

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL111925\
 Data File : VL043244.D
 Acq On : 19 Nov 2025 17:47
 Operator : SY/MD
 Sample : Q3626-10 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 14-SG-1

Quant Time: Nov 20 00:08:08 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

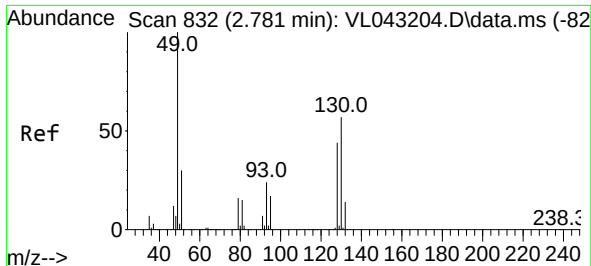
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.781	49	106615	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.949	114	284605	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	227663	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.367	95	166196	9.959	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.600%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	3851	0.256	ppbv	99
3) Chlorodifluoromethane	1.476	51	3766	0.255	ppbv #	78
4) Chloromethane	1.531	50	789	0.140	ppbv #	45
9) Propene	1.486	41	4977	0.793	ppbv #	1
10) Heptane	4.972	43	1254	0.067	ppbv #	33
11) Trichlorofluoromethane	1.874	101	2218	0.152	ppbv #	62
13) Ethanol	1.719	45	28478	12.896	ppbv	97
15) Acetone	1.832	43	198363	13.392	ppbv	100
16) 1,3-Butadiene	1.599	39	1793	0.272	ppbv #	24
17) tert-Butyl alcohol	2.043	59	2623	0.135	ppbv #	87
19) Isopropyl Alcohol	1.884	45	62615	7.481	ppbv #	30
20) Methylene Chloride	2.062	84	4407	0.244	ppbv #	82
23) Vinyl Acetate	2.447	43	3344	0.187	ppbv #	66
25) Ethyl Acetate	2.823	43	6305	0.197	ppbv #	83
26) Hexane	2.819	57	6594	0.471	ppbv #	51
27) Carbon Disulfide	2.149	76	6722	0.470	ppbv #	1
28) Methyl tert-Butyl Ether	2.405	73	513	0.075	ppbv #	50
34) 2-Butanone	2.551	43	13918	0.693	ppbv	96
36) Benzene	3.648	78	14120	0.518	ppbv #	88
39) 1,2-Dichloropropane	3.949	63	73219	7.340	ppbv #	24
41) Tetrahydrofuran	3.059	42	482	0.043	ppbv #	49
52) Tetrachloroethene	8.215	164	13878	1.369	ppbv	92
53) Toluene	6.920	91	3666	0.114	ppbv #	28
56) 1,1,1,2-Tetrachloroethane	8.927	131	1768	0.106	ppbv #	1
58) Ethyl Benzene	9.348	91	2502	0.057	ppbv #	84
59) m/p-Xylene	9.539	91	2212	0.063	ppbv #	31
60) o-Xylene	9.956	91	3418	0.097	ppbv	96
61) Styrene	9.869	104	599	0.039	ppbv	92
62) Isopropylbenzene	10.529	105	18013	0.287	ppbv	93
66) Benzyl Chloride	11.604	91	1036	0.182	ppbv #	1
67) sec-Butylbenzene	11.765	105	7294	0.093	ppbv #	44
69) p-Isopropyltoluene	11.918	119	3337	0.050	ppbv #	80
74) 1,2,4-Trimethylbenzene	11.526	105	5794	0.148	ppbv #	48

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

Quant Time: Nov 20 00:08:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Nov 19 01:11:25 2025
Response via : Initial Calibration

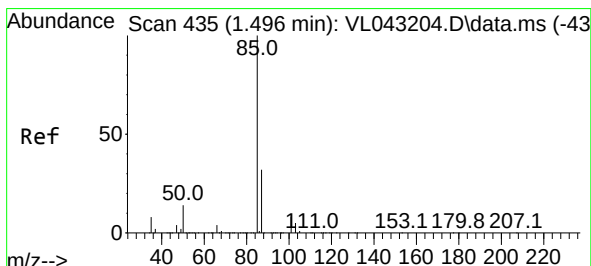
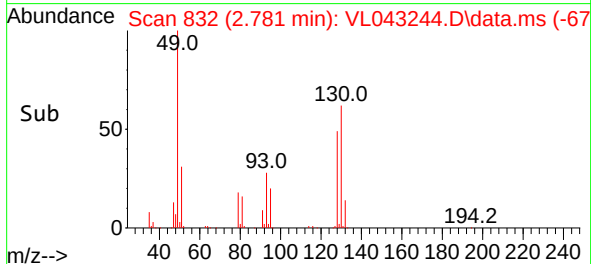
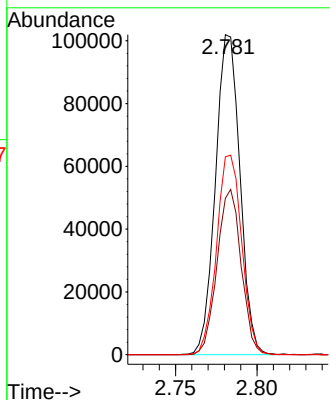
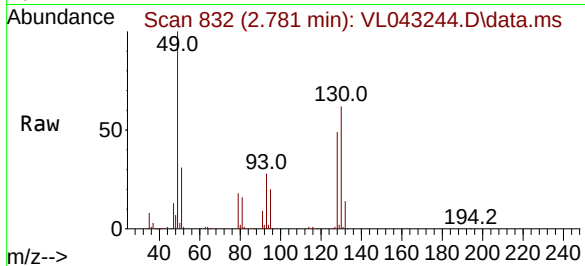




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.781 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

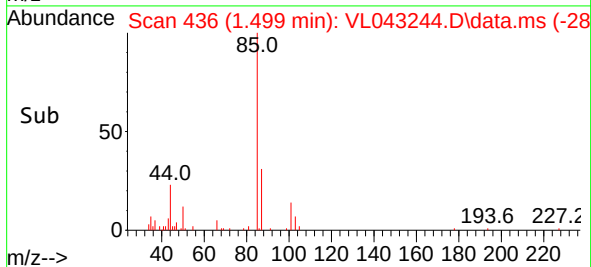
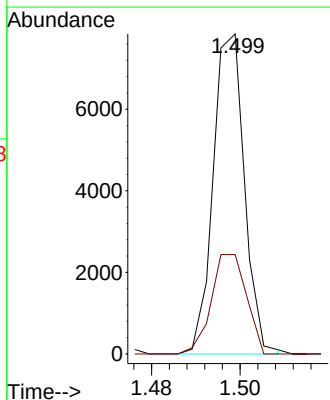
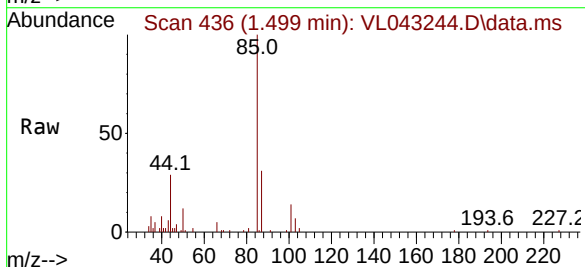
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

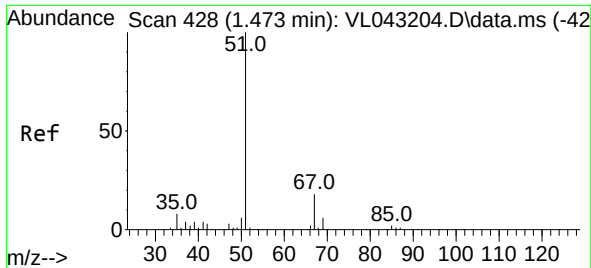
Tgt Ion: 49 Resp: 106615
Ion Ratio Lower Upper
49 100
128 50.7 23.0 69.0
130 64.0 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.256 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 85 Resp: 3851
Ion Ratio Lower Upper
85 100
87 31.0 25.4 38.2





#3

Chlorodifluoromethane

Concen: 0.255 ppbv

RT: 1.476 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_1

ClientSampleId :

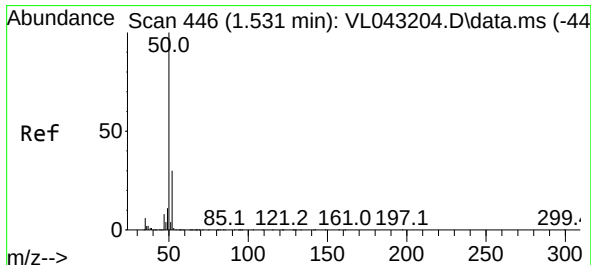
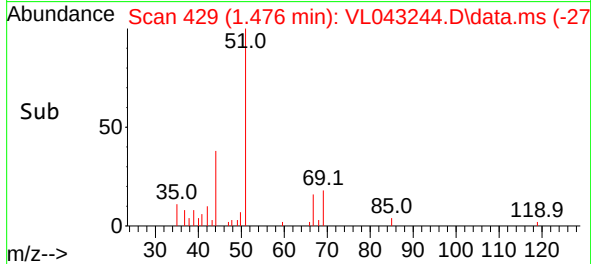
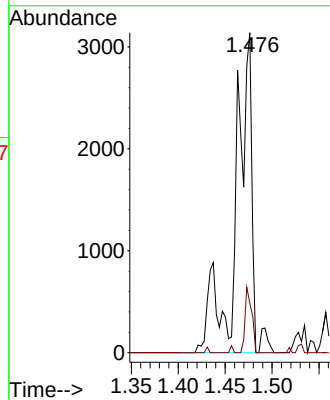
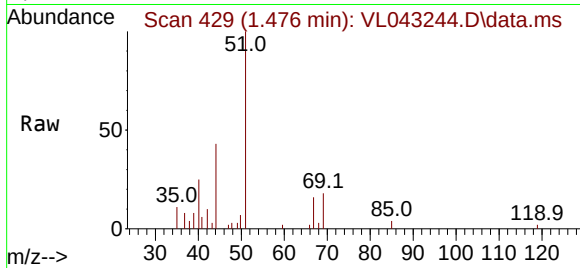
14-SG-1

Tgt Ion: 51 Resp: 3766

Ion Ratio Lower Upper

51 100

67 8.7 14.9 22.3#



#4

Chloromethane

Concen: 0.140 ppbv

RT: 1.531 min Scan# 446

Delta R.T. -0.000 min

Lab File: VL043244.D

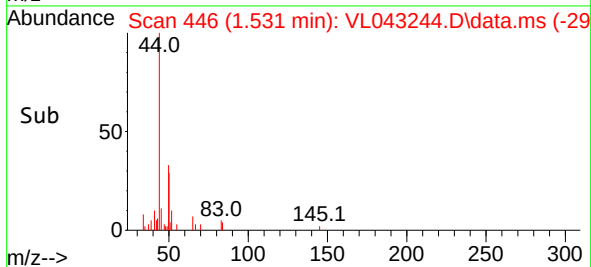
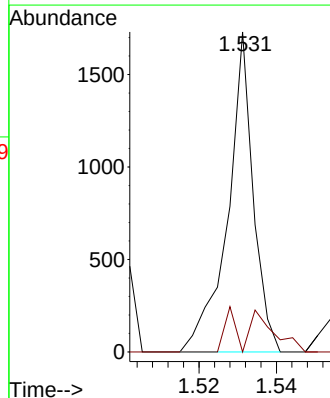
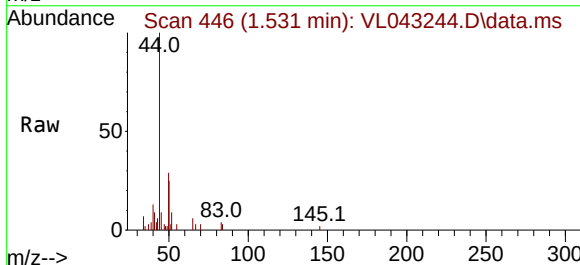
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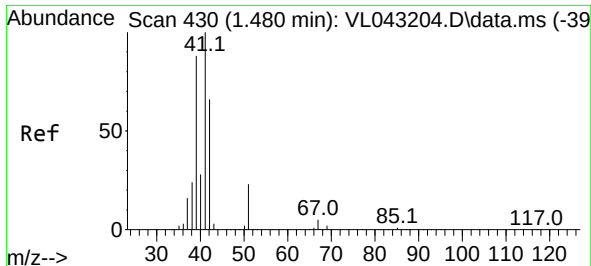
Tgt Ion: 50 Resp: 789

Ion Ratio Lower Upper

50 100

52 0.0 24.1 36.1#

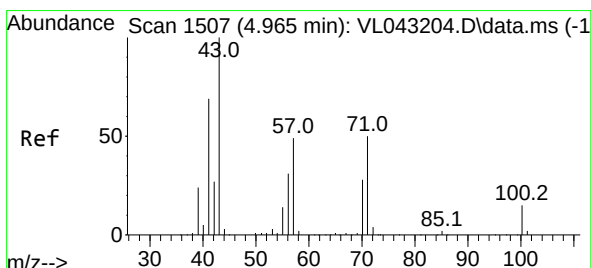
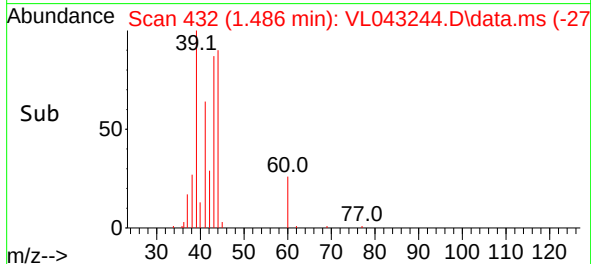
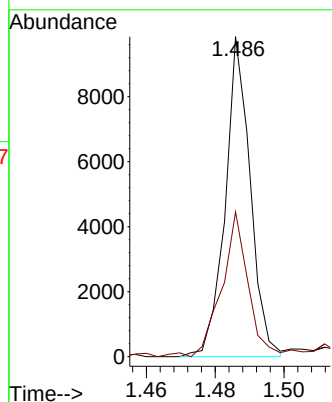
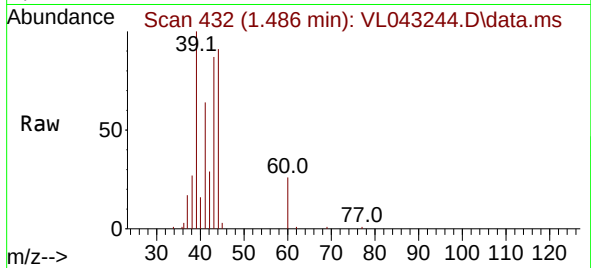




#9
 Propene
 Concen: 0.793 ppbv
 RT: 1.486 min Scan# 41
 Delta R.T. 0.006 min
 Lab File: VL043244.D
 Acq: 19 Nov 2025 17:47

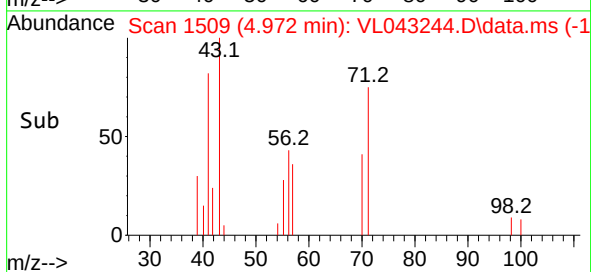
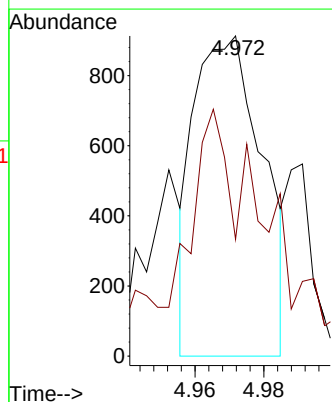
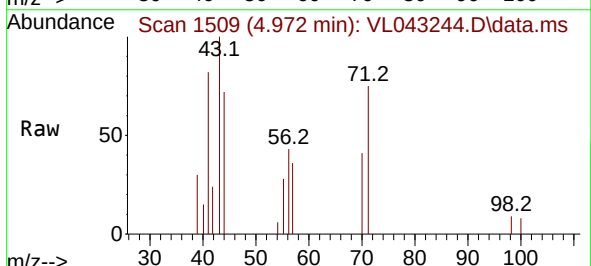
Instrument :
 MSVOA_1
 ClientSampleId :
 14-SG-1

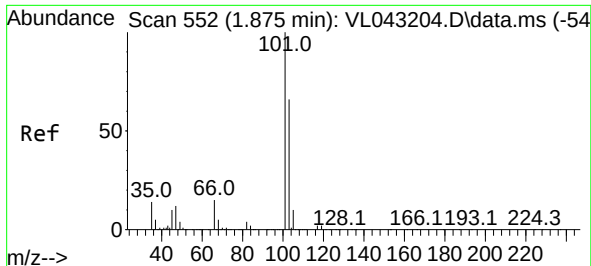
Tgt Ion: 41 Resp: 4977
 Ion Ratio Lower Upper
 41 100
 42 49.5 3.7 5.5#



#10
 Heptane
 Concen: 0.067 ppbv
 RT: 4.972 min Scan# 1509
 Delta R.T. 0.006 min
 Lab File: VL043244.D
 Acq: 19 Nov 2025 17:47

Tgt Ion: 43 Resp: 1254
 Ion Ratio Lower Upper
 43 100
 57 95.9 39.7 59.5#

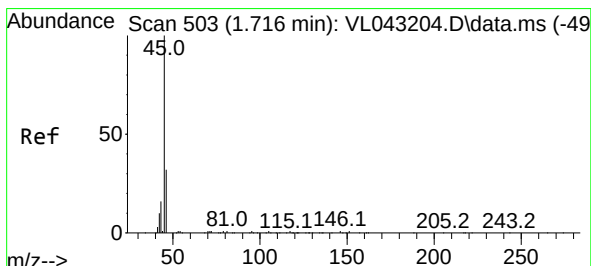
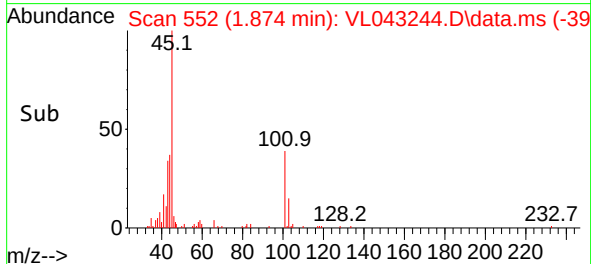
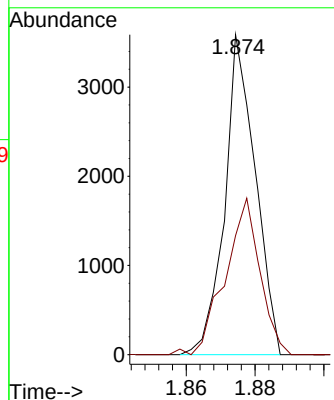
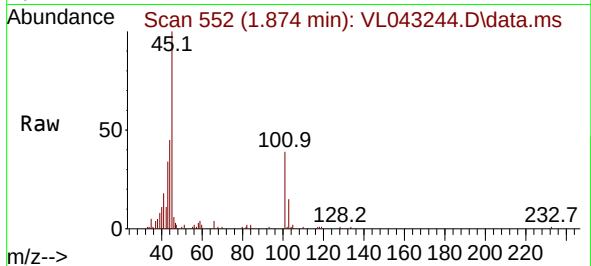




#11
 Trichlorofluoromethane
 Concen: 0.152 ppbv
 RT: 1.874 min Scan# 51
 Delta R.T. -0.000 min
 Lab File: VL043244.D
 Acq: 19 Nov 2025 17:47

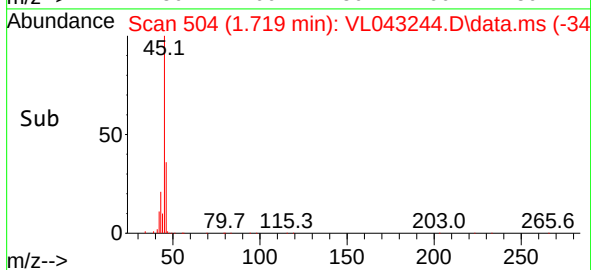
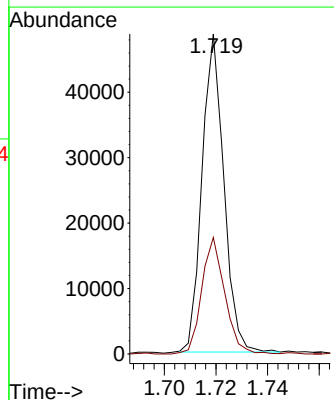
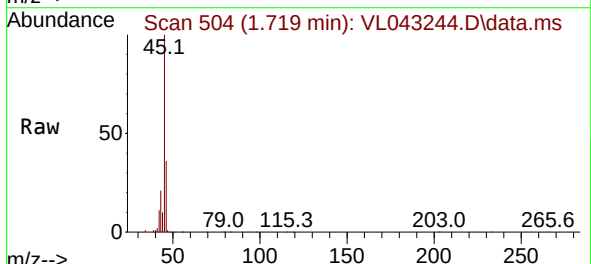
Instrument :
 MSVOA_L
 ClientSampleId :
 14-SG-1

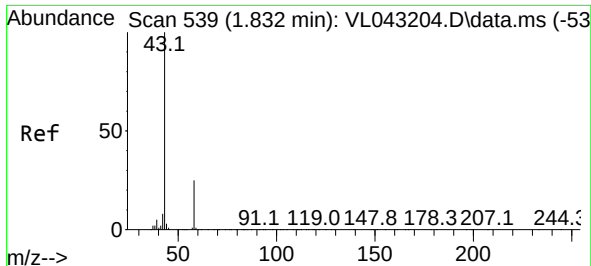
Tgt Ion:101 Resp: 2218
 Ion Ratio Lower Upper
 101 100
 103 35.5 52.6 79.0#



#13
 Ethanol
 Concen: 12.896 ppbv
 RT: 1.719 min Scan# 504
 Delta R.T. 0.003 min
 Lab File: VL043244.D
 Acq: 19 Nov 2025 17:47

Tgt Ion: 45 Resp: 28478
 Ion Ratio Lower Upper
 45 100
 46 39.3 15.0 59.8

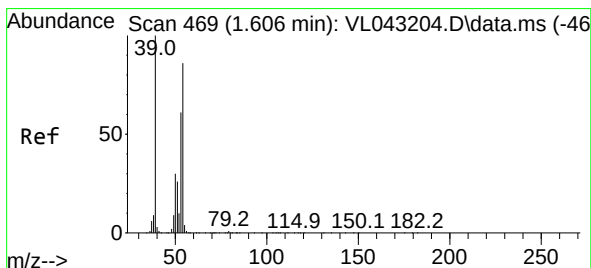
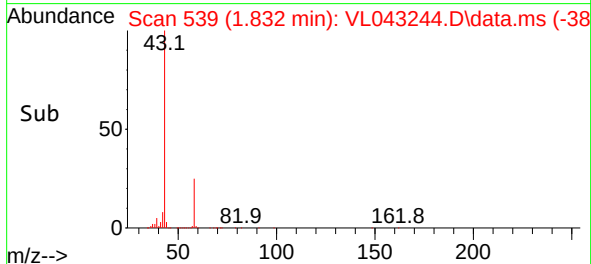
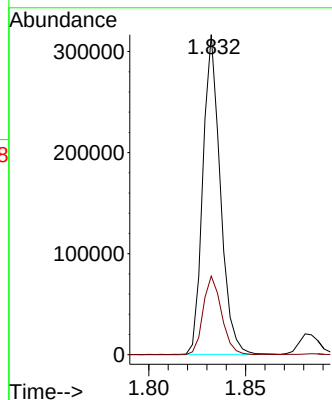
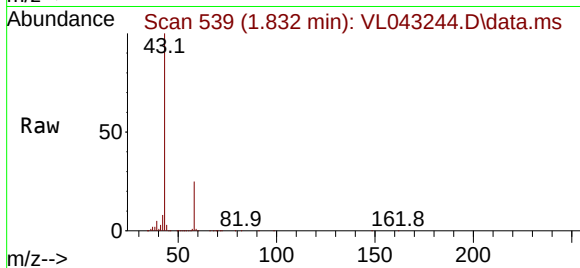




#15
Acetone
Concen: 13.392 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

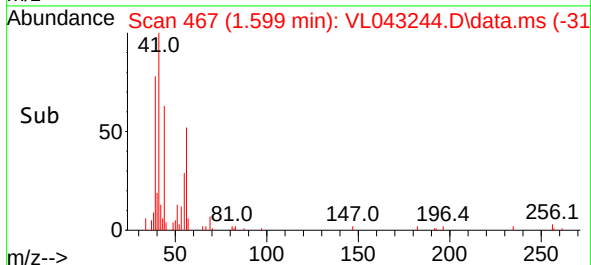
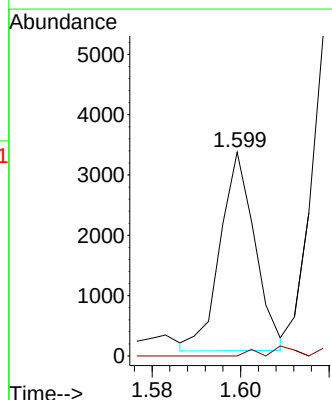
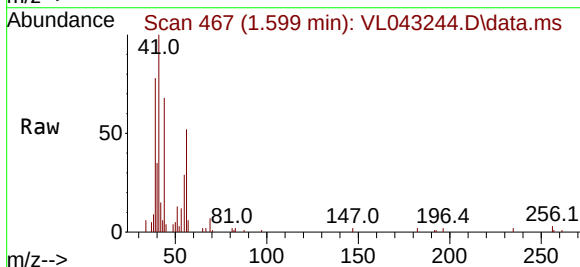
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ClientSampleId :
14-SG-1

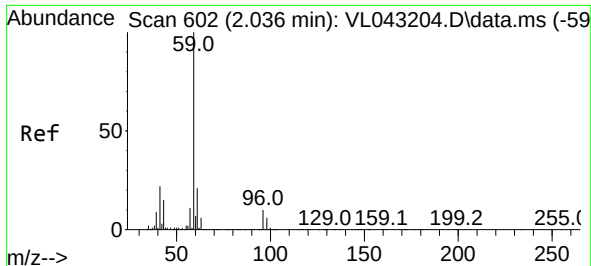
Tgt Ion: 43 Resp: 198363
Ion Ratio Lower Upper
43 100
58 25.9 20.7 31.1



#16
1,3-Butadiene
Concen: 0.272 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.007 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 39 Resp: 1793
Ion Ratio Lower Upper
39 100
54 9.8 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.135 ppbv

RT: 2.043 min Scan# 602

Delta R.T. 0.006 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_1

ClientSampleId :

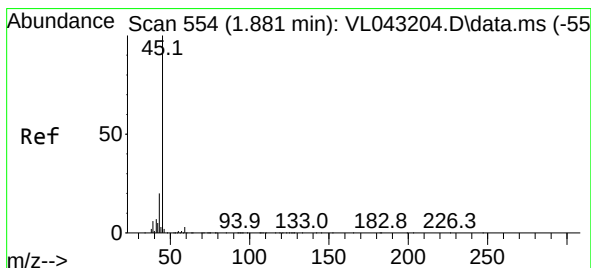
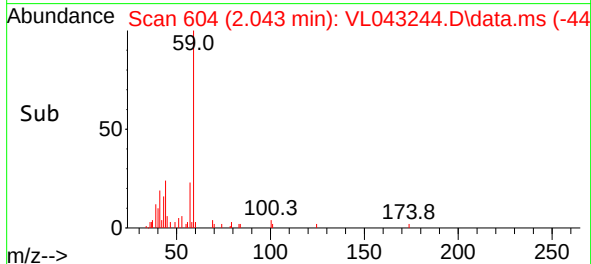
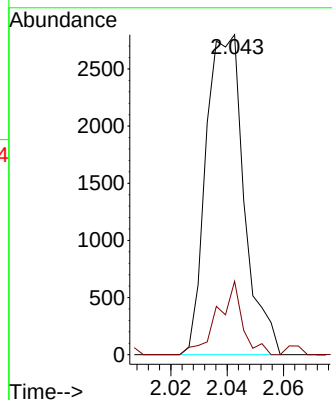
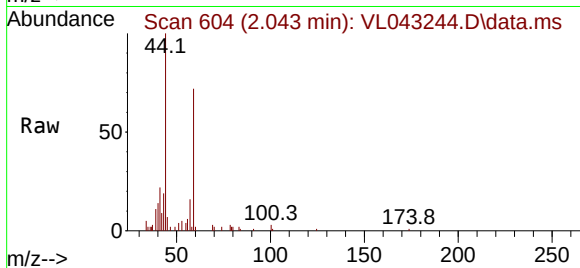
14-SG-1

Tgt Ion: 59 Resp: 2623

Ion Ratio Lower Upper

59 100

57 16.2 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 7.481 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.003 min

Lab File: VL043244.D

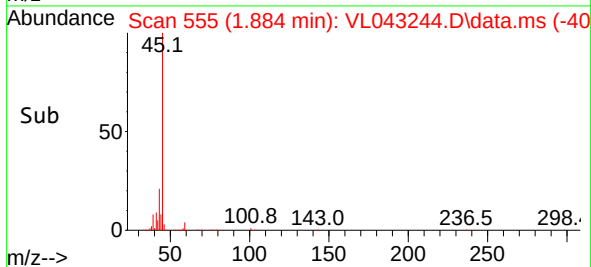
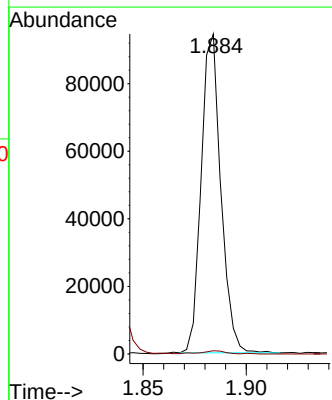
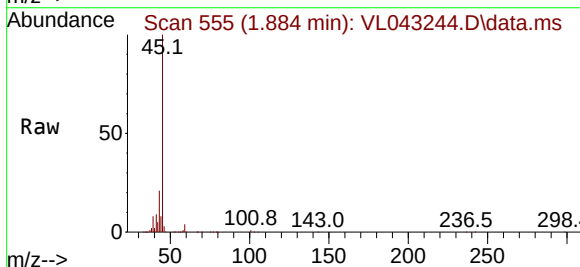
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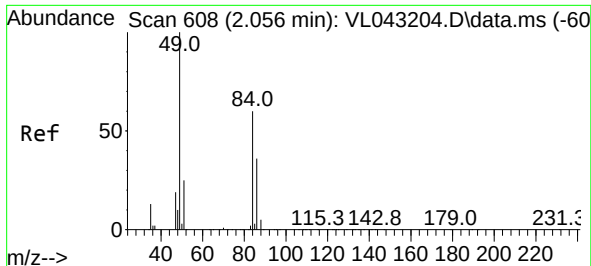
Tgt Ion: 45 Resp: 62615

Ion Ratio Lower Upper

45 100

58 82.2 31.3 46.9#





#20

Methylene Chloride

Concen: 0.244 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.006 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_L

ClientSampleId :

14-SG-1

Tgt Ion: 84 Resp: 4407

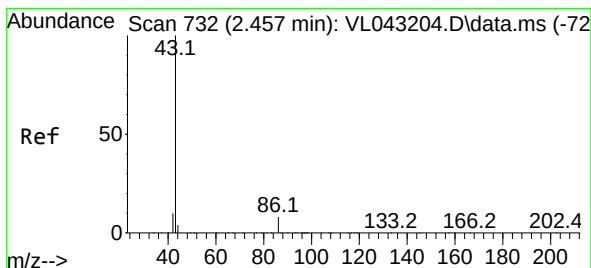
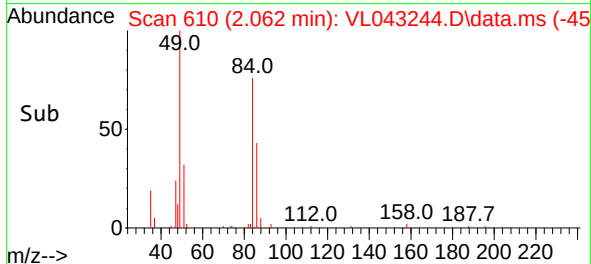
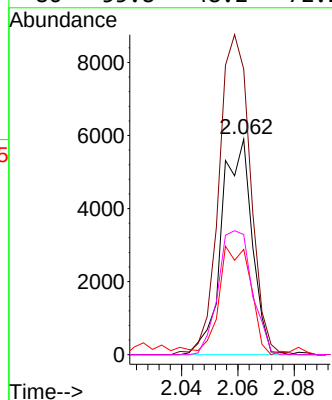
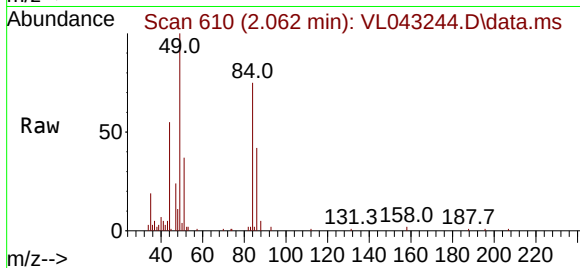
Ion Ratio Lower Upper

84 100

49 131.6 132.9 199.3#

51 47.3 34.8 52.2

86 55.8 48.2 72.2



#23

Vinyl Acetate

Concen: 0.187 ppbv

RT: 2.447 min Scan# 729

Delta R.T. -0.010 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Tgt Ion: 43 Resp: 3344

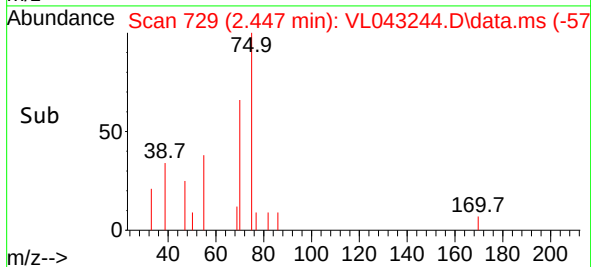
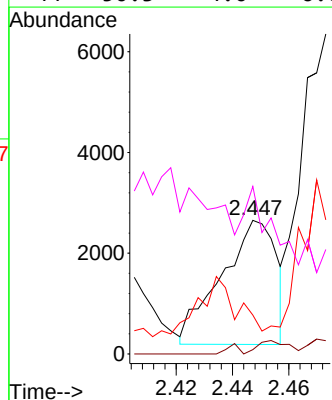
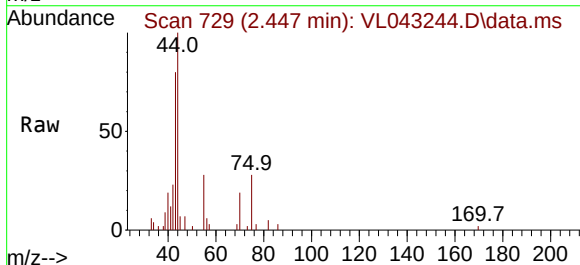
Ion Ratio Lower Upper

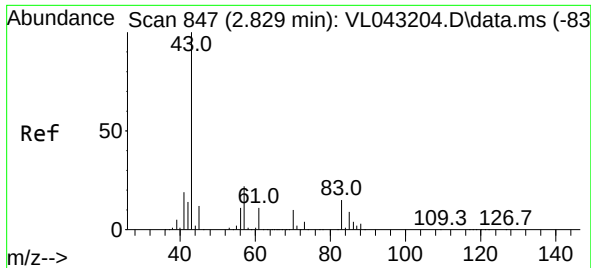
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86 3.7 6.2 9.2#

42 10.3 8.0 12.0

44 50.3 4.0 6.0#

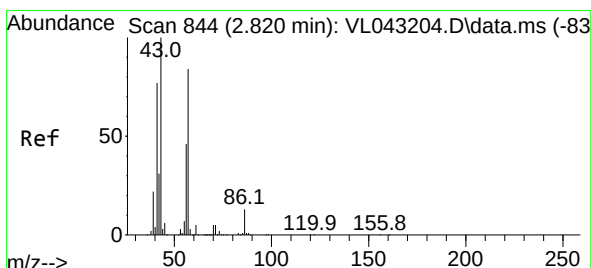
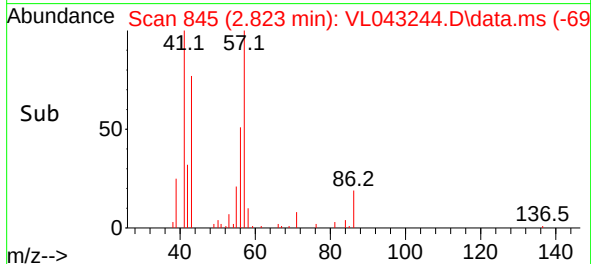
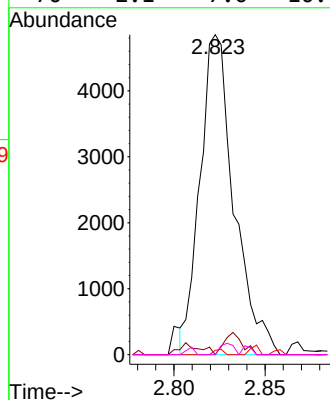
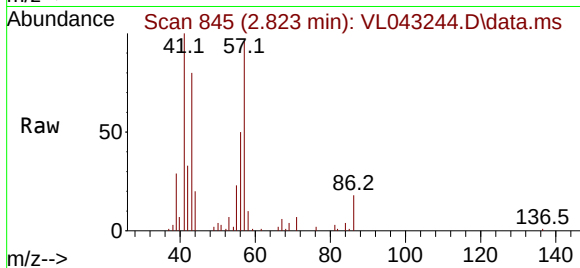




#25
Ethyl Acetate
Concen: 0.197 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.007 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

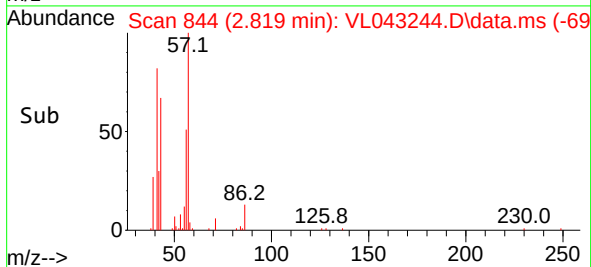
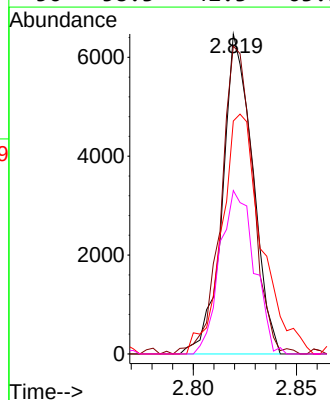
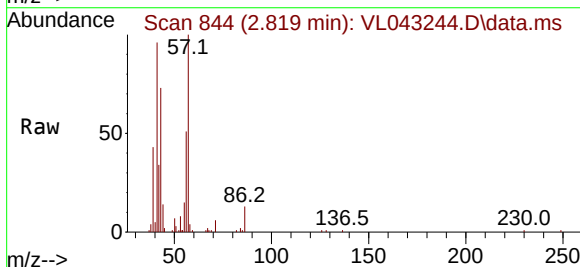
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

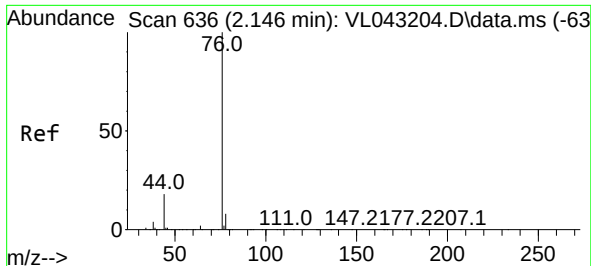
Tgt Ion:	43	Resp:	6305
Ion	Ratio	Lower	Upper
43	100		
45	5.8	8.1	12.1#
61	1.1	7.0	10.4#
70	2.1	7.0	10.6#



#26
Hexane
Concen: 0.471 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion:	57	Resp:	6594
Ion	Ratio	Lower	Upper
57	100		
41	101.9	74.6	111.8
43	100.7	179.0	268.4#
56	58.3	42.3	63.5





#27

Carbon Disulfide

Concen: 0.470 ppbv

RT: 2.149 min Scan# 61

Delta R.T. 0.003 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_1

ClientSampleId :

14-SG-1

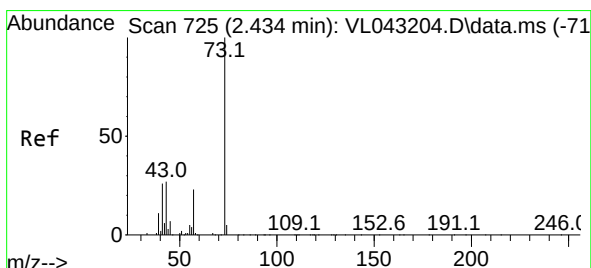
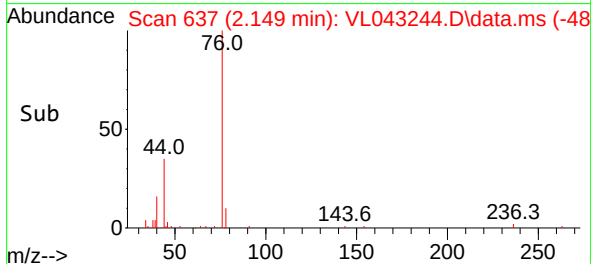
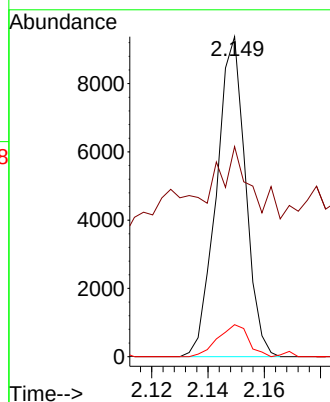
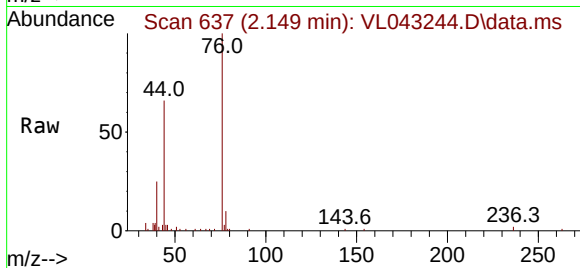
Tgt Ion: 76 Resp: 6722

Ion Ratio Lower Upper

76 100

44 239.2 16.1 24.1#

78 11.2 9.6 14.4



#28

Methyl tert-Butyl Ether

Concen: 0.075 ppbv

RT: 2.405 min Scan# 716

Delta R.T. -0.029 min

Lab File: VL043244.D

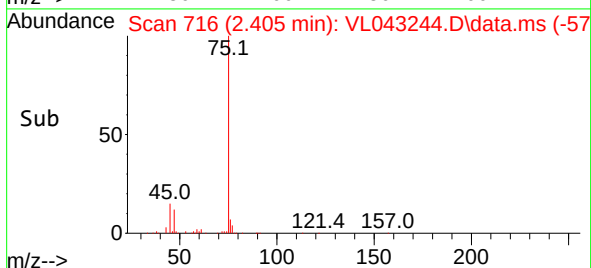
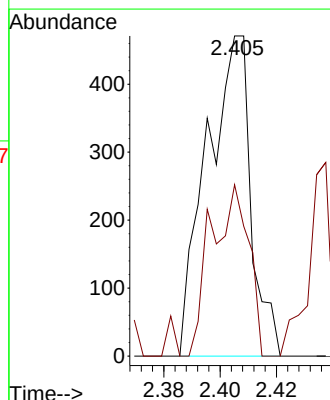
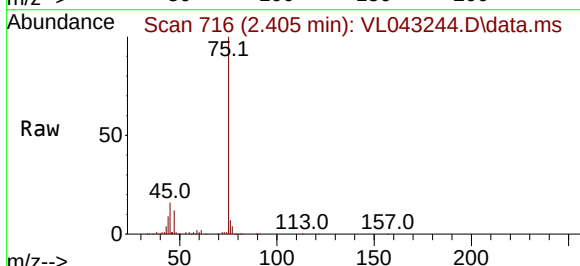
Acq: 19 Nov 2025 17:47

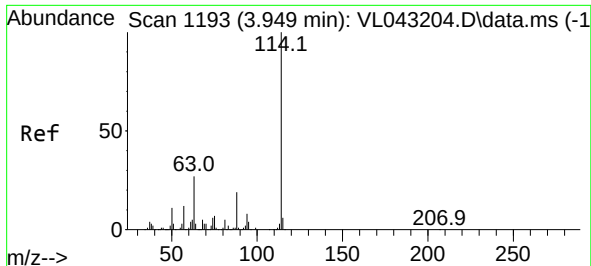
Tgt Ion: 73 Resp: 513

Ion Ratio Lower Upper

73 100

57 49.9 19.8 29.8#

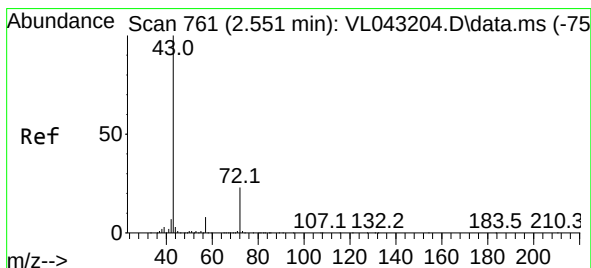
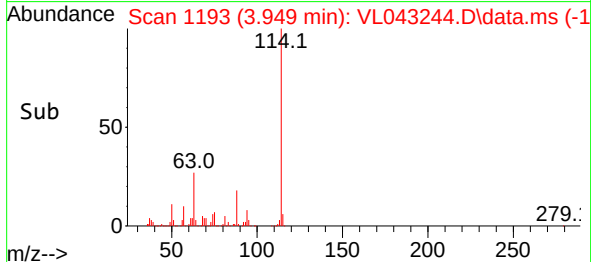
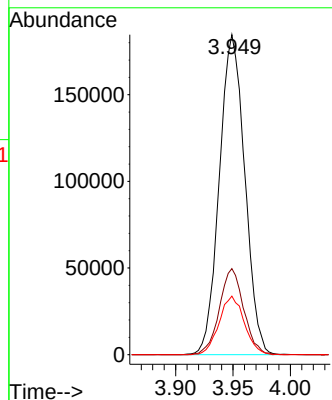
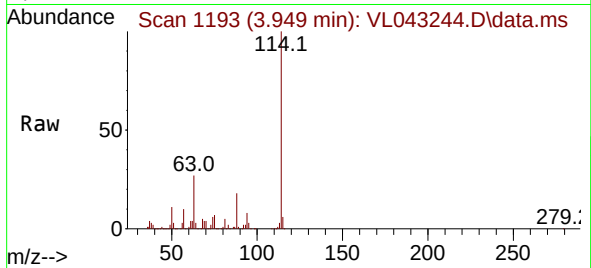




#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.949 min Scan# 1193
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

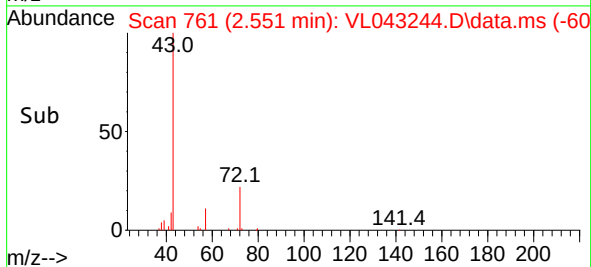
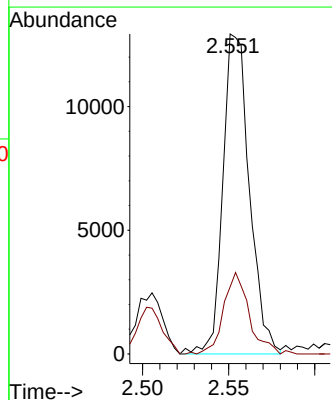
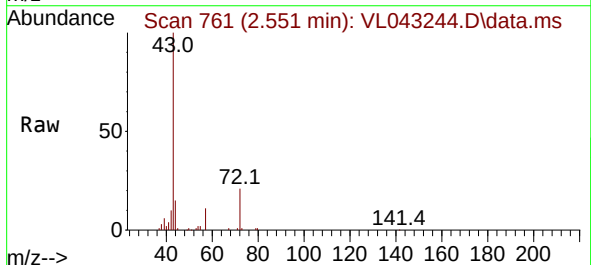
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

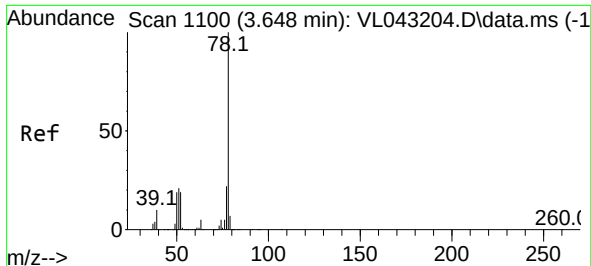
Tgt Ion:114 Resp: 284605
Ion Ratio Lower Upper
114 100
63 25.7 21.0 31.6
88 18.2 14.9 22.3



#34
2-Butanone
Concen: 0.693 ppbv
RT: 2.551 min Scan# 761
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 43 Resp: 13918
Ion Ratio Lower Upper
43 100
72 24.5 18.1 27.1

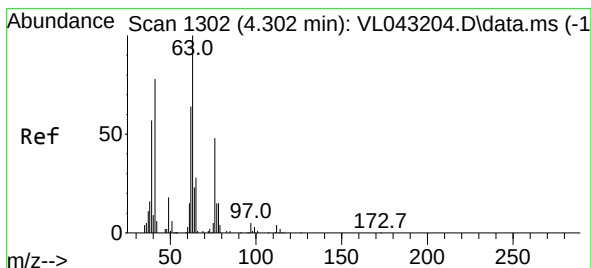
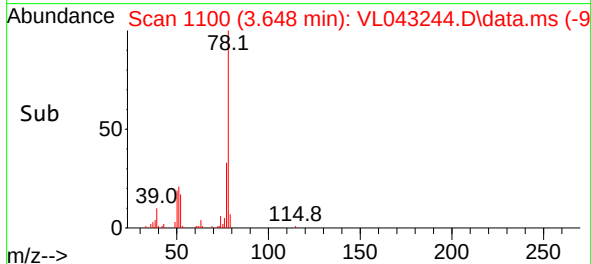
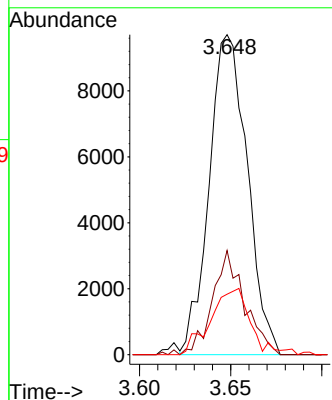
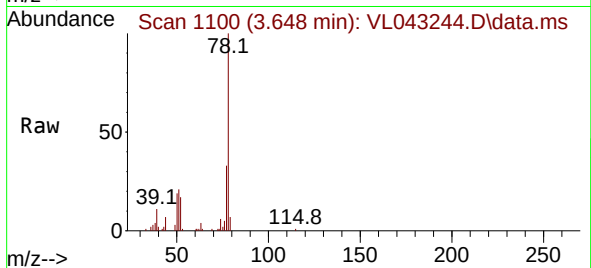




#36
Benzene
Concen: 0.518 ppbv
RT: 3.648 min Scan# 1100
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

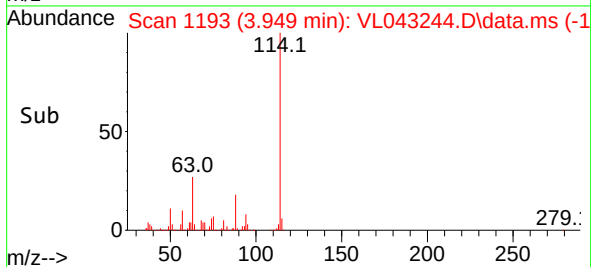
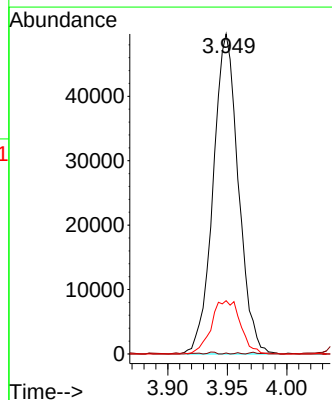
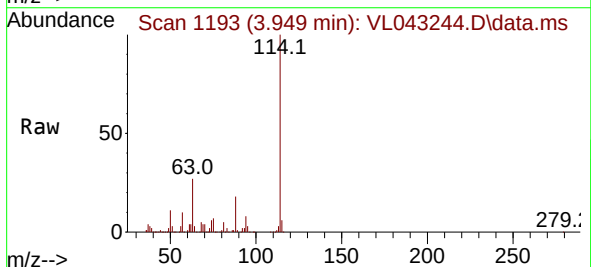
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

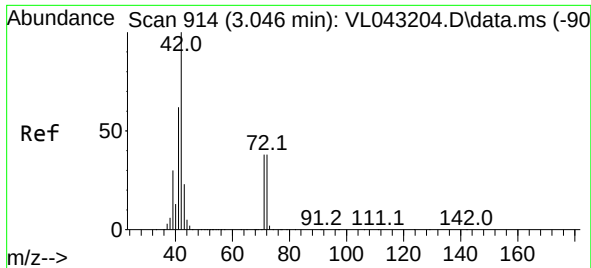
Tgt Ion: 78 Resp: 14120
Ion Ratio Lower Upper
78 100
77 32.6 17.5 26.3#
50 18.9 15.5 23.3



#39
1,2-Dichloropropane
Concen: 7.340 ppbv
RT: 3.949 min Scan# 1193
Delta R.T. -0.353 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 63 Resp: 73219
Ion Ratio Lower Upper
63 100
41 0.6 62.6 93.8#
62 16.7 51.0 76.6#

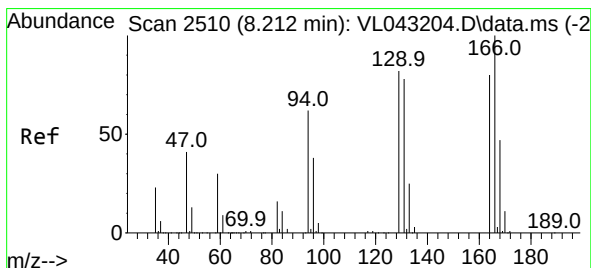
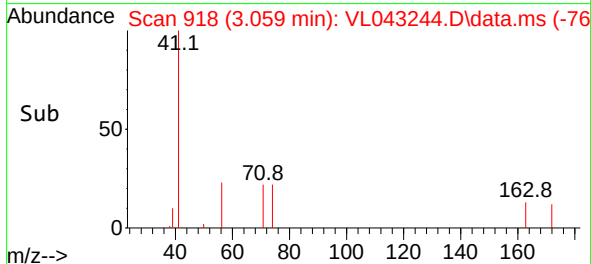
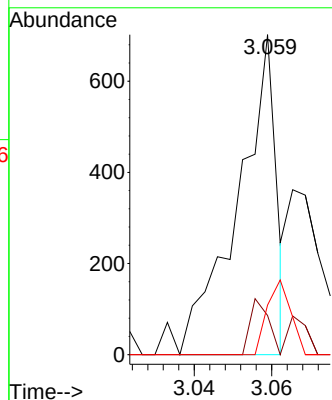
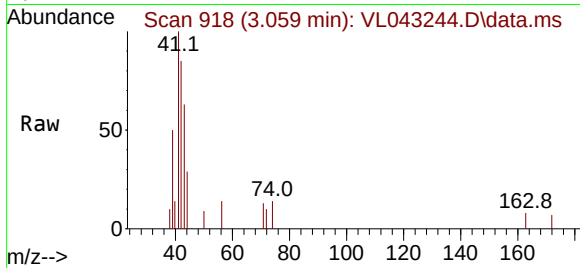




#41
Tetrahydrofuran
Concen: 0.043 ppbv
RT: 3.059 min Scan# 914
Delta R.T. 0.013 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

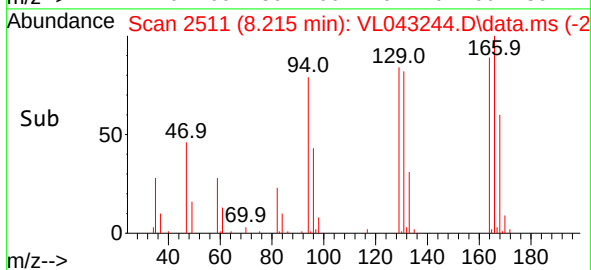
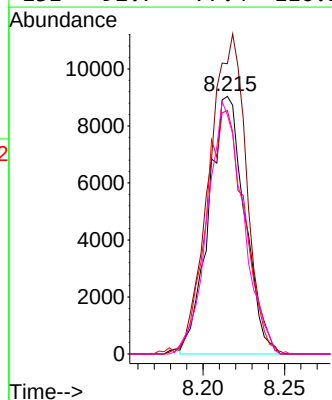
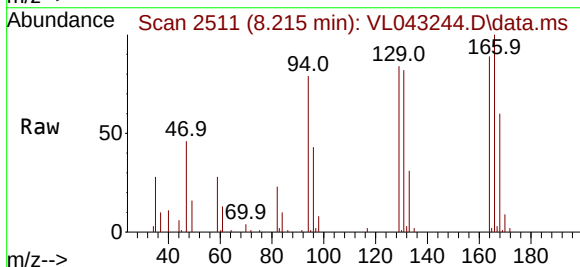
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

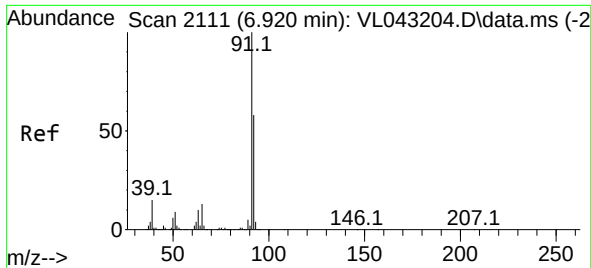
Tgt Ion: 42 Resp: 482
Ion Ratio Lower Upper
42 100
72 0.0 30.6 46.0#
71 14.3 30.5 45.7#



#52
Tetrachloroethene
Concen: 1.369 ppbv
RT: 8.215 min Scan# 2511
Delta R.T. 0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 164 Resp: 13878
Ion Ratio Lower Upper
164 100
166 111.6 99.4 149.2
129 94.5 81.8 122.8
131 92.7 77.4 116.2

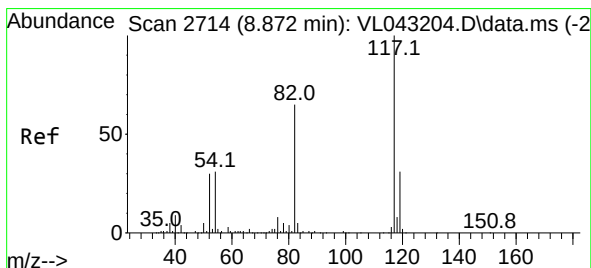
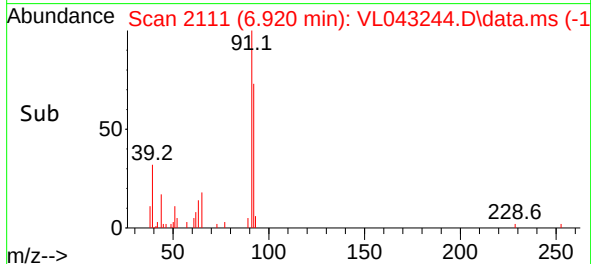
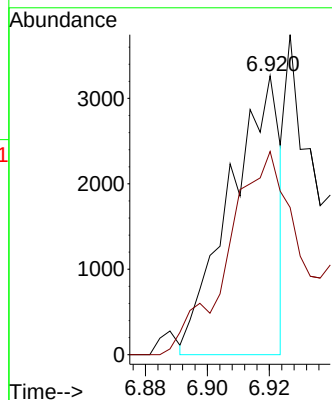
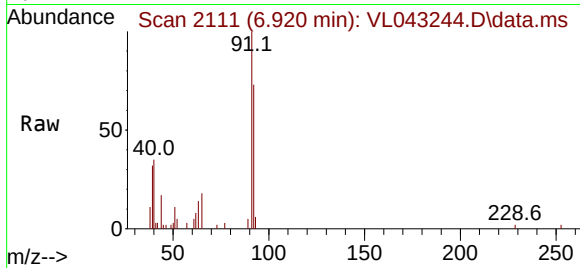




#53
Toluene
Concen: 0.114 ppbv
RT: 6.920 min Scan# 2111
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

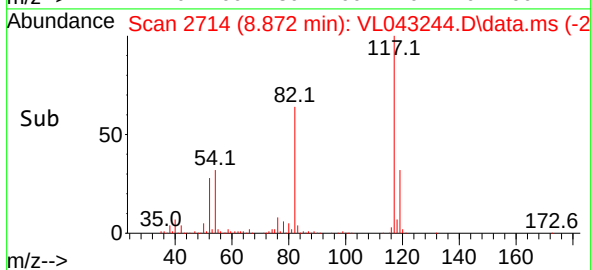
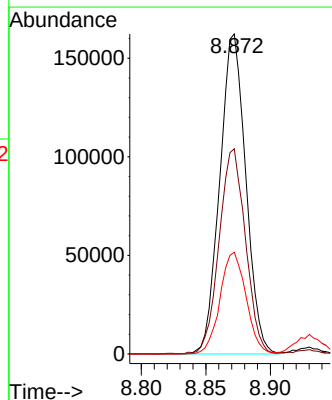
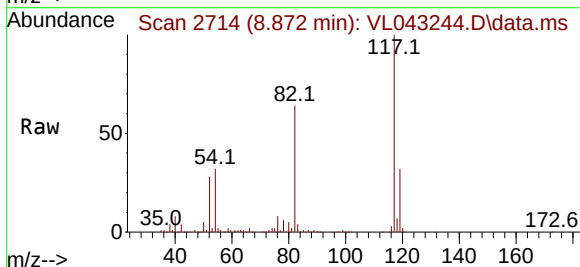
Instrument :
MSVOA_1
ClientSampleId :
14-SG-1

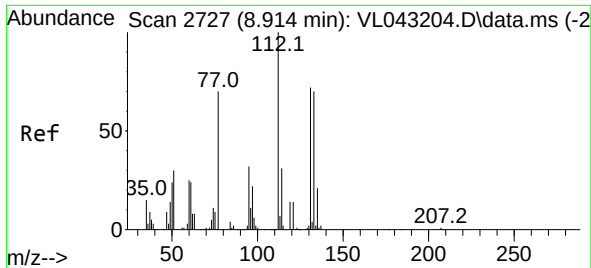
Tgt Ion: 91 Resp: 3666
Ion Ratio Lower Upper
91 100
92 113.4 47.4 71.0#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 2714
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 117 Resp: 227663
Ion Ratio Lower Upper
117 100
82 65.1 56.1 84.1
119 31.8 25.0 37.6

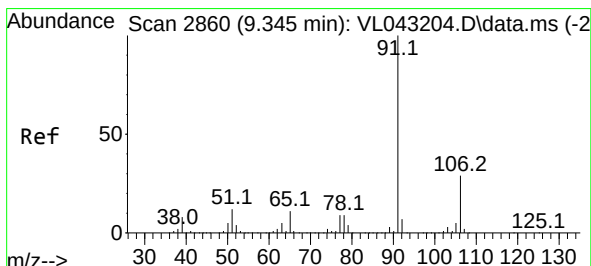
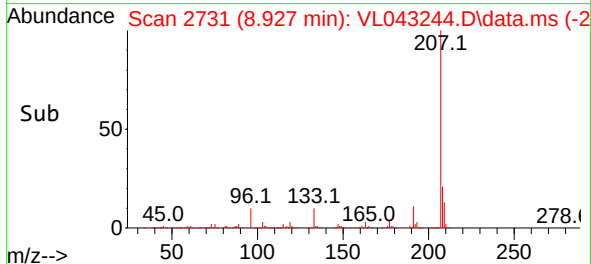
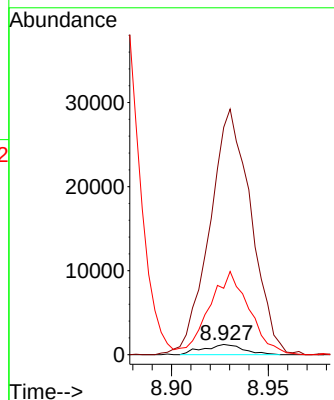
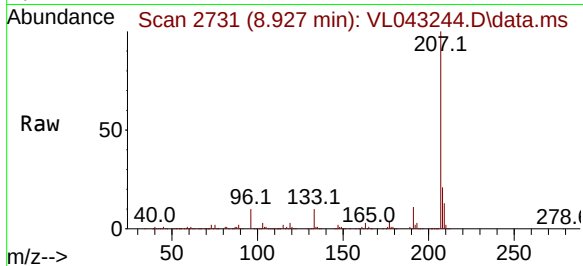




#56
1,1,1,2-Tetrachloroethane
Concen: 0.106 ppbv
RT: 8.927 min Scan# 21
Delta R.T. 0.013 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

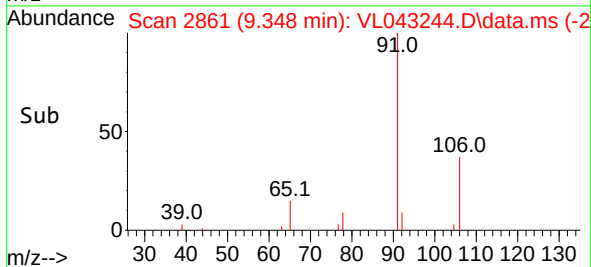
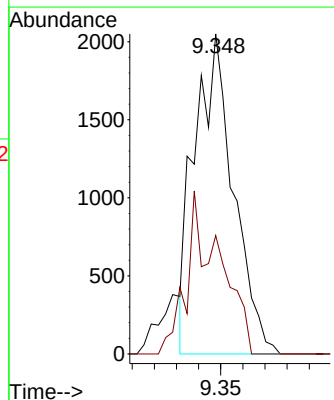
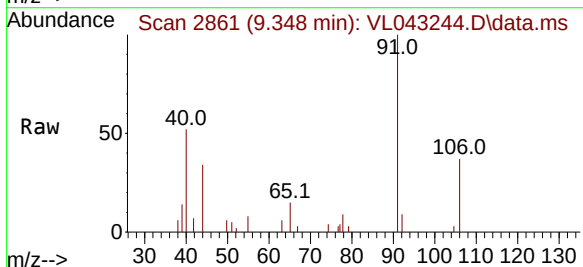
Instrument :
MSVOA_1
ClientSampleId :
14-SG-1

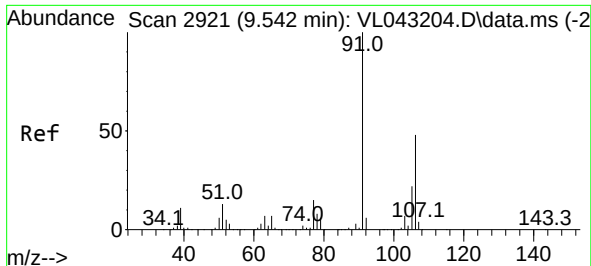
Tgt Ion:131 Resp: 1768
Ion Ratio Lower Upper
131 100
133 2473.4 77.4 116.2#
119 816.9 49.1 73.7#



#58
Ethyl Benzene
Concen: 0.057 ppbv
RT: 9.348 min Scan# 2861
Delta R.T. 0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 91 Resp: 2502
Ion Ratio Lower Upper
91 100
106 37.0 22.8 34.2#





#59

m/p-Xylene

Concen: 0.063 ppbv

RT: 9.539 min Scan# 2921

Delta R.T. -0.003 min

Lab File: VL043244.D

Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_1

ClientSampleId :

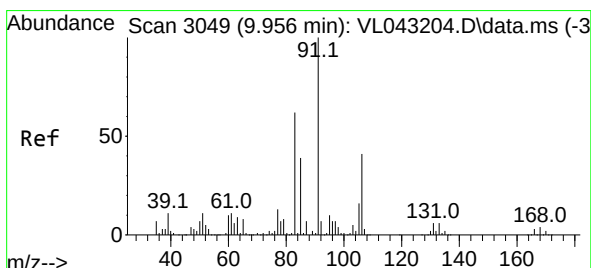
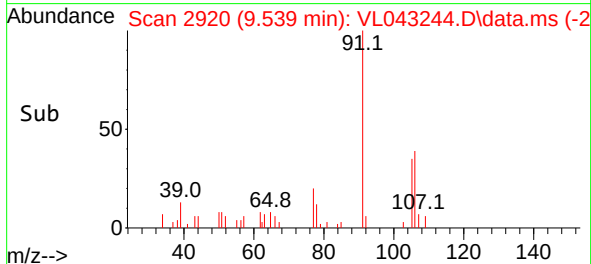
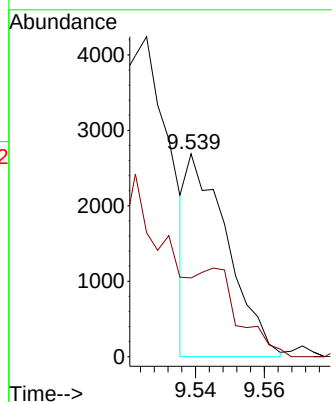
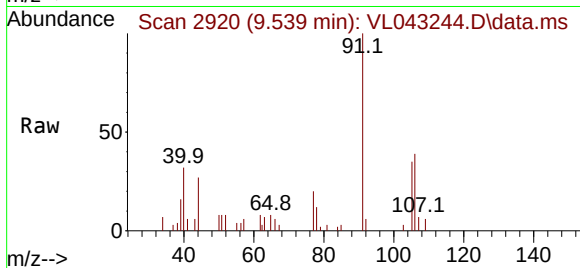
14-SG-1

Tgt Ion: 91 Resp: 2212

Ion Ratio Lower Upper

91 100

106 0.0 36.1 54.1#



#60

o-Xylene

Concen: 0.097 ppbv

RT: 9.956 min Scan# 3049

Delta R.T. -0.000 min

Lab File: VL043244.D

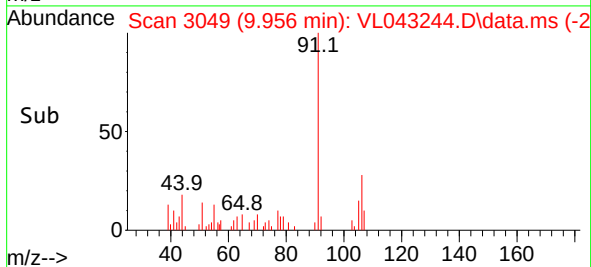
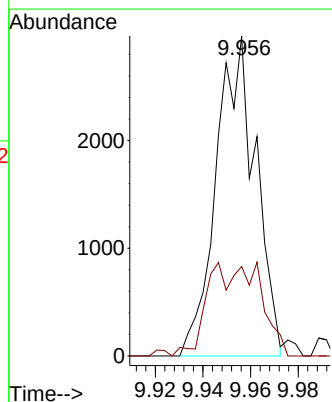
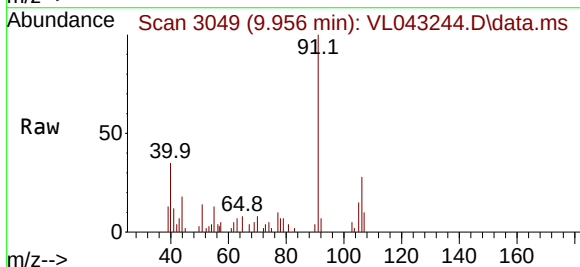
Acq: 19 Nov 2025 17:47

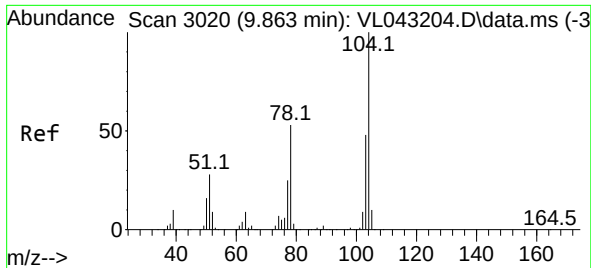
Tgt Ion: 91 Resp: 3418

Ion Ratio Lower Upper

91 100

106 39.6 20.9 62.8

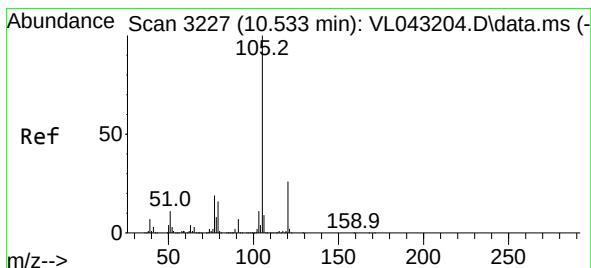
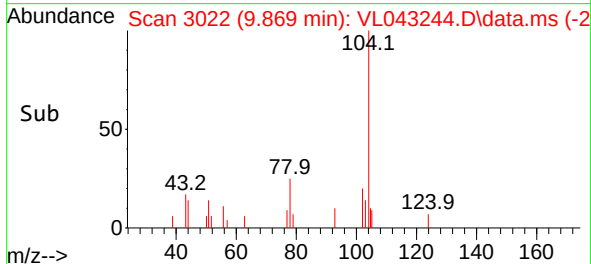
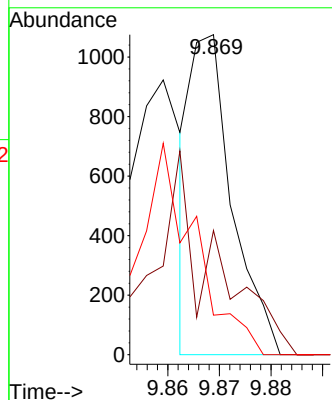
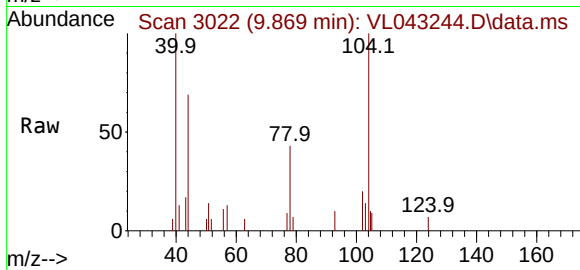




#61
Styrene
Concen: 0.039 ppbv
RT: 9.869 min Scan# 3020
Delta R.T. 0.006 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

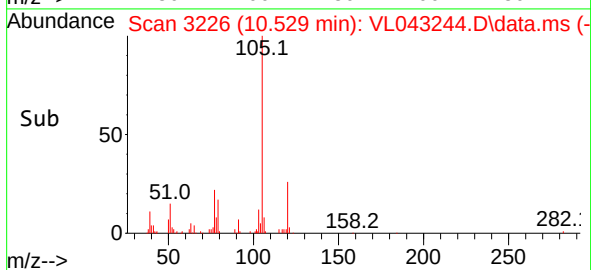
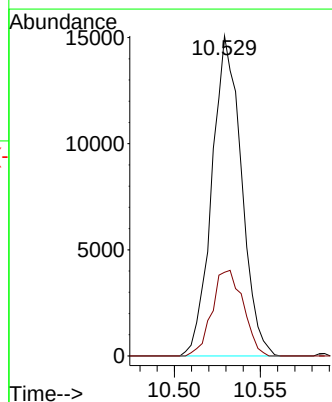
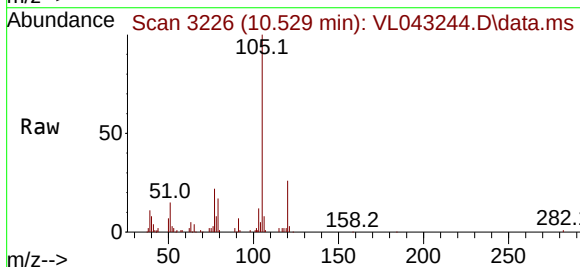
Instrument :
MSVOA_L
ClientSampleId :
14-SG-1

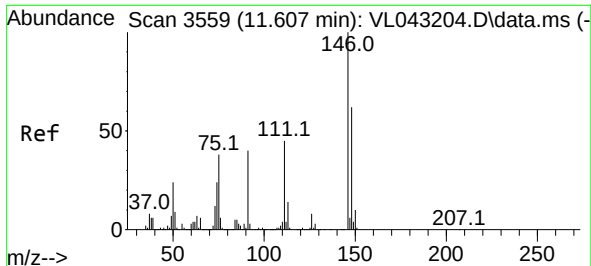
Tgt Ion:104 Resp: 599
Ion Ratio Lower Upper
104 100
78 55.3 42.1 63.1
103 38.1 37.2 55.8



#62
Isopropylbenzene
Concen: 0.287 ppbv
RT: 10.529 min Scan# 3226
Delta R.T. -0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion:105 Resp: 18013
Ion Ratio Lower Upper
105 100
120 28.2 19.8 29.8

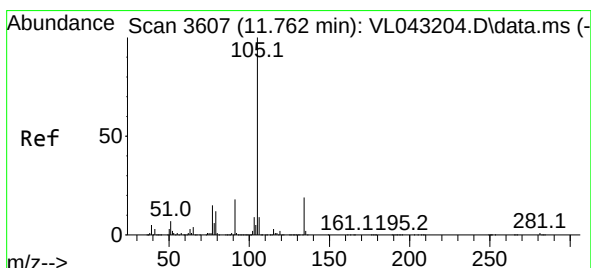
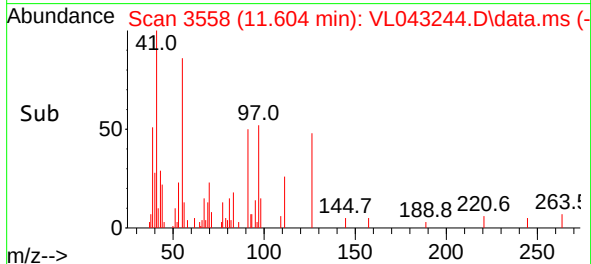
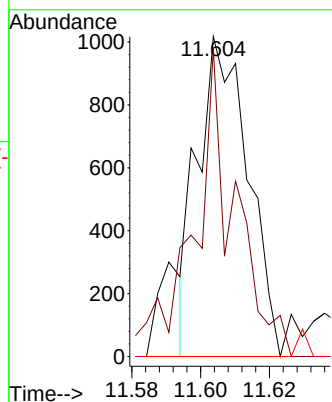
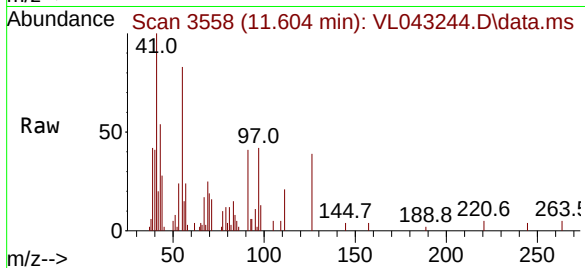




#66
Benzyl Chloride
Concen: 0.182 ppbv
RT: 11.604 min Scan# 31
Delta R.T. -0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

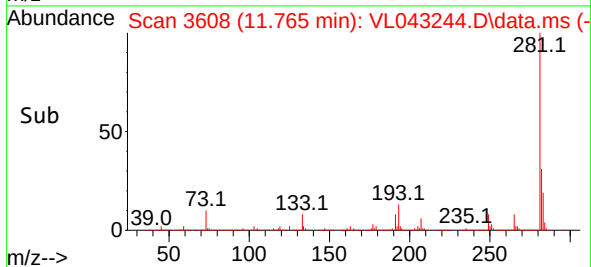
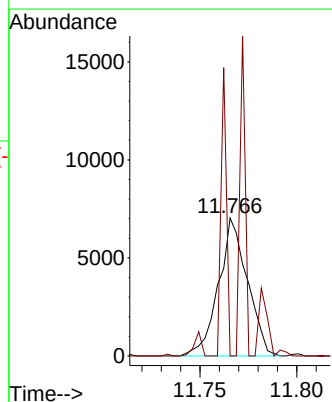
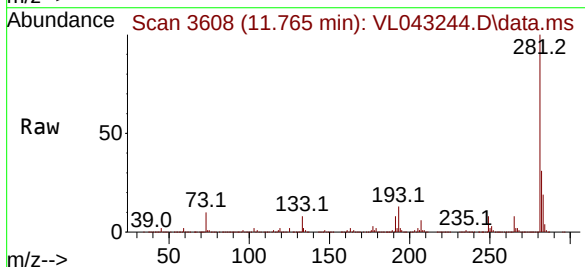
Instrument :
MSVOA_1
ClientSampleId :
14-SG-1

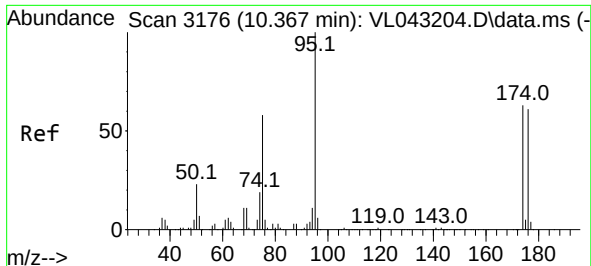
Tgt Ion: 91 Resp: 1036
Ion Ratio Lower Upper
91 100
126 78.2 14.4 21.6#
128 0.0 4.6 6.8#



#67
sec-Butylbenzene
Concen: 0.093 ppbv
RT: 11.765 min Scan# 3608
Delta R.T. 0.003 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 105 Resp: 7294
Ion Ratio Lower Upper
105 100
134 43.8 15.0 22.6#

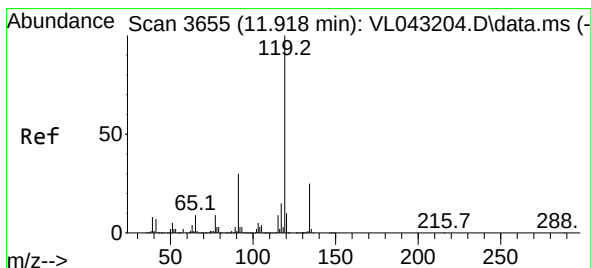
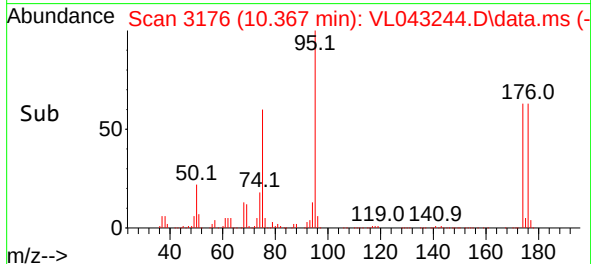
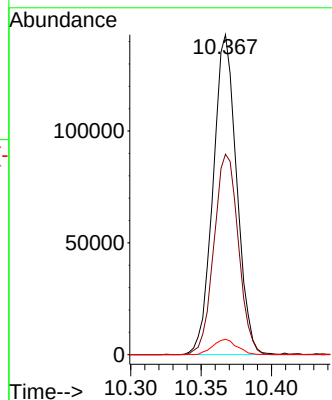
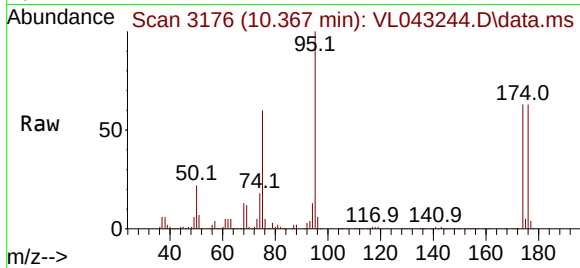




#68
1-Bromo-4-Fluorobenzene
Concen: 9.959 ppbv
RT: 10.367 min Scan# 3176
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

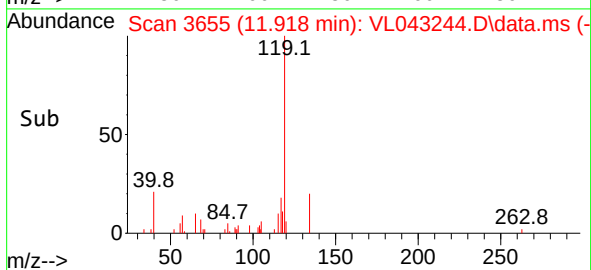
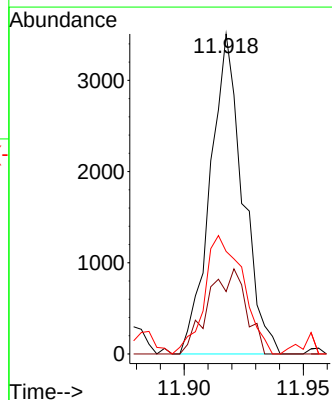
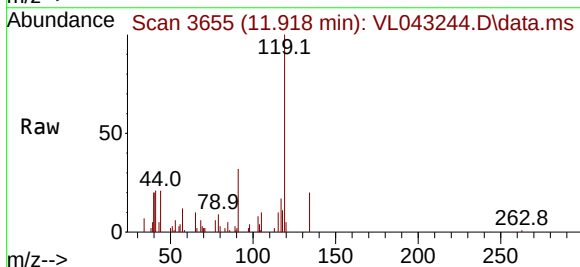
Instrument :
MSVOA_1
ClientSampleId :
14-SG-1

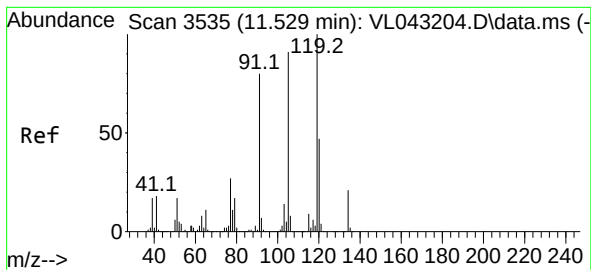
Tgt Ion: 95 Resp: 166196
Ion Ratio Lower Upper
95 100
174 65.5 50.2 75.2
175 5.0 4.1 6.1



#69
p-Isopropyltoluene
Concen: 0.050 ppbv
RT: 11.918 min Scan# 3655
Delta R.T. -0.000 min
Lab File: VL043244.D
Acq: 19 Nov 2025 17:47

Tgt Ion: 119 Resp: 3337
Ion Ratio Lower Upper
119 100
134 31.0 20.2 30.2#
91 44.1 23.8 35.8#





#74

1,2,4-Trimethylbenzene

Concen: 0.148 ppbv

RT: 11.526 min Scan# 31

Delta R.T. -0.003 min

Lab File: VL043244.D

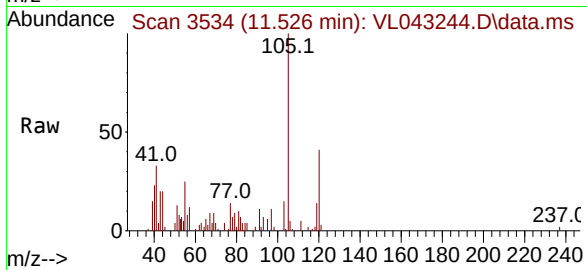
Acq: 19 Nov 2025 17:47

Instrument :

MSVOA_L

ClientSampleId :

14-SG-1



Tgt Ion:105 Resp: 5794

Ion Ratio Lower Upper

105 100

120 40.7 41.7 62.5#

91 11.4 70.0 105.0#

77 14.1 23.8 35.8#

