

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072925\
 Data File : VL042777.D
 Acq On : 29 Jul 2025 11:26
 Operator : SY/MD
 Sample : Q2712-01DL 40X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Quant Time: Jul 30 01:09:03 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072325AIR.M
 Quant Title : AIR ANALYSIS BY METHOD T0-15 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	2.793	49	150928	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.965	114	416737	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.891	117	379617	10.000	ppbv	0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.383	95	306954	10.210	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.100%

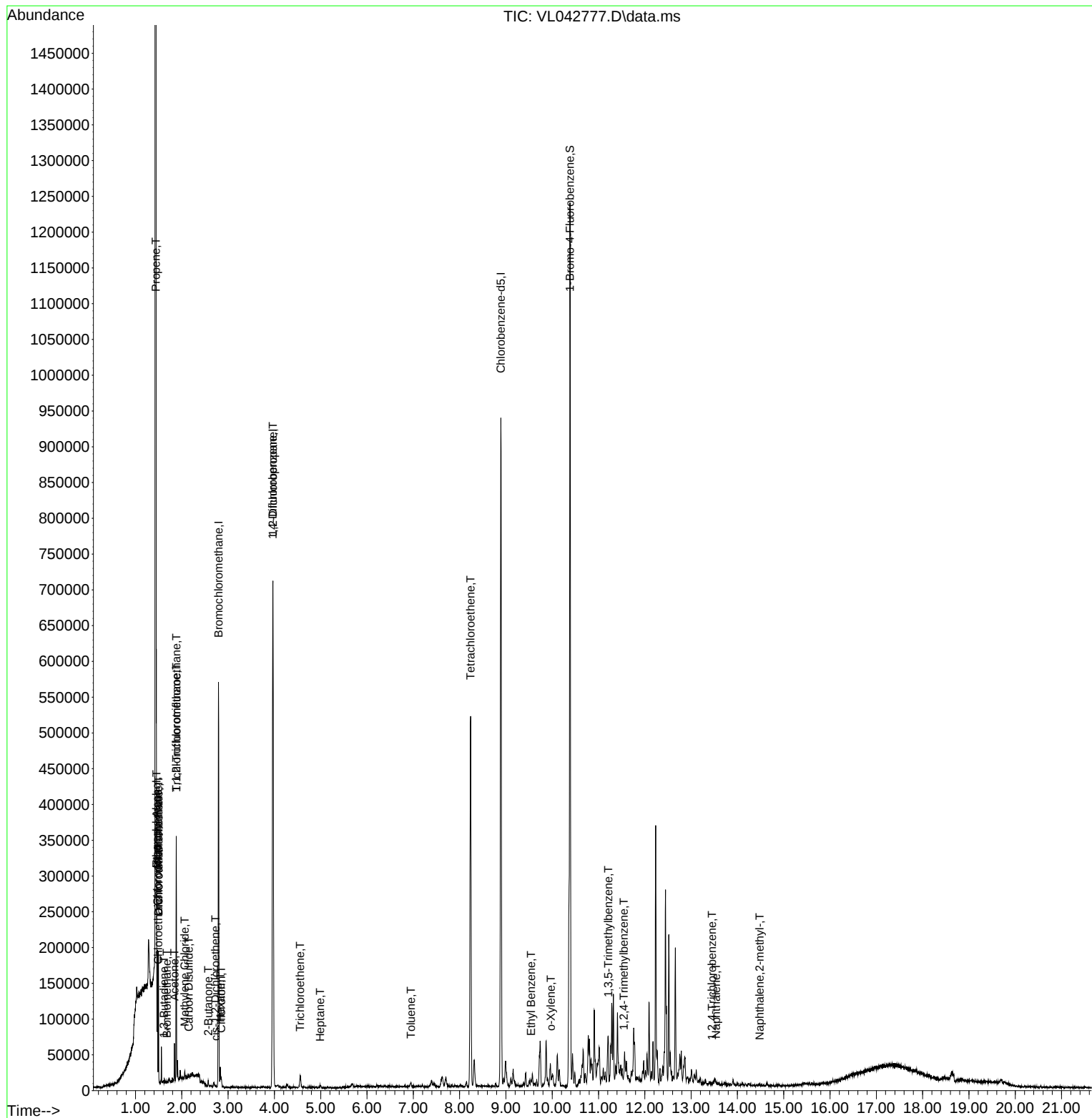
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	40115	2.010	ppbv	95
3) Chlorodifluoromethane	1.476	51	68331	2.629	ppbv #	88
6) Bromomethane	1.677	94	107	0.035	ppbv #	1
7) Chloroethane	1.492	64	7368	2.391	ppbv #	61
8) Dichlorotetrafluoroethane	1.499	85	40115	2.444	ppbv #	19
9) Propene	1.441	41	428	0.045	ppbv	99
10) Heptane	4.985	43	654	0.026	ppbv #	27
11) Trichlorofluoromethane	1.881	101	90539	4.402	ppbv	92
12) 1,1,2-Trichlorotrifluo...	1.881	101	90539	5.792	ppbv #	12
13) Ethanol	1.457	45	8712	11.512	ppbv #	31
15) Acetone	1.839	43	21573	1.035	ppbv	95
16) 1,3-Butadiene	1.615	39	206	0.023	ppbv #	16
19) Isopropyl Alcohol	1.457	45	8712	0.787	ppbv #	50
20) Methylene Chloride	2.065	84	1721	0.262	ppbv #	77
26) Hexane	2.832	57	5065	0.250	ppbv #	44
27) Carbon Disulfide	2.153	76	353	0.020	ppbv #	36
29) Chloroform	2.852	83	4427	0.142	ppbv	85
31) cis-1,2-Dichloroethene	2.729	61	748	0.036	ppbv #	76
34) 2-Butanone	2.570	43	4617	0.156	ppbv #	88
38) Trichloroethene	4.554	130	3043	0.160	ppbv #	72
39) 1,2-Dichloropropane	3.968	63	107277	7.358	ppbv #	23
52) Tetrachloroethene	8.234	164	91193	5.570	ppbv	95
53) Toluene	6.949	91	1594	0.038	ppbv #	21
58) Ethyl Benzene	9.542	91	2520	0.042	ppbv	90
60) o-Xylene	9.972	91	2152	0.045	ppbv	86
73) 1,3,5-Trimethylbenzene	11.212	105	1627	0.035	ppbv	86
74) 1,2,4-Trimethylbenzene	11.545	105	1806	0.035	ppbv #	62
79) Naphthalene	13.539	128	180	0.438	ppbv #	86
80) Naphthalene,2-methyl-	14.481	142	200	1.135	ppbv #	70
81) 1,2,4-Trichlorobenzene	13.452	180	69	0.437	ppbv #	1

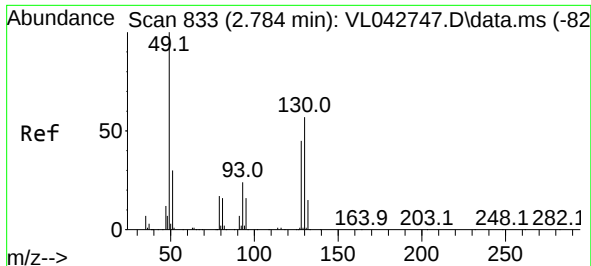
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Misc : 400mL/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SV1DL

Quant Time: Jul 30 01:09:03 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

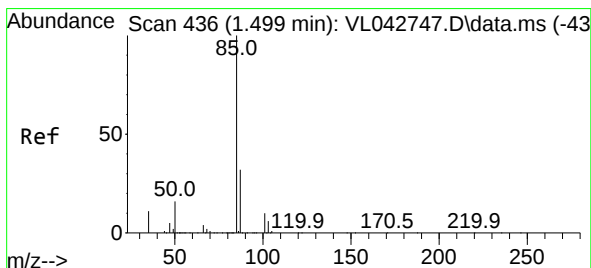
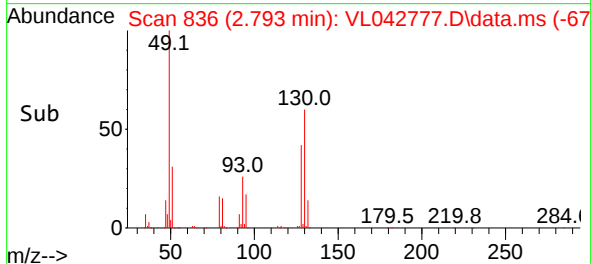
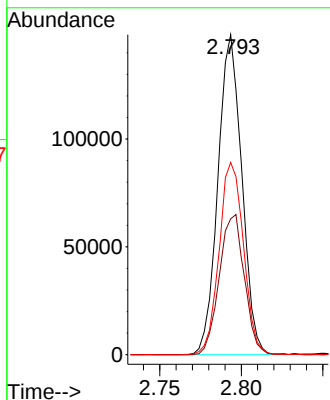
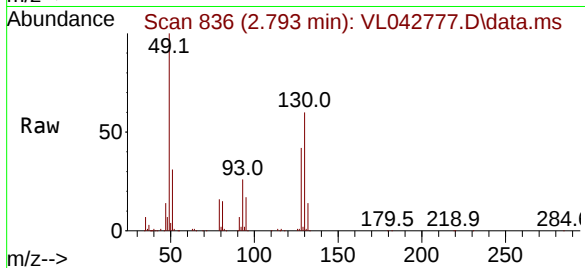




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.793 min Scan# 836
 Delta R.T. 0.009 min
 Lab File: VL042777.D
 Acq: 29 Jul 2025 11:26

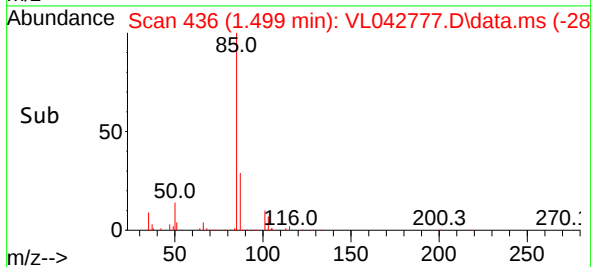
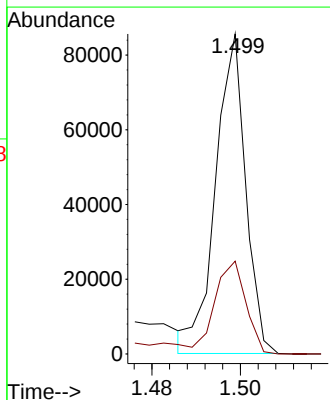
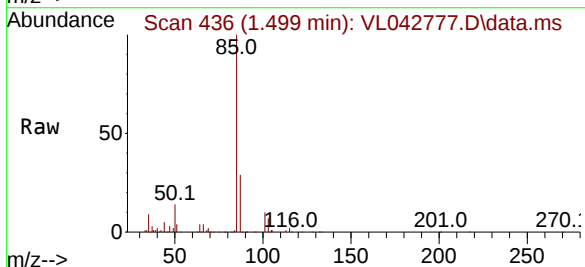
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

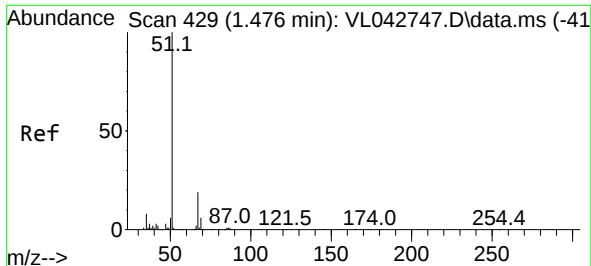
Tgt Ion: 49 Resp: 150928
 Ion Ratio Lower Upper
 49 100
 128 46.0 23.6 71.0
 130 61.5 30.3 90.8



#2
 Dichlorodifluoromethane
 Concen: 2.010 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. -0.000 min
 Lab File: VL042777.D
 Acq: 29 Jul 2025 11:26

Tgt Ion: 85 Resp: 40115
 Ion Ratio Lower Upper
 85 100
 87 29.0 25.4 38.2

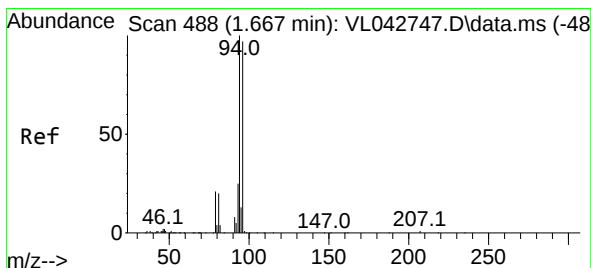
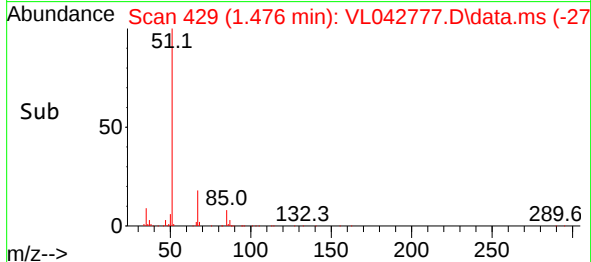
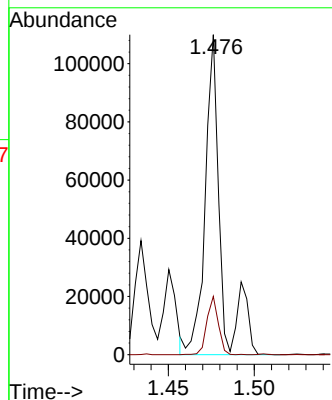
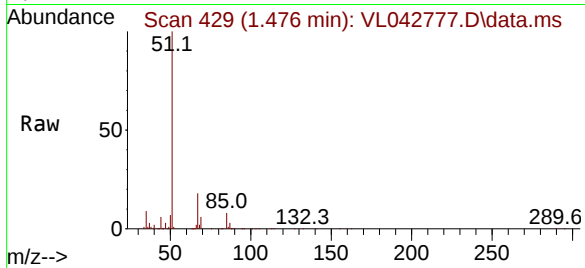




#3
Chlorodifluoromethane
Concen: 2.629 ppbv
RT: 1.476 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

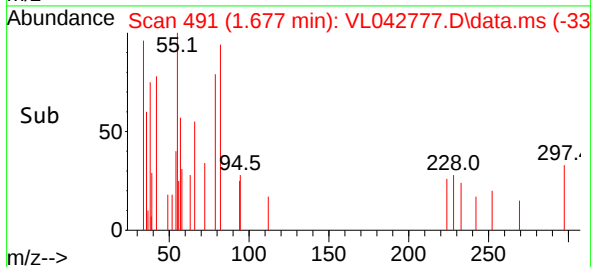
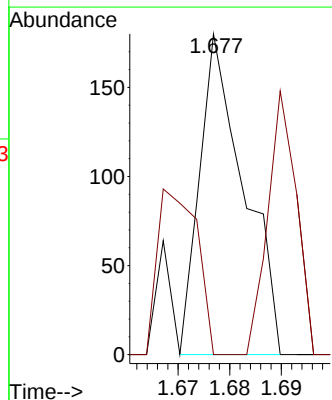
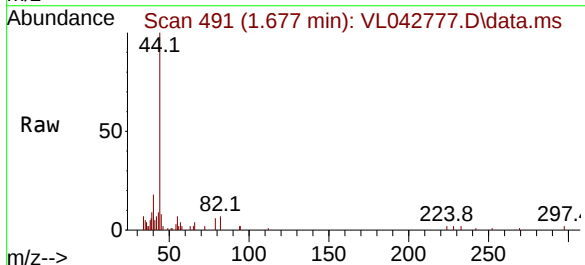
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

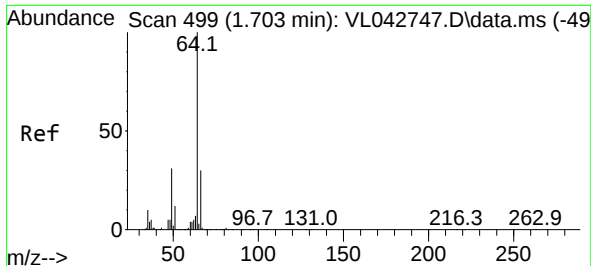
Tgt Ion: 51 Resp: 68331
Ion Ratio Lower Upper
51 100
67 13.6 15.0 22.6#



#6
Bromomethane
Concen: 0.035 ppbv
RT: 1.677 min Scan# 491
Delta R.T. 0.010 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 94 Resp: 107
Ion Ratio Lower Upper
94 100
96 0.0 77.6 116.4#

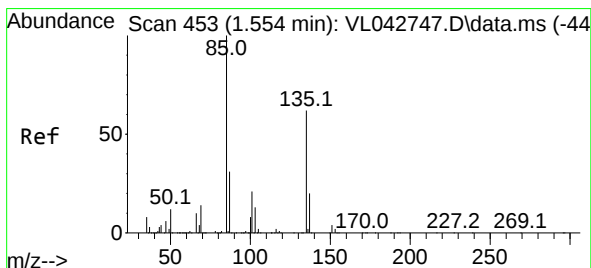
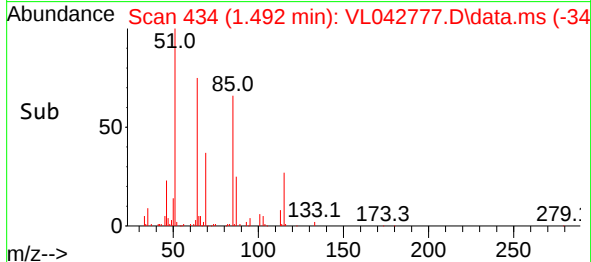
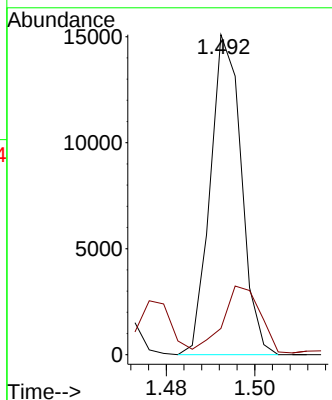
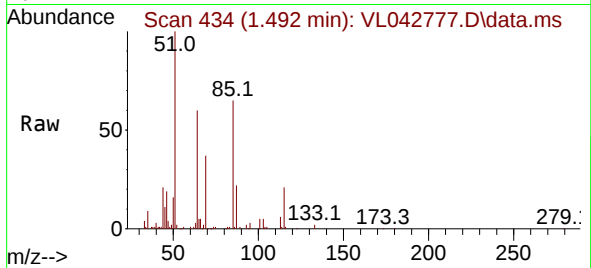




#7
Chloroethane
Concen: 2.391 ppbv
RT: 1.492 min Scan# 41
Delta R.T. -0.210 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

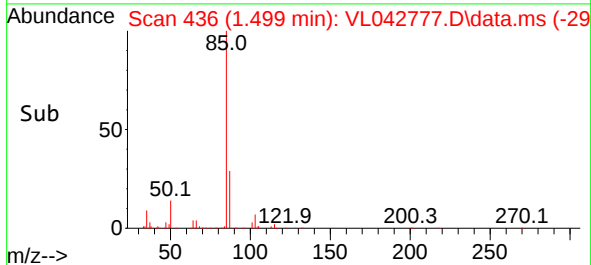
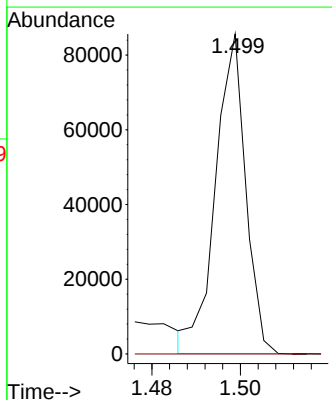
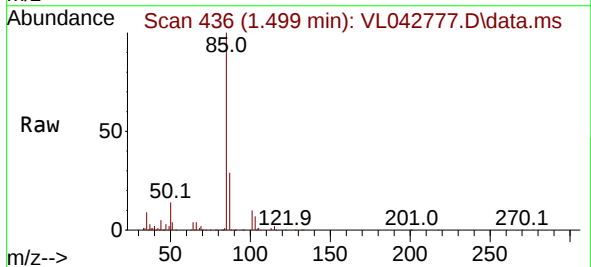
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

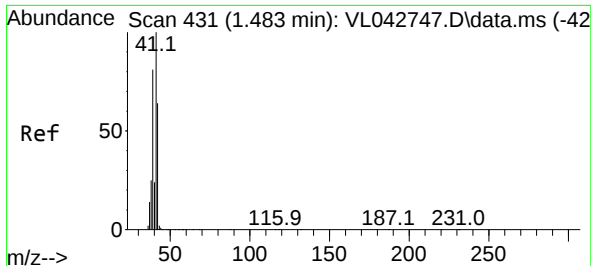
Tgt Ion: 64 Resp: 7368
Ion Ratio Lower Upper
64 100
66 8.8 24.1 36.1#



#8
Dichlorotetrafluoroethane
Concen: 2.444 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.055 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 85 Resp: 40115
Ion Ratio Lower Upper
85 100
135 0.0 50.6 76.0#





#9

Propene

Concen: 0.045 ppbv

RT: 1.441 min Scan# 41

Delta R.T. -0.042 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

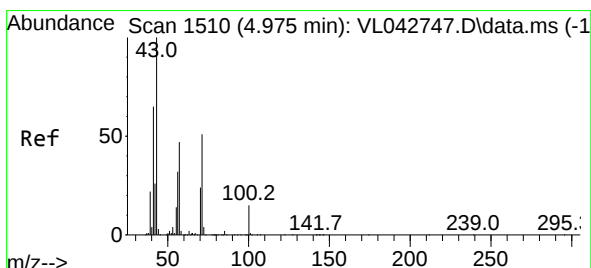
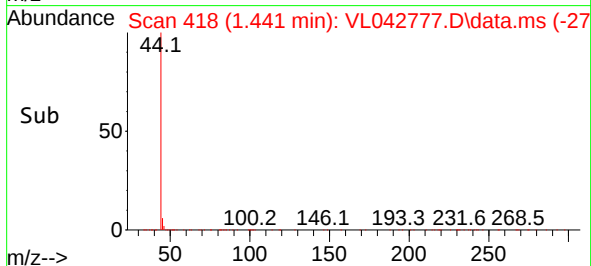
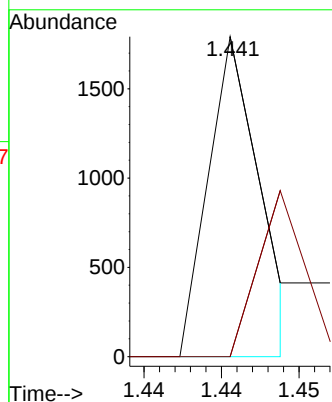
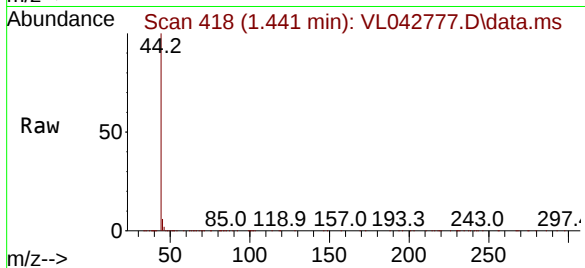
SV1DL

Tgt Ion: 41 Resp: 428

Ion Ratio Lower Upper

41 100

42 65.4 53.2 79.8



#10

Heptane

Concen: 0.026 ppbv

RT: 4.985 min Scan# 1513

Delta R.T. 0.010 min

Lab File: VL042777.D

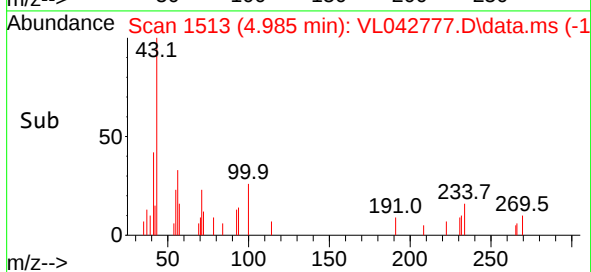
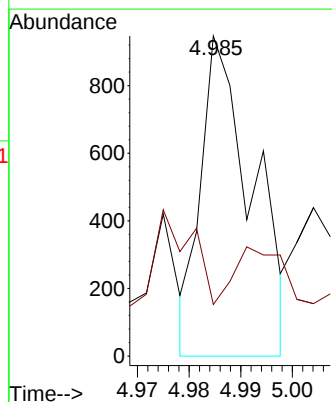
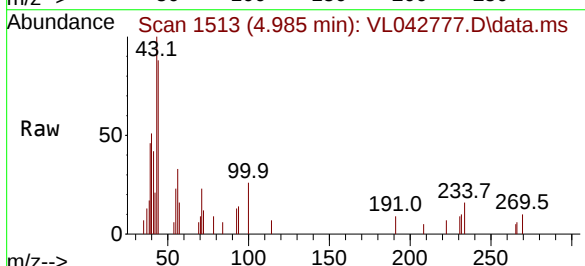
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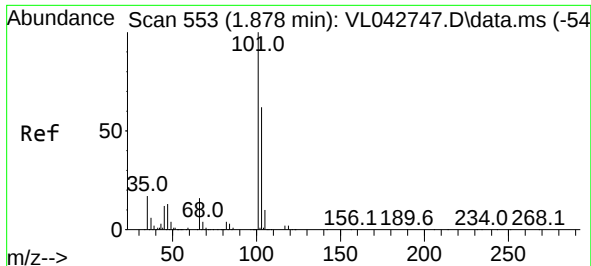
Tgt Ion: 43 Resp: 654

Ion Ratio Lower Upper

43 100

57 0.0 39.9 59.9#

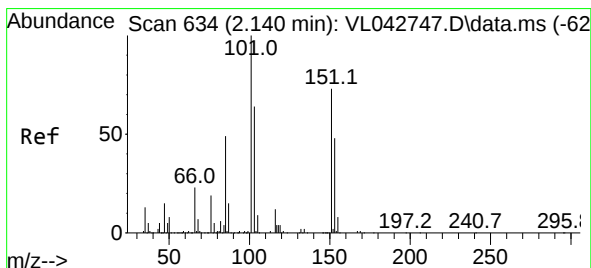
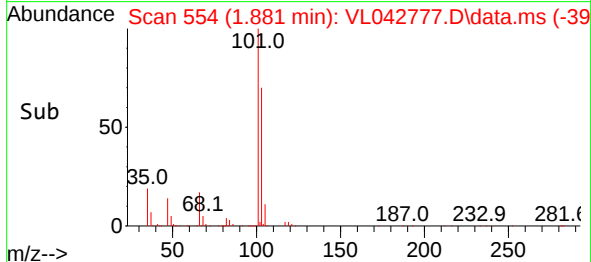
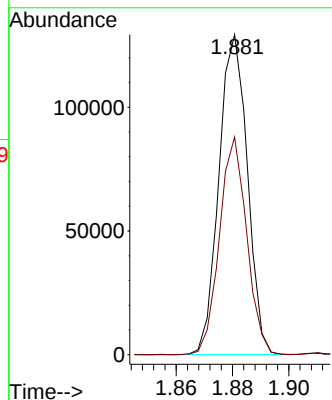
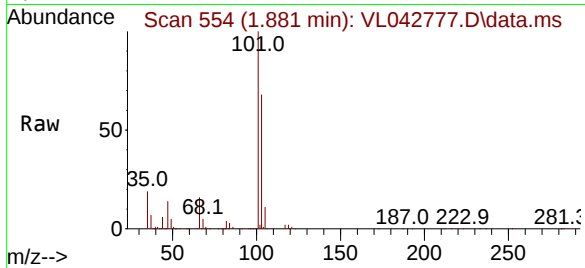




#11
Trichlorofluoromethane
Concen: 4.402 ppbv
RT: 1.881 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

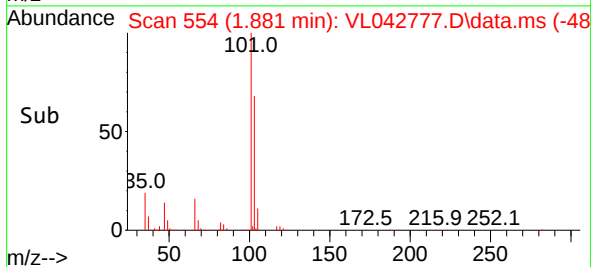
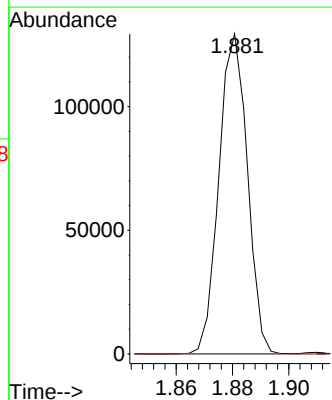
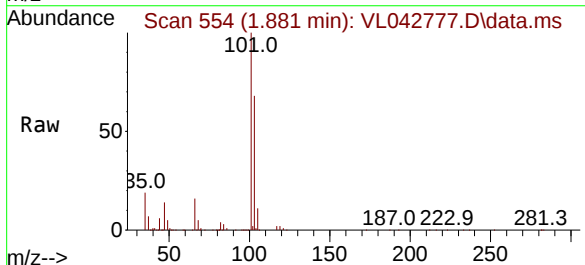
Instrument :
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ClientSampleId :
SV1DL

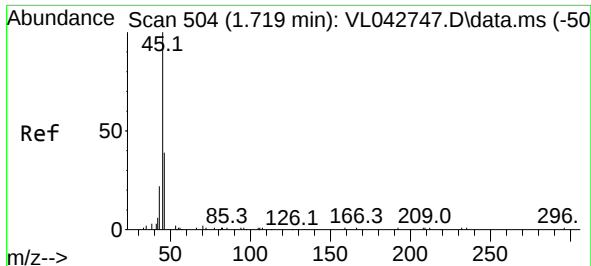
Tgt Ion:101 Resp: 90539
Ion Ratio Lower Upper
101 100
103 68.1 49.6 74.4



#12
1,1,2-Trichlorotrifluoroethane
Concen: 5.792 ppbv
RT: 1.881 min Scan# 554
Delta R.T. -0.259 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion:101 Resp: 90539
Ion Ratio Lower Upper
101 100
151 0.0 60.5 90.7#

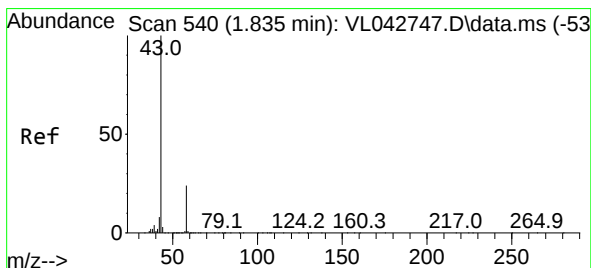
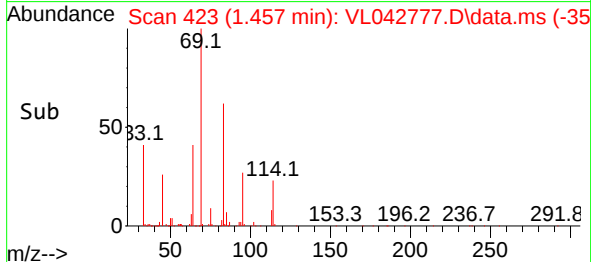
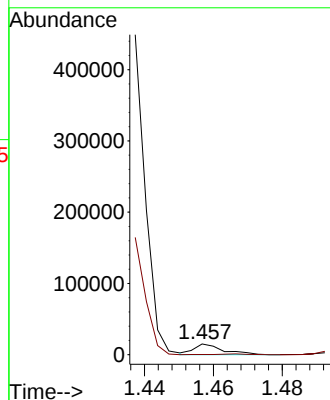
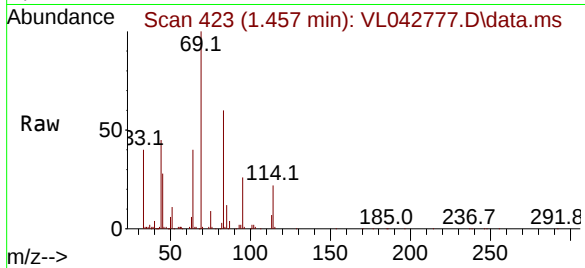




#13
Ethanol
Concen: 11.512 ppbv
RT: 1.457 min Scan# 41
Delta R.T. -0.262 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

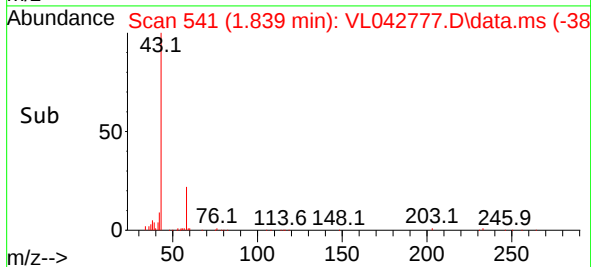
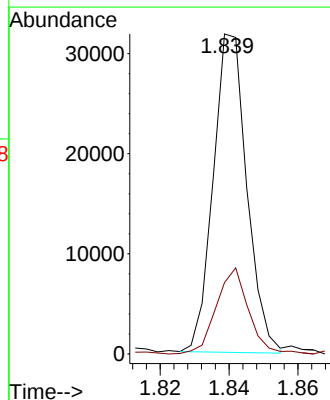
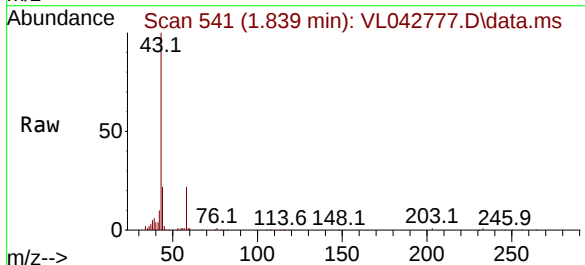
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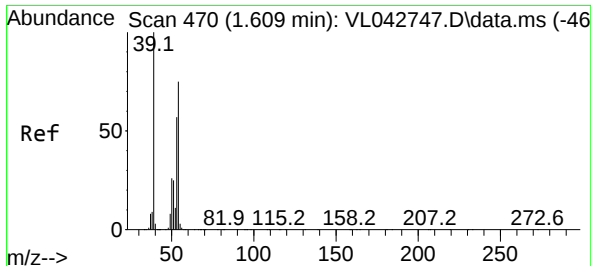
Tgt Ion: 45 Resp: 8712
Ion Ratio Lower Upper
45 100
46 0.0 17.8 71.4#



#15
Acetone
Concen: 1.035 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 43 Resp: 21573
Ion Ratio Lower Upper
43 100
58 27.3 19.8 29.8





#16

1,3-Butadiene

Concen: 0.023 ppbv

RT: 1.615 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

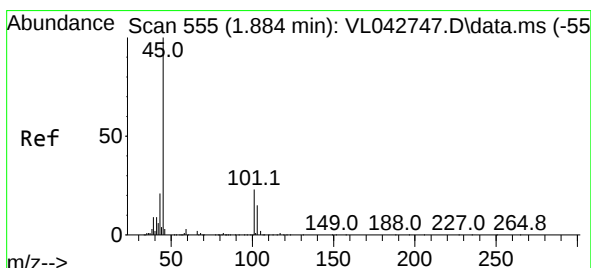
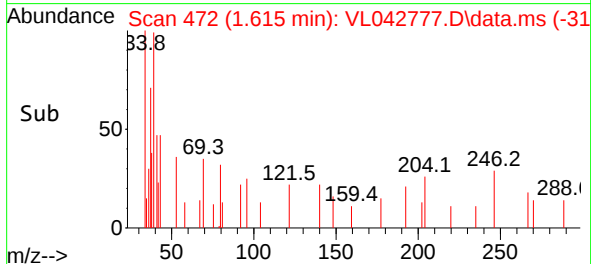
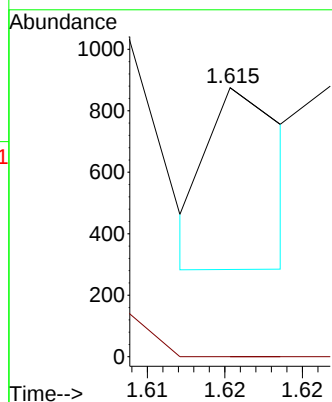
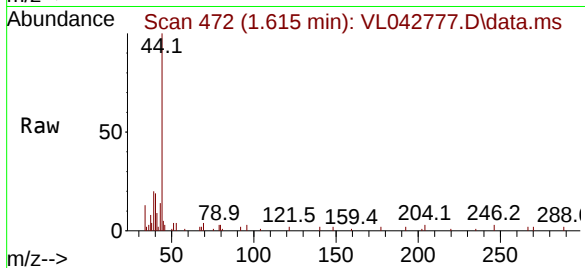
SV1DL

Tgt Ion: 39 Resp: 206

Ion Ratio Lower Upper

39 100

54 0.0 54.5 81.7#



#19

Isopropyl Alcohol

Concen: 0.787 ppbv

RT: 1.457 min Scan# 423

Delta R.T. -0.427 min

Lab File: VL042777.D

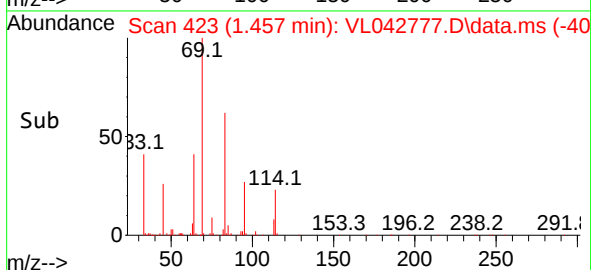
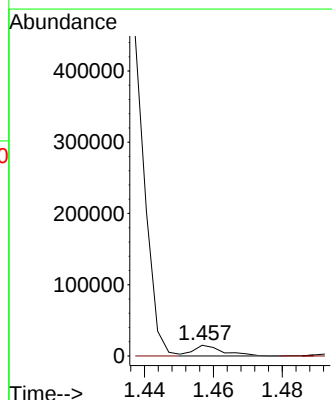
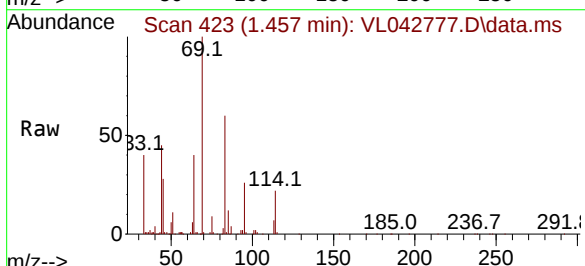
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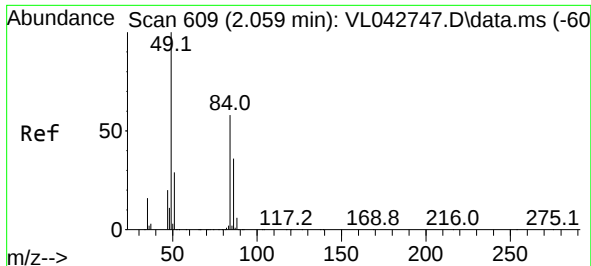
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Ion Ratio Lower Upper

45 100

58 7.4 30.0 45.0#

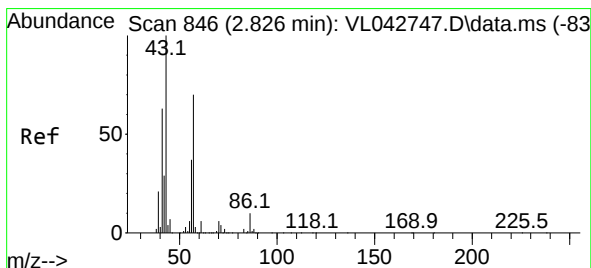
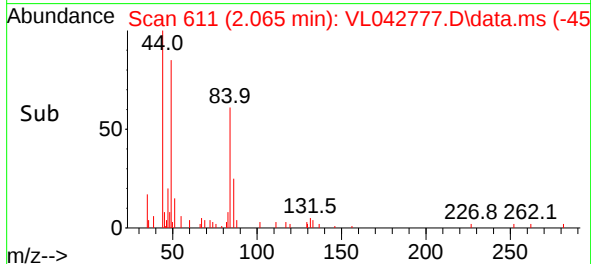
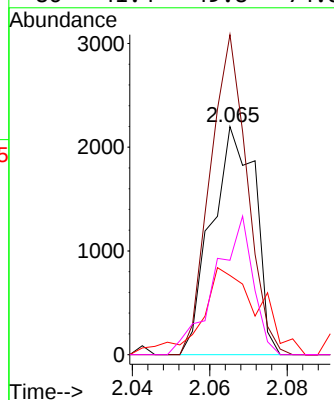
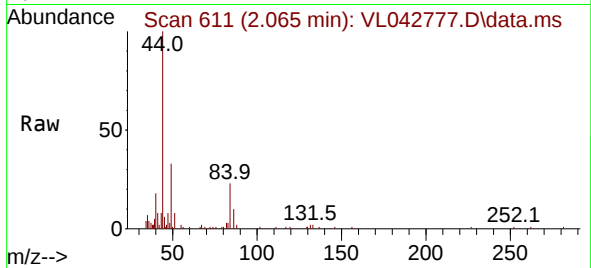




#20
Methylene Chloride
Concen: 0.262 ppbv
RT: 2.065 min Scan# 611
Delta R.T. 0.006 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

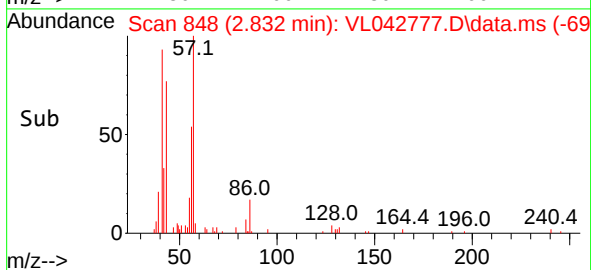
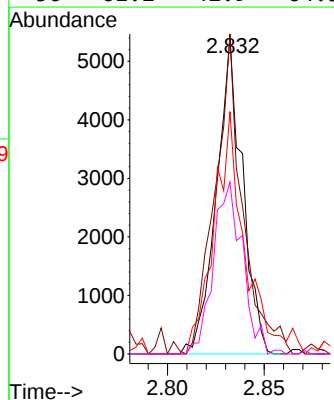
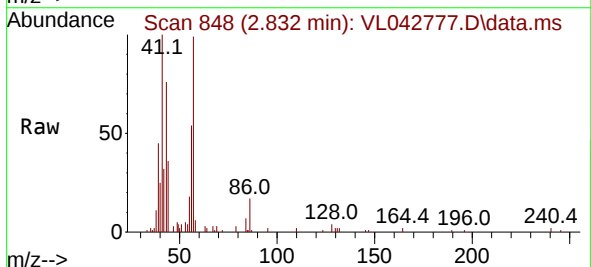
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

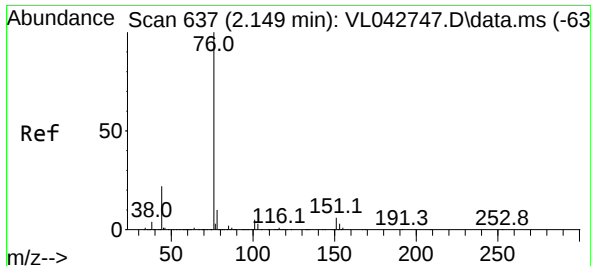
Tgt Ion: 84 Resp: 1721
Ion Ratio Lower Upper
84 100
49 145.1 138.6 208.0
51 30.5 40.6 61.0#
86 41.4 49.8 74.8#



#26
Hexane
Concen: 0.250 ppbv
RT: 2.832 min Scan# 848
Delta R.T. 0.006 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 57 Resp: 5065
Ion Ratio Lower Upper
57 100
41 109.1 75.4 113.2
43 94.6 185.0 277.6#
56 61.2 42.9 64.3

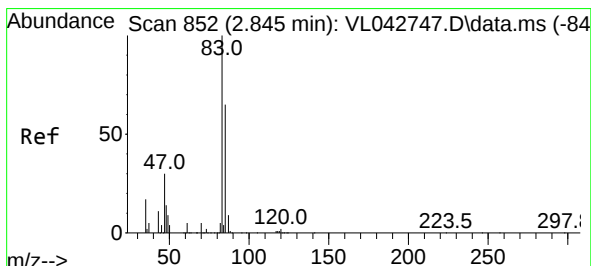
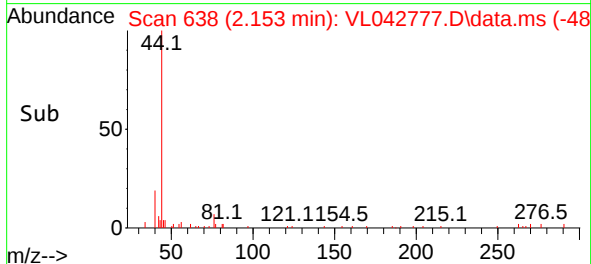
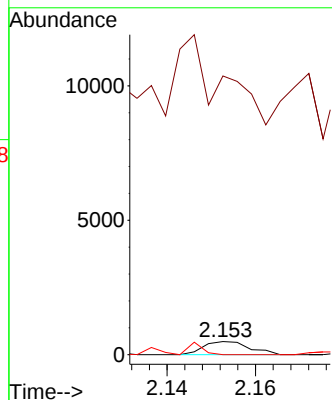
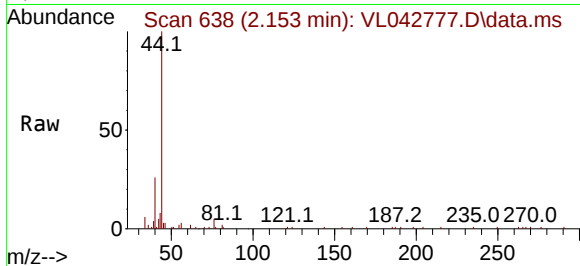




#27
Carbon Disulfide
Concen: 0.020 ppbv
RT: 2.153 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

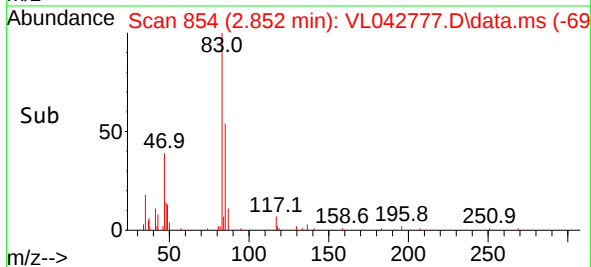
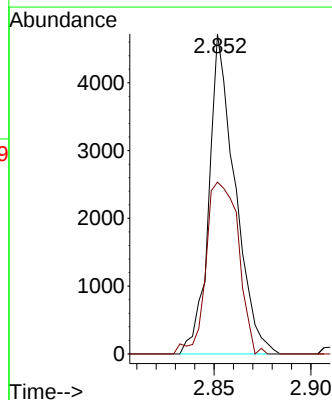
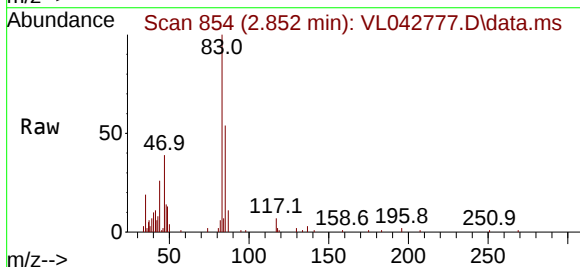
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

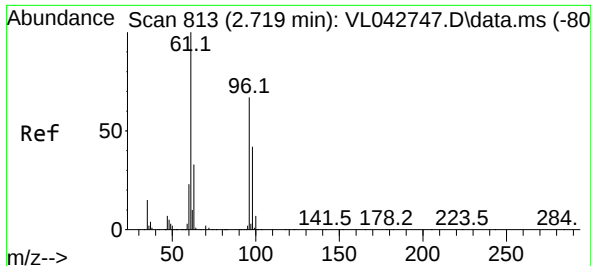
Tgt Ion: 76 Resp: 353
Ion Ratio Lower Upper
76 100
44 0.0 19.3 28.9#
78 48.7 9.9 14.9#



#29
Chloroform
Concen: 0.142 ppbv
RT: 2.852 min Scan# 854
Delta R.T. 0.006 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 83 Resp: 4427
Ion Ratio Lower Upper
83 100
85 53.7 52.2 78.2

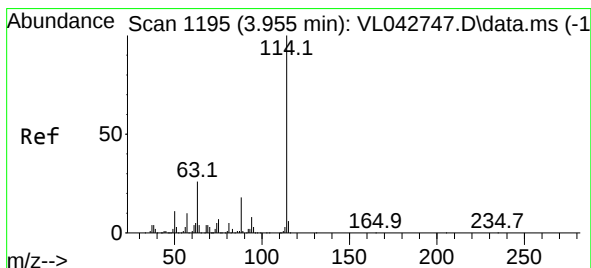
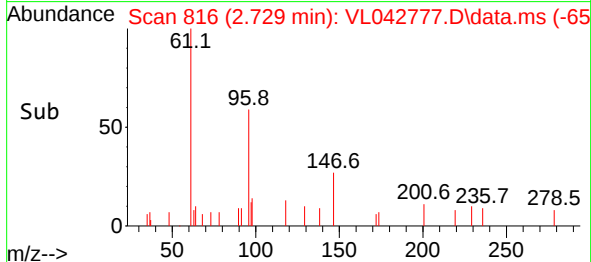
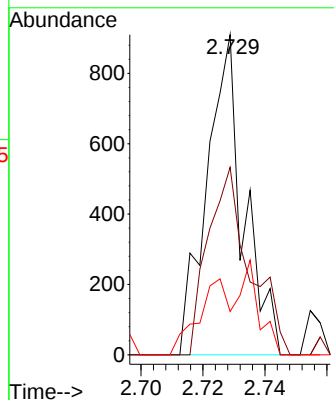
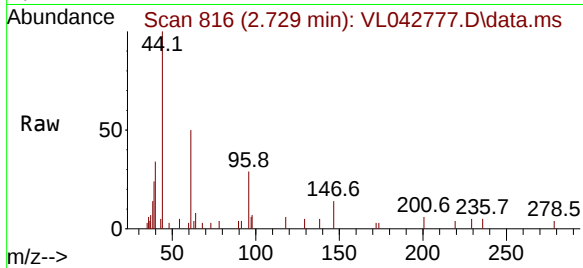




#31
 cis-1,2-Dichloroethene
 Concen: 0.036 ppbv
 RT: 2.729 min Scan# 813
 Delta R.T. 0.010 min
 Lab File: VL042777.D
 Acq: 29 Jul 2025 11:26

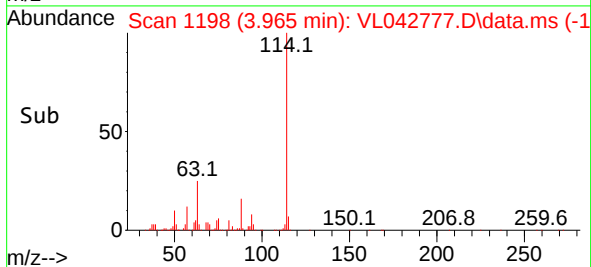
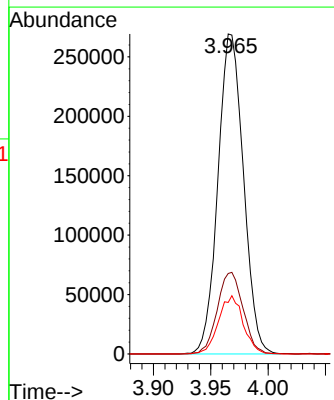
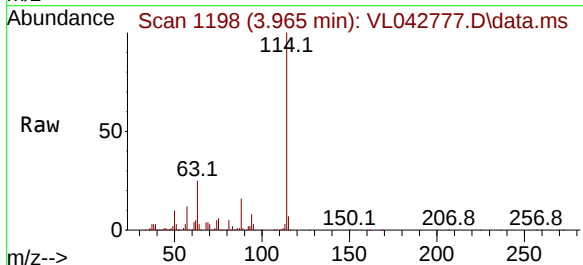
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

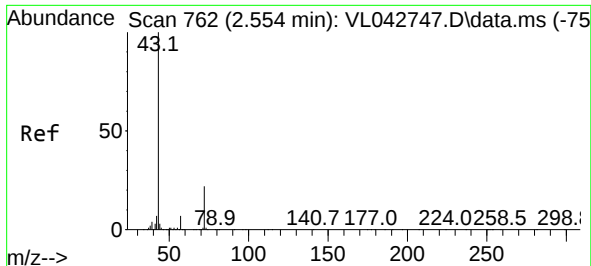
Tgt Ion: 61 Resp: 748
 Ion Ratio Lower Upper
 61 100
 96 58.6 53.5 80.3
 98 13.5 33.6 50.4#



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.965 min Scan# 1198
 Delta R.T. 0.010 min
 Lab File: VL042777.D
 Acq: 29 Jul 2025 11:26

Tgt Ion: 114 Resp: 416737
 Ion Ratio Lower Upper
 114 100
 63 25.8 20.5 30.7
 88 17.6 14.0 21.0

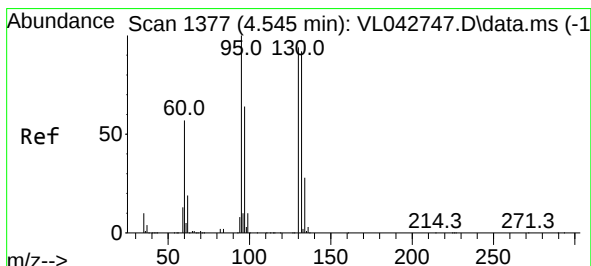
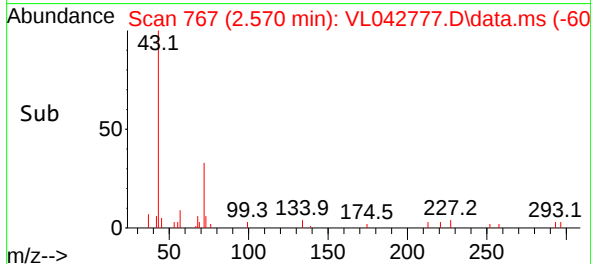
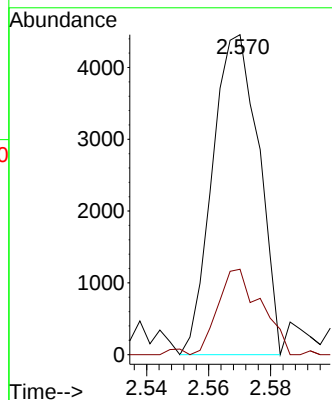
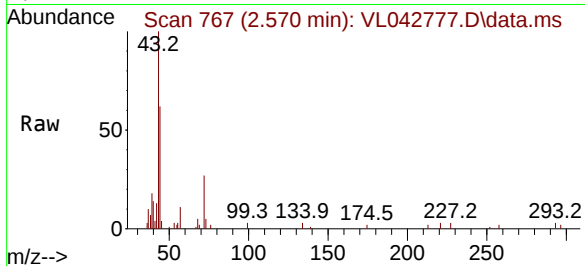




#34
2-Butanone
Concen: 0.156 ppbv
RT: 2.570 min Scan# 767
Delta R.T. 0.016 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

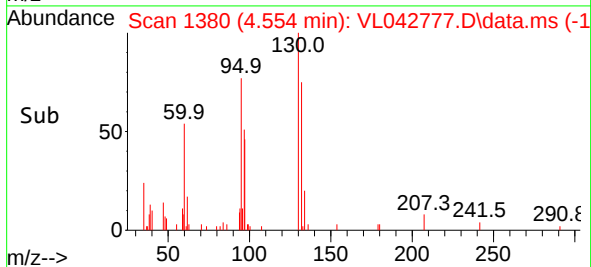
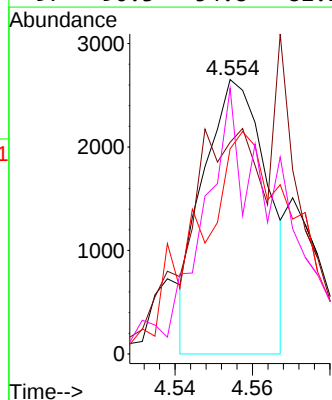
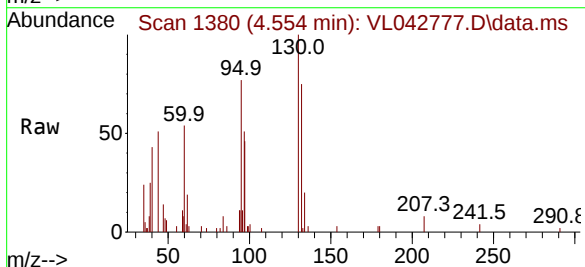
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

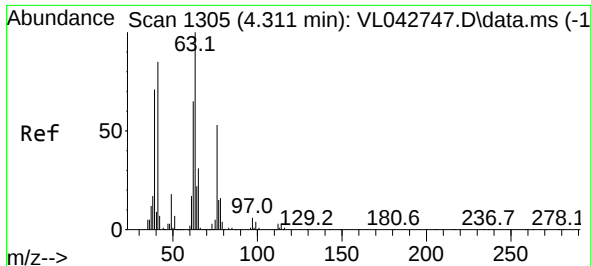
Tgt Ion: 43 Resp: 4617
Ion Ratio Lower Upper
43 100
72 27.4 17.4 26.0#



#38
Trichloroethene
Concen: 0.160 ppbv
RT: 4.554 min Scan# 1380
Delta R.T. 0.010 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion:130 Resp: 3043
Ion Ratio Lower Upper
130 100
95 80.3 85.4 128.2#
132 68.0 78.2 117.2#
97 90.3 54.8 82.2#





#39

1,2-Dichloropropane

Concen: 7.358 ppbv

RT: 3.968 min Scan# 1199

Delta R.T. -0.343 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

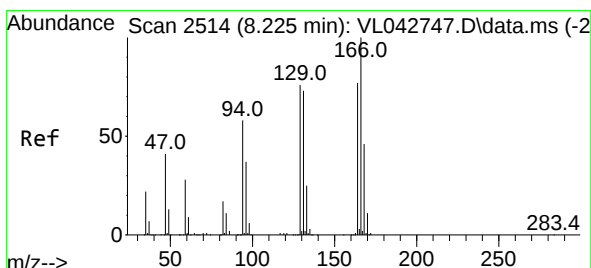
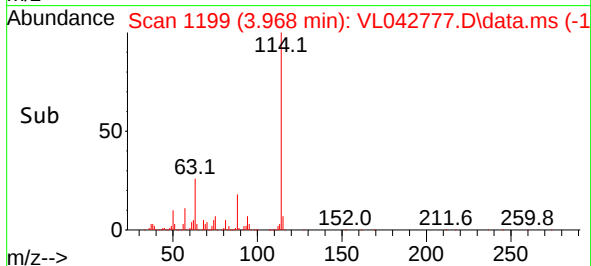
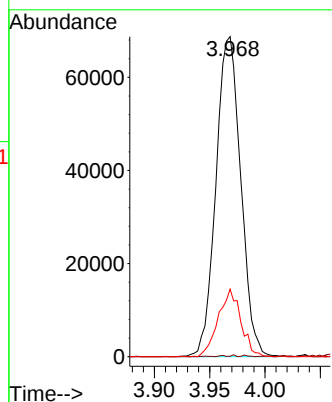
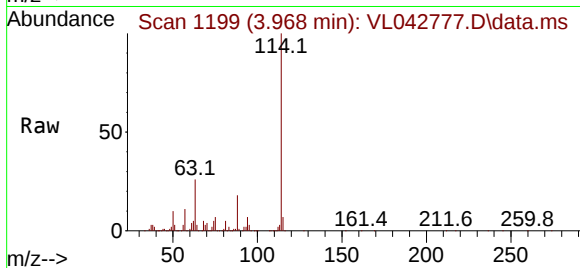
Tgt Ion: 63 Resp: 107277

Ion Ratio Lower Upper

63 100

41 0.2 68.2 102.4#

62 21.1 52.0 78.0#



#52

Tetrachloroethene

Concen: 5.570 ppbv

RT: 8.234 min Scan# 2517

Delta R.T. 0.010 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Tgt Ion: 164 Resp: 91193

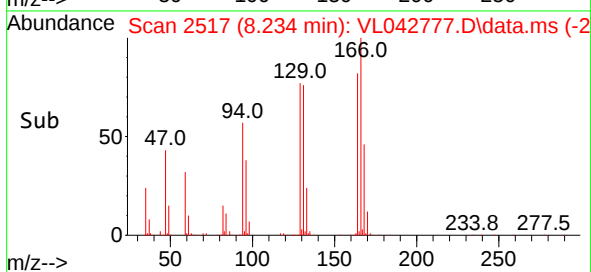
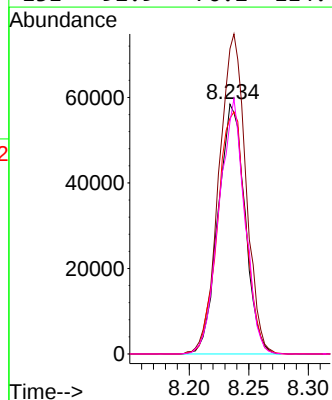
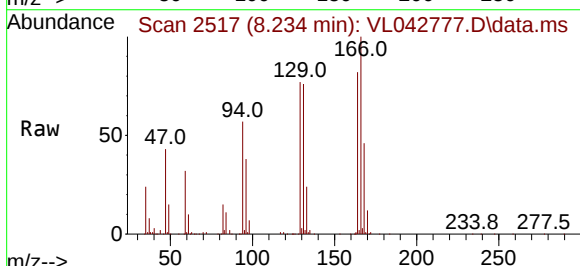
Ion Ratio Lower Upper

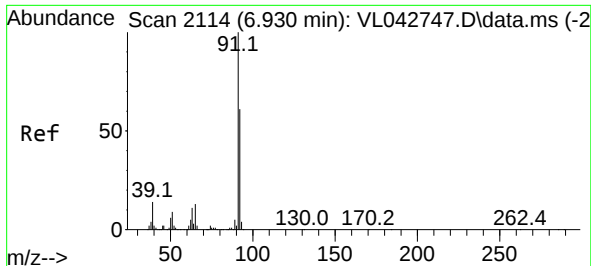
164 100

166 122.2 104.0 156.0

129 94.4 79.2 118.8

131 92.9 76.2 114.4

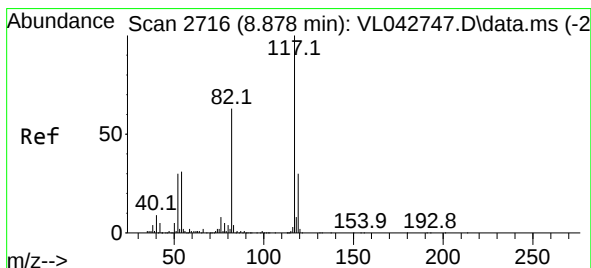
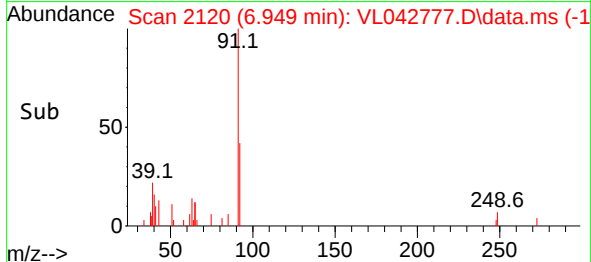
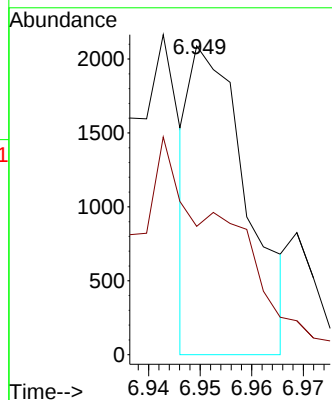
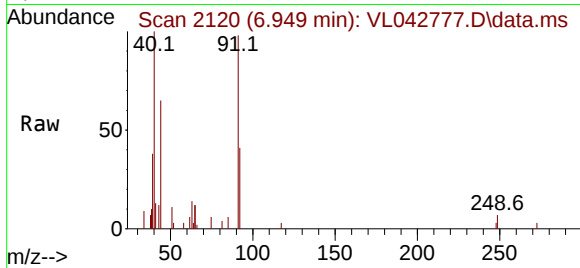




#53
Toluene
Concen: 0.038 ppbv
RT: 6.949 min Scan# 2114
Delta R.T. 0.019 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

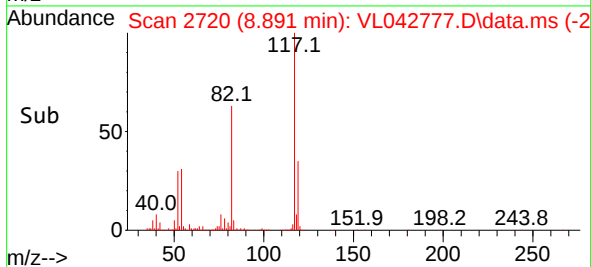
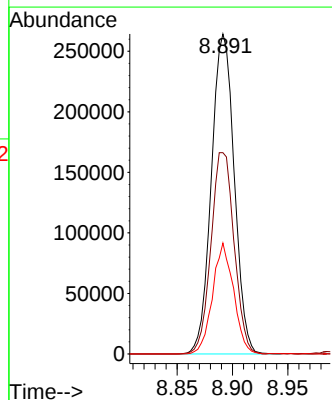
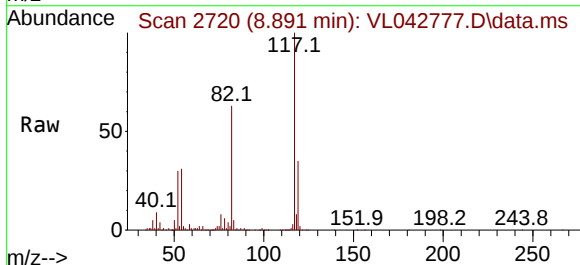
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

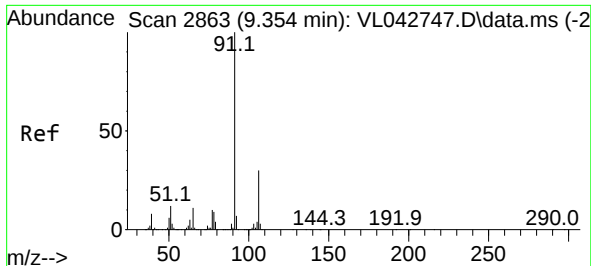
Tgt Ion: 91 Resp: 1594
Ion Ratio Lower Upper
91 100
92 0.0 48.0 72.0#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.891 min Scan# 2720
Delta R.T. 0.013 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 117 Resp: 379617
Ion Ratio Lower Upper
117 100
82 63.8 53.3 79.9
119 32.0 25.8 38.6

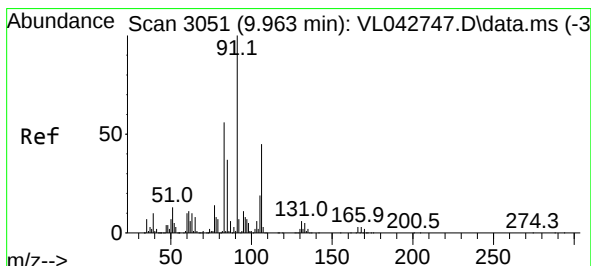
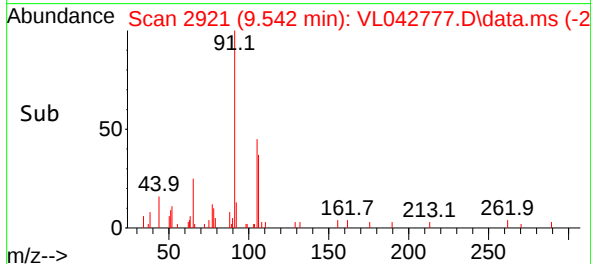
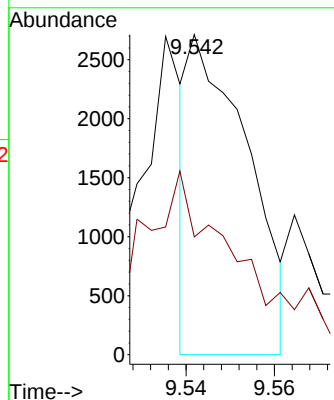
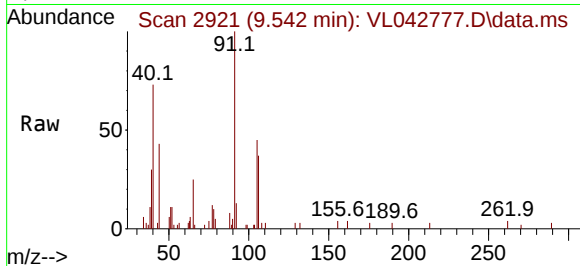




#58
Ethyl Benzene
Concen: 0.042 ppbv
RT: 9.542 min Scan# 2921
Delta R.T. 0.188 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

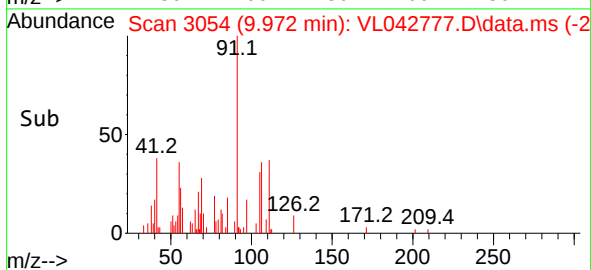
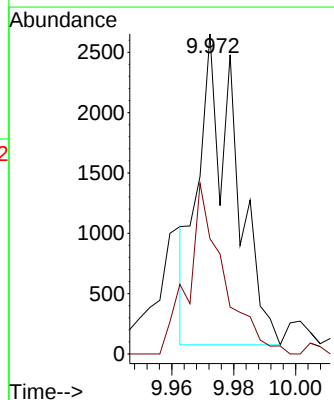
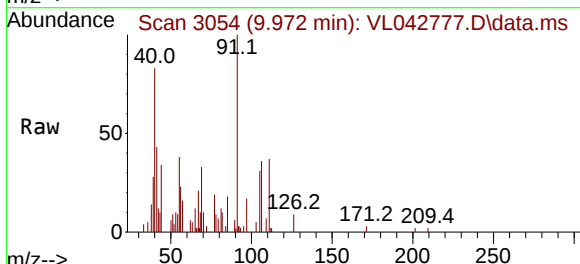
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

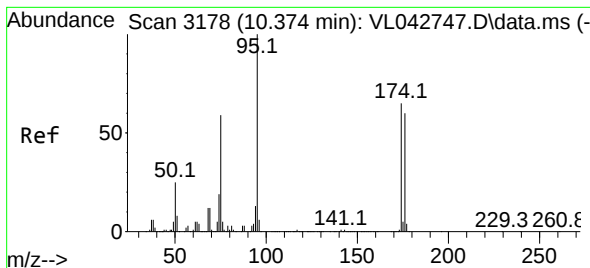
Tgt Ion: 91 Resp: 2520
Ion Ratio Lower Upper
91 100
106 24.4 23.8 35.6



#60
o-Xylene
Concen: 0.045 ppbv
RT: 9.972 min Scan# 3054
Delta R.T. 0.010 min
Lab File: VL042777.D
Acq: 29 Jul 2025 11:26

Tgt Ion: 91 Resp: 2152
Ion Ratio Lower Upper
91 100
106 53.1 22.0 66.0





#68

1-Bromo-4-Fluorobenzene

Concen: 10.210 ppbv

RT: 10.383 min Scan# 3181

Delta R.T. 0.010 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

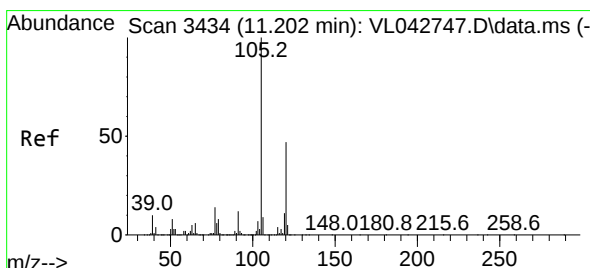
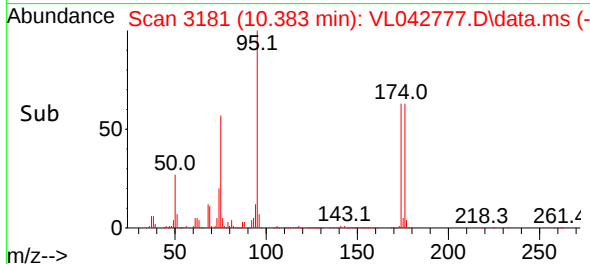
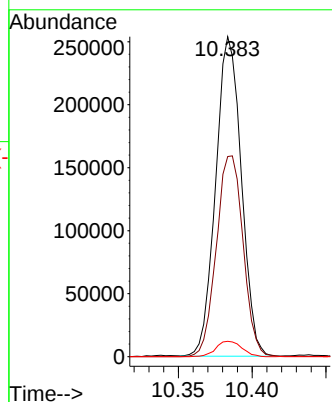
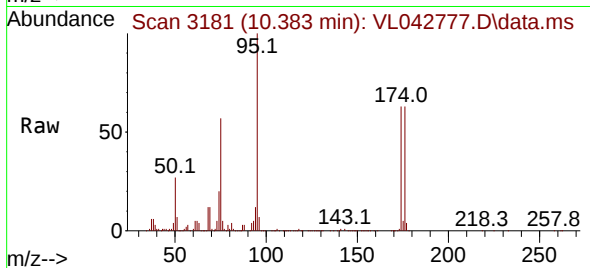
Tgt Ion: 95 Resp: 306954

Ion Ratio Lower Upper

95 100

174 65.6 53.8 80.6

175 4.9 4.0 6.0



#73

1,3,5-Trimethylbenzene

Concen: 0.035 ppbv

RT: 11.212 min Scan# 3437

Delta R.T. 0.010 min

Lab File: VL042777.D

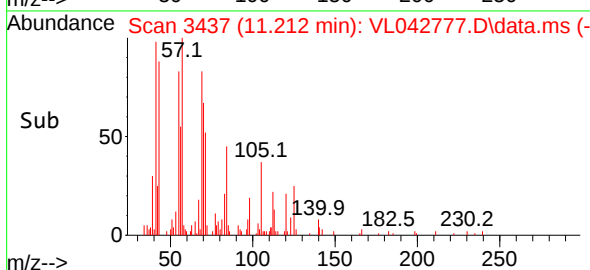
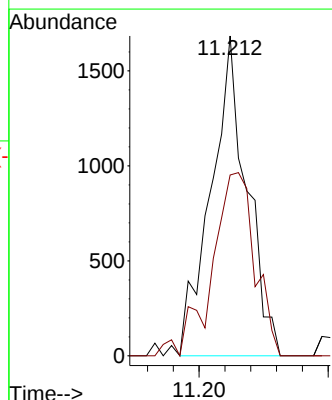
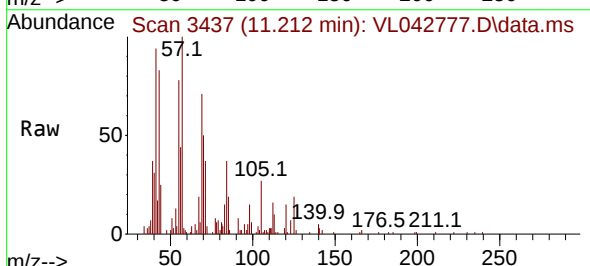
Acq: 29 Jul 2025 11:26

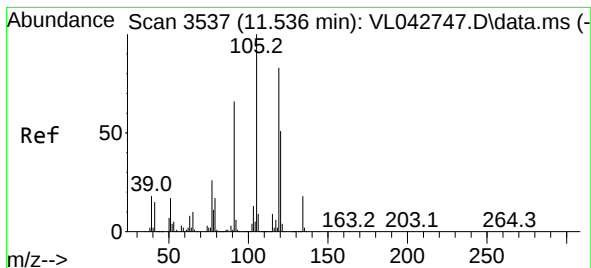
Tgt Ion: 105 Resp: 1627

Ion Ratio Lower Upper

105 100

120 56.5 37.8 56.8





#74

1,2,4-Trimethylbenzene

Concen: 0.035 ppbv

RT: 11.545 min Scan# 3

Delta R.T. 0.010 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tgt Ion:105 Resp: 1806

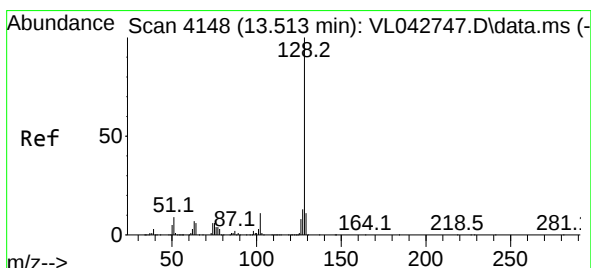
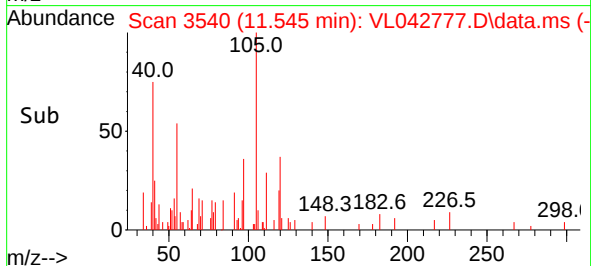
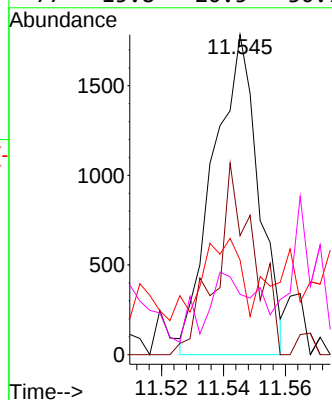
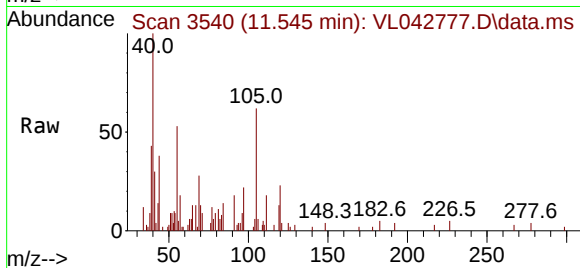
Ion Ratio Lower Upper

105 100

120 45.7 40.8 61.2

91 11.7 53.0 79.4#

77 15.8 20.5 30.7#



#79

Naphthalene

Concen: 0.438 ppbv

RT: 13.539 min Scan# 4156

Delta R.T. 0.026 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

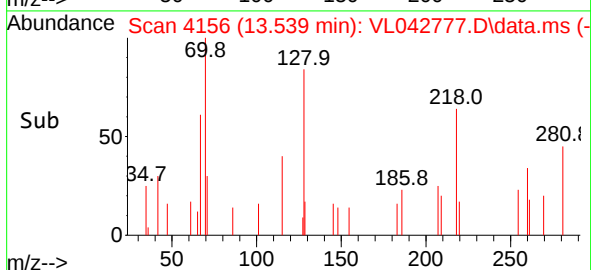
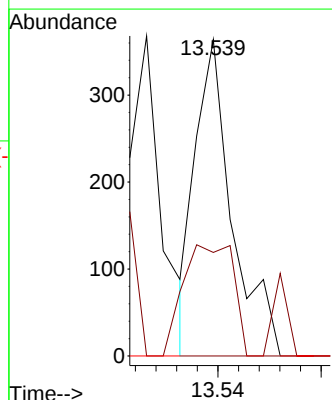
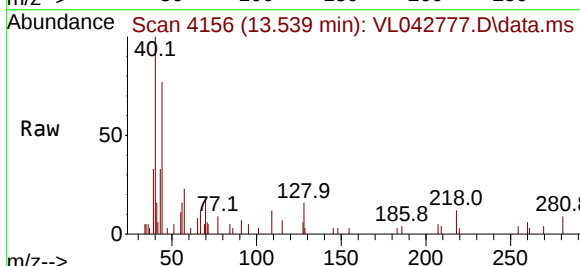
Tgt Ion:128 Resp: 180

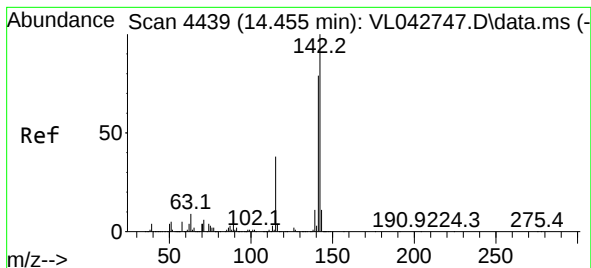
Ion Ratio Lower Upper

128 100

127 12.4 10.5 15.7

129 0.0 8.6 13.0#





#80

Naphthalene, 2-methyl-

Concen: 1.135 ppbv

RT: 14.481 min Scan# 4447

Delta R.T. 0.026 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

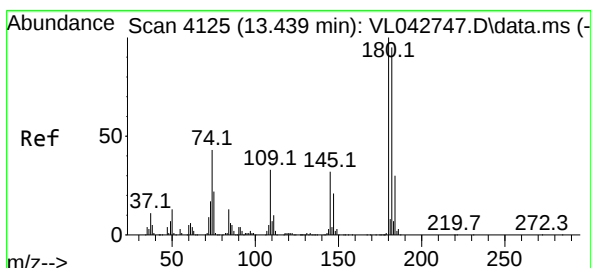
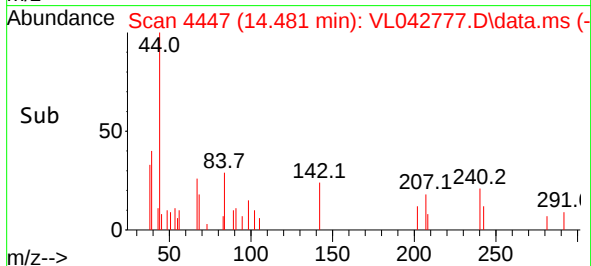
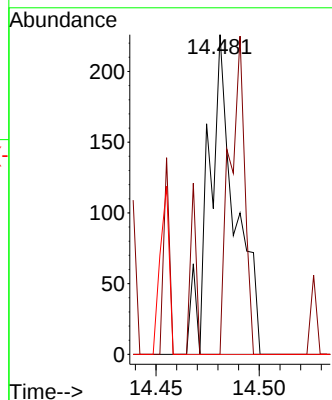
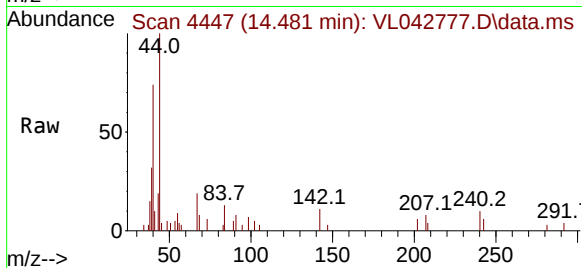
Tgt Ion:142 Resp: 200

Ion Ratio Lower Upper

142 100

141 57.0 65.8 98.8#

115 18.5 31.2 46.8#



#81

1,2,4-Trichlorobenzene

Concen: 0.437 ppbv

RT: 13.452 min Scan# 4129

Delta R.T. 0.013 min

Lab File: VL042777.D

Acq: 29 Jul 2025 11:26

Tgt Ion:180 Resp: 69

Ion Ratio Lower Upper

180 100

182 242.0 76.2 114.2#

184 39.1 24.8 37.2#

