

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072225\
 Data File : VL042743.D
 Acq On : 22 Jul 2025 23:15
 Operator : SY/MD
 Sample : Q2632-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

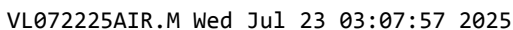
Quant Time: Jul 23 03:07:46 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Jul 23 02:51:39 2025
 Response via : Initial Calibration

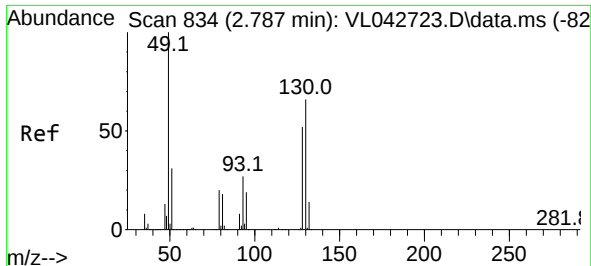
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.784	49	109401	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.952	114	323808	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.875	117	284327	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.371	95	233470	10.160	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.600%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	7298	0.427	ppbv #	87
3) Chlorodifluoromethane	1.463	51	12481	0.646	ppbv #	77
4) Chloromethane	1.531	50	3923	0.561	ppbv #	88
8) Dichlorotetrafluoroethane	1.554	85	503	0.035	ppbv #	67
9) Propene	1.619	41	16752	2.444	ppbv	84
10) Heptane	4.969	43	825	0.043	ppbv #	18
11) Trichlorofluoromethane	1.874	101	3574	0.203	ppbv #	70
12) 1,1,2-Trichlorotrifluo...	2.140	101	913	0.066	ppbv	99
13) Ethanol	1.719	45	46540	40.370	ppbv	94
15) Acetone	1.832	43	126418	6.901	ppbv	98
16) 1,3-Butadiene	1.599	39	1475	0.188	ppbv #	16
17) tert-Butyl alcohol	2.043	59	3914	0.225	ppbv	95
19) Isopropyl Alcohol	1.884	45	13308	1.371	ppbv #	1
20) Methylene Chloride	2.059	84	32808	5.698	ppbv	91
21) Allyl Chloride	2.078	41	400	0.034	ppbv #	1
23) Vinyl Acetate	2.454	43	21661	1.037	ppbv #	88
25) Ethyl Acetate	2.829	43	1747	0.052	ppbv #	75
26) Hexane	2.823	57	7659	0.516	ppbv #	60
29) Chloroform	2.845	83	1465	0.060	ppbv #	75
34) 2-Butanone	2.557	43	17157	0.769	ppbv	99
35) Carbon Tetrachloride	3.758	117	936	0.035	ppbv #	24
36) Benzene	3.658	78	5201	0.173	ppbv	95
39) 1,2-Dichloropropane	3.952	63	81696	7.293	ppbv #	23
52) Tetrachloroethene	8.221	164	14913	1.230	ppbv	89
53) Toluene	6.927	91	23962	0.706	ppbv	99
58) Ethyl Benzene	9.351	91	6421	0.135	ppbv	99
59) m/p-Xylene	9.526	91	14651	0.386	ppbv #	79
60) o-Xylene	9.956	91	6371	0.166	ppbv	85
72) 4-Ethyltoluene	11.118	105	2246	0.049	ppbv #	84
73) 1,3,5-Trimethylbenzene	11.202	105	2307	0.061	ppbv	100
74) 1,2,4-Trimethylbenzene	11.532	105	9010	0.217	ppbv #	63

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

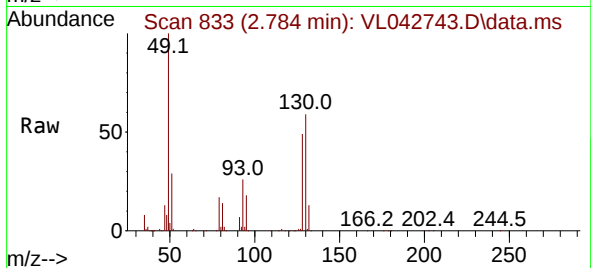
Quant Time: Jul 23 03:07:46 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Jul 23 02:51:39 2025
Response via : Initial Calibration



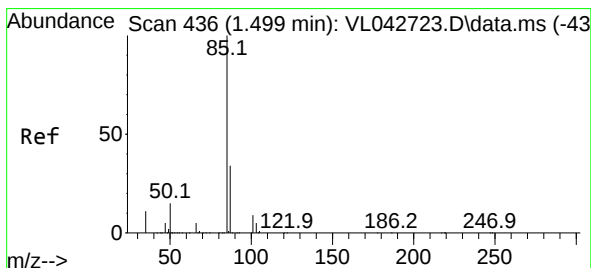
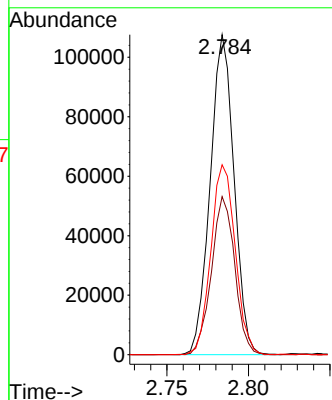
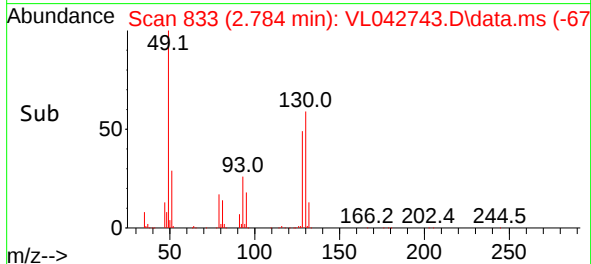


#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 81
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Instrument :
MSVOA_L
ClientSampleId :
OA1

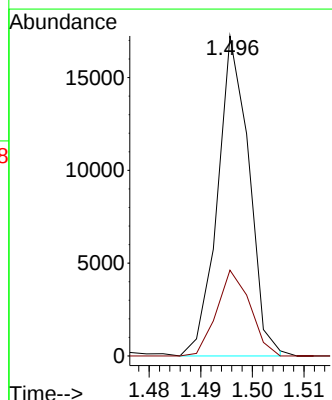
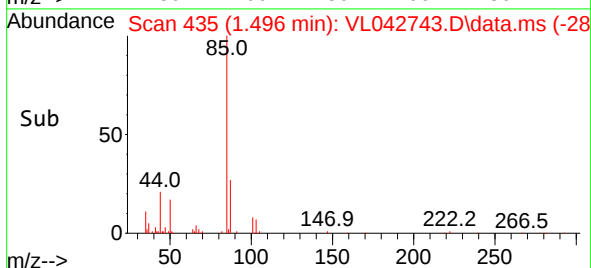
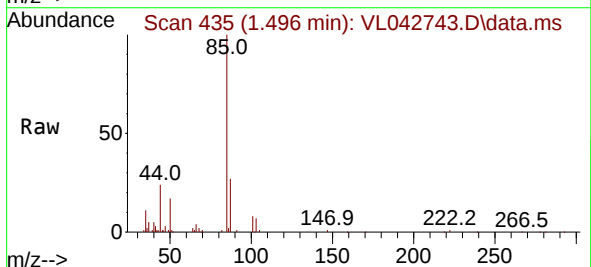


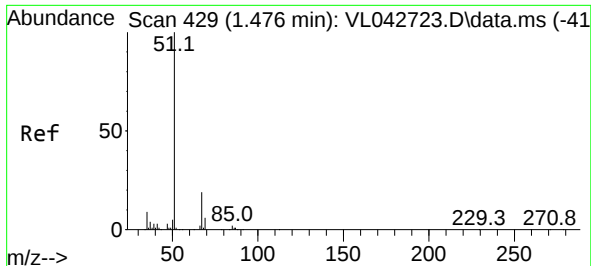
Tgt Ion: 49 Resp: 109401
Ion Ratio Lower Upper
49 100
128 48.3 24.5 73.5
130 60.7 31.7 95.1



#2
Dichlorodifluoromethane
Concen: 0.427 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 85 Resp: 7298
Ion Ratio Lower Upper
85 100
87 26.8 27.5 41.3#

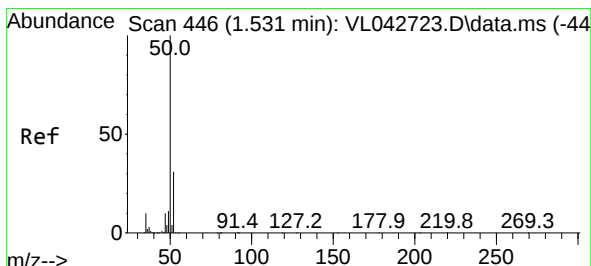
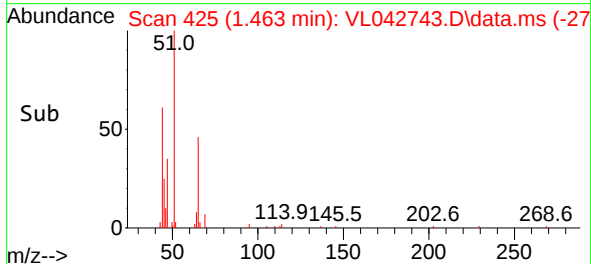
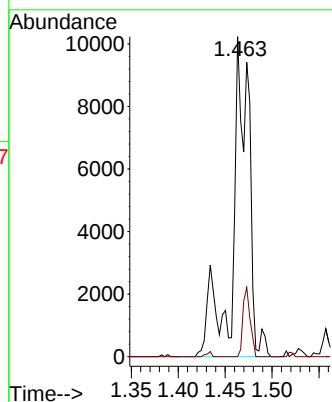
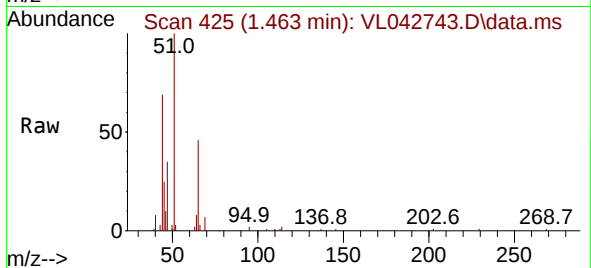




#3
Chlorodifluoromethane
Concen: 0.646 ppbv
RT: 1.463 min Scan# 41
Delta R.T. -0.013 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

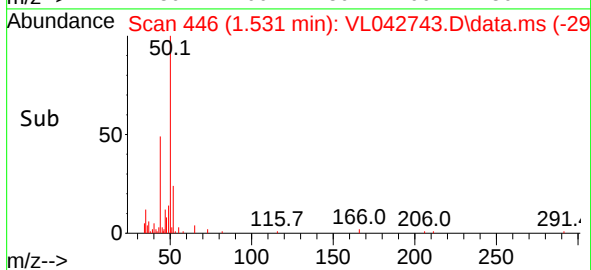
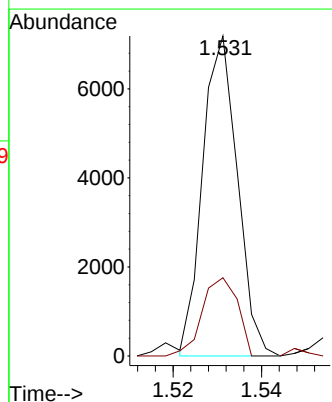
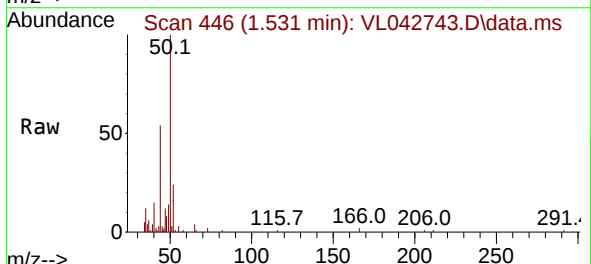
Instrument :
MSVOA_L
ClientSampleId :
OA1

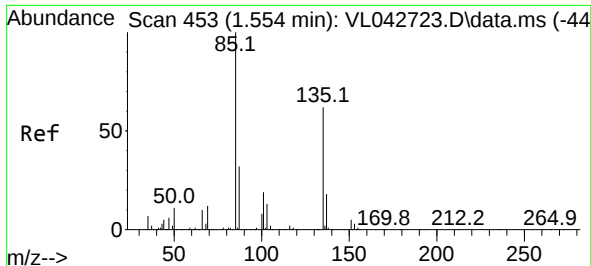
Tgt Ion: 51 Resp: 12481
Ion Ratio Lower Upper
51 100
67 9.4 16.0 24.0#



#4
Chloromethane
Concen: 0.561 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 50 Resp: 3923
Ion Ratio Lower Upper
50 100
52 24.5 24.9 37.3#

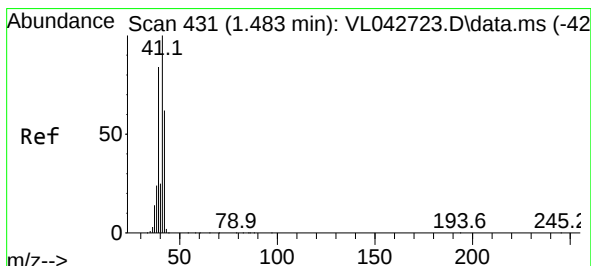
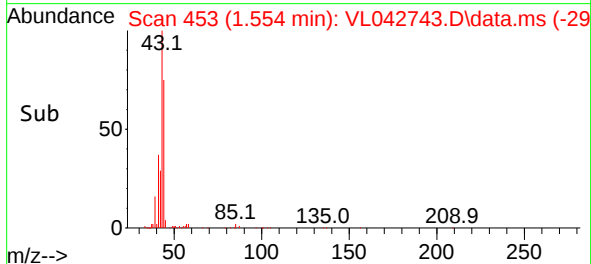
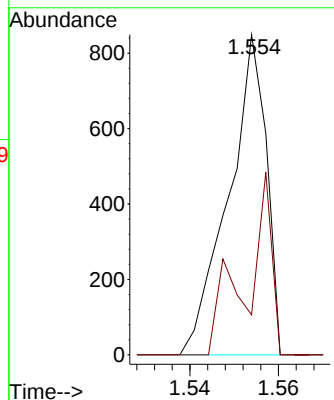
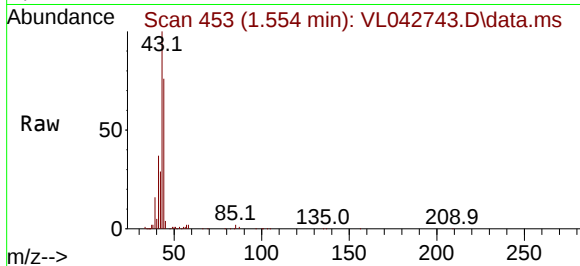




#8
 Dichlorotetrafluoroethane
 Concen: 0.035 ppbv
 RT: 1.554 min Scan# 411
 Delta R.T. 0.000 min
 Lab File: VL042743.D
 Acq: 22 Jul 2025 23:15

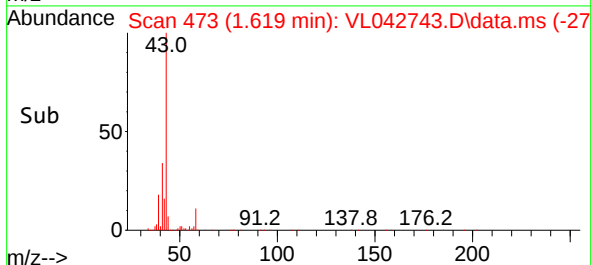
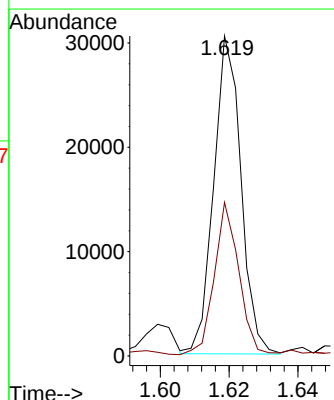
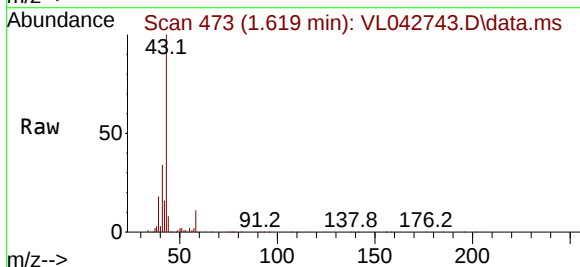
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

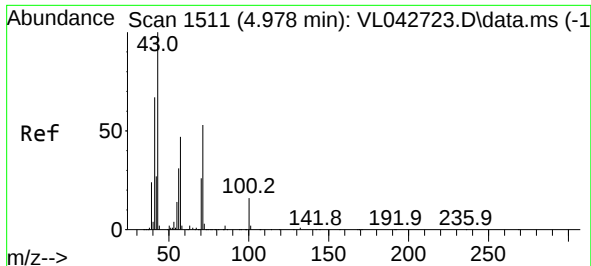
Tgt Ion: 85 Resp: 503
 Ion Ratio Lower Upper
 85 100
 135 38.8 52.0 78.0#



#9
 Propene
 Concen: 2.444 ppbv
 RT: 1.619 min Scan# 473
 Delta R.T. 0.136 min
 Lab File: VL042743.D
 Acq: 22 Jul 2025 23:15

Tgt Ion: 41 Resp: 16752
 Ion Ratio Lower Upper
 41 100
 42 52.5 52.0 78.0

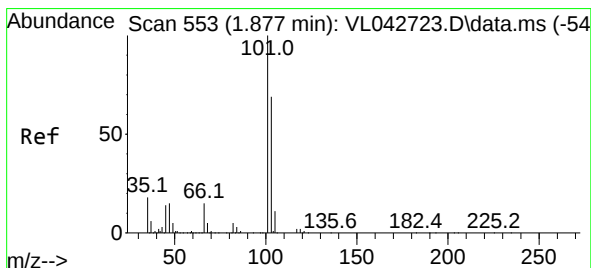
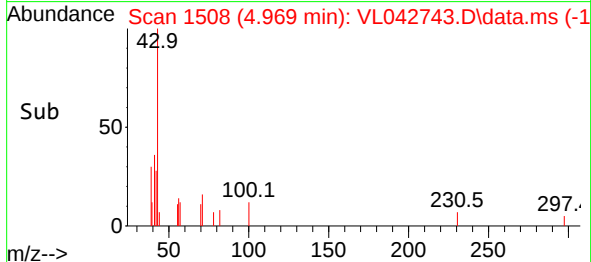
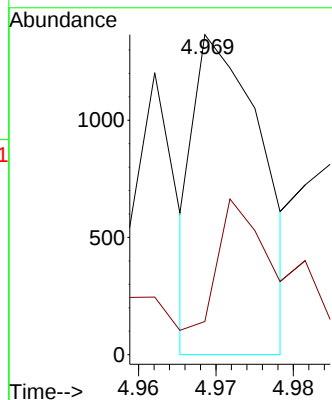
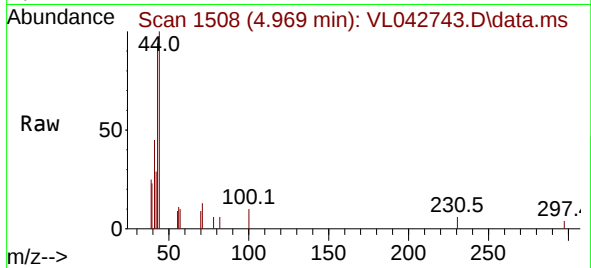




#10
Heptane
Concen: 0.043 ppbv
RT: 4.969 min Scan# 11
Delta R.T. -0.010 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

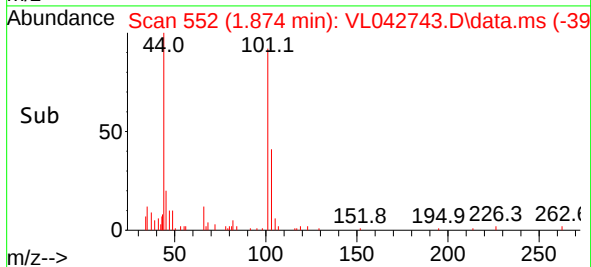
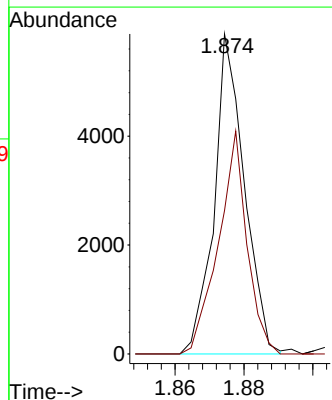
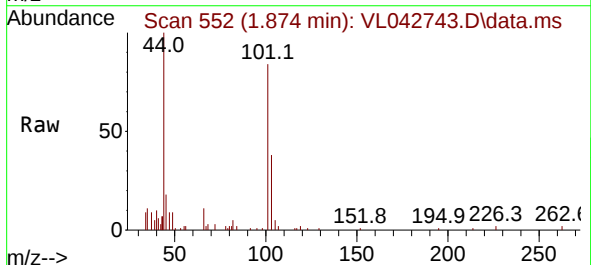
Instrument :
MSVOA_L
ClientSampleId :
OA1

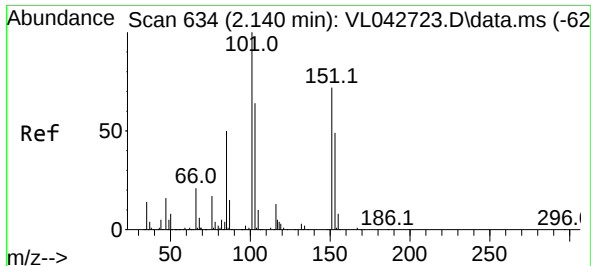
Tgt Ion: 43 Resp: 825
Ion Ratio Lower Upper
43 100
57 104.6 39.1 58.7#



#11
Trichlorofluoromethane
Concen: 0.203 ppbv
RT: 1.874 min Scan# 552
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion:101 Resp: 3574
Ion Ratio Lower Upper
101 100
103 44.8 55.2 82.8#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.066 ppbv

RT: 2.140 min Scan# 61

Delta R.T. 0.000 min

Lab File: VL042743.D

Acq: 22 Jul 2025 23:15

Instrument :

MSVOA_1

ClientSampleId :

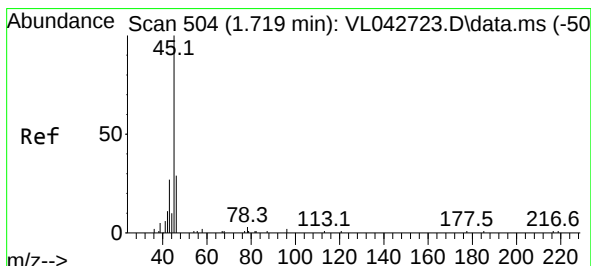
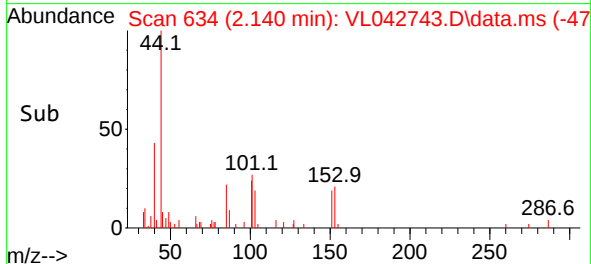
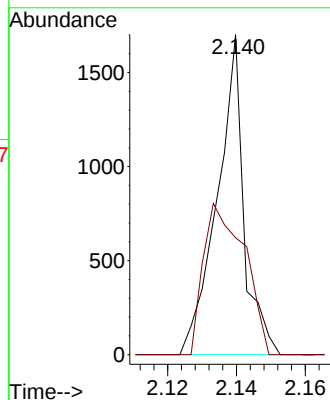
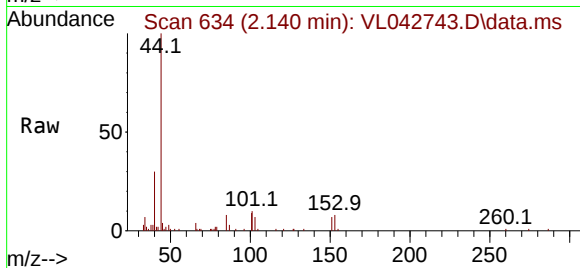
OA1

Tgt Ion:101 Resp: 913

Ion Ratio Lower Upper

101 100

151 72.9 59.1 88.7



#13

Ethanol

Concen: 40.370 ppbv

RT: 1.719 min Scan# 504

Delta R.T. 0.000 min

Lab File: VL042743.D

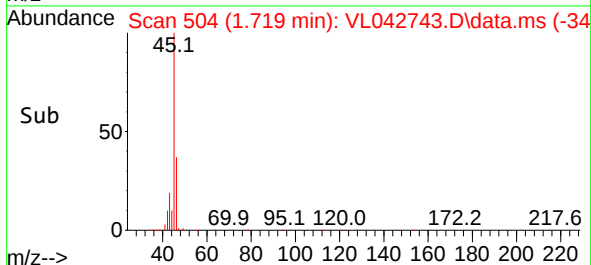
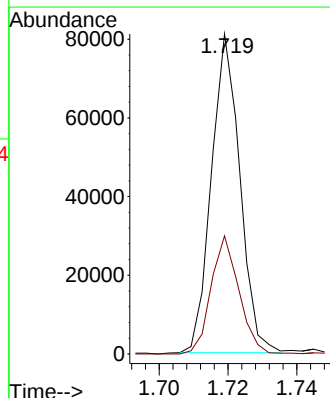
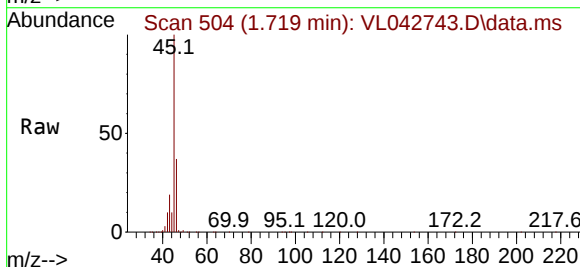
Acq: 22 Jul 2025 23:15

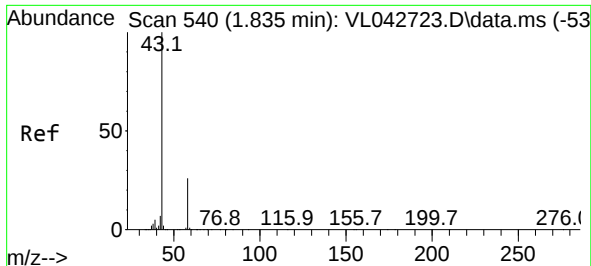
Tgt Ion: 45 Resp: 46540

Ion Ratio Lower Upper

45 100

46 36.7 16.3 65.1

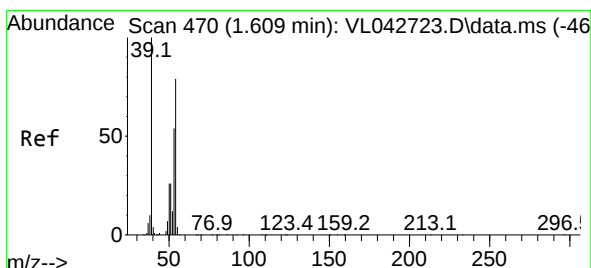
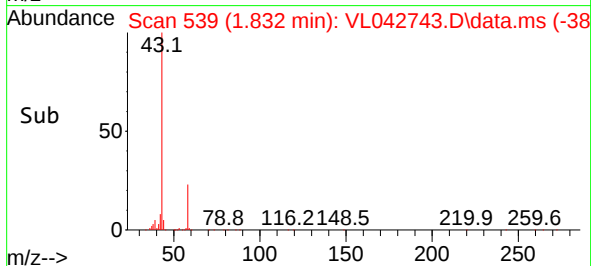
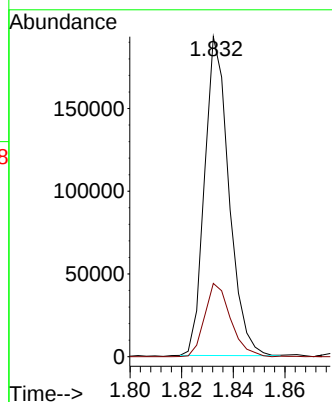
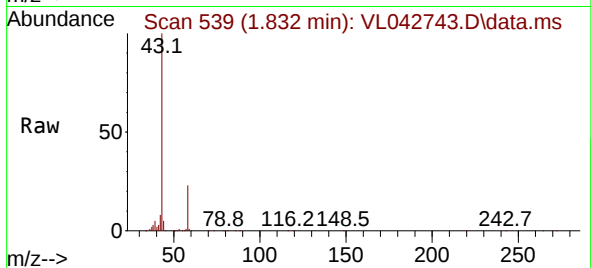




#15
Acetone
Concen: 6.901 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

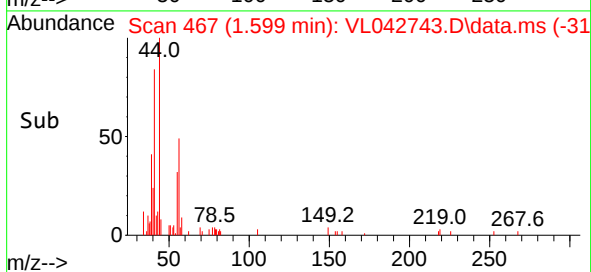
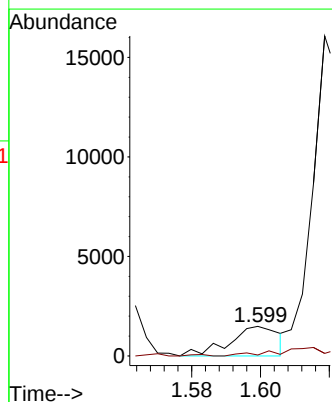
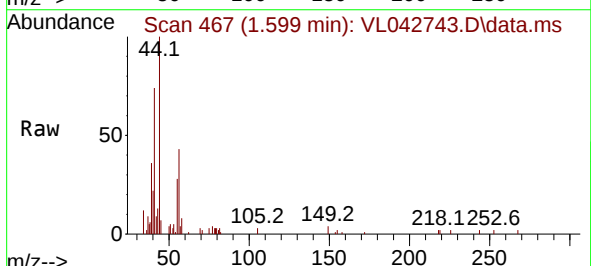
Instrument :
MSVOA_L
ClientSampleId :
OA1

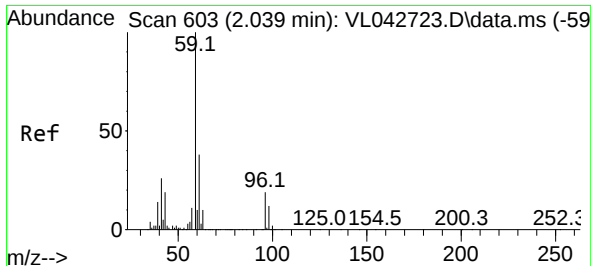
Tgt Ion: 43 Resp: 126418
Ion Ratio Lower Upper
43 100
58 24.5 20.5 30.7



#16
1,3-Butadiene
Concen: 0.188 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.010 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 39 Resp: 1475
Ion Ratio Lower Upper
39 100
54 0.0 54.6 82.0#





#17

tert-Butyl alcohol

Concen: 0.225 ppbv

RT: 2.043 min Scan# 603

Delta R.T. 0.003 min

Lab File: VL042743.D

Acq: 22 Jul 2025 23:15

Instrument :

MSVOA_1

ClientSampleId :

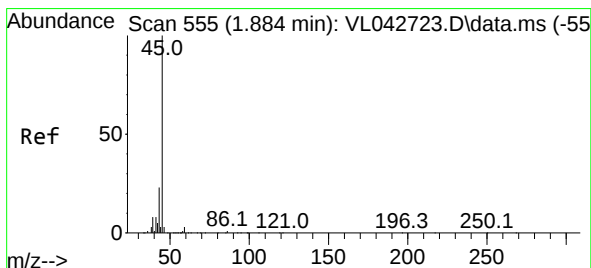
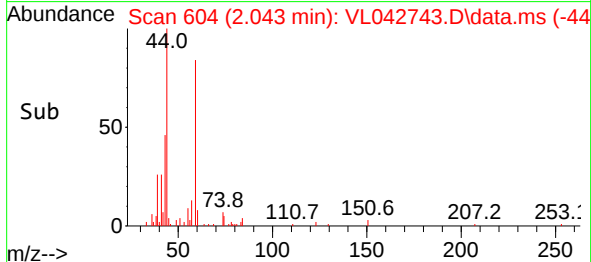
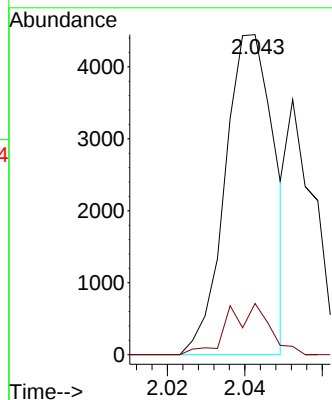
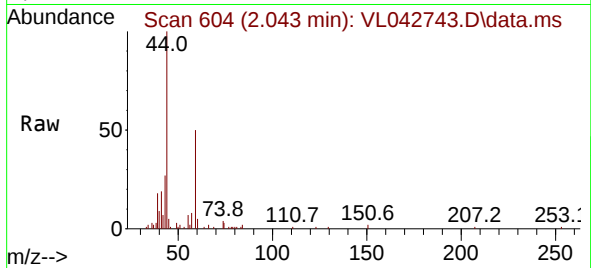
OA1

Tgt Ion: 59 Resp: 3914

Ion Ratio Lower Upper

59 100

57 13.5 9.1 13.7



#19

Isopropyl Alcohol

Concen: 1.371 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.000 min

Lab File: VL042743.D

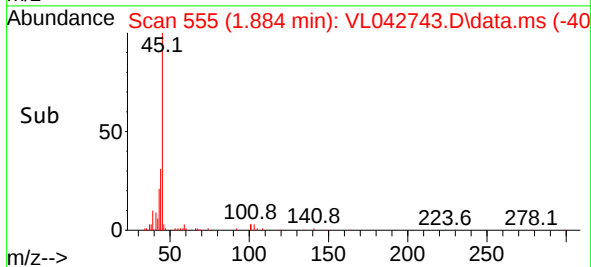
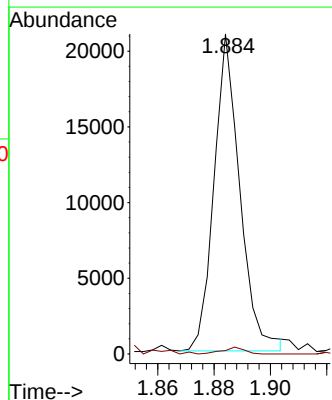
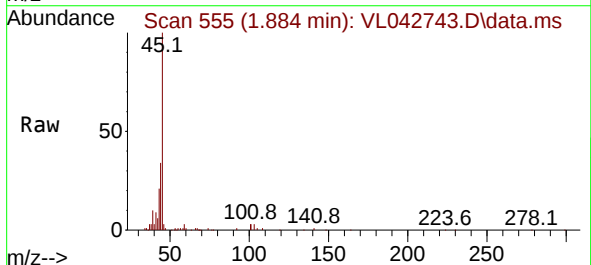
Acq: 22 Jul 2025 23:15

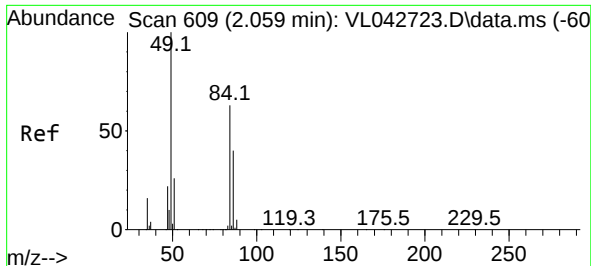
Tgt Ion: 45 Resp: 13308

Ion Ratio Lower Upper

45 100

58 232.7 30.6 46.0#

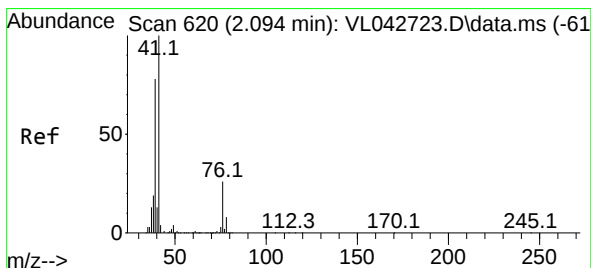
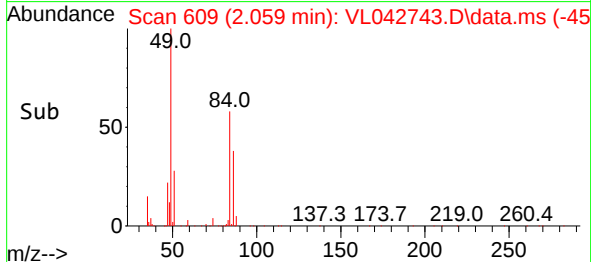
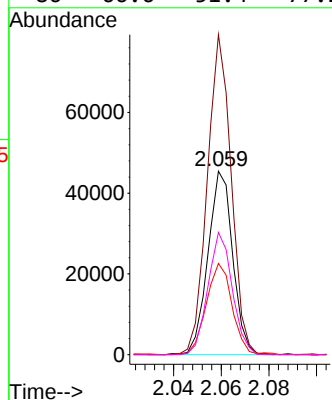
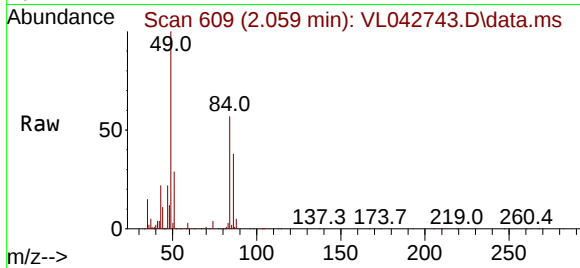




#20
Methylene Chloride
Concen: 5.698 ppbv
RT: 2.059 min Scan# 609
Delta R.T. 0.000 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

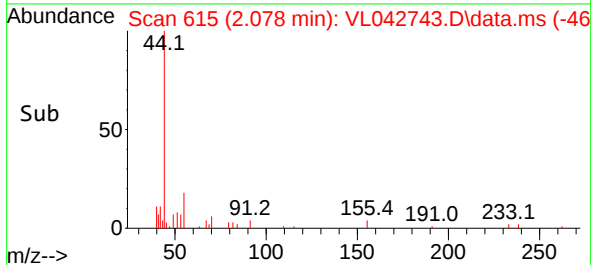
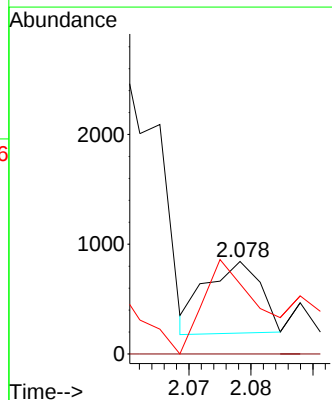
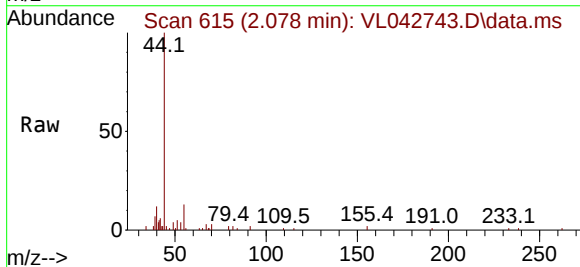
Instrument :
MSVOA_1
ClientSampleId :
OA1

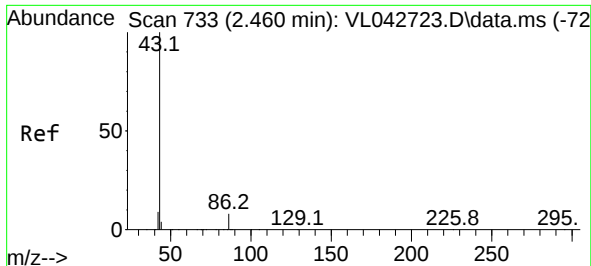
Tgt Ion: 84 Resp: 32808
Ion Ratio Lower Upper
84 100
49 174.2 128.2 192.4
51 49.7 34.5 51.7
86 66.6 51.4 77.2



#21
Allyl Chloride
Concen: 0.034 ppbv
RT: 2.078 min Scan# 615
Delta R.T. -0.016 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 41 Resp: 400
Ion Ratio Lower Upper
41 100
76 15.8 22.1 33.1#
39 305.8 64.7 97.1#



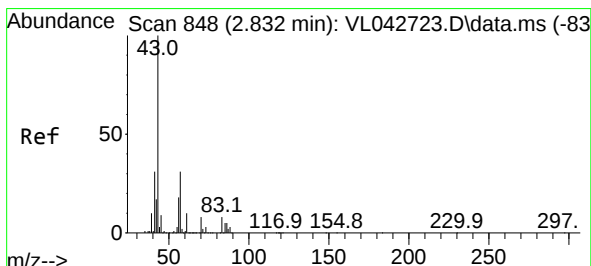
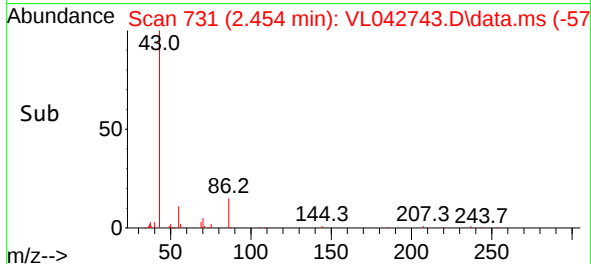
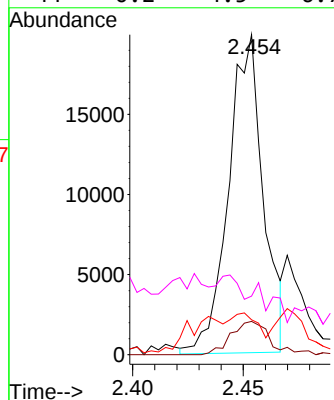
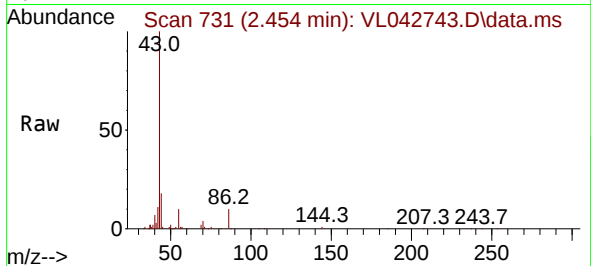


#23
 Vinyl Acetate
 Concen: 1.037 ppbv
 RT: 2.454 min Scan# 71
 Delta R.T. -0.006 min
 Lab File: VL042743.D
 Acq: 22 Jul 2025 23:15

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Tgt Ion: 43 Resp: 21661

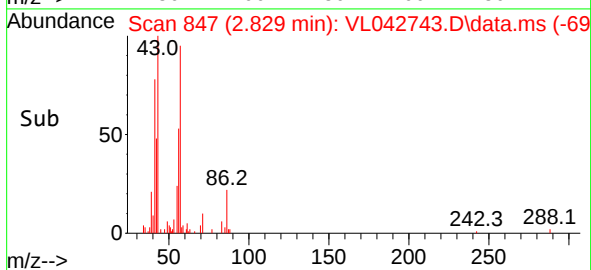
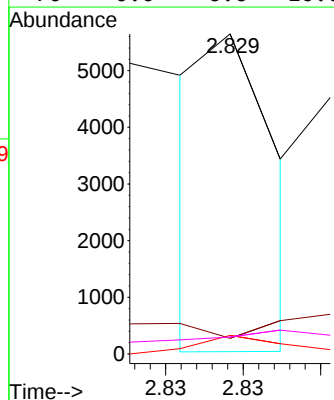
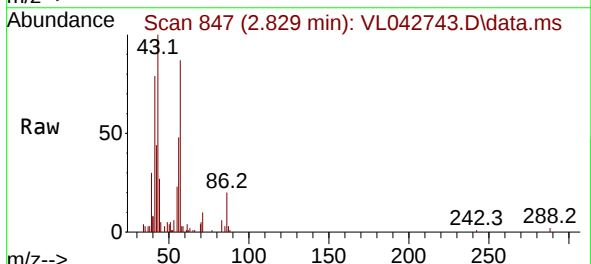
Ion	Ratio	Lower	Upper
43	100		
86	10.6	5.7	8.5#
42	5.8	7.9	11.9#
44	0.2	4.5	6.7#

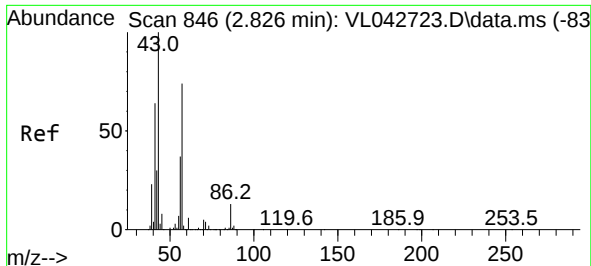


#25
 Ethyl Acetate
 Concen: 0.052 ppbv
 RT: 2.829 min Scan# 847
 Delta R.T. -0.003 min
 Lab File: VL042743.D
 Acq: 22 Jul 2025 23:15

Tgt Ion: 43 Resp: 1747

Ion	Ratio	Lower	Upper
43	100		
45	0.0	7.8	11.6#
61	0.0	7.0	10.6#
70	0.0	6.6	10.0#

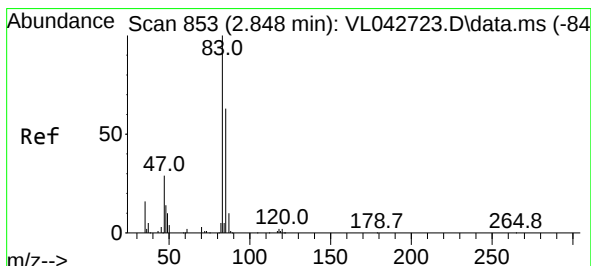
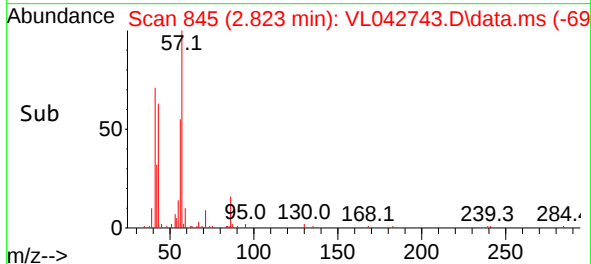
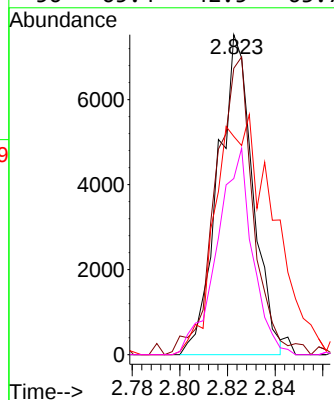
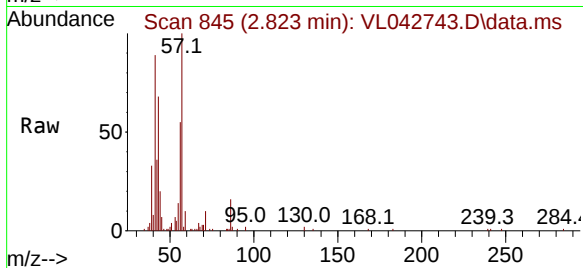




#26
Hexane
Concen: 0.516 ppbv
RT: 2.823 min Scan# 846
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

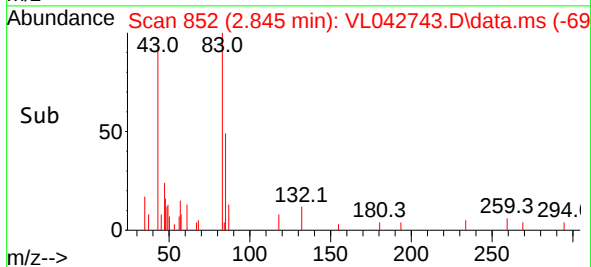
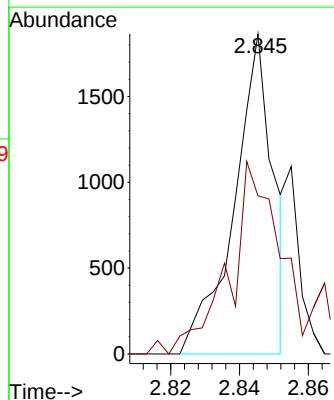
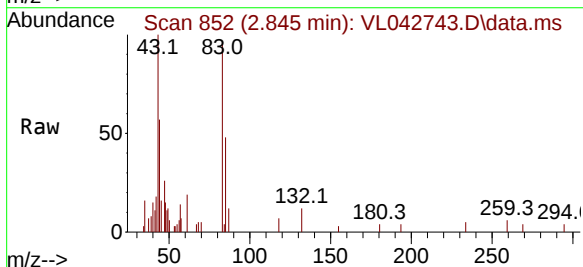
Instrument :
MSVOA_L
ClientSampleId :
OA1

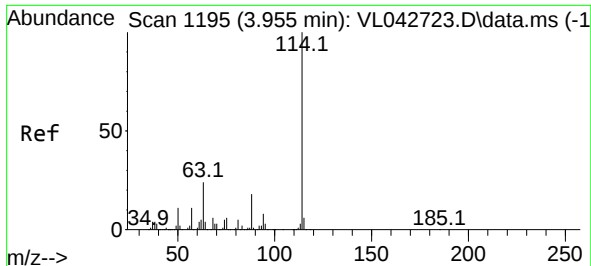
Tgt Ion:	57	Resp:	7659
Ion	Ratio	Lower	Upper
57	100		
41	104.6	77.3	115.9
43	132.4	182.3	273.5#
56	65.4	42.5	63.7#



#29
Chloroform
Concen: 0.060 ppbv
RT: 2.845 min Scan# 852
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion:	83	Resp:	1465
Ion	Ratio	Lower	Upper
83	100		
85	43.8	50.9	76.3#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.952 min Scan# 1194

Delta R.T. -0.003 min

Lab File: VL042743.D

Acq: 22 Jul 2025 23:15

Instrument :

MSVOA_L

ClientSampleId :

OA1

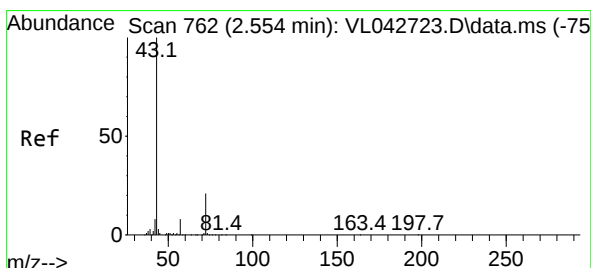
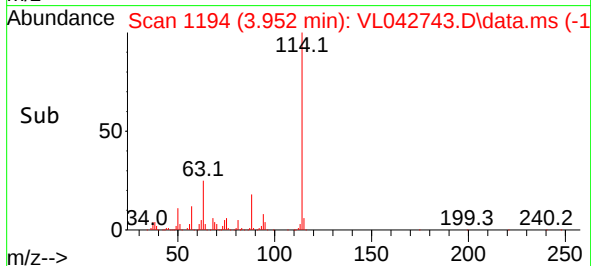
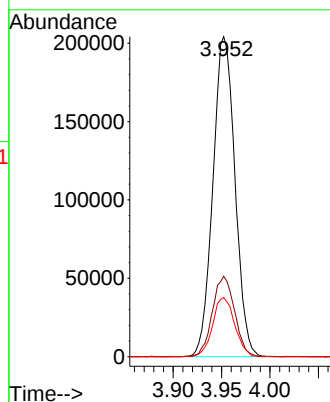
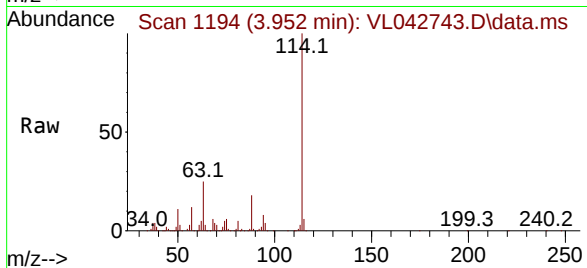
Tgt Ion:114 Resp: 323808

Ion Ratio Lower Upper

114 100

63 25.3 20.4 30.6

88 18.5 14.5 21.7



#34

2-Butanone

Concen: 0.769 ppbv

RT: 2.557 min Scan# 763

Delta R.T. 0.003 min

Lab File: VL042743.D

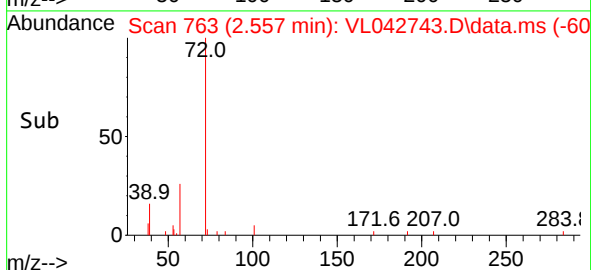
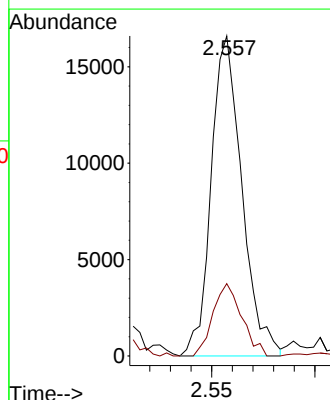
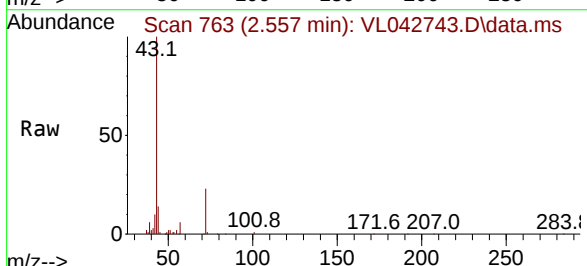
Acq: 22 Jul 2025 23:15

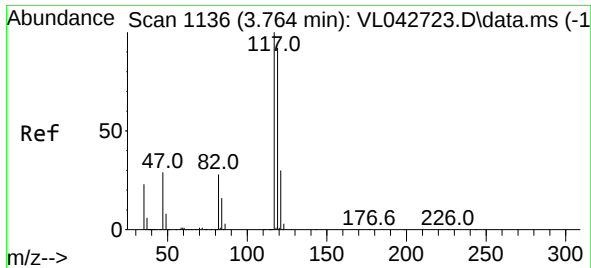
Tgt Ion: 43 Resp: 17157

Ion Ratio Lower Upper

43 100

72 21.5 17.0 25.6

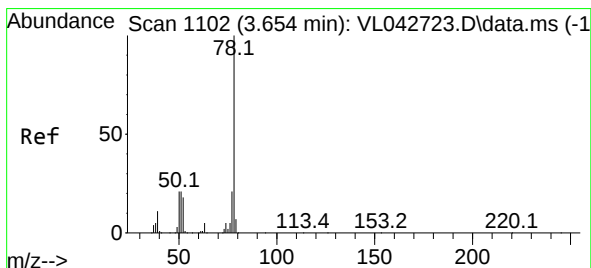
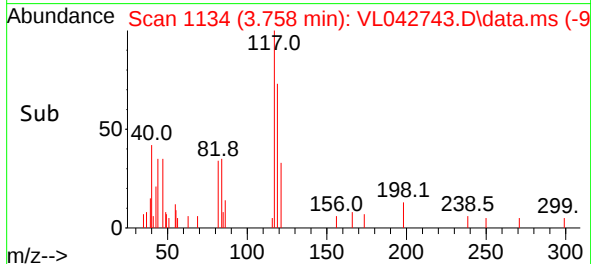
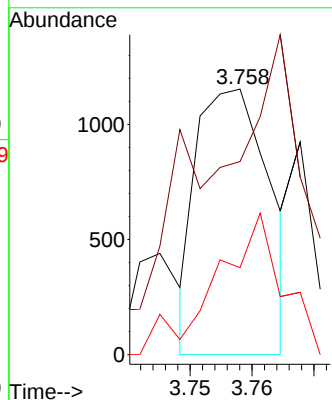
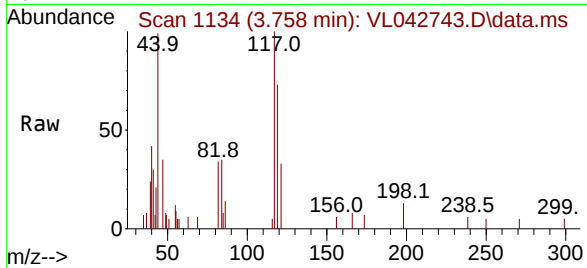




#35
Carbon Tetrachloride
Concen: 0.035 ppbv
RT: 3.758 min Scan# 1136
Delta R.T. -0.006 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

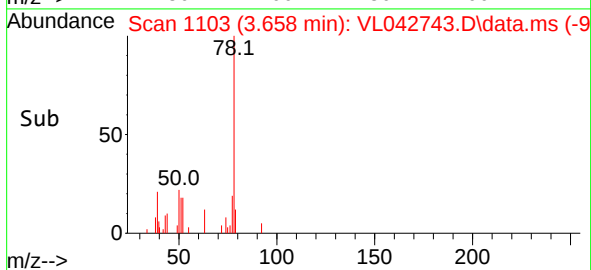
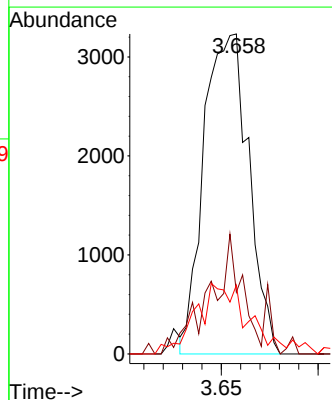
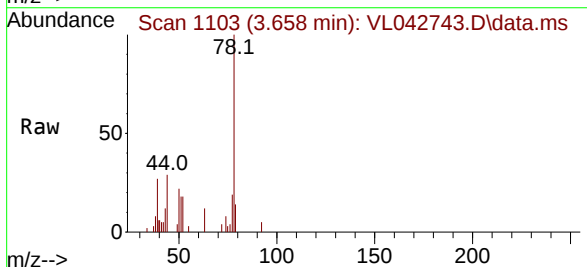
Instrument :
MSVOA_1
ClientSampleId :
OA1

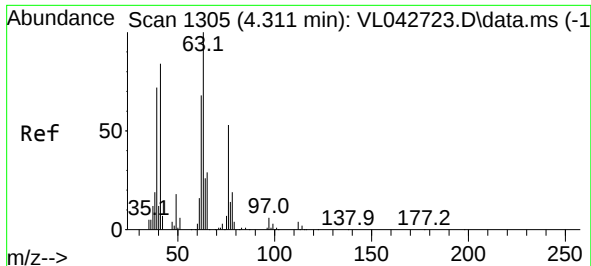
Tgt Ion:117 Resp: 936
Ion Ratio Lower Upper
117 100
119 0.0 73.7 110.5#
121 36.2 23.8 35.8#



#36
Benzene
Concen: 0.173 ppbv
RT: 3.658 min Scan# 1103
Delta R.T. 0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 78 Resp: 5201
Ion Ratio Lower Upper
78 100
77 19.3 17.0 25.4
50 18.4 16.9 25.3





#39

1,2-Dichloropropane

Concen: 7.293 ppbv

RT: 3.952 min Scan# 1194

Delta R.T. -0.359 min

Lab File: VL042743.D

Acq: 22 Jul 2025 23:15

Instrument :

MSVOA_L

ClientSampleId :

OA1

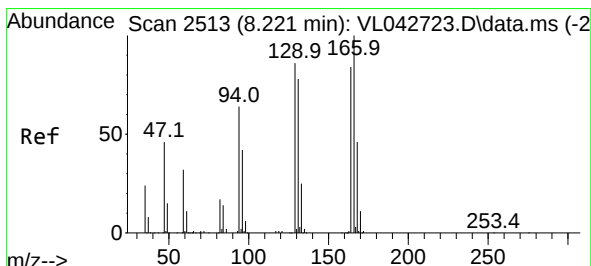
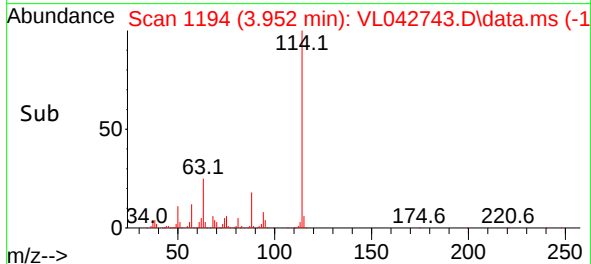
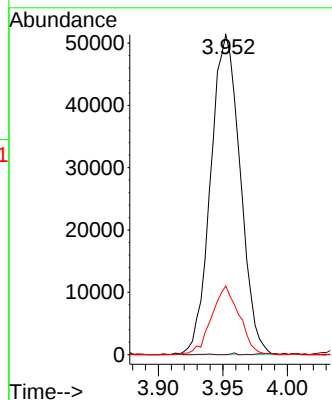
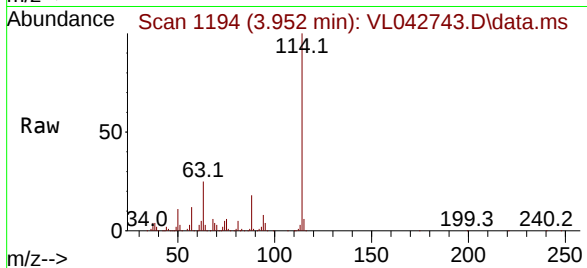
Tgt Ion: 63 Resp: 81696

Ion Ratio Lower Upper

63 100

41 0.0 67.7 101.5#

62 21.5 54.1 81.1#



#52

Tetrachloroethene

Concen: 1.230 ppbv

RT: 8.221 min Scan# 2513

Delta R.T. 0.000 min

Lab File: VL042743.D

Acq: 22 Jul 2025 23:15

Tgt Ion:164 Resp: 14913

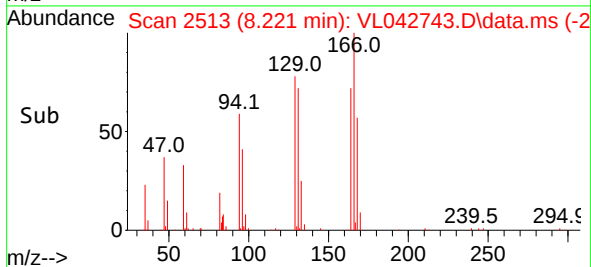
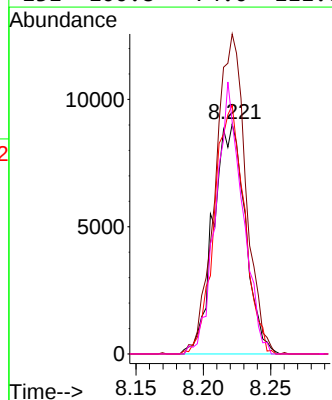
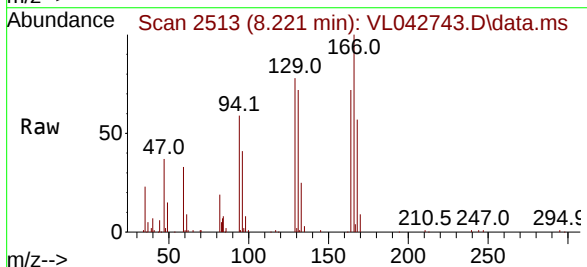
Ion Ratio Lower Upper

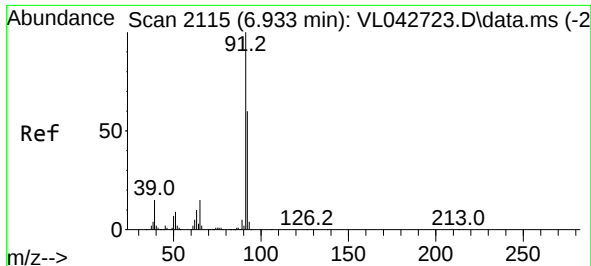
164 100

166 139.1 95.1 142.7

129 108.1 81.9 122.9

131 100.8 74.0 111.0

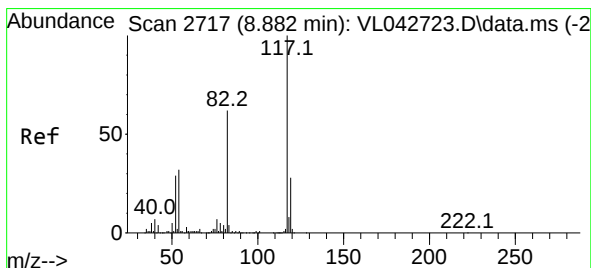
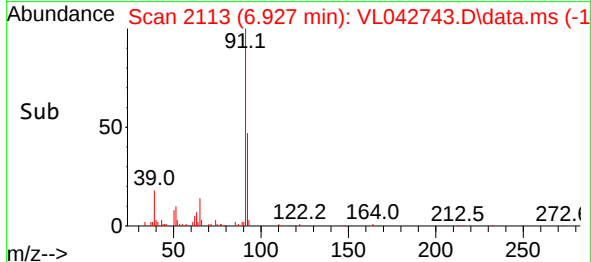
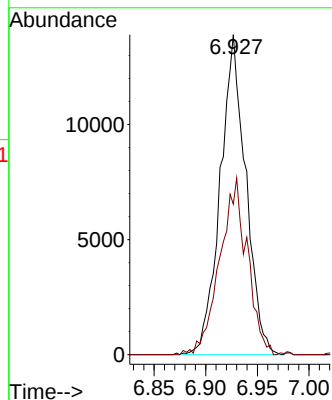
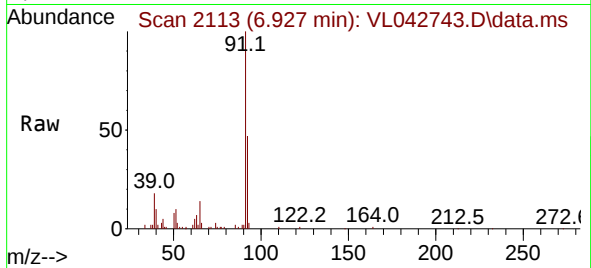




#53
Toluene
Concen: 0.706 ppbv
RT: 6.927 min Scan# 2113
Delta R.T. -0.006 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

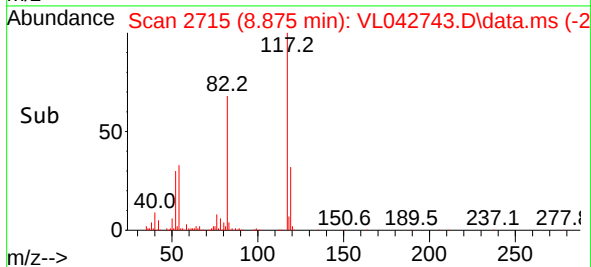
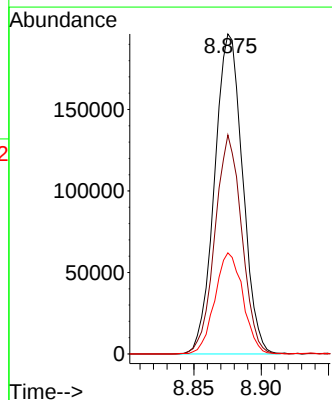
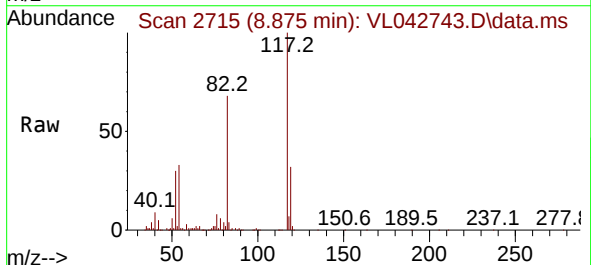
Instrument :
MSVOA_L
ClientSampleId :
OA1

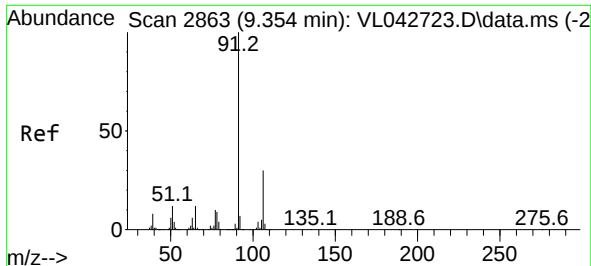
Tgt Ion: 91 Resp: 23962
Ion Ratio Lower Upper
91 100
92 59.6 48.2 72.4



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.875 min Scan# 2715
Delta R.T. -0.006 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 117 Resp: 284327
Ion Ratio Lower Upper
117 100
82 65.7 54.6 81.8
119 31.7 25.3 37.9

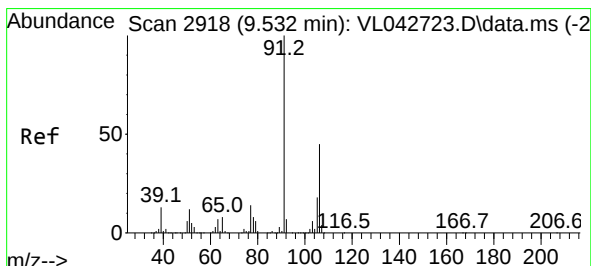
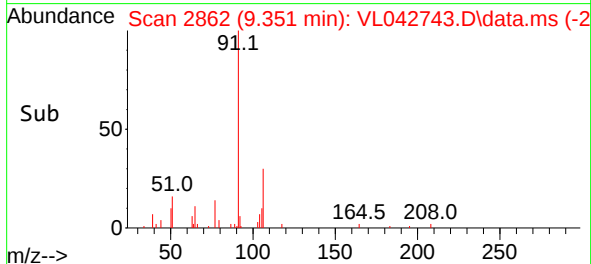
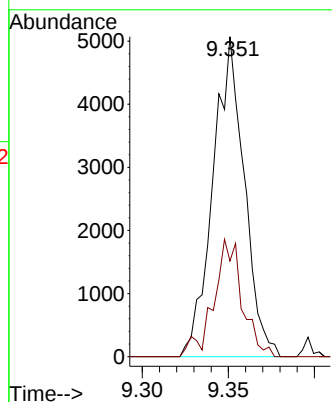
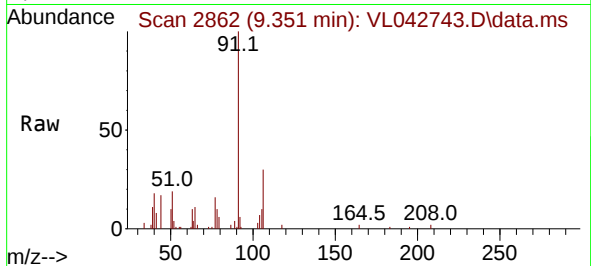




#58
Ethyl Benzene
Concen: 0.135 ppbv
RT: 9.351 min Scan# 21
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

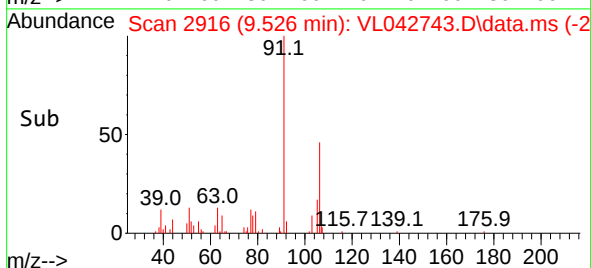
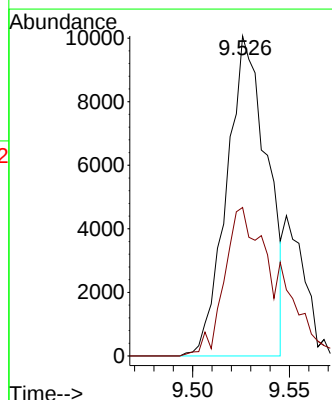
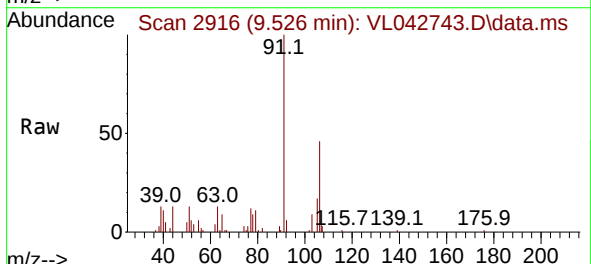
Instrument :
MSVOA_L
ClientSampleId :
OA1

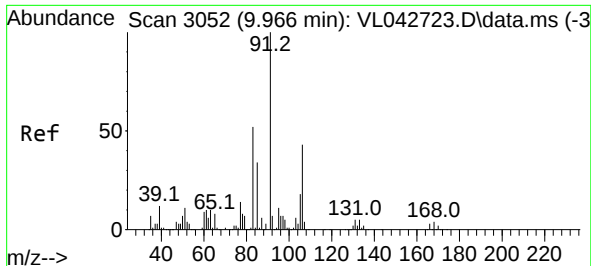
Tgt Ion: 91 Resp: 6421
Ion Ratio Lower Upper
91 100
106 29.9 23.7 35.5



#59
m/p-Xylene
Concen: 0.386 ppbv
RT: 9.526 min Scan# 2916
Delta R.T. -0.006 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 91 Resp: 14651
Ion Ratio Lower Upper
91 100
106 60.3 37.3 55.9#

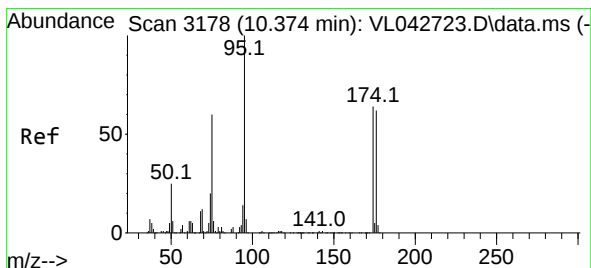
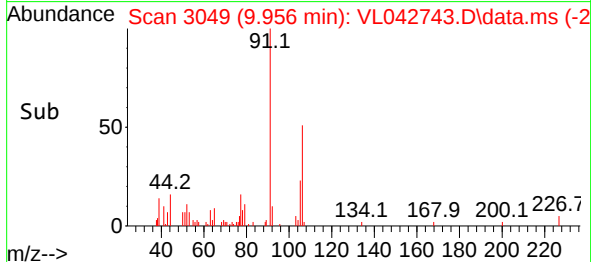
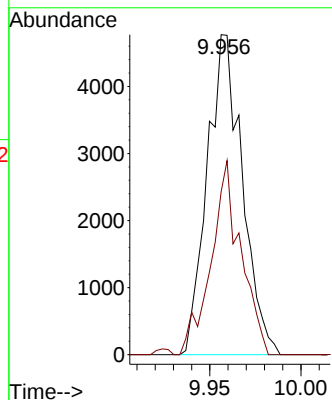
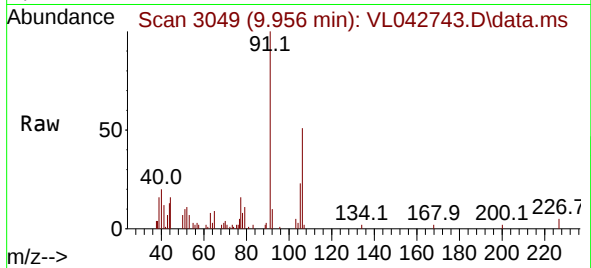




#60
o-Xylene
Concen: 0.166 ppbv
RT: 9.956 min Scan# 3052
Delta R.T. -0.010 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

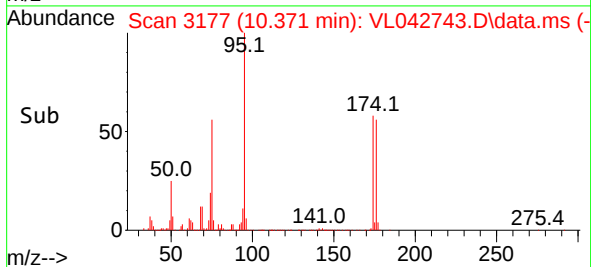
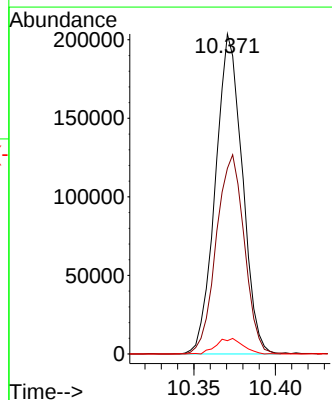
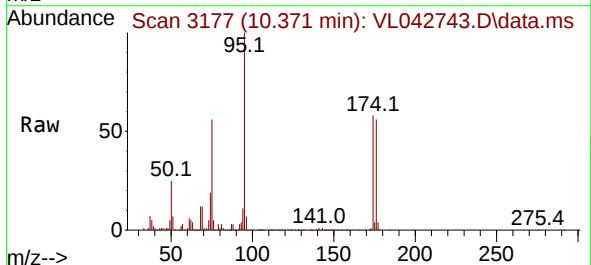
Instrument :
MSVOA_L
ClientSampleId :
OA1

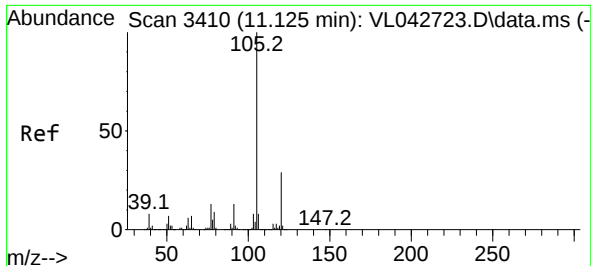
Tgt Ion: 91 Resp: 6371
Ion Ratio Lower Upper
91 100
106 52.3 21.4 64.3



#68
1-Bromo-4-Fluorobenzene
Concen: 10.160 ppbv
RT: 10.371 min Scan# 3177
Delta R.T. -0.003 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

Tgt Ion: 95 Resp: 233470
Ion Ratio Lower Upper
95 100
174 65.1 51.4 77.2
175 4.9 4.2 6.4

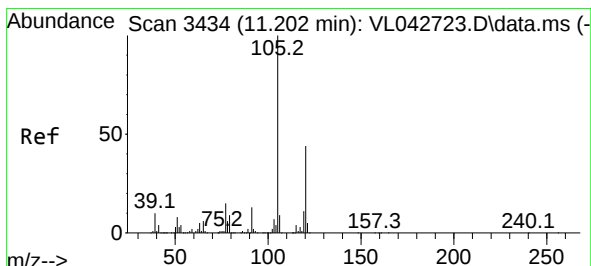
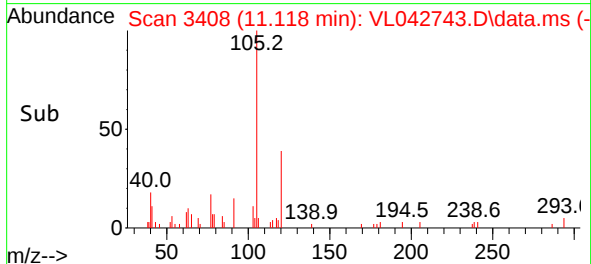
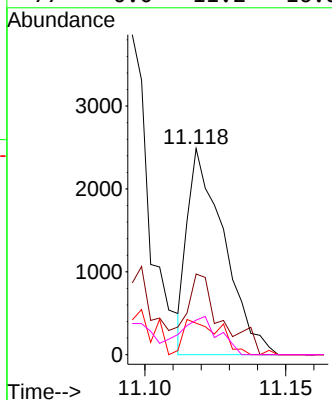
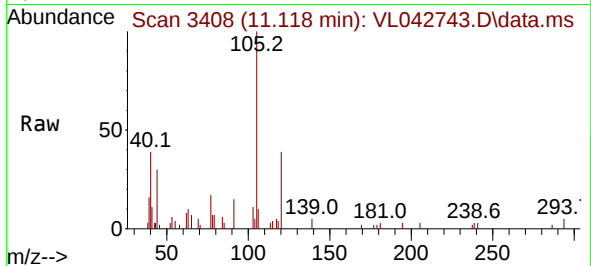




#72
4-Ethyltoluene
Concen: 0.049 ppbv
RT: 11.118 min Scan# 3410
Delta R.T. -0.006 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

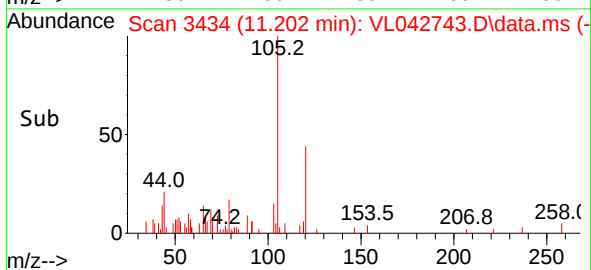
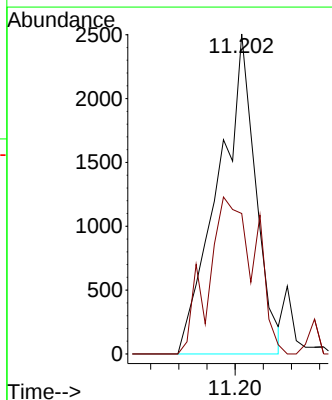
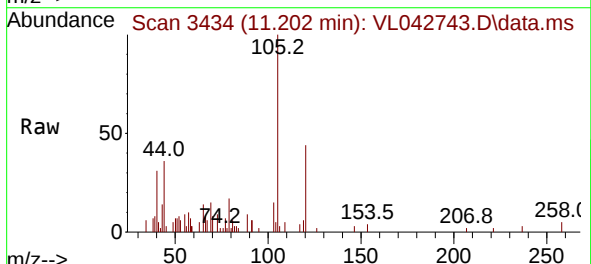
Instrument :
MSVOA_L
ClientSampleId :
OA1

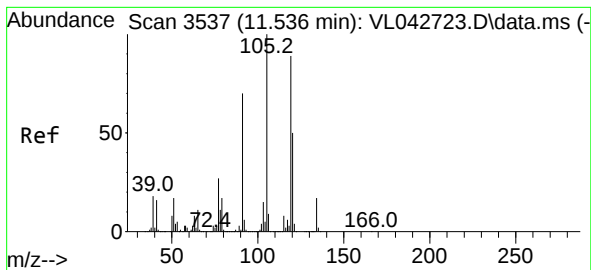
Tgt Ion:	105	Resp:	2246
Ion	Ratio	Lower	Upper
105	100		
120	34.8	23.4	35.0
91	16.8	10.6	15.8#
77	0.0	11.2	16.8#



#73
1,3,5-Trimethylbenzene
Concen: 0.061 ppbv
RT: 11.202 min Scan# 3434
Delta R.T. 0.000 min
Lab File: VL042743.D
Acq: 22 Jul 2025 23:15

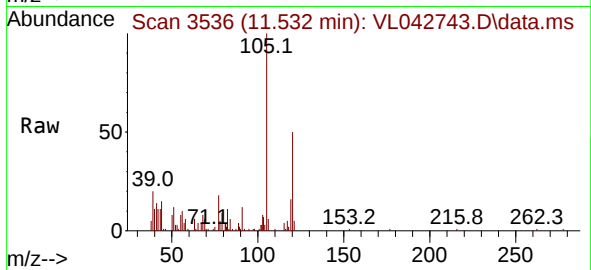
Tgt Ion:	105	Resp:	2307
Ion	Ratio	Lower	Upper
105	100		
120	43.9	35.2	52.8





#74
 1,2,4-Trimethylbenzene
 Concen: 0.217 ppbv
 RT: 11.532 min Scan# 3536
 Delta R.T. -0.003 min
 Lab File: VL042743.D
 Acq: 22 Jul 2025 23:15

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1



Tgt Ion:	105	Resp:	9010
Ion	Ratio	Lower	Upper
105	100		
120	50.3	39.9	59.9
91	12.5	56.5	84.7#
77	17.7	21.8	32.6#

