

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 :

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)

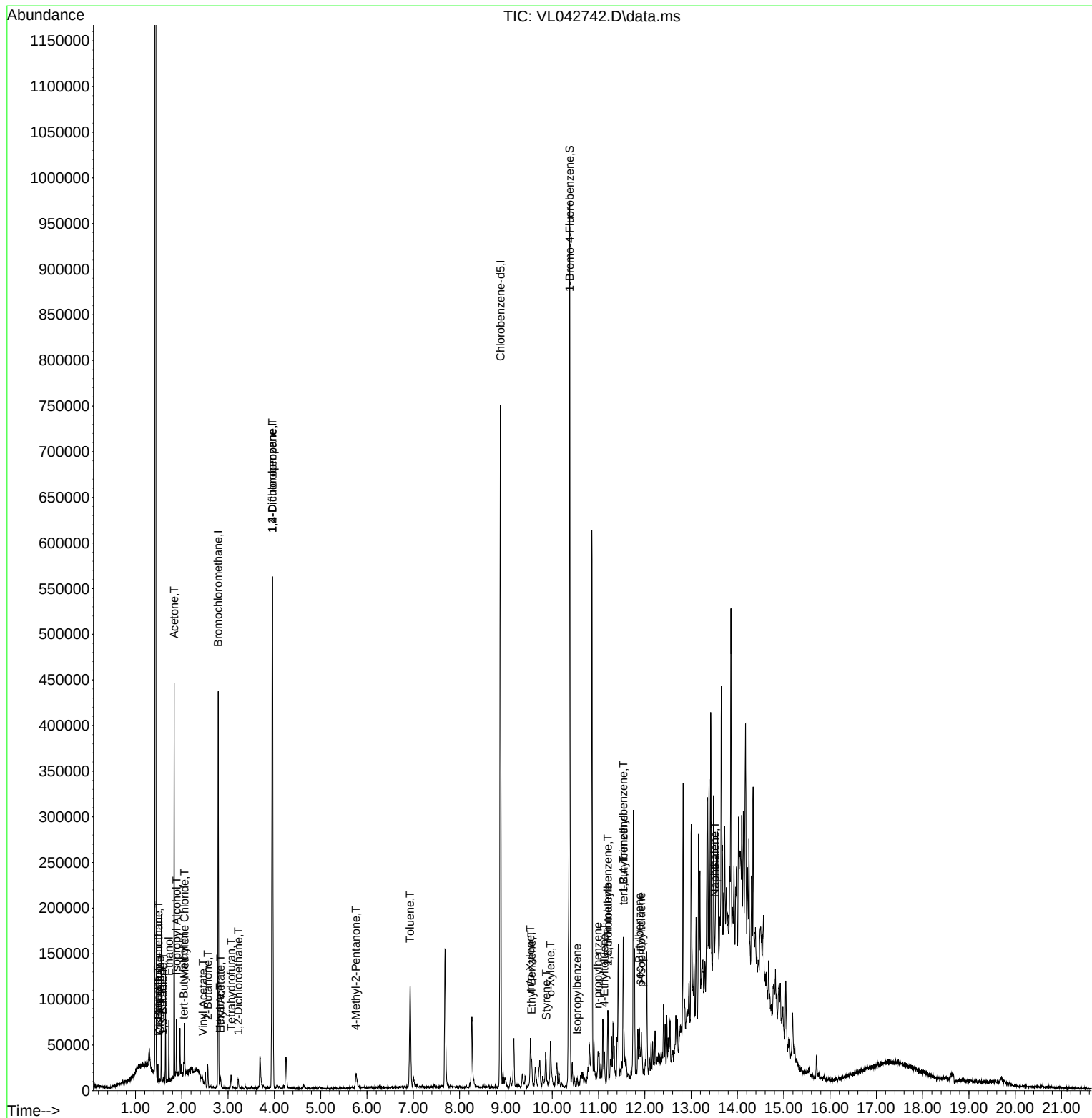
Internal Standards						
1) Bromochloromethane	2.787	49	114495	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	338585	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	297519	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	246109	10.235	ppbv	0.00
Spiked Amount	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

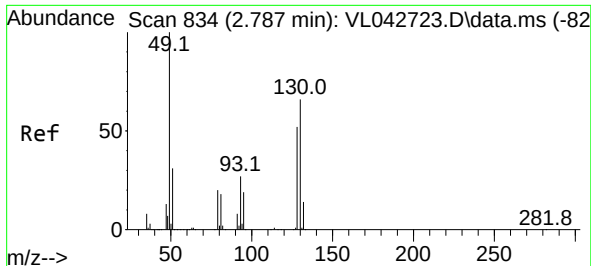
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :
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Quant Time: Jul 23 03:07:17 2025
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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
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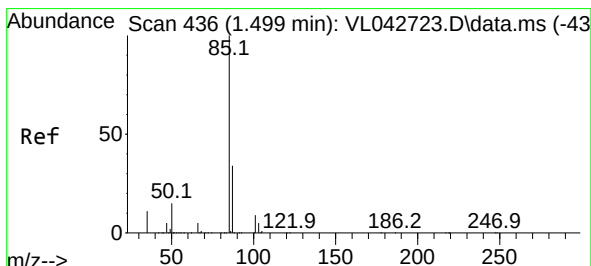
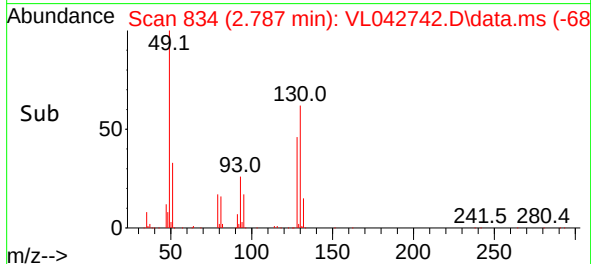
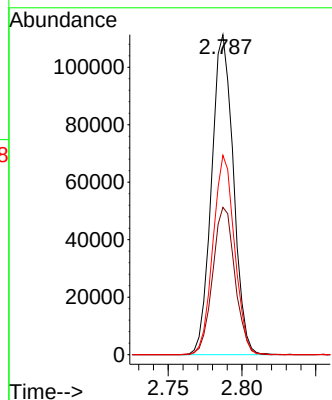
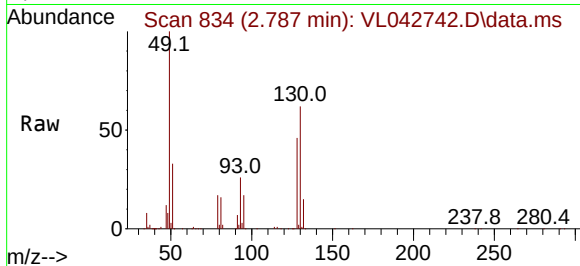




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.000 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

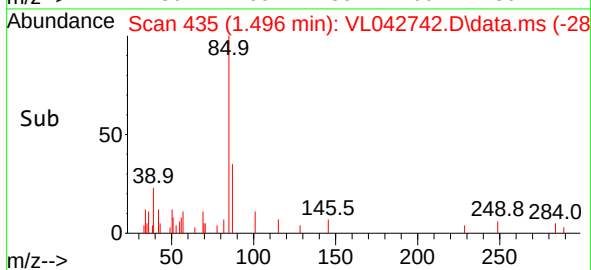
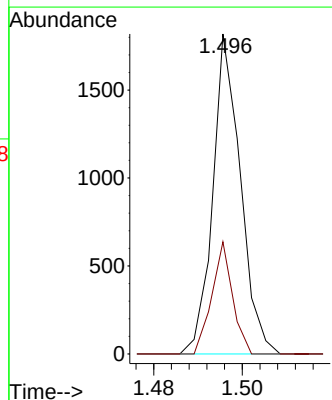
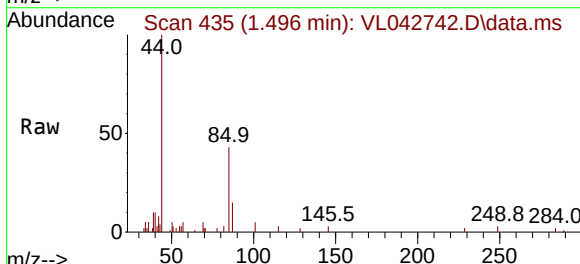
Instrument :
 MSVOA_L
 ClientSampleId :

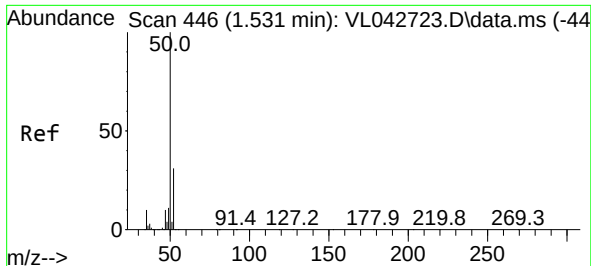
Tgt Ion: 49 Resp: 114495
 Ion Ratio Lower Upper
 49 100
 128 46.9 24.5 73.5
 130 61.5 31.7 95.1



#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

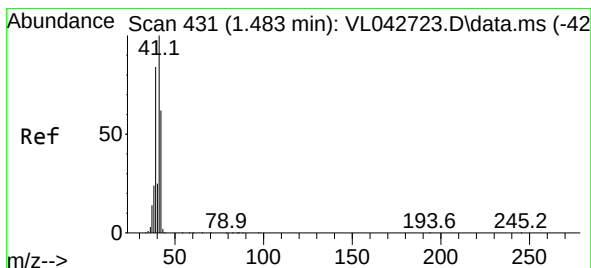
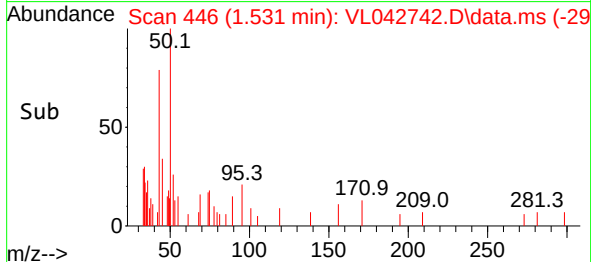
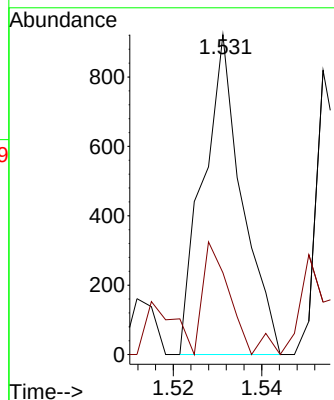
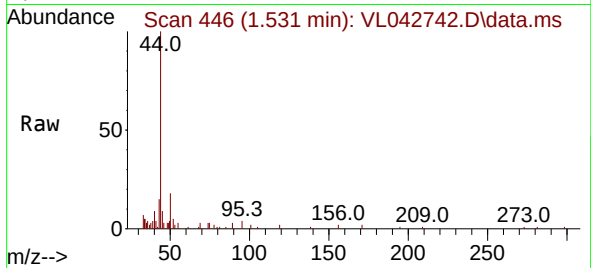




#4
Chloromethane
Concen: 0.077 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

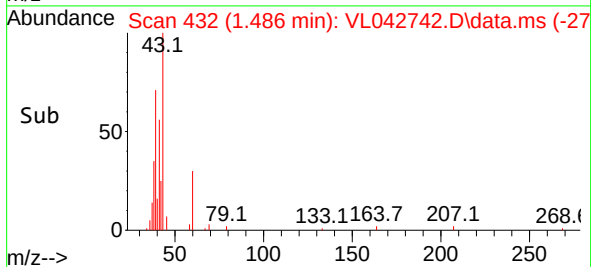
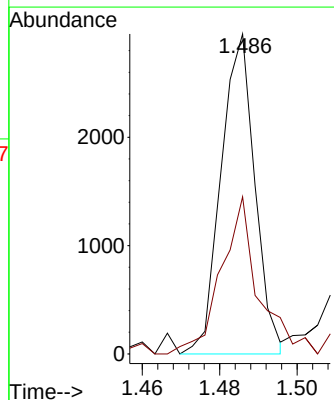
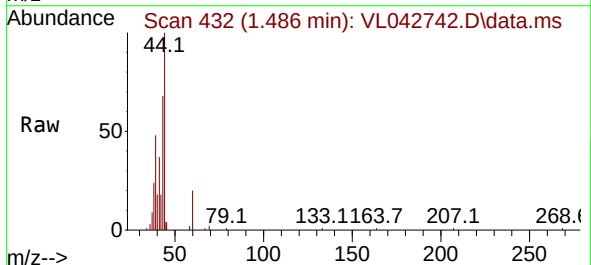
Instrument :
MSVOA_L
ClientSampleId :

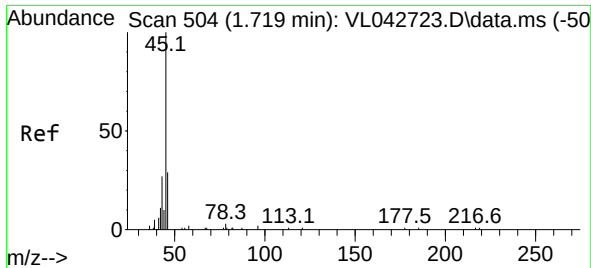
Tgt Ion: 50 Resp: 564
Ion Ratio Lower Upper
50 100
52 25.6 24.9 37.3



#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

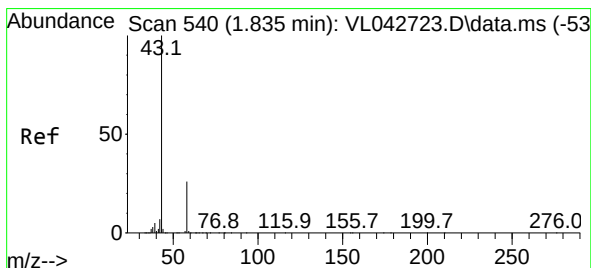
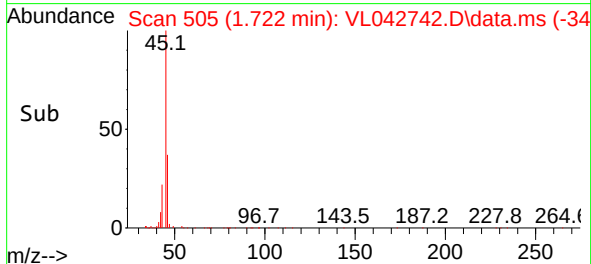
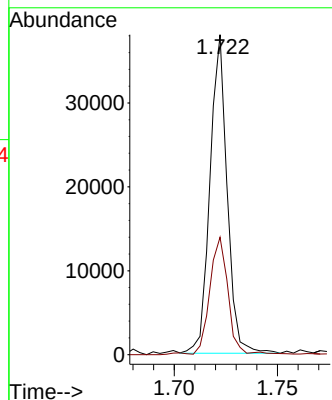
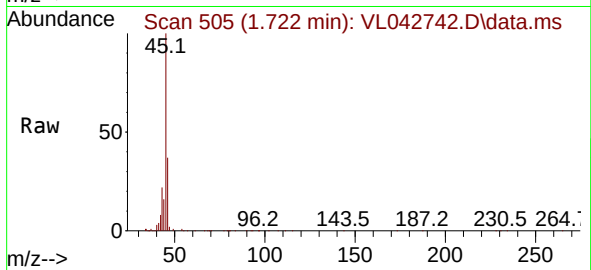




#13
 Ethanol
 Concen: 18.191 ppbv
 RT: 1.722 min Scan# 504
 Delta R.T. 0.003 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

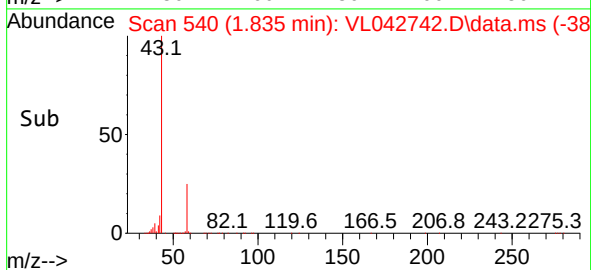
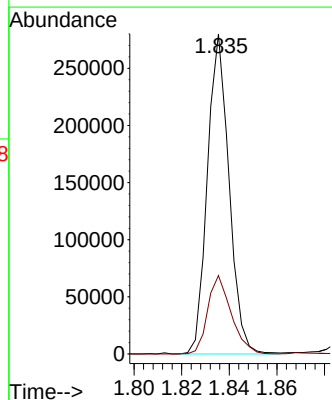
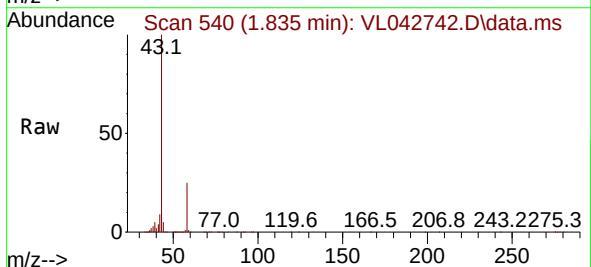
Instrument :
 MSVOA_L
 ClientSampleId :

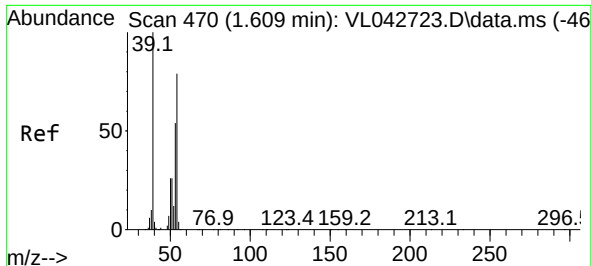
Tgt Ion: 45 Resp: 21948
 Ion Ratio Lower Upper
 45 100
 46 40.8 16.3 65.1



#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

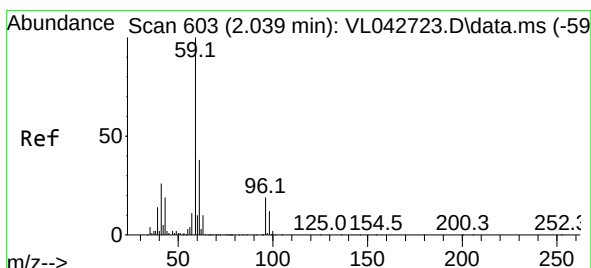
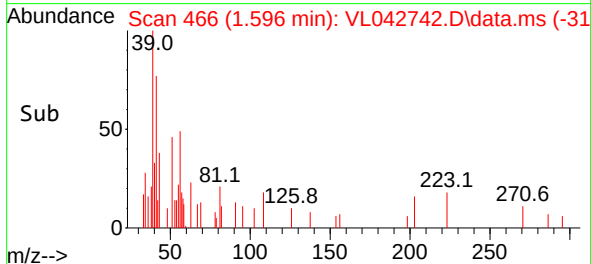
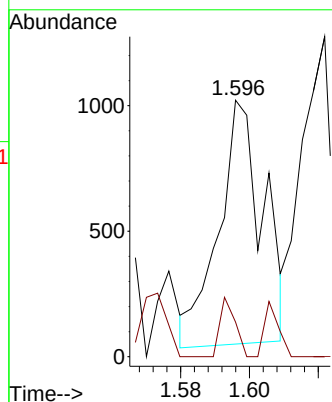
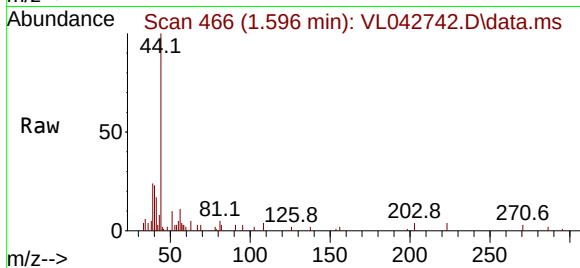
ClientSampleId :

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

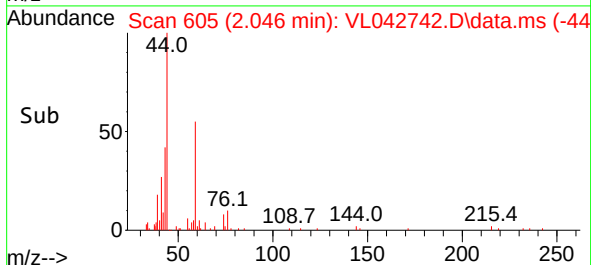
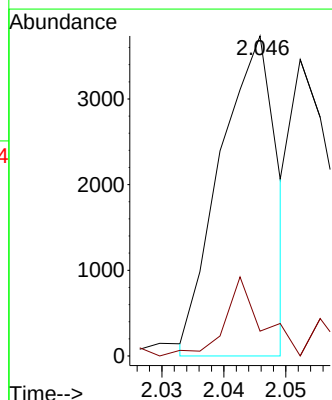
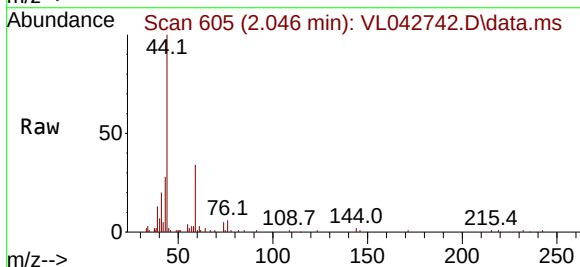
Acq: 22 Jul 2025 22:39

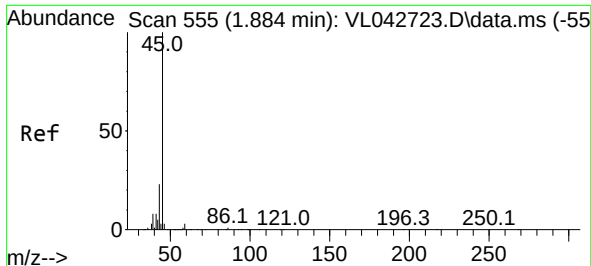
Tgt Ion: 59 Resp: 2385

Ion Ratio Lower Upper

59 100

57 27.2 9.1 13.7#

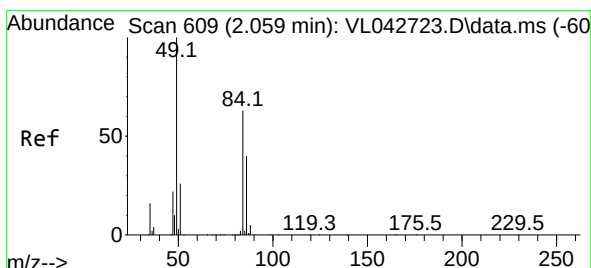
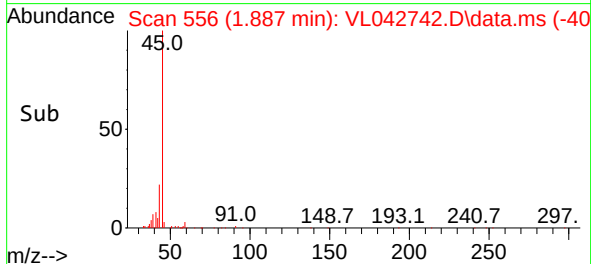
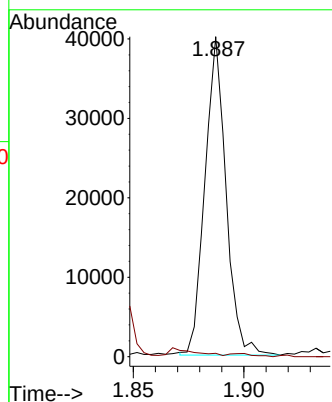
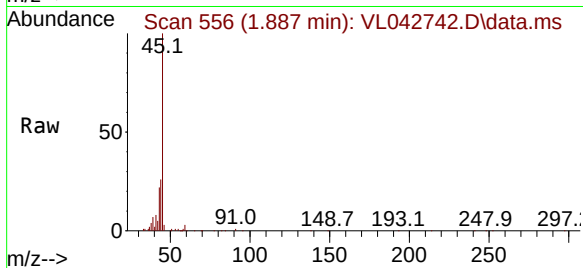




#19
Isopropyl Alcohol
Concen: 2.608 ppbv
RT: 1.887 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

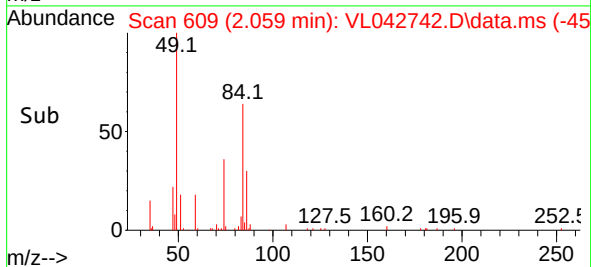
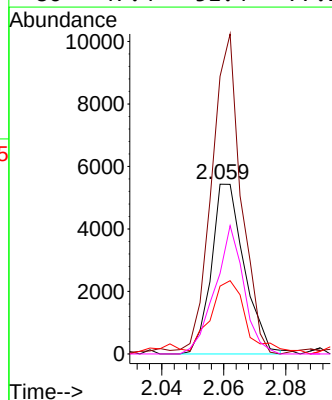
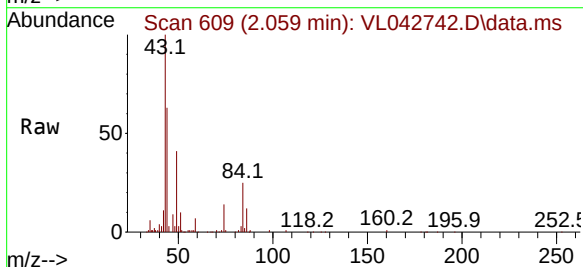
Instrument :
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ClientSampleId :

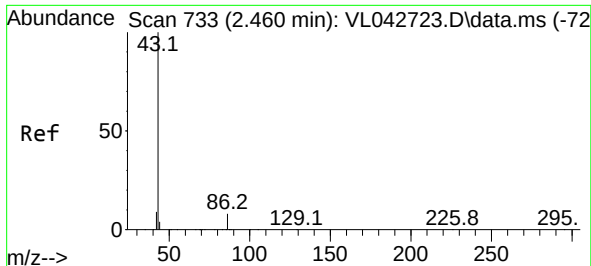
Tgt Ion: 45 Resp: 26496
Ion Ratio Lower Upper
45 100
58 182.3 30.6 46.0#



#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#

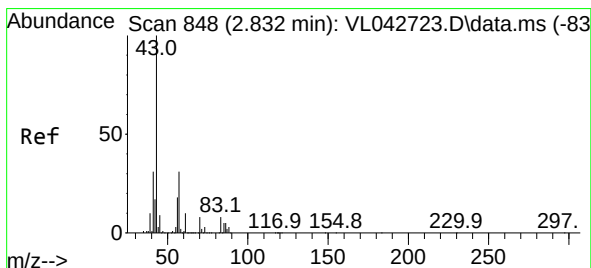
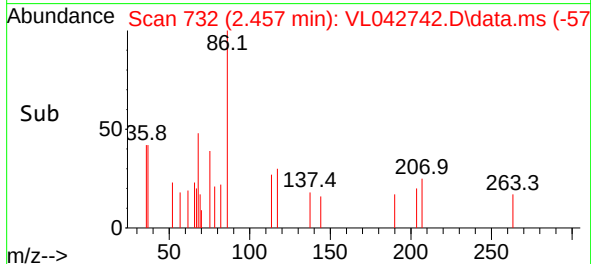
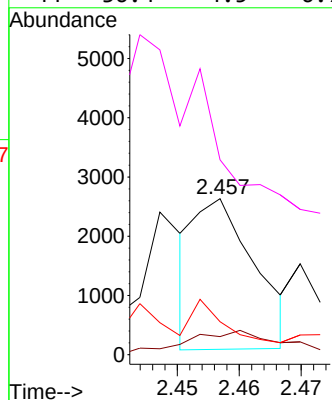
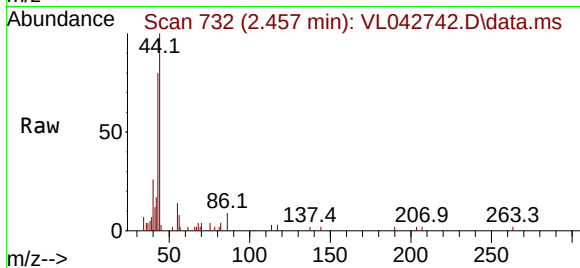




#23
Vinyl Acetate
Concen: 0.079 ppbv
RT: 2.457 min Scan# 71
Delta R.T. -0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

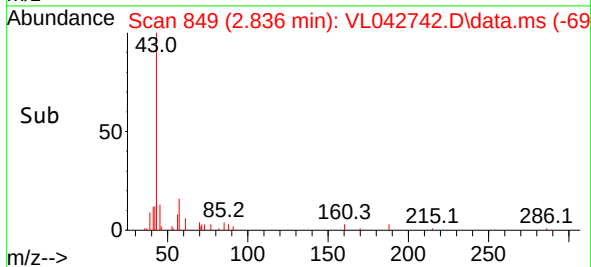
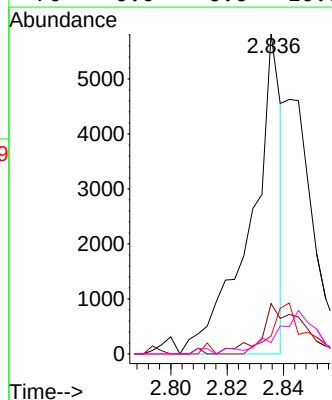
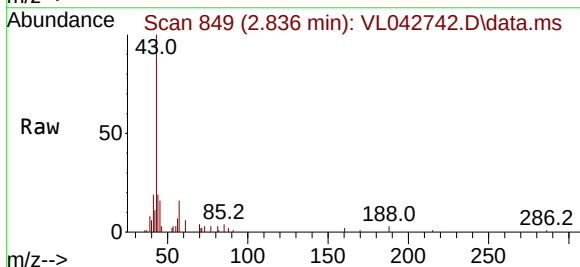
Instrument :
MSVOA_L
ClientSampleId :

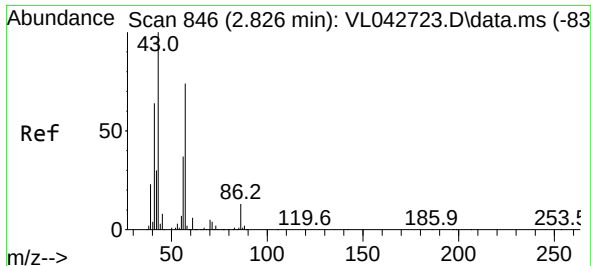
Tgt Ion: 43	Resp: 1723
Ion Ratio	Lower Upper
43 100	
86 8.1	5.7 8.5
42 21.7	7.9 11.9#
44 36.4	4.5 6.7#



#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

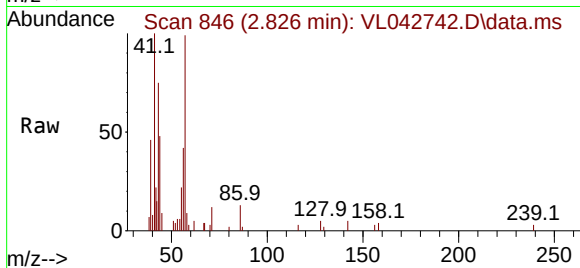
Tgt	Ion: 43	Resp:	4364
Ion	Ratio	Lower	Upper
43	100		
45	22.5	7.8	11.6#
61	0.0	7.0	10.6#
70	0.0	6.6	10.0#



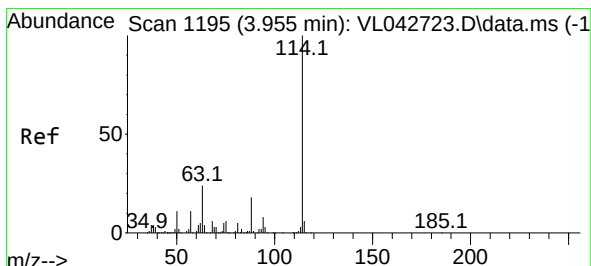
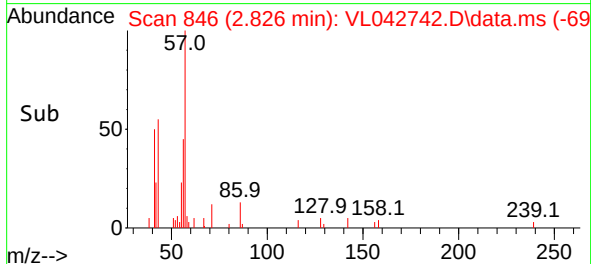
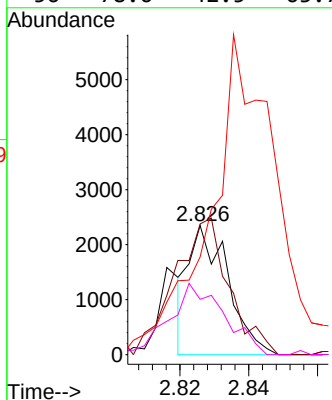


#26
Hexane
Concen: 0.119 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.000 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

Instrument :
MSVOA_L
ClientSampleId :

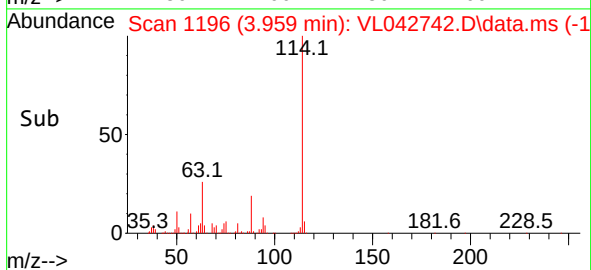
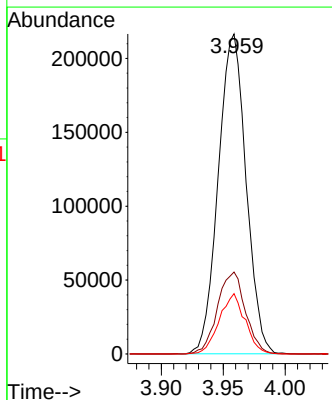
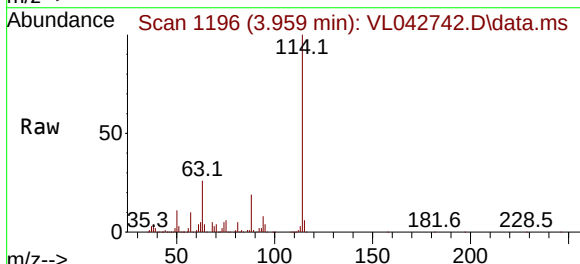


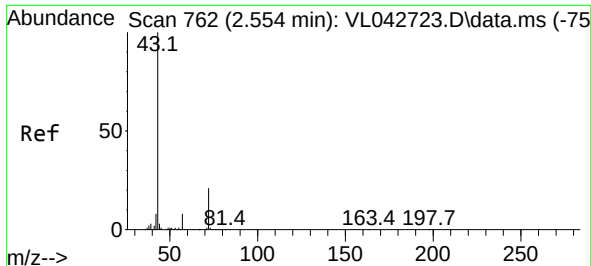
Tgt Ion: 57	Resp: 1851
Ion Ratio	Lower Upper
57 100	
41 158.5	77.3 115.9#
43 462.8	182.3 273.5#
56 78.6	42.5 63.7#



#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

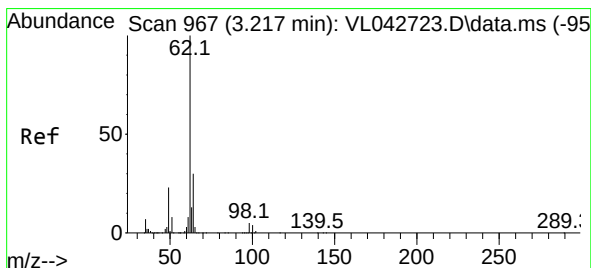
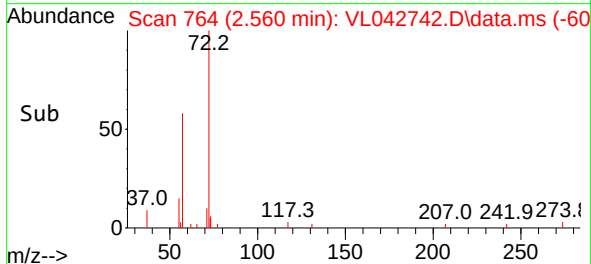
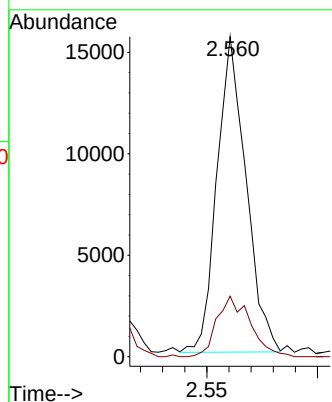
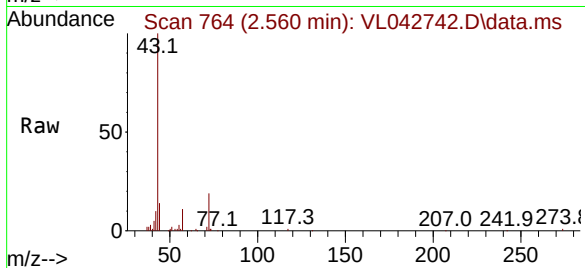




#34
2-Butanone
Concen: 0.608 ppbv
RT: 2.560 min Scan# 764
Delta R.T. 0.007 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

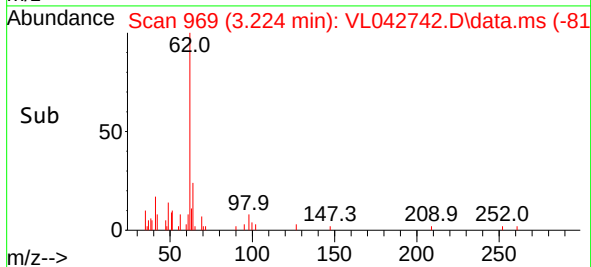
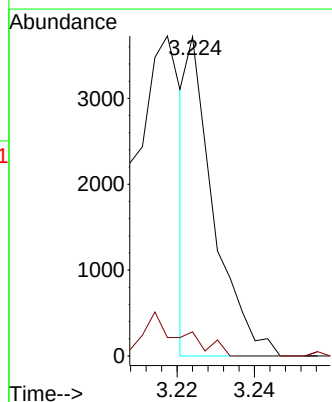
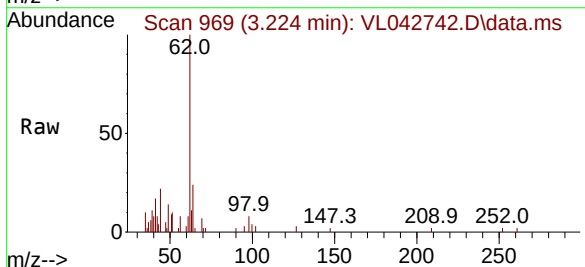
Instrument :
MSVOA_L
ClientSampleId :

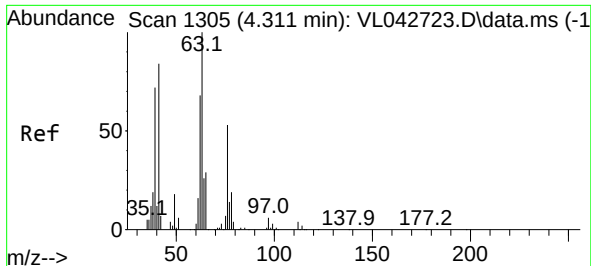
Tgt Ion: 43 Resp: 14186
Ion Ratio Lower Upper
43 100
72 22.0 17.0 25.6



#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 :

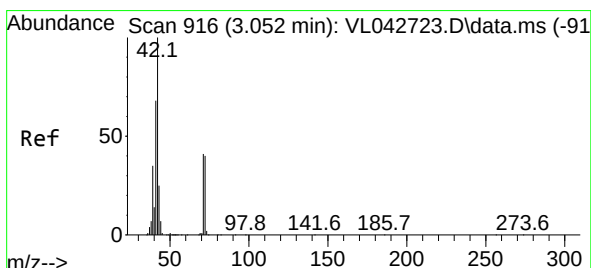
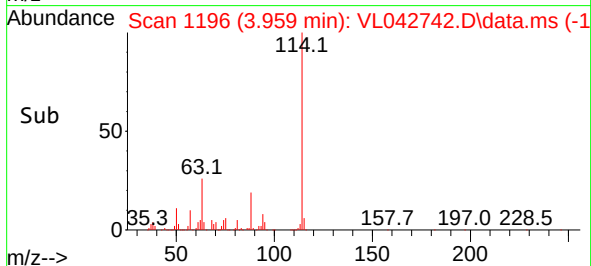
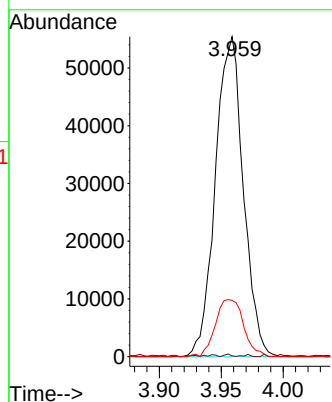
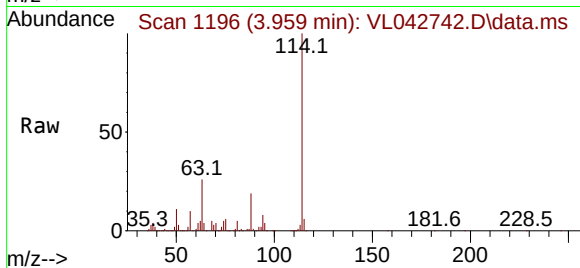
Tgt Ion: 63 Resp: 87190

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

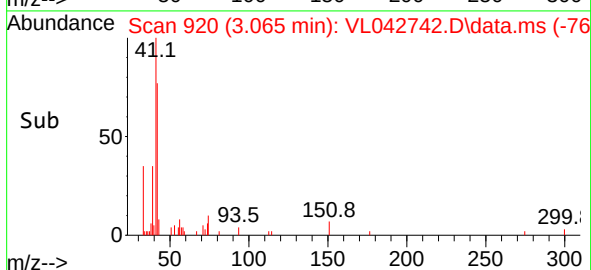
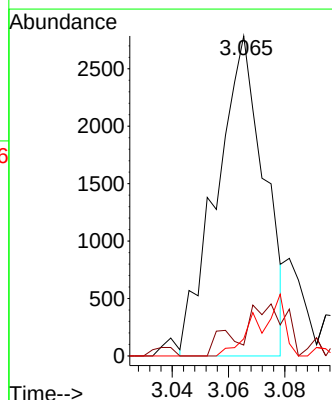
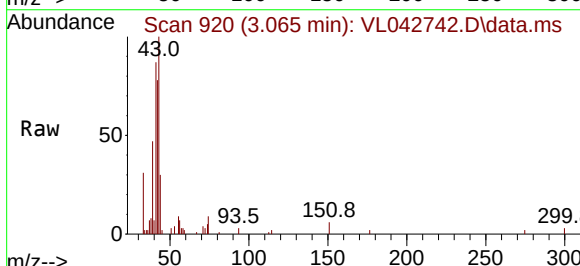
Tgt Ion: 42 Resp: 3269

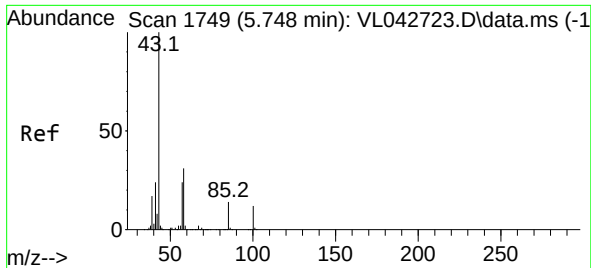
Ion Ratio Lower Upper

42 100

72 0.0 32.2 48.2#

71 0.0 29.8 44.6#

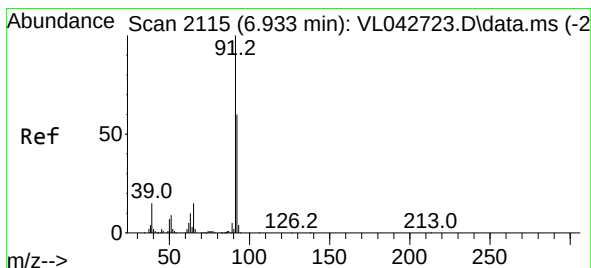
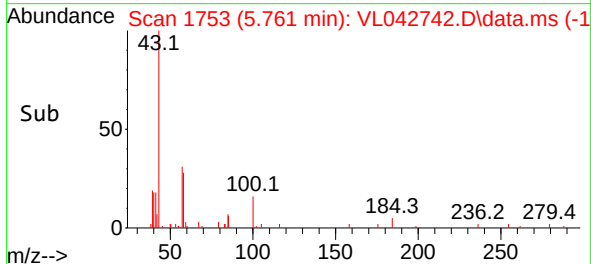
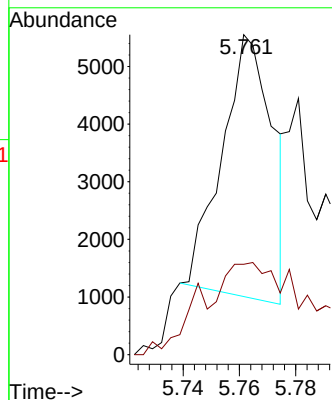
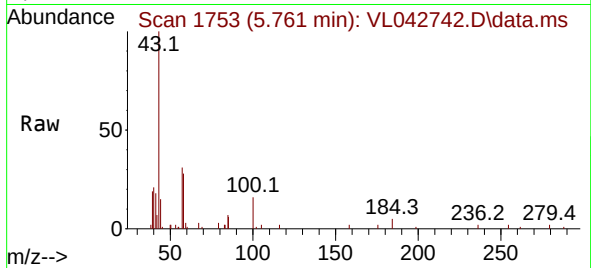




#50
4-Methyl-2-Pentanone
Concen: 0.183 ppbv
RT: 5.761 min Scan# 1753
Delta R.T. 0.013 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

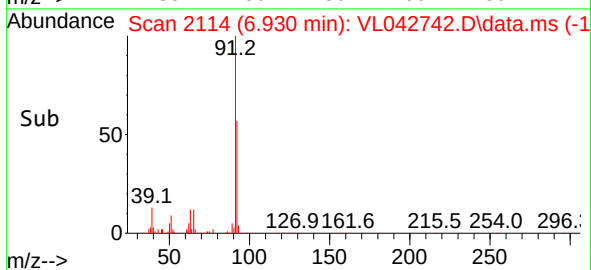
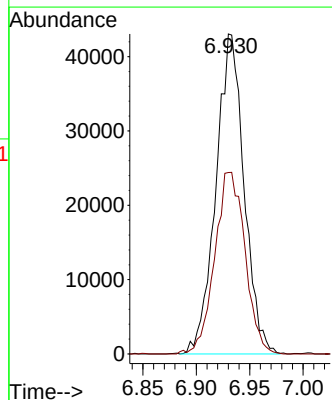
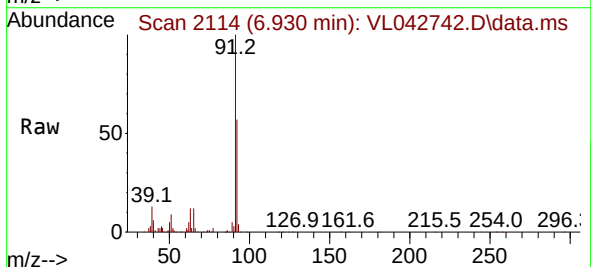
Instrument :
MSVOA_L
ClientSampleId :

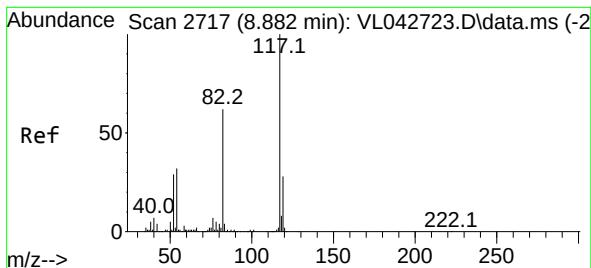
Tgt Ion: 43 Resp: 5604
Ion Ratio Lower Upper
43 100
58 84.7 27.6 41.4#



#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 :

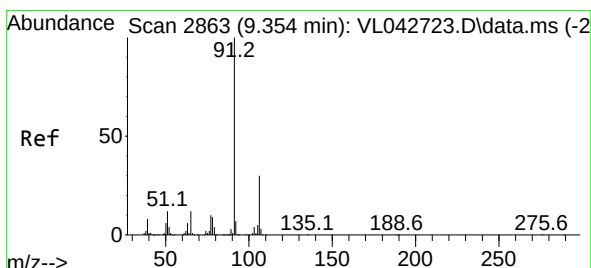
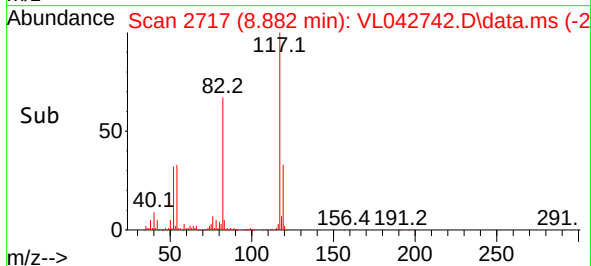
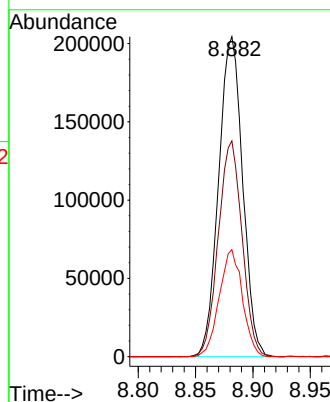
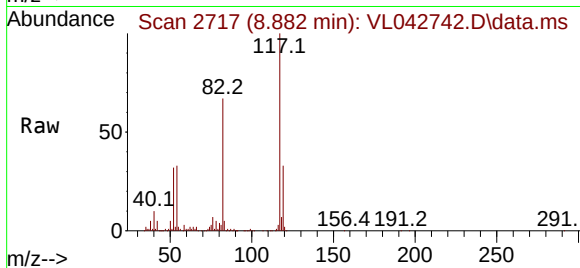
Tgt Ion:117 Resp: 297519

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

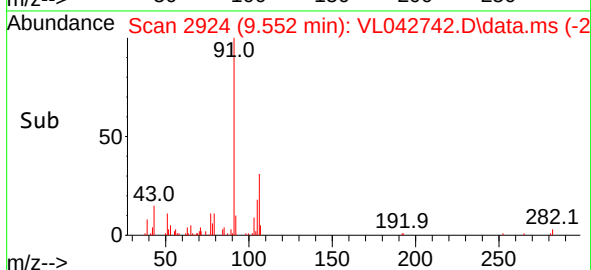
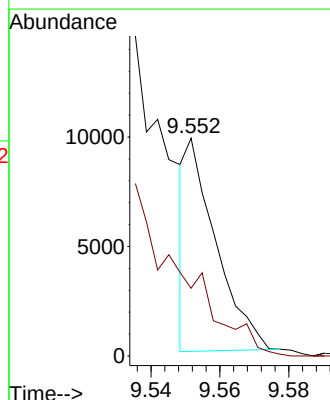
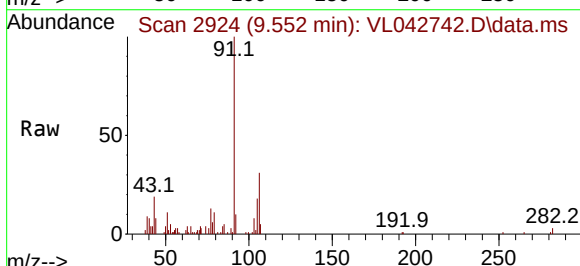
Acq: 22 Jul 2025 22:39

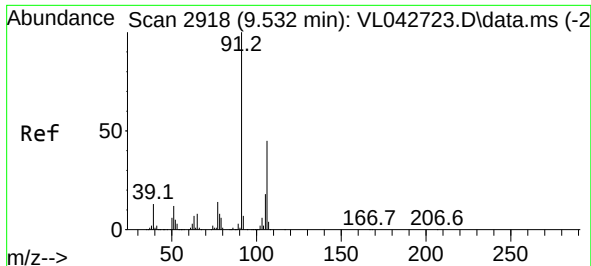
Tgt Ion: 91 Resp: 5892

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

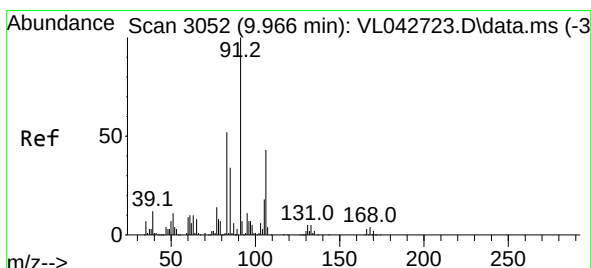
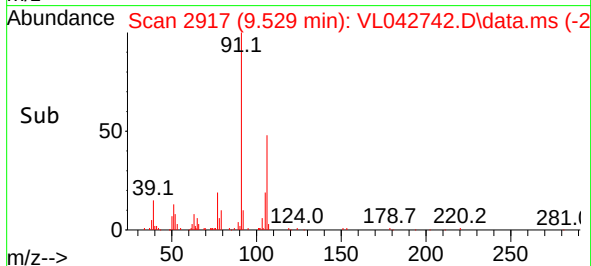
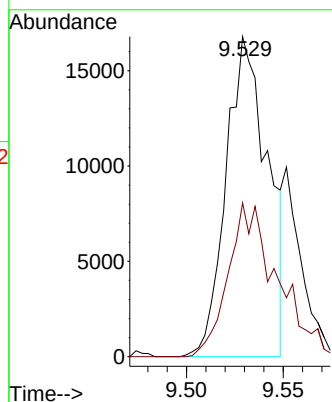
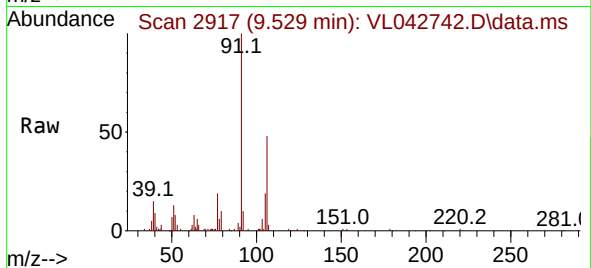
ClientSampleId :

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

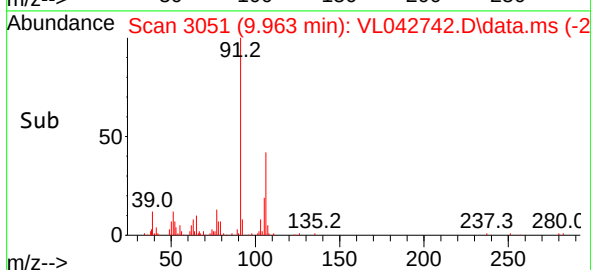
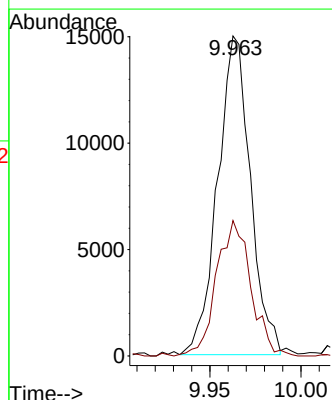
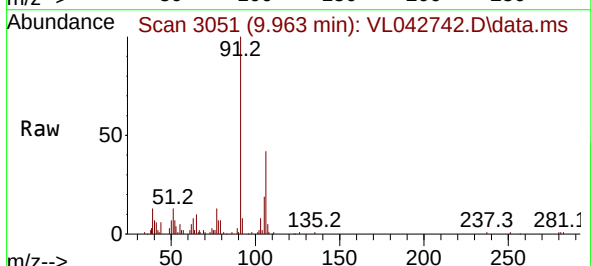
Acq: 22 Jul 2025 22:39

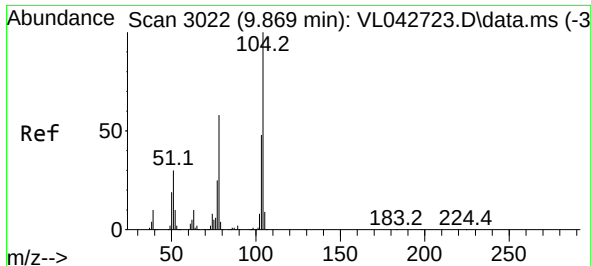
Tgt Ion: 91 Resp: 18730

Ion Ratio Lower Upper

91 100

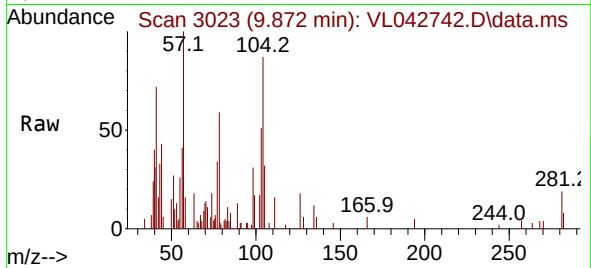
106 44.8 21.4 64.3



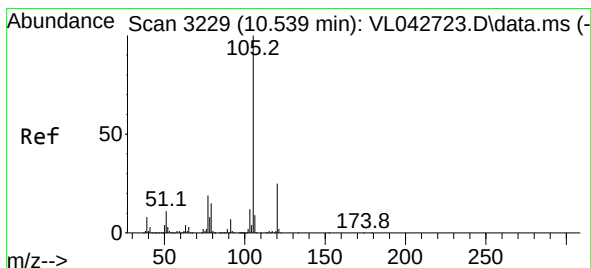
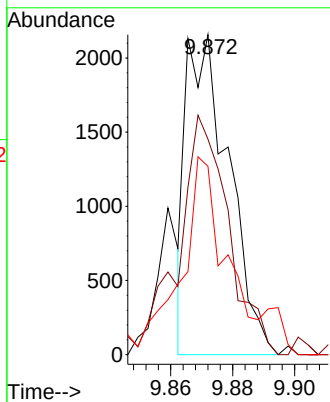
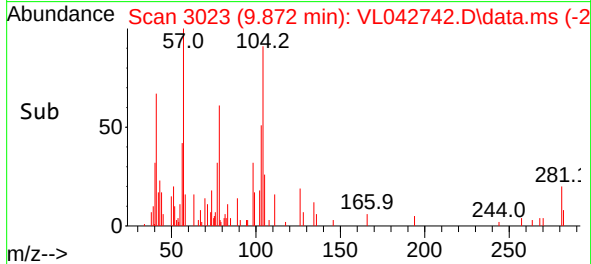


#61
Styrene
Concen: 0.119 ppbv
RT: 9.872 min Scan# 3022
Delta R.T. 0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39

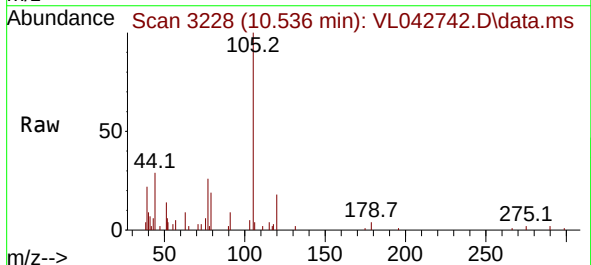
Instrument :
MSVOA_L
ClientSampleId :



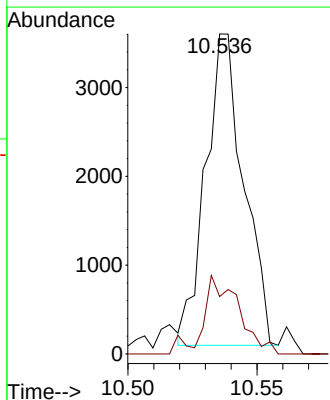
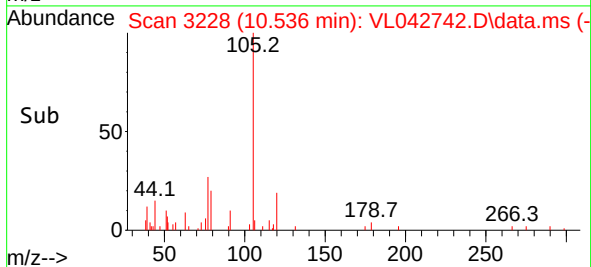
Tgt Ion:104 Resp: 2057
Ion Ratio Lower Upper
104 100
78 94.7 43.4 65.2#
103 76.2 37.8 56.6#

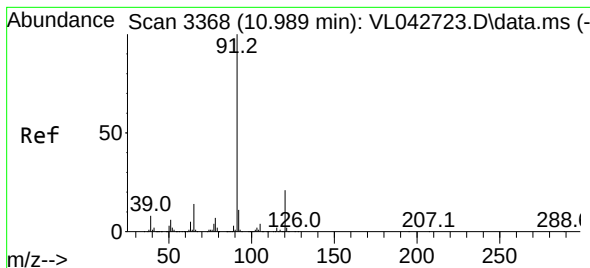


#62
Isopropylbenzene
Concen: 0.060 ppbv
RT: 10.536 min Scan# 3228
Delta R.T. -0.003 min
Lab File: VL042742.D
Acq: 22 Jul 2025 22:39



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

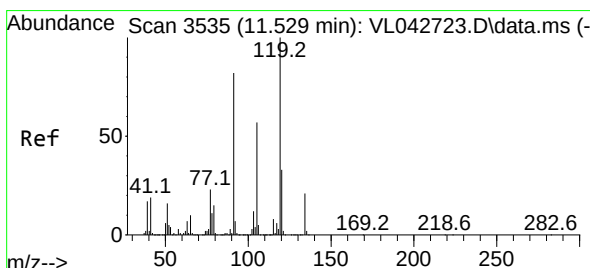
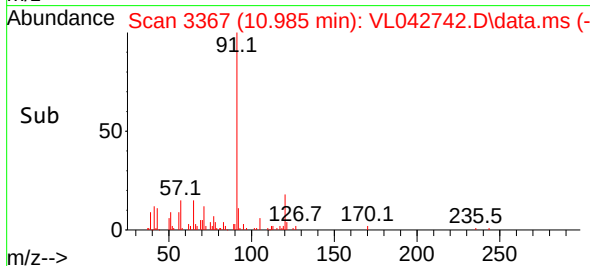
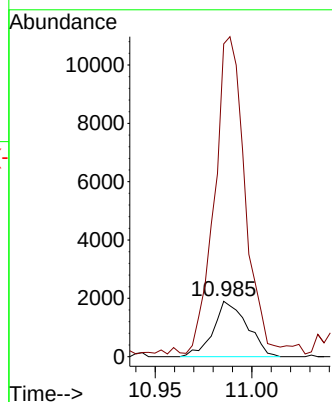
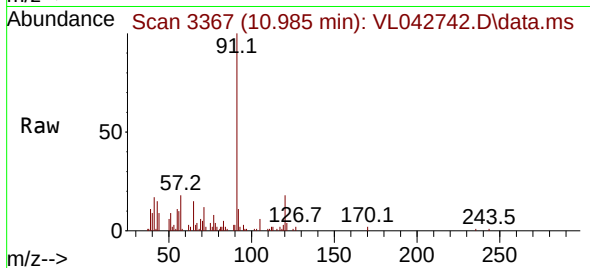
ClientSampleId :

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

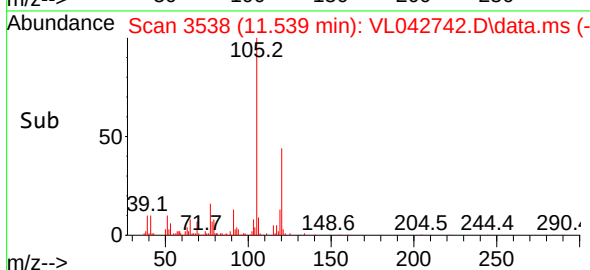
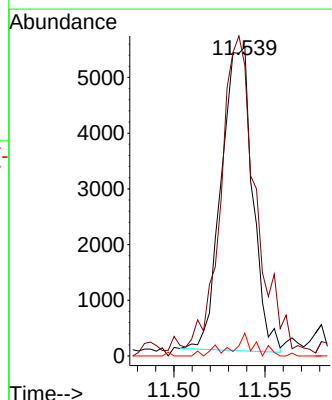
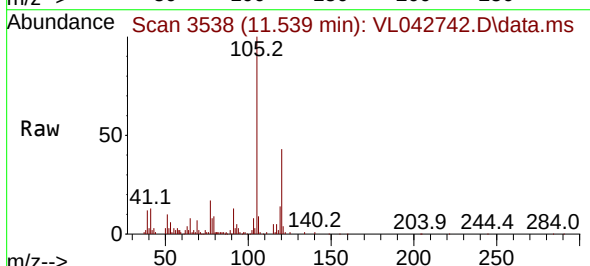
Tgt Ion:119 Resp: 6512

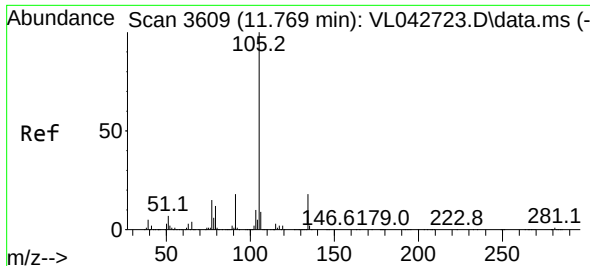
Ion Ratio Lower Upper

119 100

91 125.3 66.5 99.7#

134 5.4 16.7 25.1#

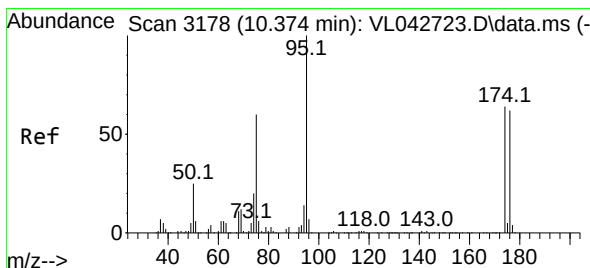
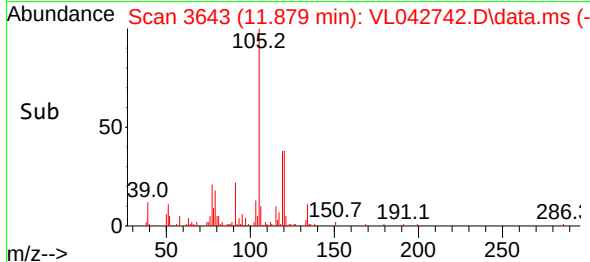
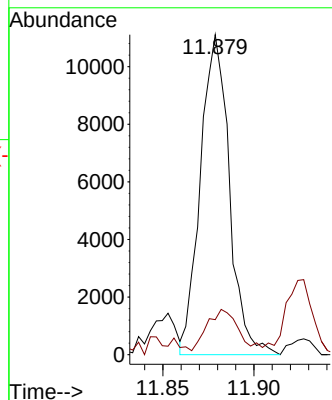
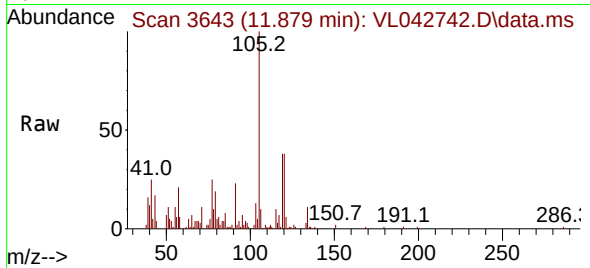




#67
 sec-Butylbenzene
 Concen: 0.167 ppbv
 RT: 11.879 min Scan# 3643
 Delta R.T. 0.110 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

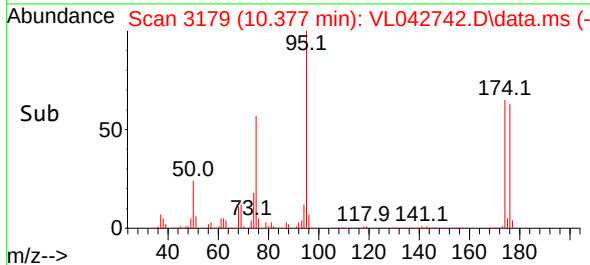
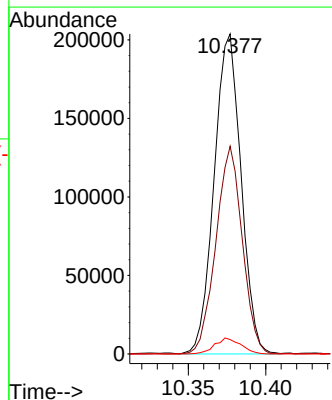
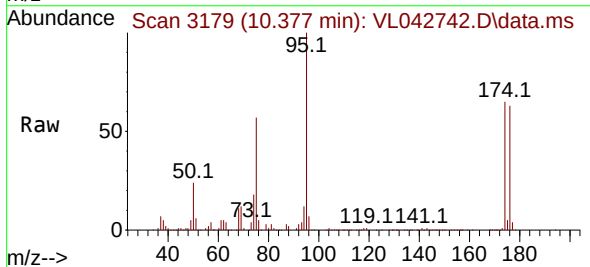
Instrument :
 MSVOA_L
 ClientSampleId :

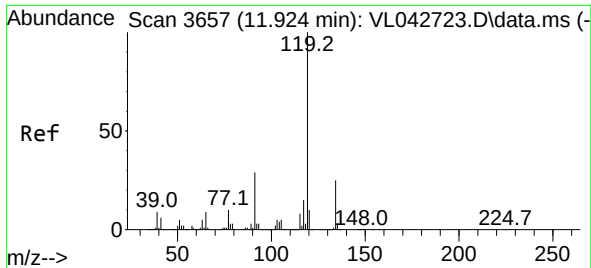
Tgt Ion:105 Resp: 12271
 Ion Ratio Lower Upper
 105 100
 134 17.6 15.0 22.4



#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

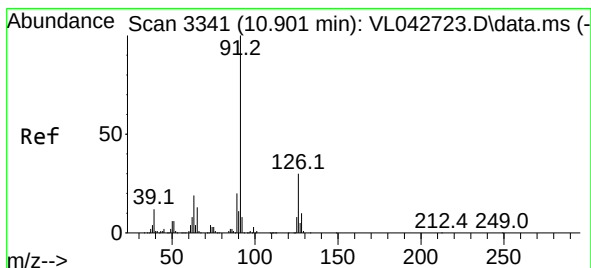
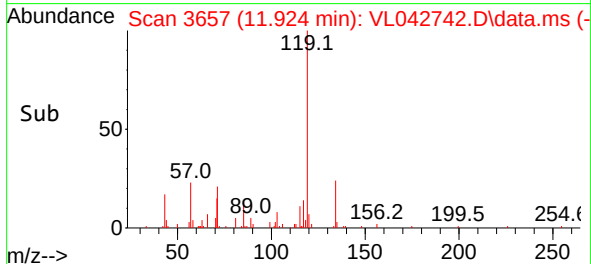
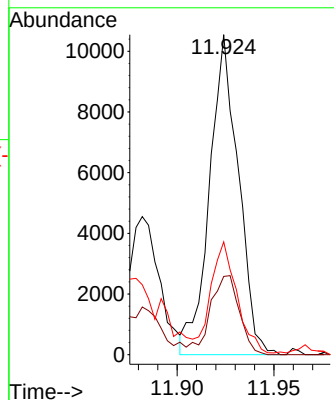
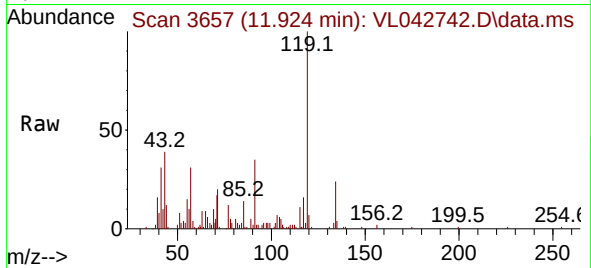




#69
 p-Isopropyltoluene
 Concen: 0.178 ppbv
 RT: 11.924 min Scan# 30
 Delta R.T. 0.000 min
 Lab File: VL042742.D
 Acq: 22 Jul 2025 22:39

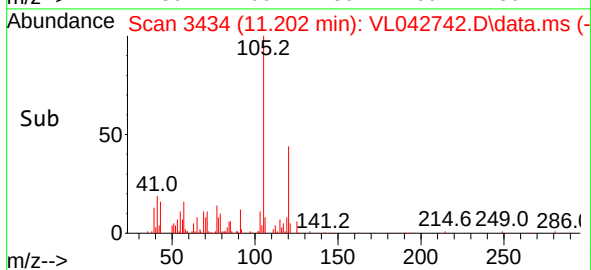
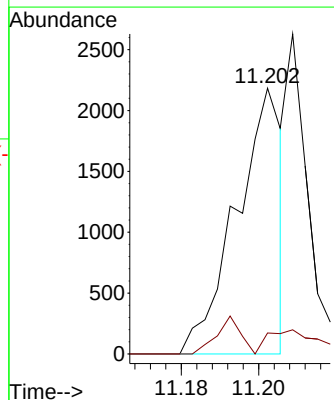
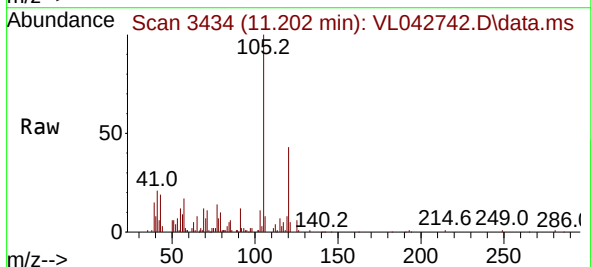
Instrument :
 MSVOA_L
 ClientSampleId :

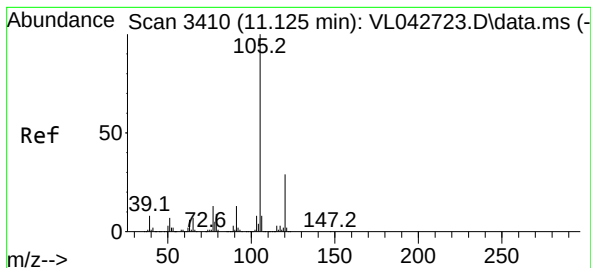
Tgt Ion:	119	Resp:	10919
Ion	Ratio	Lower	Upper
119	100		
134	23.6	19.8	29.6
91	33.7	23.9	35.9



#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 :

Tgt Ion:105 Resp: 11805

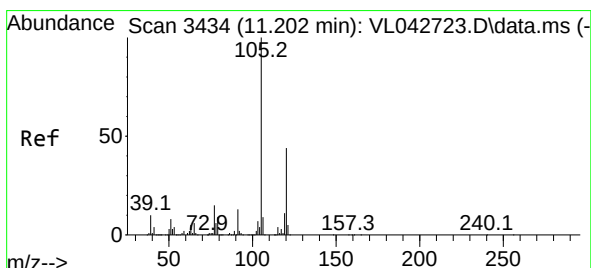
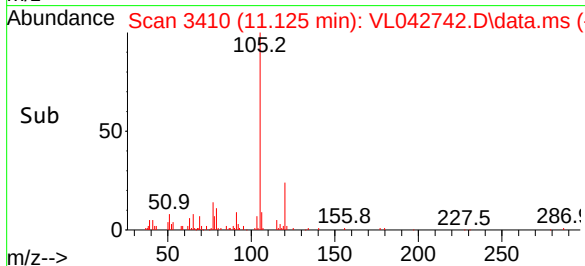
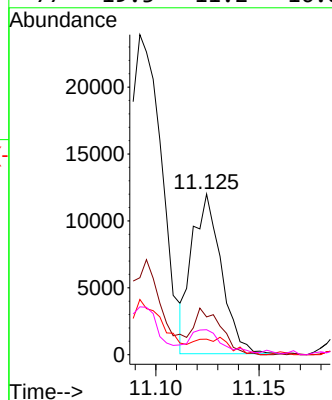
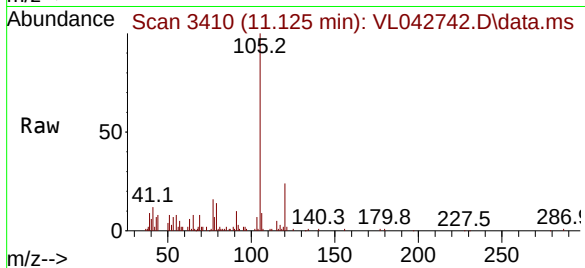
Ion Ratio Lower Upper

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

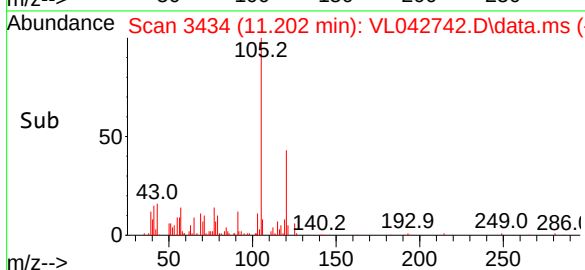
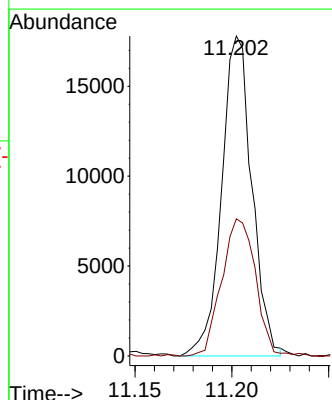
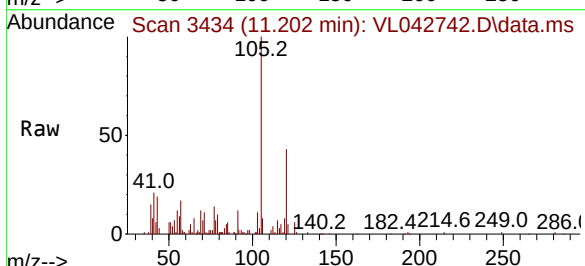
Acq: 22 Jul 2025 22:39

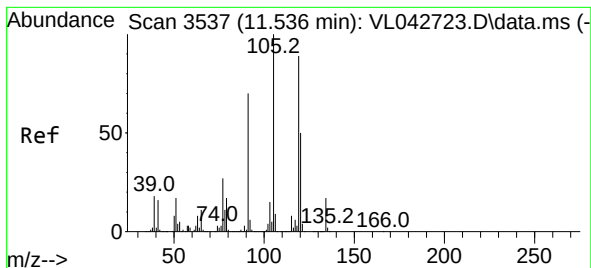
Tgt Ion:105 Resp: 19316

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

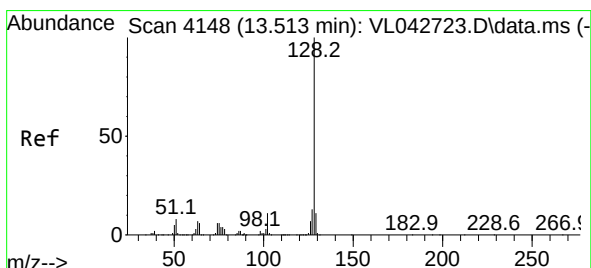
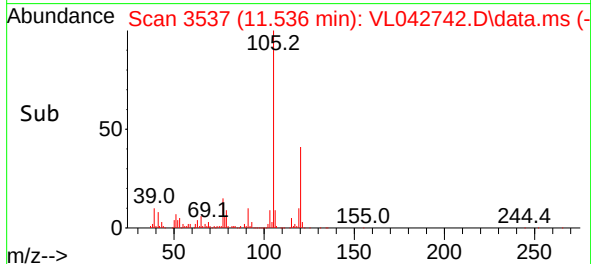
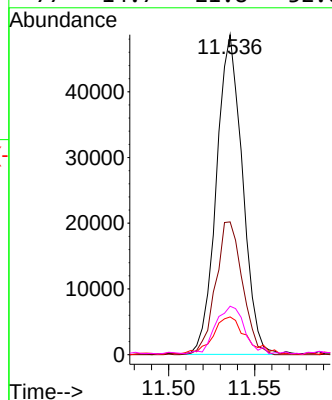
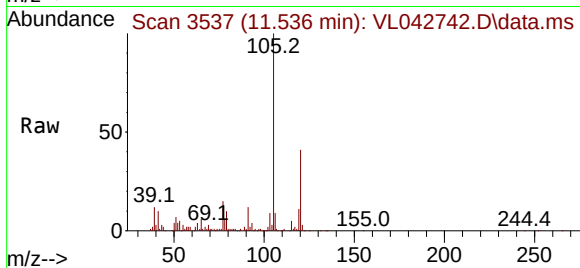
Acq: 22 Jul 2025 22:39

Instrument :

MSVOA_L

ClientSampleId :

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

