

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
 Data File : VL043161.D
 Acq On : 06 Nov 2025 11:36
 Operator : SY/MD
 Sample : Q3556-01
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 131-1A1

Quant Time: Nov 07 00:20:15 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Oct 15 02:12:58 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.787	49	117302	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	349960	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.879	117	295308	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	234219	10.204	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.000%

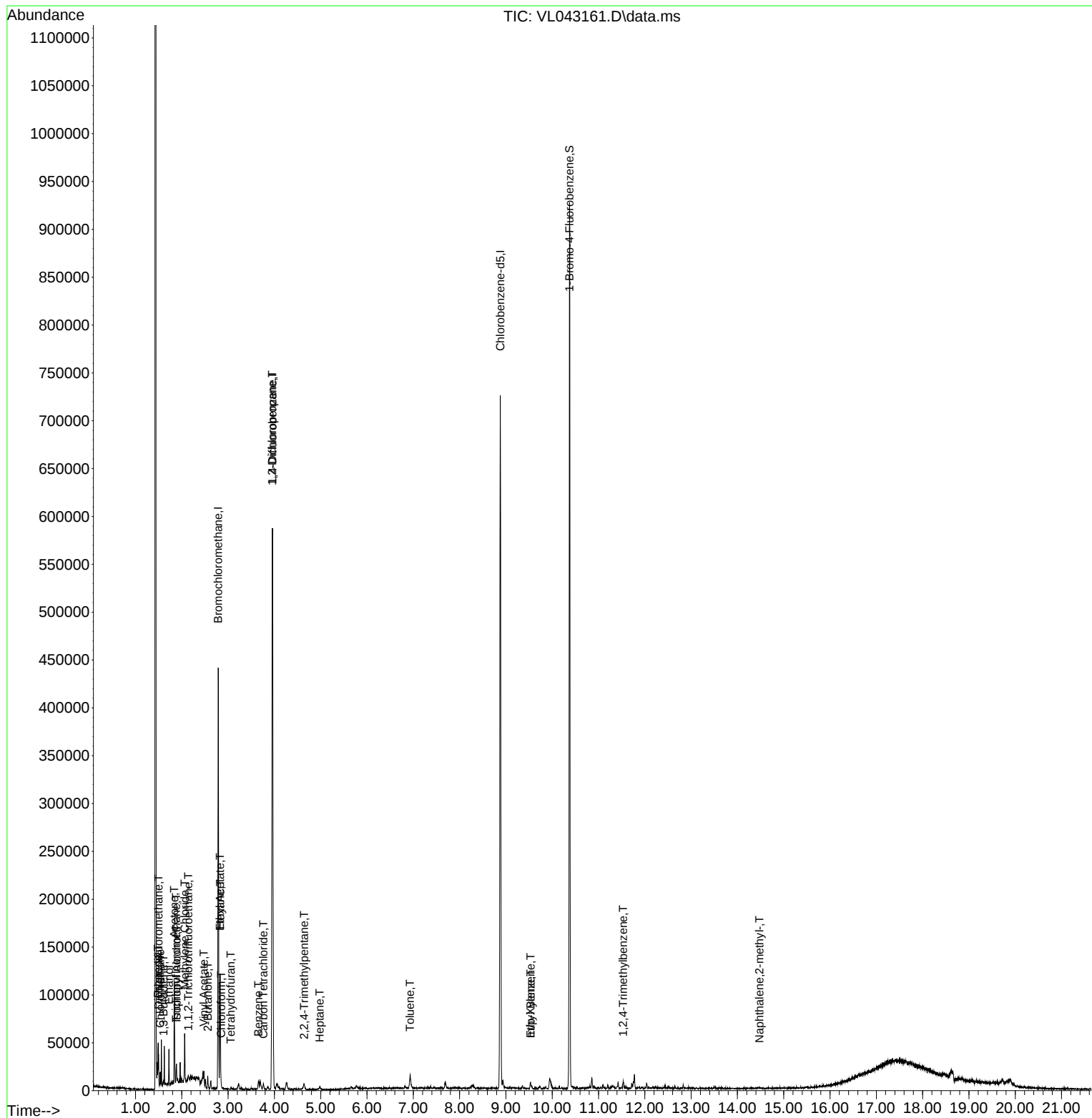
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	7506	0.450	ppbv	99
4) Chloromethane	1.531	50	3813	0.577	ppbv	93
9) Propene	1.489	41	3516	0.439	ppbv #	80
10) Heptane	4.979	43	715	0.031	ppbv #	52
11) Trichlorofluoromethane	1.878	101	4040	0.248	ppbv	86
12) 1,1,2-Trichlorotrifluo...	2.140	101	1118	0.085	ppbv #	76
13) Ethanol	1.722	45	11228	3.793	ppbv	92
15) Acetone	1.836	43	49828	3.152	ppbv	100
16) 1,3-Butadiene	1.603	39	1021	0.136	ppbv #	13
19) Isopropyl Alcohol	1.888	45	5602	0.569	ppbv #	1
20) Methylene Chloride	2.062	84	7591	1.215	ppbv	91
23) Vinyl Acetate	2.477	43	3997	0.173	ppbv #	58
25) Ethyl Acetate	2.826	43	20126	0.513	ppbv #	79
26) Hexane	2.829	57	27779	1.538	ppbv #	41
29) Chloroform	2.852	83	1027	0.039	ppbv	93
34) 2-Butanone	2.561	43	7360	0.313	ppbv	93
35) Carbon Tetrachloride	3.765	117	1370	0.054	ppbv #	87
36) Benzene	3.655	78	4711	0.143	ppbv	95
39) 1,2-Dichloropropane	3.956	63	88617	7.354	ppbv #	24
41) Tetrahydrofuran	3.059	42	579	0.044	ppbv #	48
44) 2,2,4-Trimethylpentane	4.645	57	2245	0.040	ppbv #	29
53) Toluene	6.930	91	8680	0.222	ppbv	98
58) Ethyl Benzene	9.532	91	3414	0.067	ppbv	92
59) m/p-Xylene	9.532	91	3414	0.084	ppbv	98
74) 1,2,4-Trimethylbenzene	11.533	105	1660	0.037	ppbv #	54
80) Naphthalene,2-methyl-	14.478	142	583	0.047	ppbv #	72

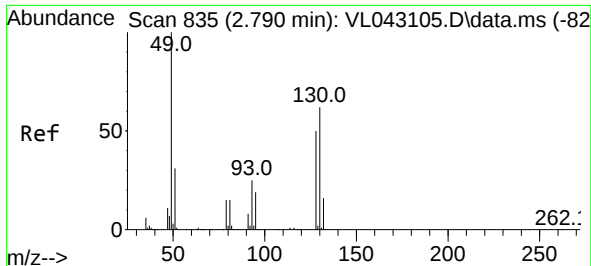
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :
MSVOA_L
ClientSampleId :
131-IA1

Quant Time: Nov 07 00:20:15 2025
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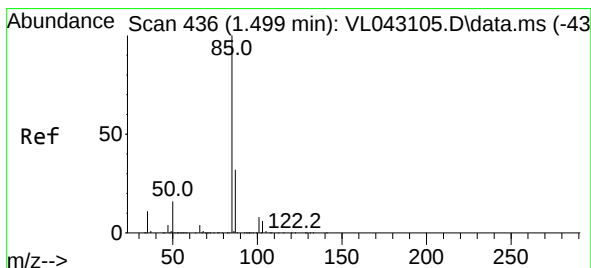
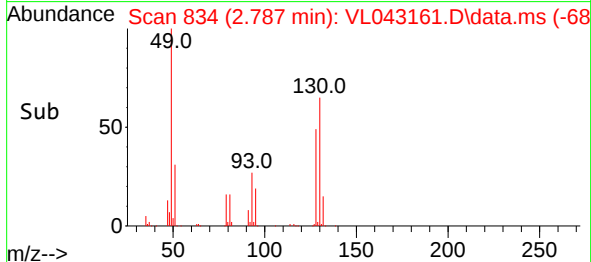
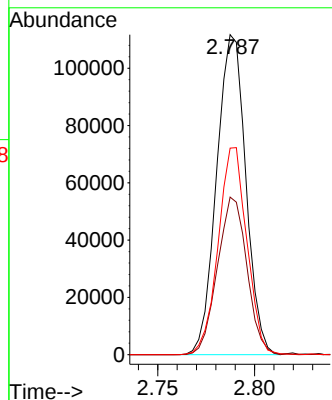
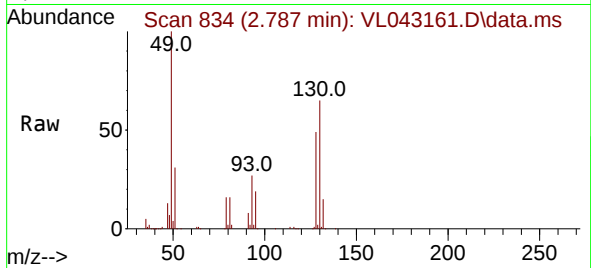




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

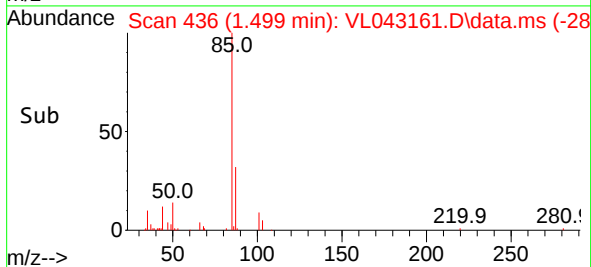
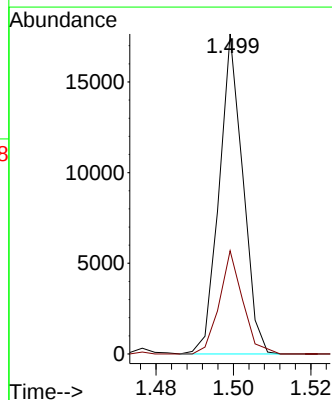
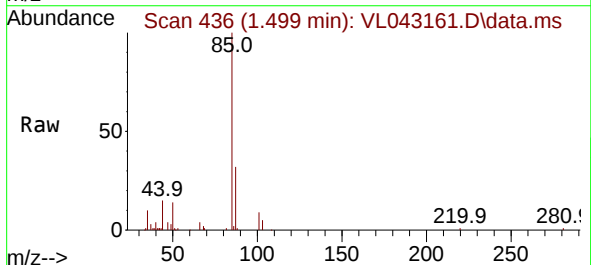
Instrument :
MSVOA_L
ClientSampleId :
131-IA1

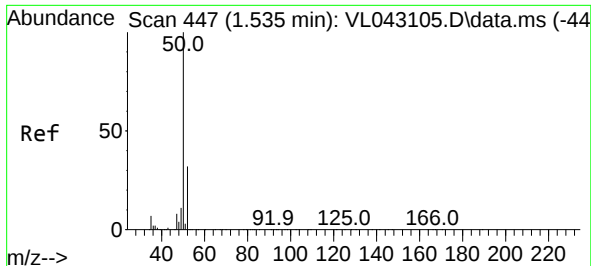
Tgt Ion: 49 Resp: 117302
Ion Ratio Lower Upper
49 100
128 49.6 24.4 73.4
130 63.6 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.450 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 85 Resp: 7506
Ion Ratio Lower Upper
85 100
87 32.3 25.3 37.9

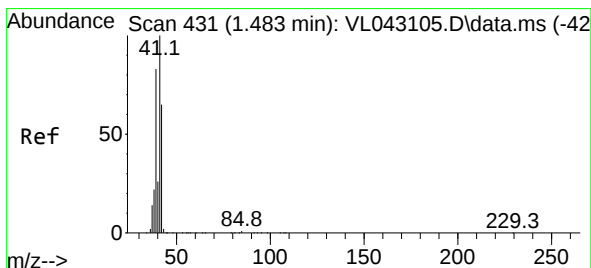
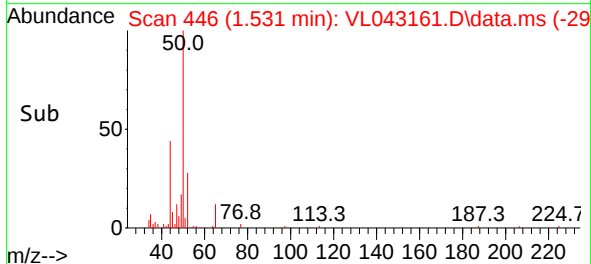
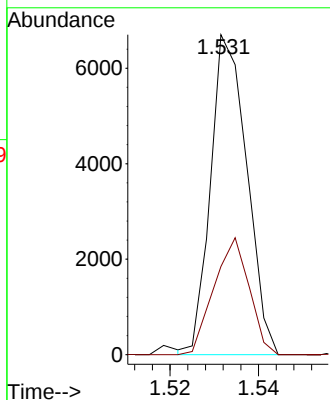
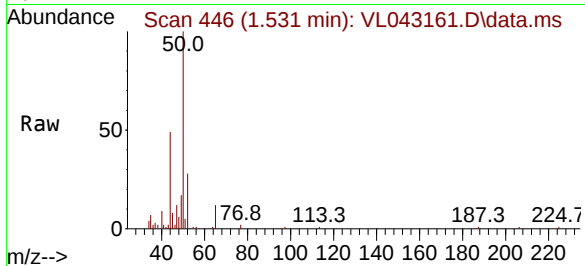




#4
Chloromethane
Concen: 0.577 ppbv
RT: 1.531 min Scan# 447
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

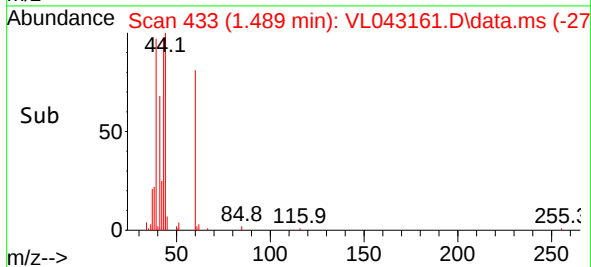
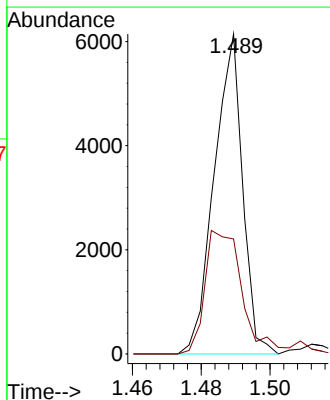
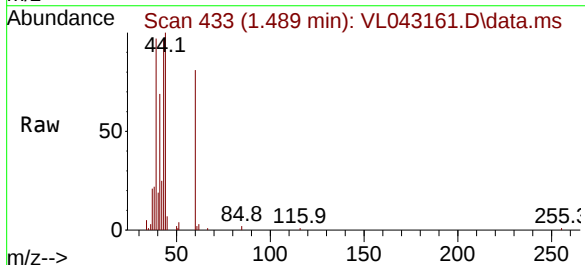
Instrument :
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ClientSampleId :
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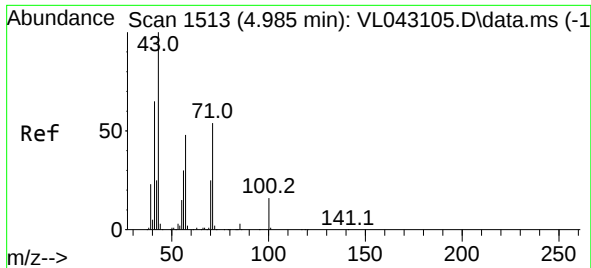
Tgt Ion: 50 Resp: 3813
Ion Ratio Lower Upper
50 100
52 27.6 25.2 37.8



#9
Propene
Concen: 0.439 ppbv
RT: 1.489 min Scan# 433
Delta R.T. 0.007 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 41 Resp: 3516
Ion Ratio Lower Upper
41 100
42 52.8 55.1 82.7#

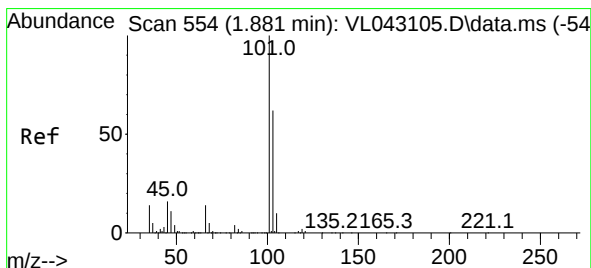
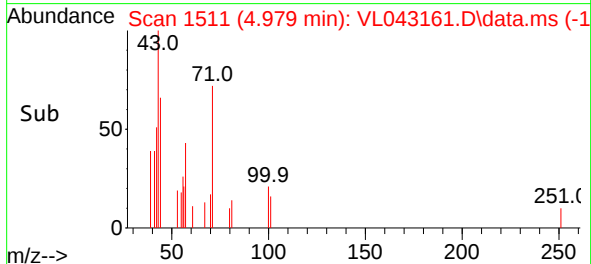
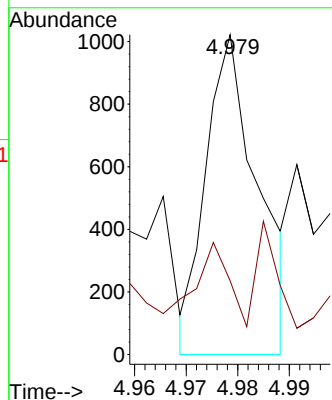
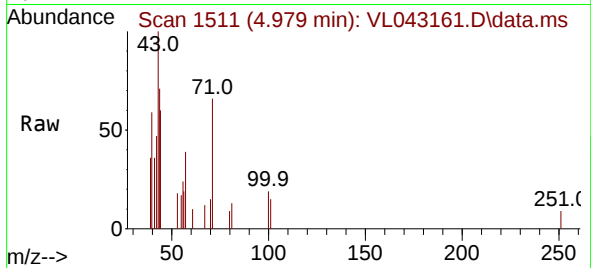




#10
Heptane
Concen: 0.031 ppbv
RT: 4.979 min Scan# 11
Delta R.T. -0.006 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

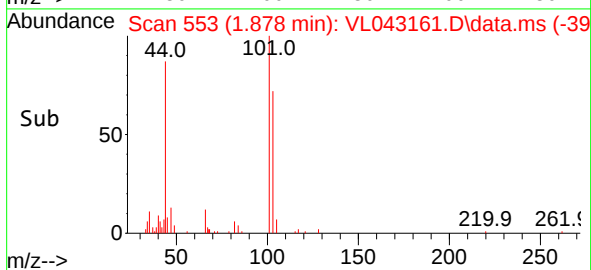
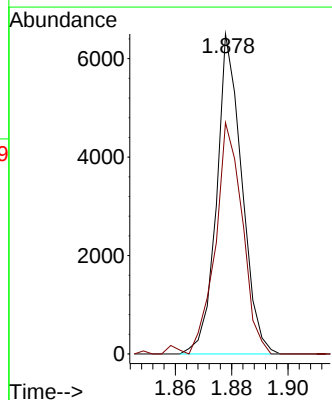
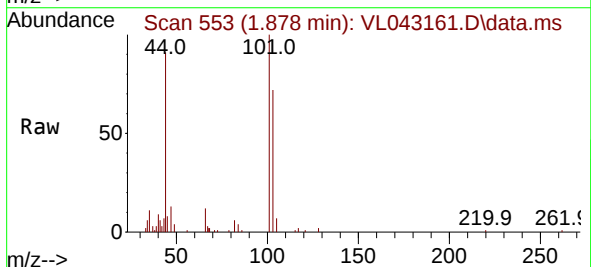
Instrument :
MSVOA_L
ClientSampleId :
131-IA1

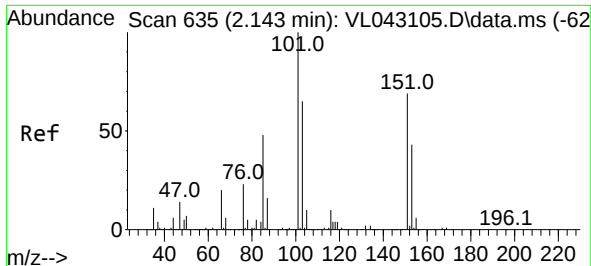
Tgt Ion: 43 Resp: 715
Ion Ratio Lower Upper
43 100
57 84.2 40.8 61.2#



#11
Trichlorofluoromethane
Concen: 0.248 ppbv
RT: 1.878 min Scan# 553
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion:101 Resp: 4040
Ion Ratio Lower Upper
101 100
103 72.3 49.3 73.9

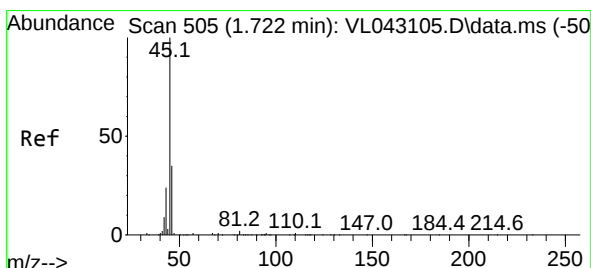
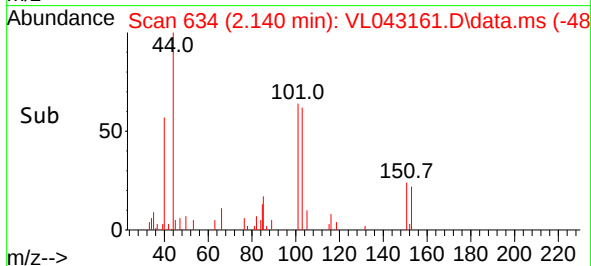
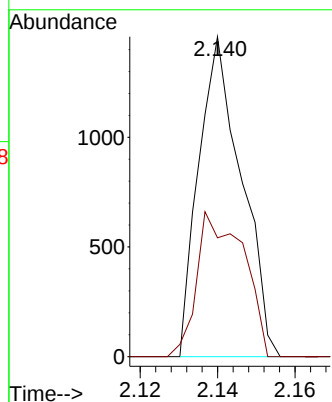
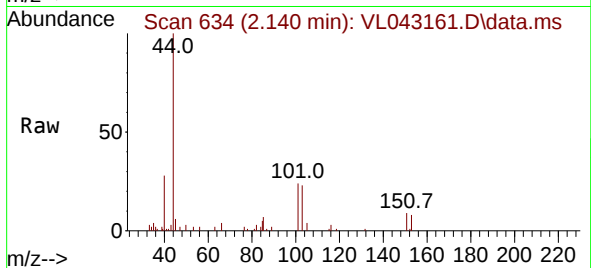




#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.085 ppbv
 RT: 2.140 min Scan# 611
 Delta R.T. -0.003 min
 Lab File: VL043161.D
 Acq: 06 Nov 2025 11:36

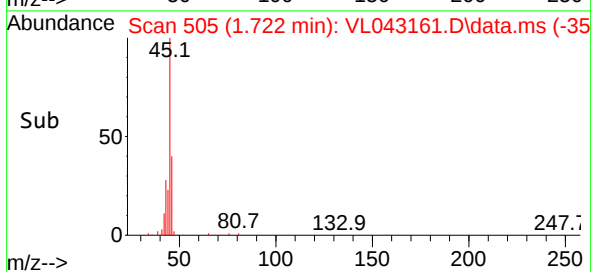
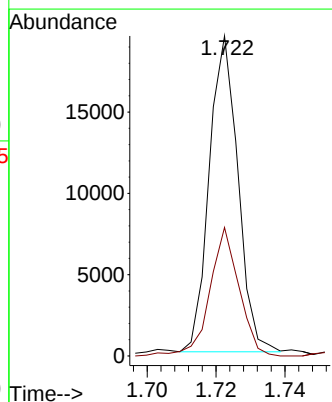
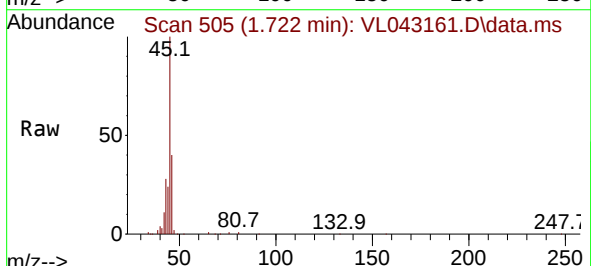
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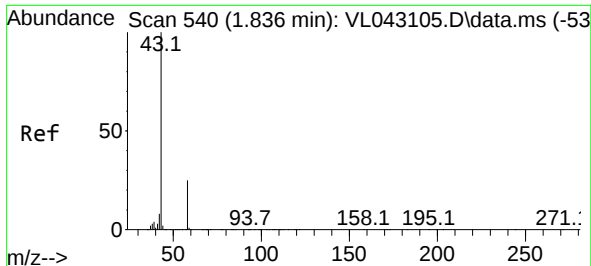
Tgt Ion:101 Resp: 1118
 Ion Ratio Lower Upper
 101 100
 151 49.3 54.7 82.1#



#13
 Ethanol
 Concen: 3.793 ppbv
 RT: 1.722 min Scan# 505
 Delta R.T. 0.000 min
 Lab File: VL043161.D
 Acq: 06 Nov 2025 11:36

Tgt Ion: 45 Resp: 11228
 Ion Ratio Lower Upper
 45 100
 46 41.5 14.7 58.9

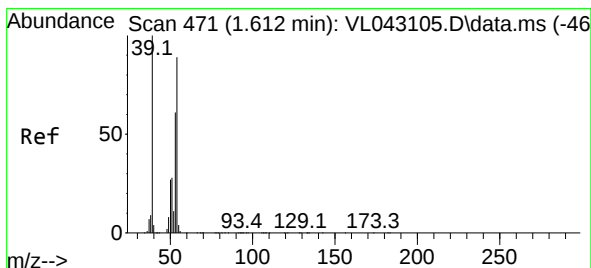
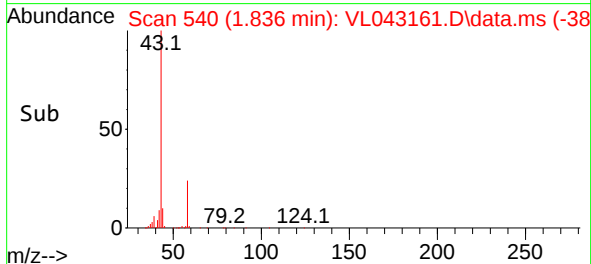
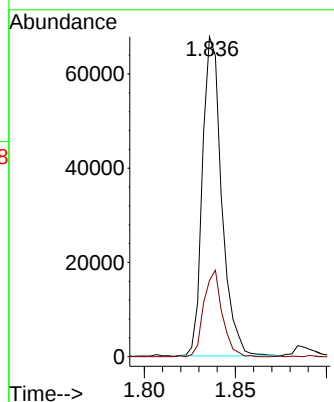
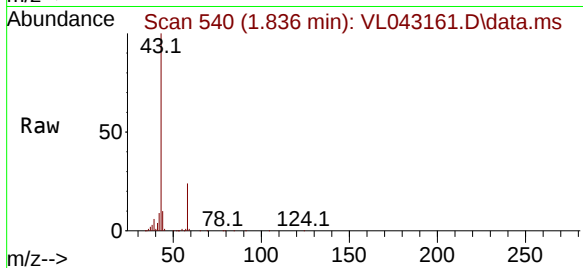




#15
Acetone
Concen: 3.152 ppbv
RT: 1.836 min Scan# 540
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

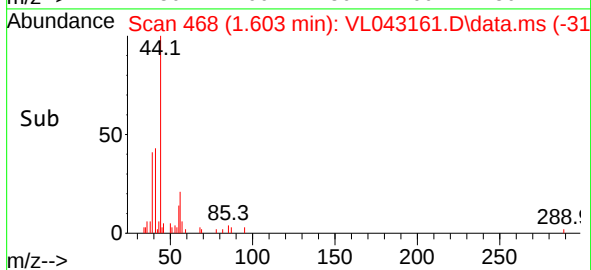
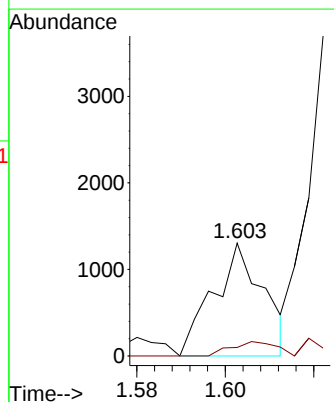
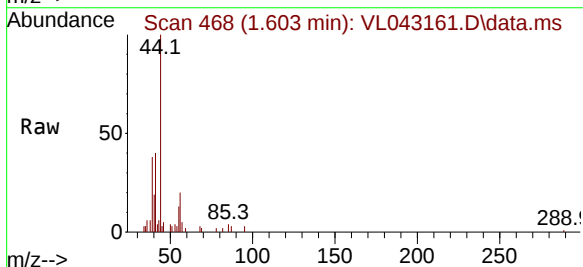
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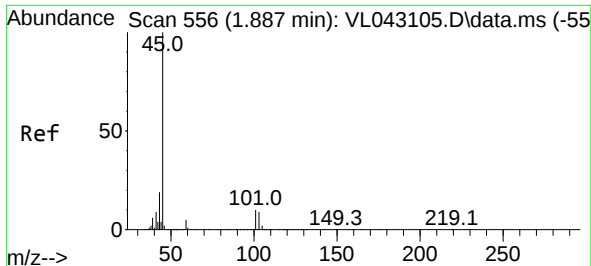
Tgt Ion: 43 Resp: 49828
Ion Ratio Lower Upper
43 100
58 26.0 20.8 31.2



#16
1,3-Butadiene
Concen: 0.136 ppbv
RT: 1.603 min Scan# 468
Delta R.T. -0.010 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 39 Resp: 1021
Ion Ratio Lower Upper
39 100
54 0.0 59.0 88.4#

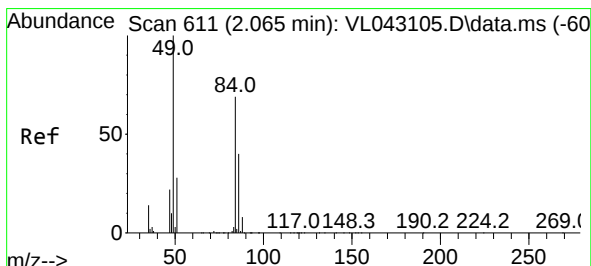
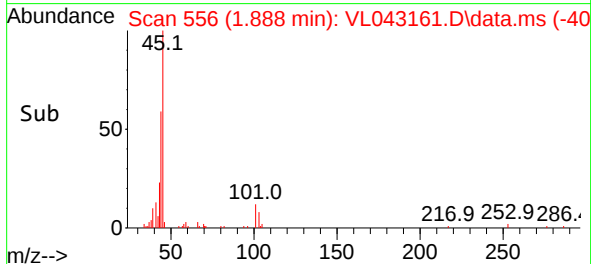
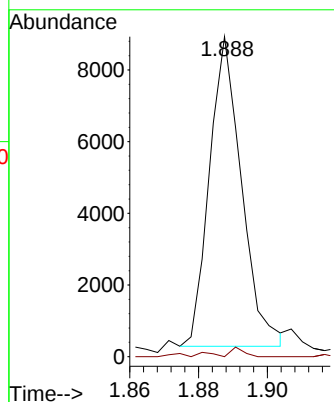
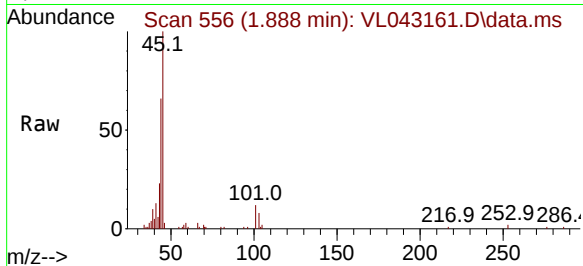




#19
Isopropyl Alcohol
Concen: 0.569 ppbv
RT: 1.888 min Scan# 51
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

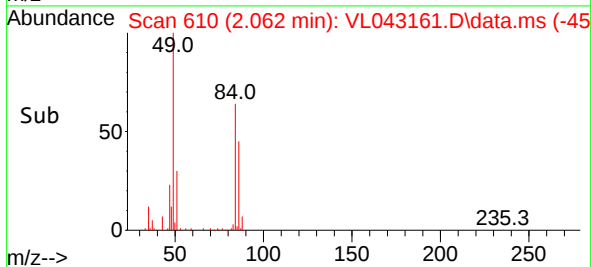
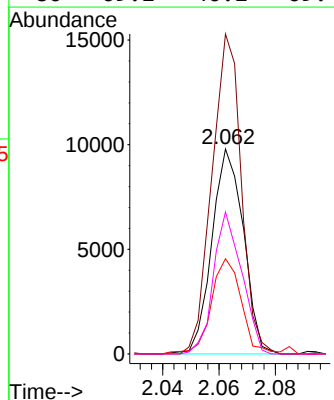
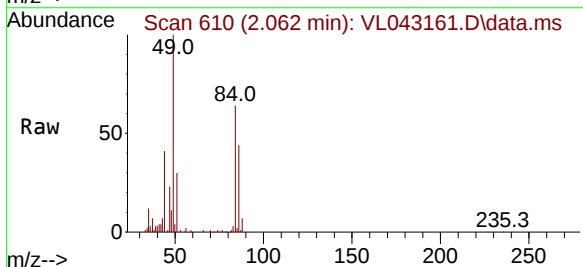
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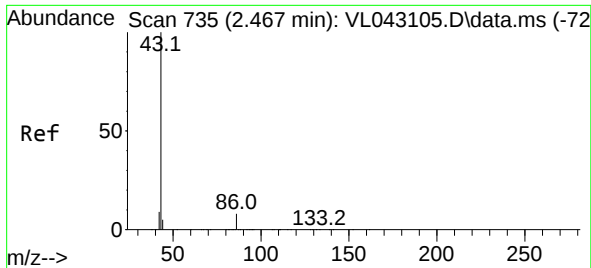
Tgt Ion: 45 Resp: 5602
Ion Ratio Lower Upper
45 100
58 231.1 31.3 46.9#



#20
Methylene Chloride
Concen: 1.215 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 84 Resp: 7591
Ion Ratio Lower Upper
84 100
49 156.1 116.6 175.0
51 45.4 34.8 52.2
86 69.2 46.2 69.4

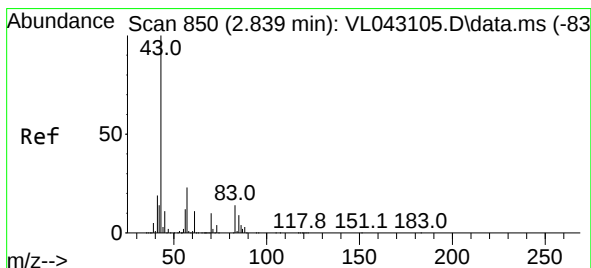
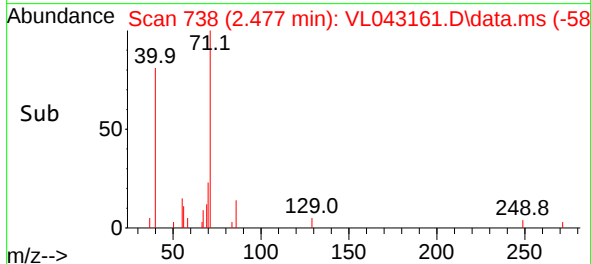
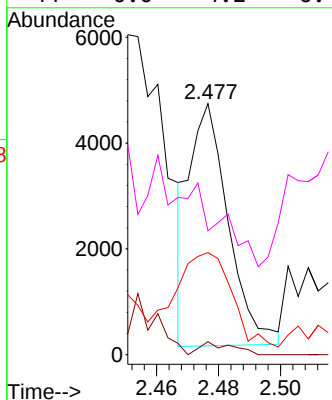
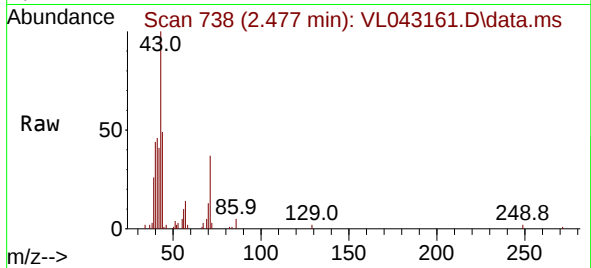




#23
 Vinyl Acetate
 Concen: 0.173 ppbv
 RT: 2.477 min Scan# 71
 Delta R.T. 0.010 min
 Lab File: VL043161.D
 Acq: 06 Nov 2025 11:36

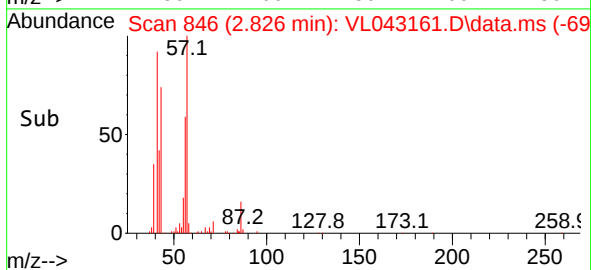
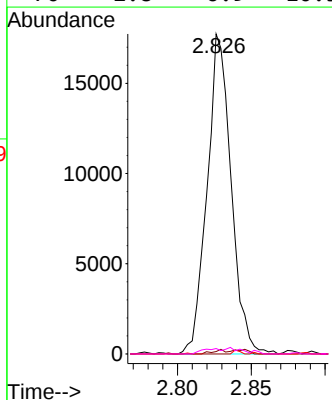
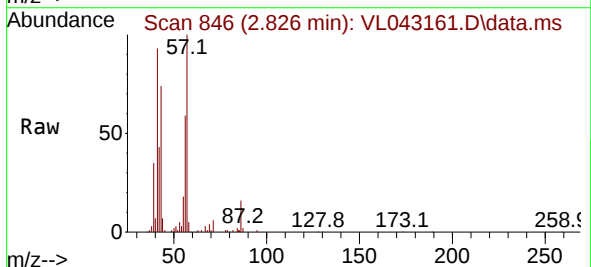
Instrument :
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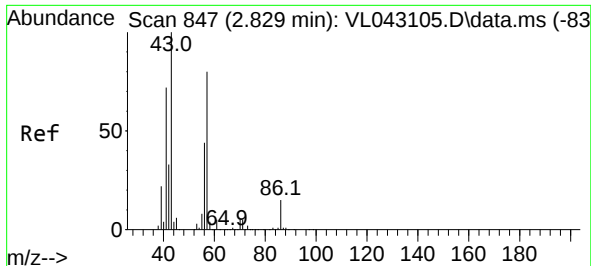
Tgt Ion: 43	Resp: 3997
Ion Ratio	Lower Upper
43	100
86	5.7 6.2 9.2#
42	41.3 7.6 11.4#
44	0.0 4.2 6.4#



#25
 Ethyl Acetate
 Concen: 0.513 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.013 min
 Lab File: VL043161.D
 Acq: 06 Nov 2025 11:36

Tgt Ion: 43	Resp: 20126
Ion Ratio	Lower Upper
43	100
45	1.6 7.8 11.8#
61	0.4 7.0 10.6#
70	2.8 6.9 10.3#

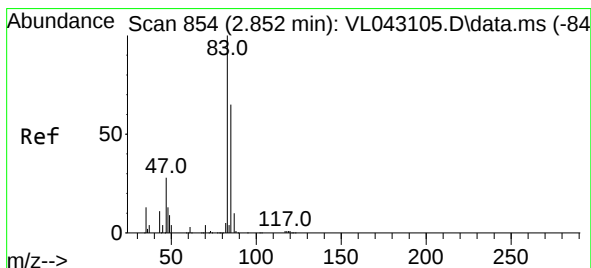
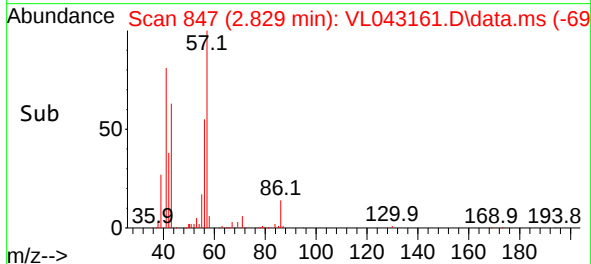
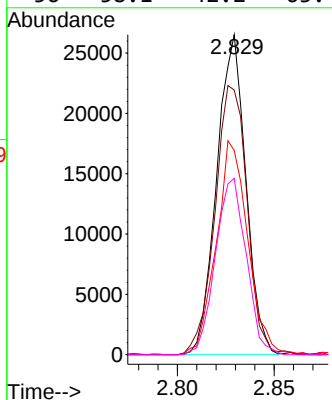
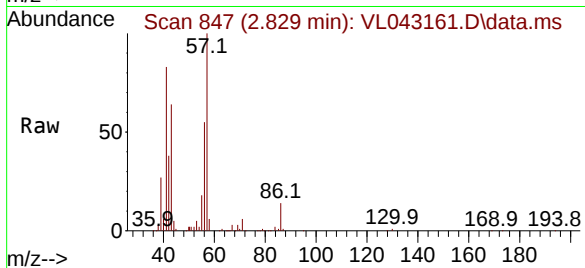




#26
Hexane
Concen: 1.538 ppbv
RT: 2.829 min Scan# 847
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

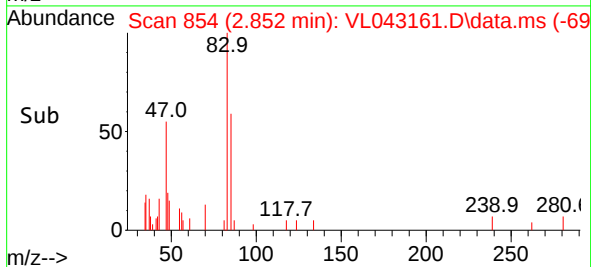
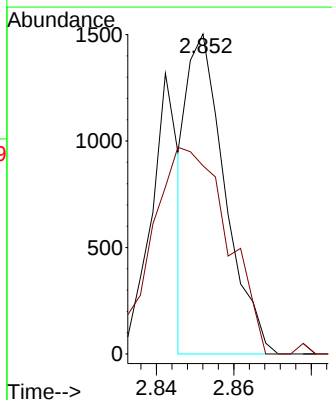
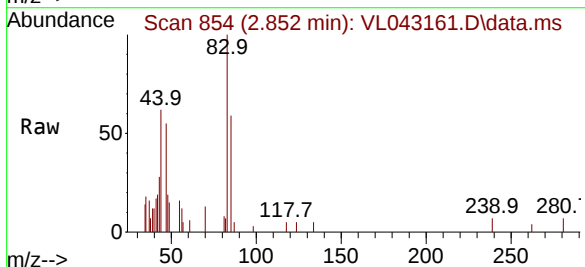
Instrument :
MSVOA_L
ClientSampleId :
131-IA1

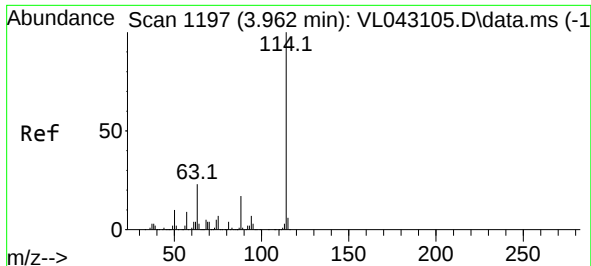
Tgt Ion: 57 Resp: 27779
Ion Ratio Lower Upper
57 100
41 93.6 71.4 107.0
43 72.5 178.5 267.7#
56 58.1 42.2 63.4



#29
Chloroform
Concen: 0.039 ppbv
RT: 2.852 min Scan# 854
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 83 Resp: 1027
Ion Ratio Lower Upper
83 100
85 58.8 51.8 77.6

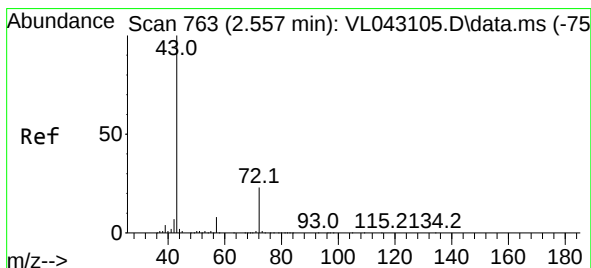
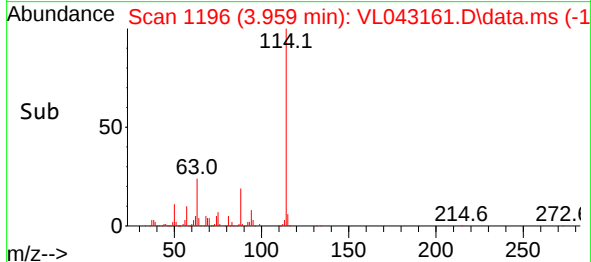
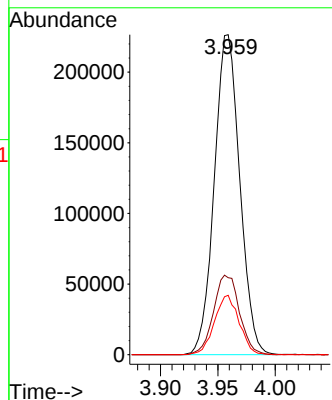
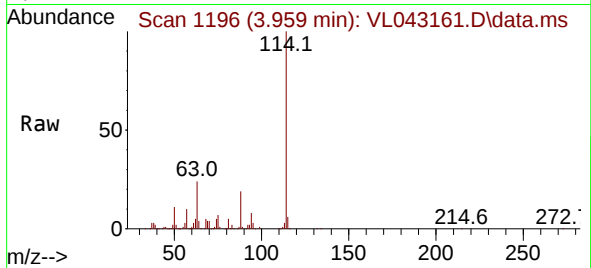




#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

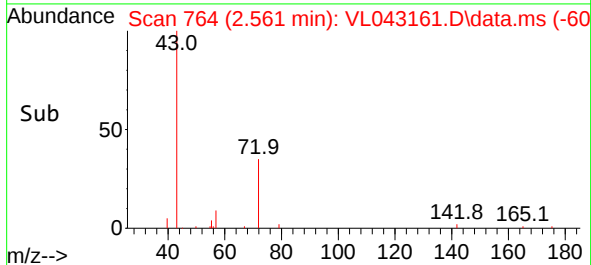
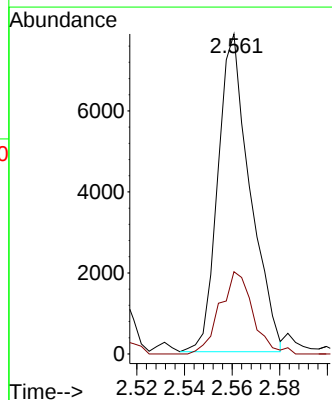
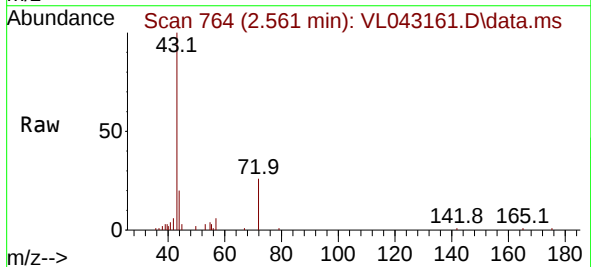
Instrument :
MSVOA_L
ClientSampleId :
131-IA1

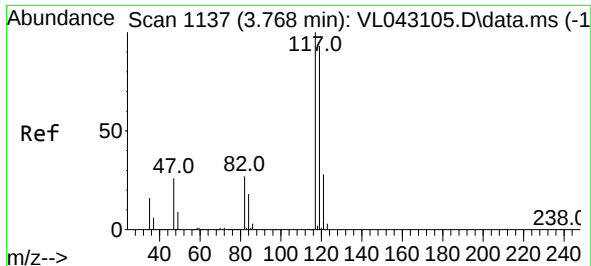
Tgt Ion:114 Resp: 349960
Ion Ratio Lower Upper
114 100
63 25.4 19.3 28.9
88 18.0 13.9 20.9



#34
2-Butanone
Concen: 0.313 ppbv
RT: 2.561 min Scan# 764
Delta R.T. 0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 43 Resp: 7360
Ion Ratio Lower Upper
43 100
72 26.5 18.4 27.6

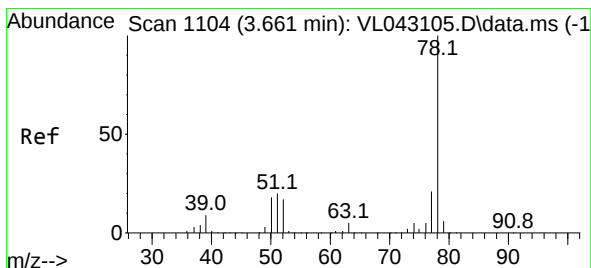
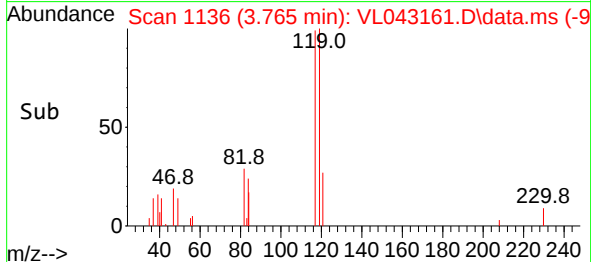
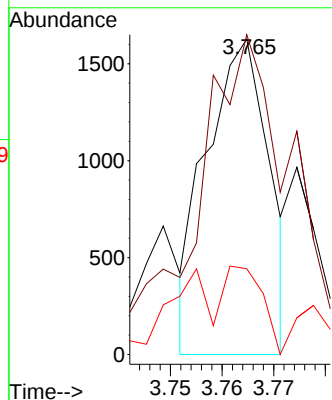
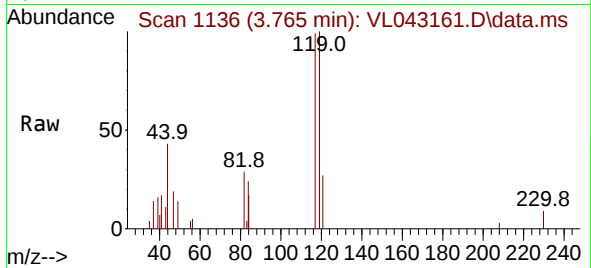




#35
Carbon Tetrachloride
Concen: 0.054 ppbv
RT: 3.765 min Scan# 1137
Delta R.T. -0.003 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

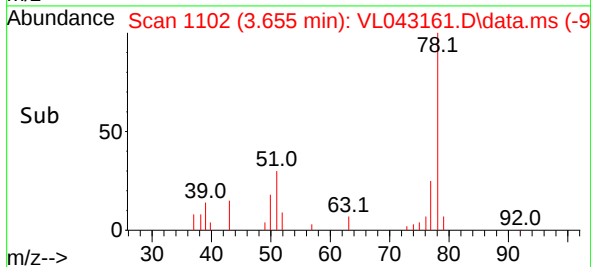
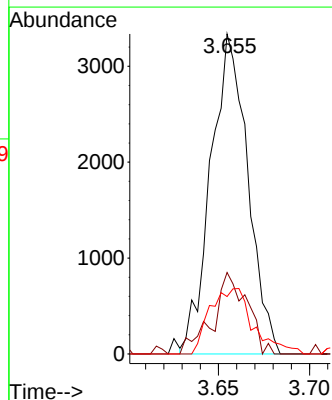
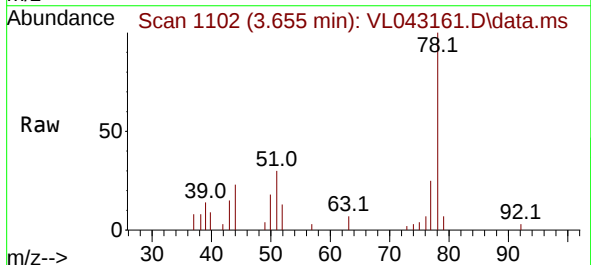
Instrument :
MSVOA_1
ClientSampleId :
131-IA1

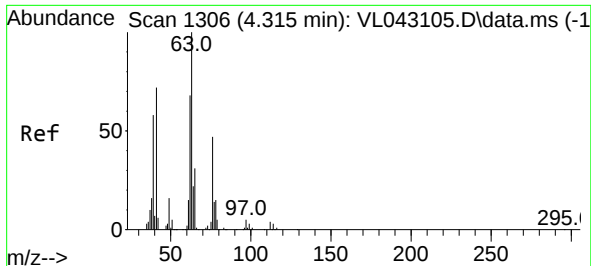
Tgt Ion:117 Resp: 1370
Ion Ratio Lower Upper
117 100
119 103.6 74.1 111.1
121 36.7 22.2 33.2#



#36
Benzene
Concen: 0.143 ppbv
RT: 3.655 min Scan# 1102
Delta R.T. -0.006 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 78 Resp: 4711
Ion Ratio Lower Upper
78 100
77 25.5 17.0 25.6
50 18.0 14.6 22.0





#39

1,2-Dichloropropane

Concen: 7.354 ppbv

RT: 3.956 min Scan# 1195

Delta R.T. -0.359 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

Instrument :

MSVOA_L

ClientSampleId :

131-IA1

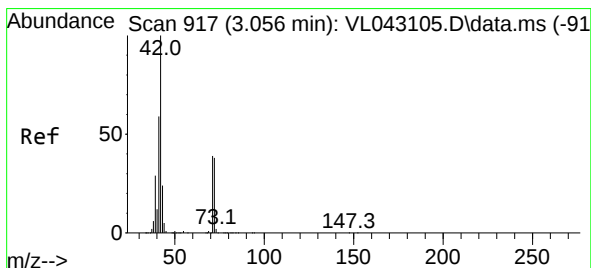
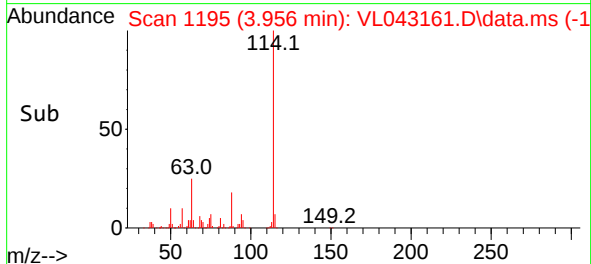
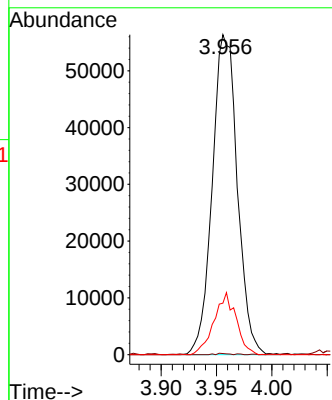
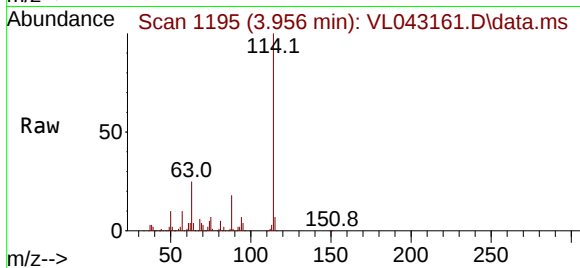
Tgt Ion: 63 Resp: 88617

Ion Ratio Lower Upper

63 100

41 0.2 58.0 87.0#

62 16.1 54.7 82.1#



#41

Tetrahydrofuran

Concen: 0.044 ppbv

RT: 3.059 min Scan# 918

Delta R.T. 0.003 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

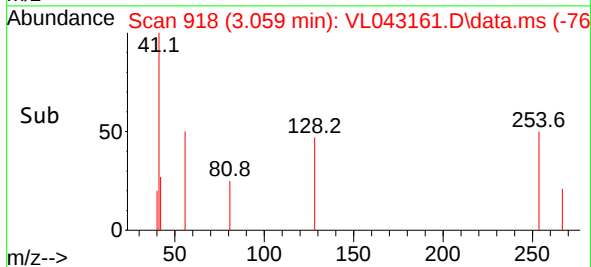
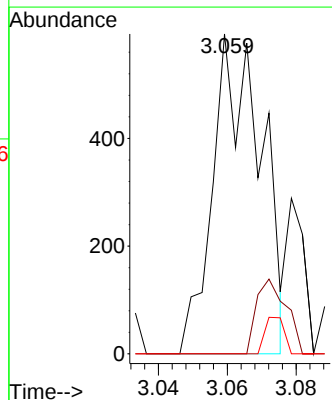
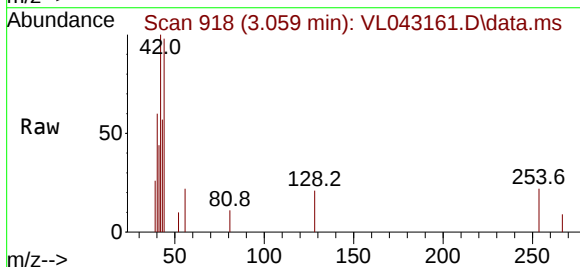
Tgt Ion: 42 Resp: 579

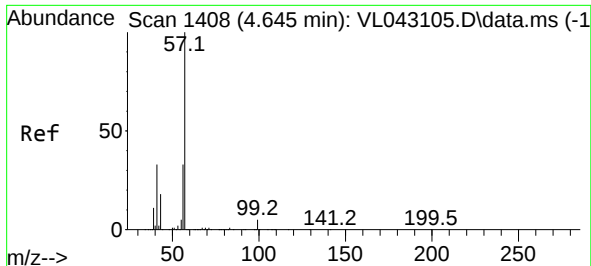
Ion Ratio Lower Upper

42 100

72 14.3 31.3 46.9#

71 0.0 30.4 45.6#

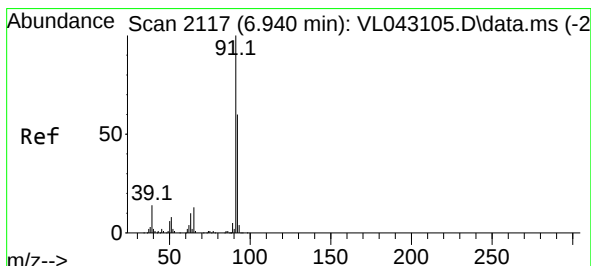
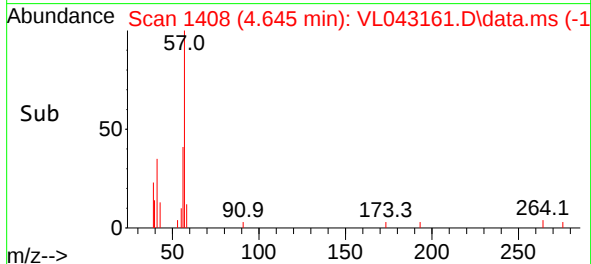
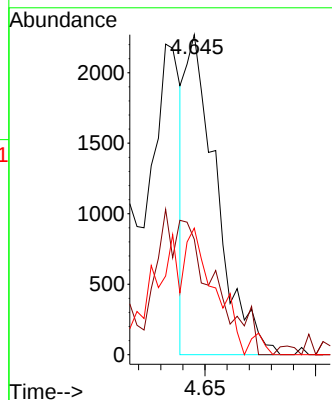
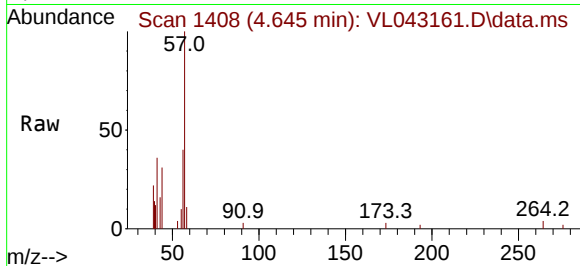




#44
2,2,4-Trimethylpentane
Concen: 0.040 ppbv
RT: 4.645 min Scan# 1408
Delta R.T. 0.000 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

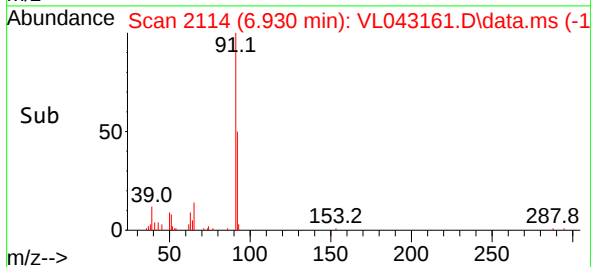
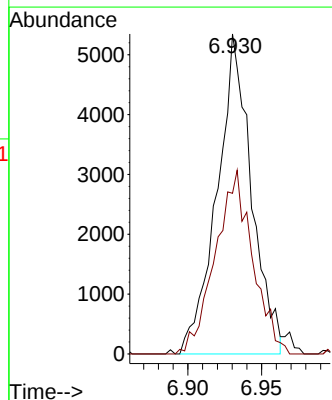
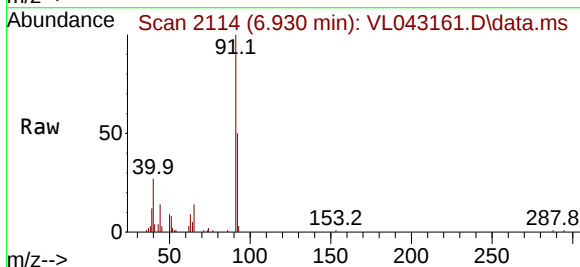
Instrument :
MSVOA_1
ClientSampleId :
131-IA1

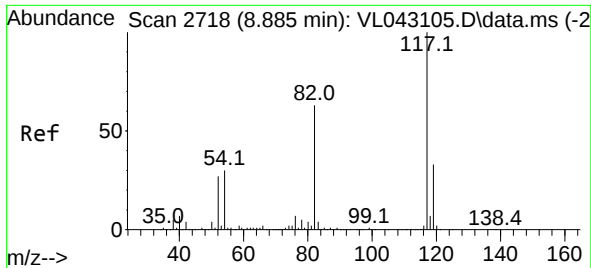
Tgt Ion: 57 Resp: 2245
Ion Ratio Lower Upper
57 100
41 0.0 26.3 39.5#
56 80.0 25.9 38.9#



#53
Toluene
Concen: 0.222 ppbv
RT: 6.930 min Scan# 2114
Delta R.T. -0.010 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 91 Resp: 8680
Ion Ratio Lower Upper
91 100
92 62.3 48.8 73.2

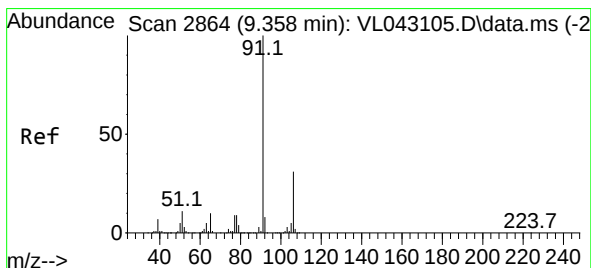
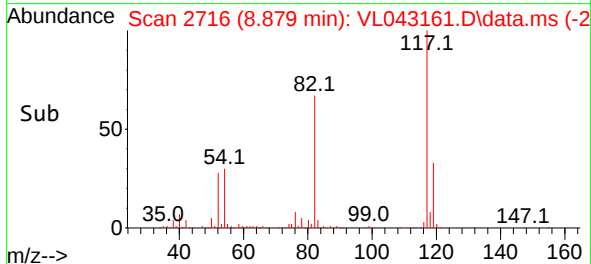
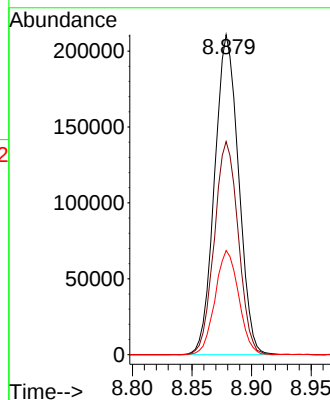
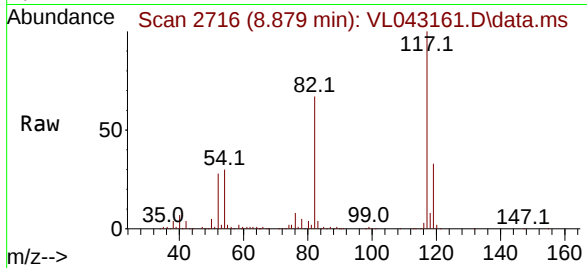




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.879 min Scan# 21
Delta R.T. -0.006 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

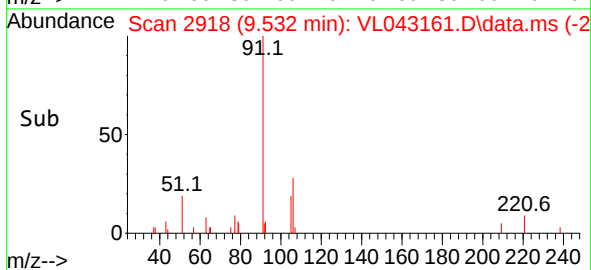
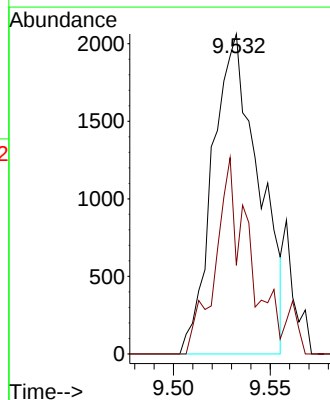
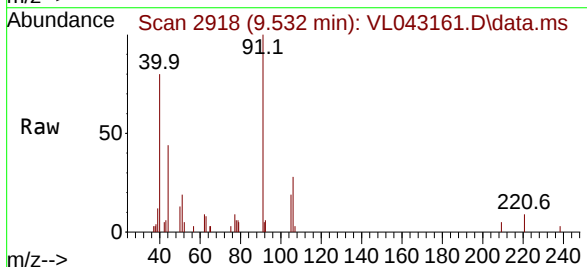
Instrument :
MSVOA_L
ClientSampleId :
131-IA1

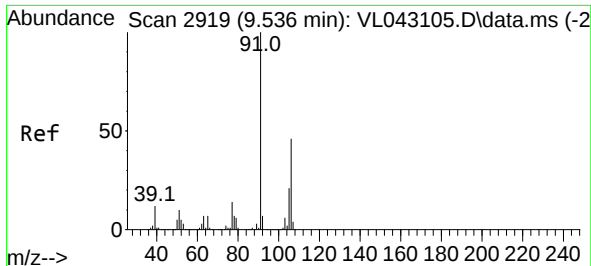
Tgt Ion:117 Resp: 295308
Ion Ratio Lower Upper
117 100
82 66.6 53.8 80.8
119 32.2 25.4 38.0



#58
Ethyl Benzene
Concen: 0.067 ppbv
RT: 9.532 min Scan# 2918
Delta R.T. 0.175 min
Lab File: VL043161.D
Acq: 06 Nov 2025 11:36

Tgt Ion: 91 Resp: 3414
Ion Ratio Lower Upper
91 100
106 26.5 24.8 37.2





#59

m/p-Xylene

Concen: 0.084 ppbv

RT: 9.532 min Scan# 2919

Delta R.T. -0.003 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

Instrument :

MSVOA_1

ClientSampleId :

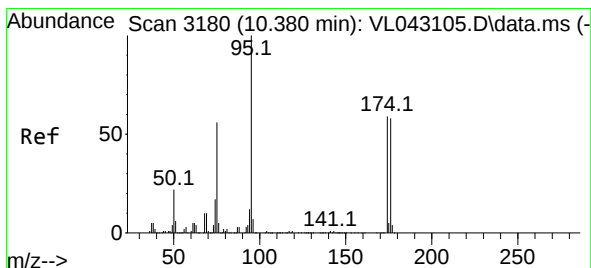
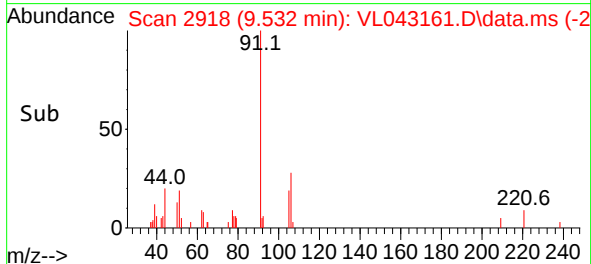
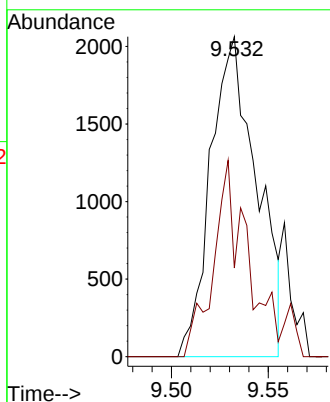
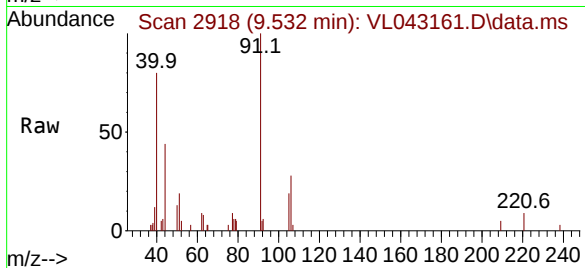
131-IA1

Tgt Ion: 91 Resp: 3414

Ion Ratio Lower Upper

91 100

106 49.2 38.0 57.0



#68

1-Bromo-4-Fluorobenzene

Concen: 10.204 ppbv

RT: 10.374 min Scan# 3178

Delta R.T. -0.006 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

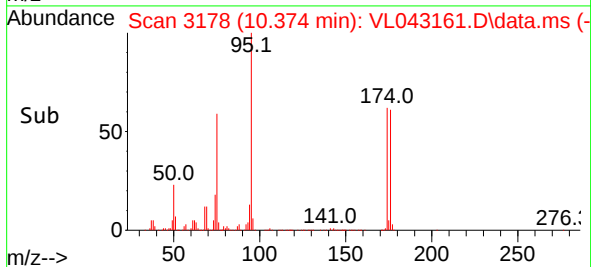
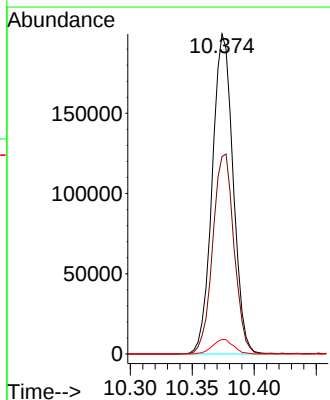
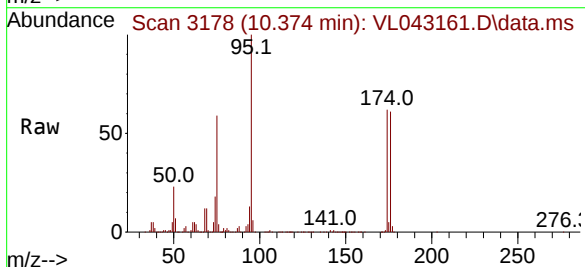
Tgt Ion: 95 Resp: 234219

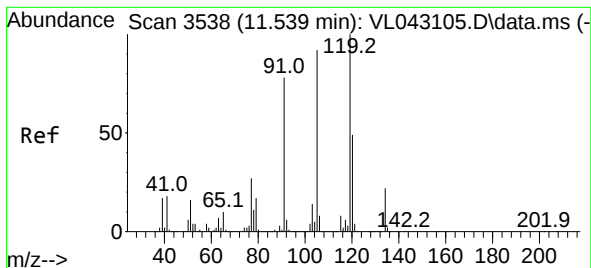
Ion Ratio Lower Upper

95 100

174 63.8 48.3 72.5

175 4.6 3.8 5.8





#74

1,2,4-Trimethylbenzene

Concen: 0.037 ppbv

RT: 11.533 min Scan# 3536

Delta R.T. -0.006 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

Instrument :

MSVOA_L

ClientSampleId :

131-IA1

Tgt Ion:105 Resp: 1660

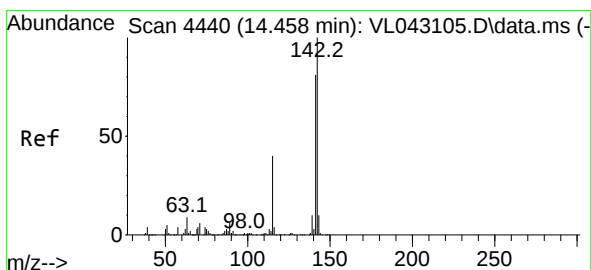
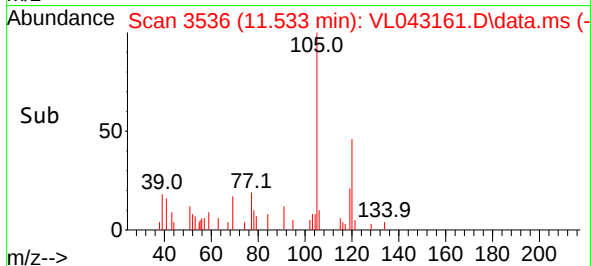
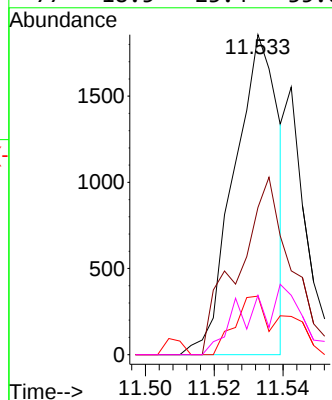
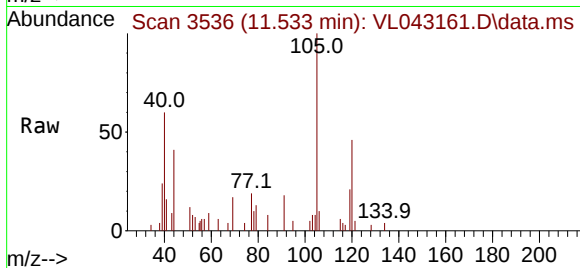
Ion Ratio Lower Upper

105 100

120 46.0 42.8 64.2

91 14.1 68.3 102.5#

77 18.5 23.4 35.0#



#80

Naphthalene,2-methyl-

Concen: 0.047 ppbv

RT: 14.478 min Scan# 4446

Delta R.T. 0.020 min

Lab File: VL043161.D

Acq: 06 Nov 2025 11:36

Tgt Ion:142 Resp: 583

Ion Ratio Lower Upper

142 100

141 45.8 64.6 97.0#

115 35.7 30.2 45.4

