

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100825\
 Data File : VL043063.D
 Acq On : 08 Oct 2025 14:32
 Operator : SY/MD
 Sample : Q3306-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Oct 09 01:18:56 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL100225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Oct 03 08:23:34 2025
 Response via : Initial Calibration

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

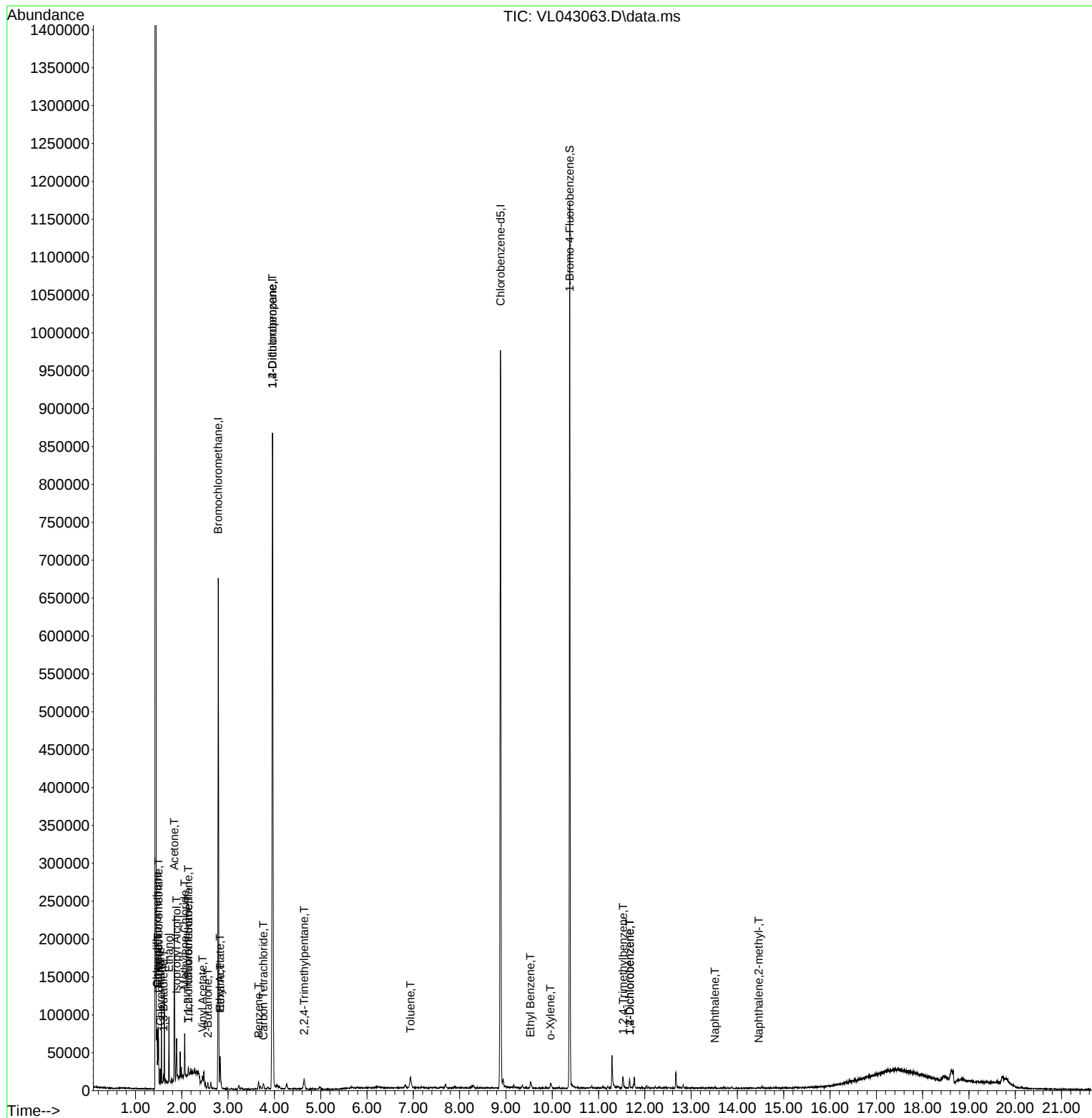
Internal Standards						
1) Bromochloromethane	2.787	49	182962	10.000	ppbv	0.01
33) 1,4-Difluorobenzene	3.959	114	486916	10.000	ppbv	0.02
55) Chlorobenzene-d5	8.882	117	383740	10.000	ppbv	0.02
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	267192	9.665	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	13758	0.446	ppbv	98
3) Chlorodifluoromethane	1.467	51	22370	0.750	ppbv #	73
4) Chloromethane	1.535	50	4992	0.443	ppbv	100
9) Propene	1.486	41	6882	0.572	ppbv	94
11) Trichlorofluoromethane	2.140	101	1686	0.053	ppbv	99
12) 1,1,2-Trichlorotrifluo...	2.140	101	1686	0.068	ppbv	99
13) Ethanol	1.722	45	28304	63.667	ppbv	92
15) Acetone	1.836	43	100511	3.923	ppbv	98
16) 1,3-Butadiene	1.603	39	1389	0.132	ppbv #	76
19) Isopropyl Alcohol	1.887	45	18668	1.521	ppbv #	1
20) Methylene Chloride	2.062	84	8621	0.771	ppbv	93
23) Vinyl Acetate	2.451	43	4785	0.880	ppbv #	90
25) Ethyl Acetate	2.826	43	7983	0.124	ppbv #	91
26) Hexane	2.829	57	7215	0.292	ppbv #	43
34) 2-Butanone	2.561	43	4940	0.150	ppbv	93
35) Carbon Tetrachloride	3.761	117	2740	0.068	ppbv #	86
36) Benzene	3.661	78	5492	0.118	ppbv	95
39) 1,2-Dichloropropane	3.959	63	123055	7.136	ppbv #	22
44) 2,2,4-Trimethylpentane	4.642	57	4971	0.067	ppbv #	18
53) Toluene	6.940	91	4167	0.089	ppbv #	12
58) Ethyl Benzene	9.529	91	4309	0.072	ppbv	93
60) o-Xylene	9.963	91	2003	0.040	ppbv	94
74) 1,2,4-Trimethylbenzene	11.533	105	1908	0.033	ppbv #	56
76) 1,4-Dichlorobenzene	11.675	146	2846	0.079	ppbv	98
77) 1,2-Dichlorobenzene	11.675	146	2846	0.076	ppbv	95
79) Naphthalene	13.513	128	642	0.248	ppbv #	91
80) Naphthalene,2-methyl-	14.462	142	464	0.681	ppbv #	86

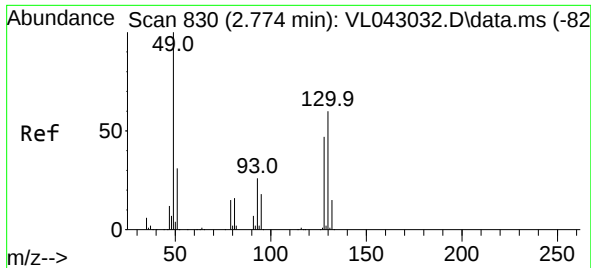
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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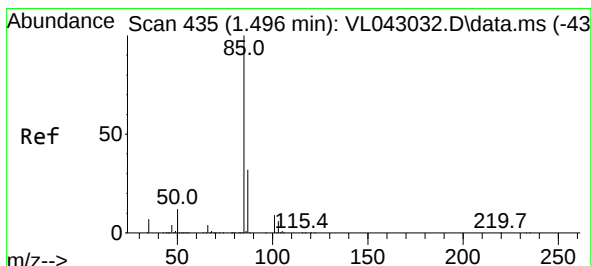
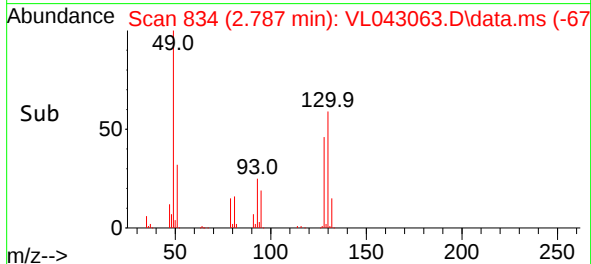
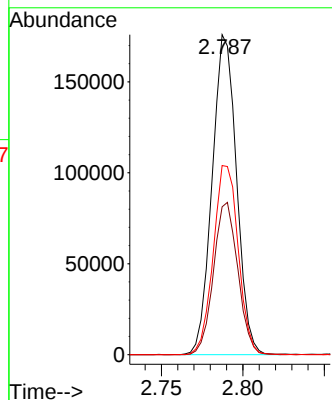
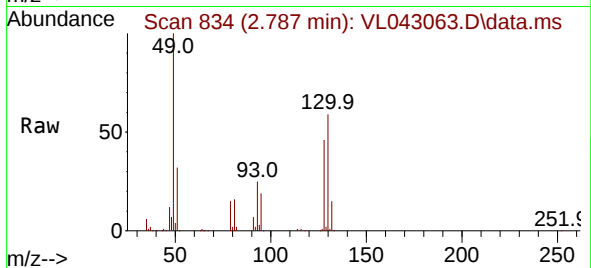




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.013 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

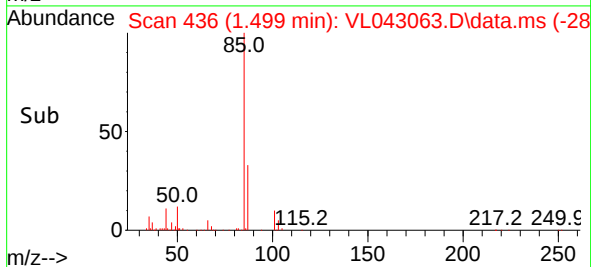
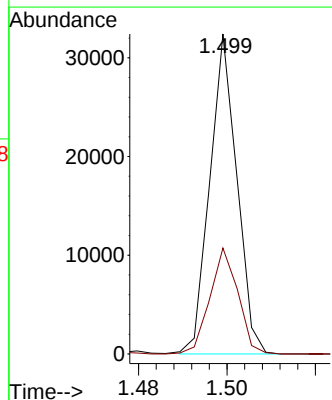
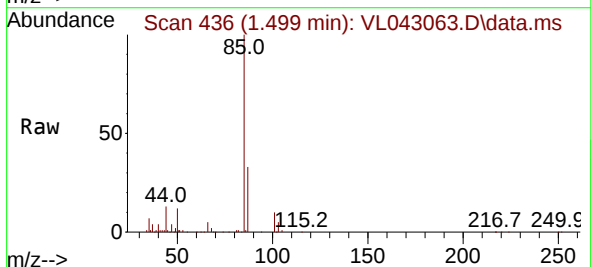
Instrument :
 MSVOA_1
 ClientSampleId :
 OA1

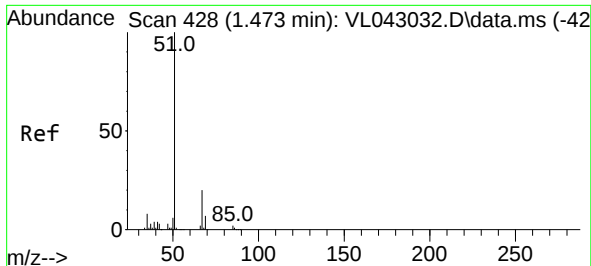
Tgt Ion: 49 Resp: 182962
 Ion Ratio Lower Upper
 49 100
 128 47.4 24.1 72.2
 130 60.5 31.4 94.3



#2
 Dichlorodifluoromethane
 Concen: 0.446 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.004 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

Tgt Ion: 85 Resp: 13758
 Ion Ratio Lower Upper
 85 100
 87 33.1 25.8 38.6

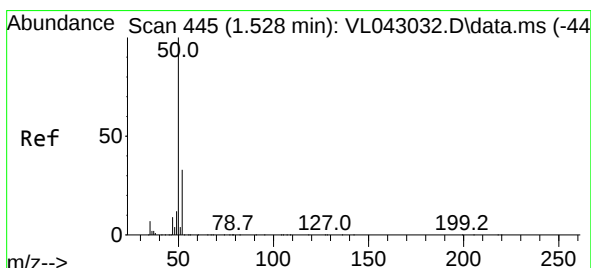
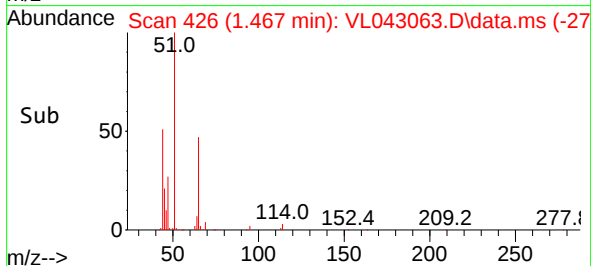
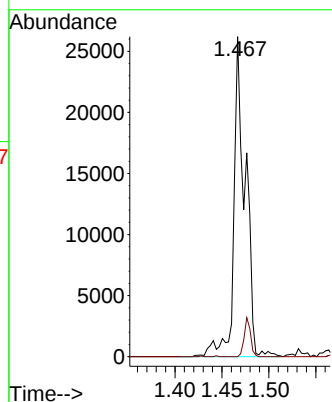
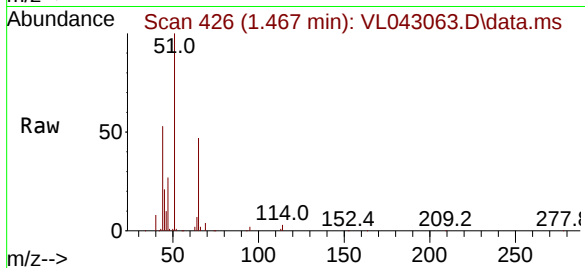




#3
Chlorodifluoromethane
Concen: 0.750 ppbv
RT: 1.467 min Scan# 41
Delta R.T. -0.006 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

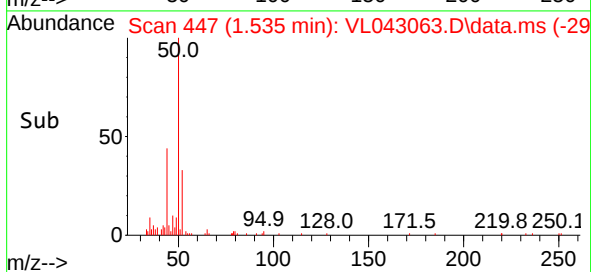
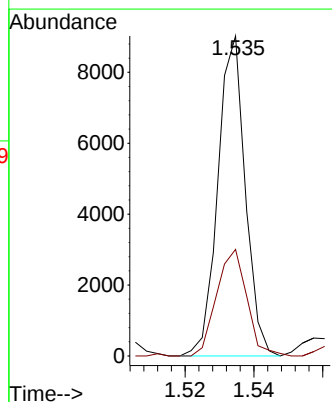
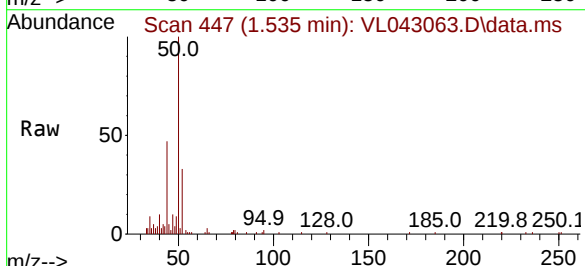
Instrument :
MSVOA_L
ClientSampleId :
OA1

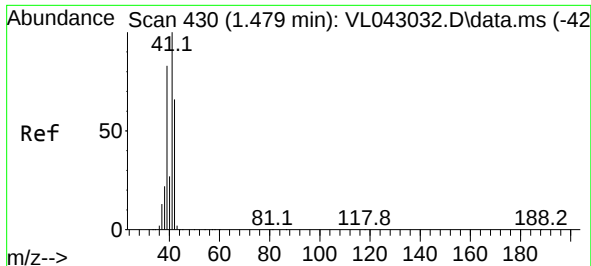
Tgt Ion: 51 Resp: 22370
Ion Ratio Lower Upper
51 100
67 6.8 15.1 22.7#



#4
Chloromethane
Concen: 0.443 ppbv
RT: 1.535 min Scan# 447
Delta R.T. 0.007 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 50 Resp: 4992
Ion Ratio Lower Upper
50 100
52 32.5 26.2 39.2





#9

Propene

Concen: 0.572 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.007 min

Lab File: VL043063.D

Acq: 08 Oct 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

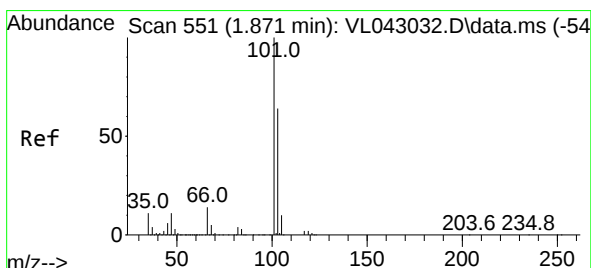
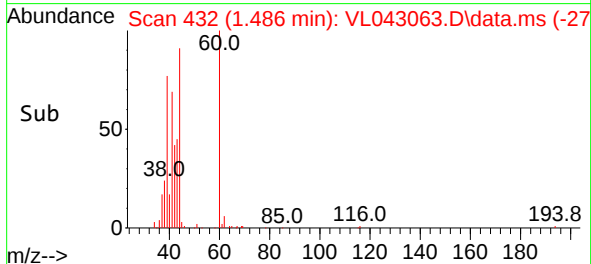
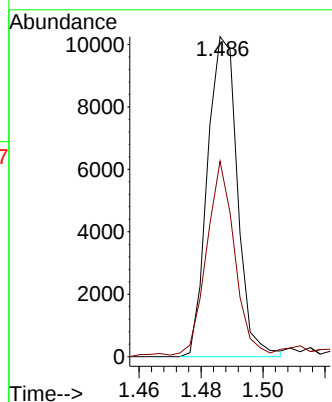
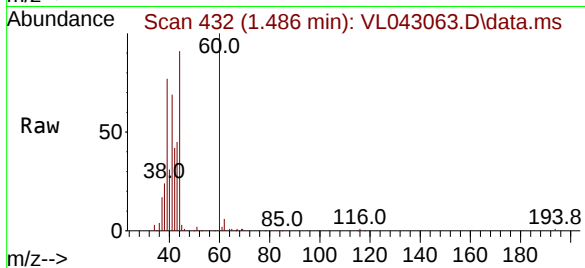
OA1

Tgt Ion: 41 Resp: 6882

Ion Ratio Lower Upper

41 100

42 61.8 53.3 79.9



#11

Trichlorofluoromethane

Concen: 0.053 ppbv

RT: 2.140 min Scan# 634

Delta R.T. 0.269 min

Lab File: VL043063.D

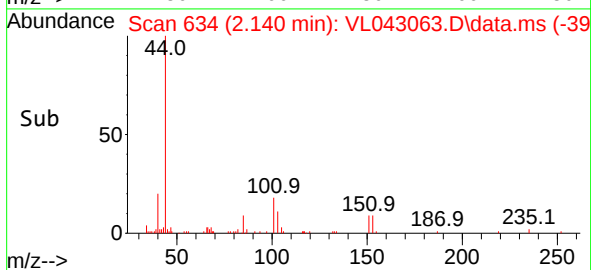
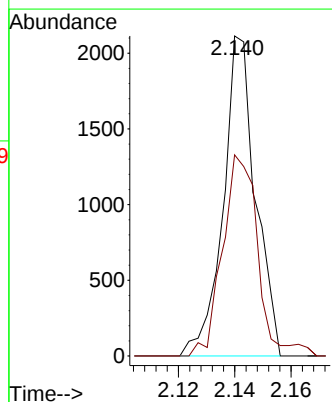
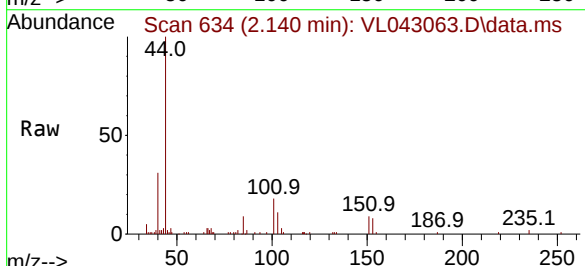
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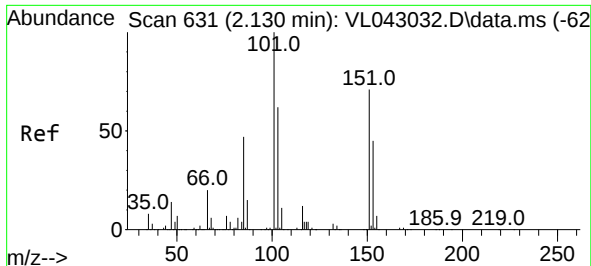
Tgt Ion: 101 Resp: 1686

Ion Ratio Lower Upper

101 100

103 62.9 51.1 76.7

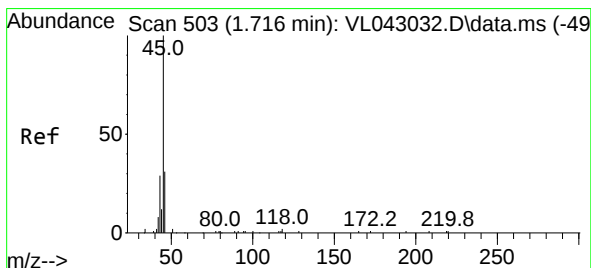
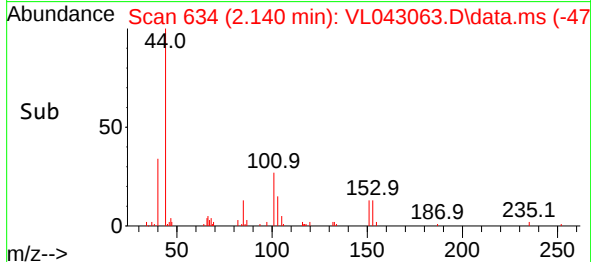
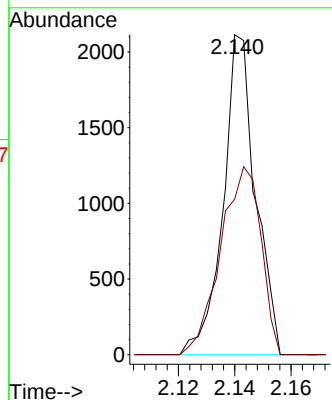
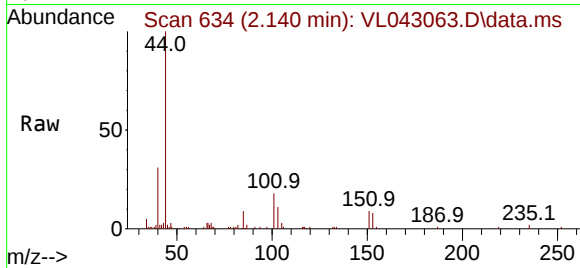




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.068 ppbv
RT: 2.140 min Scan# 61
Delta R.T. 0.010 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

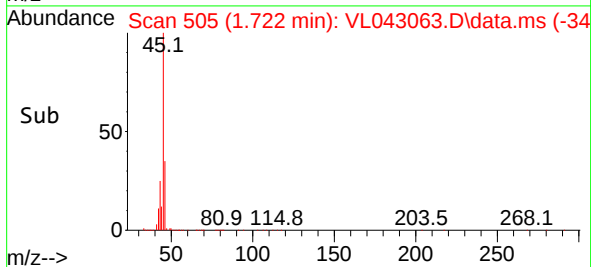
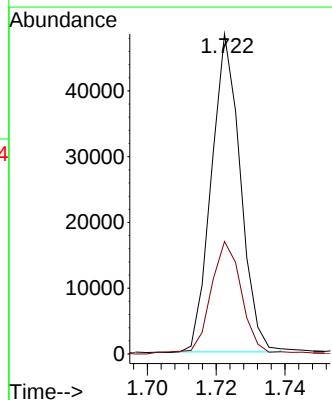
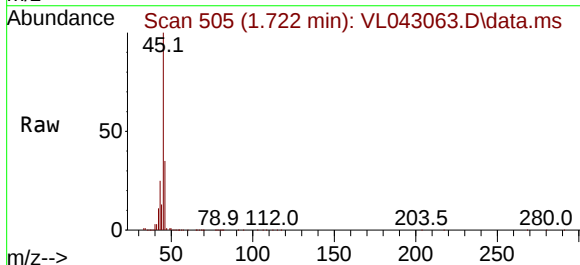
Instrument :
MSVOA_L
ClientSampleId :
OA1

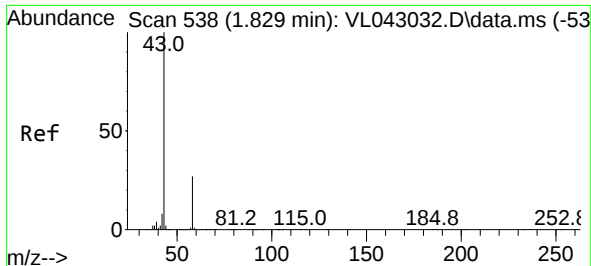
Tgt Ion:101 Resp: 1686
Ion Ratio Lower Upper
101 100
151 73.4 58.1 87.1



#13
Ethanol
Concen: 63.667 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.006 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 45 Resp: 28304
Ion Ratio Lower Upper
45 100
46 39.5 17.8 71.4

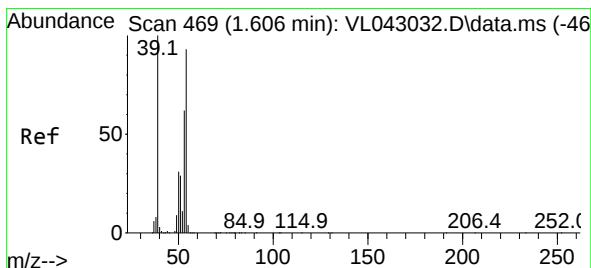
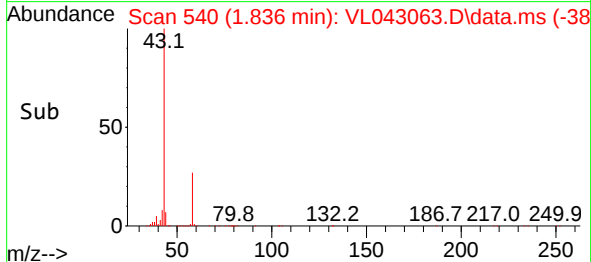
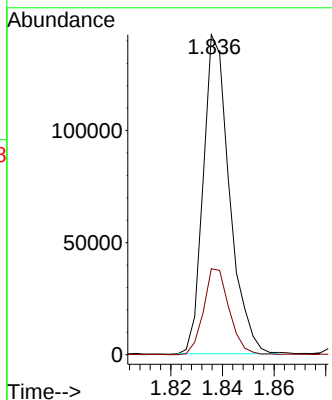
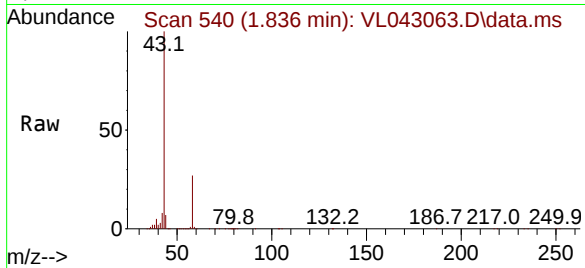




#15
Acetone
Concen: 3.923 ppbv
RT: 1.836 min Scan# 54
Delta R.T. 0.007 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

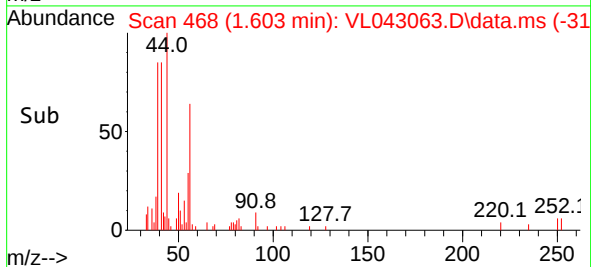
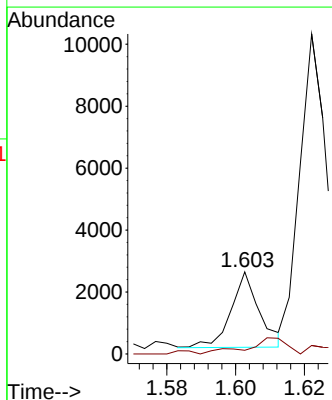
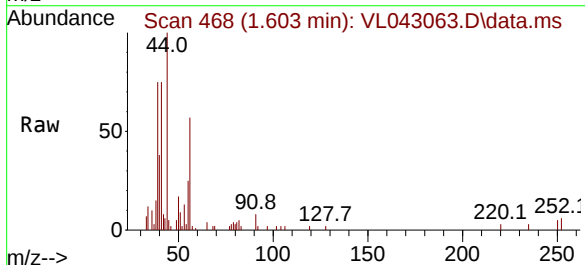
Instrument :
MSVOA_L
ClientSampleId :
OA1

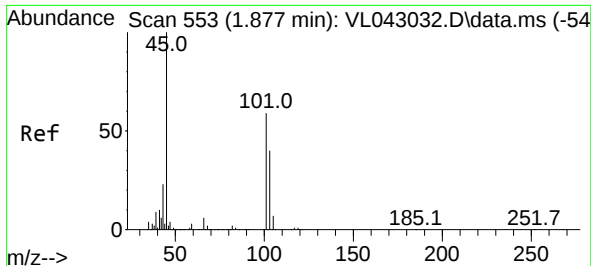
Tgt Ion: 43 Resp: 100511
Ion Ratio Lower Upper
43 100
58 26.6 22.2 33.4



#16
1,3-Butadiene
Concen: 0.132 ppbv
RT: 1.603 min Scan# 468
Delta R.T. -0.003 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 39 Resp: 1389
Ion Ratio Lower Upper
39 100
54 56.4 61.4 92.2#

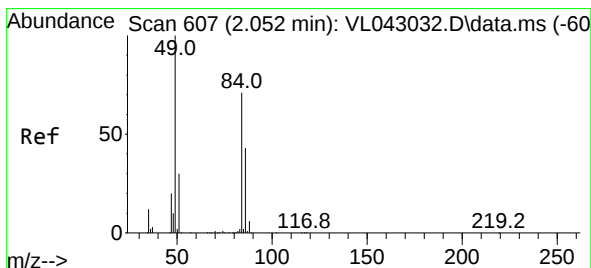
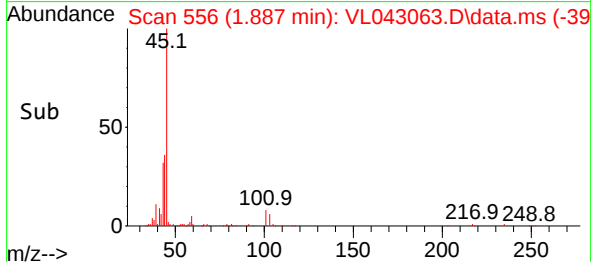
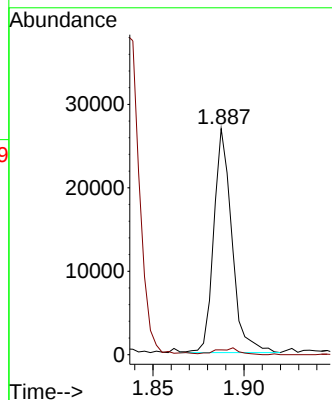
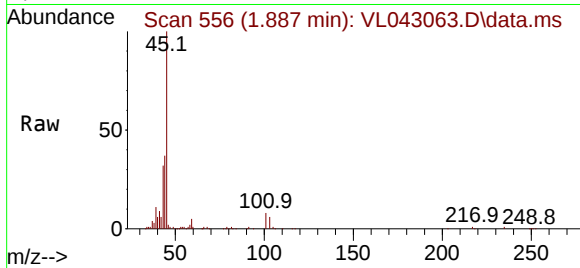




#19
Isopropyl Alcohol
Concen: 1.521 ppbv
RT: 1.887 min Scan# 51
Delta R.T. 0.010 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

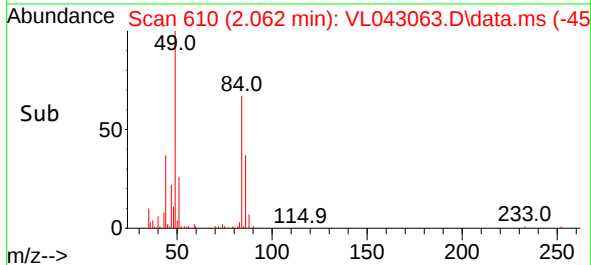
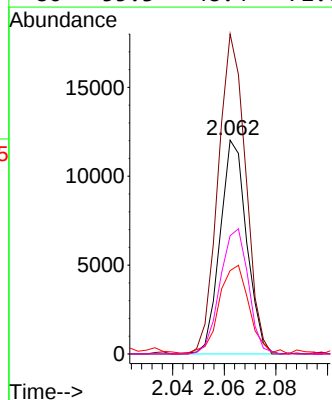
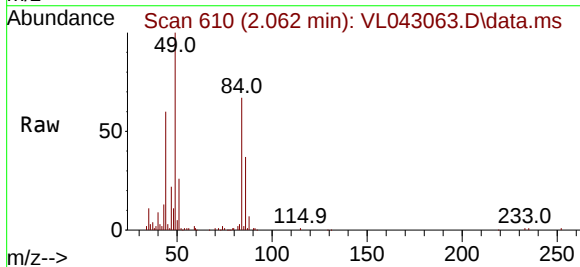
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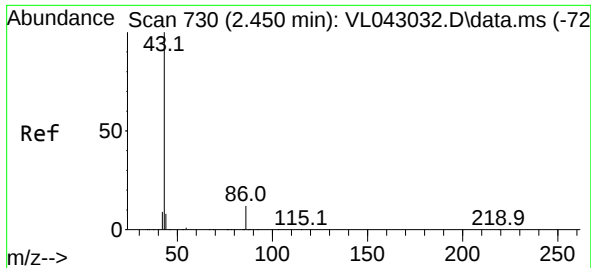
Tgt Ion: 45 Resp: 18668
Ion Ratio Lower Upper
45 100
58 143.3 42.3 63.5#



#20
Methylene Chloride
Concen: 0.771 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.010 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 84 Resp: 8621
Ion Ratio Lower Upper
84 100
49 149.7 112.5 168.7
51 38.6 34.2 51.2
86 55.3 48.4 72.6

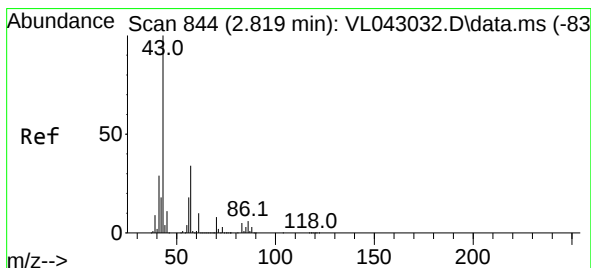
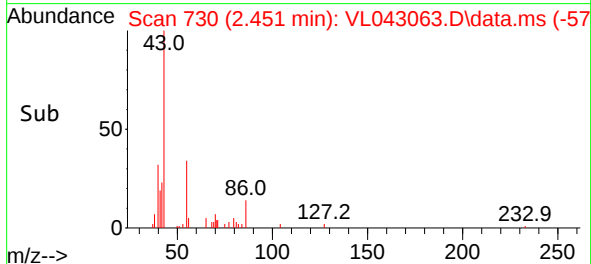
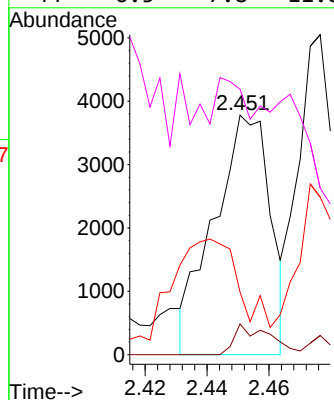
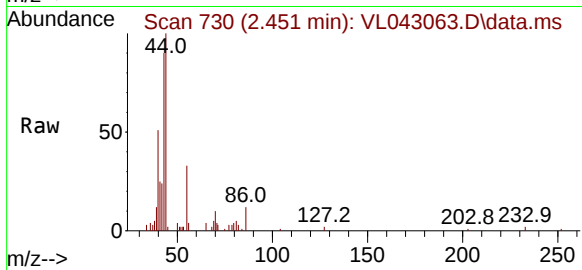




#23
 Vinyl Acetate
 Concen: 0.880 ppbv
 RT: 2.451 min Scan# 71
 Delta R.T. 0.000 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

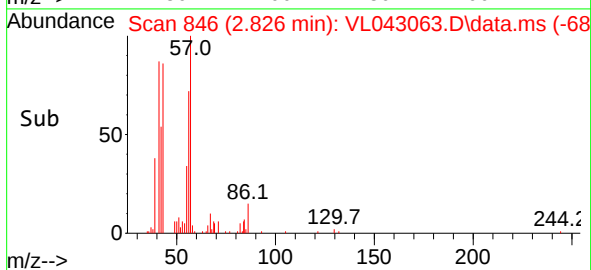
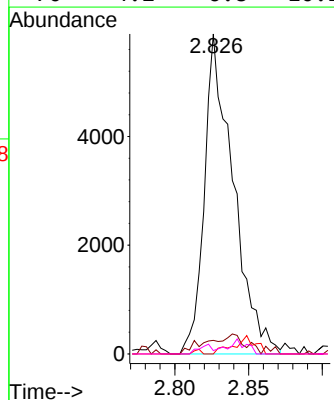
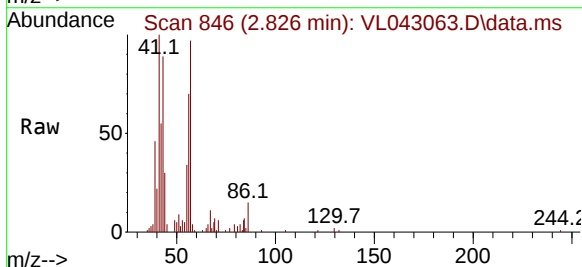
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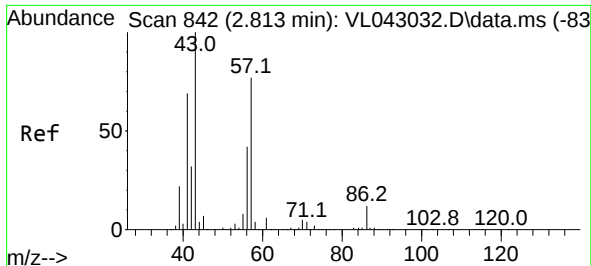
Tgt Ion:	43	Resp:	4785
Ion	Ratio	Lower	Upper
43	100		
86	15.9	7.5	11.3#
42	11.7	8.4	12.6
44	6.5	7.8	11.8#



#25
 Ethyl Acetate
 Concen: 0.124 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. 0.007 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

Tgt Ion:	43	Resp:	7983
Ion	Ratio	Lower	Upper
43	100		
45	9.0	8.3	12.5
61	4.5	7.5	11.3#
70	4.2	6.8	10.2#

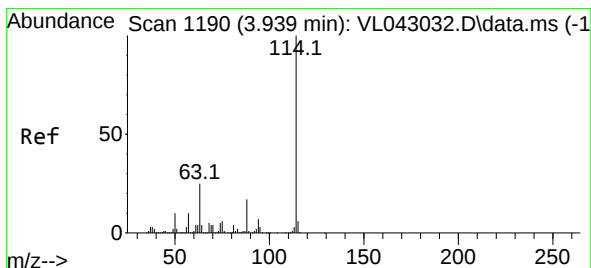
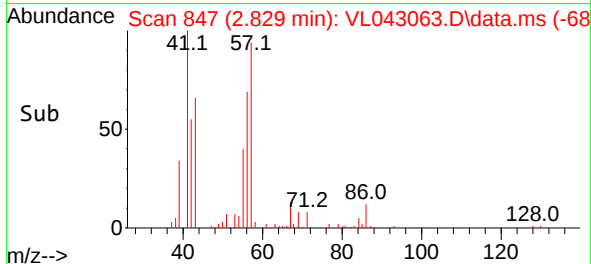
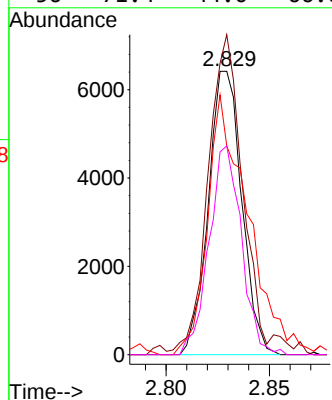
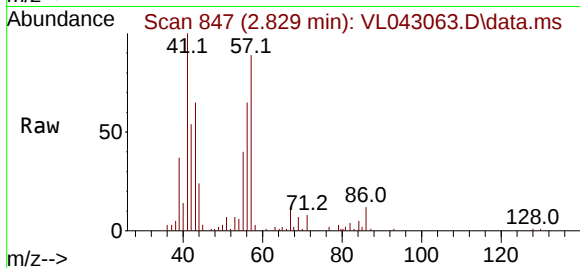




#26
Hexane
Concen: 0.292 ppbv
RT: 2.829 min Scan# 842
Delta R.T. 0.016 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

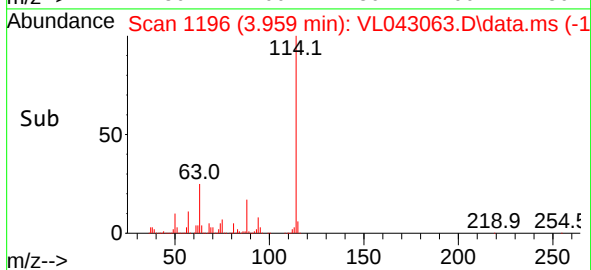
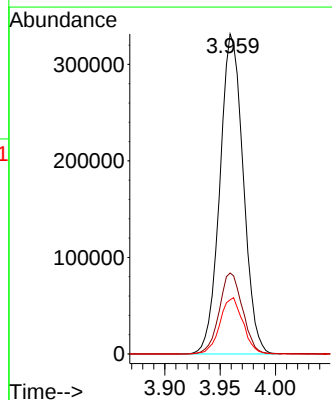
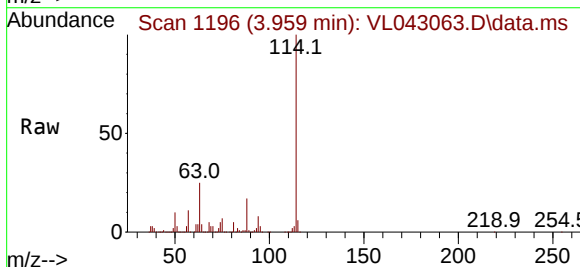
Instrument :
MSVOA_L
ClientSampleId :
OA1

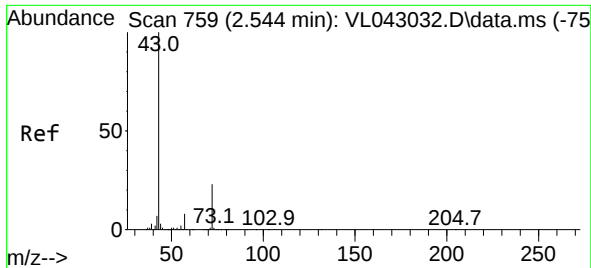
Tgt Ion: 57 Resp: 7215
Ion Ratio Lower Upper
57 100
41 120.7 76.1 114.1#
43 117.2 201.4 302.0#
56 71.4 44.0 66.0#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. 0.020 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 114 Resp: 486916
Ion Ratio Lower Upper
114 100
63 25.4 19.4 29.2
88 17.4 13.9 20.9

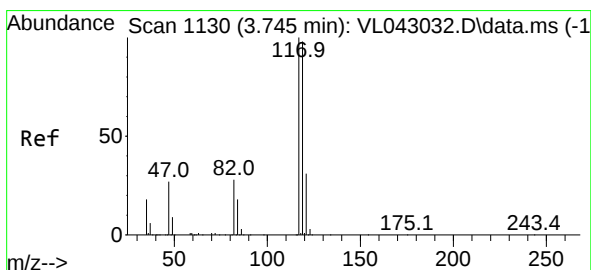
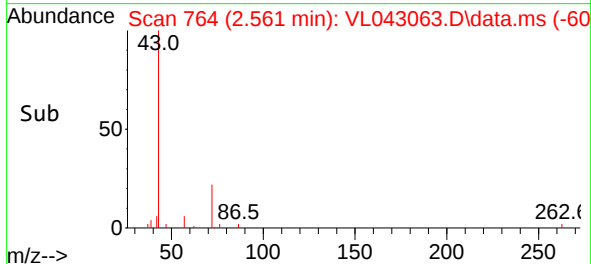
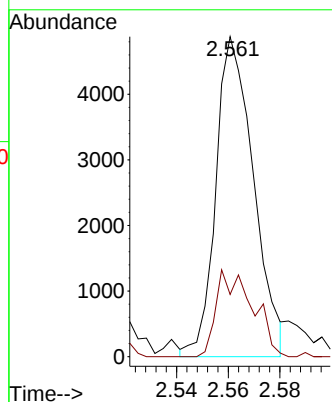
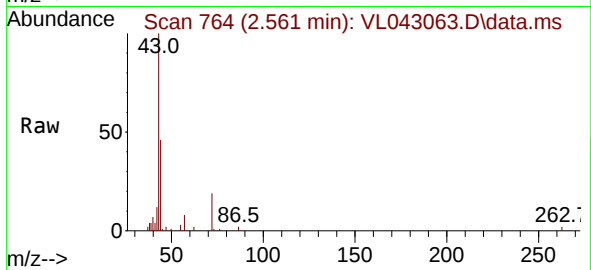




#34
2-Butanone
Concen: 0.150 ppbv
RT: 2.561 min Scan# 759
Delta R.T. 0.016 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

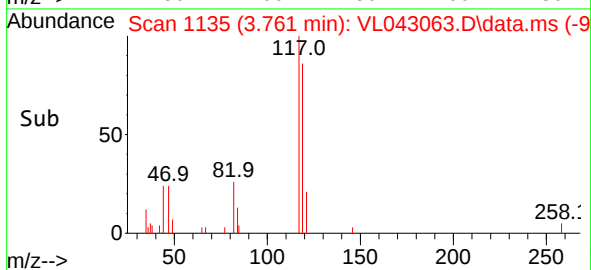
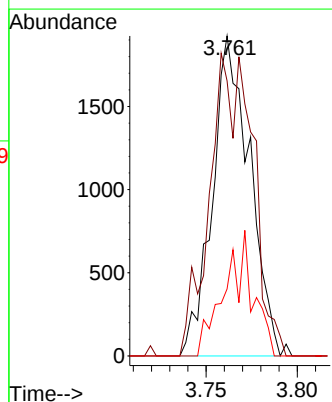
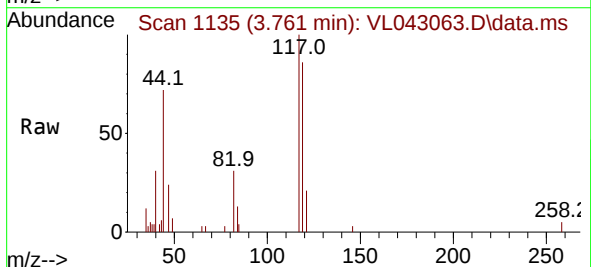
Instrument :
MSVOA_L
ClientSampleId :
OA1

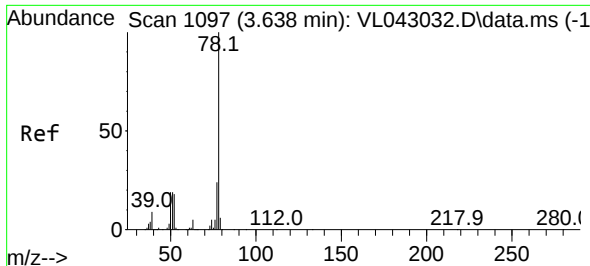
Tgt Ion: 43 Resp: 4940
Ion Ratio Lower Upper
43 100
72 26.5 18.4 27.6



#35
Carbon Tetrachloride
Concen: 0.068 ppbv
RT: 3.761 min Scan# 1135
Delta R.T. 0.016 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 117 Resp: 2740
Ion Ratio Lower Upper
117 100
119 86.0 78.2 117.4
121 20.9 24.8 37.2#

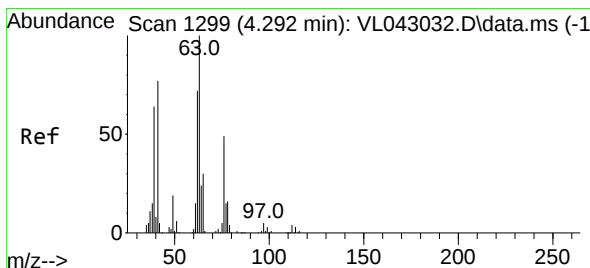
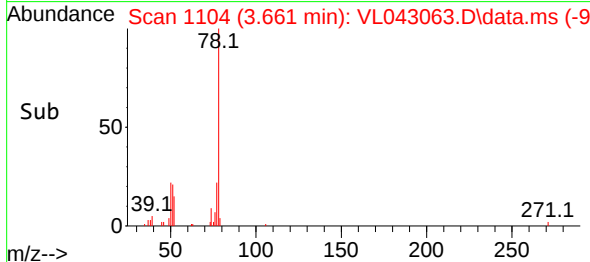
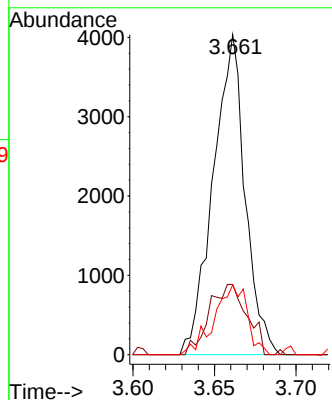
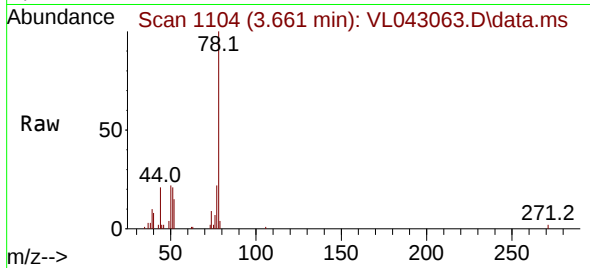




#36
Benzene
Concen: 0.118 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. 0.023 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

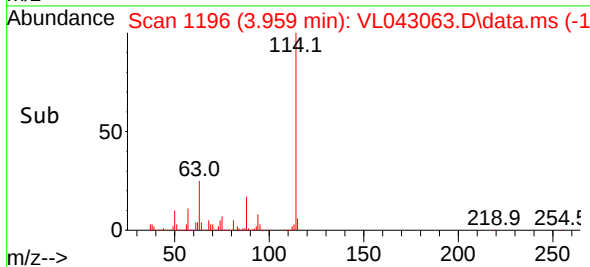
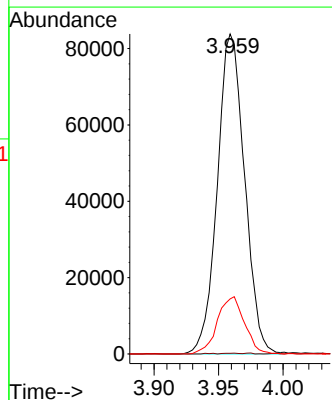
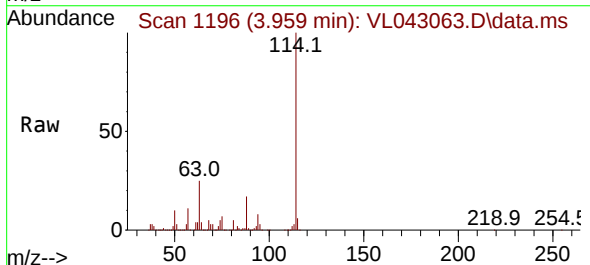
Instrument :
MSVOA_1
ClientSampleId :
OA1

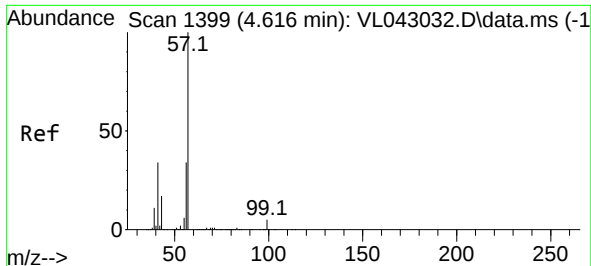
Tgt Ion: 78 Resp: 5492
Ion Ratio Lower Upper
78 100
77 21.9 19.2 28.8
50 21.8 14.9 22.3



#39
1,2-Dichloropropane
Concen: 7.136 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.333 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 63 Resp: 123055
Ion Ratio Lower Upper
63 100
41 0.2 61.6 92.4#
62 17.2 58.1 87.1#

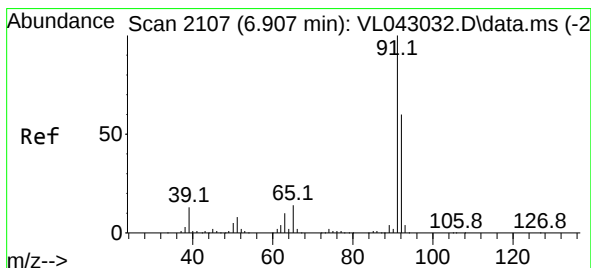
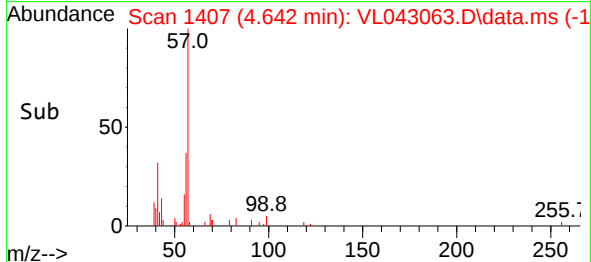
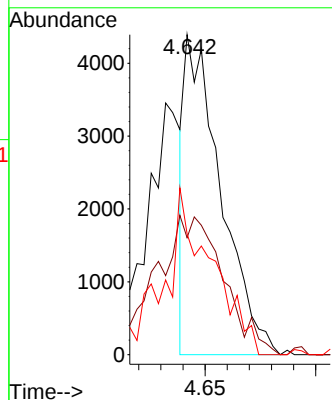
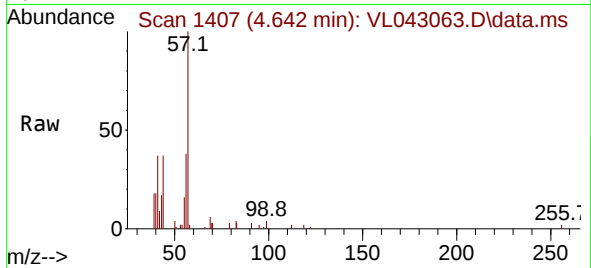




#44
 2,2,4-Trimethylpentane
 Concen: 0.067 ppbv
 RT: 4.642 min Scan# 1407
 Delta R.T. 0.026 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

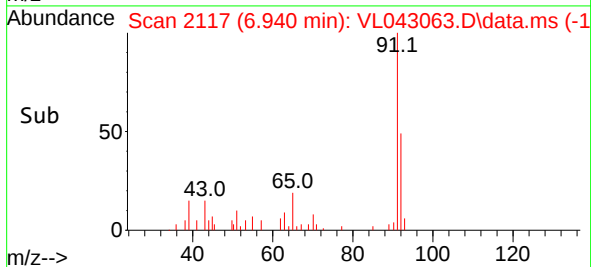
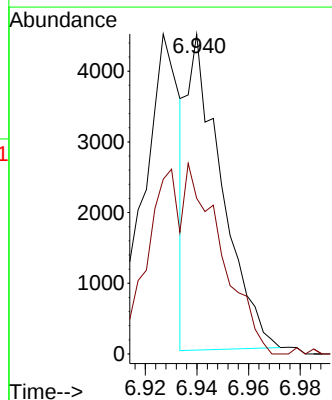
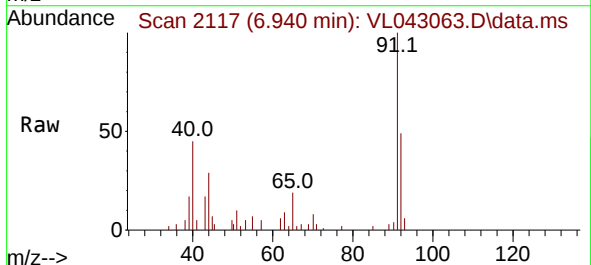
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

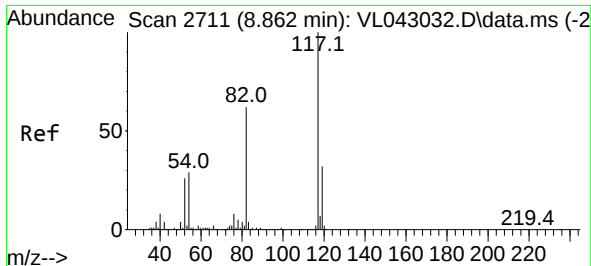
Tgt Ion: 57 Resp: 4971
 Ion Ratio Lower Upper
 57 100
 41 85.0 27.0 40.4#
 56 74.4 26.0 39.0#



#53
 Toluene
 Concen: 0.089 ppbv
 RT: 6.940 min Scan# 2117
 Delta R.T. 0.033 min
 Lab File: VL043063.D
 Acq: 08 Oct 2025 14:32

Tgt Ion: 91 Resp: 4167
 Ion Ratio Lower Upper
 91 100
 92 125.9 47.8 71.6#

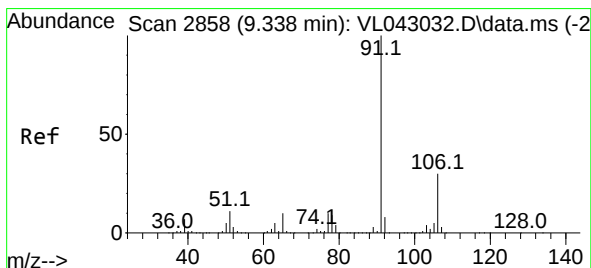
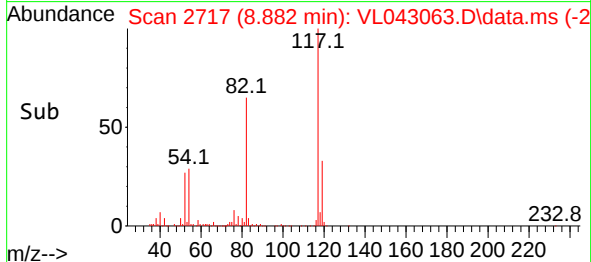
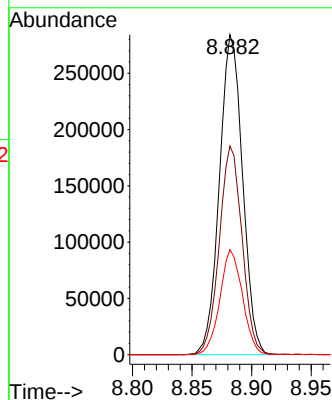
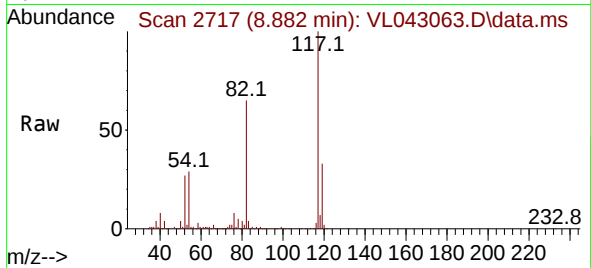




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.882 min Scan# 217
Delta R.T. 0.020 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

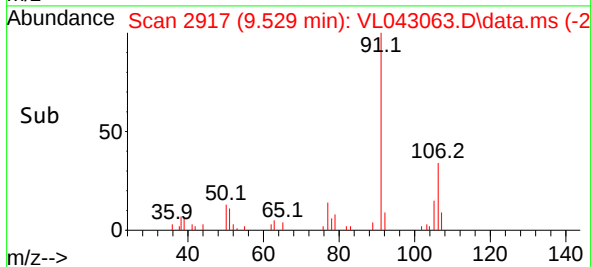
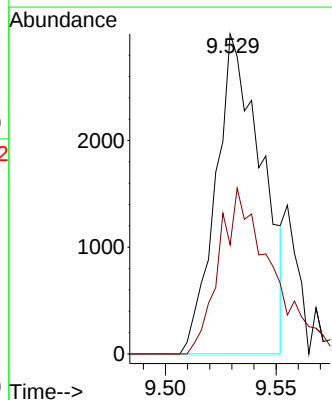
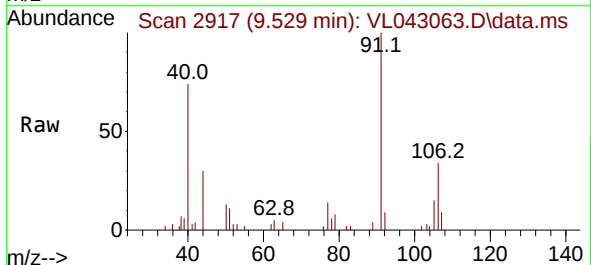
Instrument :
MSVOA_L
ClientSampleId :
OA1

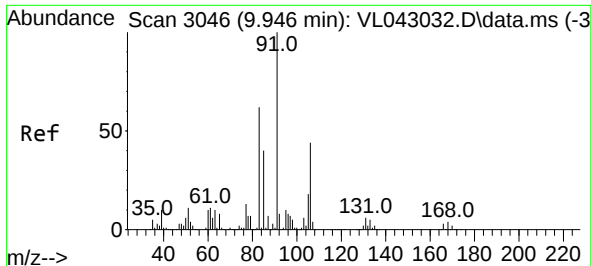
Tgt Ion:117 Resp: 383740
Ion Ratio Lower Upper
117 100
82 64.2 53.0 79.6
119 32.0 25.4 38.2



#58
Ethyl Benzene
Concen: 0.072 ppbv
RT: 9.529 min Scan# 2917
Delta R.T. 0.191 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion: 91 Resp: 4309
Ion Ratio Lower Upper
91 100
106 34.1 24.1 36.1





#60

o-Xylene

Concen: 0.040 ppbv

RT: 9.963 min Scan# 3046

Delta R.T. 0.016 min

Lab File: VL043063.D

Acq: 08 Oct 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

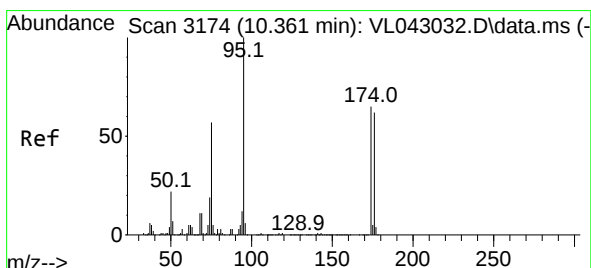
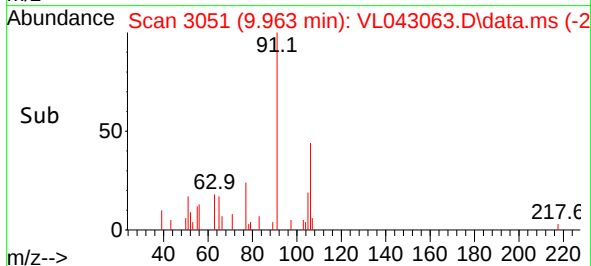
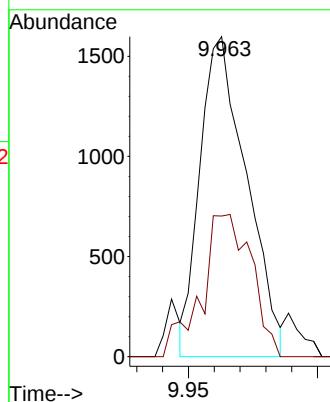
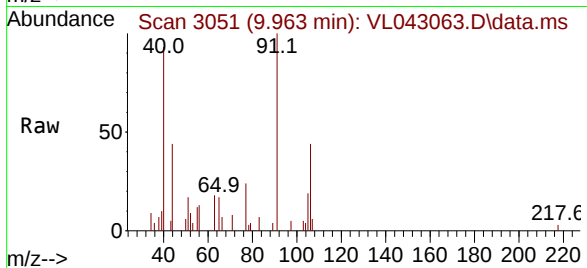
OA1

Tgt Ion: 91 Resp: 2003

Ion Ratio Lower Upper

91 100

106 47.7 21.9 65.5



#68

1-Bromo-4-Fluorobenzene

Concen: 9.665 ppbv

RT: 10.377 min Scan# 3179

Delta R.T. 0.016 min

Lab File: VL043063.D

Acq: 08 Oct 2025 14:32

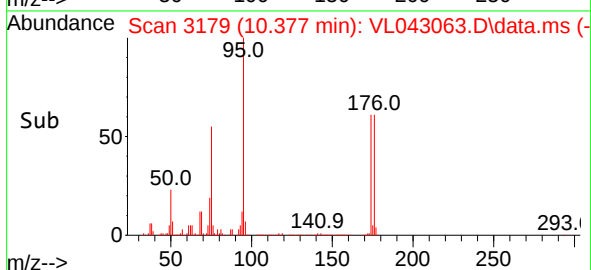
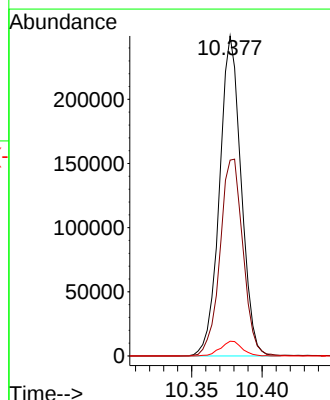
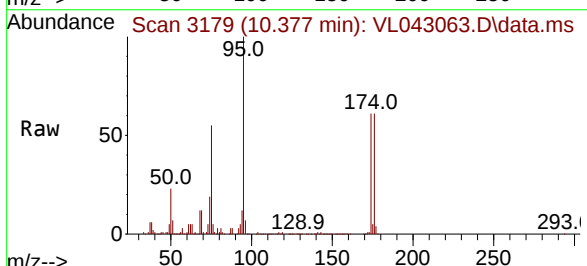
Tgt Ion: 95 Resp: 267192

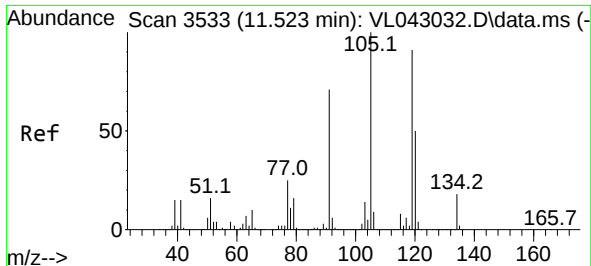
Ion Ratio Lower Upper

95 100

174 65.6 52.3 78.5

175 4.6 3.8 5.8

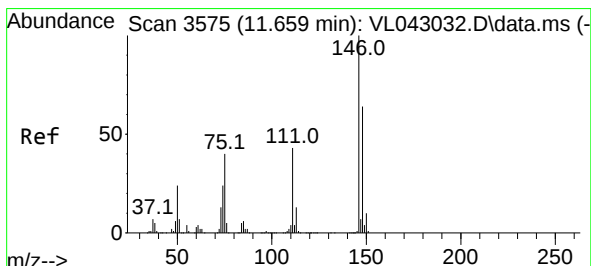
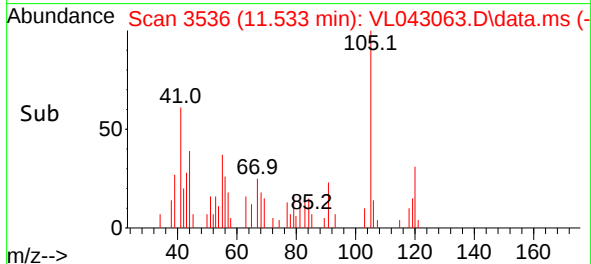
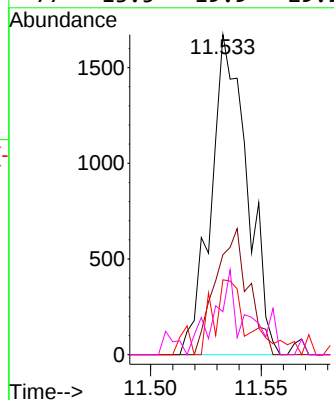
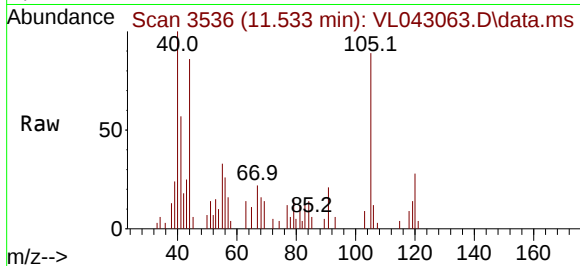




#74
1,2,4-Trimethylbenzene
Concen: 0.033 ppbv
RT: 11.533 min Scan# 3533
Delta R.T. 0.010 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

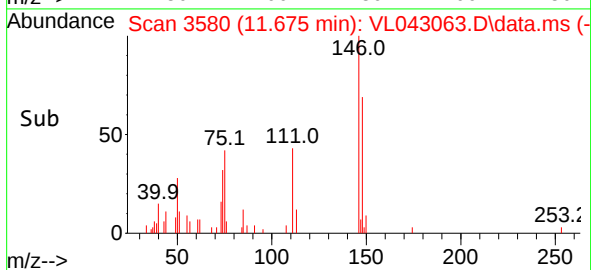
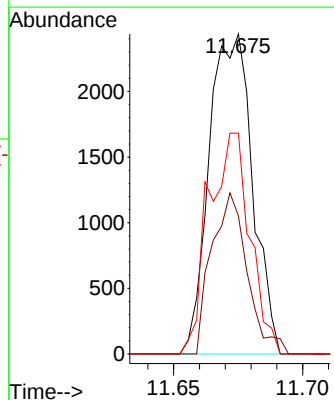
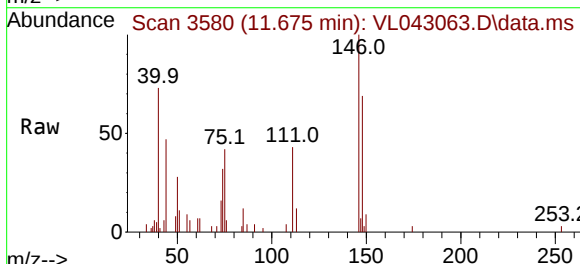
Instrument :
MSVOA_L
ClientSampleId :
OA1

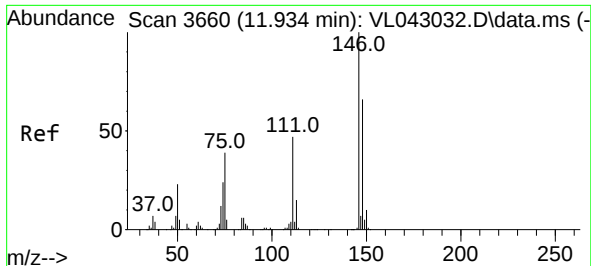
Tgt Ion:	105	Resp:	1908
Ion	Ratio	Lower	Upper
105	100		
120	31.3	39.7	59.5#
91	18.9	56.5	84.7#
77	13.5	19.9	29.9#



#76
1,4-Dichlorobenzene
Concen: 0.079 ppbv
RT: 11.675 min Scan# 3580
Delta R.T. 0.016 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion:	146	Resp:	2846
Ion	Ratio	Lower	Upper
146	100		
111	41.5	21.7	65.1
148	65.8	32.1	96.3

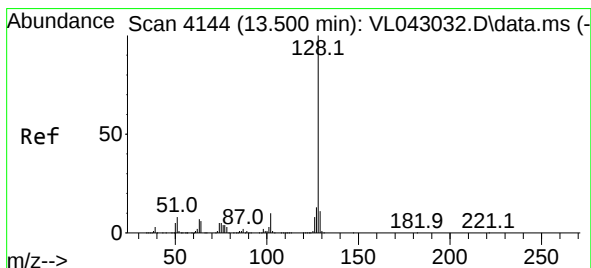
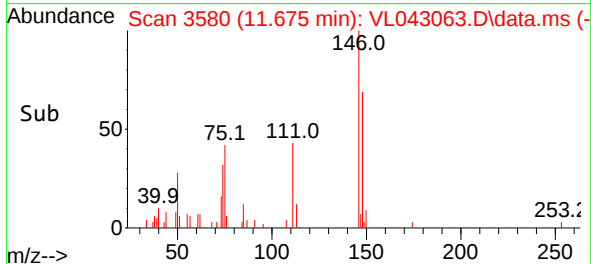
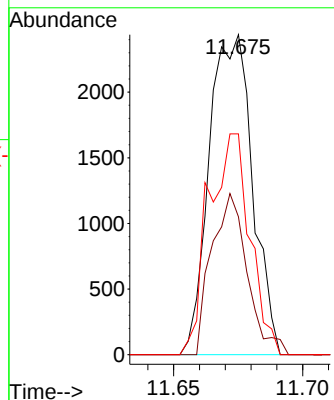
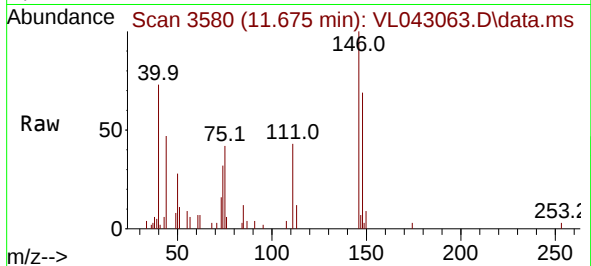




#77
1,2-Dichlorobenzene
Concen: 0.076 ppbv
RT: 11.675 min Scan# 31
Delta R.T. -0.259 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

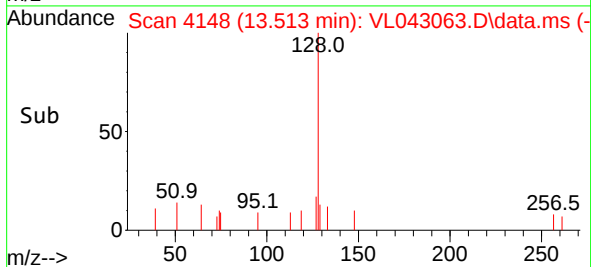
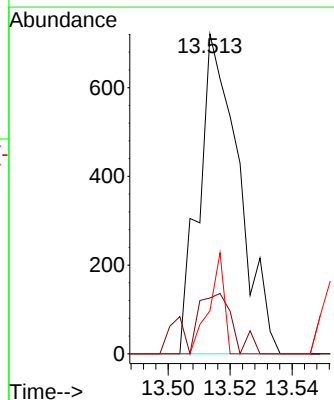
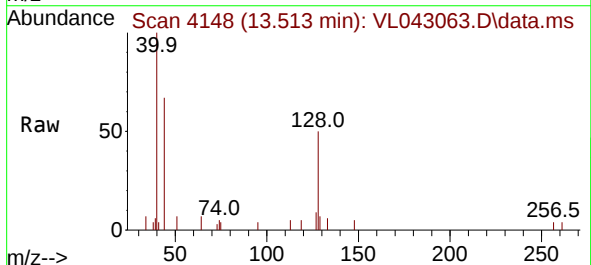
Instrument :
MSVOA_1
ClientSampleId :
OA1

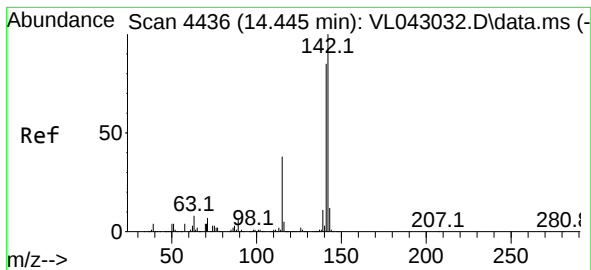
Tgt Ion:146 Resp: 2846
Ion Ratio Lower Upper
146 100
111 41.5 23.2 69.5
148 65.8 31.9 95.7



#79
Naphthalene
Concen: 0.248 ppbv
RT: 13.513 min Scan# 4148
Delta R.T. 0.013 min
Lab File: VL043063.D
Acq: 08 Oct 2025 14:32

Tgt Ion:128 Resp: 642
Ion Ratio Lower Upper
128 100
127 17.5 10.6 16.0#
129 13.5 8.8 13.2#





#80

Naphthalene, 2-methyl-

Concen: 0.681 ppbv

RT: 14.462 min Scan# 44

Delta R.T. 0.017 min

Lab File: VL043063.D

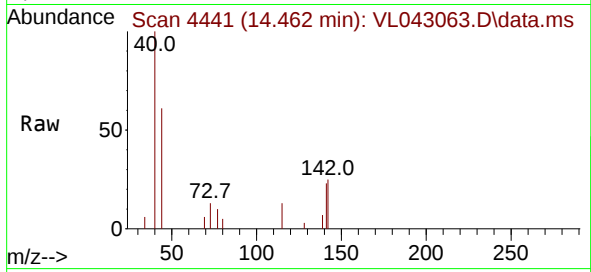
Acq: 08 Oct 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

OA1



Tgt Ion:	142	Resp:	464
Ion	Ratio	Lower	Upper
142	100		
141	71.8	66.6	100.0
115	28.2	30.1	45.1#

