

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072225\
 Data File : VL042742.D
 Acq On : 22 Jul 2025 22:39
 Operator : SY/MD
 Sample : Q2632-01DL 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

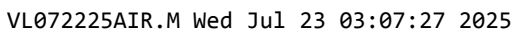
Quant Time: Jul 23 03:07:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Jul 23 02:51:39 2025
 Response via : Initial Calibration

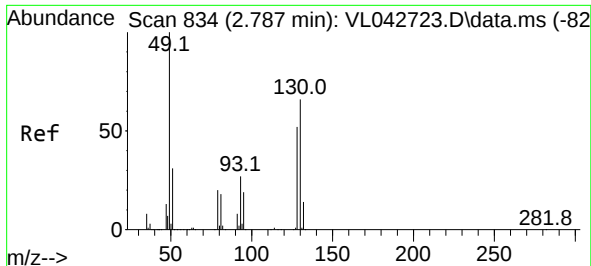
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	114495	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	338585	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	297519	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	246109	10.235	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.300%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	787	0.044	ppbv	99
4) Chloromethane	1.531	50	564	0.077	ppbv	90
9) Propene	1.486	41	1791	0.250	ppbv	87
13) Ethanol	1.722	45	21948	18.191	ppbv	100
15) Acetone	1.835	43	176470	9.205	ppbv	97
16) 1,3-Butadiene	1.596	39	868	0.106	ppbv #	16
17) tert-Butyl alcohol	2.046	59	2385	0.131	ppbv #	59
19) Isopropyl Alcohol	1.887	45	26496	2.608	ppbv #	1
20) Methylene Chloride	2.059	84	4008	0.665	ppbv #	92
23) Vinyl Acetate	2.457	43	1723	0.079	ppbv #	62
25) Ethyl Acetate	2.836	43	4364	0.123	ppbv #	72
26) Hexane	2.826	57	1851	0.119	ppbv #	1
34) 2-Butanone	2.560	43	14186	0.608	ppbv	99
37) 1,2-Dichloroethane	3.224	62	1788	0.089	ppbv #	82
39) 1,2-Dichloropropane	3.959	63	87190	7.444	ppbv #	21
41) Tetrahydrofuran	3.065	42	3269	0.278	ppbv #	36
50) 4-Methyl-2-Pentanone	5.761	43	5604	0.183	ppbv #	13
53) Toluene	6.930	91	79029	2.228	ppbv	99
58) Ethyl Benzene	9.552	91	5892	0.119	ppbv	97
59) m/p-Xylene	9.529	91	25074	0.631	ppbv #	85
60) o-Xylene	9.963	91	18730	0.467	ppbv	97
61) Styrene	9.872	104	2057	0.119	ppbv #	50
62) Isopropylbenzene	10.536	105	3600	0.060	ppbv	96
64) n-propylbenzene	10.985	120	2302	0.153	ppbv	80
65) tert-Butylbenzene	11.539	119	6512	0.122	ppbv #	56
67) sec-Butylbenzene	11.879	105	12271	0.167	ppbv	98
69) p-Isopropyltoluene	11.924	119	10919	0.178	ppbv	95
71) 2-Chlorotoluene	11.202	91	1787	0.040	ppbv	77
72) 4-Ethyltoluene	11.125	105	11805	0.247	ppbv #	61
73) 1,3,5-Trimethylbenzene	11.202	105	19316	0.488	ppbv	98
74) 1,2,4-Trimethylbenzene	11.536	105	51091	1.176	ppbv #	57
79) Naphthalene	13.513	128	2037	0.063	ppbv #	87

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

Quant Time: Jul 23 03:07:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Jul 23 02:51:39 2025
Response via : Initial Calibration

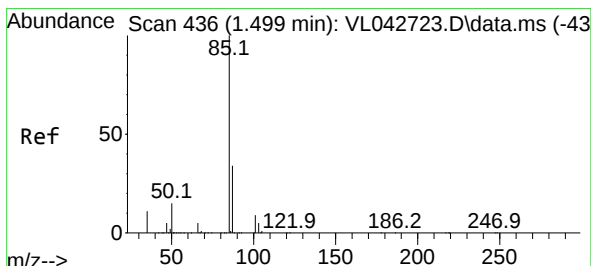
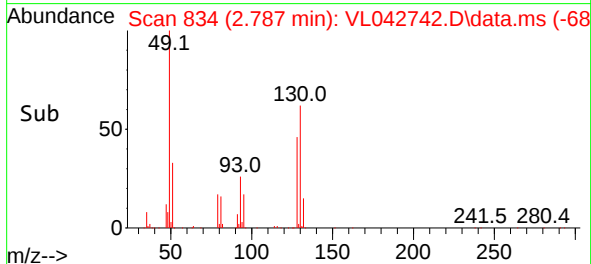
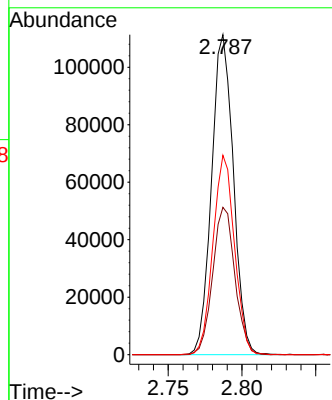
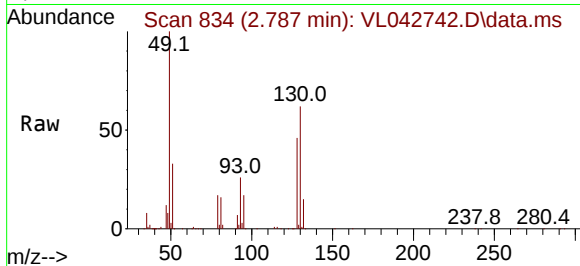




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

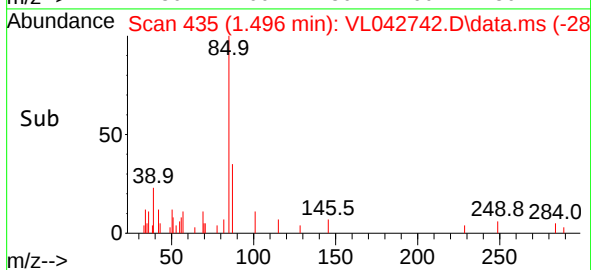
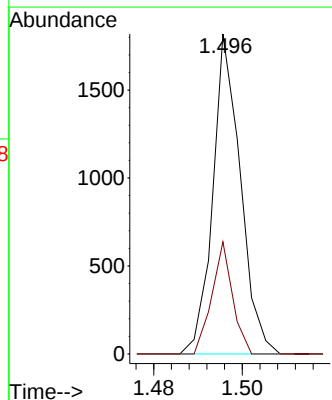
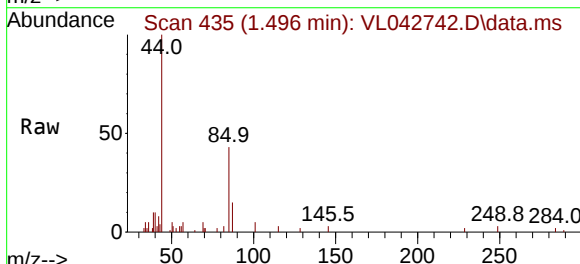
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

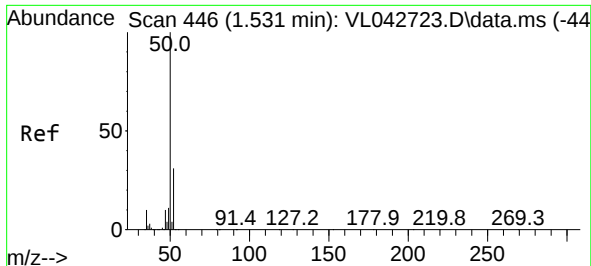
Tgt Ion: 49 Resp: 114495
Ion Ratio Lower Upper
49 100
128 46.9 24.5 73.5
130 61.5 31.7 95.1



#2
Dichlorodifluoromethane
Concen: 0.044 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion: 85 Resp: 787
Ion Ratio Lower Upper
85 100
87 35.0 27.5 41.3

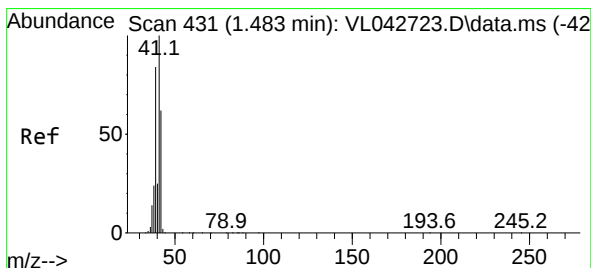
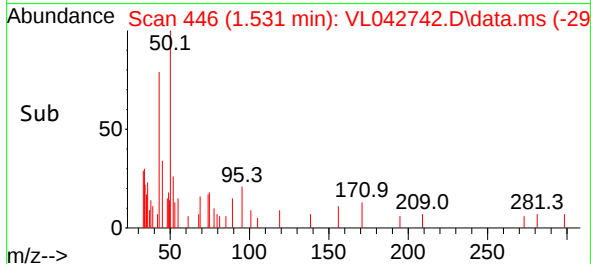
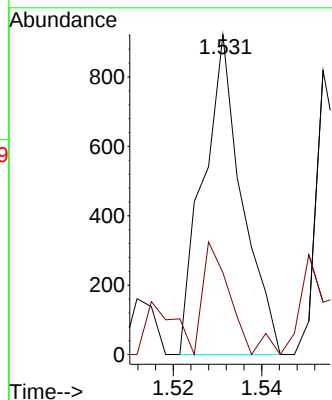
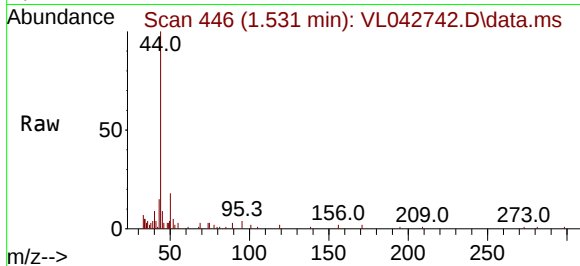




#4
Chloromethane
Concen: 0.077 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

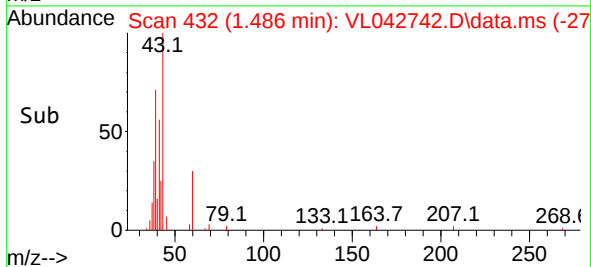
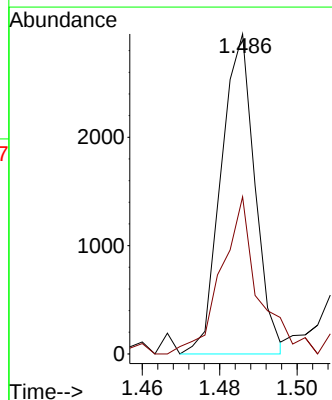
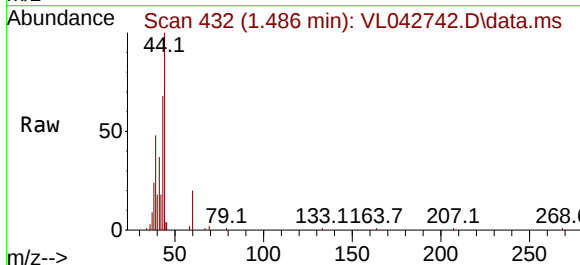
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

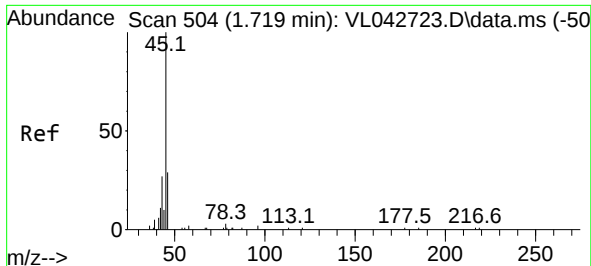
Tgt Ion: 50 Resp: 564
Ion Ratio Lower Upper
50 100
52 25.6 24.9 37.3



#9
Propene
Concen: 0.250 ppbv
RT: 1.486 min Scan# 432
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion: 41 Resp: 1791
Ion Ratio Lower Upper
41 100
42 54.4 52.0 78.0

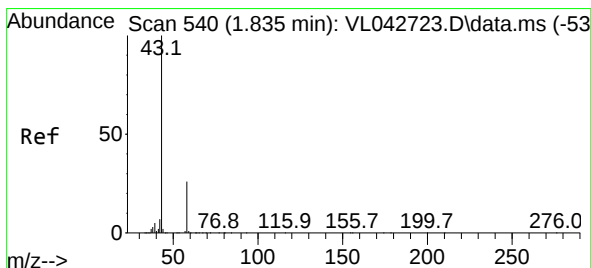
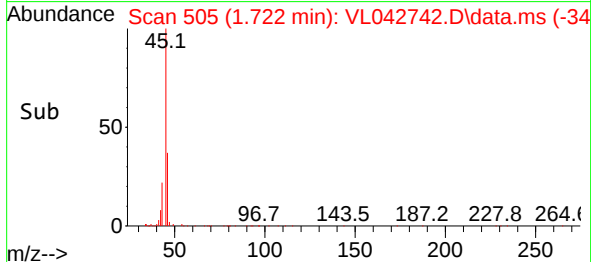
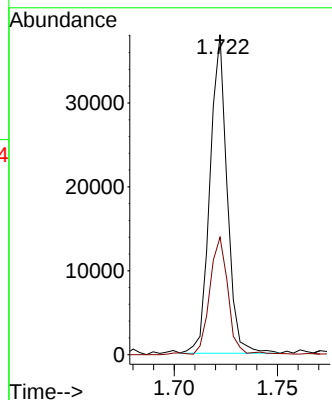
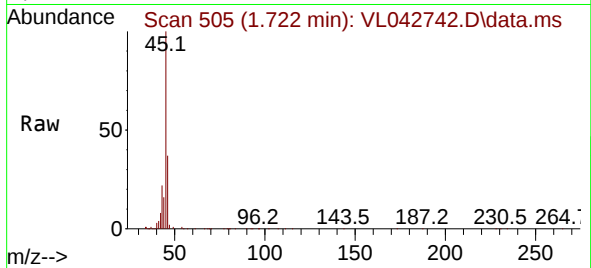




#13
Ethanol
Concen: 18.191 ppbv
RT: 1.722 min Scan# 504
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

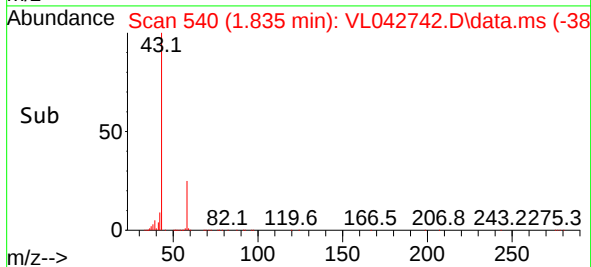
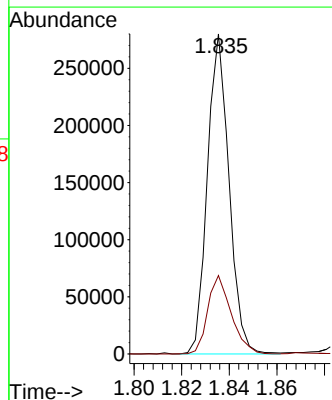
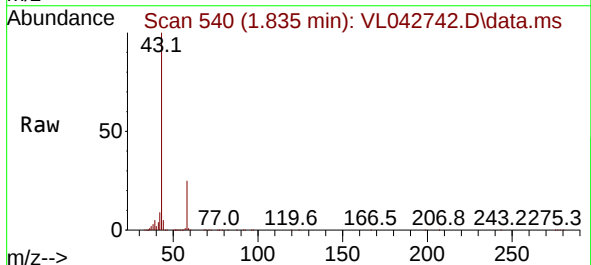
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

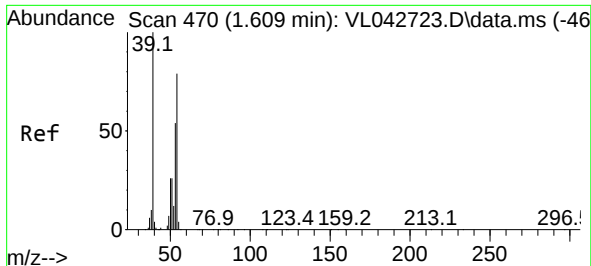
Tgt Ion: 45 Resp: 21948
Ion Ratio Lower Upper
45 100
46 40.8 16.3 65.1



#15
Acetone
Concen: 9.205 ppbv
RT: 1.835 min Scan# 540
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion: 43 Resp: 176470
Ion Ratio Lower Upper
43 100
58 27.4 20.5 30.7





#16

1,3-Butadiene

Concen: 0.106 ppbv

RT: 1.596 min Scan# 4

Delta R.T. -0.013 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

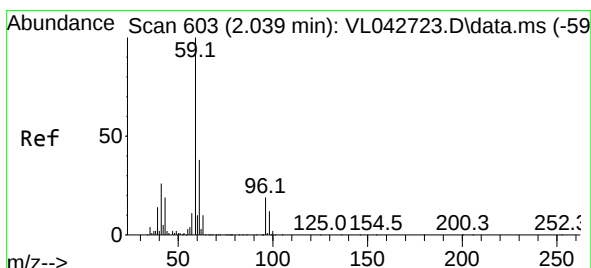
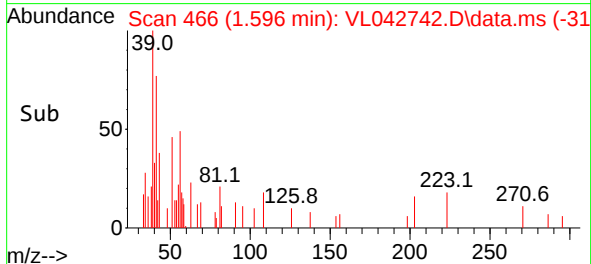
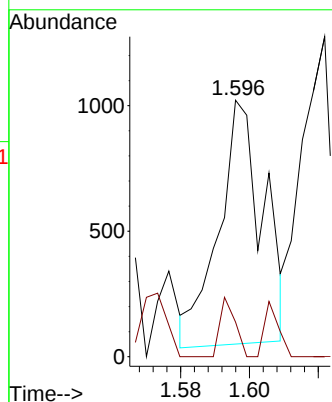
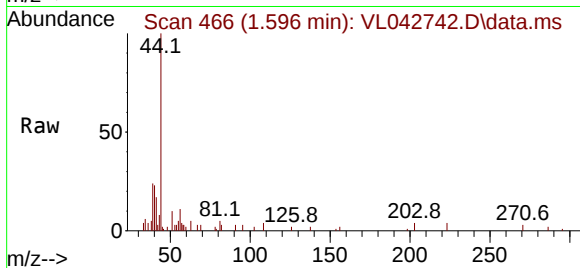
IA1DL

Tgt Ion: 39 Resp: 868

Ion Ratio Lower Upper

39 100

54 0.0 54.6 82.0#



#17

tert-Butyl alcohol

Concen: 0.131 ppbv

RT: 2.046 min Scan# 605

Delta R.T. 0.007 min

Lab File: VL042742.D

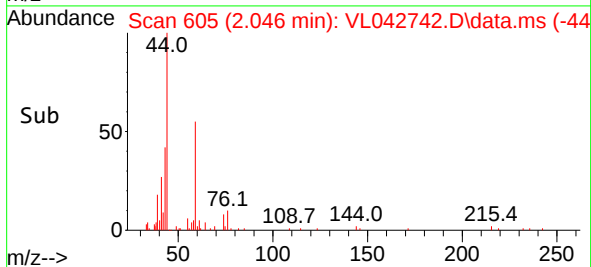
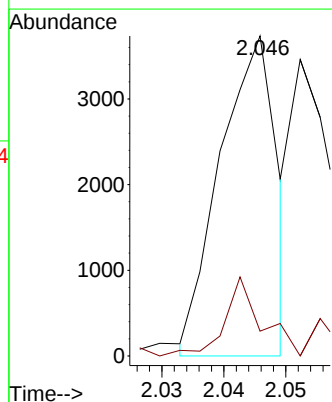
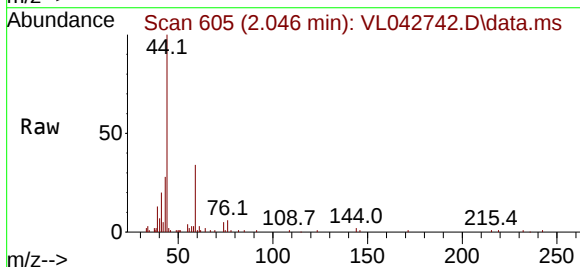
Acq: 22 Jul 2025 22:39

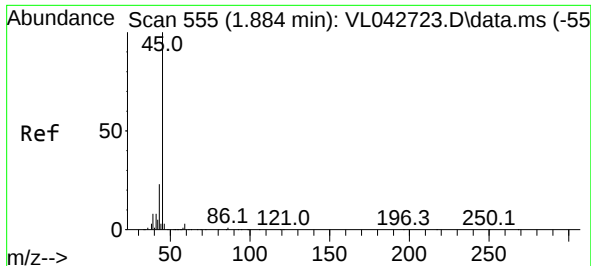
Tgt Ion: 59 Resp: 2385

Ion Ratio Lower Upper

59 100

57 27.2 9.1 13.7#





#19

Isopropyl Alcohol

Concen: 2.608 ppbv

RT: 1.887 min Scan# 51

Delta R.T. 0.003 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

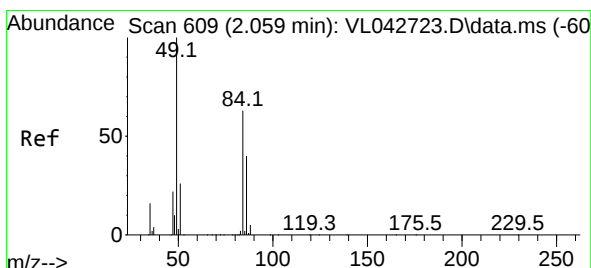
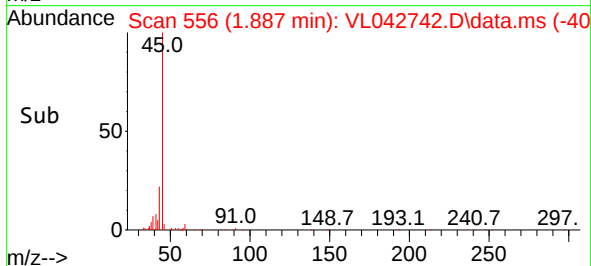
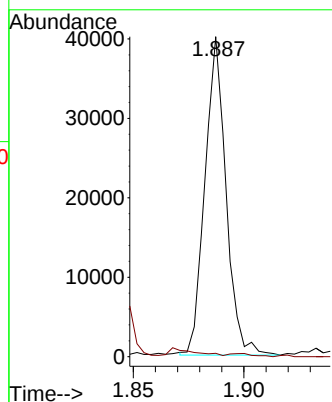
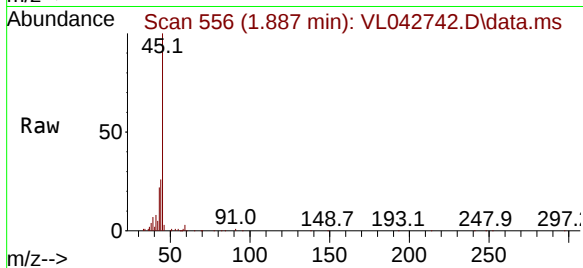
IA1DL

Tgt Ion: 45 Resp: 26496

Ion Ratio Lower Upper

45 100

58 182.3 30.6 46.0#



#20

Methylene Chloride

Concen: 0.665 ppbv

RT: 2.059 min Scan# 609

Delta R.T. 0.000 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Tgt Ion: 84 Resp: 4008

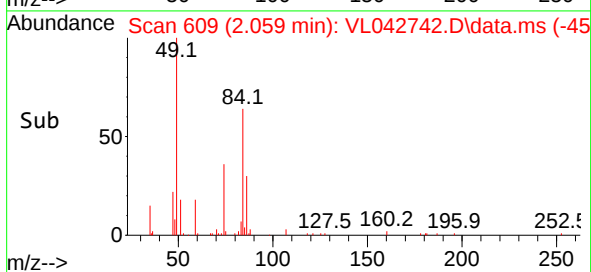
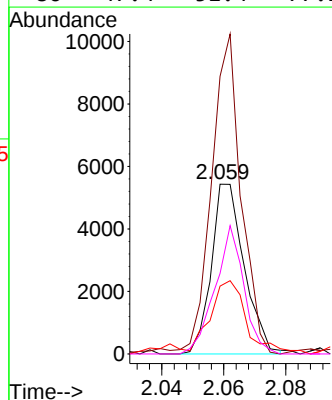
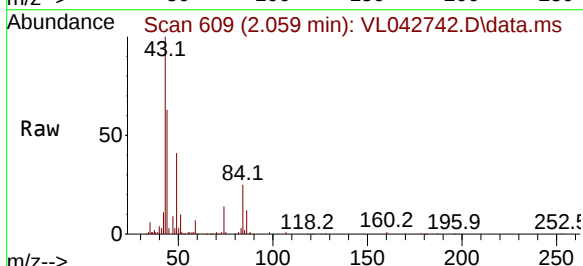
Ion Ratio Lower Upper

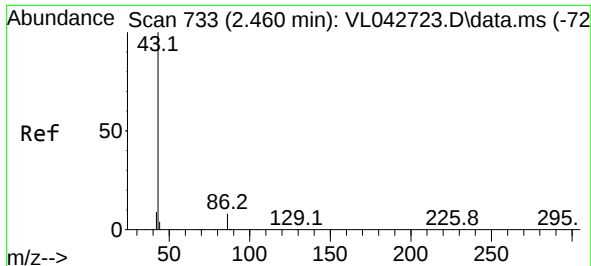
84 100

49 163.5 128.2 192.4

51 39.4 34.5 51.7

86 47.4 51.4 77.2#

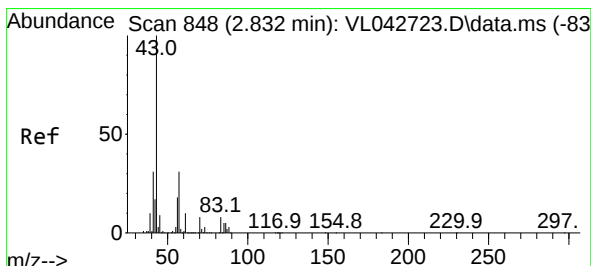
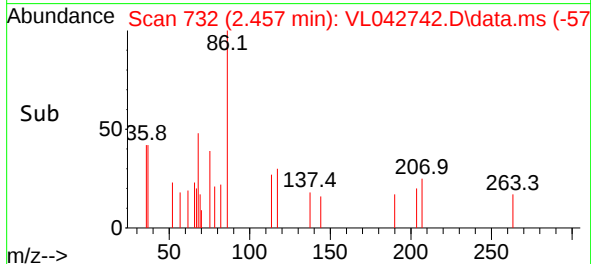
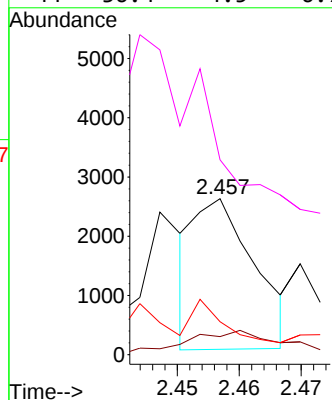
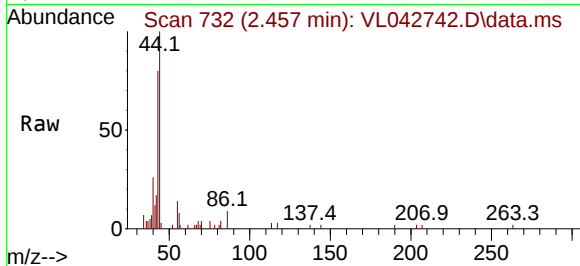




#23
 Vinyl Acetate
 Concen: 0.079 ppbv
 RT: 2.457 min Scan# 71
 Delta R.T. -0.003 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

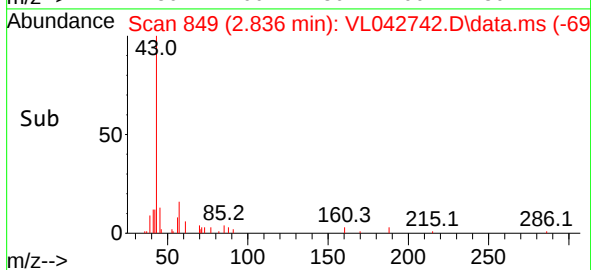
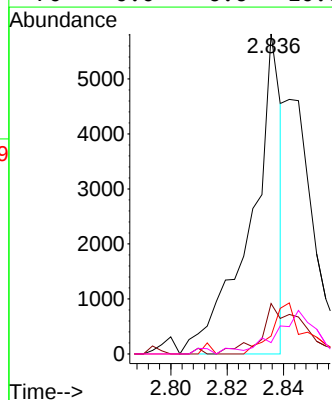
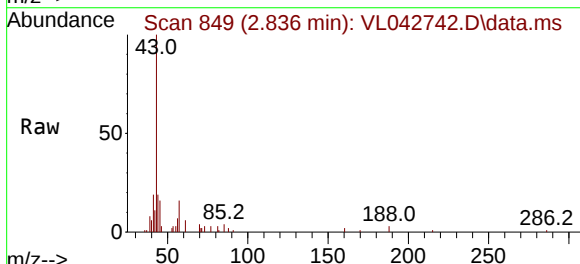
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

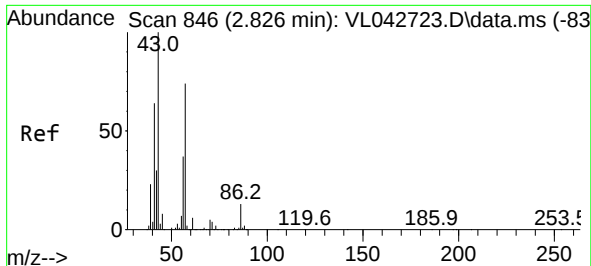
Tgt Ion: 43	Resp: 1723
Ion Ratio	Lower Upper
43 100	
86 8.1	5.7 8.5
42 21.7	7.9 11.9#
44 36.4	4.5 6.7#



#25
 Ethyl Acetate
 Concen: 0.123 ppbv
 RT: 2.836 min Scan# 849
 Delta R.T. 0.003 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

Tgt	Ion: 43	Resp:	4364
Ion	Ratio	Lower	Upper
43	100		
45	22.5	7.8	11.6#
61	0.0	7.0	10.6#
70	0.0	6.6	10.0#

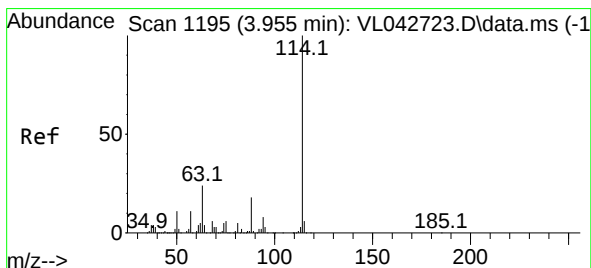
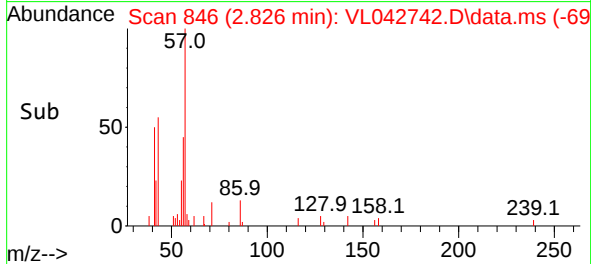
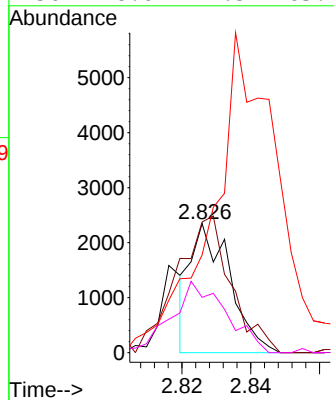
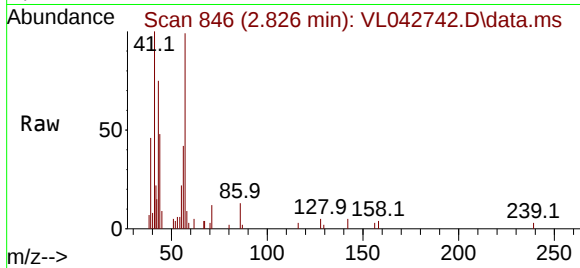




#26
Hexane
Concen: 0.119 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

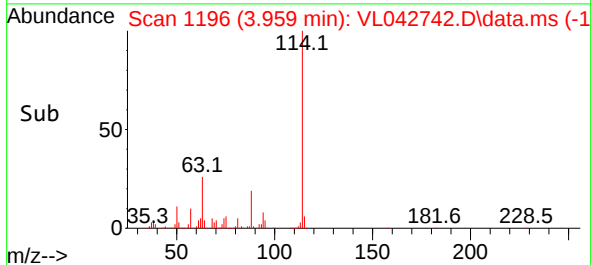
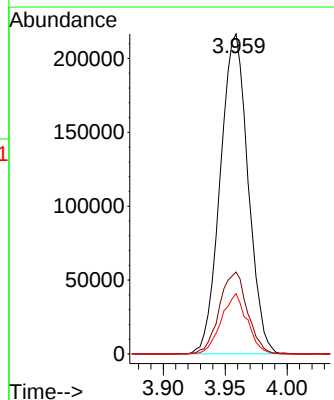
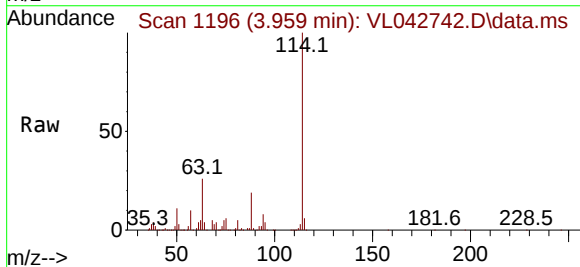
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

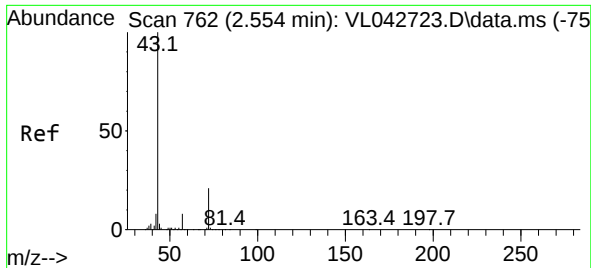
Tgt Ion: 57	Resp: 1851
Ion Ratio	Lower Upper
57 100	
41 158.5	77.3 115.9#
43 462.8	182.3 273.5#
56 78.6	42.5 63.7#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion:114	Resp: 338585		
Ion Ratio	Lower	Upper	
114 100			
63 25.8	20.4	30.6	
88 17.6	14.5	21.7	

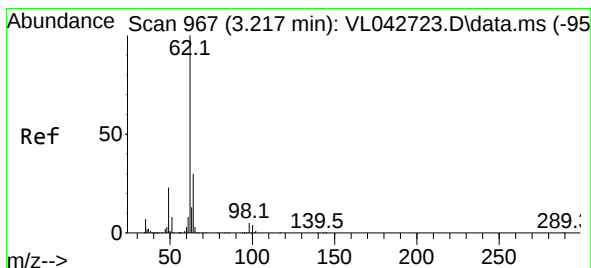
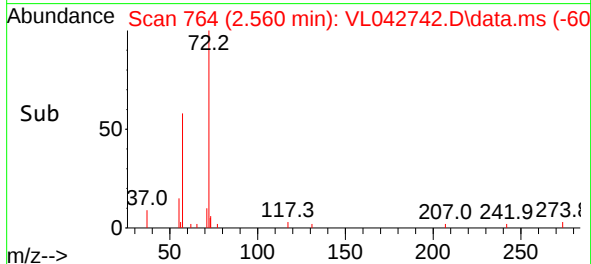
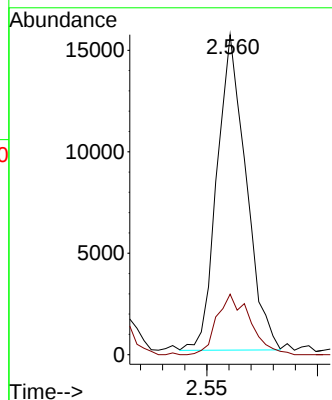
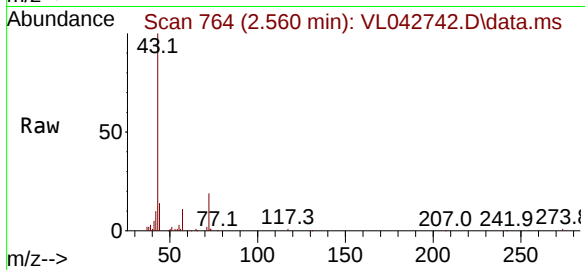




#34
2-Butanone
Concen: 0.608 ppbv
RT: 2.560 min Scan# 764
Delta R.T. 0.007 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

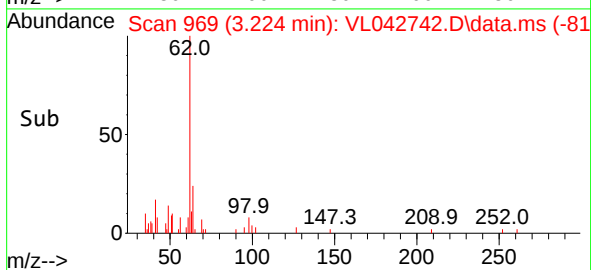
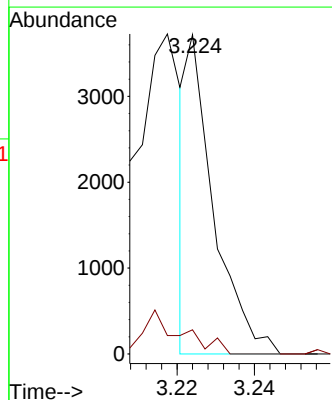
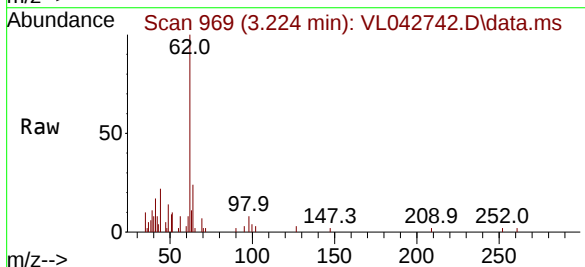
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

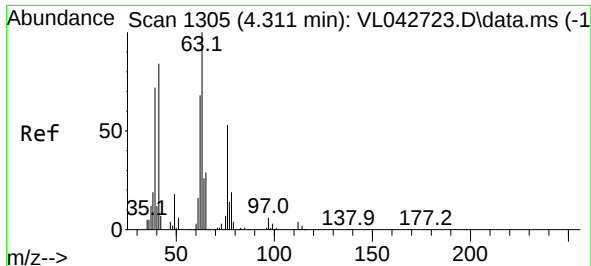
Tgt Ion: 43 Resp: 14186
Ion Ratio Lower Upper
43 100
72 22.0 17.0 25.6



#37
1,2-Dichloroethane
Concen: 0.089 ppbv
RT: 3.224 min Scan# 969
Delta R.T. 0.007 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion: 62 Resp: 1788
Ion Ratio Lower Upper
62 100
98 0.0 4.8 7.2#





#39

1,2-Dichloropropane

Concen: 7.444 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.353 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

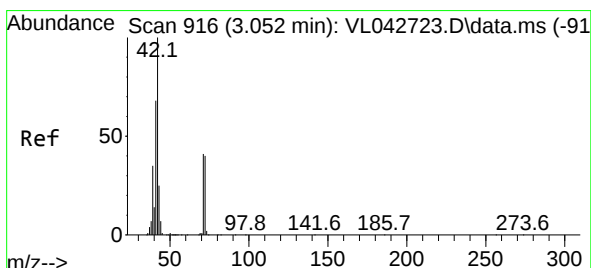
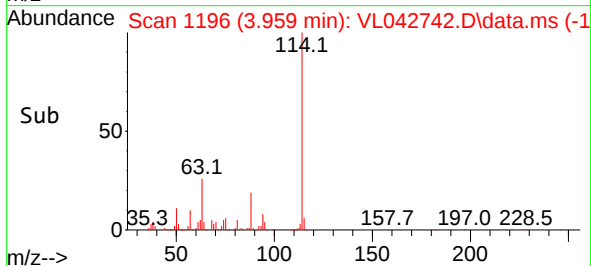
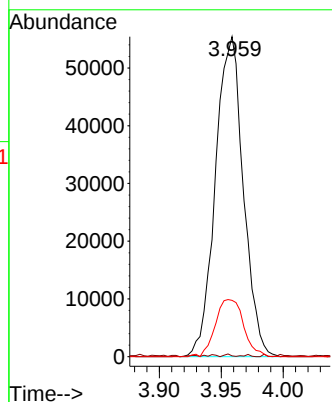
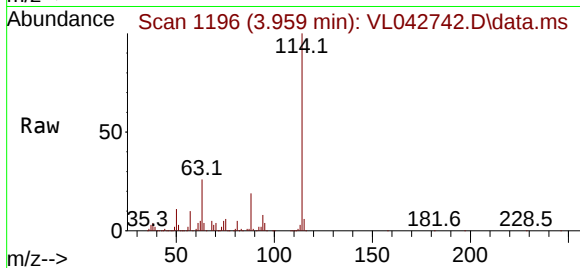
Tgt Ion: 63 Resp: 87190

Ion Ratio Lower Upper

63 100

41 0.3 67.7 101.5#

62 17.6 54.1 81.1#



#41

Tetrahydrofuran

Concen: 0.278 ppbv

RT: 3.065 min Scan# 920

Delta R.T. 0.013 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

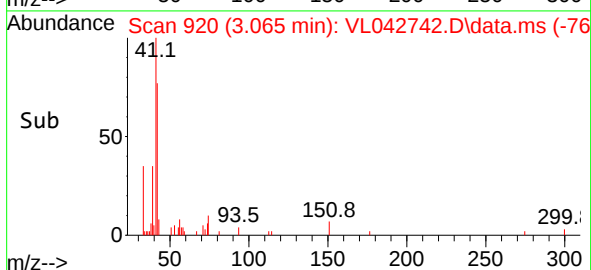
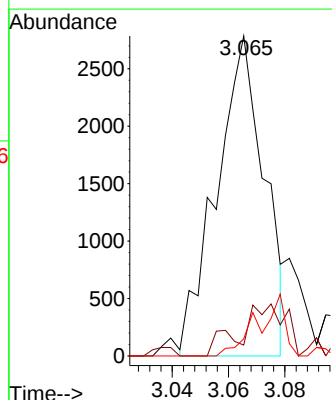
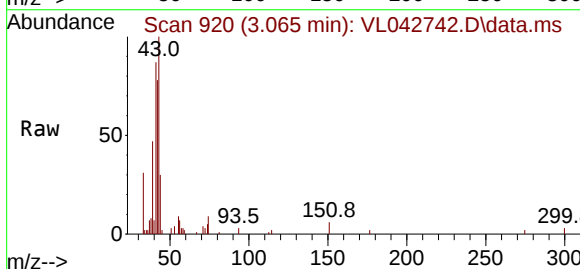
Tgt Ion: 42 Resp: 3269

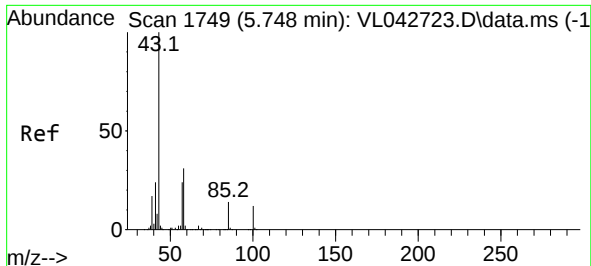
Ion Ratio Lower Upper

42 100

72 0.0 32.2 48.2#

71 0.0 29.8 44.6#





#50

4-Methyl-2-Pentanone

Concen: 0.183 ppbv

RT: 5.761 min Scan# 1753

Delta R.T. 0.013 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

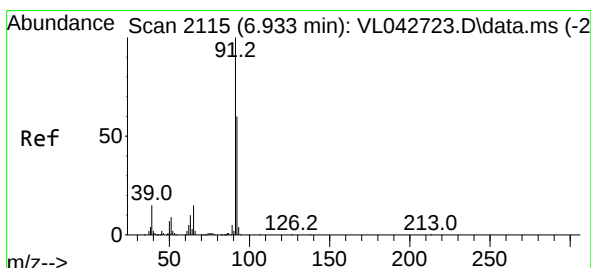
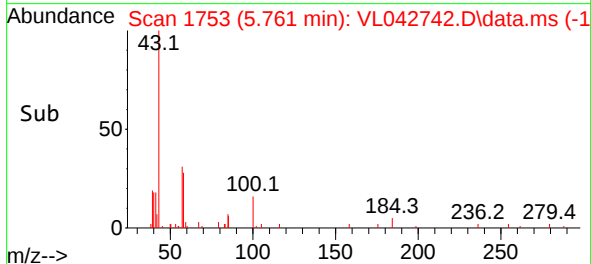
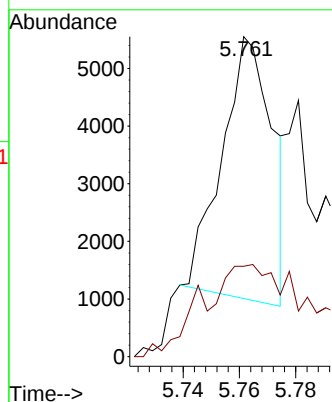
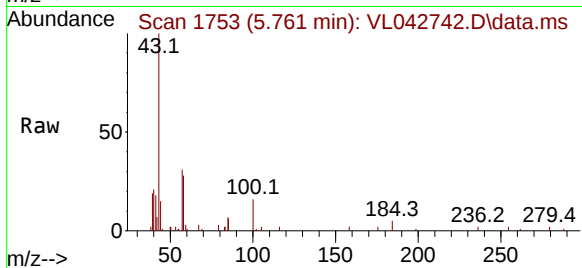
IA1DL

Tgt Ion: 43 Resp: 5604

Ion Ratio Lower Upper

43 100

58 84.7 27.6 41.4#



#53

Toluene

Concen: 2.228 ppbv

RT: 6.930 min Scan# 2114

Delta R.T. -0.003 min

Lab File: VL042742.D

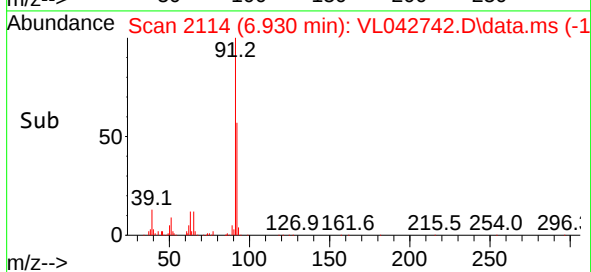
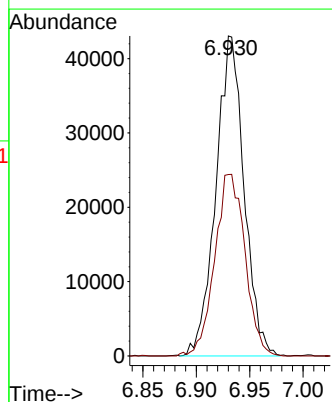
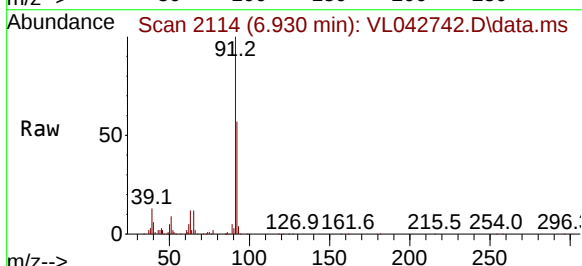
Acq: 22 Jul 2025 22:39

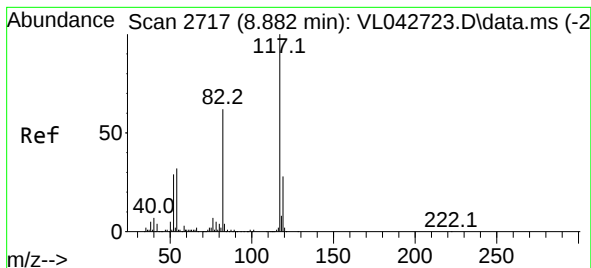
Tgt Ion: 91 Resp: 79029

Ion Ratio Lower Upper

91 100

92 61.0 48.2 72.4





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.882 min Scan# 21

Delta R.T. 0.000 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

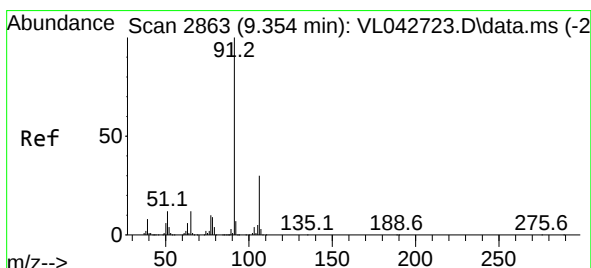
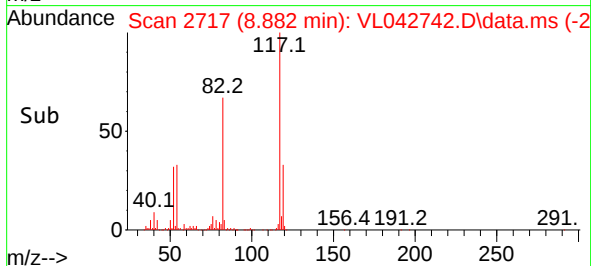
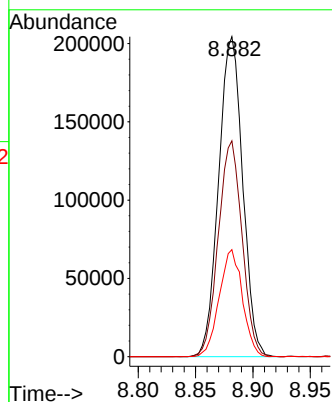
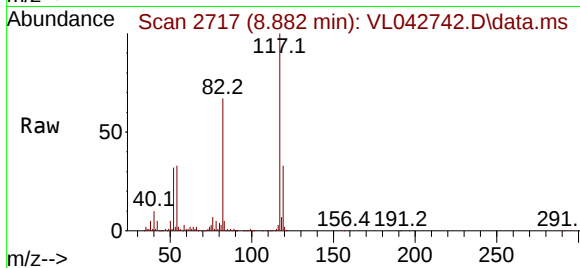
Tgt Ion:117 Resp: 297519

Ion Ratio Lower Upper

117 100

82 66.8 54.6 81.8

119 32.4 25.3 37.9



#58

Ethyl Benzene

Concen: 0.119 ppbv

RT: 9.552 min Scan# 2924

Delta R.T. 0.198 min

Lab File: VL042742.D

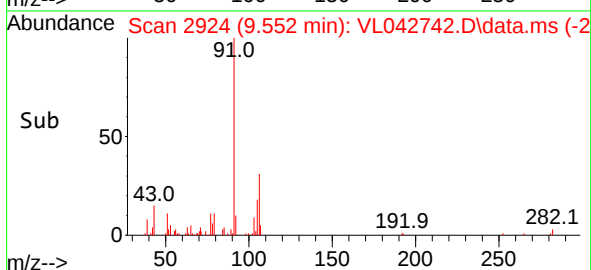
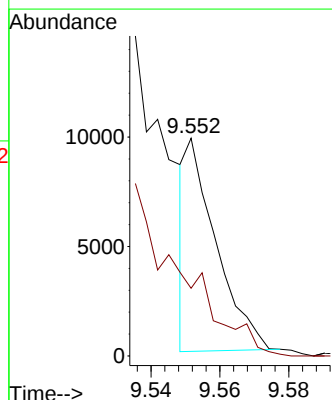
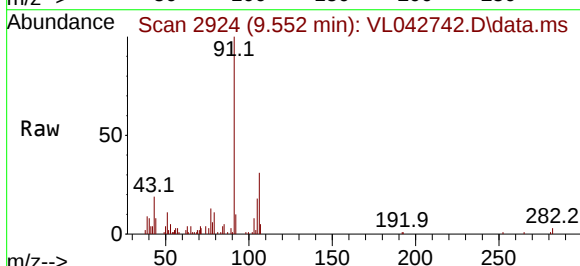
Acq: 22 Jul 2025 22:39

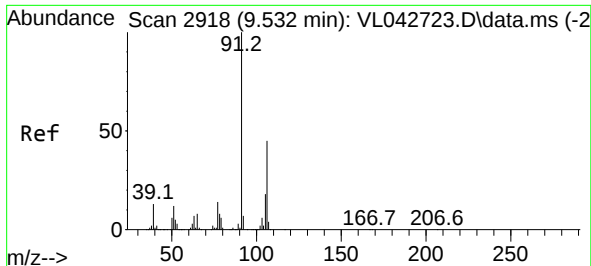
Tgt Ion: 91 Resp: 5892

Ion Ratio Lower Upper

91 100

106 31.2 23.7 35.5





#59

m/p-Xylene

Concen: 0.631 ppbv

RT: 9.529 min Scan# 2917

Delta R.T. -0.003 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

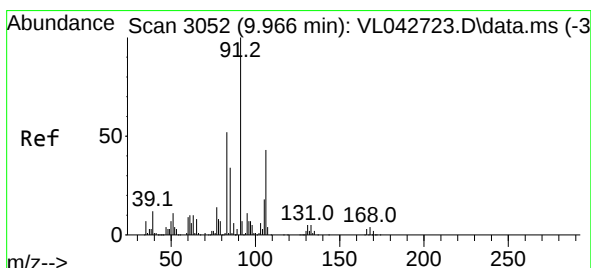
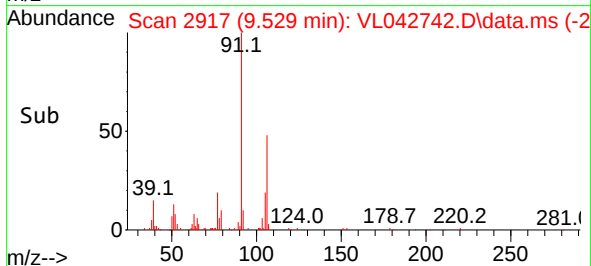
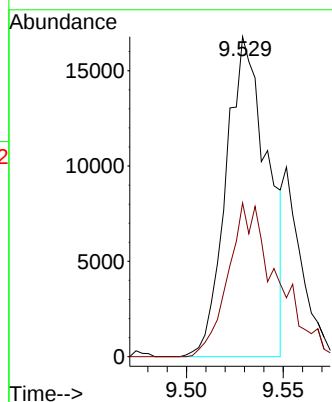
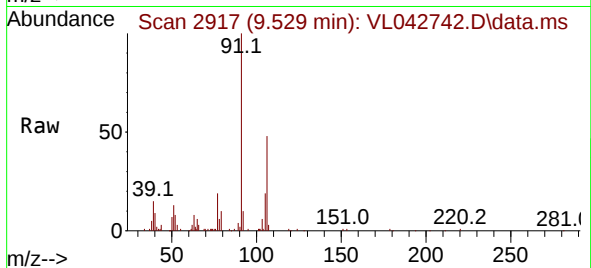
IA1DL

Tgt Ion: 91 Resp: 25074

Ion Ratio Lower Upper

91 100

106 56.4 37.3 55.9#



#60

o-Xylene

Concen: 0.467 ppbv

RT: 9.963 min Scan# 3051

Delta R.T. -0.003 min

Lab File: VL042742.D

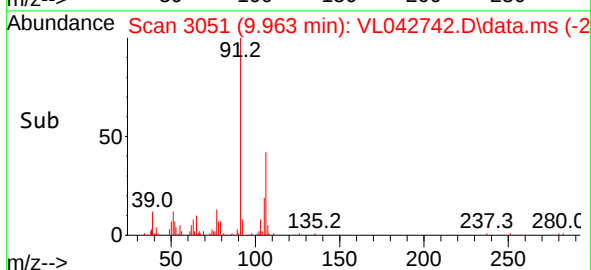
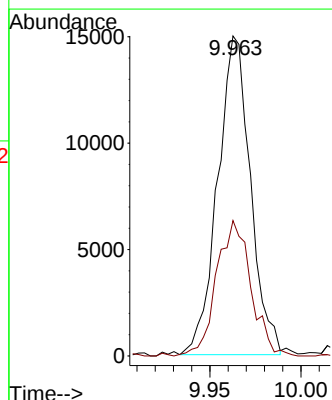
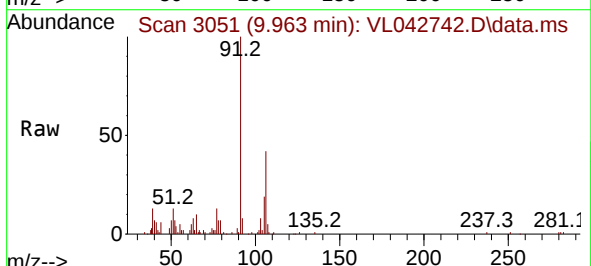
Acq: 22 Jul 2025 22:39

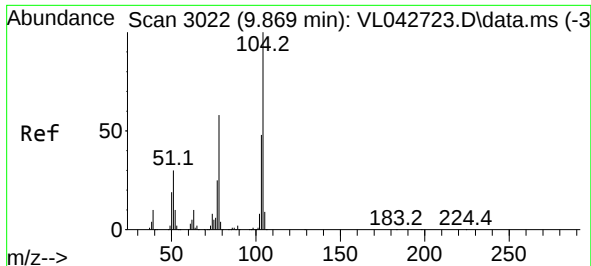
Tgt Ion: 91 Resp: 18730

Ion Ratio Lower Upper

91 100

106 44.8 21.4 64.3

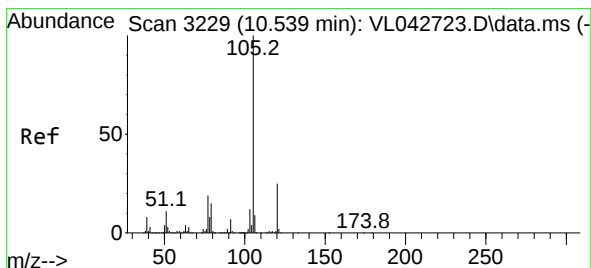
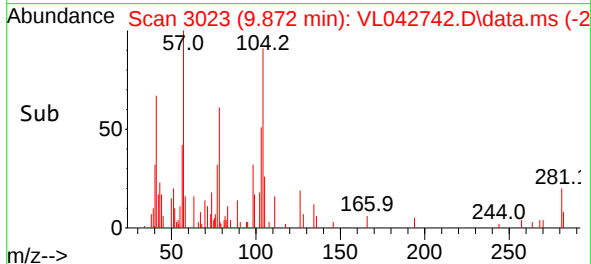
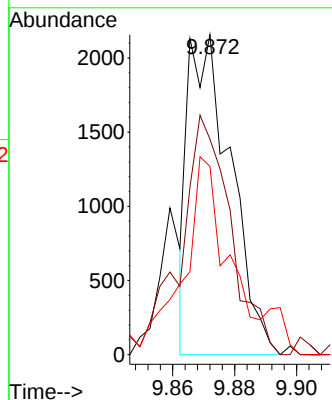
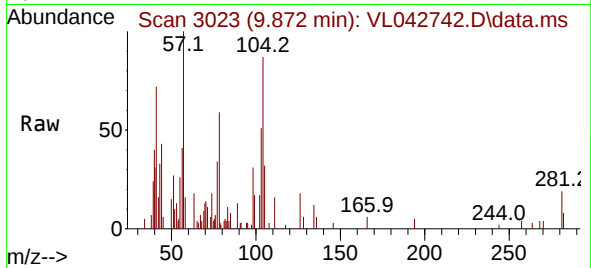




#61
Styrene
Concen: 0.119 ppbv
RT: 9.872 min Scan# 3023
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

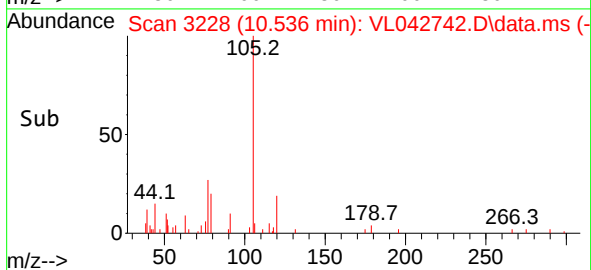
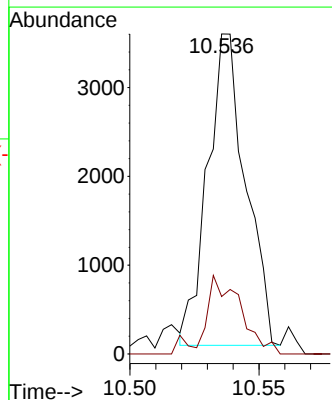
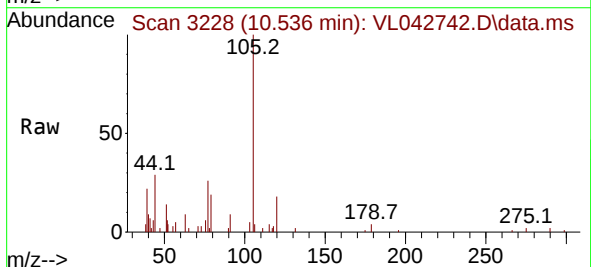
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

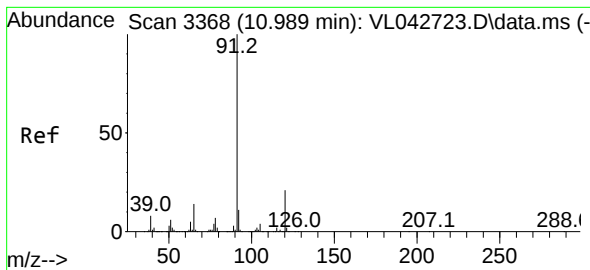
Tgt Ion:104 Resp: 2057
Ion Ratio Lower Upper
104 100
78 94.7 43.4 65.2#
103 76.2 37.8 56.6#



#62
Isopropylbenzene
Concen: 0.060 ppbv
RT: 10.536 min Scan# 3228
Delta R.T. -0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion:105 Resp: 3600
Ion Ratio Lower Upper
105 100
120 23.4 20.2 30.2

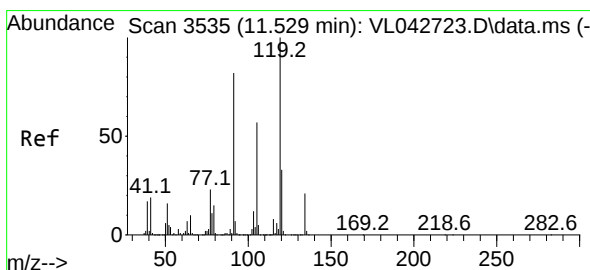
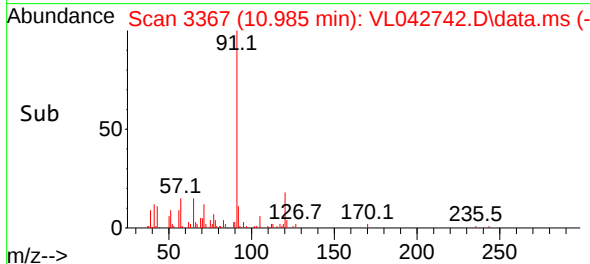
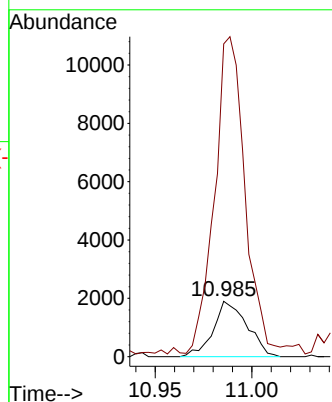
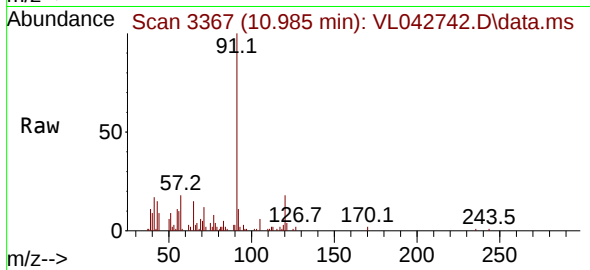




#64
n-propylbenzene
Concen: 0.153 ppbv
RT: 10.985 min Scan# 31
Delta R.T. -0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

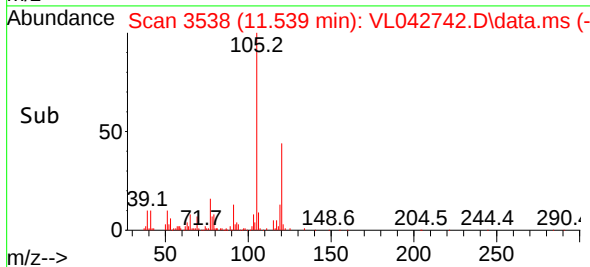
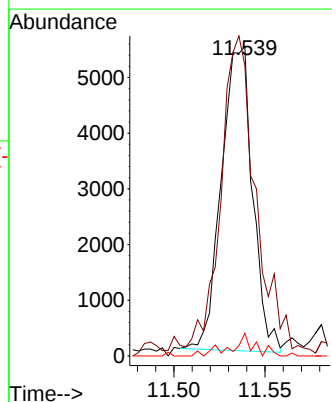
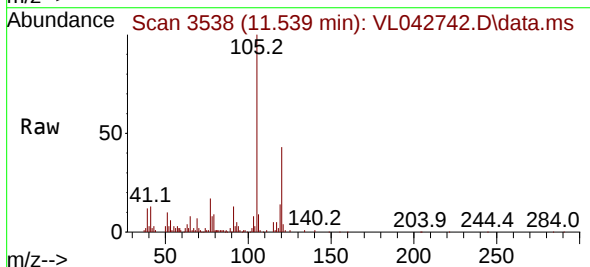
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

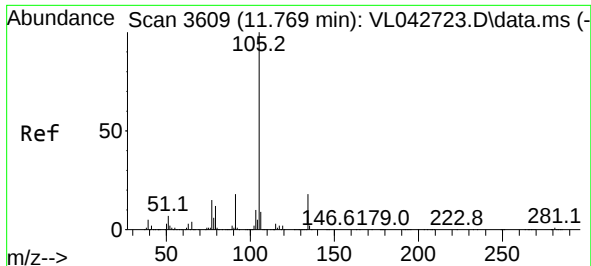
Tgt Ion:120 Resp: 2302
Ion Ratio Lower Upper
120 100
91 525.5 377.4 566.0



#65
tert-Butylbenzene
Concen: 0.122 ppbv
RT: 11.539 min Scan# 3538
Delta R.T. 0.010 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion:119 Resp: 6512
Ion Ratio Lower Upper
119 100
91 125.3 66.5 99.7#
134 5.4 16.7 25.1#





#67

sec-Butylbenzene

Concen: 0.167 ppbv

RT: 11.879 min Scan# 3643

Delta R.T. 0.110 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

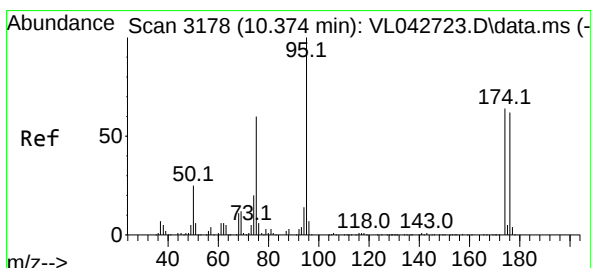
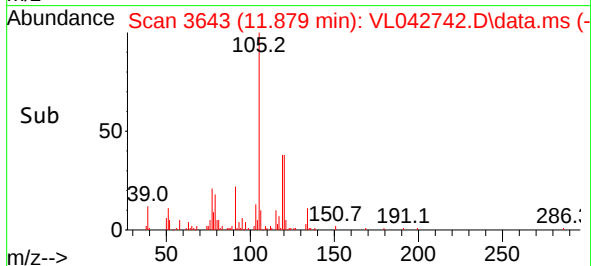
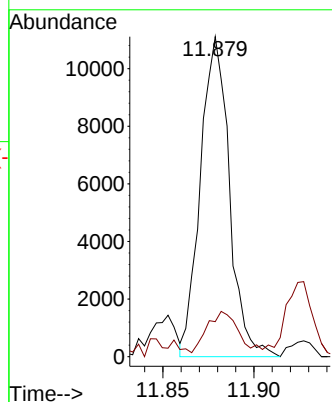
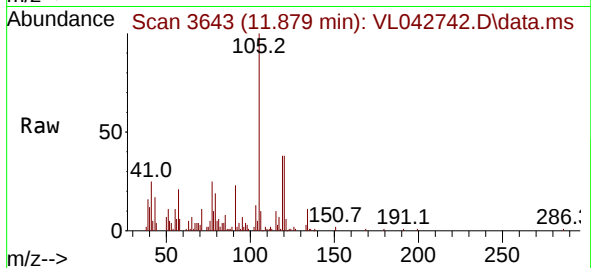
IA1DL

Tgt Ion:105 Resp: 12271

Ion Ratio Lower Upper

105 100

134 17.6 15.0 22.4



#68

1-Bromo-4-Fluorobenzene

Concen: 10.235 ppbv

RT: 10.377 min Scan# 3179

Delta R.T. 0.003 min

Lab File: VL042742.D

Acq: 22 Jul 2025 22:39

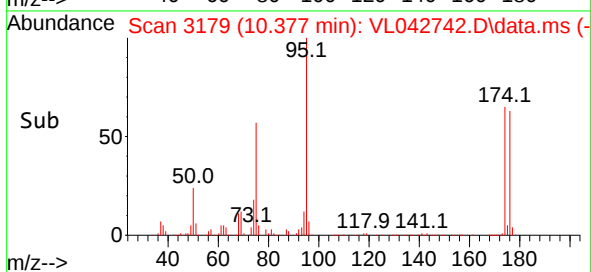
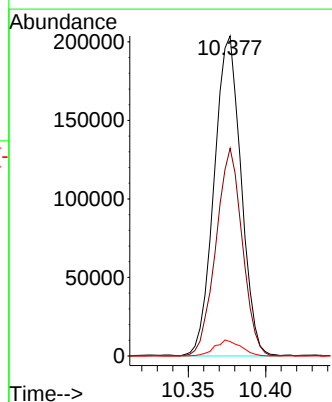
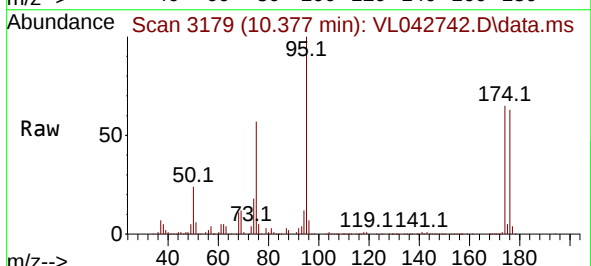
Tgt Ion: 95 Resp: 246109

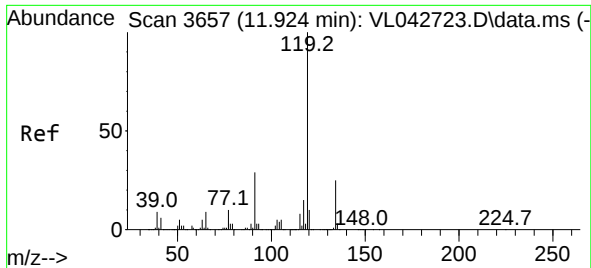
Ion Ratio Lower Upper

95 100

174 63.7 51.4 77.2

175 4.8 4.2 6.4

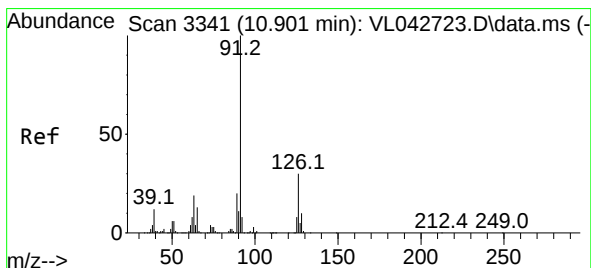
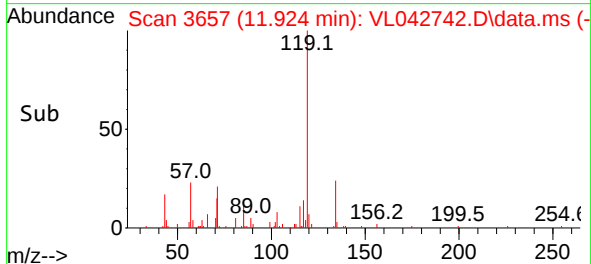
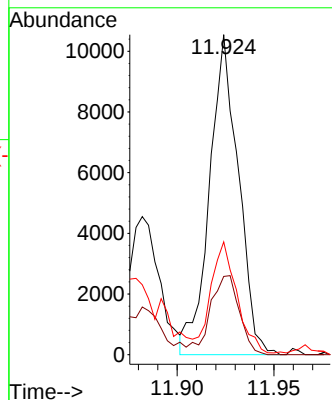
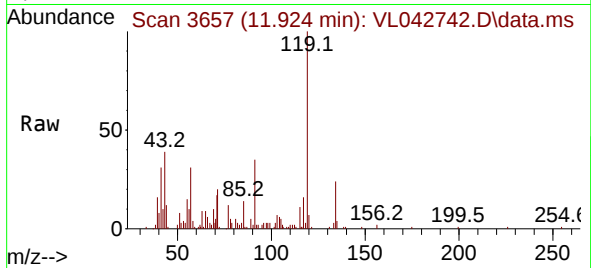




#69
 p-Isopropyltoluene
 Concen: 0.178 ppbv
 RT: 11.924 min Scan# 30
 Delta R.T. 0.000 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

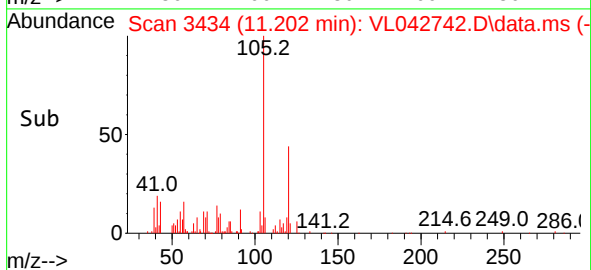
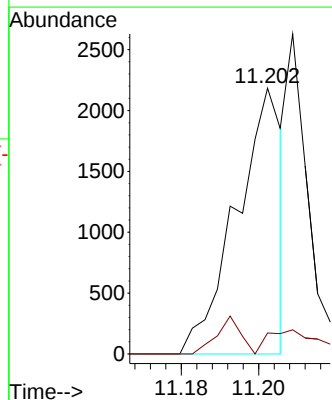
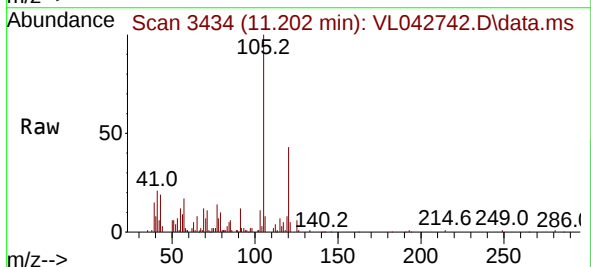
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

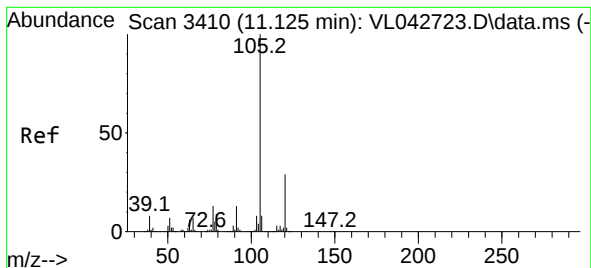
Tgt Ion:	119	Resp:	10919
Ion	Ratio	Lower	Upper
119	100		
134	23.6	19.8	29.6
91	33.7	23.9	35.9



#71
 2-Chlorotoluene
 Concen: 0.040 ppbv
 RT: 11.202 min Scan# 3434
 Delta R.T. 0.301 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

Tgt Ion:	91	Resp:	1787
Ion	Ratio	Lower	Upper
91	100		
126	16.9	11.6	46.4

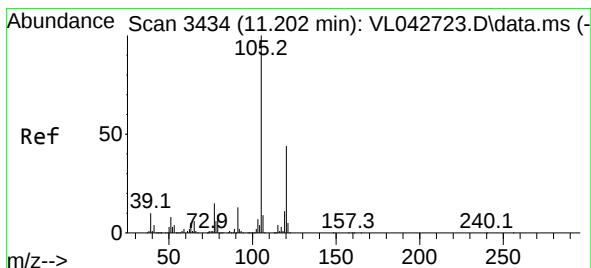
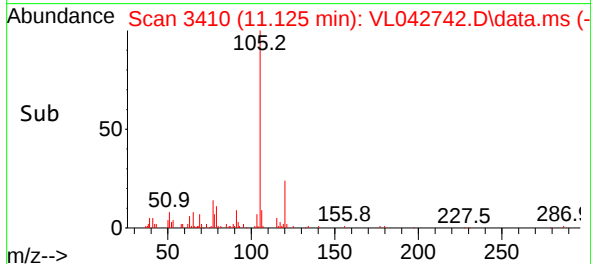
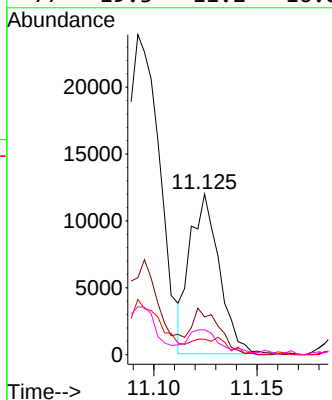
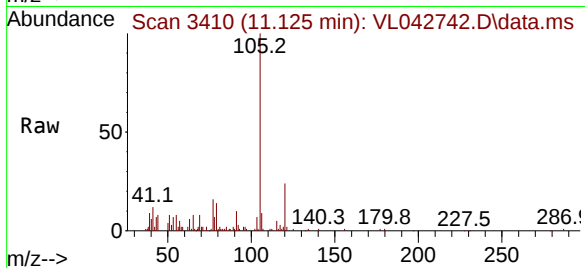




#72
4-Ethyltoluene
Concen: 0.247 ppbv
RT: 11.125 min Scan# 3410
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

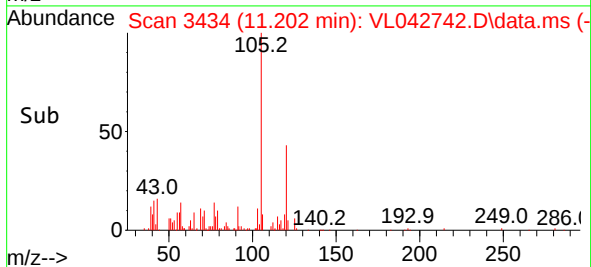
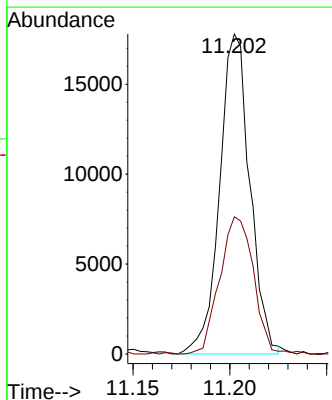
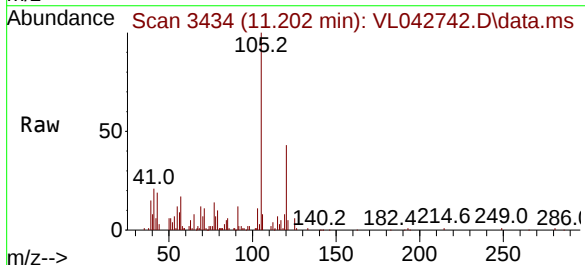
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

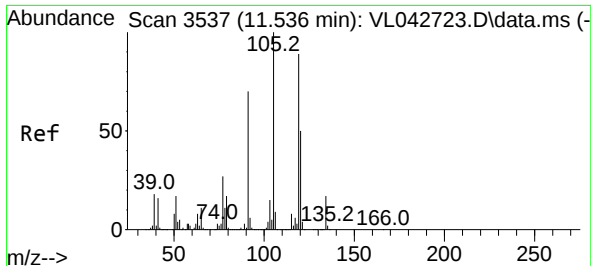
Tgt Ion:105 Resp: 11805
Ion Ratio Lower Upper
105 100
120 0.0 23.4 35.0#
91 0.0 10.6 15.8#
77 19.3 11.2 16.8#



#73
1,3,5-Trimethylbenzene
Concen: 0.488 ppbv
RT: 11.202 min Scan# 3434
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion:105 Resp: 19316
Ion Ratio Lower Upper
105 100
120 42.9 35.2 52.8

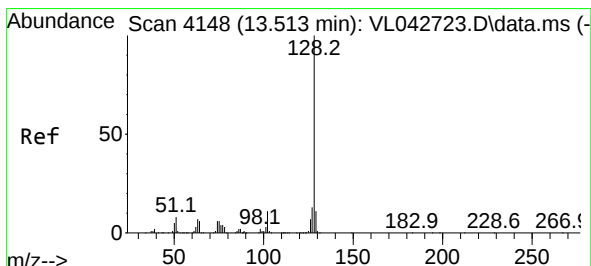
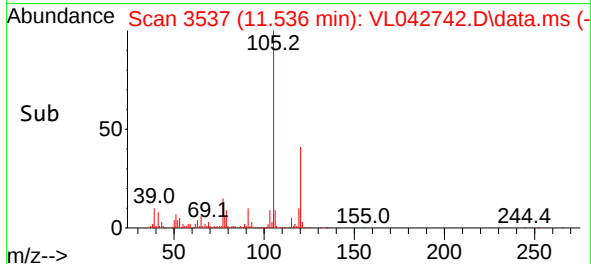
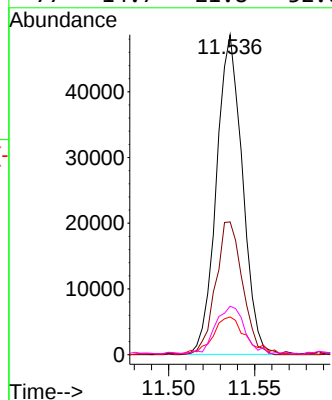
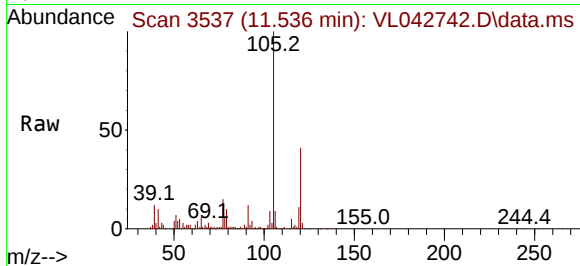




#74
1,2,4-Trimethylbenzene
Concen: 1.176 ppbv
RT: 11.536 min Scan# 3537
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Instrument :
MSVOA_L
ClientSampleId :
IA1DL

Tgt Ion:	105	Resp:	51091
Ion Ratio	Lower	Upper	
105	100		
120	41.5	39.9	59.9
91	11.5	56.5	84.7#
77	14.7	21.8	32.6#



#79
Naphthalene
Concen: 0.063 ppbv
RT: 13.513 min Scan# 4148
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Tgt Ion:	128	Resp:	2037
Ion Ratio	Lower	Upper	
128	100		
127	4.8	10.3	15.5#
129	12.1	8.6	13.0

