

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX121523\
 Data File : VX039227.D
 Acq On : 15 Dec 2023 12:25
 Operator : JC/MD
 Sample : 05840-01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :

Quant Time: Dec 16 01:13:56 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X112423W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Mon Nov 27 03:22:25 2023
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

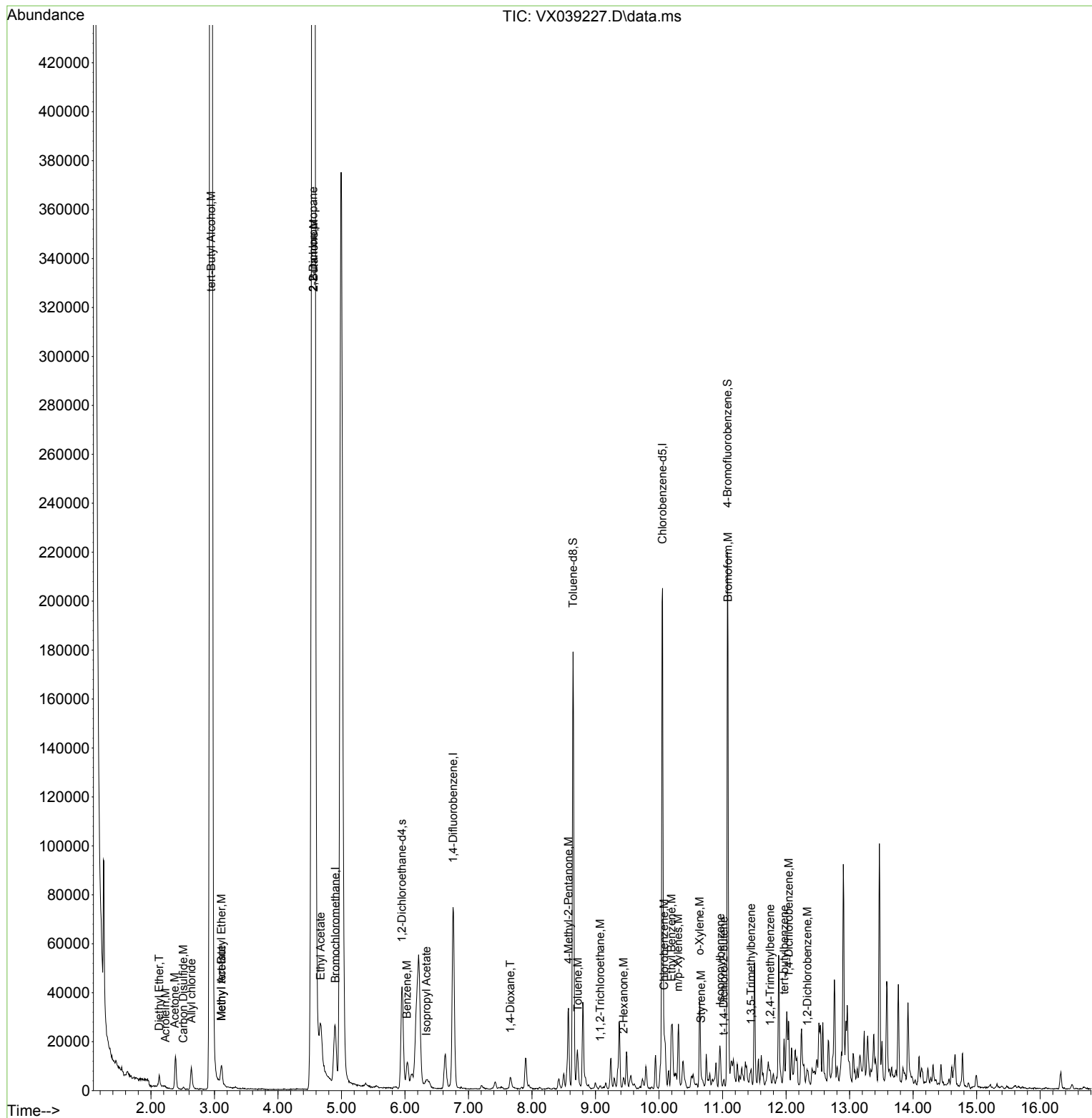
Internal Standards						
1) Bromochloromethane	4.904	128	9463	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.757	114	74137	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.055	117	87790	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	42066	32.493	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 108.300%			
60) 4-Bromofluorobenzene	11.079	95	59802	31.188	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 103.967%			
63) Toluene-d8	8.647	98	102767	29.608	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 98.700%			
Target Compounds						
					Qvalue	
8) Diethyl Ether	2.130	74	1286	1.483	ug/l	74
12) Methyl Acetate	3.111	43	2221	0.553	ug/l	91
13) Acrolein	2.227	56	168	0.478	ug/l	85
15) Acetone	2.373	58	681	1.908	ug/l #	62
16) Carbon Disulfide	2.508	76	896	0.230	ug/l #	73
17) Allyl chloride	2.636	41	9602	3.758	ug/l #	40
23) tert-Butyl Alcohol	2.947	59	2036785	3747.044	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	7971	1.681	ug/l #	65
30) 2-Butanone	4.562	43	69545	44.445	ug/l #	79
31) 2,2-Dichloropropane	4.556	77	89322	37.590	ug/l #	53
34) Benzene	6.031	78	6512	1.076	ug/l #	78
43) Ethyl Acetate	4.672	43	4896	1.819	ug/l #	1
44) Isopropyl Acetate	6.336	43	1565	0.369	ug/l #	57
45) 1,4-Dioxane	7.659	88	3776	87.162	ug/l	95
50) 1,1,2-Trichloroethane	9.073	97	525	0.343	ug/l #	14
56) Bromoform	11.085	173	399	0.336	ug/l #	1
58) 4-Methyl-2-Pentanone	8.574	43	22410	8.418	ug/l	93
59) 2-Hexanone	9.439	43	2541	1.163	ug/l #	73
62) Toluene	8.720	91	5630	0.903	ug/l	98
64) Chlorobenzene	10.079	112	3216	0.848	ug/l	97
66) Ethyl Benzene	10.195	91	12973	1.828	ug/l	97
67) m/p-Xylenes	10.299	106	3937	1.501	ug/l	98
68) o-Xylene	10.640	106	7467	2.939	ug/l	99
69) Styrene	10.659	104	978	0.260	ug/l #	1
70) Isopropylbenzene	10.963	105	6528	0.960	ug/l	98
76) 1,3,5-Trimethylbenzene	11.451	105	2967	0.507	ug/l	95
77) t-1,4-Dichloro-2-butene	11.018	75	367	0.431	ug/l #	36
79) tert-butylbenzene	11.969	119	6041	1.085	ug/l	66
80) 1,2,4-Trimethylbenzene	11.750	105	1994	0.340	ug/l	82
84) 1,4-Dichlorobenzene	12.042	146	7005	2.305	ug/l	94
87) 1,2-Dichlorobenzene	12.335	146	614	0.216	ug/l	94

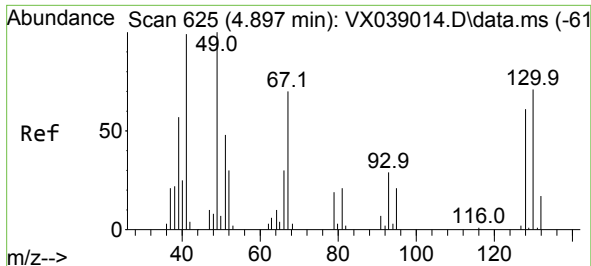
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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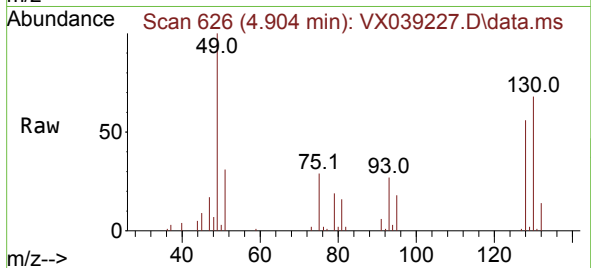
Quant Time: Dec 16 01:13:56 2023
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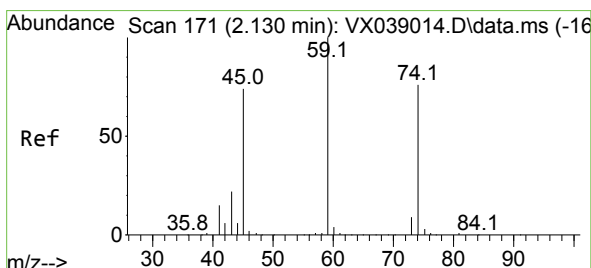
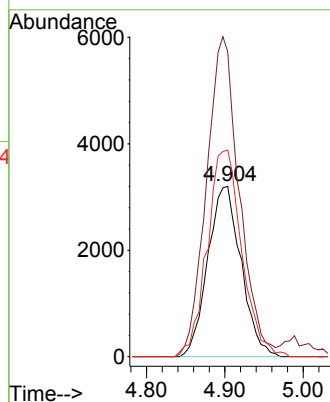
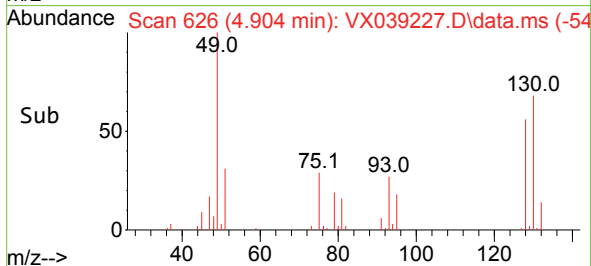


#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 4.904 min Scan# 61
Delta R.T. 0.006 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Instrument :
MSVOA_X
ClientSampleId :

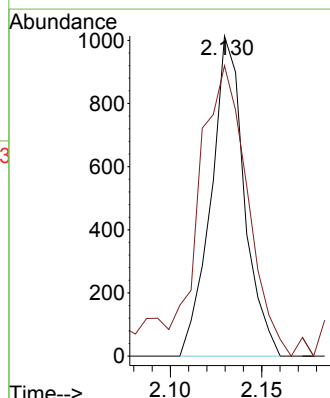
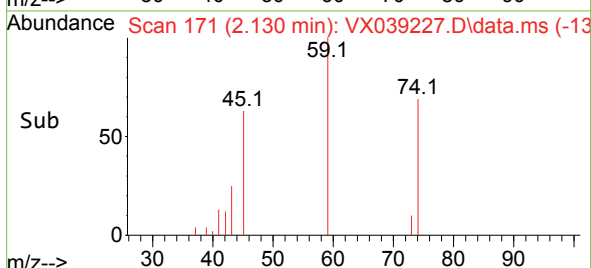
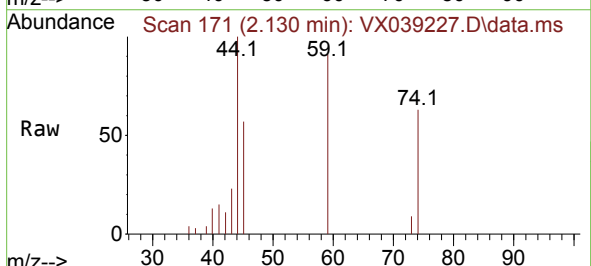


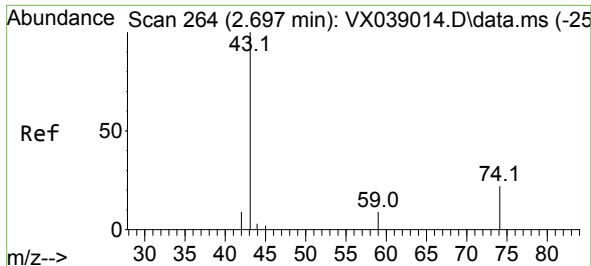
Tgt Ion:128 Resp: 9463
Ion Ratio Lower Upper
128 100
49 184.9 0.0 444.0
130 125.1 0.0 297.8



#8
Diethyl Ether
Concen: 1.483 ug/l
RT: 2.130 min Scan# 171
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 74 Resp: 1286
Ion Ratio Lower Upper
74 100
45 129.3 20.5 184.5

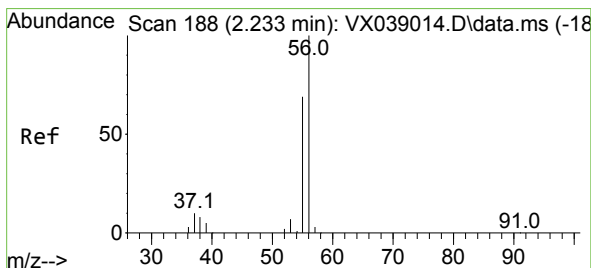
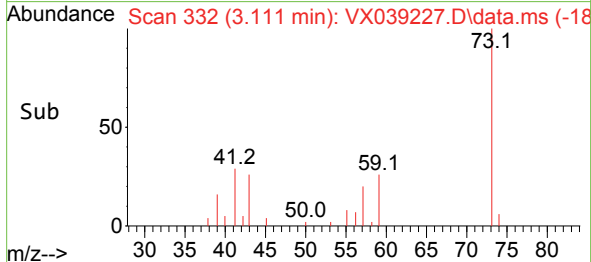
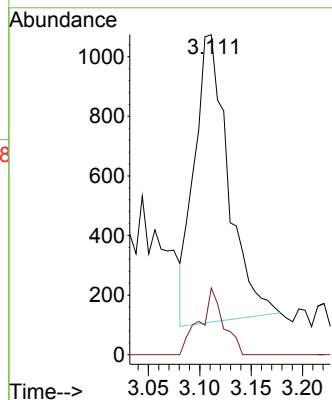
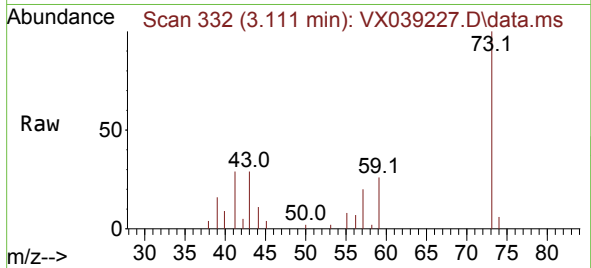




#12
Methyl Acetate
Concen: 0.553 ug/l
RT: 3.111 min Scan# 311
Delta R.T. 0.415 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

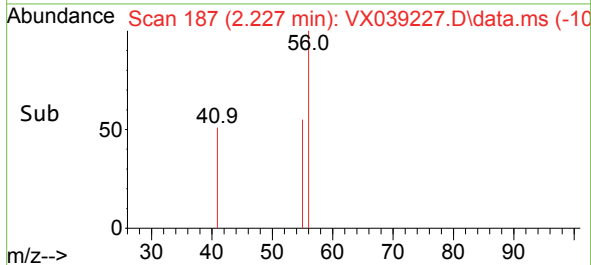
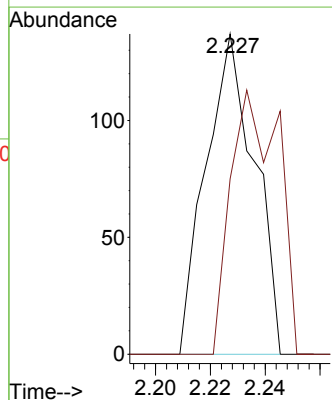
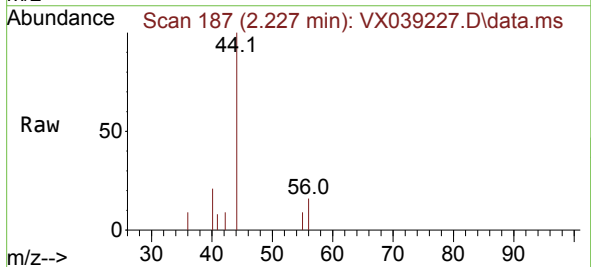
Instrument :
MSVOA_X
ClientSampleId :

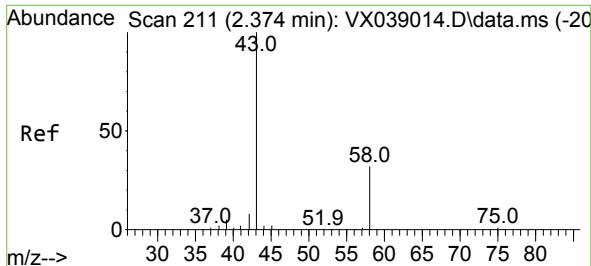
Tgt Ion: 43 Resp: 2221
Ion Ratio Lower Upper
43 100
74 26.3 17.8 26.6



#13
Acrolein
Concen: 0.478 ug/l
RT: 2.227 min Scan# 187
Delta R.T. -0.006 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

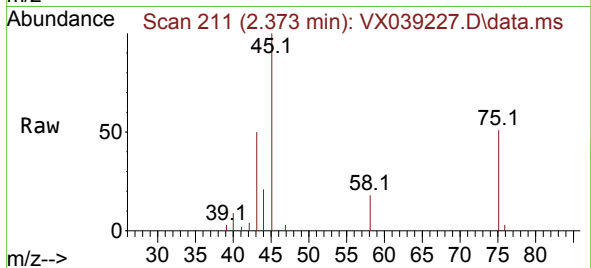
Tgt Ion: 56 Resp: 168
Ion Ratio Lower Upper
56 100
55 58.9 57.2 85.8



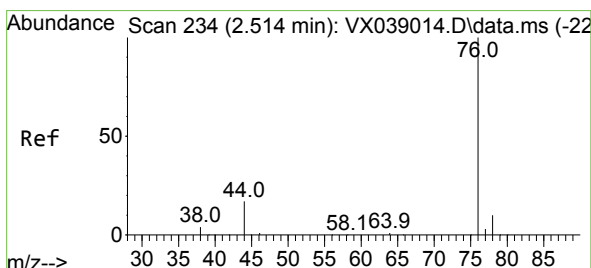
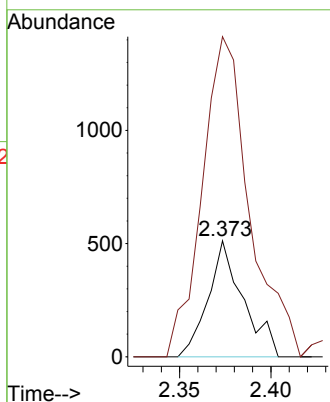
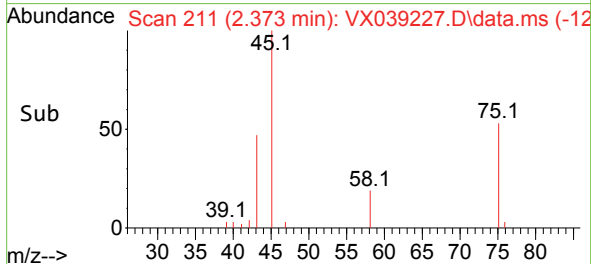


#15
Acetone
Concen: 1.908 ug/l
RT: 2.373 min Scan# 211
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

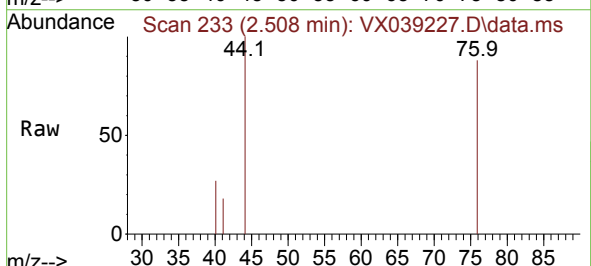
Instrument :
MSVOA_X
ClientSampleId :



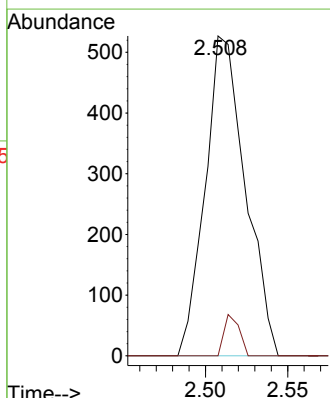
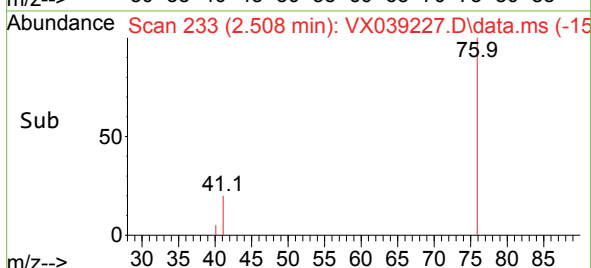
Tgt Ion: 58 Resp: 681
Ion Ratio Lower Upper
58 100
43 235.7 249.9 374.9#

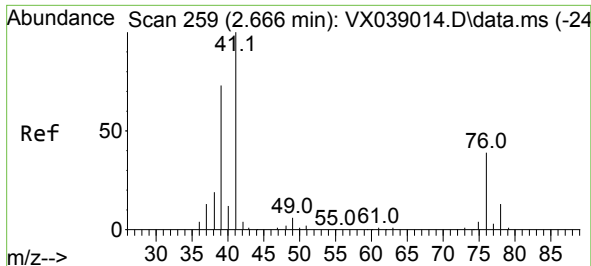


#16
Carbon Disulfide
Concen: 0.230 ug/l
RT: 2.508 min Scan# 233
Delta R.T. -0.006 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25



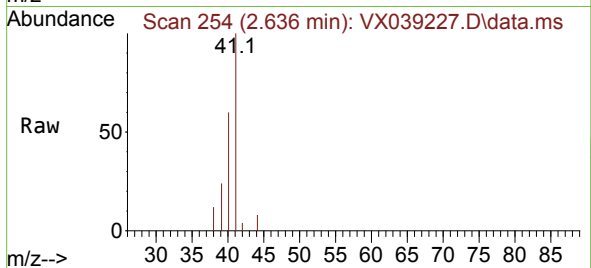
Tgt Ion: 76 Resp: 896
Ion Ratio Lower Upper
76 100
78 0.0 8.0 12.0#



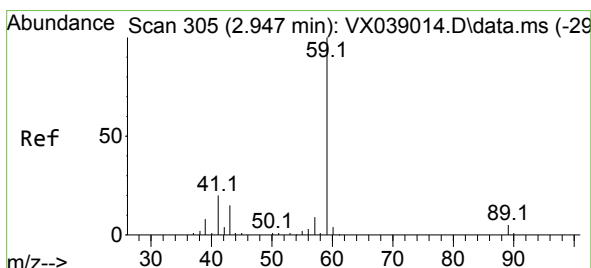
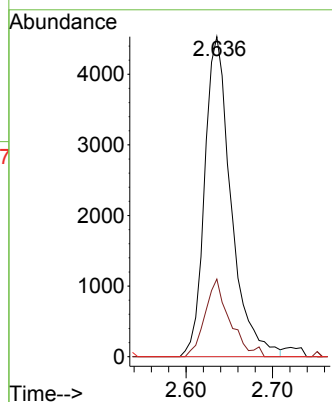
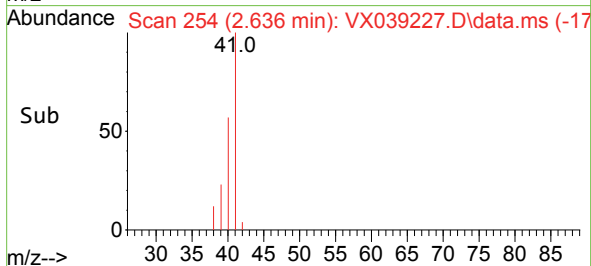


#17
 Allyl chloride
 Concen: 3.758 ug/l
 RT: 2.636 min Scan# 21
 Delta R.T. -0.031 min
 Lab File: VX039227.D
 Acq: 15 Dec 2023 12:25

Instrument :
 MSVOA_X
 ClientSampleId :

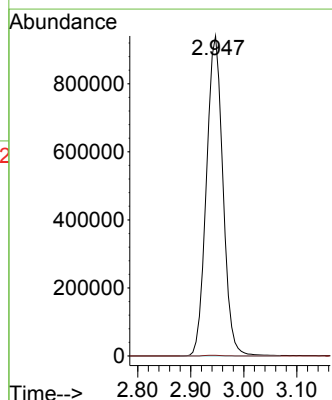
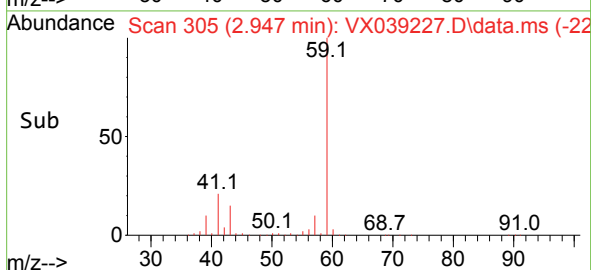
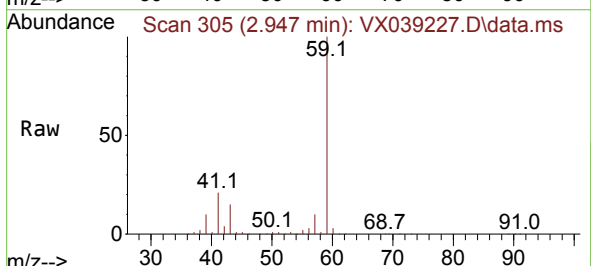


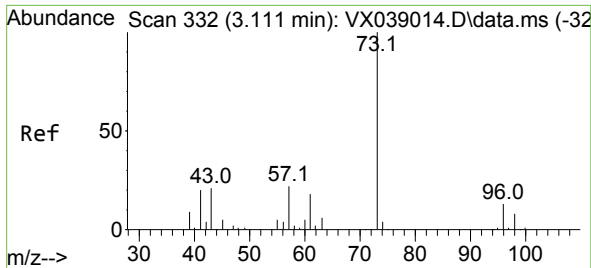
Tgt Ion: 41 Resp: 9602
 Ion Ratio Lower Upper
 41 100
 39 24.3 36.5 109.5#
 76 0.0 19.7 59.0#



#23
 tert-Butyl Alcohol
 Concen: 3747.044 ug/l
 RT: 2.947 min Scan# 305
 Delta R.T. -0.000 min
 Lab File: VX039227.D
 Acq: 15 Dec 2023 12:25

Tgt Ion: 59 Resp: 2036785
 Ion Ratio Lower Upper
 59 100
 52 0.2 0.0 0.0#

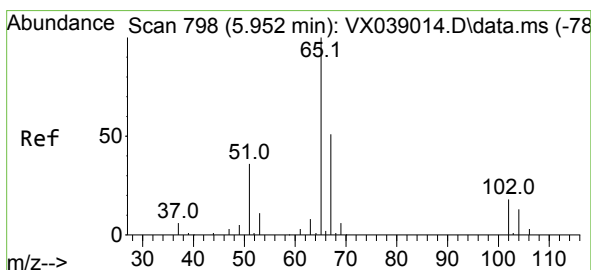
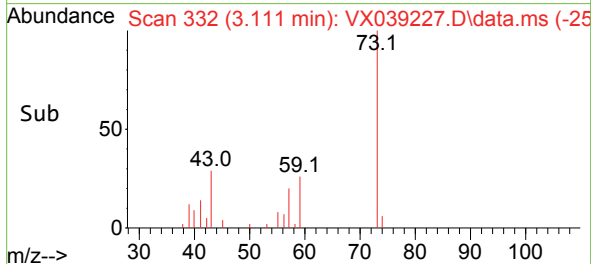
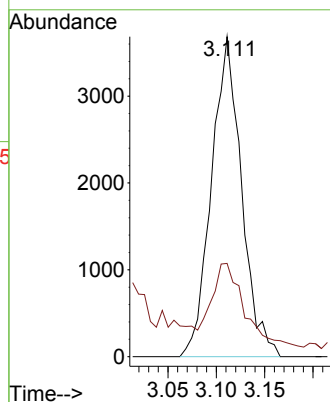
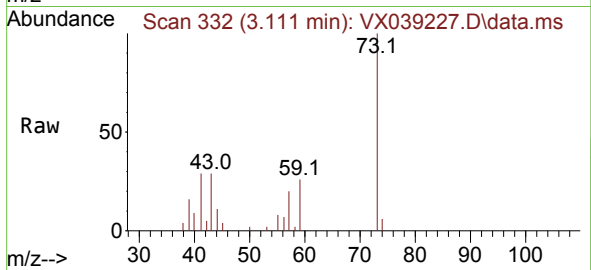




#24
Methyl tert-Butyl Ether
Concen: 1.681 ug/l
RT: 3.111 min Scan# 311
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

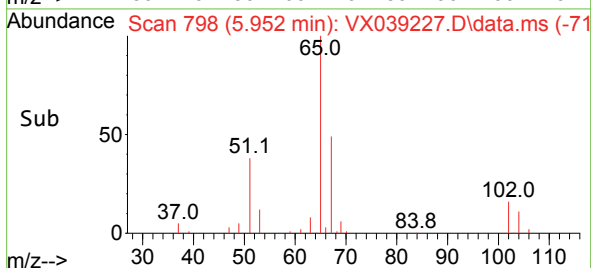
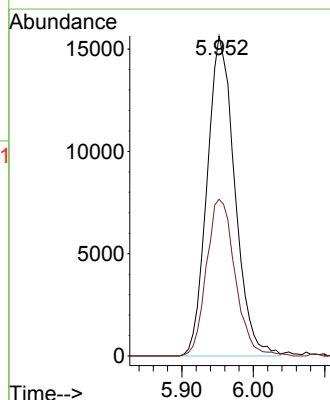
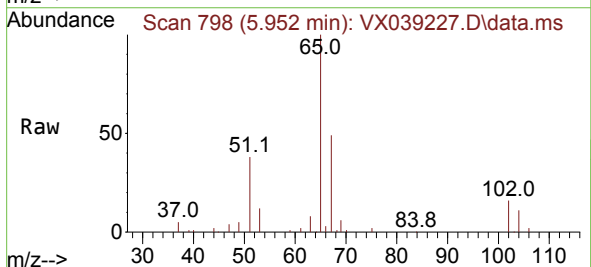
Instrument :
MSVOA_X
ClientSampleId :

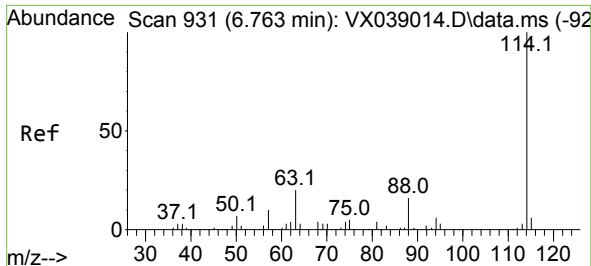
Tgt Ion: 73 Resp: 7971
Ion Ratio Lower Upper
73 100
43 37.6 17.0 25.6#



#27
1,2-Dichloroethane-d4
Concen: 32.493 ug/l
RT: 5.952 min Scan# 798
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 65 Resp: 42066
Ion Ratio Lower Upper
65 100
67 50.2 42.5 63.7





#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 6.757 min Scan# 91

Delta R.T. -0.006 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

ClientSampleId :

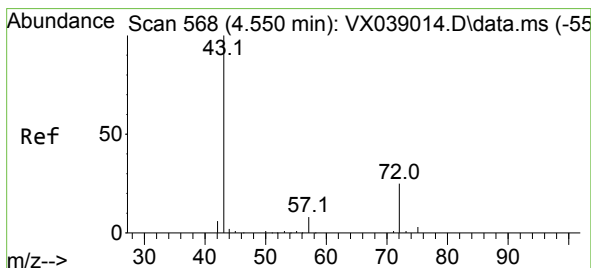
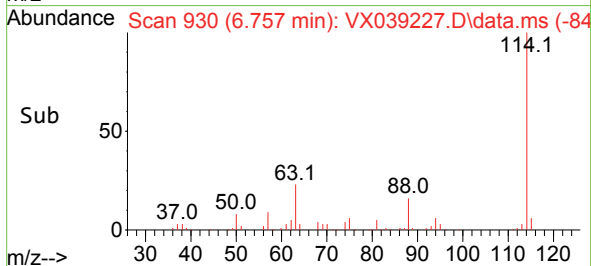
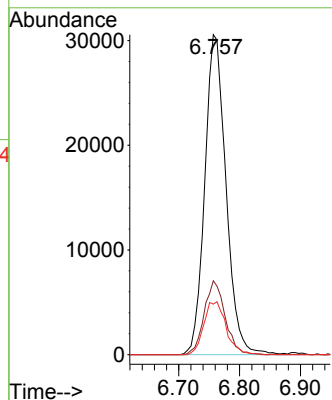
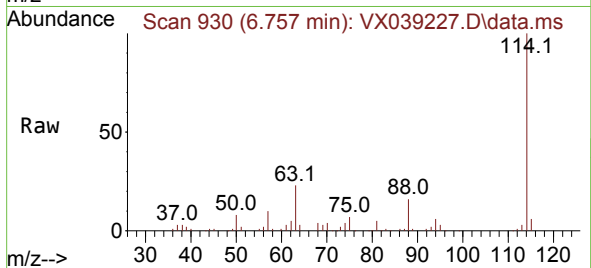
Tgt Ion:114 Resp: 74137

Ion Ratio Lower Upper

114 100

63 22.6 17.0 25.4

88 17.4 12.7 19.1



#30

2-Butanone

Concen: 44.445 ug/l

RT: 4.562 min Scan# 570

Delta R.T. 0.012 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

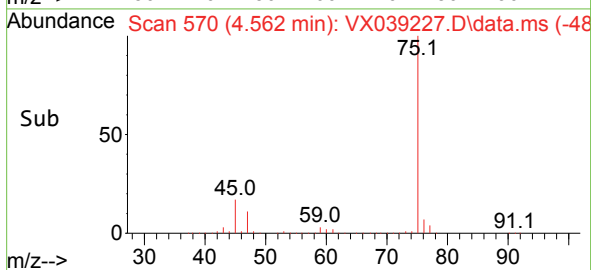
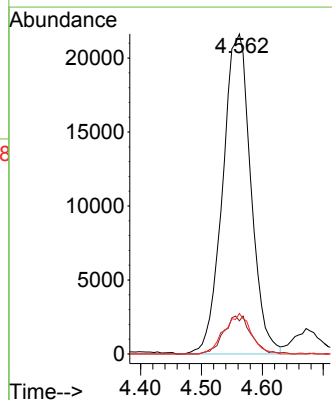
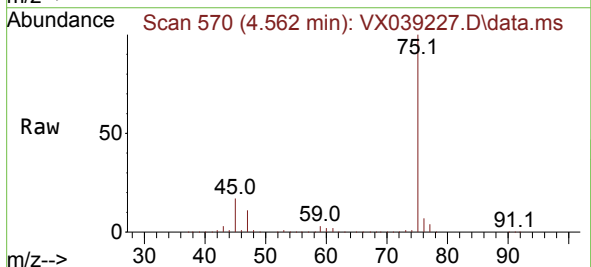
Tgt Ion: 43 Resp: 69545

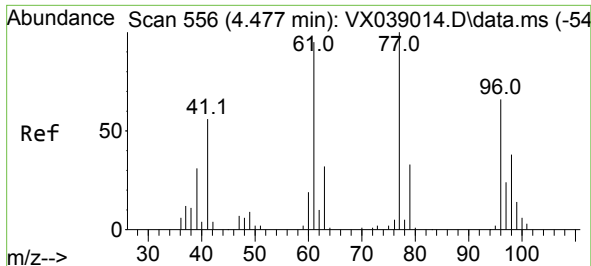
Ion Ratio Lower Upper

43 100

57 7.0 6.6 10.0

72 12.0 20.6 31.0#

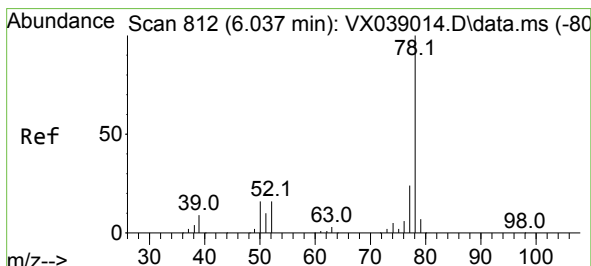
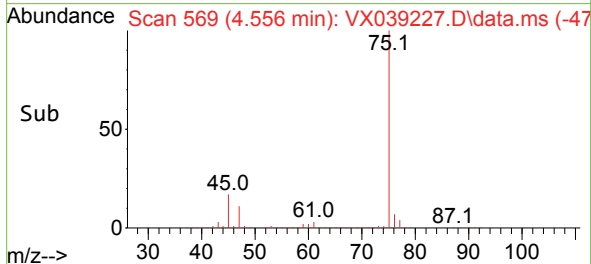
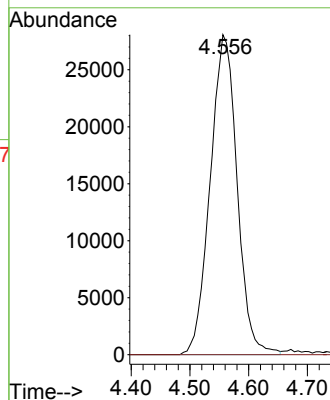
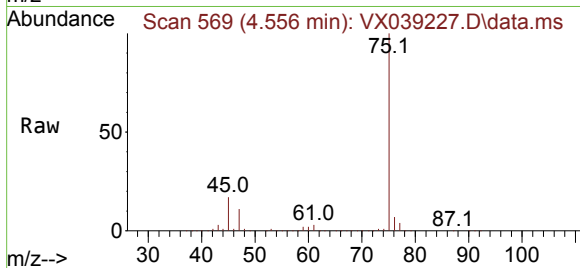




#31
2,2-Dichloropropane
Concen: 37.590 ug/l
RT: 4.556 min Scan# 50
Delta R.T. 0.079 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

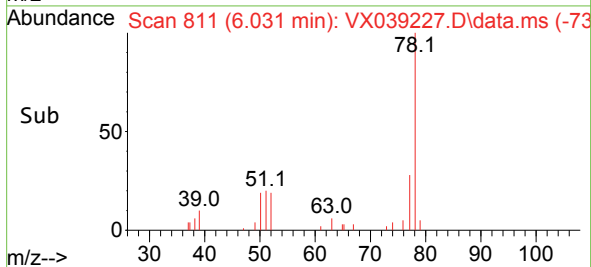
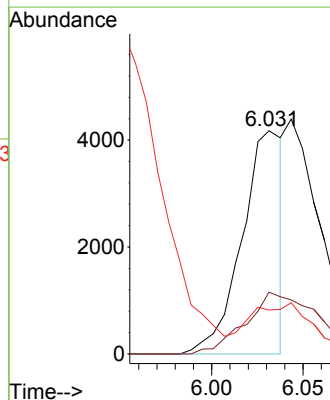
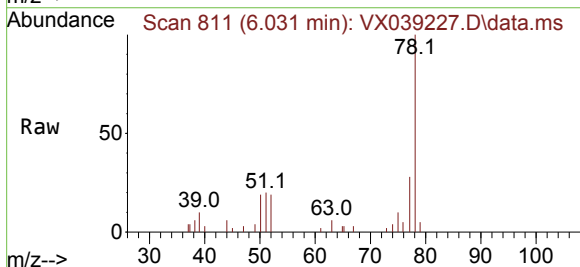
Instrument :
MSVOA_X
ClientSampleId :

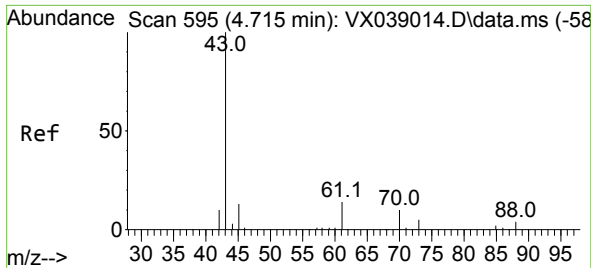
Tgt Ion: 77 Resp: 89322
Ion Ratio Lower Upper
77 100
97 0.0 18.2 27.4#



#34
Benzene
Concen: 1.076 ug/l
RT: 6.031 min Scan# 811
Delta R.T. -0.006 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 78 Resp: 6512
Ion Ratio Lower Upper
78 100
77 27.7 19.3 28.9
51 0.0 14.4 21.6#





#43

Ethyl Acetate

Concen: 1.819 ug/l

RT: 4.672 min Scan# 51

Delta R.T. -0.043 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

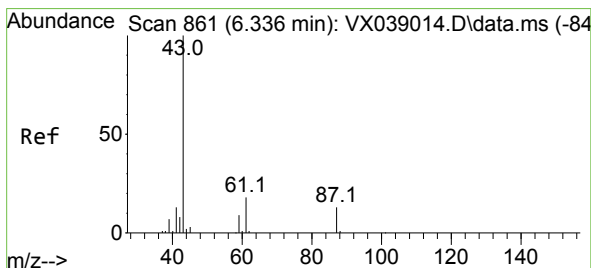
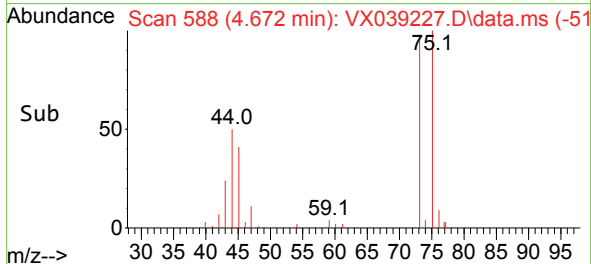
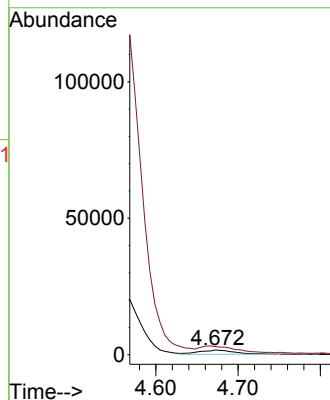
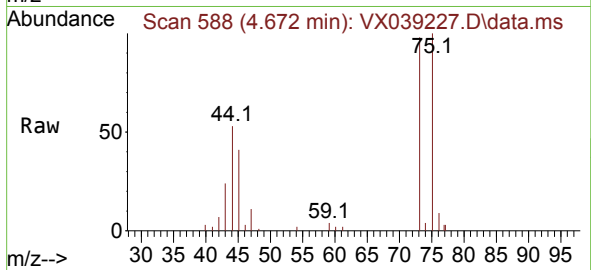
ClientSampleId :

Tgt Ion: 43 Resp: 4896

Ion Ratio Lower Upper

43 100

45 160.3 11.8 17.8#



#44

Isopropyl Acetate

Concen: 0.369 ug/l

RT: 6.336 min Scan# 861

Delta R.T. -0.000 min

Lab File: VX039227.D

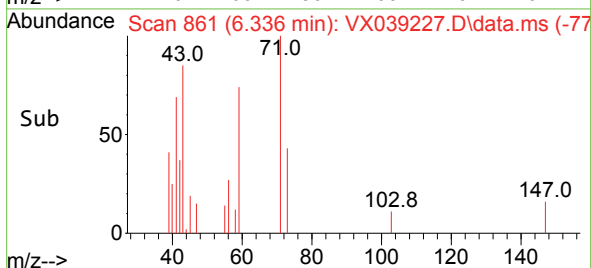
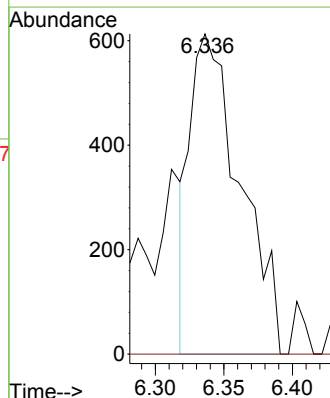
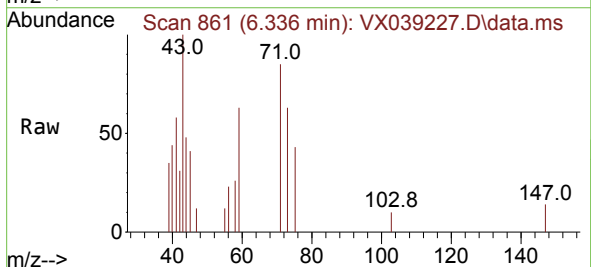
Acq: 15 Dec 2023 12:25

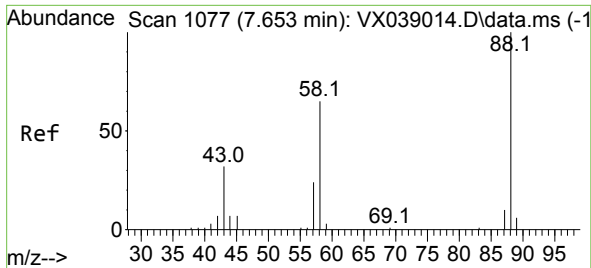
Tgt Ion: 43 Resp: 1565

Ion Ratio Lower Upper

43 100

61 0.0 15.6 23.4#

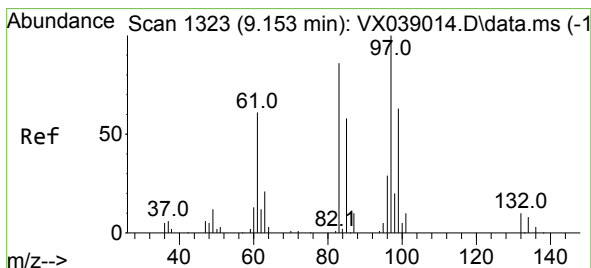
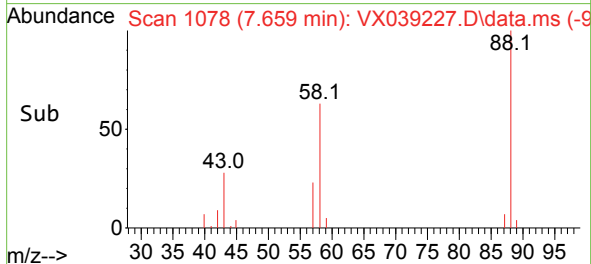
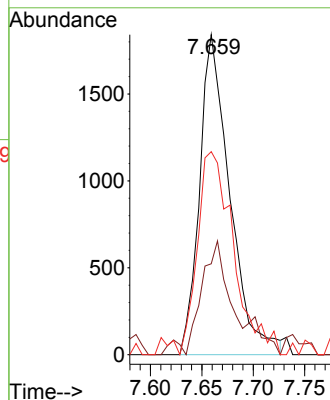
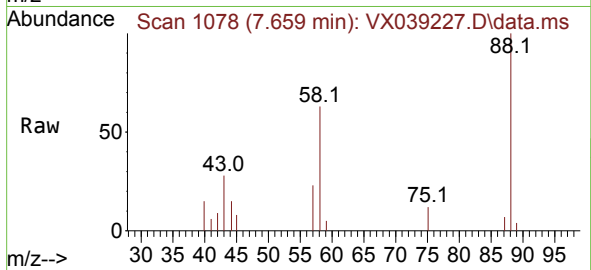




#45
 1,4-Dioxane
 Concen: 87.162 ug/l
 RT: 7.659 min Scan# 110
 Delta R.T. 0.006 min
 Lab File: VX039227.D
 Acq: 15 Dec 2023 12:25

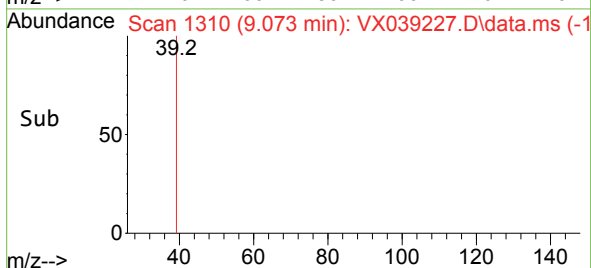
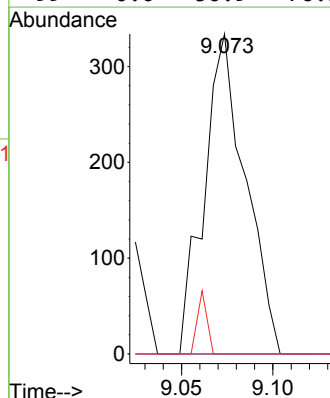
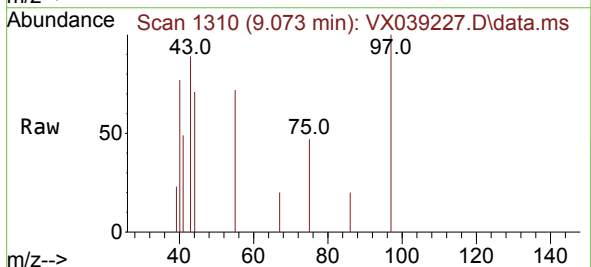
Instrument :
 MSVOA_X
 ClientSampleId :

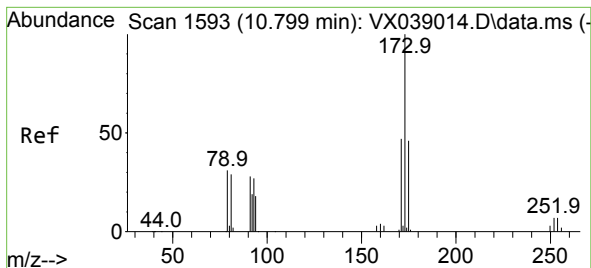
Tgt Ion: 88	Resp: 3776
Ion Ratio	Lower Upper
88	100
43	31.5 28.1 42.1
58	75.5 57.7 86.5



#50
 1,1,2-Trichloroethane
 Concen: 0.343 ug/l
 RT: 9.073 min Scan# 1310
 Delta R.T. -0.079 min
 Lab File: VX039227.D
 Acq: 15 Dec 2023 12:25

Tgt Ion: 97	Resp: 525
Ion Ratio	Lower Upper
97	100
83	0.0 69.0 103.6#
85	0.0 46.3 69.5#
99	0.0 50.9 76.3#





#56

Bromoform

Concen: 0.336 ug/l

RT: 11.085 min Scan# 1

Delta R.T. 0.286 min

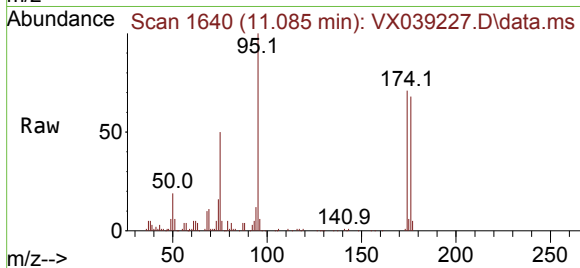
Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

ClientSampleId :



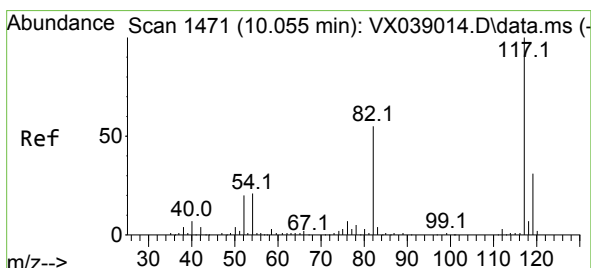
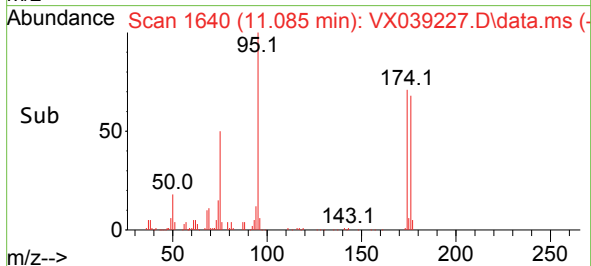
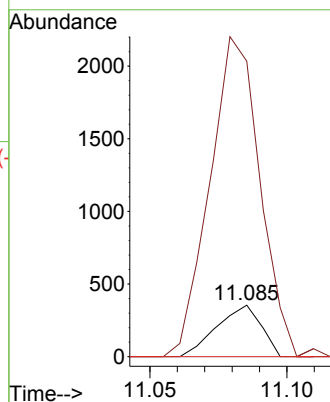
Tgt Ion:173 Resp: 399

Ion Ratio Lower Upper

173 100

175 702.8 37.6 56.4#

254 0.0 5.8 8.8#



#57

Chlorobenzene-d5

Concen: 30.000 ug/l

RT: 10.055 min Scan# 1471

Delta R.T. -0.000 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

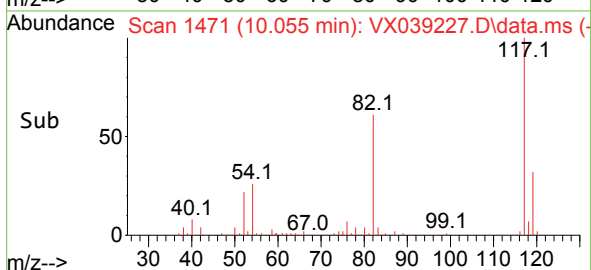
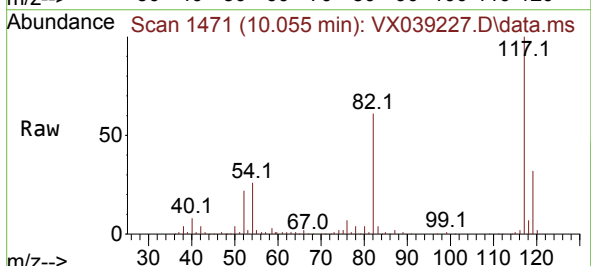
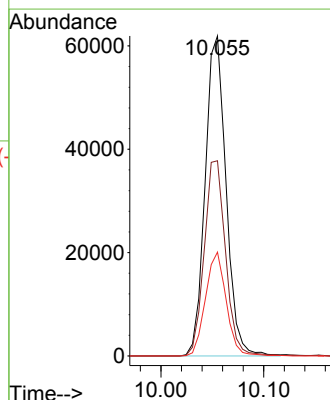
Tgt Ion:117 Resp: 87790

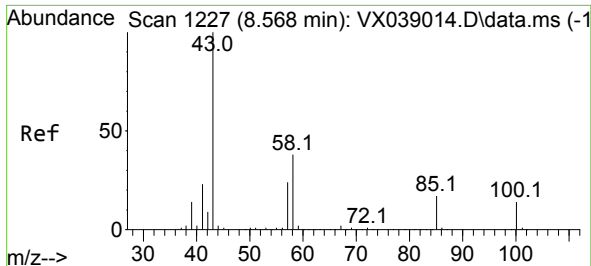
Ion Ratio Lower Upper

117 100

82 62.3 47.0 70.6

119 32.1 25.2 37.8





#58

4-Methyl-2-Pentanone

Concen: 8.418 ug/l

RT: 8.574 min Scan# 11

Delta R.T. 0.006 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

ClientSampleId :

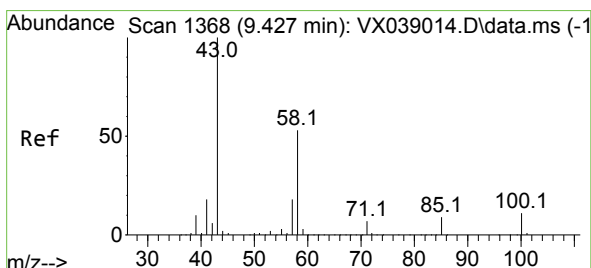
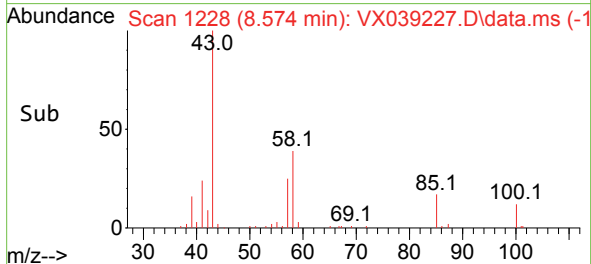
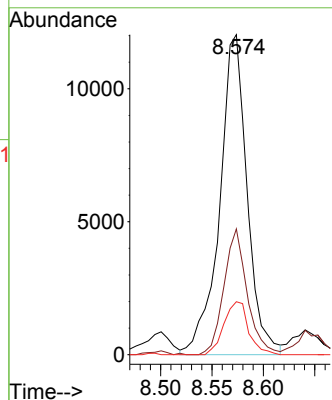
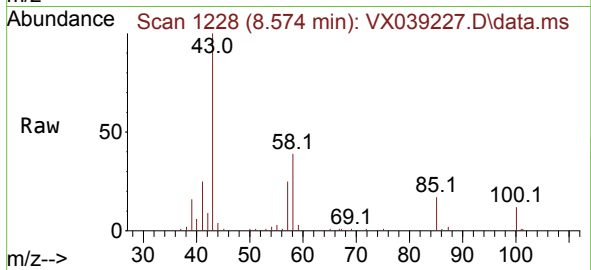
Tgt Ion: 43 Resp: 22410

Ion Ratio Lower Upper

43 100

58 33.2 30.1 45.1

85 14.8 13.9 20.9



#59

2-Hexanone

Concen: 1.163 ug/l

RT: 9.439 min Scan# 1370

Delta R.T. 0.012 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

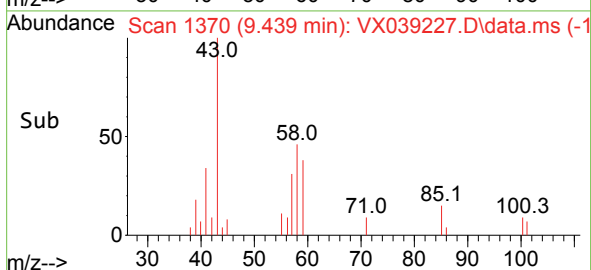
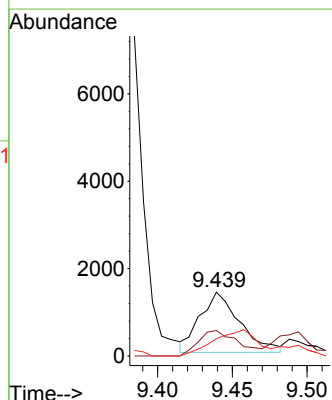
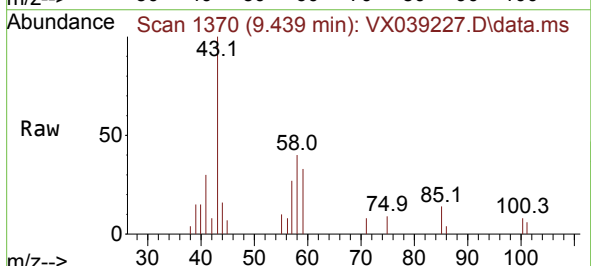
Tgt Ion: 43 Resp: 2541

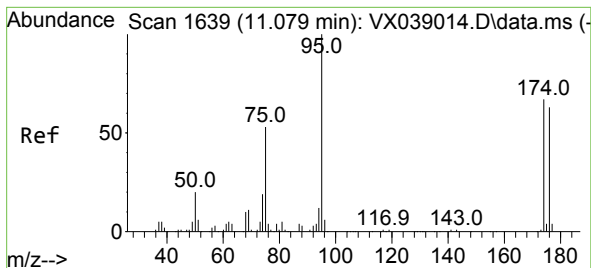
Ion Ratio Lower Upper

43 100

58 43.2 42.7 64.1

57 47.7 14.8 22.2#

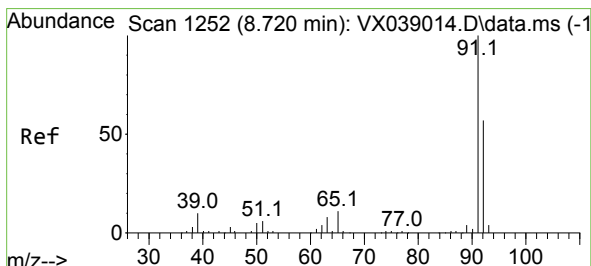
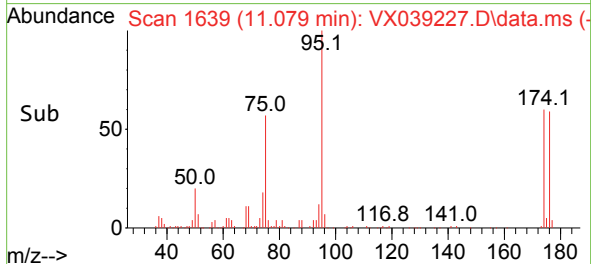
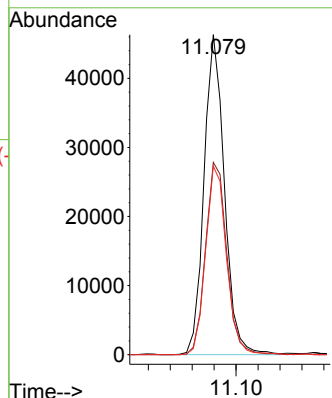
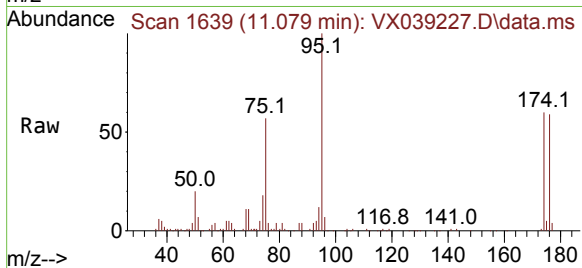




#60
4-Bromofluorobenzene
Concen: 31.188 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

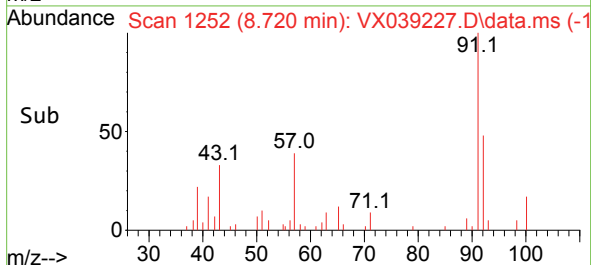
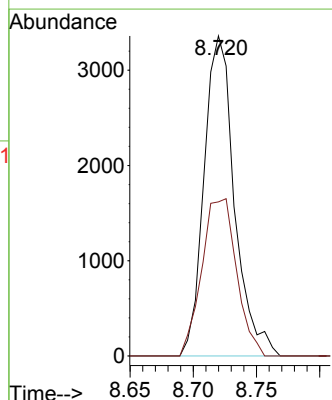
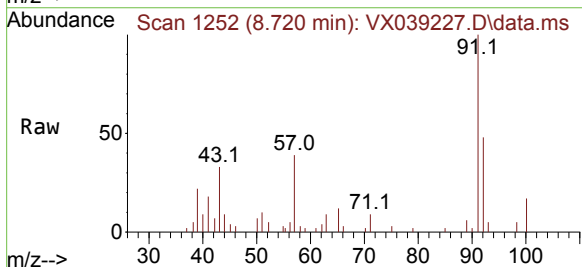
Instrument :
MSVOA_X
ClientSampleId :

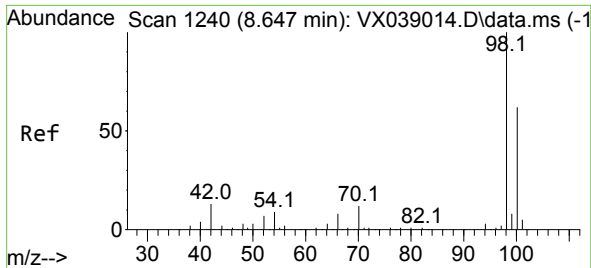
Tgt Ion: 95 Resp: 59802
Ion Ratio Lower Upper
95 100
174 62.5 55.4 83.2
176 60.2 52.6 78.8



#62
Toluene
Concen: 0.903 ug/l
RT: 8.720 min Scan# 1252
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 91 Resp: 5630
Ion Ratio Lower Upper
91 100
92 56.0 45.9 68.9

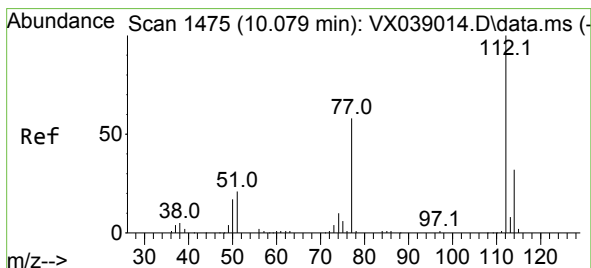
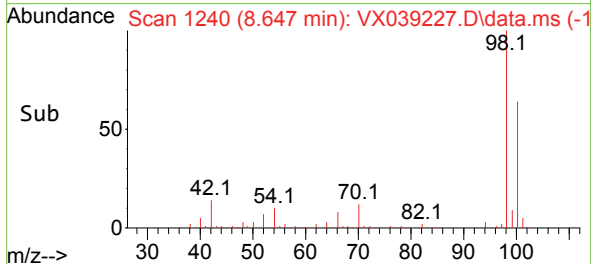
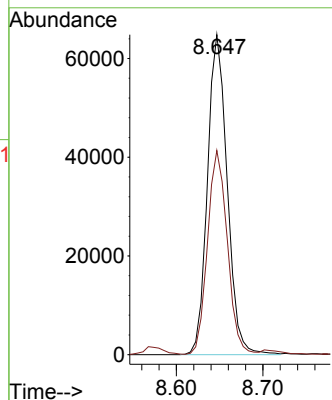
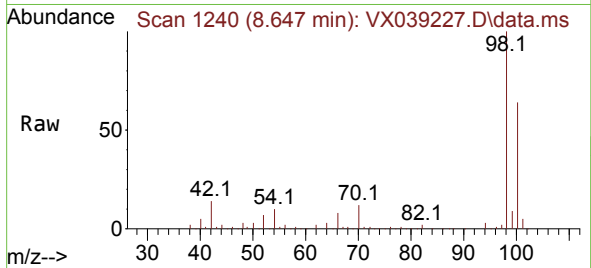




#63
Toluene-d8
Concen: 29.608 ug/l
RT: 8.647 min Scan# 11
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

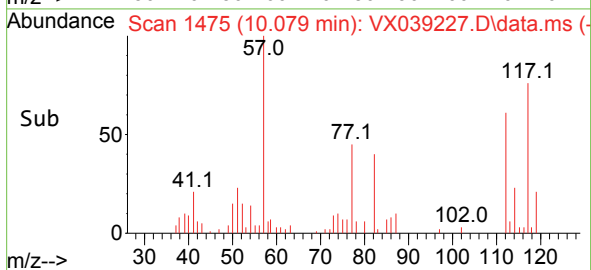
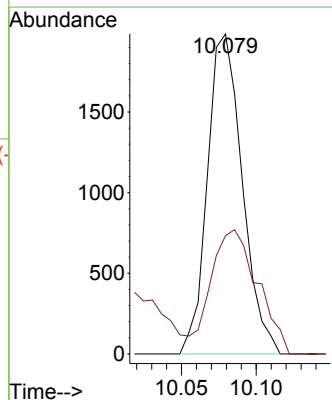
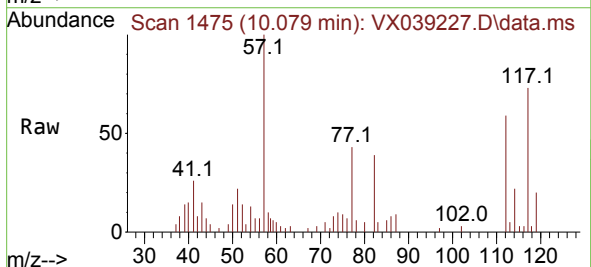
Instrument :
MSVOA_X
ClientSampleId :

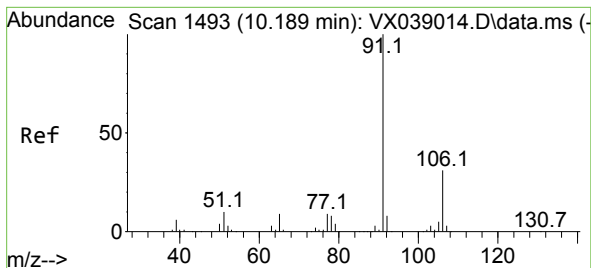
Tgt Ion: 98 Resp: 102767
Ion Ratio Lower Upper
98 100
100 64.1 51.0 76.4



#64
Chlorobenzene
Concen: 0.848 ug/l
RT: 10.079 min Scan# 1475
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 112 Resp: 3216
Ion Ratio Lower Upper
112 100
114 31.0 25.9 38.9





#66

Ethyl Benzene

Concen: 1.828 ug/l

RT: 10.195 min Scan# 1493

Delta R.T. 0.006 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

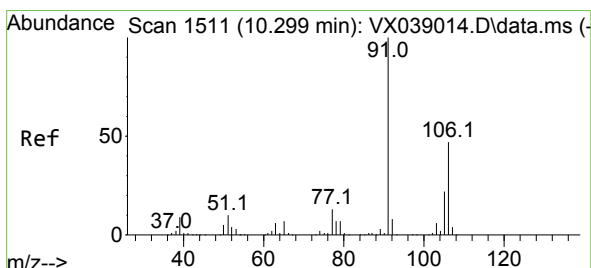
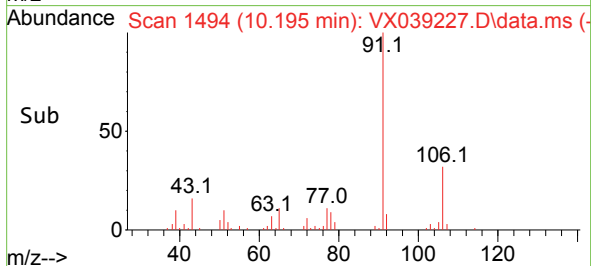
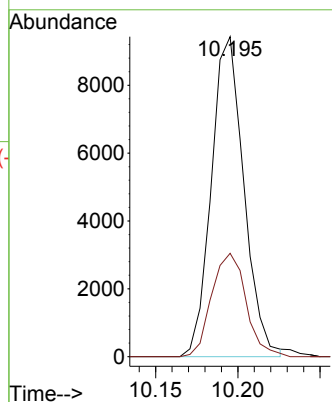
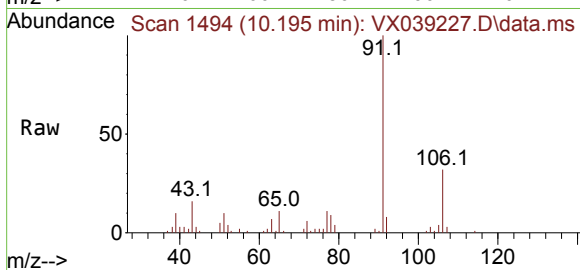
ClientSampleId :

Tgt Ion: 91 Resp: 12973

Ion Ratio Lower Upper

91 100

106 32.3 24.4 36.6



#67

m/p-Xylenes

Concen: 1.501 ug/l

RT: 10.299 min Scan# 1511

Delta R.T. -0.000 min

Lab File: VX039227.D

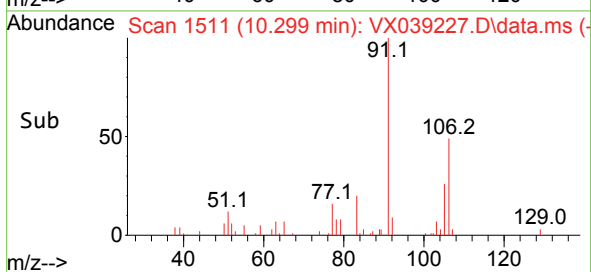
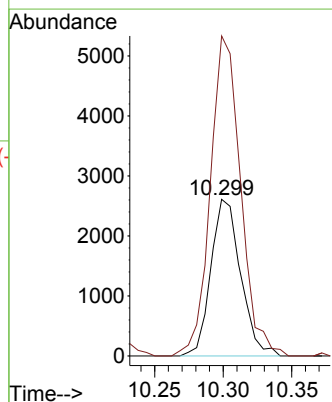
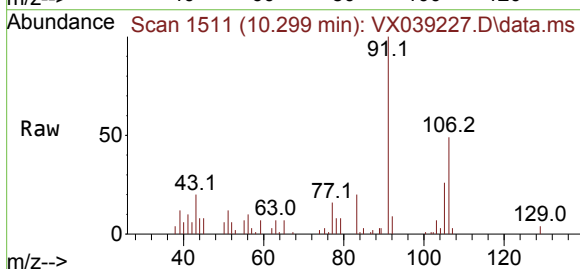
Acq: 15 Dec 2023 12:25

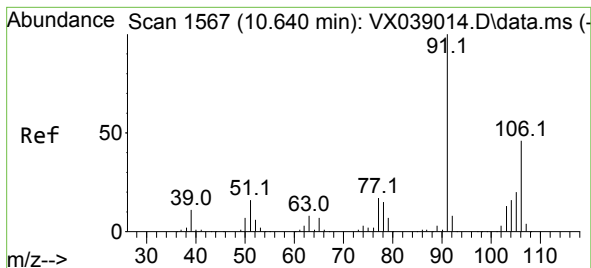
Tgt Ion: 106 Resp: 3937

Ion Ratio Lower Upper

106 100

91 208.3 169.4 254.0





#68

o-Xylene

Concen: 2.939 ug/l

RT: 10.640 min Scan# 1567

Delta R.T. -0.000 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

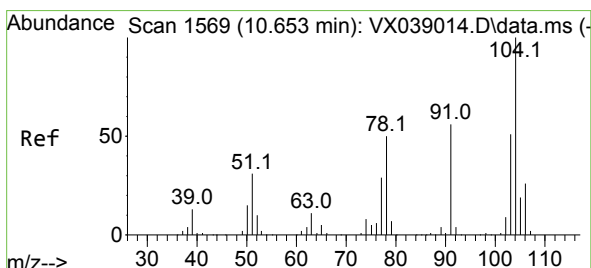
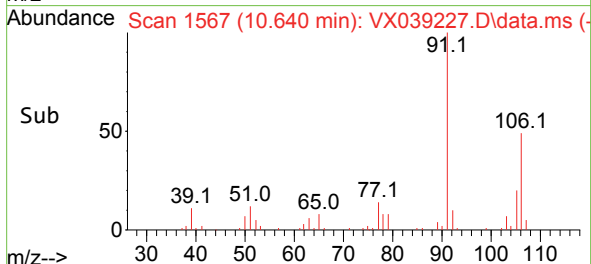
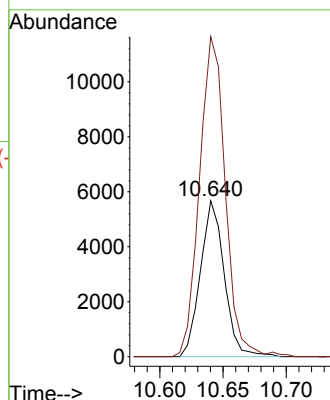
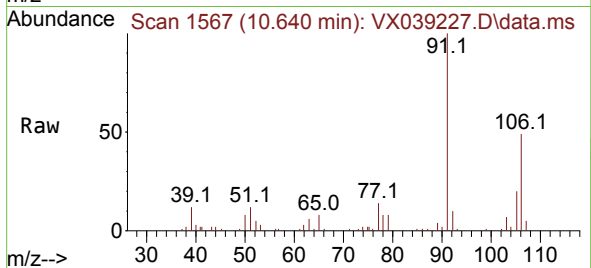
ClientSampleId :

Tgt Ion:106 Resp: 7467

Ion Ratio Lower Upper

106 100

91 220.0 111.2 333.6



#69

Styrene

Concen: 0.260 ug/l

RT: 10.659 min Scan# 1570

Delta R.T. 0.006 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

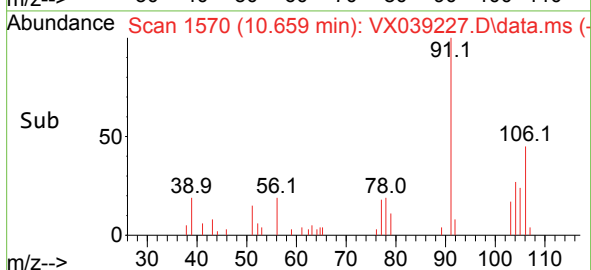
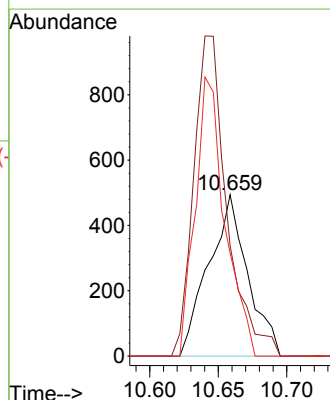
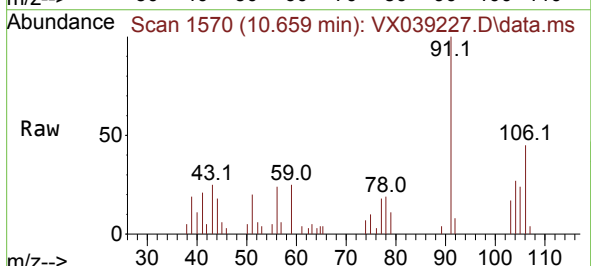
Tgt Ion:104 Resp: 978

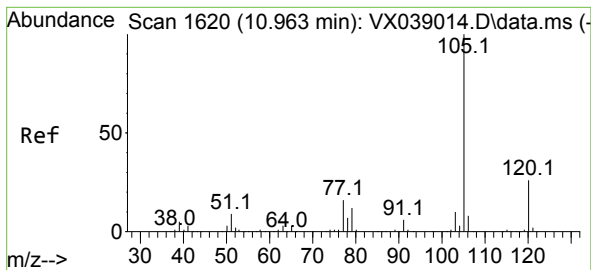
Ion Ratio Lower Upper

104 100

78 166.7 43.7 65.5#

103 130.9 44.6 67.0#





#70

Isopropylbenzene

Concen: 0.960 ug/l

RT: 10.963 min Scan# 1

Delta R.T. -0.000 min

Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

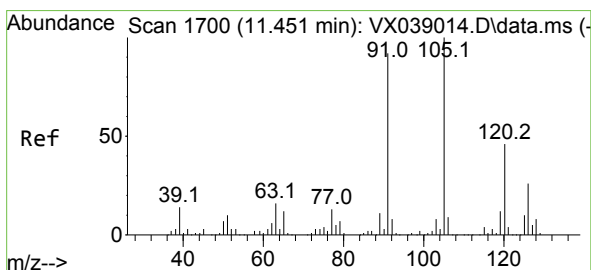
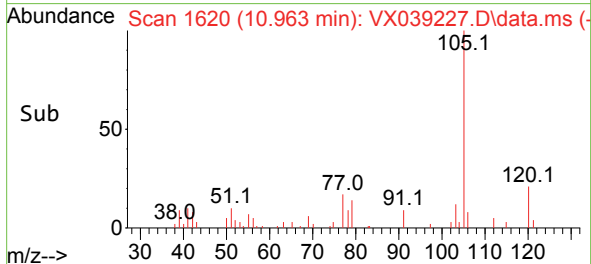
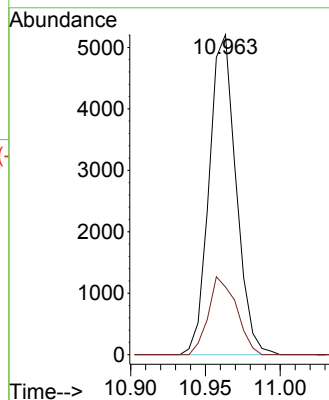
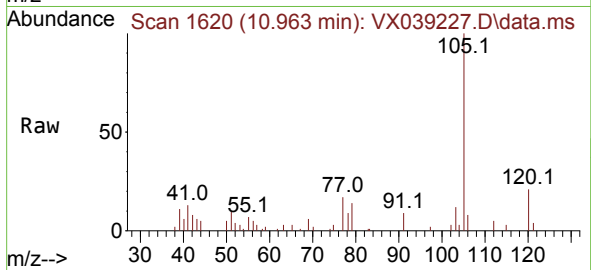
ClientSampleId :

Tgt Ion:105 Resp: 6528

Ion Ratio Lower Upper

105 100

120 25.3 18.5 34.3



#76

1,3,5-Trimethylbenzene

Concen: 0.507 ug/l

RT: 11.451 min Scan# 1700

Delta R.T. -0.000 min

Lab File: VX039227.D

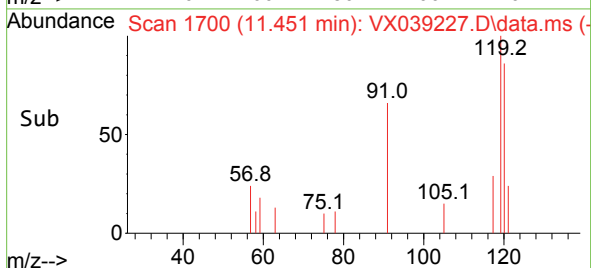
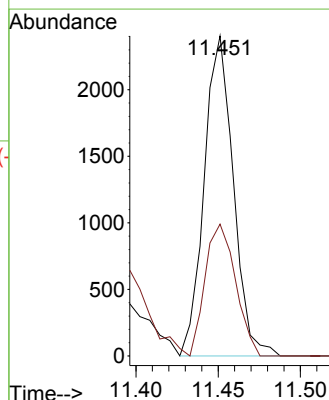
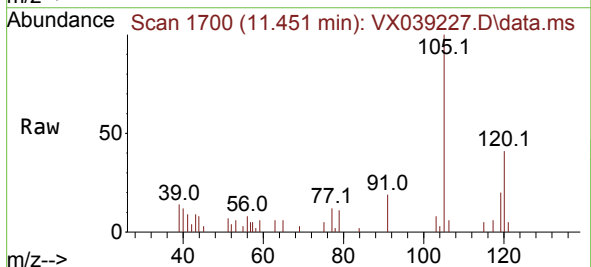
Acq: 15 Dec 2023 12:25

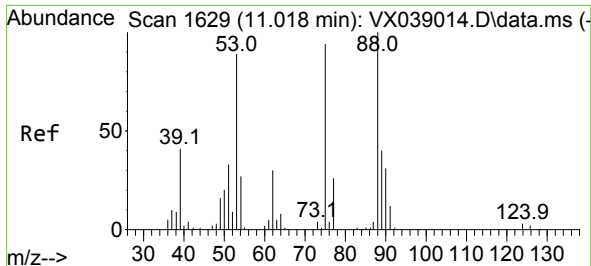
Tgt Ion:105 Resp: 2967

Ion Ratio Lower Upper

105 100

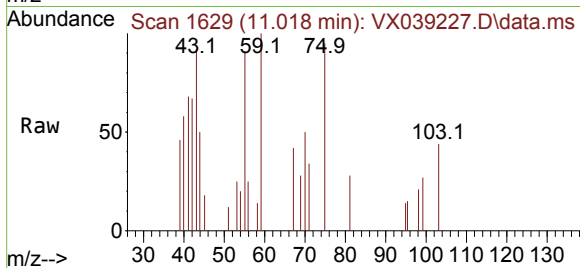
120 42.9 0.0 92.6



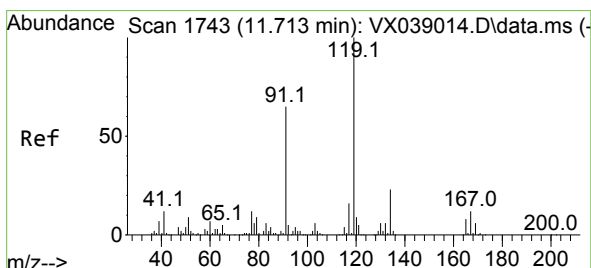
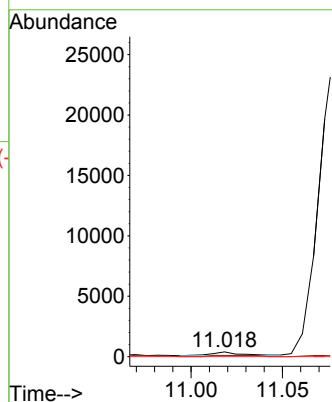
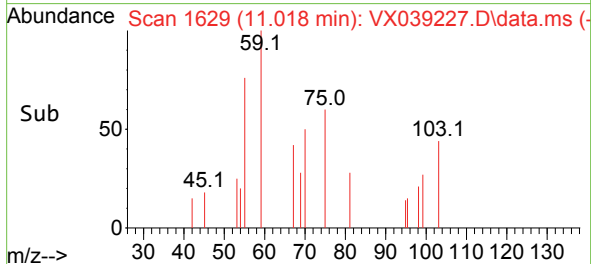


#77
t-1,4-Dichloro-2-butene
Concen: 0.431 ug/l
RT: 11.018 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Instrument :
MSVOA_X
ClientSampleId :

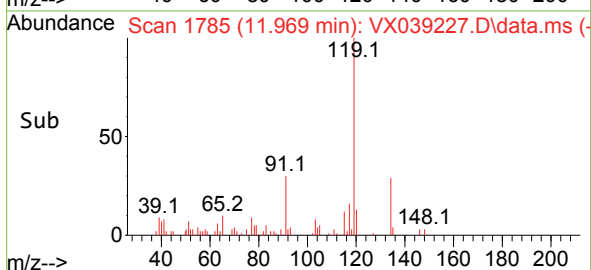
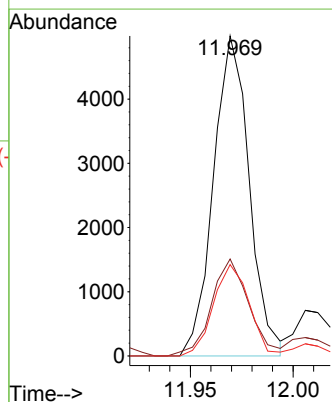
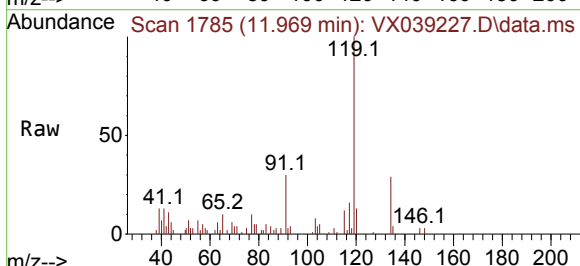


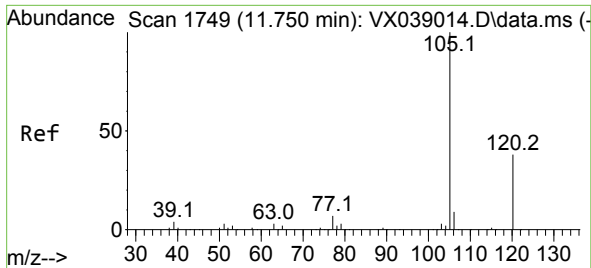
Tgt Ion: 75 Resp: 367
Ion Ratio Lower Upper
75 100
53 34.0 46.9 140.8#
89 0.0 21.3 63.7#



#79
tert-butylbenzene
Concen: 1.085 ug/l
RT: 11.969 min Scan# 1785
Delta R.T. 0.256 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion: 119 Resp: 6041
Ion Ratio Lower Upper
119 100
91 31.6 0.0 125.6
134 28.6 0.0 43.8

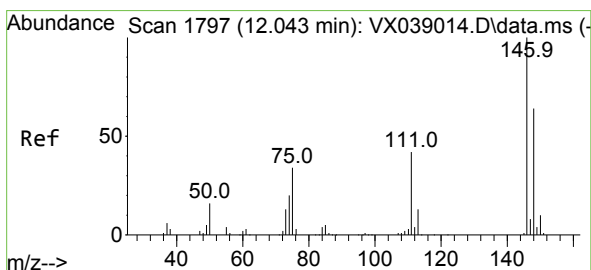
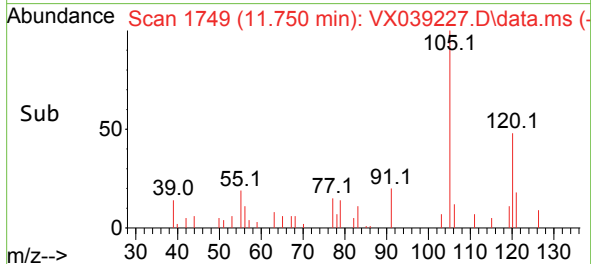
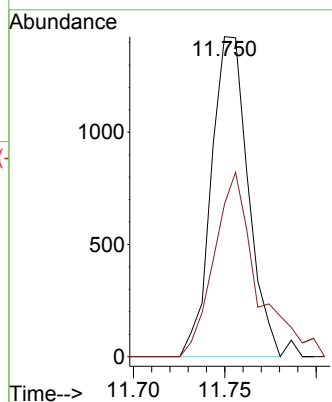
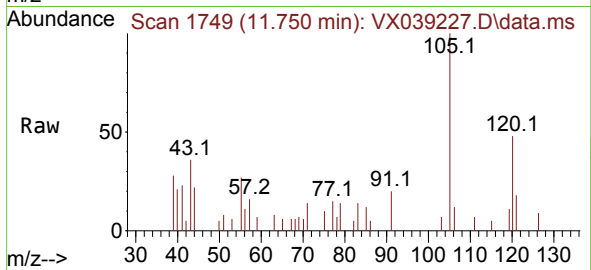




#80
1,2,4-Trimethylbenzene
Concen: 0.340 ug/l
RT: 11.750 min Scan# 11
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

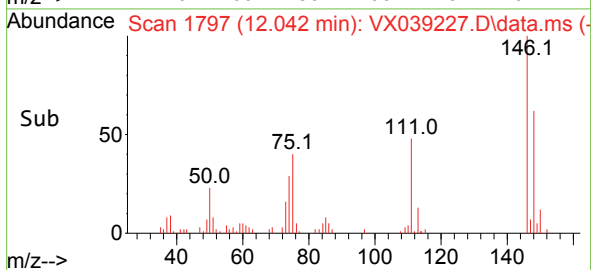
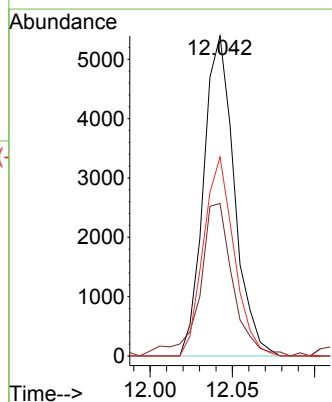
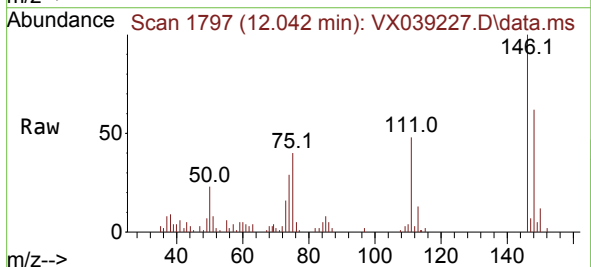
Instrument :
MSVOA_X
ClientSampleId :

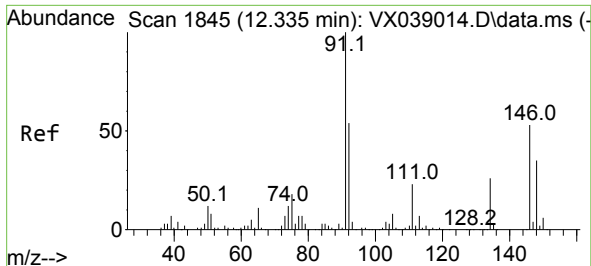
Tgt Ion:105 Resp: 1994
Ion Ratio Lower Upper
105 100
120 54.7 0.0 86.4



#84
1,4-Dichlorobenzene
Concen: 2.305 ug/l
RT: 12.042 min Scan# 1797
Delta R.T. -0.000 min
Lab File: VX039227.D
Acq: 15 Dec 2023 12:25

Tgt Ion:146 Resp: 7005
Ion Ratio Lower Upper
146 100
111 49.4 21.4 64.2
148 61.8 31.8 95.4





#87

1,2-Dichlorobenzene

Concen: 0.216 ug/l

RT: 12.335 min Scan# 11

Delta R.T. -0.000 min

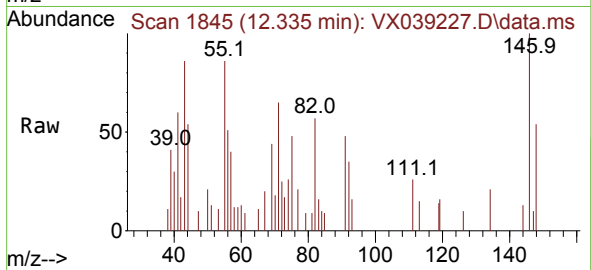
Lab File: VX039227.D

Acq: 15 Dec 2023 12:25

Instrument :

MSVOA_X

ClientSampleId :



Tgt Ion:146 Resp: 614

Ion Ratio Lower Upper

146 100

111 53.4 22.4 67.2

148 64.2 31.9 95.7

