

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072425\
 Data File : VL042761.D
 Acq On : 24 Jul 2025 12:14
 Operator : SY/MD
 Sample : Q2671-05 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 118-SG1DL

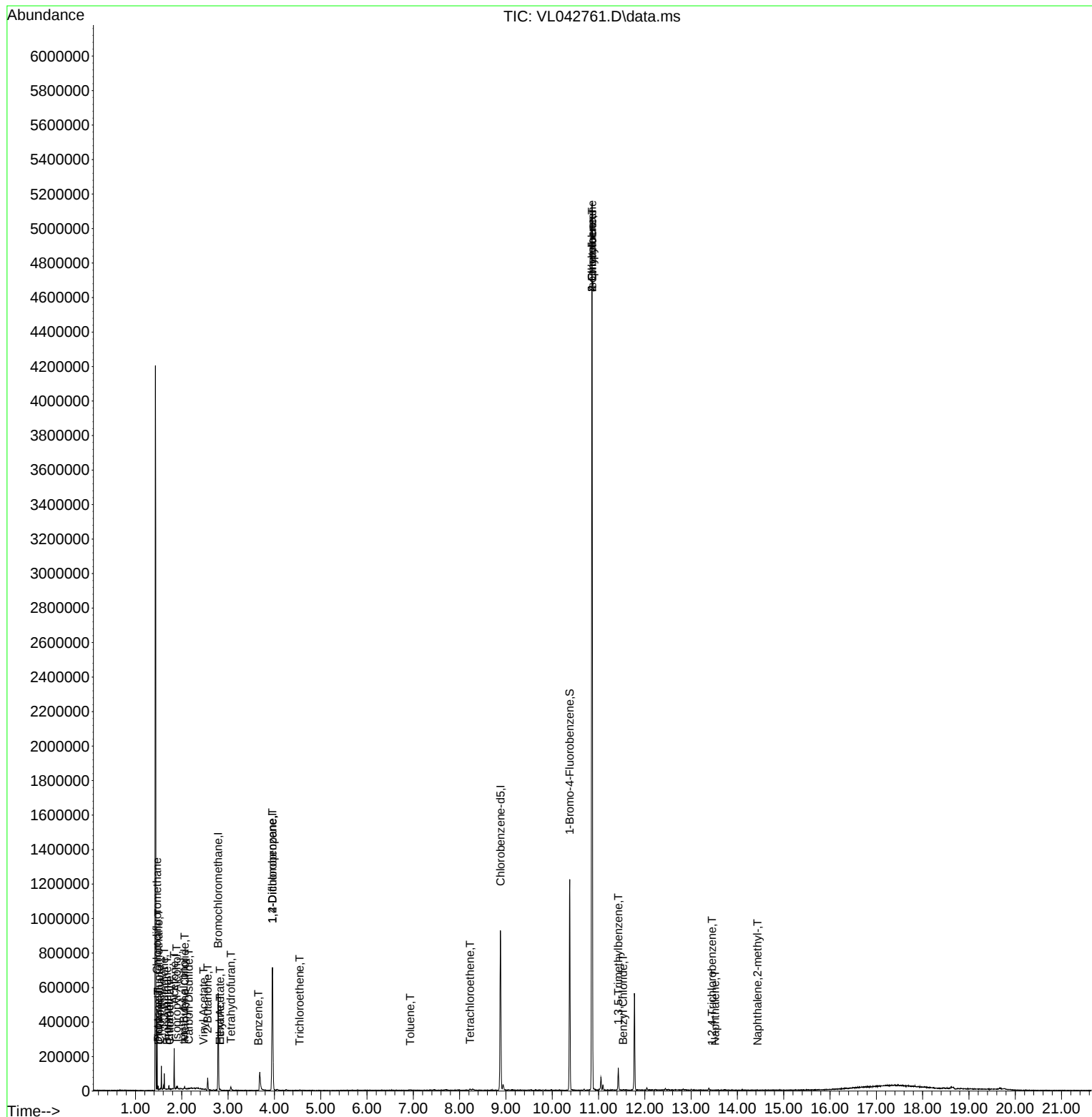
Quant Time: Jul 25 01:25:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072325AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Jul 24 05:24:41 2025
 Response via : Initial Calibration

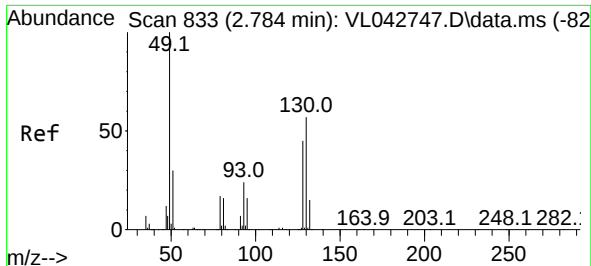
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	149830	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	418114	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	370590	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	291433	9.930	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.300%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	942	0.048	ppbv	92
3) Chlorodifluoromethane	1.467	51	84874	3.289	ppbv #	58
4) Chloromethane	1.531	50	2085	0.260	ppbv #	86
6) Bromomethane	1.684	94	67	0.022	ppbv #	1
7) Chloroethane	1.742	64	174	0.057	ppbv #	45
9) Propene	1.486	41	2822	0.301	ppbv	95
13) Ethanol	1.722	45	7958	10.501	ppbv #	31
15) Acetone	1.836	43	97426	4.709	ppbv	99
16) 1,3-Butadiene	1.622	39	4083	0.463	ppbv #	32
17) tert-Butyl alcohol	2.043	59	1202	0.064	ppbv #	81
19) Isopropyl Alcohol	1.888	45	5650	0.514	ppbv #	1
20) Methylene Chloride	2.062	84	1513	0.232	ppbv #	79
23) Vinyl Acetate	2.470	43	573	0.023	ppbv #	55
25) Ethyl Acetate	2.826	43	1548	0.034	ppbv #	75
26) Hexane	2.823	57	1383	0.069	ppbv #	53
27) Carbon Disulfide	2.150	76	430	0.025	ppbv #	1
34) 2-Butanone	2.557	43	42357	1.430	ppbv	96
36) Benzene	3.655	78	1001	0.025	ppbv #	80
38) Trichloroethene	4.545	130	403	0.021	ppbv #	31
39) 1,2-Dichloropropane	3.959	63	108490	7.417	ppbv #	21
41) Tetrahydrofuran	3.062	42	4116	0.273	ppbv #	56
52) Tetrachloroethene	8.225	164	806	0.049	ppbv #	45
53) Toluene	6.933	91	1418	0.033	ppbv	93
62) Isopropylbenzene	10.859	105	153486	2.226	ppbv #	62
66) Benzyl Chloride	11.533	91	110	0.022	ppbv #	60
71) 2-Chlorotoluene	10.859	91	659058	12.468	ppbv #	45
72) 4-Ethyltoluene	10.859	105	153486	2.750	ppbv #	1
73) 1,3,5-Trimethylbenzene	11.429	105	1729	0.038	ppbv #	44
79) Naphthalene	13.517	128	244	0.439	ppbv #	75
80) Naphthalene,2-methyl-	14.433	142	80	1.131	ppbv #	76
81) 1,2,4-Trichlorobenzene	13.449	180	67	0.437	ppbv #	1

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

Quant Time: Jul 25 01:25:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072325AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Thu Jul 24 05:24:41 2025
Response via : Initial Calibration

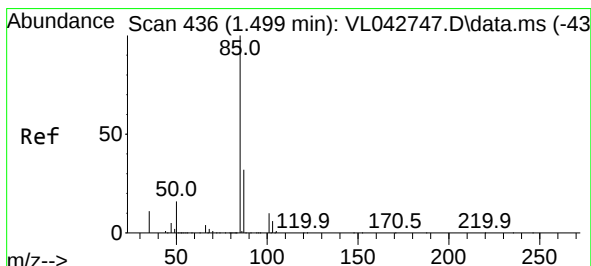
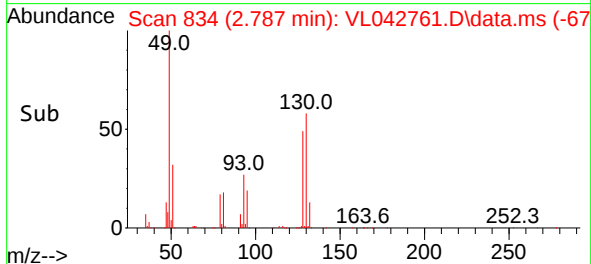
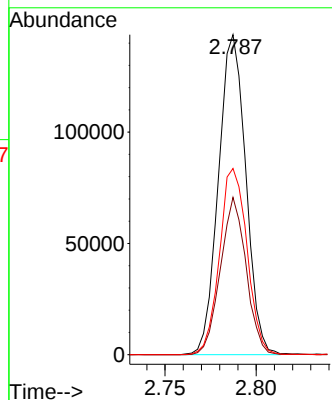
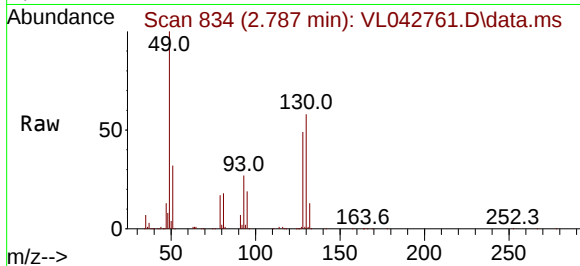




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.003 min
 Lab File: VL042761.D
 Acq: 24 Jul 2025 12:14

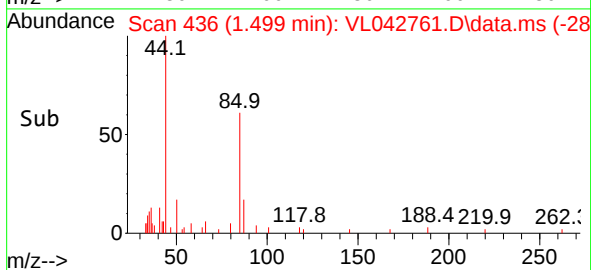
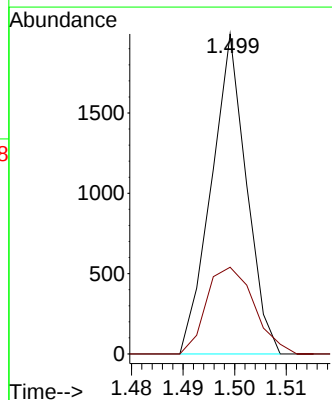
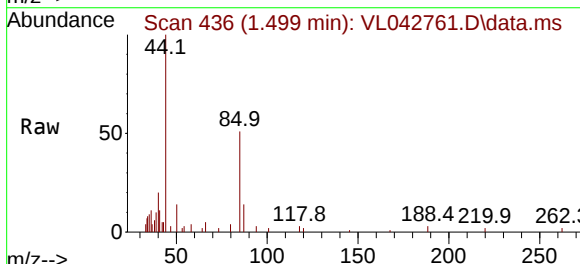
Instrument :
 MSVOA_L
 ClientSampleId :
 118-SG1DL

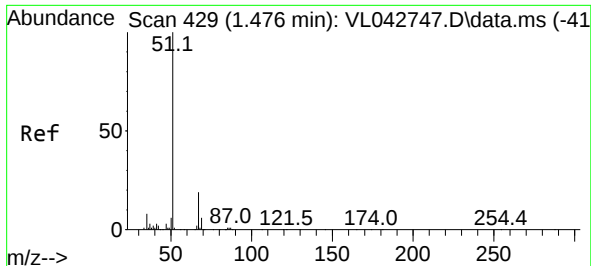
Tgt Ion: 49 Resp: 149830
 Ion Ratio Lower Upper
 49 100
 128 46.3 23.6 71.0
 130 58.9 30.3 90.8



#2
 Dichlorodifluoromethane
 Concen: 0.048 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.000 min
 Lab File: VL042761.D
 Acq: 24 Jul 2025 12:14

Tgt Ion: 85 Resp: 942
 Ion Ratio Lower Upper
 85 100
 87 27.1 25.4 38.2

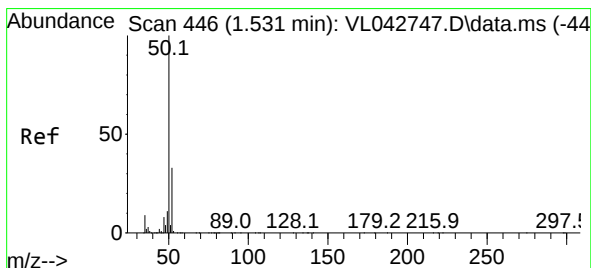
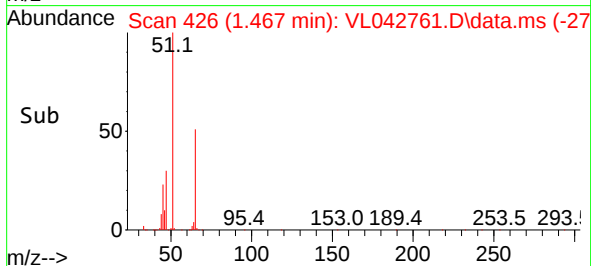
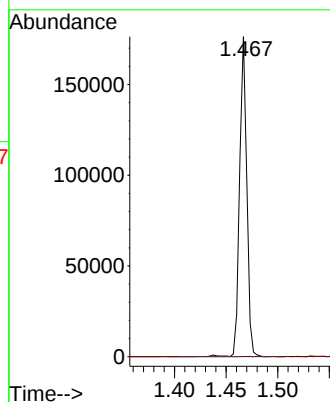
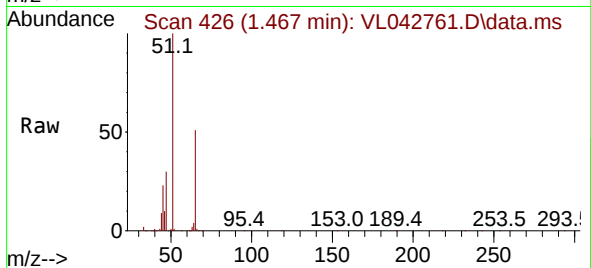




#3
Chlorodifluoromethane
Concen: 3.289 ppbv
RT: 1.467 min Scan# 41
Delta R.T. -0.009 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

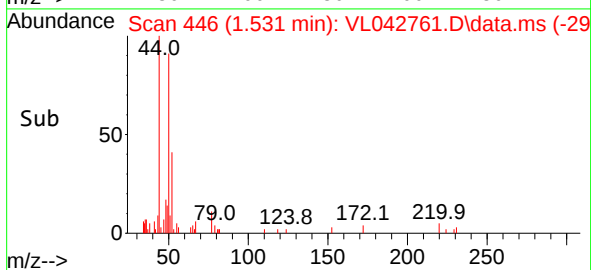
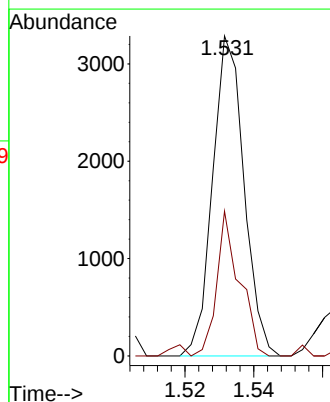
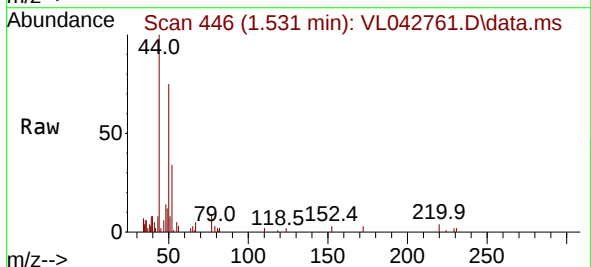
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

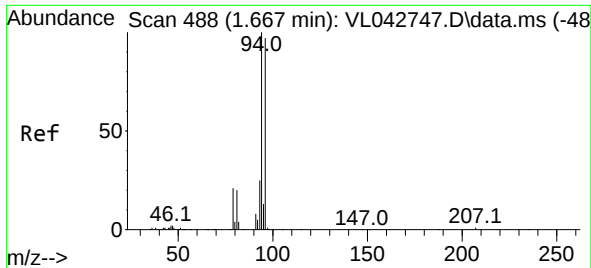
Tgt Ion: 51 Resp: 84874
Ion Ratio Lower Upper
51 100
67 0.1 15.0 22.6#



#4
Chloromethane
Concen: 0.260 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 50 Resp: 2085
Ion Ratio Lower Upper
50 100
52 41.0 26.6 40.0#

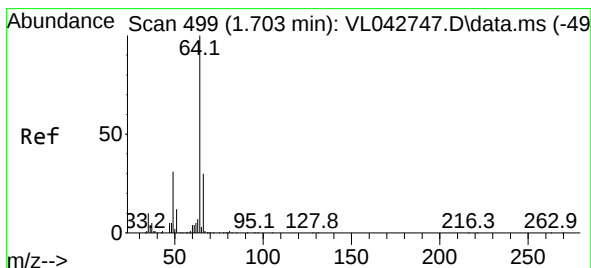
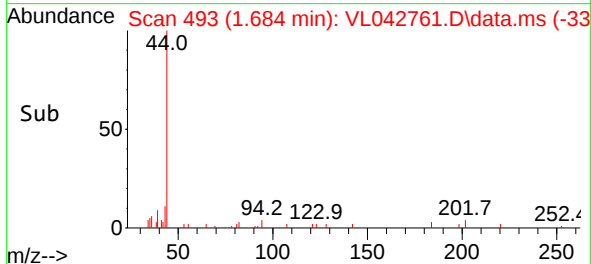
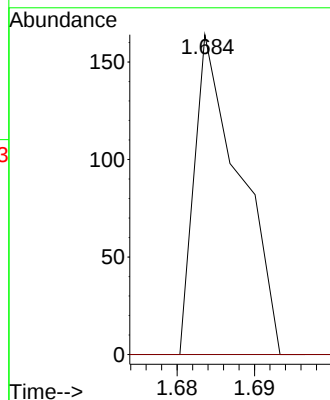
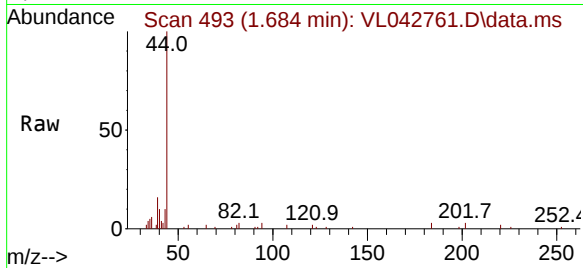




#6
Bromomethane
Concen: 0.022 ppbv
RT: 1.684 min Scan# 493
Delta R.T. 0.016 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

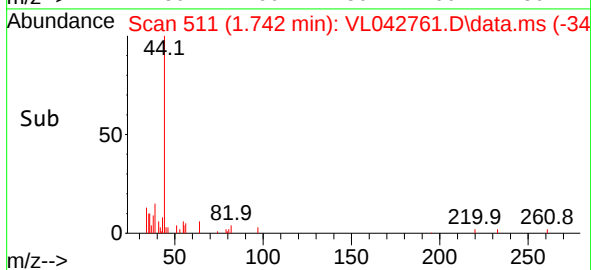
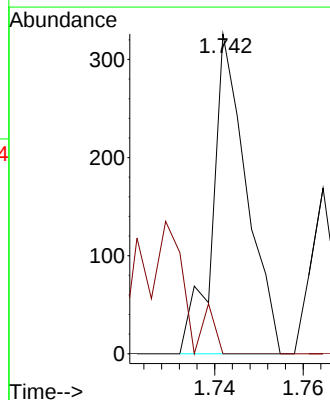
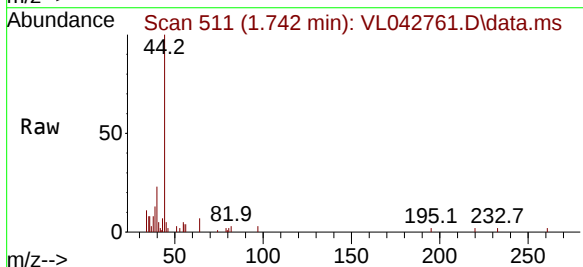
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

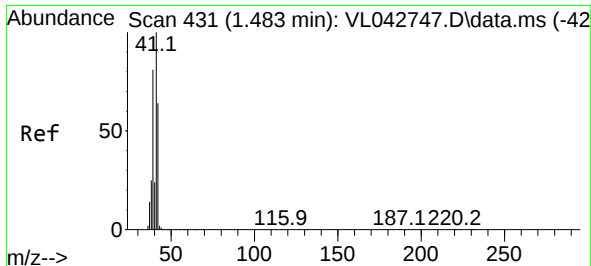
Tgt Ion: 94 Resp: 67
Ion Ratio Lower Upper
94 100
96 0.0 77.6 116.4#



#7
Chloroethane
Concen: 0.057 ppbv
RT: 1.742 min Scan# 511
Delta R.T. 0.039 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 64 Resp: 174
Ion Ratio Lower Upper
64 100
66 0.0 24.1 36.1#





#9

Propene

Concen: 0.301 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

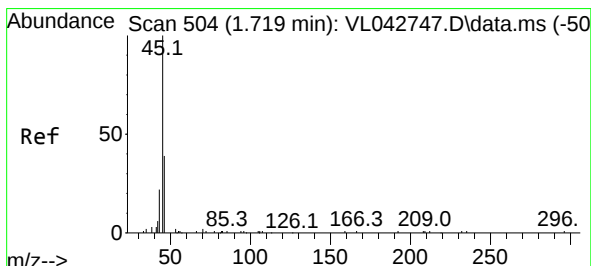
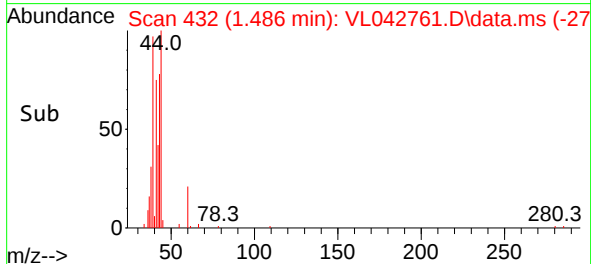
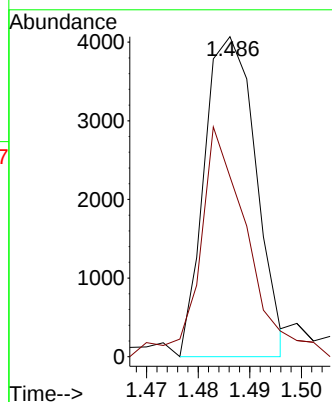
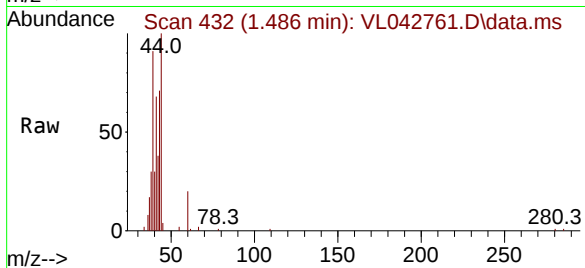
118-SG1DL

Tgt Ion: 41 Resp: 2822

Ion Ratio Lower Upper

41 100

42 70.6 53.2 79.8



#13

Ethanol

Concen: 10.501 ppbv

RT: 1.722 min Scan# 505

Delta R.T. 0.003 min

Lab File: VL042761.D

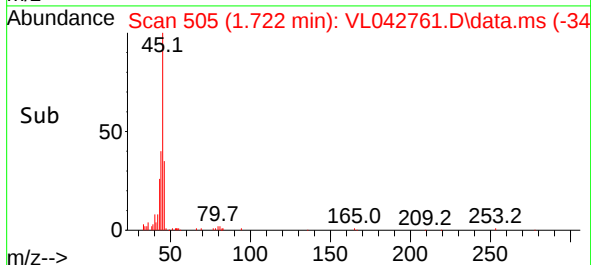
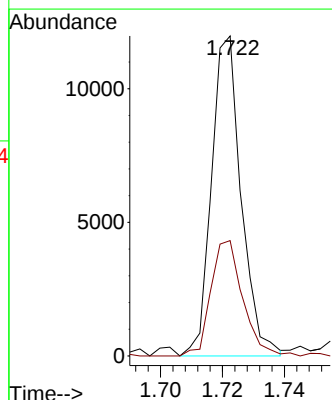
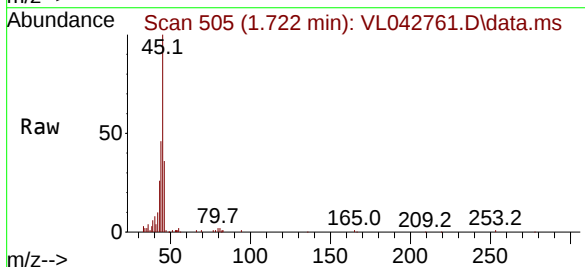
Acq: 24 Jul 2025 12:14

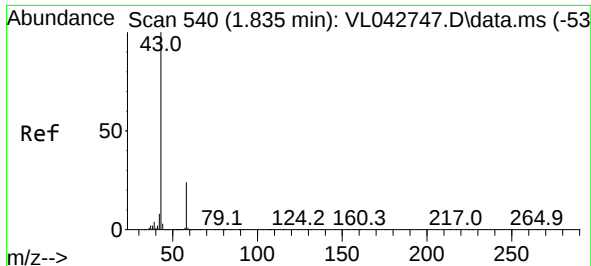
Tgt Ion: 45 Resp: 7958

Ion Ratio Lower Upper

45 100

46 0.0 17.8 71.4#





#15

Acetone

Concen: 4.709 ppbv

RT: 1.836 min Scan# 54

Delta R.T. 0.000 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

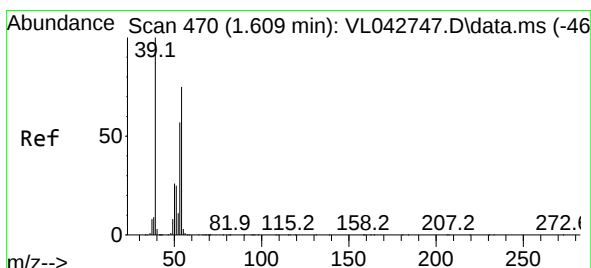
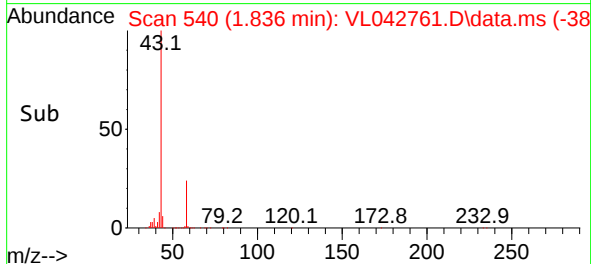
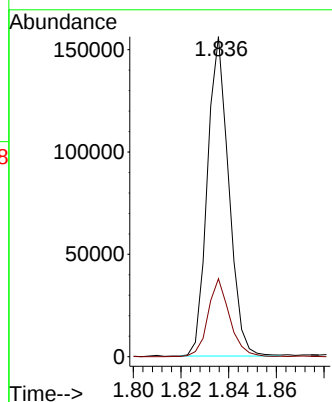
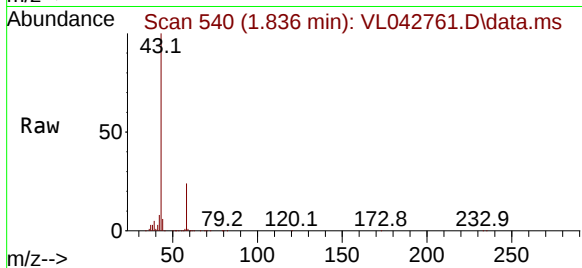
118-SG1DL

Tgt Ion: 43 Resp: 97426

Ion Ratio Lower Upper

43 100

58 25.2 19.8 29.8



#16

1,3-Butadiene

Concen: 0.463 ppbv

RT: 1.622 min Scan# 474

Delta R.T. 0.013 min

Lab File: VL042761.D

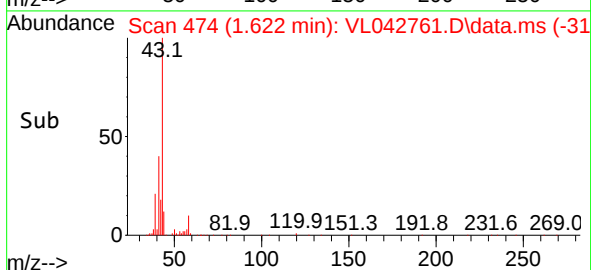
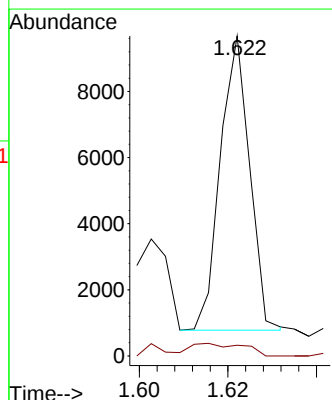
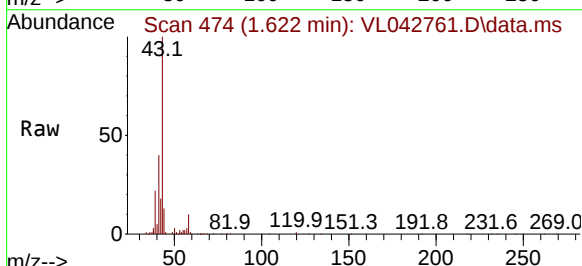
Acq: 24 Jul 2025 12:14

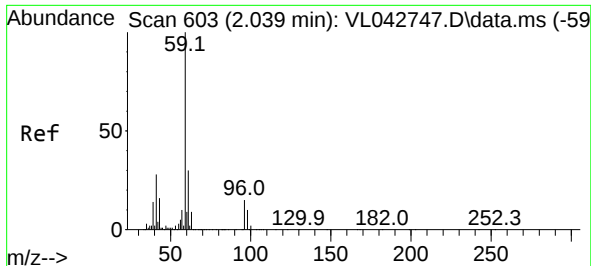
Tgt Ion: 39 Resp: 4083

Ion Ratio Lower Upper

39 100

54 13.0 54.5 81.7#





#17

tert-Butyl alcohol

Concen: 0.064 ppbv

RT: 2.043 min Scan# 603

Delta R.T. 0.003 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_1

ClientSampleId :

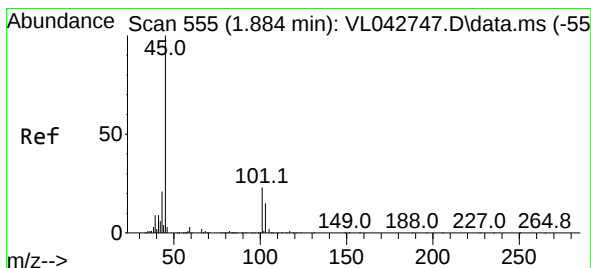
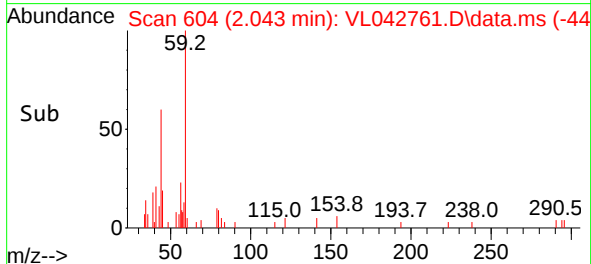
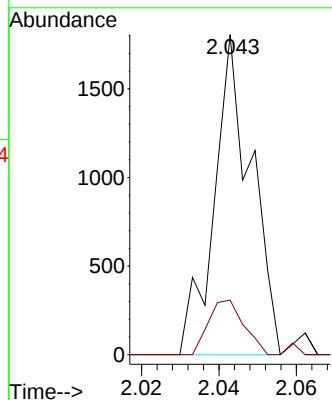
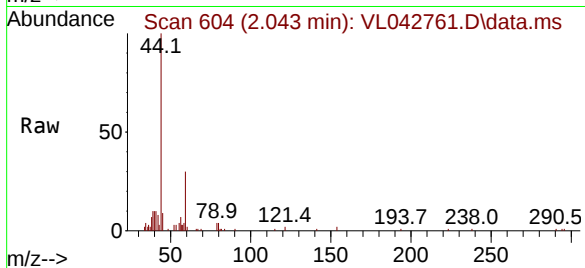
118-SG1DL

Tgt Ion: 59 Resp: 1202

Ion Ratio Lower Upper

59 100

57 17.4 8.3 12.5#



#19

Isopropyl Alcohol

Concen: 0.514 ppbv

RT: 1.888 min Scan# 556

Delta R.T. 0.003 min

Lab File: VL042761.D

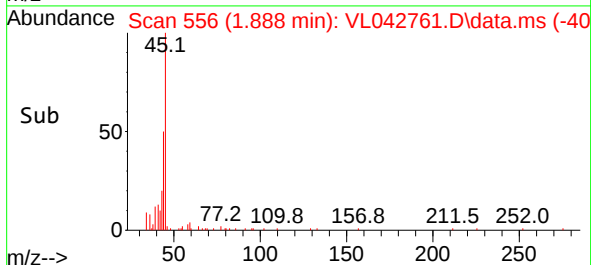
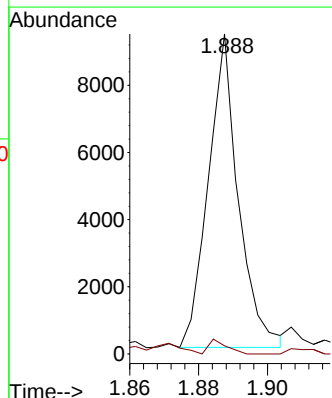
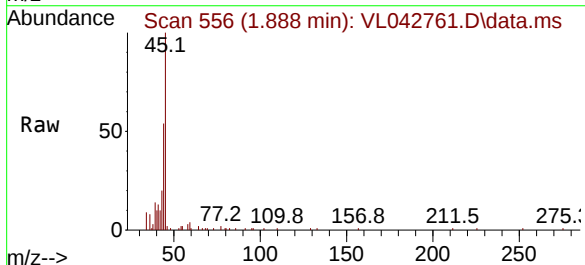
Acq: 24 Jul 2025 12:14

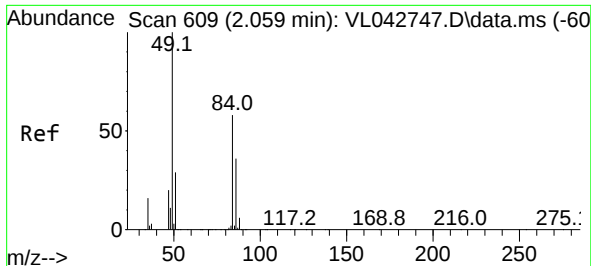
Tgt Ion: 45 Resp: 5650

Ion Ratio Lower Upper

45 100

58 434.5 30.0 45.0#

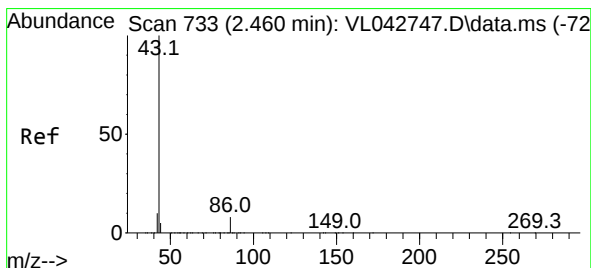
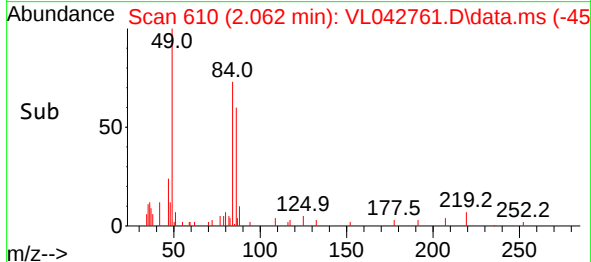
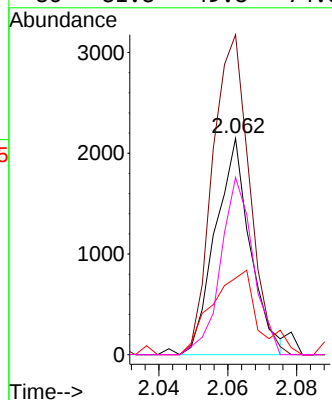
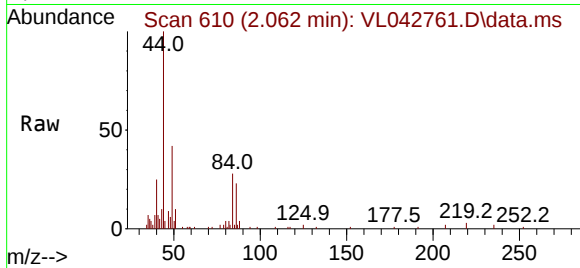




#20
Methylene Chloride
Concen: 0.232 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

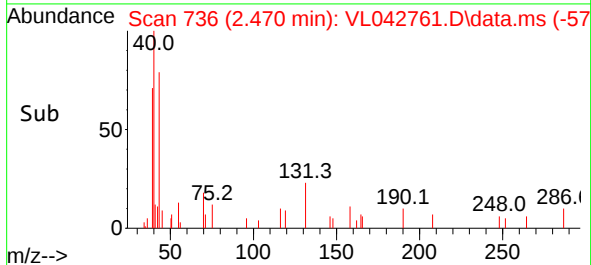
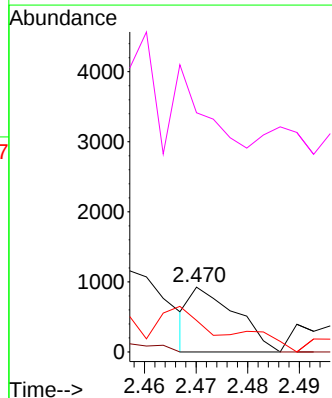
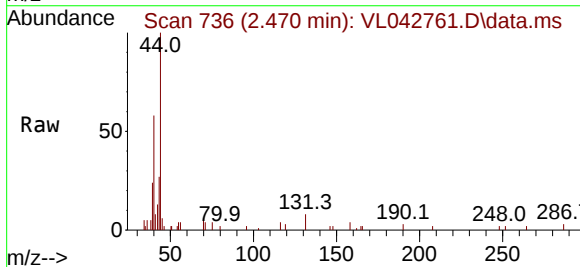
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

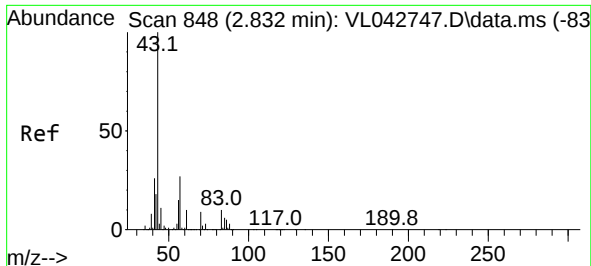
Tgt Ion:	84	Resp:	1513
Ion	Ratio	Lower	Upper
84	100		
49	147.9	138.6	208.0
51	35.4	40.6	61.0#
86	81.8	49.8	74.8#



#23
Vinyl Acetate
Concen: 0.023 ppbv
RT: 2.470 min Scan# 736
Delta R.T. 0.010 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion:	43	Resp:	573
Ion	Ratio	Lower	Upper
43	100		
86	0.0	6.1	9.1#
42	32.5	7.8	11.8#
44	21.7	4.4	6.6#

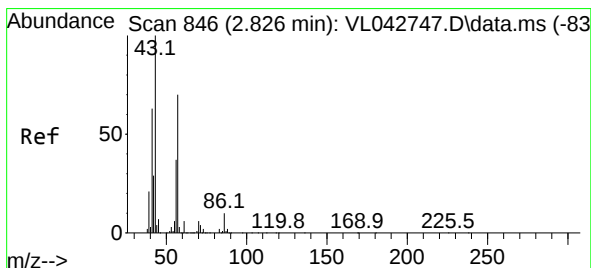
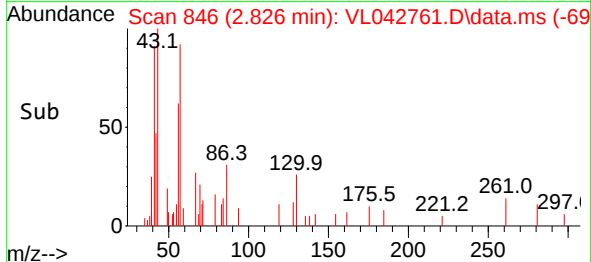
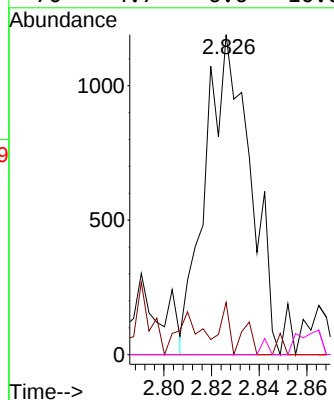
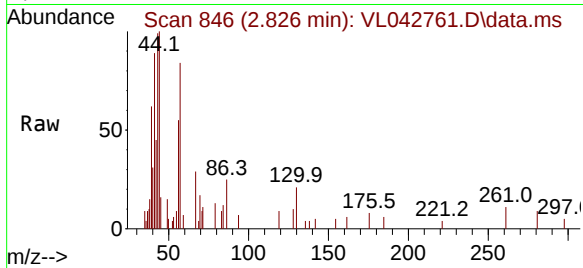




#25
Ethyl Acetate
Concen: 0.034 ppbv
RT: 2.826 min Scan# 848
Delta R.T. -0.006 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

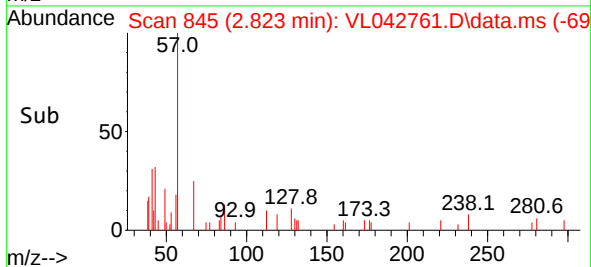
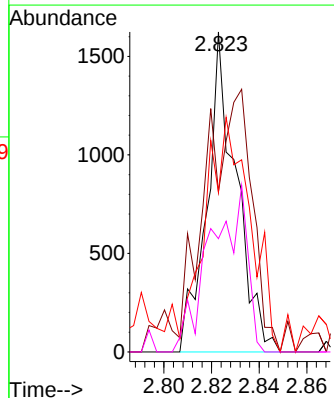
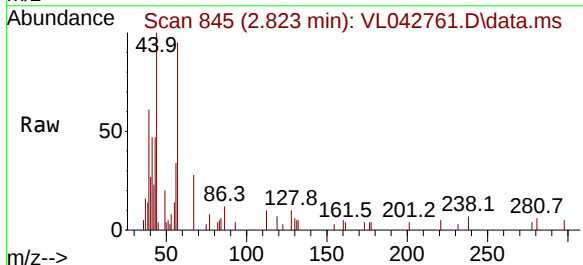
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

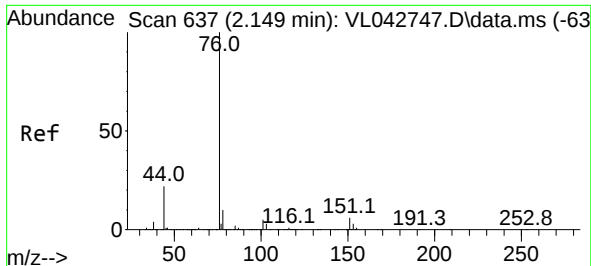
Tgt Ion: 43	Resp: 1548
Ion Ratio	Lower Upper
43 100	
45 23.7	7.8 11.6#
61 0.0	6.7 10.1#
70 4.7	6.6 10.0#



#26
Hexane
Concen: 0.069 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.003 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 57	Resp: 1383
Ion Ratio	Lower Upper
57 100	
41 142.7	75.4 113.2#
43 144.2	185.0 277.6#
56 66.7	42.9 64.3#

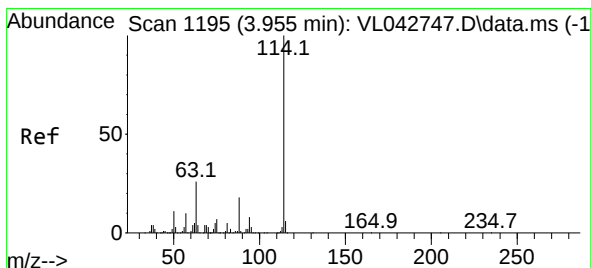
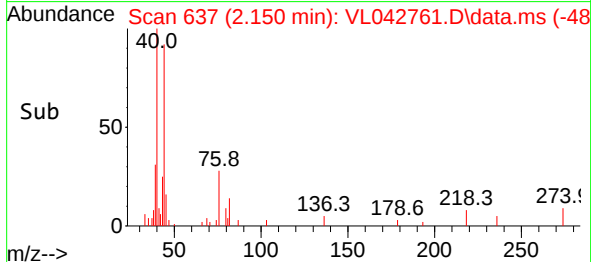
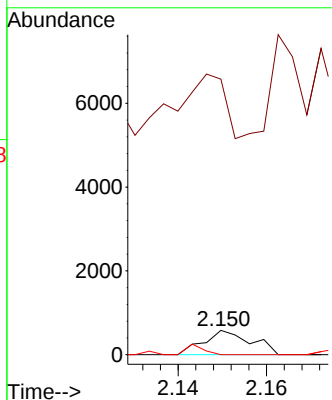
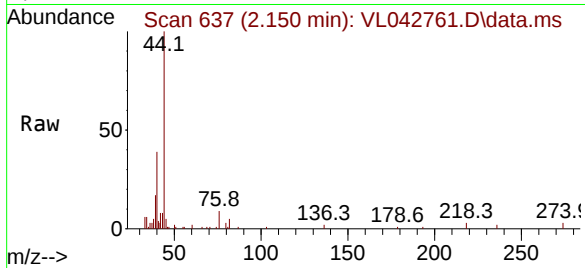




#27
Carbon Disulfide
Concen: 0.025 ppbv
RT: 2.150 min Scan# 61
Delta R.T. 0.000 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

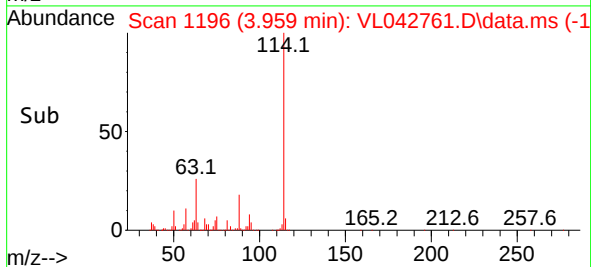
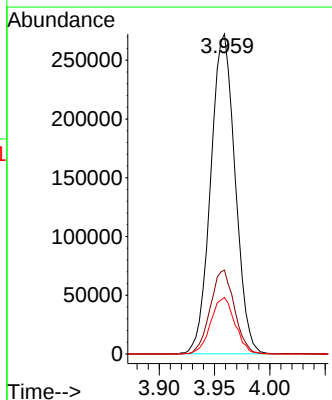
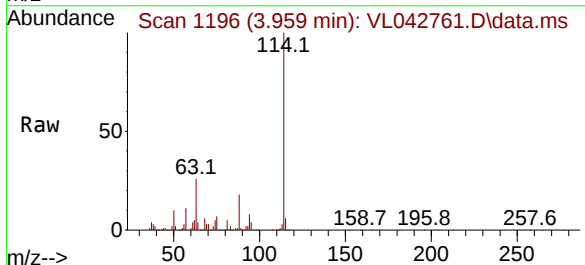
Instrument :
MSVOA_1
ClientSampleId :
118-SG1DL

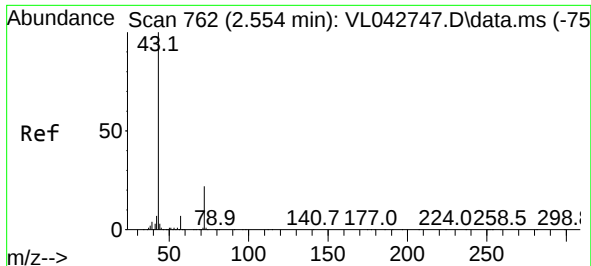
Tgt Ion: 76 Resp: 430
Ion Ratio Lower Upper
76 100
44 428.8 19.3 28.9#
78 15.3 9.9 14.9#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. 0.004 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 114 Resp: 418114
Ion Ratio Lower Upper
114 100
63 26.0 20.5 30.7
88 17.6 14.0 21.0

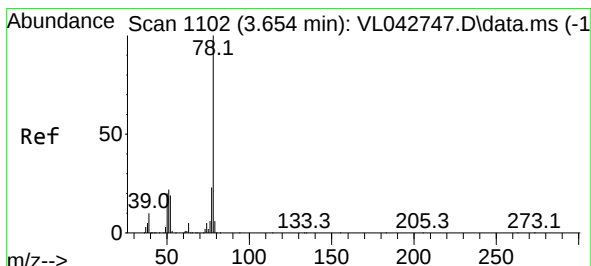
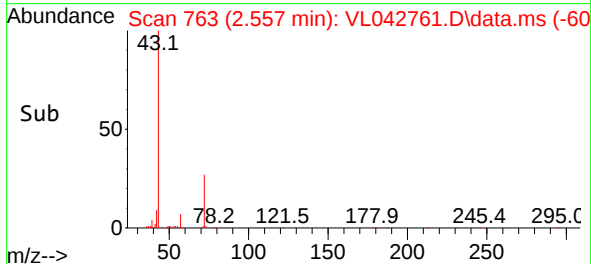
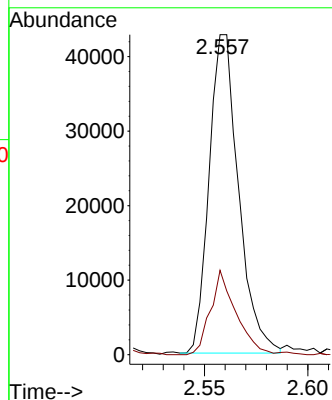
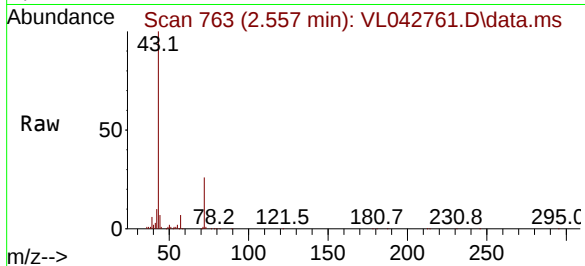




#34
2-Butanone
Concen: 1.430 ppbv
RT: 2.557 min Scan# 763
Delta R.T. 0.003 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

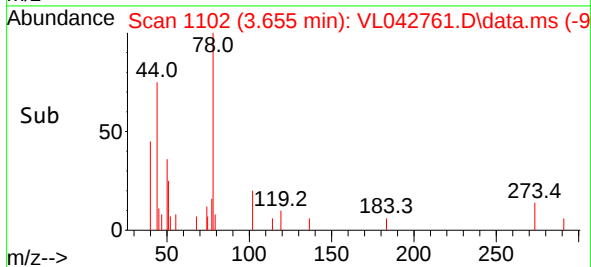
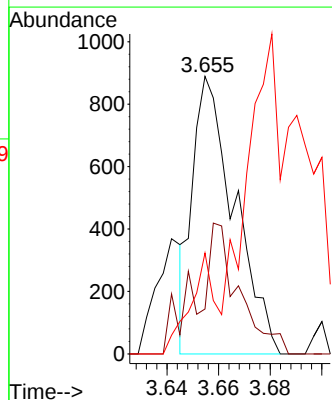
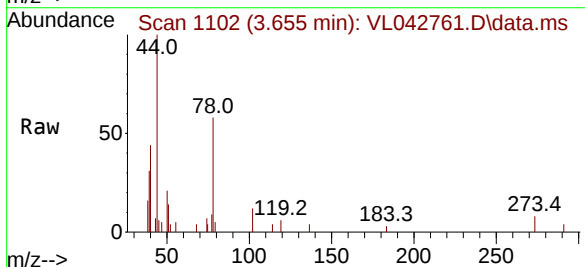
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

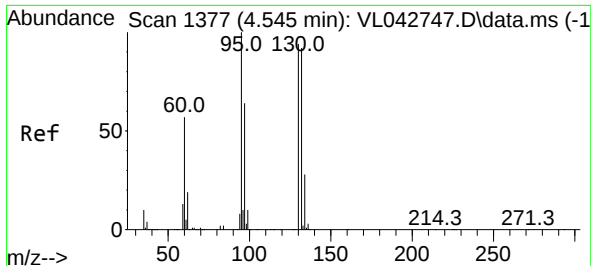
Tgt Ion: 43 Resp: 42357
Ion Ratio Lower Upper
43 100
72 23.5 17.4 26.0



#36
Benzene
Concen: 0.025 ppbv
RT: 3.655 min Scan# 1102
Delta R.T. 0.000 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 78 Resp: 1001
Ion Ratio Lower Upper
78 100
77 9.3 18.5 27.7#
50 24.6 16.2 24.2#

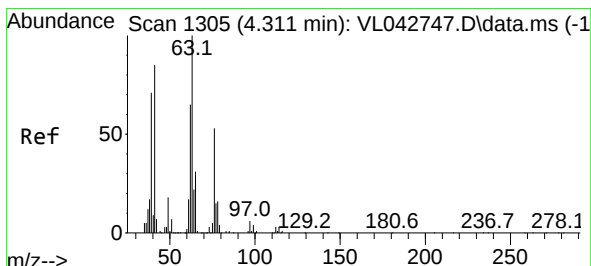
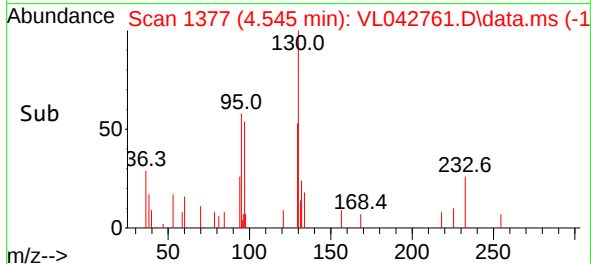
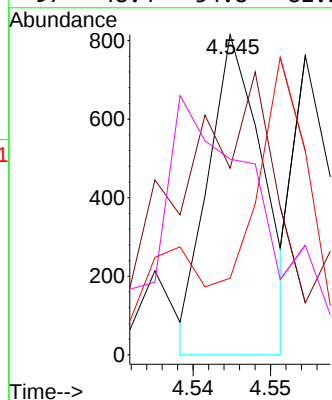
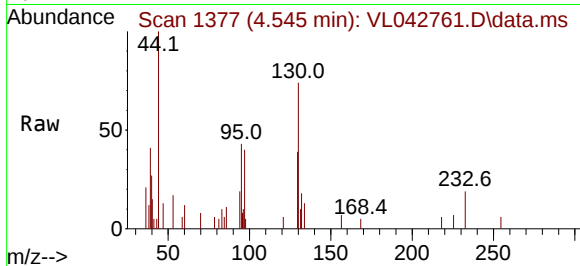




#38
 Trichloroethene
 Concen: 0.021 ppbv
 RT: 4.545 min Scan# 1196
 Delta R.T. 0.000 min
 Lab File: VL042761.D
 Acq: 24 Jul 2025 12:14

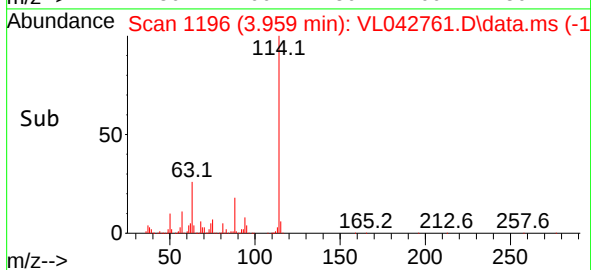
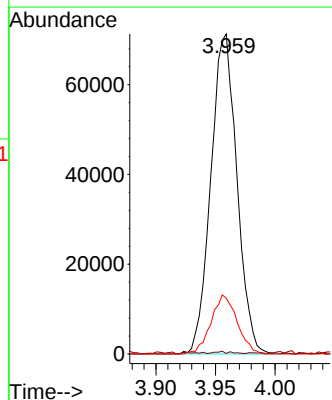
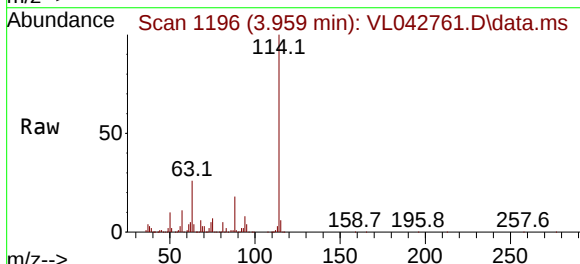
Instrument :
 MSVOA_1
 ClientSampleId :
 118-SG1DL

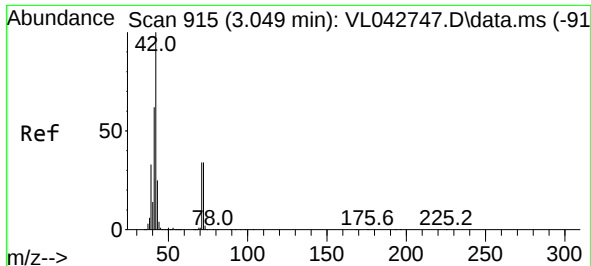
Tgt Ion:130	Resp:	403
Ion	Ratio	Lower Upper
130	100	
95	32.9	85.4 128.2#
132	0.0	78.2 117.2#
97	48.4	54.8 82.2#



#39
 1,2-Dichloropropane
 Concen: 7.417 ppbv
 RT: 3.959 min Scan# 1196
 Delta R.T. -0.353 min
 Lab File: VL042761.D
 Acq: 24 Jul 2025 12:14

Tgt Ion: 63	Resp:	108490
Ion	Ratio	Lower Upper
63	100	
41	0.0	68.2 102.4#
62	17.4	52.0 78.0#

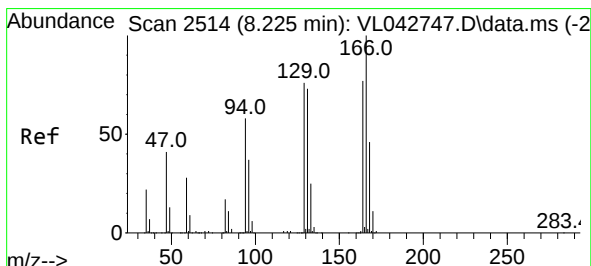
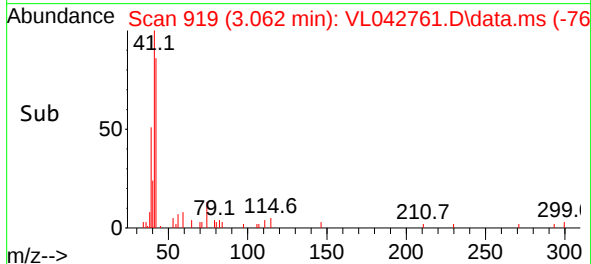
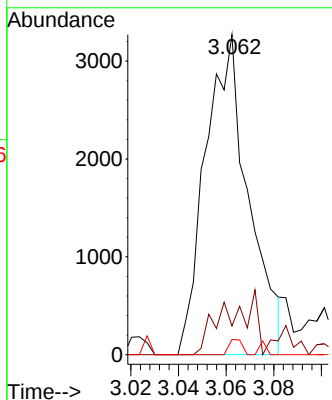
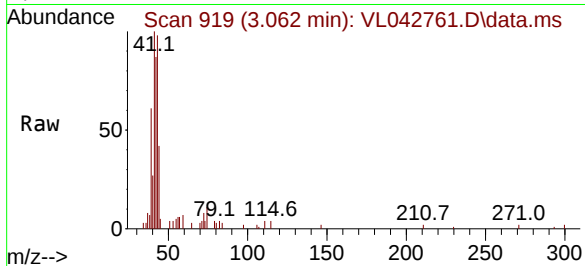




#41
Tetrahydrofuran
Concen: 0.273 ppbv
RT: 3.062 min Scan# 915
Delta R.T. 0.013 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

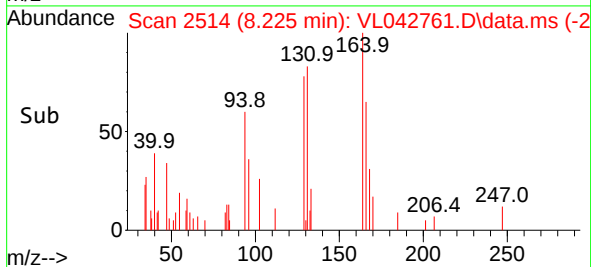
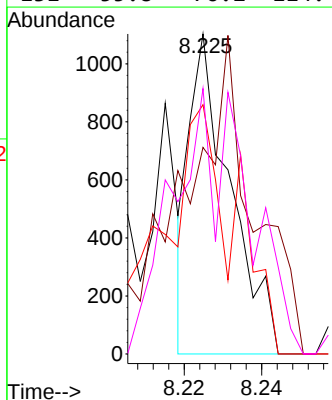
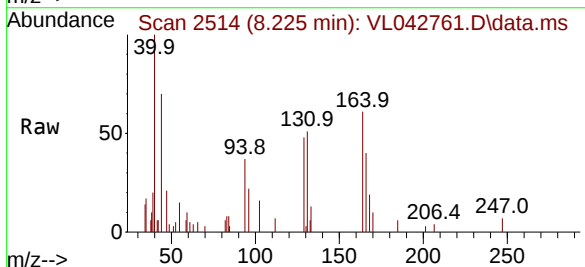
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

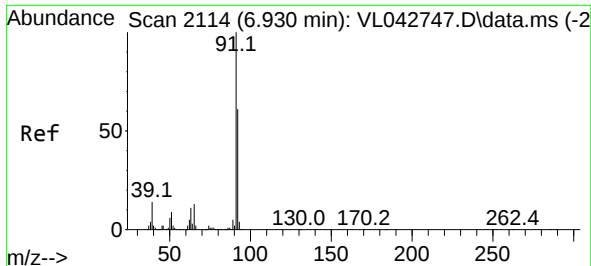
Tgt Ion: 42 Resp: 4116
Ion Ratio Lower Upper
42 100
72 19.3 30.9 46.3#
71 2.1 28.6 43.0#



#52
Tetrachloroethene
Concen: 0.049 ppbv
RT: 8.225 min Scan# 2514
Delta R.T. 0.000 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 164 Resp: 806
Ion Ratio Lower Upper
164 100
166 24.8 104.0 156.0#
129 77.9 79.2 118.8#
131 55.8 76.2 114.4#





#53

Toluene

Concen: 0.033 ppbv

RT: 6.933 min Scan# 2115

Delta R.T. 0.003 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

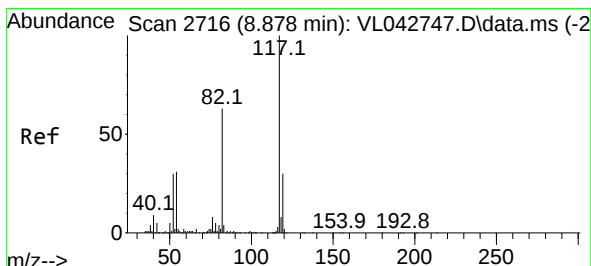
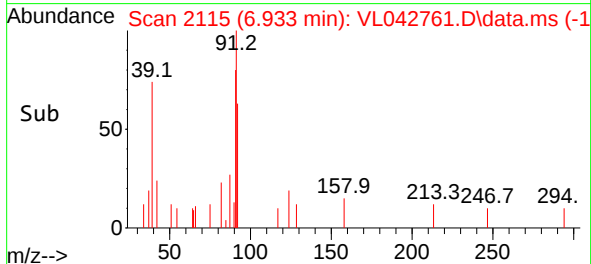
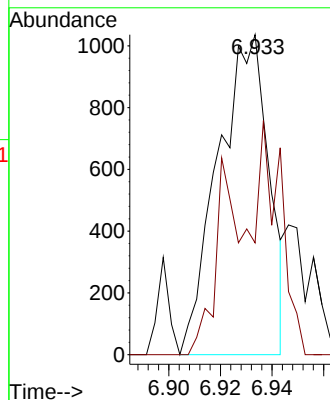
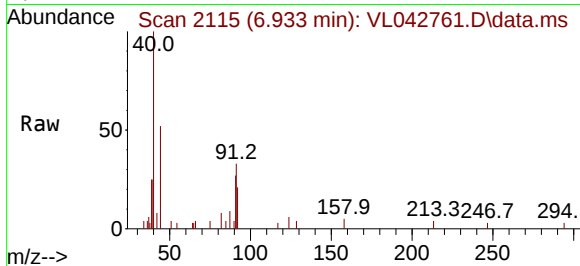
118-SG1DL

Tgt Ion: 91 Resp: 1418

Ion Ratio Lower Upper

91 100

92 65.5 48.0 72.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.882 min Scan# 2717

Delta R.T. 0.003 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

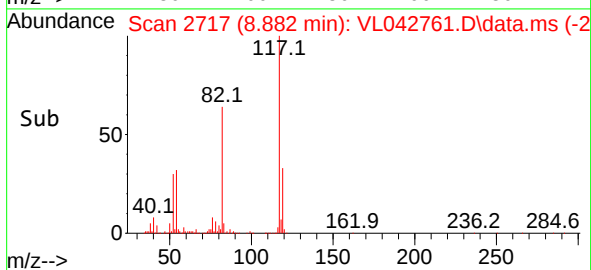
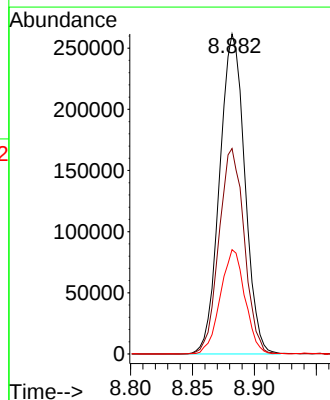
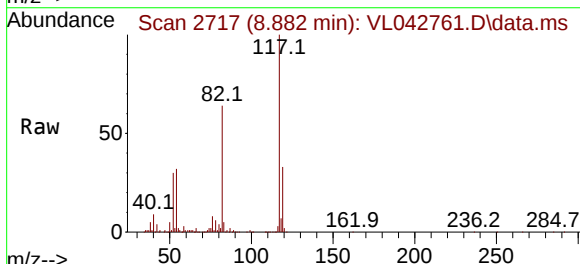
Tgt Ion: 117 Resp: 370590

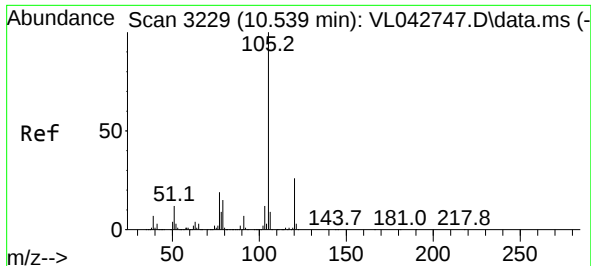
Ion Ratio Lower Upper

117 100

82 64.7 53.3 79.9

119 32.0 25.8 38.6

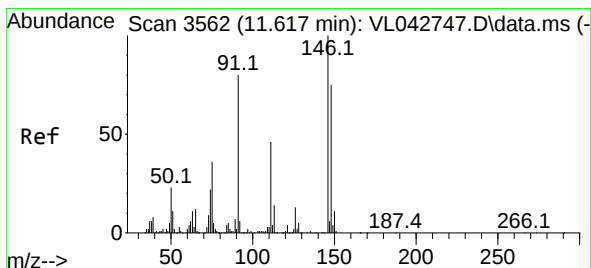
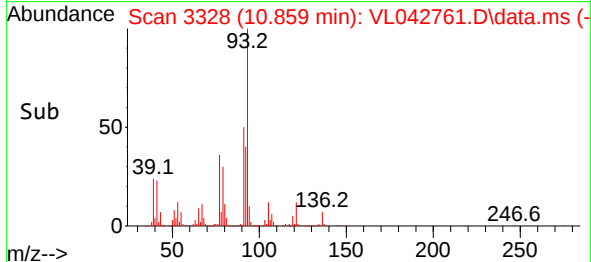
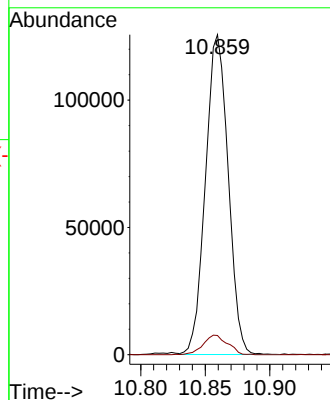
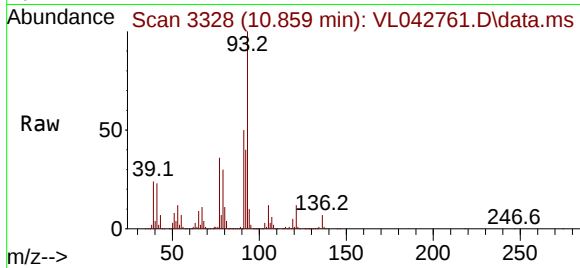




#62
Isopropylbenzene
Concen: 2.226 ppbv
RT: 10.859 min Scan# 31
Delta R.T. 0.321 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

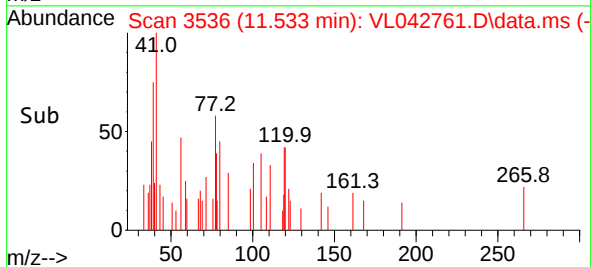
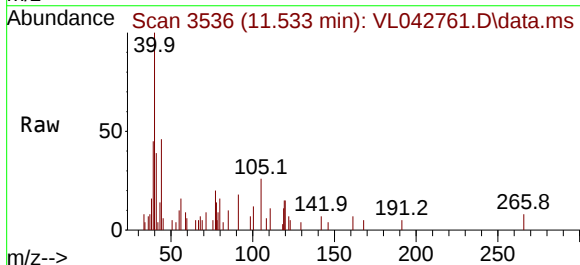
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

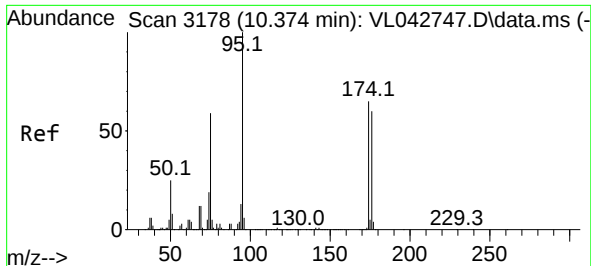
Tgt Ion:105 Resp: 153486
Ion Ratio Lower Upper
105 100
120 6.6 20.5 30.7#



#66
Benzyl Chloride
Concen: 0.022 ppbv
RT: 11.533 min Scan# 3536
Delta R.T. -0.084 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 91 Resp: 110
Ion Ratio Lower Upper
91 100
126 0.0 14.4 21.6#
128 20.0 5.2 7.8#

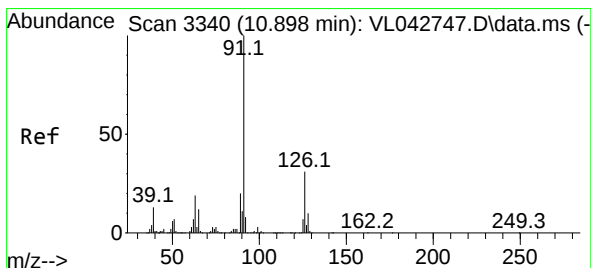
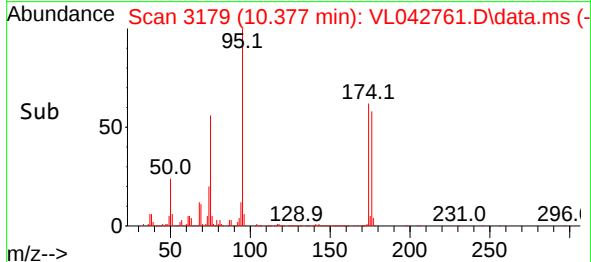
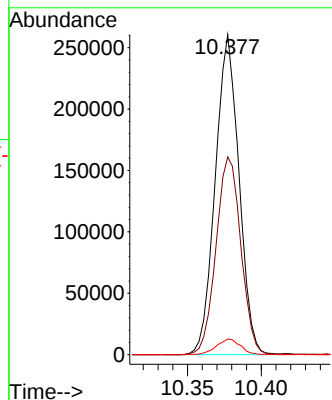
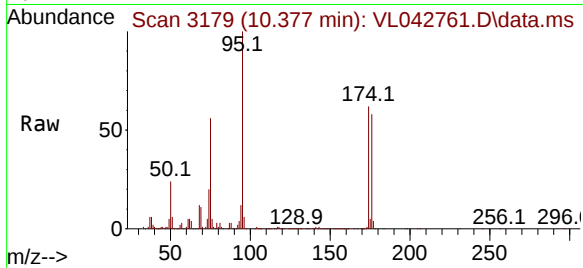




#68
1-Bromo-4-Fluorobenzene
Concen: 9.930 ppbv
RT: 10.377 min Scan# 3178
Delta R.T. 0.003 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

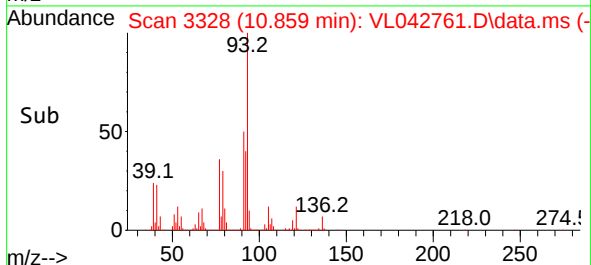
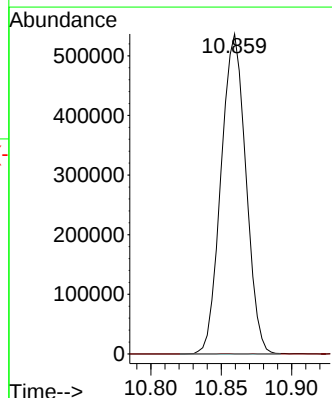
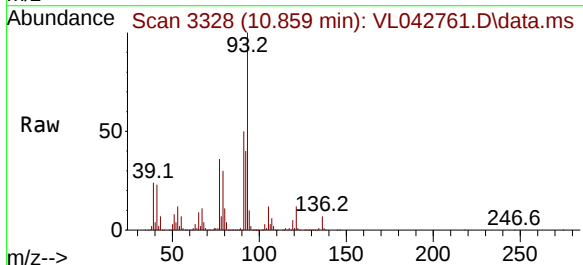
Instrument :
MSVOA_L
ClientSampleId :
118-SG1DL

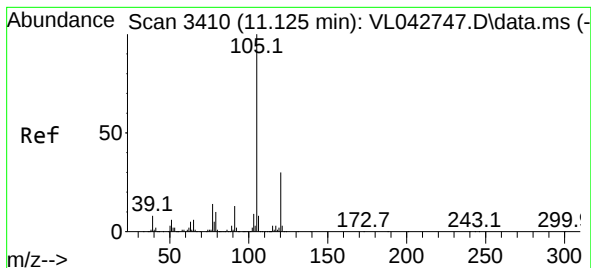
Tgt Ion: 95 Resp: 291433
Ion Ratio Lower Upper
95 100
174 65.0 53.8 80.6
175 5.0 4.0 6.0



#71
2-Chlorotoluene
Concen: 12.468 ppbv
RT: 10.859 min Scan# 3328
Delta R.T. -0.039 min
Lab File: VL042761.D
Acq: 24 Jul 2025 12:14

Tgt Ion: 91 Resp: 659058
Ion Ratio Lower Upper
91 100
126 0.0 12.0 48.2#





#72

4-Ethyltoluene

Concen: 2.750 ppbv

RT: 10.859 min Scan# 31

Delta R.T. -0.265 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

118-SG1DL

Tgt Ion:105 Resp: 153486

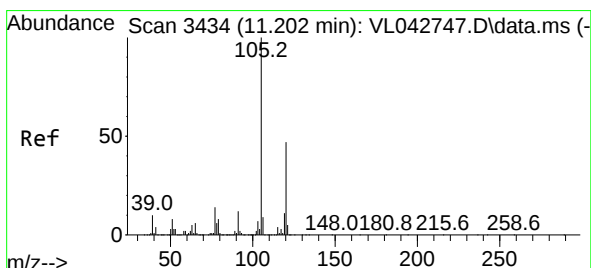
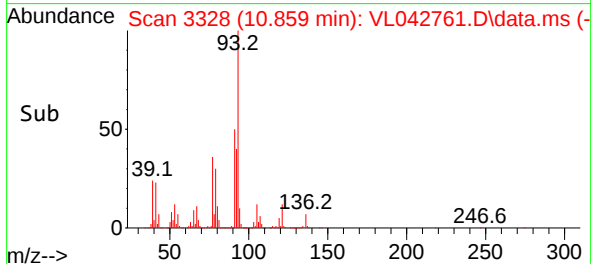
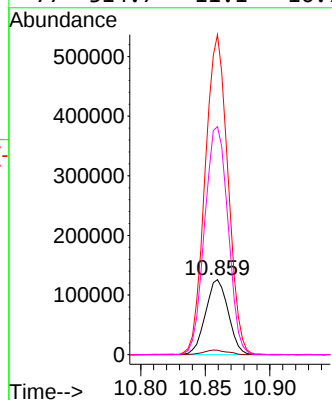
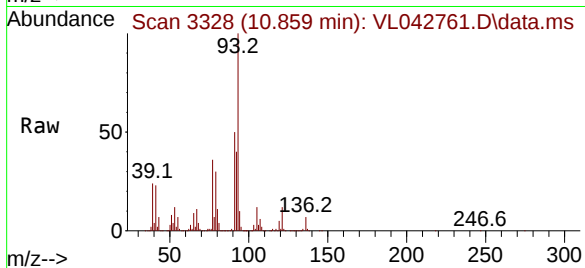
Ion Ratio Lower Upper

105 100

120 6.6 24.4 36.6#

91 429.9 10.6 15.8#

77 314.7 11.1 16.7#



#73

1,3,5-Trimethylbenzene

Concen: 0.038 ppbv

RT: 11.429 min Scan# 3504

Delta R.T. 0.227 min

Lab File: VL042761.D

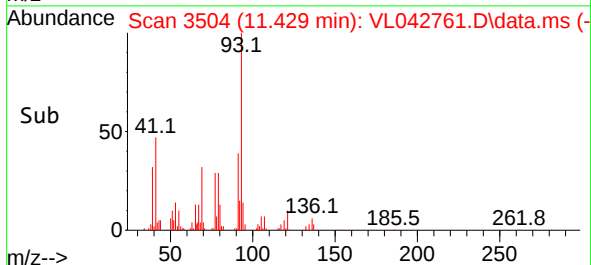
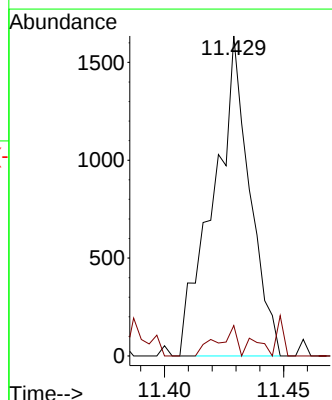
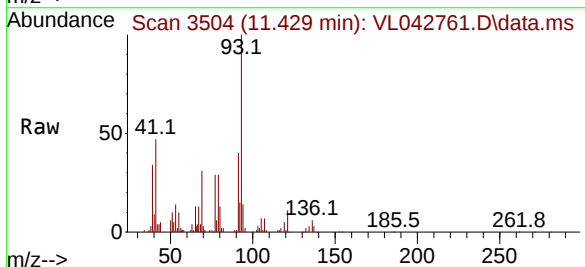
Acq: 24 Jul 2025 12:14

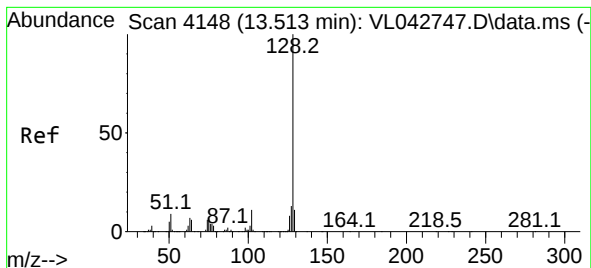
Tgt Ion:105 Resp: 1729

Ion Ratio Lower Upper

105 100

120 9.5 37.8 56.8#





#79

Naphthalene

Concen: 0.439 ppbv

RT: 13.517 min Scan# 4148

Delta R.T. 0.003 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

118-SG1DL

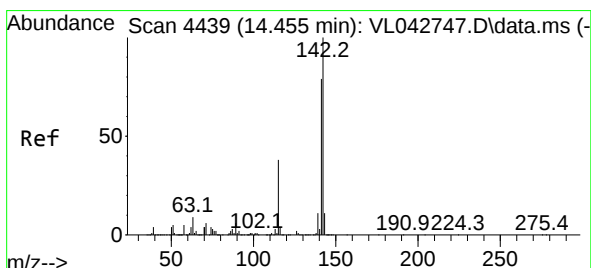
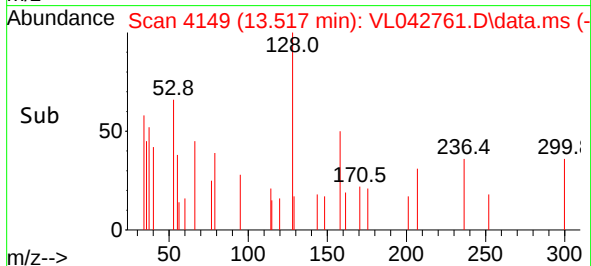
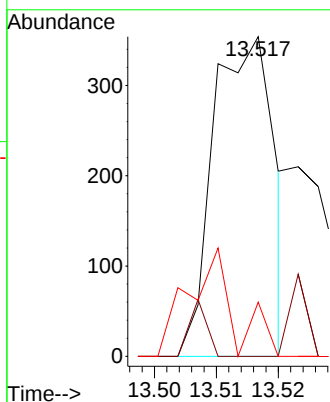
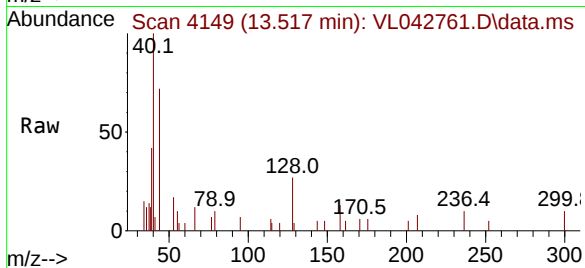
Tgt Ion:128 Resp: 244

Ion Ratio Lower Upper

128 100

127 0.0 10.5 15.7#

129 16.9 8.6 13.0#



#80

Naphthalene,2-methyl-

Concen: 1.131 ppbv

RT: 14.433 min Scan# 4432

Delta R.T. -0.022 min

Lab File: VL042761.D

Acq: 24 Jul 2025 12:14

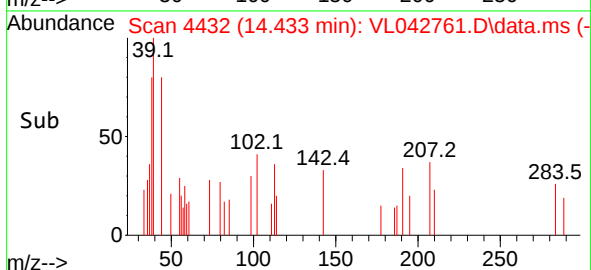
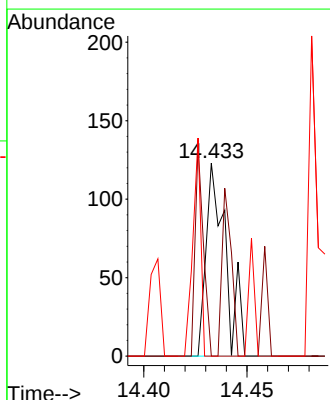
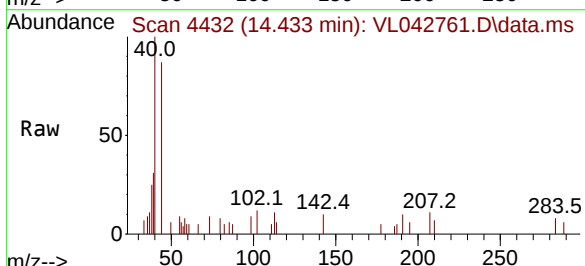
Tgt Ion:142 Resp: 80

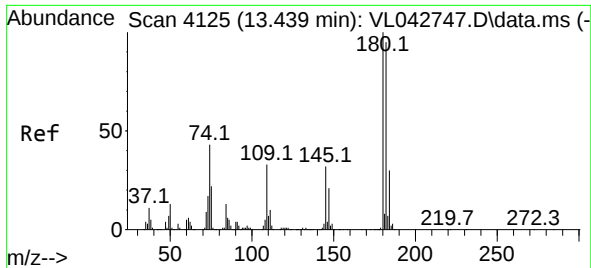
Ion Ratio Lower Upper

142 100

141 88.8 65.8 98.8

115 75.0 31.2 46.8#





#81

1,2,4-Trichlorobenzene

Concen: 0.437 ppbv

RT: 13.449 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL042761.D

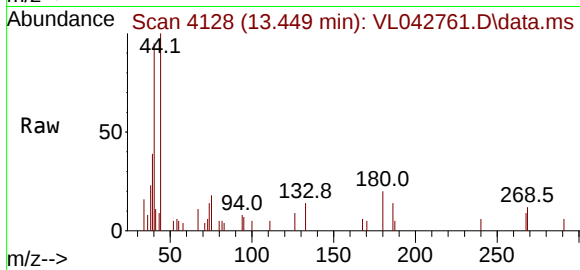
Acq: 24 Jul 2025 12:14

Instrument :

MSVOA_L

ClientSampleId :

118-SG1DL



Tgt Ion:180 Resp: 67

Ion Ratio Lower Upper

180 100

182 183.6 76.2 114.2#

184 109.0 24.8 37.2#

