1290	(M)
* 198 Perylene-d12	264	12.961	12.967	(1.000)	62319	0.10000		(M)
1 1,4-Dioxane	58	1.932	1.910	(0.555)	6821	0.15000	0.1665	(aQH)

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.
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\200901.b\008.D
Date : 01-SEP-2020 16:19
Client ID: DXSIM-0.15
Sample Info: DXSIM-0.15;DXSIM-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\200901.b\009.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Lab Smp Id: DXSIM-0.2 Client Smp ID: DXSIM-0.2
Inj Date : 01-SEP-2020 16:38 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.2;DXSIM-0.2
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

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

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

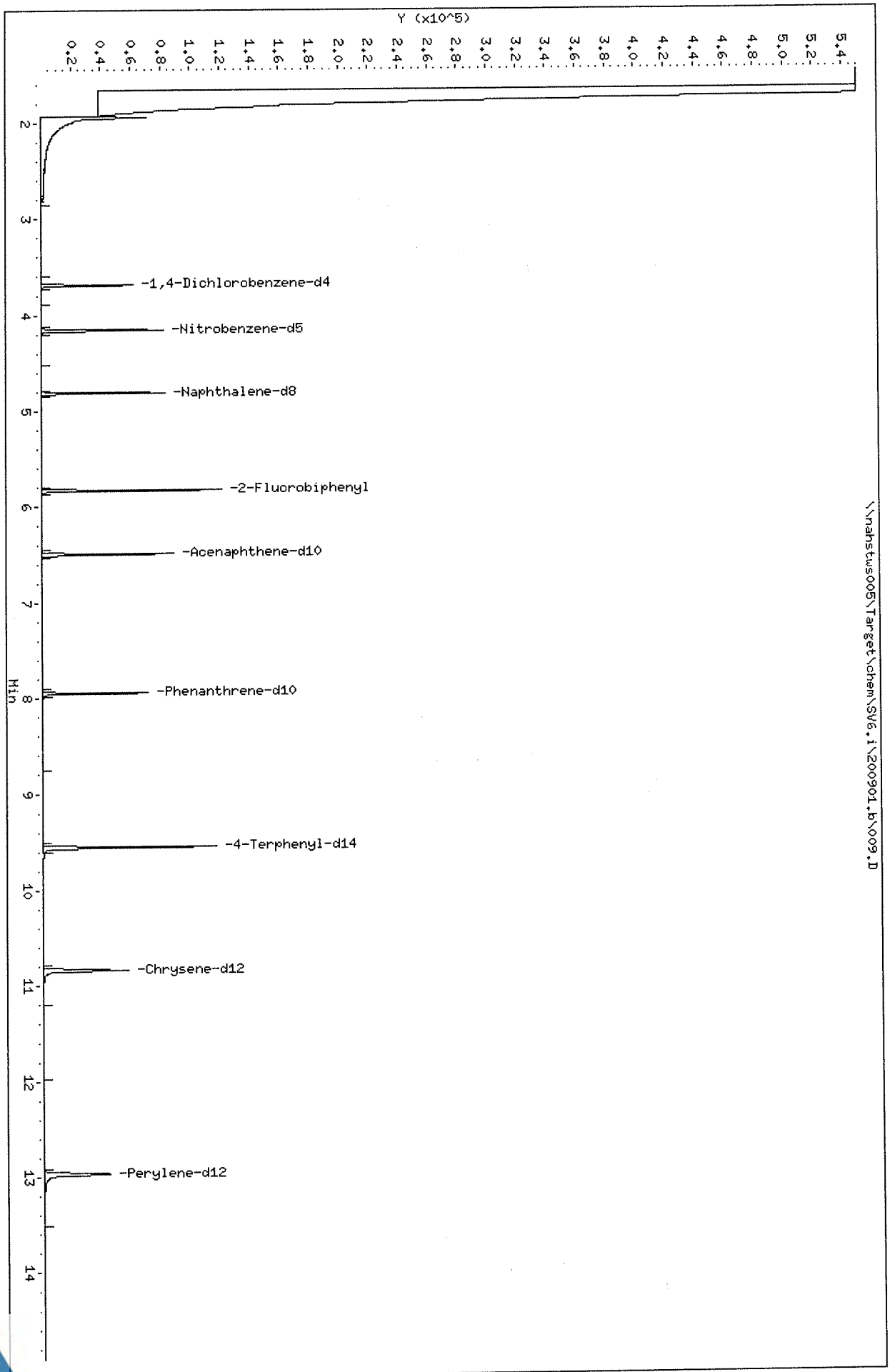
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.694	3.688	(1.000)	16191	0.10000	(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	71876	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	47444	0.20000	0.1862 (AM)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	37058	0.10000	(Q)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	83257	0.20000	0.1926 (A)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	66839	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	69577	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.933)	107656	0.20000	0.1867 (A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	67389	0.10000	(M)
1 1,4-Dioxane	58	1.943	1.910	(0.526)	10742	0.20000	0.2474 (QM)

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.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Date : 01-SEP-2020 16:38
Client ID: DXSIM-0.2
Sample Info: DXSIM-0.2;DXSIM-0.2
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\010.D Page 1
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\010.D
Lab Smp Id: DXSIM-0.5 Client Smp ID: DXSIM-0.5
Inj Date : 01-SEP-2020 16:57 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.5;DXSIM-0.5
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

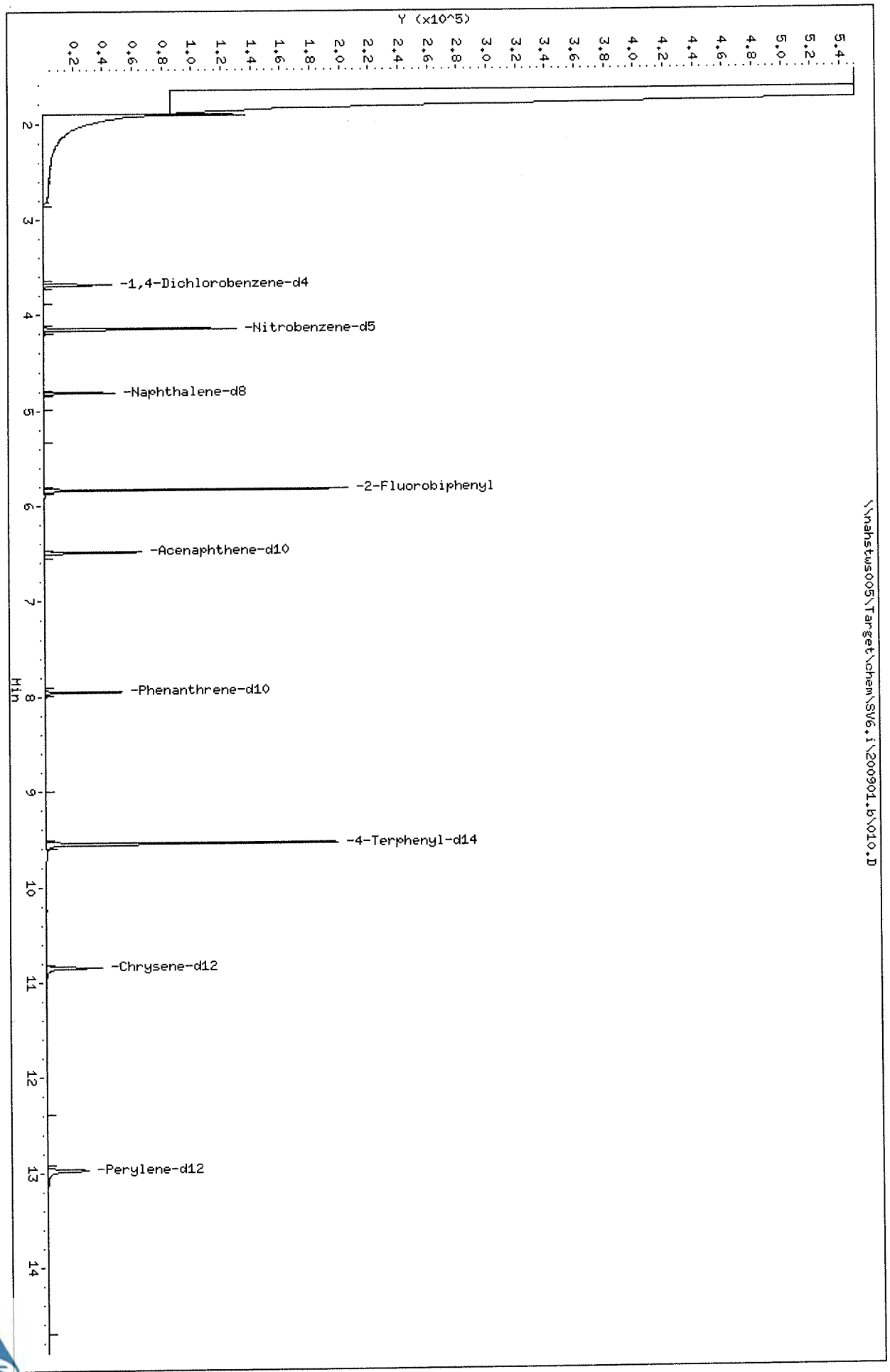
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	12162	0.10000	(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	42331	0.10000	(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	75298	0.50000	0.5019(AM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	25766	0.10000	
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	131053	0.50000	0.4360(AQM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	46874	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	42265	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.934)	177660	0.50000	0.5071(A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	40372	0.10000	(M)
1 1,4-Dioxane	58	1.910	1.910	(0.518)	17000	0.50000	0.5212(AQH)

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.
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\200901.b\010.D
Date : 01-SEP-2020 16:57
Client ID: DXSIM-0.5
Sample Info: DXSIM-0.5;DXSIM-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\200901.b\011.D
Report Date: 25-Sep-2020 11:12

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\011.D
Lab Smp Id: DXSIM-ICV Client Smp ID: DXSIM-ICV
Inj Date : 01-SEP-2020 17:16 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-ICV;DXSIM-ICV
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 11 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

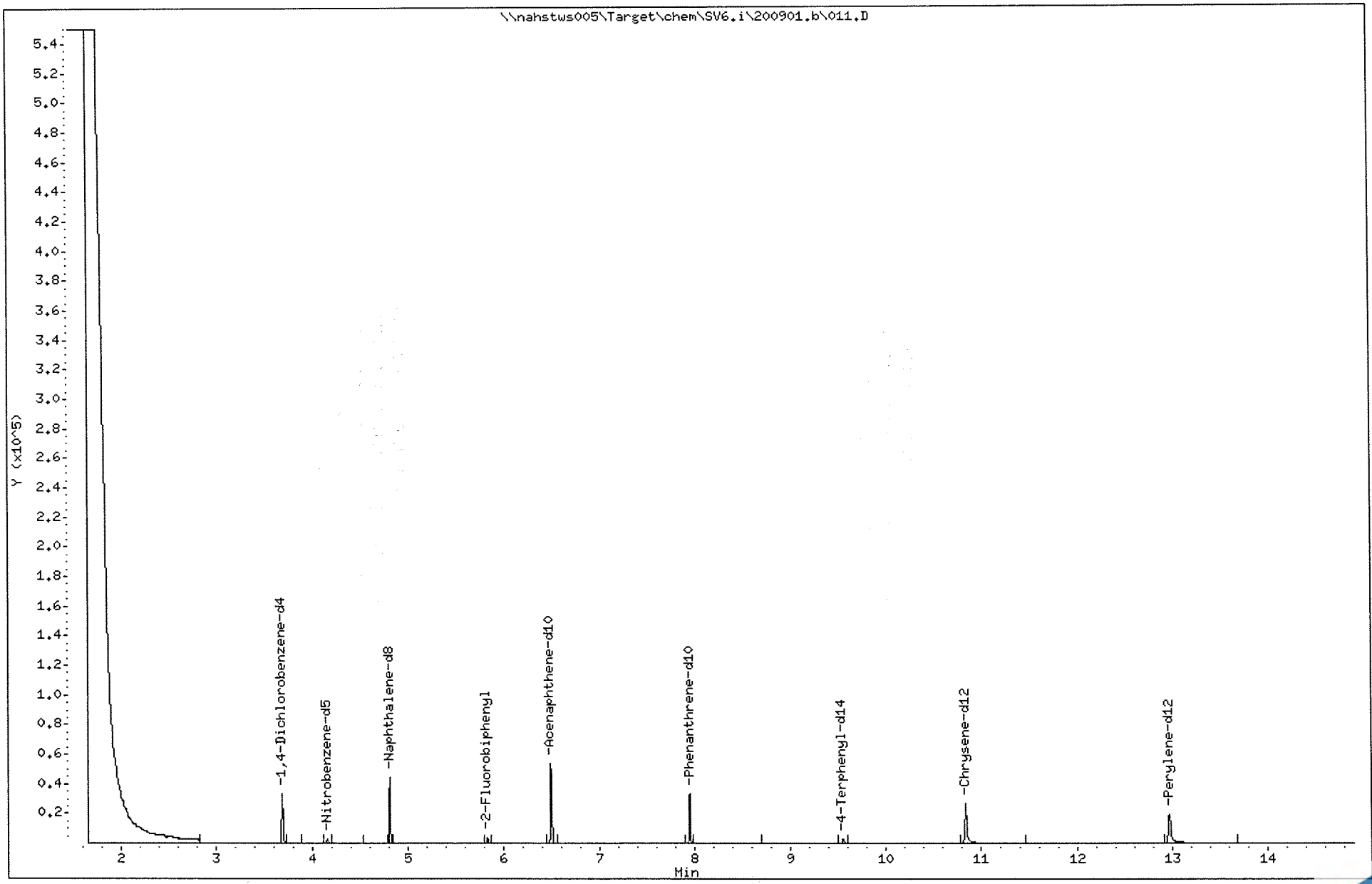
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8963	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	36304	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1344	0.01045	0.01044	(RM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	20841	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2375	0.00977	0.009770	(RM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	29957	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	32572	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	3102	0.01149	0.01149	(RM)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	29891	0.10000		(M)
1 1,4-Dioxane	58	1.906	1.910	(0.517)	1870	0.07779	0.07779	(aQH)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\011.D
Date : 01-SEP-2020 17:16
Client ID: DXSIM-ICV
Sample Info: DXSIM-ICV;DXSIM-ICV
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\200901.b\024.D
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\024.D
Lab Smp Id: MBLK-156817 Client Smp ID: MBLK-156817
Inj Date : 01-SEP-2020 21:29 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-156817;MBLK-156817;3;;BLANK
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 24 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

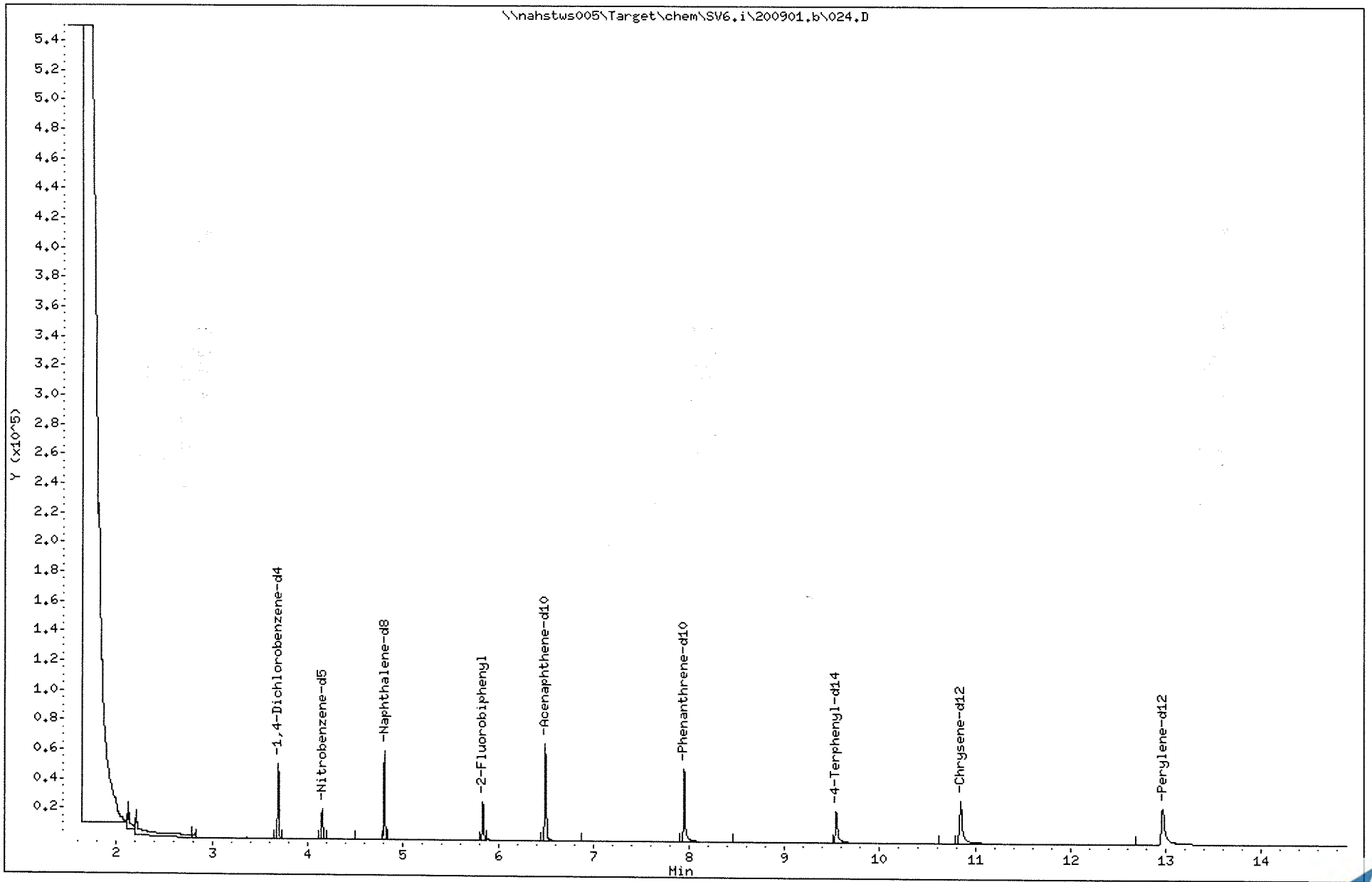
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.694	3.688	(1.000)	13204	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	54334	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	11778	0.06116	0.06116	(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	29825	0.10000		(QM)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	21640	0.06220	0.06220	(M)
* 126 Phenanthrene-d10	188	7.946	7.951	(1.000)	64312	0.10000		(M)
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	51452	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	33988	0.07969	0.07969	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	52021	0.10000		(M)

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\200901.b\024.D
Date : 01-SEP-2020 21:29
Client ID: MBLK-156817
Sample Info: MBLK-156817;MBLK-156817;3;;BLANK
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\025.D
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\025.D
Lab Smp Id: LCS-156817 Client Smp ID: LCS-156817
Inj Date : 01-SEP-2020 21:48 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCS-156817;LCS-156817;3;;LCS
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 25 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

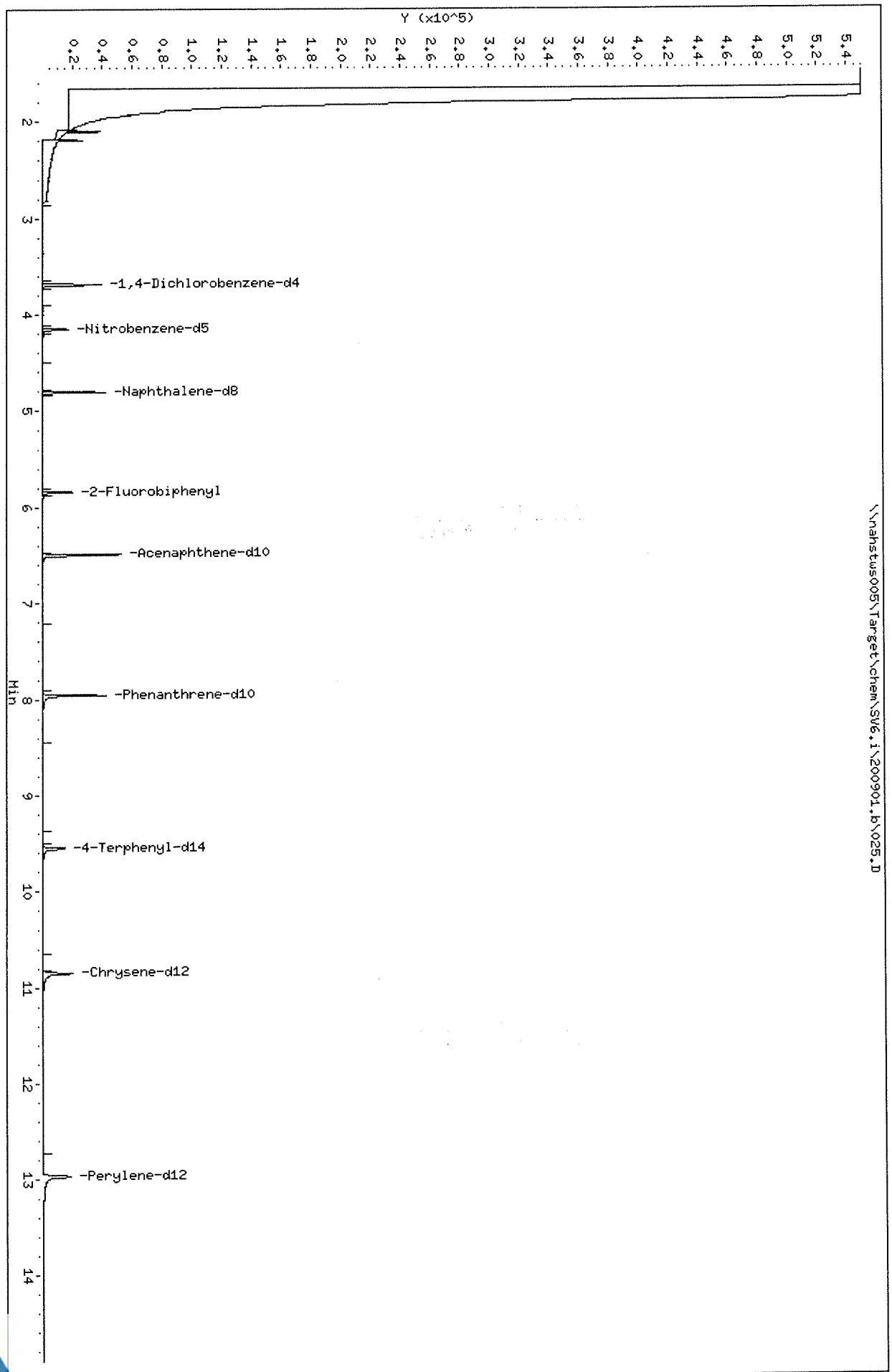
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	10614	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	36720	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	10487	0.08058	0.08058	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	23957	0.10000		
$ 69 2-Fluorobiphenyl	172	5.837	5.834	(0.899)	18182	0.06507	0.06506	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	47492	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	34942	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	23713	0.08187	0.08187	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	31820	0.10000		(M)
1 1,4-Dioxane	58	1.906	1.910	(0.517)	1580	0.05550	0.05550	(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\200901.b\025.D
Date : 01-SEP-2020 21:48
Client ID: LCS-156817
Sample Info: LCS-156817;LCS-156817;3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

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



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\026.D Page 1
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\026.D
Lab Smp Id: LCSD-156817 Client Smp ID: LCSD-156817
Inj Date : 01-SEP-2020 22:07 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-156817;LCSD-156817;3;;LCSD
Misc Info : HS20081150;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:10 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 26 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

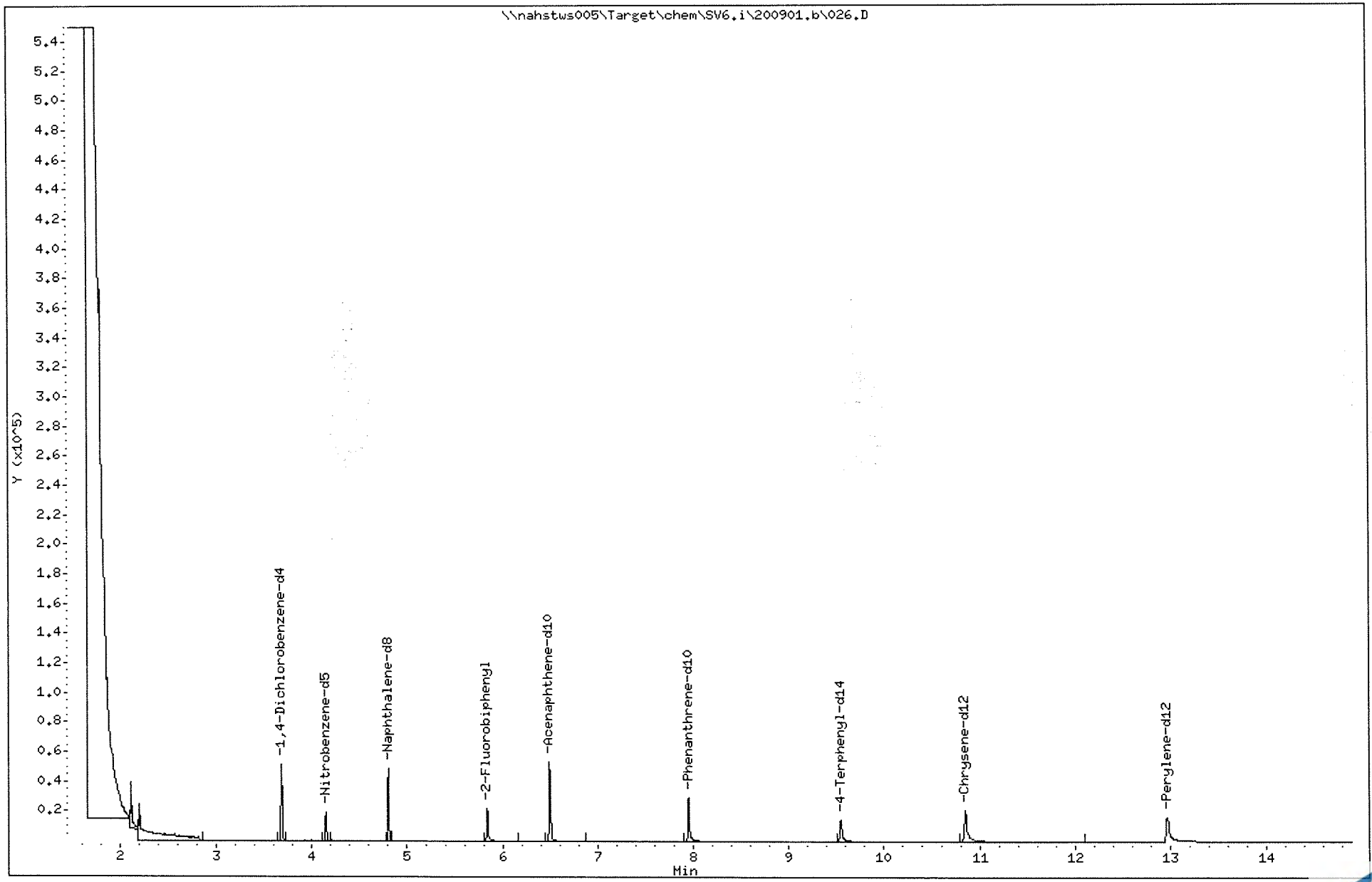
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	13263	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	42229	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	11165	0.07460	0.07460	(M)
* 86 Acenaphthene-d10	164	6.491	6.496	(1.000)	23775	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	19693	0.07101	0.07101	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	38270	0.10000		
* 182 Chrysene-d12	240	10.845	10.840	(1.000)	39135	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	23569	0.07266	0.07266	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	33668	0.10000		(M)

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\200901.b\026.D
Date : 01-SEP-2020 22:07
Client ID: LCSD-156817
Instrument: SV6.i
Sample Info: LCSD-156817;LCSD-156817;3;;LCSD
Purge Volume: 1000.0
Operator: LG
Column phase: RTX-5SIL MS
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\030.D Page 1
Report Date: 25-Sep-2020 10:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\030.D
Lab Smp Id: HS20081151-01 Client Smp ID: HS20081151-01
Inj Date : 01-SEP-2020 23:23 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : HS20081151-01;HS20081151-01
Misc Info : HS20081151;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 10:41 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 30
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

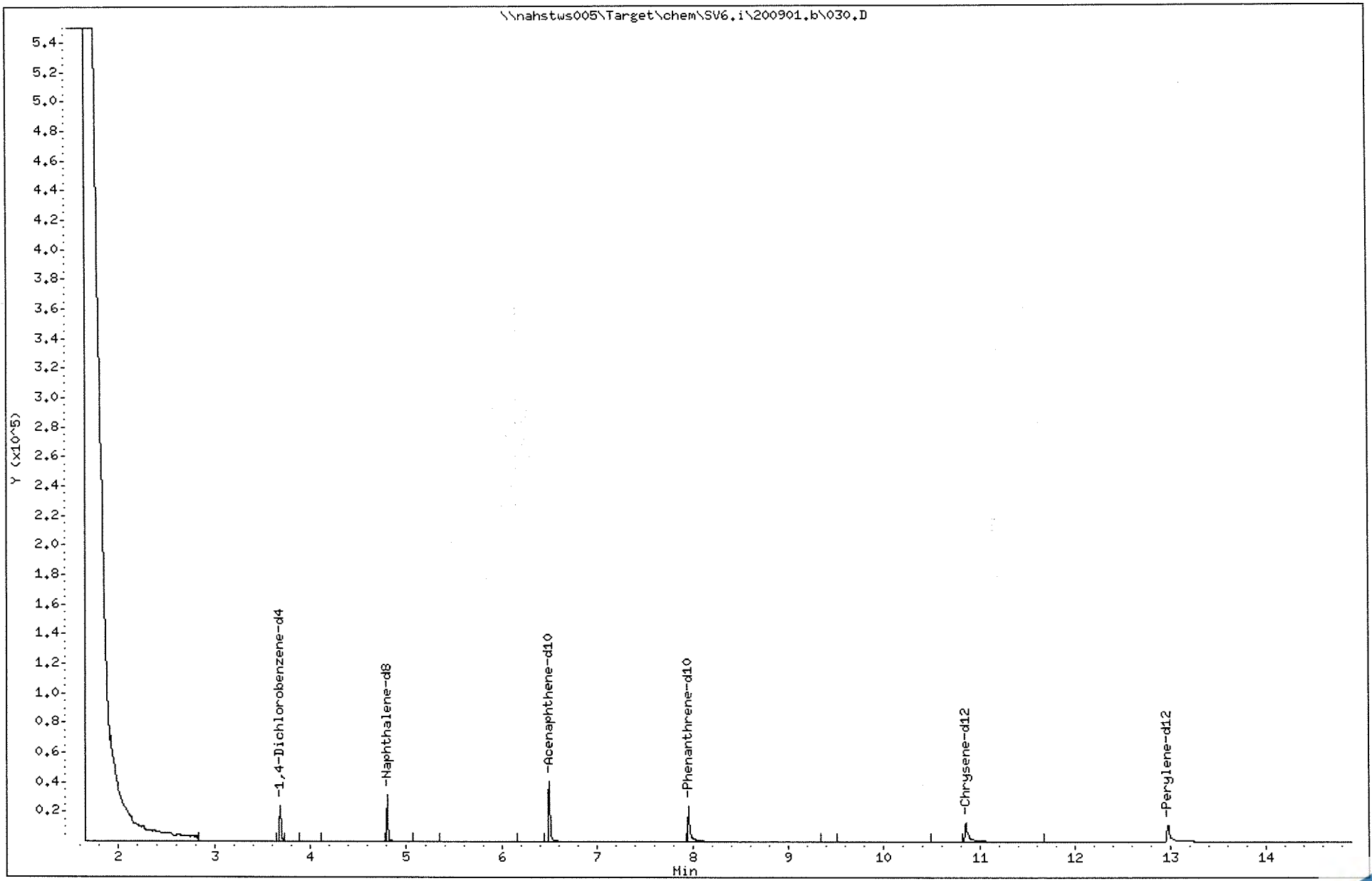
Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.683	(1.000)	7546	0.10000		(a)
* 45 Naphthalene-d8	136	4.813	4.809	(1.000)	28477	0.10000		(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	19455	0.10000		
* 126 Phenanthrene-d10	188	7.957	7.951	(1.000)	35517	0.10000		
* 182 Chrysene-d12	240	10.851	10.845	(1.000)	28838	0.10000		(M)
* 198 Perylene-d12	264	12.972	12.972	(1.000)	24864	0.10000		(M)
1 1,4-Dioxane	58	1.884	1.895	(0.511)	1288	0.06364	6.364	(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\200901.b\030.D
Date : 01-SEP-2020 23:23
Client ID: HS20081151-01
Instrument: SV6.i
Sample Info: HS20081151-01;HS20081151-01
Purge Volume: 1000.0
Operator: LG
Column phase: RTX-5SIL MS
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\030.D

Date : 01-SEP-2020 23:23

Client ID: HS20081151-01

Instrument: SV6.i

Sample Info: HS20081151-01;HS20081151-01

Purge Volume: 1000.0

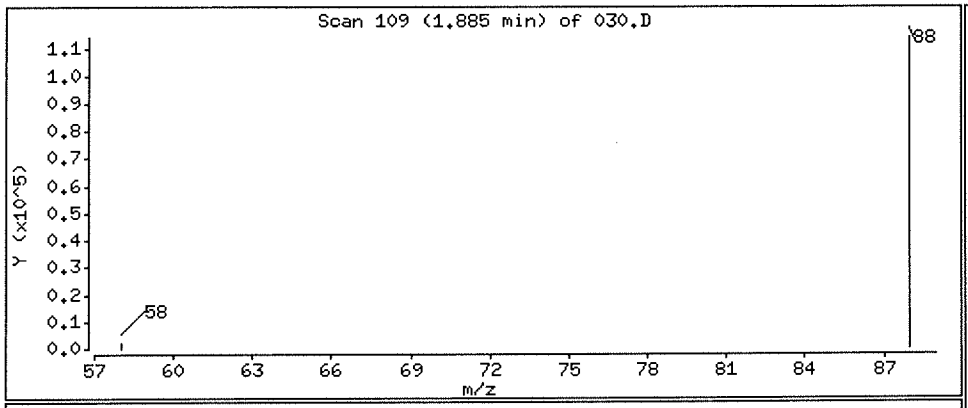
Operator: LG

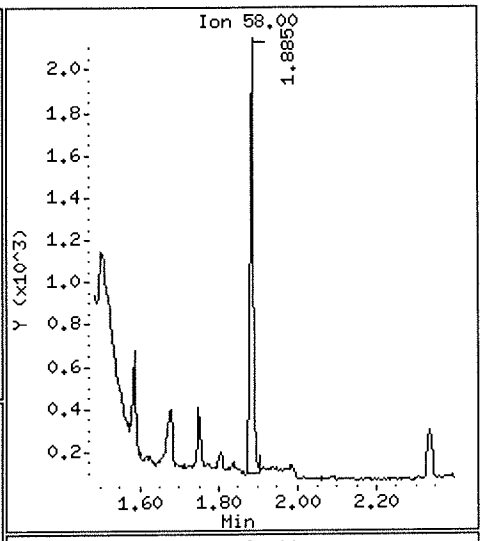
Column phase: RTX-5SIL MS

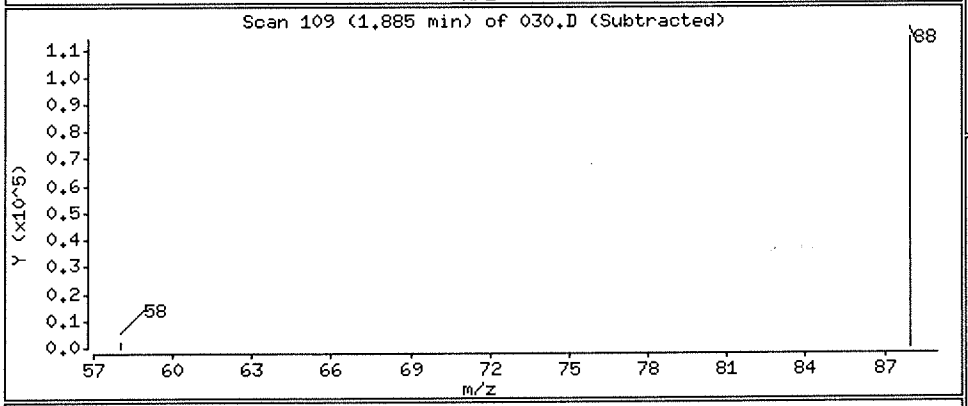
Column diameter: 0.28

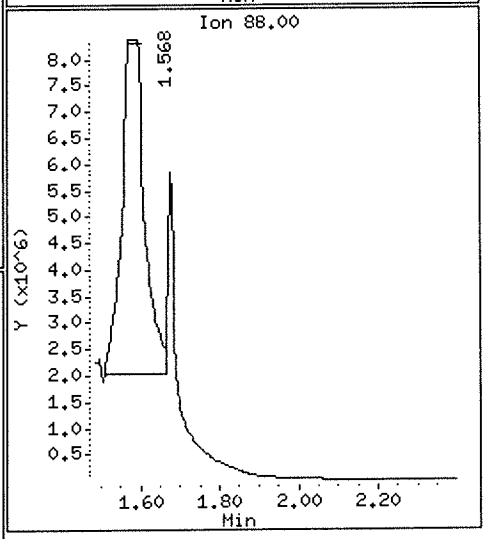
1 1,4-Dioxane

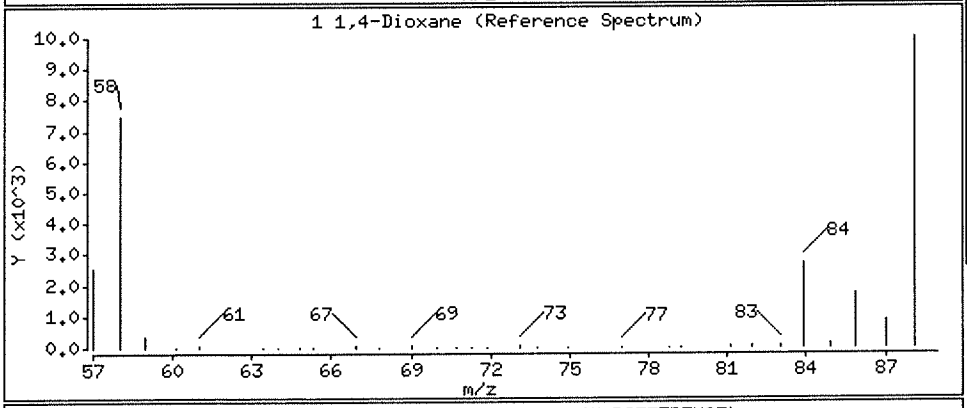
Concentration: 6.364 ug/L

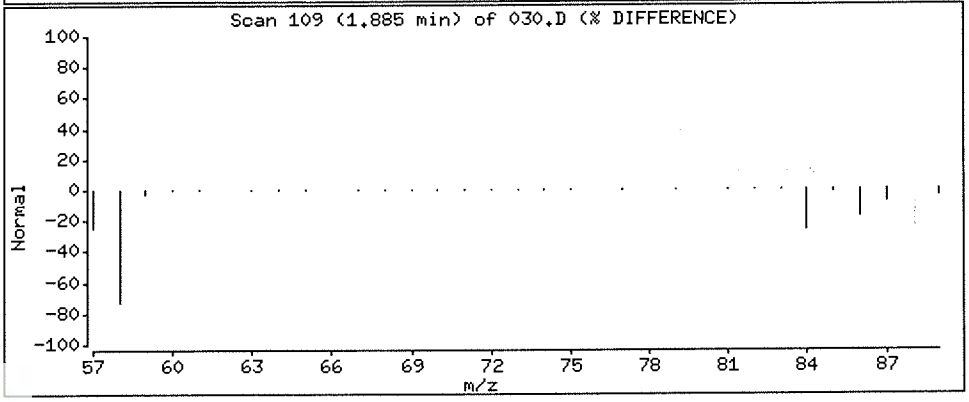












Data File: \\nahstws005\Target\chem\SV6.i\200901.b\031.D
Report Date: 25-Sep-2020 11:27

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\031.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 01-SEP-2020 23:42 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : HS20081151;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 25-Sep-2020 11:27 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

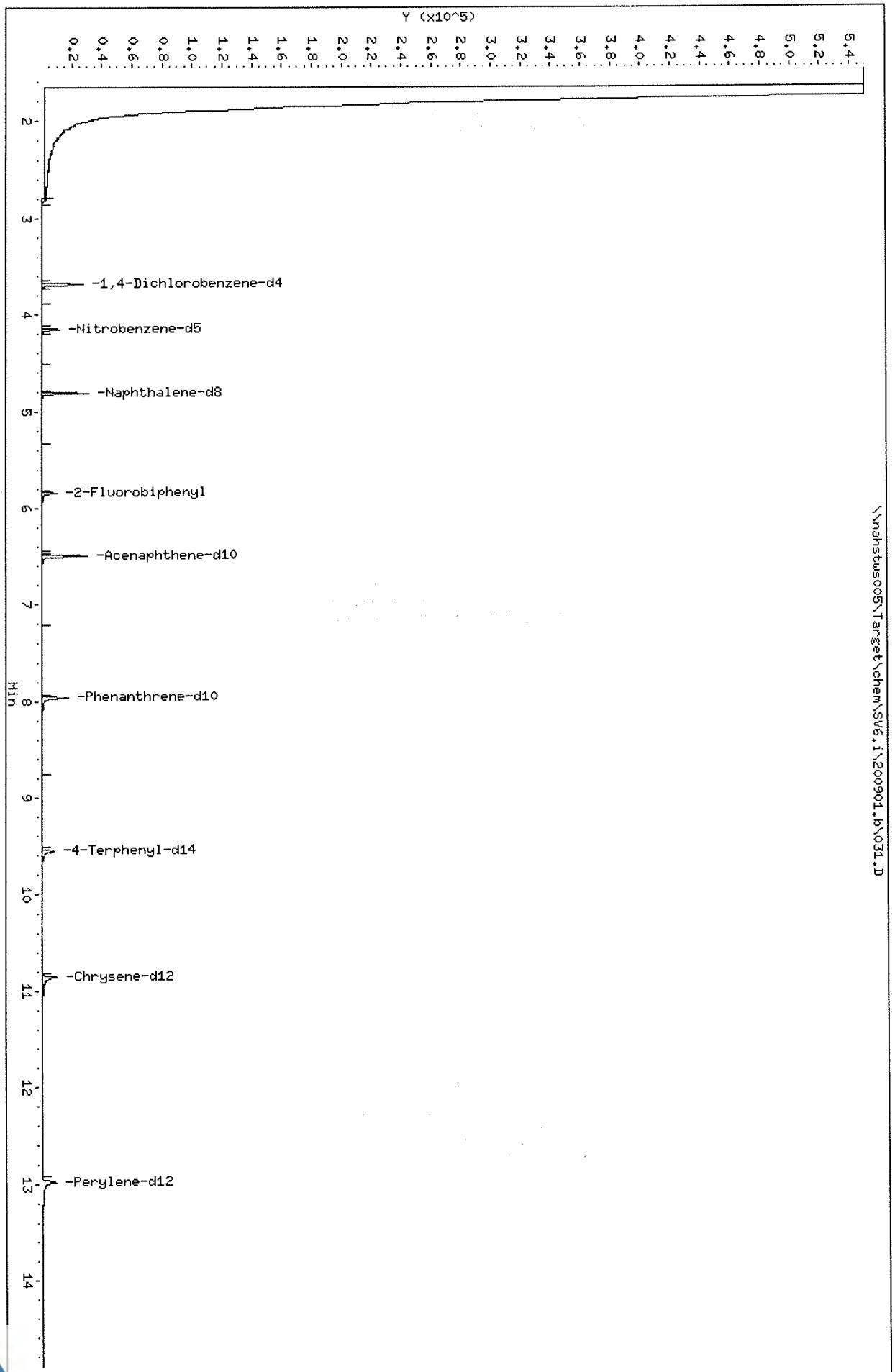
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

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	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8712	0.10000		(aM)
* 45 Naphthalene-d8	136	4.813	4.813	(1.000)	29191	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.863)	7071	0.08000	0.06835	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	14617	0.10000		
$ 69 2-Fluorobiphenyl	172	5.841	5.841	(0.899)	14596	0.08000	0.08561	(M)
* 126 Phenanthrene-d10	188	7.957	7.957	(1.000)	25985	0.10000		
* 182 Chrysene-d12	240	10.851	10.851	(1.000)	23709	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.559	9.559	(0.881)	15389	0.08000	0.07830	(M)
* 198 Perylene-d12	264	12.978	12.978	(1.000)	20825	0.10000		(M)
1 1,4-Dioxane	58	1.888	1.888	(0.512)	2027	0.08000	0.08675	(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\200901.b\031.D
Date : 01-SEP-2020 23:42
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

HS20081151 - ME - HG_W_DODICP_W_DOD

ALS WO# HS20081151

ALS Houston, US Date: 25-Sep-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151
Start Date: 31-Aug-2020 08:30 End Date: 01-Sep-2020 10:30

Batch ID: 156890
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20081150-01MS				10	10	1
HS20081150-01MSD				10	10	1
HS20081151-01	LH18/24-SP650_082520	Water		10	10	1
LCS-156890				10	10	1
MBLK-156890				10	10	1

ALS Houston, US Date: 25-Sep-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151
Start Date: 28-Aug-2020 10:00 End Date: 28-Aug-2020 14:00

Batch ID: 156822
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20081150-01MS				10	10	1
HS20081150-01MSD				10	10	1
HS20081150-01PDS				10	10	1
HS20081150-01SD				10	10	1
HS20081151-01	LH18/24-SP650_082520	Water		10	10	1
LCS-156822				10	10	1
MBLK-156822				10	10	1

ALS Houston, US

Date: 25-Sep-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151
Start Date: 01-Sep-2020 End Date: 01-Sep-2020

Run ID:HG03_367830
Instrument:HG03
Method:SW7470

Sample No.	D/F	Time	FileID	Analytes
ICCV 1	1	01-Sep-2020 11:10	_5722597	HG
ICV	1	01-Sep-2020 11:14	_5722598	HG
ICB	1	01-Sep-2020 11:15	_5722599	HG
CRA	1	01-Sep-2020 11:17	_5722600	HG
CCV 2	1	01-Sep-2020 11:39	_5722607	HG
CCB 1	1	01-Sep-2020 11:40	_5722608	HG
CCV 3	1	01-Sep-2020 12:01	_5722619	HG
CCB 2	1	01-Sep-2020 12:03	_5722620	HG
CCV 4	1	01-Sep-2020 12:35	_5722627	HG
CCB 3	1	01-Sep-2020 12:36	_5722628	HG
CCV 5	1	01-Sep-2020 12:55	_5722629	HG
CCB 4	1	01-Sep-2020 12:57	_5722630	HG
CCV 6	1	01-Sep-2020 13:08	HG03_367830 Raw Data_5722593	HG
CCB 5	1	01-Sep-2020 13:10	_5722594	HG
MBLK-156890	1	01-Sep-2020 13:12	_5722646	HG
LCS-156890	1	01-Sep-2020 13:13	_5722647	HG
ZZZZZZMS	1	01-Sep-2020 13:17	_5722649	HG
ZZZZZZMSD	1	01-Sep-2020 13:19	_5722650	HG
LH18/24-SP650_082520	1	01-Sep-2020 13:20	_5722651	HG
CCV 7	1	01-Sep-2020 13:22	_5722595	HG
CCB 6	1	01-Sep-2020 13:24	_5722596	HG
CCV 8	1	01-Sep-2020 14:12	_5722791	HG
CCB 7	1	01-Sep-2020 14:14	_5722792	HG
CCV 9	1	01-Sep-2020 14:41	_5722803	HG
CCB 8	1	01-Sep-2020 14:43	_5722804	HG
CCV 10	1	01-Sep-2020 15:06	_5722811	HG
CCB 9	1	01-Sep-2020 15:08	_5722812	HG
CCV 11	1	01-Sep-2020 15:33	_5722833	HG
CCB 10	1	01-Sep-2020 15:35	_5722834	HG
CCV 12	1	01-Sep-2020 15:51	_5722839	HG
CCB 11	1	01-Sep-2020 15:52	_5722840	HG

ALS Houston, US

Date: 25-Sep-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151
Start Date: 02-Sep-2020 End Date: 02-Sep-2020

Run ID:ICPMS06_367914
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_367914_Tune	1	02-Sep-2020 00:00	ICPMS06_367914_Tune_1	
CAL BLK	1	02-Sep-2020 10:34	011CALB.d_5724320	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	02-Sep-2020 10:36	012CALS.d_5724321	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	02-Sep-2020 10:38	013CALS.d_5724322	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
10/50/100	1	02-Sep-2020 10:40	014CALS.d_5724323	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	02-Sep-2020 10:42	015CALS.d_5724324	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	02-Sep-2020 10:43	016CALS.d_5724325	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	02-Sep-2020 10:47	018_ICV.d_5724327	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	02-Sep-2020 10:49	019LCV2.d_5724328	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	02-Sep-2020 10:51	020LCV5.d_5724329	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	02-Sep-2020 10:53	021_ICB.d_5724330	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	02-Sep-2020 10:58	023ICSA.d_5724332	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	02-Sep-2020 11:00	024ICSB.d_5724333	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCV 1	1	02-Sep-2020 16:23	145_CCV.d_5724335	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	02-Sep-2020 16:25	146_CCB.d_5724336	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
MBLK-156822	1	02-Sep-2020 16:29	147SMPL.d_5724337	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
LCS-156822	1	02-Sep-2020 16:31	148SMPL.d_5724338	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	5	02-Sep-2020 16:35	150SMPL.d_5724340	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
ZZZZZZMS	1	02-Sep-2020 16:37	151SMPL.d_5724341	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZMSD	1	02-Sep-2020 16:39	152SMPL.d_5724342	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZPDS	1	02-Sep-2020 16:41	153SMPL.d_5724343	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
LH18/24-SP650_082520	1	02-Sep-2020 16:43	154SMPL.d_5724344	AG AL AS BA BE CA CD CO CR FE K MG MN NI PB SB SE TL V ZN
CCV 2	1	02-Sep-2020 16:49	156_CCV.d_5724346	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	02-Sep-2020 16:51	157_CCB.d_5724347	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCV 3	1	02-Sep-2020 21:41	186_CCV.d_5724374	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 3	1	02-Sep-2020 21:43	187_CCB.d_5724375	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	100	02-Sep-2020 21:46	189SMPL.d_5724377	NA
ZZZZZZPDS	20	02-Sep-2020 21:48	190SMPL.d_5724378	NA
LH18/24-SP650_082520	20	02-Sep-2020 21:50	191SMPL.d_5724379	NA
CCV 4	1	02-Sep-2020 21:52	192_CCV.d_5724380	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN
CCB 4	1	02-Sep-2020 21:54	193_CCB.d_5724381	AG AL AS BA BE CA CD CO CR FE K MG MN NA NI PB SB SE TL V ZN

ALS Houston, US

Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: HG03_367830
Instrument: HG03
Method: SW7470

ICCV1 Date: 01-Sep-2020 11:10 Seq: 5722597 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.82	96	90-110	

ICV Date: 01-Sep-2020 11:14 Seq: 5722598 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.88	98	90-110	

CCV2 Date: 01-Sep-2020 11:39 Seq: 5722607 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.1	102	90-110	

CCV3 Date: 01-Sep-2020 12:01 Seq: 5722619 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.93	99	90-110	

CCV4 Date: 01-Sep-2020 12:35 Seq: 5722627 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.12	102	90-110	

CCV5 Date: 01-Sep-2020 12:55 Seq: 5722629 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV6 Date: 01-Sep-2020 13:08 Seq: 5722593 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.91	98	90-110	

CCV7 Date: 01-Sep-2020 13:22 Seq: 5722595 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.96	99	90-110	

CCV8 Date: 01-Sep-2020 14:12 Seq: 5722791 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.95	99	90-110	

CCV9 Date: 01-Sep-2020 14:41 Seq: 5722803 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.83	97	90-110	

CCV10 Date: 01-Sep-2020 15:06 Seq: 5722811 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.95	99	90-110	

CCV11 Date: 01-Sep-2020 15:33 Seq: 5722833 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.66	93	90-110	

CCV12 Date: 01-Sep-2020 15:51 Seq: 5722839 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.86	97	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS06_367914
Project: Groundwater Treatment Plant Quarterly Effluent Samples Instrument: ICPMS06
WorkOrder: HS20081151 Method: SW6020

ICV Date: 02-Sep-2020 10:47 Seq: 5724327 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.569	104	90-110	
Antimony	100	103.493	103	90-110	
Arsenic	100	106.455	106	90-110	
Barium	100	105.959	106	90-110	
Beryllium	100	104.568	105	90-110	
Cadmium	100	103.997	104	90-110	
Calcium	10000	10624.992	106	90-110	
Chromium	100	103.7	104	90-110	
Cobalt	100	107.538	108	90-110	
Iron	10000	10525.975	105	90-110	
Lead	100	106.911	107	90-110	
Magnesium	10000	10461.979	105	90-110	
Manganese	100	104.687	105	90-110	
Nickel	100	104.844	105	90-110	
Potassium	10000	10405.514	104	90-110	
Selenium	100	106.573	107	90-110	
Silver	100	106.845	107	90-110	
Sodium	10000	10360.247	104	90-110	
Thallium	100	101.552	102	90-110	
Vanadium	100	102.74	103	90-110	
Zinc	100	104.434	104	90-110	

CCV1 Date: 02-Sep-2020 16:23 Seq: 5724335 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.786	92	90-110	
Antimony	100	103.914	104	90-110	
Arsenic	100	98.847	99	90-110	
Barium	100	102.716	103	90-110	
Beryllium	100	97.299	97	90-110	
Cadmium	100	102.139	102	90-110	
Calcium	10000	9474.657	95	90-110	
Chromium	100	95.967	96	90-110	
Cobalt	100	101.973	102	90-110	
Iron	10000	9842.383	98	90-110	
Lead	100	100.577	101	90-110	
Magnesium	10000	9425.533	94	90-110	
Manganese	100	98.956	99	90-110	
Nickel	100	99.089	99	90-110	
Potassium	10000	9511.014	95	90-110	
Selenium	100	98.33	98	90-110	
Silver	100	101.005	101	90-110	
Sodium	10000	9615.129	96	90-110	
Thallium	100	94.514	95	90-110	
Vanadium	100	96.543	97	90-110	
Zinc	100	101.815	102	90-110	

CCV2 Date: 02-Sep-2020 16:49 Seq: 5724346 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.695	94	90-110	
Antimony	100	105.807	106	90-110	
Arsenic	100	99.107	99	90-110	
Barium	100	106.604	107	90-110	
Beryllium	100	97.623	98	90-110	
Cadmium	100	104.867	105	90-110	
Calcium	10000	9469.541	95	90-110	

ALS Houston, US Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS06_367914
Project: Groundwater Treatment Plant Quarterly Effluent Samples Instrument: ICPMS06
WorkOrder: HS20081151 Method: SW6020

CCV2 Date: 02-Sep-2020 16:49 Seq: 5724346 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Chromium	100	99.508	100	90-110	
Cobalt	100	102.436	102	90-110	
Iron	10000	10037.89	100	90-110	
Lead	100	104.597	105	90-110	
Magnesium	10000	9426.896	94	90-110	
Manganese	100	100.619	101	90-110	
Nickel	100	101.589	102	90-110	
Potassium	10000	9435.35	94	90-110	
Selenium	100	98.068	98	90-110	
Silver	100	103.315	103	90-110	
Sodium	10000	9507.653	95	90-110	
Thallium	100	98.246	98	90-110	
Vanadium	100	97.542	98	90-110	
Zinc	100	101.856	102	90-110	

CCV3 Date: 02-Sep-2020 21:41 Seq: 5724374 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.394	97	90-110	
Antimony	100	107.348	107	90-110	
Arsenic	100	99.811	100	90-110	
Barium	100	105.656	106	90-110	
Beryllium	100	98.189	98	90-110	
Cadmium	100	103.958	104	90-110	
Calcium	10000	9866.479	99	90-110	
Chromium	100	102.152	102	90-110	
Cobalt	100	105.267	105	90-110	
Iron	10000	10095.632	101	90-110	
Lead	100	105	105	90-110	
Magnesium	10000	9620.903	96	90-110	
Manganese	100	101.774	102	90-110	
Nickel	100	102.025	102	90-110	
Potassium	10000	9705.619	97	90-110	
Selenium	100	100.67	101	90-110	
Silver	100	103.739	104	90-110	
Sodium	10000	9779.216	98	90-110	
Thallium	100	97.727	98	90-110	
Vanadium	100	100.577	101	90-110	
Zinc	100	103.813	104	90-110	

CCV4 Date: 02-Sep-2020 21:52 Seq: 5724380 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.432	99	90-110	
Antimony	100	108.022	108	90-110	
Arsenic	100	101.715	102	90-110	
Barium	100	106.992	107	90-110	
Beryllium	100	98.234	98	90-110	
Cadmium	100	104.43	104	90-110	
Calcium	10000	9955.2	100	90-110	
Chromium	100	101.404	101	90-110	
Cobalt	100	106.484	106	90-110	
Iron	10000	10426.924	104	90-110	
Lead	100	105.155	105	90-110	
Magnesium	10000	9688.361	97	90-110	
Manganese	100	103.315	103	90-110	
Nickel	100	103.376	103	90-110	

ALS Houston, US Date: 25-Sep-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

CCV4 Date: 02-Sep-2020 21:52 Seq: 5724380 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9795.375	98	90-110	
Selenium	100	101.696	102	90-110	
Silver	100	106.392	106	90-110	
Sodium	10000	9822.265	98	90-110	
Thallium	100	97.667	98	90-110	
Vanadium	100	99.392	99	90-110	
Zinc	100	104.087	104	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: HG03_367830
Instrument: HG03
Method: SW7470

ICB	Date: 01-Sep-2020 11:15		Seq: 5722599	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB1	Date: 01-Sep-2020 11:40		Seq: 5722608	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB2	Date: 01-Sep-2020 12:03		Seq: 5722620	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB3	Date: 01-Sep-2020 12:36		Seq: 5722628	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB4	Date: 01-Sep-2020 12:57		Seq: 5722630	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB5	Date: 01-Sep-2020 13:10		Seq: 5722594	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
MBLK-156890	Date: 01-Sep-2020 13:12		Seq: 5722646	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB6	Date: 01-Sep-2020 13:24		Seq: 5722596	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB7	Date: 01-Sep-2020 14:14		Seq: 5722792	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB8	Date: 01-Sep-2020 14:43		Seq: 5722804	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB9	Date: 01-Sep-2020 15:08		Seq: 5722812	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB10	Date: 01-Sep-2020 15:35		Seq: 5722834	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	
CCB11	Date: 01-Sep-2020 15:52		Seq: 5722840	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

ICB	Date: 02-Sep-2020 10:53		Seq: 5724330	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	5	0.4	5	U	
Arsenic	5	0.4	5	U	
Barium	5	1.9	5	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	5	0.4	5	U	
Cobalt	5	0.1	5	U	
Iron	200	12	200	U	
Lead	5	0.6	5	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	5	0.6	5	U	
Potassium	200	18	200	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	5	2	5	U	

CCB1	Date: 02-Sep-2020 16:25		Seq: 5724336	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	-47.96	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	33.18	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

MBLK-156822	Date: 02-Sep-2020 16:29		Seq: 5724337	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	2.604	1.8	10	J	
Antimony	5	0.4	5	U	
Arsenic	5	0.4	5	U	
Barium	5	1.9	5	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

MBLK-156822 Date: 02-Sep-2020 16:29 Seq: 5724337 MBLK Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Chromium	5	0.4	5	U
Cobalt	5	0.1	5	U
Iron	200	12	200	U
Lead	5	0.6	5	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	5	0.6	5	U
Potassium	200	18	200	U
Selenium	5	1.1	5	U
Silver	5	0.2	5	U
Sodium	34.15	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	2.601	2	5	J

CCB2 Date: 02-Sep-2020 16:51 Seq: 5724347 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	-47.61	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	45.85	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB3 Date: 02-Sep-2020 21:43 Seq: 5724375 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	-46.8	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Run ID: ICPMS06_367914
Instrument: ICPMS06
Method: SW6020

CCB3	Date: 02-Sep-2020 21:43		Seq: 5724375	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB4	Date: 02-Sep-2020 21:54		Seq: 5724381	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	-45.86	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	15.59	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS06_367914
Project: Groundwater Treatment Plant Quarterly Effluent Samples Instrument:ICPMS06
WorkOrder: HS20081151 Method:SW6020

ICSA	Date: 02-Sep-2020 10:58	Seq: 5724332	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	97900	97.9	
Antimony		0.027	0	
Arsenic		0.089	0	
Barium		0.033	0	
Beryllium		0.001	0	
Cadmium		1.243	0	
Calcium	100000	99070	99.1	
Chromium		1.002	0	
Cobalt		0.21	0	
Iron	100000	105400	105	
Lead		0.043	0	
Magnesium	100000	105300	105	
Manganese		0.206	0	
Nickel		0.241	0	
Potassium	100000	105700	106	
Selenium		0.247	0	
Silver		0.039	0	
Sodium	100000	104000	104	
Thallium		0.008	0	
Vanadium		-0.004	0	
Zinc		0.373	0	

ICSAB	Date: 02-Sep-2020 11:00	Seq: 5724333	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	97660	97.2	
Antimony	100	97.95	98.0	
Arsenic	100	100.3	100	
Barium	100	101.6	102	
Beryllium	100	95.6	95.6	
Cadmium	100	100.1	100	
Calcium	110000	111000	101	
Chromium	100	100.2	100	
Cobalt	100	98.05	98.1	
Iron	110000	112100	102	
Lead	100	102.2	102	
Magnesium	110000	112600	102	
Manganese	100	99.86	99.9	
Nickel	100	96.64	96.6	
Potassium	110000	114000	104	
Selenium	100	101	101	
Silver	100	100.9	101	
Sodium	110000	112500	102	
Thallium	100	95.37	95.4	
Vanadium	100	99.63	99.6	
Zinc	100	98.39	98.4	

ALS Houston, US Date: 25-Sep-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 01-Sep-2020 13:19
Date Extracted: 31-Aug-2020 14:44
Units: ug/L

Matrix Spike: HS20081150-01MS
Client Sample ID:

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.2000	5.040	5.000	100	5.010	5.000	99.9	82-119	0.597	20

ALS Houston, US Date: 25-Sep-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 02-Sep-2020 16:39
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Matrix Spike: HS20081150-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	42.69	132.6	100.0	89.9	139.1	100.0	96.4	84-117	4.82	20
Antimony	5.000	51.18	50.00	102	50.72	50.00	101	85-117	0.893	20
Arsenic	1.267	50.63	50.00	98.7	51.09	50.00	99.6	84-116	0.914	20
Barium	736.8	734.4	50.00	-4.97	747.6	50.00	21.6	86-114	1.79	20
Beryllium	2.000	48.95	50.00	97.6	48.93	50.00	97.5	83-121	0.0531	20
Cadmium	2.000	50.06	50.00	99.8	51.16	50.00	102	87-115	2.17	20
Calcium	36130	37970	5000	36.8	38670	5000	50.8	87-118	1.84	20
Chromium	1.381	48.21	50.00	93.6	50.24	50.00	97.7	85-116	4.12	20
Cobalt	8.549	56.23	50.00	95.4	56.82	50.00	96.5	86-115	1.05	20
Iron	998.2	5702	5000	94.1	5728	5000	94.6	87-118	0.451	20
Lead	5.000	51.38	50.00	102	52.24	50.00	104	88-115	1.66	20
Magnesium	26540	30180	5000	72.7	30290	5000	74.9	83-118	0.363	20
Manganese	559.2	572.4	50.00	26.3	589.6	50.00	60.7	87-115	2.96	20
Nickel	9.277	55.03	50.00	91.5	55.81	50.00	93.1	85-117	1.42	20
Potassium	1231	5711	5000	89.6	5857	5000	92.5	87-115	2.52	20
Selenium	5.000	49.41	50.00	97.5	50.27	50.00	99.3	80-120	1.73	20
Silver	5.000	47.96	50.00	95.9	49.07	50.00	98.1	85-116	2.29	20
Sodium	174600	169100	5000	-110	173900	5000	-13.2	85-117	2.83	20
Thallium	2.000	47.28	50.00	94.4	48.89	50.00	97.7	82-116	3.34	20
Vanadium	0.7580	49.20	50.00	96.9	50.66	50.00	99.8	86-115	2.93	20
Zinc	26.26	72.90	50.00	93.3	75.19	50.00	97.8	83-119	3.08	20

ALS Houston, US Date: 25-Sep-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 02-Sep-2020 16:41
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: HS20081150-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	42.69	153.3	100	111	80-120
Antimony	0	109.7	100	109	80-120
Arsenic	1.267	112.6	100	111	80-120
Barium	736.8	846.4	100	110	80-120
Beryllium	0	107	100	107	80-120
Cadmium	0	112.9	100	113	80-120
Calcium	36130	46630	10000	105	80-120
Chromium	1.381	108.9	100	107	80-120
Cobalt	8.549	118.4	100	110	80-120
Iron	998.2	11730	10000	107	80-120
Lead	0	114.7	100	115	80-120
Magnesium	26540	37700	10000	112	80-120
Manganese	559.2	676.8	100	118	80-120
Nickel	9.277	112.8	100	104	80-120
Potassium	1231	11950	10000	107	80-120
Selenium	0	111.4	100	111	80-120
Silver	0	109.3	100	109	80-120
Thallium	0	107.2	100	107	80-120
Vanadium	0.758	109.5	100	109	80-120
Zinc	26.26	136.7	100	110	80-120
Sodium	179700	373300	200000	97	80-120

ALS Houston, US Date: 25-Sep-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 01-Sep-2020 13:13
Date Extracted: 31-Aug-2020 14:44
Units: ug/L

Lab Sample ID: LCS-156890 Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.11	102	82-119

ALS Houston, US

Date: 25-Sep-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 02-Sep-2020 16:31
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: LCS-156822
Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	90.9	91	84-117
Antimony	50	51.55	103	85-117
Arsenic	50	49.11	98	84-116
Barium	50	52.13	104	86-114
Beryllium	50	48.43	97	83-121
Cadmium	50	52.41	105	87-115
Calcium	5000	4654	93	87-118
Chromium	50	48.28	97	85-116
Cobalt	50	50.46	101	86-115
Iron	5000	4866	97	87-118
Lead	50	51.54	103	88-115
Magnesium	5000	4642	93	83-118
Manganese	50	47.9	96	87-115
Nickel	50	49.32	99	85-117
Potassium	5000	4594	92	87-115
Selenium	50	50.28	101	80-120
Silver	50	50.97	102	85-116
Sodium	5000	4699	94	85-117
Thallium	50	47.98	96	82-116
Vanadium	50	47.88	96	86-115
Zinc	50	54.04	108	83-119

ALS Houston, US Date: 25-Sep-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20081151

Date Analyzed: 02-Sep-2020 16:35
Date Extracted: 28-Aug-2020 14:00
Units: ug/L

Lab Sample ID: HS20081150-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	42.69		46.46	J	9	
Antimony	0	U	0	U	0	
Arsenic	1.267	J	2.057	J	62	
Barium	736.8		743.7		1	
Beryllium	0	U	0	U	0	
Cadmium	0	U	0	U	0	
Calcium	36130		36610		1	
Chromium	1.381	J	0	U	0	
Cobalt	8.549		9.184	J	7	
Iron	998.2		1094		10	
Lead	0	U	0	U	0	
Magnesium	26540		27290		3	
Manganese	559.2		589.9		5	
Nickel	9.277		10.29	J	11	
Potassium	1231		1219		1	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0	U	0	U	0	
Vanadium	0.758	J	4.585	J	505	
Zinc	26.26		29.56		13	E
Sodium	179700		174200		3	

Report Generated By Teledyne Leeman QuickTrace

Analyst: ALSHS.NoUser

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\09012020AW.wszf

Creation Date: 9/1/2020 9:41:28 AM

Comment:

Results

Sample Name		Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
Calibration Blank		STD	09/01/20 10:58:36 am	0.000	-19	58.31	15.33	
Replicates	-27.2	-6.8	-12.1	-28.6				
Standard #1 (0.2 ppb)		STD	09/01/20 11:00:17 am	0.200	864	2.03	-14.40	
Replicates	873.7	844.9	854.4	883.4				
Standard #2 (0.5 ppb)		STD	09/01/20 11:01:59 am	0.500	2379	2.47	-22.28	
Replicates	2304.2	2363.9	2405.7	2440.7				
Standard #3 (2.0 ppb)		STD	09/01/20 11:03:41 am	2.000	10021	1.45	-48.16	
Replicates	9831.9	9982.5	10129.3	10141.0				
Standard #4 (5.0 ppb)		STD	09/01/20 11:05:23 am	5.000	25865	0.78	7.92	
Replicates	25576.9	25877.3	25987.3	26020.1				
Standard #5 (10.0 ppb)		STD	09/01/20 11:07:06 am	10.000	51950	0.92	39.28	
Replicates	51268.8	51967.0	52251.7	52314.2				

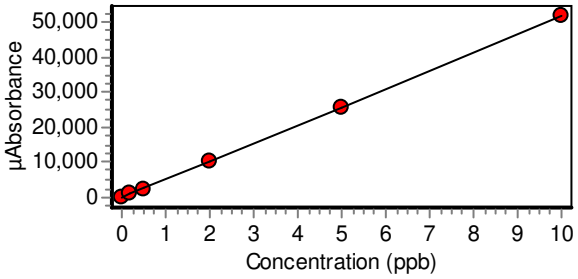
Calibration

Equation: Abs = 5184.494x + -98.132

R2: 0.99994

SEE: 180.7850

Flags:



ICCV		UNK	09/01/20 11:10:24 am	4.820	25004	1.49		
Replicates	24552.2	24881.3	25165.8	25417.3				
ICV		UNK	09/01/20 11:14:18 am	4.880	25311	1.78		
Replicates	24737.0	25203.5	25507.5	25794.3				
ICB		UNK	09/01/20 11:15:59 am	-0.004	-40	40.84		
Replicates	-46.9	-48.3	-35.8	-30.0				
CRA		UNK	09/01/20 11:17:41 am	0.169	857	2.50		
Replicates	833.4	844.8	879.3	872.3				
MBLK-156886		UNK	09/01/20 11:21:28 am	0.009	26	43.80		
Replicates	9.8	52.9	13.7	26.9				
LCS-156886		UNK	09/01/20 11:25:43 am	5.210	27016	0.34		
Replicates	26879.0	27045.4	27081.4	27058.4				
HS20081194-18		UNK	09/01/20 11:27:25 am	0.009	28	52.28		
Replicates	17.6	5.4	28.1	62.6				

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081194-18MS					UNK	09/01/20 11:29:07 am	5.330	27631	0.18		
	Replicates	27559.5	27652.7	27673.7	27639.2						
HS20081194-18MSD					UNK	09/01/20 11:33:08 am	5.170	26788	0.23		
	Replicates	26706.6	26820.8	26845.1	26779.6						
HS20081194-21					UNK	09/01/20 11:34:51 am	0.005	9	73.14		
	Replicates	0.4	-11.0	9.2	35.7						
CCV					UNK	09/01/20 11:39:11 am	5.100	26452	0.73		
	Replicates	26227.0	26380.3	26523.5	26677.0						
CCB					UNK	09/01/20 11:40:54 am	0.007	15	40.92		
	Replicates	26.6	21.4	-4.9	18.4						
HS20081194-22					UNK	09/01/20 11:42:37 am	0.009	27	65.42		
	Replicates	-9.7	60.9	18.9	39.2						
HS20081194-23					UNK	09/01/20 11:44:19 am	0.013	46	48.17		
	Replicates	30.2	49.4	17.2	89.2						
HS20081194-24					UNK	09/01/20 11:46:00 am	0.003	-2	156.70		
	Replicates	-1.8	-37.9	22.4	8.4						
HS20081194-25					UNK	09/01/20 11:47:41 am	0.007	19	62.95		
	Replicates	-14.9	35.7	20.4	35.4						
HS20081194-26					UNK	09/01/20 11:49:22 am	0.006	11	99.75		
	Replicates	41.1	15.4	-30.1	18.4						
HS20081194-27					UNK	09/01/20 11:51:04 am	0.010	35	39.66		
	Replicates	40.6	3.8	50.0	47.0						
HS20081194-28					UNK	09/01/20 11:52:45 am	0.015	58	36.75		s
	Replicates	32.8	44.8	98.1	58.3						
HS20081194-29					UNK	09/01/20 11:54:27 am	0.006	14	80.10		
	Replicates	38.9	-4.5	-12.5	32.8						
HS20081194-30					UNK	09/01/20 11:56:09 am	0.029	132	18.76		s
	Replicates	104.4	168.6	116.4	139.6						
HS20081194-31					UNK	09/01/20 11:57:51 am	0.009	27	16.57		
	Replicates	34.8	17.3	30.8	25.5						
CCV					UNK	09/01/20 12:01:56 pm	4.930	25527	1.24		
	Replicates	25139.9	25436.6	25646.1	25885.6						
CCB					UNK	09/01/20 12:03:39 pm	0.003	-4	126.63		
	Replicates	-23.4	-15.5	15.3	6.3						
HS20081194-32					UNK	09/01/20 12:05:21 pm	0.011	37	67.11		
	Replicates	2.3	58.8	79.0	9.0						
HS20081194-33					UNK	09/01/20 12:07:04 pm	0.018	76	22.94		s
	Replicates	90.3	92.2	76.7	45.2						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081194-34					UNK	09/01/20 12:08:46 pm	0.011	37	52.11		
	Replicates	10.4	77.4	23.4	36.9						
HS20081194-35					UNK	09/01/20 12:10:29 pm	0.004	4	53.47		
	Replicates	15.1	-12.6	3.4	11.1						
HS20081194-36					UNK	09/01/20 12:12:10 pm	0.010	31	25.29		
	Replicates	48.4	21.2	22.7	30.9						
HS20081194-37					UNK	09/01/20 12:13:51 pm	0.008	24	75.68		
	Replicates	-15.8	47.7	11.2	51.7						
MBLK-156893					UNK	09/01/20 12:20:46 pm	0.011	37	38.37		
	Replicates	10.2	38.2	62.7	37.9						
LCS-156893					UNK	09/01/20 12:22:27 pm	5.160	26763	0.50		
	Replicates	26562.6	26829.8	26808.8	26851.0						
HS20081222-02					UNK	09/01/20 12:24:09 pm	0.045	215	4.73		
	Replicates	219.2	228.5	206.0	205.8						
HS20081222-03					UNK	09/01/20 12:25:50 pm	0.032	147	12.75		s
	Replicates	131.4	146.7	176.7	132.4						
CCV					UNK	09/01/20 12:35:12 pm	5.120	26520	0.26		
	Replicates	26420.3	26533.5	26547.5	26578.0						
CCB					UNK	09/01/20 12:36:55 pm	0.004	4	92.01		
	Replicates	25.9	-24.2	10.6	4.1						
HS20081222-04					UNK	09/01/20 12:38:37 pm	0.029	129	20.80		s
	Replicates	88.8	131.6	133.4	163.6						
HS20081222-05					UNK	09/01/20 12:40:19 pm	0.093	466	2.59		
	Replicates	452.5	479.5	459.0	473.7						
HS20081222-10					UNK	09/01/20 12:42:01 pm	0.062	301	5.77		s
	Replicates	298.4	318.3	309.8	275.8						
HS20081236-01					UNK	09/01/20 12:43:44 pm	0.013	48	32.95		
	Replicates	67.3	29.8	67.8	28.8						
HS20081236-01MS					UNK	09/01/20 12:45:26 pm	5.170	26782	0.70		
	Replicates	26525.4	26753.9	26921.9	26925.4						
HS20081236-01MSD					UNK	09/01/20 12:47:09 pm	5.140	26627	0.84		
	Replicates	26313.3	26624.2	26765.2	26803.5						
CCV					UNK	09/01/20 12:55:26 pm	5.080	26350	0.81		
	Replicates	26059.0	26323.6	26475.8	26541.6						
CCB					UNK	09/01/20 12:57:09 pm	0.009	26	79.37		
	Replicates	-9.0	43.0	67.5	2.8						
MBLK-156892					UNK	09/01/20 12:58:50 pm	0.009	27	37.31		
	Replicates	43.0	39.2	6.2	20.5						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
LCS-156892					UNK	09/01/20 01:00:32 pm	5.260	27252	0.63		
	Replicates	27023.1	27236.5	27323.8	27425.8						
HS20081298-01					UNK	09/01/20 01:02:13 pm	0.018	74	12.30		s
	Replicates	84.3	81.3	59.8	68.8						
HS20081298-01MS					UNK	09/01/20 01:03:54 pm	5.050	26166	0.50		
	Replicates	25998.6	26131.7	26245.0	26290.7						
HS20081298-01MSD					UNK	09/01/20 01:05:36 pm	5.090	26403	0.87		
	Replicates	26107.4	26340.7	26538.2	26624.7						
CCV					UNK	09/01/20 01:08:48 pm	4.910	25436	0.78		
	Replicates	25197.1	25376.8	25498.3	25670.8						
CCB					UNK	09/01/20 01:10:31 pm	0.004	2	108.52		
	Replicates	35.5	-7.0	-5.5	-14.5						
MBLK-156890					UNK	09/01/20 01:12:13 pm	0.007	17	88.20		
	Replicates	-12.3	11.8	6.3	60.5						
LCS-156890					UNK	09/01/20 01:13:55 pm	5.110	26470	0.99		
	Replicates	26121.2	26423.3	26617.3	26718.3						
HS20081150-01					UNK	09/01/20 01:15:37 pm	0.017	68	15.91		s
	Replicates	83.5	70.2	69.2	49.9						
HS20081150-01MS					UNK	09/01/20 01:17:19 pm	5.040	26098	1.25		
	Replicates	25662.1	26050.2	26264.2	26414.7						
HS20081150-01MSD					UNK	09/01/20 01:19:01 pm	5.010	25975	1.43		
	Replicates	25484.8	25907.3	26159.6	26346.8						
HS20081151-01					UNK	09/01/20 01:20:44 pm	0.007	17	64.74		
	Replicates	38.8	-14.1	27.4	13.9						
CCV					UNK	09/01/20 01:22:27 pm	4.960	25705	0.82		
	Replicates	25416.4	25691.0	25814.0	25897.2						
CCB					UNK	09/01/20 01:24:10 pm	0.006	12	72.09		
	Replicates	32.3	16.6	16.4	-19.1						
CCV					UNK	09/01/20 02:12:41 pm	4.950	25676	0.83		
	Replicates	25417.2	25621.7	25744.2	25922.9						
CCB					UNK	09/01/20 02:14:24 pm	0.005	8	101.85		
	Replicates	-10.9	-6.4	0.6	47.1						
MBLK-156908					UNK	09/01/20 02:16:06 pm	-0.002	-30	202.56		
	Replicates	-57.3	-15.7	-39.7	-7.2						
LCS-156908					UNK	09/01/20 02:17:48 pm	4.760	24664	1.72		
	Replicates	24115.2	24570.9	24872.7	25095.9						
HS20081197-04					UNK	09/01/20 02:19:29 pm	-0.001	-22	290.16		
	Replicates	-32.4	-15.6	-28.9	-11.6						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
HS20081197-04MS					UNK	09/01/20 02:25:55 pm	4.450	23047	1.66		
Replicates	22544.1	22978.7	23234.9	23429.2							
HS20081197-04MSD					UNK	09/01/20 02:27:36 pm	4.540	23552	0.68		
Replicates	23385.1	23476.4	23587.6	23757.1							
HS20081194-38					UNK	09/01/20 02:29:18 pm	0.000	-16	191.14		
Replicates	-52.1	4.7	-29.5	12.5							
HS20081197-01					UNK	09/01/20 02:31:00 pm	0.009	27	51.09		
Replicates	55.0	8.0	35.8	7.5							
HS20081197-02					UNK	09/01/20 02:32:41 pm	0.008	23	67.04		
Replicates	18.9	-6.8	61.0	19.5							
HS20081197-03					UNK	09/01/20 02:34:23 pm	0.003	-6	220.81		
Replicates	1.3	12.5	12.0	-48.2							
HS20081197-05					UNK	09/01/20 02:36:05 pm	-0.001	-23	753.94		
Replicates	-37.3	-47.6	-34.9	27.1							
CCV					UNK	09/01/20 02:41:35 pm	4.830	25021	0.56		
Replicates	24837.5	25003.6	25074.9	25168.6							
CCB					UNK	09/01/20 02:43:18 pm	0.007	15	32.13		
Replicates	30.5	15.8	9.0	6.0							
HS20081197-06					UNK	09/01/20 02:45:00 pm	0.009	28	67.08		
Replicates	32.8	31.0	-13.5	63.0							
HS20081197-07					UNK	09/01/20 02:46:42 pm	0.009	27	36.61		
Replicates	30.6	49.9	12.9	16.2							
HS20081243-01					UNK	09/01/20 02:48:25 pm	-0.005	-46	50.32		
Replicates	-45.4	-48.2	-61.9	-28.4							
HS20081243-02					UNK	09/01/20 02:50:07 pm	-0.007	-57	82.21		
Replicates	-67.6	-10.0	-75.0	-76.3							
HS20081248-01					UNK	09/01/20 02:51:48 pm	0.231	1181	2.18		
Replicates	1184.6	1204.0	1192.3	1143.8							
HS20081248-02					UNK	09/01/20 02:53:30 pm	0.055	264	14.67		s
Replicates	256.5	218.2	264.0	319.0							
MBLK-156920					UNK	09/01/20 02:58:26 pm	0.006	10	55.33		
Replicates	12.4	18.8	22.6	-12.9							
MBLKT1-156920					UNK	09/01/20 03:00:08 pm	0.008	25	53.00		
Replicates	36.2	-7.4	46.3	26.3							
MBLKT2-156920					UNK	09/01/20 03:01:50 pm	0.009	29	60.33		
Replicates	37.9	5.1	65.4	6.9							
MBLKT3-156920					UNK	09/01/20 03:03:32 pm	0.005	7	111.27		
Replicates	31.0	21.0	10.5	-34.0							

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
CCV					UNK	09/01/20 03:06:36 pm	4.950	25654	1.22		
	Replicates	25220.9	25644.4	25813.7	25935.9						
CCB					UNK	09/01/20 03:08:19 pm	0.007	16	60.08		
	Replicates	17.1	18.3	-10.9	40.1						
MBLKT4-156920					UNK	09/01/20 03:10:01 pm	0.001	-11	530.22		
	Replicates	-17.1	-3.8	34.9	-59.3						
LCS-156920					UNK	09/01/20 03:15:09 pm	4.720	24449	2.18		
	Replicates	23667.9	24611.8	24877.6	24637.3						
HS20081159-01					UNK	09/01/20 03:16:51 pm	0.020	86	27.09		s
	Replicates	108.9	104.5	85.3	46.5						
HS20081159-01MS					UNK	09/01/20 03:18:34 pm	5.370	27837	0.14		
	Replicates	27781.7	27865.2	27854.2	27848.5						
HS20081159-01MSD					UNK	09/01/20 03:20:16 pm	5.310	27510	0.08		
	Replicates	27523.4	27523.2	27513.2	27479.2						
HS20081087-01					UNK	09/01/20 03:23:39 pm	0.051	248	6.06		s
	Replicates	248.3	224.7	261.0	256.5						
HS20081087-02					UNK	09/01/20 03:25:21 pm	0.048	228	18.41		s
	Replicates	178.2	270.4	201.2	262.4						
HS20081087-03					UNK	09/01/20 03:27:03 pm	0.008	24	57.76		
	Replicates	-0.6	28.9	11.9	56.7						
HS20081185-01					UNK	09/01/20 03:28:45 pm	0.022	95	22.85		s
	Replicates	116.7	110.8	59.1	92.6						
HS20081188-01					UNK	09/01/20 03:30:26 pm	0.005	6	72.63		
	Replicates	-15.5	-0.3	12.5	25.8						
CCV					UNK	09/01/20 03:33:17 pm	4.660	24148	1.22		
	Replicates	23717.6	24201.9	24307.4	24367.1						
CCB					UNK	09/01/20 03:35:00 pm	0.004	3	130.07		
	Replicates	-10.7	38.8	-26.9	11.8						
HS20081269-01					UNK	09/01/20 03:36:42 pm	0.013	48	25.75		
	Replicates	25.7	67.6	50.1	48.6						
HS20081273-01					UNK	09/01/20 03:43:10 pm	-0.006	-50	102.15		
	Replicates	-4.1	-71.2	-72.0	-52.0						
HS20081279-01					UNK	09/01/20 03:44:52 pm	-0.005	-45	66.78		
	Replicates	-35.3	-64.3	-52.8	-25.8						
HS20081280-01					UNK	09/01/20 03:46:34 pm	-0.009	-64	47.78		
	Replicates	-52.3	-88.2	-40.4	-76.2						
HS20081248-01 RR					UNK	09/01/20 03:49:33 pm	0.226	1156	1.70		
	Replicates	1143.9	1136.4	1180.9	1162.4						

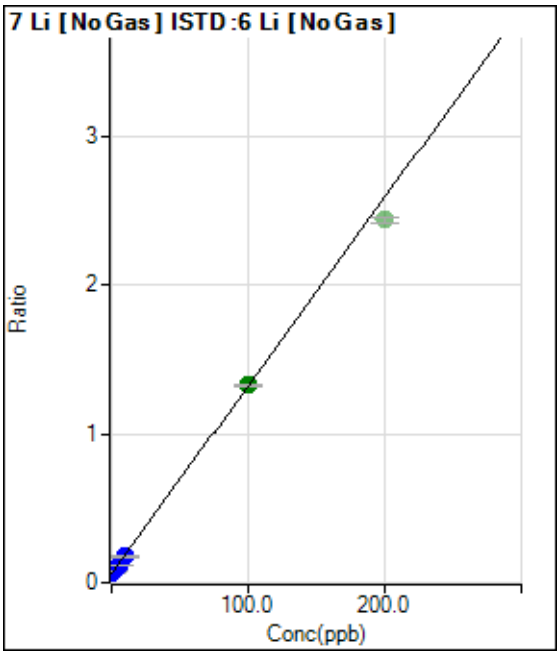
Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags
CCV				UNK	09/01/20 03:51:16 pm	4.860	25179	0.40		
	Replicates	25034.8	25190.1	25221.1	25269.3					
CCB				UNK	09/01/20 03:52:59 pm	0.005	7	18.76		
	Replicates	2.0	5.7	5.5	13.2					

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\090220A.b\
Analysis File: 090220A.batch.bin
DA Date-Time: 9/2/2020 9:38:11 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	9/2/2020 10:34:39 AM
2	012CALS.d	2/10/200	9/2/2020 10:36:32 AM
3	013CALS.d	5/25/500	9/2/2020 10:38:24 AM
4	014CALS.d	10/50/100	9/2/2020 10:40:16 AM
5	015CALS.d	100/500/10K	9/2/2020 10:42:08 AM
6	016CALS.d	200/1000/20K	9/2/2020 10:43:53 AM

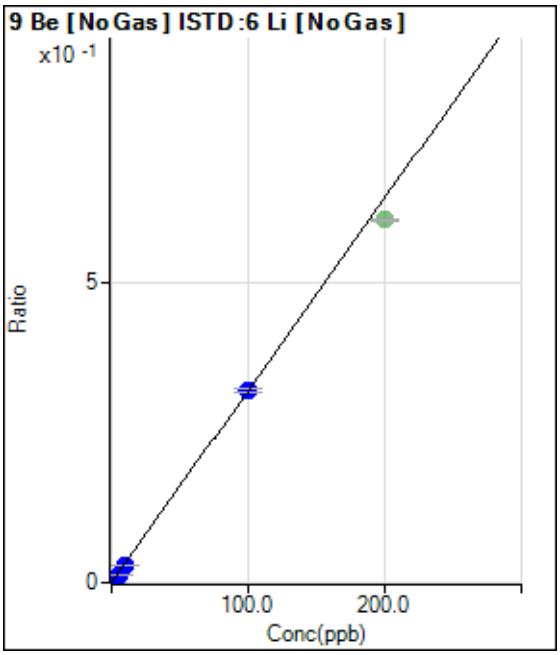
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108009.07	0.0600	P	4.4
2	☐	2.000	1.842	150042.59	0.0833	P	1.4
3	☐	5.000	4.483	210883.45	0.1166	P	2.4
4	☐	10.000	9.105	310345.65	0.1749	P	1.4
5	☐	100.000	100.118	2293137.73	1.3232	A	1.6
6	☑	200.000		4210768.58	2.4349	A	1.6

y = 0.0126 * x + 0.0600
R = 1.0000
DL = 0.6316
BEC = 4.756

Weight: <None>
Min Conc: <None>

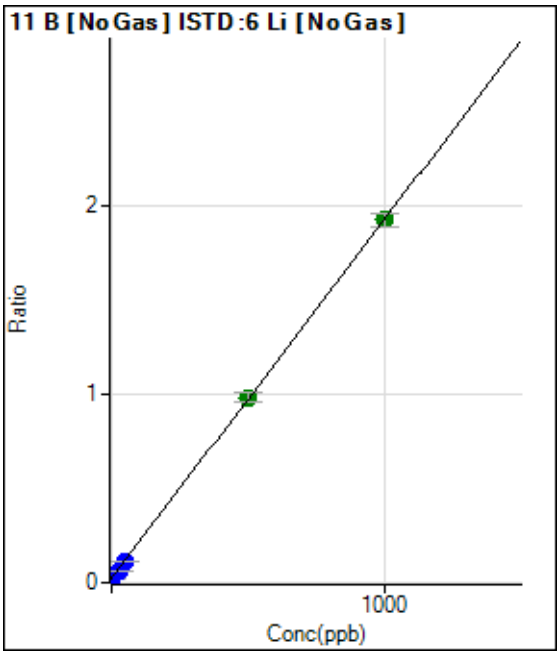


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.6
2	☐	2.000	1.815	10514.05	0.0058	P	1.1
3	☐	5.000	4.308	25014.05	0.0138	P	3.6
4	☐	10.000	8.716	49617.29	0.0280	P	3.6
5	☐	100.000	100.167	556814.36	0.3214	P	2.7
6	☑	200.000		1047985.76	0.6059	A	0.9

y = 0.0032 * x + 9.2788E-006
R = 0.9999
DL = 0.001698
BEC = 0.002892

Weight: <None>
Min Conc: <None>

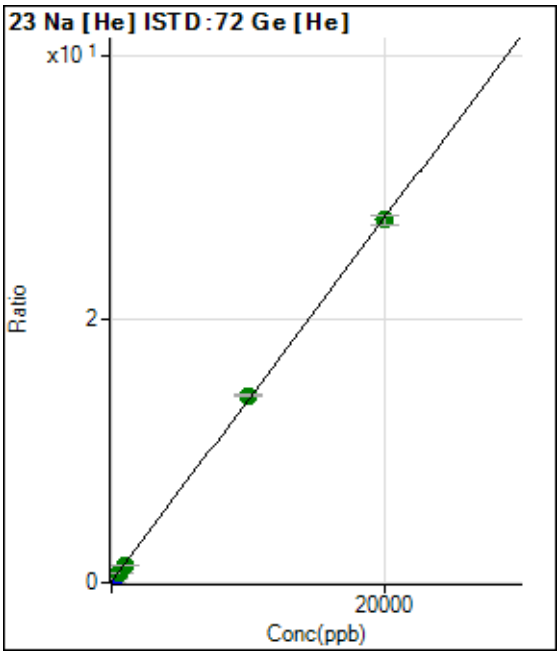
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42928.97	0.0238	P	5.3
2	☐	10.000	8.822	73262.13	0.0407	P	2.5
3	☐	25.000	21.406	116966.00	0.0647	P	1.6
4	☐	50.000	44.617	193192.91	0.1089	P	2.6
5	☐	500.000	502.928	1701436.69	0.9825	A	5.1
6	☐	1000.000	998.907	3332839.22	1.9278	A	3.8

y = 0.0019 * x + 0.0238
R = 1.0000
DL = 1.978
BEC = 12.51

Weight: <None>
Min Conc: <None>

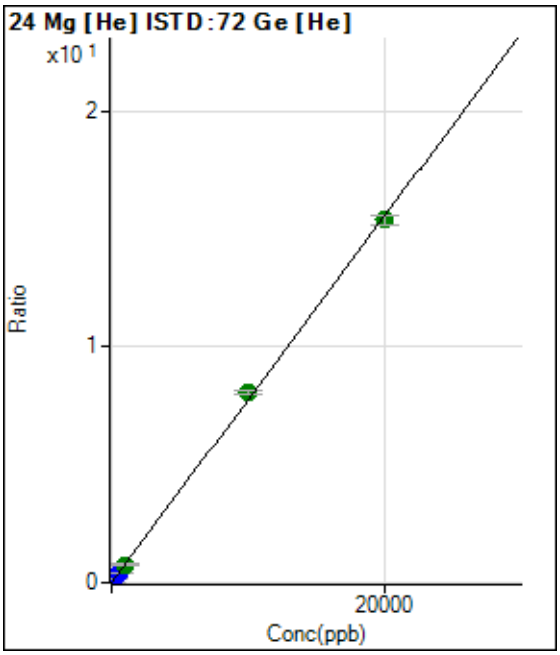


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80780.94	0.0678	P	1.6
2	☐	200.000	194.923	404342.23	0.3372	P	1.5
3	☐	500.000	495.110	873430.90	0.7520	A	2.1
4	☐	1000.000	945.353	1625669.25	1.3743	A	1.3
5	☐	10000.00	10227.20	16867532.66	14.2018	A	1.1
6	☐	20000.00	19889.30	32378185.35	27.5549	A	2.5

y = 0.0014 * x + 0.0678
R = 0.9999
DL = 2.35
BEC = 49.05

Weight: <None>
Min Conc: <None>

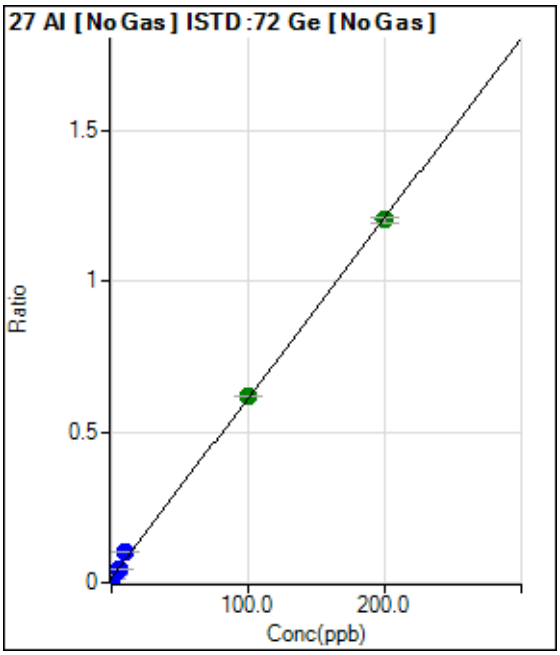
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	15.7
2	☐	200.000	200.089	186908.06	0.1559	P	1.2
3	☐	500.000	505.929	456919.80	0.3934	P	1.2
4	☐	1000.000	975.712	896635.40	0.7583	A	5.0
5	☐	10000.00	10396.23	9590907.77	8.0755	A	1.2
6	☐	20000.00	19802.94	18074599.31	15.3819	A	2.4

y = 7.7673E-004 * x + 4.4215E-004
R = 0.9997
DL = 0.2683
BEC = 0.5693

Weight: <None>
Min Conc: <None>

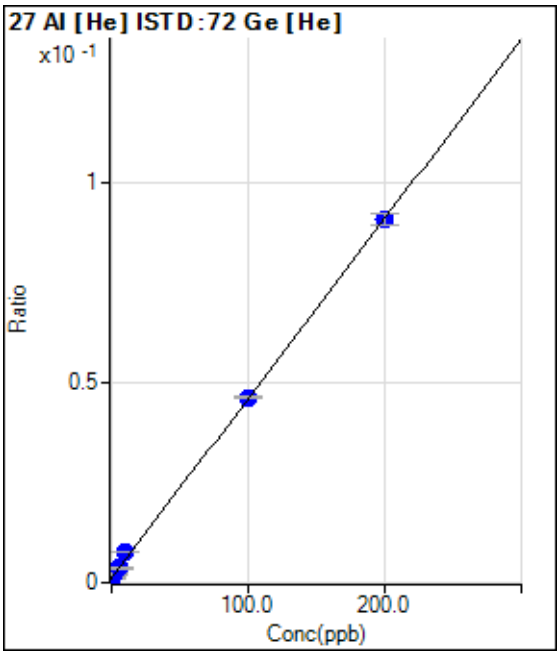


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55193.02	0.0154	P	0.8
2	☐	2.000	2.177	101933.42	0.0284	P	4.5
3	☐	5.000	4.991	162321.35	0.0452	P	3.5
4	☐	10.000	14.430	363860.98	0.1015	P	0.8
5	☐	100.000	101.470	2204238.92	0.6213	A	0.3
6	☐	200.000	199.042	4200675.25	1.2039	A	1.8

y = 0.0060 * x + 0.0154
R = 0.9998
DL = 0.06102
BEC = 2.574

Weight: <None>
Min Conc: <None>

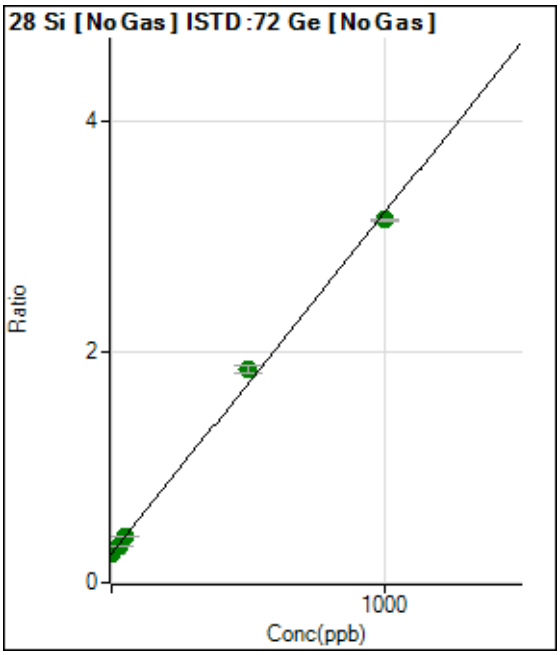
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.77	0.0012	P	11.2
2	☐	2.000	2.154	2543.62	0.0021	P	4.2
3	☐	5.000	5.507	4210.71	0.0036	P	4.7
4	☐	10.000	14.520	9073.08	0.0077	P	5.1
5	☐	100.000	100.586	54975.86	0.0463	P	1.3
6	☐	200.000	199.467	106534.61	0.0907	P	3.1

y = 4.4875E-004 * x + 0.0012
R = 0.9998
DL = 0.8645
BEC = 2.574

Weight: <None>
Min Conc: <None>

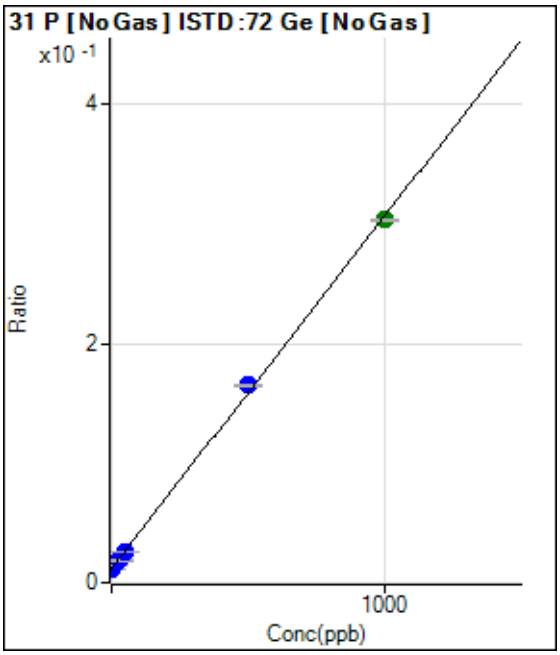


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	907317.07	0.2526	A	0.4
2	☐	10.000	10.293	1017472.07	0.2831	A	2.6
3	☐	25.000	22.790	1150233.08	0.3200	A	2.6
4	☐	50.000	48.327	1417718.10	0.3956	A	0.2
5	☐	500.000	542.160	6585647.19	1.8566	A	3.4
6	☐	1000.000	979.056	10989109.84	3.1492	A	0.8

y = 0.0030 * x + 0.2526
R = 0.9987
DL = 1.006
BEC = 85.38

Weight: <None>
Min Conc: <None>

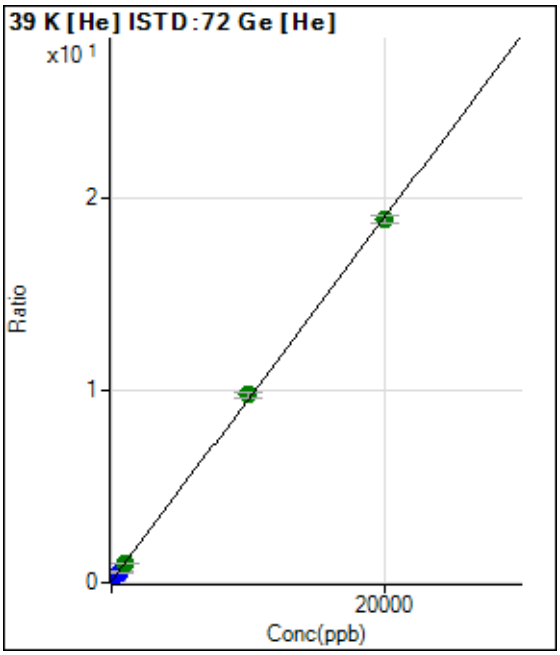
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42187.72	0.0117	P	3.2
2	☐	10.000	9.497	52275.29	0.0145	P	4.0
3	☐	25.000	23.034	66616.44	0.0185	P	2.2
4	☐	50.000	46.671	91379.39	0.0255	P	0.6
5	☐	500.000	520.743	586016.78	0.1652	P	1.5
6	☐	1000.000	989.849	1058710.01	0.3034	A	0.9

y = 2.9466E-004 * x + 0.0117
R = 0.9997
DL = 3.799
BEC = 39.87

Weight: <None>
Min Conc: <None>

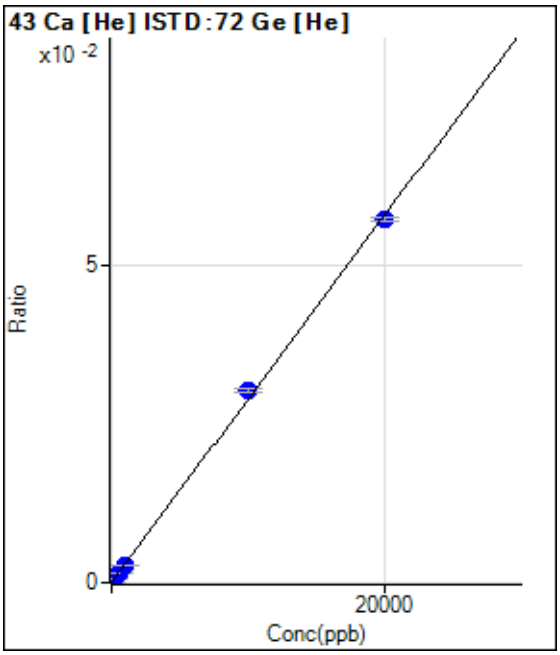


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93559.19	0.0785	P	0.5
2	☐	200.000	195.807	316026.33	0.2635	P	1.6
3	☐	500.000	495.786	635206.18	0.5470	P	2.2
4	☐	1000.000	951.057	1155699.57	0.9772	A	2.9
5	☐	10000.00	10264.10	11610195.24	9.7770	A	3.0
6	☐	20000.00	19870.54	22155299.67	18.8540	A	2.1

y = 9.4489E-004 * x + 0.0785
R = 0.9999
DL = 1.313
BEC = 83.1

Weight: <None>
Min Conc: <None>

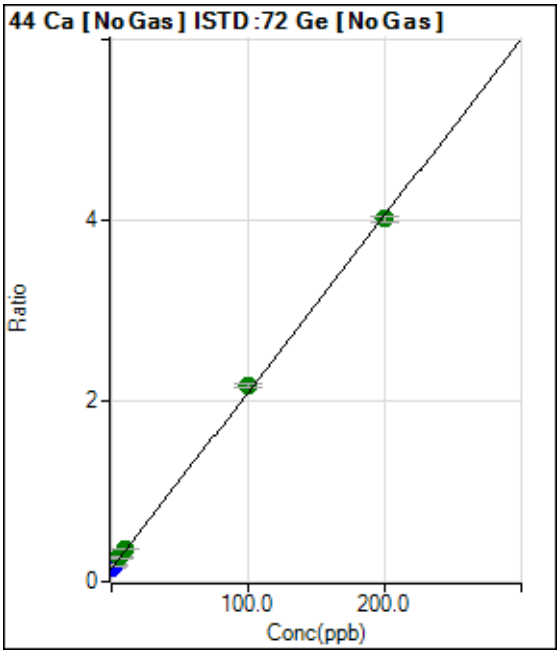
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	11.7
2	☐	200.000	204.122	753.37	0.0006	P	9.6
3	☐	500.000	486.024	1673.47	0.0014	P	10.0
4	☐	1000.000	954.163	3300.46	0.0028	P	5.0
5	☐	10000.00	10488.59	35960.99	0.0303	P	2.2
6	☐	20000.00	19758.30	67003.26	0.0570	P	1.0

y = 2.8835E-006 * x + 3.9141E-005
R = 0.9996
DL = 4.76
BEC = 13.57

Weight: <None>
Min Conc: <None>

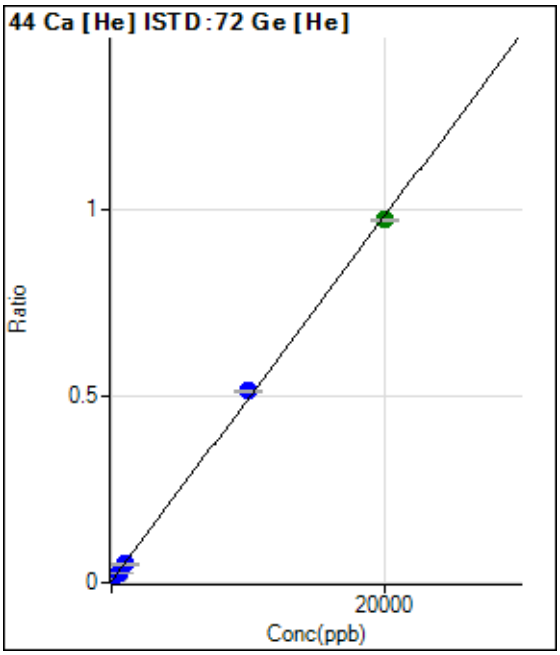


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513846.13	0.1431	P	1.1
2	☐	2.000	1.894	647441.00	0.1801	P	1.9
3	☐	5.000	6.470	968567.56	0.2695	A	3.8
4	☐	10.000	10.902	1276412.51	0.3562	A	0.4
5	☐	100.000	103.629	7693820.09	2.1687	A	1.3
6	☐	200.000	198.105	14010336.46	4.0154	A	1.6

y = 0.0195 * x + 0.1431
R = 0.9998
DL = 0.2452
BEC = 7.319

Weight: <None>
Min Conc: <None>

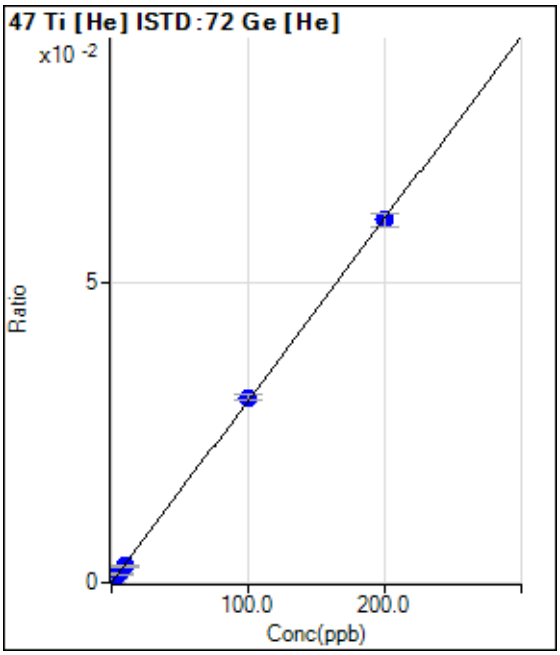
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4700.89	0.0039	P	3.8
2	☐	200.000	186.506	15662.56	0.0131	P	3.1
3	☐	500.000	475.218	31559.78	0.0272	P	2.7
4	☐	1000.000	924.253	58113.30	0.0491	P	1.9
5	☐	10000.00	10410.21	608957.09	0.5128	P	1.8
6	☐	20000.00	19799.43	1142335.37	0.9718	A	0.7

y = 4.8881E-005 * x + 0.0039
R = 0.9997
DL = 9.142
BEC = 80.71

Weight: <None>
Min Conc: <None>

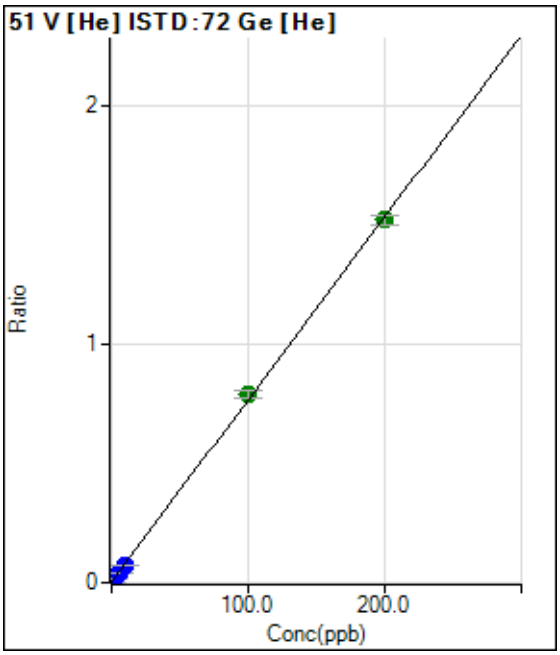


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.4
2	☐	2.000	1.695	630.03	0.0005	P	14.6
3	☐	5.000	4.843	1720.14	0.0015	P	6.5
4	☐	10.000	8.980	3237.11	0.0027	P	3.6
5	☐	100.000	101.543	36615.85	0.0308	P	3.1
6	☐	200.000	199.287	71091.34	0.0605	P	3.5

y = 3.0358E-004 * x + 1.1192E-005
R = 0.9999
DL = 0.04797
BEC = 0.03687

Weight: <None>
Min Conc: <None>

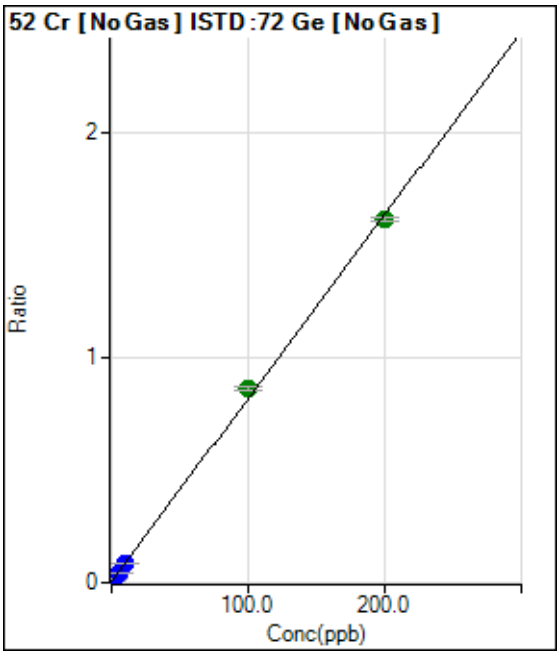
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3679.40	0.0031	P	2.7
2	☐	2.000	1.850	20644.53	0.0172	P	2.8
3	☐	5.000	4.702	45290.34	0.0390	P	1.9
4	☐	10.000	9.130	86140.58	0.0728	P	1.1
5	☐	100.000	102.908	936802.63	0.7890	A	3.5
6	☐	200.000	198.599	1785920.48	1.5199	A	2.6

y = 0.0076 * x + 0.0031
R = 0.9998
DL = 0.03322
BEC = 0.4043

Weight: <None>
Min Conc: <None>

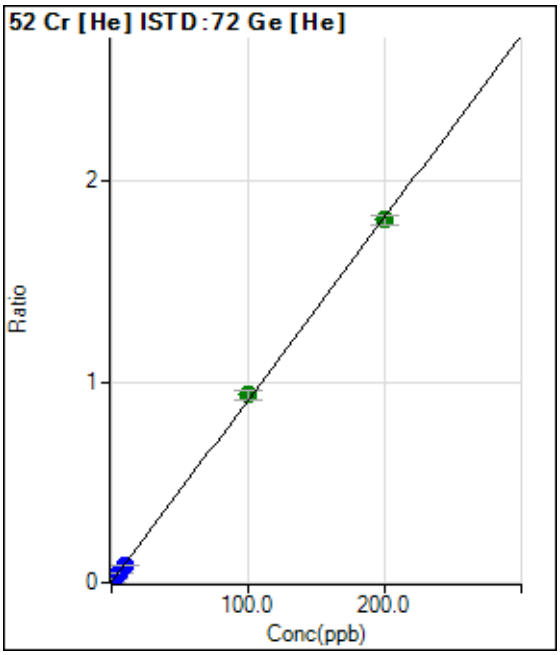


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16043.12	0.0045	P	3.5
2	☐	2.000	1.997	74422.98	0.0207	P	3.0
3	☐	5.000	4.812	156704.50	0.0436	P	2.3
4	☐	10.000	9.636	296842.20	0.0828	P	2.0
5	☐	100.000	105.337	3054745.27	0.8611	A	2.8
6	☐	200.000	197.354	5616165.96	1.6095	A	1.0

y = 0.0081 * x + 0.0045
R = 0.9995
DL = 0.05827
BEC = 0.5493

Weight: <None>
Min Conc: <None>

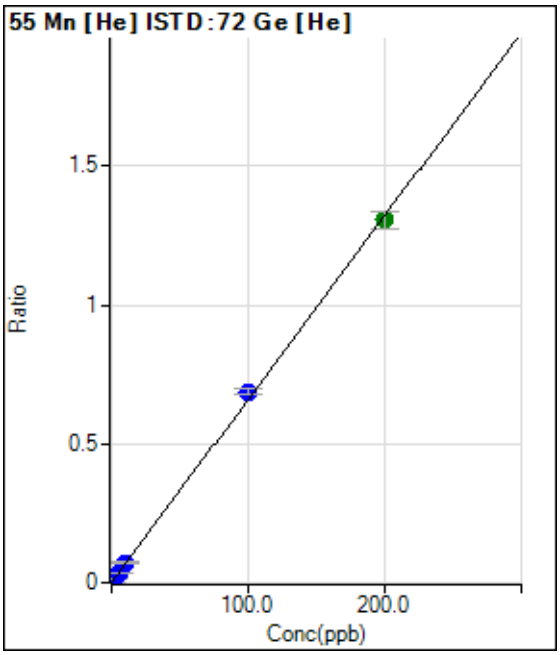
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2286.90	0.0019	P	7.8
2	☐	2.000	1.941	23443.77	0.0195	P	0.7
3	☐	5.000	4.864	53541.80	0.0461	P	1.7
4	☐	10.000	9.621	105636.97	0.0893	P	1.9
5	☐	100.000	102.613	1108771.73	0.9340	A	4.3
6	☐	200.000	198.716	2123073.09	1.8069	A	2.7

y = 0.0091 * x + 0.0019
R = 0.9999
DL = 0.04948
BEC = 0.2113

Weight: <None>
Min Conc: <None>

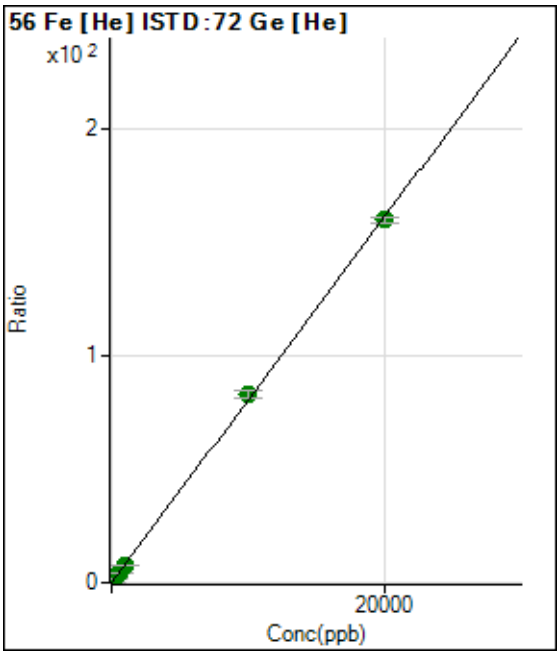


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0004	P	7.2
2	☐	2.000	1.905	15615.89	0.0130	P	5.2
3	☐	5.000	4.865	37802.81	0.0326	P	4.1
4	☐	10.000	10.902	85644.62	0.0724	P	2.3
5	☐	100.000	104.048	816044.78	0.6873	P	2.7
6	☐	200.000	197.935	1535362.69	1.3070	A	4.5

y = 0.0066 * x + 4.4473E-004
R = 0.9997
DL = 0.0146
BEC = 0.06737

Weight: <None>
Min Conc: <None>

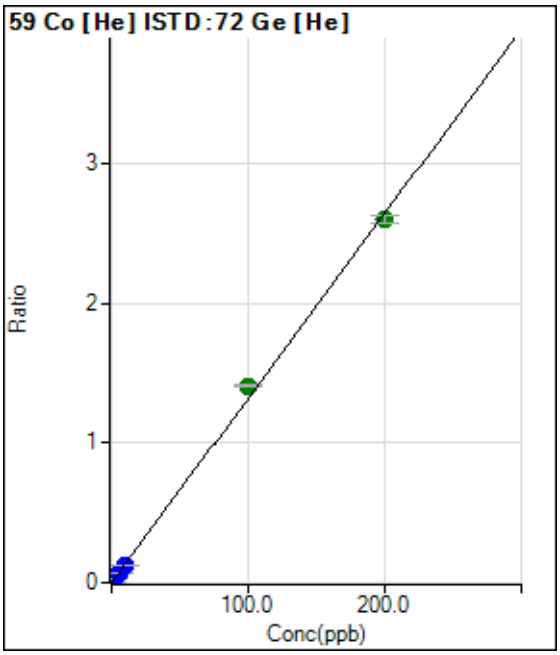
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10347.41	0.0087	P	1.0
2	☐	200.000	195.725	1899902.84	1.5841	A	0.7
3	☐	500.000	494.490	4631792.85	3.9888	A	2.9
4	☐	1000.000	938.903	8949056.95	7.5659	A	2.1
5	☐	10000.00	10325.29	98684135.20	83.1168	A	3.6
6	☐	20000.00	19840.59	187675623.8	159.705	A	1.8

y = 0.0080 * x + 0.0087
R = 0.9998
DL = 0.03159
BEC = 1.079

Weight: <None>
Min Conc: <None>

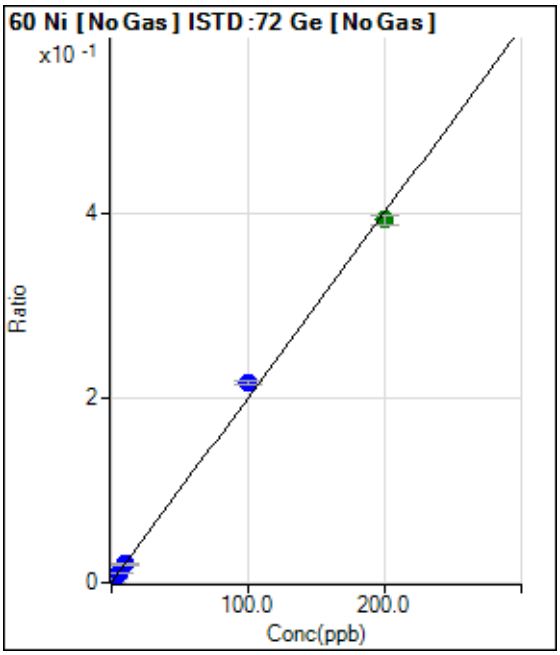


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0002	P	14.8
2	☐	2.000	1.977	31476.70	0.0262	P	2.7
3	☐	5.000	4.961	76199.45	0.0656	P	2.4
4	☐	10.000	9.522	148805.44	0.1258	P	1.4
5	☐	100.000	106.623	1671076.90	1.4070	A	1.3
6	☐	200.000	196.714	3050253.49	2.5957	A	2.0

y = 0.0132 * x + 1.5959E-004
R = 0.9992
DL = 0.005369
BEC = 0.01209

Weight: <None>
Min Conc: <None>

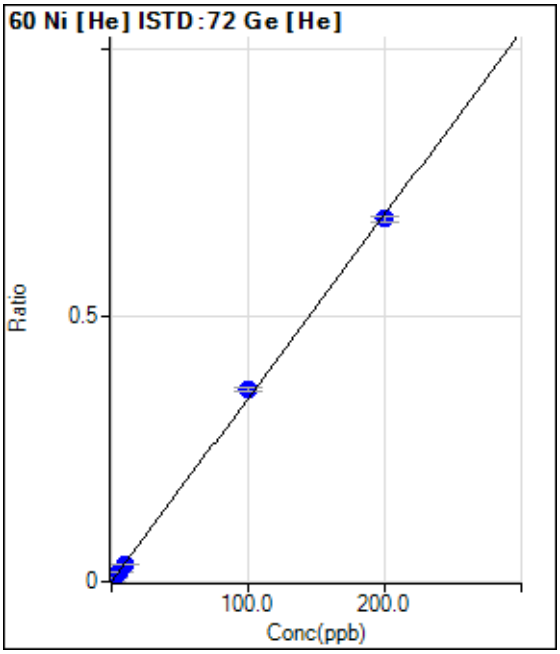
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.02	0.0001	P	9.5
2	☐	2.000	2.000	14871.71	0.0041	P	6.9
3	☐	5.000	4.984	36425.76	0.0101	P	2.4
4	☐	10.000	9.857	71394.62	0.0199	P	2.2
5	☐	100.000	107.982	770019.31	0.2170	P	2.0
6	☐	200.000	196.016	1374360.60	0.3939	A	2.7

y = 0.0020 * x + 1.2254E-004
R = 0.9989
DL = 0.0173
BEC = 0.061

Weight: <None>
Min Conc: <None>

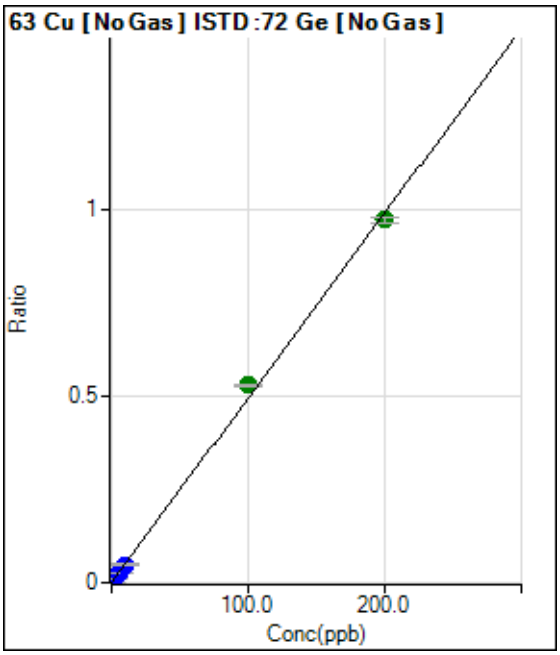


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0002	P	10.4
2	☐	2.000	1.909	8112.56	0.0068	P	3.2
3	☐	5.000	4.874	19734.66	0.0170	P	4.5
4	☐	10.000	9.431	38695.35	0.0327	P	1.7
5	☐	100.000	104.604	428734.17	0.3610	P	2.6
6	☐	200.000	197.731	801857.49	0.6823	P	1.7

y = 0.0034 * x + 1.7913E-004
R = 0.9996
DL = 0.01622
BEC = 0.05192

Weight: <None>
Min Conc: <None>

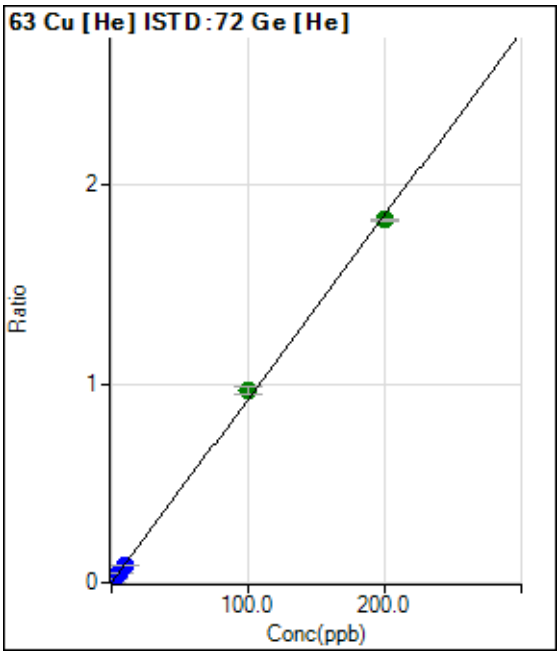
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.08	0.0003	P	2.7
2	☐	2.000	2.029	37325.02	0.0104	P	0.9
3	☐	5.000	4.933	89018.20	0.0248	P	2.4
4	☐	10.000	9.828	175667.47	0.0490	P	1.4
5	☐	100.000	107.047	1882747.78	0.5307	A	0.8
6	☐	200.000	196.486	3397954.53	0.9738	A	1.3

y = 0.0050 * x + 3.2576E-004
R = 0.9991
DL = 0.005329
BEC = 0.06575

Weight: <None>
Min Conc: <None>

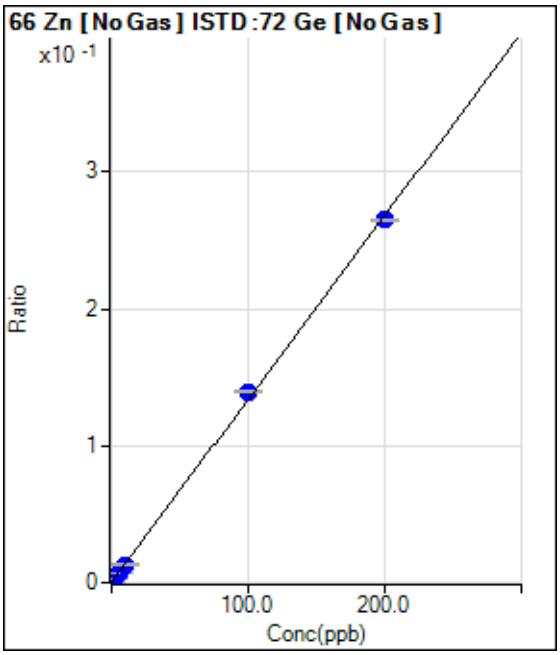


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.37	0.0006	P	18.1
2	☐	2.000	1.926	22061.71	0.0184	P	2.2
3	☐	5.000	4.861	52859.85	0.0455	P	2.0
4	☐	10.000	9.385	103262.08	0.0873	P	2.2
5	☐	100.000	104.924	1151693.99	0.9700	A	3.6
6	☐	200.000	197.573	2146156.22	1.8260	A	0.7

y = 0.0092 * x + 5.9830E-004
R = 0.9996
DL = 0.03515
BEC = 0.06476

Weight: <None>
Min Conc: <None>

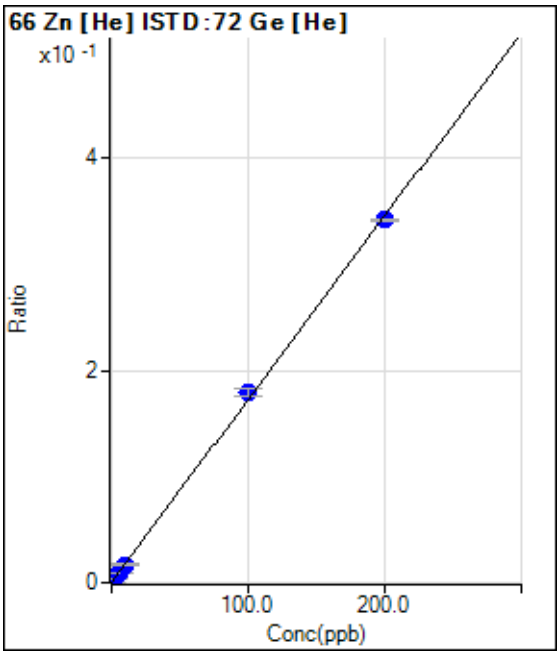
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0002	P	4.6
2	☐	2.000	1.989	10240.69	0.0028	P	1.8
3	☐	5.000	4.744	23484.09	0.0065	P	1.8
4	☐	10.000	9.802	47654.10	0.0133	P	1.5
5	☐	100.000	104.262	495383.08	0.1396	P	1.4
6	☐	200.000	197.886	924160.12	0.2649	P	0.6

y = 0.0013 * x + 1.8748E-004
R = 0.9997
DL = 0.0192
BEC = 0.1402

Weight: <None>
Min Conc: <None>

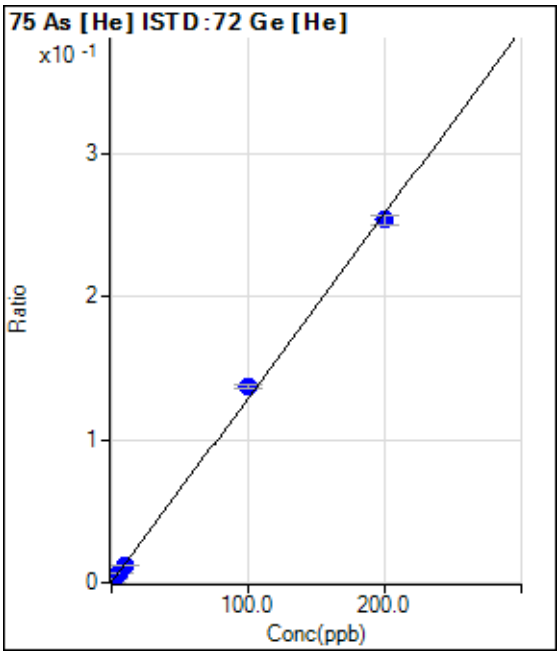


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	21.4
2	☐	2.000	1.972	4397.46	0.0037	P	5.1
3	☐	5.000	4.817	9953.83	0.0086	P	4.2
4	☐	10.000	9.809	20328.96	0.0172	P	3.3
5	☐	100.000	104.039	213429.28	0.1798	P	3.5
6	☐	200.000	197.995	401796.06	0.3419	P	0.7

y = 0.0017 * x + 2.6302E-004
R = 0.9997
DL = 0.09776
BEC = 0.1525

Weight: <None>
Min Conc: <None>

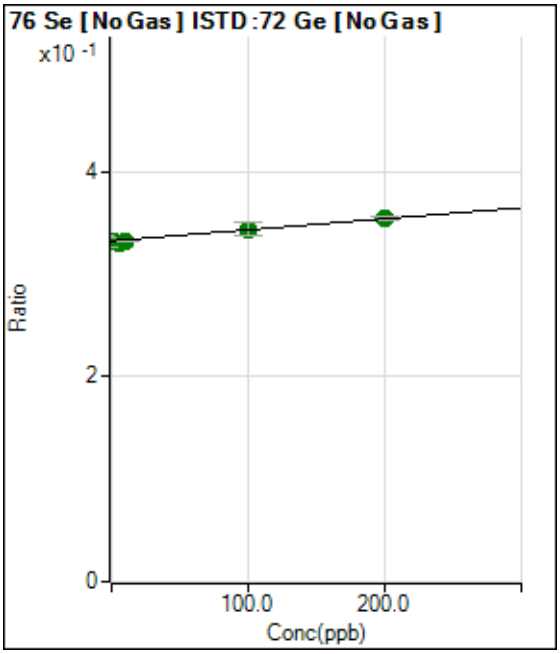
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.67	0.0002	P	10.4
2	☐	2.000	1.816	3042.59	0.0025	P	4.4
3	☐	5.000	4.784	7385.38	0.0064	P	1.7
4	☐	10.000	9.266	14348.77	0.0121	P	1.3
5	☐	100.000	106.660	163329.11	0.1375	P	2.0
6	☐	200.000	196.714	297884.41	0.2535	P	2.5

y = 0.0013 * x + 1.9852E-004
R = 0.9992
DL = 0.04818
BEC = 0.1542

Weight: <None>
Min Conc: <None>

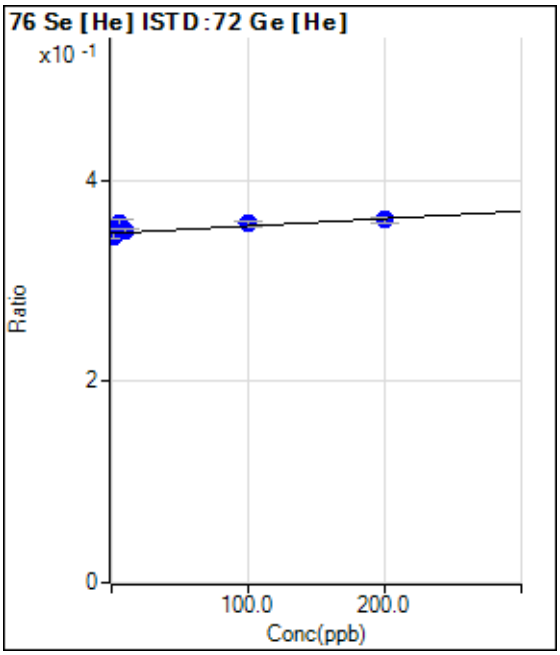


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1193927.35	0.3324	A	1.1
2	☐	2.000	-0.194	1194776.34	0.3324	A	2.7
3	☐	5.000	-17.863	1187715.89	0.3305	A	2.9
4	☐	10.000	0.671	1191578.47	0.3325	A	0.1
5	☐	100.000	106.492	1219964.44	0.3439	A	3.6
6	☐	200.000	197.814	1234562.35	0.3538	A	1.2

y = 1.0818E-004 * x + 0.3324
R = 0.9941
DL = 98.39
BEC = 3073

Weight: <None>
Min Conc: <None>

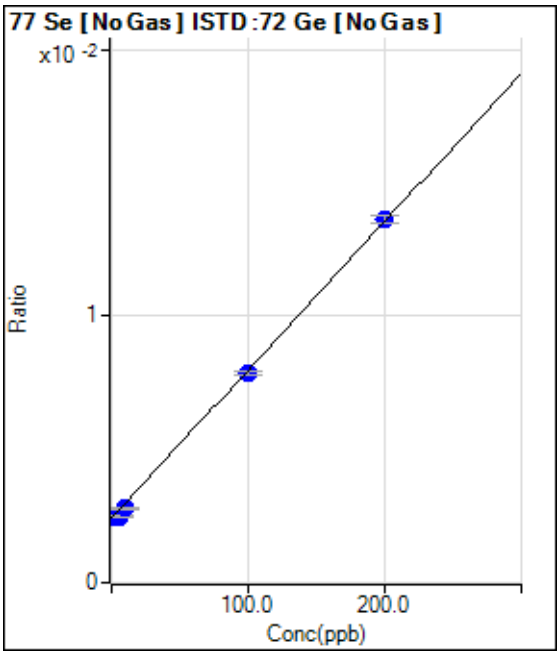
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413926.97	0.3474	P	2.4
2	☐	2.000	-32.078	413775.62	0.3450	P	1.3
3	☐	5.000	130.646	414641.32	0.3571	P	2.9
4	☐	10.000	39.267	414424.55	0.3503	P	0.8
5	☐	100.000	128.778	423891.83	0.3569	P	1.3
6	☐	200.000	181.347	424056.57	0.3608	P	1.3

y = 7.3996E-005 * x + 0.3474
R = 0.7669
DL = 334.9
BEC = 4695

Weight: <None>
Min Conc: <None>

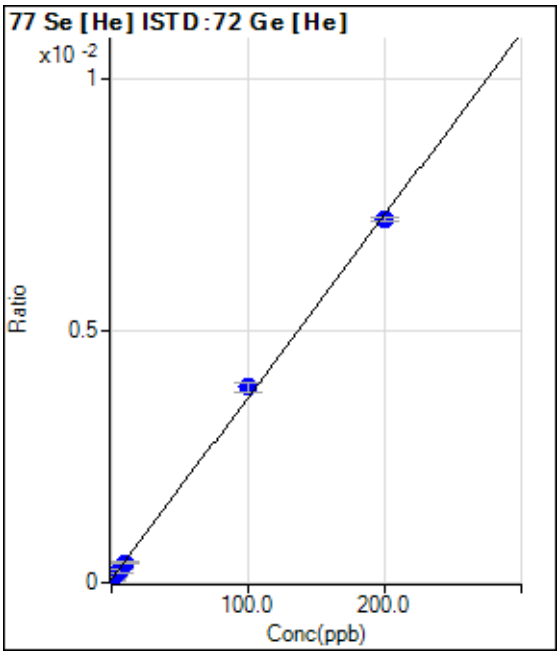


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8679.64	0.0024	P	4.4
2	☐	2.000	1.155	8923.11	0.0025	P	5.5
3	☐	5.000	1.185	8923.13	0.0025	P	2.2
4	☐	10.000	6.726	10000.54	0.0028	P	2.7
5	☐	100.000	98.336	27969.51	0.0079	P	2.0
6	☐	200.000	201.100	47444.02	0.0136	P	2.0

y = 5.5602E-005 * x + 0.0024
R = 0.9998
DL = 5.768
BEC = 43.46

Weight: <None>
Min Conc: <None>

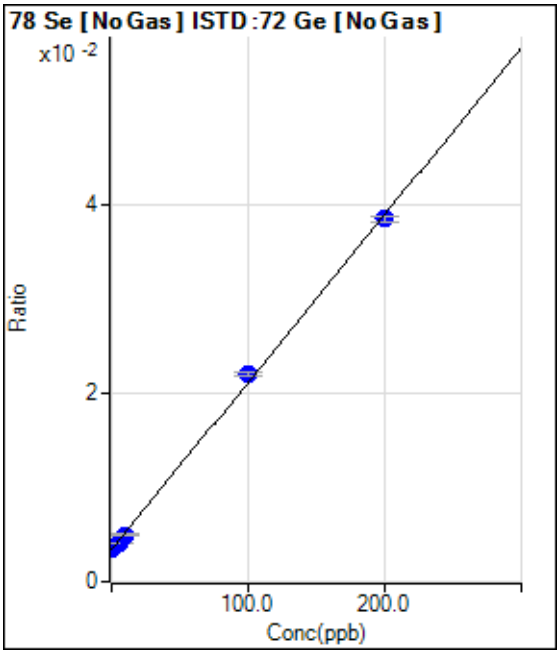
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	32.0
2	☐	2.000	1.525	143.33	0.0001	P	20.0
3	☐	5.000	4.634	270.01	0.0002	P	30.8
4	☐	10.000	9.124	466.68	0.0004	P	14.1
5	☐	100.000	105.476	4614.22	0.0039	P	4.6
6	☐	200.000	197.319	8479.50	0.0072	P	0.9

y = 3.6237E-005 * x + 6.4217E-005
R = 0.9994
DL = 1.703
BEC = 1.772

Weight: <None>
Min Conc: <None>

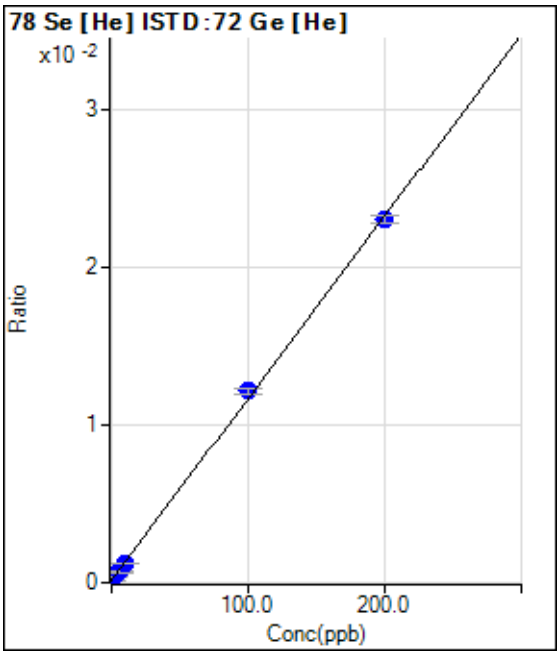


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12302.47	0.0034	P	2.0
2	☐	2.000	1.808	13466.91	0.0037	P	3.8
3	☐	5.000	3.868	14791.71	0.0041	P	1.1
4	☐	10.000	8.766	17865.42	0.0050	P	2.5
5	☐	100.000	104.933	78408.32	0.0221	P	1.0
6	☐	200.000	197.626	134677.45	0.0386	P	1.3

y = 1.7798E-004 * x + 0.0034
R = 0.9995
DL = 1.166
BEC = 19.25

Weight: <None>
Min Conc: <None>

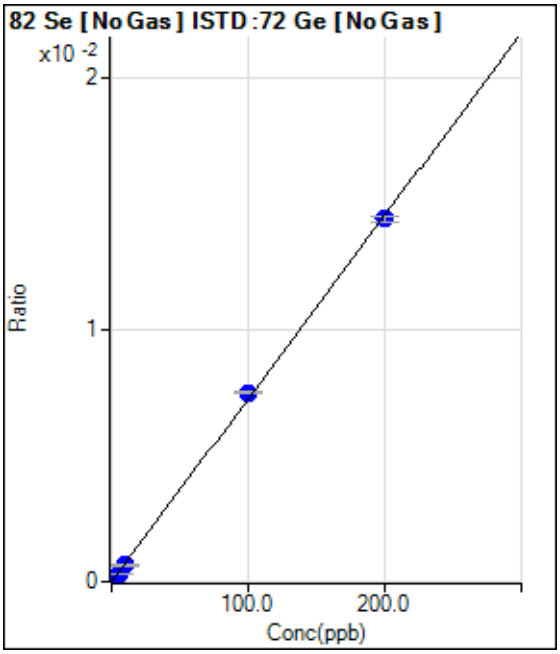
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.00	0.0002	P	5.3
2	☐	2.000	1.907	450.68	0.0004	P	9.4
3	☐	5.000	4.459	778.02	0.0007	P	3.3
4	☐	10.000	9.407	1466.08	0.0012	P	3.4
5	☐	100.000	103.908	14391.71	0.0121	P	3.6
6	☐	200.000	198.090	26988.99	0.0230	P	2.0

y = 1.1515E-004 * x + 1.5612E-004
R = 0.9997
DL = 0.2166
BEC = 1.356

Weight: <None>
Min Conc: <None>

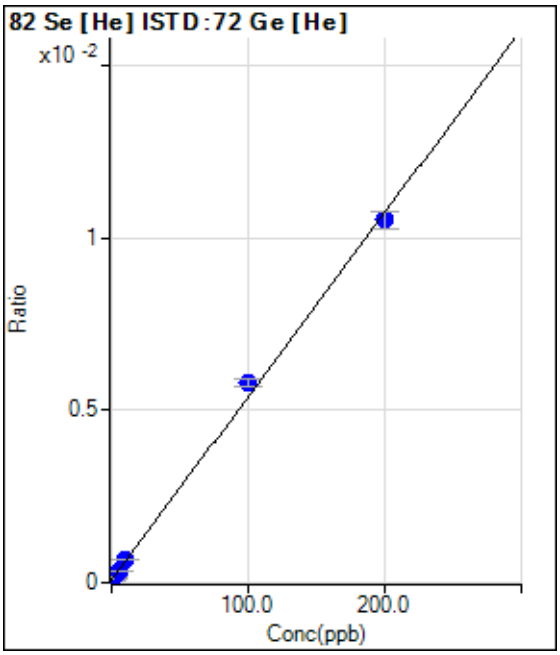


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-5.97	0.0000	P	-2242.
2	☐	2.000	1.888	487.60	0.0001	P	21.4
3	☐	5.000	4.147	1077.09	0.0003	P	6.6
4	☐	10.000	9.207	2391.15	0.0007	P	9.6
5	☐	100.000	103.421	26644.38	0.0075	P	1.7
6	☐	200.000	198.352	50262.49	0.0144	P	1.7

y = 7.2633E-005 * x - 1.5913E-006
R = 0.9998
DL = 1.474
BEC = -0.02191

Weight: <None>
Min Conc: <None>

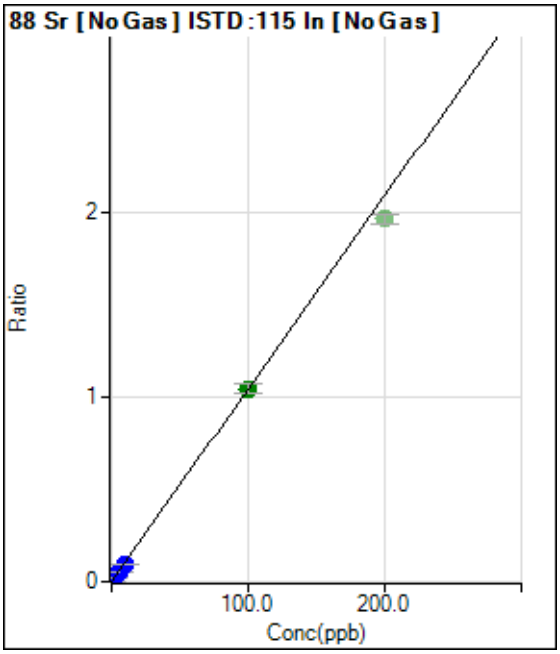
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	45.2
2	☐	2.000	1.401	173.34	0.0001	P	17.9
3	☐	5.000	4.979	390.01	0.0003	P	11.8
4	☐	10.000	11.262	793.37	0.0007	P	7.2
5	☐	100.000	107.402	6881.86	0.0058	P	4.1
6	☐	200.000	196.243	12379.26	0.0105	P	4.5

y = 5.3305E-005 * x + 6.9901E-005
R = 0.9990
DL = 1.78
BEC = 1.311

Weight: <None>
Min Conc: <None>

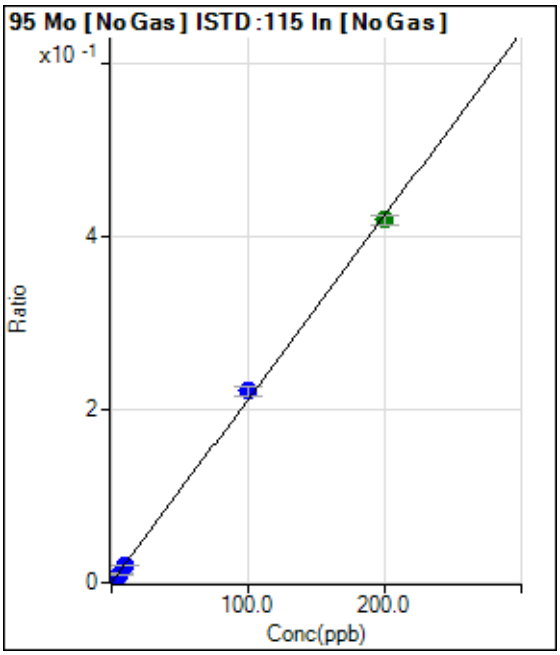


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1886.84	0.0005	P	5.5
2	☐	2.000	1.875	83802.86	0.0200	P	4.7
3	☐	5.000	4.728	205253.74	0.0498	P	2.8
4	☐	10.000	9.323	403813.07	0.0977	P	1.3
5	☐	100.000	100.084	4226592.33	1.0446	A	5.0
6	☑	200.000		7867354.05	1.9638	A	2.5

y = 0.0104 * x + 4.5220E-004
R = 1.0000
DL = 0.007144
BEC = 0.04334

Weight: <None>
Min Conc: <None>

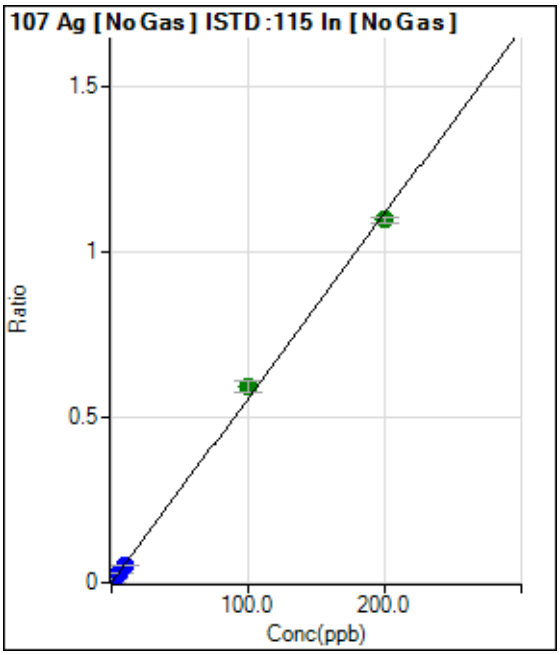
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	69.1
2	☐	2.000	1.881	16767.55	0.0040	P	5.5
3	☐	5.000	4.670	40933.59	0.0099	P	3.5
4	☐	10.000	9.449	82965.14	0.0201	P	1.1
5	☐	100.000	104.568	898269.02	0.2221	P	4.8
6	☐	200.000	197.753	1682506.07	0.4200	A	2.6

y = 0.0021 * x + 1.1219E-005
R = 0.9996
DL = 0.01095
BEC = 0.005283

Weight: <None>
Min Conc: <None>

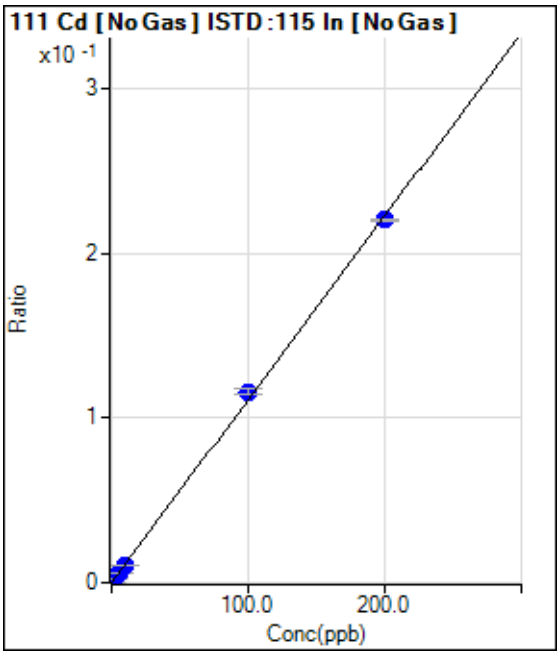


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0001	P	13.7
2	☐	2.000	1.935	45789.77	0.0109	P	2.4
3	☐	5.000	4.813	111388.45	0.0270	P	2.1
4	☐	10.000	9.496	219767.38	0.0532	P	0.3
5	☐	100.000	106.769	2413307.52	0.5968	A	5.9
6	☐	200.000	196.646	4403544.21	1.0990	A	1.3

y = 0.0056 * x + 1.1814E-004
R = 0.9992
DL = 0.008677
BEC = 0.02114

Weight: <None>
Min Conc: <None>

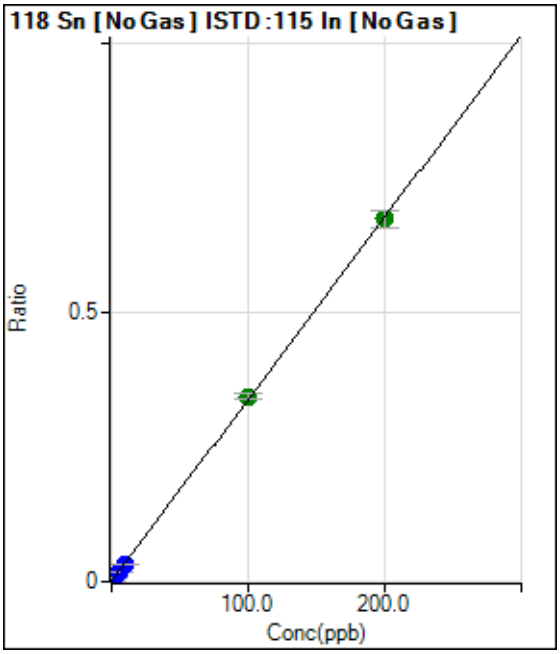
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.7
2	☐	2.000	1.918	8963.19	0.0021	P	2.6
3	☐	5.000	4.797	22045.46	0.0053	P	1.5
4	☐	10.000	9.144	42101.19	0.0102	P	1.0
5	☐	100.000	103.989	468779.91	0.1158	P	3.0
6	☐	200.000	198.054	883953.03	0.2206	P	0.4

y = 0.0011 * x + 3.1977E-006
R = 0.9997
DL = 0.00376
BEC = 0.002871

Weight: <None>
Min Conc: <None>

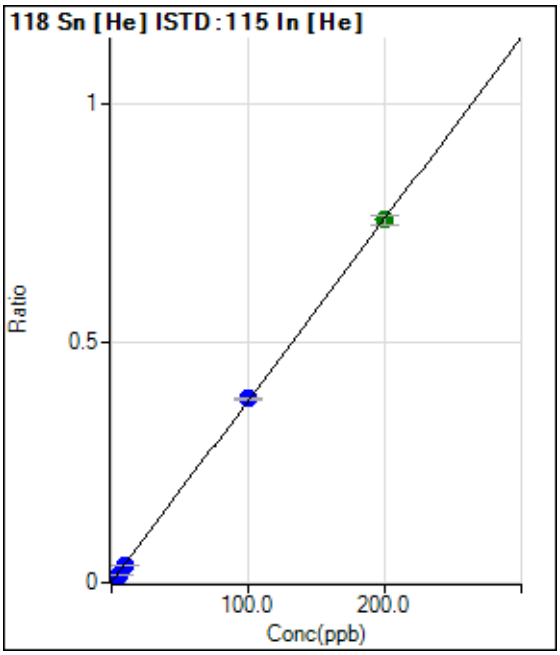


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.29	0.0006	P	5.5
2	☐	2.000	1.850	28772.06	0.0069	P	1.7
3	☐	5.000	4.671	67664.69	0.0164	P	2.2
4	☐	10.000	9.346	133148.89	0.0322	P	0.6
5	☐	100.000	101.607	1393168.21	0.3443	A	3.3
6	☐	200.000	199.239	2702480.27	0.6745	A	5.0

y = 0.0034 * x + 6.0859E-004
R = 0.9999
DL = 0.02988
BEC = 0.1799

Weight: <None>
Min Conc: <None>

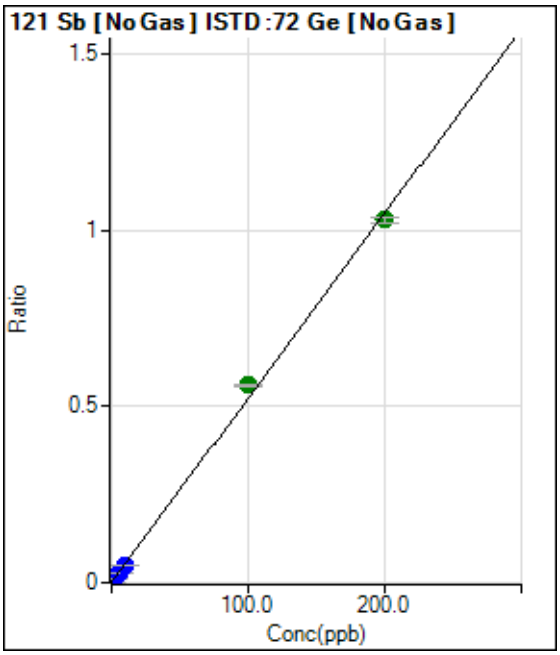
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1667.71	0.0008	P	43.2
2	☐	2.000	1.731	15906.56	0.0073	P	0.9
3	☐	5.000	4.463	37714.58	0.0177	P	2.4
4	☐	10.000	9.246	75953.20	0.0358	P	2.1
5	☐	100.000	101.028	813132.80	0.3835	P	1.6
6	☐	200.000	199.540	1573843.78	0.7566	A	2.6

y = 0.0038 * x + 7.8220E-004
R = 1.0000
DL = 0.2676
BEC = 0.2065

Weight: <None>
Min Conc: <None>

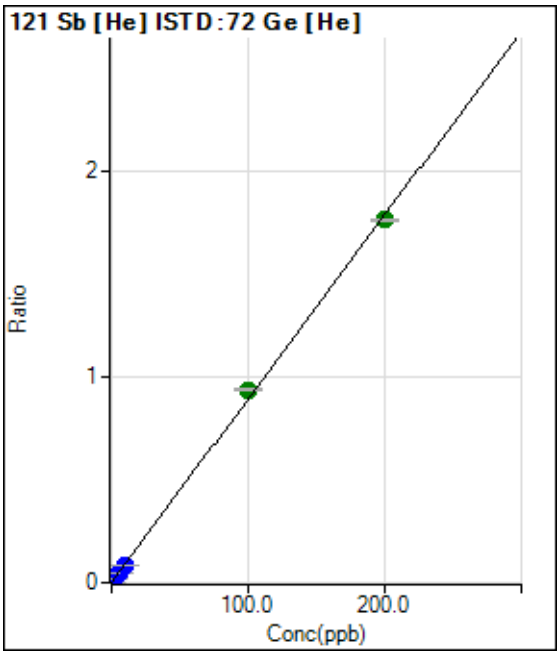


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2787.01	0.0008	P	2.9
2	☐	2.000	1.962	39647.28	0.0110	P	4.0
3	☐	5.000	4.789	92721.06	0.0258	P	3.3
4	☐	10.000	9.437	179509.61	0.0501	P	1.6
5	☐	100.000	106.832	1983478.46	0.5590	A	1.1
6	☐	200.000	196.618	3587743.59	1.0282	A	1.4

y = 0.0052 * x + 7.7591E-004
R = 0.9991
DL = 0.01309
BEC = 0.1485

Weight: <None>
Min Conc: <None>

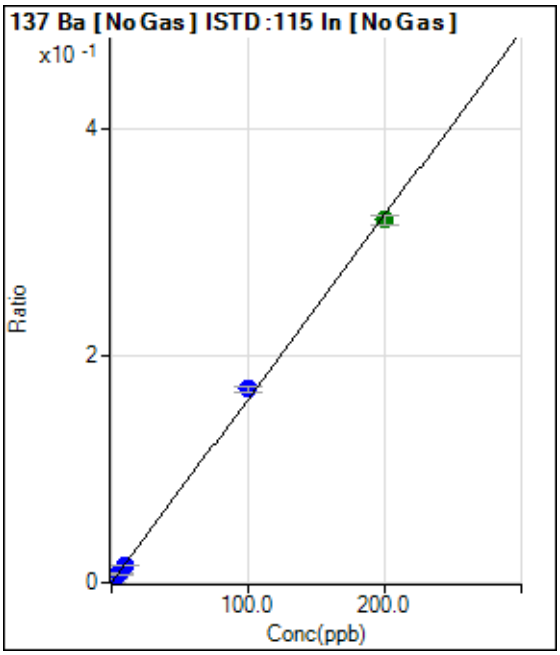
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1483.45	0.0012	P	3.7
2	☐	2.000	1.853	21330.99	0.0178	P	1.6
3	☐	5.000	4.785	51056.33	0.0440	P	2.7
4	☐	10.000	9.348	100175.05	0.0847	P	3.4
5	☐	100.000	105.123	1116029.38	0.9397	A	1.3
6	☐	200.000	197.478	2073584.61	1.7642	A	0.6

y = 0.0089 * x + 0.0012
R = 0.9995
DL = 0.0154
BEC = 0.1395

Weight: <None>
Min Conc: <None>

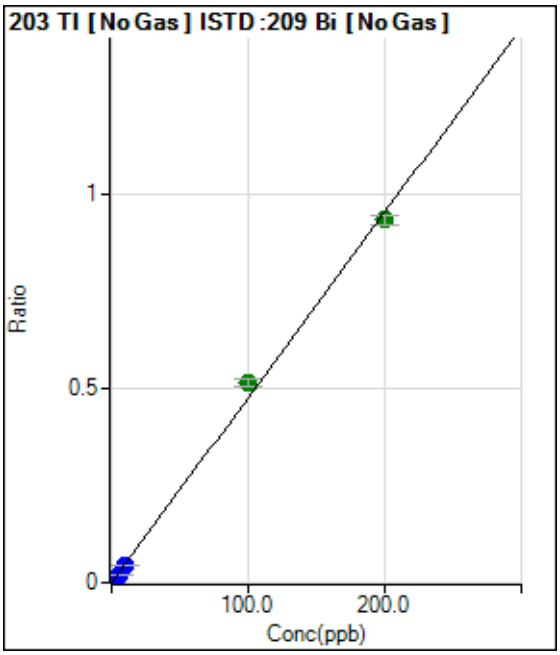


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0001	P	6.6
2	☐	2.000	1.878	13003.43	0.0031	P	2.3
3	☐	5.000	4.682	31532.18	0.0076	P	2.6
4	☐	10.000	9.402	63197.76	0.0153	P	2.9
5	☐	100.000	105.207	689902.15	0.1705	P	3.7
6	☐	200.000	197.436	1281699.28	0.3199	A	2.8

y = 0.0016 * x + 6.0716E-005
R = 0.9995
DL = 0.007372
BEC = 0.03748

Weight: <None>
Min Conc: <None>

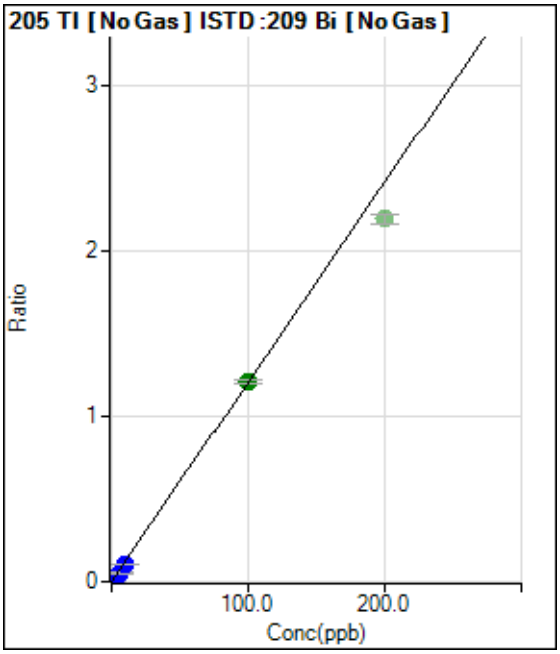
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	32.9
2	☐	2.000	1.847	30297.48	0.0088	P	1.8
3	☐	5.000	4.629	76189.71	0.0220	P	1.7
4	☐	10.000	9.336	153104.22	0.0444	P	1.7
5	☐	100.000	107.947	1745250.86	0.5132	A	3.4
6	☐	200.000	196.070	3066227.56	0.9320	A	2.5

y = 0.0048 * x + 1.8352E-005
R = 0.9988
DL = 0.00381
BEC = 0.003861

Weight: <None>
Min Conc: <None>

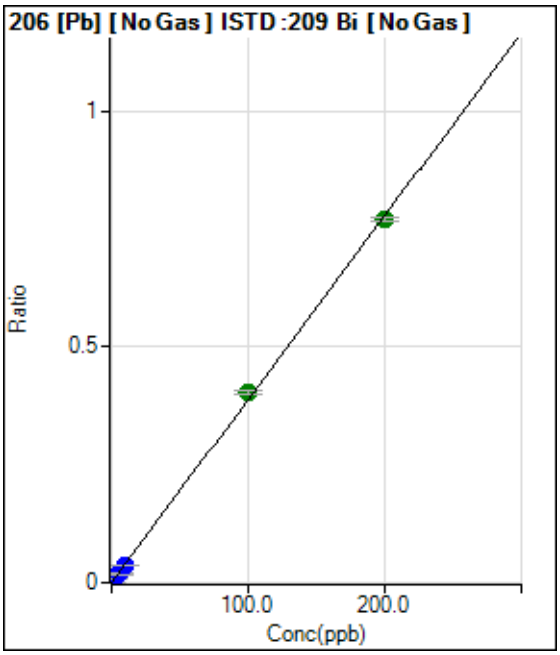


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.67	0.0000	P	14.3
2	☐	2.000	1.792	74593.73	0.0217	P	4.4
3	☐	5.000	4.313	180200.18	0.0521	P	1.1
4	☐	10.000	8.725	363227.00	0.1053	P	3.0
5	☐	100.000	100.166	4111171.92	1.2088	A	2.4
6	☑	200.000		7220635.94	2.1947	A	2.9

y = 0.0121 * x + 4.8271E-005
R = 0.9999
DL = 0.001721
BEC = 0.004

Weight: <None>
Min Conc: <None>

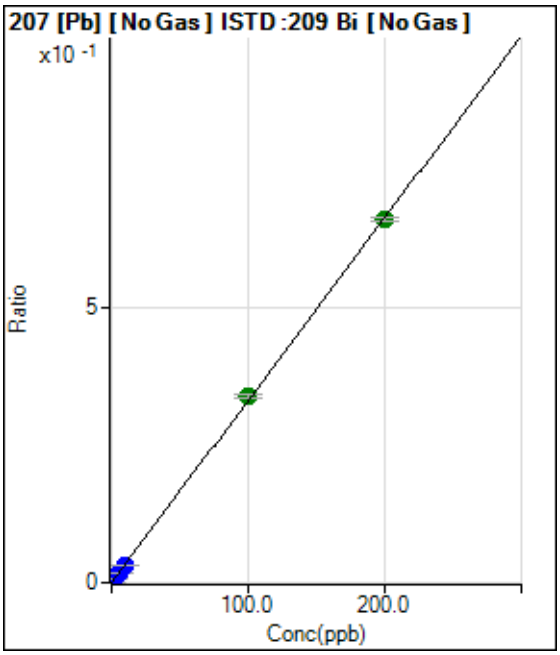
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0001	P	0.6
2	☐	2.000	1.915	26014.27	0.0076	P	4.2
3	☐	5.000	4.693	63495.88	0.0184	P	1.6
4	☐	10.000	9.344	125625.41	0.0364	P	1.7
5	☐	100.000	104.144	1376825.76	0.4048	A	2.3
6	☐	200.000	197.969	2531994.23	0.7694	A	1.1

y = 0.0039 * x + 1.1690E-004
R = 0.9997
DL = 0.0005209
BEC = 0.03008

Weight: <None>
Min Conc: <None>

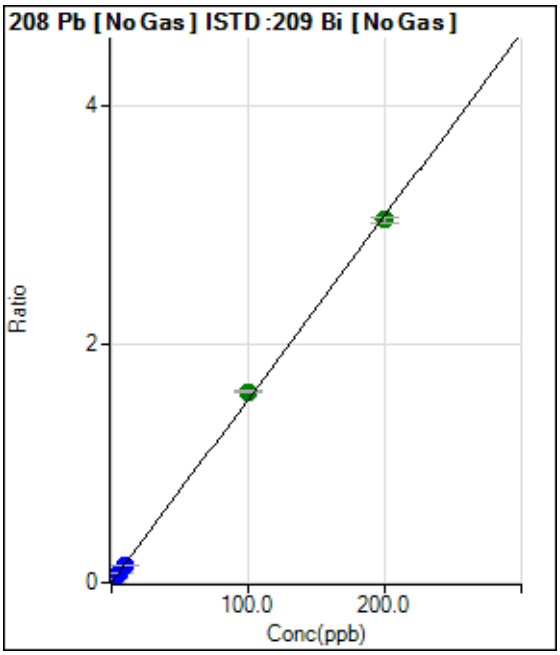


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.35	0.0001	P	42.4
2	☐	2.000	1.985	23008.44	0.0067	P	5.0
3	☐	5.000	4.776	55159.35	0.0159	P	1.9
4	☐	10.000	9.471	108687.52	0.0315	P	1.8
5	☐	100.000	101.919	1150148.45	0.3382	A	1.9
6	☐	200.000	199.072	2173017.89	0.6604	A	0.9

y = 0.0033 * x + 1.0216E-004
R = 0.9999
DL = 0.03914
BEC = 0.0308

Weight: <None>
Min Conc: <None>

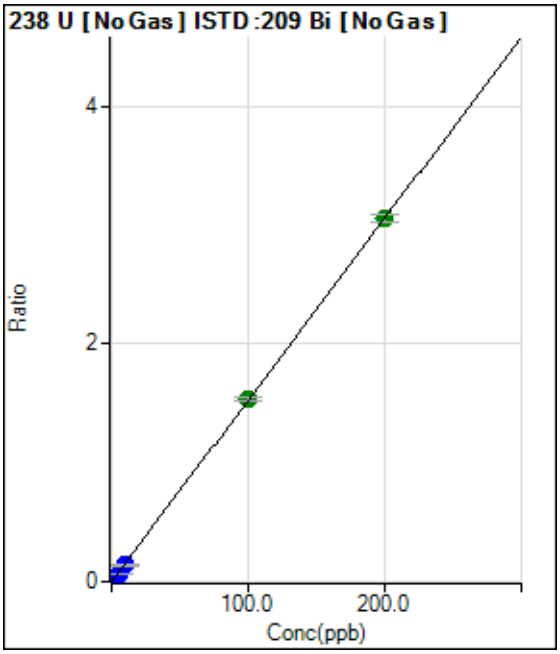
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1490.07	0.0004	P	8.4
2	☐	2.000	1.941	104038.63	0.0302	P	1.9
3	☐	5.000	4.719	251950.33	0.0728	P	1.0
4	☐	10.000	9.502	504275.20	0.1462	P	0.8
5	☐	100.000	104.195	5438819.79	1.5991	A	1.4
6	☐	200.000	197.935	9993004.12	3.0373	A	1.5

y = 0.0153 * x + 4.3166E-004
R = 0.9997
DL = 0.007089
BEC = 0.02813

Weight: <None>
Min Conc: <None>

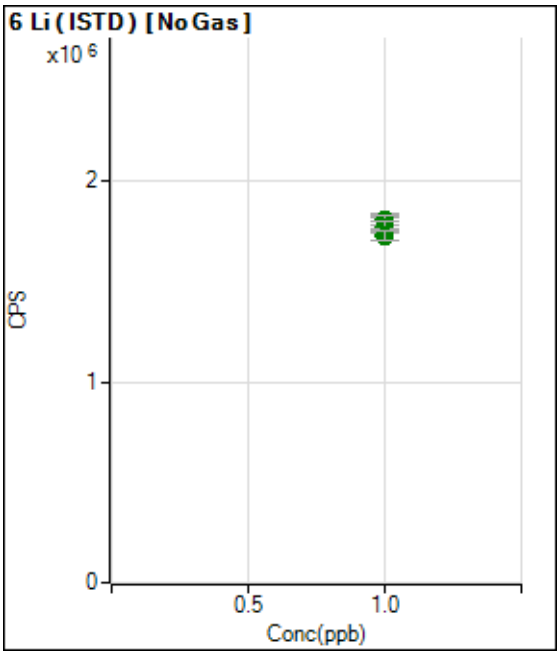


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	44.9
2	☐	2.000	1.863	97989.39	0.0285	P	0.5
3	☐	5.000	4.601	243119.95	0.0703	P	1.3
4	☐	10.000	9.075	477909.90	0.1386	P	1.7
5	☐	100.000	100.328	5210961.07	1.5320	A	1.7
6	☐	200.000	199.894	10041935.48	3.0523	A	2.2

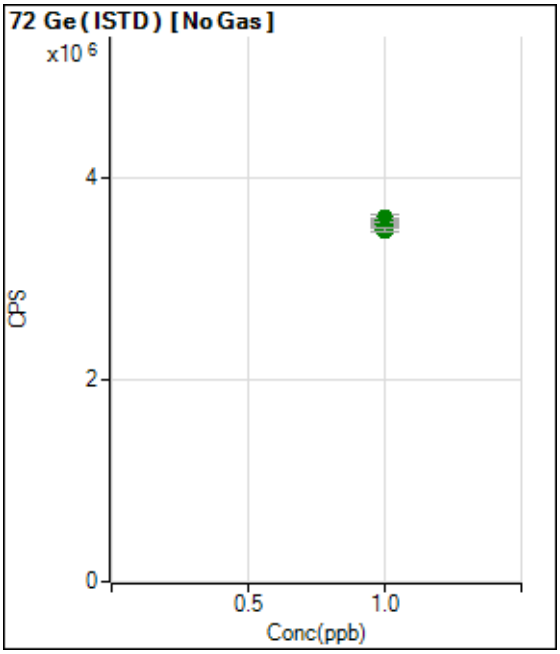
y = 0.0153 * x + 9.6362E-006
R = 1.0000
DL = 0.0008507
BEC = 0.0006311

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

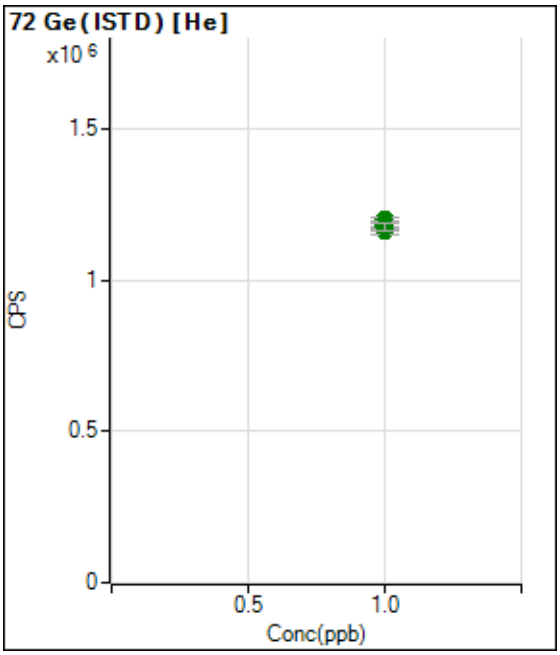


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1801939.61		A	4.0
2	☐	1.000		1802126.72		A	1.8
3	☐	1.000		1809661.71		A	2.5
4	☐	1.000		1775017.52		A	3.0
5	☐	1.000		1733503.92		A	3.2
6	☐	1.000		1729739.48		A	2.5

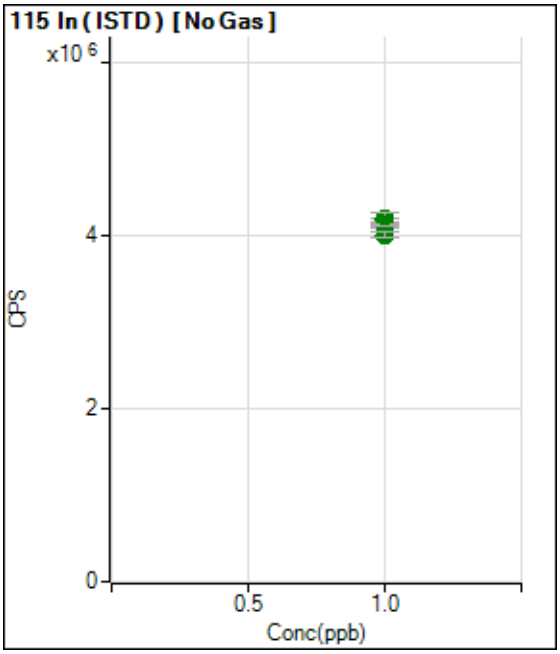


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3591716.40		A	0.4
2	☐	1.000		3595634.63		A	1.9
3	☐	1.000		3595461.51		A	2.4
4	☐	1.000		3583744.95		A	0.6
5	☐	1.000		3547979.84		A	1.1
6	☐	1.000		3489397.97		A	0.9

Calibration for 018_ICV.d

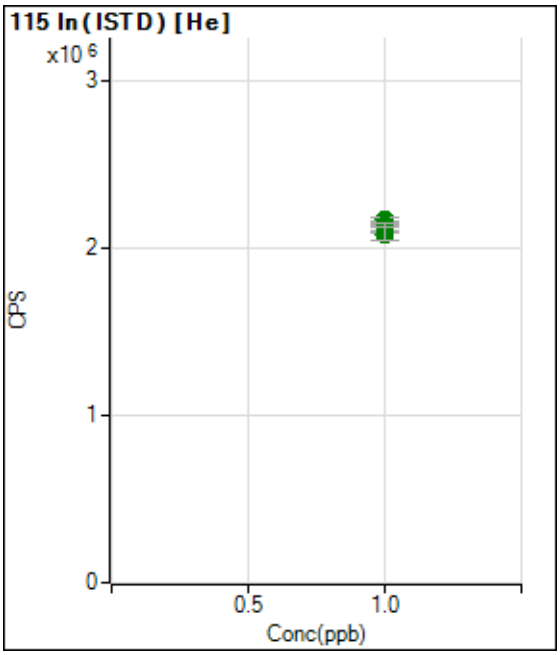


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1191599.30		A	0.9
2	☐	1.000		1199324.23		A	1.1
3	☐	1.000		1161597.90		A	1.8
4	☐	1.000		1183068.11		A	1.6
5	☐	1.000		1187742.17		A	1.8
6	☐	1.000		1175428.92		A	2.1

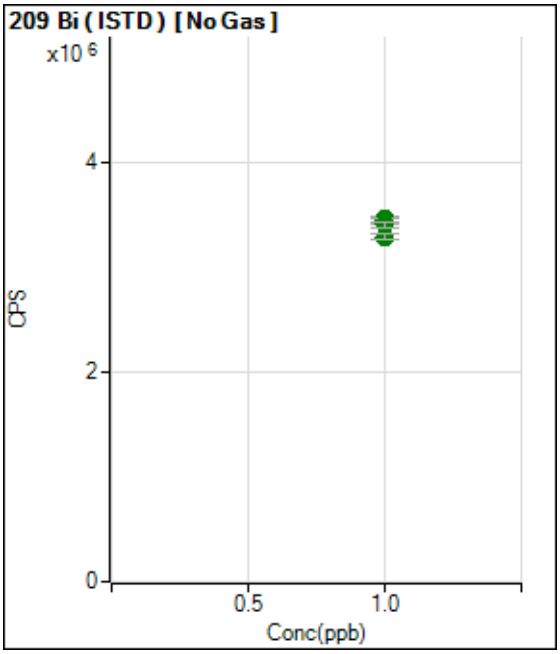


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4173630.42		A	0.7
2	☐	1.000		4191019.42		A	3.1
3	☐	1.000		4124142.74		A	1.3
4	☐	1.000		4132373.46		A	0.4
5	☐	1.000		4049488.71		A	3.4
6	☐	1.000		4007165.63		A	2.0

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2142609.86		A	2.1
2	☐	1.000		2167260.61		A	1.3
3	☐	1.000		2132262.24		A	1.0
4	☐	1.000		2121550.51		A	1.5
5	☐	1.000		2120926.11		A	2.8
6	☐	1.000		2081403.13		A	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3450327.76		A	0.9
2	☐	1.000		3444268.70		A	2.4
3	☐	1.000		3459752.97		A	1.3
4	☐	1.000		3448891.61		A	1.1
5	☐	1.000		3401832.76		A	1.7
6	☐	1.000		3290659.95		A	1.7

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	011CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:34:39-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	108009	0.00
Be	9	1	No Gas	17	103.92
V	51	2	He	3679	0.08
Cr	52	2	He	2287	0.33
Fe	56	2	He	10347	0.01
Se	78	2	He	186	2.65
Sn	118	2	He	1668	2.48
As	75	2	He	237	4.72
Ca	44	2	He	4701	0.08
Na	23	2	He	80781	0.00
Mg	24	2	He	527	2.91
K	39	2	He	93559	0.00
Mn	55	2	He	530	1.42
Co	59	2	He	190	7.33
Ni	60	2	He	213	4.57
Cu	63	2	He	713	2.59
Zn	66	2	He	313	6.78
Al	27	2	He	1377	0.85
B	11	1	No Gas	42929	0.01
Al	27	1	No Gas	55193	0.00
Si	28	1	No Gas	907317	0.00
P	31	1	No Gas	42188	0.01
Ag	107	1	No Gas	493	2.92
Cd	111	1	No Gas	13	324.76
Sr	88	1	No Gas	1887	0.25
Mo	95	1	No Gas	47	147.61
Sn	118	1	No Gas	2540	0.23
Sb	121	1	No Gas	2787	0.12
Ba	137	1	No Gas	253	2.38
Tl	205	1	No Gas	167	9.06
Tl	203	1	No Gas	63	51.90
Pb	208	1	No Gas	1490	0.62
U	238	1	No Gas	33	137.48
Ca	43	2	He	47	26.51
Sb	121	2	He	1483	0.19
Ti	47	2	He	13	324.76
Cu	63	1	No Gas	1170	0.25

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	1801940	3.99
Ge	72	2	He	1191599	0.91

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	3591716	0.44
In	115	1	No Gas	4173630	0.73
Bi	209	1	No Gas	3450328	0.87

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:36:32-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	10514	0.02
V	51	2	He	20645	0.01
Cr	52	2	He	23444	0.00
Fe	56	2	He	1899903	0.00
Se	78	2	He	451	2.20
Sn	118	2	He	15907	0.01
As	75	2	He	3043	0.13
Ca	44	2	He	15663	0.01
Na	23	2	He	404342	0.00
Mg	24	2	He	186908	0.00
K	39	2	He	316026	0.00
Mn	55	2	He	15616	0.03
Co	59	2	He	31477	0.01
Ni	60	2	He	8113	0.04
Cu	63	2	He	22062	0.01
Zn	66	2	He	4397	0.13
Al	27	2	He	2544	0.12
B	11	1	No Gas	73262	0.00
Al	27	1	No Gas	101933	0.00
Si	28	1	No Gas	1017472	0.00
P	31	1	No Gas	52275	0.00
Ag	107	1	No Gas	45790	0.00
Cd	111	1	No Gas	8963	0.04
Sr	88	1	No Gas	83803	0.00
Mo	95	1	No Gas	16768	0.02
Sn	118	1	No Gas	28772	0.01
Sb	121	1	No Gas	39647	0.01
Ba	137	1	No Gas	13003	0.01
Tl	205	1	No Gas	74594	0.00
Tl	203	1	No Gas	30297	0.00
Pb	208	1	No Gas	104039	0.00
U	238	1	No Gas	97989	0.00
Ca	43	2	He	753	1.42
Sb	121	2	He	21331	0.01
Cu	63	1	No Gas	37325	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1802127	1.79	1801940	100.01	70	120	

Calibration Standard Report

Ge	72	2	He	1199324	1.10	1191599	100.65	70	120	
Ge	72	1	No Gas	3595635	1.94	3591716	100.11	70	120	
In	115	1	No Gas	4191019	3.11	4173630	100.42	70	120	
Bi	209	1	No Gas	3444269	2.37	3450328	99.82	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:38:24-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	25014	0.01
V	51	2	He	45290	0.00
Cr	52	2	He	53542	0.00
Fe	56	2	He	4631793	0.00
Se	78	2	He	778	0.66
Sn	118	2	He	37715	0.01
As	75	2	He	7385	0.03
Ca	44	2	He	31560	0.01
Na	23	2	He	873431	0.00
Mg	24	2	He	456920	0.00
K	39	2	He	635206	0.00
Mn	55	2	He	37803	0.01
Co	59	2	He	76199	0.00
Ni	60	2	He	19735	0.02
Cu	63	2	He	52860	0.00
Zn	66	2	He	9954	0.03
Al	27	2	He	4211	0.09
B	11	1	No Gas	116966	0.00
Al	27	1	No Gas	162321	0.00
Si	28	1	No Gas	1150233	0.00
P	31	1	No Gas	66616	0.00
Ag	107	1	No Gas	111388	0.00
Cd	111	1	No Gas	22045	0.00
Sr	88	1	No Gas	205254	0.00
Mo	95	1	No Gas	40934	0.01
Sn	118	1	No Gas	67665	0.00
Sb	121	1	No Gas	92721	0.00
Ba	137	1	No Gas	31532	0.01
Tl	205	1	No Gas	180200	0.00
Tl	203	1	No Gas	76190	0.00
Pb	208	1	No Gas	251950	0.00
U	238	1	No Gas	243120	0.00
Ca	43	2	He	1673	0.61
Sb	121	2	He	51056	0.00
Cu	63	1	No Gas	89018	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1809662	2.46	1801940	100.43	70	120	

Calibration Standard Report

Ge	72	2	He	1161598	1.84	1191599	97.48	70	120	
Ge	72	1	No Gas	3595462	2.37	3591716	100.10	70	120	
In	115	1	No Gas	4124143	1.31	4173630	98.81	70	120	
Bi	209	1	No Gas	3459753	1.29	3450328	100.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:40:16-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	49617	0.00
V	51	2	He	86141	0.00
Cr	52	2	He	105637	0.00
Fe	56	2	He	8949057	0.00
Se	78	2	He	1466	0.23
Sn	118	2	He	75953	0.00
As	75	2	He	14349	0.01
Ca	44	2	He	58113	0.00
Na	23	2	He	1625669	0.00
Mg	24	2	He	896635	0.00
K	39	2	He	1155700	0.00
Mn	55	2	He	85645	0.00
Co	59	2	He	148805	0.00
Ni	60	2	He	38695	0.00
Cu	63	2	He	103262	0.00
Zn	66	2	He	20329	0.01
Al	27	2	He	9073	0.05
B	11	1	No Gas	193193	0.00
Al	27	1	No Gas	363861	0.00
Si	28	1	No Gas	1417718	0.00
P	31	1	No Gas	91379	0.00
Ag	107	1	No Gas	219767	0.00
Cd	111	1	No Gas	42101	0.00
Sr	88	1	No Gas	403813	0.00
Mo	95	1	No Gas	82965	0.00
Sn	118	1	No Gas	133149	0.00
Sb	121	1	No Gas	179510	0.00
Ba	137	1	No Gas	63198	0.00
Tl	205	1	No Gas	363227	0.00
Tl	203	1	No Gas	153104	0.00
Pb	208	1	No Gas	504275	0.00
U	238	1	No Gas	477910	0.00
Ca	43	2	He	3300	0.14
Sb	121	2	He	100175	0.00
Cu	63	1	No Gas	175667	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1775018	3.04	1801940	98.51	70	120	

Calibration Standard Report

Ge	72	2	He	1183068	1.62	1191599	99.28	70	120	
Ge	72	1	No Gas	3583745	0.58	3591716	99.78	70	120	
In	115	1	No Gas	4132373	0.41	4173630	99.01	70	120	
Bi	209	1	No Gas	3448892	1.08	3450328	99.96	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:42:08-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	556814	0.00
V	51	2	He	936803	0.00
Cr	52	2	He	1108772	0.00
Fe	56	2	He	98684135	0.00
Se	78	2	He	14392	0.02
Sn	118	2	He	813133	0.00
As	75	2	He	163329	0.00
Ca	44	2	He	608957	0.00
Na	23	2	He	16867533	0.00
Mg	24	2	He	9590908	0.00
K	39	2	He	11610195	0.00
Mn	55	2	He	816045	0.00
Co	59	2	He	1671077	0.00
Ni	60	2	He	428734	0.00
Cu	63	2	He	1151694	0.00
Zn	66	2	He	213429	0.00
Al	27	2	He	54976	0.00
B	11	1	No Gas	1701437	0.00
Al	27	1	No Gas	2204239	0.00
Si	28	1	No Gas	6585647	0.00
P	31	1	No Gas	586017	0.00
Ag	107	1	No Gas	2413308	0.00
Cd	111	1	No Gas	468780	0.00
Sr	88	1	No Gas	4226592	0.00
Mo	95	1	No Gas	898269	0.00
Sn	118	1	No Gas	1393168	0.00
Sb	121	1	No Gas	1983478	0.00
Ba	137	1	No Gas	689902	0.00
Tl	205	1	No Gas	4111172	0.00
Tl	203	1	No Gas	1745251	0.00
Pb	208	1	No Gas	5438820	0.00
U	238	1	No Gas	5210961	0.00
Ca	43	2	He	35961	0.00
Sb	121	2	He	1116029	0.00
Cu	63	1	No Gas	1882748	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1733504	3.24	1801940	96.20	70	120	

Calibration Standard Report

Ge	72	2	He	1187742	1.76	1191599	99.68	70	120	
Ge	72	1	No Gas	3547980	1.13	3591716	98.78	70	120	
In	115	1	No Gas	4049489	3.44	4173630	97.03	70	120	
Bi	209	1	No Gas	3401833	1.72	3450328	98.59	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:43:53-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1047986	0.00
V	51	2	He	1785920	0.00
Cr	52	2	He	2123073	0.00
Fe	56	2	He	187675624	0.00
Se	78	2	He	26989	0.00
Sn	118	2	He	1573844	0.00
As	75	2	He	297884	0.00
Ca	44	2	He	1142335	0.00
Na	23	2	He	32378185	0.00
Mg	24	2	He	18074599	0.00
K	39	2	He	22155300	0.00
Mn	55	2	He	1535363	0.00
Co	59	2	He	3050253	0.00
Ni	60	2	He	801857	0.00
Cu	63	2	He	2146156	0.00
Zn	66	2	He	401796	0.00
Al	27	2	He	106535	0.00
B	11	1	No Gas	3332839	0.00
Al	27	1	No Gas	4200675	0.00
Si	28	1	No Gas	10989110	0.00
P	31	1	No Gas	1058710	0.00
Ag	107	1	No Gas	4403544	0.00
Cd	111	1	No Gas	883953	0.00
Sr	88	1	No Gas	7867354	0.00
Mo	95	1	No Gas	1682506	0.00
Sn	118	1	No Gas	2702480	0.00
Sb	121	1	No Gas	3587744	0.00
Ba	137	1	No Gas	1281699	0.00
Tl	205	1	No Gas	7220636	0.00
Tl	203	1	No Gas	3066228	0.00
Pb	208	1	No Gas	9993004	0.00
U	238	1	No Gas	10041935	0.00
Ca	43	2	He	67003	0.00
Sb	121	2	He	2073585	0.00
Cu	63	1	No Gas	3397955	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1729739	2.53	1801940	95.99	70	120	

Calibration Standard Report

Ge	72	2	He	1175429	2.07	1191599	98.64	70	120	
Ge	72	1	No Gas	3489398	0.93	3591716	97.15	70	120	
In	115	1	No Gas	4007166	2.04	4173630	96.01	70	120	
Bi	209	1	No Gas	3290660	1.73	3450328	95.37	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	018_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:47:32-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	110.528	1.240	2343234	2.18	100	110.5	90	110	ICV Main CR1 Failed
Be	9	1	No Gas	109.437	1.711	565911	1.59	100	109.4	90	110	
V	51	2	He	102.740	1.565	951327	1.47	100	102.7	90	110	
Cr	52	2	He	103.700	0.777	1139907	1.81	100	103.7	90	110	
Fe	56	2	He	10525.975	2.738	102304452	1.20	10000	105.3	90	110	
Se	78	2	He	106.573	2.940	15005	1.45	100	106.6	90	110	
Sn	118	2	He	100.109	1.613	812553	1.52	100	100.1	90	110	
As	75	2	He	106.455	1.339	165778	0.72	100	106.5	90	110	
Ca	44	2	He	10624.992	2.613	631880	1.61	10000	106.2	90	110	
Na	23	2	He	10360.247	2.787	17370256	1.87	10000	103.6	90	110	
Mg	24	2	He	10461.979	1.301	9813758	1.16	10000	104.6	90	110	
K	39	2	He	10405.514	1.191	11968220	1.02	10000	104.1	90	110	
Mn	55	2	He	104.687	1.343	835082	1.47	100	104.7	90	110	
Co	59	2	He	107.538	1.748	1713733	1.68	100	107.5	90	110	
Ni	60	2	He	104.844	1.681	436975	0.20	100	104.8	90	110	
Cu	63	2	He	104.513	1.866	1166676	0.36	100	104.5	90	110	
Zn	66	2	He	104.434	1.539	217890	0.17	100	104.4	90	110	
Al	27	2	He	103.569	0.572	57523	1.01	100	103.6	90	110	
B	11	1	No Gas	534.520	2.594	1758452	1.40	500	106.9	90	110	
Al	27	1	No Gas	104.095	1.348	2285806	1.19	100	104.1	90	110	
Si	28	1	No Gas	566.643	4.145	6921117	2.09	500	113.3	90	110	ICV Main CR1 Failed
P	31	1	No Gas	538.560	3.522	611529	1.97	500	107.7	90	110	
Ag	107	1	No Gas	106.845	4.003	2432640	1.92	100	106.8	90	110	
Cd	111	1	No Gas	103.997	2.828	471942	0.30	100	104.0	90	110	
Sr	88	1	No Gas	110.202	0.922	4467601	2.95	100	110.2	90	110	ICV Main CR1 Failed
Mo	95	1	No Gas	105.750	3.672	914840	1.32	100	105.8	90	110	
Sn	118	1	No Gas	102.657	2.933	1417252	1.63	100	102.7	90	110	
Sb	121	1	No Gas	107.283	1.884	2014596	1.15	100	107.3	90	110	
Ba	137	1	No Gas	105.959	4.161	699455	1.22	100	106.0	90	110	
Tl	205	1	No Gas	109.472	4.321	4042890	1.19	100	109.5	90	110	
Tl	203	1	No Gas	107.493	5.432	1685346	2.34	100	107.5	90	110	
Pb	208	1	No Gas	106.911	3.890	5413102	0.79	100	106.9	90	110	
U	238	1	No Gas	102.676	3.103	5173421	0.20	100	102.7	90	110	
Ca	43	2	He	10393.634	2.496	36235	1.49	10000	103.9	90	110	
Sb	121	2	He	103.493	2.215	1117397	2.76	100	103.5	90	110	
Ti	47	2	He	103.222	4.012	37846	2.91	100	103.2	90	110	
Cu	63	1	No Gas	107.666	2.786	1915147	1.39	100	107.7	90	110	

QC ISTD Table

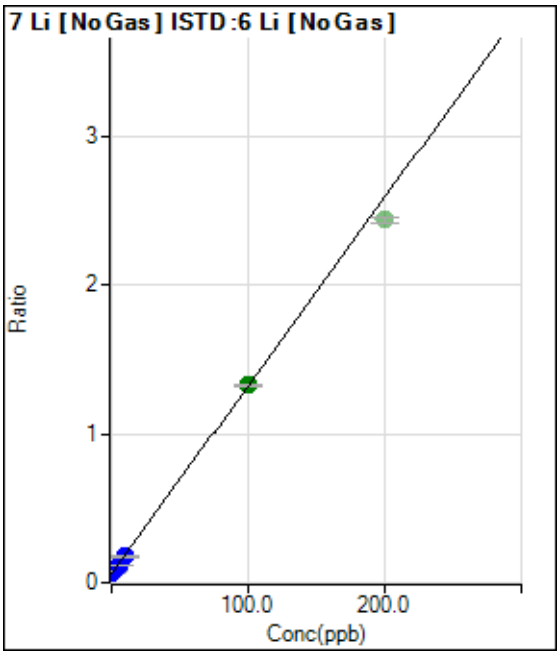
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1686946	1.88	1801940	93.62	70	120	
Ge	72	2	He	1207732	1.57	1191599	101.35	70	120	
Ge	72	1	No Gas	3589107	1.54	3591716	99.93	70	120	
In	115	1	No Gas	4076480	3.06	4173630	97.67	70	120	
Bi	209	1	No Gas	3301847	3.08	3450328	95.70	70	120	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\090220A.b\
Analysis File: 090220A.batch.bin
DA Date-Time: 9/2/2020 9:38:11 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	9/2/2020 10:34:39 AM
2	012CALS.d	2/10/200	9/2/2020 10:36:32 AM
3	013CALS.d	5/25/500	9/2/2020 10:38:24 AM
4	014CALS.d	10/50/100	9/2/2020 10:40:16 AM
5	015CALS.d	100/500/10K	9/2/2020 10:42:08 AM
6	016CALS.d	200/1000/20K	9/2/2020 10:43:53 AM

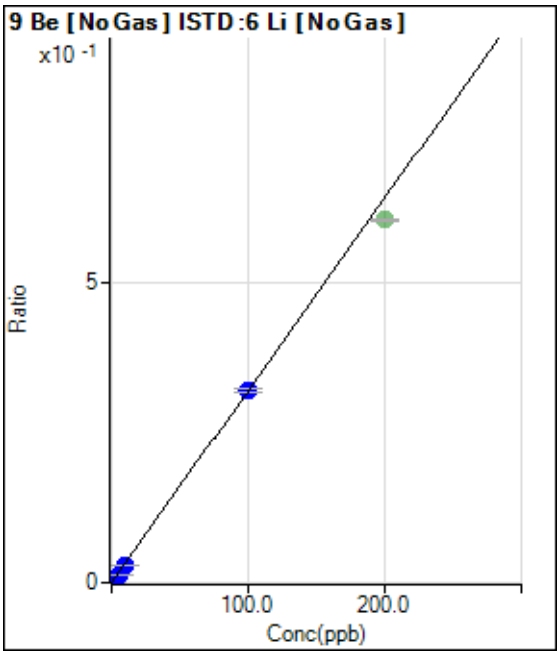
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108009.07	0.0600	P	4.4
2	☐	2.000	1.842	150042.59	0.0833	P	1.4
3	☐	5.000	4.483	210883.45	0.1166	P	2.4
4	☐	10.000	9.105	310345.65	0.1749	P	1.4
5	☐	100.000	100.118	2293137.73	1.3232	A	1.6
6	☑	200.000		4210768.58	2.4349	A	1.6

y = 0.0126 * x + 0.0600
R = 1.0000
DL = 0.6316
BEC = 4.756

Weight: <None>
Min Conc: <None>

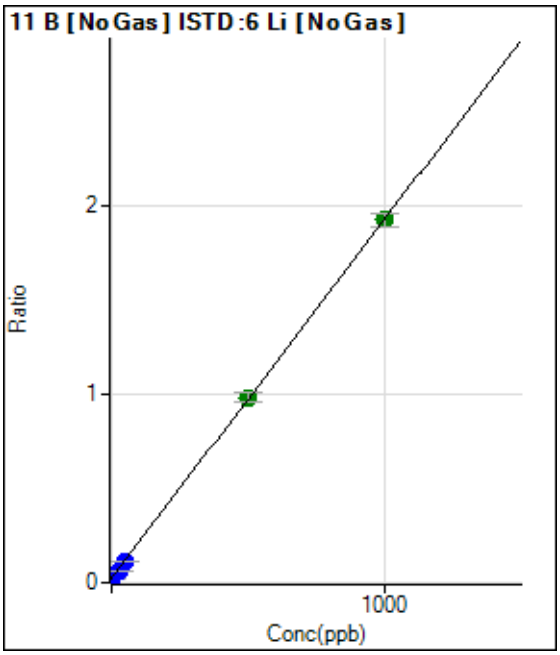


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.6
2	☐	2.000	1.815	10514.05	0.0058	P	1.1
3	☐	5.000	4.308	25014.05	0.0138	P	3.6
4	☐	10.000	8.716	49617.29	0.0280	P	3.6
5	☐	100.000	100.167	556814.36	0.3214	P	2.7
6	☑	200.000		1047985.76	0.6059	A	0.9

y = 0.0032 * x + 9.2788E-006
R = 0.9999
DL = 0.001698
BEC = 0.002892

Weight: <None>
Min Conc: <None>

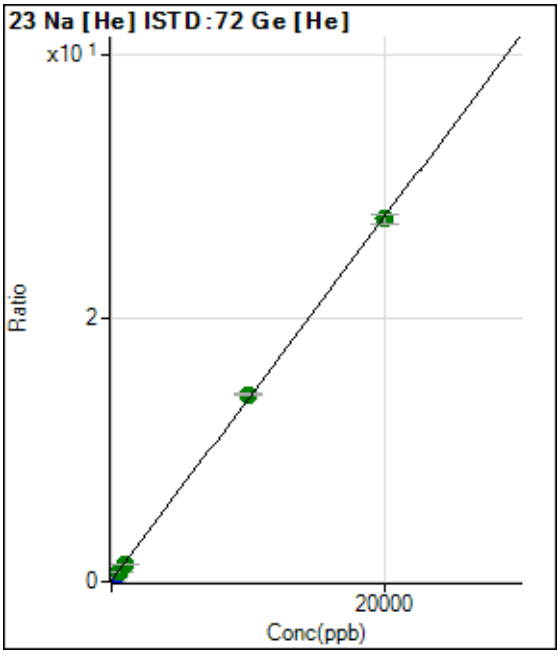
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42928.97	0.0238	P	5.3
2	☐	10.000	8.822	73262.13	0.0407	P	2.5
3	☐	25.000	21.406	116966.00	0.0647	P	1.6
4	☐	50.000	44.617	193192.91	0.1089	P	2.6
5	☐	500.000	502.928	1701436.69	0.9825	A	5.1
6	☐	1000.000	998.907	3332839.22	1.9278	A	3.8

y = 0.0019 * x + 0.0238
R = 1.0000
DL = 1.978
BEC = 12.51

Weight: <None>
Min Conc: <None>

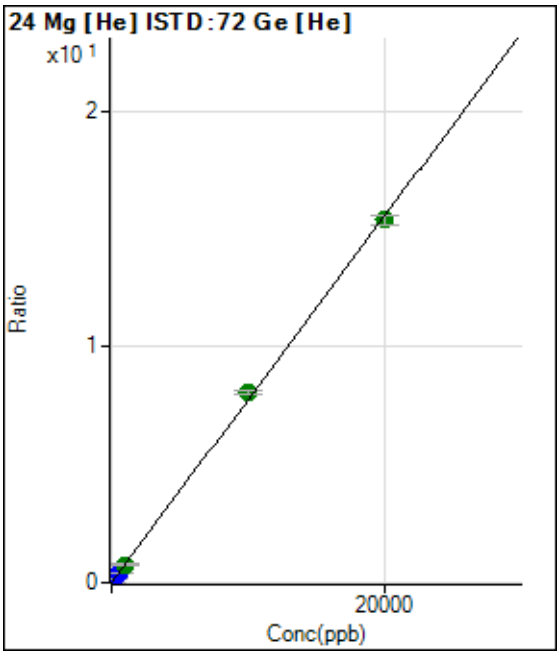


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80780.94	0.0678	P	1.6
2	☐	200.000	194.923	404342.23	0.3372	P	1.5
3	☐	500.000	495.110	873430.90	0.7520	A	2.1
4	☐	1000.000	945.353	1625669.25	1.3743	A	1.3
5	☐	10000.00	10227.20	16867532.66	14.2018	A	1.1
6	☐	20000.00	19889.30	32378185.35	27.5549	A	2.5

y = 0.0014 * x + 0.0678
R = 0.9999
DL = 2.35
BEC = 49.05

Weight: <None>
Min Conc: <None>

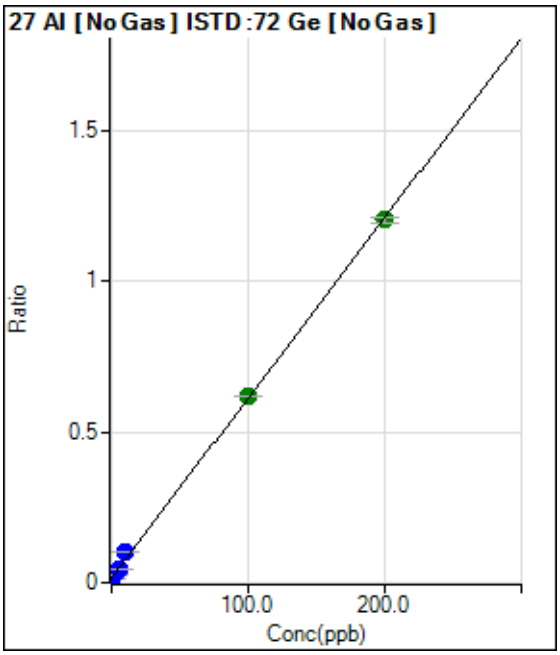
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	15.7
2	☐	200.000	200.089	186908.06	0.1559	P	1.2
3	☐	500.000	505.929	456919.80	0.3934	P	1.2
4	☐	1000.000	975.712	896635.40	0.7583	A	5.0
5	☐	10000.00	10396.23	9590907.77	8.0755	A	1.2
6	☐	20000.00	19802.94	18074599.31	15.3819	A	2.4

y = 7.7673E-004 * x + 4.4215E-004
R = 0.9997
DL = 0.2683
BEC = 0.5693

Weight: <None>
Min Conc: <None>

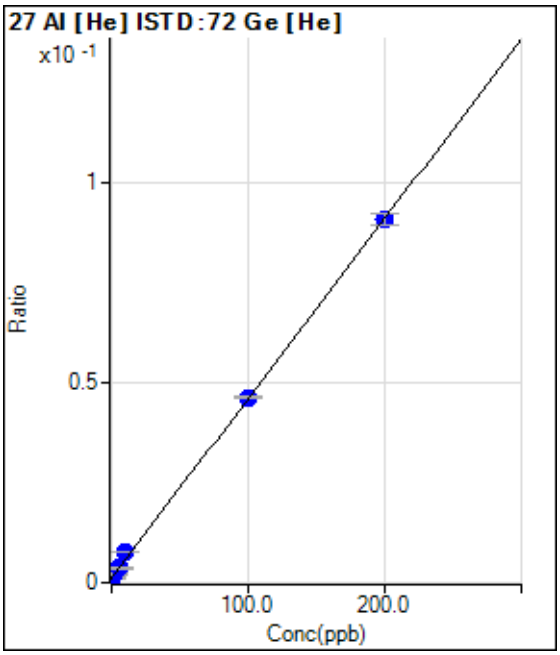


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55193.02	0.0154	P	0.8
2	☐	2.000	2.177	101933.42	0.0284	P	4.5
3	☐	5.000	4.991	162321.35	0.0452	P	3.5
4	☐	10.000	14.430	363860.98	0.1015	P	0.8
5	☐	100.000	101.470	2204238.92	0.6213	A	0.3
6	☐	200.000	199.042	4200675.25	1.2039	A	1.8

y = 0.0060 * x + 0.0154
R = 0.9998
DL = 0.06102
BEC = 2.574

Weight: <None>
Min Conc: <None>

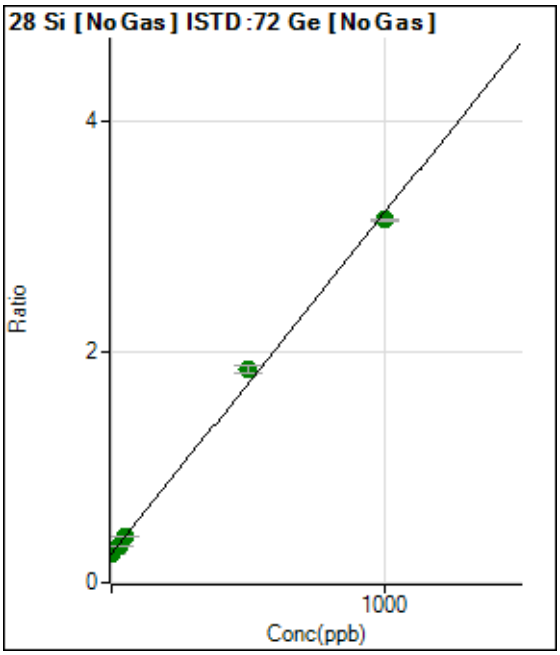
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.77	0.0012	P	11.2
2	☐	2.000	2.154	2543.62	0.0021	P	4.2
3	☐	5.000	5.507	4210.71	0.0036	P	4.7
4	☐	10.000	14.520	9073.08	0.0077	P	5.1
5	☐	100.000	100.586	54975.86	0.0463	P	1.3
6	☐	200.000	199.467	106534.61	0.0907	P	3.1

y = 4.4875E-004 * x + 0.0012
R = 0.9998
DL = 0.8645
BEC = 2.574

Weight: <None>
Min Conc: <None>

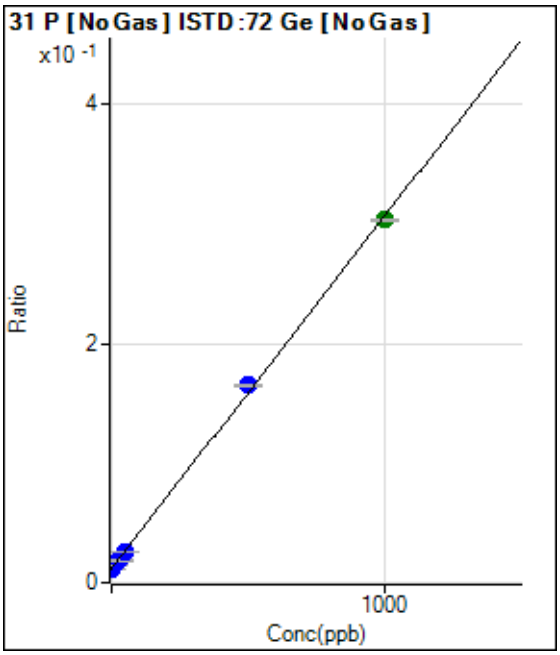


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	907317.07	0.2526	A	0.4
2	☐	10.000	10.293	1017472.07	0.2831	A	2.6
3	☐	25.000	22.790	1150233.08	0.3200	A	2.6
4	☐	50.000	48.327	1417718.10	0.3956	A	0.2
5	☐	500.000	542.160	6585647.19	1.8566	A	3.4
6	☐	1000.000	979.056	10989109.84	3.1492	A	0.8

y = 0.0030 * x + 0.2526
R = 0.9987
DL = 1.006
BEC = 85.38

Weight: <None>
Min Conc: <None>

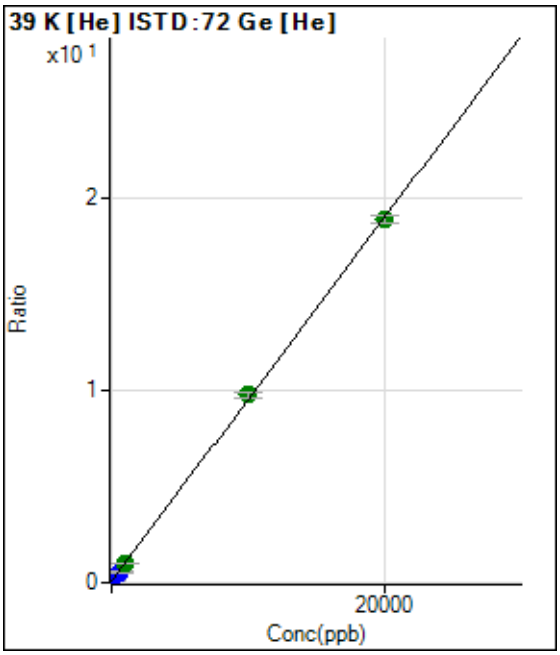
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42187.72	0.0117	P	3.2
2	☐	10.000	9.497	52275.29	0.0145	P	4.0
3	☐	25.000	23.034	66616.44	0.0185	P	2.2
4	☐	50.000	46.671	91379.39	0.0255	P	0.6
5	☐	500.000	520.743	586016.78	0.1652	P	1.5
6	☐	1000.000	989.849	1058710.01	0.3034	A	0.9

y = 2.9466E-004 * x + 0.0117
R = 0.9997
DL = 3.799
BEC = 39.87

Weight: <None>
Min Conc: <None>

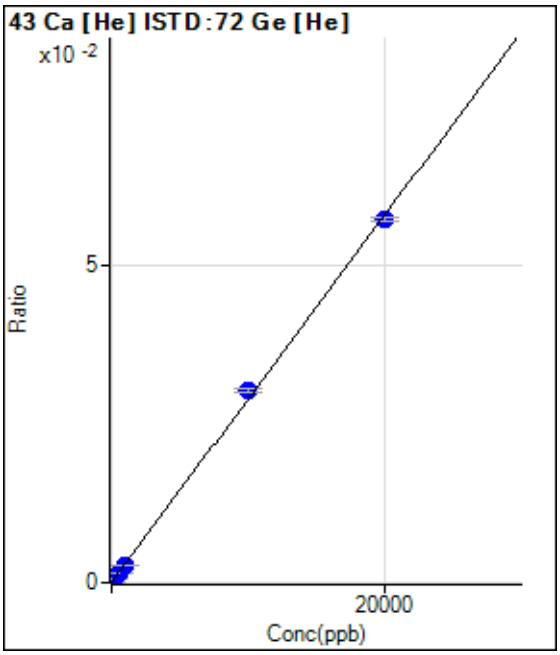


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93559.19	0.0785	P	0.5
2	☐	200.000	195.807	316026.33	0.2635	P	1.6
3	☐	500.000	495.786	635206.18	0.5470	P	2.2
4	☐	1000.000	951.057	1155699.57	0.9772	A	2.9
5	☐	10000.00	10264.10	11610195.24	9.7770	A	3.0
6	☐	20000.00	19870.54	22155299.67	18.8540	A	2.1

y = 9.4489E-004 * x + 0.0785
R = 0.9999
DL = 1.313
BEC = 83.1

Weight: <None>
Min Conc: <None>

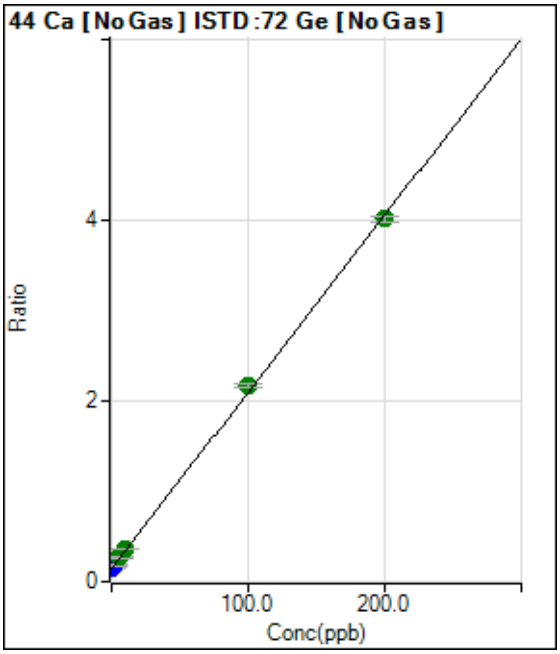
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	11.7
2	☐	200.000	204.122	753.37	0.0006	P	9.6
3	☐	500.000	486.024	1673.47	0.0014	P	10.0
4	☐	1000.000	954.163	3300.46	0.0028	P	5.0
5	☐	10000.00	10488.59	35960.99	0.0303	P	2.2
6	☐	20000.00	19758.30	67003.26	0.0570	P	1.0

y = 2.8835E-006 * x + 3.9141E-005
R = 0.9996
DL = 4.76
BEC = 13.57

Weight: <None>
Min Conc: <None>

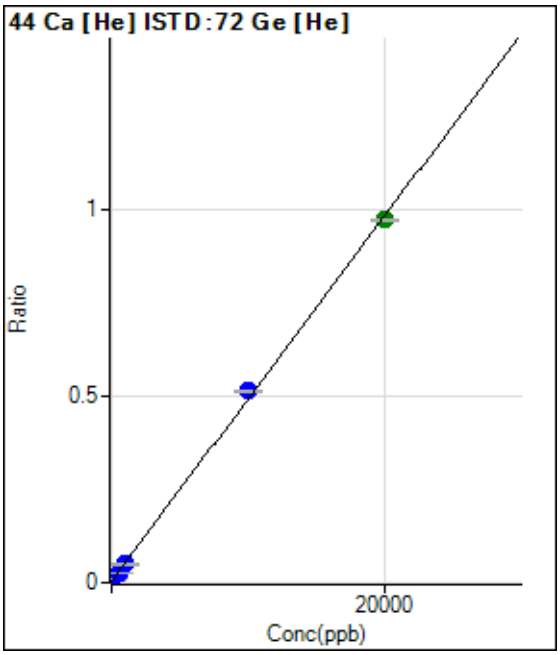


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513846.13	0.1431	P	1.1
2	☐	2.000	1.894	647441.00	0.1801	P	1.9
3	☐	5.000	6.470	968567.56	0.2695	A	3.8
4	☐	10.000	10.902	1276412.51	0.3562	A	0.4
5	☐	100.000	103.629	7693820.09	2.1687	A	1.3
6	☐	200.000	198.105	14010336.46	4.0154	A	1.6

y = 0.0195 * x + 0.1431
R = 0.9998
DL = 0.2452
BEC = 7.319

Weight: <None>
Min Conc: <None>

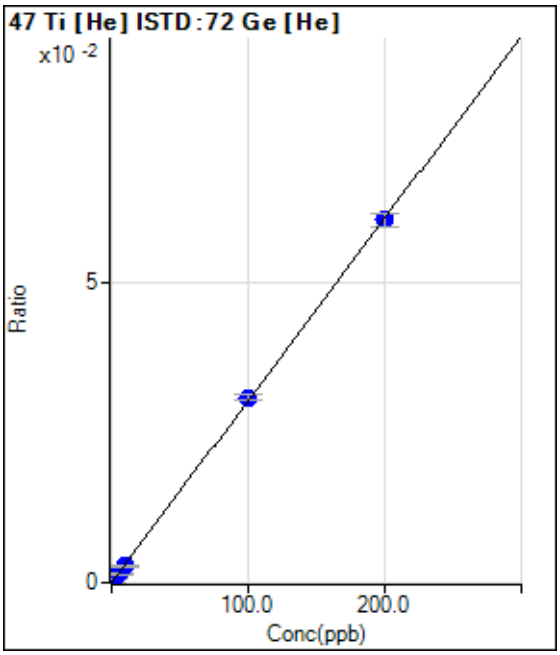
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4700.89	0.0039	P	3.8
2	☐	200.000	186.506	15662.56	0.0131	P	3.1
3	☐	500.000	475.218	31559.78	0.0272	P	2.7
4	☐	1000.000	924.253	58113.30	0.0491	P	1.9
5	☐	10000.00	10410.21	608957.09	0.5128	P	1.8
6	☐	20000.00	19799.43	1142335.37	0.9718	A	0.7

y = 4.8881E-005 * x + 0.0039
R = 0.9997
DL = 9.142
BEC = 80.71

Weight: <None>
Min Conc: <None>

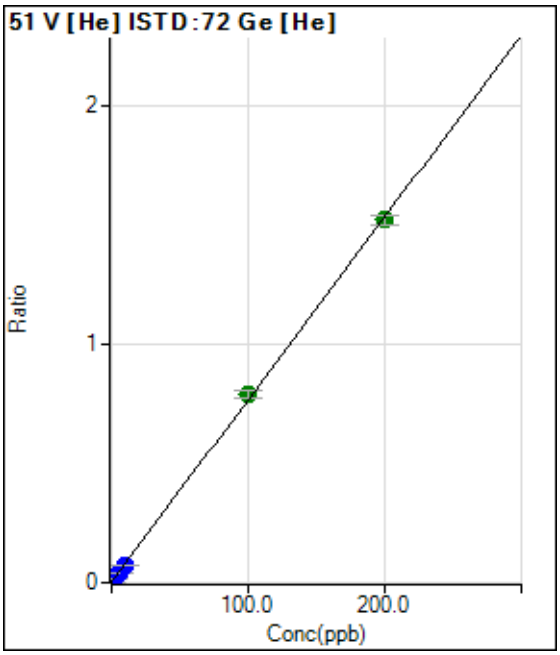


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.4
2	☐	2.000	1.695	630.03	0.0005	P	14.6
3	☐	5.000	4.843	1720.14	0.0015	P	6.5
4	☐	10.000	8.980	3237.11	0.0027	P	3.6
5	☐	100.000	101.543	36615.85	0.0308	P	3.1
6	☐	200.000	199.287	71091.34	0.0605	P	3.5

y = 3.0358E-004 * x + 1.1192E-005
R = 0.9999
DL = 0.04797
BEC = 0.03687

Weight: <None>
Min Conc: <None>

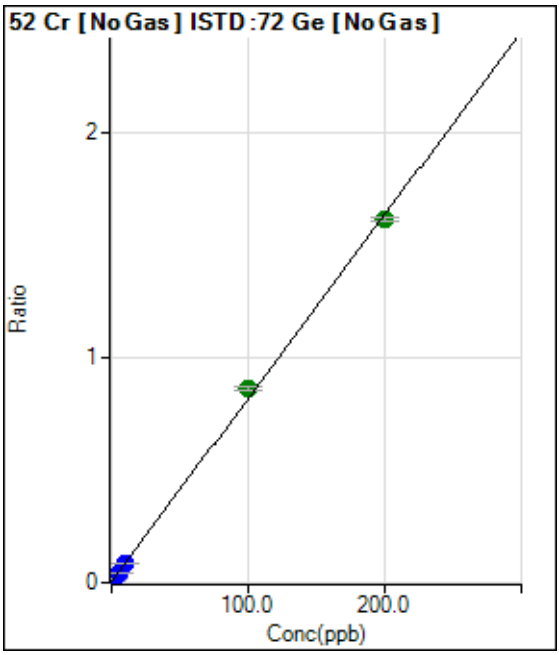
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3679.40	0.0031	P	2.7
2	☐	2.000	1.850	20644.53	0.0172	P	2.8
3	☐	5.000	4.702	45290.34	0.0390	P	1.9
4	☐	10.000	9.130	86140.58	0.0728	P	1.1
5	☐	100.000	102.908	936802.63	0.7890	A	3.5
6	☐	200.000	198.599	1785920.48	1.5199	A	2.6

y = 0.0076 * x + 0.0031
R = 0.9998
DL = 0.03322
BEC = 0.4043

Weight: <None>
Min Conc: <None>

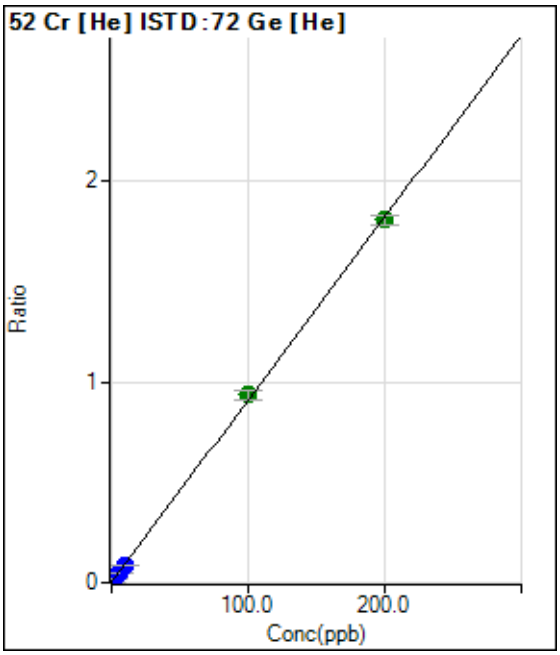


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16043.12	0.0045	P	3.5
2	☐	2.000	1.997	74422.98	0.0207	P	3.0
3	☐	5.000	4.812	156704.50	0.0436	P	2.3
4	☐	10.000	9.636	296842.20	0.0828	P	2.0
5	☐	100.000	105.337	3054745.27	0.8611	A	2.8
6	☐	200.000	197.354	5616165.96	1.6095	A	1.0

y = 0.0081 * x + 0.0045
R = 0.9995
DL = 0.05827
BEC = 0.5493

Weight: <None>
Min Conc: <None>

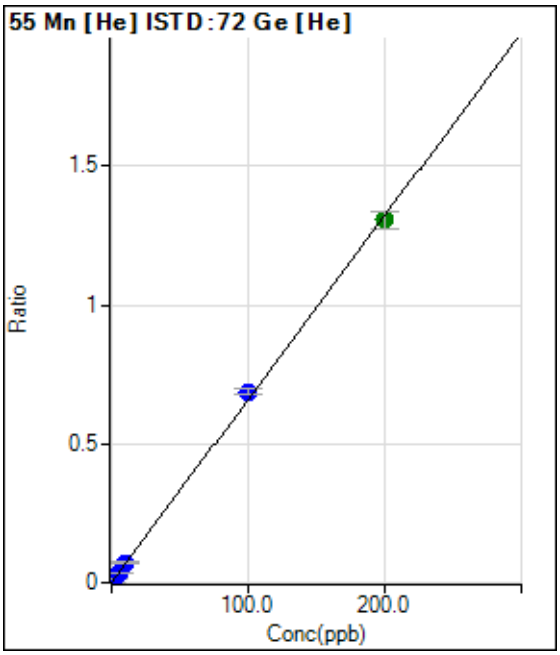
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2286.90	0.0019	P	7.8
2	☐	2.000	1.941	23443.77	0.0195	P	0.7
3	☐	5.000	4.864	53541.80	0.0461	P	1.7
4	☐	10.000	9.621	105636.97	0.0893	P	1.9
5	☐	100.000	102.613	1108771.73	0.9340	A	4.3
6	☐	200.000	198.716	2123073.09	1.8069	A	2.7

y = 0.0091 * x + 0.0019
R = 0.9999
DL = 0.04948
BEC = 0.2113

Weight: <None>
Min Conc: <None>

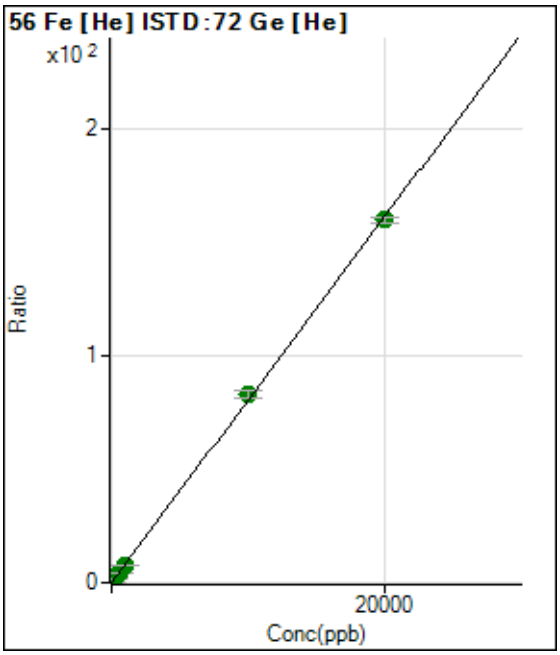


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0004	P	7.2
2	☐	2.000	1.905	15615.89	0.0130	P	5.2
3	☐	5.000	4.865	37802.81	0.0326	P	4.1
4	☐	10.000	10.902	85644.62	0.0724	P	2.3
5	☐	100.000	104.048	816044.78	0.6873	P	2.7
6	☐	200.000	197.935	1535362.69	1.3070	A	4.5

y = 0.0066 * x + 4.4473E-004
R = 0.9997
DL = 0.0146
BEC = 0.06737

Weight: <None>
Min Conc: <None>

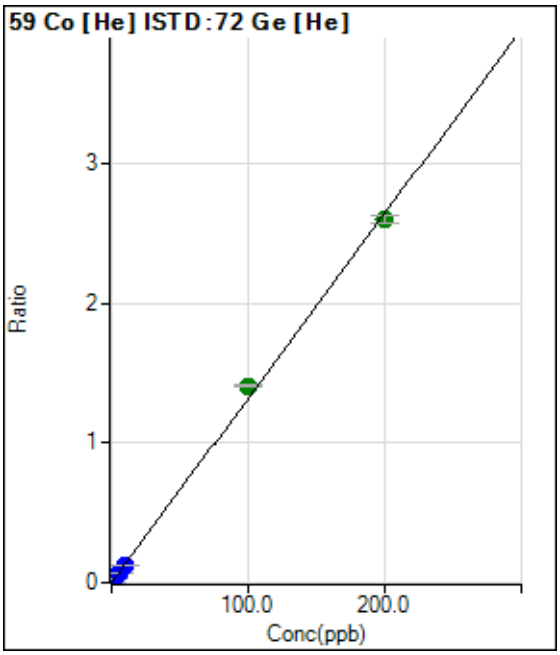
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10347.41	0.0087	P	1.0
2	☐	200.000	195.725	1899902.84	1.5841	A	0.7
3	☐	500.000	494.490	4631792.85	3.9888	A	2.9
4	☐	1000.000	938.903	8949056.95	7.5659	A	2.1
5	☐	10000.00	10325.29	98684135.20	83.1168	A	3.6
6	☐	20000.00	19840.59	187675623.8	159.705	A	1.8

y = 0.0080 * x + 0.0087
R = 0.9998
DL = 0.03159
BEC = 1.079

Weight: <None>
Min Conc: <None>

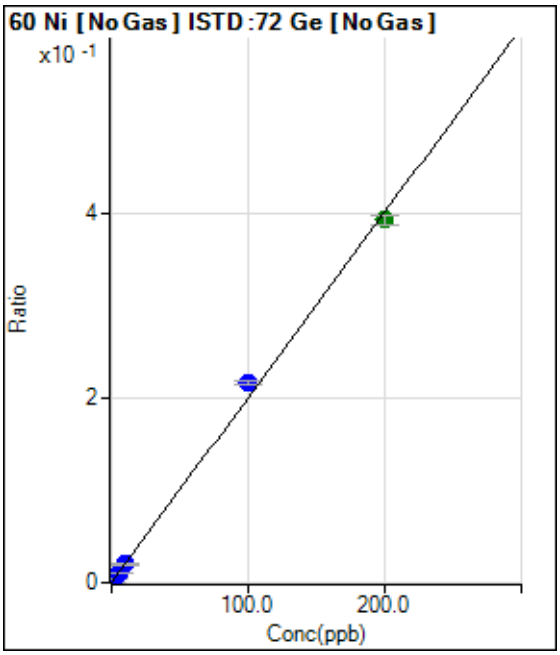


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0002	P	14.8
2	☐	2.000	1.977	31476.70	0.0262	P	2.7
3	☐	5.000	4.961	76199.45	0.0656	P	2.4
4	☐	10.000	9.522	148805.44	0.1258	P	1.4
5	☐	100.000	106.623	1671076.90	1.4070	A	1.3
6	☐	200.000	196.714	3050253.49	2.5957	A	2.0

y = 0.0132 * x + 1.5959E-004
R = 0.9992
DL = 0.005369
BEC = 0.01209

Weight: <None>
Min Conc: <None>

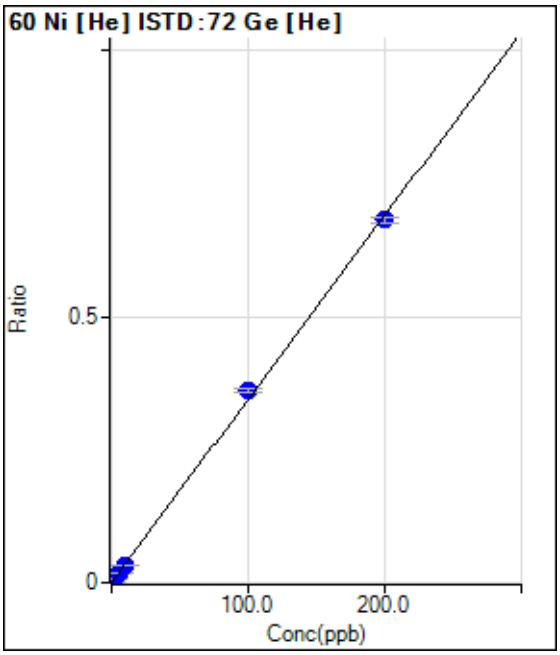
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.02	0.0001	P	9.5
2	☐	2.000	2.000	14871.71	0.0041	P	6.9
3	☐	5.000	4.984	36425.76	0.0101	P	2.4
4	☐	10.000	9.857	71394.62	0.0199	P	2.2
5	☐	100.000	107.982	770019.31	0.2170	P	2.0
6	☐	200.000	196.016	1374360.60	0.3939	A	2.7

y = 0.0020 * x + 1.2254E-004
R = 0.9989
DL = 0.0173
BEC = 0.061

Weight: <None>
Min Conc: <None>

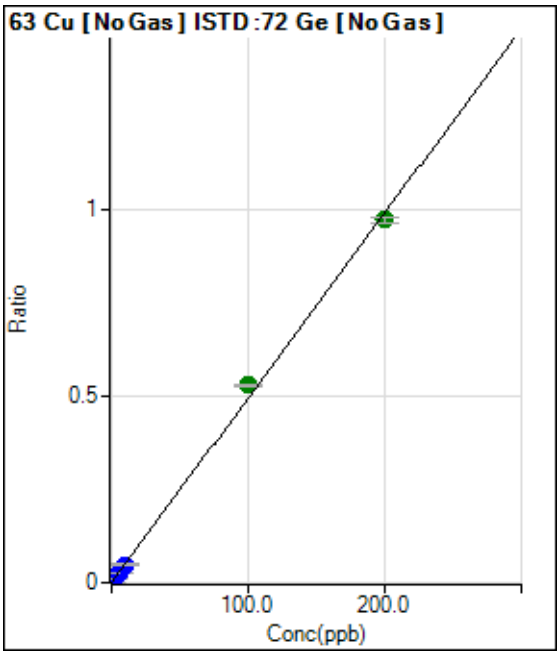


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0002	P	10.4
2	☐	2.000	1.909	8112.56	0.0068	P	3.2
3	☐	5.000	4.874	19734.66	0.0170	P	4.5
4	☐	10.000	9.431	38695.35	0.0327	P	1.7
5	☐	100.000	104.604	428734.17	0.3610	P	2.6
6	☐	200.000	197.731	801857.49	0.6823	P	1.7

y = 0.0034 * x + 1.7913E-004
R = 0.9996
DL = 0.01622
BEC = 0.05192

Weight: <None>
Min Conc: <None>

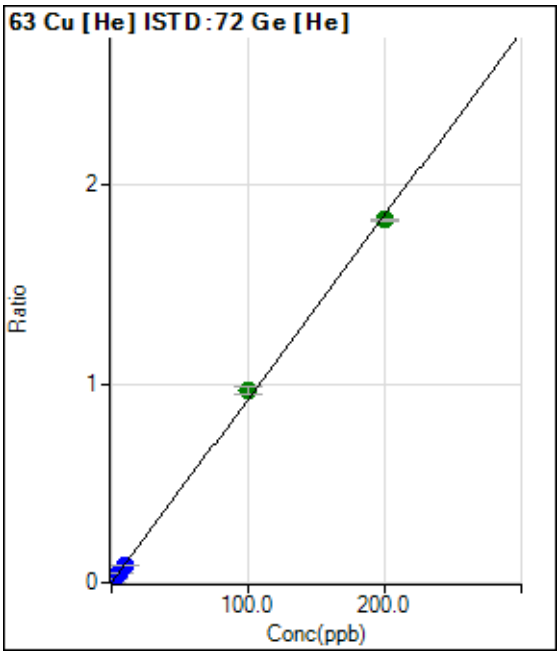
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1170.08	0.0003	P	2.7
2	☐	2.000	2.029	37325.02	0.0104	P	0.9
3	☐	5.000	4.933	89018.20	0.0248	P	2.4
4	☐	10.000	9.828	175667.47	0.0490	P	1.4
5	☐	100.000	107.047	1882747.78	0.5307	A	0.8
6	☐	200.000	196.486	3397954.53	0.9738	A	1.3

y = 0.0050 * x + 3.2576E-004
R = 0.9991
DL = 0.005329
BEC = 0.06575

Weight: <None>
Min Conc: <None>

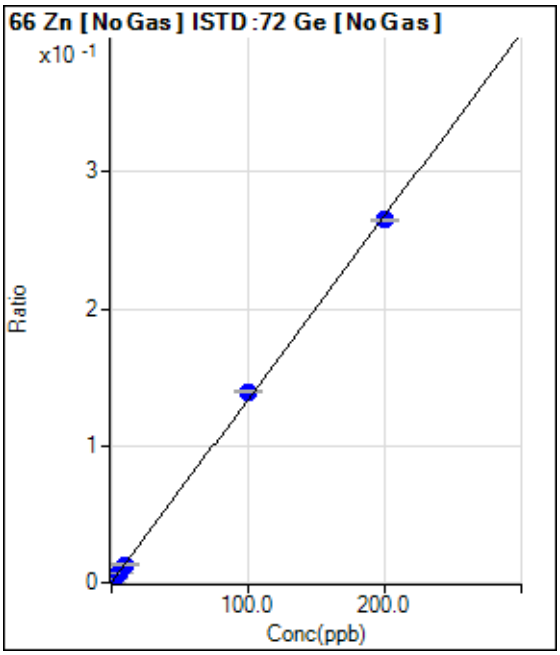


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.37	0.0006	P	18.1
2	☐	2.000	1.926	22061.71	0.0184	P	2.2
3	☐	5.000	4.861	52859.85	0.0455	P	2.0
4	☐	10.000	9.385	103262.08	0.0873	P	2.2
5	☐	100.000	104.924	1151693.99	0.9700	A	3.6
6	☐	200.000	197.573	2146156.22	1.8260	A	0.7

y = 0.0092 * x + 5.9830E-004
R = 0.9996
DL = 0.03515
BEC = 0.06476

Weight: <None>
Min Conc: <None>

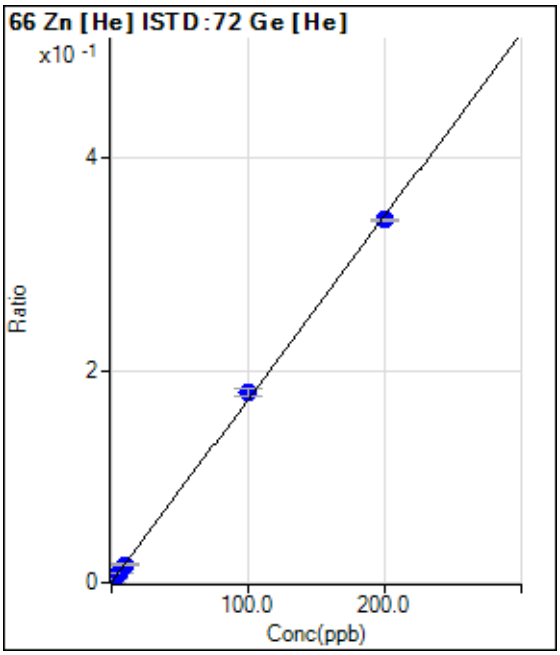
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0002	P	4.6
2	☐	2.000	1.989	10240.69	0.0028	P	1.8
3	☐	5.000	4.744	23484.09	0.0065	P	1.8
4	☐	10.000	9.802	47654.10	0.0133	P	1.5
5	☐	100.000	104.262	495383.08	0.1396	P	1.4
6	☐	200.000	197.886	924160.12	0.2649	P	0.6

y = 0.0013 * x + 1.8748E-004
R = 0.9997
DL = 0.0192
BEC = 0.1402

Weight: <None>
Min Conc: <None>

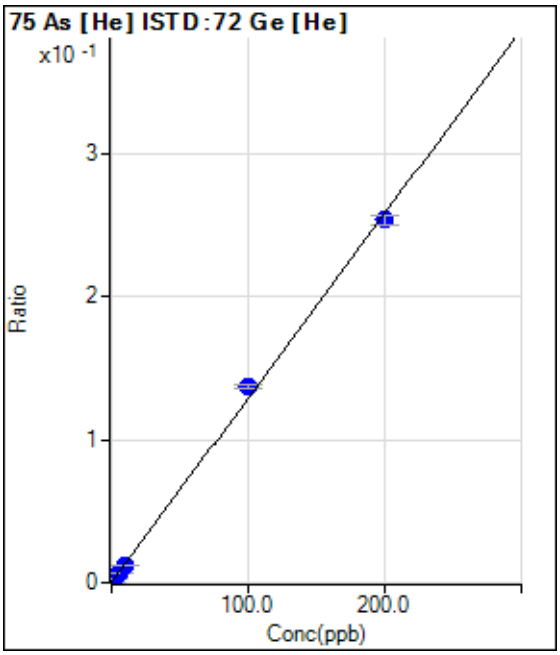


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	21.4
2	☐	2.000	1.972	4397.46	0.0037	P	5.1
3	☐	5.000	4.817	9953.83	0.0086	P	4.2
4	☐	10.000	9.809	20328.96	0.0172	P	3.3
5	☐	100.000	104.039	213429.28	0.1798	P	3.5
6	☐	200.000	197.995	401796.06	0.3419	P	0.7

y = 0.0017 * x + 2.6302E-004
R = 0.9997
DL = 0.09776
BEC = 0.1525

Weight: <None>
Min Conc: <None>

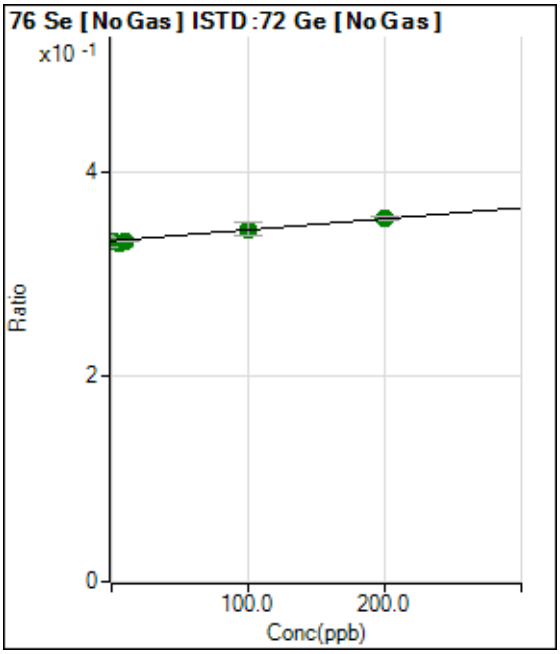
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.67	0.0002	P	10.4
2	☐	2.000	1.816	3042.59	0.0025	P	4.4
3	☐	5.000	4.784	7385.38	0.0064	P	1.7
4	☐	10.000	9.266	14348.77	0.0121	P	1.3
5	☐	100.000	106.660	163329.11	0.1375	P	2.0
6	☐	200.000	196.714	297884.41	0.2535	P	2.5

y = 0.0013 * x + 1.9852E-004
R = 0.9992
DL = 0.04818
BEC = 0.1542

Weight: <None>
Min Conc: <None>

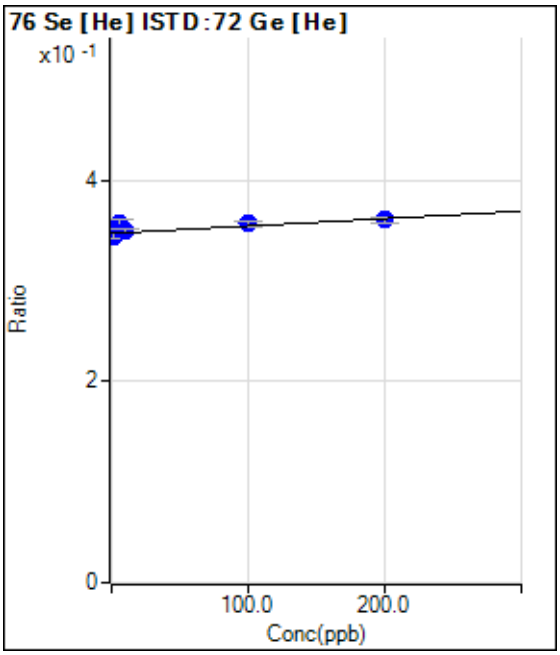


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1193927.35	0.3324	A	1.1
2	☐	2.000	-0.194	1194776.34	0.3324	A	2.7
3	☐	5.000	-17.863	1187715.89	0.3305	A	2.9
4	☐	10.000	0.671	1191578.47	0.3325	A	0.1
5	☐	100.000	106.492	1219964.44	0.3439	A	3.6
6	☐	200.000	197.814	1234562.35	0.3538	A	1.2

y = 1.0818E-004 * x + 0.3324
R = 0.9941
DL = 98.39
BEC = 3073

Weight: <None>
Min Conc: <None>

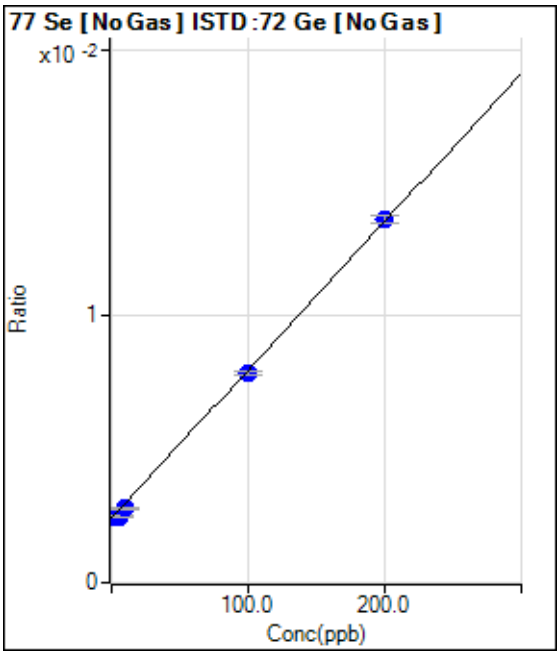
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413926.97	0.3474	P	2.4
2	☐	2.000	-32.078	413775.62	0.3450	P	1.3
3	☐	5.000	130.646	414641.32	0.3571	P	2.9
4	☐	10.000	39.267	414424.55	0.3503	P	0.8
5	☐	100.000	128.778	423891.83	0.3569	P	1.3
6	☐	200.000	181.347	424056.57	0.3608	P	1.3

y = 7.3996E-005 * x + 0.3474
R = 0.7669
DL = 334.9
BEC = 4695

Weight: <None>
Min Conc: <None>

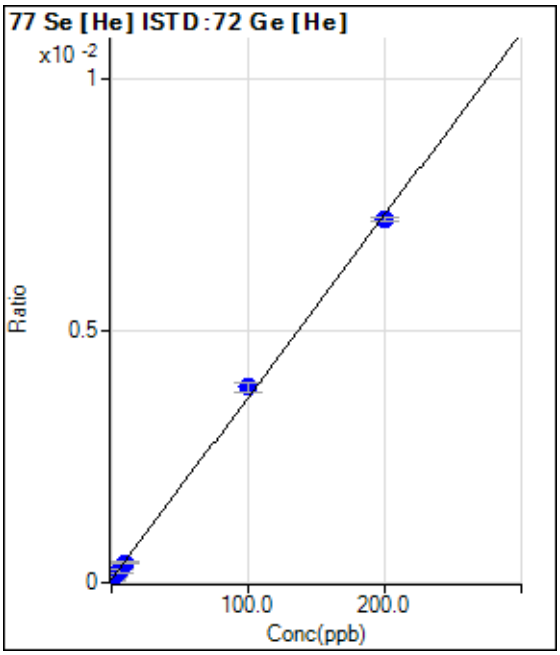


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8679.64	0.0024	P	4.4
2	☐	2.000	1.155	8923.11	0.0025	P	5.5
3	☐	5.000	1.185	8923.13	0.0025	P	2.2
4	☐	10.000	6.726	10000.54	0.0028	P	2.7
5	☐	100.000	98.336	27969.51	0.0079	P	2.0
6	☐	200.000	201.100	47444.02	0.0136	P	2.0

y = 5.5602E-005 * x + 0.0024
R = 0.9998
DL = 5.768
BEC = 43.46

Weight: <None>
Min Conc: <None>

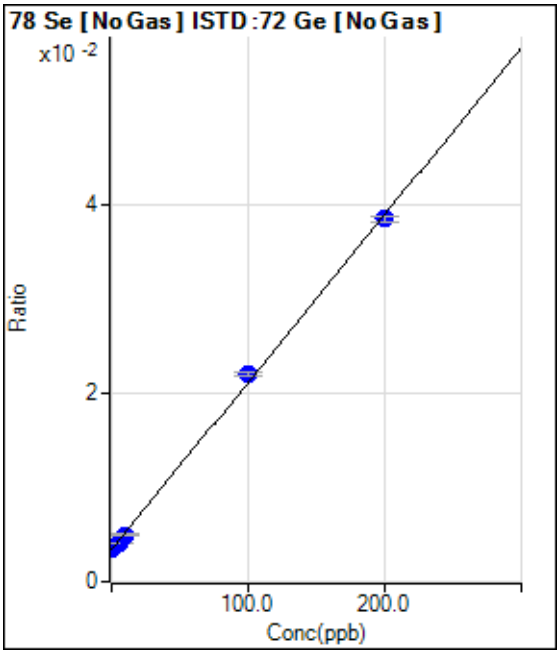
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	32.0
2	☐	2.000	1.525	143.33	0.0001	P	20.0
3	☐	5.000	4.634	270.01	0.0002	P	30.8
4	☐	10.000	9.124	466.68	0.0004	P	14.1
5	☐	100.000	105.476	4614.22	0.0039	P	4.6
6	☐	200.000	197.319	8479.50	0.0072	P	0.9

y = 3.6237E-005 * x + 6.4217E-005
R = 0.9994
DL = 1.703
BEC = 1.772

Weight: <None>
Min Conc: <None>

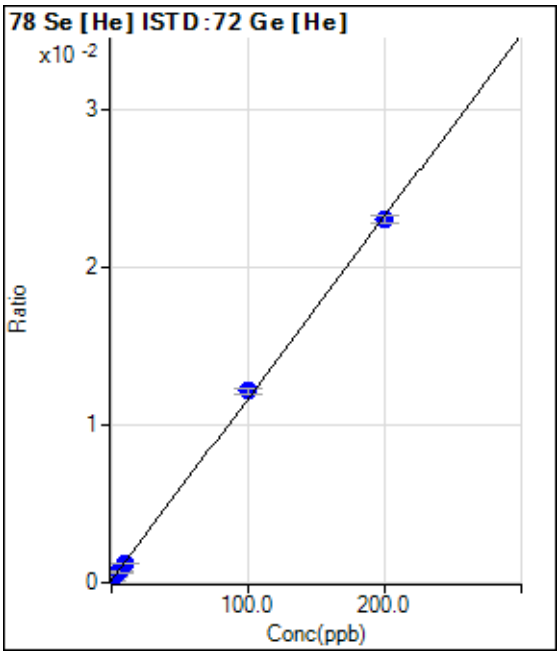


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12302.47	0.0034	P	2.0
2	☐	2.000	1.808	13466.91	0.0037	P	3.8
3	☐	5.000	3.868	14791.71	0.0041	P	1.1
4	☐	10.000	8.766	17865.42	0.0050	P	2.5
5	☐	100.000	104.933	78408.32	0.0221	P	1.0
6	☐	200.000	197.626	134677.45	0.0386	P	1.3

y = 1.7798E-004 * x + 0.0034
R = 0.9995
DL = 1.166
BEC = 19.25

Weight: <None>
Min Conc: <None>

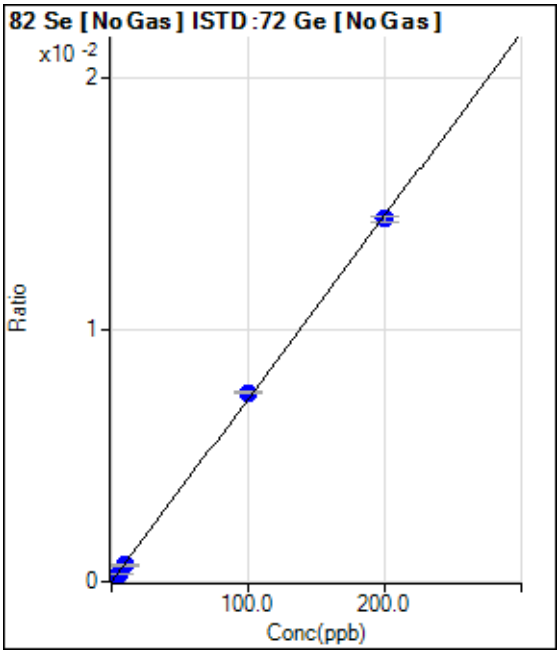
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.00	0.0002	P	5.3
2	☐	2.000	1.907	450.68	0.0004	P	9.4
3	☐	5.000	4.459	778.02	0.0007	P	3.3
4	☐	10.000	9.407	1466.08	0.0012	P	3.4
5	☐	100.000	103.908	14391.71	0.0121	P	3.6
6	☐	200.000	198.090	26988.99	0.0230	P	2.0

y = 1.1515E-004 * x + 1.5612E-004
R = 0.9997
DL = 0.2166
BEC = 1.356

Weight: <None>
Min Conc: <None>

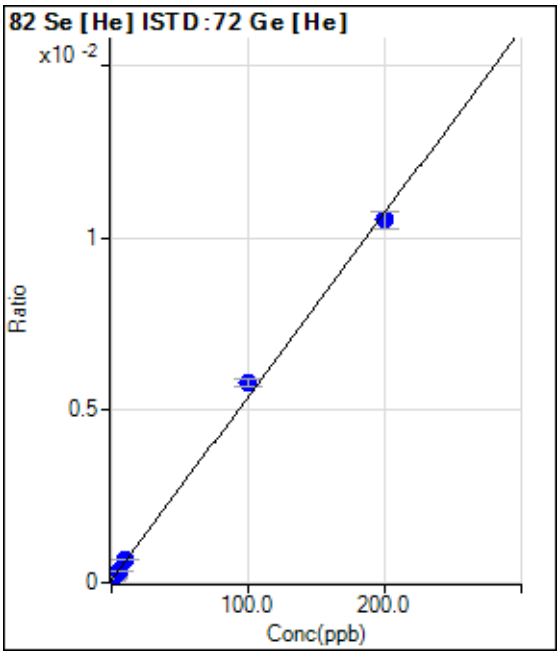


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-5.97	0.0000	P	-2242.
2	☐	2.000	1.888	487.60	0.0001	P	21.4
3	☐	5.000	4.147	1077.09	0.0003	P	6.6
4	☐	10.000	9.207	2391.15	0.0007	P	9.6
5	☐	100.000	103.421	26644.38	0.0075	P	1.7
6	☐	200.000	198.352	50262.49	0.0144	P	1.7

y = 7.2633E-005 * x - 1.5913E-006
R = 0.9998
DL = 1.474
BEC = -0.02191

Weight: <None>
Min Conc: <None>

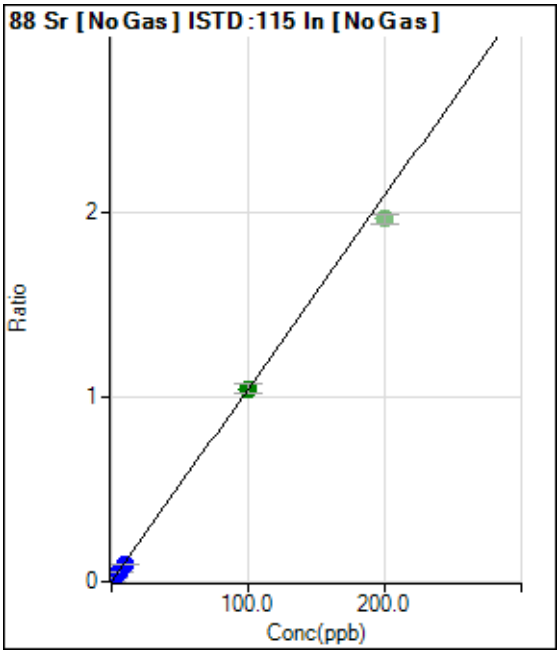
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	45.2
2	☐	2.000	1.401	173.34	0.0001	P	17.9
3	☐	5.000	4.979	390.01	0.0003	P	11.8
4	☐	10.000	11.262	793.37	0.0007	P	7.2
5	☐	100.000	107.402	6881.86	0.0058	P	4.1
6	☐	200.000	196.243	12379.26	0.0105	P	4.5

y = 5.3305E-005 * x + 6.9901E-005
R = 0.9990
DL = 1.78
BEC = 1.311

Weight: <None>
Min Conc: <None>

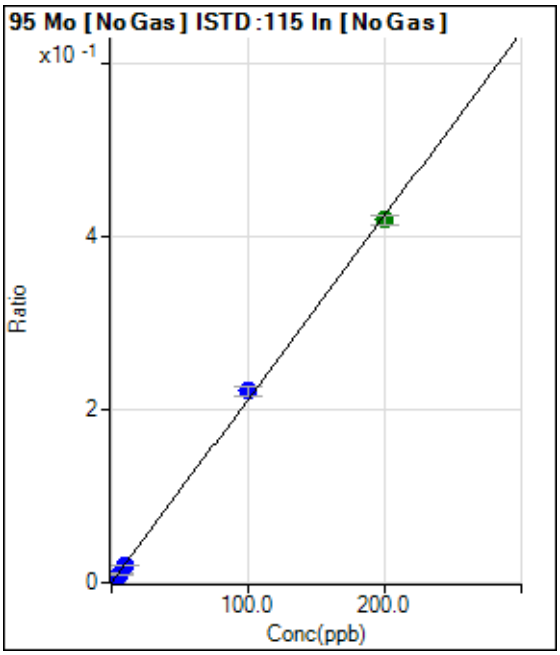


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1886.84	0.0005	P	5.5
2	☐	2.000	1.875	83802.86	0.0200	P	4.7
3	☐	5.000	4.728	205253.74	0.0498	P	2.8
4	☐	10.000	9.323	403813.07	0.0977	P	1.3
5	☐	100.000	100.084	4226592.33	1.0446	A	5.0
6	☑	200.000		7867354.05	1.9638	A	2.5

y = 0.0104 * x + 4.5220E-004
R = 1.0000
DL = 0.007144
BEC = 0.04334

Weight: <None>
Min Conc: <None>

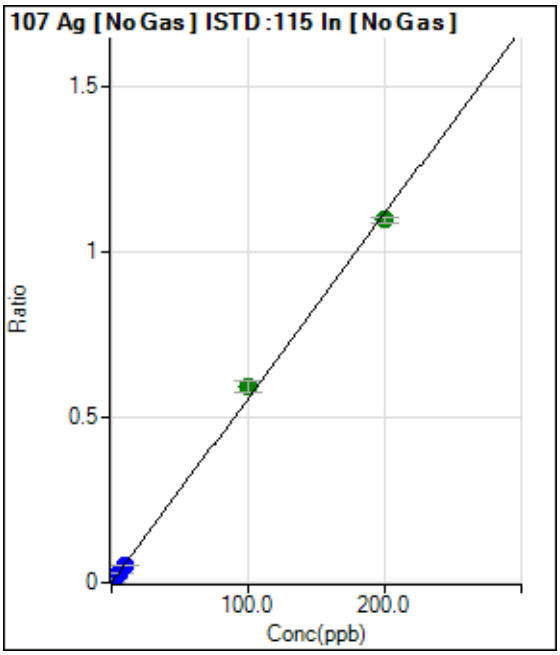
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	69.1
2	☐	2.000	1.881	16767.55	0.0040	P	5.5
3	☐	5.000	4.670	40933.59	0.0099	P	3.5
4	☐	10.000	9.449	82965.14	0.0201	P	1.1
5	☐	100.000	104.568	898269.02	0.2221	P	4.8
6	☐	200.000	197.753	1682506.07	0.4200	A	2.6

y = 0.0021 * x + 1.1219E-005
R = 0.9996
DL = 0.01095
BEC = 0.005283

Weight: <None>
Min Conc: <None>

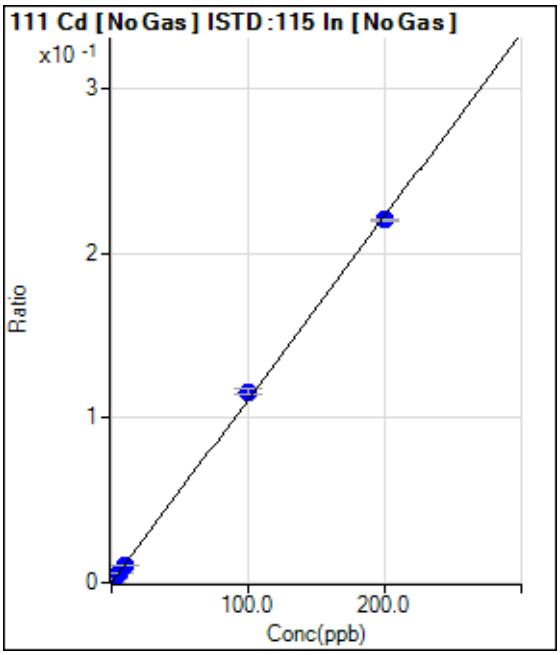


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0001	P	13.7
2	☐	2.000	1.935	45789.77	0.0109	P	2.4
3	☐	5.000	4.813	111388.45	0.0270	P	2.1
4	☐	10.000	9.496	219767.38	0.0532	P	0.3
5	☐	100.000	106.769	2413307.52	0.5968	A	5.9
6	☐	200.000	196.646	4403544.21	1.0990	A	1.3

y = 0.0056 * x + 1.1814E-004
R = 0.9992
DL = 0.008677
BEC = 0.02114

Weight: <None>
Min Conc: <None>

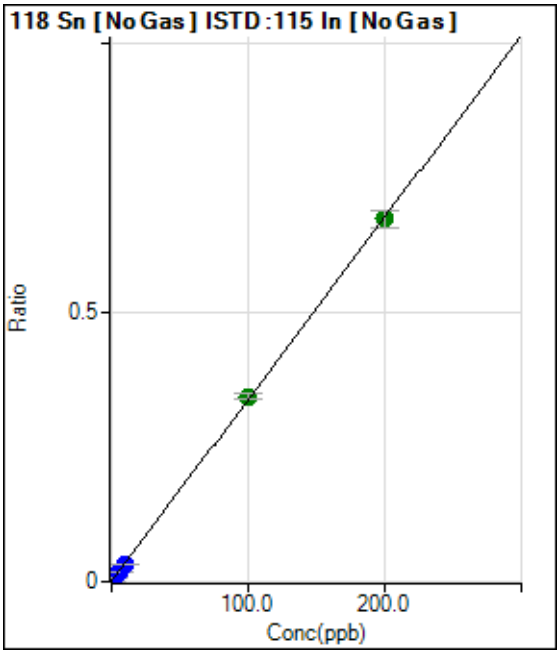
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.7
2	☐	2.000	1.918	8963.19	0.0021	P	2.6
3	☐	5.000	4.797	22045.46	0.0053	P	1.5
4	☐	10.000	9.144	42101.19	0.0102	P	1.0
5	☐	100.000	103.989	468779.91	0.1158	P	3.0
6	☐	200.000	198.054	883953.03	0.2206	P	0.4

y = 0.0011 * x + 3.1977E-006
R = 0.9997
DL = 0.00376
BEC = 0.002871

Weight: <None>
Min Conc: <None>

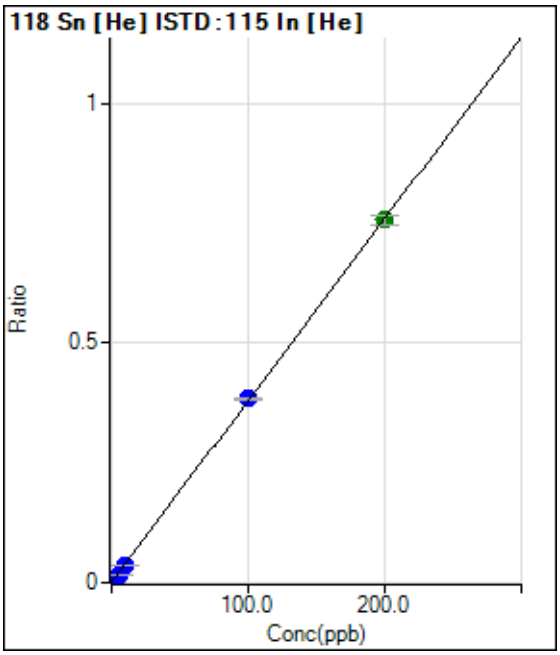


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.29	0.0006	P	5.5
2	☐	2.000	1.850	28772.06	0.0069	P	1.7
3	☐	5.000	4.671	67664.69	0.0164	P	2.2
4	☐	10.000	9.346	133148.89	0.0322	P	0.6
5	☐	100.000	101.607	1393168.21	0.3443	A	3.3
6	☐	200.000	199.239	2702480.27	0.6745	A	5.0

y = 0.0034 * x + 6.0859E-004
R = 0.9999
DL = 0.02988
BEC = 0.1799

Weight: <None>
Min Conc: <None>

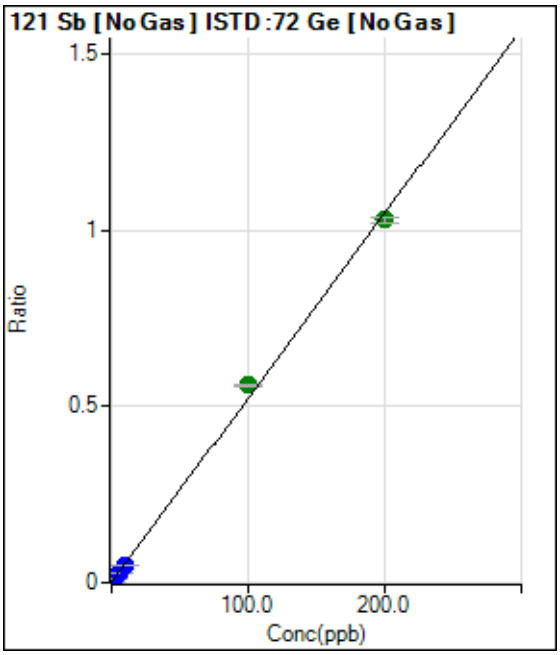
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1667.71	0.0008	P	43.2
2	☐	2.000	1.731	15906.56	0.0073	P	0.9
3	☐	5.000	4.463	37714.58	0.0177	P	2.4
4	☐	10.000	9.246	75953.20	0.0358	P	2.1
5	☐	100.000	101.028	813132.80	0.3835	P	1.6
6	☐	200.000	199.540	1573843.78	0.7566	A	2.6

y = 0.0038 * x + 7.8220E-004
R = 1.0000
DL = 0.2676
BEC = 0.2065

Weight: <None>
Min Conc: <None>

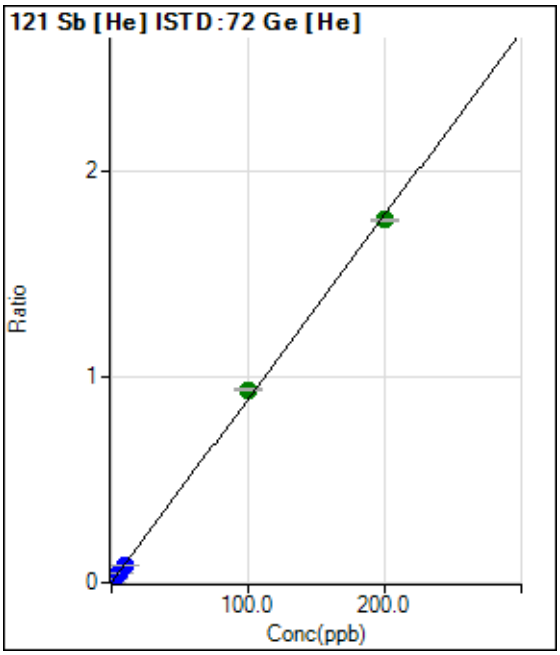


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2787.01	0.0008	P	2.9
2	☐	2.000	1.962	39647.28	0.0110	P	4.0
3	☐	5.000	4.789	92721.06	0.0258	P	3.3
4	☐	10.000	9.437	179509.61	0.0501	P	1.6
5	☐	100.000	106.832	1983478.46	0.5590	A	1.1
6	☐	200.000	196.618	3587743.59	1.0282	A	1.4

y = 0.0052 * x + 7.7591E-004
R = 0.9991
DL = 0.01309
BEC = 0.1485

Weight: <None>
Min Conc: <None>

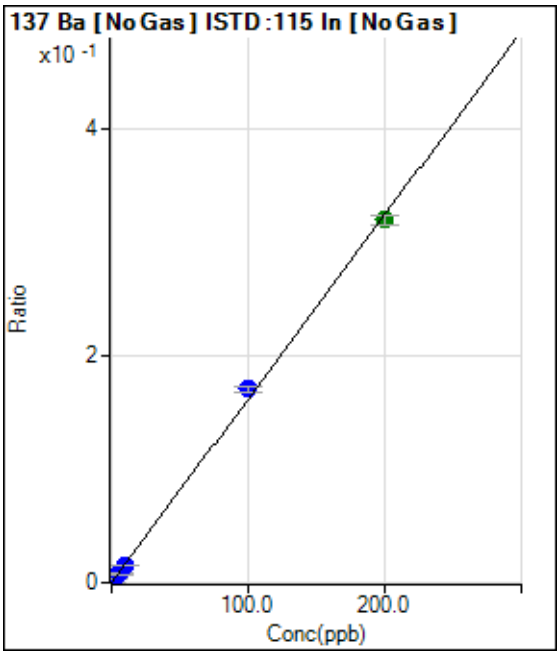
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1483.45	0.0012	P	3.7
2	☐	2.000	1.853	21330.99	0.0178	P	1.6
3	☐	5.000	4.785	51056.33	0.0440	P	2.7
4	☐	10.000	9.348	100175.05	0.0847	P	3.4
5	☐	100.000	105.123	1116029.38	0.9397	A	1.3
6	☐	200.000	197.478	2073584.61	1.7642	A	0.6

y = 0.0089 * x + 0.0012
R = 0.9995
DL = 0.0154
BEC = 0.1395

Weight: <None>
Min Conc: <None>

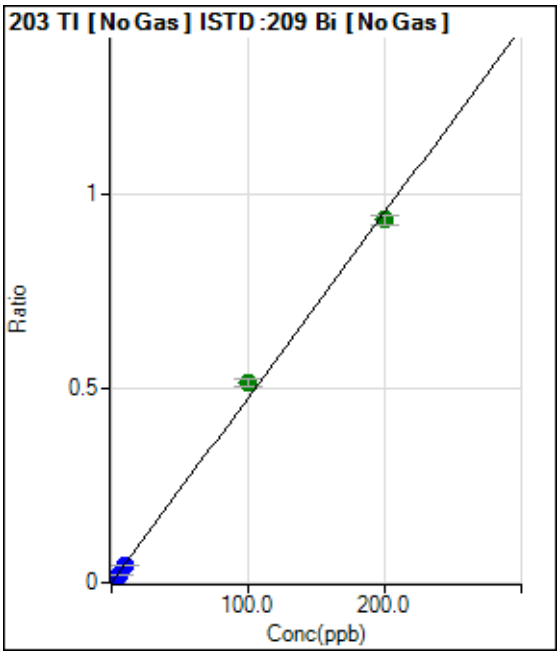


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0001	P	6.6
2	☐	2.000	1.878	13003.43	0.0031	P	2.3
3	☐	5.000	4.682	31532.18	0.0076	P	2.6
4	☐	10.000	9.402	63197.76	0.0153	P	2.9
5	☐	100.000	105.207	689902.15	0.1705	P	3.7
6	☐	200.000	197.436	1281699.28	0.3199	A	2.8

y = 0.0016 * x + 6.0716E-005
R = 0.9995
DL = 0.007372
BEC = 0.03748

Weight: <None>
Min Conc: <None>

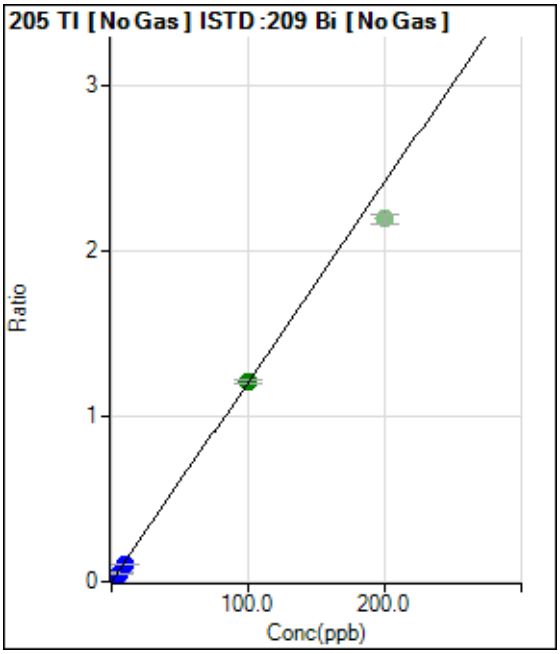
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	32.9
2	☐	2.000	1.847	30297.48	0.0088	P	1.8
3	☐	5.000	4.629	76189.71	0.0220	P	1.7
4	☐	10.000	9.336	153104.22	0.0444	P	1.7
5	☐	100.000	107.947	1745250.86	0.5132	A	3.4
6	☐	200.000	196.070	3066227.56	0.9320	A	2.5

y = 0.0048 * x + 1.8352E-005
R = 0.9988
DL = 0.00381
BEC = 0.003861

Weight: <None>
Min Conc: <None>

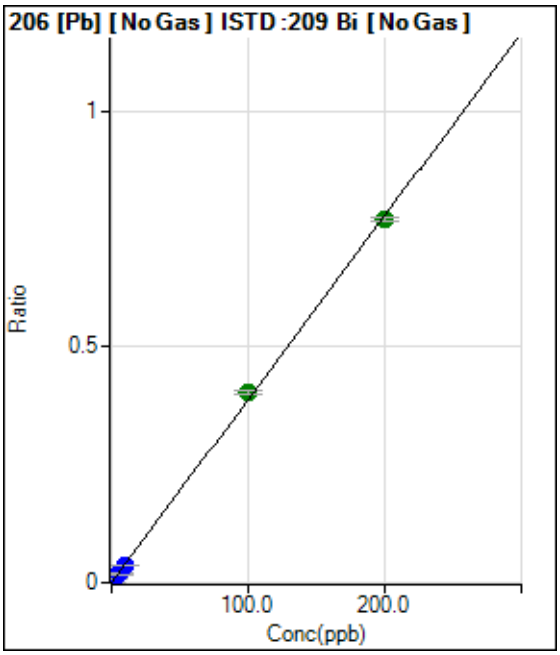


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.67	0.0000	P	14.3
2	☐	2.000	1.792	74593.73	0.0217	P	4.4
3	☐	5.000	4.313	180200.18	0.0521	P	1.1
4	☐	10.000	8.725	363227.00	0.1053	P	3.0
5	☐	100.000	100.166	4111171.92	1.2088	A	2.4
6	☑	200.000		7220635.94	2.1947	A	2.9

y = 0.0121 * x + 4.8271E-005
R = 0.9999
DL = 0.001721
BEC = 0.004

Weight: <None>
Min Conc: <None>

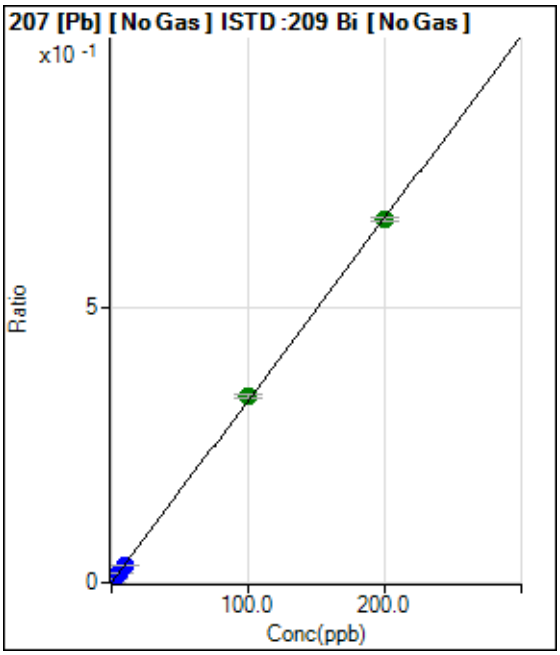
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0001	P	0.6
2	☐	2.000	1.915	26014.27	0.0076	P	4.2
3	☐	5.000	4.693	63495.88	0.0184	P	1.6
4	☐	10.000	9.344	125625.41	0.0364	P	1.7
5	☐	100.000	104.144	1376825.76	0.4048	A	2.3
6	☐	200.000	197.969	2531994.23	0.7694	A	1.1

y = 0.0039 * x + 1.1690E-004
R = 0.9997
DL = 0.0005209
BEC = 0.03008

Weight: <None>
Min Conc: <None>

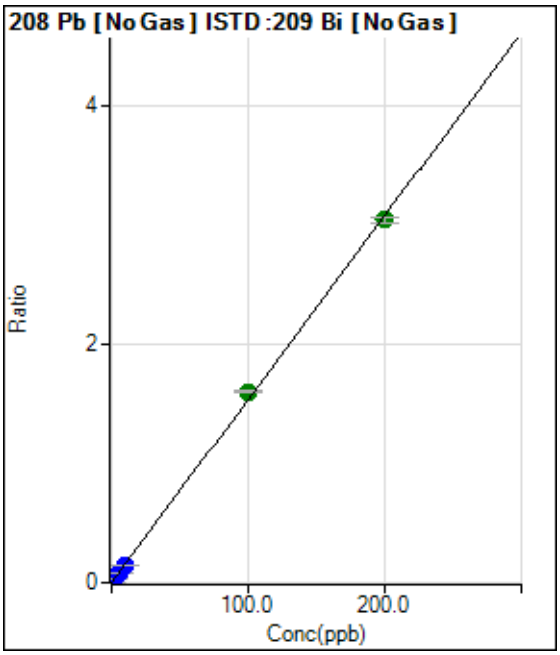


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.35	0.0001	P	42.4
2	☐	2.000	1.985	23008.44	0.0067	P	5.0
3	☐	5.000	4.776	55159.35	0.0159	P	1.9
4	☐	10.000	9.471	108687.52	0.0315	P	1.8
5	☐	100.000	101.919	1150148.45	0.3382	A	1.9
6	☐	200.000	199.072	2173017.89	0.6604	A	0.9

y = 0.0033 * x + 1.0216E-004
R = 0.9999
DL = 0.03914
BEC = 0.0308

Weight: <None>
Min Conc: <None>

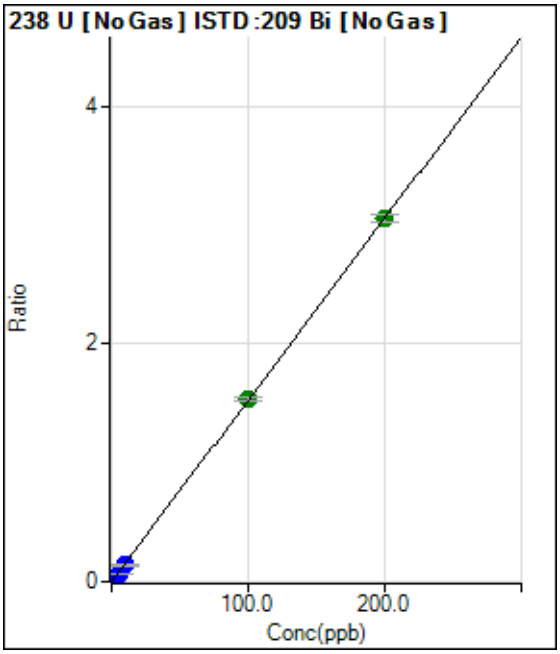
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1490.07	0.0004	P	8.4
2	☐	2.000	1.941	104038.63	0.0302	P	1.9
3	☐	5.000	4.719	251950.33	0.0728	P	1.0
4	☐	10.000	9.502	504275.20	0.1462	P	0.8
5	☐	100.000	104.195	5438819.79	1.5991	A	1.4
6	☐	200.000	197.935	9993004.12	3.0373	A	1.5

y = 0.0153 * x + 4.3166E-004
R = 0.9997
DL = 0.007089
BEC = 0.02813

Weight: <None>
Min Conc: <None>

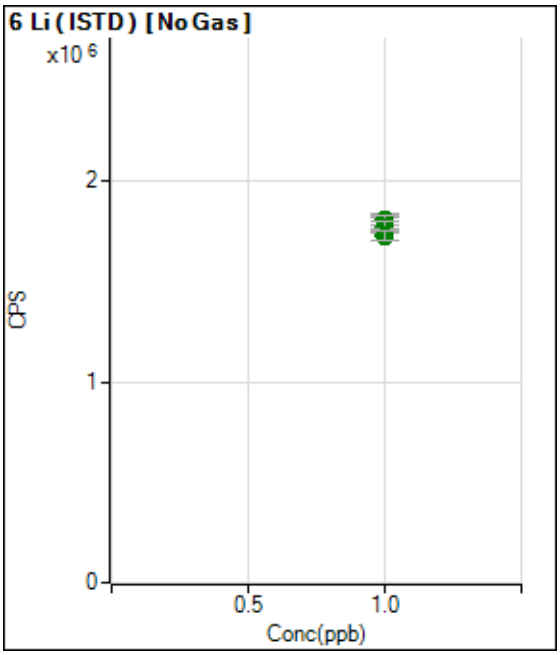


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	44.9
2	☐	2.000	1.863	97989.39	0.0285	P	0.5
3	☐	5.000	4.601	243119.95	0.0703	P	1.3
4	☐	10.000	9.075	477909.90	0.1386	P	1.7
5	☐	100.000	100.328	5210961.07	1.5320	A	1.7
6	☐	200.000	199.894	10041935.48	3.0523	A	2.2

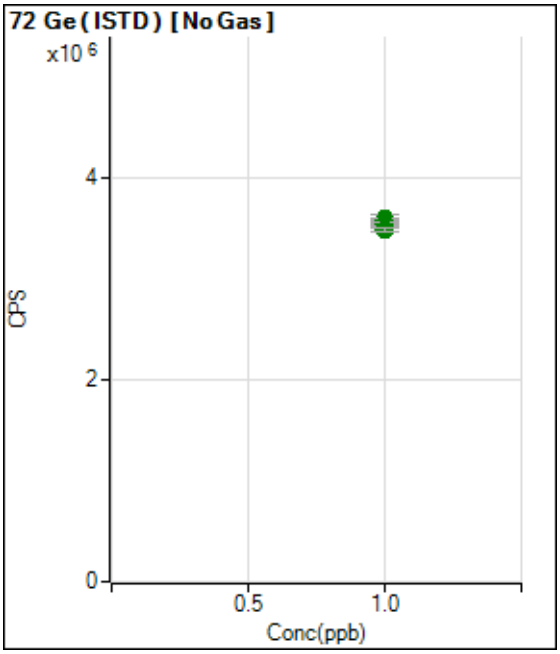
y = 0.0153 * x + 9.6362E-006
R = 1.0000
DL = 0.0008507
BEC = 0.0006311

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

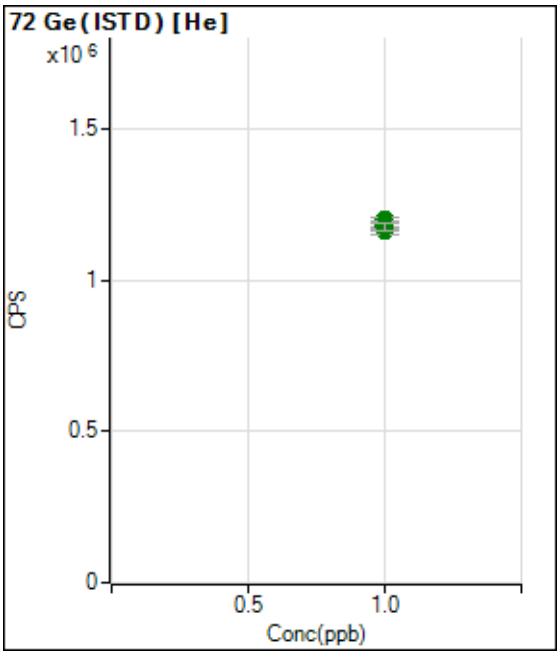


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1801939.61		A	4.0
2	☐	1.000		1802126.72		A	1.8
3	☐	1.000		1809661.71		A	2.5
4	☐	1.000		1775017.52		A	3.0
5	☐	1.000		1733503.92		A	3.2
6	☐	1.000		1729739.48		A	2.5

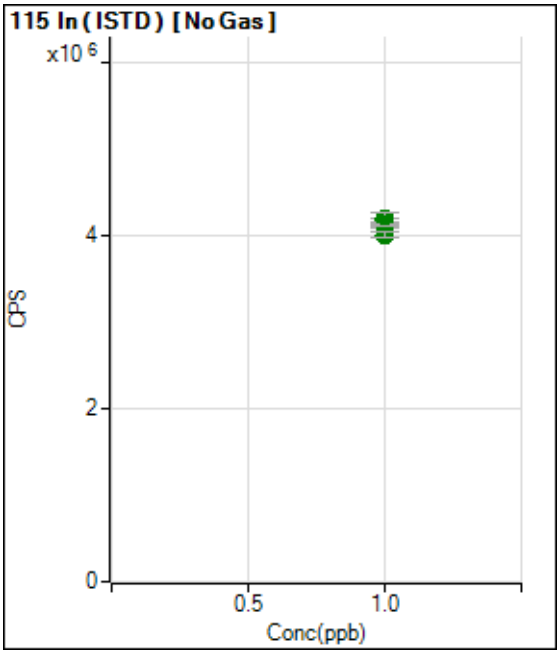


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3591716.40		A	0.4
2	☐	1.000		3595634.63		A	1.9
3	☐	1.000		3595461.51		A	2.4
4	☐	1.000		3583744.95		A	0.6
5	☐	1.000		3547979.84		A	1.1
6	☐	1.000		3489397.97		A	0.9

Calibration for 018_ICV.d

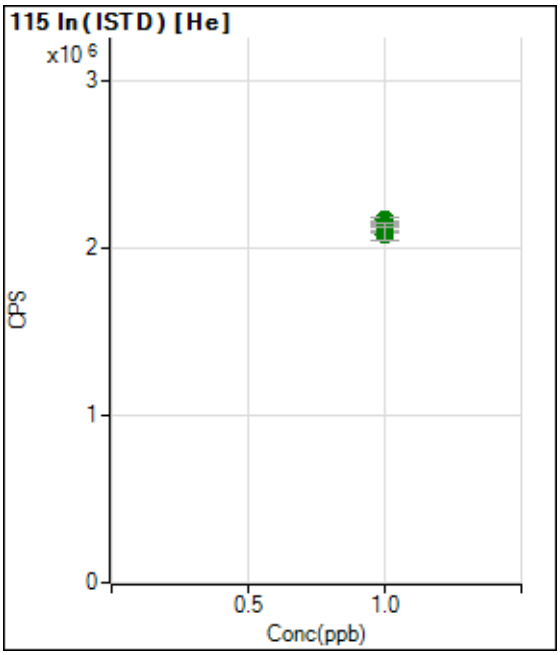


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1191599.30		A	0.9
2	☐	1.000		1199324.23		A	1.1
3	☐	1.000		1161597.90		A	1.8
4	☐	1.000		1183068.11		A	1.6
5	☐	1.000		1187742.17		A	1.8
6	☐	1.000		1175428.92		A	2.1

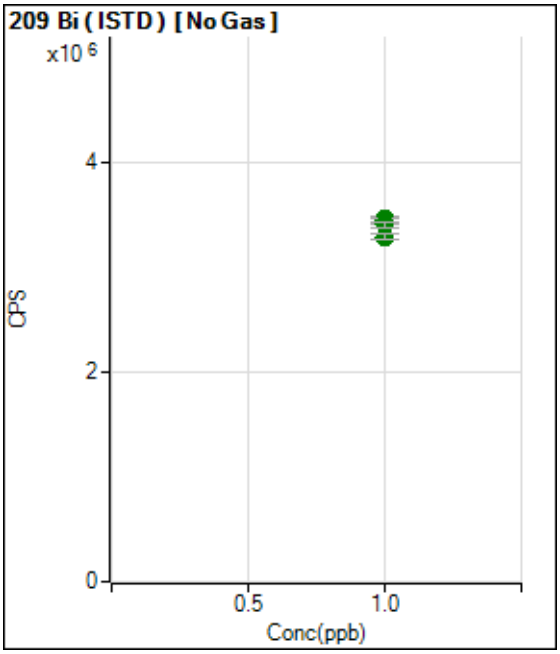


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4173630.42		A	0.7
2	☐	1.000		4191019.42		A	3.1
3	☐	1.000		4124142.74		A	1.3
4	☐	1.000		4132373.46		A	0.4
5	☐	1.000		4049488.71		A	3.4
6	☐	1.000		4007165.63		A	2.0

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2142609.86		A	2.1
2	☐	1.000		2167260.61		A	1.3
3	☐	1.000		2132262.24		A	1.0
4	☐	1.000		2121550.51		A	1.5
5	☐	1.000		2120926.11		A	2.8
6	☐	1.000		2081403.13		A	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3450327.76		A	0.9
2	☐	1.000		3444268.70		A	2.4
3	☐	1.000		3459752.97		A	1.3
4	☐	1.000		3448891.61		A	1.1
5	☐	1.000		3401832.76		A	1.7
6	☐	1.000		3290659.95		A	1.7

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	019LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:49:17-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.893	1.893	5.50	145845	0.00	2	
Be	9	1	No Gas	1.898	1.898	2.86	10267	0.02	2	
V	51	2	He	1.785	1.785	2.70	20545	0.01	2	
Cr	52	2	He	1.907	1.907	2.78	23647	0.01	2	
Fe	56	2	He	194.519	194.519	0.47	1934735	0.01	200	
Se	78	2	He	1.823	1.823	14.83	450	0.41	2	
Sn	118	2	He	2.003	2.003	4.79	18096	0.01	2	
As	75	2	He	1.809	1.809	3.62	3107	0.06	2	
Ca	44	2	He	189.096	189.096	3.48	16206	1.17	200	
Na	23	2	He	207.406	207.406	1.32	435543	0.05	200	
Mg	24	2	He	203.307	203.307	1.47	194593	0.10	200	
K	39	2	He	200.481	200.481	2.91	329257	0.06	200	
Mn	55	2	He	1.849	1.849	0.90	15546	0.01	2	
Co	59	2	He	1.937	1.937	0.41	31597	0.01	2	
Ni	60	2	He	1.847	1.847	3.31	8049	0.02	2	
Cu	63	2	He	1.961	1.961	1.85	22997	0.01	2	
Zn	66	2	He	1.904	1.904	6.28	4361	0.04	2	
Al	27	2	He	1.930	1.930	11.31	2484	0.08	2	
B	11	1	No Gas	25.411	25.411	3.42	127371	0.02	10	NewName Main CR1 Failed
Al	27	1	No Gas	2.228	2.228	5.63	103885	0.00	2	
Si	28	1	No Gas	11.047	11.047	18.52	1033833	0.00	10	
P	31	1	No Gas	12.329	12.329	10.38	55727	0.02	10	
Ag	107	1	No Gas	1.989	1.989	1.02	46148	0.00	2	
Cd	111	1	No Gas	1.985	1.985	0.35	9097	0.02	2	
Sr	88	1	No Gas	2.063	2.063	0.77	86138	0.00	2	
Mo	95	1	No Gas	1.987	1.987	1.20	17382	0.01	2	
Sn	118	1	No Gas	2.163	2.163	1.26	32555	0.01	2	
Sb	121	1	No Gas	2.016	2.016	3.62	40981	0.00	2	
Ba	137	1	No Gas	1.850	1.850	2.84	12563	0.01	2	
Tl	205	1	No Gas	1.986	1.986	4.23	76704	0.00	2	
Tl	203	1	No Gas	1.950	1.950	6.96	31948	0.01	2	
Pb	208	1	No Gas	1.953	1.953	3.10	104632	0.00	2	
U	238	1	No Gas	1.849	1.849	2.08	97238	0.00	2	
Ca	43	2	He	188.553	188.553	14.35	717	26.31	200	
Sb	121	2	He	1.905	1.905	2.10	22429	0.01	2	
Ti	47	2	He	1.679	1.679	1.82	640	0.26	200	
Cu	63	1	No Gas	2.046	2.046	1.68	37917	0.01	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1761937	1.05	1801940	97.78	70	120	
Ge	72	2	He	1228926	0.79	1191599	103.13	70	120	
Ge	72	1	No Gas	3624180	1.28	3591716	100.90	70	120	
In	115	1	No Gas	4108908	1.93	4173630	98.45	70	120	
Bi	209	1	No Gas	3445133	3.50	3450328	99.85	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	020LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:51:10-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.457	4.457	4.18	203352	0.00	5	
Be	9	1	No Gas	4.518	4.518	2.71	24810	0.02	5	
V	51	2	He	4.591	4.591	0.59	46444	0.01	5	
Cr	52	2	He	4.727	4.727	2.30	54592	0.01	5	
Fe	56	2	He	471.411	471.411	3.08	4628536	0.01	500	
Se	78	2	He	5.025	5.025	13.15	894	0.56	5	
Sn	118	2	He	4.593	4.593	3.00	39309	0.01	5	
As	75	2	He	4.497	4.497	1.34	7290	0.06	5	
Ca	44	2	He	458.398	458.398	2.17	32078	1.43	500	
Na	23	2	He	483.604	483.604	1.74	895986	0.05	500	
Mg	24	2	He	490.357	490.357	2.09	464102	0.11	500	
K	39	2	He	482.427	482.427	0.39	650464	0.07	500	
Mn	55	2	He	4.722	4.722	2.49	38481	0.01	5	
Co	59	2	He	4.785	4.785	3.69	77029	0.01	5	
Ni	60	2	He	4.745	4.745	3.81	20142	0.02	5	
Cu	63	2	He	4.713	4.713	0.47	53733	0.01	5	
Zn	66	2	He	4.676	4.676	4.76	10137	0.05	5	
Al	27	2	He	4.999	4.999	3.97	4137	0.12	5	
B	11	1	No Gas	30.499	30.499	0.96	146771	0.02	25	
Al	27	1	No Gas	5.400	5.400	3.69	168018	0.00	5	
Si	28	1	No Gas	27.130	27.130	5.87	1174857	0.00	25	
P	31	1	No Gas	25.772	25.772	3.28	68261	0.04	25	
Ag	107	1	No Gas	4.881	4.881	2.98	113343	0.00	5	
Cd	111	1	No Gas	4.679	4.679	2.89	21578	0.02	5	
Sr	88	1	No Gas	4.964	4.964	2.41	206025	0.00	5	
Mo	95	1	No Gas	4.734	4.734	2.38	41639	0.01	5	
Sn	118	1	No Gas	4.738	4.738	2.17	68824	0.01	5	
Sb	121	1	No Gas	4.867	4.867	3.39	92475	0.01	5	
Ba	137	1	No Gas	4.809	4.809	0.27	32488	0.01	5	
Tl	205	1	No Gas	4.788	4.788	4.20	180138	0.00	5	
Tl	203	1	No Gas	4.694	4.694	1.91	75020	0.01	5	
Pb	208	1	No Gas	4.915	4.915	2.58	254752	0.00	5	
U	238	1	No Gas	4.605	4.605	1.71	236279	0.00	5	
Ca	43	2	He	483.851	483.851	9.11	1747	27.70	500	
Sb	121	2	He	4.617	4.617	1.72	51689	0.01	5	
Ti	47	2	He	4.554	4.554	2.99	1697	0.27	5	
Cu	63	1	No Gas	5.021	5.021	2.63	88921	0.01	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1790225	1.13	1801940	99.35	70	120	
Ge	72	2	He	1217271	0.98	1191599	102.15	70	120	

Sample Report

Ge	72	1	No Gas	3530150	2.45	3591716	98.29	70	120	
In	115	1	No Gas	4137366	0.62	4173630	99.13	70	120	
Bi	209	1	No Gas	3360182	2.62	3450328	97.39	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	021_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:53:02-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.152	-76.6	107301	1.4	0.5	
Be	9	1	No Gas	0.002	160.2	32	72.9	0.5	
V	51	2	He	-0.087	-12.7	2913	3.4	2.5	
Cr	52	2	He	-0.015	-173.0	2140	14.6	2.5	
Fe	56	2	He	0.268	12.2	13030	3.1	100	
Se	78	2	He	0.027	177.3	191	4.0	1	
Sn	118	2	He	0.026	44.4	1870	5.1	2.5	
As	75	2	He	-0.019	-139.4	210	19.5	2.5	
Ca	44	2	He	0.410	1036.7	4768	6.2	100	
Na	23	2	He	6.488	15.5	92247	0.7	100	
Mg	24	2	He	0.297	53.4	810	19.2	100	
K	39	2	He	15.866	4.7	112384	0.3	100	
Mn	55	2	He	0.093	11.9	1277	7.9	2.5	
Co	59	2	He	-0.002	-174.9	160	33.1	2.5	
Ni	60	2	He	0.062	33.0	473	18.9	2.5	
Cu	63	2	He	-0.001	-1369.0	713	12.7	1	
Zn	66	2	He	0.029	139.8	377	22.6	2.5	
Al	27	2	He	0.733	218.3	1788	49.1	5	
B	11	1	No Gas	5.744	14.3	64148	1.1	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.062	103.2	55458	3.0	5	
Si	28	1	No Gas	1.623	41.7	907064	1.6	10	
P	31	1	No Gas	0.970	116.5	42388	1.3	10	
Ag	107	1	No Gas	0.056	6.3	1773	4.7	2.5	
Cd	111	1	No Gas	-0.001	-89.2	7	86.6	1	
Sr	88	1	No Gas	0.008	37.7	2177	5.4	2.5	
Mo	95	1	No Gas	0.005	59.9	90	29.4	2.5	
Sn	118	1	No Gas	0.075	42.9	3545	12.7	5	
Sb	121	1	No Gas	0.004	386.4	2814	11.2	2.5	
Ba	137	1	No Gas	0.028	10.9	433	4.8	2.5	
Tl	205	1	No Gas	0.009	18.1	533	14.2	1	
Tl	203	1	No Gas	0.010	25.9	230	19.9	1	
Pb	208	1	No Gas	0.008	23.1	1897	7.2	2.5	
U	238	1	No Gas	0.002	46.9	117	34.6	2.5	
Ca	43	2	He	16.220	25.7	103	14.8	100	
Sb	121	2	He	0.030	30.6	1824	6.1	2.5	
Ti	47	2	He	0.036	86.3	27	43.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1845414	3.57	1801940	102.41	70	120	
Ge	72	2	He	1201917	1.08	1191599	100.87	70	120	
Ge	72	1	No Gas	3523729	1.51	3591716	98.11	70	120	
In	115	1	No Gas	4104705	0.19	4173630	98.35	70	120	
Bi	209	1	No Gas	3434989	2.25	3450328	99.56	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	023ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T10:58:15-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.627	22.6	112535	1.7	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.001	100.3	18	15.7	0	ICSA Main CR1 Failed
V	51	2	He	-0.004	-423.9	3545	3.9	0	ICSA Main CR1 Failed
Cr	52	2	He	1.002	1.9	12776	1.2	0	ICSA Main CR1 Failed
Fe	56	2	He	105393.347	1.8	983904385	2.0	0	
Se	78	2	He	0.247	33.5	214	4.9	0	ICSA Main CR1 Failed
Sn	118	2	He	0.026	38.5	1753	6.6	0	ICSA Main CR1 Failed
As	75	2	He	0.089	37.9	363	13.9	0	ICSA Main CR1 Failed
Ca	44	2	He	99066.017	2.6	5620697	2.4	0	
Na	23	2	He	104022.046	2.1	166805761	1.9	0	
Mg	24	2	He	105278.216	1.0	94838135	0.6	0	
K	39	2	He	105705.554	1.8	115927318	1.4	0	
Mn	55	2	He	0.206	8.4	2094	6.5	0	ICSA Main CR1 Failed
Co	59	2	He	0.210	2.9	3404	2.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.241	18.7	1173	15.6	0	ICSA Main CR1 Failed
Cu	63	2	He	0.275	6.5	3644	5.2	0	ICSA Main CR1 Failed
Zn	66	2	He	0.373	26.5	1050	18.4	0	ICSA Main CR1 Failed
Al	27	2	He	97904.537	2.0	50954601	1.6	0	
B	11	1	No Gas	5.233	10.2	56053	3.7	0	
Al	27	1	No Gas	100270.871	2.4	2036531330	2.6	0	
Si	28	1	No Gas	36.069	4.5	1222145	1.1	0	
P	31	1	No Gas	96776.523	0.5	97030805	0.7	0	
Ag	107	1	No Gas	0.039	11.6	1267	7.7	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.243	3.8	5248	3.6	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.010	6.3	41586	6.3	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	2125.654	1.3	17073284	1.5	0	
Sn	118	1	No Gas	0.063	12.0	3107	2.9	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.018	24.1	2960	2.6	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.033	30.5	430	14.0	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.008	33.8	433	20.2	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.008	56.0	170	35.8	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.043	5.7	3270	5.8	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	39.4	187	31.4	0	ICSA Main CR1 Failed
Ca	43	2	He	101420.358	1.4	339208	1.0	0	
Sb	121	2	He	0.027	86.3	1727	14.5	0	ICSA Main CR1 Failed
Ti	47	2	He	2055.322	1.7	723638	1.3	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1657031	1.05	1801940	91.96	70	120	
Ge	72	2	He	1159806	0.43	1191599	97.33	70	120	
Ge	72	1	No Gas	3401299	0.56	3591716	94.70	70	120	
In	115	1	No Gas	3782270	0.25	4173630	90.62	70	120	
Bi	209	1	No Gas	2983106	2.60	3450328	86.46	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	024ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T11:00:13-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	95.751	3.005	2108164	1.45	100	95.8	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	100.054	2.241	509993	1.28	100	100.1	80	120	
V	51	2	He	99.626	2.464	865886	2.46	100	99.6	80	120	
Cr	52	2	He	100.227	0.550	1033960	0.36	100	100.2	80	120	
Fe	56	2	He	112058.180	0.491	1022265665	0.50	100	112058.2	80	120	ICSB Main CR1 Failed
Se	78	2	He	100.964	1.920	13353	1.34	100	101.0	80	120	
Sn	118	2	He	98.044	2.188	746464	0.59	100	98.0	80	120	
As	75	2	He	100.264	1.465	146548	0.70	100	100.3	80	120	
Ca	44	2	He	111017.185	1.403	6155138	1.70	100	111017.2	80	120	
Na	23	2	He	112541.763	1.419	176359104	1.65	100	112541.8	80	120	
Mg	24	2	He	112645.849	3.362	99161875	3.20	100	112645.8	80	120	ICSB Main CR1 Failed
K	39	2	He	114026.694	1.538	122203295	1.61	100	114026.7	80	120	
Mn	55	2	He	99.859	1.518	747554	0.68	100	99.9	80	120	
Co	59	2	He	98.053	0.217	1466577	1.00	100	98.1	80	120	
Ni	60	2	He	96.640	2.589	378017	1.75	100	96.6	80	120	
Cu	63	2	He	94.841	1.888	993711	1.15	100	94.8	80	120	
Zn	66	2	He	98.388	1.410	192682	1.16	100	98.4	80	120	
Al	27	2	He	97656.380	1.485	49670548	1.62	100	97656.4	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	507.930	1.956	1649478	1.95	100	507.9	80	120	
Al	27	1	No Gas	97309.944	1.782	1967840077	0.54	100	97309.9	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	516.497	3.176	6031796	3.25	100	516.5	80	120	
P	31	1	No Gas	94519.746	0.868	94372905	1.45	100	94519.7	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	100.865	1.488	2149447	2.57	100	100.9	80	120	
Cd	111	1	No Gas	100.141	1.184	425211	1.13	100	100.1	80	120	
Sr	88	1	No Gas	100.435	1.924	3995719	1.12	100	100.4	80	120	
Mo	95	1	No Gas	2125.973	1.928	17208611	1.08	100	2126.0	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	101.748	1.055	1314286	1.15	100	101.7	80	120	
Sb	121	1	No Gas	103.149	1.913	1828025	0.48	100	103.1	80	120	
Ba	137	1	No Gas	101.624	2.367	627750	0.51	100	101.6	80	120	
Tl	205	1	No Gas	95.370	3.580	3526194	2.58	100	95.4	80	120	
Tl	203	1	No Gas	100.420	3.905	1462590	3.02	100	100.4	80	120	
Pb	208	1	No Gas	102.226	1.861	4807126	0.49	100	102.2	80	120	
U	238	1	No Gas	104.571	0.450	4893402	1.30	100	104.6	80	120	
Ca	43	2	He	111924.932	1.521	365798	0.68	100	111924.9	80	120	
Sb	121	2	He	97.952	1.189	992486	0.37	100	98.0	80	120	
Ti	47	2	He	2125.479	1.099	731289	0.32	100	2125.5	80	120	ICSB Main CR1 Failed
Cu	63	1	No Gas	99.657	3.397	1672805	1.18	100	99.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1663237	2.83	1801940	92.30	70	120	
Ge	72	2	He	1133405	0.84	1191599	95.12	70	120	
Ge	72	1	No Gas	3387503	2.25	3591716	94.31	70	120	
In	115	1	No Gas	3812676	2.19	4173630	91.35	70	120	
Bi	209	1	No Gas	3064758	1.75	3450328	88.83	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	145_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:23:40-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.585	1.066	2006789	1.00	100	96.6	90	110	
Be	9	1	No Gas	97.299	0.126	489969	0.17	100	97.3	90	110	
V	51	2	He	96.543	2.567	884062	2.03	100	96.5	90	110	
Cr	52	2	He	95.967	1.293	1043204	1.94	100	96.0	90	110	
Fe	56	2	He	9842.383	2.967	94583929	1.30	10000	98.4	90	110	
Se	78	2	He	98.330	3.291	13705	2.73	100	98.3	90	110	
Sn	118	2	He	101.009	1.439	833482	0.29	100	101.0	90	110	
As	75	2	He	98.847	1.641	152213	0.25	100	98.8	90	110	
Ca	44	2	He	9474.657	2.395	557629	0.62	10000	94.7	90	110	
Na	23	2	He	9615.129	3.053	15944408	1.57	10000	96.2	90	110	
Mg	24	2	He	9425.533	2.040	8741939	1.63	10000	94.3	90	110	
K	39	2	He	9511.014	3.549	10821512	1.89	10000	95.1	90	110	
Mn	55	2	He	98.956	1.628	780447	0.22	100	99.0	90	110	
Co	59	2	He	101.973	2.279	1606599	1.14	100	102.0	90	110	
Ni	60	2	He	99.089	0.234	408432	1.55	100	99.1	90	110	
Cu	63	2	He	98.916	1.388	1091889	0.41	100	98.9	90	110	
Zn	66	2	He	101.815	2.892	210014	1.10	100	101.8	90	110	
Al	27	2	He	91.786	1.726	50559	1.07	100	91.8	90	110	
B	11	1	No Gas	513.572	0.685	1573776	0.64	500	102.7	90	110	
Al	27	1	No Gas	96.474	1.218	2128352	1.27	100	96.5	90	110	
Si	28	1	No Gas	448.292	2.948	5681277	1.53	5000	9.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	453.454	3.111	523021	1.91	500	90.7	90	110	
Ag	107	1	No Gas	101.005	1.883	2419077	1.24	100	101.0	90	110	
Cd	111	1	No Gas	102.139	2.605	487422	0.48	100	102.1	90	110	
Sr	88	1	No Gas	95.330	1.882	4263349	0.38	100	95.3	90	110	
Mo	95	1	No Gas	99.365	2.990	904024	1.08	100	99.4	90	110	
Sn	118	1	No Gas	101.260	3.107	1470192	2.60	100	101.3	90	110	
Sb	121	1	No Gas	109.944	1.399	2070360	1.71	100	109.9	90	110	
Ba	137	1	No Gas	102.716	1.716	713342	1.19	100	102.7	90	110	
Tl	205	1	No Gas	94.514	2.425	4359800	0.64	100	94.5	90	110	
Tl	203	1	No Gas	102.002	1.526	1853668	0.35	100	102.0	90	110	
Pb	208	1	No Gas	100.577	3.171	5899587	1.41	100	100.6	90	110	
U	238	1	No Gas	98.193	2.862	5730968	1.16	100	98.2	90	110	
Ca	43	2	He	9633.275	2.792	33210	2.02	10000	96.3	90	110	
Sb	121	2	He	103.914	4.881	1108761	3.30	100	103.9	90	110	
Ti	47	2	He	91.761	3.227	33274	2.99	100	91.8	90	110	
Cu	63	1	No Gas	99.405	0.921	1773535	1.36	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
Li	6	1	No Gas	1569478	0.05	1801940	87.10	70	120	
Ge	72	2	He	1194196	1.78	1191599	100.22	70	120	
Ge	72	1	No Gas	3598754	0.94	3591716	100.20	70	120	
In	115	1	No Gas	4285893	2.17	4173630	102.69	70	120	
Bi	209	1	No Gas	3823544	1.80	3450328	110.82	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	146_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:25:27-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.109	-34.7	90466	1.4	0.5	
Be	9	1	No Gas	0.006	10.8	43	6.7	0.5	
V	51	2	He	-0.036	-22.7	3308	2.9	2.5	
Cr	52	2	He	0.029	67.7	2564	8.4	2.5	
Fe	56	2	He	1.037	5.1	20038	2.8	100	
Se	78	2	He	0.111	19.9	199	1.2	2	
As	75	2	He	0.031	84.4	280	13.3	2.5	
Ca	44	2	He	-47.961	-3.5	1884	5.8	100	
Na	23	2	He	33.184	2.3	133689	0.8	100	
Mg	24	2	He	0.600	41.8	1067	20.6	100	
K	39	2	He	-2.821	-17.4	89228	1.4	100	
Mn	55	2	He	0.124	9.9	1483	5.6	2.5	
Co	59	2	He	0.005	58.2	267	16.9	2.5	
Ni	60	2	He	0.035	48.4	353	20.1	2.5	
Cu	63	2	He	0.039	33.6	1123	11.8	2	
Zn	66	2	He	0.120	26.1	553	12.3	2.5	
Al	27	2	He	1.454	20.9	2127	8.2	5	
B	11	1	No Gas	18.145	8.2	90125	4.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.340	4.6	83384	0.4	5	
Si	28	1	No Gas	-28.809	-1.9	597248	0.2	10	
P	31	1	No Gas	-8.624	-6.5	32846	1.0	10	
Ag	107	1	No Gas	0.015	20.4	870	8.0	2.5	
Cd	111	1	No Gas	0.006	51.4	43	35.3	1	
Sr	88	1	No Gas	0.040	5.3	3754	2.8	2.5	
Mo	95	1	No Gas	0.045	13.9	457	12.5	2.5	
Sn	118	1	No Gas	0.299	3.2	7002	1.6	5	
Sb	121	1	No Gas	0.325	8.1	8830	6.3	2.5	
Ba	137	1	No Gas	0.038	32.5	527	15.8	2.5	
Tl	205	1	No Gas	0.057	56.5	2814	54.0	1	
Tl	203	1	No Gas	0.056	53.7	1083	51.3	1	
Pb	208	1	No Gas	0.033	31.9	3554	17.9	2.5	
U	238	1	No Gas	0.009	9.5	580	7.9	2.5	
Ca	43	2	He	7.115	126.8	70	42.9	100	
Sb	121	2	He	0.271	6.7	4311	5.3	2.5	
Ti	47	2	He	0.057	76.9	33	45.8	2.5	
Cu	63	1	No Gas	0.046	11.5	1980	4.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1542748	0.94	1801940	85.62	70	120	
Ge	72	2	He	1176308	0.85	1191599	98.72	70	120	
Ge	72	1	No Gas	3568438	1.15	3591716	99.35	70	120	
In	115	1	No Gas	4319783	0.47	4173630	103.50	70	120	
Bi	209	1	No Gas	3790444	1.54	3450328	109.86	70	120	

Sample Report

Sample Table

Sample Name	MBLK-156822
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:29:49-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	-0.294	-0.294	-64.49	92608	0.00	2000	
Be	9	1	No Gas	0.003	0.003	119.26	32	0.01	2000	
V	51	2	He	-0.058	-0.058	-26.52	3232	0.00	2000	
Cr	52	2	He	0.134	0.134	11.55	3837	0.00	2000	
Fe	56	2	He	2.744	2.744	2.53	37632	0.01	200000	
Se	78	2	He	-0.110	-0.110	-89.58	175	-0.06	2000	
Sn	118	2	He	0.016	0.016	121.24	1877	0.00	200	
As	75	2	He	-0.015	-0.015	-81.86	219	-0.01	2000	
Ca	44	2	He	-42.962	-42.962	-1.92	2257	-1.90	200000	
Na	23	2	He	34.154	34.154	4.80	140643	0.02	200000	
Mg	24	2	He	5.912	5.912	2.51	6158	0.10	200000	
K	39	2	He	-2.448	-2.448	-53.80	93207	0.00	200000	
Mn	55	2	He	0.353	0.353	3.52	3397	0.01	2000	
Co	59	2	He	0.004	0.004	71.22	260	0.00	2000	
Ni	60	2	He	0.016	0.016	106.06	287	0.01	2000	
Cu	63	2	He	0.100	0.100	5.06	1864	0.01	2000	
Zn	66	2	He	2.601	2.601	5.06	5808	0.04	2000	
Al	27	2	He	2.604	2.604	17.62	2840	0.09	2000	
B	11	1	No Gas	7.230	7.230	5.53	61926	0.01	2000	
Al	27	1	No Gas	2.770	2.770	4.58	117573	0.00	2000	
Si	28	1	No Gas	-33.025	-33.025	-3.86	570835	-0.01	2000	
Ag	107	1	No Gas	-0.001	-0.001	-185.75	483	0.00	2000	
Cd	111	1	No Gas	0.000	0.000	-1416.31	13	0.00	2000	
Sr	88	1	No Gas	0.025	0.025	14.52	3067	0.00	2000	
Mo	95	1	No Gas	0.025	0.025	22.47	280	0.01	2000	
Sn	118	1	No Gas	0.043	0.043	25.83	3264	0.00	2000	
Sb	121	1	No Gas	0.002	0.002	493.52	2894	0.00	2000	
Ba	137	1	No Gas	0.080	0.080	6.82	823	0.01	2000	
Tl	205	1	No Gas	0.000	0.000	178.50	210	0.00	2000	
Tl	203	1	No Gas	0.002	0.002	24.48	117	0.00	2000	
Pb	208	1	No Gas	0.193	0.193	6.24	13426	0.00	2000	
U	238	1	No Gas	0.001	0.001	136.36	77	0.00	2000	
Ca	43	2	He	20.442	20.442	50.18	120	17.03	200000	
Sb	121	2	He	0.052	0.052	25.74	2087	0.00	2000	
Ti	47	2	He	0.152	0.152	36.94	70	0.22	2000	
Cu	63	1	No Gas	0.111	0.111	8.36	3220	0.00	2000	
Zn	66	1	No Gas	2.832	2.832	2.31	14648	0.02	2000	
Se	82	1	No Gas	0.074	0.074	833.34	14	0.53	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1646225	2.65	1801940	91.36	70	120	
Ge	72	2	He	1223267	1.44	1191599	102.66	70	120	
Ge	72	1	No Gas	3686343	2.28	3591716	102.63	70	120	

Sample Report

In	115	1	No Gas	4336037	2.49	4173630	103.89	70	120	
Bi	209	1	No Gas	3964956	4.56	3450328	114.92	70	120	

Sample Report

Sample Table

Sample Name	LCS-156822
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:31:43-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	-0.146	-0.146	-47.01	92225	0.00	2000	
Be	9	1	No Gas	48.433	48.433	0.96	246392	0.02	2000	
V	51	2	He	47.875	47.875	1.85	450455	0.01	2000	
Cr	52	2	He	48.283	48.283	1.92	538101	0.01	2000	
Fe	56	2	He	4865.769	4865.769	4.42	47847748	0.01	200000	
Se	78	2	He	50.281	50.281	3.72	7263	0.69	2000	
Sn	118	2	He	100.855	100.855	0.65	834641	0.01	200	
As	75	2	He	49.113	49.113	1.38	77507	0.06	2000	
Ca	44	2	He	4654.492	4654.492	2.31	282759	1.65	200000	
Na	23	2	He	4699.231	4699.231	1.96	8016494	0.06	200000	
Mg	24	2	He	4642.199	4642.199	4.10	4404198	0.11	200000	
K	39	2	He	4593.633	4593.633	2.90	5397681	0.09	200000	
Mn	55	2	He	47.901	47.901	2.44	386795	0.01	2000	
Co	59	2	He	50.462	50.462	3.20	813532	0.01	2000	
Ni	60	2	He	49.324	49.324	3.50	208048	0.02	2000	
Cu	63	2	He	49.242	49.242	3.58	556390	0.01	2000	
Zn	66	2	He	54.042	54.042	2.72	114216	0.05	2000	
Al	27	2	He	90.904	90.904	2.42	51245	0.18	2000	
B	11	1	No Gas	491.354	491.354	3.08	1522486	0.03	2000	
Al	27	1	No Gas	93.969	93.969	3.49	2155502	0.00	2000	
Si	28	1	No Gas	397.805	397.805	2.26	5346620	0.01	2000	
Ag	107	1	No Gas	50.969	50.969	1.23	1231300	0.00	2000	
Cd	111	1	No Gas	52.407	52.407	3.43	252202	0.02	2000	
Sr	88	1	No Gas	95.777	95.777	1.31	4319607	0.00	2000	
Mo	95	1	No Gas	49.402	49.402	0.61	453360	0.01	2000	
Sn	118	1	No Gas	100.684	100.684	1.21	1474174	0.01	2000	
Sb	121	1	No Gas	52.680	52.680	2.44	1032189	0.01	2000	
Ba	137	1	No Gas	52.127	52.127	2.47	365204	0.01	2000	
Tl	205	1	No Gas	47.982	47.982	4.26	2179620	0.00	2000	
Tl	203	1	No Gas	50.939	50.939	4.12	911526	0.01	2000	
Pb	208	1	No Gas	51.541	51.541	1.29	2980443	0.00	2000	
U	238	1	No Gas	0.002	0.002	23.24	127	0.00	2000	
Ca	43	2	He	4729.005	4729.005	2.91	16704	28.31	200000	
Sb	121	2	He	51.547	51.547	2.39	563668	0.01	2000	
Ti	47	2	He	134.473	134.473	1.48	49888	0.27	2000	
Cu	63	1	No Gas	48.881	48.881	1.02	906853	0.01	2000	
Zn	66	1	No Gas	54.021	54.021	1.06	270921	0.02	2000	
Se	82	1	No Gas	50.348	50.348	2.66	13668	0.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1585523	0.83	1801940	87.99	70	120	
Ge	72	2	He	1221889	1.80	1191599	102.54	70	120	
Ge	72	1	No Gas	3739918	1.78	3591716	104.13	70	120	

Sample Report

In	115	1	No Gas	4321049	1.24	4173630	103.53	70	120	
Bi	209	1	No Gas	3767015	2.79	3450328	109.18	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01SD
Data File Name	150SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:35:29-05:00
Sample Type	Sample
Dilution	5
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.247	26.237	2.59	197307	0.00	2000	
Be	9	1	No Gas	0.029	0.145	3.43	160	0.02	2000	
V	51	2	He	0.917	4.585	5.62	12008	0.01	2000	
Cr	52	2	He	0.313	1.563	4.92	5665	0.01	2000	
Fe	56	2	He	218.710	1093.552	3.79	2105110	0.01	200000	
Se	78	2	He	0.259	1.294	13.18	221	0.12	2000	
Sn	118	2	He	0.117	0.587	22.38	2694	0.00	200	
As	75	2	He	0.411	2.057	1.87	867	0.05	2000	
Ca	44	2	He	7321.101	36605.504	1.71	430630	1.70	200000	
Na	23	2	He	35397.405	176987.025	1.18	58311731	0.06	200000	
Mg	24	2	He	5458.889	27294.445	3.27	5047048	0.11	200000	
K	39	2	He	243.789	1218.946	1.85	367636	0.07	200000	
Mn	55	2	He	117.970	589.851	3.04	927309	0.01	2000	
Co	59	2	He	1.837	9.184	2.81	29038	0.01	2000	
Ni	60	2	He	2.058	10.292	1.62	8666	0.02	2000	
Cu	63	2	He	3.019	15.095	1.51	33913	0.01	2000	
Zn	66	2	He	5.912	29.562	2.90	12459	0.05	2000	
Al	27	2	He	9.291	46.456	6.48	6339	0.15	2000	
B	11	1	No Gas	22.108	110.538	4.16	103149	0.02	2000	
Al	27	1	No Gas	8.958	44.790	7.94	252836	0.00	2000	
Si	28	1	No Gas	4224.623	21123.114	1.17	46821323	0.01	2000	>LDR
Ag	107	1	No Gas	-0.001	-0.005	-452.43	483	0.00	2000	
Cd	111	1	No Gas	0.038	0.191	18.94	197	0.02	2000	
Sr	88	1	No Gas	133.303	666.515	1.87	5983979	0.00	2000	
Mo	95	1	No Gas	0.089	0.446	8.81	863	0.01	2000	
Sn	118	1	No Gas	0.176	0.878	16.57	5171	0.00	2000	
Sb	121	1	No Gas	0.101	0.507	3.27	4794	0.00	2000	
Ba	137	1	No Gas	148.740	743.702	2.05	1036990	0.01	2000	
Tl	205	1	No Gas	0.004	0.020	43.92	360	0.00	2000	
Tl	203	1	No Gas	0.005	0.026	61.46	160	0.00	2000	
Pb	208	1	No Gas	0.026	0.131	5.16	3117	0.00	2000	
U	238	1	No Gas	0.024	0.120	10.11	1410	0.00	2000	
Ca	43	2	He	7313.676	36568.378	0.58	25150	29.08	200000	
Sb	121	2	He	0.121	0.605	11.07	2767	0.00	2000	
Ti	47	2	He	0.194	0.969	33.24	83	0.23	2000	
Cu	63	1	No Gas	3.028	15.141	2.26	56284	0.01	2000	
Zn	66	1	No Gas	5.722	28.612	3.44	28791	0.02	2000	
Se	82	1	No Gas	0.112	0.559	340.76	24	0.47	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1563366	0.83	1801940	86.76	70	120	
Ge	72	2	He	1190411	1.66	1191599	99.90	70	120	
Ge	72	1	No Gas	3671806	0.09	3591716	102.23	70	120	

Sample Report

In	115	1	No Gas	4301710	0.99	4173630	103.07	70	120	
Bi	209	1	No Gas	3735901	1.18	3450328	108.28	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01MS
Data File Name	151SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:37:22-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.552	24.552	2.17	587958	0.00	2000	
Be	9	1	No Gas	48.954	48.954	2.13	249735	0.02	2000	
V	51	2	He	49.195	49.195	0.65	459139	0.01	2000	
Cr	52	2	He	48.206	48.206	1.04	533025	0.01	2000	
Fe	56	2	He	5702.451	5702.451	1.69	55642494	0.01	200000	
Se	78	2	He	49.413	49.413	1.54	7086	0.70	2000	
Sn	118	2	He	100.782	100.782	1.47	814401	0.01	200	
As	75	2	He	50.626	50.626	0.69	79258	0.06	2000	
Ca	44	2	He	37968.425	37968.425	2.19	2254196	1.68	200000	
Na	23	2	He	169053.434	169053.434	0.56	283262476	0.06	200000	
Mg	24	2	He	30177.900	30177.900	1.88	28412225	0.11	200000	
K	39	2	He	5710.545	5710.545	1.54	6635226	0.09	200000	
Mn	55	2	He	572.351	572.351	1.37	4579931	0.01	2000	
Co	59	2	He	56.228	56.228	0.90	899458	0.01	2000	
Ni	60	2	He	55.027	55.027	0.26	230309	0.02	2000	
Cu	63	2	He	61.798	61.798	0.48	692746	0.01	2000	
Zn	66	2	He	72.903	72.903	1.12	152766	0.05	2000	
Al	27	2	He	132.562	132.562	2.36	73507	0.18	2000	
B	11	1	No Gas	557.991	557.991	3.29	1728592	0.03	2000	
Al	27	1	No Gas	135.715	135.715	6.96	3012638	0.00	2000	
Si	28	1	No Gas	20421.352	20421.352	2.44	221430263	0.01	2000	>LDR
Ag	107	1	No Gas	47.964	47.964	2.15	1142948	0.00	2000	
Cd	111	1	No Gas	50.061	50.061	0.97	237674	0.02	2000	
Sr	88	1	No Gas	726.835	726.835	0.88	32318792	0.00	2000	
Mo	95	1	No Gas	50.121	50.121	0.30	453686	0.01	2000	
Sn	118	1	No Gas	100.996	100.996	1.84	1458299	0.01	2000	
Sb	121	1	No Gas	52.852	52.852	1.15	1010869	0.01	2000	
Ba	137	1	No Gas	734.354	734.354	1.89	5070406	0.01	2000	
Tl	205	1	No Gas	47.282	47.282	2.29	2022944	0.00	2000	
Tl	203	1	No Gas	48.579	48.579	0.88	818816	0.01	2000	
Pb	208	1	No Gas	51.380	51.380	1.67	2796340	0.00	2000	
U	238	1	No Gas	0.126	0.126	3.66	6842	0.00	2000	
Ca	43	2	He	39017.505	39017.505	0.95	136411	28.60	200000	
Sb	121	2	He	51.178	51.178	0.39	555291	0.01	2000	
Ti	47	2	He	139.331	139.331	0.73	51280	0.27	2000	
Cu	63	1	No Gas	64.642	64.642	0.45	1170234	0.01	2000	
Zn	66	1	No Gas	74.145	74.145	1.35	362641	0.02	2000	
Se	82	1	No Gas	50.925	50.925	2.71	13498	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1590324	1.97	1801940	88.26	70	120	
Ge	72	2	He	1212060	0.43	1191599	101.72	70	120	
Ge	72	1	No Gas	3650163	1.08	3591716	101.63	70	120	
In	115	1	No Gas	4261994	1.47	4173630	102.12	70	120	
Bi	209	1	No Gas	3545713	1.30	3450328	102.76	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01MSD
Data File Name	152SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:39:17-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.246	24.246	2.70	602232	0.00	2000	
Be	9	1	No Gas	48.928	48.928	2.93	258343	0.02	2000	
V	51	2	He	50.657	50.657	2.07	480499	0.01	2000	
Cr	52	2	He	50.235	50.235	2.90	564529	0.01	2000	
Fe	56	2	He	5728.218	5728.218	2.04	56821592	0.01	200000	
Se	78	2	He	50.273	50.273	1.66	7326	0.69	2000	
Sn	118	2	He	100.418	100.418	2.14	828982	0.01	200	
As	75	2	He	51.091	51.091	1.67	81310	0.06	2000	
Ca	44	2	He	38672.661	38672.661	3.12	2333613	1.66	200000	
Na	23	2	He	173908.199	173908.199	2.21	296211229	0.06	200000	
Mg	24	2	He	30287.790	30287.790	2.40	28985035	0.10	200000	
K	39	2	He	5856.518	5856.518	2.18	6914845	0.08	200000	
Mn	55	2	He	589.557	589.557	2.39	4795250	0.01	2000	
Co	59	2	He	56.820	56.820	2.49	923862	0.01	2000	
Ni	60	2	He	55.815	55.815	2.77	237442	0.02	2000	
Cu	63	2	He	59.620	59.620	4.14	679202	0.01	2000	
Zn	66	2	He	75.187	75.187	2.47	160141	0.05	2000	
Al	27	2	He	139.105	139.105	4.37	78309	0.18	2000	
B	11	1	No Gas	576.311	576.311	2.97	1846877	0.03	2000	
Al	27	1	No Gas	141.683	141.683	2.90	3097700	0.00	2000	
Si	28	1	No Gas	21543.199	21543.199	3.44	230113590	0.01	2000	>LDR
Ag	107	1	No Gas	49.074	49.074	0.44	1172168	0.00	2000	
Cd	111	1	No Gas	51.157	51.157	0.89	243483	0.02	2000	
Sr	88	1	No Gas	740.711	740.711	1.96	33027643	0.00	2000	
Mo	95	1	No Gas	51.358	51.358	0.86	465987	0.01	2000	
Sn	118	1	No Gas	102.460	102.460	1.55	1483481	0.01	2000	
Sb	121	1	No Gas	55.083	55.083	0.80	1038157	0.01	2000	
Ba	137	1	No Gas	747.638	747.638	3.55	5173084	0.01	2000	
Tl	205	1	No Gas	48.889	48.889	1.46	2071270	0.00	2000	
Tl	203	1	No Gas	51.123	51.123	3.30	852978	0.01	2000	
Pb	208	1	No Gas	52.241	52.241	0.60	2815678	0.00	2000	
U	238	1	No Gas	0.127	0.127	1.85	6825	0.00	2000	
Ca	43	2	He	40121.101	40121.101	2.35	142582	28.14	200000	
Sb	121	2	He	50.723	50.723	2.62	559421	0.01	2000	
Ti	47	2	He	141.331	141.331	2.50	52873	0.27	2000	
Cu	63	1	No Gas	62.897	62.897	1.15	1122170	0.01	2000	
Zn	66	1	No Gas	77.671	77.671	0.64	374351	0.02	2000	
Se	82	1	No Gas	53.801	53.801	1.70	14052	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1646535	3.00	1801940	91.38	70	120	
Ge	72	2	He	1232466	2.23	1191599	103.43	70	120	
Ge	72	1	No Gas	3597281	1.56	3591716	100.15	70	120	
In	115	1	No Gas	4272747	2.13	4173630	102.37	70	120	
Bi	209	1	No Gas	3511266	2.05	3450328	101.77	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01PDS
Data File Name	153SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:41:10-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	25.347	25.347	1.67	627026	0.00	2000	
Be	9	1	No Gas	106.991	106.991	1.63	566699	0.02	2000	
V	51	2	He	109.525	109.525	1.51	1016264	0.01	2000	
Cr	52	2	He	108.877	108.877	2.23	1199186	0.01	2000	
Fe	56	2	He	11734.721	11734.721	1.59	114320025	0.01	200000	
Se	78	2	He	111.437	111.437	1.12	15719	0.71	2000	
Sn	118	2	He	0.424	0.424	4.75	5108	0.01	200	
As	75	2	He	112.626	112.626	1.07	175751	0.06	2000	
Ca	44	2	He	46625.436	46625.436	1.62	2763472	1.69	200000	
Na	23	2	He	191764.142	191764.142	1.25	320796855	0.06	200000	>LDR
Mg	24	2	He	37704.918	37704.918	1.05	35442712	0.11	200000	
K	39	2	He	11947.716	11947.716	0.25	13758497	0.09	200000	
Mn	55	2	He	676.770	676.770	0.89	5407290	0.01	2000	
Co	59	2	He	118.408	118.408	2.54	1890685	0.01	2000	
Ni	60	2	He	112.816	112.816	1.19	471214	0.02	2000	
Cu	63	2	He	117.639	117.639	0.68	1316079	0.01	2000	
Zn	66	2	He	136.656	136.656	1.99	285620	0.05	2000	
Al	27	2	He	153.305	153.305	2.44	84653	0.18	2000	
B	11	1	No Gas	66.281	66.281	0.63	247962	0.03	2000	
Al	27	1	No Gas	150.455	150.455	2.95	3309733	0.00	2000	
Si	28	1	No Gas	21658.760	21658.760	0.91	233038043	0.01	2000	>LDR
Ag	107	1	No Gas	109.293	109.293	1.59	2571517	0.00	2000	
Cd	111	1	No Gas	112.864	112.864	1.44	529222	0.02	2000	
Sr	88	1	No Gas	673.067	673.067	0.71	29563326	0.00	2000	
Mo	95	1	No Gas	111.273	111.273	0.98	994805	0.01	2000	
Sn	118	1	No Gas	0.551	0.551	2.94	10401	0.01	2000	
Sb	121	1	No Gas	117.516	117.516	1.47	2227242	0.01	2000	
Ba	137	1	No Gas	846.426	846.426	2.11	5773242	0.01	2000	
Tl	205	1	No Gas	107.193	107.193	1.47	4575652	0.00	2000	
Tl	203	1	No Gas	114.324	114.324	2.23	1922030	0.01	2000	
Pb	208	1	No Gas	114.707	114.707	1.85	6225986	0.00	2000	
U	238	1	No Gas	0.131	0.131	0.38	7109	0.00	2000	
Ca	43	2	He	47390.069	47390.069	0.29	165432	28.65	200000	
Sb	121	2	He	109.681	109.681	0.92	1186687	0.01	2000	
Ti	47	2	He	104.314	104.314	2.12	38334	0.27	2000	
Cu	63	1	No Gas	120.428	120.428	1.35	2162578	0.01	2000	
Zn	66	1	No Gas	138.693	138.693	0.61	672647	0.02	2000	
Se	82	1	No Gas	117.559	117.559	1.36	30924	0.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1651046	1.25	1801940	91.63	70	120	
Ge	72	2	He	1210280	1.27	1191599	101.57	70	120	
Ge	72	1	No Gas	3622447	0.45	3591716	100.86	70	120	
In	115	1	No Gas	4210048	0.97	4173630	100.87	70	120	
Bi	209	1	No Gas	3537399	1.49	3450328	102.52	70	120	

Sample Report

Sample Table

Sample Name	HS20081151-01
Data File Name	154SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:43:00-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 156822
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	22.591	22.591	4.33	570073	0.00	2000	
Be	9	1	No Gas	0.016	0.016	35.09	100	0.02	2000	
V	51	2	He	0.517	0.517	5.89	8440	0.01	2000	
Cr	52	2	He	0.428	0.428	12.03	6962	0.01	2000	
Fe	56	2	He	81.498	81.498	2.33	797471	0.01	200000	
Se	78	2	He	0.319	0.319	49.08	231	0.14	2000	
Sn	118	2	He	0.351	0.351	2.93	4588	0.01	200	
As	75	2	He	0.732	0.732	1.45	1370	0.05	2000	
Ca	44	2	He	41602.531	41602.531	1.46	2444947	1.70	200000	
Na	23	2	He	174425.823	174425.823	2.76	289292169	0.06	200000	
Mg	24	2	He	28875.307	28875.307	1.71	26916495	0.11	200000	
K	39	2	He	1201.421	1201.421	2.20	1456439	0.08	200000	
Mn	55	2	He	56.458	56.458	1.45	447731	0.01	2000	
Co	59	2	He	0.288	0.288	1.95	4744	0.01	2000	
Ni	60	2	He	1.238	1.238	3.78	5341	0.02	2000	
Cu	63	2	He	6.717	6.717	2.31	75178	0.01	2000	
Zn	66	2	He	12.906	12.906	3.99	27027	0.05	2000	
Al	27	2	He	8.636	8.636	5.14	6035	0.14	2000	
B	11	1	No Gas	62.383	62.383	5.68	235788	0.03	2000	
Al	27	1	No Gas	8.799	8.799	0.57	246152	0.00	2000	
Si	28	1	No Gas	20776.345	20776.345	2.58	223663283	0.01	2000	>LDR
Ag	107	1	No Gas	0.000	0.000	-3112.03	493	0.00	2000	
Cd	111	1	No Gas	0.022	0.022	28.49	117	0.02	2000	
Sr	88	1	No Gas	783.041	783.041	2.46	34386974	0.00	2000	
Mo	95	1	No Gas	0.502	0.502	9.24	4538	0.01	2000	
Sn	118	1	No Gas	0.395	0.395	5.71	8189	0.00	2000	
Sb	121	1	No Gas	1.279	1.279	17.21	27015	0.00	2000	
Ba	137	1	No Gas	701.953	701.953	1.67	4786907	0.01	2000	
Tl	205	1	No Gas	0.028	0.028	20.94	1383	0.00	2000	
Tl	203	1	No Gas	0.037	0.037	37.10	707	0.01	2000	
Pb	208	1	No Gas	0.387	0.387	0.43	23086	0.00	2000	
U	238	1	No Gas	0.018	0.018	13.16	1047	0.00	2000	
Ca	43	2	He	42716.376	42716.376	1.68	147869	28.89	200000	
Sb	121	2	He	0.883	0.883	3.20	10951	0.01	2000	
Ti	47	2	He	0.539	0.539	40.78	210	0.26	2000	
Cu	63	1	No Gas	7.362	7.362	3.25	133345	0.01	2000	
Zn	66	1	No Gas	13.084	13.084	2.24	64095	0.02	2000	
Se	82	1	No Gas	0.085	0.085	177.20	17	0.50	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1653131	2.79	1801940	91.74	70	120	
Ge	72	2	He	1200128	1.69	1191599	100.72	70	120	
Ge	72	1	No Gas	3624651	1.44	3591716	100.92	70	120	
In	115	1	No Gas	4209167	0.44	4173630	100.85	70	120	
Bi	209	1	No Gas	3627533	1.30	3450328	105.14	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	156_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:49:18-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.406	5.106	2178764	2.12	100	99.4	90	110	
Be	9	1	No Gas	97.623	3.657	519379	0.24	100	97.6	90	110	
V	51	2	He	97.542	1.500	921348	1.10	100	97.5	90	110	
Cr	52	2	He	99.508	1.284	1115685	1.89	100	99.5	90	110	
Fe	56	2	He	10037.890	1.955	99517792	1.35	10000	100.4	90	110	
Se	78	2	He	98.068	2.627	14101	2.74	100	98.1	90	110	
Sn	118	2	He	103.658	1.181	877395	0.24	100	103.7	90	110	
As	75	2	He	99.107	1.521	157426	0.99	100	99.1	90	110	
Ca	44	2	He	9469.541	1.424	574961	0.80	10000	94.7	90	110	
Na	23	2	He	9507.653	1.942	16266441	1.42	10000	95.1	90	110	
Mg	24	2	He	9426.896	2.313	9018407	1.76	10000	94.3	90	110	
K	39	2	He	9435.350	1.738	11077058	1.18	10000	94.4	90	110	
Mn	55	2	He	100.619	2.421	818554	1.83	100	100.6	90	110	
Co	59	2	He	102.436	0.382	1664984	0.80	100	102.4	90	110	
Ni	60	2	He	101.589	1.953	431862	1.40	100	101.6	90	110	
Cu	63	2	He	101.287	1.648	1153353	1.75	100	101.3	90	110	
Zn	66	2	He	101.856	0.505	216768	0.42	100	101.9	90	110	
Al	27	2	He	93.695	1.414	53209	1.12	100	93.7	90	110	
B	11	1	No Gas	511.002	6.340	1653732	3.18	500	102.2	90	110	
Al	27	1	No Gas	99.484	5.759	2238324	3.06	100	99.5	90	110	
Si	28	1	No Gas	455.965	3.656	5885367	0.69	5000	9.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	477.643	3.614	560316	1.18	500	95.5	90	110	
Ag	107	1	No Gas	103.315	2.449	2514459	2.33	100	103.3	90	110	
Cd	111	1	No Gas	104.867	1.915	508615	1.64	100	104.9	90	110	
Sr	88	1	No Gas	99.948	1.116	4542337	0.58	100	99.9	90	110	
Mo	95	1	No Gas	102.952	0.892	952055	1.26	100	103.0	90	110	
Sn	118	1	No Gas	104.691	0.376	1544711	1.46	100	104.7	90	110	
Sb	121	1	No Gas	110.201	3.094	2118929	0.56	100	110.2	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	106.604	2.380	752220	1.28	100	106.6	90	110	
Tl	205	1	No Gas	98.246	1.387	4579835	3.18	100	98.2	90	110	
Tl	203	1	No Gas	105.571	2.302	1938776	4.06	100	105.6	90	110	
Pb	208	1	No Gas	104.597	0.454	6199358	1.44	100	104.6	90	110	
U	238	1	No Gas	105.642	0.406	6229891	1.53	100	105.6	90	110	
Ca	43	2	He	9375.747	0.849	33348	1.36	10000	93.8	90	110	
Sb	121	2	He	105.807	2.231	1164890	1.62	100	105.8	90	110	
Ti	47	2	He	95.183	1.731	35603	1.63	100	95.2	90	110	
Cu	63	1	No Gas	102.862	3.182	1874131	2.43	100	102.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1659573	3.51	1801940	92.10	70	120	
Ge	72	2	He	1231700	0.61	1191599	103.37	70	120	
Ge	72	1	No Gas	3676513	2.55	3591716	102.36	70	120	
In	115	1	No Gas	4354611	1.12	4173630	104.34	70	120	
Bi	209	1	No Gas	3862188	1.84	3450328	111.94	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	157_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T16:51:03-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.126	-103.1	99279	0.3	0.5	
Be	9	1	No Gas	0.013	43.9	88	36.8	0.5	
V	51	2	He	0.141	5.6	5039	4.9	2.5	
Cr	52	2	He	-0.004	-443.4	2274	5.9	2.5	
Fe	56	2	He	1.154	3.3	21728	2.7	100	
Se	78	2	He	-0.081	-84.9	177	3.4	2	
As	75	2	He	0.025	43.2	279	2.8	2.5	
Ca	44	2	He	-47.615	-3.8	1957	7.1	100	
Na	23	2	He	45.850	8.1	158468	1.0	100	
Mg	24	2	He	0.696	34.0	1183	15.7	100	
K	39	2	He	-6.149	-37.8	87862	0.5	100	
Mn	55	2	He	0.125	9.7	1533	3.3	2.5	
Co	59	2	He	0.002	55.5	220	7.9	2.5	
Ni	60	2	He	0.035	33.4	363	15.7	2.5	
Cu	63	2	He	0.027	14.4	1023	3.0	2	
Zn	66	2	He	0.055	68.8	433	20.8	2.5	
Al	27	2	He	1.122	16.2	2004	1.8	5	
B	11	1	No Gas	14.547	11.1	87616	4.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.334	13.9	85232	2.4	5	
Si	28	1	No Gas	-29.204	-5.6	607299	0.9	10	
P	31	1	No Gas	-8.294	-17.7	33992	3.9	10	
Ag	107	1	No Gas	0.004	55.3	620	9.0	2.5	
Cd	111	1	No Gas	0.003	63.8	30	33.3	1	
Sr	88	1	No Gas	0.044	6.3	4041	2.9	2.5	
Mo	95	1	No Gas	0.042	14.6	443	12.8	2.5	
Sn	118	1	No Gas	0.317	8.1	7439	5.3	5	
Sb	121	1	No Gas	0.468	11.8	11786	9.7	2.5	
Ba	137	1	No Gas	0.046	4.8	597	2.6	2.5	
Tl	205	1	No Gas	0.043	39.6	2247	36.9	1	
Tl	203	1	No Gas	0.043	43.0	883	40.1	1	
Pb	208	1	No Gas	0.030	36.2	3490	19.1	2.5	
U	238	1	No Gas	0.009	35.1	557	32.9	2.5	
Ca	43	2	He	15.191	53.4	100	26.5	100	
Sb	121	2	He	0.380	2.6	5601	1.6	2.5	
Ti	47	2	He	0.053	111.6	33	69.3	2.5	
Cu	63	1	No Gas	0.053	6.6	2150	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1700241	3.09	1801940	94.36	70	120	
Ge	72	2	He	1209267	3.43	1191599	101.48	70	120	
Ge	72	1	No Gas	3655324	2.39	3591716	101.77	70	120	
In	115	1	No Gas	4422978	0.43	4173630	105.97	70	120	
Bi	209	1	No Gas	3925292	0.59	3450328	113.77	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	186_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:41:14-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.649	3.020	2053989	1.99	100	96.6	90	110	
Be	9	1	No Gas	98.189	2.847	505723	1.18	100	98.2	90	110	
V	51	2	He	100.577	2.589	940539	2.83	100	100.6	90	110	
Cr	52	2	He	102.152	2.149	1133809	2.07	100	102.2	90	110	
Fe	56	2	He	10095.632	1.541	99094875	0.22	10000	101.0	90	110	
Se	78	2	He	100.670	2.872	14324	1.99	100	100.7	90	110	
Sn	118	2	He	103.143	0.368	876651	1.99	100	103.1	90	110	
As	75	2	He	99.811	1.701	156961	0.61	100	99.8	90	110	
Ca	44	2	He	9866.479	1.542	592916	1.16	10000	98.7	90	110	
Na	23	2	He	9779.216	1.528	16562761	1.03	10000	97.8	90	110	
Mg	24	2	He	9620.903	1.980	9114169	2.65	10000	96.2	90	110	
K	39	2	He	9705.619	1.103	11280388	2.20	10000	97.1	90	110	
Mn	55	2	He	101.774	1.764	819758	1.35	100	101.8	90	110	
Co	59	2	He	105.267	2.017	1693938	1.84	100	105.3	90	110	
Ni	60	2	He	102.025	1.621	429420	1.34	100	102.0	90	110	
Cu	63	2	He	100.359	1.172	1131381	0.65	100	100.4	90	110	
Zn	66	2	He	103.813	1.068	218729	0.80	100	103.8	90	110	
Al	27	2	He	97.394	1.272	54705	1.07	100	97.4	90	110	
B	11	1	No Gas	508.944	3.261	1595527	2.09	500	101.8	90	110	
Al	27	1	No Gas	99.196	3.348	2251558	1.94	100	99.2	90	110	
Si	28	1	No Gas	446.184	4.677	5826777	2.65	5000	8.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	456.846	1.946	542355	0.48	500	91.4	90	110	
Ag	107	1	No Gas	103.739	1.326	2517112	0.94	100	103.7	90	110	
Cd	111	1	No Gas	103.958	1.022	502731	1.75	100	104.0	90	110	
Sr	88	1	No Gas	98.786	1.239	4475963	0.79	100	98.8	90	110	
Mo	95	1	No Gas	100.969	1.586	930922	2.05	100	101.0	90	110	
Sn	118	1	No Gas	106.580	0.584	1567660	0.50	100	106.6	90	110	
Sb	121	1	No Gas	109.274	2.079	2118826	0.74	100	109.3	90	110	
Ba	137	1	No Gas	105.656	1.725	743329	1.07	100	105.7	90	110	
Tl	205	1	No Gas	97.727	3.734	4512669	3.71	100	97.7	90	110	
Tl	203	1	No Gas	104.501	2.420	1900798	2.24	100	104.5	90	110	
Pb	208	1	No Gas	105.000	1.319	6165843	1.16	100	105.0	90	110	
U	238	1	No Gas	103.555	4.147	6050181	3.96	100	103.6	90	110	
Ca	43	2	He	9705.684	2.563	34180	3.23	10000	97.1	90	110	
Sb	121	2	He	107.348	1.283	1170210	1.47	100	107.3	90	110	
Ti	47	2	He	97.300	1.348	36034	1.52	100	97.3	90	110	
Cu	63	1	No Gas	101.720	2.396	1868611	1.06	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
Li	6	1	No Gas	1605764	1.72	1801940	89.11	70	120	
Ge	72	2	He	1219552	1.59	1191599	102.35	70	120	
Ge	72	1	No Gas	3706223	1.33	3591716	103.19	70	120	
In	115	1	No Gas	4341319	0.78	4173630	104.02	70	120	
Bi	209	1	No Gas	3826417	0.20	3450328	110.90	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	187_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:43:01-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.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
Li	7	1	No Gas	-0.180	-58.1	96694	2.3	0.5	
Be	9	1	No Gas	0.004	39.0	38	19.9	0.5	
V	51	2	He	0.098	9.4	4719	0.6	2.5	
Cr	52	2	He	-0.015	-71.1	2194	3.7	2.5	
Fe	56	2	He	0.783	10.6	18429	5.5	100	
Se	78	2	He	-0.131	-112.4	173	11.7	2	
As	75	2	He	0.047	30.7	318	5.8	2.5	
Ca	44	2	He	-46.798	-2.5	2037	1.7	100	
Na	23	2	He	13.058	9.6	105494	0.3	100	
Mg	24	2	He	0.563	15.8	1080	5.6	100	
K	39	2	He	4.904	56.4	102179	1.7	100	
Mn	55	2	He	0.082	32.1	1210	19.1	2.5	
Co	59	2	He	0.001	277.6	217	25.4	2.5	
Ni	60	2	He	0.059	4.0	470	3.7	2.5	
Cu	63	2	He	0.016	21.0	913	6.2	2	
Zn	66	2	He	0.027	74.2	380	9.5	2.5	
Al	27	2	He	-0.017	-536.7	1410	1.2	5	
B	11	1	No Gas	0.123	565.1	40378	8.2	0.5	
Al	27	1	No Gas	-0.090	-51.3	55213	1.4	5	
Si	28	1	No Gas	-31.257	-2.7	596163	0.9	10	
P	31	1	No Gas	-9.608	-2.6	33193	0.7	10	
Ag	107	1	No Gas	0.080	8.9	2510	4.2	2.5	
Cd	111	1	No Gas	-0.001	-7.3	10	0.0	1	
Sr	88	1	No Gas	0.011	25.2	2507	4.8	2.5	
Mo	95	1	No Gas	0.036	29.9	387	24.0	2.5	
Sn	118	1	No Gas	0.282	5.1	6919	0.3	5	
Sb	121	1	No Gas	0.284	9.6	8416	6.9	2.5	
Ba	137	1	No Gas	0.061	23.0	703	12.9	2.5	
Tl	205	1	No Gas	0.070	64.3	3494	60.3	1	
Tl	203	1	No Gas	0.072	51.5	1417	48.5	1	
Pb	208	1	No Gas	0.022	40.5	3040	17.8	2.5	
U	238	1	No Gas	0.008	15.8	520	14.5	2.5	
Ca	43	2	He	12.764	25.9	93	12.4	100	
Sb	121	2	He	0.219	11.6	3937	7.6	2.5	
Ti	47	2	He	0.025	156.2	23	65.5	2.5	
Cu	63	1	No Gas	0.015	17.1	1497	3.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

Li	6	1	No Gas	1675549	4.20	1801940	92.99	70	120	
Ge	72	2	He	1229354	2.35	1191599	103.17	70	120	
Ge	72	1	No Gas	3723013	0.68	3591716	103.66	70	120	
In	115	1	No Gas	4429978	3.04	4173630	106.14	70	120	
Bi	209	1	No Gas	3930711	0.73	3450328	113.92	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01SD
Data File Name	189SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:46:57-05:00
Sample Type	Sample
Dilution	100
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.058	5.794	93.37	102266	0.00	2000	
Be	9	1	No Gas	0.000	-0.010	-1918.44	15	0.00	2000	
V	51	2	He	0.281	28.114	7.34	6452	0.00	2000	
Cr	52	2	He	0.016	1.624	142.82	2547	0.00	2000	
Fe	56	2	He	10.764	1076.438	0.52	117491	0.01	200000	
Se	78	2	He	-0.027	-2.656	-392.86	189	-0.01	2000	
Sn	118	2	He	0.045	4.514	31.36	2144	0.00	200	
As	75	2	He	0.041	4.117	28.73	310	0.01	2000	
Ca	44	2	He	287.716	28771.564	3.85	22195	1.30	200000	
Na	23	2	He	1741.888	174188.777	1.09	3050546	0.06	200000	
Mg	24	2	He	284.233	28423.307	0.22	272653	0.10	200000	
K	39	2	He	3.278	327.832	48.54	100588	0.00	200000	
Mn	55	2	He	6.029	602.857	2.23	49594	0.01	2000	
Co	59	2	He	0.094	9.391	10.91	1723	0.01	2000	
Ni	60	2	He	0.152	15.191	4.35	867	0.02	2000	
Cu	63	2	He	0.210	21.040	10.33	3134	0.01	2000	
Zn	66	2	He	0.725	72.529	7.20	1867	0.04	2000	
Al	27	2	He	0.590	58.985	24.56	1750	0.03	2000	
B	11	1	No Gas	-5.812	-581.214	-2.02	21503	-0.03	2000	
Al	27	1	No Gas	0.483	48.321	36.29	68167	0.00	2000	
Si	28	1	No Gas	177.476	17747.559	1.76	2905227	0.01	2000	
Ag	107	1	No Gas	0.005	0.507	40.57	670	0.00	2000	
Cd	111	1	No Gas	0.002	0.172	365.48	23	0.01	2000	
Sr	88	1	No Gas	6.480	648.044	3.00	311029	0.00	2000	
Mo	95	1	No Gas	0.006	0.644	55.89	113	0.01	2000	
Sn	118	1	No Gas	0.069	6.859	40.51	3847	0.00	2000	
Sb	121	1	No Gas	0.012	1.223	27.95	3137	0.00	2000	
Ba	137	1	No Gas	7.008	700.790	3.47	52159	0.01	2000	
Tl	205	1	No Gas	0.002	0.177	9.97	270	0.00	2000	
Tl	203	1	No Gas	0.003	0.283	73.53	123	0.00	2000	
Pb	208	1	No Gas	0.007	0.662	28.44	2070	0.00	2000	
U	238	1	No Gas	0.002	0.151	7.26	127	0.00	2000	
Ca	43	2	He	386.044	38604.442	11.48	1420	27.18	200000	
Sb	121	2	He	0.039	3.868	22.21	1960	0.00	2000	
Ti	47	2	He	0.025	2.546	59.58	23	0.11	2000	
Cu	63	1	No Gas	0.210	20.990	9.91	5101	0.00	2000	
Zn	66	1	No Gas	0.835	83.486	8.48	4871	0.02	2000	
Se	82	1	No Gas	-0.047	-4.730	-906.43	-19	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1683663	1.50	1801940	93.44	70	120	
Ge	72	2	He	1232525	0.51	1191599	103.43	70	120	
Ge	72	1	No Gas	3735528	0.86	3591716	104.00	70	120	

Sample Report

In	115	1	No Gas	4571916	2.31	4173630	109.54	70	120	
Bi	209	1	No Gas	3879366	2.73	3450328	112.43	70	120	

Sample Report

Sample Table

Sample Name	HS20081150-01PDS
Data File Name	190SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:48:57-05:00
Sample Type	Sample
Dilution	20
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.100	22.009	15.15	122089	0.00	2000	
Be	9	1	No Gas	98.126	1962.519	3.47	520119	0.02	2000	
V	51	2	He	102.864	2057.283	3.50	949809	0.01	2000	
Cr	52	2	He	100.121	2002.412	3.72	1097520	0.01	2000	
Fe	56	2	He	10274.716	205494.329	3.15	99628065	0.01	200000	
Se	78	2	He	102.335	2046.696	4.31	14376	0.71	2000	
Sn	118	2	He	0.037	0.738	50.11	2057	0.00	200	
As	75	2	He	102.420	2048.403	4.06	159043	0.06	2000	
Ca	44	2	He	11662.973	233259.454	5.95	690905	1.69	200000	
Na	23	2	He	18667.187	373343.730	3.03	31152605	0.06	200000	
Mg	24	2	He	11121.526	222430.514	3.75	10402537	0.11	200000	
K	39	2	He	9923.511	198470.223	3.24	11386770	0.09	200000	
Mn	55	2	He	129.260	2585.190	4.11	1028039	0.01	2000	
Co	59	2	He	105.224	2104.486	2.17	1672628	0.01	2000	
Ni	60	2	He	104.060	2081.201	3.37	432536	0.02	2000	
Cu	63	2	He	105.204	2104.080	3.37	1171466	0.01	2000	
Zn	66	2	He	106.525	2130.509	3.70	221626	0.05	2000	
Al	27	2	He	95.150	1902.991	5.41	52791	0.18	2000	
B	11	1	No Gas	-4.304	-86.086	-4.30	25854	-0.02	2000	
Al	27	1	No Gas	97.074	1941.488	1.18	2193112	0.00	2000	
Si	28	1	No Gas	998.722	19974.435	1.85	11821712	0.01	2000	
Ag	107	1	No Gas	106.518	2130.359	1.40	2604112	0.00	2000	
Cd	111	1	No Gas	106.972	2139.431	2.38	521116	0.02	2000	
Sr	88	1	No Gas	33.146	662.930	4.11	1514043	0.00	2000	
Mo	95	1	No Gas	101.492	2029.831	2.44	942604	0.01	2000	
Sn	118	1	No Gas	0.056	1.124	29.91	3494	0.00	2000	
Sb	121	1	No Gas	110.858	2217.164	2.82	2137738	0.01	2000	
Ba	137	1	No Gas	144.216	2884.317	3.26	1021969	0.01	2000	
Tl	205	1	No Gas	101.359	2027.177	2.71	4607753	0.00	2000	
Tl	203	1	No Gas	107.806	2156.112	0.93	1931193	0.01	2000	
Pb	208	1	No Gas	107.216	2144.321	1.76	6199006	0.00	2000	
U	238	1	No Gas	0.007	0.141	12.62	443	0.00	2000	
Ca	43	2	He	11376.612	227532.239	3.48	39551	28.76	200000	
Sb	121	2	He	109.329	2186.572	3.73	1176852	0.01	2000	
Ti	47	2	He	96.804	1936.081	4.66	35396	0.27	2000	
Cu	63	1	No Gas	103.063	2061.258	2.99	1883114	0.01	2000	
Zn	66	1	No Gas	107.122	2142.444	0.98	528756	0.02	2000	
Se	82	1	No Gas	106.191	2123.818	2.78	28419	0.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1653344	3.51	1801940	91.75	70	120	
Ge	72	2	He	1205156	3.35	1191599	101.14	70	120	
Ge	72	1	No Gas	3685909	0.92	3591716	102.62	70	120	

Sample Report

In	115	1	No Gas	4374820	2.09	4173630	104.82	70	120	
Bi	209	1	No Gas	3768193	1.72	3450328	109.21	70	120	

Sample Report

Sample Table

Sample Name	HS20081151-01
Data File Name	191SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:50:48-05:00
Sample Type	Sample
Dilution	20
Comment	TW B156822 Na
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.976	19.522	6.88	118659	0.00	2000	
Be	9	1	No Gas	0.012	0.240	18.03	78	0.02	2000	
V	51	2	He	0.153	3.065	23.33	5194	0.00	2000	
Cr	52	2	He	0.032	0.642	86.70	2697	0.00	2000	
Fe	56	2	He	5.054	101.089	2.14	60247	0.01	200000	
Se	78	2	He	0.039	0.775	80.93	196	0.02	2000	
Sn	118	2	He	0.039	0.784	53.16	2140	0.00	200	
As	75	2	He	0.069	1.371	50.15	350	0.02	2000	
Ca	44	2	He	2016.905	40338.101	1.27	125135	1.61	200000	
Na	23	2	He	8646.213	172924.265	3.12	14663221	0.06	200000	
Mg	24	2	He	1468.384	29367.690	3.13	1392216	0.11	200000	
K	39	2	He	52.968	1059.351	5.55	156889	0.03	200000	
Mn	55	2	He	3.042	60.843	0.99	25053	0.01	2000	
Co	59	2	He	0.015	0.301	15.23	437	0.00	2000	
Ni	60	2	He	0.097	1.939	3.03	627	0.02	2000	
Cu	63	2	He	0.413	8.267	1.74	5391	0.01	2000	
Zn	66	2	He	0.845	16.905	5.93	2100	0.04	2000	
Al	27	2	He	0.343	6.850	39.56	1597	0.02	2000	
B	11	1	No Gas	-4.544	-90.871	-3.93	24922	-0.02	2000	
Al	27	1	No Gas	0.444	8.880	18.27	68329	0.00	2000	
Si	28	1	No Gas	950.619	19012.381	2.07	11625065	0.01	2000	
Ag	107	1	No Gas	0.013	0.268	34.66	863	0.00	2000	
Cd	111	1	No Gas	0.001	0.010	1151.09	17	0.00	2000	
Sr	88	1	No Gas	39.411	788.217	1.87	1840864	0.00	2000	
Mo	95	1	No Gas	0.063	1.256	10.59	647	0.01	2000	
Sn	118	1	No Gas	0.047	0.938	27.51	3431	0.00	2000	
Sb	121	1	No Gas	0.727	14.532	12.57	17369	0.00	2000	
Ba	137	1	No Gas	35.996	719.914	0.26	261067	0.01	2000	
Tl	205	1	No Gas	0.020	0.401	4.70	1133	0.00	2000	
Tl	203	1	No Gas	0.019	0.371	33.86	417	0.00	2000	
Pb	208	1	No Gas	0.052	1.033	16.83	4784	0.00	2000	
U	238	1	No Gas	0.000	0.002	203.44	43	0.00	2000	
Ca	43	2	He	2012.279	40245.573	1.98	7129	28.23	200000	
Sb	121	2	He	0.548	10.958	4.27	7492	0.01	2000	
Ti	47	2	He	0.071	1.424	113.10	40	0.18	2000	
Cu	63	1	No Gas	0.437	8.748	6.25	9454	0.00	2000	
Zn	66	1	No Gas	0.866	17.310	5.97	5101	0.02	2000	
Se	82	1	No Gas	-0.072	-1.445	-207.09	-26	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1640691	0.28	1801940	91.05	70	120	
Ge	72	2	He	1220551	1.42	1191599	102.43	70	120	
Ge	72	1	No Gas	3793648	2.09	3591716	105.62	70	120	

Sample Report

In	115	1	No Gas	4472015	0.94	4173630	107.15	70	120	
Bi	209	1	No Gas	3907305	0.31	3450328	113.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	192_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:52:41-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.040	2.063	2074183	3.75	100	96.0	90	110	
Be	9	1	No Gas	98.234	2.408	513810	1.33	100	98.2	90	110	
V	51	2	He	99.392	2.640	928777	1.60	100	99.4	90	110	
Cr	52	2	He	101.404	2.708	1124652	1.23	100	101.4	90	110	
Fe	56	2	He	10426.924	3.909	102263552	2.49	10000	104.3	90	110	
Se	78	2	He	101.696	2.324	14460	1.02	100	101.7	90	110	
Sn	118	2	He	102.347	1.683	886794	0.88	100	102.3	90	110	
As	75	2	He	101.715	1.924	159852	0.44	100	101.7	90	110	
Ca	44	2	He	9955.200	2.930	597747	1.46	10000	99.6	90	110	
Na	23	2	He	9822.265	1.512	16627423	2.13	10000	98.2	90	110	
Mg	24	2	He	9688.361	0.657	9172563	1.79	10000	96.9	90	110	
K	39	2	He	9795.375	1.885	11374984	1.27	10000	98.0	90	110	
Mn	55	2	He	103.315	2.673	831548	1.26	100	103.3	90	110	
Co	59	2	He	106.484	1.647	1712388	0.45	100	106.5	90	110	
Ni	60	2	He	103.376	0.505	434869	0.99	100	103.4	90	110	
Cu	63	2	He	102.046	1.657	1149829	2.19	100	102.0	90	110	
Zn	66	2	He	104.087	1.167	219171	0.36	100	104.1	90	110	
Al	27	2	He	99.432	3.164	55775	1.68	100	99.4	90	110	
B	11	1	No Gas	506.399	4.151	1612003	2.40	500	101.3	90	110	
Al	27	1	No Gas	102.006	1.252	2324640	0.78	100	102.0	90	110	
Si	28	1	No Gas	464.040	0.658	6051538	0.96	5000	9.3	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	474.952	0.886	564731	1.03	500	95.0	90	110	
Ag	107	1	No Gas	106.392	1.536	2607167	1.38	100	106.4	90	110	
Cd	111	1	No Gas	104.430	2.334	509975	2.04	100	104.4	90	110	
Sr	88	1	No Gas	101.304	1.288	4635485	0.28	100	101.3	90	110	
Mo	95	1	No Gas	101.962	1.837	949424	2.31	100	102.0	90	110	
Sn	118	1	No Gas	104.019	0.936	1545316	1.38	100	104.0	90	110	
Sb	121	1	No Gas	109.459	2.593	2132318	2.74	100	109.5	90	110	
Ba	137	1	No Gas	106.992	0.907	760247	0.74	100	107.0	90	110	
Tl	205	1	No Gas	97.667	1.709	4493558	1.49	100	97.7	90	110	
Tl	203	1	No Gas	102.445	2.685	1856628	2.33	100	102.4	90	110	
Pb	208	1	No Gas	105.155	2.288	6152840	2.35	100	105.2	90	110	
U	238	1	No Gas	105.354	1.243	6133616	1.61	100	105.4	90	110	
Ca	43	2	He	9951.512	1.093	35018	0.79	10000	99.5	90	110	
Sb	121	2	He	108.022	0.493	1176964	1.92	100	108.0	90	110	
Ti	47	2	He	97.370	6.085	36021	4.78	100	97.4	90	110	
Cu	63	1	No Gas	99.340	2.938	1833234	2.23	100	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1630723	2.45	1801940	90.50	70	120	
Ge	72	2	He	1218817	1.47	1191599	102.28	70	120	
Ge	72	1	No Gas	3722840	0.76	3591716	103.65	70	120	
In	115	1	No Gas	4384541	1.06	4173630	105.05	70	120	
Bi	209	1	No Gas	3812638	0.37	3450328	110.50	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	193_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq Date Time	2020-09-02T21:54:26-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.068	-57.9	96954	0.8	0.5	
Be	9	1	No Gas	0.010	10.8	68	8.4	0.5	
V	51	2	He	-0.007	-176.1	3708	4.0	2.5	
Cr	52	2	He	-0.020	-53.1	2127	6.1	2.5	
Fe	56	2	He	0.982	6.7	20285	3.9	100	
Se	78	2	He	0.130	93.0	209	9.2	2	
As	75	2	He	0.038	71.9	303	14.8	2.5	
Ca	44	2	He	-45.863	-8.2	2084	11.1	100	
Na	23	2	He	15.588	3.2	109255	0.5	100	
Mg	24	2	He	0.652	14.7	1160	7.4	100	
K	39	2	He	5.934	7.0	102885	0.8	100	
Mn	55	2	He	0.106	17.2	1400	9.3	2.5	
Co	59	2	He	0.002	127.5	230	19.0	2.5	
Ni	60	2	He	0.079	12.6	550	6.6	2.5	
Cu	63	2	He	0.011	29.6	857	4.7	2	
Zn	66	2	He	0.050	94.7	427	23.6	2.5	
Al	27	2	He	-0.004	-2435.8	1410	3.7	5	
B	11	1	No Gas	1.605	61.8	44107	7.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.079	-75.8	56733	2.2	5	
Si	28	1	No Gas	-32.522	-2.0	595626	1.1	10	
P	31	1	No Gas	-10.585	-2.0	32859	1.0	10	
Ag	107	1	No Gas	0.065	5.7	2164	2.7	2.5	
Cd	111	1	No Gas	0.003	62.9	30	33.3	1	
Sr	88	1	No Gas	0.011	48.5	2534	8.1	2.5	
Mo	95	1	No Gas	0.043	33.1	463	29.8	2.5	
Sn	118	1	No Gas	0.267	8.5	6789	4.6	5	
Sb	121	1	No Gas	0.335	8.1	9624	5.5	2.5	
Ba	137	1	No Gas	0.067	13.0	757	8.8	2.5	
Tl	205	1	No Gas	0.072	60.3	3594	57.6	1	
Tl	203	1	No Gas	0.088	53.2	1707	51.4	1	
Pb	208	1	No Gas	0.031	20.2	3584	12.4	2.5	
U	238	1	No Gas	0.008	11.5	517	8.1	2.5	
Ca	43	2	He	8.151	120.8	77	45.8	100	
Sb	121	2	He	0.301	8.2	4814	5.5	2.5	
Ti	47	2	He	0.026	118.9	23	49.5	2.5	
Cu	63	1	No Gas	0.014	29.5	1507	5.0	2.5	

QC ISTD Table

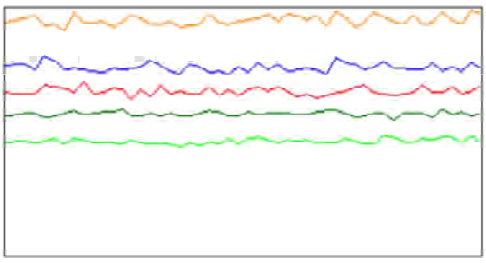
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1639089	0.05	1801940	90.96	70	120	
Ge	72	2	He	1223038	1.14	1191599	102.64	70	120	
Ge	72	1	No Gas	3808445	0.25	3591716	106.03	70	120	
In	115	1	No Gas	4487683	1.62	4173630	107.52	70	120	
Bi	209	1	No Gas	3912220	2.78	3450328	113.39	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\090220A.b
Acq. Date-Time	9/2/2020 9:29:24 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	6656	66564.02		
24	50000	23172	231719.22		
59	50000	38035	380345.10		
115	50000	47673	476725.56		
208	50000	28683	286826.00		

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

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.254	5.000	
24	2.209	5.000	
59	2.212	5.000	
115	1.992	5.000	
208	1.657	5.000	

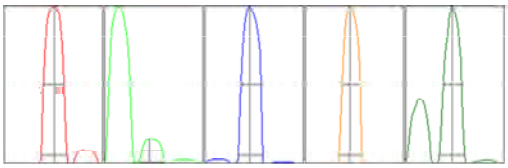
Mass	Background	Background (Required)	Background (Flag)
9	0.100		
24	0.700		
59	0.200		
115	0.200		
208	1.700		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.522 %
Doubly Charged	70 / 140 0.830 %

Tune Check Report

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6555.64	9.05	8.90 - 9.10	
24	23568.99	23.90	23.90 - 24.10	
59	38886.74	58.90	58.90 - 59.10	
115	50217.69	114.90	114.90 - 115.10	
208	29271.85	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.64	0.782		
24	0.64	0.751		
59	0.62	0.740		
115	0.54	0.688		
208	0.56	0.773		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

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

QP Parameters

Mass Gain	131	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

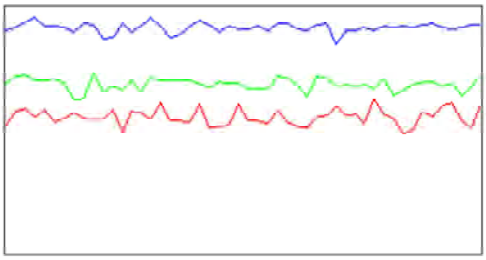
EM

Discriminator	4.5 mV	Analog HV	2413 V	Pulse HV	1207 V

[He]

Tune Check Report

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	276	2763.27		
24	2000	1371	13713.10		
59	20000	18300	183003.07		

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

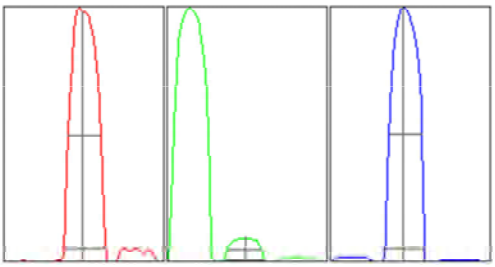
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	6.205	5.000	Fail
24	3.742	5.000	
59	2.169	5.000	

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

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.353 %
Doubly Charged	70 / 140 0.912 %

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	277.79	9.00	8.90 - 9.10	
24	1373.98	24.00	23.90 - 24.10	
59	18643.25	58.90	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.782		
24	0.64	0.745		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.61	0.741		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.2 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

EM

Discriminator	4.5 mV	Analog HV	2413 V	Pulse HV	1207 V

HS20081151 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20081151

Sequence: 082820
Last Update Operator: alshs.nouser

CD	Name	m	Type	Position	Dilution	Level	Instrument Method	Processing Method	me	Status	Inject Time
	STD1		Calibration	BD1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 10:46:45 AM
	STD2		Calibration	BD2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:04:45 AM
	STD3		Calibration	BD3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:22:45 AM
	STD4		Calibration	BD4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:40:48 AM
	STD5		Calibration	BD5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:58:48 AM
	STD6		Calibration	BD6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:16:48 PM
	ICV		Unknown	BD7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:34:48 PM
	ICB		Unknown	BD8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:52:50 PM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 10:52:13 AM
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 11:10:14 AM
	MBLK-082820		Unknown	BB1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:04:18 PM
	LCS-082820		Unknown	BB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:22:18 PM
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:40:19 PM
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/28/2020 12:58:19 PM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 6:50:32 AM -
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 7:08:33 AM -
	HS20080995-04MSDF10		Unknown	GA8	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 8:02:36 AM -
	HS20080995-04MSDDF10		Unknown	GB1	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 8:20:38 AM -
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 10:26:49 AM
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 10:44:49 AM
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 2:03:18 PM -
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 2:21:19 PM -
	HS20081151-01		Unknown	BC4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:21:33 PM -
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:39:34 PM -
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 5:57:35 PM -
	HS20081151-01DF20		Unknown	BC5	20.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 6:15:36 PM -
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 9:51:49 PM -
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/29/2020 10:27:53 PM

Sequence: 082820
Injection #6: STD6

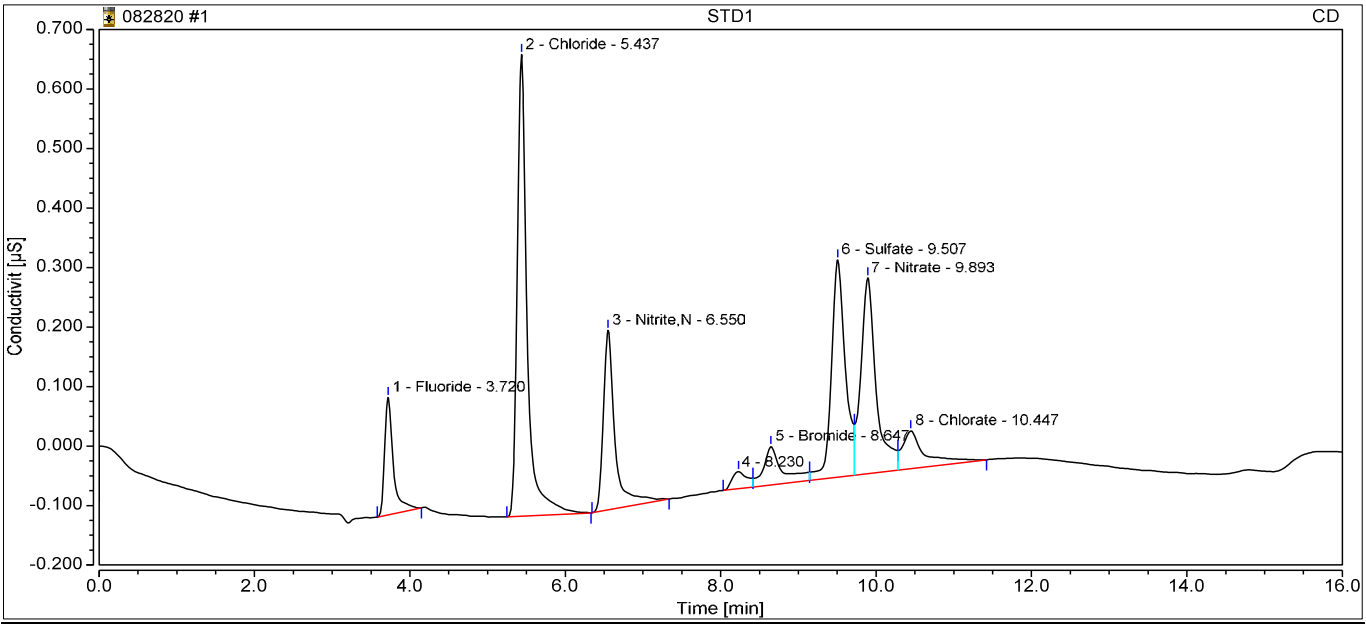
Calibration

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:

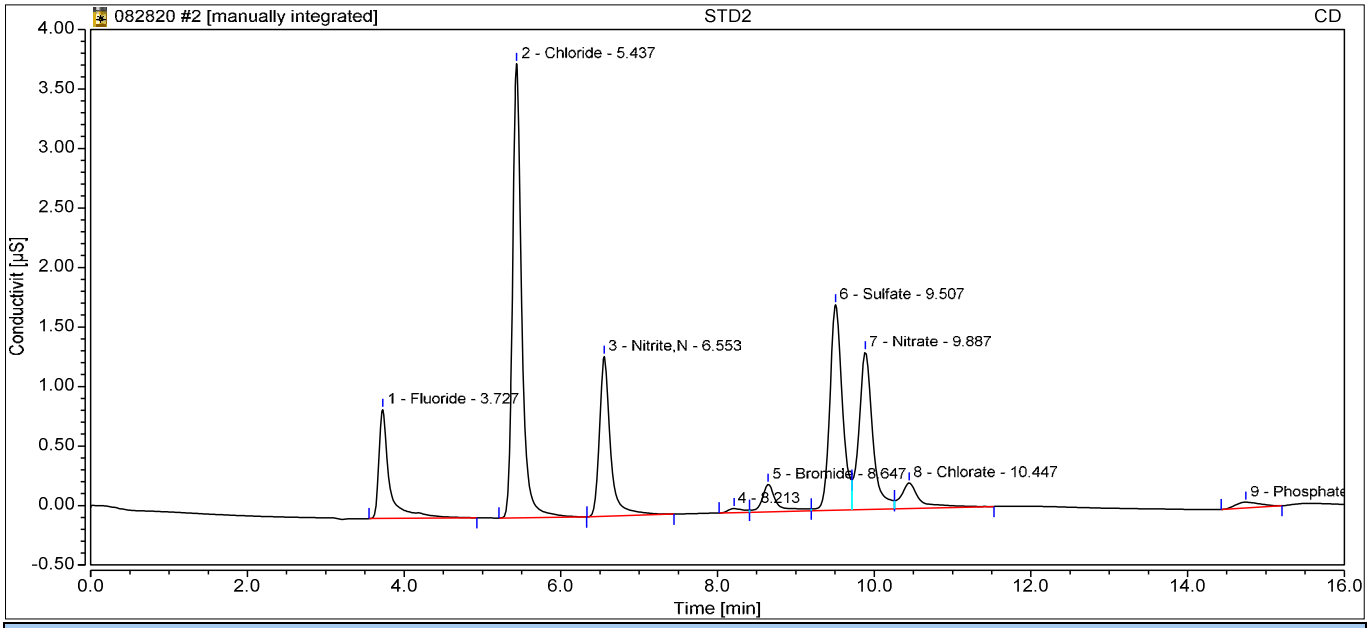


Integration Results

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:



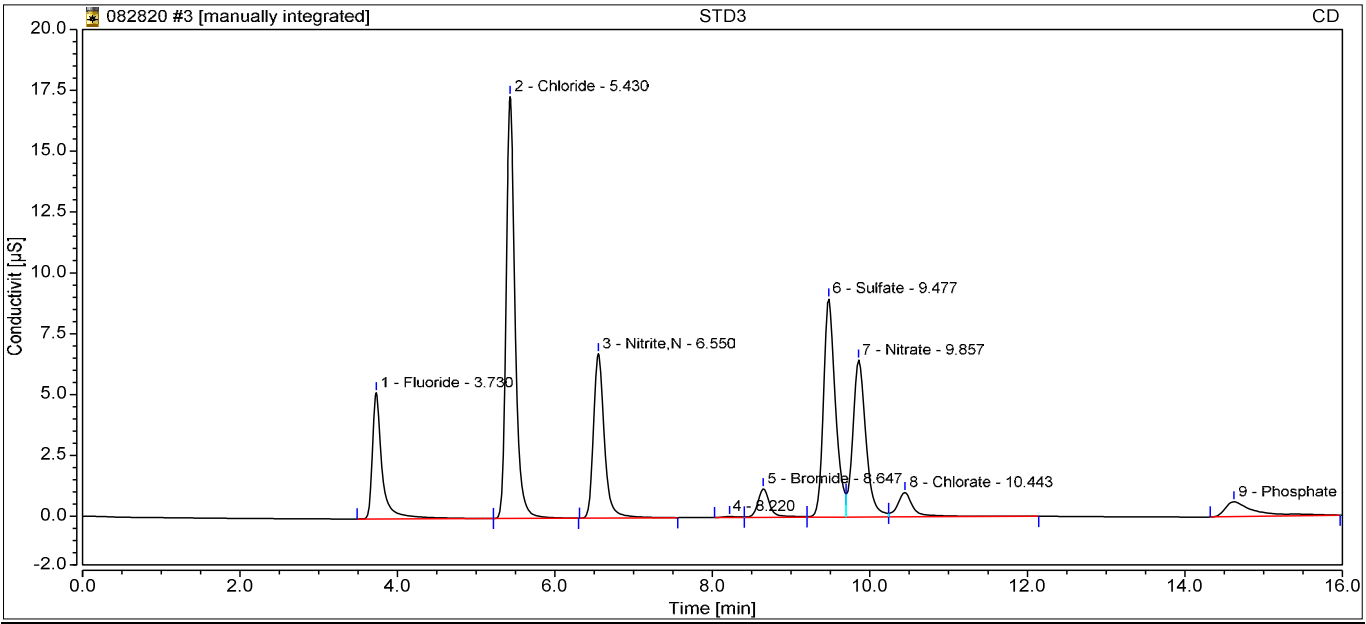
Integration Results

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:



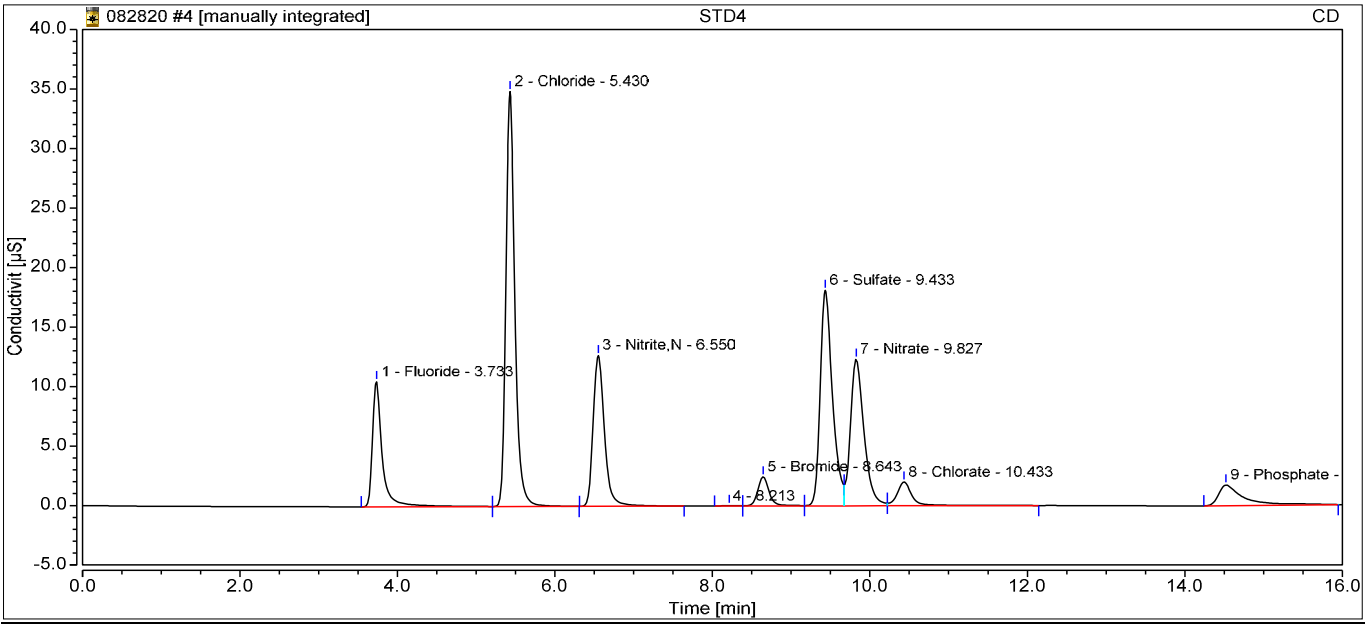
Integration Results

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:



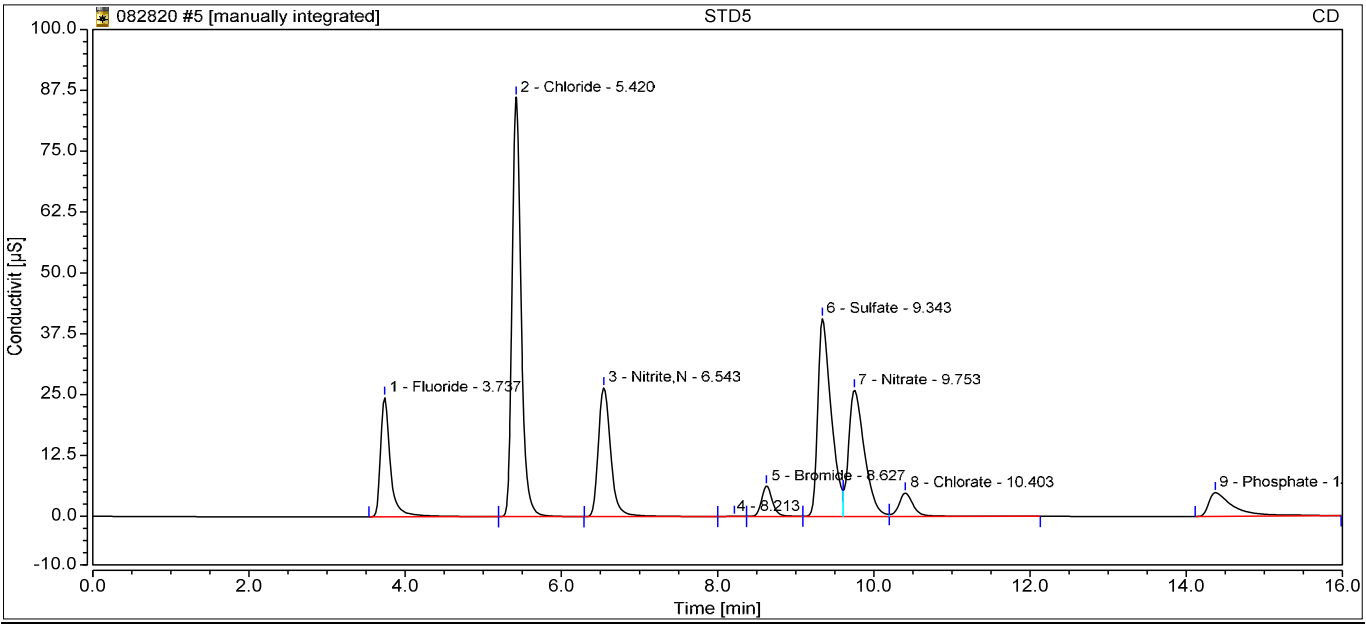
Integration Results

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:



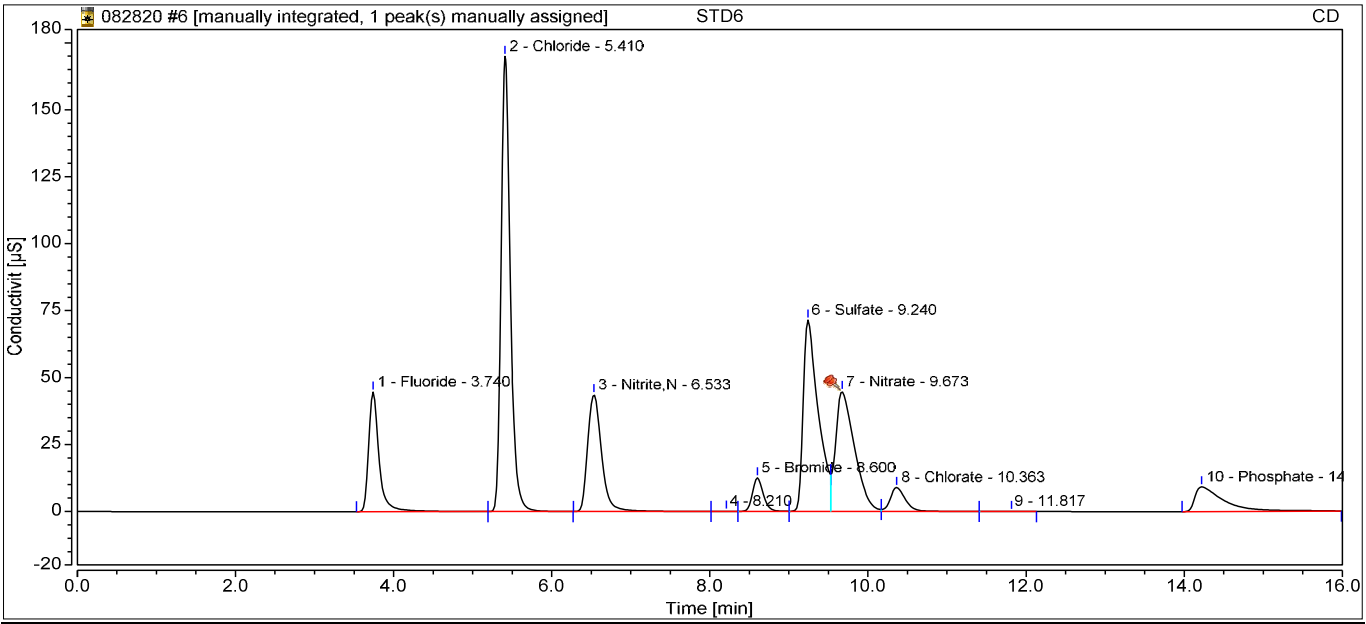
Integration Results

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:



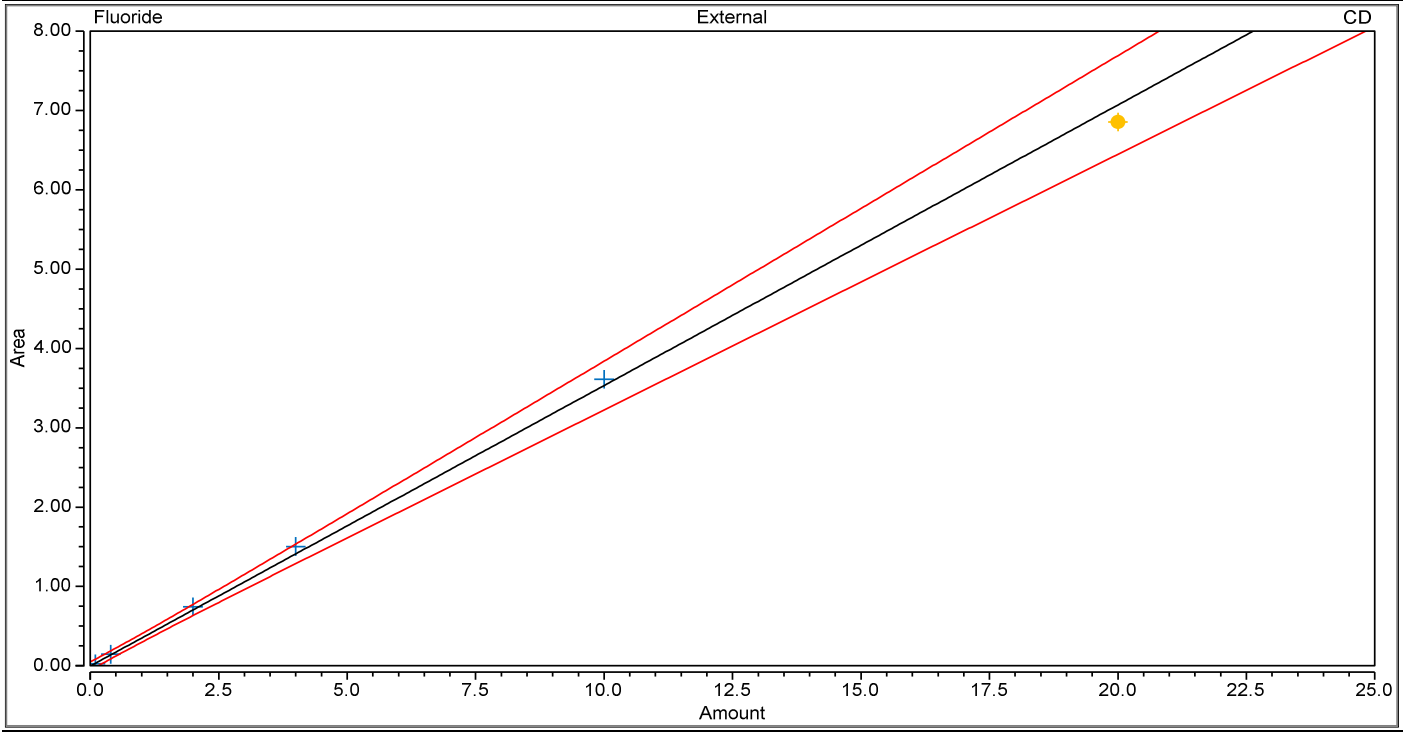
Integration Results

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**



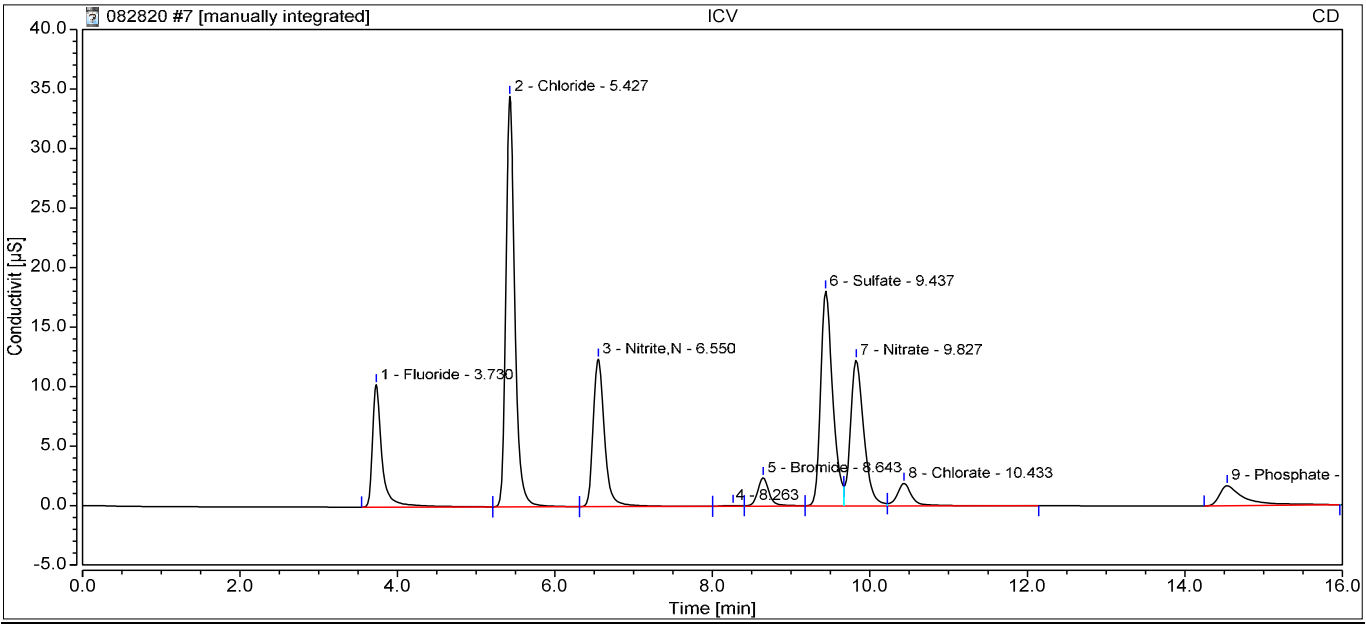
Calibration Results **Fluoride**

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:



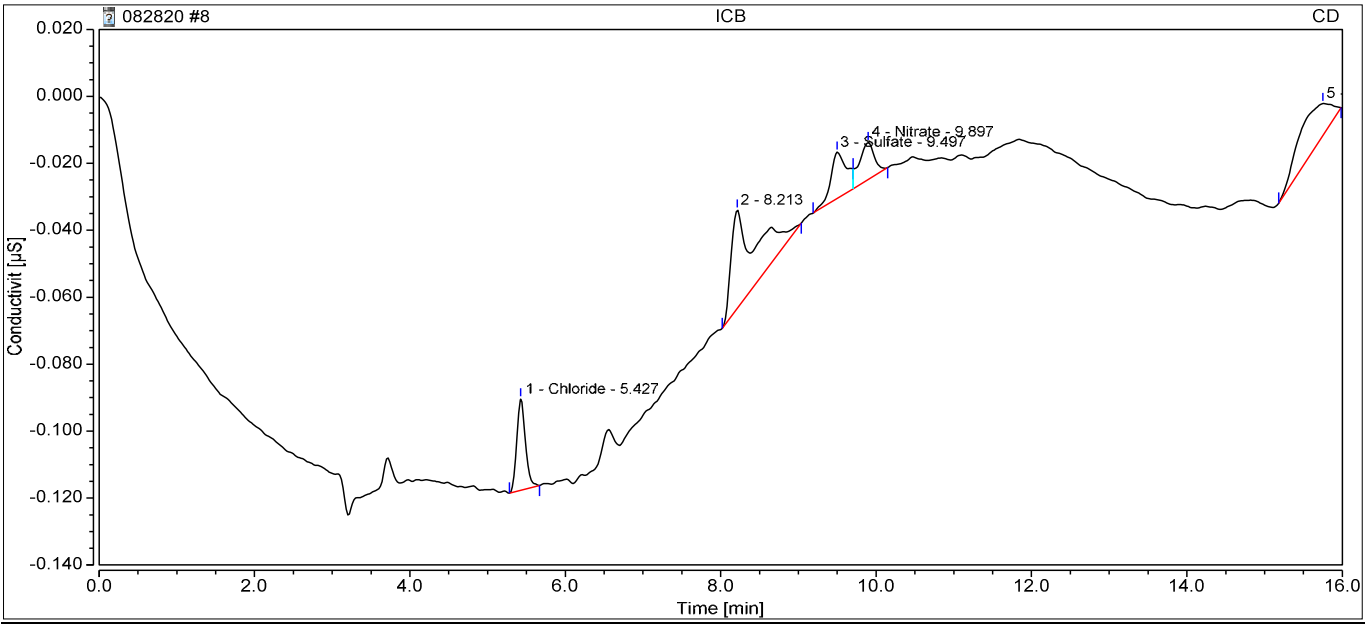
Integration Results

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:



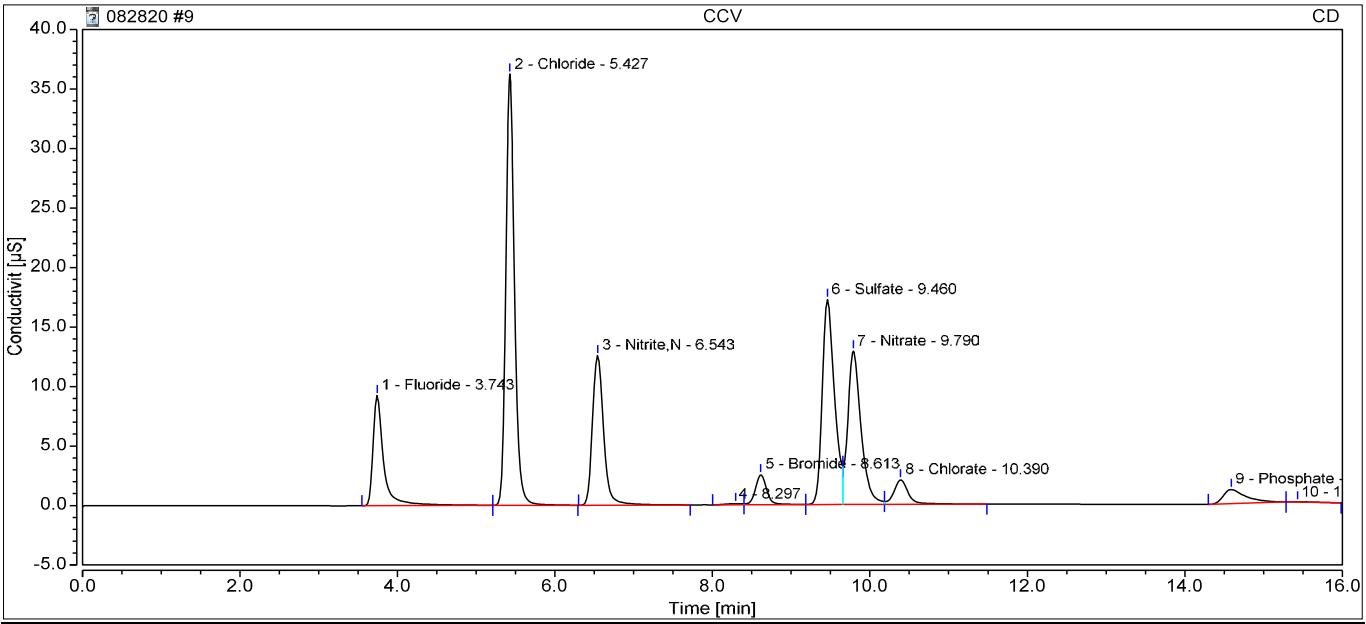
Integration Results

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**	

9 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:	**08/28/2020 10:52**	*Sample Weight:*	**1.0000**

Run Time:



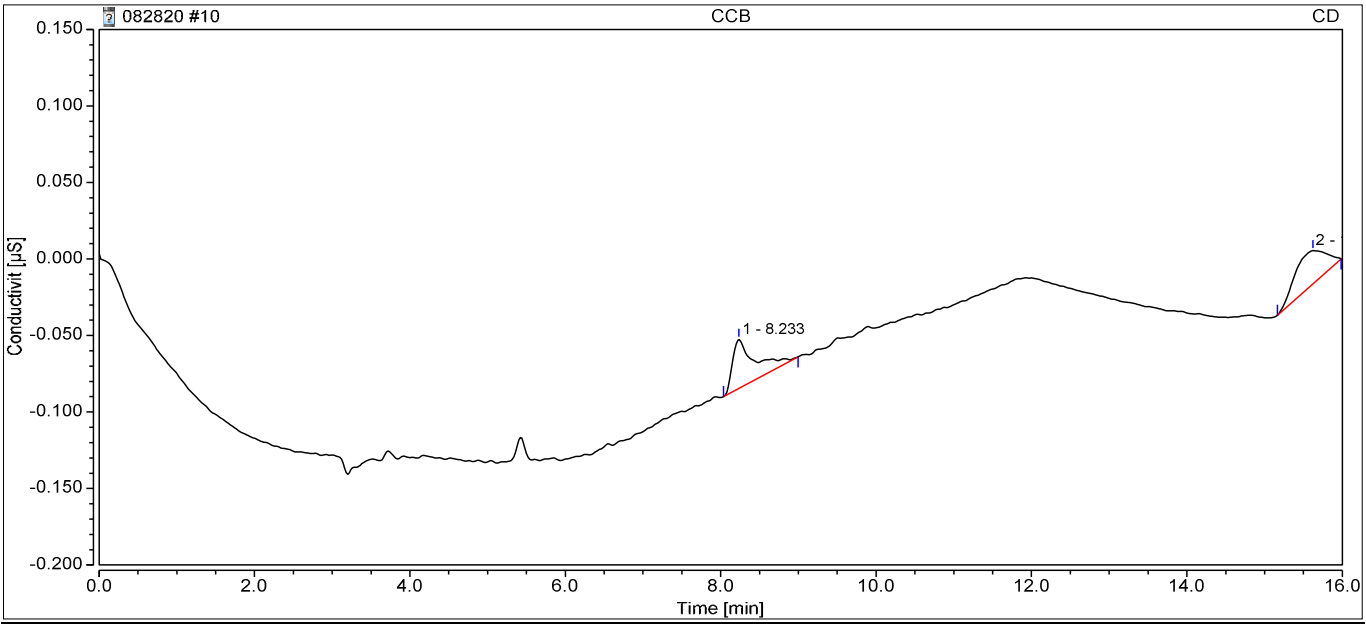
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.440	4.0828	4.0828	1.0000
2	5.43	Chloride	BMB	4.637	20.2040	20.2040	1.0000
3	6.54	Nitrite,N	BMB	2.058	4.3304	4.3304	1.0000
5	8.61	Bromide	M	0.419	4.0781	4.0781	1.0000
6	9.46	Sulfate	M	3.125	19.5238	19.5238	1.0000
7	9.79	Nitrate	M	2.515	4.0625	4.0625	1.0000
8	10.39	Chlorate	MB	0.433	4.1126	4.1126	1.0000
9	14.59	Phosphate	BMB	0.401	2.4437	2.4437	1.0000
Total:			**0.000**	**15.028**		**62.84**	

10 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:	**08/28/2020 11:10**	*Sample Weight:*	**1.0000**

Run Time:



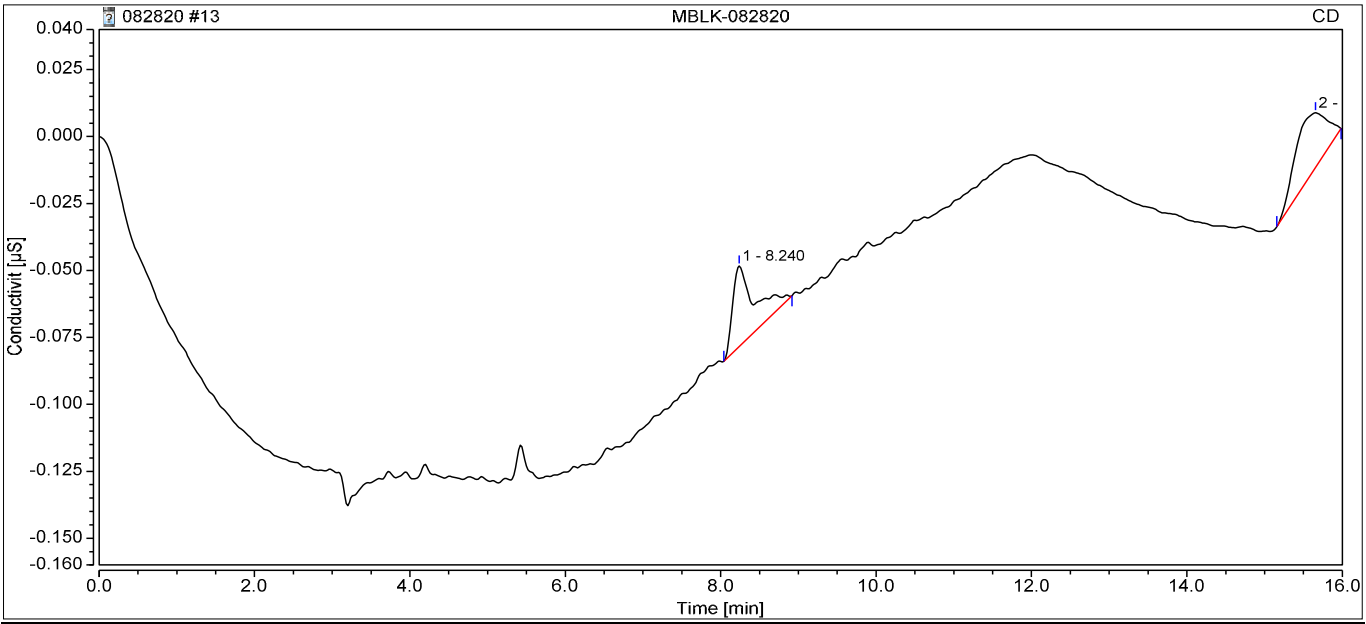
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

13 MBLK-082820

Sample Name:	**MBLK-082820**	*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:	**08/28/2020 12:04**	*Sample Weight:*	**1.0000**

Run Time:



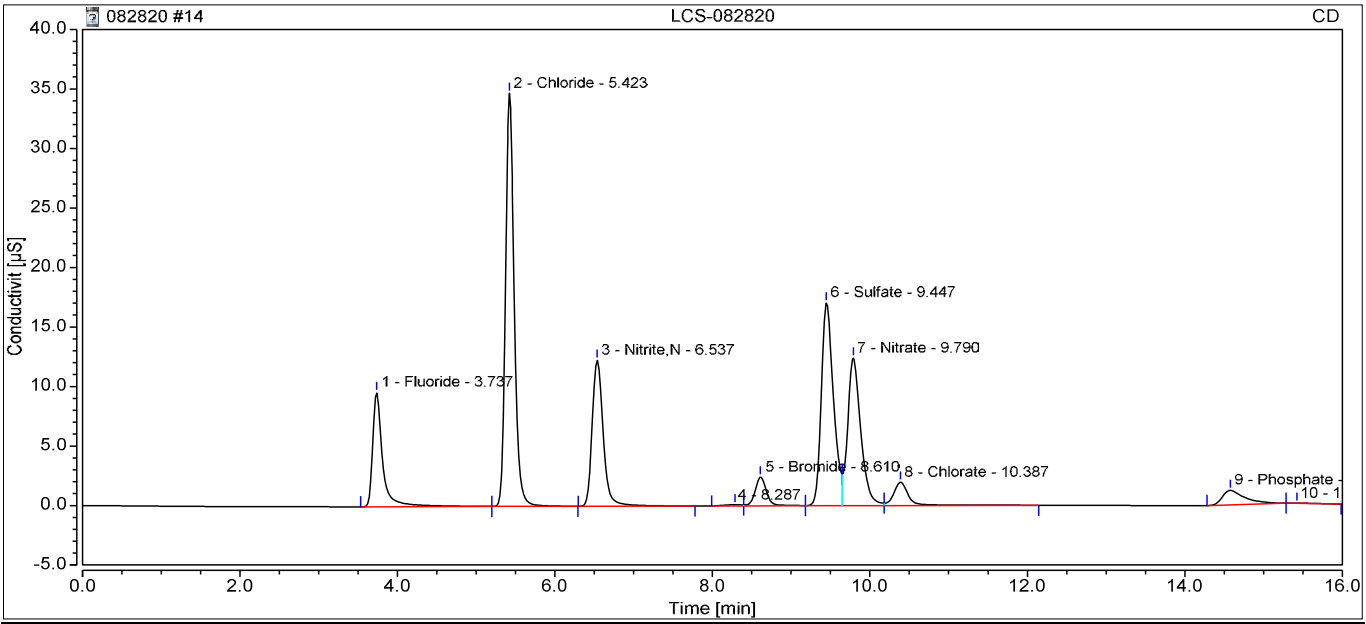
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

14 LCS-082820

Sample Name:	**LCS-082820**	*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:	**08/28/2020 12:22**	*Sample Weight:*	**1.0000**

Run Time:



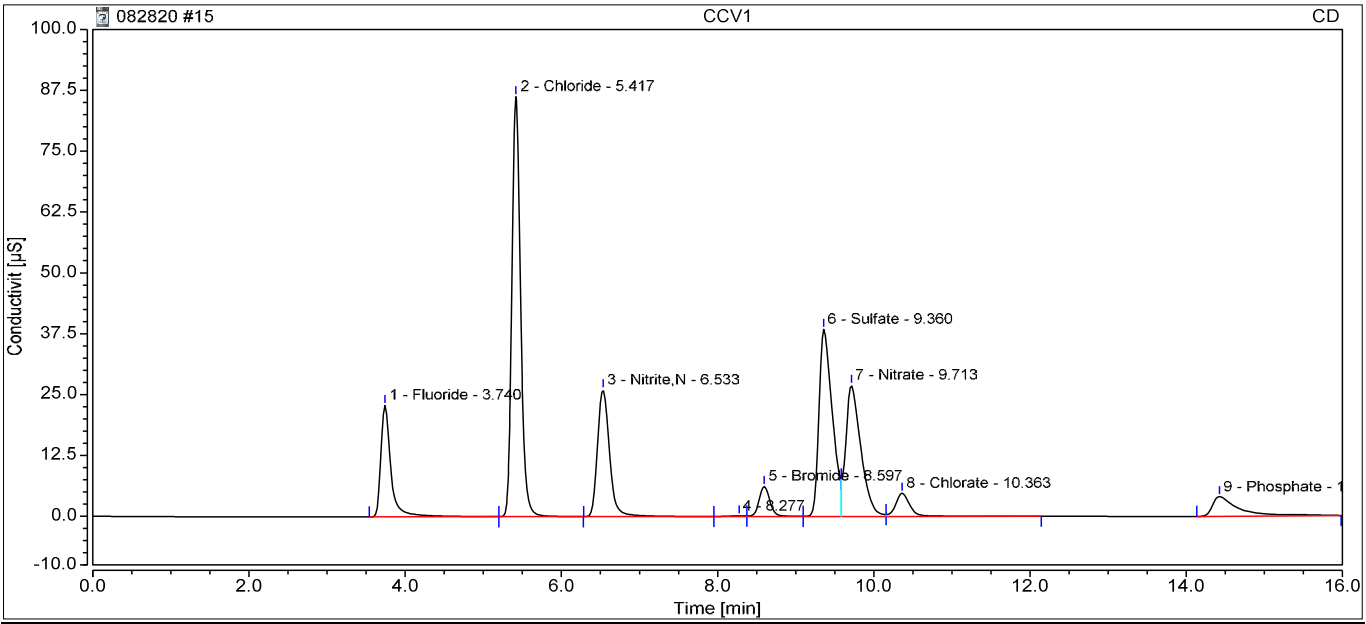
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.404	3.9820	3.9820	1.0000
2	5.42	Chloride	BMB	4.442	19.3547	19.3547	1.0000
3	6.54	Nitrite,N	BMB	1.997	4.1997	4.1997	1.0000
5	8.61	Bromide	M	0.402	3.9068	3.9068	1.0000
6	9.45	Sulfate	M	3.057	19.0994	19.0994	1.0000
7	9.79	Nitrate	M	2.391	3.8614	3.8614	1.0000
8	10.39	Chlorate	MB	0.433	4.1073	4.1073	1.0000
9	14.58	Phosphate	BMB	0.406	2.4713	2.4713	1.0000
Total:			**0.000**	**14.532**		**60.98**	

15 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 12:40**	*Sample Weight:*	**1.0000**

Run Time:



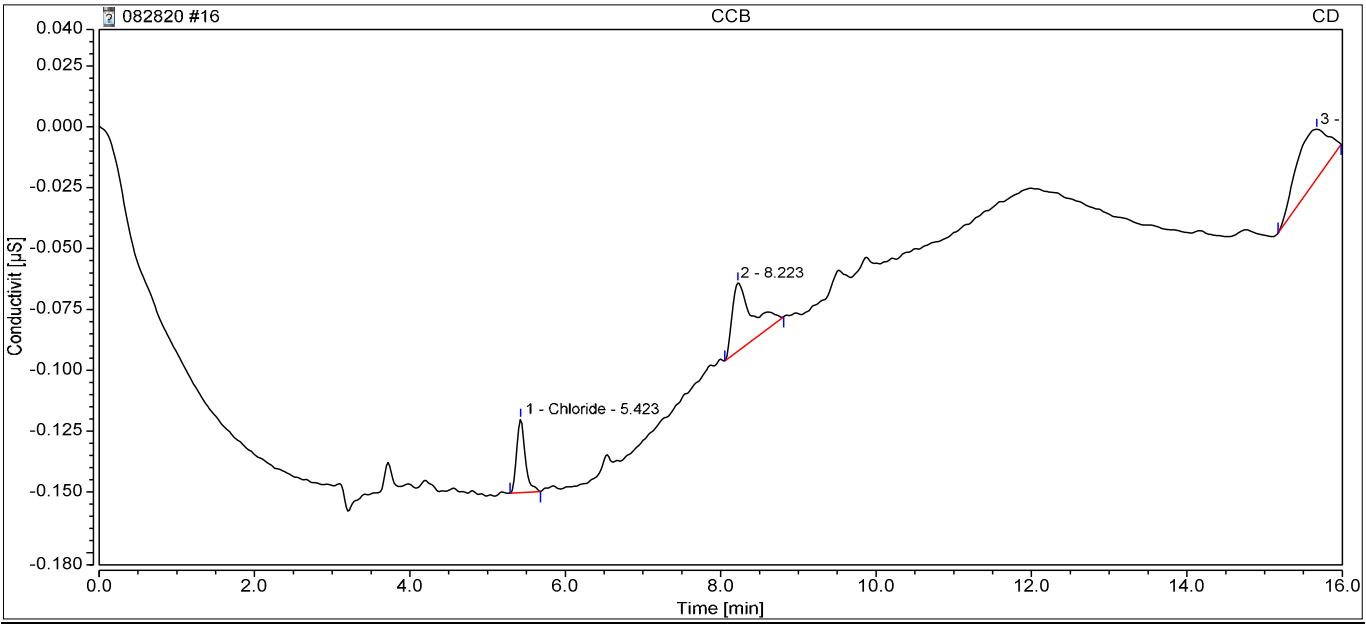
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.427	9.7022	9.7022	1.0000
2	5.42	Chloride	BMB	11.048	48.2188	48.2188	1.0000
3	6.53	Nitrite,N	BMB	4.678	9.8915	9.8915	1.0000
5	8.60	Bromide	M	0.995	9.7843	9.7843	1.0000
6	9.36	Sulfate	M	7.604	47.4928	47.4928	1.0000
7	9.71	Nitrate	M	6.026	9.7683	9.7683	1.0000
8	10.36	Chlorate	MB	1.008	9.7526	9.7526	1.0000
9	14.43	Phosphate	BMB	1.583	8.5316	8.5316	1.0000
Total:			**0.000**	**36.370**		**153.14**	

16 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 12:58**	*Sample Weight:*	**1.0000**

Run Time:



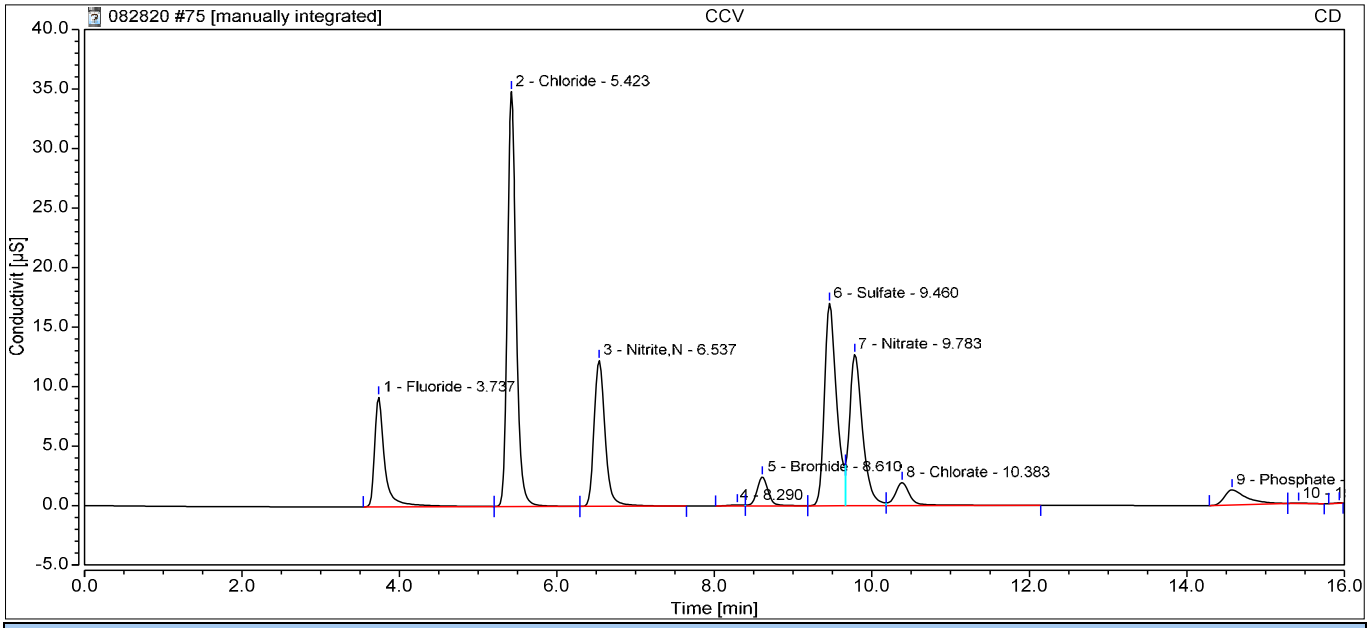
Integration Results

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	0.004	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**	

75 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:	**08/29/2020 06:50**	*Sample Weight:*	**1.0000**

Run Time:



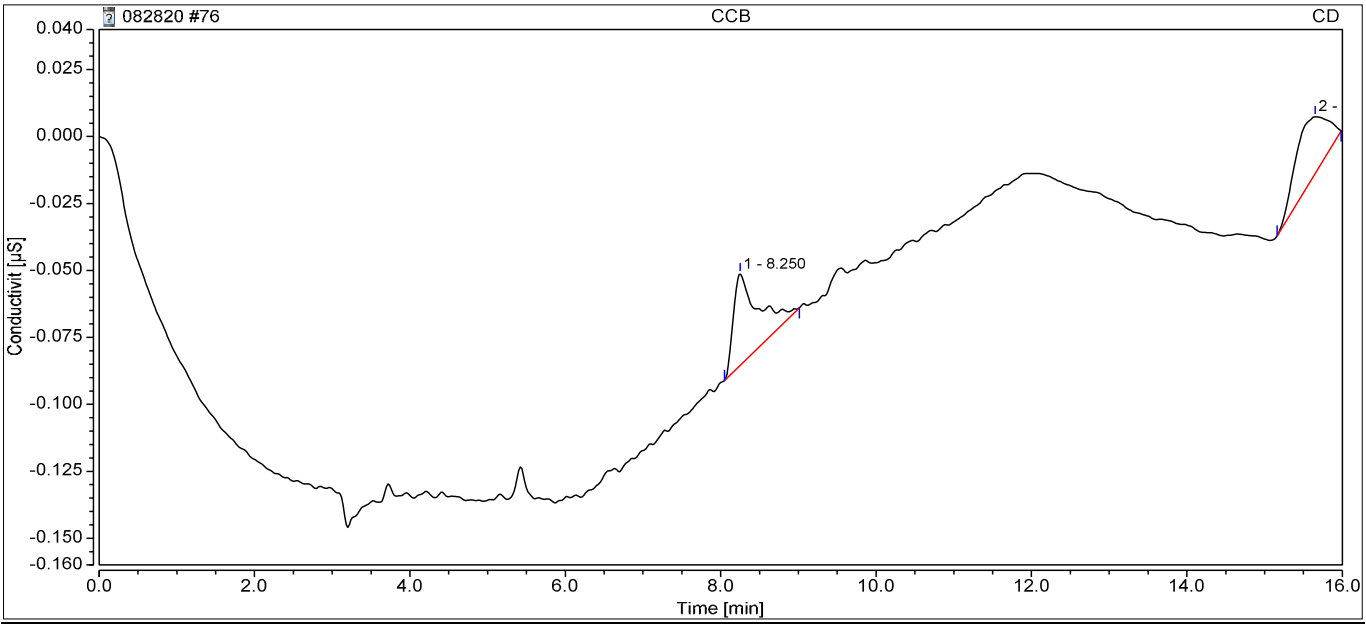
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.376	3.9009	3.9009	1.0000
2	5.42	Chloride	BMB	4.483	19.5325	19.5325	1.0000
3	6.54	Nitrite,N	BMB	1.993	4.1910	4.1910	1.0000
5	8.61	Bromide	M	0.404	3.9254	3.9254	1.0000
6	9.46	Sulfate	M *	3.067	19.1618	19.1618	1.0000
7	9.78	Nitrate	M *	2.451	3.9584	3.9584	1.0000
8	10.38	Chlorate	MB	0.429	4.0692	4.0692	1.0000
9	14.57	Phosphate	BMB	0.411	2.4940	2.4940	1.0000
Total:			**0.000**	**14.612**		**61.23**	

76 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:	**08/29/2020 07:08**	*Sample Weight:*	**1.0000**

Run Time:



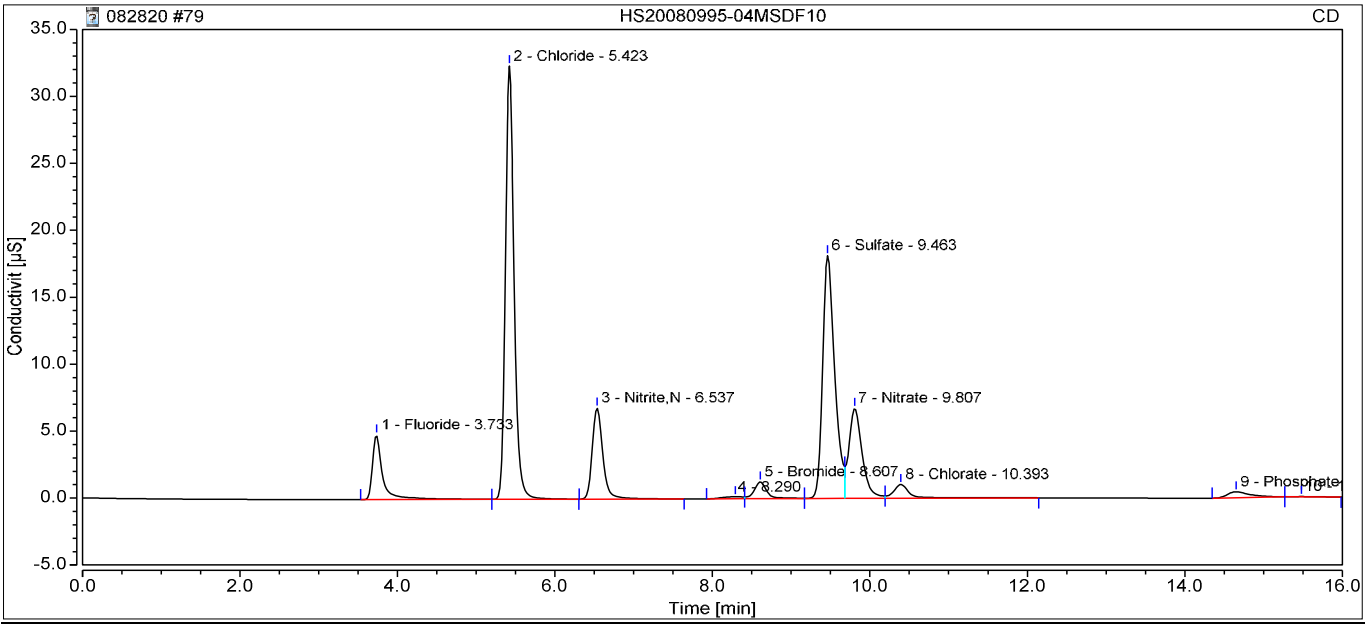
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

79 HS20080995-04MSDF10

Sample Name:	**HS20080995-04MSDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**08/29/2020 08:02**	*Sample Weight:*	**1.0000**

Run Time:



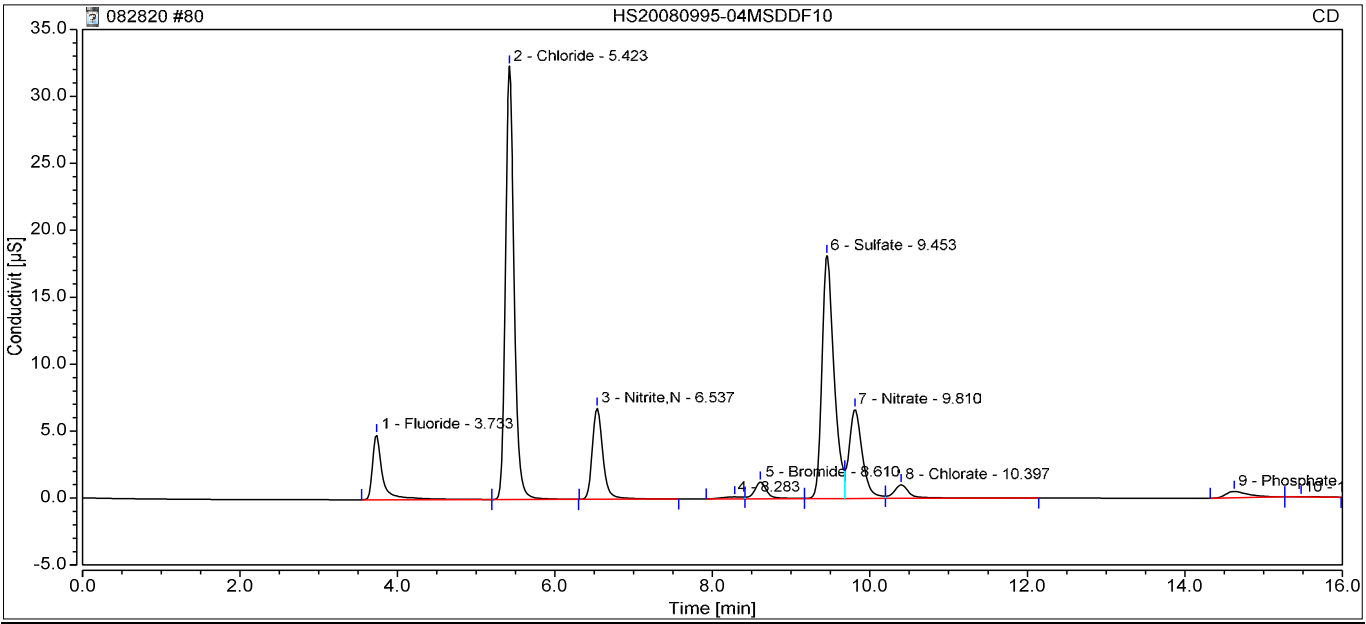
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.722	2.0525	20.5250	10.0000
2	5.42	Chloride	BMB	4.146	18.0604	180.6038	10.0000
3	6.54	Nitrite,N	BMB	1.061	2.2133	22.1329	10.0000
5	8.61	Bromide	M	0.233	2.2258	22.2582	10.0000
6	9.46	Sulfate	M	3.230	20.1765	201.7653	10.0000
7	9.81	Nitrate	M	1.313	2.1103	21.1029	10.0000
8	10.39	Chlorate	MB	0.247	2.2834	22.8336	10.0000
9	14.65	Phosphate	BMB	0.150	1.1502	11.5019	10.0000
Total:			**0.000**	**11.101**		**502.72**	

80 HS20080995-04MSDDF10

Sample Name:	**HS20080995-04MSDDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**08/29/2020 08:20**	*Sample Weight:*	**1.0000**

Run Time:



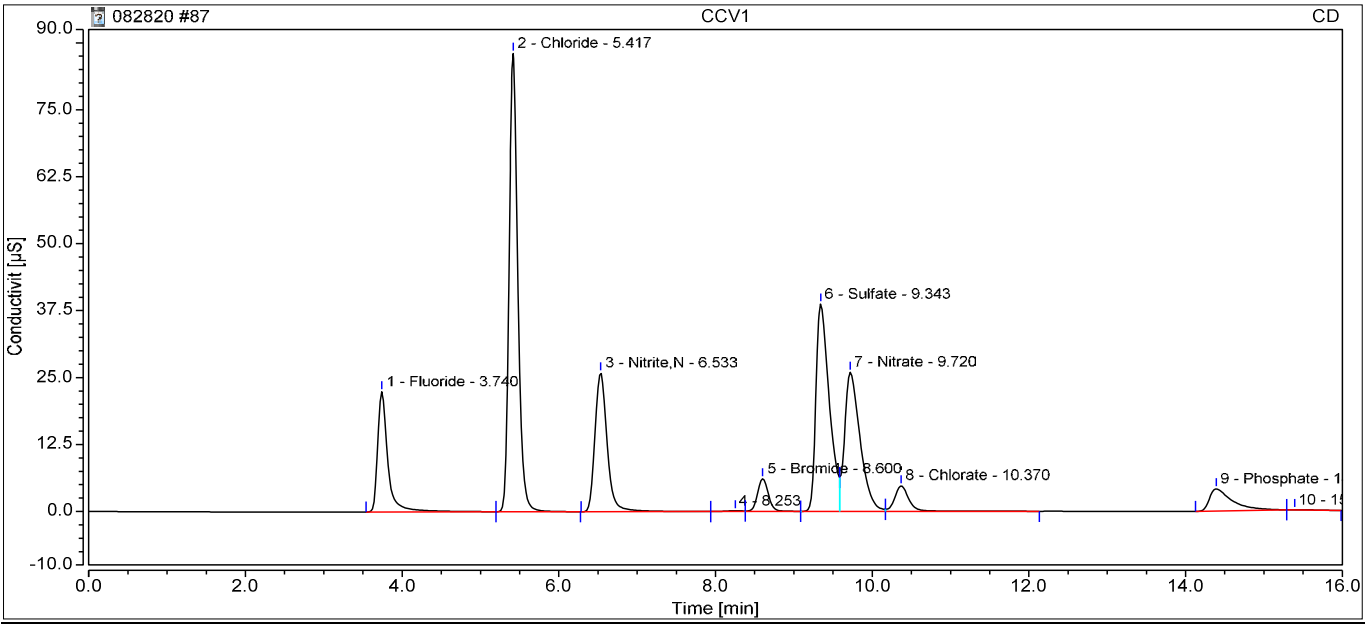
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.725	2.0607	20.6072	10.0000
2	5.42	Chloride	BMB	4.141	18.0367	180.3673	10.0000
3	6.54	Nitrite,N	BMB	1.062	2.2151	22.1508	10.0000
5	8.61	Bromide	M	0.232	2.2163	22.1630	10.0000
6	9.45	Sulfate	M	3.247	20.2831	202.8308	10.0000
7	9.81	Nitrate	M	1.295	2.0815	20.8151	10.0000
8	10.40	Chlorate	MB	0.243	2.2426	22.4258	10.0000
9	14.63	Phosphate	BMB	0.164	1.2239	12.2389	10.0000
Total:			**0.000**	**11.108**		**503.60**	

87 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:	**08/29/2020 10:26**	*Sample Weight:*	**1.0000**

Run Time:



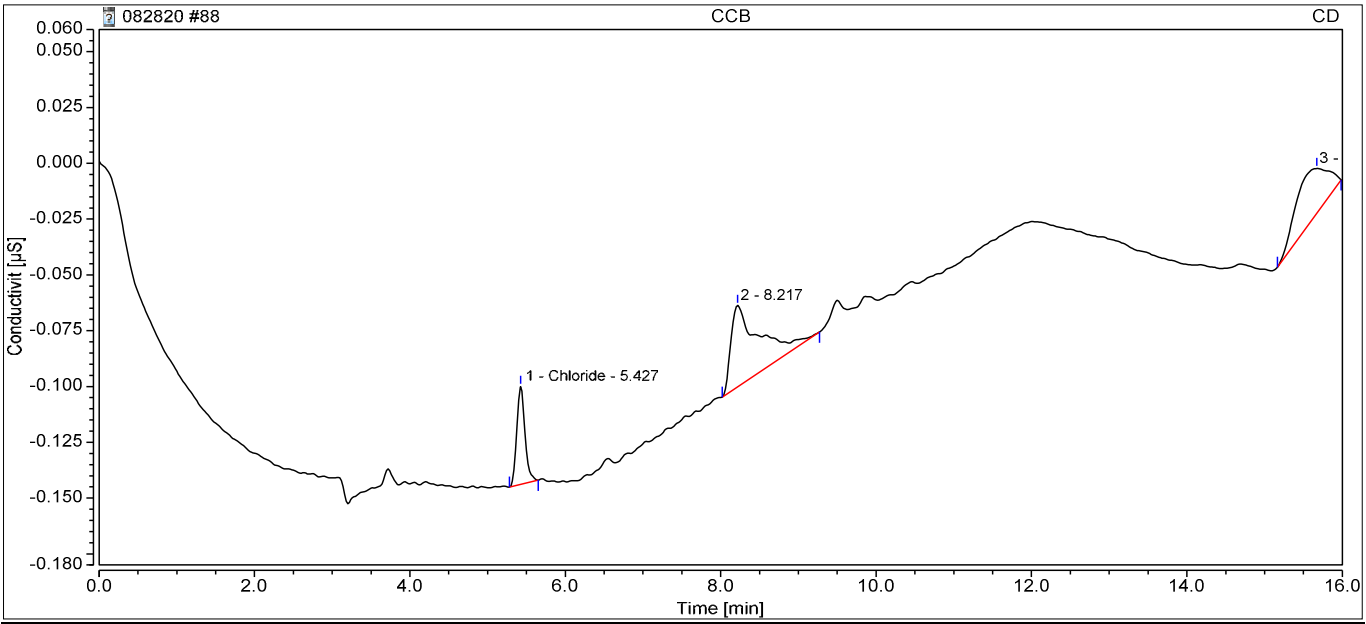
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.387	9.5899	9.5899	1.0000
2	5.42	Chloride	BMB	11.031	48.1464	48.1464	1.0000
3	6.53	Nitrite,N	BMB	4.684	9.9036	9.9036	1.0000
5	8.60	Bromide	M	0.989	9.7309	9.7309	1.0000
6	9.34	Sulfate	M	7.630	47.6531	47.6531	1.0000
7	9.72	Nitrate	M	5.971	9.6784	9.6784	1.0000
8	10.37	Chlorate	MB	1.011	9.7788	9.7788	1.0000
9	14.39	Phosphate	BMB	1.396	7.5674	7.5674	1.0000
Total:			**0.000**	**36.100**		**152.05**	

88 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:	**08/29/2020 10:44**	*Sample Weight:*	**1.0000**

Run Time:



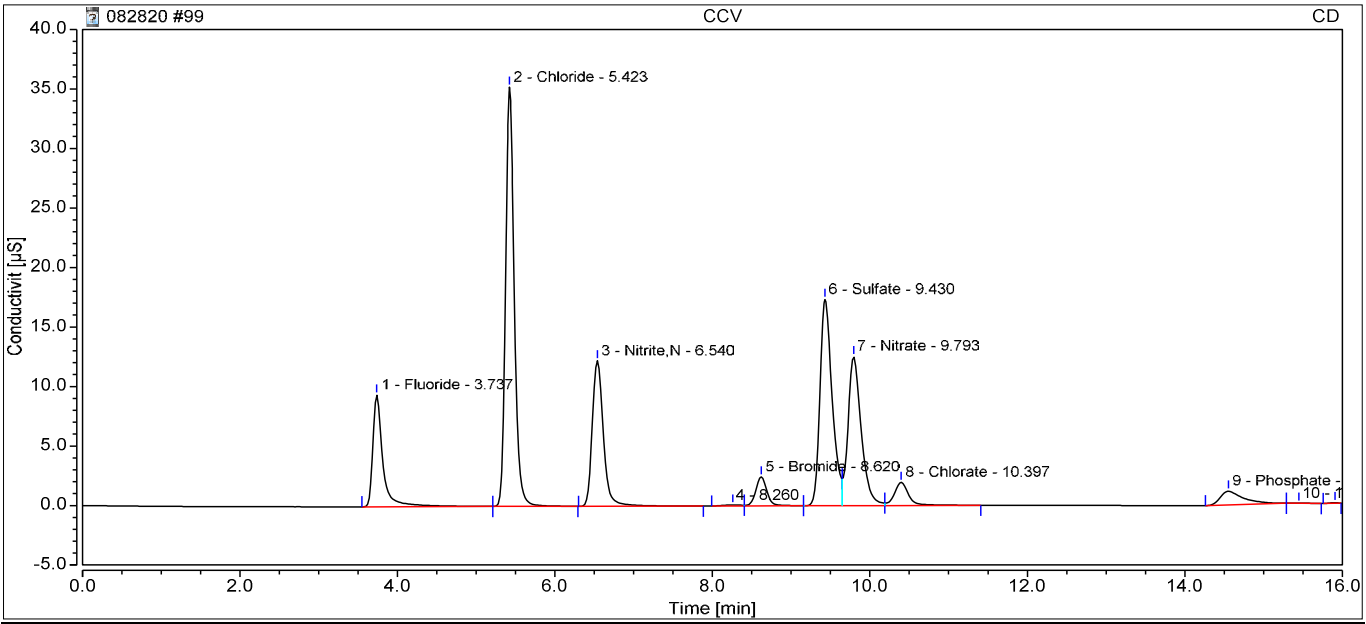
Integration Results

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	0.005	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**	

99 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:	**08/29/2020 14:03**	*Sample Weight:*	**1.0000**

Run Time:



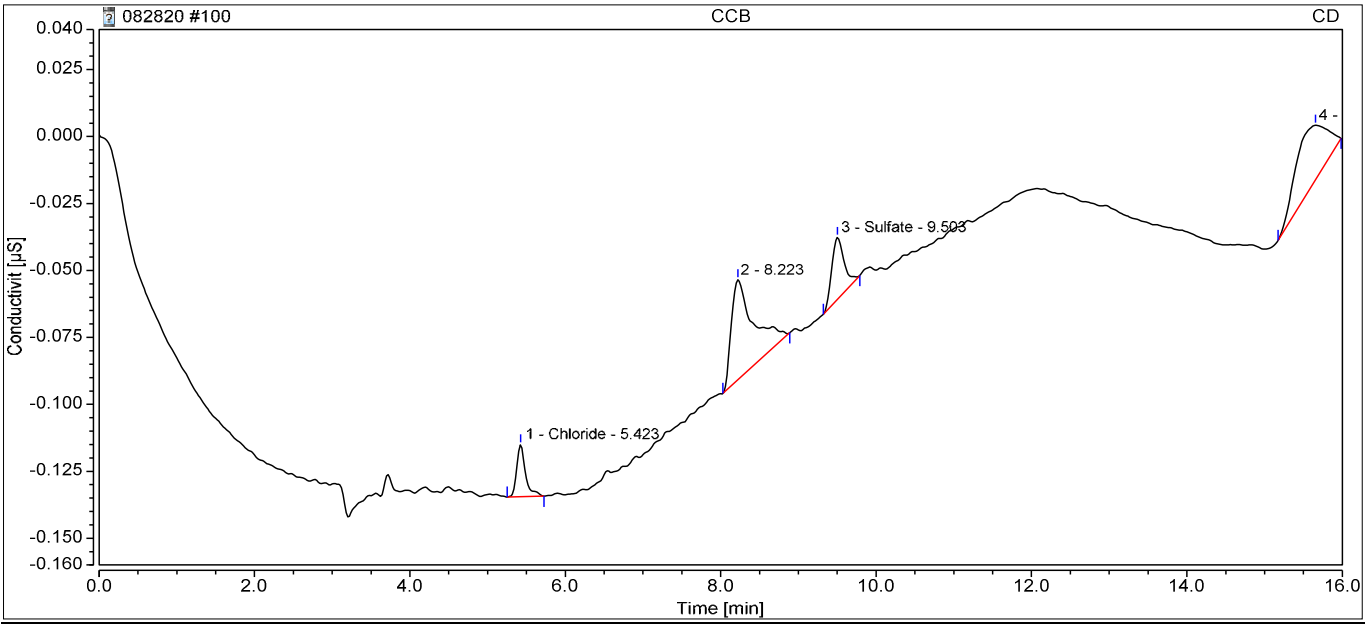
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.388	3.9358	3.9358	1.0000
2	5.42	Chloride	BMB	4.517	19.6819	19.6819	1.0000
3	6.54	Nitrite,N	BMB	2.002	4.2095	4.2095	1.0000
5	8.62	Bromide	M	0.398	3.8635	3.8635	1.0000
6	9.43	Sulfate	M	3.121	19.4980	19.4980	1.0000
7	9.79	Nitrate	M	2.442	3.9444	3.9444	1.0000
8	10.40	Chlorate	MB	0.403	3.8151	3.8151	1.0000
9	14.55	Phosphate	BMB	0.393	2.4016	2.4016	1.0000
Total:			**0.000**	**14.663**		**61.35**	

100 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:	**08/29/2020 14:21**	*Sample Weight:*	**1.0000**

Run Time:



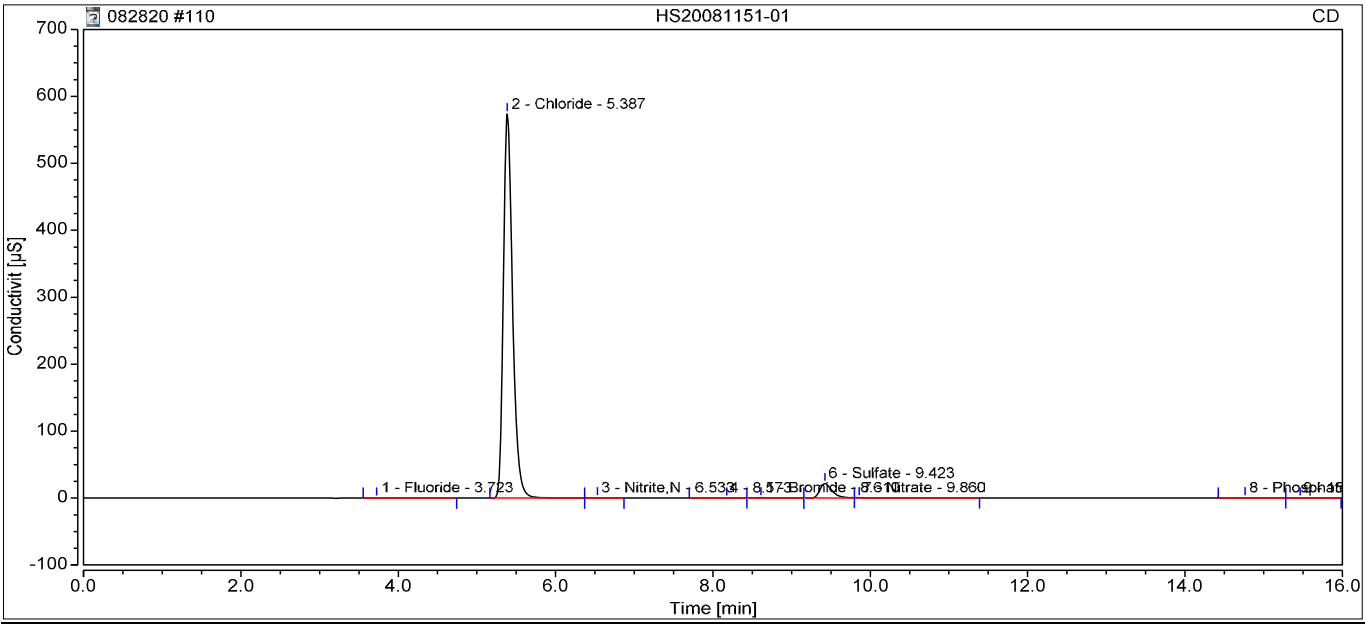
Integration Results

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	9.50	Sulfate	BMB	0.004	0.0384	0.0384	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**		**0.04**	

110 HS20081151-01

Sample Name:	**HS20081151-01**	*Injection Volume:*	**5.00**
Vial Number:	**BC4**	*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:	**08/29/2020 17:21**	*Sample Weight:*	**1.0000**

Run Time:



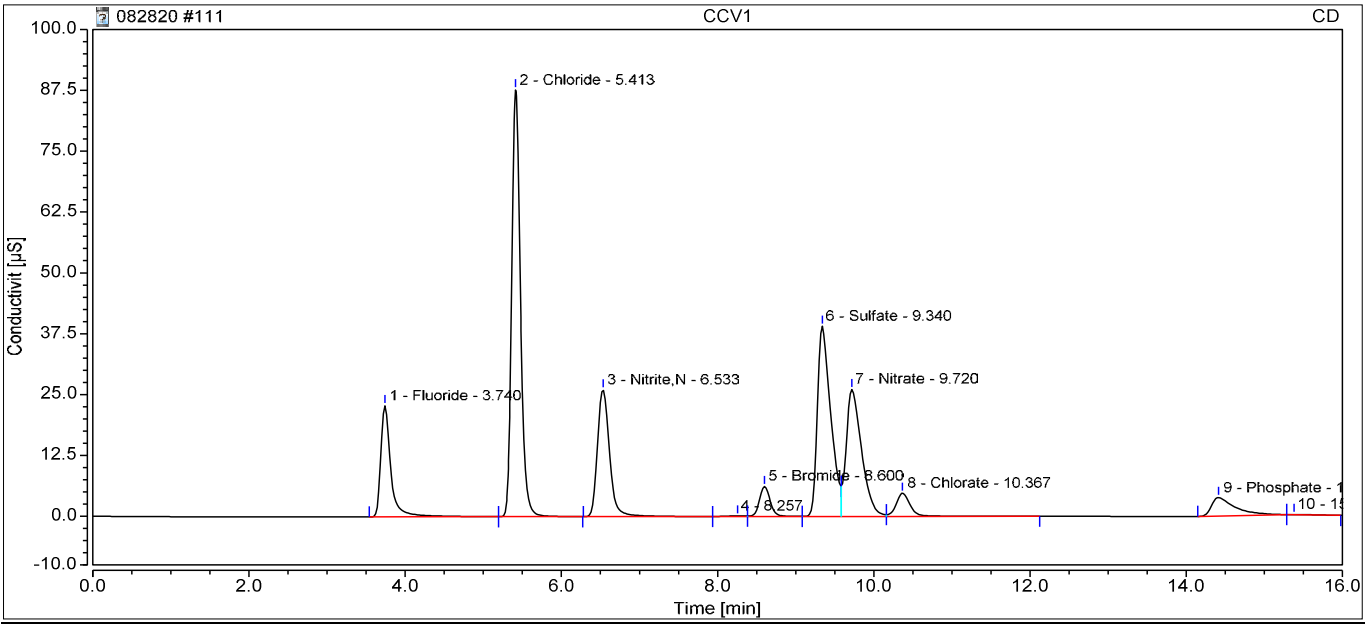
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.045	0.1377	0.1377	1.0000
2	5.39	Chloride	BMB	77.857	340.1420	340.1420	1.0000
3	6.53	Nitrite,N	BMB	0.050	0.0672	0.0672	1.0000
5	8.61	Bromide	M	0.108	0.9922	0.9922	1.0000
6	9.42	Sulfate	M	3.958	24.7276	24.7276	1.0000
7	9.86	Nitrate	MB	0.128	0.1854	0.1854	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.76	Phosphate	BMB	0.094	0.8636	0.8636	1.0000
Total:			**0.000**	**82.241**		**367.12**	

111 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:	**08/29/2020 17:39**	*Sample Weight:*	**1.0000**

Run Time:



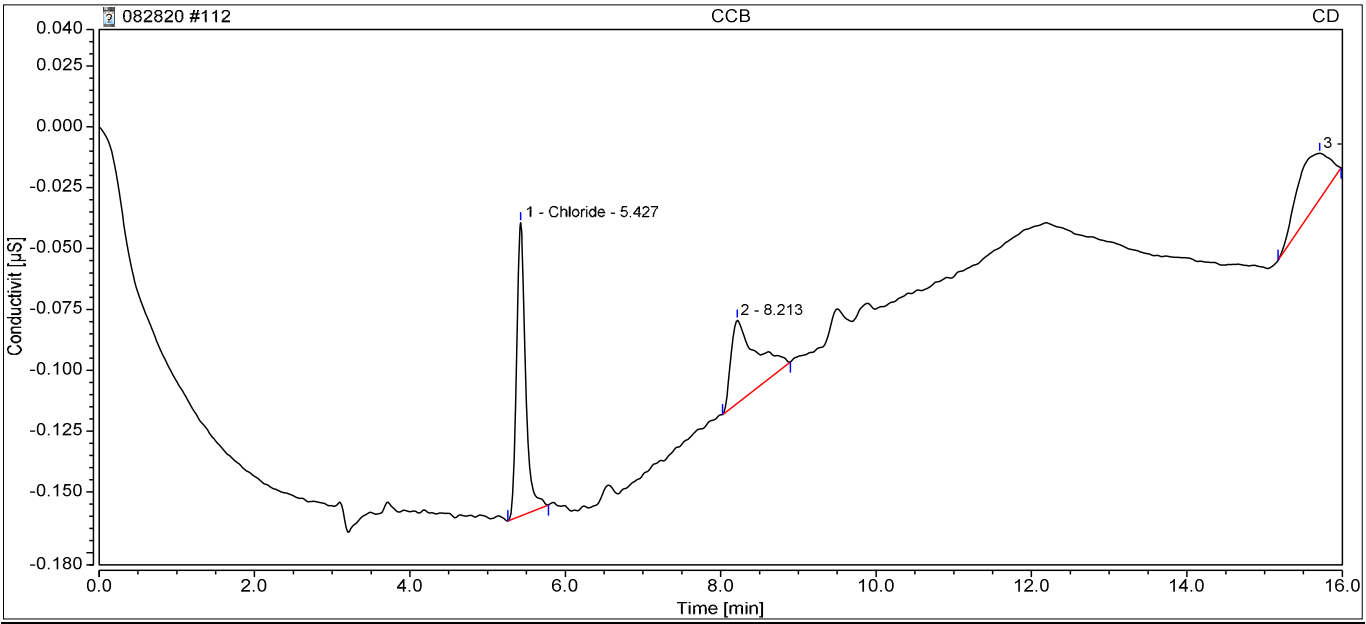
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.416	9.6712	9.6712	1.0000
2	5.41	Chloride	BMB	11.326	49.4313	49.4313	1.0000
3	6.53	Nitrite,N	BMB	4.699	9.9355	9.9355	1.0000
5	8.60	Bromide	M	0.989	9.7325	9.7325	1.0000
6	9.34	Sulfate	M	7.753	48.4219	48.4219	1.0000
7	9.72	Nitrate	M	5.957	9.6551	9.6551	1.0000
8	10.37	Chlorate	MB	1.001	9.6846	9.6846	1.0000
9	14.41	Phosphate	BMB	1.320	7.1751	7.1751	1.0000
Total:			**0.000**	**36.461**		**153.71**	

112 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:	**08/29/2020 17:57**	*Sample Weight:*	**1.0000**

Run Time:



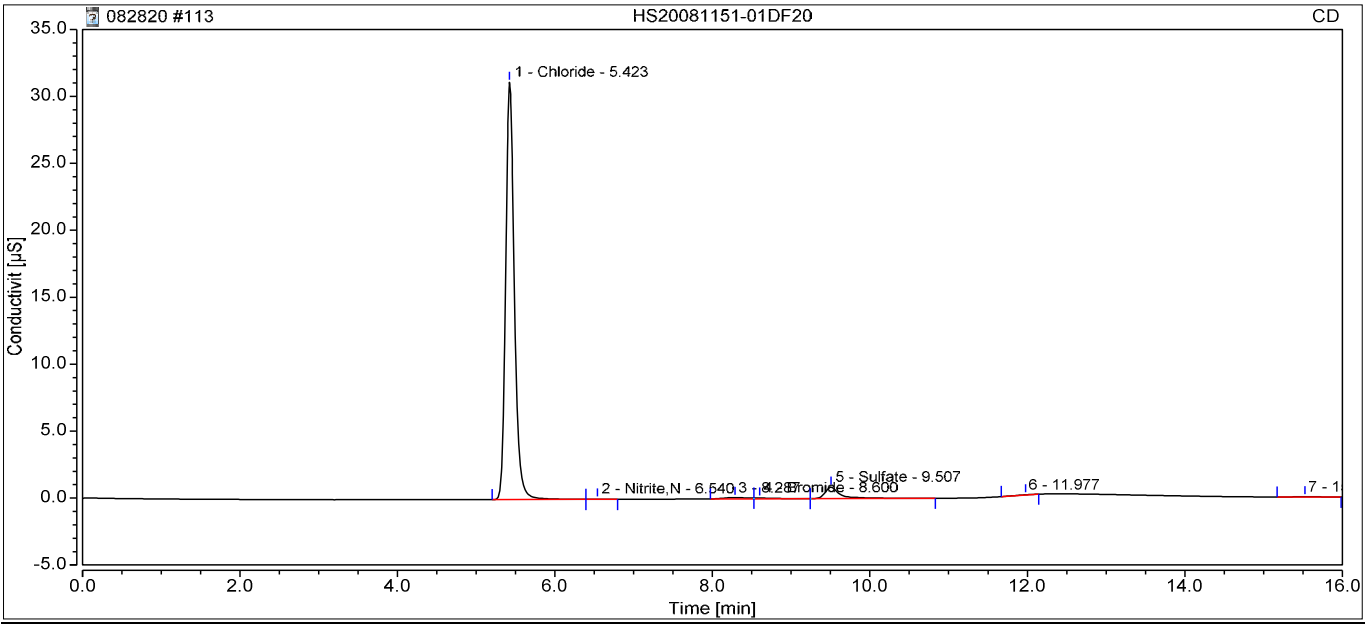
Integration Results

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	0.016	0.0141	0.0141	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**	**0.016**		**0.01**	

113 HS20081151-01DF20

Sample Name:	**HS20081151-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**BC5**	*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:	**08/29/2020 18:15**	*Sample Weight:*	**1.0000**

Run Time:



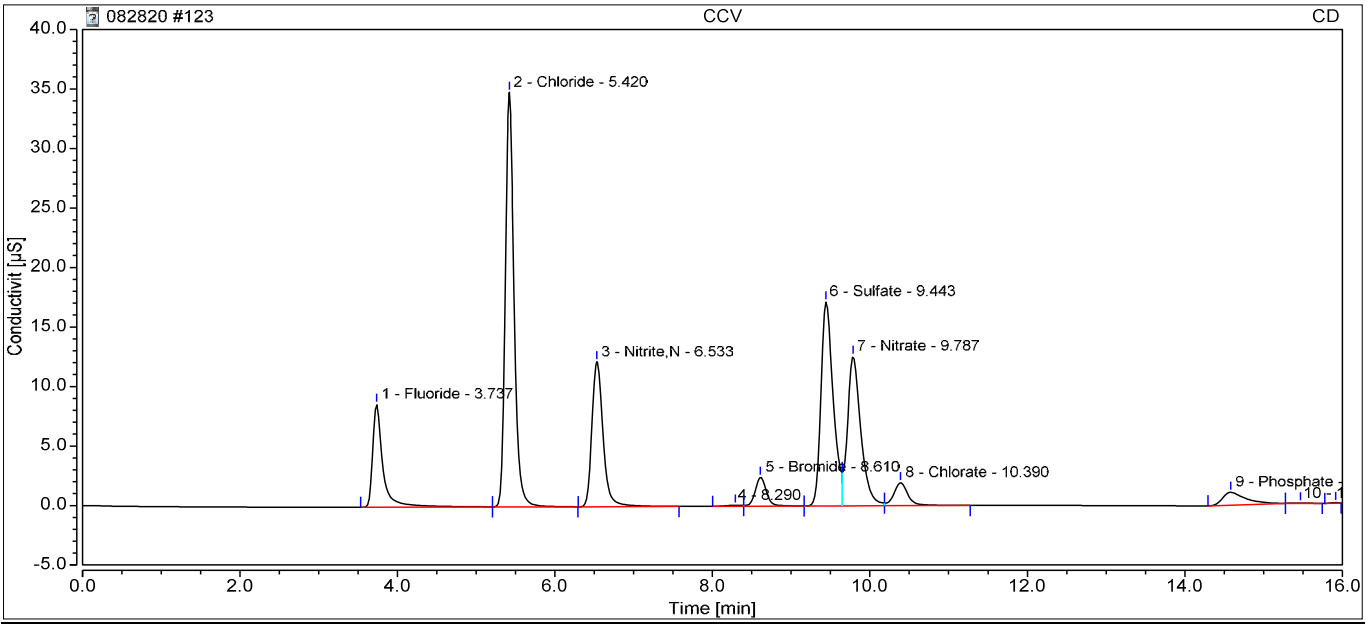
Integration Results

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
1	5.42	Chloride	BMB	4.014	17.4814	349.6283	20.0000
2	6.54	Nitrite,N	BMB	0.002	n.a.	n.a.	20.0000
4	8.60	Bromide	M	0.019	0.1044	2.0883	20.0000
5	9.51	Sulfate	MB	0.192	1.2109	24.2182	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	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**	**4.227**		**375.93**	

123 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:	**08/29/2020 21:51**	*Sample Weight:*	**1.0000**

Run Time:



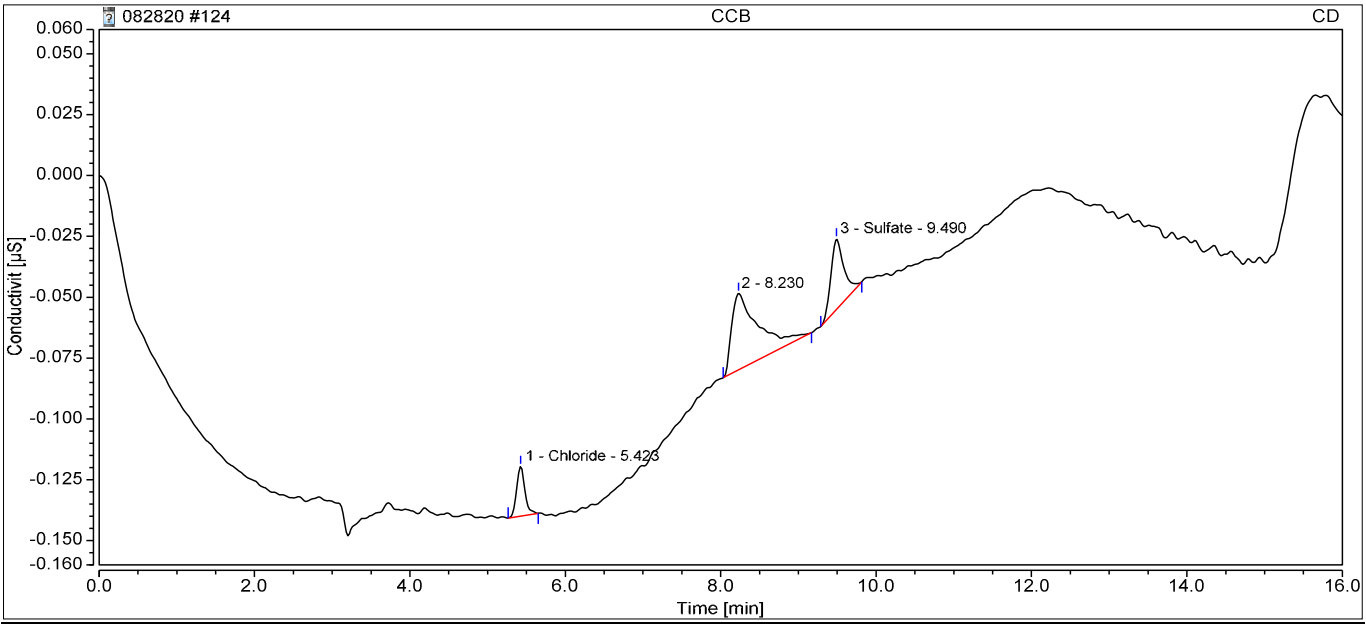
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.298	3.6830	3.6830	1.0000
2	5.42	Chloride	BMB	4.504	19.6260	19.6260	1.0000
3	6.53	Nitrite,N	BMB	2.001	4.2085	4.2085	1.0000
5	8.61	Bromide	M	0.401	3.8934	3.8934	1.0000
6	9.44	Sulfate	M	3.097	19.3488	19.3488	1.0000
7	9.79	Nitrate	M	2.481	4.0080	4.0080	1.0000
8	10.39	Chlorate	MB	0.403	3.8200	3.8200	1.0000
9	14.58	Phosphate	BMB	0.364	2.2534	2.2534	1.0000
Total:			**0.000**	**14.550**		**60.84**	

124 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:	**08/29/2020 22:27**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
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	0.006	0.0467	0.0467	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**	**0.008**		**0.05**	

HS20081151 Wet Chem Raw Data (COD)

ALS WO# HS20081151

ALS Laboratory Group **COD Analysis** **Logbook# 31318**

Method: HACH 8000 / EPA 410.4		Date: 8-31-20		Low COD–420nm		Analyst:	
SOP #: HS-WC025		Time: 10:30		High COD–620nm		TH	
WO # / SX #	Bottle #	Init Sample Vol (mL)	Prep Final Volume (mL)	Dilution Factor	Init Conc. (mg/L)	Final Conc. (mg/L)	Comments
CCV50		2	2	1	52		
MBLK					0		
LCS					102		
HS20081253-01					36		
-01MS					85		
-01MSD					87		
HS20081236-01					80		
HS20081101-01					55		
HS20081147-02					71		
CCV100		2	2	1	101		
HS20081187-01					29		
HS20081150-01					15		
HS20081151-01					8		
HS20081158-01				10	96		
HS20081211-01				1	42		
HS20081245-01				5	19		HI Cl
HS20081246-01				5	15		HI Cl
CCV50		2	2	1	51		

LCS ID #	CCV1 ID#	CCV2 ID#	Vial Lot#:	Reviewed By:
314.061.701	314.061.702	314.061.703	310.060.2218	KL
LCS Prep Date:	**Prep Date:**	**Prep Date:**	**MS ID:**	***Pipette ID:***
07-23-20	→	→	310.060.2311	WC9, COD
Digestor ID:	**Digestor *Temp* (°C):**	**Date/Time In Digestor:**	**Date/Time Off Digestor:**	**Batch ID:**
DRB 200	150°	8-31-20 8:00	8-31-20 10:00	367736

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HS20081151 Wet Chem Raw Data (O&G_1664_W_HS)

ALS WO# HS20081151

ALS Laboratory Group Confidential

083120O&G

Method: O&G, HEM by EPA 1664A (SOP HS-WC036, Current Revision)

Analyst:	KAH
Review By:	
Batch ID:	
LCS/MS Spike ID:	3110602011
Hexane ID:	3100602319
Filter Lot:	3100602020
Silica Gel:	

Methanol ID:	3100601405
1:1 HCl ID:	309116109
Na2SO4 Cartridge ID:	3100602405
Thermo HotBlock Setting (°C):	40
pH Paper ID:	300107019-06
Pipette ID	TDS

Temp Ranges (°C)
Pan Drying: 105-115
Hex Evap: 68-72
HotBlock: 35-50

	grams	mg	Accept.
Init 2.0 mg wt (1.8mg to 2.2mg required):	0.0020	2.0	Yes
Init 1000 mg wt (995mg to 1005mg required):	0.9999	999.9	Yes
Final 2.0 mg wt (1.8mg to 2.2mg required):	0.0020	2.0	Yes
Final 1000 mg wt (995mg to 1005mg required):	1.0000	1000	Yes

Pan	Temp Deg C	Actual Deg C	Date	Time
Pan 1st In:	105-115	104	08/31/2020	7:40AM
Pan 1st Out:	105-115	104	08/31/2020	9:00AM
Pan 2nd In:	105-115	104	08/31/2020	9:30AM
Pan 2nd Out:	105-115	104	08/31/2020	10:35AM
Pan 3rd In:	105-115			
Pan 3rd Out:	105-115			
Oven ID:	WC Oven 4			
Balance ID:	WC Balance-03			

O&G	Temp Deg C	Actual Deg C	Date	Time
O&G 1st In:	68-72	68	08/31/2020	1:45PM
O&G 1st Out:	68-72	68	08/31/2020	1:55PM
O&G 2nd In:	68-72	68	08/31/2020	2:40PM
O&G 2nd Out:	68-72	68	08/31/2020	2:50PM
O&G 3rd In:	68-72			
O&G 3rd Out:	68-72			
Oven ID:	WC Oven 1A			
Balance ID:	WC Balance-03			

$$\text{O \& G (HEM), mg/L} = \frac{\text{Weight (HEM, mg)}}{\text{Volume (Sample Extracted, L)}}$$

Dish ID	Work Order #	Bottle Number	SGT	Sample Type	pH Check	1st Dry Pan Wt (g)	2nd Dry Pan Wt (g)	3rd Dry Pan Wt (g)	Passes Difference Criteria (Change is <0.0005 g)	Passes % Weight Criteria (Change is <4%)	Pan Weight (g)	Sample Vol (mL)	70 deg C O&G 1st dry Wt (g)	70 deg C O&G 2nd dry Wt (g)	70 deg C O&G 3rd dry Wt (g)	Passes Difference Criteria (Change is <0.0005 g)	Passes % Weight Criteria (Change is <4%)	O&G Weight (g)	O&G (mg/L)
1	WBLKW-083120	1 of 1		MBLK	<2	6.4784	6.4784		Yes	Yes	6.4784	250	6.4785	6.4784		Yes	Yes	0.0000	0.0
2	WLCSW-083120	1 of 1		LCS	<2	6.4883	6.4883		Yes	Yes	6.4883	250	6.4973	6.4973		Yes	Yes	0.0090	36.0
3	WLCSDW-083120	1 of 1		LCSD	<2	6.4668	6.4668		Yes	Yes	6.4668	250	6.4763	6.4763		Yes	Yes	0.0095	38.0
4	HS20081143-02MS	2 of 2		MS	<2	6.4524	6.4525		Yes	Yes	6.4525	235	6.4617	6.4617		Yes	Yes	0.0092	39.1
5	HS20081101-02	1 of 1		Sample	<2	6.4927	6.4926		Yes	Yes	6.4926	235	6.4939	6.4939		Yes	Yes	0.0013	5.5
6	HS20081142-01	1 of 2		Sample	<2	6.4705	6.4705		Yes	Yes	6.4705	235	6.4714	6.4712		Yes	Yes	0.0007	3.0
7	HS20081143-02	1 of 2		Sample	<2	6.4594	6.4592		Yes	Yes	6.4592	235	6.4594	6.4592		Yes	Yes	0.0000	0.0
8	HS20081147-01	1 of 2		Sample	<2	6.4680	6.4679		Yes	Yes	6.4679	235	6.4690	6.4688		Yes	Yes	0.0009	3.8
9	HS20081176-01	1 of 1		Sample	<2	6.5290	6.5288		Yes	Yes	6.5288	235	6.5311	6.5310		Yes	Yes	0.0022	9.4
10	HS20081176-02	1 of 1		Sample	<2	6.4493	6.4491		Yes	Yes	6.4491	235	6.4503	6.4503		Yes	Yes	0.0012	5.1
11	HS20081176-03	1 of 1		Sample	<2	6.4509	6.4510		Yes	Yes	6.4510	235	6.4512	6.4512		Yes	Yes	0.0002	0.9
12	HS20081176-04	1 of 1		Sample	<2	6.4452	6.4450		Yes	Yes	6.4450	235	6.4453	6.4453		Yes	Yes	0.0003	1.3
13	HS20081186-01	1 of 1		Sample	<2	6.5073	6.5074		Yes	Yes	6.5074	235	6.5086	6.5083		Yes	Yes	0.0009	3.8
14	HS20081187-01	1 of 2		Sample	<2	6.4633	6.4633		Yes	Yes	6.4633	235	6.4637	6.4637		Yes	Yes	0.0004	1.7
15	HS20081069-02	1 of 2		Sample	<2	6.4275	6.4274		Yes	Yes	6.4274	235	6.4283	6.4282		Yes	Yes	0.0008	3.4
16	HS20081150-01	1 of 1		Sample	<2	6.4878	6.4878		Yes	Yes	6.4878	980	6.4884	6.4881		Yes	Yes	0.0003	0.3
17	HS20081151-01	1 of 1		Sample	<2	6.4671	6.4669		Yes	Yes	6.4669	980	6.4669	6.4669		Yes	Yes	0.0000	0.0
18	HS20081203-01	1 of 2		Sample	<2	6.4806	6.4805		Yes	Yes	6.4805	235	6.4822	6.4822		Yes	Yes	0.0017	7.2
19	HS20081206-01	1 of 2		Sample	<2	6.4721	6.4721		Yes	Yes	6.4721	235	6.4733	6.4733		Yes	Yes	0.0012	5.1
20	HS20081207-01	1 of 2		Sample	<2	6.4948	6.4948		Yes	Yes	6.4948	235	6.4998	6.4996		Yes	Yes	0.0048	20.4
21	HS20081208-01	1 of 2		Sample	<2	6.4713	6.4713		Yes	Yes	6.4713	235	6.4719	6.4719		Yes	Yes	0.0006	2.6
22	HS20081208-02	1 of 2		Sample	<2	6.4430	6.4429		Yes	Yes	6.4429	235	6.4970	6.4970		Yes	Yes	0.0541	230.2
23	HS20081208-03	1 of 2		Sample	<2	6.4255	6.4255		Yes	Yes	6.4255	235	6.4549	6.4549		Yes	Yes	0.0294	125.1
24	HS20081298-01	1 of 2		Sample	<2	6.4794	6.4794		Yes	Yes	6.4794	235	6.4805	6.4803		Yes	Yes	0.0009	3.8

O&G	Temp Deg C	Actual Deg C	Date	Time
Silica Gel O&G 1st In:	68-72			
Silica Gel O&G 1st Out:	68-72			
Silica Gel O&G 2nd In:	68-72			
Silica Gel O&G 2nd Out:	68-72			
Silica Gel O&G 3rd In:	68-72			
Silica Gel O&G 3rd Out:	68-72			
Oven ID:				
Balance ID:				

$$\text{O \& G (SGT - HEM), mg/L} = \frac{\text{Weight (SGT - HEM, mg)}}{\text{Volume (Sample Extracted, L)}}$$

Dish ID	Work Order #	Silca Gel O&G 70 deg C 1st dry Wt (g)	Silca Gel O&G 70 deg C 2nd dry Wt (g)	Silca Gel O&G 70 deg C 3rd dry Wt (g)	Silica Gell Passes Difference Criteria	Silica Gell Passes % Weight Criteria	Silca Gel O&G Weight (g)	Silica Gel O&G (mg/L)
1	WBLKW-083120							#VALUE!
2	WLCSW-083120							#VALUE!
3	WLCSDW-083120							#VALUE!
4	HS20081143-02MS							#VALUE!
5	HS20081101-02							#VALUE!
6	HS20081142-01							#VALUE!
7	HS20081143-02							#VALUE!
8	HS20081147-01							#VALUE!
9	HS20081176-01							#VALUE!
10	HS20081176-02							#VALUE!
11	HS20081176-03							#VALUE!
12	HS20081176-04							#VALUE!
13	HS20081186-01							#VALUE!
14	HS20081187-01							#VALUE!
15	HS20081069-02							#VALUE!
16	HS20081150-01							#VALUE!
17	HS20081151-01							#VALUE!
18	HS20081203-01							#VALUE!
19	HS20081206-01							#VALUE!
20	HS20081207-01							#VALUE!
21	HS20081208-01							#VALUE!
22	HS20081208-02							#VALUE!
23	HS20081208-03							#VALUE!
24	HS20081298-01							#VALUE!

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WorkOrder: HS20090080

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

22-Sep-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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HS20090080 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20090080

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

September 21, 2020

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

Work Order: **HS20090080**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Sep 02, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090080

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090080-01	LH18/24-SP650_090120	Water		01-Sep-2020 14:00	02-Sep-2020 10:00	☐
HS20090080-02	LH18/24-SP650_090120-BIX	Water		01-Sep-2020 14:00	02-Sep-2020 10:00	☐

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090080

Work Order Comments

- The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

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

Wet Chemistry by Method E365.3

Batch ID: R367974

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

Wet Chemistry by Method E350.3

Batch ID: R368162

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

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20090080
Sample ID: LH18/24-SP650_090120
Lab ID:HS20090080-01
Collection Date: 01-Sep-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)	**10**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	08-Sep-2020 15:30
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**3.94**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	02-Sep-2020 09:35
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	15-Sep-2020 17:02

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

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20090080
Sample ID: LH18/24-SP650_090120-BIX
Lab ID:HS20090080-02
Collection Date: 01-Sep-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	21-Sep-2020 13:22

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

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090080

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R367974 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20090080-01	LH18/24-SP650_090120	01 Sep 2020 14:00			02 Sep 2020 09:35	10
Batch ID: R368162 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20090080-01	LH18/24-SP650_090120	01 Sep 2020 14:00			08 Sep 2020 15:30	1
Batch ID: R368619 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20090080-01	LH18/24-SP650_090120	01 Sep 2020 14:00			15 Sep 2020 17:02	1
Batch ID: R368953 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20090080-02	LH18/24-SP650_090120-BIX	01 Sep 2020 14:00			21 Sep 2020 13:22	1

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090080

QC BATCH REPORT

Batch ID: R367974 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R367974** Units: **mg/L** Analysis Date: **02-Sep-2020 09:35**
Client ID: Run ID: **UV-2450_367974** SeqNo: **5725910** 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-R367974** Units: **mg/L** Analysis Date: **02-Sep-2020 09:35**
Client ID: Run ID: **UV-2450_367974** SeqNo: **5725909** 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)	0.268	0.0250	0.25	0	107	85 - 115				

MS Sample ID: **HS20081306-11MS** Units: **mg/L** Analysis Date: **02-Sep-2020 09:35**
Client ID: Run ID: **UV-2450_367974** SeqNo: **5725912** 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)	0.291	0.0250	0.25	0.013	111	80 - 120				

MSD Sample ID: **HS20081306-11MSD** Units: **mg/L** Analysis Date: **02-Sep-2020 09:35**
Client ID: Run ID: **UV-2450_367974** SeqNo: **5725911** 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)	0.276	0.0250	0.25	0.013	105	80 - 120	0.291	5.29	20	

The following samples were analyzed in this batch: HS20090080-01

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090080

QC BATCH REPORT

Batch ID: R368162 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-368162** Units: **mg/L** Analysis Date: **08-Sep-2020 15:30**
Client ID: Run ID: **WetChem_HS_368162** SeqNo: **5730227** 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-368162** Units: **mg/L** Analysis Date: **08-Sep-2020 15:30**
Client ID: Run ID: **WetChem_HS_368162** SeqNo: **5730228** 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)	10.16	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20090037-01MS** Units: **mg/L** Analysis Date: **08-Sep-2020 15:30**
Client ID: Run ID: **WetChem_HS_368162** SeqNo: **5731402** 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)	11.44	0.20	10	1.119	103	80 - 120				

MSD Sample ID: **HS20090037-01MSD** Units: **mg/L** Analysis Date: **08-Sep-2020 15:30**
Client ID: Run ID: **WetChem_HS_368162** SeqNo: **5731403** 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)	11.78	0.20	10	1.119	107	80 - 120	11.44	2.93	20	

The following samples were analyzed in this batch: HS20090080-01

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20090080**

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: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090080

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090080-01	LH18/24-SP650_090120	Login	9/2/2020 12:19:36 PM	JRM	WET250
HS20090080-01	LH18/24-SP650_090120	Login	9/2/2020 12:19:36 PM	JRM	WET250
HS20090080-01	LH18/24-SP650_090120	Login	9/2/2020 12:19:36 PM	JRM	Sub
HS20090080-02	LH18/24-SP650_090120-BIX	Login	9/2/2020 12:19:36 PM	JRM	Sub

ALS Houston, US Date: 21-Sep-20

Sample Receipt Checklist

Work Order ID: HS20090080 **Date/Time Received:** **02-Sep-2020 10:00**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	02-Sep-2020 12:26	**Reviewed by:**	/S/ RJ Modashia	02-Sep-2020 14:17
	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):	45706	
Date/Time sample(s) sent to storage:	09/02/2020 12:30	

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	AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_090120	Water	09/01/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_090120	Water	09/01/20 / 14:00		1			X		NONE	
LH18/24–SP650_090120_AIX	Water	09/01/20 / 14:00		1				X	NONE	

Analyses

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	09/01/20	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. Mascarr	9/2/20	10:00							

Remarks: Cooler 45706 IR31
Temp 0.8°C CF0

HS20090080

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

(Word) S:\U-ces\Forms\Chain of Custody - Bi\Weekly

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

45706

CUSTODY SEAL

Date: 9/1/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 09102120

45706

Must Deliver Next Business Day
Time and Tempature Sensitive!

45706

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM ENVIRONMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14AUG18
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3111

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP 46-RJ

RMA:

FedEx Express

FedEx
TRK# 4380 9531 7281
0221

WED - 02 SEP 10:30A
PRIORITY OVERNIGHT
AHS
77099
TX-US IAH

AB SGRA

September 21, 2020 Service Request No:E2000825

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

Laboratory Results for: HS20090080

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory September 02, 2020
For your reference, these analyses have been assigned our service request number **E2000825.**

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.:**	E2000825
Project:	HS20090080	**Date Received:**	09/02/20
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 09/02/20.

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:

EQ2000419: 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: HS20090080 **Service Request:**E2000825

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000825-001	LH18/24-SP650_090120-BIX	9/1/2020	1400

Service Request Summary

Folder #: **E2000825**
Client Name: ALS Environmental - US
Project Name: HS20090080
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: 09/02/20
Internal Due Date: 9/17/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090080
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 8D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000825-001	LH18/24-SP650_090120-BIX	Water	09/01/20 1400	**IV**

Service Request Summary

Folder #: **E2000825**
Client Name: ALS Environmental - US
Project Name: HS20090080
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: 09/02/20
Internal Due Date: 9/17/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090080
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 8D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/17,level IV 9/24

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
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

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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14605**

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:	HS20090080
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090080-02**	**LH18/24-SP650_090120-BIX**	**Water**	**01 Sep 2020 14:00**
	SUB_Perch-6850			10 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. Mendoza Date/Time: 09/02/20 14:20

Received By: [illegible] Date/Time: 9/2/20 1420

Cooler ID(s): Temperature(s):

00994458

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR3

Date/Time Received: 9/12/20 Initials: CH

Date/Time Logged in: 9/12/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ⊘ Courier (ALS) ○ 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?
-		9/12/20	1420	CH	1.1	☒
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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F: +1 713 266 1599
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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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Preparation Information Benchsheet

Prep Run#: 365387
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 9/11/20 13:18

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000825-001	LH18/24-SP650_090120-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	EQ2000419-01	MB		6850/ClO4 DOD			Liquid	10mL	
3	EQ2000419-02	LCS		6850/ClO4 DOD			Liquid	10mL	
4	EQ2000419-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000419-02 1.00µL EQ2000419-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000825-001 100.00µL EQ2000419-01 100.00µL EQ2000419-02 100.00µL EQ2000419-03 100.00µL

Preparation Steps

Step: Preparation
Started: 9/11/20 13:18
Finished: 9/11/20 14:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 9/18/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000825
Project:	HS20090080	**Date Collected:**	9/ 1/20 1400
Sample Matrix:	Water	**Date Received:**	9/ 2/20
		Date Extracted:	9/11/20
		Date Analyzed:	9/17/20 14:58
Sample Name:	LH18/24-SP650_090120-BIX	**Units:**	µg/L
Lab Code:	E2000825-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695632
Prep Method:	Method	**Extraction Lot:**	365387
Data File Name:	I:\LCMS01\DATA\20200917\20200917_008	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.157**	J	0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000825
Project:	HS20090080	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/11/20
		Date Analyzed:	9/11/20 19:47
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000419-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	694863
Prep Method:	Method	**Extraction Lot:**	365387
Data File Name:	I:\LCMS01\DATA\20200911\20200911_029	**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

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090080
Sample Matrix: Water

Service Request: E2000825
Date Analyzed: 9/11/20

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: 365387

	Lab Control Sample EQ2000419-02			Duplicate Lab Control Sample EQ2000419-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.115	0.100	115	0.119	0.100	119	84 - 119	3	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:**	E2000825
Project:	HS20090080	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/11/20
		Date Analyzed:	9/11/20 19:55
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000419-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	694863
Prep Method:	Method	**Extraction Lot:**	365387
Data File Name:	I:\LCMS01\DATA\20200911\20200911_030	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.115**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000825
Project:	HS20090080	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/11/20
		Date Analyzed:	9/11/20 20:03
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000419-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	694863
Prep Method:	Method	**Extraction Lot:**	365387
Data File Name:	I:\LCMS01\DATA\20200911\20200911_031	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.119**		0.100	0.0500	0.0250	

Initial Calibration

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20200911

ALS Environmental

ICAL Date: 9/11/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000031**

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		20200911_011	Perchlorate6850b.lcm	1x	☒	3100806-05	9/11/2020 17:17
2	PERCHLORATE2		20200911_012	Perchlorate6850b.lcm	1x	☒	3100806-06	9/11/2020 17:25
3	PERCHLORATE3		20200911_013	Perchlorate6850b.lcm	1x	☒	3100806-07	9/11/2020 17:33
4	PERCHLORATE4		20200911_014	Perchlorate6850b.lcm	1x	☒	3100807-01	9/11/2020 17:41
5	PERCHLORATE5		20200911_015	Perchlorate6850b.lcm	1x	☒	3100807-02	9/11/2020 17:49
6	PERCHLORATE6		20200911_016	Perchlorate6850b.lcm	1x	☒	3100807-03	9/11/2020 17:56
7	PERCHLORATE7		20200911_017	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 18:04
8	PERCHLORATE8		20200911_018	Perchlorate6850b.lcm	1x	☒	3100807-05	9/11/2020 18:12
9	PERCHLORATE9		20200911_019	Perchlorate6850b.lcm	1x	☒	3100807-06	9/11/2020 18:20
10	PERCHLORATE10		20200911_020	Perchlorate6850b.lcm	1x	☒	3100807-07	9/11/2020 18:28
11	LODV		20200911_007	Perchlorate6850b.lcm	1x	☒		9/11/2020 16:05
12	IB		20200911_021	Perchlorate6850b.lcm	1x	☒		9/11/2020 18:36
13	PERCHLORATEICV		20200911_022	Perchlorate6850b.lcm	1x	☒	3100807-08	9/11/2020 18:44
14	EQ2000400-01		20200911_023	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:00
15	EQ2000400-02		20200911_024	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:07
16	EQ2000400-03		20200911_025	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:15
17	E2000817-001		20200911_026	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:23
18	E2000817-001x10		20200911_027	Perchlorate6850b.lcm	10x	☒		9/11/2020 19:31
19	PERCHLORATE7		20200911_028	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 19:39
20	EQ2000419-01		20200911_029	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:47
21	EQ2000419-02		20200911_030	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:55
22	EQ2000419-03		20200911_031	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:03
23	E2000825-001		20200911_032	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:10
24	EQ2000418-01		20200911_033	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:18
25	EQ2000418-02		20200911_034	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:26
26	EQ2000418-03		20200911_035	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:34
27	E2000812-01		20200911_036	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:42
28	PERCHLORATE7		20200911_037	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 20:50
29								
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Initial Calibration - Detailed Report

Calibration ID: EC2000031 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000031-01	PERCHLORATE1	20200911_011	09/11/2020 17:17
02	EC2000031-02	PERCHLORATE2	20200911_012	09/11/2020 17:25
03	EC2000031-03	PERCHLORATE3	20200911_013	09/11/2020 17:33
04	EC2000031-04	PERCHLORATE4	20200911_014	09/11/2020 17:41
05	EC2000031-05	PERCHLORATE5	20200911_015	09/11/2020 17:49
06	EC2000031-06	PERCHLORATE6	20200911_016	09/11/2020 17:56
07	EC2000031-07	PERCHLORATE7	20200911_017	09/11/2020 18:04
08	EC2000031-08	PERCHLORATE8	20200911_018	09/11/2020 18:12
09	EC2000031-09	PERCHLORATE9	20200911_019	09/11/2020 18:20
10	EC2000031-10	PERCHLORATE10	20200911_020	09/11/2020 18:28

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

Perchlorate **Average RF** **RSD = 11.17** **Average RF = 0.1138**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1329	02	0.5000	0.1398	03	0.7000	0.1126	04	1.0000	0.1146
05	2.0000	0.1115	06	5.0000	0.1059	07	10.0000	0.1005	08	20.0000	0.1077
09	30.0000	0.1073	10	50.0000	0.1047						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.117	16.9	02	0.5000	0.615	22.9	03	0.7000	0.693	-1.0
04	1.0000	1.01	0.7	05	2.0000	1.96	-2.0	06	5.0000	4.66	-6.9
07	10.0000	8.83	-11.7	08	20.0000	18.9	-5.3	09	30.0000	28.3	-5.6
10	50.0000	46.0	-8.0								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000031	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200911_022	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000031-11	T	Average RF	10	8.793	ng/mL	-12.1	<= 15

ALS Group Houston

PERCHLORATE1

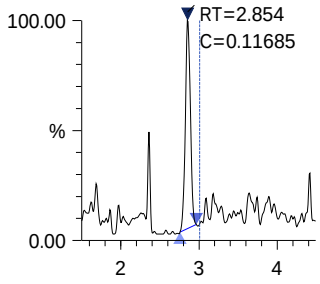
Date acquired: 9/11/2020 5:17:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_011.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	9/11/2020 5:17:31 PM	2986	0.11685	20200911_011	2.854	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/11/2020 5:17:31 PM	224628	1.00000	20200911_011	2.854	25.0000	1.0000	5

Perchlorate

Conc 0.11685
Area 2986

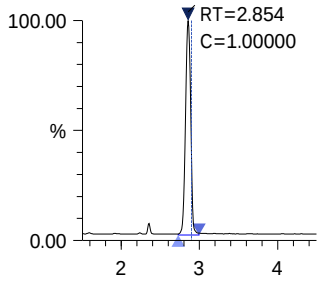
Q 99.00>83.00 (-) 6.70e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 224628

ISTD 107.00>89.00 (-) 4.75e4



ALS Group Houston

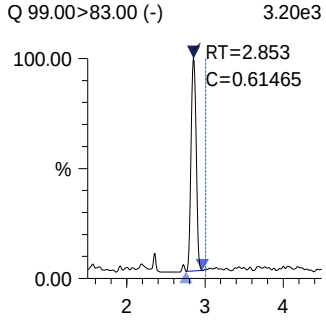
PERCHLORATE2

Date acquired: 9/11/2020 5:25:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_012.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	9/11/2020 5:25:24 PM	14844	0.61465	20200911_012	2.853	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/11/2020 5:25:24 PM	212288	1.00000	20200911_012	2.849	25.0000	1.0000	6

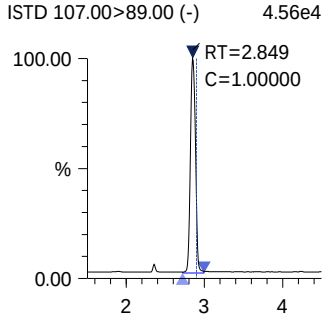
Perchlorate

Conc 0.61465
Area 14844



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 212288



ALS Group Houston

PERCHLORATE3

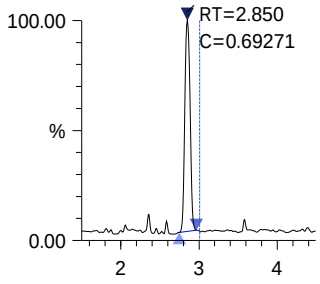
Date acquired: 9/11/2020 5:33:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_013.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/11/2020 5:33:16 PM	17125	0.69271	20200911_013	2.850	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/11/2020 5:33:16 PM	217322	1.00000	20200911_013	2.852	25.0000	1.0000	7

Perchlorate

Conc 0.69271
Area 17125

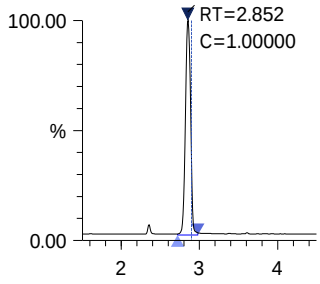
Q 99.00>83.00 (-) 3.63e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 217322

ISTD 107.00>89.00 (-) 4.59e4



ALS Group Houston

PERCHLORATE4

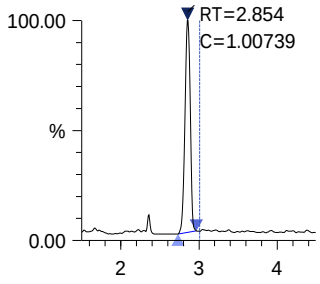
Date acquired: 9/11/2020 5:41:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_014.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	9/11/2020 5:41:08 PM	22898	1.00739	20200911_014	2.854	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/11/2020 5:41:08 PM	199808	1.00000	20200911_014	2.853	25.0000	1.0000	8

Perchlorate

Conc 1.00739
Area 22898

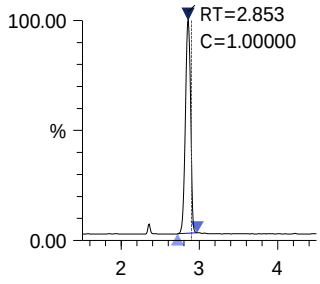
Q 99.00>83.00 (-) 4.81e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 199808

ISTD 107.00>89.00 (-) 4.26e4



ALS Group Houston

PERCHLORATE5

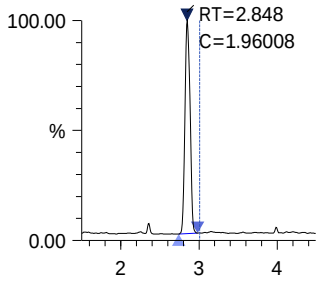
Date acquired: 9/11/2020 5:49:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_015.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	9/11/2020 5:49:02 PM	45228	1.96008	20200911_015	2.848	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/11/2020 5:49:02 PM	202838	1.00000	20200911_015	2.848	25.0000	1.0000	9

Perchlorate

Conc 1.96008
Area 45228

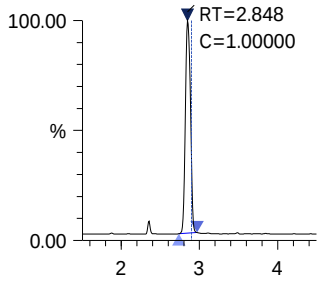
Q 99.00>83.00 (-) 9.79e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202838

ISTD 107.00>89.00 (-) 4.41e4



ALS Group Houston

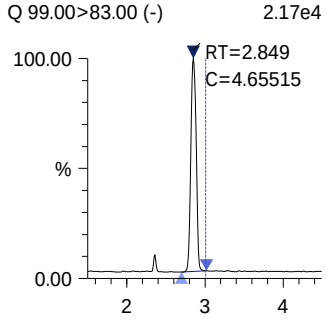
PERCHLORATE6

Date acquired: 9/11/2020 5:56:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_016.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	9/11/2020 5:56:57 PM	104564	4.65515	20200911_016	2.849	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/11/2020 5:56:57 PM	197453	1.00000	20200911_016	2.849	25.0000	1.0000	10

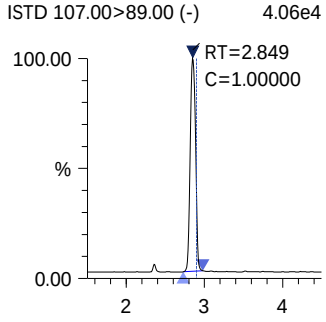
Perchlorate

Conc 4.65515
Area 104564



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 197453



ALS Group Houston

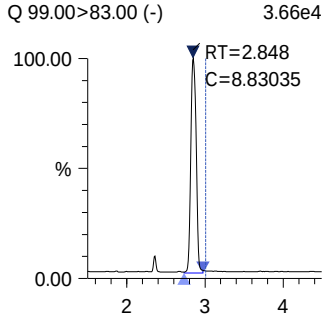
PERCHLORATE7

Date acquired: 9/11/2020 6:04:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_017.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	9/11/2020 6:04:52 PM	180012	8.83035	20200911_017	2.848	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/11/2020 6:04:52 PM	179201	1.00000	20200911_017	2.846	25.0000	1.0000	4

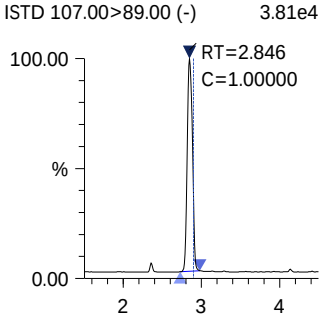
Perchlorate

Conc 8.83035
Area 180012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179201



ALS Group Houston

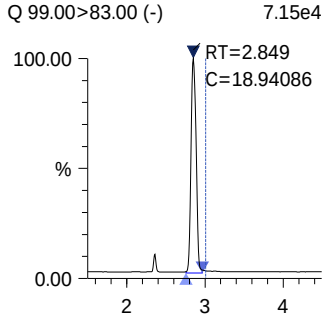
PERCHLORATE8

Date acquired: 9/11/2020 6:12:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_018.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	9/11/2020 6:12:44 PM	333399	18.94086	20200911_018	2.849	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/11/2020 6:12:44 PM	154732	1.00000	20200911_018	2.847	25.0000	1.0000	11

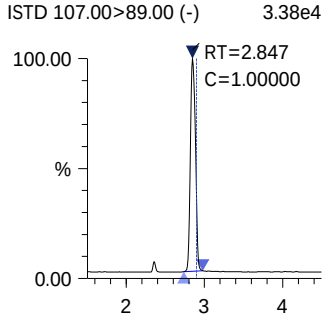
Perchlorate

Conc 18.94086
Area 333399



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 154732



ALS Group Houston

PERCHLORATE9

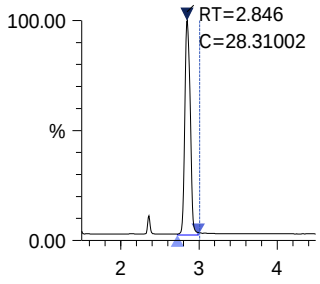
Date acquired: 9/11/2020 6:20:41 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_019.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	9/11/2020 6:20:41 PM	458254	28.31002	20200911_019	2.846	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/11/2020 6:20:41 PM	142293	1.00000	20200911_019	2.846	25.0000	1.0000	12

Perchlorate

Conc 28.31002
Area 458254

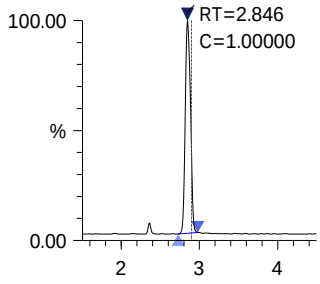
Q 99.00>83.00 (-) 9.27e4



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 142293

ISTD 107.00>89.00 (-) 3.00e4



ALS Group Houston

PERCHLORATE10

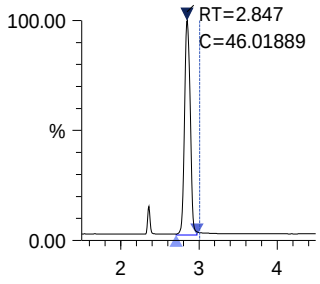
Date acquired: 9/11/2020 6:28:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_020.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	9/11/2020 6:28:33 PM	685705	46.01889	20200911_020	2.847	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/11/2020 6:28:33 PM	130984	1.00000	20200911_020	2.845	25.0000	1.0000	13

Perchlorate

Conc 46.01889
Area 685705

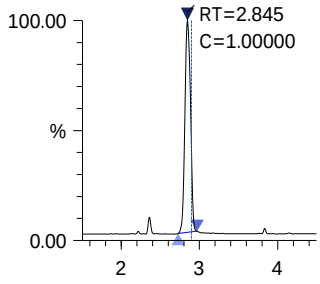
Q 99.00>83.00 (-) 1.32e5



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130984

ISTD 107.00>89.00 (-) 2.60e4



ALS Group Houston

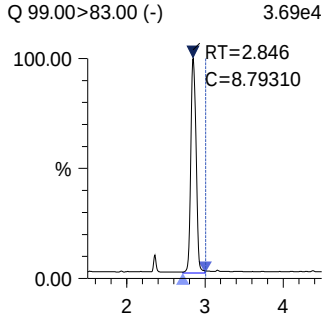
PERCHLORATEICV

Date acquired: 9/11/2020 6:44:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_022.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	PERCHLORATEICV	9/11/2020 6:44:19 PM	178538	8.79310	20200911_022	2.846	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/11/2020 6:44:19 PM	178486	1.00000	20200911_022	2.845	25.0000	1.0000	4

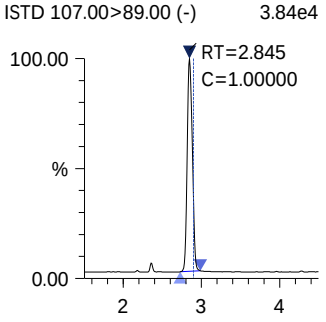
Perchlorate

Conc 8.79310
Area 178538



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 178486



20200915

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200915_044	Perchlorate6850b.lcm	1x	☒	3100806-05	9/15/2020 17:55
2	PERCHLORATE2		20200915_024	Perchlorate6850b.lcm	1x	☒	3100806-06	9/15/2020 15:10
3	PERCHLORATE3		20200915_046	Perchlorate6850b.lcm	1x	☒	3100806-07	9/15/2020 18:13
4	PERCHLORATE4		20200915_047	Perchlorate6850b.lcm	1x	☒	3100807-01	9/15/2020 18:21
5	PERCHLORATE5		20200915_048	Perchlorate6850b.lcm	1x	☒	3100807-02	9/15/2020 18:29
6	PERCHLORATE6		20200915_049	Perchlorate6850b.lcm	1x	☒	3100807-03	9/15/2020 18:37
7	PERCHLORATE7		20200915_029	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 15:49
8	PERCHLORATE8		20200915_051	Perchlorate6850b.lcm	1x	☒	3100807-05	9/15/2020 18:52
9	PERCHLORATE9		20200915_052	Perchlorate6850b.lcm	1x	☒	3100807-06	9/15/2020 19:00
10	PERCHLORATE10		20200915_053	Perchlorate6850b.lcm	1x	☒	3100807-07	9/15/2020 19:08
11	PERCHLORATE ICV		20200915_054	Perchlorate6850b.lcm	1x	☒	3100807-08	9/15/2020 19:16
12	LODV		20200915_055	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:24
13	E2000817-001		20200915_056	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:40
14	E2000817-001x10		20200915_057	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:48
15	PERCHLORATE7		20200915_058	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 19:56
16								
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Initial Calibration - Detailed Report

Calibration ID: EC2000032 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000032-01	PERCHLORATE2	20200915_024	09/15/2020 15:10
02	EC2000032-02	PERCHLORATE7	20200915_029	09/15/2020 15:49
03	EC2000032-03	PERCHLORATE1	20200915_044	09/15/2020 17:55
04	EC2000032-04	PERCHLORATE3	20200915_046	09/15/2020 18:13
05	EC2000032-05	PERCHLORATE4	20200915_047	09/15/2020 18:21
06	EC2000032-06	PERCHLORATE5	20200915_048	09/15/2020 18:29
07	EC2000032-07	PERCHLORATE6	20200915_049	09/15/2020 18:37
08	EC2000032-08	PERCHLORATE8	20200915_051	09/15/2020 18:52
09	EC2000032-09	PERCHLORATE9	20200915_052	09/15/2020 19:00
10	EC2000032-10	PERCHLORATE10	20200915_053	09/15/2020 19:08

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

Perchlorate **Quadratic** **Equal** **COD = 0.9998** **Y= -9.474E-05 X² + 0.1066 X + 0.00148**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5000	0.1319	02	10.0000	0.1001	03	0.1000	0.1399	04	0.7000	0.1079
05	1.0000	0.1089	06	2.0000	0.1096	07	5.0000	0.1086	08	20.0000	0.1062
09	30.0000	0.104	10	50.0000	0.1018						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.5000	0.605	21.0	02	10.0000	9.45	-5.5	03	0.1000	0.117	17.3
04	0.7000	0.695	-0.8	05	1.0000	1.01	0.8	06	2.0000	2.05	2.3
07	5.0000	5.10	2.0	08	20.0000	20.3	1.3	09	30.0000	30.1	0.2
10	50.0000	50.0	-0.1								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000032	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200915_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000032-11	T	Quadratic	10	9.462	ng/mL	-5.4	<= 15

ALS Group Houston

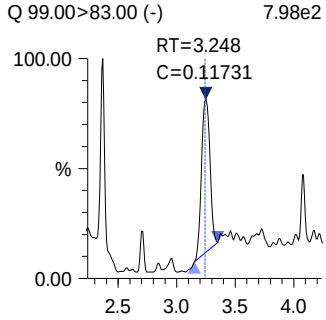
PERCHLORATE1

Date acquired: 9/15/2020 5:55:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_044.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	9/15/2020 5:55:29 PM	2833	0.11731	20200915_044	3.248	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/15/2020 5:55:29 PM	202512	1.00000	20200915_044	3.237	25.0000	1.0000	5

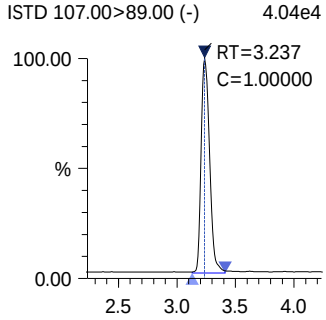
Perchlorate

Conc 0.11731
Area 2833



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202512



ALS Group Houston

PERCHLORATE2

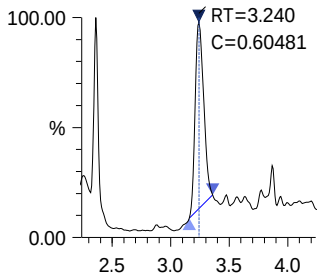
Date acquired: 9/15/2020 3:10:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_024.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	9/15/2020 3:10:04 PM	11634	0.60481	20200915_024	3.240	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/15/2020 3:10:04 PM	176422	1.00000	20200915_024	3.240	25.0000	1.0000	6

Perchlorate

Conc 0.60481
Area 11634

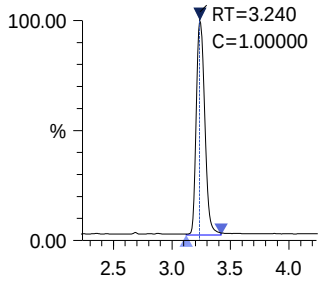
Q 99.00>83.00 (-) 2.66e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 176422

ISTD 107.00>89.00 (-) 3.50e4



ALS Group Houston

PERCHLORATE3

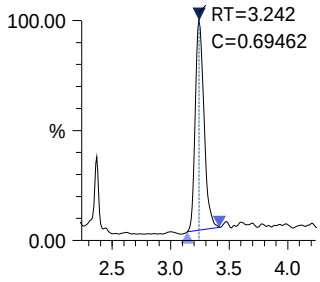
Date acquired: 9/15/2020 6:13:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/15/2020 6:13:20 PM	14722	0.69462	20200915_046	3.242	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/15/2020 6:13:20 PM	194971	1.00000	20200915_046	3.239	25.0000	1.0000	7

Perchlorate

Conc 0.69462
Area 14722

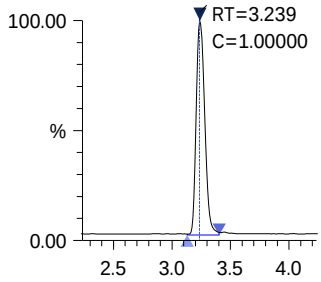
Q 99.00>83.00 (-) 2.91e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 194971

ISTD 107.00>89.00 (-) 3.85e4



ALS Group Houston

PERCHLORATE4

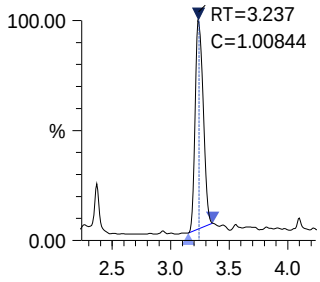
Date acquired: 9/15/2020 6:21:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_047.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	9/15/2020 6:21:15 PM	19524	1.00844	20200915_047	3.237	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/15/2020 6:21:15 PM	179246	1.00000	20200915_047	3.240	25.0000	1.0000	8

Perchlorate

Conc 1.00844
Area 19524

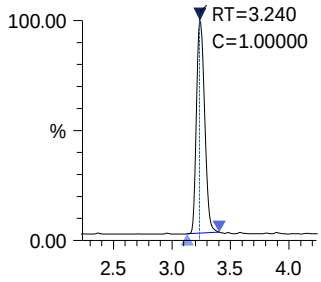
Q 99.00>83.00 (-) 4.23e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179246

ISTD 107.00>89.00 (-) 3.75e4



ALS Group Houston

PERCHLORATE5

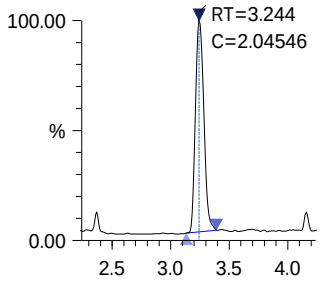
Date acquired: 9/15/2020 6:29:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_048.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	9/15/2020 6:29:08 PM	38522	2.04546	20200915_048	3.244	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/15/2020 6:29:08 PM	175734	1.00000	20200915_048	3.240	25.0000	1.0000	9

Perchlorate

Conc 2.04546
Area 38522

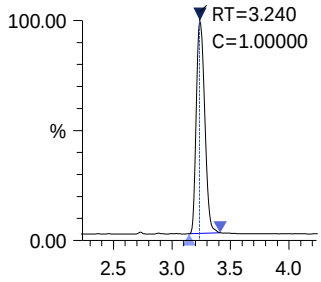
Q 99.00>83.00 (-) 7.92e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 175734

ISTD 107.00>89.00 (-) 3.56e4



ALS Group Houston

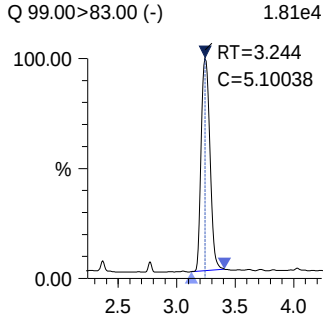
PERCHLORATE6

Date acquired: 9/15/2020 6:37:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_049.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	9/15/2020 6:37:05 PM	92162	5.10038	20200915_049	3.244	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/15/2020 6:37:05 PM	169754	1.00000	20200915_049	3.239	25.0000	1.0000	10

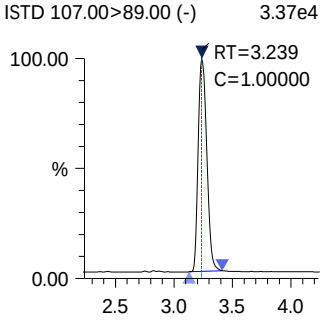
Perchlorate

Conc 5.10038
Area 92162



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 169754



ALS Group Houston

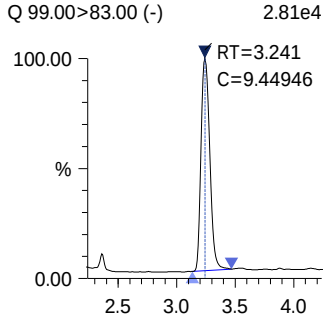
PERCHLORATE7

Date acquired: 9/15/2020 3:49:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_029.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	9/15/2020 3:49:35 PM	144012	9.44946	20200915_029	3.241	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/15/2020 3:49:35 PM	143911	1.00000	20200915_029	3.238	25.0000	1.0000	4

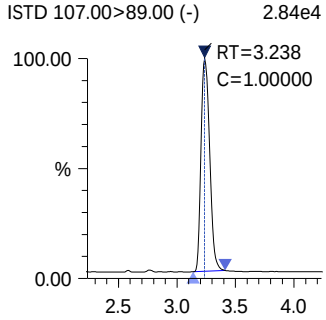
Perchlorate

Conc 9.44946
Area 144012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143911



ALS Group Houston

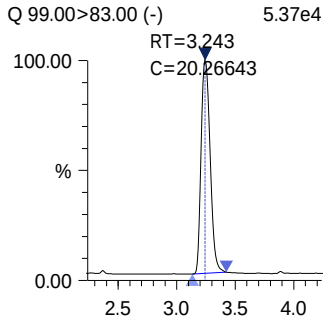
PERCHLORATE8

Date acquired: 9/15/2020 6:52:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_051.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	9/15/2020 6:52:54 PM	284308	20.26643	20200915_051	3.243	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/15/2020 6:52:54 PM	133870	1.00000	20200915_051	3.240	25.0000	1.0000	11

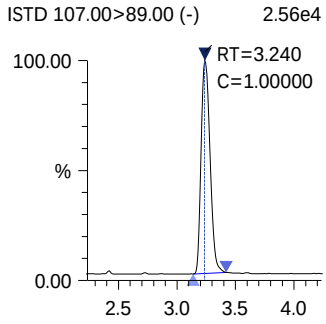
Perchlorate

Conc 20.26643
Area 284308



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 133870



ALS Group Houston

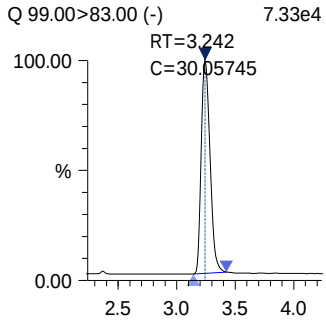
PERCHLORATE9

Date acquired: 9/15/2020 7:00:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_052.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	9/15/2020 7:00:50 PM	377183	30.05745	20200915_052	3.242	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/15/2020 7:00:50 PM	120846	1.00000	20200915_052	3.240	25.0000	1.0000	12

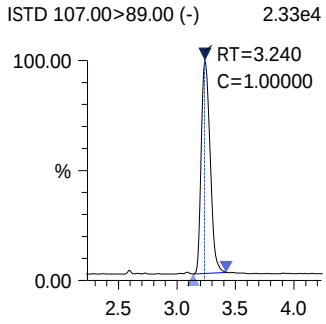
Perchlorate

Conc 30.05745
Area 377183



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 120846



ALS Group Houston

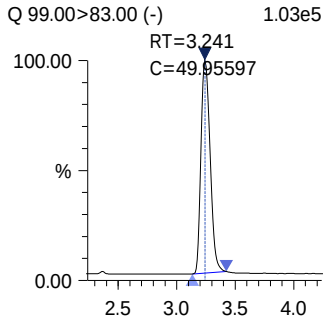
PERCHLORATE10

Date acquired: 9/15/2020 7:08:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_053.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	9/15/2020 7:08:43 PM	553330	49.95597	20200915_053	3.241	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/15/2020 7:08:43 PM	108660	1.00000	20200915_053	3.240	25.0000	1.0000	13

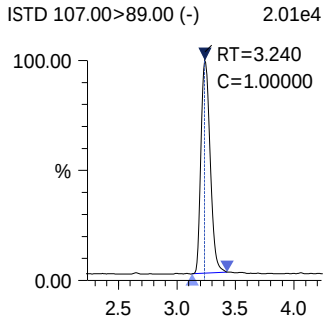
Perchlorate

Conc 49.95597
Area 553330



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108660



ALS Group Houston

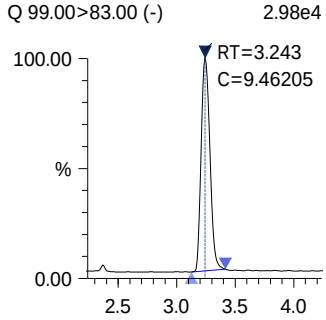
PERCHLORATEICV

Date acquired: 9/15/2020 7:16:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_054.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	9/15/2020 7:16:39 PM	152650	9.46205	20200915_054	3.243	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/15/2020 7:16:39 PM	152342	1.00000	20200915_054	3.241	25.0000	1.0000	14

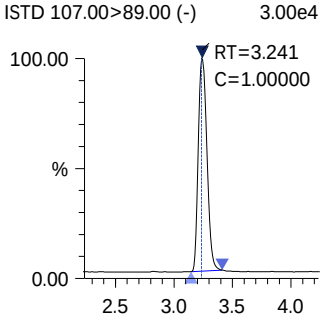
Perchlorate

Conc 9.46205
Area 152650



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 152342



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

20200911

ALS Environmental

ICAL Date: 9/11/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000031**

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		20200911_011	Perchlorate6850b.lcm	1x	☒	3100806-05	9/11/2020 17:17
2	PERCHLORATE2		20200911_012	Perchlorate6850b.lcm	1x	☒	3100806-06	9/11/2020 17:25
3	PERCHLORATE3		20200911_013	Perchlorate6850b.lcm	1x	☒	3100806-07	9/11/2020 17:33
4	PERCHLORATE4		20200911_014	Perchlorate6850b.lcm	1x	☒	3100807-01	9/11/2020 17:41
5	PERCHLORATE5		20200911_015	Perchlorate6850b.lcm	1x	☒	3100807-02	9/11/2020 17:49
6	PERCHLORATE6		20200911_016	Perchlorate6850b.lcm	1x	☒	3100807-03	9/11/2020 17:56
7	PERCHLORATE7		20200911_017	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 18:04
8	PERCHLORATE8		20200911_018	Perchlorate6850b.lcm	1x	☒	3100807-05	9/11/2020 18:12
9	PERCHLORATE9		20200911_019	Perchlorate6850b.lcm	1x	☒	3100807-06	9/11/2020 18:20
10	PERCHLORATE10		20200911_020	Perchlorate6850b.lcm	1x	☒	3100807-07	9/11/2020 18:28
11	LODV		20200911_007	Perchlorate6850b.lcm	1x	☒		9/11/2020 16:05
12	IB		20200911_021	Perchlorate6850b.lcm	1x	☒		9/11/2020 18:36
13	PERCHLORATEICV		20200911_022	Perchlorate6850b.lcm	1x	☒	3100807-08	9/11/2020 18:44
14	EQ2000400-01		20200911_023	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:00
15	EQ2000400-02		20200911_024	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:07
16	EQ2000400-03		20200911_025	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:15
17	E2000817-001		20200911_026	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:23
18	E2000817-001x10		20200911_027	Perchlorate6850b.lcm	10x	☒		9/11/2020 19:31
19	PERCHLORATE7		20200911_028	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 19:39
20	EQ2000419-01		20200911_029	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:47
21	EQ2000419-02		20200911_030	Perchlorate6850b.lcm	1x	☒		9/11/2020 19:55
22	EQ2000419-03		20200911_031	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:03
23	E2000825-001		20200911_032	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:10
24	EQ2000418-01		20200911_033	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:18
25	EQ2000418-02		20200911_034	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:26
26	EQ2000418-03		20200911_035	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:34
27	E2000812-01		20200911_036	Perchlorate6850b.lcm	1x	☒		9/11/2020 20:42
28	PERCHLORATE7		20200911_037	Perchlorate6850b.lcm	1x	☒	3100807-04	9/11/2020 20:50
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20200917

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200917_001	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:11
2	null		20200917_002	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:16
3	null		20200917_003	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:21
4	IB		20200917_004	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:26
5	IB		20200917_005	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:34
6	LODV		20200917_006	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:42
7	PERCHLORATE7		20200917_007	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 14:50
8	E2000825-001x2		20200917_008	Perchlorate6850b.lcm	2x	☒		9/17/2020 14:58
9	PERCHLORATE7		20200917_009	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:05
10	E2000825-001		20200917_010	Perchlorate6850b.lcm	1x	☒		9/17/2020 15:40
11	PERCHLORATE7		20200917_011	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:48
12	EQ2000436-01		20200917_012	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:11
13	EQ2000436-02		20200917_013	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:19
14	EQ2000436-03		20200917_014	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:27
15	E2000845-001		20200917_015	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:35
16	E2000868-001DNU		20200917_016	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:42
17	E2000869-001		20200917_017	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:50
18	E2000870-001		20200917_018	Perchlorate6850b.lcm	10x	☒		9/17/2020 16:58
19	E2000870-002		20200917_019	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:06
20	PERCHLORATE7		20200917_020	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 17:14
21	IB		20200917_021	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:39
22	EQ2000869-01RR		20200917_022	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:47
23	EQ2000870-01RR		20200917_023	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:55
24	EQ2000870-02RR		20200917_024	Perchlorate6850b.lcm	1x	☒		9/17/2020 18:02
25	EQ2000868-01X1000		20200917_025	Perchlorate6850b.lcm	1000x	☒		9/17/2020 18:10
26	PERCHLORATE7		20200917_026	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 18:18
27								
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Tiger-Sul Products
Project: Perchlorate

Service Request: E2000812
Date Analyzed: 9/11/20

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\20200911\20200911_028

Calibration Date: 9/11/20
Calibration ID: EC2000031
Analysis Lot: 694863
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.61	0.1138	0.09799	-13.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Tiger-Sul Products
Project: Perchlorate

Service Request: E2000812
Date Analyzed: 9/11/20

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\20200911\20200911_037

Calibration Date: 9/11/20
Calibration ID: EC2000031
Analysis Lot: 694863
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.58	0.1138	0.09761	-14.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090080

Service Request: E2000825
Date Analyzed: 9/17/20

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\20200917\20200917_007

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695632
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.88	NA	NA	NA	-11.2	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090080

Service Request: E2000825
Date Analyzed: 9/17/20

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\20200917\20200917_009

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695632
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.67	NA	NA	NA	-13.3	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090080

Service Request: E2000825
Date Analyzed: 9/17/20 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\20200917\20200917_007
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000438-01
Analysis Lot: 695632
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000438-01	138,337	3.22
LH18/24-SP650_090120-BIX	E2000825-001	143,744	3.21

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:**	E2000825
Project:	HS20090080	**Date Analyzed:**	9/17/20 15:05

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_009	**Lab Code:**	EQ2000438-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695632
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000438-02	139,974	3.22

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

ALS Group Houston

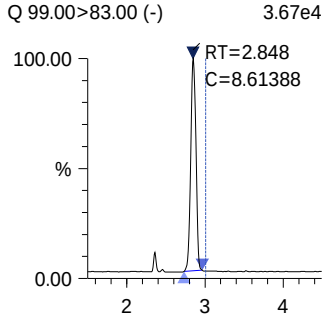
PERCHLORATE7

Date acquired: 9/11/2020 7:39:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_028.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	9/11/2020 7:39:25 PM	172301	8.61388	20200911_028	2.848	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/11/2020 7:39:25 PM	175836	1.00000	20200911_028	2.848	25.0000	1.0000	4

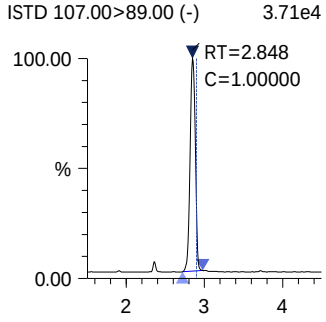
Perchlorate

Conc 8.61388
Area 172301



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 175836



ALS Group Houston

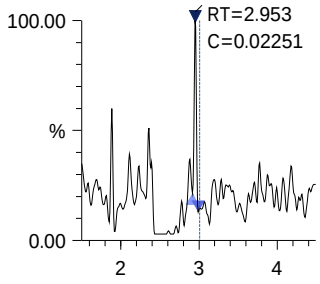
EQ2000419-01

Date acquired: 9/11/2020 7:47:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_029.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	EQ2000419-01	9/11/2020 7:47:19 PM	524	0.02251	20200911_029	2.953	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000419-01	9/11/2020 7:47:19 PM	204666	1.00000	20200911_029	2.848	25.0000	1.0000	7

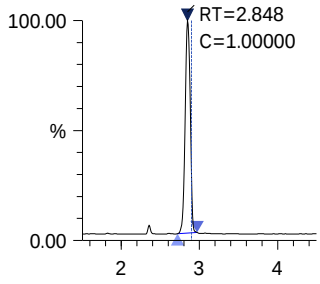
Perchlorate

Conc 0.02251
Area 524
Q 99.00>83.00 (-) 3.18e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 204666
ISTD 107.00>89.00 (-) 4.46e4



ALS Group Houston

EQ2000419-02

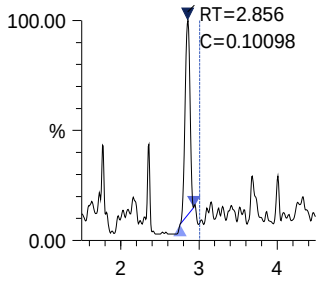
Date acquired: 9/11/2020 7:55:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_030.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000419-02	9/11/2020 7:55:13 PM	2458	0.10098	20200911_030	2.856	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	EQ2000419-02	9/11/2020 7:55:13 PM	214025	1.00000	20200911_030	2.848	25.0000	1.0000	8

Perchlorate

Conc 0.10098
Area 2458

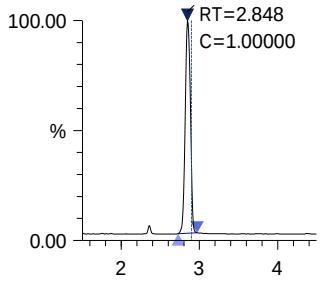
Q 99.00>83.00 (-) 6.04e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 214025

ISTD 107.00>89.00 (-) 4.58e4



ALS Group Houston

EQ2000419-03

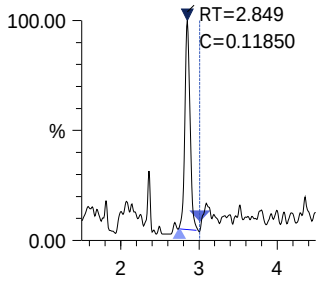
Date acquired: 9/11/2020 8:03:03 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_031.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000419-03	9/11/2020 8:03:03 PM	2701	0.11850	20200911_031	2.849	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	EQ2000419-03	9/11/2020 8:03:03 PM	200360	1.00000	20200911_031	2.850	25.0000	1.0000	9

Perchlorate

Conc 0.11850
Area 2701

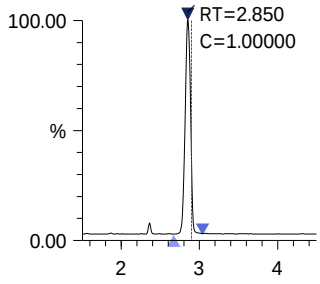
Q 99.00>83.00 (-) 6.59e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200360

ISTD 107.00>89.00 (-) 3.99e4



ALS Group Houston

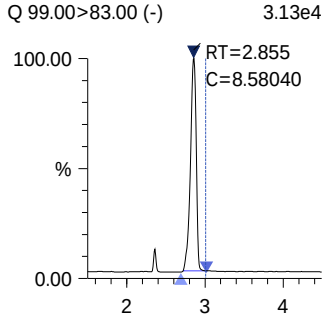
PERCHLORATE7

Date acquired: 9/11/2020 8:50:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200911\20200911_037.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	9/11/2020 8:50:25 PM	168032	8.58040	20200911_037	2.855	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/11/2020 8:50:25 PM	172148	1.00000	20200911_037	2.853	25.0000	1.0000	4

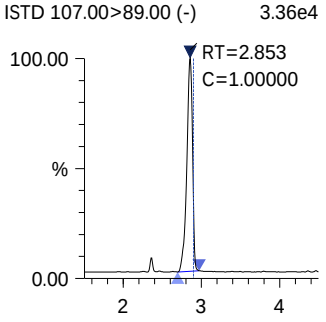
Perchlorate

Conc 8.58040
Area 168032



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 172148



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September 15, 2020 **Analytical Report for Service Request No:** K2007609

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 September 03, 2020
For your reference, these analyses have been assigned our service request number **K2007609.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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: K2007609
Date Received: 09/03/2020

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 09/03/2020. 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 09/15/2020

Chain of Custody

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K20071609

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www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14604**

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:	HS20090080
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090080-01**	**LH18/24-SP650_090120**	**Water**	**01 Sep 2020 14:00**
	TOC Analysis for DOD Level IV			10 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: 9/2/2020 1800

Received By: RJ Mod ALS KELSO Date/Time: 9/3/20 0930

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

PM VL

Cooler Receipt and Preservation Form

Client ALS-Houston Service Request K20 074009

Received: 9/3/20 Opened: 9/3/20 By: [illegible] Unloaded: 9/3/20 By: IK

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
1.6	—	IR01	14604			1891 8879 9914	

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

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:**	K2007609
Project:	ALS Houston DOD TOC	**Date Collected:**	09/1/20
Sample Matrix:	Water	**Date Received:**	09/3/20
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_090120	K2007609-001	**2.14**	0.50	0.20	0.07	1	09/11/20 16:06	
Method Blank	K2007609-MB	ND U	0.50	0.20	0.07	1	09/11/20 16:06	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007609
Project:	ALS Houston DOD TOC	**Date Analyzed:**	09/11/20
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:	694702

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2007609-LCS	26.5	25.0	106	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2007609
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	694702	KQ2012952-09	09/11/20 16:06	25.0	25.8	103	90-110
CCV2	694702	KQ2012952-10	09/11/20 16:06	25.0	25.5	102	90-110
CCV3	694702	KQ2012952-11	09/11/20 16:06	25.0	25.4	102	90-110
CCV4	694702	KQ2012952-12	09/11/20 16:06	25.0	25.3	101	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2007609
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	694702	KQ2012952-05	09/11/20 16:06	0.50	0.20	0.07	ND	U
CCB2	694702	KQ2012952-06	09/11/20 16:06	0.50	0.20	0.07	ND	U
CCB3	694702	KQ2012952-07	09/11/20 16:06	0.50	0.20	0.07	ND	U
CCB4	694702	KQ2012952-08	09/11/20 16:06	0.50	0.20	0.07	ND	U

Raw Data

ALS Environmental—Kelso Laboratory
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General Chemistry

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Work Request # 7337 7471 7552 7609 7873 7874

Tier: II II II IV II II

Date Analyzed: 9-11-20

Analyst: MAS Run # 694702

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:

7471-1 DUP 23% Sample is less than 5 times the MRL

Final Approved by: _____ Date: 9/15/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 694702 **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
K2007337-001	Carbon, Total Organic	N/A		Water	0.46 mg/L	10 mL	0.46 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-002	Carbon, Total Organic	N/A		Water	0.52 mg/L	10 mL	0.52 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-003	Carbon, Total Organic	N/A		Water	0.77 mg/L	10 mL	0.77 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-004	Carbon, Total Organic	N/A		Water	0.71 mg/L	10 mL	0.71 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-005	Carbon, Total Organic	N/A		Water	0.65 mg/L	10 mL	0.65 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-006	Carbon, Total Organic	N/A		Water	0.31 mg/L	10 mL	0.31 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-007	Carbon, Total Organic	N/A		Water	0.90 mg/L	10 mL	0.90 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007337-008	Carbon, Total Organic	N/A		Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007471-001	Carbon, Total Organic	N/A		Water	0.20 mg/L	10 mL	0.20 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007471-002	Carbon, Total Organic	N/A		Water	0.42 mg/L	10 mL	0.42 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007471-003	Carbon, Total Organic	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007471-004	Carbon, Total Organic	N/A		Water	0.21 mg/L	10 mL	0.21 mg/L J	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007552-001	Carbon, Total Organic	N/A		Drinking Water	0.25 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	I
K2007609-001	Carbon, Total Organic	N/A		Water	2.14 mg/L	10 mL	2.14 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	IV
K2007873-001	Carbon, Dissolved Organic (DOC)	N/A		Water	1.05 mg/L	10 mL	1.05 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007873-001	Carbon, Total Organic	N/A		Water	1.11 mg/L	10 mL	1.11 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007874-001	Carbon, Dissolved Organic (DOC)	N/A		Water	0.63 mg/L	10 mL	0.63 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
K2007874-001	Carbon, Total Organic	N/A		Water	0.68 mg/L	10 mL	0.68 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-01	Carbon, Total Organic	MS	K2007471-001	Water	25.96 mg/L	10 mL	26.0 mg/L	1	0.07	0.50	103		9/11/20 16:06:00	N	II
KQ2012952-02	Carbon, Total Organic	DUP	K2007471-001	Water	0.25 mg/L	10 mL	0.25 mg/L J	1	0.07	0.50		23*	9/11/20 16:06:00	N	II
KQ2012952-03	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-03	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-04	Carbon, Dissolved Organic (DOC)	LCS		Water	26.53 mg/L	10 mL	26.5 mg/L	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-04	Carbon, Total Organic	LCS		Water	26.53 mg/L	10 mL	26.5 mg/L	1	0.07	0.50	106		9/11/20 16:06:00	N	II
KQ2012952-05	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-06	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-07	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-08	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	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:** MSPECHT **Analysis Lot:** 694702 **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
KQ2012952-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/11/20 16:06:00	N	II
KQ2012952-09	Carbon, Dissolved Organic (DOC)	CCV		Water	25.80 mg/L	10 mL	25.8 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-09	Carbon, Total Organic	CCV		Water	25.80 mg/L	10 mL	25.8 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-10	Carbon, Dissolved Organic (DOC)	CCV		Water	25.49 mg/L	10 mL	25.5 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-10	Carbon, Total Organic	CCV		Water	25.49 mg/L	10 mL	25.5 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-11	Carbon, Dissolved Organic (DOC)	CCV		Water	25.39 mg/L	10 mL	25.4 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-11	Carbon, Total Organic	CCV		Water	25.39 mg/L	10 mL	25.4 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-12	Carbon, Dissolved Organic (DOC)	CCV		Water	25.30 mg/L	10 mL	25.3 mg/L	1					9/11/20 16:06:00	N	II
KQ2012952-12	Carbon, Total Organic	CCV		Water	25.30 mg/L	10 mL	25.3 mg/L	1					9/11/20 16:06:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 091120A

Version: 1
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/09/11 16:06 - Friday

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 [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2007337-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2007337-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2007337-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2007337-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2007337-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2007337-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2007337-007	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	K2007337-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2007471-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2007471-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2007471-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2007471-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2007471-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2007471-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2007552-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2007609-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2007873-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	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	K2007874-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2007873-001 TOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2007874-001 TOC	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 - 091120A
Friday, September 11, 2020 04:06 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/09/12 10:50 - Saturday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	091120A	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)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/11 16:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.52	26.62	13.10	49.75	05:37
2	TC Clean	4.66	17.64	12.98	49.63	07:15
3	TC Clean	1.14	13.95	12.81	49.90	07:00
4	TC Clean	0.64	13.44	12.80	49.90	07:02

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/11 16:38

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.29	12.58	12.87	49.66	05:19
2	TC Clean	3.54	16.39	12.86	49.64	07:17
3	TC Clean	1.44	14.22	12.79	49.72	07:03
4	TC Clean	0.68	13.84	13.16	49.96	07:03

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/11 17:09

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.24	12.62	12.86	49.62	05:25
2	TC Clean	3.90	16.95	13.05	49.72	07:15
3	TC Clean	1.05	14.02	12.96	49.66	07:02
4	TC Clean	0.95	13.96	13.01	49.94	07:02

Sample Type: Blank (Creating v1445) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/09/11 17:41

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.12	12.65	12.78	49.58	05:27
2	TC Clean	4.60	17.43	12.83	49.71	07:19
3	TC Clean	1.91	14.76	12.85	49.70	07:00
4	TC Clean	1.68	14.55	12.87	49.64	07:02
5	Reagent Blank	5.98	18.95	12.96	49.95	08:10
6	Acid Blank	0.43	13.36	12.92	49.66	05:36

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.2026 ppm	0.0000 ppm	0.0000%	2020/09/11 18:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2026	2.0261	10.72	23.87	13.15	49.97	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.7995 ppm (PASS)	0.0000 ppm	0%	2020/09/11 18:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7995	257.9949	190.87	203.88	13.01	49.90	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 1

	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%	2020/09/11 18:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.24	22.14	12.90	49.85	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 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/11 19:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.70	21.73	13.03	49.89	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	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)	26.5318 ppm (PASS)	0.0000 ppm	0%	2020/09/11 19:26

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	26.5318	265.3180	196.01	209.03	13.02	49.92	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 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	ICS	0.2053 ppm	0.0000 ppm	0.0000%	2020/09/11 19:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2053	2.0532	10.74	23.60	12.86	49.88	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2007337-001	0.4581 ppm	0.0159 ppm	3.4800%	2020/09/11 19:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4468	4.4681	12.44	25.47	13.04	49.93	10:26
2	TOC	0.4693	4.6933	12.59	25.59	13.00	49.96	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2007337-002	0.5211 ppm	0.0194 ppm	3.7100%	2020/09/11 20:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5348	5.3477	13.05	25.97	12.91	49.96	10:29
2	TOC	0.5074	5.0739	12.86	25.88	13.02	49.98	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2007337-003	0.7712 ppm	0.0283 ppm	3.6700%	2020/09/11 20:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7512	7.5116	14.57	27.47	12.90	50.02	10:24
2	TOC	0.7912	7.9122	14.85	27.92	13.07	50.01	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC)	CAS_salt_010711	CAS_salt_010711

(v1445) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2007337-004	0.7083 ppm	0.0414 ppm	5.8500%	2020/09/11 21:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7376	7.3762	14.48	27.26	12.78	50.03	10:31
2	TOC	0.6790	6.7903	14.07	27.34	13.28	50.05	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2007337-005	0.6533 ppm	0.0156 ppm	2.3900%	2020/09/11 21:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6643	6.6435	13.96	26.97	13.01	50.06	10:27
2	TOC	0.6423	6.4225	13.81	26.96	13.16	50.08	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2007337-006	0.3067 ppm	0.0224 ppm	7.3000%	2020/09/11 22:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2909	2.9085	11.34	24.46	13.11	50.10	10:29
2	TOC	0.3225	3.2250	11.56	24.68	13.12	50.09	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2007337-007	0.9022 ppm	0.0213 ppm	2.3600%	2020/09/11 22:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8872	8.8716	15.52	28.61	13.09	50.10	10:29
2	TOC	0.9172	9.1724	15.74	28.93	13.20	50.11	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.4866 ppm (PASS)	0.0000 ppm	0%	2020/09/11 23:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.4866	254.8658	188.68	202.10	13.42	50.09	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 1

	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%	2020/09/11 23:26

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	21.70	13.15	50.10	10:35

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 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2007337-008	0.3683 ppm	0.0132 ppm	3.5900%	2020/09/11 23:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3777	3.7767	11.95	24.96	13.00	50.11	10:29
2	TOC	0.3590	3.5899	11.82	25.06	13.24	50.10	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2007471-001	0.1992 ppm	0.0048 ppm	2.4300%	2020/09/12 00:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1958	1.9577	10.68	23.77	13.09	50.11	10:29
2	TOC	0.2026	2.0261	10.72	24.14	13.41	50.12	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2007471-001DUP	0.2499 ppm	0.0002 ppm	0.0800%	2020/09/12 00:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2498	2.4980	11.05	24.28	13.23	50.11	10:28
2	TOC	0.2501	2.5008	11.06	24.29	13.24	50.13	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2007471-001MS	25.9644 ppm	0.3646 ppm	1.4000%	2020/09/12 01:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.7066	257.0659	189.63	202.78	13.15	50.12	10:26
2	TOC	26.2222	262.2221	193.25	206.42	13.18	50.11	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2007471-002	0.4190 ppm	0.0496 ppm	11.8400%	2020/09/12 01:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4541	4.5408	12.49	25.66	13.17	50.12	10:29
2	TOC	0.3839	3.8394	12.00	25.27	13.27	50.10	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2007471-003	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/12 02:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.71	21.91	13.20	50.11	10:29
2	TOC	0.0000	0.0000	8.31	21.73	13.42	50.12	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2007471-004	0.2050 ppm	0.0352 ppm	17.1600%	2020/09/12 02:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1801	1.8009	10.56	23.83	13.27	50.11	10:29

2	TOC	0.2298	2.2984	10.91	24.32	13.40	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2007552-001	0.2519 ppm	0.0554 ppm	22.0100%	2020/09/12 02:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2127	2.1273	10.79	24.13	13.34	50.12	10:26
2	TOC	0.2911	2.9114	11.34	24.60	13.25	50.11	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2007609-001	2.1421 ppm	0.0157 ppm	0.7300%	2020/09/12 03:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1310	21.3096	24.25	37.53	13.28	50.12	10:28
2	TOC	2.1532	21.5319	24.41	37.61	13.20	50.14	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2007873-001 DOC	1.0541 ppm	0.0230 ppm	2.1800%	2020/09/12 03:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0703	10.7035	16.81	29.99	13.18	50.12	10:29
2	TOC	1.0378	10.3784	16.58	29.97	13.39	50.14	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.3921 ppm (PASS)	0.0000 ppm	0%	2020/09/12 04:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3921	253.9207	188.01	201.24	13.23	50.14	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 1

	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%	2020/09/12 04:36

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.54	21.55	13.01	50.13	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 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/12 04:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.59	20.80	13.21	50.16	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS — From Schedule Version 1

	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)	25.9790 ppm (PASS)	0.0000 ppm	0%	2020/09/12 05:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.9790	259.7897	192.13	205.16	13.03	50.15	10:34

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 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2007874-001 DOC	0.6260 ppm	0.1000 ppm	15.9700%	2020/09/12 05:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6967	6.9671	14.19	27.50	13.31	50.16	10:25
2	TOC	0.5553	5.5529	13.20	26.45	13.25	50.17	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2007873-001 TOC	1.1149 ppm	0.0487 ppm	4.3700%	2020/09/12 05:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0805	10.8047	16.88	30.14	13.26	50.16	10:27
2	TOC	1.1493	11.4932	17.36	30.60	13.23	50.18	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2007874-001 TOC	0.6835 ppm	0.0203 ppm	2.9600%	2020/09/12 06:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6978	6.9785	14.20	27.34	13.15	50.20	10:28
2	TOC	0.6692	6.6919	14.00	27.06	13.06	50.18	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3017 (IC) (v1445)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.3010 ppm (PASS)	0.0000 ppm	0%	2020/09/12 06:45

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3010	253.0097	187.37	200.61	13.24	50.18	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 1

	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%	2020/09/12 07:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.07	21.34	13.26	50.17	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
v1444	1.5973	0.0330	0.0000	0.0000	0.0000	2020/09/10 13:22	Fusion1 (Fusion1)
v1445	1.9943	0.4320	0.0000	0.0000	0.0000	2020/09/11 18:27	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	2020/09/12 07:14

ALS Environmental

StarLIMS Ru: 694702

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-40-C 50 ppm LCS: 19-GEN-8-41k 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-08-41-I

21 % H3PO4: 19-GEN-08-42b

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MK for MS	Date Analyzed: 9-11-20
Reviewed By:	Date Reviewed: 9/15/20

HS20090080 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20090080

NIT-AMN-W-ISE 13503

ALS Laboratory Group

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD					Date: 9/8/20 3:30 PM		
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F							
Probe Calibration Date: 9/8/20		Cal Std ID: 3140648(03-08)			Probe ID: X01-11806		
Std Level		mV	Conc., mg/L:		Sodium Thiosulfate ID:		
STD 1 (mg/L):	0.2	135.7	0.200		Std Level	mV	Conc., mg/L:
STD 2 (mg/L):	1	95.7	0.999		STD 4 (mg/L): 10	35.8	10.008
STD 3 (mg/L):	5	52.6	5.002		STD 5 (mg/L): 50	-6.6	49.990
LSC / MS Spike ID:	3100602320				ICAL Date & Slope:		
ICV Cal STD ID:	3140648(03)				98.1 %, | -57.9 mV		
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		10.013			
CCB					0.007			
MBLK					0.007			
LCS					10.159			
MS20090031-01					0.155		-ve	
37-01					1.119		-ve	
50-01					10.426		+ve	Reactivated
37-01 MS					11.462			
37-01 MSD					11.782			
103-01					1.937		-ve	
103-02					0.179		-ve	
103-03					0.055		-ve	
CCV					9.942			
CCB					0.008			
MS20090 103-04					0.730		-ve	
103-05					33.702		-ve	
103-06					1.063		-ve	
103-07					1.925		-ve	
103-08					0.098		-ve	
103-09					0.056		-ve	
103-10					2.388		-ve	
103-11					2.282		-ve	
103-12					0.138		-ve	
106-01					0.057		-ve	
CCV					10.381			

Batch ID:	Reported By	Reviewed By:
368159 | 368162	MD	YP

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NH3-AmIV-W ISE

ALS Laboratory Group

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD	Date: 9/8/20
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date: 9/8/20		Cal Std ID: 3140458(03-05)		Probe ID: X01-11806		
Std Level		mV	Conc., mg/L:	Sodium Thiosulfate ID:		
STD 1 (mg/L):	0.2	135.7	0.200	Std Level	mV	Conc., mg/L:
STD 2 (mg/L):	1	95.7	0.999	STD 4 (mg/L): 10	35.8	10.605
STD 3 (mg/L):	5	52.6	5.002	STD 5 (mg/L): 50	-46	49.490
LSC / MS Spike ID: 3100602320				ICAL Date & Slope:		
ICV Cal STD ID: 3140458(03)				98.1% / -57.9 mV		
DPD Reagent ID: 3100602302						

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
CCB		50ml	50ml		0.009			
1452009106-02					0.020			
160-01					0.478		-ve	
160-02					0.436		-ve	
160-03		5ml		10X	46.650		-ve	
160-04		5ml		10X	43.862		-ve	
CCV		50ml			10.012			
CCB		1			0.010			

Batch ID:	Reported By: MD	Reviewed By:

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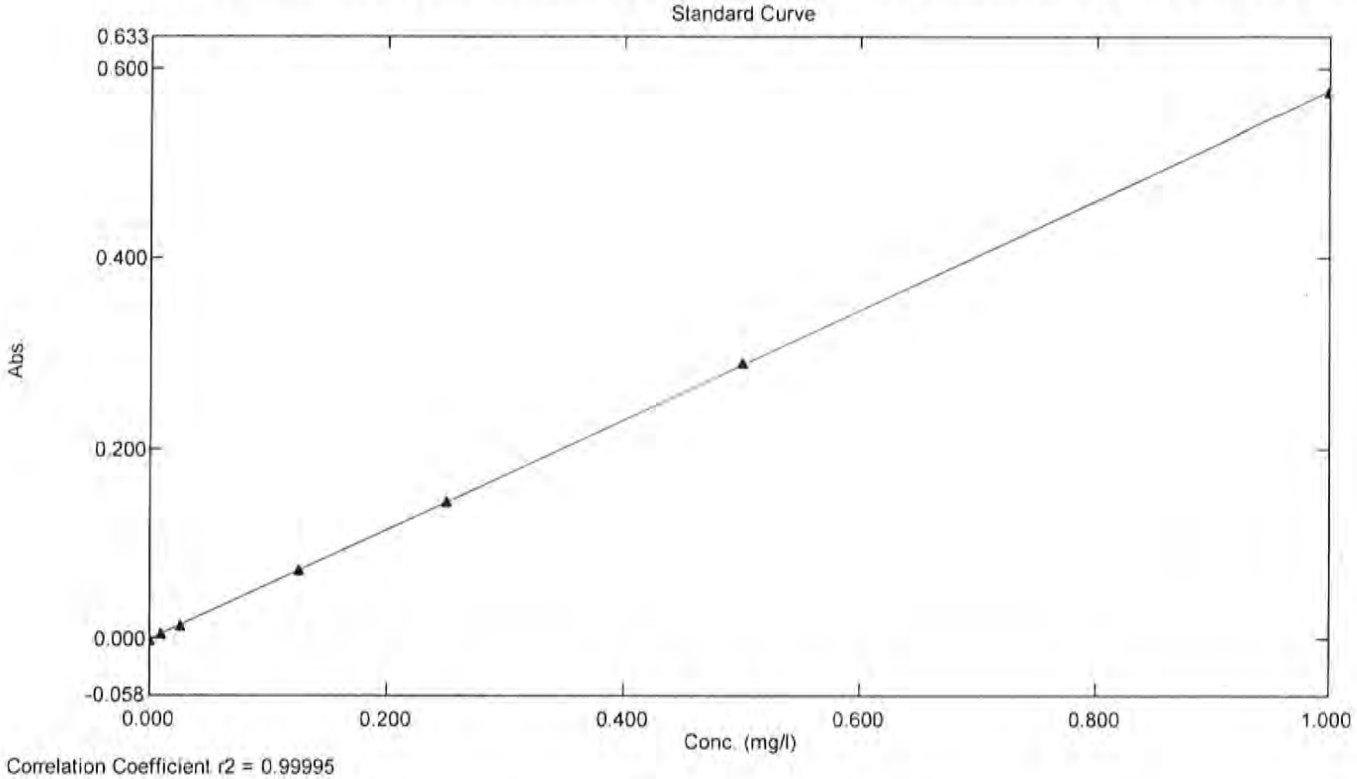
HS20090080 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20090080

Standard Table Report

09/11/2020 03:46:01 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\090120A_P_ORTHO.pho..



Correlation Coefficient r2 = 0.99995

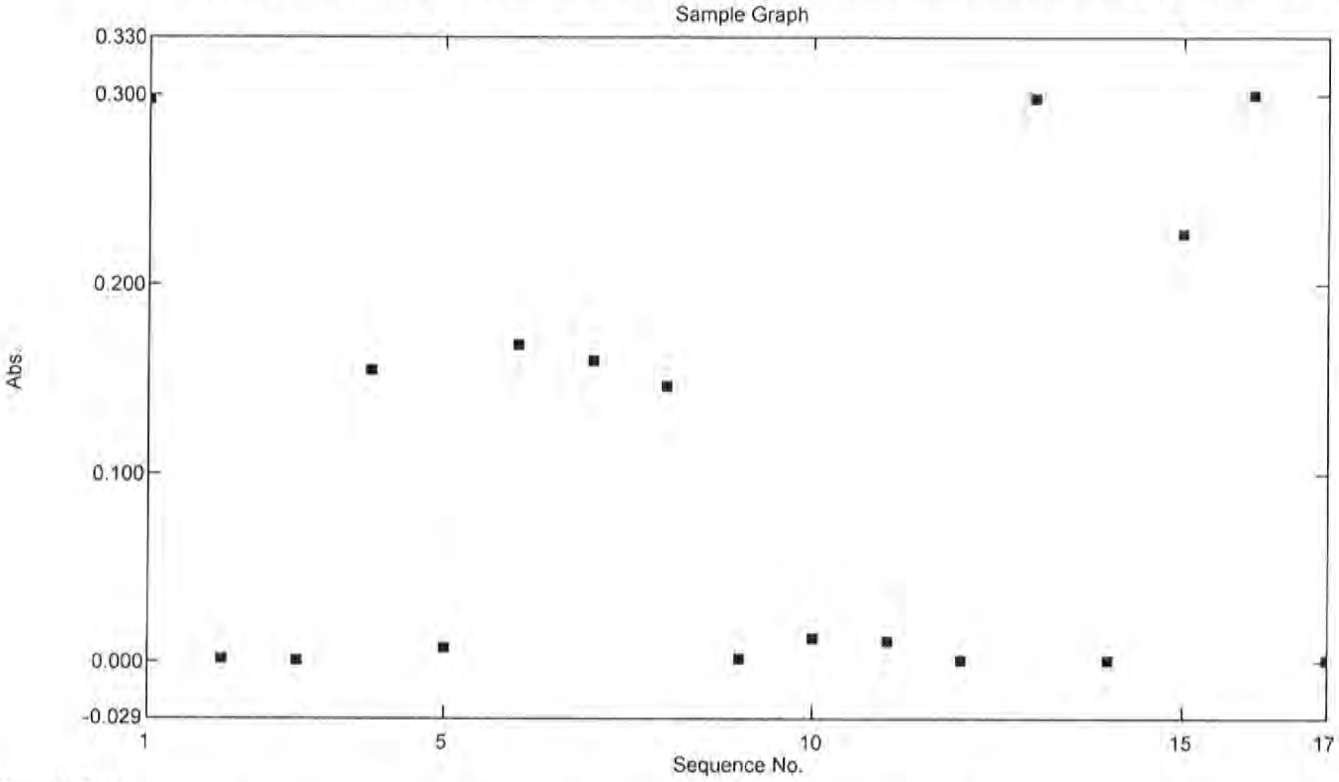
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.005	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

09/11/2020 03:46:04 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\090120A_P_ORTHO.pho.



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.517	0.298	314064002 WC-14
2	CCB	Unknown		0.003	0.002	
3	MBLK	Unknown		0.001	0.001	
4	LCS	Unknown		0.268	0.155	314064001 WC-14
5	HS20081306.11	Unknown		0.013	0.007	09:35AM
6	HS20081306.11MS	Unknown		0.291	0.168	09:36AM
7	HS20081306.11MS D	Unknown		0.276	0.159	09:36AM
8	HS20081306.22	Unknown		0.253	0.146	DF:5X,09:38AM
9	HS20081306.23	Unknown		0.003	0.002	09:39AM
10	HS20090016.01	Unknown		0.022	0.013	09:39AM
11	HS20090016.02	Unknown		0.019	0.011	09:39AM
12	HS20090016.03	Unknown		0.001	0.001	09:40AM
13	CCV2	Unknown		0.517	0.298	
14	CCB2	Unknown		0.002	0.001	C-314064302 UV-11
15	HS20090080.01	Unknown		0.394	0.227	PF:10X,04:49PM
16	CCV3	Unknown		0.521	0.300	
17	CCB3	Unknown		0.002	0.001	
18						

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WorkOrder: HS20090475

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

05-Oct-2020

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- HS20090475 Wet Chem Raw Data (P-ORTHO)

HS20090475 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20090475

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September 22, 2020

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

Work Order: **HS20090475**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Sep 10, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090475

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090475-01	LH18/24-SP650_090920	Water		09-Sep-2020 14:00	10-Sep-2020 10:00	☐
HS20090475-02	LH18/24-SP650_090920-AIX	Water		09-Sep-2020 14:00	10-Sep-2020 10:00	☐

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090475

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R368566

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

WetChemistry by Method E365.3

Batch ID: R368372

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

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20090475
Sample ID: LH18/24-SP650_090920
Lab ID:HS20090475-01
Collection Date: 09-Sep-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)	**9.1**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	15-Sep-2020 10:37
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.64**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	11-Sep-2020 11:30
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	22-Sep-2020 09:33

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

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20090475
Sample ID: LH18/24-SP650_090920-AIX Lab ID:HS20090475-02
Collection Date: 09-Sep-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	21-Sep-2020 13:22

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

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090475

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R368372 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20090475-01	LH18/24-SP650_090920	09 Sep 2020 14:00			11 Sep 2020 11:30	10
Batch ID: R368566 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20090475-01	LH18/24-SP650_090920	09 Sep 2020 14:00			15 Sep 2020 10:37	1
Batch ID: R368953 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20090475-02	LH18/24-SP650_090920-AIX	09 Sep 2020 14:00			21 Sep 2020 13:22	1
Batch ID: R368997 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20090475-01	LH18/24-SP650_090920	09 Sep 2020 14:00			22 Sep 2020 09:33	1

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090475

QC BATCH REPORT

Batch ID: R368372 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-368372** Units: **mg/L** Analysis Date: **11-Sep-2020 11:30**
Client ID: Run ID: **UV-2450_368372** SeqNo: **5734973** 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-368372** Units: **mg/L** Analysis Date: **11-Sep-2020 11:30**
Client ID: Run ID: **UV-2450_368372** SeqNo: **5734974** 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)	0.272	0.0250	0.25	0	109	85 - 115				

MS Sample ID: **HS20090475-01MS** Units: **mg/L** Analysis Date: **11-Sep-2020 11:30**
Client ID: **LH18/24-SP650_090920** Run ID: **UV-2450_368372** SeqNo: **5734976** 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)	4.89	0.250	2.5	2.64	90.0	80 - 120				

MSD Sample ID: **HS20090475-01MSD** Units: **mg/L** Analysis Date: **11-Sep-2020 11:30**
Client ID: **LH18/24-SP650_090920** Run ID: **UV-2450_368372** SeqNo: **5734977** 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)	5.12	0.250	2.5	2.64	99.2	80 - 120	4.89	4.6	20	

The following samples were analyzed in this batch: HS20090475-01

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090475

QC BATCH REPORT

Batch ID: R368566 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-368566** Units: **mg/L** Analysis Date: **15-Sep-2020 10:37**
Client ID: Run ID: **WetChem_HS_368566** SeqNo: **5738989** 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-368566** Units: **mg/L** Analysis Date: **15-Sep-2020 10:37**
Client ID: Run ID: **WetChem_HS_368566** SeqNo: **5738990** 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)	11.06	0.20	10	0	111	80 - 120				

MS Sample ID: **HS20090573-01MS** Units: **mg/L** Analysis Date: **15-Sep-2020 10:37**
Client ID: Run ID: **WetChem_HS_368566** SeqNo: **5738992** 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)	11.09	0.20	10	0.1	110	80 - 120				

MSD Sample ID: **HS20090573-01MSD** Units: **mg/L** Analysis Date: **15-Sep-2020 10:37**
Client ID: Run ID: **WetChem_HS_368566** SeqNo: **5738993** 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)	11.1	0.20	10	0.1	110	80 - 120	11.09	0.108	20	

The following samples were analyzed in this batch: HS20090475-01

ALS Houston, US Date: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20090475**

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: 22-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090475

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090475-01	LH18/24-SP650_090920	Login	9/10/2020 3:40:54 PM	PMG	WET250
HS20090475-01	LH18/24-SP650_090920	Login	9/10/2020 3:40:54 PM	PMG	WET250
HS20090475-01	LH18/24-SP650_090920	Login	9/10/2020 3:40:54 PM	PMG	Sub
HS20090475-02	LH18/24-SP650_090920-AIX	Login	9/10/2020 3:40:54 PM	PMG	Sub

ALS Houston, US Date: 22-Sep-20

Sample Receipt Checklist

Work Order ID: HS20090475 **Date/Time Received:** **10-Sep-2020 10:00**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By:	/S/ Paresh M. Giga	10-Sep-2020 15:43	**Reviewed by:**	/S/ RJ Modashia	11-Sep-2020 13:23
	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):	1.1C U/c	IR31	
Cooler(s)/Kit(s):	45858		
Date/Time sample(s) sent to storage:	9/10/2020 15:50		
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

HS20090475
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_090920	Water	09/09/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_090920	Water	09/09/20 / 14:00		1			X		NONE	
LH18/24-SP650_090920_AIX	Water	09/09/20 / 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	09/09/20	14:30		9/10/20	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:
45858 O/C. 1.1° #31 C11-0.0

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

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

45858

CUSTODY SEAL

Date: 9/9/20 Time: 1430
Name: Scott Beesinger
Company: BHMT

Seal Broken By: SM
Date: 09/10/20

45858

Must Deliver Next Business Day
Time and Tempature Sensitive!

45858

ORIGIN ID:SGRA (903) 930-8193
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFRASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14AUG18
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3111

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-6668
REF: LHAAP 46 - #1

RMA:

FedEx Express

FedEx
TRK# 0221 4380 9531 7292

THU - 10 SEP 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

September 21, 2020 Service Request No:E2000845

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

Laboratory Results for: HS20090475

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory September 11, 2020
For your reference, these analyses have been assigned our service request number **E2000845.**

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.:**	E2000845
Project:	HS20090475	**Date Received:**	09/11/20
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 09/11/20.

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:

EQ2000436: 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: HS20090475

Service Request:E2000845

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000845-001	LH18/24-SP650_090920-AIX	9/9/2020	1400

Service Request Summary

Folder #: **E2000845**
Client Name: ALS Environmental - US
Project Name: HS20090475
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: 09/11/20
Internal Due Date: 9/24/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090475
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000845-001	LH18/24-SP650_090920-AIX	Water	09/09/20 1400	**IV**

Service Request Summary

Folder #: **E2000845**
Client Name: ALS Environmental - US
Project Name: HS20090475
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: 09/11/20
Internal Due Date: 9/24/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090475
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/24,level IV 10/1

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
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

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:** **14657**

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:	HS20090475
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090475-02**	**LH18/24-SP650_090920-AIX**	**Water**	**09 Sep 2020 14:00**
	SUB_Perch-6850			18 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: 9/11/20 12:14

Received By: [signature] Date/Time: 9/11/20 1214

Cooler ID(s): Temperature(s):

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-HI

Thermometer ID 1231

Date/Time Received: 9/11/26 Initials: CH Date/Time Logged in: 9/11/26 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?
-		9/11/26	1214	CH	0.7	☒
						☐
						☐
						☐

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#: 365762
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 9/17/20 14:12

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000845-001	LH18/24-SP650_090920-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000868-001	LH18/24-SP140_091520	.01	6850/ClO4 DOD			Water	10mL	
3	E2000869-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000870-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
5	E2000870-002	LH18/24-SP650_091520-BIX	.01	6850/ClO4 DOD			Water	10mL	
6	EQ2000436-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000436-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2000436-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000436-02 1.00µL EQ2000436-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000845-001 100.00µL E2000868-001 100.00µL E2000869-001 100.00µL E2000870-001 100.00µL E2000870-002 100.00µL EQ2000436-01 100.00µL
EQ2000436-02 100.00µL EQ2000436-03 100.00µL

Preparation Steps

Step: Preparation
Started: 9/17/20 14:12
Finished: 9/17/20 17:43
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 9/18/2020

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:**	E2000845
Project:	HS20090475	**Date Collected:**	9/ 9/20 1400
Sample Matrix:	Water	**Date Received:**	9/11/20
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:35
Sample Name:	LH18/24-SP650_090920-AIX	**Units:**	µg/L
Lab Code:	E2000845-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_015	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**2.49**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000845
Project:	HS20090475	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:11
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000436-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_012	**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: HS20090475
Sample Matrix: Water

Service Request: E2000845
Date Analyzed: 9/17/20

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: 365762

	Lab Control Sample EQ2000436-02			Duplicate Lab Control Sample EQ2000436-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.114	0.100	114	0.107	0.100	107	84 - 119	6	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:**	E2000845
Project:	HS20090475	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:19
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_013	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.114**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000845
Project:	HS20090475	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:27
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_014	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.107**		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

20200915

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200915_044	Perchlorate6850b.lcm	1x	☒	3100806-05	9/15/2020 17:55
2	PERCHLORATE2		20200915_024	Perchlorate6850b.lcm	1x	☒	3100806-06	9/15/2020 15:10
3	PERCHLORATE3		20200915_046	Perchlorate6850b.lcm	1x	☒	3100806-07	9/15/2020 18:13
4	PERCHLORATE4		20200915_047	Perchlorate6850b.lcm	1x	☒	3100807-01	9/15/2020 18:21
5	PERCHLORATE5		20200915_048	Perchlorate6850b.lcm	1x	☒	3100807-02	9/15/2020 18:29
6	PERCHLORATE6		20200915_049	Perchlorate6850b.lcm	1x	☒	3100807-03	9/15/2020 18:37
7	PERCHLORATE7		20200915_029	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 15:49
8	PERCHLORATE8		20200915_051	Perchlorate6850b.lcm	1x	☒	3100807-05	9/15/2020 18:52
9	PERCHLORATE9		20200915_052	Perchlorate6850b.lcm	1x	☒	3100807-06	9/15/2020 19:00
10	PERCHLORATE10		20200915_053	Perchlorate6850b.lcm	1x	☒	3100807-07	9/15/2020 19:08
11	PERCHLORATE ICV		20200915_054	Perchlorate6850b.lcm	1x	☒	3100807-08	9/15/2020 19:16
12	LODV		20200915_055	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:24
13	E2000817-001		20200915_056	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:40
14	E2000817-001x10		20200915_057	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:48
15	PERCHLORATE7		20200915_058	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 19:56
16								
17								
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36								

Initial Calibration - Detailed Report

Calibration ID: EC2000032 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000032-01	PERCHLORATE2	20200915_024	09/15/2020 15:10
02	EC2000032-02	PERCHLORATE7	20200915_029	09/15/2020 15:49
03	EC2000032-03	PERCHLORATE1	20200915_044	09/15/2020 17:55
04	EC2000032-04	PERCHLORATE3	20200915_046	09/15/2020 18:13
05	EC2000032-05	PERCHLORATE4	20200915_047	09/15/2020 18:21
06	EC2000032-06	PERCHLORATE5	20200915_048	09/15/2020 18:29
07	EC2000032-07	PERCHLORATE6	20200915_049	09/15/2020 18:37
08	EC2000032-08	PERCHLORATE8	20200915_051	09/15/2020 18:52
09	EC2000032-09	PERCHLORATE9	20200915_052	09/15/2020 19:00
10	EC2000032-10	PERCHLORATE10	20200915_053	09/15/2020 19:08

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

Perchlorate **Quadratic** **Equal** **COD = 0.9998** **Y= -9.474E-05 X² + 0.1066 X + 0.00148**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5000	0.1319	02	10.0000	0.1001	03	0.1000	0.1399	04	0.7000	0.1079
05	1.0000	0.1089	06	2.0000	0.1096	07	5.0000	0.1086	08	20.0000	0.1062
09	30.0000	0.104	10	50.0000	0.1018						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.5000	0.605	21.0	02	10.0000	9.45	-5.5	03	0.1000	0.117	17.3
04	0.7000	0.695	-0.8	05	1.0000	1.01	0.8	06	2.0000	2.05	2.3
07	5.0000	5.10	2.0	08	20.0000	20.3	1.3	09	30.0000	30.1	0.2
10	50.0000	50.0	-0.1								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000032	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200915_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000032-11	T	Quadratic	10	9.462	ng/mL	-5.4	<= 15

ALS Group Houston

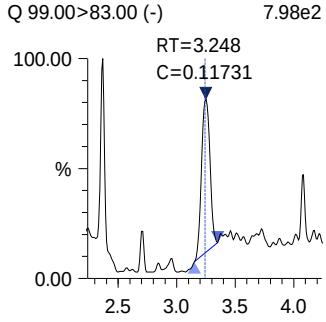
PERCHLORATE1

Date acquired: 9/15/2020 5:55:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_044.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	9/15/2020 5:55:29 PM	2833	0.11731	20200915_044	3.248	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/15/2020 5:55:29 PM	202512	1.00000	20200915_044	3.237	25.0000	1.0000	5

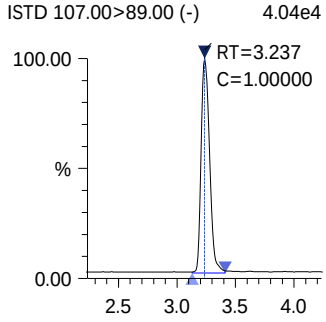
Perchlorate

Conc 0.11731
Area 2833



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202512



ALS Group Houston

PERCHLORATE2

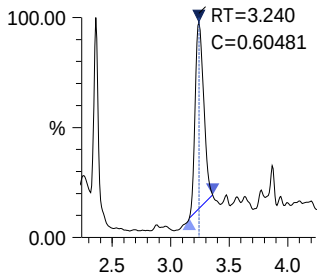
Date acquired: 9/15/2020 3:10:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_024.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	9/15/2020 3:10:04 PM	11634	0.60481	20200915_024	3.240	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/15/2020 3:10:04 PM	176422	1.00000	20200915_024	3.240	25.0000	1.0000	6

Perchlorate

Conc 0.60481
Area 11634

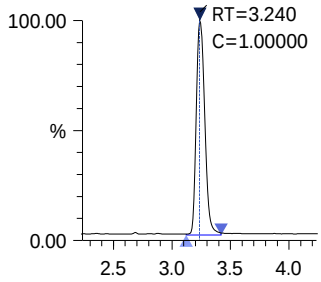
Q 99.00>83.00 (-) 2.66e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 176422

ISTD 107.00>89.00 (-) 3.50e4



ALS Group Houston

PERCHLORATE3

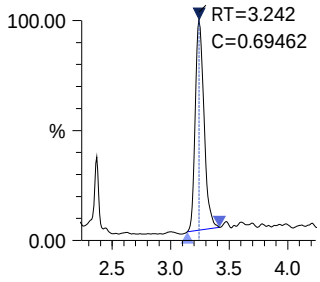
Date acquired: 9/15/2020 6:13:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/15/2020 6:13:20 PM	14722	0.69462	20200915_046	3.242	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/15/2020 6:13:20 PM	194971	1.00000	20200915_046	3.239	25.0000	1.0000	7

Perchlorate

Conc 0.69462
Area 14722

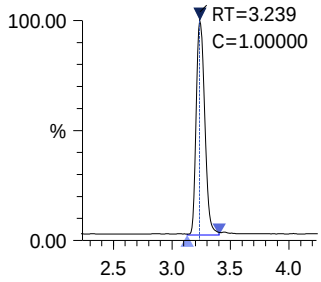
Q 99.00>83.00 (-) 2.91e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 194971

ISTD 107.00>89.00 (-) 3.85e4



ALS Group Houston

PERCHLORATE4

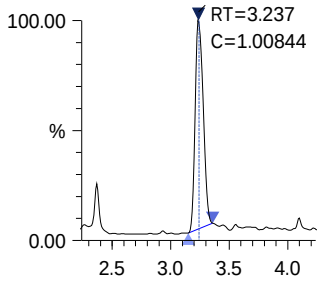
Date acquired: 9/15/2020 6:21:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_047.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	9/15/2020 6:21:15 PM	19524	1.00844	20200915_047	3.237	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/15/2020 6:21:15 PM	179246	1.00000	20200915_047	3.240	25.0000	1.0000	8

Perchlorate

Conc 1.00844
Area 19524

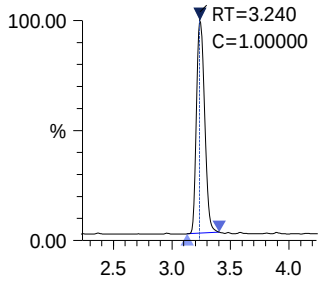
Q 99.00>83.00 (-) 4.23e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179246

ISTD 107.00>89.00 (-) 3.75e4



ALS Group Houston

PERCHLORATE5

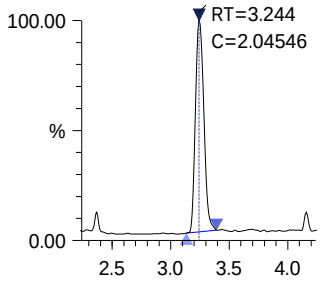
Date acquired: 9/15/2020 6:29:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_048.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	9/15/2020 6:29:08 PM	38522	2.04546	20200915_048	3.244	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/15/2020 6:29:08 PM	175734	1.00000	20200915_048	3.240	25.0000	1.0000	9

Perchlorate

Conc 2.04546
Area 38522

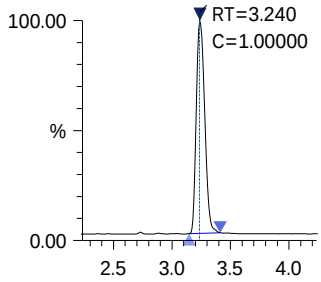
Q 99.00>83.00 (-) 7.92e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 175734

ISTD 107.00>89.00 (-) 3.56e4



ALS Group Houston

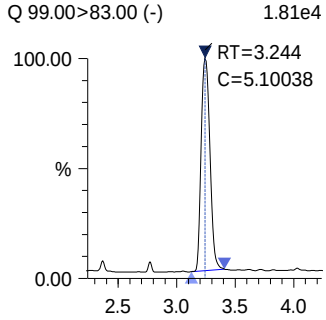
PERCHLORATE6

Date acquired: 9/15/2020 6:37:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_049.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	9/15/2020 6:37:05 PM	92162	5.10038	20200915_049	3.244	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/15/2020 6:37:05 PM	169754	1.00000	20200915_049	3.239	25.0000	1.0000	10

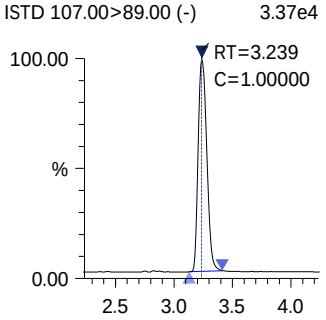
Perchlorate

Conc 5.10038
Area 92162



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 169754



ALS Group Houston

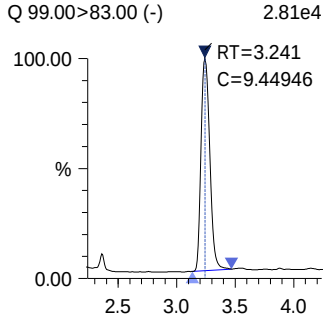
PERCHLORATE7

Date acquired: 9/15/2020 3:49:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_029.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	9/15/2020 3:49:35 PM	144012	9.44946	20200915_029	3.241	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/15/2020 3:49:35 PM	143911	1.00000	20200915_029	3.238	25.0000	1.0000	4

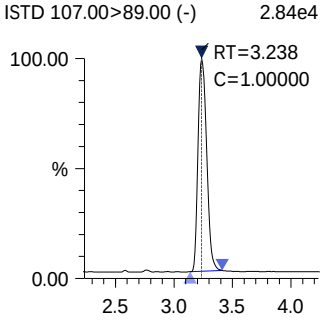
Perchlorate

Conc 9.44946
Area 144012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143911



ALS Group Houston

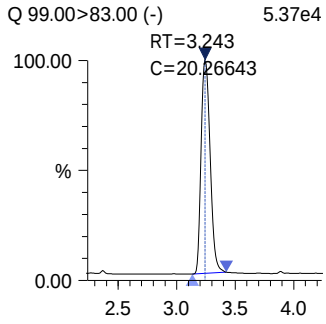
PERCHLORATE8

Date acquired: 9/15/2020 6:52:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_051.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	9/15/2020 6:52:54 PM	284308	20.26643	20200915_051	3.243	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/15/2020 6:52:54 PM	133870	1.00000	20200915_051	3.240	25.0000	1.0000	11

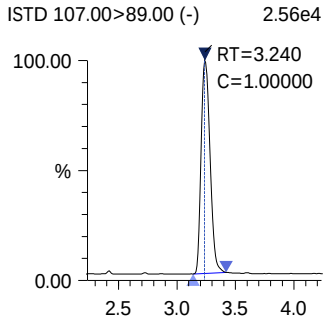
Perchlorate

Conc 20.26643
Area 284308



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 133870



ALS Group Houston

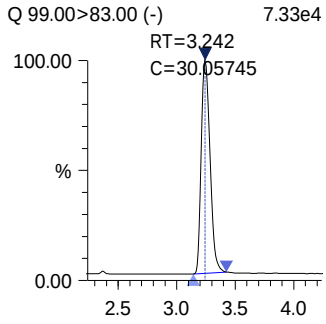
PERCHLORATE9

Date acquired: 9/15/2020 7:00:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_052.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	9/15/2020 7:00:50 PM	377183	30.05745	20200915_052	3.242	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/15/2020 7:00:50 PM	120846	1.00000	20200915_052	3.240	25.0000	1.0000	12

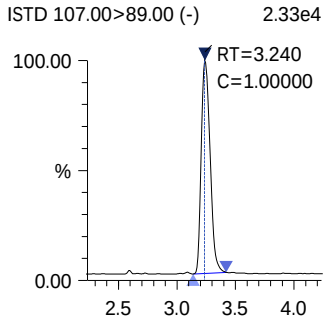
Perchlorate

Conc 30.05745
Area 377183



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 120846



ALS Group Houston

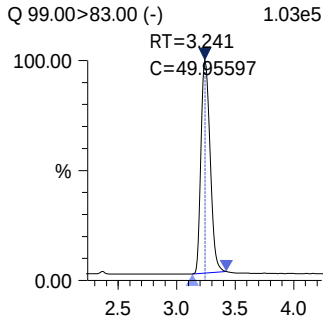
PERCHLORATE10

Date acquired: 9/15/2020 7:08:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_053.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	9/15/2020 7:08:43 PM	553330	49.95597	20200915_053	3.241	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/15/2020 7:08:43 PM	108660	1.00000	20200915_053	3.240	25.0000	1.0000	13

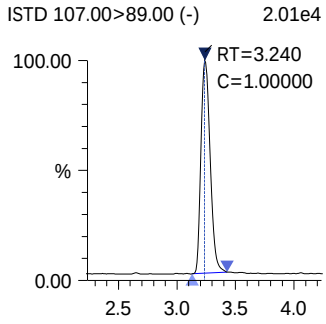
Perchlorate

Conc 49.95597
Area 553330



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108660



ALS Group Houston

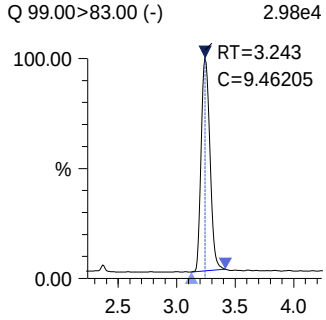
PERCHLORATEICV

Date acquired: 9/15/2020 7:16:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_054.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	9/15/2020 7:16:39 PM	152650	9.46205	20200915_054	3.243	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/15/2020 7:16:39 PM	152342	1.00000	20200915_054	3.241	25.0000	1.0000	14

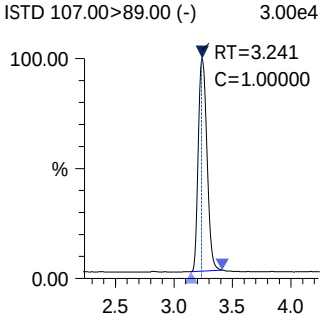
Perchlorate

Conc 9.46205
Area 152650



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 152342



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

20200917

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200917_001	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:11
2	null		20200917_002	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:16
3	null		20200917_003	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:21
4	IB		20200917_004	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:26
5	IB		20200917_005	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:34
6	LODV		20200917_006	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:42
7	PERCHLORATE7		20200917_007	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 14:50
8	E2000825-001x2		20200917_008	Perchlorate6850b.lcm	2x	☒		9/17/2020 14:58
9	PERCHLORATE7		20200917_009	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:05
10	E2000825-001		20200917_010	Perchlorate6850b.lcm	1x	☒		9/17/2020 15:40
11	PERCHLORATE7		20200917_011	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:48
12	EQ2000436-01		20200917_012	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:11
13	EQ2000436-02		20200917_013	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:19
14	EQ2000436-03		20200917_014	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:27
15	E2000845-001		20200917_015	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:35
16	E2000868-001DNU		20200917_016	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:42
17	E2000869-001		20200917_017	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:50
18	E2000870-001		20200917_018	Perchlorate6850b.lcm	10x	☒		9/17/2020 16:58
19	E2000870-002		20200917_019	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:06
20	PERCHLORATE7		20200917_020	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 17:14
21	IB		20200917_021	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:39
22	EQ2000869-01RR		20200917_022	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:47
23	EQ2000870-01RR		20200917_023	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:55
24	EQ2000870-02RR		20200917_024	Perchlorate6850b.lcm	1x	☒		9/17/2020 18:02
25	EQ2000868-01X1000		20200917_025	Perchlorate6850b.lcm	1000x	☒		9/17/2020 18:10
26	PERCHLORATE7		20200917_026	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 18:18
27								
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090475

Service Request: E2000845
Date Analyzed: 9/17/20

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\20200917\20200917_011

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.07	NA	NA	NA	-9.3	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090475

Service Request: E2000845
Date Analyzed: 9/17/20

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\20200917\20200917_020

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090475

Service Request: E2000845
Date Analyzed: 9/17/20

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\20200917\20200917_026

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090475

Service Request: E2000845
Date Analyzed: 9/17/20 15:48

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

File ID: I:\LCMS01\DATA\20200917\20200917_011
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000439-01
Analysis Lot: 695661
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-01	151,139	3.22
Method Blank	EQ2000436-01	168,330	3.17
Lab Control Sample	EQ2000436-02	174,963	3.21
Duplicate Lab Control Sample	EQ2000436-03	163,778	3.21
LH18/24-SP650_090920-AIX	E2000845-001	125,134	3.19

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:**	E2000845
Project:	HS20090475	**Date Analyzed:**	9/17/20 17:14

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_020	**Lab Code:**	EQ2000439-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-02	153,613	3.21

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:**	E2000845
Project:	HS20090475	**Date Analyzed:**	9/17/20 18:18

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_026	**Lab Code:**	EQ2000439-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-03	152,718	3.21

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

ALS Group Houston

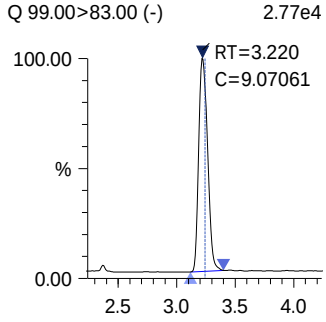
PERCHLORATE7

Date acquired: 9/17/2020 3:48:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_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	9/17/2020 3:48:47 PM	145240	9.07061	20200917_011	3.220	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 3:48:47 PM	151139	1.00000	20200917_011	3.219	25.0000	1.0000	4

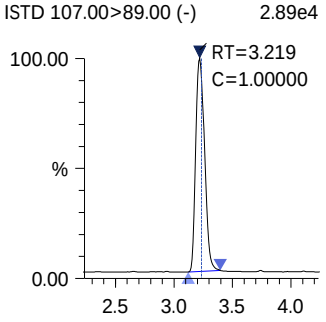
Perchlorate

Conc 9.07061
Area 145240



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 151139



ALS Group Houston

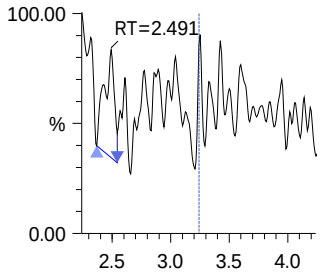
EQ2000436-01

Date acquired: 9/17/2020 4:11:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_012.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-01	9/17/2020 4:11:27 PM	----	----	20200917_012	----	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	EQ2000436-01	9/17/2020 4:11:27 PM	168330	1.00000	20200917_012	3.165	25.0000	1.0000	17

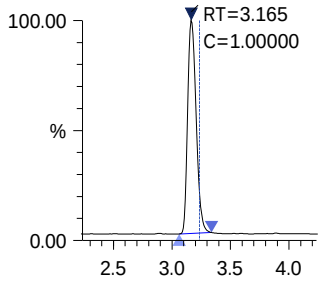
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.13e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168330
ISTD 107.00>89.00 (-) 3.29e4



ALS Group Houston

EQ2000436-02

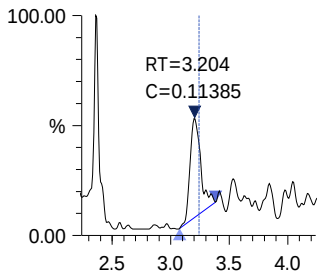
Date acquired: 9/17/2020 4:19:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_013.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-02	9/17/2020 4:19:22 PM	2383	0.11385	20200917_013	3.204	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000436-02	9/17/2020 4:19:22 PM	174963	1.00000	20200917_013	3.208	25.0000	1.0000	18

Perchlorate

Conc 0.11385
Area 2383

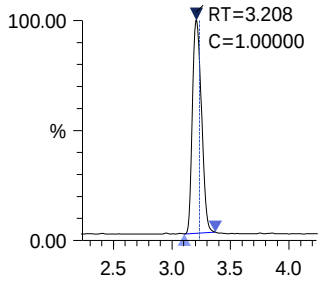
Q 99.00>83.00 (-) 8.10e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 174963

ISTD 107.00>89.00 (-) 3.25e4



ALS Group Houston

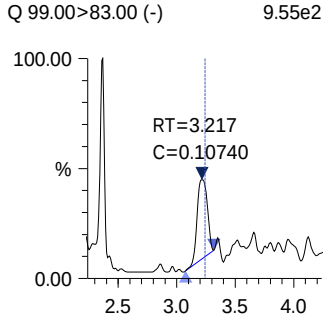
EQ2000436-03

Date acquired: 9/17/2020 4:27:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_014.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-03	9/17/2020 4:27:12 PM	2118	0.10740	20200917_014	3.217	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000436-03	9/17/2020 4:27:12 PM	163778	1.00000	20200917_014	3.208	25.0000	1.0000	19

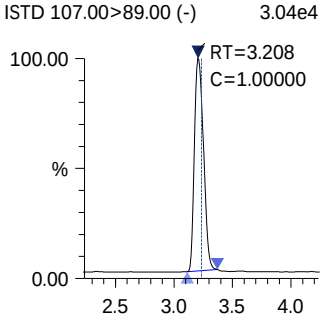
Perchlorate

Conc 0.10740
Area 2118



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 163778



ALS Group Houston

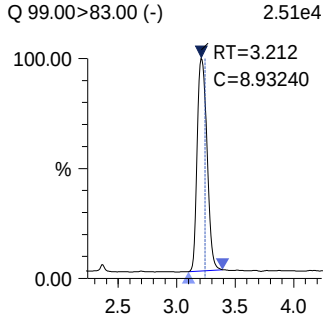
PERCHLORATE7

Date acquired: 9/17/2020 5:14:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_020.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	9/17/2020 5:14:31 PM	145389	8.93240	20200917_020	3.212	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 5:14:31 PM	153613	1.00000	20200917_020	3.208	25.0000	1.0000	4

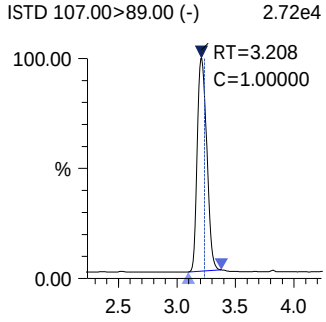
Perchlorate

Conc 8.93240
Area 145389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 153613



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September 21, 2020

Analytical Report for Service Request No: K2007923

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 September 12, 2020
For your reference, these analyses have been assigned our service request number **K2007923.**

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

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626

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    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: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2007923
Date Received: 09/12/2020

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 09/12/2020. 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 09/21/2020

Chain of Custody

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K2007923

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:** **14656**

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:	HS20090475
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090475-01**	**LH18/24-SP650_090920**	**Water**	**09 Sep 2020 14:00**
	TOC Analysis for DOD Level IV			18 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: 9/11/2020 1800.

Received By: _____ Date/Time: 9/12/20 1159

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

PM KL

Cooler Receipt and Preservation Form

Client ALS-Houston Service Request K20 07923

Received: 9/12/20 Opened: 9/12/20 By: BR Unloaded: 9/12/20 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
NA	2.6	IR01	141526			189188802757	

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:**	K2007923
Project:	ALS Houston DOD TOC	**Date Collected:**	09/9/20
Sample Matrix:	Water	**Date Received:**	09/12/20
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_090920	K2007923-001	**2.43**	0.50	0.20	0.07	1	09/17/20 12:08	
Method Blank	K2007923-MB	ND U	0.50	0.20	0.07	1	09/17/20 12:08	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007923
Project	ALS Houston DOD TOC	**Date Collected:**	09/09/20
Sample Matrix:	Water	**Date Received:**	09/12/20
		Date Analyzed:	09/17/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	LH18/24-SP650_090920	**Units:**	mg/L
Lab Code:	K2007923-001	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2007923-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	2.43	2.43	2.43	<1	10

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2007923
Project:	ALS Houston DOD TOC	**Date Collected:**	09/09/20
Sample Matrix:	Water	**Date Received:**	09/12/20
		Date Analyzed:	09/17/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	LH18/24-SP650_090920	**Units:**	mg/L
Lab Code:	K2007923-001	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2007923-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	2.43	28.9	25.0	106	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:**	K2007923
Project:	ALS Houston DOD TOC	**Date Analyzed:**	09/17/20
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:	695749

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2007923-LCS	23.3	25.0	93	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2007923
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	695749	KQ2013493-01	09/17/20 12:08	25.0	25.4	102	90-110
CCV2	695749	KQ2013493-02	09/17/20 12:08	25.0	25.3	101	90-110
CCV3	695749	KQ2013493-03	09/17/20 12:08	25.0	25.4	102	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2007923
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	695749	KQ2013493-04	09/17/20 12:08	0.50	0.20	0.07	ND	U
CCB2	695749	KQ2013493-05	09/17/20 12:08	0.50	0.20	0.07	ND	U
CCB3	695749	KQ2013493-06	09/17/20 12:08	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # 7439 7591 7726 7886 7887 7429 7546 7590

Tier: II II IV II II IV II II

Date Analyzed: 9-17-20 7591 7628

Analyst: MAS II II

Analysis: TOC Run # 695750 695749

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: _____ Date: 9/21/20

DOREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 695750 **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
K2007439-001	Carbon, Total Organic	N/A		Water	0.07 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	III
K2007591-005	Carbon, Total Organic	N/A		Water	17.58 mg/L	10 mL	17.6 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007591-006	Carbon, Total Organic	N/A		Water	2.84 mg/L	10 mL	2.84 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007591-007	Carbon, Total Organic	N/A		Water	2.10 mg/L	10 mL	2.10 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007647-001	Carbon, Total Organic	N/A		Water	2.94 mg/L	10 mL	2.94 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007647-002	Carbon, Total Organic	N/A		Water	0.64 mg/L	10 mL	0.64 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007647-004	Carbon, Total Organic	N/A		Water	0.55 mg/L	10 mL	0.55 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007726-001	Carbon, Total Organic	N/A		Surface Water	7.90 mg/L	10 mL	7.90 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	IV
K2007726-002	Carbon, Total Organic	N/A		Surface Water	1.16 mg/L	10 mL	1.16 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	IV
K2007726-003	Carbon, Total Organic	N/A		Surface Water	3.76 mg/L	10 mL	3.76 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	IV
K2007726-004	Carbon, Total Organic	N/A		Surface Water	1.53 mg/L	10 mL	1.53 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	IV
K2007886-001	Carbon, Total Organic	N/A		Water	3.97 mg/L	10 mL	3.97 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007887-001	Carbon, Total Organic	N/A		Wastewater	2.03 mg/L	10 mL	2.03 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007887-002	Carbon, Total Organic	N/A		Wastewater	3.49 mg/L	10 mL	3.49 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007887-003	Carbon, Total Organic	N/A		Wastewater	2.59 mg/L	10 mL	2.59 mg/L	1	0.07	0.50			9/17/20 15:35:00	N	II
K2007887-004	Carbon, Total Organic	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	II
KQ2013494-01	Carbon, Total Organic	CCV		Water	25.40 mg/L	10 mL	25.4 mg/L	1					9/17/20 15:35:00	N	II
KQ2013494-02	Carbon, Total Organic	CCV		Water	25.01 mg/L	10 mL	25.0 mg/L	1					9/17/20 15:35:00	N	II
KQ2013494-03	Carbon, Total Organic	CCV		Water	24.94 mg/L	10 mL	24.9 mg/L	1					9/17/20 15:35:00	N	II
KQ2013494-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	II
KQ2013494-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	II
KQ2013494-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	II
KQ2013494-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 15:35:00	N	II
KQ2013494-08	Carbon, Total Organic	LCS		Water	26.12 mg/L	10 mL	26.1 mg/L	1	0.07	0.50	104		9/17/20 15:35:00	N	II
KQ2013494-09	Carbon, Total Organic	MS	K2007886-001	Water	30.38 mg/L	10 mL	30.4 mg/L	1	0.07	0.50	106		9/17/20 15:35:00	N	II
KQ2013494-10	Carbon, Total Organic	DUP	K2007886-001	Water	3.94 mg/L	10 mL	3.94 mg/L	1	0.07	0.50		<1	9/17/20 15:35:00	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:** MSPECHT **Analysis Lot:** 695749 **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
K2007429-001	Carbon, Total Organic	N/A		Water	1.65 mg/L	10 mL	1.65 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	IV
K2007546-001	Carbon, Total Organic	N/A		Water	3.62 mg/L	10 mL	3.62 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007546-002	Carbon, Total Organic	N/A		Water	3.55 mg/L	10 mL	3.55 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007546-003	Carbon, Total Organic	N/A		Water	3.47 mg/L	10 mL	3.47 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007546-004	Carbon, Total Organic	N/A		Water	2.62 mg/L	10 mL	2.62 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007546-005	Carbon, Total Organic	N/A		Water	21.72 mg/L	10 mL	21.7 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007590-001	Carbon, Total Organic	N/A		Water	0.39 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007590-002	Carbon, Total Organic	N/A		Water	0.64 mg/L	10 mL	0.64 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007591-002	Carbon, Total Organic	N/A		Water	2.67 mg/L	10 mL	2.67 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007591-003	Carbon, Total Organic	N/A		Water	5.54 mg/L	10 mL	5.54 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007591-004	Carbon, Total Organic	N/A		Water	17.35 mg/L	10 mL	17.4 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007628-001	Carbon, Total Organic	N/A		Water	2.53 mg/L	10 mL	2.53 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	II
K2007923-001	Carbon, Total Organic	N/A		Water	2.43 mg/L	10 mL	2.43 mg/L	1	0.07	0.50			9/17/20 12:08:00	N	IV
KQ2013493-01	Carbon, Total Organic	CCV		Water	25.42 mg/L	10 mL	25.4 mg/L	1					9/17/20 12:08:00	N	II
KQ2013493-02	Carbon, Total Organic	CCV		Water	25.26 mg/L	10 mL	25.3 mg/L	1					9/17/20 12:08:00	N	II
KQ2013493-03	Carbon, Total Organic	CCV		Water	25.40 mg/L	10 mL	25.4 mg/L	1					9/17/20 12:08:00	N	II
KQ2013493-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 12:08:00	N	II
KQ2013493-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 12:08:00	N	II
KQ2013493-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 12:08:00	N	II
KQ2013493-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			9/17/20 12:08:00	N	II
KQ2013493-08	Carbon, Total Organic	LCS		Water	23.34 mg/L	10 mL	23.3 mg/L	1	0.07	0.50	93		9/17/20 12:08:00	N	II
KQ2013493-09	Carbon, Total Organic	MS	K2007923-001	Water	28.89 mg/L	10 mL	28.9 mg/L	1	0.07	0.50	106		9/17/20 12:08:00	N	IV
KQ2013493-10	Carbon, Total Organic	DUP	K2007923-001	Water	2.43 mg/L	10 mL	2.43 mg/L	1	0.07	0.50		<1	9/17/20 12:08:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 091720

Version: 7
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/09/17 15:35 - Thursday

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 [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2006619-023 LOD	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2006619-023 LOQ	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2007628-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2007923-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2007923-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2007923-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2007429-001	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	K2007546-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2007546-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2007546-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2007546-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2007546-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2007590-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2007590-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2007591-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2007591-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2007591-004	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 [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2007591-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2007591-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2007591-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2007647-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2007647-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2007467-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2007726-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2007726-002	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	K2007726-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2007726-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2007439-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2007886-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2007886-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2007886-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2007887-001TOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2007887-002TOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2007887-003TOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	K2007887-004TOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready

Schedule: 091720

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
40	Sample	K2007726-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
41	Sample	K2007726-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
42	Sample	K2007995-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
43	Sample	K2007995-002 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
44	Sample	K2007995-003 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
45	Sample	K2007995-004 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
46	Sample	K2007995-005 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
47	Sample	K2007995-006 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
48	Sample	K2007995-007 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
49	Sample	K2007995-008 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
50	Sample	K2007995-009 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
51	Sample	K2007887-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
52	Sample	K2007887-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
53	Sample	K2007887-003 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
54	Sample	K2007887-004 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
55	Sample	K2007718-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
56	Sample	K2007718-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
57	Sample	K2007782-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
58	Sample	MB4	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] DLCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
59	Sample	K2007782-004 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
60	Sample	K2007850-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
61	Sample	K2007850-001 DUP DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
62	Sample	K2007850-001 MS DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
63	Sample	K2007854-021 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
64	Sample	K2007855-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
65	Sample	K2007726-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
66	Sample	K2007782-001	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
67	Sample	K2007782-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
68	Sample	K2007800-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
69	Sample	K2007800-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
70	Sample	K2007800-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
71	Sample	Empty bottle check	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 - 091720
Thursday, September 17, 2020 12:08 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/09/19 11:45 - Saturday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	091720	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)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/17 12:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.09	30.58	17.49	49.84	07:58
2	TC Clean	33.35	46.47	13.11	49.72	07:19
3	TC Clean	3.21	16.59	13.39	49.83	07:00
4	TC Clean	1.73	14.92	13.19	49.72	07:02

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/17 12:43

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	15.46	28.58	13.12	49.96	08:00
2	TC Clean	5.57	18.67	13.10	49.75	07:18

3	TC Clean	1.39	14.29	12.90	49.70	07:05
4	TC Clean	0.97	14.13	13.16	49.94	07:02

Sample Type: Clean From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/09/17 13:17

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.21	12.78	12.99	49.70	05:30
2	TC Clean	4.44	17.39	12.94	49.69	07:18
3	TC Clean	1.01	13.95	12.95	49.90	07:02
4	TC Clean	0.64	13.71	13.07	49.73	07:00

Sample Type: Blank (Creating v1446) From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/09/17 13:49

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.08	12.76	12.84	49.75	05:35
2	TC Clean	4.29	17.09	12.81	49.85	07:15
3	TC Clean	1.40	14.21	12.81	49.70	07:01
4	TC Clean	0.86	13.89	13.03	49.95	07:02
5	Reagent Blank	5.20	18.07	12.87	49.74	08:10
6	Acid Blank	0.27	13.20	12.93	49.66	05:36

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.1054 ppm	0.0000 ppm	0.0000%	2020/09/17 14:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1054	1.0540	9.99	22.83	12.84	49.95	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.4211 ppm (PASS)	0.0000 ppm	0%	2020/09/17 14:50

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.4211	254.2115	188.22	201.42	13.21	50.09	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 5

	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%	2020/09/17 15:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.67	21.53	12.86	49.96	10:28

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
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/17 15:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.25	21.16	12.91	49.97	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	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)	23.3376 ppm (PASS)	0.0000 ppm	0%	2020/09/17 15:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.3376	233.3756	173.60	186.39	12.79	50.08	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 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	ICS	0.0646 ppm	0.0000 ppm	0.0000%	2020/09/17 15:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0646	0.6463	9.70	22.83	13.13	50.02	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2006619-023 LOD	0.0199 ppm	0.0206 ppm	103.5200%	2020/09/17 16:07

→NR

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0344	0.3441	9.49	22.38	12.89	49.97	10:27
2	TOC	0.0053	0.0532	9.29	22.34	13.06	50.09	10:28

Fails

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2006619-023 LOQ	0.3512 ppm	0.0286 ppm	8.1500%	2020/09/17 16:35

-NR

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3714	3.7141	11.86	24.78	12.92	49.99	10:29
2	TOC	0.3309	3.3092	11.57	24.49	12.92	50.01	10:25

Fails

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2007628-001	2.5332 ppm	0.0039 ppm	0.1600%	2020/09/17 17:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5304	25.3040	27.00	40.02	13.02	50.07	10:30
2	TOC	2.5360	25.3596	27.04	40.12	13.08	50.02	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2007923-001	2.4325 ppm	0.0152 ppm	0.6300%	2020/09/17 17:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4218	24.2178	26.24	39.33	13.09	49.99	10:29
2	TOC	2.4433	24.4330	26.39	39.32	12.93	50.08	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2007923-001DUP	2.4295 ppm	0.0355 ppm	1.4600%	2020/09/17 17:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4546	24.5457	26.47	39.40	12.94	50.06	10:31
2	TOC	2.4044	24.0439	26.12	39.20	13.08	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2007923-001MS	28.8854 ppm	0.0164 ppm	0.0600%	2020/09/17 18:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.8970	288.9699	211.96	224.81	12.86	50.01	10:28
2	TOC	28.8738	288.7375	211.79	224.93	13.13	50.09	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2007429-001	1.6521 ppm	0.0736 ppm	4.4500%	2020/09/17 18:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7042	17.0415	21.20	34.19	12.99	49.97	10:28
2	TOC	1.6001	16.0009	20.47	33.60	13.12	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2601 ppm (PASS)	0.0000 ppm	0%	2020/09/17 19:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2601	252.6006	187.09	200.20	13.12	50.10	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 7

	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%	2020/09/17 19:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.12	21.36	13.24	49.98	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 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2007546-001	3.6165 ppm	0.0009 ppm	0.0300%	2020/09/17 19:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.6158	36.1582	34.61	47.57	12.96	50.01	10:24
2	TOC	3.6171	36.1710	34.62	47.62	13.00	50.08	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2007546-002	3.5461 ppm	0.0157 ppm	0.4400%	2020/09/17 20:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.5572	35.5723	34.20	47.39	13.19	49.96	10:30
2	TOC	3.5350	35.3499	34.05	47.08	13.03	50.07	10:24

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2007546-003	3.4652 ppm	0.0459 ppm	1.3200%	2020/09/17 20:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.4328	34.3278	33.33	46.59	13.26	49.96	10:27
2	TOC	3.4976	34.9764	33.79	46.98	13.19	50.02	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2007546-004	2.6192 ppm	0.0490 ppm	1.8700%	2020/09/17 21:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5846	25.8458	27.38	40.26	12.88	49.94	10:29
2	TOC	2.6539	26.5386	27.87	40.84	12.97	49.86	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2007546-005	21.7241 ppm	0.1846 ppm	0.8500%	2020/09/17 21:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.5936	215.9360	160.72	173.55	12.82	49.95	10:26
2	TOC	21.8546	218.5462	162.56	175.53	12.97	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2007590-001	0.3941 ppm	0.0990 ppm	25.1200%	2020/09/17 22:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4641	4.6407	12.50	25.36	12.86	49.86	10:29
2	TOC	0.3241	3.2408	11.52	24.30	12.78	50.00	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2007590-002	0.6403 ppm	0.0208 ppm	3.2400%	2020/09/17 22:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6549	6.5495	13.84	26.64	12.79	49.90	10:28
2	TOC	0.6256	6.2558	13.64	26.68	13.04	49.84	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2007591-002	2.6706 ppm	0.0662 ppm	2.4800%	2020/09/17 23:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.7174	27.1744	28.31	41.24	12.92	49.94	10:28
2	TOC	2.6238	26.2378	27.66	40.73	13.08	49.90	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K2007591-003	5.5389 ppm	0.0887 ppm	1.6000%	2020/09/17 23:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.4762	54.7617	47.66	60.63	12.97	49.85	10:27
2	TOC	5.6016	56.0161	48.54	61.65	13.11	49.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2007591-004	17.3522 ppm	0.0071 ppm	0.0400%	2020/09/18 00:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.3571	173.5714	131.01	143.92	12.91	49.88	10:24
2	TOC	17.3472	173.4716	130.94	143.93	12.99	49.85	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.3978 ppm (PASS)	0.0000 ppm	0%	2020/09/18 00:33

Pos	Base Analysis	ID	Rep	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run

	Type		#							Time
B	TOC	25 ppm	1	25.3978	253.9777	188.05	200.91	12.86	49.79	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 7

	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%	2020/09/18 00:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.54	21.44	12.90	49.92	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 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/18 01:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.75	20.83	13.07	49.88	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	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)	26.1204 ppm (PASS)	0.0000 ppm	0%	2020/09/18 01:17

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	26.1204	261.2038	193.12	206.15	13.03	49.84	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 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2007591-005	17.5800 ppm	0.1363 ppm	0.7800%	2020/09/18 01:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.4836	174.8359	131.89	144.90	13.01	49.76	10:28
2	TOC	17.6763	176.7632	133.25	146.27	13.02	49.82	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2007591-006	2.8440 ppm	0.0898 ppm	3.1600%	2020/09/18 02:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9075	29.0746	29.65	42.72	13.07	49.89	10:27
2	TOC	2.7804	27.8045	28.75	41.65	12.90	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2007591-007	2.1009 ppm	0.0675 ppm	3.2100%	2020/09/18 02:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1486	21.4864	24.32	37.05	12.72	49.82	10:28
2	TOC	2.0531	20.5313	23.65	36.64	12.99	49.77	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2007647-001	2.9417 ppm	0.0408 ppm	1.3900%	2020/09/18 02:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9706	29.7062	30.09	43.01	12.92	49.94	10:27
2	TOC	2.9129	29.1288	29.68	42.81	13.13	49.89	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2007647-002	0.6431 ppm	0.0194 ppm	3.0100%	2020/09/18 03:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	0.6294	6.2943	13.66	26.67	13.01	49.84	10:28
2	TOC	0.6568	6.5680	13.86	26.95	13.09	49.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2007467-004	0.5501 ppm	0.0128 ppm	2.3300%	2020/09/18 03:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5410	5.4105	13.04	26.24	13.19	49.85	10:28
2	TOC	0.5592	5.5915	13.17	26.19	13.02	49.89	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2007726-001	7.8990 ppm	0.0021 ppm	0.0300%	2020/09/18 04:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.9005	79.0046	64.67	77.53	12.86	49.87	10:26
2	TOC	7.8975	78.9747	64.65	77.73	13.09	49.81	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2007726-002	1.1566 ppm	0.0377 ppm	3.2600%	2020/09/18 04:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1833	11.8326	17.55	30.60	13.05	49.95	10:27
2	TOC	1.1299	11.2994	17.18	30.14	12.96	49.90	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.0136 ppm (PASS)	0.0000 ppm	0%	2020/09/18 05:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0136	250.1358	185.36	198.21	12.86	49.86	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 7

	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%	2020/09/18 05:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.26	21.19	12.93	49.81	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2007726-003	3.7624 ppm	0.0497 ppm	1.3200%	2020/09/18 05:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.7273	37.2730	35.40	48.35	12.95	49.93	10:31
2	TOC	3.7976	37.9758	35.89	48.85	12.96	49.90	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2007726-004	1.5301 ppm	0.0125 ppm	0.8200%	2020/09/18 06:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5213	15.2126	19.92	32.78	12.86	49.86	10:32
2	TOC	1.5389	15.3893	20.05	33.18	13.14	49.81	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2007439-001	0.0682 ppm	0.0153 ppm	22.4700%	2020/09/18 06:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0790	0.7903	9.80	22.59	12.78	49.97	10:27

2	TOC	0.0574	0.5736	9.65	22.61	12.96	49.90	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K2007886-001	3.9706 ppm	0.0343 ppm	0.8600%	2020/09/18 07:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9464	39.4641	36.93	49.92	12.99	49.93	10:29
2	TOC	3.9949	39.9487	37.27	50.20	12.93	49.96	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2007886-001DUP	3.9355 ppm	0.0160 ppm	0.4100%	2020/09/18 07:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9242	39.2417	36.78	49.55	12.77	49.91	10:29
2	TOC	3.9468	39.4683	36.94	49.83	12.90	49.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2007886-001MS	30.3760 ppm	0.0407 ppm	0.1300%	2020/09/18 08:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.4048	304.0479	222.53	235.60	13.07	49.95	10:29
2	TOC	30.3472	303.4720	222.13	235.13	13.00	50.09	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2007887-001TOC	2.0334 ppm	0.0388 ppm	1.9100%	2020/09/18 08:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0608	20.6083	23.71	36.55	12.84	49.95	10:28
2	TOC	2.0059	20.0594	23.32	36.41	13.09	50.00	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	36	TOC	K2007887-002TOC	3.4947 ppm	0.0491 ppm	1.4000%	2020/09/18 09:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.4600	34.6001	33.52	46.63	13.11	49.97	10:30
2	TOC	3.5294	35.2943	34.01	47.00	12.99	49.92	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2007887-003TOC	2.5926 ppm	0.0100 ppm	0.3800%	2020/09/18 09:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5997	25.9969	27.49	40.50	13.01	49.97	10:29
2	TOC	2.5856	25.8557	27.39	40.59	13.20	49.96	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2007887-004TOC	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/18 09:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.67	21.72	13.05	50.01	10:27
2	TOC	0.0000	0.0000	9.03	22.16	13.13	49.93	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	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)	24.9395 ppm (PASS)	0.0000 ppm	0%	2020/09/18 10:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9395	249.3945	184.84	197.71	12.87	50.07	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 7

			Concentration			Min / Max				

	Pos	BAT	(ppm)	Dil	Sample ID	(% 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%	2020/09/18 10:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.04	21.16	13.13	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

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/09/18 10:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.65	20.53	12.88	50.03	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2496 (IC) (v1446)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	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)	25.8585 ppm (PASS)	0.0000 ppm	0%	2020/09/18 11:10

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.8585	258.5851	191.28	204.04	12.76	49.94	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 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	40	TOC	K2007726-005	1.4533 ppm	0.0533 ppm	3.6700%	2020/09/18 11:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.4910	14.9103	19.71	32.60	12.89	50.05	10:27
2	TOC	1.4156	14.1562	19.18	32.14	12.96	49.90	10:24

ALS Environmental

StarLIMS Ru 695750 695749

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-40-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-08-41-I

21 % H3PO4: 19-GEN-08-38-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MK for MKS	Date Analyzed: 9-21-20
Reviewed By: qc	Date Reviewed: 9/21/20

HS20090475 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20090475

NIT-AMN-W-ISE/3503

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD	Date: 9/15/20
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date: 9/15/20 10:16 AM		Cal Std ID: 3140852(03-08)		Probe ID: X01 - 11806		
Std Level		mV	Conc., mg/L:	Sodium Thiosulfate ID: 3100601115		
STD 1 (mg/L):	0.2	137.9	0.203	Std Level	mV	Conc., mg/L:
STD 2 (mg/L):	1	96.6	1.001	STD 4 (mg/L): 10	39.1	10.021
STD 3 (mg/L):	5	54.0	5.000	STD 5 (mg/L): 50	-2.9	50.025
LSC / MS Spike ID: 3100602320				ICAL Date & Slope:		
ICV Cal STD ID: 3140852				100.0% / -60.0mV		
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		10.041			
CCB					0.011			
MBLK					0.011			
LCS					11.065			
M520090573-01					0.100		-ve	
573-01MS					11.086			
573-01MSD					11.098			
562-01					0.867		+ve	Rechecked
475-01					9.082		+ve	"
480-01					0.574		-ve	
642-01		5ml	50ml	10X	16.227		-ve	
585-01		"	"	10X	49.852		+ve	Rechecked
CCV		50ml	50ml		9.720			
CCB		"	"		0.012			
M520090566-01		5ml	50ml	10X	46.699		+ve	Rechecked
CCV		50ml	50ml		9.601			
CCB		"	"		0.010			

Batch ID: 368563 / 368566	Reported By: MD	Reviewed By: YP

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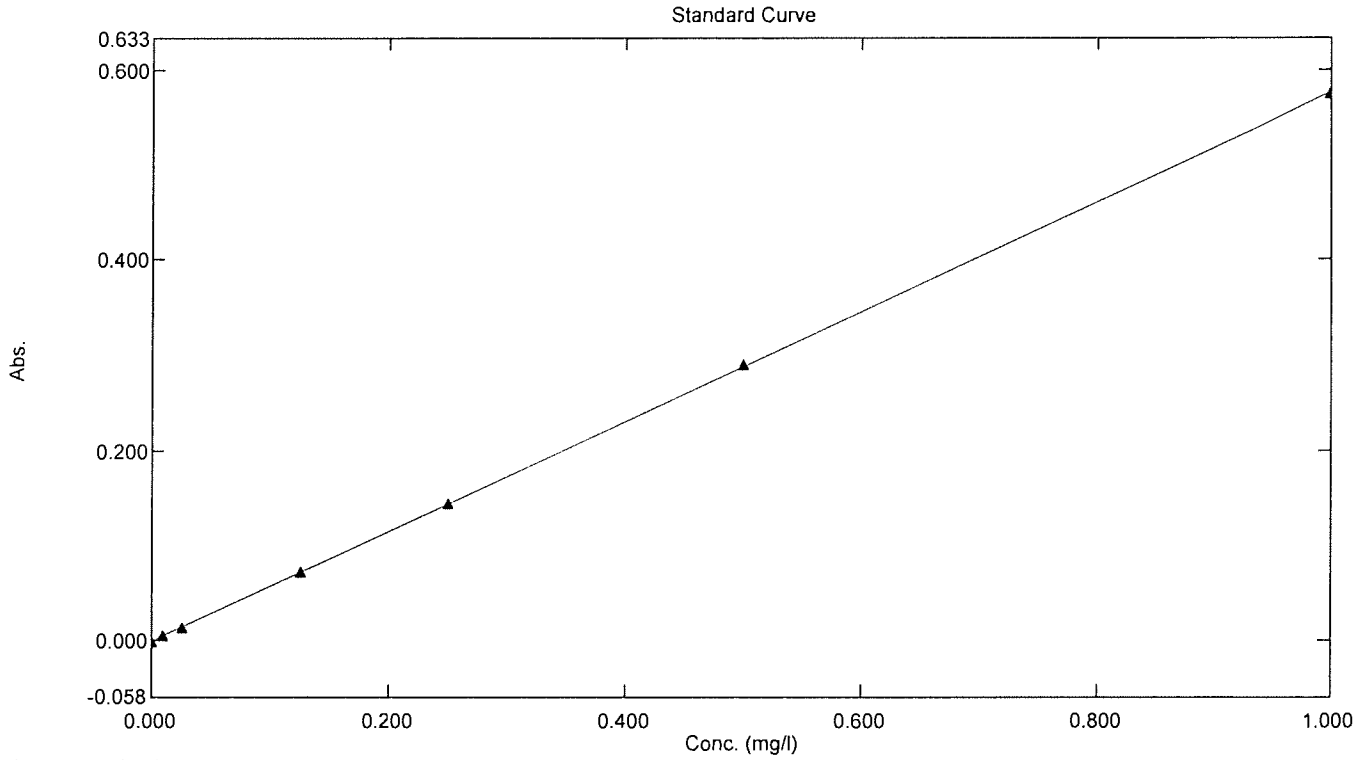
HS20090475 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20090475

Standard Table Report

10/05/2020 02:24:50 PM

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Correlation Coefficient r2 = 0.99995

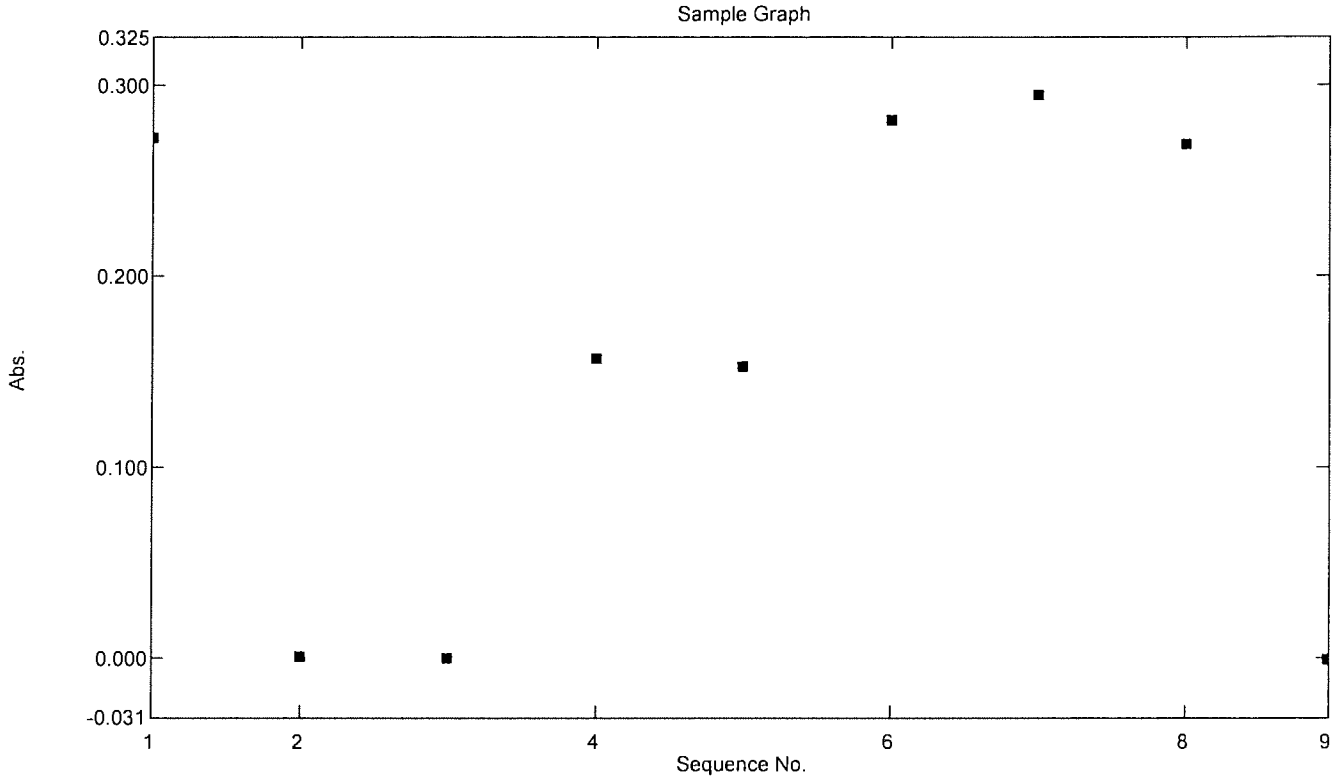
Standard Table

	Sample	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

10/05/2020 02:24:53 PM

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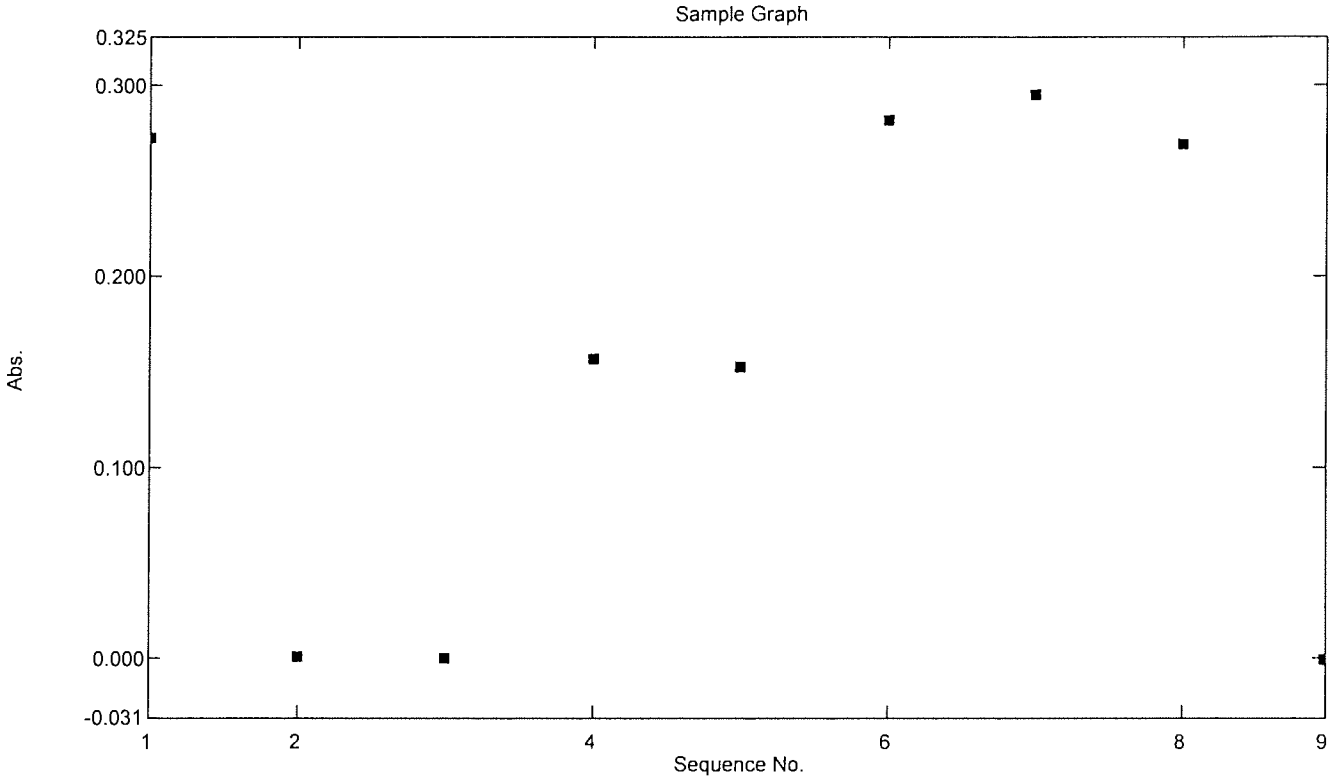
Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.472	0.272	314064002 WC-14
2	CCB	Unknown		0.001	0.001	
3	MBLK	Unknown		-0.001	-0.000	
4	LCS	Unknown		0.272	0.157	314064001 WC-14
5	HS20090475.01	Unknown		0.264	0.152	PF:10X,11:30AM
6	HS20090475.01MS	Unknown		0.489	0.282	PF:10X,11:32AM
7	HS20090475.01MS	Unknown		0.512	0.295	PF:10X,11:33AM
8	CCV2	Unknown		0.467	0.269	
9	CCB2	Unknown		-0.003	-0.001	C-314065002 UV-11
10						

Sample Table Report

10/05/2020 02:25:03 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\091120_P_ORTHO.pho..p



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.472	0.272	314064002 WC-14
2	CCB	Unknown		0.001	0.001	
3	MBLK	Unknown		-0.001	-0.000	
4	LCS	Unknown		0.272	0.157	314064001 WC-14
5	HS20090475.01	Unknown		0.264	0.152	PF:10X,11:30AM
6	HS20090475.01MS	Unknown		0.489	0.282	PF:10X,11:32AM
7	HS20090475.01MS	Unknown		0.512	0.295	PF:10X,11:33AM
8	CCV2	Unknown		0.467	0.269	
9	CCB2	Unknown		-0.003	-0.001	C-314065002 UV-11
10						

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WorkOrder: HS20090744

Longhorn GW Treatment Plant Monthly Influent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

09-Oct-2020

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HS20090744 Wet Chem Raw Data (Cr6_W_7196_DOD)

HS20090744 Longhorn GW Treatment Plant Monthly Influent Samples Final

ALS WO# HS20090744

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September 21, 2020

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

Work Order: **HS20090744**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 1 sample(s) on Sep 16, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20090744

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090744-01	LH18/24-SP140_091520	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20090744

Work Order Comments

- The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

Metals by Method SW6020

Batch ID: 157451

Sample ID: HS20090748-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R368683

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

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder:HS20090744
Sample ID: LH18/24-SP140_091520
Lab ID:HS20090744-01
Collection Date: 15-Sep-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 / 17-Sep-2020		Analyst: JHD
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	21-Sep-2020 13:52
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	21-Sep-2020 13:52
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	16-Sep-2020 13:00
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	21-Sep-2020 13:22

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: HS20090744

Batch ID: 157451 **Start Date:** 17 Sep 2020 12:00 **End Date:** 17 Sep 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090744-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 157451 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20090744-01	LH18/24-SP140_091520	15 Sep 2020 14:00		17 Sep 2020 16:00	21 Sep 2020 13:52	1
Batch ID: R368683 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20090744-01	LH18/24-SP140_091520	15 Sep 2020 14:00			16 Sep 2020 13:00	1
Batch ID: R368953 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20090744-01	LH18/24-SP140_091520	15 Sep 2020 14:00			21 Sep 2020 13:22	1

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

QC BATCH REPORT

Batch ID: 157451 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-157451** Units: **mg/L** Analysis Date: **21-Sep-2020 13:48**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747280** PrepDate: **17-Sep-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-157451** Units: **mg/L** Analysis Date: **21-Sep-2020 13:54**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747283** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04841	0.00500	0.05	0	96.8	80 - 120				
Silver	0.04721	0.00500	0.05	0	94.4	85 - 116				

MS Sample ID: **HS20090748-01MS** Units: **mg/L** Analysis Date: **21-Sep-2020 13:59**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747286** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04515	0.00500	0.05	0.000151	90.0	80 - 120				
Silver	0.0412	0.00500	0.05	-0.000007	82.4	85 - 116				S

MSD Sample ID: **HS20090748-01MSD** Units: **mg/L** Analysis Date: **21-Sep-2020 15:39**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747357** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04378	0.00500	0.05	0	87.6	80 - 120	0.04515	3.08	20	
Silver	0.04071	0.00500	0.05	0	81.4	85 - 116	0.0412	1.21	20	S

PDS Sample ID: **HS20090748-01PDS** Units: **mg/L** Analysis Date: **21-Sep-2020 14:03**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747288** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.1036	0.00500	0.1	0.000151	103	80 - 120				
Silver	0.09766	0.00500	0.1	-0.000007	97.7	80 - 120				

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

QC BATCH REPORT

Batch ID: 157451 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20090748-01SD** Units: **mg/L** Analysis Date: **21-Sep-2020 13:58**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747285** PrepDate: **17-Sep-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					0.000151	0	10	U
Silver	0.00250	0.0250					-0.000007	0	10	U

The following samples were analyzed in this batch: HS20090744-01

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

QC BATCH REPORT

Batch ID: R368683 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R368683** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741230** 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-R368683** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741229** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.256	0.0100	0.25	0	102	90 - 111				

MS Sample ID: **HS20090748-01MS** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741232** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.252	0.0100	0.25	0	101	90 - 111				

MSD Sample ID: **HS20090748-01MSD** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741231** 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	0.252	0.398	20	

The following samples were analyzed in this batch: HS20090744-01

ALS Houston, US Date: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20090744**

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: 21-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20090744

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090744-01	LH18/24-SP140_091520	Login	9/16/2020 11:24:58 AM	PMG	MET068
HS20090744-01	LH18/24-SP140_091520	Login	9/16/2020 11:24:58 AM	PMG	Sub
HS20090744-01	LH18/24-SP140_091520	Login	9/16/2020 11:24:58 AM	PMG	WET131

ALS Houston, US Date: 21-Sep-20

Sample Receipt Checklist

Work Order ID: HS20090744 **Date/Time Received:** 16-Sep-2020 10:20

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	16-Sep-2020 11:27	**Reviewed by:**	/S/ RJ Modashia	16-Sep-2020 12:59
	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):	0.8C U/C	IR31
Cooler(s)/Kit(s):	44674	
Date/Time sample(s) sent to storage:	9/16/2020 11:35	

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

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

HS20090744
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Influent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	SILVER & SELENIUM	HEXAVALENT CHROMIUM	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_091520	Water	09/15/20 / 14:00		1	X			HNO3	
LH18/24-SP140_091520	Water	09/15/20 / 14:00		2		X	X	NONE	

Analyses

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	09/15/20	14:30	NK	9/16/20	1032						

For Lab Use Only

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

Remarks:

4/4/74 - 4 IC 0.8
(RA31 CIC-

(Word) S:\Forms\Chain of Custody - Bi Weekly

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

4467

CUSTODY SEAL

Date: 9/15/20 Time: 1430

Name: [illegible]

Company: RH-ATA

Seal Initiated By: [illegible]

Date: 9/16/2020

RETURN

FedEx
TRK# 0221 1891 8880 1577

WED – 16 SEP 10:30A
PRIORITY OVERNIGHT

AB SGRA 4467

77099
TX-US IAH

September 18, 2020 Service Request No:E2000868

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

Laboratory Results for: HS20090744

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory September 16, 2020
For your reference, these analyses have been assigned our service request number **E2000868.**

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.:**	E2000868
Project:	HS20090744	**Date Received:**	09/16/20
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 09/16/20.

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:

EQ2000436: 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: HS20090744 **Service Request:**E2000868

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000868-001	LH18/24-SP140_091520	9/15/2020	1400

Service Request Summary

Folder #: **E2000868**
Client Name: ALS Environmental - US
Project Name: HS20090744
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: 09/16/20
Internal Due Date: 9/21/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090744
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000868-001	LH18/24-SP140_091520	Water	09/15/20 1400	**IV**

Service Request Summary

Folder #: **E2000868**
Client Name: ALS Environmental - US
Project Name: HS20090744
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: 09/16/20
Internal Due Date: 9/21/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090744
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/21,level IV 10/7

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
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

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:** **14690**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

RUSH

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:	HS20090744
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090744-01**	**LH18/24-SP140_091520**	**Water**	**15 Sep 2020 14:00**
	SUB_Perch-6850			21 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: 9/16/2020 12:23,

Received By: _____ Date/Time: 9/16/20 1223

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

00994698

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1231

Date/Time Received: 9/16/26 Initials: CH

Date/Time Logged in: 9/16/26 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?
NA		9/16/26	1225	CH	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
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Preparation Information Benchsheet

Prep Run#: 365762
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 9/17/20 14:12

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000845-001	LH18/24-SP650_090920-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000868-001	LH18/24-SP140_091520	.01	6850/ClO4 DOD			Water	10mL	
3	E2000869-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000870-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
5	E2000870-002	LH18/24-SP650_091520-BIX	.01	6850/ClO4 DOD			Water	10mL	
6	EQ2000436-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000436-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2000436-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000436-02 1.00µL EQ2000436-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000845-001 100.00µL E2000868-001 100.00µL E2000869-001 100.00µL E2000870-001 100.00µL E2000870-002 100.00µL EQ2000436-01 100.00µL
EQ2000436-02 100.00µL EQ2000436-03 100.00µL

Preparation Steps

Step: Preparation
Started: 9/17/20 14:12
Finished: 9/17/20 17:43
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 9/18/20

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:**	E2000868
Project:	HS20090744	**Date Collected:**	9/15/20 1400
Sample Matrix:	Water	**Date Received:**	9/16/20
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 18:10
Sample Name:	LH18/24-SP140_091520	**Units:**	µg/L
Lab Code:	E2000868-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_025	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**8350**		100	50.0	25.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000868
Project:	HS20090744	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:11
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000436-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_012	**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: HS20090744
Sample Matrix: Water

Service Request: E2000868
Date Analyzed: 9/17/20

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: 365762

	Lab Control Sample EQ2000436-02			Duplicate Lab Control Sample EQ2000436-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.114	0.100	114	0.107	0.100	107	84 - 119	6	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:**	E2000868
Project:	HS20090744	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:19
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_013	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.114**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000868
Project:	HS20090744	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:27
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_014	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.107**		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

20200915

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200915_044	Perchlorate6850b.lcm	1x	☒	3100806-05	9/15/2020 17:55
2	PERCHLORATE2		20200915_024	Perchlorate6850b.lcm	1x	☒	3100806-06	9/15/2020 15:10
3	PERCHLORATE3		20200915_046	Perchlorate6850b.lcm	1x	☒	3100806-07	9/15/2020 18:13
4	PERCHLORATE4		20200915_047	Perchlorate6850b.lcm	1x	☒	3100807-01	9/15/2020 18:21
5	PERCHLORATE5		20200915_048	Perchlorate6850b.lcm	1x	☒	3100807-02	9/15/2020 18:29
6	PERCHLORATE6		20200915_049	Perchlorate6850b.lcm	1x	☒	3100807-03	9/15/2020 18:37
7	PERCHLORATE7		20200915_029	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 15:49
8	PERCHLORATE8		20200915_051	Perchlorate6850b.lcm	1x	☒	3100807-05	9/15/2020 18:52
9	PERCHLORATE9		20200915_052	Perchlorate6850b.lcm	1x	☒	3100807-06	9/15/2020 19:00
10	PERCHLORATE10		20200915_053	Perchlorate6850b.lcm	1x	☒	3100807-07	9/15/2020 19:08
11	PERCHLORATE ICV		20200915_054	Perchlorate6850b.lcm	1x	☒	3100807-08	9/15/2020 19:16
12	LODV		20200915_055	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:24
13	E2000817-001		20200915_056	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:40
14	E2000817-001x10		20200915_057	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:48
15	PERCHLORATE7		20200915_058	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 19:56
16								
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36								

Initial Calibration - Detailed Report

Calibration ID: EC2000032 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000032-01	PERCHLORATE2	20200915_024	09/15/2020 15:10
02	EC2000032-02	PERCHLORATE7	20200915_029	09/15/2020 15:49
03	EC2000032-03	PERCHLORATE1	20200915_044	09/15/2020 17:55
04	EC2000032-04	PERCHLORATE3	20200915_046	09/15/2020 18:13
05	EC2000032-05	PERCHLORATE4	20200915_047	09/15/2020 18:21
06	EC2000032-06	PERCHLORATE5	20200915_048	09/15/2020 18:29
07	EC2000032-07	PERCHLORATE6	20200915_049	09/15/2020 18:37
08	EC2000032-08	PERCHLORATE8	20200915_051	09/15/2020 18:52
09	EC2000032-09	PERCHLORATE9	20200915_052	09/15/2020 19:00
10	EC2000032-10	PERCHLORATE10	20200915_053	09/15/2020 19:08

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

Perchlorate **Quadratic** **Equal** **COD = 0.9998** **Y= -9.474E-05 X² + 0.1066 X + 0.00148**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5000	0.1319	02	10.0000	0.1001	03	0.1000	0.1399	04	0.7000	0.1079
05	1.0000	0.1089	06	2.0000	0.1096	07	5.0000	0.1086	08	20.0000	0.1062
09	30.0000	0.104	10	50.0000	0.1018						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.5000	0.605	21.0	02	10.0000	9.45	-5.5	03	0.1000	0.117	17.3
04	0.7000	0.695	-0.8	05	1.0000	1.01	0.8	06	2.0000	2.05	2.3
07	5.0000	5.10	2.0	08	20.0000	20.3	1.3	09	30.0000	30.1	0.2
10	50.0000	50.0	-0.1								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000032	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200915_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000032-11	T	Quadratic	10	9.462	ng/mL	-5.4	<= 15

ALS Group Houston

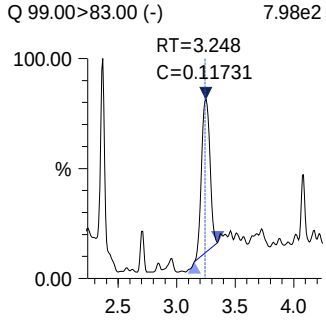
PERCHLORATE1

Date acquired: 9/15/2020 5:55:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_044.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	9/15/2020 5:55:29 PM	2833	0.11731	20200915_044	3.248	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/15/2020 5:55:29 PM	202512	1.00000	20200915_044	3.237	25.0000	1.0000	5

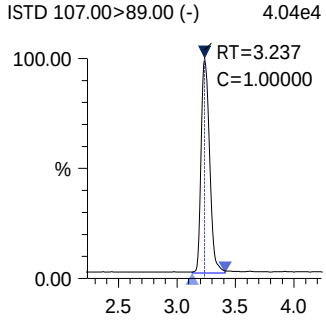
Perchlorate

Conc 0.11731
Area 2833



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202512



ALS Group Houston

PERCHLORATE2

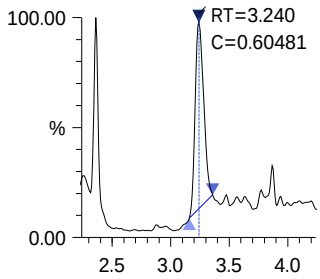
Date acquired: 9/15/2020 3:10:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_024.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	9/15/2020 3:10:04 PM	11634	0.60481	20200915_024	3.240	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/15/2020 3:10:04 PM	176422	1.00000	20200915_024	3.240	25.0000	1.0000	6

Perchlorate

Conc 0.60481
Area 11634

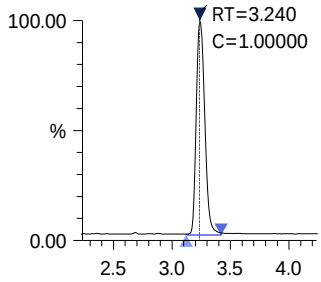
Q 99.00>83.00 (-) 2.66e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 176422

ISTD 107.00>89.00 (-) 3.50e4



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PERCHLORATE3

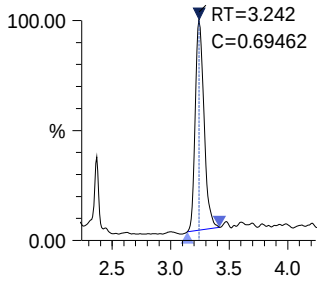
Date acquired: 9/15/2020 6:13:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/15/2020 6:13:20 PM	14722	0.69462	20200915_046	3.242	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/15/2020 6:13:20 PM	194971	1.00000	20200915_046	3.239	25.0000	1.0000	7

Perchlorate

Conc 0.69462
Area 14722

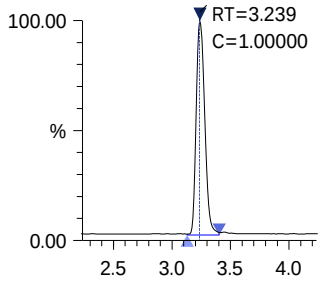
Q 99.00>83.00 (-) 2.91e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 194971

ISTD 107.00>89.00 (-) 3.85e4



ALS Group Houston

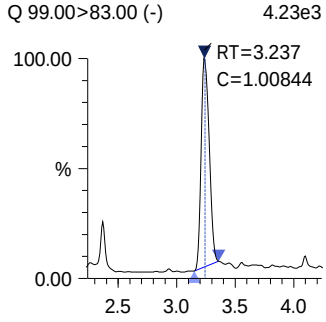
PERCHLORATE4

Date acquired: 9/15/2020 6:21:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_047.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	9/15/2020 6:21:15 PM	19524	1.00844	20200915_047	3.237	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/15/2020 6:21:15 PM	179246	1.00000	20200915_047	3.240	25.0000	1.0000	8

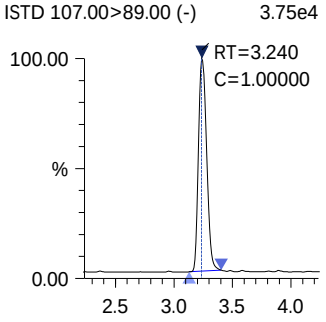
Perchlorate

Conc 1.00844
Area 19524



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179246



PERCHLORATE5

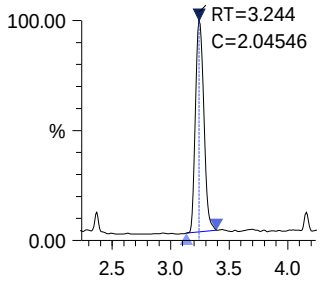
Date acquired: 9/15/2020 6:29:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_048.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	9/15/2020 6:29:08 PM	38522	2.04546	20200915_048	3.244	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/15/2020 6:29:08 PM	175734	1.00000	20200915_048	3.240	25.0000	1.0000	9

Perchlorate

Conc 2.04546
Area 38522

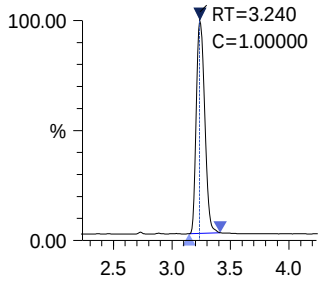
Q 99.00>83.00 (-) 7.92e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 175734

ISTD 107.00>89.00 (-) 3.56e4



ALS Group Houston

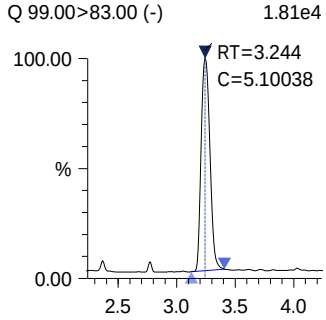
PERCHLORATE6

Date acquired: 9/15/2020 6:37:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_049.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	9/15/2020 6:37:05 PM	92162	5.10038	20200915_049	3.244	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/15/2020 6:37:05 PM	169754	1.00000	20200915_049	3.239	25.0000	1.0000	10

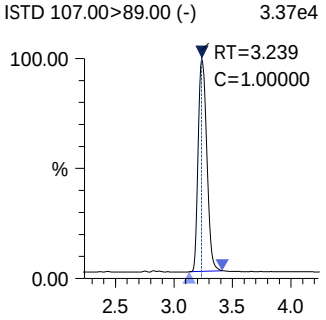
Perchlorate

Conc 5.10038
Area 92162



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 169754



ALS Group Houston

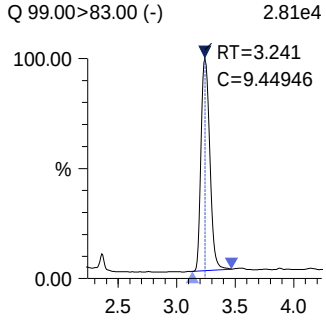
PERCHLORATE7

Date acquired: 9/15/2020 3:49:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_029.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	9/15/2020 3:49:35 PM	144012	9.44946	20200915_029	3.241	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/15/2020 3:49:35 PM	143911	1.00000	20200915_029	3.238	25.0000	1.0000	4

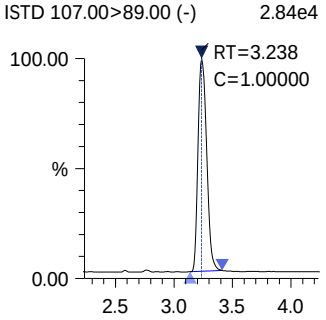
Perchlorate

Conc 9.44946
Area 144012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143911



ALS Group Houston

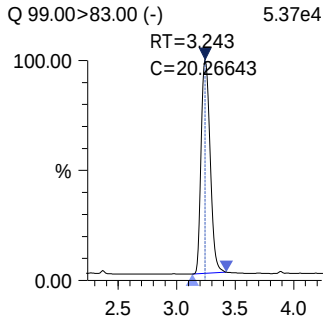
PERCHLORATE8

Date acquired: 9/15/2020 6:52:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_051.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	9/15/2020 6:52:54 PM	284308	20.26643	20200915_051	3.243	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/15/2020 6:52:54 PM	133870	1.00000	20200915_051	3.240	25.0000	1.0000	11

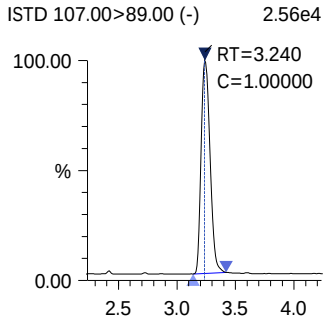
Perchlorate

Conc 20.26643
Area 284308



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 133870



ALS Group Houston

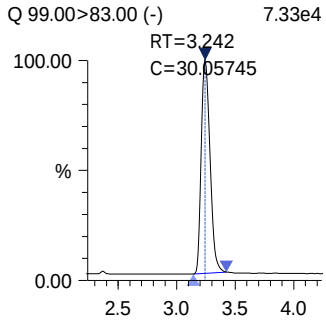
PERCHLORATE9

Date acquired: 9/15/2020 7:00:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_052.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	9/15/2020 7:00:50 PM	377183	30.05745	20200915_052	3.242	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/15/2020 7:00:50 PM	120846	1.00000	20200915_052	3.240	25.0000	1.0000	12

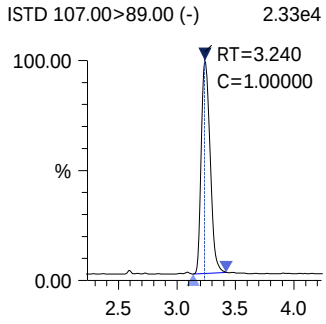
Perchlorate

Conc 30.05745
Area 377183



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 120846



ALS Group Houston

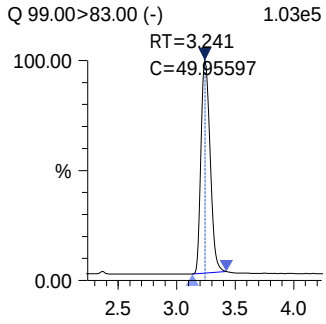
PERCHLORATE10

Date acquired: 9/15/2020 7:08:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_053.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	9/15/2020 7:08:43 PM	553330	49.95597	20200915_053	3.241	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/15/2020 7:08:43 PM	108660	1.00000	20200915_053	3.240	25.0000	1.0000	13

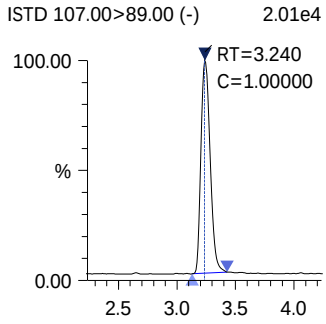
Perchlorate

Conc 49.95597
Area 553330



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108660



ALS Group Houston

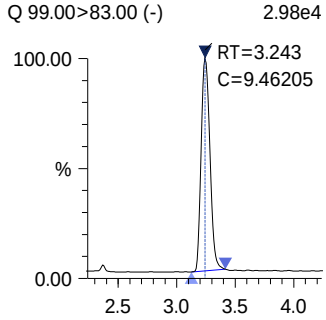
PERCHLORATEICV

Date acquired: 9/15/2020 7:16:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_054.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	9/15/2020 7:16:39 PM	152650	9.46205	20200915_054	3.243	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/15/2020 7:16:39 PM	152342	1.00000	20200915_054	3.241	25.0000	1.0000	14

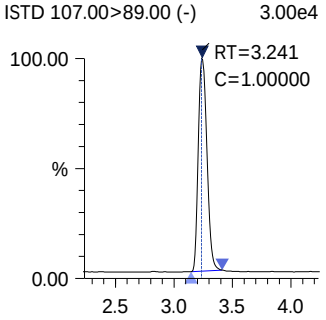
Perchlorate

Conc 9.46205
Area 152650



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 152342



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

20200917

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200917_001	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:11
2	null		20200917_002	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:16
3	null		20200917_003	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:21
4	IB		20200917_004	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:26
5	IB		20200917_005	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:34
6	LODV		20200917_006	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:42
7	PERCHLORATE7		20200917_007	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 14:50
8	E2000825-001x2		20200917_008	Perchlorate6850b.lcm	2x	☒		9/17/2020 14:58
9	PERCHLORATE7		20200917_009	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:05
10	E2000825-001		20200917_010	Perchlorate6850b.lcm	1x	☒		9/17/2020 15:40
11	PERCHLORATE7		20200917_011	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:48
12	EQ2000436-01		20200917_012	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:11
13	EQ2000436-02		20200917_013	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:19
14	EQ2000436-03		20200917_014	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:27
15	E2000845-001		20200917_015	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:35
16	E2000868-001DNU		20200917_016	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:42
17	E2000869-001		20200917_017	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:50
18	E2000870-001		20200917_018	Perchlorate6850b.lcm	10x	☒		9/17/2020 16:58
19	E2000870-002		20200917_019	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:06
20	PERCHLORATE7		20200917_020	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 17:14
21	IB		20200917_021	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:39
22	EQ2000869-01RR		20200917_022	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:47
23	EQ2000870-01RR		20200917_023	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:55
24	EQ2000870-02RR		20200917_024	Perchlorate6850b.lcm	1x	☒		9/17/2020 18:02
25	EQ2000868-01X1000		20200917_025	Perchlorate6850b.lcm	1000x	☒		9/17/2020 18:10
26	PERCHLORATE7		20200917_026	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 18:18
27								
28								
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34								
35								
36								
37								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090744

Service Request: E2000868
Date Analyzed: 9/17/20

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\20200917\20200917_011

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.07	NA	NA	NA	-9.3	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090744

Service Request: E2000868
Date Analyzed: 9/17/20

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\20200917\20200917_020

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090744

Service Request: E2000868
Date Analyzed: 9/17/20

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\20200917\20200917_026

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090744

Service Request: E2000868
Date Analyzed: 9/17/20 15:48

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

File ID: I:\LCMS01\DATA\20200917\20200917_011
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000439-01
Analysis Lot: 695661
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-01	151,139	3.22
Method Blank	EQ2000436-01	168,330	3.17
Lab Control Sample	EQ2000436-02	174,963	3.21
Duplicate Lab Control Sample	EQ2000436-03	163,778	3.21

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:**	E2000868
Project:	HS20090744	**Date Analyzed:**	9/17/20 17:14

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_020	**Lab Code:**	EQ2000439-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-02	153,613	3.21
LH18/24-SP140_091520	E2000868-001	155,837	3.21

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:**	E2000868
Project:	HS20090744	**Date Analyzed:**	9/17/20 18:18

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_026	**Lab Code:**	EQ2000439-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-03	152,718	3.21

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

ALS Group Houston

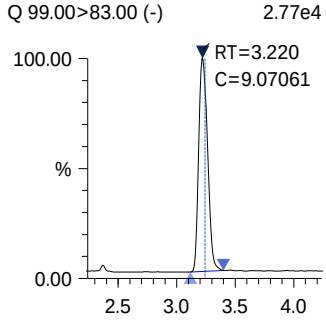
PERCHLORATE7

Date acquired: 9/17/2020 3:48:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_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	9/17/2020 3:48:47 PM	145240	9.07061	20200917_011	3.220	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 3:48:47 PM	151139	1.00000	20200917_011	3.219	25.0000	1.0000	4

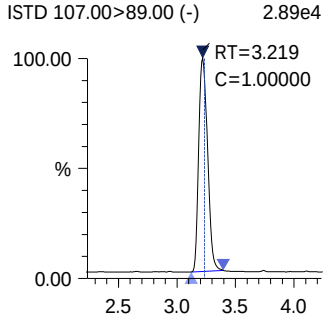
Perchlorate

Conc 9.07061
Area 145240



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 151139



ALS Group Houston

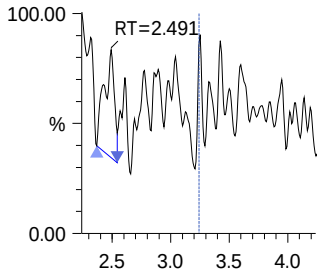
EQ2000436-01

Date acquired: 9/17/2020 4:11:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_012.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-01	9/17/2020 4:11:27 PM	----	----	20200917_012	----	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	EQ2000436-01	9/17/2020 4:11:27 PM	168330	1.00000	20200917_012	3.165	25.0000	1.0000	17

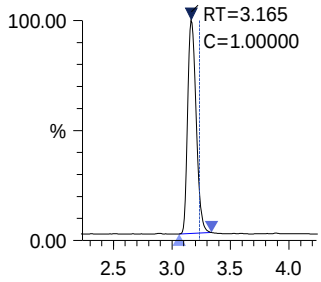
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.13e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168330
ISTD 107.00>89.00 (-) 3.29e4



ALS Group Houston

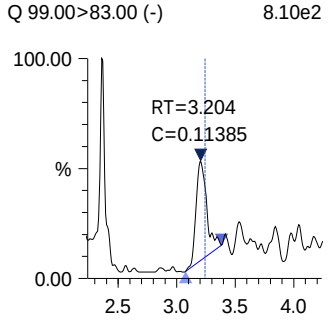
EQ2000436-02

Date acquired: 9/17/2020 4:19:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_013.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-02	9/17/2020 4:19:22 PM	2383	0.11385	20200917_013	3.204	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000436-02	9/17/2020 4:19:22 PM	174963	1.00000	20200917_013	3.208	25.0000	1.0000	18

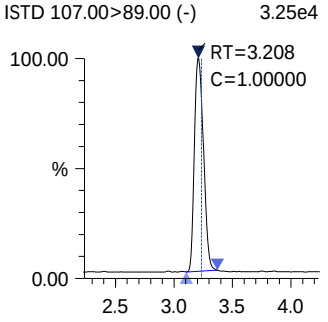
Perchlorate

Conc 0.11385
Area 2383



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 174963



ALS Group Houston

EQ2000436-03

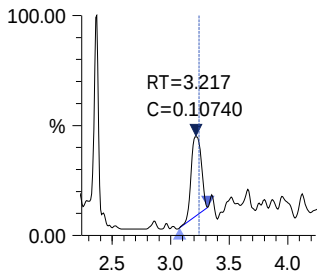
Date acquired: 9/17/2020 4:27:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_014.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-03	9/17/2020 4:27:12 PM	2118	0.10740	20200917_014	3.217	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000436-03	9/17/2020 4:27:12 PM	163778	1.00000	20200917_014	3.208	25.0000	1.0000	19

Perchlorate

Conc 0.10740
Area 2118

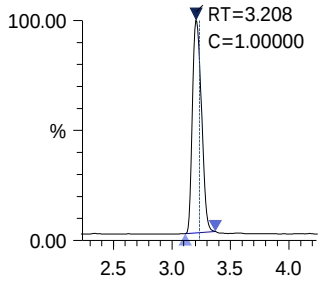
Q 99.00>83.00 (-) 9.55e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 163778

ISTD 107.00>89.00 (-) 3.04e4



ALS Group Houston

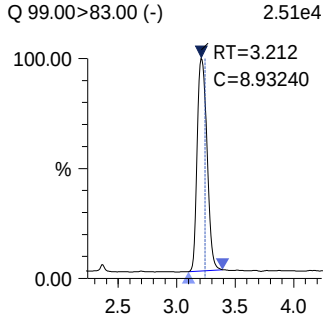
PERCHLORATE7

Date acquired: 9/17/2020 5:14:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_020.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	9/17/2020 5:14:31 PM	145389	8.93240	20200917_020	3.212	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 5:14:31 PM	153613	1.00000	20200917_020	3.208	25.0000	1.0000	4

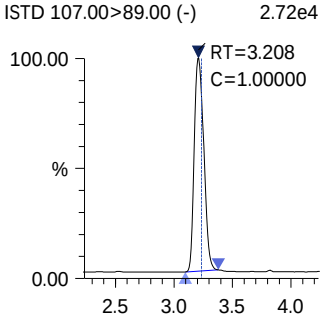
Perchlorate

Conc 8.93240
Area 145389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 153613



HS20090744 - ME - ICP_W_DOD

ALS WO# HS20090744

ALS Houston, US Date: 07-Oct-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744
Start Date: 17-Sep-2020 12:00 End Date: 17-Sep-2020 16:00

Batch ID: 157451
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20090744-01	LH18/24-SP140_091520	Water		10	10	1
HS20090748-01MS				10	10	1
HS20090748-01MSD				10	10	1
HS20090748-01PDS				10	10	1
HS20090748-01SD				10	10	1
LCS-157451				10	10	1
MBLK-157451				10	10	1

ALS Houston, US Date: 07-Oct-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744
Start Date: 21-Sep-2020 End Date: 21-Sep-2020

Run ID:ICPMS06_368933
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_368933_Tune	1	21-Sep-2020 00:00	ICPMS06_368933_Tune_1	
CAL BLK	1	21-Sep-2020 11:10	013CALB.d_5747083	AG SE
2/10/200	1	21-Sep-2020 11:12	014CALS.d_5747084	AG SE
5/25/500	1	21-Sep-2020 11:13	015CALS.d_5747085	AG SE
10/50/100	1	21-Sep-2020 11:15	016CALS.d_5747086	AG SE
100/500/10K	1	21-Sep-2020 11:17	017CALS.d_5747087	AG SE
200/1000/20K	1	21-Sep-2020 11:19	018CALS.d_5747088	AG SE
ICV	1	21-Sep-2020 11:23	020_ICV.d_5747090	AG SE
LLICV2	1	21-Sep-2020 11:24	021LCV2.d_5747091	AG SE
LLICV5	1	21-Sep-2020 11:26	022LCV5.d_5747092	AG SE
ICB	1	21-Sep-2020 11:28	023_ICB.d_5747093	AG SE
ICSA	1	21-Sep-2020 11:30	024ICSA.d_5747094	AG SE
ICSAB	1	21-Sep-2020 11:32	025ICSB.d_5747095	AG SE
CCV 1	1	21-Sep-2020 11:50	030_CCV.d_5747106	AG SE
CCB 1	1	21-Sep-2020 11:52	031_CCB.d_5747107	AG SE
CCV 2	1	21-Sep-2020 12:18	042_CCV.d_5747118	AG SE
CCB 2	1	21-Sep-2020 12:19	043_CCB.d_5747119	AG SE
CCV 3	1	21-Sep-2020 12:44	054_CCV.d_5747130	AG SE
CCB 3	1	21-Sep-2020 12:52	057_CCB.d_5747133	AG SE
CCB 4	1	21-Sep-2020 12:54	058_CCB.d_5747134	AG SE
CCV 4	1	21-Sep-2020 13:39	082_CCV.d_5747278	AG SE
CCB 5	1	21-Sep-2020 13:41	083_CCB.d_5747279	AG SE
MBLK-157451	1	21-Sep-2020 13:48	084SMPL.d_5747280	AG SE
LH18/24-SP140_091520	1	21-Sep-2020 13:52	086SMPL.d_5747282	AG SE
LCS-157451	1	21-Sep-2020 13:54	087SMPL.d_5747283	AG SE
ZZZZZZSD	5	21-Sep-2020 13:58	089SMPL.d_5747285	AG SE
ZZZZZZMS	1	21-Sep-2020 13:59	090SMPL.d_5747286	AG SE
ZZZZZZPDS	1	21-Sep-2020 14:03	092SMPL.d_5747288	AG SE
CCV 5	1	21-Sep-2020 14:08	094_CCV.d_5747290	AG SE
CCB 6	1	21-Sep-2020 14:10	095_CCB.d_5747291	AG SE
CCV 6	1	21-Sep-2020 15:10	118_CCV.d_5747355	AG SE
CCB 7	1	21-Sep-2020 15:11	119_CCB.d_5747356	AG SE
ZZZZZZMSD	1	21-Sep-2020 15:39	127SMPL.d_5747357	AG SE
CCV 7	1	21-Sep-2020 15:44	130_CCV.d_5747359	AG SE
CCB 8	1	21-Sep-2020 15:46	131_CCB.d_5747360	AG SE

ALS Houston, US Date: 07-Oct-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Run ID: ICPMS06_368933
Instrument: ICPMS06
Method: SW6020

ICV	Date: 21-Sep-2020 11:23		Seq: 5747090	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	105.18	105	90-110	
Silver	100	104.571	105	90-110	

CCV1	Date: 21-Sep-2020 11:50		Seq: 5747106	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	102.538	103	90-110	
Silver	100	101.558	102	90-110	

CCV2	Date: 21-Sep-2020 12:18		Seq: 5747118	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.645	99	90-110	
Silver	100	99.774	100	90-110	

CCV3	Date: 21-Sep-2020 12:44		Seq: 5747130	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	100.501	101	90-110	
Silver	100	102.234	102	90-110	

CCV4	Date: 21-Sep-2020 13:39		Seq: 5747278	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	94.738	95	90-110	
Silver	100	96.309	96	90-110	

CCV5	Date: 21-Sep-2020 14:08		Seq: 5747290	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.34	97	90-110	
Silver	100	97.225	97	90-110	

CCV6	Date: 21-Sep-2020 15:10		Seq: 5747355	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	99.703	100	90-110	
Silver	100	97.976	98	90-110	

CCV7	Date: 21-Sep-2020 15:44		Seq: 5747359	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	96.689	97	90-110	
Silver	100	100.863	101	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Run ID: ICPMS06_368933
Instrument: ICPMS06
Method: SW6020

ICB	Date: 21-Sep-2020 11:28		Seq: 5747093	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
CCB1	Date: 21-Sep-2020 11:52		Seq: 5747107	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB2	Date: 21-Sep-2020 12:19		Seq: 5747119	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB3	Date: 21-Sep-2020 12:52		Seq: 5747133	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB4	Date: 21-Sep-2020 12:54		Seq: 5747134	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB5	Date: 21-Sep-2020 13:41		Seq: 5747279	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
MBLK-157451	Date: 21-Sep-2020 13:48		Seq: 5747280	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
CCB6	Date: 21-Sep-2020 14:10		Seq: 5747291	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB7	Date: 21-Sep-2020 15:11		Seq: 5747356	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB8	Date: 21-Sep-2020 15:46		Seq: 5747360	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: 07-Oct-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Run ID: ICPMS06_368933
Instrument: ICPMS06
Method: SW6020

ICSA	Date: 21-Sep-2020 11:30	Seq: 5747094	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		0.149	0	
Silver		0.008	0	

ICSAB	Date: 21-Sep-2020 11:32	Seq: 5747095	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	111.3	111	
Silver	100	98.32	98.3	

ALS Houston, US Date: 07-Oct-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Date Analyzed: 21-Sep-2020 15:39
Date Extracted: 17-Sep-2020 16:00
Units: ug/L

Matrix Spike: HS20090748-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	5.000	45.15	50.00	90.0	43.78	50.00	87.6	80-120	3.08	20
Silver	5.000	41.20	50.00	82.4	40.71	50.00	81.4	85-116	1.21	20

ALS Houston, US Date: 07-Oct-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Date Analyzed: 21-Sep-2020 14:03
Date Extracted: 17-Sep-2020 16:00
Units: ug/L

Lab Sample ID: HS20090748-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Selenium	0	103.6	100	103	80-120
Silver	0	97.66	100	98	80-120

ALS Houston, US

Date: 07-Oct-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Date Analyzed: 21-Sep-2020 13:54
Date Extracted: 17-Sep-2020 16:00
Units: ug/L

Lab Sample ID: LCS-157451

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Selenium	50	48.41	97	80-120
Silver	50	47.21	94	85-116

ALS Houston, US Date: 07-Oct-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20090744

Date Analyzed: 21-Sep-2020 13:58
Date Extracted: 17-Sep-2020 16:00
Units: ug/L

Lab Sample ID: HS20090748-01SD
Client Sample ID:

Analysis Method: SW6020

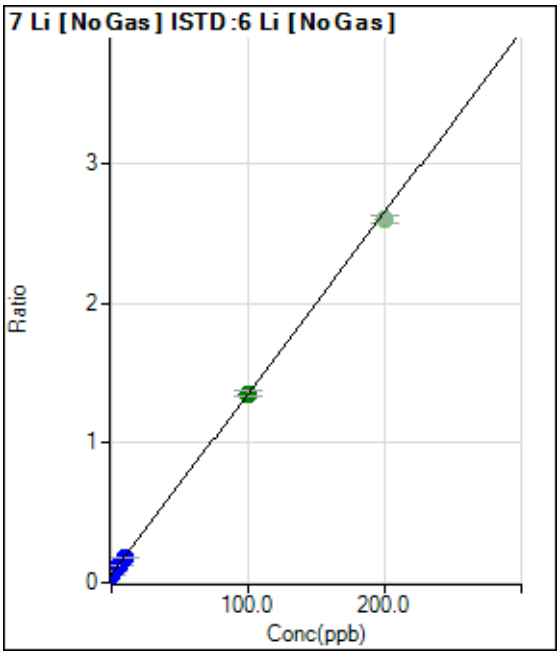
Analyte	Sample Result	C	SD Result	C	RPD	Q
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

Calibration for 020_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\092120B.b\
Analysis File: 092120B.batch.bin
DA Date-Time: 9/21/2020 11:29:19 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	013CALB.d	CAL BLK	9/21/2020 11:10:12 AM
2	014CALS.d	2/10/200	9/21/2020 11:12:05 AM
3	015CALS.d	5/25/500	9/21/2020 11:13:57 AM
4	016CALS.d	10/50/100	9/21/2020 11:15:49 AM
5	017CALS.d	100/500/10K	9/21/2020 11:17:41 AM
6	018CALS.d	200/1000/20K	9/21/2020 11:19:26 AM

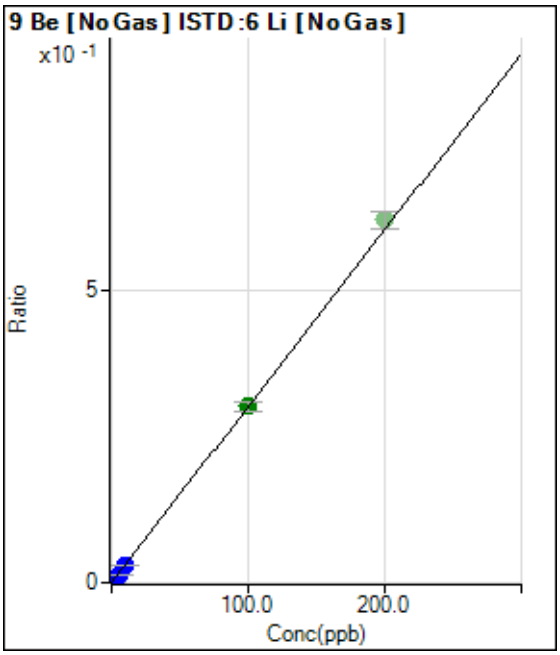
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149939.87	0.0579	P	3.5
2	☐	2.000	2.036	211314.61	0.0844	P	0.8
3	☐	5.000	4.752	306121.57	0.1196	P	1.7
4	☐	10.000	9.713	466994.59	0.1840	P	2.1
5	☐	100.000	100.040	3276564.01	1.3569	A	3.2
6	☑	200.000		5941593.66	2.6015	A	2.0

y = 0.0130 * x + 0.0579
R = 1.0000
DL = 0.469
BEC = 4.462

Weight: <None>
Min Conc: <None>

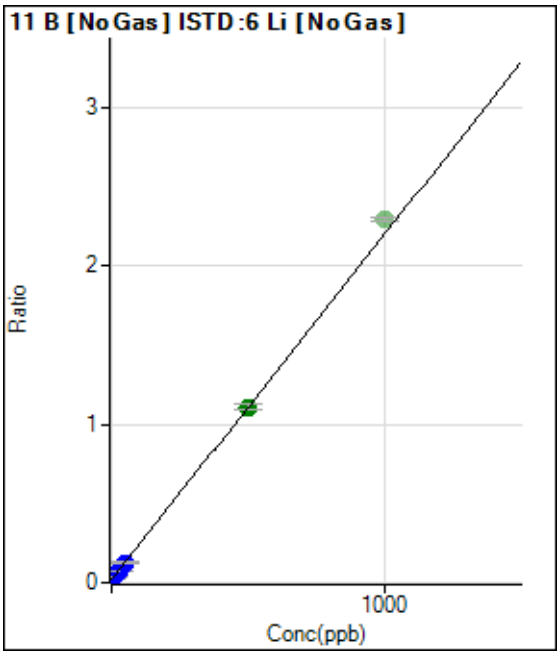


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	49.1
2	☐	2.000	2.054	15486.93	0.0062	P	2.8
3	☐	5.000	4.785	36855.06	0.0144	P	1.8
4	☐	10.000	9.936	75897.22	0.0299	P	1.1
5	☐	100.000	100.016	726683.14	0.3010	A	5.6
6	☑	200.000		1414598.36	0.6196	A	4.8

y = 0.0030 * x + 3.8437E-006
R = 1.0000
DL = 0.001883
BEC = 0.001277

Weight: <None>
Min Conc: <None>

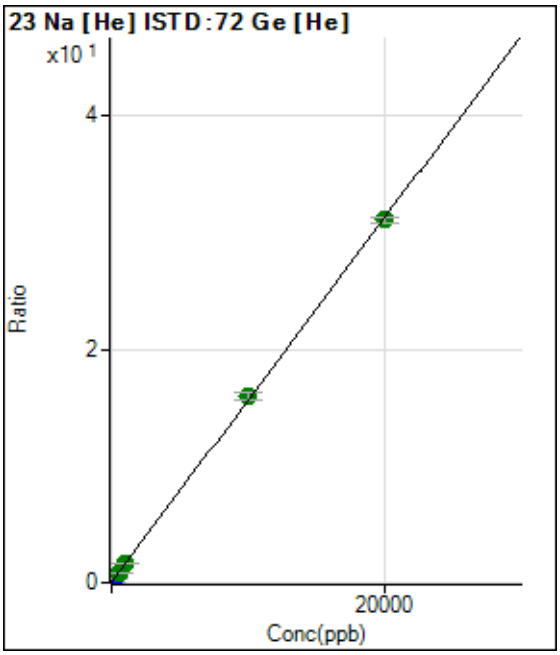
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49424.15	0.0191	P	0.8
2	☐	10.000	9.628	100328.56	0.0401	P	2.7
3	☐	25.000	23.761	181286.60	0.0709	P	3.1
4	☐	50.000	49.682	323143.52	0.1273	P	1.5
5	☐	500.000	500.101	2677296.52	1.1088	A	3.7
6	☑	1000.000		5228784.61	2.2894	A	1.1

y = 0.0022 * x + 0.0191
R = 1.0000
DL = 0.1995
BEC = 8.76

Weight: <None>
Min Conc: <None>

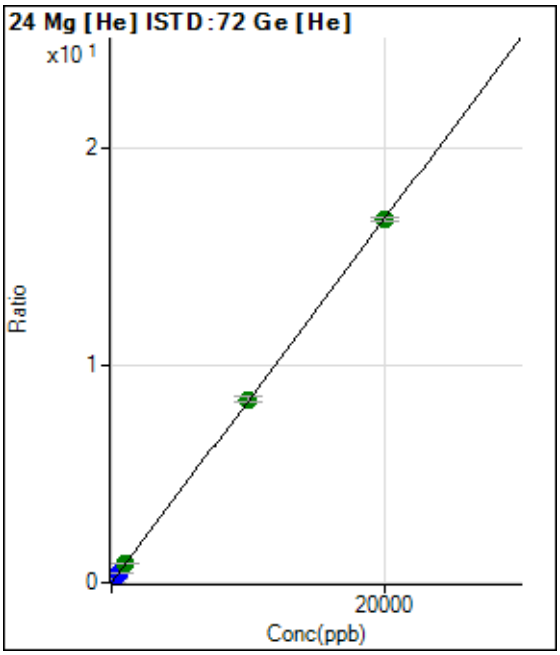


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63293.82	0.0566	P	2.9
2	☐	200.000	205.607	415213.65	0.3771	P	2.1
3	☐	500.000	510.993	930281.83	0.8531	A	0.2
4	☐	1000.000	1025.865	1761027.63	1.6557	A	4.1
5	☐	10000.00	10212.56	16552148.92	15.9760	A	3.9
6	☐	20000.00	19892.09	31823983.69	31.0644	A	1.4

y = 0.0016 * x + 0.0566
R = 0.9999
DL = 3.176
BEC = 36.3

Weight: <None>
Min Conc: <None>

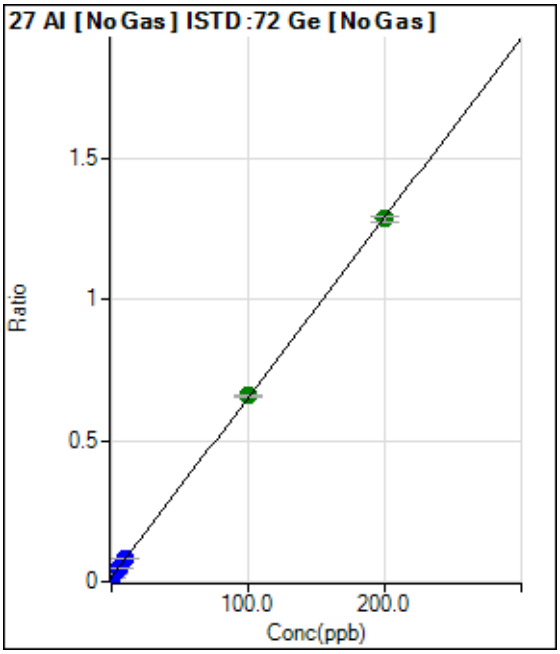
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	35.2
2	☐	200.000	206.253	190560.11	0.1731	P	3.1
3	☐	500.000	522.775	477895.45	0.4383	P	0.6
4	☐	1000.000	1023.577	912426.50	0.8578	A	3.3
5	☐	10000.00	10092.07	8760163.83	8.4554	A	3.7
6	☐	20000.00	19952.15	17126576.41	16.7161	A	0.9

y = 8.3779E-004 * x + 2.7971E-004
R = 1.0000
DL = 0.3527
BEC = 0.3339

Weight: <None>
Min Conc: <None>

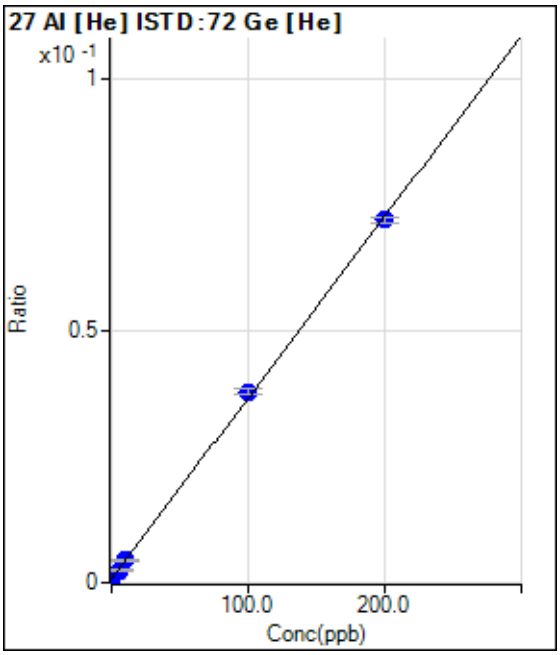


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66668.50	0.0152	P	9.7
2	☐	2.000	2.080	125208.57	0.0284	P	1.7
3	☐	5.000	5.215	208298.07	0.0484	P	0.4
4	☐	10.000	10.579	358276.93	0.0827	P	1.9
5	☐	100.000	101.154	2773494.33	0.6606	A	1.3
6	☐	200.000	199.388	5319793.25	1.2875	A	1.7

y = 0.0064 * x + 0.0152
R = 1.0000
DL = 0.6884
BEC = 2.375

Weight: <None>
Min Conc: <None>

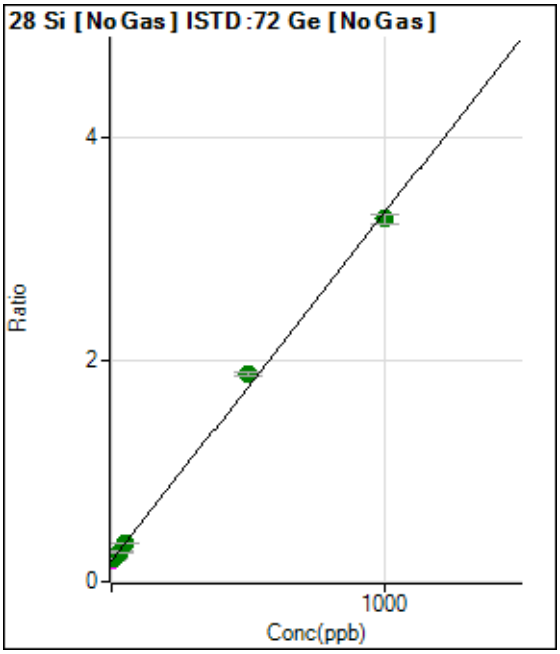
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	816.71	0.0007	P	10.6
2	☐	2.000	2.328	1723.47	0.0016	P	13.4
3	☐	5.000	4.719	2643.63	0.0024	P	6.4
4	☐	10.000	10.327	4717.55	0.0044	P	7.6
5	☐	100.000	103.339	39195.95	0.0378	P	2.6
6	☐	200.000	198.318	73662.44	0.0719	P	1.7

y = 3.5889E-004 * x + 7.3071E-004
R = 0.9998
DL = 0.65
BEC = 2.036

Weight: <None>
Min Conc: <None>

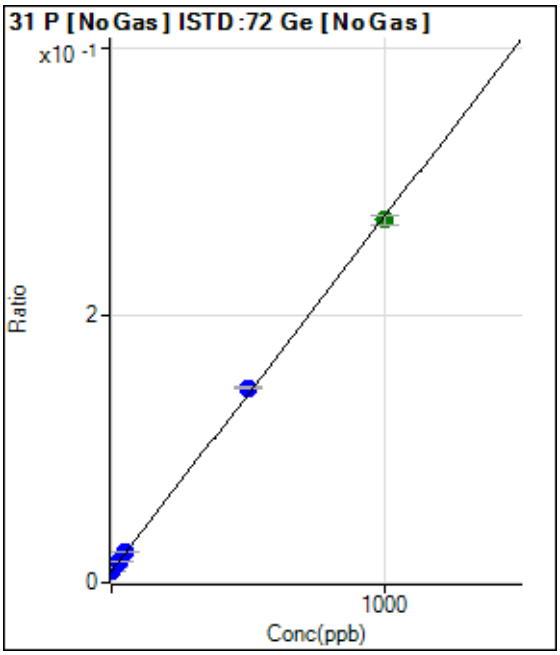


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	826175.30	0.1879	M	6.1
2	☐	10.000	8.435	944869.18	0.2144	A	3.1
3	☐	25.000	24.480	1138901.44	0.2648	A	4.0
4	☐	50.000	49.135	1483460.86	0.3422	A	1.5
5	☐	500.000	535.837	7853886.97	1.8707	A	2.4
6	☐	1000.000	982.154	13520266.47	3.2724	A	2.3

y = 0.0031 * x + 0.1879
R = 0.9991
DL = 10.88
BEC = 59.84

Weight: <None>
Min Conc: <None>

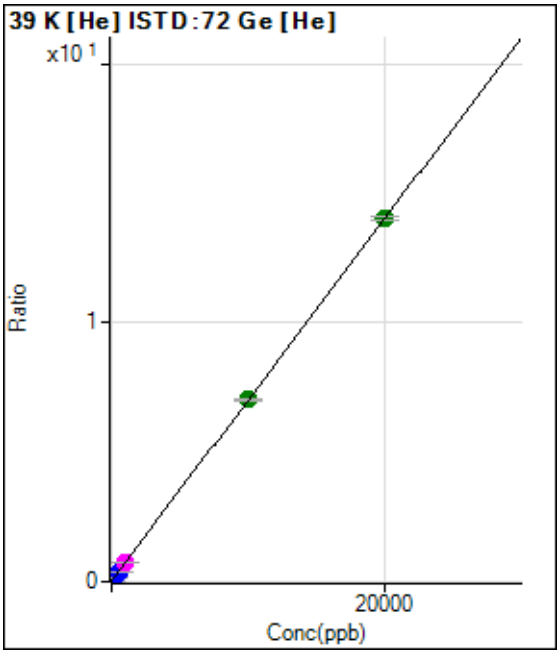
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37280.47	0.0085	P	3.3
2	☐	10.000	10.004	49033.54	0.0111	P	2.1
3	☐	25.000	27.297	67588.03	0.0157	P	0.4
4	☐	50.000	53.171	97847.44	0.0226	P	1.9
5	☐	500.000	517.678	611717.61	0.1457	P	1.6
6	☐	1000.000	990.945	1120427.17	0.2712	A	3.0

y = 2.6510E-004 * x + 0.0085
R = 0.9998
DL = 3.133
BEC = 31.98

Weight: <None>
Min Conc: <None>

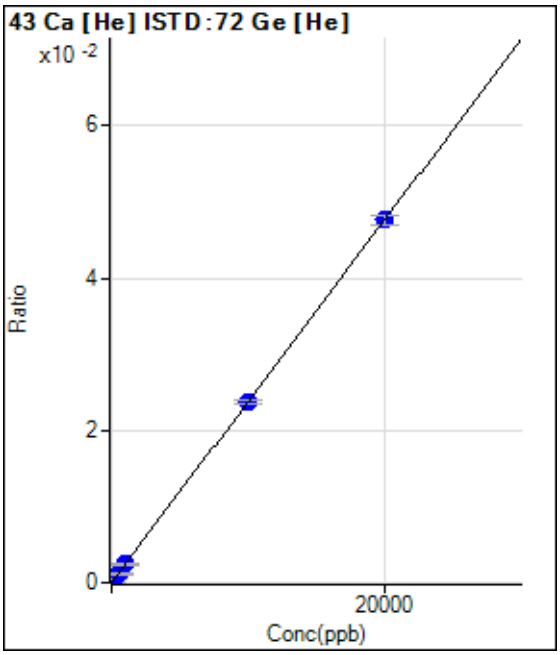


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32084.44	0.0287	P	4.4
2	☐	200.000	204.968	189375.24	0.1720	P	1.3
3	☐	500.000	503.132	414742.12	0.3804	P	2.4
4	☐	1000.000	1034.348	799809.26	0.7517	M	1.7
5	☐	10000.00	9999.040	7274280.93	7.0184	A	1.3
6	☐	20000.00	19998.63	14350478.12	14.0086	A	1.0

y = 6.9904E-004 * x + 0.0287
R = 1.0000
DL = 5.374
BEC = 41.04

Weight: <None>
Min Conc: <None>

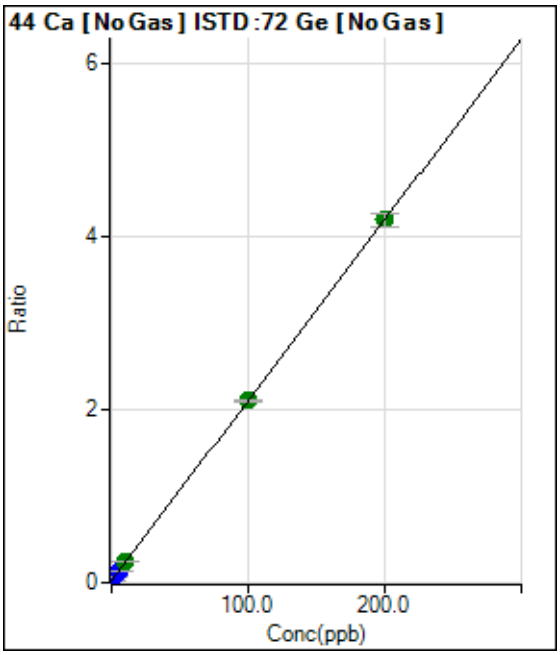
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	48.9
2	☐	200.000	229.065	623.36	0.0006	P	9.3
3	☐	500.000	483.890	1276.75	0.0012	P	11.6
4	☐	1000.000	1001.306	2556.97	0.0024	P	2.4
5	☐	10000.00	9969.292	24602.38	0.0237	P	1.2
6	☐	20000.00	20015.40	48783.96	0.0476	P	2.5

y = 2.3787E-006 * x + 2.0787E-005
R = 1.0000
DL = 12.82
BEC = 8.739

Weight: <None>
Min Conc: <None>

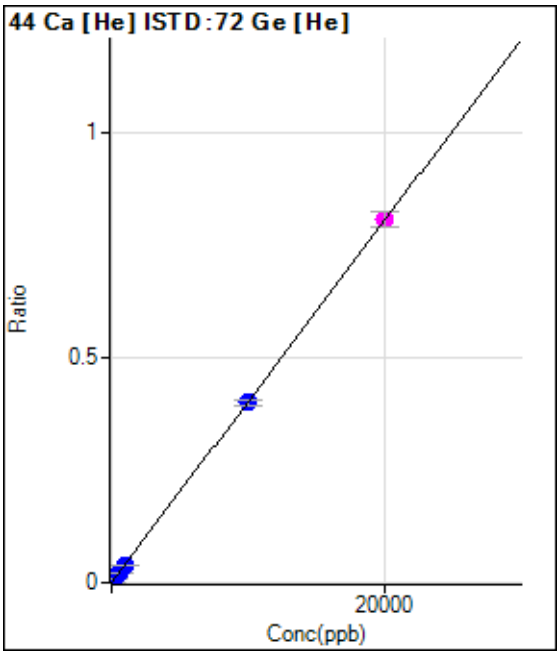


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98005.67	0.0223	P	1.5
2	☐	2.000	2.048	286319.88	0.0650	P	2.2
3	☐	5.000	5.272	568653.44	0.1322	P	1.2
4	☐	10.000	10.455	1041783.55	0.2403	A	0.7
5	☐	100.000	99.977	8847369.04	2.1073	A	0.9
6	☐	200.000	199.982	17319699.33	4.1930	A	3.9

y = 0.0209 * x + 0.0223
R = 1.0000
DL = 0.04769
BEC = 1.068

Weight: <None>
Min Conc: <None>

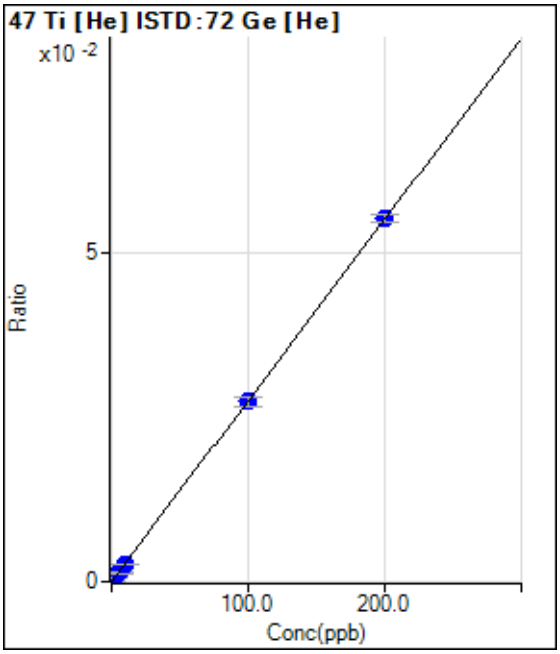
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.02	0.0004	P	17.8
2	☐	200.000	201.670	9400.07	0.0085	P	3.2
3	☐	500.000	477.285	21420.35	0.0196	P	1.3
4	☐	1000.000	992.144	42981.04	0.0404	P	0.5
5	☐	10000.00	9930.232	415084.15	0.4006	P	3.0
6	☐	20000.00	20035.82	827183.69	0.8079	M	4.3

y = 4.0300E-005 * x + 4.1087E-004
R = 1.0000
DL = 5.445
BEC = 10.2

Weight: <None>
Min Conc: <None>

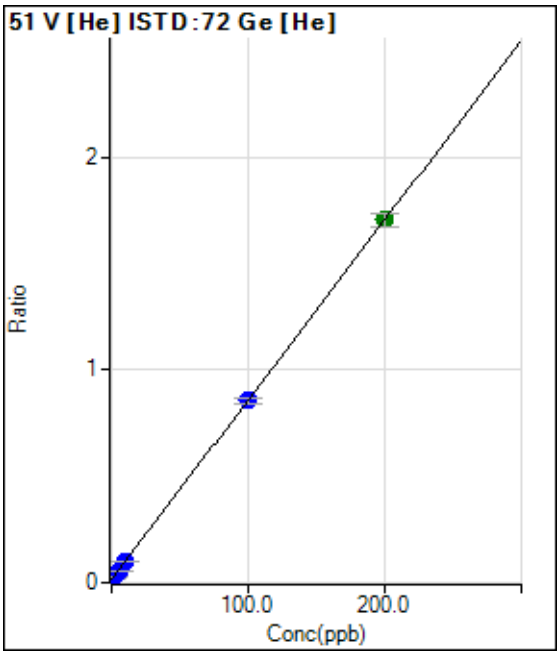


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	86.6
2	☐	2.000	1.952	610.03	0.0006	P	6.5
3	☐	5.000	4.859	1473.44	0.0014	P	6.8
4	☐	10.000	9.135	2687.00	0.0025	P	0.9
5	☐	100.000	99.310	28259.62	0.0273	P	4.8
6	☐	200.000	200.392	56366.23	0.0550	P	2.2

y = 2.7454E-004 * x + 1.7771E-005
R = 1.0000
DL = 0.1682
BEC = 0.06473

Weight: <None>
Min Conc: <None>

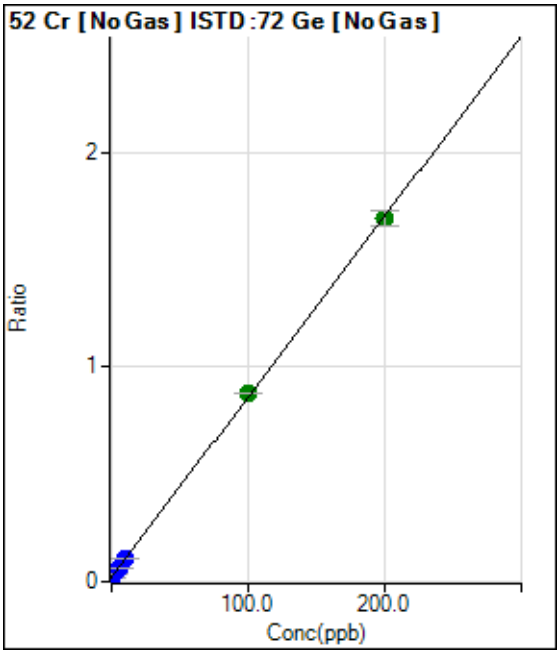
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16207.40	0.0145	P	1.1
2	☐	2.000	1.907	33676.81	0.0306	P	1.7
3	☐	5.000	4.879	60691.43	0.0557	P	1.2
4	☐	10.000	10.023	105375.62	0.0991	P	1.9
5	☐	100.000	99.503	884927.22	0.8540	P	2.9
6	☐	200.000	200.251	1744884.76	1.7041	A	4.1

y = 0.0084 * x + 0.0145
R = 1.0000
DL = 0.05442
BEC = 1.717

Weight: <None>
Min Conc: <None>

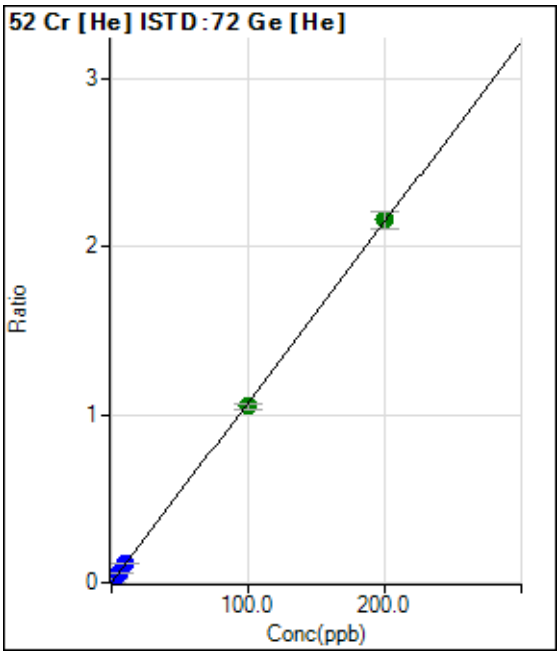


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	89545.64	0.0204	P	3.4
2	☐	2.000	2.083	166846.54	0.0379	P	0.6
3	☐	5.000	5.473	285369.57	0.0664	P	1.6
4	☐	10.000	10.670	476937.09	0.1100	P	1.6
5	☐	100.000	102.442	3700032.55	0.8812	A	0.2
6	☐	200.000	198.733	6982229.90	1.6904	A	4.4

y = 0.0084 * x + 0.0204
R = 0.9999
DL = 0.249
BEC = 2.423

Weight: <None>
Min Conc: <None>

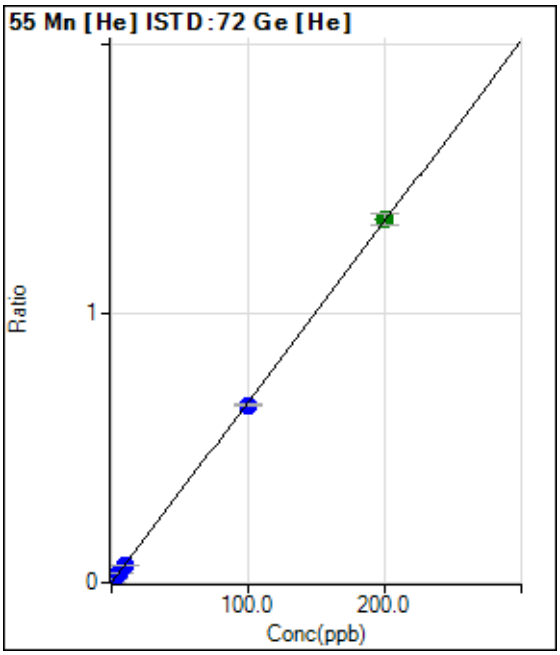
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1983.51	0.0018	P	5.8
2	☐	2.000	2.024	25874.80	0.0235	P	2.7
3	☐	5.000	4.941	59777.86	0.0548	P	2.6
4	☐	10.000	10.170	118027.04	0.1110	P	2.4
5	☐	100.000	97.739	1089072.25	1.0511	A	3.8
6	☐	200.000	201.123	2212591.74	2.1611	A	4.8

y = 0.0107 * x + 0.0018
R = 0.9999
DL = 0.02886
BEC = 0.1651

Weight: <None>
Min Conc: <None>

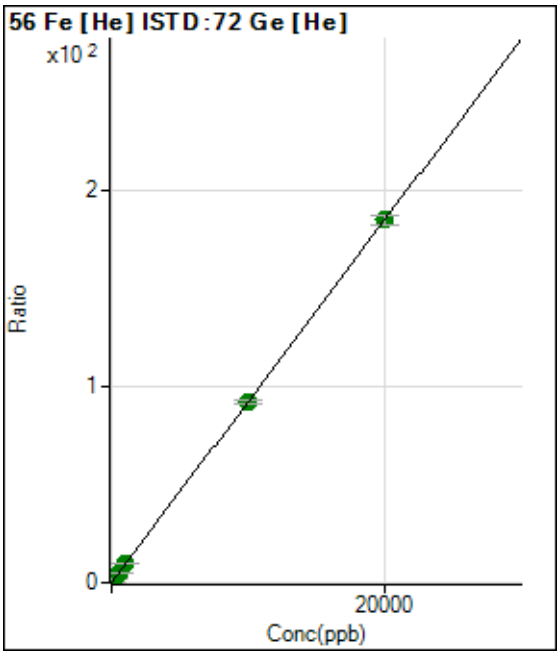


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.01	0.0002	P	18.5
2	☐	2.000	1.949	14634.75	0.0133	P	1.7
3	☐	5.000	4.808	35396.46	0.0325	P	1.2
4	☐	10.000	9.989	71508.18	0.0672	P	1.5
5	☐	100.000	98.427	684510.15	0.6605	P	1.7
6	☐	200.000	200.792	1379710.24	1.3471	A	3.0

y = 0.0067 * x + 2.1439E-004
R = 1.0000
DL = 0.01769
BEC = 0.03196

Weight: <None>
Min Conc: <None>

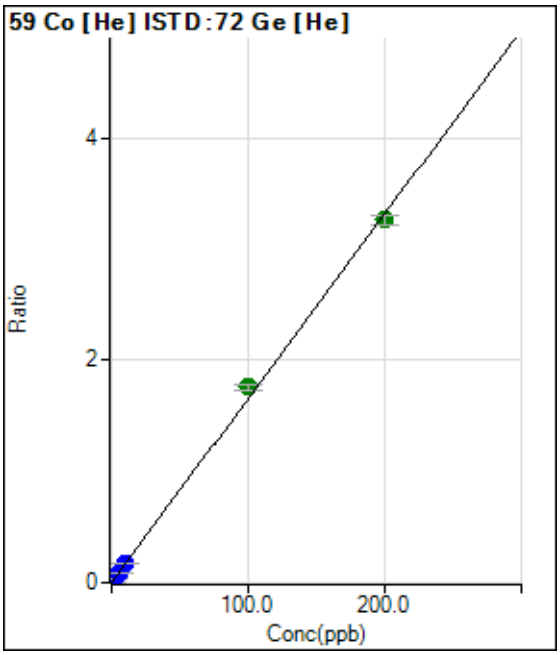
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12966.78	0.0115	P	65.4
2	☐	200.000	200.553	2049523.04	1.8607	A	2.8
3	☐	500.000	487.198	4910416.49	4.5038	A	1.9
4	☐	1000.000	1029.577	10111521.93	9.5048	A	1.5
5	☐	10000.00	9953.086	95118421.92	91.7844	A	2.0
6	☐	20000.00	20022.29	189079223.8	184.628	A	3.0

y = 0.0092 * x + 0.0115
R = 1.0000
DL = 2.454
BEC = 1.25

Weight: <None>
Min Conc: <None>

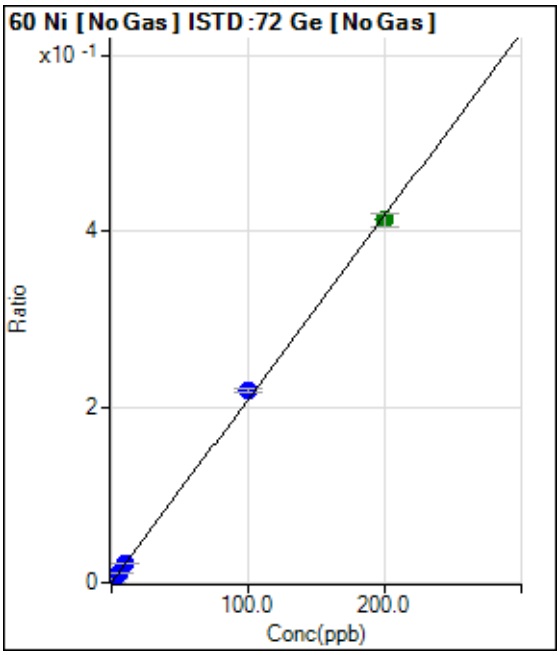


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.33	0.0001	P	19.1
2	☐	2.000	2.037	37295.11	0.0339	P	1.1
3	☐	5.000	5.102	92239.07	0.0846	P	2.5
4	☐	10.000	10.819	190679.11	0.1792	P	1.9
5	☐	100.000	105.966	1818022.11	1.7543	A	2.0
6	☐	200.000	196.973	3339419.32	3.2608	A	3.0

y = 0.0166 * x + 1.4606E-004
R = 0.9994
DL = 0.005056
BEC = 0.008823

Weight: <None>
Min Conc: <None>

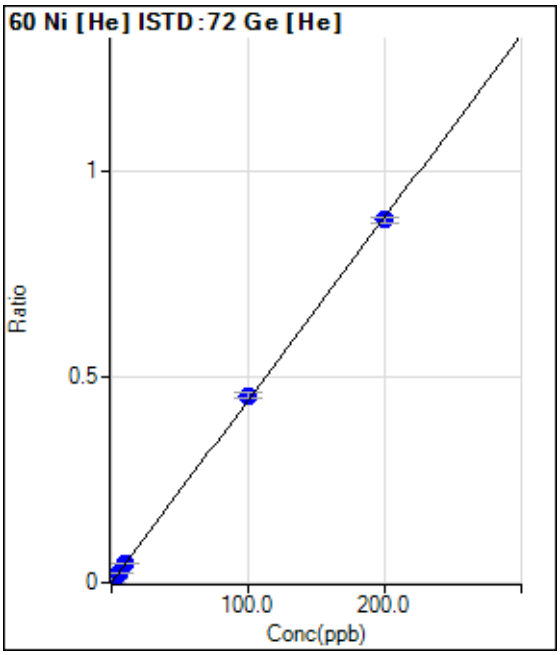
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0001	P	7.1
2	☐	2.000	2.143	20151.94	0.0046	P	3.1
3	☐	5.000	5.334	48316.41	0.0112	P	1.7
4	☐	10.000	10.569	96045.46	0.0222	P	2.2
5	☐	100.000	104.366	914794.31	0.2179	P	2.0
6	☐	200.000	197.779	1705251.90	0.4128	A	3.8

y = 0.0021 * x + 1.0314E-004
R = 0.9997
DL = 0.01051
BEC = 0.04943

Weight: <None>
Min Conc: <None>

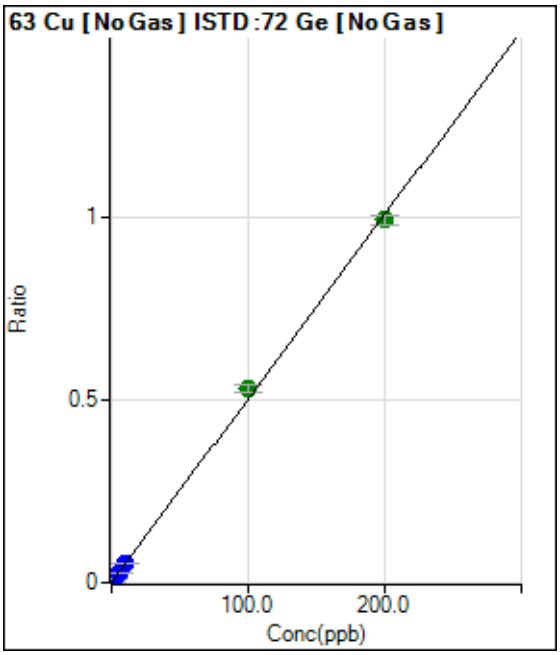


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.01	0.0002	P	13.3
2	☐	2.000	1.967	9777.00	0.0089	P	3.9
3	☐	5.000	5.134	24983.35	0.0229	P	2.3
4	☐	10.000	10.508	49721.33	0.0467	P	1.1
5	☐	100.000	102.611	471406.86	0.4549	P	2.5
6	☐	200.000	198.666	902045.87	0.8806	P	1.5

y = 0.0044 * x + 1.6071E-004
R = 0.9999
DL = 0.01447
BEC = 0.03626

Weight: <None>
Min Conc: <None>

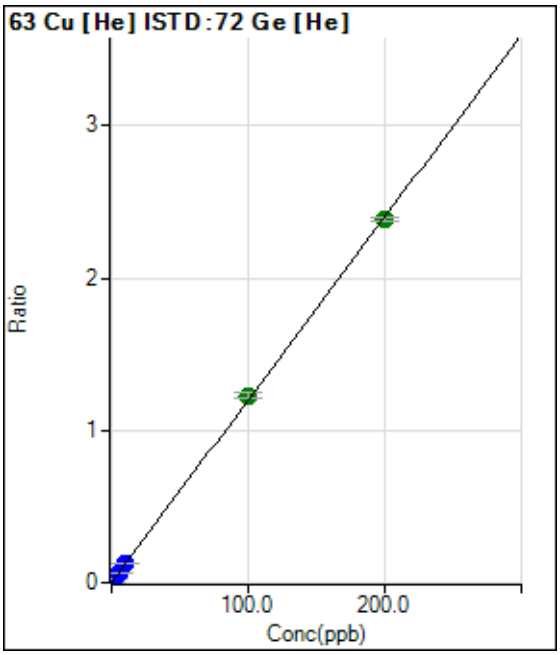
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1986.85	0.0005	P	10.4
2	☐	2.000	2.128	49169.70	0.0112	P	1.2
3	☐	5.000	5.368	118128.62	0.0275	P	1.9
4	☐	10.000	10.607	233319.05	0.0538	P	2.5
5	☐	100.000	105.330	2227068.25	0.5305	A	3.5
6	☐	200.000	197.294	4103872.96	0.9933	A	2.7

y = 0.0050 * x + 4.5204E-004
R = 0.9995
DL = 0.02808
BEC = 0.08982

Weight: <None>
Min Conc: <None>

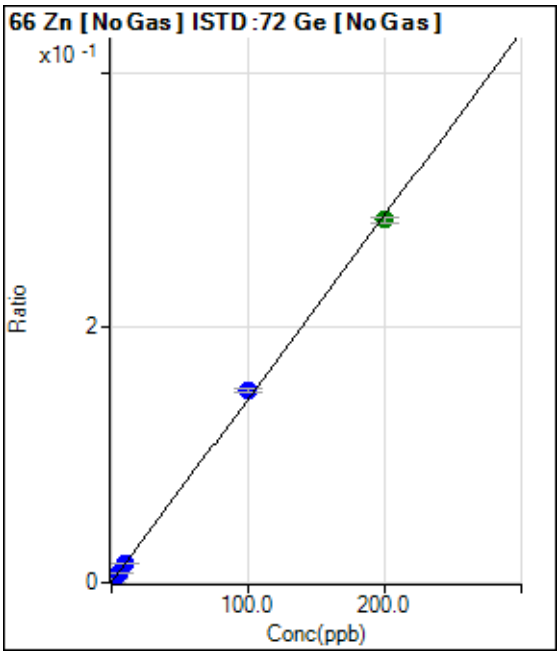


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1080.07	0.0010	P	19.1
2	☐	2.000	2.090	28643.97	0.0260	P	3.0
3	☐	5.000	5.312	70469.55	0.0646	P	2.1
4	☐	10.000	10.423	133911.48	0.1259	P	1.7
5	☐	100.000	102.609	1275228.99	1.2307	A	2.7
6	☐	200.000	198.666	2440154.28	2.3819	A	0.9

y = 0.0120 * x + 9.6602E-004
R = 0.9999
DL = 0.04626
BEC = 0.08061

Weight: <None>
Min Conc: <None>

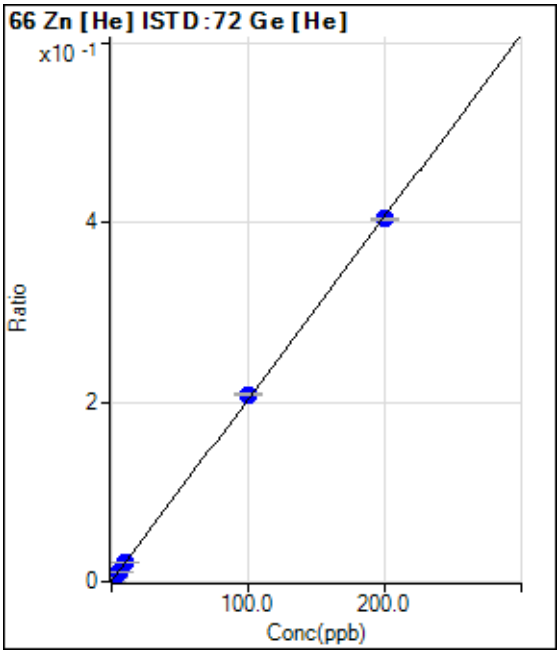
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1400.10	0.0003	P	5.3
2	☐	2.000	2.069	14518.04	0.0033	P	3.5
3	☐	5.000	5.219	33668.84	0.0078	P	2.5
4	☐	10.000	10.496	66854.56	0.0154	P	1.6
5	☐	100.000	104.791	634454.35	0.1511	P	1.8
6	☐	200.000	197.574	1176732.04	0.2847	A	1.8

y = 0.0014 * x + 3.1822E-004
R = 0.9996
DL = 0.03504
BEC = 0.2211

Weight: <None>
Min Conc: <None>

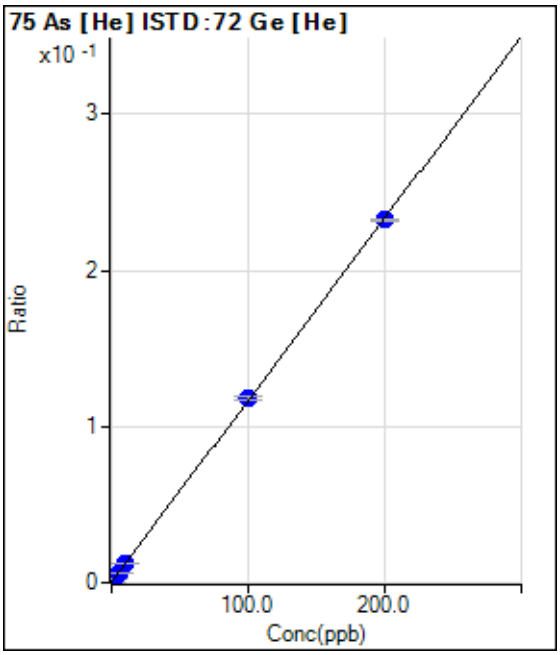


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0004	P	18.3
2	☐	2.000	1.995	4937.67	0.0045	P	6.0
3	☐	5.000	4.962	11455.03	0.0105	P	3.4
4	☐	10.000	10.424	22966.37	0.0216	P	2.5
5	☐	100.000	102.296	215609.85	0.2080	P	1.4
6	☐	200.000	198.832	413813.20	0.4039	P	0.5

y = 0.0020 * x + 4.3731E-004
R = 0.9999
DL = 0.1181
BEC = 0.2155

Weight: <None>
Min Conc: <None>

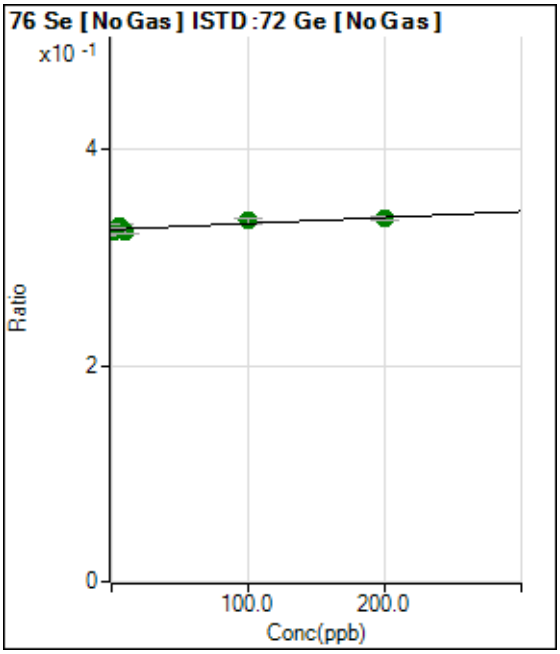
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0003	P	8.3
2	☐	2.000	1.967	2851.43	0.0026	P	2.5
3	☐	5.000	4.764	6373.75	0.0058	P	0.2
4	☐	10.000	9.957	12651.52	0.0119	P	1.6
5	☐	100.000	101.496	122787.96	0.1185	P	1.7
6	☐	200.000	199.260	237992.62	0.2323	P	0.6

y = 0.0012 * x + 2.9819E-004
R = 1.0000
DL = 0.06396
BEC = 0.2561

Weight: <None>
Min Conc: <None>

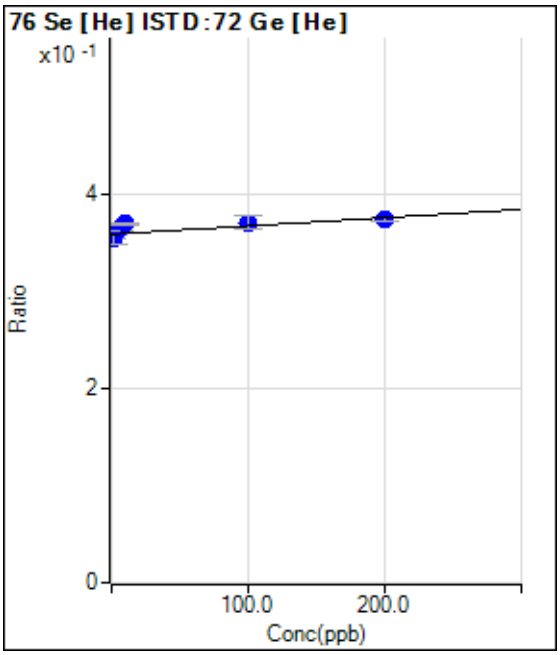


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1434642.79	0.3262	A	1.9
2	☐	2.000	-49.422	1424690.39	0.3234	A	2.2
3	☐	5.000	46.484	1413981.28	0.3288	A	1.7
4	☐	10.000	-25.949	1407825.81	0.3247	A	1.7
5	☐	100.000	152.611	1405425.24	0.3347	A	1.6
6	☐	200.000	174.969	1388220.13	0.3359	A	1.1

y = 5.5793E-005 * x + 0.3262
R = 0.8931
DL = 327.4
BEC = 5846

Weight: <None>
Min Conc: <None>

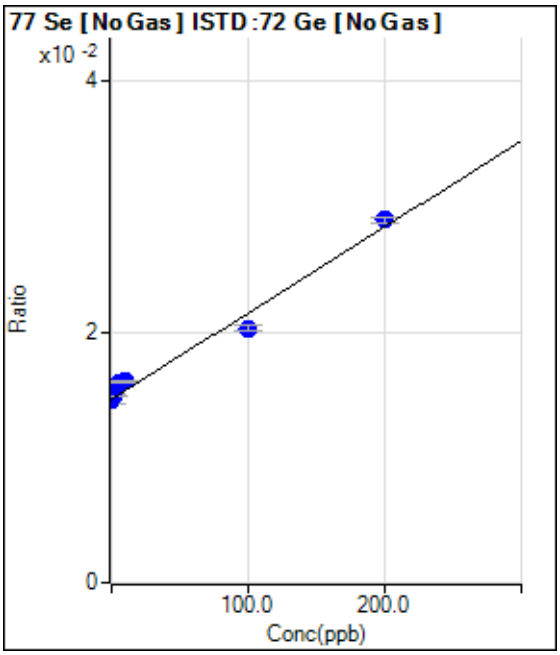
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400715.97	0.3583	P	2.1
2	☐	2.000	-61.485	388685.98	0.3530	P	2.8
3	☐	5.000	71.844	397281.55	0.3644	P	1.9
4	☐	10.000	128.378	392797.82	0.3692	P	0.6
5	☐	100.000	141.112	383612.68	0.3703	P	3.8
6	☐	200.000	172.489	382068.56	0.3729	P	1.2

y = 8.5159E-005 * x + 0.3583
R = 0.7091
DL = 269.6
BEC = 4207

Weight: <None>
Min Conc: <None>

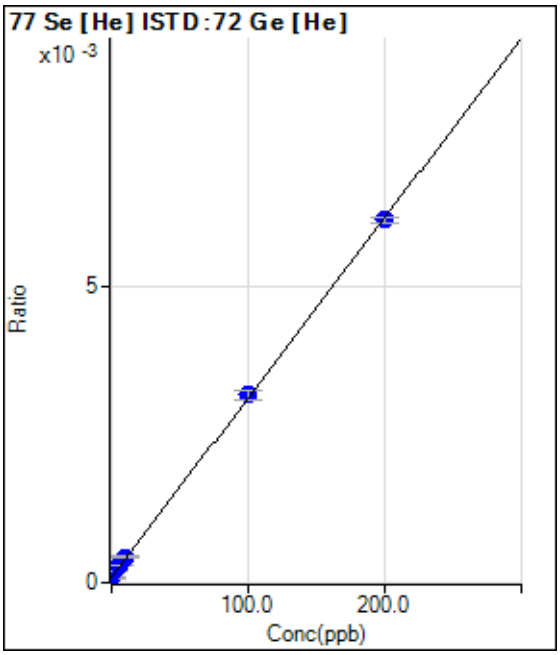


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64384.32	0.0146	P	4.5
2	☐	2.000	3.611	65613.17	0.0149	P	0.7
3	☐	5.000	19.877	68852.85	0.0160	P	1.2
4	☐	10.000	20.870	69696.94	0.0161	P	1.2
5	☐	100.000	82.128	85168.36	0.0203	P	2.0
6	☐	200.000	208.005	119573.78	0.0289	P	1.7

y = 6.8706E-005 * x + 0.0146
R = 0.9899
DL = 28.48
BEC = 213.2

Weight: <None>
Min Conc: <None>

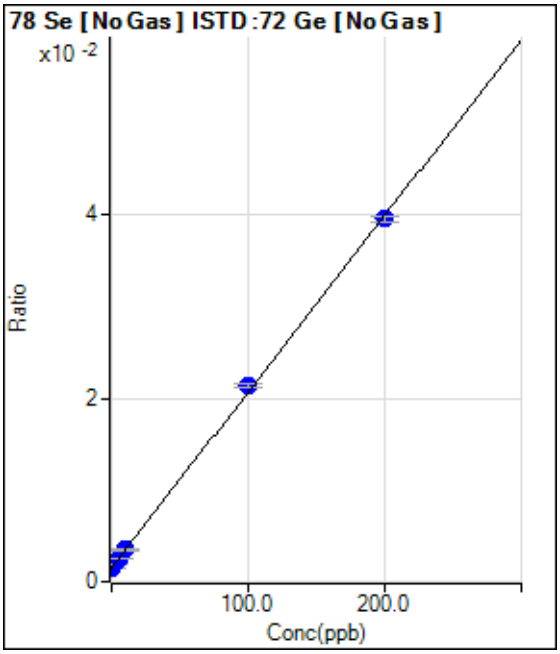
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	37.1
2	☐	2.000	3.743	223.34	0.0002	P	23.3
3	☐	5.000	6.826	323.34	0.0003	P	7.5
4	☐	10.000	11.298	460.01	0.0004	P	12.1
5	☐	100.000	101.823	3293.80	0.0032	P	4.9
6	☐	200.000	198.961	6274.94	0.0061	P	1.8

y = 3.0341E-005 * x + 8.9566E-005
R = 0.9999
DL = 3.282
BEC = 2.952

Weight: <None>
Min Conc: <None>

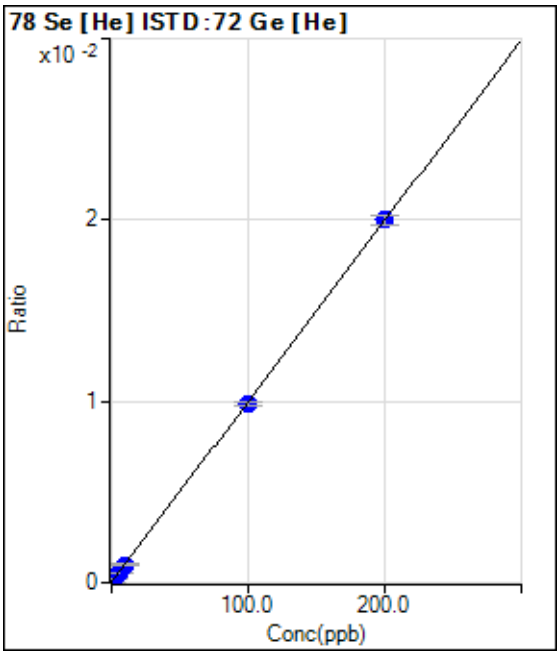


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6678.44	0.0015	P	2.5
2	☐	2.000	1.913	8302.69	0.0019	P	1.5
3	☐	5.000	5.347	10934.61	0.0025	P	4.4
4	☐	10.000	10.161	15021.99	0.0035	P	3.5
5	☐	100.000	103.326	89524.45	0.0213	P	1.7
6	☐	200.000	198.321	163372.22	0.0395	P	1.9

y = 1.9170E-004 * x + 0.0015
R = 0.9998
DL = 0.5839
BEC = 7.918

Weight: <None>
Min Conc: <None>

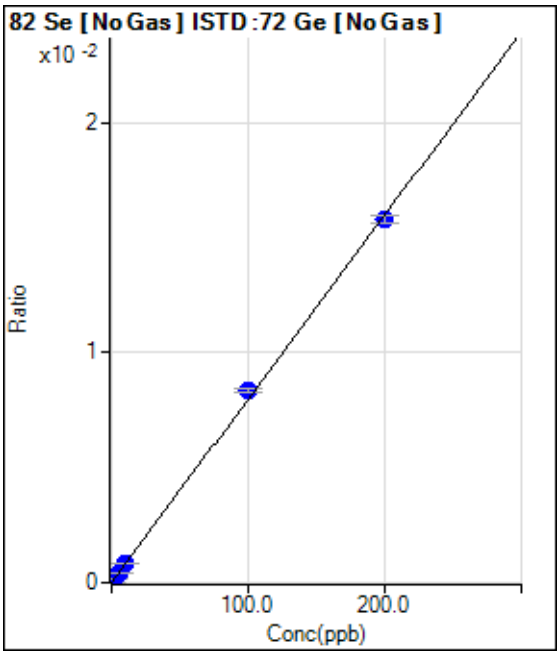
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	18.8
2	☐	2.000	2.129	270.00	0.0002	P	10.7
3	☐	5.000	4.738	550.68	0.0005	P	6.5
4	☐	10.000	9.575	1050.71	0.0010	P	5.0
5	☐	100.000	99.109	10272.61	0.0099	P	2.1
6	☐	200.000	200.472	20496.27	0.0200	P	2.7

y = 9.9661E-005 * x + 3.2825E-005
R = 1.0000
DL = 0.1854
BEC = 0.3294

Weight: <None>
Min Conc: <None>

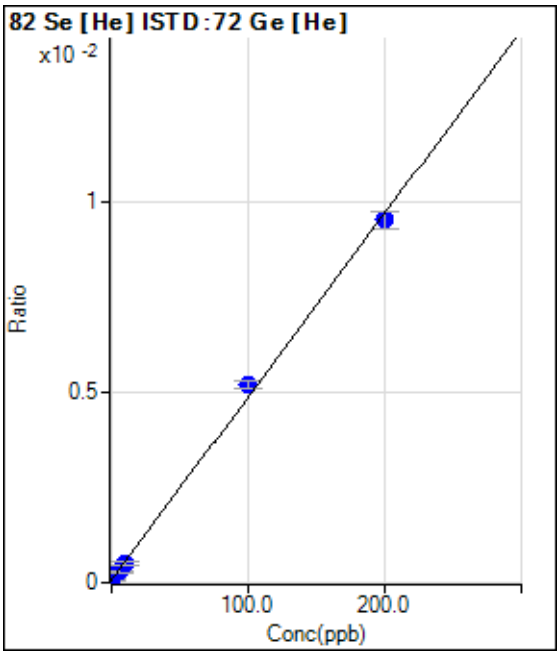


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-63.13	0.0000	P	-154.3
2	☐	2.000	2.165	700.36	0.0002	P	16.8
3	☐	5.000	5.218	1730.51	0.0004	P	11.4
4	☐	10.000	10.166	3458.03	0.0008	P	2.0
5	☐	100.000	104.556	34994.01	0.0083	P	2.5
6	☐	200.000	197.707	65190.23	0.0158	P	1.9

y = 7.9867E-005 * x - 1.4155E-005
R = 0.9996
DL = 0.8202
BEC = -0.1772

Weight: <None>
Min Conc: <None>

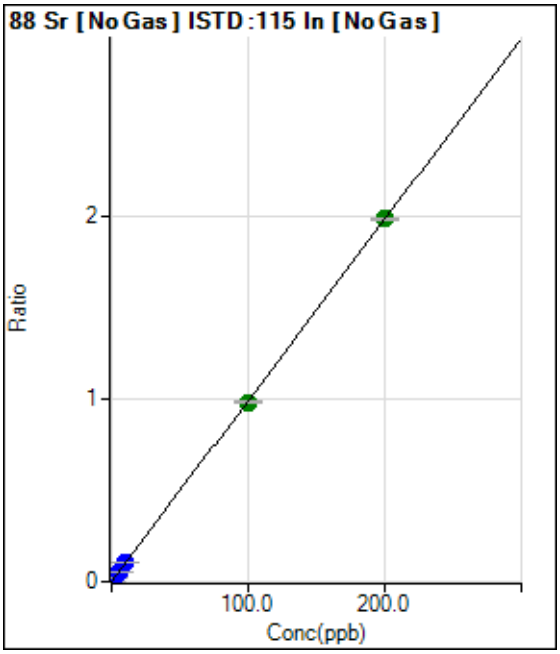
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	24.1
2	☐	2.000	2.611	216.68	0.0002	P	12.5
3	☐	5.000	4.424	310.01	0.0003	P	8.7
4	☐	10.000	8.996	536.69	0.0005	P	13.0
5	☐	100.000	106.919	5404.54	0.0052	P	4.3
6	☐	200.000	196.599	9760.40	0.0095	P	4.5

y = 4.8124E-005 * x + 7.1418E-005
R = 0.9991
DL = 1.071
BEC = 1.484

Weight: <None>
Min Conc: <None>

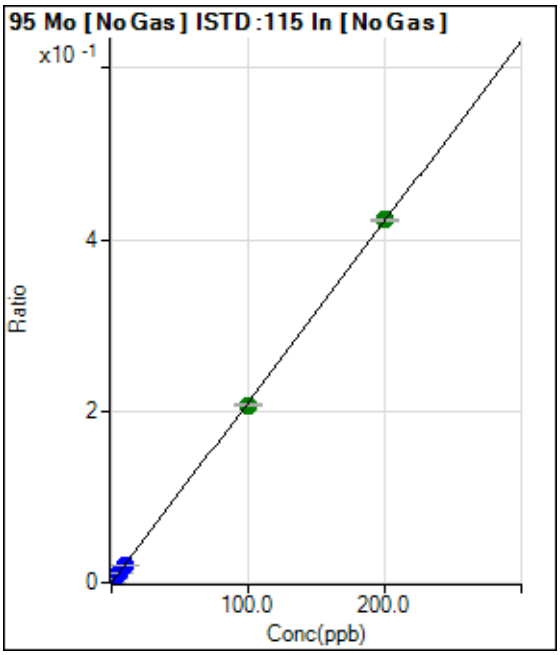


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1386.77	0.0002	P	2.7
2	☐	2.000	2.058	114741.74	0.0206	P	1.3
3	☐	5.000	5.091	280733.88	0.0506	P	1.2
4	☐	10.000	10.260	568135.76	0.1018	P	1.0
5	☐	100.000	99.180	5288072.42	0.9817	A	1.0
6	☐	200.000	200.394	10294153.39	1.9832	A	0.7

y = 0.0099 * x + 2.4079E-004
R = 1.0000
DL = 0.001984
BEC = 0.02433

Weight: <None>
Min Conc: <None>

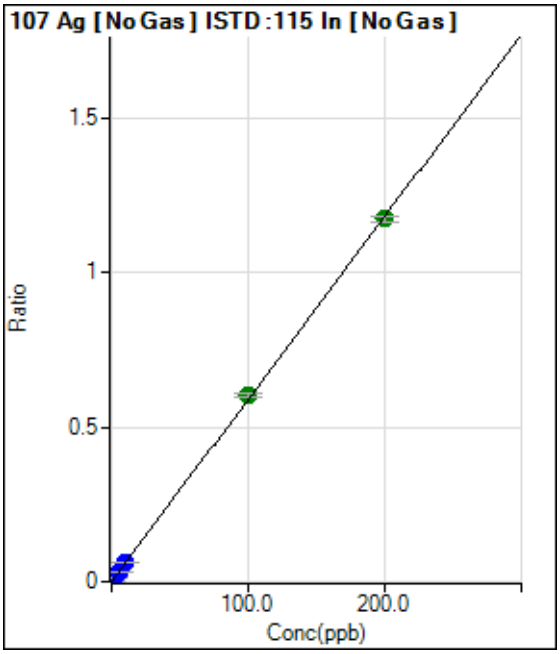
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	45.3
2	☐	2.000	2.021	23791.67	0.0043	P	0.8
3	☐	5.000	4.982	58305.17	0.0105	P	2.1
4	☐	10.000	9.937	116955.19	0.0209	P	1.4
5	☐	100.000	98.334	1116178.32	0.2072	A	1.1
6	☐	200.000	200.836	2196433.71	0.4232	A	0.4

y = 0.0021 * x + 1.3320E-005
R = 1.0000
DL = 0.008585
BEC = 0.006322

Weight: <None>
Min Conc: <None>

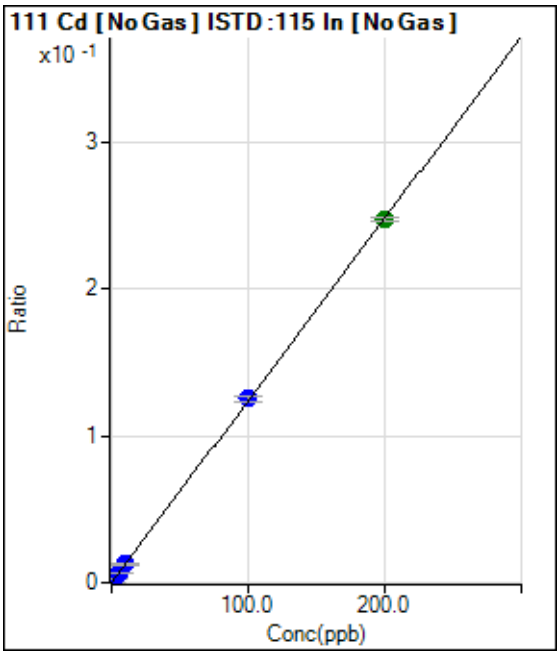


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	793.37	0.0001	P	12.4
2	☐	2.000	2.084	69281.59	0.0124	P	2.6
3	☐	5.000	5.126	168585.37	0.0304	P	1.7
4	☐	10.000	10.396	343379.41	0.0615	P	1.8
5	☐	100.000	102.083	3247191.62	0.6028	A	1.7
6	☐	200.000	198.935	6096209.07	1.1746	A	1.6

y = 0.0059 * x + 1.3772E-004
R = 0.9999
DL = 0.00868
BEC = 0.02333

Weight: <None>
Min Conc: <None>

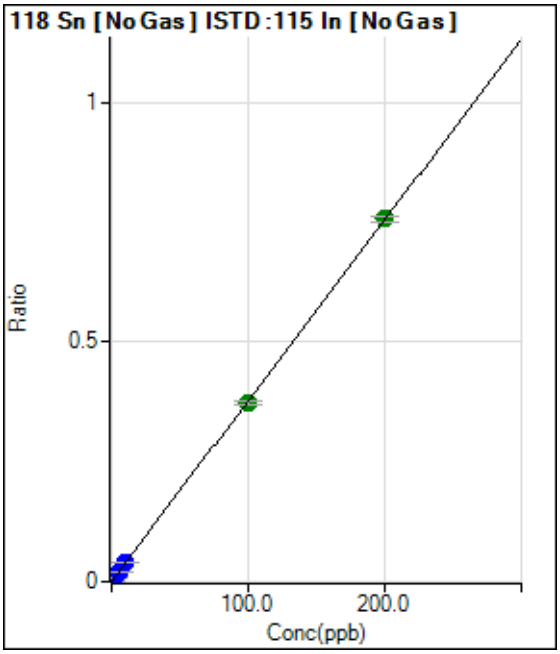
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	112.7
2	☐	2.000	1.999	13820.79	0.0025	P	2.0
3	☐	5.000	5.005	34442.24	0.0062	P	2.6
4	☐	10.000	10.075	69781.64	0.0125	P	1.2
5	☐	100.000	101.290	676662.23	0.1256	P	3.0
6	☐	200.000	199.351	1283492.56	0.2473	A	0.9

y = 0.0012 * x + 2.3066E-006
R = 1.0000
DL = 0.006284
BEC = 0.00186

Weight: <None>
Min Conc: <None>

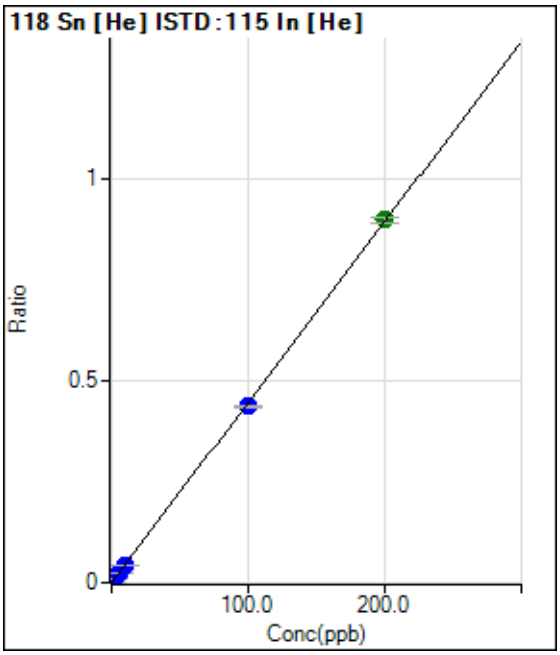


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2767.01	0.0005	P	6.0
2	☐	2.000	2.017	45047.73	0.0081	P	0.5
3	☐	5.000	5.022	107732.49	0.0194	P	1.2
4	☐	10.000	10.048	214280.53	0.0384	P	0.1
5	☐	100.000	98.570	2005371.69	0.3723	A	2.4
6	☐	200.000	200.712	3931945.77	0.7576	A	1.6

y = 0.0038 * x + 4.8008E-004
R = 1.0000
DL = 0.02302
BEC = 0.1273

Weight: <None>
Min Conc: <None>

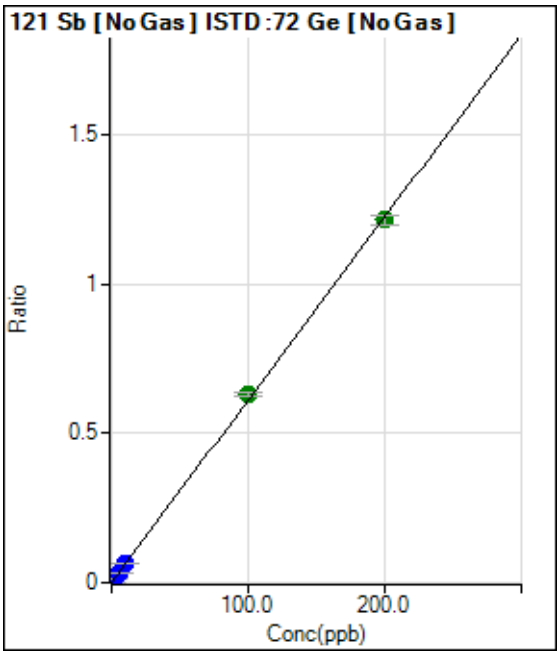
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.07	0.0006	P	8.4
2	☐	2.000	1.931	18770.45	0.0092	P	1.1
3	☐	5.000	4.808	44429.28	0.0220	P	3.3
4	☐	10.000	9.680	88777.26	0.0437	P	1.3
5	☐	100.000	97.705	851059.23	0.4360	P	1.7
6	☐	200.000	201.169	1727126.23	0.8971	A	1.6

y = 0.0045 * x + 5.6019E-004
R = 0.9999
DL = 0.03158
BEC = 0.1257

Weight: <None>
Min Conc: <None>

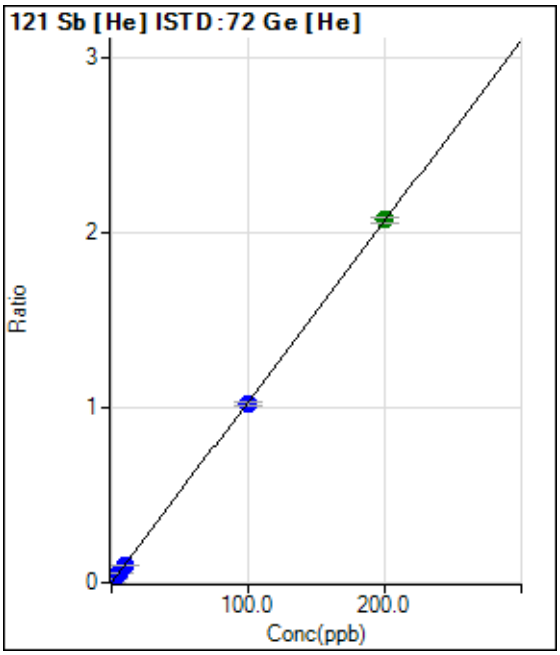


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1893.50	0.0004	P	5.1
2	☐	2.000	1.956	54550.70	0.0124	P	1.1
3	☐	5.000	5.046	134425.49	0.0313	P	0.2
4	☐	10.000	10.162	270936.65	0.0625	P	2.6
5	☐	100.000	102.724	2636139.34	0.6280	A	2.3
6	☐	200.000	198.629	5015223.57	1.2138	A	2.4

y = 0.0061 * x + 4.3071E-004
R = 0.9999
DL = 0.01087
BEC = 0.07051

Weight: <None>
Min Conc: <None>

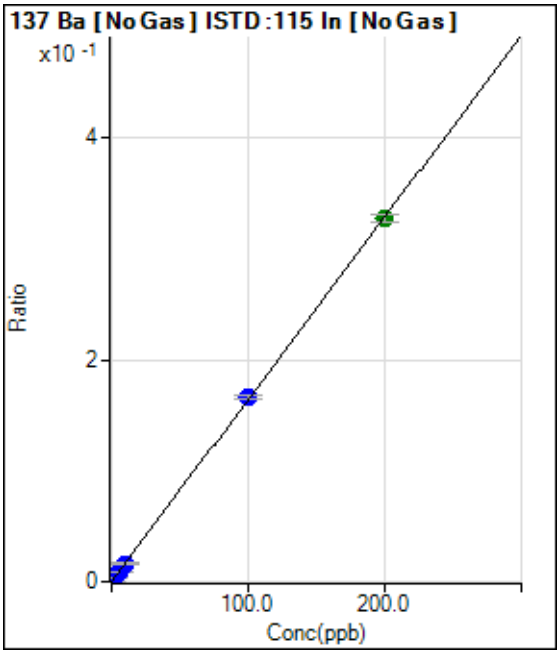
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	653.36	0.0006	P	19.8
2	☐	2.000	1.880	22045.55	0.0200	P	1.9
3	☐	5.000	4.786	54577.15	0.0501	P	2.0
4	☐	10.000	9.678	107035.32	0.1006	P	3.3
5	☐	100.000	98.699	1057960.84	1.0209	P	2.1
6	☐	200.000	200.673	2125456.95	2.0751	A	1.7

y = 0.0103 * x + 5.8467E-004
R = 1.0000
DL = 0.03363
BEC = 0.05656

Weight: <None>
Min Conc: <None>

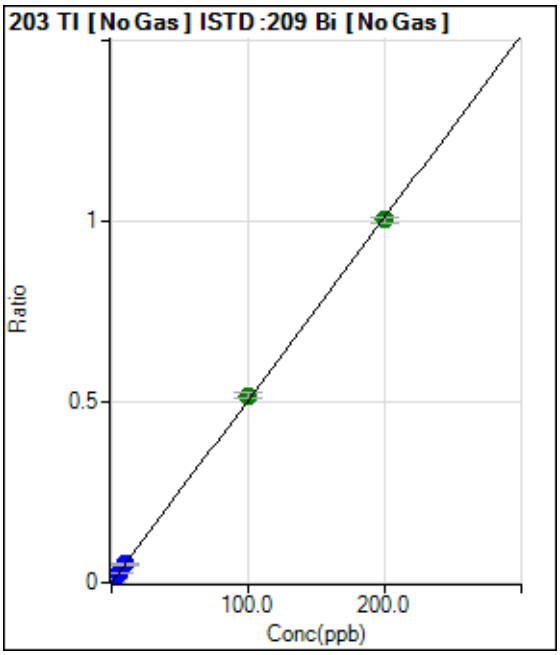


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0000	P	24.5
2	☐	2.000	2.014	18606.93	0.0033	P	2.4
3	☐	5.000	4.949	45242.95	0.0082	P	2.5
4	☐	10.000	9.985	91696.62	0.0164	P	1.6
5	☐	100.000	101.683	899178.09	0.1669	P	2.2
6	☐	200.000	199.160	1696913.47	0.3270	A	2.1

y = 0.0016 * x + 3.4643E-005
R = 0.9999
DL = 0.0155
BEC = 0.0211

Weight: <None>
Min Conc: <None>

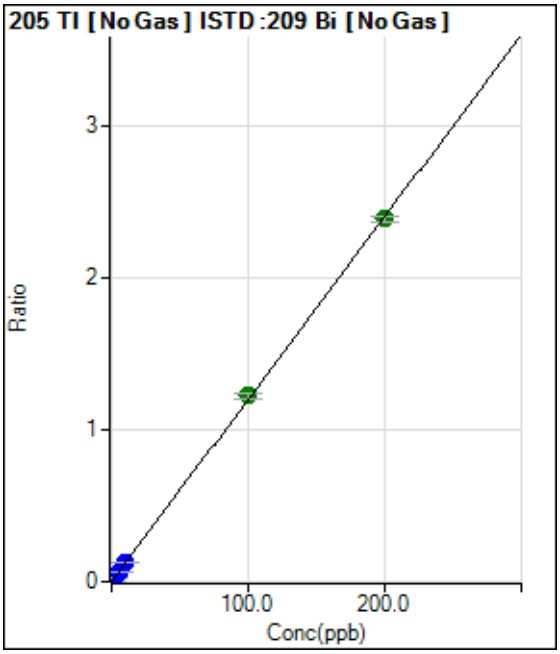
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0000	P	37.1
2	☐	2.000	1.992	58789.04	0.0101	P	2.8
3	☐	5.000	4.792	141822.21	0.0242	P	1.0
4	☐	10.000	10.137	295707.66	0.0512	P	4.6
5	☐	100.000	102.435	2901358.29	0.5169	A	2.8
6	☐	200.000	198.781	5445358.46	1.0031	A	1.7

y = 0.0050 * x + 2.6544E-005
R = 0.9999
DL = 0.005855
BEC = 0.00526

Weight: <None>
Min Conc: <None>

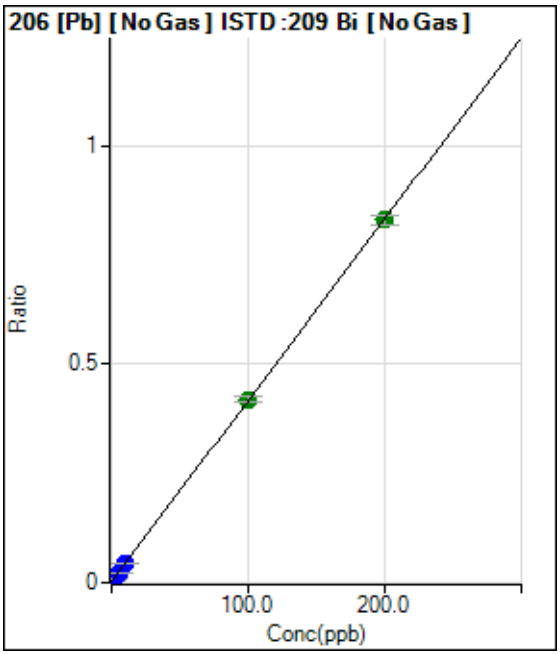


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0001	P	12.1
2	☐	2.000	1.992	139805.16	0.0240	P	2.6
3	☐	5.000	4.937	347404.53	0.0593	P	1.1
4	☐	10.000	10.305	714722.10	0.1237	P	5.0
5	☐	100.000	102.030	6870546.36	1.2242	A	3.4
6	☐	200.000	198.972	12959803.14	2.3873	A	1.6

y = 0.0120 * x + 5.8293E-005
R = 0.9999
DL = 0.001767
BEC = 0.004859

Weight: <None>
Min Conc: <None>

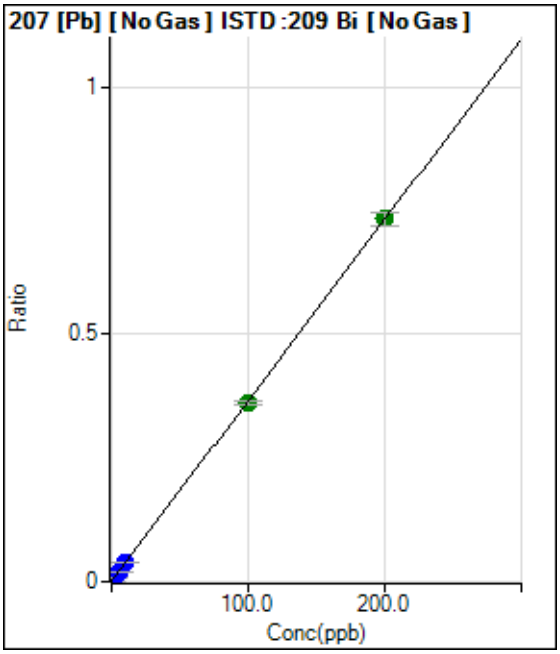
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13003.77	0.0023	P	0.7
2	☐	2.000	1.967	60745.29	0.0104	P	1.8
3	☐	5.000	5.000	134755.16	0.0230	P	0.6
4	☐	10.000	10.021	253219.92	0.0438	P	4.8
5	☐	100.000	100.644	2356621.47	0.4199	A	3.1
6	☐	200.000	199.677	4509402.95	0.8308	A	2.9

y = 0.0041 * x + 0.0023
R = 1.0000
DL = 0.01092
BEC = 0.5423

Weight: <None>
Min Conc: <None>

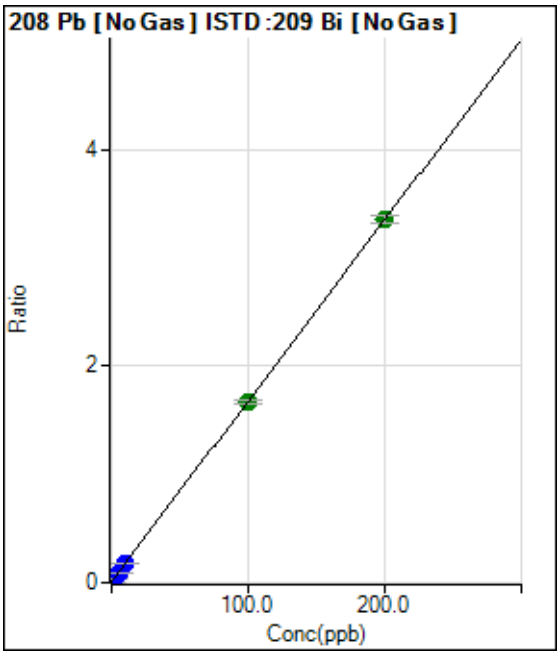


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10317.88	0.0018	P	2.9
2	☐	2.000	1.967	52300.63	0.0090	P	1.7
3	☐	5.000	5.035	118008.93	0.0201	P	3.0
4	☐	10.000	10.024	221664.11	0.0383	P	1.9
5	☐	100.000	98.747	2031814.35	0.3619	A	1.4
6	☐	200.000	200.625	3980545.56	0.7334	A	3.9

y = 0.0036 * x + 0.0018
R = 1.0000
DL = 0.04248
BEC = 0.4895

Weight: <None>
Min Conc: <None>

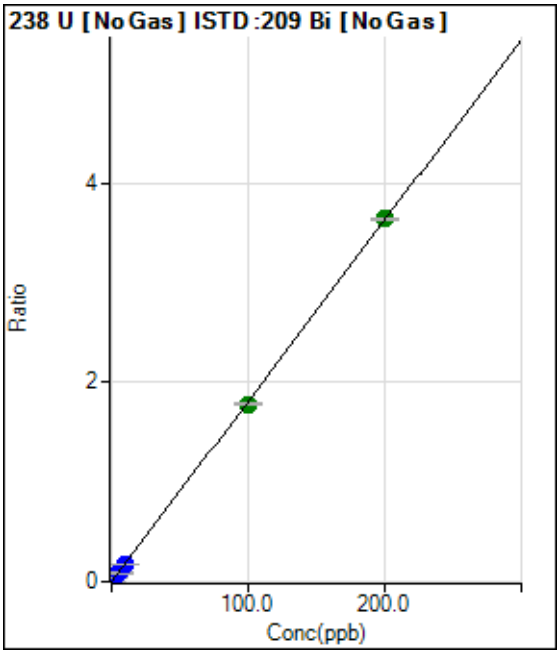
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48798.10	0.0084	P	0.5
2	☐	2.000	1.991	243401.01	0.0417	P	1.1
3	☐	5.000	5.006	539349.77	0.0921	P	1.5
4	☐	10.000	10.095	1023586.84	0.1771	P	2.0
5	☐	100.000	99.527	9379522.10	1.6709	A	2.2
6	☐	200.000	200.232	18201692.54	3.3531	A	2.0

y = 0.0167 * x + 0.0084
R = 1.0000
DL = 0.007524
BEC = 0.5055

Weight: <None>
Min Conc: <None>

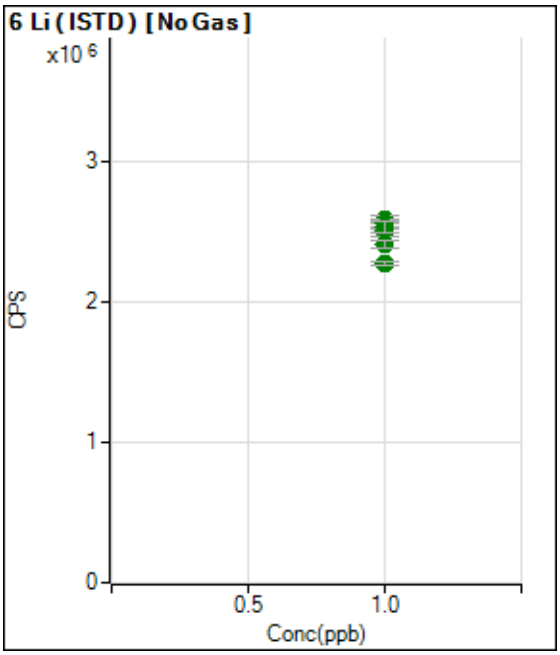


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	33.4
2	☐	2.000	1.924	203382.05	0.0348	P	1.1
3	☐	5.000	4.809	510257.78	0.0871	P	1.4
4	☐	10.000	9.848	1031213.42	0.1784	P	2.0
5	☐	100.000	98.284	9992270.06	1.7800	A	1.2
6	☐	200.000	200.871	19751618.46	3.6378	A	0.4

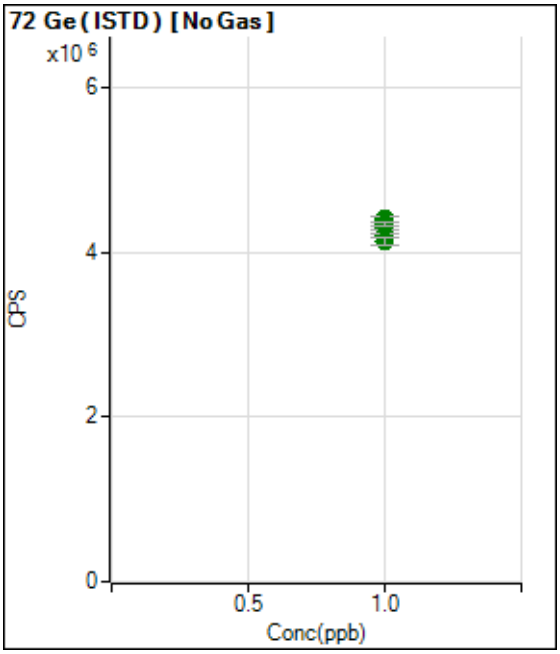
y = 0.0181 * x + 1.0972E-005
R = 0.9999
DL = 0.0006068
BEC = 0.0006058

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d

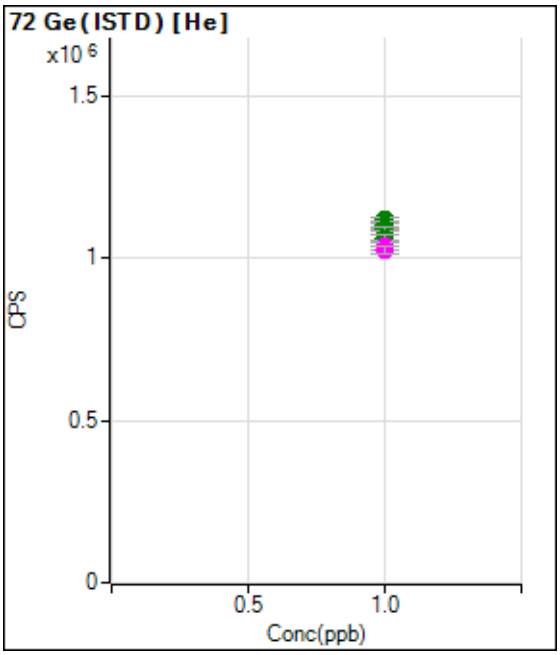


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2589134.74		A	2.1
2	☐	1.000		2505192.38		A	2.6
3	☐	1.000		2559501.44		A	2.3
4	☐	1.000		2538320.49		A	2.8
5	☐	1.000		2415737.08		A	1.8
6	☐	1.000		2284056.83		A	1.2

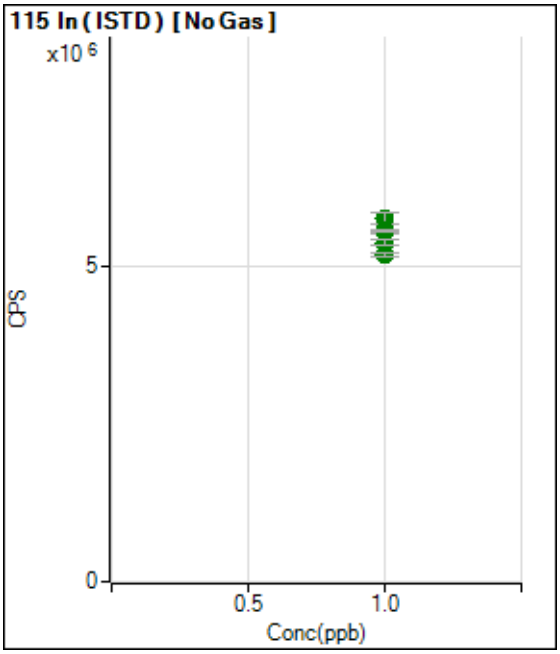


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4398724.00		A	1.8
2	☐	1.000		4405774.10		A	1.3
3	☐	1.000		4300858.58		A	1.0
4	☐	1.000		4334989.21		A	1.0
5	☐	1.000		4198643.27		A	1.4
6	☐	1.000		4132846.40		A	2.0

Calibration for 020_ICV.d

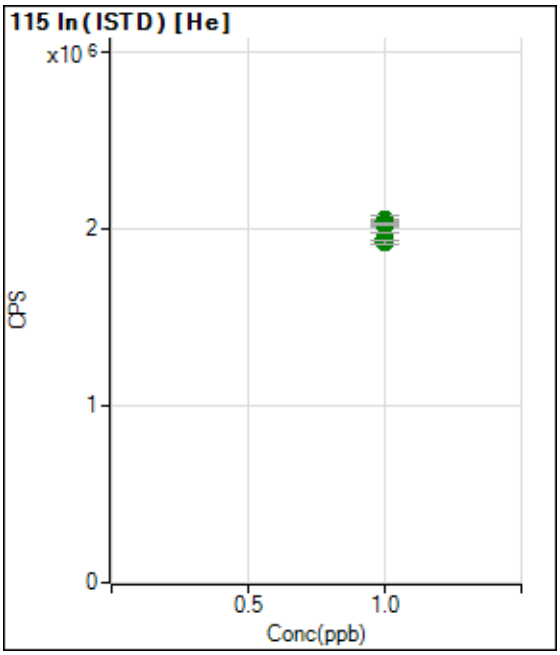


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1118718.47		A	1.4
2	☐	1.000		1101392.46		A	2.0
3	☐	1.000		1090447.27		A	1.1
4	☐	1.000		1063995.51		A	1.5
5	☐	1.000		1036684.70		M	2.6
6	☐	1.000		1024533.97		M	2.1

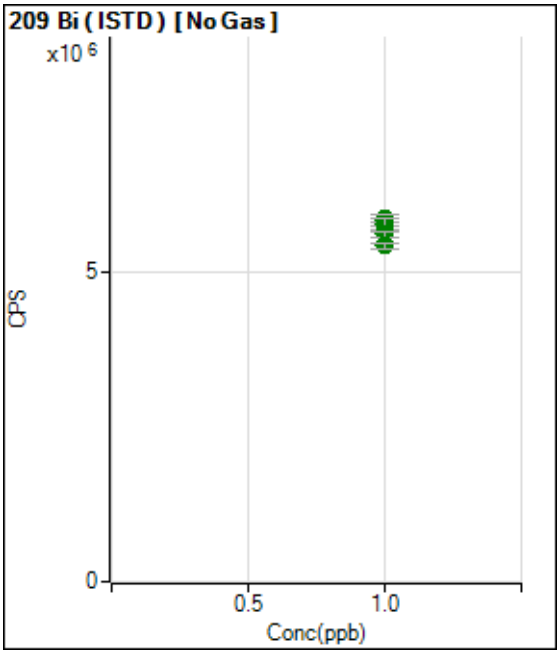


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5762279.09		A	3.0
2	☐	1.000		5569465.29		A	1.1
3	☐	1.000		5546527.08		A	0.9
4	☐	1.000		5582843.11		A	0.4
5	☐	1.000		5387468.46		A	1.9
6	☐	1.000		5190590.08		A	0.8

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2053664.34		A	0.6
2	☐	1.000		2048181.01		A	2.8
3	☐	1.000		2021047.87		A	1.2
4	☐	1.000		2031475.83		A	0.8
5	☐	1.000		1952588.14		A	3.2
6	☐	1.000		1925432.46		A	1.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5779491.99		A	0.8
2	☐	1.000		5837391.16		A	2.8
3	☐	1.000		5859482.83		A	2.0
4	☐	1.000		5783185.54		A	3.1
5	☐	1.000		5614344.50		A	1.8
6	☐	1.000		5429486.59		A	1.6

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	013CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:10:12-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	149940	0.00
Be	9	1	No Gas	10	500.00
V	51	2	He	16207	0.00
Cr	52	2	He	1984	0.36
Fe	56	2	He	12967	0.52
Se	78	2	He	37	47.82
Sn	118	2	He	1150	0.68
As	75	2	He	333	2.10
Ca	44	2	He	460	4.04
Na	23	2	He	63294	0.00
Mg	24	2	He	313	11.45
K	39	2	He	32084	0.01
Mn	55	2	He	240	7.96
Co	59	2	He	163	11.45
Ni	60	2	He	180	8.17
Cu	63	2	He	1080	1.72
Zn	66	2	He	490	4.02
Al	27	2	He	817	1.15
B	11	1	No Gas	49424	0.01
Al	27	1	No Gas	66669	0.02
Si	28	1	No Gas	826175	0.00
P	31	1	No Gas	37280	0.00
Ag	107	1	No Gas	793	1.60
Cd	111	1	No Gas	13	859.23
Sr	88	1	No Gas	1387	0.06
Mo	95	1	No Gas	77	59.75
Sn	118	1	No Gas	2767	0.26
Sb	121	1	No Gas	1894	0.19
Ba	137	1	No Gas	200	12.99
Tl	205	1	No Gas	337	3.34
Tl	203	1	No Gas	153	24.19
Pb	208	1	No Gas	48798	0.00
U	238	1	No Gas	63	51.90
Ca	43	2	He	23	212.09
Sb	121	2	He	653	2.89
Ti	47	2	He	20	433.01
Cu	63	1	No Gas	1987	0.47

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	2589135	2.06
Ge	72	2	He	1118718	1.36

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	4398724	1.75
In	115	1	No Gas	5762279	3.02
Bi	209	1	No Gas	5779492	0.83

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:12:05-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	15487	0.00
V	51	2	He	33677	0.00
Cr	52	2	He	25875	0.01
Fe	56	2	He	2049523	0.00
Se	78	2	He	270	4.29
Sn	118	2	He	18770	0.01
As	75	2	He	2851	0.15
Ca	44	2	He	9400	0.02
Na	23	2	He	415214	0.00
Mg	24	2	He	190560	0.00
K	39	2	He	189375	0.00
Mn	55	2	He	14635	0.02
Co	59	2	He	37295	0.00
Ni	60	2	He	9777	0.04
Cu	63	2	He	28644	0.01
Zn	66	2	He	4938	0.10
Al	27	2	He	1723	0.72
B	11	1	No Gas	100329	0.00
Al	27	1	No Gas	125209	0.00
Si	28	1	No Gas	944869	0.00
P	31	1	No Gas	49034	0.00
Ag	107	1	No Gas	69282	0.00
Cd	111	1	No Gas	13821	0.01
Sr	88	1	No Gas	114742	0.00
Mo	95	1	No Gas	23792	0.01
Sn	118	1	No Gas	45048	0.00
Sb	121	1	No Gas	54551	0.00
Ba	137	1	No Gas	18607	0.01
Tl	205	1	No Gas	139805	0.00
Tl	203	1	No Gas	58789	0.00
Pb	208	1	No Gas	243401	0.00
U	238	1	No Gas	203382	0.00
Ca	43	2	He	623	1.63
Sb	121	2	He	22046	0.01
Cu	63	1	No Gas	49170	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2505192	2.57	2589135	96.76	70	120	

Calibration Standard Report

Ge	72	2	He	1101392	1.97	1118718	98.45	70	120	
Ge	72	1	No Gas	4405774	1.28	4398724	100.16	70	120	
In	115	1	No Gas	5569465	1.11	5762279	96.65	70	120	
Bi	209	1	No Gas	5837391	2.82	5779492	101.00	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:13:57-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	36855	0.00
V	51	2	He	60691	0.00
Cr	52	2	He	59778	0.00
Fe	56	2	He	4910416	0.00
Se	78	2	He	551	1.18
Sn	118	2	He	44429	0.01
As	75	2	He	6374	0.02
Ca	44	2	He	21420	0.00
Na	23	2	He	930282	0.00
Mg	24	2	He	477895	0.00
K	39	2	He	414742	0.00
Mn	55	2	He	35396	0.00
Co	59	2	He	92239	0.00
Ni	60	2	He	24983	0.01
Cu	63	2	He	70470	0.00
Zn	66	2	He	11455	0.03
Al	27	2	He	2644	0.25
B	11	1	No Gas	181287	0.00
Al	27	1	No Gas	208298	0.00
Si	28	1	No Gas	1138901	0.00
P	31	1	No Gas	67588	0.00
Ag	107	1	No Gas	168585	0.00
Cd	111	1	No Gas	34442	0.01
Sr	88	1	No Gas	280734	0.00
Mo	95	1	No Gas	58305	0.00
Sn	118	1	No Gas	107732	0.00
Sb	121	1	No Gas	134425	0.00
Ba	137	1	No Gas	45243	0.00
Tl	205	1	No Gas	347405	0.00
Tl	203	1	No Gas	141822	0.00
Pb	208	1	No Gas	539350	0.00
U	238	1	No Gas	510258	0.00
Ca	43	2	He	1277	0.82
Sb	121	2	He	54577	0.00
Cu	63	1	No Gas	118129	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2559501	2.26	2589135	98.86	70	120	

Calibration Standard Report

Ge	72	2	He	1090447	1.13	1118718	97.47	70	120	
Ge	72	1	No Gas	4300859	0.95	4398724	97.78	70	120	
In	115	1	No Gas	5546527	0.89	5762279	96.26	70	120	
Bi	209	1	No Gas	5859483	1.95	5779492	101.38	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:15:49-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	75897	0.00
V	51	2	He	105376	0.00
Cr	52	2	He	118027	0.00
Fe	56	2	He	10111522	0.00
Se	78	2	He	1051	0.59
Sn	118	2	He	88777	0.00
As	75	2	He	12652	0.01
Ca	44	2	He	42981	0.00
Na	23	2	He	1761028	0.00
Mg	24	2	He	912426	0.00
K	39	2	He	799809	0.00
Mn	55	2	He	71508	0.00
Co	59	2	He	190679	0.00
Ni	60	2	He	49721	0.00
Cu	63	2	He	133911	0.00
Zn	66	2	He	22966	0.00
Al	27	2	He	4718	0.13
B	11	1	No Gas	323144	0.00
Al	27	1	No Gas	358277	0.00
Si	28	1	No Gas	1483461	0.00
P	31	1	No Gas	97847	0.00
Ag	107	1	No Gas	343379	0.00
Cd	111	1	No Gas	69782	0.00
Sr	88	1	No Gas	568136	0.00
Mo	95	1	No Gas	116955	0.00
Sn	118	1	No Gas	214281	0.00
Sb	121	1	No Gas	270937	0.00
Ba	137	1	No Gas	91697	0.00
Tl	205	1	No Gas	714722	0.00
Tl	203	1	No Gas	295708	0.00
Pb	208	1	No Gas	1023587	0.00
U	238	1	No Gas	1031213	0.00
Ca	43	2	He	2557	0.15
Sb	121	2	He	107035	0.00
Cu	63	1	No Gas	233319	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2538320	2.76	2589135	98.04	70	120	

Calibration Standard Report

Ge	72	2	He	1063996	1.51	1118718	95.11	70	120	
Ge	72	1	No Gas	4334989	1.03	4398724	98.55	70	120	
In	115	1	No Gas	5582843	0.45	5762279	96.89	70	120	
Bi	209	1	No Gas	5783186	3.11	5779492	100.06	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:17:41-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	726683	0.00
V	51	2	He	884927	0.00
Cr	52	2	He	1089072	0.00
Fe	56	2	He	95118422	0.00
Se	78	2	He	10273	0.03
Sn	118	2	He	851059	0.00
As	75	2	He	122788	0.00
Ca	44	2	He	415084	0.00
Na	23	2	He	16552149	0.00
Mg	24	2	He	8760164	0.00
K	39	2	He	7274281	0.00
Mn	55	2	He	684510	0.00
Co	59	2	He	1818022	0.00
Ni	60	2	He	471407	0.00
Cu	63	2	He	1275229	0.00
Zn	66	2	He	215610	0.00
Al	27	2	He	39196	0.01
B	11	1	No Gas	2677297	0.00
Al	27	1	No Gas	2773494	0.00
Si	28	1	No Gas	7853887	0.00
P	31	1	No Gas	611718	0.00
Ag	107	1	No Gas	3247192	0.00
Cd	111	1	No Gas	676662	0.00
Sr	88	1	No Gas	5288072	0.00
Mo	95	1	No Gas	1116178	0.00
Sn	118	1	No Gas	2005372	0.00
Sb	121	1	No Gas	2636139	0.00
Ba	137	1	No Gas	899178	0.00
Tl	205	1	No Gas	6870546	0.00
Tl	203	1	No Gas	2901358	0.00
Pb	208	1	No Gas	9379522	0.00
U	238	1	No Gas	9992270	0.00
Ca	43	2	He	24602	0.01
Sb	121	2	He	1057961	0.00
Cu	63	1	No Gas	2227068	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2415737	1.84	2589135	93.30	70	120	

Calibration Standard Report

Ge	72	2	He	1036685	2.60	1118718	92.67	70	120	
Ge	72	1	No Gas	4198643	1.39	4398724	95.45	70	120	
In	115	1	No Gas	5387468	1.88	5762279	93.50	70	120	
Bi	209	1	No Gas	5614344	1.78	5779492	97.14	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:19:26-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1414598	0.00
V	51	2	He	1744885	0.00
Cr	52	2	He	2212592	0.00
Fe	56	2	He	189079224	0.00
Se	78	2	He	20496	0.01
Sn	118	2	He	1727126	0.00
As	75	2	He	237993	0.00
Ca	44	2	He	827184	0.00
Na	23	2	He	31823984	0.00
Mg	24	2	He	17126576	0.00
K	39	2	He	14350478	0.00
Mn	55	2	He	1379710	0.00
Co	59	2	He	3339419	0.00
Ni	60	2	He	902046	0.00
Cu	63	2	He	2440154	0.00
Zn	66	2	He	413813	0.00
Al	27	2	He	73662	0.00
B	11	1	No Gas	5228785	0.00
Al	27	1	No Gas	5319793	0.00
Si	28	1	No Gas	13520266	0.00
P	31	1	No Gas	1120427	0.00
Ag	107	1	No Gas	6096209	0.00
Cd	111	1	No Gas	1283493	0.00
Sr	88	1	No Gas	10294153	0.00
Mo	95	1	No Gas	2196434	0.00
Sn	118	1	No Gas	3931946	0.00
Sb	121	1	No Gas	5015224	0.00
Ba	137	1	No Gas	1696913	0.00
Tl	205	1	No Gas	12959803	0.00
Tl	203	1	No Gas	5445358	0.00
Pb	208	1	No Gas	18201693	0.00
U	238	1	No Gas	19751618	0.00
Ca	43	2	He	48784	0.00
Sb	121	2	He	2125457	0.00
Cu	63	1	No Gas	4103873	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2284057	1.15	2589135	88.22	70	120	

Calibration Standard Report

Ge	72	2	He	1024534	2.09	1118718	91.58	70	120	
Ge	72	1	No Gas	4132846	2.01	4398724	93.96	70	120	
In	115	1	No Gas	5190590	0.80	5762279	90.08	70	120	
Bi	209	1	No Gas	5429487	1.64	5779492	93.94	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	020_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:23:04-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	111.079	2.315	3392577	1.28	100	111.1	90	110	ICV Main CR1 Failed
Be	9	1	No Gas	102.460	2.992	724995	1.90	100	102.5	90	110	
V	51	2	He	99.006	1.620	882600	0.88	100	99.0	90	110	
Cr	52	2	He	102.885	2.499	1149034	2.17	100	102.9	90	110	
Fe	56	2	He	10144.319	1.285	97158472	1.02	10000	101.4	90	110	
Se	78	2	He	105.180	0.622	10922	1.30	100	105.2	90	110	
Sn	118	2	He	101.438	2.294	868376	0.98	100	101.4	90	110	
As	75	2	He	105.829	1.454	128287	0.59	100	105.8	90	110	
Ca	44	2	He	10141.176	3.101	424841	2.31	10000	101.4	90	110	
Na	23	2	He	10456.254	2.164	16986064	1.47	10000	104.6	90	110	
Mg	24	2	He	10223.880	2.118	8895756	1.30	10000	102.2	90	110	
K	39	2	He	10082.515	0.417	7350107	0.44	10000	100.8	90	110	
Mn	55	2	He	103.154	0.493	718888	0.38	100	103.2	90	110	
Co	59	2	He	107.541	2.264	1848936	1.48	100	107.5	90	110	
Ni	60	2	He	103.973	0.785	478750	0.59	100	104.0	90	110	
Cu	63	2	He	105.231	1.137	1310833	0.97	100	105.2	90	110	
Zn	66	2	He	105.672	1.172	223164	0.88	100	105.7	90	110	
Al	27	2	He	105.020	3.627	39898	2.69	100	105.0	90	110	
B	11	1	No Gas	511.676	3.251	2690945	2.24	500	102.3	90	110	
Al	27	1	No Gas	102.689	2.616	2786294	2.51	100	102.7	90	110	
Si	28	1	No Gas	677.269	0.590	9621610	1.71	500	135.5	90	110	ICV Main CR1 Failed
P	31	1	No Gas	526.885	2.617	615739	2.50	500	105.4	90	110	
Ag	107	1	No Gas	104.571	3.120	3292149	4.28	100	104.6	90	110	
Cd	111	1	No Gas	104.029	2.149	687957	3.37	100	104.0	90	110	
Sr	88	1	No Gas	100.382	1.090	5296091	1.75	100	100.4	90	110	
Mo	95	1	No Gas	100.051	2.334	1123816	3.11	100	100.1	90	110	
Sn	118	1	No Gas	101.196	1.832	2037118	1.77	100	101.2	90	110	
Sb	121	1	No Gas	107.083	1.987	2720173	0.83	100	107.1	90	110	
Ba	137	1	No Gas	105.471	0.863	922974	0.72	100	105.5	90	110	
Tl	205	1	No Gas	107.447	1.752	7058724	1.35	100	107.4	90	110	
Tl	203	1	No Gas	108.100	1.862	2986933	1.73	100	108.1	90	110	
Pb	208	1	No Gas	104.383	0.927	9593542	1.29	100	104.4	90	110	
U	238	1	No Gas	99.160	0.465	9833083	0.65	100	99.2	90	110	
Ca	43	2	He	10064.902	4.219	24883	3.40	10000	100.6	90	110	
Sb	121	2	He	104.441	2.731	1121914	2.48	100	104.4	90	110	
Ti	47	2	He	99.237	1.449	28313	0.59	100	99.2	90	110	
Cu	63	1	No Gas	107.553	1.927	2251236	1.37	100	107.6	90	110	

QC ISTD Table

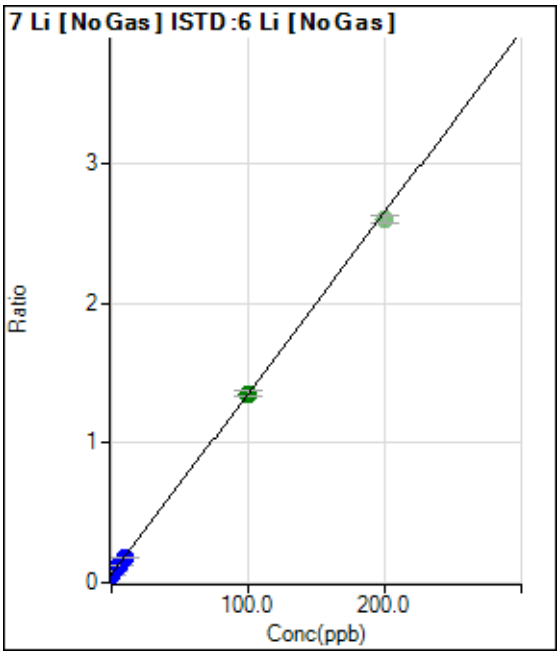
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2297883	1.10	2589135	88.75	70	120	
Ge	72	2	He	1038645	0.86	1118718	92.84	70	120	
Ge	72	1	No Gas	4156196	1.19	4398724	94.49	70	120	
In	115	1	No Gas	5330371	1.27	5762279	92.50	70	120	
Bi	209	1	No Gas	5475523	0.41	5779492	94.74	70	120	

Calibration for 020_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\092120B.b\
Analysis File: 092120B.batch.bin
DA Date-Time: 9/21/2020 11:29:19 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	013CALB.d	CAL BLK	9/21/2020 11:10:12 AM
2	014CALS.d	2/10/200	9/21/2020 11:12:05 AM
3	015CALS.d	5/25/500	9/21/2020 11:13:57 AM
4	016CALS.d	10/50/100	9/21/2020 11:15:49 AM
5	017CALS.d	100/500/10K	9/21/2020 11:17:41 AM
6	018CALS.d	200/1000/20K	9/21/2020 11:19:26 AM

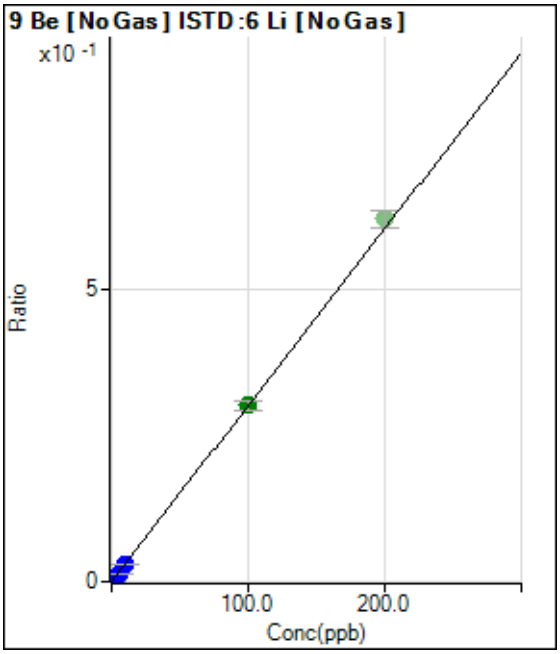
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149939.87	0.0579	P	3.5
2	☐	2.000	2.036	211314.61	0.0844	P	0.8
3	☐	5.000	4.752	306121.57	0.1196	P	1.7
4	☐	10.000	9.713	466994.59	0.1840	P	2.1
5	☐	100.000	100.040	3276564.01	1.3569	A	3.2
6	☑	200.000		5941593.66	2.6015	A	2.0

y = 0.0130 * x + 0.0579
R = 1.0000
DL = 0.469
BEC = 4.462

Weight: <None>
Min Conc: <None>

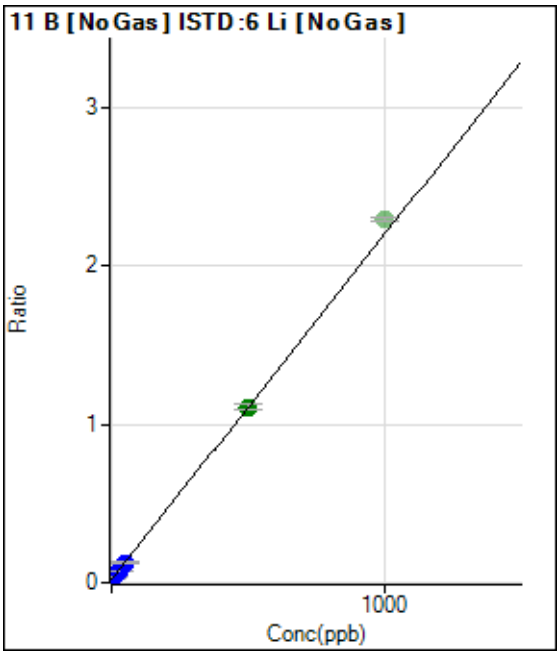


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	49.1
2	☐	2.000	2.054	15486.93	0.0062	P	2.8
3	☐	5.000	4.785	36855.06	0.0144	P	1.8
4	☐	10.000	9.936	75897.22	0.0299	P	1.1
5	☐	100.000	100.016	726683.14	0.3010	A	5.6
6	☑	200.000		1414598.36	0.6196	A	4.8

y = 0.0030 * x + 3.8437E-006
R = 1.0000
DL = 0.001883
BEC = 0.001277

Weight: <None>
Min Conc: <None>

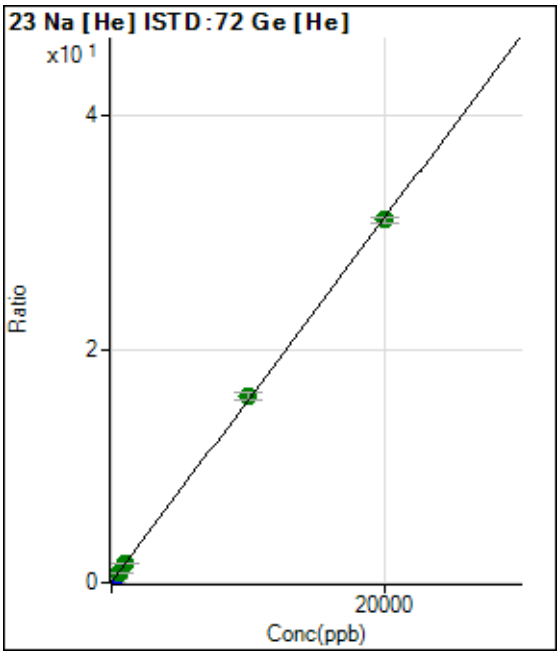
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49424.15	0.0191	P	0.8
2	☐	10.000	9.628	100328.56	0.0401	P	2.7
3	☐	25.000	23.761	181286.60	0.0709	P	3.1
4	☐	50.000	49.682	323143.52	0.1273	P	1.5
5	☐	500.000	500.101	2677296.52	1.1088	A	3.7
6	☑	1000.000		5228784.61	2.2894	A	1.1

y = 0.0022 * x + 0.0191
R = 1.0000
DL = 0.1995
BEC = 8.76

Weight: <None>
Min Conc: <None>

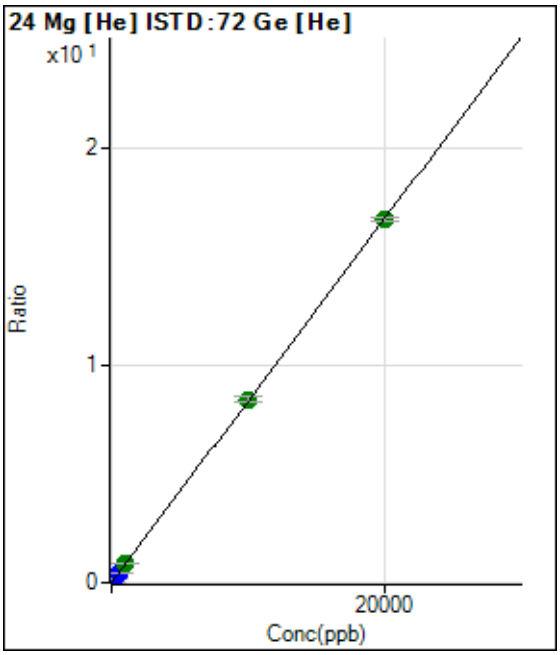


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63293.82	0.0566	P	2.9
2	☐	200.000	205.607	415213.65	0.3771	P	2.1
3	☐	500.000	510.993	930281.83	0.8531	A	0.2
4	☐	1000.000	1025.865	1761027.63	1.6557	A	4.1
5	☐	10000.00	10212.56	16552148.92	15.9760	A	3.9
6	☐	20000.00	19892.09	31823983.69	31.0644	A	1.4

y = 0.0016 * x + 0.0566
R = 0.9999
DL = 3.176
BEC = 36.3

Weight: <None>
Min Conc: <None>

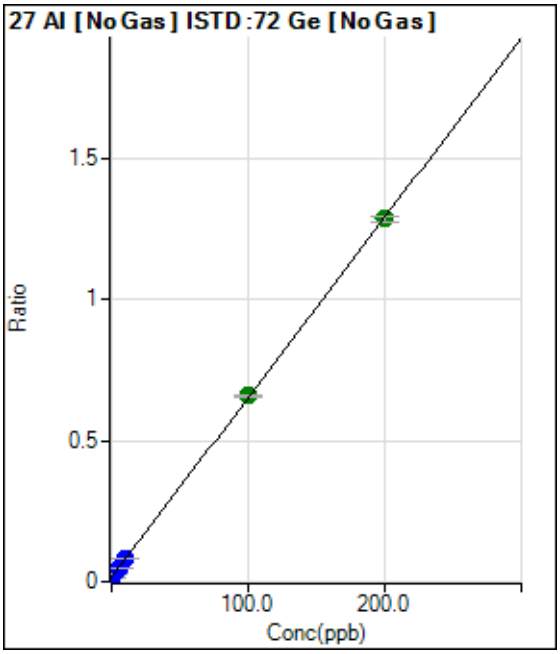
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0003	P	35.2
2	☐	200.000	206.253	190560.11	0.1731	P	3.1
3	☐	500.000	522.775	477895.45	0.4383	P	0.6
4	☐	1000.000	1023.577	912426.50	0.8578	A	3.3
5	☐	10000.00	10092.07	8760163.83	8.4554	A	3.7
6	☐	20000.00	19952.15	17126576.41	16.7161	A	0.9

y = 8.3779E-004 * x + 2.7971E-004
R = 1.0000
DL = 0.3527
BEC = 0.3339

Weight: <None>
Min Conc: <None>

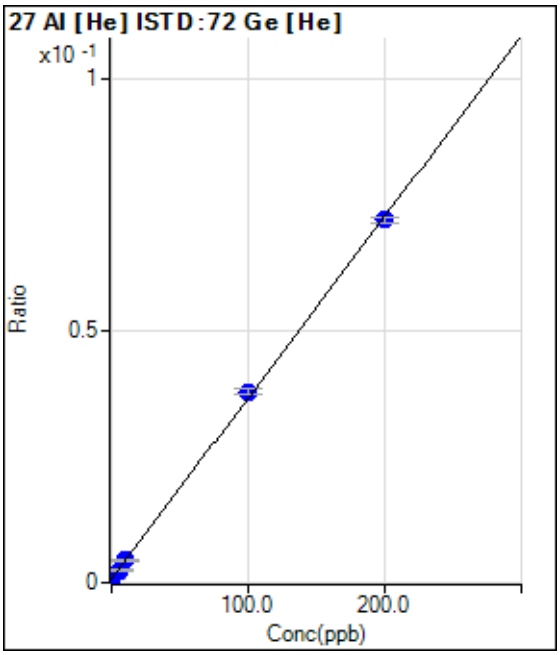


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66668.50	0.0152	P	9.7
2	☐	2.000	2.080	125208.57	0.0284	P	1.7
3	☐	5.000	5.215	208298.07	0.0484	P	0.4
4	☐	10.000	10.579	358276.93	0.0827	P	1.9
5	☐	100.000	101.154	2773494.33	0.6606	A	1.3
6	☐	200.000	199.388	5319793.25	1.2875	A	1.7

y = 0.0064 * x + 0.0152
R = 1.0000
DL = 0.6884
BEC = 2.375

Weight: <None>
Min Conc: <None>

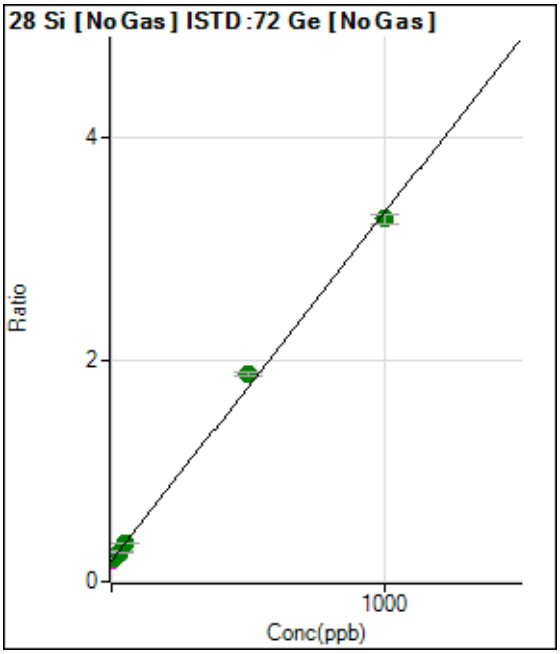
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	816.71	0.0007	P	10.6
2	☐	2.000	2.328	1723.47	0.0016	P	13.4
3	☐	5.000	4.719	2643.63	0.0024	P	6.4
4	☐	10.000	10.327	4717.55	0.0044	P	7.6
5	☐	100.000	103.339	39195.95	0.0378	P	2.6
6	☐	200.000	198.318	73662.44	0.0719	P	1.7

y = 3.5889E-004 * x + 7.3071E-004
R = 0.9998
DL = 0.65
BEC = 2.036

Weight: <None>
Min Conc: <None>

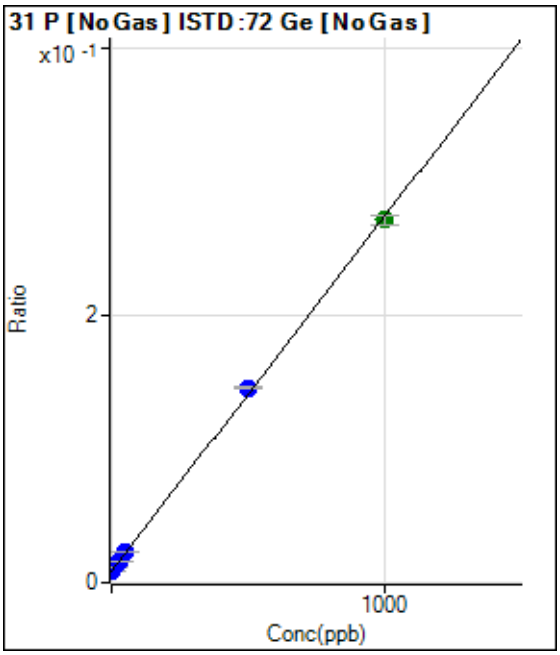


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	826175.30	0.1879	M	6.1
2	☐	10.000	8.435	944869.18	0.2144	A	3.1
3	☐	25.000	24.480	1138901.44	0.2648	A	4.0
4	☐	50.000	49.135	1483460.86	0.3422	A	1.5
5	☐	500.000	535.837	7853886.97	1.8707	A	2.4
6	☐	1000.000	982.154	13520266.47	3.2724	A	2.3

y = 0.0031 * x + 0.1879
R = 0.9991
DL = 10.88
BEC = 59.84

Weight: <None>
Min Conc: <None>

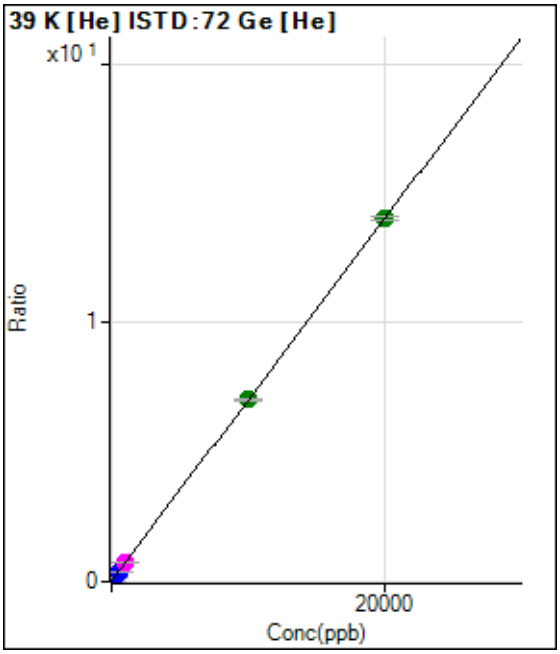
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37280.47	0.0085	P	3.3
2	☐	10.000	10.004	49033.54	0.0111	P	2.1
3	☐	25.000	27.297	67588.03	0.0157	P	0.4
4	☐	50.000	53.171	97847.44	0.0226	P	1.9
5	☐	500.000	517.678	611717.61	0.1457	P	1.6
6	☐	1000.000	990.945	1120427.17	0.2712	A	3.0

y = 2.6510E-004 * x + 0.0085
R = 0.9998
DL = 3.133
BEC = 31.98

Weight: <None>
Min Conc: <None>

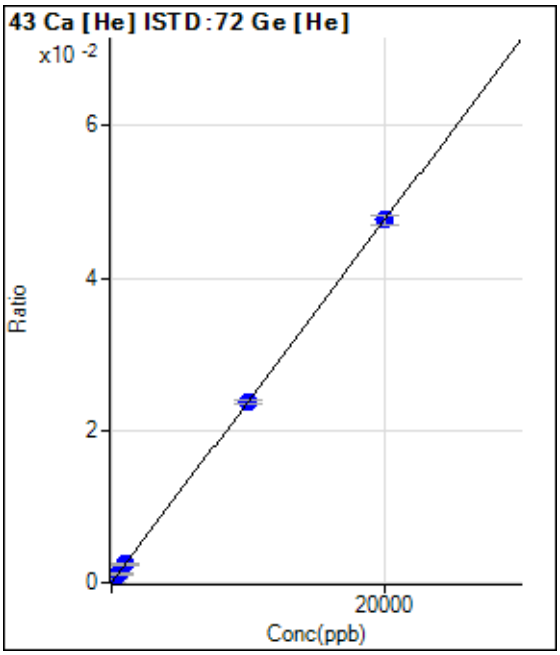


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32084.44	0.0287	P	4.4
2	☐	200.000	204.968	189375.24	0.1720	P	1.3
3	☐	500.000	503.132	414742.12	0.3804	P	2.4
4	☐	1000.000	1034.348	799809.26	0.7517	M	1.7
5	☐	10000.00	9999.040	7274280.93	7.0184	A	1.3
6	☐	20000.00	19998.63	14350478.12	14.0086	A	1.0

y = 6.9904E-004 * x + 0.0287
R = 1.0000
DL = 5.374
BEC = 41.04

Weight: <None>
Min Conc: <None>

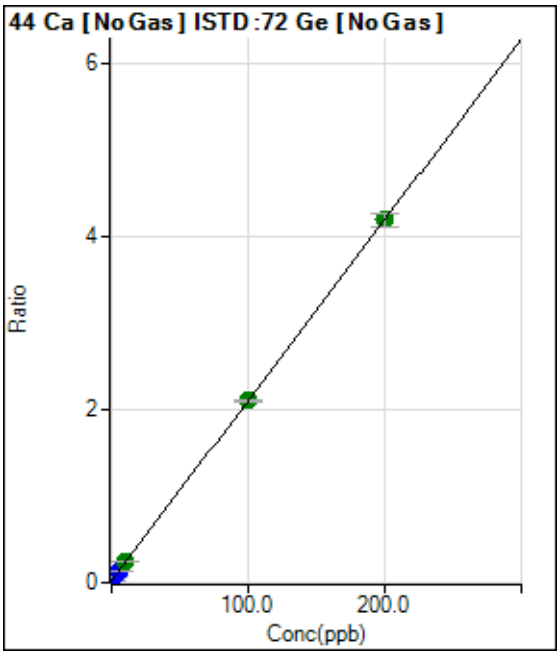
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	48.9
2	☐	200.000	229.065	623.36	0.0006	P	9.3
3	☐	500.000	483.890	1276.75	0.0012	P	11.6
4	☐	1000.000	1001.306	2556.97	0.0024	P	2.4
5	☐	10000.00	9969.292	24602.38	0.0237	P	1.2
6	☐	20000.00	20015.40	48783.96	0.0476	P	2.5

y = 2.3787E-006 * x + 2.0787E-005
R = 1.0000
DL = 12.82
BEC = 8.739

Weight: <None>
Min Conc: <None>

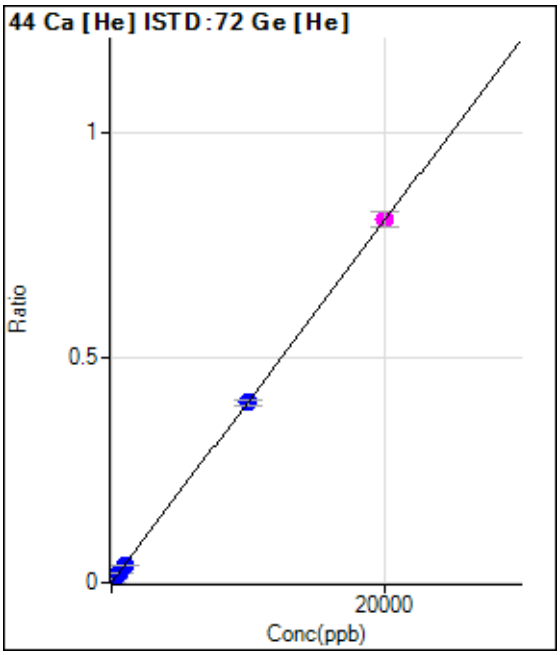


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98005.67	0.0223	P	1.5
2	☐	2.000	2.048	286319.88	0.0650	P	2.2
3	☐	5.000	5.272	568653.44	0.1322	P	1.2
4	☐	10.000	10.455	1041783.55	0.2403	A	0.7
5	☐	100.000	99.977	8847369.04	2.1073	A	0.9
6	☐	200.000	199.982	17319699.33	4.1930	A	3.9

y = 0.0209 * x + 0.0223
R = 1.0000
DL = 0.04769
BEC = 1.068

Weight: <None>
Min Conc: <None>

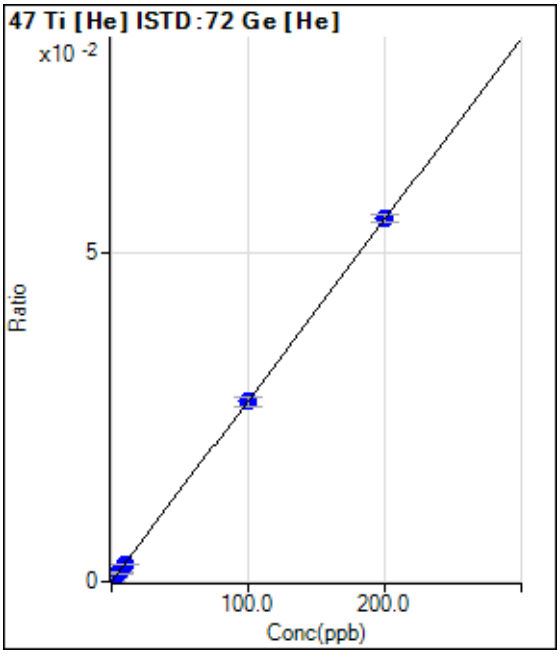
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.02	0.0004	P	17.8
2	☐	200.000	201.670	9400.07	0.0085	P	3.2
3	☐	500.000	477.285	21420.35	0.0196	P	1.3
4	☐	1000.000	992.144	42981.04	0.0404	P	0.5
5	☐	10000.00	9930.232	415084.15	0.4006	P	3.0
6	☐	20000.00	20035.82	827183.69	0.8079	M	4.3

y = 4.0300E-005 * x + 4.1087E-004
R = 1.0000
DL = 5.445
BEC = 10.2

Weight: <None>
Min Conc: <None>

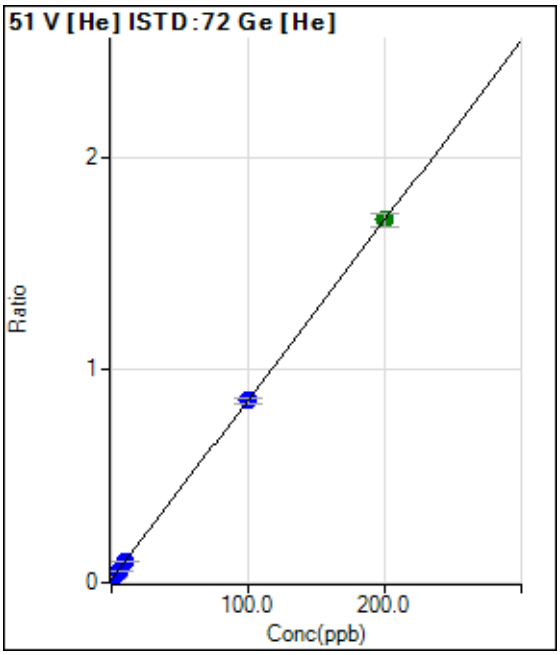


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	86.6
2	☐	2.000	1.952	610.03	0.0006	P	6.5
3	☐	5.000	4.859	1473.44	0.0014	P	6.8
4	☐	10.000	9.135	2687.00	0.0025	P	0.9
5	☐	100.000	99.310	28259.62	0.0273	P	4.8
6	☐	200.000	200.392	56366.23	0.0550	P	2.2

y = 2.7454E-004 * x + 1.7771E-005
R = 1.0000
DL = 0.1682
BEC = 0.06473

Weight: <None>
Min Conc: <None>

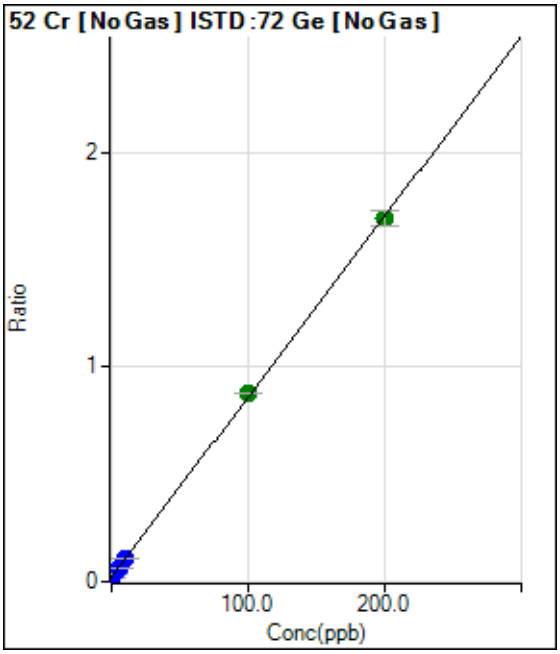
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16207.40	0.0145	P	1.1
2	☐	2.000	1.907	33676.81	0.0306	P	1.7
3	☐	5.000	4.879	60691.43	0.0557	P	1.2
4	☐	10.000	10.023	105375.62	0.0991	P	1.9
5	☐	100.000	99.503	884927.22	0.8540	P	2.9
6	☐	200.000	200.251	1744884.76	1.7041	A	4.1

y = 0.0084 * x + 0.0145
R = 1.0000
DL = 0.05442
BEC = 1.717

Weight: <None>
Min Conc: <None>

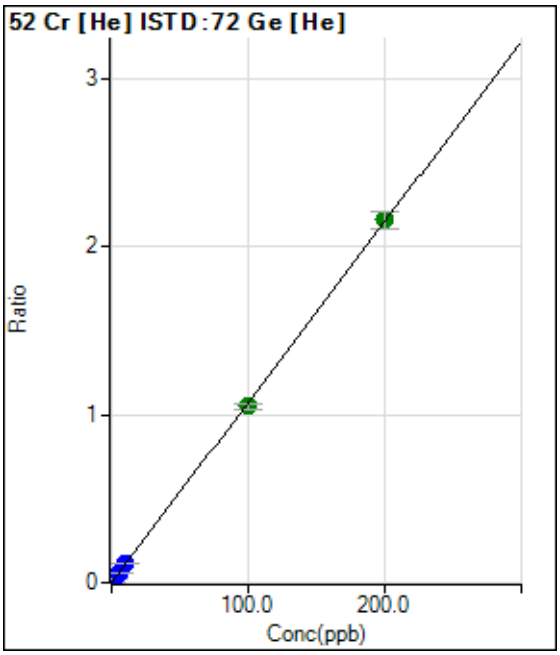


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	89545.64	0.0204	P	3.4
2	☐	2.000	2.083	166846.54	0.0379	P	0.6
3	☐	5.000	5.473	285369.57	0.0664	P	1.6
4	☐	10.000	10.670	476937.09	0.1100	P	1.6
5	☐	100.000	102.442	3700032.55	0.8812	A	0.2
6	☐	200.000	198.733	6982229.90	1.6904	A	4.4

y = 0.0084 * x + 0.0204
R = 0.9999
DL = 0.249
BEC = 2.423

Weight: <None>
Min Conc: <None>

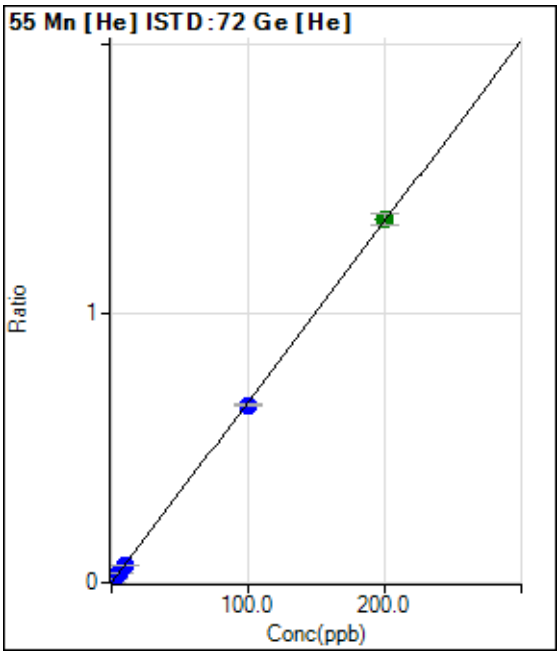
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1983.51	0.0018	P	5.8
2	☐	2.000	2.024	25874.80	0.0235	P	2.7
3	☐	5.000	4.941	59777.86	0.0548	P	2.6
4	☐	10.000	10.170	118027.04	0.1110	P	2.4
5	☐	100.000	97.739	1089072.25	1.0511	A	3.8
6	☐	200.000	201.123	2212591.74	2.1611	A	4.8

y = 0.0107 * x + 0.0018
R = 0.9999
DL = 0.02886
BEC = 0.1651

Weight: <None>
Min Conc: <None>

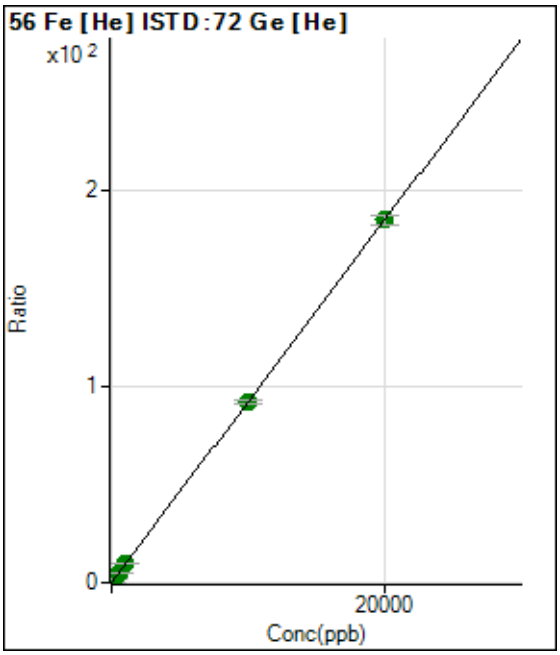


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.01	0.0002	P	18.5
2	☐	2.000	1.949	14634.75	0.0133	P	1.7
3	☐	5.000	4.808	35396.46	0.0325	P	1.2
4	☐	10.000	9.989	71508.18	0.0672	P	1.5
5	☐	100.000	98.427	684510.15	0.6605	P	1.7
6	☐	200.000	200.792	1379710.24	1.3471	A	3.0

y = 0.0067 * x + 2.1439E-004
R = 1.0000
DL = 0.01769
BEC = 0.03196

Weight: <None>
Min Conc: <None>

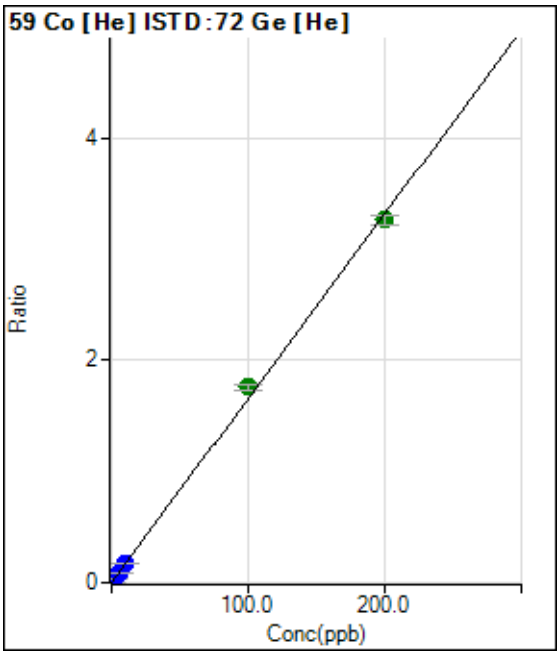
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12966.78	0.0115	P	65.4
2	☐	200.000	200.553	2049523.04	1.8607	A	2.8
3	☐	500.000	487.198	4910416.49	4.5038	A	1.9
4	☐	1000.000	1029.577	10111521.93	9.5048	A	1.5
5	☐	10000.00	9953.086	95118421.92	91.7844	A	2.0
6	☐	20000.00	20022.29	189079223.8	184.628	A	3.0

y = 0.0092 * x + 0.0115
R = 1.0000
DL = 2.454
BEC = 1.25

Weight: <None>
Min Conc: <None>

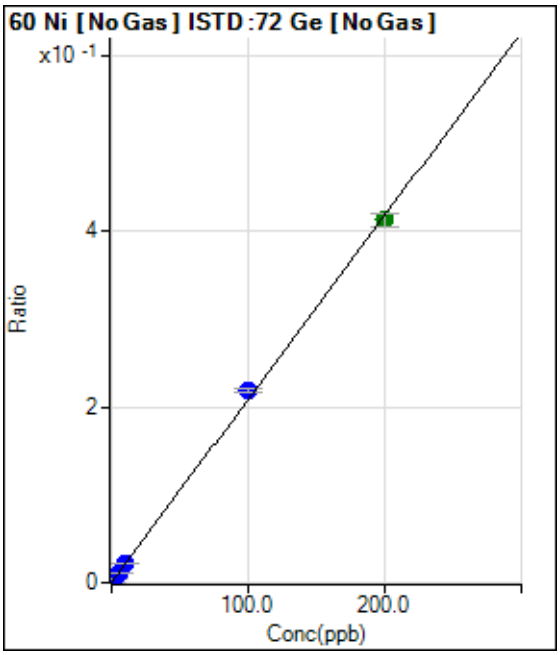


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.33	0.0001	P	19.1
2	☐	2.000	2.037	37295.11	0.0339	P	1.1
3	☐	5.000	5.102	92239.07	0.0846	P	2.5
4	☐	10.000	10.819	190679.11	0.1792	P	1.9
5	☐	100.000	105.966	1818022.11	1.7543	A	2.0
6	☐	200.000	196.973	3339419.32	3.2608	A	3.0

y = 0.0166 * x + 1.4606E-004
R = 0.9994
DL = 0.005056
BEC = 0.008823

Weight: <None>
Min Conc: <None>

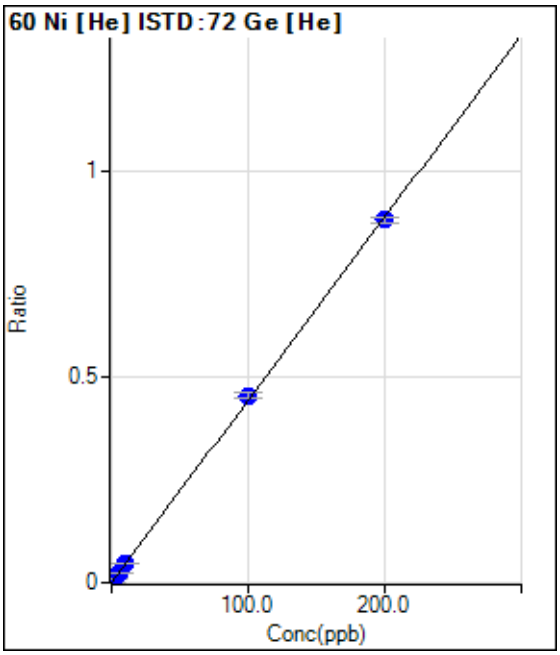
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0001	P	7.1
2	☐	2.000	2.143	20151.94	0.0046	P	3.1
3	☐	5.000	5.334	48316.41	0.0112	P	1.7
4	☐	10.000	10.569	96045.46	0.0222	P	2.2
5	☐	100.000	104.366	914794.31	0.2179	P	2.0
6	☐	200.000	197.779	1705251.90	0.4128	A	3.8

y = 0.0021 * x + 1.0314E-004
R = 0.9997
DL = 0.01051
BEC = 0.04943

Weight: <None>
Min Conc: <None>

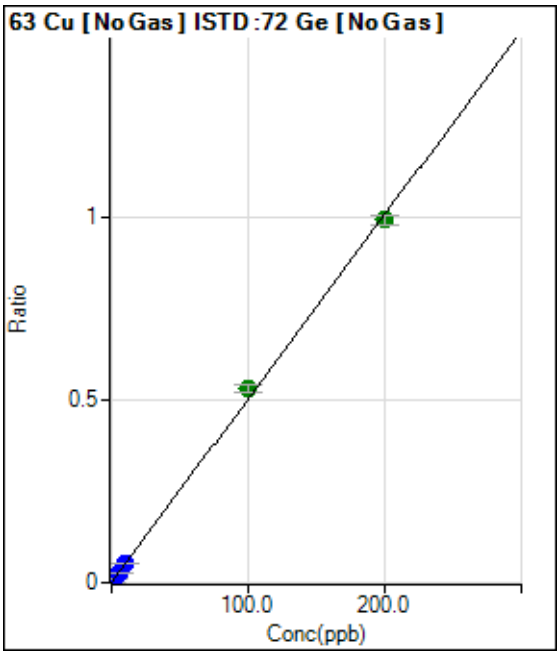


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.01	0.0002	P	13.3
2	☐	2.000	1.967	9777.00	0.0089	P	3.9
3	☐	5.000	5.134	24983.35	0.0229	P	2.3
4	☐	10.000	10.508	49721.33	0.0467	P	1.1
5	☐	100.000	102.611	471406.86	0.4549	P	2.5
6	☐	200.000	198.666	902045.87	0.8806	P	1.5

y = 0.0044 * x + 1.6071E-004
R = 0.9999
DL = 0.01447
BEC = 0.03626

Weight: <None>
Min Conc: <None>

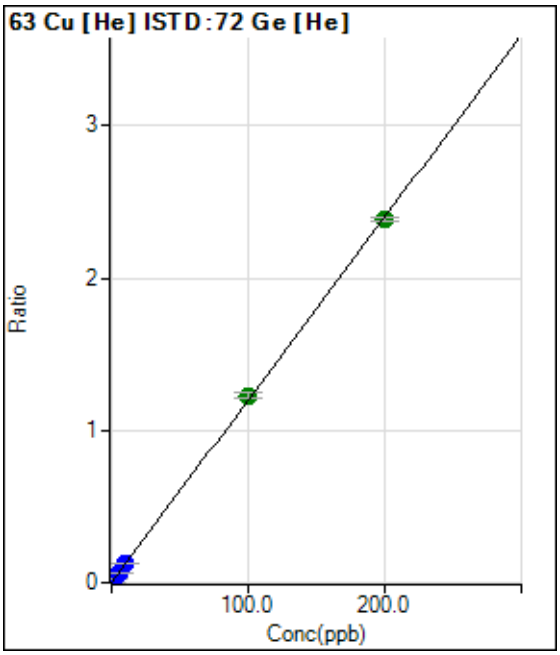
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1986.85	0.0005	P	10.4
2	☐	2.000	2.128	49169.70	0.0112	P	1.2
3	☐	5.000	5.368	118128.62	0.0275	P	1.9
4	☐	10.000	10.607	233319.05	0.0538	P	2.5
5	☐	100.000	105.330	2227068.25	0.5305	A	3.5
6	☐	200.000	197.294	4103872.96	0.9933	A	2.7

y = 0.0050 * x + 4.5204E-004
R = 0.9995
DL = 0.02808
BEC = 0.08982

Weight: <None>
Min Conc: <None>

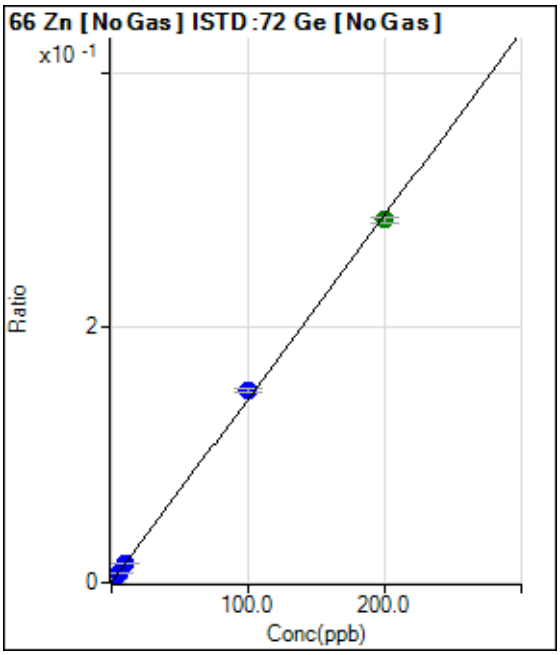


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1080.07	0.0010	P	19.1
2	☐	2.000	2.090	28643.97	0.0260	P	3.0
3	☐	5.000	5.312	70469.55	0.0646	P	2.1
4	☐	10.000	10.423	133911.48	0.1259	P	1.7
5	☐	100.000	102.609	1275228.99	1.2307	A	2.7
6	☐	200.000	198.666	2440154.28	2.3819	A	0.9

y = 0.0120 * x + 9.6602E-004
R = 0.9999
DL = 0.04626
BEC = 0.08061

Weight: <None>
Min Conc: <None>

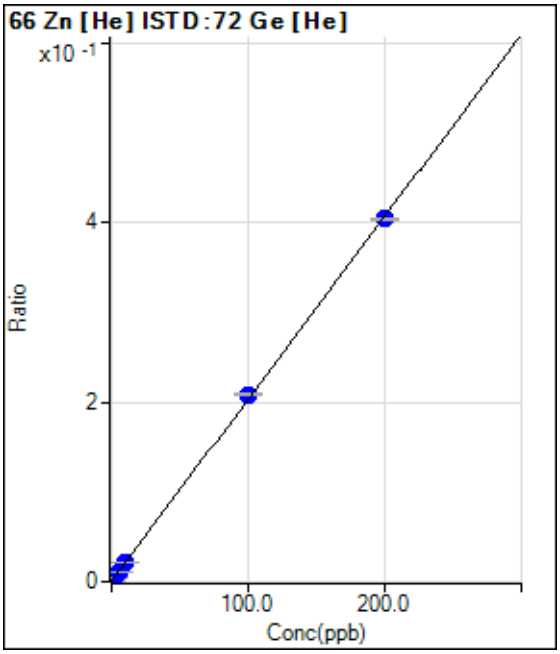
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1400.10	0.0003	P	5.3
2	☐	2.000	2.069	14518.04	0.0033	P	3.5
3	☐	5.000	5.219	33668.84	0.0078	P	2.5
4	☐	10.000	10.496	66854.56	0.0154	P	1.6
5	☐	100.000	104.791	634454.35	0.1511	P	1.8
6	☐	200.000	197.574	1176732.04	0.2847	A	1.8

y = 0.0014 * x + 3.1822E-004
R = 0.9996
DL = 0.03504
BEC = 0.2211

Weight: <None>
Min Conc: <None>

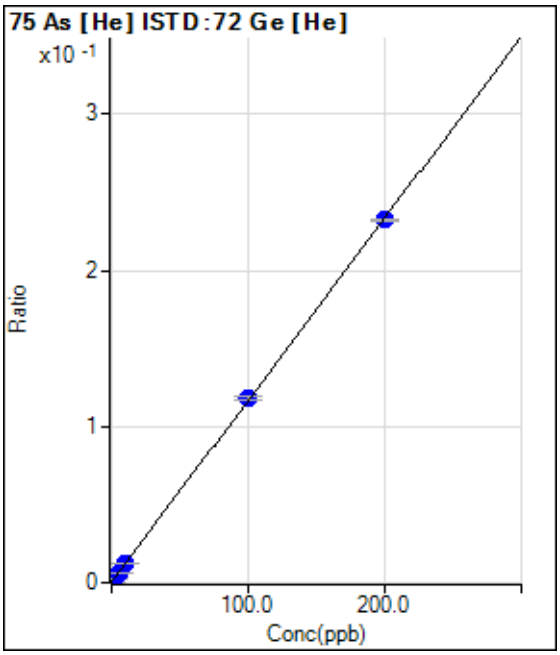


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0004	P	18.3
2	☐	2.000	1.995	4937.67	0.0045	P	6.0
3	☐	5.000	4.962	11455.03	0.0105	P	3.4
4	☐	10.000	10.424	22966.37	0.0216	P	2.5
5	☐	100.000	102.296	215609.85	0.2080	P	1.4
6	☐	200.000	198.832	413813.20	0.4039	P	0.5

y = 0.0020 * x + 4.3731E-004
R = 0.9999
DL = 0.1181
BEC = 0.2155

Weight: <None>
Min Conc: <None>

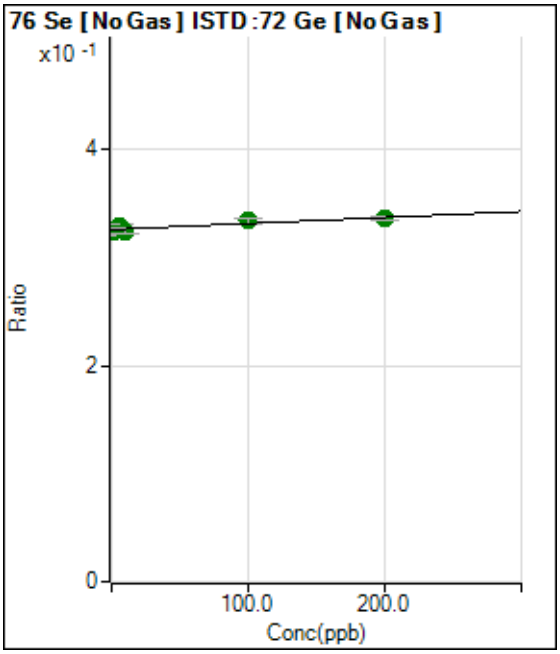
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0003	P	8.3
2	☐	2.000	1.967	2851.43	0.0026	P	2.5
3	☐	5.000	4.764	6373.75	0.0058	P	0.2
4	☐	10.000	9.957	12651.52	0.0119	P	1.6
5	☐	100.000	101.496	122787.96	0.1185	P	1.7
6	☐	200.000	199.260	237992.62	0.2323	P	0.6

y = 0.0012 * x + 2.9819E-004
R = 1.0000
DL = 0.06396
BEC = 0.2561

Weight: <None>
Min Conc: <None>

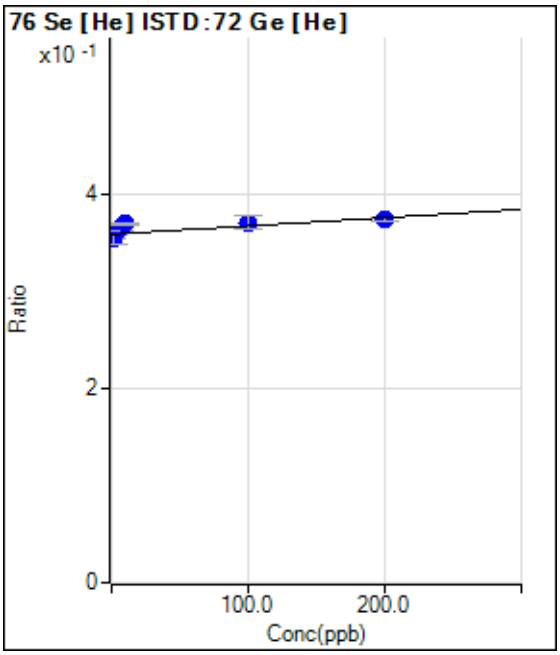


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1434642.79	0.3262	A	1.9
2	☐	2.000	-49.422	1424690.39	0.3234	A	2.2
3	☐	5.000	46.484	1413981.28	0.3288	A	1.7
4	☐	10.000	-25.949	1407825.81	0.3247	A	1.7
5	☐	100.000	152.611	1405425.24	0.3347	A	1.6
6	☐	200.000	174.969	1388220.13	0.3359	A	1.1

y = 5.5793E-005 * x + 0.3262
R = 0.8931
DL = 327.4
BEC = 5846

Weight: <None>
Min Conc: <None>

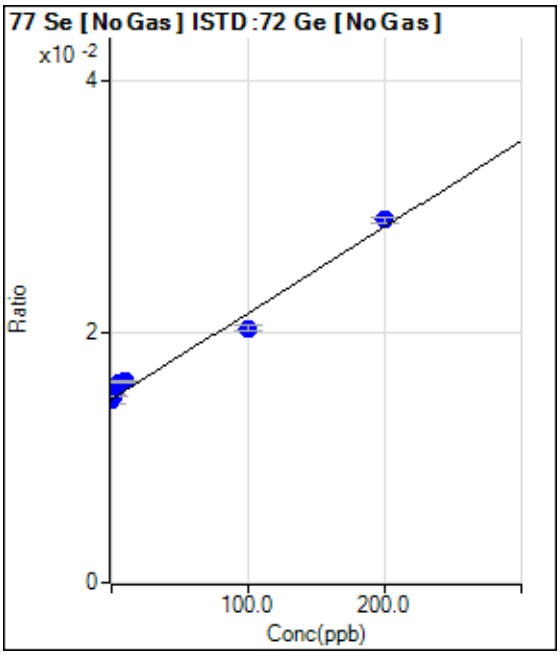
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400715.97	0.3583	P	2.1
2	☐	2.000	-61.485	388685.98	0.3530	P	2.8
3	☐	5.000	71.844	397281.55	0.3644	P	1.9
4	☐	10.000	128.378	392797.82	0.3692	P	0.6
5	☐	100.000	141.112	383612.68	0.3703	P	3.8
6	☐	200.000	172.489	382068.56	0.3729	P	1.2

y = 8.5159E-005 * x + 0.3583
R = 0.7091
DL = 269.6
BEC = 4207

Weight: <None>
Min Conc: <None>

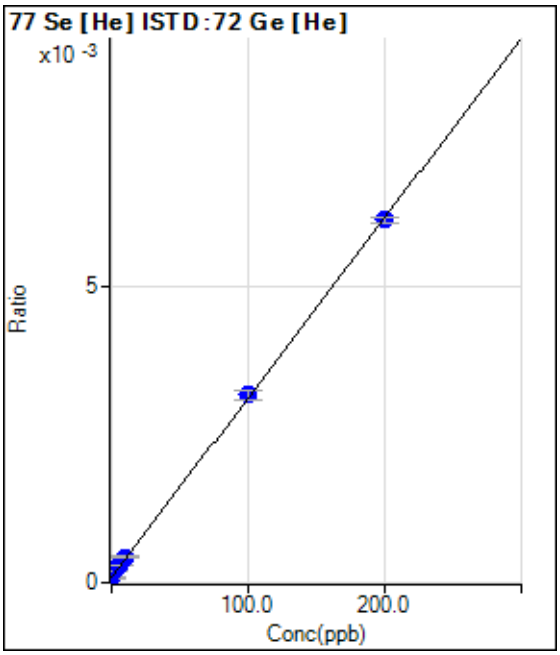


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64384.32	0.0146	P	4.5
2	☐	2.000	3.611	65613.17	0.0149	P	0.7
3	☐	5.000	19.877	68852.85	0.0160	P	1.2
4	☐	10.000	20.870	69696.94	0.0161	P	1.2
5	☐	100.000	82.128	85168.36	0.0203	P	2.0
6	☐	200.000	208.005	119573.78	0.0289	P	1.7

y = 6.8706E-005 * x + 0.0146
R = 0.9899
DL = 28.48
BEC = 213.2

Weight: <None>
Min Conc: <None>

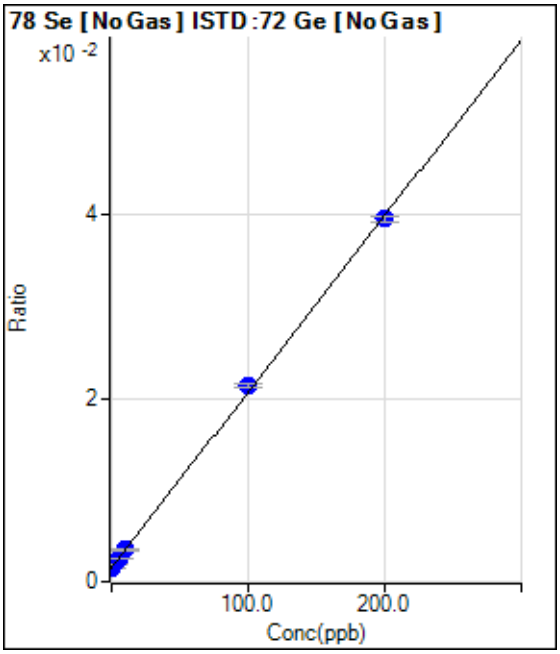
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	37.1
2	☐	2.000	3.743	223.34	0.0002	P	23.3
3	☐	5.000	6.826	323.34	0.0003	P	7.5
4	☐	10.000	11.298	460.01	0.0004	P	12.1
5	☐	100.000	101.823	3293.80	0.0032	P	4.9
6	☐	200.000	198.961	6274.94	0.0061	P	1.8

y = 3.0341E-005 * x + 8.9566E-005
R = 0.9999
DL = 3.282
BEC = 2.952

Weight: <None>
Min Conc: <None>

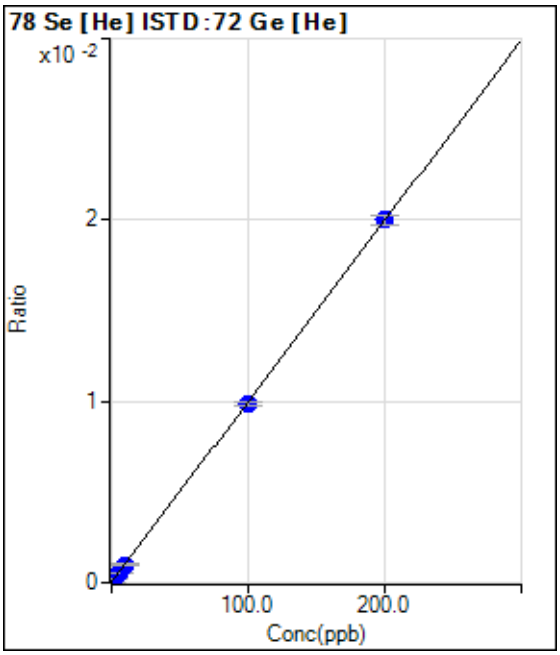


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6678.44	0.0015	P	2.5
2	☐	2.000	1.913	8302.69	0.0019	P	1.5
3	☐	5.000	5.347	10934.61	0.0025	P	4.4
4	☐	10.000	10.161	15021.99	0.0035	P	3.5
5	☐	100.000	103.326	89524.45	0.0213	P	1.7
6	☐	200.000	198.321	163372.22	0.0395	P	1.9

y = 1.9170E-004 * x + 0.0015
R = 0.9998
DL = 0.5839
BEC = 7.918

Weight: <None>
Min Conc: <None>

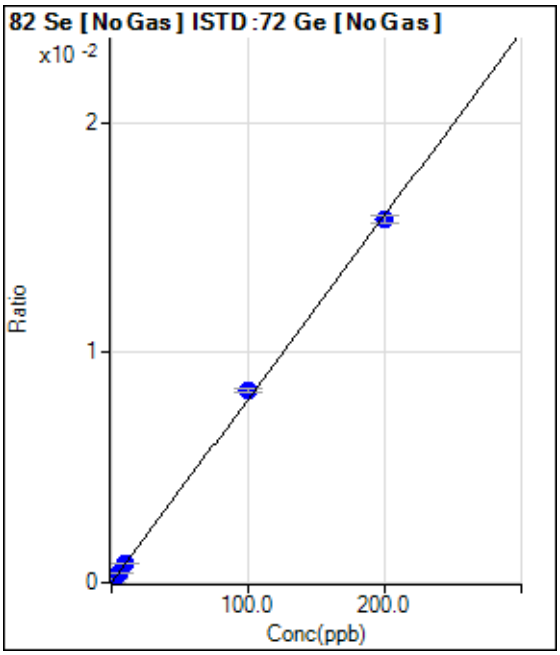
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	18.8
2	☐	2.000	2.129	270.00	0.0002	P	10.7
3	☐	5.000	4.738	550.68	0.0005	P	6.5
4	☐	10.000	9.575	1050.71	0.0010	P	5.0
5	☐	100.000	99.109	10272.61	0.0099	P	2.1
6	☐	200.000	200.472	20496.27	0.0200	P	2.7

y = 9.9661E-005 * x + 3.2825E-005
R = 1.0000
DL = 0.1854
BEC = 0.3294

Weight: <None>
Min Conc: <None>

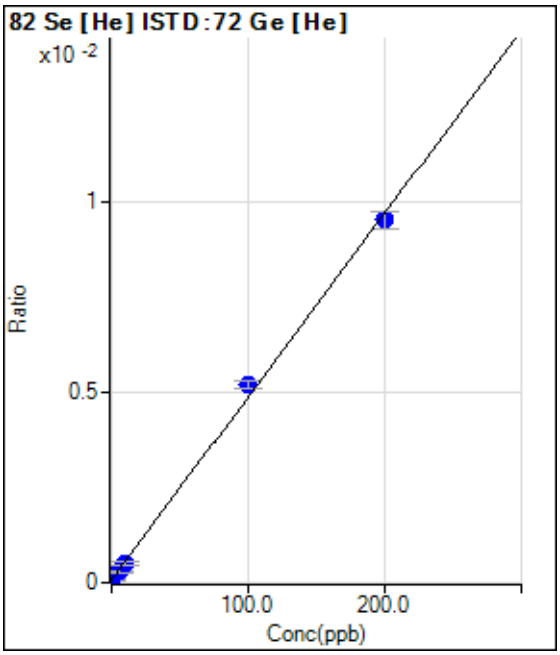


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-63.13	0.0000	P	-154.3
2	☐	2.000	2.165	700.36	0.0002	P	16.8
3	☐	5.000	5.218	1730.51	0.0004	P	11.4
4	☐	10.000	10.166	3458.03	0.0008	P	2.0
5	☐	100.000	104.556	34994.01	0.0083	P	2.5
6	☐	200.000	197.707	65190.23	0.0158	P	1.9

y = 7.9867E-005 * x - 1.4155E-005
R = 0.9996
DL = 0.8202
BEC = -0.1772

Weight: <None>
Min Conc: <None>

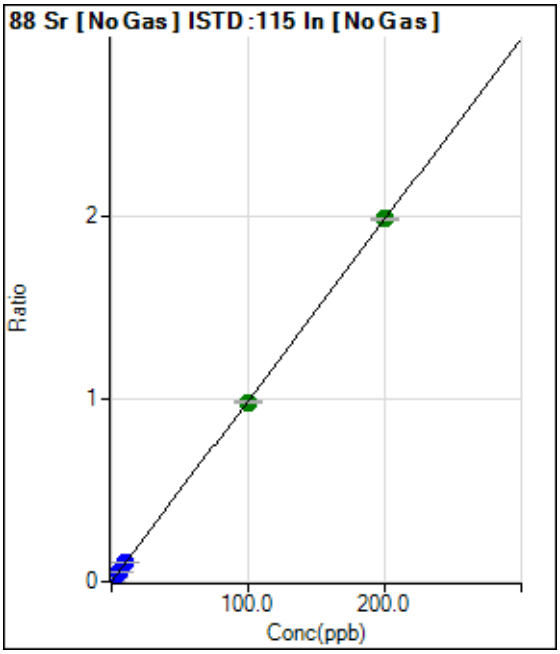
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	24.1
2	☐	2.000	2.611	216.68	0.0002	P	12.5
3	☐	5.000	4.424	310.01	0.0003	P	8.7
4	☐	10.000	8.996	536.69	0.0005	P	13.0
5	☐	100.000	106.919	5404.54	0.0052	P	4.3
6	☐	200.000	196.599	9760.40	0.0095	P	4.5

y = 4.8124E-005 * x + 7.1418E-005
R = 0.9991
DL = 1.071
BEC = 1.484

Weight: <None>
Min Conc: <None>

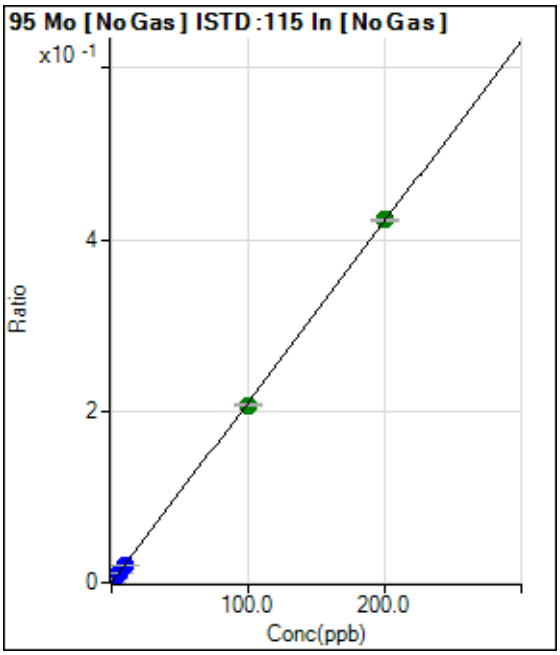


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1386.77	0.0002	P	2.7
2	☐	2.000	2.058	114741.74	0.0206	P	1.3
3	☐	5.000	5.091	280733.88	0.0506	P	1.2
4	☐	10.000	10.260	568135.76	0.1018	P	1.0
5	☐	100.000	99.180	5288072.42	0.9817	A	1.0
6	☐	200.000	200.394	10294153.39	1.9832	A	0.7

y = 0.0099 * x + 2.4079E-004
R = 1.0000
DL = 0.001984
BEC = 0.02433

Weight: <None>
Min Conc: <None>

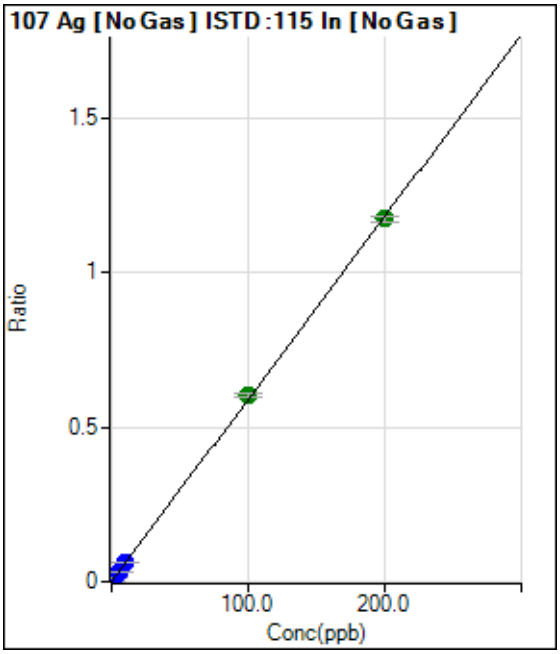
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	45.3
2	☐	2.000	2.021	23791.67	0.0043	P	0.8
3	☐	5.000	4.982	58305.17	0.0105	P	2.1
4	☐	10.000	9.937	116955.19	0.0209	P	1.4
5	☐	100.000	98.334	1116178.32	0.2072	A	1.1
6	☐	200.000	200.836	2196433.71	0.4232	A	0.4

y = 0.0021 * x + 1.3320E-005
R = 1.0000
DL = 0.008585
BEC = 0.006322

Weight: <None>
Min Conc: <None>

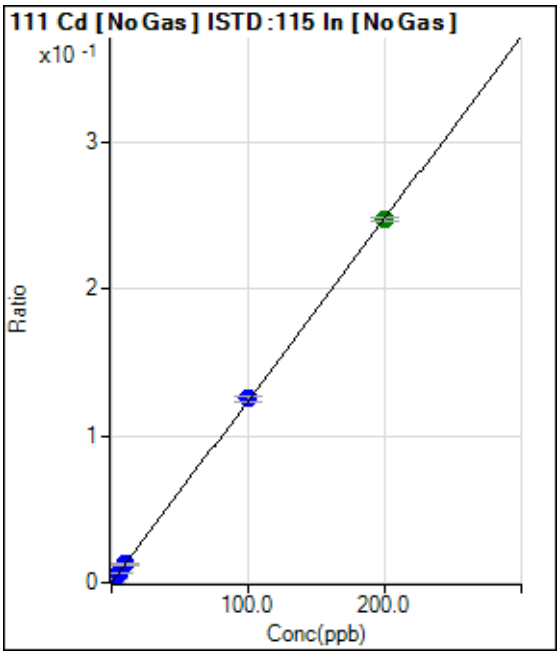


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	793.37	0.0001	P	12.4
2	☐	2.000	2.084	69281.59	0.0124	P	2.6
3	☐	5.000	5.126	168585.37	0.0304	P	1.7
4	☐	10.000	10.396	343379.41	0.0615	P	1.8
5	☐	100.000	102.083	3247191.62	0.6028	A	1.7
6	☐	200.000	198.935	6096209.07	1.1746	A	1.6

y = 0.0059 * x + 1.3772E-004
R = 0.9999
DL = 0.00868
BEC = 0.02333

Weight: <None>
Min Conc: <None>

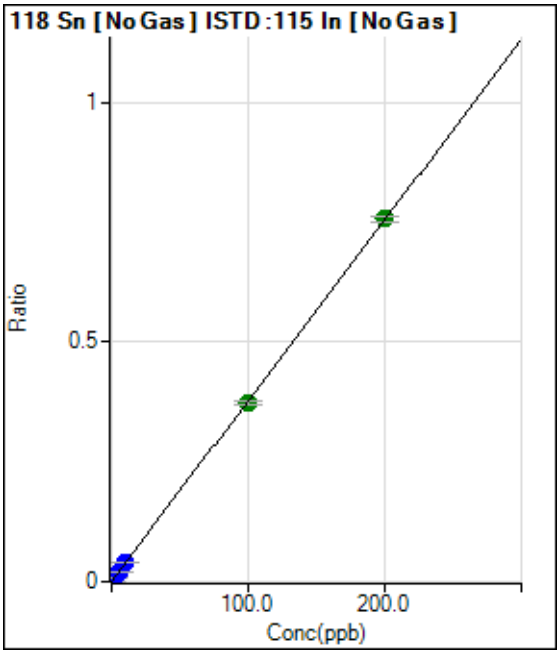
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	112.7
2	☐	2.000	1.999	13820.79	0.0025	P	2.0
3	☐	5.000	5.005	34442.24	0.0062	P	2.6
4	☐	10.000	10.075	69781.64	0.0125	P	1.2
5	☐	100.000	101.290	676662.23	0.1256	P	3.0
6	☐	200.000	199.351	1283492.56	0.2473	A	0.9

y = 0.0012 * x + 2.3066E-006
R = 1.0000
DL = 0.006284
BEC = 0.00186

Weight: <None>
Min Conc: <None>

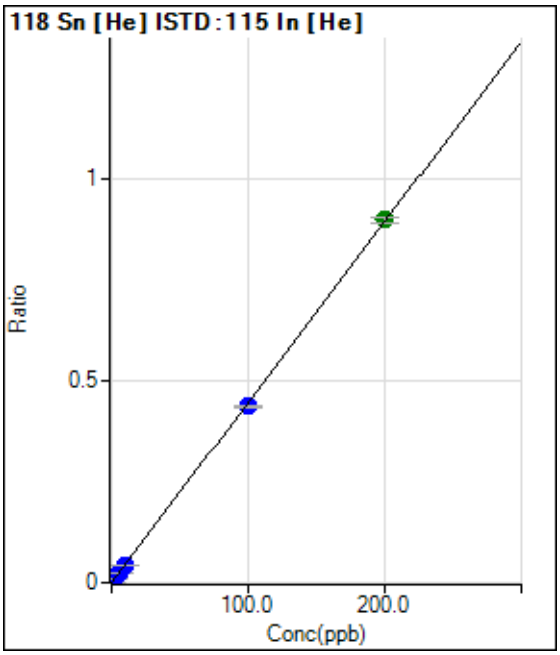


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2767.01	0.0005	P	6.0
2	☐	2.000	2.017	45047.73	0.0081	P	0.5
3	☐	5.000	5.022	107732.49	0.0194	P	1.2
4	☐	10.000	10.048	214280.53	0.0384	P	0.1
5	☐	100.000	98.570	2005371.69	0.3723	A	2.4
6	☐	200.000	200.712	3931945.77	0.7576	A	1.6

y = 0.0038 * x + 4.8008E-004
R = 1.0000
DL = 0.02302
BEC = 0.1273

Weight: <None>
Min Conc: <None>

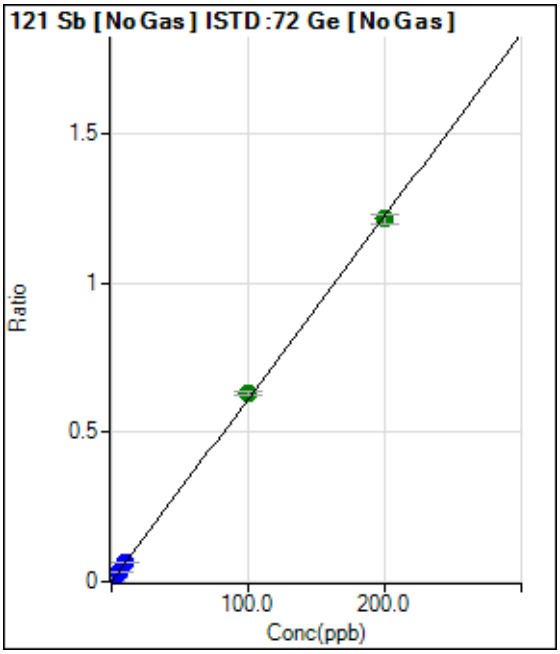
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.07	0.0006	P	8.4
2	☐	2.000	1.931	18770.45	0.0092	P	1.1
3	☐	5.000	4.808	44429.28	0.0220	P	3.3
4	☐	10.000	9.680	88777.26	0.0437	P	1.3
5	☐	100.000	97.705	851059.23	0.4360	P	1.7
6	☐	200.000	201.169	1727126.23	0.8971	A	1.6

y = 0.0045 * x + 5.6019E-004
R = 0.9999
DL = 0.03158
BEC = 0.1257

Weight: <None>
Min Conc: <None>

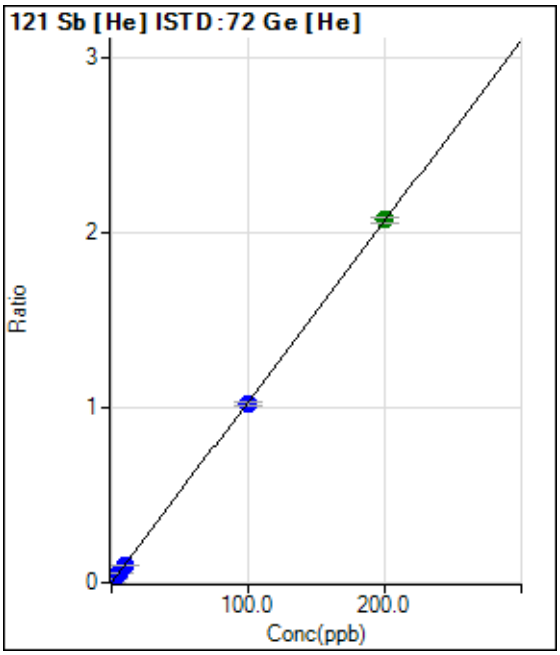


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1893.50	0.0004	P	5.1
2	☐	2.000	1.956	54550.70	0.0124	P	1.1
3	☐	5.000	5.046	134425.49	0.0313	P	0.2
4	☐	10.000	10.162	270936.65	0.0625	P	2.6
5	☐	100.000	102.724	2636139.34	0.6280	A	2.3
6	☐	200.000	198.629	5015223.57	1.2138	A	2.4

y = 0.0061 * x + 4.3071E-004
R = 0.9999
DL = 0.01087
BEC = 0.07051

Weight: <None>
Min Conc: <None>

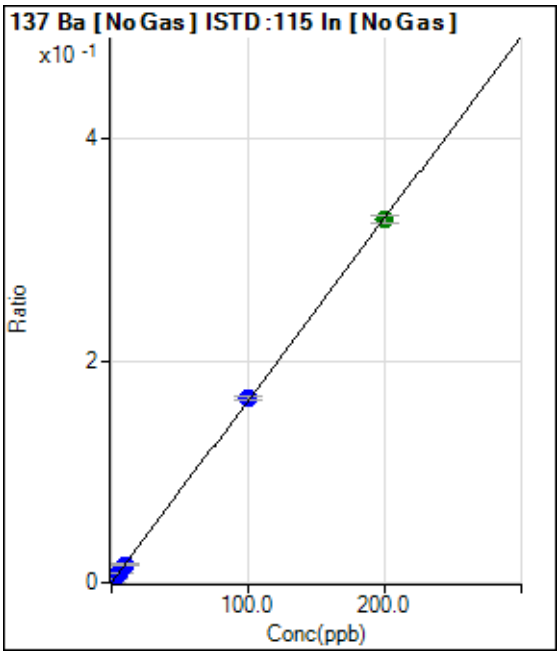
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	653.36	0.0006	P	19.8
2	☐	2.000	1.880	22045.55	0.0200	P	1.9
3	☐	5.000	4.786	54577.15	0.0501	P	2.0
4	☐	10.000	9.678	107035.32	0.1006	P	3.3
5	☐	100.000	98.699	1057960.84	1.0209	P	2.1
6	☐	200.000	200.673	2125456.95	2.0751	A	1.7

y = 0.0103 * x + 5.8467E-004
R = 1.0000
DL = 0.03363
BEC = 0.05656

Weight: <None>
Min Conc: <None>

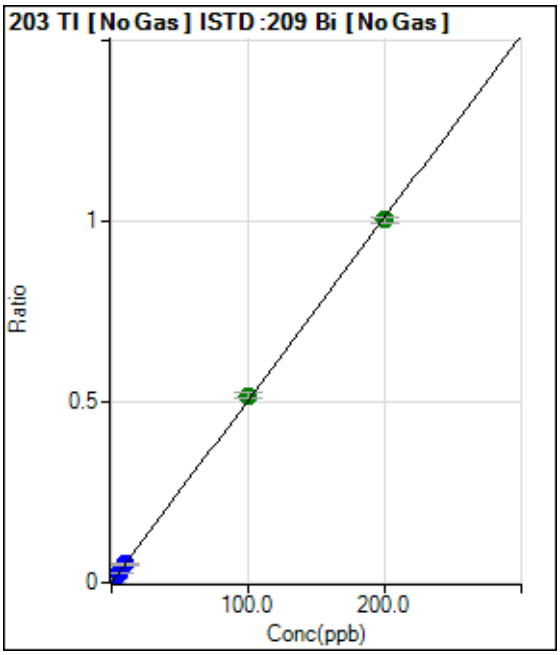


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0000	P	24.5
2	☐	2.000	2.014	18606.93	0.0033	P	2.4
3	☐	5.000	4.949	45242.95	0.0082	P	2.5
4	☐	10.000	9.985	91696.62	0.0164	P	1.6
5	☐	100.000	101.683	899178.09	0.1669	P	2.2
6	☐	200.000	199.160	1696913.47	0.3270	A	2.1

y = 0.0016 * x + 3.4643E-005
R = 0.9999
DL = 0.0155
BEC = 0.0211

Weight: <None>
Min Conc: <None>

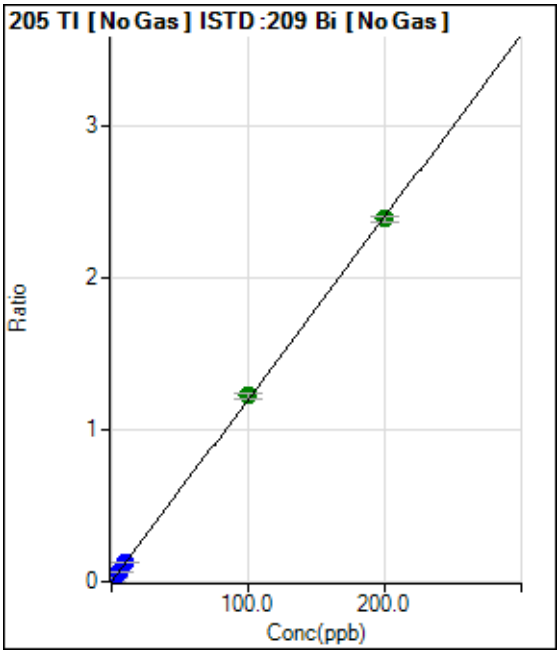
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0000	P	37.1
2	☐	2.000	1.992	58789.04	0.0101	P	2.8
3	☐	5.000	4.792	141822.21	0.0242	P	1.0
4	☐	10.000	10.137	295707.66	0.0512	P	4.6
5	☐	100.000	102.435	2901358.29	0.5169	A	2.8
6	☐	200.000	198.781	5445358.46	1.0031	A	1.7

y = 0.0050 * x + 2.6544E-005
R = 0.9999
DL = 0.005855
BEC = 0.00526

Weight: <None>
Min Conc: <None>

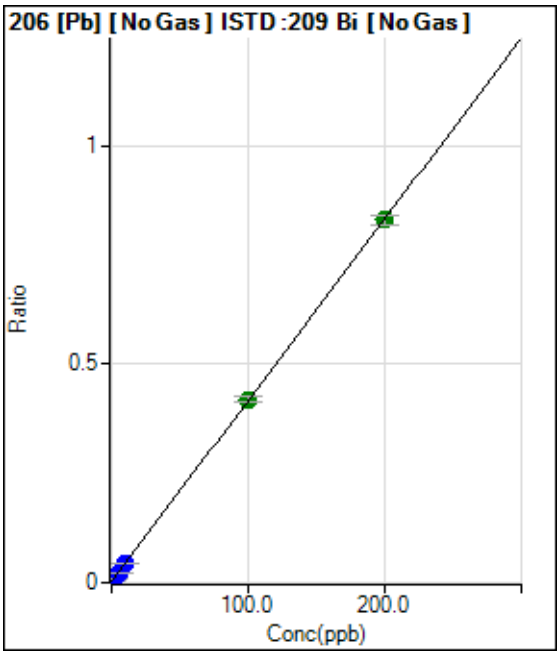


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0001	P	12.1
2	☐	2.000	1.992	139805.16	0.0240	P	2.6
3	☐	5.000	4.937	347404.53	0.0593	P	1.1
4	☐	10.000	10.305	714722.10	0.1237	P	5.0
5	☐	100.000	102.030	6870546.36	1.2242	A	3.4
6	☐	200.000	198.972	12959803.14	2.3873	A	1.6

y = 0.0120 * x + 5.8293E-005
R = 0.9999
DL = 0.001767
BEC = 0.004859

Weight: <None>
Min Conc: <None>

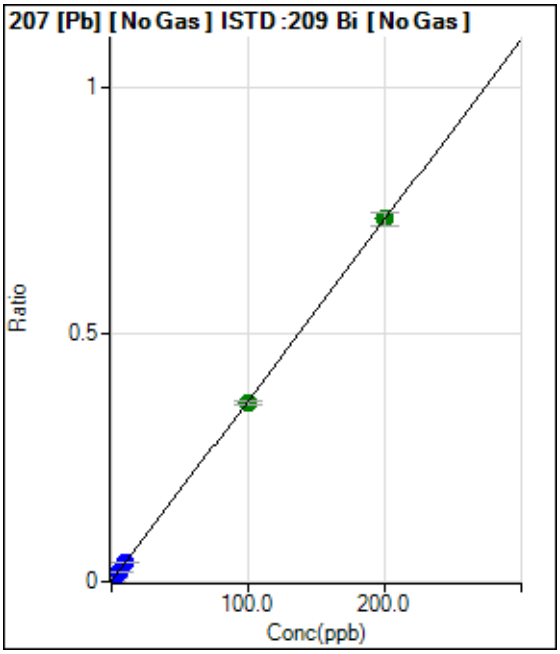
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13003.77	0.0023	P	0.7
2	☐	2.000	1.967	60745.29	0.0104	P	1.8
3	☐	5.000	5.000	134755.16	0.0230	P	0.6
4	☐	10.000	10.021	253219.92	0.0438	P	4.8
5	☐	100.000	100.644	2356621.47	0.4199	A	3.1
6	☐	200.000	199.677	4509402.95	0.8308	A	2.9

y = 0.0041 * x + 0.0023
R = 1.0000
DL = 0.01092
BEC = 0.5423

Weight: <None>
Min Conc: <None>

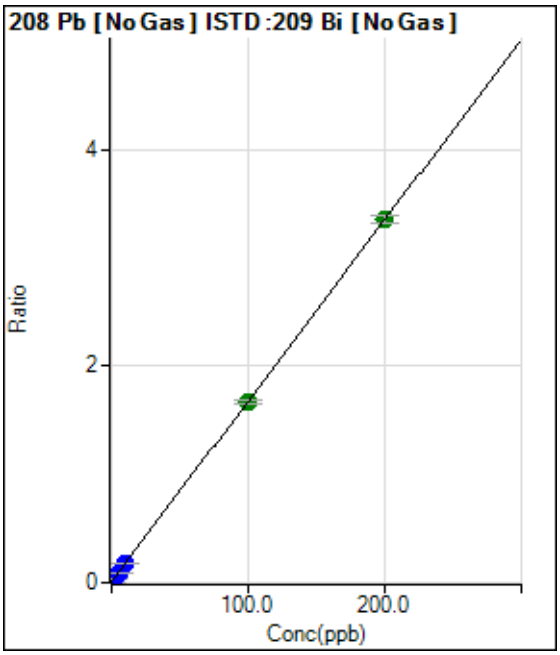


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10317.88	0.0018	P	2.9
2	☐	2.000	1.967	52300.63	0.0090	P	1.7
3	☐	5.000	5.035	118008.93	0.0201	P	3.0
4	☐	10.000	10.024	221664.11	0.0383	P	1.9
5	☐	100.000	98.747	2031814.35	0.3619	A	1.4
6	☐	200.000	200.625	3980545.56	0.7334	A	3.9

y = 0.0036 * x + 0.0018
R = 1.0000
DL = 0.04248
BEC = 0.4895

Weight: <None>
Min Conc: <None>

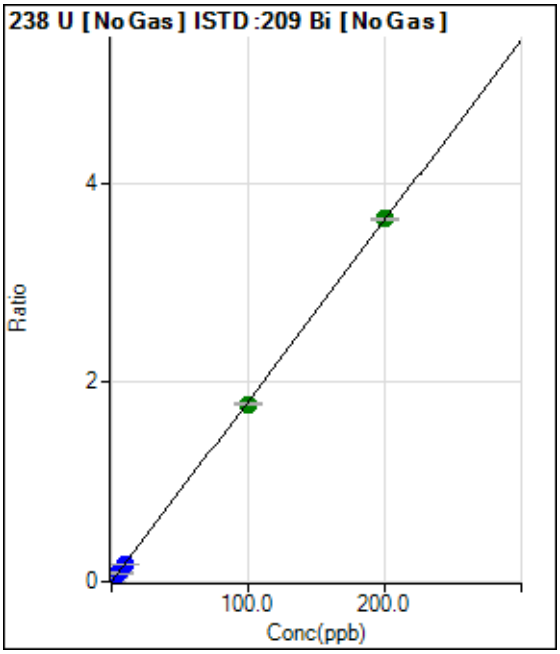
Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48798.10	0.0084	P	0.5
2	☐	2.000	1.991	243401.01	0.0417	P	1.1
3	☐	5.000	5.006	539349.77	0.0921	P	1.5
4	☐	10.000	10.095	1023586.84	0.1771	P	2.0
5	☐	100.000	99.527	9379522.10	1.6709	A	2.2
6	☐	200.000	200.232	18201692.54	3.3531	A	2.0

y = 0.0167 * x + 0.0084
R = 1.0000
DL = 0.007524
BEC = 0.5055

Weight: <None>
Min Conc: <None>

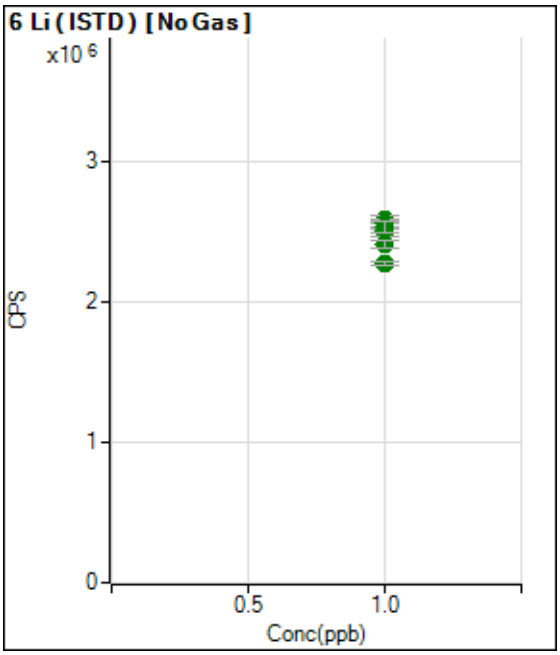


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	33.4
2	☐	2.000	1.924	203382.05	0.0348	P	1.1
3	☐	5.000	4.809	510257.78	0.0871	P	1.4
4	☐	10.000	9.848	1031213.42	0.1784	P	2.0
5	☐	100.000	98.284	9992270.06	1.7800	A	1.2
6	☐	200.000	200.871	19751618.46	3.6378	A	0.4

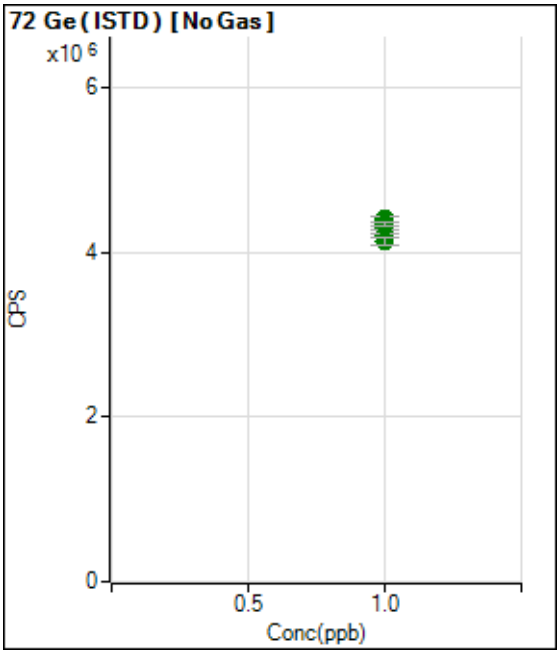
y = 0.0181 * x + 1.0972E-005
R = 0.9999
DL = 0.0006068
BEC = 0.0006058

Weight: <None>
Min Conc: <None>

Calibration for 020_ICV.d

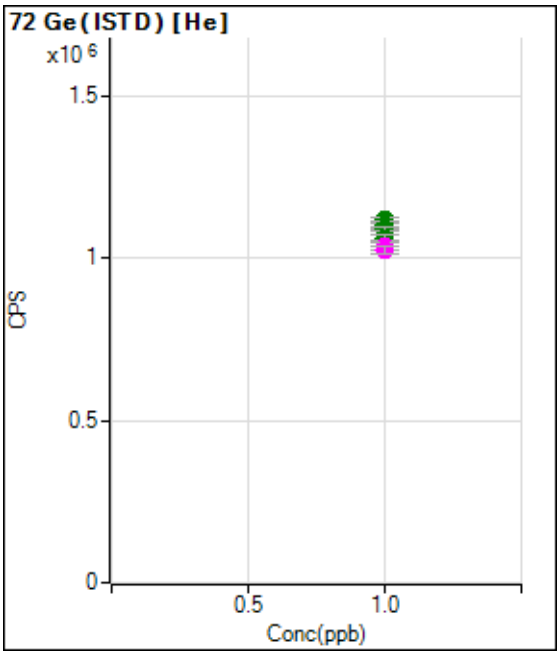


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2589134.74		A	2.1
2	☐	1.000		2505192.38		A	2.6
3	☐	1.000		2559501.44		A	2.3
4	☐	1.000		2538320.49		A	2.8
5	☐	1.000		2415737.08		A	1.8
6	☐	1.000		2284056.83		A	1.2

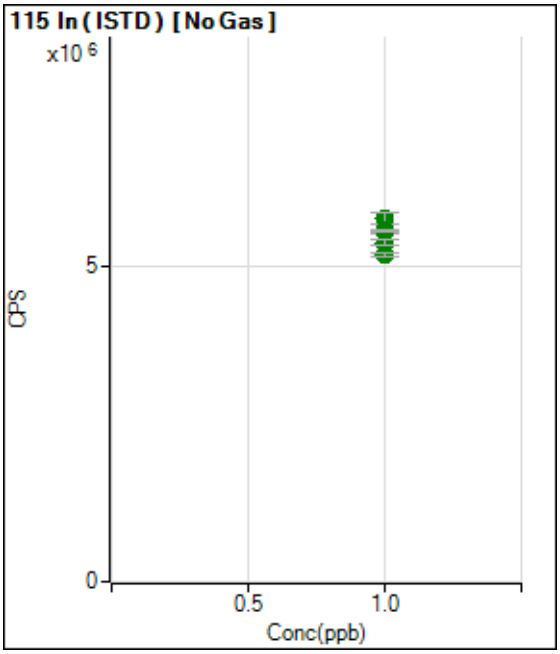


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4398724.00		A	1.8
2	☐	1.000		4405774.10		A	1.3
3	☐	1.000		4300858.58		A	1.0
4	☐	1.000		4334989.21		A	1.0
5	☐	1.000		4198643.27		A	1.4
6	☐	1.000		4132846.40		A	2.0

Calibration for 020_ICV.d

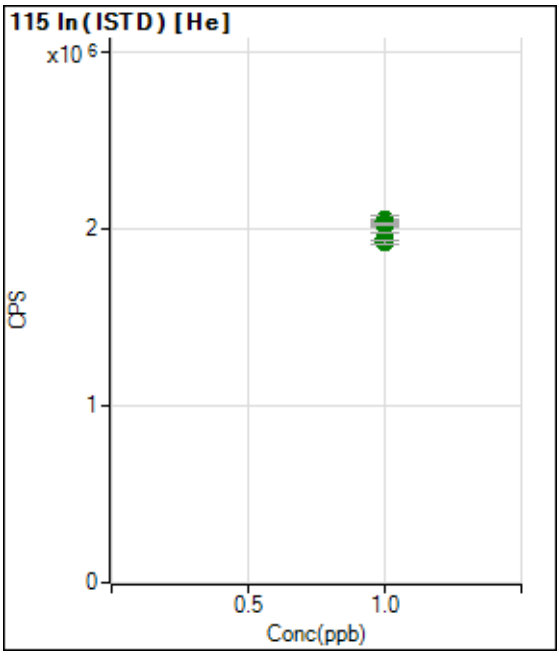


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1118718.47		A	1.4
2	☐	1.000		1101392.46		A	2.0
3	☐	1.000		1090447.27		A	1.1
4	☐	1.000		1063995.51		A	1.5
5	☐	1.000		1036684.70		M	2.6
6	☐	1.000		1024533.97		M	2.1

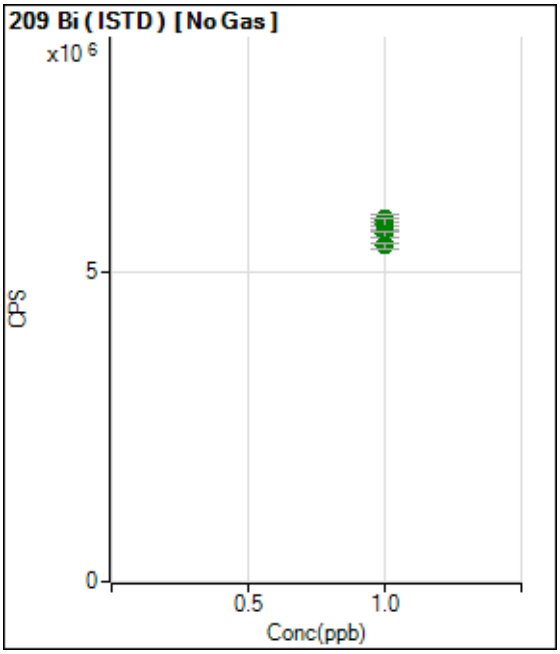


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5762279.09		A	3.0
2	☐	1.000		5569465.29		A	1.1
3	☐	1.000		5546527.08		A	0.9
4	☐	1.000		5582843.11		A	0.4
5	☐	1.000		5387468.46		A	1.9
6	☐	1.000		5190590.08		A	0.8

Calibration for 020_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2053664.34		A	0.6
2	☐	1.000		2048181.01		A	2.8
3	☐	1.000		2021047.87		A	1.2
4	☐	1.000		2031475.83		A	0.8
5	☐	1.000		1952588.14		A	3.2
6	☐	1.000		1925432.46		A	1.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5779491.99		A	0.8
2	☐	1.000		5837391.16		A	2.8
3	☐	1.000		5859482.83		A	2.0
4	☐	1.000		5783185.54		A	3.1
5	☐	1.000		5614344.50		A	1.8
6	☐	1.000		5429486.59		A	1.6

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	021LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:24:48-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.148	2.148	9.11	202363	0.00	2	
Be	9	1	No Gas	1.980	1.980	5.04	14453	0.01	2	
V	51	2	He	1.305	1.305	8.01	26894	0.00	2	NewName Main CR1 Failed
Cr	52	2	He	2.030	2.030	3.01	24853	0.01	2	
Fe	56	2	He	203.278	203.278	3.84	1988736	0.01	200	
Se	78	2	He	2.047	2.047	9.96	250	0.82	2	
Sn	118	2	He	2.164	2.164	1.64	20416	0.01	2	
As	75	2	He	1.950	1.950	6.18	2708	0.07	2	
Ca	44	2	He	193.265	193.265	1.49	8656	2.23	200	
Na	23	2	He	209.182	209.182	3.74	403599	0.05	200	
Mg	24	2	He	211.211	211.211	2.72	186957	0.11	200	
K	39	2	He	208.367	208.367	5.11	183840	0.11	200	
Mn	55	2	He	2.019	2.019	3.18	14508	0.01	2	
Co	59	2	He	2.049	2.049	4.18	35931	0.01	2	
Ni	60	2	He	2.039	2.039	7.13	9690	0.02	2	
Cu	63	2	He	2.078	2.078	2.44	27295	0.01	2	
Zn	66	2	He	1.976	1.976	4.97	4691	0.04	2	
Al	27	2	He	2.315	2.315	23.39	1643	0.14	2	
B	11	1	No Gas	28.364	28.364	8.76	196443	0.01	10	NewName Main CR1 Failed
Al	27	1	No Gas	2.134	2.134	0.81	121103	0.00	2	
Si	28	1	No Gas	9.081	9.081	12.67	910874	0.00	10	
P	31	1	No Gas	9.283	9.283	11.02	46033	0.02	10	
Ag	107	1	No Gas	2.062	2.062	1.86	66822	0.00	2	
Cd	111	1	No Gas	2.070	2.070	4.80	13944	0.01	2	
Sr	88	1	No Gas	2.072	2.072	3.70	112584	0.00	2	
Mo	95	1	No Gas	2.037	2.037	3.19	23374	0.01	2	
Sn	118	1	No Gas	2.303	2.303	1.79	49745	0.00	2	
Sb	121	1	No Gas	2.278	2.278	2.67	60376	0.00	2	
Ba	137	1	No Gas	2.030	2.030	2.69	18273	0.01	2	
Tl	205	1	No Gas	2.134	2.134	3.35	146324	0.00	2	
Tl	203	1	No Gas	2.075	2.075	3.71	59875	0.00	2	
Pb	208	1	No Gas	1.979	1.979	2.02	236653	0.00	2	
U	238	1	No Gas	1.968	1.968	0.91	203361	0.00	2	
Ca	43	2	He	193.345	193.345	7.50	507	38.16	200	
Sb	121	2	He	2.094	2.094	3.99	23445	0.01	2	
Ti	47	2	He	1.971	1.971	7.39	590	0.33	200	
Cu	63	1	No Gas	2.134	2.134	2.08	47102	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2372986	5.35	2589135	91.65	70	120	
Ge	72	2	He	1055438	3.33	1118718	94.34	70	120	
Ge	72	1	No Gas	4208963	1.31	4398724	95.69	70	120	
In	115	1	No Gas	5428016	1.27	5762279	94.20	70	120	
Bi	209	1	No Gas	5703506	1.35	5779492	98.69	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	022LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:26:41-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.963	4.963	2.52	296614	0.00	5	
Be	9	1	No Gas	4.769	4.769	3.74	35913	0.01	5	
V	51	2	He	4.317	4.317	3.38	52845	0.01	5	
Cr	52	2	He	5.102	5.102	2.57	58690	0.01	5	
Fe	56	2	He	499.962	499.962	2.93	4796596	0.01	500	
Se	78	2	He	4.786	4.786	5.61	529	0.90	5	
Sn	118	2	He	4.908	4.908	2.40	44469	0.01	5	
As	75	2	He	4.956	4.956	3.35	6298	0.08	5	
Ca	44	2	He	514.440	514.440	4.11	21941	2.34	500	
Na	23	2	He	510.563	510.563	4.86	884620	0.06	500	
Mg	24	2	He	524.073	524.073	2.44	456021	0.11	500	
K	39	2	He	507.658	507.658	2.96	398132	0.13	500	
Mn	55	2	He	5.007	5.007	4.14	35079	0.01	5	
Co	59	2	He	5.251	5.251	2.32	90393	0.01	5	
Ni	60	2	He	5.178	5.178	2.78	23998	0.02	5	
Cu	63	2	He	5.211	5.211	2.79	65837	0.01	5	
Zn	66	2	He	5.270	5.270	4.89	11555	0.05	5	
Al	27	2	He	5.197	5.197	8.86	2697	0.19	5	
B	11	1	No Gas	34.684	34.684	1.49	237629	0.01	25	NewName2 Main CR1 Failed
Al	27	1	No Gas	5.300	5.300	2.07	203442	0.00	5	
Si	28	1	No Gas	22.987	22.987	12.30	1080443	0.00	25	
P	31	1	No Gas	26.582	26.582	4.34	64490	0.04	25	
Ag	107	1	No Gas	5.135	5.135	1.22	165378	0.00	5	
Cd	111	1	No Gas	4.920	4.920	1.90	33162	0.01	5	
Sr	88	1	No Gas	5.006	5.006	0.93	270355	0.00	5	
Mo	95	1	No Gas	4.953	4.953	1.88	56751	0.01	5	
Sn	118	1	No Gas	4.958	4.958	1.04	104169	0.00	5	
Sb	121	1	No Gas	5.175	5.175	0.54	133096	0.00	5	
Ba	137	1	No Gas	4.994	4.994	1.47	44707	0.01	5	
Tl	205	1	No Gas	4.979	4.979	1.10	344055	0.00	5	
Tl	203	1	No Gas	4.879	4.879	1.03	141806	0.00	5	
Pb	208	1	No Gas	4.977	4.977	3.26	526783	0.00	5	
U	238	1	No Gas	4.747	4.747	1.04	494697	0.00	5	
Ca	43	2	He	469.086	469.086	2.67	1180	39.75	500	
Sb	121	2	He	4.852	4.852	2.73	52663	0.01	5	
Ti	47	2	He	4.875	4.875	7.74	1407	0.35	5	
Cu	63	1	No Gas	5.323	5.323	1.31	113143	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2445334	1.96	2589135	94.45	70	120	
Ge	72	2	He	1038268	1.85	1118718	92.81	70	120	
Ge	72	1	No Gas	4153820	0.33	4398724	94.43	70	120	
In	115	1	No Gas	5431191	0.62	5762279	94.25	70	120	
Bi	209	1	No Gas	5754167	1.83	5779492	99.56	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	023_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:28:34-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.016	-424.9	139831	2.0	0.5	
Be	9	1	No Gas	0.003	45.7	30	33.3	0.5	
V	51	2	He	-0.529	-5.9	10532	2.3	2.5	
Cr	52	2	He	0.007	149.9	1947	8.5	2.5	
Fe	56	2	He	-0.115	-42.0	10991	1.8	100	
Se	78	2	He	-0.010	-500.6	33	12.5	1	
Sn	118	2	He	0.058	17.2	1590	3.9	2.5	
As	75	2	He	0.025	185.4	342	13.2	2.5	
Ca	44	2	He	3.503	29.4	580	7.9	100	
Na	23	2	He	3.455	25.1	65102	1.6	100	
Mg	24	2	He	0.256	69.2	517	27.7	100	
K	39	2	He	3.514	64.6	32696	1.9	100	
Mn	55	2	He	0.029	36.7	430	14.1	2.5	
Co	59	2	He	0.003	86.5	200	18.0	2.5	
Ni	60	2	He	0.032	31.5	317	12.8	2.5	
Cu	63	2	He	0.029	46.6	1387	15.0	1	
Zn	66	2	He	0.002	1048.9	463	8.2	2.5	
Al	27	2	He	0.446	35.8	937	8.6	5	
B	11	1	No Gas	8.410	1.5	90633	2.4	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.341	19.0	72872	0.7	5	
Si	28	1	No Gas	-3.596	-53.4	742524	0.3	10	
P	31	1	No Gas	0.284	345.6	35964	1.7	10	
Ag	107	1	No Gas	0.014	25.1	1203	8.7	2.5	
Cd	111	1	No Gas	0.002	52.4	23	24.7	1	
Sr	88	1	No Gas	0.008	8.3	1753	2.9	2.5	
Mo	95	1	No Gas	0.006	48.1	143	24.5	2.5	
Sn	118	1	No Gas	0.078	10.0	4181	3.1	5	
Sb	121	1	No Gas	0.078	9.8	3821	4.7	2.5	
Ba	137	1	No Gas	0.043	41.4	570	28.2	2.5	
Tl	205	1	No Gas	0.014	18.5	1267	13.6	1	
Tl	203	1	No Gas	0.015	13.4	573	9.9	1	
Pb	208	1	No Gas	-0.076	-5.5	40189	0.9	2.5	
U	238	1	No Gas	0.002	31.1	230	23.0	2.5	
Ca	43	2	He	-0.795	-851.2	20	86.6	100	
Sb	121	2	He	0.073	13.5	1410	4.4	2.5	
Ti	47	2	He	-0.005	-1380.4	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
Li	6	1	No Gas	2422807	2.82	2589135	93.58	70	120	
Ge	72	2	He	1050866	3.18	1118718	93.93	70	120	
Ge	72	1	No Gas	4206764	3.15	4398724	95.64	70	120	
In	115	1	No Gas	5409999	1.01	5762279	93.89	70	120	
Bi	209	1	No Gas	5601400	0.39	5779492	96.92	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	024ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:30:56-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.823	15.1	154300	2.8	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.003	90.0	28	62.0	0	ICSA Main CR1 Failed
V	51	2	He	-0.589	-0.7	9456	1.0	0	ICSA Main CR1 Failed
Cr	52	2	He	0.965	6.0	12049	5.7	0	ICSA Main CR1 Failed
Fe	56	2	He	99630.552	0.7	912492786	1.0	0	
Se	78	2	He	0.149	20.3	47	6.5	0	ICSA Main CR1 Failed
Sn	118	2	He	0.083	17.0	1713	6.7	0	ICSA Main CR1 Failed
As	75	2	He	0.213	6.4	542	3.0	0	ICSA Main CR1 Failed
Ca	44	2	He	98472.853	1.5	3941982	0.9	0	
Na	23	2	He	104424.745	2.0	161728724	1.5	0	
Mg	24	2	He	99568.987	3.1	82847020	2.5	0	
K	39	2	He	103483.443	3.8	71869691	3.2	0	
Mn	55	2	He	0.187	18.3	1457	15.4	0	ICSA Main CR1 Failed
Co	59	2	He	0.204	8.9	3497	8.0	0	ICSA Main CR1 Failed
Ni	60	2	He	0.237	24.4	1203	20.9	0	ICSA Main CR1 Failed
Cu	63	2	He	0.216	3.1	3527	2.4	0	ICSA Main CR1 Failed
Zn	66	2	He	0.461	15.0	1363	10.0	0	ICSA Main CR1 Failed
Al	27	2	He	97496.976	3.6	34750429	2.9	0	
B	11	1	No Gas	6.561	7.1	75056	2.5	0	
Al	27	1	No Gas	100030.156	2.1	2496129829	0.2	0	
Si	28	1	No Gas	22.749	16.7	1014026	3.3	0	
P	31	1	No Gas	93534.681	2.6	96991045	0.8	0	
Ag	107	1	No Gas	0.008	62.3	890	15.2	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.589	4.4	9624	4.4	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.011	4.4	49984	4.3	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	2012.311	2.9	20678939	2.8	0	
Sn	118	1	No Gas	0.083	14.1	3864	5.4	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.061	3.3	3147	2.8	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.046	9.7	540	6.7	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.011	5.1	927	6.3	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.005	26.3	263	15.3	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	-0.143	-35.7	29724	12.0	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	7.6	357	8.1	0	ICSA Main CR1 Failed
Ca	43	2	He	98250.909	1.0	232158	0.8	0	
Sb	121	2	He	0.080	13.1	1403	7.0	0	ICSA Main CR1 Failed
Ti	47	2	He	1994.451	0.9	543874	0.6	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2248609	1.10	2589135	86.85	70	120	
Ge	72	2	He	993287	0.69	1118718	88.79	70	120	
Ge	72	1	No Gas	3911400	1.85	4398724	88.92	70	120	
In	115	1	No Gas	4877364	0.13	5762279	84.64	70	120	
Bi	209	1	No Gas	4921260	2.87	5779492	85.15	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	025ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:32:53-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	97.256	0.816	2937357	2.61	100	97.3	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	102.629	1.622	686784	1.87	100	102.6	80	120	
V	51	2	He	98.997	3.675	848279	4.47	100	99.0	80	120	
Cr	52	2	He	101.722	0.685	1091770	1.12	100	101.7	80	120	
Fe	56	2	He	113795.591	1.145	1047209398	1.03	100	113795.6	80	120	ICSB Main CR1 Failed
Se	78	2	He	111.268	1.674	11099	0.50	100	111.3	80	120	
Sn	118	2	He	100.588	0.815	832927	0.77	100	100.6	80	120	
As	75	2	He	105.296	1.630	122652	0.20	100	105.3	80	120	
Ca	44	2	He	112011.047	2.115	4505546	1.95	100	112011.0	80	120	ICSB Main CR1 Failed
Na	23	2	He	116363.239	0.907	181089577	0.93	100	116363.2	80	120	
Mg	24	2	He	114389.737	2.106	95637979	1.13	100	114389.7	80	120	ICSB Main CR1 Failed
K	39	2	He	116881.787	0.739	81574087	0.69	100	116881.8	80	120	ICSB Main CR1 Failed
Mn	55	2	He	101.142	1.474	677347	1.69	100	101.1	80	120	
Co	59	2	He	101.717	0.715	1680676	0.91	100	101.7	80	120	
Ni	60	2	He	98.870	1.192	437468	0.56	100	98.9	80	120	
Cu	63	2	He	97.965	1.886	1172973	3.11	100	98.0	80	120	
Zn	66	2	He	101.177	1.467	205332	0.48	100	101.2	80	120	
Al	27	2	He	101622.985	1.171	36399825	0.90	100	101623.0	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	511.052	3.097	2519288	4.29	100	511.1	80	120	
Al	27	1	No Gas	103715.728	0.992	2586068868	0.60	100	103715.7	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	521.023	2.111	7127716	1.58	100	521.0	80	120	
P	31	1	No Gas	97417.541	1.415	100940282	0.91	100	97417.5	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	98.315	1.169	2850341	2.08	100	98.3	80	120	
Cd	111	1	No Gas	102.343	0.583	623236	0.55	100	102.3	80	120	
Sr	88	1	No Gas	106.444	0.337	5172318	1.07	100	106.4	80	120	
Mo	95	1	No Gas	2188.986	0.879	22643270	1.57	100	2189.0	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	101.106	1.476	1874543	0.91	100	101.1	80	120	
Sb	121	1	No Gas	103.545	0.707	2473621	2.06	100	103.5	80	120	
Ba	137	1	No Gas	104.882	0.782	845354	0.57	100	104.9	80	120	
Tl	205	1	No Gas	106.201	0.295	6104880	2.59	100	106.2	80	120	
Tl	203	1	No Gas	108.280	1.521	2617223	1.14	100	108.3	80	120	
Pb	208	1	No Gas	105.502	0.736	8483783	2.88	100	105.5	80	120	
U	238	1	No Gas	104.825	2.321	9091584	0.50	100	104.8	80	120	
Ca	43	2	He	112922.664	1.922	268084	0.97	100	112922.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	99.206	1.325	1024067	0.16	100	99.2	80	120	
Ti	47	2	He	2152.760	3.142	589748	1.87	100	2152.8	80	120	ICSB Main CR1 Failed
Cu	63	1	No Gas	101.643	1.983	2000312	1.03	100	101.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2223840	1.85	2589135	85.89	70	120	
Ge	72	2	He	998113	1.42	1118718	89.22	70	120	
Ge	72	1	No Gas	3907737	1.56	4398724	88.84	70	120	
In	115	1	No Gas	4909483	1.10	5762279	85.20	70	120	
Bi	209	1	No Gas	4790849	2.48	5779492	82.89	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	030_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:50:47-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	98.541	2.290	3071681	2.31	100	98.5	90	110	
Be	9	1	No Gas	102.980	1.918	711758	1.88	100	103.0	90	110	
V	51	2	He	97.215	4.720	888471	2.63	100	97.2	90	110	
Cr	52	2	He	98.890	0.997	1132715	2.59	100	98.9	90	110	
Fe	56	2	He	10005.475	3.424	98222982	1.25	10000	100.1	90	110	
Se	78	2	He	102.538	3.171	10914	0.78	100	102.5	90	110	
Sn	118	2	He	97.491	1.279	870408	1.89	100	97.5	90	110	
As	75	2	He	102.224	2.844	127037	0.50	100	102.2	90	110	
Ca	44	2	He	10137.200	1.738	435463	1.27	10000	101.4	90	110	
Na	23	2	He	10173.730	3.886	16940402	0.98	10000	101.7	90	110	
Mg	24	2	He	10101.328	4.292	9007612	1.66	10000	101.0	90	110	
K	39	2	He	10097.958	2.982	7547531	2.89	10000	101.0	90	110	
Mn	55	2	He	99.216	1.574	708936	1.35	100	99.2	90	110	
Co	59	2	He	106.469	3.363	1876386	1.04	100	106.5	90	110	
Ni	60	2	He	102.911	3.080	485750	1.57	100	102.9	90	110	
Cu	63	2	He	101.050	3.393	1290244	1.33	100	101.0	90	110	
Zn	66	2	He	101.623	1.814	220071	2.01	100	101.6	90	110	
Al	27	2	He	101.994	2.354	39754	1.44	100	102.0	90	110	
B	11	1	No Gas	498.093	2.022	2536662	2.54	500	99.6	90	110	
Al	27	1	No Gas	98.860	2.688	2760934	2.95	100	98.9	90	110	
Si	28	1	No Gas	501.182	5.567	7530088	5.14	5000	10.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	504.526	2.818	607788	2.18	500	100.9	90	110	
Ag	107	1	No Gas	101.558	2.013	3227439	1.89	100	101.6	90	110	
Cd	111	1	No Gas	101.469	0.714	677434	1.38	100	101.5	90	110	
Sr	88	1	No Gas	99.443	1.383	5297136	1.20	100	99.4	90	110	
Mo	95	1	No Gas	101.022	0.937	1145573	0.47	100	101.0	90	110	
Sn	118	1	No Gas	98.501	1.646	2002110	0.95	100	98.5	90	110	
Sb	121	1	No Gas	102.184	1.026	2669498	0.34	100	102.2	90	110	
Ba	137	1	No Gas	102.016	1.488	901418	1.33	100	102.0	90	110	
Tl	205	1	No Gas	104.524	0.972	6901944	1.81	100	104.5	90	110	
Tl	203	1	No Gas	105.855	2.561	2939577	2.53	100	105.9	90	110	
Pb	208	1	No Gas	102.686	1.576	9486891	2.68	100	102.7	90	110	
U	238	1	No Gas	97.913	0.760	9758713	1.68	100	97.9	90	110	
Ca	43	2	He	10105.235	3.025	25618	2.52	10000	101.1	90	110	
Sb	121	2	He	98.216	3.801	1081443	1.95	100	98.2	90	110	
Ti	47	2	He	99.124	2.760	28998	2.65	100	99.1	90	110	
Cu	63	1	No Gas	104.867	2.313	2257056	1.35	100	104.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2296715	0.63	2589135	88.71	70	120	
Ge	72	2	He	1065210	2.94	1118718	95.22	70	120	
Ge	72	1	No Gas	4273837	1.18	4398724	97.16	70	120	
In	115	1	No Gas	5382177	1.22	5762279	93.40	70	120	
Bi	209	1	No Gas	5503161	1.13	5779492	95.22	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	031_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T11:52:32-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.262	51.8	142115	0.8	0.5	
Be	9	1	No Gas	0.008	28.9	65	23.1	0.5	
V	51	2	He	-0.587	-0.9	10415	2.2	2.5	
Cr	52	2	He	0.023	19.9	2200	2.5	2.5	
Fe	56	2	He	0.608	19.2	18697	4.6	100	
Se	78	2	He	0.031	258.6	39	24.0	2	
As	75	2	He	0.046	37.0	384	4.8	2.5	
Ca	44	2	He	4.858	37.0	663	13.7	100	
Na	23	2	He	15.549	8.7	88231	0.8	100	
Mg	24	2	He	0.534	17.5	793	10.1	100	
K	39	2	He	13.158	9.6	41362	1.2	100	
Mn	55	2	He	0.127	8.0	1167	5.6	2.5	
Co	59	2	He	0.005	63.5	243	22.6	2.5	
Ni	60	2	He	0.034	71.4	340	35.3	2.5	
Cu	63	2	He	0.034	21.9	1503	4.9	2	
Zn	66	2	He	0.084	11.0	663	2.3	2.5	
Al	27	2	He	1.289	11.3	1303	6.0	5	
B	11	1	No Gas	11.382	6.9	101742	4.8	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.778	11.8	85343	2.5	5	
Si	28	1	No Gas	-4.350	-11.0	739194	0.6	10	
P	31	1	No Gas	-1.444	-21.6	34340	0.8	10	
Ag	107	1	No Gas	0.020	18.0	1353	6.0	2.5	
Cd	111	1	No Gas	0.007	44.1	57	36.7	1	
Sr	88	1	No Gas	0.020	14.3	2347	4.3	2.5	
Mo	95	1	No Gas	0.070	8.1	857	5.4	2.5	
Sn	118	1	No Gas	0.264	8.9	7899	4.6	5	
Sb	121	1	No Gas	0.293	14.0	9424	11.0	2.5	
Ba	137	1	No Gas	0.024	16.8	393	10.6	2.5	
Tl	205	1	No Gas	0.080	56.9	5745	53.0	1	
Tl	203	1	No Gas	0.084	53.3	2527	49.5	1	
Pb	208	1	No Gas	0.011	120.4	48601	2.1	2.5	
U	238	1	No Gas	0.012	23.7	1253	22.0	2.5	
Ca	43	2	He	1.617	511.4	27	78.1	100	
Sb	121	2	He	0.220	2.7	3117	0.7	2.5	
Ti	47	2	He	0.024	288.9	27	78.1	2.5	
Cu	63	1	No Gas	0.040	6.7	2770	2.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2317978	2.22	2589135	89.53	70	120	
Ge	72	2	He	1091955	1.87	1118718	97.61	70	120	
Ge	72	1	No Gas	4241915	0.66	4398724	96.44	70	120	
In	115	1	No Gas	5350036	2.26	5762279	92.85	70	120	
Bi	209	1	No Gas	5633813	0.56	5779492	97.48	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T12:18:10-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.555	2.835	2947983	4.19	100	99.6	90	110	
Be	9	1	No Gas	104.767	1.613	687935	1.20	100	104.8	90	110	
V	51	2	He	97.677	1.195	846291	1.00	100	97.7	90	110	
Cr	52	2	He	95.502	3.294	1036369	2.61	100	95.5	90	110	
Fe	56	2	He	9966.875	3.577	92739289	2.85	10000	99.7	90	110	
Se	78	2	He	98.645	0.889	9954	1.05	100	98.6	90	110	
Sn	118	2	He	98.816	2.759	840158	1.40	100	98.8	90	110	
As	75	2	He	100.985	2.127	118954	1.49	100	101.0	90	110	
Ca	44	2	He	9720.801	0.370	395754	0.41	10000	97.2	90	110	
Na	23	2	He	9839.325	0.684	15535187	0.68	10000	98.4	90	110	
Mg	24	2	He	9643.057	0.424	8153354	0.89	10000	96.4	90	110	
K	39	2	He	9790.635	1.722	6935283	1.01	10000	97.9	90	110	
Mn	55	2	He	98.629	2.053	667815	1.34	100	98.6	90	110	
Co	59	2	He	104.059	1.396	1738426	0.75	100	104.1	90	110	
Ni	60	2	He	101.936	2.647	456023	2.04	100	101.9	90	110	
Cu	63	2	He	102.213	1.993	1237145	1.87	100	102.2	90	110	
Zn	66	2	He	101.410	0.611	208114	0.91	100	101.4	90	110	
Al	27	2	He	98.078	1.092	36261	1.79	100	98.1	90	110	
B	11	1	No Gas	501.660	1.016	2426966	1.81	500	100.3	90	110	
Al	27	1	No Gas	100.817	2.915	2702140	2.24	100	100.8	90	110	
Si	28	1	No Gas	504.668	3.939	7274710	2.88	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	503.088	1.499	582123	1.16	500	100.6	90	110	
Ag	107	1	No Gas	99.774	3.282	3091414	1.93	100	99.8	90	110	
Cd	111	1	No Gas	101.208	1.861	658863	1.34	100	101.2	90	110	
Sr	88	1	No Gas	98.955	4.483	5138682	3.15	100	99.0	90	110	
Mo	95	1	No Gas	98.192	3.863	1085630	2.82	100	98.2	90	110	
Sn	118	1	No Gas	100.565	0.628	1993433	0.89	100	100.6	90	110	
Sb	121	1	No Gas	103.483	2.239	2596228	2.41	100	103.5	90	110	
Ba	137	1	No Gas	101.561	1.356	875229	2.19	100	101.6	90	110	
Tl	205	1	No Gas	104.695	3.480	6877059	2.03	100	104.7	90	110	
Tl	203	1	No Gas	106.036	3.834	2929392	2.50	100	106.0	90	110	
Pb	208	1	No Gas	103.863	1.089	9546924	1.48	100	103.9	90	110	
U	238	1	No Gas	97.578	1.482	9677071	1.57	100	97.6	90	110	
Ca	43	2	He	9500.946	0.728	22829	1.44	10000	95.0	90	110	
Sb	121	2	He	99.785	0.467	1041590	0.84	100	99.8	90	110	
Ti	47	2	He	94.941	2.511	26322	2.74	100	94.9	90	110	
Cu	63	1	No Gas	103.504	4.162	2139722	4.44	100	103.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2182254	1.75	2589135	84.29	70	120	
Ge	72	2	He	1009179	0.72	1118718	90.21	70	120	
Ge	72	1	No Gas	4104008	0.65	4398724	93.30	70	120	
In	115	1	No Gas	5248714	1.37	5762279	91.09	70	120	
Bi	209	1	No Gas	5477157	2.55	5779492	94.77	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T12:19:56-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.168	69.9	136374	0.4	0.5	
Be	9	1	No Gas	0.010	15.6	75	11.5	0.5	
V	51	2	He	-0.836	-0.1	7554	0.4	2.5	
Cr	52	2	He	0.023	28.1	2054	3.7	2.5	
Fe	56	2	He	0.625	14.8	17569	4.5	100	
Se	78	2	He	0.013	532.1	35	20.3	2	
As	75	2	He	-0.018	-156.1	281	12.1	2.5	
Ca	44	2	He	4.856	60.9	617	20.0	100	
Na	23	2	He	14.771	3.0	80901	1.3	100	
Mg	24	2	He	0.563	21.4	763	13.4	100	
K	39	2	He	8.073	6.2	34888	1.2	100	
Mn	55	2	He	0.135	14.9	1137	12.5	2.5	
Co	59	2	He	0.002	189.1	190	41.1	2.5	
Ni	60	2	He	0.016	23.2	233	6.5	2.5	
Cu	63	2	He	0.051	3.2	1607	1.0	2	
Zn	66	2	He	0.501	9.0	1477	5.8	2.5	
Al	27	2	He	1.209	8.0	1183	2.6	5	
B	11	1	No Gas	8.691	9.2	86288	4.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.882	6.3	84796	1.0	5	
Si	28	1	No Gas	-4.669	-22.5	707040	1.2	10	
P	31	1	No Gas	-2.279	-38.2	32131	2.3	10	
Ag	107	1	No Gas	0.015	12.5	1187	1.8	2.5	
Cd	111	1	No Gas	0.005	93.7	43	66.6	1	
Sr	88	1	No Gas	0.023	8.0	2497	0.8	2.5	
Mo	95	1	No Gas	0.051	32.4	643	28.2	2.5	
Sn	118	1	No Gas	0.244	8.3	7416	3.4	5	
Sb	121	1	No Gas	0.303	10.5	9307	7.5	2.5	
Ba	137	1	No Gas	0.029	39.5	430	19.9	2.5	
Tl	205	1	No Gas	0.080	55.1	5645	52.8	1	
Tl	203	1	No Gas	0.076	46.9	2264	44.7	1	
Pb	208	1	No Gas	-0.081	-9.9	39128	2.0	2.5	
U	238	1	No Gas	0.011	29.1	1153	28.4	2.5	
Ca	43	2	He	3.672	195.0	30	57.7	100	
Sb	121	2	He	0.257	5.1	3297	3.9	2.5	
Ti	47	2	He	0.031	135.1	27	43.3	2.5	
Cu	63	1	No Gas	0.044	30.8	2747	8.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2269397	2.22	2589135	87.65	70	120	
Ge	72	2	He	1016125	0.42	1118718	90.83	70	120	
Ge	72	1	No Gas	4081317	1.44	4398724	92.78	70	120	
In	115	1	No Gas	5305327	3.43	5762279	92.07	70	120	
Bi	209	1	No Gas	5517727	0.83	5779492	95.47	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T12:44:27-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	100.832	2.921	2933415	0.86	100	100.8	90	110	
Be	9	1	No Gas	103.729	1.724	669885	0.55	100	103.7	90	110	
V	51	2	He	95.970	0.936	774430	0.44	100	96.0	90	110	
Cr	52	2	He	96.039	3.450	970632	4.01	100	96.0	90	110	
Fe	56	2	He	9986.752	2.512	86526332	1.95	10000	99.9	90	110	
Se	78	2	He	100.501	2.376	9441	1.82	100	100.5	90	110	
Sn	118	2	He	99.312	1.034	793057	1.08	100	99.3	90	110	
As	75	2	He	100.249	1.135	109956	0.64	100	100.2	90	110	
Ca	44	2	He	9678.584	1.182	366872	0.80	10000	96.8	90	110	
Na	23	2	He	9858.209	0.655	14492046	0.22	10000	98.6	90	110	
Mg	24	2	He	9843.676	0.846	7749232	0.84	10000	98.4	90	110	
K	39	2	He	9548.209	1.970	6298674	2.14	10000	95.5	90	110	
Mn	55	2	He	98.185	2.165	619025	1.99	100	98.2	90	110	
Co	59	2	He	105.080	1.483	1634557	1.35	100	105.1	90	110	
Ni	60	2	He	101.887	0.976	424424	0.47	100	101.9	90	110	
Cu	63	2	He	103.297	1.653	1164188	2.15	100	103.3	90	110	
Zn	66	2	He	102.099	0.780	195091	1.35	100	102.1	90	110	
Al	27	2	He	97.028	2.836	33407	3.01	100	97.0	90	110	
B	11	1	No Gas	495.044	1.561	2355795	0.85	500	99.0	90	110	
Al	27	1	No Gas	101.264	1.731	2497713	1.67	100	101.3	90	110	
Si	28	1	No Gas	502.608	0.342	6671210	0.50	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	503.251	1.242	535870	0.73	500	100.7	90	110	
Ag	107	1	No Gas	102.234	1.970	3035998	0.96	100	102.2	90	110	
Cd	111	1	No Gas	101.097	2.806	630587	0.84	100	101.1	90	110	
Sr	88	1	No Gas	97.398	3.393	4847197	1.51	100	97.4	90	110	
Mo	95	1	No Gas	99.260	3.833	1051563	2.09	100	99.3	90	110	
Sn	118	1	No Gas	97.054	1.932	1843487	0.47	100	97.1	90	110	
Sb	121	1	No Gas	107.295	1.193	2477091	1.12	100	107.3	90	110	
Ba	137	1	No Gas	101.074	1.753	834695	2.19	100	101.1	90	110	
Tl	205	1	No Gas	101.580	2.310	6498187	0.37	100	101.6	90	110	
Tl	203	1	No Gas	103.533	2.113	2786034	2.06	100	103.5	90	110	
Pb	208	1	No Gas	104.837	1.375	9383104	1.23	100	104.8	90	110	
U	238	1	No Gas	98.958	1.564	9556067	0.64	100	99.0	90	110	
Ca	43	2	He	9547.593	1.806	21360	2.14	10000	95.5	90	110	
Sb	121	2	He	101.844	0.541	989824	1.10	100	101.8	90	110	
Ti	47	2	He	97.574	4.830	25184	4.42	100	97.6	90	110	
Cu	63	1	No Gas	103.740	0.270	1973446	0.30	100	103.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2146417	1.99	2589135	82.90	70	120	
Ge	72	2	He	939624	0.57	1118718	83.99	70	120	
Ge	72	1	No Gas	3776772	0.49	4398724	85.86	70	120	
In	115	1	No Gas	5030397	2.19	5762279	87.30	70	120	
Bi	209	1	No Gas	5333157	1.97	5779492	92.28	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	058_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T12:54:05-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.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
Li	7	1	No Gas	0.088	180.2	128896	1.4	0.5	
Be	9	1	No Gas	0.001	153.1	17	75.5	0.5	
V	51	2	He	-1.424	-0.7	2319	3.6	2.5	
Cr	52	2	He	0.070	19.3	2364	5.9	2.5	
Fe	56	2	He	0.236	14.3	12853	2.5	100	
Se	78	2	He	-0.016	-348.2	29	17.2	2	
As	75	2	He	-0.155	-15.5	110	23.7	2.5	
Ca	44	2	He	4.356	50.3	550	14.9	100	
Na	23	2	He	-0.711	-91.5	52047	1.5	100	
Mg	24	2	He	0.171	44.6	397	15.4	100	
K	39	2	He	1.875	34.5	28146	1.8	100	
Mn	55	2	He	0.109	15.5	887	12.1	2.5	
Co	59	2	He	0.001	117.4	160	16.5	2.5	
Ni	60	2	He	0.023	12.9	247	4.7	2.5	
Cu	63	2	He	0.015	60.7	1077	9.3	2	
Zn	66	2	He	0.189	21.1	770	10.1	2.5	
Al	27	2	He	0.993	15.6	1020	5.5	5	
B	11	1	No Gas	-0.204	-52.4	40692	1.6	0.5	
Al	27	1	No Gas	0.603	4.4	71996	1.4	5	
Si	28	1	No Gas	-6.333	-24.8	636646	1.7	10	
P	31	1	No Gas	-2.462	-34.9	29652	2.3	10	
Ag	107	1	No Gas	-0.004	-66.9	580	13.5	2.5	
Cd	111	1	No Gas	0.000	881.2	13	114.6	1	
Sr	88	1	No Gas	0.013	19.7	1887	8.0	2.5	
Mo	95	1	No Gas	0.000	-4116.4	67	31.2	2.5	
Sn	118	1	No Gas	0.016	70.1	2740	6.8	5	
Sb	121	1	No Gas	0.054	1.5	2894	0.7	2.5	
Ba	137	1	No Gas	0.023	58.9	363	30.3	2.5	
Tl	205	1	No Gas	0.002	86.2	420	20.3	1	
Tl	203	1	No Gas	0.001	187.5	170	27.0	1	
Pb	208	1	No Gas	2.239	1.0	250987	1.4	2.5	
U	238	1	No Gas	0.000	-171.1	50	34.6	2.5	
Ca	43	2	He	13.661	65.3	50	40.0	100	
Sb	121	2	He	0.058	38.3	1107	19.5	2.5	
Ti	47	2	He	0.013	300.5	20	50.0	2.5	
Cu	63	1	No Gas	0.010	22.0	1907	2.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

Li	6	1	No Gas	2183101	2.46	2589135	84.32	70	120	
Ge	72	2	He	938123	0.34	1118718	83.86	70	120	
Ge	72	1	No Gas	3789654	1.37	4398724	86.15	70	120	
In	115	1	No Gas	5064179	2.25	5762279	87.89	70	120	
Bi	209	1	No Gas	5475166	0.63	5779492	94.73	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	082_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:39:32-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	94.549	2.272	2720341	1.76	100	94.5	90	110	
Be	9	1	No Gas	99.797	0.945	635539	0.78	100	99.8	90	110	
V	51	2	He	92.182	0.936	766508	0.68	100	92.2	90	110	
Cr	52	2	He	91.417	1.399	951367	2.03	100	91.4	90	110	
Fe	56	2	He	9516.003	2.073	84896782	1.37	10000	95.2	90	110	
Se	78	2	He	94.738	1.859	9166	0.64	100	94.7	90	110	
Sn	118	2	He	96.453	1.498	796813	2.56	100	96.5	90	110	
As	75	2	He	94.583	1.156	106837	0.43	100	94.6	90	110	
Ca	44	2	He	9248.612	1.265	360993	0.42	10000	92.5	90	110	
Na	23	2	He	9175.699	2.063	13896118	3.22	10000	91.8	90	110	
Mg	24	2	He	9038.165	2.382	7325544	1.47	10000	90.4	90	110	
K	39	2	He	8953.658	1.914	6083680	2.20	10000	89.5	90	110	CCV Main CR1-2 Failed
Mn	55	2	He	93.463	1.007	606772	0.78	100	93.5	90	110	
Co	59	2	He	99.584	3.013	1594871	2.22	100	99.6	90	110	
Ni	60	2	He	96.159	3.025	412397	1.86	100	96.2	90	110	
Cu	63	2	He	96.472	1.944	1119556	2.00	100	96.5	90	110	
Zn	66	2	He	95.960	0.938	188836	1.77	100	96.0	90	110	
Al	27	2	He	101.709	2.687	36020	2.13	100	101.7	90	110	
B	11	1	No Gas	481.377	2.753	2260124	2.99	500	96.3	90	110	
Al	27	1	No Gas	112.228	2.131	2829025	0.13	100	112.2	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	444.871	3.556	6130822	1.04	5000	8.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	474.615	1.748	519584	1.22	500	94.9	90	110	
Ag	107	1	No Gas	96.309	0.900	2889173	0.75	100	96.3	90	110	
Cd	111	1	No Gas	97.400	2.235	613743	1.40	100	97.4	90	110	
Sr	88	1	No Gas	97.618	1.815	4908854	2.08	100	97.6	90	110	
Mo	95	1	No Gas	94.725	1.627	1014110	2.39	100	94.7	90	110	
Sn	118	1	No Gas	99.499	1.266	1909365	2.24	100	99.5	90	110	
Sb	121	1	No Gas	100.301	1.210	2372782	2.71	100	100.3	90	110	
Ba	137	1	No Gas	97.474	0.759	813094	1.56	100	97.5	90	110	
Tl	205	1	No Gas	98.051	1.783	6352943	0.68	100	98.1	90	110	
Tl	203	1	No Gas	97.769	2.699	2664049	1.49	100	97.8	90	110	
Pb	208	1	No Gas	97.937	0.697	8880459	0.71	100	97.9	90	110	
U	238	1	No Gas	95.910	1.074	9381248	1.97	100	95.9	90	110	
Ca	43	2	He	8937.792	1.869	20596	3.45	10000	89.4	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	92.584	1.854	926490	0.91	100	92.6	90	110	
Ti	47	2	He	91.785	2.763	24392	1.28	100	91.8	90	110	
Cu	63	1	No Gas	99.814	0.938	1945459	2.14	100	99.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2116361	1.73	2589135	81.74	70	120	
Ge	72	2	He	967597	1.59	1118718	86.49	70	120	
Ge	72	1	No Gas	3869571	2.09	4398724	87.97	70	120	
In	115	1	No Gas	5080504	1.00	5762279	88.17	70	120	
Bi	209	1	No Gas	5400813	1.37	5779492	93.45	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	083_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:41:18-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.210	30.9	135396	2.1	0.5	
Be	9	1	No Gas	0.010	15.8	75	13.3	0.5	
V	51	2	He	-1.098	-0.5	5081	0.4	2.5	
Cr	52	2	He	0.041	11.7	2154	3.6	2.5	
Fe	56	2	He	0.907	15.1	19354	5.9	100	
Se	78	2	He	-0.021	-380.0	30	26.7	2	
As	75	2	He	-0.064	-60.3	218	20.0	2.5	
Ca	44	2	He	3.490	100.6	537	25.4	100	
Na	23	2	He	2.783	7.7	59296	1.0	100	
Mg	24	2	He	0.775	18.9	903	12.1	100	
K	39	2	He	4.087	23.3	30698	1.0	100	
Mn	55	2	He	0.145	7.7	1157	6.7	2.5	
Co	59	2	He	0.007	51.9	257	22.2	2.5	
Ni	60	2	He	0.033	43.9	300	21.9	2.5	
Cu	63	2	He	0.029	28.6	1273	6.9	2	
Zn	66	2	He	0.117	12.8	657	5.3	2.5	
Al	27	2	He	1.198	23.4	1130	9.2	5	
B	11	1	No Gas	6.354	6.5	73513	3.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.826	7.1	79448	1.6	5	
Si	28	1	No Gas	-4.331	-21.6	678046	0.4	10	
P	31	1	No Gas	-2.744	-41.4	30143	2.9	10	
Ag	107	1	No Gas	0.003	100.6	790	11.6	2.5	
Cd	111	1	No Gas	0.009	69.5	70	57.1	1	
Sr	88	1	No Gas	0.024	23.3	2437	9.8	2.5	
Mo	95	1	No Gas	0.053	43.4	643	37.5	2.5	
Sn	118	1	No Gas	0.317	10.0	8603	7.4	5	
Sb	121	1	No Gas	0.832	16.0	21438	14.6	2.5	
Ba	137	1	No Gas	0.031	44.8	443	29.0	2.5	
Tl	205	1	No Gas	0.032	27.3	2460	21.8	1	
Tl	203	1	No Gas	0.030	28.4	1010	23.2	1	
Pb	208	1	No Gas	0.738	7.8	116365	1.6	2.5	
U	238	1	No Gas	0.011	31.5	1203	28.2	2.5	
Ca	43	2	He	2.643	609.2	27	142.0	100	
Sb	121	2	He	0.560	7.9	6195	6.1	2.5	
Ti	47	2	He	0.035	125.3	27	43.3	2.5	
Cu	63	1	No Gas	0.013	52.3	2017	6.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2231953	0.76	2589135	86.20	70	120	
Ge	72	2	He	973242	1.28	1118718	87.00	70	120	
Ge	72	1	No Gas	3890151	1.35	4398724	88.44	70	120	
In	115	1	No Gas	5131701	2.07	5762279	89.06	70	120	
Bi	209	1	No Gas	5608856	3.17	5779492	97.05	70	120	

Sample Report

Sample Table

Sample Name	MBLK-157451
Data File Name	084SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:48:24-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.099	0.099	291.49	136981	0.00	2000	
Be	9	1	No Gas	0.009	0.009	24.39	73	0.01	2000	
V	51	2	He	-1.010	-1.010	-1.56	5927	-0.02	2000	
Cr	52	2	He	0.113	0.113	23.42	2964	0.00	2000	
Fe	56	2	He	1.555	1.555	4.02	25691	0.01	200000	
Se	78	2	He	-0.060	-0.060	-189.94	27	-0.23	2000	
Sn	118	2	He	0.028	0.028	68.10	1340	0.00	200	
As	75	2	He	-0.074	-0.074	-41.69	211	-0.03	2000	
Ca	44	2	He	22.110	22.110	8.30	1293	1.71	200000	
Na	23	2	He	11.585	11.585	3.54	74157	0.02	200000	
Mg	24	2	He	20.514	20.514	2.00	17351	0.12	200000	
K	39	2	He	13.270	13.270	12.23	37719	0.04	200000	
Mn	55	2	He	0.207	0.207	9.77	1590	0.01	2000	
Co	59	2	He	0.016	0.016	12.36	413	0.00	2000	
Ni	60	2	He	0.095	0.095	14.64	580	0.02	2000	
Cu	63	2	He	0.090	0.090	3.45	2027	0.00	2000	
Zn	66	2	He	1.892	1.892	3.90	4247	0.04	2000	
Al	27	2	He	9.223	9.223	6.27	4014	0.23	2000	
B	11	1	No Gas	-0.511	-0.511	-105.84	41575	0.00	2000	
Al	27	1	No Gas	10.429	10.429	1.08	323715	0.00	2000	
Si	28	1	No Gas	81.814	81.814	1.40	1762538	0.00	2000	
Ag	107	1	No Gas	-0.009	-0.009	-27.59	463	0.00	2000	
Cd	111	1	No Gas	0.016	0.016	33.74	117	0.01	2000	
Sr	88	1	No Gas	0.074	0.074	6.73	5201	0.00	2000	
Mo	95	1	No Gas	0.018	0.018	34.21	270	0.01	2000	
Sn	118	1	No Gas	0.041	0.041	32.86	3381	0.00	2000	
Sb	121	1	No Gas	0.108	0.108	9.44	4331	0.00	2000	
Ba	137	1	No Gas	0.435	0.435	2.79	3997	0.01	2000	
Tl	205	1	No Gas	0.010	0.010	26.06	1033	0.00	2000	
Tl	203	1	No Gas	0.008	0.008	42.14	380	0.00	2000	
Pb	208	1	No Gas	2.164	2.164	8.23	260143	0.00	2000	
U	238	1	No Gas	0.001	0.001	67.27	143	0.00	2000	
Ca	43	2	He	25.099	25.099	88.96	80	31.37	200000	
Sb	121	2	He	0.138	0.138	9.90	1994	0.01	2000	
Ti	47	2	He	0.082	0.082	45.15	40	0.20	2000	
Cu	63	1	No Gas	0.091	0.091	21.59	3611	0.00	2000	
Zn	66	1	No Gas	1.852	1.852	3.23	11819	0.02	2000	
Se	82	1	No Gas	-0.053	-0.053	-104.71	-73	0.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2320148	7.01	2589135	89.61	70	120	

Sample Report

Ge	72	2	He	993422	0.24	1118718	88.80	70	120	
Ge	72	1	No Gas	3962036	0.35	4398724	90.07	70	120	
In	115	1	No Gas	5345526	2.19	5762279	92.77	70	120	
Bi	209	1	No Gas	5824665	3.64	5779492	100.78	70	120	

Sample Report

Sample Table

Sample Name	HS20090744-01
Data File Name	086SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:52:10-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	22.955	22.955	3.26	759986	0.00	2000	
Be	9	1	No Gas	0.133	0.133	7.57	862	0.02	2000	
V	51	2	He	-1.110	-1.110	-2.27	4972	-0.02	2000	
Cr	52	2	He	1.206	1.206	2.56	14294	0.01	2000	
Fe	56	2	He	1071.629	1071.629	2.46	9604618	0.01	200000	
Se	78	2	He	0.333	0.333	51.70	64	0.52	2000	
Sn	118	2	He	0.016	0.016	14.67	1160	0.00	200	
As	75	2	He	1.108	1.108	0.62	1542	0.07	2000	
Ca	44	2	He	33577.197	33577.197	2.74	1314452	2.55	200000	
Na	23	2	He	159393.003	159393.003	0.94	241311110	0.07	200000	
Mg	24	2	He	24225.897	24225.897	3.27	19704833	0.12	200000	
K	39	2	He	1144.747	1144.747	1.83	804854	0.14	200000	
Mn	55	2	He	525.734	525.734	0.85	3424504	0.02	2000	
Co	59	2	He	7.926	7.926	1.43	127534	0.01	2000	
Ni	60	2	He	10.304	10.304	0.47	44500	0.02	2000	
Cu	63	2	He	29.576	29.576	1.19	345110	0.01	2000	
Zn	66	2	He	81.142	81.142	0.59	160310	0.05	2000	
Al	27	2	He	53.378	53.378	3.31	19314	0.28	2000	
B	11	1	No Gas	37.002	37.002	4.11	212848	0.02	2000	
Al	27	1	No Gas	55.492	55.492	3.67	1397753	0.00	2000	
Si	28	1	No Gas	18868.870	18868.870	1.32	225011463	0.01	2000	>LDR
Ag	107	1	No Gas	-0.009	-0.009	-25.93	427	0.00	2000	
Cd	111	1	No Gas	0.215	0.215	0.79	1350	0.02	2000	
Sr	88	1	No Gas	604.358	604.358	0.67	29968275	0.00	2000	
Mo	95	1	No Gas	0.353	0.353	1.73	3794	0.01	2000	
Sn	118	1	No Gas	0.018	0.018	41.11	2744	0.00	2000	
Sb	121	1	No Gas	0.563	0.563	4.27	14635	0.00	2000	
Ba	137	1	No Gas	654.147	654.147	2.11	5380480	0.01	2000	
Tl	205	1	No Gas	0.087	0.087	54.81	5575	0.00	2000	
Tl	203	1	No Gas	0.086	0.086	40.65	2344	0.00	2000	
Pb	208	1	No Gas	0.826	0.826	2.09	112790	0.00	2000	
U	238	1	No Gas	0.106	0.106	4.54	9751	0.00	2000	
Ca	43	2	He	33833.009	33833.009	2.11	78173	43.28	200000	
Sb	121	2	He	0.488	0.488	10.90	5465	0.01	2000	
Ti	47	2	He	0.511	0.511	5.37	153	0.33	2000	
Cu	63	1	No Gas	32.517	32.517	0.53	621101	0.01	2000	
Zn	66	1	No Gas	85.908	85.908	0.62	469167	0.02	2000	
Se	82	1	No Gas	1.180	1.180	12.39	303	0.39	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2135881	2.79	2589135	82.49	70	120	
Ge	72	2	He	971058	1.03	1118718	86.80	70	120	
Ge	72	1	No Gas	3785079	0.54	4398724	86.05	70	120	
In	115	1	No Gas	5011049	0.78	5762279	86.96	70	120	
Bi	209	1	No Gas	5070023	0.63	5779492	87.72	70	120	

Sample Report

Sample Table

Sample Name	LCS-157451
Data File Name	087SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:54:19-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.469	0.469	35.69	144305	0.00	2000	
Be	9	1	No Gas	46.584	46.584	4.46	315941	0.01	2000	
V	51	2	He	42.918	42.918	1.11	375660	0.01	2000	
Cr	52	2	He	44.462	44.462	0.80	477946	0.01	2000	
Fe	56	2	He	4386.153	4386.153	1.22	40352645	0.01	200000	
Se	78	2	He	48.414	48.414	2.22	4846	1.00	2000	
Sn	118	2	He	-0.019	-0.019	-33.55	880	0.00	200	
As	75	2	He	46.203	46.203	0.39	53962	0.09	2000	
Ca	44	2	He	4268.480	4268.480	0.99	172008	2.48	200000	
Na	23	2	He	4470.668	4470.668	0.75	7007945	0.06	200000	
Mg	24	2	He	4379.493	4379.493	1.81	3660216	0.12	200000	
K	39	2	He	4500.348	4500.348	0.90	3166699	0.14	200000	
Mn	55	2	He	44.305	44.305	1.07	296663	0.01	2000	
Co	59	2	He	47.216	47.216	0.20	779811	0.01	2000	
Ni	60	2	He	45.634	45.634	1.07	201909	0.02	2000	
Cu	63	2	He	46.759	46.759	0.50	559966	0.01	2000	
Zn	66	2	He	48.811	48.811	1.44	99242	0.05	2000	
Al	27	2	He	49.405	49.405	0.94	18416	0.27	2000	
B	11	1	No Gas	-1.375	-1.375	-11.07	36287	0.00	2000	
Al	27	1	No Gas	53.096	53.096	2.78	1416652	0.00	2000	
Si	28	1	No Gas	69.660	69.660	6.46	1627581	0.00	2000	
Ag	107	1	No Gas	47.208	47.208	1.96	1441121	0.00	2000	
Cd	111	1	No Gas	47.503	47.503	1.08	304587	0.02	2000	
Sr	88	1	No Gas	0.128	0.128	7.14	7786	0.00	2000	
Mo	95	1	No Gas	45.842	45.842	0.92	499313	0.01	2000	
Sn	118	1	No Gas	-0.017	-0.017	-94.98	2144	0.00	2000	
Sb	121	1	No Gas	47.723	47.723	1.83	1168587	0.00	2000	
Ba	137	1	No Gas	46.153	46.153	1.08	391762	0.01	2000	
Tl	205	1	No Gas	46.673	46.673	3.10	3097388	0.00	2000	
Tl	203	1	No Gas	44.778	44.778	2.23	1249920	0.00	2000	
Pb	208	1	No Gas	46.909	46.909	1.27	4381037	0.00	2000	
U	238	1	No Gas	0.000	0.000	-376.88	53	0.00	2000	
Ca	43	2	He	4252.341	4252.341	4.20	10111	42.06	200000	
Sb	121	2	He	44.791	44.791	1.10	462473	0.01	2000	
Ti	47	2	He	42.469	42.469	1.95	11648	0.36	2000	
Cu	63	1	No Gas	48.373	48.373	2.05	976167	0.00	2000	
Zn	66	1	No Gas	50.279	50.279	2.18	290885	0.02	2000	
Se	82	1	No Gas	49.678	49.678	4.43	15820	0.31	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2256218	4.00	2589135	87.14	70	120	
Ge	72	2	He	997521	0.40	1118718	89.17	70	120	
Ge	72	1	No Gas	4003138	1.32	4398724	91.01	70	120	

Sample Report

In	115	1	No Gas	5169323	1.62	5762279	89.71	70	120	
Bi	209	1	No Gas	5532179	1.62	5779492	95.72	70	120	

Sample Report

Sample Table

Sample Name	HS20090748-01SD
Data File Name	089SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:58:04-05:00
Sample Type	Sample
Dilution	5
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.336	21.682	2.04	266285	0.00	2000	
Be	9	1	No Gas	0.003	0.015	62.77	30	0.01	2000	
V	51	2	He	-1.111	-5.555	-0.91	5197	-0.02	2000	
Cr	52	2	He	0.240	1.201	9.10	4421	0.01	2000	
Fe	56	2	He	25.807	129.034	0.86	253395	0.01	200000	
Se	78	2	He	0.112	0.560	117.89	45	0.25	2000	
Sn	118	2	He	0.009	0.045	70.45	1120	0.00	200	
As	75	2	He	0.013	0.063	230.06	318	0.00	2000	
Ca	44	2	He	1771.921	8859.606	1.96	72954	2.43	200000	
Na	23	2	He	71039.554	355197.772	2.81	112528878	0.06	200000	
Mg	24	2	He	1964.741	9823.705	1.62	1672314	0.12	200000	
K	39	2	He	335.904	1679.522	0.59	267641	0.13	200000	
Mn	55	2	He	8.581	42.903	0.91	58680	0.01	2000	
Co	59	2	He	0.119	0.595	4.19	2150	0.01	2000	
Ni	60	2	He	0.351	1.755	8.67	1743	0.02	2000	
Cu	63	2	He	0.212	1.061	1.02	3564	0.01	2000	
Zn	66	2	He	3.067	15.334	1.16	6765	0.05	2000	
Al	27	2	He	4.147	20.736	8.43	2254	0.18	2000	
B	11	1	No Gas	3.221	16.104	9.77	60847	0.01	2000	
Al	27	1	No Gas	4.422	22.108	2.14	175534	0.00	2000	
Si	28	1	No Gas	1741.662	8708.309	2.09	22899215	0.01	2000	
Ag	107	1	No Gas	-0.014	-0.072	-13.22	273	-0.01	2000	
Cd	111	1	No Gas	0.005	0.027	81.12	47	0.01	2000	
Sr	88	1	No Gas	43.844	219.219	2.26	2226947	0.00	2000	
Mo	95	1	No Gas	0.192	0.962	8.06	2147	0.01	2000	
Sn	118	1	No Gas	-0.002	-0.010	-752.55	2424	0.00	2000	
Sb	121	1	No Gas	0.242	1.212	4.20	7739	0.00	2000	
Ba	137	1	No Gas	31.654	158.269	2.90	266628	0.01	2000	
Tl	205	1	No Gas	0.006	0.028	41.09	660	0.00	2000	
Tl	203	1	No Gas	0.007	0.034	58.79	320	0.00	2000	
Pb	208	1	No Gas	0.425	2.127	3.73	82353	0.00	2000	
U	238	1	No Gas	0.016	0.082	4.84	1623	0.00	2000	
Ca	43	2	He	1721.503	8607.513	7.51	4181	41.18	200000	
Sb	121	2	He	0.233	1.165	4.37	3040	0.01	2000	
Ti	47	2	He	0.102	0.512	71.95	47	0.22	2000	
Cu	63	1	No Gas	0.643	3.216	1.36	14935	0.00	2000	
Zn	66	1	No Gas	3.195	15.973	1.17	19898	0.02	2000	
Se	82	1	No Gas	0.386	1.929	45.25	67	0.58	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2331173	0.97	2589135	90.04	70	120	
Ge	72	2	He	1015728	0.53	1118718	90.79	70	120	
Ge	72	1	No Gas	4047972	1.29	4398724	92.03	70	120	

Sample Report

In	115	1	No Gas	5129326	1.28	5762279	89.02	70	120	
Bi	209	1	No Gas	5296740	1.62	5779492	91.65	70	120	

Sample Report

Sample Table

Sample Name	HS20090748-01MS
Data File Name	090SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T13:59:59-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	21.443	21.443	5.18	702094	0.00	2000	
Be	9	1	No Gas	48.121	48.121	4.01	302233	0.02	2000	
V	51	2	He	42.575	42.575	0.52	368657	0.01	2000	
Cr	52	2	He	43.938	43.938	1.07	467100	0.01	2000	
Fe	56	2	He	4357.168	4357.168	0.52	39643835	0.01	200000	
Se	78	2	He	45.152	45.152	0.96	4471	1.01	2000	
Sn	118	2	He	0.050	0.050	8.96	1430	0.00	200	
As	75	2	He	46.188	46.188	0.28	53347	0.09	2000	
Ca	44	2	He	13677.316	13677.316	1.67	544169	2.51	200000	
Na	23	2	He	369957.570	369957.570	1.82	568929565	0.07	200000	>LDR
Mg	24	2	He	14574.738	14574.738	1.83	12045418	0.12	200000	
K	39	2	He	6035.178	6035.178	0.65	4190060	0.14	200000	
Mn	55	2	He	88.332	88.332	1.24	584694	0.02	2000	
Co	59	2	He	46.629	46.629	0.83	761593	0.01	2000	
Ni	60	2	He	45.340	45.340	1.32	198381	0.02	2000	
Cu	63	2	He	45.752	45.752	0.56	541856	0.01	2000	
Zn	66	2	He	62.568	62.568	0.44	125679	0.05	2000	
Al	27	2	He	59.276	59.276	5.54	21704	0.27	2000	
B	11	1	No Gas	24.883	24.883	6.85	152956	0.02	2000	
Al	27	1	No Gas	60.433	60.433	2.00	1570292	0.00	2000	
Si	28	1	No Gas	9292.534	9292.534	0.34	115079258	0.01	2000	>LDR
Ag	107	1	No Gas	41.205	41.205	0.43	1207318	0.00	2000	
Cd	111	1	No Gas	45.069	45.069	0.98	277319	0.02	2000	
Sr	88	1	No Gas	223.698	223.698	0.87	10981177	0.00	2000	
Mo	95	1	No Gas	46.959	46.959	1.56	490837	0.01	2000	
Sn	118	1	No Gas	0.048	0.048	34.81	3274	0.00	2000	
Sb	121	1	No Gas	45.303	45.303	1.46	1085948	0.00	2000	
Ba	137	1	No Gas	206.251	206.251	2.96	1679524	0.01	2000	
Tl	205	1	No Gas	46.616	46.616	1.88	2752962	0.00	2000	
Tl	203	1	No Gas	44.597	44.597	2.64	1107513	0.00	2000	
Pb	208	1	No Gas	47.468	47.468	3.08	3942950	0.00	2000	
U	238	1	No Gas	0.091	0.091	5.70	8146	0.00	2000	
Ca	43	2	He	13916.241	13916.241	0.99	32676	42.59	200000	
Sb	121	2	He	42.980	42.980	0.07	438876	0.01	2000	
Ti	47	2	He	42.936	42.936	2.44	11645	0.37	2000	
Cu	63	1	No Gas	52.049	52.049	0.56	1028080	0.01	2000	
Zn	66	1	No Gas	63.980	63.980	0.68	362011	0.02	2000	
Se	82	1	No Gas	44.536	44.536	5.44	13877	0.32	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2089224	3.99	2589135	80.69	70	120	
Ge	72	2	He	986472	0.39	1118718	88.18	70	120	
Ge	72	1	No Gas	3918145	0.94	4398724	89.07	70	120	
In	115	1	No Gas	4960341	0.23	5762279	86.08	70	120	
Bi	209	1	No Gas	4922560	2.31	5779492	85.17	70	120	

Sample Report

Sample Table

Sample Name	HS20090748-01PDS
Data File Name	092SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T14:03:44-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	20.505	20.505	2.29	685352	0.00	2000	
Be	9	1	No Gas	106.607	106.607	2.97	678211	0.02	2000	
V	51	2	He	100.544	100.544	2.74	843676	0.01	2000	
Cr	52	2	He	97.939	97.939	2.44	1029928	0.01	2000	
Fe	56	2	He	9903.050	9903.050	2.07	89311555	0.01	200000	
Se	78	2	He	103.608	103.608	1.48	10130	1.02	2000	
Sn	118	2	He	0.073	0.073	34.45	1587	0.00	200	
As	75	2	He	107.551	107.551	1.13	122760	0.09	2000	
Ca	44	2	He	19036.655	19036.655	0.61	750751	2.54	200000	
Na	23	2	He	375437.051	375437.051	0.53	572468898	0.07	200000	>LDR
Mg	24	2	He	19668.402	19668.402	2.20	16113875	0.12	200000	
K	39	2	He	11707.103	11707.103	1.50	8031600	0.15	200000	
Mn	55	2	He	140.702	140.702	1.44	923296	0.02	2000	
Co	59	2	He	103.510	103.510	1.25	1676000	0.01	2000	
Ni	60	2	He	100.137	100.137	0.59	434208	0.02	2000	
Cu	63	2	He	101.667	101.667	0.65	1192580	0.01	2000	
Zn	66	2	He	119.645	119.645	1.50	237857	0.05	2000	
Al	27	2	He	116.199	116.199	2.11	41496	0.28	2000	
B	11	1	No Gas	24.061	24.061	3.42	151182	0.02	2000	
Al	27	1	No Gas	119.347	119.347	0.70	2991873	0.00	2000	
Si	28	1	No Gas	9359.790	9359.790	1.15	113943098	0.01	2000	>LDR
Ag	107	1	No Gas	97.655	97.655	2.64	2807720	0.00	2000	
Cd	111	1	No Gas	102.139	102.139	0.14	616799	0.02	2000	
Sr	88	1	No Gas	222.857	222.857	1.12	10736064	0.00	2000	
Mo	95	1	No Gas	104.497	104.497	1.31	1071807	0.01	2000	
Sn	118	1	No Gas	0.074	0.074	14.88	3694	0.00	2000	
Sb	121	1	No Gas	99.698	99.698	2.27	2347868	0.00	2000	
Ba	137	1	No Gas	261.995	261.995	0.62	2093912	0.01	2000	
Tl	205	1	No Gas	102.408	102.408	3.54	6012385	0.00	2000	
Tl	203	1	No Gas	104.178	104.178	2.16	2572494	0.00	2000	
Pb	208	1	No Gas	103.355	103.355	2.11	8489324	0.00	2000	
U	238	1	No Gas	0.090	0.090	3.63	8043	0.00	2000	
Ca	43	2	He	19140.722	19140.722	1.24	44556	42.96	200000	
Sb	121	2	He	95.547	95.547	0.84	966600	0.01	2000	
Ti	47	2	He	95.619	95.619	3.10	25685	0.37	2000	
Cu	63	1	No Gas	109.992	109.992	1.59	2133700	0.01	2000	
Zn	66	1	No Gas	121.863	121.863	2.05	676687	0.02	2000	
Se	82	1	No Gas	107.359	107.359	4.58	32962	0.33	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2114607	1.81	2589135	81.67	70	120	
Ge	72	2	He	978048	1.39	1118718	87.43	70	120	
Ge	72	1	No Gas	3852132	1.52	4398724	87.57	70	120	
In	115	1	No Gas	4868262	1.14	5762279	84.49	70	120	
Bi	209	1	No Gas	4894013	1.27	5779492	84.68	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	094_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T14:08:20-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	94.741	0.792	2847904	1.58	100	94.7	90	110	
Be	9	1	No Gas	99.821	1.425	664112	0.73	100	99.8	90	110	
V	51	2	He	92.207	1.802	793673	1.74	100	92.2	90	110	
Cr	52	2	He	90.185	1.262	971496	1.21	100	90.2	90	110	
Fe	56	2	He	9475.306	3.552	87514505	3.63	10000	94.8	90	110	
Se	78	2	He	97.340	1.789	9749	1.87	100	97.3	90	110	
Sn	118	2	He	97.761	1.781	796781	0.53	100	97.8	90	110	
As	75	2	He	97.398	1.587	113881	1.65	100	97.4	90	110	
Ca	44	2	He	9472.777	3.022	382756	3.08	10000	94.7	90	110	
Na	23	2	He	9476.749	1.395	14851790	1.47	10000	94.8	90	110	
Mg	24	2	He	9467.588	2.518	7944306	2.52	10000	94.7	90	110	
K	39	2	He	9175.578	1.166	6452633	1.08	10000	91.8	90	110	
Mn	55	2	He	92.977	1.908	624849	1.98	100	93.0	90	110	
Co	59	2	He	100.597	0.663	1667964	0.74	100	100.6	90	110	
Ni	60	2	He	97.028	1.211	430837	1.23	100	97.0	90	110	
Cu	63	2	He	97.560	2.694	1171945	2.62	100	97.6	90	110	
Zn	66	2	He	97.970	0.970	199545	0.92	100	98.0	90	110	
Al	27	2	He	105.293	2.757	38577	2.67	100	105.3	90	110	
B	11	1	No Gas	472.516	0.537	2318551	1.30	500	94.5	90	110	
Al	27	1	No Gas	108.639	1.299	2805181	0.28	100	108.6	90	110	
Si	28	1	No Gas	474.614	0.488	6646879	0.60	5000	9.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	484.804	1.629	542494	0.54	500	97.0	90	110	
Ag	107	1	No Gas	97.225	2.221	2927280	1.72	100	97.2	90	110	
Cd	111	1	No Gas	97.352	1.489	615759	1.24	100	97.4	90	110	
Sr	88	1	No Gas	97.026	2.108	4897310	2.53	100	97.0	90	110	
Mo	95	1	No Gas	95.224	2.732	1023025	2.20	100	95.2	90	110	
Sn	118	1	No Gas	97.461	2.081	1876949	1.73	100	97.5	90	110	
Sb	121	1	No Gas	98.371	1.621	2381613	2.15	100	98.4	90	110	
Ba	137	1	No Gas	98.017	0.529	820593	0.17	100	98.0	90	110	
Tl	205	1	No Gas	98.408	0.503	6451489	1.58	100	98.4	90	110	
Tl	203	1	No Gas	99.518	2.363	2743436	1.27	100	99.5	90	110	
Pb	208	1	No Gas	96.785	1.317	8878790	1.22	100	96.8	90	110	
U	238	1	No Gas	94.941	1.998	9393182	1.16	100	94.9	90	110	
Ca	43	2	He	9200.982	2.160	21941	2.21	10000	92.0	90	110	
Sb	121	2	He	94.059	1.266	974415	1.24	100	94.1	90	110	
Ti	47	2	He	94.030	2.100	25872	2.04	100	94.0	90	110	
Cu	63	1	No Gas	101.663	0.257	2027875	0.74	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
Li	6	1	No Gas	2211087	1.79	2589135	85.40	70	120	
Ge	72	2	He	1001531	0.08	1118718	89.52	70	120	
Ge	72	1	No Gas	3960200	1.00	4398724	90.03	70	120	
In	115	1	No Gas	5099230	0.66	5762279	88.49	70	120	
Bi	209	1	No Gas	5463821	1.41	5779492	94.54	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	095_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T14:10:05-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.250	14.9	136798	1.2	0.5	
Be	9	1	No Gas	0.014	27.3	100	26.0	0.5	
V	51	2	He	-1.163	-1.1	4641	1.9	2.5	
Cr	52	2	He	0.036	44.7	2147	8.6	2.5	
Fe	56	2	He	0.774	8.1	18540	3.9	100	
Se	78	2	He	-0.067	-58.9	26	15.4	2	
As	75	2	He	-0.057	-34.7	230	9.5	2.5	
Ca	44	2	He	-0.451	-765.6	390	35.5	100	
Na	23	2	He	54.423	1.6	140455	1.8	100	
Mg	24	2	He	0.804	6.9	947	5.4	100	
K	39	2	He	9.801	13.9	35296	2.7	100	
Mn	55	2	He	0.029	44.7	403	20.6	2.5	
Co	59	2	He	0.007	51.2	253	21.7	2.5	
Ni	60	2	He	0.023	52.9	260	20.4	2.5	
Cu	63	2	He	0.038	32.0	1417	10.9	2	
Zn	66	2	He	-0.022	-176.3	390	20.5	2.5	
Al	27	2	He	0.809	35.8	1013	9.3	5	
B	11	1	No Gas	5.347	13.9	68717	4.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.662	27.7	76327	6.7	5	
Si	28	1	No Gas	-1.239	-29.1	724681	1.2	10	
P	31	1	No Gas	0.018	5795.9	33397	2.4	10	
Ag	107	1	No Gas	-0.004	-44.6	600	10.4	2.5	
Cd	111	1	No Gas	0.013	48.1	97	43.1	1	
Sr	88	1	No Gas	0.033	9.8	2947	4.4	2.5	
Mo	95	1	No Gas	0.064	20.7	777	20.1	2.5	
Sn	118	1	No Gas	0.266	6.0	7762	5.2	5	
Sb	121	1	No Gas	0.858	10.1	22303	7.7	2.5	
Ba	137	1	No Gas	0.020	38.4	353	19.3	2.5	
Tl	205	1	No Gas	0.042	35.6	3137	33.8	1	
Tl	203	1	No Gas	0.045	31.3	1413	30.0	1	
Pb	208	1	No Gas	0.173	3.3	62405	1.1	2.5	
U	238	1	No Gas	0.012	22.0	1223	22.9	2.5	
Ca	43	2	He	-1.696	-141.6	17	34.6	100	
Sb	121	2	He	0.649	5.1	7245	4.3	2.5	
Ti	47	2	He	-0.016	-130.3	13	43.3	2.5	
Cu	63	1	No Gas	0.215	7.8	6041	4.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2236186	1.17	2589135	86.37	70	120	
Ge	72	2	He	993099	0.86	1118718	88.77	70	120	
Ge	72	1	No Gas	3937970	1.72	4398724	89.53	70	120	
In	115	1	No Gas	5232795	1.52	5762279	90.81	70	120	
Bi	209	1	No Gas	5508580	1.95	5779492	95.31	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	118_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T15:10:09-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.635	2.700	2713342	1.93	100	96.6	90	110	
Be	9	1	No Gas	100.487	3.420	624934	1.09	100	100.5	90	110	
V	51	2	He	93.814	1.693	741055	0.74	100	93.8	90	110	
Cr	52	2	He	93.608	2.962	925518	1.86	100	93.6	90	110	
Fe	56	2	He	9583.642	1.295	81256960	0.68	10000	95.8	90	110	
Se	78	2	He	99.703	1.723	9167	2.25	100	99.7	90	110	
Sn	118	2	He	99.197	1.421	762459	0.35	100	99.2	90	110	
As	75	2	He	97.184	1.407	104314	0.33	100	97.2	90	110	
Ca	44	2	He	9421.144	0.550	349483	1.07	10000	94.2	90	110	
Na	23	2	He	9370.184	1.918	13481229	1.41	10000	93.7	90	110	
Mg	24	2	He	9358.157	2.508	7208155	1.62	10000	93.6	90	110	
K	39	2	He	9293.665	1.267	5999798	1.20	10000	92.9	90	110	
Mn	55	2	He	95.094	1.709	586657	0.82	100	95.1	90	110	
Co	59	2	He	98.719	1.682	1502664	1.43	100	98.7	90	110	
Ni	60	2	He	96.219	1.096	392220	0.50	100	96.2	90	110	
Cu	63	2	He	95.879	2.238	1057307	1.42	100	95.9	90	110	
Zn	66	2	He	99.443	0.329	185954	1.43	100	99.4	90	110	
Al	27	2	He	104.803	1.070	35259	2.06	100	104.8	90	110	
B	11	1	No Gas	480.054	4.920	2200907	3.38	500	96.0	90	110	
Al	27	1	No Gas	109.925	2.753	2654777	1.28	100	109.9	90	110	
Si	28	1	No Gas	456.961	1.253	6013638	0.39	5000	9.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	483.996	2.285	506772	0.82	500	96.8	90	110	
Ag	107	1	No Gas	97.976	4.224	2824036	2.89	100	98.0	90	110	
Cd	111	1	No Gas	98.978	2.134	599420	0.95	100	99.0	90	110	
Sr	88	1	No Gas	96.944	0.332	4685423	1.18	100	96.9	90	110	
Mo	95	1	No Gas	93.566	2.434	962591	2.07	100	93.6	90	110	
Sn	118	1	No Gas	97.953	2.482	1806160	1.17	100	98.0	90	110	
Sb	121	1	No Gas	102.722	1.546	2326674	1.16	100	102.7	90	110	
Ba	137	1	No Gas	99.803	0.235	800126	1.15	100	99.8	90	110	
Tl	205	1	No Gas	99.790	0.861	6355194	0.92	100	99.8	90	110	
Tl	203	1	No Gas	101.379	0.316	2715495	0.81	100	101.4	90	110	
Pb	208	1	No Gas	97.857	1.739	8720146	0.71	100	97.9	90	110	
U	238	1	No Gas	95.794	1.970	9207280	0.94	100	95.8	90	110	
Ca	43	2	He	9515.476	2.682	20829	2.20	10000	95.2	90	110	
Sb	121	2	He	96.506	0.530	917893	1.52	100	96.5	90	110	
Ti	47	2	He	95.779	2.049	24192	1.37	100	95.8	90	110	
Cu	63	1	No Gas	99.305	1.962	1853243	0.88	100	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2067689	2.50	2589135	79.86	70	120	
Ge	72	2	He	919501	1.11	1118718	82.19	70	120	
Ge	72	1	No Gas	3705594	1.46	4398724	84.24	70	120	
In	115	1	No Gas	4883095	1.37	5762279	84.74	70	120	
Bi	209	1	No Gas	5307959	1.05	5779492	91.84	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	119_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T15:11:56-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.196	20.5	126685	1.8	0.5	
Be	9	1	No Gas	0.011	49.9	77	43.4	0.5	
V	51	2	He	-1.353	-1.3	2861	3.9	2.5	
Cr	52	2	He	0.010	28.5	1753	0.9	2.5	
Fe	56	2	He	0.476	13.2	14802	3.2	100	
Se	78	2	He	0.060	259.4	36	38.9	2	
As	75	2	He	-0.143	-6.9	122	7.9	2.5	
Ca	44	2	He	1.530	114.8	440	15.7	100	
Na	23	2	He	26.587	6.2	91200	1.8	100	
Mg	24	2	He	0.533	31.3	677	20.2	100	
K	39	2	He	4.514	18.6	29629	1.6	100	
Mn	55	2	He	0.039	15.8	440	9.1	2.5	
Co	59	2	He	0.004	78.8	203	25.2	2.5	
Ni	60	2	He	0.016	97.6	217	30.7	2.5	
Cu	63	2	He	0.018	74.8	1097	14.1	2	
Zn	66	2	He	-0.066	-62.5	283	28.3	2.5	
Al	27	2	He	0.689	65.1	910	16.6	5	
B	11	1	No Gas	5.865	9.3	66783	5.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.540	30.4	69197	6.4	5	
Si	28	1	No Gas	-6.712	-12.5	620575	1.5	10	
P	31	1	No Gas	-1.023	-34.2	30531	2.4	10	
Ag	107	1	No Gas	0.001	65.8	720	2.8	2.5	
Cd	111	1	No Gas	0.004	82.3	37	56.8	1	
Sr	88	1	No Gas	0.018	17.9	2114	8.1	2.5	
Mo	95	1	No Gas	0.065	50.5	753	45.8	2.5	
Sn	118	1	No Gas	0.272	3.4	7502	2.5	5	
Sb	121	1	No Gas	0.638	7.8	16100	7.8	2.5	
Ba	137	1	No Gas	0.013	33.1	280	12.9	2.5	
Tl	205	1	No Gas	0.075	50.6	5115	47.7	1	
Tl	203	1	No Gas	0.076	52.6	2197	49.4	1	
Pb	208	1	No Gas	-0.034	-50.2	42145	3.3	2.5	
U	238	1	No Gas	0.012	20.5	1230	19.8	2.5	
Ca	43	2	He	4.732	326.9	30	115.5	100	
Sb	121	2	He	0.472	8.3	5078	6.7	2.5	
Ti	47	2	He	0.026	374.1	23	107.9	2.5	
Cu	63	1	No Gas	0.056	9.4	2727	4.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2094963	1.37	2589135	80.91	70	120	
Ge	72	2	He	930431	0.97	1118718	83.17	70	120	
Ge	72	1	No Gas	3719675	1.29	4398724	84.56	70	120	
In	115	1	No Gas	4986470	0.31	5762279	86.54	70	120	
Bi	209	1	No Gas	5354236	0.34	5779492	92.64	70	120	

Sample Report

Sample Table

Sample Name	HS20090748-01MSD
Data File Name	127SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T15:39:06-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 157451
ISTD Ref FileName	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	21.810	21.810	3.32	650112	0.00	2000	
Be	9	1	No Gas	48.003	48.003	4.59	275204	0.02	2000	
V	51	2	He	42.219	42.219	0.71	335566	0.01	2000	
Cr	52	2	He	43.306	43.306	1.19	422471	0.01	2000	
Fe	56	2	He	4269.241	4269.241	1.58	35645848	0.01	200000	
Se	78	2	He	43.782	43.782	5.57	3980	1.10	2000	
Sn	118	2	He	0.335	0.335	16.82	3427	0.01	200	
As	75	2	He	45.625	45.625	0.59	48361	0.09	2000	
Ca	44	2	He	13639.933	13639.933	1.00	497978	2.74	200000	
Na	23	2	He	372298.576	372298.576	2.21	525394779	0.07	200000	>LDR
Mg	24	2	He	14458.731	14458.731	2.46	10965983	0.13	200000	
K	39	2	He	6002.118	6002.118	1.19	3824165	0.16	200000	
Mn	55	2	He	87.135	87.135	1.36	529308	0.02	2000	
Co	59	2	He	45.485	45.485	1.52	681732	0.01	2000	
Ni	60	2	He	44.426	44.426	1.02	178378	0.02	2000	
Cu	63	2	He	44.671	44.671	0.72	485485	0.01	2000	
Zn	66	2	He	62.351	62.351	0.31	114929	0.05	2000	
Al	27	2	He	59.637	59.637	2.61	20035	0.30	2000	
B	11	1	No Gas	32.267	32.267	3.54	170366	0.02	2000	
Al	27	1	No Gas	62.219	62.219	2.11	1463399	0.00	2000	
Si	28	1	No Gas	9113.838	9113.838	1.71	102278395	0.01	2000	>LDR
Ag	107	1	No Gas	40.710	40.710	0.44	1110675	0.00	2000	
Cd	111	1	No Gas	45.209	45.209	0.21	259030	0.02	2000	
Sr	88	1	No Gas	218.871	218.871	2.37	10002395	0.00	2000	
Mo	95	1	No Gas	46.152	46.152	1.92	449134	0.01	2000	
Sn	118	1	No Gas	0.389	0.389	3.90	8997	0.00	2000	
Sb	121	1	No Gas	47.520	47.520	0.84	1032140	0.00	2000	
Ba	137	1	No Gas	208.819	208.819	1.77	1583074	0.01	2000	
Tl	205	1	No Gas	43.297	43.297	5.56	2587556	0.00	2000	
Tl	203	1	No Gas	41.446	41.446	4.64	1041916	0.00	2000	
Pb	208	1	No Gas	44.435	44.435	2.27	3741027	0.00	2000	
U	238	1	No Gas	0.089	0.089	1.16	8103	0.00	2000	
Ca	43	2	He	13449.327	13449.327	2.11	28978	46.41	200000	
Sb	121	2	He	44.256	44.256	1.90	414689	0.01	2000	
Ti	47	2	He	43.639	43.639	6.33	10861	0.40	2000	
Cu	63	1	No Gas	48.142	48.142	1.56	861724	0.01	2000	
Zn	66	1	No Gas	64.751	64.751	1.29	331965	0.02	2000	
Se	82	1	No Gas	46.418	46.418	3.90	13110	0.35	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1906807	3.09	2589135	73.65	70	120	
Ge	72	2	He	905227	0.37	1118718	80.92	70	120	
Ge	72	1	No Gas	3550406	0.83	4398724	80.71	70	120	
In	115	1	No Gas	4618792	1.53	5762279	80.16	70	120	
Bi	209	1	No Gas	4985533	2.83	5779492	86.26	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	130_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T15:44:53-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	95.909	3.798	2739723	1.49	100	95.9	90	110	
Be	9	1	No Gas	98.388	0.975	622700	1.31	100	98.4	90	110	
V	51	2	He	93.287	1.574	740743	0.56	100	93.3	90	110	
Cr	52	2	He	92.590	0.976	920317	0.70	100	92.6	90	110	
Fe	56	2	He	9439.842	3.218	80438165	2.35	10000	94.4	90	110	
Se	78	2	He	96.689	2.951	8934	1.93	100	96.7	90	110	
Sn	118	2	He	98.382	2.157	764386	0.85	100	98.4	90	110	
As	75	2	He	96.685	1.043	104315	0.58	100	96.7	90	110	
Ca	44	2	He	9528.300	2.892	355199	1.89	10000	95.3	90	110	
Na	23	2	He	9475.419	0.998	13702216	0.02	10000	94.8	90	110	
Mg	24	2	He	9325.762	2.572	7219896	1.56	10000	93.3	90	110	
K	39	2	He	9121.882	2.967	5918959	2.35	10000	91.2	90	110	
Mn	55	2	He	94.727	3.511	587317	2.50	100	94.7	90	110	
Co	59	2	He	99.026	1.291	1515021	0.34	100	99.0	90	110	
Ni	60	2	He	97.574	2.331	399746	1.32	100	97.6	90	110	
Cu	63	2	He	96.623	3.594	1070935	3.03	100	96.6	90	110	
Zn	66	2	He	99.104	0.704	186262	0.84	100	99.1	90	110	
Al	27	2	He	102.401	4.023	34634	3.31	100	102.4	90	110	
B	11	1	No Gas	470.846	3.612	2197494	3.10	500	94.2	90	110	
Al	27	1	No Gas	109.409	0.510	2650732	0.35	100	109.4	90	110	
Si	28	1	No Gas	453.813	3.880	5993708	2.71	5000	9.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	481.642	0.860	505983	0.47	500	96.3	90	110	
Ag	107	1	No Gas	100.863	1.134	2867244	2.87	100	100.9	90	110	
Cd	111	1	No Gas	99.650	0.470	595052	2.35	100	99.7	90	110	
Sr	88	1	No Gas	98.479	4.637	4688714	1.96	100	98.5	90	110	
Mo	95	1	No Gas	95.122	3.104	964567	2.49	100	95.1	90	110	
Sn	118	1	No Gas	97.822	2.936	1778278	3.01	100	97.8	90	110	
Sb	121	1	No Gas	102.039	2.083	2317958	1.91	100	102.0	90	110	
Ba	137	1	No Gas	99.898	2.469	789268	0.75	100	99.9	90	110	
Tl	205	1	No Gas	97.703	1.060	6342666	1.71	100	97.7	90	110	
Tl	203	1	No Gas	96.910	2.186	2645798	2.07	100	96.9	90	110	
Pb	208	1	No Gas	96.930	1.715	8804844	1.17	100	96.9	90	110	
U	238	1	No Gas	95.496	4.118	9352174	1.63	100	95.5	90	110	
Ca	43	2	He	9246.438	1.229	20345	0.26	10000	92.5	90	110	
Sb	121	2	He	97.256	2.288	929591	1.29	100	97.3	90	110	
Ti	47	2	He	90.488	4.233	22973	3.89	100	90.5	90	110	
Cu	63	1	No Gas	100.162	3.760	1874643	3.31	100	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2103352	2.19	2589135	81.24	70	120	
Ge	72	2	He	924208	1.02	1118718	82.61	70	120	
Ge	72	1	No Gas	3716159	0.76	4398724	84.48	70	120	
In	115	1	No Gas	4814322	2.81	5762279	83.55	70	120	
Bi	209	1	No Gas	5411341	2.59	5779492	93.63	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	131_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq Date Time	2020-09-21T15:46:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	013CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.156	20.0	125497	1.1	0.5	
Be	9	1	No Gas	0.013	17.5	92	16.7	0.5	
V	51	2	He	-1.286	-1.4	3334	3.1	2.5	
Cr	52	2	He	0.018	37.2	1800	4.4	2.5	
Fe	56	2	He	0.382	14.1	13801	3.6	100	
Se	78	2	He	-0.060	-164.5	25	37.4	2	
As	75	2	He	-0.093	-8.1	174	4.0	2.5	
Ca	44	2	He	1.707	53.8	440	8.2	100	
Na	23	2	He	43.409	0.5	113966	1.2	100	
Mg	24	2	He	0.591	21.6	710	12.9	100	
K	39	2	He	6.623	14.1	30558	1.4	100	
Mn	55	2	He	0.042	15.1	453	8.4	2.5	
Co	59	2	He	0.009	6.5	263	2.2	2.5	
Ni	60	2	He	0.005	144.1	167	17.3	2.5	
Cu	63	2	He	0.021	86.8	1117	18.1	2	
Zn	66	2	He	-0.049	-104.8	310	29.6	2.5	
Al	27	2	He	0.761	47.6	920	12.2	5	
B	11	1	No Gas	8.823	12.4	80162	5.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.398	4.3	65920	0.7	5	
Si	28	1	No Gas	-5.300	-10.3	638123	0.5	10	
P	31	1	No Gas	-1.213	-76.2	30387	2.6	10	
Ag	107	1	No Gas	-0.001	-91.4	643	6.5	2.5	
Cd	111	1	No Gas	0.003	3.6	30	0.0	1	
Sr	88	1	No Gas	0.017	24.8	1970	7.9	2.5	
Mo	95	1	No Gas	0.055	27.9	633	23.4	2.5	
Sn	118	1	No Gas	0.391	3.9	9540	0.7	5	
Sb	121	1	No Gas	0.553	11.3	14178	9.8	2.5	
Ba	137	1	No Gas	0.009	39.1	243	12.6	2.5	
Tl	205	1	No Gas	0.071	51.4	4995	49.7	1	
Tl	203	1	No Gas	0.077	49.8	2257	48.0	1	
Pb	208	1	No Gas	-0.143	-14.8	32961	4.5	2.5	
U	238	1	No Gas	0.011	21.0	1137	21.5	2.5	
Ca	43	2	He	3.445	201.3	27	57.3	100	
Sb	121	2	He	0.448	2.2	4784	1.2	2.5	
Ti	47	2	He	0.014	555.5	20	100.0	2.5	
Cu	63	1	No Gas	0.078	14.8	3140	6.4	2.5	

QC ISTD Table

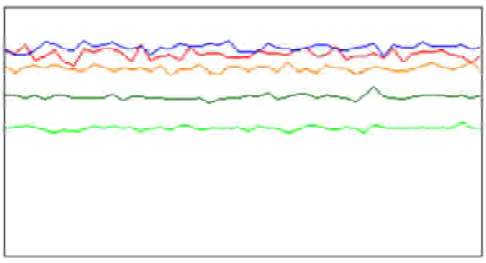
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2093076	0.87	2589135	80.84	70	120	
Ge	72	2	He	917171	1.02	1118718	81.98	70	120	
Ge	72	1	No Gas	3725802	0.93	4398724	84.70	70	120	
In	115	1	No Gas	4880446	2.29	5762279	84.70	70	120	
Bi	209	1	No Gas	5439462	1.46	5779492	94.12	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\092120B.b
Acq. Date-Time	9/21/2020 10:14:00 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	8153	81528.24		
24	50000	25773	257734.80		
59	50000	42126	421255.59		
115	100000	75602	756023.75		
208	100000	64250	642498.64		

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

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.349	5.000	
24	1.751	5.000	
59	1.769	5.000	
115	1.701	5.000	
208	1.630	5.000	

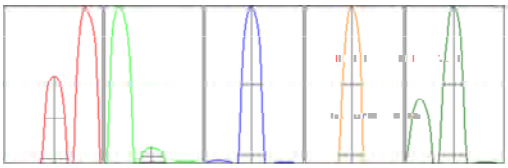
Mass	Background	Background (Required)	Background (Flag)
9	0.300		
24	0.400		
59	0.100		
115	0.100		
208	0.600		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.677 %
Doubly Charged	70 / 140 0.736 %

Tune Check Report

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8151.84	9.05	8.90 - 9.10	
24	26126.54	23.95	23.90 - 24.10	
59	43055.31	58.95	58.90 - 59.10	
115	77356.99	114.95	114.90 - 115.10	
208	65304.99	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.780		
24	0.66	0.787		
59	0.61	0.780		
115	0.58	0.734		
208	0.62	0.824		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.48 L/min	Dilution Gas	0.57 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

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

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.14		

Hardware Settings

Torch

Torch H	0.9 mm	Torch V	0.1 mm

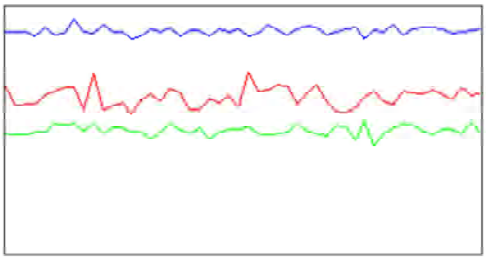
EM

Discriminator	4.3 mV	Analog HV	2429 V	Pulse HV	1216 V

[He]

Tune Check Report

Sensitivity



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

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	317	3165.75		
24	2000	995	9950.13		
59	20000	18035	180348.49		

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

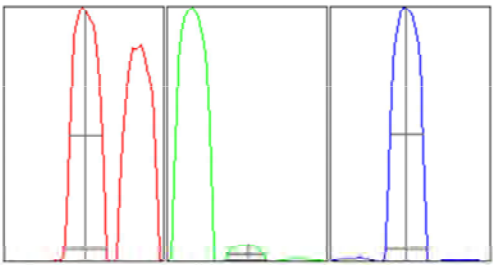
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	6.029	5.000	Fail
24	4.130	5.000	
59	1.692	5.000	

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

Oxide/Doubly Charged Ratio

Oxide 156 / 140 0.296 %
Doubly Charged 70 / 140 0.710 %

Resolution/Axis



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

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	313.05	9.05	8.90 - 9.10	
24	961.62	24.05	23.90 - 24.10	
59	18087.80	58.95	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.785		
24	0.67	0.788		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.62	0.781		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.48 L/min	Dilution Gas	0.57 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.2 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	4.4 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.14		

Hardware Settings

Torch

Torch H	0.9 mm	Torch V	0.1 mm

EM

Discriminator	4.3 mV	Analog HV	2429 V	Pulse HV	1216 V

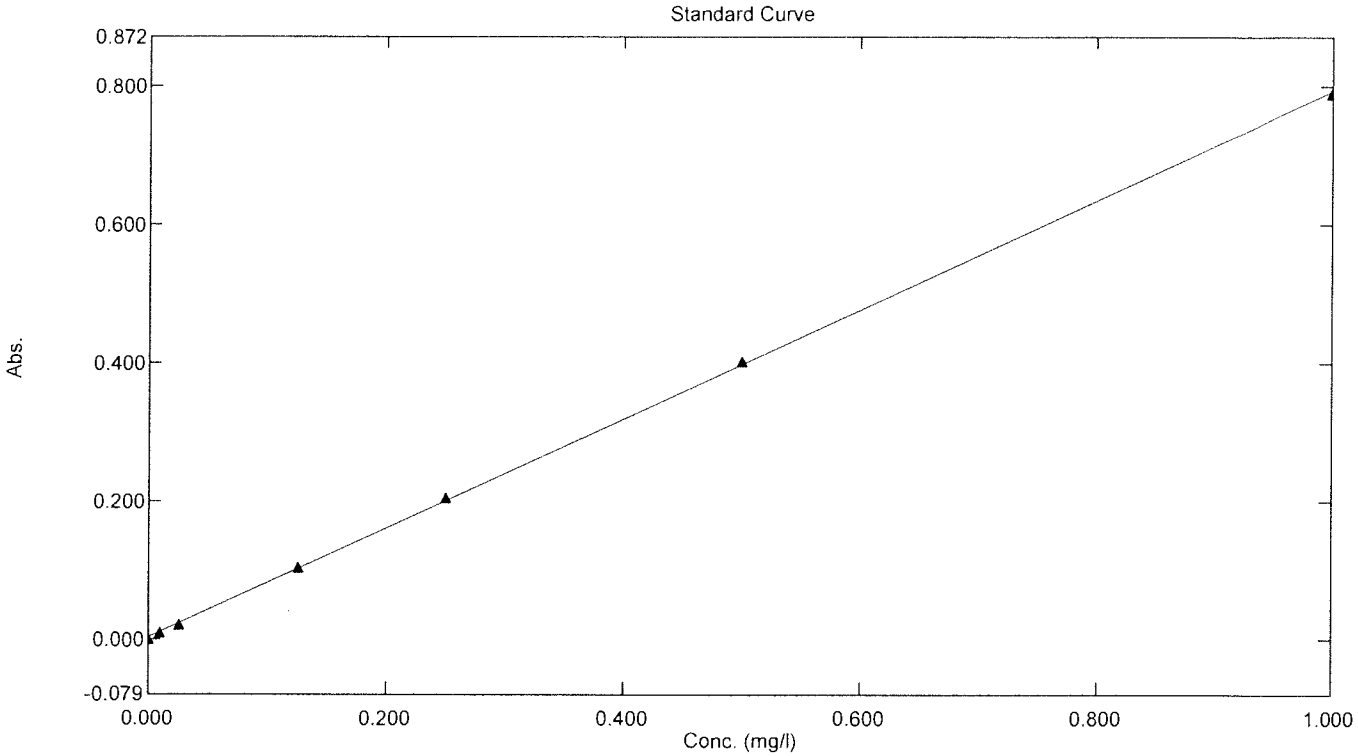
HS20090744 Wet Chem Raw Data (Cr6_W_7196_DOD)

ALS WO# HS20090744

Standard Table Report

10/09/2020 11:16:18 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\09162020-CR6 W_.pho



Correlation Coefficient r2 = 0.99986

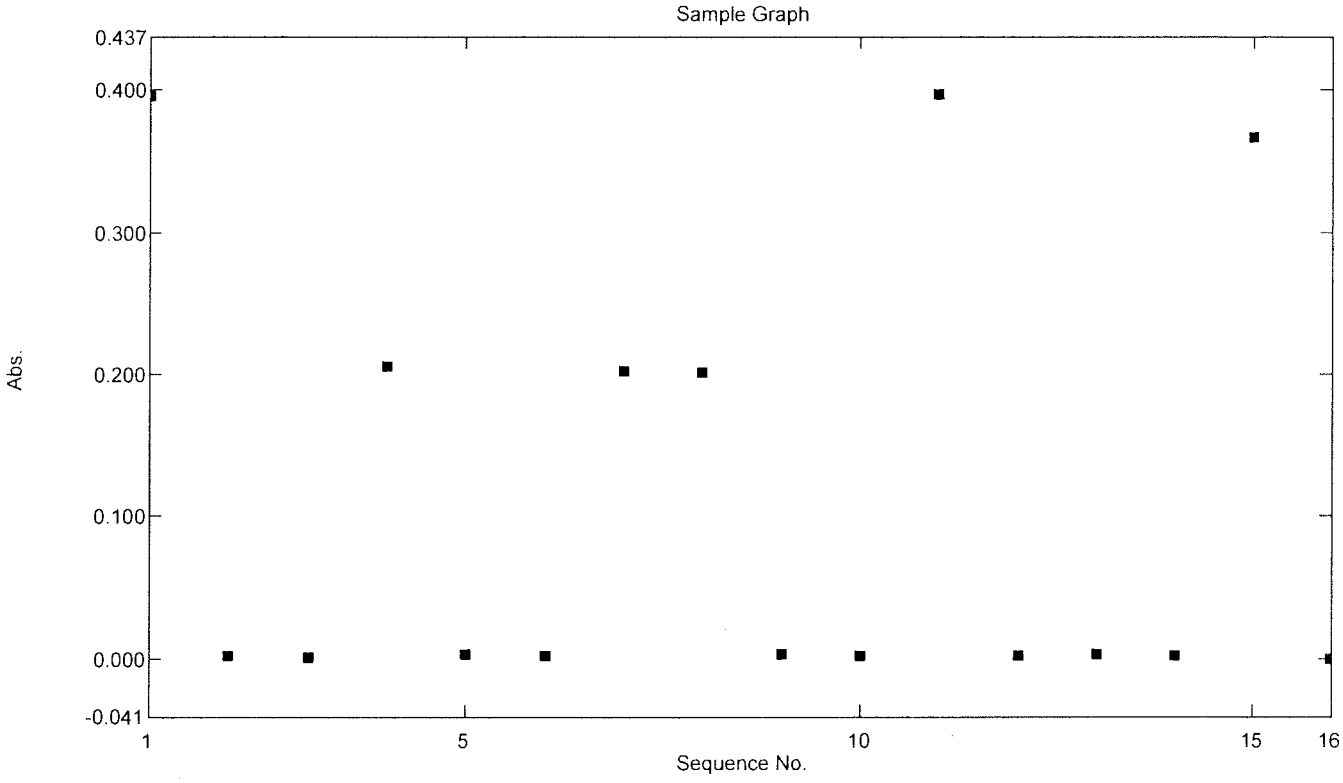
Standard Table

	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

10/09/2020 11:16:21 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\09162020-CR6 W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.498	0.396	314064802 WC-14
2	CCB	Unknown		-0.001	0.001	314064710 WC-13
3	MBLK	Unknown		-0.002	0.001	314062704 WC-13
4	LCS	Unknown		0.256	0.205	314064801 WC-14
5	HS20090748.01	Unknown		0.000	0.003	1:03PM,SAMP-BKG=TOTAL
6	HS20090748.01BKG	Unknown		-0.001	0.001	1:04PM,0
7	HS20090748.01MS	Unknown		0.252	0.202	1:05PM
8	HS20090748.01MSD	Unknown		0.251	0.201	1:05PM
9	HS20090744.01	Unknown		-0.000	0.002	1:06PM,0
10	HS20090744.01BKG	Unknown		-0.001	0.002	1:07PM
11	CCV2	Unknown		0.499	0.397	
12	CCB2	Unknown		-0.001	0.001	
13	HS20090769.01	Unknown		0.000	0.003	4:37PM,0
14	HS20090769.01BKG	Unknown		-0.001	0.002	4:37PM
15	CCV3	Unknown		0.461	0.367	
16	CCB3	Unknown		-0.004	-0.001	
17						

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WorkOrder: HS20090534

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

26-Sep-2020

ALS Environmental
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  - Trip Blank
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
- HS20090534 8260 Raw Data
- HS20090534 Wet Chem Raw Data (9056_anions_W)

HS20090534 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20090534

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September 15, 2020

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

Work Order: **HS20090534**

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

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Sep 10, 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: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20090534

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090534-01	LH18/24-SP650_090920	Water		09-Sep-2020 14:00	10-Sep-2020 10:00	☐
HS20090534-02	Trip Blank	Water		09-Sep-2020 00:00	10-Sep-2020 10:00	☐

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20090534

GCMS Volatiles by Method SW8260

Batch ID: R368460

Sample ID: CCV

- 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene and Hexachlorobutadiene exceeded %D limits for CCV. Samples are ND for these compounds.

Sample ID: CCV-END

- 1,2,3-Trichlorobenzene exceeded %D limits for closing CCV

Sample ID: HS20090556-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R368550

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

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20090534
Sample ID: LH18/24-SP650_090920 Lab ID:HS20090534-01
Collection Date: 09-Sep-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	11-Sep-2020 14:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	11-Sep-2020 14:37
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	11-Sep-2020 14:37
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	11-Sep-2020 14:37
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	11-Sep-2020 14:37
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	11-Sep-2020 14:37
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37

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

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_090920
Collection Date: 09-Sep-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20090534
Lab ID:HS20090534-01
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	11-Sep-2020 14:37
cis-1,2-Dichloroethene	**22**		**0.20**	**0.50**	**1.0**	**UG/L**	1	11-Sep-2020 14:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	11-Sep-2020 14:37
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	11-Sep-2020 14:37
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:37
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:37
Trichloroethene	**4.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	11-Sep-2020 14:37
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:37
Vinyl chloride	**0.89**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	11-Sep-2020 14:37
Surr: 1,2-Dichloroethane-d4	*89.2*			**0**	*81-118*	*%REC*	*1*	*11-Sep-2020 14:37*
Surr: 4-Bromofluorobenzene	*95.7*			**0**	*85-114*	*%REC*	*1*	*11-Sep-2020 14:37*
Surr: Dibromofluoromethane	*95.7*			**0**	*80-119*	*%REC*	*1*	*11-Sep-2020 14:37*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*11-Sep-2020 14:37*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**422**		**4.00**	**10.0**	**10.0**	**mg/L**	20	14-Sep-2020 18:50
Sulfate	**34.5**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-Sep-2020 18:32

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

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20090534
Sample ID: Trip Blank
Lab ID:HS20090534-02
Collection Date: 09-Sep-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	11-Sep-2020 14:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	11-Sep-2020 14:13
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	11-Sep-2020 14:13
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	11-Sep-2020 14:13
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	11-Sep-2020 14:13
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	11-Sep-2020 14:13
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13

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

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20090534
Sample ID: Trip Blank Lab ID:HS20090534-02
Collection Date: 09-Sep-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	11-Sep-2020 14:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	11-Sep-2020 14:13
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	11-Sep-2020 14:13
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	11-Sep-2020 14:13
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	11-Sep-2020 14:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	11-Sep-2020 14:13
Surr: 1,2-Dichloroethane-d4	*88.6*			**0**	*81-118*	*%REC*	*1*	*11-Sep-2020 14:13*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*1*	*11-Sep-2020 14:13*
Surr: Dibromofluoromethane	*94.0*			**0**	*80-119*	*%REC*	*1*	*11-Sep-2020 14:13*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*11-Sep-2020 14:13*

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

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R368460 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20090534-01	LH18/24-SP650_090920	09 Sep 2020 14:00			11 Sep 2020 14:37	1
HS20090534-02	Trip Blank	09 Sep 2020 00:00			11 Sep 2020 14:13	1
Batch ID: R368550 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20090534-01	LH18/24-SP650_090920	09 Sep 2020 14:00			14 Sep 2020 18:50	20
HS20090534-01	LH18/24-SP650_090920	09 Sep 2020 14:00			14 Sep 2020 18:32	1

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200911** Units: **UG/L** Analysis Date: **11-Sep-2020 13:49**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736820** 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: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200911** Units: **UG/L** Analysis Date: **11-Sep-2020 13:49**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736820** 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	*43.58*	*1.0*	*50*	*0*	*87.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.85*	*1.0*	*50*	*0*	*97.7*	*85 - 114*				
Surr: Dibromofluoromethane	*47.19*	*1.0*	*50*	*0*	*94.4*	*80 - 119*				
Surr: Toluene-d8	*52.41*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200911** Units: **UG/L** Analysis Date: **11-Sep-2020 12:37**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736819** 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	17.85	1.0	20	0	89.2	78 - 124				
1,1,1-Trichloroethane	17.29	1.0	20	0	86.5	74 - 131				
1,1,2,2-Tetrachloroethane	18.79	1.0	20	0	94.0	71 - 121				
1,1,2-Trichloroethane	18.49	1.0	20	0	92.4	80 - 119				
1,1-Dichloroethane	20.18	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	18.76	1.0	20	0	93.8	71 - 131				
1,1-Dichloropropene	17.17	1.0	20	0	85.9	78 - 125				
1,2,3-Trichlorobenzene	23.34	1.0	20	0	117	69 - 129				
1,2,3-Trichloropropane	16.78	1.0	20	0	83.9	73 - 122				
1,2,4-Trichlorobenzene	23.59	1.0	20	0	118	69 - 130				
1,2,4-Trimethylbenzene	17.56	1.0	20	0	87.8	76 - 124				
1,2-Dibromo-3-chloropropane	15.84	1.0	20	0	79.2	62 - 128				
1,2-Dibromoethane	18.63	1.0	20	0	93.2	77 - 121				
1,2-Dichlorobenzene	17.49	1.0	20	0	87.4	80 - 119				
1,2-Dichloroethane	18.75	1.0	20	0	93.8	73 - 128				
1,2-Dichloropropane	20.52	1.0	20	0	103	78 - 122				
1,3,5-Trimethylbenzene	17.35	1.0	20	0	86.8	75 - 124				
1,3-Dichlorobenzene	17.65	1.0	20	0	88.2	80 - 119				
1,3-Dichloropropane	19.19	1.0	20	0	95.9	80 - 119				
1,4-Dichlorobenzene	17.83	1.0	20	0	89.1	79 - 118				
2,2-Dichloropropane	18.69	1.0	20	0	93.5	60 - 139				
2-Butanone	33.53	2.0	40	0	83.8	56 - 143				
2-Chlorotoluene	18.26	1.0	20	0	91.3	79 - 122				
2-Hexanone	29.81	2.0	40	0	74.5	57 - 139				
4-Chlorotoluene	17.99	1.0	20	0	90.0	78 - 122				
4-Isopropyltoluene	16.08	1.0	20	0	80.4	77 - 127				
4-Methyl-2-pentanone	32	2.0	40	0	80.0	67 - 130				
Acetone	48.64	2.0	40	0	122	39 - 160				
Benzene	19.74	1.0	20	0	98.7	79 - 120				
Bromobenzene	18.3	1.0	20	0	91.5	80 - 120				
Bromochloromethane	19	1.0	20	0	95.0	78 - 123				
Bromodichloromethane	18.77	1.0	20	0	93.8	79 - 125				
Bromoform	16.34	1.0	20	0	81.7	66 - 130				
Bromomethane	20.69	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200911** Units: **UG/L** Analysis Date: **11-Sep-2020 12:37**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736819** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.58	2.0	40	0	91.5	64 - 133				
Carbon tetrachloride	15.43	1.0	20	0	77.1	72 - 136				
Chlorobenzene	18.58	1.0	20	0	92.9	82 - 118				
Chloroethane	26.82	1.0	20	0	134	60 - 138				
Chloroform	19.38	1.0	20	0	96.9	79 - 124				
Chloromethane	17.42	1.0	20	0	87.1	50 - 139				
cis-1,2-Dichloroethene	20.1	1.0	20	0	101	78 - 123				
cis-1,3-Dichloropropene	19.17	1.0	20	0	95.9	75 - 124				
Dibromochloromethane	17.59	1.0	20	0	87.9	74 - 126				
Dibromomethane	18.58	1.0	20	0	92.9	79 - 123				
Dichlorodifluoromethane	14.16	1.0	20	0	70.8	32 - 152				
Ethylbenzene	17.65	1.0	20	0	88.2	79 - 121				
Hexachlorobutadiene	22.29	1.0	20	0	111	66 - 134				
Isopropylbenzene	16.56	1.0	20	0	82.8	72 - 131				
m,p-Xylene	35.34	2.0	40	0	88.4	80 - 121				
Methylene chloride	19.24	2.0	20	0	96.2	74 - 124				
Naphthalene	21.02	1.0	20	0	105	61 - 128				
n-Butylbenzene	16.23	1.0	20	0	81.1	75 - 128				
n-Propylbenzene	16.83	1.0	20	0	84.1	76 - 126				
o-Xylene	17.93	1.0	20	0	89.7	78 - 122				
sec-Butylbenzene	15.81	1.0	20	0	79.1	77 - 126				
Styrene	18.39	1.0	20	0	92.0	78 - 123				
tert-Butylbenzene	16.42	1.0	20	0	82.1	78 - 124				
Tetrachloroethene	16.79	1.0	20	0	83.9	74 - 129				
Toluene	18.81	1.0	20	0	94.1	80 - 121				
trans-1,2-Dichloroethene	19.38	1.0	20	0	96.9	75 - 124				
trans-1,3-Dichloropropene	18.24	1.0	20	0	91.2	73 - 127				
Trichloroethene	18.82	1.0	20	0	94.1	79 - 123				
Trichlorofluoromethane	15.86	1.0	20	0	79.3	65 - 141				
Vinyl chloride	17.9	1.0	20	0	89.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.7*	*1.0*	*50*	*0*	*91.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.88*	*1.0*	*50*	*0*	*91.8*	*85 - 114*				
Surr: Dibromofluoromethane	*47.99*	*1.0*	*50*	*0*	*96.0*	*80 - 119*				
Surr: Toluene-d8	*48.69*	*1.0*	*50*	*0*	*97.4*	*89 - 112*				

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20090556-01MS** Units: **UG/L** Analysis Date: **11-Sep-2020 15:25**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736824** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.49	1.0	20	0	107	78 - 124				
1,1,1-Trichloroethane	22.76	1.0	20	0	114	74 - 131				
1,1,2,2-Tetrachloroethane	22.5	1.0	20	0	113	71 - 121				
1,1,2-Trichloroethane	21.8	1.0	20	0	109	80 - 119				
1,1-Dichloroethane	23.57	1.0	20	0	118	77 - 125				
1,1-Dichloroethene	23.29	1.0	20	0	116	71 - 131				
1,1-Dichloropropene	24.07	1.0	20	0	120	78 - 125				
1,2,3-Trichlorobenzene	30.97	1.0	20	0	155	69 - 129				S
1,2,3-Trichloropropane	20.06	1.0	20	0	100	73 - 122				
1,2,4-Trichlorobenzene	31.19	1.0	20	0	156	69 - 130				S
1,2,4-Trimethylbenzene	23.68	1.0	20	0	118	76 - 124				
1,2-Dibromo-3-chloropropane	20.22	1.0	20	0	101	62 - 128				
1,2-Dibromoethane	21.5	1.0	20	0	108	77 - 121				
1,2-Dichlorobenzene	22.21	1.0	20	0	111	80 - 119				
1,2-Dichloroethane	22.11	1.0	20	0	111	73 - 128				
1,2-Dichloropropane	23.92	1.0	20	0	120	78 - 122				
1,3,5-Trimethylbenzene	23.97	1.0	20	0	120	75 - 124				
1,3-Dichlorobenzene	22.8	1.0	20	0	114	80 - 119				
1,3-Dichloropropane	21.93	1.0	20	0	110	80 - 119				
1,4-Dichlorobenzene	22.64	1.0	20	0	113	79 - 118				
2,2-Dichloropropane	23.79	1.0	20	0	119	60 - 139				
2-Butanone	41.61	2.0	40	0	104	56 - 143				
2-Chlorotoluene	23.55	1.0	20	0	118	79 - 122				
2-Hexanone	37.64	2.0	40	0	94.1	57 - 139				
4-Chlorotoluene	23.25	1.0	20	0	116	78 - 122				
4-Isopropyltoluene	24.8	1.0	20	0	124	77 - 127				
4-Methyl-2-pentanone	37.48	2.0	40	0	93.7	67 - 130				
Acetone	49.58	2.0	40	2.691	117	39 - 160				
Benzene	23.91	1.0	20	0	120	79 - 120				
Bromobenzene	22.13	1.0	20	0	111	80 - 120				
Bromochloromethane	21.54	1.0	20	0	108	78 - 123				
Bromodichloromethane	22.11	1.0	20	0	111	79 - 125				
Bromoform	19.21	1.0	20	0	96.0	66 - 130				
Bromomethane	21.02	1.0	20	0	105	53 - 141				

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20090556-01MS** Units: **UG/L** Analysis Date: **11-Sep-2020 15:25**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736824** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	42.07	2.0	40	0	105	64 - 133				
Carbon tetrachloride	22.62	1.0	20	0	113	72 - 136				
Chlorobenzene	22.95	1.0	20	0	115	82 - 118				
Chloroethane	19.76	1.0	20	0	98.8	60 - 138				
Chloroform	22.97	1.0	20	0	115	79 - 124				
Chloromethane	12.92	1.0	20	0	64.6	50 - 139				
cis-1,2-Dichloroethene	22.96	1.0	20	0	115	78 - 123				
cis-1,3-Dichloropropene	22.46	1.0	20	0	112	75 - 124				
Dibromochloromethane	21	1.0	20	0	105	74 - 126				
Dibromomethane	21.59	1.0	20	0	108	79 - 123				
Dichlorodifluoromethane	6.003	1.0	20	0	30.0	32 - 152				S
Ethylbenzene	23.82	1.0	20	0	119	79 - 121				
Hexachlorobutadiene	34.07	1.0	20	0	170	66 - 134				S
Isopropylbenzene	24	1.0	20	0	120	72 - 131				
m,p-Xylene	46.81	2.0	40	0	117	80 - 121				
Methylene chloride	21.49	2.0	20	0	107	74 - 124				
Naphthalene	27.28	1.0	20	0	136	61 - 128				S
n-Butylbenzene	25.54	1.0	20	0	128	75 - 128				
n-Propylbenzene	24.81	1.0	20	0	124	76 - 126				
o-Xylene	23.34	1.0	20	0	117	78 - 122				
sec-Butylbenzene	24.93	1.0	20	0	125	77 - 126				
Styrene	22.49	1.0	20	0	112	78 - 123				
tert-Butylbenzene	24.61	1.0	20	0	123	78 - 124				
Tetrachloroethene	24.94	1.0	20	0	125	74 - 129				
Toluene	23.63	1.0	20	0	118	80 - 121				
trans-1,2-Dichloroethene	23.58	1.0	20	0	118	75 - 124				
trans-1,3-Dichloropropene	21.5	1.0	20	0	108	73 - 127				
Trichloroethene	23.86	1.0	20	0	119	79 - 123				
Trichlorofluoromethane	21.11	1.0	20	0	106	65 - 141				
Vinyl chloride	16.67	1.0	20	0	83.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.17*	*1.0*	*50*	*0*	*88.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.85*	*1.0*	*50*	*0*	*95.7*	*85 - 114*				
Surr: Dibromofluoromethane	*47.61*	*1.0*	*50*	*0*	*95.2*	*80 - 119*				
Surr: Toluene-d8	*51.46*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20090556-01MSD** Units: **UG/L** Analysis Date: **11-Sep-2020 15:49**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736825** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.3	1.0	20	0	106	78 - 124	21.49	0.93	20	
1,1,1-Trichloroethane	22.03	1.0	20	0	110	74 - 131	22.76	3.25	20	
1,1,2,2-Tetrachloroethane	22.26	1.0	20	0	111	71 - 121	22.5	1.06	20	
1,1,2-Trichloroethane	22	1.0	20	0	110	80 - 119	21.8	0.887	20	
1,1-Dichloroethane	22.69	1.0	20	0	113	77 - 125	23.57	3.78	20	
1,1-Dichloroethene	22.1	1.0	20	0	110	71 - 131	23.29	5.25	20	
1,1-Dichloropropene	22.75	1.0	20	0	114	78 - 125	24.07	5.61	20	
1,2,3-Trichlorobenzene	33.67	1.0	20	0	168	69 - 129	30.97	8.35	20	S
1,2,3-Trichloropropane	20.27	1.0	20	0	101	73 - 122	20.06	1.05	20	
1,2,4-Trichlorobenzene	32.2	1.0	20	0	161	69 - 130	31.19	3.19	20	S
1,2,4-Trimethylbenzene	23.09	1.0	20	0	115	76 - 124	23.68	2.53	20	
1,2-Dibromo-3-chloropropane	21.54	1.0	20	0	108	62 - 128	20.22	6.36	20	
1,2-Dibromoethane	21.44	1.0	20	0	107	77 - 121	21.5	0.279	20	
1,2-Dichlorobenzene	22.07	1.0	20	0	110	80 - 119	22.21	0.637	20	
1,2-Dichloroethane	21.01	1.0	20	0	105	73 - 128	22.11	5.12	20	
1,2-Dichloropropane	23.17	1.0	20	0	116	78 - 122	23.92	3.2	20	
1,3,5-Trimethylbenzene	23.37	1.0	20	0	117	75 - 124	23.97	2.54	20	
1,3-Dichlorobenzene	22.4	1.0	20	0	112	80 - 119	22.8	1.75	20	
1,3-Dichloropropane	22.19	1.0	20	0	111	80 - 119	21.93	1.15	20	
1,4-Dichlorobenzene	22.19	1.0	20	0	111	79 - 118	22.64	2.02	20	
2,2-Dichloropropane	22.76	1.0	20	0	114	60 - 139	23.79	4.42	20	
2-Butanone	42.67	2.0	40	0	107	56 - 143	41.61	2.5	20	
2-Chlorotoluene	22.99	1.0	20	0	115	79 - 122	23.55	2.4	20	
2-Hexanone	39.34	2.0	40	0	98.3	57 - 139	37.64	4.42	20	
4-Chlorotoluene	22.49	1.0	20	0	112	78 - 122	23.25	3.34	20	
4-Isopropyltoluene	24.1	1.0	20	0	120	77 - 127	24.8	2.87	20	
4-Methyl-2-pentanone	38.55	2.0	40	0	96.4	67 - 130	37.48	2.79	20	
Acetone	50.76	2.0	40	2.691	120	39 - 160	49.58	2.36	20	
Benzene	22.87	1.0	20	0	114	79 - 120	23.91	4.48	20	
Bromobenzene	21.85	1.0	20	0	109	80 - 120	22.13	1.3	20	
Bromochloromethane	21.25	1.0	20	0	106	78 - 123	21.54	1.37	20	
Bromodichloromethane	21.52	1.0	20	0	108	79 - 125	22.11	2.66	20	
Bromoform	19.92	1.0	20	0	99.6	66 - 130	19.21	3.65	20	
Bromomethane	20.31	1.0	20	0	102	53 - 141	21.02	3.4	20	

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368460 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20090556-01MSD** Units: **UG/L** Analysis Date: **11-Sep-2020 15:49**
Client ID: Run ID: **VOA6_368460** SeqNo: **5736825** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	40.14	2.0	40	0	100	64 - 133	42.07	4.69	20	
Carbon tetrachloride	21.58	1.0	20	0	108	72 - 136	22.62	4.67	20	
Chlorobenzene	22.46	1.0	20	0	112	82 - 118	22.95	2.18	20	
Chloroethane	20.8	1.0	20	0	104	60 - 138	19.76	5.14	20	
Chloroform	22.42	1.0	20	0	112	79 - 124	22.97	2.42	20	
Chloromethane	12.55	1.0	20	0	62.7	50 - 139	12.92	2.93	20	
cis-1,2-Dichloroethene	22.2	1.0	20	0	111	78 - 123	22.96	3.34	20	
cis-1,3-Dichloropropene	21.91	1.0	20	0	110	75 - 124	22.46	2.47	20	
Dibromochloromethane	20.76	1.0	20	0	104	74 - 126	21	1.17	20	
Dibromomethane	21.23	1.0	20	0	106	79 - 123	21.59	1.67	20	
Dichlorodifluoromethane	5.496	1.0	20	0	27.5	32 - 152	6.003	8.81	20	S
Ethylbenzene	23.03	1.0	20	0	115	79 - 121	23.82	3.36	20	
Hexachlorobutadiene	33.28	1.0	20	0	166	66 - 134	34.07	2.33	20	S
Isopropylbenzene	23.8	1.0	20	0	119	72 - 131	24	0.849	20	
m,p-Xylene	45.79	2.0	40	0	114	80 - 121	46.81	2.21	20	
Methylene chloride	21.15	2.0	20	0	106	74 - 124	21.49	1.58	20	
Naphthalene	30.36	1.0	20	0	152	61 - 128	27.28	10.7	20	S
n-Butylbenzene	25.03	1.0	20	0	125	75 - 128	25.54	2.02	20	
n-Propylbenzene	23.98	1.0	20	0	120	76 - 126	24.81	3.4	20	
o-Xylene	22.73	1.0	20	0	114	78 - 122	23.34	2.66	20	
sec-Butylbenzene	24.34	1.0	20	0	122	77 - 126	24.93	2.38	20	
Styrene	22.19	1.0	20	0	111	78 - 123	22.49	1.3	20	
tert-Butylbenzene	23.88	1.0	20	0	119	78 - 124	24.61	3.01	20	
Tetrachloroethene	23.94	1.0	20	0	120	74 - 129	24.94	4.1	20	
Toluene	23.22	1.0	20	0	116	80 - 121	23.63	1.74	20	
trans-1,2-Dichloroethene	22.62	1.0	20	0	113	75 - 124	23.58	4.14	20	
trans-1,3-Dichloropropene	20.53	1.0	20	0	103	73 - 127	21.5	4.63	20	
Trichloroethene	23.1	1.0	20	0	116	79 - 123	23.86	3.24	20	
Trichlorofluoromethane	19.97	1.0	20	0	99.8	65 - 141	21.11	5.56	20	
Vinyl chloride	15.68	1.0	20	0	78.4	58 - 137	16.67	6.16	20	
Surr: 1,2-Dichloroethane-d4	*44.45*	*1.0*	*50*	*0*	*88.9*	*81 - 118*	*44.17*	*0.628*	*20*	
Surr: 4-Bromofluorobenzene	*48.61*	*1.0*	*50*	*0*	*97.2*	*85 - 114*	*47.85*	*1.58*	*20*	
Surr: Dibromofluoromethane	*48.22*	*1.0*	*50*	*0*	*96.4*	*80 - 119*	*47.61*	*1.27*	*20*	
Surr: Toluene-d8	*51.54*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.46*	*0.153*	*20*	

ALS Houston, US Date: 15-Sep-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20090534

QC BATCH REPORT

Batch ID:	**R368460 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20090534-01 HS20090534-02

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20090534

QC BATCH REPORT

Batch ID: R368550 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-091420** Units: **mg/L** Analysis Date: **14-Sep-2020 10:48**
Client ID: Run ID: **ICS-Integrion_368550** SeqNo: **5738610** 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-091420** Units: **mg/L** Analysis Date: **14-Sep-2020 11:06**
Client ID: Run ID: **ICS-Integrion_368550** SeqNo: **5738611** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.46	0.500	20	0	97.3	80 - 120				
Sulfate	19.13	0.500	20	0	95.6	80 - 120				

MS Sample ID: **HS20090405-01MS** Units: **mg/L** Analysis Date: **14-Sep-2020 15:14**
Client ID: Run ID: **ICS-Integrion_368550** SeqNo: **5738616** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	33.09	0.500	10	23.49	96.1	80 - 120				
Sulfate	9.733	0.500	10	0.0916	96.4	80 - 120				

MSD Sample ID: **HS20090405-01MSD** Units: **mg/L** Analysis Date: **14-Sep-2020 15:32**
Client ID: Run ID: **ICS-Integrion_368550** SeqNo: **5738617** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	33.01	0.500	10	23.49	95.2	80 - 120	33.09	0.248	20	
Sulfate	9.742	0.500	10	0.0916	96.5	80 - 120	9.733	0.0924	20	

The following samples were analyzed in this batch: HS20090534-01

ALS Houston, US Date: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20090534**

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	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: 15-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20090534

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090534-01	LH18/24-SP650_090920	Login	9/11/2020 8:30:28 AM	BAF	WET184
HS20090534-01	LH18/24-SP650_090920	Login	9/11/2020 8:30:28 AM	BAF	VOA081
HS20090534-02	Trip Blank	Login	9/11/2020 8:30:28 AM	BAF	VOA081

ALS Houston, US Date: 15-Sep-20

Sample Receipt Checklist

Work Order ID: HS20090534 **Date/Time Received:** **10-Sep-2020 10:00**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By:	/S/ Bernadette A. Fini	11-Sep-2020 08:32	**Reviewed by:**	/S/ RJ Modashia	11-Sep-2020 13:39
	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):	1.1°C/1.1°C UC/C	IR31
Cooler(s)/Kit(s):	45858	
Date/Time sample(s) sent to storage:	09/11/2020 0900	

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 Stanchiff 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

HS20090534
Bhate Environmental Associates. Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

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_090920	Water	09/09/20 / 14:00		3	3		HCL	
LH18/24-SP650_090920	Water	09/09/20 / 14:00		1		1	NONE	
Trip Blank	Water	09/09/20		2	2		HCL	

Additional Remarks: **Standard TAT**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	09/09/20	14:30		9/10/2020	10:00						

For Lab Use Only

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

Remarks

45858 VTC. 1.1 +1.3 cif e.c.

(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

45858

CUSTODY SEAL
Date: 9/9/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 09/10/20

45858

Must Deliver Next Business Day
Time and Tempature Sensitive!

45858

ORIGIN ID:SGRA (903) 930-6183
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14AUG18
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3111

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5868
REF: LHAAP 48 - H

RMA:

FedEx Express

FedEx
TRK# 0221 4380 9531 7292

THU - 10 SEP 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

HS20090534 8260 Raw Data

ALS WO# HS20090534

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.: HS20090534

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.: HS20090534

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.: HS20090534

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.: HS20090534

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.: HS20090534

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.: HS2009053

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.: HS2009053

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.: HS2009053

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.: HS2009053

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.: HS2009053

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

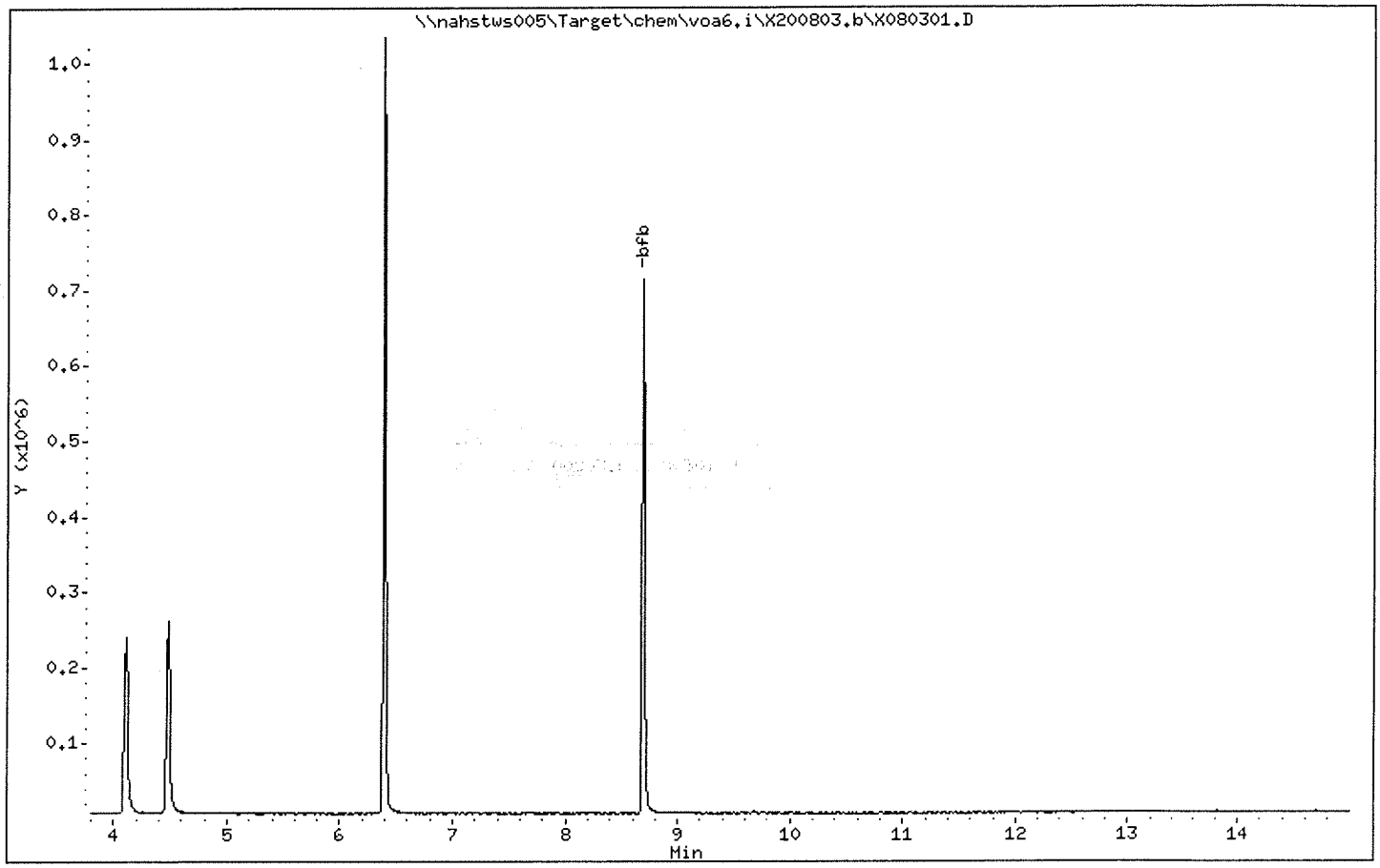
Sample Info: BFB;BFB;3;;BFB

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

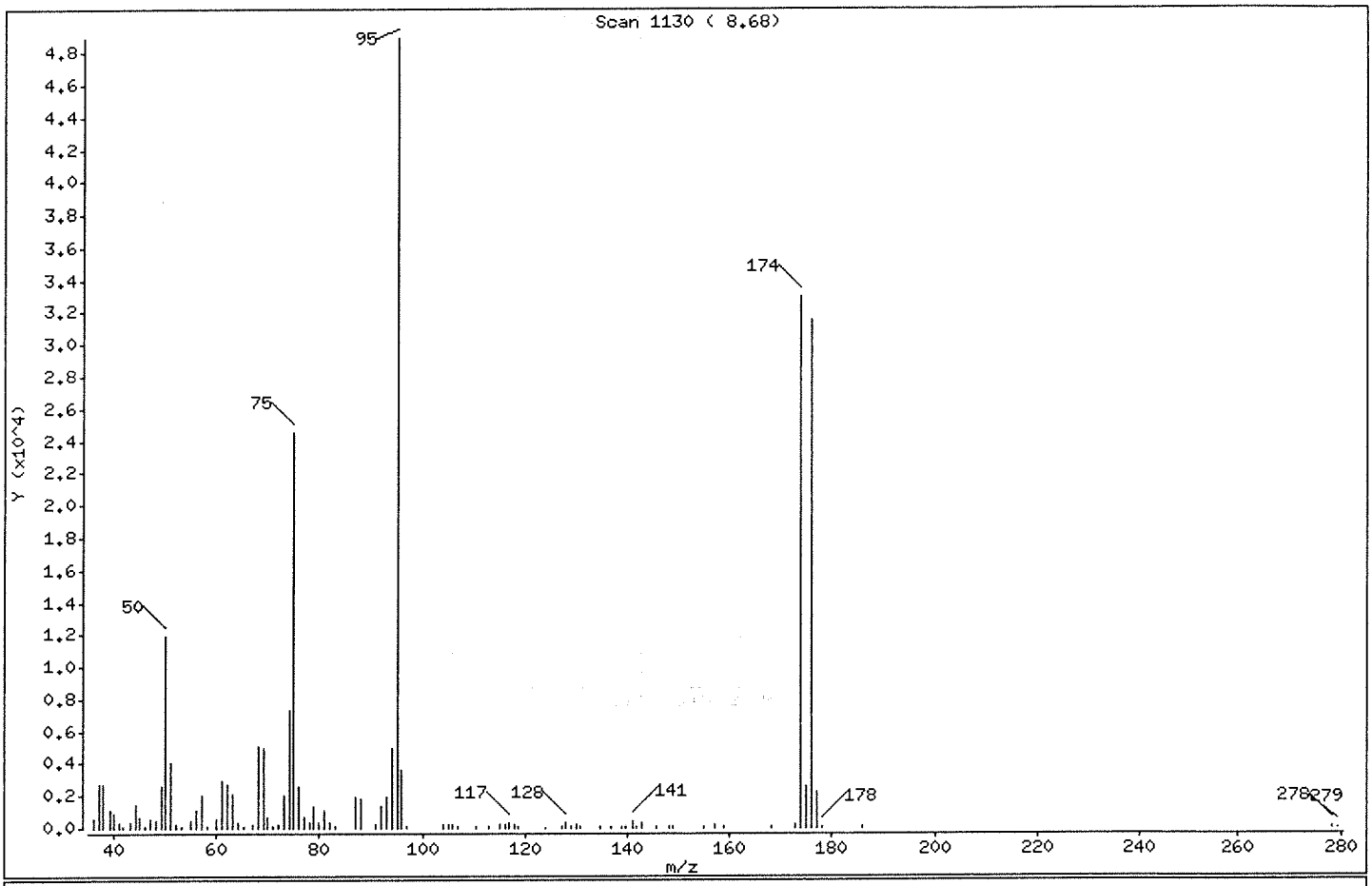
Volume Injected (uL): 2.0

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)

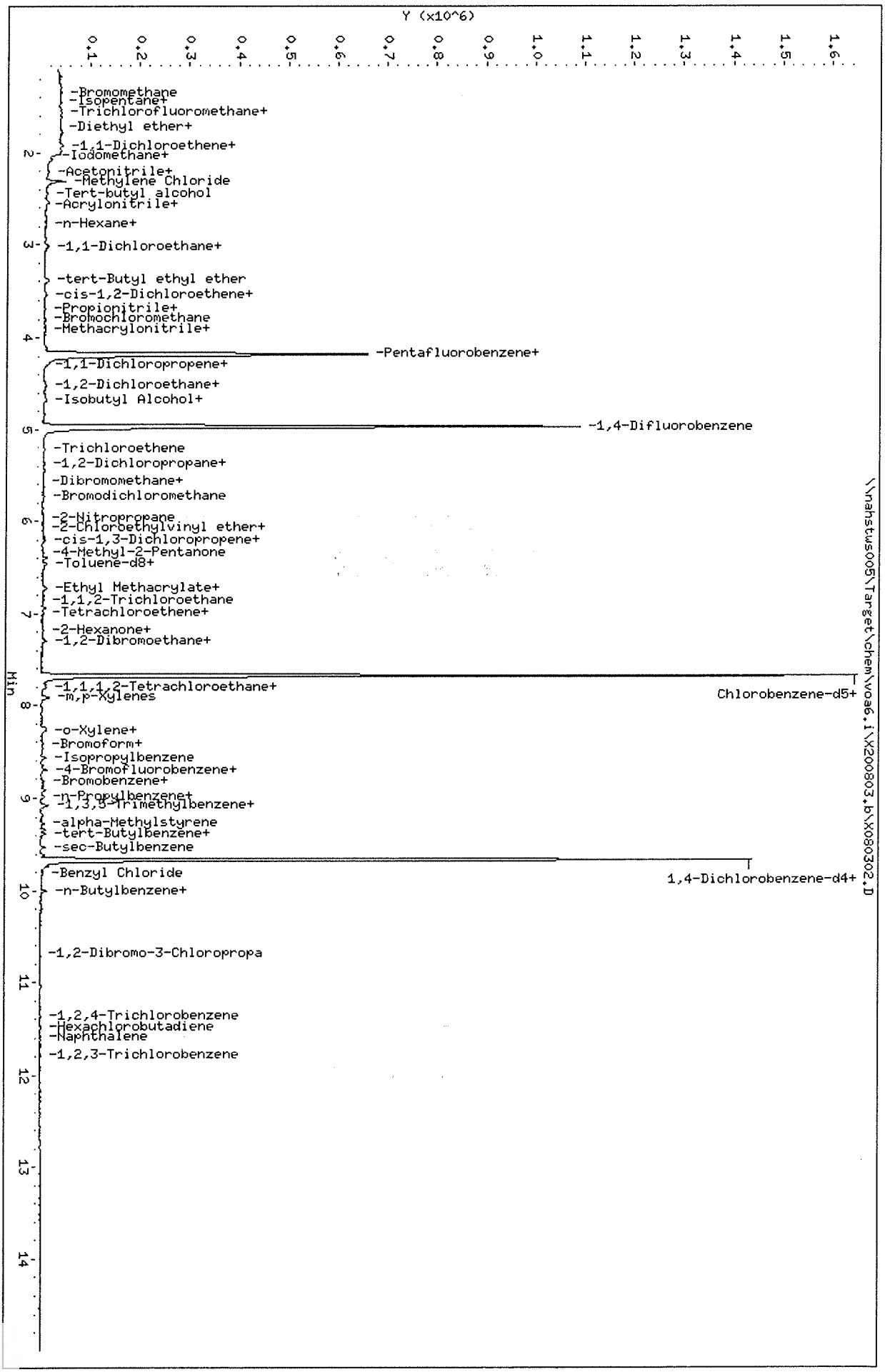
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

	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
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

\\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D

Page 4

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 1
Report Date: 22-Aug-2020 11:54

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

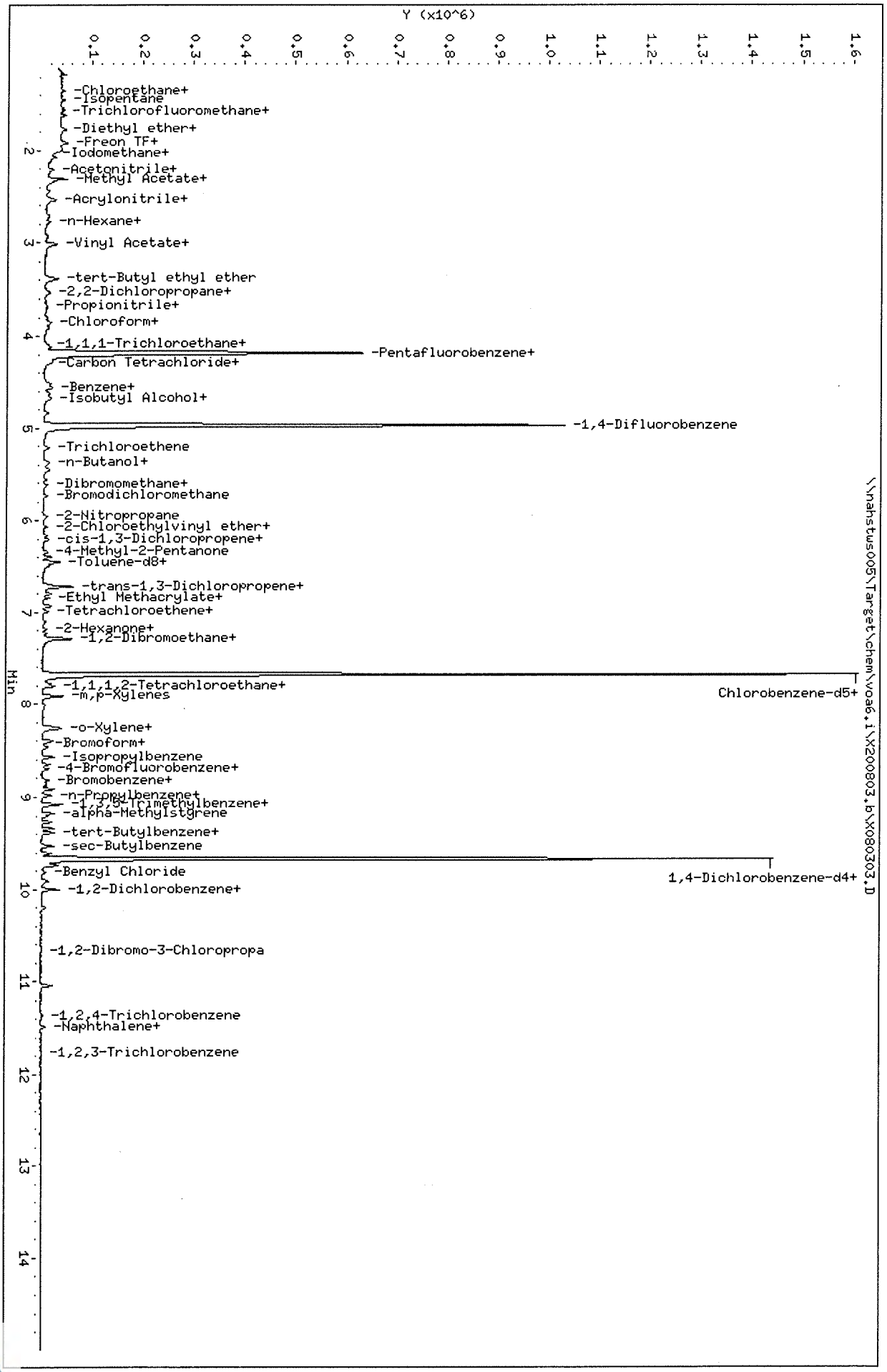
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	544079	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	825062	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	734728	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

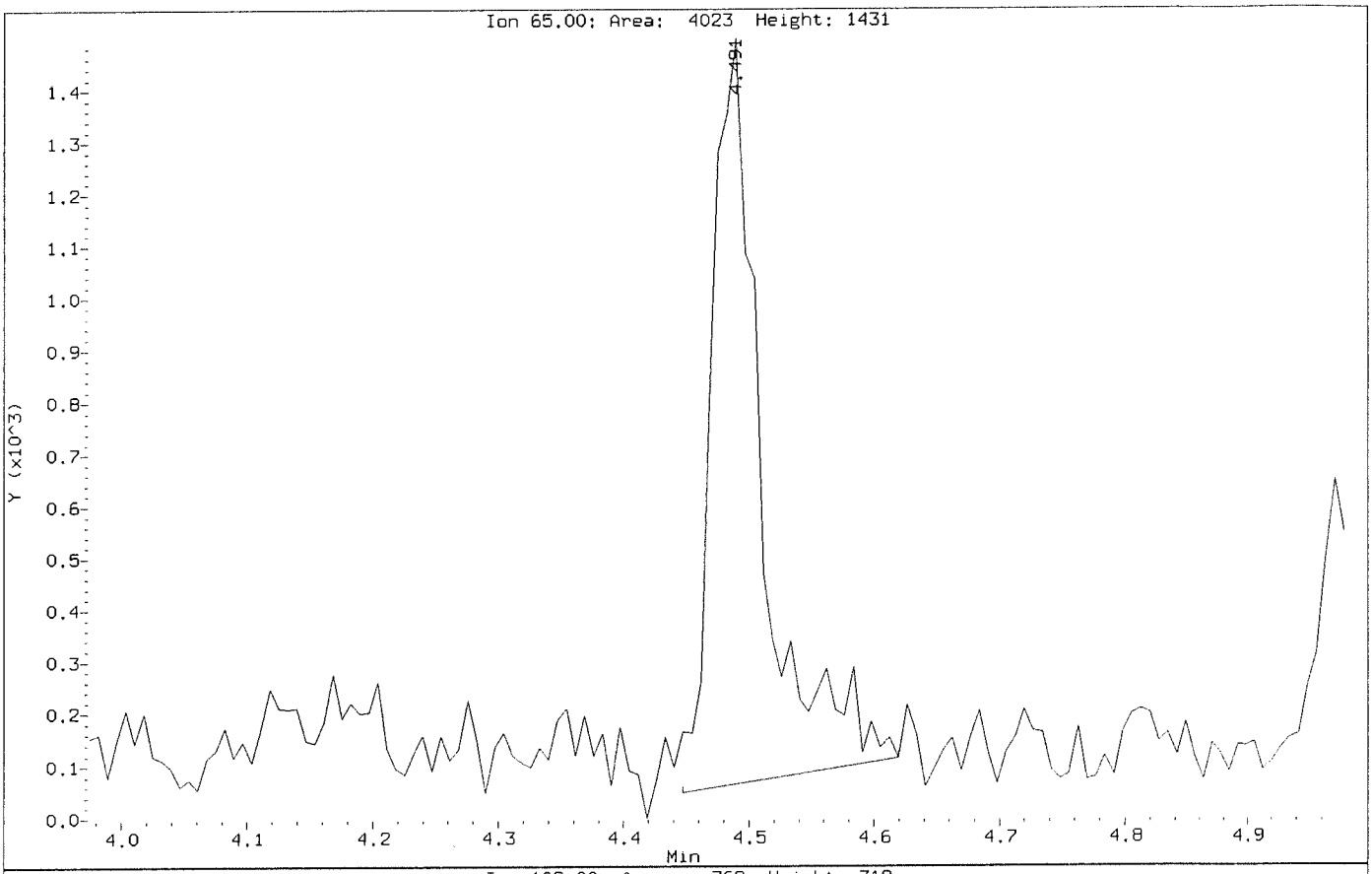


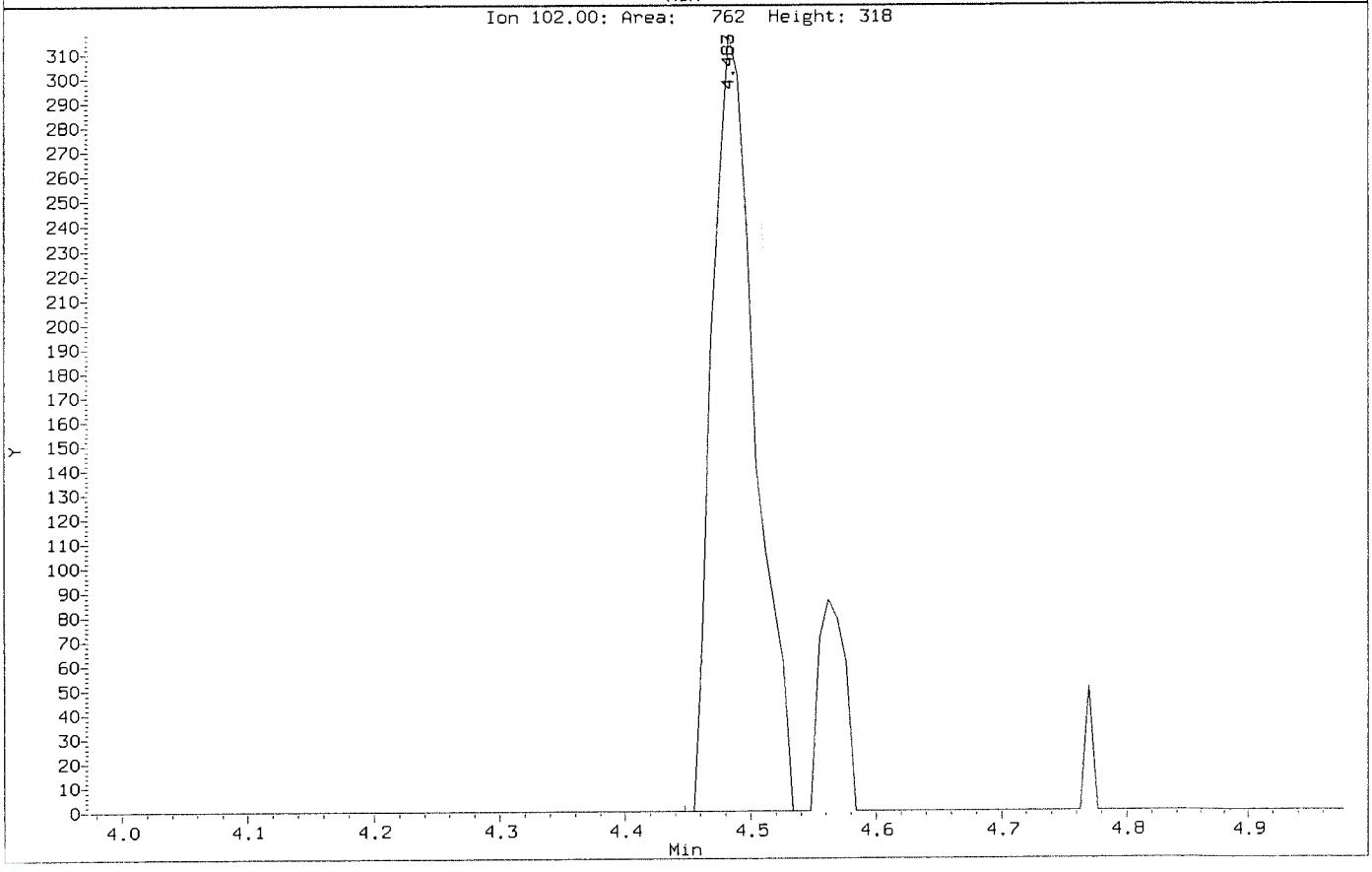
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Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

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

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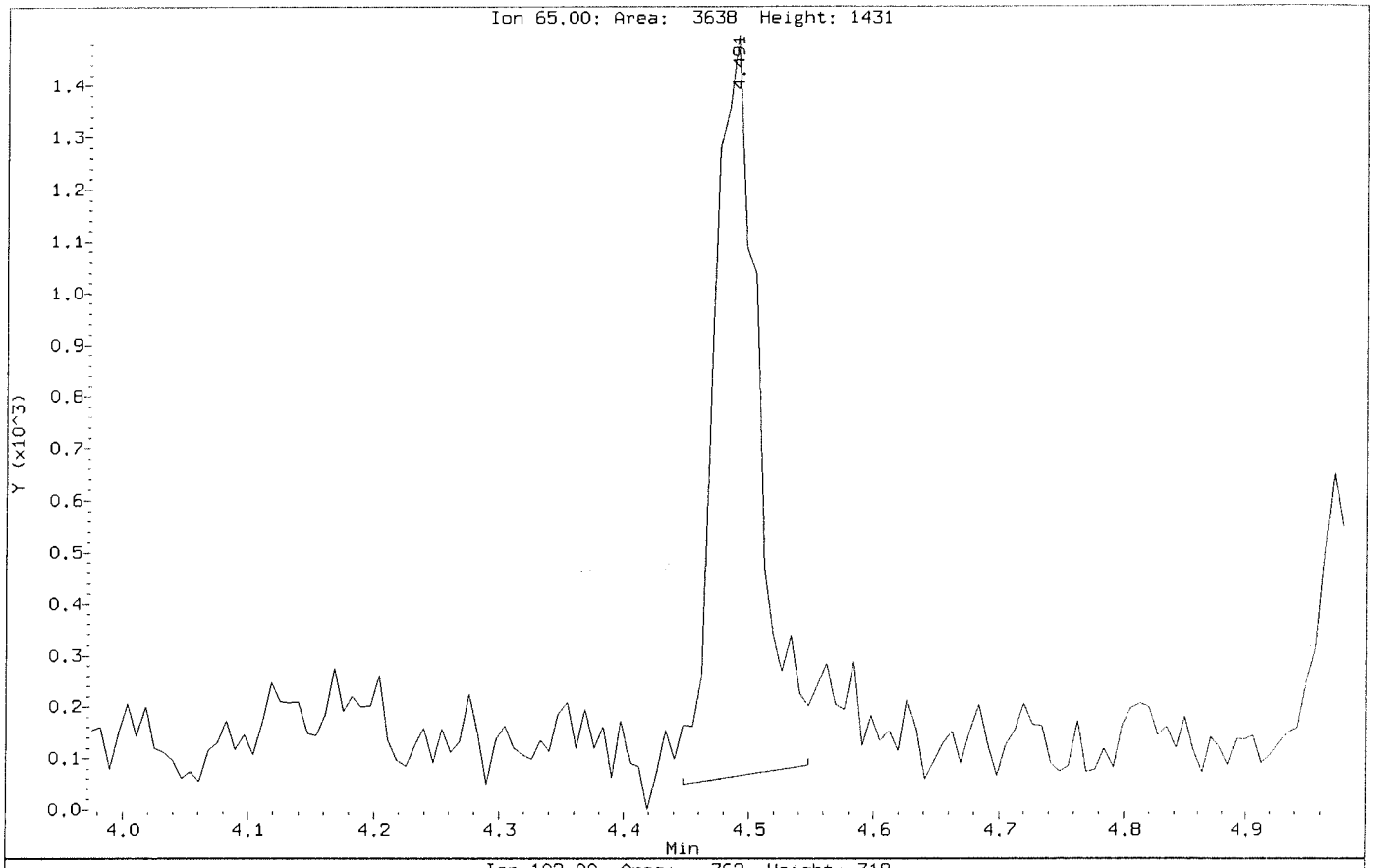
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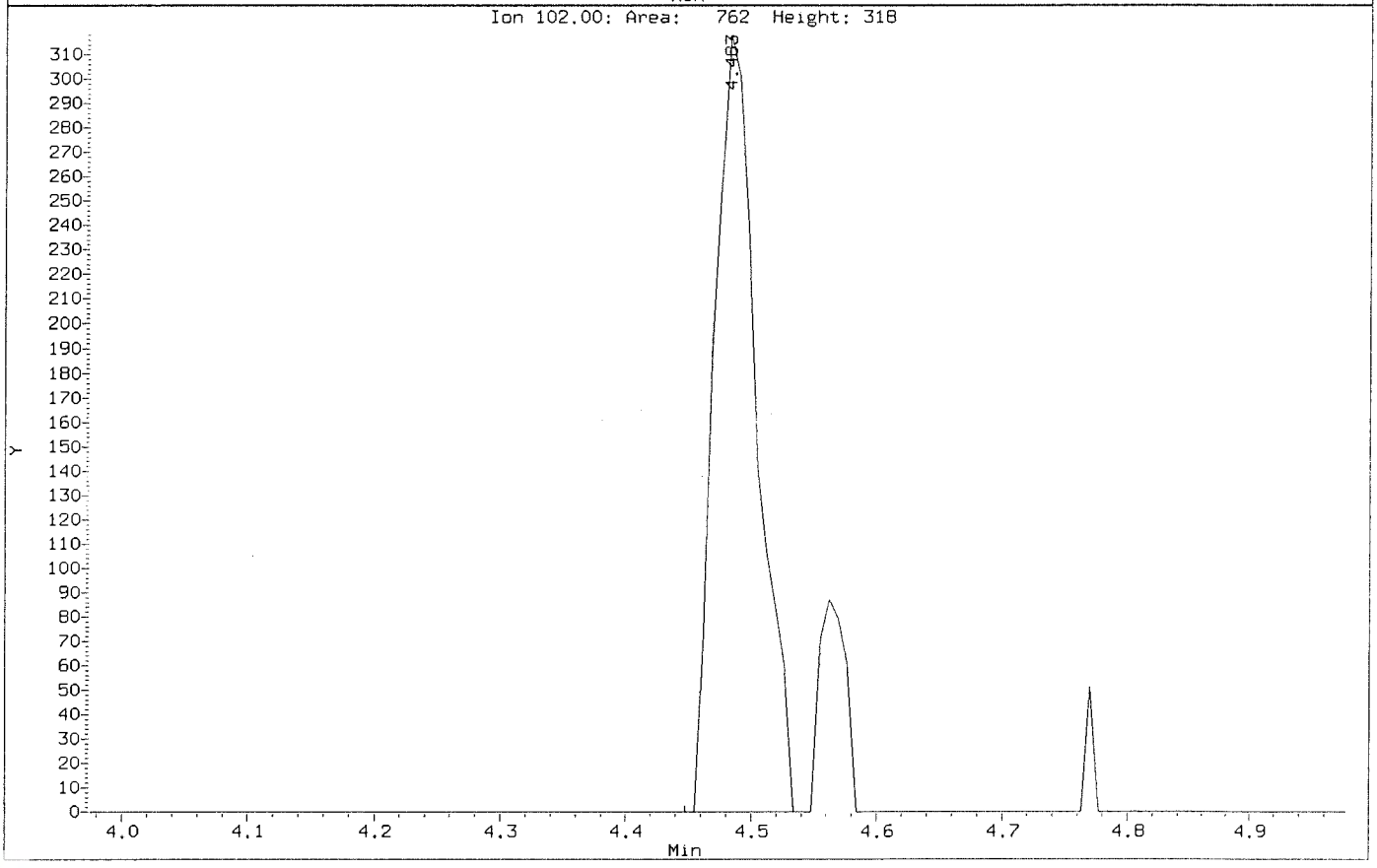




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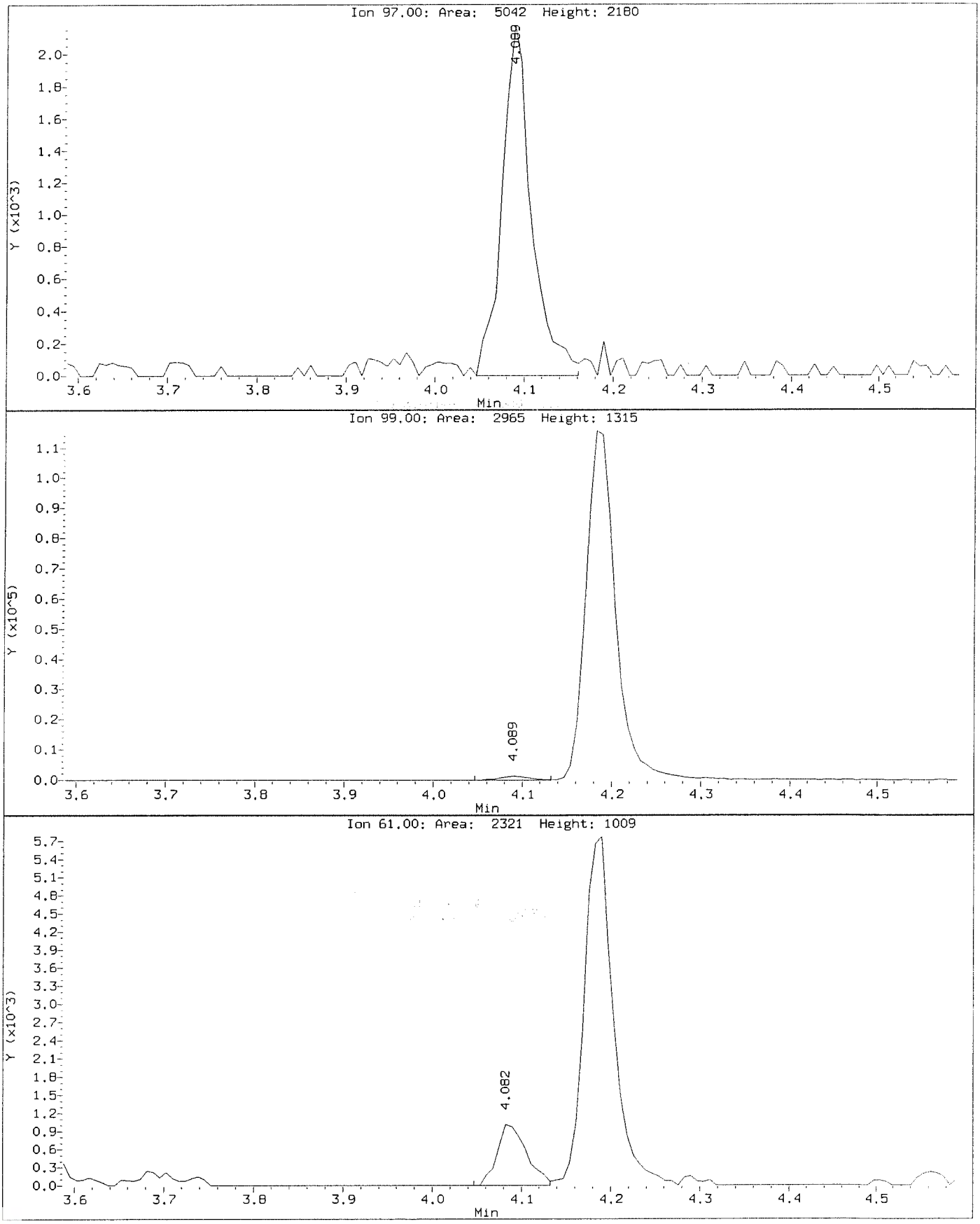
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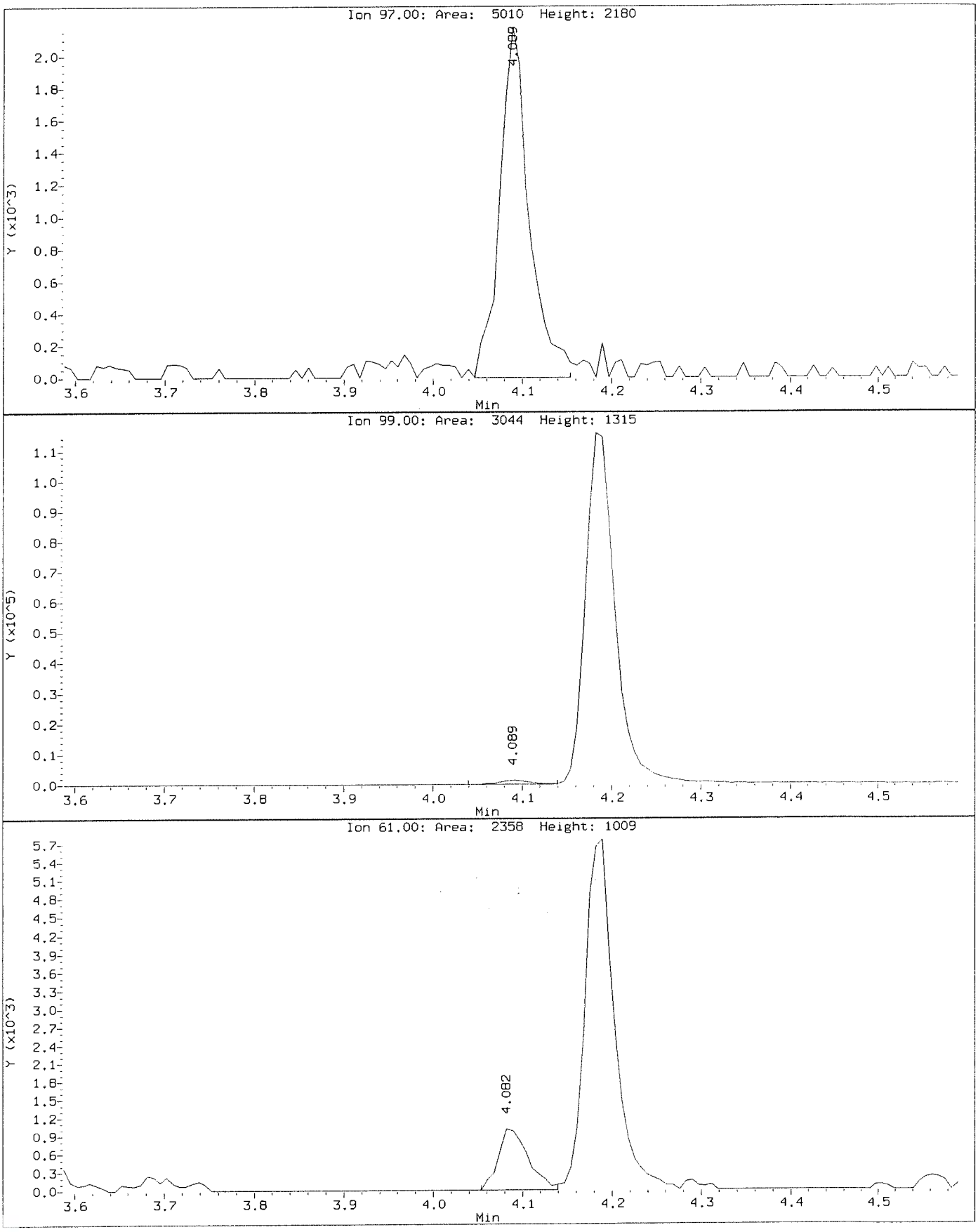
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



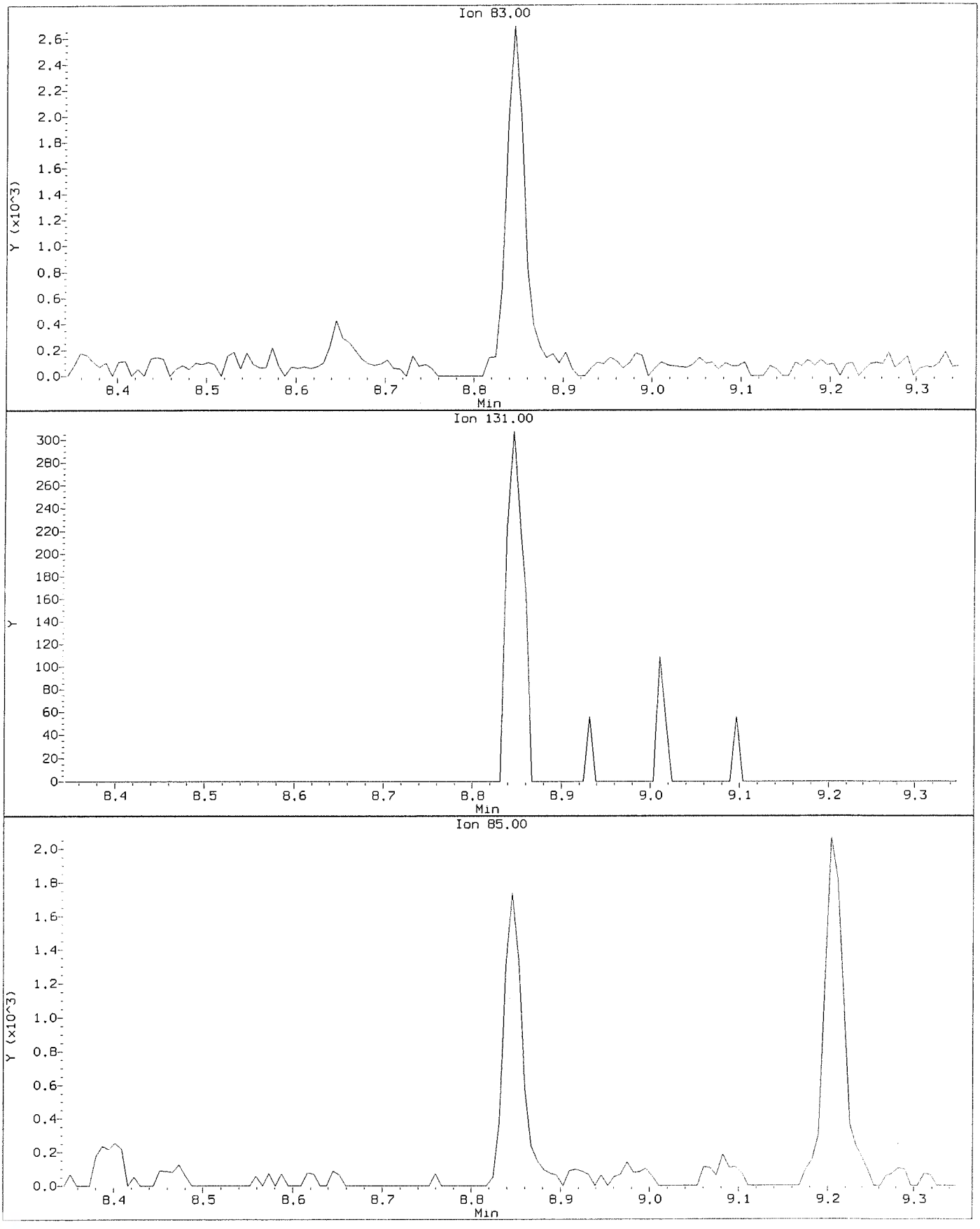
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



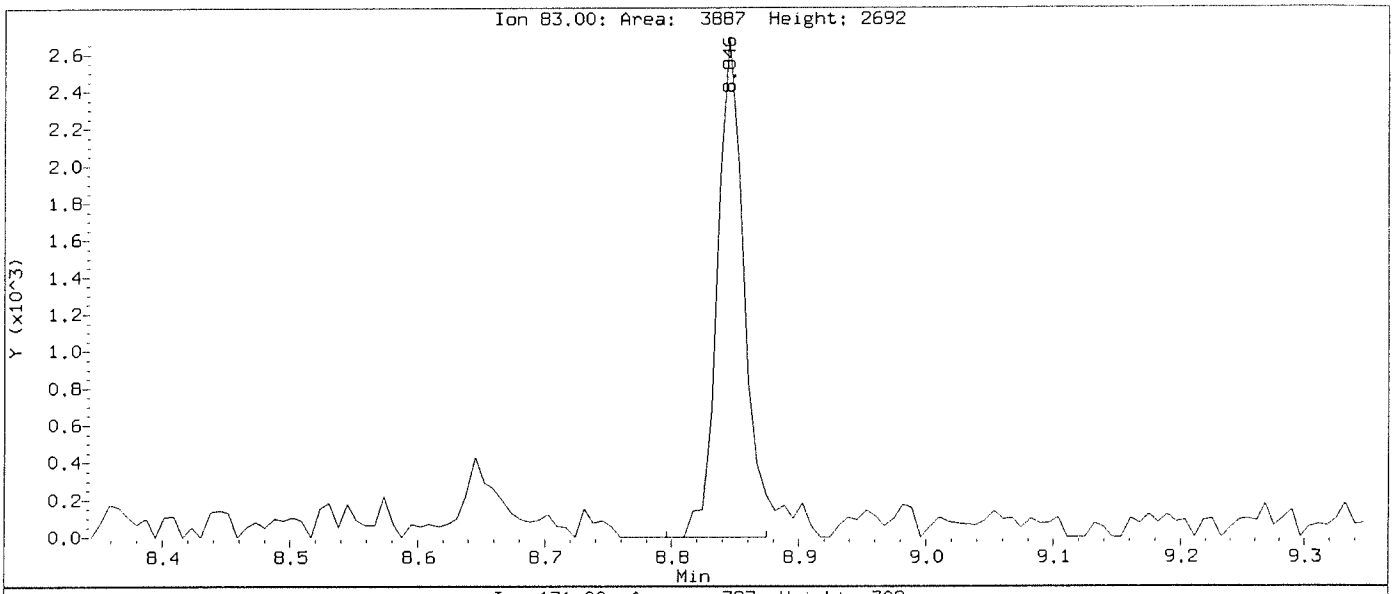
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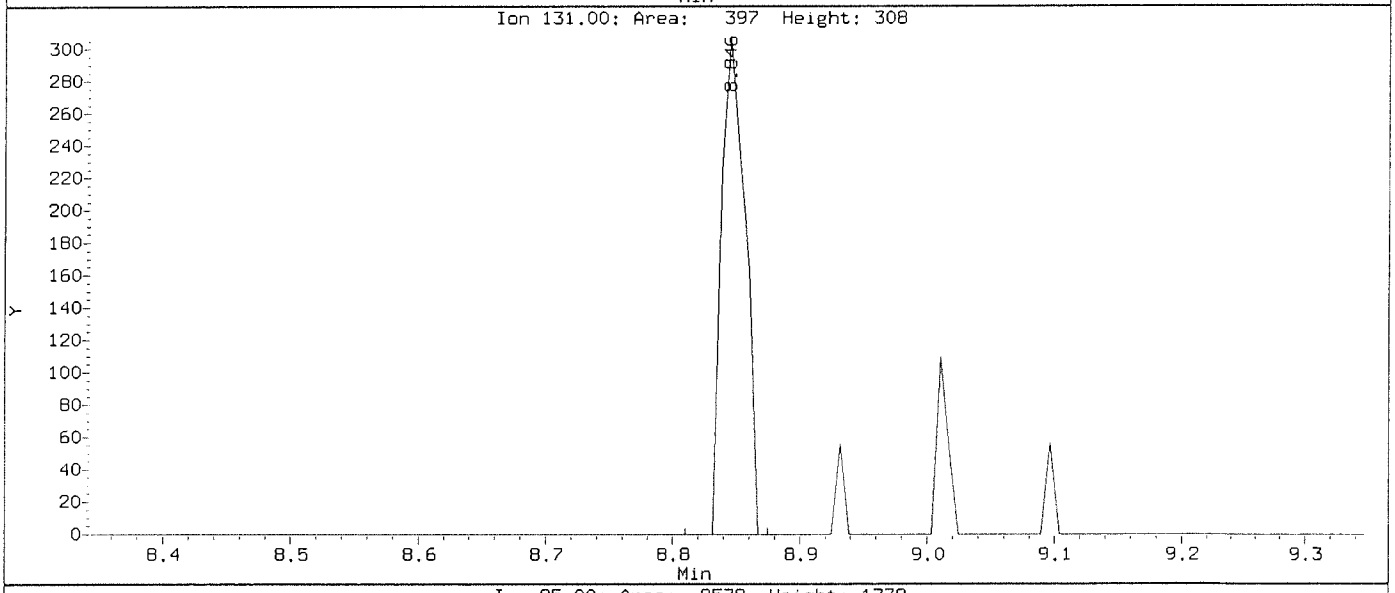
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

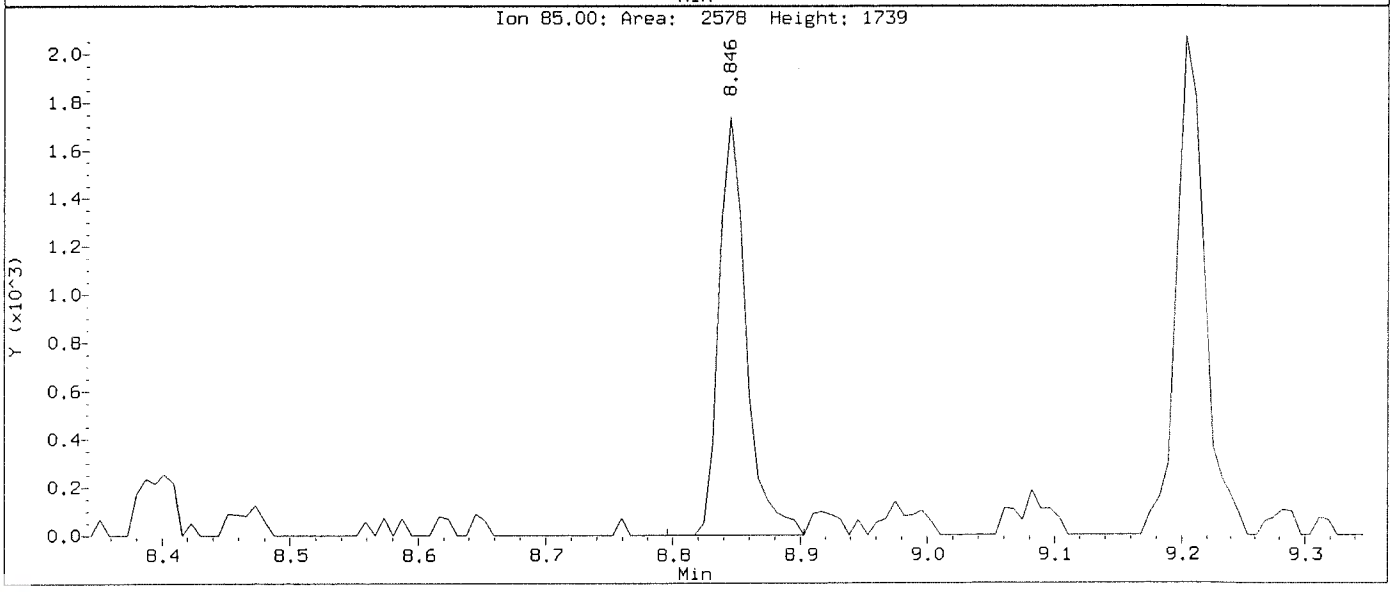


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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

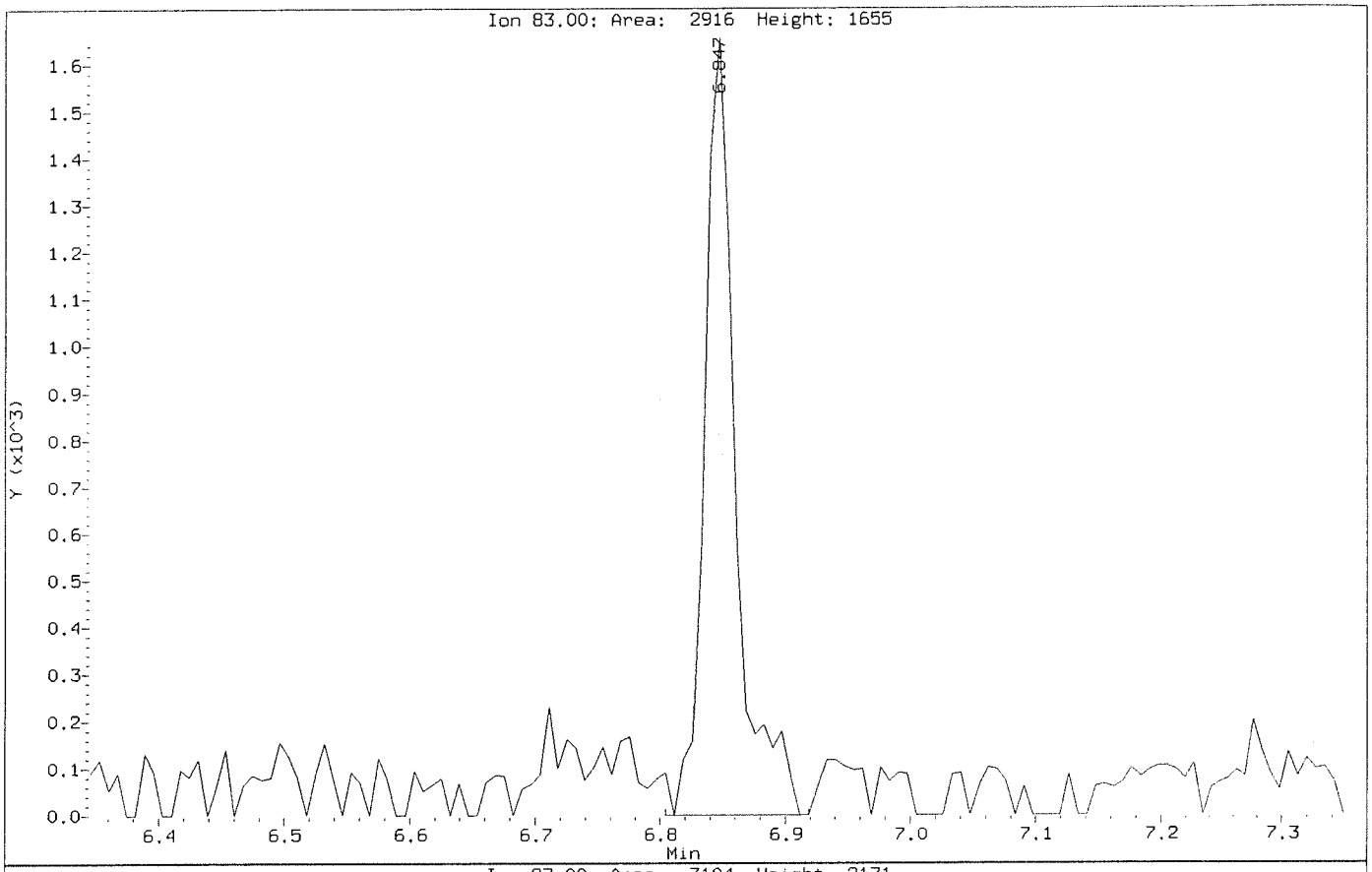


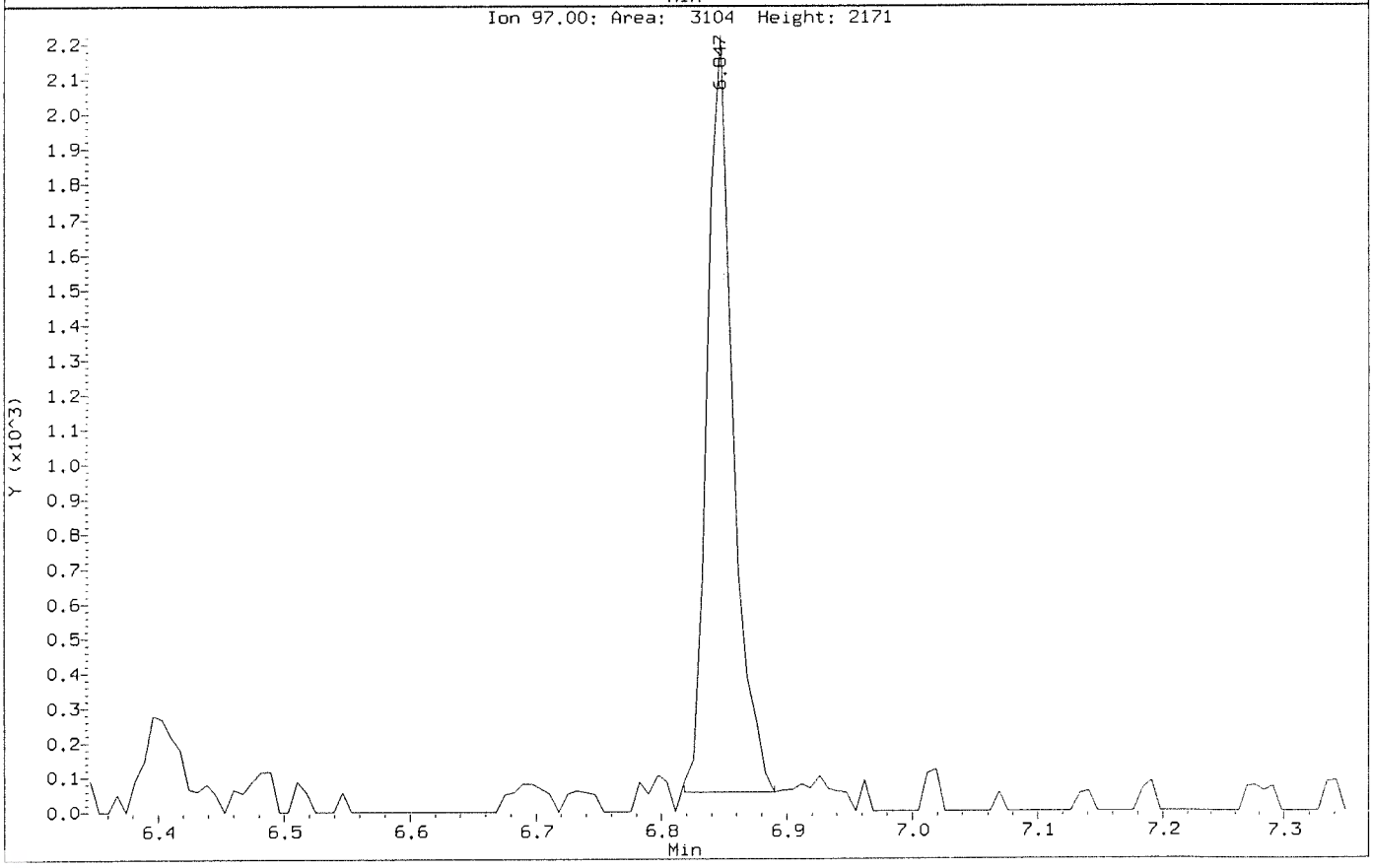




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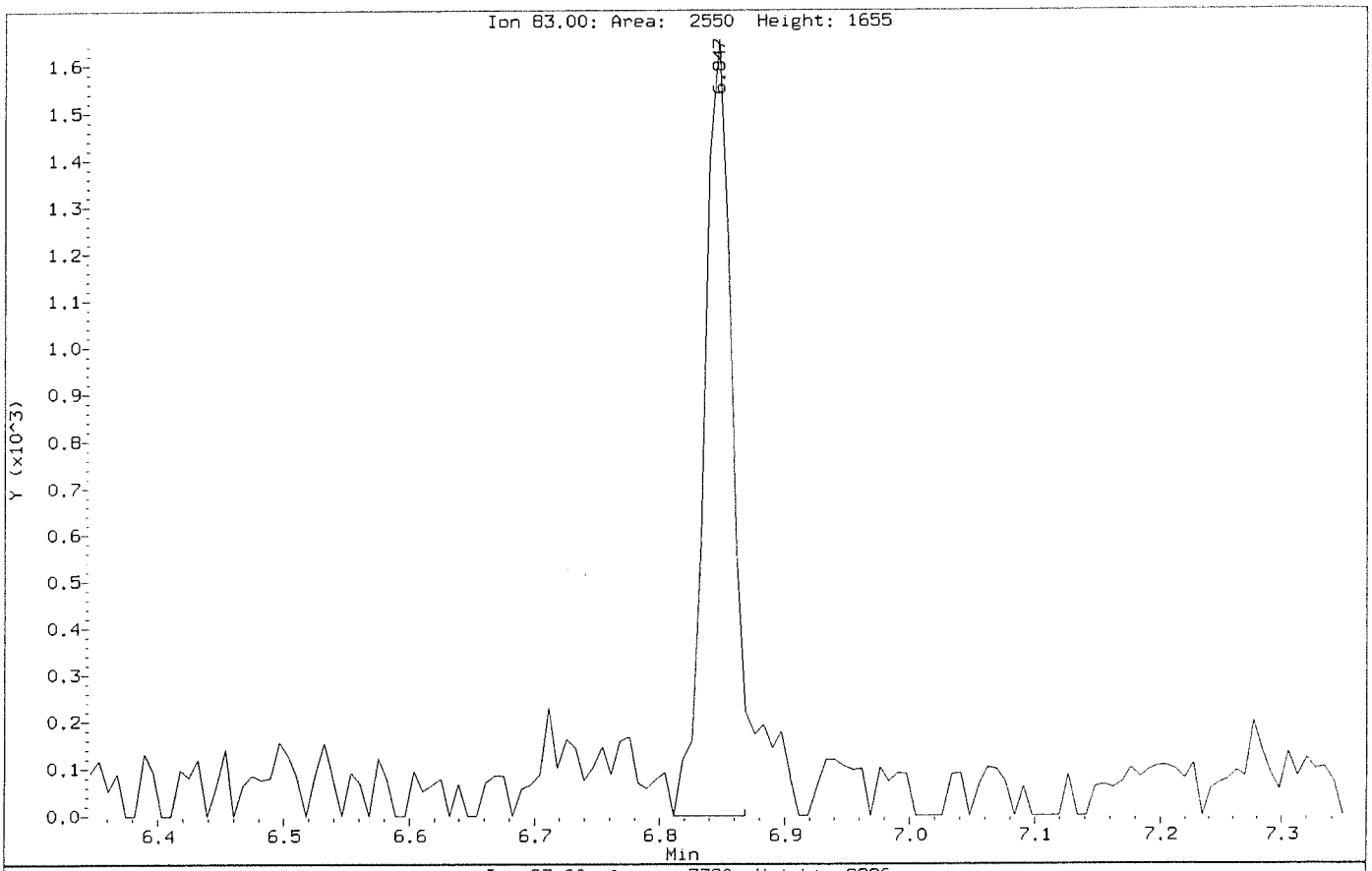
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CAS Number: 79-00-5

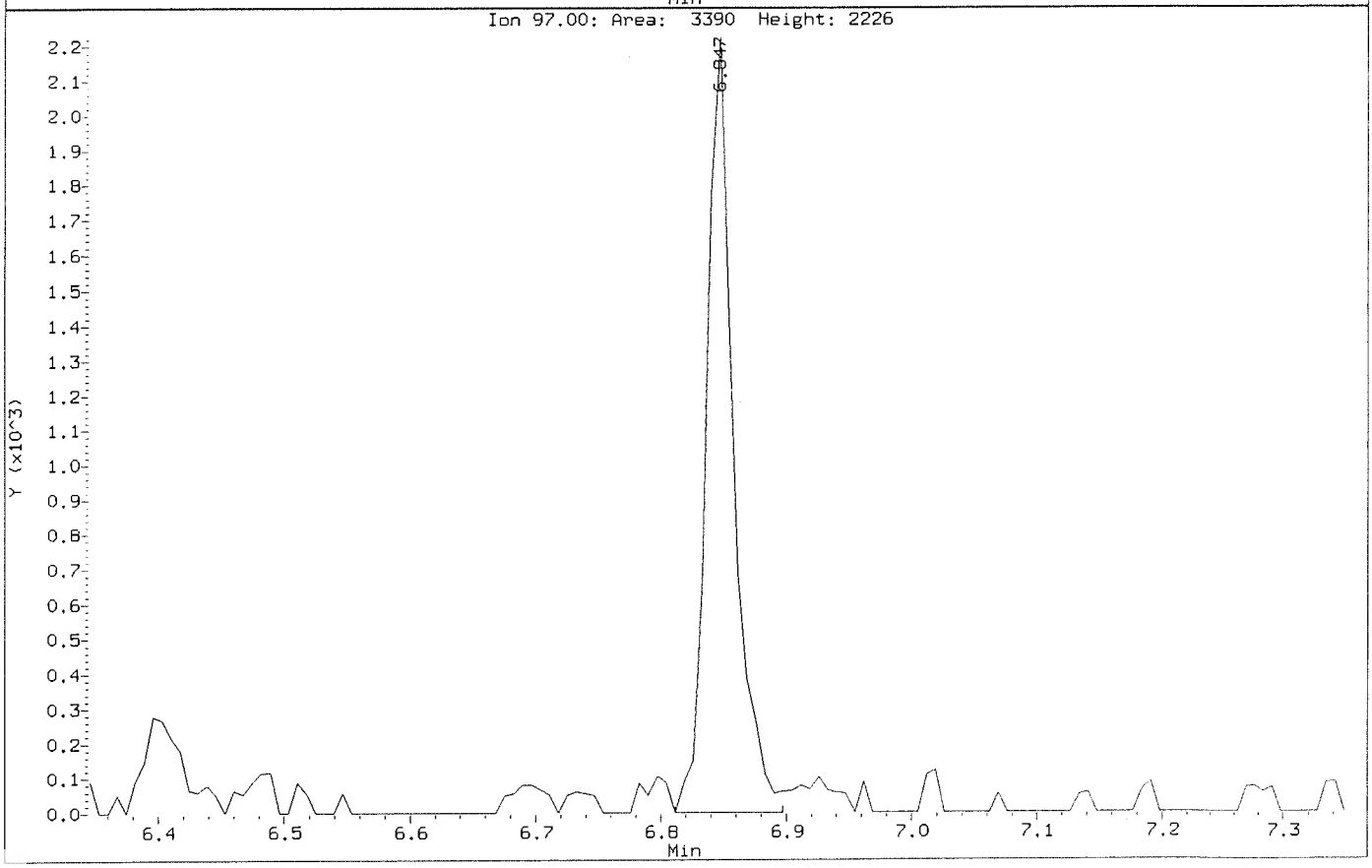




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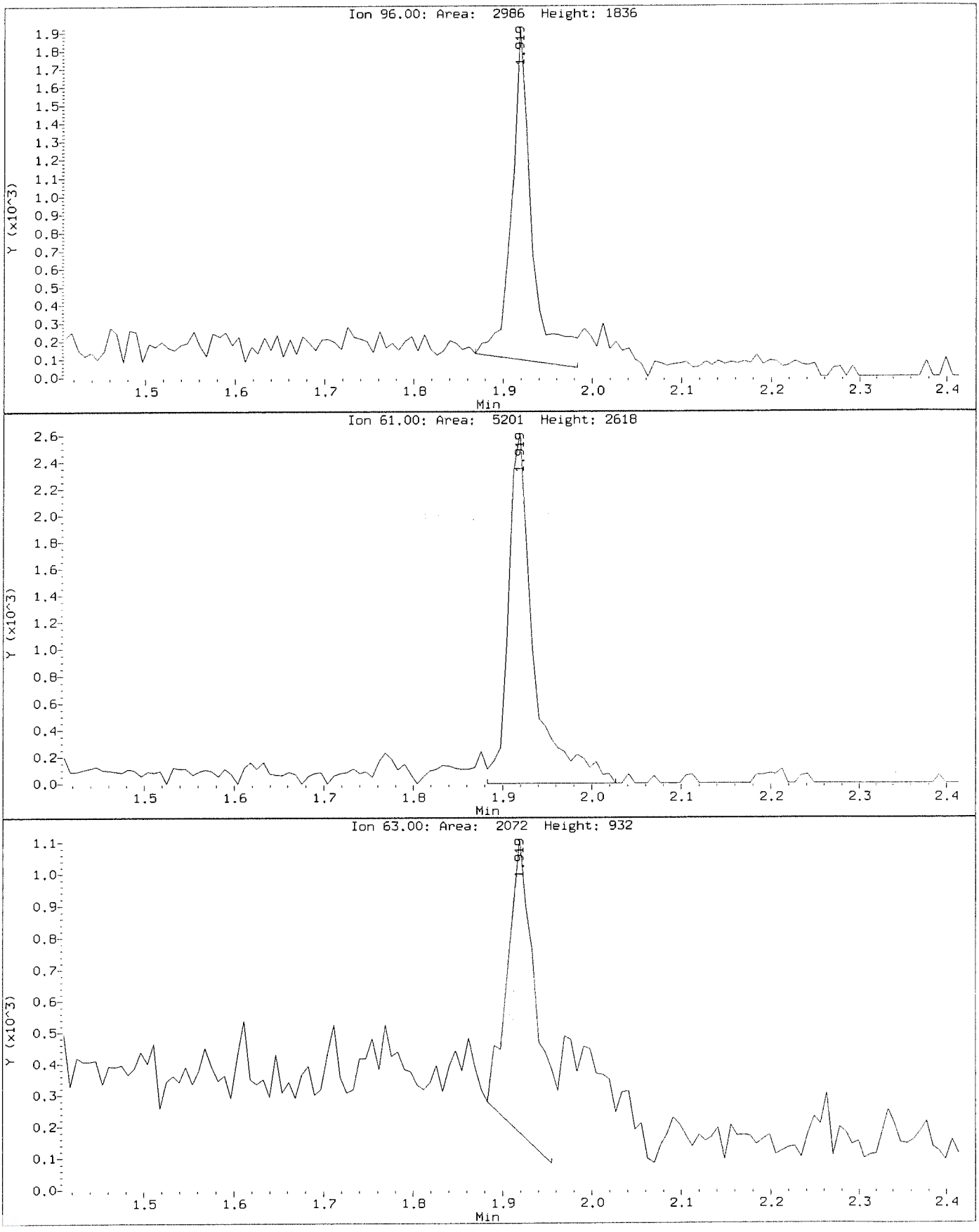
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CAS Number: 79-00-5





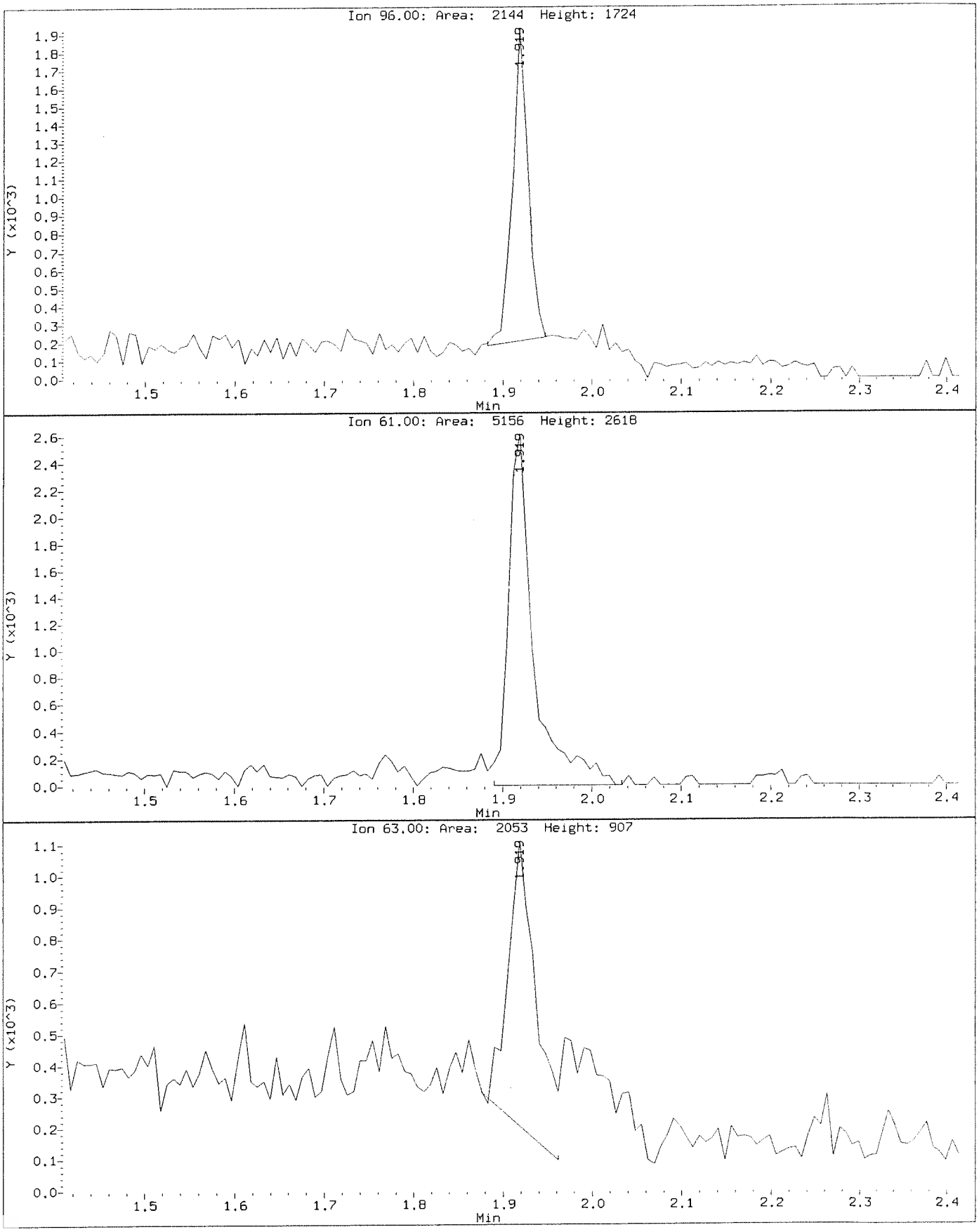
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Instrument: voa6.i
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



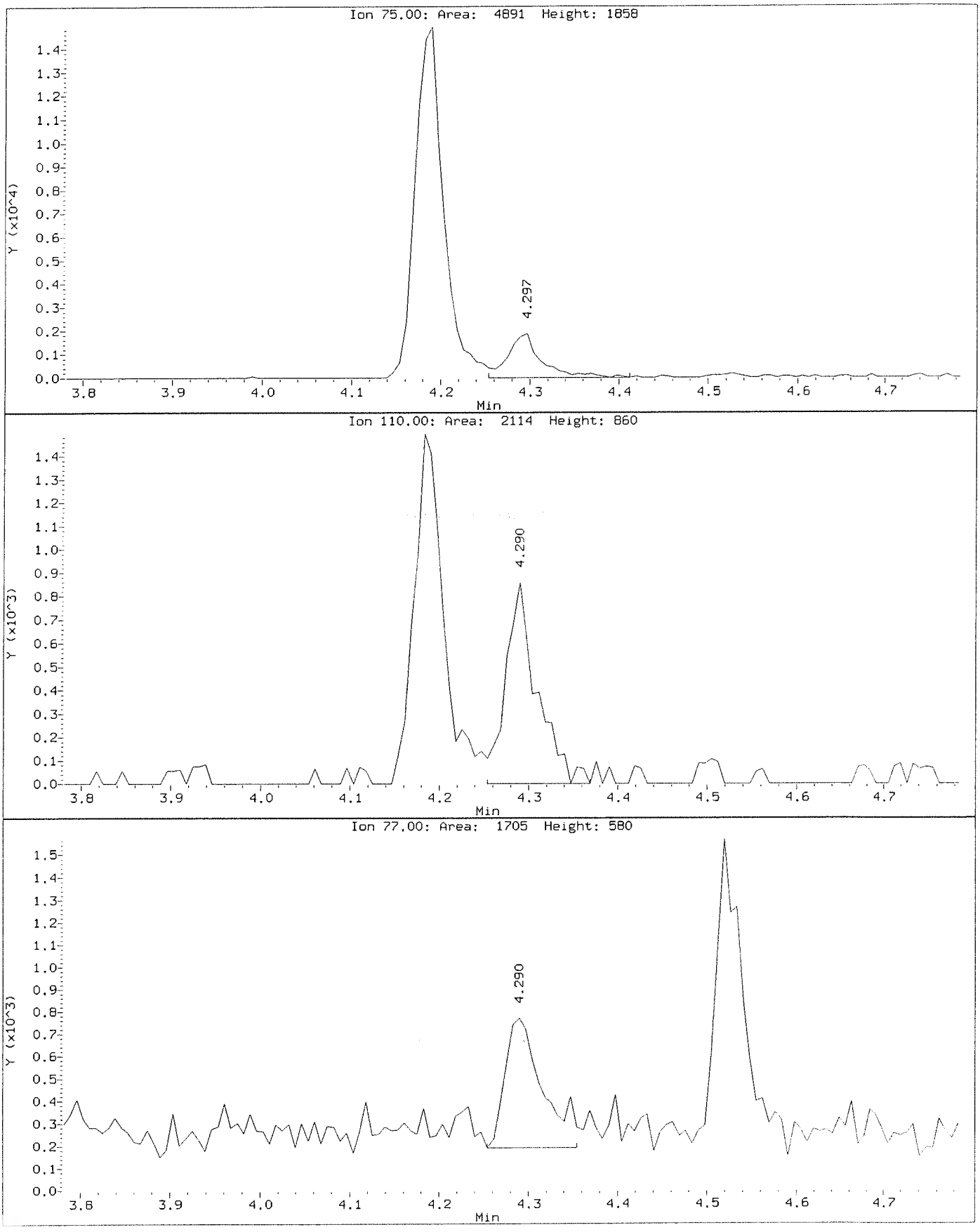
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Client Sample ID: VSTD000.5

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



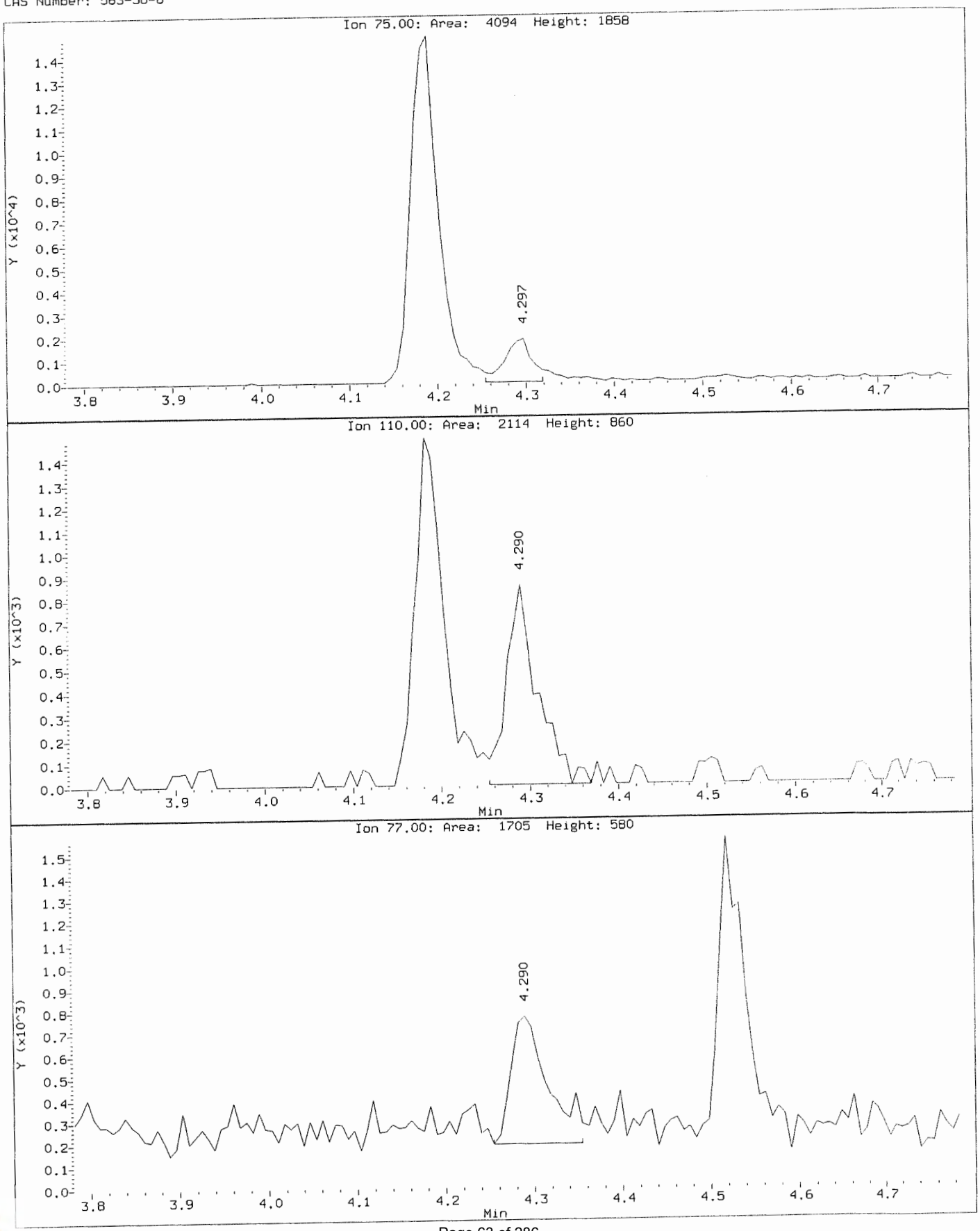
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



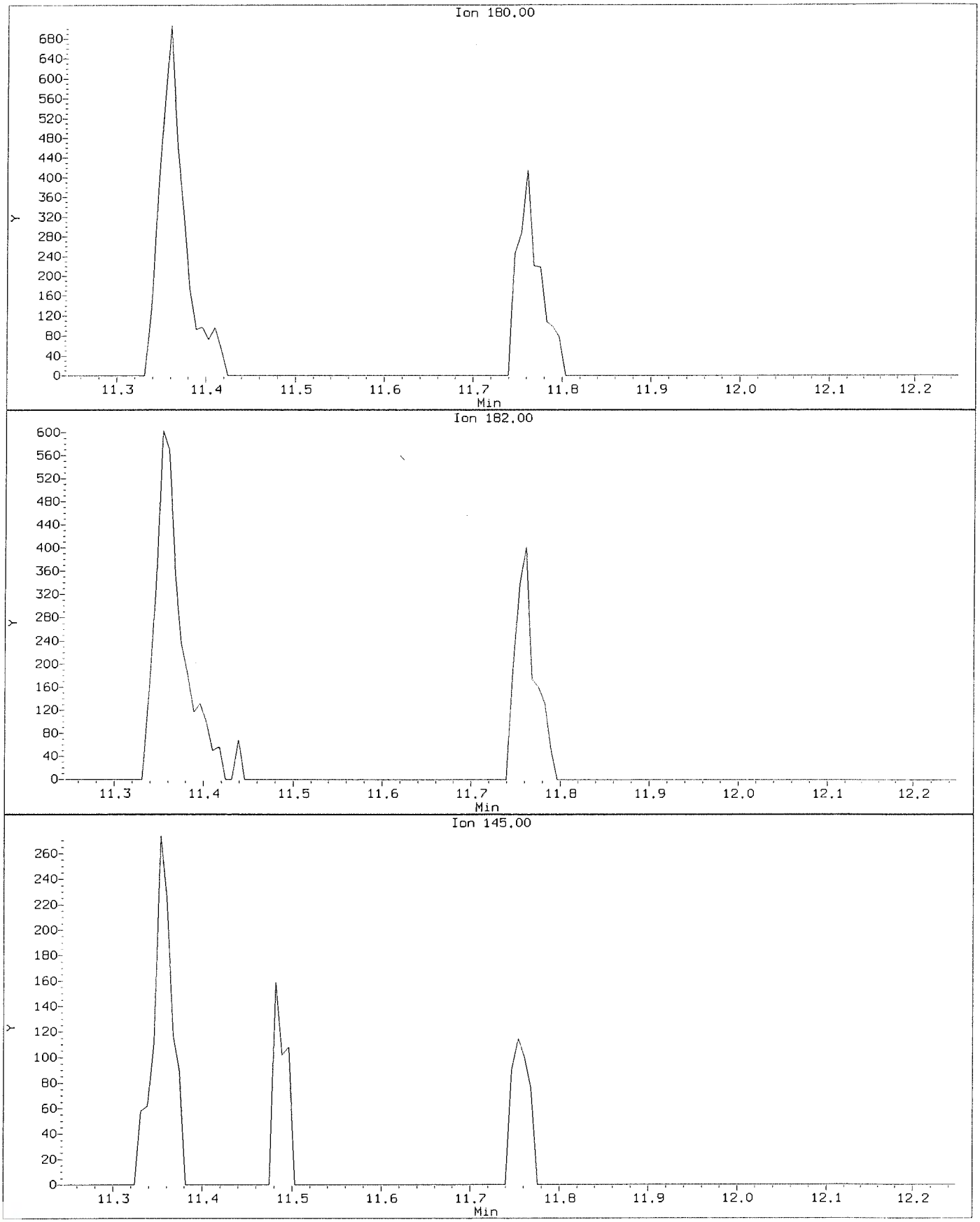
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



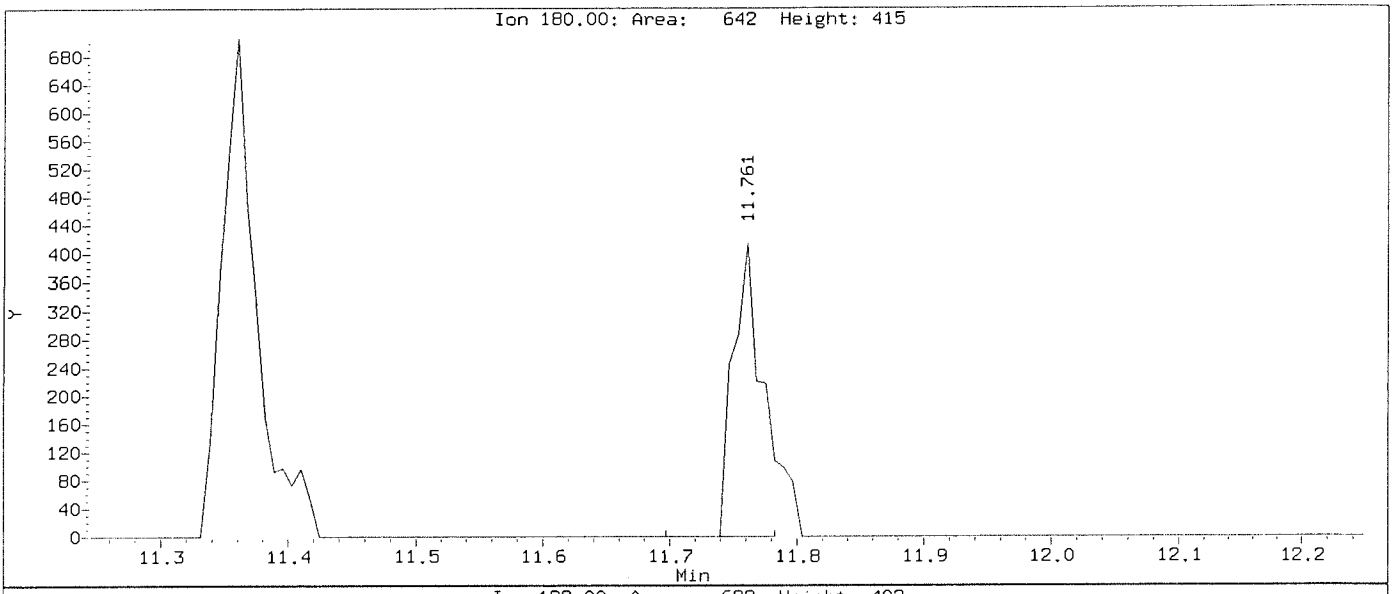
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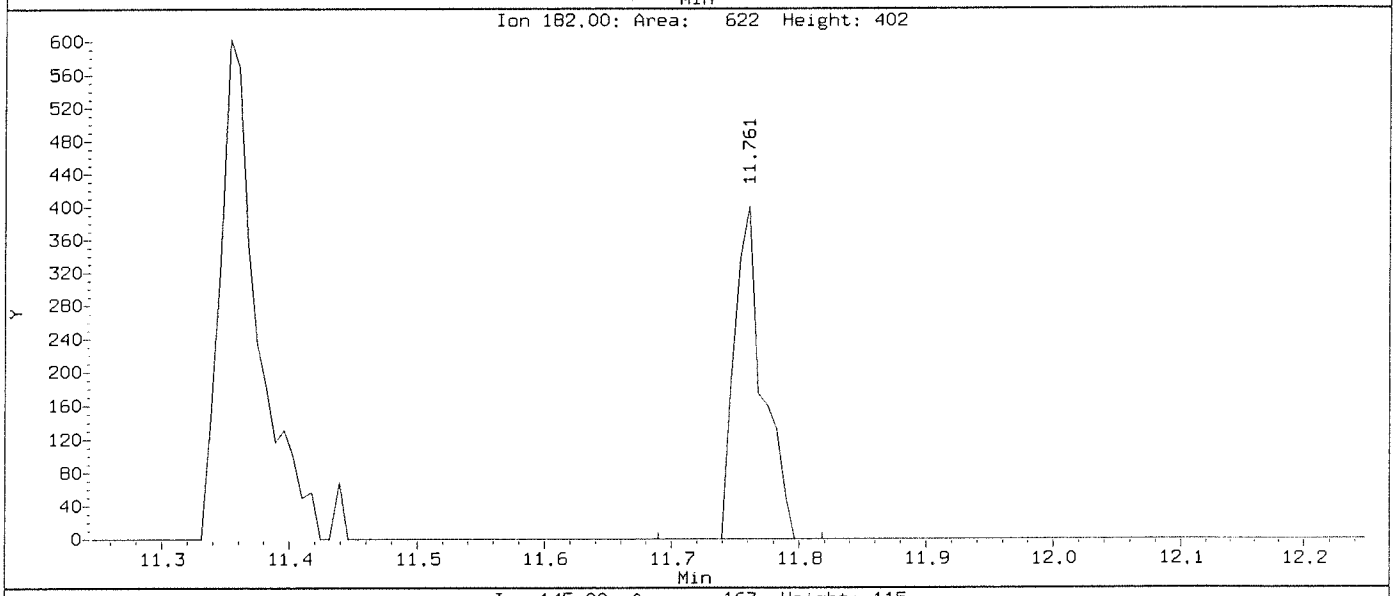
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

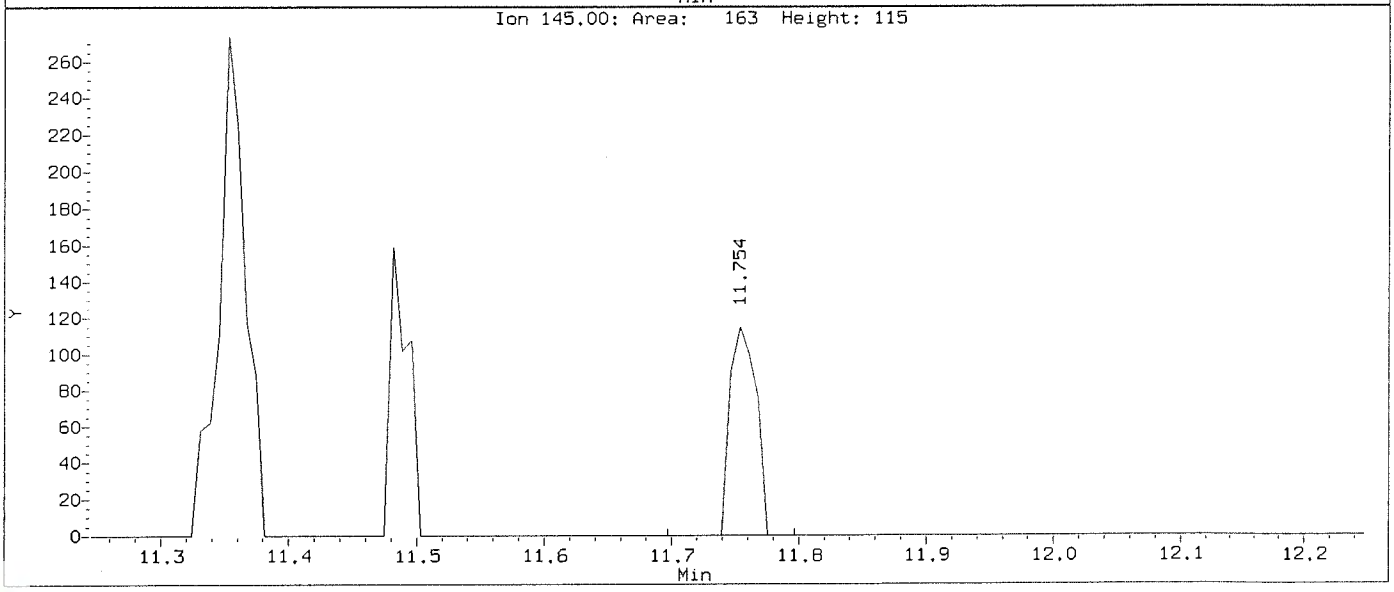


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Client Sample ID: VSTD000.5

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

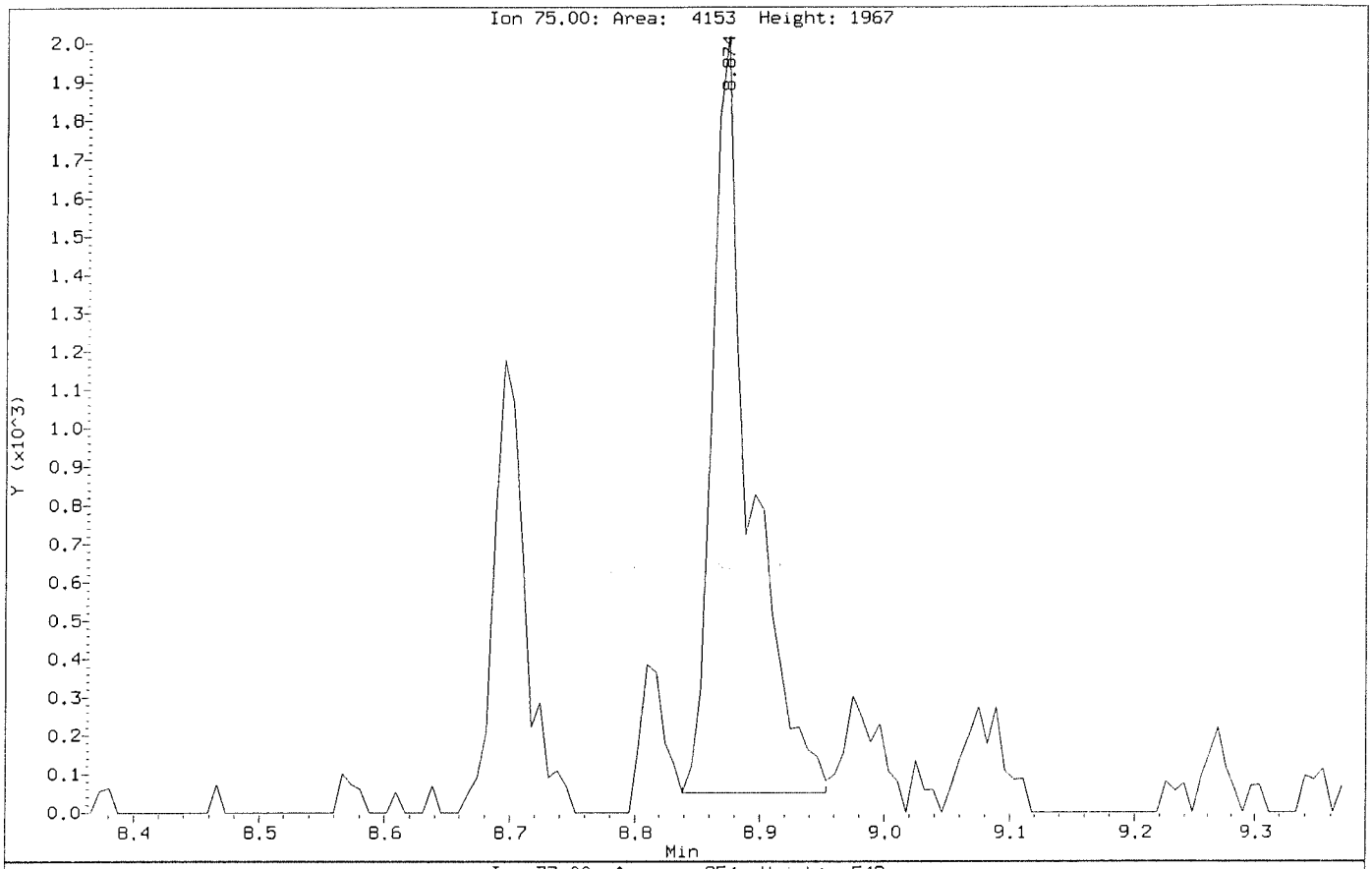


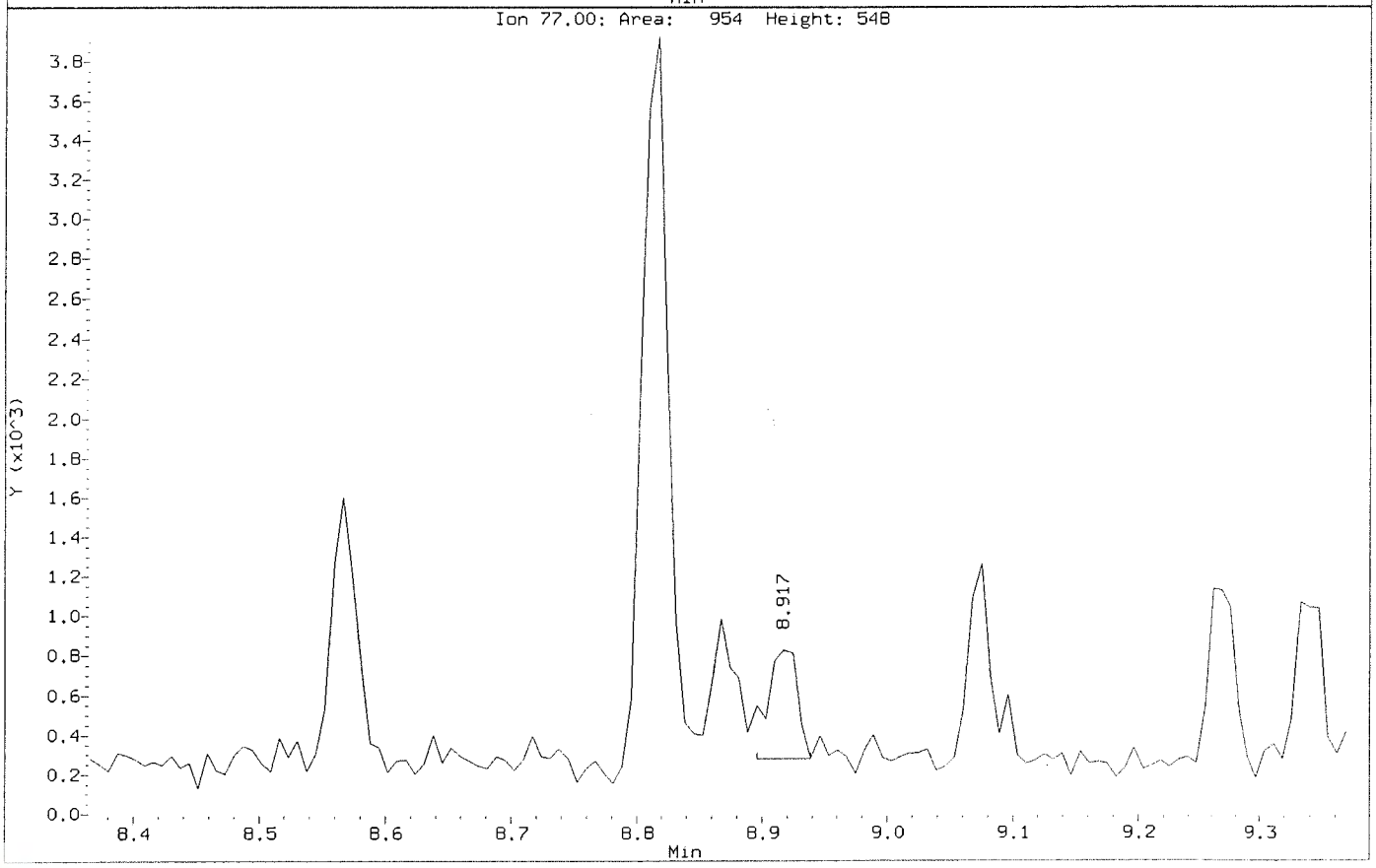




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Instrument: voa6.i
Client Sample ID: VSTD000.5

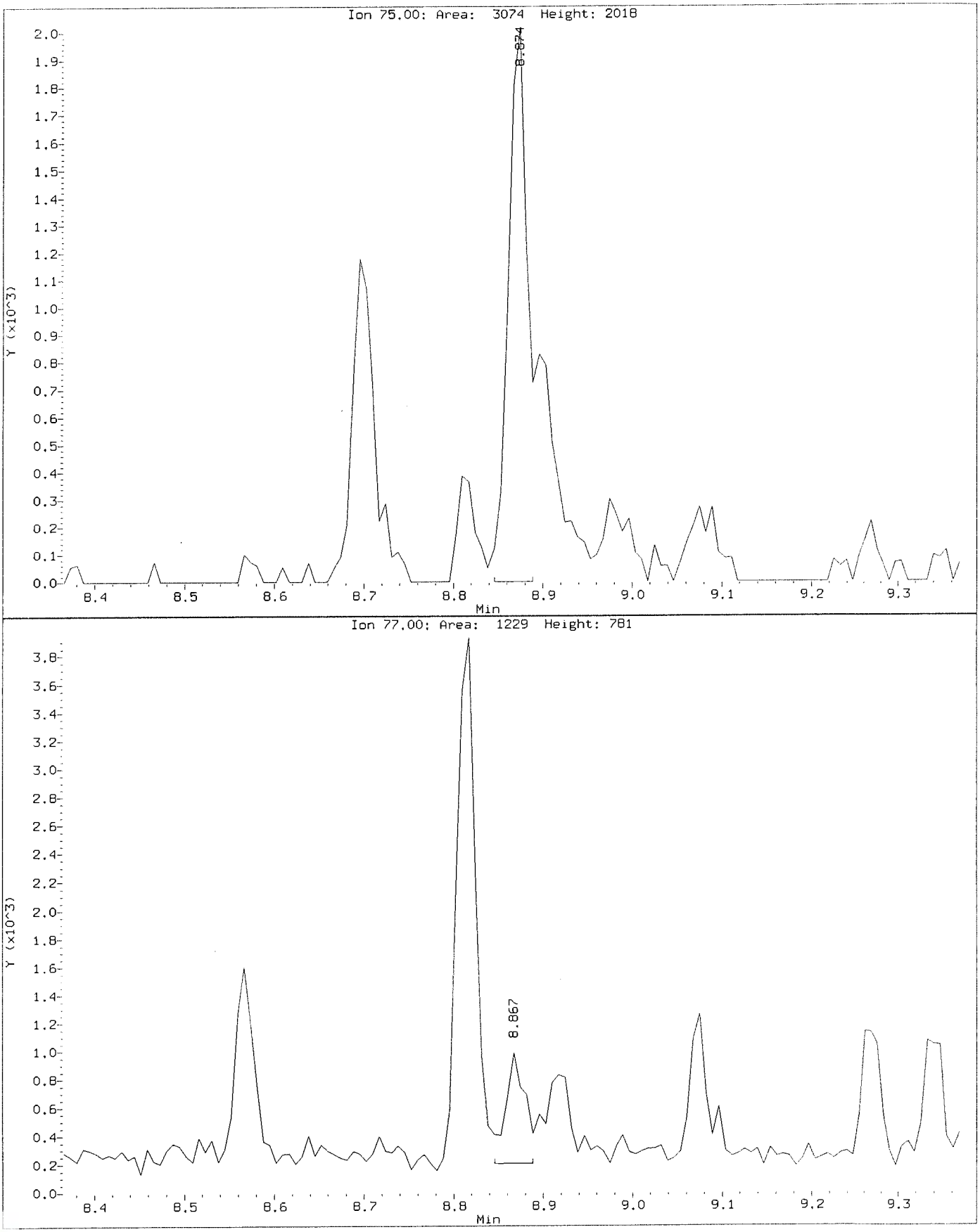
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





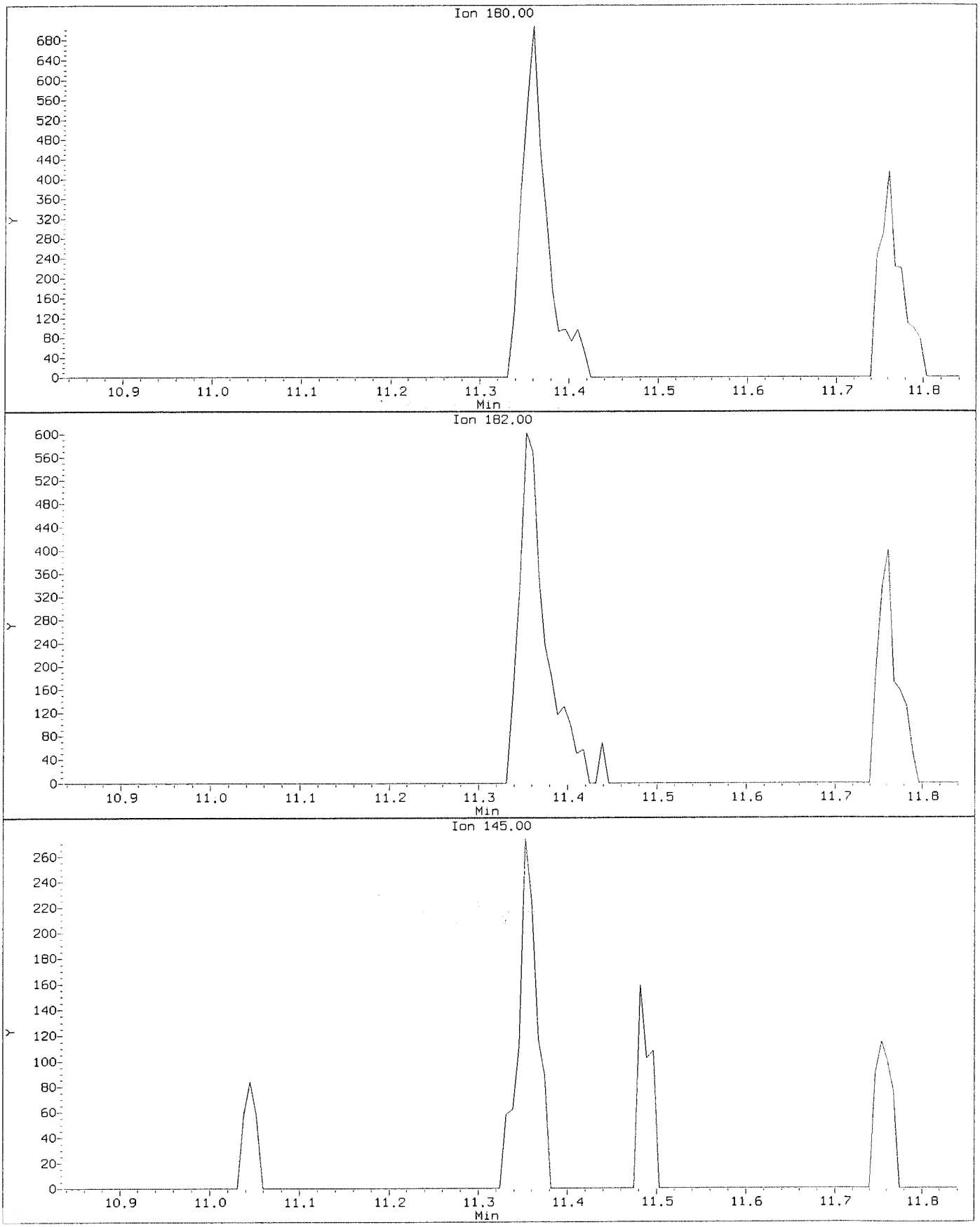
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



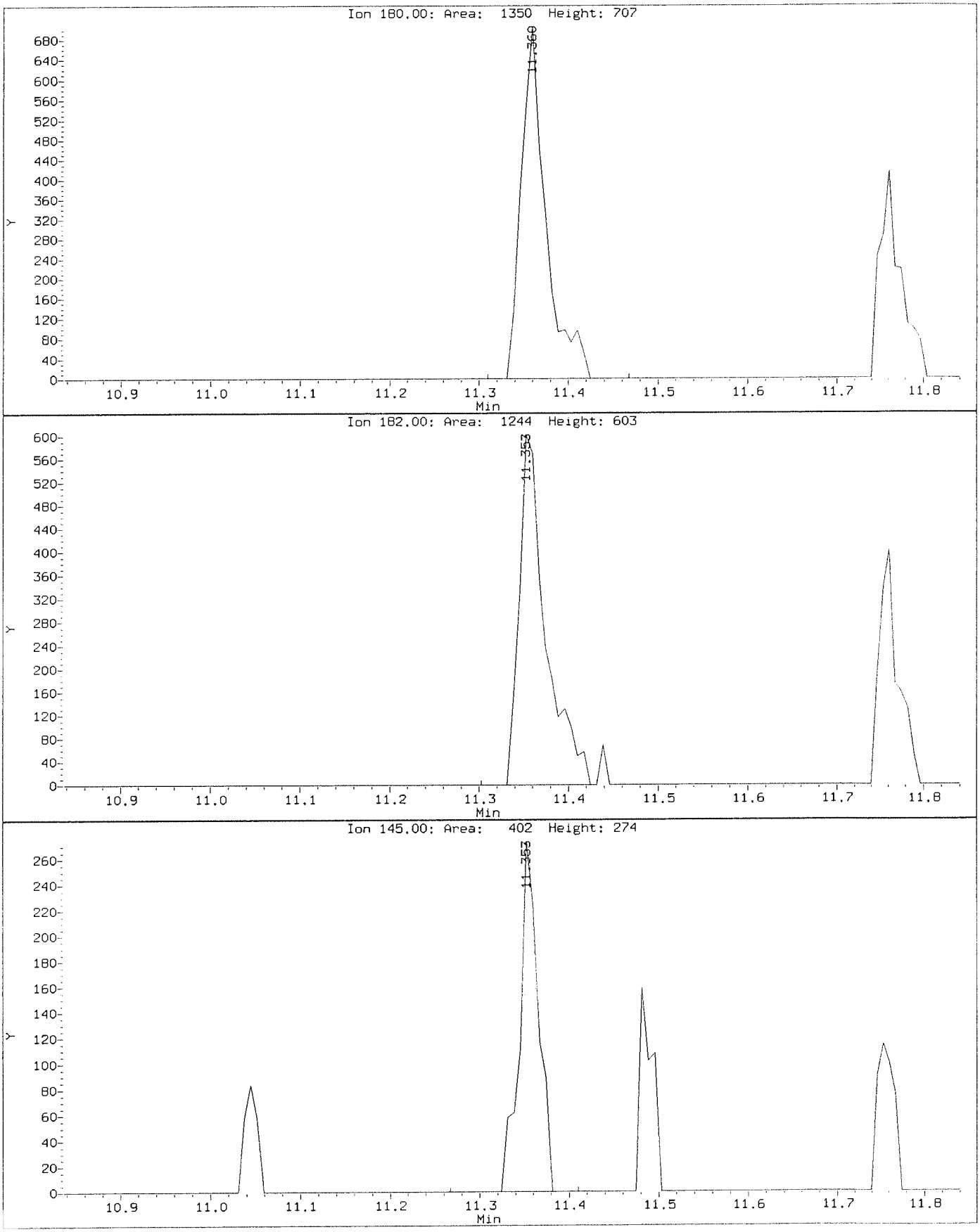
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



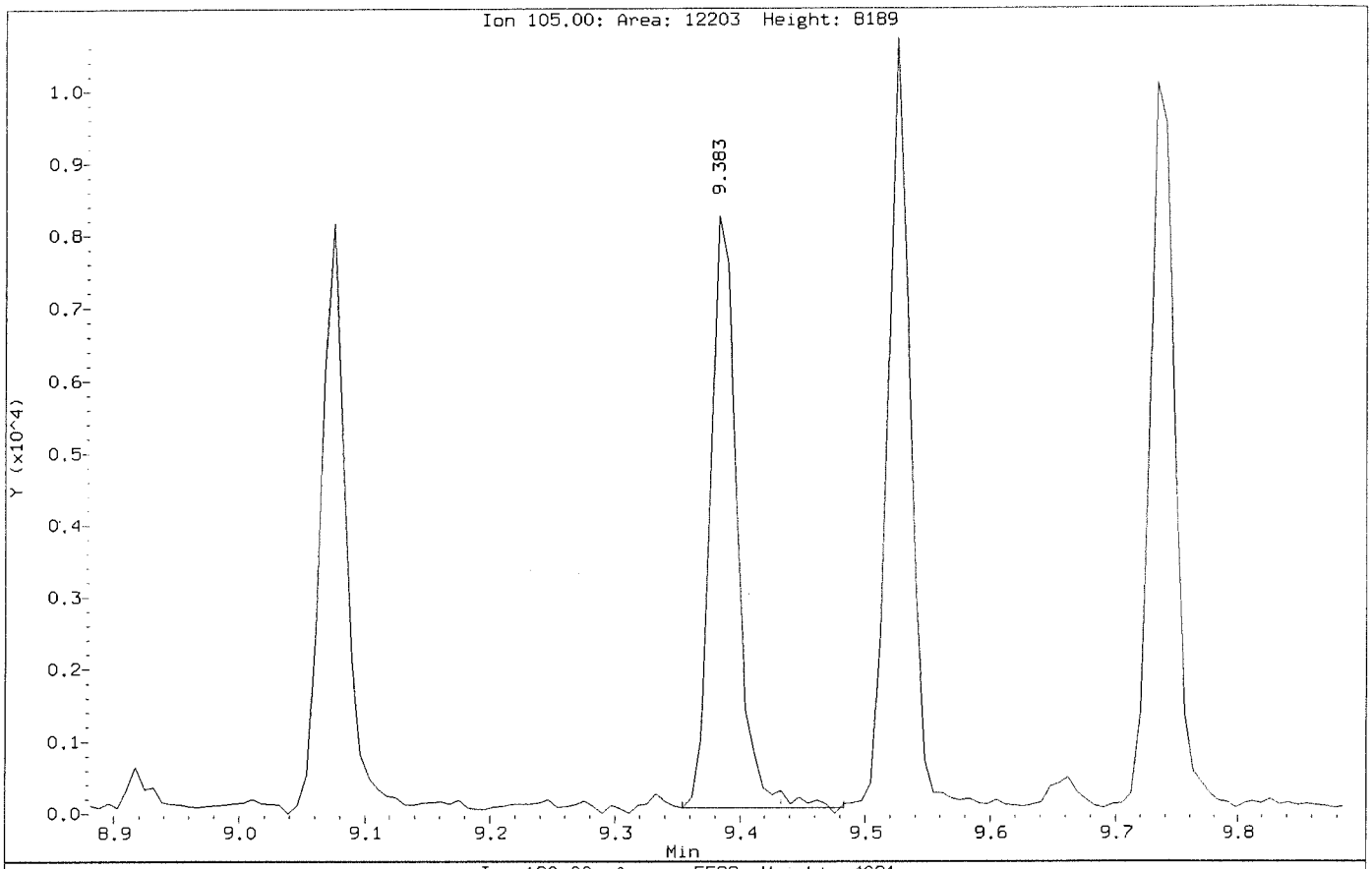
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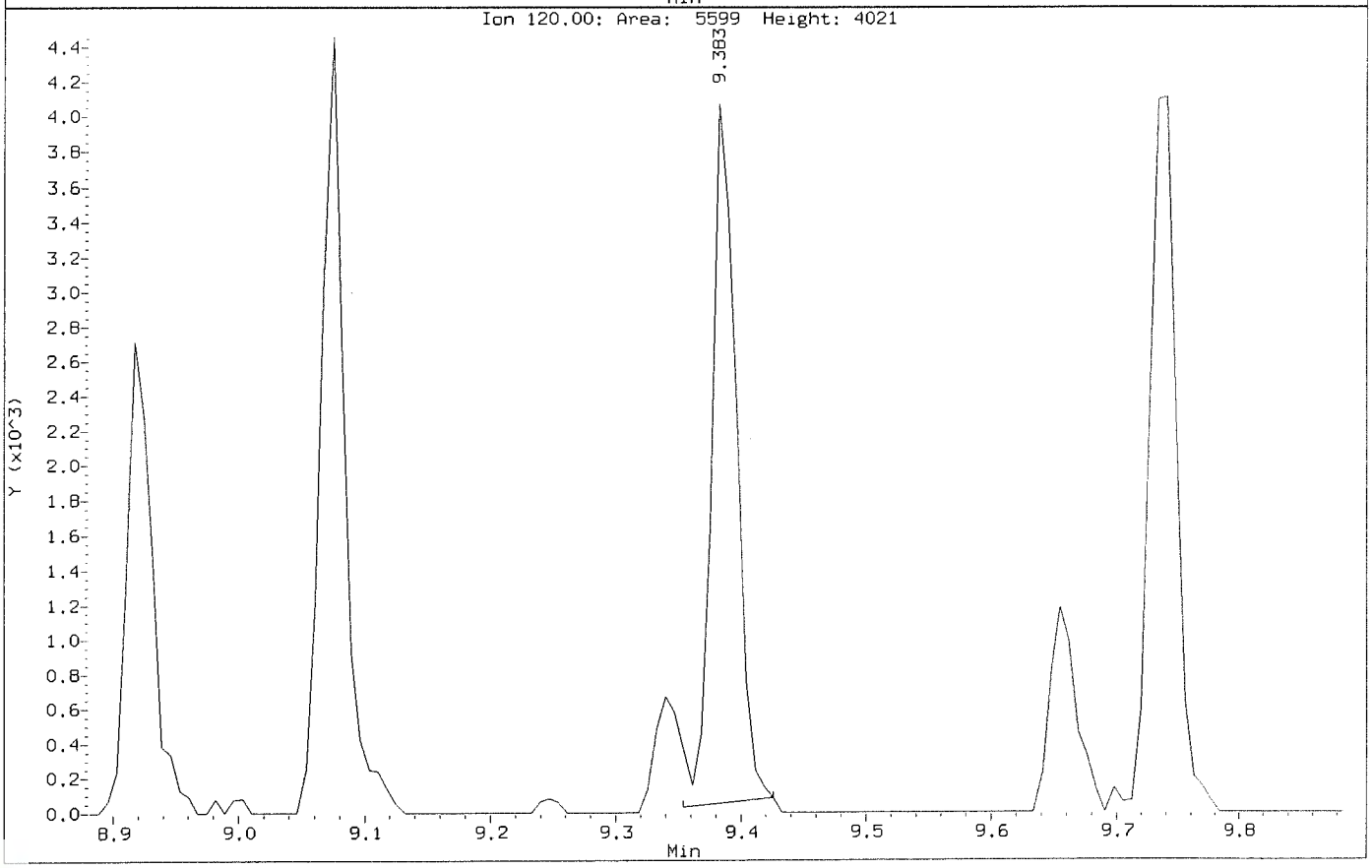
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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Client Sample ID: VSTD000.5

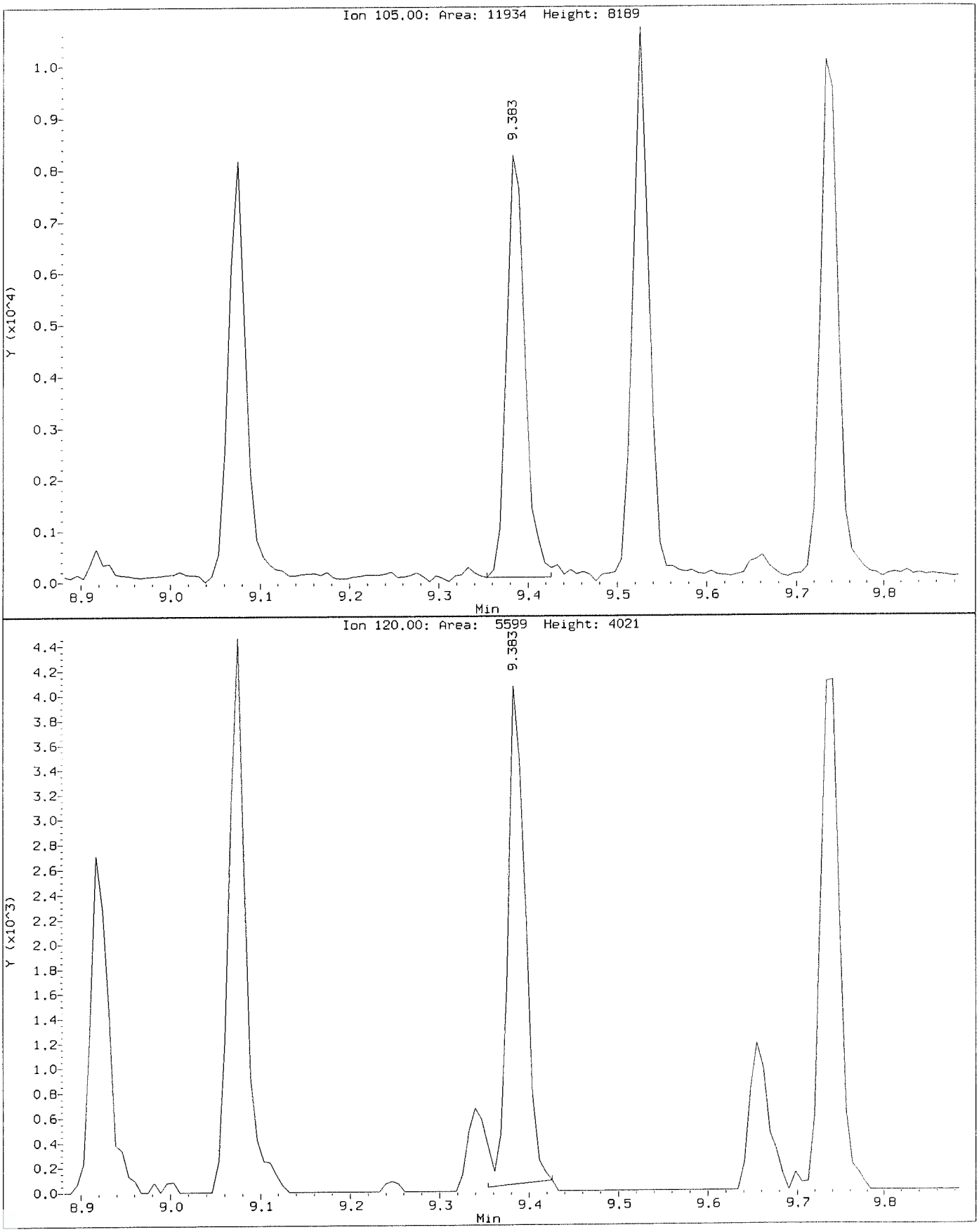
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





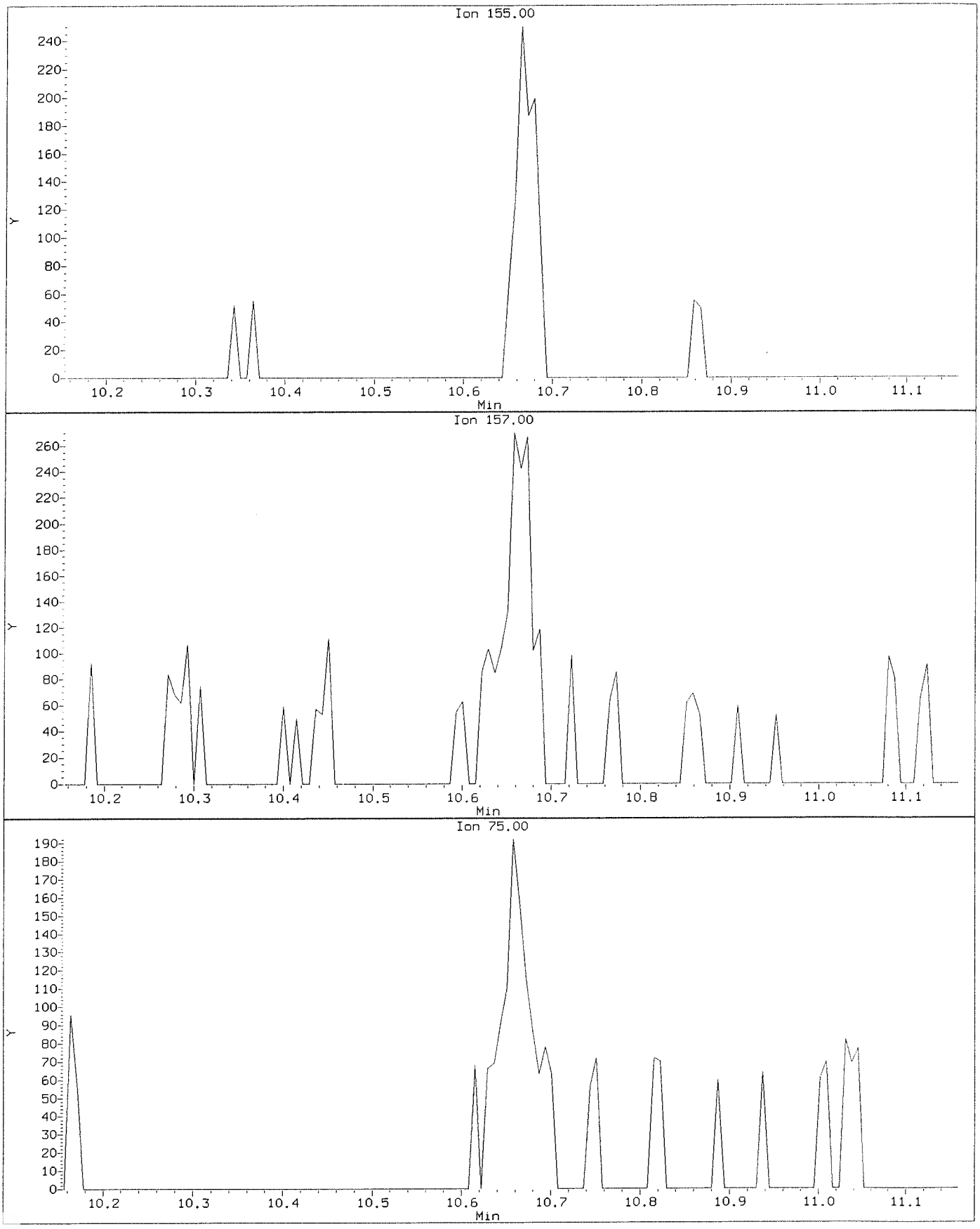
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Client Sample ID: VSTD000.5

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



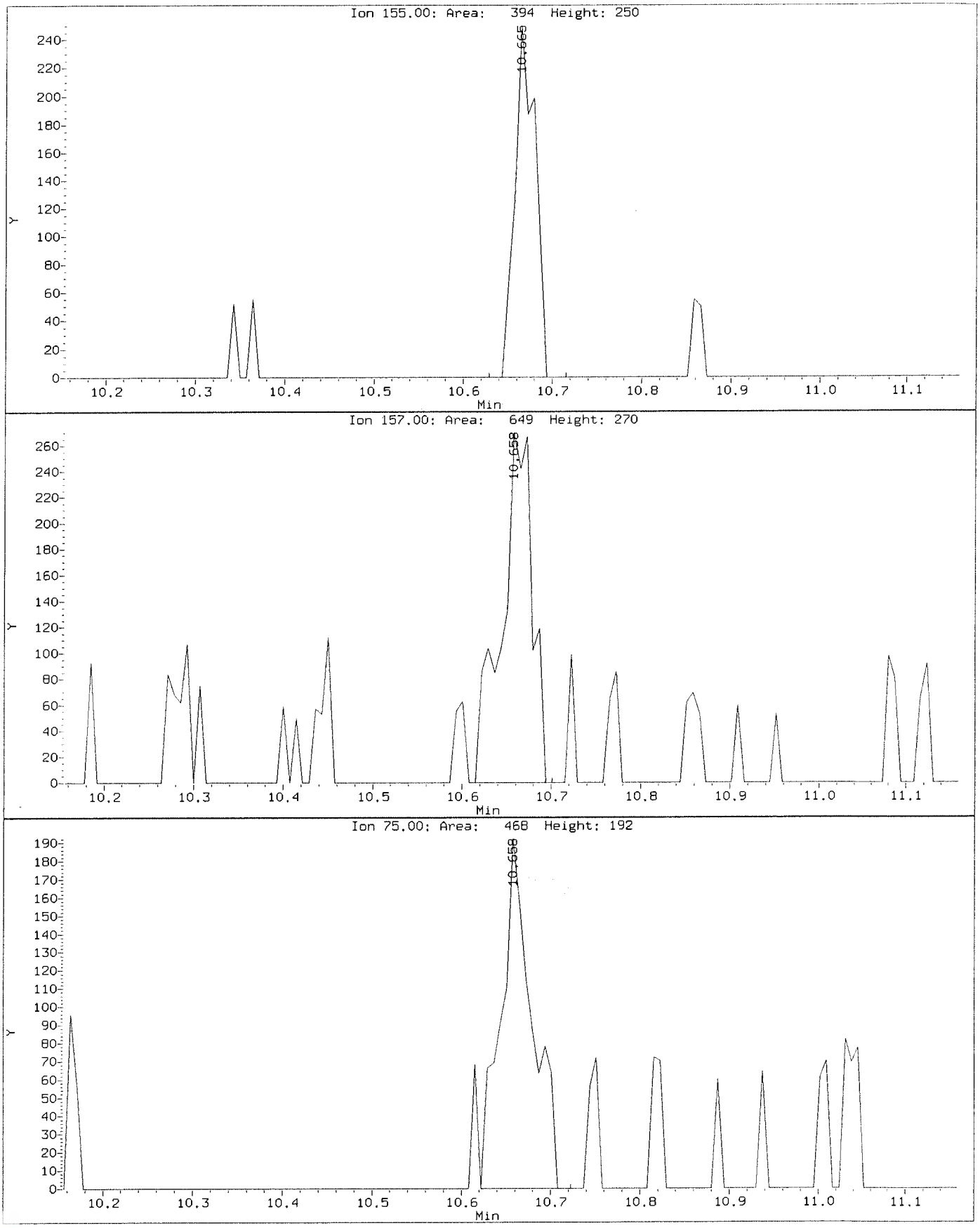
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



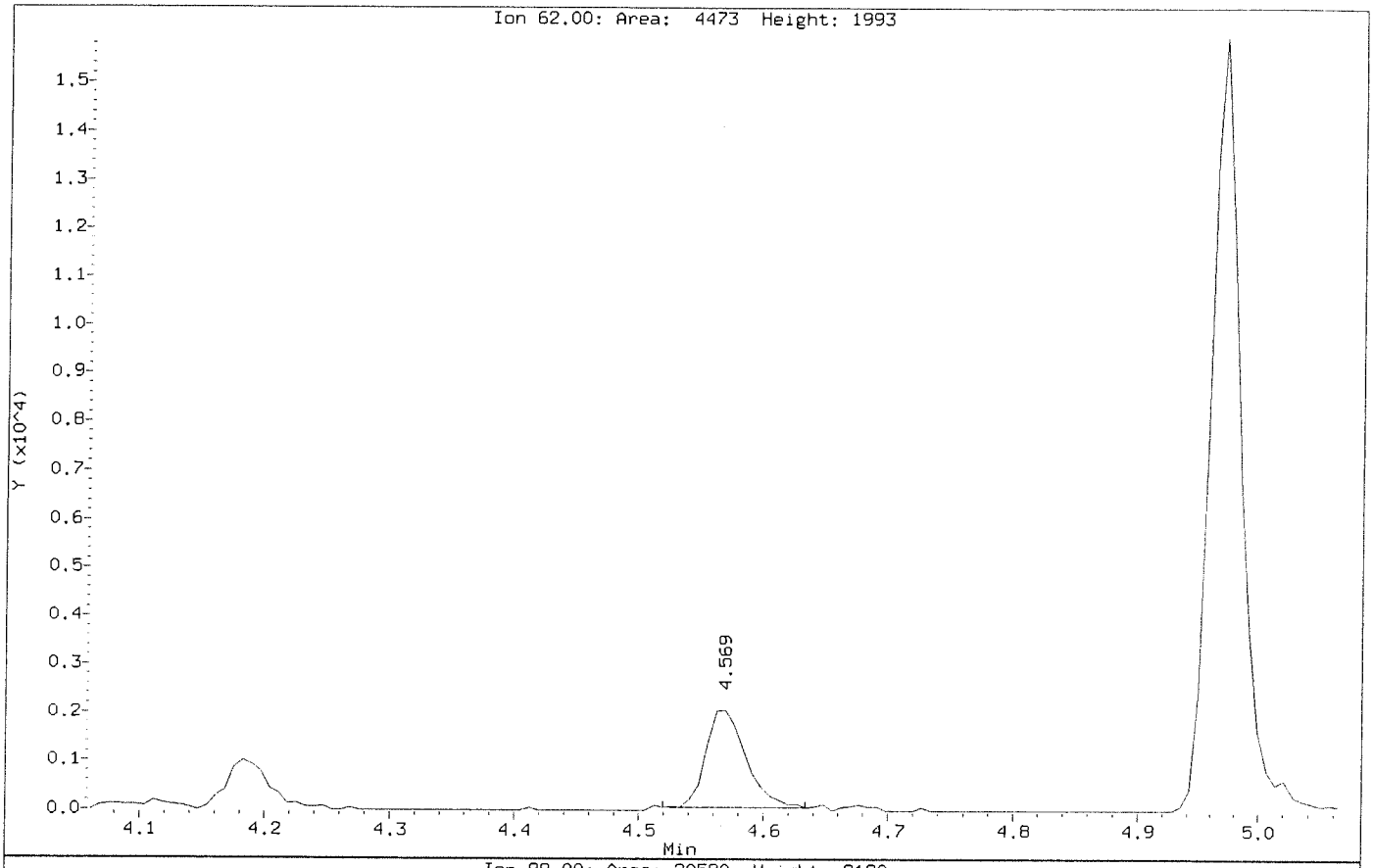
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Client Sample ID: VSTD000.5

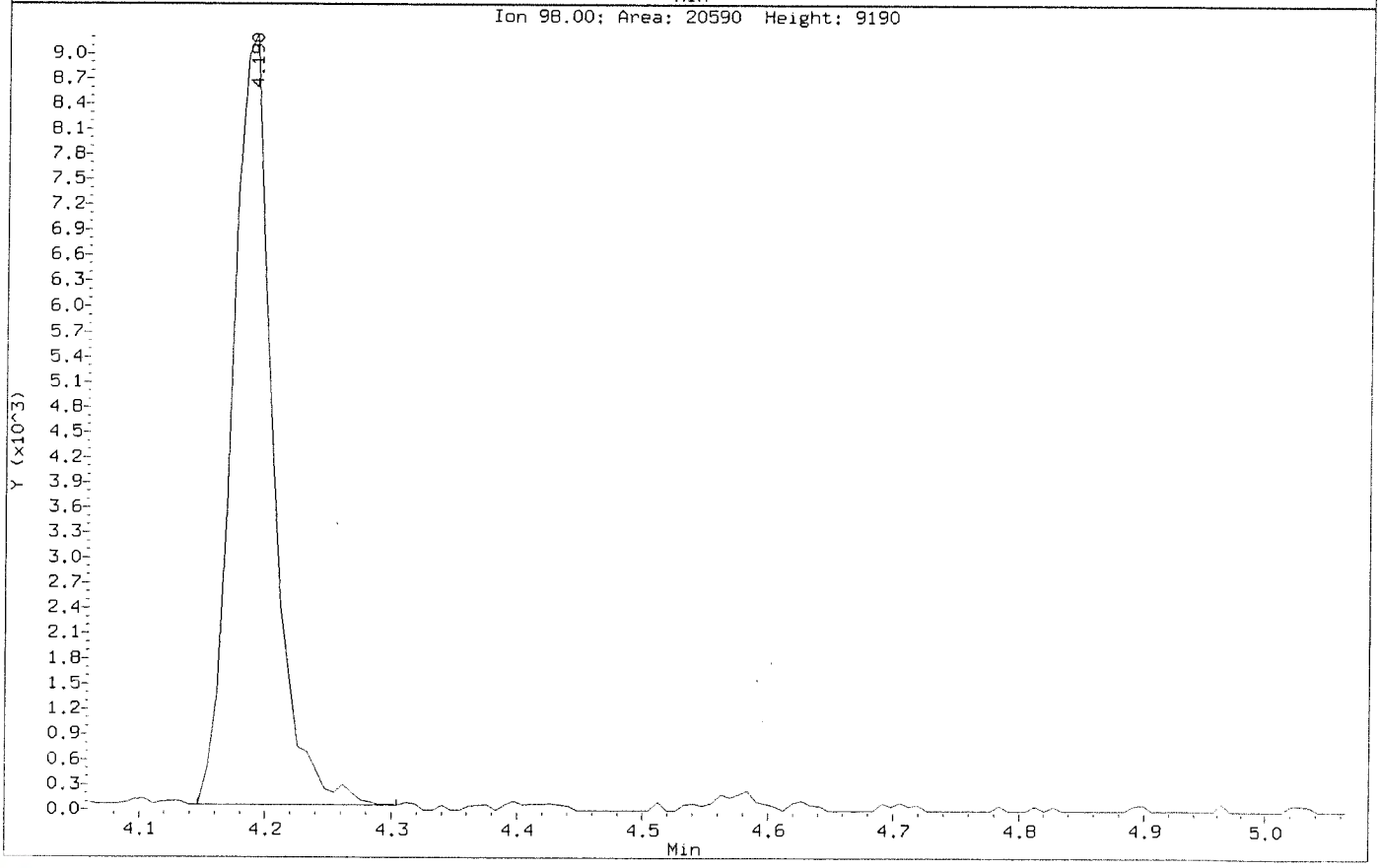
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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

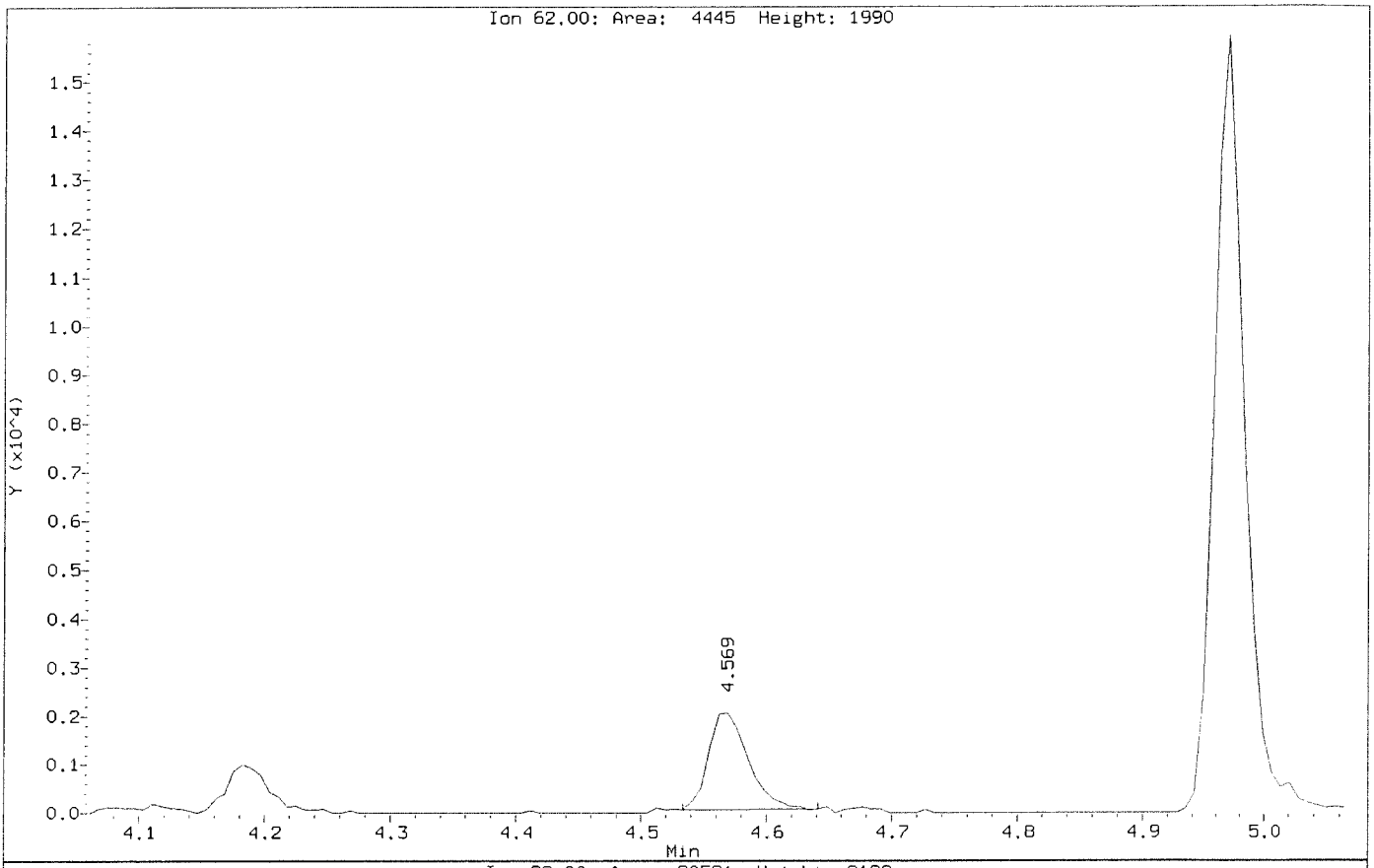
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

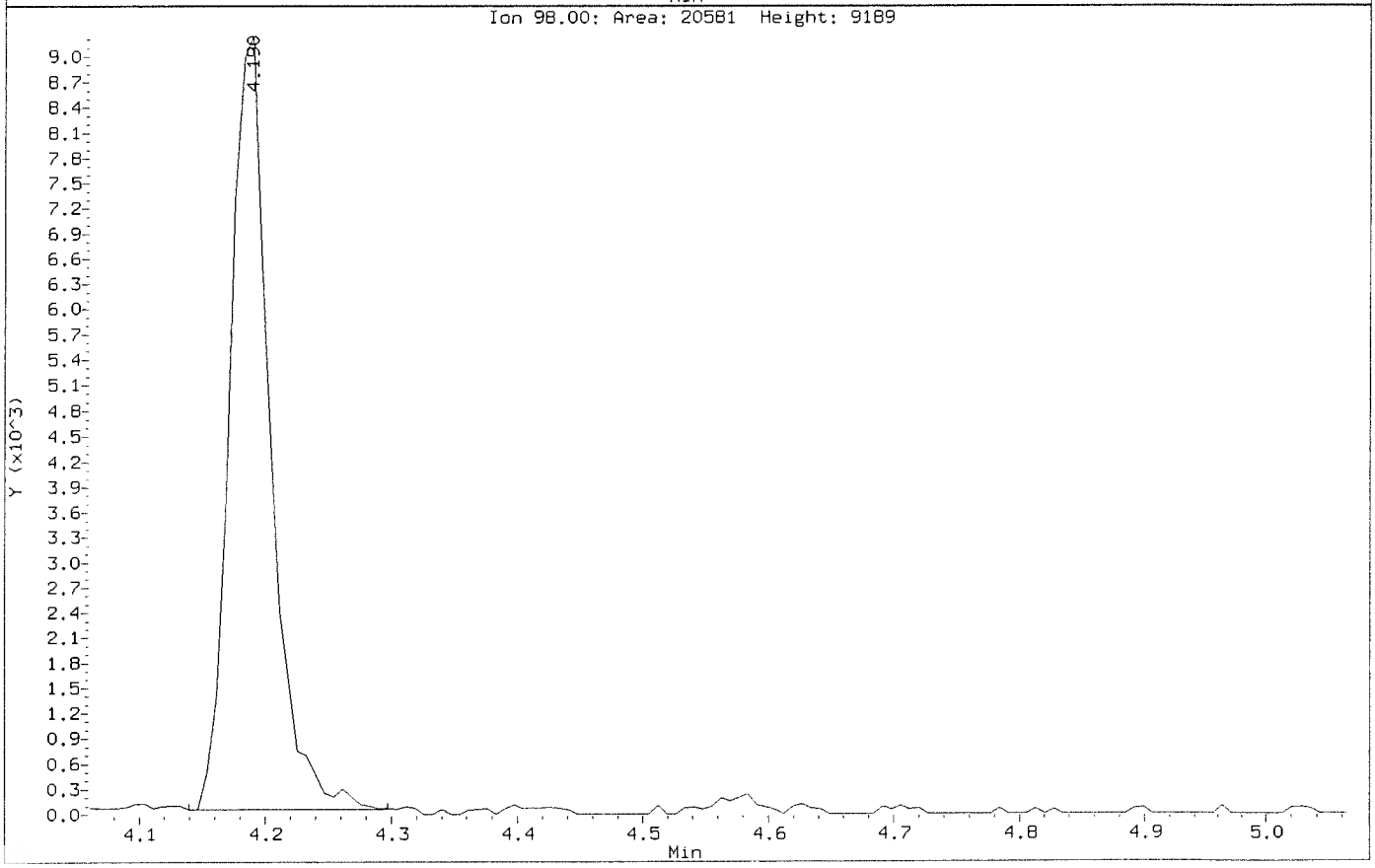




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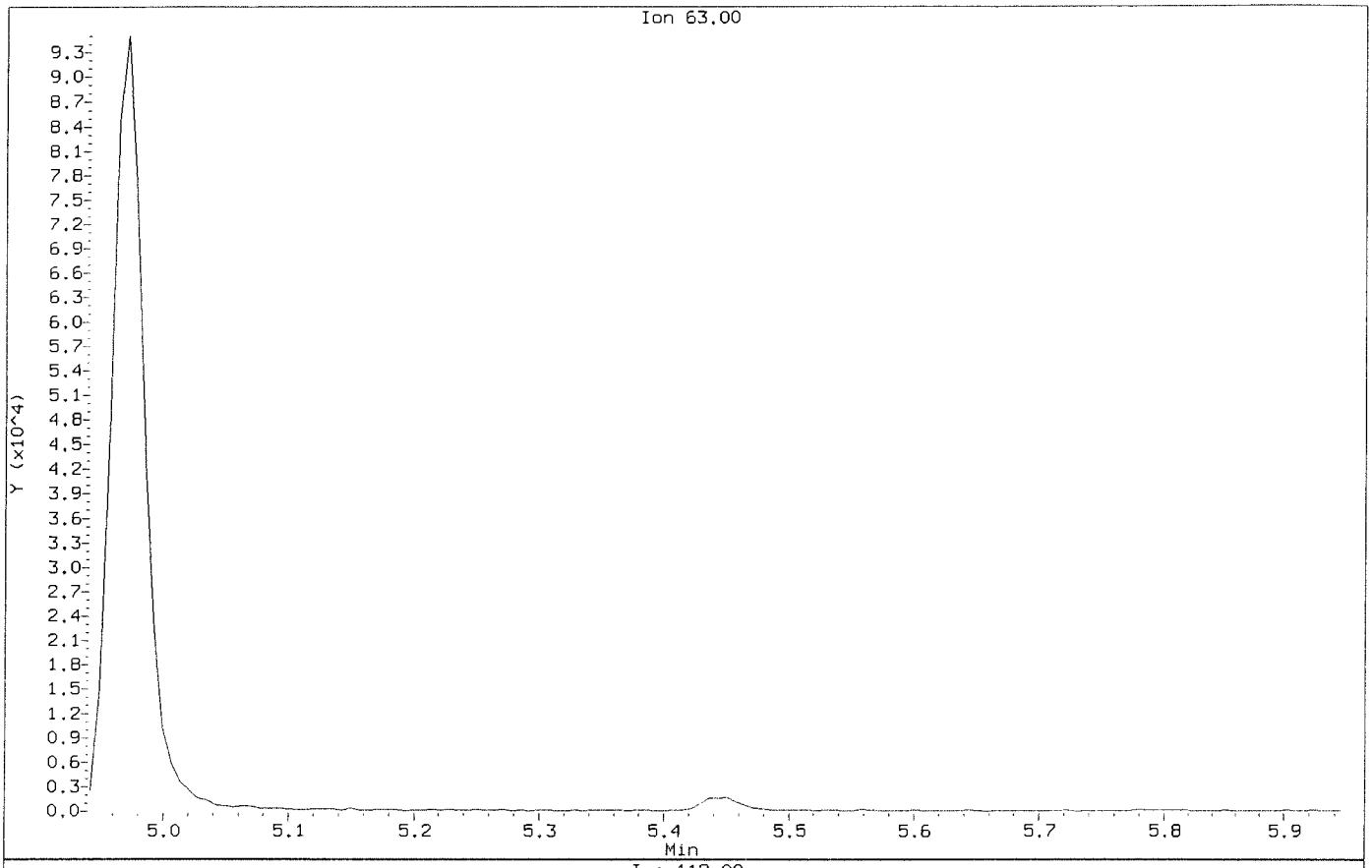
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CAS Number: 107-06-2

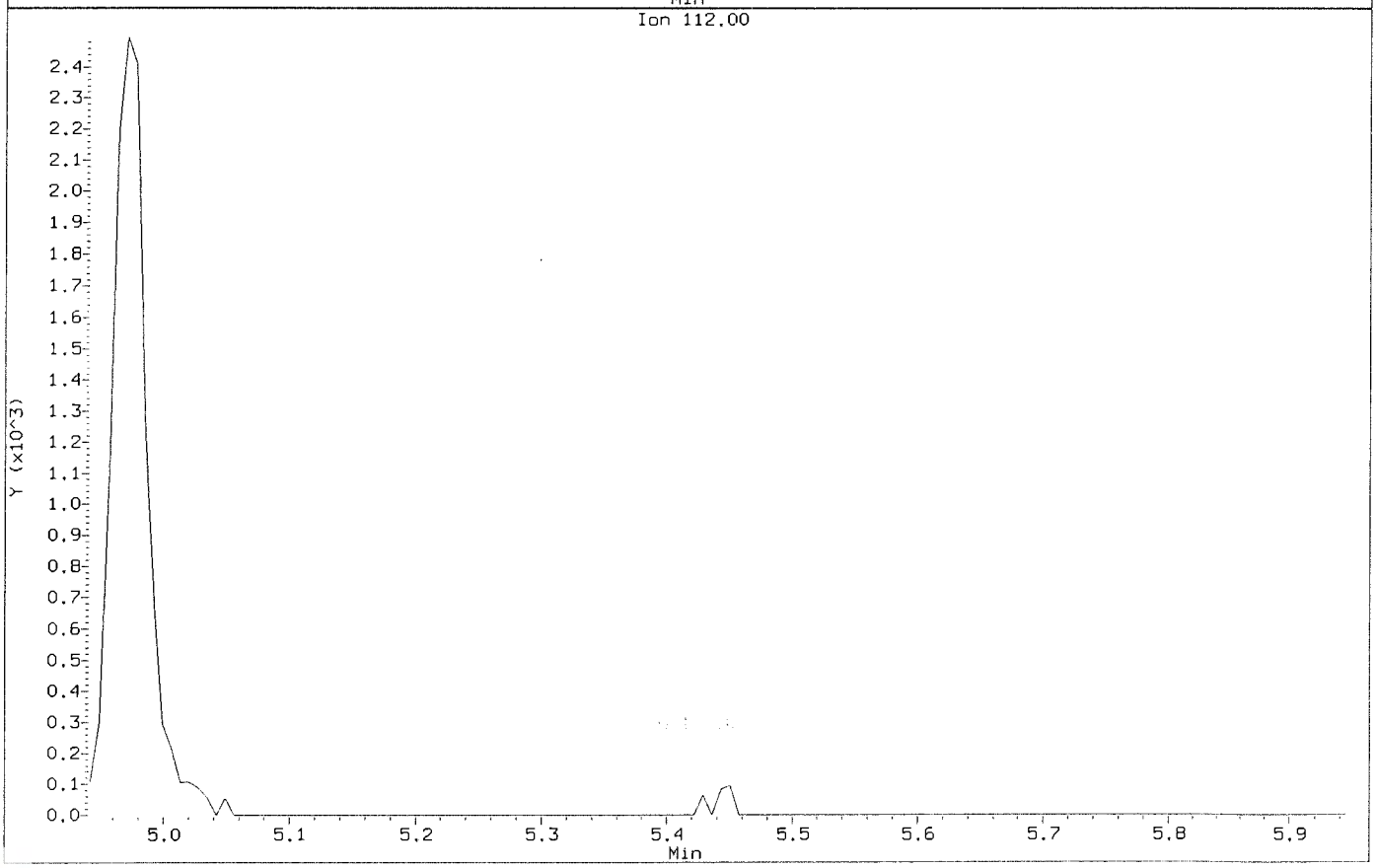




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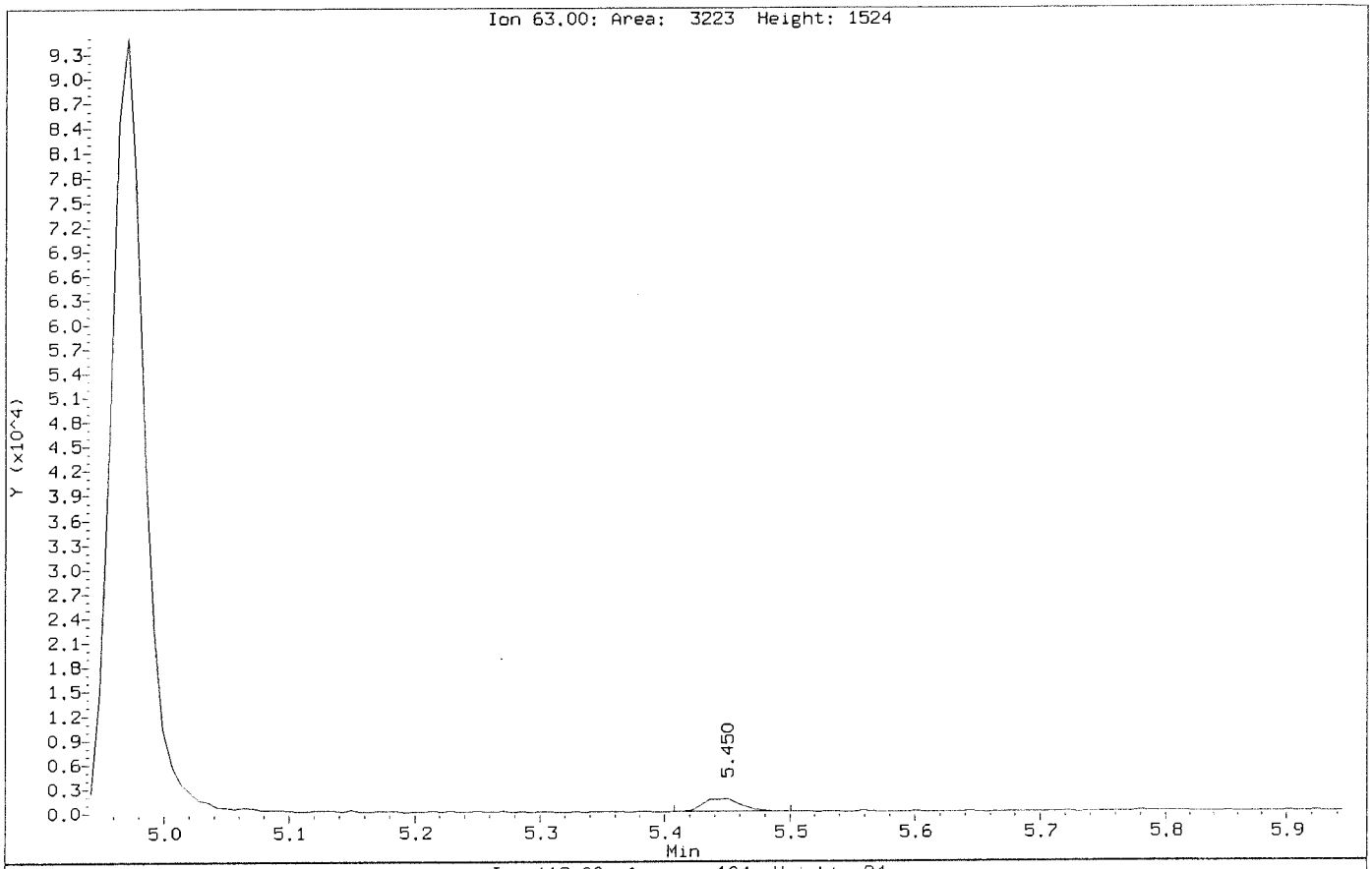
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

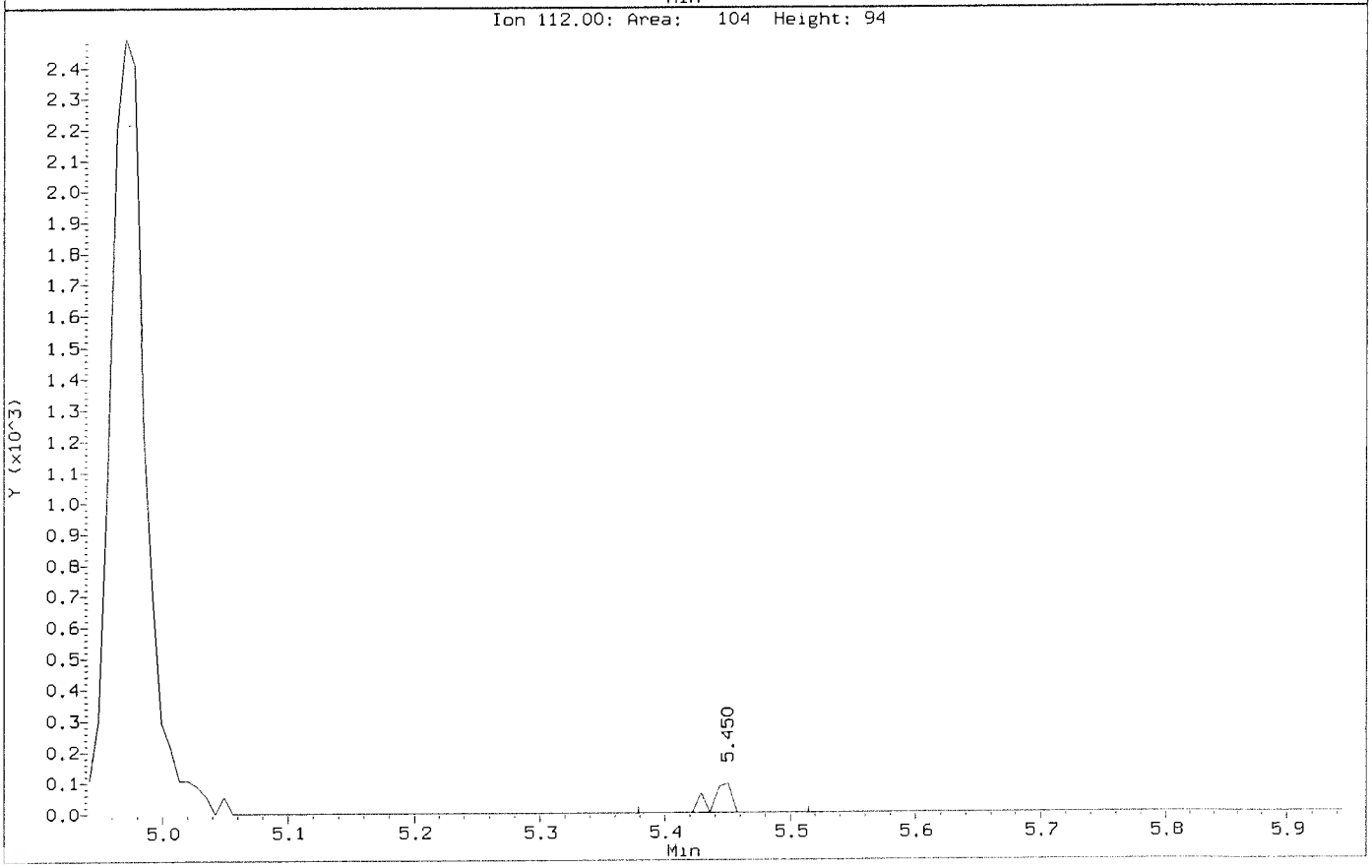




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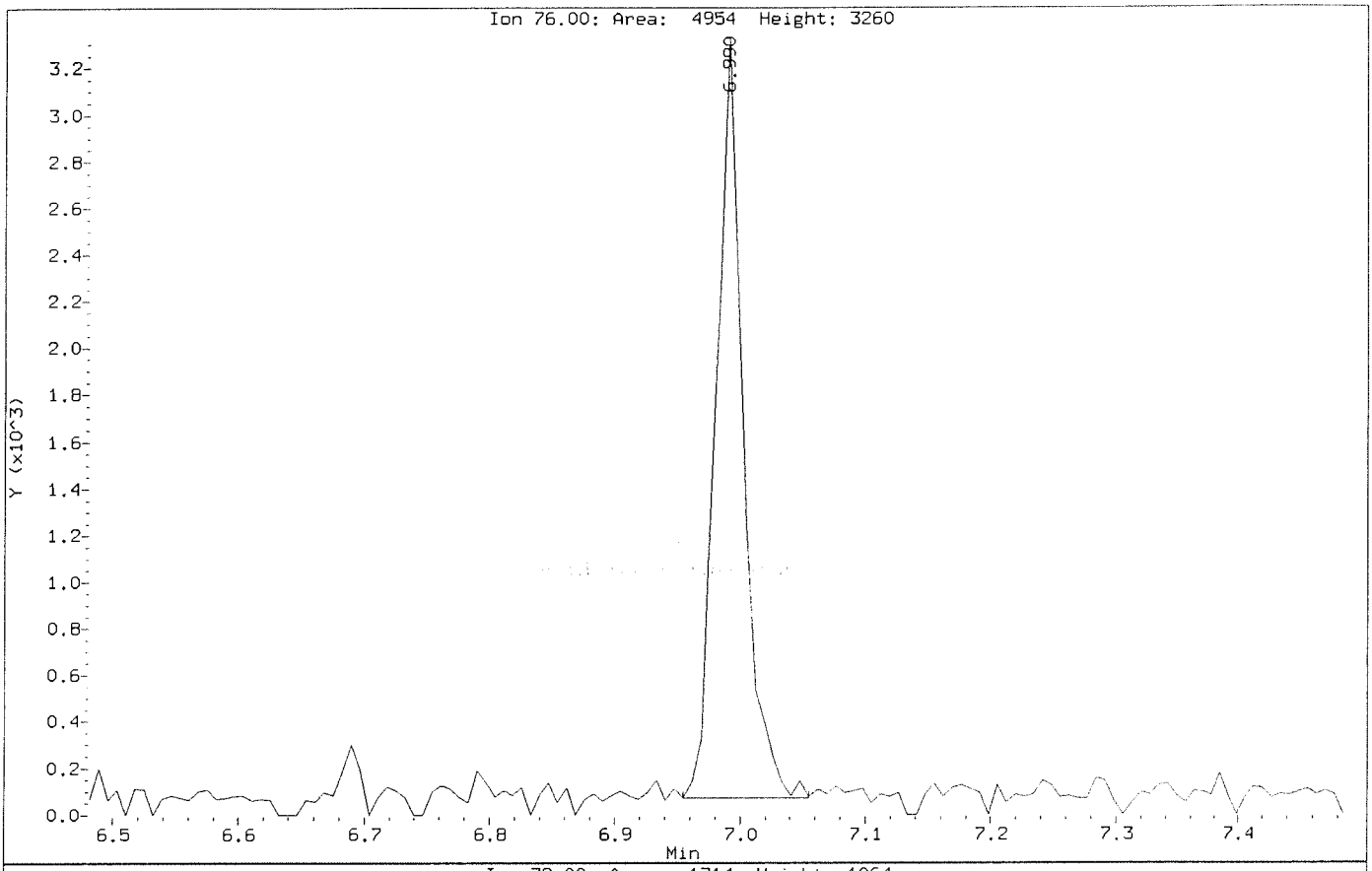
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CAS Number: 78-87-5

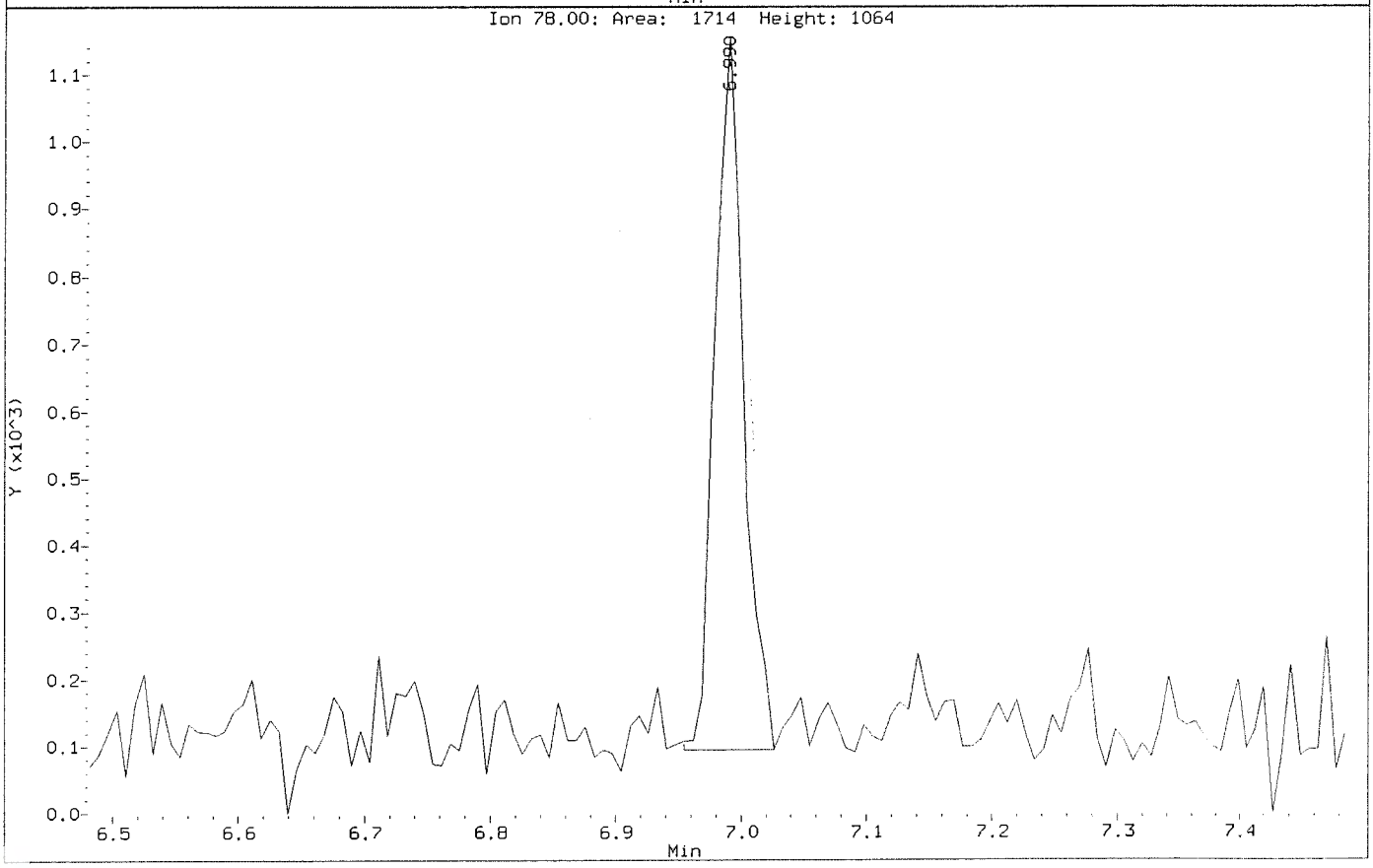




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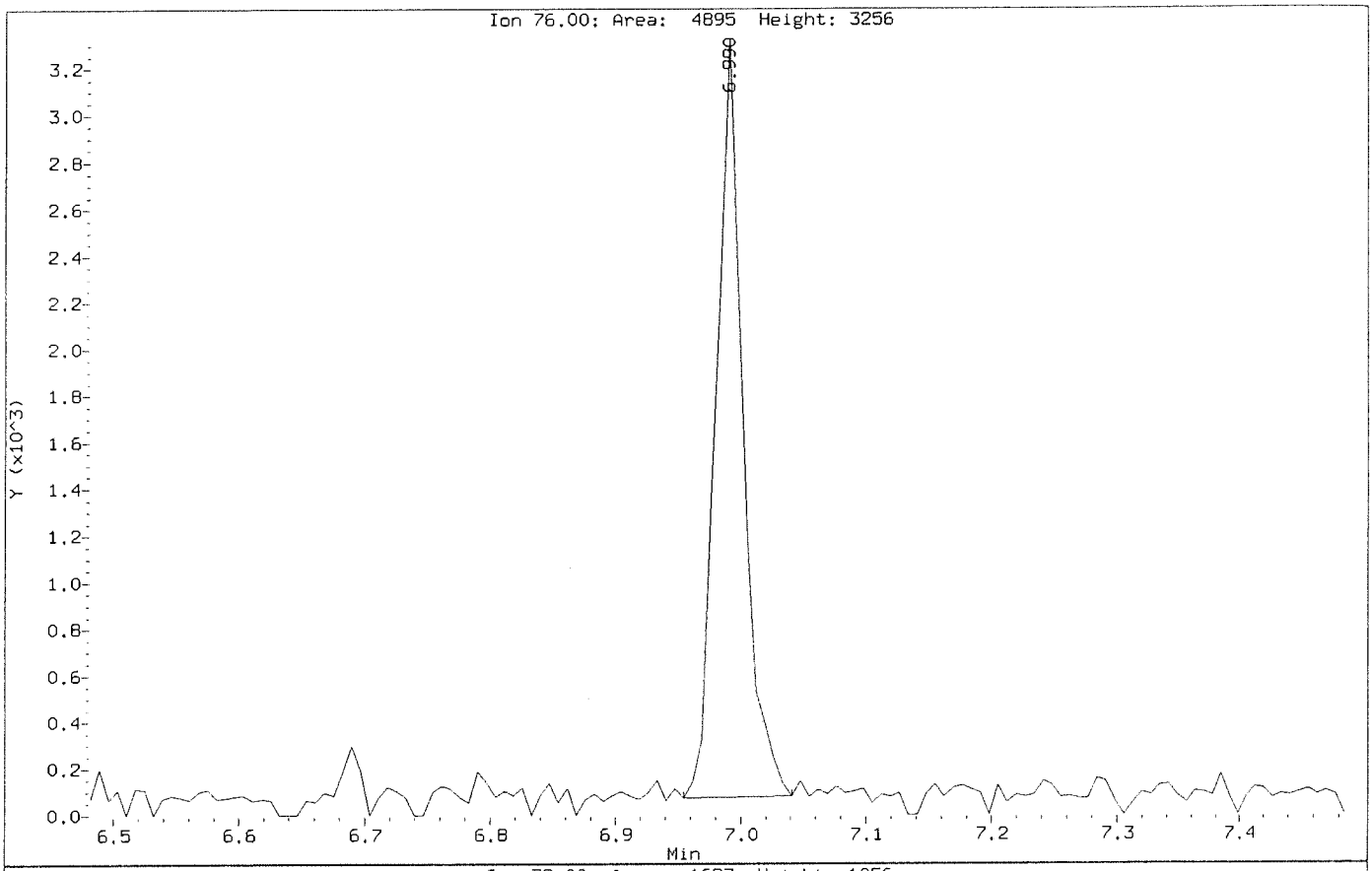
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

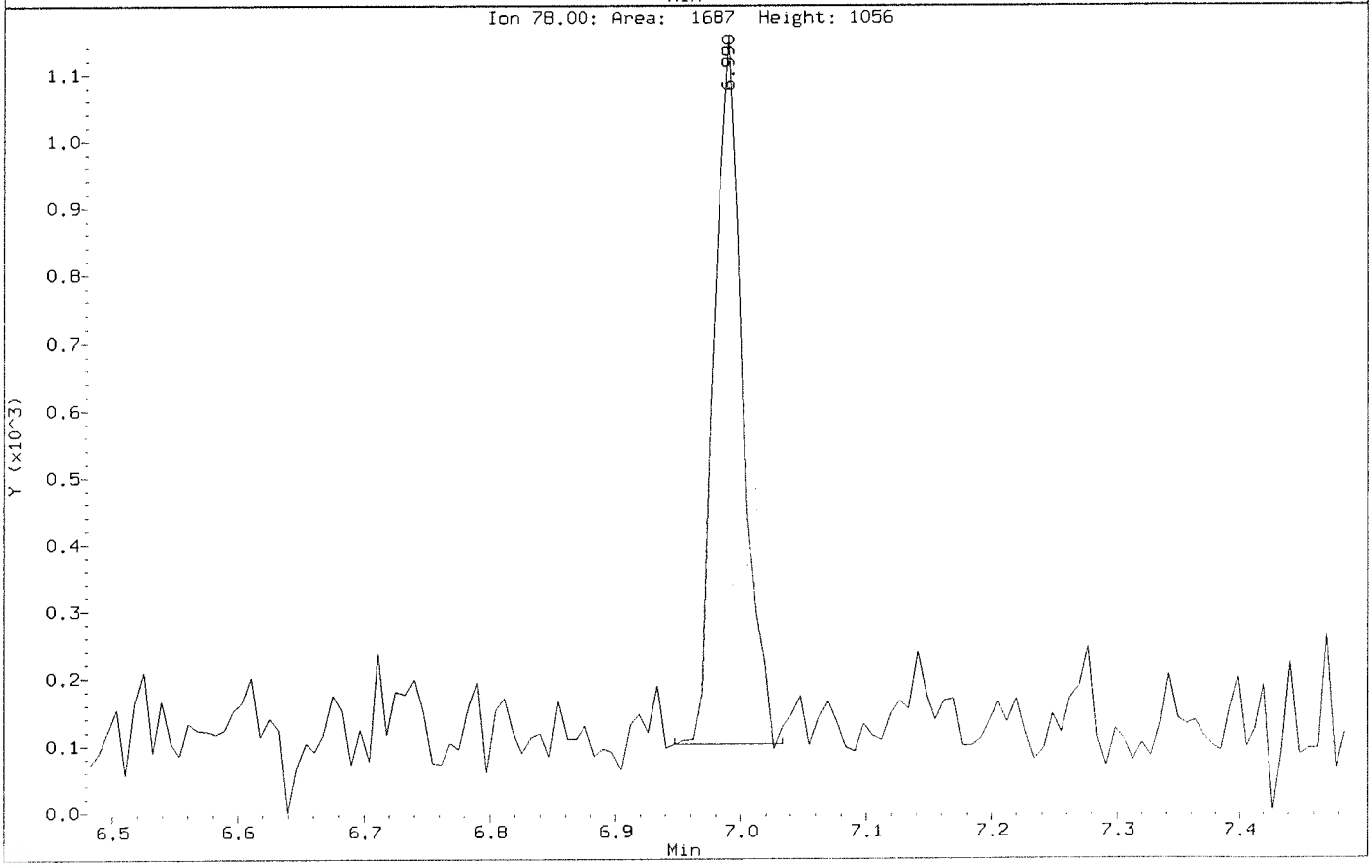




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Instrument: voa6.i
Client Sample ID: VSTD000.5

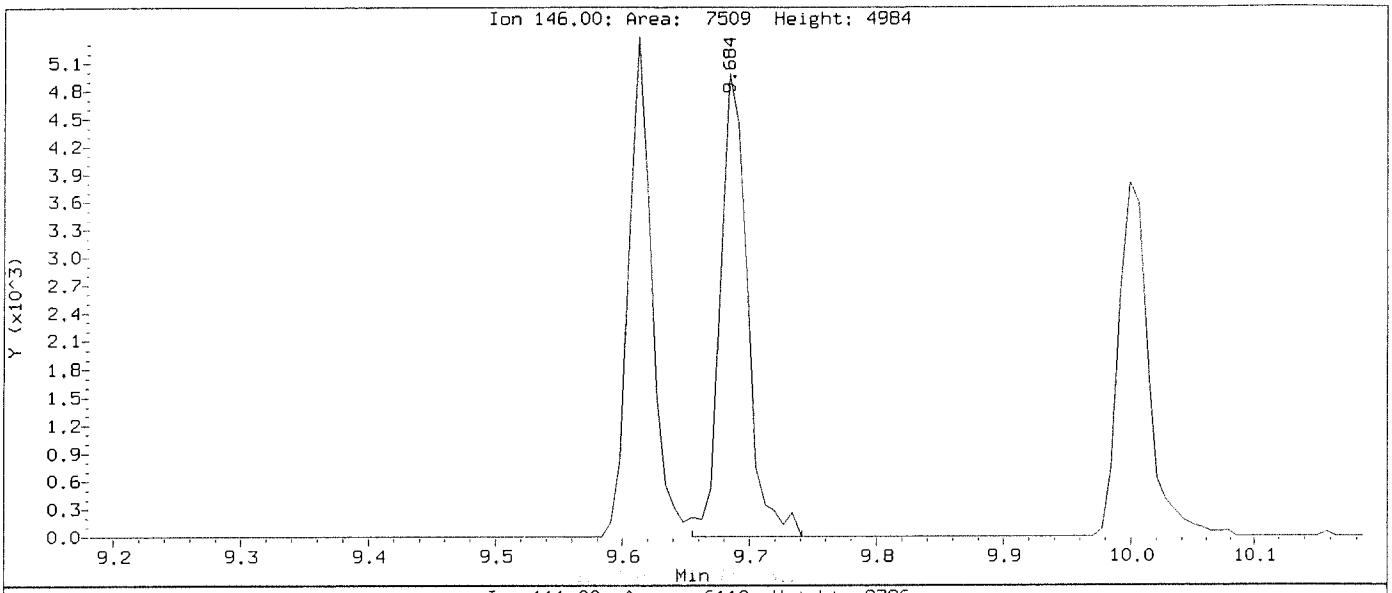
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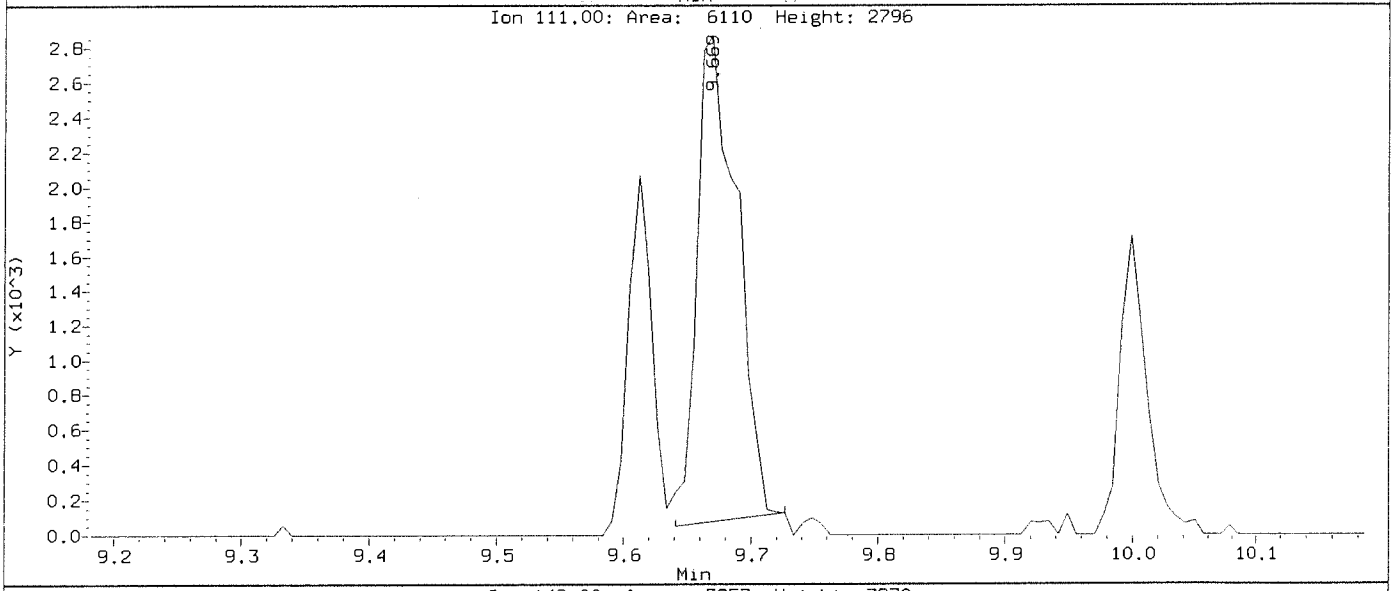


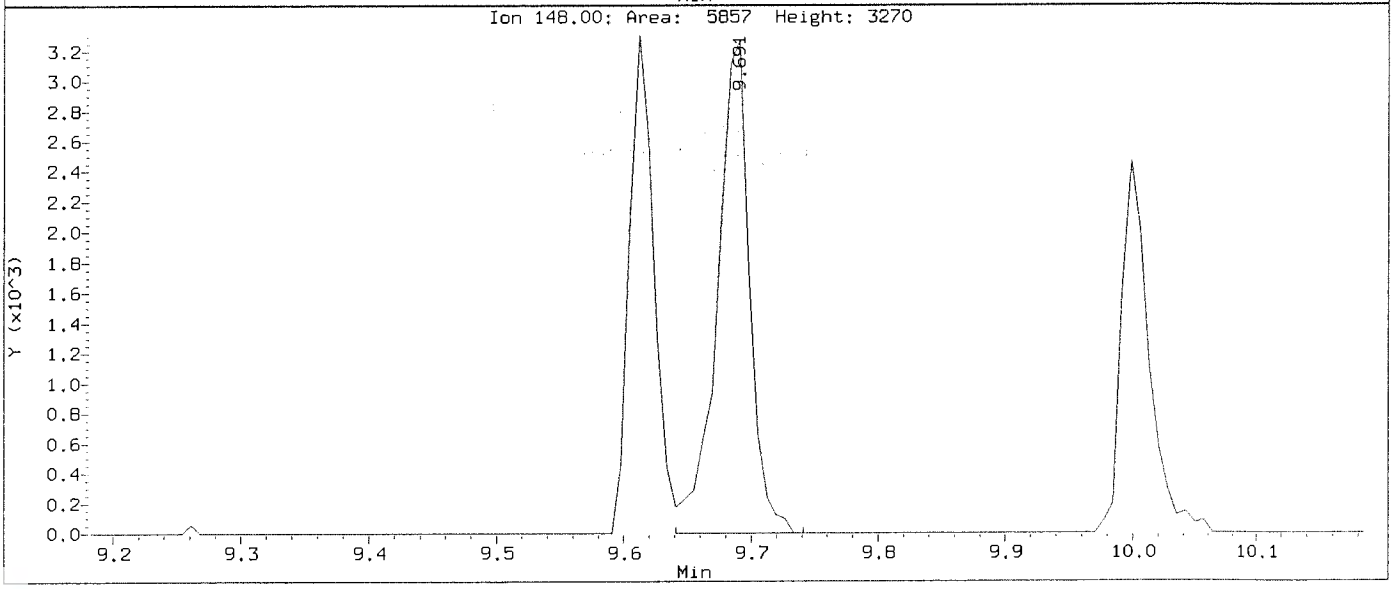


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

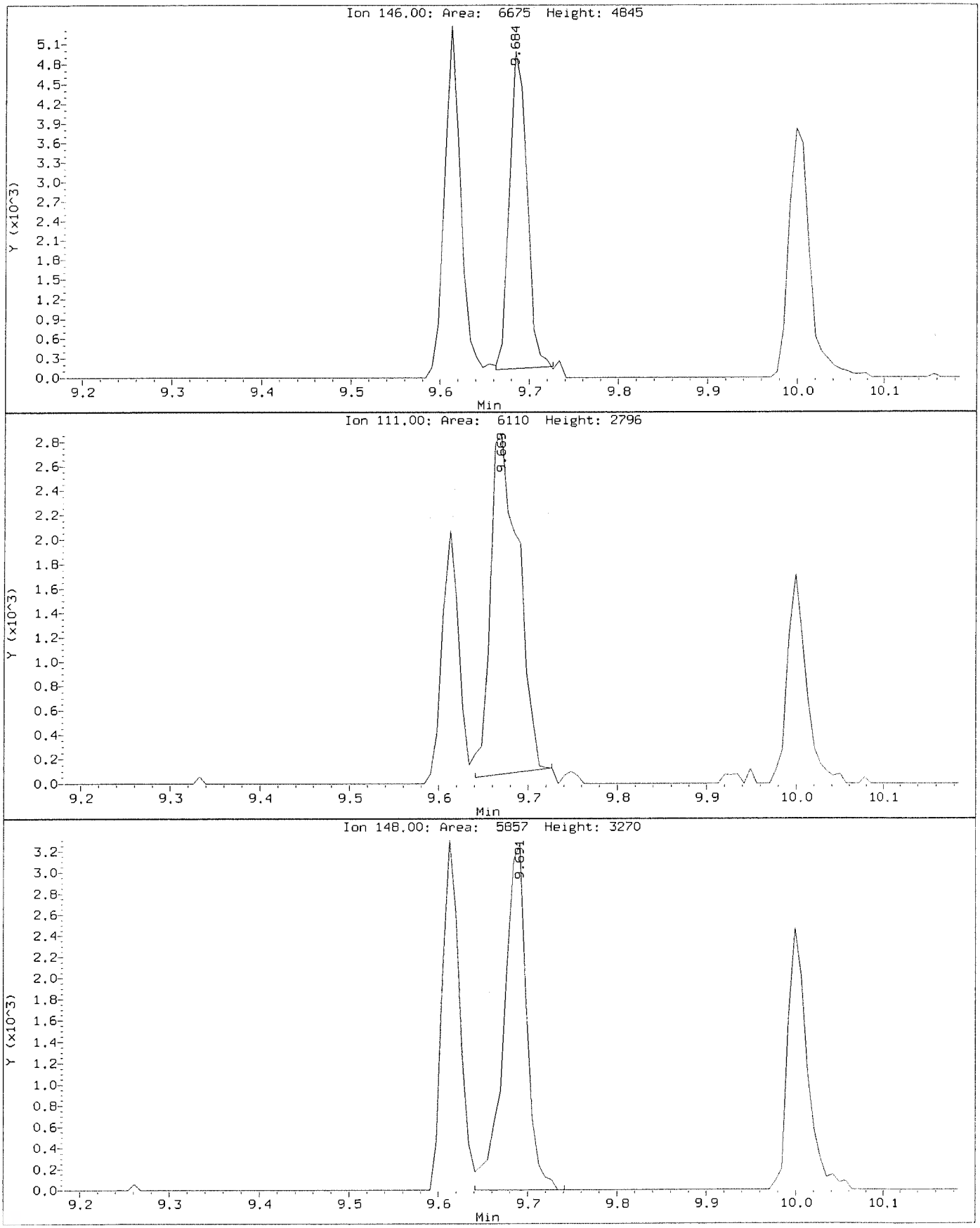






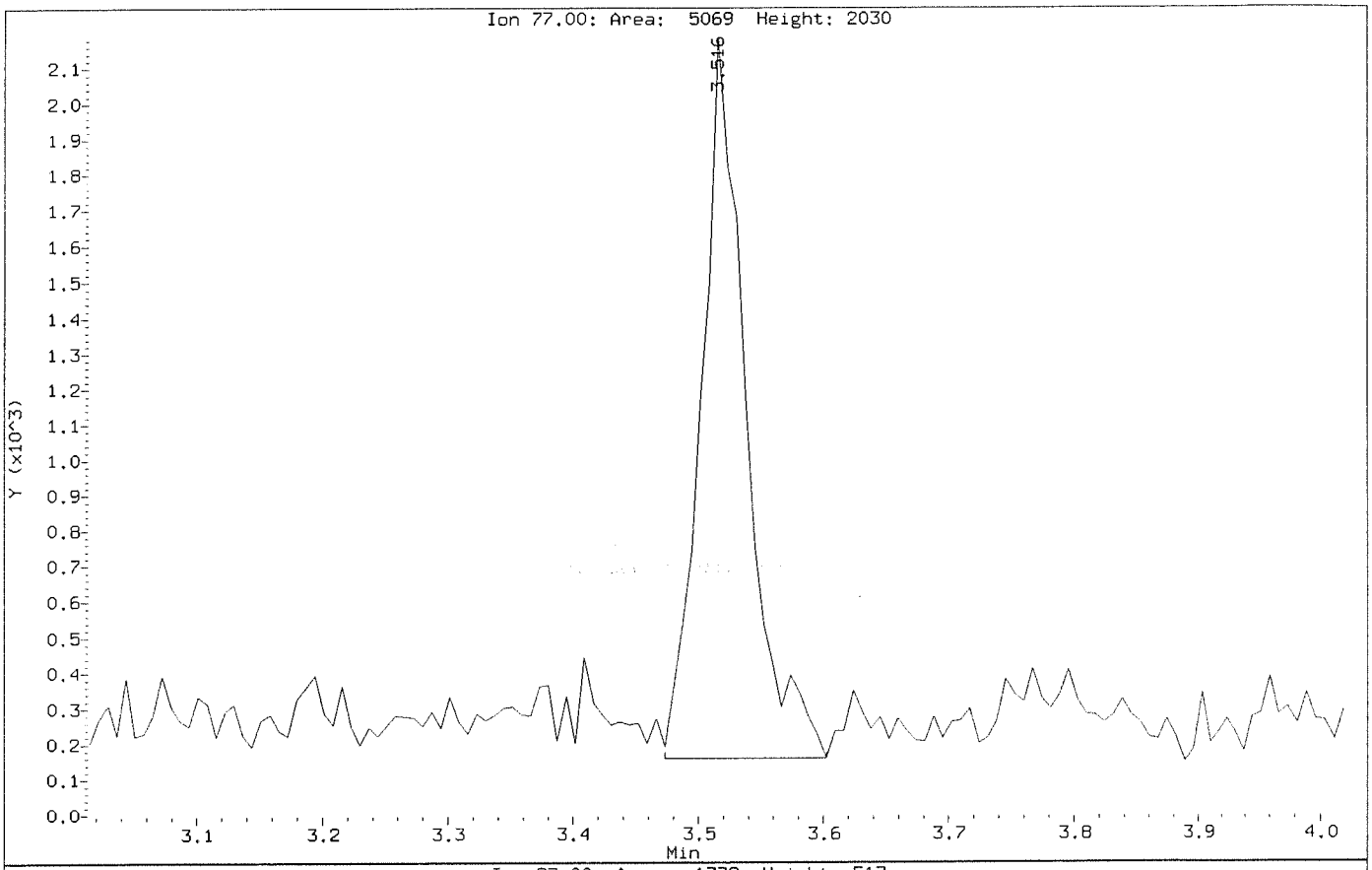
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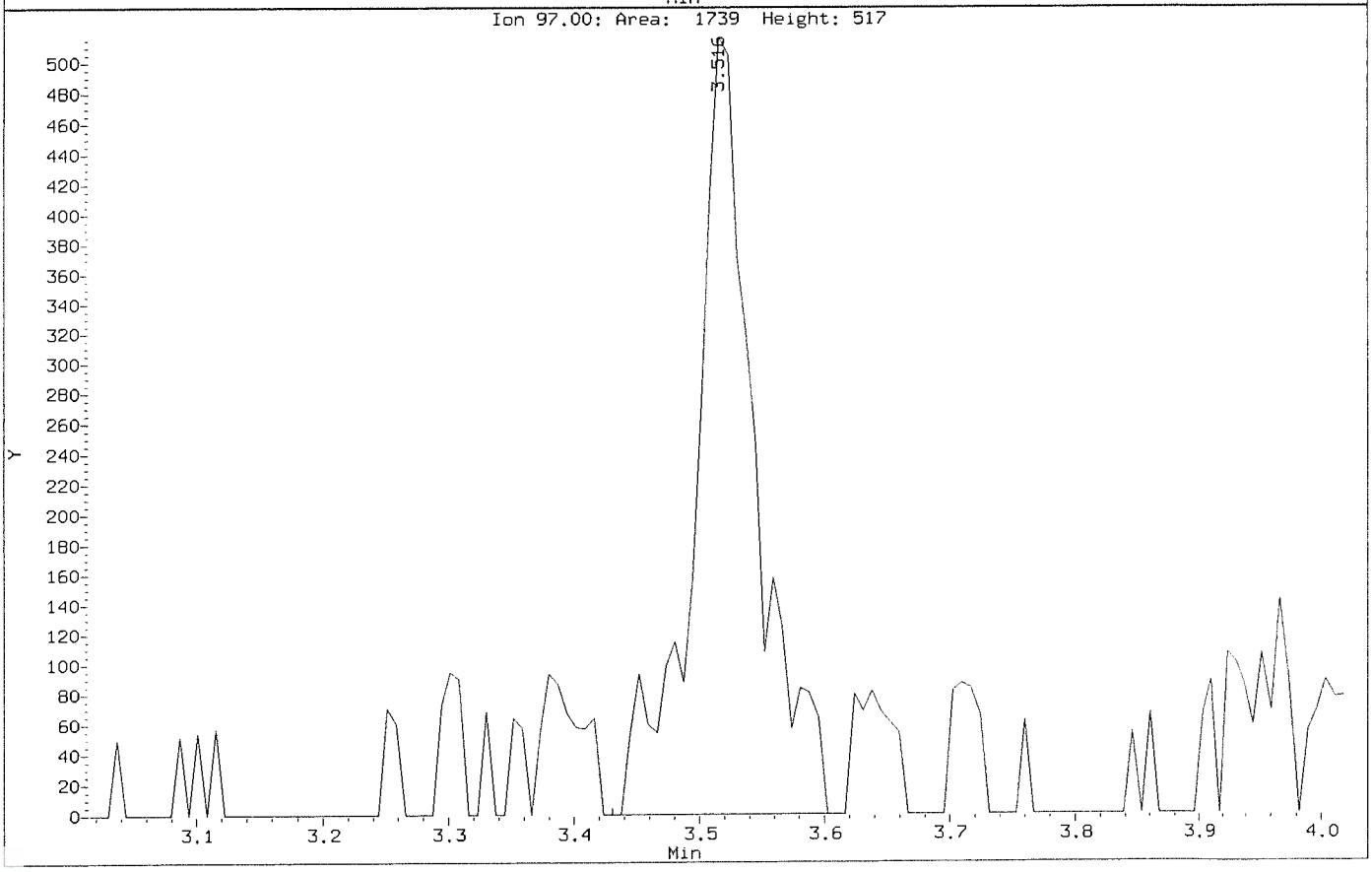
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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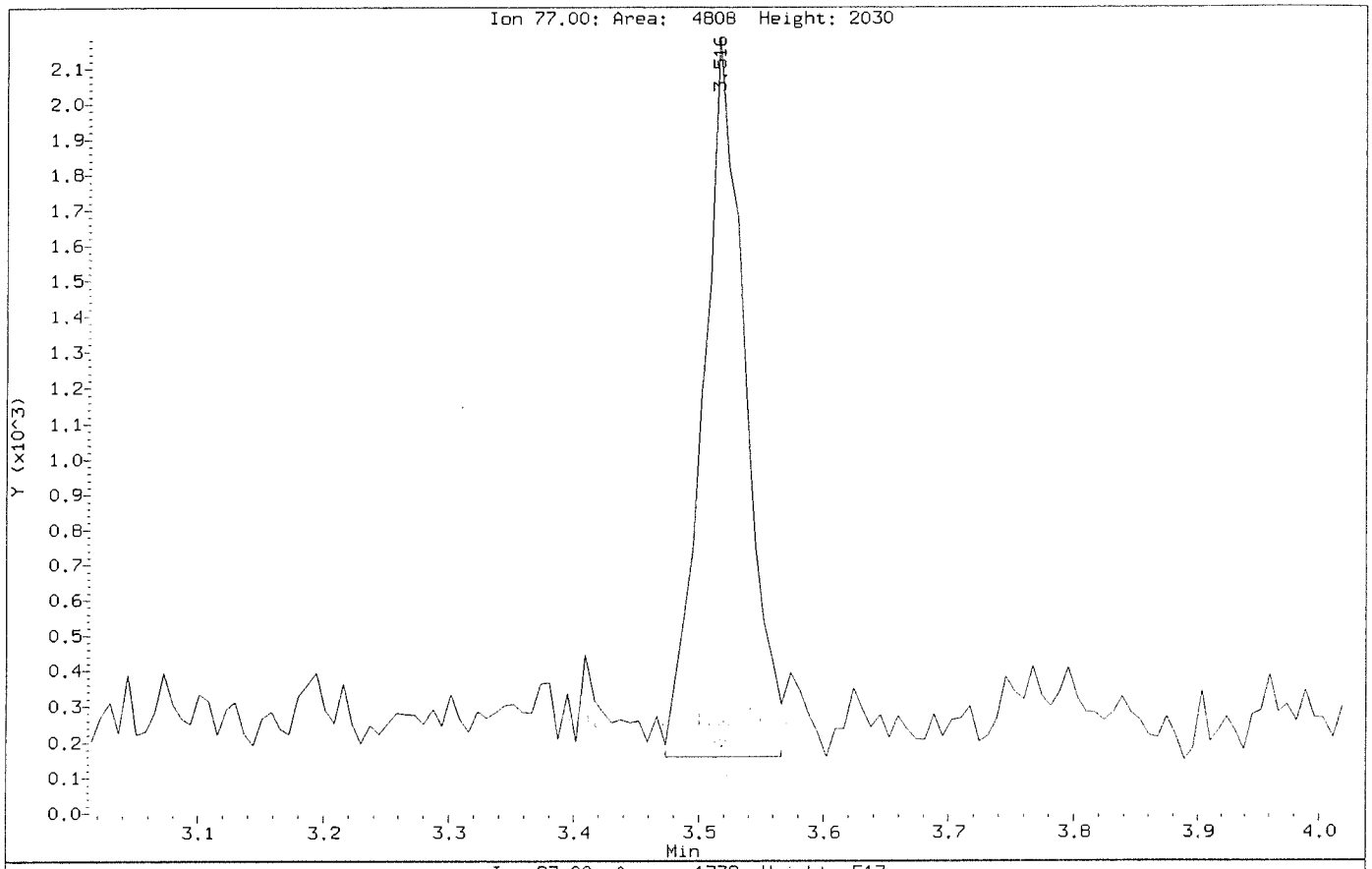
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

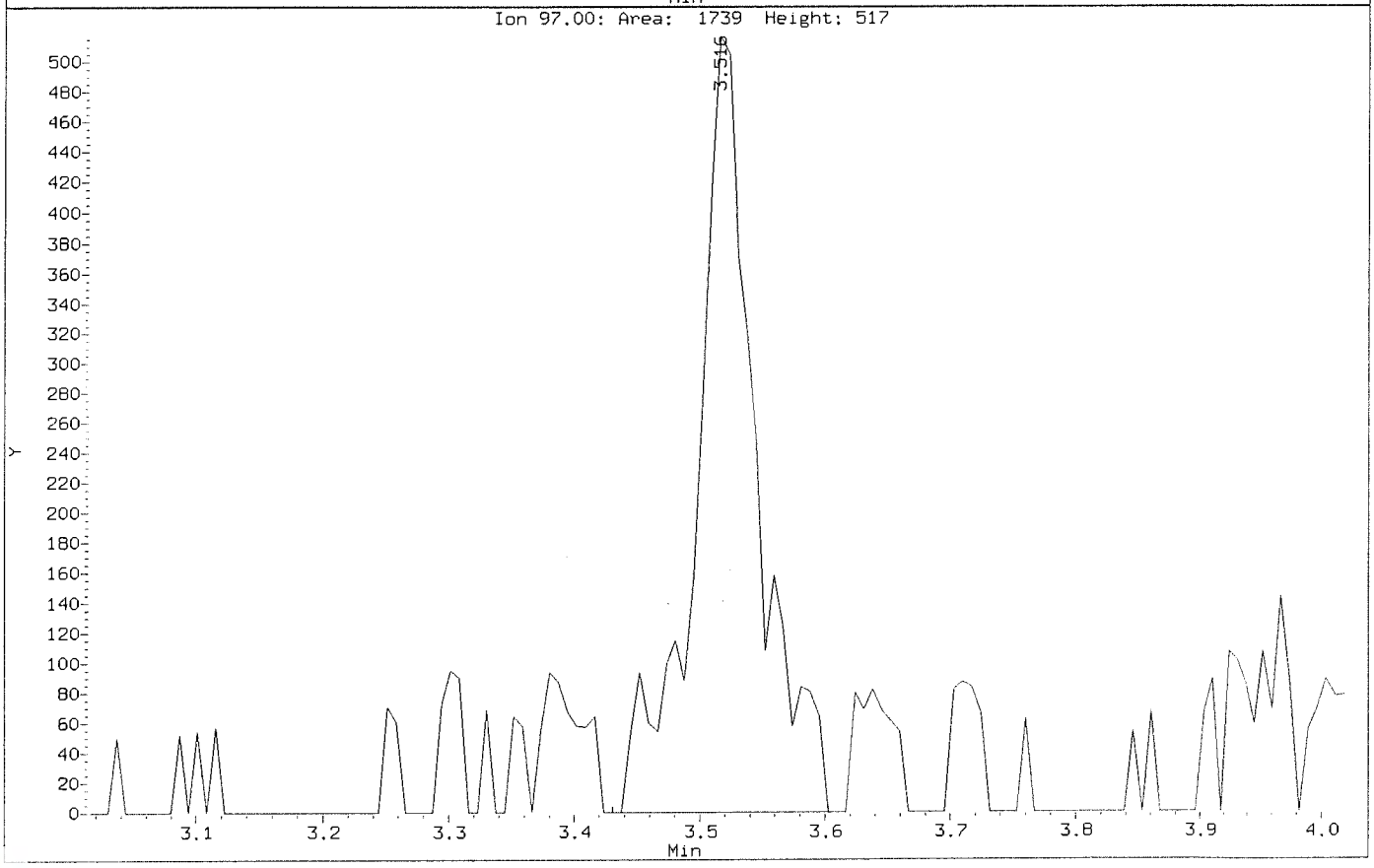




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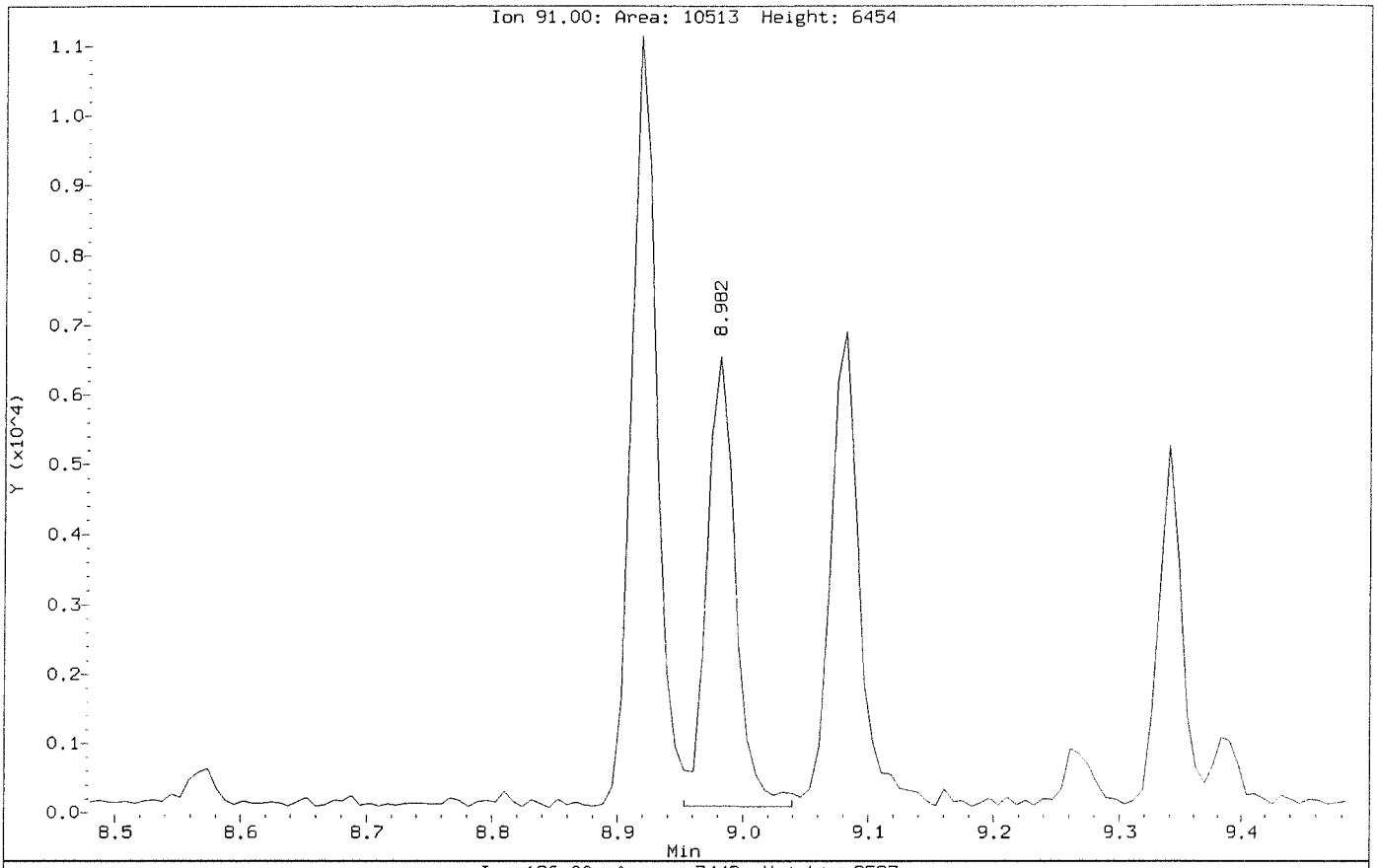
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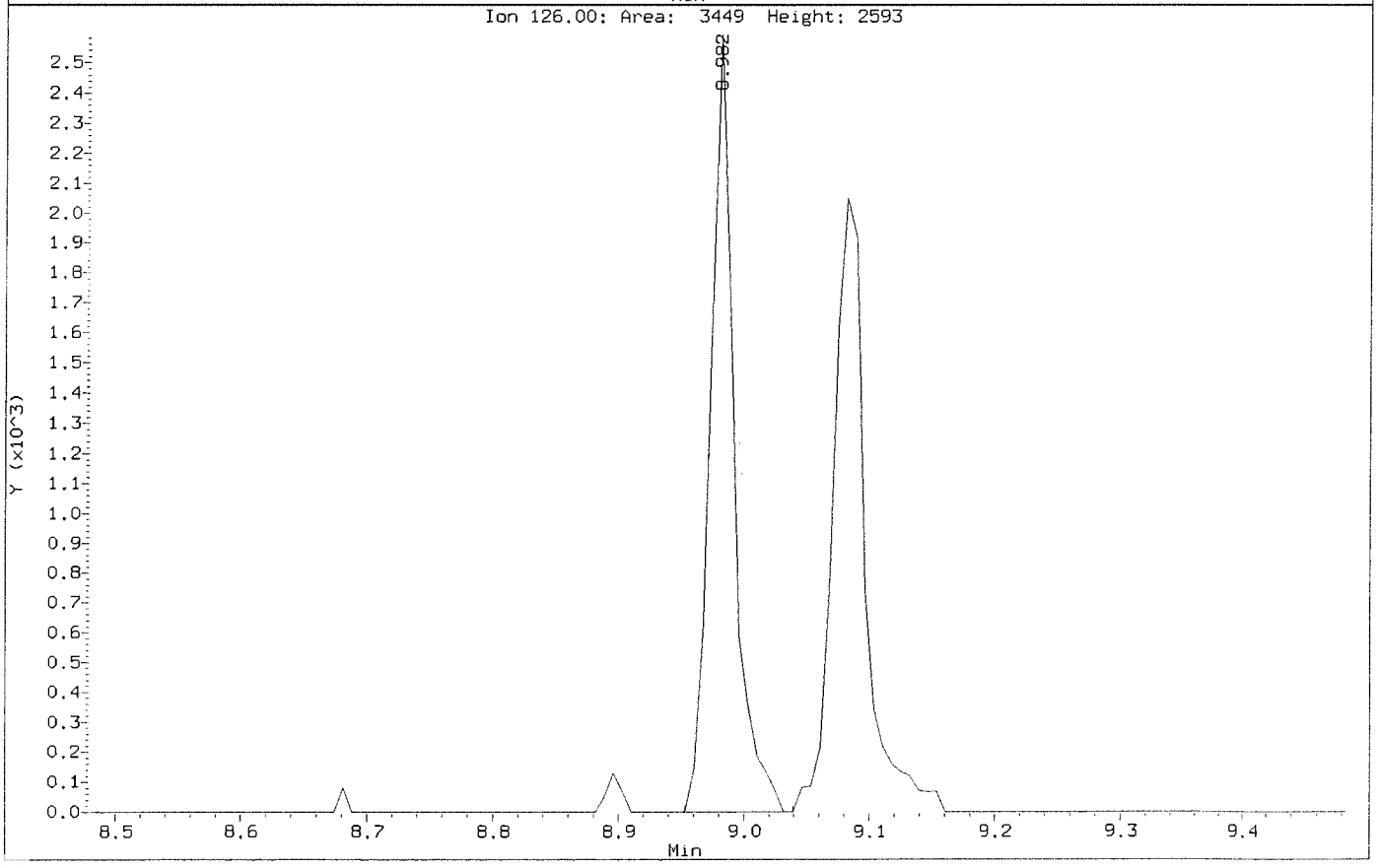




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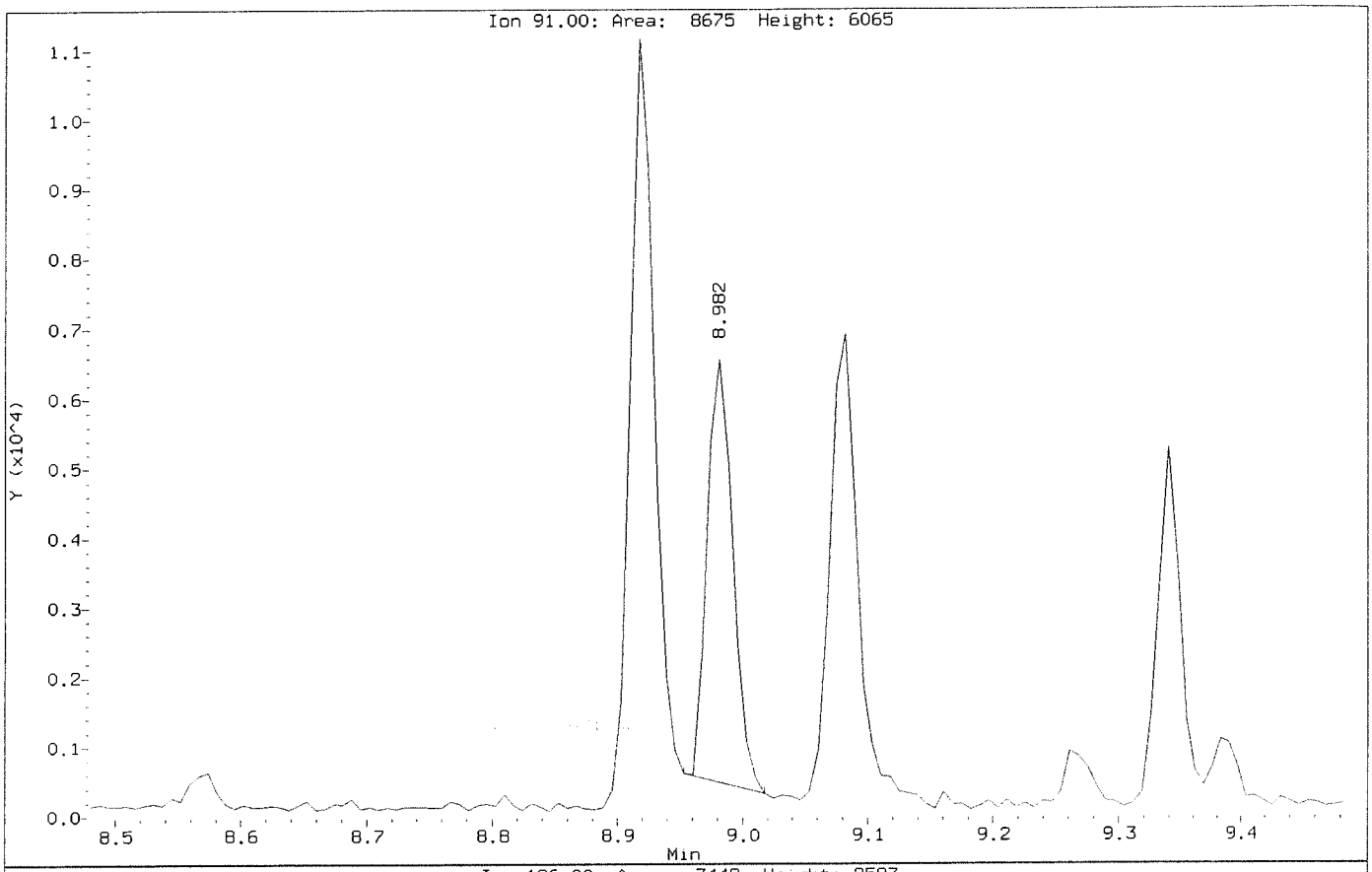
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

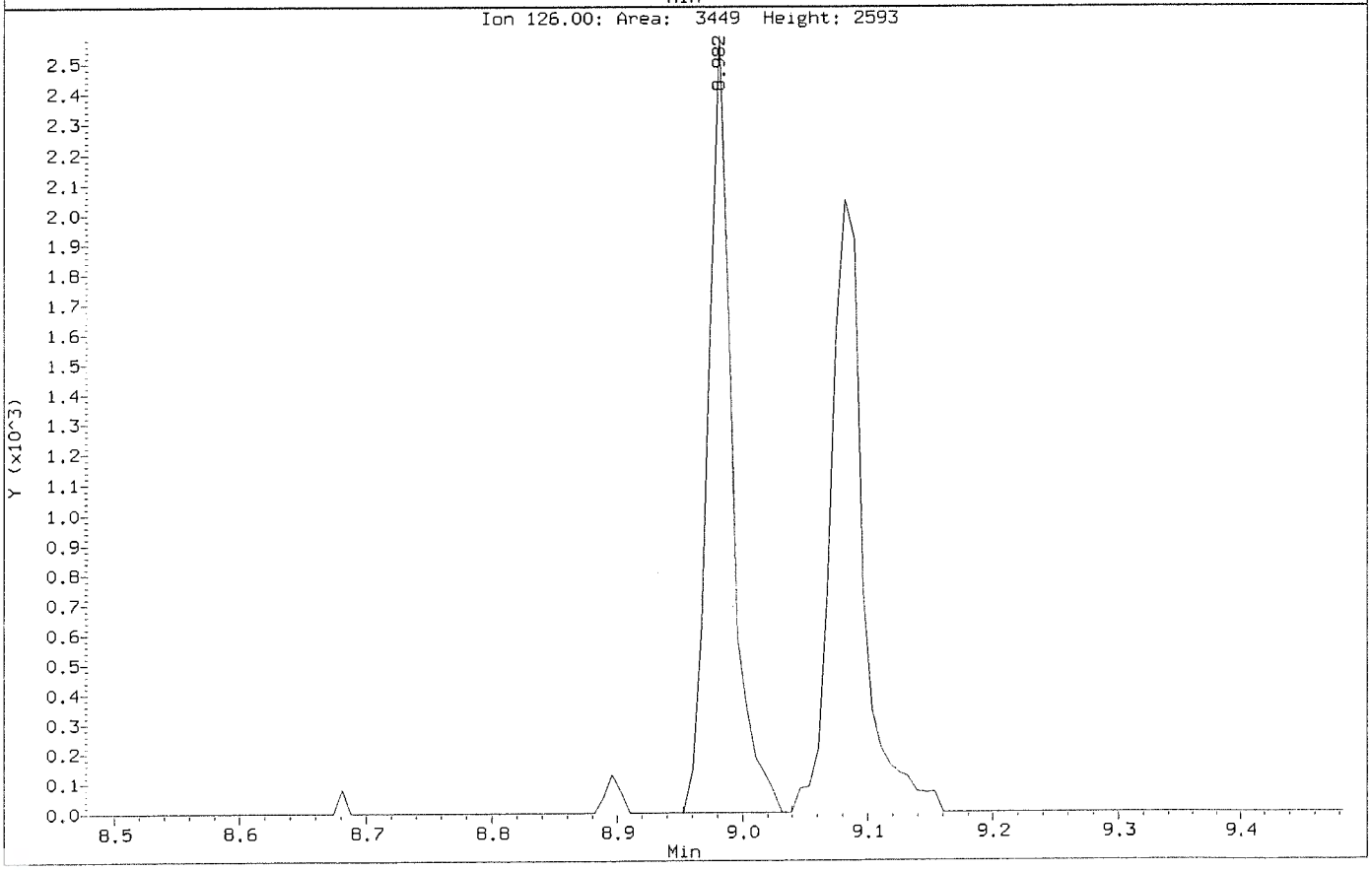




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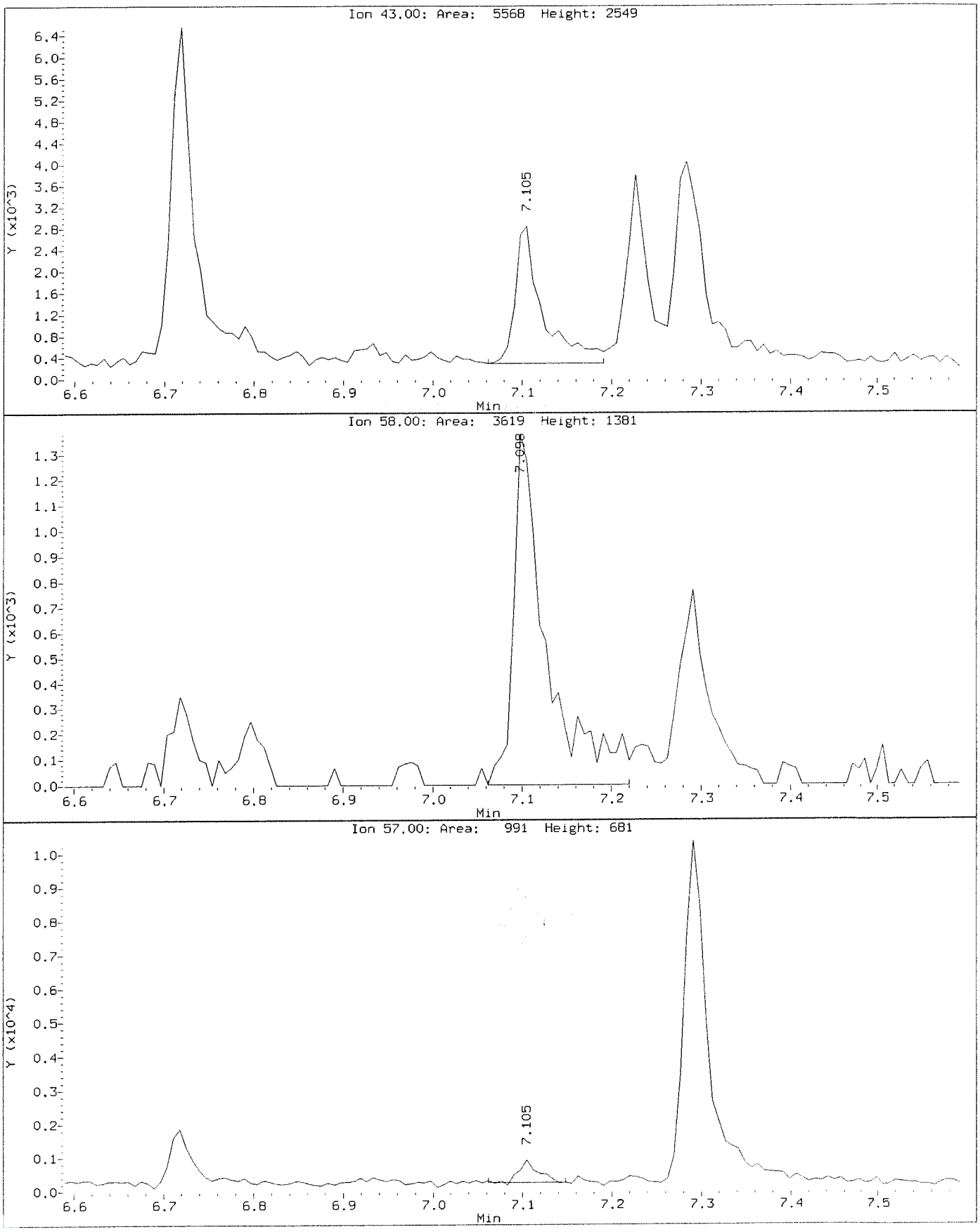
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





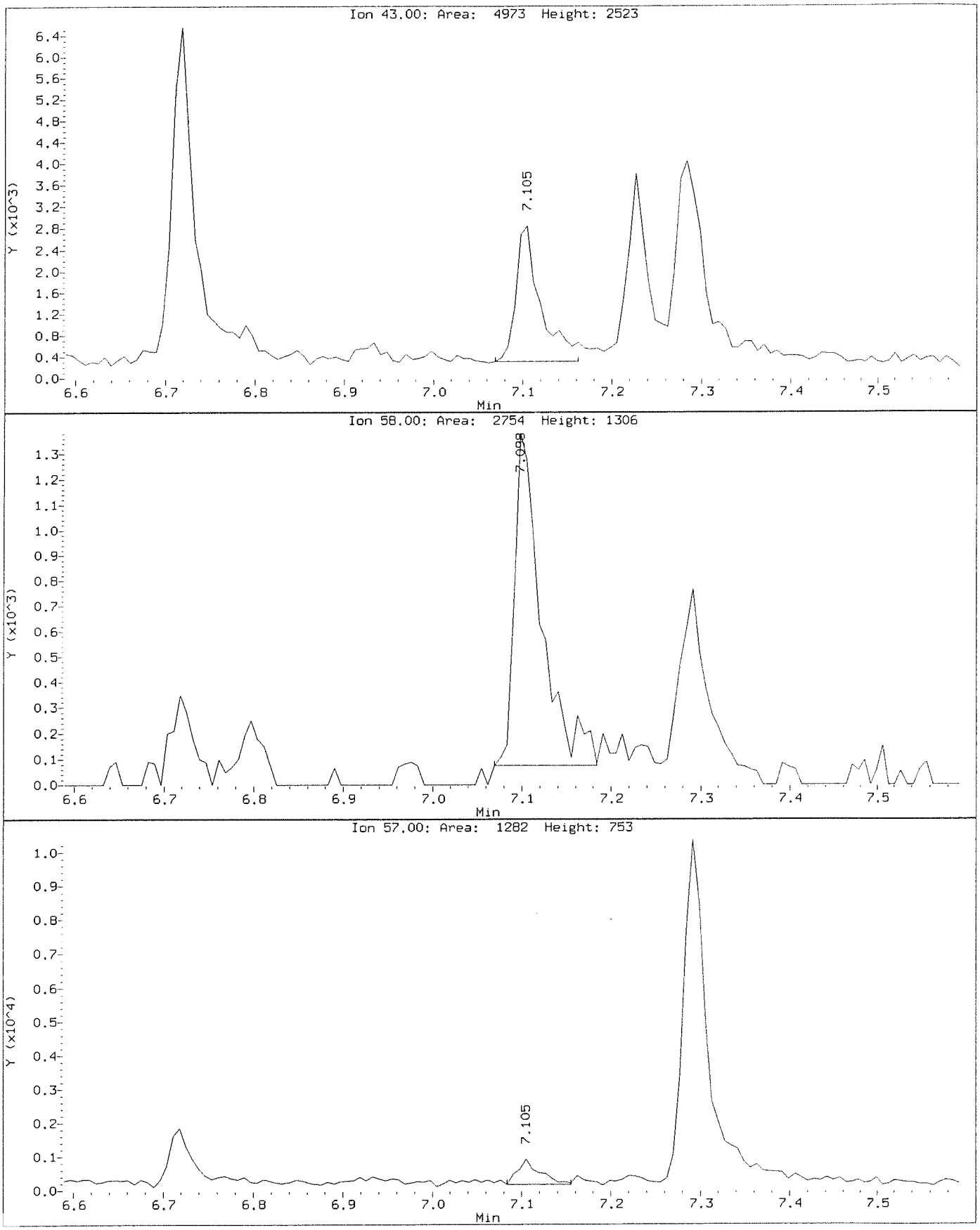
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



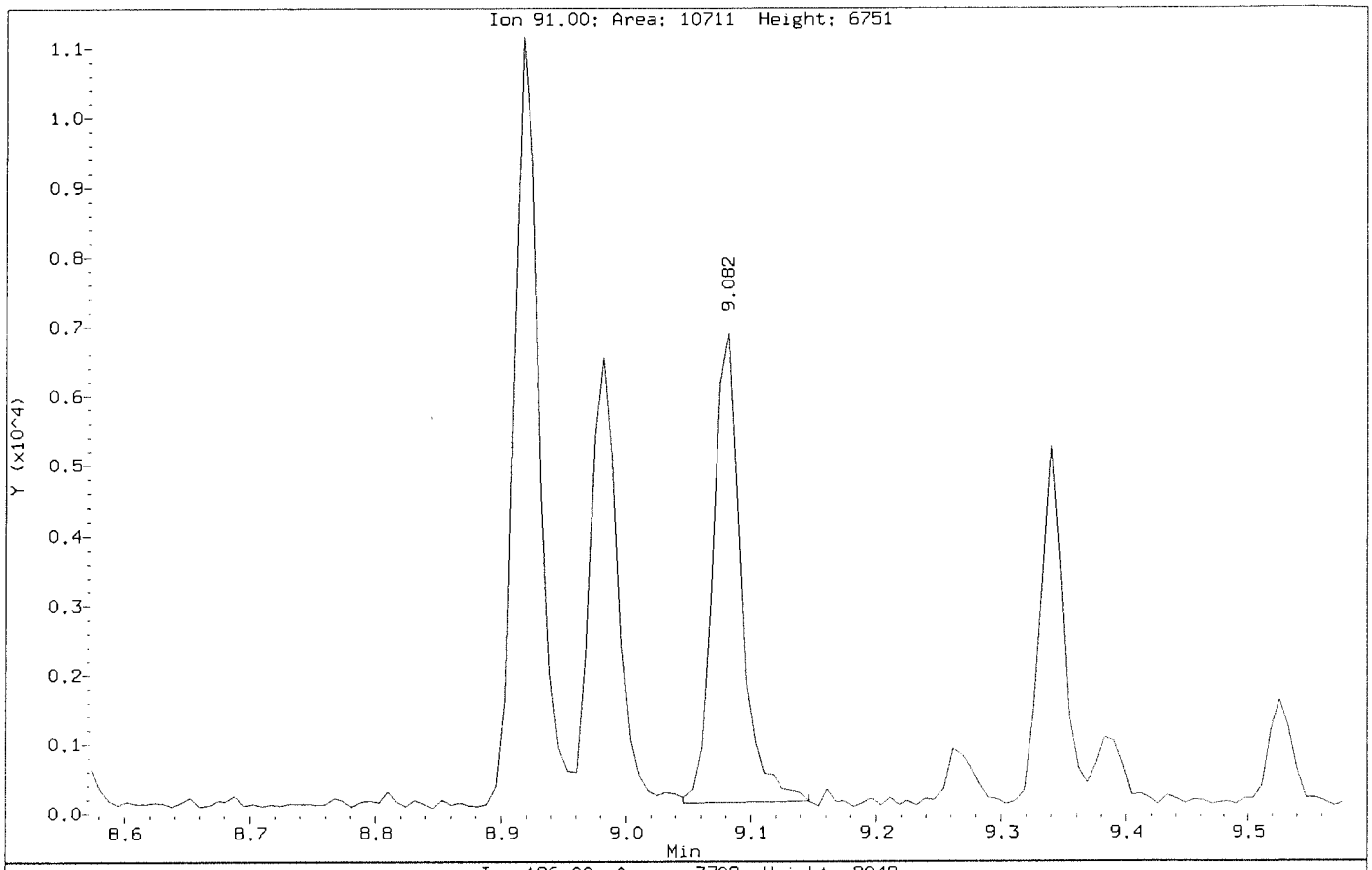
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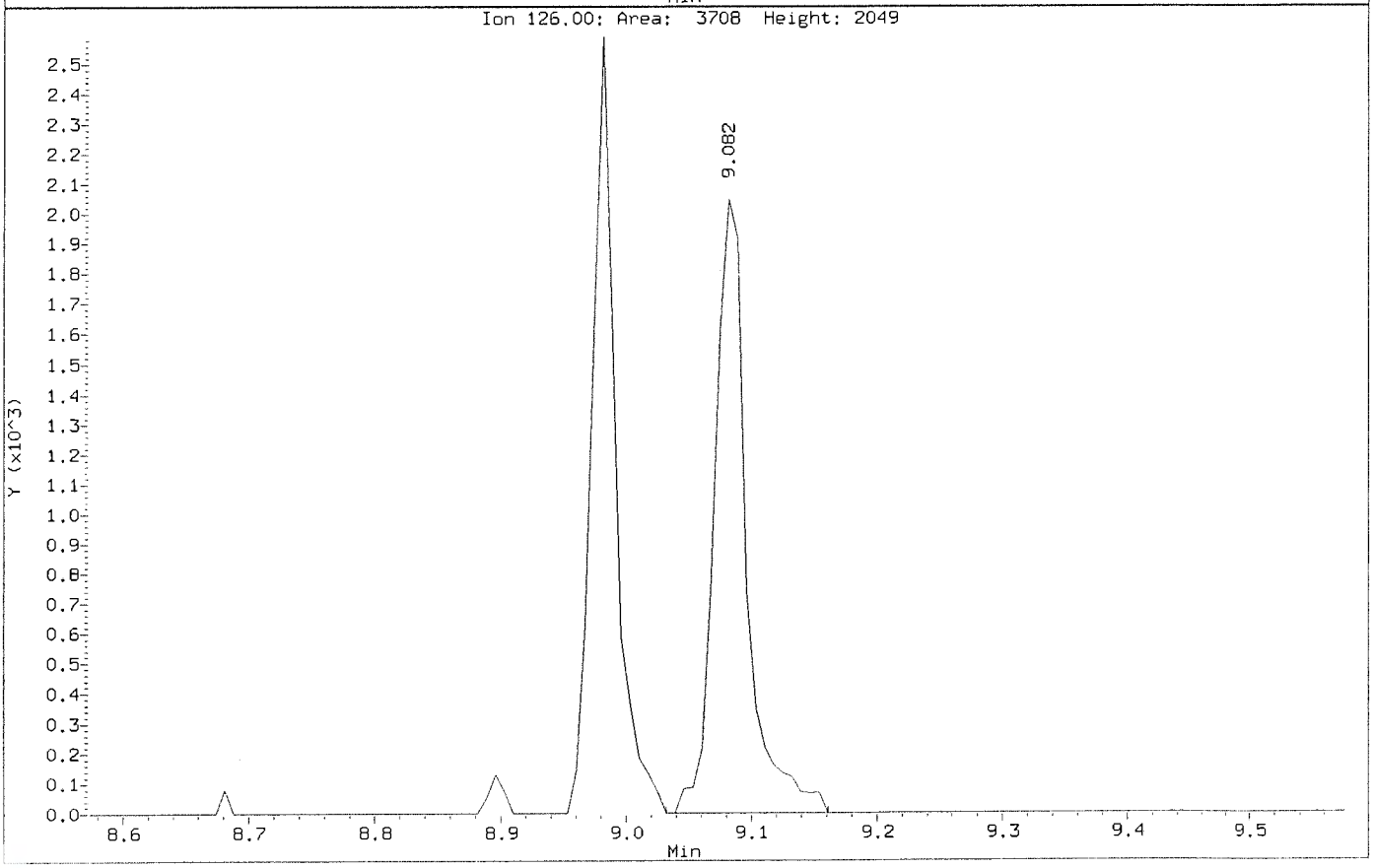
Compound: 2-Hexanone
CAS Number: 591-78-6



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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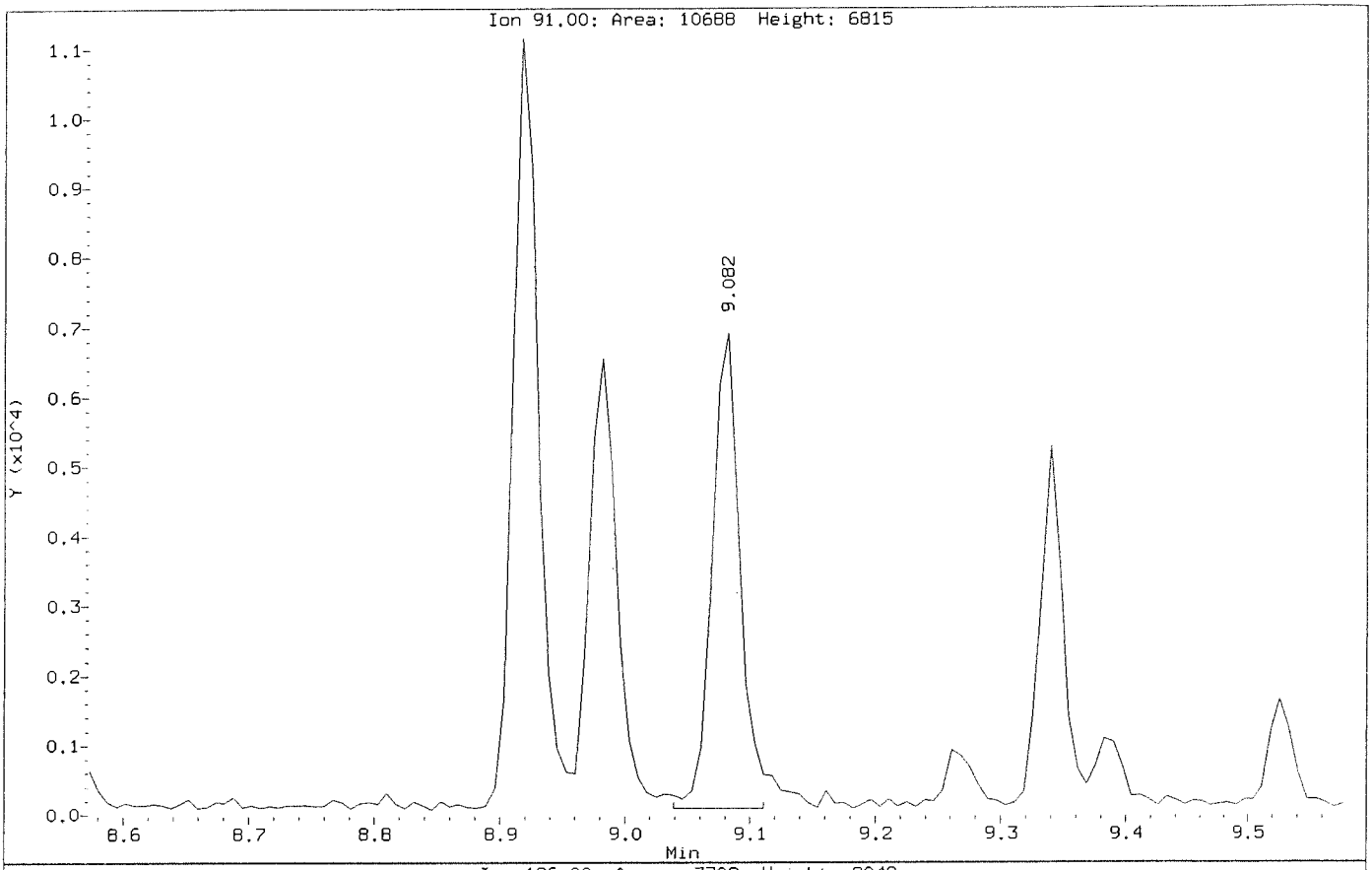
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

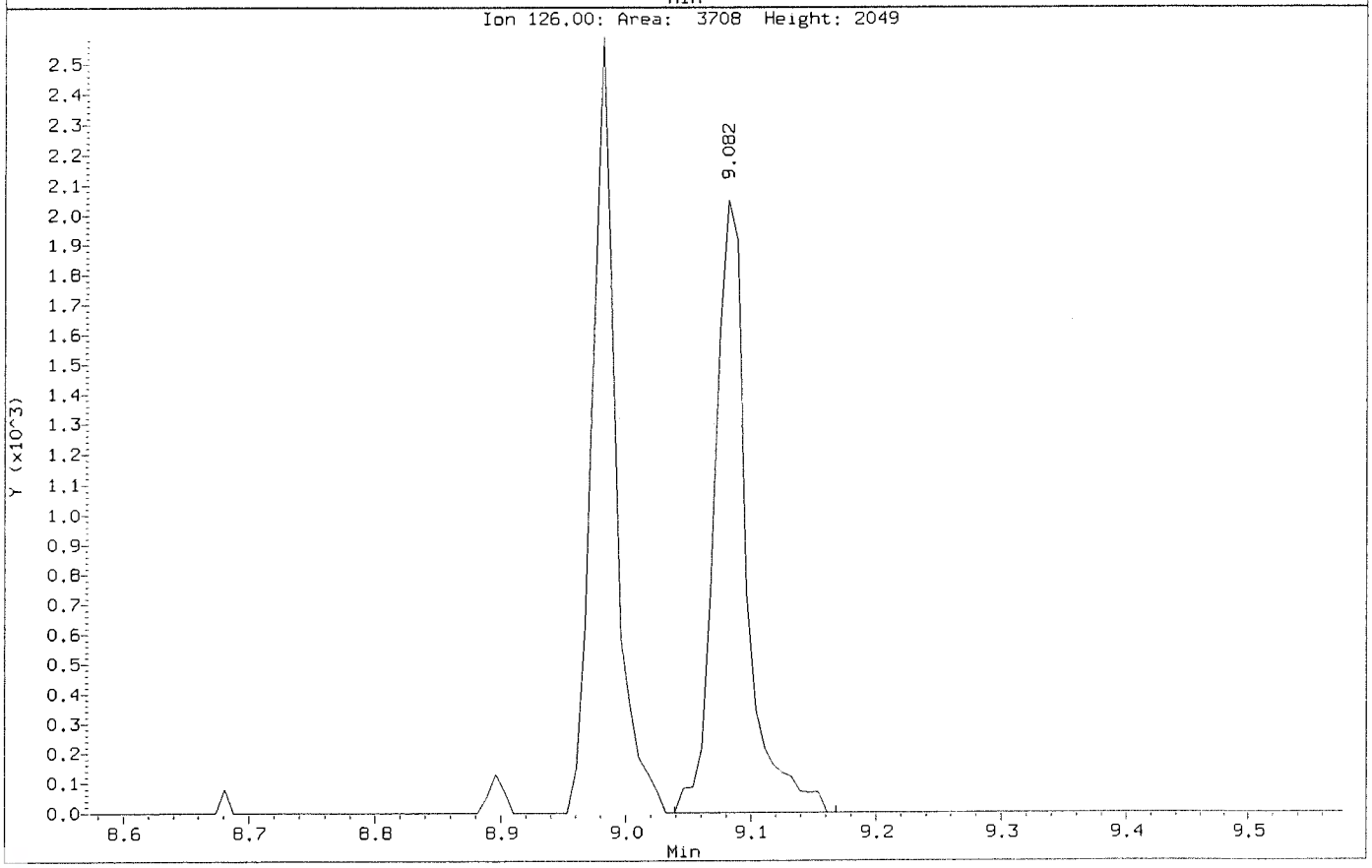




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Instrument: voa6.i
Client Sample ID: VSTD000.5

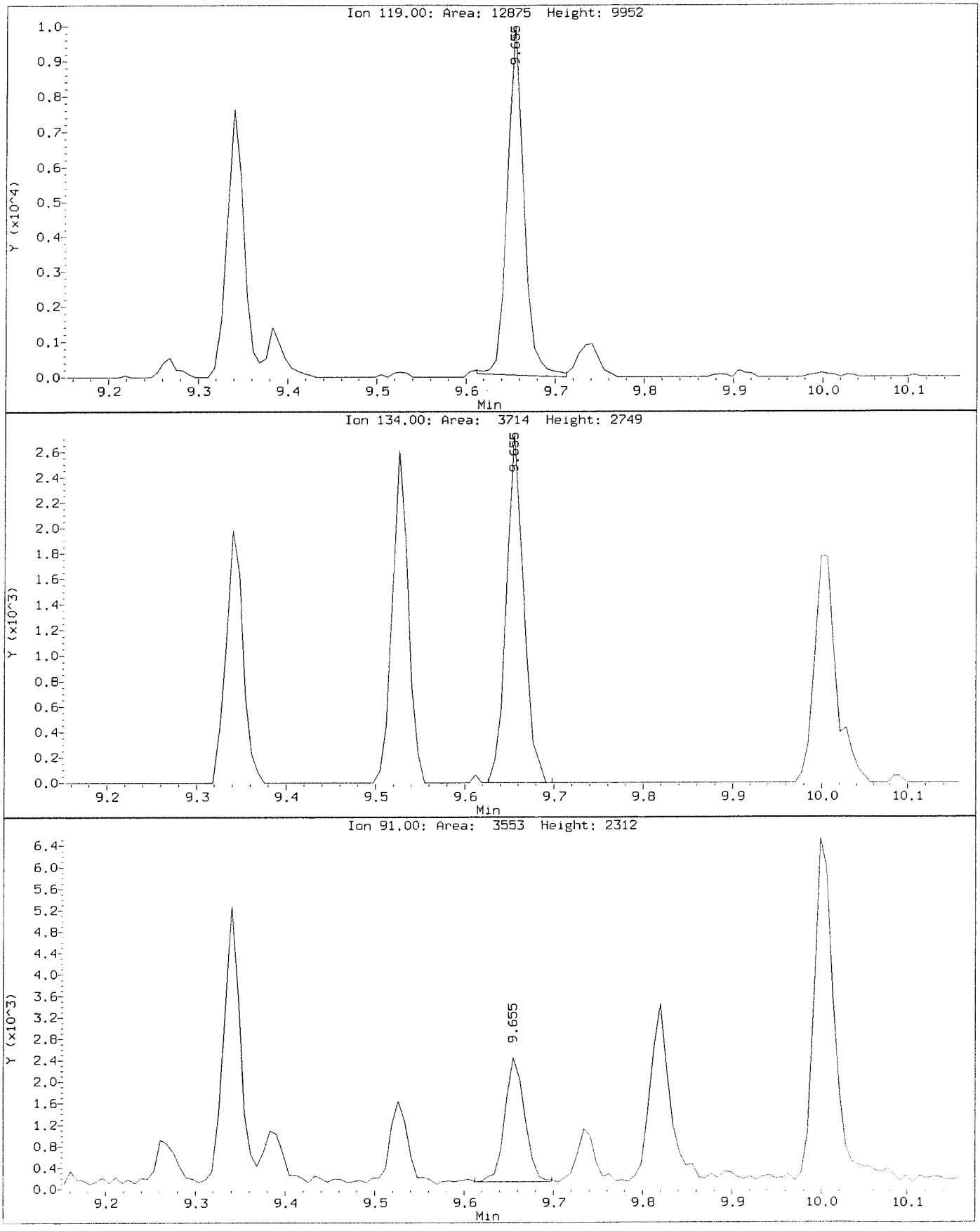
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





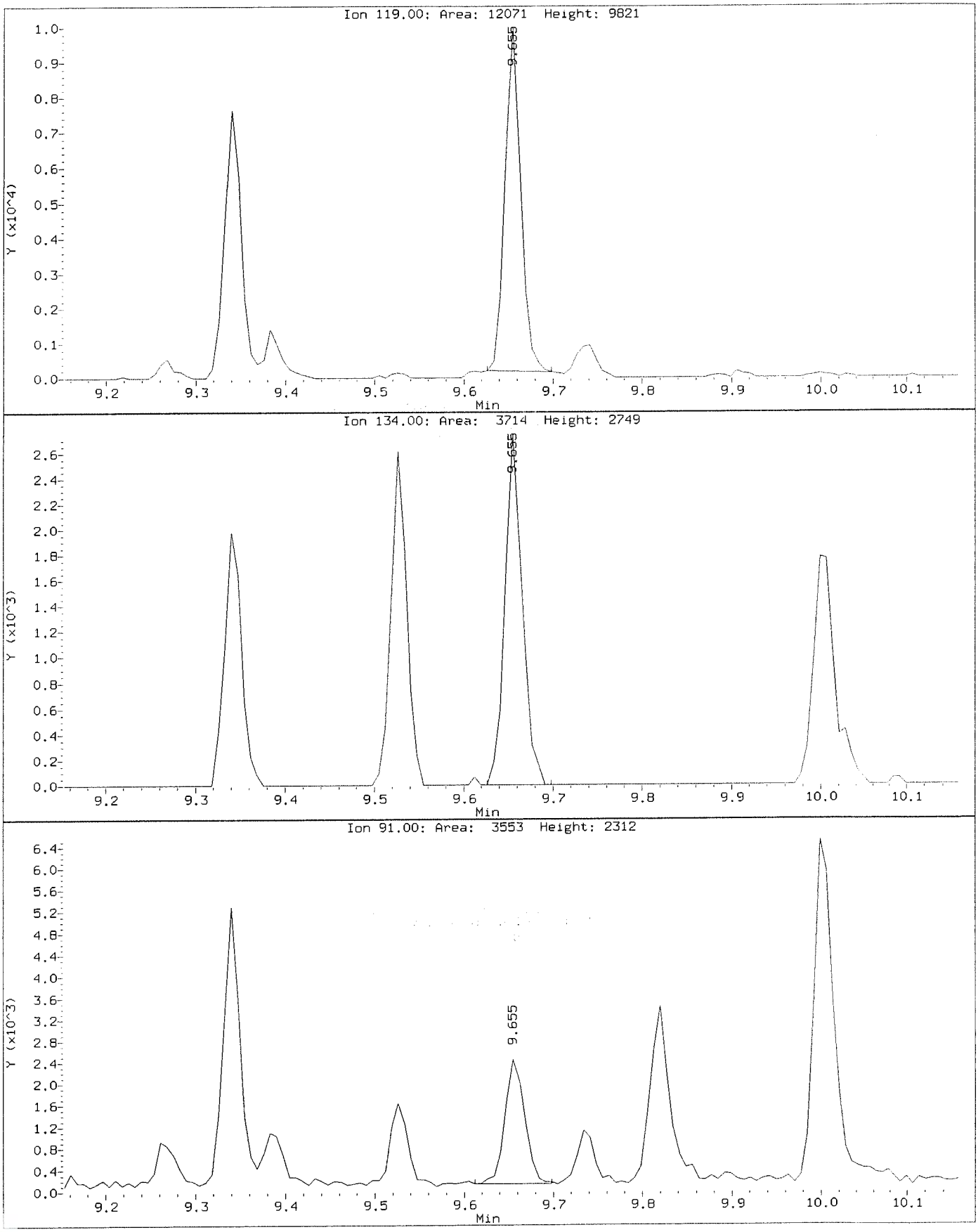
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



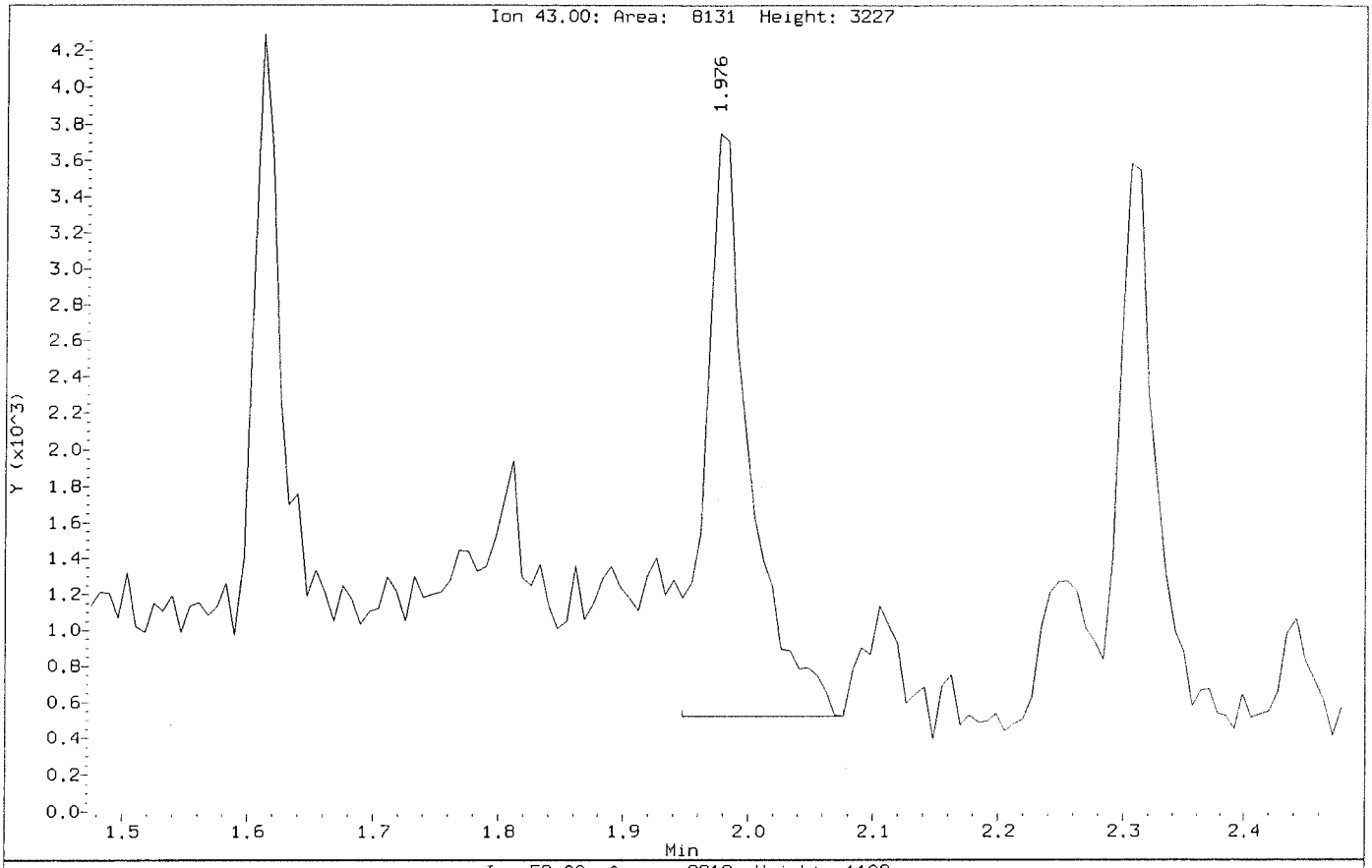
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

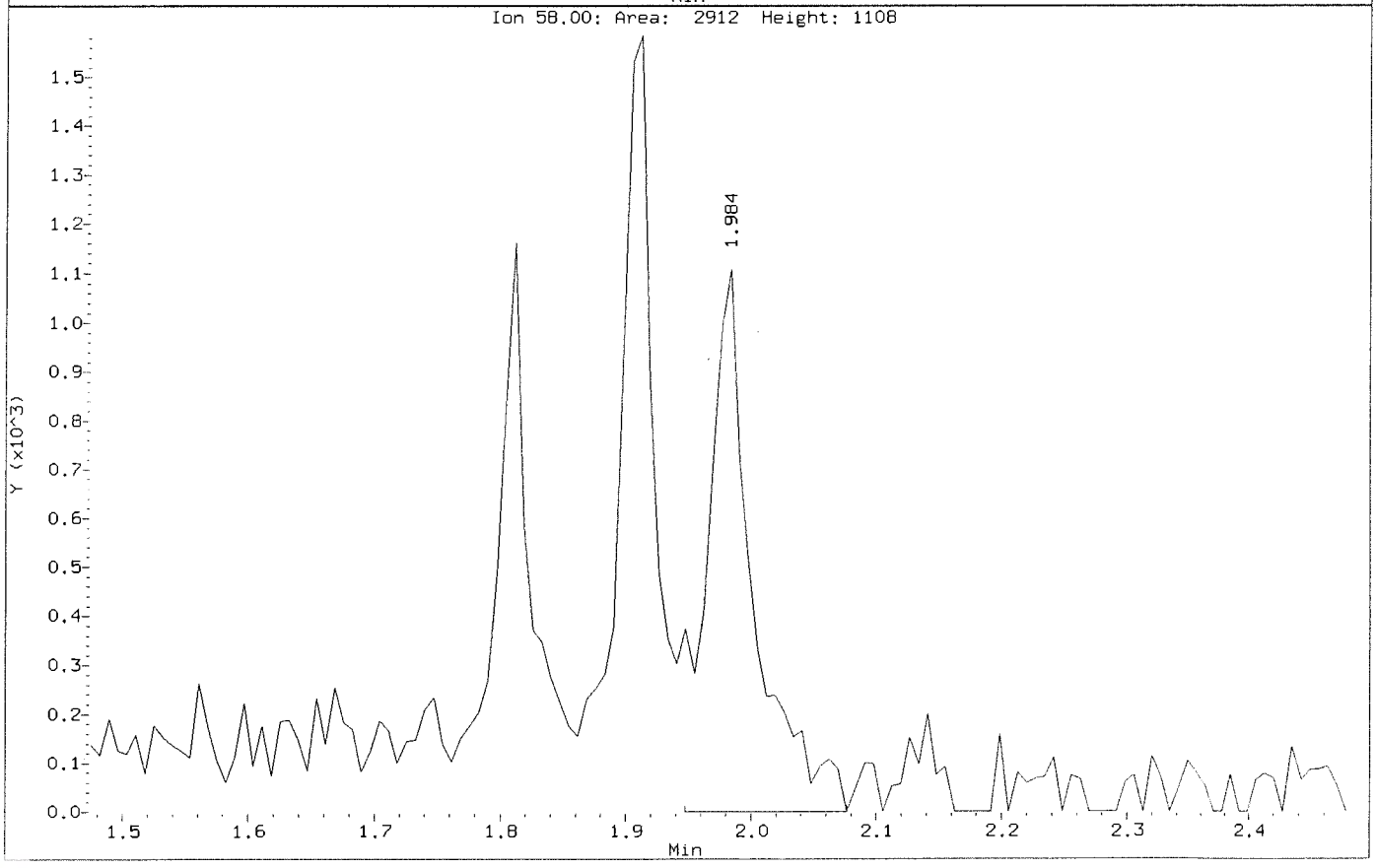
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



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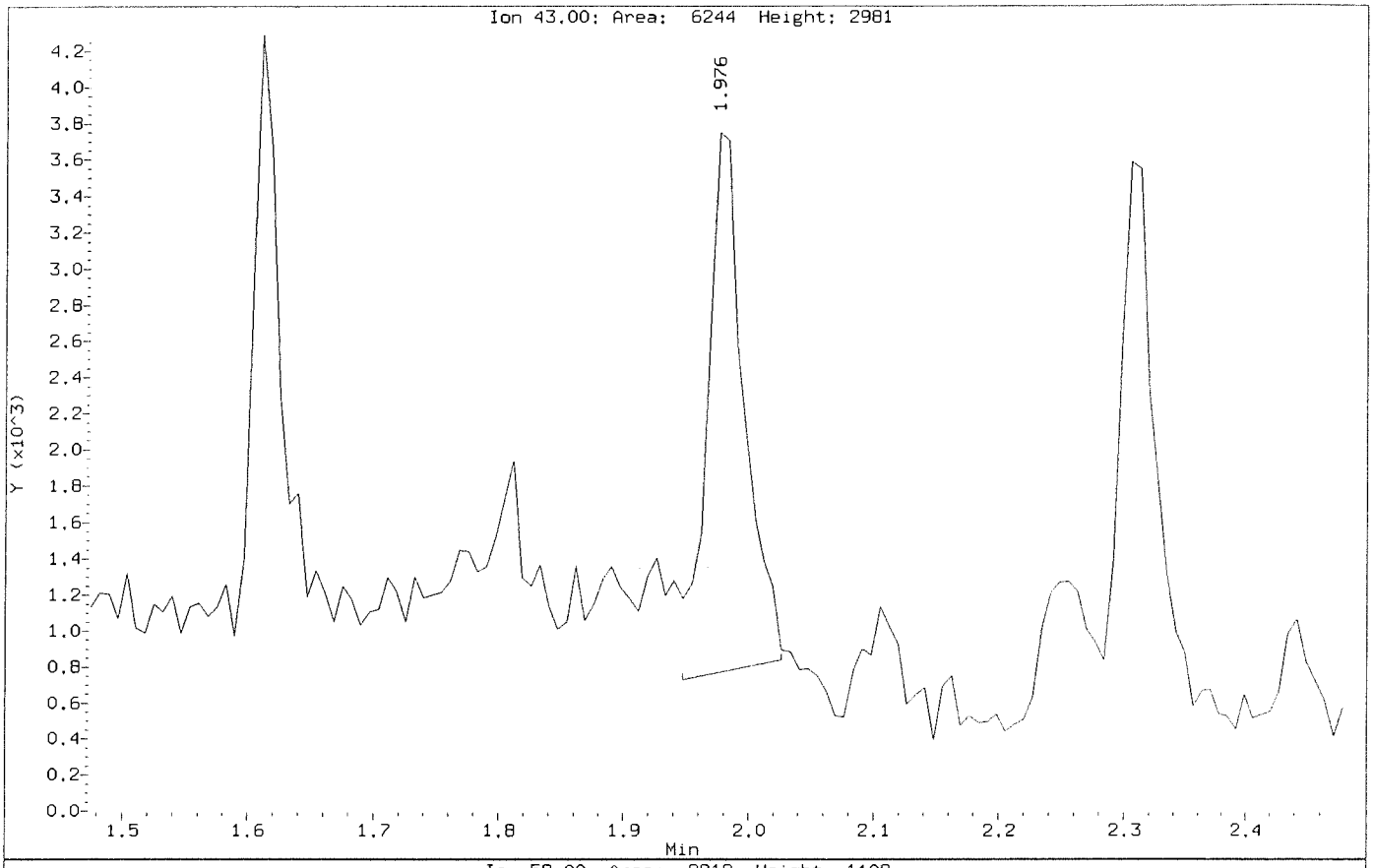
Compound: Acetone
CAS Number: 67-64-1

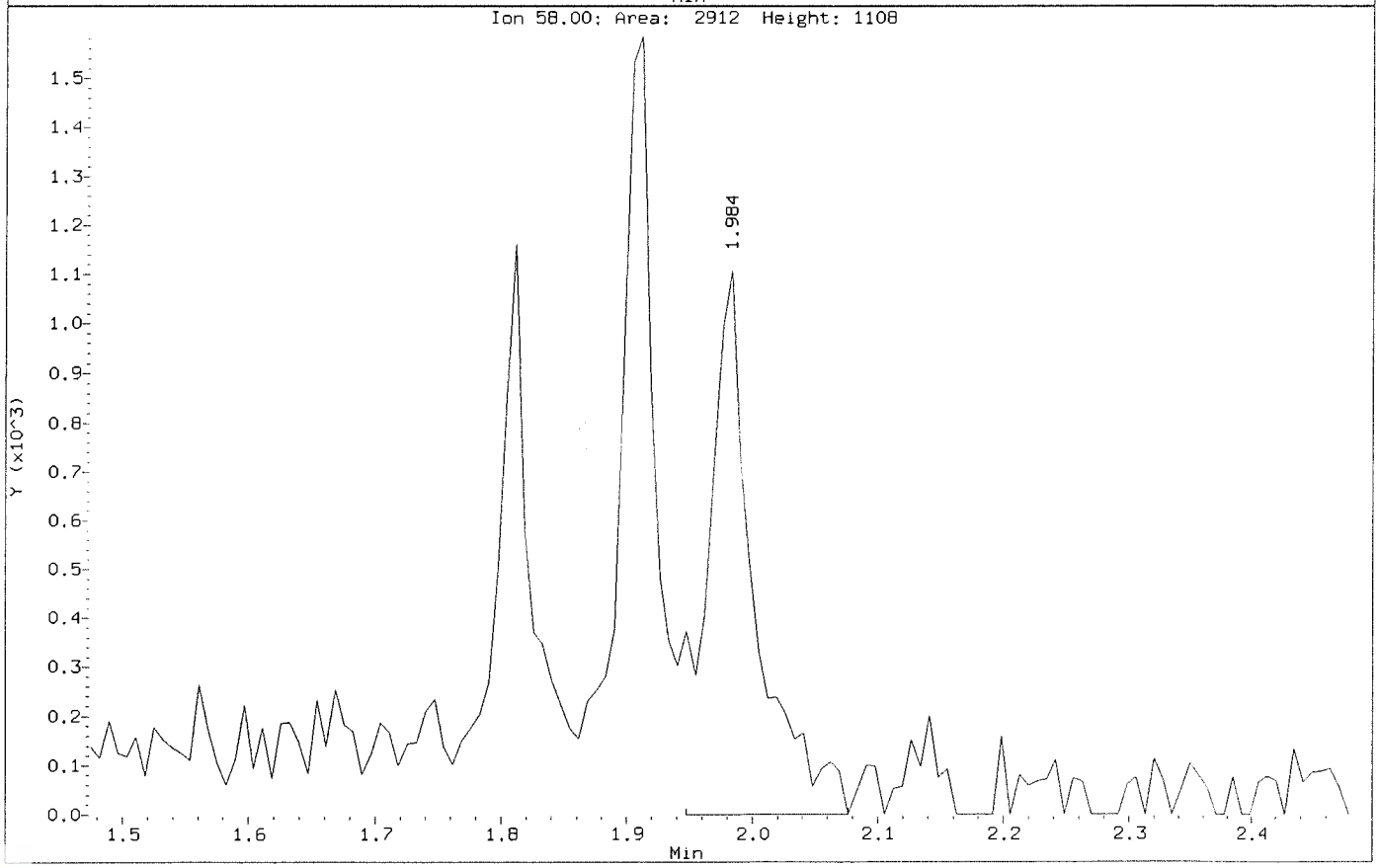




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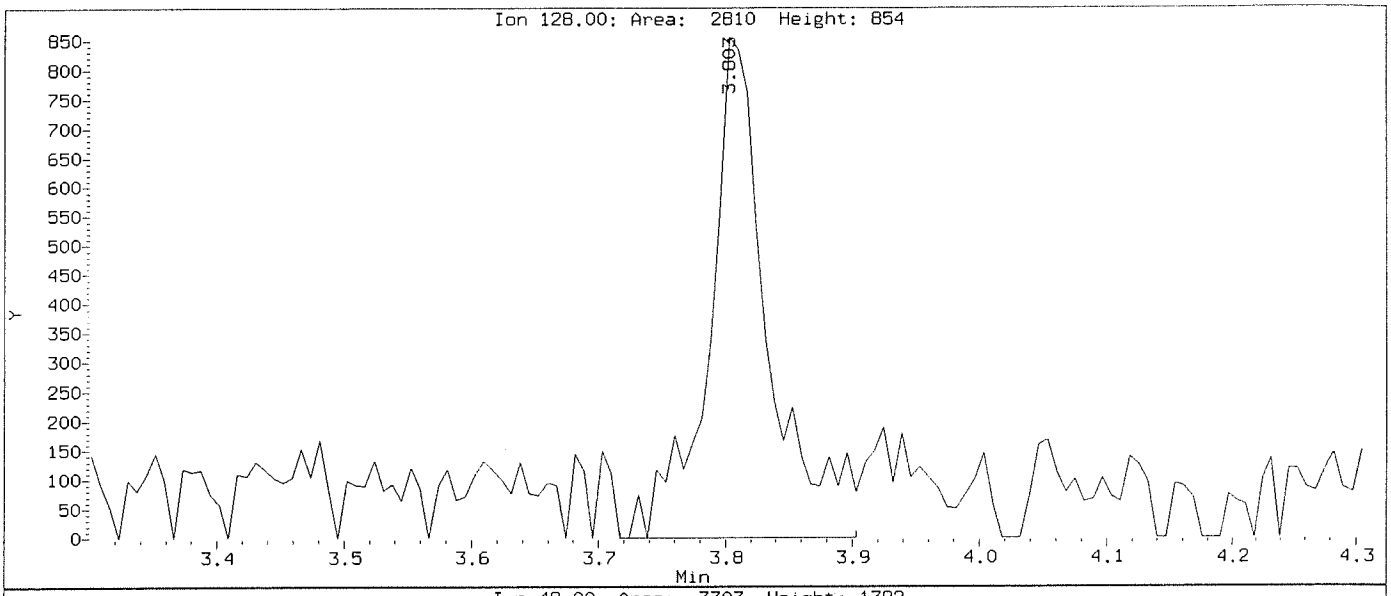
Compound: Acetone
CAS Number: 67-64-1

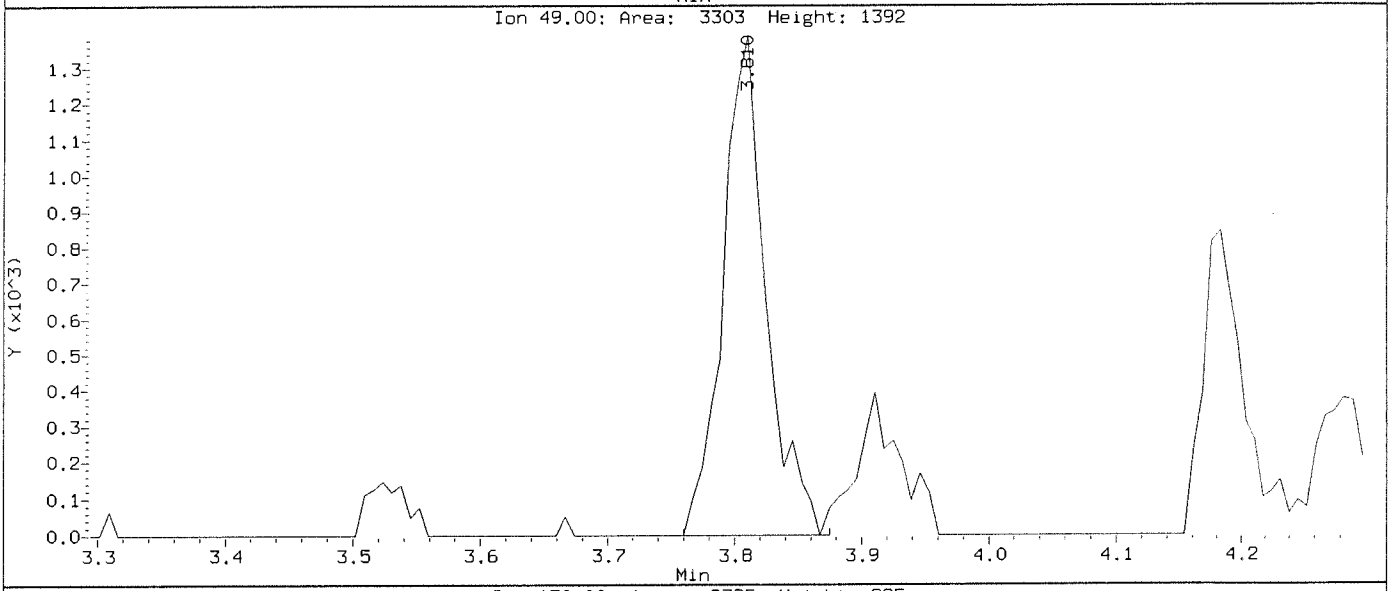


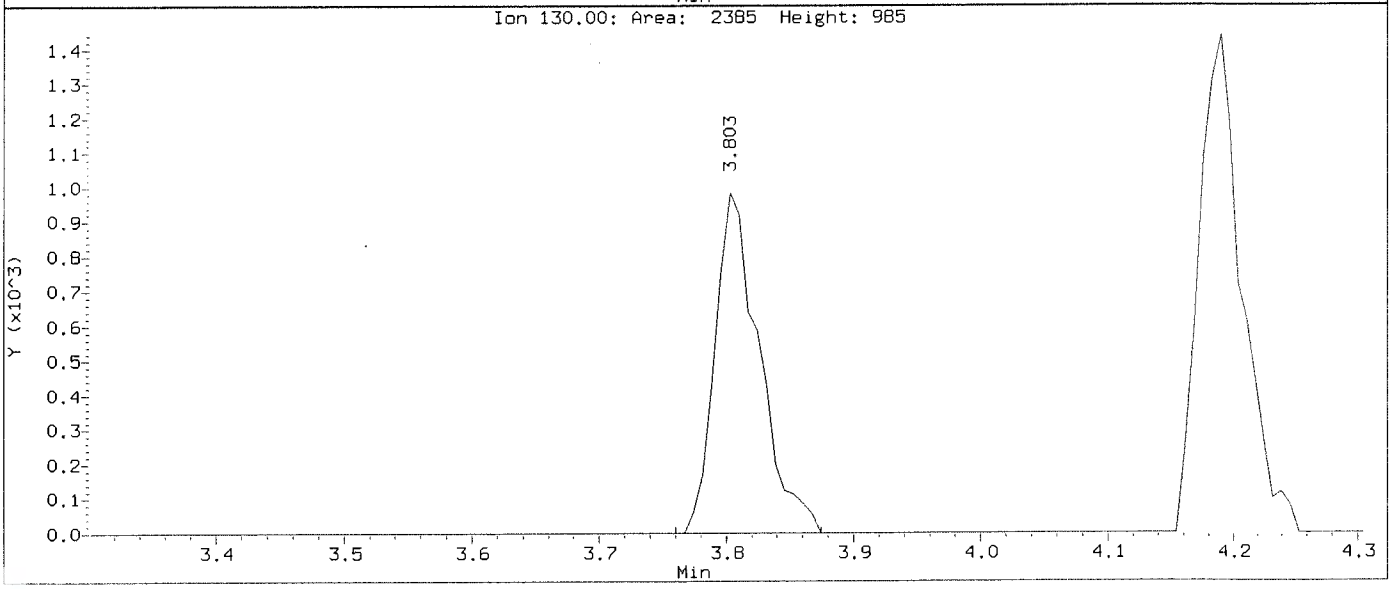


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

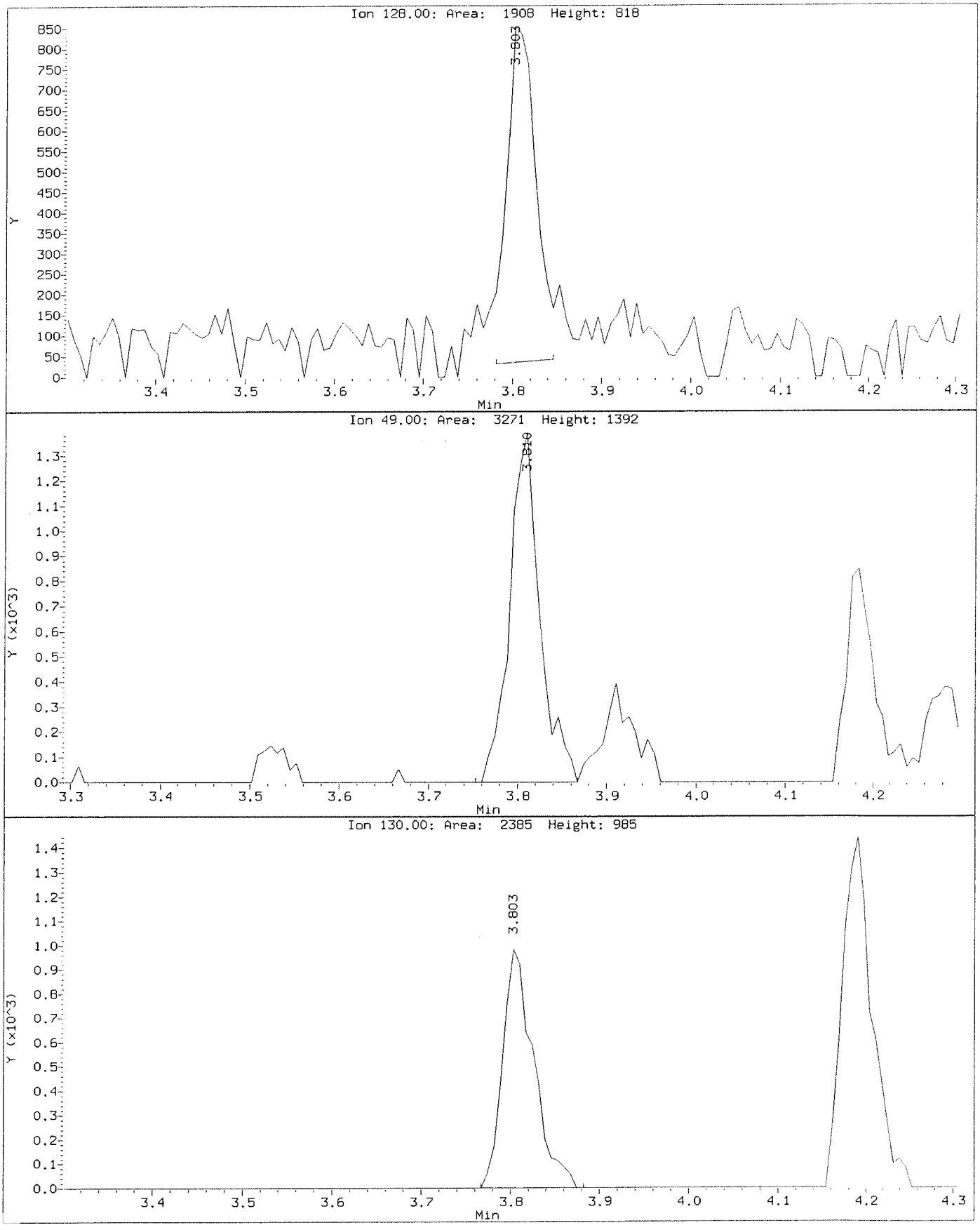






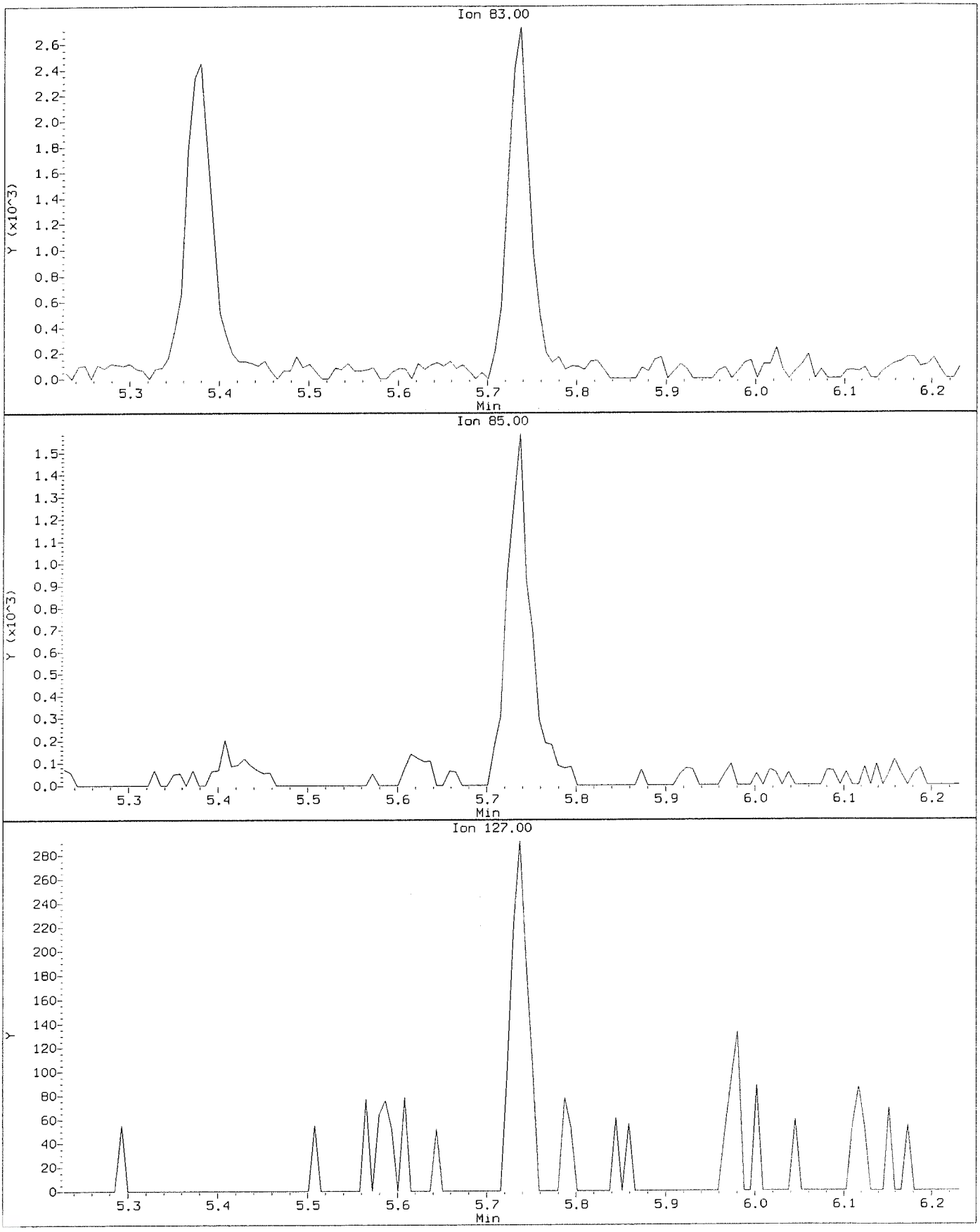
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Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5



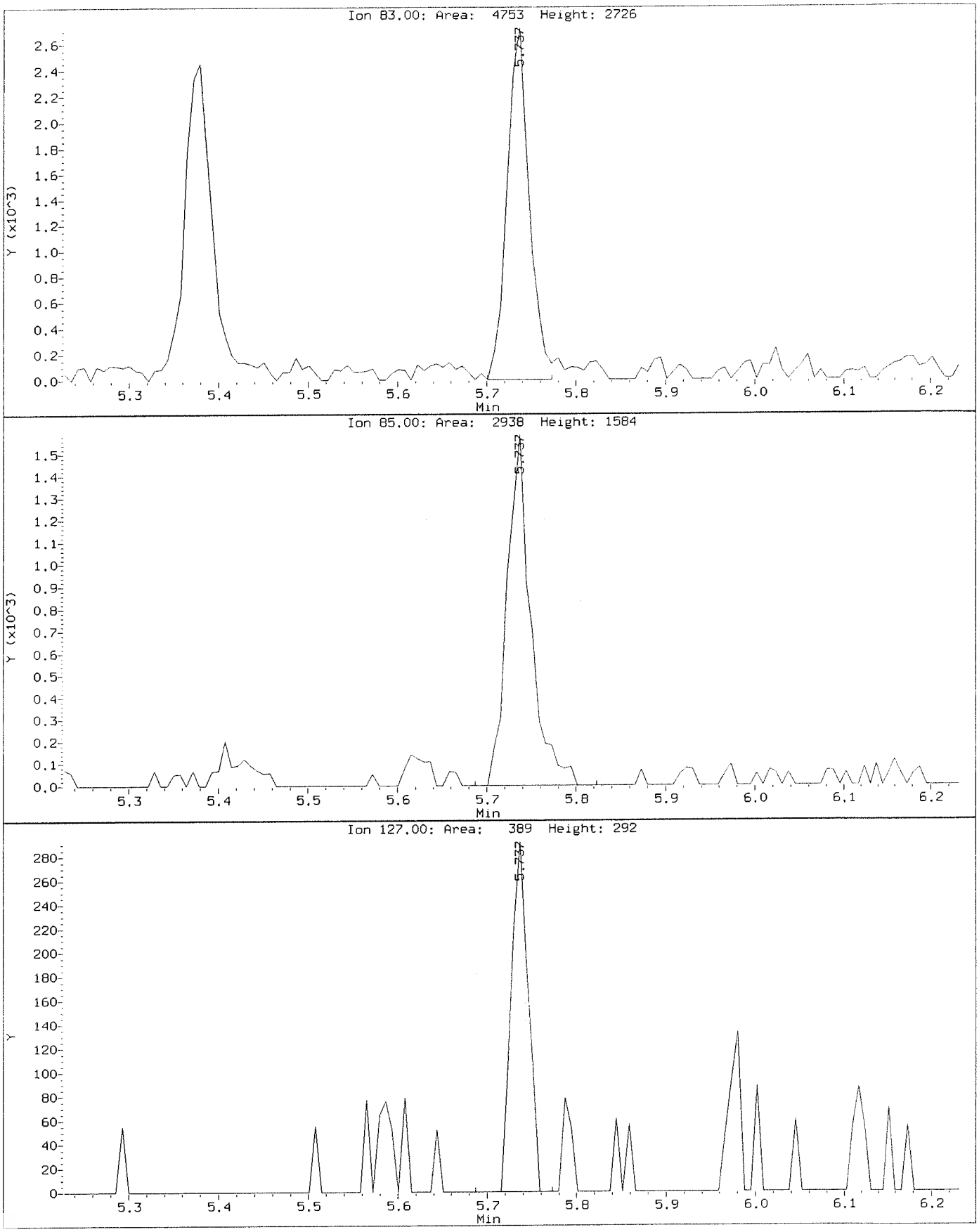
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



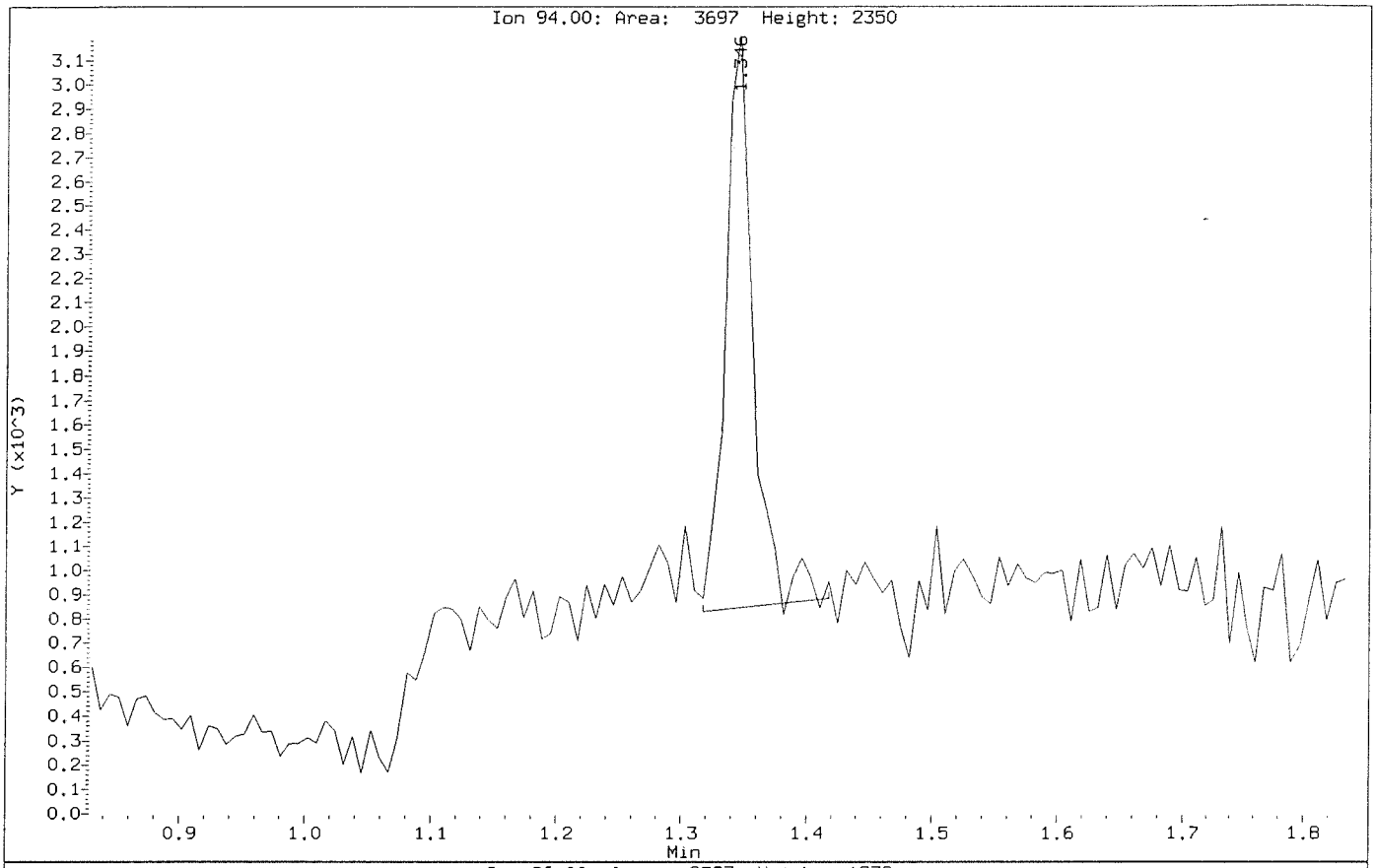
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Client Sample ID: VSTD000.5

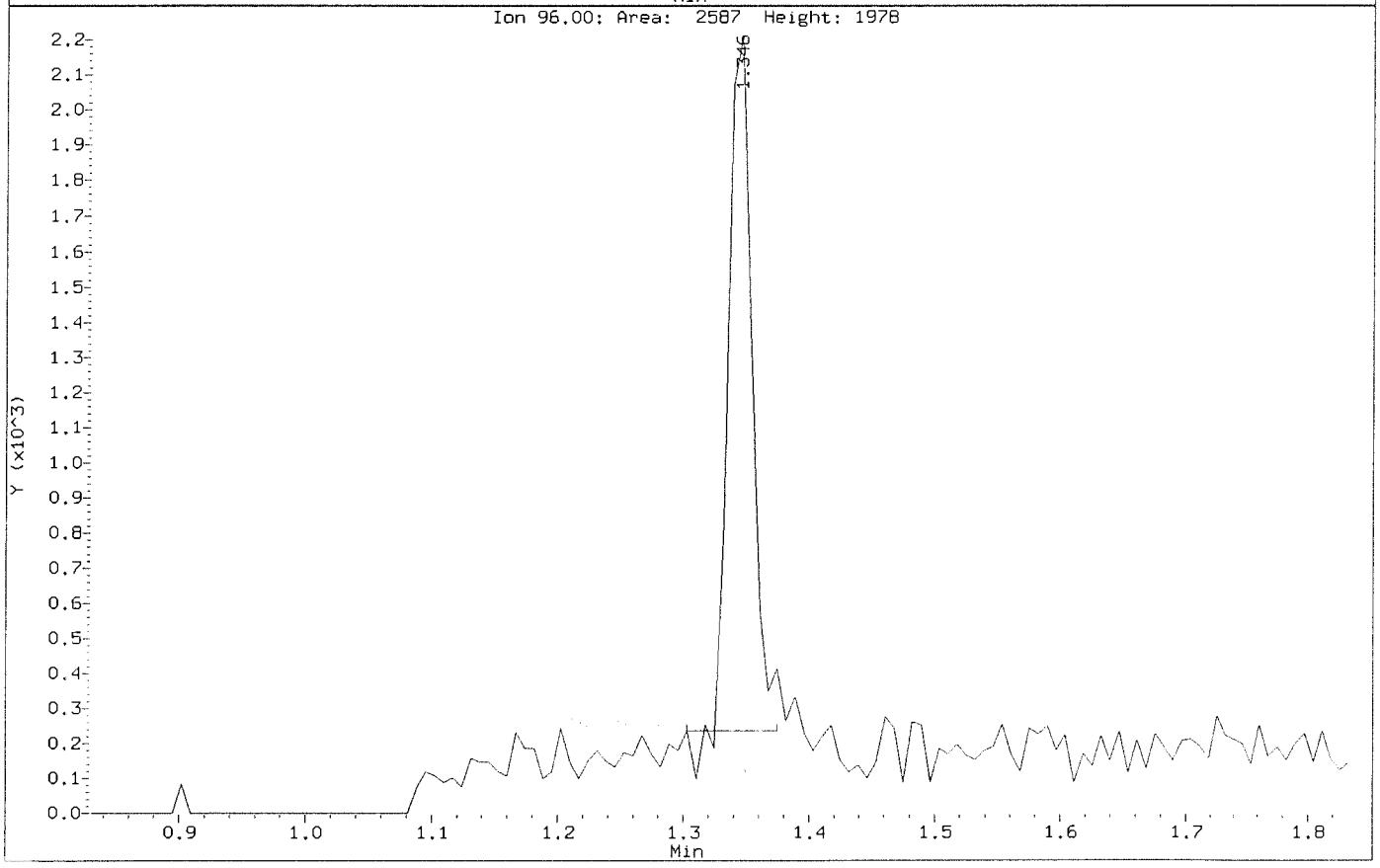
Compound: Bromodichloromethane
CAS Number: 75-27-4



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

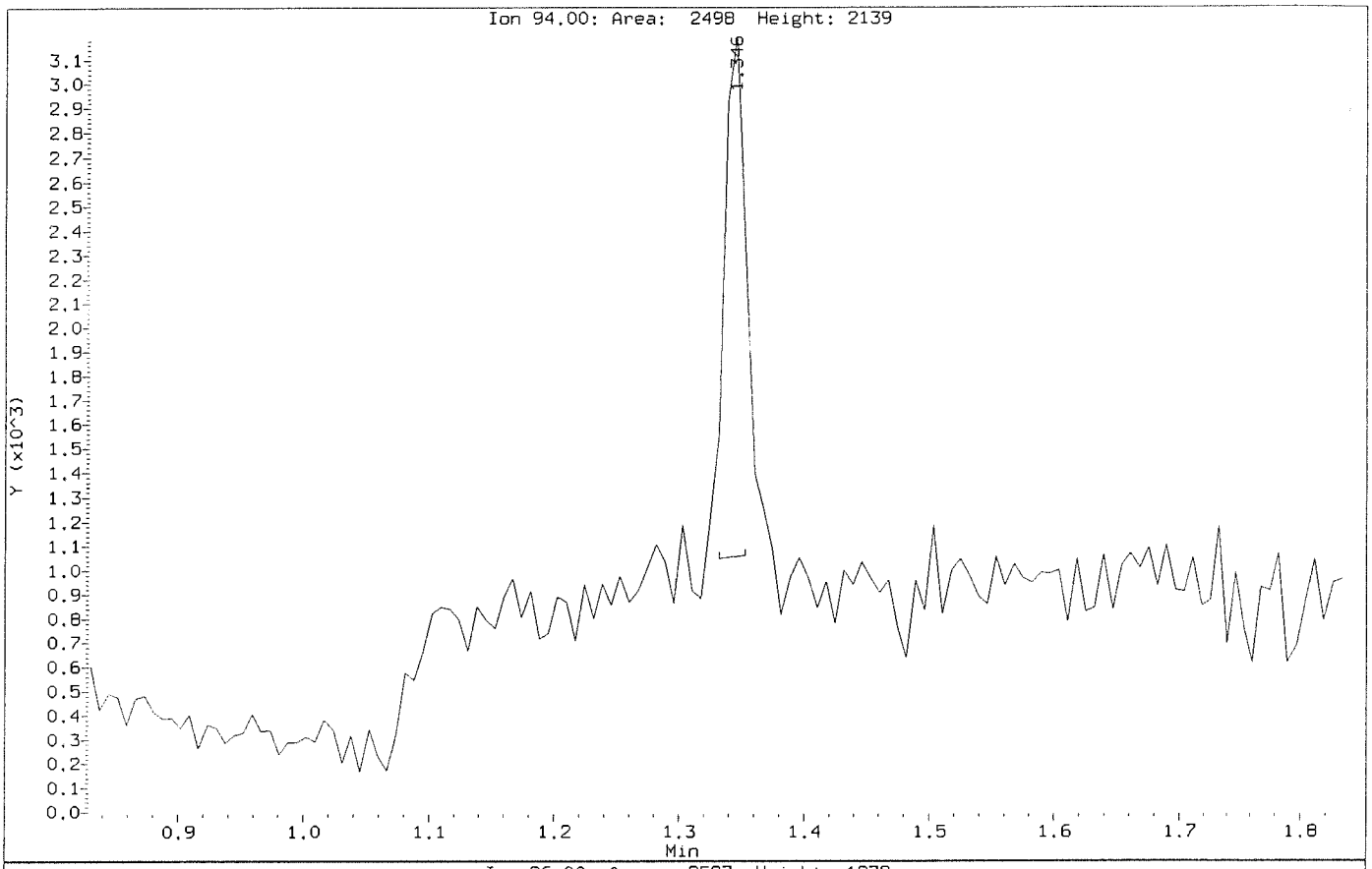
Compound: Bromomethane
CAS Number: 74-83-9

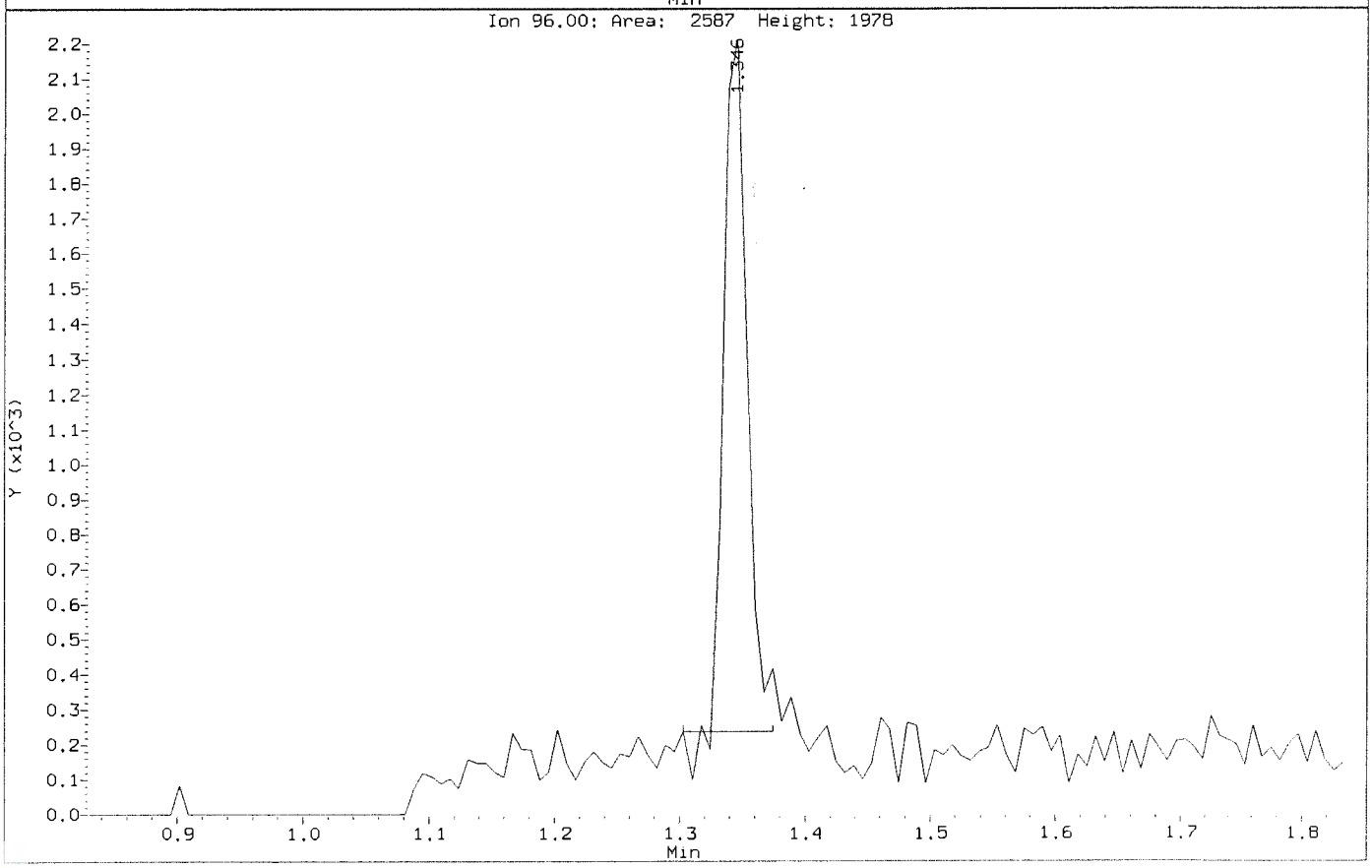




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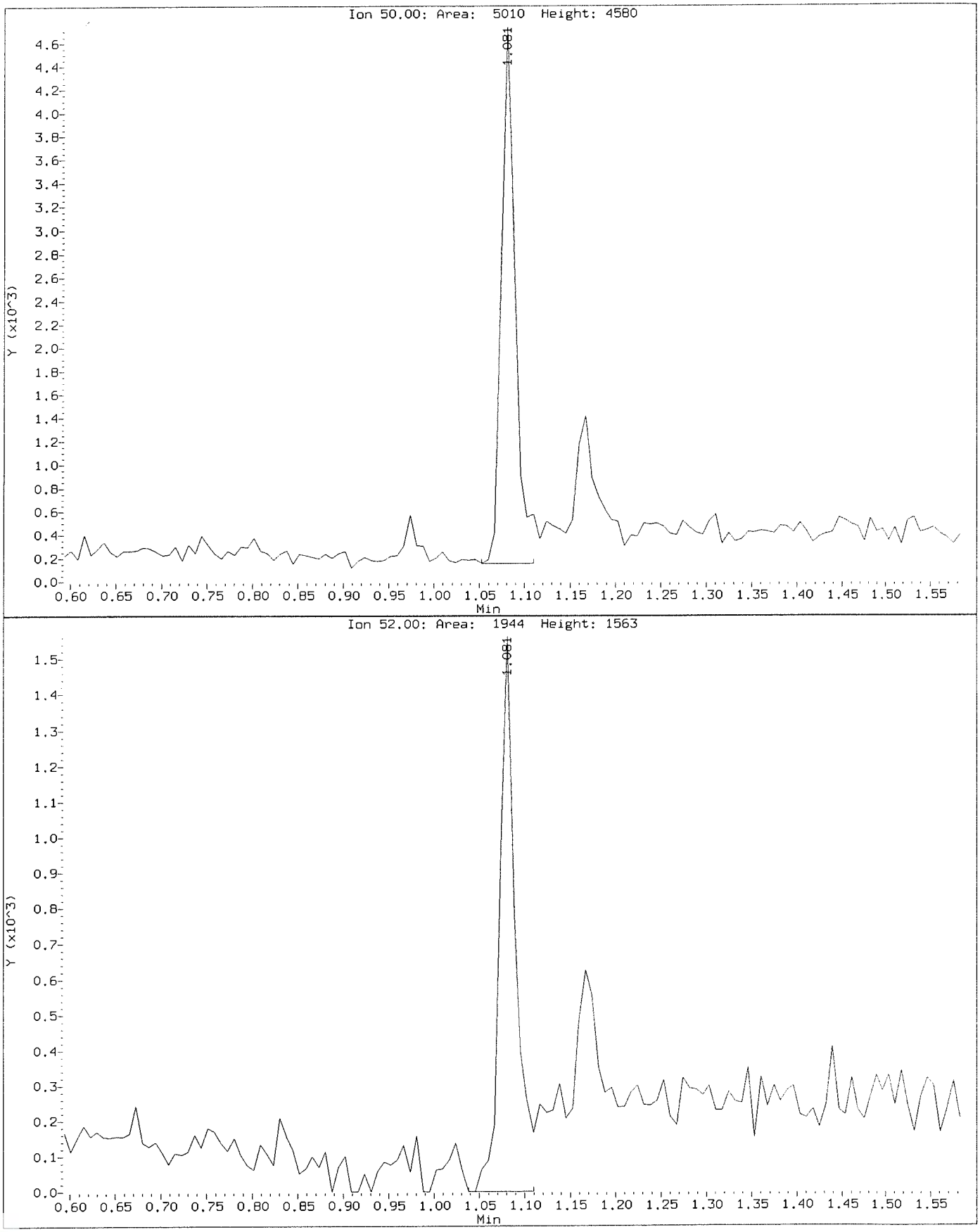
Compound: Bromomethane
CAS Number: 74-83-9





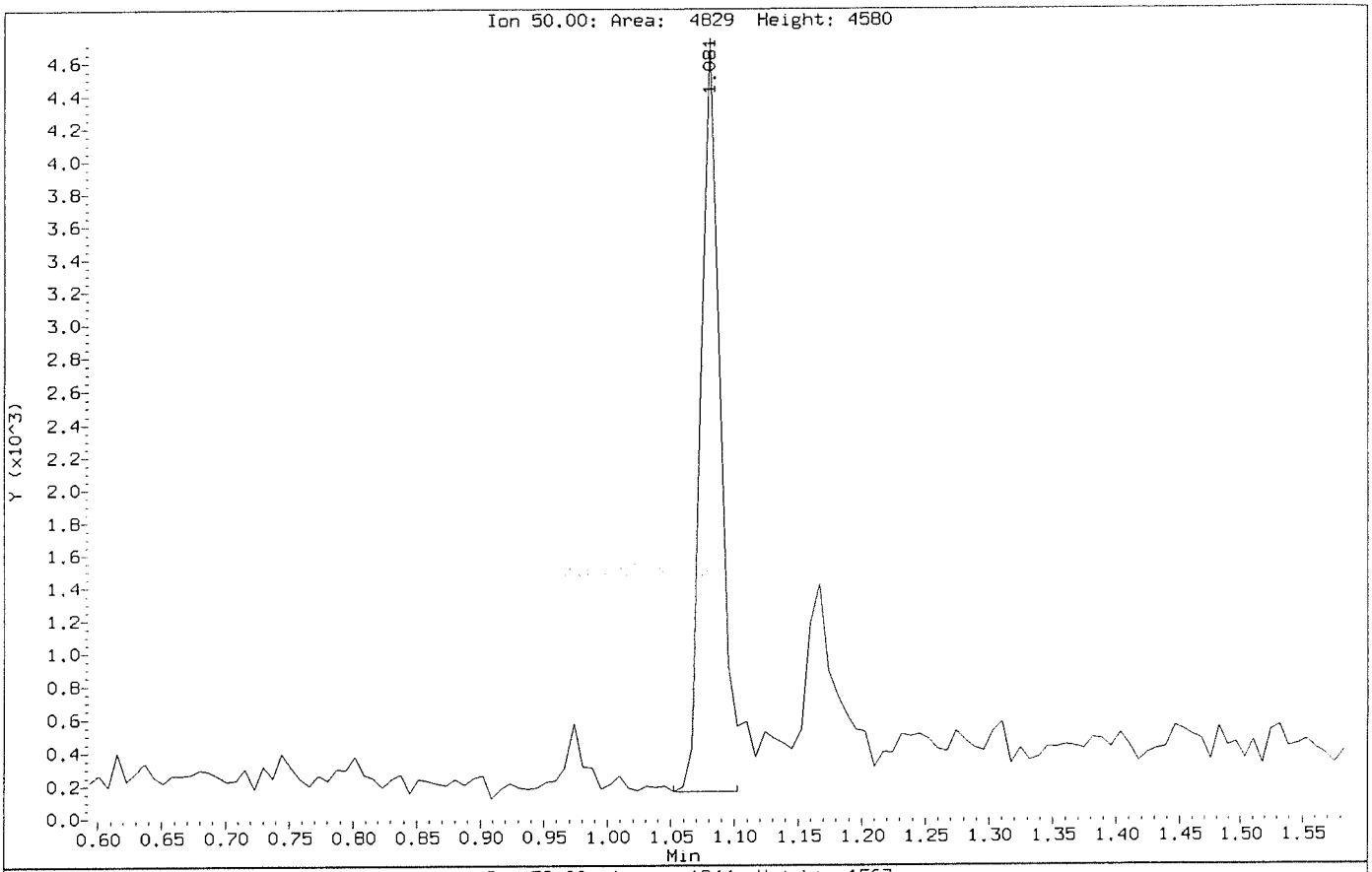
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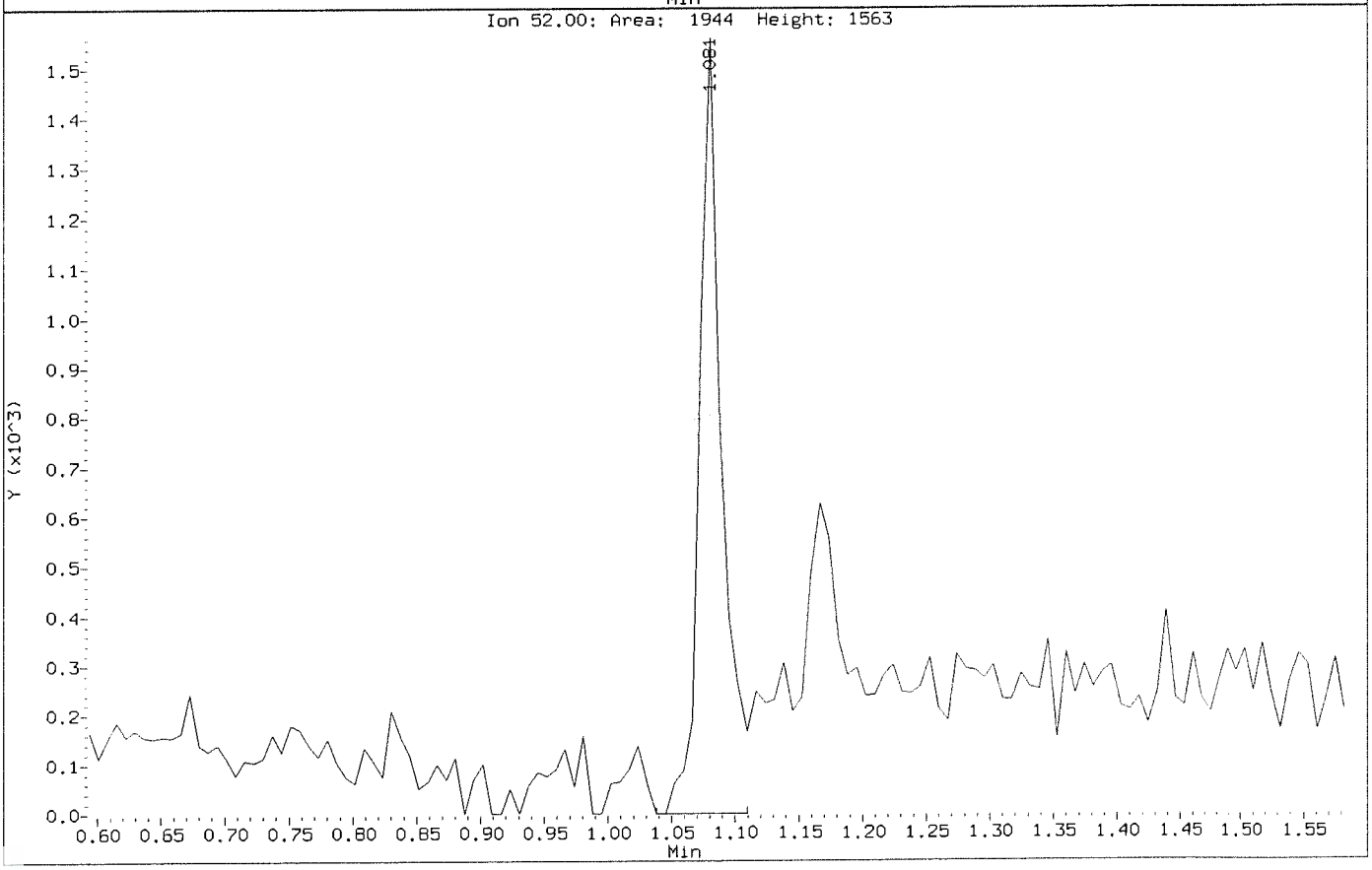
Compound: Chloromethane
CAS Number: 74-87-3



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

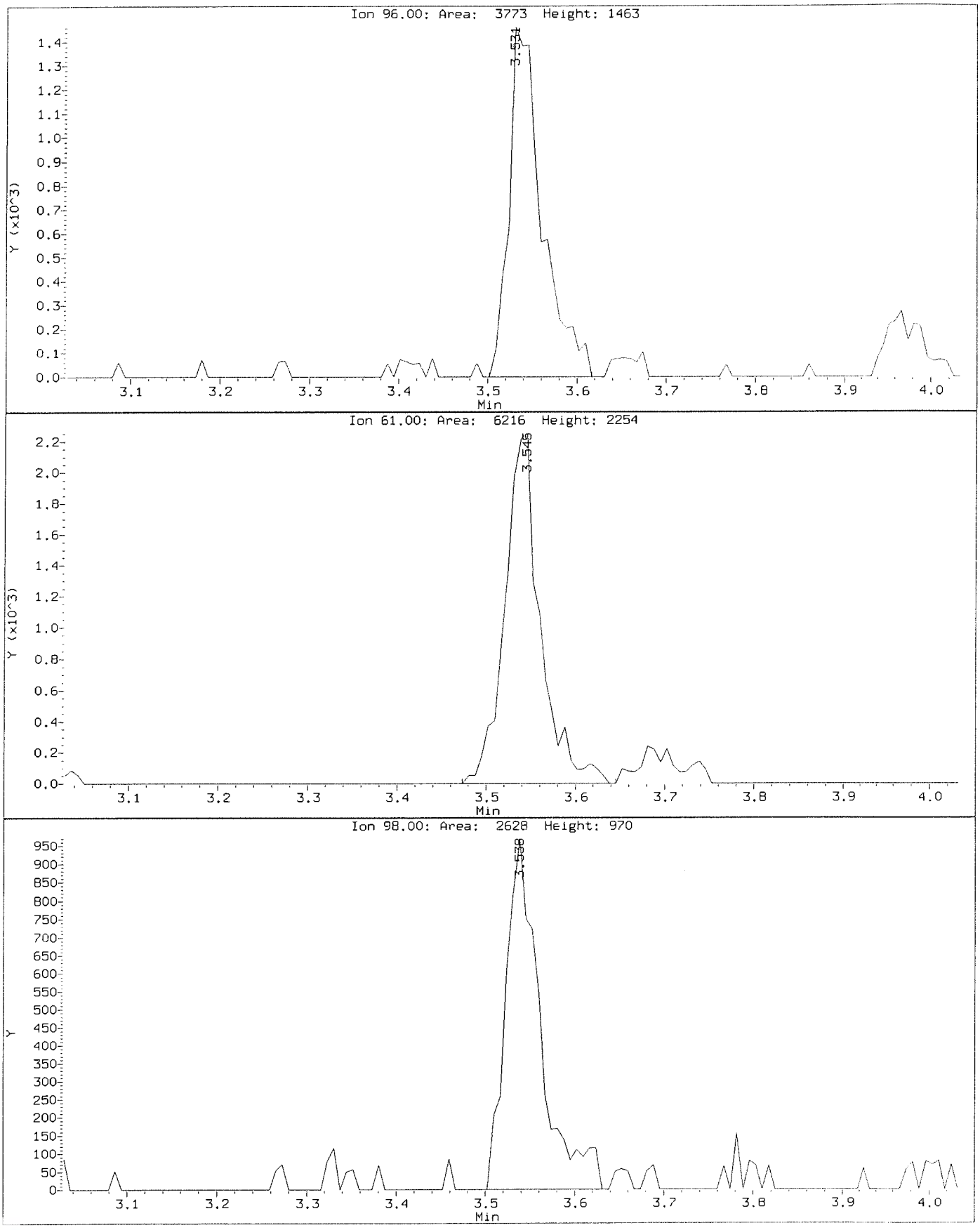
Compound: Chloromethane
CAS Number: 74-87-3





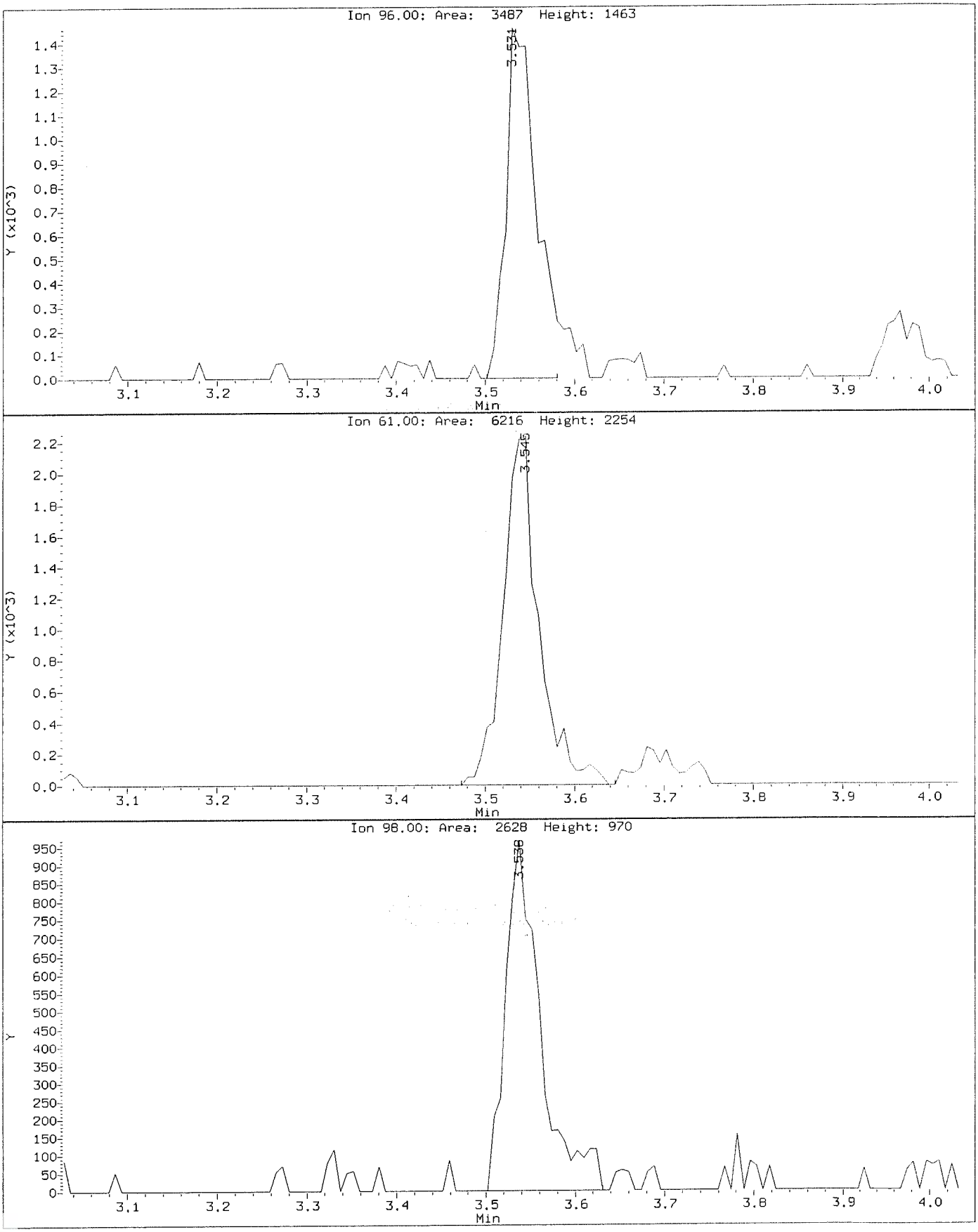
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



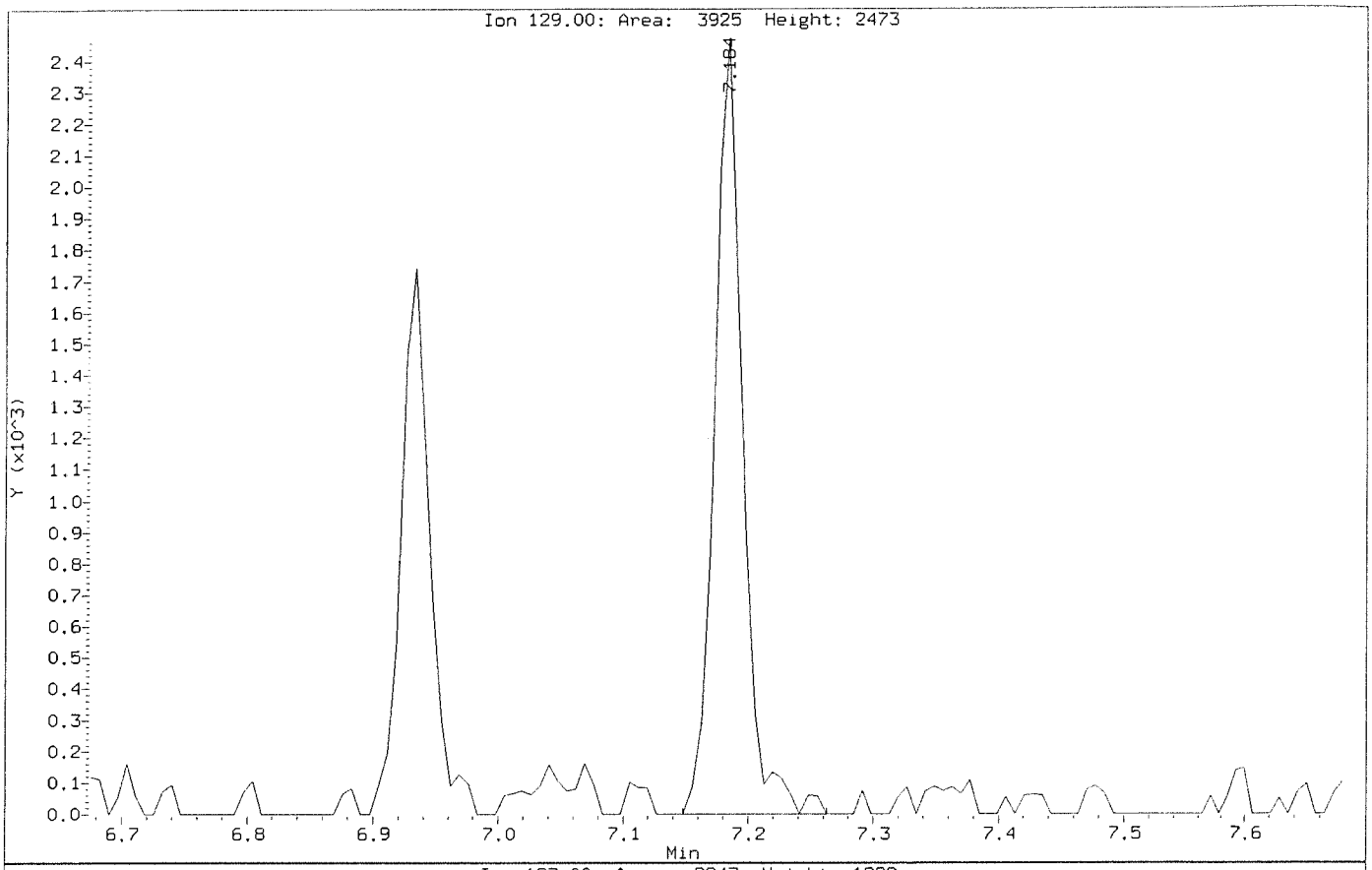
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Instrument: voa6.i
Client Sample ID: VSTD000.5

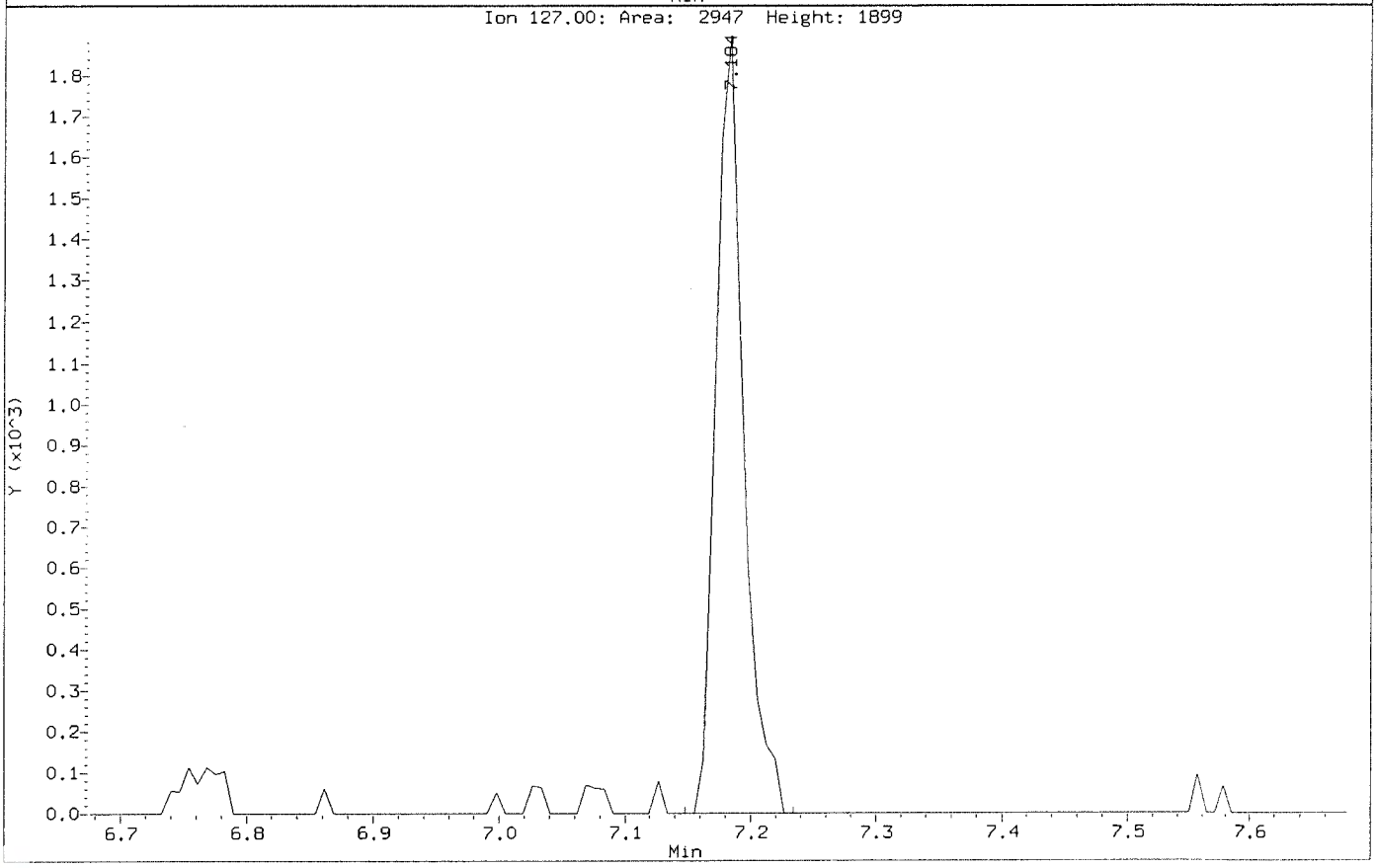
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



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

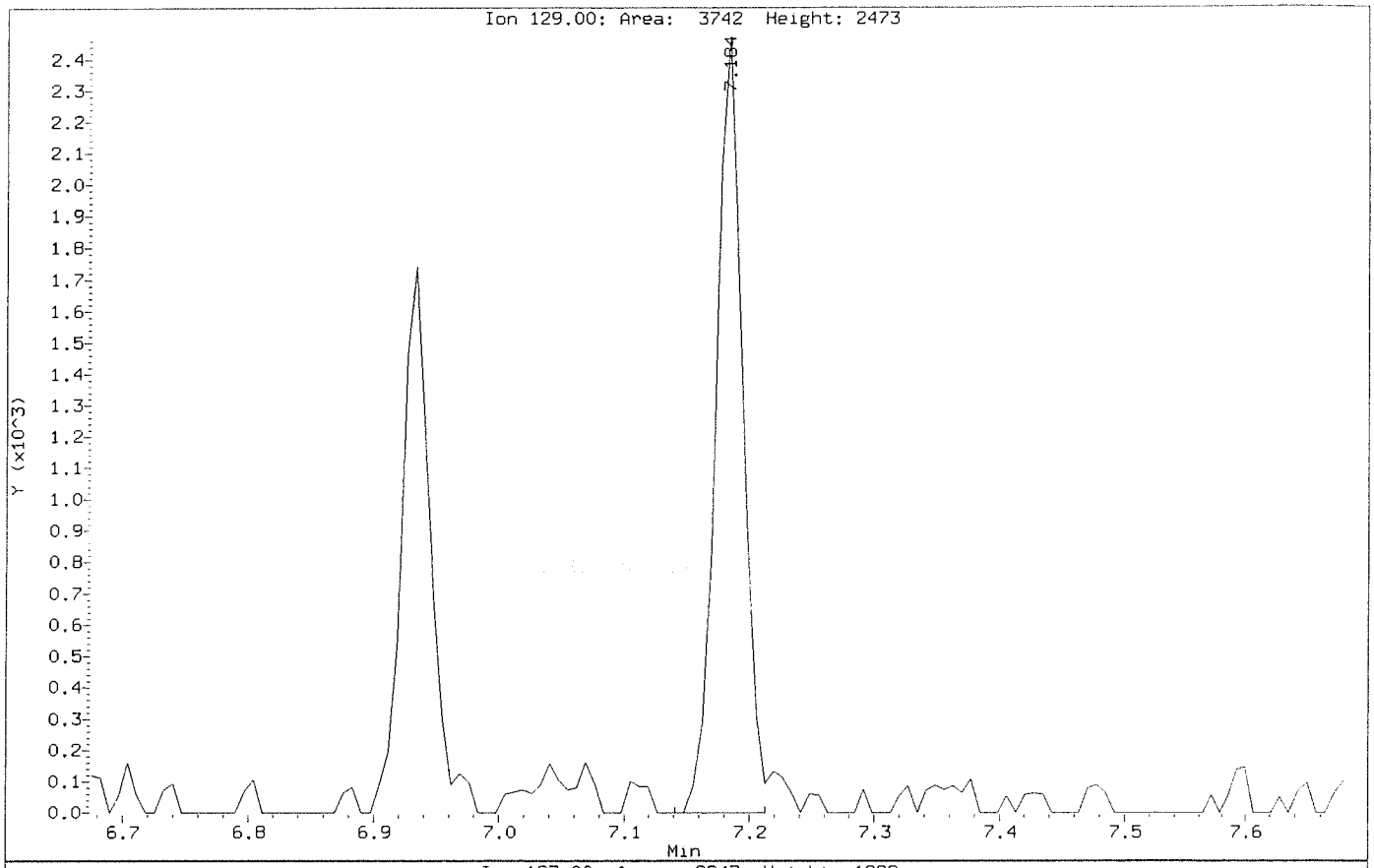
Compound: Dibromochloromethane
CAS Number: 124-48-1

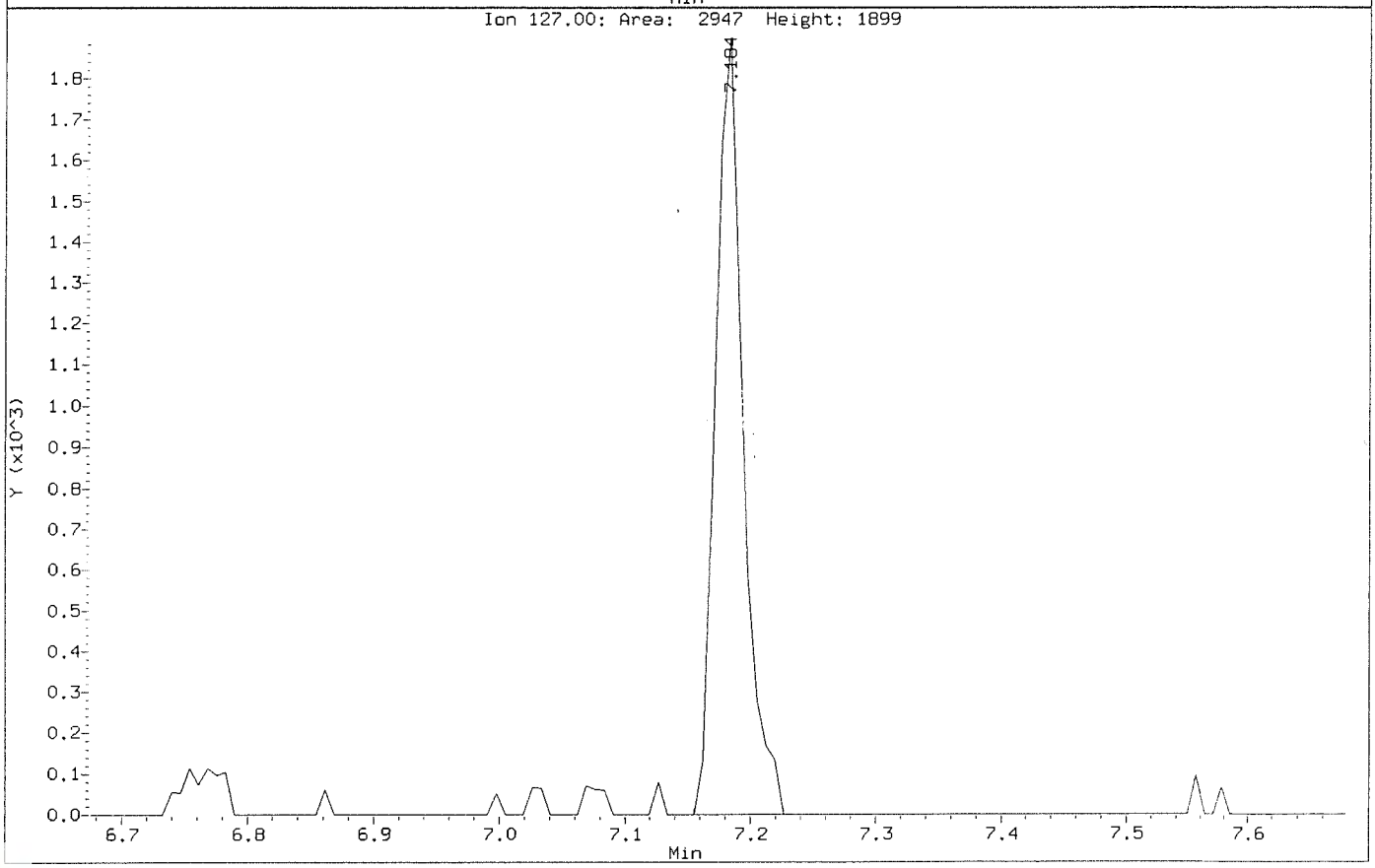




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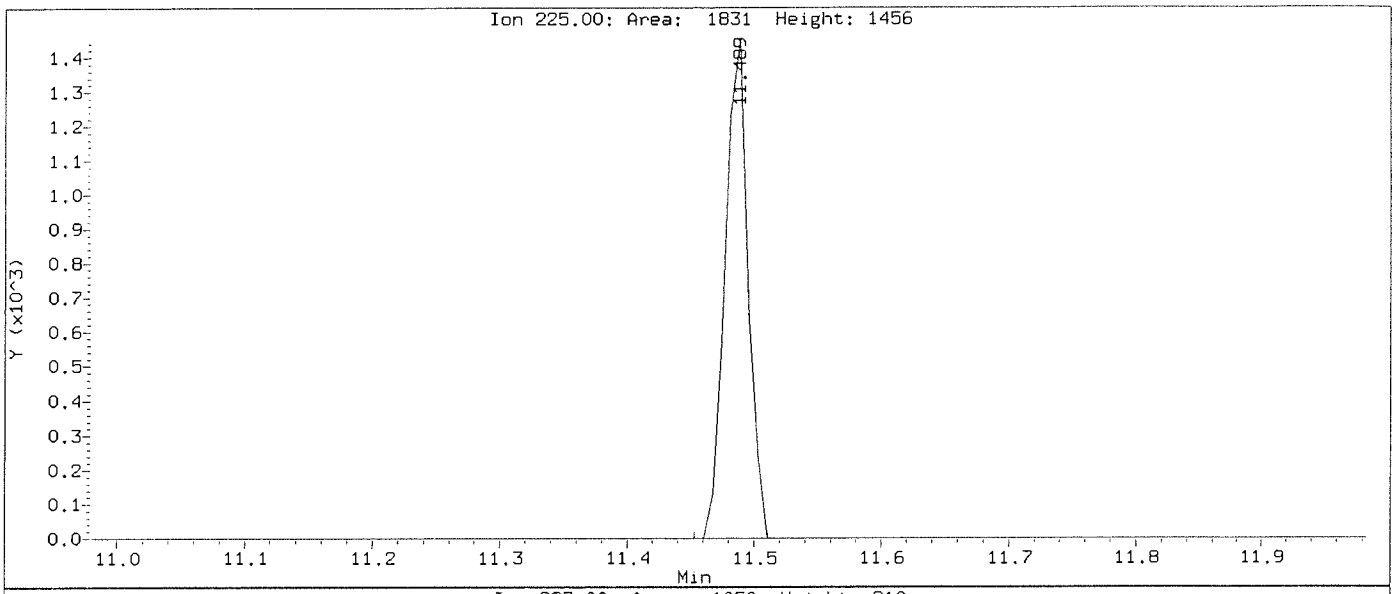
Compound: Dibromochloromethane
CAS Number: 124-48-1

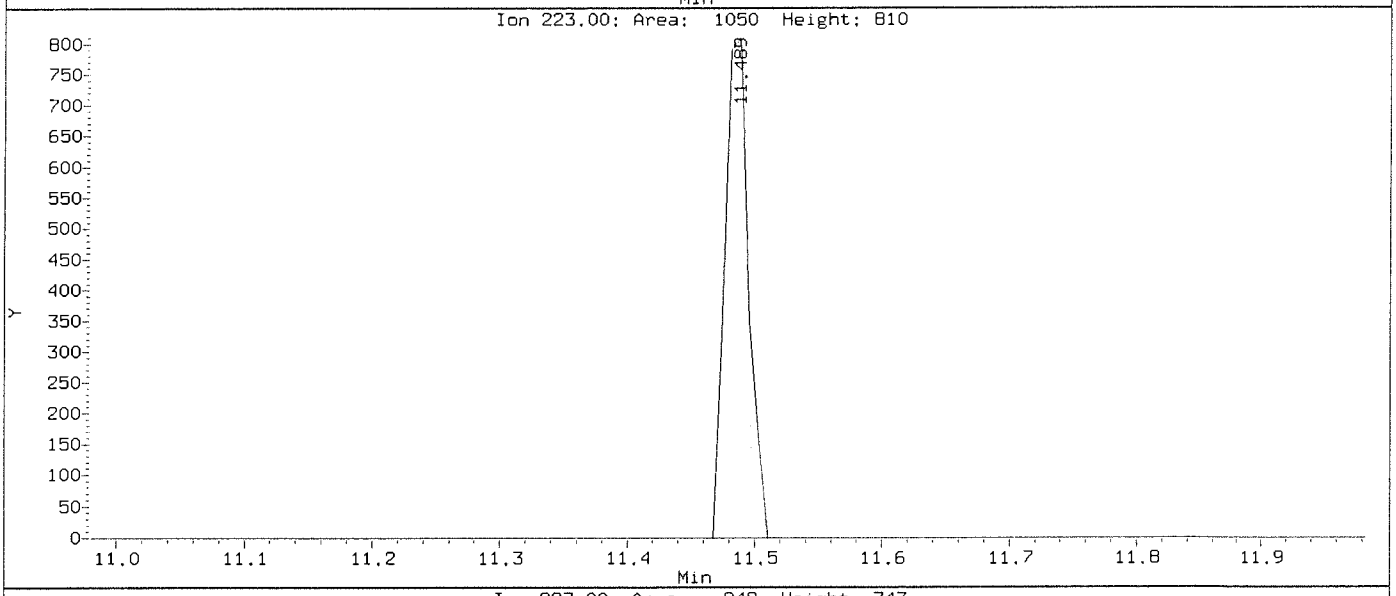


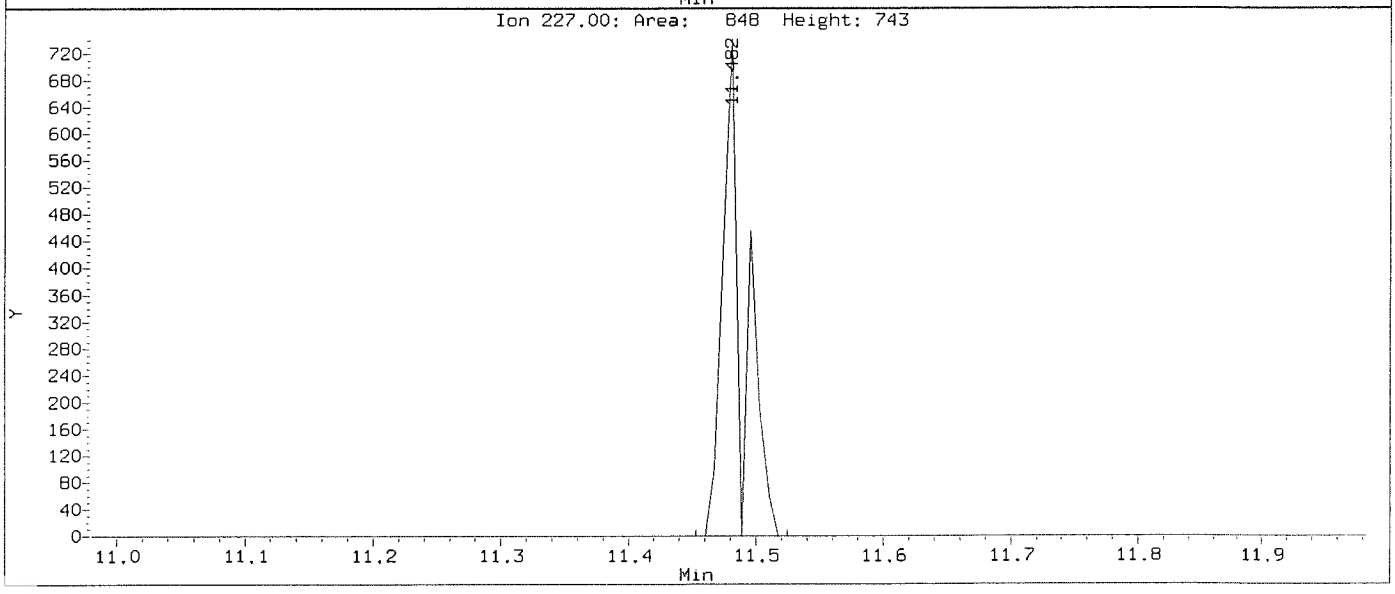


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

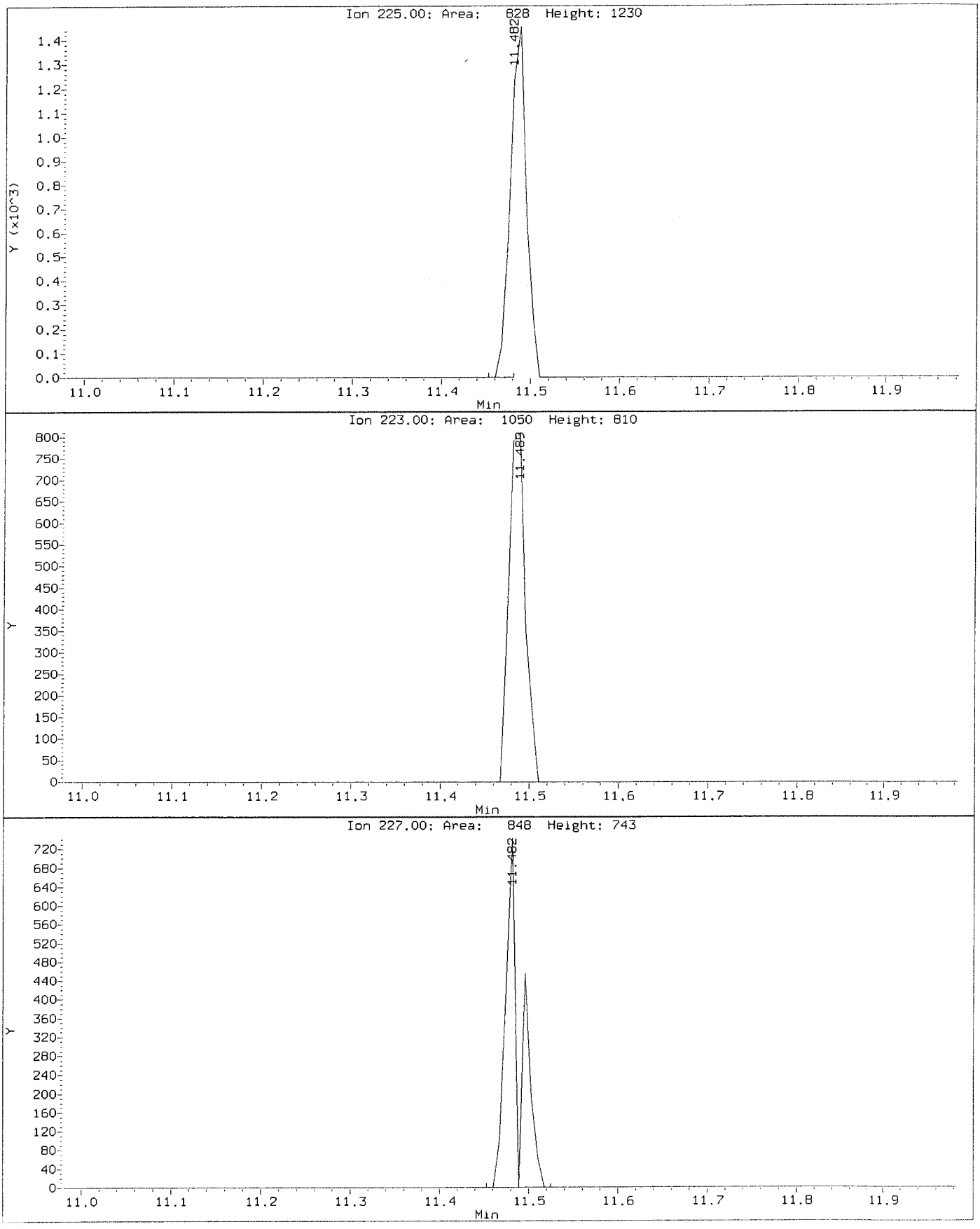






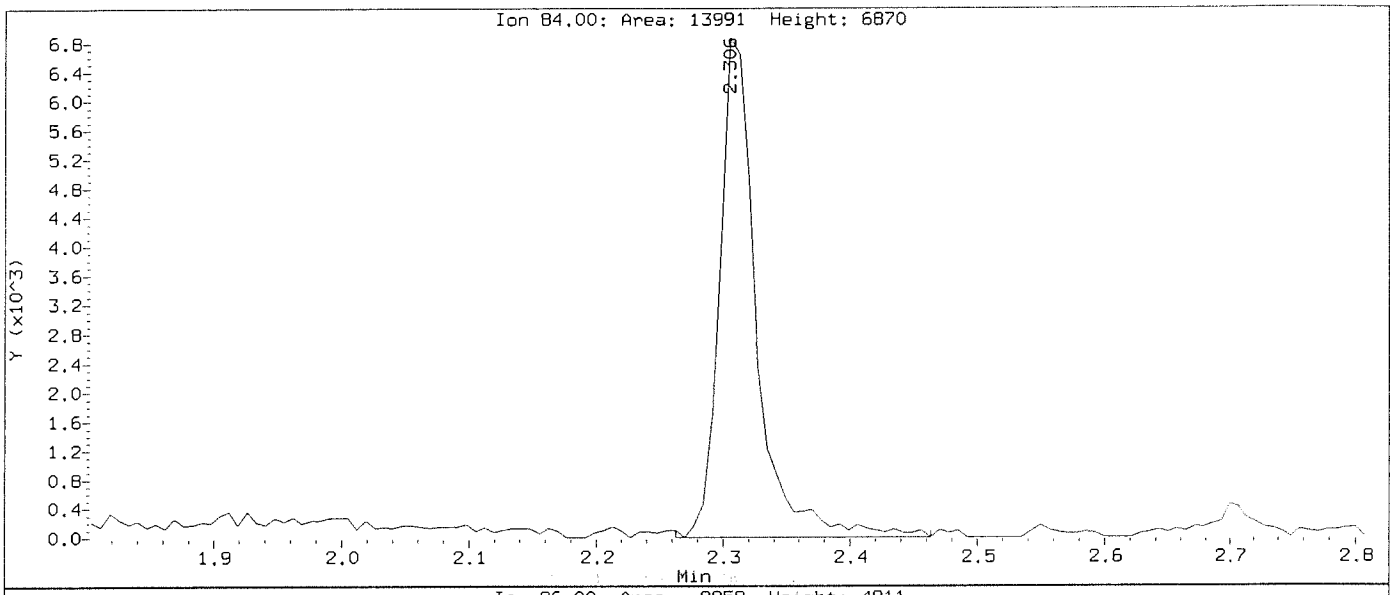
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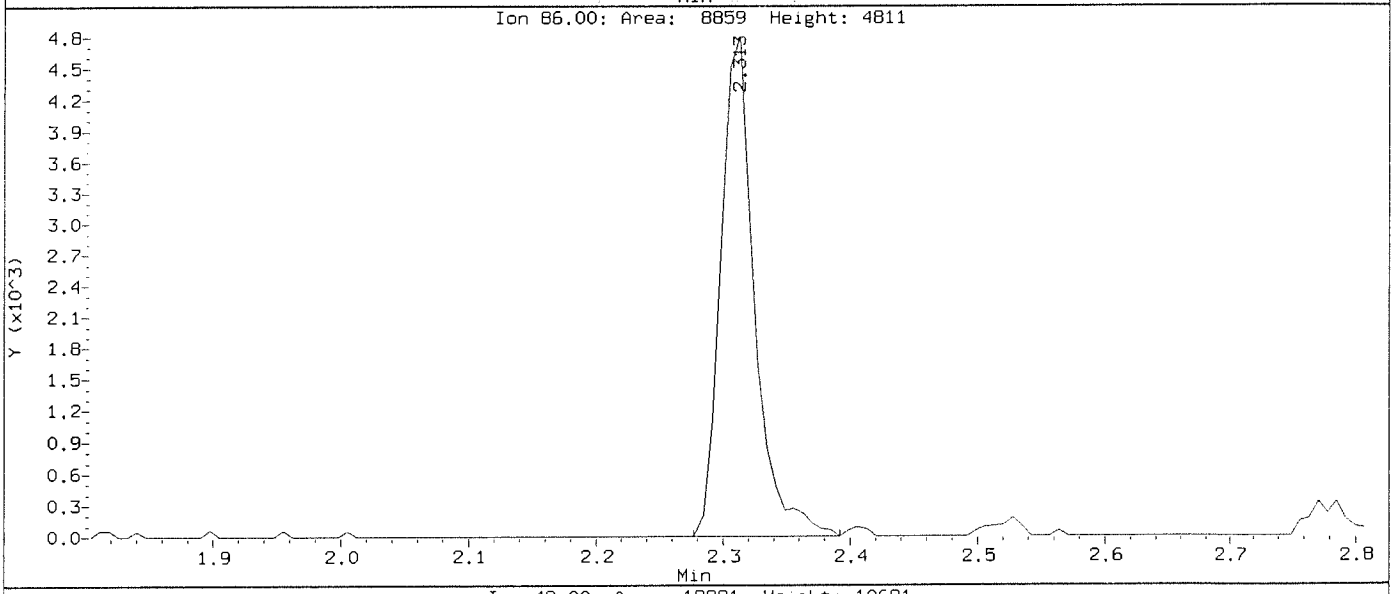
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

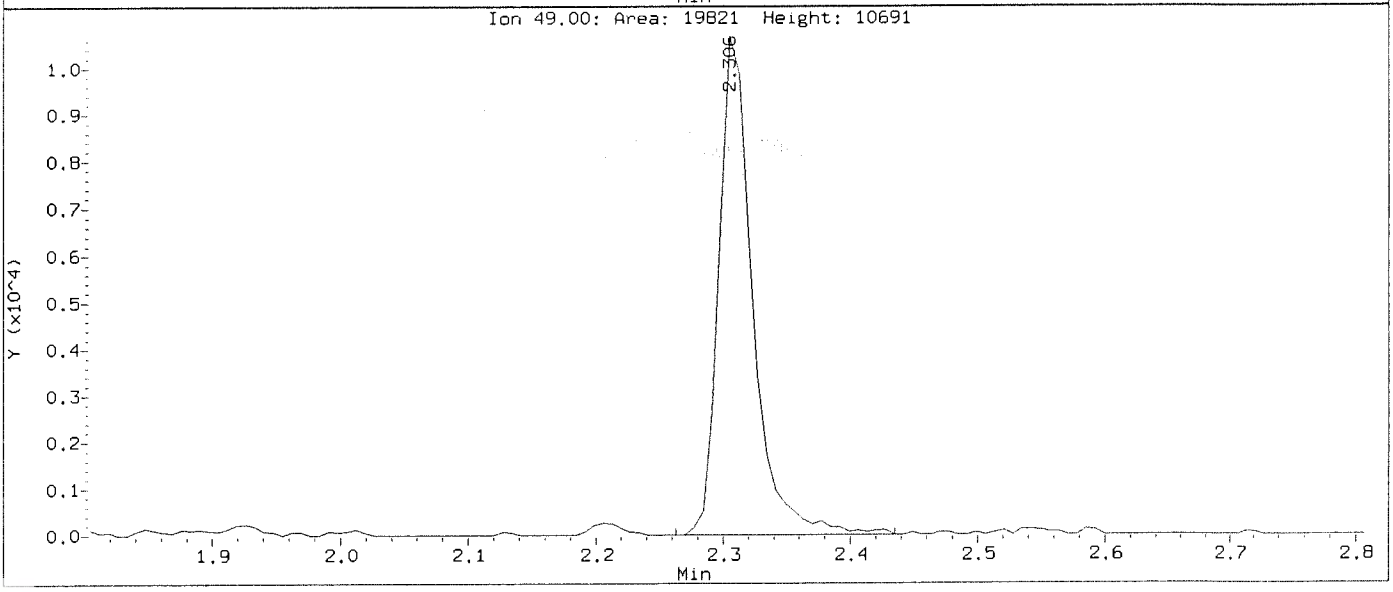


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

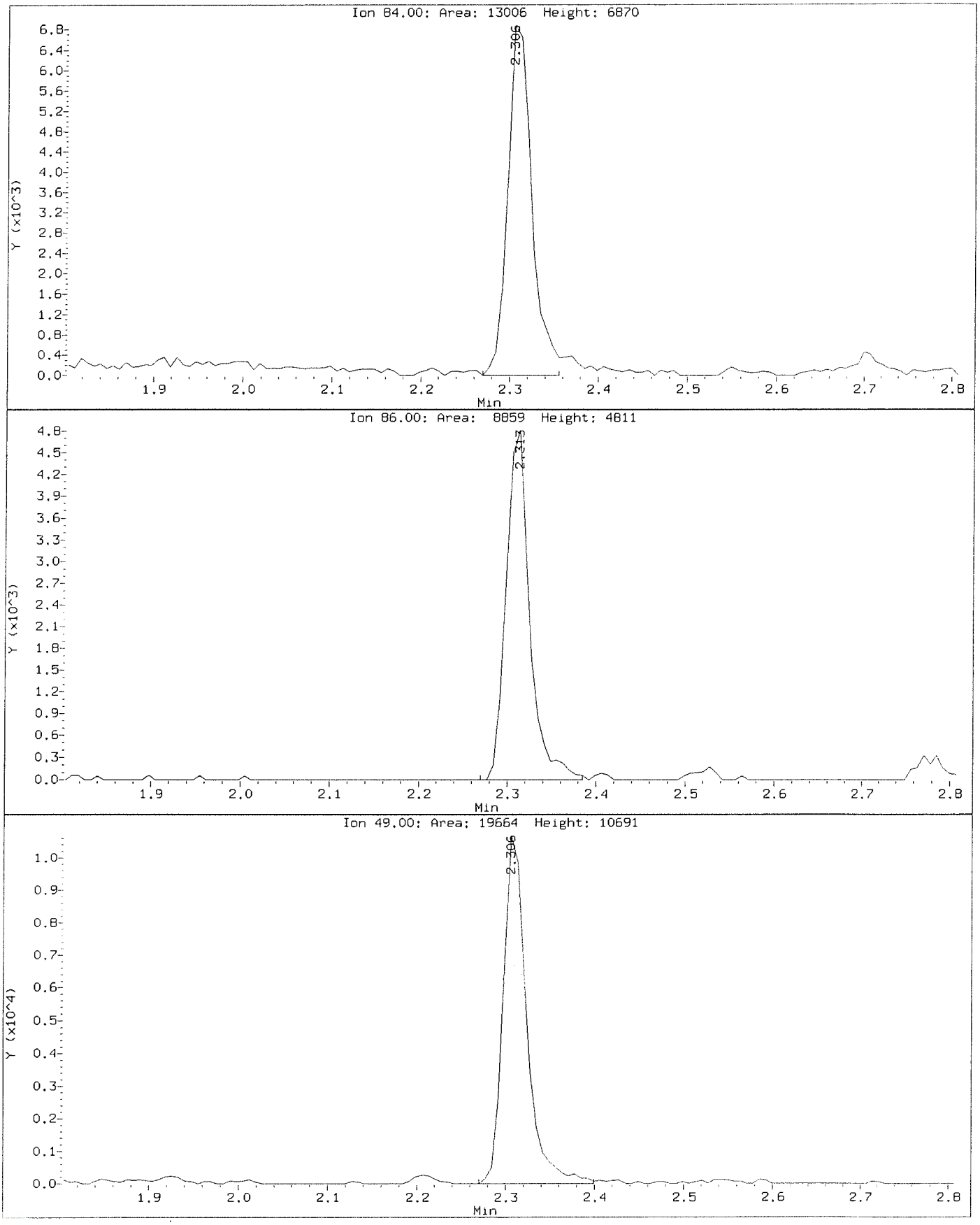






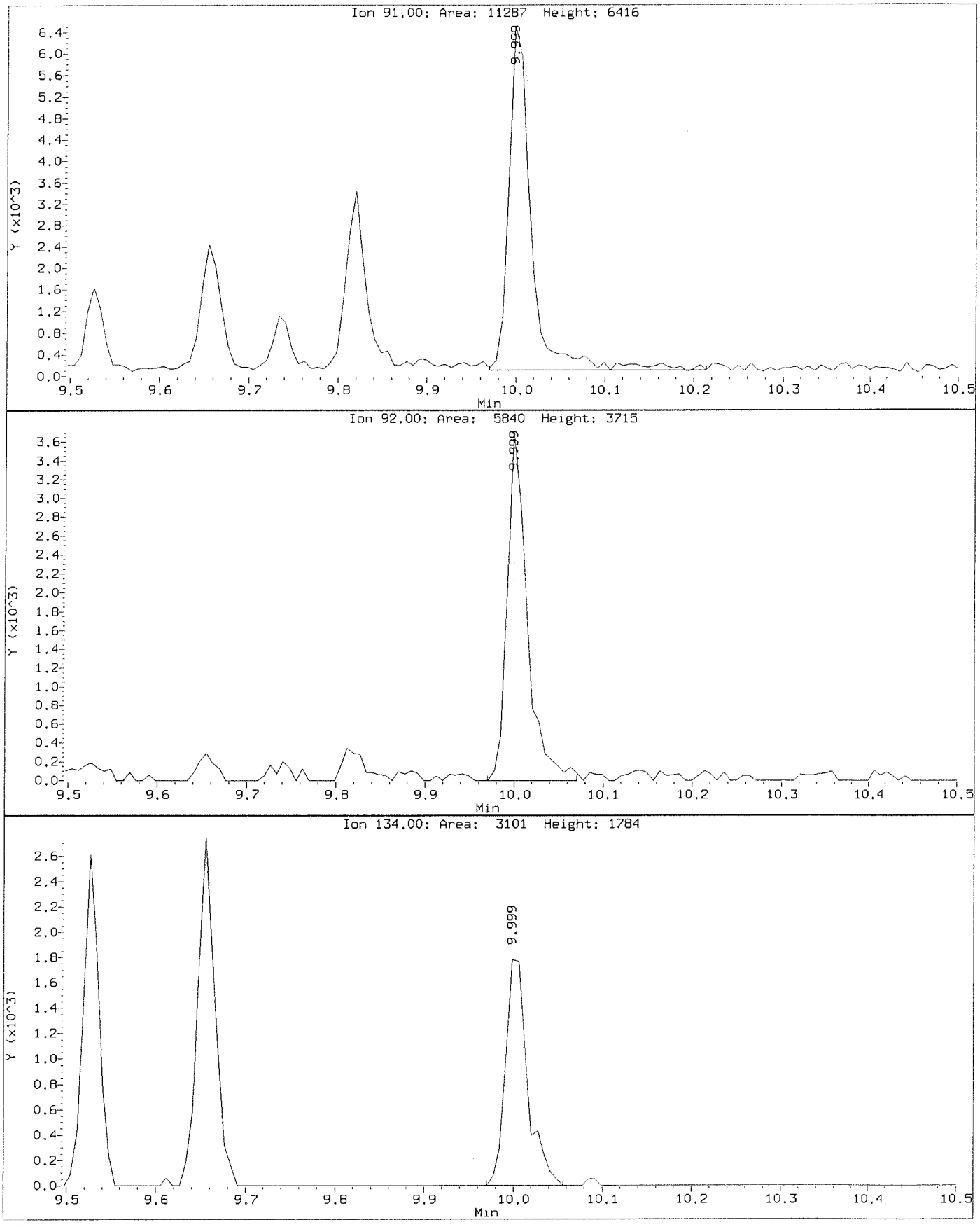
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Compound: Methylene Chloride
CAS Number: 75-09-2



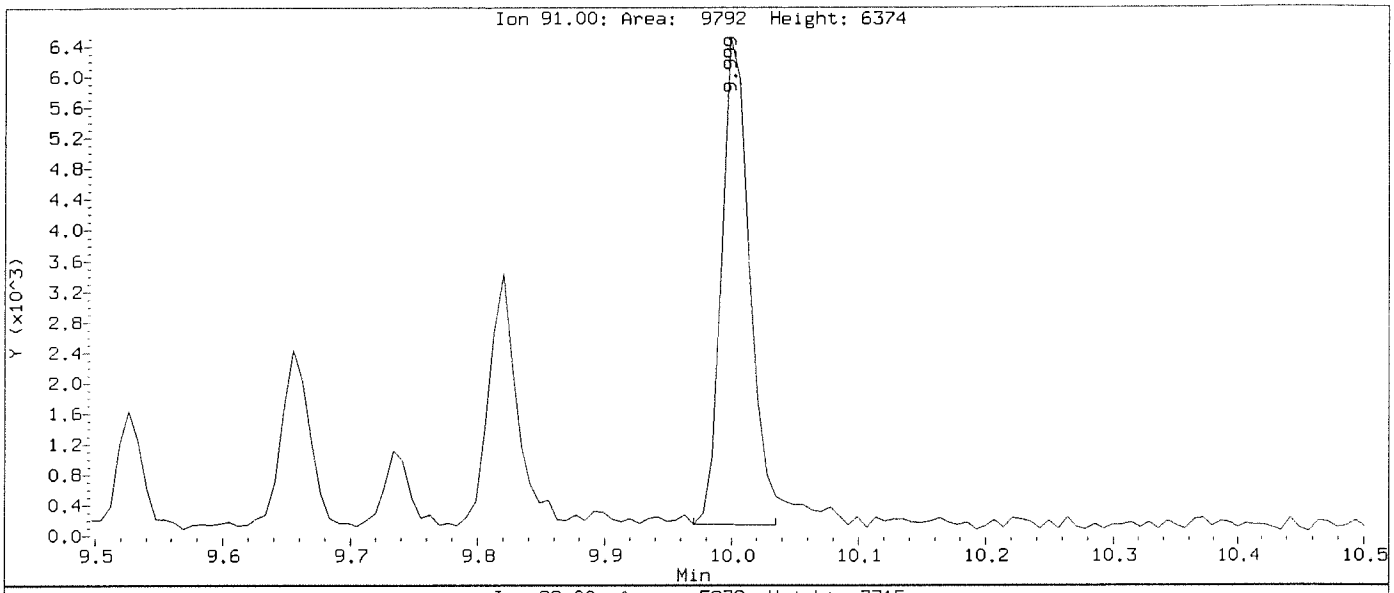
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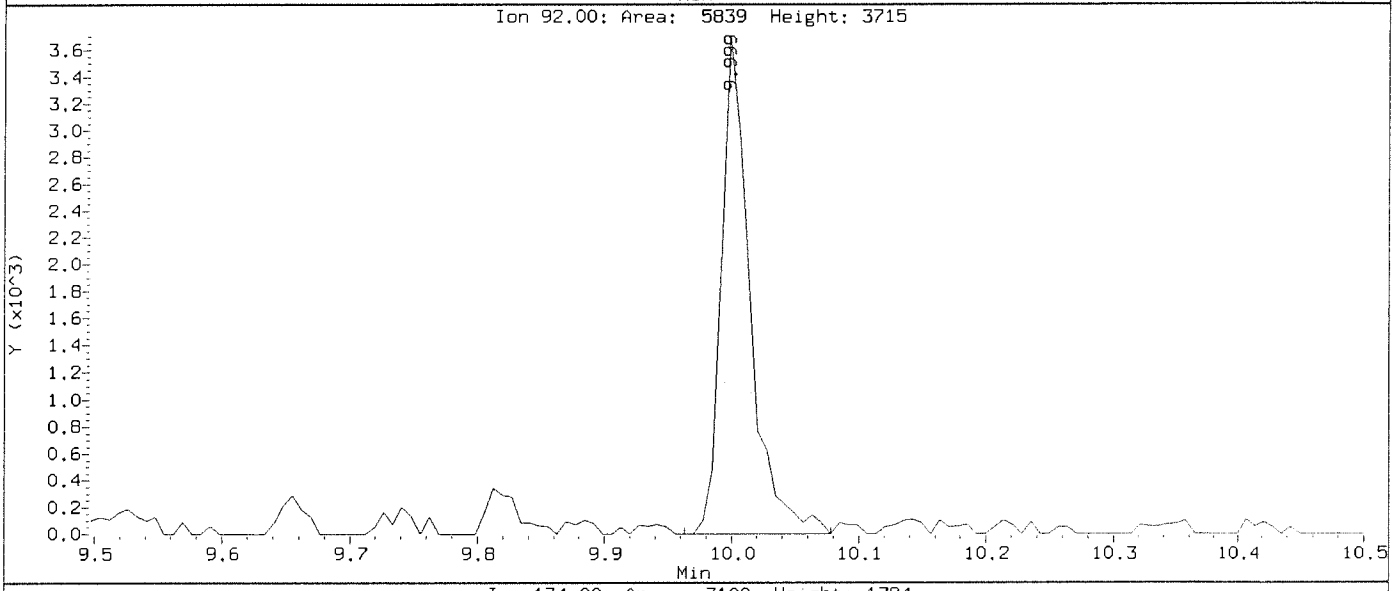
Compound: n-Butylbenzene
CAS Number: 104-51-8

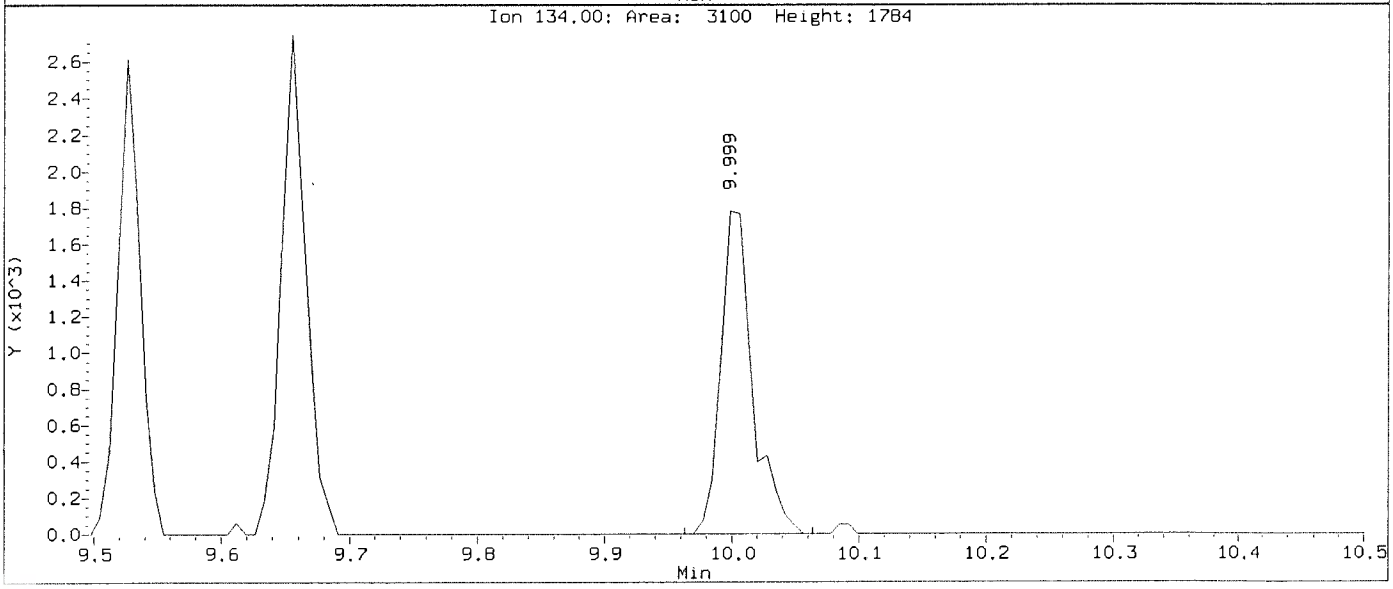


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Instrument: voa6.i
Client Sample ID: VSTD000.5

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

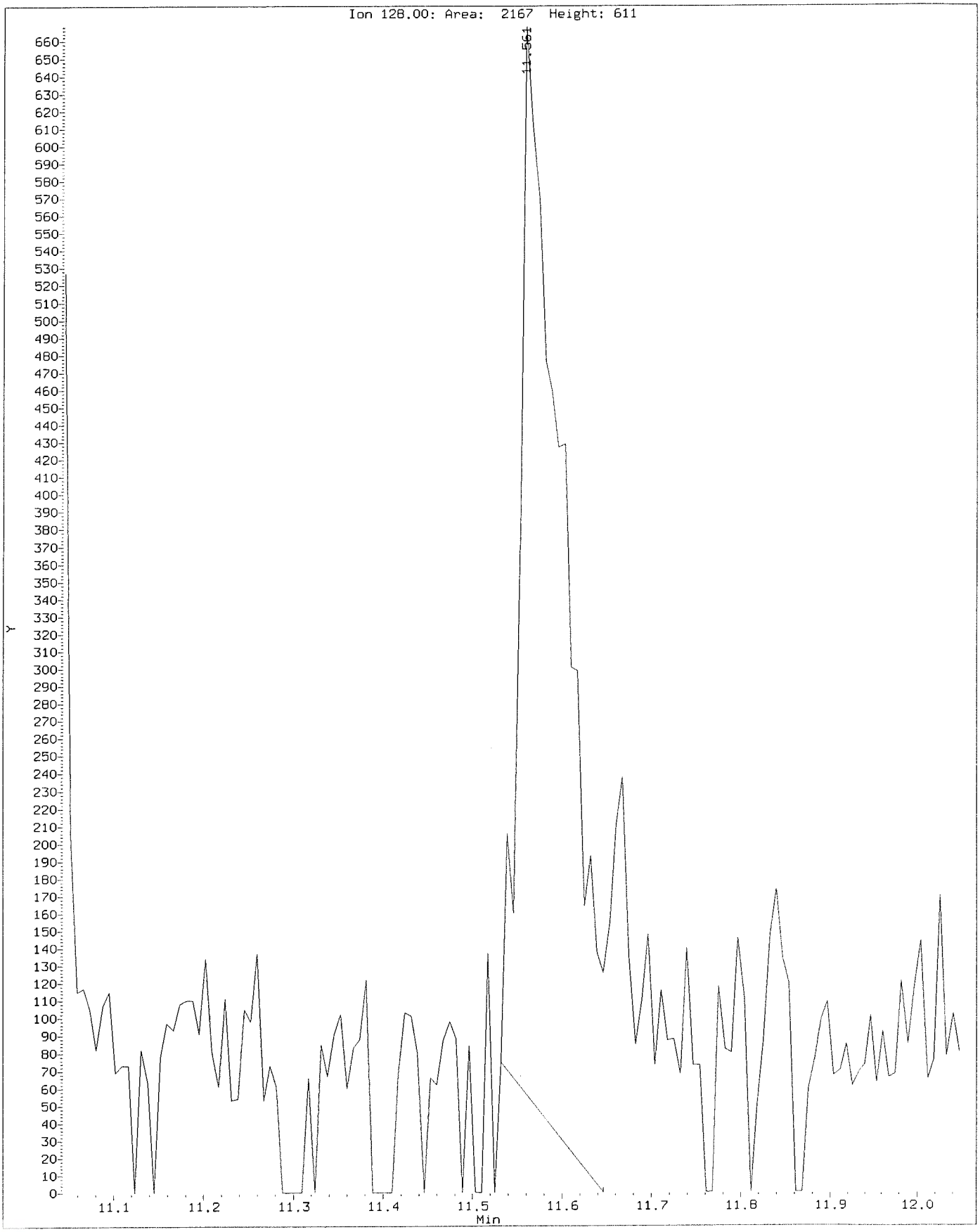






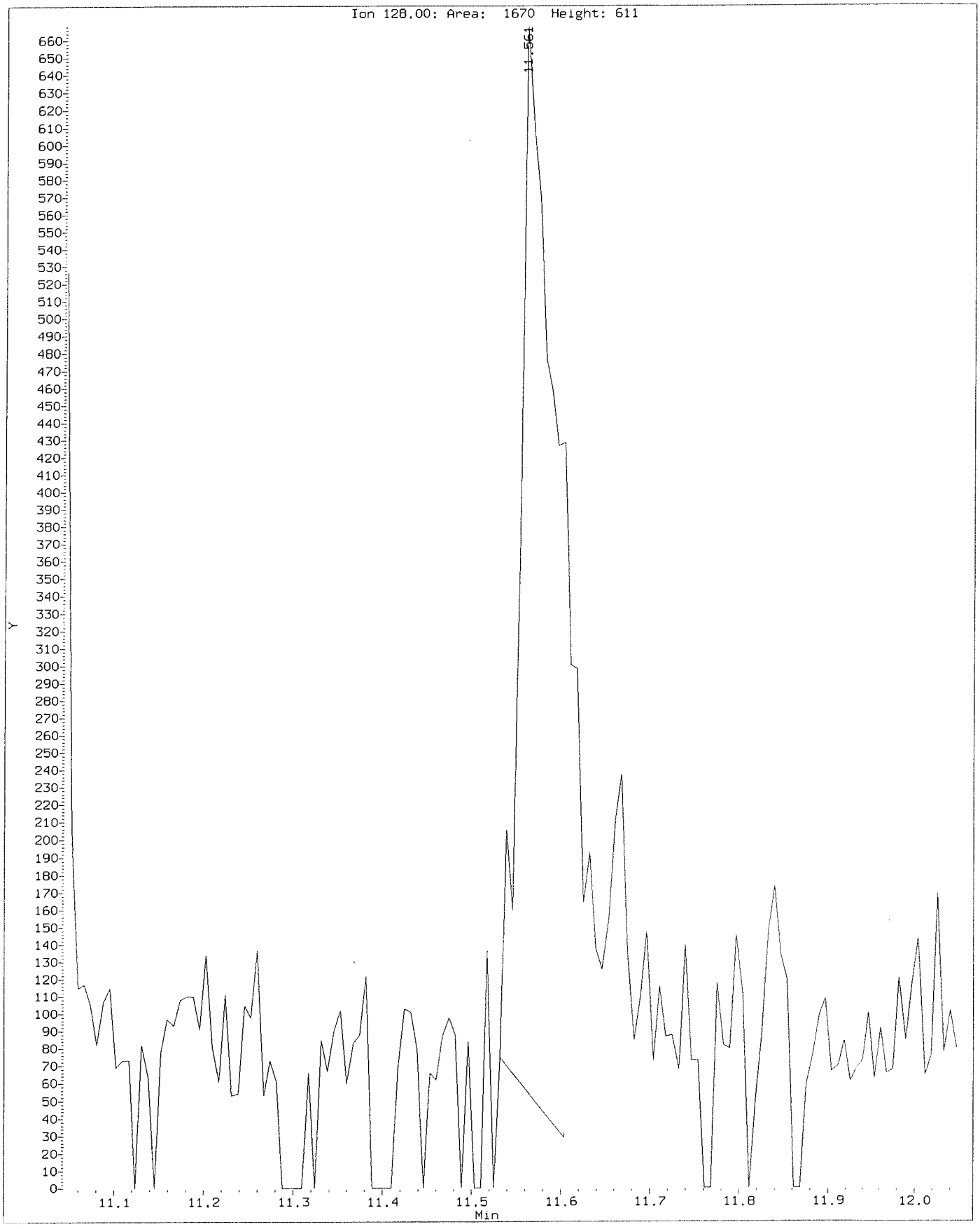
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



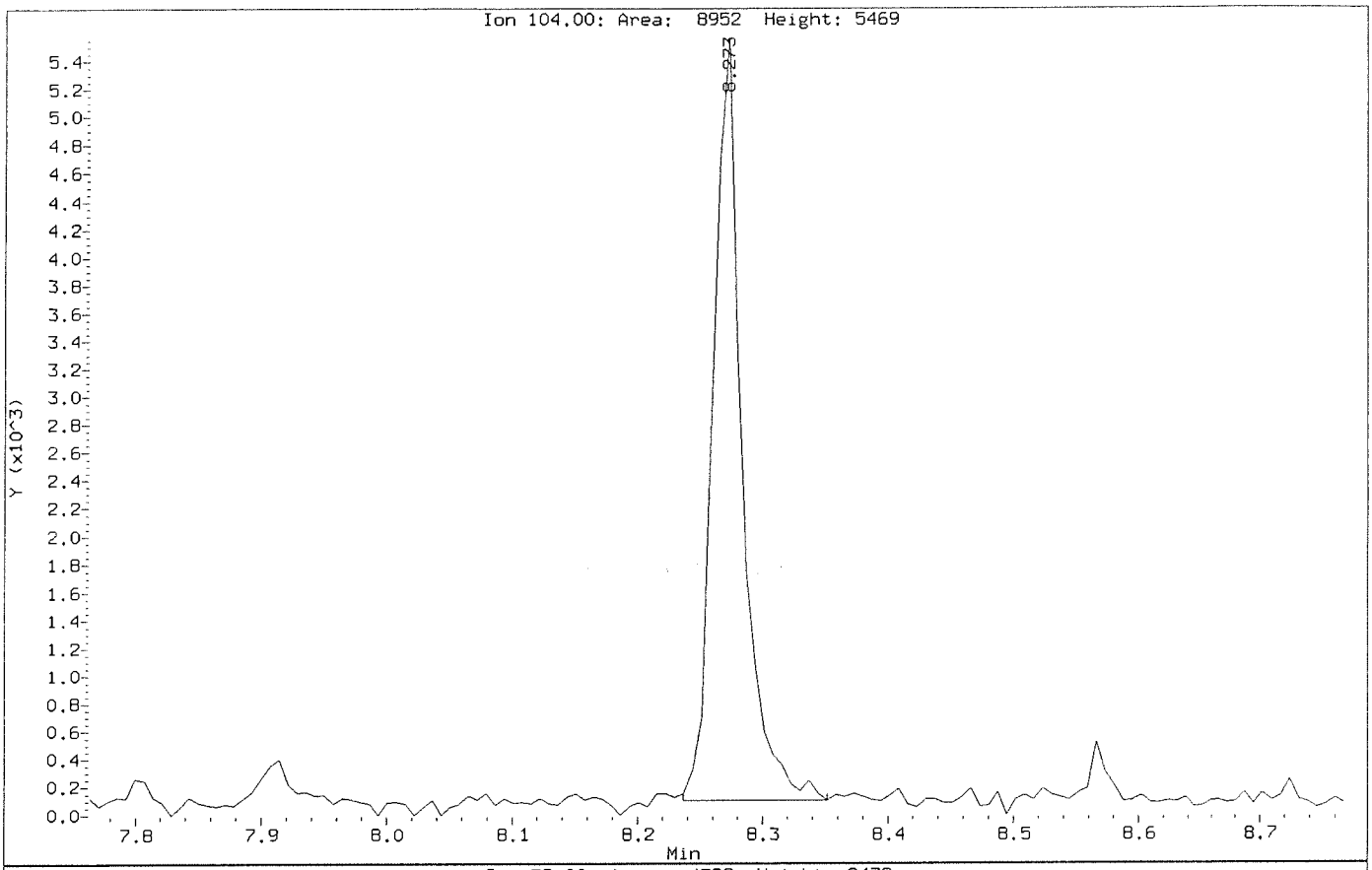
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

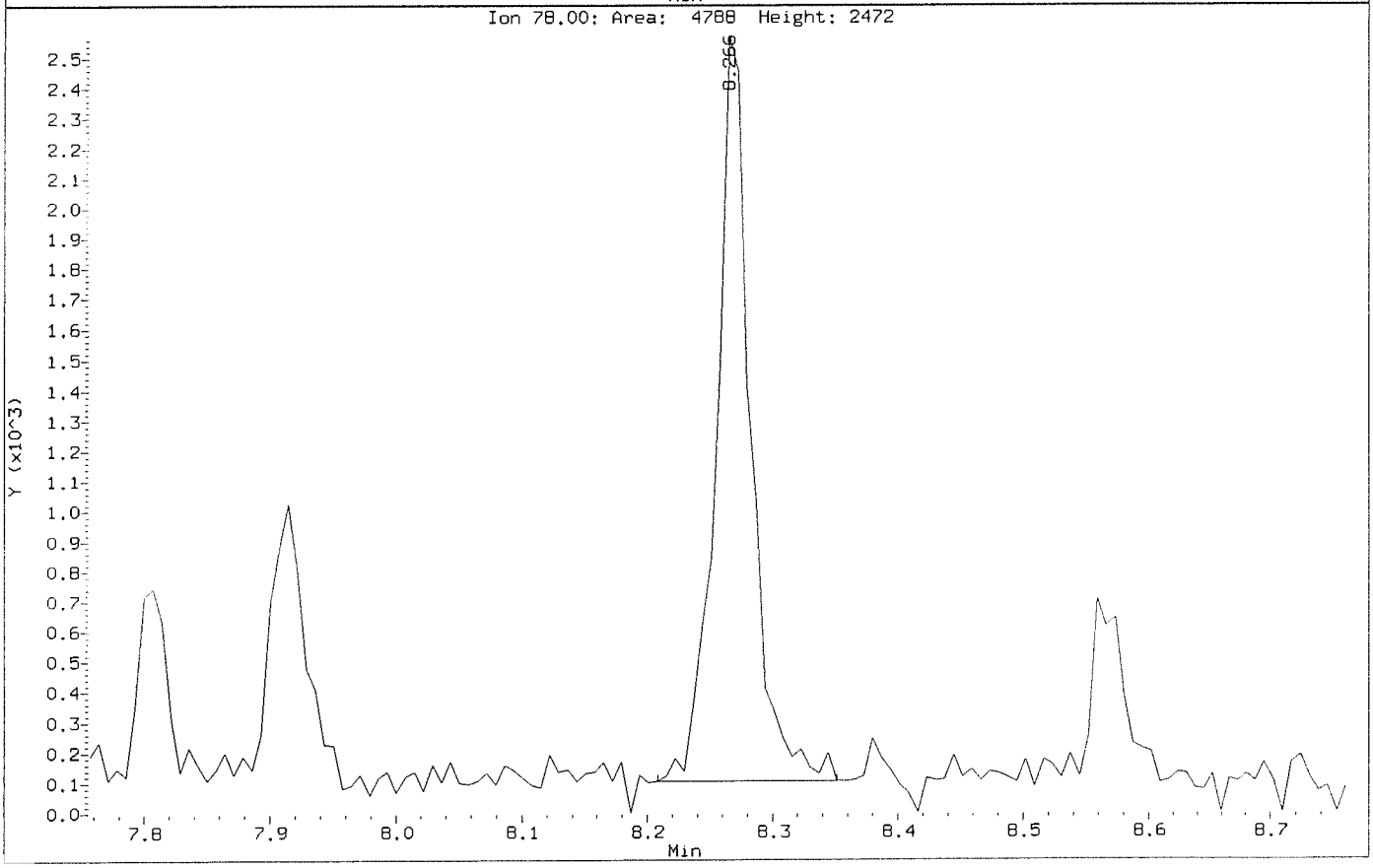
Compound: Naphthalene
CAS Number: 91-20-3



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

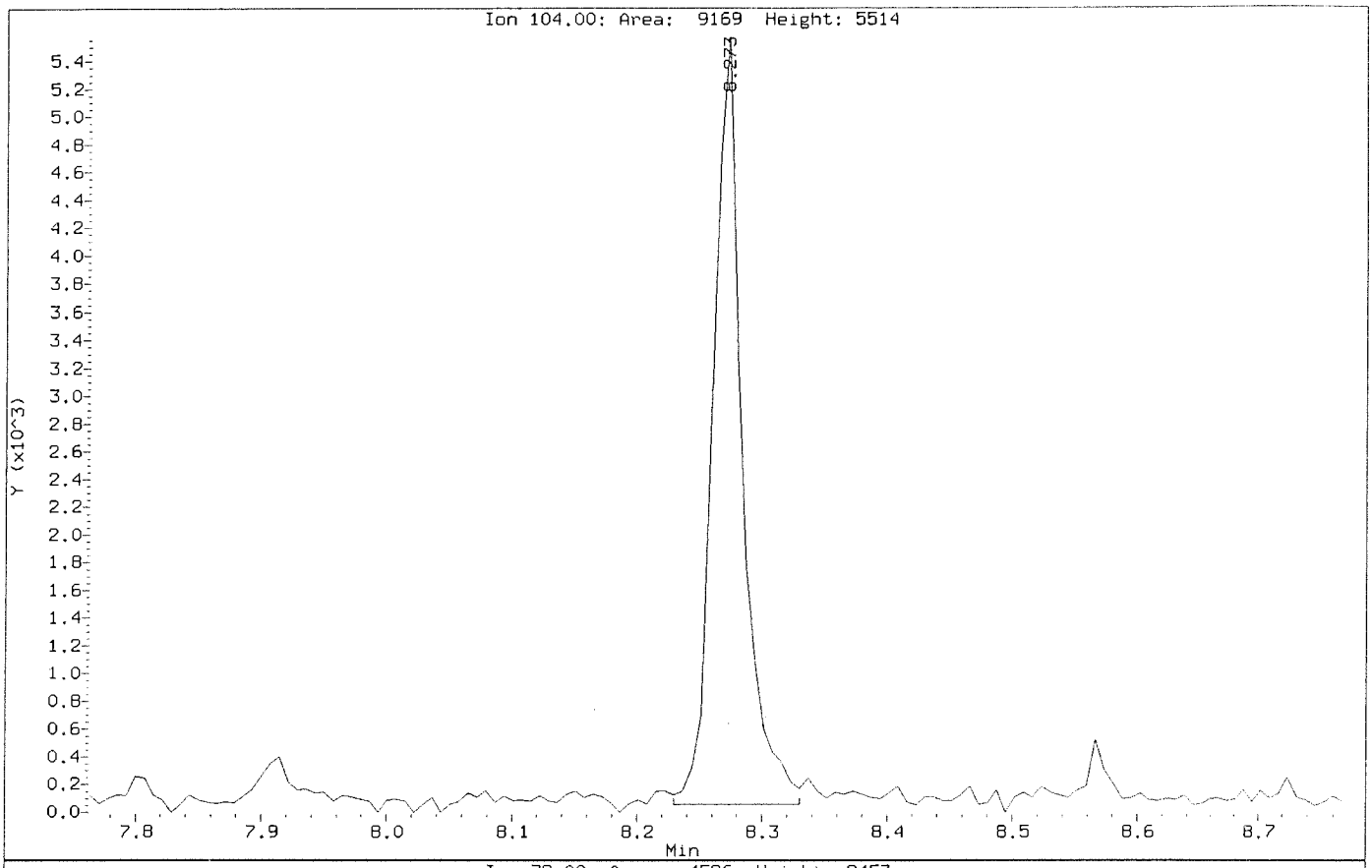
Compound: Styrene
CAS Number: 100-42-5

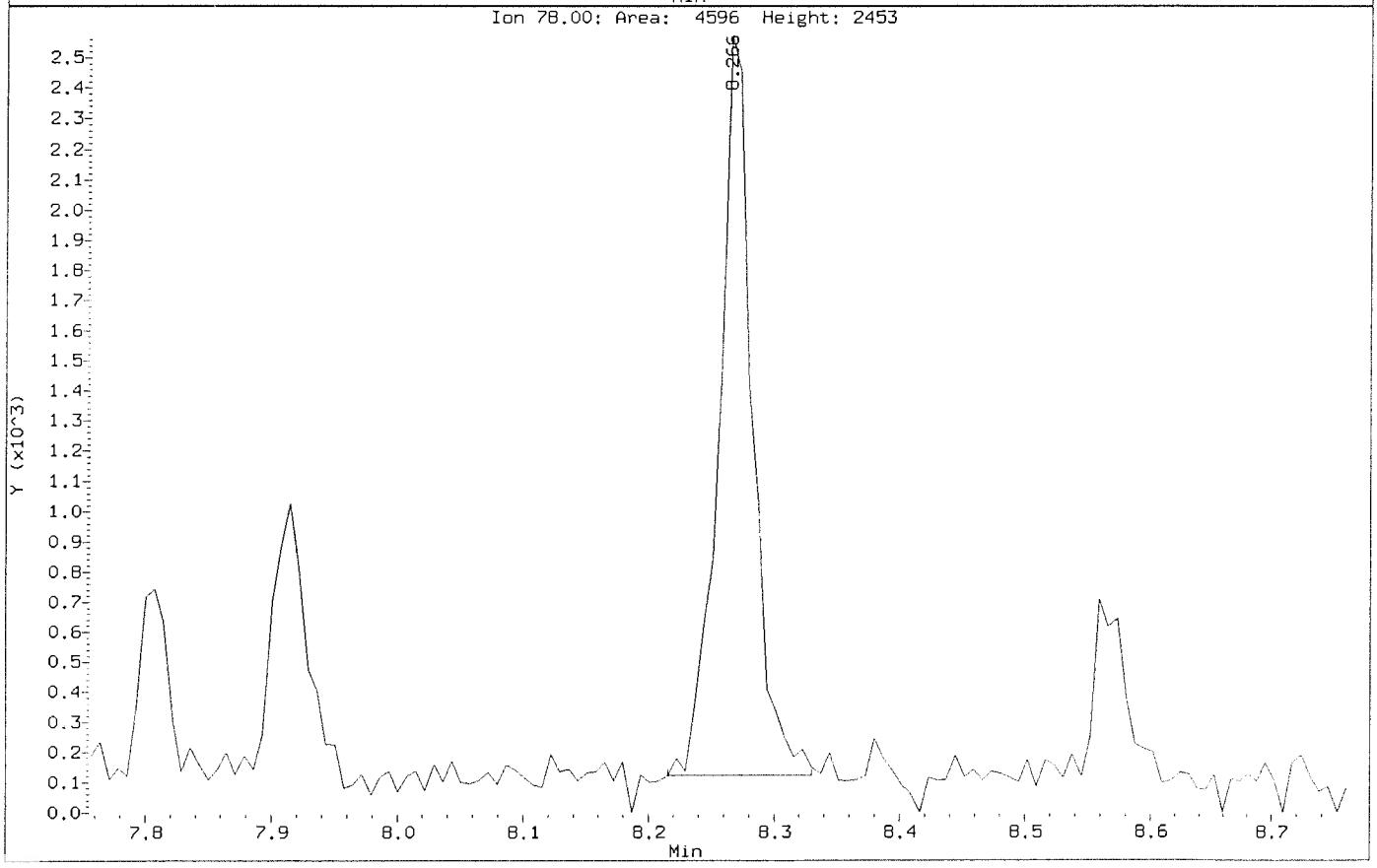




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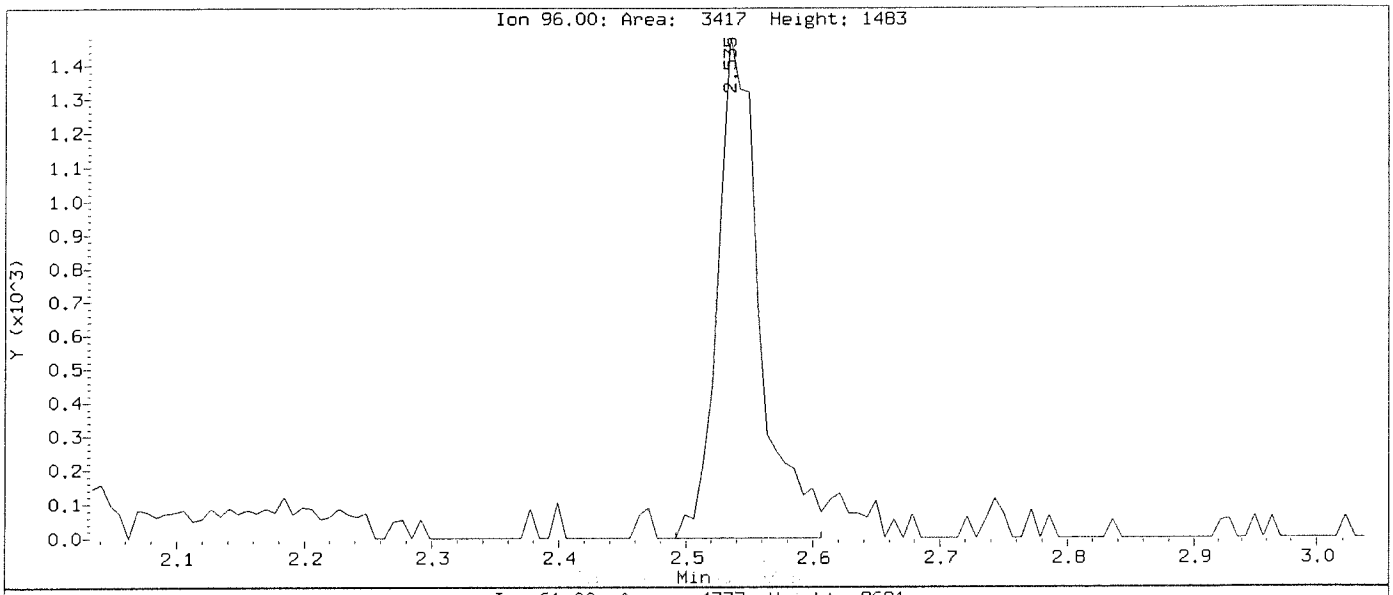
Compound: Styrene
CAS Number: 100-42-5

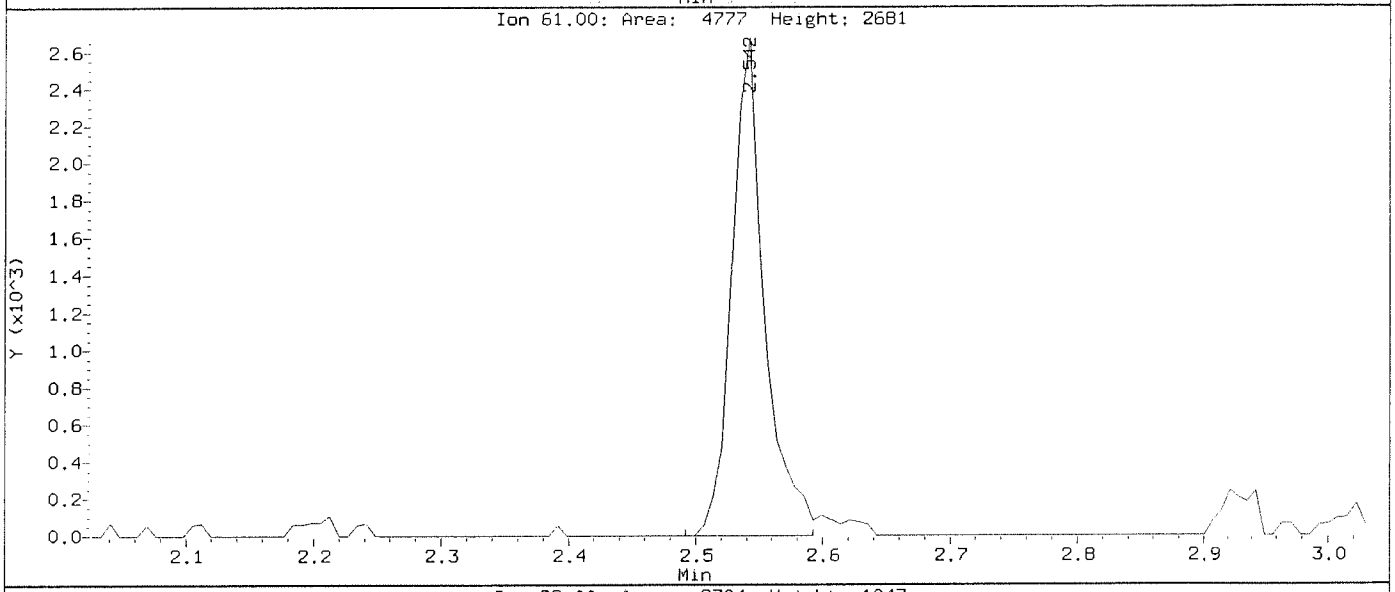


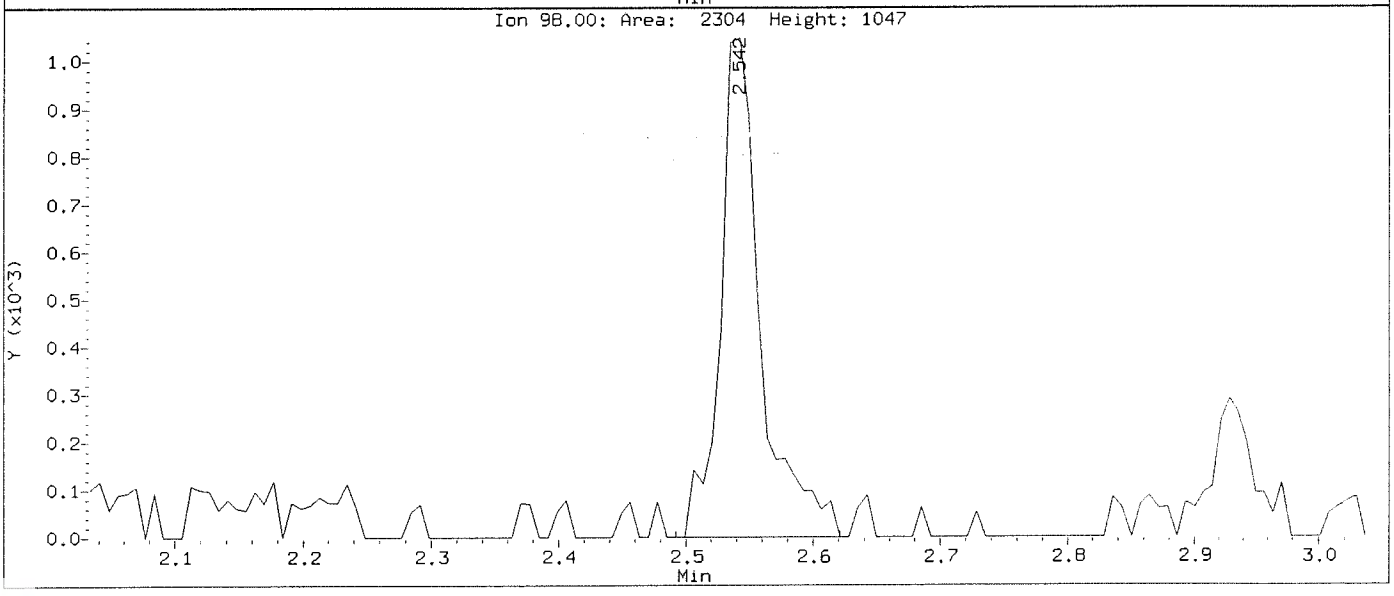


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

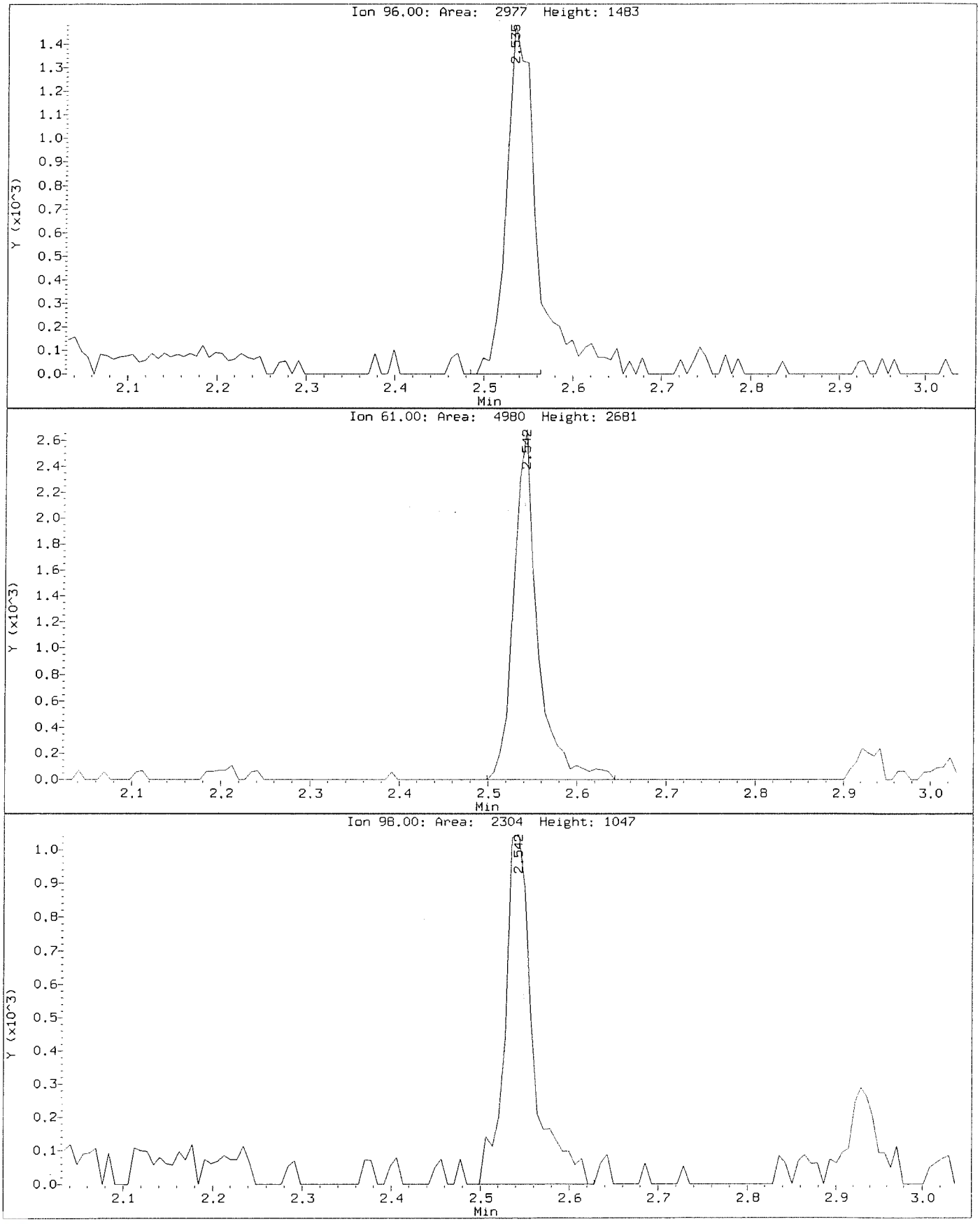






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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 1
Report Date: 22-Aug-2020 11:54

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

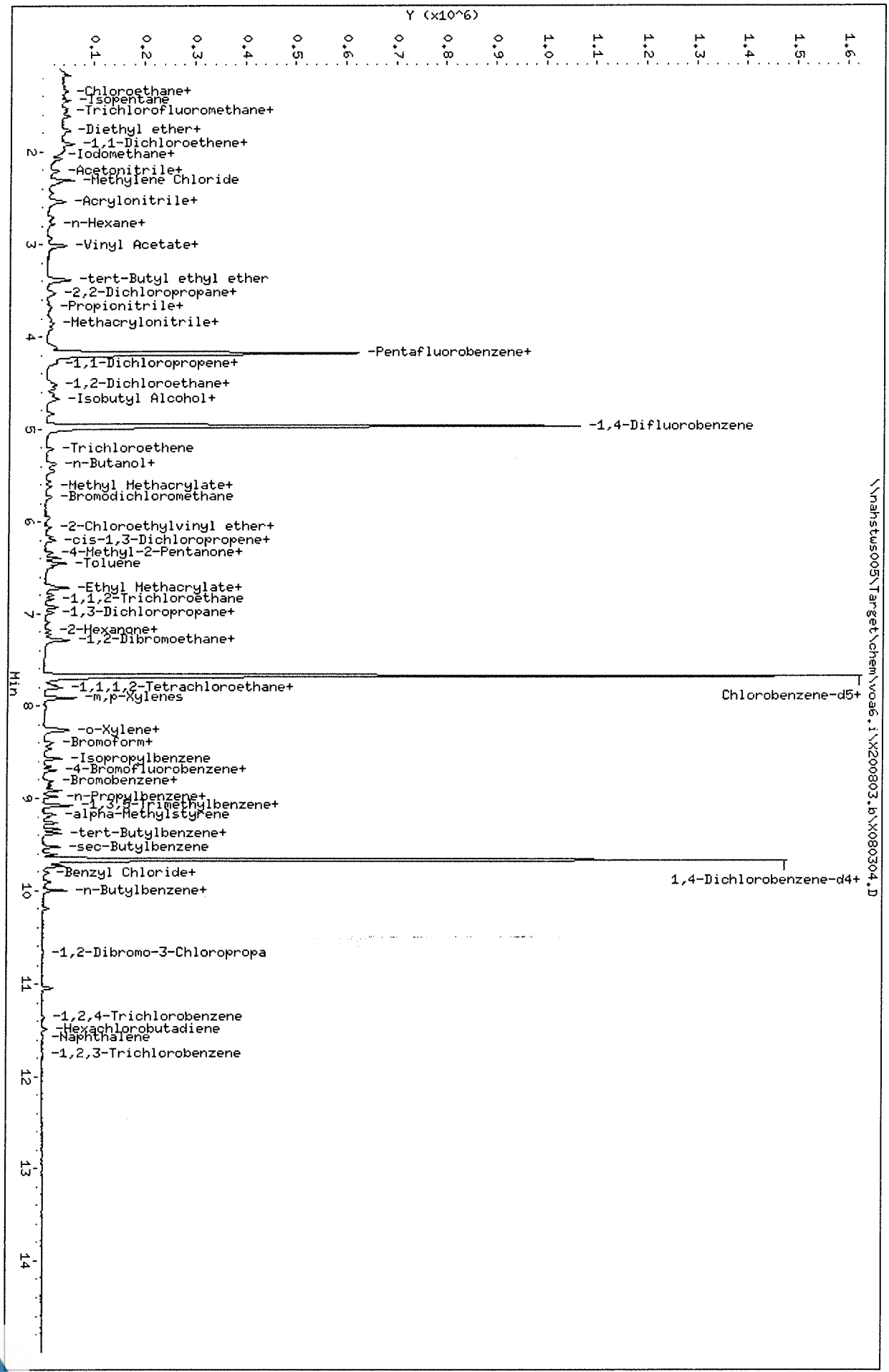
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539031	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	824218	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	742459	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

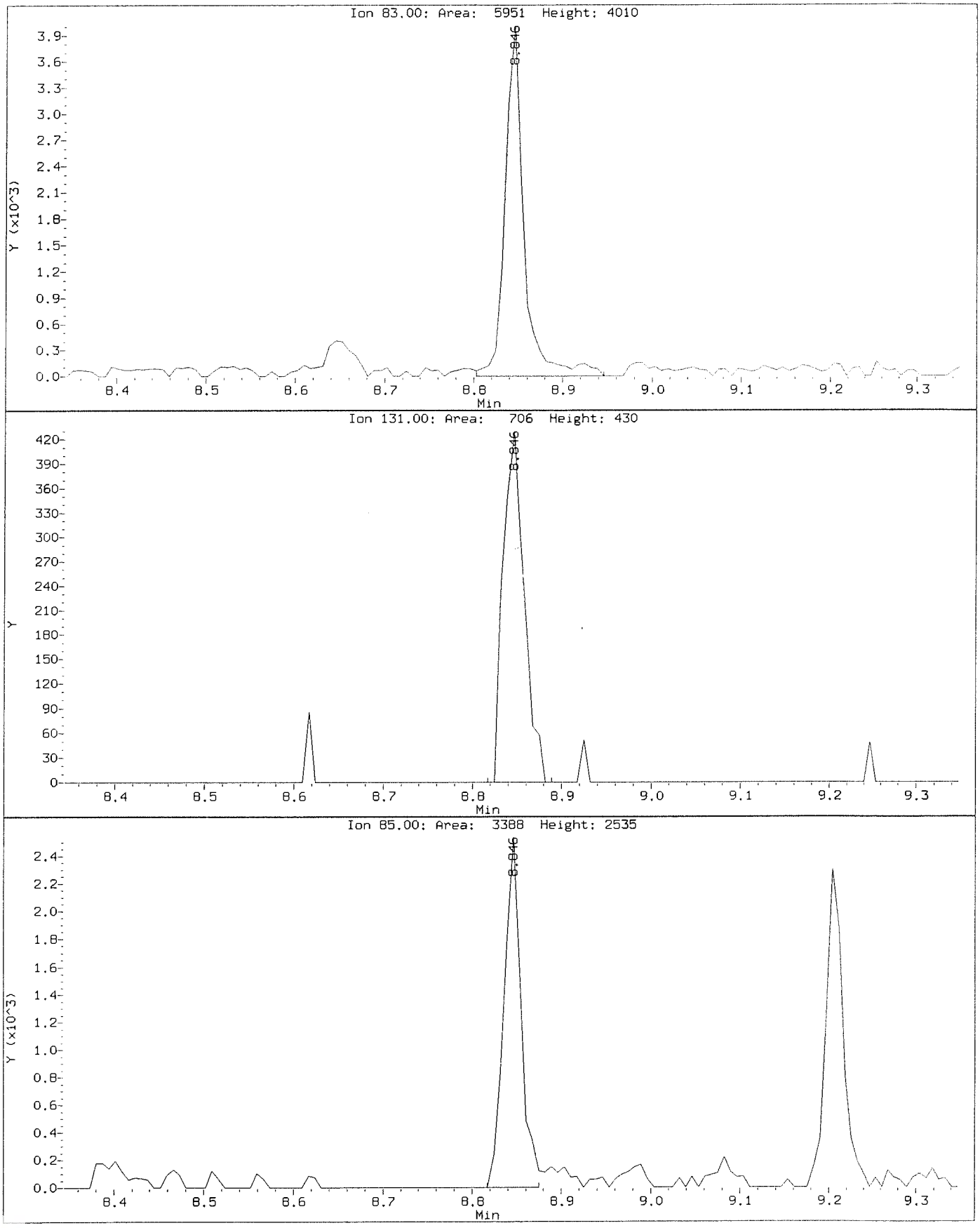


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Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

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

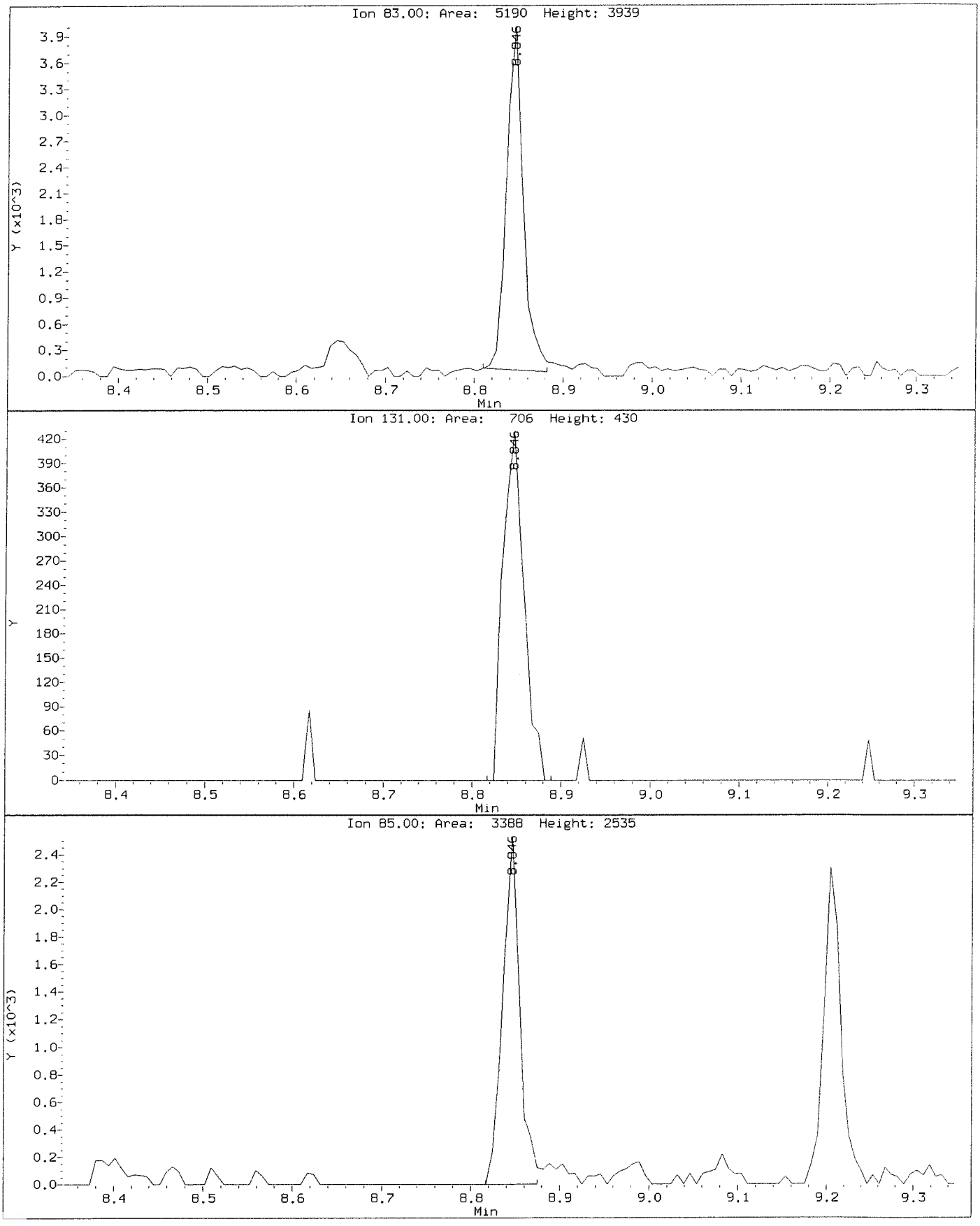
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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



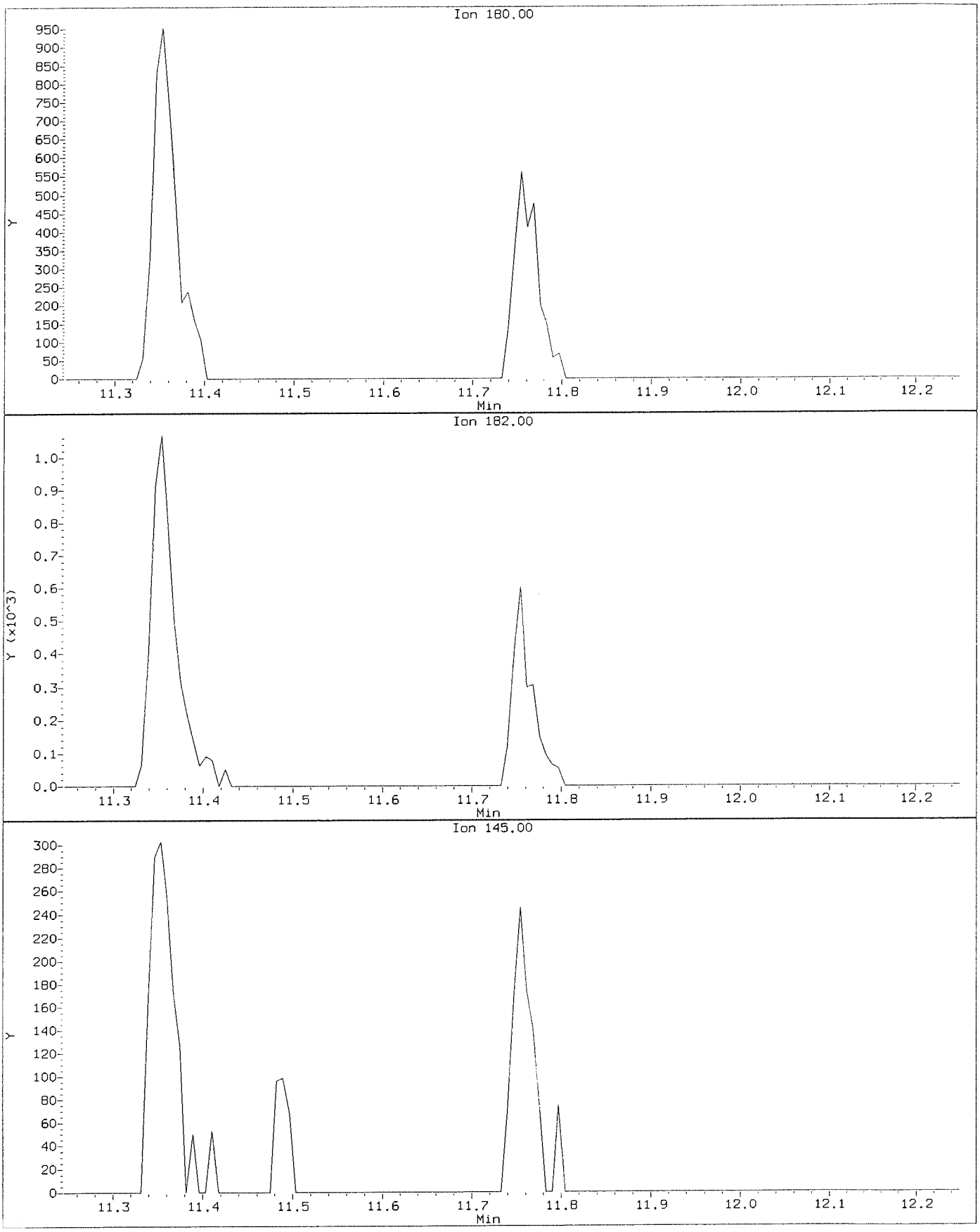
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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



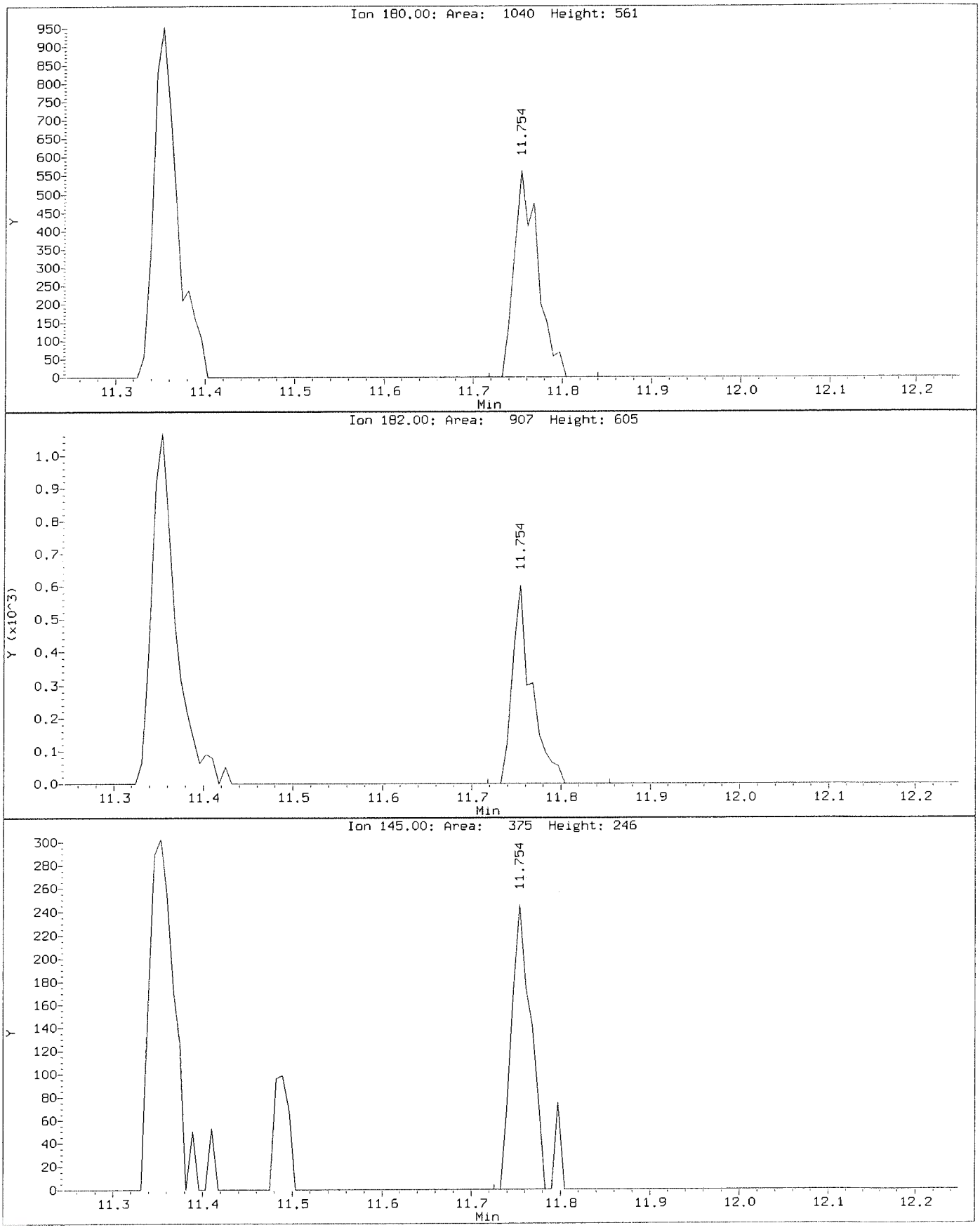
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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



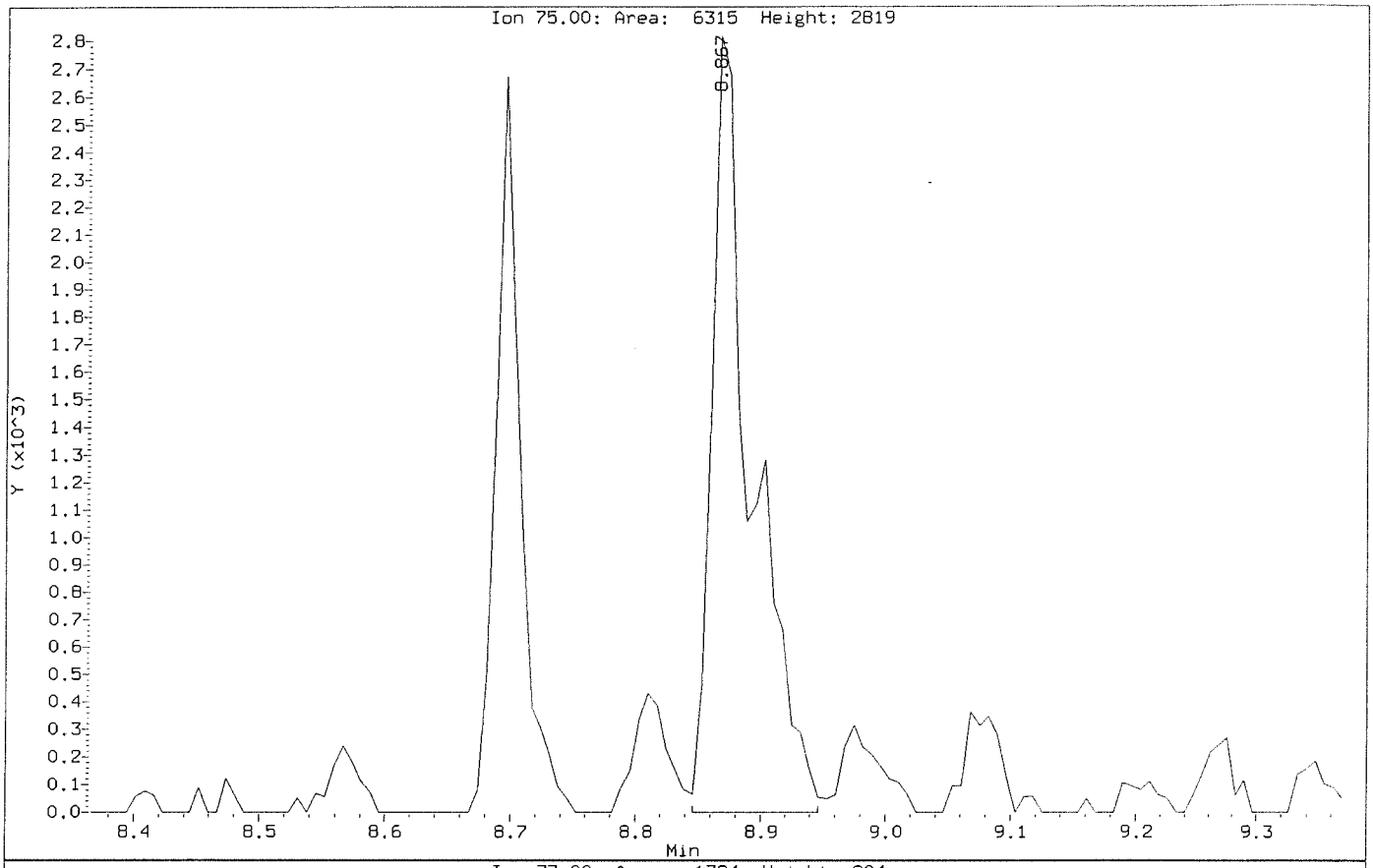
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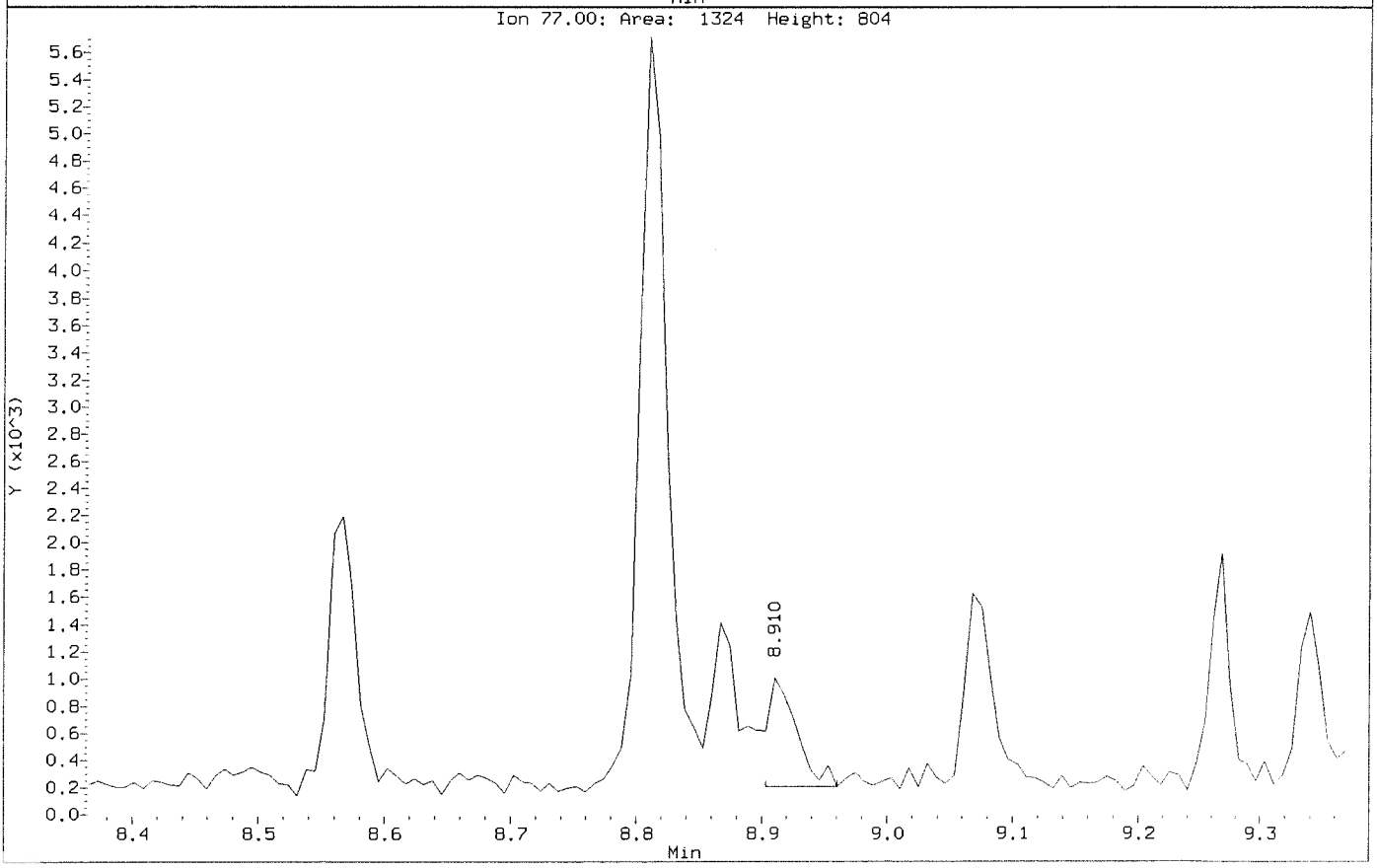
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD001

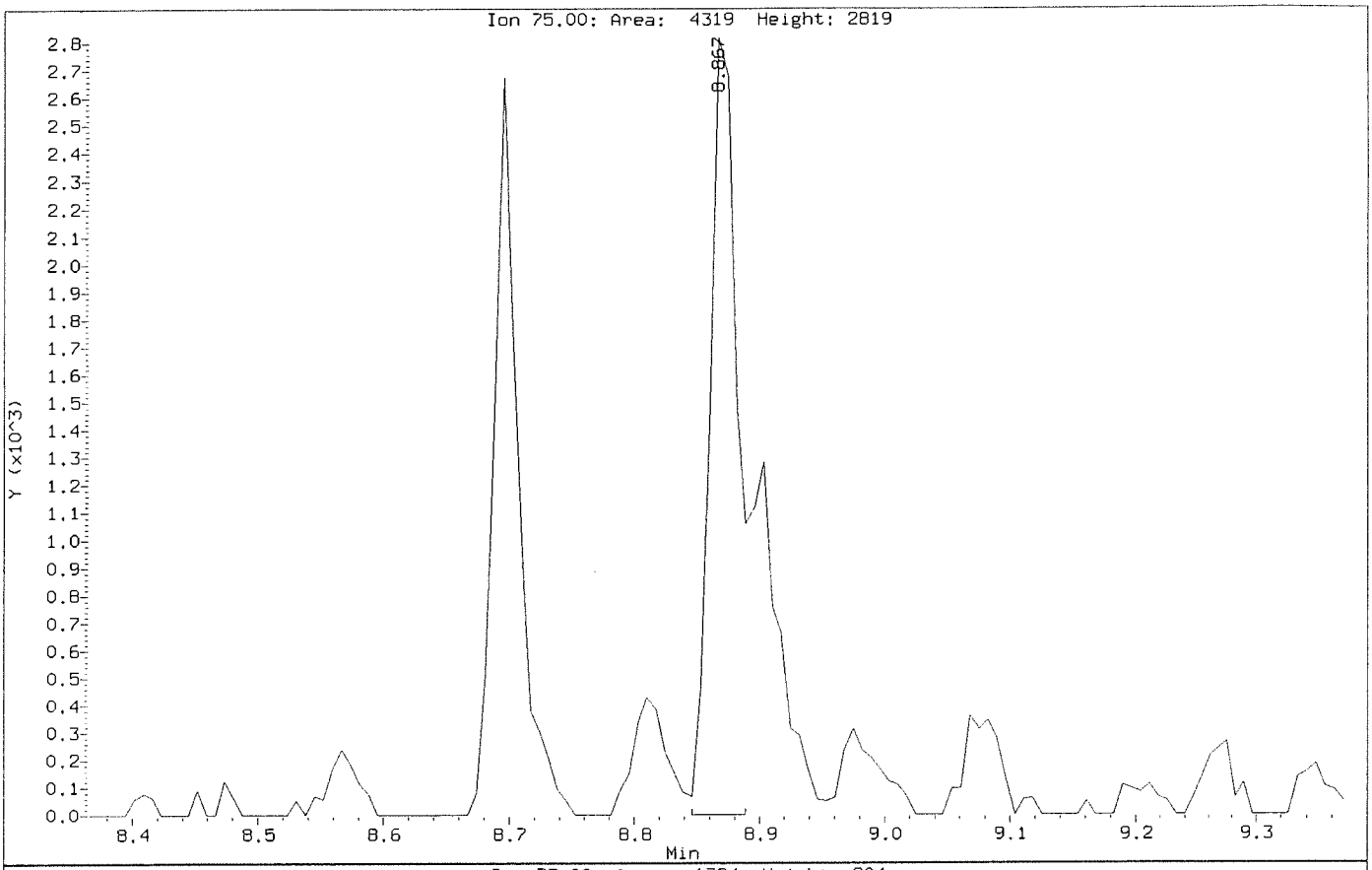
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

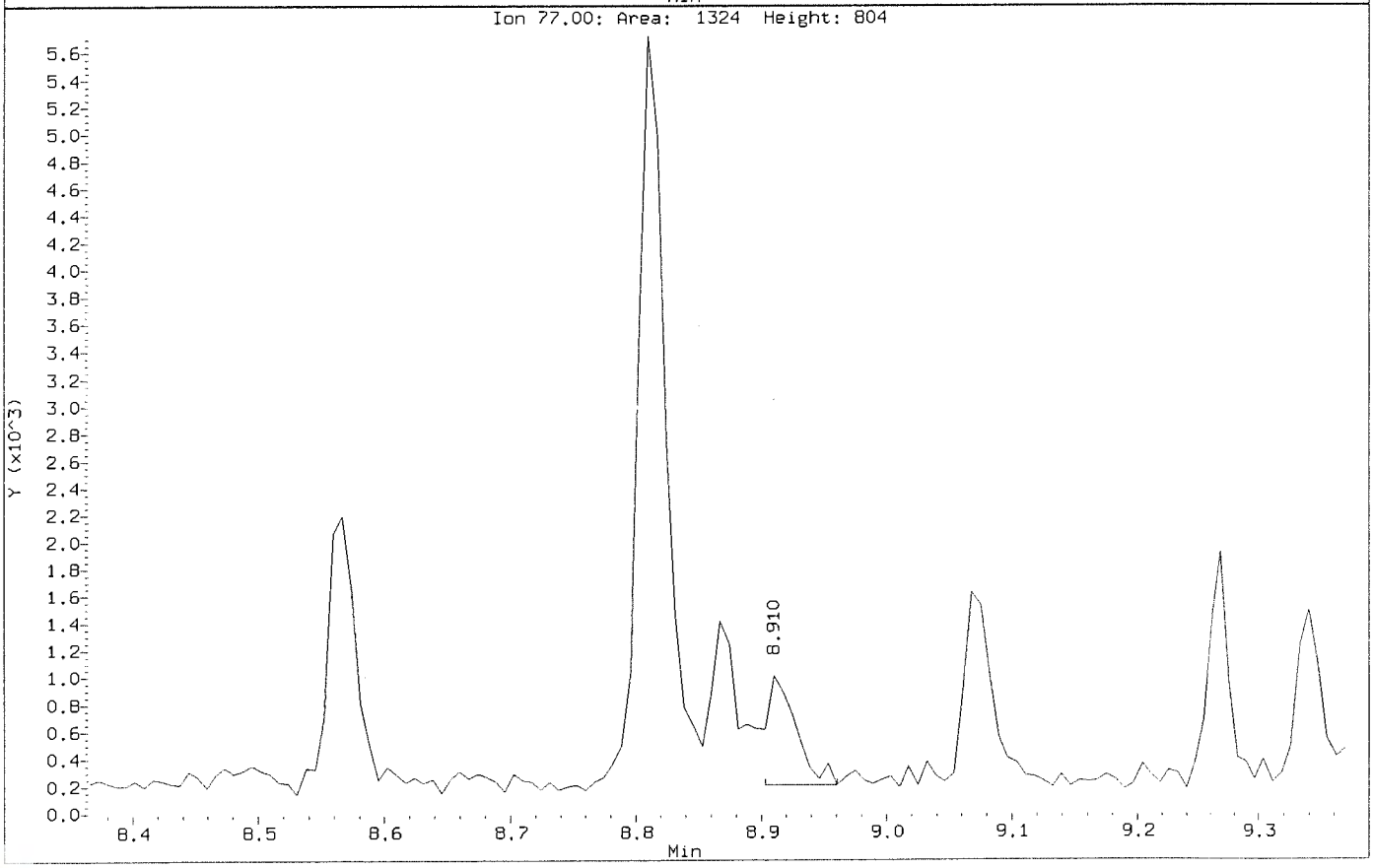




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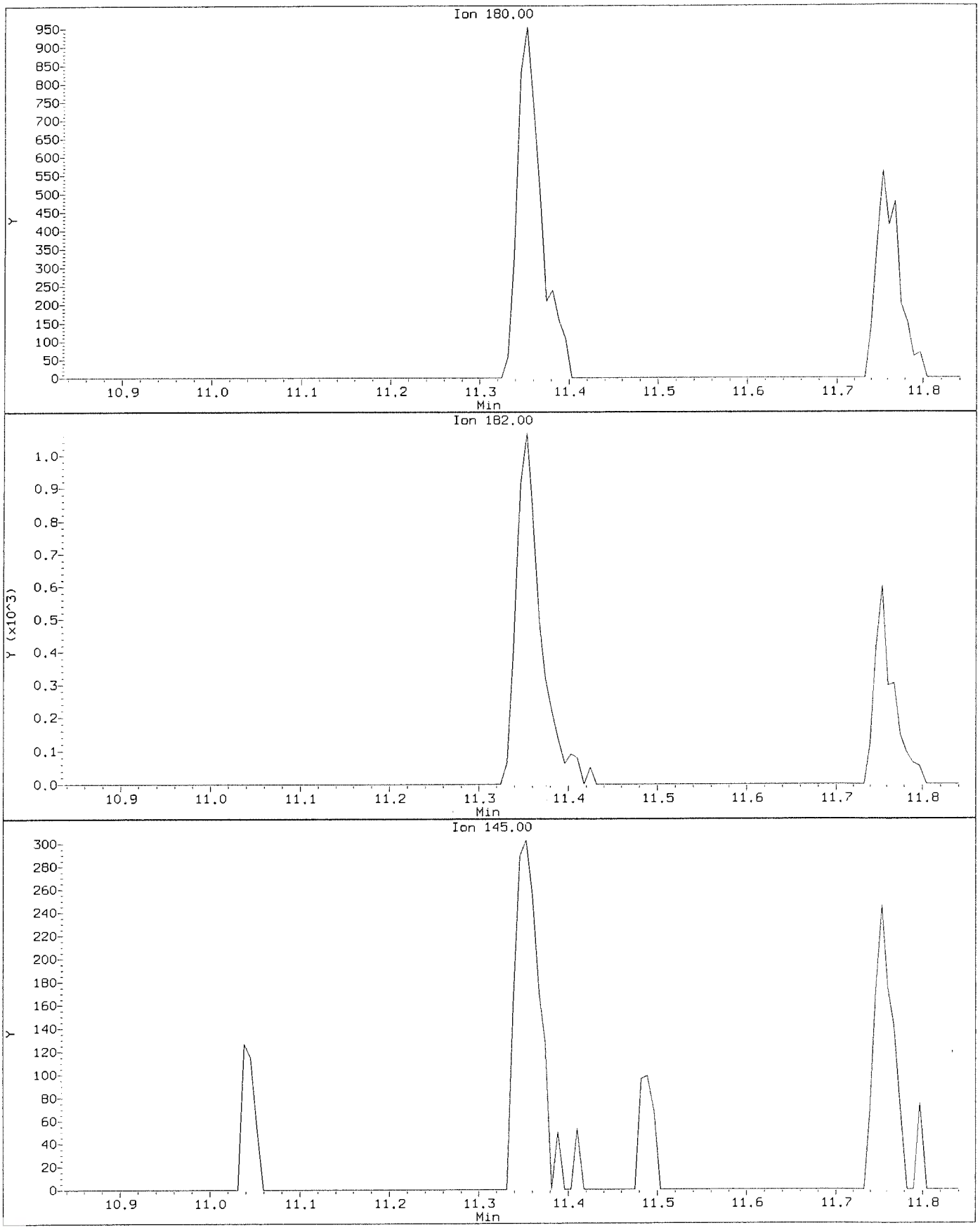
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





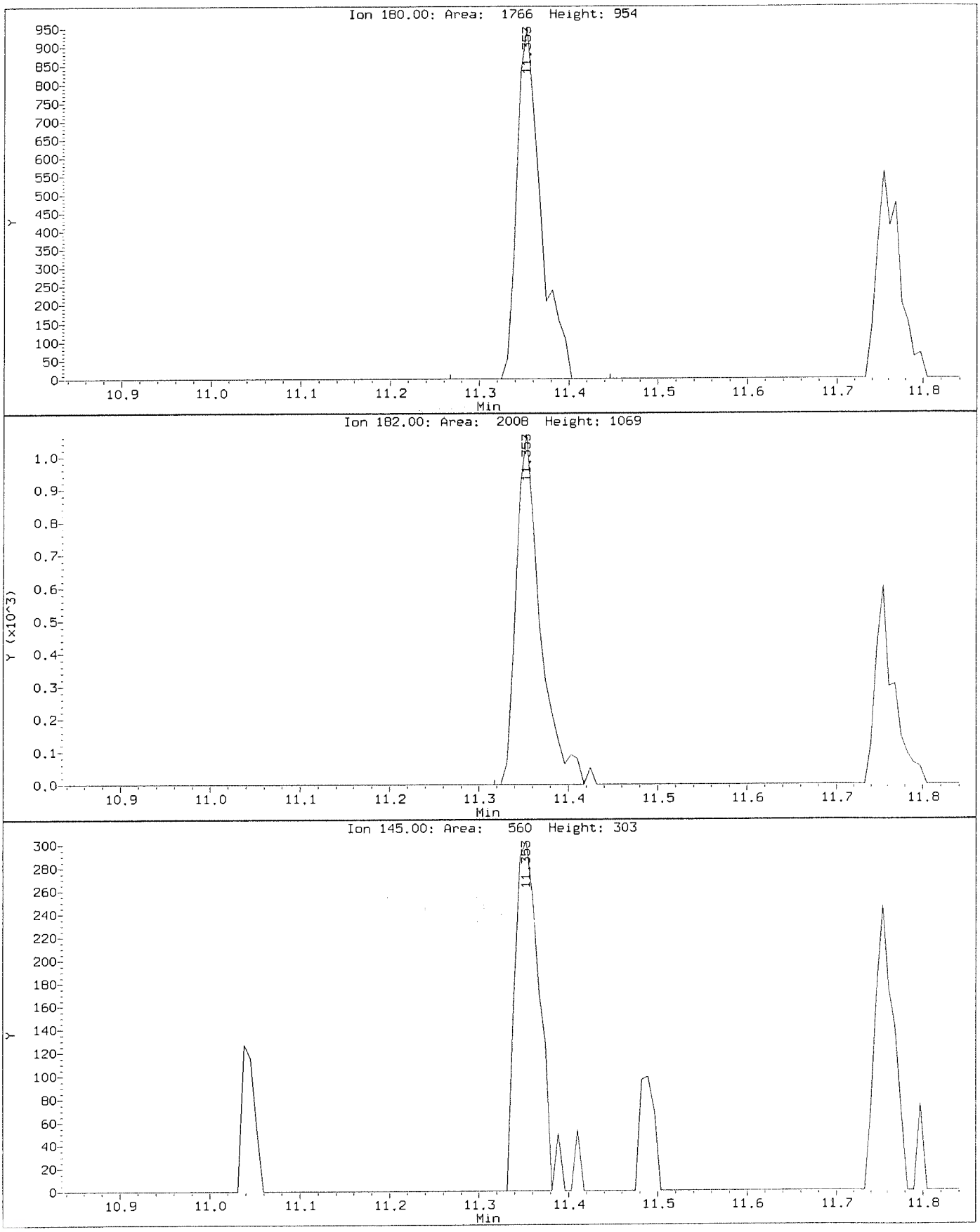
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Instrument: voa6.i
Client Sample ID: VSTD001

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



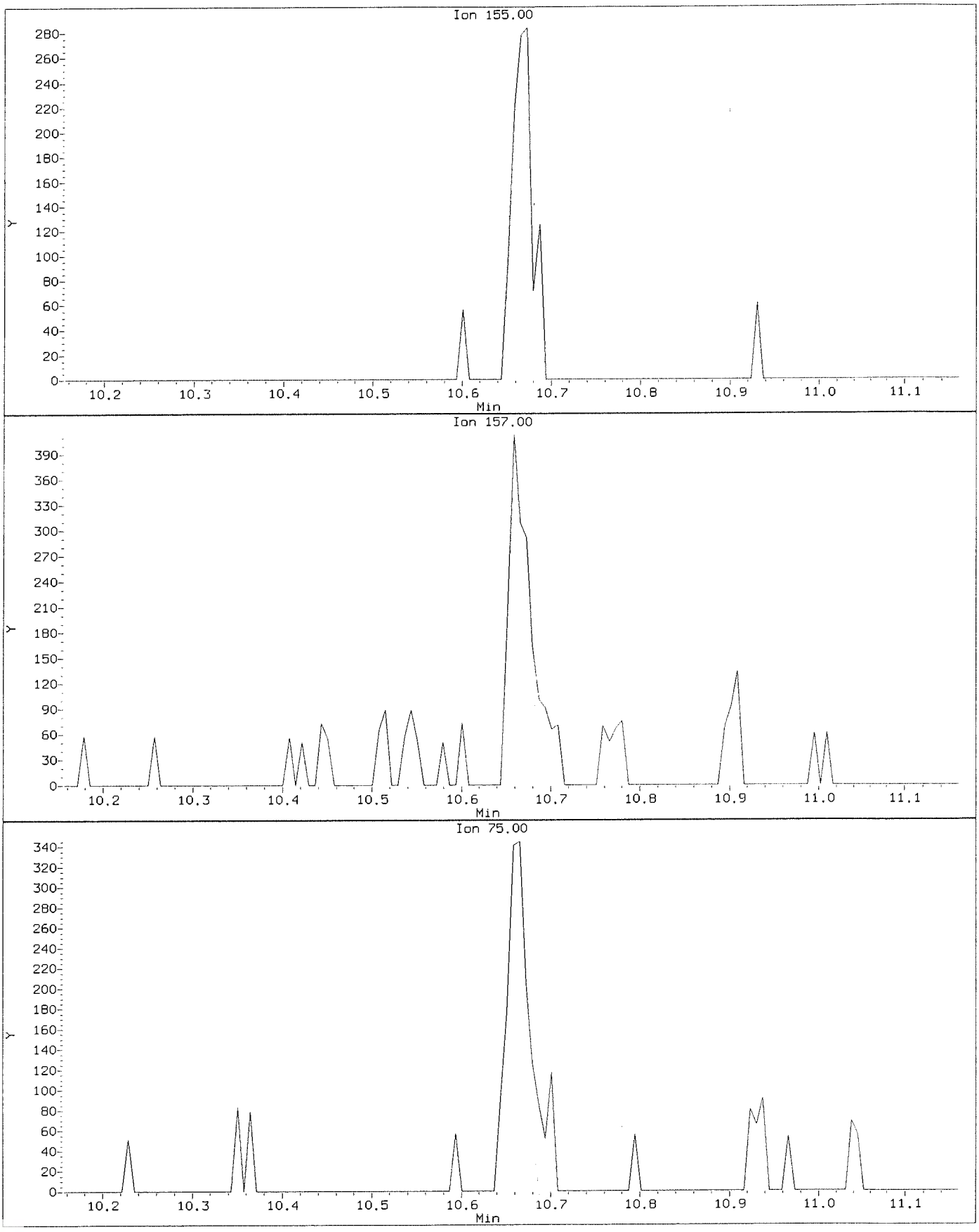
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Instrument: voa6.i
Client Sample ID: VSTD001

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



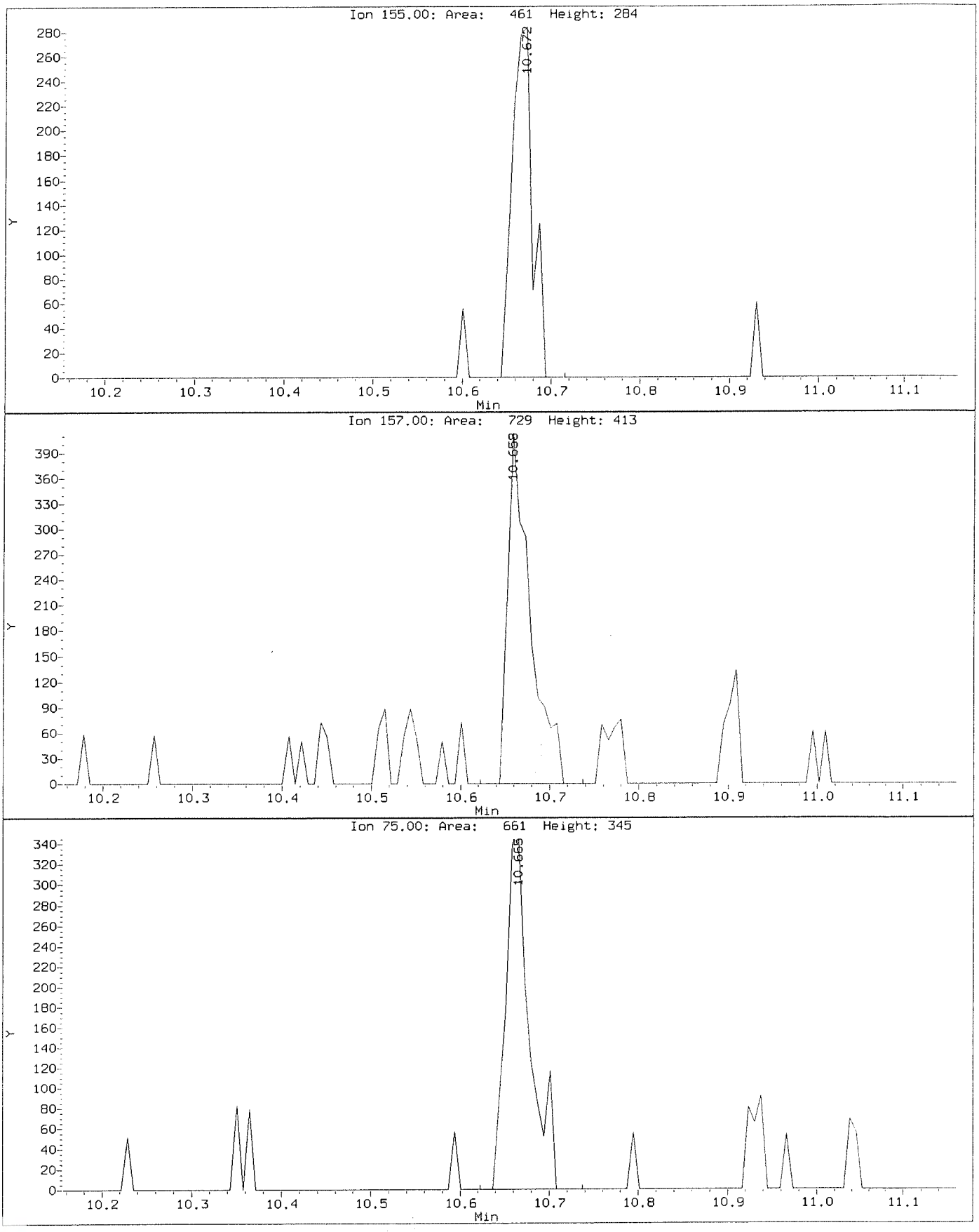
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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



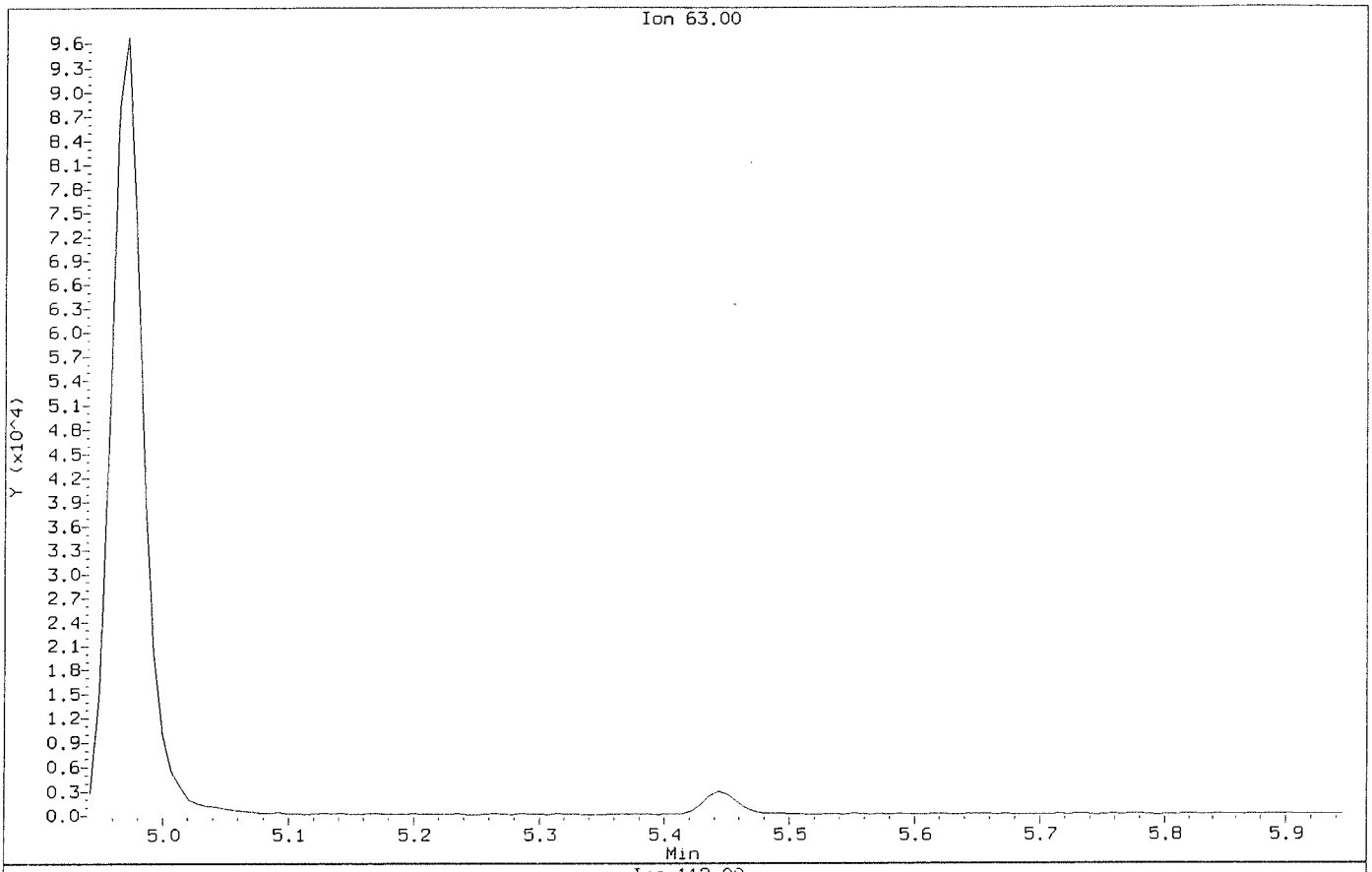
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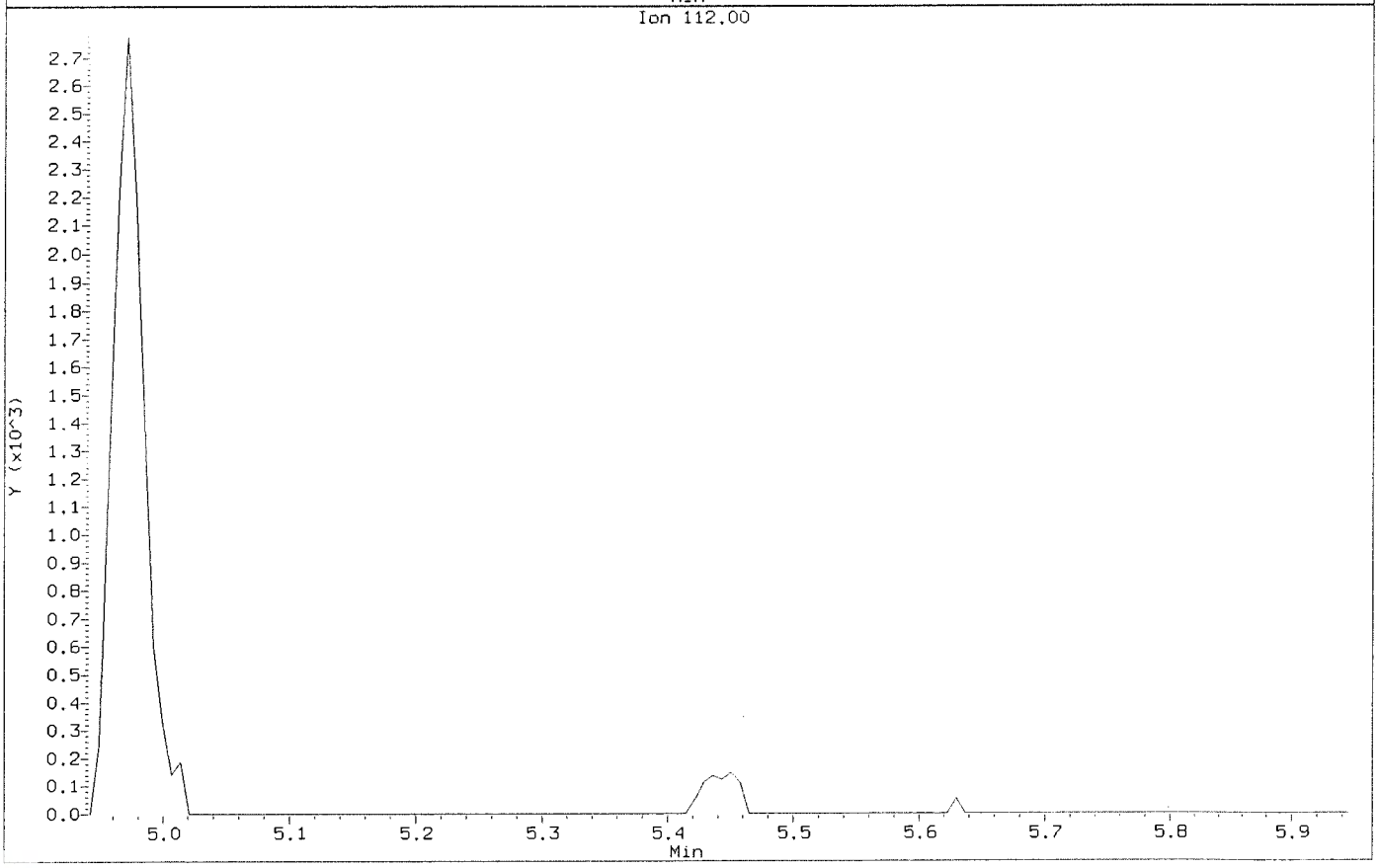
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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

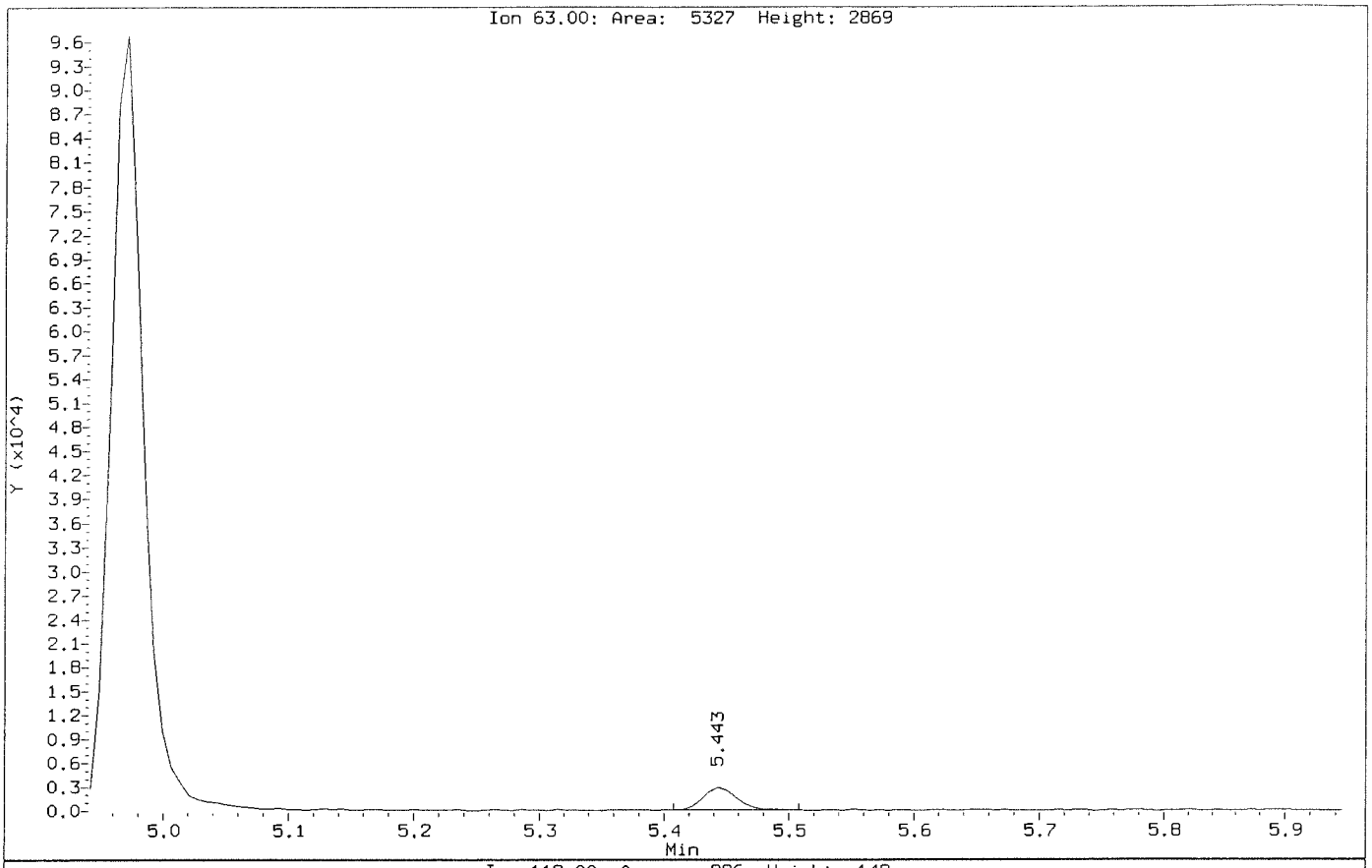
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

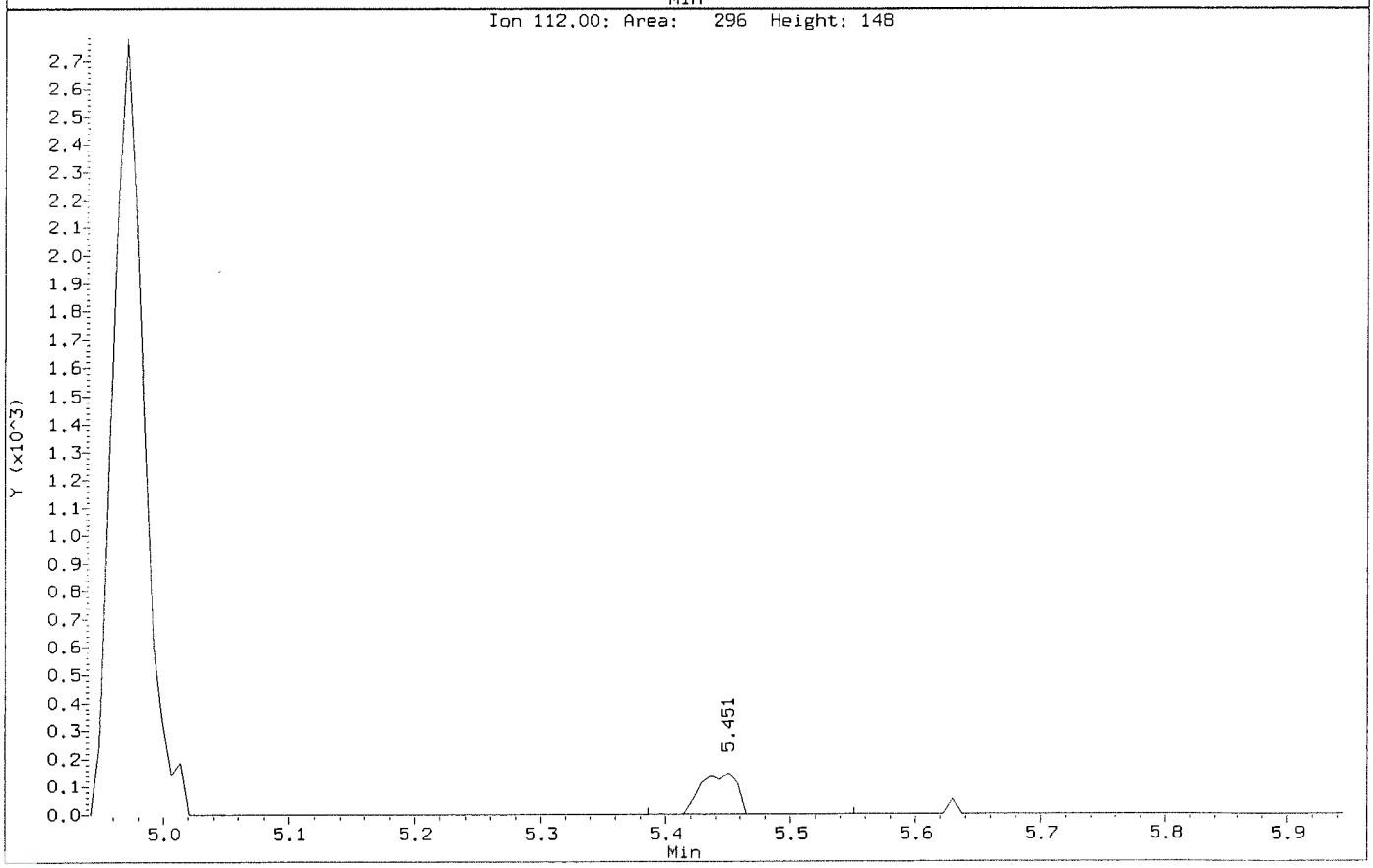




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Instrument: voa6.i
Client Sample ID: VSTD001

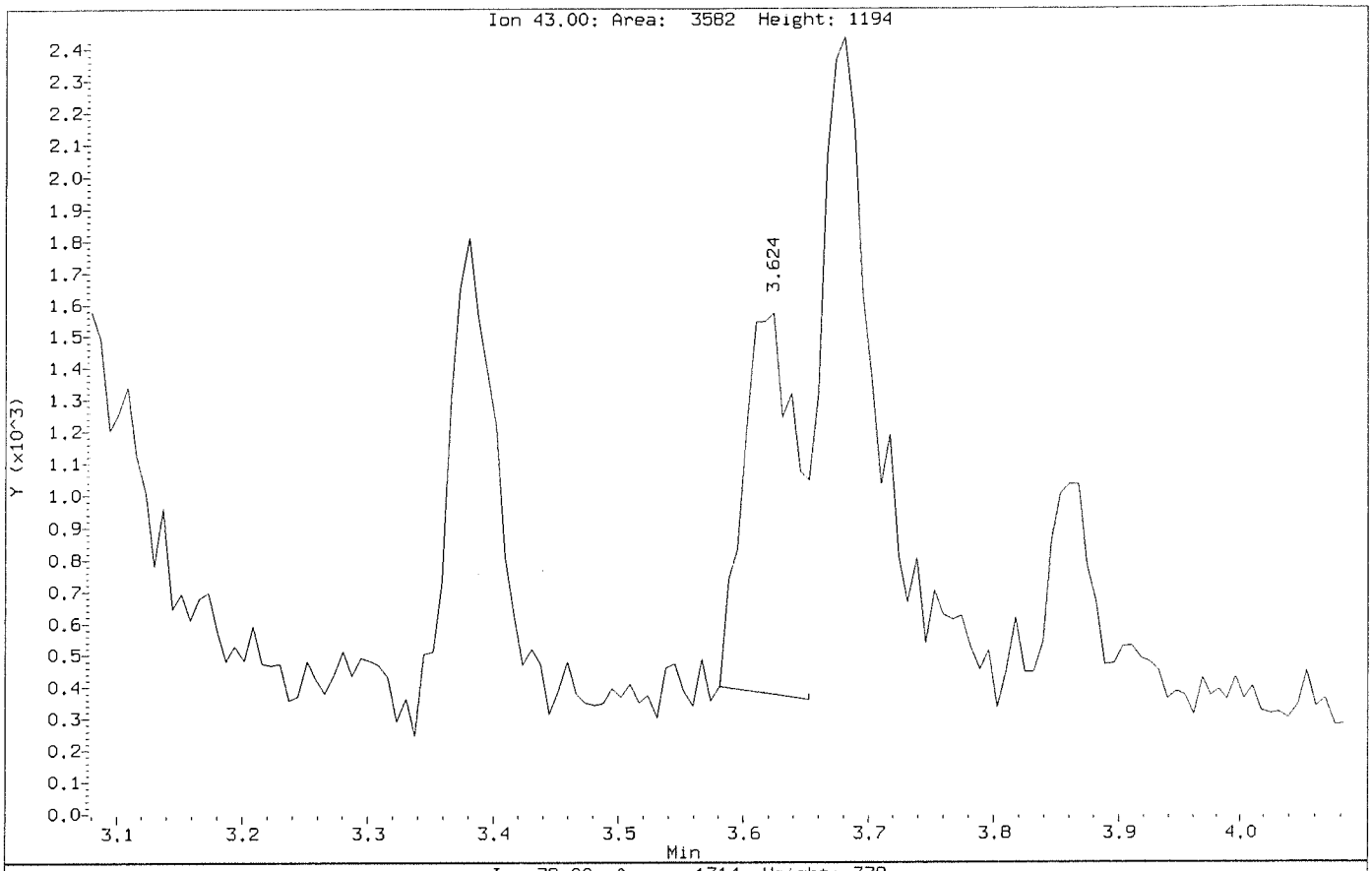
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

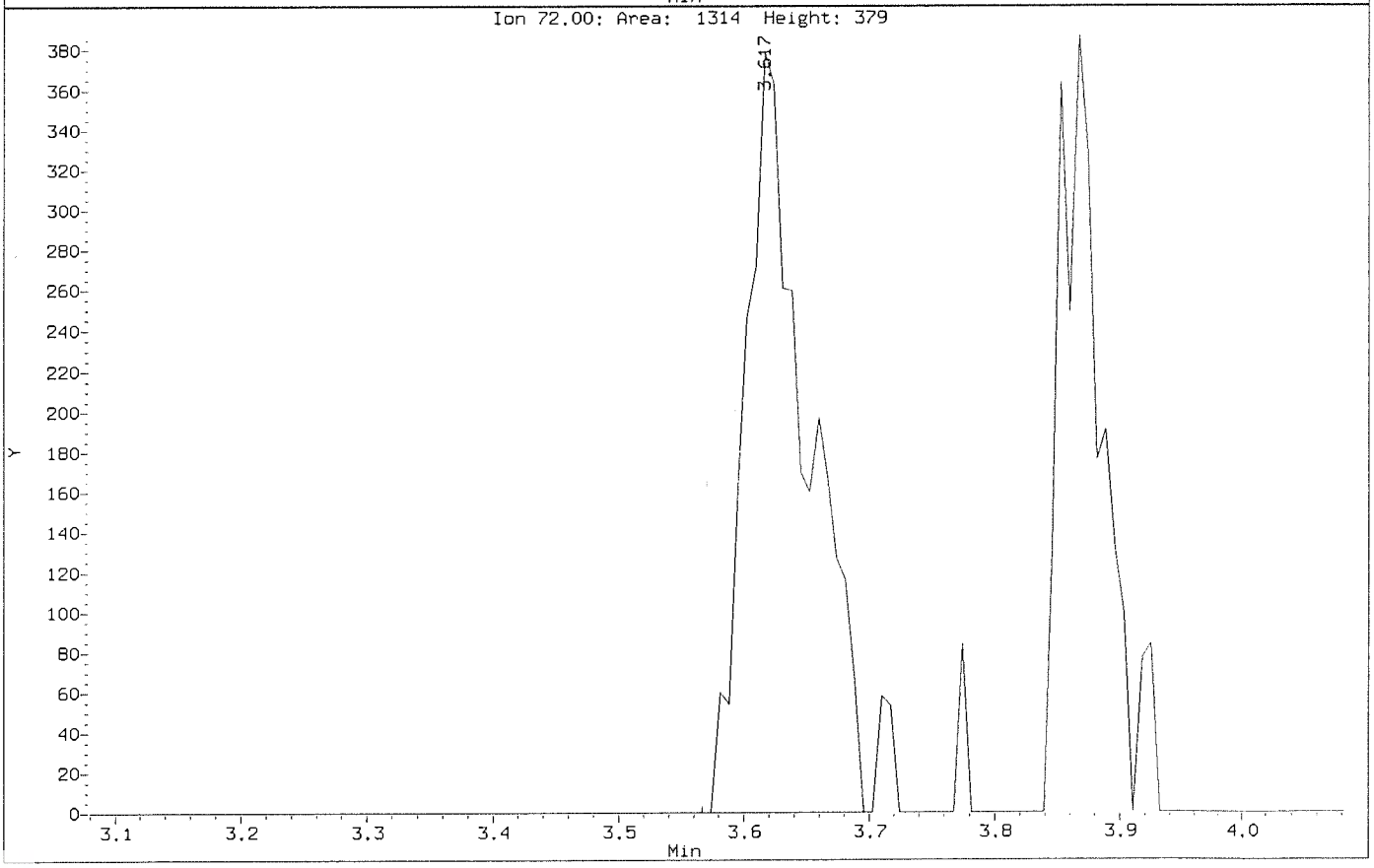




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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

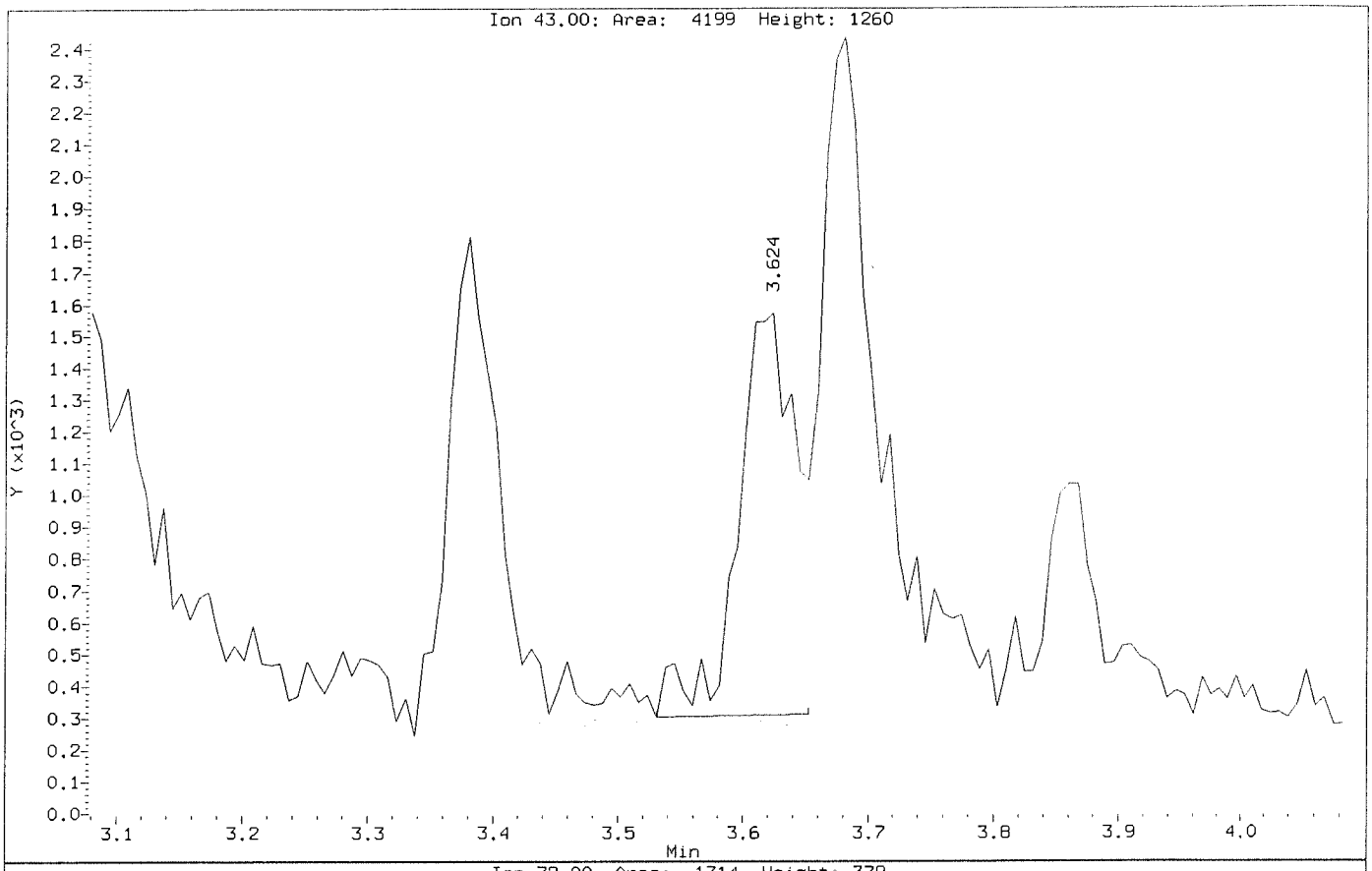
Compound: 2-Butanone
CAS Number: 78-93-3

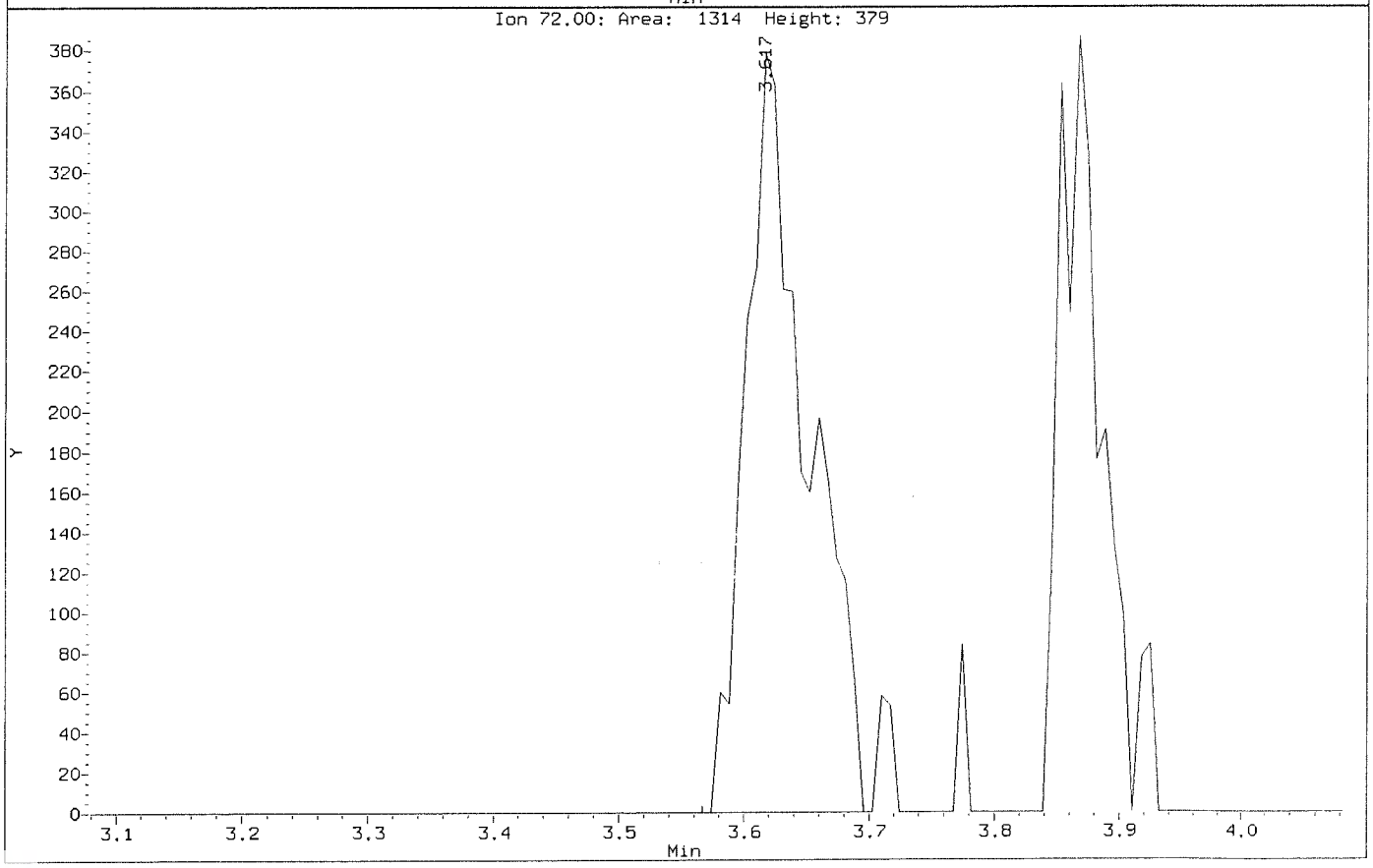




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Client Sample ID: VSTD001

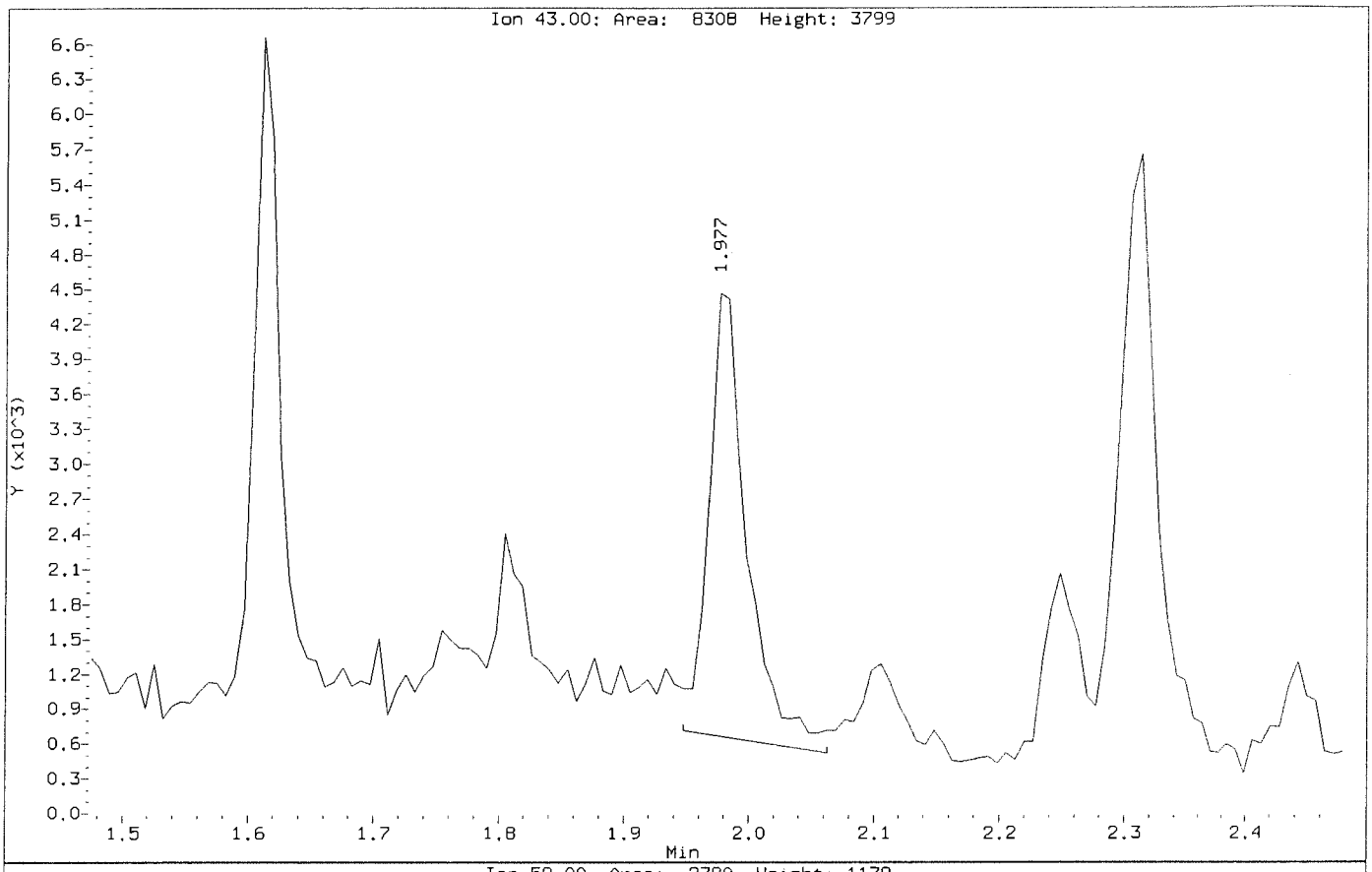
Compound: 2-Butanone
CAS Number: 78-93-3

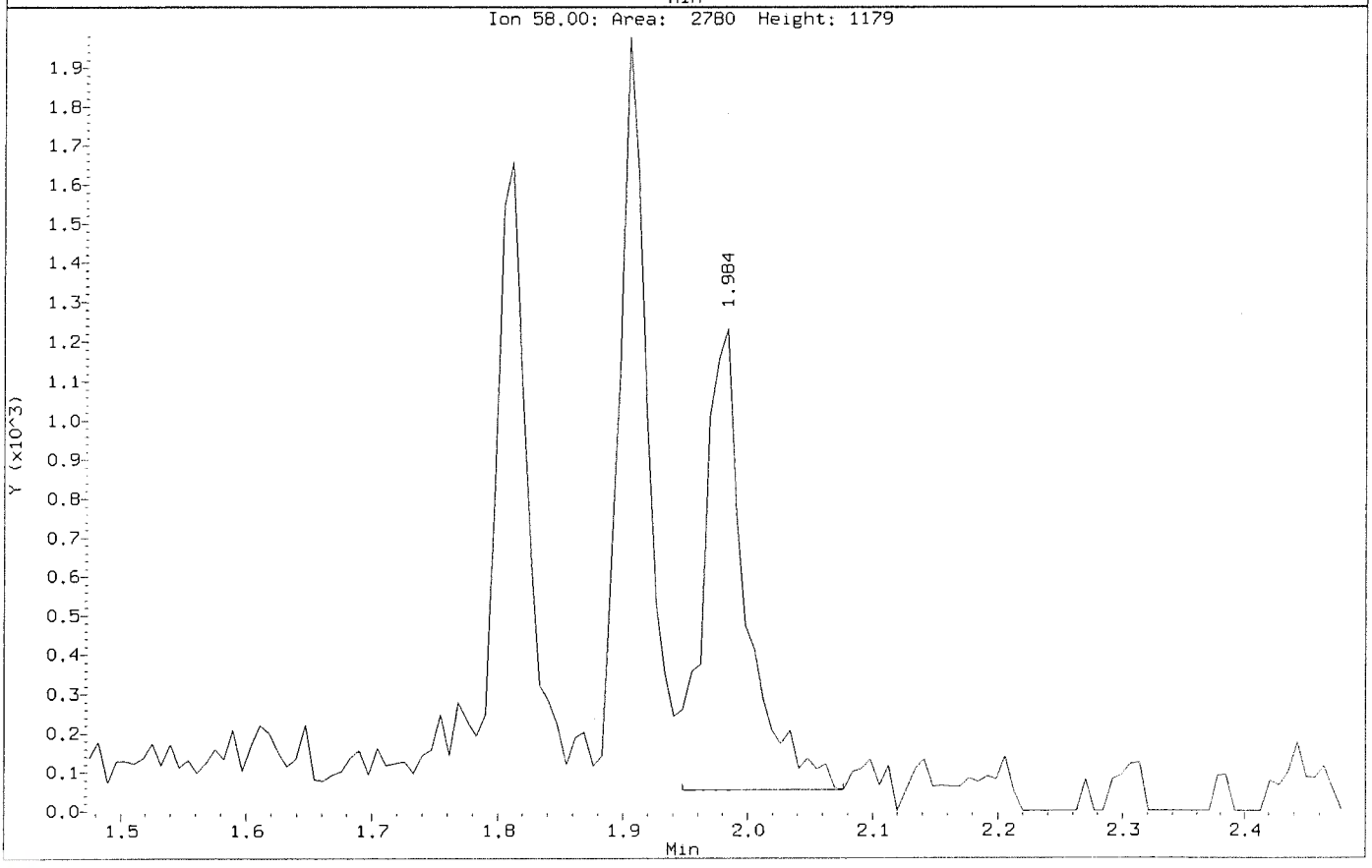




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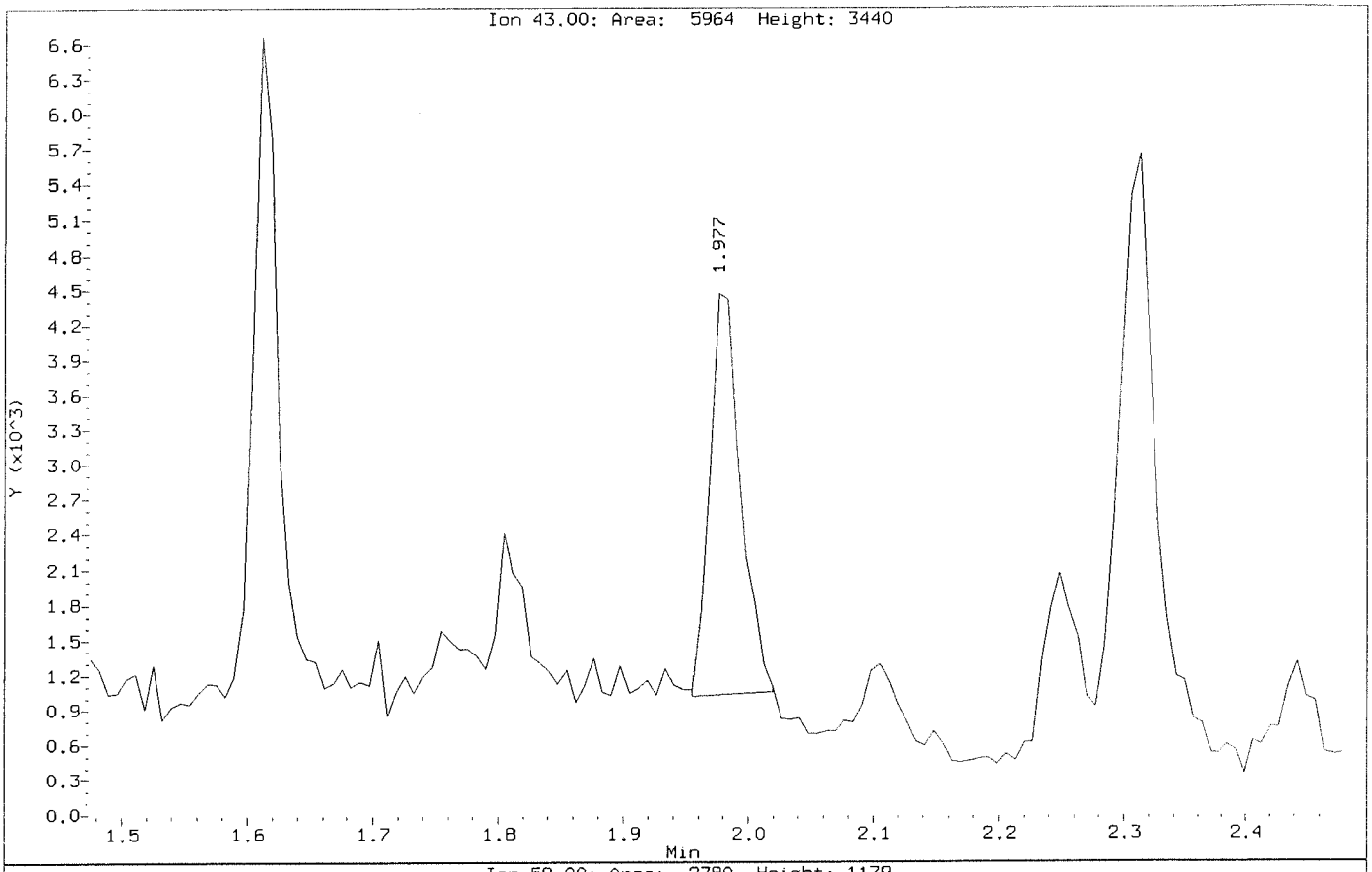
Compound: Acetone
CAS Number: 67-64-1

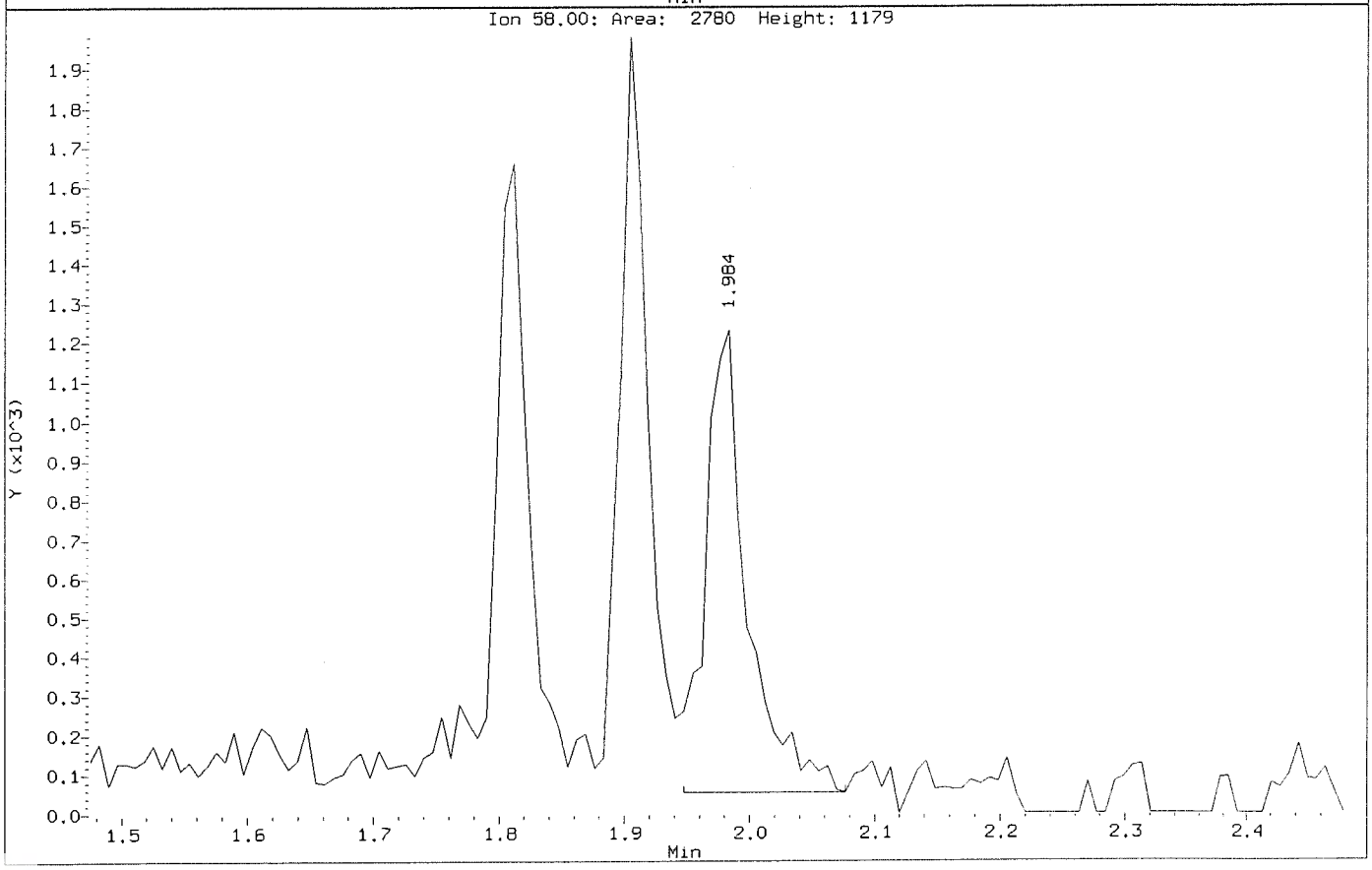




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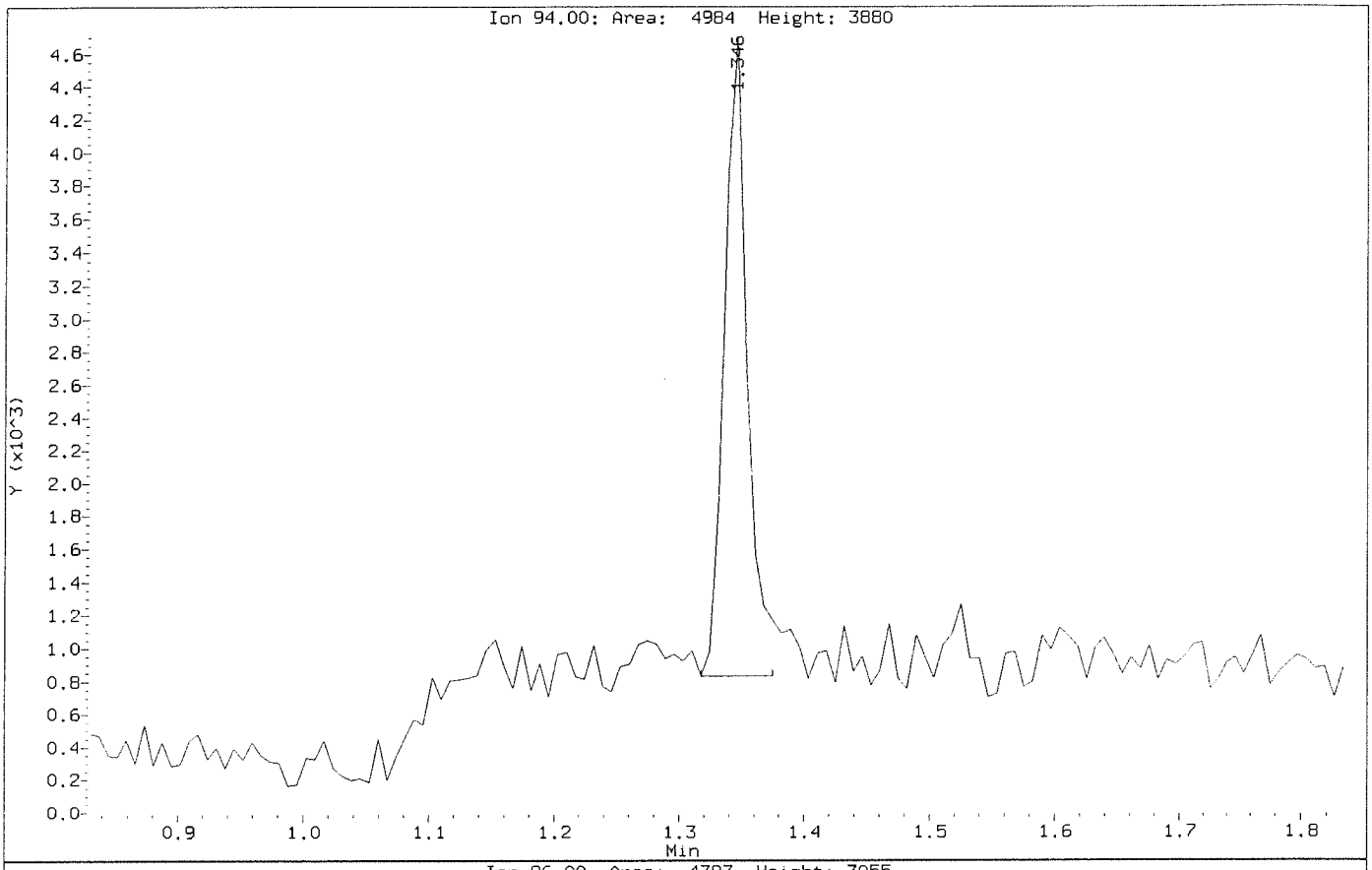
Compound: Acetone
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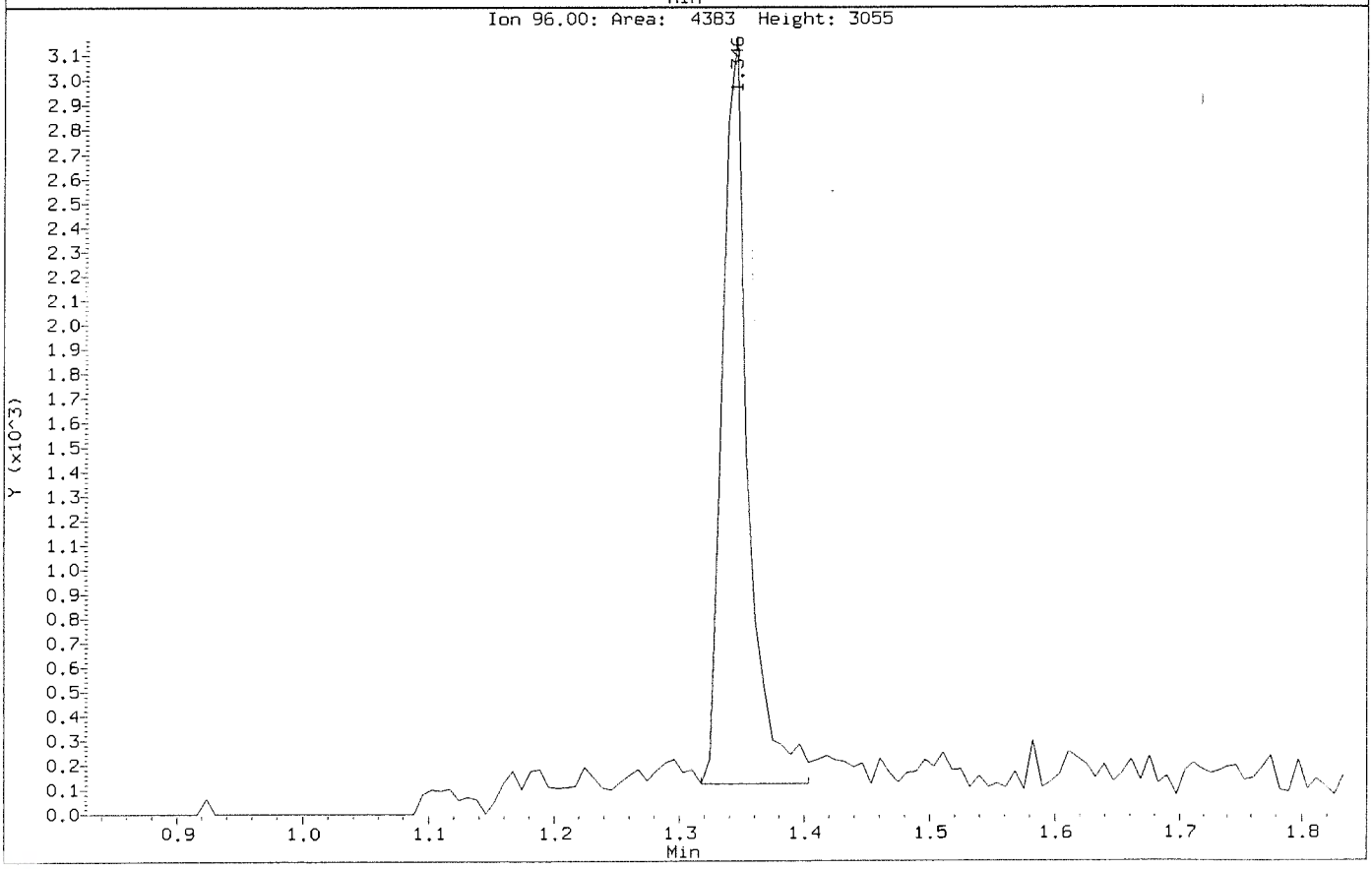




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Instrument: voa6.i
Client Sample ID: VSTD001

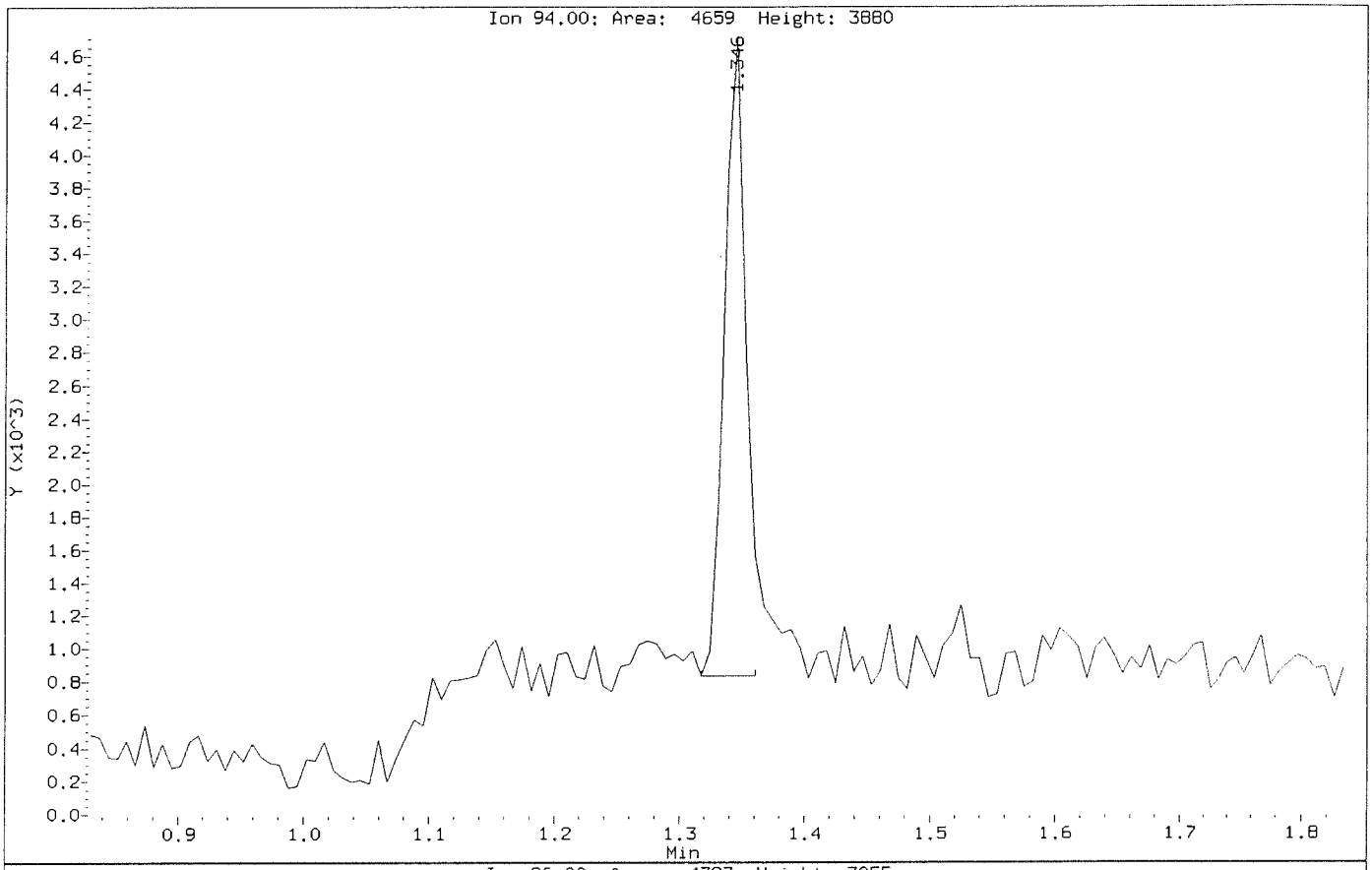
Compound: Bromomethane
CAS Number: 74-83-9

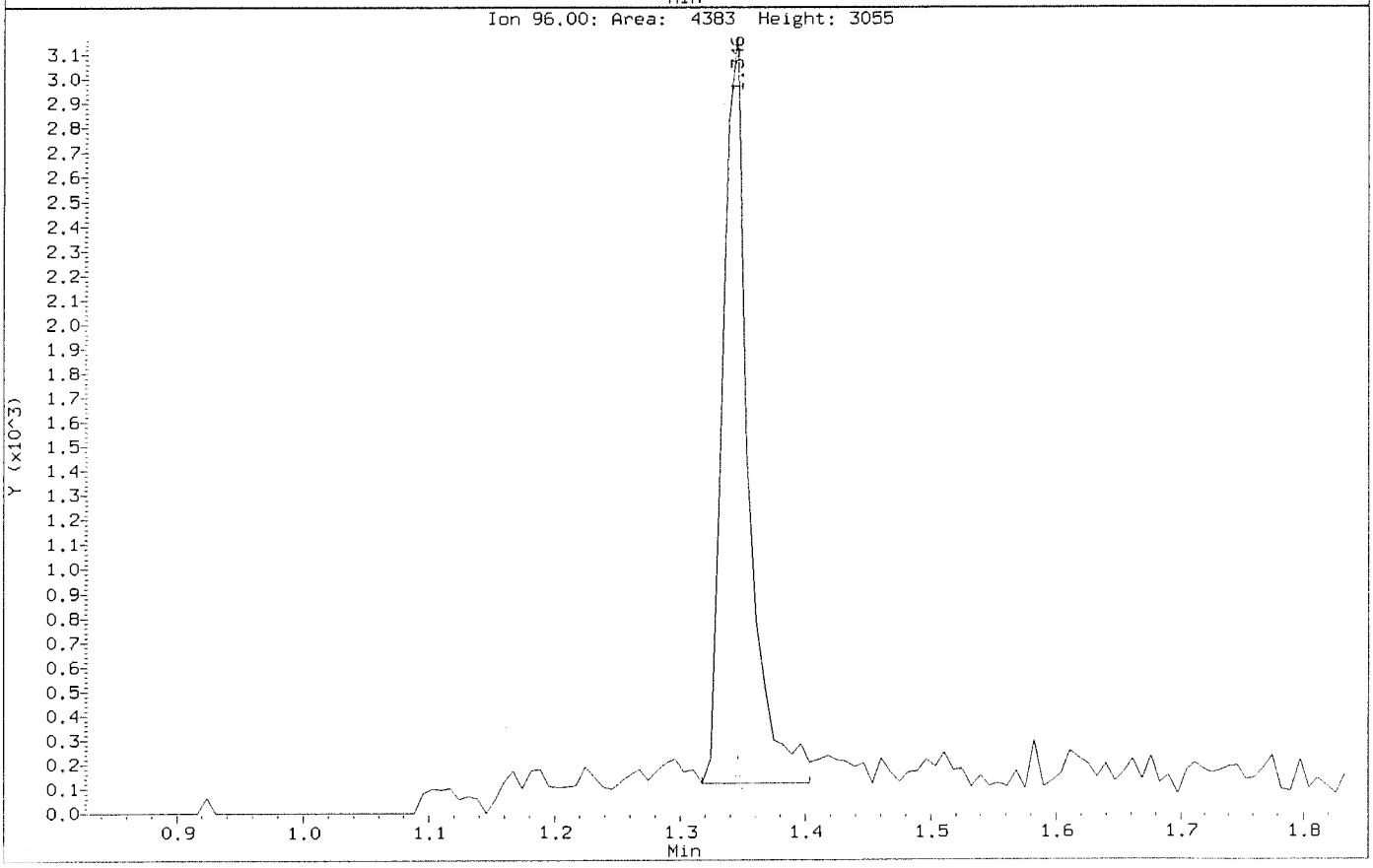




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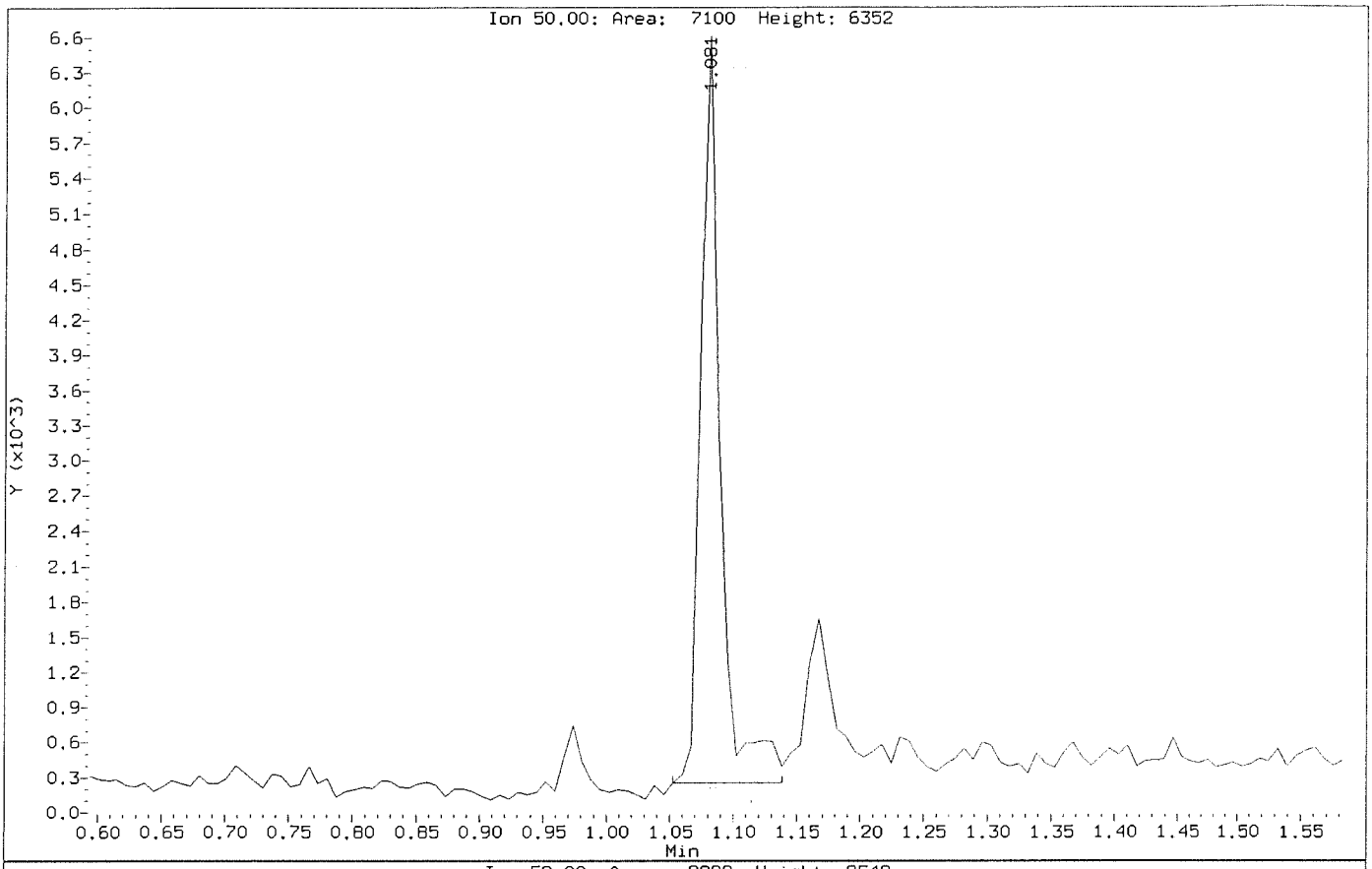
Compound: Bromomethane
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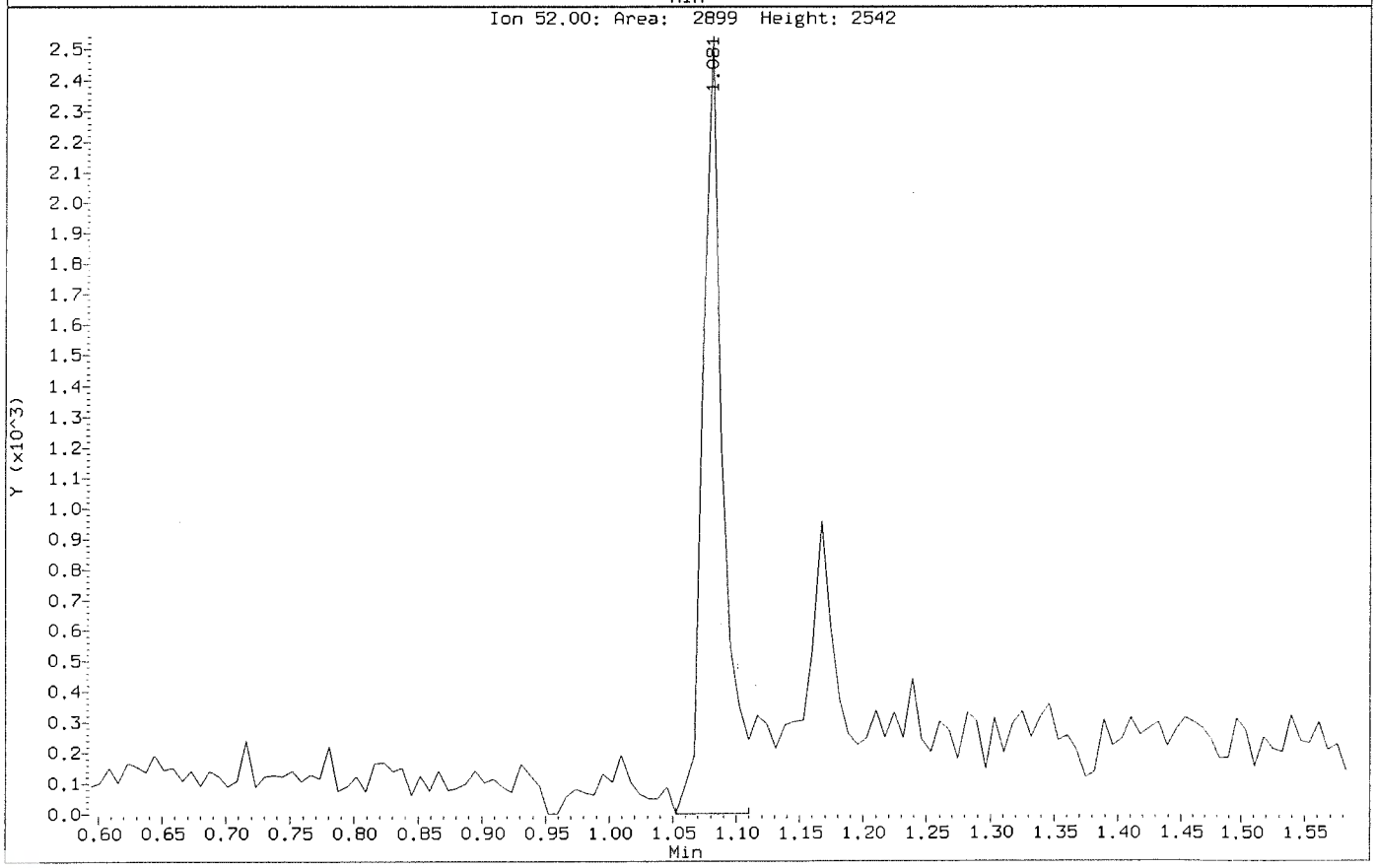




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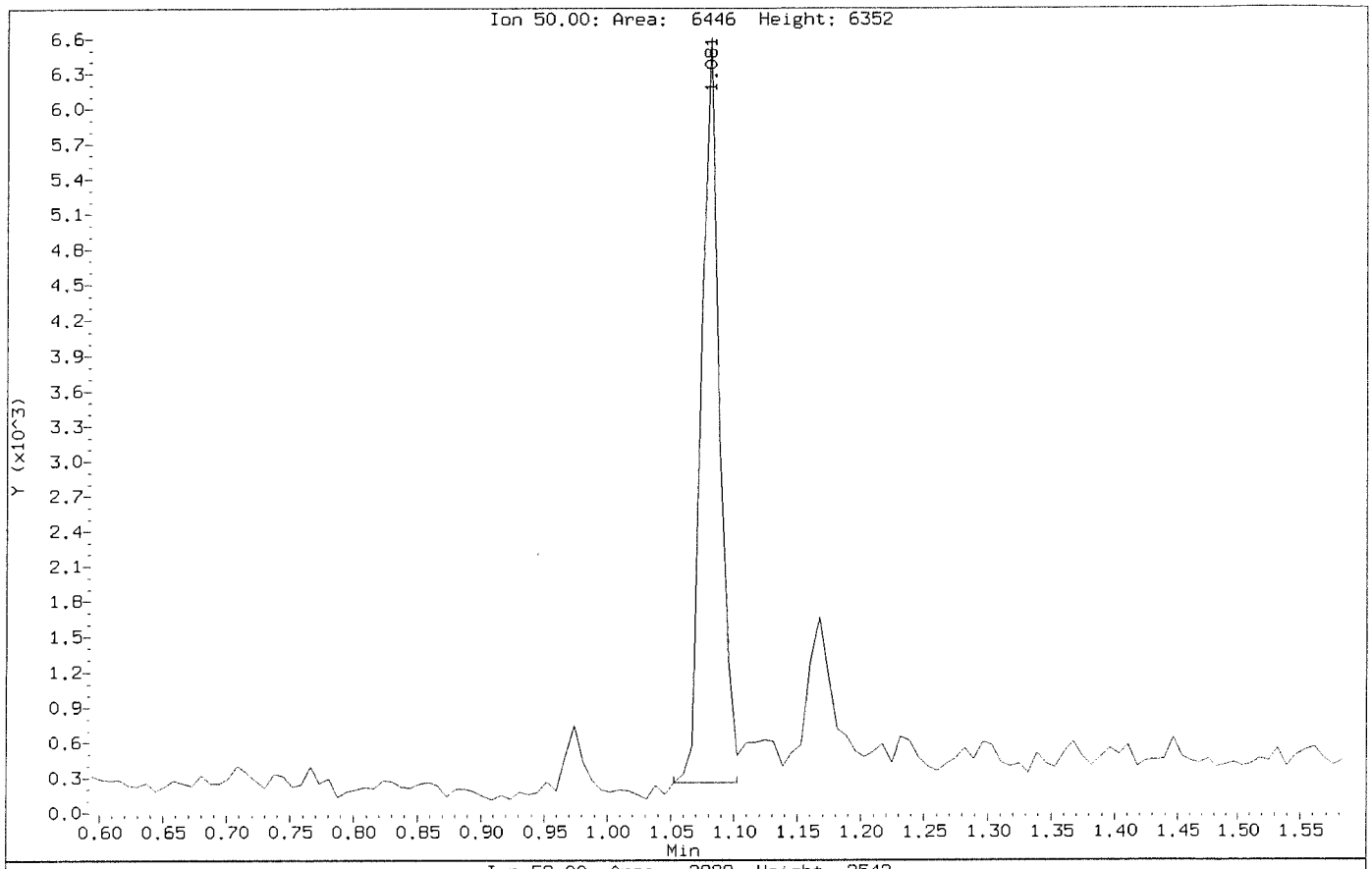
Compound: Chloromethane
CAS Number: 74-87-3

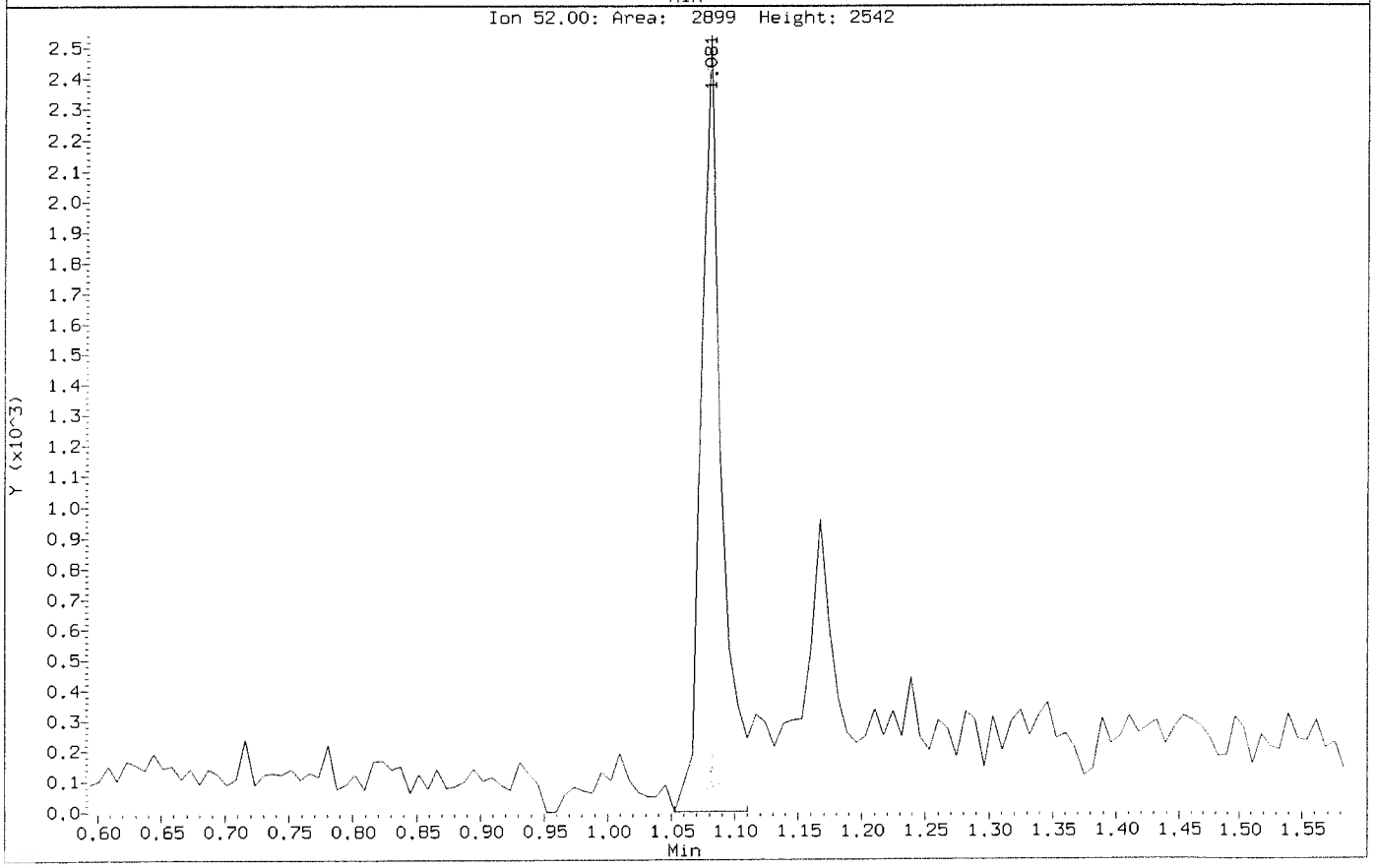




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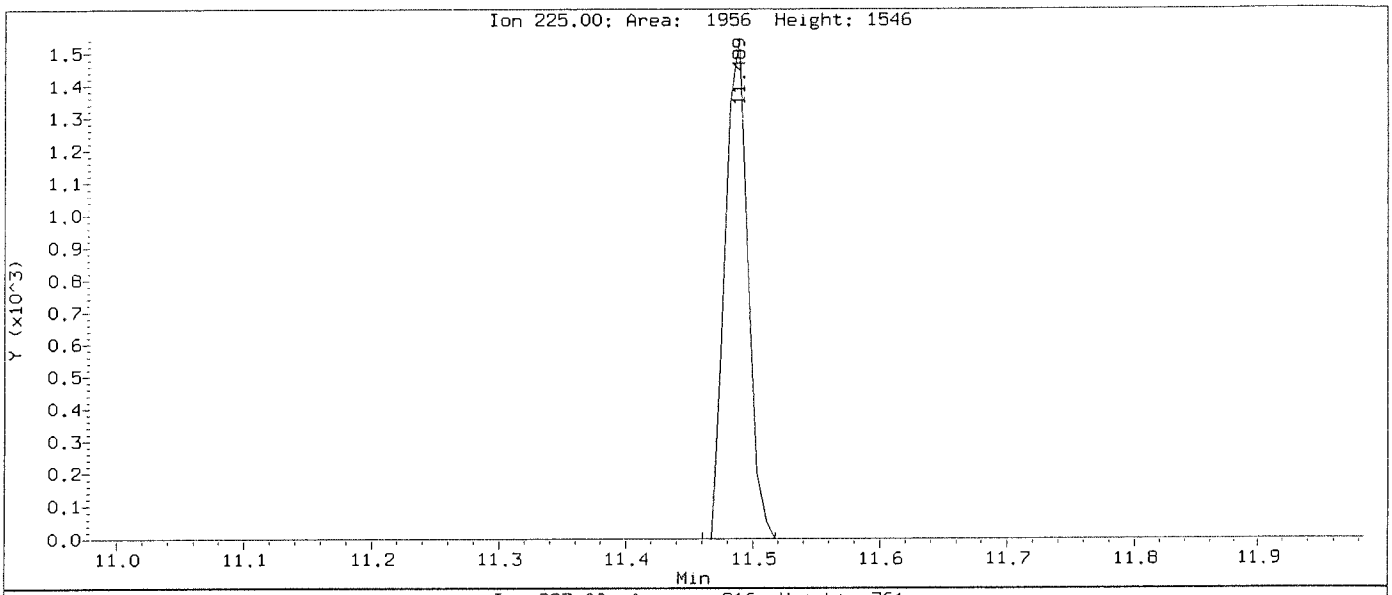
Compound: Chloromethane
CAS Number: 74-87-3

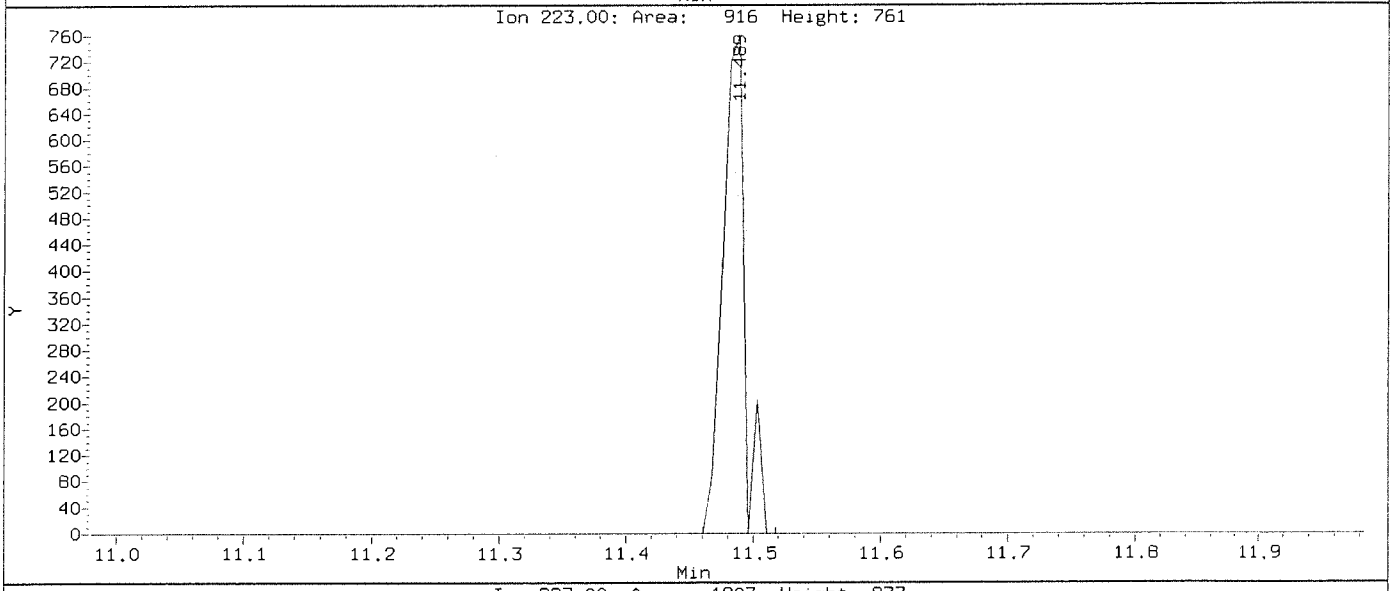


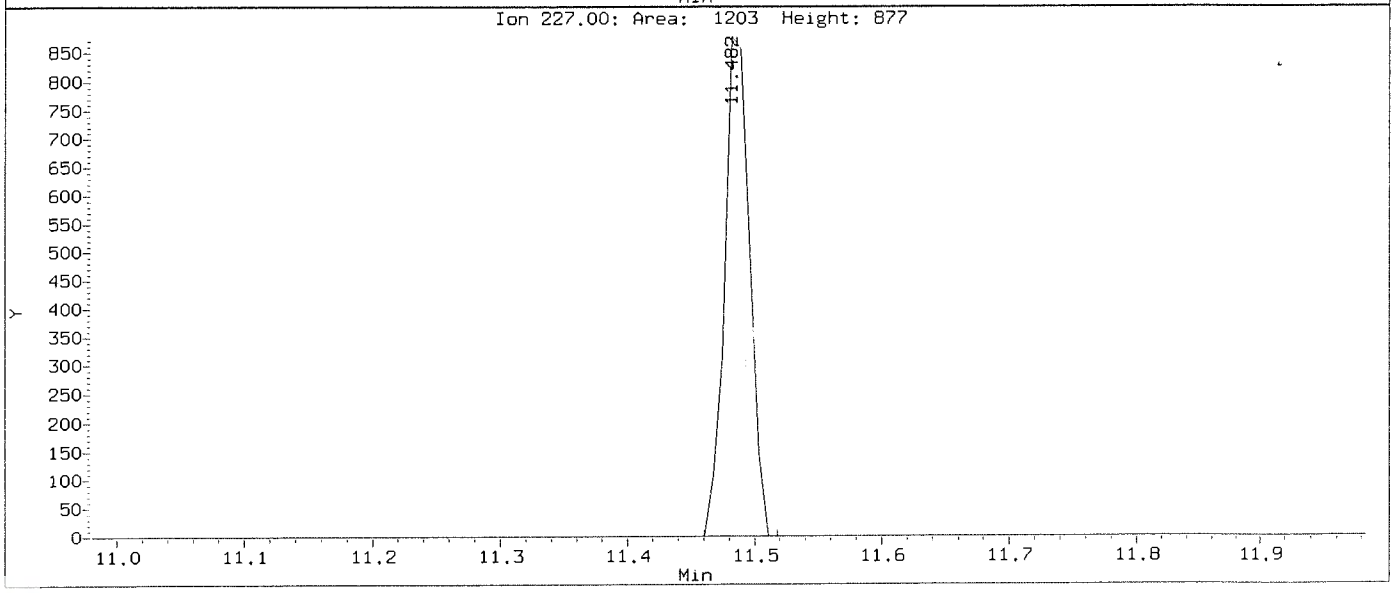


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

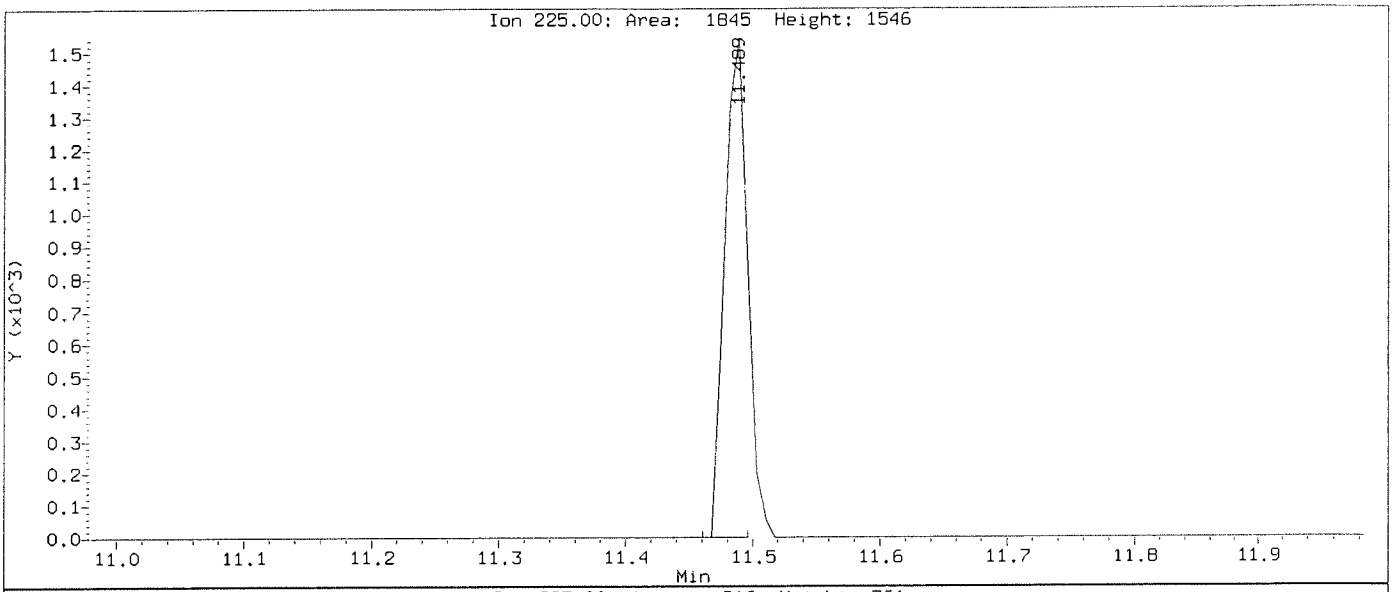


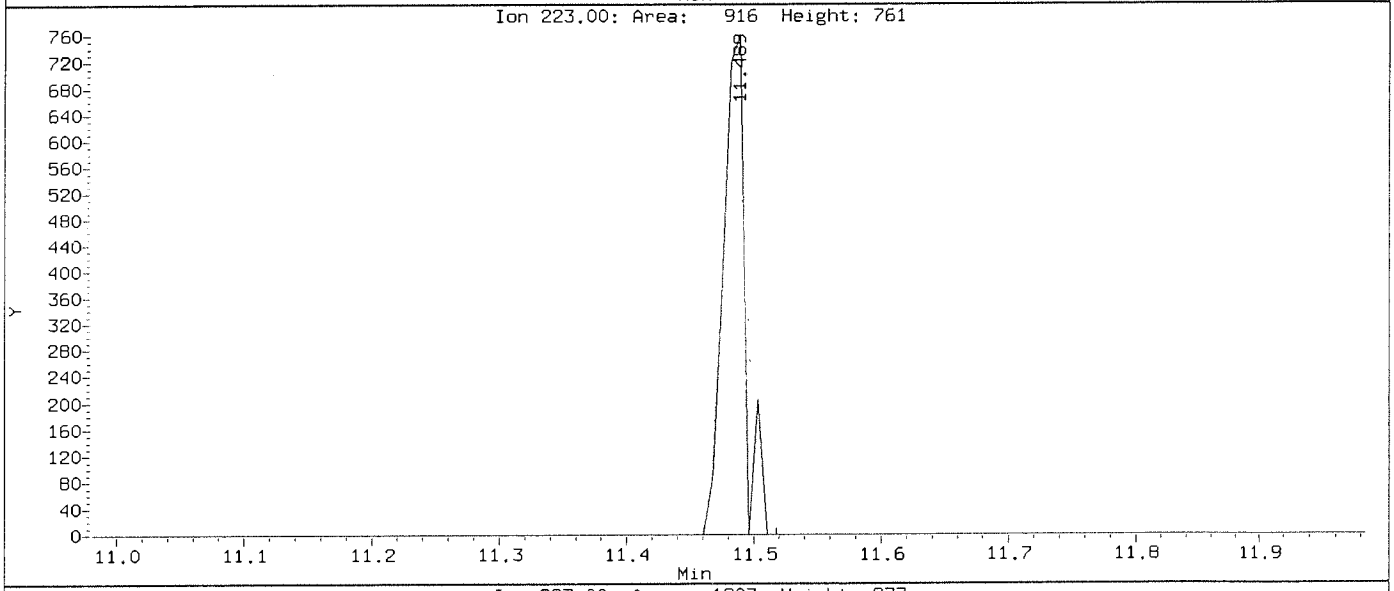


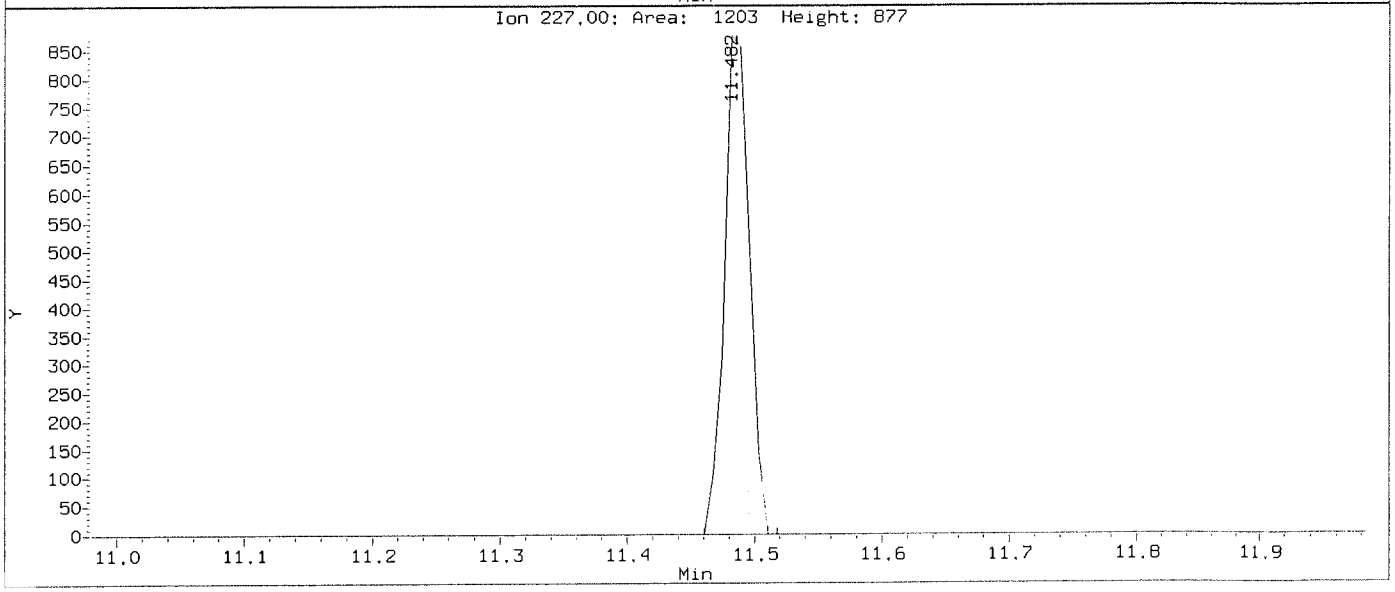


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

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 :
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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

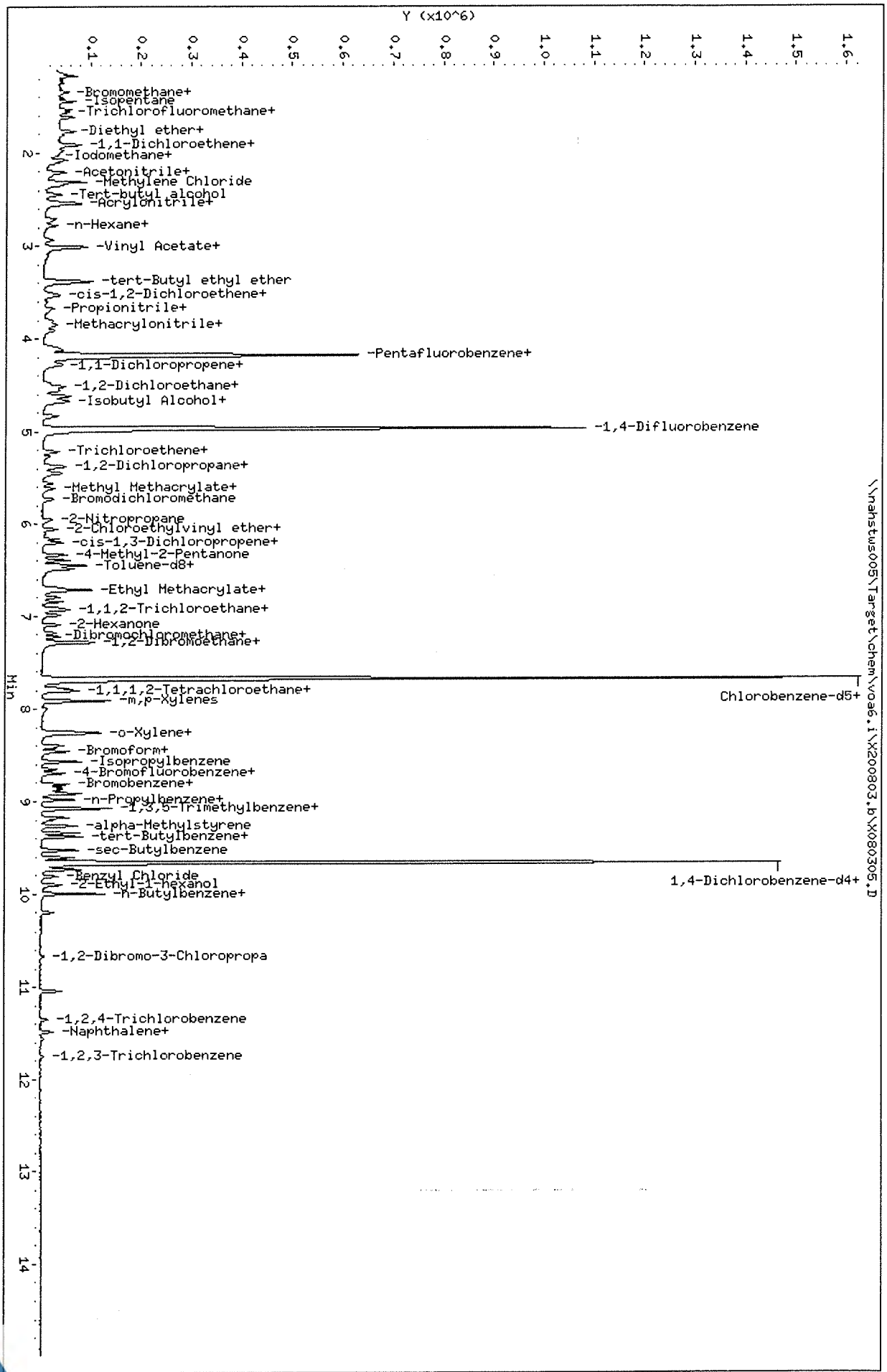
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.190	4.190	(1.000)	543911	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	829677	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	750905	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

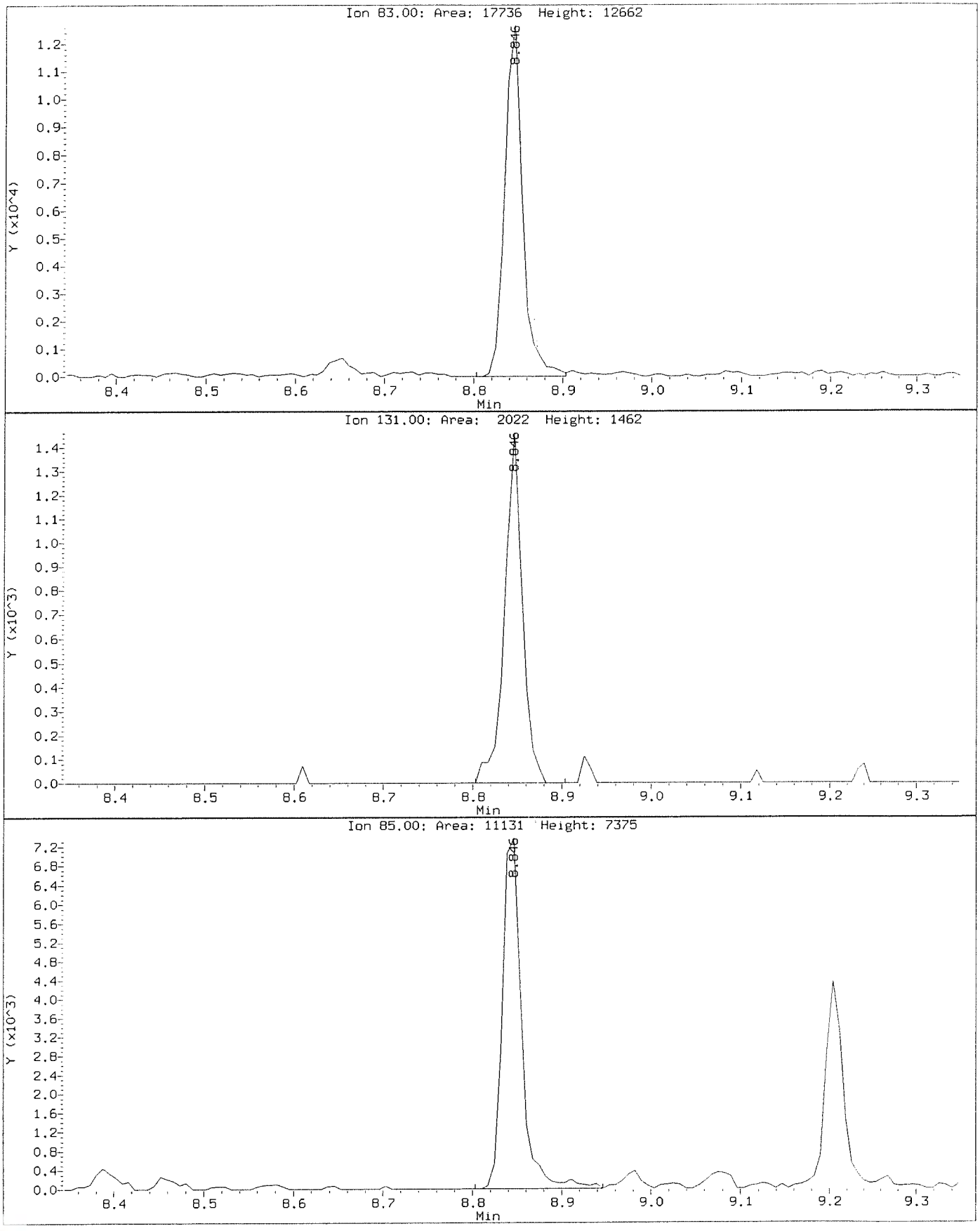


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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

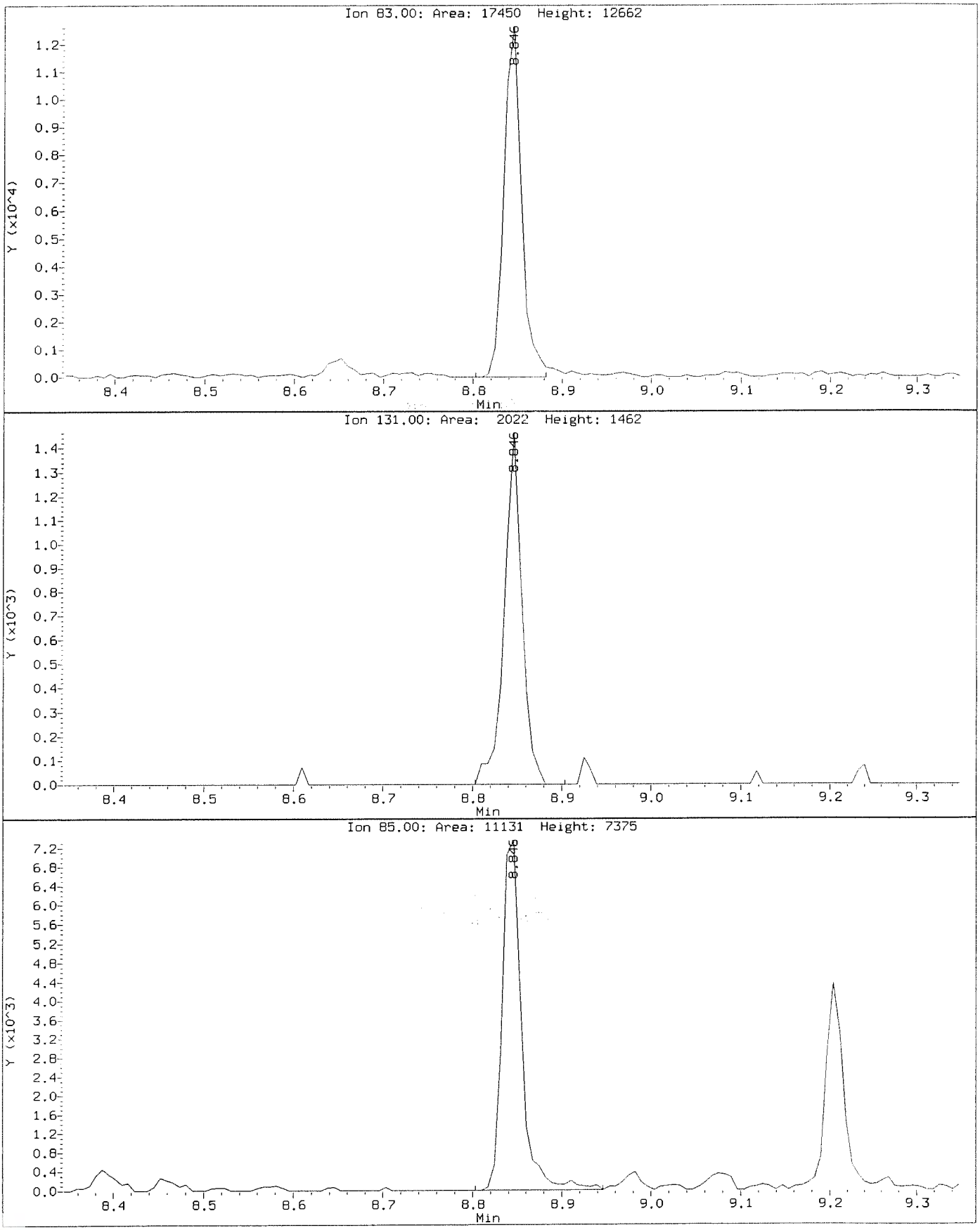
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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



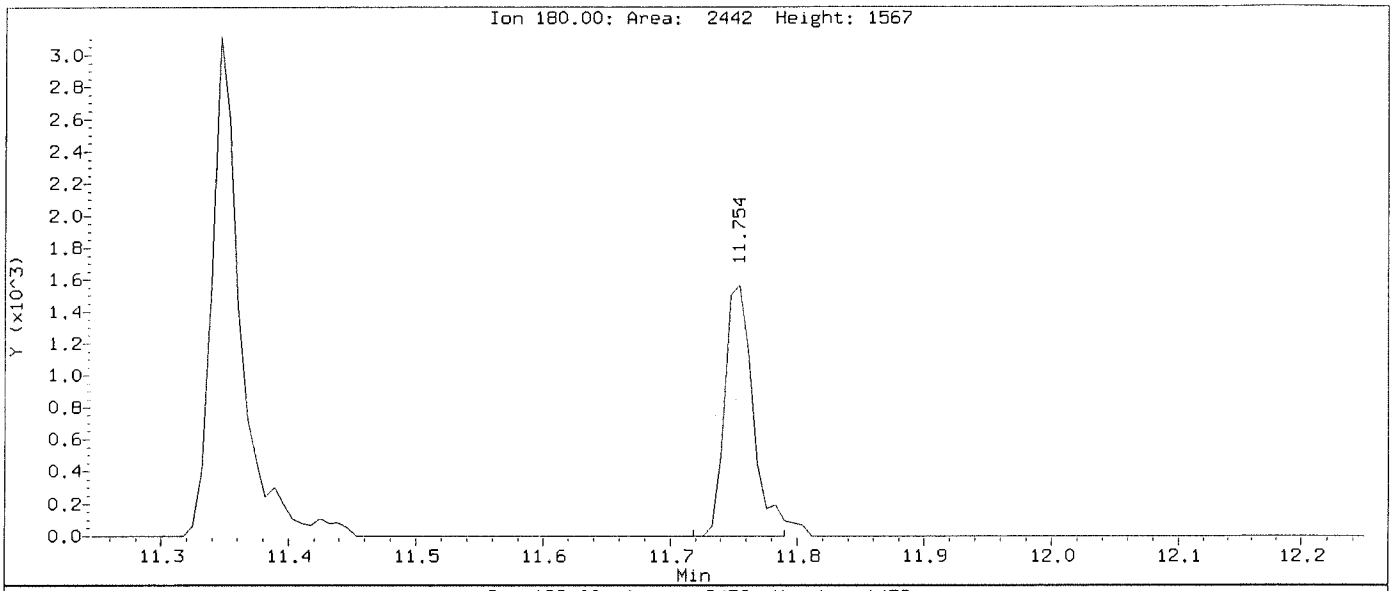
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Instrument: voa6.i
Client Sample ID: VSTD002

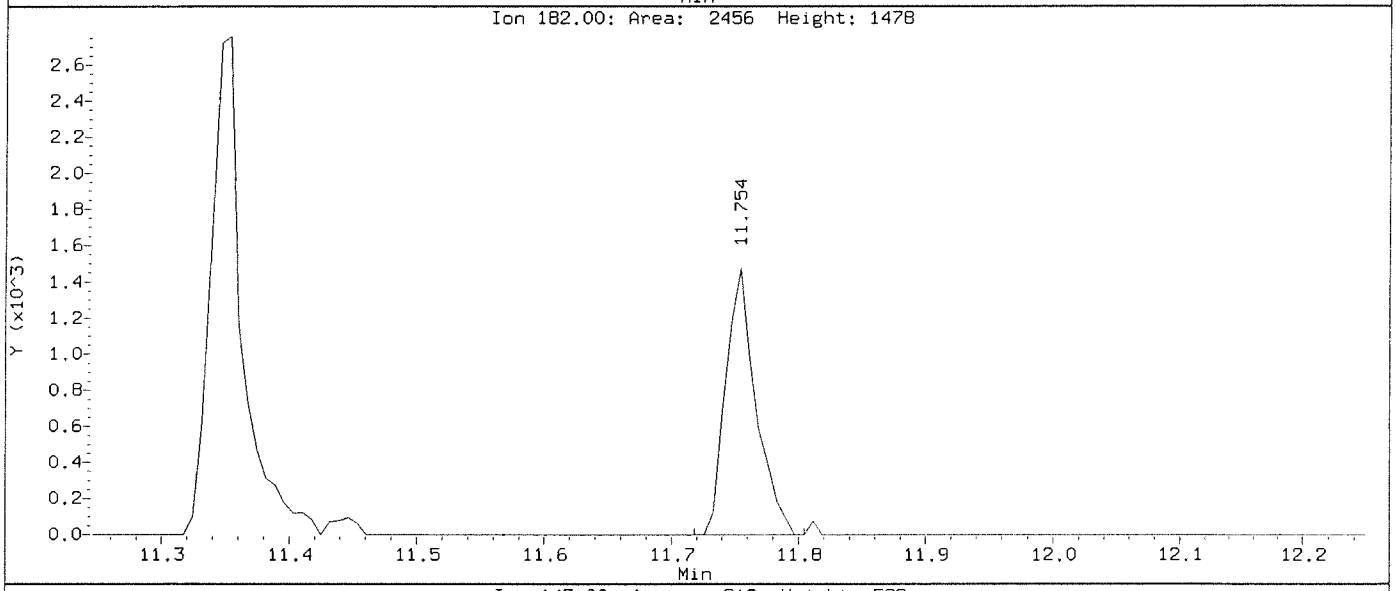
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

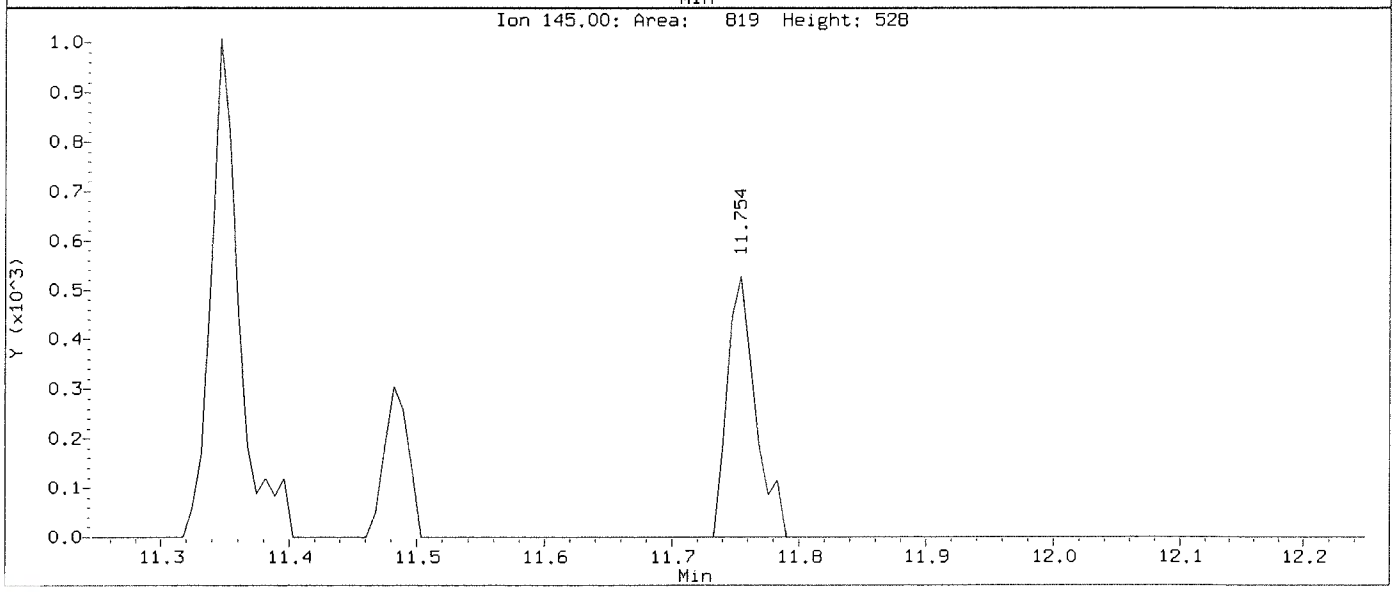


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

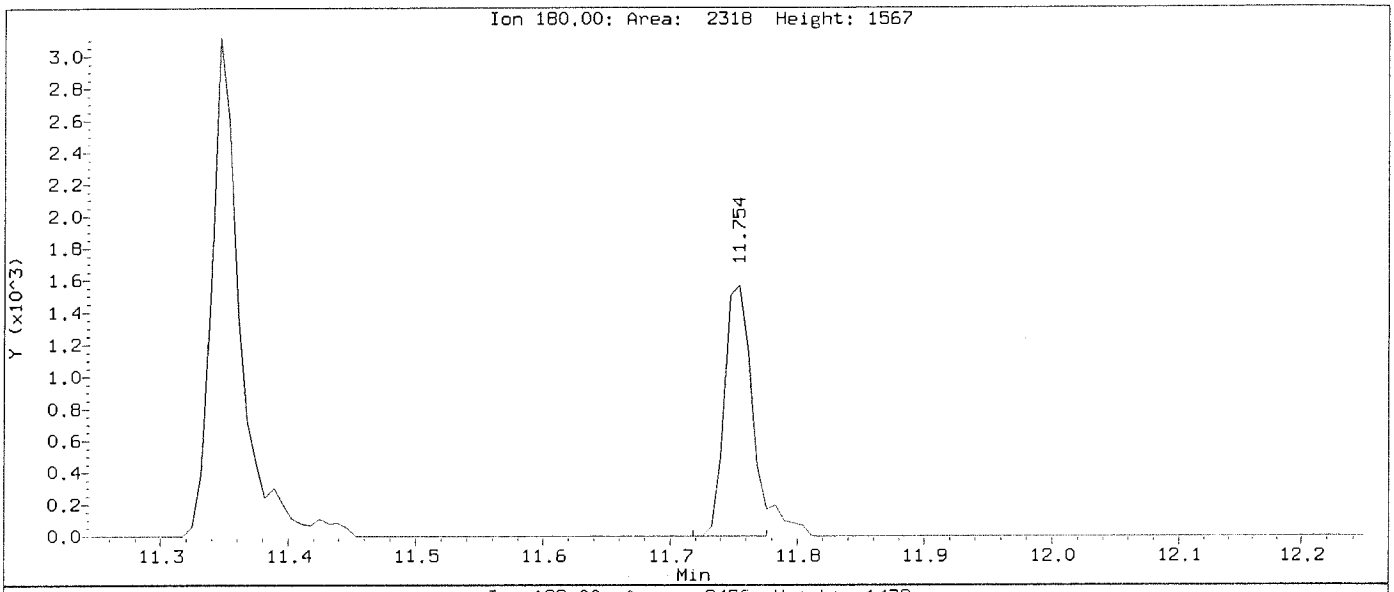


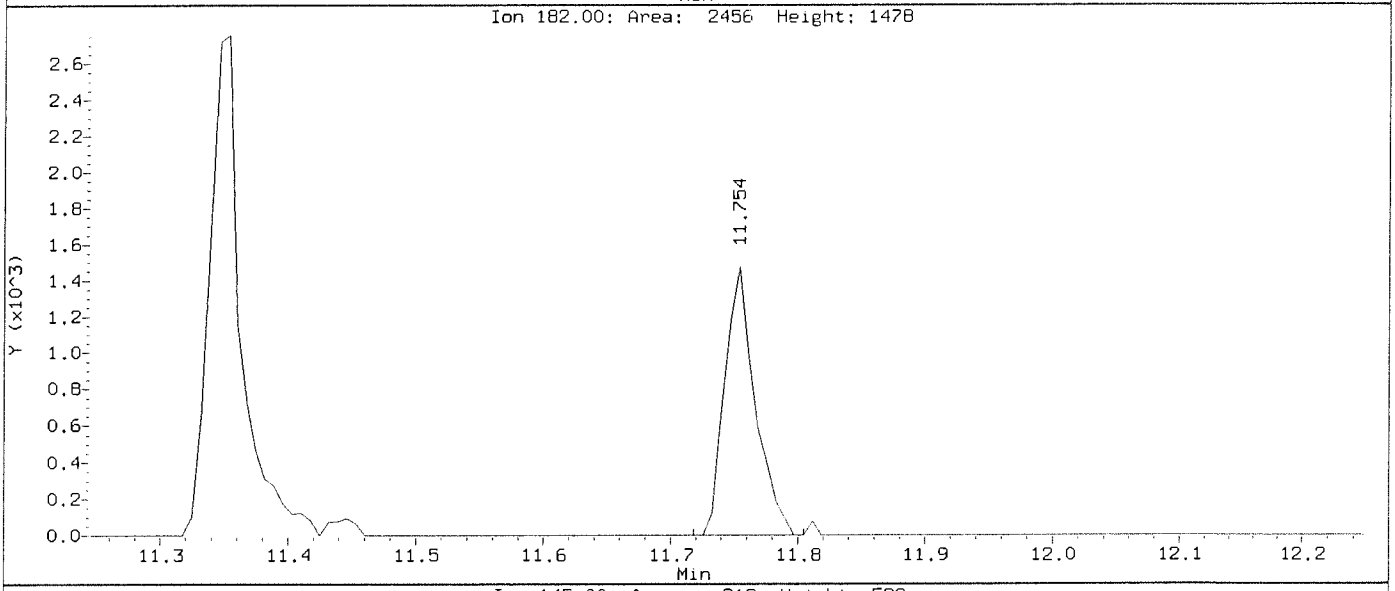


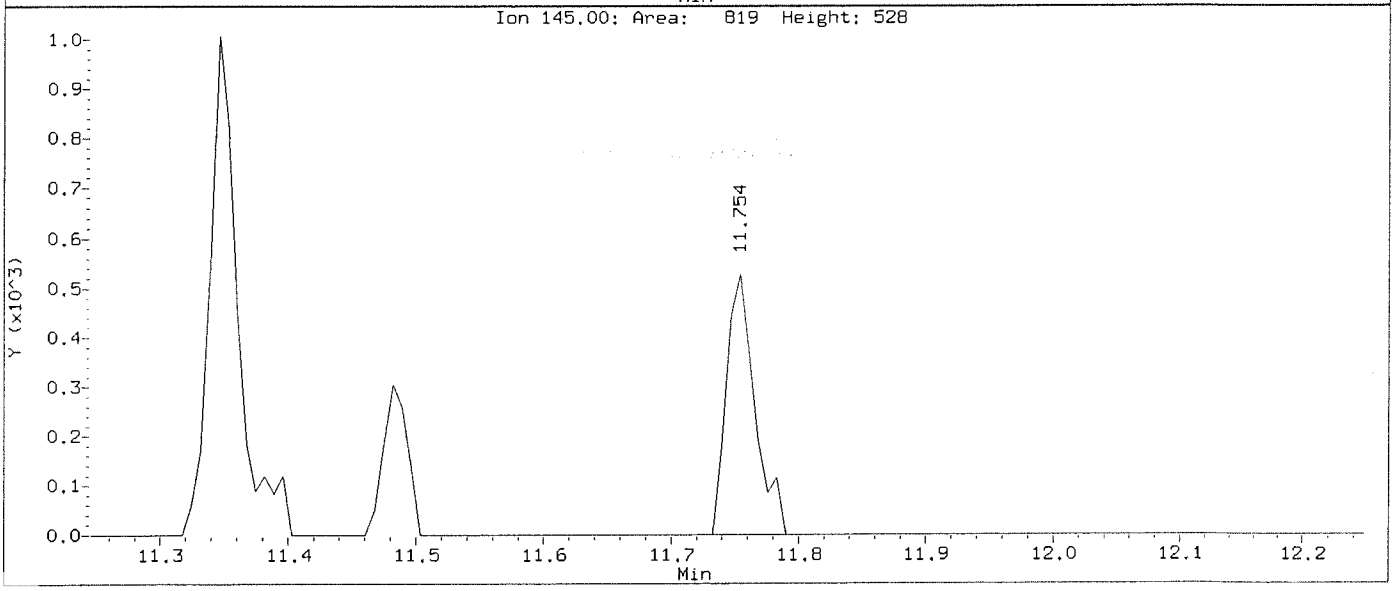


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Instrument: voa6.i
Client Sample ID: VSTD002

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

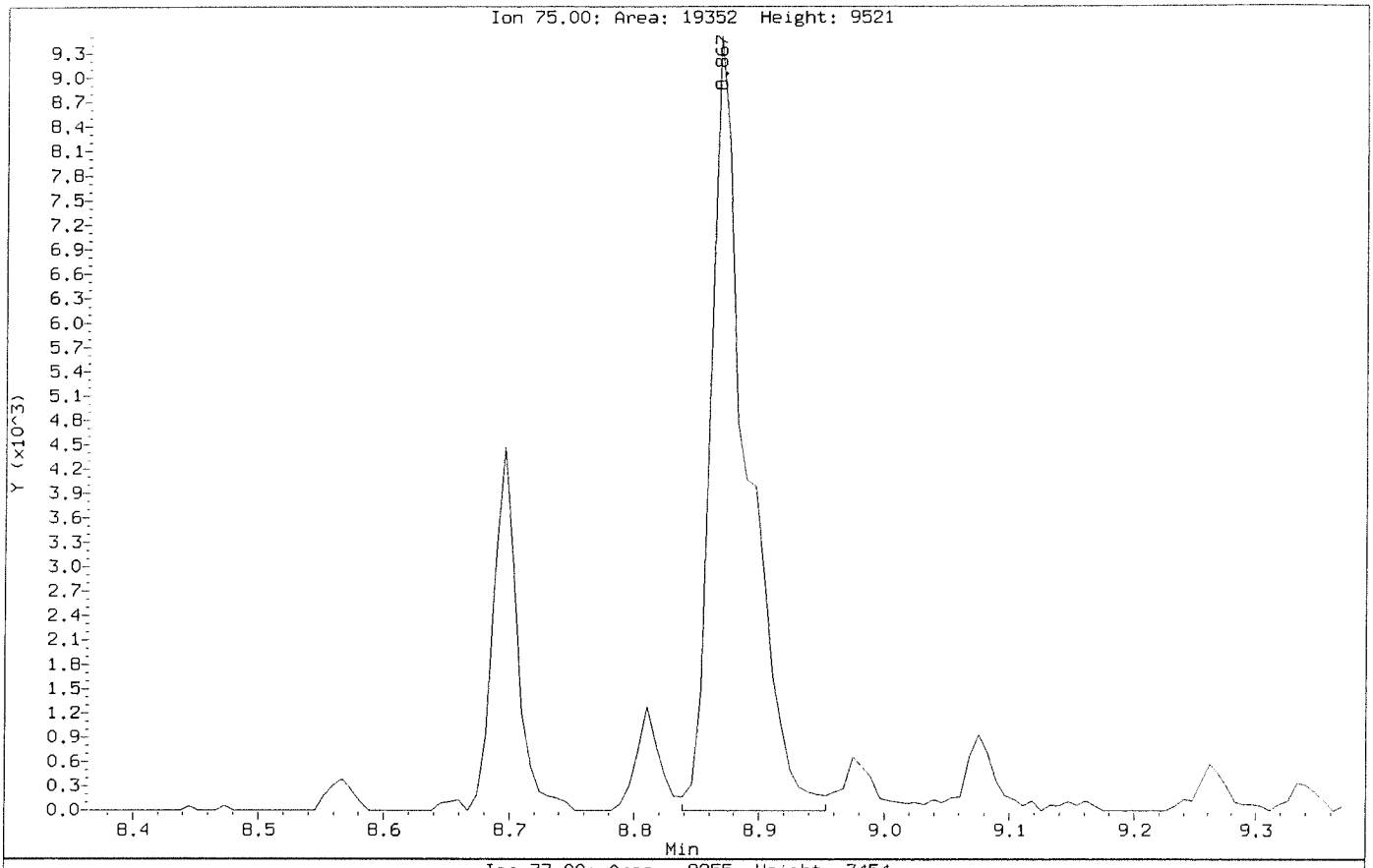


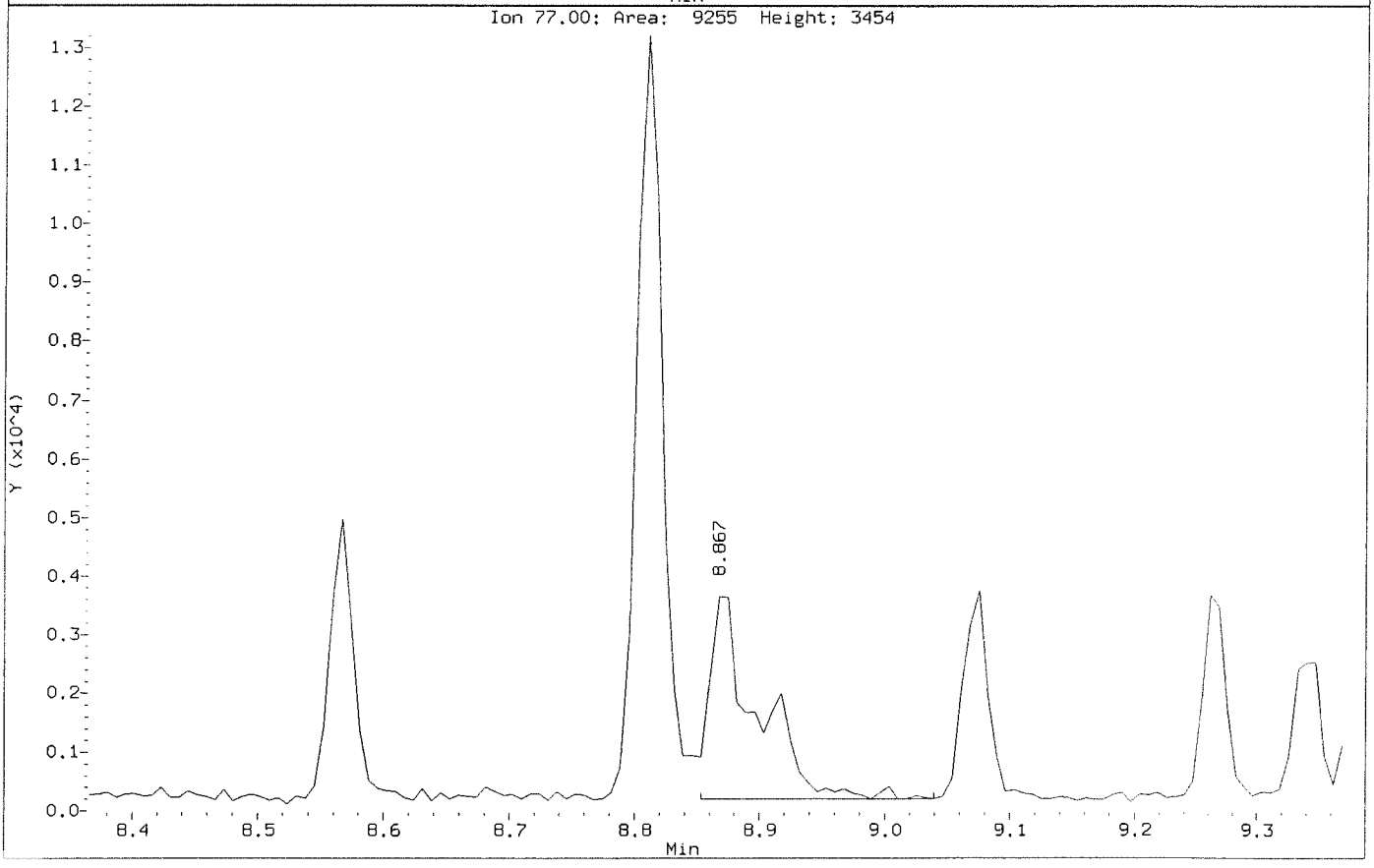




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Instrument: voa6.i
Client Sample ID: VSTD002

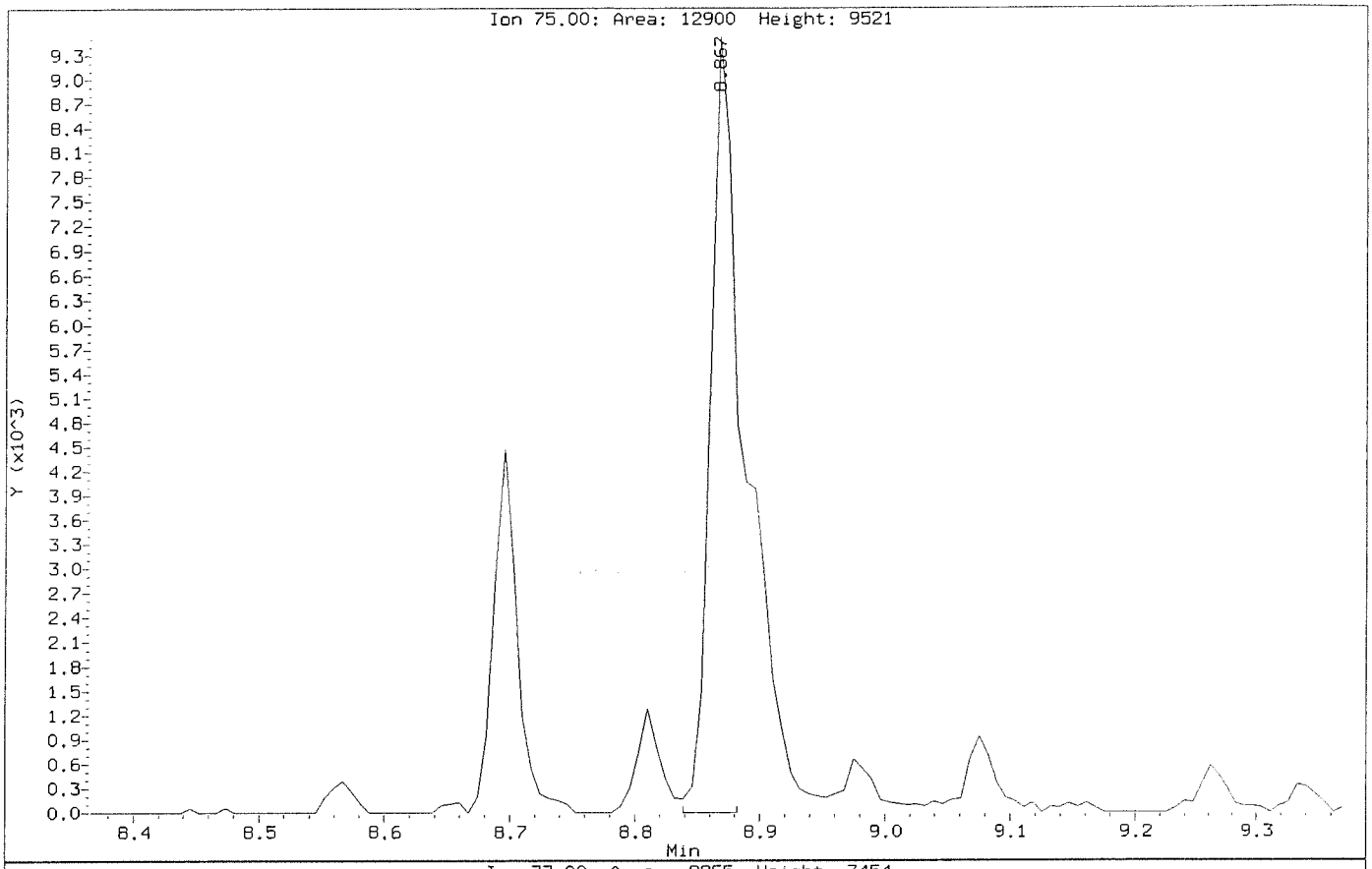
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

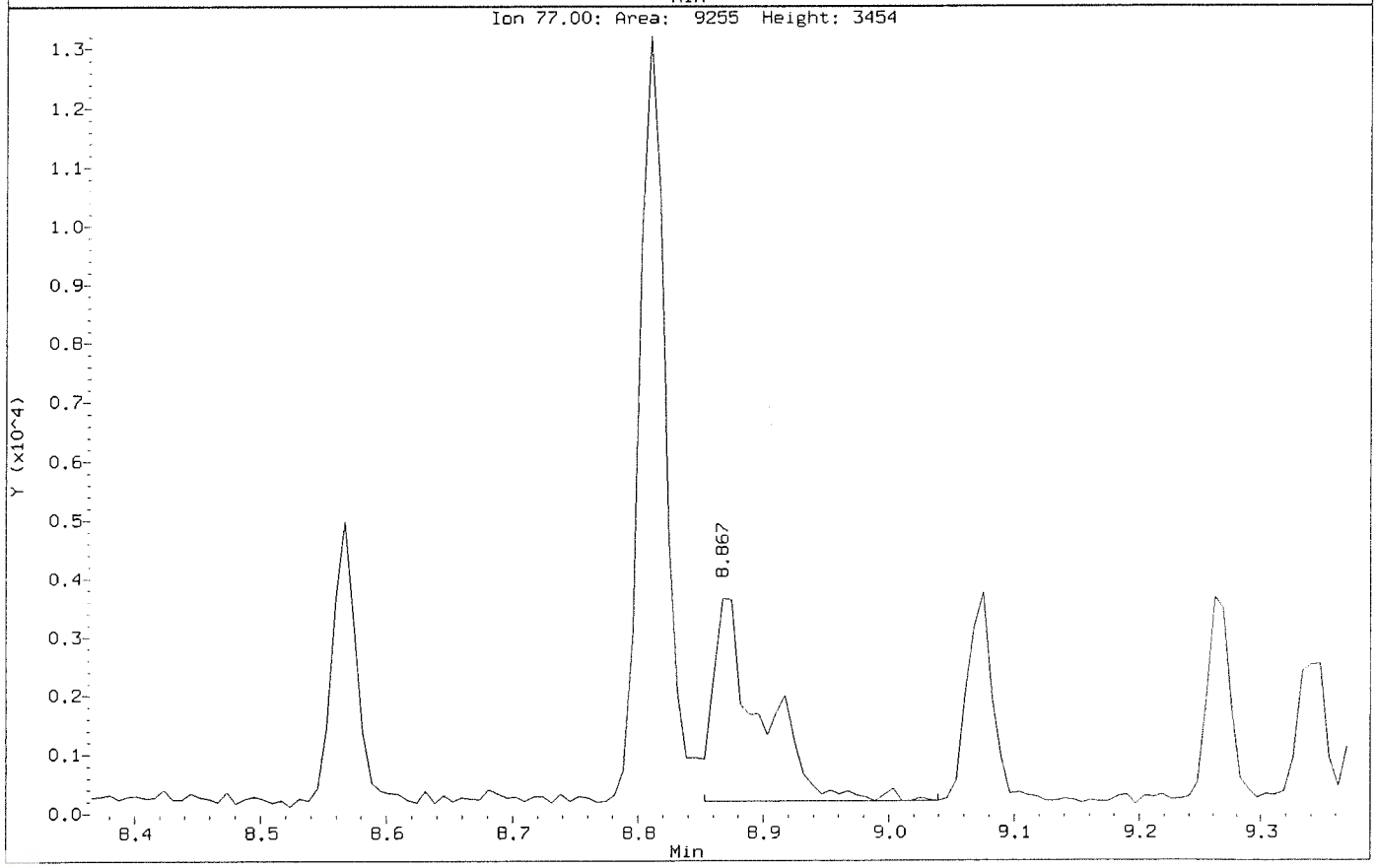




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Instrument: voa6.i
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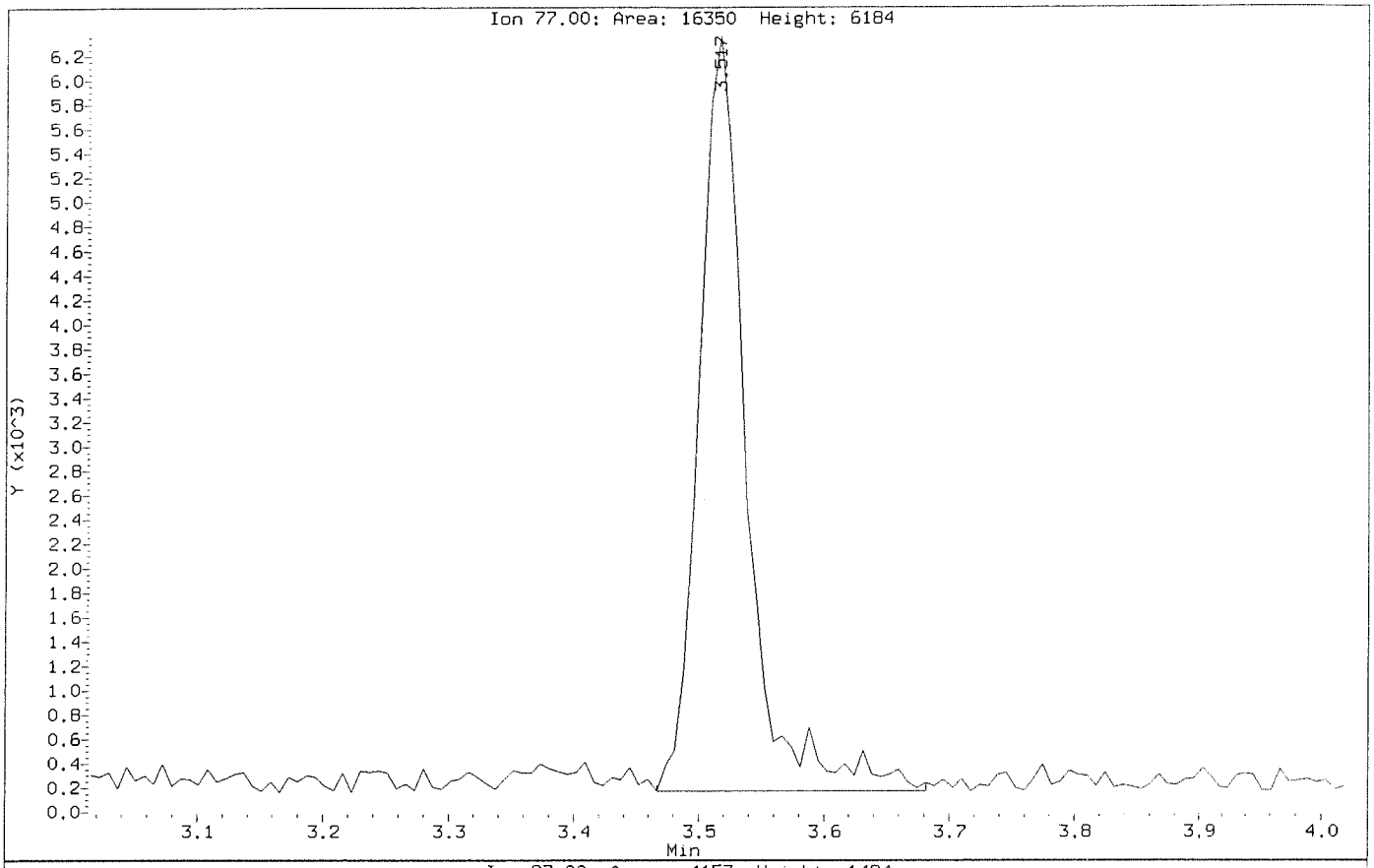
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CAS Number: 96-18-4

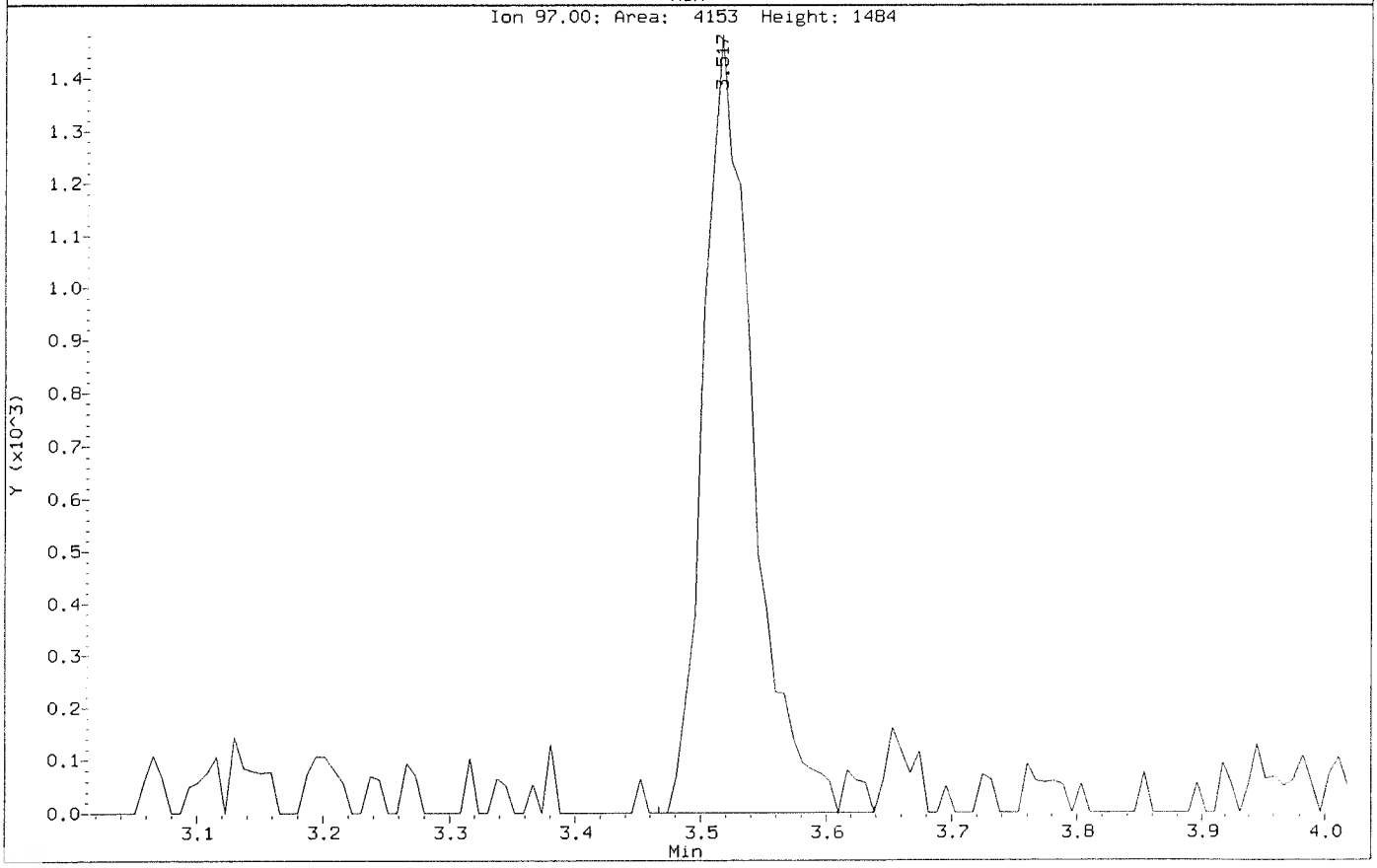




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Client Sample ID: VSTD002

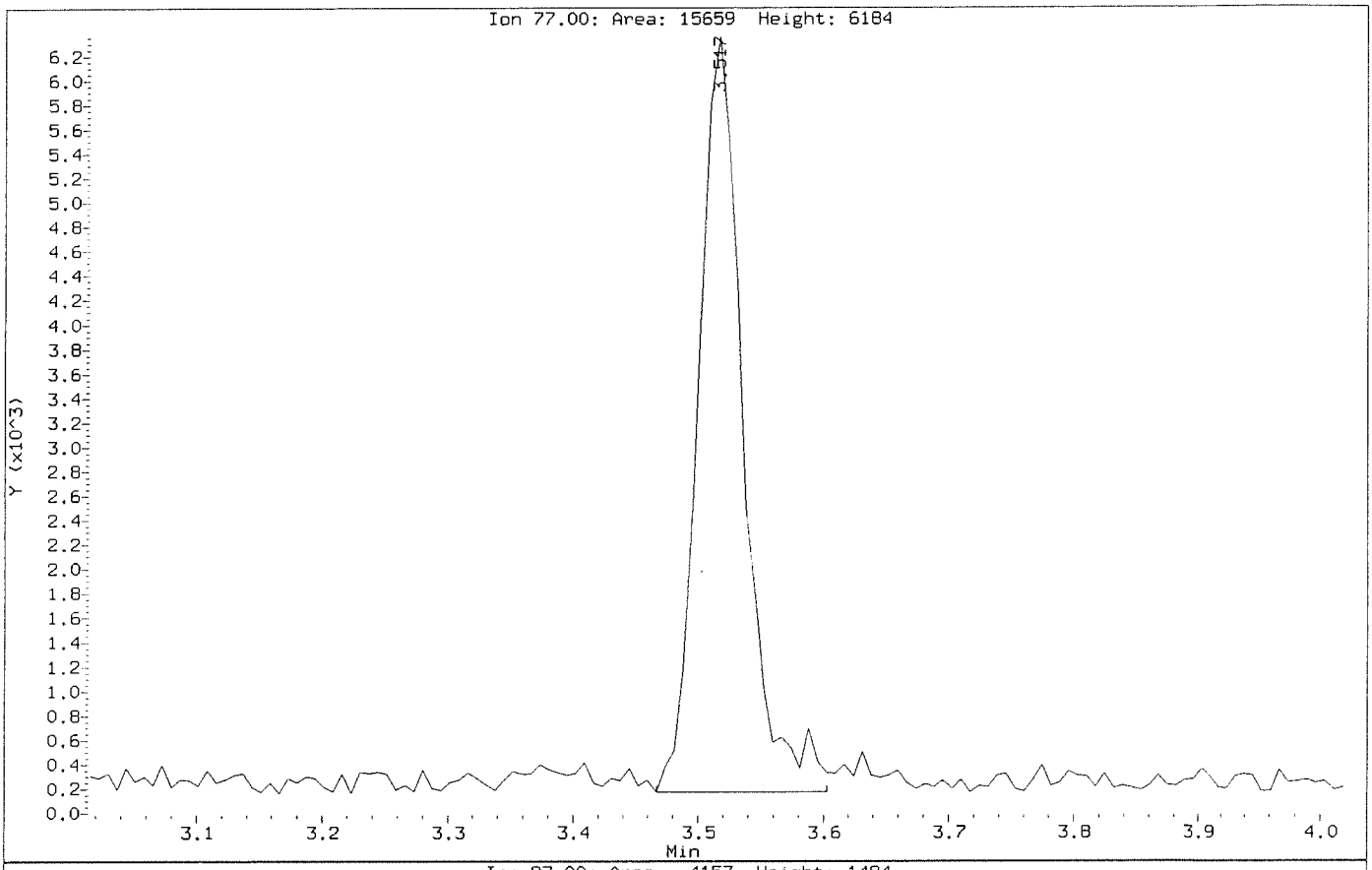
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

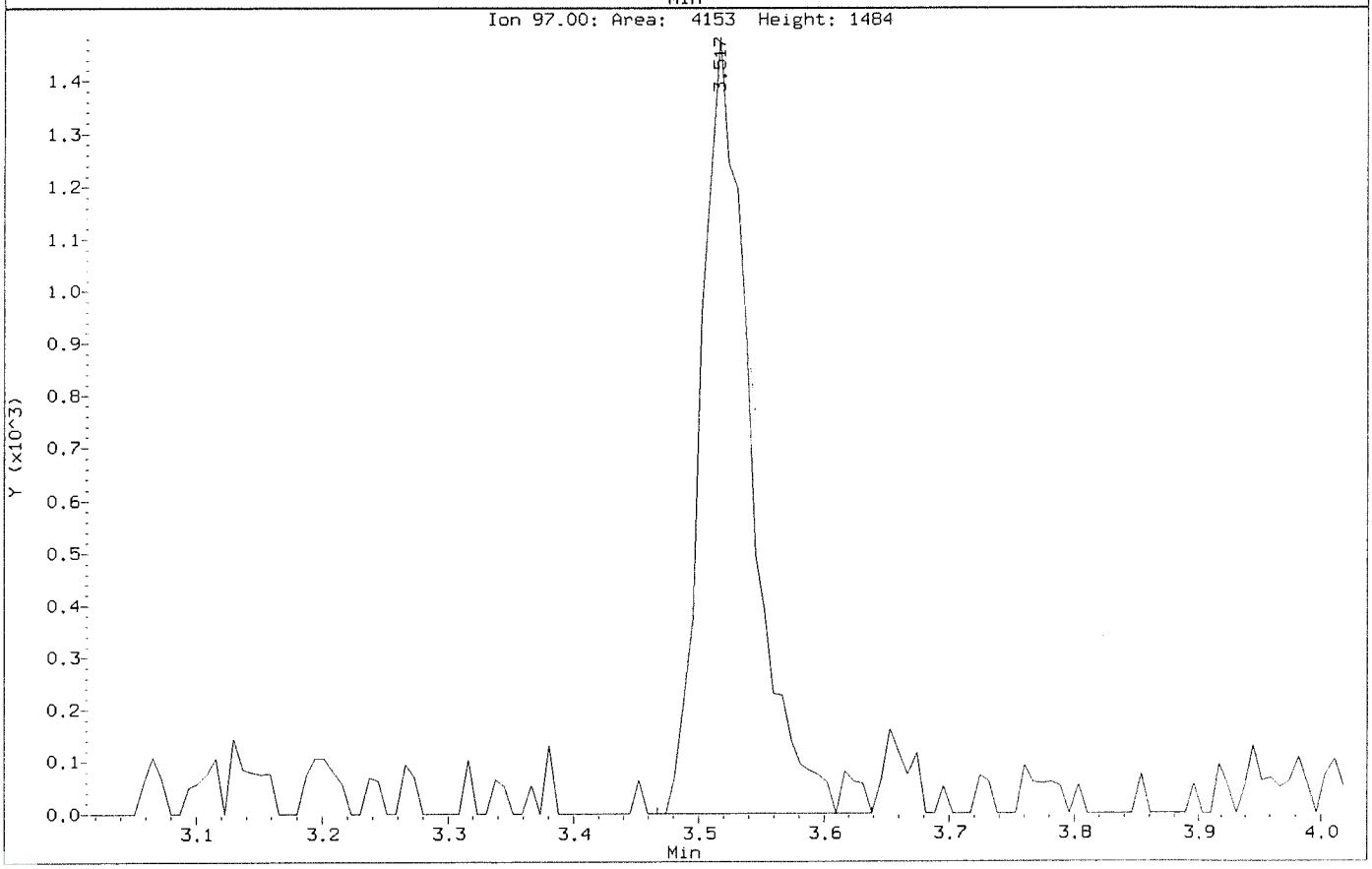




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Client Sample ID: VSTD002

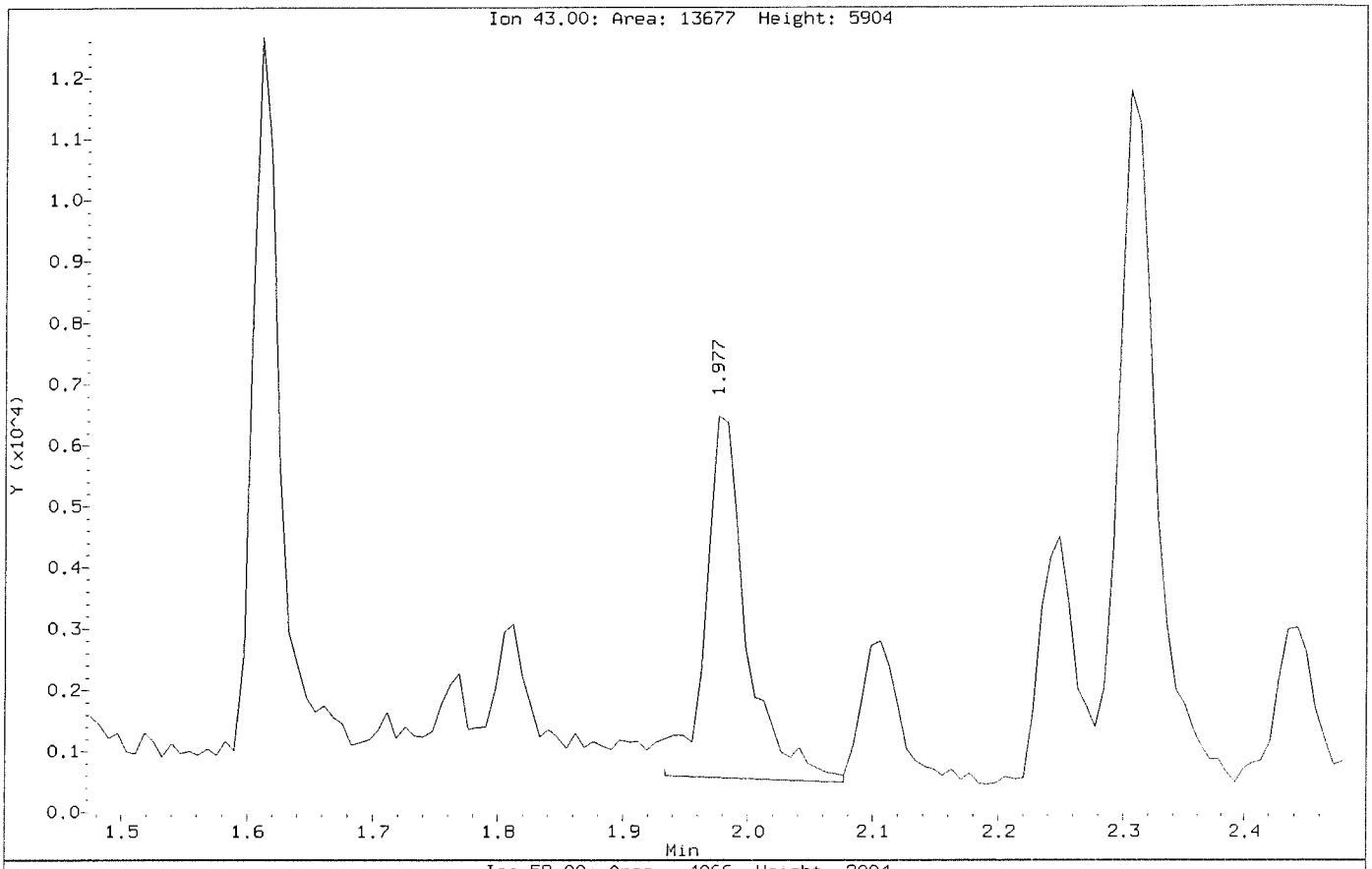
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CAS Number: 594-20-7

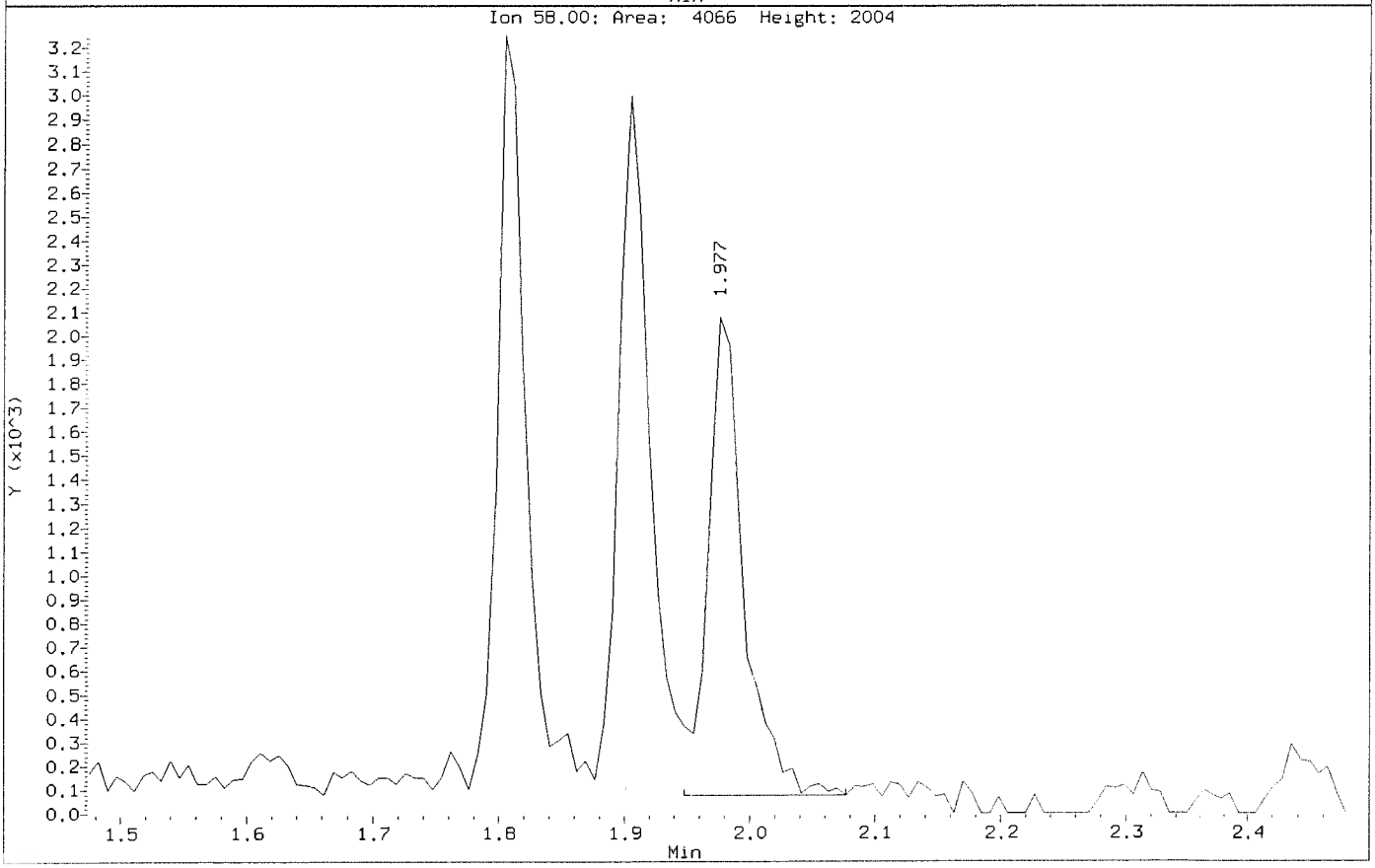




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Instrument: voa6.i
Client Sample ID: VSTD002

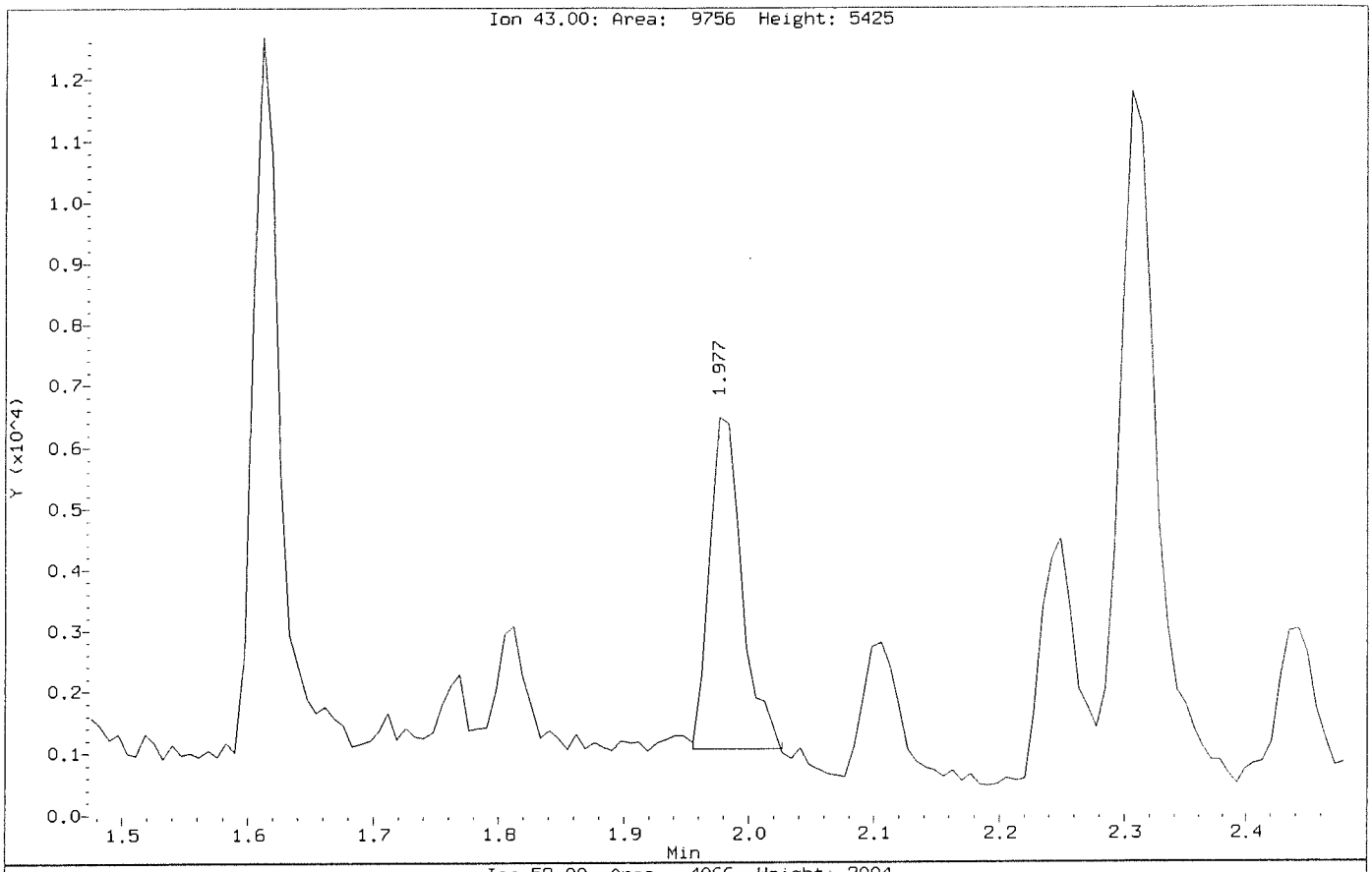
Compound: Acetone
CAS Number: 67-64-1

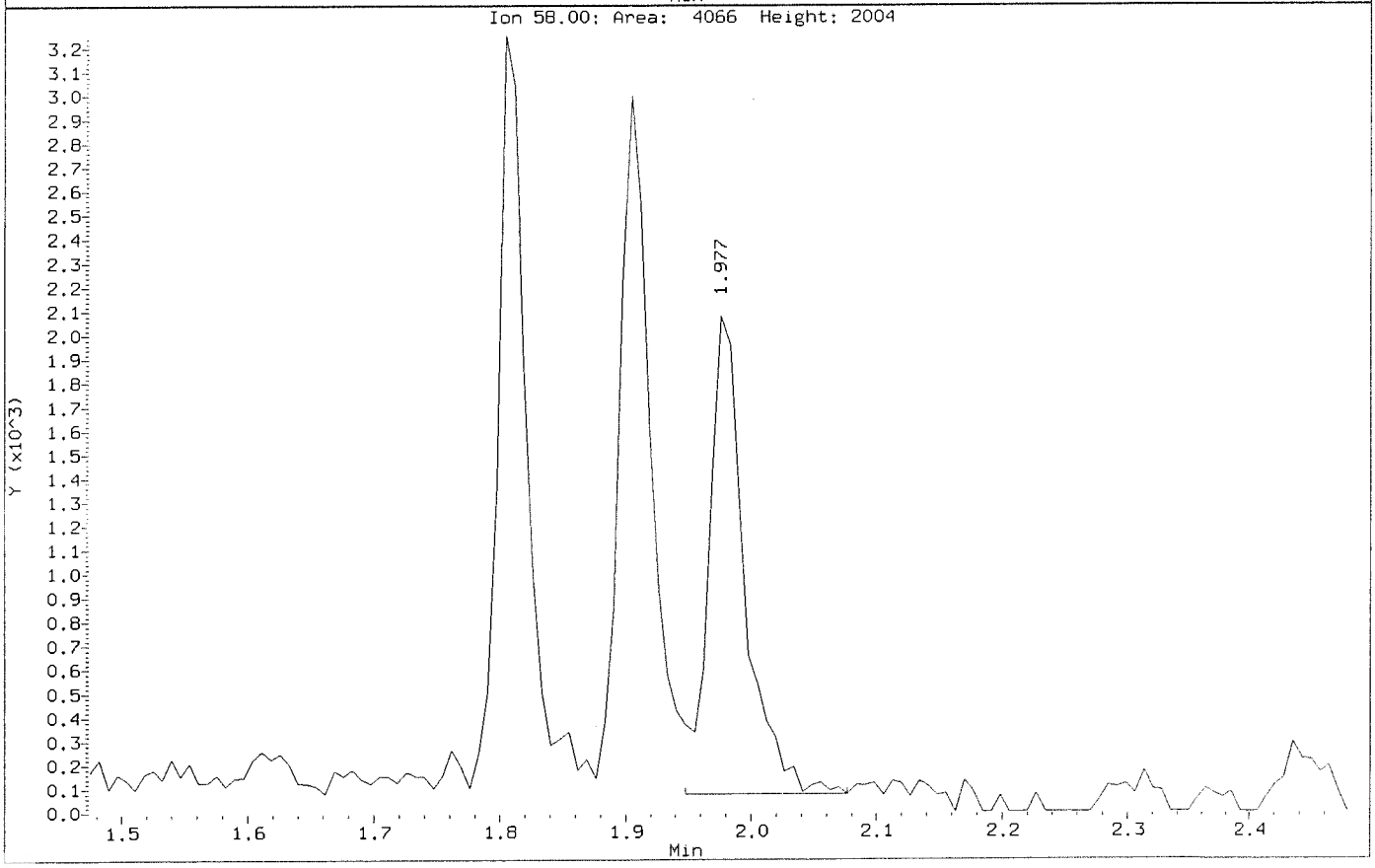




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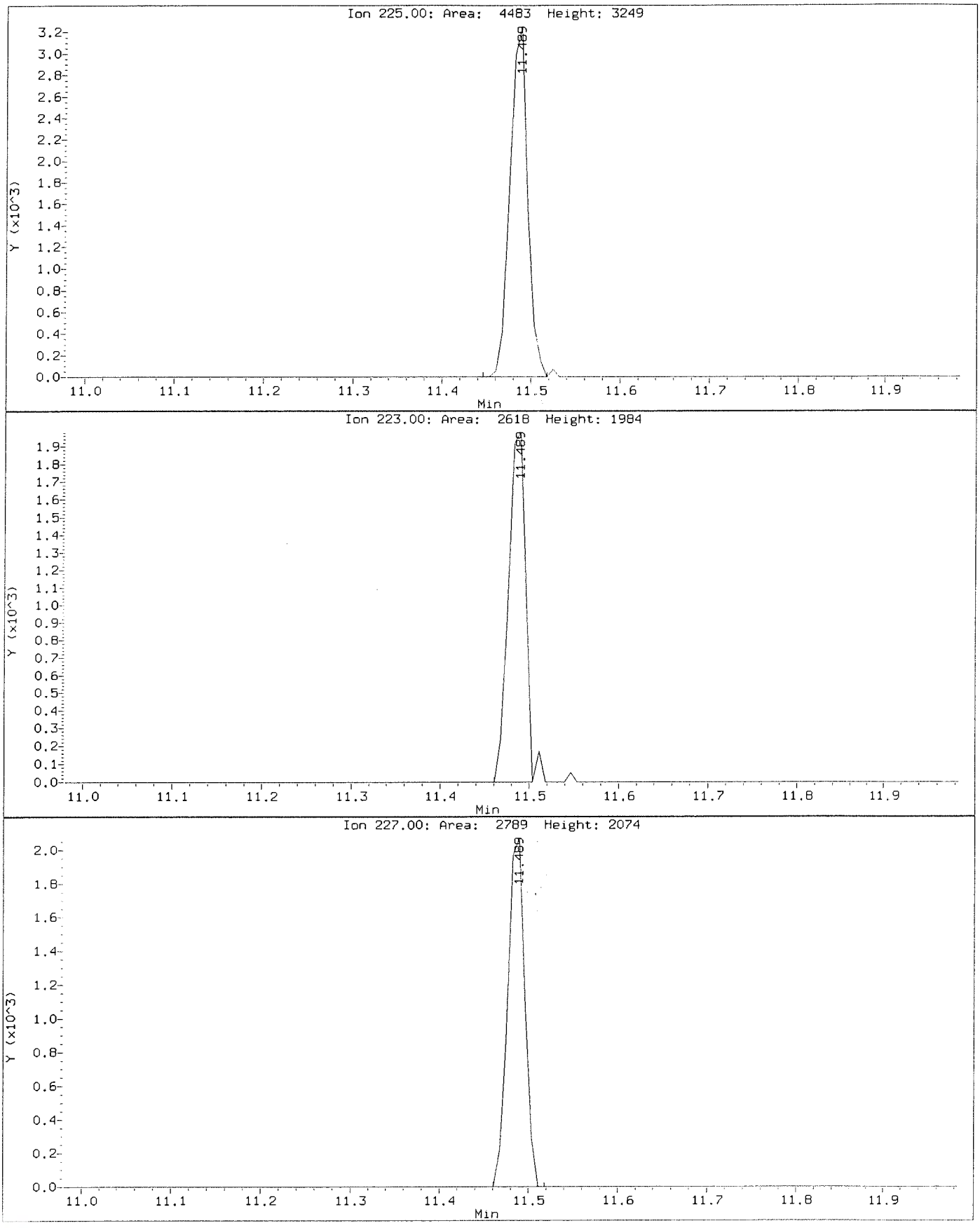
Compound: Acetone
CAS Number: 67-64-1





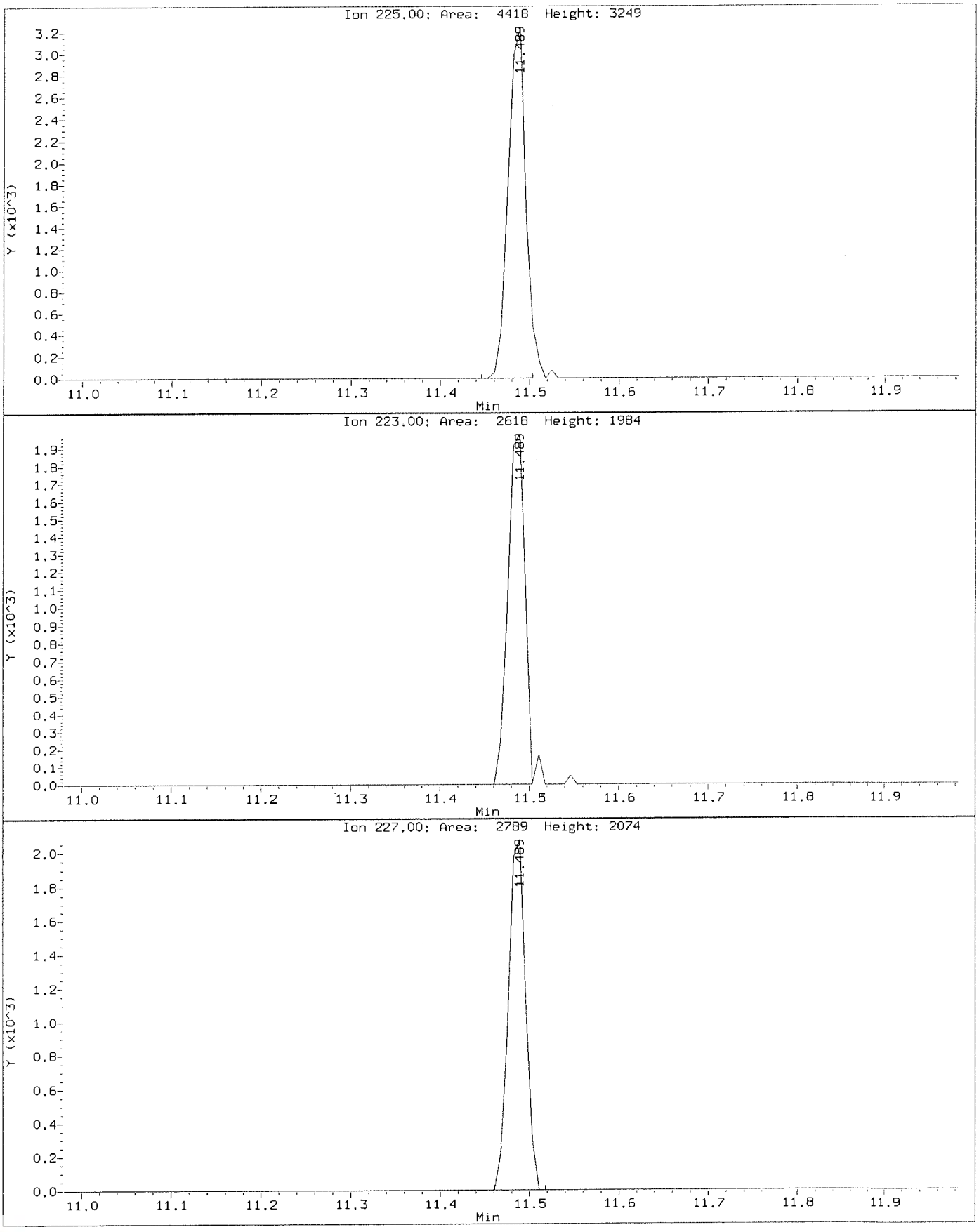
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



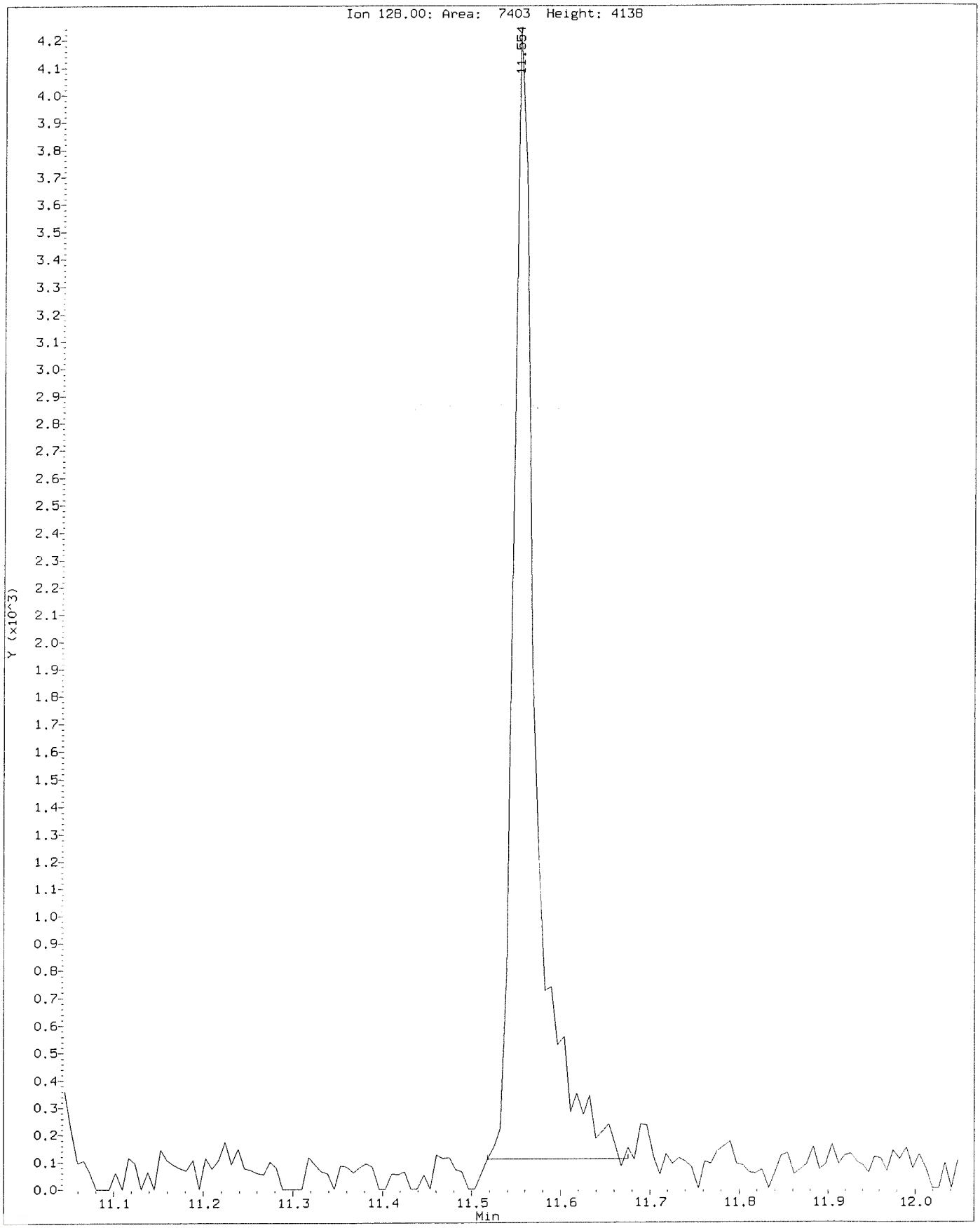
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Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



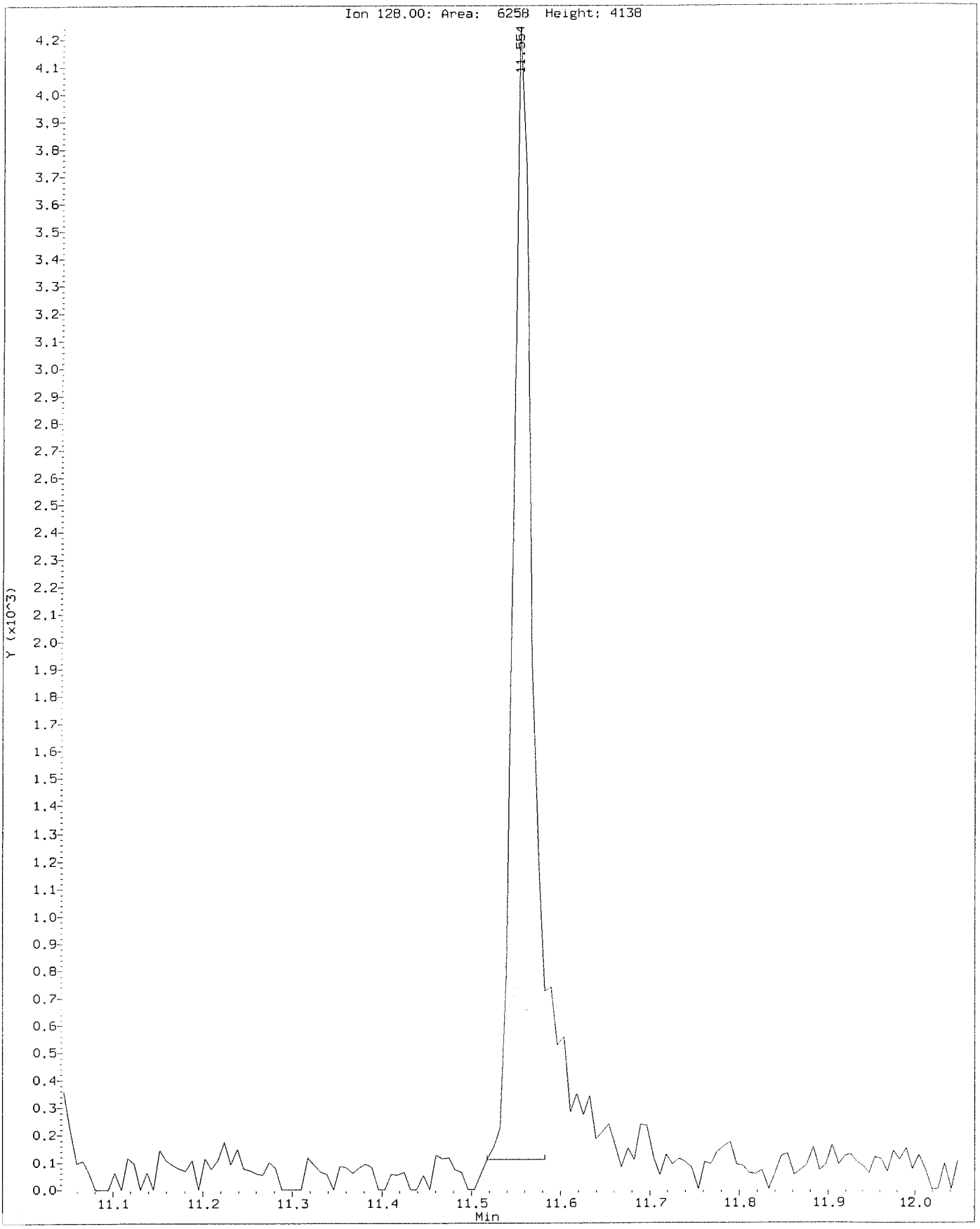
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

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

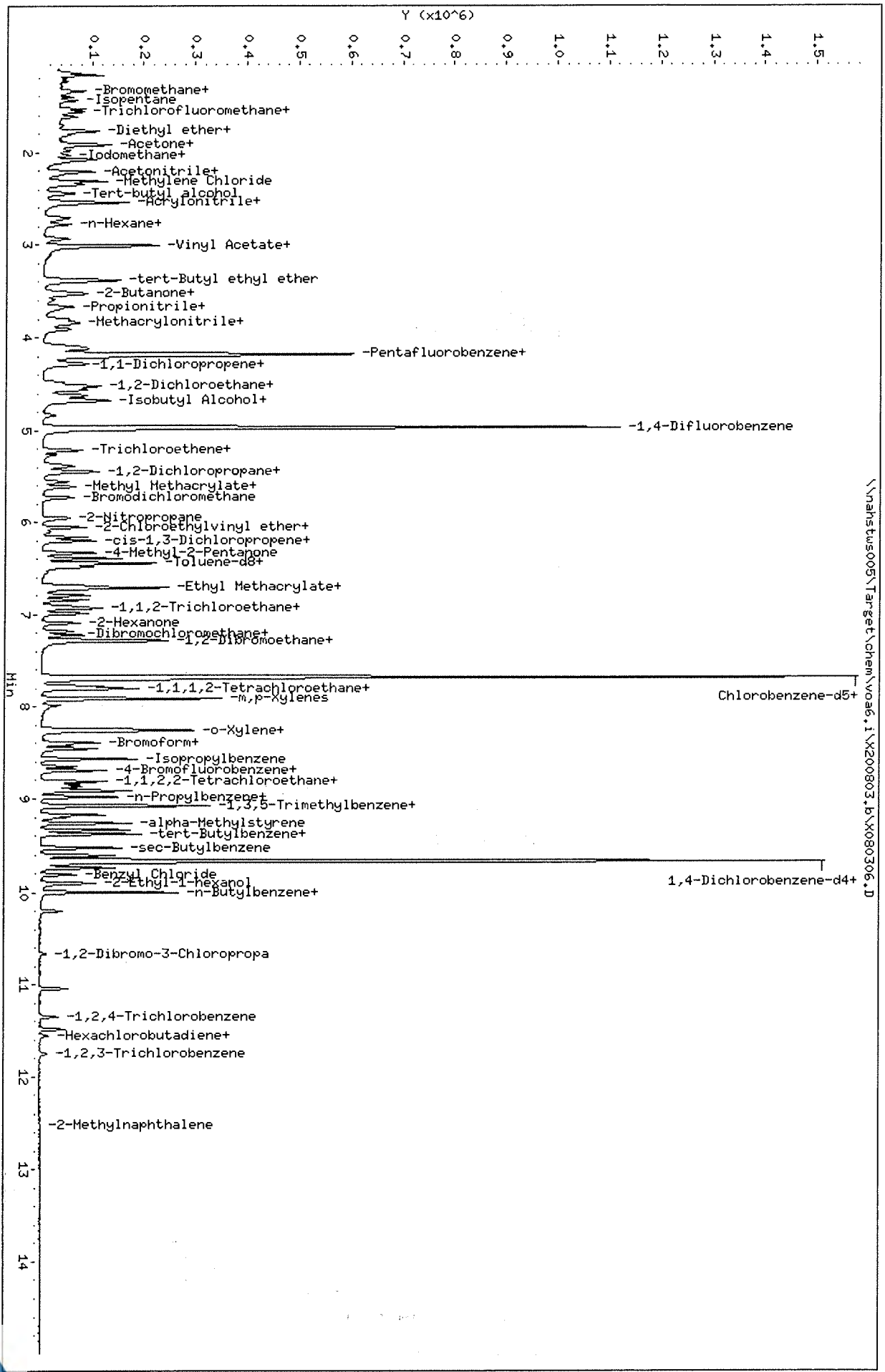
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	516466	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	799737	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721427	50.0000	
* 70 1,4-Dichlorobenzene-d4	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.

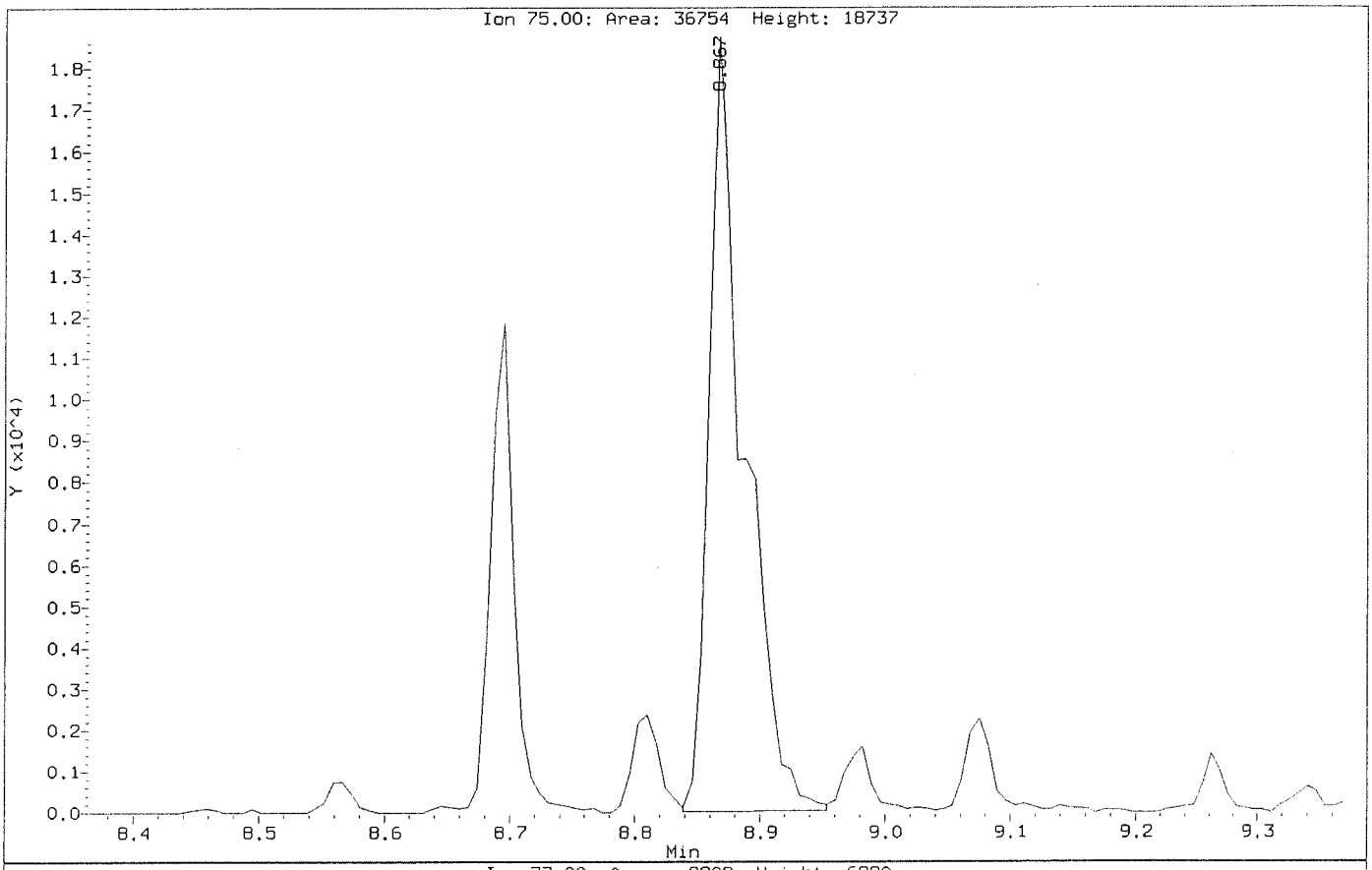


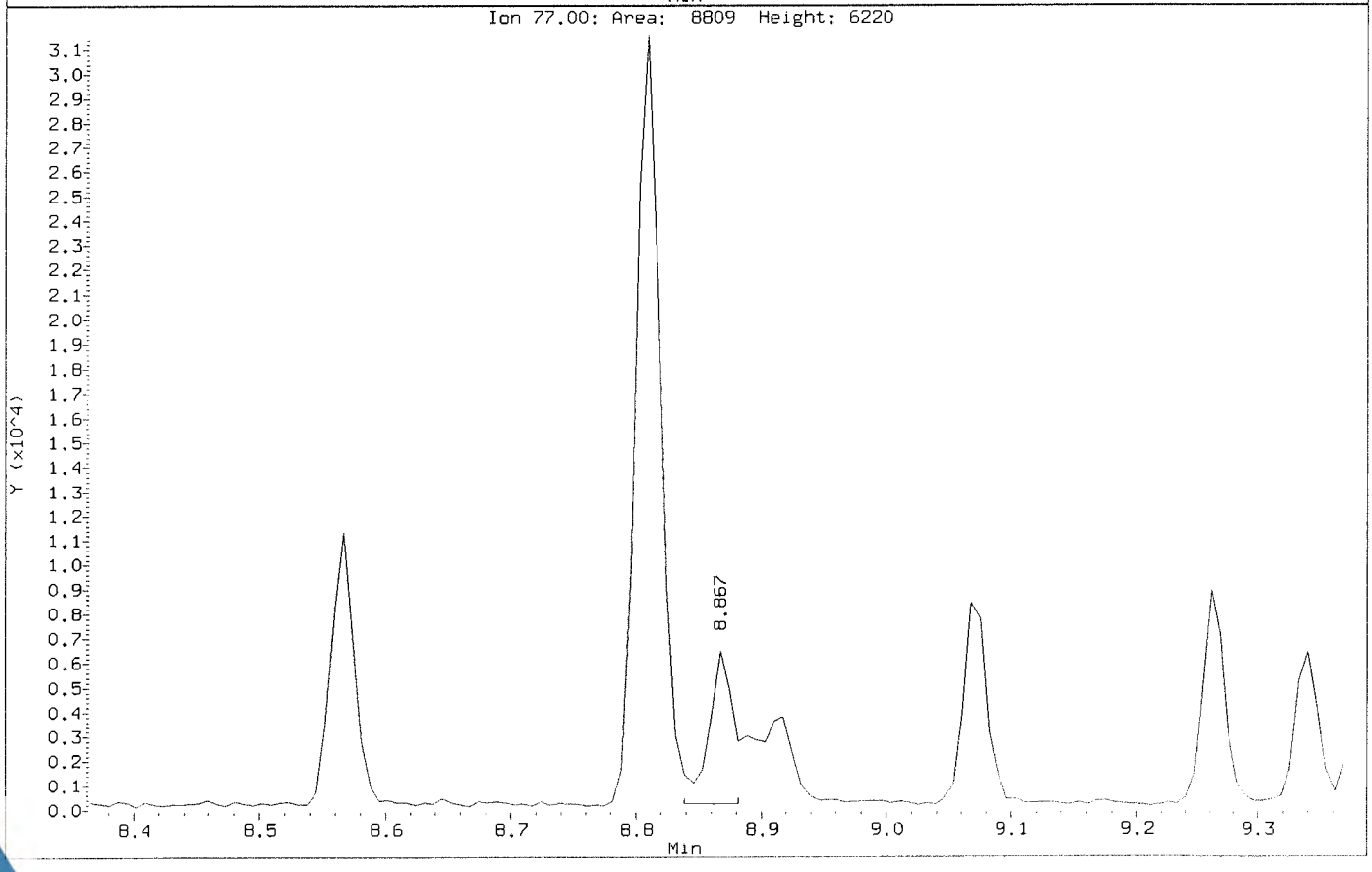
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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

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

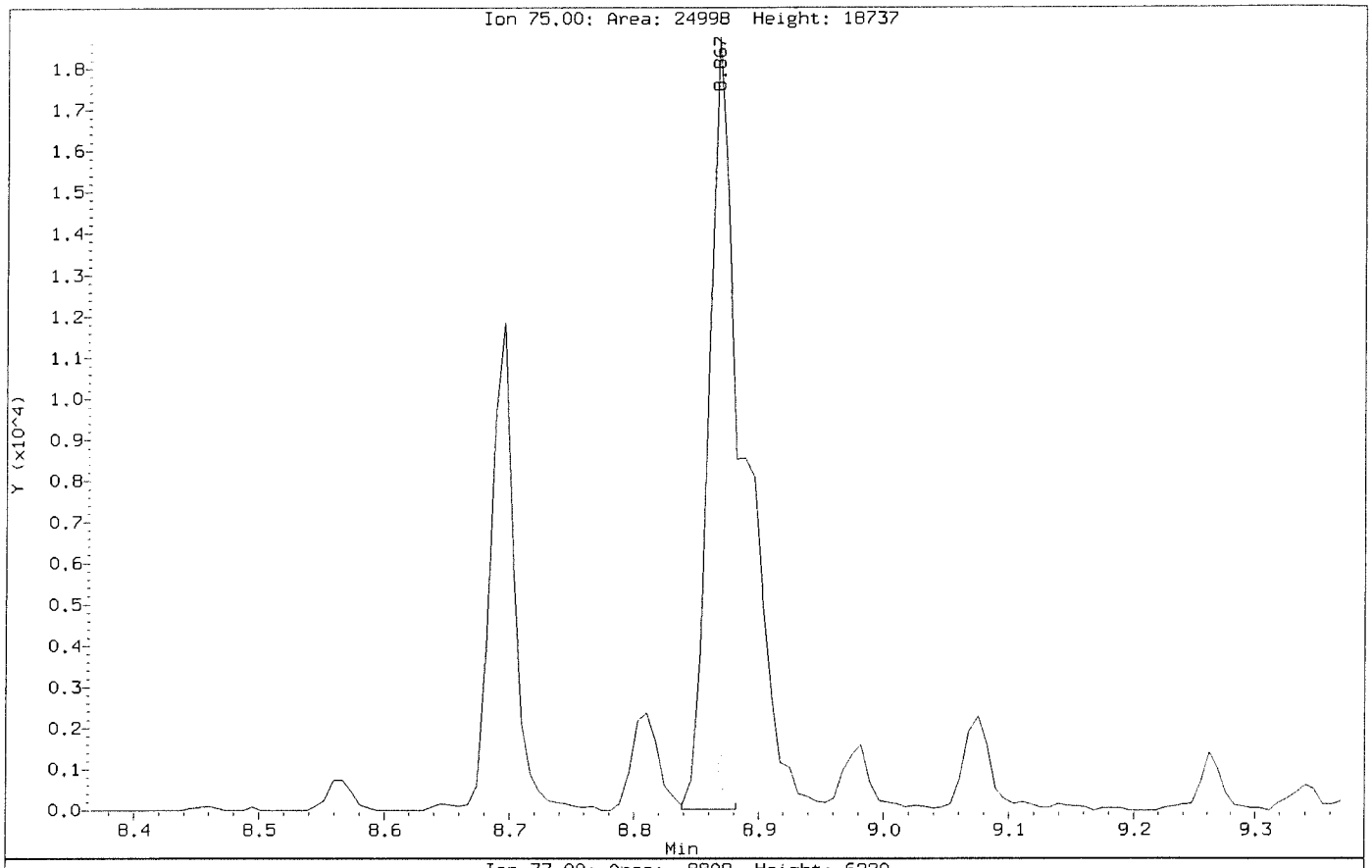
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

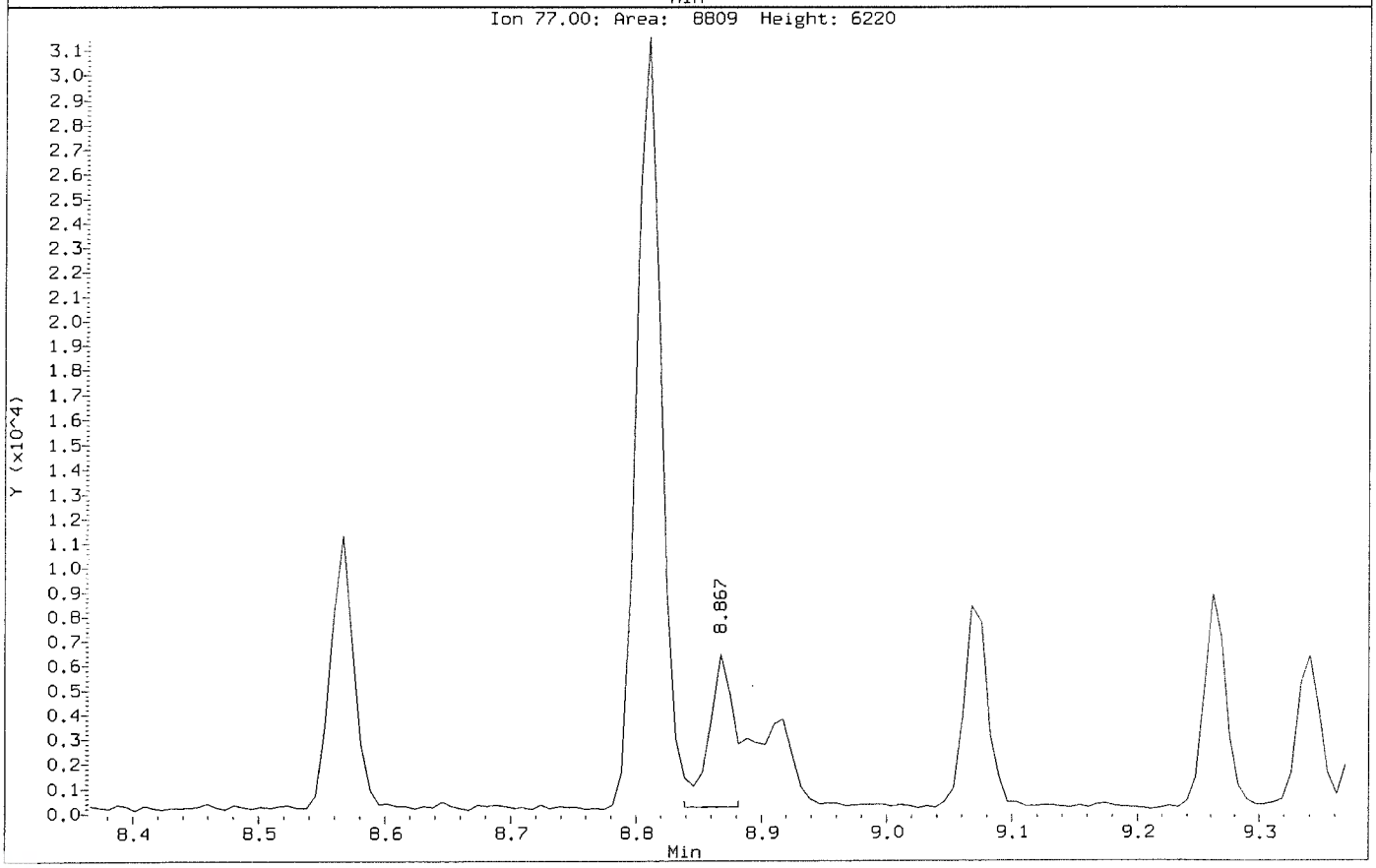




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Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

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





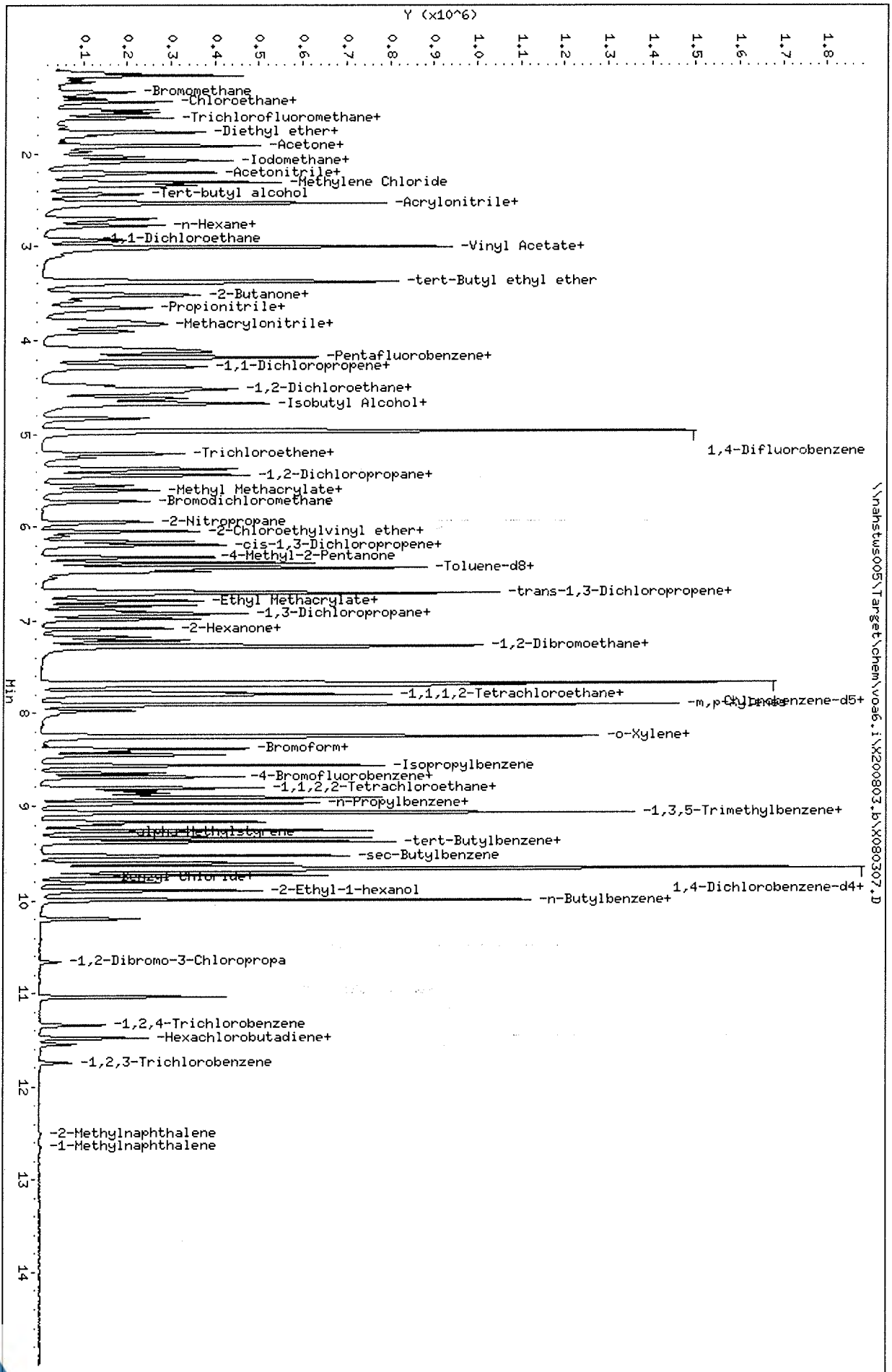
ALS Laboratory Group

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

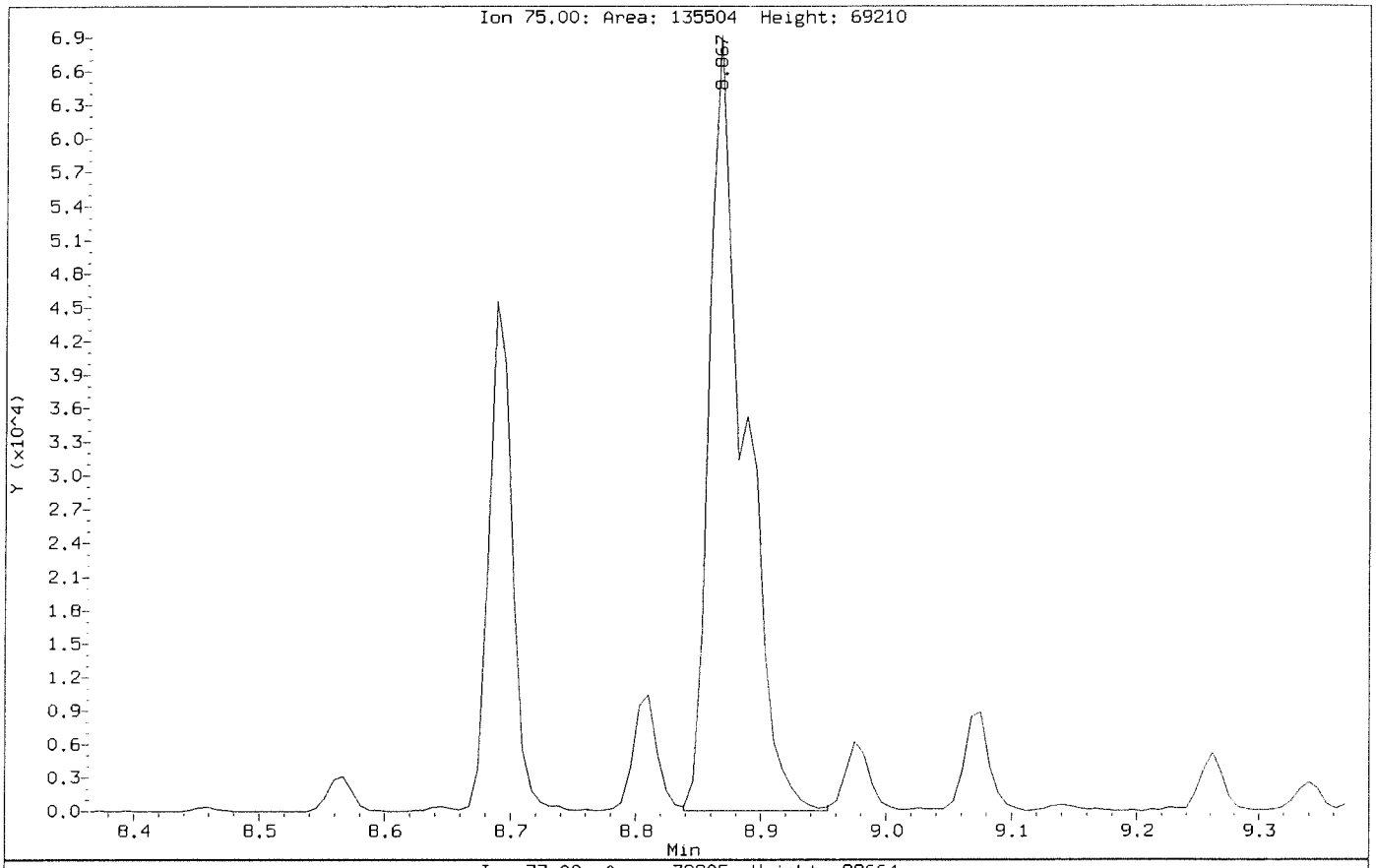


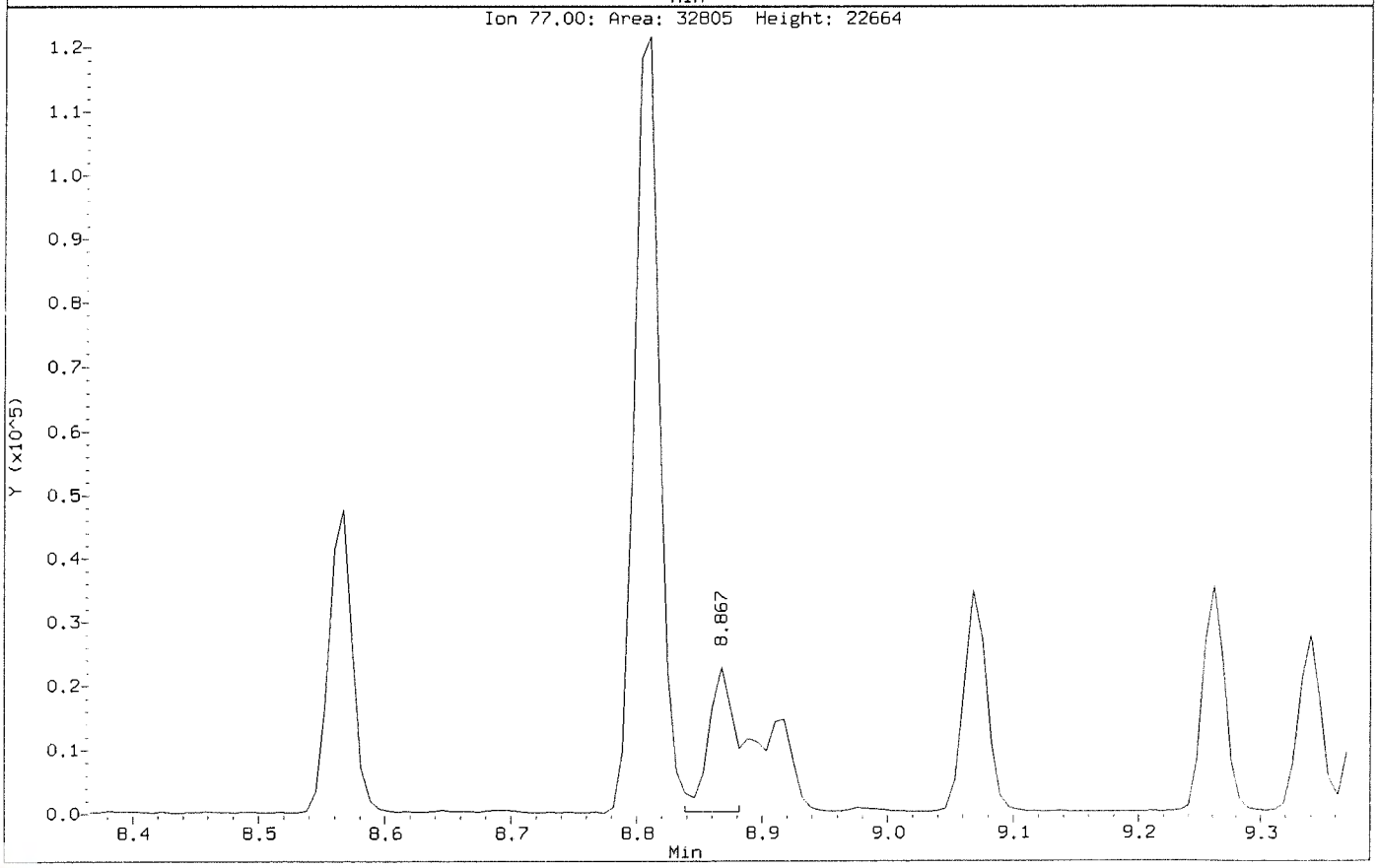
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Date : 03-AUG-2020 14:04
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

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

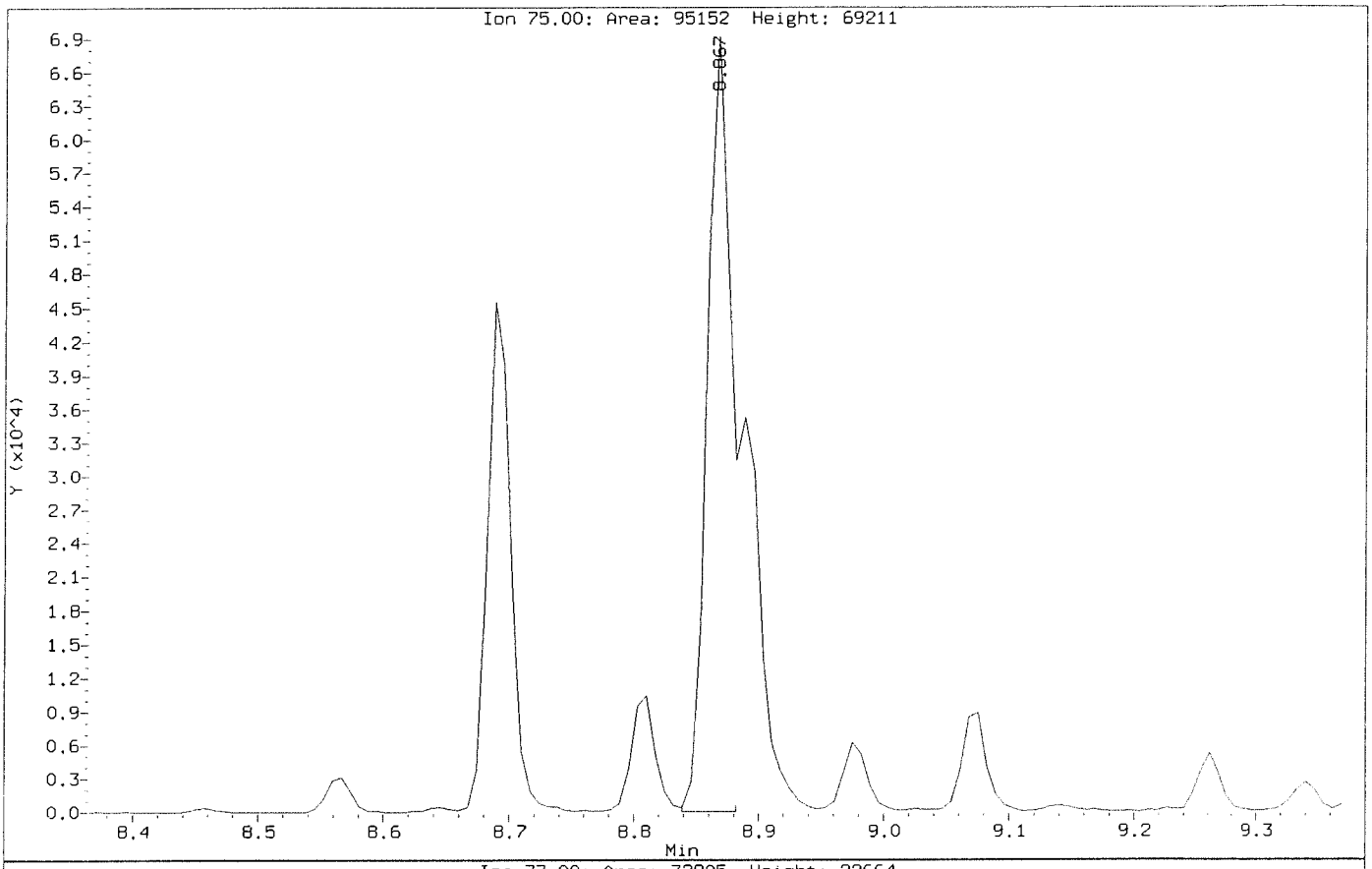
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

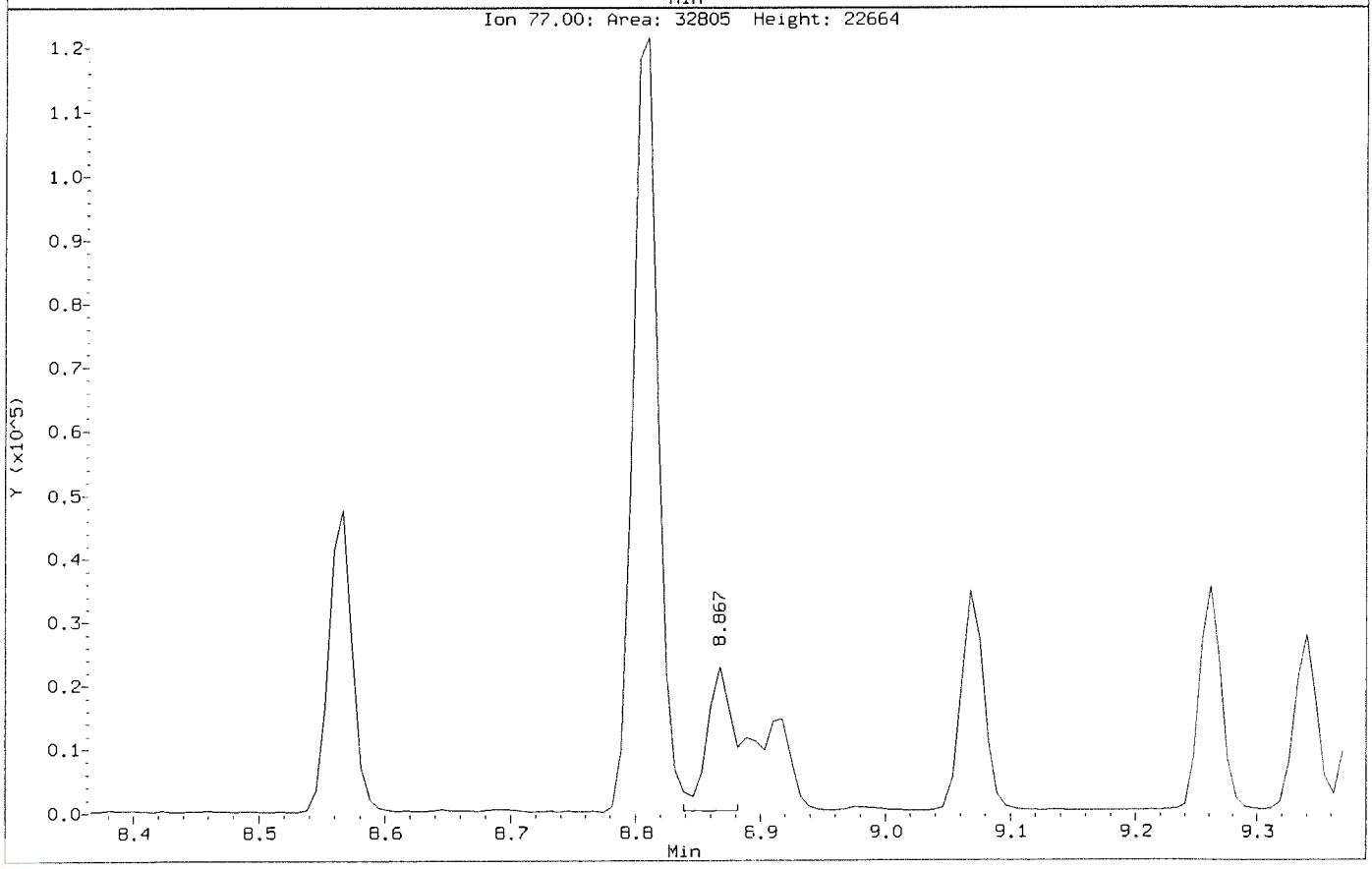




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Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

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

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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

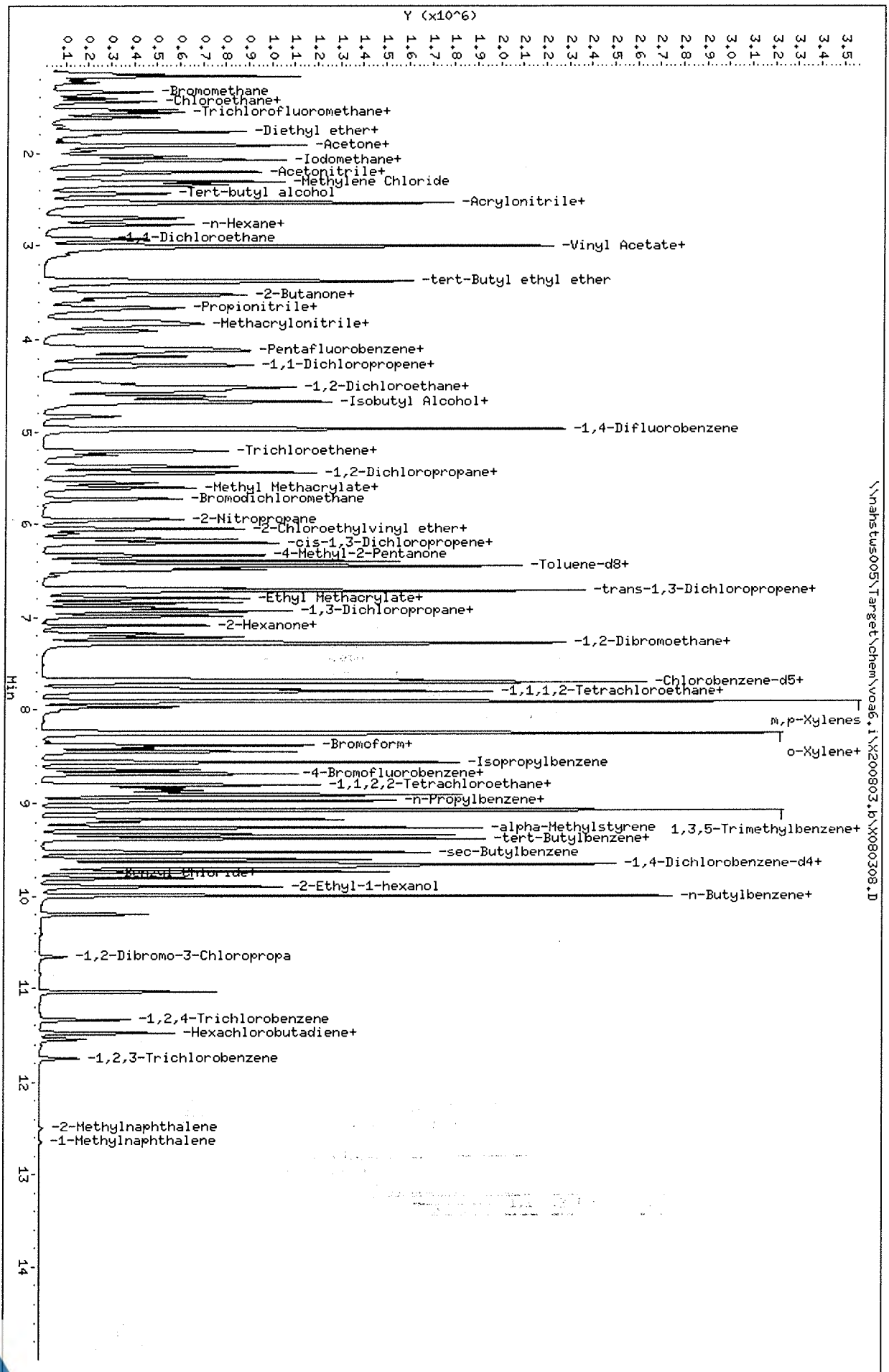
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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

	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.

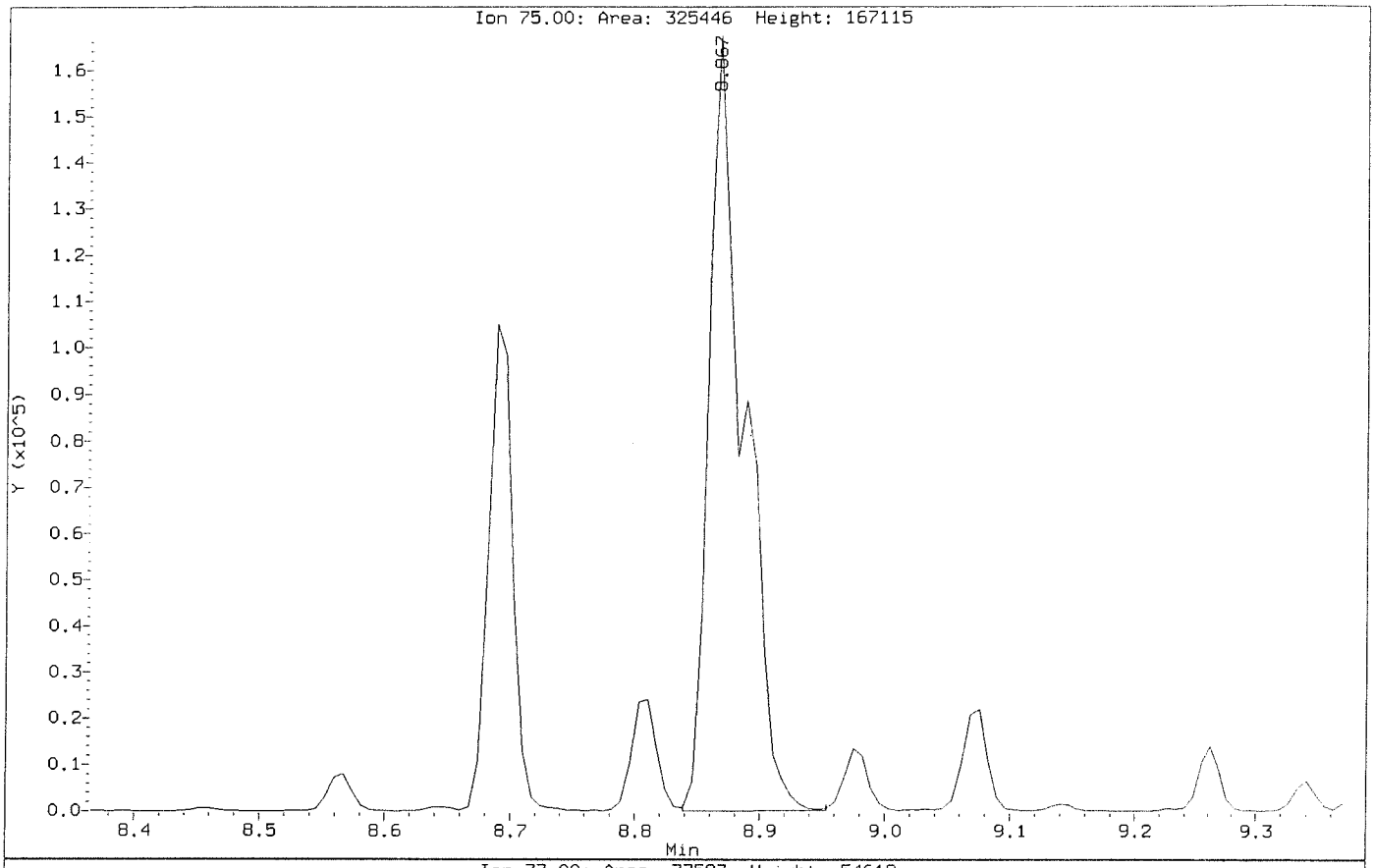


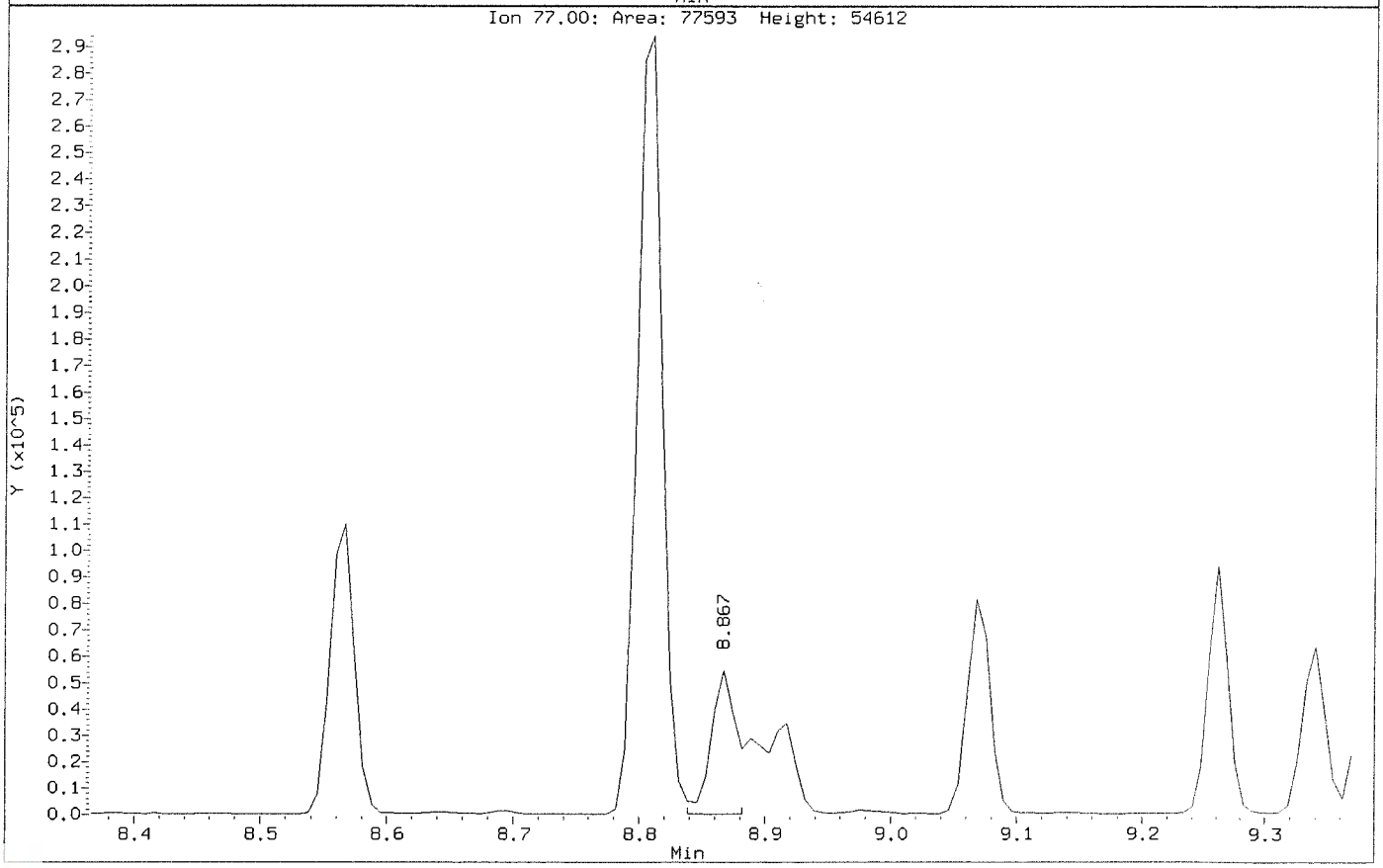
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Date : 03-AUG-2020 14:28
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

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

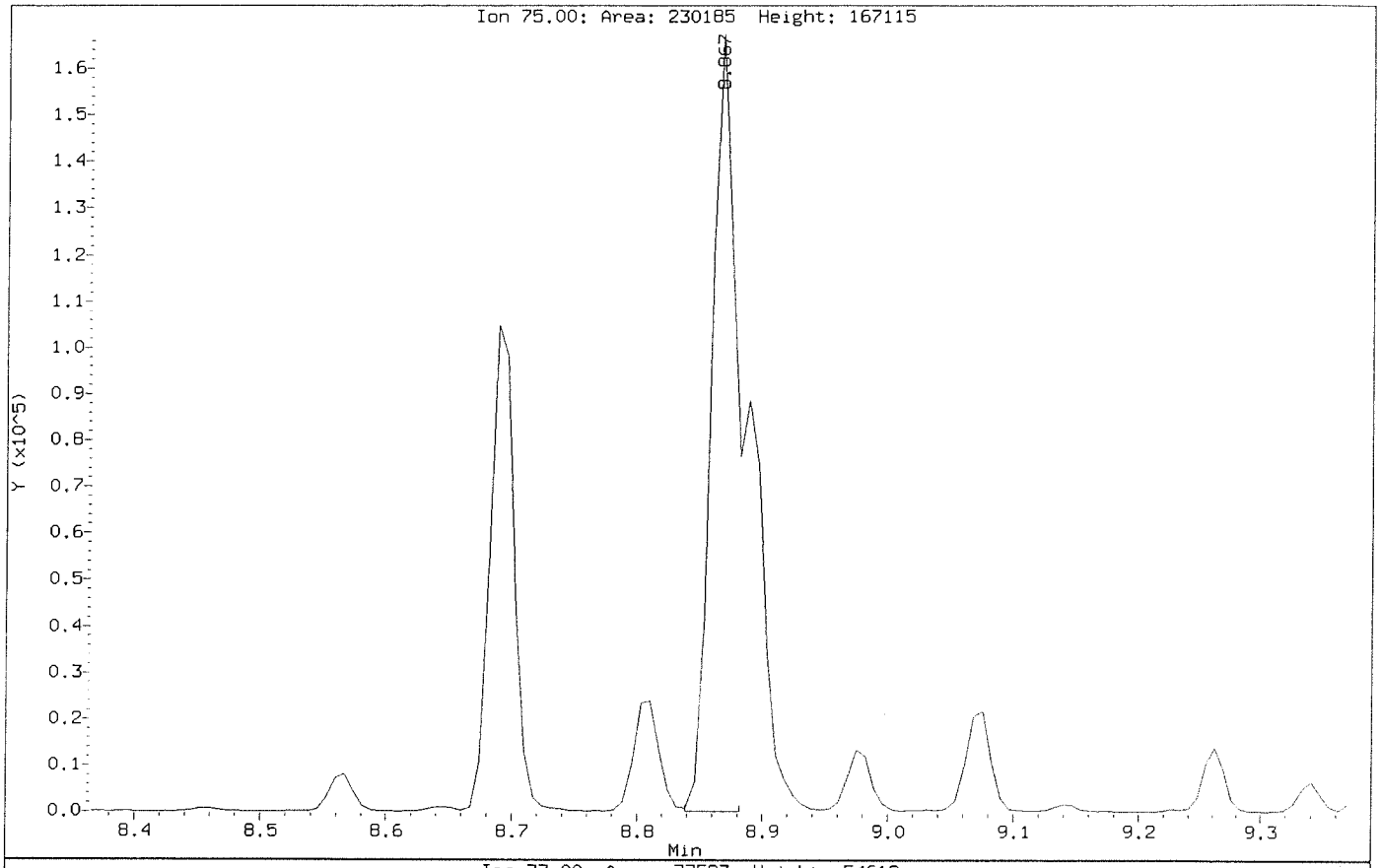
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

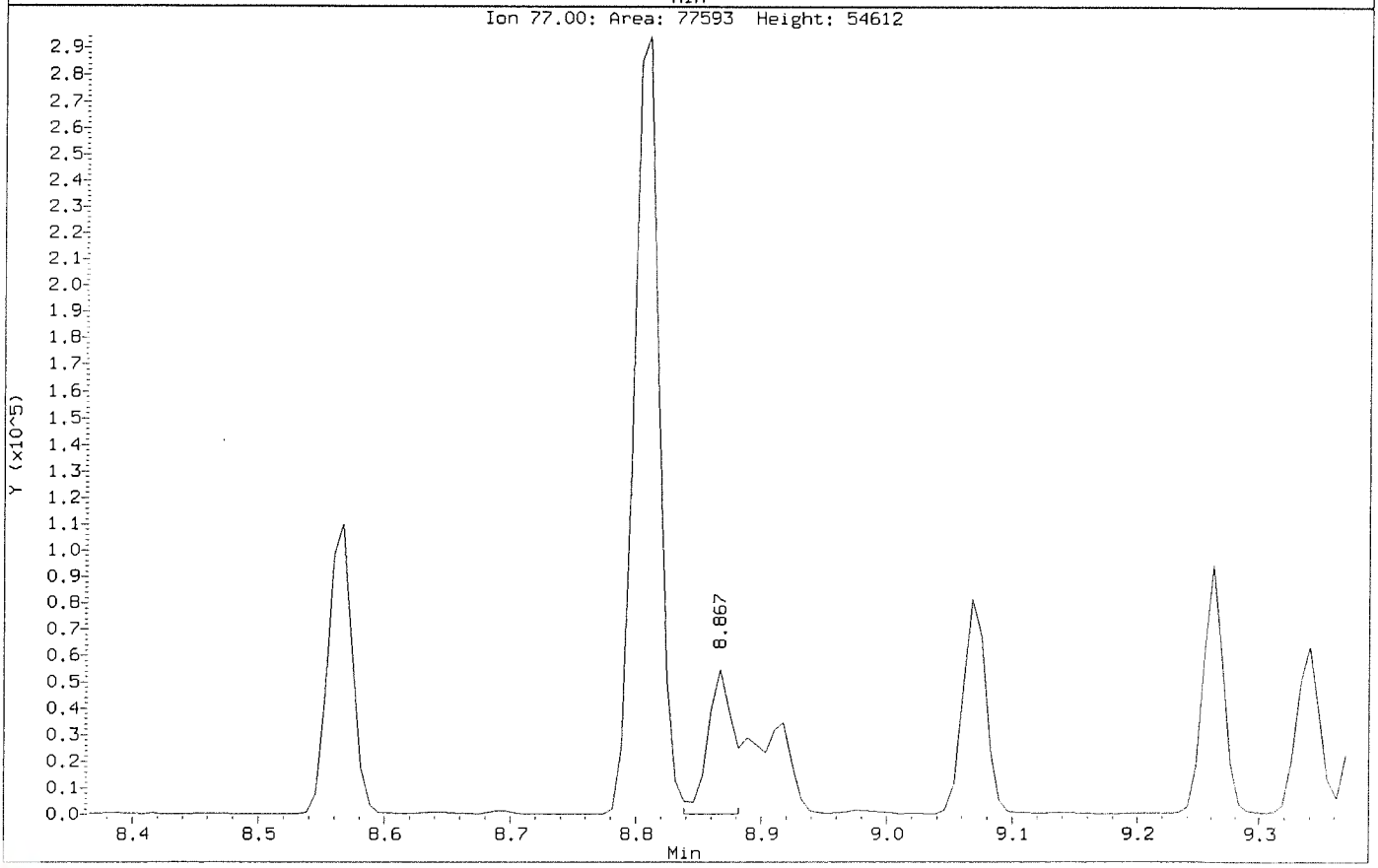




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Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

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

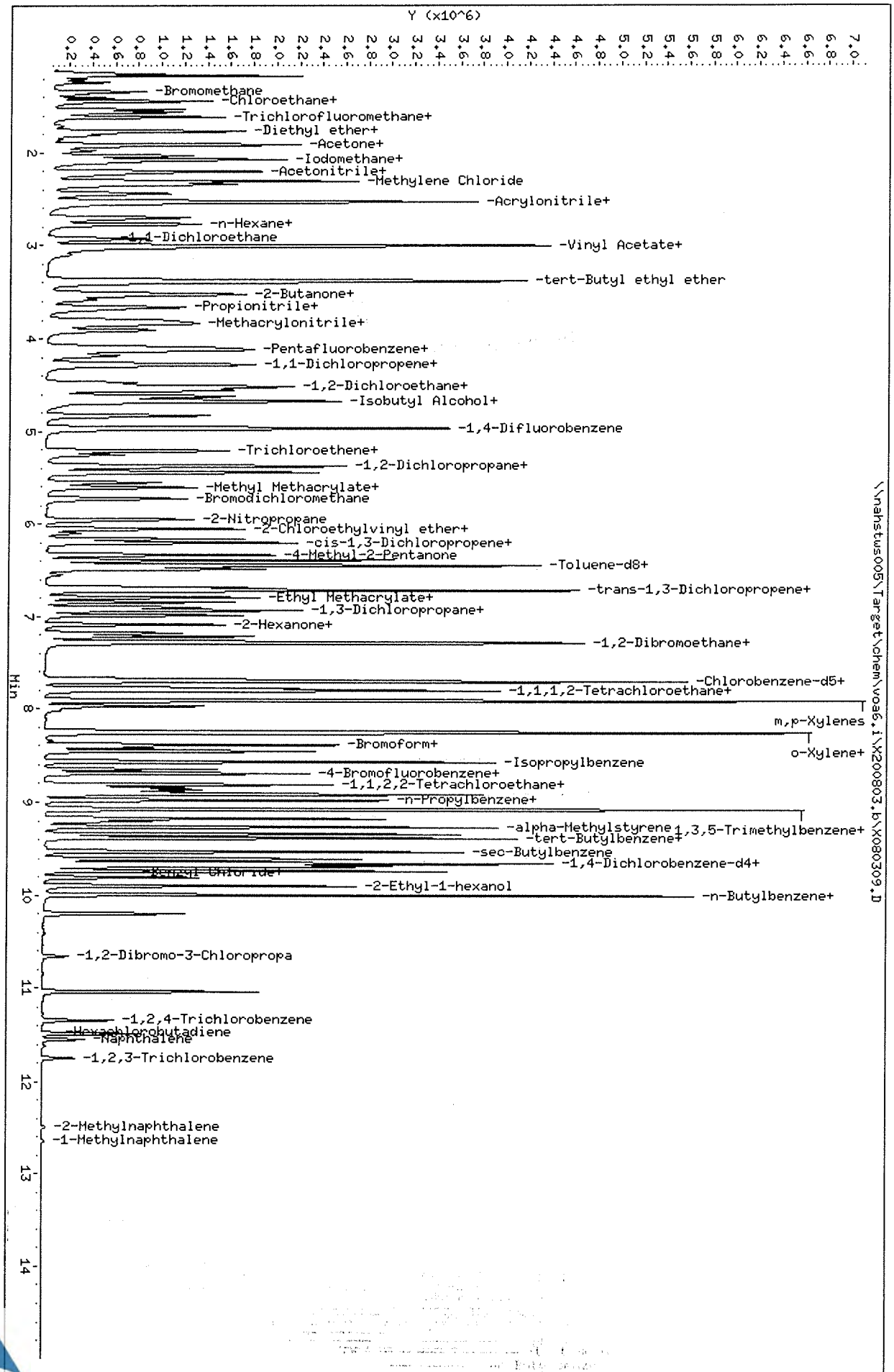
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	486833	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	732825	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	684816	50.0000	
*	70 1,4-Dichlorobenzene-d4	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)	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.

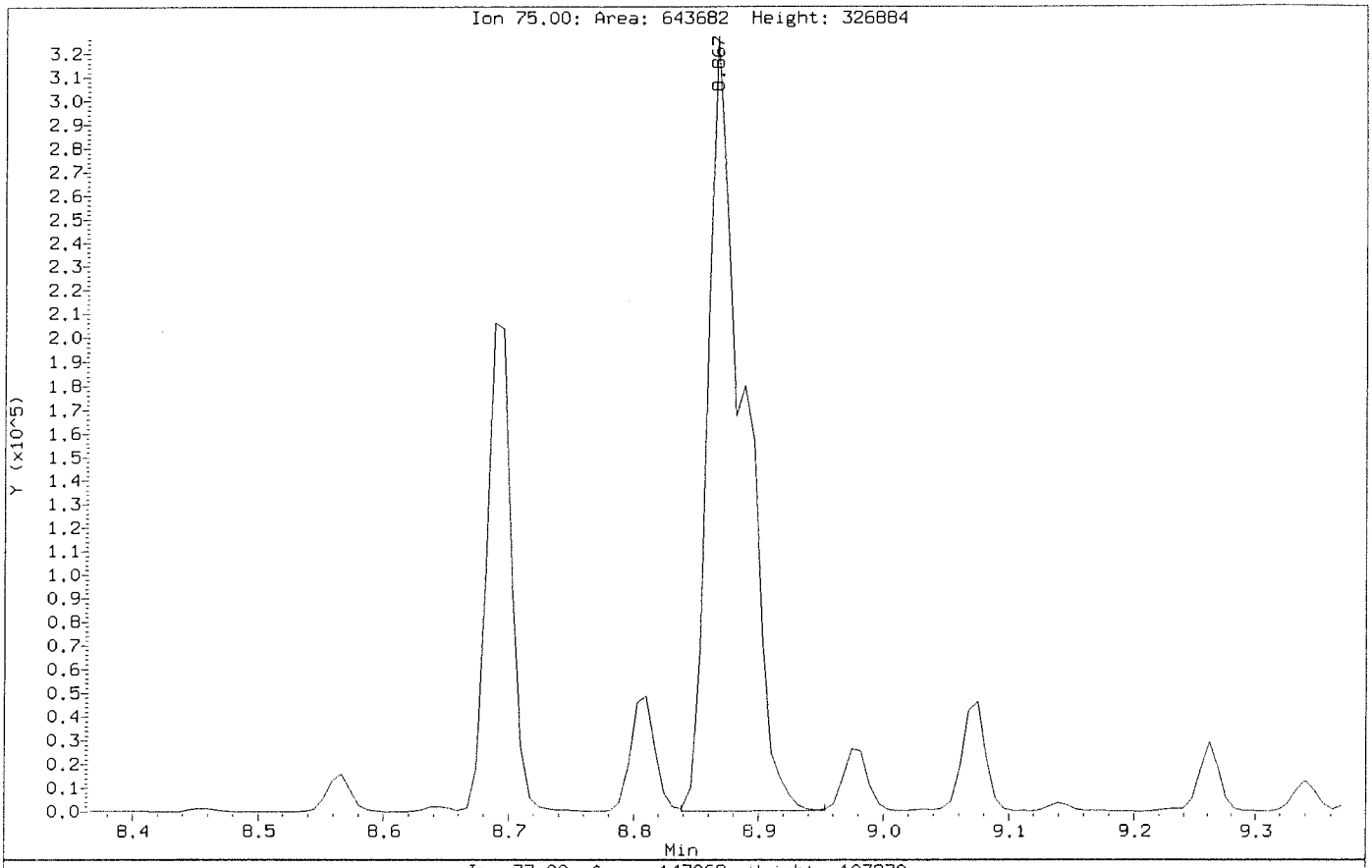


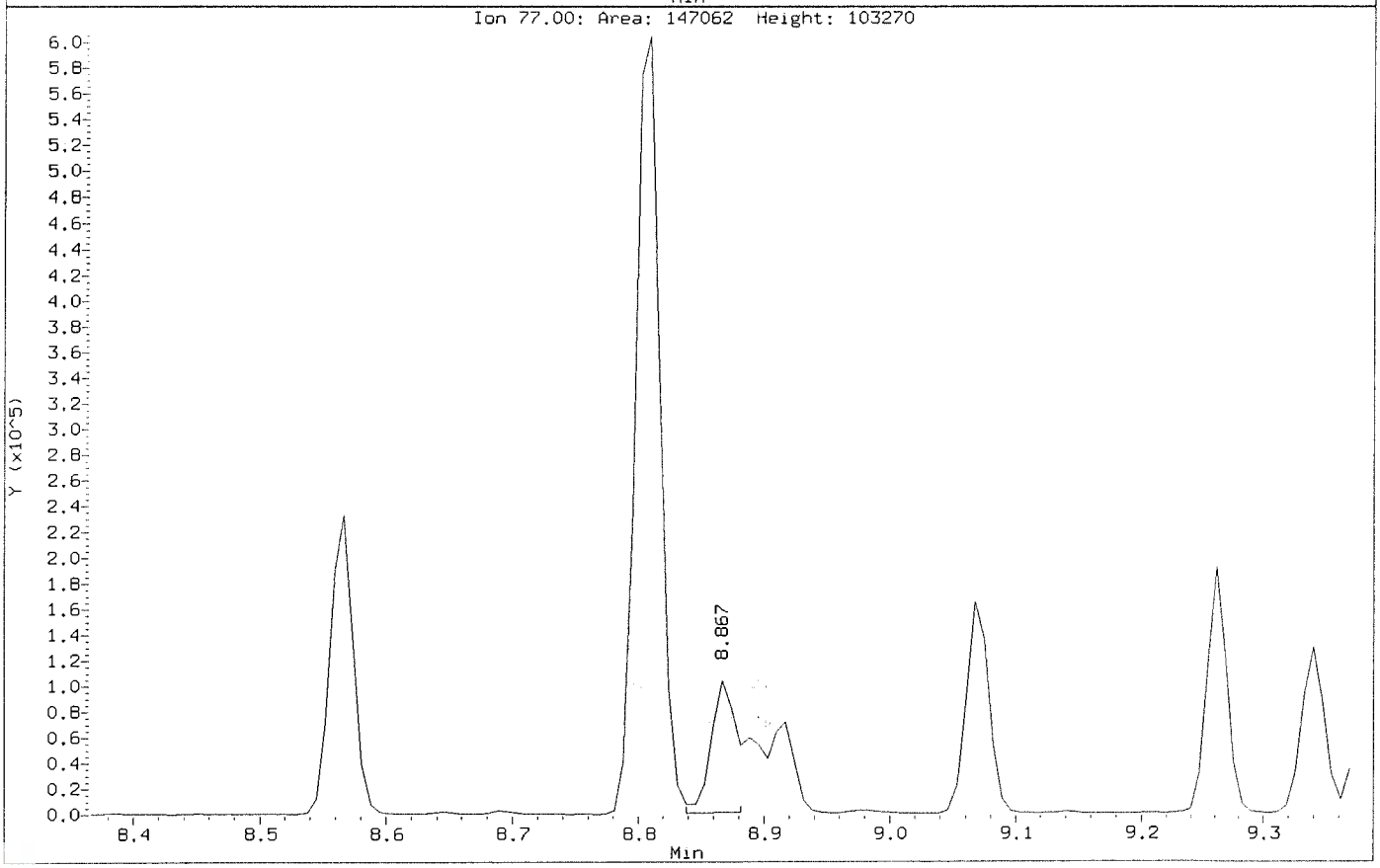
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

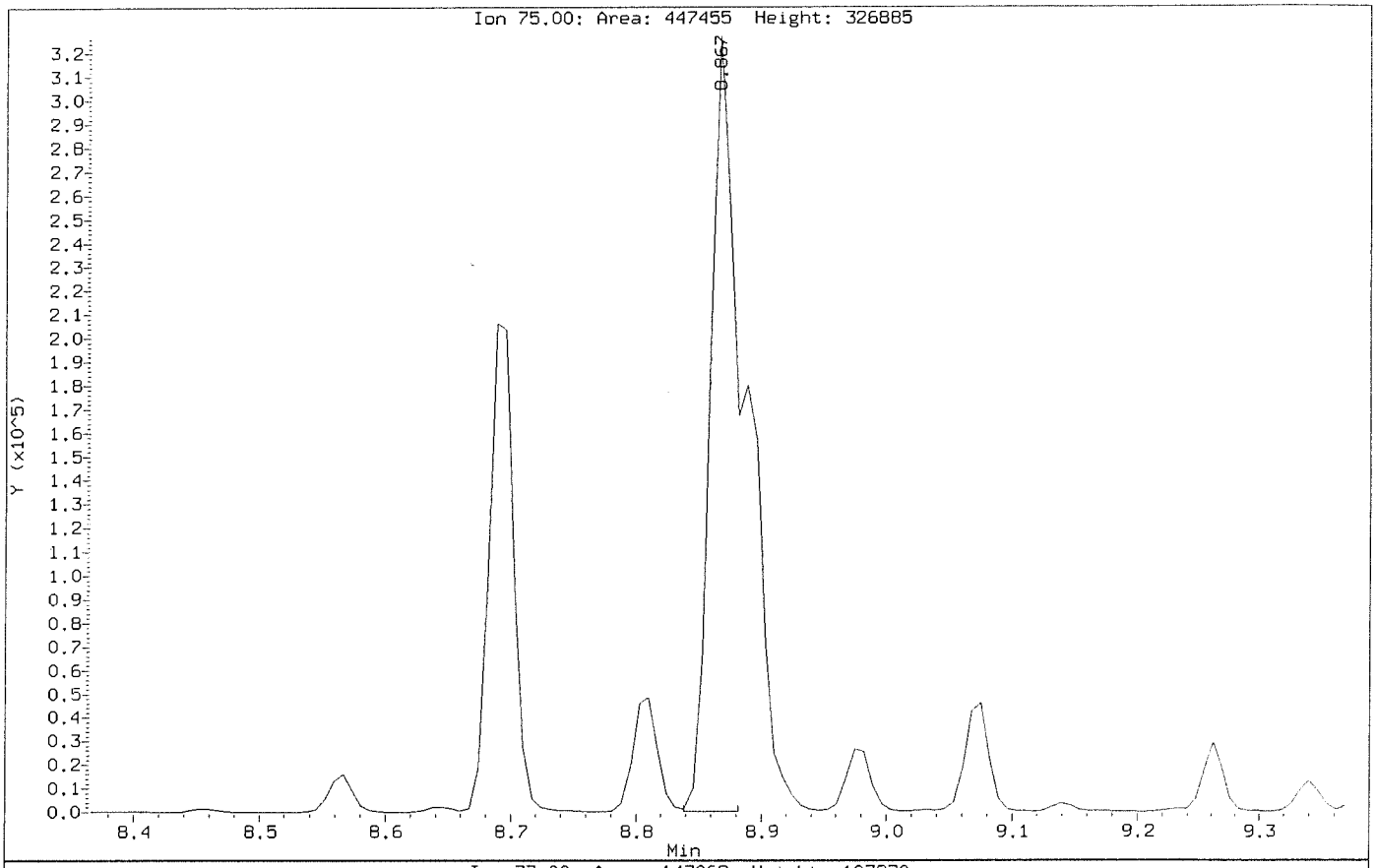
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

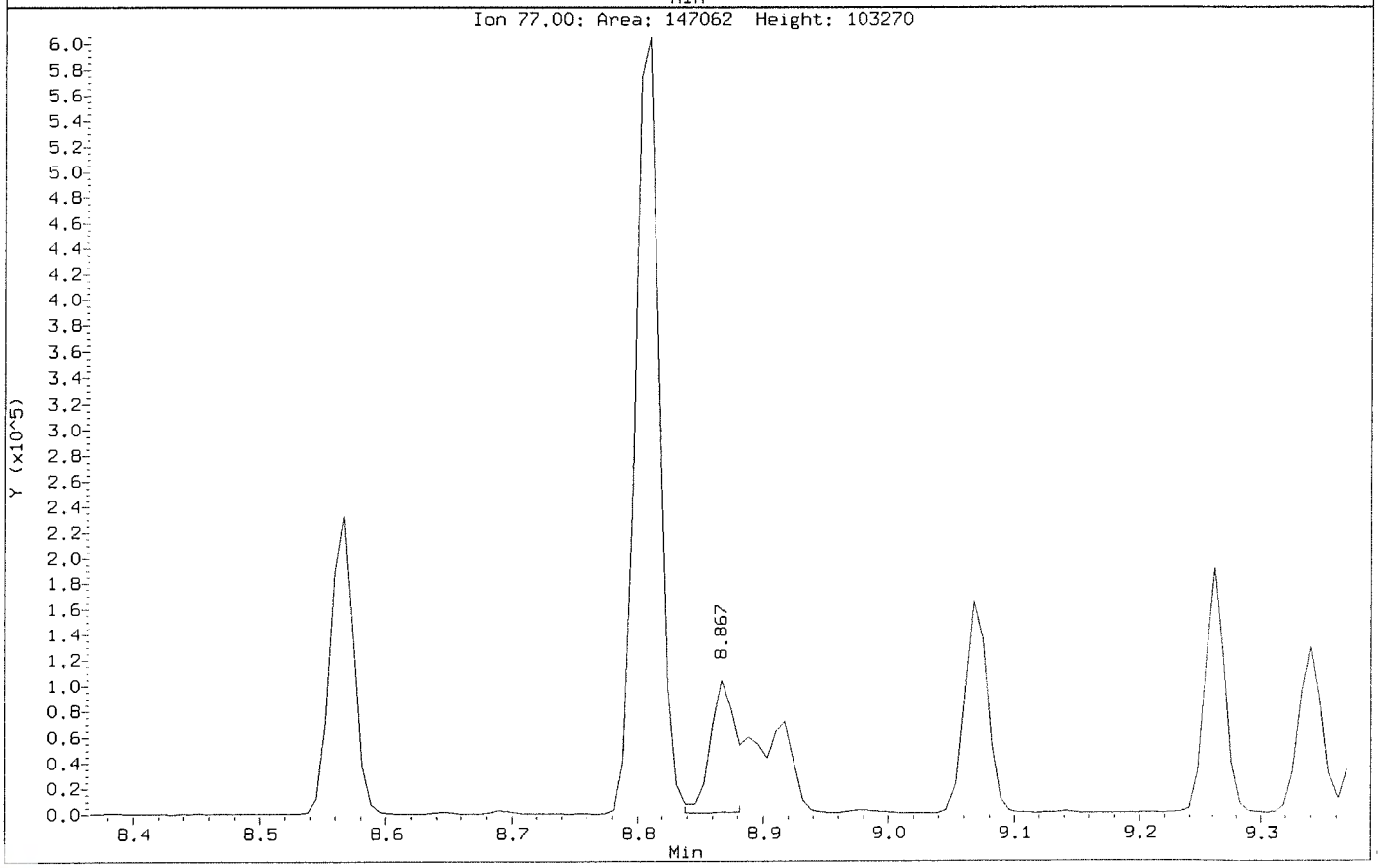




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Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

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

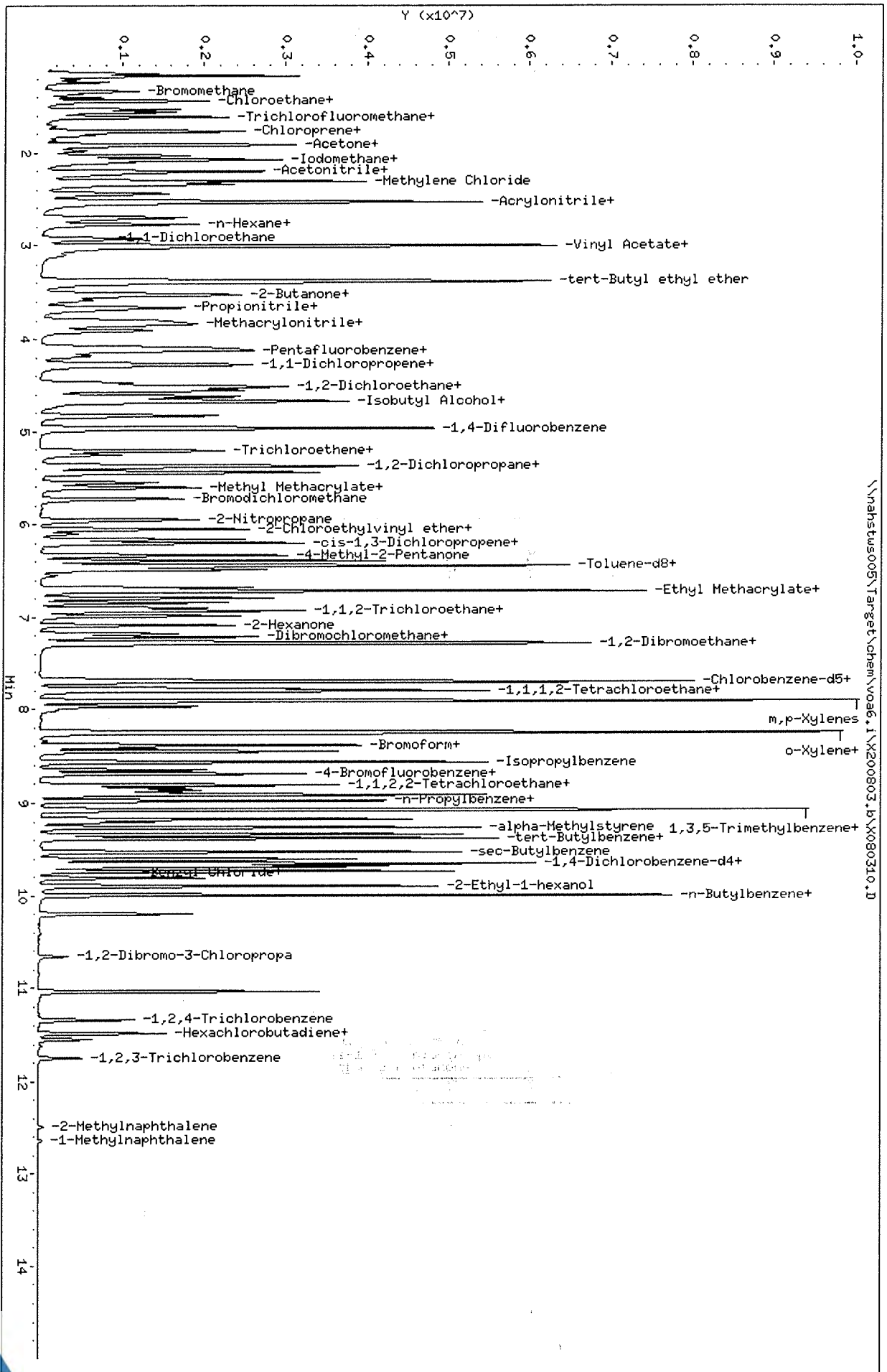
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	457081	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697946	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	658557	50.0000	
*	70 1,4-Dichlorobenzene-d4	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.

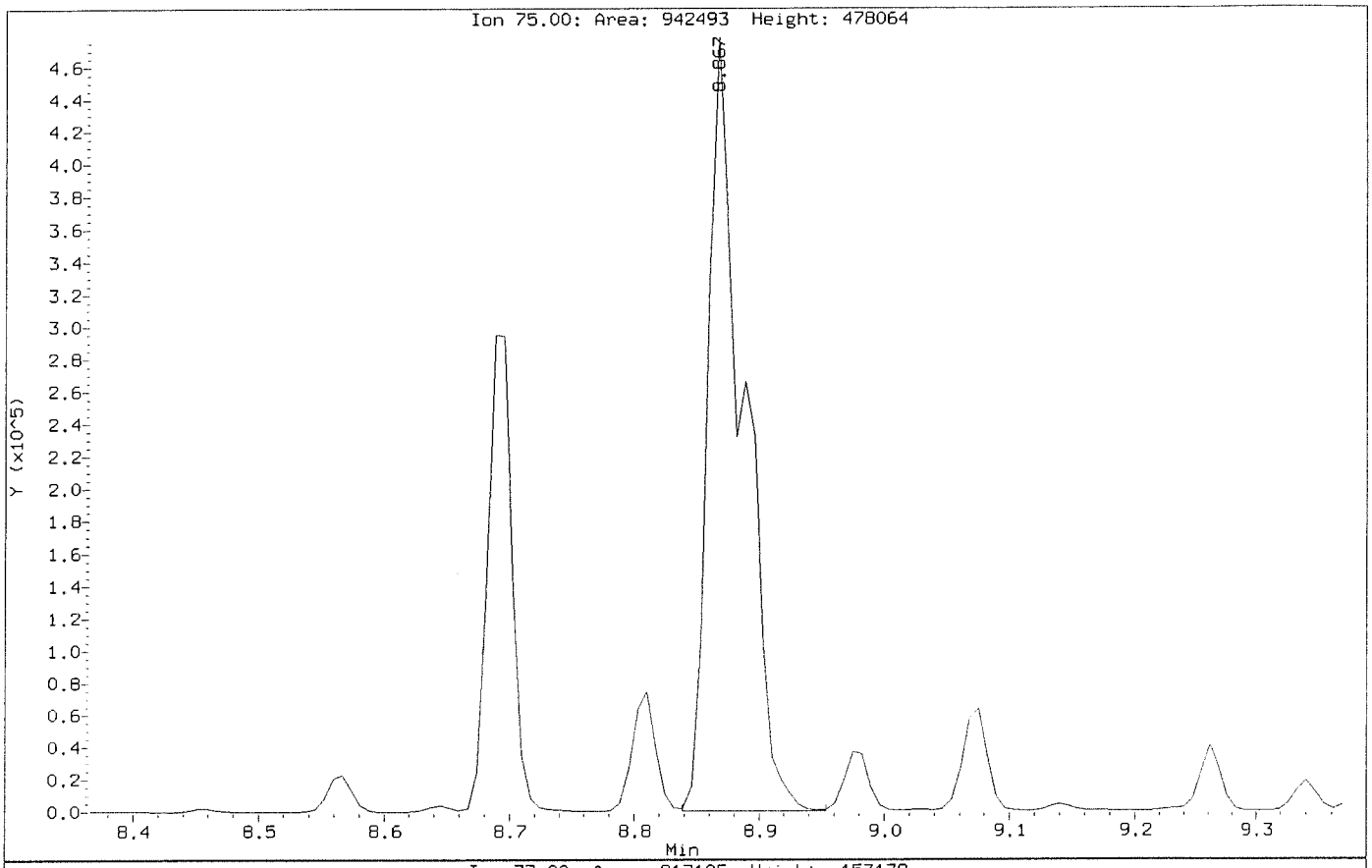


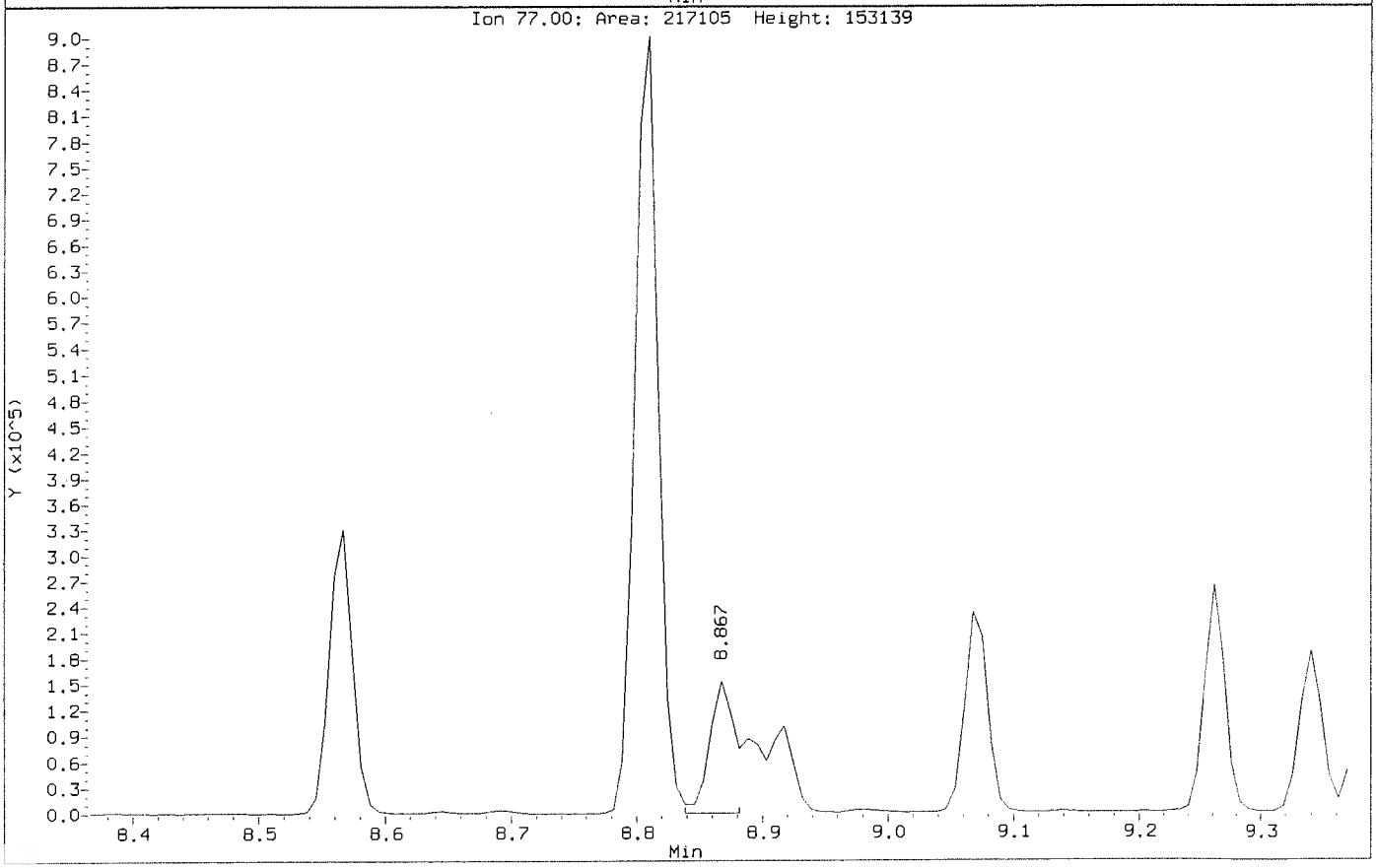
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Purge Volume: 5.0
Column phase: DB624

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

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Client Sample ID: VSTD150

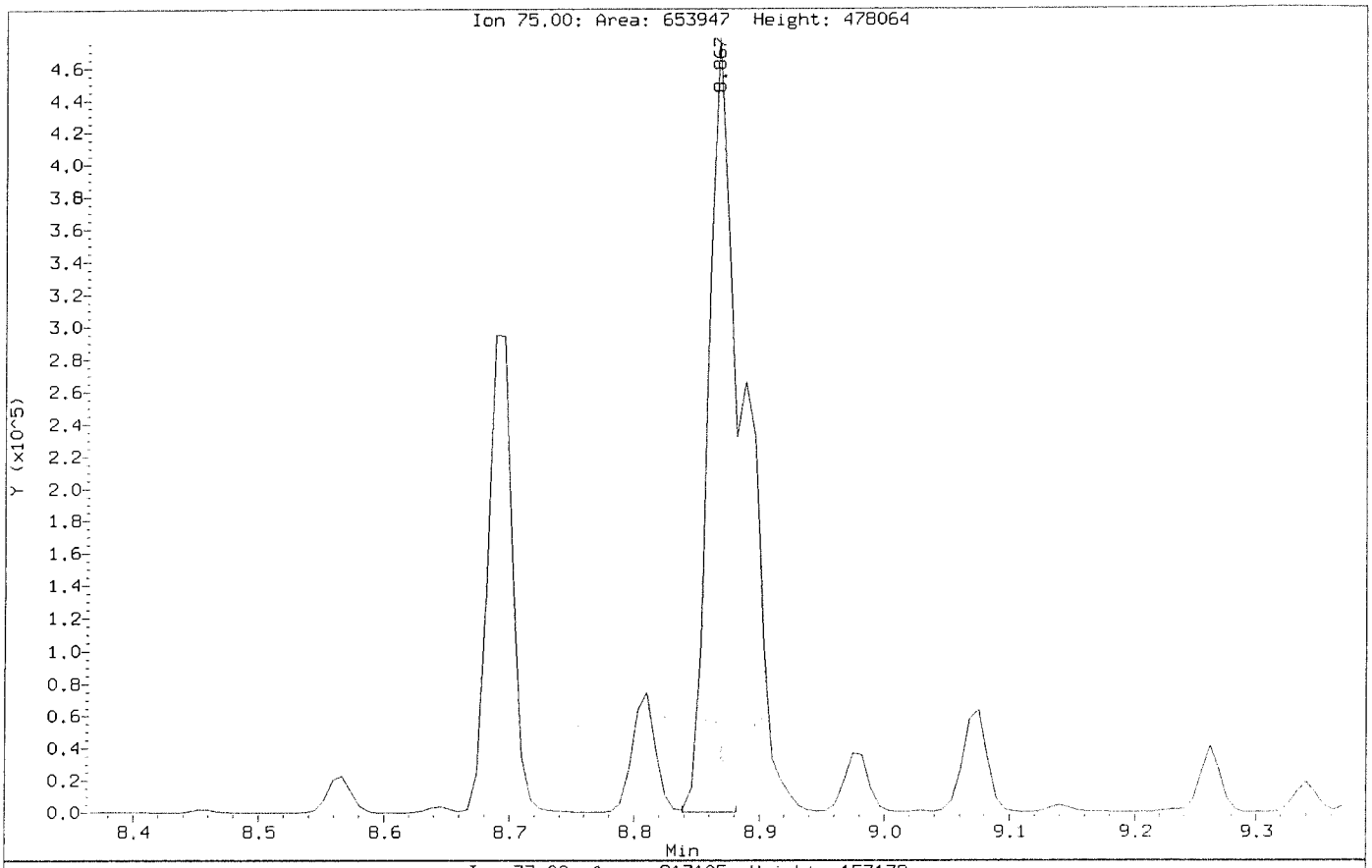
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CAS Number: 96-18-4

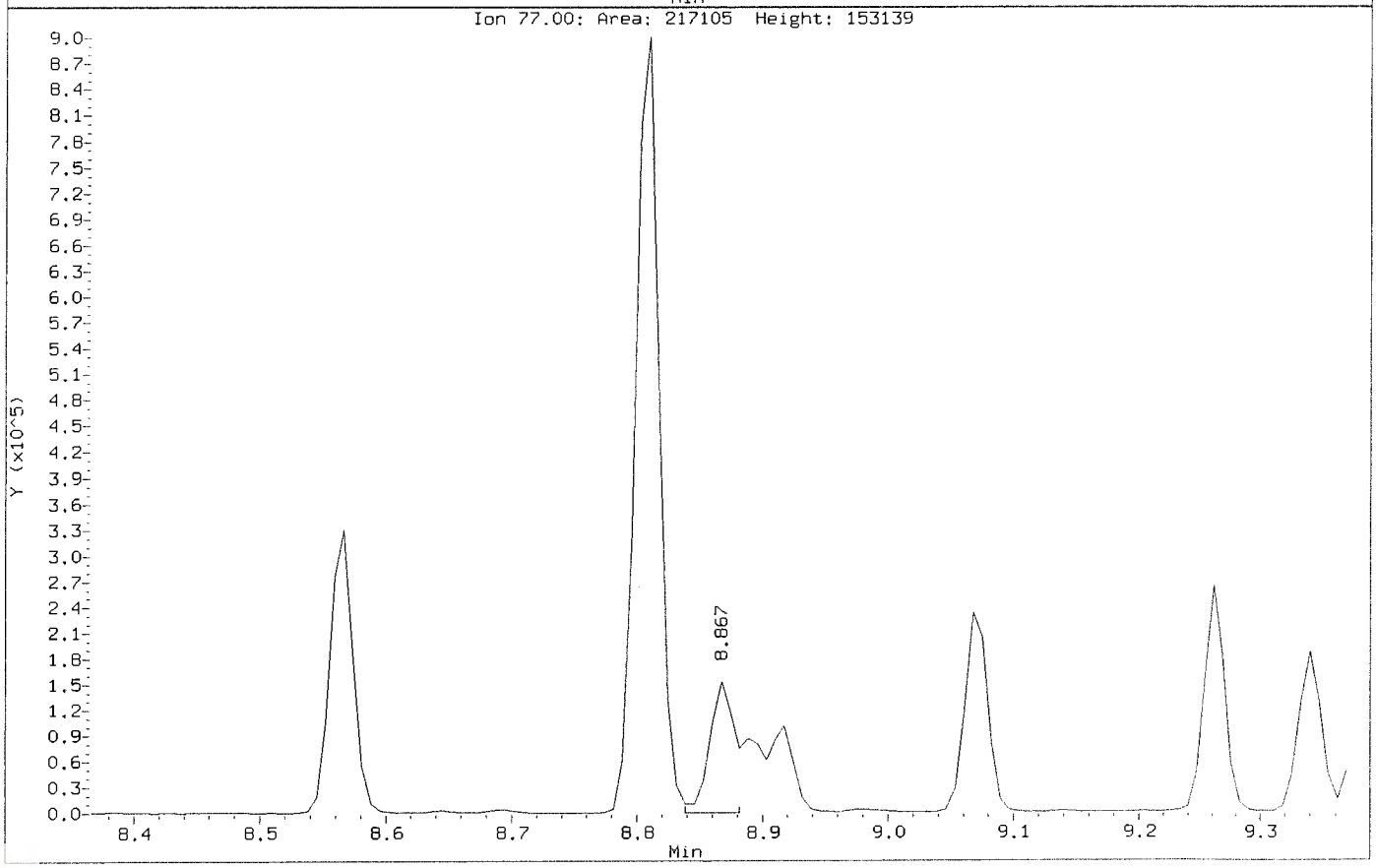




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Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
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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 :
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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

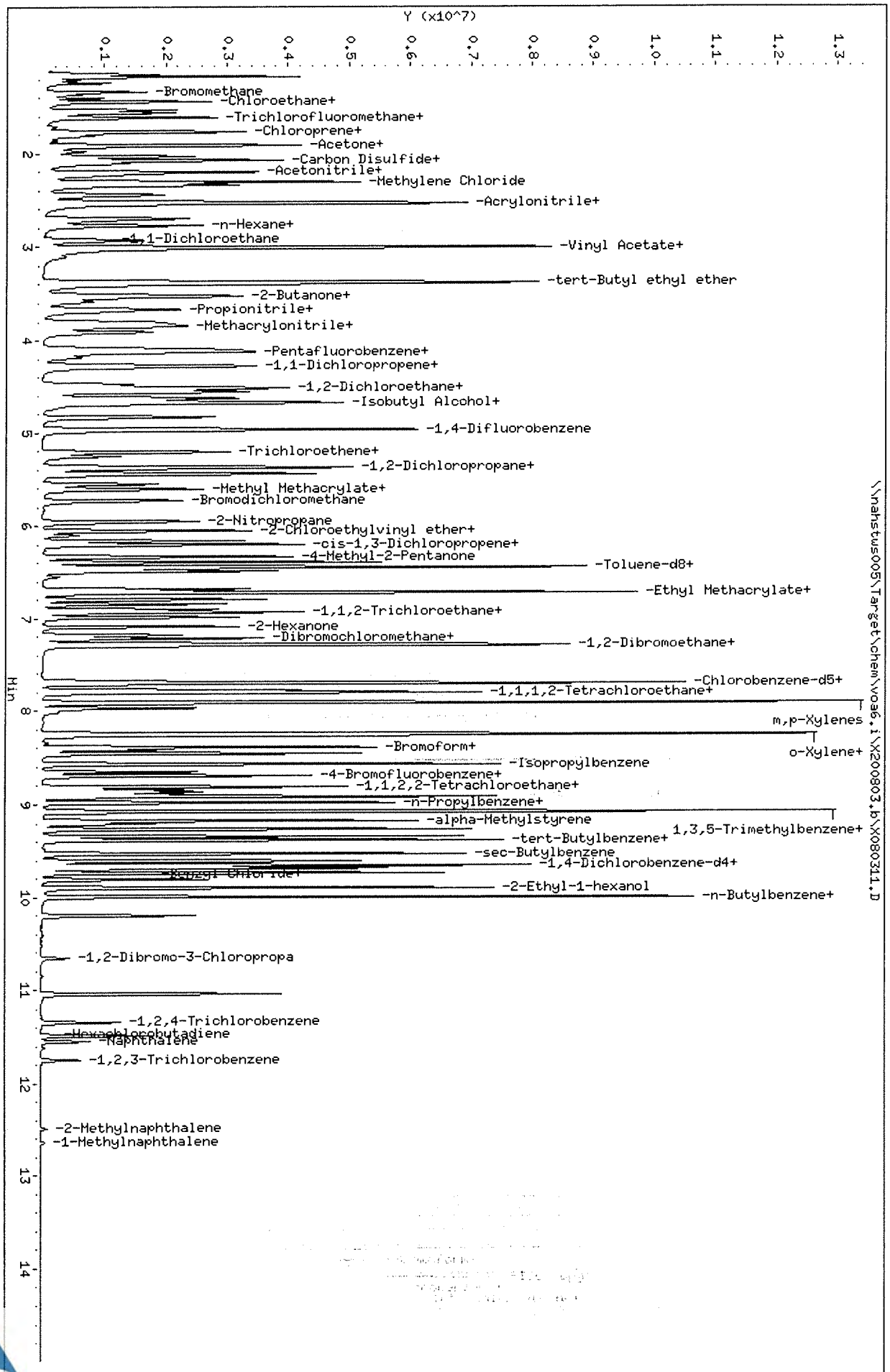
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	450865	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	691821	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	647390	50.0000	
* 70 1,4-Dichlorobenzene-d4	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.

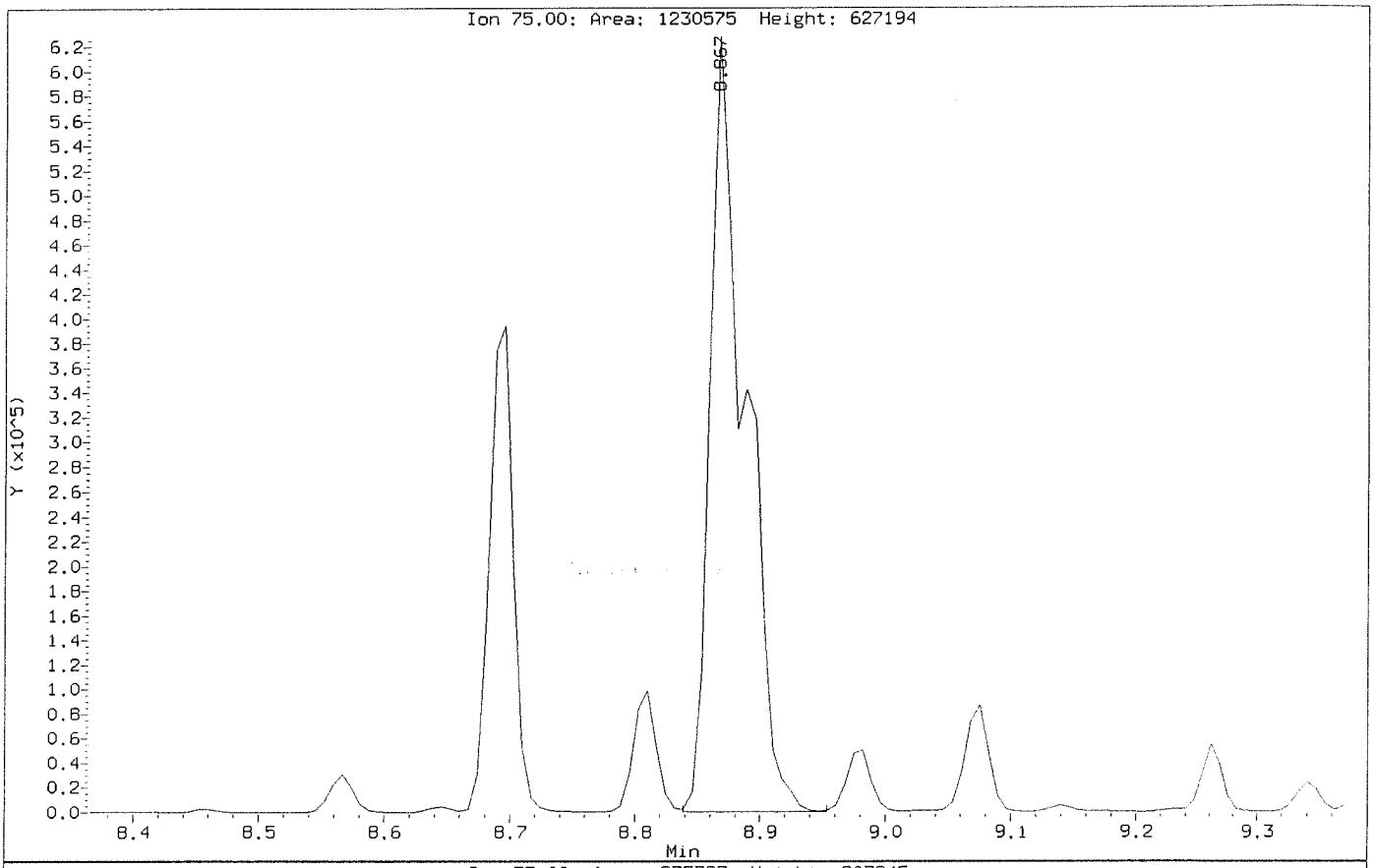


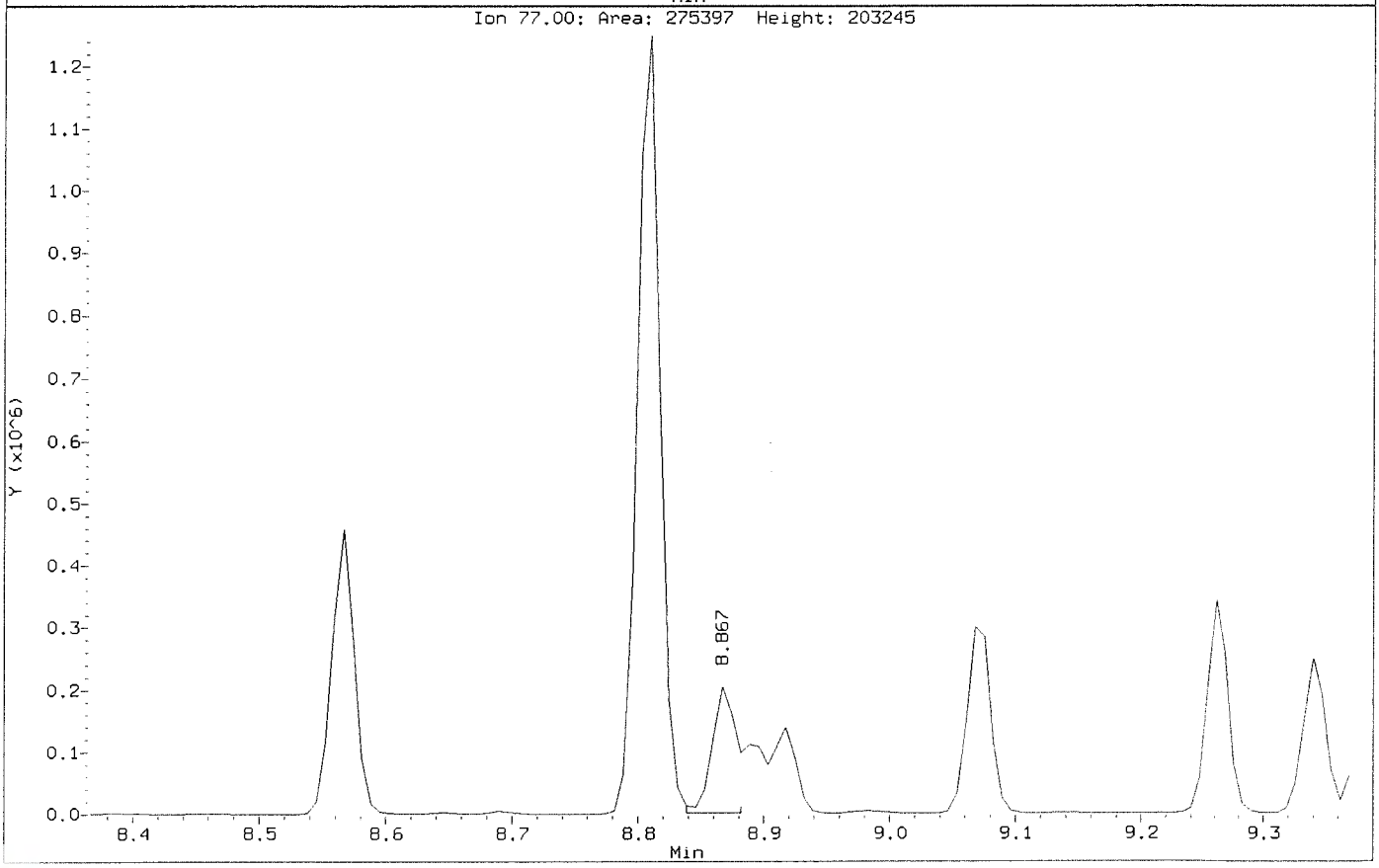
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Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

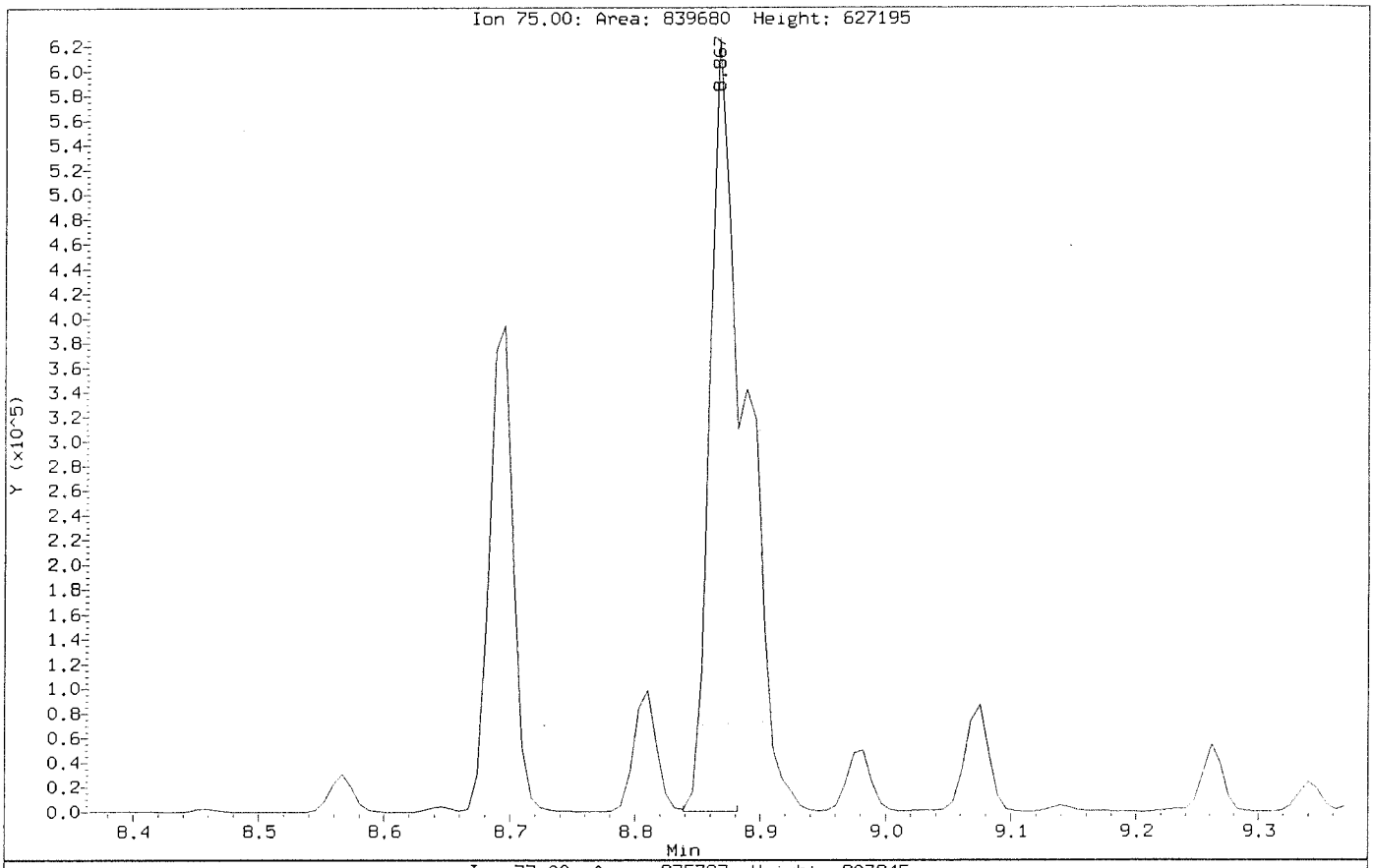
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CAS Number: 96-18-4

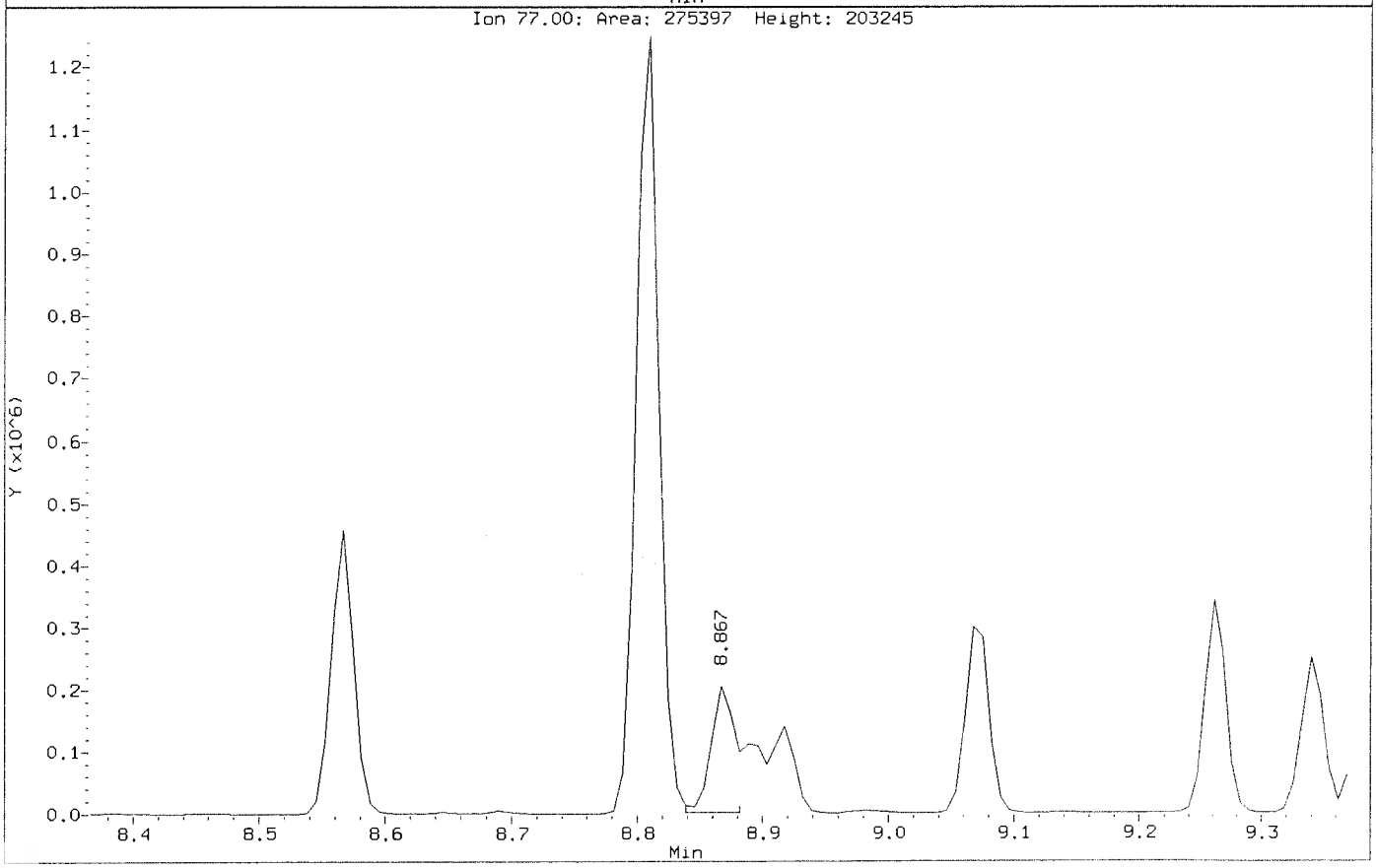




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Instrument: voa6.i
Client Sample ID: VSTD200

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
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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 :
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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

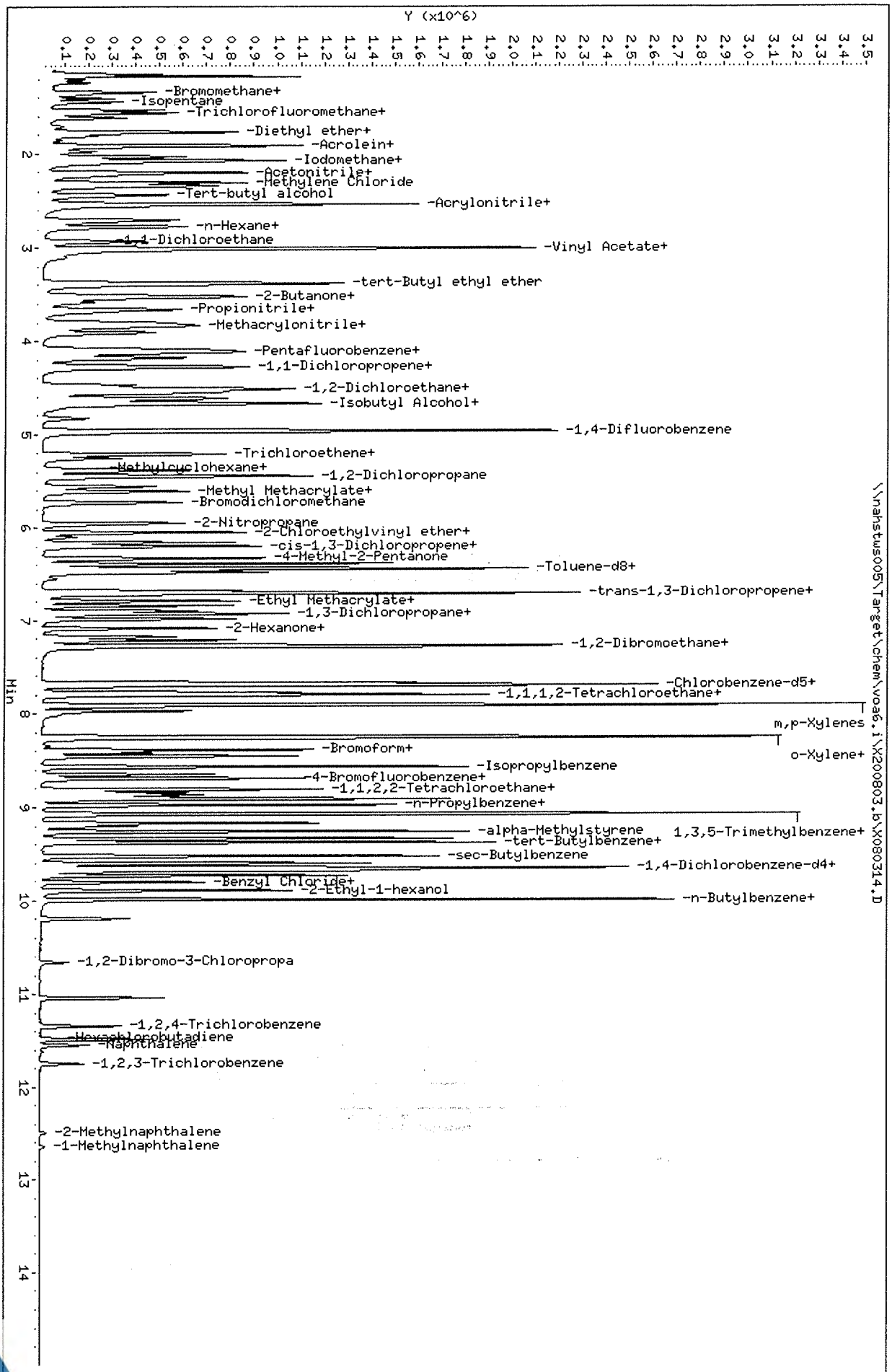
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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.

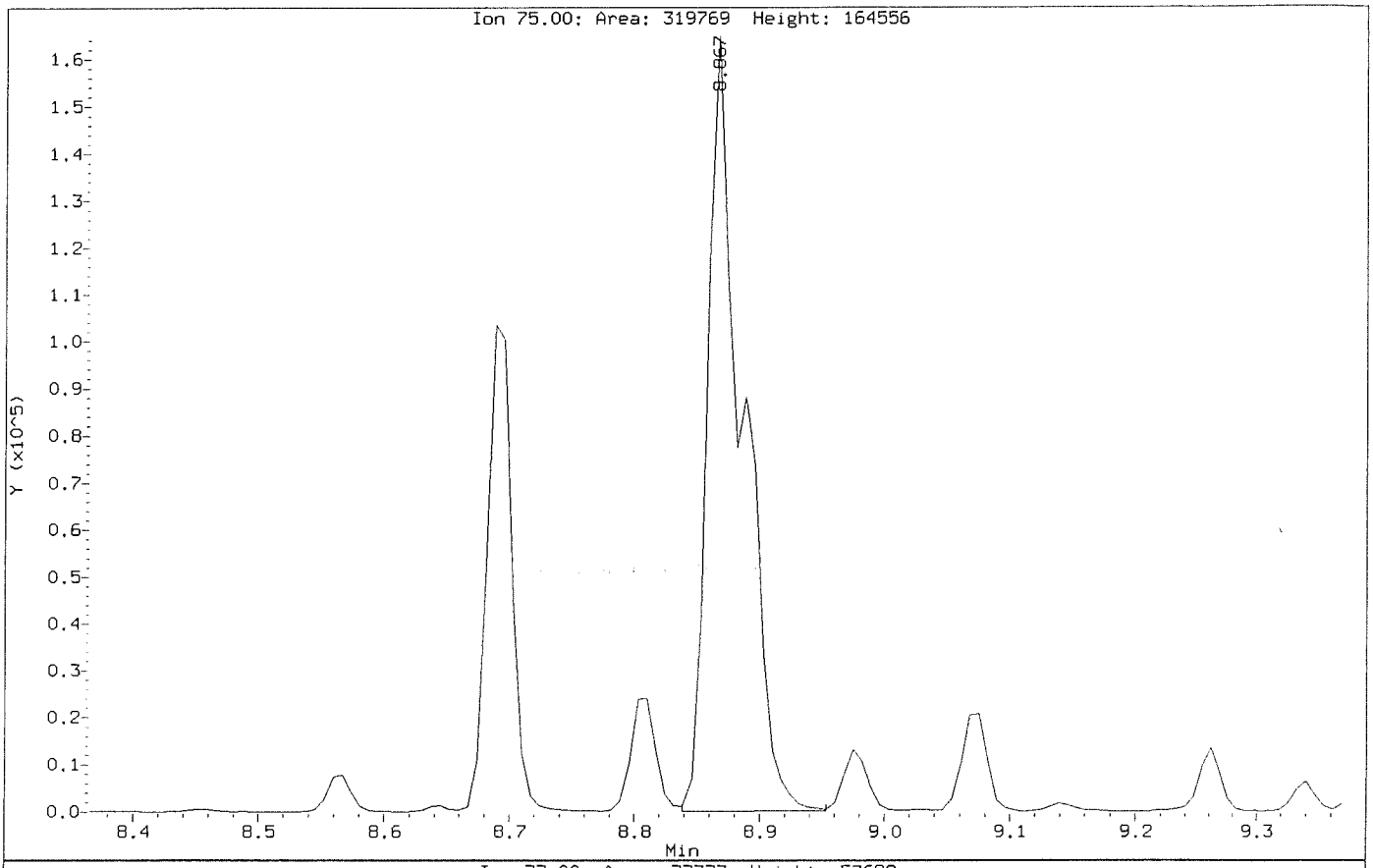


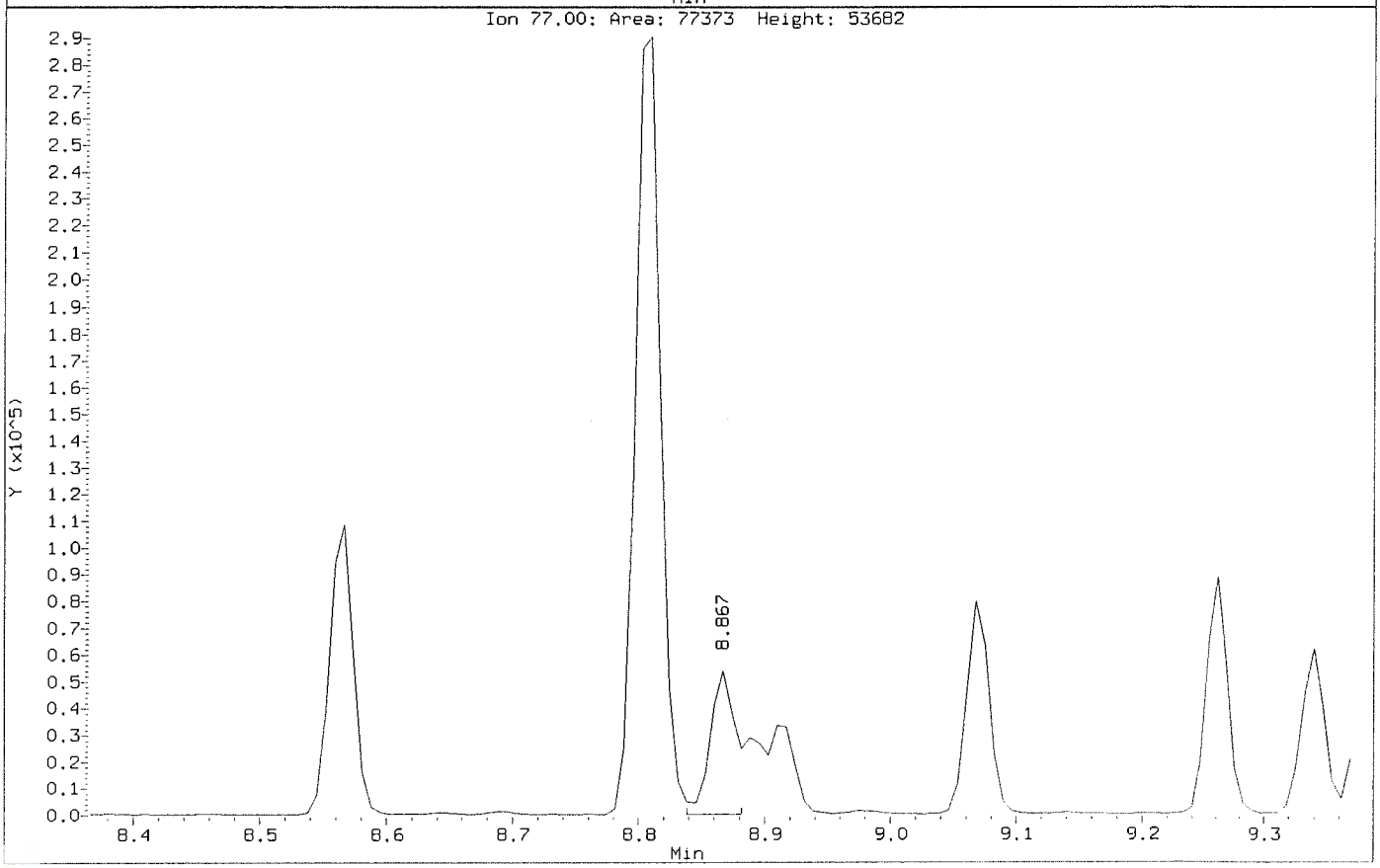
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Purge Volume: 5.0
Column phase: DB624

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

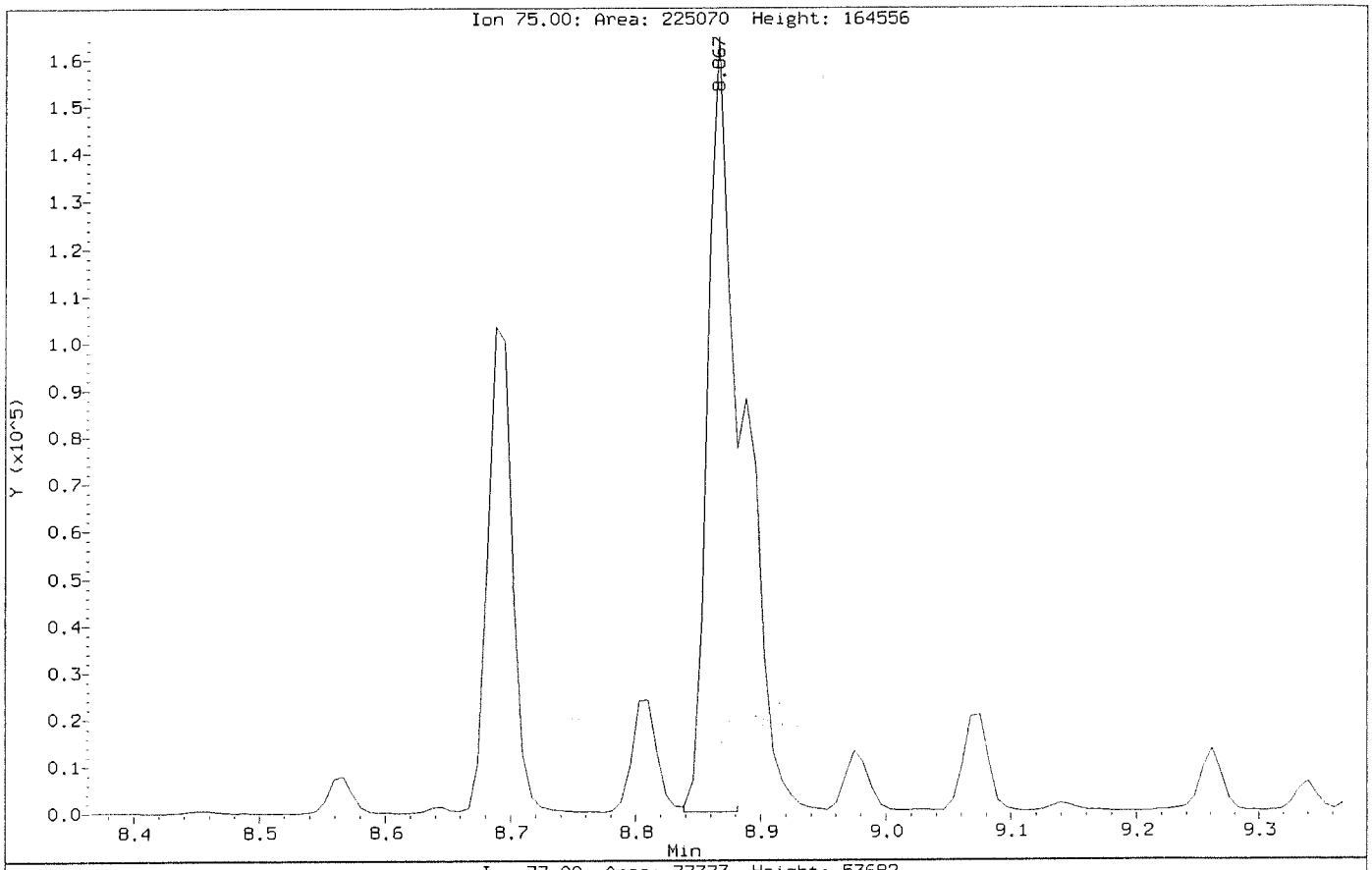
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

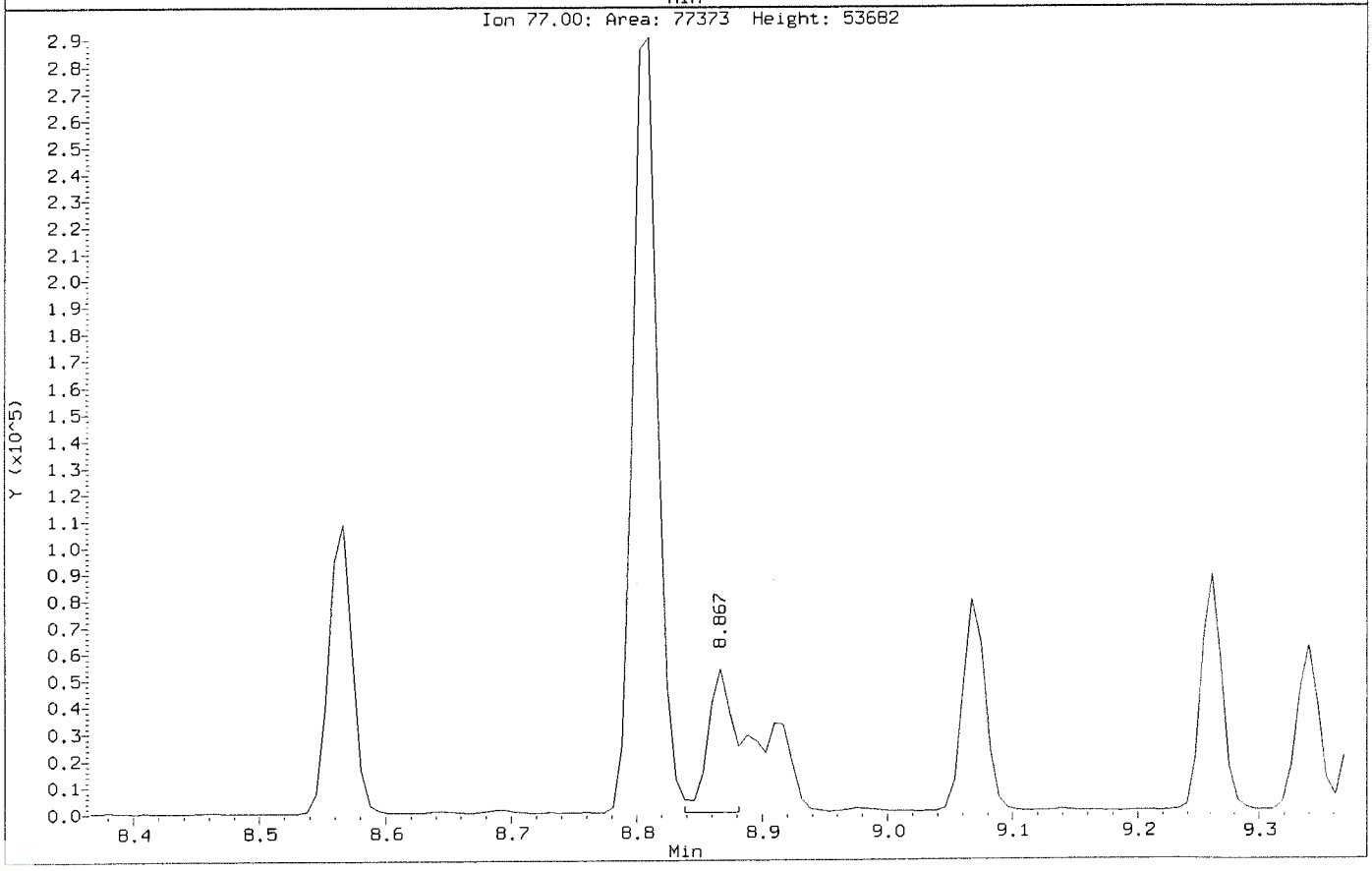




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

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





MSVOA06 -Logbook

Batch: 41774 **Analyst:** Presenta Cabascango

Date: 09-11-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	09-11-2020 10:37 am	1.00	50 mL	50 mL	X091101a.D	Liquid	Y	NA
	auto find/ purged									
2	BFB	TUNE	09-11-2020 11:01 am	1.00	50 mL	50 mL	X091102.D	Liquid	Y	NA
	Auto find/ purged									
3	CCV	CCV	09-11-2020 11:25 am	1.00	50 mL	50 mL	X091103.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	09-11-2020 11:49 am	1.00	50 mL	50 mL	X091104.D	Liquid	Y	NA
5	CCB	SAMP	09-11-2020 12:13 pm	1.00	50 mL	50 mL	X091105.D	Liquid	Y	NA
6	VLCSW-200911	LCS	09-11-2020 12:37 pm	1.00	50 mL	50 mL	X091106.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
7	BLANK	SAMP	09-11-2020 01:25 pm	1.00	50 mL	50 mL	X091107.D	Liquid	Y	NA
8	VBLKW-200911	MBLK	09-11-2020 01:49 pm	1.00	50 mL	50 mL	X091108.D	Liquid	Y	NA
9	HS20090534-02	SAMP	09-11-2020 02:13 pm	1.00	50 mL	50 mL	X091110.D	Liquid	Y	<2
10	HS20090534-01	SAMP	09-11-2020 02:37 pm	1.00	50 mL	50 mL	X091111.D	Liquid	Y	<2
11	HS20090556-01	SAMP	09-11-2020 03:01 pm	1.00	50 mL	50 mL	X091112.D	Liquid	Y	NA
12	HS20090556-01MS	MS	09-11-2020 03:25 pm	1.00	50 mL	50 mL	X091113.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
13	HS20090556-01MSD	MSD	09-11-2020 03:49 pm	1.00	50 mL	50 mL	X091114.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
14	CCV-END	CCV	09-11-2020 04:13 pm	1.00	50 mL	50 mL	X091115.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	HS20090431-03	SAMP	09-11-2020 04:37 pm	1.00	50 mL	50 mL	X091116.D	Liquid	Y	<2
16	HS20090431-04	SAMP	09-11-2020 05:02 pm	100.0(	500 µL	50 mL	X091117.D	Liquid	Y	<2
17	HS20090432-01	SAMP	09-11-2020 05:26 pm	5.00	10 mL	50 mL	X091118.D	Liquid	Y	<2
18	HS20090434-01	SAMP	09-11-2020 05:50 pm	100.0(	500 µL	50 mL	X091119.D	Liquid	Y	<2
19	HS20090434-02	SAMP	09-11-2020 06:14 pm	100.0(	500 µL	50 mL	X091120.D	Liquid	Y	<2
20	HS20090434-03	SAMP	09-11-2020 06:38 pm	100.0(	500 µL	50 mL	X091121.D	Liquid	Y	<2
21	MBLK-157215	MBLK	09-11-2020 07:02 pm	20.00	2.5 mL	50 mL	X091122.D	Liquid	Y	<2
	tclps									
22	HS20090369-01	SAMP	09-11-2020 07:26 pm	20.00	2.5 mL	50 mL	X091123.D	Liquid	Y	<2
23	HS20090289-01	SAMP	09-11-2020 07:50 pm	20.00	2.5 mL	50 mL	X091124.D	Liquid	Y	<2
24	HS20090393-01	SAMP	09-11-2020 08:14 pm	20.00	2.5 mL	50 mL	X091125.D	Liquid	Y	<2
25	HS20090455-01	SAMP	09-11-2020 08:38 pm	20.00	2.5 mL	50 mL	X091126.D	Liquid	Y	<2
26	HS20090392-01	SAMP	09-11-2020 09:02 pm	20.00	2.5 mL	50 mL	X091127.D	Liquid	Y	<2
27	HS20090395-01	SAMP	09-11-2020 09:26 pm	20.00	2.5 mL	50 mL	X091128.D	Liquid	Y	<2
28	HS20090394-01	SAMP	09-11-2020 09:50 pm	20.00	2.5 mL	50 mL	X091129.D	Liquid	Y	<2
29	HS20090525-02	SAMP	09-11-2020 10:14 pm	1.00	50 mL	50 mL	X091130.D	Liquid	Y	<2
30	HS20090525-03	SAMP	09-11-2020 10:38 pm	1.00	50 mL	50 mL	X091131.D	Liquid	Y	<2

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-42-06
IS ID	31106-42-06
CAL STD ID	31106-46-01/02
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.: HS20090534

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200911	91	96	97	92	0
02	VBLKW-200911	87	94	105	98	0
03	HS20090534-02	89	94	106	98	0
04	HS20090534-01	89	96	106	96	0
05	HS20090556-01	88	95	103	96	0
06	HS20090556-01	89	96	103	97	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-200911

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090534

Lab File ID: X091108 Lab Sample ID: VBLKW-200911

Date Analyzed: 09/11/20 Time Analyzed: 1349

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-200911	VLCSW-200911	X091106	1237
02	HS20090534-0	HS20090534-02	X091110	1413
03	HS20090534-0	HS20090534-01	X091111	1437
04	HS20090556-0	HS20090556-01M	X091113	1525
05	HS20090556-0	HS20090556-01M	X091114	1549
06				
07				
08				
09				
10				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090534

Lab File ID: X091102 BFB Injection Date: 09/11/20

Instrument ID: VOA6 BFB Injection Time: 1101

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	25.8
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	52.3
175	5.0 - 9.0% of mass 174	4.3 (8.3)1
176	95.0 - 101.0% of mass 174	51.5 (98.3)1
177	5.0 - 9.0% of mass 176	3.9 (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	X091103	09/11/20	1125
02	VLCSW-200911	VLCSW-200911	X091106	09/11/20	1237
03	VBLKW-200911	VBLKW-200911	X091108	09/11/20	1349
04	HS20090534-0	HS20090534-02	X091110	09/11/20	1413
05	HS20090534-0	HS20090534-01	X091111	09/11/20	1437
06	HS20090556-0	HS20090556-01M	X091113	09/11/20	1525
07	HS20090556-0	HS20090556-01M	X091114	09/11/20	1549
08	CCV-END	CCV-END	X091115	09/11/20	1613
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.: HS20090534

Instrument ID: VOA6 Calibration Date: 09/11/20 Time: 1125

Lab File ID: X091103 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	0.5426902	0.5426902	0.2	-3.17	20.00	AVRG	
trans-1,3-Dichloropropene	0.4820000	0.4755660	0.4755660	0.1	1.33	20.00	AVRG	
1,3-Dichlorobenzene	1.5720000	1.5755704	1.5755704	0.6	-0.23	20.00	AVRG	
2,2-Dichloropropane	0.7130000	0.7294923	0.7294923	0.1	-2.31	20.00	AVRG	
1,1-Dichloropropene	0.4200000	0.4130792	0.4130792	0.1	1.65	20.00	AVRG	
Dibromomethane	0.2170000	0.2111777	0.2111777	0.1	2.68	20.00	AVRG	
1,2-Dibromoethane	0.3660000	0.3560474	0.3560474	0.1	2.72	20.00	AVRG	
trans-1,2-Dichloroethene	0.4690000	0.4802711	0.4802711	0.1	-2.40	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3800000	0.3725798	0.3725798	0.1	1.95	20.00	AVRG	
1,1,1-Trichloroethane	0.7700000	0.7408615	0.7408615	0.1	3.78	20.00	AVRG	
1,1,2,2-Tetrachloroethane	47.855316	50.000000	0.7706842	0.3	4.29	20.00	LINR	
1,1,2-Trichloroethane	0.2840000	0.2763046	0.2763046	0.1	2.71	20.00	AVRG	
1,1-Dichloroethane	0.9760000	1.0171376	1.0171376	0.2	-4.21	20.00	AVRG	
1,1-Dichloroethene	0.3960000	0.4051757	0.4051757	0.1	-2.32	20.00	AVRG	
Trichloroethene	0.3540000	0.3607867	0.3607867	0.2	-1.92	20.00	AVRG	
1,2,3-Trichlorobenzene	0.1500000	0.1963756	0.1963756	0.01	-30.92	20.00	AVRG	<-
Trichlorofluoromethane	0.7360000	0.6986791	0.6986791	0.1	5.07	20.00	AVRG	
1,2,4-Trichlorobenzene	64.988010	50.000000	0.3770390	0.1	-29.98	20.00	2RDR	<-
1,2,4-Trimethylbenzene	2.6710000	2.7125183	2.7125183	0.1	-1.55	20.00	AVRG	
Tetrachloroethene	0.3180000	0.3139610	0.3139610	0.2	1.27	20.00	AVRG	
1,2-Dichlorobenzene	1.4140000	1.3709395	1.3709395	0.4	3.04	20.00	AVRG	
1,2-Dichloroethane	0.4840000	0.4697917	0.4697917	0.1	2.94	20.00	AVRG	
1,2-Dichloropropane	0.3670000	0.3911584	0.3911584	0.1	-6.58	20.00	AVRG	
1,3,5-Trimethylbenzene	2.6130000	2.6777865	2.6777865	0.1	-2.48	20.00	AVRG	
1,3-Dichloropropane	0.5620000	0.5539296	0.5539296	0.1	1.44	20.00	AVRG	
1,4-Dichlorobenzene	1.5540000	1.5615762	1.5615762	0.4	-0.49	20.00	AVRG	
Toluene	1.4600000	1.4868162	1.4868162	0.4	-1.84	20.00	AVRG	
2-Butanone	0.2450000	0.2088422	0.2088422	0.1	14.76	20.00	AVRG	
2-Chlorotoluene	2.1690000	2.2181285	2.2181285	0.1	-2.26	20.00	AVRG	
2-Hexanone	0.3140000	0.2520711	0.2520711	0.1	19.72	20.00	AVRG	
4-Chlorotoluene	2.5230000	2.5877068	2.5877068	0.1	-2.56	20.00	AVRG	
tert-Butylbenzene	2.2650000	2.2844099	2.2844099	0.1	-0.86	20.00	AVRG	
4-Methyl-2-Pentanone	0.4630000	0.3736210	0.3736210	0.1	19.30	20.00	AVRG	
Acetone	91.805226	100.00000	0.1601631	0.1	8.19	20.00	LINR	
Benzene	1.2410000	1.2868866	1.2868866	0.5	-3.70	20.00	AVRG	
Bromobenzene	0.9780000	0.9810798	0.9810798	0.1	-0.31	20.00	AVRG	
Bromochloromethane	0.3010000	0.2949093	0.2949093	0.1	2.02	20.00	AVRG	
Bromodichloromethane	0.4500000	0.4443264	0.4443264	0.2	1.26	20.00	AVRG	
Bromoform	0.2780000	0.2430463	0.2430463	0.1	12.57	20.00	AVRG	
Bromomethane	54.204933	50.000000	0.3734850	0.1	-8.41	20.00	LINR	
Carbon Disulfide	1.2300000	1.2240949	1.2240949	0.1	0.48	20.00	AVRG	
Carbon Tetrachloride	0.4460000	0.4135048	0.4135048	0.1	7.28	20.00	AVRG	

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009053

Instrument ID: VOA6 Calibration Date: 09/11/20 Time: 1125

Lab File ID: X091103 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	0.9940263	0.9940263	0.5	-1.43	20.00	AVRG	
Chloroethane	0.3540000	0.3566919	0.3566919	0.1	-0.76	20.00	AVRG	
Chloroform	0.8930000	0.8889593	0.8889593	0.2	0.45	20.00	AVRG	
Chloromethane	0.7020000	0.6719619	0.6719619	0.1	4.28	20.00	AVRG	
cis-1,2-Dichloroethene	0.5500000	0.5627843	0.5627843	0.1	-2.32	20.00	AVRG	
Dibromochloromethane	0.4000000	0.3797306	0.3797306	0.1	5.07	20.00	AVRG	
Dichlorodifluoromethane	0.4890000	0.4130439	0.4130439	0.1	15.53	20.00	AVRG	
Ethylbenzene	0.5060000	0.5035504	0.5035504	0.1	0.48	20.00	AVRG	
Hexachlorobutadiene	0.2680000	0.3627652	0.3627652	0.1	-35.36	20.00	AVRG	<-
Isopropylbenzene	1.4850000	1.4553986	1.4553986	0.1	1.99	20.00	AVRG	
m,p-Xylenes	0.6100000	0.6029517	0.6029517	0.1	1.16	20.00	AVRG	
Methylene Chloride	51.015397	50.000000	0.5255594	0.1	-2.03	20.00	LINR	
n-Butylbenzene	2.2110000	2.3167394	2.3167394	0.5	-4.78	20.00	AVRG	
n-Propylbenzene	3.6020000	3.7233561	3.7233561	0.1	-3.37	20.00	AVRG	
Naphthalene	57.468244	50.000000	0.4621927	0.2	-14.94	20.00	2RDR	
o-Xylene	0.6000000	0.5999273	0.5999273	0.3	0.01	20.00	AVRG	
sec-Butylbenzene	3.0380000	3.0850507	3.0850507	0.1	-1.55	20.00	AVRG	
Styrene	1.0410000	1.0512929	1.0512929	0.3	-0.99	20.00	AVRG	
Vinyl Chloride	0.6440000	0.6348771	0.6348771	0.1	1.42	20.00	AVRG	
1,2,3-Trichloropropane	0.7320000	0.6545731	0.6545731	0.1	10.58	20.00	AVRG	
p-Isopropyltoluene	2.7680000	2.8064129	2.8064129	0.1	-1.39	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	42.075072	50.000000	6.e-002	0.05	15.85	20.00	LINR	
1,2-Dichloroethane-d4	0.5820000	0.5372823	0.5372823	0.1	7.68	20.00	AVRG	
Dibromofluoromethane	0.4910000	0.4808017	0.4808017	0.1	2.08	20.00	AVRG	
Toluene-d8	1.2130000	1.2010150	1.2010150	0.1	0.99	20.00	AVRG	
4-Bromofluorobenzene	0.4680000	0.4405435	0.4405435	0.1	5.87	20.00	AVRG	

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090534

Lab File ID (Standard): X091103 Date Analyzed: 09/11/20

Instrument ID: VOA6 Time Analyzed: 1125

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

		IS1(CBZ) AREA #	IS1(CBZ) RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(DCB) AREA #	IS3(DCB) RT #
	12 HOUR STD	599791	7.67	657915	4.97	271826	9.66
	UPPER LIMIT	1199582	8.17	1315830	5.47	543652	10.16
	LOWER LIMIT	299896	7.17	328958	4.47	135913	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200911	633231	7.67	700146	4.97	290605	9.66
02	VBLKW-200911	596787	7.67	677401	4.97	277182	9.67
03	HS20090534-02	598539	7.67	674280	4.97	278863	9.67
04	HS20090534-01	578351	7.67	667279	4.97	266792	9.67
05	HS20090556-01	569395	7.67	627425	4.97	263988	9.66
06	HS20090556-01	562154	7.67	625889	4.97	263355	9.66
07							
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18							
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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 VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090534

Lab File ID (Standard): X091103 Date Analyzed: 09/11/20

Instrument ID: VOA6 Time Analyzed: 1125

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	435300	4.19				
	UPPER LIMIT	870600	4.69				
	LOWER LIMIT	217650	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200911	463162	4.19				
02	VBLKW-200911	453117	4.19				
03	HS20090534-02	447119	4.19				
04	HS20090534-01	442249	4.19				
05	HS20090556-01	423503	4.19				
06	HS20090556-01	414539	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\X200911.b\X091102.D

Date : 11-SEP-2020 11:01

Client ID: BFB

Instrument: voa6.i

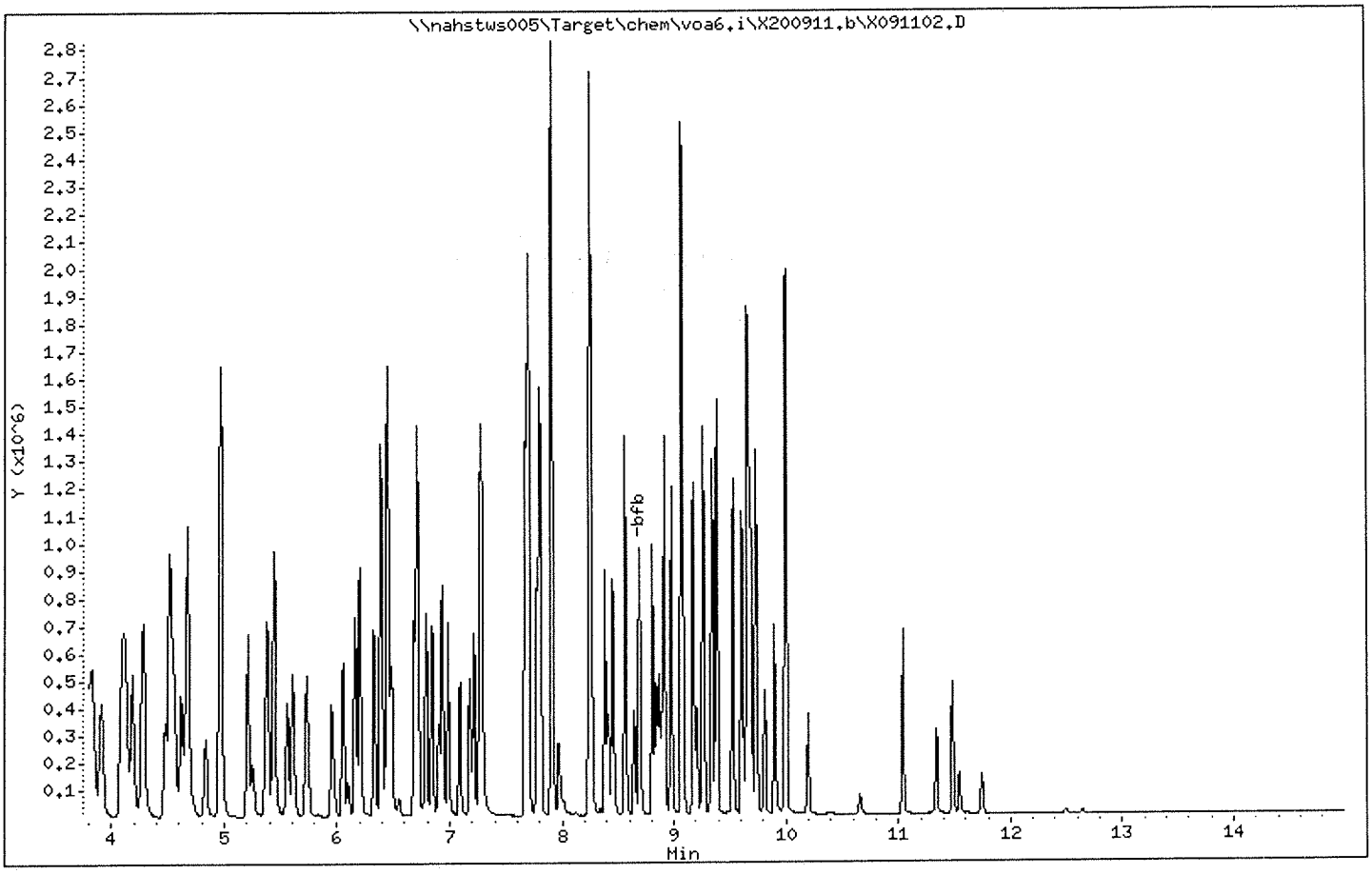
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091102.D

Date : 11-SEP-2020 11:01

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

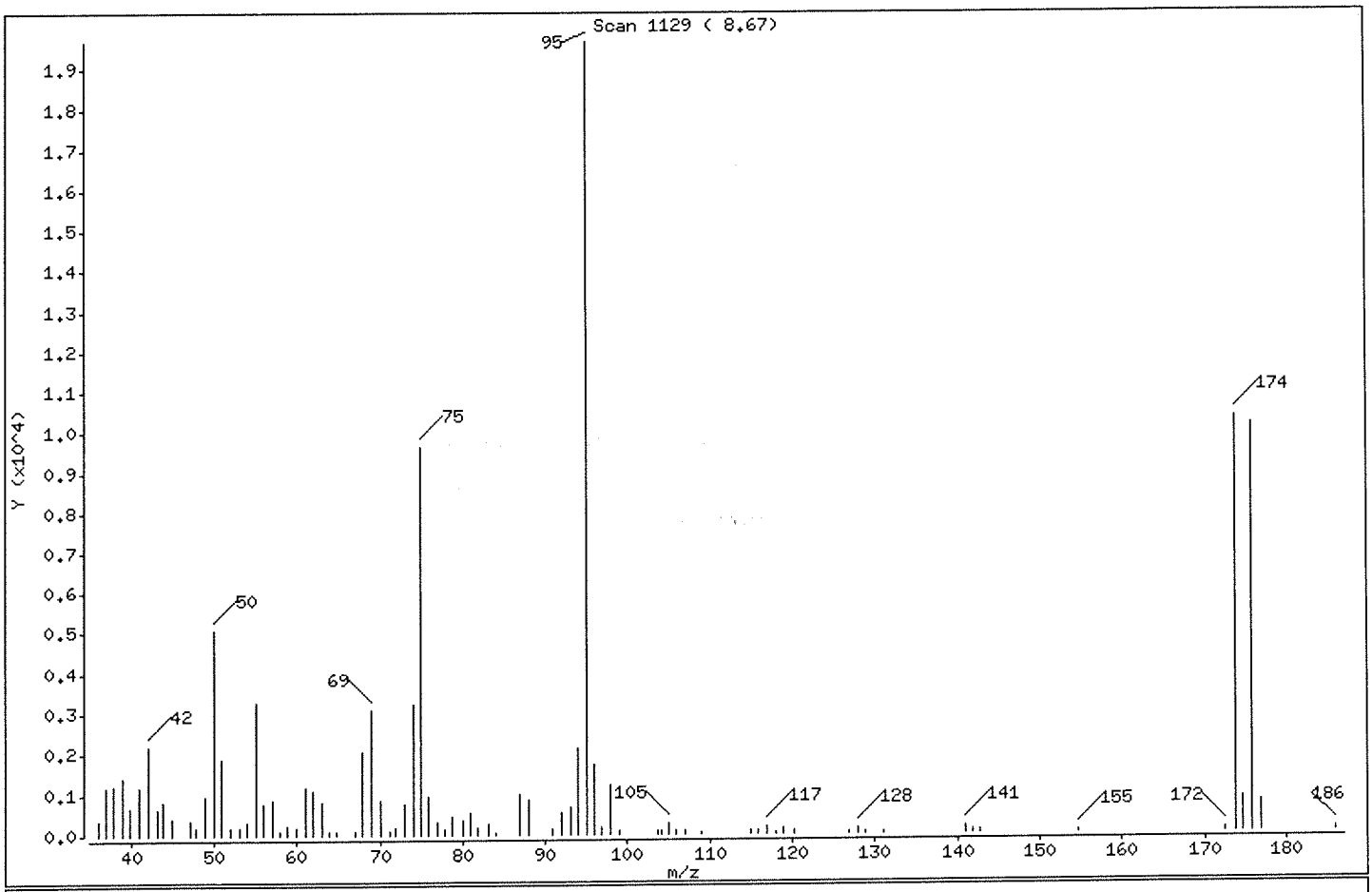
Volume Injected (uL): 2.0

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	25.83
75	30.00 - 60.00% of mass 95	49.03
96	5.00 - 9.00% of mass 95	8.70
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	52.34
175	5.00 - 9.00% of mass 174	4.33 (8.26)
176	95.00 - 101.00% of mass 174	51.48 (98.35)
177	5.00 - 9.00% of mass 176	3.86 (7.49)

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091102.D

Date : 11-SEP-2020 11:01

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: X091102.D
Spectrum: Scan 1129 (8.67)
Location of Maximum: 95.00
Number of points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	352	58.90	209	81.90	188	116.90	181
37.00	1188	60.00	164	83.10	270	118.00	54
37.90	1238	61.00	1188	83.90	62	118.90	121
39.00	1415	62.00	1107	86.90	1017	120.20	102
39.90	659	63.00	819	88.00	876	126.80	61
41.00	1176	64.00	106	90.90	116	127.90	140
42.00	2187	64.80	79	92.00	547	128.80	62
43.10	645	67.00	84	93.00	695	131.00	66
43.90	797	68.00	2057	93.90	2120	141.00	166
45.00	417	69.00	3086	95.00	19672	141.90	80
47.10	377	70.00	868	96.00	1712	142.70	72
47.80	186	71.20	102	96.90	172	154.70	63
48.90	932	71.90	170	98.00	1219	172.50	75
50.00	5081	73.00	786	99.00	82	173.90	10297
51.00	1861	74.00	3210	103.70	92	174.80	851
52.00	169	75.00	9645	104.10	110	175.90	10127
53.10	173	75.90	960	105.00	273	176.90	759
54.00	335	76.90	328	105.90	76	186.10	112
55.00	3244	77.90	158	107.00	109		
56.00	776	78.80	463	109.00	63		
57.00	880	80.00	342	114.90	85		
58.00	112	80.90	524	115.80	79		

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Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091103.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 11-SEP-2020 11:25
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:16 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

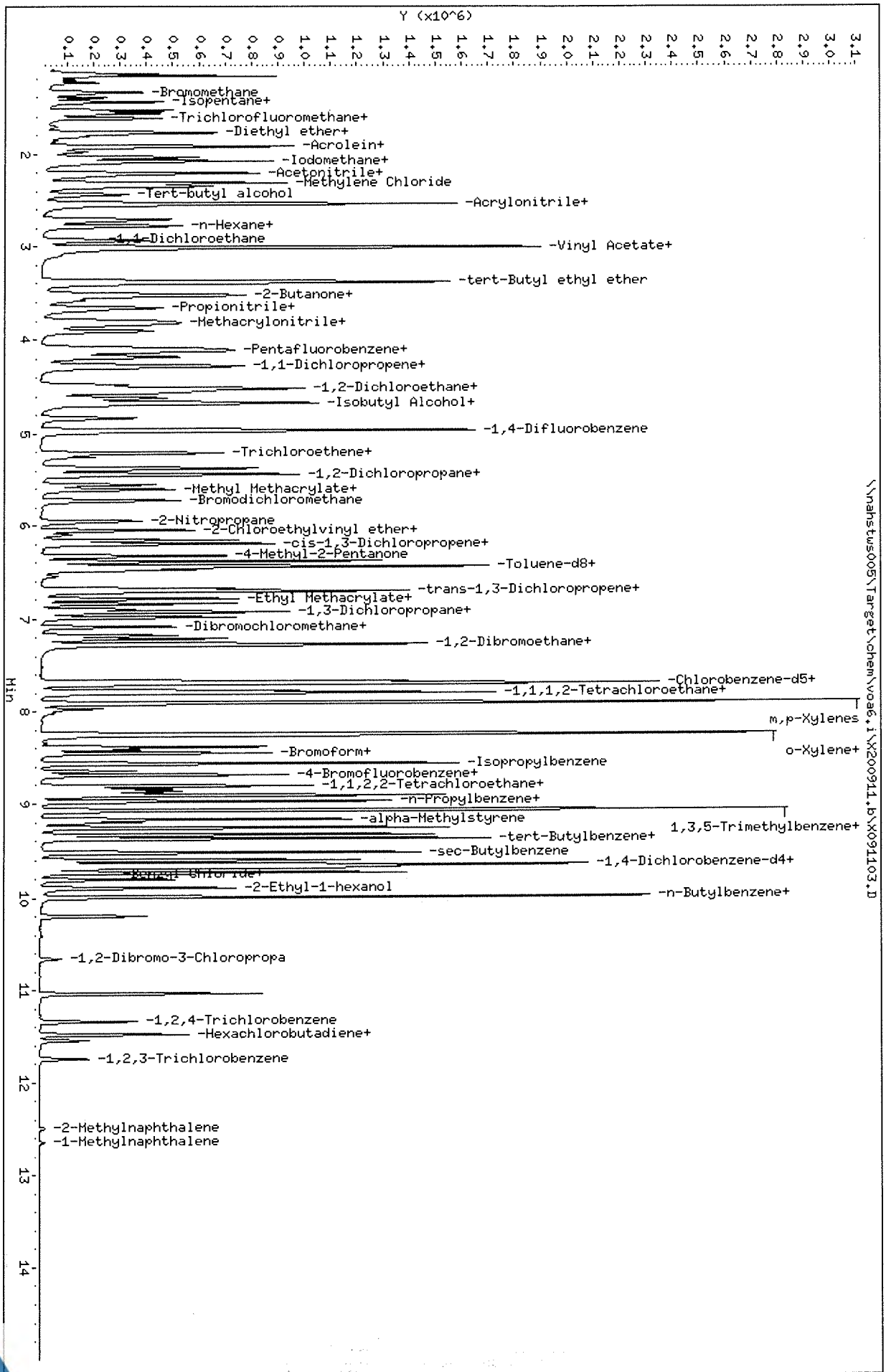
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	435300	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	657915	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	599791	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	271826	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	209293	50.0000	48.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	233879	50.0000	46.15
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	720358	50.0000	49.51
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	264234	50.0000	47.08
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	223470	50.0000	48.94
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	322497	50.0000	48.09
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	209492	50.0000	47.85
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	165725	50.0000	48.55
22 1,1-Dichloroethane	63	2.928	2.928	(0.699)	442760	50.0000	52.07
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	176373	50.0000	51.13
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	271771	50.0000	49.15
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	53380	50.0000	65.25
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	177930	50.0000	44.71(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	102489	50.0000	64.98
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	737333	50.0000	50.77
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	16307	50.0000	42.07
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	213554	50.0000	48.57
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	372657	50.0000	48.46

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091103.D Page 2
Report Date: 25-Sep-2020 09:16

	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)	309083	50.0000	48.52
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	257349	50.0000	53.29
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	727892	50.0000	51.24
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	428281	50.0000	50.12
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	332242	50.0000	49.30
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	424477	50.0000	50.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	317548	50.0000	51.14
24	2-Butanone	43	3.580	3.580	(0.855)	181818	100.000	85.20
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	602945	50.0000	51.12
52	2-Hexanone	43	7.090	7.090	(0.924)	302380	100.000	80.30(M)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	703406	50.0000	51.26
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	762856	50.0000	50.67
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	448189	100.000	80.73
10	Acetone	43	1.976	1.976	(0.472)	139438	100.000	91.80
37	Benzene	78	4.519	4.519	(0.909)	846662	50.0000	51.86
74	Bromobenzene	156	8.809	8.809	(0.912)	266683	50.0000	50.15
29	Bromochloromethane	128	3.802	3.802	(0.908)	128374	50.0000	48.92
39	Bromodichloromethane	83	5.729	5.729	(1.153)	292329	50.0000	49.35
66	Bromoform	173	8.415	8.415	(1.097)	145777	50.0000	43.80
6	Bromomethane	94	1.345	1.345	(0.321)	162578	50.0000	54.20
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1065697	100.000	99.51
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	272051	50.0000	46.29
59	Chlorobenzene	112	7.699	7.699	(1.004)	596208	50.0000	50.71
7	Chloroethane	64	1.403	1.403	(0.335)	155268	50.0000	50.32(M)
28	Chloroform	83	3.910	3.910	(0.933)	386964	50.0000	49.75
3	Chloromethane	50	1.080	1.080	(0.258)	292505	50.0000	47.85
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	244980	50.0000	51.12
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	357044	50.0000	51.55
55	Dibromochloromethane	129	7.176	7.176	(0.936)	227759	50.0000	47.40
44	Dibromomethane	93	5.557	5.557	(1.118)	138937	50.0000	48.52
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	179798	50.0000	42.20
61	Ethylbenzene	106	7.799	7.799	(1.017)	302025	50.0000	49.75
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	98609	50.0000	67.57
67	Isopropylbenzene	105	8.566	8.566	(1.117)	872935	50.0000	48.99
62	m,p-Xylenes	106	7.907	7.907	(1.031)	723290	100.000	98.74
17	Methylene Chloride	84	2.305	2.305	(0.550)	228776	50.0000	51.01
87	n-Butylbenzene	91	9.998	9.998	(1.035)	629750	50.0000	52.38
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1012105	50.0000	51.68
92	Naphthalene	128	11.546	11.546	(1.195)	125636	50.0000	57.46
63	o-Xylene	106	8.243	8.243	(1.075)	359831	50.0000	50.00
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	838597	50.0000	50.78
64	Styrene	104	8.258	8.258	(1.077)	630556	50.0000	50.46
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	620962	50.0000	50.42
56	Tetrachloroethene	164	6.933	6.933	(0.904)	188311	50.0000	49.38
50	Toluene	91	6.446	6.446	(0.840)	891779	50.0000	50.91
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	209062	50.0000	51.23
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	312882	50.0000	49.29
38	Trichloroethene	130	5.214	5.214	(1.049)	237367	50.0000	50.90
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	304135	50.0000	47.44
5	Vinyl Chloride	62	1.145	1.145	(0.273)	276362	50.0000	49.32

QC Flag Legend

M - Compound response manually integrated.

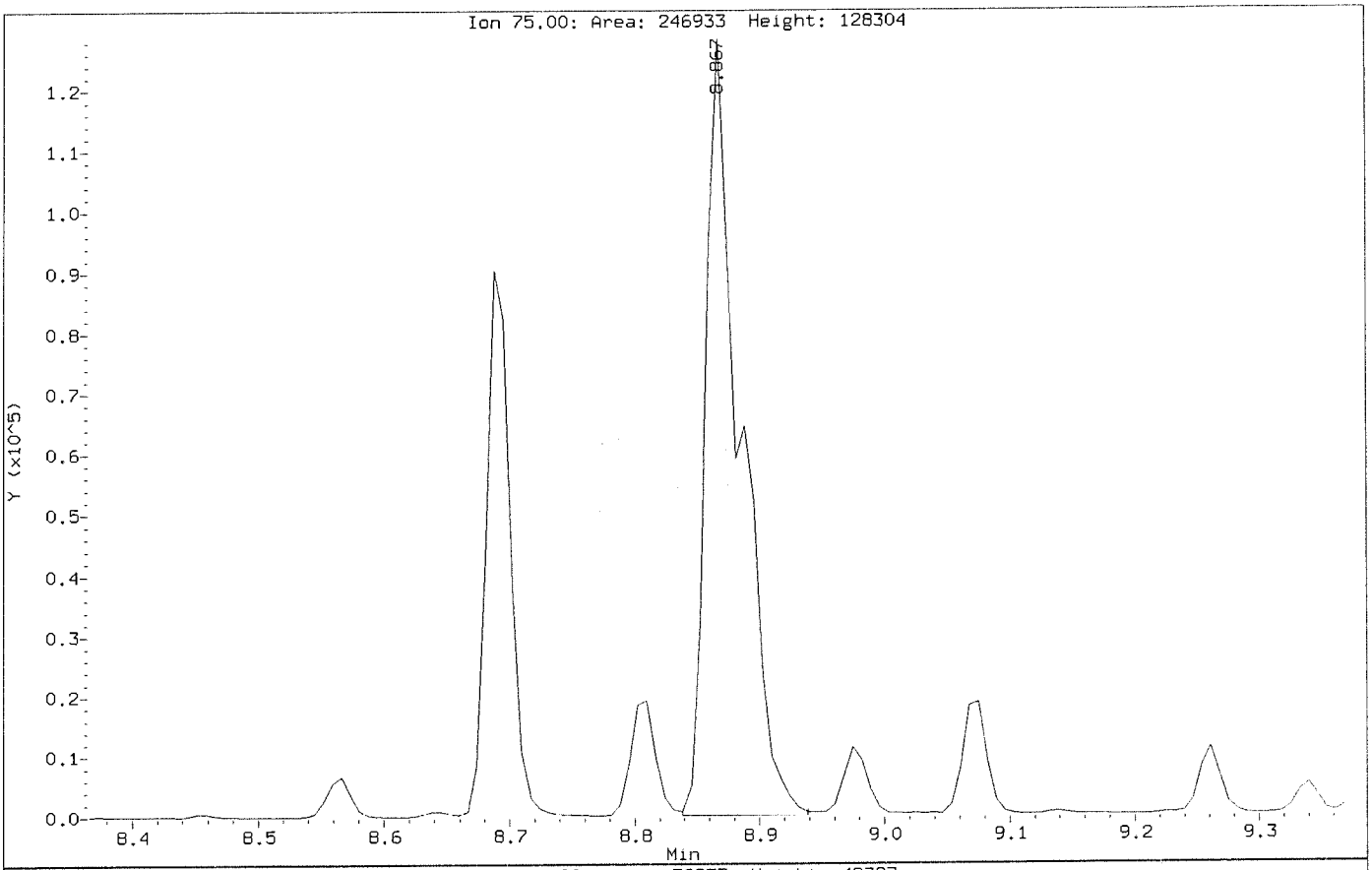


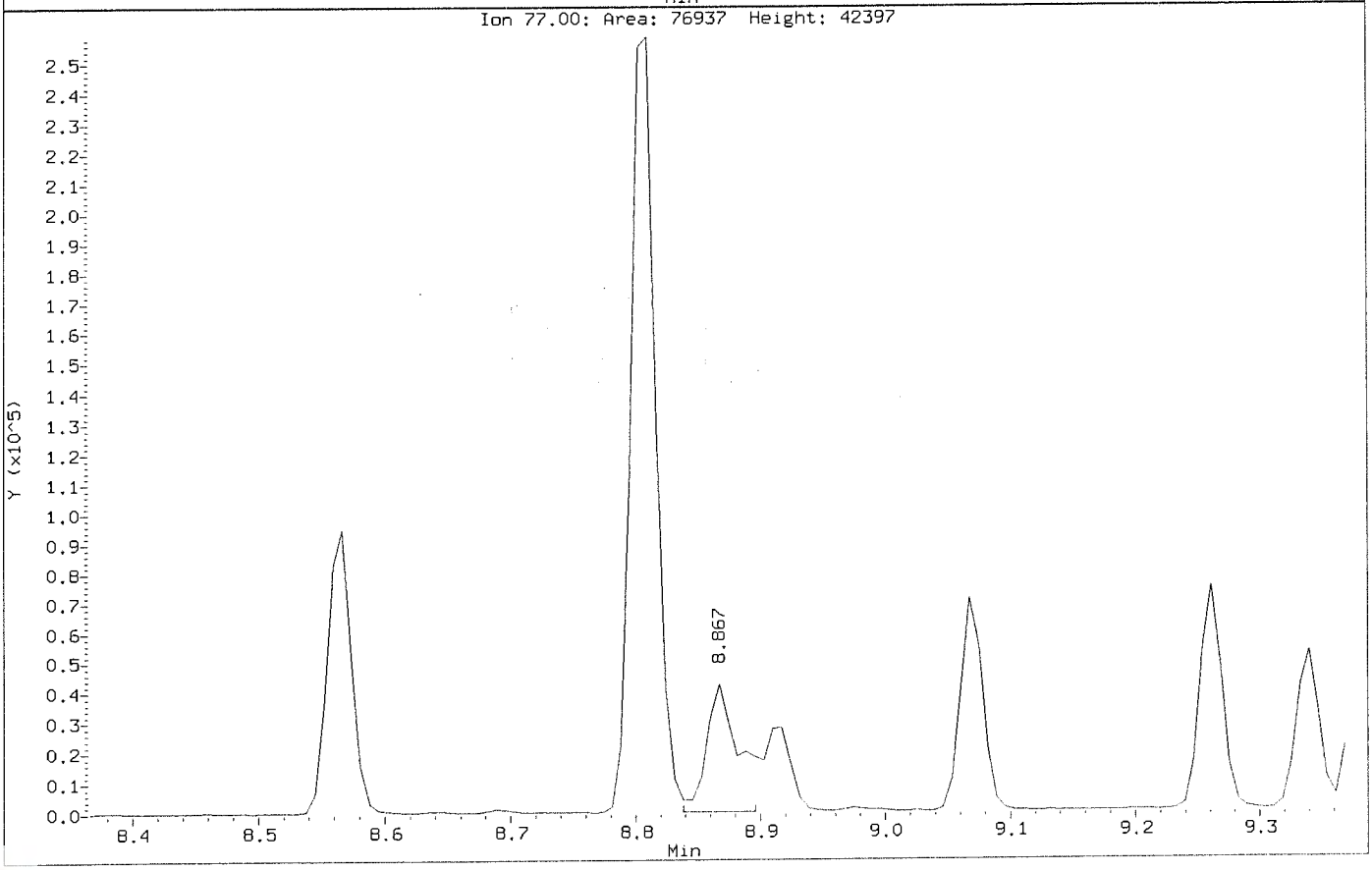
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Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\Before\X091103.D
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Instrument: voa6.i
Client Sample ID: CCV

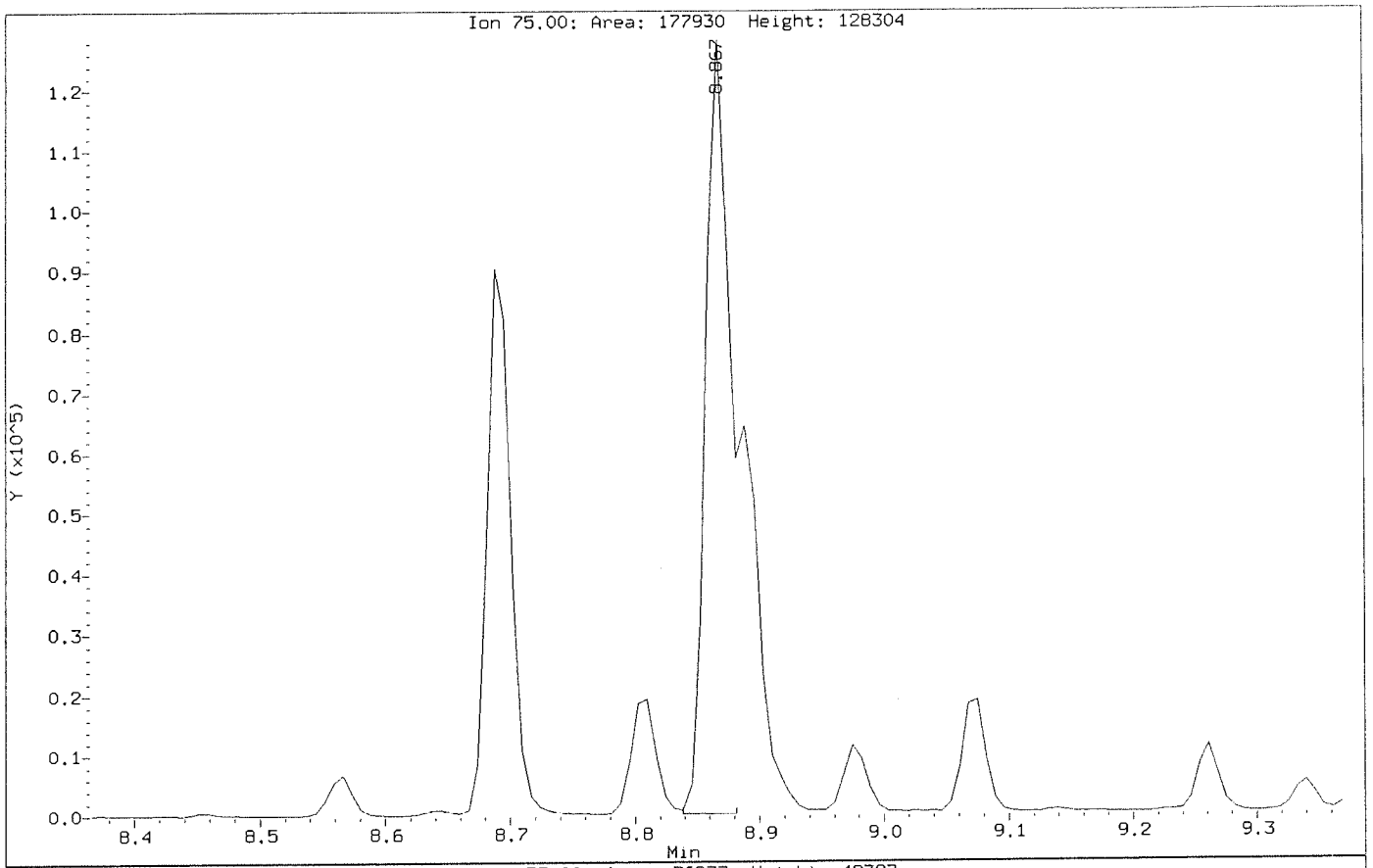
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

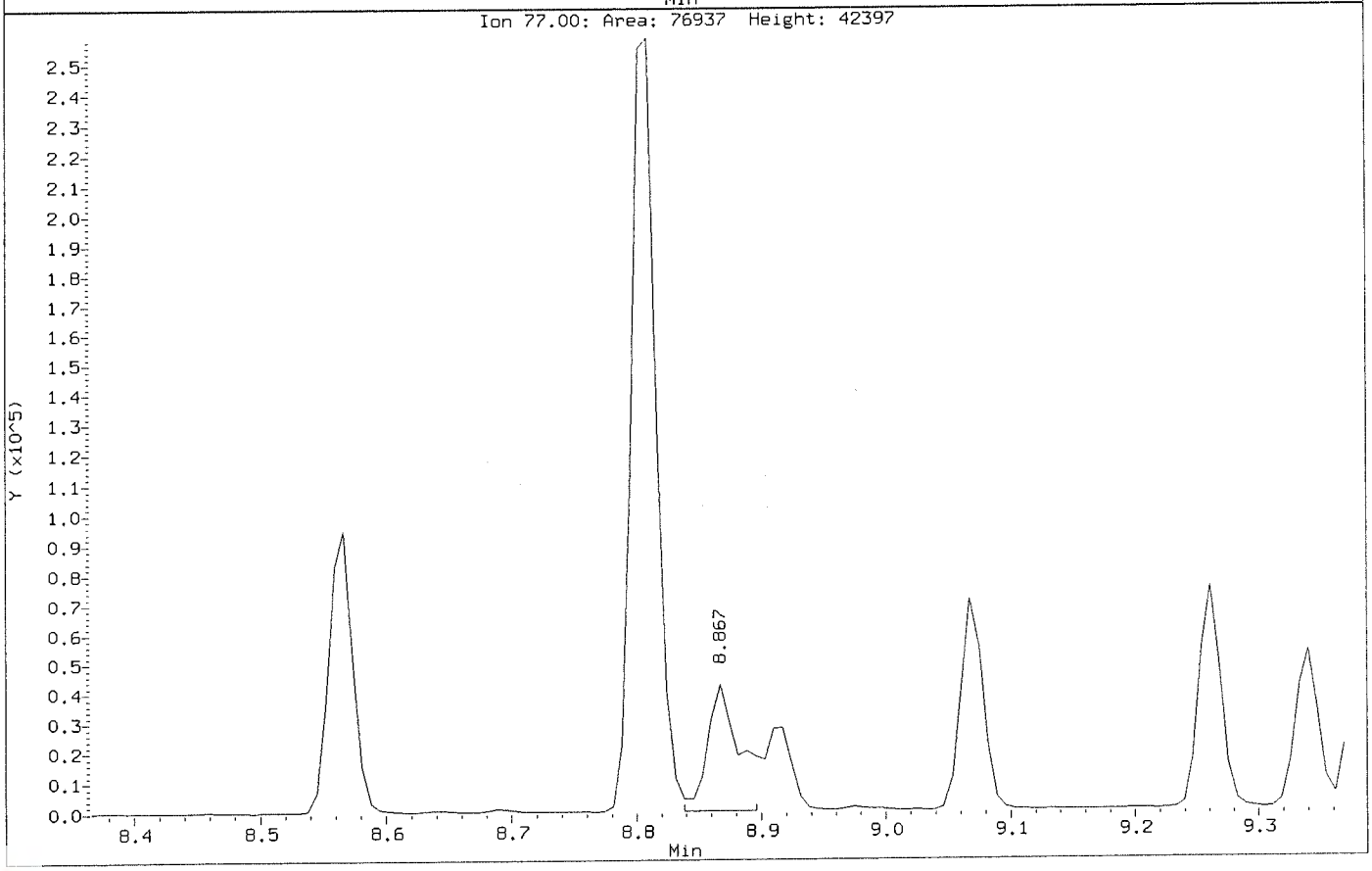




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Injection Date: 11-SEP-2020 11:25
Instrument: voa6.i
Client Sample ID: CCV

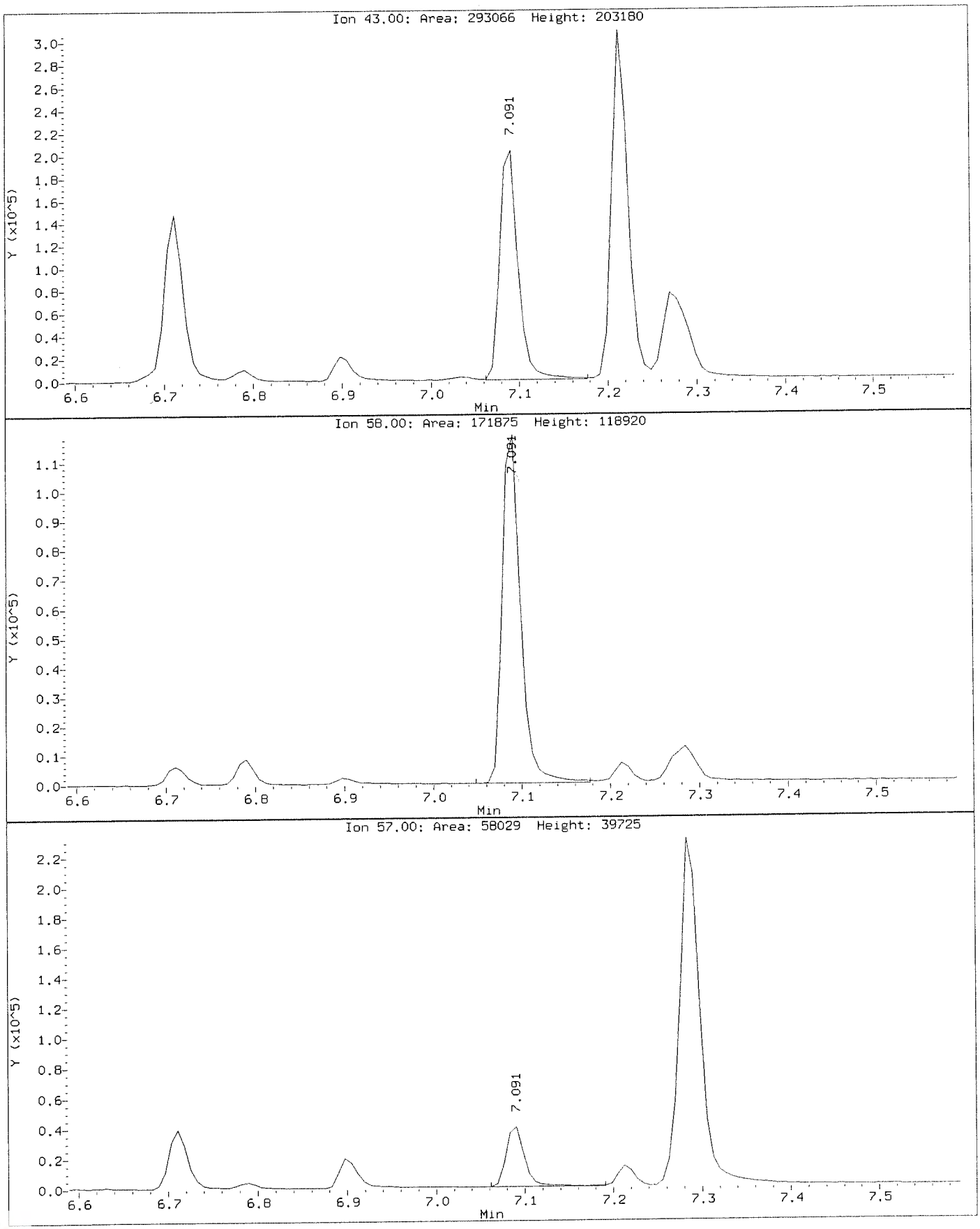
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





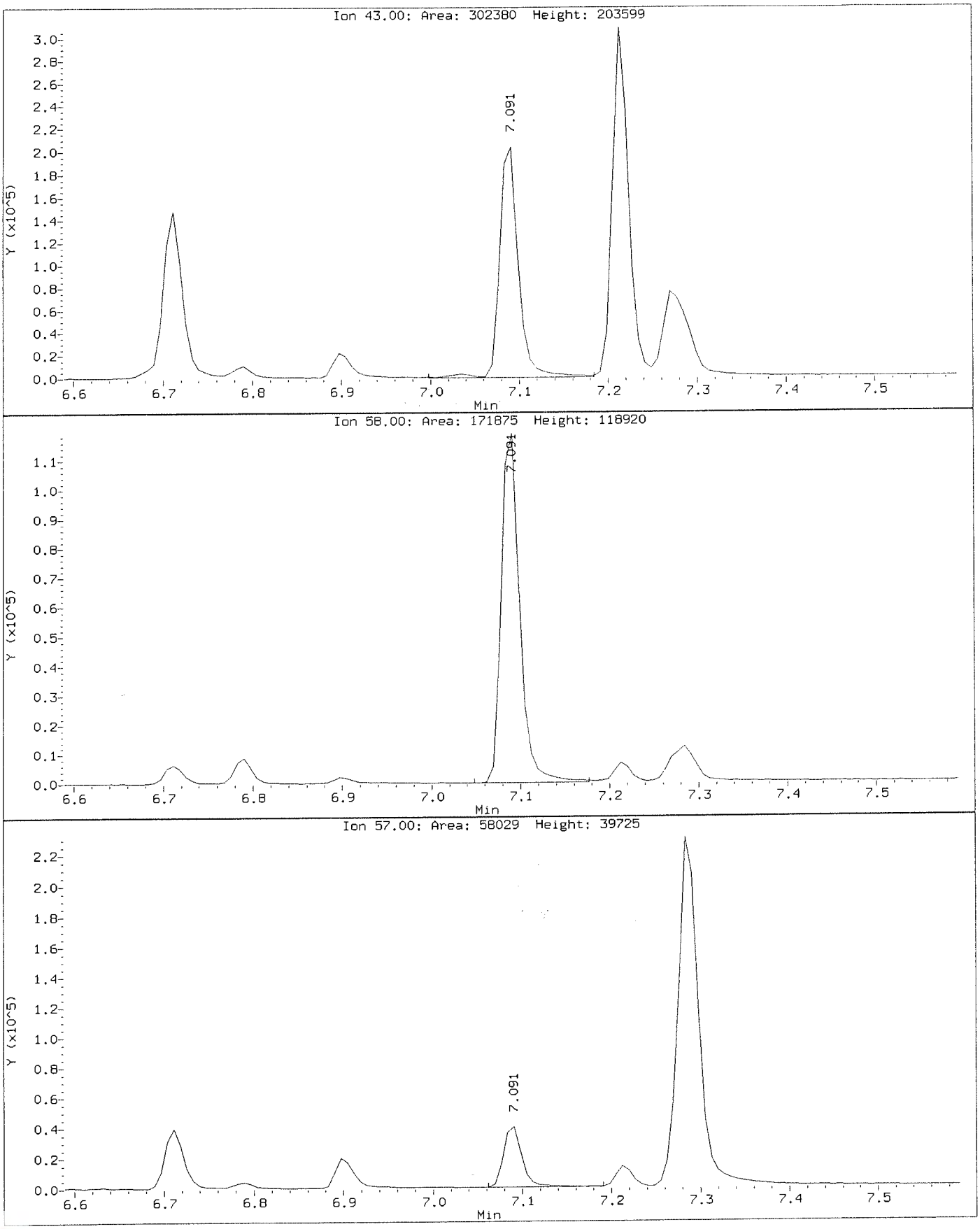
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Injection Date: 11-SEP-2020 11:25
Instrument: voa6.i
Client Sample ID: CCV

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



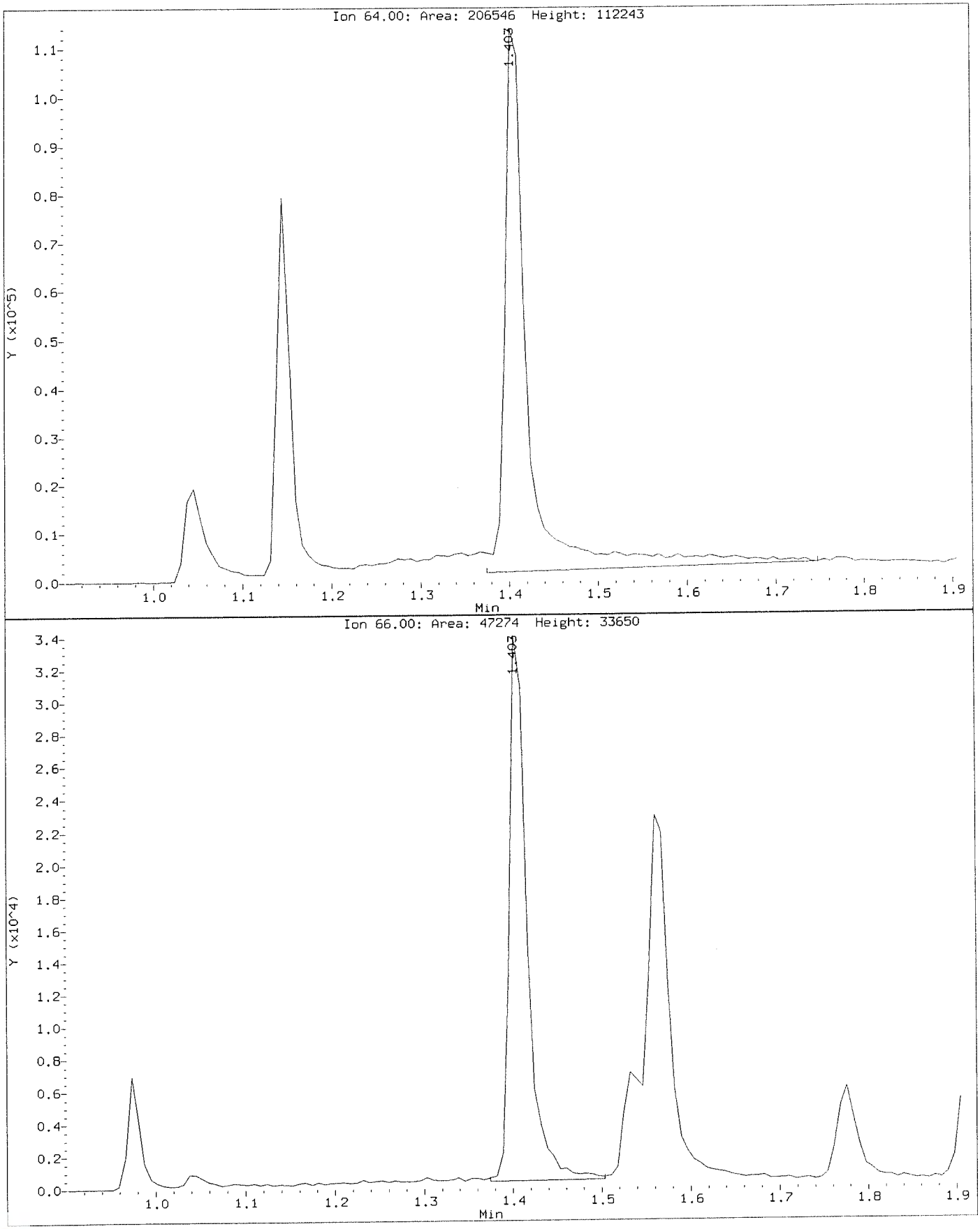
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Instrument: voa6.i
Client Sample ID: CCV

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



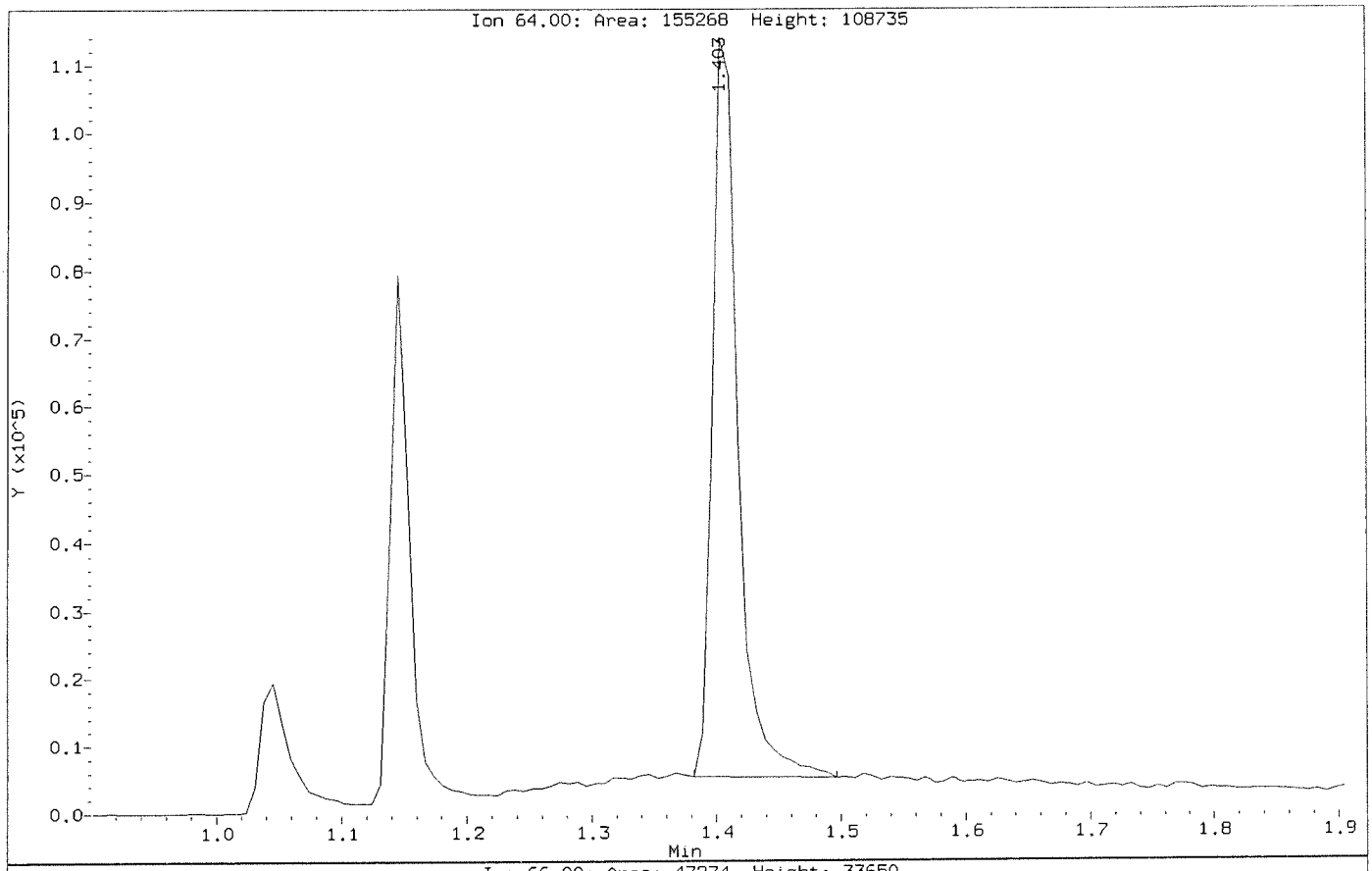
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Injection Date: 11-SEP-2020 11:25
Instrument: voa6.i
Client Sample ID: CCV

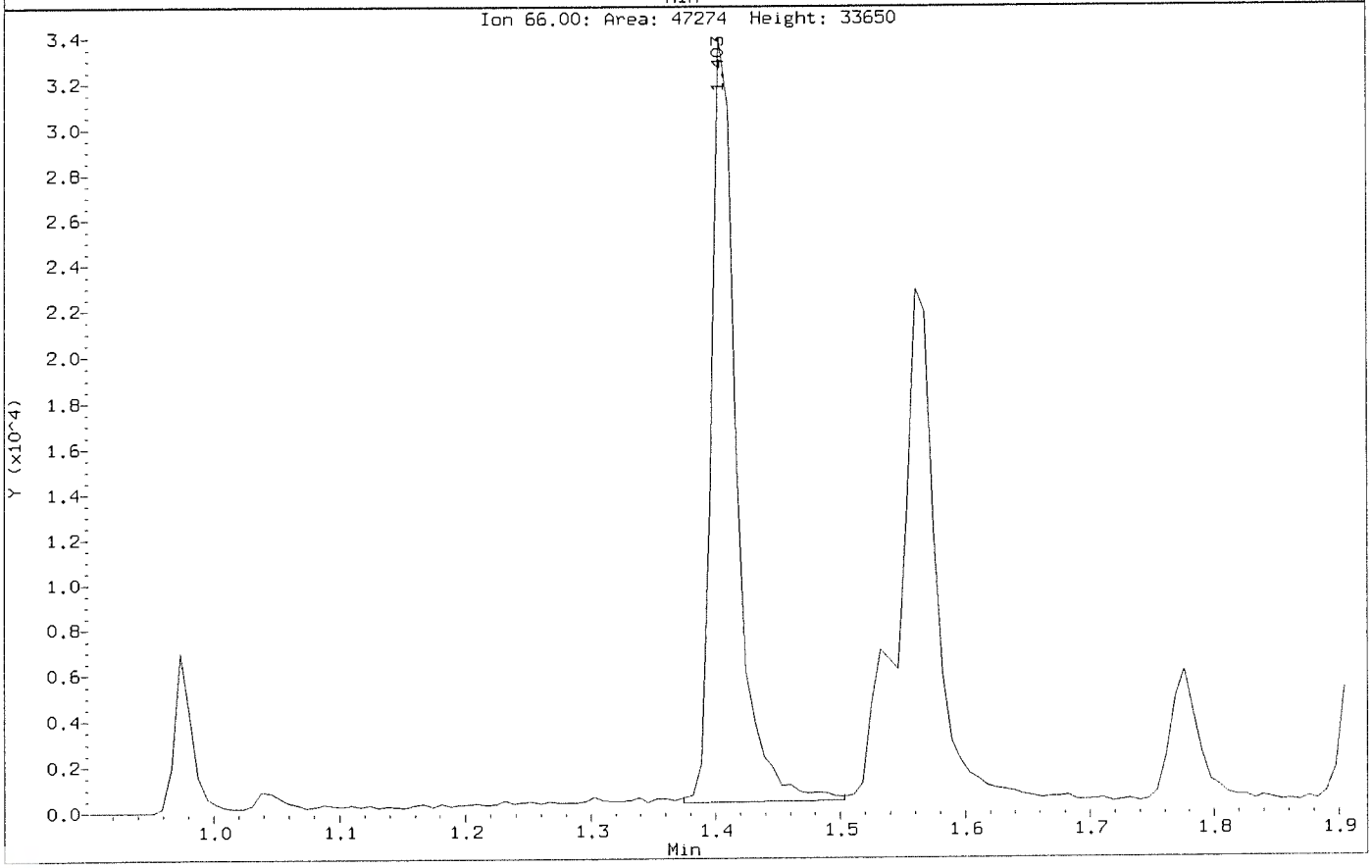
Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091103.D
Injection Date: 11-SEP-2020 11:25
Instrument: voa6.i
Client Sample ID: CCV

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091106.D Page 1
Report Date: 25-Sep-2020 09:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091106.D
Lab Smp Id: VLCSW-200911 Client Smp ID: VLCSW-200911
Inj Date : 11-SEP-2020 12:37
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200911;VLCSW-200911;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:21 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 6 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

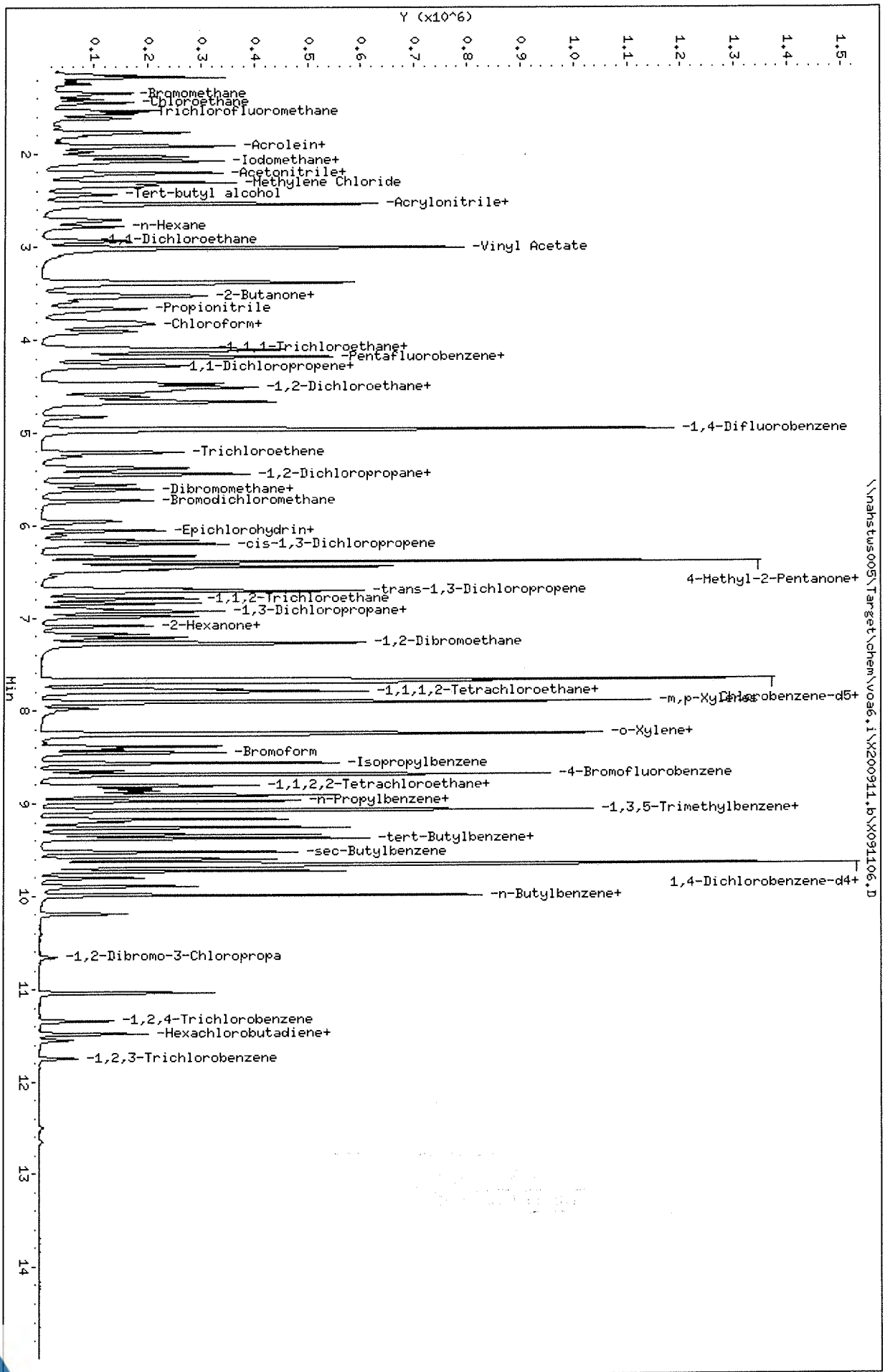
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	463162	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	700146	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	633231	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	290605	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	218274	47.9893	47.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	246376	45.6988	45.69
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	747821	48.6882	48.68
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	271826	45.8764	45.87
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	86032	17.8482	17.84
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	123356	17.2907	17.29
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	86837	18.7912	18.79
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	66612	18.4872	18.48
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	182559	20.1786	20.17
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	68845	18.7600	18.75
32 1,1-Dichloropropene	75	4.290	4.283	(0.863)	101038	17.1731	17.17
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	20409	23.3378	23.33
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	71380	16.7807	16.78(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	39550	23.5918	23.59
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	272577	17.5575	17.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6354	15.8395	15.83
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	86482	18.6307	18.63
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.035)	143759	17.4894	17.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	127122	18.7526	18.75
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	105433	20.5183	20.51
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	263536	17.3546	17.35
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	161218	17.6499	17.64
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	136501	19.1865	19.18
84	1,4-Dichlorobenzene	146	9.684	9.683	(1.002)	161030	17.8266	17.82
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	123471	18.6907	18.69
24	2-Butanone	43	3.581	3.581	(0.855)	76124	33.5271	33.52
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	230198	18.2581	18.25
52	2-Hexanone	43	7.090	7.090	(0.924)	118506	29.8101	29.81
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	263921	17.9933	17.99
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	258844	16.0848	16.08
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	187537	31.9994	31.99
10	Acetone	43	1.976	1.976	(0.472)	79402	48.6352	48.63
37	Benzene	78	4.519	4.519	(0.909)	342922	19.7413	19.74
74	Bromobenzene	156	8.810	8.810	(0.912)	104047	18.3028	18.30
29	Bromochloromethane	128	3.803	3.803	(0.908)	53048	19.0014	19.00
39	Bromodichloromethane	83	5.730	5.729	(1.153)	118302	18.7697	18.76
66	Bromoform	173	8.416	8.416	(1.097)	57409	16.3404	16.34
6	Bromomethane	94	1.346	1.346	(0.321)	64713	20.6877	20.68
19	Carbon Disulfide	76	2.076	2.076	(0.496)	416835	36.5831	36.58
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	96484	15.4284	15.42
59	Chlorobenzene	112	7.699	7.699	(1.004)	230561	18.5778	18.57
7	Chloroethane	64	1.403	1.403	(0.335)	88058	26.8233	26.82
28	Chloroform	83	3.910	3.910	(0.933)	160386	19.3825	19.38
3	Chloromethane	50	1.081	1.081	(0.258)	113272	17.4182	17.41
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	102482	20.1016	20.10
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	141315	19.1746	19.17
55	Dibromochloromethane	129	7.176	7.176	(0.936)	89216	17.5889	17.58
44	Dibromomethane	93	5.558	5.558	(1.118)	56625	18.5839	18.58
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	64208	14.1643	14.16
61	Ethylbenzene	106	7.800	7.800	(1.017)	113076	17.6456	17.64
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	34771	22.2866	22.28
67	Isopropylbenzene	105	8.566	8.566	(1.117)	311529	16.5614	16.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	273316	35.3429	35.34
17	Methylene Chloride	84	2.306	2.306	(0.550)	95780	19.2375	19.23
87	n-Butylbenzene	91	9.999	9.999	(1.035)	208531	16.2257	16.22
73	n-Propylbenzene	91	8.917	8.917	(0.923)	352265	16.8265	16.82
92	Naphthalene	128	11.546	11.546	(1.195)	48074	21.0158	21.01
63	o-Xylene	106	8.244	8.244	(1.075)	136238	17.9345	17.93
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	279185	15.8138	15.81
64	Styrene	104	8.265	8.258	(1.078)	242631	18.3944	18.39
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	216122	16.4152	16.41
56	Tetrachloroethene	164	6.933	6.933	(0.904)	67577	16.7876	16.78
50	Toluene	91	6.453	6.446	(0.841)	347921	18.8142	18.81
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	84129	19.3759	19.37
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	123178	18.2356	18.23
38	Trichloroethene	130	5.214	5.214	(1.049)	93403	18.8238	18.82
8	Trichlorofluoromethane	101	1.568	1.561	(0.374)	108150	15.8552	15.85
5	Vinyl Chloride	62	1.145	1.145	(0.273)	106711	17.8988	17.89

QC Flag Legend

M - Compound response manually integrated.

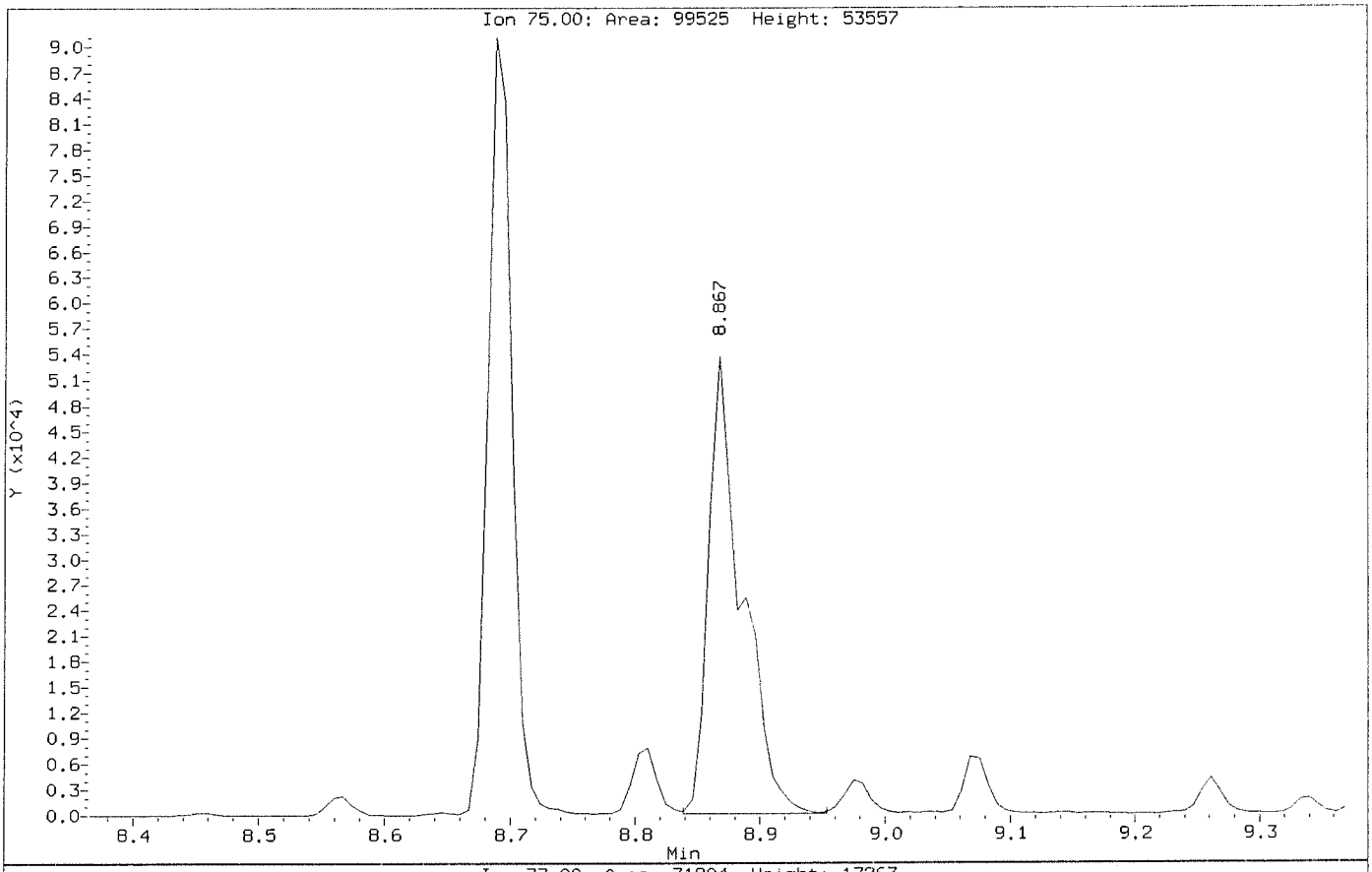


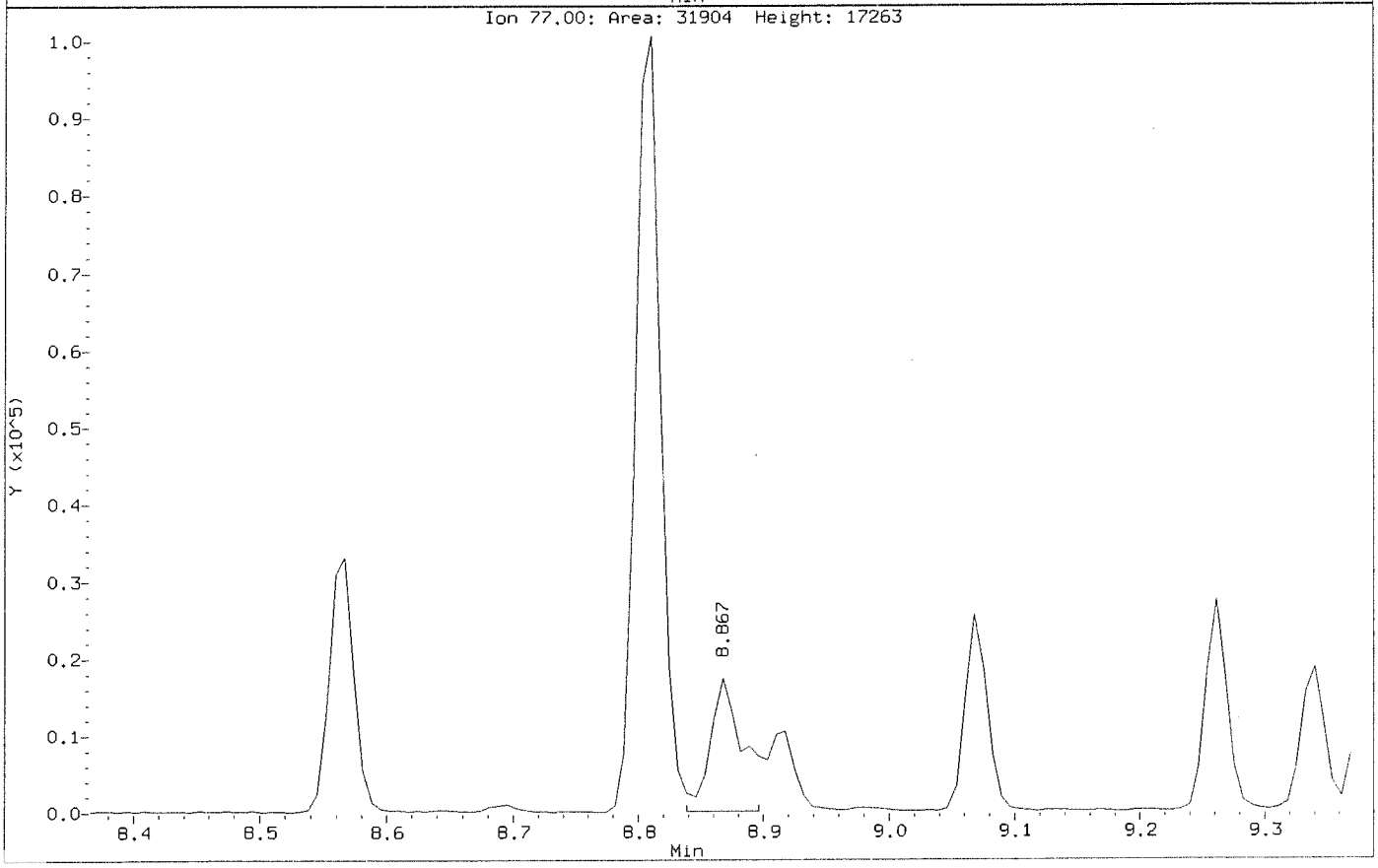
Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091106.D
Date : 11-SEP-2020 12:37
Client ID: VLCSW-200911
Sample Info: VLCSW-200911;VLCSW-200911;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\Before\X091106.D
Injection Date: 11-SEP-2020 12:37
Instrument: voa6.i
Client Sample ID: VLCSW-200911

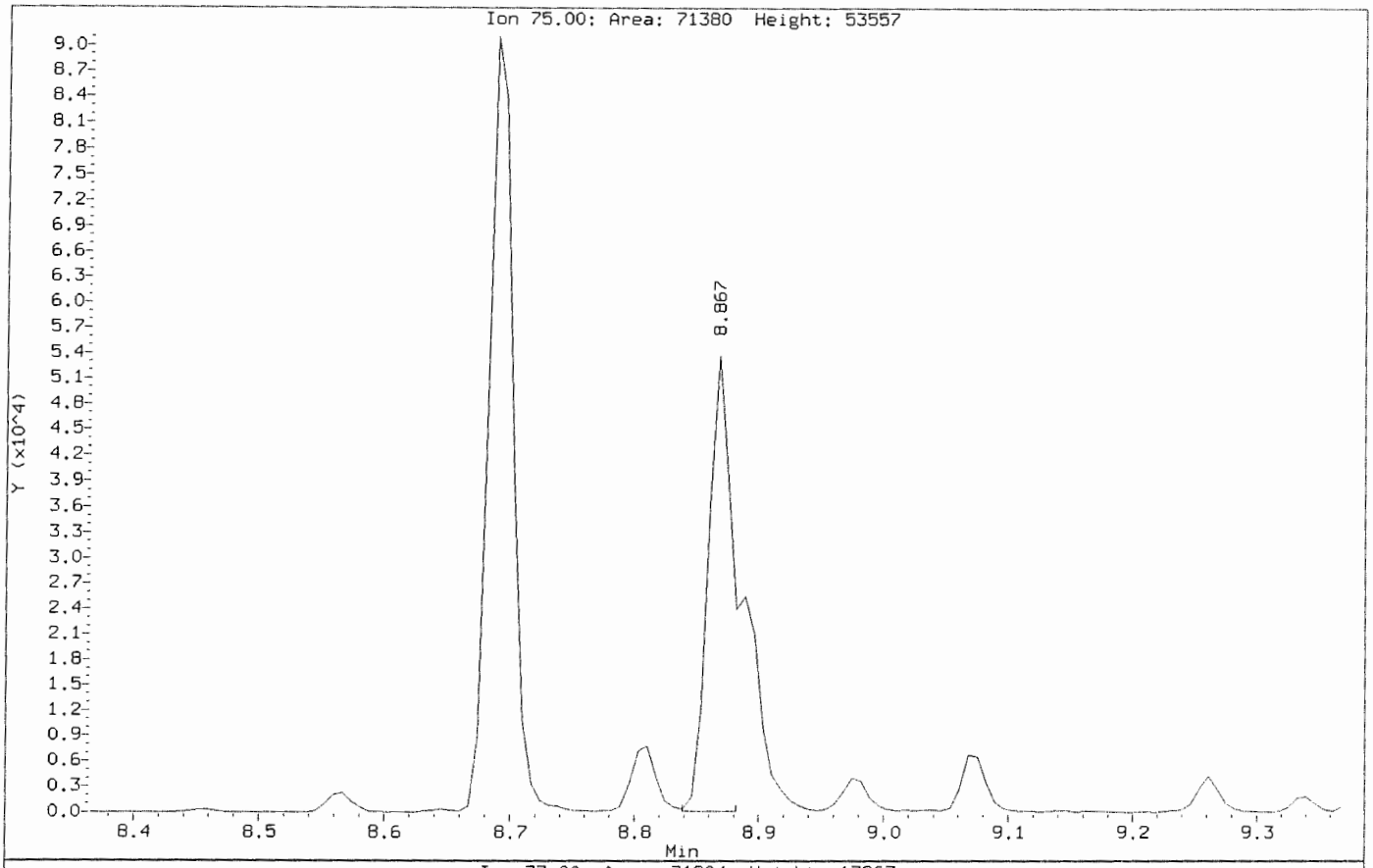
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CAS Number: 96-18-4

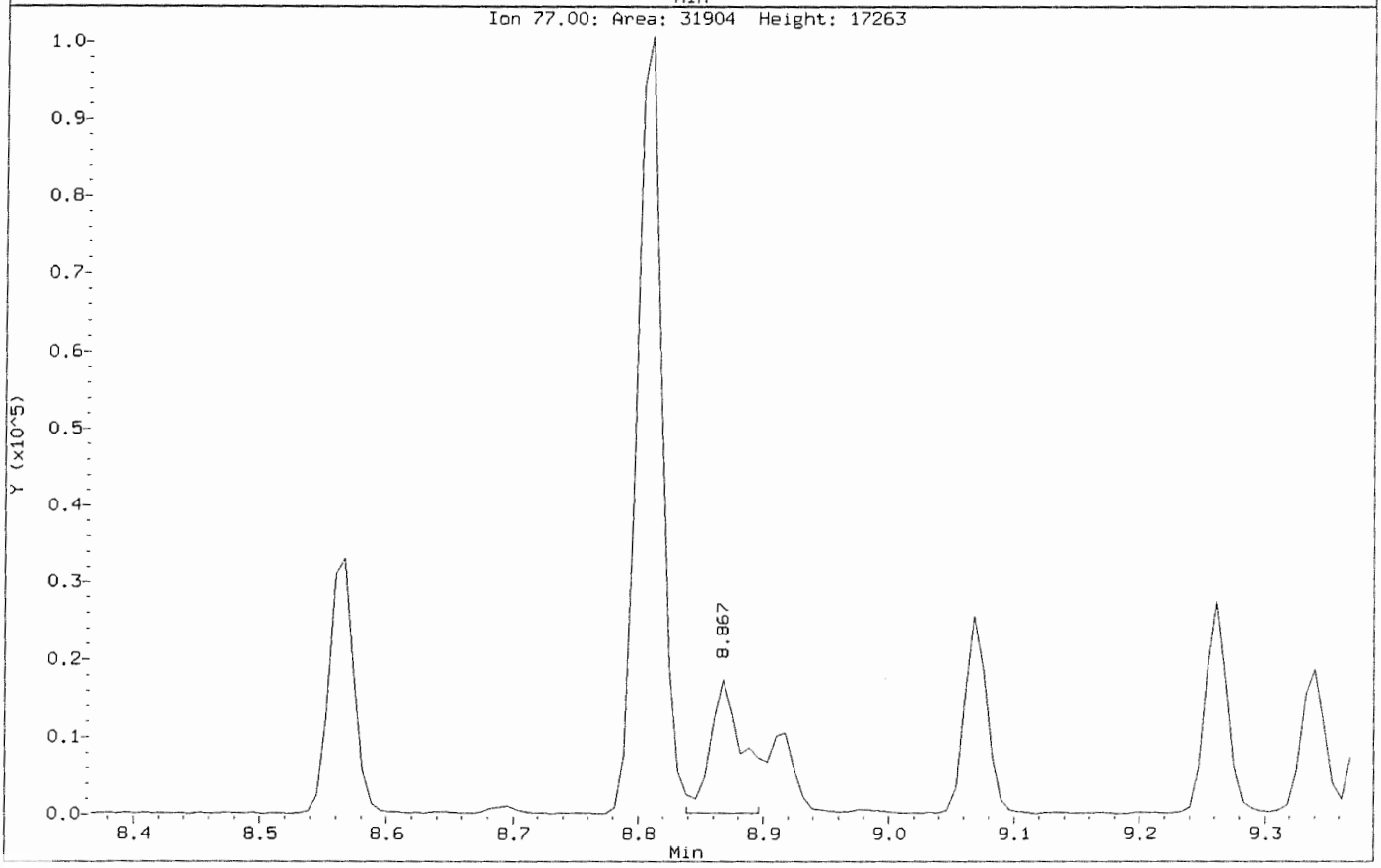




Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091106.D
Injection Date: 11-SEP-2020 12:37
Instrument: voa6.i
Client Sample ID: VLCSW-200911

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





Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091108.D Page 1
Report Date: 25-Sep-2020 09:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091108.D
Lab Smp Id: VBLKW-200911 Client Smp ID: VBLKW-200911
Inj Date : 11-SEP-2020 13:49
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200911;VBLKW-200911;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:21 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

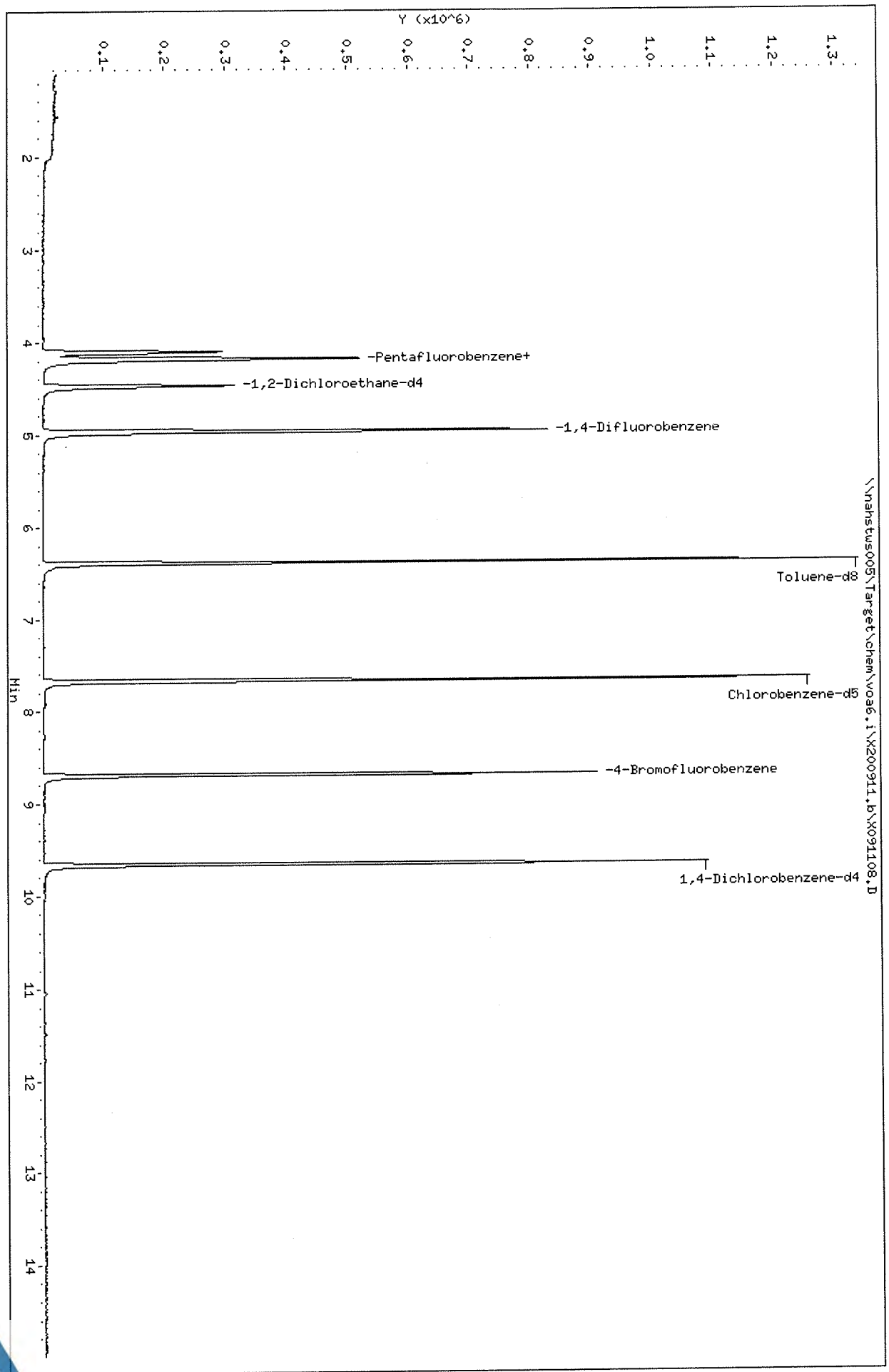
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	453117	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	677401	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	596787	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	277182	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	210003	47.1944	47.19
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	229863	43.5811	43.58
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	758654	52.4099	52.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	272772	48.8473	48.84

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091108.D
Date : 11-SEP-2020 13:49
Client ID: VBLKW-200911
Sample Info: VBLKW-200911;VBLKW-200911;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\X200911.b\X091110.D Page 1
Report Date: 25-Sep-2020 09:15

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091110.D
Lab Smp Id: HS20090534-02 Client Smp ID: HS20090534-02
Inj Date : 11-SEP-2020 14:13
Operator : PC Inst ID: voa6.i
Smp Info : HS20090534-02;HS20090534-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:15 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 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

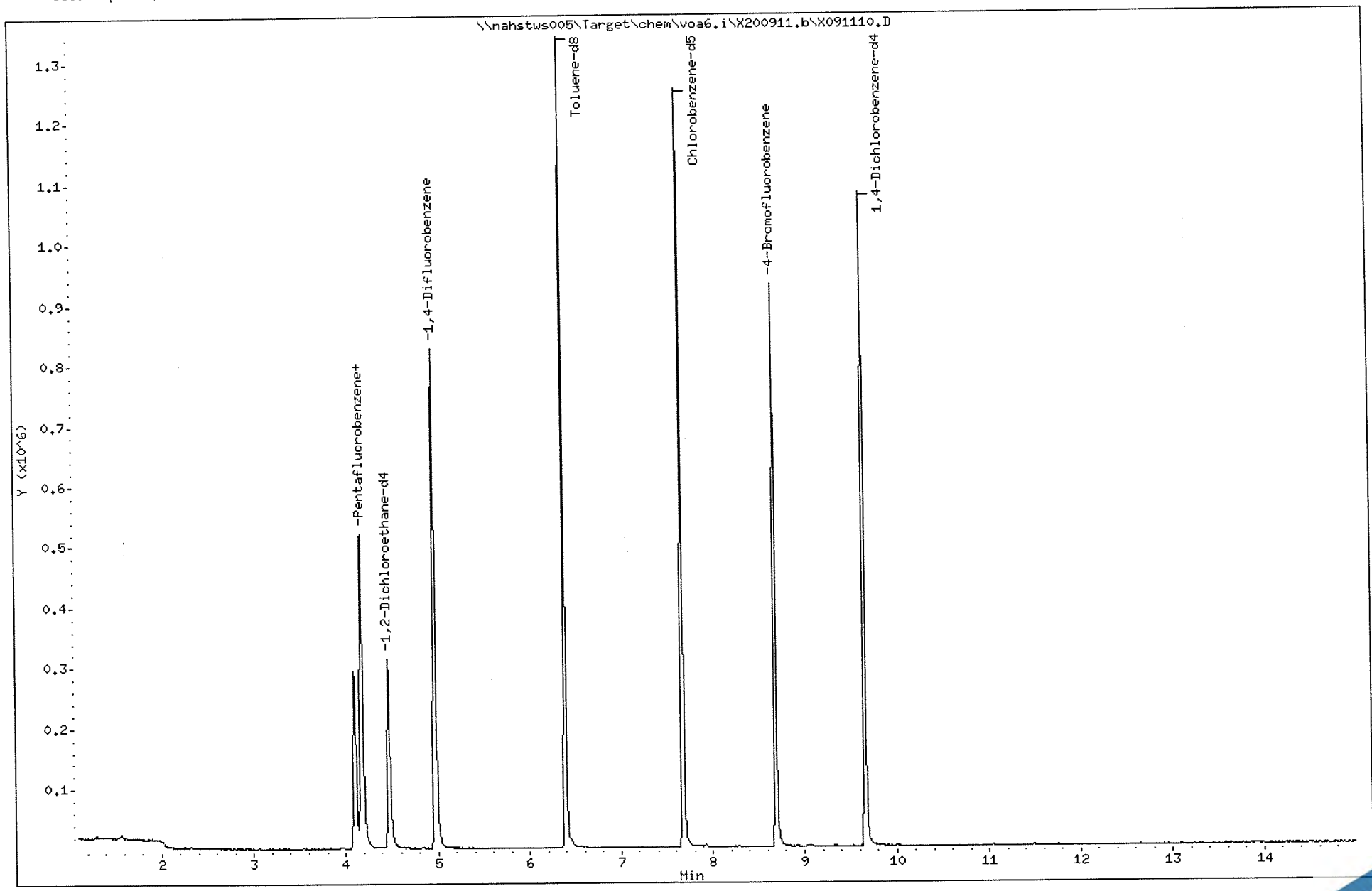
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	447119	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	674280	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	598539	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	278863	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	206463	47.0213	47.02
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	230635	44.3140	44.31
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	766345	52.7862	52.78
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	274384	48.9922	48.99

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091110.D
Date : 11-SEP-2020 14:13
Client ID: HS20090534-02
Sample Info: HS20090534-02;HS20090534-02;;;
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\X200911.b\X091111.D
Lab Smp Id: HS20090534-01 Client Smp ID: HS20090534-01
Inj Date : 11-SEP-2020 14:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20090534-01;HS20090534-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:15 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

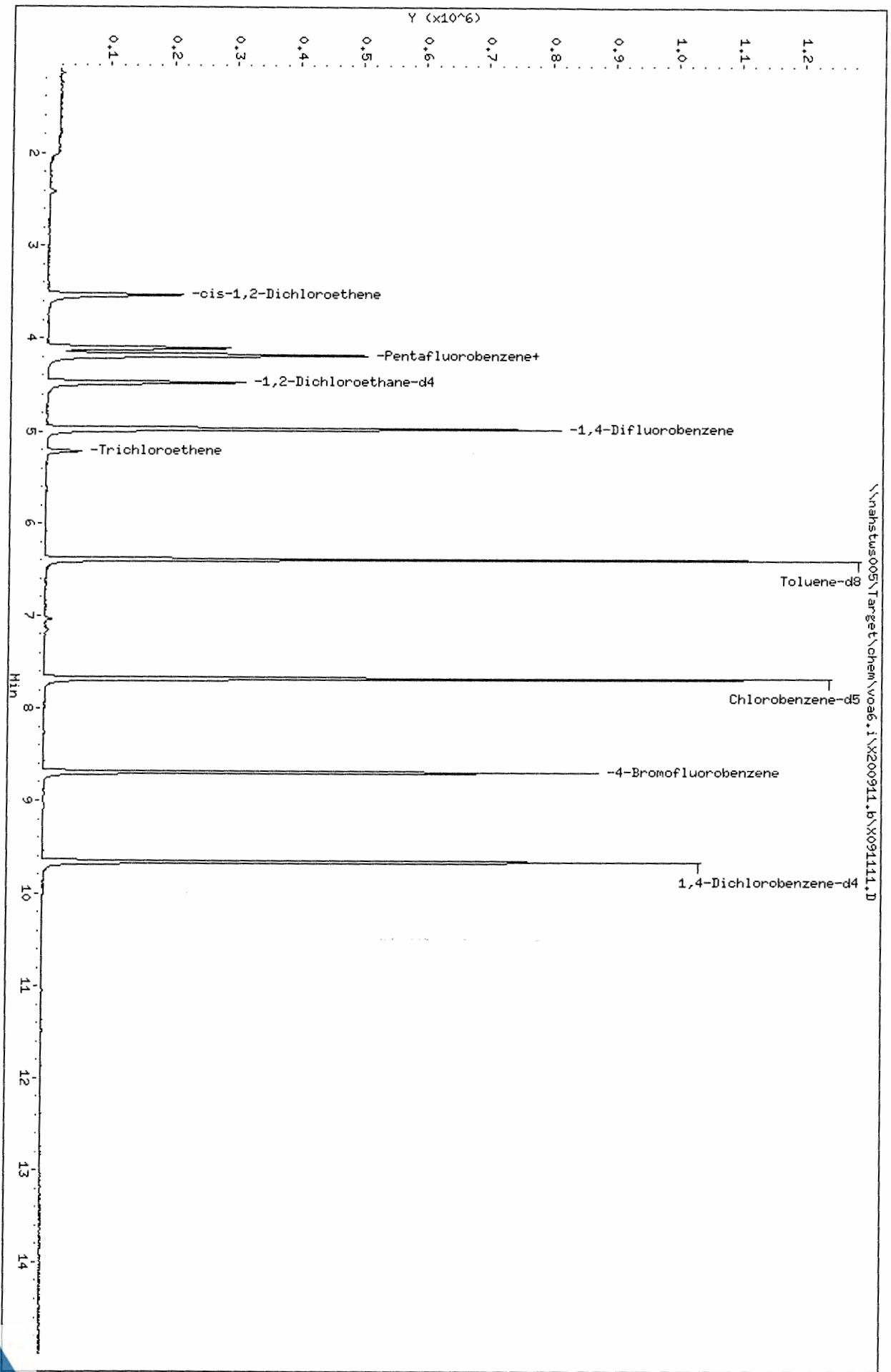
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	442249	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	667279	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	578351	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	266792	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	207808	47.8488	47.84
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	229681	44.6167	44.61
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	745642	53.1530	53.15
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	258982	47.8562	47.85
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.844)	109131	22.4180	22.41
38 Trichloroethene	130	5.214	5.214	(1.049)	19302	4.08160	4.08(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	5084	0.89307	0.89(a)

QC Flag Legend

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


Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091111.D
Date : 11-SEP-2020 14:37
Client ID: HS20090534-01
Sample Info: HS20090534-01;HS20090534-01;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Y (x10^6)
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
-cis-1,2-Dichloroethene
-Pentafluorobenzene+
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\nahstws005\Target\chem\voa6.i\X200911.b\X091111.D
Min
2
3
4
5
6
7
8
9
10
11
12
13
14

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091111.D

Date : 11-SEP-2020 14:37

Client ID: HS20090534-01

Instrument: voa6.i

Sample Info: HS20090534-01;HS20090534-01;;;

Purge Volume: 5.0

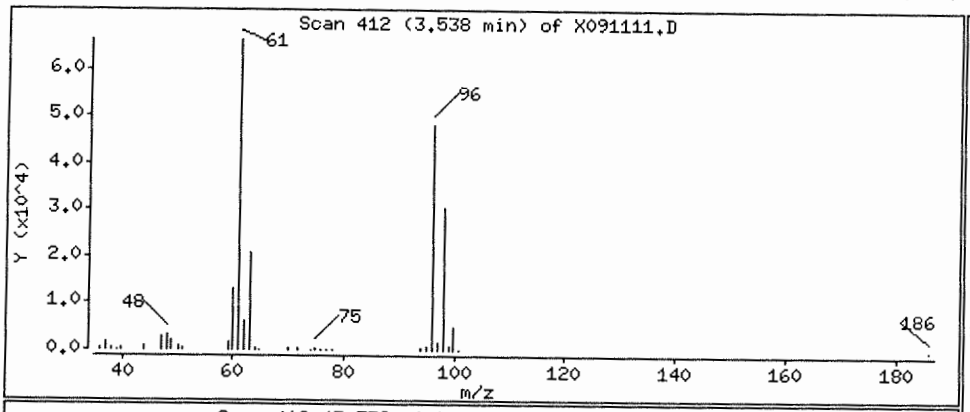
Operator: PC

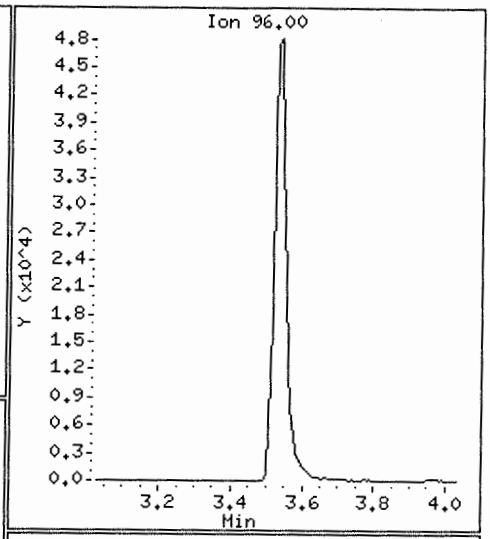
Column phase: DB624

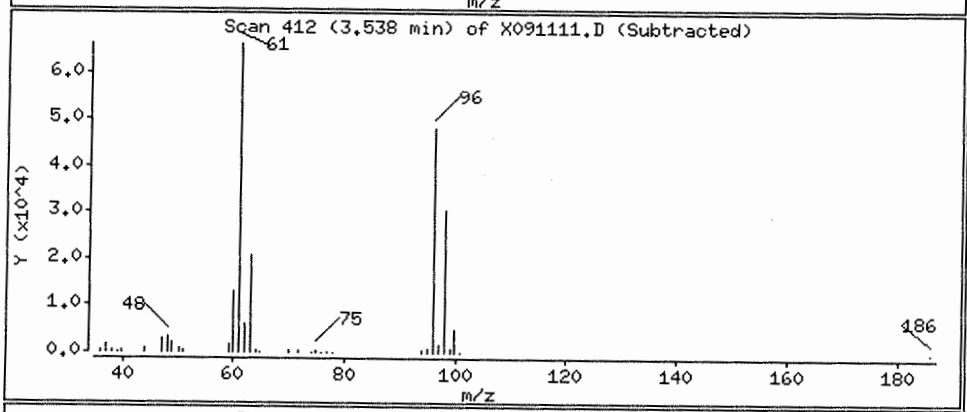
Column diameter: 0.18

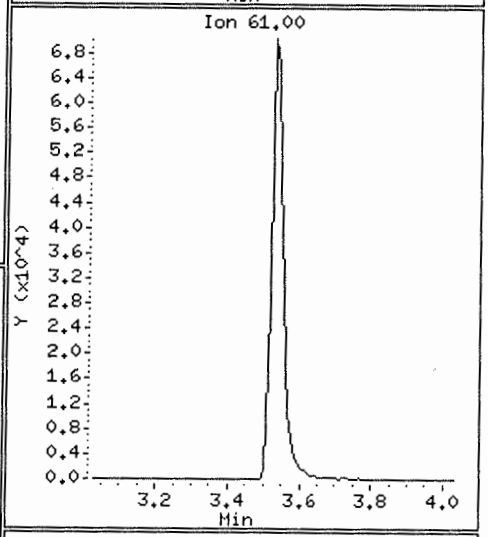
27 cis-1,2-Dichloroethene

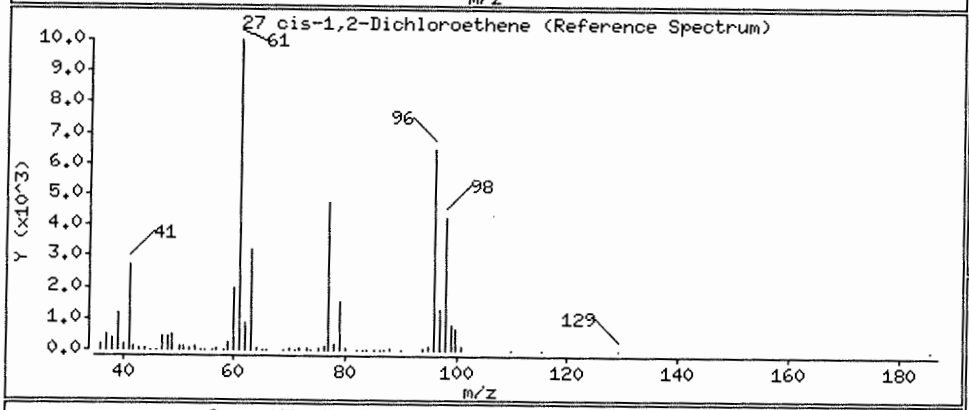
Concentration: 22.41 ug/l

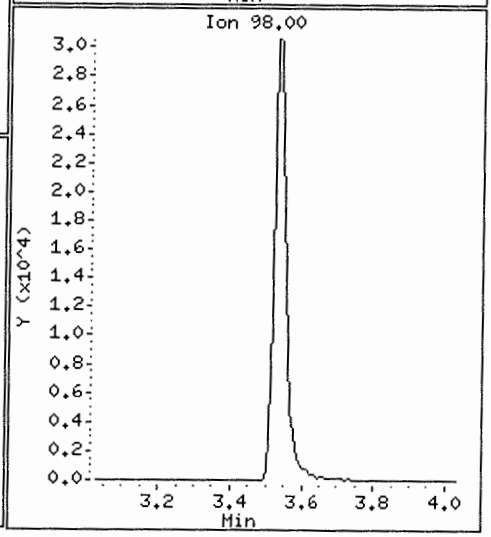


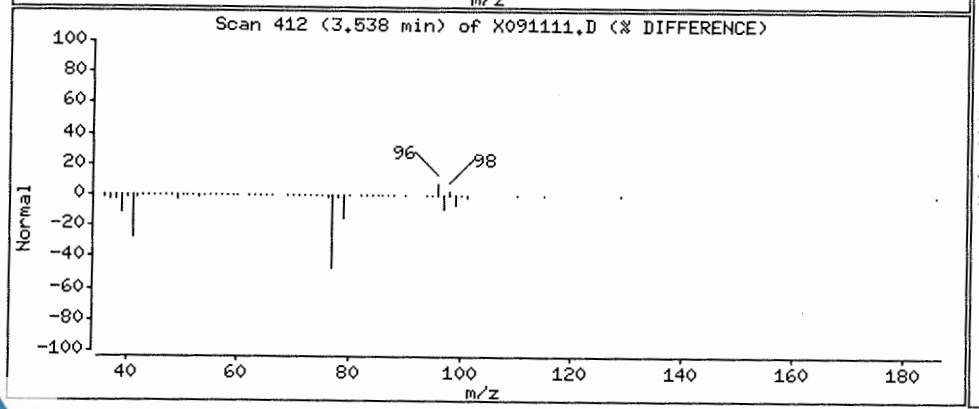












Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091111.D

Date : 11-SEP-2020 14:37

Client ID: HS20090534-01

Instrument: voa6.i

Sample Info: HS20090534-01;HS20090534-01;;;

Purge Volume: 5.0

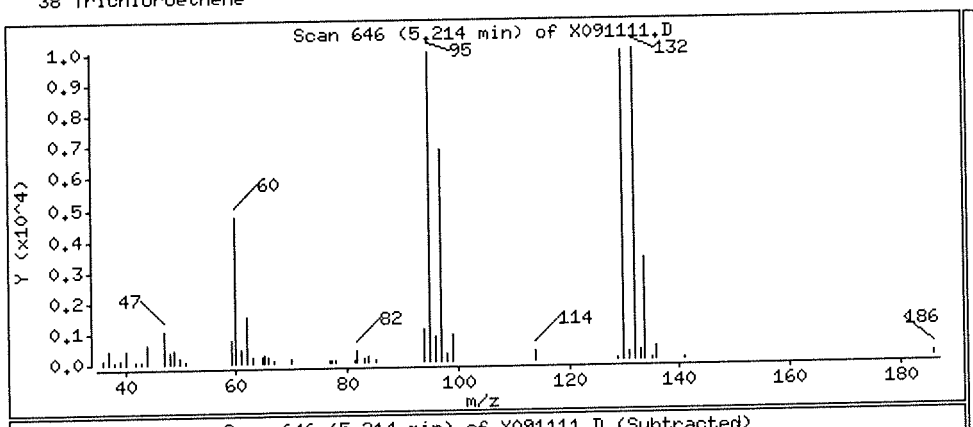
Operator: PC

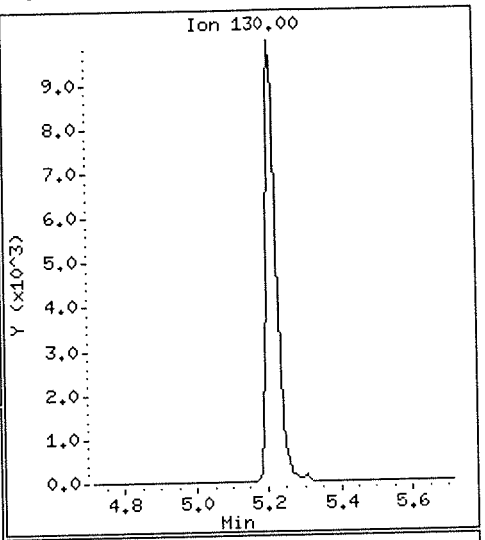
Column phase: DB624

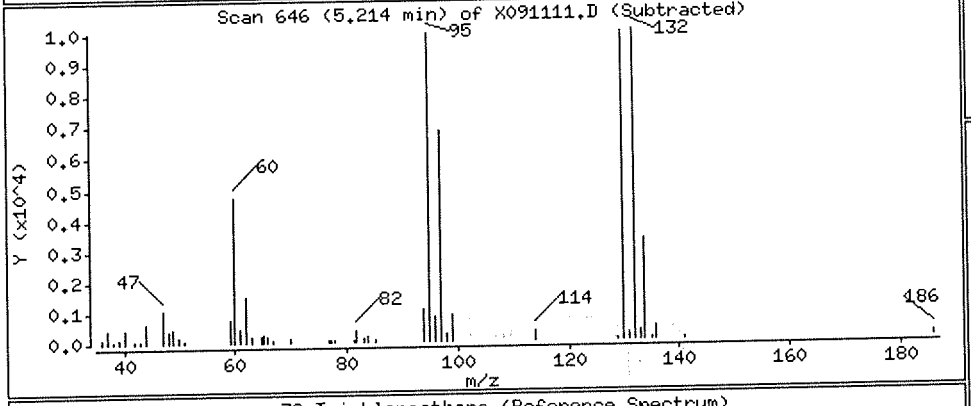
Column diameter: 0.18

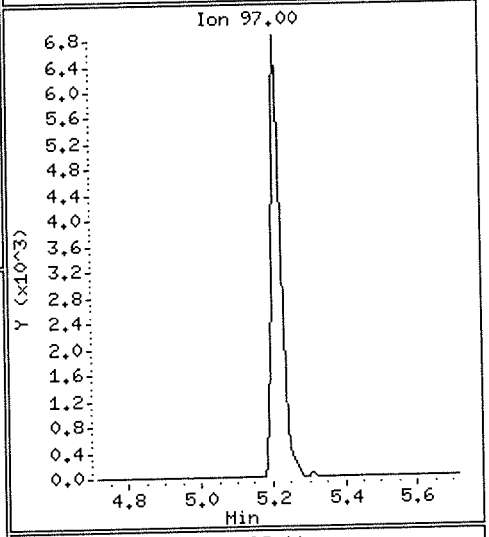
38 Trichloroethene

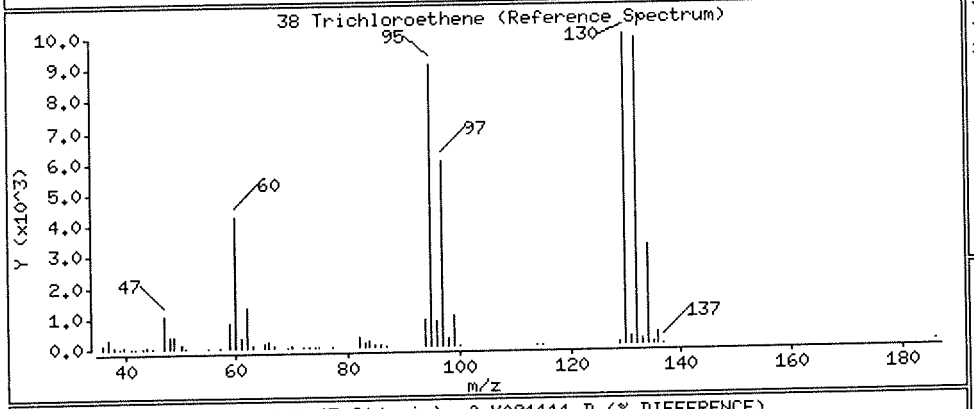
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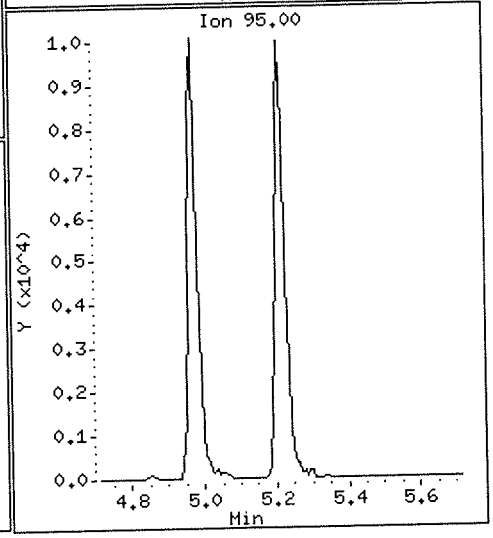


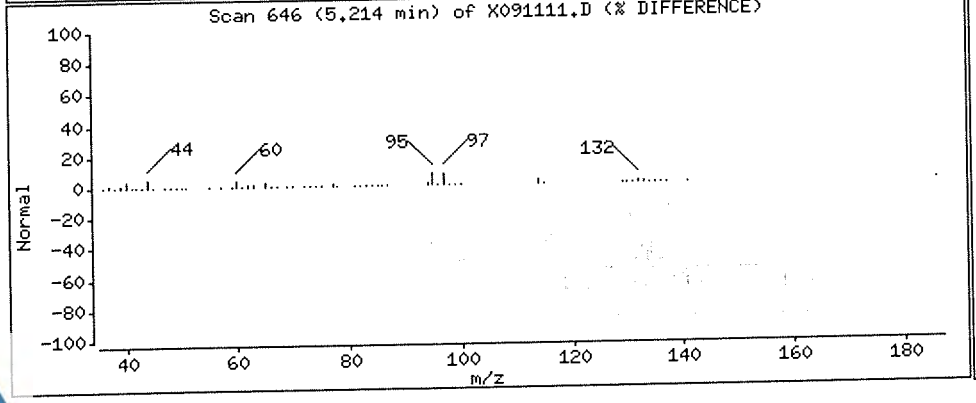












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Date : 11-SEP-2020 14:37

Client ID: HS20090534-01

Instrument: voa6.i

Sample Info: HS20090534-01;HS20090534-01;;;

Purge Volume: 5.0

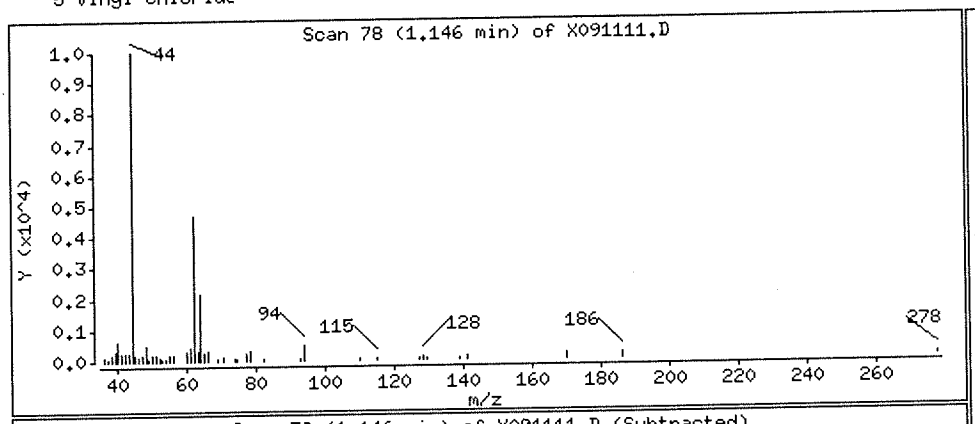
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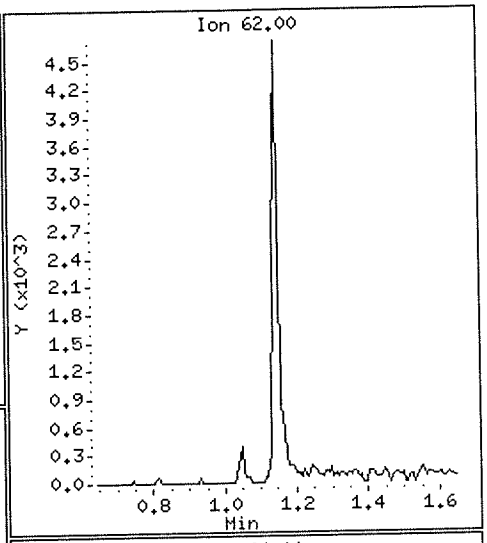
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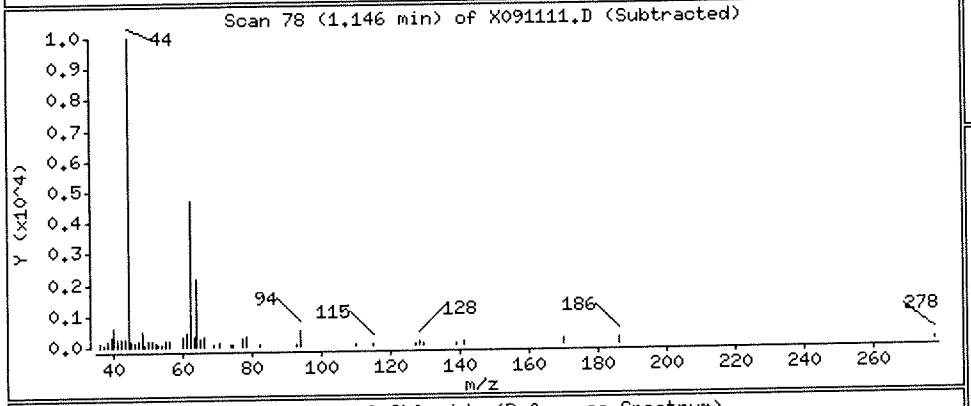
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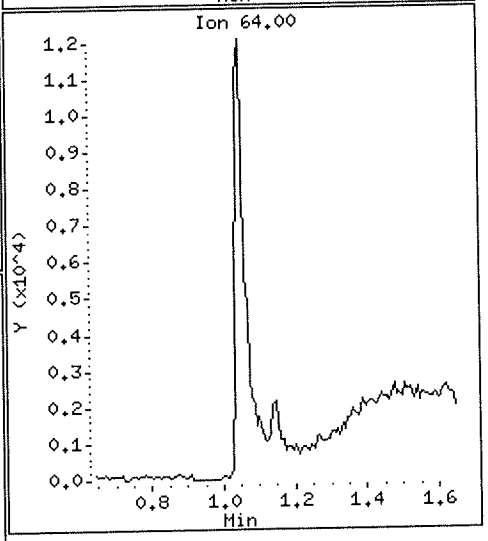
5 Vinyl Chloride

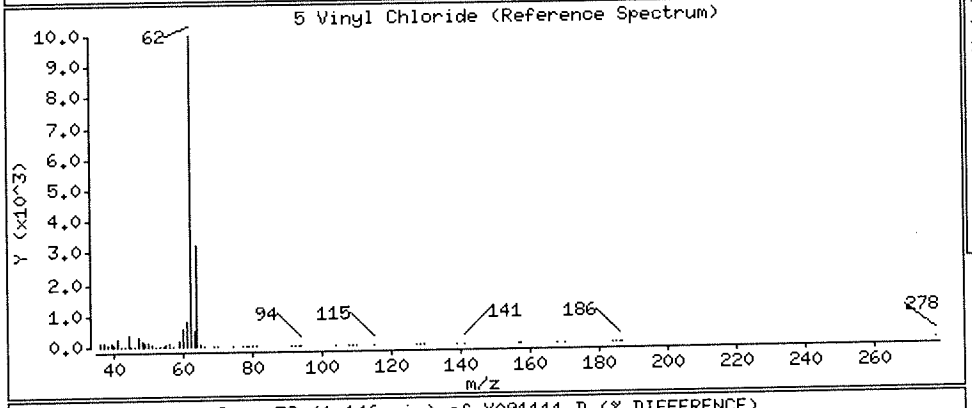
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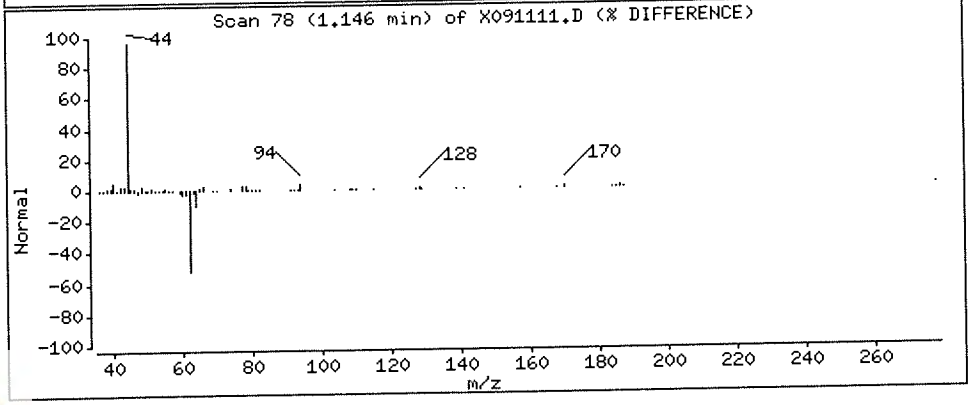












Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091113.D Page 1
Report Date: 25-Sep-2020 09:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091113.D
Lab Smp Id: HS20090556-01MS Client Smp ID: HS20090556-01MS
Inj Date : 11-SEP-2020 15:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20090556-01MS;HS20090556-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:21 dev.giga Quant Type: ISTD
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

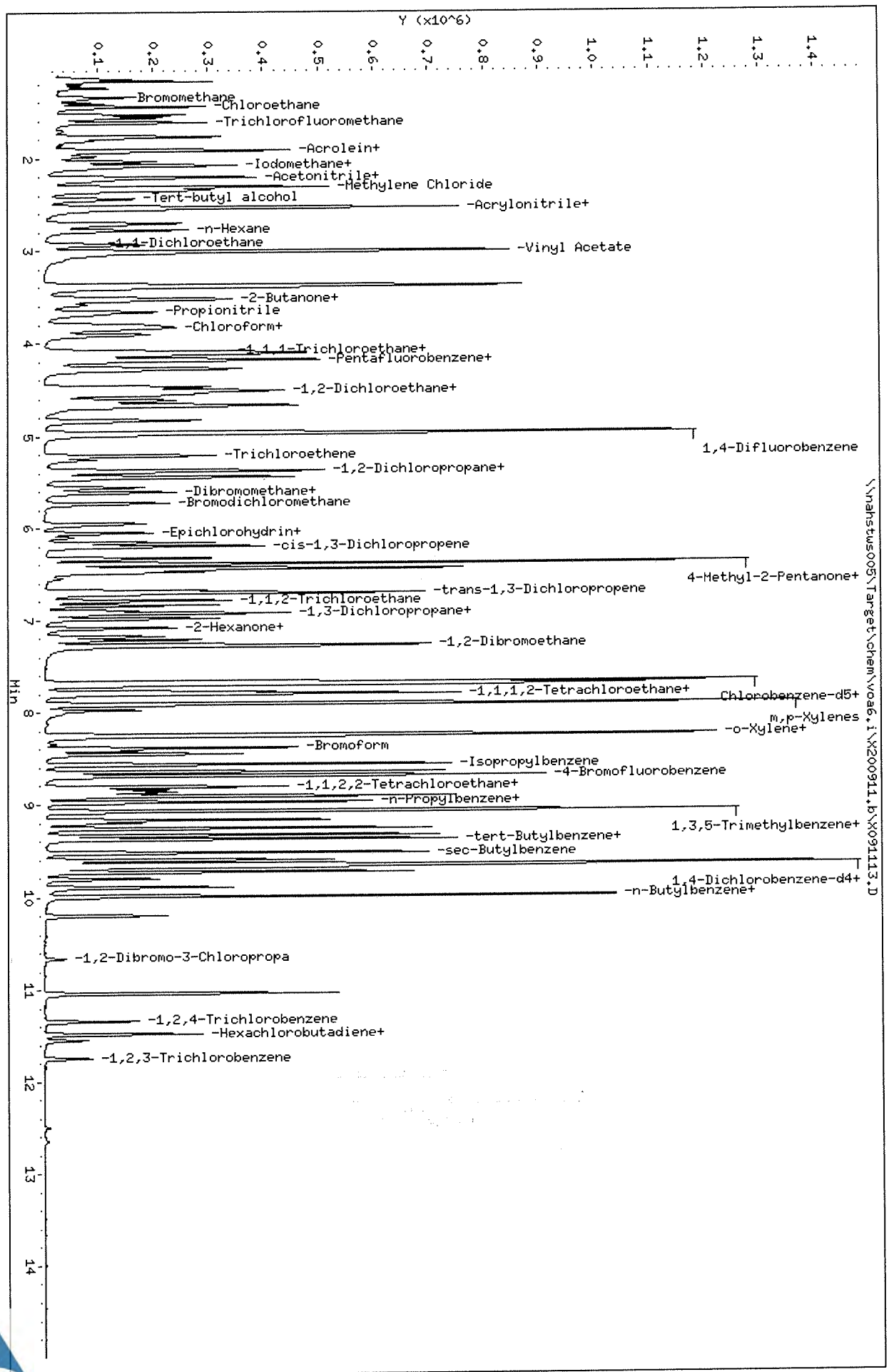
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	423503	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	627425	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	569395	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263988	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	197992	47.6066	47.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	217765	44.1744	44.17
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	710768	51.4639	51.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	254931	47.8486	47.84
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	93165	21.4949	21.49
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	148483	22.7617	22.76
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	94785	22.5013	22.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	70637	21.8021	21.80
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	194946	23.5656	23.56
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	78153	23.2907	23.29
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	126895	24.0677	24.06
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	24606	30.9741	30.97
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	77513	20.0599	20.05(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	47405	31.1883	31.18
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	333938	23.6787	23.67
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7451	20.2161	20.21
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	89745	21.5012	21.50
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	165848	22.2111	22.21

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091113.D Page 2
Report Date: 25-Sep-2020 09:23

	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)	134335	22.1135	22.11
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	110160	23.9230	23.92
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	330701	23.9733	23.97
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	189181	22.7995	22.79
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	140322	21.9348	21.93
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	185771	22.6391	22.63
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	143716	23.7926	23.79
24	2-Butanone	43	3.580	3.581	(0.855)	86392	41.6126	41.61
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	269720	23.5497	23.54
52	2-Hexanone	43	7.090	7.090	(0.924)	134535	37.6363	37.63
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	309765	23.2481	23.24
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	362544	24.8003	24.80
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	197537	37.4845	37.48
10	Acetone	43	1.976	1.976	(0.472)	73978	49.5765	49.57
37	Benzene	78	4.519	4.519	(0.909)	372253	23.9136	23.91
74	Bromobenzene	156	8.809	8.810	(0.912)	114294	22.1325	22.13
29	Bromochloromethane	128	3.803	3.803	(0.908)	54987	21.5403	21.54
39	Bromodichloromethane	83	5.729	5.729	(1.153)	124856	22.1056	22.10
66	Bromoform	173	8.416	8.416	(1.097)	60675	19.2062	19.20
6	Bromomethane	94	1.346	1.346	(0.321)	60143	21.0165	21.01
19	Carbon Disulfide	76	2.076	2.076	(0.496)	438336	42.0727	42.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	126746	22.6165	22.61
59	Chlorobenzene	112	7.699	7.699	(1.004)	256131	22.9520	22.95
7	Chloroethane	64	1.403	1.403	(0.335)	59317	19.7605	19.76 (M)
28	Chloroform	83	3.910	3.910	(0.933)	173804	22.9710	22.97
3	Chloromethane	50	1.081	1.081	(0.258)	76840	12.9225	12.92
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	107028	22.9592	22.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	148353	22.4627	22.46
55	Dibromochloromethane	129	7.176	7.176	(0.936)	95780	21.0000	21.00
44	Dibromomethane	93	5.557	5.558	(1.118)	58957	21.5919	21.59
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	24883	6.00324	6.00
61	Ethylbenzene	106	7.799	7.800	(1.017)	137261	23.8211	23.82
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	48283	34.0674	34.06
67	Isopropylbenzene	105	8.566	8.566	(1.117)	405943	24.0001	24.00
62	m,p-Xylenes	106	7.907	7.907	(1.031)	325535	46.8148	46.81
17	Methylene Chloride	84	2.305	2.306	(0.550)	97156	21.4919	21.49
87	n-Butylbenzene	91	9.999	9.999	(1.035)	298208	25.5430	25.54
73	n-Propylbenzene	91	8.917	8.917	(0.923)	471786	24.8079	24.80
92	Naphthalene	128	11.546	11.546	(1.195)	56844	27.2778	27.27
63	o-Xylene	106	8.244	8.244	(1.075)	159453	23.3439	23.34
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	399771	24.9272	24.92
64	Styrene	104	8.258	8.258	(1.077)	266695	22.4856	22.48
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	294362	24.6121	24.61
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90288	24.9441	24.94
50	Toluene	91	6.453	6.446	(0.841)	392943	23.6310	23.63
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	93622	23.5814	23.58
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	130149	21.5008	21.50
38	Trichloroethene	130	5.214	5.214	(1.049)	106115	23.8644	23.86
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	131648	21.1075	21.10
5	Vinyl Chloride	62	1.145	1.145	(0.273)	90885	16.6719	16.67

QC Flag Legend

M - Compound response manually integrated.

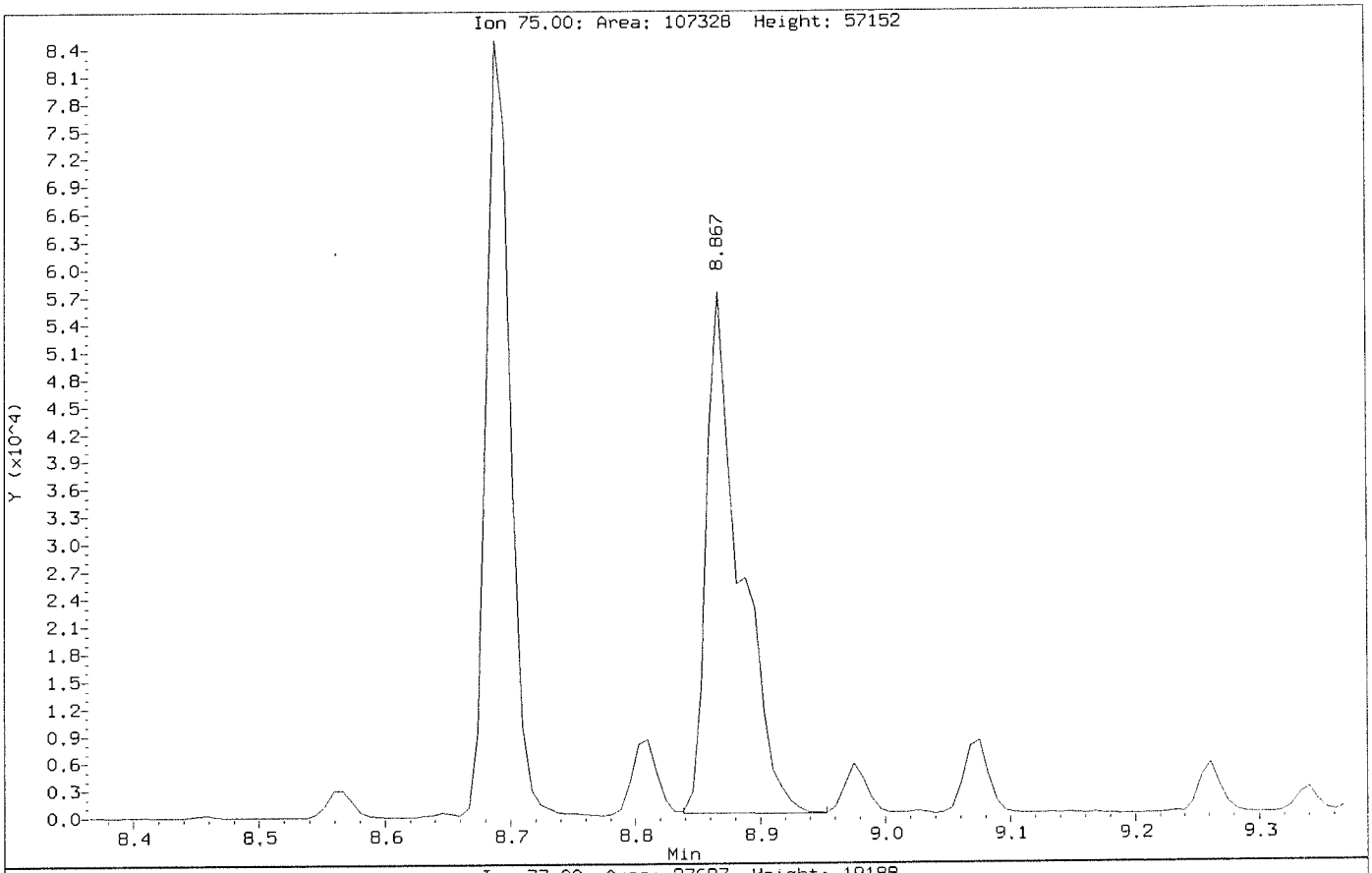


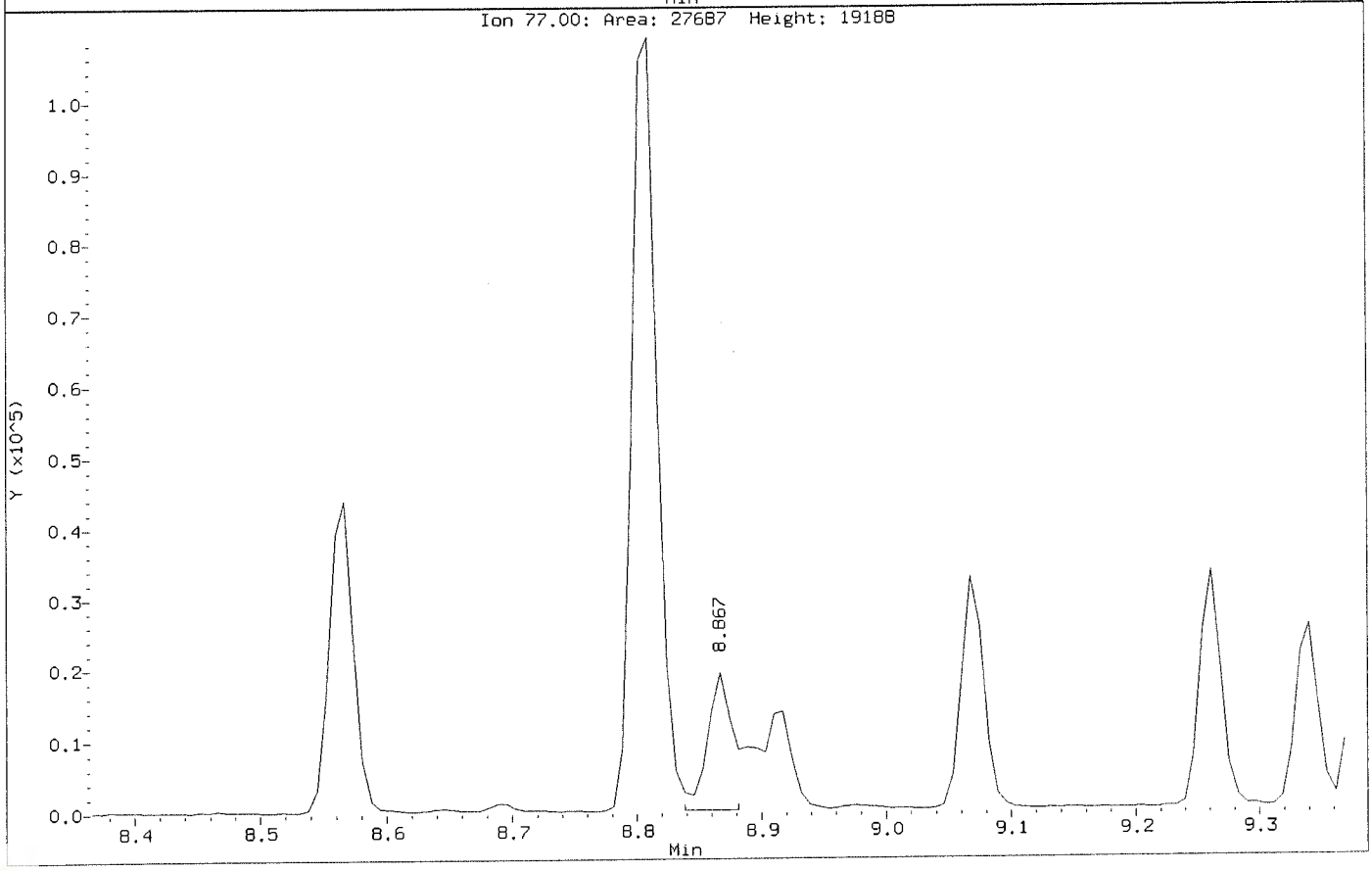
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Sample Info: HS20090556-01MS;HS20090556-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

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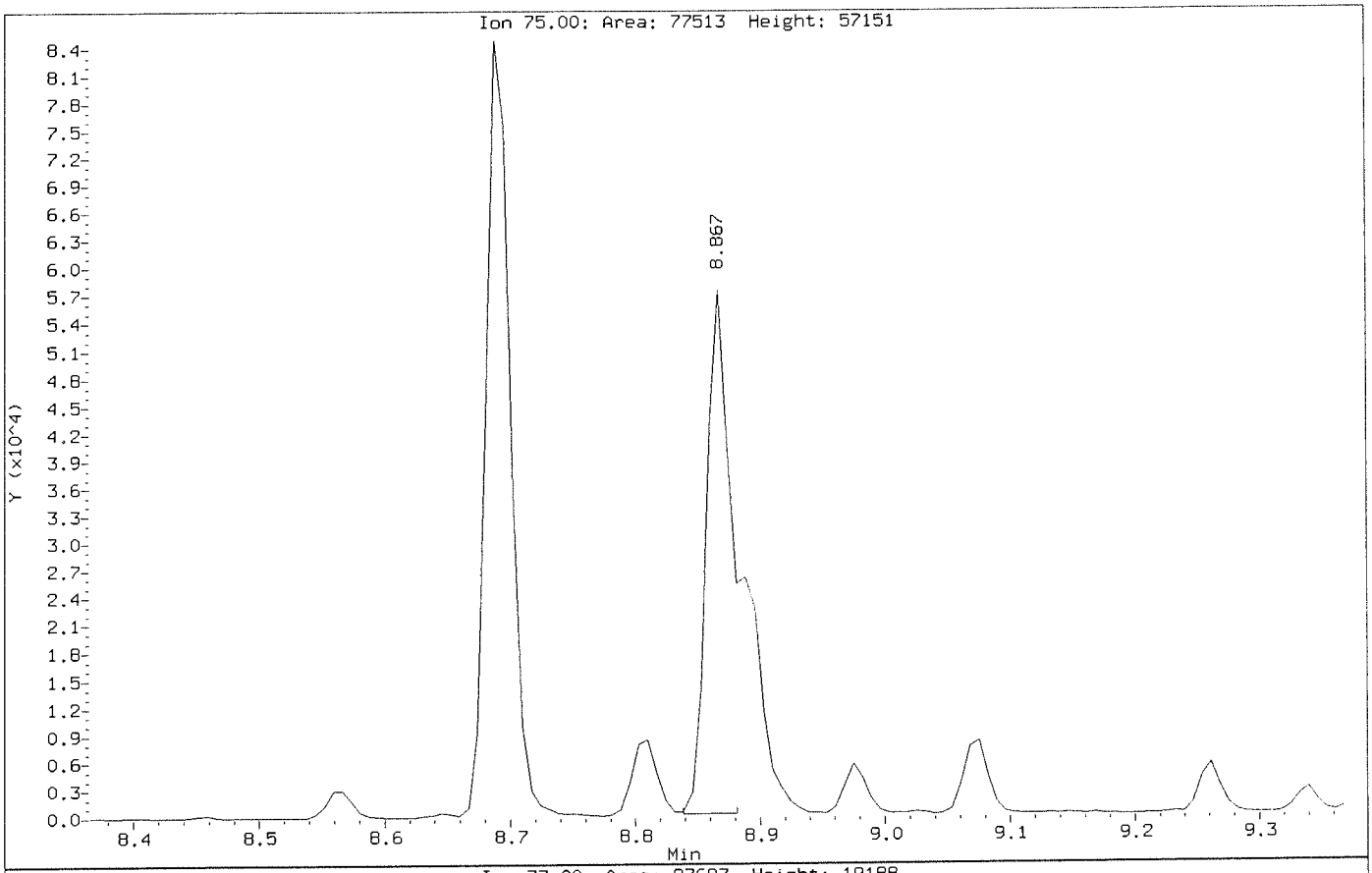
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CAS Number: 96-18-4

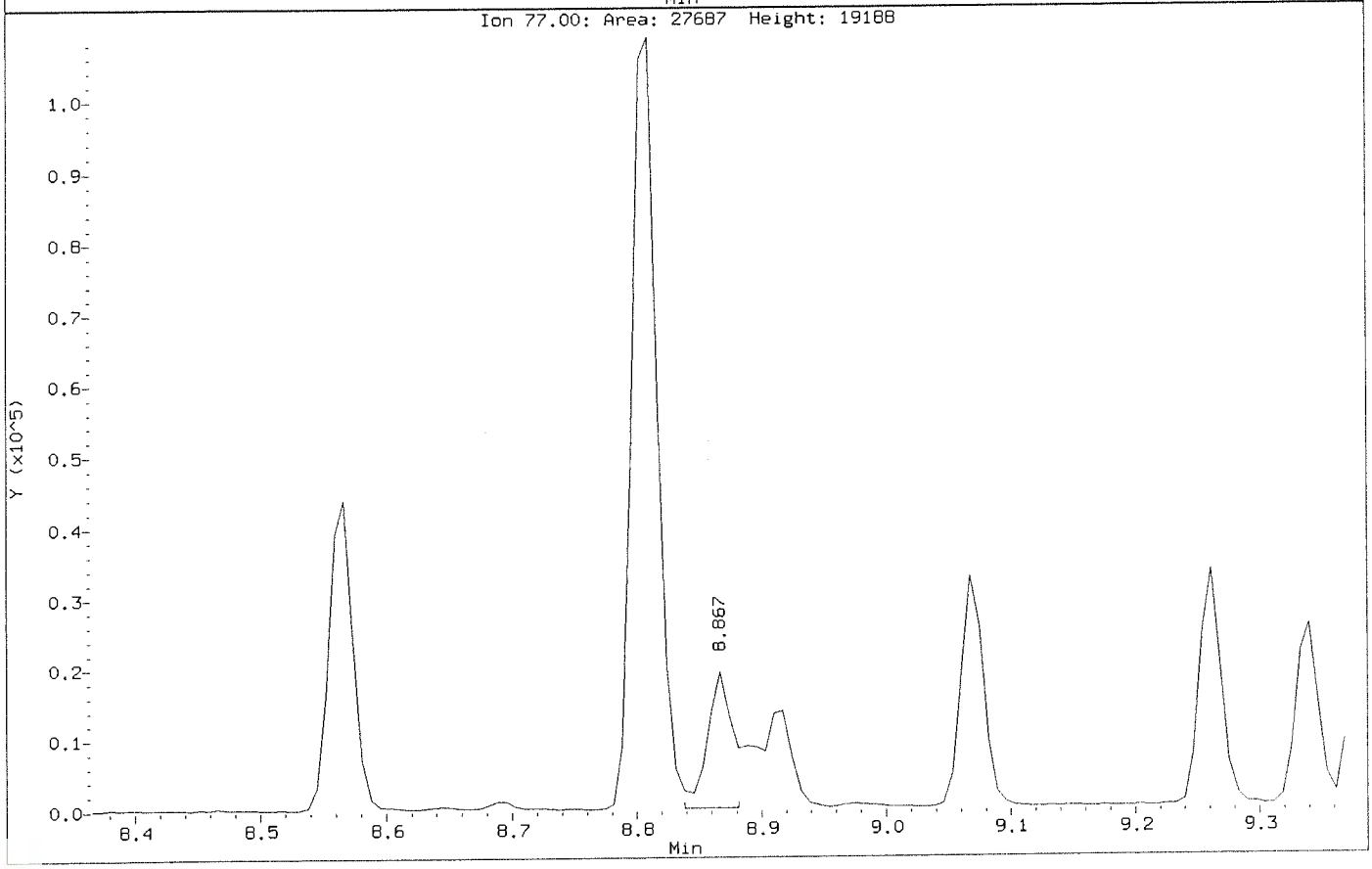




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Instrument: voa6.i
Client Sample ID: HS20090556-01MS

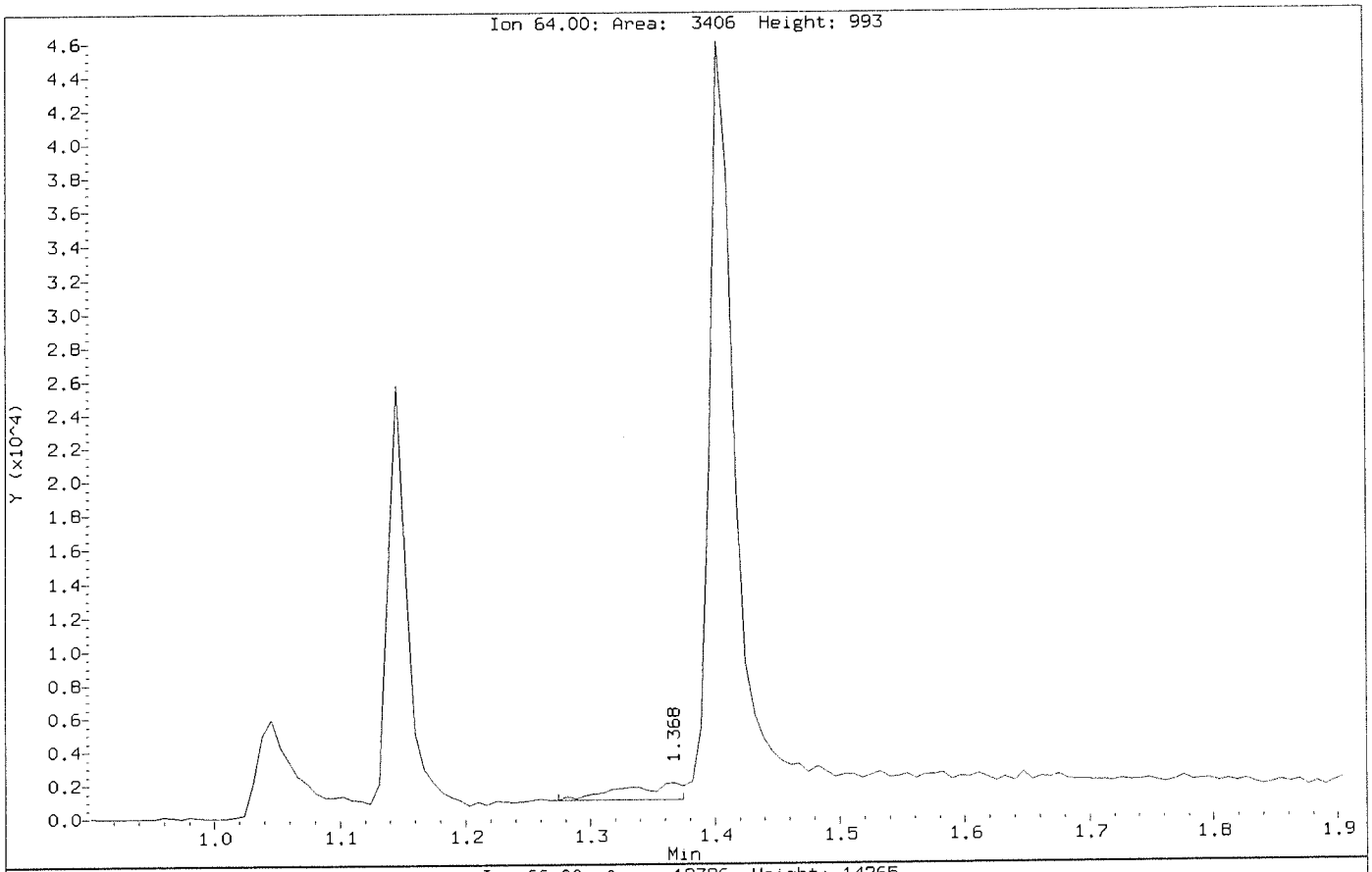
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CAS Number: 96-18-4

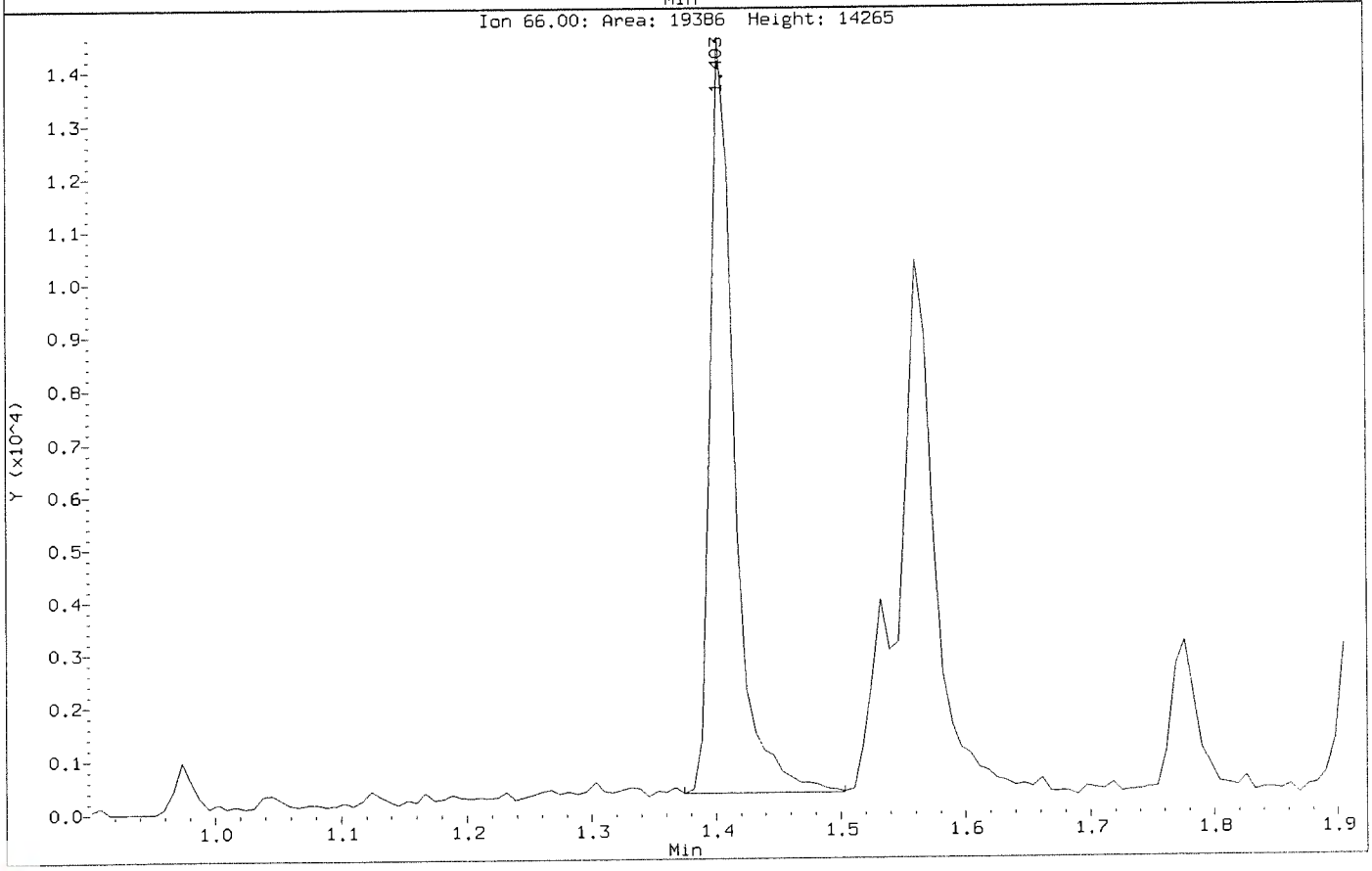




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Client Sample ID: HS20090556-01MS

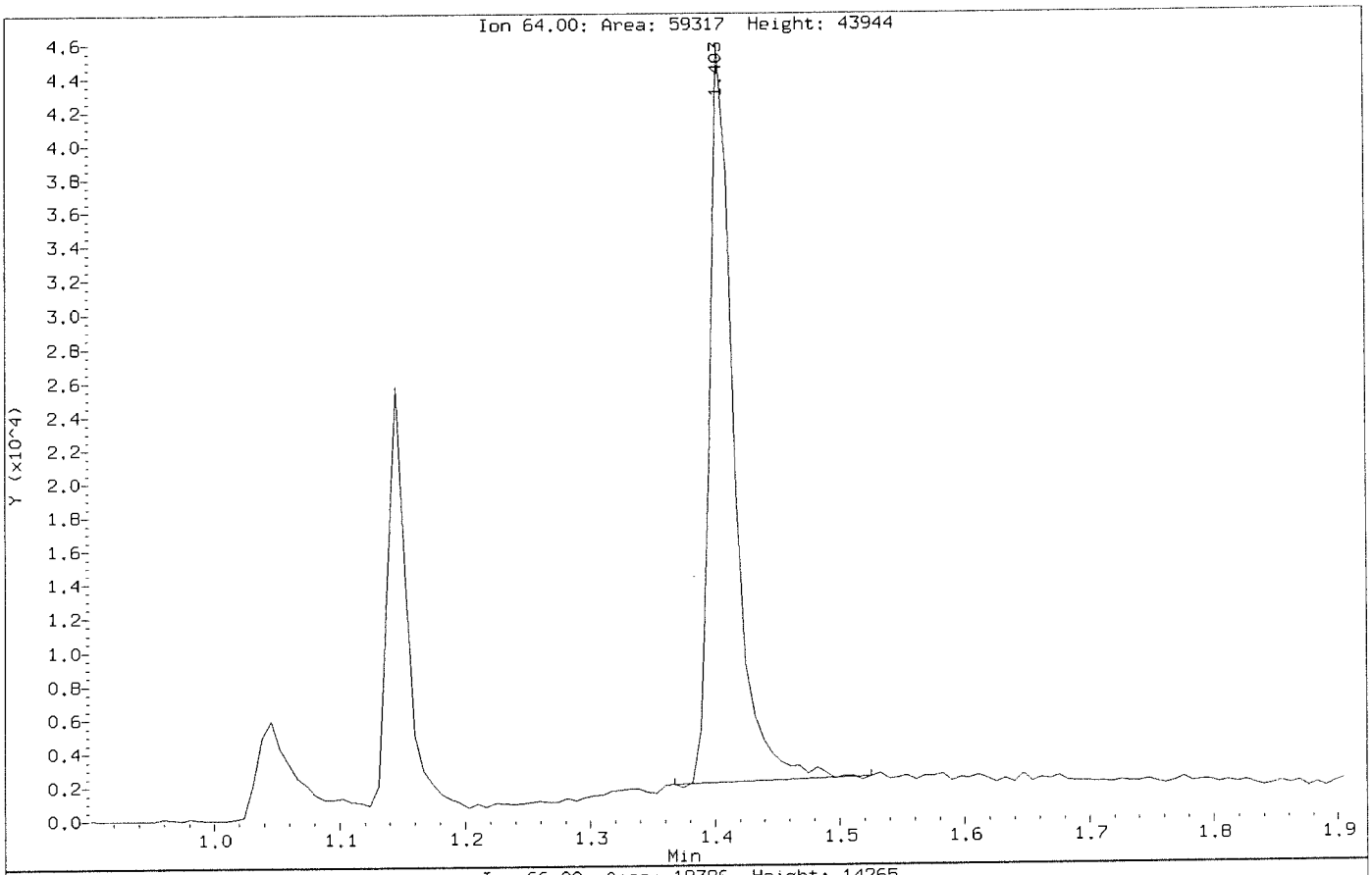
Compound: Chloroethane
CAS Number: 75-00-3

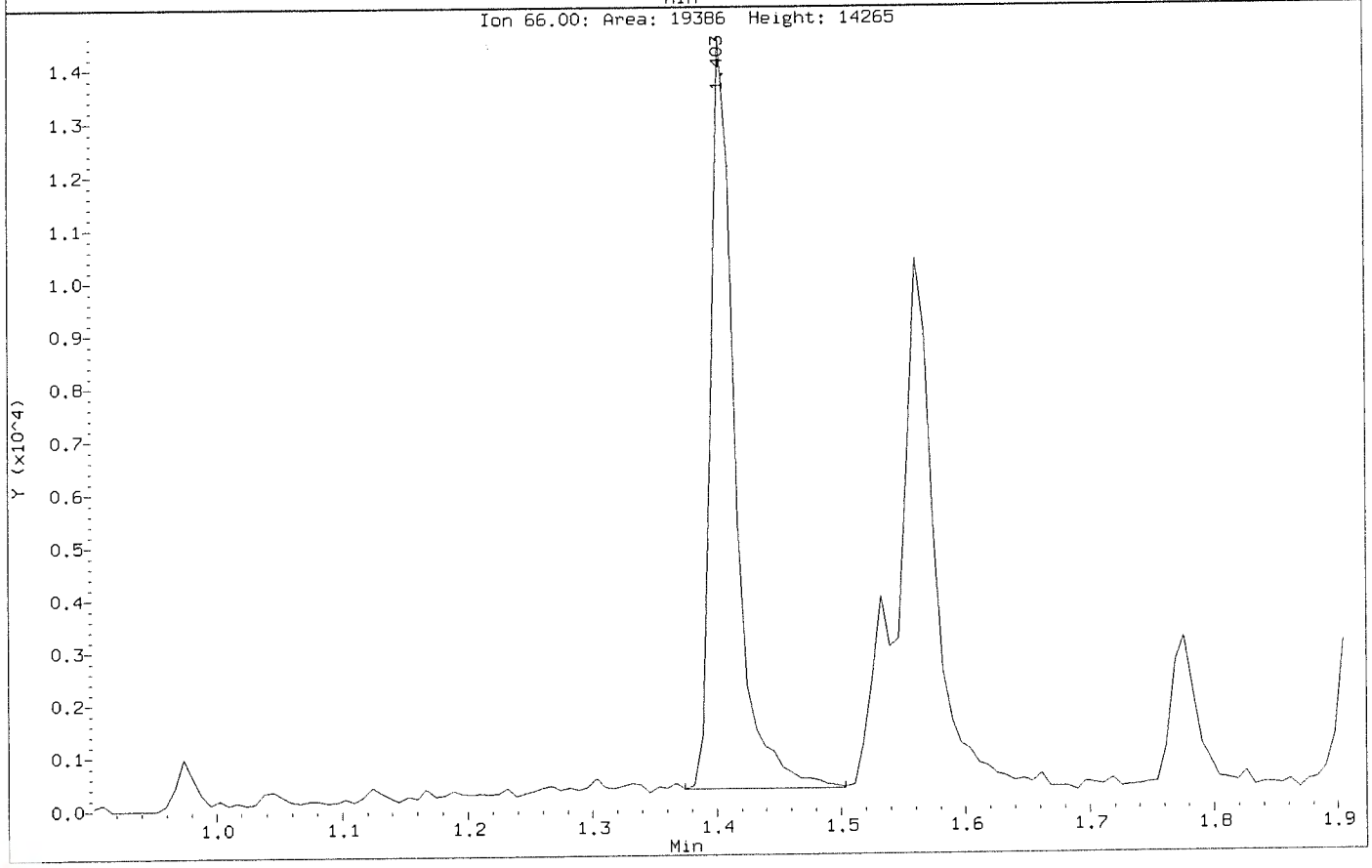




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Injection Date: 11-SEP-2020 15:25
Instrument: voa6.i
Client Sample ID: HS20090556-01MS

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091114.D Page 1
Report Date: 25-Sep-2020 09:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091114.D
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Inj Date : 11-SEP-2020 15:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20090556-01MSD;HS20090556-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:21 dev.giga 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

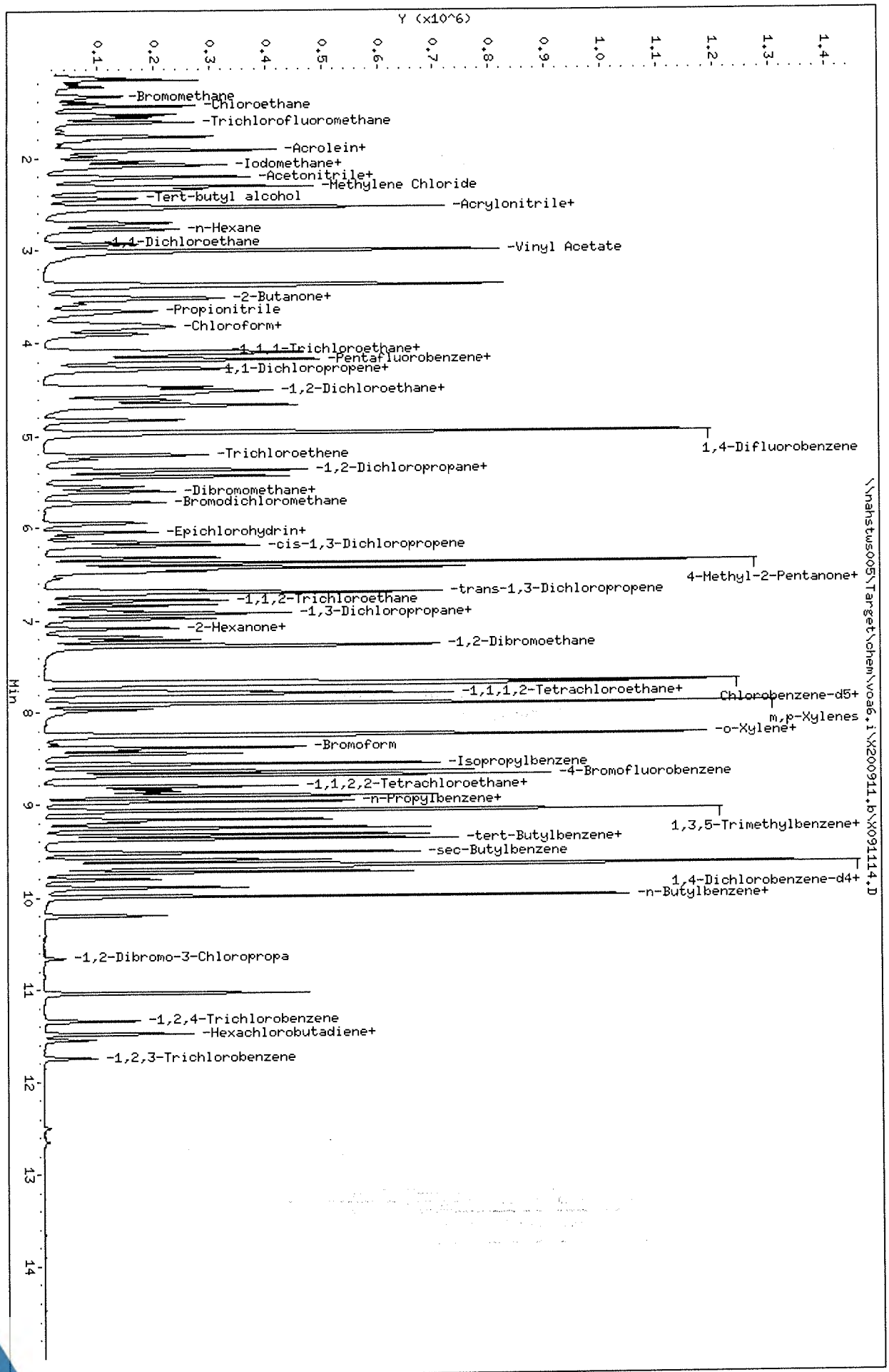
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	414539	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	625889	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	562154	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263355	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	196284	48.2164	48.21
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	214499	44.4528	44.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	702805	51.5428	51.54
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	255701	48.6113	48.61
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31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	140686	22.0328	22.03
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	93545	22.2644	22.26
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	70360	21.9964	21.99
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	183749	22.6924	22.69
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	72585	22.0991	22.09
32 1,1-Dichloropropene	75	4.290	4.283	(0.863)	119672	22.7535	22.75
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	26686	33.6732	33.67
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	78145	20.2720	20.27(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	48822	32.1996	32.19
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	324810	23.0869	23.08
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	7941	21.5431	21.54
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	88357	21.4414	21.44
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.035)	164400	22.0701	22.07

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091114.D Page 2
Report Date: 25-Sep-2020 09:23

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)	127313	21.0090	21.00
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	106426	23.1688	23.16
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	321623	23.3713	23.37
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	185453	22.4040	22.40
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	140136	22.1879	22.18
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	181622	22.1867	22.18
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	134593	22.7641	22.76
24 2-Butanone	43	3.588	3.581	(0.856)	86703	42.6654	42.66
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	262684	22.9905	22.99
52 2-Hexanone	43	7.090	7.090	(0.924)	138821	39.3356	39.33
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	298882	22.4853	22.48
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	351448	24.0991	24.09
45 4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	200544	38.5453	38.54
10 Acetone	43	1.976	1.976	(0.472)	74103	50.7592	50.75
37 Benzene	78	4.519	4.519	(0.909)	355067	22.8655	22.86
74 Bromobenzene	156	8.809	8.810	(0.912)	112547	21.8465	21.84
29 Bromochloromethane	128	3.802	3.803	(0.908)	53090	21.2469	21.24
39 Bromodichloromethane	83	5.729	5.729	(1.153)	121279	21.5250	21.52
66 Bromoform	173	8.415	8.416	(1.097)	62133	19.9210	19.92
6 Bromomethane	94	1.346	1.346	(0.321)	56841	20.3147	20.31
19 Carbon Disulfide	76	2.076	2.076	(0.496)	409380	40.1431	40.14
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	120660	21.5834	21.58
59 Chlorobenzene	112	7.699	7.699	(1.004)	247414	22.4564	22.45
7 Chloroethane	64	1.403	1.403	(0.335)	61123	20.8025	20.80
28 Chloroform	83	3.910	3.910	(0.933)	166052	22.4210	22.42
3 Chloromethane	50	1.080	1.081	(0.258)	73038	12.5487	12.54
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	101321	22.2049	22.20
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	144381	21.9149	21.91
55 Dibromochloromethane	129	7.176	7.176	(0.936)	93465	20.7564	20.75
44 Dibromomethane	93	5.557	5.558	(1.118)	57838	21.2341	21.23
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	22300	5.49641	5.49
61 Ethylbenzene	106	7.799	7.800	(1.017)	131032	23.0330	23.03
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	47058	33.2829	33.28
67 Isopropylbenzene	105	8.566	8.566	(1.117)	397394	23.7973	23.79
62 m,p-Xylenes	106	7.907	7.907	(1.031)	314366	45.7909	45.79
17 Methylene Chloride	84	2.305	2.306	(0.550)	93698	21.1549	21.15
87 n-Butylbenzene	91	9.998	9.999	(1.035)	291541	25.0319	25.03
73 n-Propylbenzene	91	8.917	8.917	(0.923)	454899	23.9774	23.97
92 Naphthalene	128	11.546	11.546	(1.195)	63221	30.3615	30.36
63 o-Xylene	106	8.244	8.244	(1.075)	153294	22.7313	22.73
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	389445	24.3417	24.34
64 Styrene	104	8.265	8.258	(1.078)	259901	22.1950	22.19
78 tert-Butylbenzene	119	9.339	9.340	(0.967)	284949	23.8823	23.88
56 Tetrachloroethene	164	6.933	6.933	(0.904)	85555	23.9409	23.94
50 Toluene	91	6.453	6.446	(0.841)	381257	23.2236	23.22
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	87922	22.6246	22.62
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	123951	20.5271	20.52
38 Trichloroethene	130	5.214	5.214	(1.049)	102478	23.1030	23.10
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	121891	19.9657	19.96
5 Vinyl Chloride	62	1.145	1.145	(0.273)	83648	15.6761	15.67

QC Flag Legend

M - Compound response manually integrated.

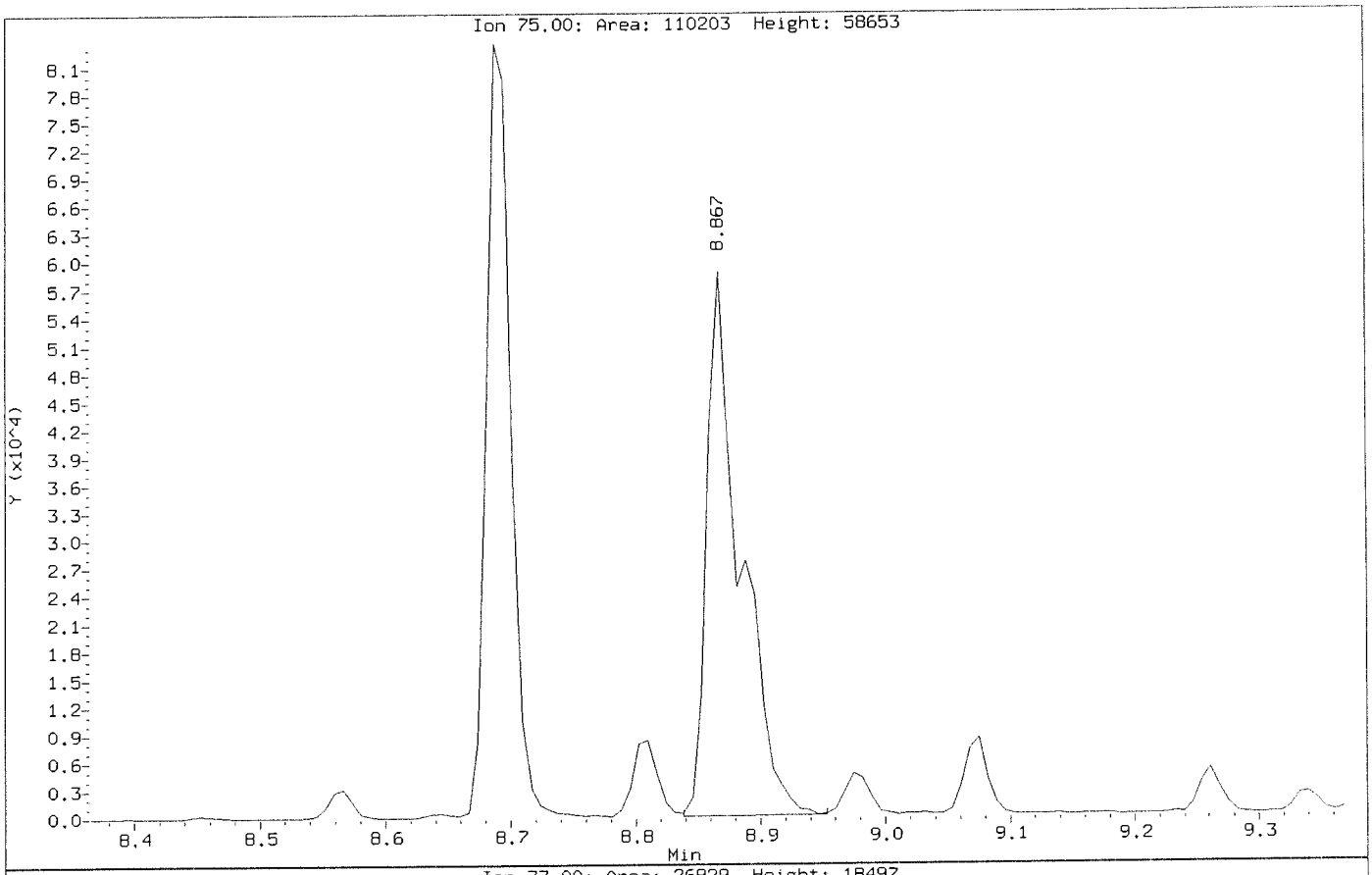


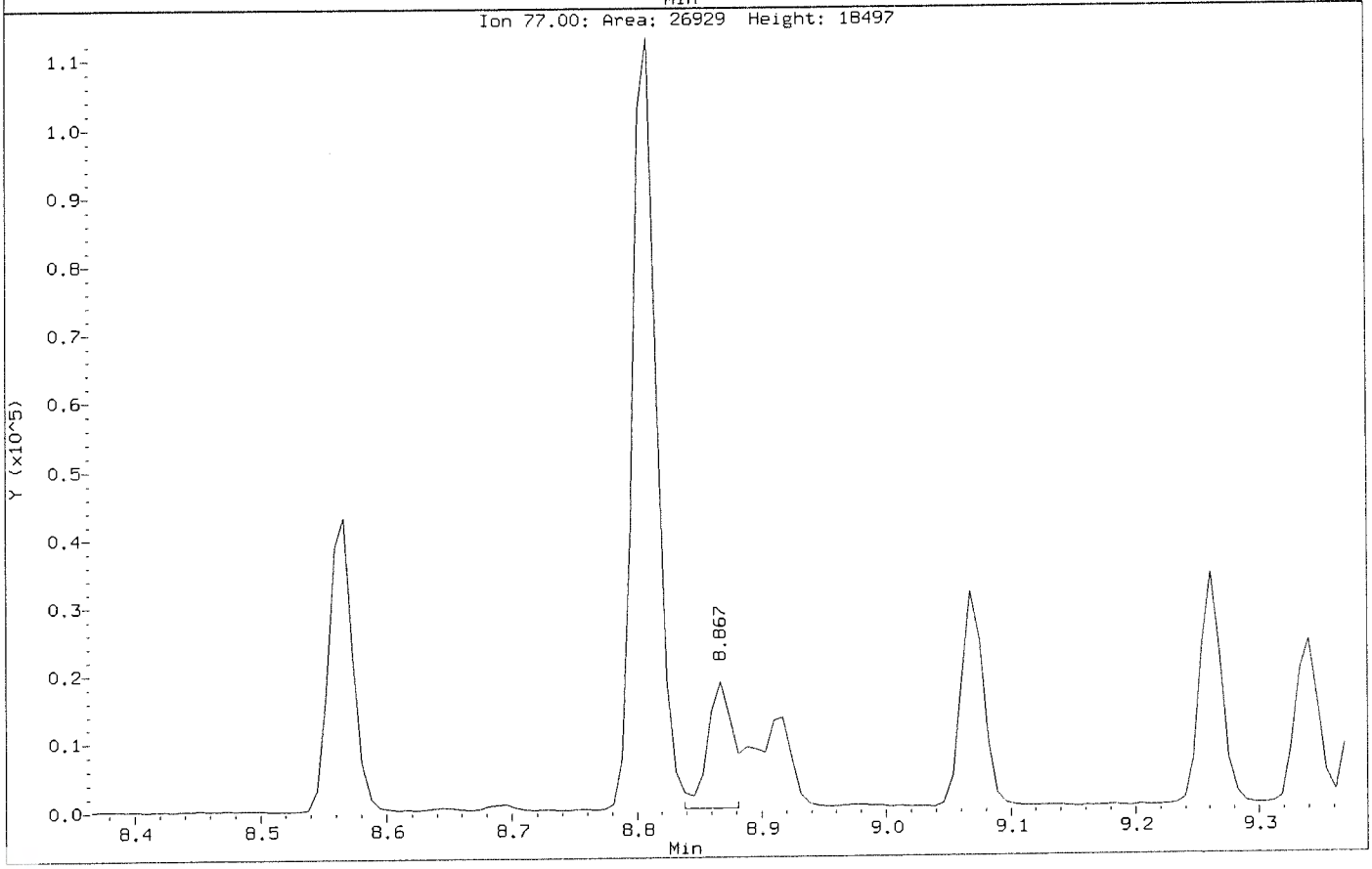
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Sample Info: HS20090556-01HSD;HS20090556-01HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

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

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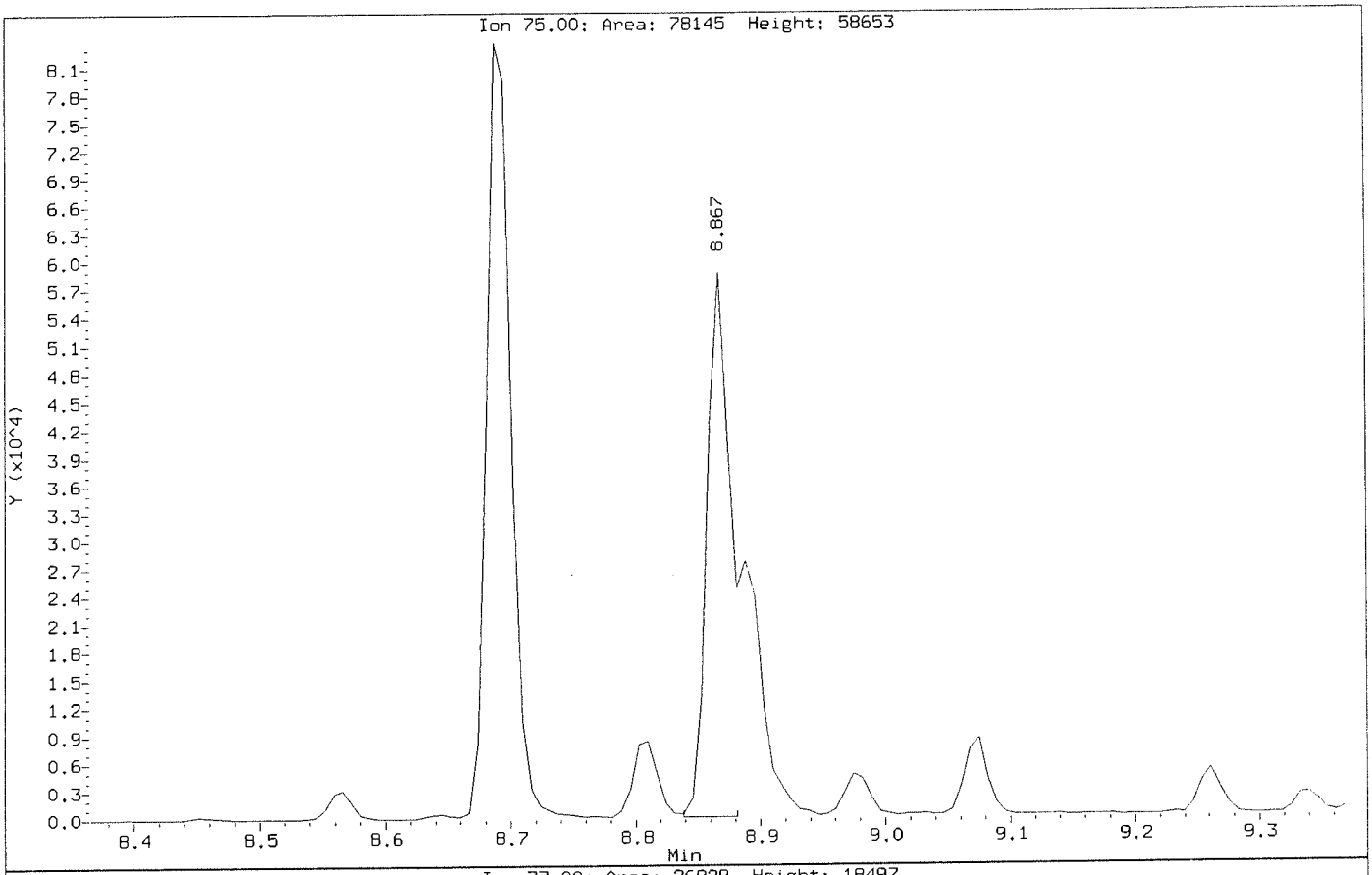
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

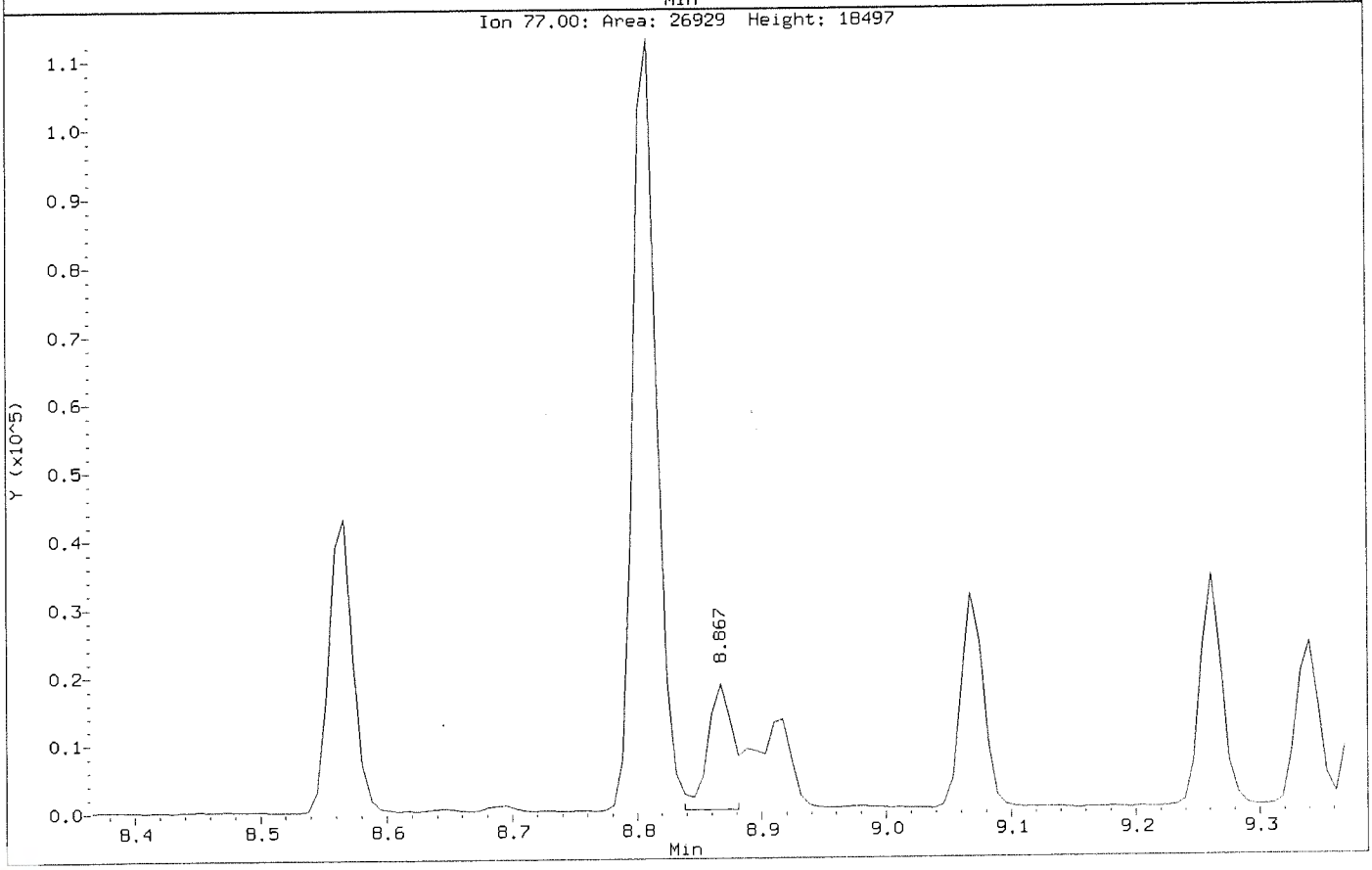




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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091115.D Page 1
Report Date: 25-Sep-2020 09:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200911.b\X091115.D
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Inj Date : 11-SEP-2020 16:13
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\X200911.b\8260W.m
Meth Date : 25-Sep-2020 09:20 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

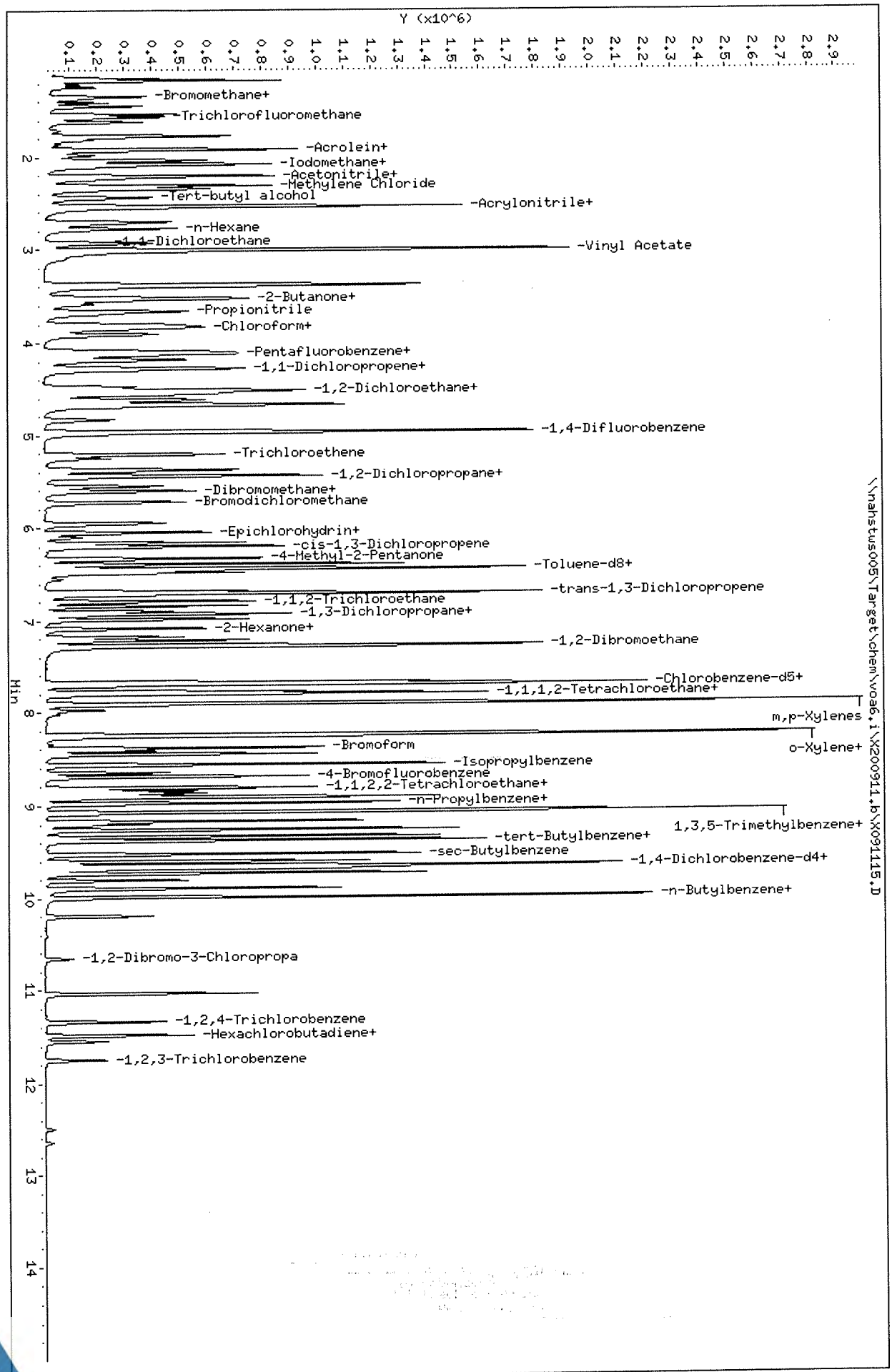
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	430021	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	662258	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	606626	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	283280	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	211011	50.0000	49.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	242537	50.0000	48.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	723378	50.0000	49.16
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269633	50.0000	47.50
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	216807	50.0000	46.95
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	313548	50.0000	47.33
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	228665	50.0000	50.10
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	167202	50.0000	48.43
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	437429	50.0000	52.07
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	173304	50.0000	50.86
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	261751	50.0000	47.03
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	65436	50.0000	76.76
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	193584	50.0000	46.68(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	118528	50.0000	71.92
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	710150	50.0000	46.92
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	20700	50.0000	51.07
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	216324	50.0000	48.64
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	376814	50.0000	47.02

Data File: \\nahstws005\Target\chem\voa6.i\X200911.b\X091115.D Page 2
Report Date: 25-Sep-2020 09:20

	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)	306775	50.0000	47.84
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	252289	50.0000	51.90
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	691274	50.0000	46.69
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	422043	50.0000	47.39
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	332511	50.0000	48.78
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	416362	50.0000	47.28
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	295214	50.0000	48.13
24	2-Butanone	43	3.581	3.581	(0.855)	210626	100.000	99.91
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	584851	50.0000	47.58
52	2-Hexanone	43	7.090	7.090	(0.924)	333622	100.000	87.60
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	674110	50.0000	47.14
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	727821	50.0000	46.39
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	498391	100.000	88.77
10	Acetone	43	1.976	1.976	(0.472)	159621	100.000	106.55
37	Benzene	78	4.519	4.519	(0.909)	826011	50.0000	50.27
74	Bromobenzene	156	8.810	8.810	(0.912)	263791	50.0000	47.60
29	Bromochloromethane	128	3.803	3.803	(0.908)	128053	50.0000	49.40
39	Bromodichloromethane	83	5.729	5.729	(1.153)	288207	50.0000	48.34
66	Bromoform	173	8.416	8.416	(1.097)	152987	50.0000	45.45
6	Bromomethane	94	1.346	1.346	(0.321)	152707	50.0000	51.57
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1035457	100.000	97.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	262734	50.0000	44.41
59	Chlorobenzene	112	7.699	7.699	(1.004)	572729	50.0000	48.17
7	Chloroethane	64	1.403	1.403	(0.335)	152188	50.0000	49.93
28	Chloroform	83	3.910	3.910	(0.933)	380986	50.0000	49.59
3	Chloromethane	50	1.081	1.081	(0.258)	276943	50.0000	45.86
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	241796	50.0000	51.08
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	344959	50.0000	49.48
55	Dibromochloromethane	129	7.176	7.176	(0.936)	229227	50.0000	47.17
44	Dibromomethane	93	5.558	5.558	(1.118)	140005	50.0000	48.57
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	173377	50.0000	41.19
61	Ethylbenzene	106	7.800	7.800	(1.017)	287430	50.0000	46.82
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	93137	50.0000	61.24
67	Isopropylbenzene	105	8.566	8.566	(1.117)	825293	50.0000	45.79
62	m,p-Xylenes	106	7.907	7.907	(1.031)	695213	100.000	93.84
17	Methylene Chloride	84	2.306	2.306	(0.550)	225170	50.0000	50.82
87	n-Butylbenzene	91	9.999	9.999	(1.035)	590380	50.0000	47.12
73	n-Propylbenzene	91	8.917	8.917	(0.923)	958230	50.0000	46.95
92	Naphthalene	128	11.546	11.546	(1.195)	161988	50.0000	70.45
63	o-Xylene	106	8.244	8.244	(1.075)	345431	50.0000	47.46
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	791360	50.0000	45.98
64	Styrene	104	8.258	8.258	(1.077)	611813	50.0000	48.41
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	595317	50.0000	46.38
56	Tetrachloroethene	164	6.933	6.933	(0.904)	179646	50.0000	46.58
50	Toluene	91	6.446	6.446	(0.840)	857100	50.0000	48.38
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	204340	50.0000	50.68
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	305687	50.0000	47.84
38	Trichloroethene	130	5.214	5.214	(1.049)	231613	50.0000	49.34
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	289697	50.0000	45.74
5	Vinyl Chloride	62	1.145	1.145	(0.273)	267542	50.0000	48.33

QC Flag Legend

M - Compound response manually integrated.

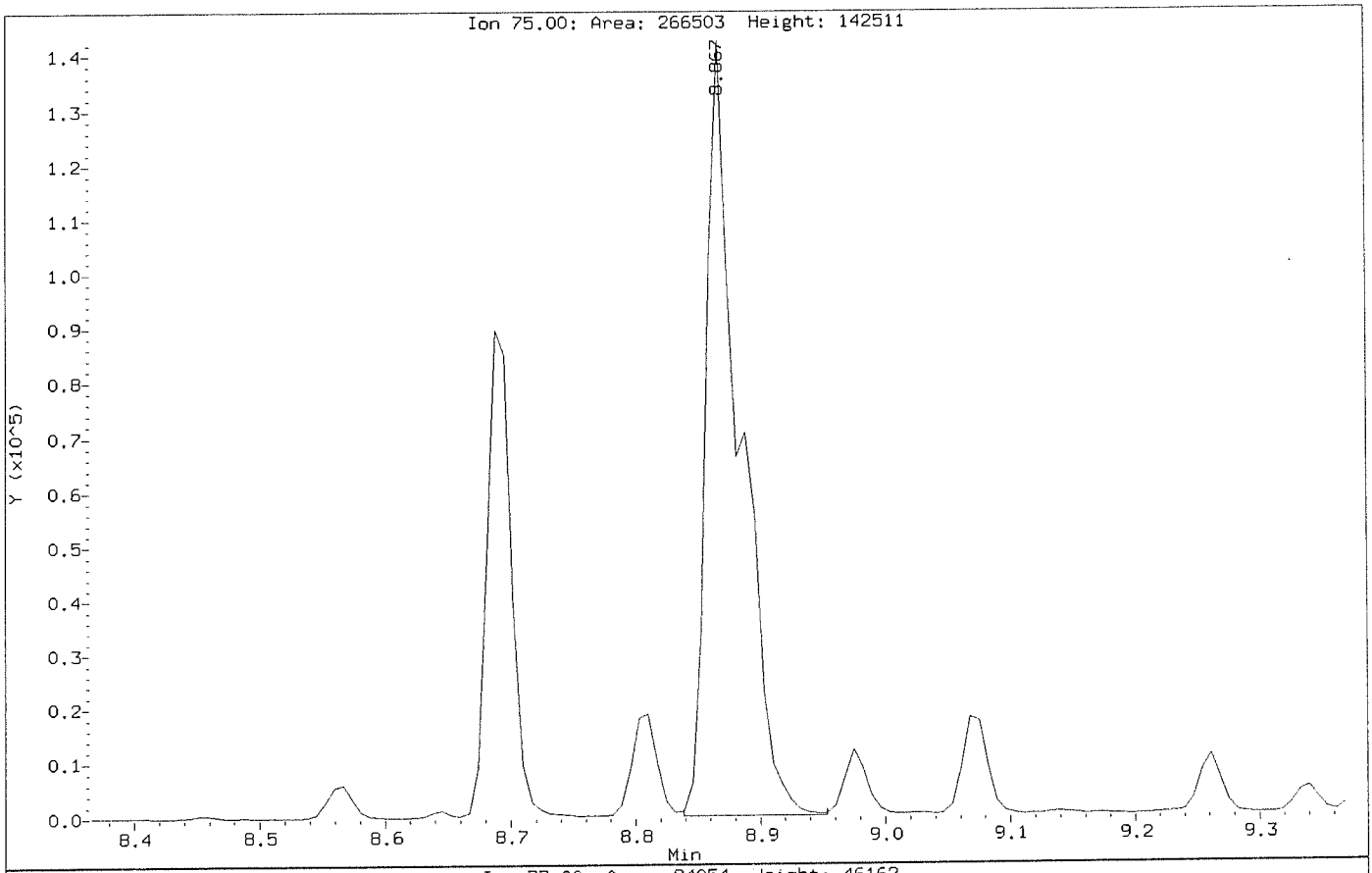


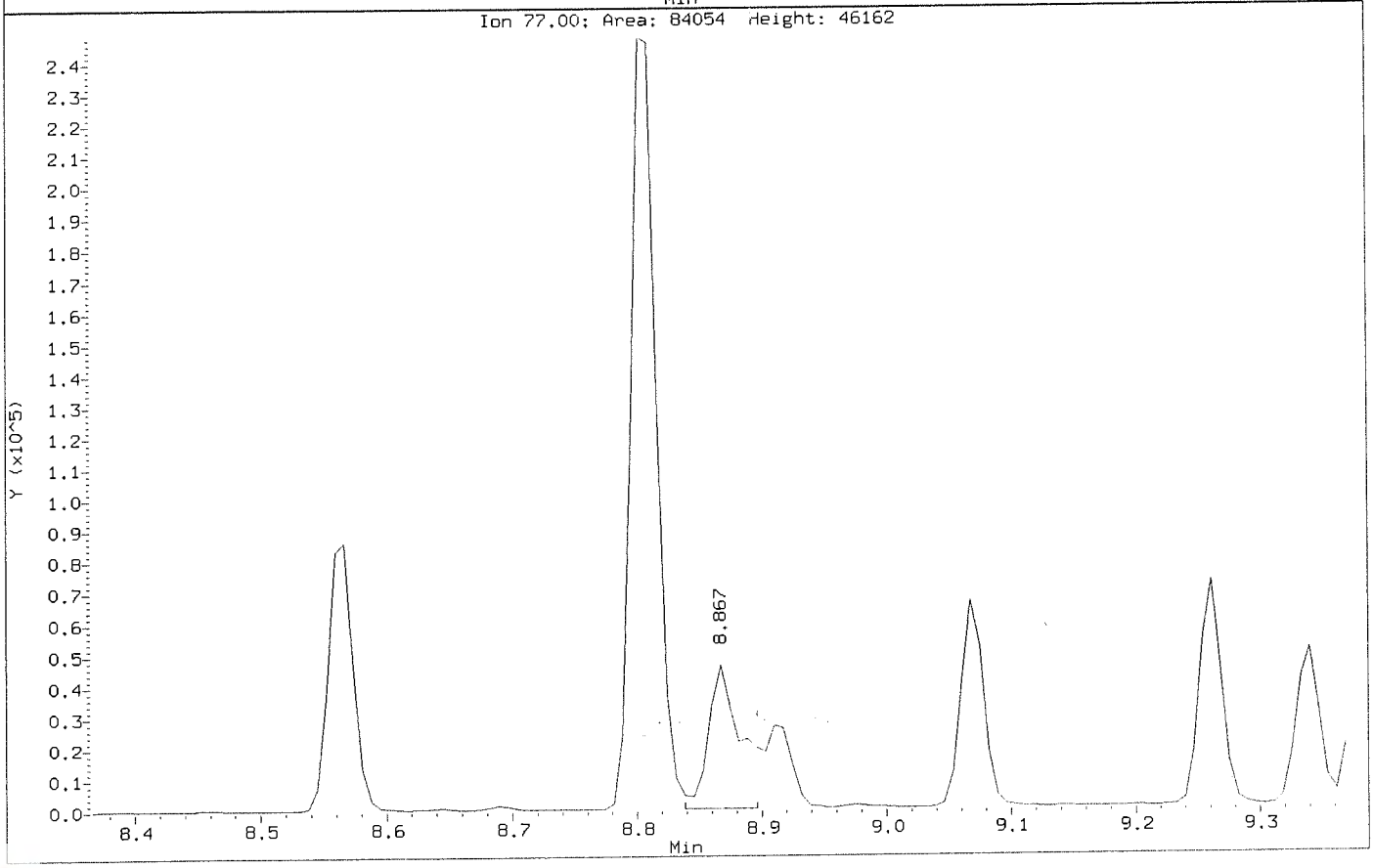
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Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: CCV-END

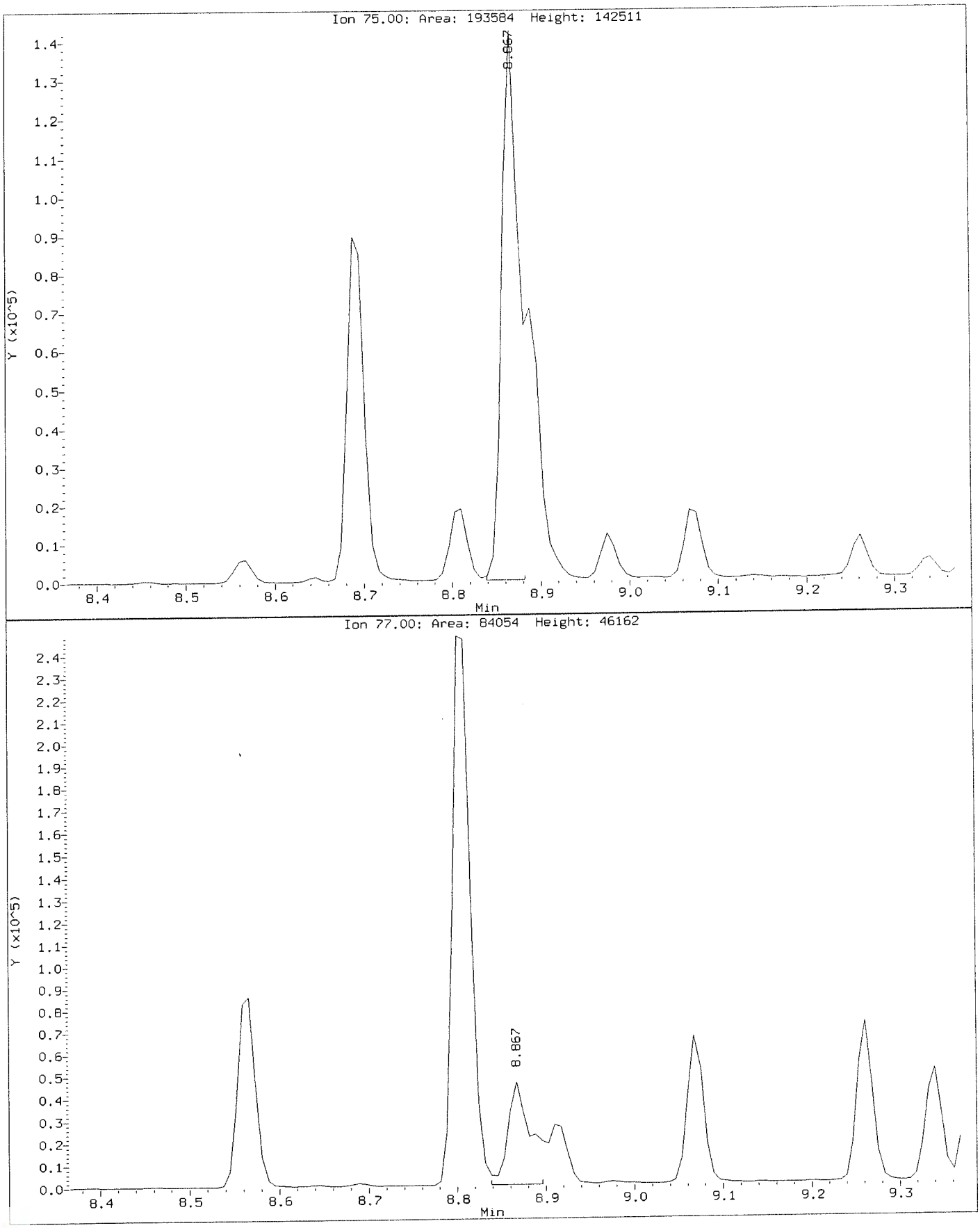
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Injection Date: 11-SEP-2020 16:13
Instrument: voa6.i
Client Sample ID: CCV-END

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



HS20090534 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20090534

Sequence: 091420
Last Update Operator: alshs.nouser

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	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
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	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
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	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	HS20090534-01DF20		Unknown	GB5	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: 091420
Last Update Operator: alshs.nouser

Inject Time
8/11/2020 10:46:45 AM -05:00
8/11/2020 11:04:45 AM -05:00
8/11/2020 11:22:45 AM -05:00
8/11/2020 11:40:48 AM -05:00
8/11/2020 11:58:48 AM -05:00
8/11/2020 12:16:48 PM -05:00
8/11/2020 12:34:48 PM -05:00
8/11/2020 12:52:50 PM -05:00
9/14/2020 10:12:43 AM -05:00
9/14/2020 10:30:47 AM -05:00
9/14/2020 10:48:48 AM -05:00
9/14/2020 11:06:51 AM -05:00
9/14/2020 1:48:58 PM -05:00
9/14/2020 2:06:59 PM -05:00
9/14/2020 2:56:01 PM -05:00
9/14/2020 3:14:02 PM -05:00
9/14/2020 3:32:04 PM -05:00
9/14/2020 5:38:19 PM -05:00
9/14/2020 5:56:25 PM -05:00
9/14/2020 6:32:30 PM -05:00
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9/14/2020 8:38:38 PM -05:00
9/14/2020 8:56:38 PM -05:00

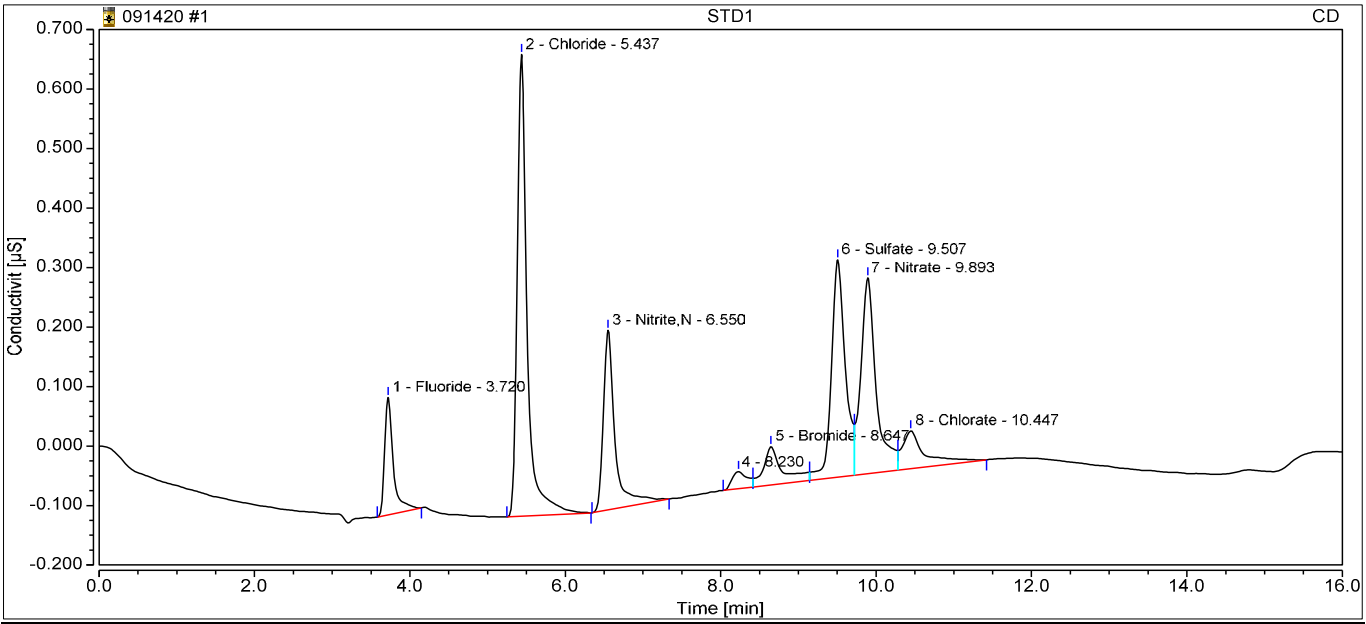
Sequence: 091420
Injection #6: STD6

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:

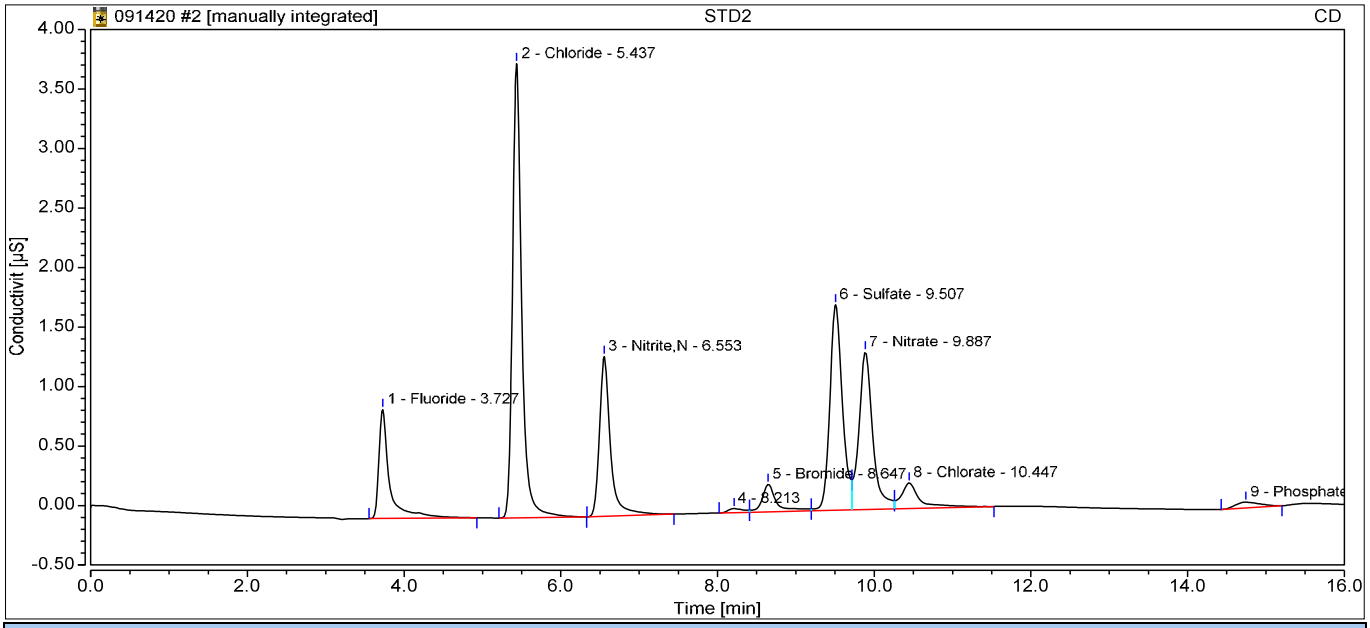


Integration Results

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:

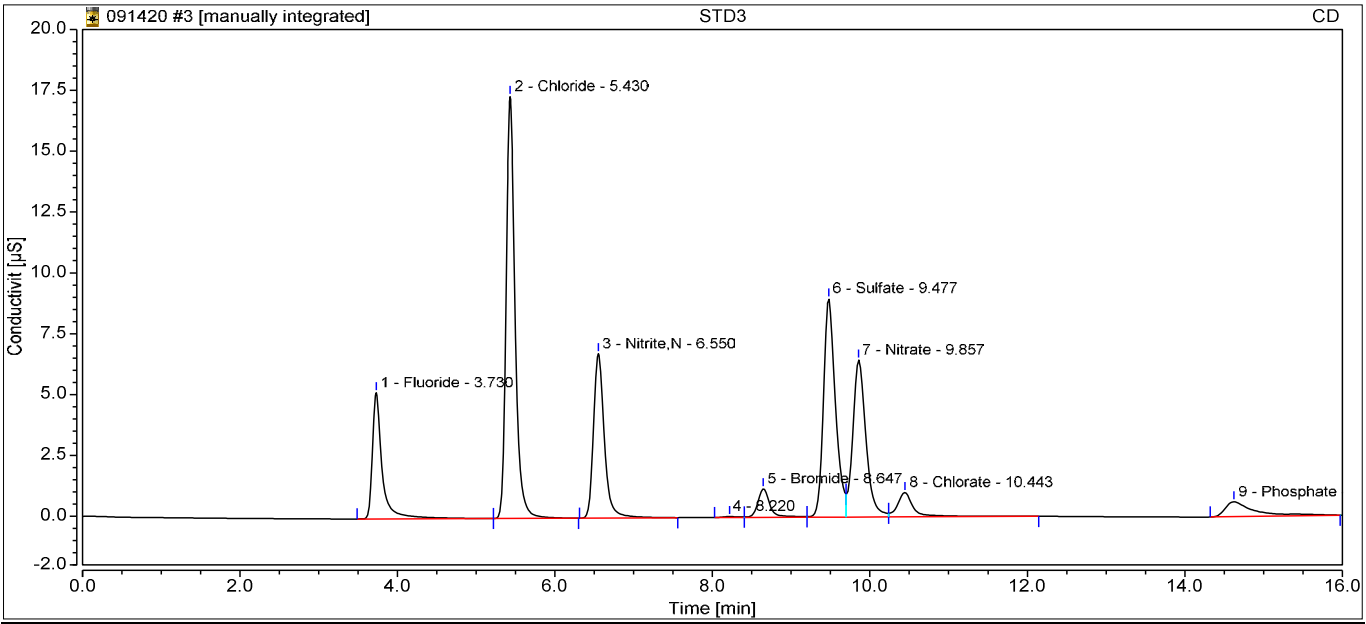


Integration Results

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:



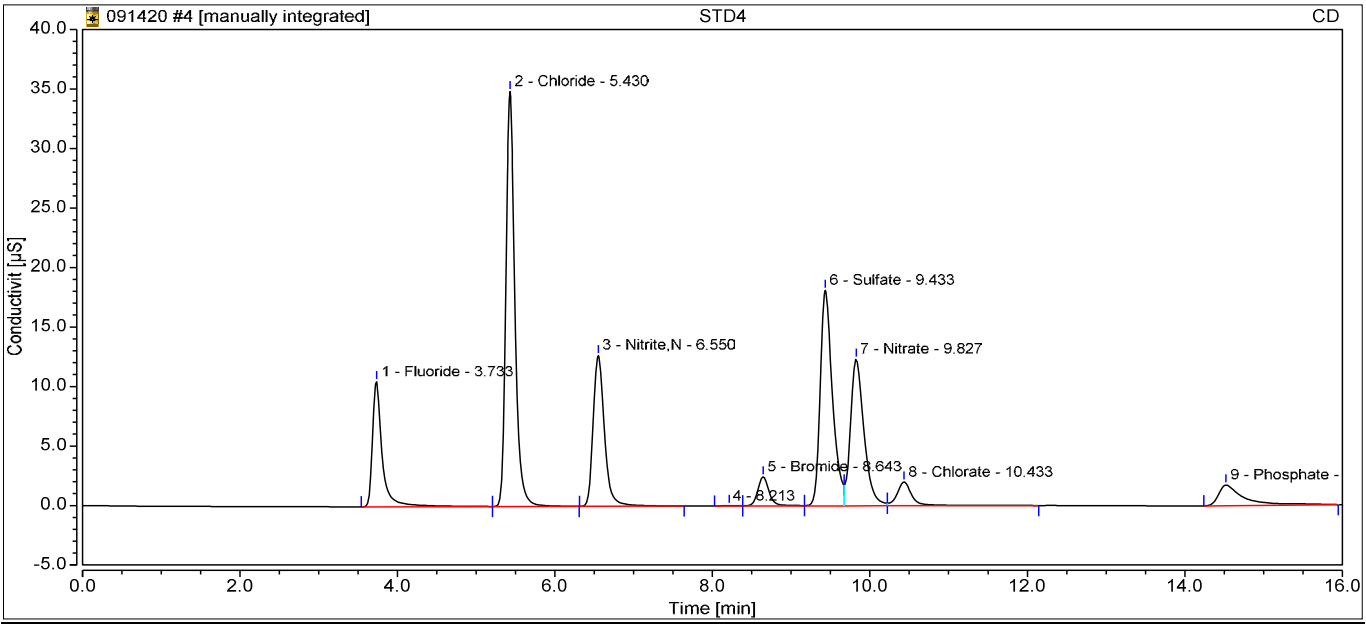
Integration Results

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:



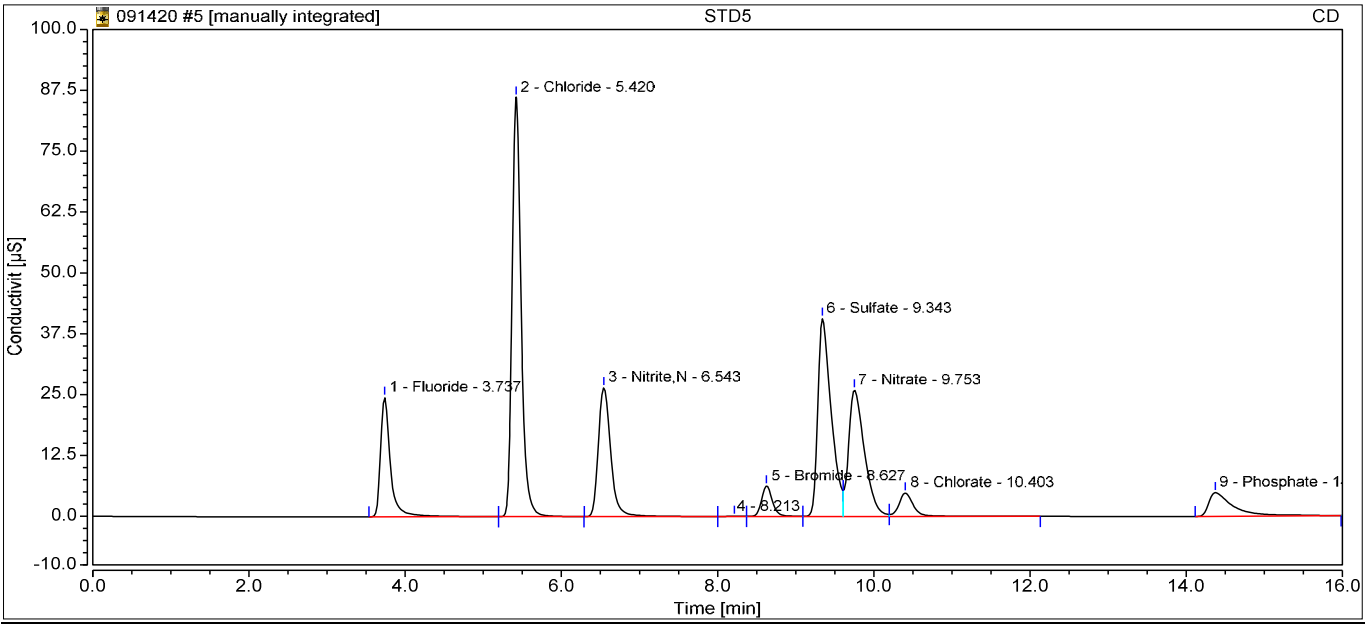
Integration Results

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:



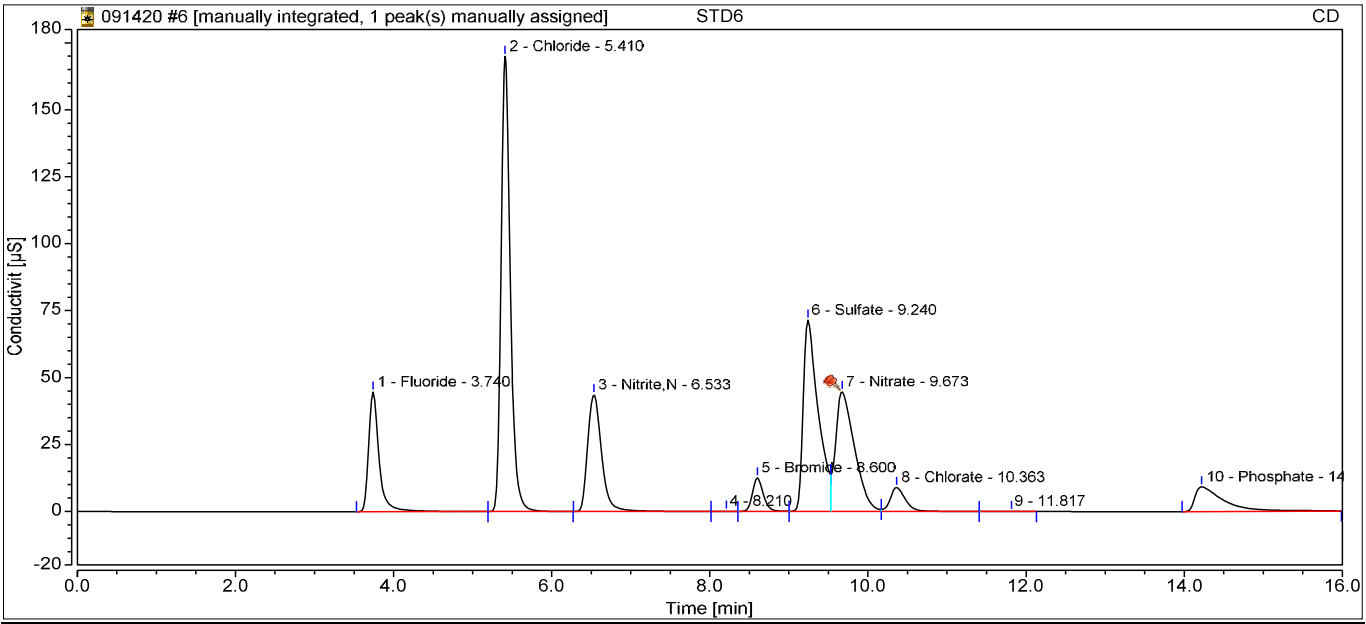
Integration Results

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:



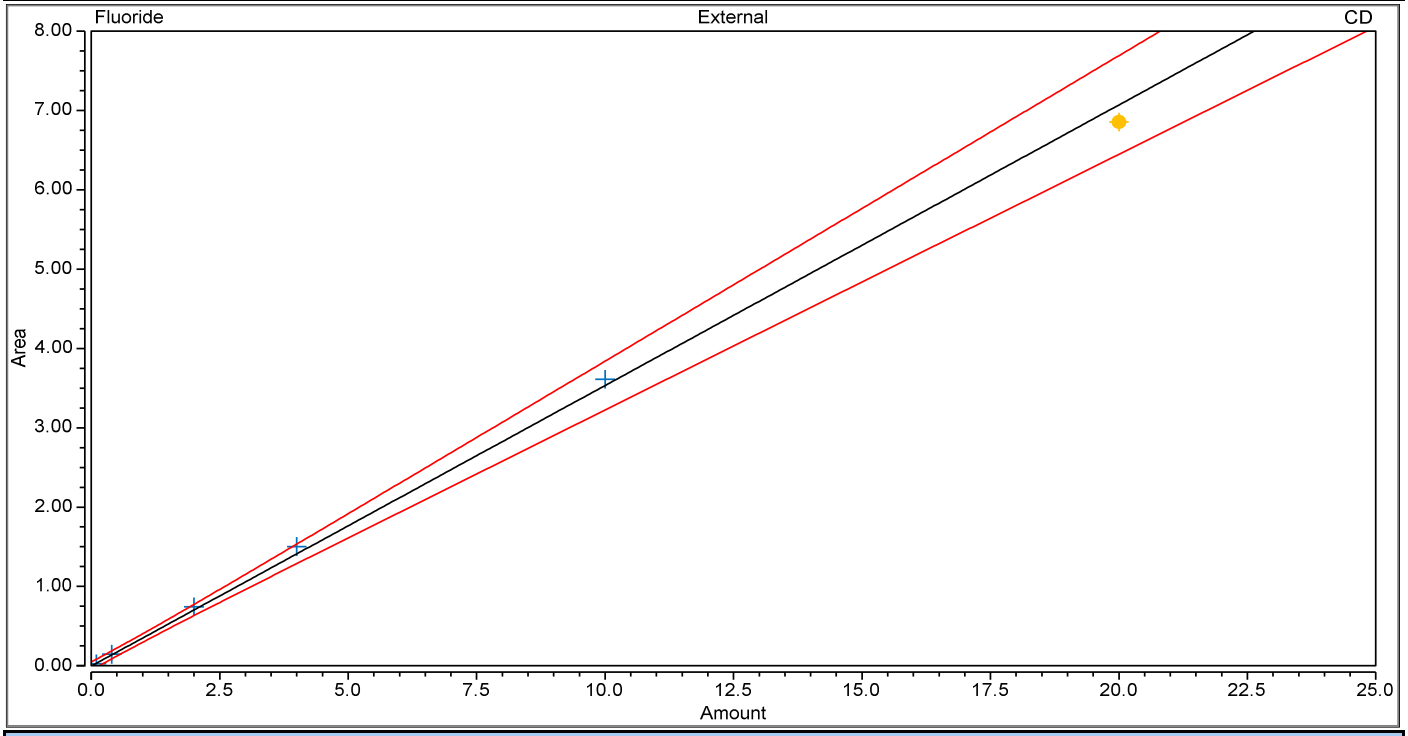
Integration Results

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**



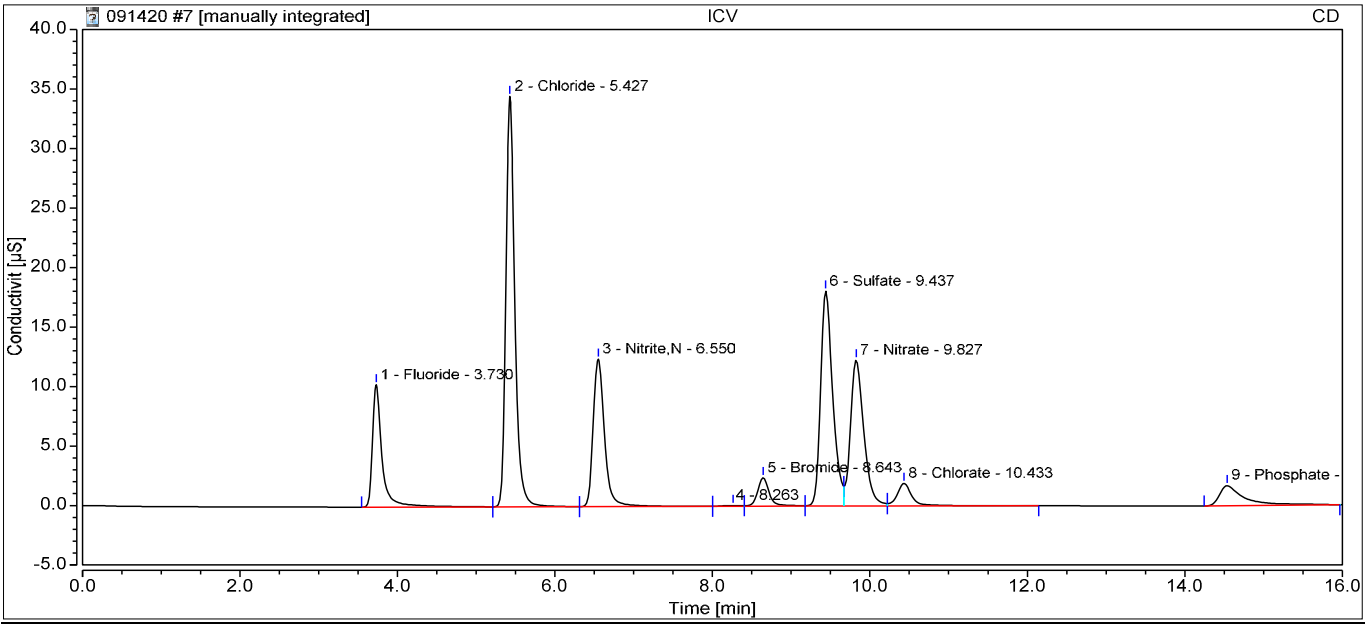
Calibration Results **Fluoride**

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:



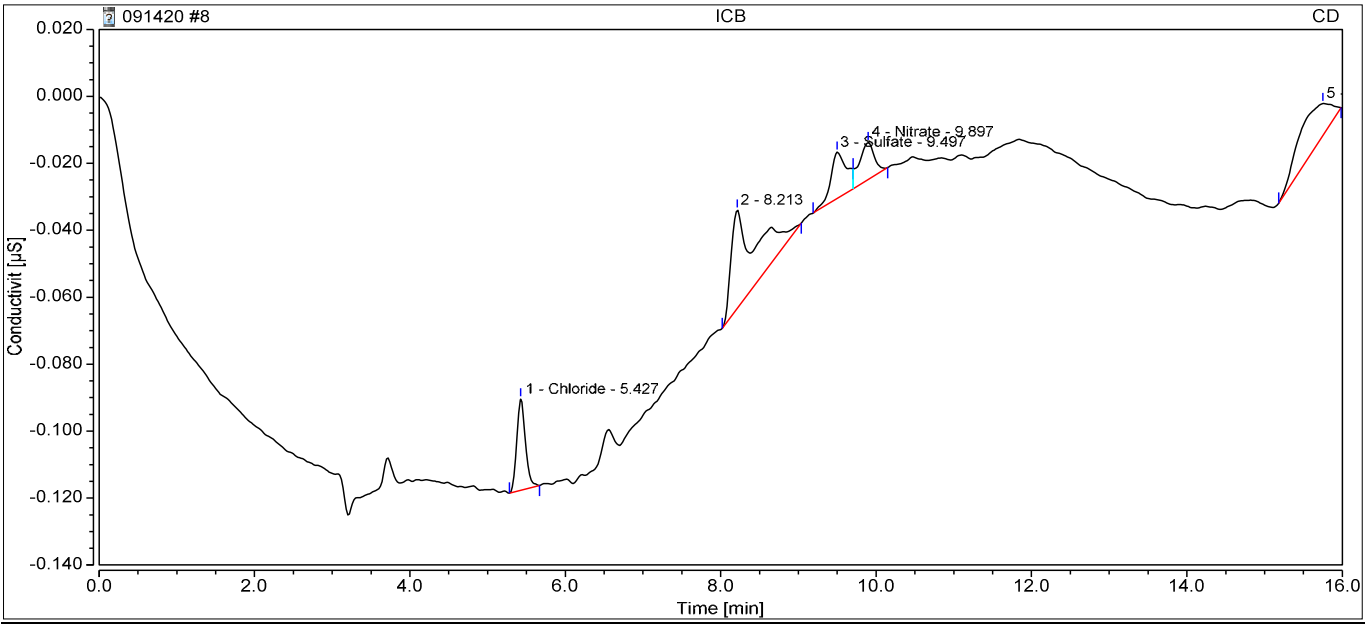
Integration Results

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:



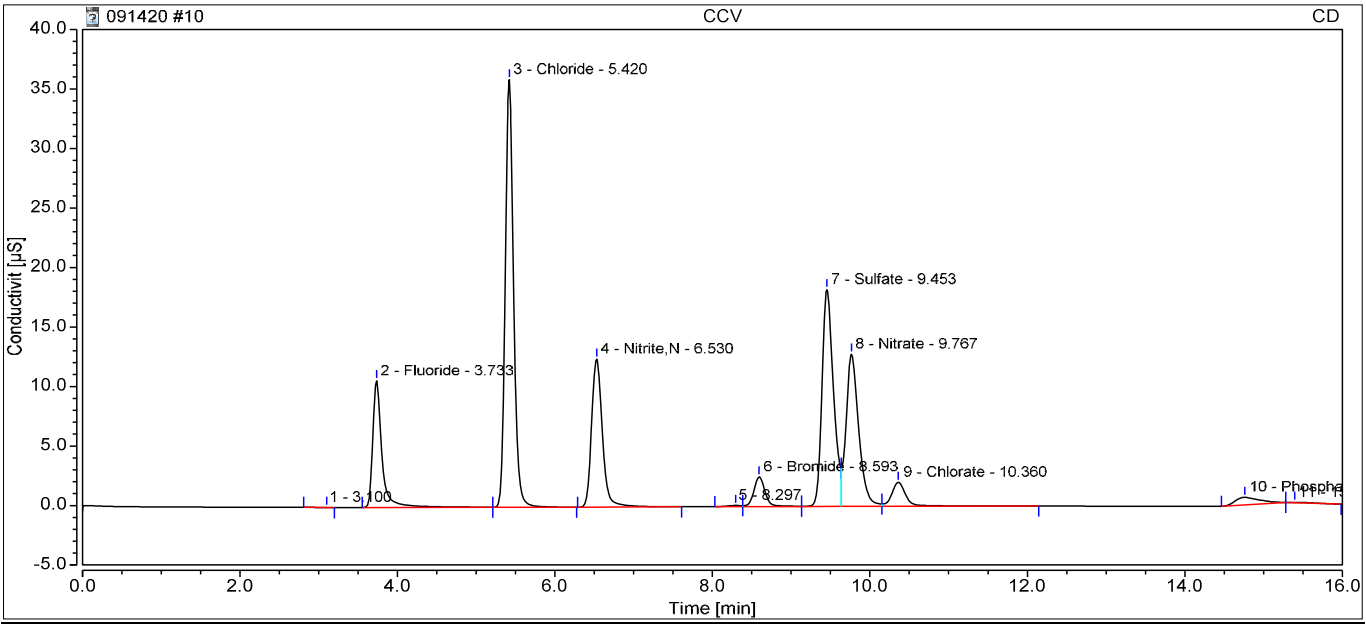
Integration Results

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:	**09/14/2020 10:12**	*Sample Weight:*	**1.0000**

Run Time:



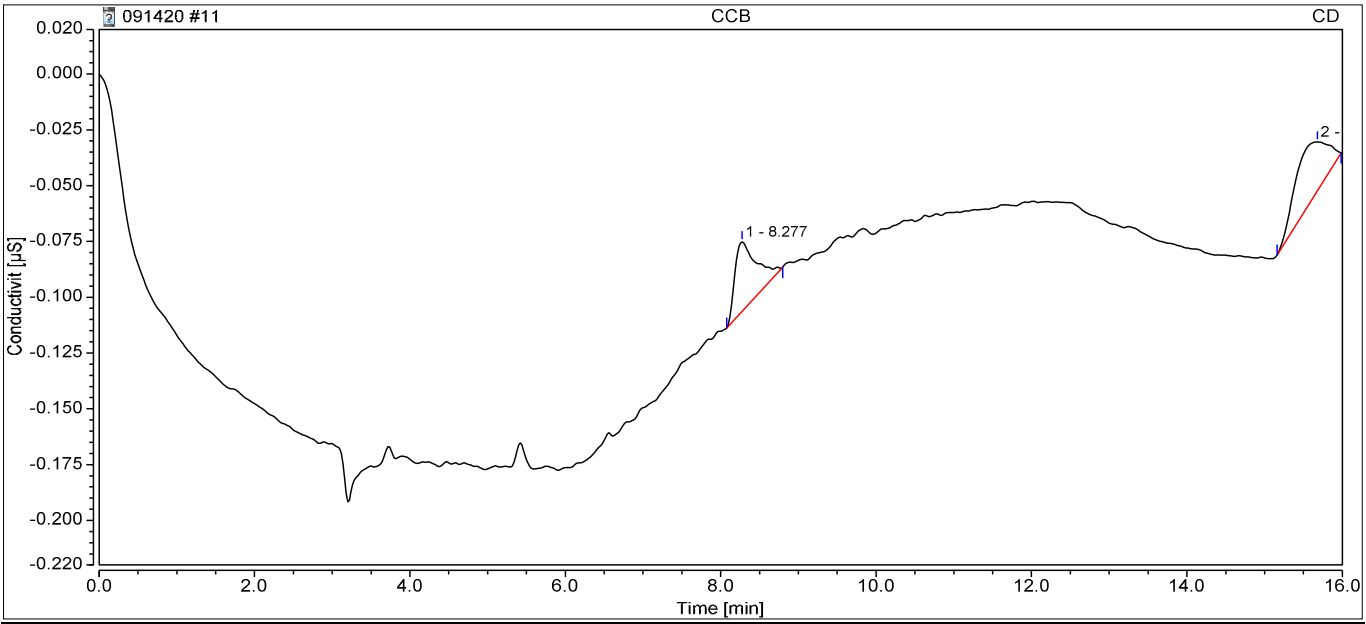
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
2	3.73	Fluoride	BMB	1.435	4.0704	4.0704	1.0000
3	5.42	Chloride	BMB	4.438	19.3337	19.3337	1.0000
4	6.53	Nitrite,N	BMB	1.980	4.1631	4.1631	1.0000
6	8.59	Bromide	M	0.415	4.0296	4.0296	1.0000
7	9.45	Sulfate	M	3.095	19.3361	19.3361	1.0000
8	9.77	Nitrate	M	2.391	3.8612	3.8612	1.0000
9	10.36	Chlorate	MB	0.429	4.0745	4.0745	1.0000
10	14.76	Phosphate	BMB	0.227	1.5458	1.5458	1.0000
Total:			**0.000**	**14.409**		**60.41**	

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:	**09/14/2020 10:30**	*Sample Weight:*	**1.0000**

Run Time:

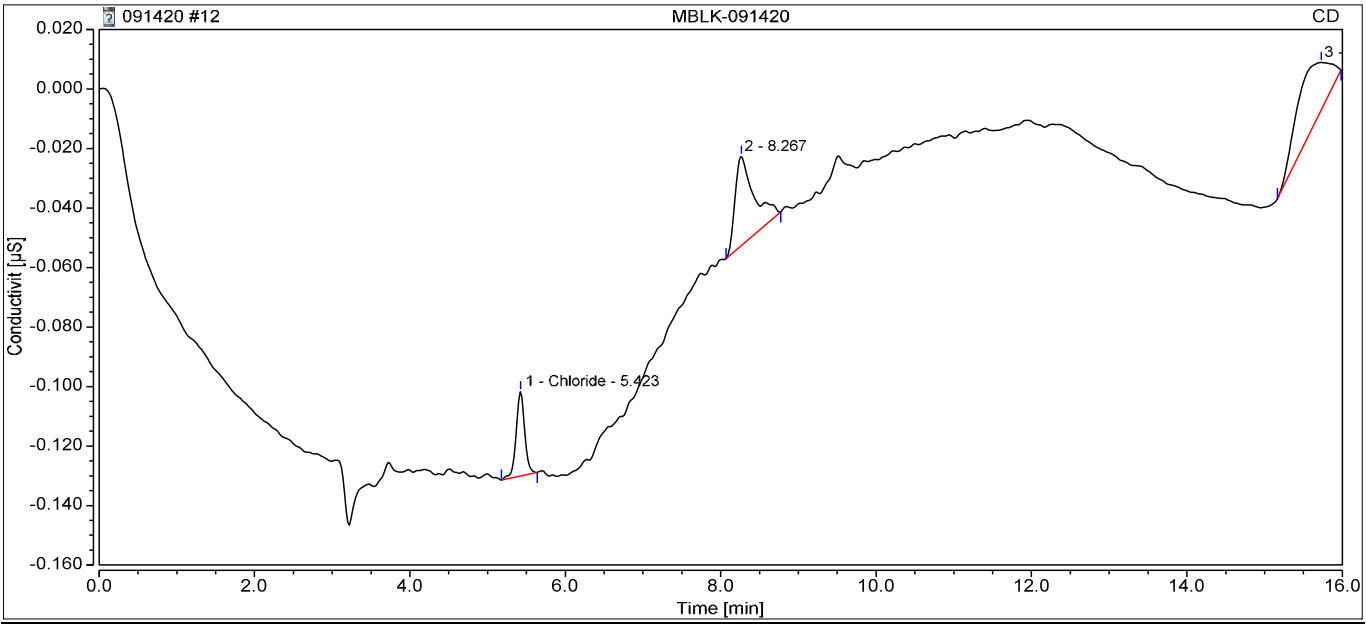


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

12 MBLK-091420			
Sample Name:	**MBLK-091420**	*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:	**09/14/2020 10:48**	*Sample Weight:*	**1.0000**

Run Time:



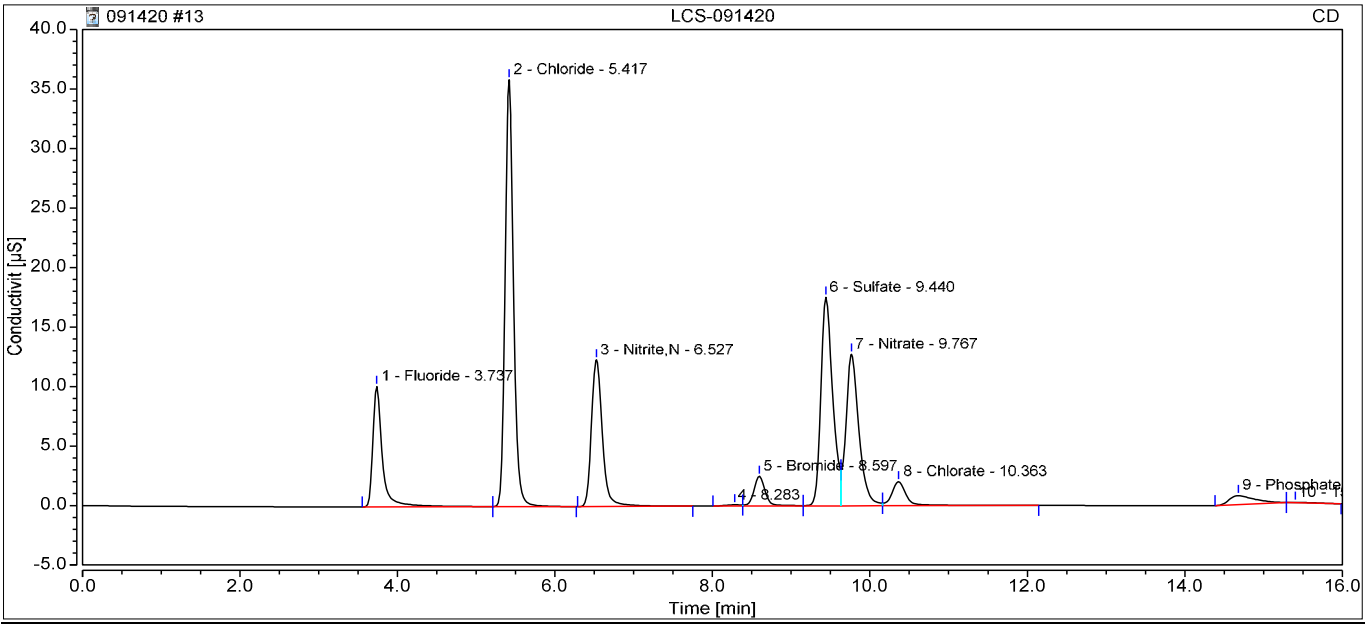
Integration Results

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	0.004	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**	

13 LCS-091420

Sample Name:	**LCS-091420**	*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:	**09/14/2020 11:06**	*Sample Weight:*	**1.0000**

Run Time:

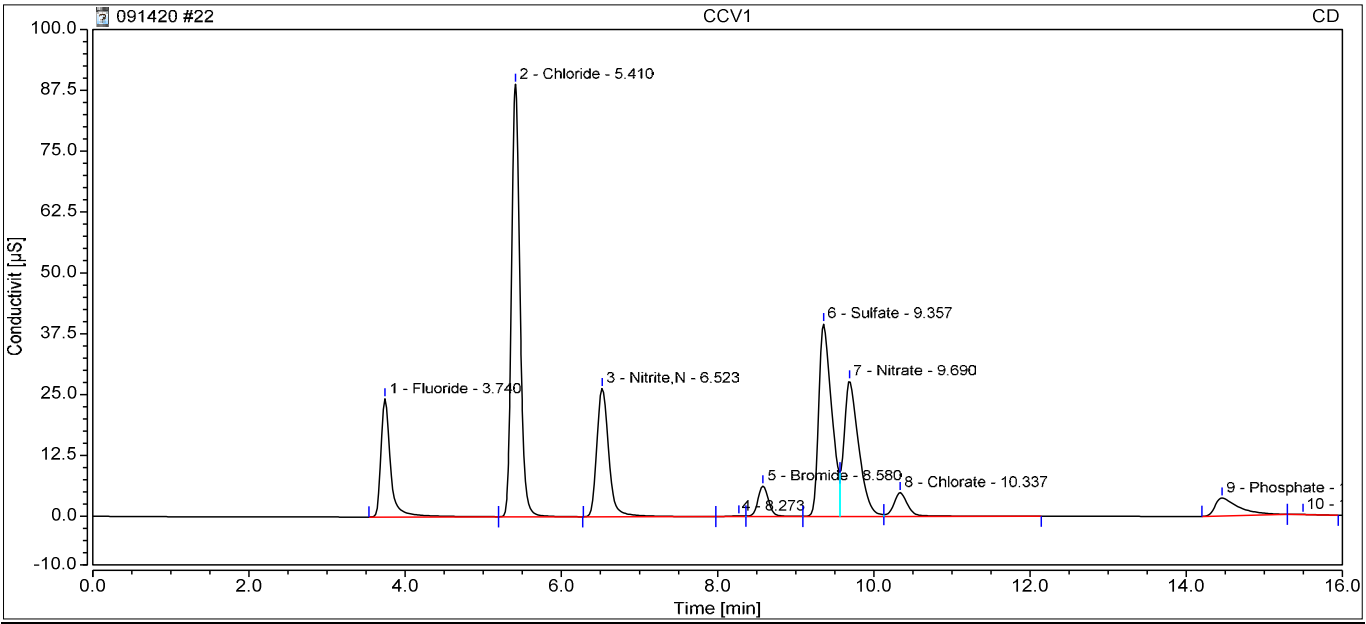


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.420	4.0252	4.0252	1.0000
2	5.42	Chloride	BMB	4.466	19.4604	19.4604	1.0000
3	6.53	Nitrite,N	BMB	1.983	4.1710	4.1710	1.0000
5	8.60	Bromide	M	0.415	4.0342	4.0342	1.0000
6	9.44	Sulfate	M	3.061	19.1255	19.1255	1.0000
7	9.77	Nitrate	M	2.424	3.9157	3.9157	1.0000
8	10.36	Chlorate	MB	0.436	4.1381	4.1381	1.0000
9	14.68	Phosphate	BMB	0.283	1.8371	1.8371	1.0000
Total:			**0.000**	**14.489**		**60.71**	

22 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:	**09/14/2020 13:48**	*Sample Weight:*	**1.0000**

Run Time:



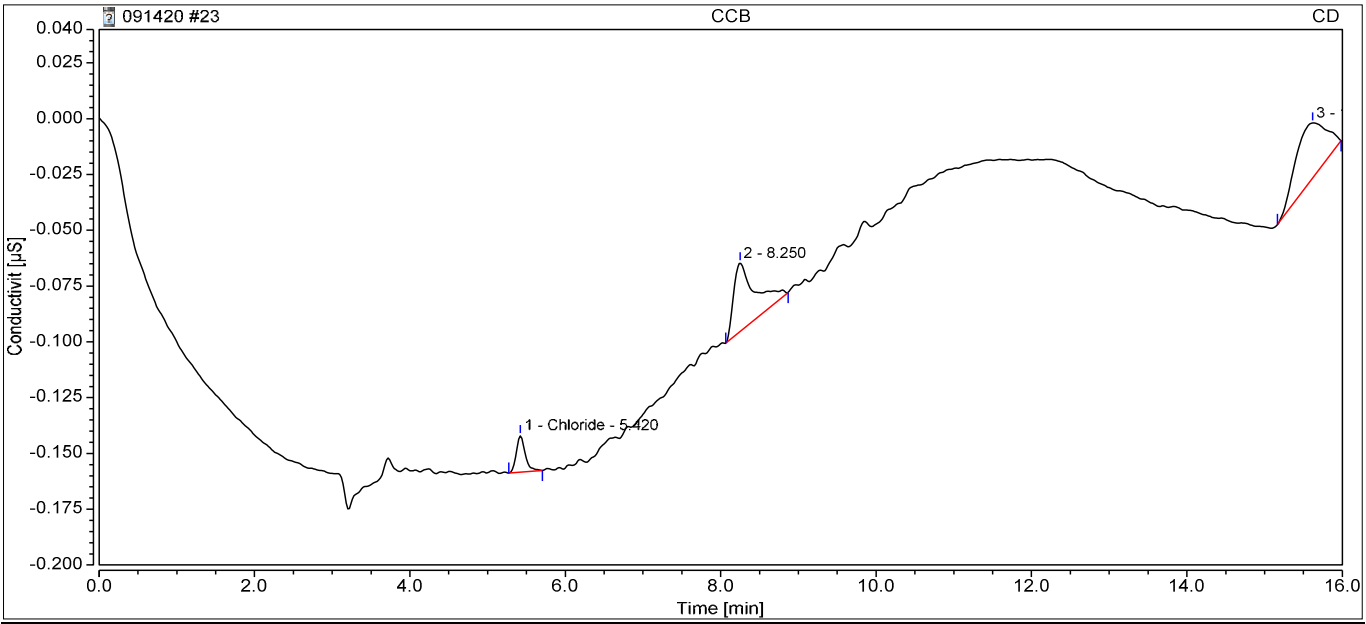
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.477	9.8422	9.8422	1.0000
2	5.41	Chloride	BMB	11.112	48.4999	48.4999	1.0000
3	6.52	Nitrite,N	BMB	4.693	9.9230	9.9230	1.0000
5	8.58	Bromide	M	1.001	9.8505	9.8505	1.0000
6	9.36	Sulfate	M	7.639	47.7073	47.7073	1.0000
7	9.69	Nitrate	M	6.107	9.8989	9.8989	1.0000
8	10.34	Chlorate	MB	1.030	9.9649	9.9649	1.0000
9	14.46	Phosphate	BMB	1.291	7.0241	7.0241	1.0000
Total:			**0.000**	**36.349**		**152.71**	

23 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:	**09/14/2020 14:06**	*Sample Weight:*	**1.0000**

Run Time:



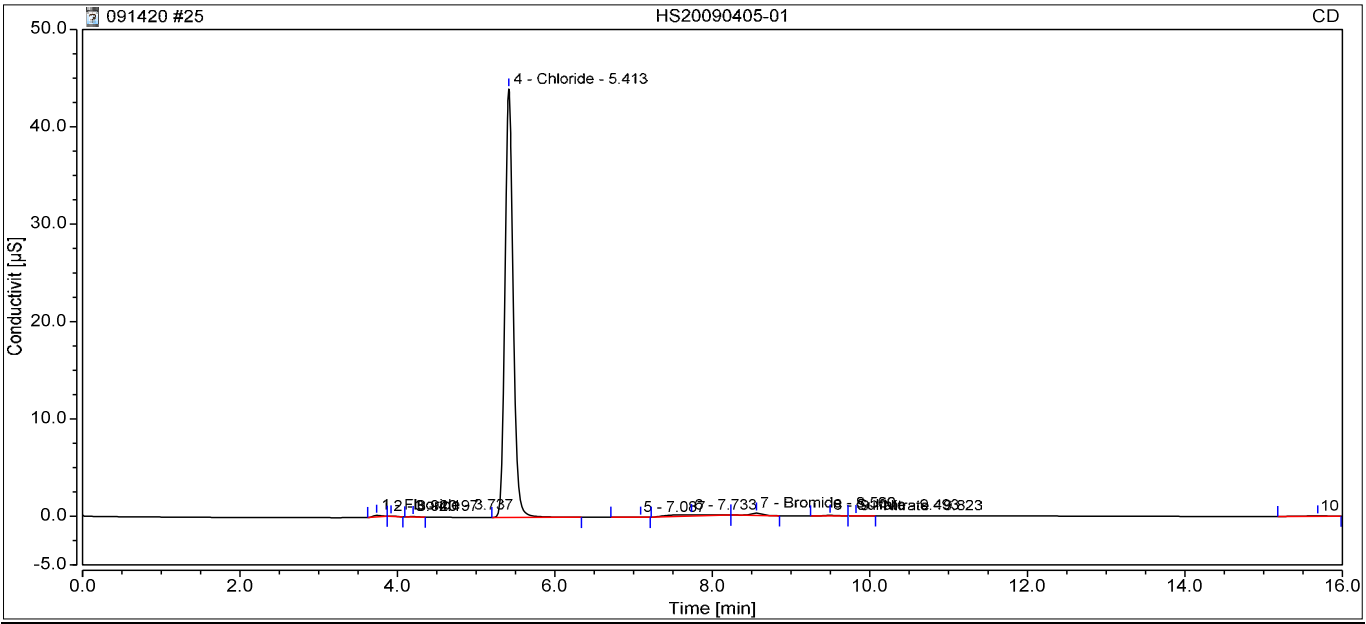
Integration Results

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**	

25 HS20090405-01

Sample Name:	**HS20090405-01**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*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:	**09/14/2020 14:56**	*Sample Weight:*	**1.0000**

Run Time:



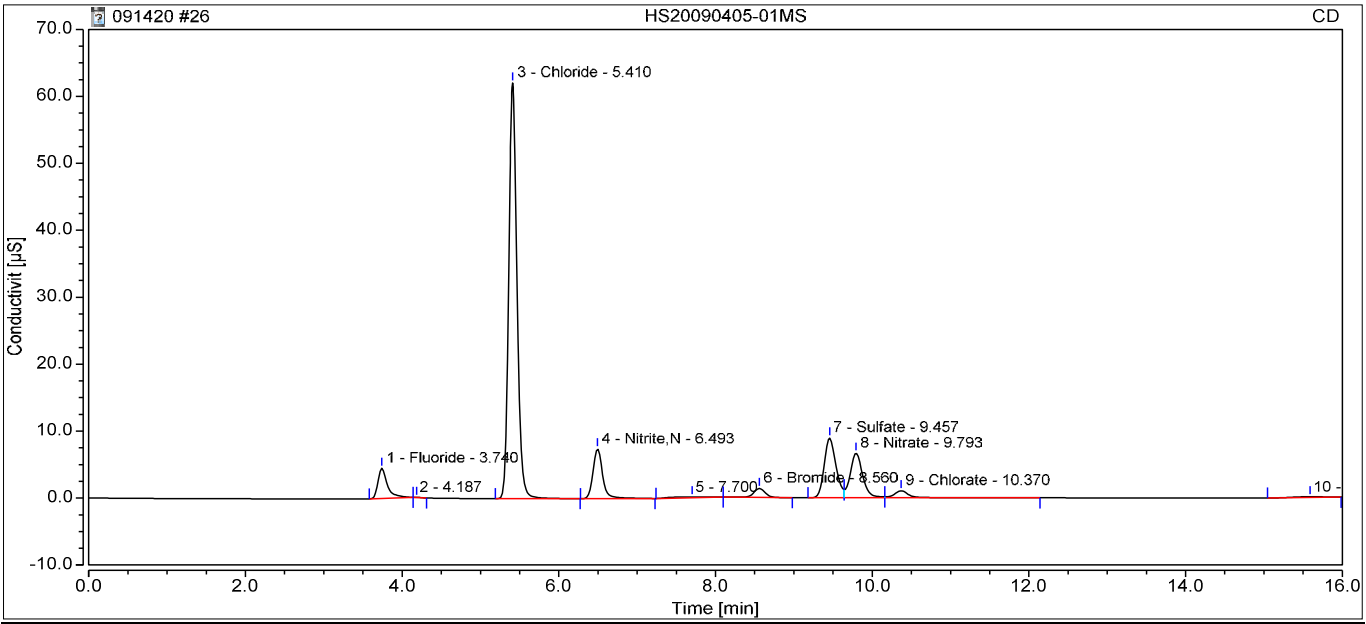
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.019	0.0646	0.0646	1.0000
4	5.41	Chloride	BMB	5.388	23.4865	23.4865	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
7	8.56	Bromide	BMB	0.040	0.3138	0.3138	1.0000
8	9.49	Sulfate	BM	0.013	0.0916	0.0916	1.0000
9	9.82	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**	**5.463**		**23.96**	

26 HS20090405-01MS

Sample Name:	**HS20090405-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*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:	**09/14/2020 15:14**	*Sample Weight:*	**1.0000**

Run Time:



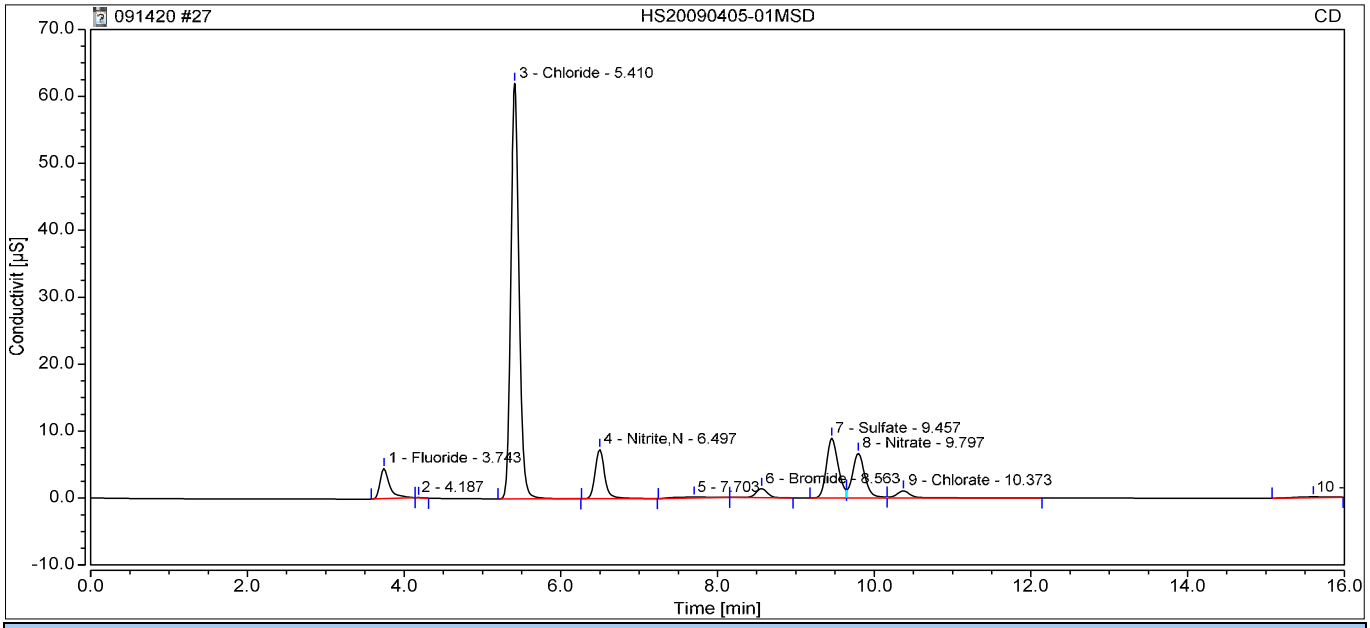
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.629	1.7905	1.7905	1.0000
3	5.41	Chloride	BMB	7.586	33.0931	33.0931	1.0000
4	6.49	Nitrite,N	BMB	1.054	2.1977	2.1977	1.0000
6	8.56	Bromide	BMB	0.224	2.1440	2.1440	1.0000
7	9.46	Sulfate	BM	1.557	9.7329	9.7329	1.0000
8	9.79	Nitrate	M	1.222	1.9625	1.9625	1.0000
9	10.37	Chlorate	MB	0.238	2.1951	2.1951	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**12.511**		**53.12**	

27 HS20090405-01MSD

Sample Name:	**HS20090405-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*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:	**09/14/2020 15:32**	*Sample Weight:*	**1.0000**

Run Time:



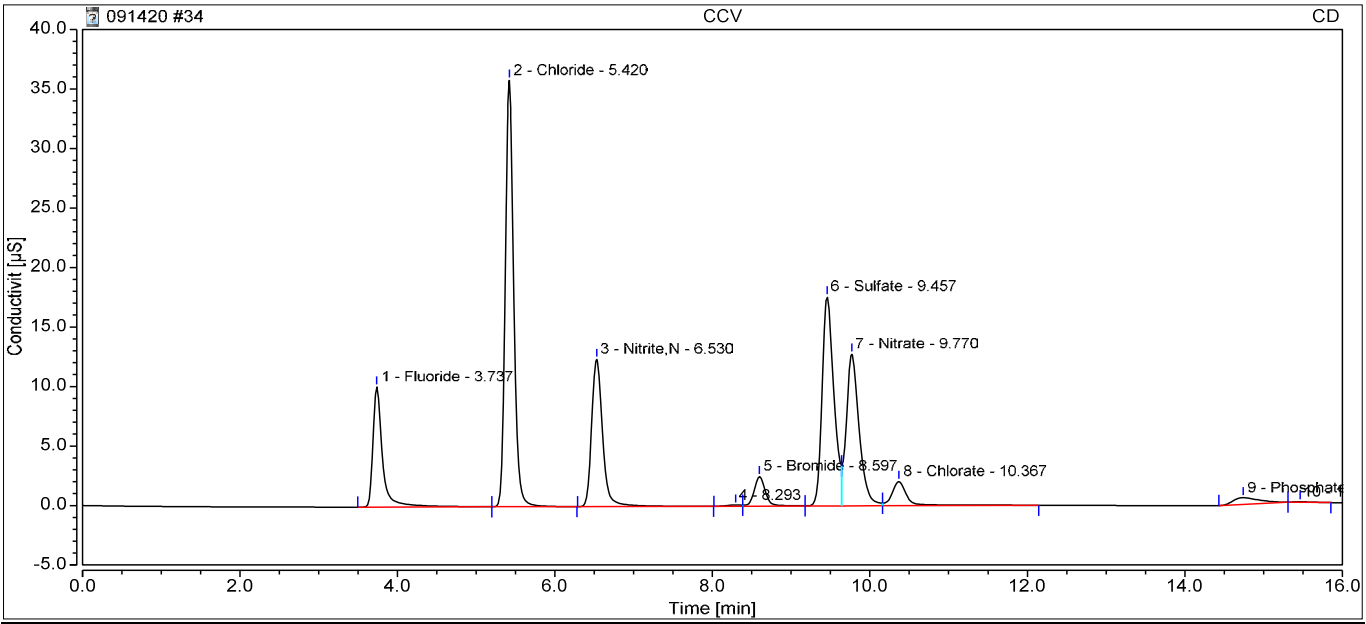
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.628	1.7880	1.7880	1.0000
3	5.41	Chloride	BMB	7.568	33.0107	33.0107	1.0000
4	6.50	Nitrite,N	BMB	1.052	2.1946	2.1946	1.0000
6	8.56	Bromide	BMB	0.223	2.1314	2.1314	1.0000
7	9.46	Sulfate	BM	1.558	9.7419	9.7419	1.0000
8	9.80	Nitrate	M	1.217	1.9537	1.9537	1.0000
9	10.37	Chlorate	MB	0.232	2.1376	2.1376	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**12.478**		**52.96**	

34 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:	**09/14/2020 17:38**	*Sample Weight:*	**1.0000**

Run Time:



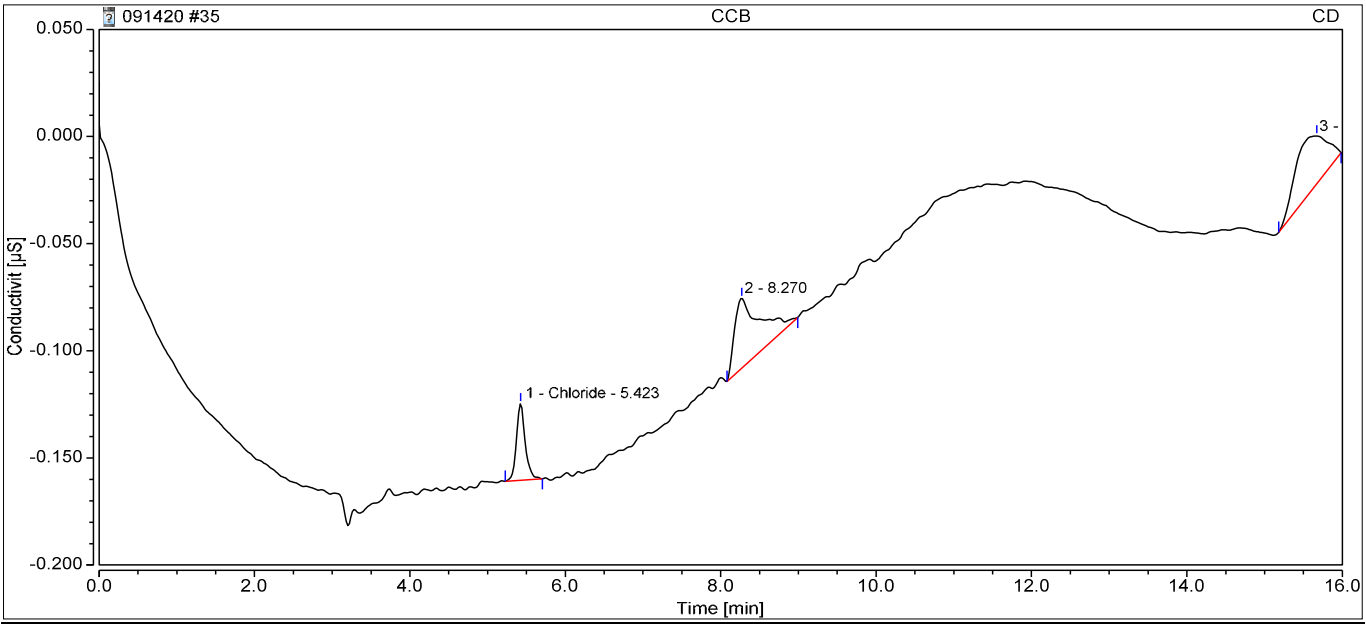
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.421	4.0291	4.0291	1.0000
2	5.42	Chloride	BMB	4.467	19.4610	19.4610	1.0000
3	6.53	Nitrite,N	BMB	2.003	4.2126	4.2126	1.0000
5	8.60	Bromide	M	0.410	3.9830	3.9830	1.0000
6	9.46	Sulfate	M	3.057	19.0973	19.0973	1.0000
7	9.77	Nitrate	M	2.423	3.9130	3.9130	1.0000
8	10.37	Chlorate	MB	0.453	4.3094	4.3094	1.0000
9	14.74	Phosphate	BMB	0.213	1.4764	1.4764	1.0000
Total:			**0.000**	**14.446**		**60.48**	

35 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:	**09/14/2020 17:56**	*Sample Weight:*	**1.0000**

Run Time:

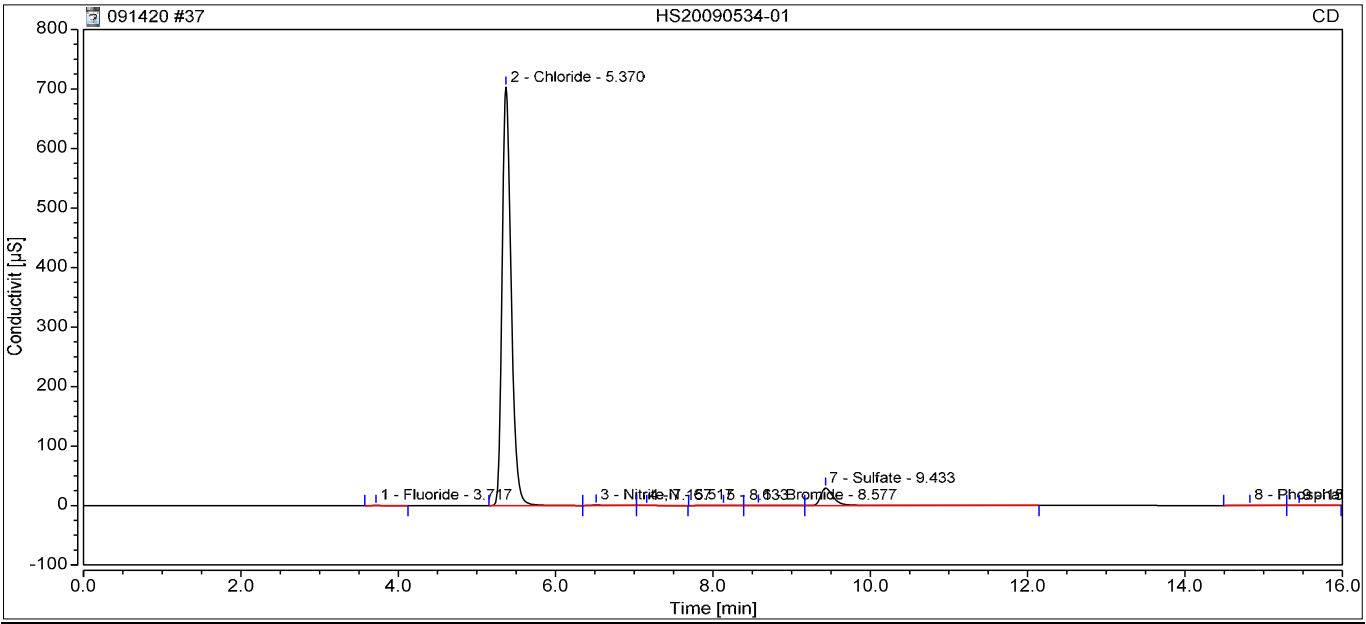


Integration Results

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**	

37	*HS20090534-01*		
Sample Name:	**HS20090534-01**	*Injection Volume:*	**5.00**
Vial Number:	**GB4**	*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:	**09/14/2020 18:32**	*Sample Weight:*	**1.0000**

Run Time:



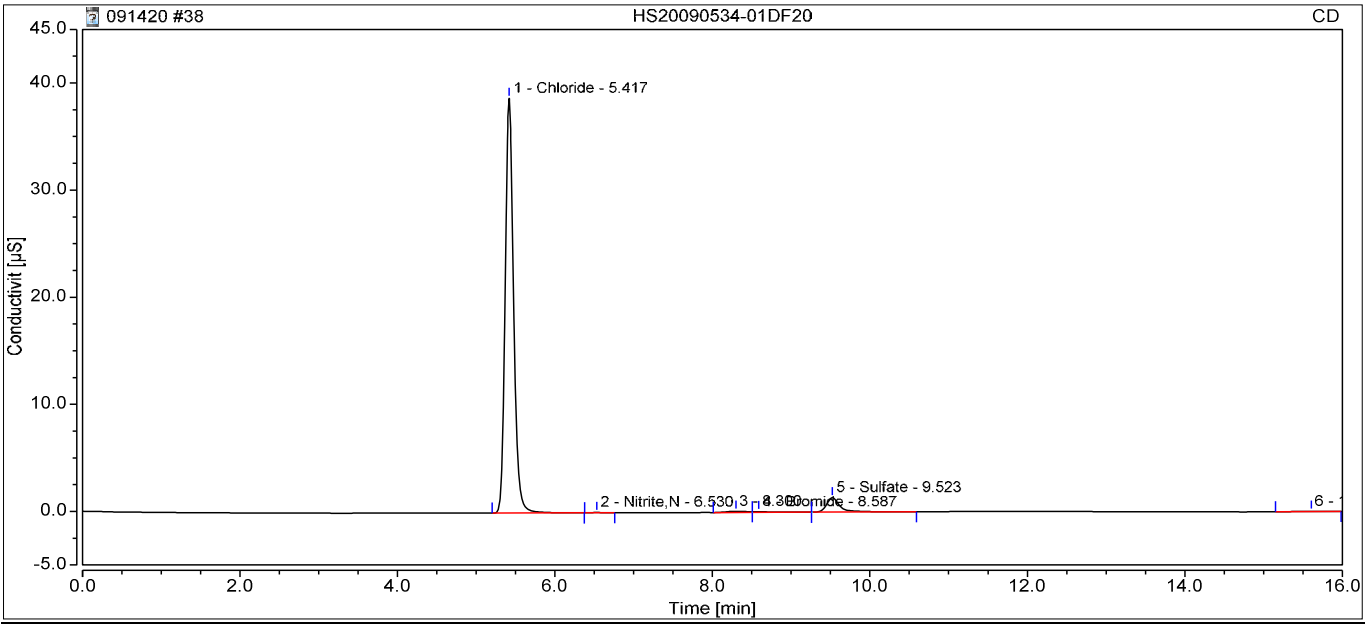
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.033	0.1047	0.1047	1.0000
2	5.37	Chloride	BMB	93.649	409.1463	409.1463	1.0000
3	6.52	Nitrite,N	BMB	0.118	0.2110	0.2110	1.0000
6	8.58	Bromide	M	0.134	1.2463	1.2463	1.0000
7	9.43	Sulfate	MB	5.518	34.4645	34.4645	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
8	14.83	Phosphate	BMB	0.093	0.8587	0.8587	1.0000
Total:			**0.000**	**99.545**		**446.03**	

38 HS20090534-01DF20

Sample Name:	**HS20090534-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**GB5**	*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:	**09/14/2020 18:50**	*Sample Weight:*	**1.0000**

Run Time:



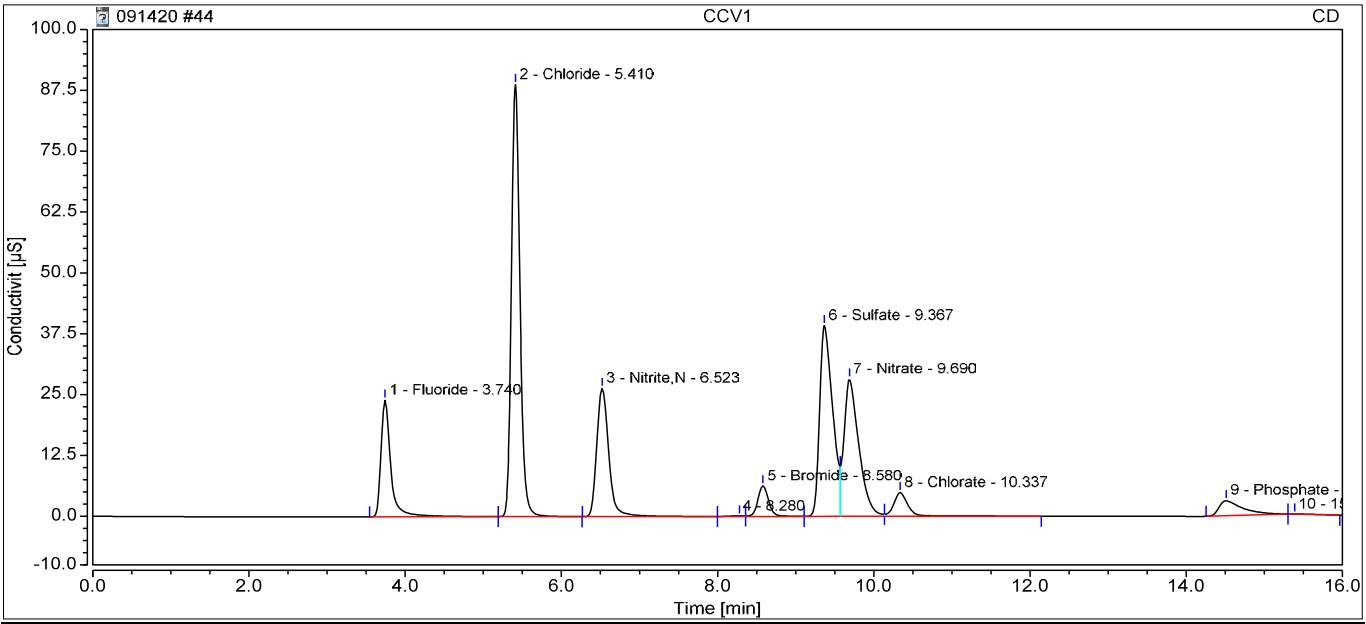
Integration Results

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.	20.0000
1	5.42	Chloride	BMB	4.841	21.0964	421.9277	20.0000
2	6.53	Nitrite,N	BMB	0.005	n.a.	n.a.	20.0000
4	8.59	Bromide	M	0.019	0.1024	2.0486	20.0000
5	9.52	Sulfate	MB	0.265	1.6690	33.3806	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	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**	**5.130**		**457.36**	

44 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:	**09/14/2020 20:38**	*Sample Weight:*	**1.0000**

Run Time:



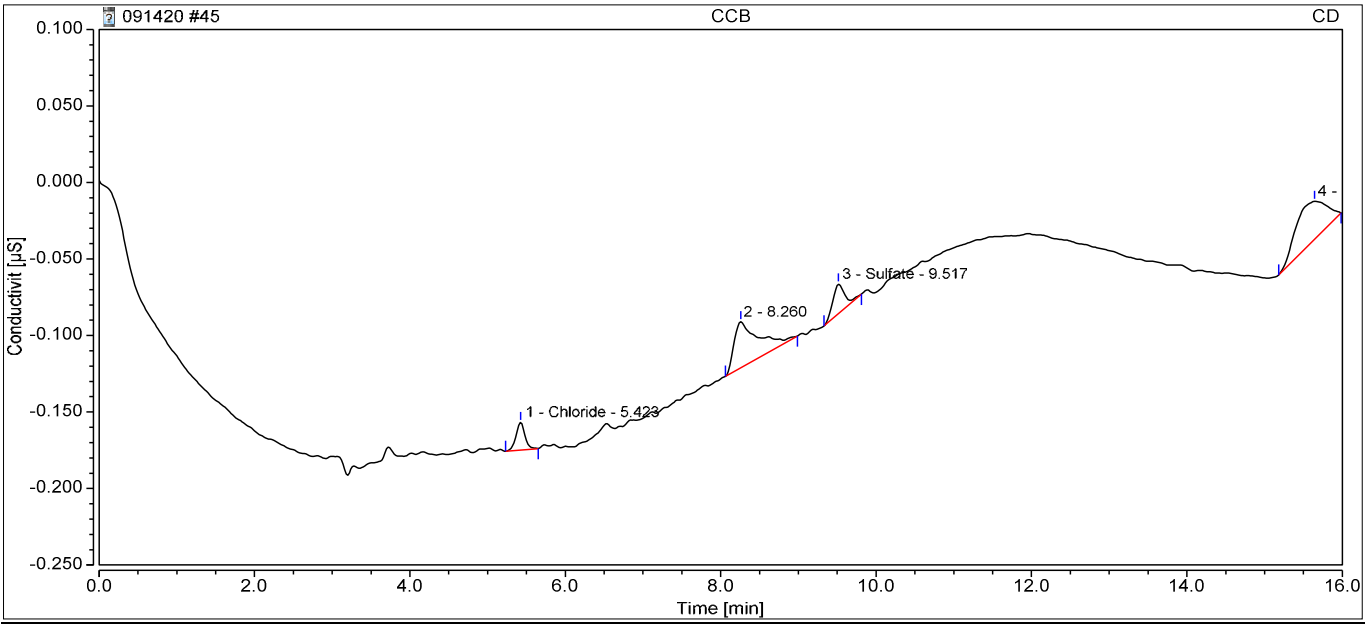
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.499	9.9055	9.9055	1.0000
2	5.41	Chloride	BMB	11.145	48.6444	48.6444	1.0000
3	6.52	Nitrite,N	BMB	4.709	9.9572	9.9572	1.0000
5	8.58	Bromide	M	1.004	9.8729	9.8729	1.0000
6	9.37	Sulfate	M	7.554	47.1801	47.1801	1.0000
7	9.69	Nitrate	M	6.247	10.1264	10.1264	1.0000
8	10.34	Chlorate	MB	1.041	10.0710	10.0710	1.0000
9	14.51	Phosphate	BMB	1.095	6.0198	6.0198	1.0000
Total:			**0.000**	**36.294**		**151.78**	

45 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:	**09/14/2020 20:56**	*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
3	9.52	Sulfate	BMB	0.003	0.0327	0.0327	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**	**0.006**		**0.03**	

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Longhorn GW Treatment Plant Weekly Samples

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October 08, 2020

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Lakewood, CO 80228

Work Order: **HS20090747**

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

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Sep 16, 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: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090747

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090747-01	LH18/24-SP650_091520	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐
HS20090747-02	LH18/24-SP650_091520-AIX	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐
HS20090747-03	LH18/24-SP650_091520-BIX	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090747

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

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

WetChemistry by Method E350.3

Batch ID: R368939

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

WetChemistry by Method E365.3

Batch ID: R368716

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

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20090747
Sample ID: LH18/24-SP650_091520
Lab ID:HS20090747-01
Collection Date: 15-Sep-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)	**15**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	21-Sep-2020 10:55
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**3.06**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	16-Sep-2020 14:34
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	08-Oct-2020 09:28

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

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20090747
Sample ID: LH18/24-SP650_091520-AIX
Lab ID:HS20090747-02
Collection Date: 15-Sep-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	21-Sep-2020 13:22

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

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20090747
Sample ID: LH18/24-SP650_091520-BIX Lab ID:HS20090747-03
Collection Date: 15-Sep-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	21-Sep-2020 13:22

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

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090747

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R368716 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20090747-01	LH18/24-SP650_091520	15 Sep 2020 14:00			16 Sep 2020 14:34	10
Batch ID: R368939 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20090747-01	LH18/24-SP650_091520	15 Sep 2020 14:00			21 Sep 2020 10:55	1
Batch ID: R368953 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20090747-02	LH18/24-SP650_091520-AIX	15 Sep 2020 14:00			21 Sep 2020 13:22	1
HS20090747-03	LH18/24-SP650_091520-BIX	15 Sep 2020 14:00			21 Sep 2020 13:22	1
Batch ID: R370026 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20090747-01	LH18/24-SP650_091520	15 Sep 2020 14:00			08 Oct 2020 09:28	1

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090747

QC BATCH REPORT

Batch ID: R368716 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-368716** Units: **mg/L** Analysis Date: **16-Sep-2020 14:34**
Client ID: Run ID: **UV-2450_368716** SeqNo: **5741892** 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-368716** Units: **mg/L** Analysis Date: **16-Sep-2020 14:34**
Client ID: Run ID: **UV-2450_368716** SeqNo: **5741893** 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)	0.252	0.0250	0.25	0	101	85 - 115				

MS Sample ID: **HS20090747-01MS** Units: **mg/L** Analysis Date: **16-Sep-2020 14:34**
Client ID: **LH18/24-SP650_091520** Run ID: **UV-2450_368716** SeqNo: **5741895** 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)	5.65	0.250	2.5	3.06	104	80 - 120				

MSD Sample ID: **HS20090747-01MSD** Units: **mg/L** Analysis Date: **16-Sep-2020 14:34**
Client ID: **LH18/24-SP650_091520** Run ID: **UV-2450_368716** SeqNo: **5741896** 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)	5.38	0.250	2.5	3.06	92.8	80 - 120	5.65	4.9	20	

The following samples were analyzed in this batch: HS20090747-01

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20090747

QC BATCH REPORT

Batch ID: R368939 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-368939** Units: **mg/L** Analysis Date: **21-Sep-2020 10:55**
Client ID: Run ID: **WetChem_HS_368939** SeqNo: **5746588** 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-368939** Units: **mg/L** Analysis Date: **21-Sep-2020 10:55**
Client ID: Run ID: **WetChem_HS_368939** SeqNo: **5746589** 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)	10.24	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20090675-01MS** Units: **mg/L** Analysis Date: **21-Sep-2020 10:55**
Client ID: Run ID: **WetChem_HS_368939** SeqNo: **5746591** 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)	11.64	0.20	10	0.168	115	80 - 120				

MSD Sample ID: **HS20090675-01MSD** Units: **mg/L** Analysis Date: **21-Sep-2020 10:55**
Client ID: Run ID: **WetChem_HS_368939** SeqNo: **5746592** 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)	11.63	0.20	10	0.168	115	80 - 120	11.64	0.0859	20	

The following samples were analyzed in this batch: HS20090747-01

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ALS Houston, US Date: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20090747**

QUALIFIERS, ACRONYMS, UNITS

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

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

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
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
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: 08-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20090747

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090747-01	LH18/24-SP650_091520	Login	9/16/2020 11:43:50 AM	PMG	WET381
HS20090747-01	LH18/24-SP650_091520	Login	9/16/2020 11:43:50 AM	PMG	WET381
HS20090747-01	LH18/24-SP650_091520	Login	9/16/2020 11:43:50 AM	PMG	Sub
HS20090747-02	LH18/24-SP650_091520-AIX	Login	9/16/2020 11:43:50 AM	PMG	Sub

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ALS Houston, US Date: 08-Oct-20

Sample Receipt Checklist

Work Order ID: HS20090747 **Date/Time Received:** **16-Sep-2020 10:20**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	16-Sep-2020 11:46	**Reviewed by:**	/S/ RJ Modashia	16-Sep-2020 13:09
	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):	0.8C U/c	IR31
Cooler(s)/Kit(s):	44674	
Date/Time sample(s) sent to storage:	9/16/2020 11:55	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stanciff 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

HS20090747

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_091520	Water	09/15/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_091520	Water	09/15/20 / 14:00		1			X		NONE	
LH18/24–SP650_091520_AIX	Water	09/15/20 / 14:00		1				X	NONE	
LH18/24-SP650_091520_BIX	Water	09/15/20 / 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
	09/15/20	14:30		9/16/20	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:

44674 UIC 28 RR#31

CR O

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

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

4674

CUSTODY SEAL

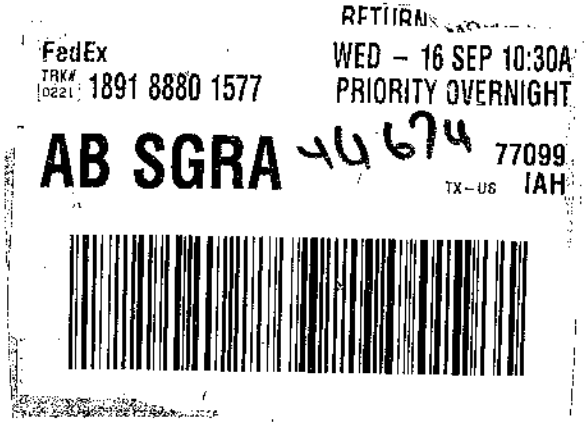
Date: 9/15/20 Time: 1430

Name: [illegible]

Company: RH-ATH

Seal Signature By:

Date: 9/16/2020



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September 21, 2020 Service Request No:E2000870

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

Laboratory Results for: HS20090747

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory September 16, 2020
For your reference, these analyses have been assigned our service request number **E2000870.**

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.:**	E2000870
Project:	HS20090747	**Date Received:**	09/16/20
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

Two samples were received for analysis at ALS Environmental in Houston on 09/16/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000436: 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: HS20090747 **Service Request:**E2000870

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000870-001	LH18/24-SP650_091520-AIX	9/15/2020	1400
E2000870-002	LH18/24-SP650_091520-BIX	9/15/2020	1400

Service Request Summary

Folder #: **E2000870**
Client Name: ALS Environmental - US
Project Name: HS20090747
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: 09/16/20
Internal Due Date: 9/30/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090747
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000870-001	LH18/24-SP650_091520-AIX	Water	09/15/20 1400	**IV**
E2000870-002	LH18/24-SP650_091520-BIX	Water	09/15/20 1400	**IV**

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Service Request Summary

Folder #: **E2000870**
Client Name: ALS Environmental - US
Project Name: HS20090747
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: 09/16/20
Internal Due Date: 9/30/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090747
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	2	Level II due 9/30,level IV 10/7

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Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
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.

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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
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

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14692**

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:	HS20090747
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090747-02**	**LH18/24-SP650_091520-AIX**	**Water**	**15 Sep 2020 14:00**
	SUB_Perch-6850			24 Sep 2020
2.	**HS20090747-03**	**LH18/24-SP650_091520-BIX**	**Water**	**15 Sep 2020 14:00**
	SUB_Perch-6850			24 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: 9/16/2020 12:23.

Received By: _____ Date/Time: 9/16/20 0225

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

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1251

Date/Time Received: 9/16/20 Initials: CH

Date/Time Logged in: 9/16/20 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?
NA		9/16/20	1225	CH	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:

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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

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Preparation Information Benchsheets

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00995173

Preparation Information Benchsheet

Prep Run#: 365762
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/17/20 14:12

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000845-001	LH18/24-SP650_090920-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000868-001	LH18/24-SP140_091520	.01	6850/ClO4 DOD			Water	10mL	
3	E2000869-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000870-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
5	E2000870-002	LH18/24-SP650_091520-BIX	.01	6850/ClO4 DOD			Water	10mL	
6	EQ2000436-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000436-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2000436-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000436-02 1.00µL EQ2000436-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000845-001 100.00µL E2000868-001 100.00µL E2000869-001 100.00µL E2000870-001 100.00µL E2000870-002 100.00µL EQ2000436-01 100.00µL
EQ2000436-02 100.00µL EQ2000436-03 100.00µL

Preparation Steps

Step: Preparation
Started: 9/17/20 14:12
Finished: 9/17/20 17:43
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 9/18/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined
By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Collected:**	9/15/20 1400
Sample Matrix:	Water	**Date Received:**	9/16/20
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 17:55
Sample Name:	LH18/24-SP650_091520-AIX	**Units:**	µg/L
Lab Code:	E2000870-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_023	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**6.49**		0.100	0.0500	0.0250	

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Collected:**	9/15/20 1400
Sample Matrix:	Water	**Date Received:**	9/16/20
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 18:02
Sample Name:	LH18/24-SP650_091520-BIX	**Units:**	µg/L
Lab Code:	E2000870-002	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_024	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.583**		0.100	0.0500	0.0250	

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:11
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000436-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_012	**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	

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Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090747
Sample Matrix: Water

Service Request: E2000870
Date Analyzed: 9/17/20

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: 365762

	Lab Control Sample EQ2000436-02			Duplicate Lab Control Sample EQ2000436-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.114	0.100	114	0.107	0.100	107	84 - 119	6	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:**	E2000870
Project:	HS20090747	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:19
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_013	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.114**		0.100	0.0500	0.0250	

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:27
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_014	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.107**		0.100	0.0500	0.0250	

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Initial Calibration

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20200915

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200915_044	Perchlorate6850b.lcm	1x	☒	3100806-05	9/15/2020 17:55
2	PERCHLORATE2		20200915_024	Perchlorate6850b.lcm	1x	☒	3100806-06	9/15/2020 15:10
3	PERCHLORATE3		20200915_046	Perchlorate6850b.lcm	1x	☒	3100806-07	9/15/2020 18:13
4	PERCHLORATE4		20200915_047	Perchlorate6850b.lcm	1x	☒	3100807-01	9/15/2020 18:21
5	PERCHLORATE5		20200915_048	Perchlorate6850b.lcm	1x	☒	3100807-02	9/15/2020 18:29
6	PERCHLORATE6		20200915_049	Perchlorate6850b.lcm	1x	☒	3100807-03	9/15/2020 18:37
7	PERCHLORATE7		20200915_029	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 15:49
8	PERCHLORATE8		20200915_051	Perchlorate6850b.lcm	1x	☒	3100807-05	9/15/2020 18:52
9	PERCHLORATE9		20200915_052	Perchlorate6850b.lcm	1x	☒	3100807-06	9/15/2020 19:00
10	PERCHLORATE10		20200915_053	Perchlorate6850b.lcm	1x	☒	3100807-07	9/15/2020 19:08
11	PERCHLORATE ICV		20200915_054	Perchlorate6850b.lcm	1x	☒	3100807-08	9/15/2020 19:16
12	LODV		20200915_055	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:24
13	E2000817-001		20200915_056	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:40
14	E2000817-001x10		20200915_057	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:48
15	PERCHLORATE7		20200915_058	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 19:56
16								
17								
18								
19								
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36								

Initial Calibration - Detailed Report

Calibration ID: EC2000032 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000032-01	PERCHLORATE2	20200915_024	09/15/2020 15:10
02	EC2000032-02	PERCHLORATE7	20200915_029	09/15/2020 15:49
03	EC2000032-03	PERCHLORATE1	20200915_044	09/15/2020 17:55
04	EC2000032-04	PERCHLORATE3	20200915_046	09/15/2020 18:13
05	EC2000032-05	PERCHLORATE4	20200915_047	09/15/2020 18:21
06	EC2000032-06	PERCHLORATE5	20200915_048	09/15/2020 18:29
07	EC2000032-07	PERCHLORATE6	20200915_049	09/15/2020 18:37
08	EC2000032-08	PERCHLORATE8	20200915_051	09/15/2020 18:52
09	EC2000032-09	PERCHLORATE9	20200915_052	09/15/2020 19:00
10	EC2000032-10	PERCHLORATE10	20200915_053	09/15/2020 19:08

Analyte	Curve Fit	Weighting		
Perchlorate	**Quadratic**	**Equal**	**COD = 0.9998**	**Y= -9.474E-05 X² + 0.1066 X + 0.00148**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5000	0.1319	02	10.0000	0.1001	03	0.1000	0.1399	04	0.7000	0.1079
05	1.0000	0.1089	06	2.0000	0.1096	07	5.0000	0.1086	08	20.0000	0.1062
09	30.0000	0.104	10	50.0000	0.1018						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.5000	0.605	21.0	02	10.0000	9.45	-5.5	03	0.1000	0.117	17.3
04	0.7000	0.695	-0.8	05	1.0000	1.01	0.8	06	2.0000	2.05	2.3
07	5.0000	5.10	2.0	08	20.0000	20.3	1.3	09	30.0000	30.1	0.2
10	50.0000	50.0	-0.1								

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Initial Calibration Verification Summary Report

Calibration ID:	EC2000032	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200915_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000032-11	T	Quadratic	10	9.462	ng/mL	-5.4	<= 15

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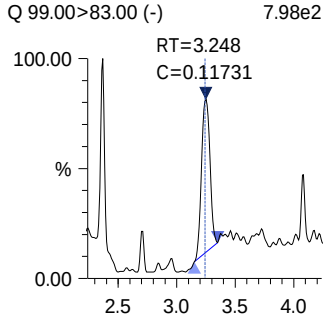
PERCHLORATE1

Date acquired: 9/15/2020 5:55:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_044.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	9/15/2020 5:55:29 PM	2833	0.11731	20200915_044	3.248	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/15/2020 5:55:29 PM	202512	1.00000	20200915_044	3.237	25.0000	1.0000	5

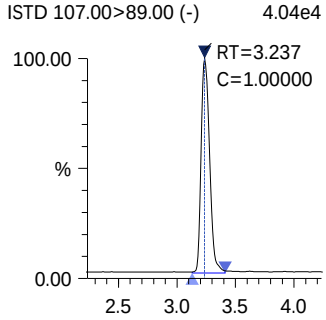
Perchlorate

Conc 0.11731
Area 2833



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202512



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PERCHLORATE2

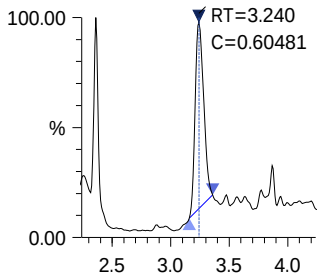
Date acquired: 9/15/2020 3:10:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_024.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	9/15/2020 3:10:04 PM	11634	0.60481	20200915_024	3.240	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/15/2020 3:10:04 PM	176422	1.00000	20200915_024	3.240	25.0000	1.0000	6

Perchlorate

Conc 0.60481
Area 11634

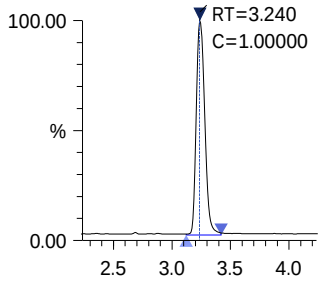
Q 99.00>83.00 (-) 2.66e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 176422

ISTD 107.00>89.00 (-) 3.50e4



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PERCHLORATE3

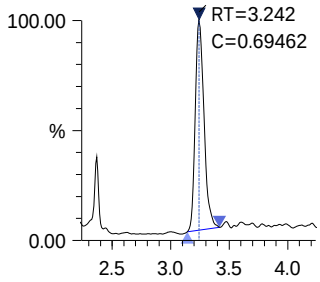
Date acquired: 9/15/2020 6:13:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/15/2020 6:13:20 PM	14722	0.69462	20200915_046	3.242	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/15/2020 6:13:20 PM	194971	1.00000	20200915_046	3.239	25.0000	1.0000	7

Perchlorate

Conc 0.69462
Area 14722

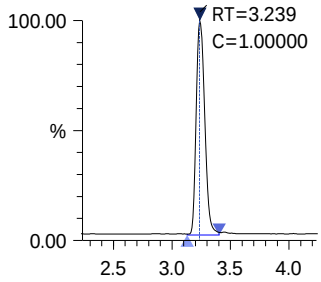
Q 99.00>83.00 (-) 2.91e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 194971

ISTD 107.00>89.00 (-) 3.85e4



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PERCHLORATE4

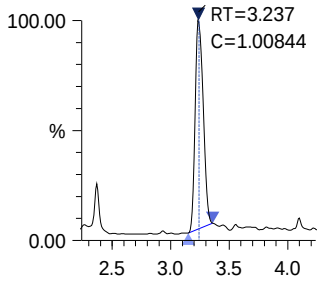
Date acquired: 9/15/2020 6:21:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_047.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	9/15/2020 6:21:15 PM	19524	1.00844	20200915_047	3.237	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/15/2020 6:21:15 PM	179246	1.00000	20200915_047	3.240	25.0000	1.0000	8

Perchlorate

Conc 1.00844
Area 19524

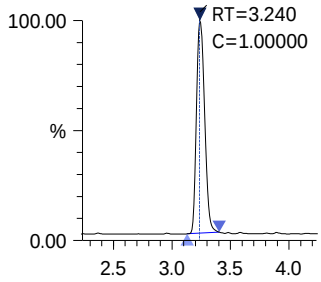
Q 99.00>83.00 (-) 4.23e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179246

ISTD 107.00>89.00 (-) 3.75e4



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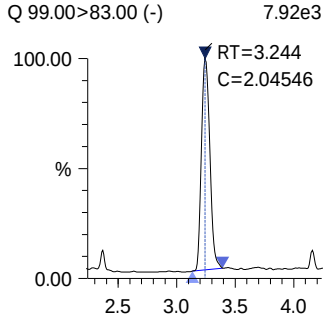
PERCHLORATE5

Date acquired: 9/15/2020 6:29:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_048.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	9/15/2020 6:29:08 PM	38522	2.04546	20200915_048	3.244	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/15/2020 6:29:08 PM	175734	1.00000	20200915_048	3.240	25.0000	1.0000	9

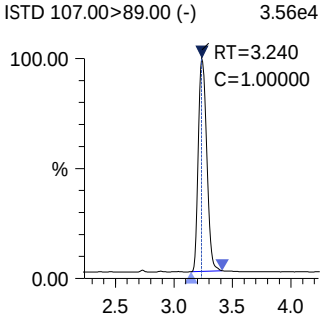
Perchlorate

Conc 2.04546
Area 38522



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 175734



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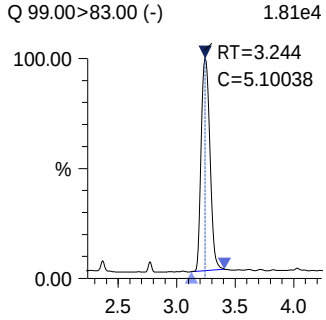
PERCHLORATE6

Date acquired: 9/15/2020 6:37:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_049.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	9/15/2020 6:37:05 PM	92162	5.10038	20200915_049	3.244	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/15/2020 6:37:05 PM	169754	1.00000	20200915_049	3.239	25.0000	1.0000	10

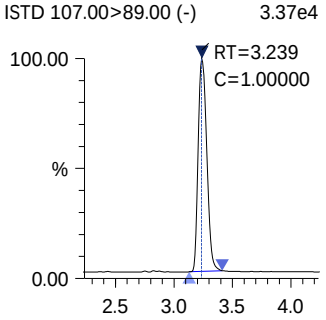
Perchlorate

Conc 5.10038
Area 92162



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 169754



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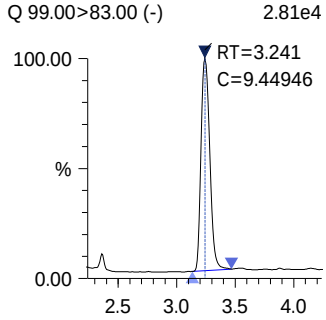
PERCHLORATE7

Date acquired: 9/15/2020 3:49:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_029.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	9/15/2020 3:49:35 PM	144012	9.44946	20200915_029	3.241	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/15/2020 3:49:35 PM	143911	1.00000	20200915_029	3.238	25.0000	1.0000	4

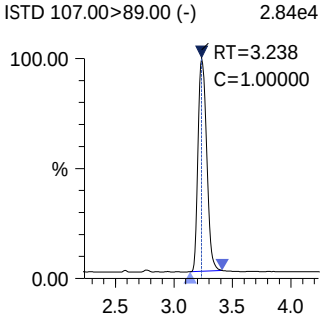
Perchlorate

Conc 9.44946
Area 144012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143911



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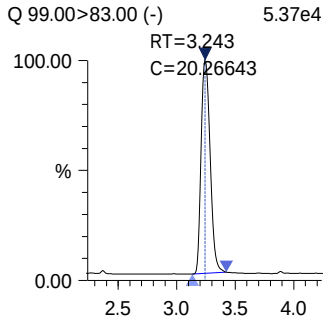
PERCHLORATE8

Date acquired: 9/15/2020 6:52:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_051.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	9/15/2020 6:52:54 PM	284308	20.26643	20200915_051	3.243	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/15/2020 6:52:54 PM	133870	1.00000	20200915_051	3.240	25.0000	1.0000	11

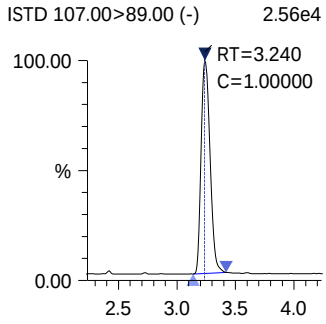
Perchlorate

Conc 20.26643
Area 284308



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 133870



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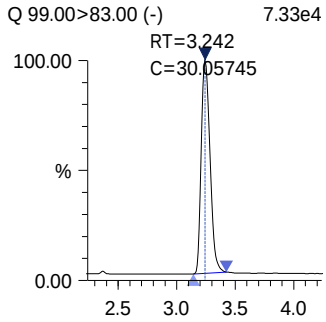
PERCHLORATE9

Date acquired: 9/15/2020 7:00:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_052.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	9/15/2020 7:00:50 PM	377183	30.05745	20200915_052	3.242	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/15/2020 7:00:50 PM	120846	1.00000	20200915_052	3.240	25.0000	1.0000	12

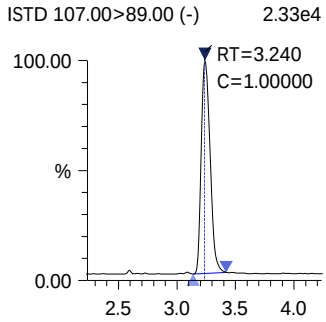
Perchlorate

Conc 30.05745
Area 377183



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 120846



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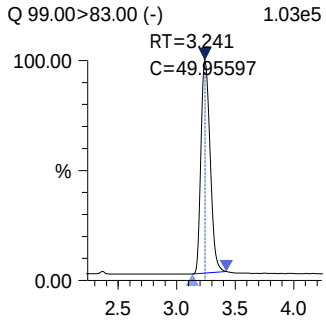
PERCHLORATE10

Date acquired: 9/15/2020 7:08:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_053.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	9/15/2020 7:08:43 PM	553330	49.95597	20200915_053	3.241	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/15/2020 7:08:43 PM	108660	1.00000	20200915_053	3.240	25.0000	1.0000	13

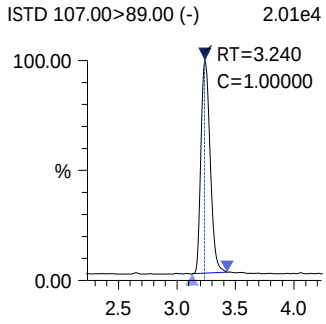
Perchlorate

Conc 49.95597
Area 553330



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108660



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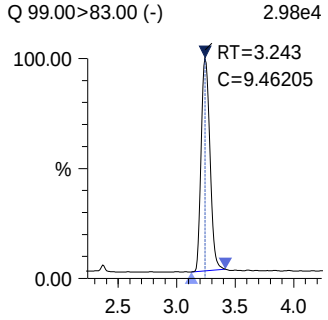
PERCHLORATEICV

Date acquired: 9/15/2020 7:16:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_054.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	9/15/2020 7:16:39 PM	152650	9.46205	20200915_054	3.243	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/15/2020 7:16:39 PM	152342	1.00000	20200915_054	3.241	25.0000	1.0000	14

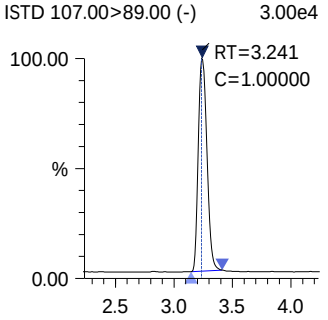
Perchlorate

Conc 9.46205
Area 152650



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 152342



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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

20200917

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200917_001	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:11
2	null		20200917_002	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:16
3	null		20200917_003	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:21
4	IB		20200917_004	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:26
5	IB		20200917_005	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:34
6	LODV		20200917_006	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:42
7	PERCHLORATE7		20200917_007	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 14:50
8	E2000825-001x2		20200917_008	Perchlorate6850b.lcm	2x	☒		9/17/2020 14:58
9	PERCHLORATE7		20200917_009	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:05
10	E2000825-001		20200917_010	Perchlorate6850b.lcm	1x	☒		9/17/2020 15:40
11	PERCHLORATE7		20200917_011	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:48
12	EQ2000436-01		20200917_012	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:11
13	EQ2000436-02		20200917_013	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:19
14	EQ2000436-03		20200917_014	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:27
15	E2000845-001		20200917_015	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:35
16	E2000868-001DNU		20200917_016	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:42
17	E2000869-001		20200917_017	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:50
18	E2000870-001		20200917_018	Perchlorate6850b.lcm	10x	☒		9/17/2020 16:58
19	E2000870-002		20200917_019	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:06
20	PERCHLORATE7		20200917_020	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 17:14
21	IB		20200917_021	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:39
22	EQ2000869-01RR		20200917_022	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:47
23	EQ2000870-01RR		20200917_023	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:55
24	EQ2000870-02RR		20200917_024	Perchlorate6850b.lcm	1x	☒		9/17/2020 18:02
25	EQ2000868-01X1000		20200917_025	Perchlorate6850b.lcm	1000x	☒		9/17/2020 18:10
26	PERCHLORATE7		20200917_026	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 18:18
27								
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37								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090747

Service Request: E2000870
Date Analyzed: 9/17/20

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\20200917\20200917_011

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.07	NA	NA	NA	-9.3	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Analyzed:**	9/17/20

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

Analytical Method:	6850	**Calibration Date:**	9/15/20
File ID:	I:\LCMS01\DATA\20200917\20200917_020	**Calibration ID:**	EC2000032
		Analysis Lot:	695661
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090747

Service Request: E2000870
Date Analyzed: 9/17/20

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\20200917\20200917_026

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Analyzed:**	9/17/20 15:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_011	**Lab Code:**	EQ2000439-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-01	151,139	3.22
Method Blank	EQ2000436-01	168,330	3.17
Lab Control Sample	EQ2000436-02	174,963	3.21
Duplicate Lab Control Sample	EQ2000436-03	163,778	3.21

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

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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Analyzed:**	9/17/20 17:14

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_020	**Lab Code:**	EQ2000439-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-02	153,613	3.21
LH18/24-SP650_091520-AIX	E2000870-001	121,340	3.19
LH18/24-SP650_091520-BIX	E2000870-002	129,787	3.19

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

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000870
Project:	HS20090747	**Date Analyzed:**	9/17/20 18:18

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

File ID:	I:\LCMS01\DATA\20200917\20200917_026	**Lab Code:**	EQ2000439-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-03	152,718	3.21

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

ALS Group Houston

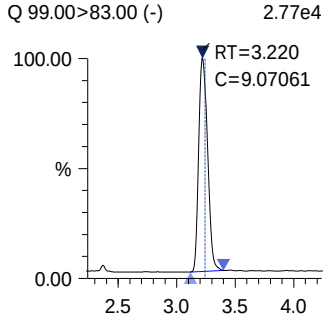
PERCHLORATE7

Date acquired: 9/17/2020 3:48:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_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	9/17/2020 3:48:47 PM	145240	9.07061	20200917_011	3.220	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 3:48:47 PM	151139	1.00000	20200917_011	3.219	25.0000	1.0000	4

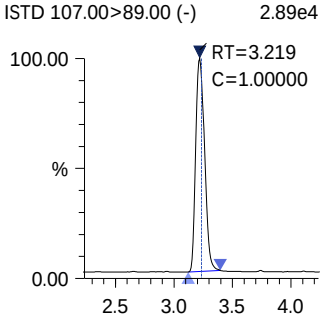
Perchlorate

Conc 9.07061
Area 145240



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 151139



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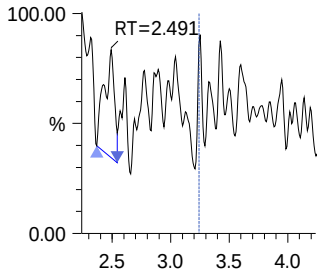
EQ2000436-01

Date acquired: 9/17/2020 4:11:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_012.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-01	9/17/2020 4:11:27 PM	----	----	20200917_012	----	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	EQ2000436-01	9/17/2020 4:11:27 PM	168330	1.00000	20200917_012	3.165	25.0000	1.0000	17

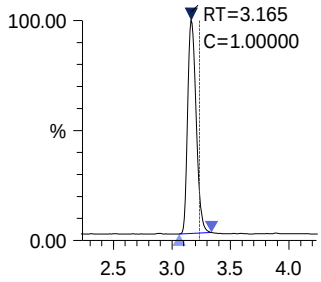
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.13e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168330
ISTD 107.00>89.00 (-) 3.29e4



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EQ2000436-02

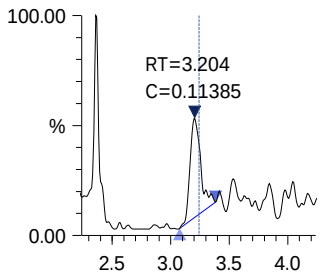
Date acquired: 9/17/2020 4:19:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_013.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-02	9/17/2020 4:19:22 PM	2383	0.11385	20200917_013	3.204	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000436-02	9/17/2020 4:19:22 PM	174963	1.00000	20200917_013	3.208	25.0000	1.0000	18

Perchlorate

Conc 0.11385
Area 2383

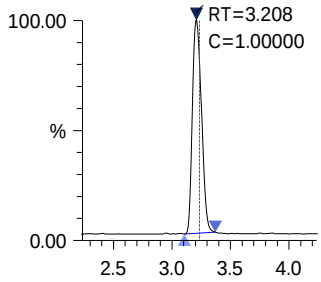
Q 99.00>83.00 (-) 8.10e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 174963

ISTD 107.00>89.00 (-) 3.25e4



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ALS Group Houston

EQ2000436-03

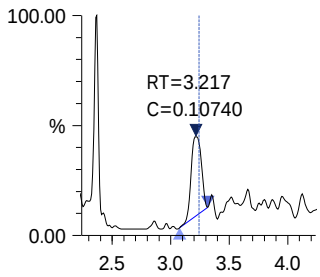
Date acquired: 9/17/2020 4:27:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_014.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-03	9/17/2020 4:27:12 PM	2118	0.10740	20200917_014	3.217	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000436-03	9/17/2020 4:27:12 PM	163778	1.00000	20200917_014	3.208	25.0000	1.0000	19

Perchlorate

Conc 0.10740
Area 2118

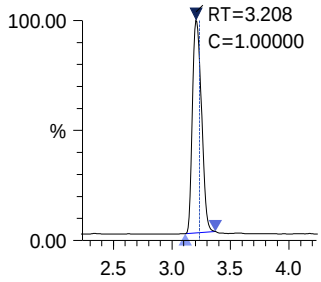
Q 99.00>83.00 (-) 9.55e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 163778

ISTD 107.00>89.00 (-) 3.04e4



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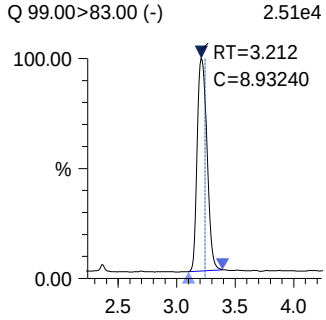
PERCHLORATE7

Date acquired: 9/17/2020 5:14:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_020.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	9/17/2020 5:14:31 PM	145389	8.93240	20200917_020	3.212	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 5:14:31 PM	153613	1.00000	20200917_020	3.208	25.0000	1.0000	4

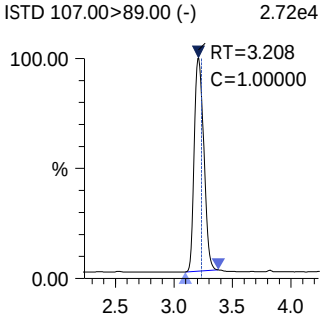
Perchlorate

Conc 8.93240
Area 145389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 153613



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ALS Environmental
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October 07, 2020

Analytical Report for Service Request No: K2008157

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 September 18, 2020
For your reference, these analyses have been assigned our service request number **K2008157.**

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

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, the elution pattern does not match the calibration standard.
	chromatographic fingerprint does not resemble a petroleum product.

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ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2008157
Date Received: 09/18/2020

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 09/18/2020. 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 10/07/2020

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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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K2008157

10450 Stancliff Rd, Ste 210
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:** **14691**

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:	HS20090747
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090747-01**	**LH18/24-SP650_091520**	**Water**	**15 Sep 2020 14:00**
	TOC Analysis for DOD Level IV			24 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. Hamilton
Received By:
Cooler ID(s):

Date/Time: 9/17/20 18:00
Date/Time: 9/18/20 1630
Temperature(s):

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00995219

PM SW

Cooler Receipt and Preservation Form

Client ANS- Houston Service Request K20 0815Z5

Received: 9/11/20 Opened: 9/11/20 By: BE Unloaded: 9/11/20 By: BE

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
NA	2.5	IR07				1Z8K58041164	

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

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:**	K2008157
Project:	ALS Houston DOD TOC	**Date Collected:**	09/15/20
Sample Matrix:	Water	**Date Received:**	09/18/20
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
HS20090747-01	K2008157-001	**2.34**	0.50	0.20	0.07	1	10/07/20 18:15	
Method Blank	K2008157-MB	ND U	0.50	0.20	0.07	1	10/07/20 18:15	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2008157
Project:	ALS Houston DOD TOC	**Date Analyzed:**	10/07/20
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:	698234

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2008157-LCS	24.1	25.0	96	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2008157
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	698234	KQ2014960-09	10/07/20 18:15	25.0	25.9	103	90-110
CCV2	698234	KQ2014960-10	10/07/20 18:15	25.0	25.4	102	90-110
CCV3	698234	KQ2014960-11	10/07/20 18:15	25.0	24.9	100	90-110
CCV4	698234	KQ2014960-12	10/07/20 18:15	25.0	25.2	101	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2008157
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	698234	KQ2014960-05	10/07/20 18:15	0.50	0.20	0.07	ND	U
CCB2	698234	KQ2014960-06	10/07/20 18:15	0.50	0.20	0.07	ND	U
CCB3	698234	KQ2014960-07	10/07/20 18:15	0.50	0.20	0.07	ND	U
CCB4	698234	KQ2014960-08	10/07/20 18:15	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
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General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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Work Request # 8311 8157 8557 8870 8740

Tier: II IV II IV IV

Date Analyzed: 10-6-20

Analyst: MK Run # 698234 / 698233

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:

Final Approved by: _____ Date: 10/7/20

DOREPORT

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Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 698233 **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?
K2008311-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.28 mg/L	10 mL	1.28 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.77 mg/L	10 mL	1.77 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-003	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-004	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.07 mg/L	10 mL	1.07 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-005	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.41 mg/L	10 mL	1.41 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-006	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.45 mg/L	10 mL	2.45 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-007	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.63 mg/L	10 mL	2.63 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-008	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.59 mg/L	10 mL	2.59 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-009	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.61 mg/L	10 mL	2.61 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-010	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	0.94 mg/L	10 mL	0.94 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-011	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.53 mg/L	10 mL	2.53 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
K2008311-012	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.54 mg/L	10 mL	2.54 mg/L	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-01	Carbon, Dissolved Organic (DOC)	MB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-02	Carbon, Dissolved Organic (DOC)	LCS		Surface Water	23.68 mg/L	10 mL	23.7 mg/L	1	0.07	0.50	95		10/6/20 18:15:00	N
KQ2014958-03	Carbon, Dissolved Organic (DOC)	DLCS		Surface Water	23.79 mg/L	10 mL	23.8 mg/L	1	0.07	0.50	95	<1	10/6/20 18:15:00	N
KQ2014958-04	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-05	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-06	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-07	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/6/20 18:15:00	N
KQ2014958-08	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.86 mg/L	10 mL	25.9 mg/L	1					10/6/20 18:15:00	N
KQ2014958-09	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.38 mg/L	10 mL	25.4 mg/L	1					10/6/20 18:15:00	N
KQ2014958-10	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.90 mg/L	10 mL	24.9 mg/L	1					10/6/20 18:15:00	N
KQ2014958-11	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.21 mg/L	10 mL	25.2 mg/L	1					10/6/20 18:15:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 698234 **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?
K2008157-001	Carbon, Total Organic	N/A		Water	2.34 mg/L	10 mL	2.34 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008557-001	Carbon, Total Organic	N/A		Water	5.30 mg/L	10 mL	5.30 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008740-001	Carbon, Total Organic	N/A		Water	2.17 mg/L	10 mL	2.17 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008877-001	Carbon, Total Organic	N/A		Ground Water	1.58 mg/L	10 mL	1.58 mg/L	1	0.07	0.50			10/7/20 18:15:00	Y
K2008877-002	Carbon, Total Organic	N/A		Ground Water	3.54 mg/L	10 mL	3.54 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008877-003	Carbon, Total Organic	N/A		Ground Water	1.82 mg/L	10 mL	1.82 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008877-004	Carbon, Total Organic	N/A		Ground Water	1.86 mg/L	10 mL	1.86 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008877-005	Carbon, Total Organic	N/A		Ground Water	6.09 mg/L	10 mL	6.09 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
K2008877-006	Carbon, Total Organic	N/A		Ground Water	1.14 mg/L	10 mL	1.14 mg/L	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-01	Carbon, Total Organic	DUP	K2008877-001	Ground Water	1.56 mg/L	10 mL	1.56 mg/L	1	0.07	0.50		1	10/7/20 18:15:00	N
KQ2014960-02	Carbon, Total Organic	MS	K2008877-001	Ground Water	28.02 mg/L	10 mL	28.0 mg/L	1	0.07	0.50	106		10/7/20 18:15:00	N
KQ2014960-03	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-04	Carbon, Total Organic	LCS		Water	24.09 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		10/7/20 18:15:00	N
KQ2014960-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/7/20 18:15:00	N
KQ2014960-09	Carbon, Total Organic	CCV		Water	25.86 mg/L	10 mL	25.9 mg/L	1					10/7/20 18:15:00	N
KQ2014960-10	Carbon, Total Organic	CCV		Water	25.38 mg/L	10 mL	25.4 mg/L	1					10/7/20 18:15:00	N
KQ2014960-11	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					10/7/20 18:15:00	N
KQ2014960-12	Carbon, Total Organic	CCV		Water	25.21 mg/L	10 mL	25.2 mg/L	1					10/7/20 18:15:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Schedule: 100620

Version: 7
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/10/07 08:07 - Wednesday

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 [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2008157-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2008877-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2008877-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2008877-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2008877-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2008877-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2008877-004	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	K2008877-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2008877-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2008311-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2008311-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2008311-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2008311-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2008311-005	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
17	Sample	K2008311-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2008311-007	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
19	Sample	K2008311-008	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
20	Sample	MB2	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
22	Sample	K2008311-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2008311-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2008311-011	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2008311-012	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2008311-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2008311-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2008311-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2008557-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K208740-001	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	

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Fusion Report - 100620
Tuesday, October 06, 2020 06:15 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/10/07 11:56 - Wednesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	100620	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) (v4) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v7)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/06 18:15

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.41	27.59	14.18	49.65	05:27
2	TC Clean	8.03	21.21	13.18	49.84	07:17
3	TC Clean	1.28	14.58	13.30	49.75	07:00
4	TC Clean	0.76	14.06	13.30	50.00	07:03

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/06 18:47

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.20	13.01	13.21	49.62	05:25
2	TC Clean	3.49	16.68	13.19	49.77	07:18

3	TC Clean	0.64	13.85	13.21	50.00	07:03
4	TC Clean	0.47	13.55	13.08	49.87	07:02

Sample Type: Clean From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/06 19:18

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.51	12.67	13.18	49.67	05:17
2	TC Clean	3.48	16.35	12.87	49.76	07:16
3	TC Clean	0.39	13.46	13.07	49.89	07:02
4	TC Clean	0.29	13.36	13.07	49.77	07:02

Sample Type: Blank (Creating v1457) From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/10/06 19:50

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.52	12.41	12.93	49.71	05:18
2	TC Clean	3.73	16.66	12.93	49.66	07:15
3	TC Clean	0.71	13.83	13.12	49.64	07:00
4	TC Clean	0.66	13.90	13.24	49.92	07:02
5	Reagent Blank	5.08	18.08	13.00	49.78	08:13
6	Acid Blank	-0.13	12.89	13.02	49.85	08:02

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/06 20:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.97	22.00	13.04	49.83	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	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)	25.8559 ppm (PASS)	0.0000 ppm	0%	2020/10/06 20:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.8559	258.5594	191.27	204.27	13.01	49.94	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 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%	2020/10/06 21:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.74	20.71	12.98	49.85	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 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%	2020/10/06 21:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.62	20.42	12.80	49.99	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	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 [25.0 ppm]	0 / infinity (NA / NA)	24.0885 ppm (PASS)	0.0000 ppm	0%	2020/10/06 21:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.0885	240.8854	178.87	191.80	12.93	49.92	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	0.0819 ppm	0.0000 ppm	0.0000%	2020/10/06 21:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0819	0.8188	9.82	22.51	12.69	49.89	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2008157-001	2.3388 ppm	0.1008 ppm	4.3100%	2020/10/06 22:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4101	24.1009	26.15	38.83	12.68	50.03	10:31
2	TOC	2.2675	22.6753	25.15	38.05	12.90	49.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2008877-001	1.5821 ppm	0.0274 ppm	1.7300%	2020/10/06 22:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6015	16.0152	20.48	33.42	12.95	49.96	10:25
2	TOC	1.5627	15.6274	20.20	33.25	13.04	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2008877-001D	1.5647 ppm	0.0668 ppm	4.2700%	2020/10/06 23:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6119	16.1192	20.55	33.17	12.62	49.94	10:29
2	TOC	1.5174	15.1741	19.89	33.01	13.12	49.93	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2008877-001MS	28.0161 ppm	0.0492 ppm	0.1800%	2020/10/06 23:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.9814	279.8136	205.53	218.52	12.99	49.94	10:28
2	TOC	28.0509	280.5092	206.01	219.09	13.08	49.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2008877-002	3.5402 ppm	0.1013 ppm	2.8600%	2020/10/07 00:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.6118	36.1183	34.58	47.62	13.04	49.94	10:30
2	TOC	3.4686	34.6856	33.57	46.63	13.05	49.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2008877-003	1.8176 ppm	0.0053 ppm	0.2900%	2020/10/07 00:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8213	18.2134	22.02	35.06	13.04	49.95	10:31
2	TOC	1.8138	18.1378	21.96	34.95	12.99	49.96	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2008877-004	1.8570 ppm	0.0175 ppm	0.9400%	2020/10/07 01:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8694	18.6938	22.35	35.39	13.03	49.97	10:27
2	TOC	1.8446	18.4457	22.18	35.16	12.98	49.97	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.3819 ppm (PASS)	0.0000 ppm	0%	2020/10/07 01:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3819	253.8195	187.94	200.90	12.96	49.96	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 5

	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%	2020/10/07 01:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.59	20.69	13.10	50.00	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 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2008877-005	6.0944 ppm	0.0221 ppm	0.3600%	2020/10/07 01:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.0787	60.7875	51.88	65.00	13.12	49.99	10:26
2	TOC	6.1100	61.0997	52.10	65.18	13.08	50.00	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2008877-006	1.1383 ppm	0.0134 ppm	1.1800%	2020/10/07 02:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1478	11.4776	17.29	30.30	13.01	50.04	10:26
2	TOC	1.1288	11.2880	17.16	30.11	12.95	50.04	10:25

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2008311-001	1.2840 ppm	0.0012 ppm	0.0900%	2020/10/07 02:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2832	12.8319	18.24	31.38	13.14	50.04	10:25
2	TOC	1.2849	12.8490	18.26	31.32	13.07	50.05	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2008311-002	1.7744 ppm	0.0365 ppm	2.0600%	2020/10/07 03:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7486	17.4863	21.51	34.66	13.15	50.05	10:29
2	TOC	1.8002	18.0024	21.87	34.80	12.93	50.05	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2008311-003	0.5426 ppm	0.0216 ppm	3.9800%	2020/10/07 03:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5274	5.2736	12.94	26.10	13.16	50.07	10:27
2	TOC	0.5579	5.5787	13.16	26.24	13.08	50.07	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2008311-004	1.0718 ppm	0.0310 ppm	2.9000%	2020/10/07 04:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0498	10.4983	16.61	29.82	13.21	50.07	10:26
2	TOC	1.0937	10.9373	16.91	30.00	13.08	50.09	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2008311-005	1.4339 ppm	0.0000 ppm	0.0000%	2020/10/07 04:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.4339	14.3387	19.30	32.25	12.95	50.12	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2008311-006	2.4503 ppm	0.0069 ppm	0.2800%	2020/10/07 05:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4454	24.4544	26.40	39.68	13.29	50.12	10:27
2	TOC	2.4551	24.5514	26.46	39.48	13.02	50.12	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2008311-007	2.6971 ppm	0.0000 ppm	0.0000%	2020/10/07 05:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.6971	26.9705	28.16	41.38	13.22	50.13	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2008311-008	2.6425 ppm	0.0000 ppm	0.0000%	2020/10/07 05:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.6425	26.4245	27.78	41.02	13.25	50.14	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	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)	24.8974 ppm (PASS)	0.0000 ppm	0%	2020/10/07 05:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8974	248.9740	184.54	197.90	13.36	50.16	10:27

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 5

	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%	2020/10/07 06:11

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.86	21.08	13.22	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 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/07 06:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.82	21.20	13.38	50.18	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	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 [25.0 ppm]	0 / infinity (NA / NA)	23.6770 ppm (PASS)	0.0000 ppm	0%	2020/10/07 06:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.6770	236.7699	175.98	189.20	13.22	50.19	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 5

Pos	BAT	Concentration	Dil	Sample ID	Min / Max	Result	Std. Dev.	RSD	Start Time

			(ppm)			(% dev)				
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.7946 ppm (PASS)	0.0000 ppm	0%	2020/10/07 06:55

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.7946	237.9459	176.81	190.08	13.28	50.19	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 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2008311-009	2.6083 ppm	0.0249 ppm	0.9500%	2020/10/07 07:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5907	25.9071	27.42	40.72	13.30	50.18	10:27
2	TOC	2.6259	26.2592	27.66	40.84	13.18	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2008311-010	0.9351 ppm	0.0634 ppm	6.7800%	2020/10/07 07:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8903	8.9031	15.49	28.77	13.28	50.16	10:29
2	TOC	0.9800	9.7997	16.12	29.31	13.19	50.15	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	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
◆	24	TOC	K2008311-011	2.5265 ppm	0.0001 ppm	0.0000%	2020/10/07 08:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5264	25.2641	26.96	40.12	13.16	50.11	10:28
2	TOC	2.5266	25.2656	26.96	40.26	13.29	50.15	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2008311-012	2.5421 ppm	0.0321 ppm	1.2600%	2020/10/07 08:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5194	25.1943	26.92	40.18	13.27	50.16	10:28
2	TOC	2.5648	25.6476	27.23	40.33	13.10	50.09	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2008311-005	1.4069 ppm	0.0034 ppm	0.2400%	2020/10/07 09:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.4045	14.0450	19.09	32.07	12.98	50.04	10:26
2	TOC	1.4094	14.0935	19.13	32.25	13.12	50.03	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2008311-007	2.6313 ppm	0.0468 ppm	1.7800%	2020/10/07 09:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5983	25.9826	27.47	40.64	13.17	50.00	10:28
2	TOC	2.6644	26.6441	27.93	41.08	13.15	50.04	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2008311-008	2.5927 ppm	0.0030 ppm	0.1200%	2020/10/07 10:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5948	25.9484	27.44	40.63	13.18	50.06	10:27
2	TOC	2.5906	25.9056	27.41	40.61	13.19	50.04	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2008557-001	5.2985 ppm	0.0286 ppm	0.5400%	2020/10/07 10:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.3188	53.1878	46.55	59.41	12.86	49.96	10:26

2	TOC	5.2783	52.7830	46.27	59.06	12.79	50.13	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K208740-001	2.1675 ppm	0.0083 ppm	0.3800%	2020/10/07 10:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1616	21.6161	24.40	37.49	13.09	50.02	10:29
2	TOC	2.1733	21.7330	24.49	37.36	12.87	49.96	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2416 (IC) (v1457)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2062 ppm (PASS)	0.0000 ppm	0%	2020/10/07 11:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2062	252.0618	186.71	199.68	12.97	50.04	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 7

	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%	2020/10/07 11:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.83	20.99	13.16	49.99	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

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1456	1.6967	0.1340	0.0000	0.0000	0.0000	2020/10/05 21:31	Fusion1 (Fusion1)
v1457	1.6940	-0.1340	0.0000	0.0000	0.0000	2020/10/06 20:38	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
DetectorSweepFlow	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

PreSpargeTime	2.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	5
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	5
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/10/07 11:53

ALS Environmental

StarLIMS Ru 698233/698234

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-40-C 50 ppm LCS: 19-GEN-8-41-k 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-08-45-J

21 % H3PO4: 19-GEN-08-46-F

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MK	Date Analyzed: 10-6-20
Reviewed By: JC	Date Reviewed: 10/7/20

NH3 AMN-W ISE/1350's

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD

Date: 9/21/20 10:55AM

Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F

Probe Calibration Date: 9/21/20

Cal Std ID: 3140655(05-10)

Probe ID: X01-11806

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	133.9	0200
STD 2 (mg/L):	1	93.6	0.998
STD 3 (mg/L):	5	52.9	5.003

Sodium Thiosulfate ID:

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	35.9	10.003
STD 5 (mg/L): 50	-5.1	50.017

LSC / MS Spike ID: 3100602320

ICV Cal STD ID: 3140655(05

DPD Reagent ID: 2100602305

ICAL Date & Slope: 99.4 1/- 55.6mV

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		10.270			
CCB					0.008			
MBLK					0.009			
LCS					10.245			
MS2009068-01					0.168		+ve	Rechecked
675-01MS					11.640			
675-01 MSD					11.630			
685-01					5.141		+ve	
900-01					33.363		+ve	
747-01					14.750			
783-01		1ml	50ml	50X	9.315		+ve	Rechecked
785-01		1ml	50ml	50X	9.297		-ve	
CCV		50ml	50ml		9.953			
CCB					0.008			

Batch ID: 368937 | 368939

Reported By: MD

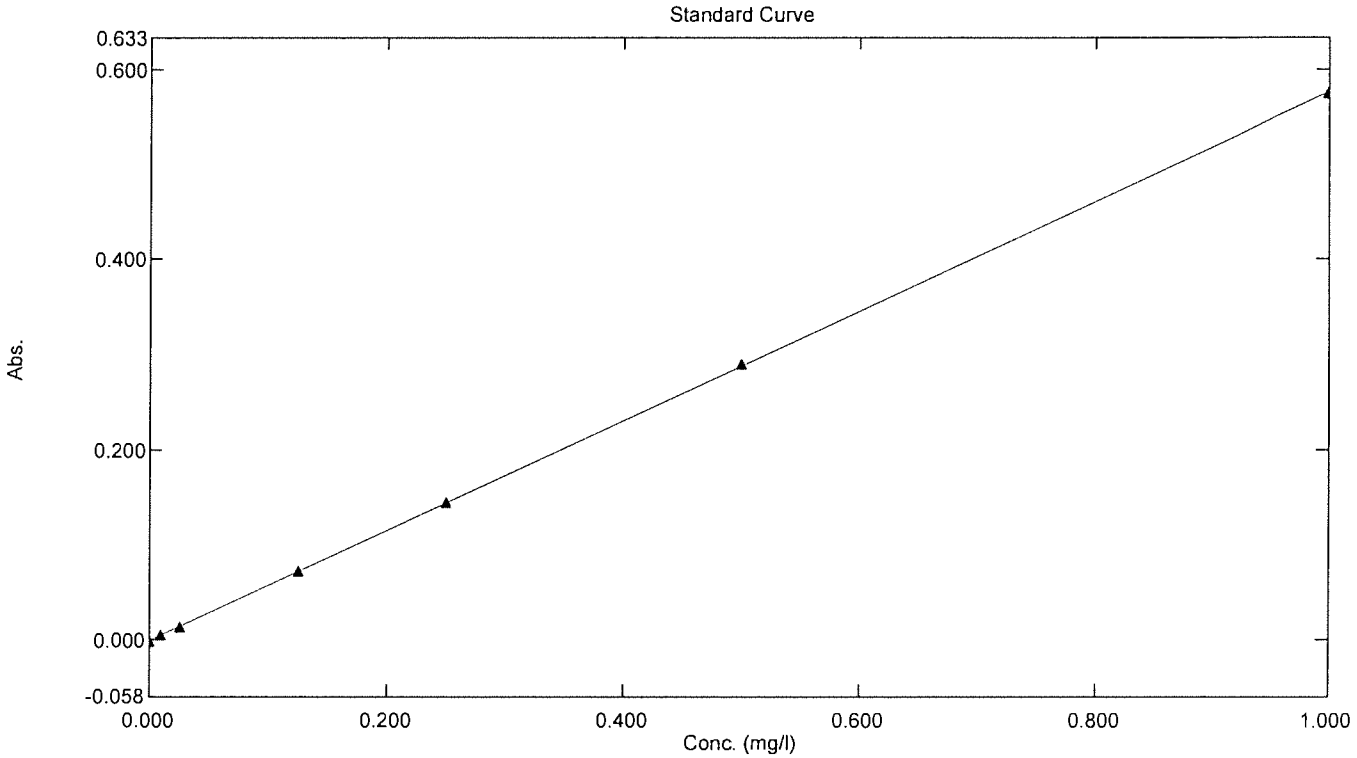
Reviewed By: YP

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Standard Table Report

10/05/2020 02:25:31 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\091620_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99995

Standard Table

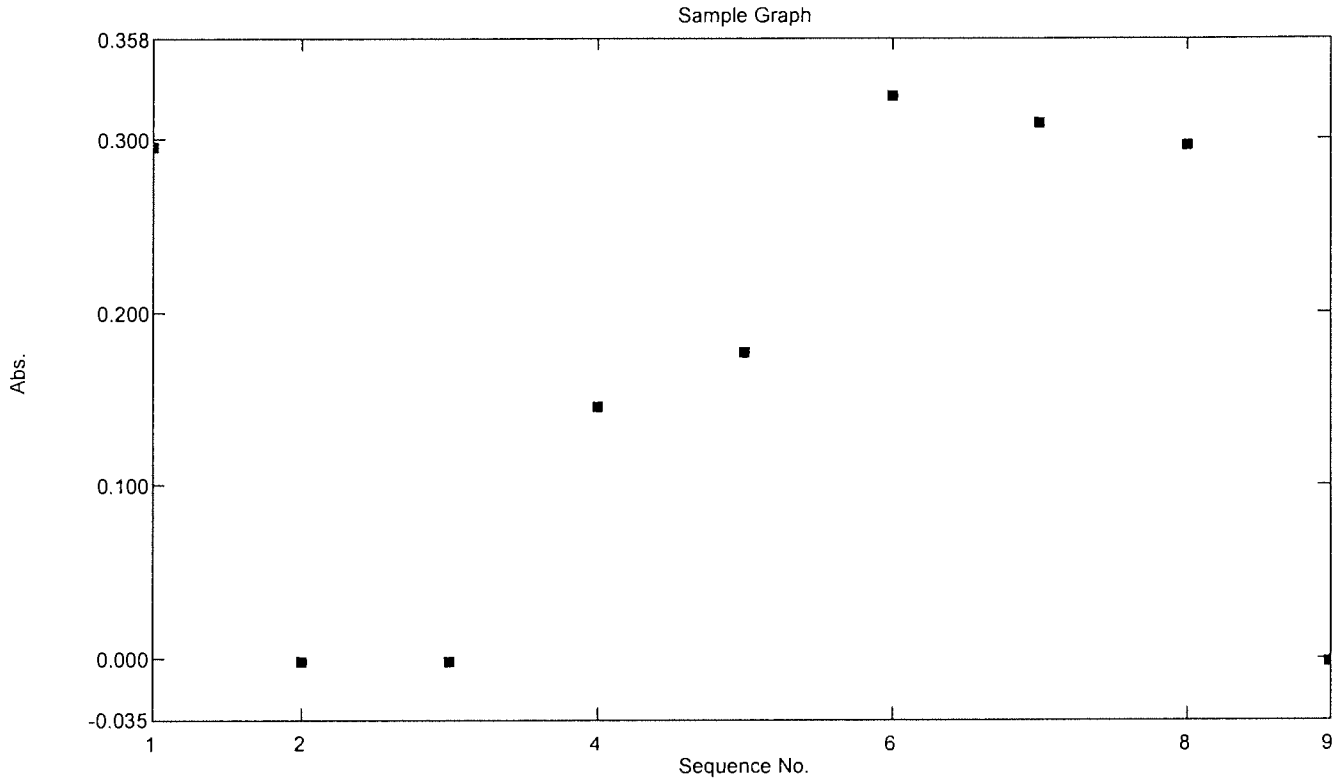
	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.073	1.000	
5	STD5	Standard		0.250	0.145	1.000	
6	STD6	Standard		0.500	0.290	1.000	
7	STD7	Standard		1.000	0.575	1.000	
8							

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Sample Table Report

10/05/2020 02:25:34 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\091620_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.513	0.295	314064002 WC-14
2	CCB	Unknown		-0.003	-0.002	
3	MBLK	Unknown		-0.004	-0.002	
4	LCS	Unknown		0.252	0.146	314064001 WC-14
5	HS20090747.01	Unknown		0.306	0.177	PF:10X,02:34PM
6	HS20090747.01MS	Unknown		0.565	0.326	PF:10X,02:34PM
7	HS20090747.01MS D	Unknown		0.538	0.310	PF:10X,02:35PM
8	CCV2	Unknown		0.515	0.297	
9	CCB2	Unknown		-0.003	-0.002	C-314065302 UV-11
10						

RIGHT SOLUTIONS | RIGHT PARTNER

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WorkOrder: HS20090748

Longhorn GW Treatment Plant Monthly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

14-Oct-2020

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HS20090748 Cr6_W_7196_DOD Raw Data

HS20090748 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20090748

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September 25, 2020

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

Work Order: **HS20090748**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Sep 16, 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: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20090748

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090748-01	LH18/24-SP650_091520	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐
HS20090748-02	LH18/24-SP650_091520_AIX	Water		15-Sep-2020 14:00	16-Sep-2020 10:20	☐
HS20090748-03	Trip Blank	Water	CG-042320-33	15-Sep-2020 00:00	16-Sep-2020 10:20	☐

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20090748

Work Order Comments

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

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 157399

Sample ID: LH18/24-SP650_091520 (HS20090748-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: LCSD-157399

• The RPD between the LCS and LCSD was outside of the control limit. Surrogate 2-Fluorobiphenyl

GCMS Volatiles by Method SW8260

Batch ID: R369299

Sample ID: LH18/24-SP650_091520(HS20090748-01MS)

• MS/MSD failed QC limit for some few compounds

Metals by Method SW6020

Batch ID: 157451

Sample ID: LH18/24-SP650_091520 (HS20090748-01MS)

• Silver failed for MS/MSD but passed for PDS.

Sample ID: LH18/24-SP650_091520 (HS20090748-01MSD)

• Lead failed for MSD but passed for MS and PDS.

WetChemistry by Method SW7196

Batch ID: R368683

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

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748
Sample ID: LH18/24-SP650_091520 Lab ID:HS20090748-01
Collection Date: 15-Sep-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	24-Sep-2020 19:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Sep-2020 19:58
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Sep-2020 19:58
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Sep-2020 19:58
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Sep-2020 19:58
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	24-Sep-2020 19:58
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58

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

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748
Sample ID: LH18/24-SP650_091520 Lab ID:HS20090748-01
Collection Date: 15-Sep-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
cis-1,2-Dichloroethene	**20**		**0.20**	**0.50**	**1.0**	**UG/L**	1	24-Sep-2020 19:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Sep-2020 19:58
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Sep-2020 19:58
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:58
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	24-Sep-2020 19:58
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:58
Surr: 1,2-Dichloroethane-d4	*91.3*			**0**	*81-118*	*%REC*	*1*	*24-Sep-2020 19:58*
Surr: 4-Bromofluorobenzene	*105*			**0**	*85-114*	*%REC*	*1*	*24-Sep-2020 19:58*
Surr: Dibromofluoromethane	*93.9*			**0**	*80-119*	*%REC*	*1*	*24-Sep-2020 19:58*
Surr: Toluene-d8	*99.9*			**0**	*89-112*	*%REC*	*1*	*24-Sep-2020 19:58*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 16-Sep-2020		Analyst: ACN
1,4-Dioxane	**5.7**	a	**1.0**	**1.0**	**1.0**	**ug/L**	100	18-Sep-2020 14:54
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*18-Sep-2020 14:54*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*18-Sep-2020 14:54*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*18-Sep-2020 14:54*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 17-Sep-2020		Analyst: JHD
Barium	**0.155**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	21-Sep-2020 13:56
Lead	**0.000679**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	21-Sep-2020 13:56
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	21-Sep-2020 13:56
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	21-Sep-2020 13:56

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

ALS Houston, US Date: 25-Sep-20

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

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748

Sample ID: LH18/24-SP650_091520 Lab ID:HS20090748-01

Collection Date: 15-Sep-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	16-Sep-2020 13:00

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

ALS Houston, US Date: 25-Sep-20

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

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748

Sample ID: LH18/24-SP650_091520_AIX Lab ID:HS20090748-02

Collection Date: 15-Sep-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	21-Sep-2020 13:22

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

ALS Houston, US Date: 25-Sep-20

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

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748

Sample ID: Trip Blank Lab ID:HS20090748-03

Collection Date: 15-Sep-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	24-Sep-2020 19:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Sep-2020 19:09
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Sep-2020 19:09
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Sep-2020 19:09
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Sep-2020 19:09
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	24-Sep-2020 19:09
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09

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

ALS Houston, US Date: 25-Sep-20

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

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20090748

Sample ID: Trip Blank Lab ID:HS20090748-03

Collection Date: 15-Sep-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	24-Sep-2020 19:09
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Sep-2020 19:09
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Sep-2020 19:09
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Sep-2020 19:09
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Sep-2020 19:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Sep-2020 19:09
Surr: 1,2-Dichloroethane-d4	*89.8*			**0**	*81-118*	*%REC*	*1*	*24-Sep-2020 19:09*
Surr: 4-Bromofluorobenzene	*104*			**0**	*85-114*	*%REC*	*1*	*24-Sep-2020 19:09*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*1*	*24-Sep-2020 19:09*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*24-Sep-2020 19:09*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

Batch ID: 157399 **Start Date:** 16 Sep 2020 12:30 **End Date:** 16 Sep 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090748-01		1000 (mL)	1 (mL)	0.001

Batch ID: 157451 **Start Date:** 17 Sep 2020 12:00 **End Date:** 17 Sep 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090748-01		10 (mL)	10 (mL)	1

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 157399 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20090748-01	LH18/24-SP650_091520	15 Sep 2020 14:00		16 Sep 2020 13:04	18 Sep 2020 14:54	100
Batch ID: 157451 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20090748-01	LH18/24-SP650_091520	15 Sep 2020 14:00		17 Sep 2020 16:00	21 Sep 2020 13:56	1
Batch ID: R368683 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20090748-01	LH18/24-SP650_091520	15 Sep 2020 14:00			16 Sep 2020 13:00	1
Batch ID: R368953 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20090748-02	LH18/24-SP650_091520_AIX	15 Sep 2020 14:00			21 Sep 2020 13:22	1
Batch ID: R369299 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20090748-01	LH18/24-SP650_091520	15 Sep 2020 14:00			24 Sep 2020 19:58	1
HS20090748-03	Trip Blank	15 Sep 2020 00:00			24 Sep 2020 19:09	1

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: 157451 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-157451** Units: **mg/L** Analysis Date: **21-Sep-2020 13:48**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747280** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.002164	0.00500								J
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-157451** Units: **mg/L** Analysis Date: **21-Sep-2020 13:54**
Client ID: Run ID: **ICPMS06_368933** SeqNo: **5747283** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04615	0.00500	0.05	0	92.3	86 - 114				
Lead	0.04691	0.00500	0.05	0	93.8	88 - 115				
Selenium	0.04841	0.00500	0.05	0	96.8	80 - 120				
Silver	0.04721	0.00500	0.05	0	94.4	85 - 116				

MS Sample ID: **HS20090748-01MS** Units: **mg/L** Analysis Date: **21-Sep-2020 13:59**
Client ID: **LH18/24-SP650_091520** Run ID: **ICPMS06_368933** SeqNo: **5747286** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.2063	0.00500	0.05	0.1548	103	86 - 114				
Lead	0.04747	0.00500	0.05	0.000679	93.6	88 - 115				
Selenium	0.04515	0.00500	0.05	0.000151	90.0	80 - 120				
Silver	0.0412	0.00500	0.05	-0.000007	82.4	85 - 116				S

MSD Sample ID: **HS20090748-01MSD** Units: **mg/L** Analysis Date: **21-Sep-2020 15:39**
Client ID: **LH18/24-SP650_091520** Run ID: **ICPMS06_368933** SeqNo: **5747357** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.2088	0.00500	0.05	0.1548	108	86 - 114	0.2063	1.24	20	
Lead	0.04444	0.00500	0.05	0.000679	87.5	88 - 115	0.04747	6.6	20	S
Selenium	0.04378	0.00500	0.05	0	87.6	80 - 120	0.04515	3.08	20	
Silver	0.04071	0.00500	0.05	0	81.4	85 - 116	0.0412	1.21	20	S

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: 157451 (0) **Instrument:** ICPMS06 **Method:** METALS BY ICPMS BY SW6020A

PDS Sample ID: **HS20090748-01PDS** Units: **mg/L** Analysis Date: **21-Sep-2020 14:03**
Client ID: **LH18/24-SP650_091520** Run ID: **ICPMS06_368933** SeqNo: **5747288** PrepDate: **17-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.262	0.00500	0.1	0.1548	107	80 - 120				
Lead	0.1034	0.00500	0.1	0.000679	103	80 - 120				
Selenium	0.1036	0.00500	0.1	0.000151	103	80 - 120				
Silver	0.09766	0.00500	0.1	-0.000007	97.7	80 - 120				

SD Sample ID: **HS20090748-01SD** Units: **mg/L** Analysis Date: **21-Sep-2020 13:58**
Client ID: **LH18/24-SP650_091520** Run ID: **ICPMS06_368933** SeqNo: **5747285** PrepDate: **17-Sep-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.1583	0.0250					0.1548	2.21	10	
Lead	0.00500	0.0250					0.000679	0	10	U
Selenium	0.0125	0.0250					0.000151	0	10	U
Silver	0.00250	0.0250					-0.000007	0	10	U

The following samples were analyzed in this batch: HS20090748-01

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: 157399 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-157399** Units: **ug/L** Analysis Date: **18-Sep-2020 14:00**
Client ID: Run ID: **SV-6_368876** SeqNo: **5745309** PrepDate: **16-Sep-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	*0.06612*	*0*	*0.08*	*0*	*82.6*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.05363*	*0*	*0.08*	*0*	*67.0*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.05971*	*0*	*0.08*	*0*	*74.6*	*40 - 140*				

LCS Sample ID: **LCS-157399** Units: **ug/L** Analysis Date: **18-Sep-2020 14:18**
Client ID: Run ID: **SV-6_368876** SeqNo: **5745310** PrepDate: **16-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06954	0.010	0.08	0	86.9	40 - 140				
Surr: 2-Fluorobiphenyl	*0.09409*	*0*	*0.08*	*0*	*118*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.06775*	*0*	*0.08*	*0*	*84.7*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.0725*	*0*	*0.08*	*0*	*90.6*	*40 - 140*				

LCSD Sample ID: **LCSD-157399** Units: **ug/L** Analysis Date: **18-Sep-2020 14:36**
Client ID: Run ID: **SV-6_368876** SeqNo: **5745311** PrepDate: **16-Sep-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06821	0.010	0.08	0	85.3	40 - 140	0.06954	1.94	20	
Surr: 2-Fluorobiphenyl	*0.06865*	*0*	*0.08*	*0*	*85.8*	*40 - 140*	*0.09409*	*31.3*	*20*	R
Surr: 4-Terphenyl-d14	*0.07618*	*0*	*0.08*	*0*	*95.2*	*40 - 140*	*0.06775*	*11.7*	*20*	
Surr: Nitrobenzene-d5	*0.06228*	*0*	*0.08*	*0*	*77.8*	*40 - 140*	*0.0725*	*15.2*	*20*	

The following samples were analyzed in this batch: HS20090748-01

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200924** Units: **UG/L** Analysis Date: **24-Sep-2020 18:45**
Client ID: Run ID: **VOA6_369299** SeqNo: **5753827** 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: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200924** Units: **UG/L** Analysis Date: **24-Sep-2020 18:45**
Client ID: Run ID: **VOA6_369299** SeqNo: **5753827** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.25*	*1.0*	*50*	*0*	*90.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.96*	*1.0*	*50*	*0*	*106*	*85 - 114*				
Surr: Dibromofluoromethane	*46.3*	*1.0*	*50*	*0*	*92.6*	*80 - 119*				
Surr: Toluene-d8	*50.3*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200924** Units: **UG/L** Analysis Date: **24-Sep-2020 17:33**
Client ID: Run ID: **VOA6_369299** SeqNo: **5753826** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.48	1.0	20	0	92.4	78 - 124				
1,1,1-Trichloroethane	17.8	1.0	20	0	89.0	74 - 131				
1,1,2,2-Tetrachloroethane	17.93	1.0	20	0	89.6	71 - 121				
1,1,2-Trichloroethane	18.19	1.0	20	0	90.9	80 - 119				
1,1-Dichloroethane	18.25	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	17.97	1.0	20	0	89.8	71 - 131				
1,1-Dichloropropene	17.86	1.0	20	0	89.3	78 - 125				
1,2,3-Trichlorobenzene	20.21	1.0	20	0	101	69 - 129				
1,2,3-Trichloropropane	18.38	1.0	20	0	91.9	73 - 122				
1,2,4-Trichlorobenzene	20.4	1.0	20	0	102	69 - 130				
1,2,4-Trimethylbenzene	18.48	1.0	20	0	92.4	76 - 124				
1,2-Dibromo-3-chloropropane	16.78	1.0	20	0	83.9	62 - 128				
1,2-Dibromoethane	18.87	1.0	20	0	94.4	77 - 121				
1,2-Dichlorobenzene	18.04	1.0	20	0	90.2	80 - 119				
1,2-Dichloroethane	18.47	1.0	20	0	92.4	73 - 128				
1,2-Dichloropropane	19.01	1.0	20	0	95.1	78 - 122				
1,3,5-Trimethylbenzene	17.84	1.0	20	0	89.2	75 - 124				
1,3-Dichlorobenzene	18.3	1.0	20	0	91.5	80 - 119				
1,3-Dichloropropane	18.24	1.0	20	0	91.2	80 - 119				
1,4-Dichlorobenzene	18.07	1.0	20	0	90.4	79 - 118				
2,2-Dichloropropane	18.55	1.0	20	0	92.8	60 - 139				
2-Butanone	40.27	2.0	40	0	101	56 - 143				
2-Chlorotoluene	18.08	1.0	20	0	90.4	79 - 122				
2-Hexanone	37.88	2.0	40	0	94.7	57 - 139				
4-Chlorotoluene	17.8	1.0	20	0	89.0	78 - 122				
4-Isopropyltoluene	17.74	1.0	20	0	88.7	77 - 127				
4-Methyl-2-pentanone	36.56	2.0	40	0	91.4	67 - 130				
Acetone	42.63	2.0	40	0	107	39 - 160				
Benzene	18.44	1.0	20	0	92.2	79 - 120				
Bromobenzene	18.48	1.0	20	0	92.4	80 - 120				
Bromochloromethane	17.64	1.0	20	0	88.2	78 - 123				
Bromodichloromethane	18.39	1.0	20	0	92.0	79 - 125				
Bromoform	18.78	1.0	20	0	93.9	66 - 130				
Bromomethane	19.96	1.0	20	0	99.8	53 - 141				

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200924** Units: **UG/L** Analysis Date: **24-Sep-2020 17:33**
Client ID: Run ID: **VOA6_369299** SeqNo: **5753826** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.85	2.0	40	0	92.1	64 - 133				
Carbon tetrachloride	17.24	1.0	20	0	86.2	72 - 136				
Chlorobenzene	18.29	1.0	20	0	91.5	82 - 118				
Chloroethane	17.56	1.0	20	0	87.8	60 - 138				
Chloroform	18.31	1.0	20	0	91.6	79 - 124				
Chloromethane	18.38	1.0	20	0	91.9	50 - 139				
cis-1,2-Dichloroethene	18.53	1.0	20	0	92.6	78 - 123				
cis-1,3-Dichloropropene	18.42	1.0	20	0	92.1	75 - 124				
Dibromochloromethane	18.08	1.0	20	0	90.4	74 - 126				
Dibromomethane	18.4	1.0	20	0	92.0	79 - 123				
Dichlorodifluoromethane	18.14	1.0	20	0	90.7	32 - 152				
Ethylbenzene	18.14	1.0	20	0	90.7	79 - 121				
Hexachlorobutadiene	22.06	1.0	20	0	110	66 - 134				
Isopropylbenzene	17.52	1.0	20	0	87.6	72 - 131				
m,p-Xylene	36.07	2.0	40	0	90.2	80 - 121				
Methylene chloride	19.25	2.0	20	0	96.2	74 - 124				
Naphthalene	18.61	1.0	20	0	93.0	61 - 128				
n-Butylbenzene	18.29	1.0	20	0	91.4	75 - 128				
n-Propylbenzene	17.71	1.0	20	0	88.6	76 - 126				
o-Xylene	18.08	1.0	20	0	90.4	78 - 122				
sec-Butylbenzene	17.25	1.0	20	0	86.2	77 - 126				
Styrene	18.34	1.0	20	0	91.7	78 - 123				
tert-Butylbenzene	17.37	1.0	20	0	86.9	78 - 124				
Tetrachloroethene	17.58	1.0	20	0	87.9	74 - 129				
Toluene	18.33	1.0	20	0	91.7	80 - 121				
trans-1,2-Dichloroethene	18.7	1.0	20	0	93.5	75 - 124				
trans-1,3-Dichloropropene	18.67	1.0	20	0	93.4	73 - 127				
Trichloroethene	18.47	1.0	20	0	92.3	79 - 123				
Trichlorofluoromethane	17.74	1.0	20	0	88.7	65 - 141				
Vinyl chloride	17.91	1.0	20	0	89.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.63*	*1.0*	*50*	*0*	*97.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.89*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*47.19*	*1.0*	*50*	*0*	*94.4*	*80 - 119*				
Surr: Toluene-d8	*47.93*	*1.0*	*50*	*0*	*95.9*	*89 - 112*				

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20090748-01MS** Units: **UG/L** Analysis Date: **24-Sep-2020 21:10**
Client ID: **LH18/24-SP650_091520** Run ID: **VOA6_369299** SeqNo: **5753833** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.99	1.0	20	0	115	78 - 124				
1,1,1-Trichloroethane	23.21	1.0	20	0	116	74 - 131				
1,1,2,2-Tetrachloroethane	21.41	1.0	20	0	107	71 - 121				
1,1,2-Trichloroethane	21.98	1.0	20	0	110	80 - 119				
1,1-Dichloroethane	22.22	1.0	20	0	111	77 - 125				
1,1-Dichloroethene	20.74	1.0	20	0	104	71 - 131				
1,1-Dichloropropene	22.91	1.0	20	0	115	78 - 125				
1,2,3-Trichlorobenzene	17.85	1.0	20	0	89.2	69 - 129				
1,2,3-Trichloropropane	21.6	1.0	20	0	108	73 - 122				
1,2,4-Trichlorobenzene	19.66	1.0	20	0	98.3	69 - 130				
1,2,4-Trimethylbenzene	23.43	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	18.95	1.0	20	0	94.8	62 - 128				
1,2-Dibromoethane	21.81	1.0	20	0	109	77 - 121				
1,2-Dichlorobenzene	21.64	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	21.97	1.0	20	0	110	73 - 128				
1,2-Dichloropropane	23.04	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	23.47	1.0	20	0	117	75 - 124				
1,3-Dichlorobenzene	22.35	1.0	20	0	112	80 - 119				
1,3-Dichloropropane	21.86	1.0	20	0	109	80 - 119				
1,4-Dichlorobenzene	21.87	1.0	20	0	109	79 - 118				
2,2-Dichloropropane	22.39	1.0	20	0	112	60 - 139				
2-Butanone	42.09	2.0	40	0	105	56 - 143				
2-Chlorotoluene	22.98	1.0	20	0	115	79 - 122				
2-Hexanone	40.77	2.0	40	0	102	57 - 139				
4-Chlorotoluene	22.39	1.0	20	0	112	78 - 122				
4-Isopropyltoluene	23.84	1.0	20	0	119	77 - 127				
4-Methyl-2-pentanone	41.36	2.0	40	0	103	67 - 130				
Acetone	38.55	2.0	40	0	96.4	39 - 160				
Benzene	22.53	1.0	20	0	113	79 - 120				
Bromobenzene	22.85	1.0	20	0	114	80 - 120				
Bromochloromethane	21.77	1.0	20	0	109	78 - 123				
Bromodichloromethane	22.42	1.0	20	0	112	79 - 125				
Bromoform	21.71	1.0	20	0	109	66 - 130				
Bromomethane	14.6	1.0	20	0	73.0	53 - 141				

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20090748-01MS** Units: **UG/L** Analysis Date: **24-Sep-2020 21:10**
Client ID: **LH18/24-SP650_091520** Run ID: **VOA6_369299** SeqNo: **5753833** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	35.65	2.0	40	0	89.1	64 - 133				
Carbon tetrachloride	23.47	1.0	20	0	117	72 - 136				
Chlorobenzene	22.44	1.0	20	0	112	82 - 118				
Chloroethane	14.52	1.0	20	0	72.6	60 - 138				
Chloroform	22.73	1.0	20	0	114	79 - 124				
Chloromethane	8.979	1.0	20	0	44.9	50 - 139				S
cis-1,2-Dichloroethene	43.51	1.0	20	20.43	115	78 - 123				
cis-1,3-Dichloropropene	21.99	1.0	20	0	110	75 - 124				
Dibromochloromethane	22.05	1.0	20	0	110	74 - 126				
Dibromomethane	21.95	1.0	20	0	110	79 - 123				
Dichlorodifluoromethane	5.075	1.0	20	0	25.4	32 - 152				S
Ethylbenzene	23.03	1.0	20	0	115	79 - 121				
Hexachlorobutadiene	23.95	1.0	20	0	120	66 - 134				
Isopropylbenzene	23.76	1.0	20	0	119	72 - 131				
m,p-Xylene	46.23	2.0	40	0	116	80 - 121				
Methylene chloride	22.82	2.0	20	0	114	74 - 124				
Naphthalene	17.08	1.0	20	0	85.4	61 - 128				
n-Butylbenzene	24.02	1.0	20	0	120	75 - 128				
n-Propylbenzene	23.72	1.0	20	0	119	76 - 126				
o-Xylene	23.07	1.0	20	0	115	78 - 122				
sec-Butylbenzene	23.79	1.0	20	0	119	77 - 126				
Styrene	25.36	1.0	20	0	127	78 - 123				S
tert-Butylbenzene	23.88	1.0	20	0	119	78 - 124				
Tetrachloroethene	23.59	1.0	20	0	118	74 - 129				
Toluene	23.22	1.0	20	0	116	80 - 121				
trans-1,2-Dichloroethene	22.82	1.0	20	0	114	75 - 124				
trans-1,3-Dichloropropene	21.83	1.0	20	0	109	73 - 127				
Trichloroethene	23.89	1.0	20	1.294	113	79 - 123				
Trichlorofluoromethane	19.44	1.0	20	0	97.2	65 - 141				
Vinyl chloride	12.45	1.0	20	0	62.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.88*	*1.0*	*50*	*0*	*91.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.03*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*47*	*1.0*	*50*	*0*	*94.0*	*80 - 119*				
Surr: Toluene-d8	*48.85*	*1.0*	*50*	*0*	*97.7*	*89 - 112*				

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20090748-01MSD** Units: **UG/L** Analysis Date: **24-Sep-2020 21:34**
Client ID: **LH18/24-SP650_091520** Run ID: **VOA6_369299** SeqNo: **5753834** 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	22.28	1.0	20	0	111	78 - 124	22.99	3.11	20	
1,1,1-Trichloroethane	22.43	1.0	20	0	112	74 - 131	23.21	3.43	20	
1,1,2,2-Tetrachloroethane	22.14	1.0	20	0	111	71 - 121	21.41	3.36	20	
1,1,2-Trichloroethane	22.11	1.0	20	0	111	80 - 119	21.98	0.609	20	
1,1-Dichloroethane	21.39	1.0	20	0	107	77 - 125	22.22	3.82	20	
1,1-Dichloroethene	19.9	1.0	20	0	99.5	71 - 131	20.74	4.14	20	
1,1-Dichloropropene	22.1	1.0	20	0	111	78 - 125	22.91	3.59	20	
1,2,3-Trichlorobenzene	20.91	1.0	20	0	105	69 - 129	17.85	15.8	20	
1,2,3-Trichloropropane	21.99	1.0	20	0	110	73 - 122	21.6	1.82	20	
1,2,4-Trichlorobenzene	22.32	1.0	20	0	112	69 - 130	19.66	12.7	20	
1,2,4-Trimethylbenzene	23.21	1.0	20	0	116	76 - 124	23.43	0.954	20	
1,2-Dibromo-3-chloropropane	20.38	1.0	20	0	102	62 - 128	18.95	7.22	20	
1,2-Dibromoethane	21.8	1.0	20	0	109	77 - 121	21.81	0.0436	20	
1,2-Dichlorobenzene	22.37	1.0	20	0	112	80 - 119	21.64	3.29	20	
1,2-Dichloroethane	21.91	1.0	20	0	110	73 - 128	21.97	0.273	20	
1,2-Dichloropropane	22.38	1.0	20	0	112	78 - 122	23.04	2.88	20	
1,3,5-Trimethylbenzene	23.57	1.0	20	0	118	75 - 124	23.47	0.422	20	
1,3-Dichlorobenzene	22.54	1.0	20	0	113	80 - 119	22.35	0.848	20	
1,3-Dichloropropane	21.84	1.0	20	0	109	80 - 119	21.86	0.0707	20	
1,4-Dichlorobenzene	22.49	1.0	20	0	112	79 - 118	21.87	2.78	20	
2,2-Dichloropropane	21.42	1.0	20	0	107	60 - 139	22.39	4.42	20	
2-Butanone	43.32	2.0	40	0	108	56 - 143	42.09	2.87	20	
2-Chlorotoluene	22.66	1.0	20	0	113	79 - 122	22.98	1.4	20	
2-Hexanone	42.23	2.0	40	0	106	57 - 139	40.77	3.5	20	
4-Chlorotoluene	22.47	1.0	20	0	112	78 - 122	22.39	0.38	20	
4-Isopropyltoluene	23.72	1.0	20	0	119	77 - 127	23.84	0.511	20	
4-Methyl-2-pentanone	42	2.0	40	0	105	67 - 130	41.36	1.54	20	
Acetone	39.17	2.0	40	0	97.9	39 - 160	38.55	1.62	20	
Benzene	21.88	1.0	20	0	109	79 - 120	22.53	2.94	20	
Bromobenzene	22.83	1.0	20	0	114	80 - 120	22.85	0.0732	20	
Bromochloromethane	20.55	1.0	20	0	103	78 - 123	21.77	5.76	20	
Bromodichloromethane	21.84	1.0	20	0	109	79 - 125	22.42	2.62	20	
Bromoform	21.67	1.0	20	0	108	66 - 130	21.71	0.18	20	
Bromomethane	13.21	1.0	20	0	66.1	53 - 141	14.6	9.97	20	

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R369299 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20090748-01MSD** Units: **UG/L** Analysis Date: **24-Sep-2020 21:34**
Client ID: **LH18/24-SP650_091520** Run ID: **VOA6_369299** SeqNo: **5753834** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	33.86	2.0	40	0	84.7	64 - 133	35.65	5.15	20	
Carbon tetrachloride	22.41	1.0	20	0	112	72 - 136	23.47	4.66	20	
Chlorobenzene	21.94	1.0	20	0	110	82 - 118	22.44	2.28	20	
Chloroethane	13.79	1.0	20	0	69.0	60 - 138	14.52	5.17	20	
Chloroform	22.14	1.0	20	0	111	79 - 124	22.73	2.66	20	
Chloromethane	8.542	1.0	20	0	42.7	50 - 139	8.979	4.99	20	S
cis-1,2-Dichloroethene	42.14	1.0	20	20.43	109	78 - 123	43.51	3.2	20	
cis-1,3-Dichloropropene	21.7	1.0	20	0	108	75 - 124	21.99	1.35	20	
Dibromochloromethane	21.58	1.0	20	0	108	74 - 126	22.05	2.18	20	
Dibromomethane	21.49	1.0	20	0	107	79 - 123	21.95	2.13	20	
Dichlorodifluoromethane	4.821	1.0	20	0	24.1	32 - 152	5.075	5.14	20	S
Ethylbenzene	22.82	1.0	20	0	114	79 - 121	23.03	0.909	20	
Hexachlorobutadiene	24.35	1.0	20	0	122	66 - 134	23.95	1.63	20	
Isopropylbenzene	23.14	1.0	20	0	116	72 - 131	23.76	2.63	20	
m,p-Xylene	45.24	2.0	40	0	113	80 - 121	46.23	2.17	20	
Methylene chloride	22.48	2.0	20	0	112	74 - 124	22.82	1.5	20	
Naphthalene	20.56	1.0	20	0	103	61 - 128	17.08	18.5	20	
n-Butylbenzene	24	1.0	20	0	120	75 - 128	24.02	0.0875	20	
n-Propylbenzene	23.68	1.0	20	0	118	76 - 126	23.72	0.17	20	
o-Xylene	22.51	1.0	20	0	113	78 - 122	23.07	2.45	20	
sec-Butylbenzene	23.66	1.0	20	0	118	77 - 126	23.79	0.571	20	
Styrene	22.65	1.0	20	0	113	78 - 123	25.36	11.3	20	
tert-Butylbenzene	23.66	1.0	20	0	118	78 - 124	23.88	0.89	20	
Tetrachloroethene	22.99	1.0	20	0	115	74 - 129	23.59	2.6	20	
Toluene	22.47	1.0	20	0	112	80 - 121	23.22	3.28	20	
trans-1,2-Dichloroethene	21.53	1.0	20	0	108	75 - 124	22.82	5.8	20	
trans-1,3-Dichloropropene	21.76	1.0	20	0	109	73 - 127	21.83	0.312	20	
Trichloroethene	23.32	1.0	20	1.294	110	79 - 123	23.89	2.39	20	
Trichlorofluoromethane	18.31	1.0	20	0	91.6	65 - 141	19.44	5.97	20	
Vinyl chloride	11.67	1.0	20	0	58.4	58 - 137	12.45	6.43	20	
Surr: 1,2-Dichloroethane-d4	*44.76*	*1.0*	*50*	*0*	*89.5*	*81 - 118*	*45.88*	*2.48*	*20*	
Surr: 4-Bromofluorobenzene	*51.87*	*1.0*	*50*	*0*	*104*	*85 - 114*	*52.03*	*0.32*	*20*	
Surr: Dibromofluoromethane	*46.8*	*1.0*	*50*	*0*	*93.6*	*80 - 119*	*47*	*0.421*	*20*	
Surr: Toluene-d8	*49*	*1.0*	*50*	*0*	*98.0*	*89 - 112*	*48.85*	*0.304*	*20*	

ALS Houston, US Date: 25-Sep-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20090748

QC BATCH REPORT

Batch ID:	**R369299 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20090748-01 HS20090748-03

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20090748

QC BATCH REPORT

Batch ID: R368683 (0) **Instrument:** UV-2450 **Method:** HEXAVALENT CHROMIUM BY SW7196A

MBLK Sample ID: **MBLK-R368683** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741230** 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-R368683** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: Run ID: **UV-2450_368683** SeqNo: **5741229** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.256	0.0100	0.25	0	102	90 - 111				

MS Sample ID: **HS20090748-01MS** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: **LH18/24-SP650_091520** Run ID: **UV-2450_368683** SeqNo: **5741232** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.252	0.0100	0.25	0	101	90 - 111				

MSD Sample ID: **HS20090748-01MSD** Units: **mg/L** Analysis Date: **16-Sep-2020 13:00**
Client ID: **LH18/24-SP650_091520** Run ID: **UV-2450_368683** SeqNo: **5741231** 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	0.252	0.398	20	

The following samples were analyzed in this batch: HS20090748-01

ALS Houston, US Date: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20090748**

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: 25-Sep-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20090748

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090748-01	LH18/24-SP650_091520	Login	9/16/2020 11:53:11 AM	PMG	EXT154
HS20090748-01	LH18/24-SP650_091520	Login	9/16/2020 11:53:11 AM	PMG	WET131
HS20090748-01	LH18/24-SP650_091520	Login	9/16/2020 11:53:11 AM	PMG	MET068
HS20090748-01	LH18/24-SP650_091520	Login	9/16/2020 11:53:11 AM	PMG	VOA154
HS20090748-02	LH18/24-SP650_091520_AIX	Login	9/16/2020 11:53:11 AM	PMG	Sub
HS20090748-03	Trip Blank	Login	9/16/2020 11:53:11 AM	PMG	VOA154

ALS Houston, US Date: 25-Sep-20

Sample Receipt Checklist

Work Order ID: HS20090748 **Date/Time Received:** **16-Sep-2020 10:20**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	16-Sep-2020 11:57	**Reviewed by:**	/S/ RJ Modashia	16-Sep-2020 12:57
	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):	0.8C U/c	IR31
Cooler(s)/Kit(s):	44674	
Date/Time sample(s) sent to storage:	9/16/2020 12:10	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

HS20090748
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE					Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_091520	Water	09/15/20 / 14:00		3	X									HCL	
LH18/24-SP650_091520	Water	09/15/20 / 14:00		2			X	X						NONE	
LH18/24-SP650_091520_AIX	Water	09/15/20 / 14:00		1					X					NONE	
LH18/24-SP650_091520	Water	09/15/20 / 14:00		1		X								HNO3	
Trip Blank	Water	09/15/20		2	X									HCL	

Additional Remarks: **3 DAY TAT on VOC's. Standard TAT on all other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	09/15/20	14:30	NC	9/16/20	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:

44674 4°C 0.8 Ice 831 CHO

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

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

4674

CUSTODY SEAL

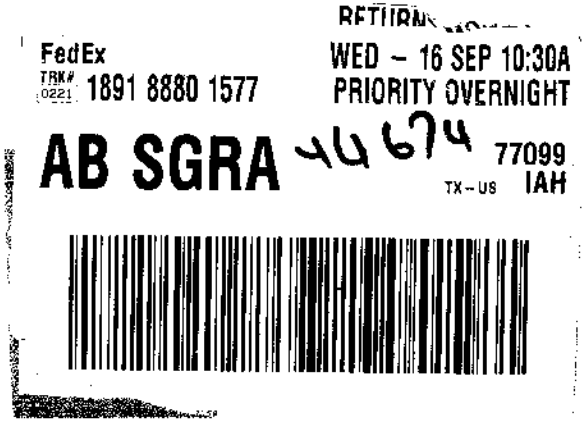
Date: 9/15/16 Time: 1430

Name: Shelby Barrington

Company: BHGTH

Seal Broken By:

Date:



September 21, 2020 Service Request No:E2000869

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

Laboratory Results for: HS20090748

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory September 16, 2020
For your reference, these analyses have been assigned our service request number **E2000869.**

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.:**	E2000869
Project:	HS20090748	**Date Received:**	09/16/20
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 09/16/20.

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:

EQ2000436: 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: HS20090748 **Service Request:**E2000869

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000869-001	LH18/24-SP650_091520-AIX	9/15/2020	1400

Service Request Summary

Folder #: **E2000869**
Client Name: ALS Environmental - US
Project Name: HS20090748
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: 09/16/20
Internal Due Date: 9/21/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090748
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000869-001	LH18/24-SP650_091520-AIX	Water	09/15/20 1400	**IV**

Service Request Summary

Folder #: **E2000869**
Client Name: ALS Environmental - US
Project Name: HS20090748
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: 09/16/20
Internal Due Date: 9/21/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20090748
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 9/21,level IV 10/7

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

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:** **14693**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

RUSH

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:	HS20090748
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20090748-02**	**LH18/24-SP650_091520_AIX**	**Water**	**15 Sep 2020 14:00**
	SUB_Perch-6850			05 Oct 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: 9/16/2020 12:23.

Received By: _____ Date/Time: 9/16/20 12:23

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

00995295

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1031

Date/Time Received: 9/16/20 Initials: CH Date/Time Logged in: 9/16/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ⊘ Courier (ALS) ○ 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?
NA		9/16/20	1225	CH	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#: 365762
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/17/20 14:12

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000845-001	LH18/24-SP650_090920-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000868-001	LH18/24-SP140_091520	.01	6850/ClO4 DOD			Water	10mL	
3	E2000869-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000870-001	LH18/24-SP650_091520-AIX	.01	6850/ClO4 DOD			Water	10mL	
5	E2000870-002	LH18/24-SP650_091520-BIX	.01	6850/ClO4 DOD			Water	10mL	
6	EQ2000436-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2000436-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2000436-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000436-02 1.00µL EQ2000436-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000845-001 100.00µL E2000868-001 100.00µL E2000869-001 100.00µL E2000870-001 100.00µL E2000870-002 100.00µL EQ2000436-01 100.00µL
EQ2000436-02 100.00µL EQ2000436-03 100.00µL

Preparation Steps

Step: Preparation
Started: 9/17/20 14:12
Finished: 9/17/20 17:43
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 9/18/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000869
Project:	HS20090748	**Date Collected:**	9/15/20 1400
Sample Matrix:	Water	**Date Received:**	9/16/20
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 17:47
Sample Name:	LH18/24-SP650_091520-AIX	**Units:**	µg/L
Lab Code:	E2000869-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_022	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**5.69**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000869
Project:	HS20090748	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:11
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000436-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_012	**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: HS20090748
Sample Matrix: Water

Service Request: E2000869
Date Analyzed: 9/17/20

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: 365762

	Lab Control Sample EQ2000436-02			Duplicate Lab Control Sample EQ2000436-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.114	0.100	114	0.107	0.100	107	84 - 119	6	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:**	E2000869
Project:	HS20090748	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:19
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_013	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.114**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000869
Project:	HS20090748	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/17/20
		Date Analyzed:	9/17/20 16:27
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000436-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	695661
Prep Method:	Method	**Extraction Lot:**	365762
Data File Name:	I:\LCMS01\DATA\20200917\20200917_014	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.107**		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

20200915

1st Review: Grivera
2nd Review: Hvan

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200915_044	Perchlorate6850b.lcm	1x	☒	3100806-05	9/15/2020 17:55
2	PERCHLORATE2		20200915_024	Perchlorate6850b.lcm	1x	☒	3100806-06	9/15/2020 15:10
3	PERCHLORATE3		20200915_046	Perchlorate6850b.lcm	1x	☒	3100806-07	9/15/2020 18:13
4	PERCHLORATE4		20200915_047	Perchlorate6850b.lcm	1x	☒	3100807-01	9/15/2020 18:21
5	PERCHLORATE5		20200915_048	Perchlorate6850b.lcm	1x	☒	3100807-02	9/15/2020 18:29
6	PERCHLORATE6		20200915_049	Perchlorate6850b.lcm	1x	☒	3100807-03	9/15/2020 18:37
7	PERCHLORATE7		20200915_029	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 15:49
8	PERCHLORATE8		20200915_051	Perchlorate6850b.lcm	1x	☒	3100807-05	9/15/2020 18:52
9	PERCHLORATE9		20200915_052	Perchlorate6850b.lcm	1x	☒	3100807-06	9/15/2020 19:00
10	PERCHLORATE10		20200915_053	Perchlorate6850b.lcm	1x	☒	3100807-07	9/15/2020 19:08
11	PERCHLORATE ICV		20200915_054	Perchlorate6850b.lcm	1x	☒	3100807-08	9/15/2020 19:16
12	LODV		20200915_055	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:24
13	E2000817-001		20200915_056	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:40
14	E2000817-001x10		20200915_057	Perchlorate6850b.lcm	1x	☒		9/15/2020 19:48
15	PERCHLORATE7		20200915_058	Perchlorate6850b.lcm	1x	☒	3100807-04	9/15/2020 19:56
16								
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Initial Calibration - Detailed Report

Calibration ID: EC2000032 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000032-01	PERCHLORATE2	20200915_024	09/15/2020 15:10
02	EC2000032-02	PERCHLORATE7	20200915_029	09/15/2020 15:49
03	EC2000032-03	PERCHLORATE1	20200915_044	09/15/2020 17:55
04	EC2000032-04	PERCHLORATE3	20200915_046	09/15/2020 18:13
05	EC2000032-05	PERCHLORATE4	20200915_047	09/15/2020 18:21
06	EC2000032-06	PERCHLORATE5	20200915_048	09/15/2020 18:29
07	EC2000032-07	PERCHLORATE6	20200915_049	09/15/2020 18:37
08	EC2000032-08	PERCHLORATE8	20200915_051	09/15/2020 18:52
09	EC2000032-09	PERCHLORATE9	20200915_052	09/15/2020 19:00
10	EC2000032-10	PERCHLORATE10	20200915_053	09/15/2020 19:08

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

Perchlorate **Quadratic** **Equal** **COD = 0.9998** **Y= -9.474E-05 X² + 0.1066 X + 0.00148**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5000	0.1319	02	10.0000	0.1001	03	0.1000	0.1399	04	0.7000	0.1079
05	1.0000	0.1089	06	2.0000	0.1096	07	5.0000	0.1086	08	20.0000	0.1062
09	30.0000	0.104	10	50.0000	0.1018						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.5000	0.605	21.0	02	10.0000	9.45	-5.5	03	0.1000	0.117	17.3
04	0.7000	0.695	-0.8	05	1.0000	1.01	0.8	06	2.0000	2.05	2.3
07	5.0000	5.10	2.0	08	20.0000	20.3	1.3	09	30.0000	30.1	0.2
10	50.0000	50.0	-0.1								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000032	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200915_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000032-11	T	Quadratic	10	9.462	ng/mL	-5.4	<= 15

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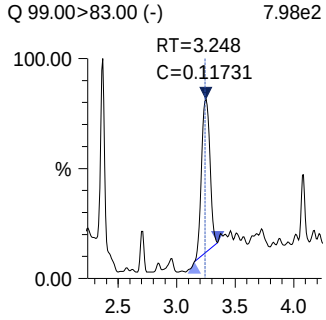
PERCHLORATE1

Date acquired: 9/15/2020 5:55:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_044.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	9/15/2020 5:55:29 PM	2833	0.11731	20200915_044	3.248	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	9/15/2020 5:55:29 PM	202512	1.00000	20200915_044	3.237	25.0000	1.0000	5

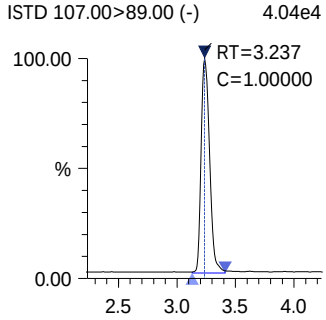
Perchlorate

Conc 0.11731
Area 2833



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 202512



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PERCHLORATE2

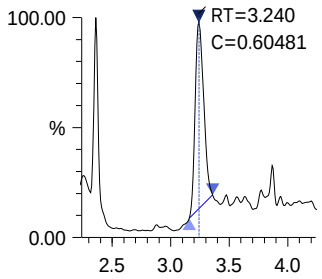
Date acquired: 9/15/2020 3:10:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_024.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	9/15/2020 3:10:04 PM	11634	0.60481	20200915_024	3.240	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	9/15/2020 3:10:04 PM	176422	1.00000	20200915_024	3.240	25.0000	1.0000	6

Perchlorate

Conc 0.60481
Area 11634

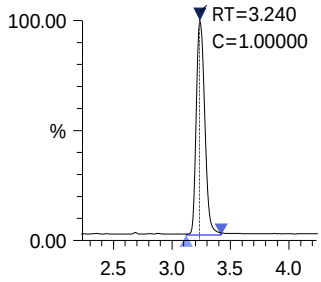
Q 99.00>83.00 (-) 2.66e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 176422

ISTD 107.00>89.00 (-) 3.50e4



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PERCHLORATE3

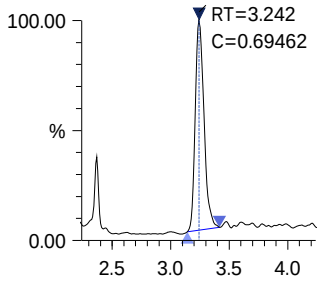
Date acquired: 9/15/2020 6:13:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	9/15/2020 6:13:20 PM	14722	0.69462	20200915_046	3.242	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	9/15/2020 6:13:20 PM	194971	1.00000	20200915_046	3.239	25.0000	1.0000	7

Perchlorate

Conc 0.69462
Area 14722

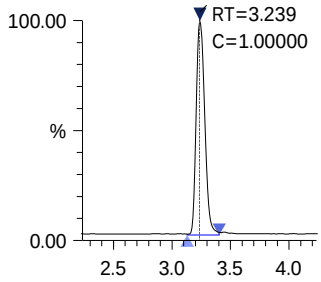
Q 99.00>83.00 (-) 2.91e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 194971

ISTD 107.00>89.00 (-) 3.85e4



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PERCHLORATE4

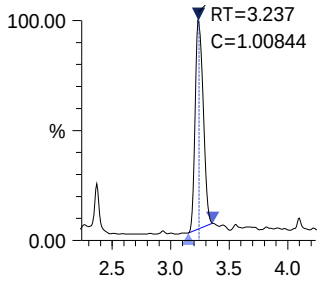
Date acquired: 9/15/2020 6:21:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_047.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	9/15/2020 6:21:15 PM	19524	1.00844	20200915_047	3.237	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	9/15/2020 6:21:15 PM	179246	1.00000	20200915_047	3.240	25.0000	1.0000	8

Perchlorate

Conc 1.00844
Area 19524

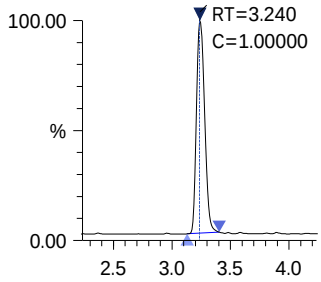
Q 99.00>83.00 (-) 4.23e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 179246

ISTD 107.00>89.00 (-) 3.75e4



ALS Group Houston

PERCHLORATE5

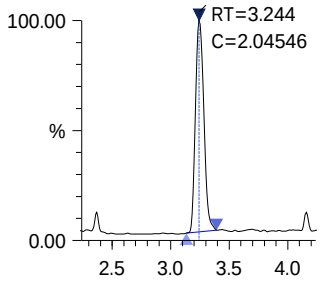
Date acquired: 9/15/2020 6:29:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_048.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	9/15/2020 6:29:08 PM	38522	2.04546	20200915_048	3.244	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	9/15/2020 6:29:08 PM	175734	1.00000	20200915_048	3.240	25.0000	1.0000	9

Perchlorate

Conc 2.04546
Area 38522

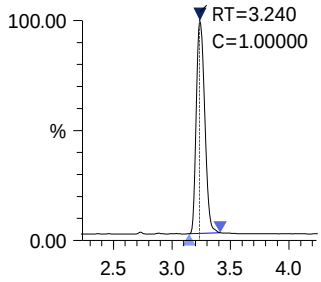
Q 99.00>83.00 (-) 7.92e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 175734

ISTD 107.00>89.00 (-) 3.56e4



ALS Group Houston

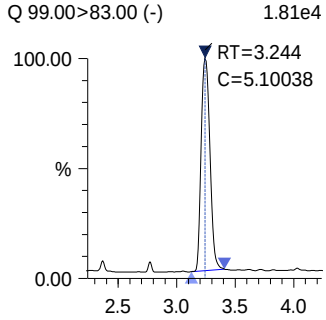
PERCHLORATE6

Date acquired: 9/15/2020 6:37:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_049.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	9/15/2020 6:37:05 PM	92162	5.10038	20200915_049	3.244	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	9/15/2020 6:37:05 PM	169754	1.00000	20200915_049	3.239	25.0000	1.0000	10

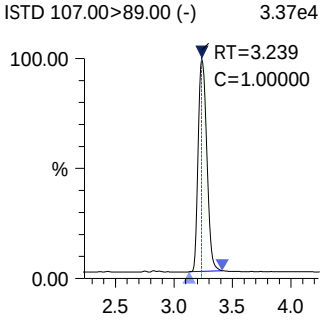
Perchlorate

Conc 5.10038
Area 92162



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 169754



ALS Group Houston

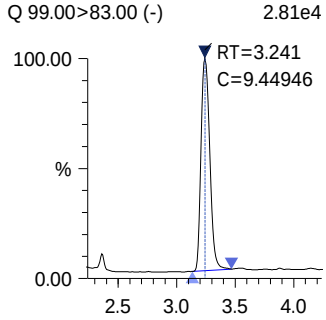
PERCHLORATE7

Date acquired: 9/15/2020 3:49:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_029.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	9/15/2020 3:49:35 PM	144012	9.44946	20200915_029	3.241	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/15/2020 3:49:35 PM	143911	1.00000	20200915_029	3.238	25.0000	1.0000	4

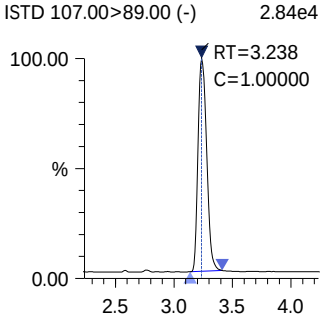
Perchlorate

Conc 9.44946
Area 144012



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143911



ALS Group Houston

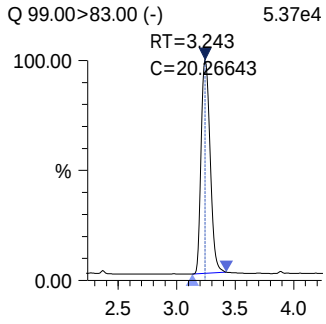
PERCHLORATE8

Date acquired: 9/15/2020 6:52:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_051.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	9/15/2020 6:52:54 PM	284308	20.26643	20200915_051	3.243	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	9/15/2020 6:52:54 PM	133870	1.00000	20200915_051	3.240	25.0000	1.0000	11

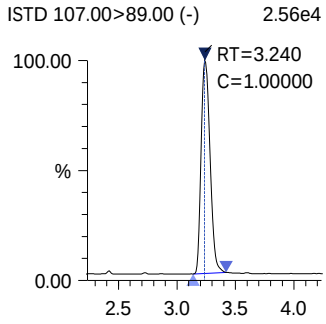
Perchlorate

Conc 20.26643
Area 284308



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 133870



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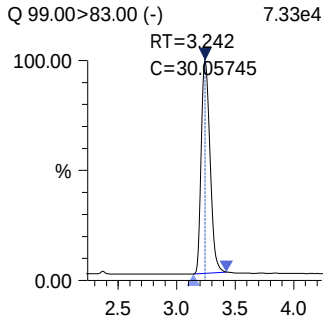
PERCHLORATE9

Date acquired: 9/15/2020 7:00:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_052.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	9/15/2020 7:00:50 PM	377183	30.05745	20200915_052	3.242	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	9/15/2020 7:00:50 PM	120846	1.00000	20200915_052	3.240	25.0000	1.0000	12

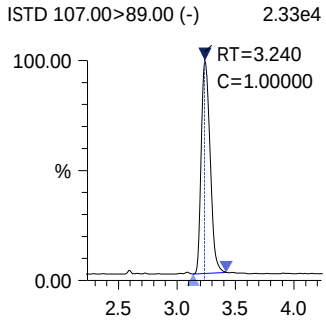
Perchlorate

Conc 30.05745
Area 377183



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 120846



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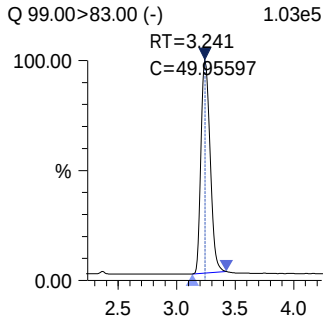
PERCHLORATE10

Date acquired: 9/15/2020 7:08:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_053.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	9/15/2020 7:08:43 PM	553330	49.95597	20200915_053	3.241	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	9/15/2020 7:08:43 PM	108660	1.00000	20200915_053	3.240	25.0000	1.0000	13

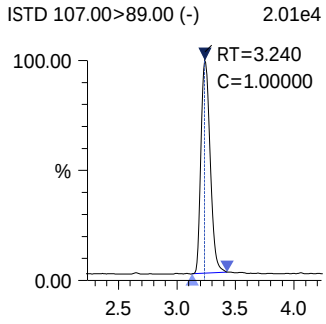
Perchlorate

Conc 49.95597
Area 553330



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108660



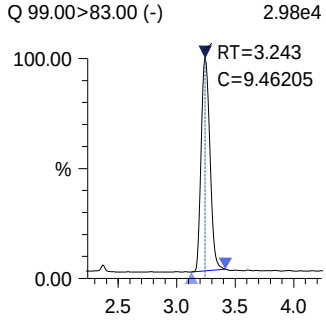
PERCHLORATEICV

Date acquired: 9/15/2020 7:16:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200915\20200915_054.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	9/15/2020 7:16:39 PM	152650	9.46205	20200915_054	3.243	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	9/15/2020 7:16:39 PM	152342	1.00000	20200915_054	3.241	25.0000	1.0000	14

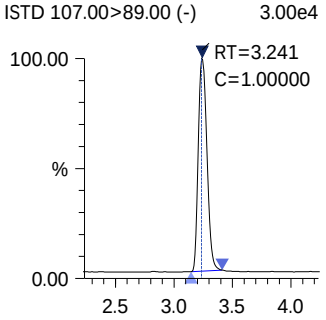
Perchlorate

Conc 9.46205
Area 152650



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 152342



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

20200917

ALS Environmental

ICAL Date: 9/15/2020
Cal. Std. xp: 11/18/2020
ICAL ID: **EC2000032**

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		20200917_001	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:11
2	null		20200917_002	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:16
3	null		20200917_003	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:21
4	IB		20200917_004	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:26
5	IB		20200917_005	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:34
6	LODV		20200917_006	Perchlorate6850b.lcm	1x	☒		9/17/2020 14:42
7	PERCHLORATE7		20200917_007	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 14:50
8	E2000825-001x2		20200917_008	Perchlorate6850b.lcm	2x	☒		9/17/2020 14:58
9	PERCHLORATE7		20200917_009	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:05
10	E2000825-001		20200917_010	Perchlorate6850b.lcm	1x	☒		9/17/2020 15:40
11	PERCHLORATE7		20200917_011	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 15:48
12	EQ2000436-01		20200917_012	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:11
13	EQ2000436-02		20200917_013	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:19
14	EQ2000436-03		20200917_014	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:27
15	E2000845-001		20200917_015	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:35
16	E2000868-001DNU		20200917_016	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:42
17	E2000869-001		20200917_017	Perchlorate6850b.lcm	1x	☒		9/17/2020 16:50
18	E2000870-001		20200917_018	Perchlorate6850b.lcm	10x	☒		9/17/2020 16:58
19	E2000870-002		20200917_019	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:06
20	PERCHLORATE7		20200917_020	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 17:14
21	IB		20200917_021	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:39
22	EQ2000869-01RR		20200917_022	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:47
23	EQ2000870-01RR		20200917_023	Perchlorate6850b.lcm	1x	☒		9/17/2020 17:55
24	EQ2000870-02RR		20200917_024	Perchlorate6850b.lcm	1x	☒		9/17/2020 18:02
25	EQ2000868-01X1000		20200917_025	Perchlorate6850b.lcm	1000x	☒		9/17/2020 18:10
26	PERCHLORATE7		20200917_026	Perchlorate6850b.lcm	1x	☒	3100807-04	9/17/2020 18:18
27								
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37								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090748

Service Request: E2000869
Date Analyzed: 9/17/20

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\20200917\20200917_011

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.07	NA	NA	NA	-9.3	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090748

Service Request: E2000869
Date Analyzed: 9/17/20

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\20200917\20200917_020

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20090748

Service Request: E2000869
Date Analyzed: 9/17/20

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\20200917\20200917_026

Calibration Date: 9/15/20
Calibration ID: EC2000032
Analysis Lot: 695661
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.93	NA	NA	NA	-10.7	± 15 %	Quadratic

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000869
Project:	HS20090748	**Date Analyzed:**	9/17/20 15:48

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_011	**Lab Code:**	EQ2000439-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-01	151,139	3.22
Method Blank	EQ2000436-01	168,330	3.17
Lab Control Sample	EQ2000436-02	174,963	3.21
Duplicate Lab Control Sample	EQ2000436-03	163,778	3.21

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:**	E2000869
Project:	HS20090748	**Date Analyzed:**	9/17/20 17:14

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_020	**Lab Code:**	EQ2000439-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-02	153,613	3.21
LH18/24-SP650_091520-AIX	E2000869-001	119,823	3.19

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:**	E2000869
Project:	HS20090748	**Date Analyzed:**	9/17/20 18:18

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20200917\20200917_026	**Lab Code:**	EQ2000439-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	695661
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	160,593	3.24
	Upper Limit ==>	240,890	5.24
	Lower Limit ==>	80,297	1.24
Associated Analyses			
Continuing Calibration Verification	EQ2000439-03	152,718	3.21

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

ALS Group Houston

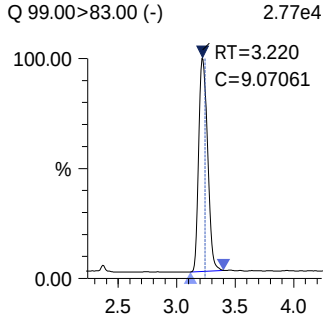
PERCHLORATE7

Date acquired: 9/17/2020 3:48:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_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	9/17/2020 3:48:47 PM	145240	9.07061	20200917_011	3.220	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 3:48:47 PM	151139	1.00000	20200917_011	3.219	25.0000	1.0000	4

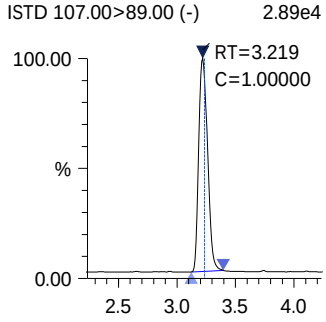
Perchlorate

Conc 9.07061
Area 145240



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 151139



ALS Group Houston

EQ2000436-01

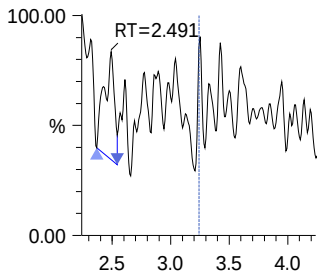
Date acquired: 9/17/2020 4:11:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_012.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-01	9/17/2020 4:11:27 PM	----	----	20200917_012	----	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	EQ2000436-01	9/17/2020 4:11:27 PM	168330	1.00000	20200917_012	3.165	25.0000	1.0000	17

Perchlorate

Conc ----
Area ----

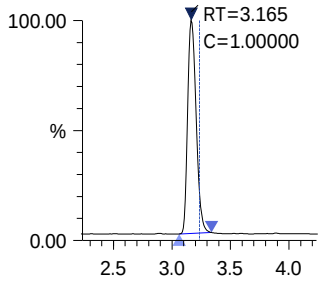
Q 99.00>83.00 (-) 2.13e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168330

ISTD 107.00>89.00 (-) 3.29e4



ALS Group Houston

EQ2000436-02

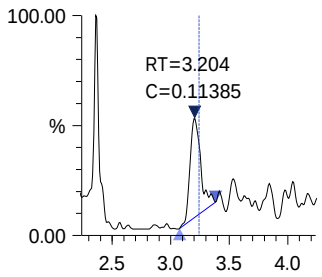
Date acquired: 9/17/2020 4:19:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_013.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-02	9/17/2020 4:19:22 PM	2383	0.11385	20200917_013	3.204	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000436-02	9/17/2020 4:19:22 PM	174963	1.00000	20200917_013	3.208	25.0000	1.0000	18

Perchlorate

Conc 0.11385
Area 2383

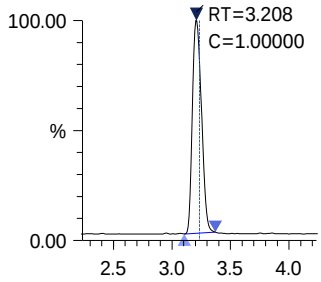
Q 99.00>83.00 (-) 8.10e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 174963

ISTD 107.00>89.00 (-) 3.25e4



ALS Group Houston

EQ2000436-03

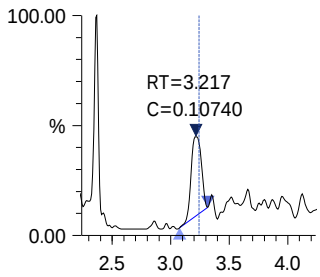
Date acquired: 9/17/2020 4:27:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_014.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000436-03	9/17/2020 4:27:12 PM	2118	0.10740	20200917_014	3.217	25.0000	1.0000	19
Sodium Perchlorate-18O4_IS	EQ2000436-03	9/17/2020 4:27:12 PM	163778	1.00000	20200917_014	3.208	25.0000	1.0000	19

Perchlorate

Conc 0.10740
Area 2118

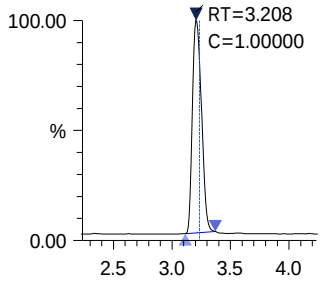
Q 99.00>83.00 (-) 9.55e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 163778

ISTD 107.00>89.00 (-) 3.04e4



ALS Group Houston

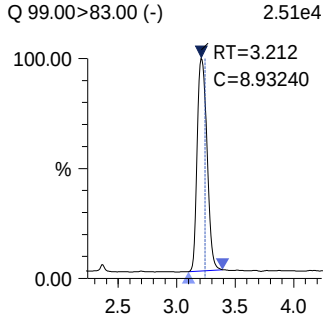
PERCHLORATE7

Date acquired: 9/17/2020 5:14:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200917\20200917_020.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	9/17/2020 5:14:31 PM	145389	8.93240	20200917_020	3.212	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	9/17/2020 5:14:31 PM	153613	1.00000	20200917_020	3.208	25.0000	1.0000	4

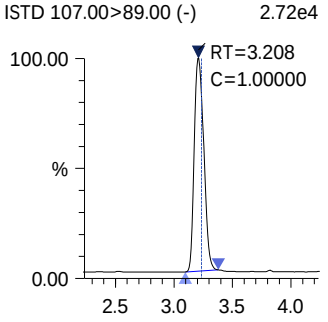
Perchlorate

Conc 8.93240
Area 145389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 153613



HS20090748 8260_W_DOD Raw Data

ALS WO# HS20090748

MSVOA06 -Logbook

Batch: 41874 **Analyst:** Presenta Cabascango

Date: 09-24-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	09-24-2020 11:10 am	1.00	50 mL	50 mL	X092401.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	09-24-2020 11:34 am	1.00	50 mL	50 mL	X092402.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	09-24-2020 11:58 am	1.00	50 mL	50 mL	X092403.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	09-24-2020 12:46 pm	1.00	50 mL	50 mL	X092404.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	09-24-2020 01:10 pm	1.00	50 mL	50 mL	X092405.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	09-24-2020 01:33 pm	1.00	50 mL	50 mL	X092406.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	09-24-2020 01:57 pm	1.00	50 mL	50 mL	X092407.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	09-24-2020 02:21 pm	1.00	50 mL	50 mL	X092408.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	09-24-2020 02:45 pm	1.00	50 mL	50 mL	X092409.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	09-24-2020 03:09 pm	1.00	50 mL	50 mL	X092410.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	09-24-2020 03:33 pm	1.00	50 mL	50 mL	X092411.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	09-24-2020 03:57 pm	1.00	50 mL	50 mL	X092412.D	Liquid	Y	NA
13	BLANK	SAMP	09-24-2020 04:21 pm	1.00	50 mL	50 mL	X092413.D	Liquid	Y	NA
14	VSTD050	ICV	09-24-2020 04:45 pm	1.00	50 mL	50 mL	X092414.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
15	CCB	SAMP	09-24-2020 05:09 pm	1.00	50 mL	50 mL	X092415.D	Liquid	Y	NA
16	VLCSW-200924	LCS	09-24-2020 05:33 pm	1.00	50 mL	50 mL	X092416.D	Liquid	Y	na
	4.0 uL cal std/50 mL DI									
17	BLK	SAMP	09-24-2020 05:57 pm	1.00	50 mL	50 mL	X092417.D	Liquid	Y	na
18	BLK	SAMP	09-24-2020 06:21 pm	1.00	50 mL	50 mL	X092418.D	Liquid	Y	na
19	VBLKW-200924	MBLK	09-24-2020 06:45 pm	1.00	50 mL	50 mL	X092419.D	Liquid	Y	na
20	HS20090748-03	SAMP	09-24-2020 07:09 pm	1.00	50 mL	50 mL	X092420.D	Liquid	Y	<2
21	HS20091030-02	SAMP	09-24-2020 07:33 pm	1.00	50 mL	50 mL	X092421.D	Liquid	Y	<2
22	HS20090748-01	SAMP	09-24-2020 07:58 pm	1.00	50 mL	50 mL	X092422.D	Liquid	Y	<2
23	HS20091030-01	SAMP	09-24-2020 08:22 pm	1.00	50 mL	50 mL	X092423.D	Liquid	Y	<2
24	HS20090796-01	SAMP	09-24-2020 08:46 pm	1.00	50 mL	50 mL	X092424.D	Liquid	Y	<2
25	HS20090748-01MS	MS	09-24-2020 09:10 pm	1.00	50 mL	50 mL	X092425.D	Liquid	Y	<2
	3.5 uL cal std/40 mL amp									
26	HS20090748-01MSD	MSD	09-24-2020 09:34 pm	1.00	50 mL	50 mL	X092426.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	CCV-END	CCV	09-24-2020 09:58 pm	1.00	50 mL	50 mL	X092427.D	Liquid	Y	na
	10 uL cal std/50 mL DI									

Chemical	Value
SURR SPK ID	31106-47-06
IS ID	31106-47-06
CAL STD ID	31106-48-01/02
BFB ID	31106-47-06
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.: HS20090748

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200924	97	94	96	104	0
02	VBLKW-200924	90	92	101	106	0
03	HS20090748-03	90	93	100	104	0
04	HS20090748-01	91	94	100	105	0
05						
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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 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	46.28	92	80-120
trans-1,3-Dichloroprope	50.00	46.89	94	80-120
1,3-Dichlorobenzene	50.00	44.85	90	80-120
2,2-Dichloropropane	50.00	44.62	89	80-120
1,1-Dichloropropene	50.00	42.22	84	80-120
Dibromomethane	50.00	45.44	91	80-120
1,2-Dibromoethane	50.00	45.33	91	80-120
trans-1,2-Dichloroethen	50.00	45.27	90	80-120
1,1,1,2-Tetrachloroetha	50.00	45.52	91	80-120
1,1,1-Trichloroethane	50.00	43.54	87	80-120
1,1,2,2-Tetrachloroetha	50.00	44.71	89	80-120
1,1,2-Trichloroethane	50.00	44.55	89	80-120
1,1-Dichloroethane	50.00	44.26	88	80-120
1,1-Dichloroethene	50.00	43.02	86	80-120
Trichloroethene	50.00	44.33	89	80-120
1,2,3-Trichlorobenzene	50.00	51.26	102	80-120
Trichlorofluoromethane	50.00	41.97	84	80-120
1,2,4-Trichlorobenzene	50.00	49.34	99	80-120
1,2,4-Trimethylbenzene	50.00	44.00	88	80-120
Tetrachloroethene	50.00	41.29	82	80-120
1,2-Dichlorobenzene	50.00	45.04	90	80-120
1,2-Dichloroethane	50.00	45.12	90	80-120
1,2-Dichloropropane	50.00	46.11	92	80-120
1,3,5-Trimethylbenzene	50.00	43.20	86	80-120
1,3-Dichloropropane	50.00	44.68	89	80-120
1,4-Dichlorobenzene	50.00	44.16	88	80-120
Toluene	50.00	43.58	87	80-120
2-Butanone	100.00	108.02	108	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	43.08	86	80-120
2-Hexanone	100.00	95.15	95	80-120
4-Chlorotoluene	50.00	43.22	86	80-120
tert-Butylbenzene	50.00	40.89	82	80-120
4-Methyl-2-Pentanone	100.00	91.36	91	80-120
Acetone	100.00	109.54	110	80-120
Benzene	50.00	44.84	90	80-120
Bromobenzene	50.00	45.66	91	80-120
Bromochloromethane	50.00	43.92	88	80-120
Bromodichloromethane	50.00	45.59	91	80-120
Bromoform	50.00	47.84	96	80-120
Bromomethane	50.00	47.86	96	80-120
Carbon Disulfide	100.00	89.81	90	80-120
Carbon Tetrachloride	50.00	41.93	84	80-120
Chlorobenzene	50.00	43.59	87	80-120
Chloroethane	50.00	42.99	86	80-120
Chloroform	50.00	44.56	89	80-120
Chloromethane	50.00	45.59	91	80-120
cis-1,2-Dichloroethene	50.00	44.88	90	80-120
Dibromochloromethane	50.00	45.50	91	80-120
Dichlorodifluoromethane	50.00	41.03	82	80-120
Ethylbenzene	50.00	42.63	85	80-120
Hexachlorobutadiene	50.00	45.33	91	80-120
Isopropylbenzene	50.00	41.73	83	80-120
m,p-Xylenes	100.00	87.22	87	80-120
Methylene Chloride	50.00	48.15	96	80-120
n-Butylbenzene	50.00	42.35	85	80-120
n-Propylbenzene	50.00	42.33	85	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	51.91	104	80-120
o-Xylene	50.00	44.49	89	80-120
sec-Butylbenzene	50.00	40.27	80	80-120
Styrene	50.00	46.11	92	80-120
Vinyl Chloride	50.00	43.77	88	80-120
1,2,3-Trichloropropane	50.00	47.51	95	80-120
p-Isopropyltoluene	50.00	41.31	83	80-120
1,2-Dibromo-3-Chloropro	50.00	44.96	90	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200924

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Lab File ID: X092419 Lab Sample ID: VBLKW-200924

Date Analyzed: 09/24/20 Time Analyzed: 1845

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-200924	VLCSW-200924	X092416	1733
02	HS20090748-0	HS20090748-03	X092420	1909
03	HS20090748-0	HS20090748-01	X092422	1958
04	HS20090748-0	HS20090748-01M	X092425	2110
05	HS20090748-0	HS20090748-01M	X092426	2134
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.: HS20090748

Lab File ID: X092401 BFB Injection Date: 09/24/20

Instrument ID: VOA6 BFB Injection Time: 1110

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	20.0
75	30.0 - 60.0% of mass 95	50.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Greater than 50.0% of mass 95	61.7
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	59.2 (95.9)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X092402	09/24/20	1134
02	VSTD000.5	VSTD000.5	X092403	09/24/20	1158
03	VSTD001	VSTD001	X092404	09/24/20	1246
04	VSTD002	VSTD002	X092405	09/24/20	1310
05	VSTD005	VSTD005	X092406	09/24/20	1333
06	VSTD020	VSTD020	X092407	09/24/20	1357
07	VSTD050	VSTD050	X092408	09/24/20	1421
08	VSTD100	VSTD100	X092409	09/24/20	1445
09	VSTD150	VSTD150	X092410	09/24/20	1509
10	VSTD200	VSTD200	X092411	09/24/20	1533
11	ICV	ICV	X092414	09/24/20	1645
12	VLCSW-200924	VLCSW-200924	X092416	09/24/20	1733
13	VBLKW-200924	VBLKW-200924	X092419	09/24/20	1845
14	HS20090748-0	HS20090748-03	X092420	09/24/20	1909
15	HS20090748-0	HS20090748-01	X092422	09/24/20	1958
16	HS20090748-0	HS20090748-01M	X092425	09/24/20	2110
17	HS20090748-0	HS20090748-01M	X092426	09/24/20	2134
18	CCV-END	CCV-END	X092427	09/24/20	2158
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.604	0.628	0.568	0.604	0.541
trans-1,3-Dichloropropene		0.493	0.544	0.449	0.488	0.454
1,3-Dichlorobenzene		1.748	1.889	1.644	1.680	1.520
2,2-Dichloropropane		0.861	0.919	0.796	0.818	0.755
1,1-Dichloropropene		0.527	0.482	0.495	0.471	0.433
Dibromomethane		0.239	0.252	0.223	0.235	0.206
1,2-Dibromoethane		0.381	0.414	0.336	0.379	0.333
trans-1,2-Dichloroethene		0.537	0.588	0.521	0.545	0.506
1,1,1,2-Tetrachloroethane		0.377	0.392	0.346	0.354	0.332
1,1,1-Trichloroethane		0.761	0.888	0.781	0.820	0.738
1,1,2,2-Tetrachloroethane		0.972	1.064	0.959	0.972	0.806
1,1,2-Trichloroethane		0.329	0.353	0.304	0.315	0.282
1,1-Dichloroethane		1.171	1.218	1.028	1.103	0.991
1,1-Dichloroethene		0.476	0.539	0.431	0.448	0.435
Trichloroethene		0.372	0.414	0.359	0.376	0.338
1,2,3-Trichlorobenzene		0.212	0.229	0.179	0.207	0.172
Trichlorofluoromethane		0.757	0.831	0.697	0.720	0.706
1,2,4-Trichlorobenzene		2229	2921	5479	14272	49391
1,2,4-Trimethylbenzene		3.253	3.430	3.000	3.122	2.892
Tetrachloroethene		0.330	0.385	0.342	0.326	0.303
1,2-Dichlorobenzene		1.582	1.610	1.410	1.464	1.310
1,2-Dichloroethane		0.464	0.540	0.412	0.472	0.402
1,2-Dichloropropane		0.349	0.428	0.384	0.397	0.357
1,3,5-Trimethylbenzene		3.204	3.443	2.987	3.074	2.846
1,3-Dichloropropane		0.675	0.751	0.610	0.667	0.574
1,4-Dichlorobenzene		1.942	1.823	1.606	1.670	1.478
Toluene		1.763	1.942	1.682	1.757	1.559
2-Butanone		0.159	0.163	0.163	0.188	0.182
2-Chlorotoluene		2.978	3.094	2.683	2.737	2.473
2-Hexanone		0.236	0.214	0.234	0.236	0.212
4-Chlorotoluene		3.311	3.565	3.106	3.156	2.760
tert-Butylbenzene		2.792	2.908	2.555	2.536	2.344
4-Methyl-2-Pentanone		0.403	0.380	0.356	0.375	0.329
Acetone		4284	6768	9048	17679	61351
Benzene		1.490	1.723	1.410	1.500	1.365
Bromobenzene		1.061	1.189	1.028	1.073	0.964
Bromochloromethane		0.353	0.379	0.328	0.323	0.295
Bromodichloromethane		0.508	0.505	0.447	0.466	0.426
Bromoform		0.214	0.238	0.211	0.232	0.207
Bromomethane		3098	7731	11427	28439	96280
Carbon Disulfide		1.618	1.837	1.489	1.545	1.490
Carbon Tetrachloride		0.450	0.410	0.425	0.402	0.374
Chlorobenzene		1.160	1.233	1.044	1.068	0.953
Chloroethane		0.468	0.445	0.392	0.414	0.365

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		0.973	1.141	0.992	1.044	0.936
Chloromethane		0.732	0.710	0.650	0.686	0.643
cis-1,2-Dichloroethene		0.624	0.717	0.604	0.661	0.596
Dibromochloromethane		0.378	0.421	0.354	0.371	0.337
Dichlorodifluoromethane		2901	6629	12034	28274	113538
Ethylbenzene		0.570	0.644	0.540	0.559	0.508
Hexachlorobutadiene		3351	3302	5496	12681	49814
Isopropylbenzene		1.678	1.831	1.584	1.626	1.476
m,p-Xylenes		0.696	0.760	0.654	0.678	0.614
Methylene Chloride		5505	9684	16648	39690	137362
n-Butylbenzene		2.993	2.947	2.400	2.488	2.487
n-Propylbenzene		4.661	4.835	4.262	4.396	4.114
Naphthalene		0.532	0.476	0.478	0.463	0.420
o-Xylene		0.650	0.742	0.643	0.665	0.599
sec-Butylbenzene		4.025	3.986	3.550	3.514	3.338
Styrene		1.181	1.221	1.038	1.129	1.027
Vinyl Chloride		0.636	0.723	0.606	0.632	0.612
1,2,3-Trichloropropane		0.736	0.868	0.803	0.779	0.679
p-Isopropyltoluene		3.578	3.306	2.975	2.940	2.823
1,2-Dibromo-3-Chloropropane		0.058	0.078	0.056	0.065	0.056
1,2-Dichloroethane-d4		0.637	0.580	0.541	0.589	0.547
Dibromofluoromethane		0.609	0.515	0.484	0.562	0.504
Toluene-d8		1.586	1.355	1.300	1.446	1.276
4-Bromofluorobenzene		6772	10018	18232	43900	154353

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.531	0.554	0.562	0.570
trans-1,3-Dichloropropene	0.450	0.465	0.478	0.480
1,3-Dichlorobenzene	1.386	1.553	1.537	1.516
2,2-Dichloropropane	0.678	0.750	0.745	0.743
1,1-Dichloropropene	0.383	0.447	0.452	0.449
Dibromomethane	0.201	0.206	0.207	0.207
1,2-Dibromoethane	0.318	0.318	0.326	0.320
trans-1,2-Dichloroethene	0.468	0.502	0.498	0.497
1,1,1,2-Tetrachloroethane	0.315	0.332	0.335	0.334
1,1,1-Trichloroethane	0.665	0.757	0.758	0.763
1,1,2,2-Tetrachloroethane	0.793	0.790	0.812	0.789
1,1,2-Trichloroethane	0.267	0.267	0.269	0.265
1,1-Dichloroethane	0.940	0.990	0.979	0.982
1,1-Dichloroethene	0.402	0.438	0.438	0.436
Trichloroethene	0.312	0.346	0.350	0.351
1,2,3-Trichlorobenzene	0.166	0.178	0.198	0.197
Trichlorofluoromethane	0.622	0.737	0.739	0.735
1,2,4-Trichlorobenzene	124784	247364	386588	497987
1,2,4-Trimethylbenzene	2.510	2.888	2.846	2.846
Tetrachloroethene	0.253	0.302	0.303	0.299
1,2-Dichlorobenzene	1.213	1.315	1.322	1.304
1,2-Dichloroethane	0.392	0.397	0.401	0.401
1,2-Dichloropropane	0.342	0.357	0.358	0.359
1,3,5-Trimethylbenzene	2.440	2.900	2.851	2.826
1,3-Dichloropropane	0.548	0.549	0.557	0.551
1,4-Dichlorobenzene	1.360	1.498	1.505	1.492
Toluene	1.388	1.491	1.504	1.480
2-Butanone	0.206	0.191	0.196	0.193
2-Chlorotoluene	2.151	2.449	2.412	2.404
2-Hexanone	0.214	0.214	0.219	0.215
4-Chlorotoluene	2.445	2.790	2.754	2.736
tert-Butylbenzene	1.924	2.379	2.368	2.343
4-Methyl-2-Pentanone	0.328	0.322	0.335	0.330
Acetone	153009	255829	368697	468128
Benzene	1.277	1.365	1.367	1.372
Bromobenzene	0.889	0.967	0.962	0.959
Bromochloromethane	0.279	0.285	0.284	0.285
Bromodichloromethane	0.413	0.436	0.439	0.443
Bromoform	0.210	0.214	0.221	0.218
Bromomethane	218171	446857	643333	822601
Carbon Disulfide	1.386	1.542	1.534	1.534
Carbon Tetrachloride	0.324	0.399	0.407	0.408
Chlorobenzene	0.877	0.936	0.944	0.940
Chloroethane	0.344	0.372	0.362	0.363

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.890	0.916	0.913	0.918
Chloromethane	0.611	0.690	0.702	0.738
cis-1,2-Dichloroethene	0.564	0.583	0.581	0.582
Dibromochloromethane	0.328	0.340	0.345	0.342
Dichlorodifluoromethane	235600	565982	843912	1091943
Ethylbenzene	0.448	0.501	0.506	0.502
Hexachlorobutadiene	102822	246513	372303	468444
Isopropylbenzene	1.252	1.488	1.497	1.463
m,p-Xylenes	0.536	0.600	0.602	0.596
Methylene Chloride	303593	605902	861961	1112263
n-Butylbenzene	2.066	2.630	2.602	2.574
n-Propylbenzene	3.438	4.273	4.216	4.190
Naphthalene	0.431	0.435	0.482	0.479
o-Xylene	0.540	0.589	0.591	0.584
sec-Butylbenzene	2.708	3.473	3.444	3.403
Styrene	0.962	1.004	1.008	1.014
Vinyl Chloride	0.579	0.668	0.670	0.686
1,2,3-Trichloropropane	0.688	0.684	0.685	0.661
p-Isopropyltoluene	2.366	2.953	2.951	2.908
1,2-Dibromo-3-Chloropropane	0.058	0.054	0.058	0.059
1,2-Dichloroethane-d4	0.545	0.544	0.536	0.539
Dibromofluoromethane	0.491	0.491	0.483	0.485
Toluene-d8	1.241	1.226	1.208	1.191
4-Bromofluorobenzene	368645	706326	1011330	1311827

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.57360540		5.610	15.000
trans-1,3-Dichloropropene	AVRG		0.47808495		6.216	15.000
1,3-Dichlorobenzene	AVRG		1.60820005		9.290	15.000
2,2-Dichloropropane	AVRG		0.78485479		9.213	15.000
1,1-Dichloropropene	AVRG		0.45997920		8.917	15.000
Dibromomethane	AVRG		0.21954206		8.424	15.000
1,2-Dibromoethane	AVRG		0.34744899		10.056	15.000
trans-1,2-Dichloroethene	AVRG		0.51794510		6.732	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.34649256		7.010	15.000
1,1,1-Trichloroethane	AVRG		0.77008815		7.853	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.88418602		12.031	15.000
1,1,2-Trichloroethane	AVRG		0.29447500		10.989	15.000
1,1-Dichloroethane	AVRG		1.04452475		9.239	15.000
1,1-Dichloroethene	AVRG		0.44955963		8.570	15.000
Trichloroethene	AVRG		0.35763128		7.969	15.000
1,2,3-Trichlorobenzene	AVRG		0.19324402		10.853	15.000
Trichlorofluoromethane	AVRG		0.72688377		7.613	15.000
1,2,4-Trichlorobenzene	LINR	2.746e-002	2.56905140		0.9990136	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.97638251		8.970	15.000
Tetrachloroethene	AVRG		0.31588869		11.507	15.000
1,2-Dichlorobenzene	AVRG		1.39230756		9.714	15.000
1,2-Dichloroethane	AVRG		0.43110842		11.681	15.000
1,2-Dichloropropane	AVRG		0.37022435		7.462	15.000
1,3,5-Trimethylbenzene	AVRG		2.95239803		9.456	15.000
1,3-Dichloropropane	AVRG		0.60913171		11.944	15.000
1,4-Dichlorobenzene	AVRG		1.59712325		11.610	15.000
Toluene	AVRG		1.61839272		11.010	15.000
2-Butanone	AVRG		0.18251644		9.154	15.000
2-Chlorotoluene	AVRG		2.59810067		11.606	15.000
2-Hexanone	AVRG		0.22171060		4.753	15.000
4-Chlorotoluene	AVRG		2.95805584		11.804	15.000
tert-Butylbenzene	AVRG		2.46106150		11.636	15.000
4-Methyl-2-Pentanone	AVRG		0.35097560		8.234	15.000
Acetone	LINR	-0.1016719	8.80554020		0.9985929	0.9900000
Benzene	AVRG		1.42999265		9.055	15.000
Bromobenzene	AVRG		1.01036504		8.748	15.000
Bromochloromethane	AVRG		0.31247517		11.396	15.000
Bromodichloromethane	AVRG		0.45345872		7.310	15.000
Bromoform	AVRG		0.21840761		4.729	15.000
Bromomethane	LINR	-4.77e-003	2.49479317		0.9998004	0.9900000
Carbon Disulfide	AVRG		1.55286116		7.945	15.000
Carbon Tetrachloride	AVRG		0.39996836		8.725	15.000
Chlorobenzene	AVRG		1.01718815		11.612	15.000
Chloroethane	AVRG		0.39167182		10.785	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.96918894		8.302	15.000
Chloromethane	AVRG		0.68469210		6.196	15.000
cis-1,2-Dichloroethene	AVRG		0.61256258		7.953	15.000
Dibromochloromethane	AVRG		0.35728688		8.083	15.000
Dichlorodifluoromethane	LINR	4.145e-002	1.87764616		0.9978779	0.9900000
Ethylbenzene	AVRG		0.53098194		10.520	15.000
Hexachlorobutadiene	2ORDR	1.818e-002	2.84082074	-0.1088007	0.9976659	0.9900000
Isopropylbenzene	AVRG		1.54388319		10.527	15.000
m,p-Xylenes	AVRG		0.63748802		10.458	15.000
Methylene Chloride	LINR	-1.42e-002	1.85325576		0.9998633	0.9900000
n-Butylbenzene	AVRG		2.57642229		10.827	15.000
n-Propylbenzene	AVRG		4.26505902		9.136	15.000
Naphthalene	AVRG		0.46624710		7.340	15.000
o-Xylene	AVRG		0.62252020		9.561	15.000
sec-Butylbenzene	AVRG		3.49356204		10.998	15.000
Styrene	AVRG		1.06500599		8.405	15.000
Vinyl Chloride	AVRG		0.64586993		6.955	15.000
1,2,3-Trichloropropane	AVRG		0.73140081		9.692	15.000
p-Isopropyltoluene	AVRG		2.97795815		11.100	15.000
1,2-Dibromo-3-Chloropropane	AVRG		6.034e-002		11.963	15.000
1,2-Dichloroethane-d4	AVRG		0.56206107		6.062	15.000
Dibromofluoromethane	AVRG		0.51378762		8.475	15.000
Toluene-d8	AVRG		1.31453904		9.856	15.000
4-Bromofluorobenzene	LINR	-1.66e-002	2.33275892		0.9999120	0.9900000

FORM VI VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Instrument ID: VOA6 Calibration Date: 09/24/20 Time: 2158

Lab File ID: X092427 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

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	0.5740000	0.5403802	0.5403802	0.2	5.86	50.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.4549800	0.4549800	0.1	4.82	50.00	AVRG
1,3-Dichlorobenzene	1.6080000	1.4136041	1.4136041	0.6	12.09	50.00	AVRG
2,2-Dichloropropane	0.7850000	0.7078680	0.7078680	0.1	9.82	50.00	AVRG
1,1-Dichloropropene	0.4600000	0.4154307	0.4154307	0.1	9.69	50.00	AVRG
Dibromomethane	0.2200000	0.2059330	0.2059330	0.1	6.39	50.00	AVRG
1,2-Dibromoethane	0.3470000	0.3232415	0.3232415	0.1	6.85	50.00	AVRG
trans-1,2-Dichloroethene	0.5180000	0.4899588	0.4899588	0.1	5.41	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3460000	0.3272472	0.3272472	0.1	5.42	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7138081	0.7138081	0.1	7.30	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.8840000	0.7997896	0.7997896	0.3	9.53	50.00	AVRG
1,1,2-Trichloroethane	0.2940000	0.2705655	0.2705655	0.1	7.97	50.00	AVRG
1,1-Dichloroethane	1.0450000	0.9742118	0.9742118	0.2	6.77	50.00	AVRG
1,1-Dichloroethene	0.4490000	0.4236313	0.4236313	0.1	5.65	50.00	AVRG
Trichloroethene	0.3580000	0.3313697	0.3313697	0.2	7.44	50.00	AVRG
1,2,3-Trichlorobenzene	0.1930000	0.1642648	0.1642648	0.01	14.89	50.00	AVRG
Trichlorofluoromethane	0.7270000	0.6896644	0.6896644	0.1	5.14	50.00	AVRG
1,2,4-Trichlorobenzene	43.291362	50.000000	0.3263349	0.1	13.42	50.00	LINR
1,2,4-Trimethylbenzene	2.9760000	2.6239385	2.6239385	0.1	11.83	50.00	AVRG
Tetrachloroethene	0.3160000	0.2684764	0.2684764	0.2	15.04	50.00	AVRG
1,2-Dichlorobenzene	1.3920000	1.2317371	1.2317371	0.4	11.51	50.00	AVRG
1,2-Dichloroethane	0.4310000	0.3983218	0.3983218	0.1	7.58	50.00	AVRG
1,2-Dichloropropane	0.3700000	0.3543729	0.3543729	0.1	4.22	50.00	AVRG
1,3,5-Trimethylbenzene	2.9520000	2.5607415	2.5607415	0.1	13.25	50.00	AVRG
1,3-Dichloropropane	0.6090000	0.5613848	0.5613848	0.1	7.82	50.00	AVRG
1,4-Dichlorobenzene	1.5970000	1.3949558	1.3949558	0.4	12.65	50.00	AVRG
Toluene	1.6180000	1.4860645	1.4860645	0.4	8.15	50.00	AVRG
2-Butanone	0.1820000	0.1894463	0.1894463	0.1	-4.09	50.00	AVRG
2-Chlorotoluene	2.5980000	2.2468661	2.2468661	0.1	13.52	50.00	AVRG
2-Hexanone	0.2220000	0.2099463	0.2099463	0.1	5.43	50.00	AVRG
4-Chlorotoluene	2.9580000	2.5560150	2.5560150	0.1	13.59	50.00	AVRG
tert-Butylbenzene	2.4610000	2.0663969	2.0663969	0.1	16.03	50.00	AVRG
4-Methyl-2-Pentanone	0.3510000	0.3234266	0.3234266	0.1	7.86	50.00	AVRG
Acetone	99.013083	100.00000	0.1182173	0.1	0.99	50.00	LINR
Benzene	1.4300000	1.3346211	1.3346211	0.5	6.67	50.00	AVRG
Bromobenzene	1.0100000	0.9179438	0.9179438	0.1	9.11	50.00	AVRG
Bromochloromethane	0.3120000	0.2851289	0.2851289	0.1	8.61	50.00	AVRG
Bromodichloromethane	0.4540000	0.4286180	0.4286180	0.2	5.59	50.00	AVRG
Bromoform	0.2180000	0.2105199	0.2105199	0.1	3.43	50.00	AVRG
Bromomethane	47.244174	50.000000	0.3806552	0.1	5.51	50.00	LINR
Carbon Disulfide	1.5530000	1.4863627	1.4863627	0.1	4.29	50.00	AVRG
Carbon Tetrachloride	0.4000000	0.3613193	0.3613193	0.1	9.67	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2009074

Instrument ID: VOA6 Calibration Date: 09/24/20 Time: 2158

Lab File ID: X092427 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

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	1.0170000	0.9170110	0.9170110	0.5	9.83	50.00	AVRG
Chloroethane	0.3920000	0.4467719	0.4467719	0.1	-13.97	50.00	AVRG
Chloroform	0.9690000	0.9120691	0.9120691	0.2	5.88	50.00	AVRG
Chloromethane	0.6850000	0.6196046	0.6196046	0.1	9.55	50.00	AVRG
cis-1,2-Dichloroethene	0.6120000	0.5753839	0.5753839	0.1	5.98	50.00	AVRG
Dibromochloromethane	0.3570000	0.3337362	0.3337362	0.1	6.52	50.00	AVRG
Dichlorodifluoromethane	46.763837	50.000000	0.4760344	0.1	6.47	50.00	LINR
Ethylbenzene	0.5310000	0.4765806	0.4765806	0.1	10.25	50.00	AVRG
Hexachlorobutadiene	42.324602	50.000000	0.2949049	0.1	15.35	50.00	2RDR
Isopropylbenzene	1.5440000	1.3381147	1.3381147	0.1	13.33	50.00	AVRG
m,p-Xylenes	0.6370000	0.5678050	0.5678050	0.1	10.86	50.00	AVRG
Methylene Chloride	50.503879	50.000000	0.5526648	0.1	-1.01	50.00	LINR
n-Butylbenzene	2.5760000	2.1495432	2.1495432	0.5	16.56	50.00	AVRG
n-Propylbenzene	4.2650000	3.6416578	3.6416578	0.1	14.62	50.00	AVRG
Naphthalene	0.4660000	0.3981821	0.3981821	0.2	14.55	50.00	AVRG
o-Xylene	0.6220000	0.5590304	0.5590304	0.3	10.12	50.00	AVRG
sec-Butylbenzene	3.4930000	2.8832465	2.8832465	0.1	17.46	50.00	AVRG
Styrene	1.0650000	0.9825085	0.9825085	0.3	7.74	50.00	AVRG
Vinyl Chloride	0.6460000	0.6189250	0.6189250	0.1	4.19	50.00	AVRG
1,2,3-Trichloropropane	0.7310000	0.6829629	0.6829629	0.1	6.57	50.00	AVRG
p-Isopropyltoluene	2.9780000	2.5014124	2.5014124	0.1	16.00	50.00	AVRG
1,2-Dibromo-3-Chloropropane	6.e-002	5.2e-002	5.2e-002	0.05	13.33	50.00	AVRG
1,2-Dichloroethane-d4	0.5620000	0.5479004	0.5479004	0.1	2.51	50.00	AVRG
Dibromofluoromethane	0.5140000	0.5031926	0.5031926	0.1	2.10	50.00	AVRG
Toluene-d8	1.3140000	1.2679397	1.2679397	0.1	3.50	50.00	AVRG
4-Bromofluorobenzene	51.582762	50.000000	0.4493425	0.1	-3.16	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Lab File ID (Standard): X092408 Date Analyzed: 09/24/20

Instrument ID: VOA6 Time Analyzed: 1421

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

		IS1(CBZ) AREA #	IS1(CBZ) RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(DCB) AREA #	IS3(DCB) RT #
	12 HOUR STD	829935	7.67	910705	4.97	353927	9.66
	UPPER LIMIT	1659870	8.17	1821410	5.47	707854	10.16
	LOWER LIMIT	414968	7.17	455353	4.47	176964	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200924	845297	7.67	938823	4.97	360132	9.66
02	VBLKW-200924	775740	7.67	880416	4.97	327303	9.67
03	HS20090748-03	779477	7.67	877491	4.97	328330	9.67
04	HS20090748-01	778039	7.67	872798	4.97	330800	9.67
05	HS20090748-01	733420	7.67	814545	4.97	309007	9.67
06	HS20090748-01	725877	7.67	804716	4.97	301126	9.66
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20090748

Lab File ID (Standard): X092408 Date Analyzed: 09/24/20

Instrument ID: VOA6 Time Analyzed: 1421

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	565166	4.19				
	UPPER LIMIT	1130332	4.69				
	LOWER LIMIT	282583	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200924	602309	4.19				
02	VBLKW-200924	555169	4.19				
03	HS20090748-03	557708	4.19				
04	HS20090748-01	550328	4.19				
05	HS20090748-01	512532	4.19				
06	HS20090748-01	509084	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\X200924.b\X092401.D Page 1

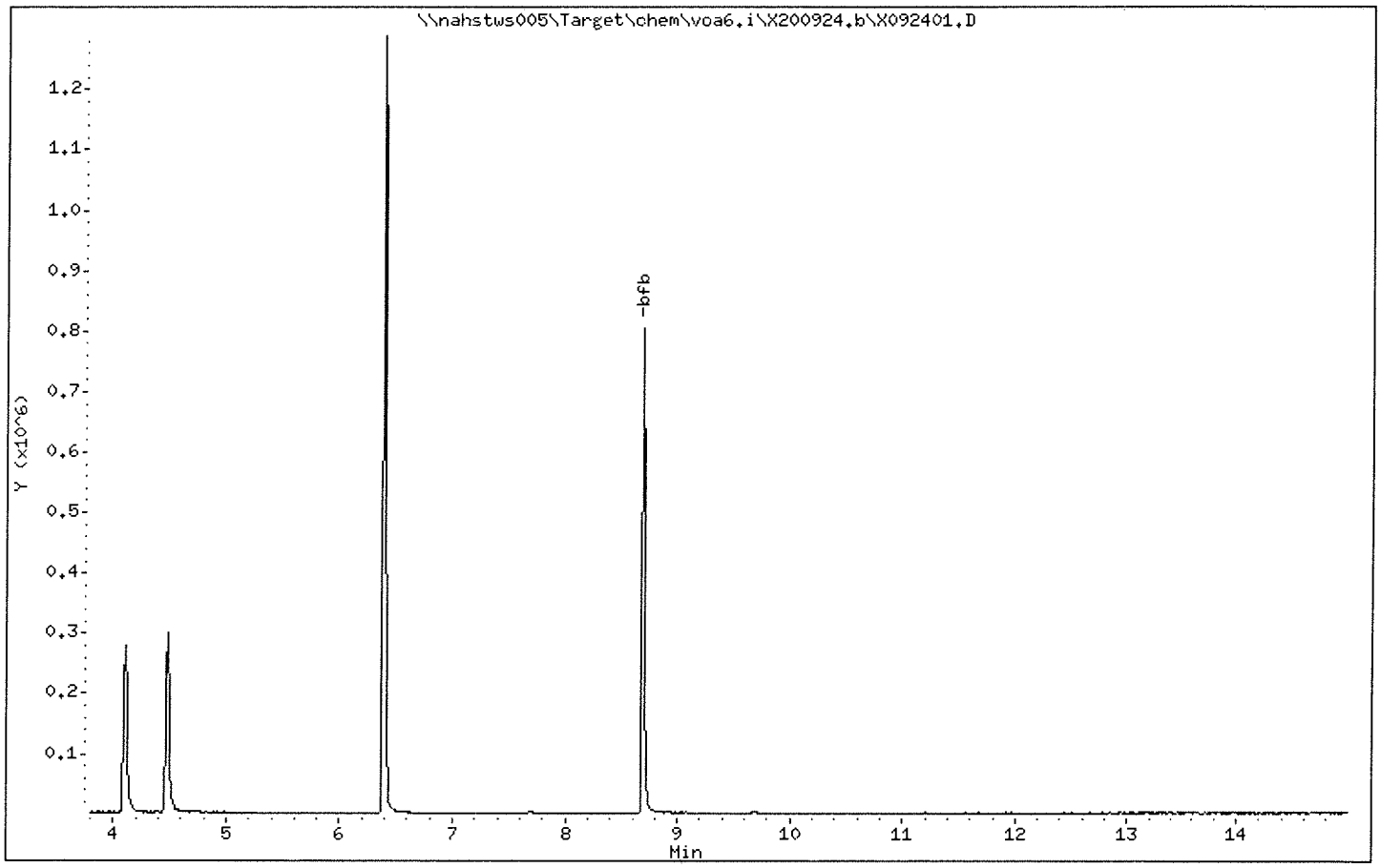
Date : 24-SEP-2020 11:10

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\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

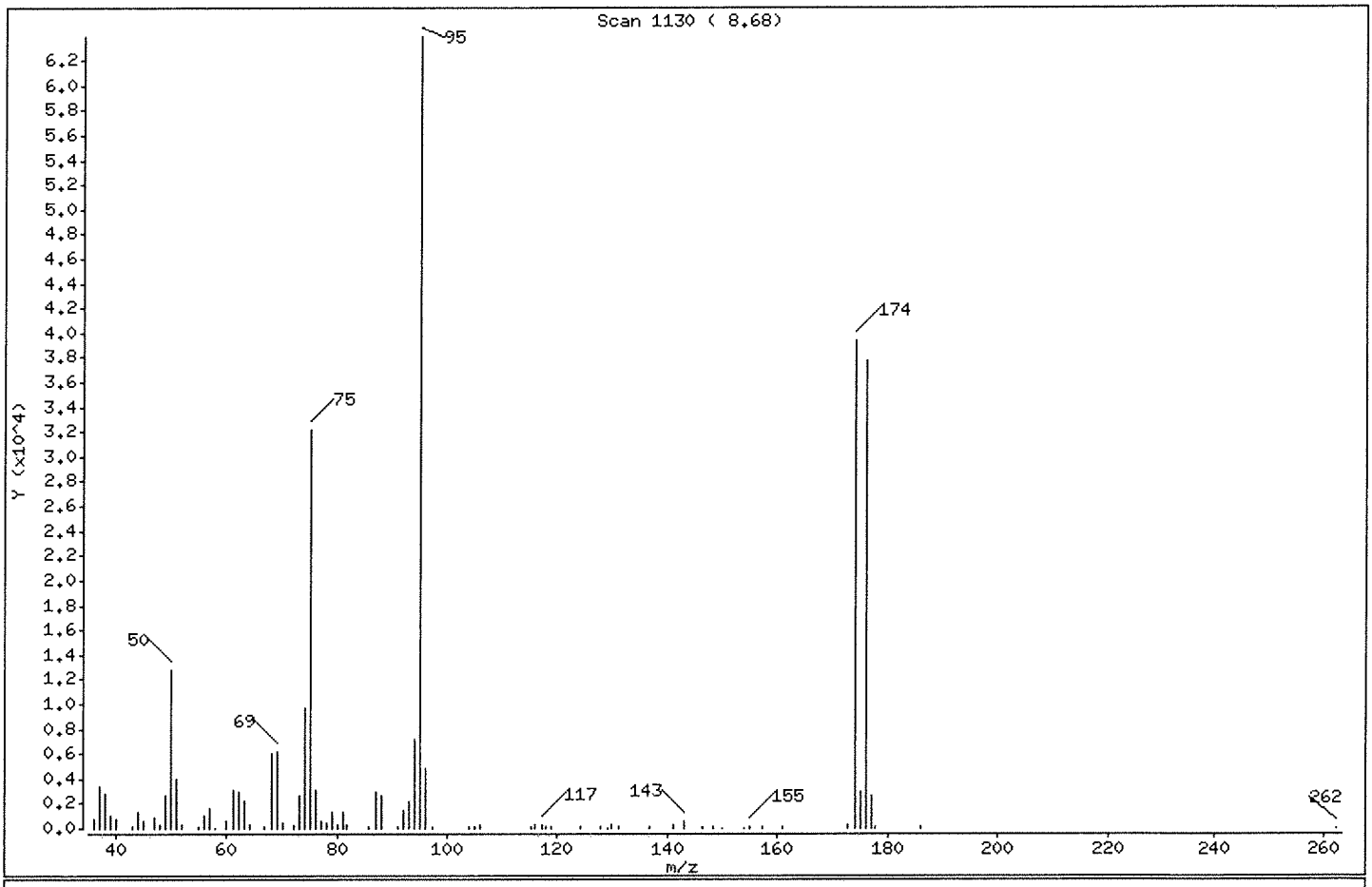
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.97
75	30.00 - 60.00% of mass 95	50.32
96	5.00 - 9.00% of mass 95	7.53
173	Less than 2.00% of mass 174	0.54 (0.87)
174	Greater than 50.00% of mass 95	61.71
175	5.00 - 9.00% of mass 174	4.54 (7.36)
176	95.00 - 101.00% of mass 174	59.18 (95.90)
177	5.00 - 9.00% of mass 176	4.14 (6.99)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

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: X092401.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.10
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	680	62.10	2916	88.00	2589	131.00	177
37.10	3328	63.10	2146	90.90	197	136.90	95
38.10	2848	64.20	251	92.10	1499	141.00	363
39.10	1092	67.00	144	93.10	2228	143.00	535
40.10	702	68.10	6060	94.10	7204	146.20	84
43.20	90	69.10	6113	95.10	63928	148.20	88
44.10	1373	70.10	387	96.10	4811	149.90	62
45.10	600	72.10	357	97.20	145	153.90	52
47.10	929	73.10	2682	104.00	204	155.00	162
48.00	358	74.10	9632	105.00	136	157.10	128
49.10	2668	75.10	32168	105.80	273	160.80	100
50.10	12768	76.10	3061	115.20	130	172.90	344
51.10	4025	77.00	582	116.00	238	174.00	39448
52.10	271	78.10	388	117.10	274	175.10	2905
55.00	135	79.00	1342	117.90	175	176.00	37832
56.10	1094	80.00	329	119.00	202	177.00	2644
57.10	1650	81.10	1363	124.00	76	177.90	81
58.10	54	81.90	267	127.90	200	186.10	193
60.00	635	85.90	78	129.00	73	262.20	52
61.10	3138	87.10	3005	129.90	222		

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Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 24-SEP-2020 11:34
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:33 Cal File: X092411.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

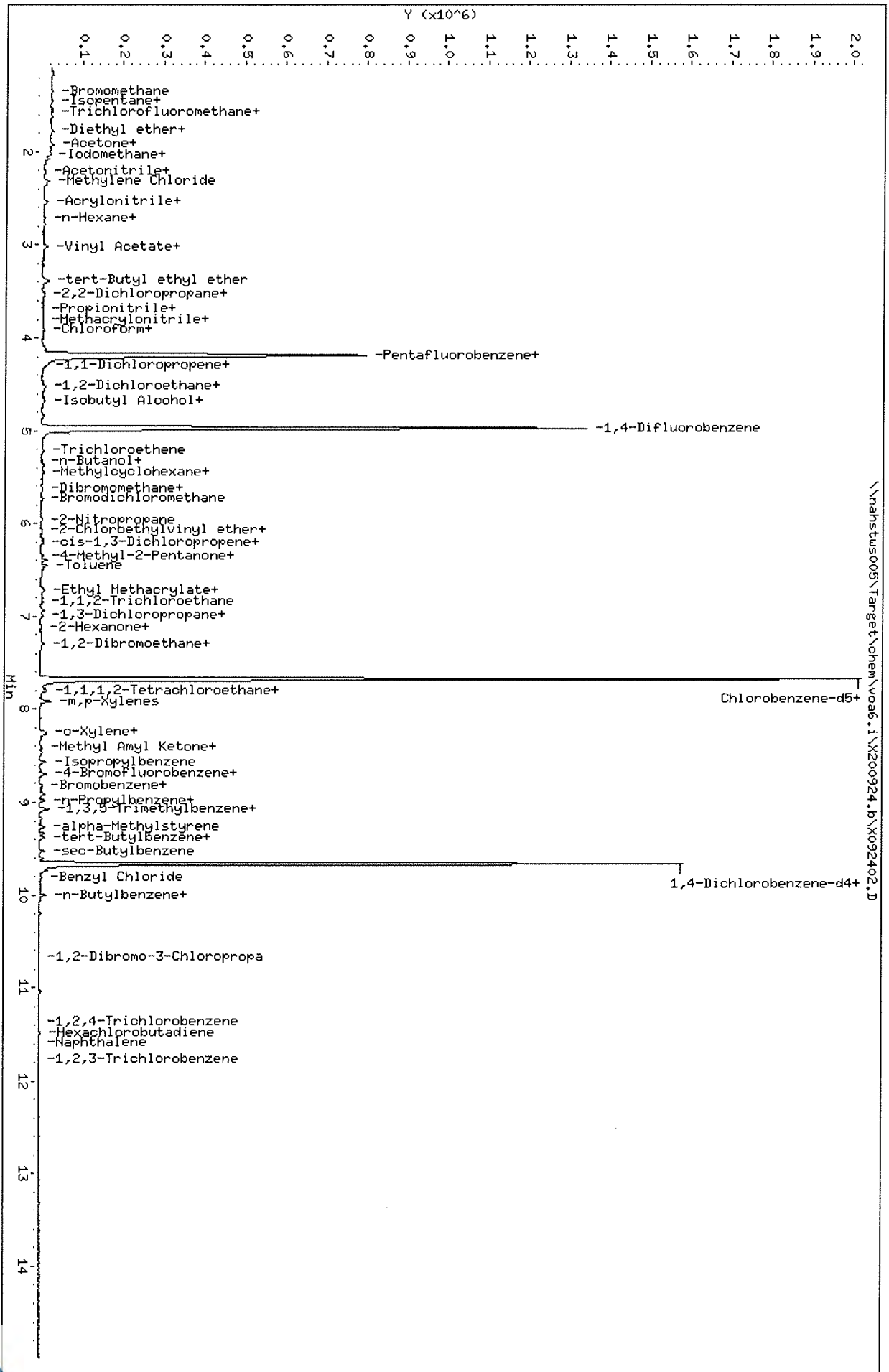
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	689255	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1110772	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	970158	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	403723	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	2163	0.25000	0.30(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	3033	0.25000	0.39(Ta)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	9651	0.25000	0.37(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5599	0.25000	(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2084	0.25000	0.30(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	3047	0.25000	0.28(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2033	0.25000	0.28(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1754	0.25000	0.30(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	4149	0.25000	0.28(Ta)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1960	0.25000	0.31(a)
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	4394	0.25000	0.43(a)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	209	0.25000	0.13(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1939	0.25000	0.32(aM)
	90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	629	0.25000	1.57(aM)
	79 1,2,4-Trimethylbenzene	105	9.390	9.390	(0.971)	6923	0.25000	0.28(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	24	0.25000	0.04(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	2205	0.25000	0.32(a)
	88 1,2-Dichlorobenzene	146	10.006	10.006	(1.035)	3283	0.25000	0.29(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D Page 2
Report Date: 13-Oct-2020 11:23

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	4.576	4.576	(0.921)	3037	0.25000	0.31(aM)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	2261	0.25000	0.27(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	6914	0.25000	0.29(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	3732	0.25000	0.28(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	3561	0.25000	0.30(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	4213	0.25000	0.32(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.838)	3427	0.25000	0.31(a)
24 2-Butanone	43	3.623	3.623	(0.865)	834	0.50000	0.33(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	6603	0.25000	0.31(a)
52 2-Hexanone	43	7.126	7.126	(0.929)	2395	0.50000	0.55(a)
77 4-Chlorotoluene	91	9.082	9.082	(0.939)	6800	0.25000	0.28(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	6876	0.25000	0.28(a)
45 4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	4043	0.50000	0.59(a)
10 Acetone	43	1.983	1.983	(0.473)	3858	0.50000	(a)
37 Benzene	78	4.526	4.526	(0.911)	9036	0.25000	0.28(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	2319	0.25000	0.28(a)
29 Bromochloromethane	128	3.810	3.810	(0.909)	1564	0.25000	0.36(aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	2701	0.25000	0.26(aM)
66 Bromoform	173	8.415	8.415	(1.097)	1037	0.25000	0.24(aM)
6 Bromomethane	94	1.345	1.345	(0.321)	2296	0.25000	0.17(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	13194	0.50000	0.61(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	2765	0.25000	0.31(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	6427	0.25000	0.32(a)
7 Chloroethane	64	1.410	1.410	(0.337)	1828	0.25000	0.33(aM)
28 Chloroform	83	3.917	3.917	(0.935)	4124	0.25000	0.30(a)
3 Chloromethane	50	1.080	1.080	(0.258)	2721	0.25000	0.28(aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	2548	0.25000	0.30(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	3539	0.25000	0.27(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	2043	0.25000	0.29(a)
44 Dibromomethane	93	5.565	5.565	(1.120)	1356	0.25000	0.27(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1988	0.25000	2.34(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	2951	0.25000	0.28(a)
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	750	0.25000	1.17(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	9283	0.25000	0.30(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	7240	0.50000	0.58(a)
17 Methylene Chloride	84	2.312	2.312	(0.552)	4057	0.25000	(a)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	5273	0.25000	0.25(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	10348	0.25000	0.30(a)
92 Naphthalene	128	11.589	11.589	(1.199)	788	0.25000	0.20(a)
63 o-Xylene	106	8.251	8.251	(1.076)	3465	0.25000	0.28(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	8177	0.25000	0.28(a)
64 Styrene	104	8.265	8.265	(1.078)	5747	0.25000	0.27(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	5920	0.25000	0.29(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1901	0.25000	0.31(a)
50 Toluene	91	6.453	6.453	(0.841)	9946	0.25000	0.31(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	2138	0.25000	0.29(a)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2811	0.25000	0.26(a)
38 Trichloroethene	130	5.221	5.221	(1.050)	2204	0.25000	0.27(a)
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	2639	0.25000	0.26(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	2201	0.25000	0.24(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D
Date : 24-SEP-2020 11:34
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\X200924.b\X092403.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 24-SEP-2020 11:58
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:34 Cal File: X092402.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

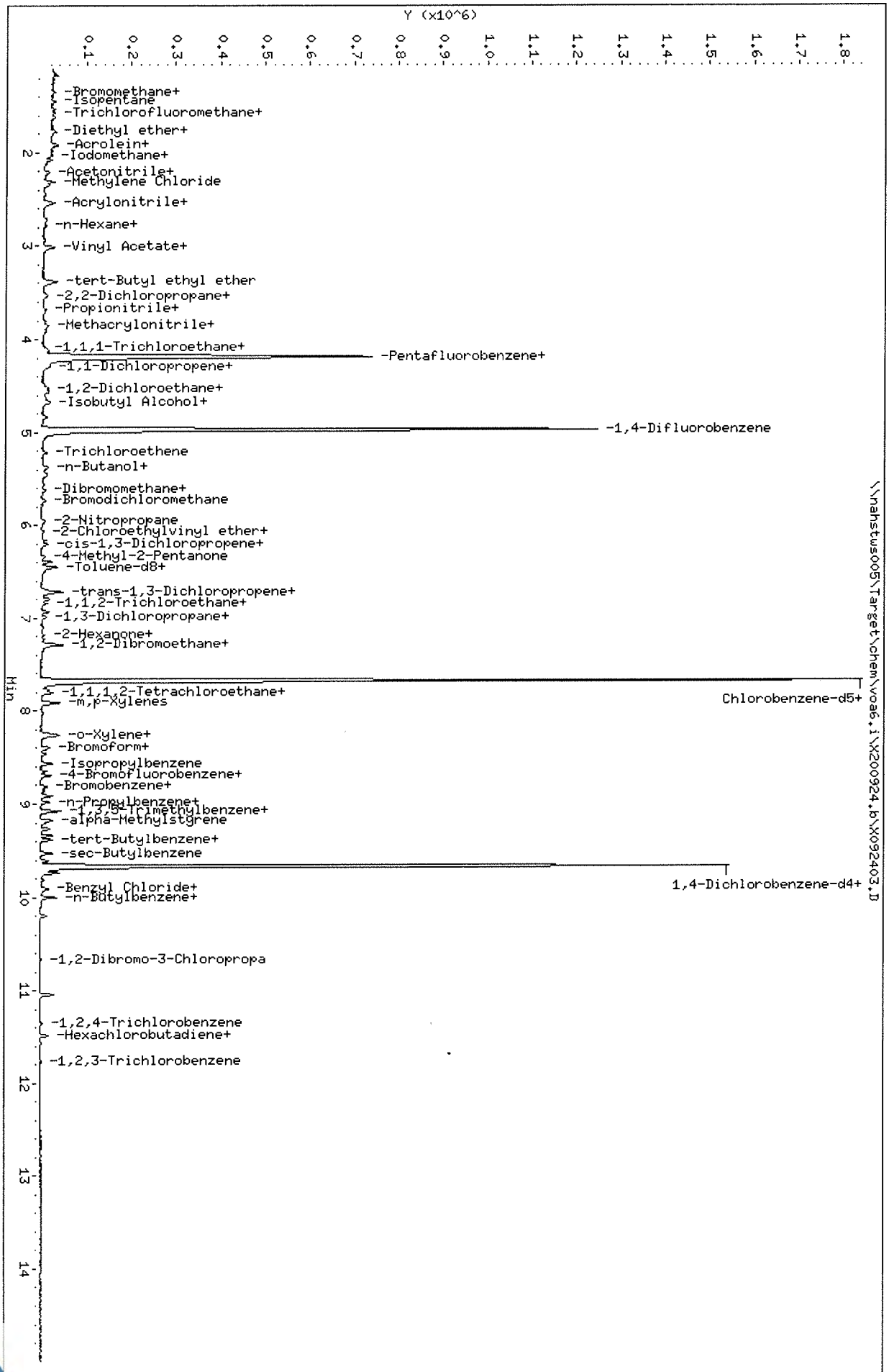
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	642784	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019136	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	901245	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	392686	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	3913	0.50000	0.59(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	4097	0.50000	0.56(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	14296	0.50000	0.60(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	6772	0.50000	0.04(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3395	0.50000	0.54(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	4890	0.50000	0.49(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3817	0.50000	0.54(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2965	0.50000	0.55(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	7525	0.50000	0.56(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	3062	0.50000	0.52(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	5375	0.50000	0.57(a)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	833	0.50000	0.54(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	2889	0.50000	0.50(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2229	0.50000	2.10(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	12774	0.50000	0.54(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	230	0.50000	0.48(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3438	0.50000	0.54(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	6211	0.50000	0.56(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	4.569	4.569	(0.919)	4729	0.50000	0.53(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	3559	0.50000	0.47(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	12580	0.50000	0.54(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6864	0.50000	0.54(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	6082	0.50000	0.55(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	7626	0.50000	0.60(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	5532	0.50000	0.54(a)
24	2-Butanone	43	3.638	3.638	(0.868)	2048	1.00000	0.87(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	11695	0.50000	0.57(a)
52	2-Hexanone	43	7.105	7.105	(0.926)	4262	1.00000	1.06(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	13001	0.50000	0.55(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	14051	0.50000	0.60(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7266	1.00000	1.14(a)
10	Acetone	43	1.983	1.983	(0.473)	4284	1.00000	(a)
37	Benzene	78	4.526	4.526	(0.911)	15191	0.50000	0.52(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4166	0.50000	0.52(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	2272	0.50000	0.56(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	5173	0.50000	0.55(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1929	0.50000	0.48(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	3098	0.50000	0.36(a)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	20804	1.00000	1.04(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4583	0.50000	0.56(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	10454	0.50000	0.57(a)
7	Chloroethane	64	1.410	1.410	(0.337)	3007	0.50000	0.59(a)
28	Chloroform	83	3.917	3.917	(0.935)	6256	0.50000	0.50(a)
3	Chloromethane	50	1.081	1.081	(0.258)	4707	0.50000	0.53(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	4012	0.50000	0.50(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	6161	0.50000	0.52(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3409	0.50000	0.52(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	2436	0.50000	0.54(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2901	0.50000	2.49(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	5137	0.50000	0.53(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	3351	0.50000	2.12(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	15126	0.50000	0.54(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	12539	1.00000	1.09(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	5505	0.50000	0.08(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	11754	0.50000	0.58(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	18305	0.50000	0.54(a)
92	Naphthalene	128	11.574	11.574	(1.197)	2091	0.50000	0.57(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5859	0.50000	0.52(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	15807	0.50000	0.57(a)
64	Styrene	104	8.272	8.272	(1.078)	10644	0.50000	0.55(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	10963	0.50000	0.56(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2972	0.50000	0.52(a)
50	Toluene	91	6.453	6.453	(0.841)	15888	0.50000	0.54(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	3450	0.50000	0.51(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	5027	0.50000	0.51(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	3796	0.50000	0.52(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4865	0.50000	0.52(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	4088	0.50000	0.49(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.

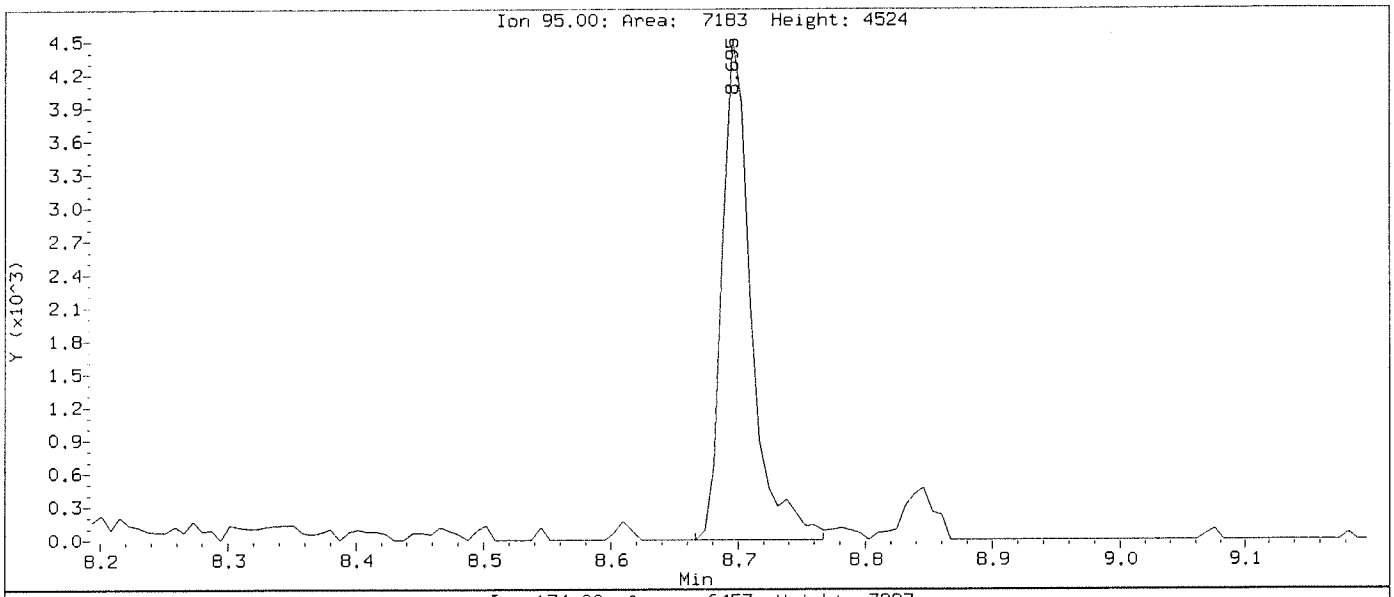


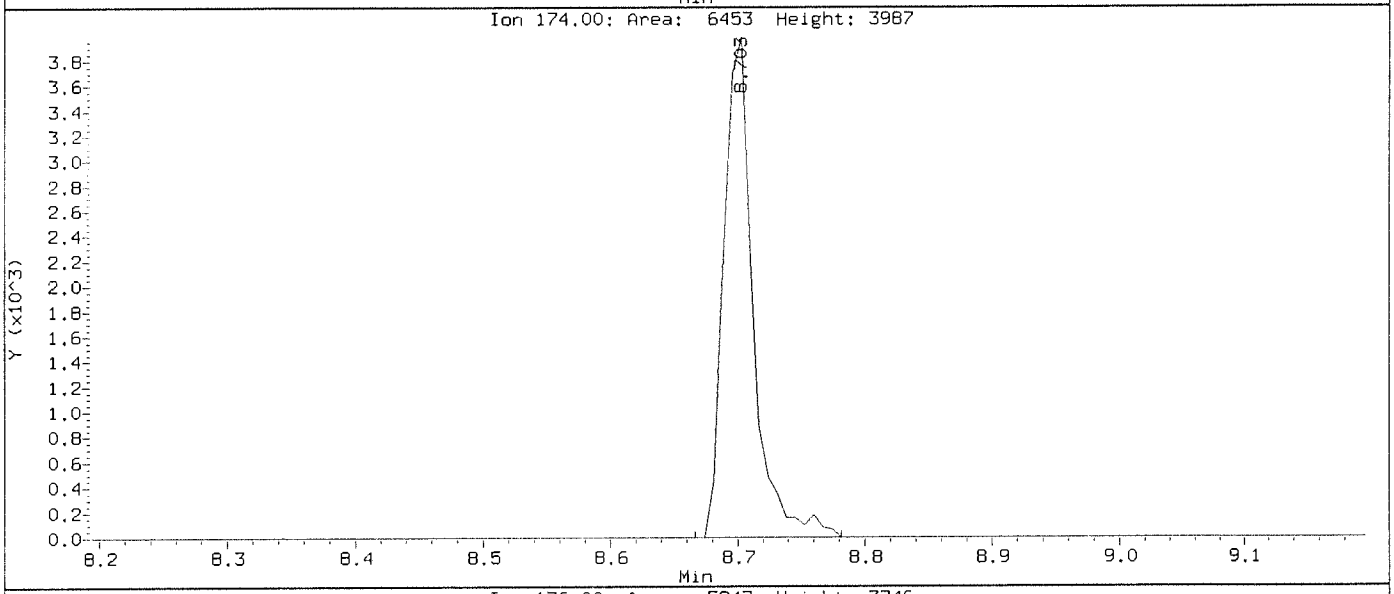
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Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

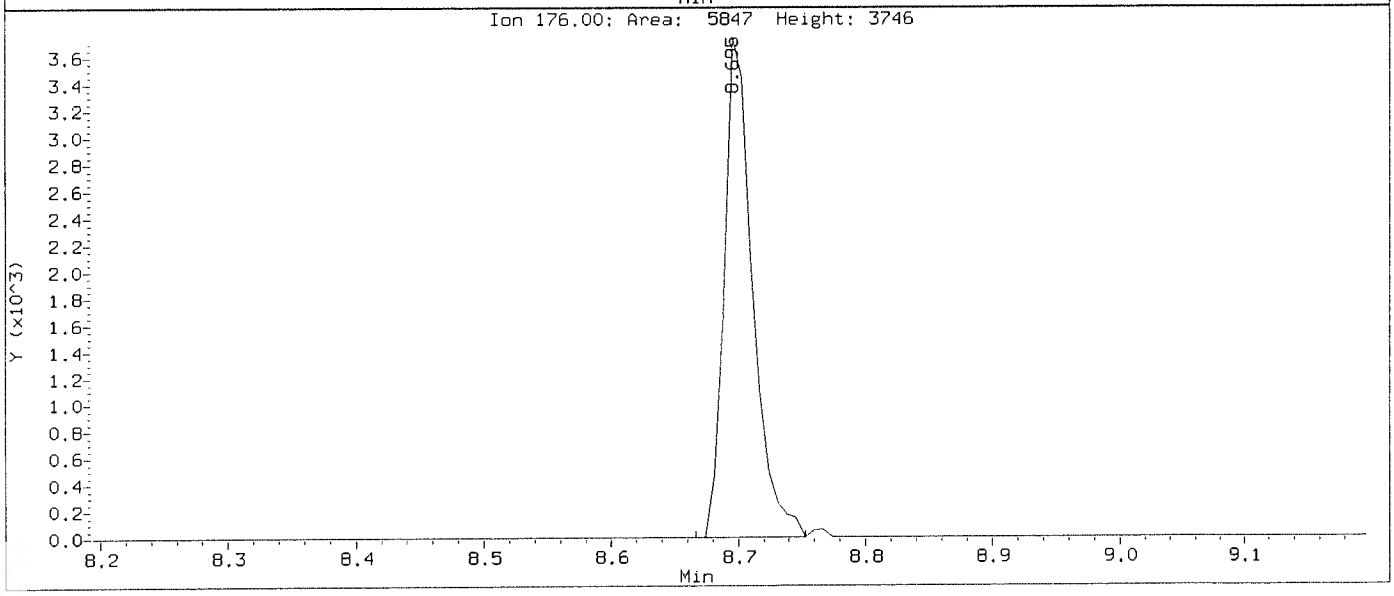
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4

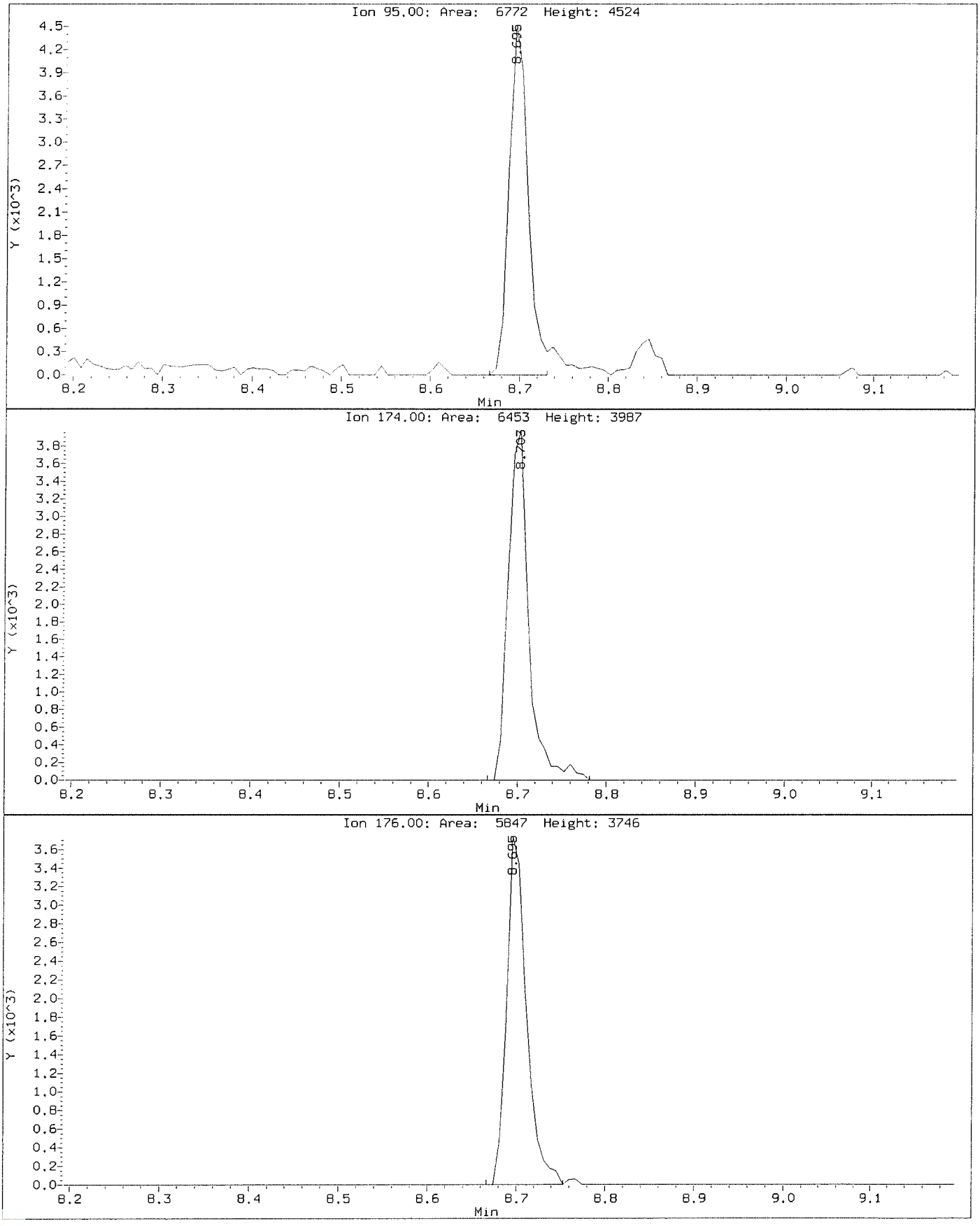






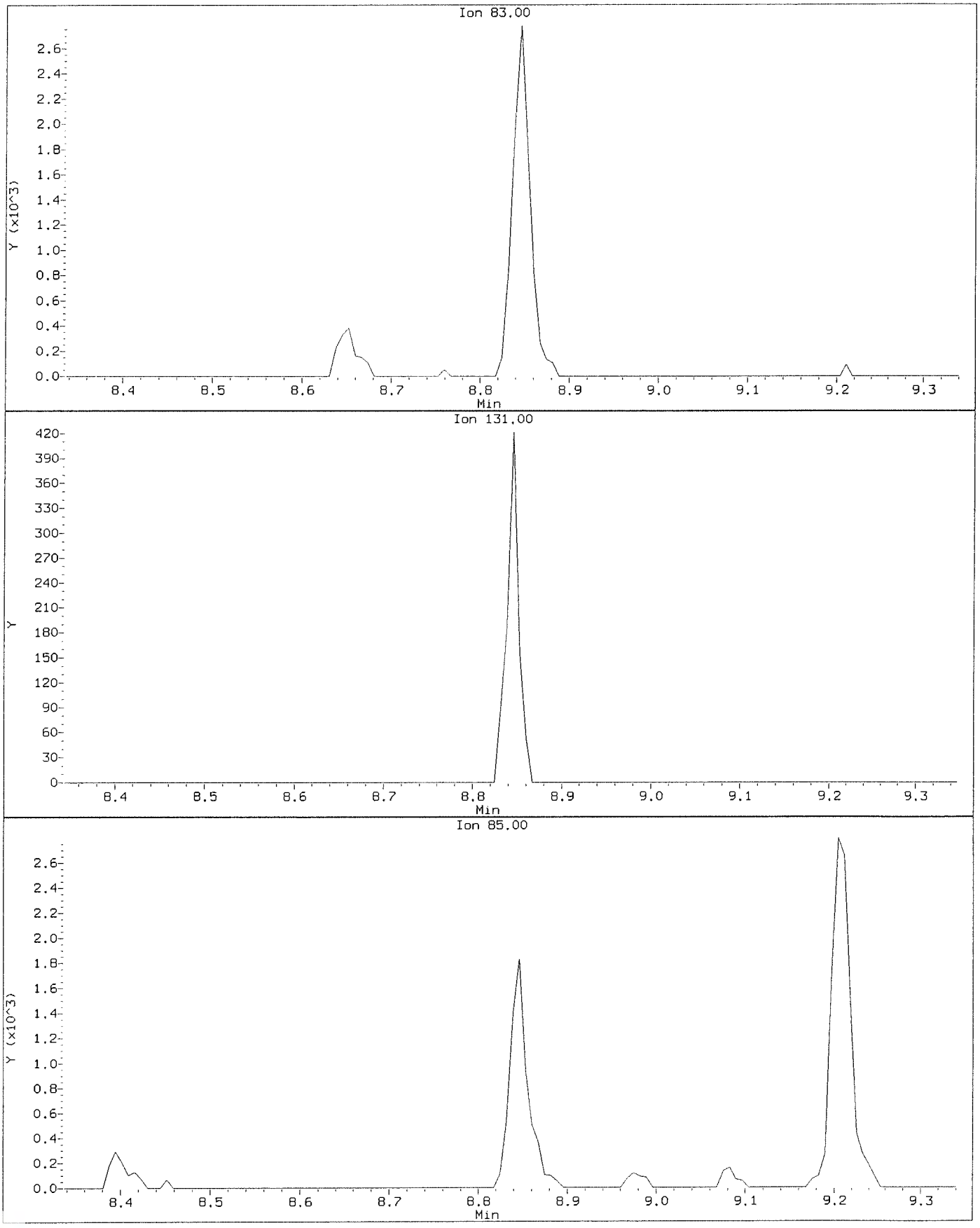
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4



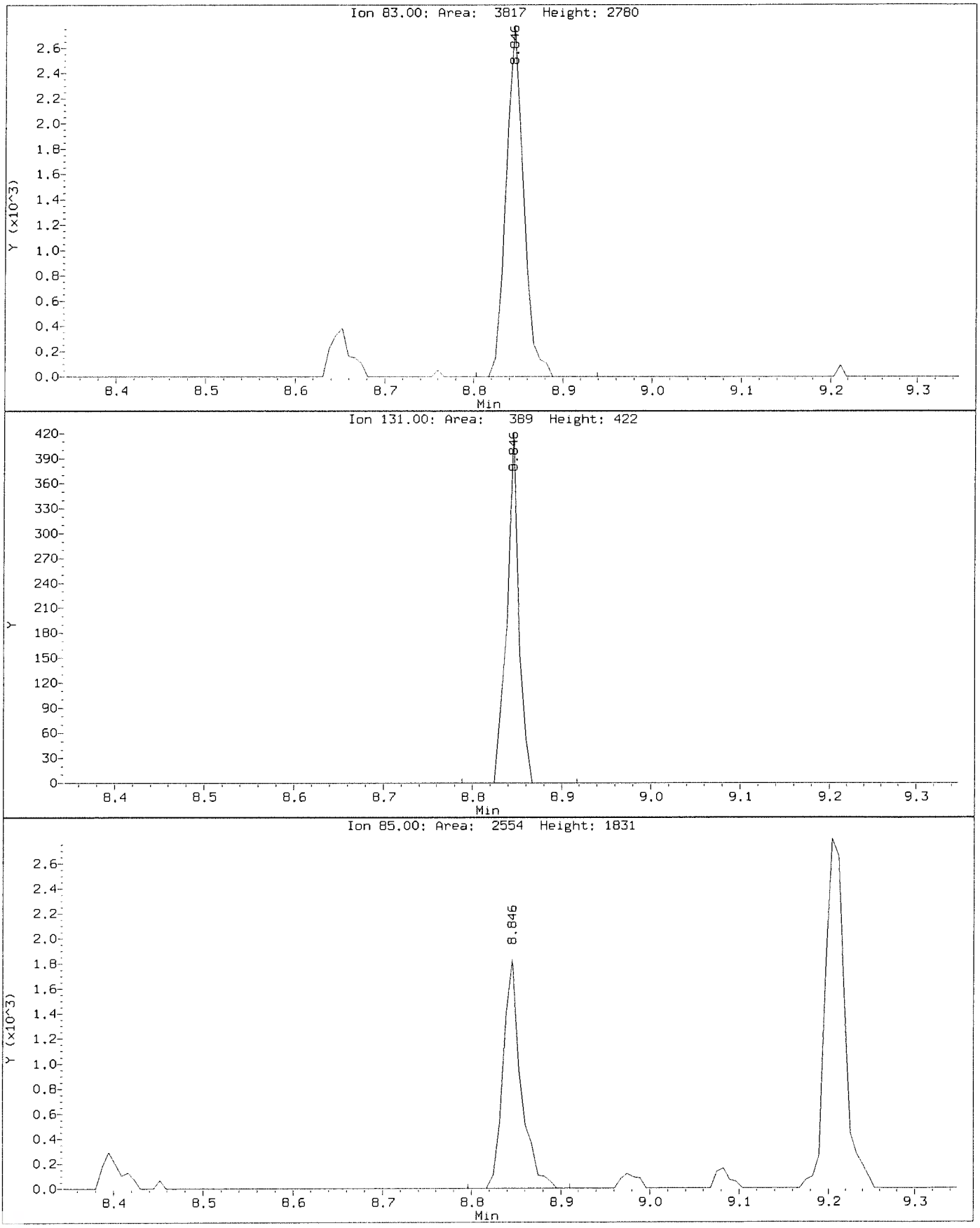
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Client Sample ID: VSTD000.5

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



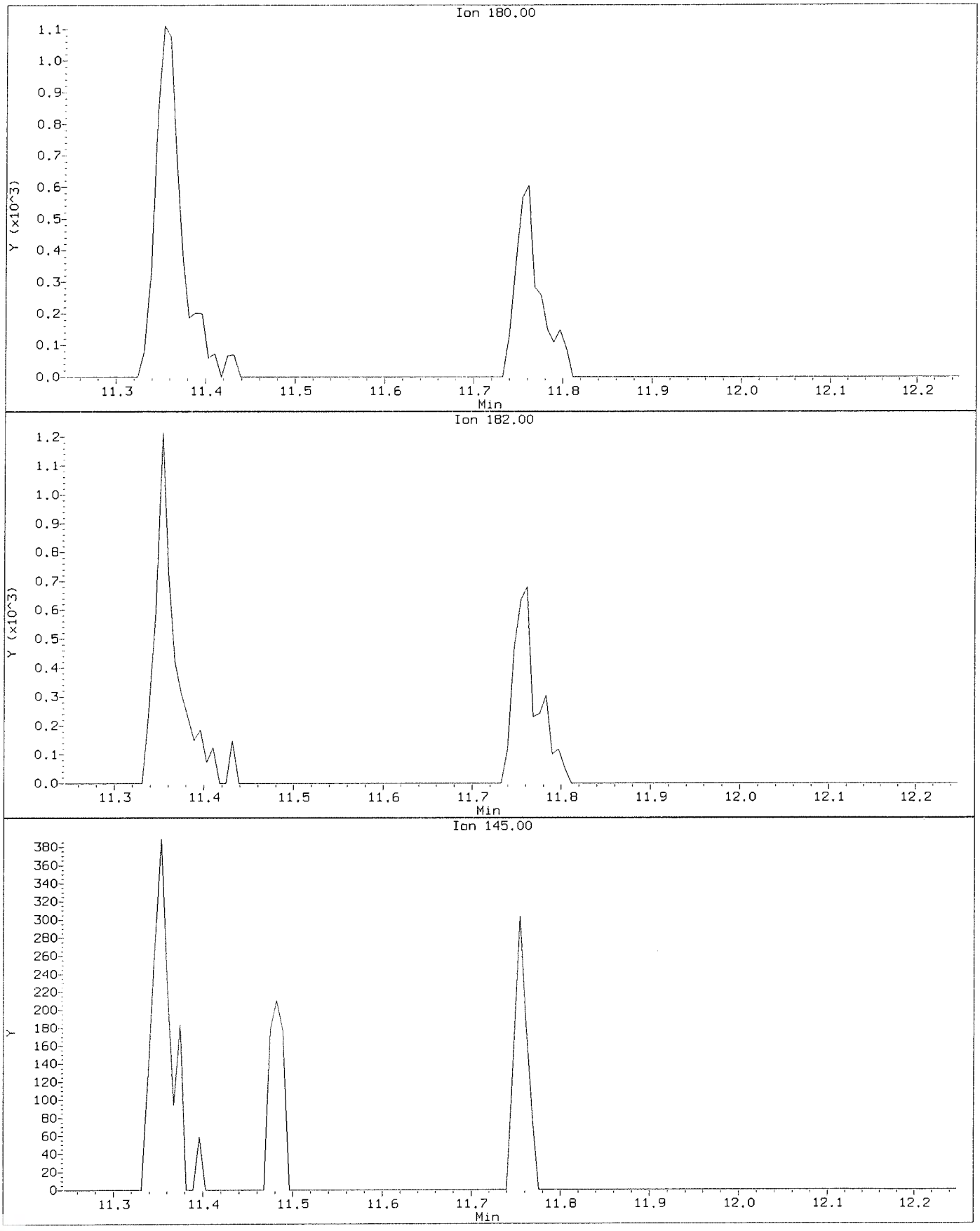
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



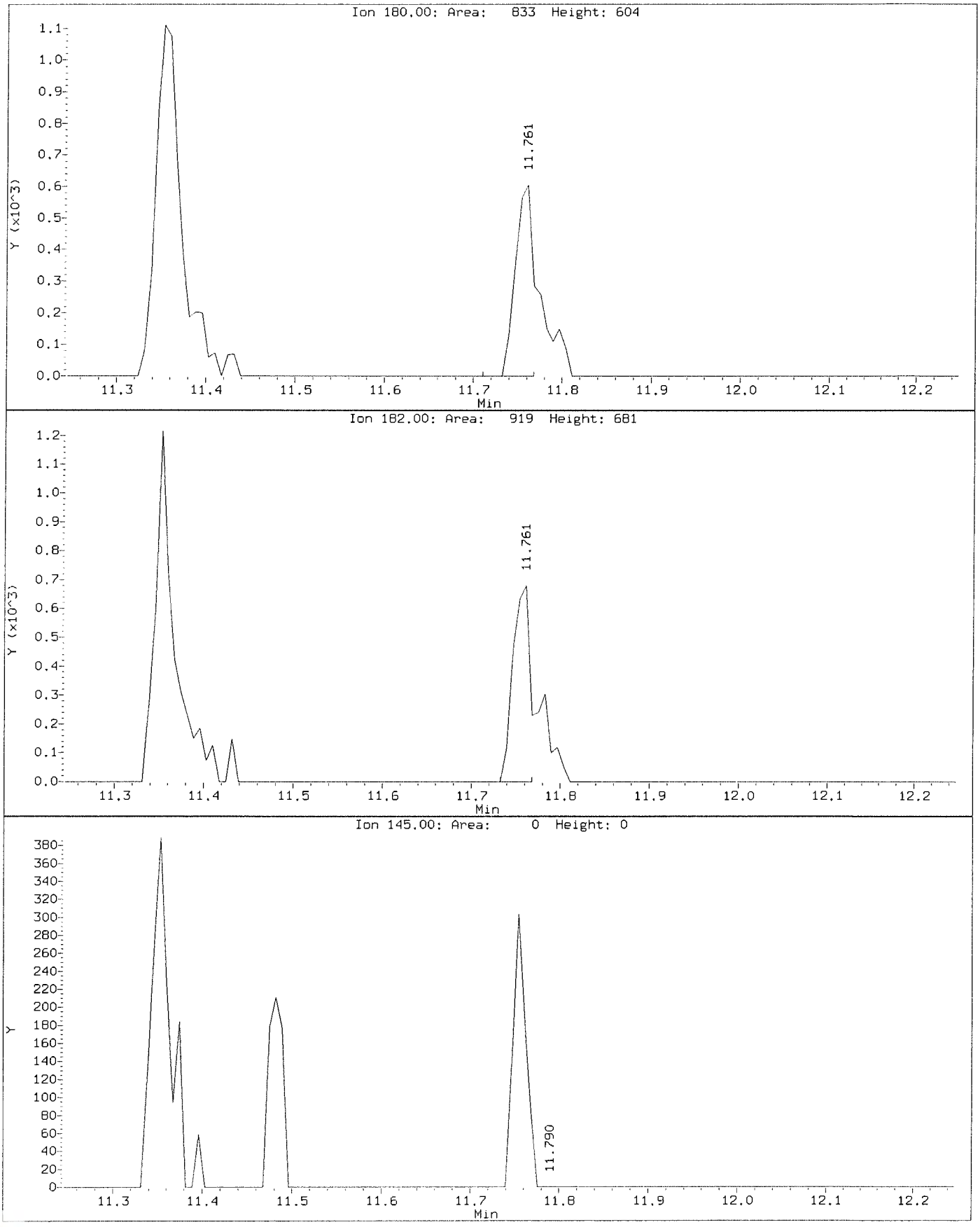
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Instrument: voa6.i
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



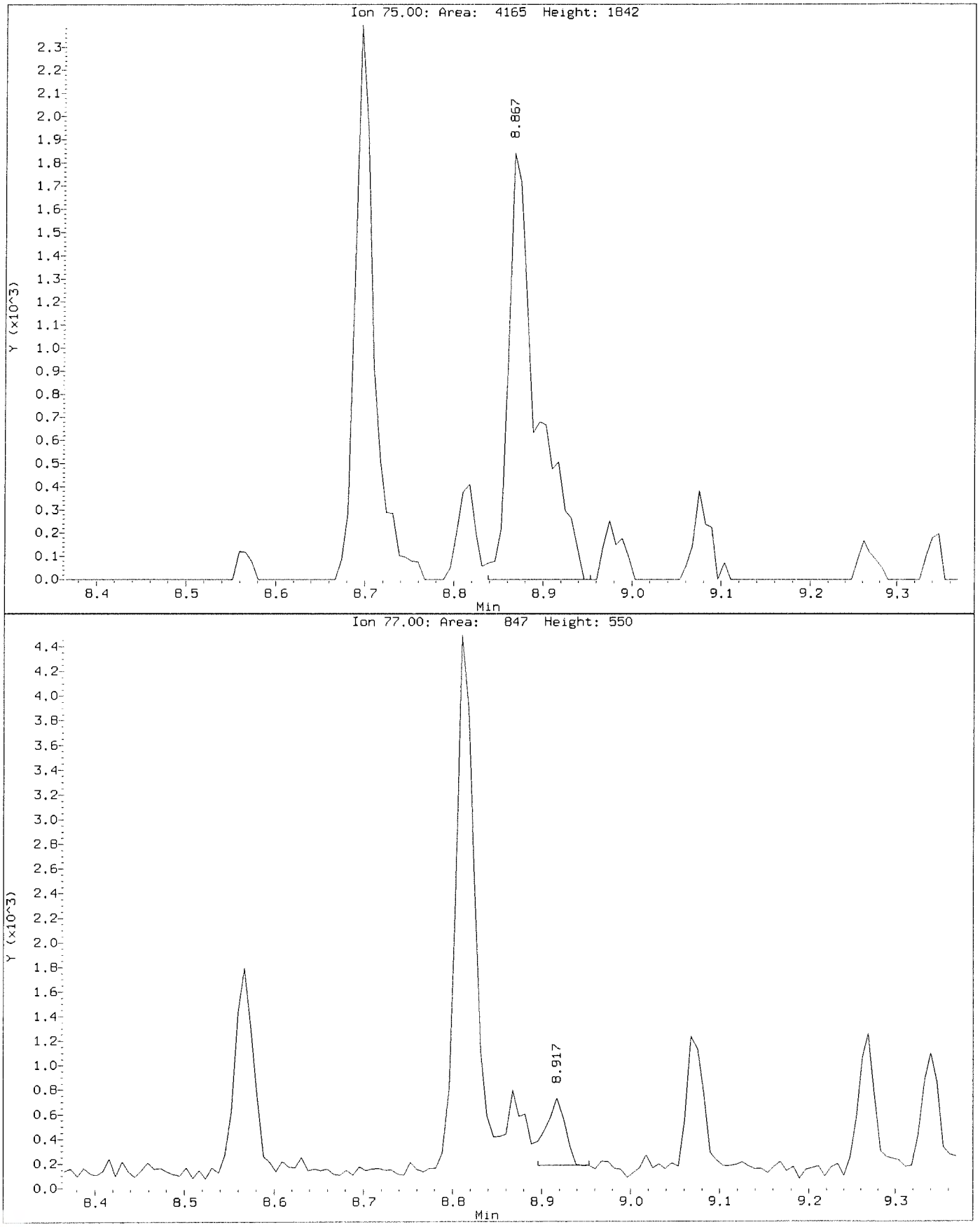
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



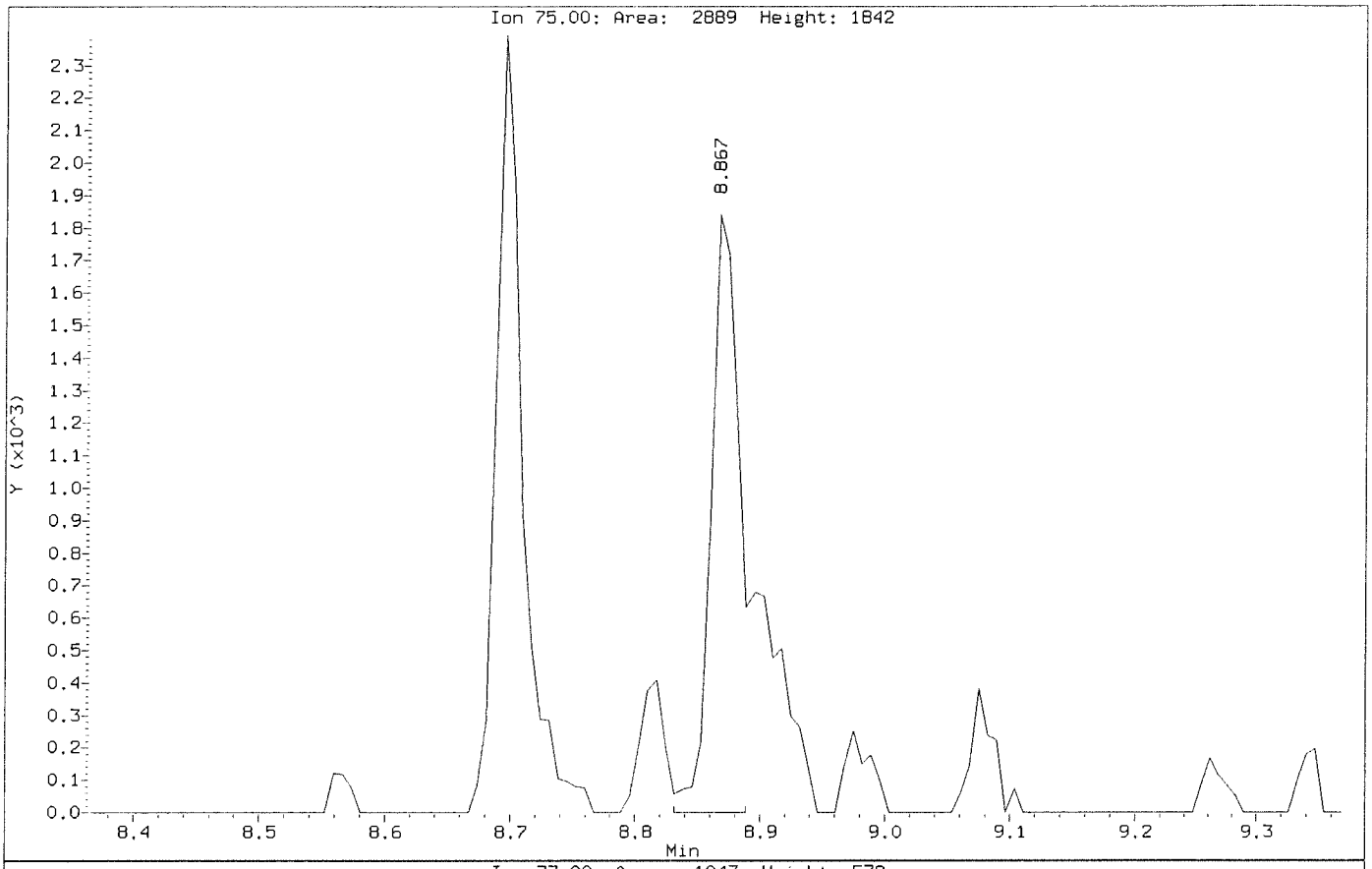
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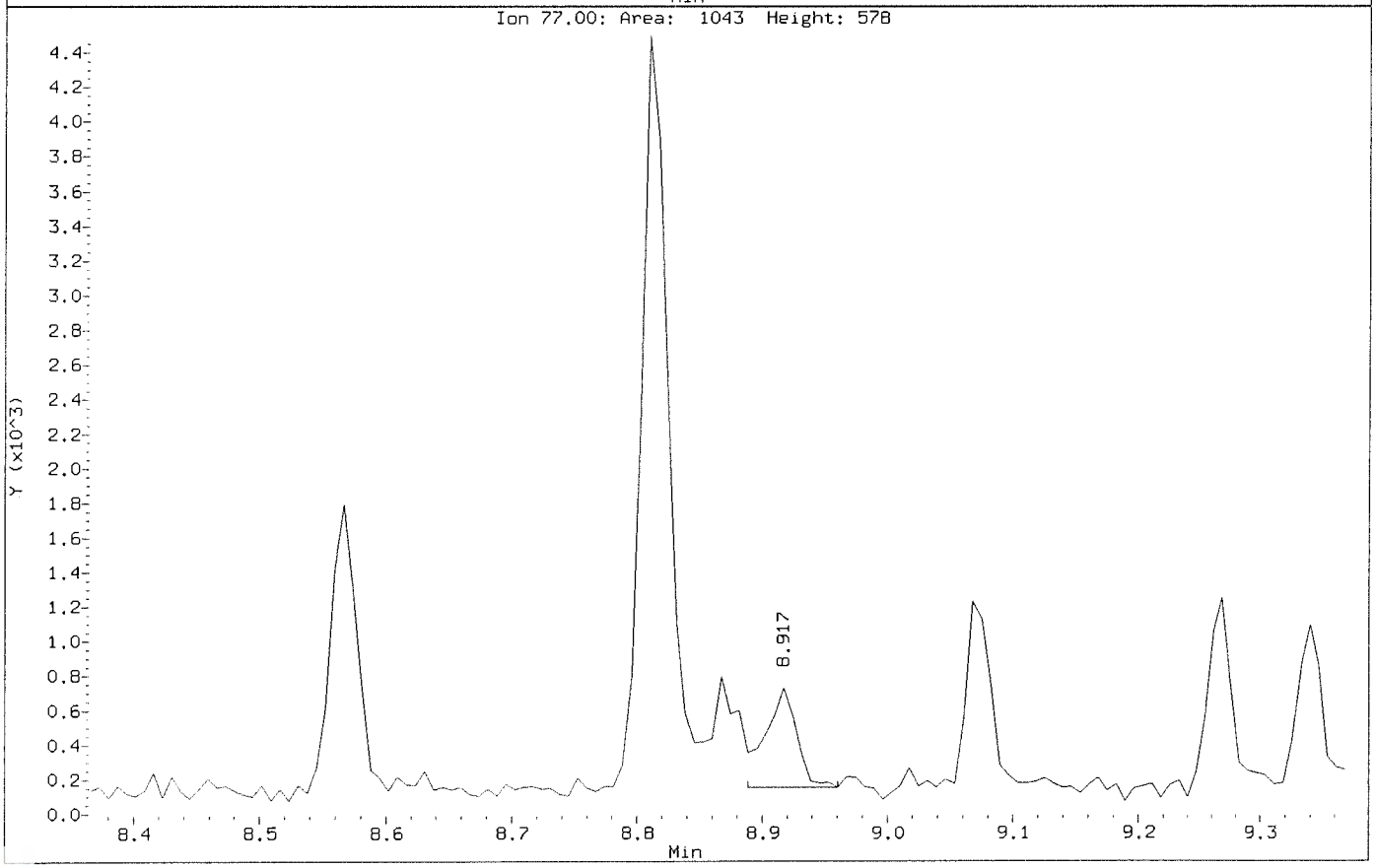
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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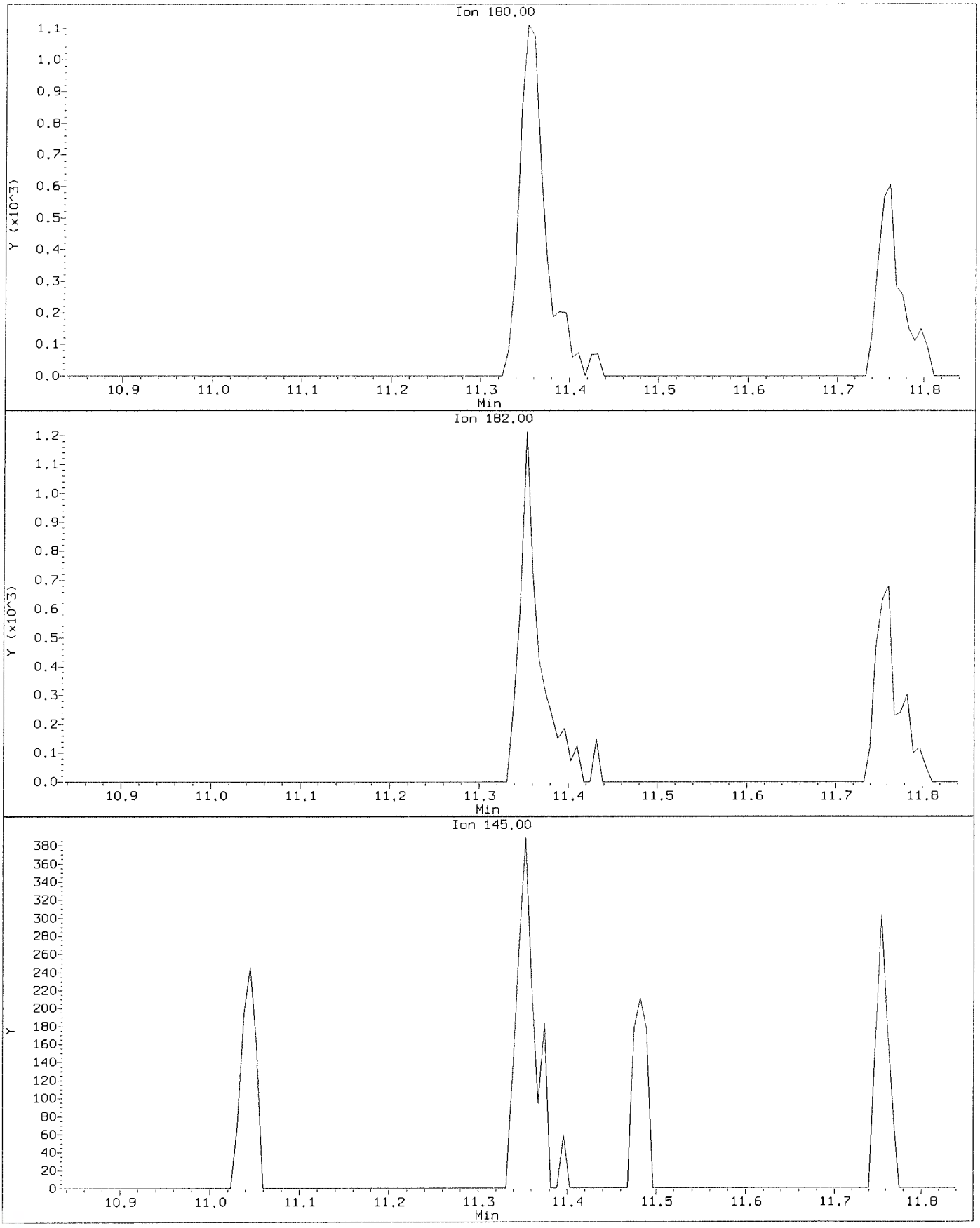
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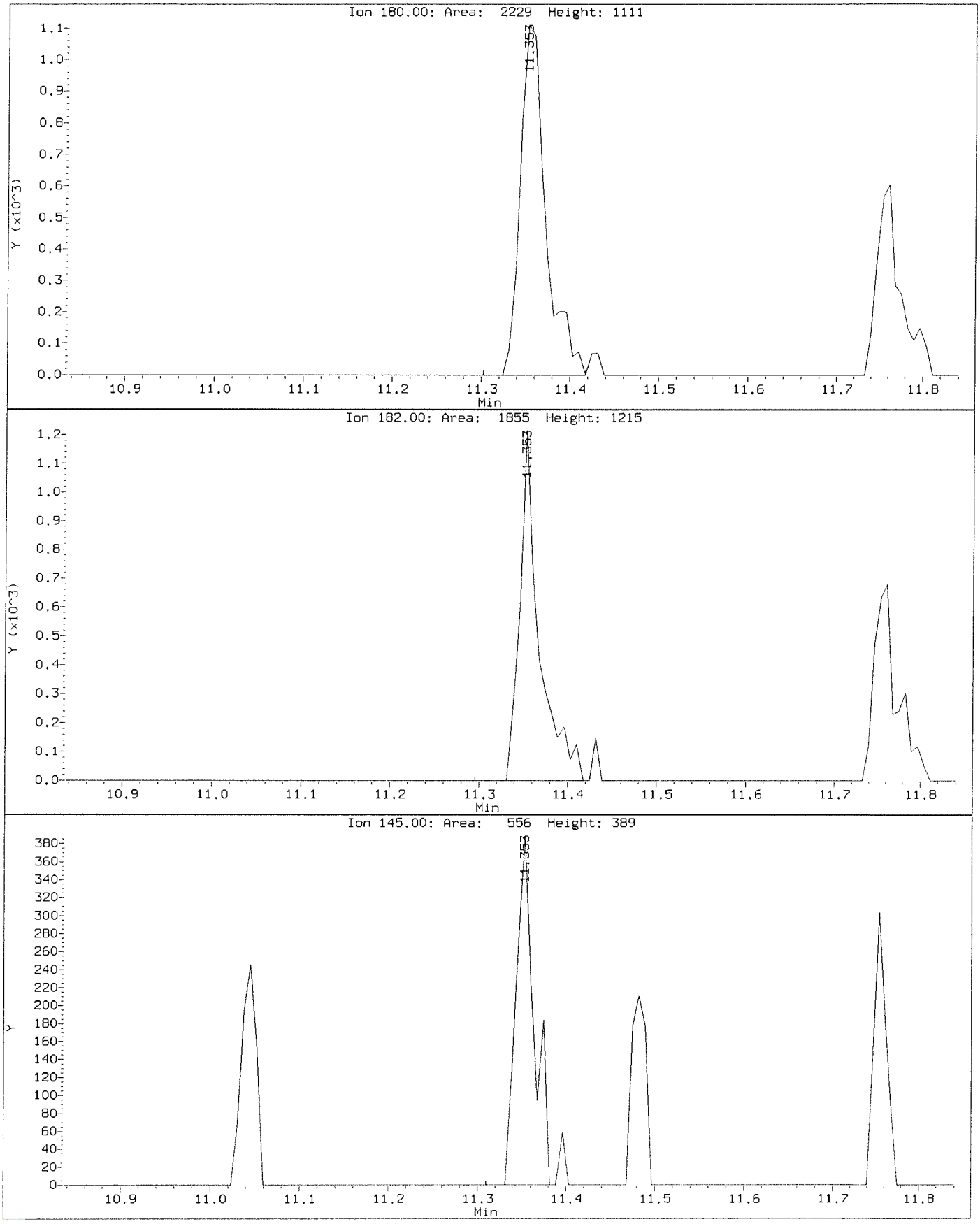
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



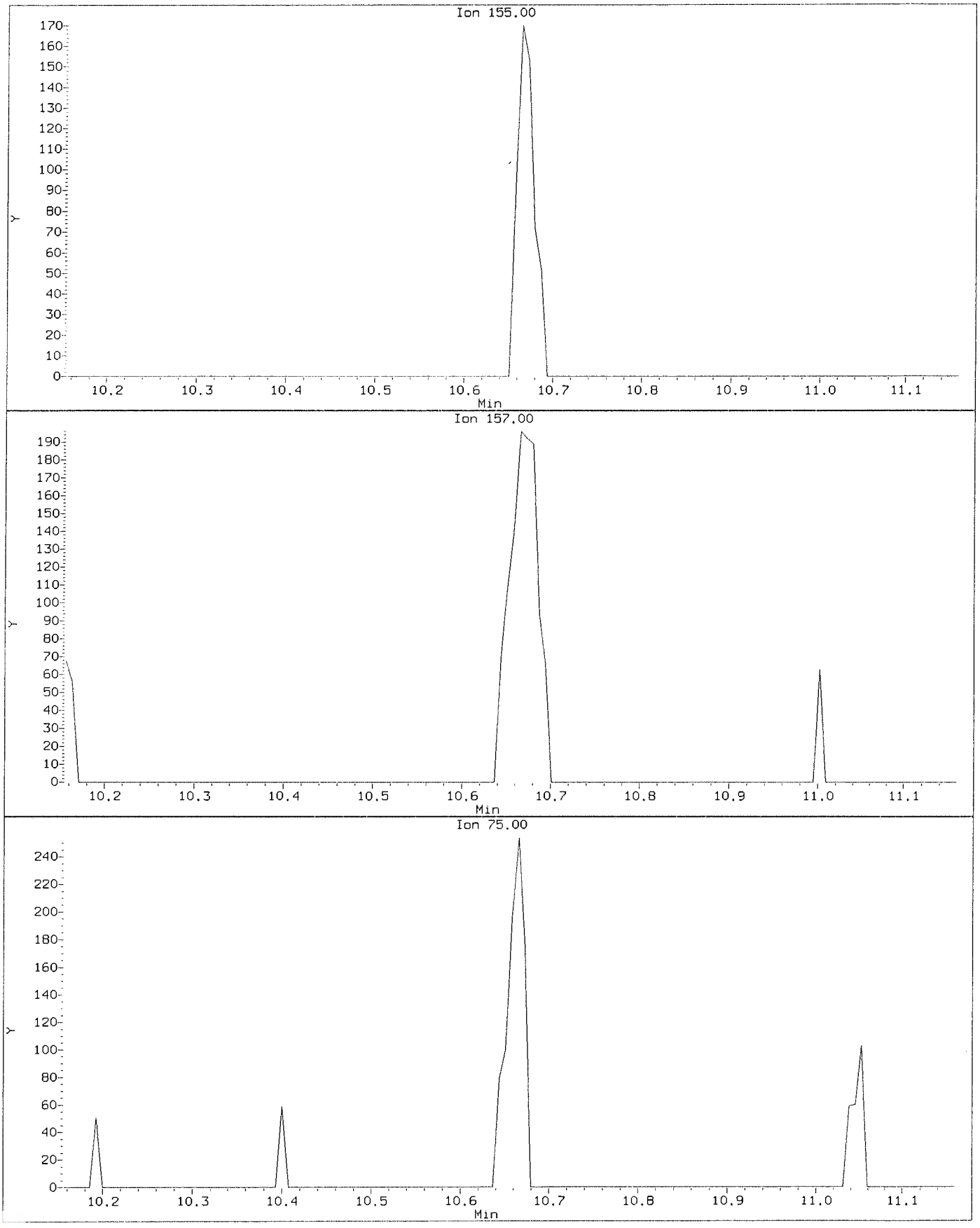
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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



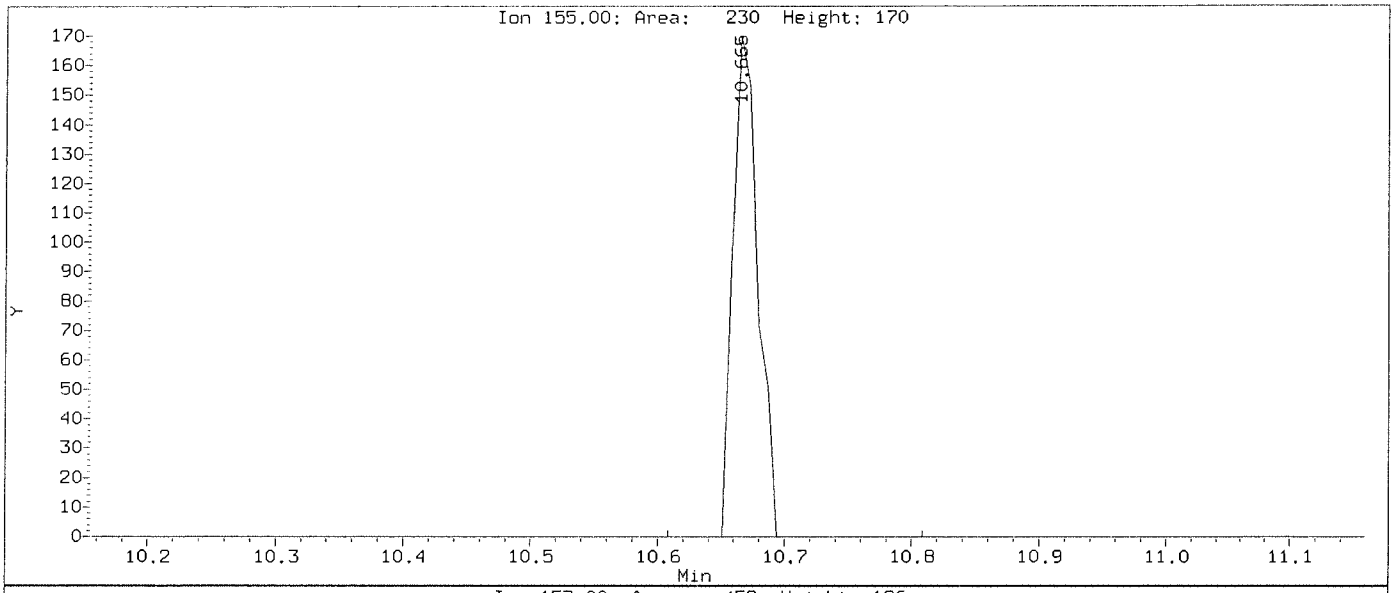
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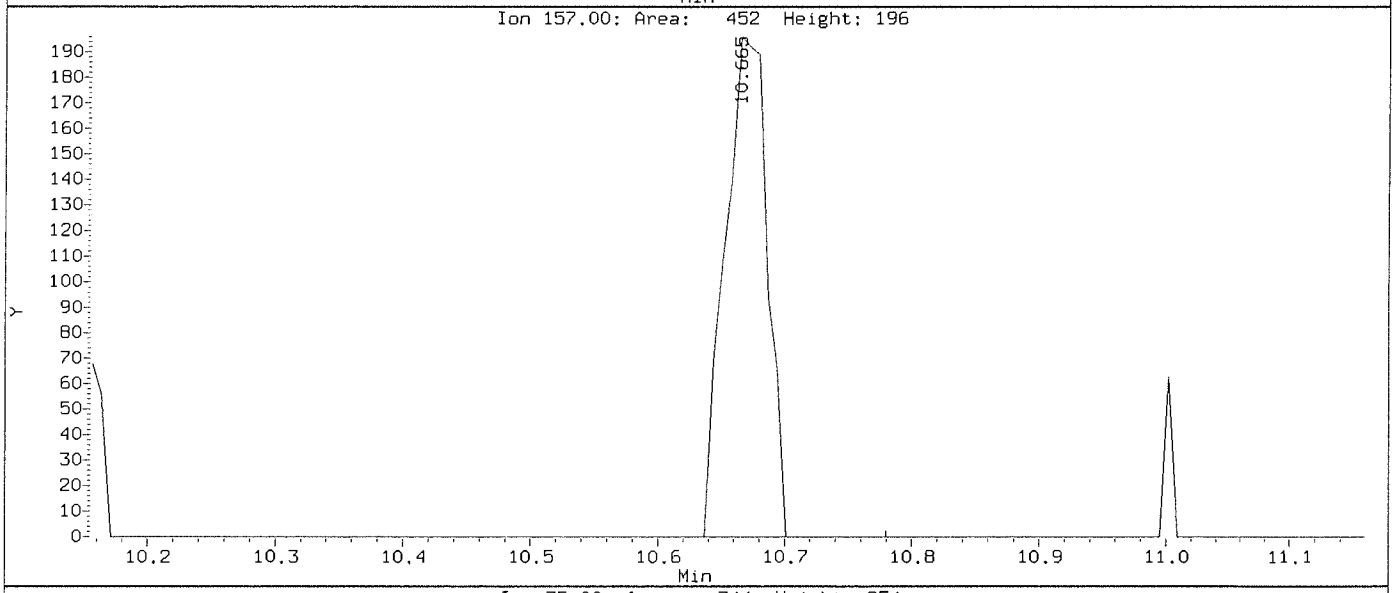
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

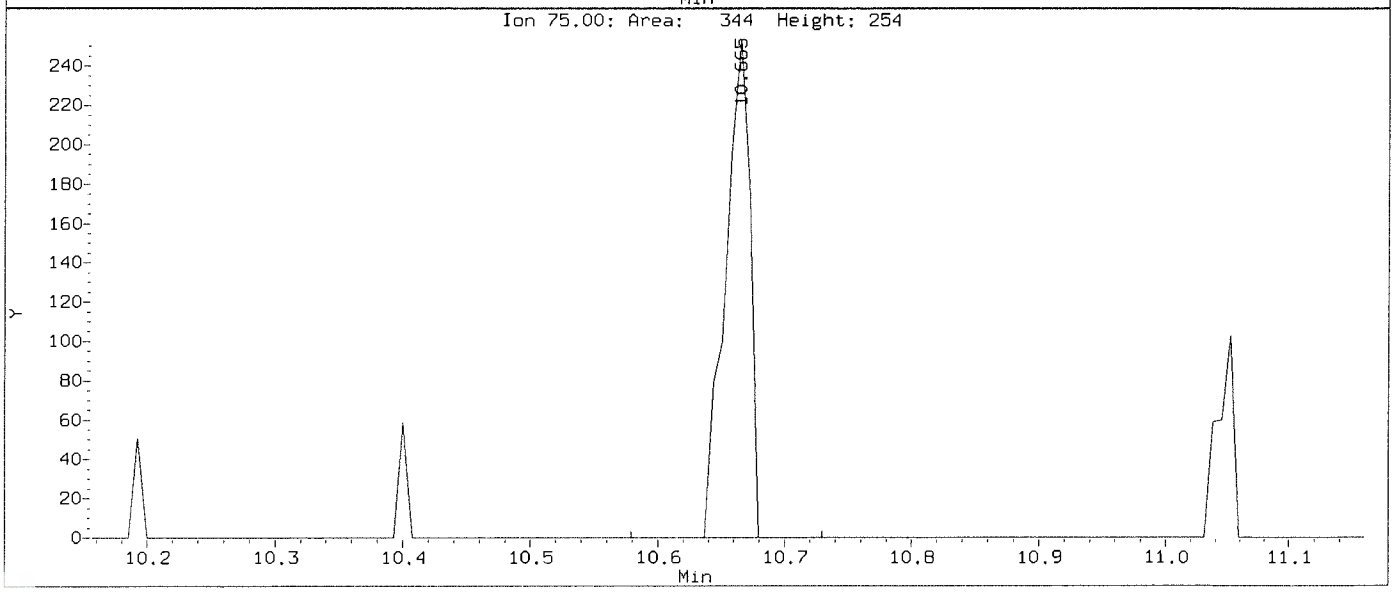


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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

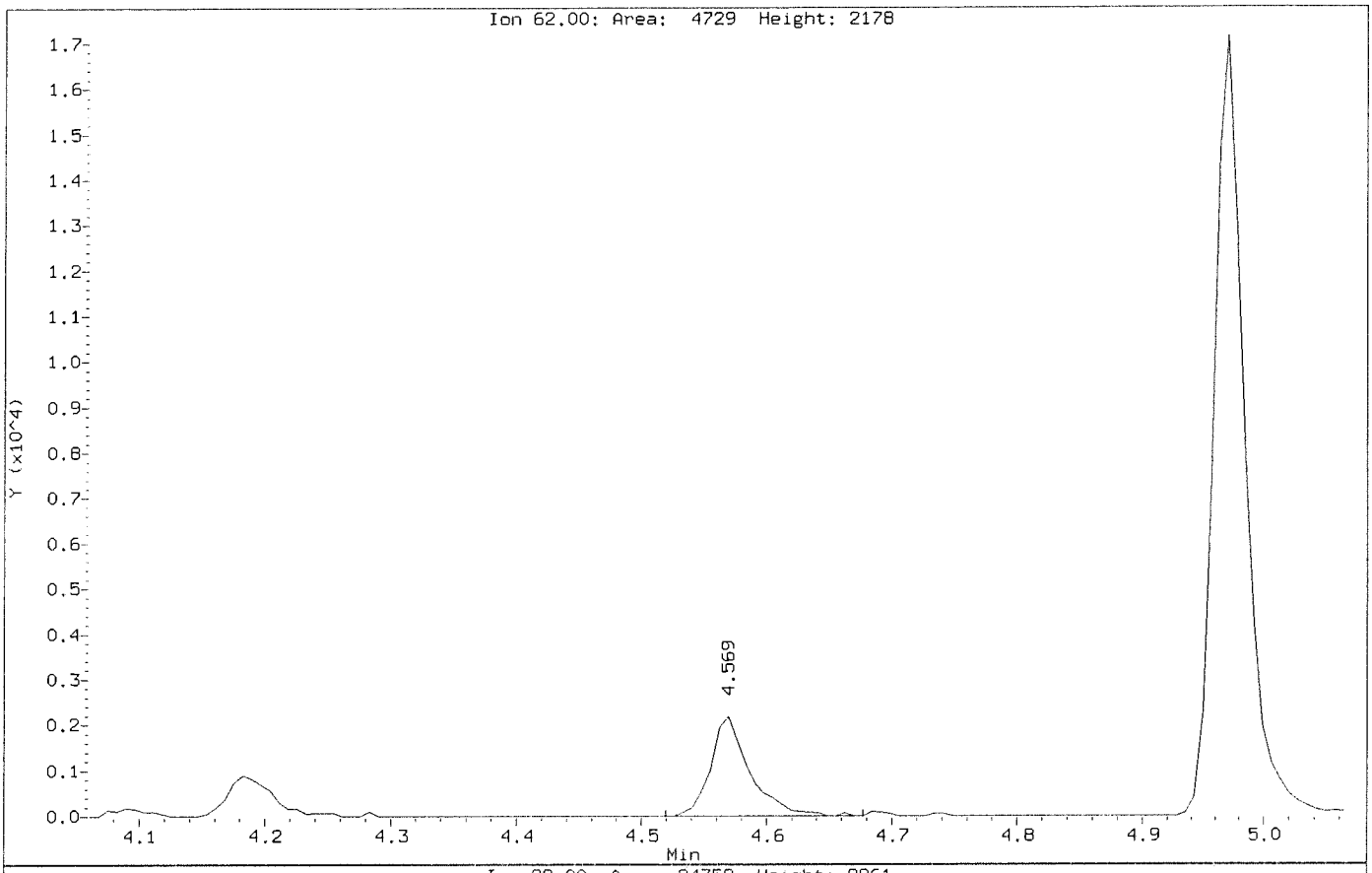


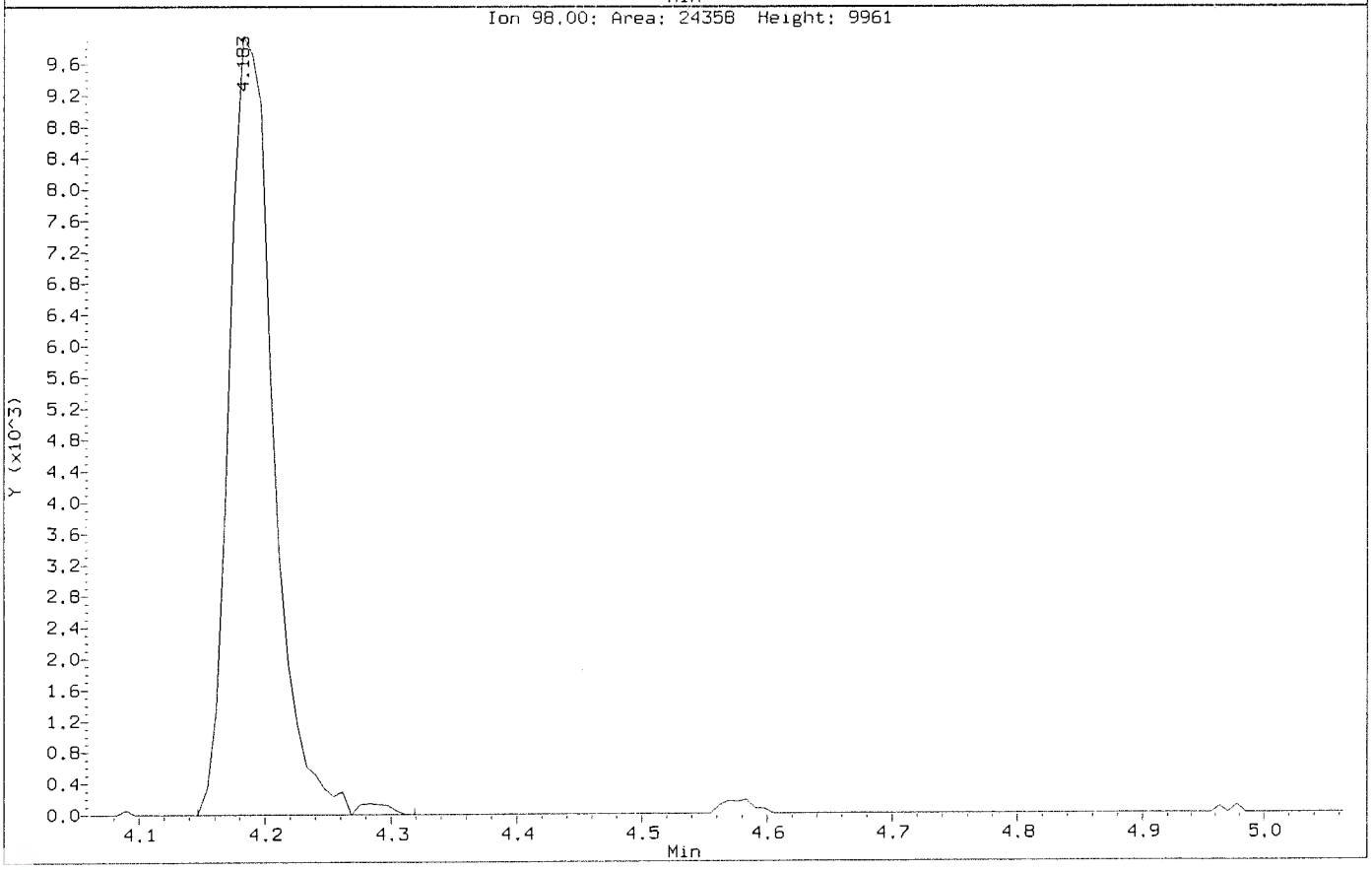




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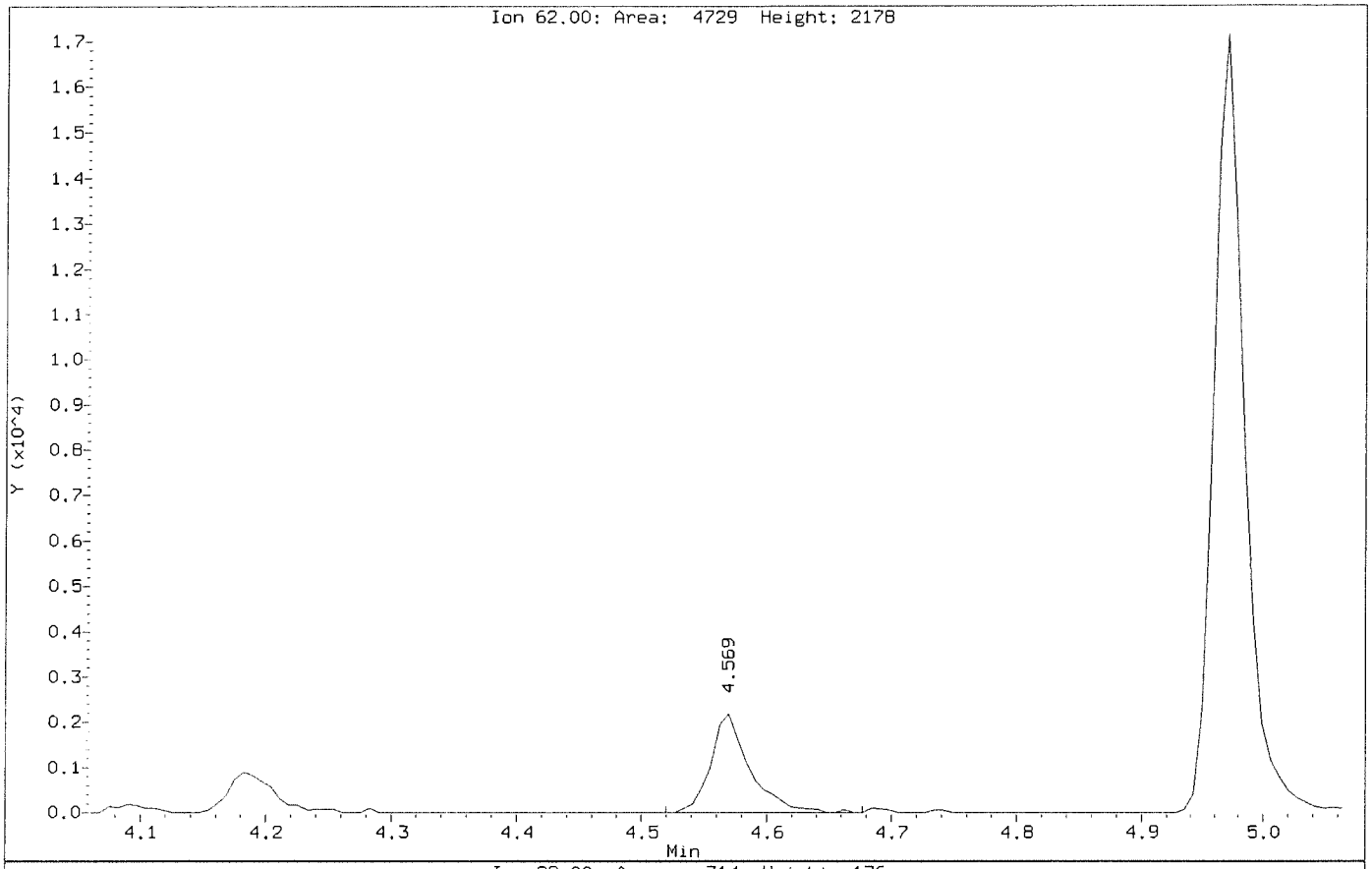
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

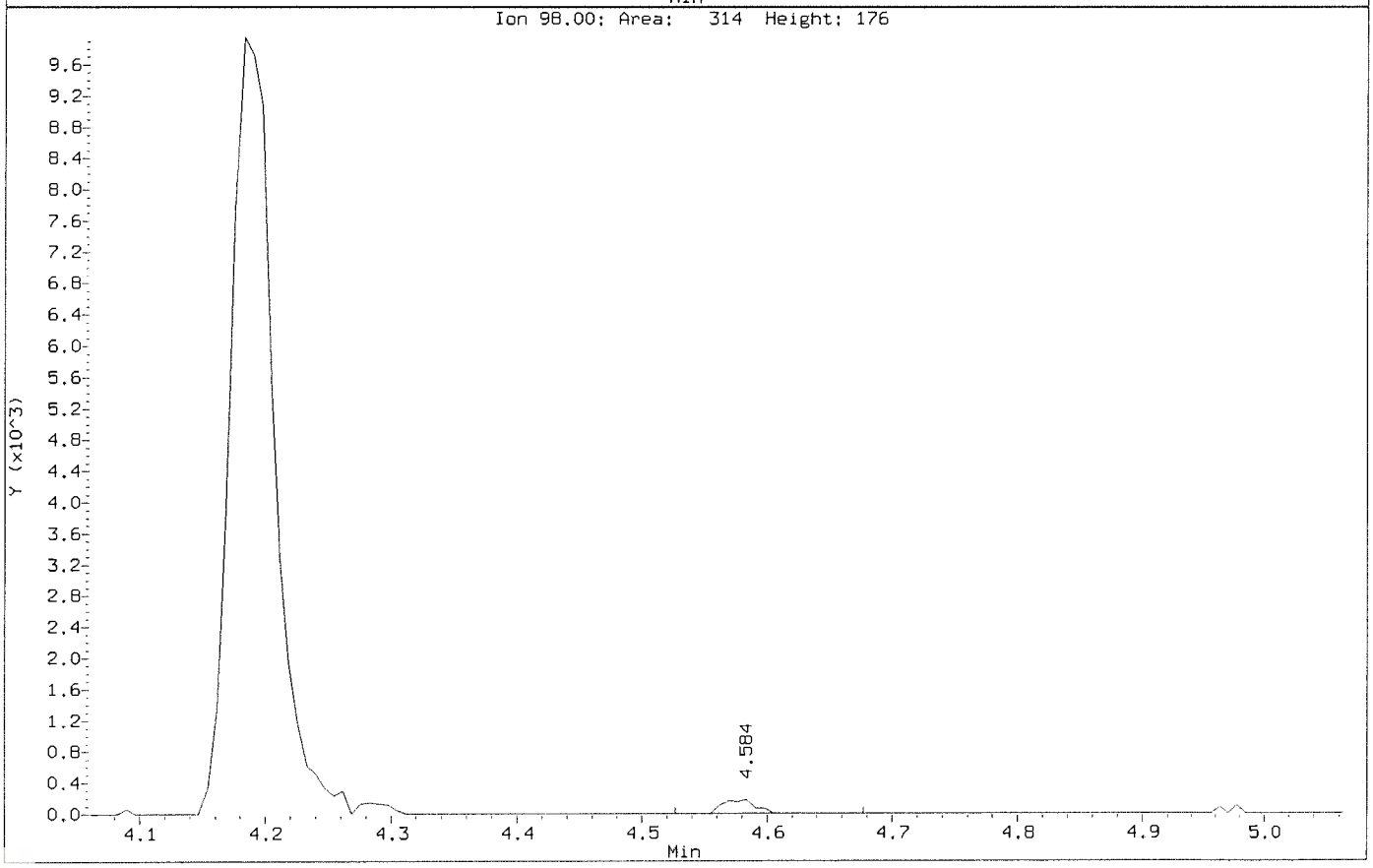




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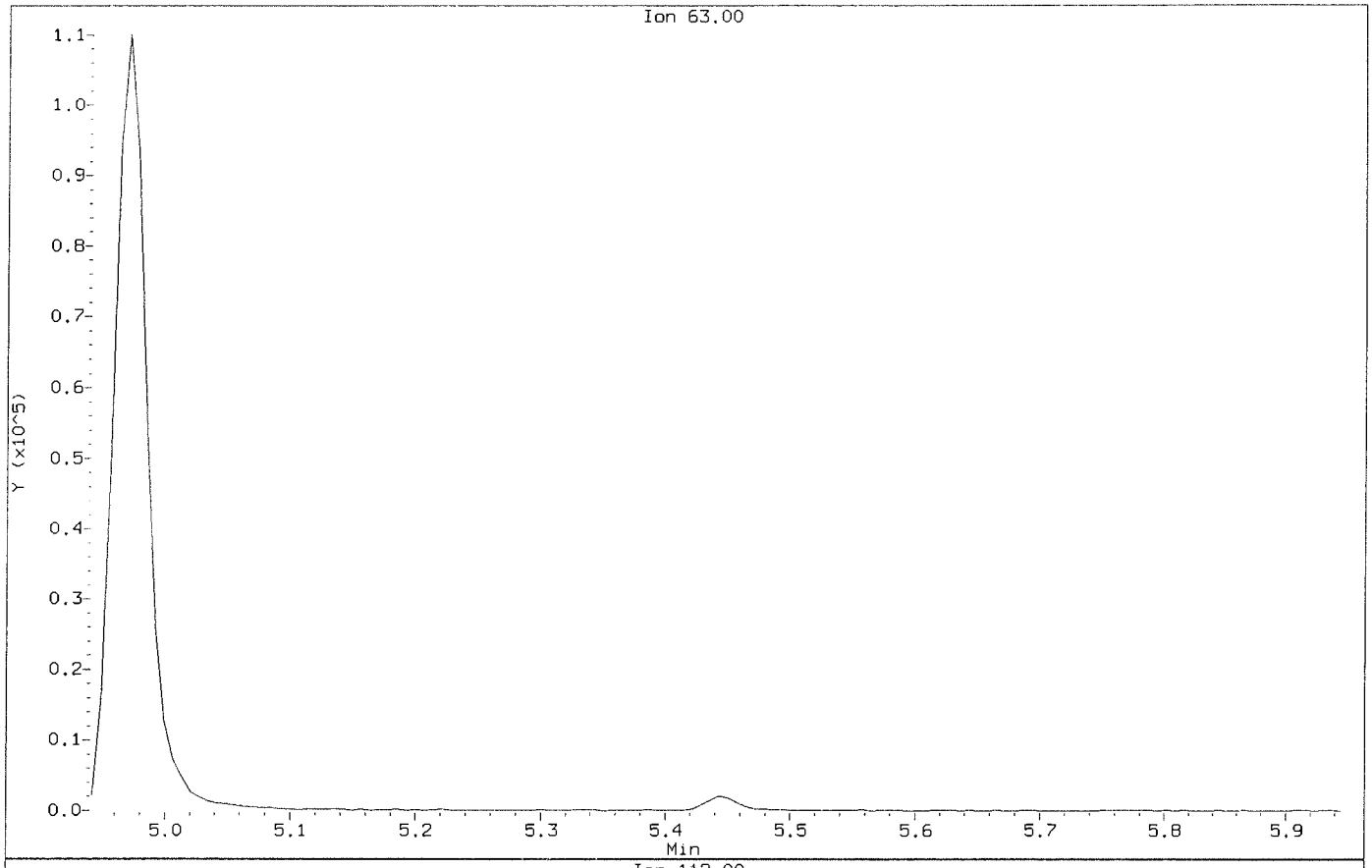
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

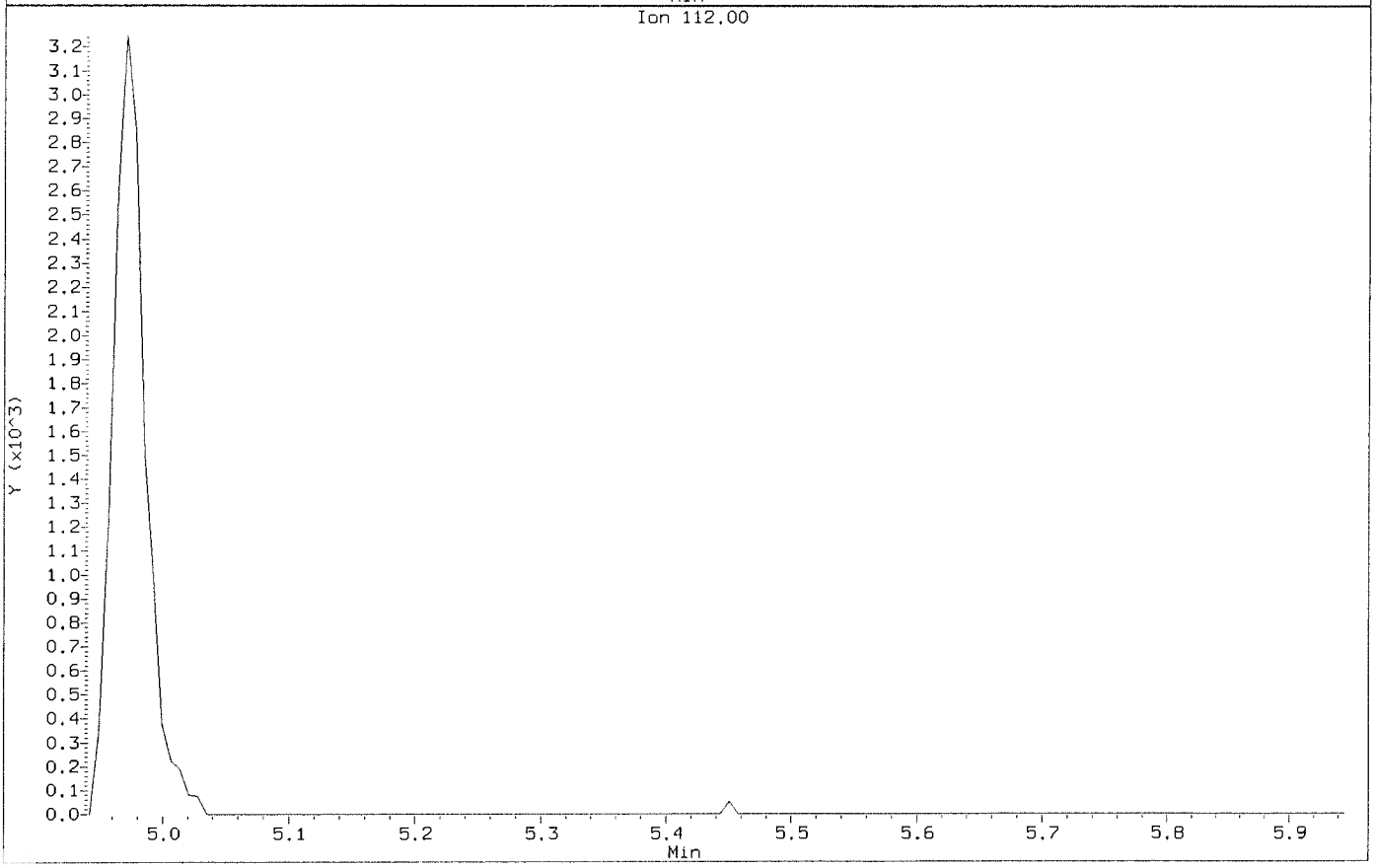




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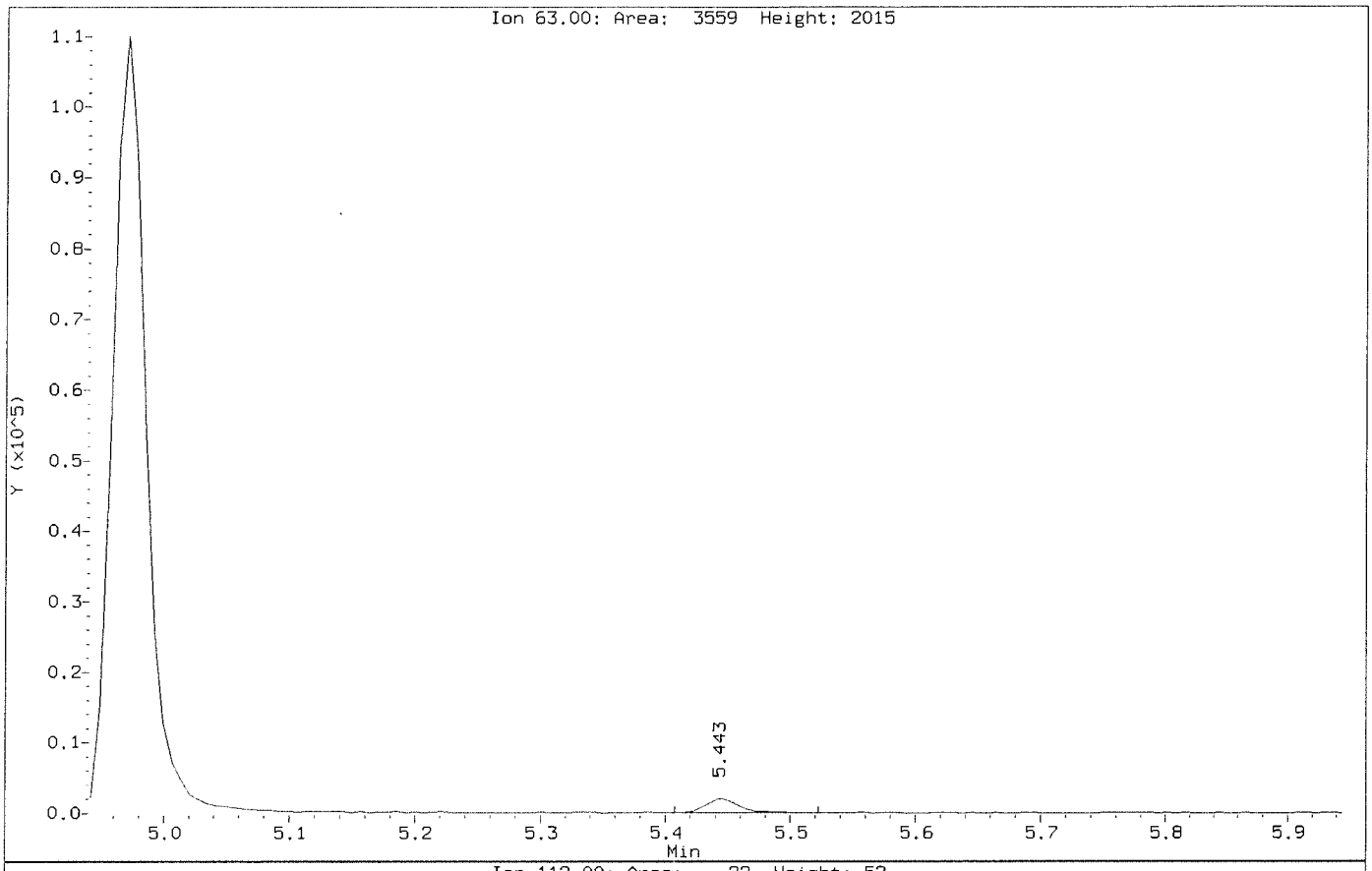
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

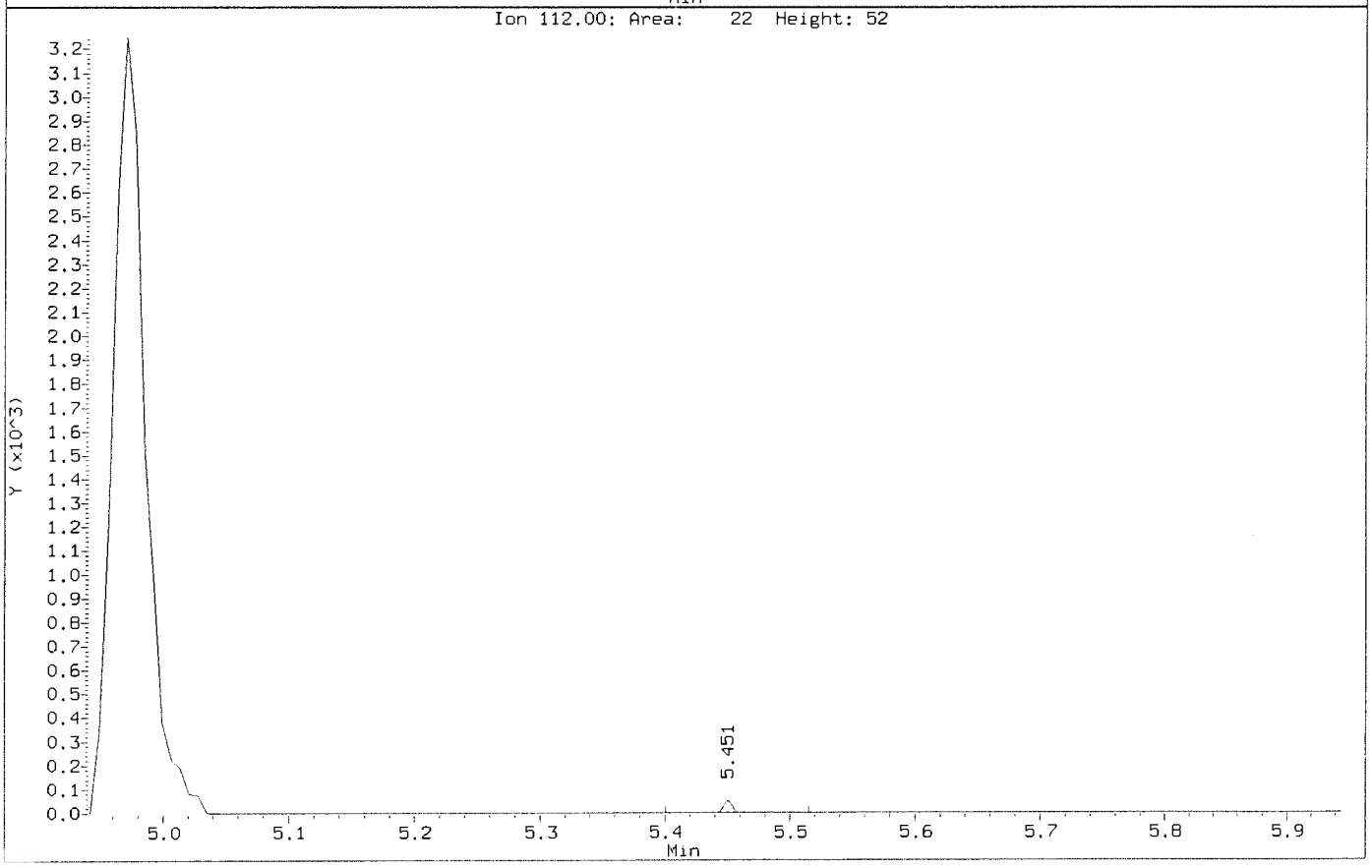




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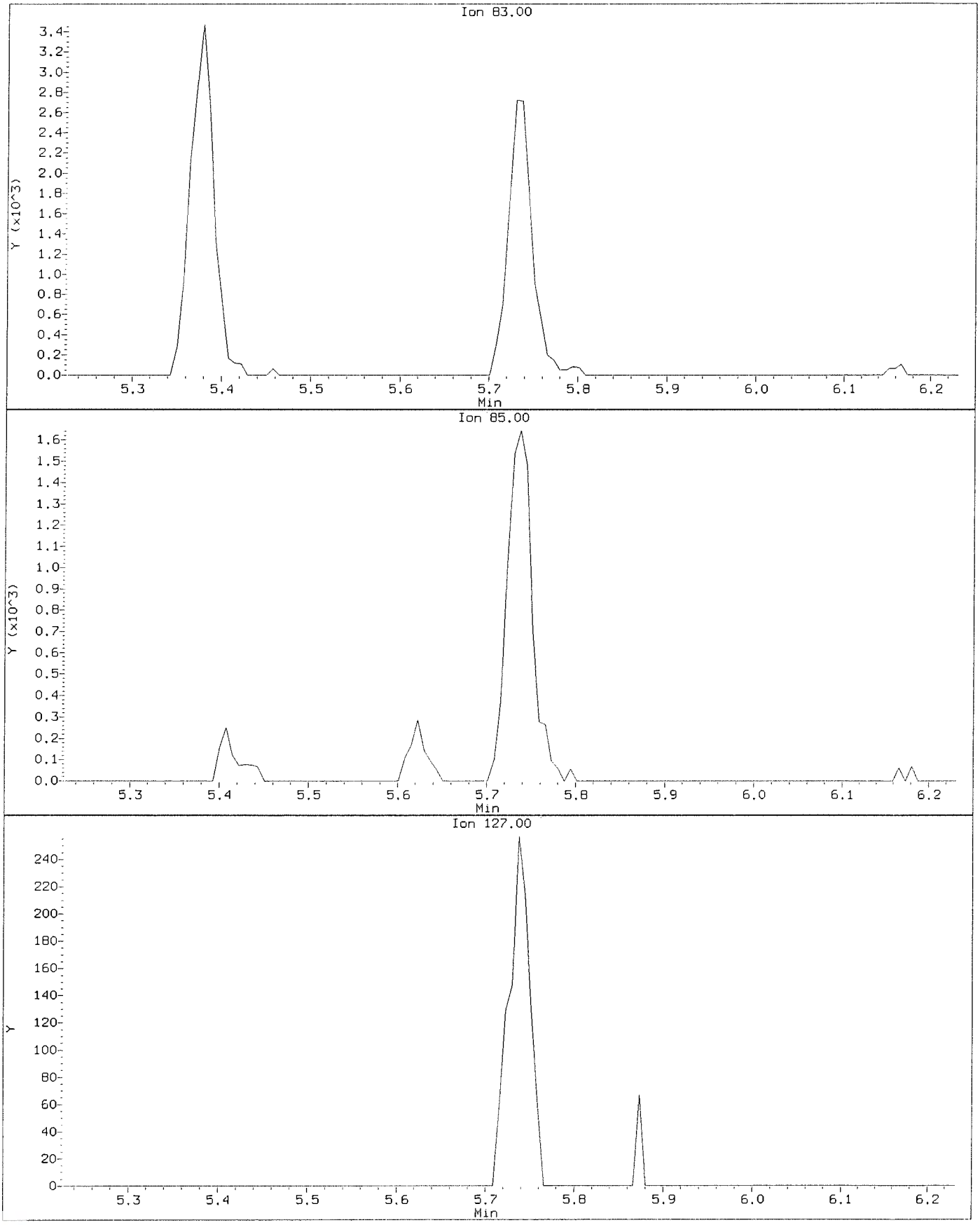
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





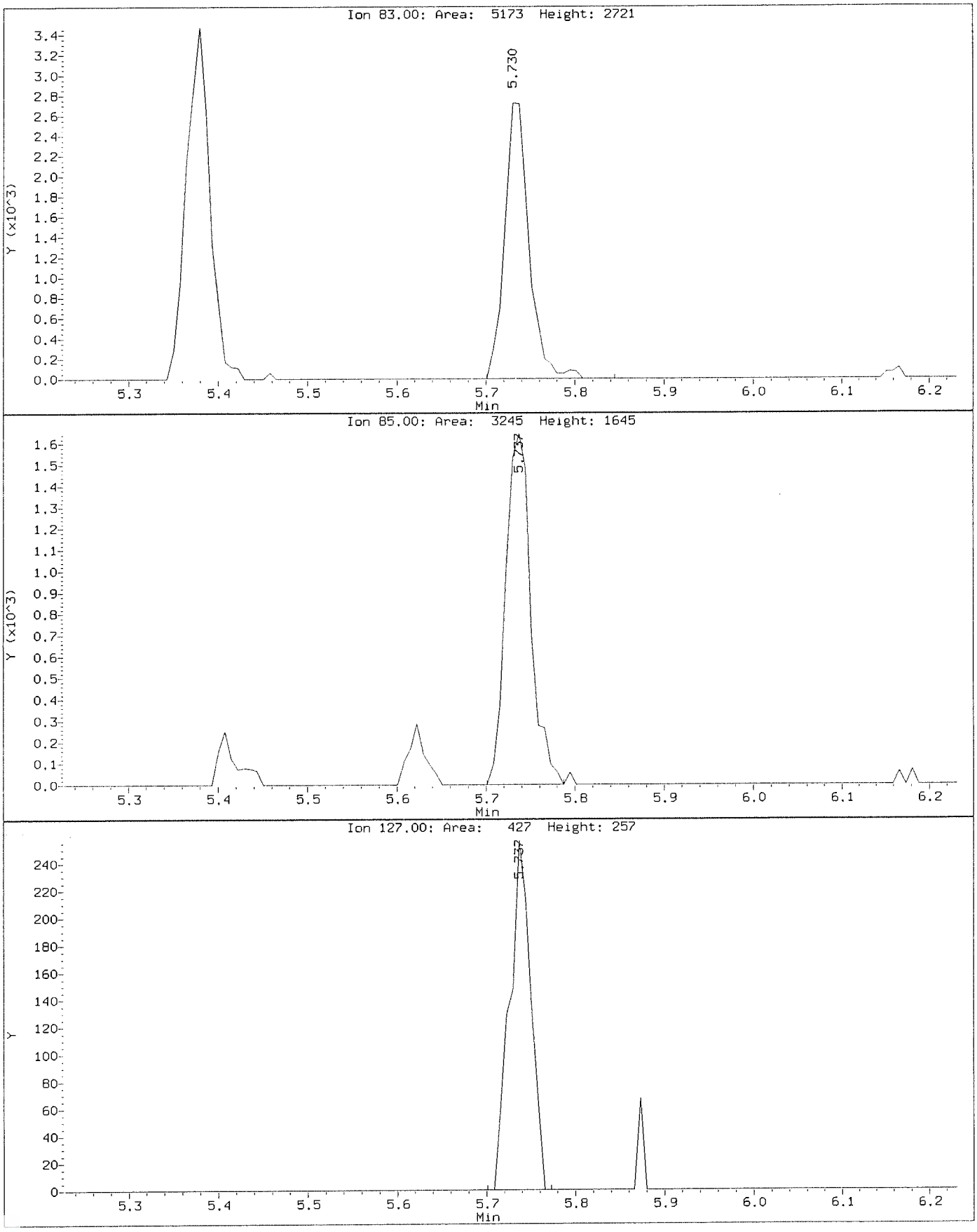
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Instrument: voa6.i
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Compound: Bromodichloromethane
CAS Number: 75-27-4



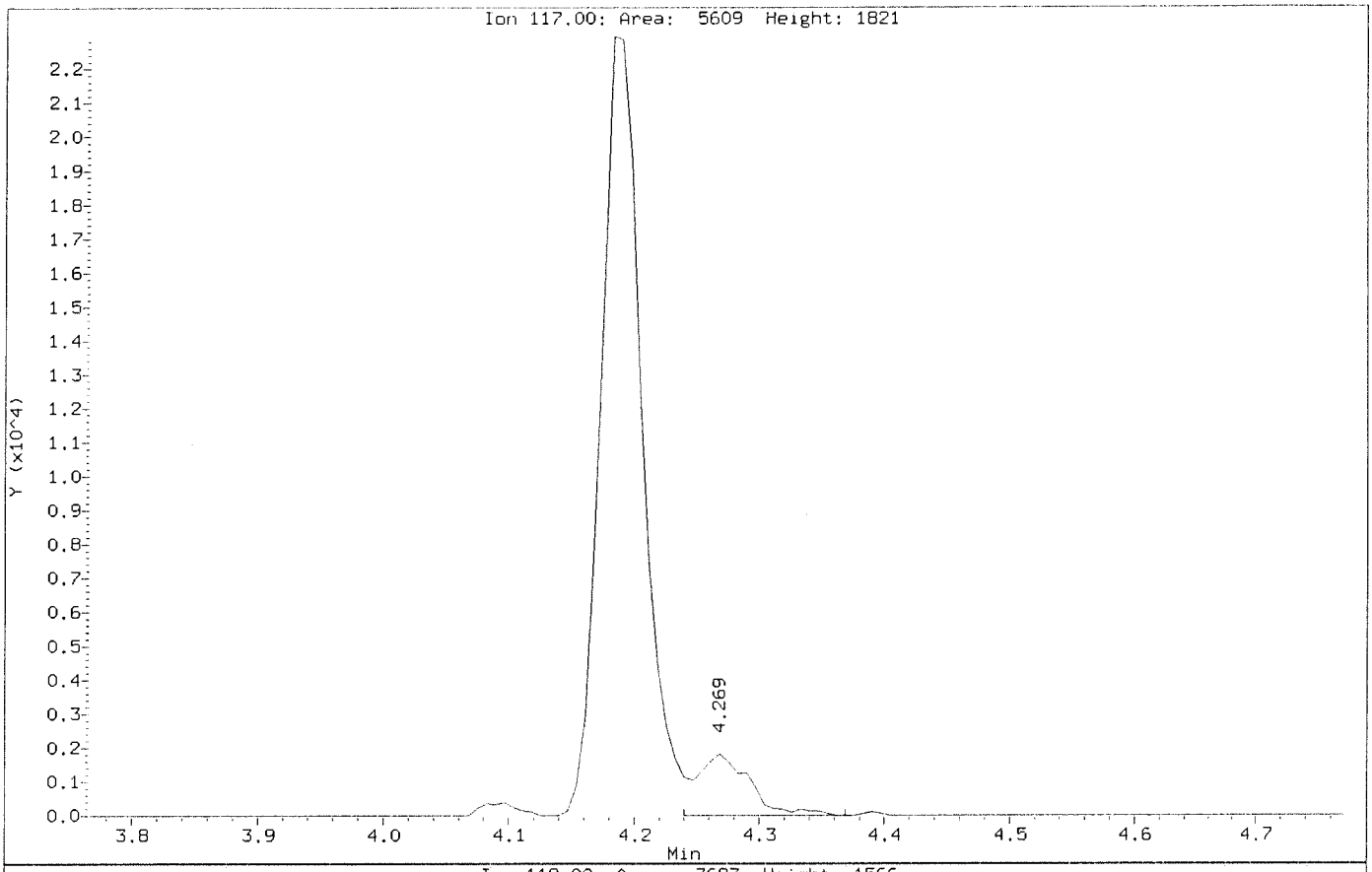
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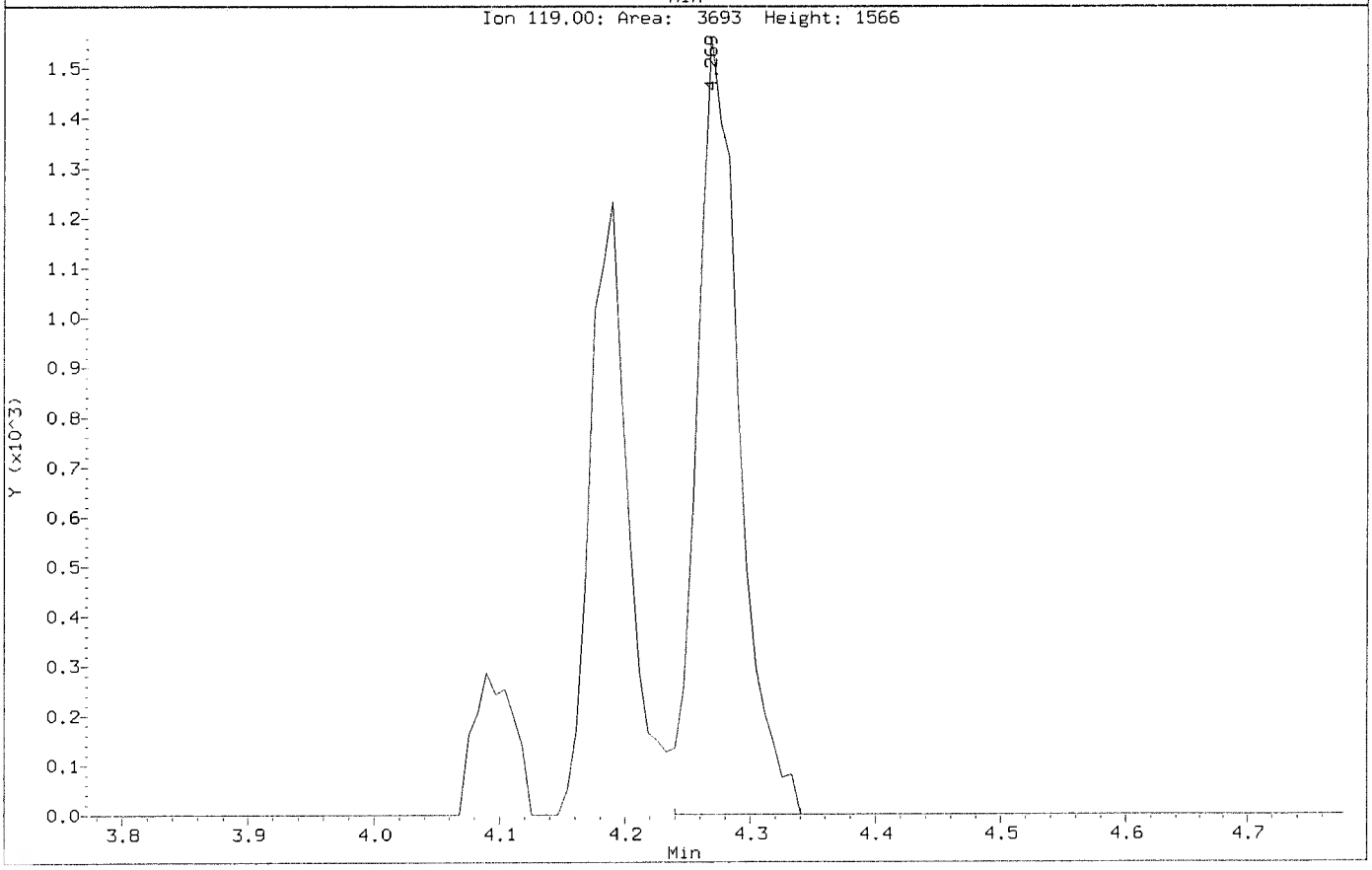
Compound: Bromodichloromethane
CAS Number: 75-27-4



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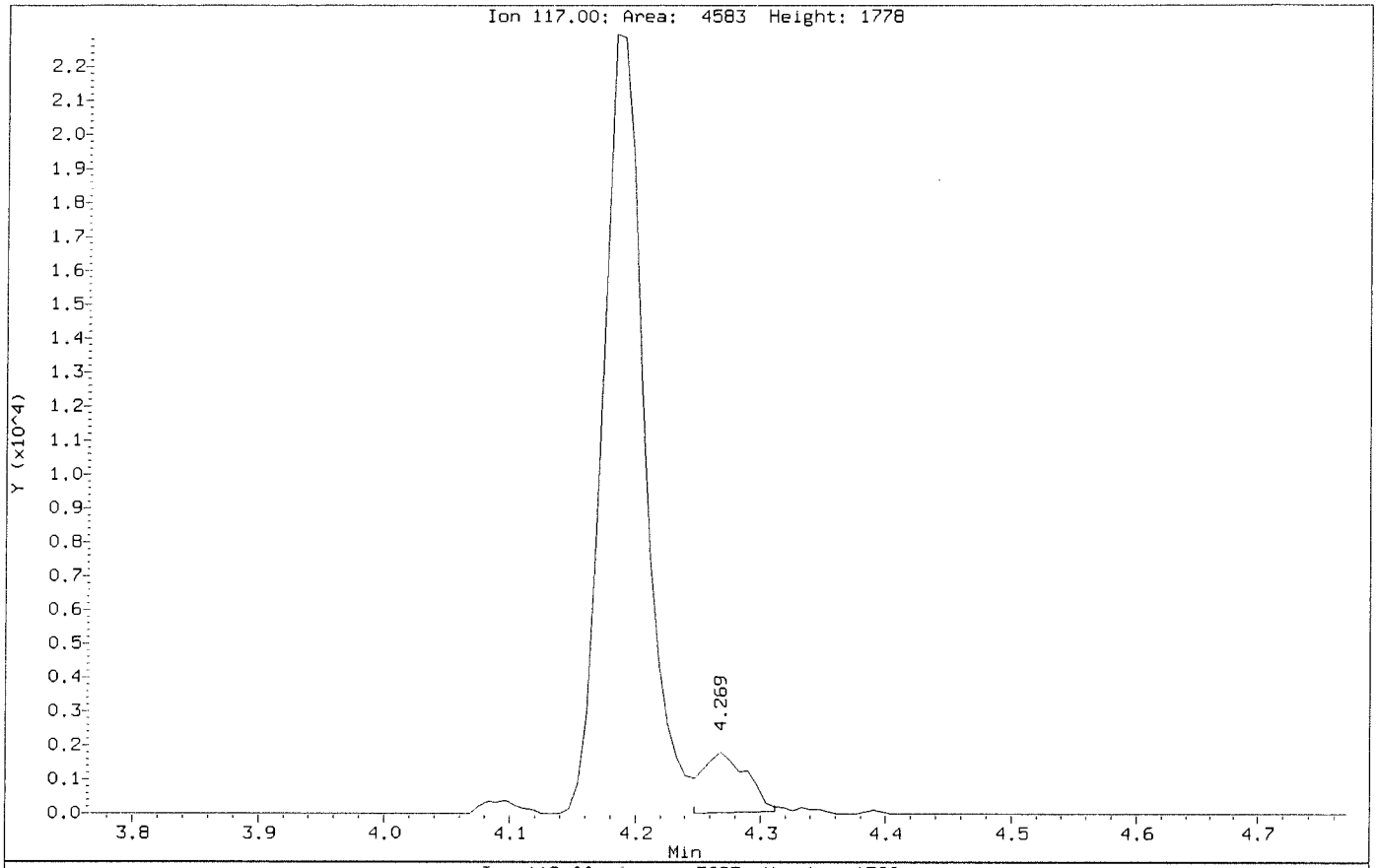
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

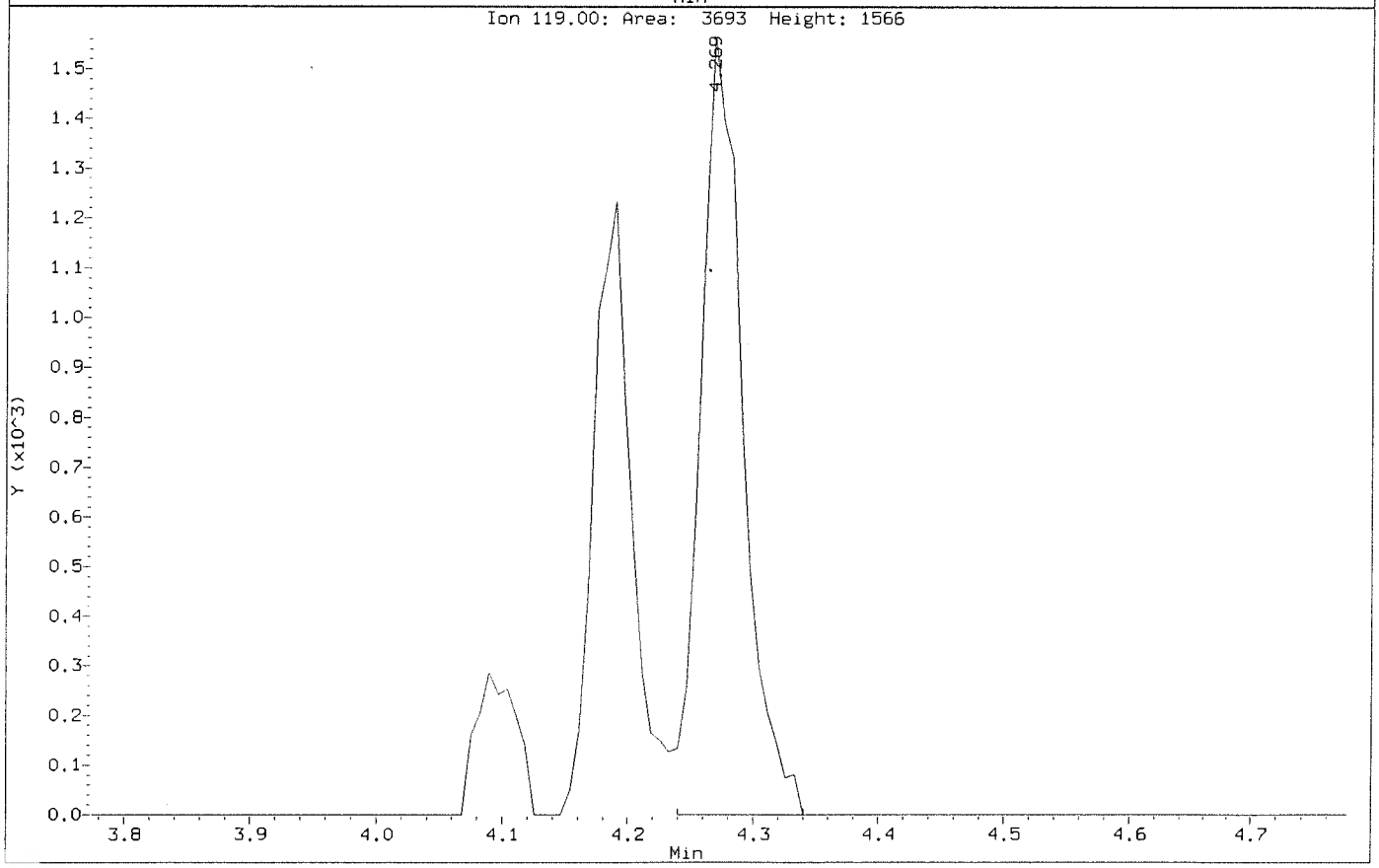




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Instrument: voa6.i
Client Sample ID: VSTD000.5

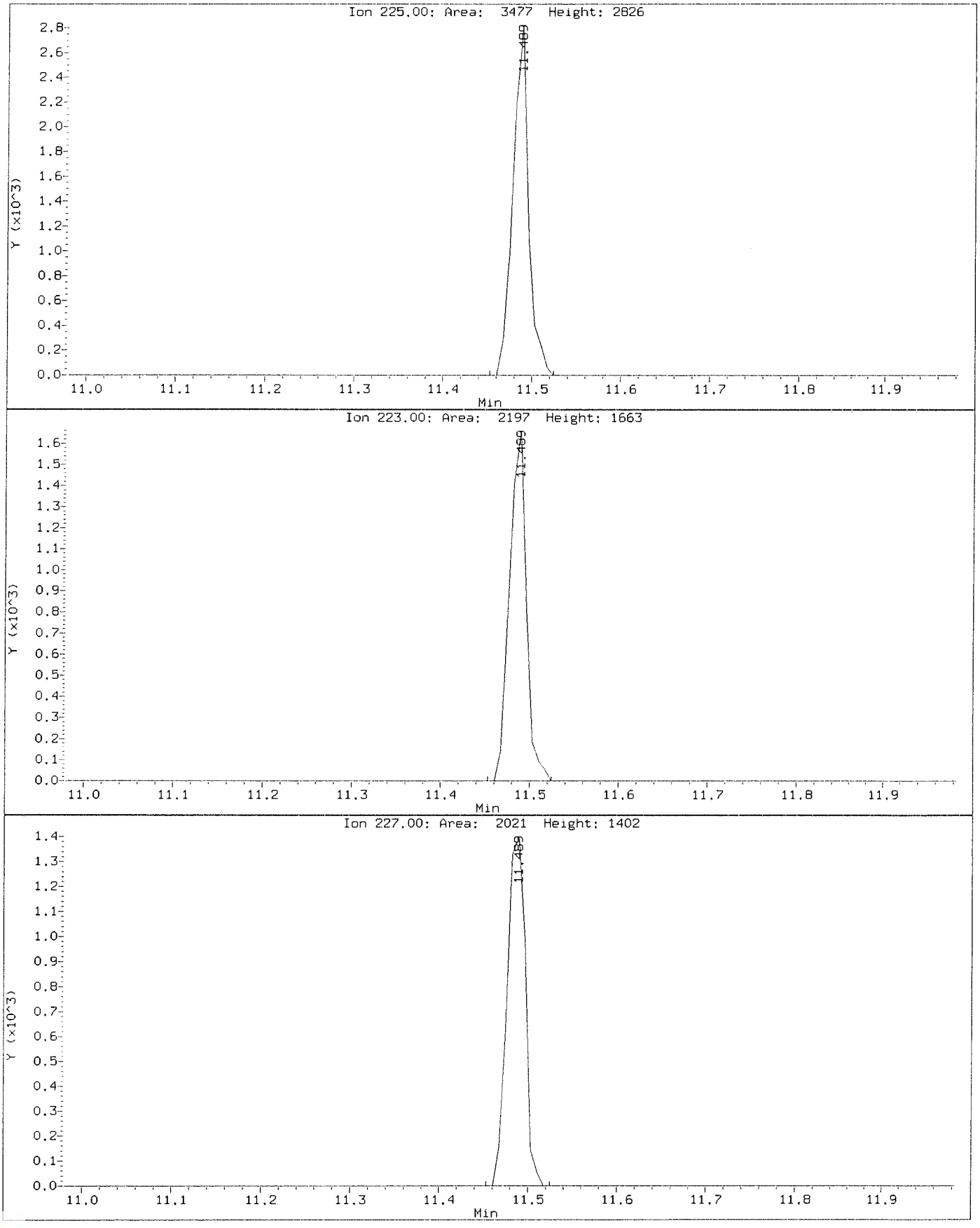
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





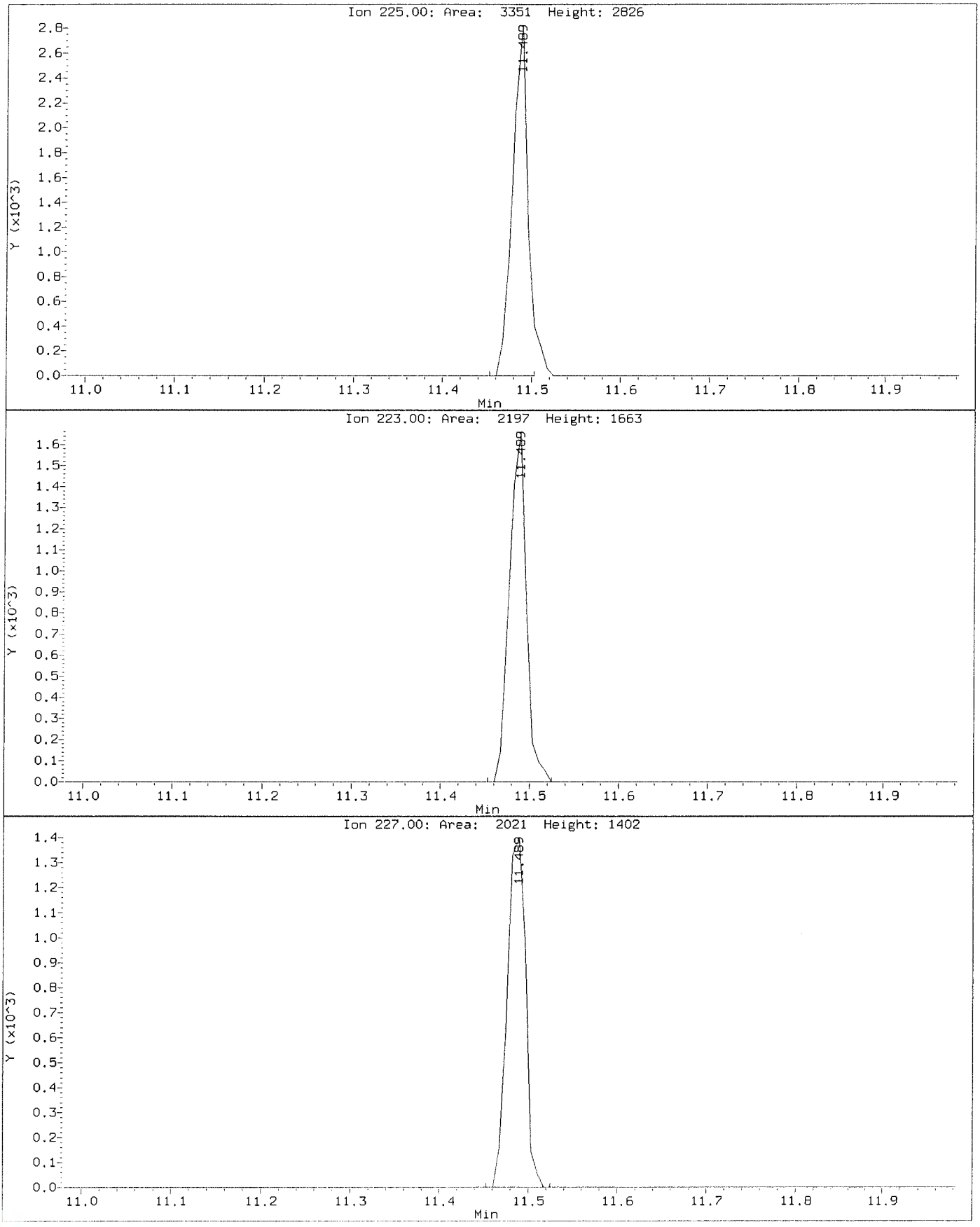
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



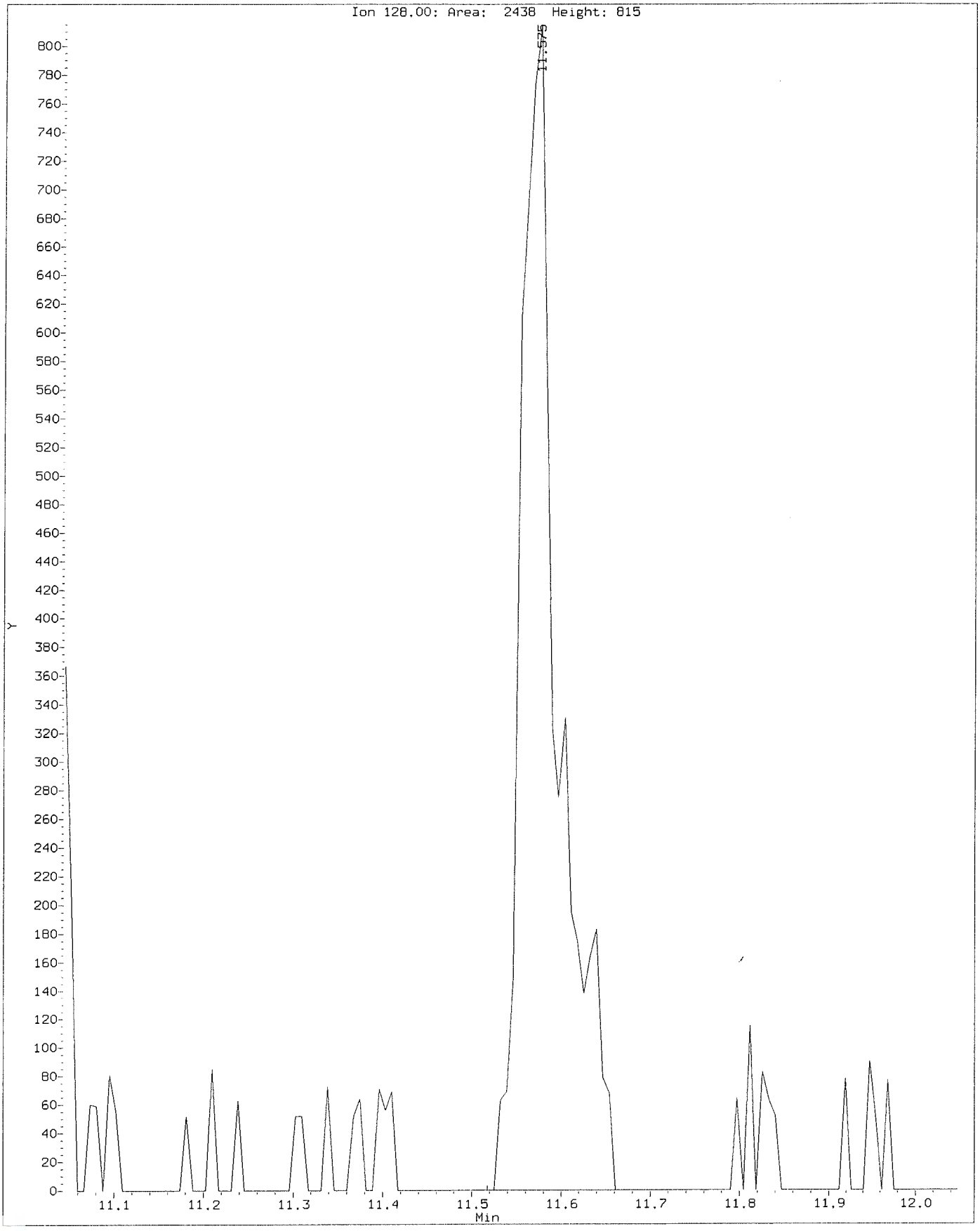
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



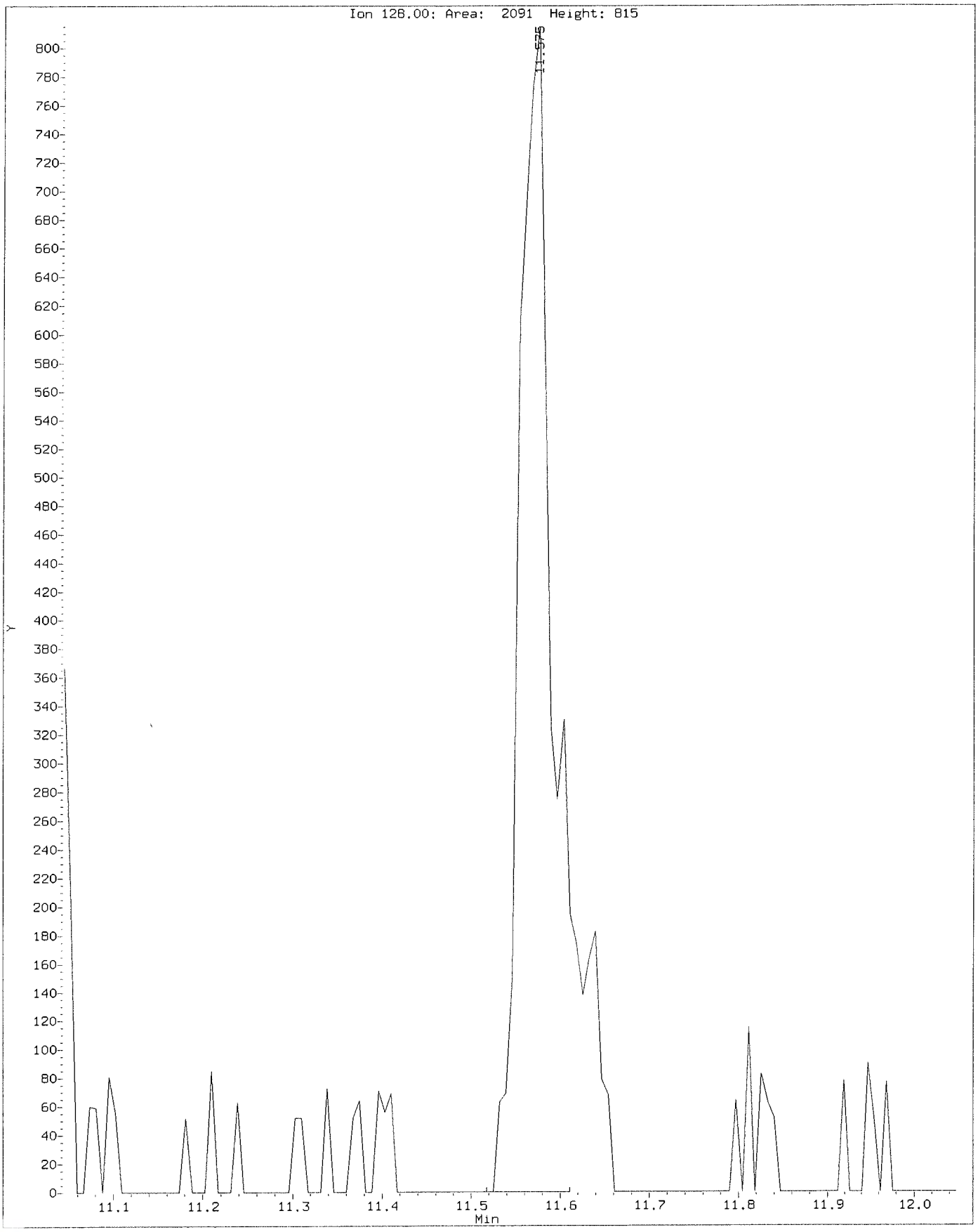
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D
Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 24-SEP-2020 12:46
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:58 Cal File: X092403.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

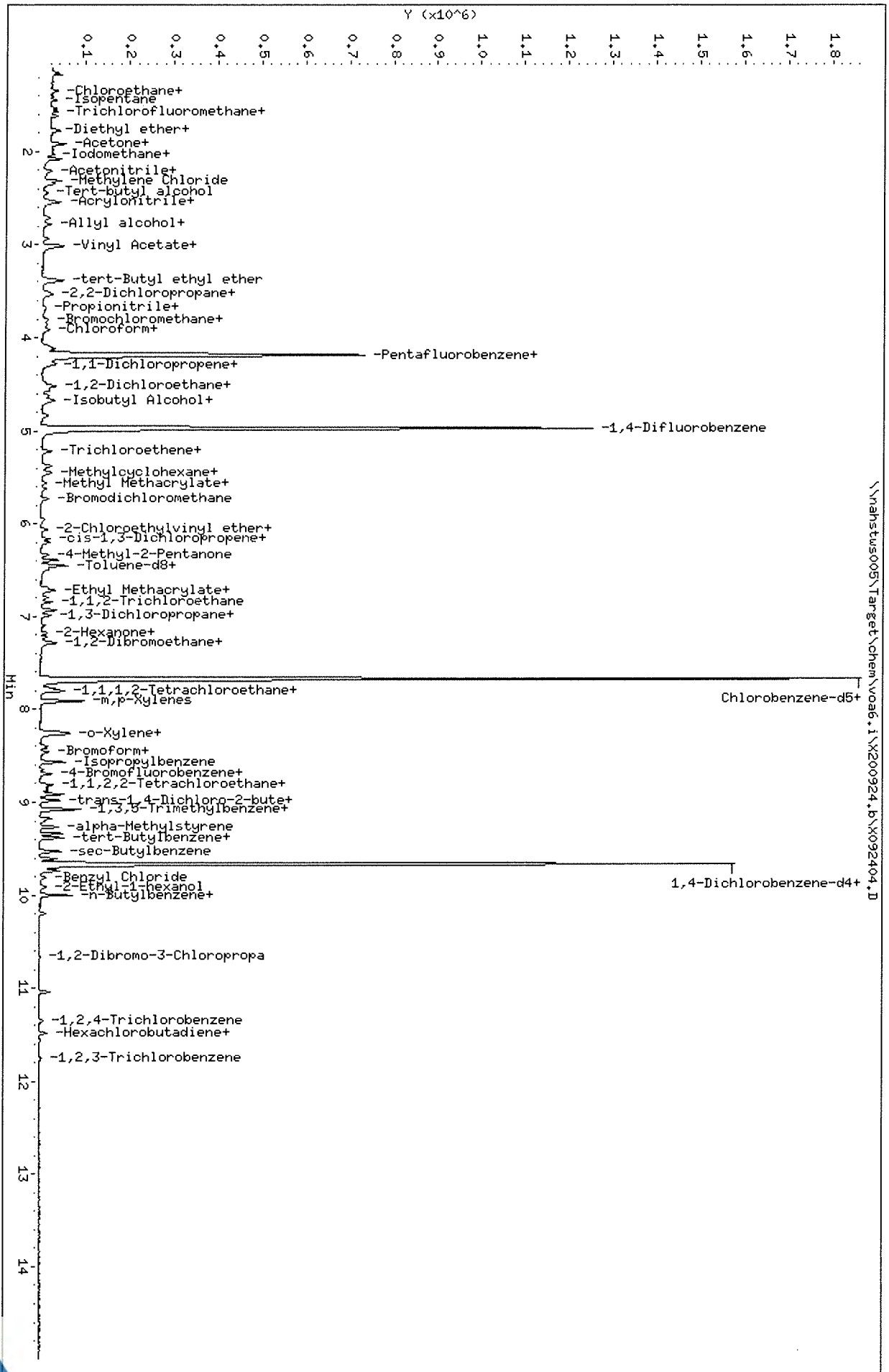
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	632214	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1010972	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	898139	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	383057	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	6507	1.00000	1.00(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	7341	1.00000	1.03(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	24343	1.00000	1.03(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	10018	1.00000	0.47(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	7049	1.00000	1.13(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	11235	1.00000	1.15(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8149	1.00000	1.20(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	6343	1.00000	1.19(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	15395	1.00000	1.16(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	6814	1.00000	1.19(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	9757	1.00000	1.04(aM)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1757	1.00000	1.18(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6651	1.00000	1.18(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2921	1.00000	2.35(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	26280	1.00000	1.15(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	597	1.00000	1.29(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	7429	1.00000	1.19(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	12334	1.00000	1.15(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D Page 2
Report Date: 13-Oct-2020 11:23

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)	10910	1.00000	1.25(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	8653	1.00000	1.15(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	26381	1.00000	1.16(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	14475	1.00000	1.17(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	13486	1.00000	1.23(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	13966	1.00000	1.14(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	11616	1.00000	1.17(a)
24 2-Butanone	43	3.616	3.616	(0.863)	4126	2.00000	1.78(a)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	23708	1.00000	1.19(a)
52 2-Hexanone	43	7.098	7.098	(0.925)	7700	2.00000	1.93(a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	27312	1.00000	1.20(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	25331	1.00000	1.11(a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	13653	2.00000	2.16(a)
10 Acetone	43	1.976	1.976	(0.472)	6768	2.00000	(a)
37 Benzene	78	4.519	4.519	(0.909)	34840	1.00000	1.20(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	9112	1.00000	1.17(a)
29 Bromochloromethane	128	3.803	3.803	(0.908)	4791	1.00000	1.21(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	10203	1.00000	1.11(a)
66 Bromoform	173	8.416	8.416	(1.097)	4274	1.00000	1.08(aM)
6 Bromomethane	94	1.346	1.346	(0.321)	7731	1.00000	1.28(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	46459	2.00000	2.36(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	8300	1.00000	1.02(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	22145	1.00000	1.21(a)
7 Chloroethane	64	1.410	1.410	(0.337)	5632	1.00000	1.13(a)
28 Chloroform	83	3.917	3.917	(0.935)	14431	1.00000	1.17(a)
3 Chloromethane	50	1.081	1.081	(0.258)	8974	1.00000	1.03(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	9071	1.00000	1.17(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	12704	1.00000	1.09(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	7560	1.00000	1.17(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	5100	1.00000	1.14(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	6629	1.00000	3.05(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	11569	1.00000	1.21(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	3302	1.00000	2.13(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	32898	1.00000	1.18(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	27318	2.00000	2.38(a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	9684	1.00000	0.71(a)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	22581	1.00000	1.14(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	37045	1.00000	1.13(a)
92 Naphthalene	128	11.560	11.560	(1.196)	3645	1.00000	1.02(a)
63 o-Xylene	106	8.251	8.251	(1.076)	13335	1.00000	1.19(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	30538	1.00000	1.14(a)
64 Styrene	104	8.265	8.265	(1.078)	21938	1.00000	1.14(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	22282	1.00000	1.18(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	6913	1.00000	1.21(a)
50 Toluene	91	6.453	6.453	(0.841)	34881	1.00000	1.19(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	7431	1.00000	1.13(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	11002	1.00000	1.13(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	8381	1.00000	1.15(a)
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	10504	1.00000	1.14(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	9143	1.00000	1.11(a)

QC Flag Legend

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

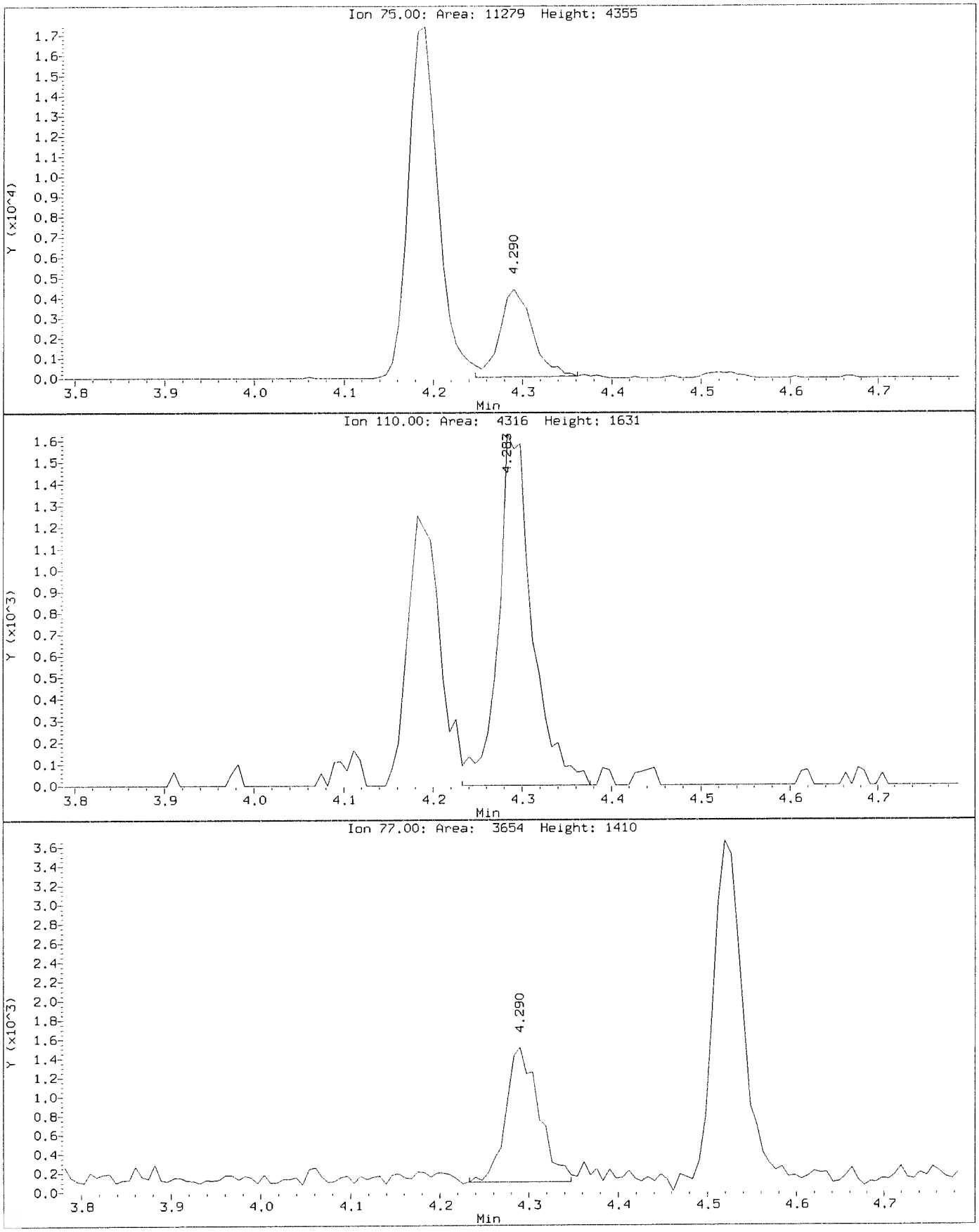


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Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

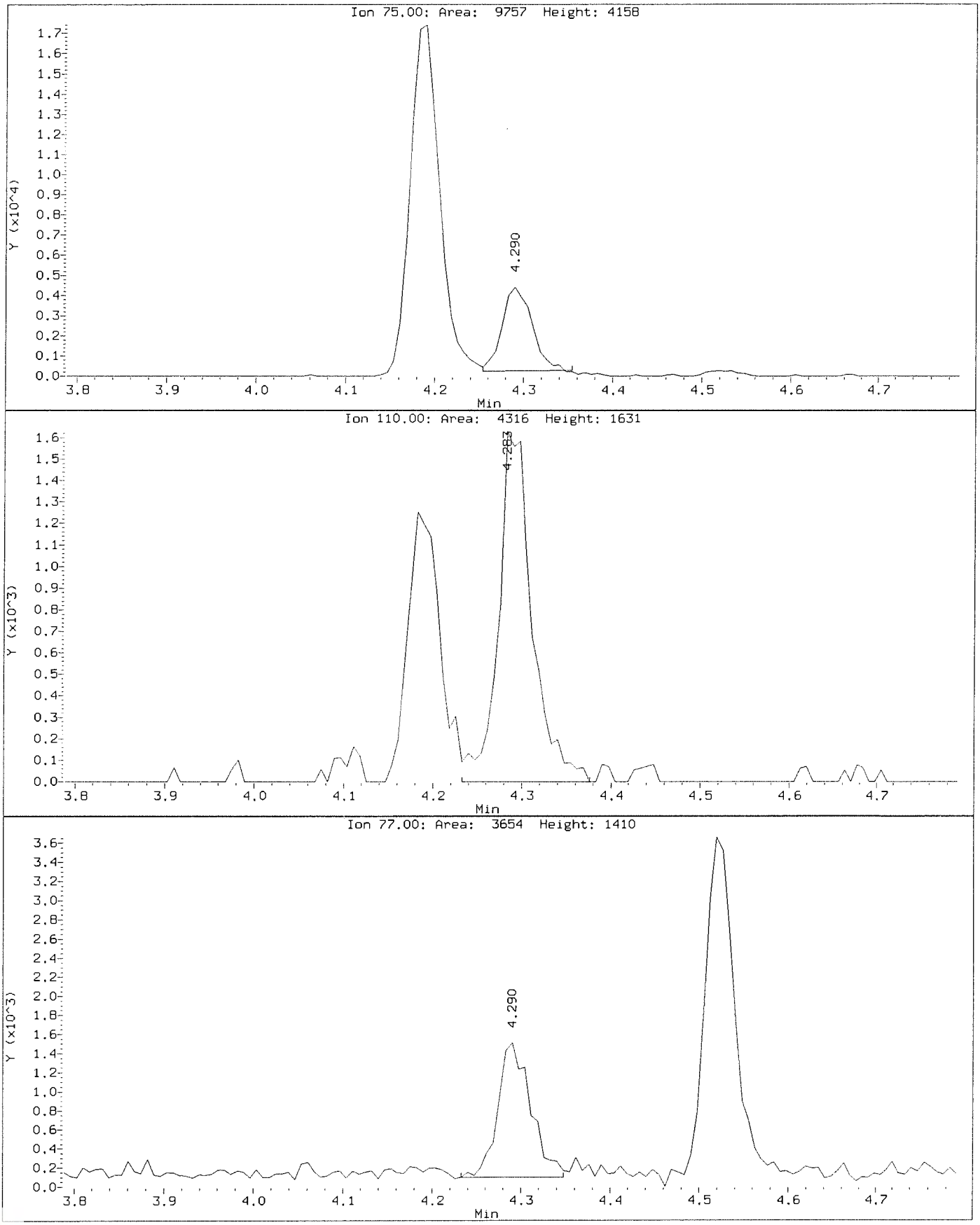
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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

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



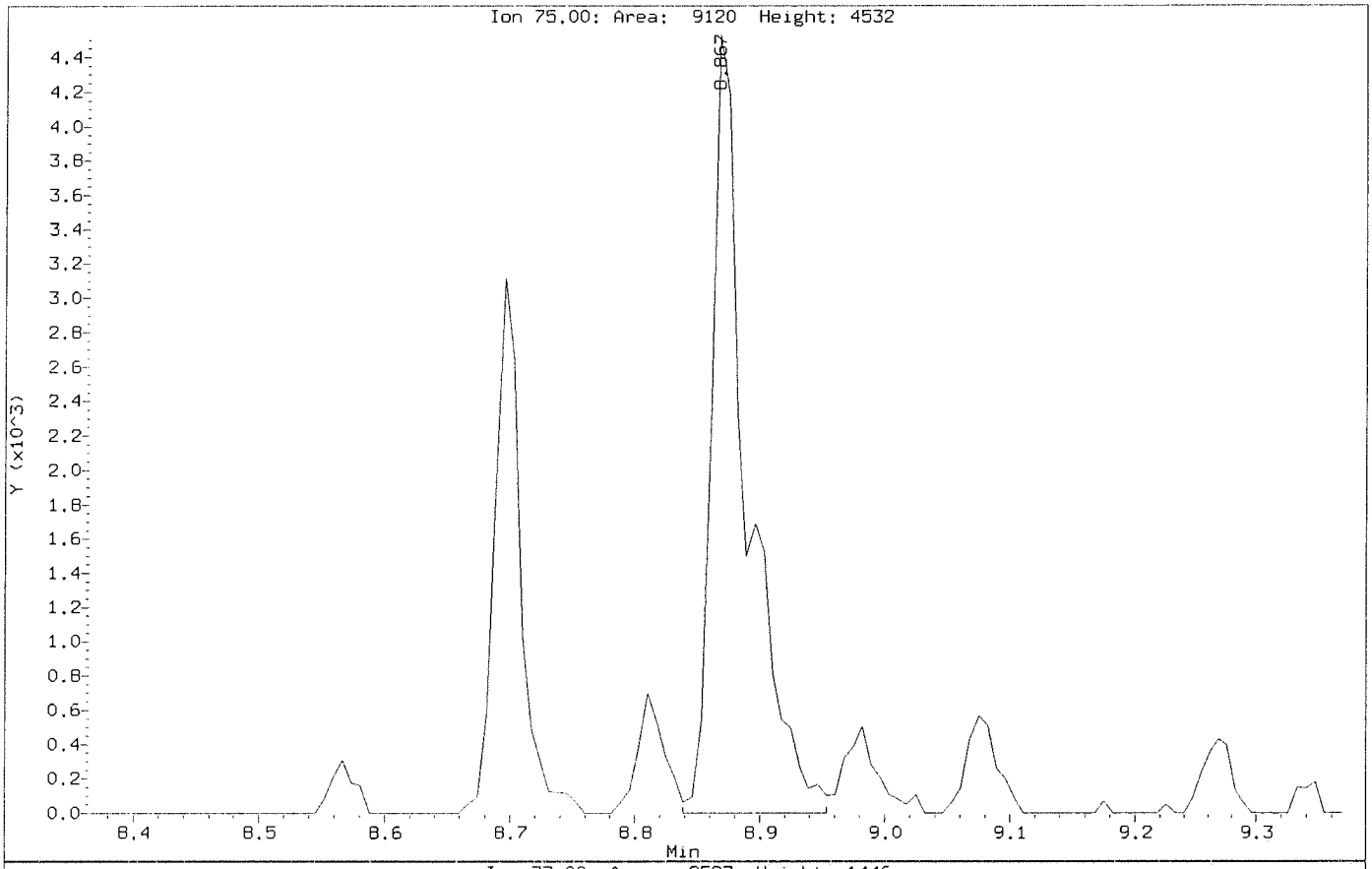
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Client Sample ID: VSTD001

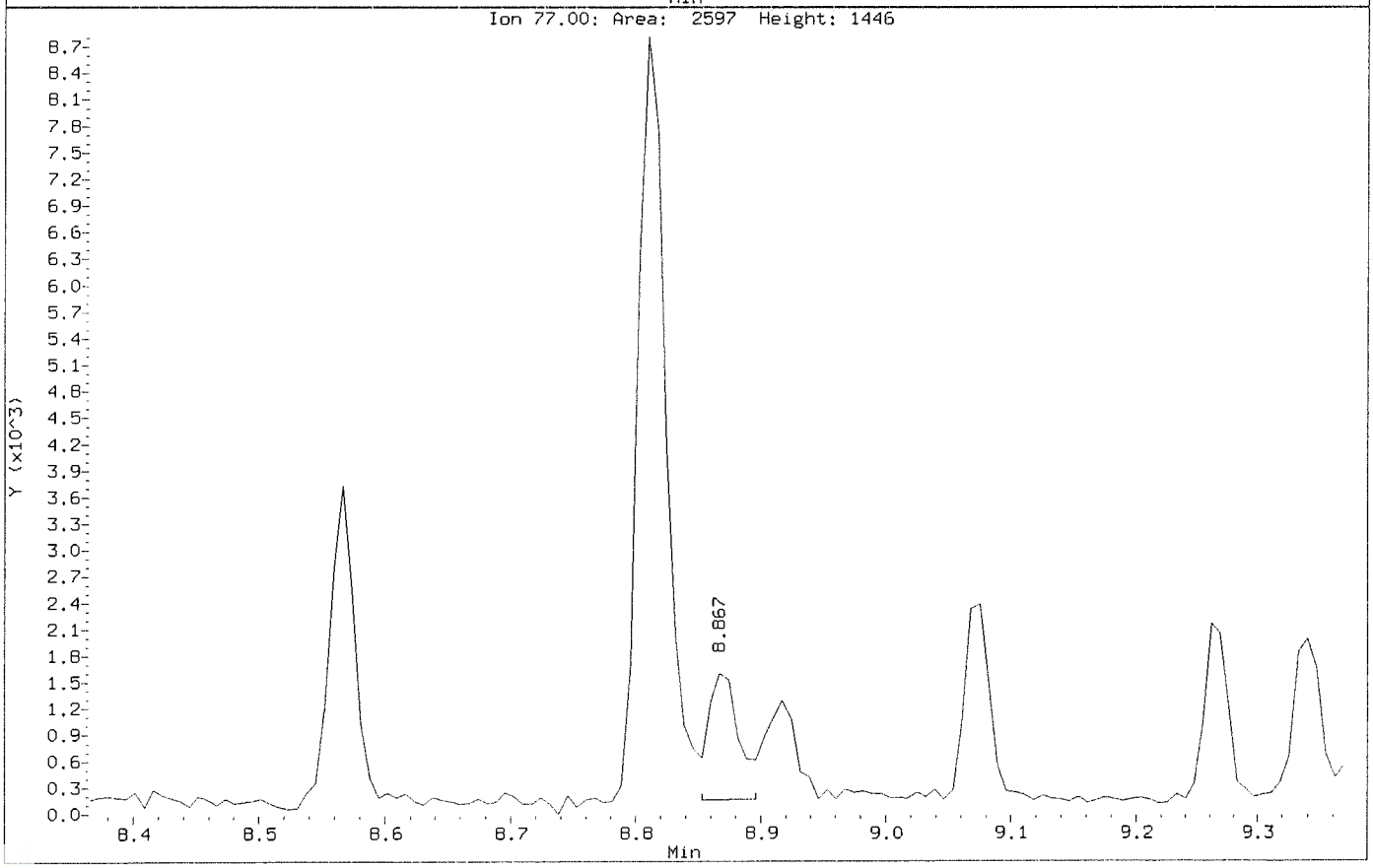
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

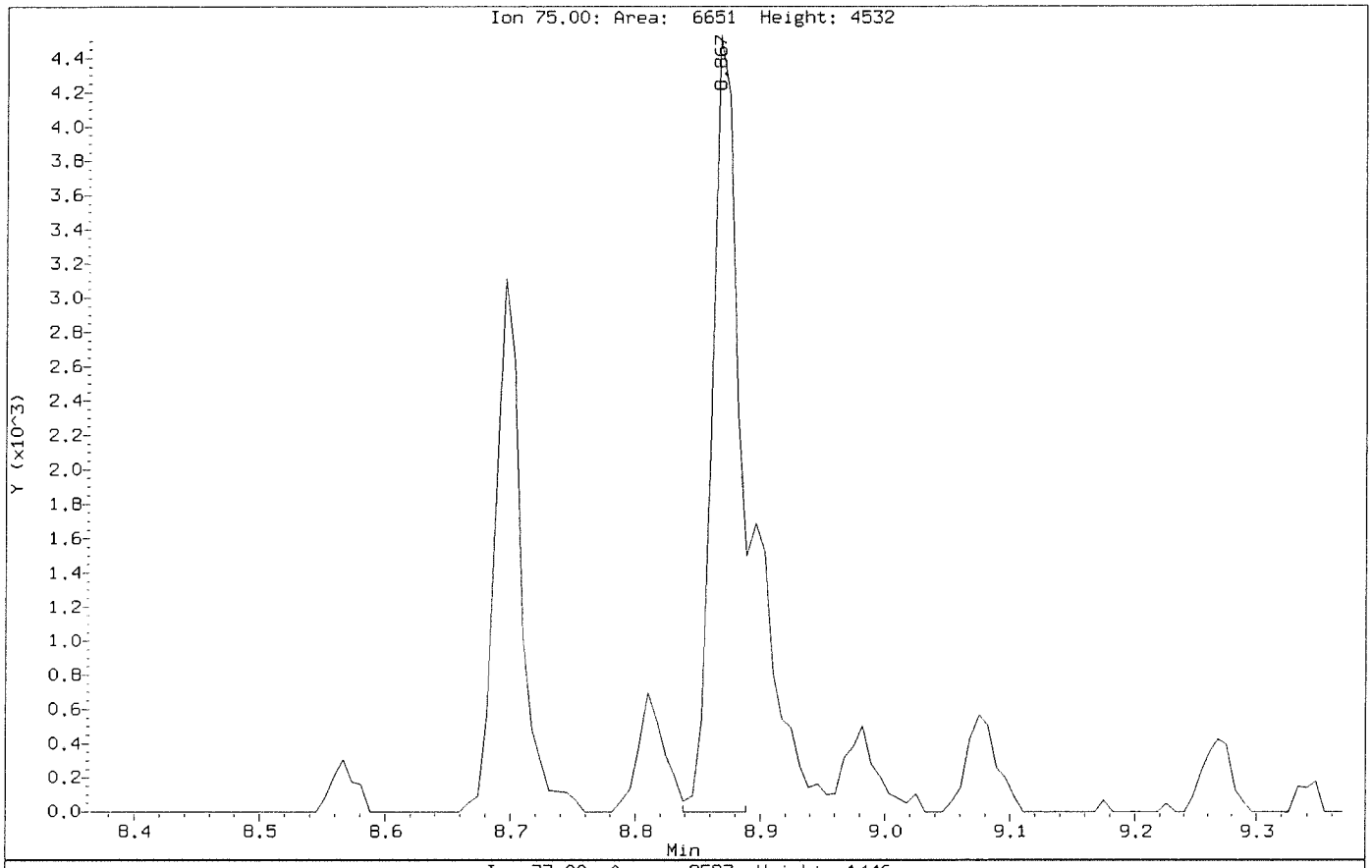
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

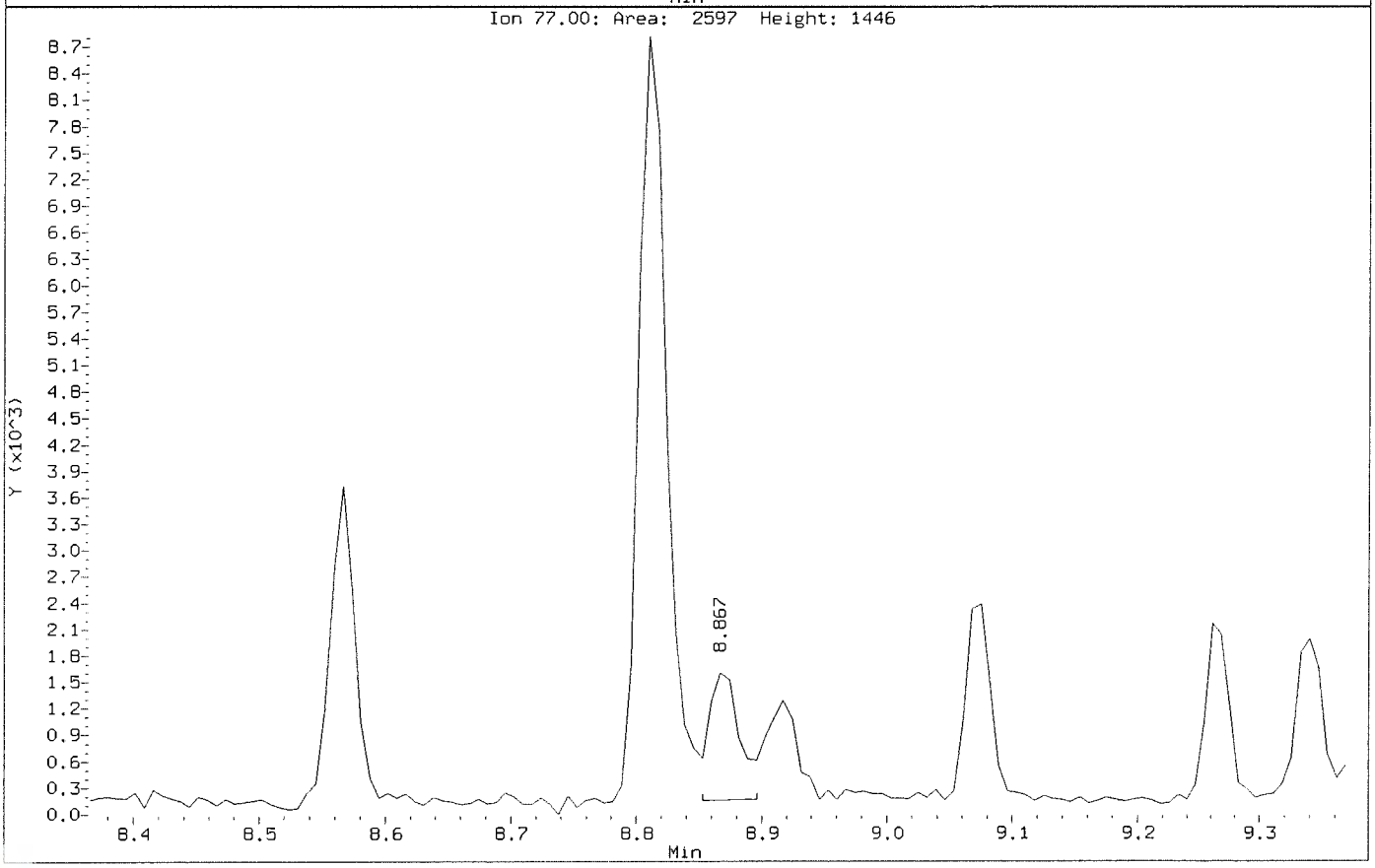




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Instrument: voa6.i
Client Sample ID: VSTD001

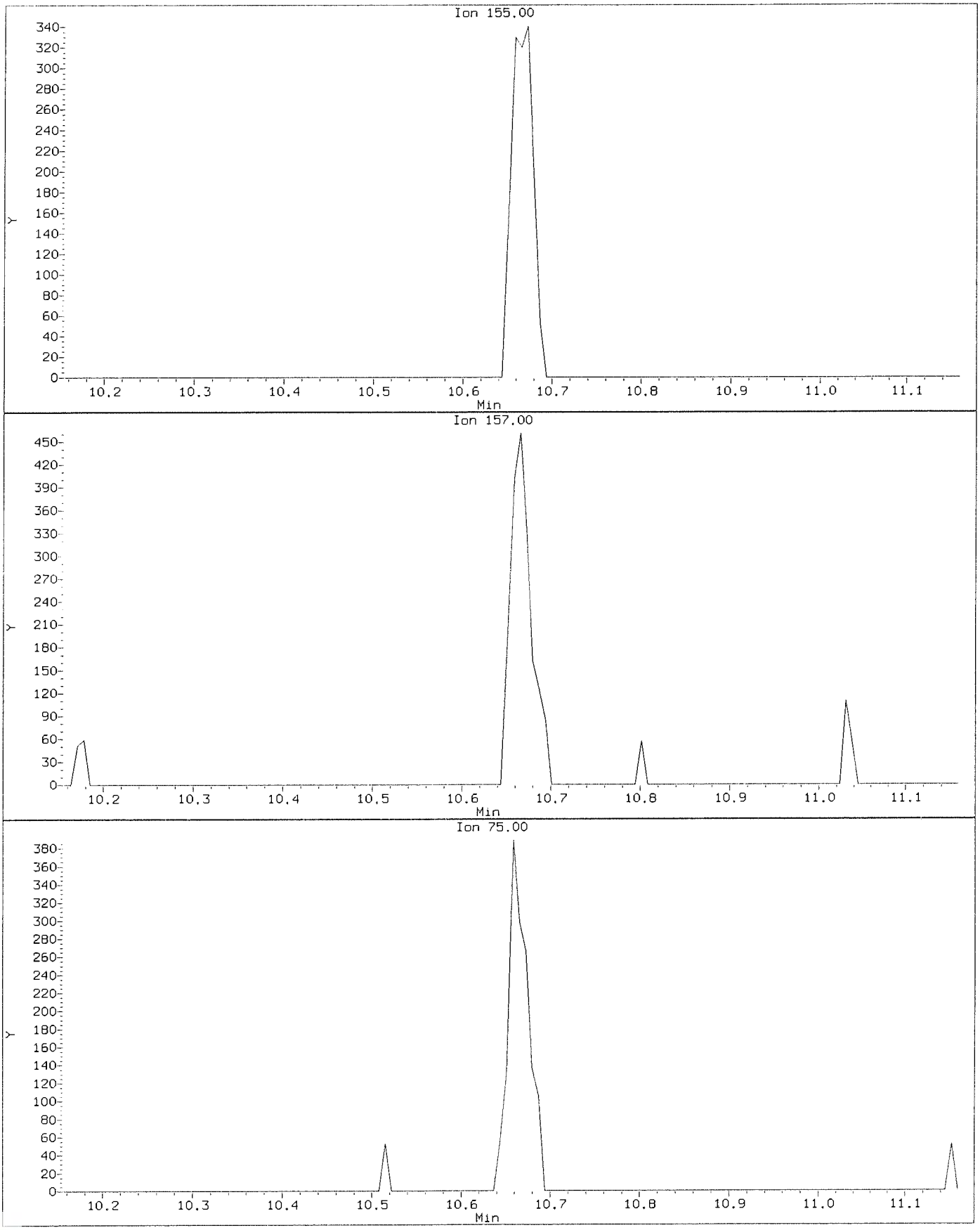
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





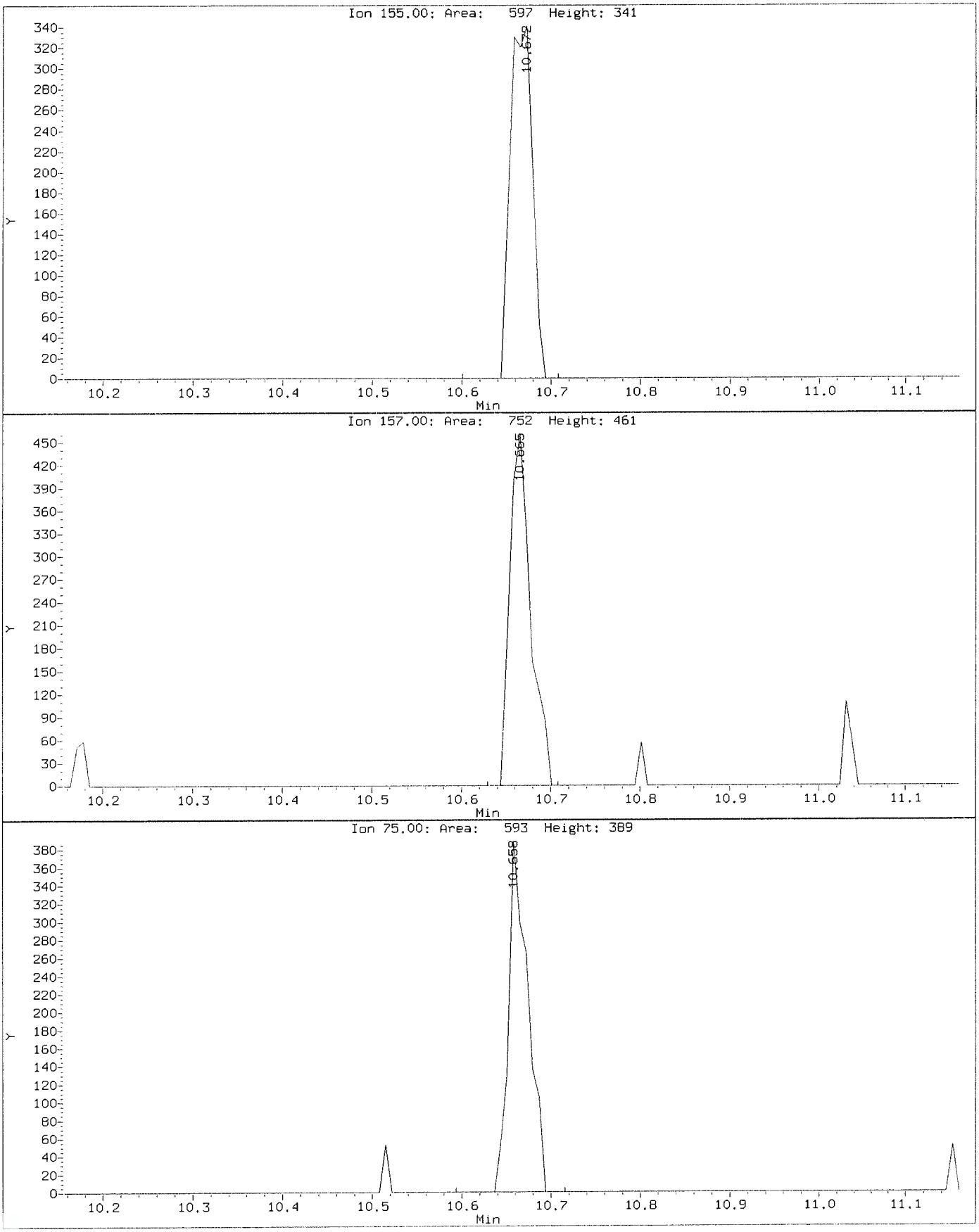
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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

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



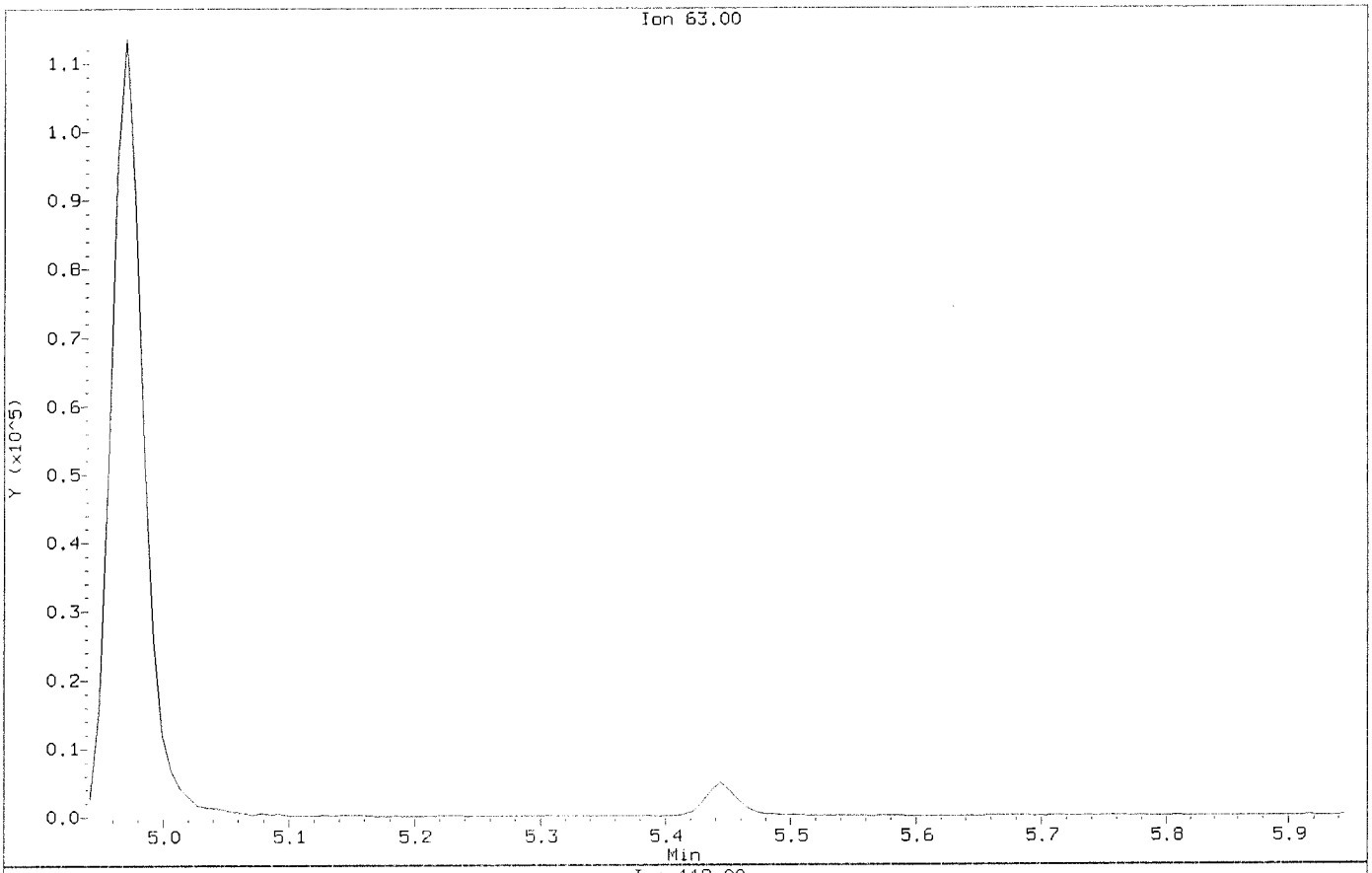
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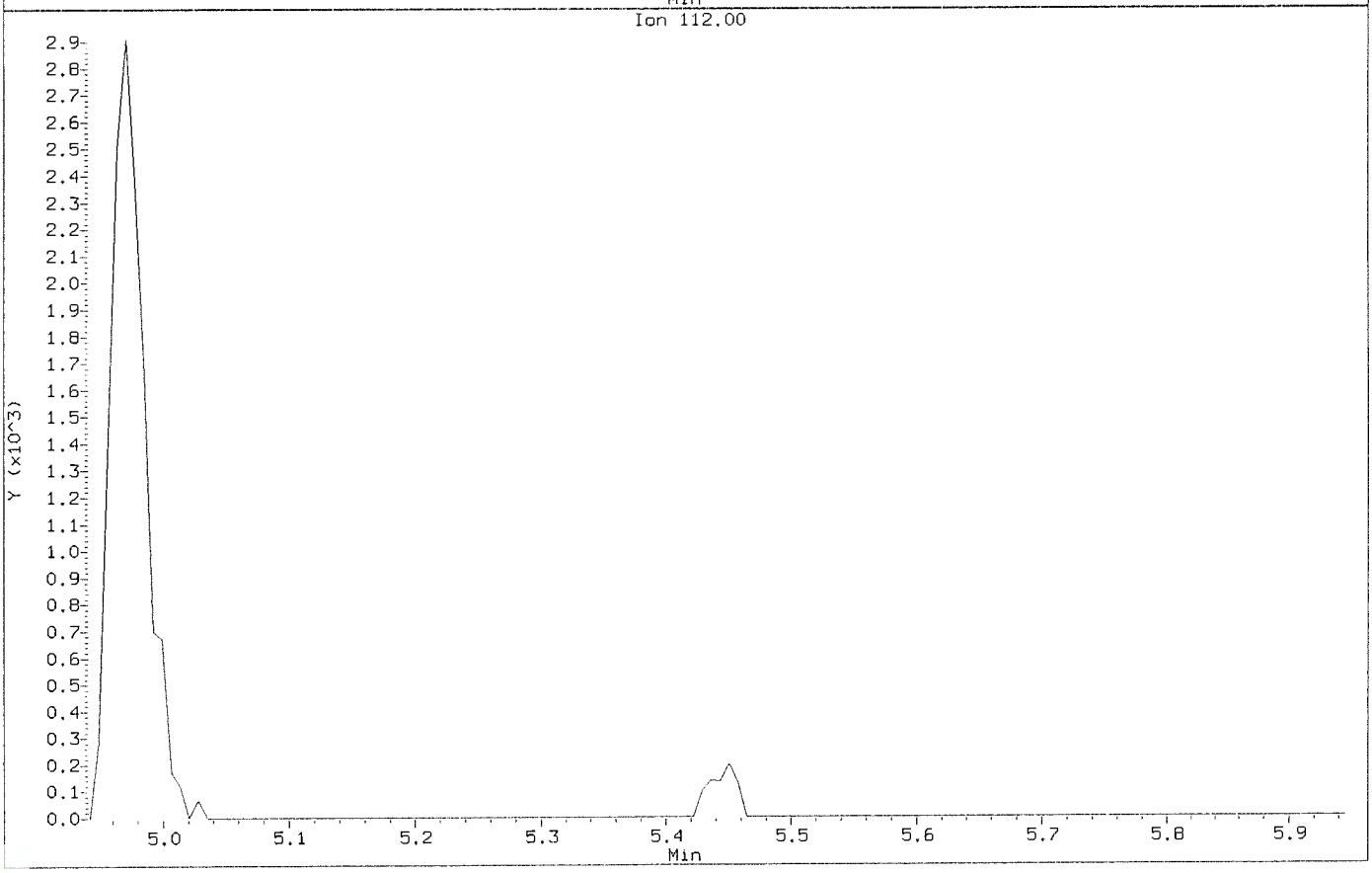
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

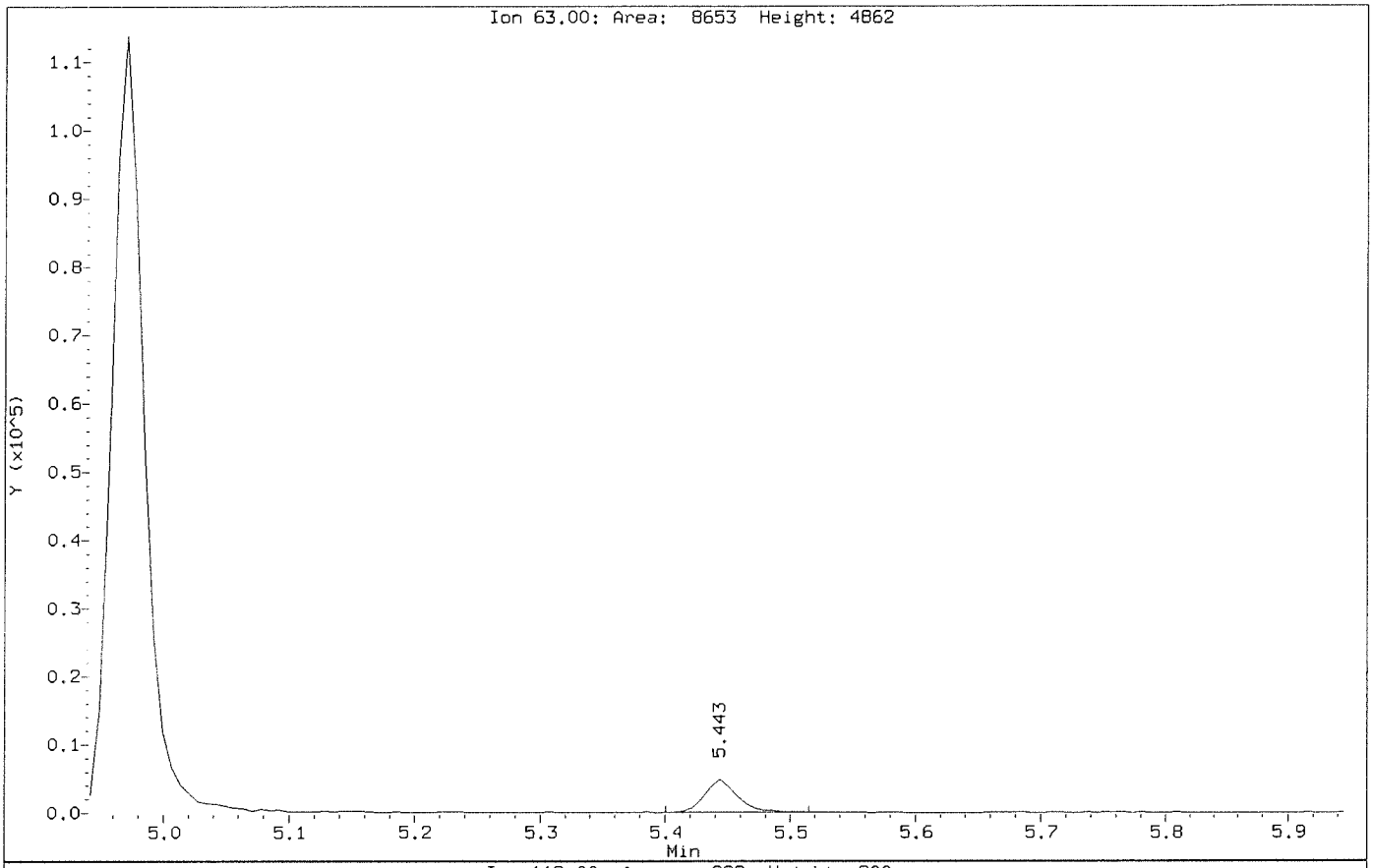
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

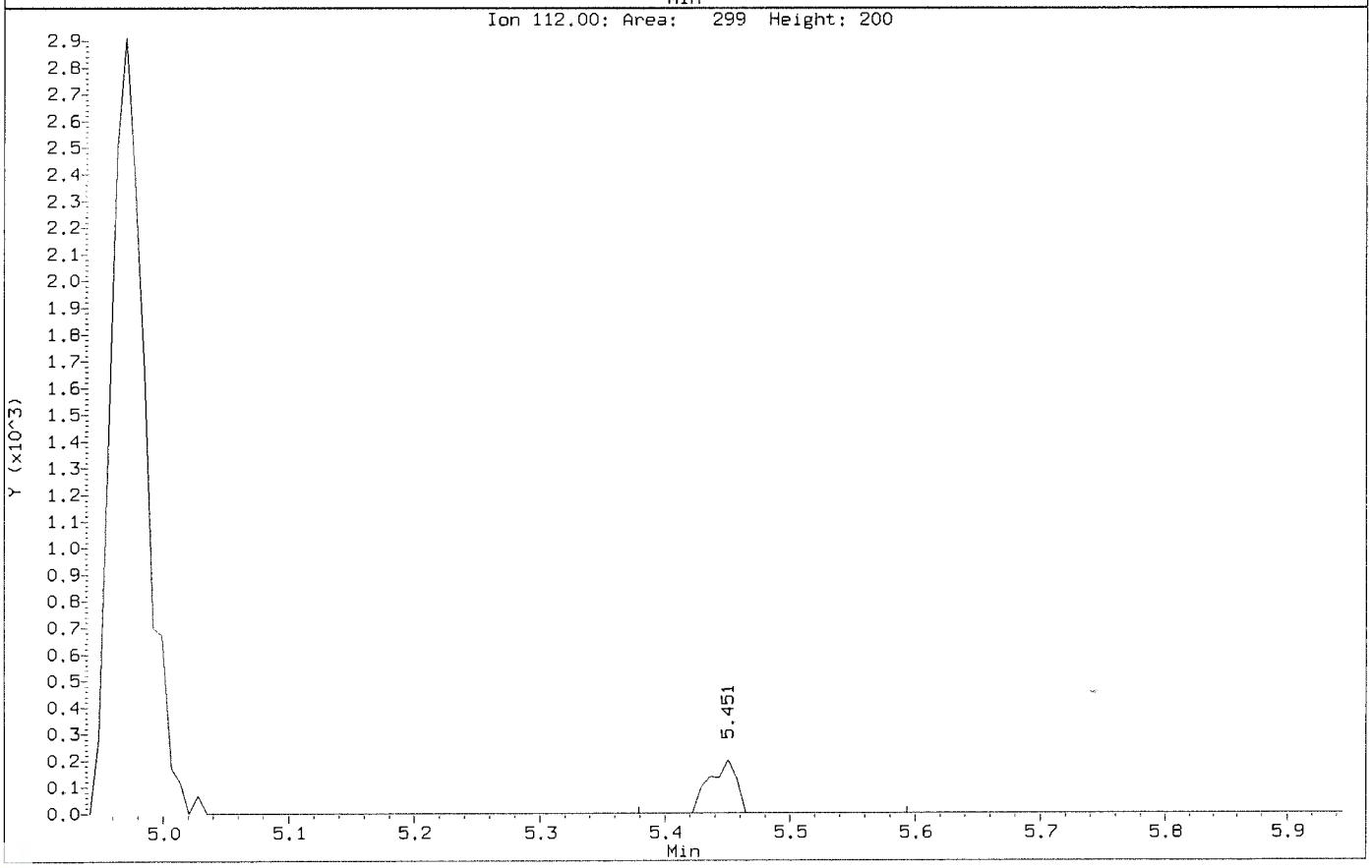




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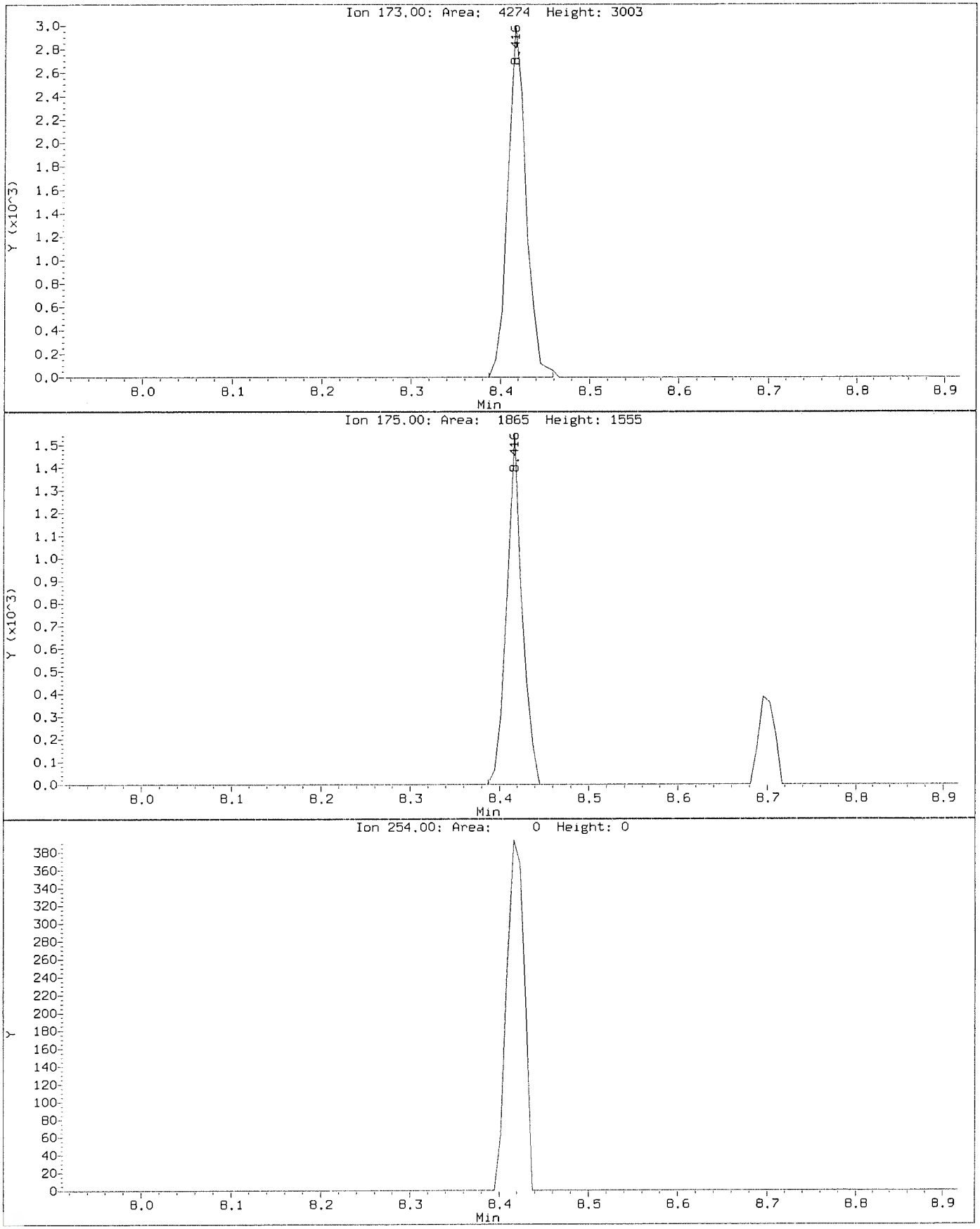
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





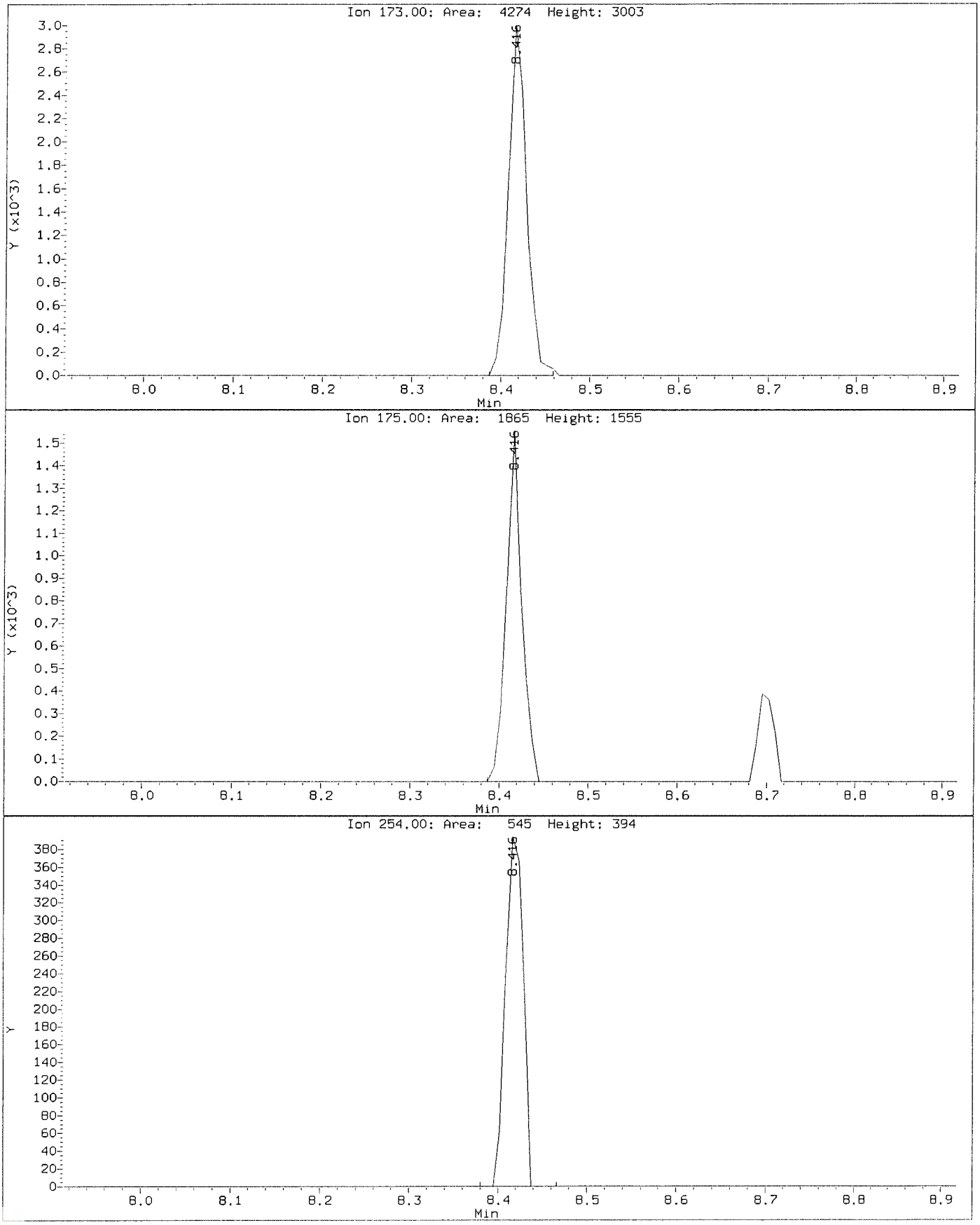
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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2



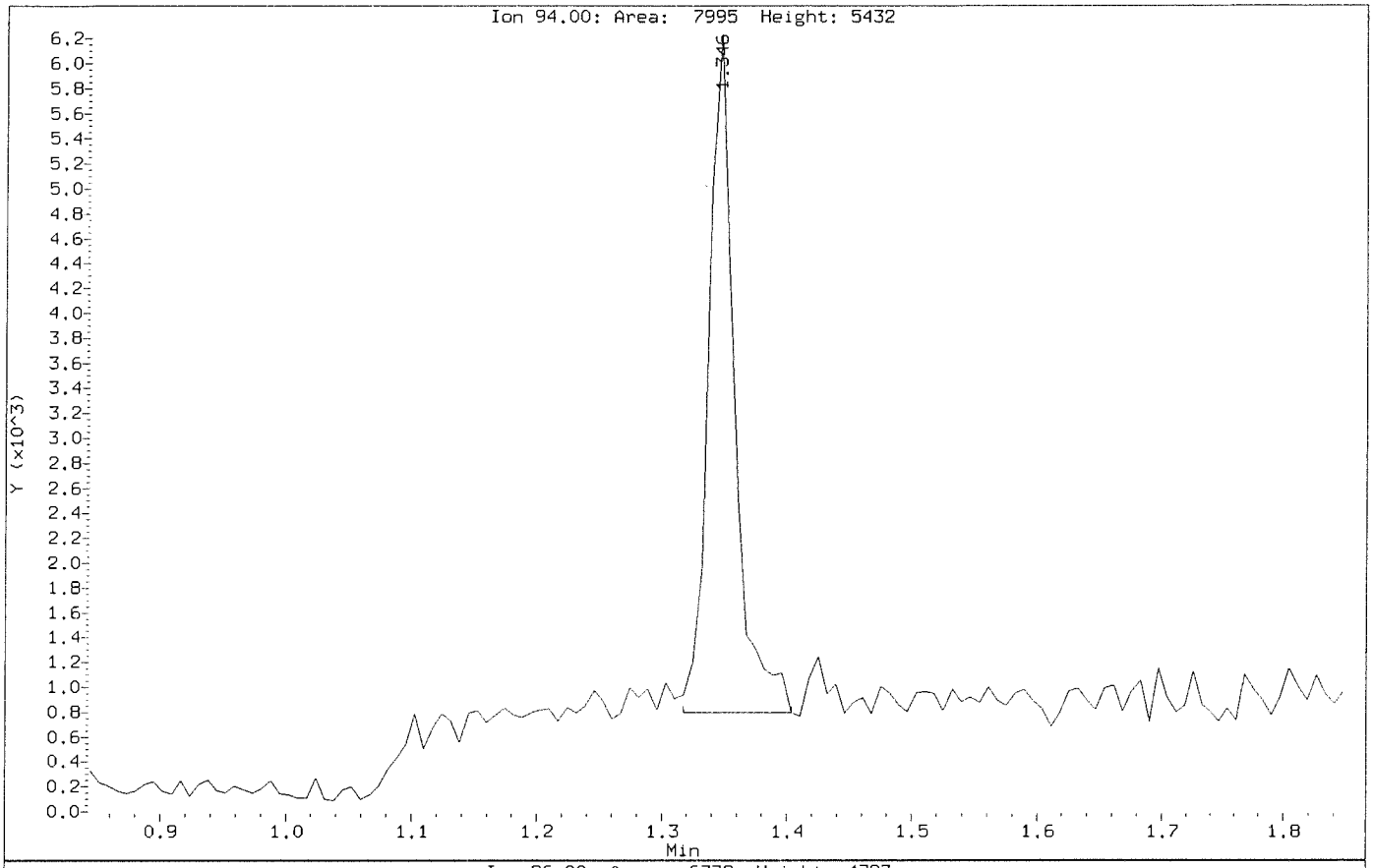
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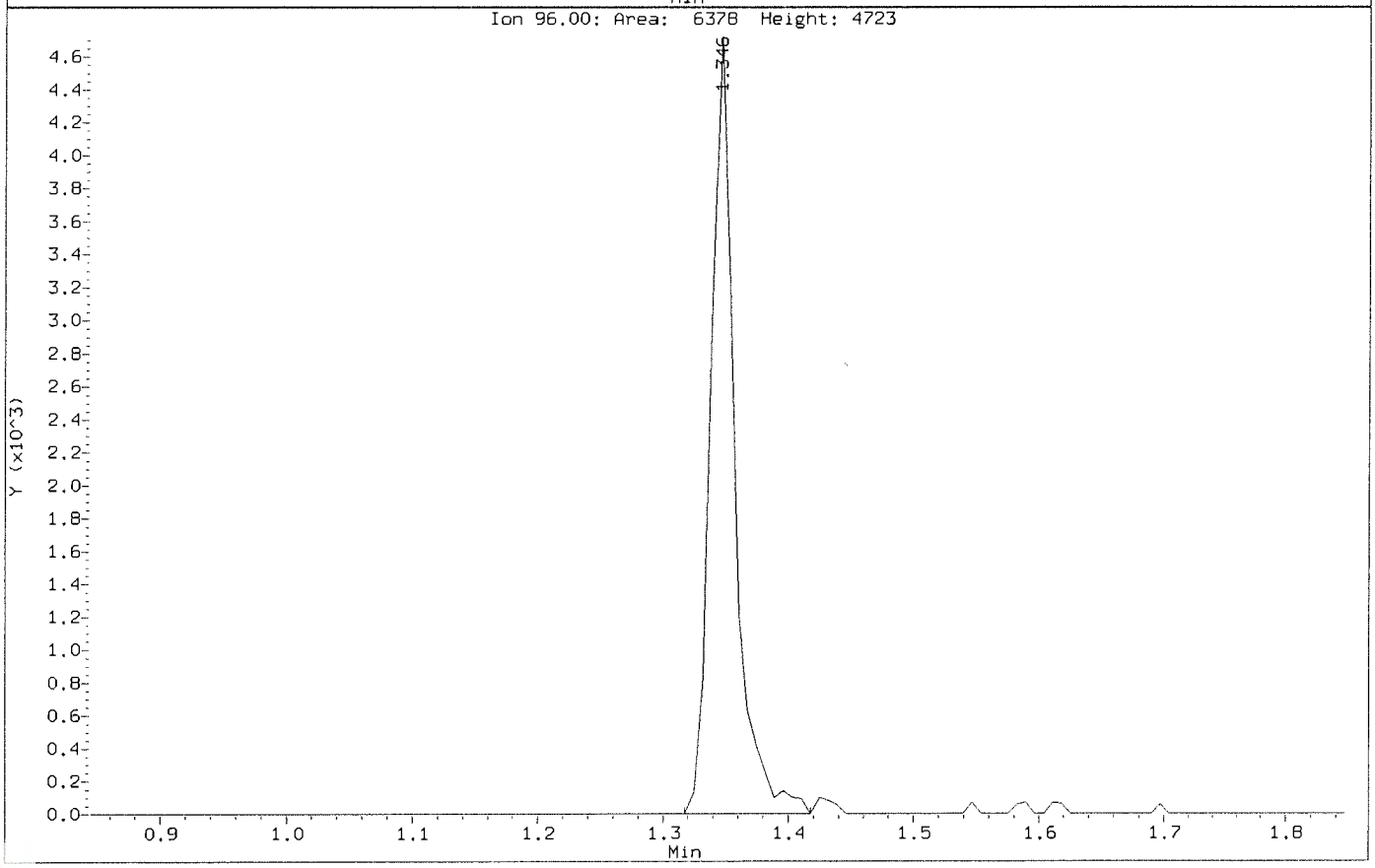
Compound: Bromoform
CAS Number: 75-25-2



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092404.D
Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

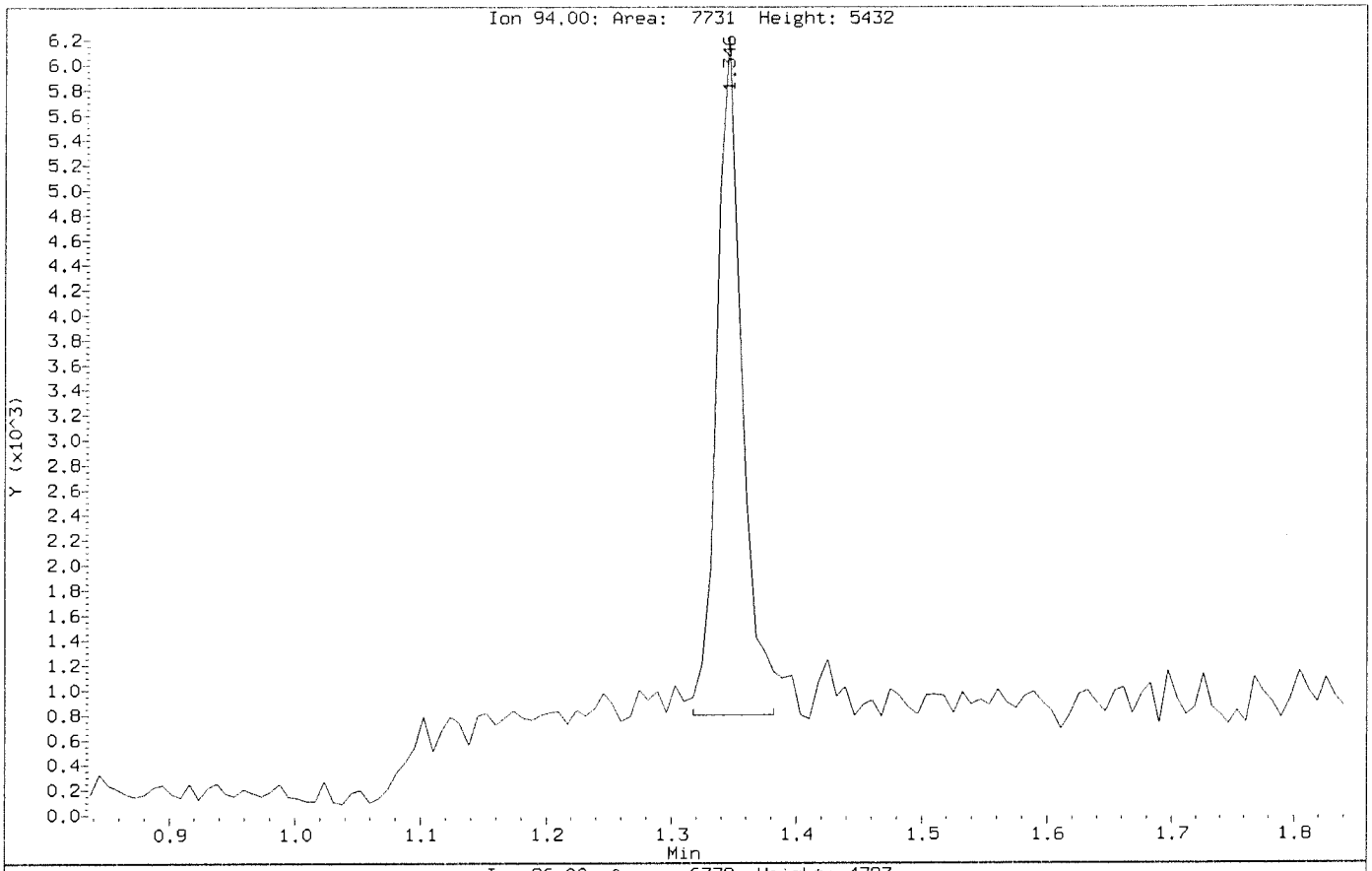
Compound: Bromomethane
CAS Number: 74-83-9

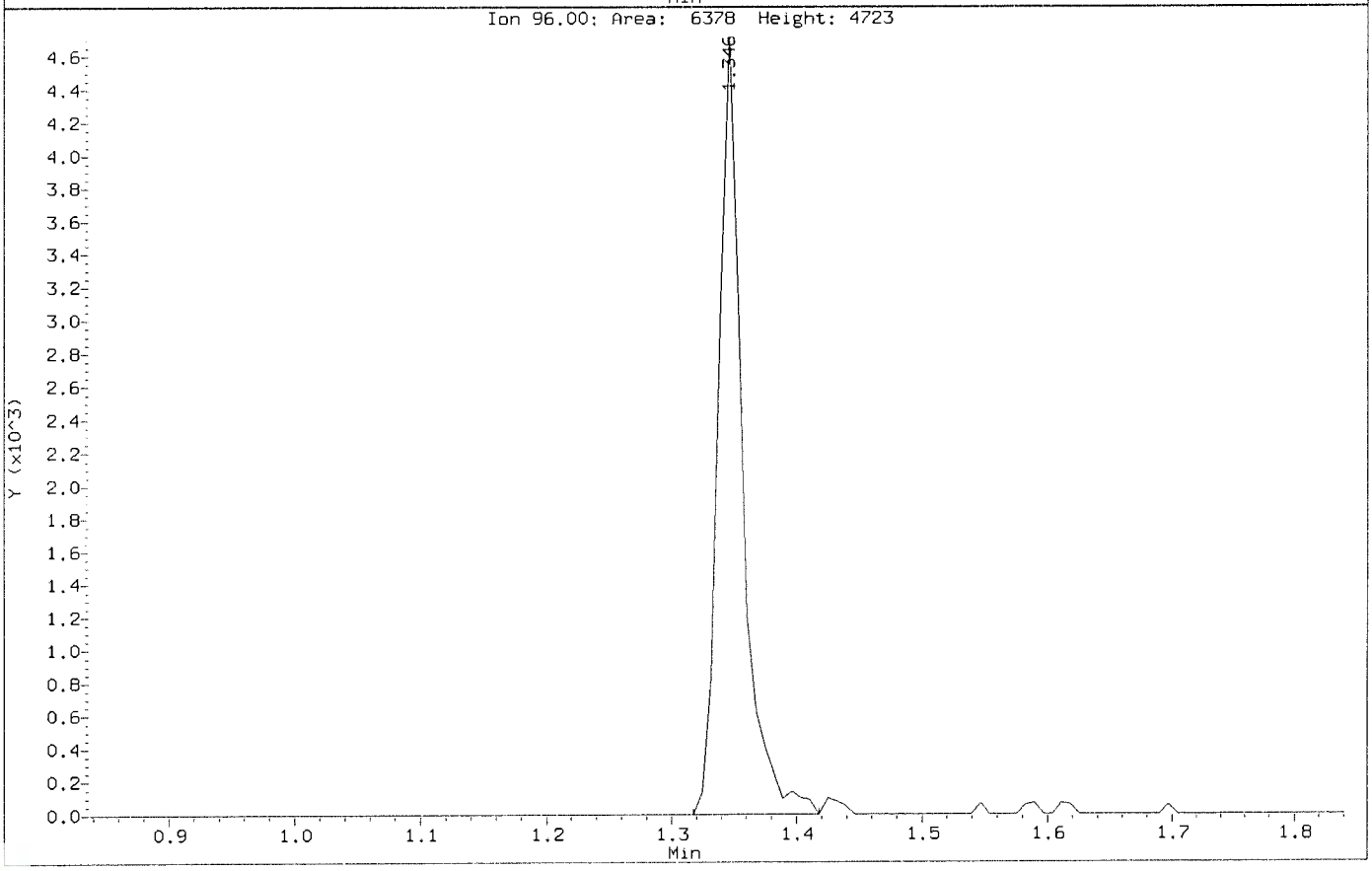




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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

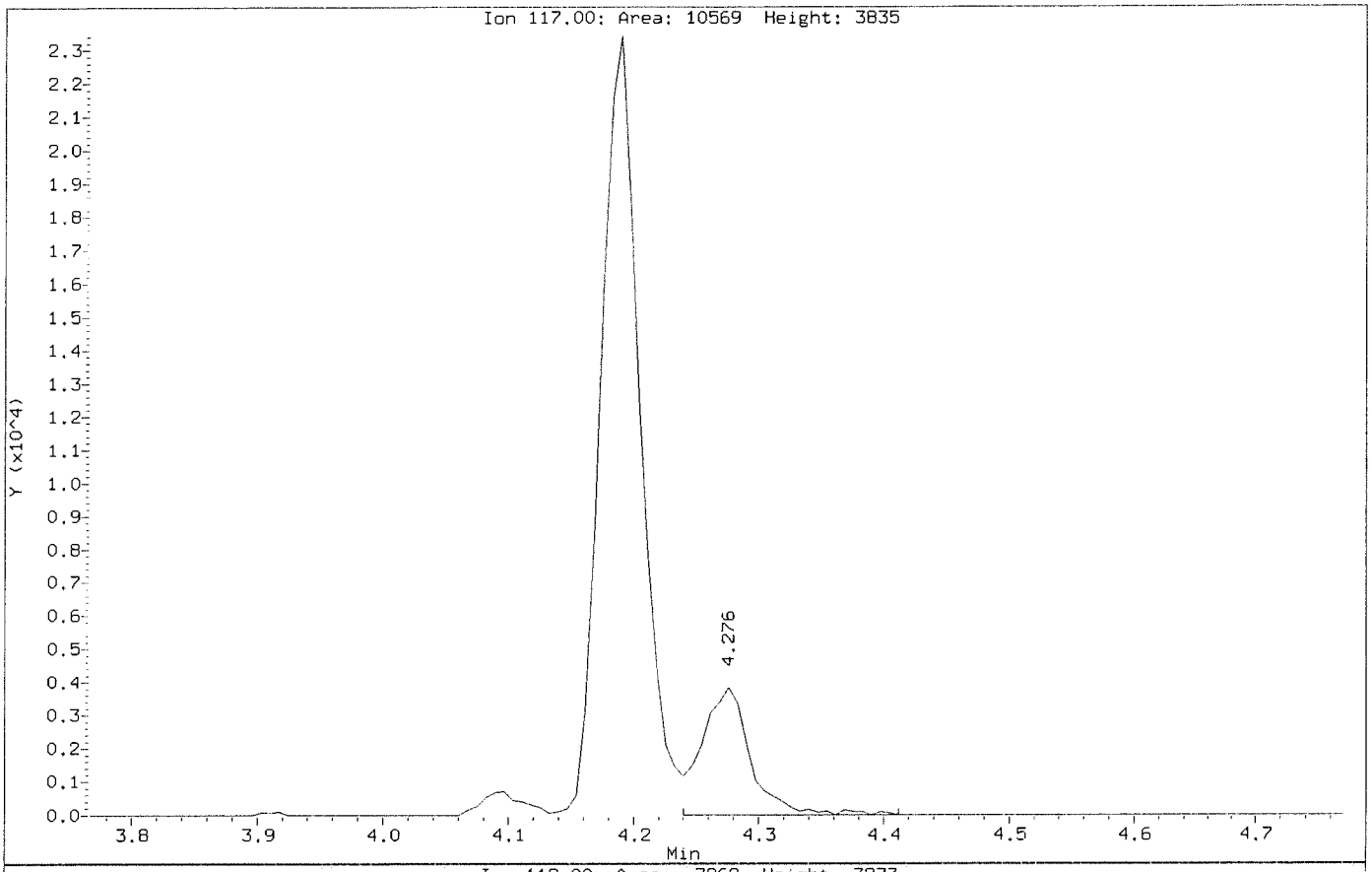
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CAS Number: 74-83-9

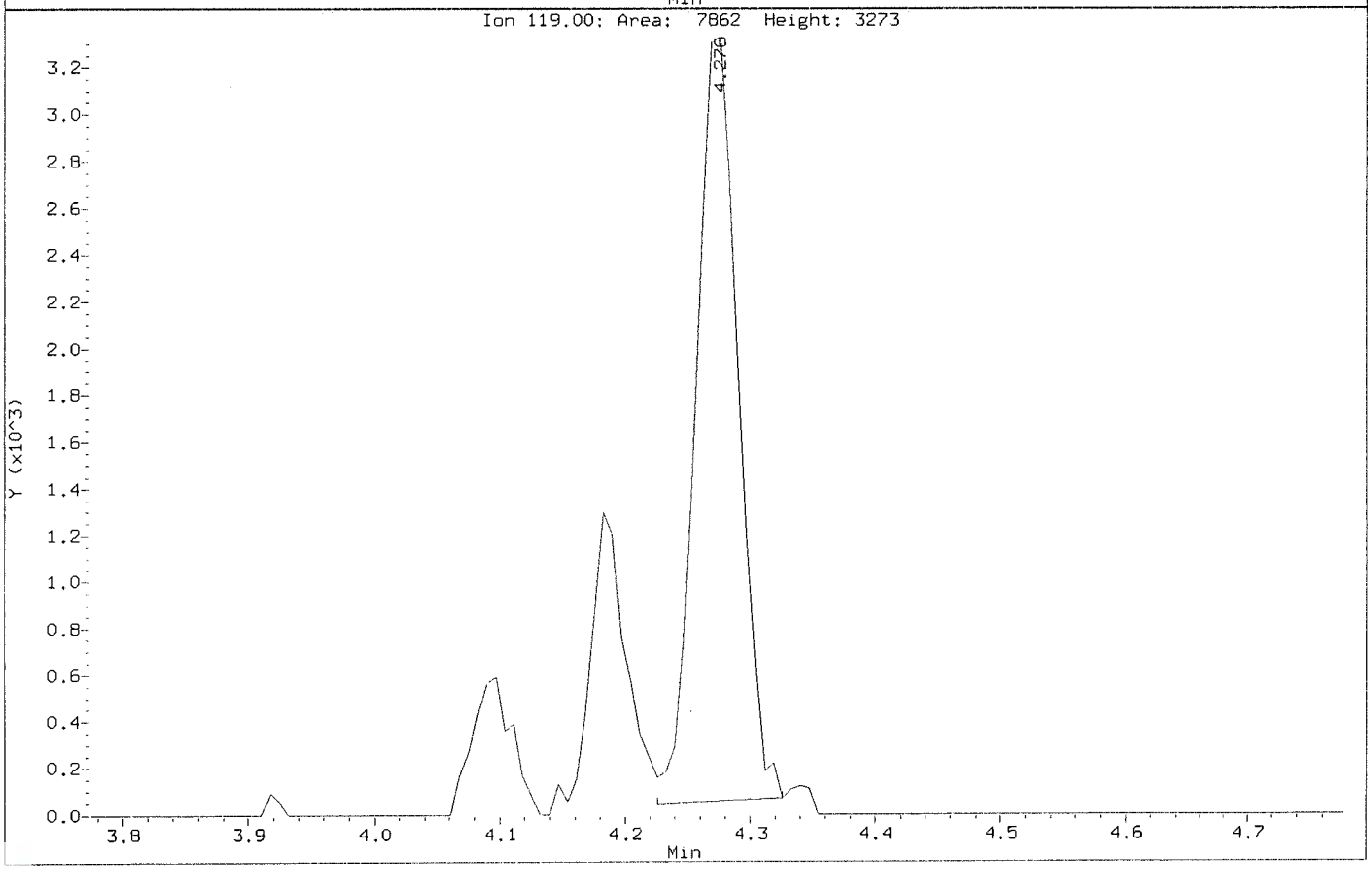




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Instrument: voa6.i
Client Sample ID: VSTD001

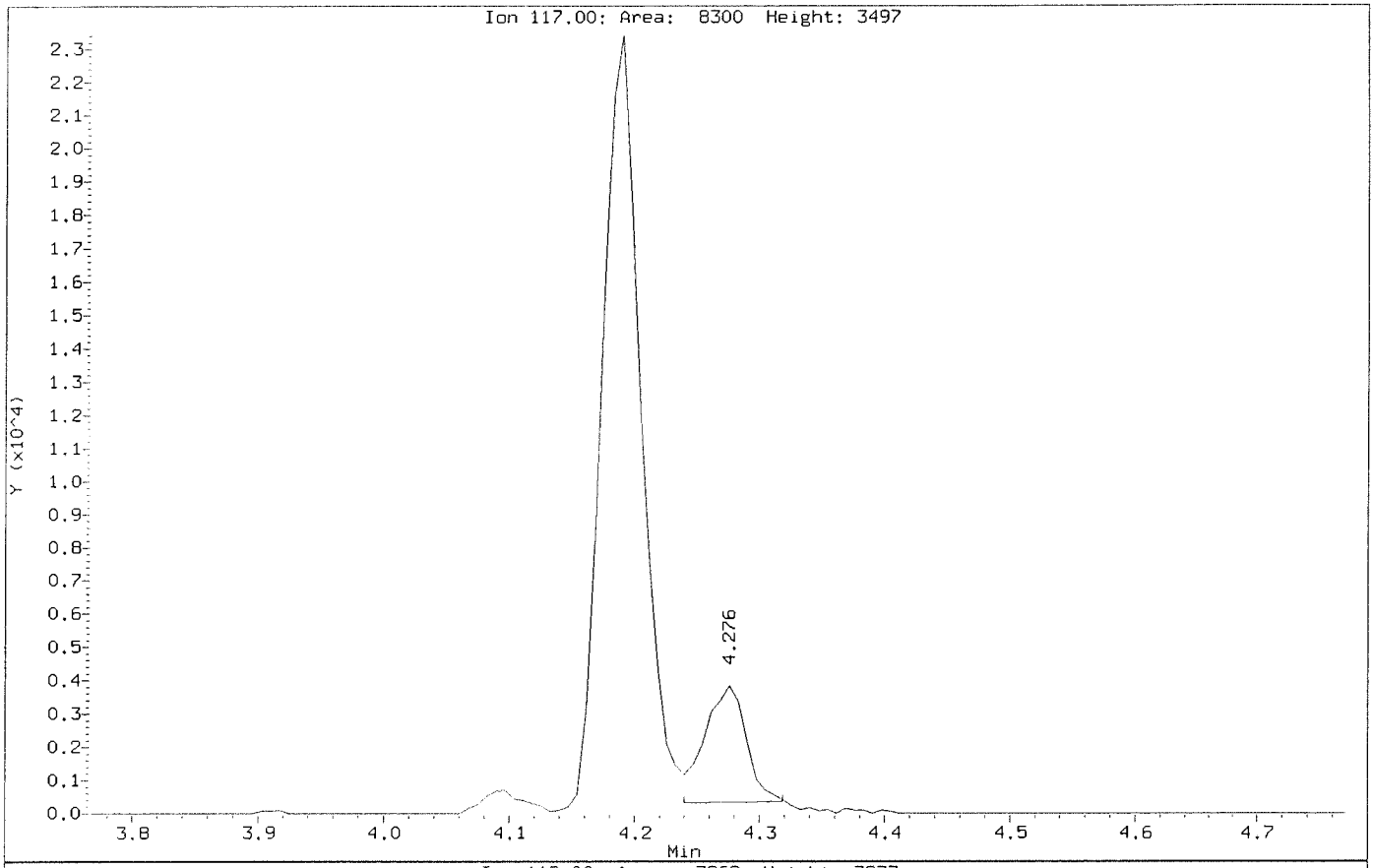
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

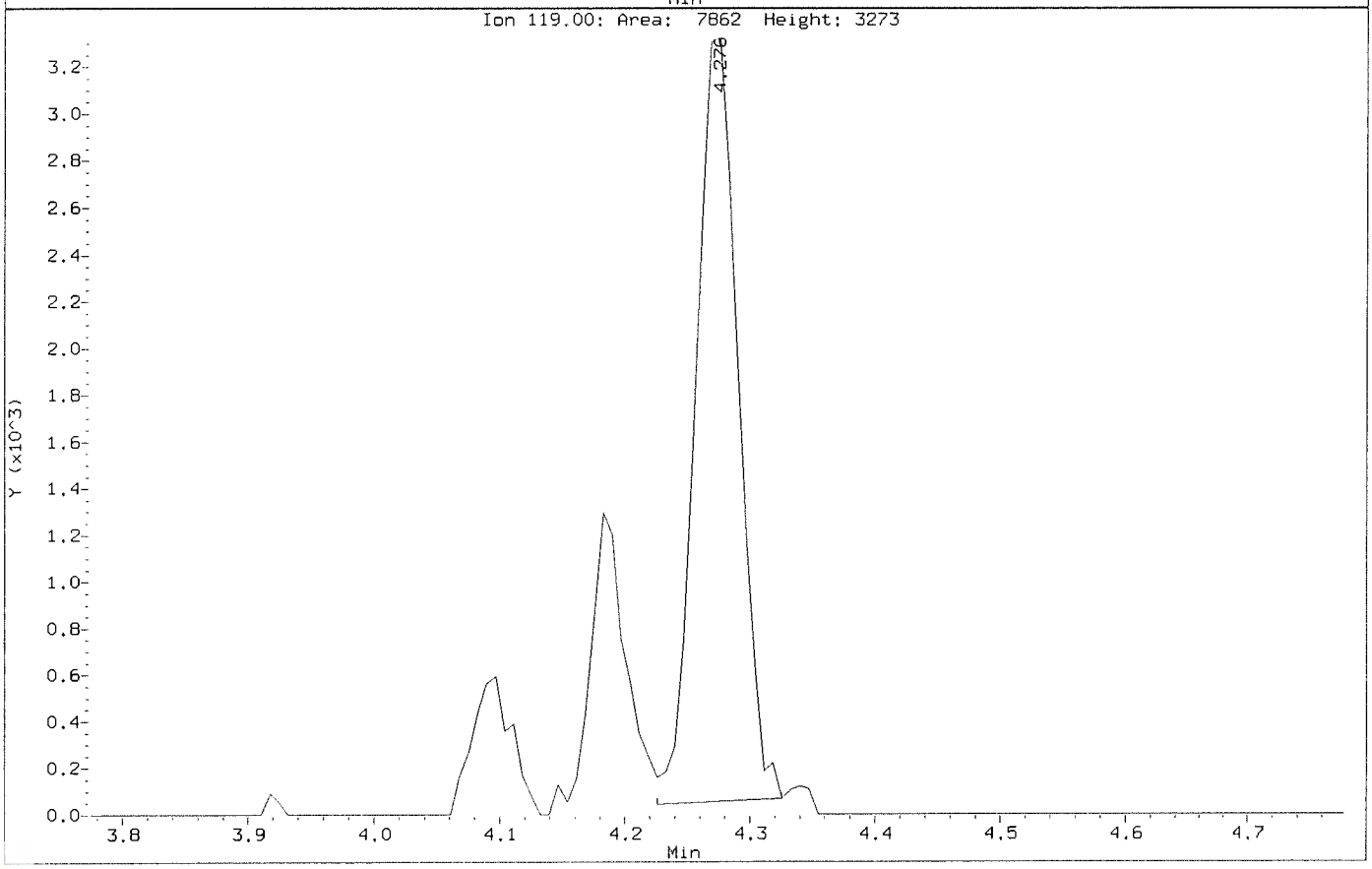




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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 24-SEP-2020 13:10
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 12:46 Cal File: X092404.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

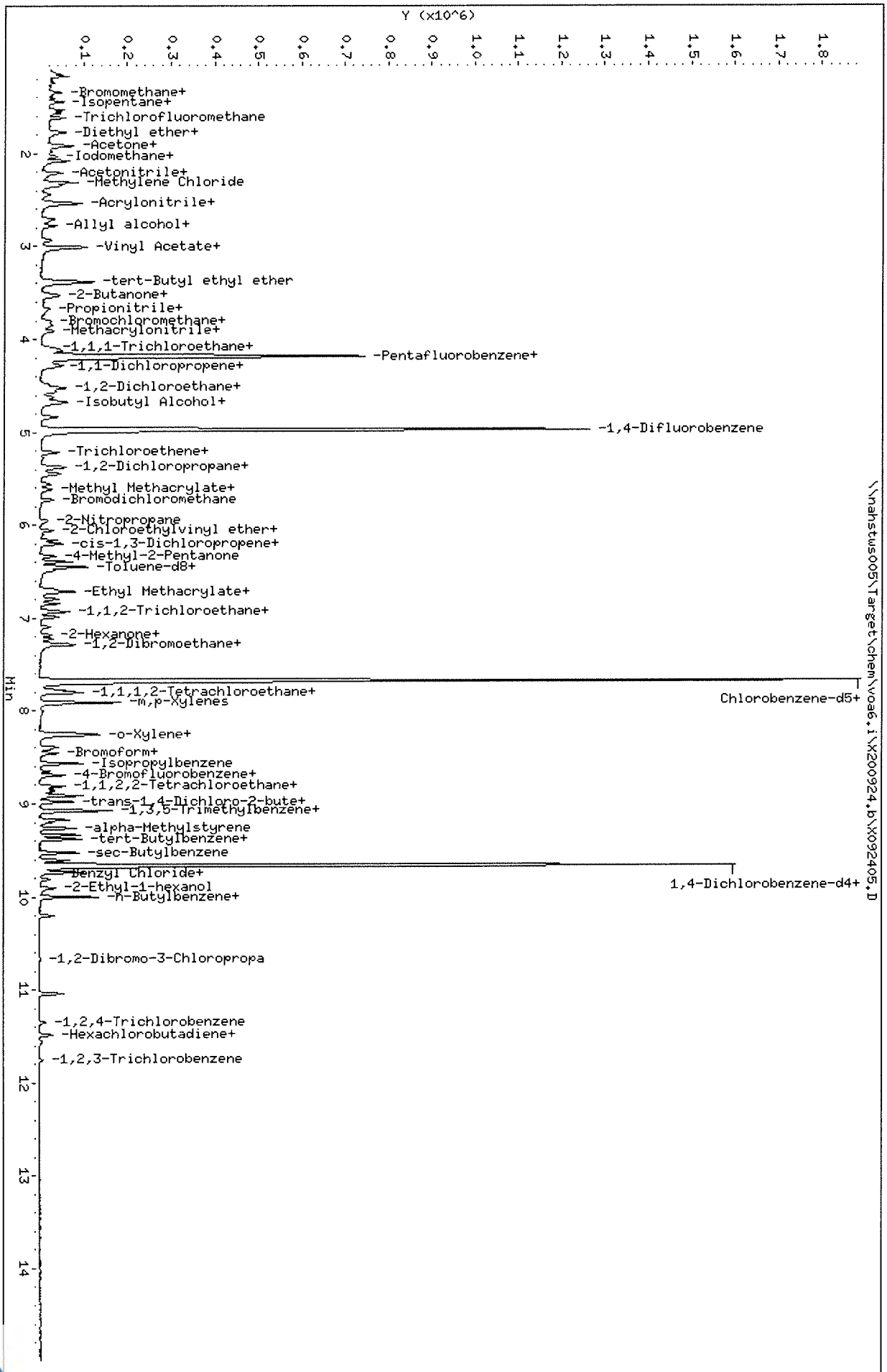
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	644357	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019524	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	903632	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	382631	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	12469	2.00000	1.88(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	13937	2.00000	1.92(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	46992	2.00000	1.97(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	18232	2.00000	1.52(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	12510	2.00000	1.99(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	20125	2.00000	2.02(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	14679	2.00000	2.16(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	10973	2.00000	2.06(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	26490	2.00000	1.96(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	11109	2.00000	1.91(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	20197	2.00000	2.15(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2737	2.00000	1.85(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12294	2.00000	2.19(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5479	2.00000	3.21(a)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	45912	2.00000	2.01(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	862	2.00000	1.86(a)
57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	12165	2.00000	1.93(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	21583	2.00000	2.02(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D Page 2
Report Date: 13-Oct-2020 11:23

	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)	16818	2.00000	1.91(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	15682	2.00000	2.07(a)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	45721	2.00000	2.02(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	25155	2.00000	2.04(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	22062	2.00000	2.00(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	24589	2.00000	2.01(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	20525	2.00000	2.02(a)
24	2-Butanone	43	3.602	3.602	(0.860)	8427	4.00000	3.58(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	41065	2.00000	2.06(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	16923	4.00000	4.22(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	47538	2.00000	2.10(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	45536	2.00000	1.99(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	25721	4.00000	4.05(a)
10	Acetone	43	1.983	1.983	(0.473)	9048	4.00000	1.09(a)
37	Benzene	78	4.519	4.519	(0.909)	57516	2.00000	1.97(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	15741	2.00000	2.03(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	8453	2.00000	2.09(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	18226	2.00000	1.97(a)
66	Bromoform	173	8.416	8.416	(1.097)	7643	2.00000	1.93(a)
6	Bromomethane	94	1.346	1.346	(0.321)	11427	2.00000	1.97(a)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	76740	4.00000	3.83(a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	17342	2.00000	2.12(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	37718	2.00000	2.05(a)
7	Chloroethane	64	1.410	1.410	(0.337)	10093	2.00000	1.99(a)
28	Chloroform	83	3.917	3.917	(0.935)	25563	2.00000	2.04(a)
3	Chloromethane	50	1.081	1.081	(0.258)	16756	2.00000	1.89(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	15564	2.00000	1.97(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	23162	2.00000	1.98(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	12783	2.00000	1.97(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	9079	2.00000	2.02(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	12034	2.00000	3.82(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	19509	2.00000	2.03(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	5496	2.00000	2.94(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	57275	2.00000	2.05(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	47303	4.00000	4.10(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	16648	2.00000	1.68(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	36734	2.00000	1.86(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	65226	2.00000	1.99(a)
92	Naphthalene	128	11.553	11.553	(1.195)	7312	2.00000	2.04(a)
63	o-Xylene	106	8.244	8.244	(1.075)	23228	2.00000	2.06(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	54335	2.00000	2.03(a)
64	Styrene	104	8.265	8.265	(1.078)	37510	2.00000	1.94(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	39109	2.00000	2.07(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	12381	2.00000	2.16(a)
50	Toluene	91	6.453	6.453	(0.841)	60795	2.00000	2.07(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	13424	2.00000	2.01(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	18306	2.00000	1.87(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	14627	2.00000	2.00(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	17957	2.00000	1.91(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	15623	2.00000	1.87(a)

QC Flag Legend

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

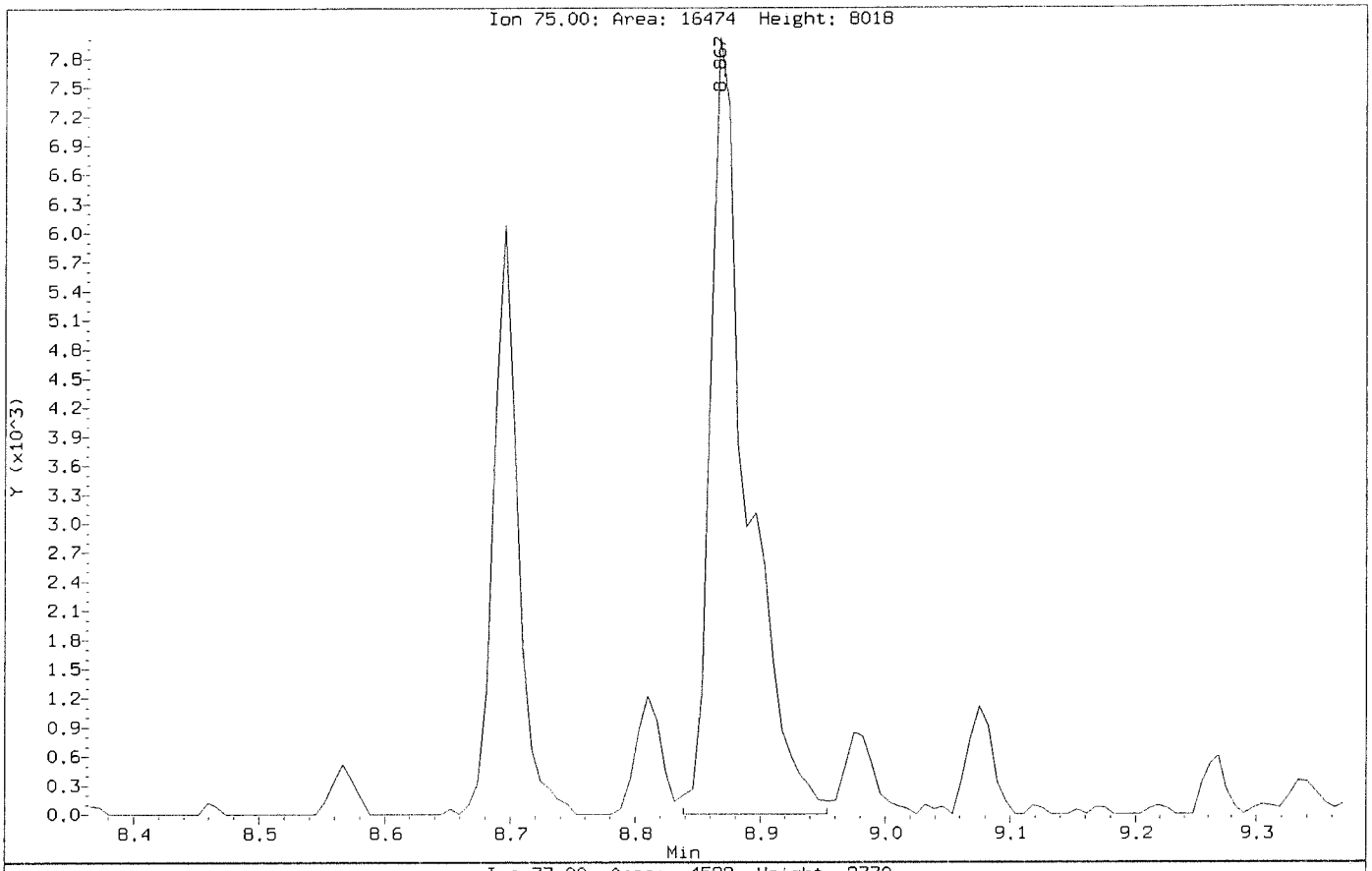


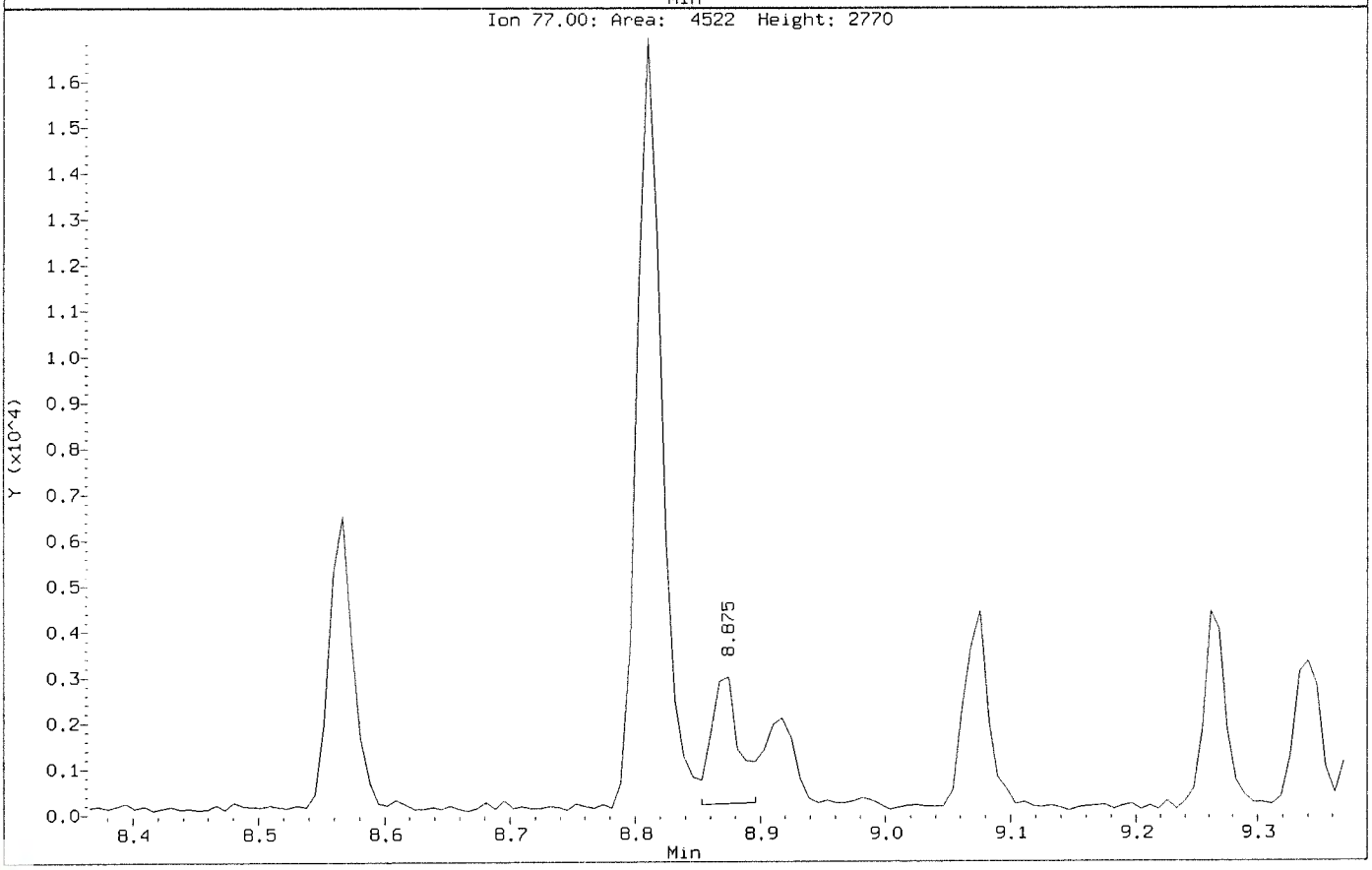
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Date : 24-SEP-2020 13:10
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092405.D
Injection Date: 24-SEP-2020 13:10
Instrument: voa6.i
Client Sample ID: VSTD002

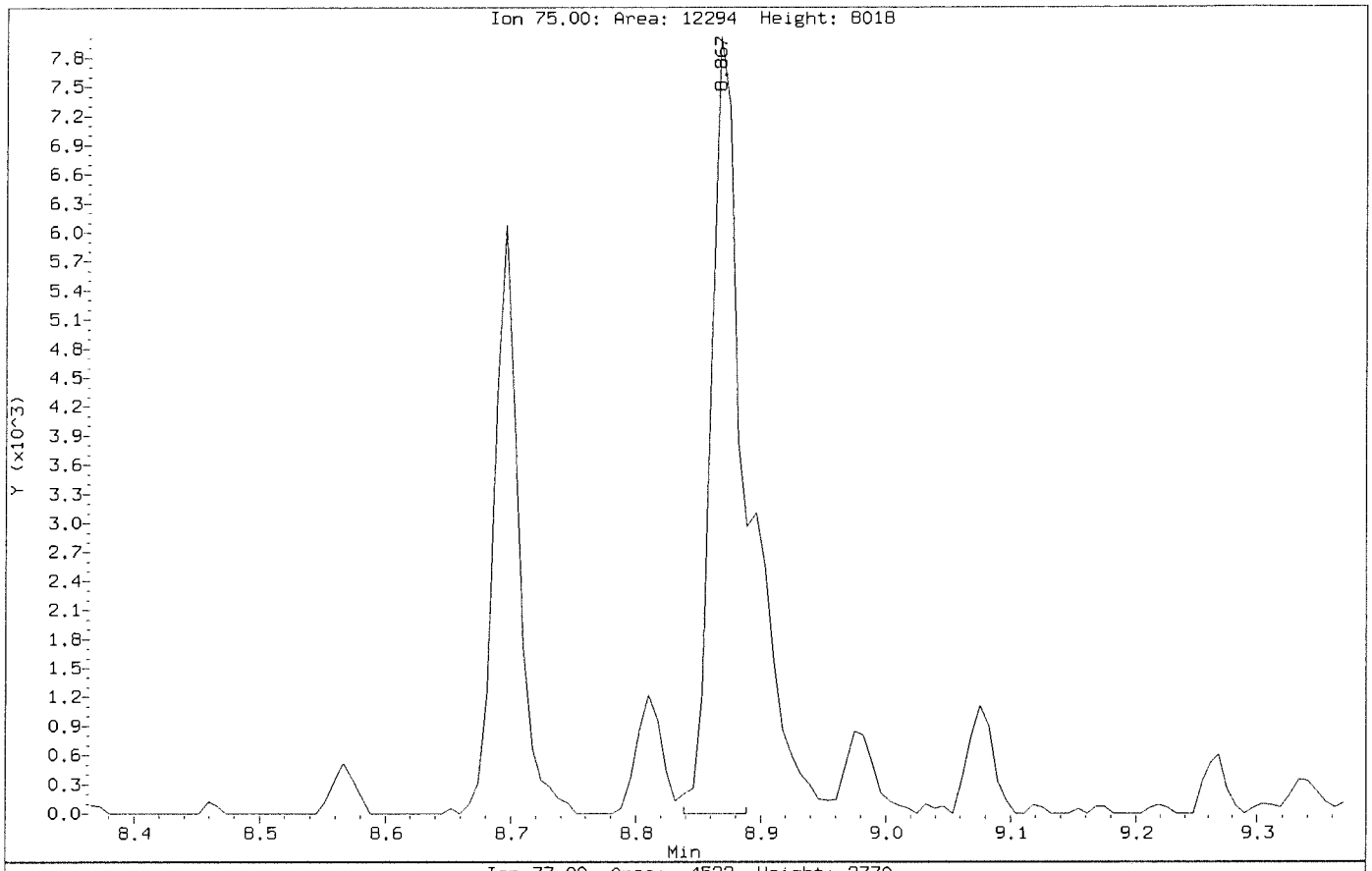
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

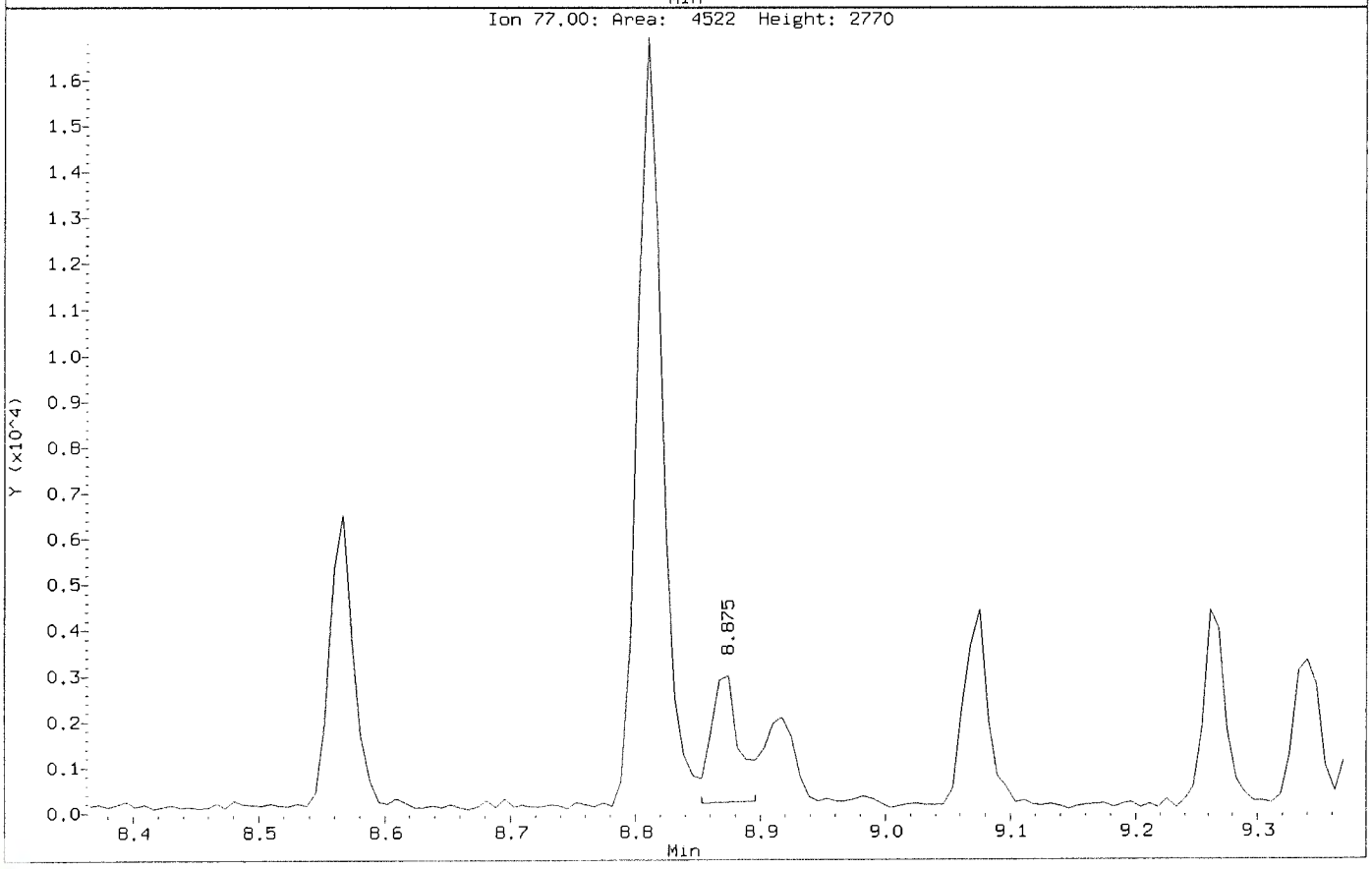




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Injection Date: 24-SEP-2020 13:10
Instrument: voa6.i
Client Sample ID: VSTD002

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092406.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 24-SEP-2020 13:33
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:10 Cal File: X092405.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

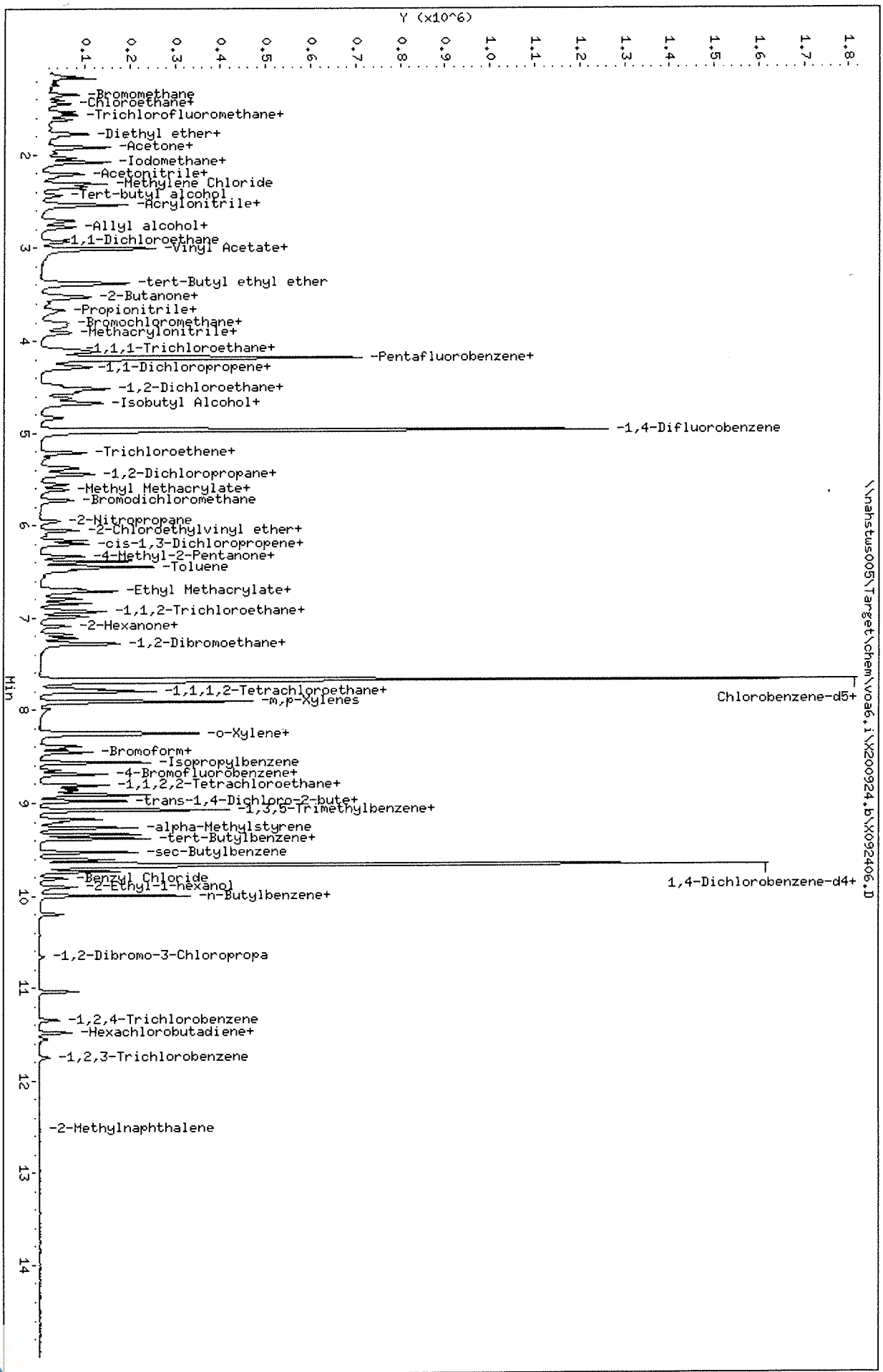
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	604947	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968132	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	862629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	366206	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	34017	5.00000	5.47
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	35655	5.00000	5.24
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	124776	5.00000	5.50
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	43900	5.00000	5.10
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	30508	5.00000	5.10
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	49631	5.00000	5.32
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	35579	5.00000	5.49
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	27209	5.00000	5.35
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	66717	5.00000	5.27
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	27129	5.00000	4.98(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	45564	5.00000	5.11
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	7596	5.00000	5.36
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	28529	5.00000	5.32(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	14272	5.00000	6.37
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	114323	5.00000	5.24
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	2370	5.00000	5.36
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	32725	5.00000	5.45
18 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	53633	5.00000	5.25

	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)	45690	5.00000	5.47
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	38422	5.00000	5.35
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	112577	5.00000	5.20
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	61531	5.00000	5.22
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	57519	5.00000	5.47
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	61140	5.00000	5.22
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	49490	5.00000	5.21
24	2-Butanone	43	3.595	3.595	(0.858)	22783	10.0000	10.31
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	100230	5.00000	5.26
52	2-Hexanone	43	7.090	7.090	(0.924)	40720	10.0000	10.64
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	115574	5.00000	5.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	107669	5.00000	4.93(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	64724	10.0000	10.68
10	Acetone	43	1.976	1.976	(0.472)	17679	10.0000	7.78
37	Benzene	78	4.519	4.519	(0.909)	145224	5.00000	5.24
74	Bromobenzene	156	8.809	8.809	(0.911)	39295	5.00000	5.31
29	Bromochloromethane	128	3.802	3.802	(0.908)	19555	5.00000	5.17
39	Bromodichloromethane	83	5.729	5.729	(1.153)	45076	5.00000	5.13
66	Bromoform	173	8.415	8.415	(1.097)	19994	5.00000	5.30
6	Bromomethane	94	1.346	1.346	(0.321)	28439	5.00000	5.62
19	Carbon Disulfide	76	2.076	2.076	(0.496)	186941	10.0000	9.95
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	38907	5.00000	5.02
59	Chlorobenzene	112	7.699	7.699	(1.004)	92091	5.00000	5.24
7	Chloroethane	64	1.410	1.410	(0.337)	25052	5.00000	5.28
28	Chloroform	83	3.917	3.917	(0.935)	63153	5.00000	5.38
3	Chloromethane	50	1.081	1.081	(0.258)	41522	5.00000	5.01
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	40006	5.00000	5.39
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	58436	5.00000	5.26
55	Dibromochloromethane	129	7.176	7.176	(0.936)	32041	5.00000	5.19
44	Dibromomethane	93	5.557	5.557	(1.118)	22782	5.00000	5.35
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	28274	5.00000	6.46
61	Ethylbenzene	106	7.799	7.799	(1.017)	48263	5.00000	5.26
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	12681	5.00000	5.82
67	Isopropylbenzene	105	8.566	8.566	(1.117)	140289	5.00000	5.26
62	m,p-Xylenes	106	7.907	7.907	(1.031)	117010	10.0000	10.63
17	Methylene Chloride	84	2.313	2.313	(0.552)	39690	5.00000	5.37
87	n-Butylbenzene	91	9.998	9.998	(1.034)	91095	5.00000	4.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	160991	5.00000	5.15
92	Naphthalene	128	11.553	11.553	(1.195)	16943	5.00000	4.96(a)
63	o-Xylene	106	8.244	8.244	(1.075)	57363	5.00000	5.34
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	128686	5.00000	5.02
64	Styrene	104	8.265	8.265	(1.078)	97357	5.00000	5.29
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	92883	5.00000	5.15
56	Tetrachloroethene	164	6.933	6.933	(0.904)	28143	5.00000	5.16
50	Toluene	91	6.453	6.453	(0.841)	151563	5.00000	5.42
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	32989	5.00000	5.26
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	47268	5.00000	5.10
38	Trichloroethene	130	5.214	5.214	(1.049)	36421	5.00000	5.25
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	43540	5.00000	4.95(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	38248	5.00000	4.89(a)

QC Flag Legend

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

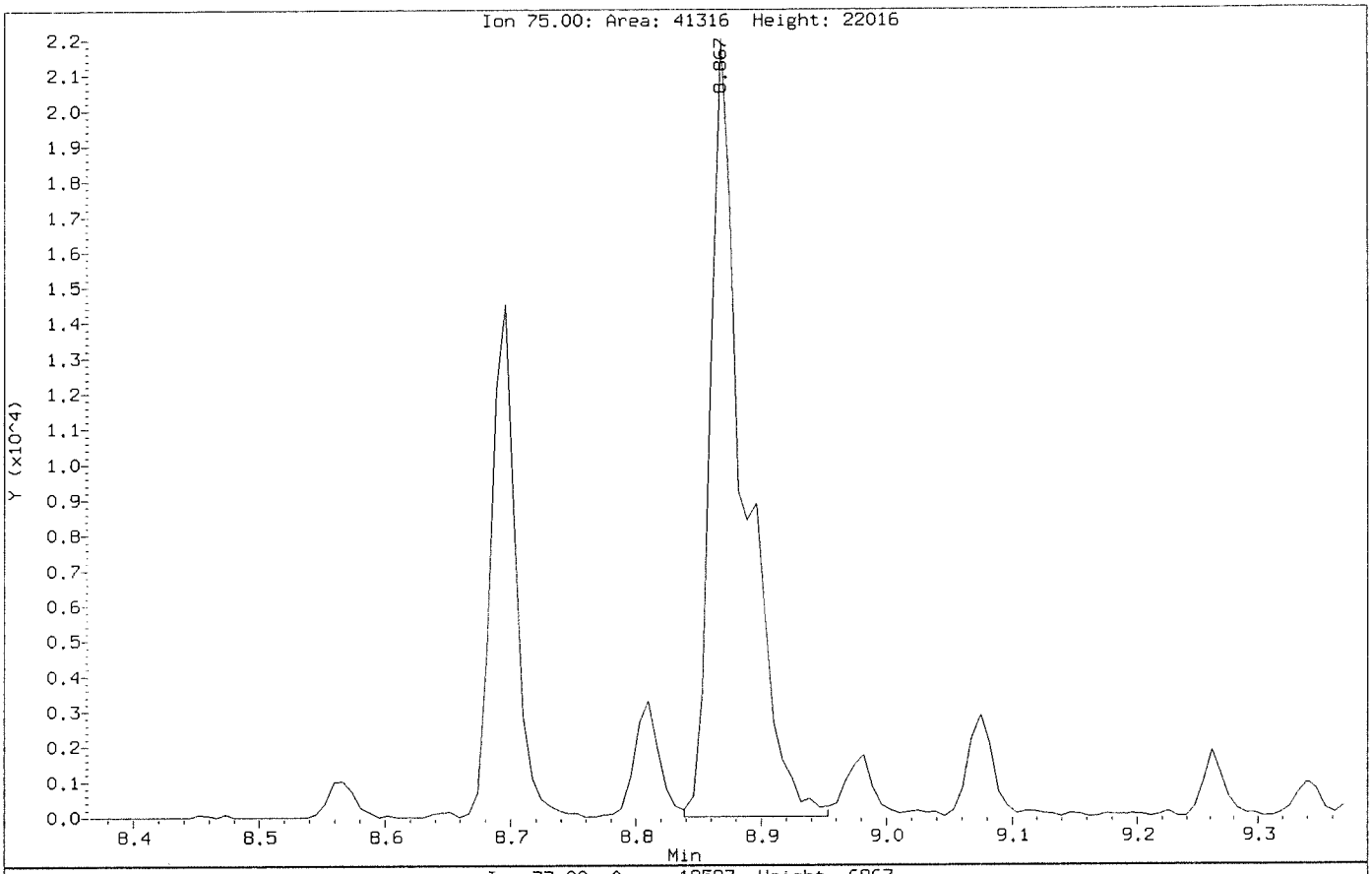


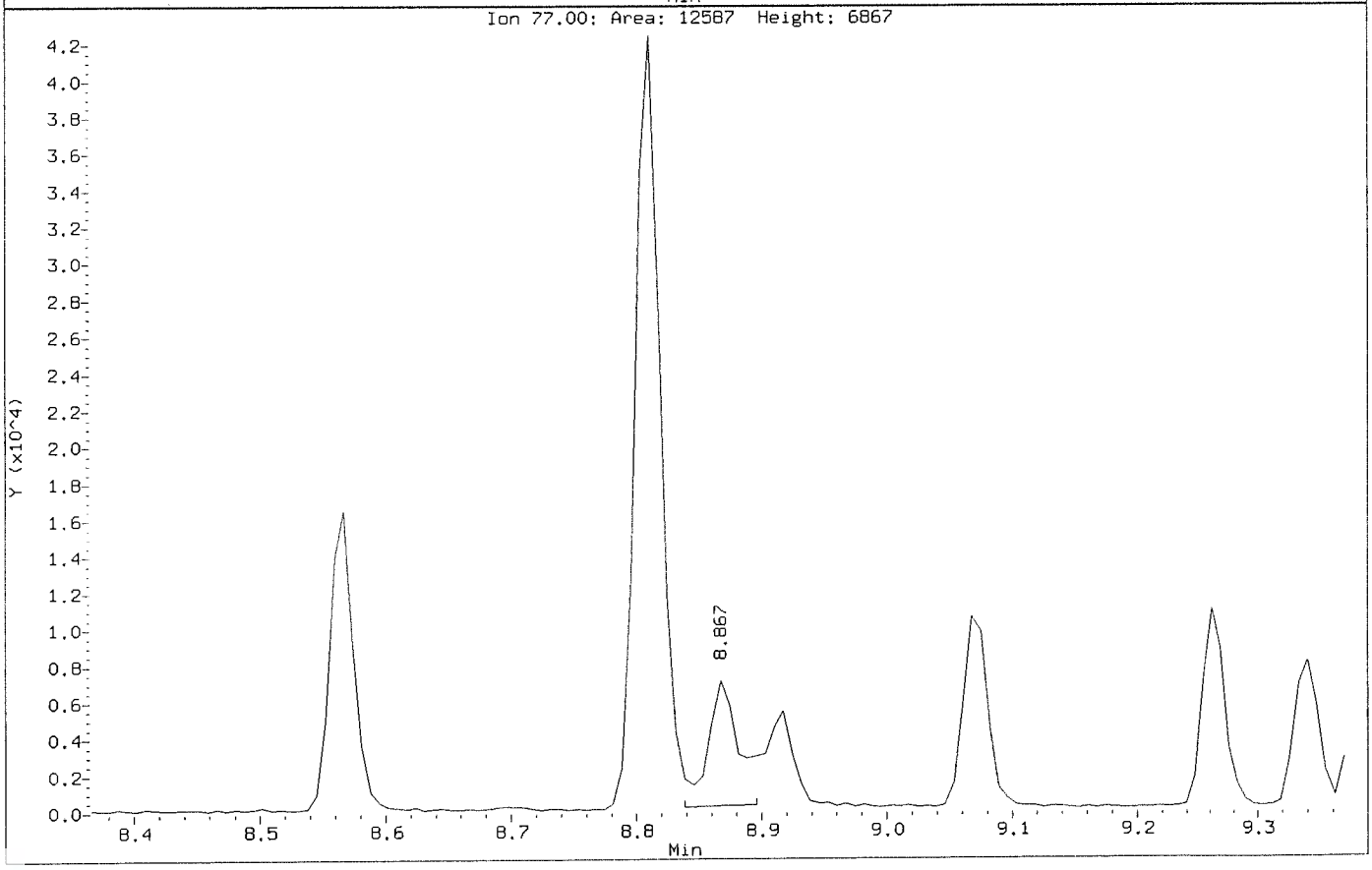
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Date : 24-SEP-2020 13:33
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092406.D
Injection Date: 24-SEP-2020 13:33
Instrument: voa6.i
Client Sample ID: VSTD005

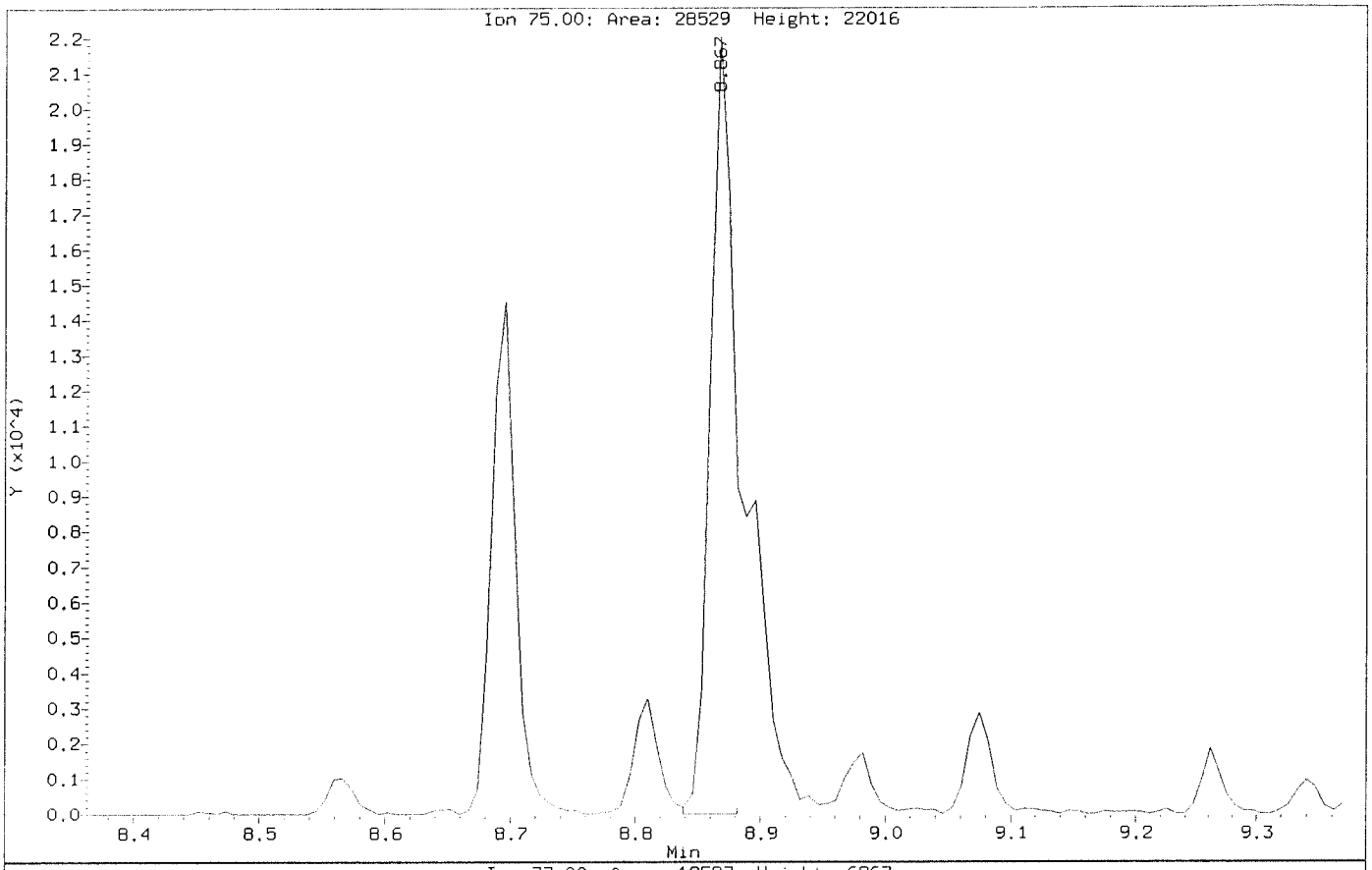
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

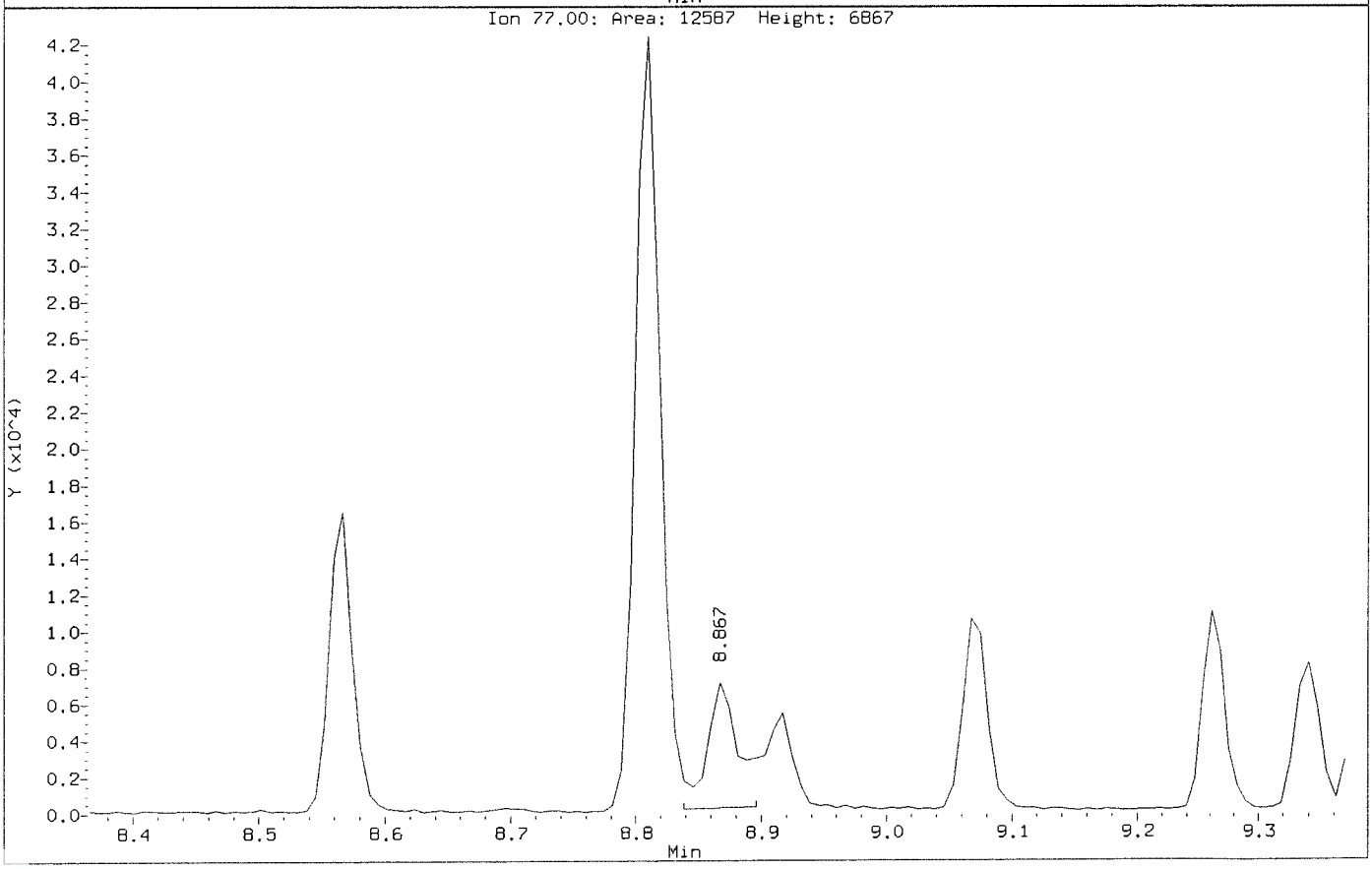




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Injection Date: 24-SEP-2020 13:33
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 24-SEP-2020 13:57
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:33 Cal File: X092406.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

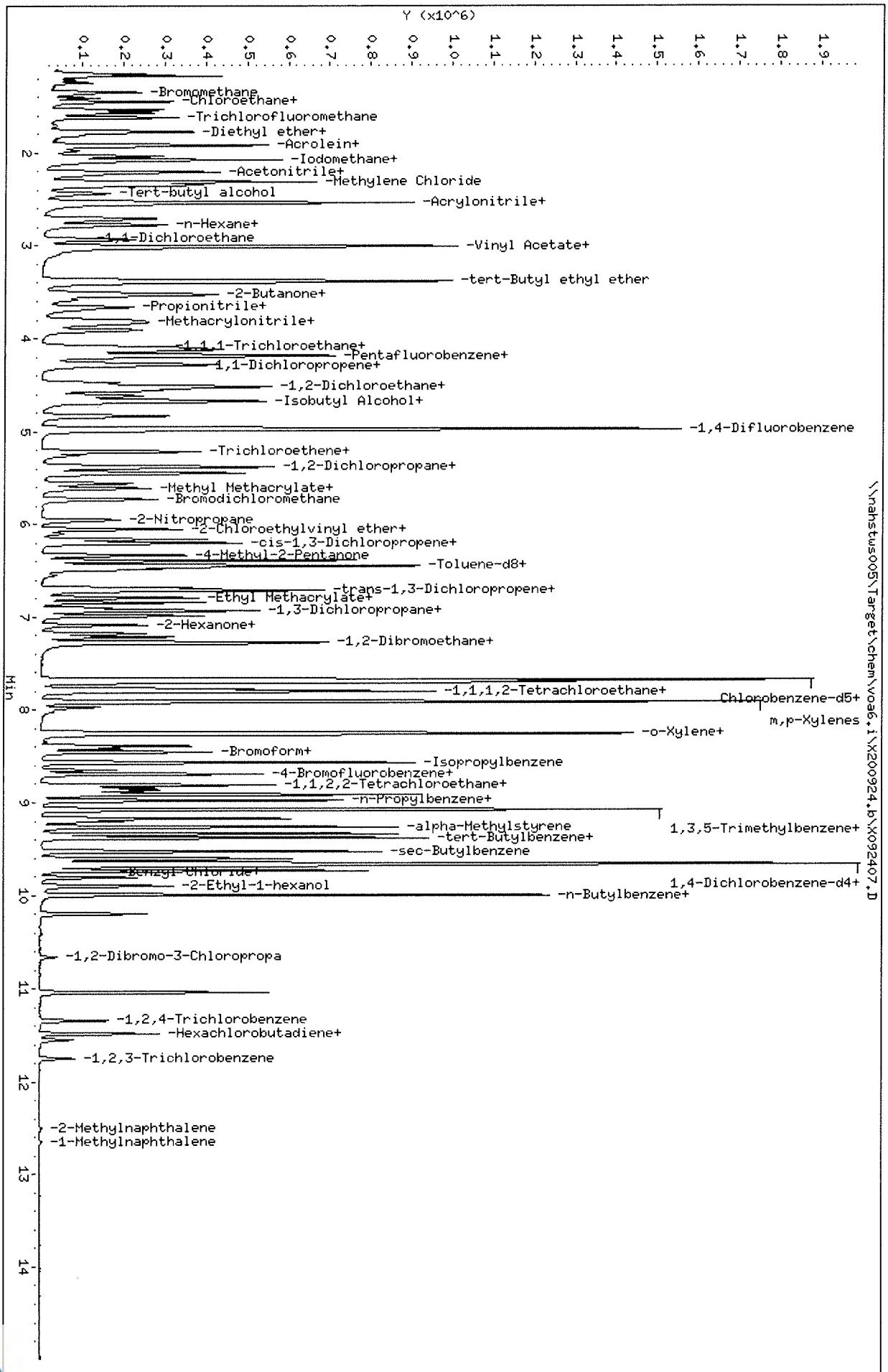
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	597686	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	958262	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	861110	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	364939	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	120544	20.0000	19.62
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	130718	20.0000	19.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	439641	20.0000	19.41
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	154353	20.0000	20.07
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	114469	20.0000	19.18
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	176318	20.0000	19.15
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	117650	20.0000	18.23
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97092	20.0000	19.14
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	236851	20.0000	18.96
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	104067	20.0000	19.36
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	165987	20.0000	18.82
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25160	20.0000	17.83
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	99152	20.0000	18.57(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	49391	20.0000	18.75
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	422220	20.0000	19.43
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8129	20.0000	18.45
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	114808	20.0000	19.18
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	191275	20.0000	18.82

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D Page 2
Report Date: 13-Oct-2020 11:23

	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)	153916	20.0000	18.62
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	136853	20.0000	19.28
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	415398	20.0000	19.27
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	221882	20.0000	18.90
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	197702	20.0000	18.84
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	215720	20.0000	18.50
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	180409	20.0000	19.22
24	2-Butanone	43	3.588	3.588	(0.856)	87144	40.0000	39.94
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	361041	20.0000	19.03
52	2-Hexanone	43	7.090	7.090	(0.924)	146255	40.0000	38.30
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	402829	20.0000	18.65
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	412064	20.0000	18.95
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	226622	40.0000	37.49
10	Acetone	43	1.976	1.976	(0.472)	61351	40.0000	40.10
37	Benzene	78	4.519	4.519	(0.909)	523094	20.0000	19.08
74	Bromobenzene	156	8.809	8.809	(0.912)	140723	20.0000	19.08
29	Bromochloromethane	128	3.802	3.802	(0.908)	70448	20.0000	18.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	163173	20.0000	18.77
66	Bromoform	173	8.415	8.415	(1.097)	71380	20.0000	18.97
6	Bromomethane	94	1.345	1.345	(0.321)	96280	20.0000	19.85
19	Carbon Disulfide	76	2.076	2.076	(0.496)	712494	40.0000	38.38
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	143505	20.0000	18.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	328244	20.0000	18.73
7	Chloroethane	64	1.410	1.410	(0.337)	87182	20.0000	18.62
28	Chloroform	83	3.917	3.917	(0.935)	223718	20.0000	19.31
3	Chloromethane	50	1.080	1.080	(0.258)	153741	20.0000	18.78
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	142521	20.0000	19.46
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	207519	20.0000	18.87
55	Dibromochloromethane	129	7.176	7.176	(0.936)	116110	20.0000	18.86
44	Dibromomethane	93	5.557	5.557	(1.118)	79007	20.0000	18.77
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	113538	20.0000	19.90
61	Ethylbenzene	106	7.799	7.799	(1.017)	174975	20.0000	19.13
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	49814	20.0000	20.19
67	Isopropylbenzene	105	8.566	8.566	(1.117)	508270	20.0000	19.11
62	m,p-Xylenes	106	7.907	7.907	(1.031)	423076	40.0000	38.53
17	Methylene Chloride	84	2.305	2.305	(0.550)	137362	20.0000	20.58
87	n-Butylbenzene	91	9.998	9.998	(1.035)	363106	20.0000	19.30
73	n-Propylbenzene	91	8.917	8.917	(0.923)	600477	20.0000	19.28
92	Naphthalene	128	11.546	11.546	(1.195)	61326	20.0000	18.02
63	o-Xylene	106	8.243	8.243	(1.075)	206196	20.0000	19.23
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	487237	20.0000	19.10
64	Styrene	104	8.265	8.265	(1.078)	353788	20.0000	19.28
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	342131	20.0000	19.04
56	Tetrachloroethene	164	6.933	6.933	(0.904)	104308	20.0000	19.17
50	Toluene	91	6.453	6.453	(0.841)	537067	20.0000	19.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	121098	20.0000	19.55
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	174041	20.0000	18.99
38	Trichloroethene	130	5.214	5.214	(1.049)	129379	20.0000	18.87
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	168693	20.0000	19.41
5	Vinyl Chloride	62	1.145	1.145	(0.273)	146437	20.0000	18.96

QC Flag Legend

M - Compound response manually integrated.

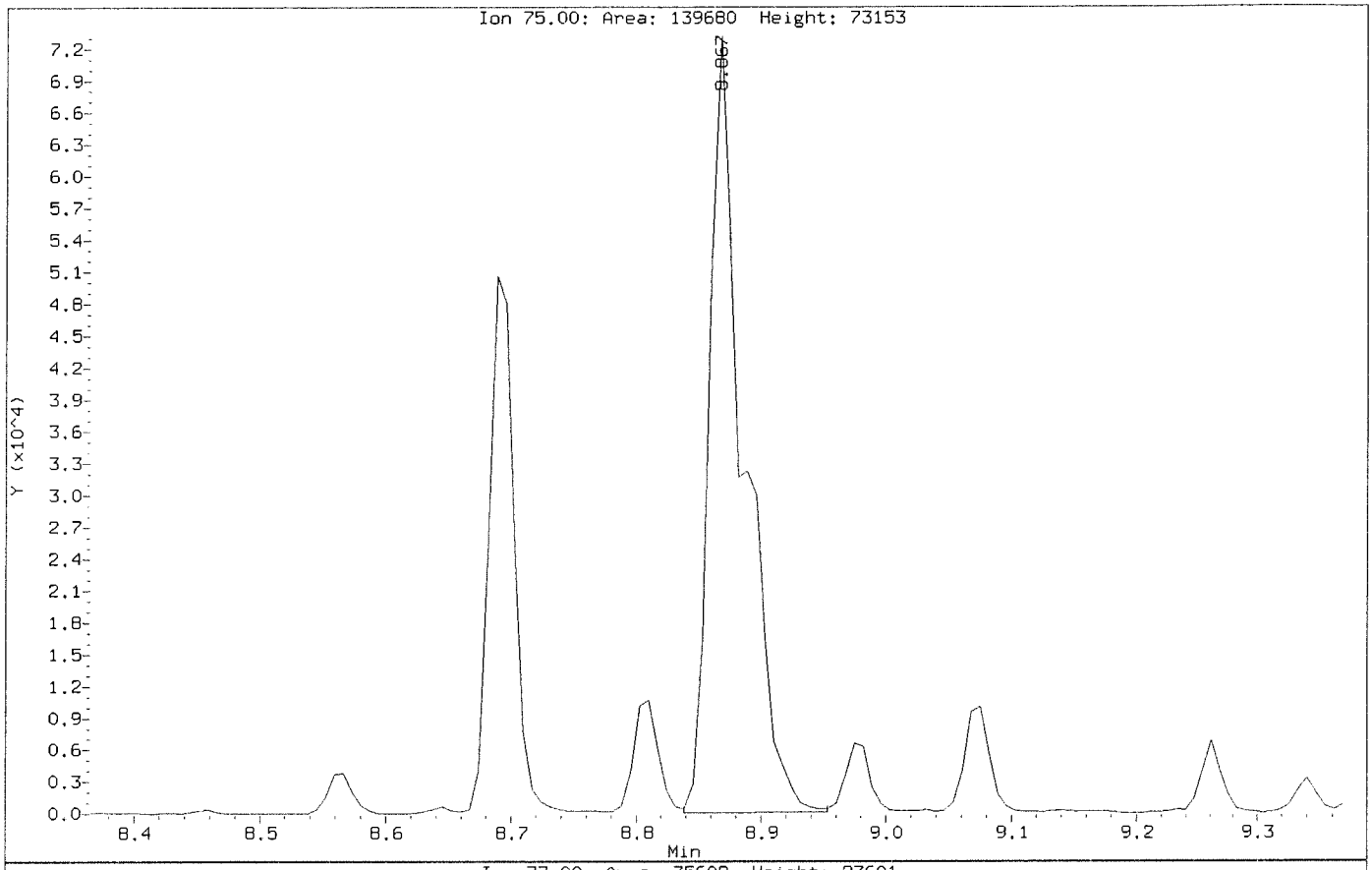


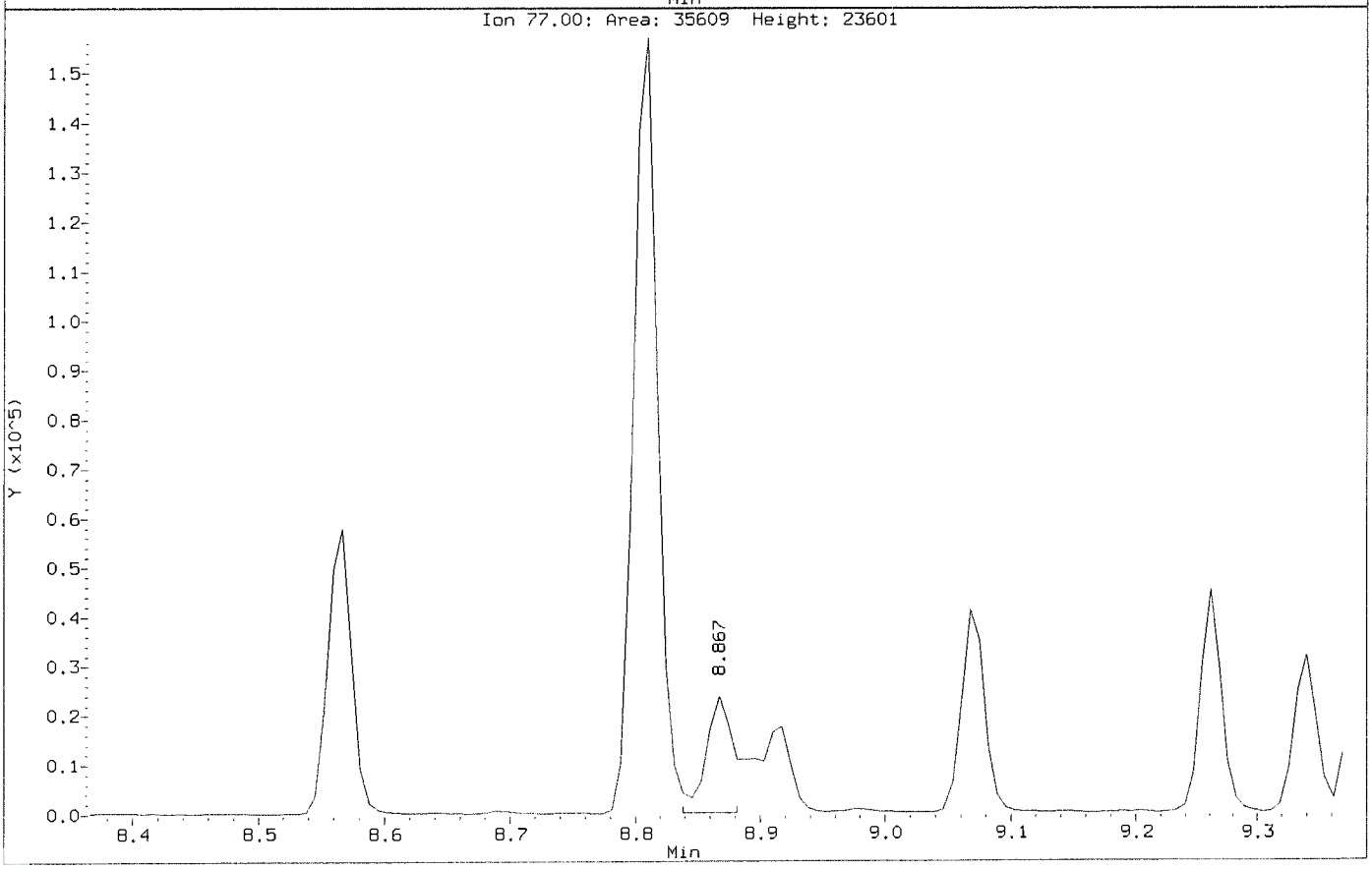
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Date : 24-SEP-2020 13:57
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092407.D
Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

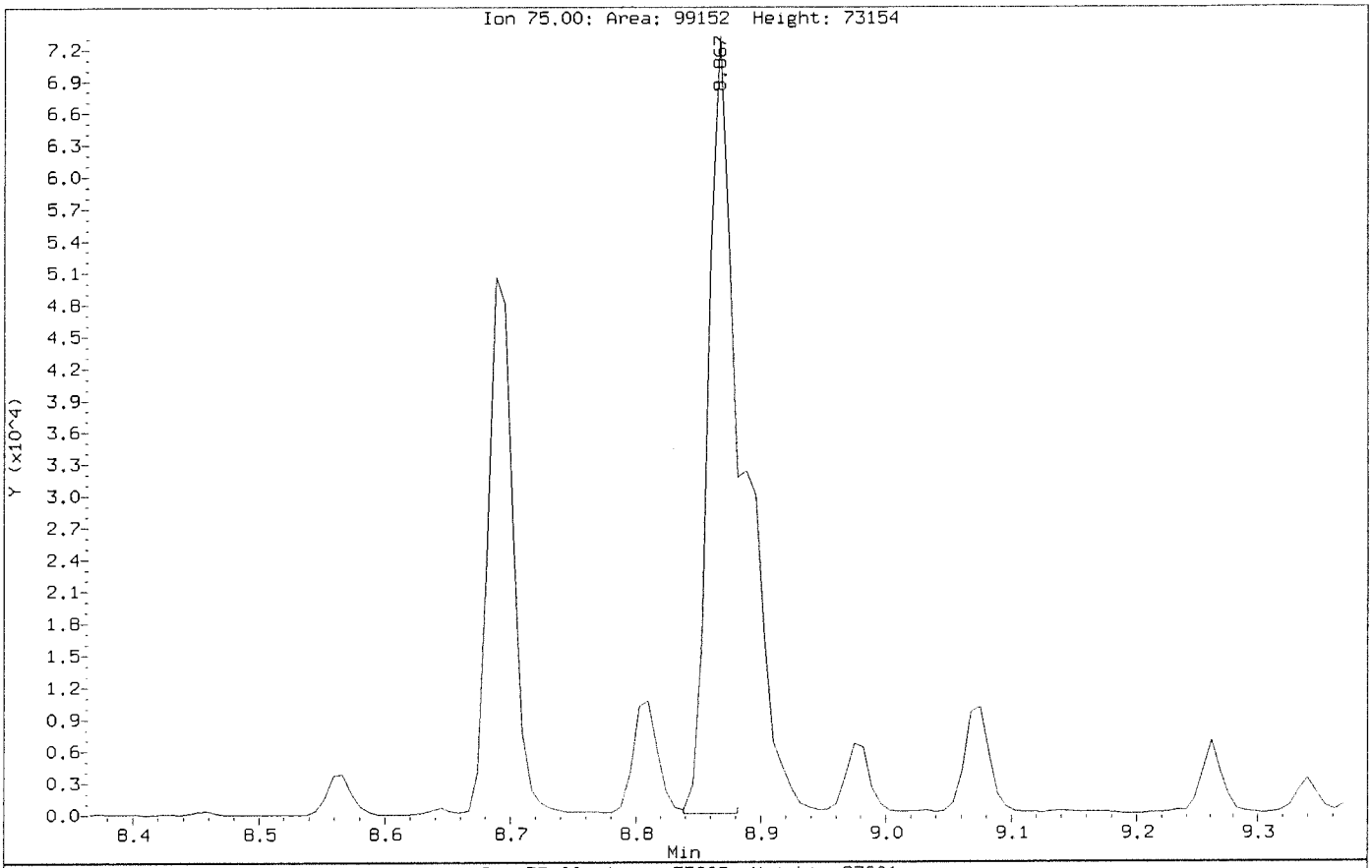
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

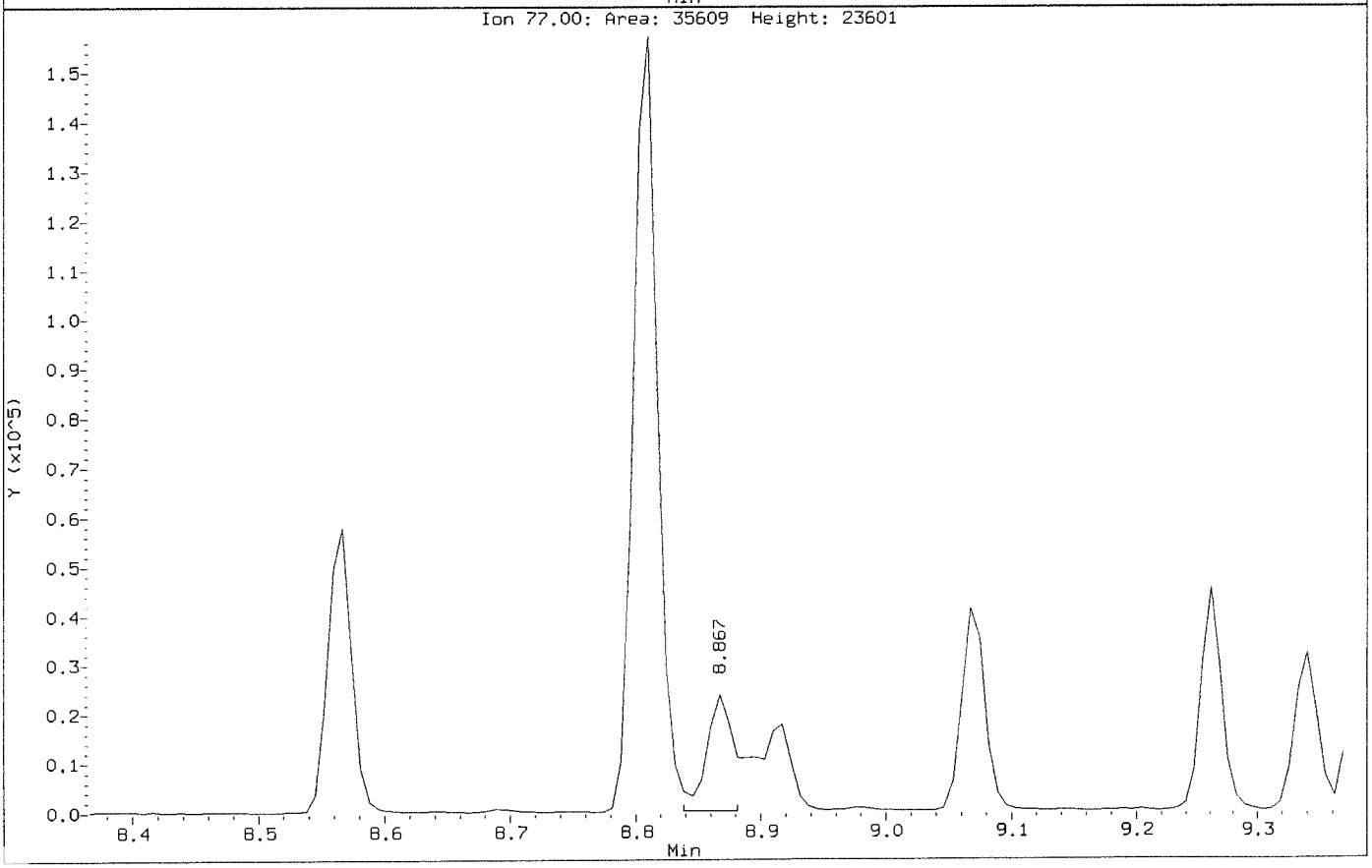




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Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 24-SEP-2020 14:21
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:57 Cal File: X092407.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
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

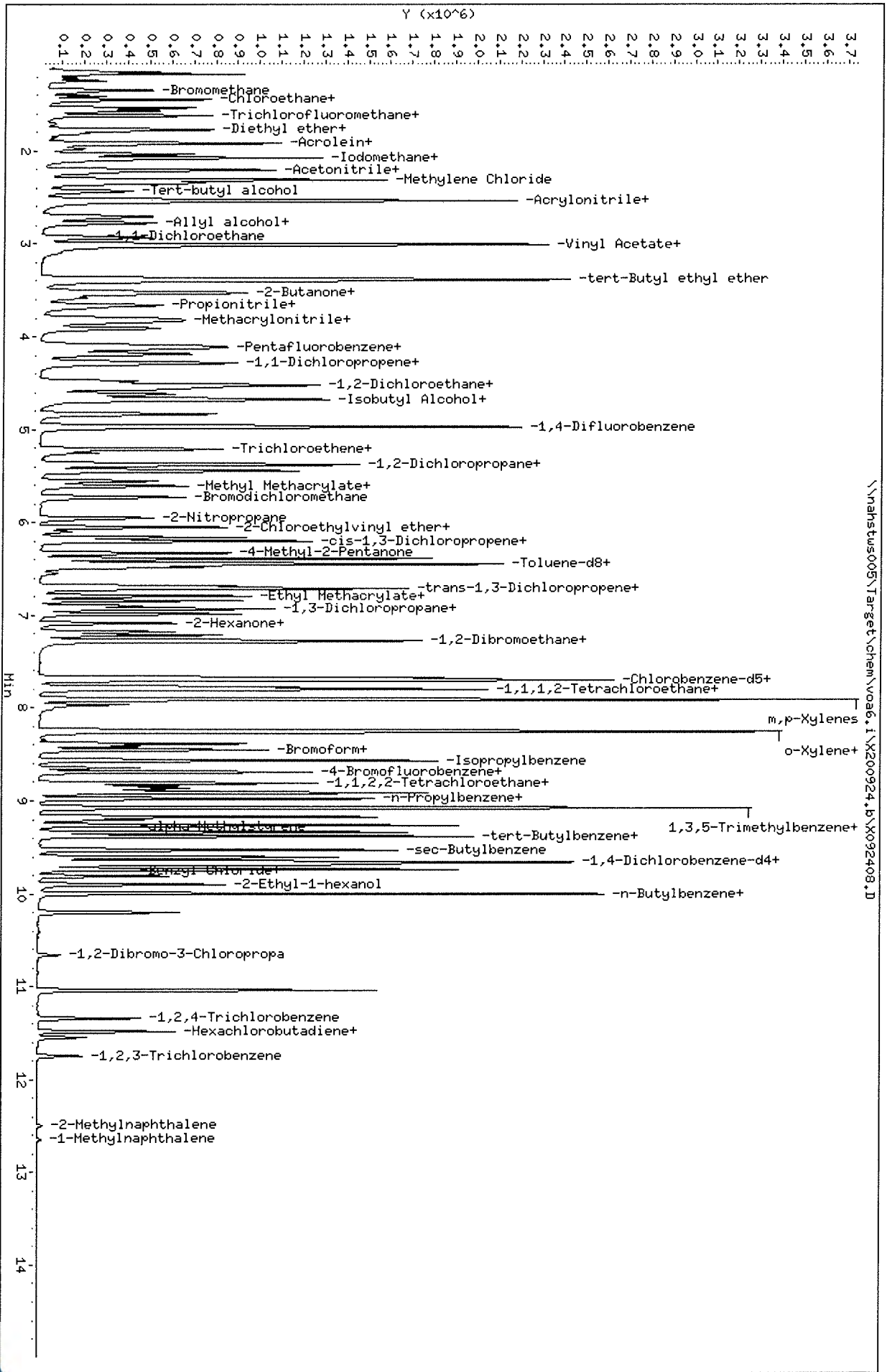
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	565166	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	910705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	829935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	353927	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	277712	50.0000	47.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	307872	50.0000	48.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1029825	50.0000	47.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	368645	50.0000	50.98
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	261758	50.0000	45.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	375794	50.0000	43.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	280829	50.0000	44.86
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	221270	50.0000	45.26
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	531332	50.0000	45.00
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	227518	50.0000	44.77
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	348526	50.0000	41.59
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	58736	50.0000	42.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	243402	50.0000	47.01(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	124784	50.0000	46.66
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	888516	50.0000	42.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	20616	50.0000	48.27
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	264089	50.0000	45.79
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	429312	50.0000	43.56

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D Page 2
Report Date: 13-Oct-2020 11:23

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)	356652	50.0000	45.42
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	311284	50.0000	46.16
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	863451	50.0000	41.31
83 1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	490714	50.0000	43.10
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	455083	50.0000	45.00
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	481319	50.0000	42.57
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	383156	50.0000	43.18
24 2-Butanone	43	3.580	3.580	(0.855)	233034	100.000	112.95
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	761189	50.0000	41.38
52 2-Hexanone	43	7.090	7.090	(0.924)	356053	100.000	96.75
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	865469	50.0000	41.33
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	837442	50.0000	39.72
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	544400	100.000	93.44
10 Acetone	43	1.976	1.976	(0.472)	153009	100.000	114.11
37 Benzene	78	4.519	4.519	(0.909)	1162667	50.0000	44.63
74 Bromobenzene	156	8.809	8.809	(0.912)	314740	50.0000	44.00
29 Bromochloromethane	128	3.802	3.802	(0.908)	157955	50.0000	44.72
39 Bromodichloromethane	83	5.729	5.729	(1.153)	375833	50.0000	45.50
66 Bromoform	173	8.415	8.415	(1.097)	174123	50.0000	48.03
6 Bromomethane	94	1.345	1.345	(0.321)	218171	50.0000	47.91
19 Carbon Disulfide	76	2.076	2.076	(0.496)	1567013	100.000	89.27
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	295202	50.0000	40.52
59 Chlorobenzene	112	7.699	7.699	(1.004)	728183	50.0000	43.12
7 Chloroethane	64	1.403	1.403	(0.335)	194264	50.0000	43.87
28 Chloroform	83	3.917	3.917	(0.935)	502736	50.0000	45.89
3 Chloromethane	50	1.080	1.080	(0.258)	345422	50.0000	44.63
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	318945	50.0000	46.06
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	483233	50.0000	46.25
55 Dibromochloromethane	129	7.176	7.176	(0.936)	272125	50.0000	45.88
44 Dibromomethane	93	5.557	5.557	(1.118)	183392	50.0000	45.86
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	235600	50.0000	41.20
61 Ethylbenzene	106	7.799	7.799	(1.017)	371688	50.0000	42.17
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	102822	50.0000	41.71
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1038705	50.0000	40.53
62 m,p-Xylenes	106	7.907	7.907	(1.031)	890486	100.000	84.15
17 Methylene Chloride	84	2.305	2.305	(0.550)	303593	50.0000	49.06
87 n-Butylbenzene	91	9.998	9.998	(1.035)	731188	50.0000	40.09
73 n-Propylbenzene	91	8.917	8.917	(0.923)	1216787	50.0000	40.30
92 Naphthalene	128	11.546	11.546	(1.195)	152719	50.0000	46.27
63 o-Xylene	106	8.243	8.243	(1.075)	447984	50.0000	43.35
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	958531	50.0000	38.76
64 Styrene	104	8.258	8.258	(1.077)	798852	50.0000	45.18
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	680800	50.0000	39.07
56 Tetrachloroethene	164	6.933	6.933	(0.904)	209713	50.0000	39.99
50 Toluene	91	6.446	6.446	(0.840)	1151574	50.0000	42.86
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	264379	50.0000	45.15
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	410118	50.0000	47.09
38 Trichloroethene	130	5.214	5.214	(1.049)	284429	50.0000	43.66
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	351293	50.0000	42.75
5 Vinyl Chloride	62	1.145	1.145	(0.273)	327079	50.0000	44.80

QC Flag Legend

M - Compound response manually integrated.

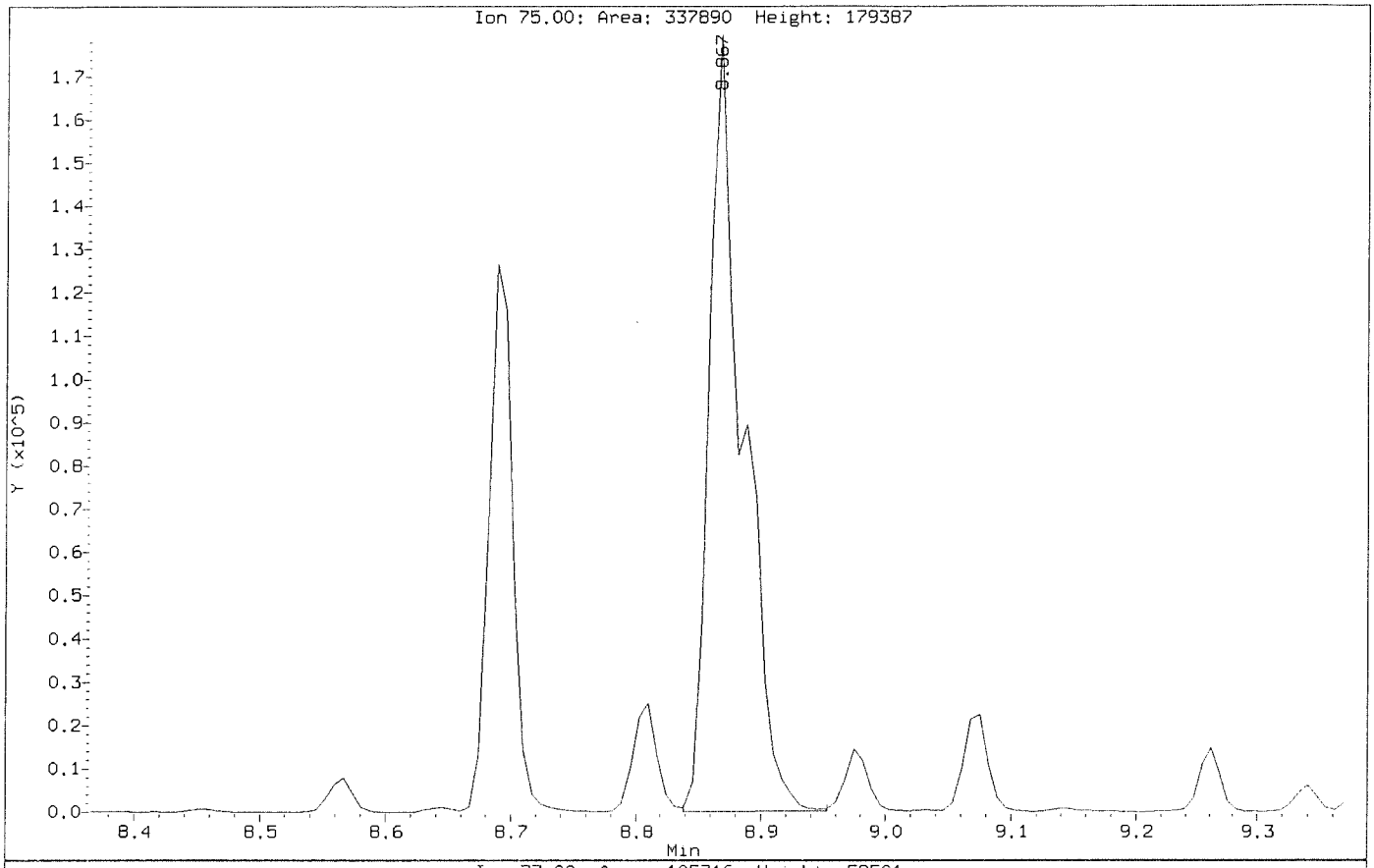


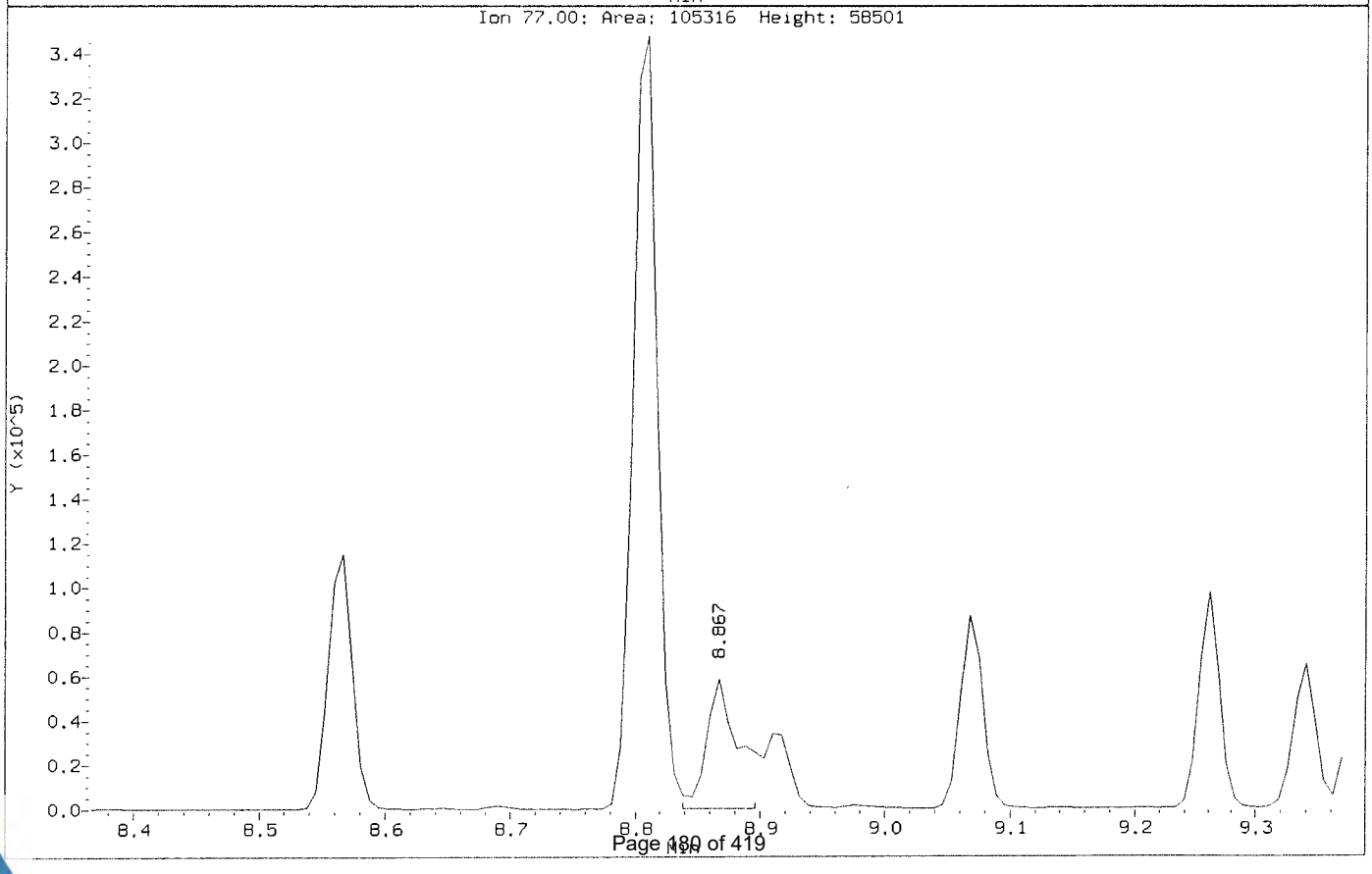
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Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 24-SEP-2020 14:21
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D
Injection Date: 24-SEP-2020 14:21
Instrument: voa6.i
Client Sample ID: VSTD050

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

