

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100925\
 Data File : VL043086.D
 Acq On : 09 Oct 2025 13:52
 Operator : SY/MD
 Sample : Q3320-11
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA6

Quant Time: Oct 09 22:15:24 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	2.777	49	194363	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.943	114	513990	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.866	117	433895	10.000	ppbv	0.00

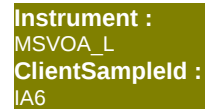
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.361	95	336046	10.751	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	107.500%

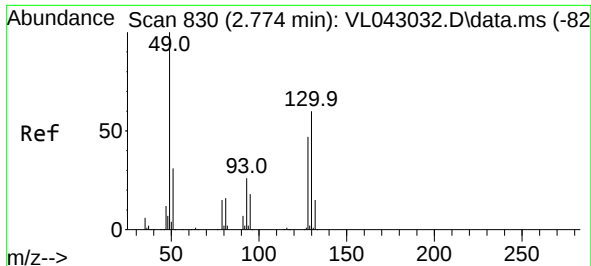
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.496	85	13785	0.421	ppbv	98
3) Chlorodifluoromethane	1.473	51	13273	0.419	ppbv #	85
4) Chloromethane	1.528	50	5462	0.456	ppbv	99
6) Bromomethane	1.661	94	162	0.032	ppbv	94
9) Propene	1.881	41	18900	1.479	ppbv	100
11) Trichlorofluoromethane	1.874	101	6810	0.202	ppbv	89
12) 1,1,2-Trichlorotrifluo...	2.133	101	1502	0.057	ppbv	83
13) Ethanol	1.716	45	86892	186.390	ppbv	89
15) Acetone	1.829	43	236906	8.705	ppbv	100
16) 1,3-Butadiene	1.596	39	1221	0.109	ppbv #	80
17) tert-Butyl alcohol	1.881	59	7318	0.254	ppbv	99
19) Isopropyl Alcohol	1.881	45	178943	13.724	ppbv #	29
20) Methylene Chloride	2.056	84	6285	0.529	ppbv	95
23) Vinyl Acetate	2.444	43	3894	0.674	ppbv #	91
25) Ethyl Acetate	2.813	43	8337	0.122	ppbv #	90
26) Hexane	2.819	57	7381	0.281	ppbv #	40
29) Chloroform	2.839	83	9745	0.218	ppbv	99
34) 2-Butanone	2.551	43	6124	0.176	ppbv	95
35) Carbon Tetrachloride	3.748	117	1931	0.046	ppbv	92
36) Benzene	3.642	78	2409	0.049	ppbv	99
39) 1,2-Dichloropropane	3.943	63	131186	7.207	ppbv #	22
53) Toluene	6.911	91	14195	0.286	ppbv	100
58) Ethyl Benzene	9.335	91	5034	0.075	ppbv	94
59) m/p-Xylene	9.519	91	10623	0.187	ppbv #	74
60) o-Xylene	9.519	91	10623	0.188	ppbv	68
66) Benzyl Chloride	11.533	91	136	0.046	ppbv #	65
79) Naphthalene	13.504	128	914	0.251	ppbv #	93
80) Naphthalene,2-methyl-	14.445	142	592	0.683	ppbv	90

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

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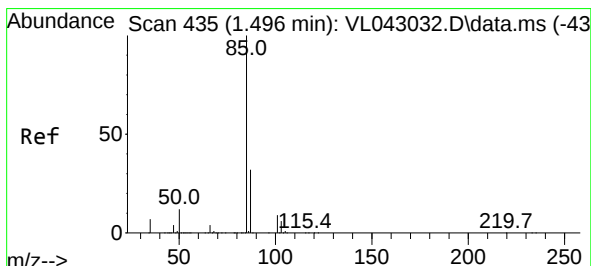
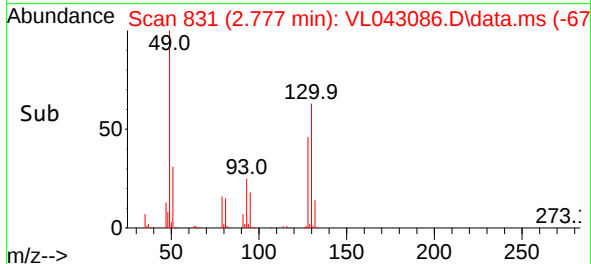
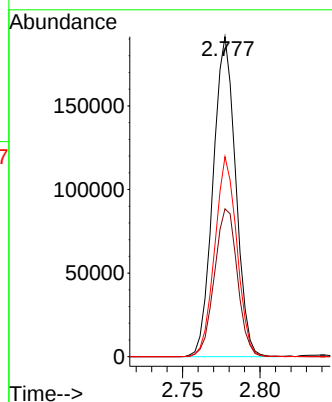
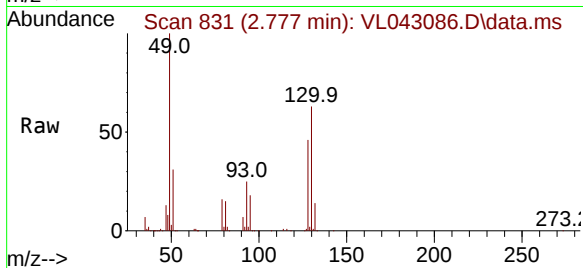




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.777 min Scan# 81
Delta R.T. 0.003 min
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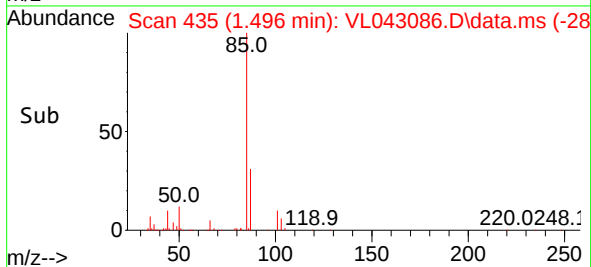
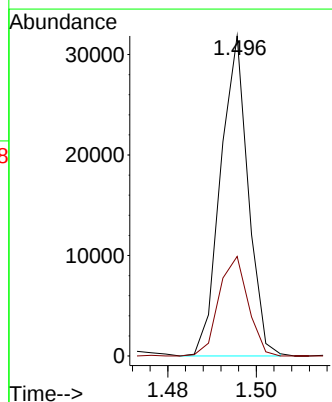
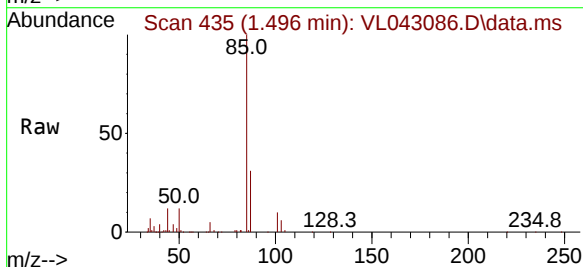
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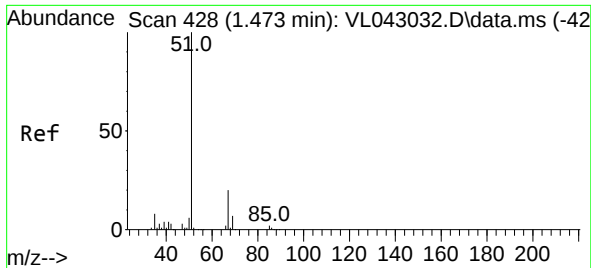
Tgt Ion: 49 Resp: 194363
Ion Ratio Lower Upper
49 100
128 47.0 24.1 72.2
130 61.2 31.4 94.3



#2
Dichlorodifluoromethane
Concen: 0.421 ppbv
RT: 1.496 min Scan# 435
Delta R.T. 0.000 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 85 Resp: 13785
Ion Ratio Lower Upper
85 100
87 31.1 25.8 38.6





#3

Chlorodifluoromethane

Concen: 0.419 ppbv

RT: 1.473 min Scan# 41

Delta R.T. 0.000 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

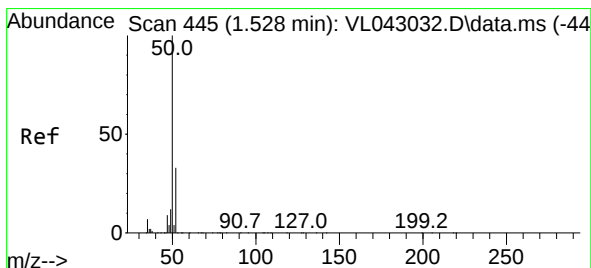
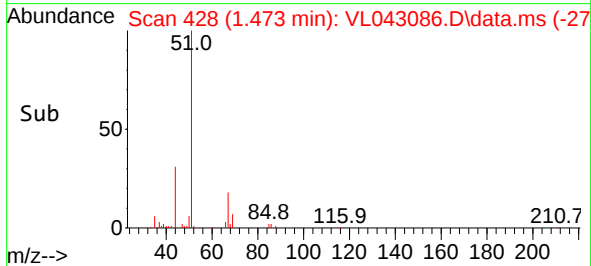
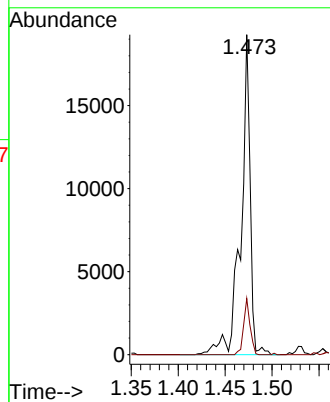
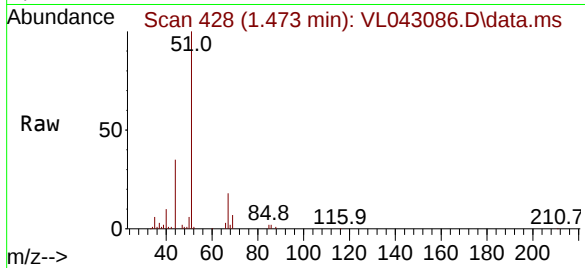
IA6

Tgt Ion: 51 Resp: 13273

Ion Ratio Lower Upper

51 100

67 12.2 15.1 22.7#



#4

Chloromethane

Concen: 0.456 ppbv

RT: 1.528 min Scan# 445

Delta R.T. 0.000 min

Lab File: VL043086.D

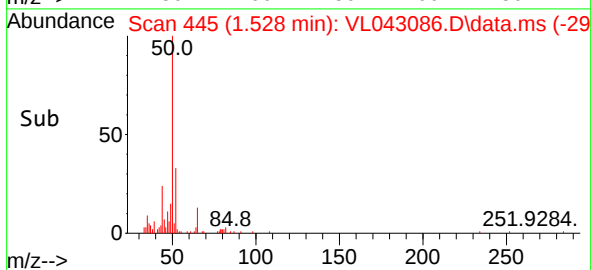
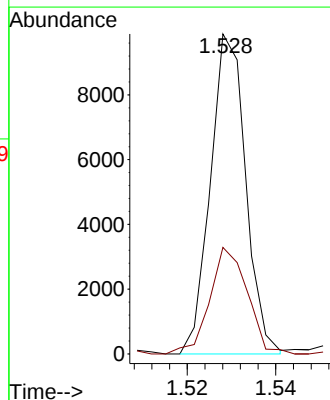
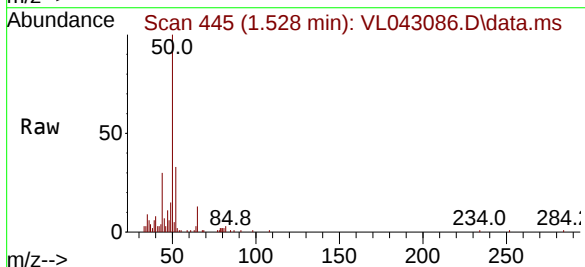
Acq: 09 Oct 2025 13:52

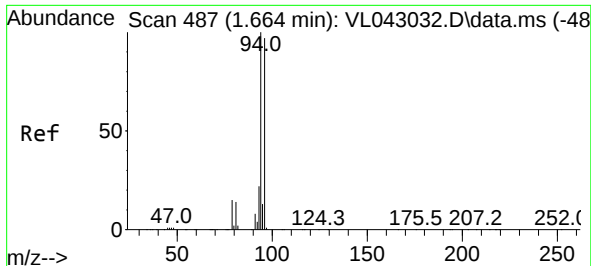
Tgt Ion: 50 Resp: 5462

Ion Ratio Lower Upper

50 100

52 32.0 26.2 39.2

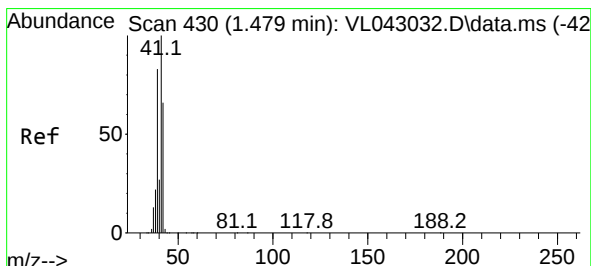
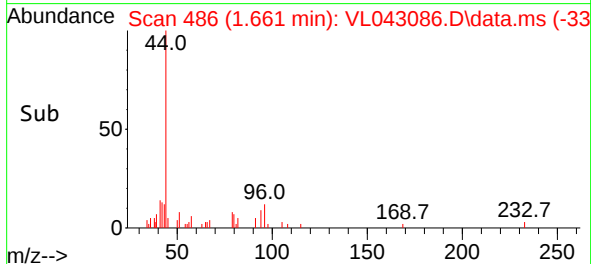
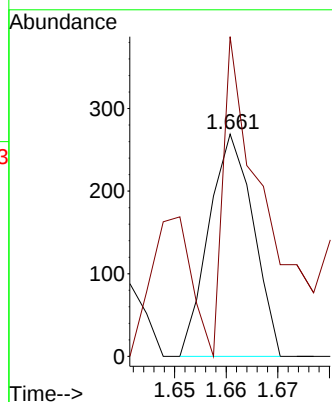
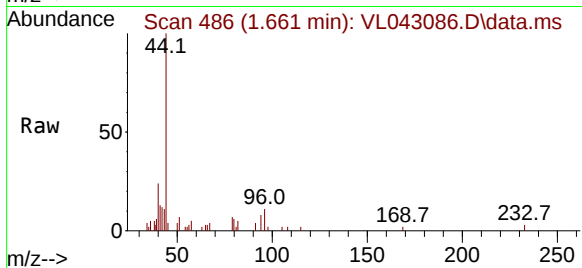




#6
Bromomethane
Concen: 0.032 ppbv
RT: 1.661 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

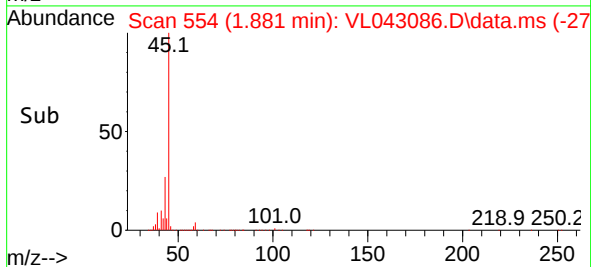
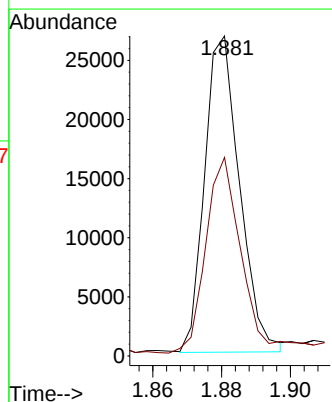
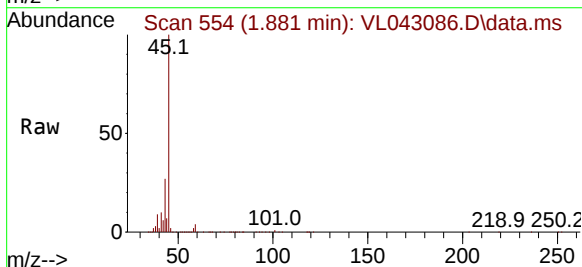
Instrument :
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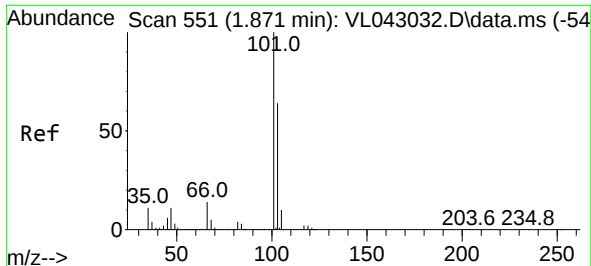
Tgt Ion: 94 Resp: 162
Ion Ratio Lower Upper
94 100
96 102.6 77.6 116.4



#9
Propene
Concen: 1.479 ppbv
RT: 1.881 min Scan# 554
Delta R.T. 0.401 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 41 Resp: 18900
Ion Ratio Lower Upper
41 100
42 66.6 53.3 79.9

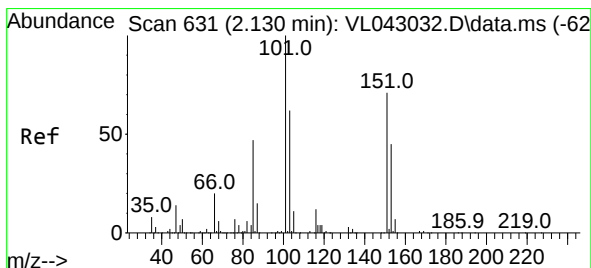
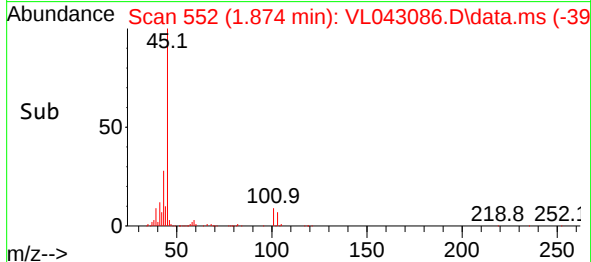
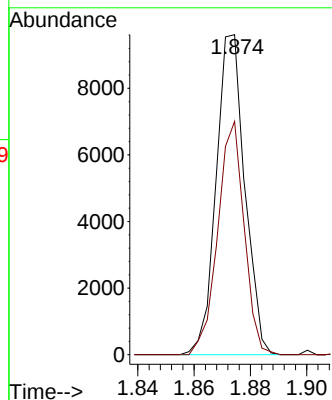
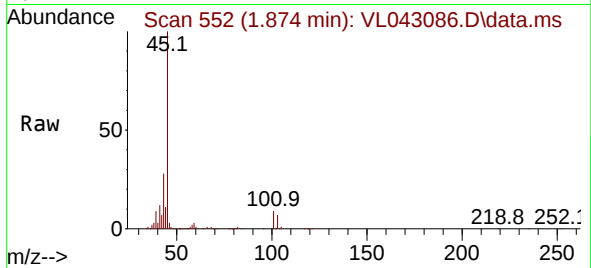




#11
Trichlorofluoromethane
Concen: 0.202 ppbv
RT: 1.874 min Scan# 511
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

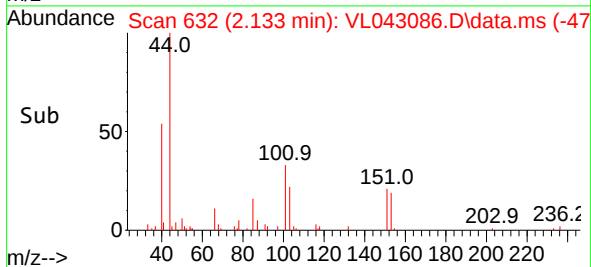
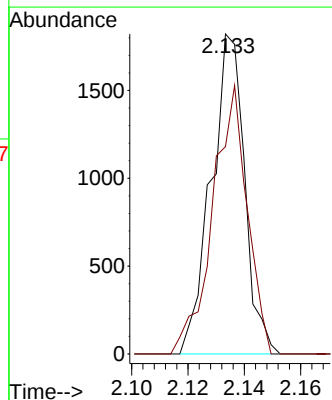
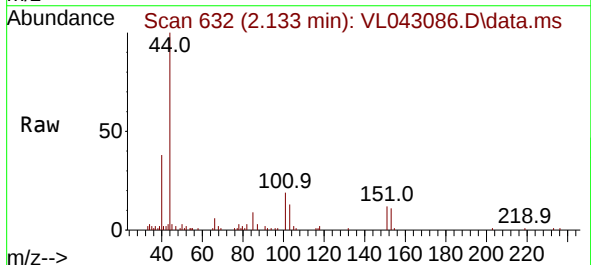
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ClientSampleId :
IA6

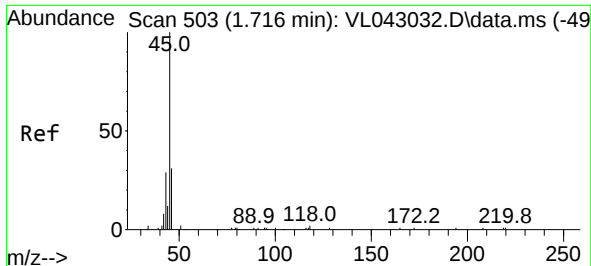
Tgt Ion:101 Resp: 6810
Ion Ratio Lower Upper
101 100
103 72.9 51.1 76.7



#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.057 ppbv
RT: 2.133 min Scan# 632
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion:101 Resp: 1502
Ion Ratio Lower Upper
101 100
151 86.4 58.1 87.1

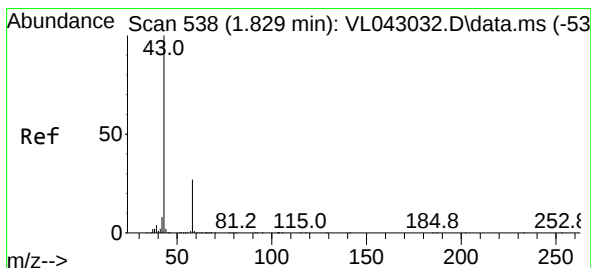
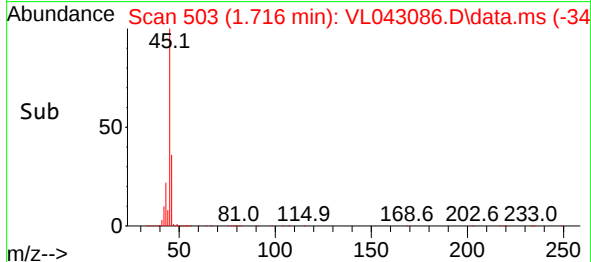
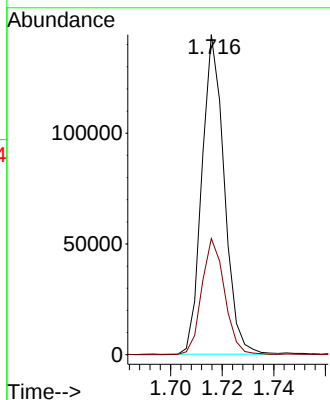
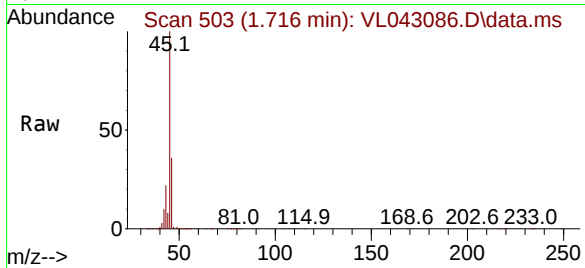




#13
Ethanol
Concen: 186.390 ppbv
RT: 1.716 min Scan# 503
Delta R.T. -0.000 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

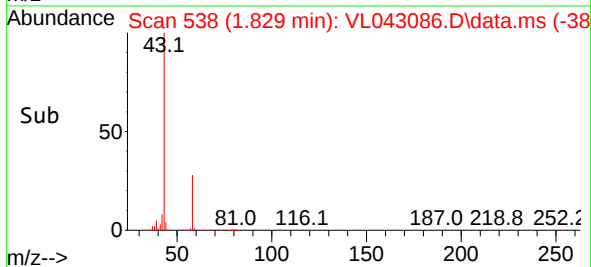
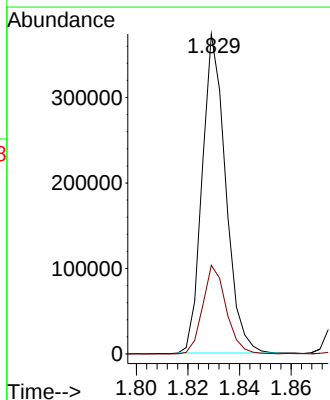
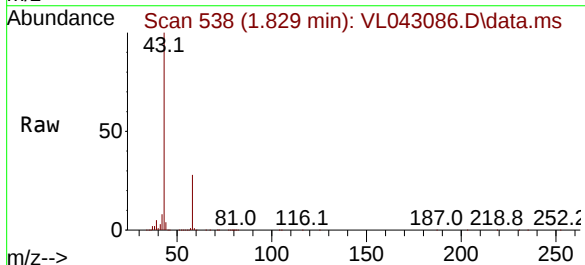
Instrument :
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ClientSampleId :
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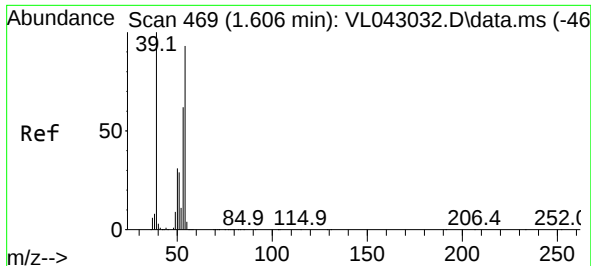
Tgt Ion: 45 Resp: 86892
Ion Ratio Lower Upper
45 100
46 37.4 17.8 71.4



#15
Acetone
Concen: 8.705 ppbv
RT: 1.829 min Scan# 538
Delta R.T. 0.000 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 43 Resp: 236906
Ion Ratio Lower Upper
43 100
58 27.7 22.2 33.4

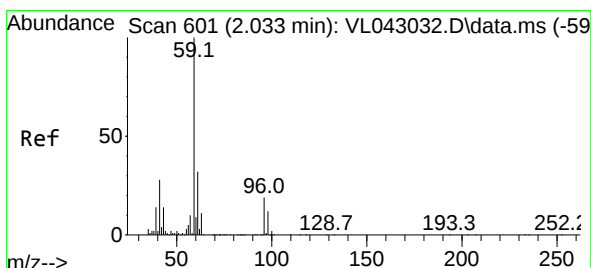
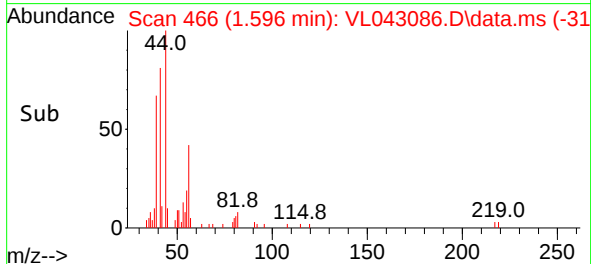
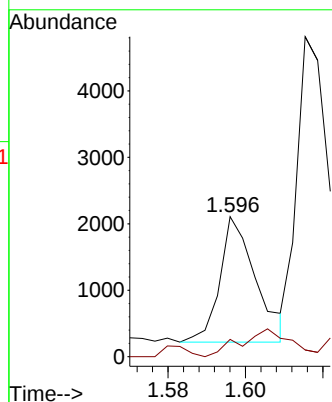
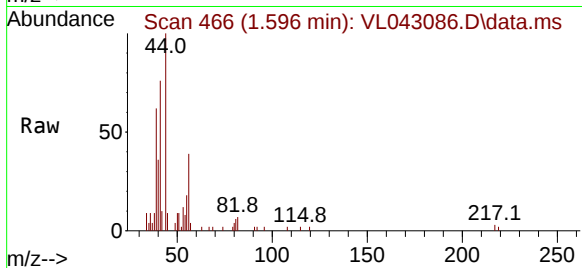




#16
1,3-Butadiene
Concen: 0.109 ppbv
RT: 1.596 min Scan# 411
Delta R.T. -0.010 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

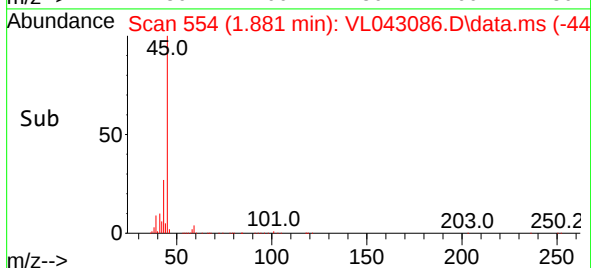
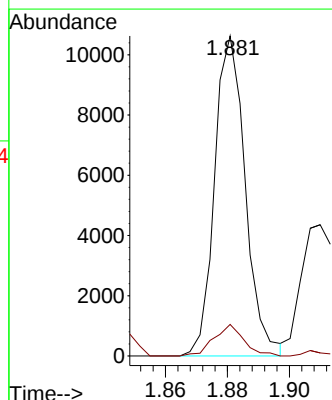
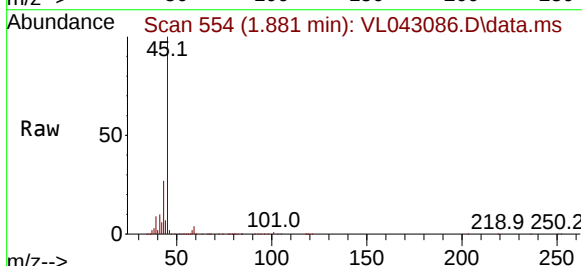
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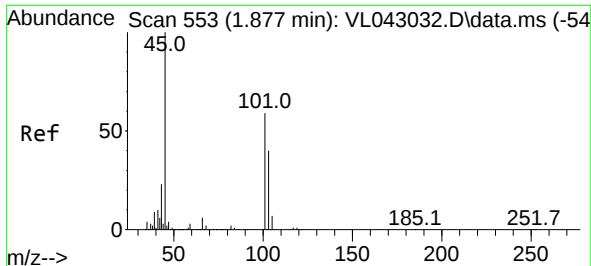
Tgt Ion: 39 Resp: 1221
Ion Ratio Lower Upper
39 100
54 59.3 61.4 92.2#



#17
tert-Butyl alcohol
Concen: 0.254 ppbv
RT: 1.881 min Scan# 554
Delta R.T. -0.152 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 59 Resp: 7318
Ion Ratio Lower Upper
59 100
57 10.8 8.5 12.7

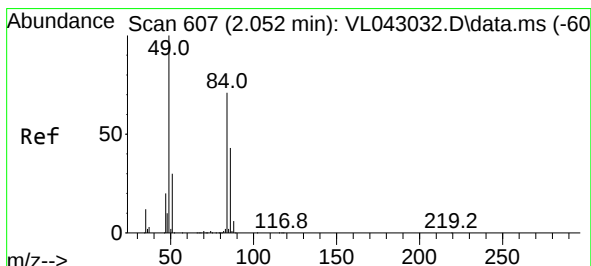
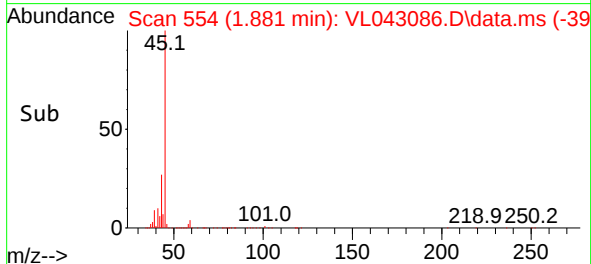
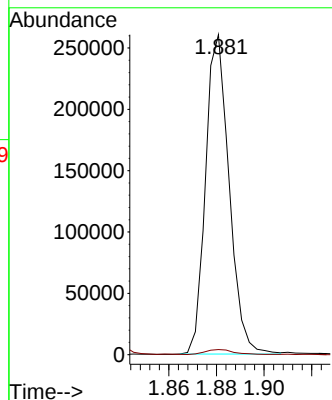
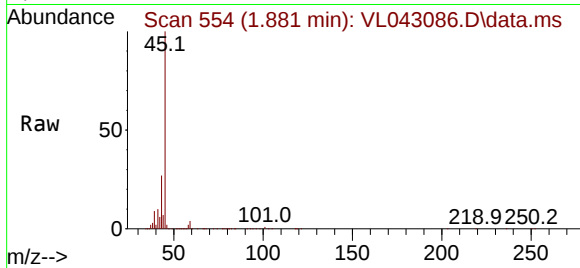




#19
Isopropyl Alcohol
Concen: 13.724 ppbv
RT: 1.881 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

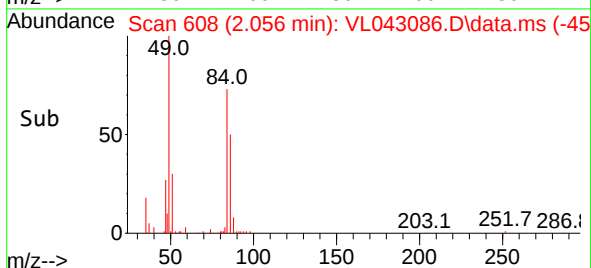
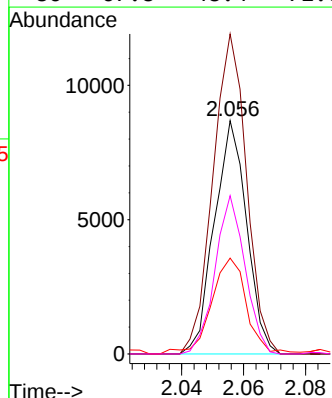
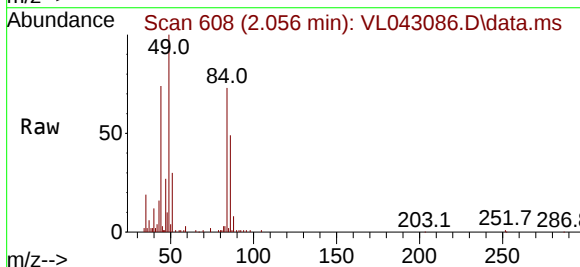
Instrument :
MSVOA_L
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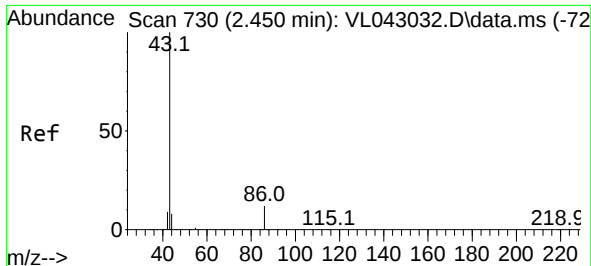
Tgt Ion: 45 Resp: 178943
Ion Ratio Lower Upper
45 100
58 2.4 42.3 63.5#



#20
Methylene Chloride
Concen: 0.529 ppbv
RT: 2.056 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 84 Resp: 6285
Ion Ratio Lower Upper
84 100
49 137.2 112.5 168.7
51 39.4 34.2 51.2
86 67.8 48.4 72.6

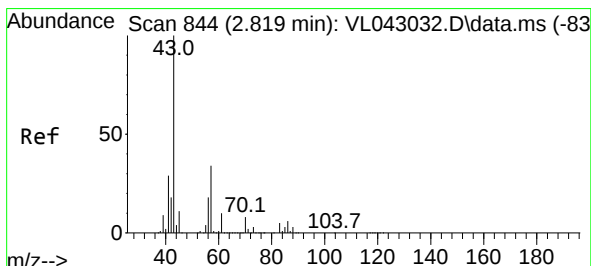
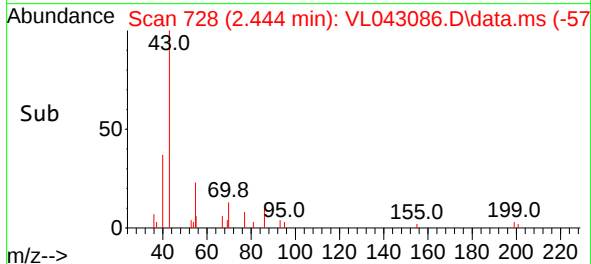
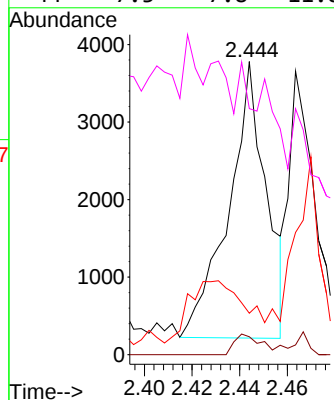
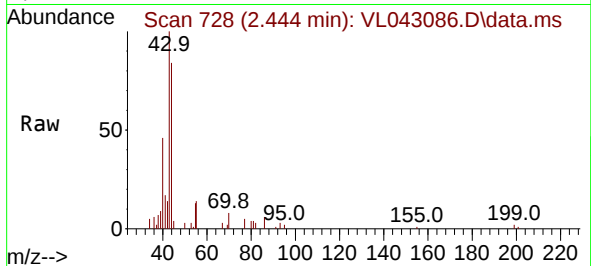




#23
 Vinyl Acetate
 Concen: 0.674 ppbv
 RT: 2.444 min Scan# 71
 Delta R.T. -0.006 min
 Lab File: VL043086.D
 Acq: 09 Oct 2025 13:52

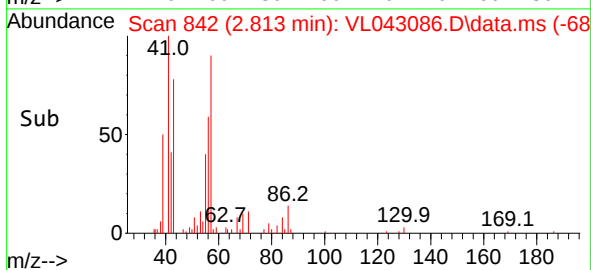
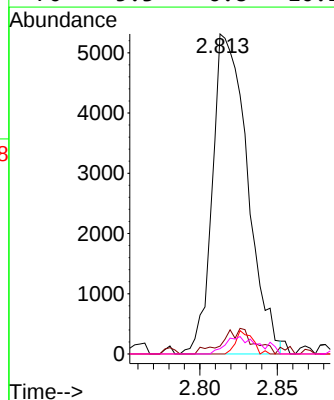
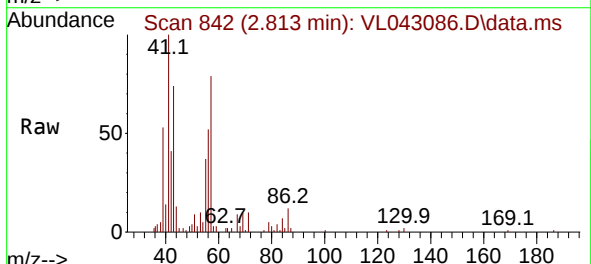
Instrument :
 MSVOA_L
 ClientSampleId :
 IA6

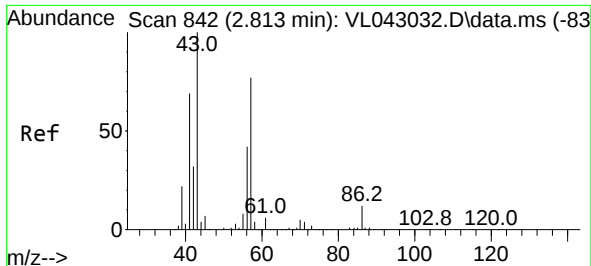
Tgt Ion: 43	Resp: 3894
Ion Ratio	Lower Upper
43 100	
86 6.5	7.5 11.3#
42 6.4	8.4 12.6#
44 7.3	7.8 11.8#



#25
 Ethyl Acetate
 Concen: 0.122 ppbv
 RT: 2.813 min Scan# 842
 Delta R.T. -0.006 min
 Lab File: VL043086.D
 Acq: 09 Oct 2025 13:52

Tgt Ion: 43	Resp: 8337
Ion Ratio	Lower Upper
43 100	
45 8.1	8.3 12.5#
61 3.5	7.5 11.3#
70 5.3	6.8 10.2#

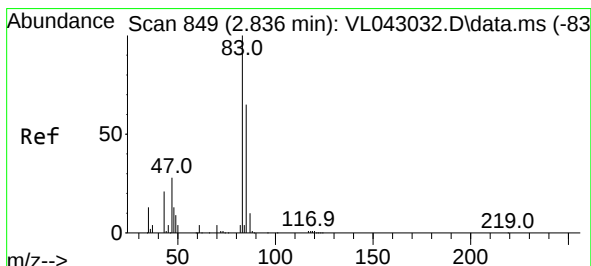
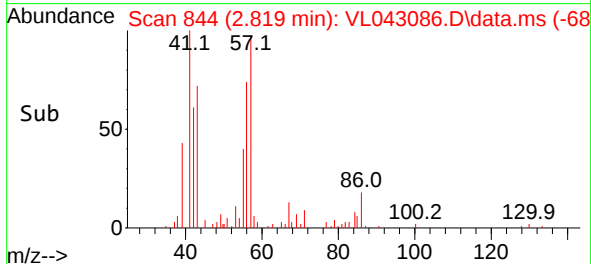
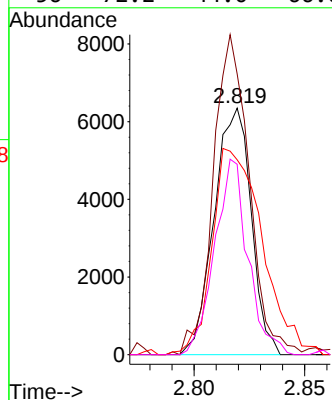
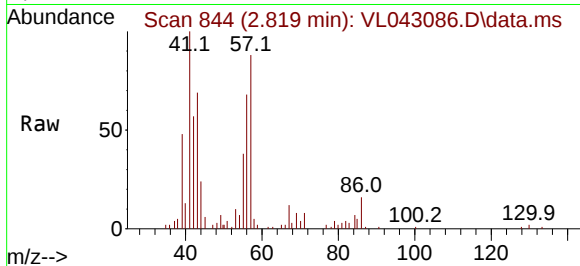




#26
Hexane
Concen: 0.281 ppbv
RT: 2.819 min Scan# 842
Delta R.T. 0.007 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

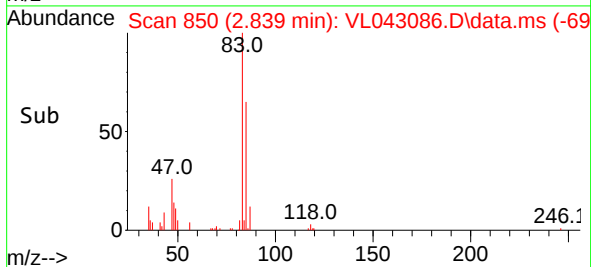
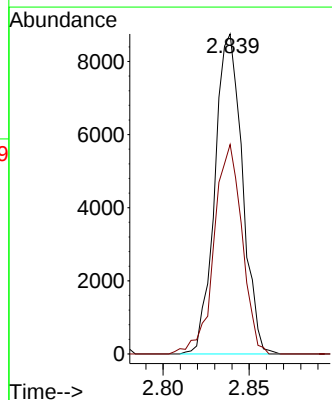
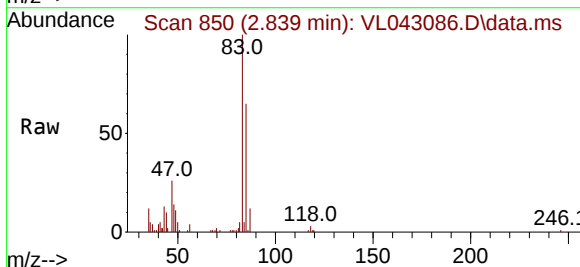
Instrument :
MSVOA_L
ClientSampleId :
IA6

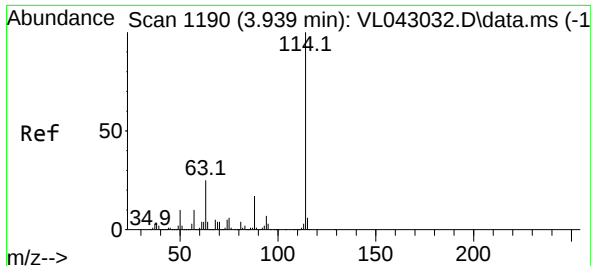
Tgt Ion: 57 Resp: 7381
Ion Ratio Lower Upper
57 100
41 127.3 76.1 114.1#
43 114.0 201.4 302.0#
56 72.2 44.0 66.0#



#29
Chloroform
Concen: 0.218 ppbv
RT: 2.839 min Scan# 850
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 83 Resp: 9745
Ion Ratio Lower Upper
83 100
85 65.5 52.0 78.0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.943 min Scan# 1190

Delta R.T. 0.003 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

IA6

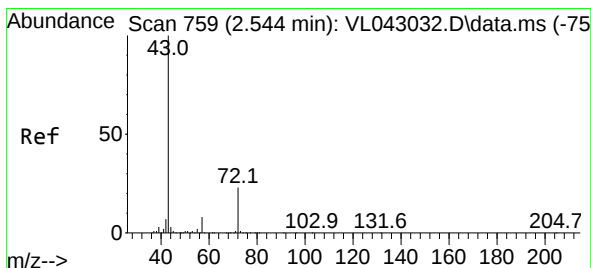
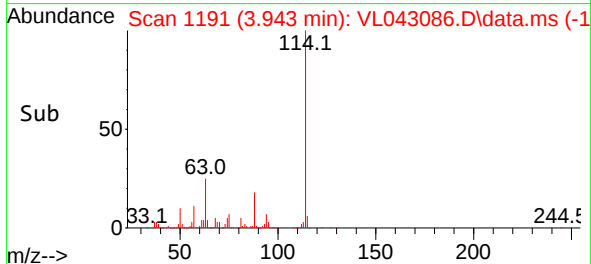
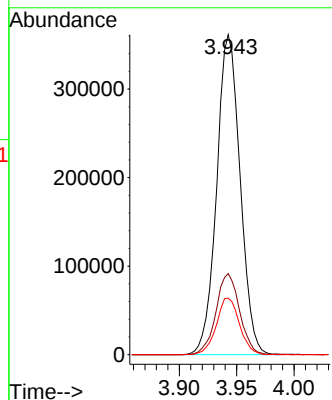
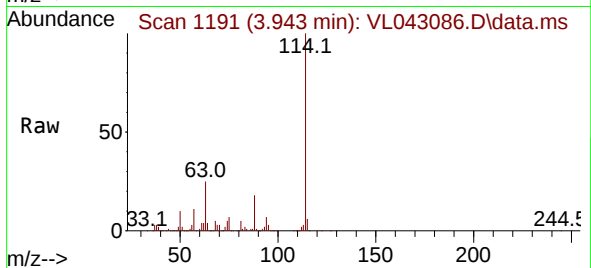
Tgt Ion:114 Resp: 513990

Ion Ratio Lower Upper

114 100

63 25.6 19.4 29.2

88 17.5 13.9 20.9



#34

2-Butanone

Concen: 0.176 ppbv

RT: 2.551 min Scan# 761

Delta R.T. 0.007 min

Lab File: VL043086.D

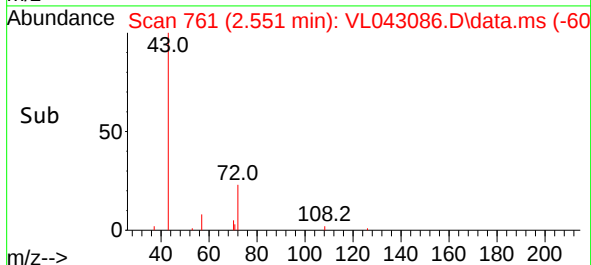
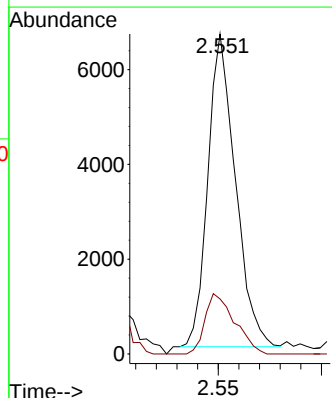
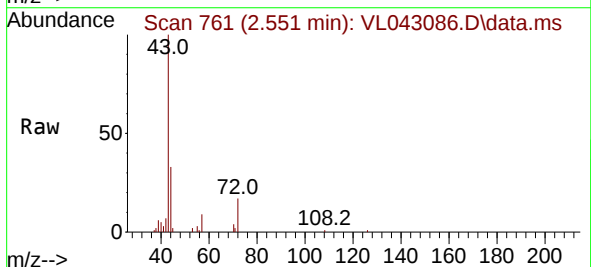
Acq: 09 Oct 2025 13:52

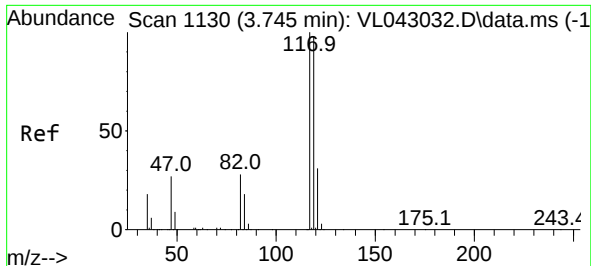
Tgt Ion: 43 Resp: 6124

Ion Ratio Lower Upper

43 100

72 20.8 18.4 27.6

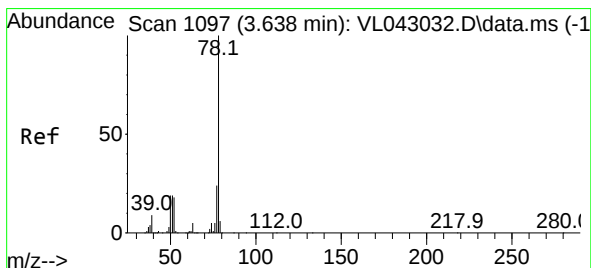
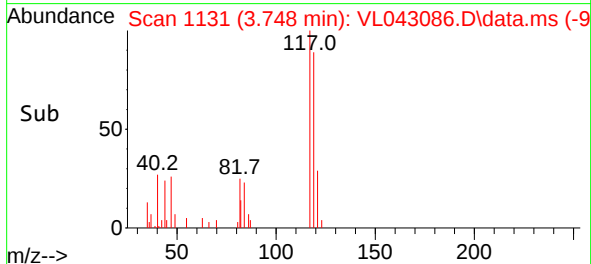
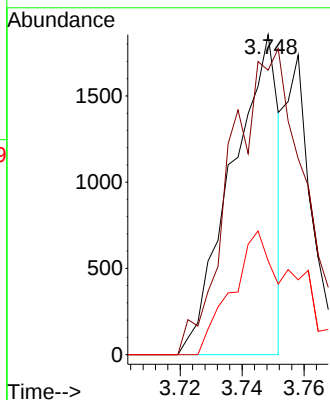
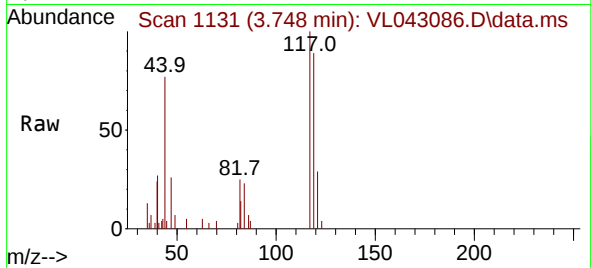




#35
Carbon Tetrachloride
Concen: 0.046 ppbv
RT: 3.748 min Scan# 1131
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

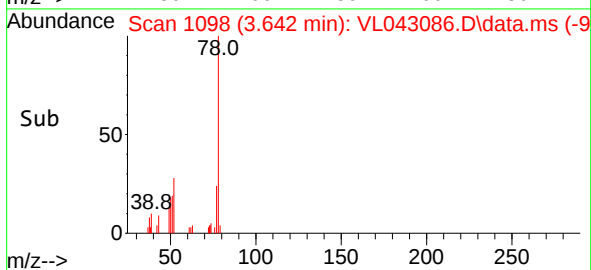
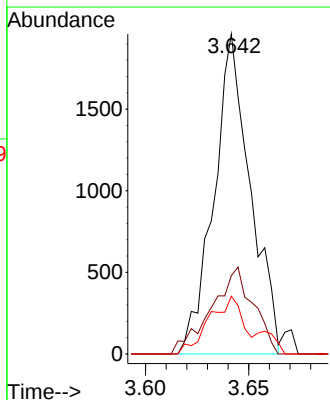
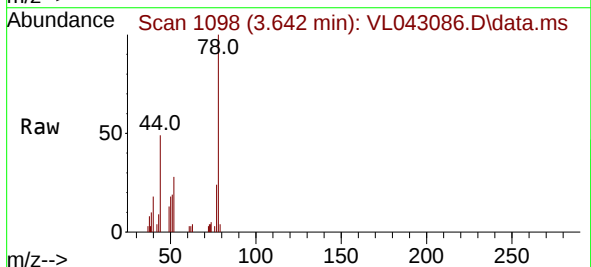
Instrument :
MSVOA_L
ClientSampleId :
IA6

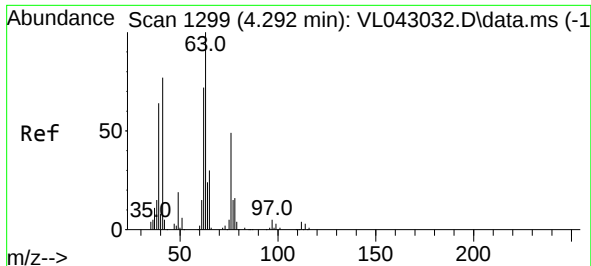
Tgt Ion:117 Resp: 1931
Ion Ratio Lower Upper
117 100
119 88.9 78.2 117.4
121 29.3 24.8 37.2



#36
Benzene
Concen: 0.049 ppbv
RT: 3.642 min Scan# 1098
Delta R.T. 0.003 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion: 78 Resp: 2409
Ion Ratio Lower Upper
78 100
77 25.2 19.2 28.8
50 18.6 14.9 22.3





#39

1,2-Dichloropropane

Concen: 7.207 ppbv

RT: 3.943 min Scan# 1191

Delta R.T. -0.349 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

IA6

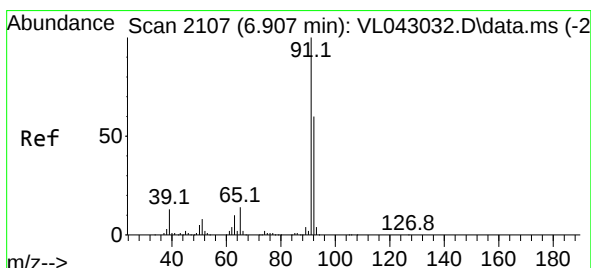
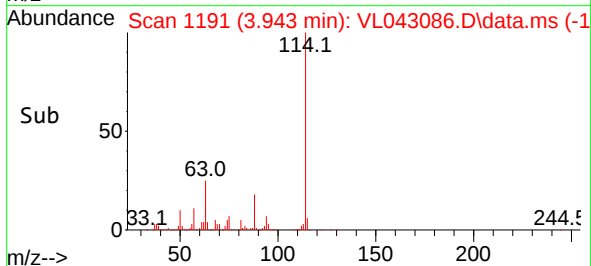
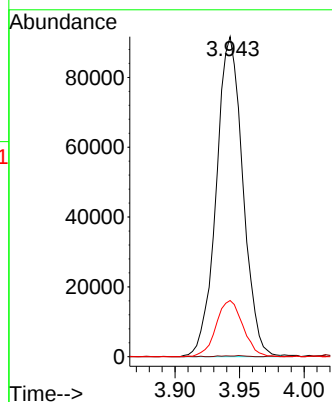
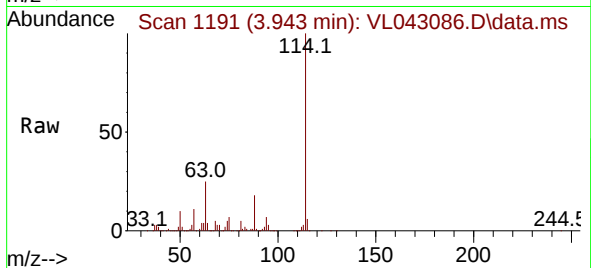
Tgt Ion: 63 Resp: 131186

Ion Ratio Lower Upper

63 100

41 0.2 61.6 92.4#

62 17.5 58.1 87.1#



#53

Toluene

Concen: 0.286 ppbv

RT: 6.911 min Scan# 2108

Delta R.T. 0.003 min

Lab File: VL043086.D

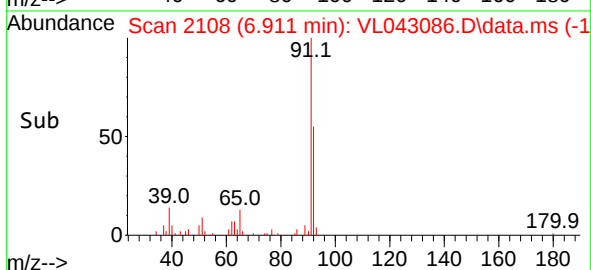
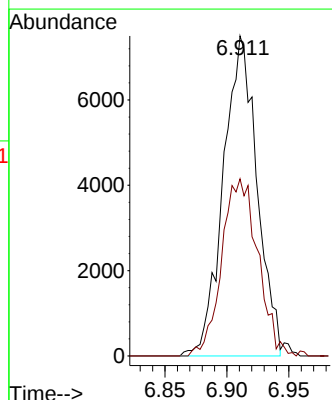
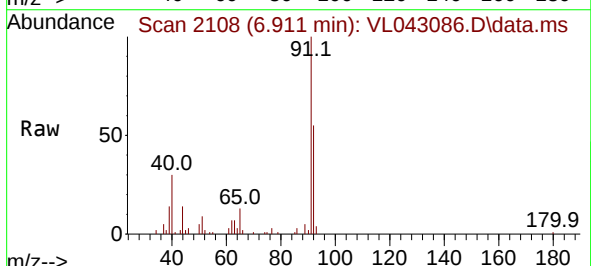
Acq: 09 Oct 2025 13:52

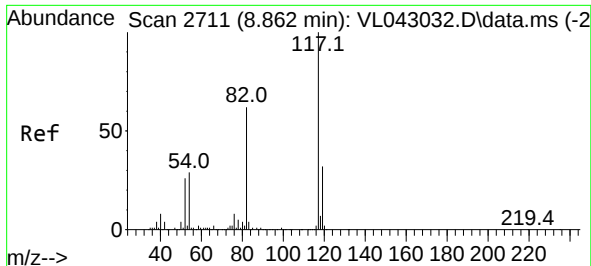
Tgt Ion: 91 Resp: 14195

Ion Ratio Lower Upper

91 100

92 59.6 47.8 71.6





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.866 min Scan# 21

Delta R.T. 0.003 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

IA6

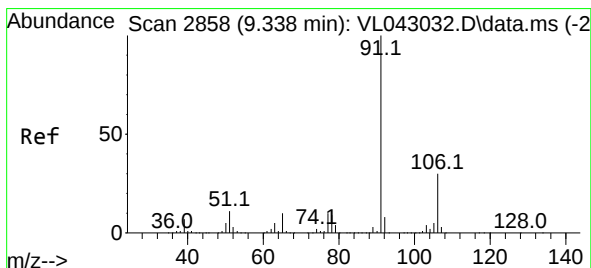
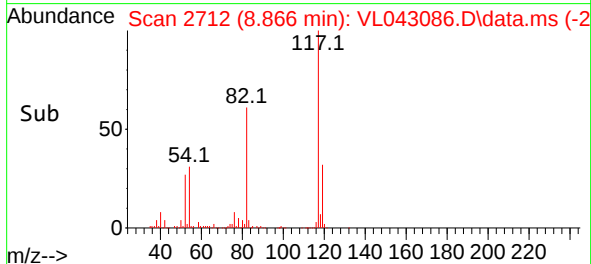
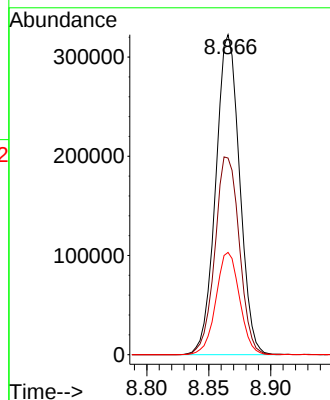
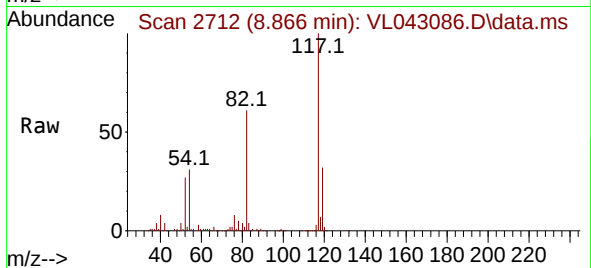
Tgt Ion:117 Resp: 433895

Ion Ratio Lower Upper

117 100

82 63.3 53.0 79.6

119 31.7 25.4 38.2



#58

Ethyl Benzene

Concen: 0.075 ppbv

RT: 9.335 min Scan# 2857

Delta R.T. -0.003 min

Lab File: VL043086.D

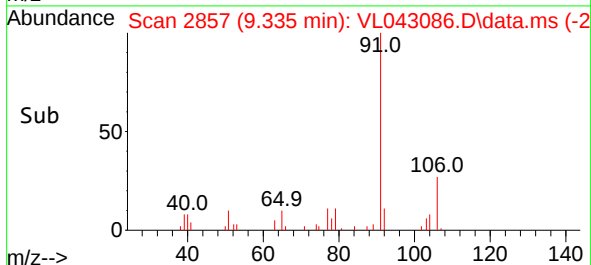
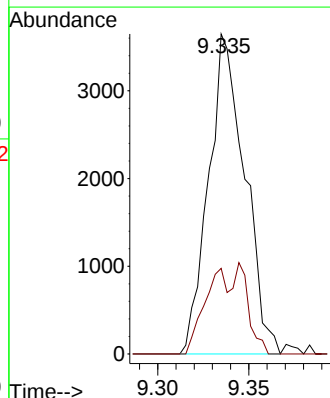
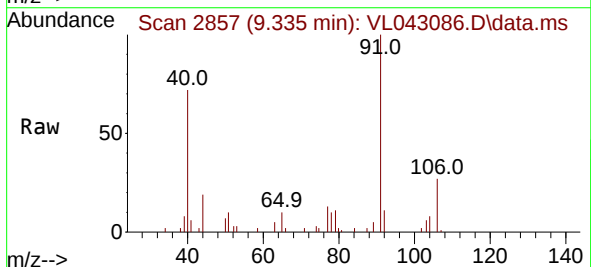
Acq: 09 Oct 2025 13:52

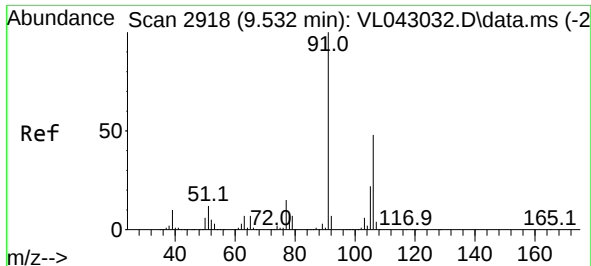
Tgt Ion: 91 Resp: 5034

Ion Ratio Lower Upper

91 100

106 26.8 24.1 36.1





#59

m/p-Xylene

Concen: 0.187 ppbv

RT: 9.519 min Scan# 2914

Delta R.T. -0.013 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

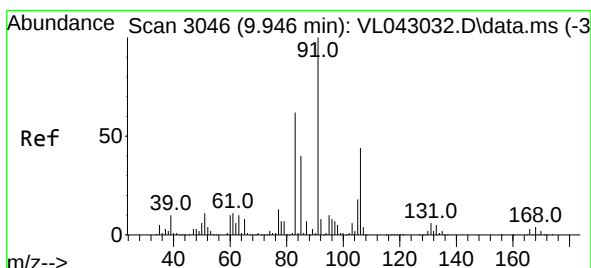
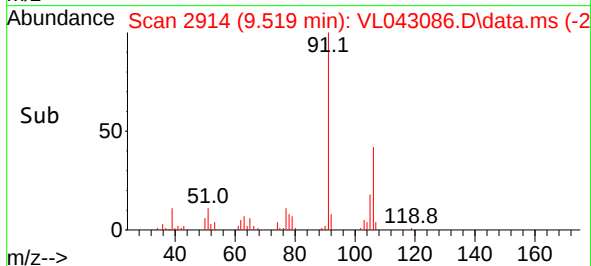
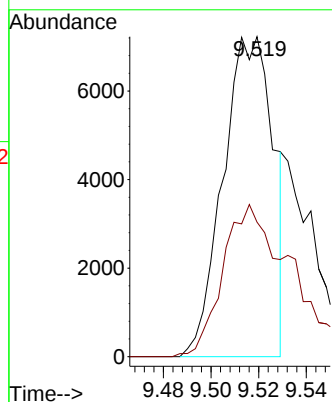
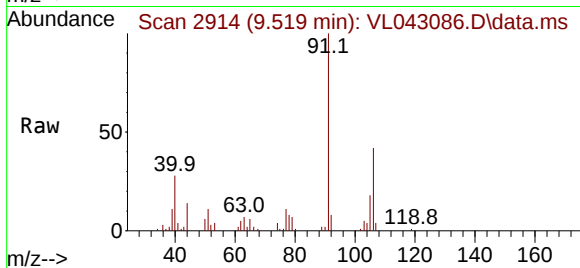
IA6

Tgt Ion: 91 Resp: 10623

Ion Ratio Lower Upper

91 100

106 64.3 37.5 56.3#



#60

o-Xylene

Concen: 0.188 ppbv

RT: 9.519 min Scan# 2914

Delta R.T. -0.427 min

Lab File: VL043086.D

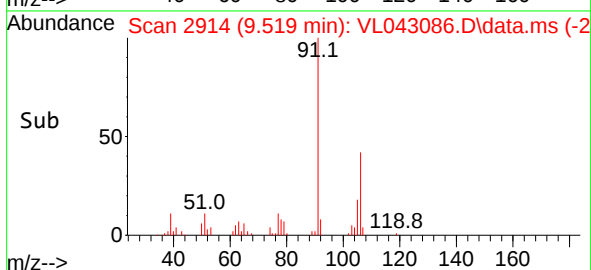
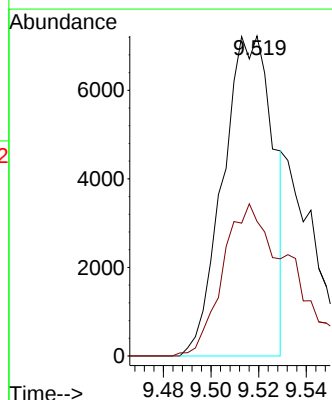
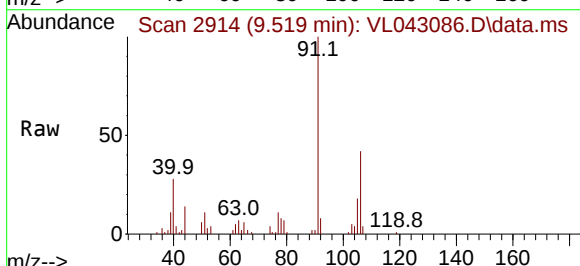
Acq: 09 Oct 2025 13:52

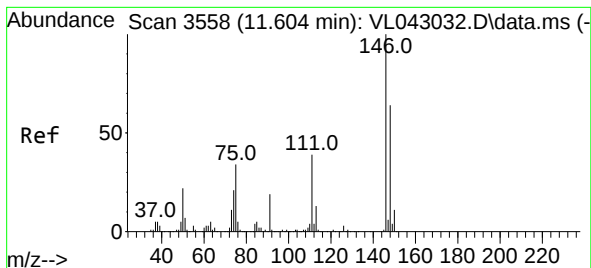
Tgt Ion: 91 Resp: 10623

Ion Ratio Lower Upper

91 100

106 64.2 21.9 65.5





#66

Benzyl Chloride

Concen: 0.046 ppbv

RT: 11.533 min Scan# 3153

Delta R.T. -0.071 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

Instrument :

MSVOA_L

ClientSampleId :

IA6

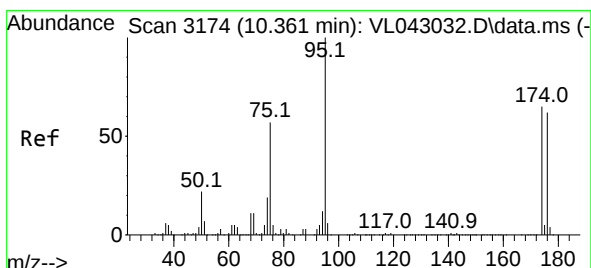
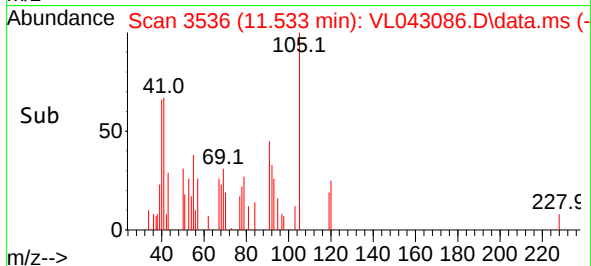
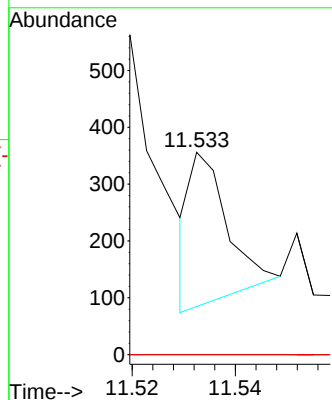
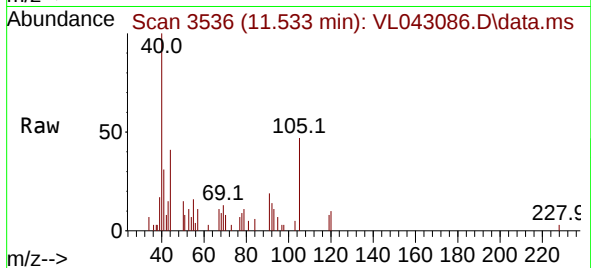
Tgt Ion: 91 Resp: 136

Ion Ratio Lower Upper

91 100

126 0.0 14.2 21.4#

128 0.0 4.8 7.2#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.751 ppbv

RT: 10.361 min Scan# 3174

Delta R.T. 0.000 min

Lab File: VL043086.D

Acq: 09 Oct 2025 13:52

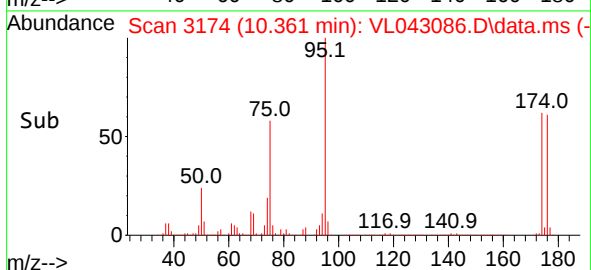
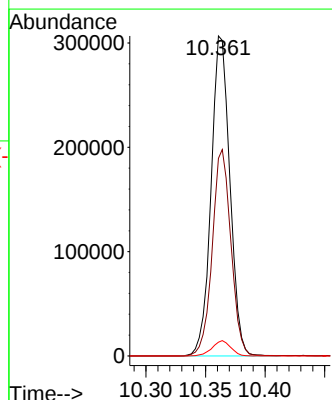
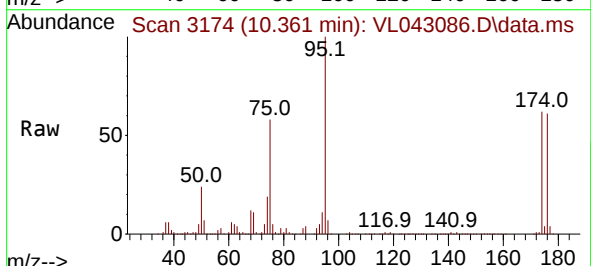
Tgt Ion: 95 Resp: 336046

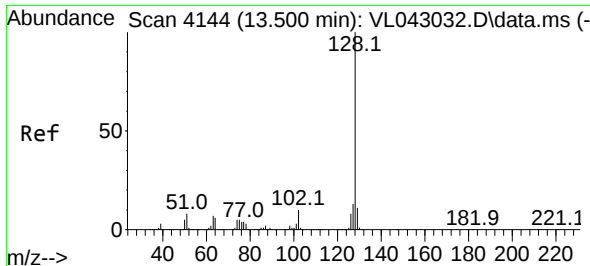
Ion Ratio Lower Upper

95 100

174 64.5 52.3 78.5

175 4.8 3.8 5.8

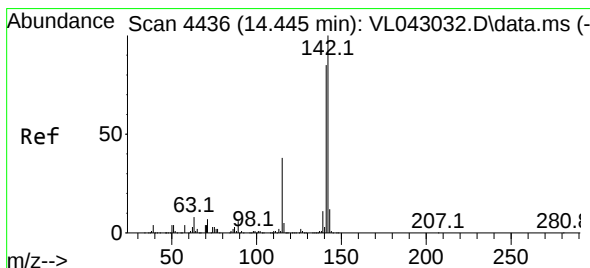
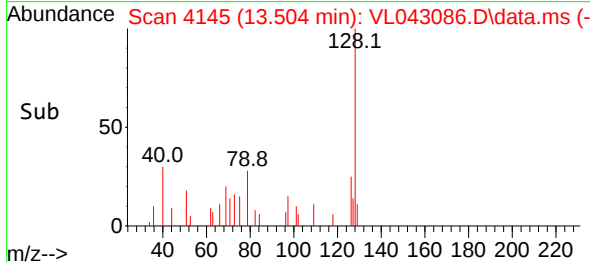
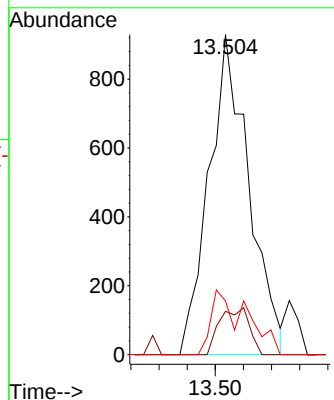
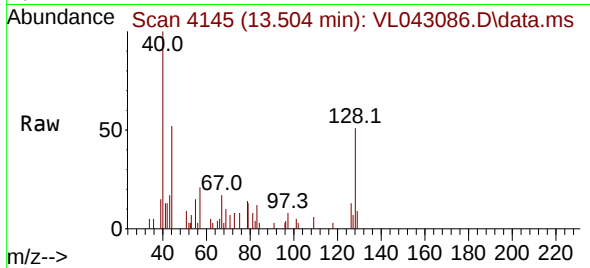




#79
Naphthalene
Concen: 0.251 ppbv
RT: 13.504 min Scan# 4144
Delta R.T. 0.004 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Instrument :
MSVOA_L
ClientSampleId :
IA6

Tgt Ion:128 Resp: 914
Ion Ratio Lower Upper
128 100
127 13.6 10.6 16.0
129 16.8 8.8 13.2#



#80
Naphthalene,2-methyl-
Concen: 0.683 ppbv
RT: 14.445 min Scan# 4436
Delta R.T. 0.000 min
Lab File: VL043086.D
Acq: 09 Oct 2025 13:52

Tgt Ion:142 Resp: 592
Ion Ratio Lower Upper
142 100
141 93.8 66.6 100.0
115 33.6 30.1 45.1

