

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL111925\
 Data File : VL043239.D
 Acq On : 19 Nov 2025 14:59
 Operator : SY/MD
 Sample : Q3626-05 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 10-SG-1

Quant Time: Nov 20 00:05:40 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

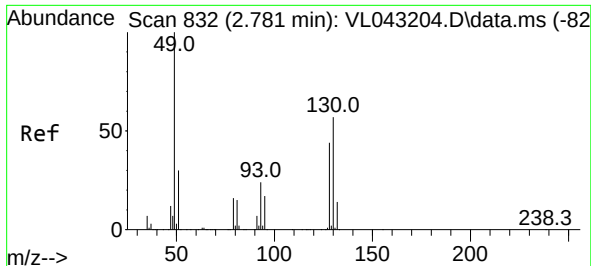
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	103410	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.955	114	285776	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	221762	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.370	95	162206	9.979	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.800%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	3957	0.271	ppbv	96
3) Chlorodifluoromethane	1.476	51	3425	0.239	ppbv	96
4) Chloromethane	1.538	50	264	0.048	ppbv #	45
9) Propene	1.486	41	1552	0.255	ppbv #	86
11) Trichlorofluoromethane	1.877	101	1726	0.122	ppbv	92
13) Ethanol	1.722	45	19662	9.180	ppbv	99
15) Acetone	1.832	43	1257557	87.530	ppbv	96
16) 1,3-Butadiene	1.602	39	1466	0.229	ppbv #	33
17) tert-Butyl alcohol	1.884	59	9986	0.530	ppbv	99
19) Isopropyl Alcohol	1.884	45	295068	36.345	ppbv #	1
20) Methylene Chloride	2.062	84	6137	0.721	ppbv #	91
21) Allyl Chloride	2.188	41	736	0.076	ppbv #	1
23) Vinyl Acetate	2.473	43	718	0.041	ppbv #	79
25) Ethyl Acetate	2.826	43	5321	0.172	ppbv #	84
26) Hexane	2.826	57	5891	0.434	ppbv #	45
27) Carbon Disulfide	2.149	76	5026	0.362	ppbv #	6
29) Chloroform	2.845	83	11863	0.614	ppbv	88
34) 2-Butanone	2.557	43	14813	0.734	ppbv	93
36) Benzene	3.654	78	1336	0.049	ppbv #	79
38) Trichloroethene	4.541	130	9230	0.862	ppbv	94
39) 1,2-Dichloropropane	3.952	63	70936	7.082	ppbv #	25
41) Tetrahydrofuran	3.059	42	1765	0.158	ppbv #	86
52) Tetrachloroethene	8.224	164	656288	64.467	ppbv	98
53) Toluene	6.933	91	2097	0.065	ppbv #	21
58) Ethyl Benzene	9.354	91	1928	0.045	ppbv	98
59) m/p-Xylene	9.542	91	1687	0.049	ppbv #	31
60) o-Xylene	9.962	91	1547	0.045	ppbv #	50
61) Styrene	9.865	104	731	0.049	ppbv #	87
66) Benzyl Chloride	11.610	91	254	0.046	ppbv #	1
73) 1,3,5-Trimethylbenzene	11.196	105	1054	0.030	ppbv	96
74) 1,2,4-Trimethylbenzene	11.535	105	1781	0.047	ppbv #	51

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

Quant Time: Nov 20 00:05:40 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
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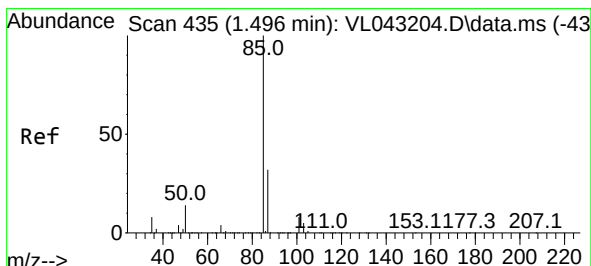
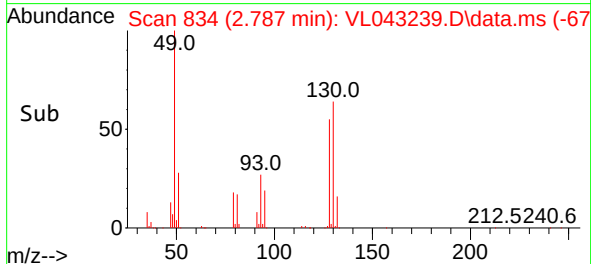
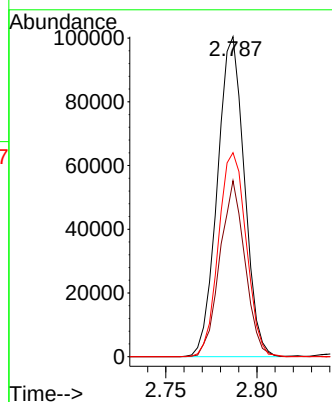
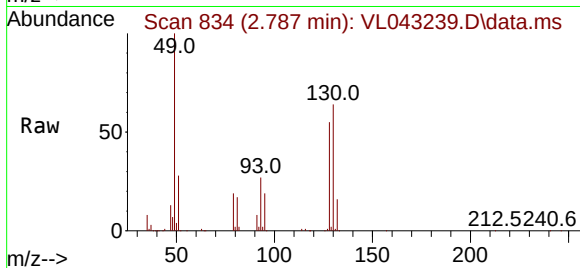




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.006 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

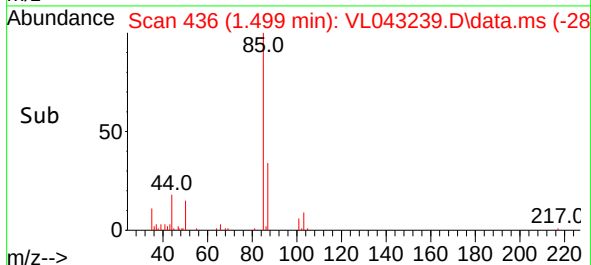
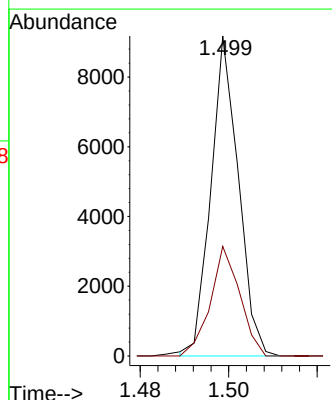
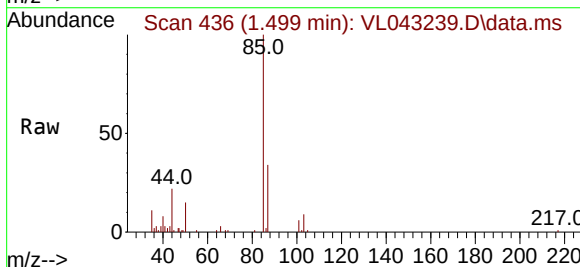
Instrument :
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10-SG-1

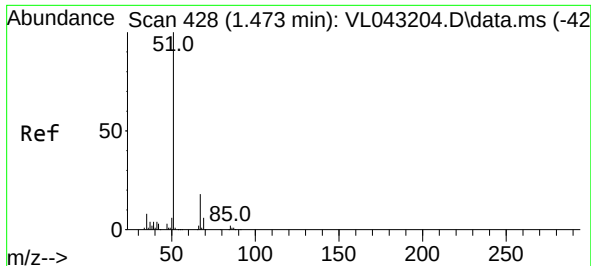
Tgt Ion: 49 Resp: 103410
Ion Ratio Lower Upper
49 100
128 51.1 23.0 69.0
130 65.4 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.271 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 85 Resp: 3957
Ion Ratio Lower Upper
85 100
87 34.2 25.4 38.2

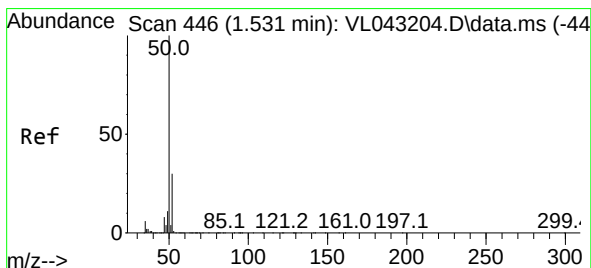
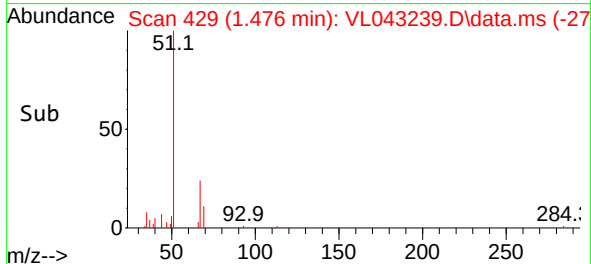
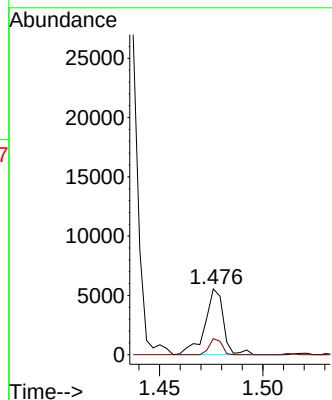
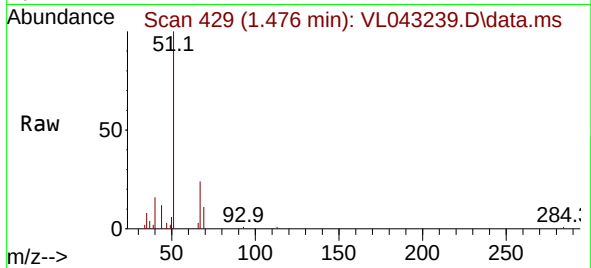




#3
Chlorodifluoromethane
Concen: 0.239 ppbv
RT: 1.476 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

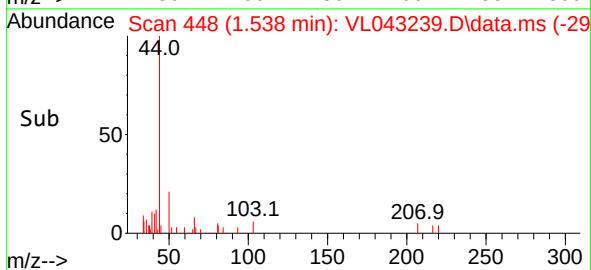
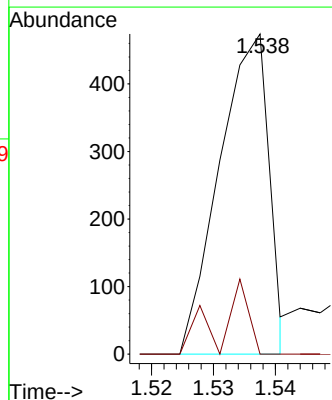
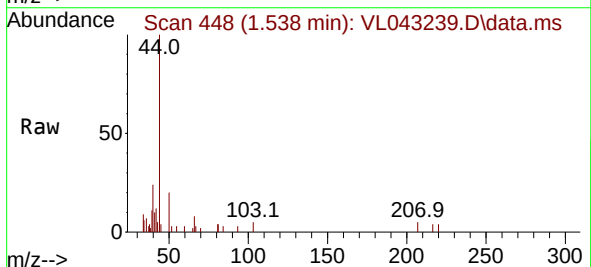
Instrument :
MSVOA_1
ClientSampleId :
10-SG-1

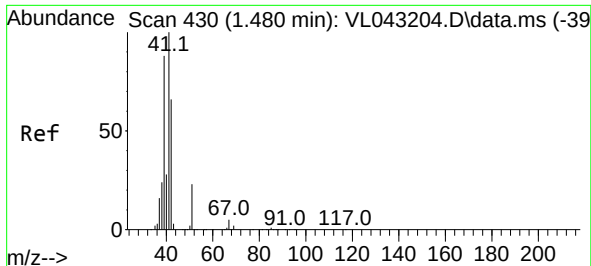
Tgt Ion: 51 Resp: 3425
Ion Ratio Lower Upper
51 100
67 16.6 14.9 22.3



#4
Chloromethane
Concen: 0.048 ppbv
RT: 1.538 min Scan# 448
Delta R.T. 0.006 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 50 Resp: 264
Ion Ratio Lower Upper
50 100
52 0.0 24.1 36.1#





#9

Propene

Concen: 0.255 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_1

ClientSampleId :

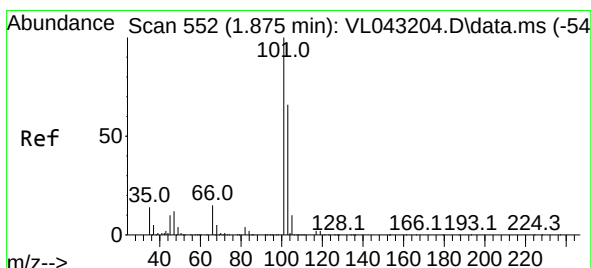
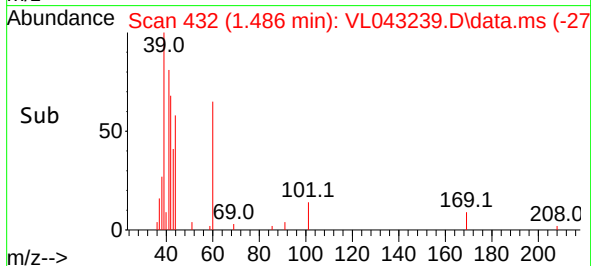
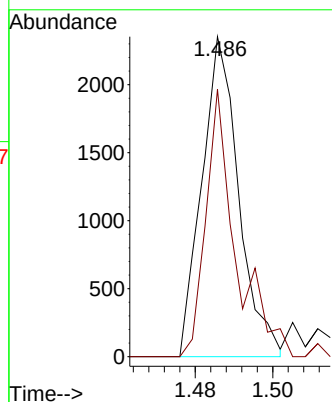
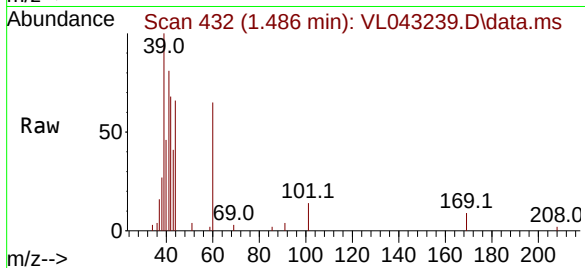
10-SG-1

Tgt Ion: 41 Resp: 1552

Ion Ratio Lower Upper

41 100

42 0.0 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.122 ppbv

RT: 1.877 min Scan# 553

Delta R.T. 0.003 min

Lab File: VL043239.D

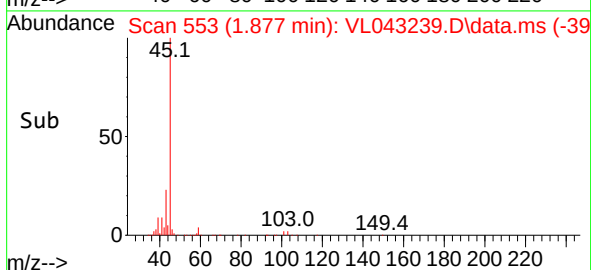
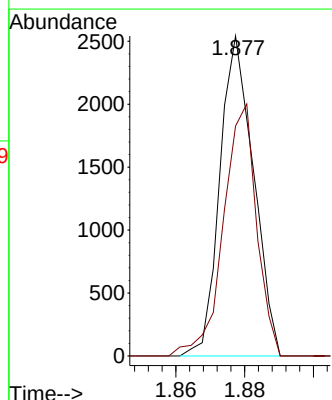
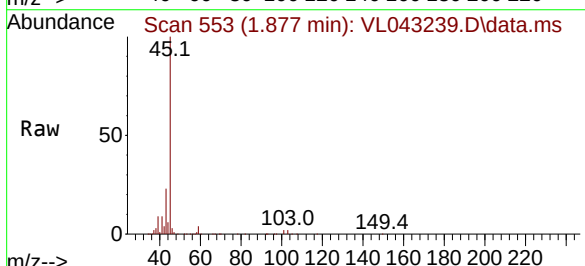
Acq: 19 Nov 2025 14:59

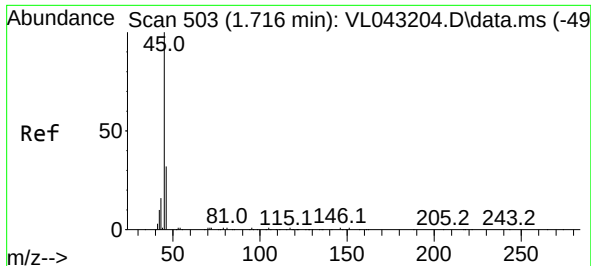
Tgt Ion: 101 Resp: 1726

Ion Ratio Lower Upper

101 100

103 71.9 52.6 79.0

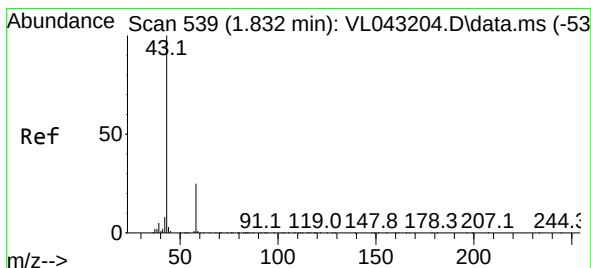
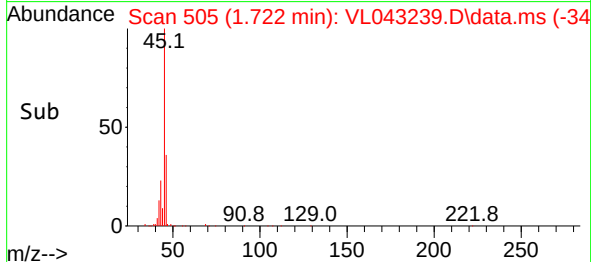
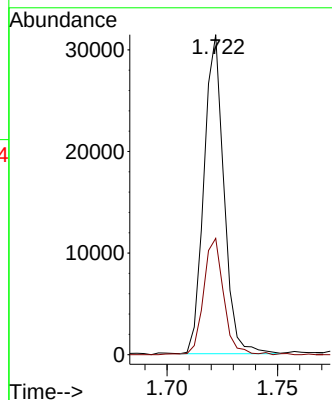
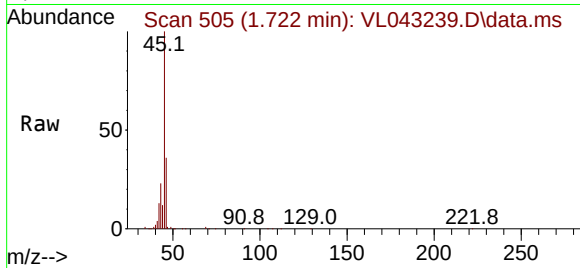




#13
 Ethanol
 Concen: 9.180 ppbv
 RT: 1.722 min Scan# 503
 Delta R.T. 0.006 min
 Lab File: VL043239.D
 Acq: 19 Nov 2025 14:59

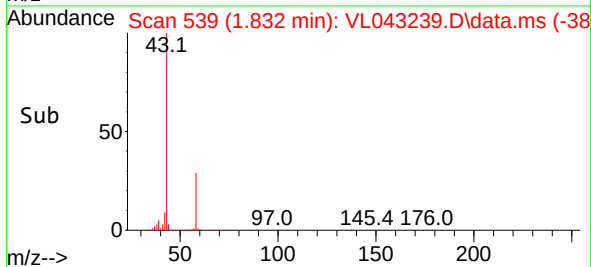
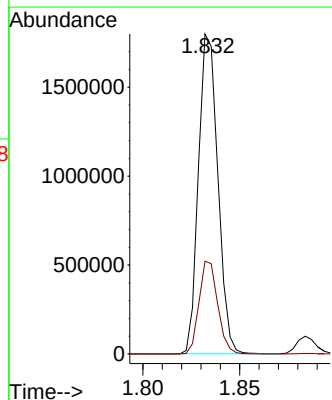
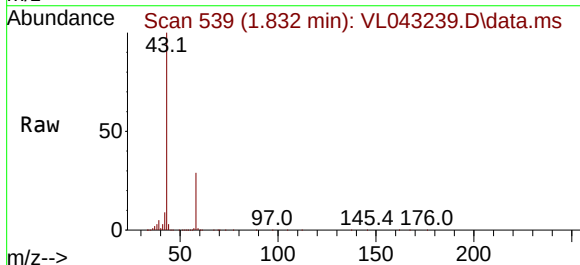
Instrument :
 MSVOA_L
 ClientSampleId :
 10-SG-1

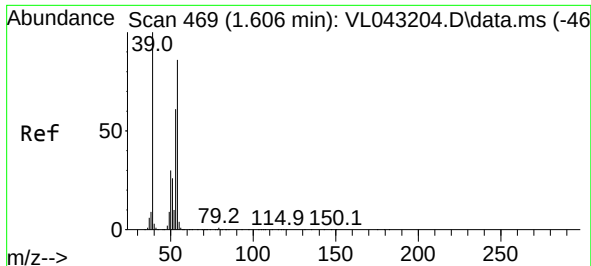
Tgt Ion: 45 Resp: 19662
 Ion Ratio Lower Upper
 45 100
 46 37.0 15.0 59.8



#15
 Acetone
 Concen: 87.530 ppbv
 RT: 1.832 min Scan# 539
 Delta R.T. -0.000 min
 Lab File: VL043239.D
 Acq: 19 Nov 2025 14:59

Tgt Ion: 43 Resp: 1257557
 Ion Ratio Lower Upper
 43 100
 58 27.8 20.7 31.1

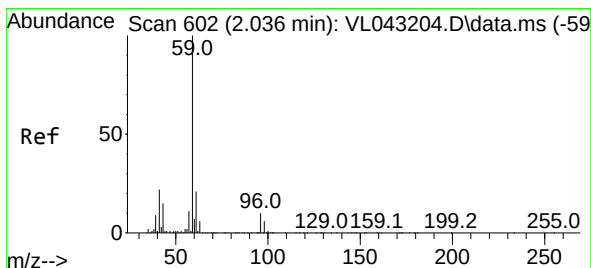
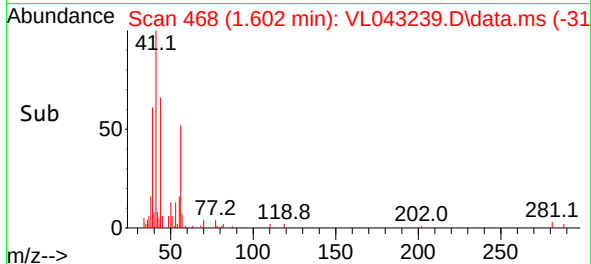
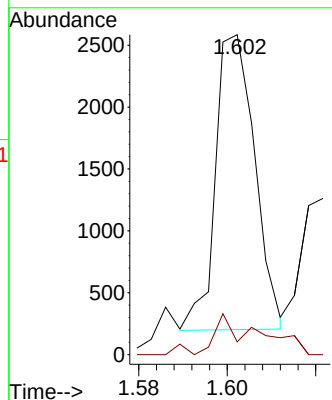
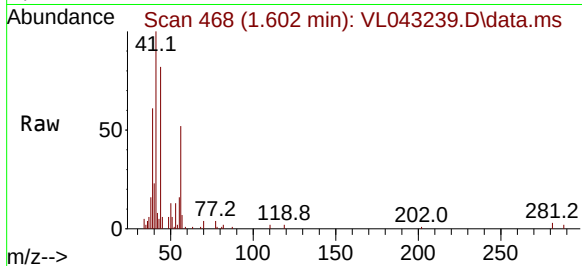




#16
1,3-Butadiene
Concen: 0.229 ppbv
RT: 1.602 min Scan# 41
Delta R.T. -0.004 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

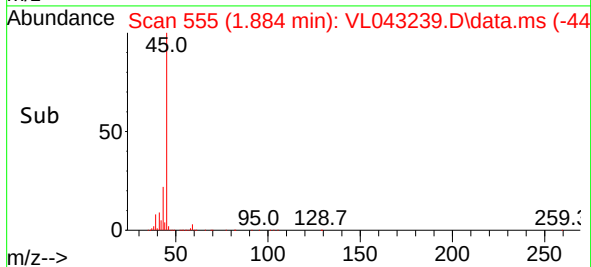
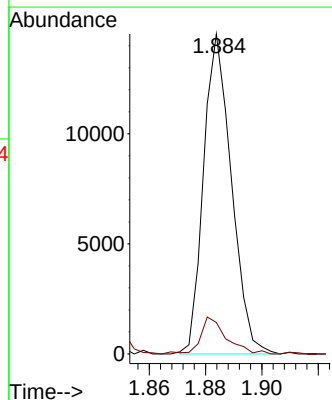
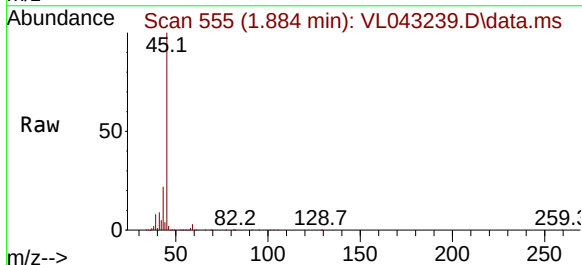
Instrument :
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ClientSampleId :
10-SG-1

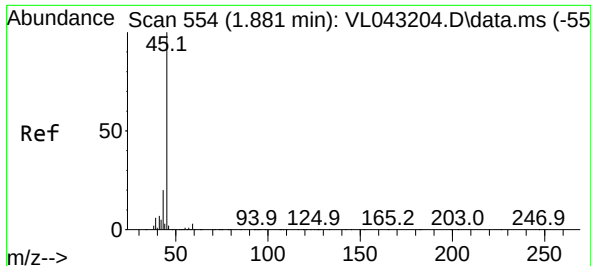
Tgt Ion: 39 Resp: 1466
Ion Ratio Lower Upper
39 100
54 17.5 59.4 89.2#



#17
tert-Butyl alcohol
Concen: 0.530 ppbv
RT: 1.884 min Scan# 555
Delta R.T. -0.153 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 59 Resp: 9986
Ion Ratio Lower Upper
59 100
57 11.0 9.0 13.4

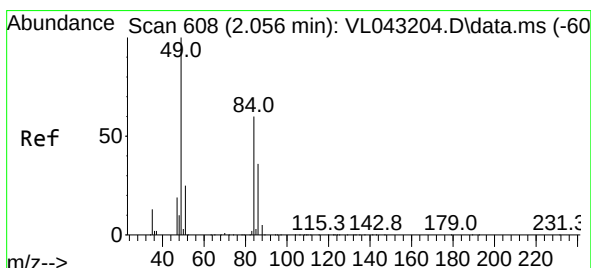
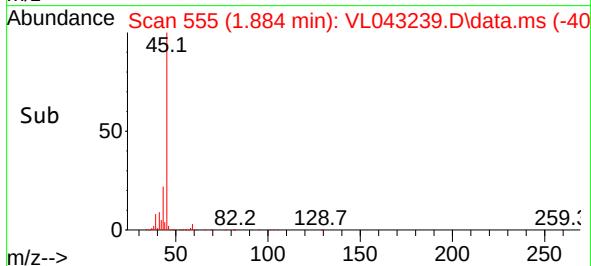
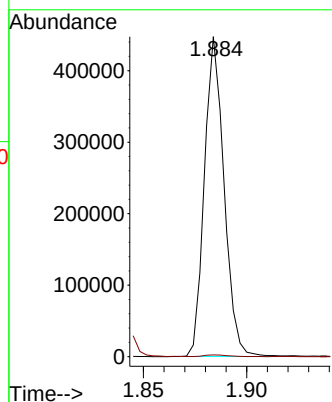
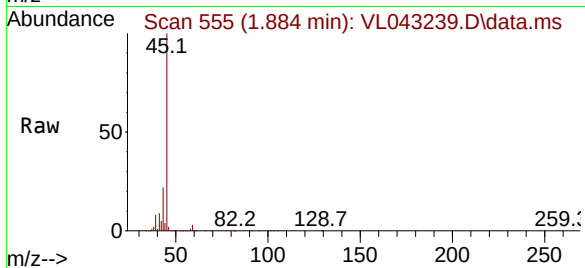




#19
Isopropyl Alcohol
Concen: 36.345 ppbv
RT: 1.884 min Scan# 511
Delta R.T. 0.003 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

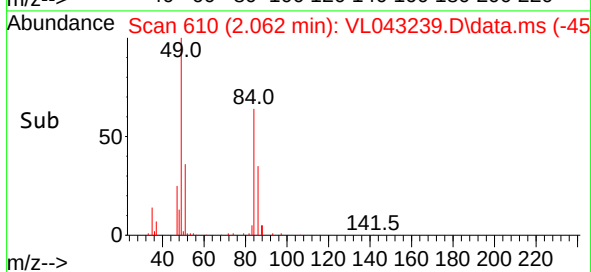
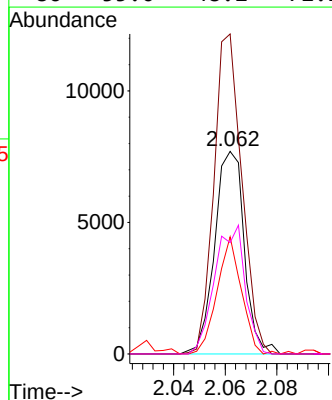
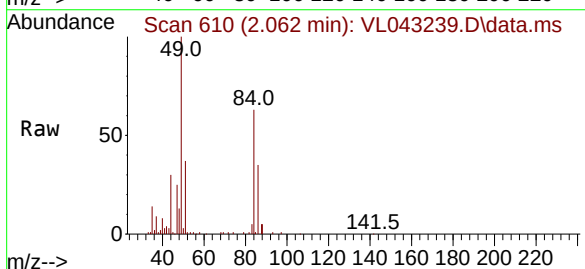
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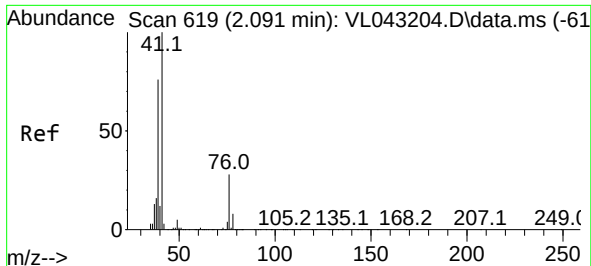
Tgt Ion: 45 Resp: 295068
Ion Ratio Lower Upper
45 100
58 118.7 31.3 46.9#



#20
Methylene Chloride
Concen: 0.721 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.006 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 84 Resp: 6137
Ion Ratio Lower Upper
84 100
49 157.9 132.9 199.3
51 57.8 34.8 52.2#
86 55.0 48.2 72.2

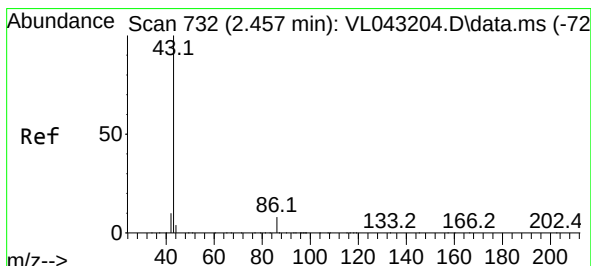
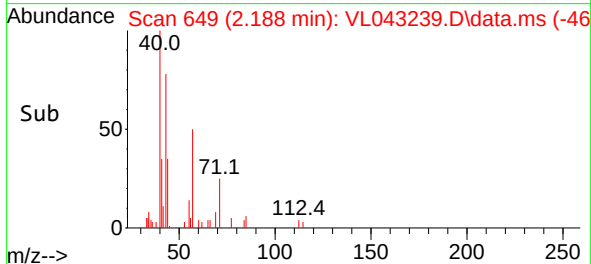
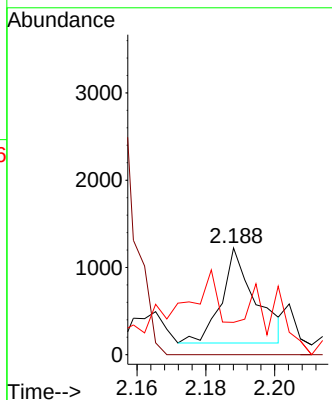
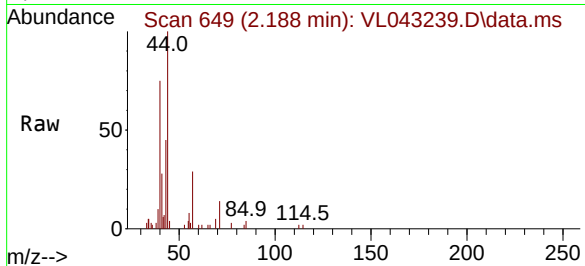




#21
 Allyl Chloride
 Concen: 0.076 ppbv
 RT: 2.188 min Scan# 649
 Delta R.T. 0.097 min
 Lab File: VL043239.D
 Acq: 19 Nov 2025 14:59

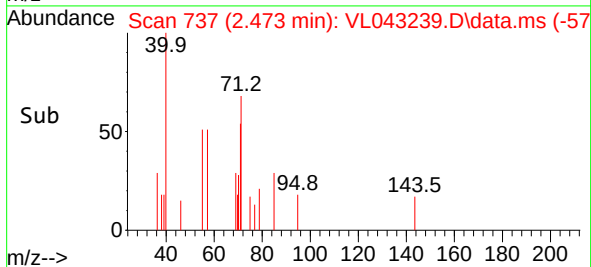
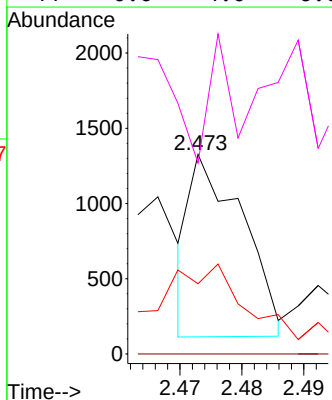
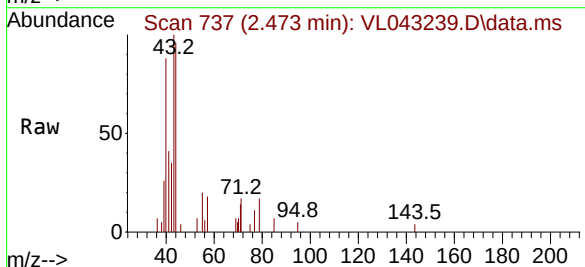
Instrument :
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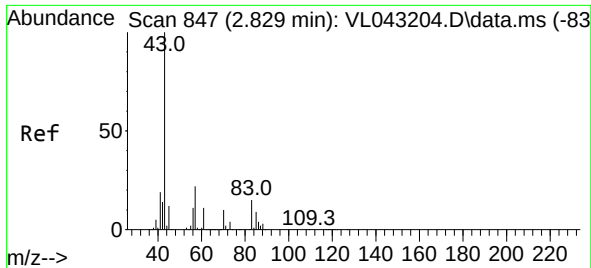
Tgt Ion: 41 Resp: 736
 Ion Ratio Lower Upper
 41 100
 76 683.0 22.1 33.1#
 39 0.0 61.0 91.4#



#23
 Vinyl Acetate
 Concen: 0.041 ppbv
 RT: 2.473 min Scan# 737
 Delta R.T. 0.016 min
 Lab File: VL043239.D
 Acq: 19 Nov 2025 14:59

Tgt Ion: 43 Resp: 718
 Ion Ratio Lower Upper
 43 100
 86 0.0 6.2 9.2#
 42 18.7 8.0 12.0#
 44 0.0 4.0 6.0#

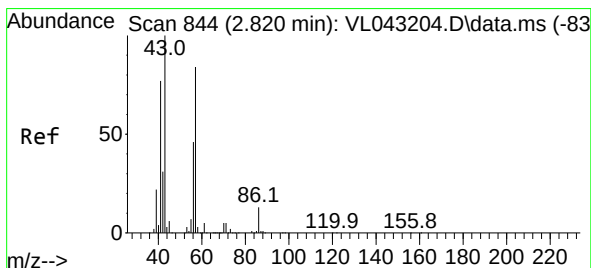
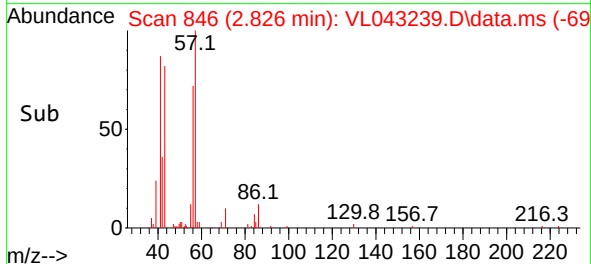
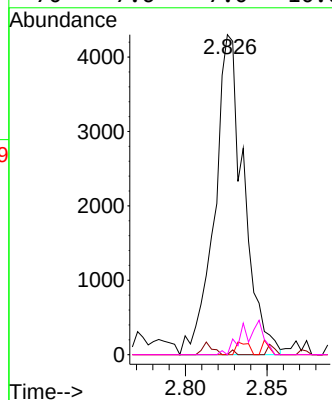
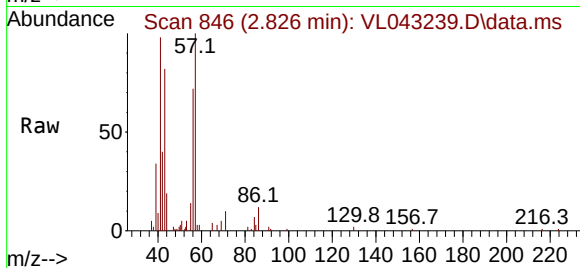




#25
Ethyl Acetate
Concen: 0.172 ppbv
RT: 2.826 min Scan# 846
Delta R.T. -0.004 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

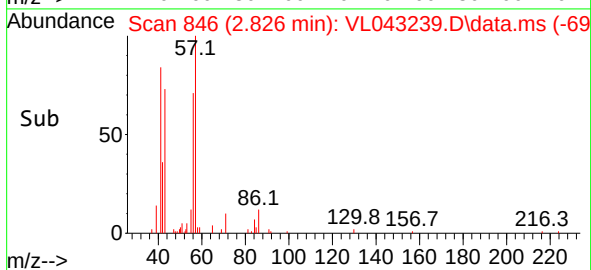
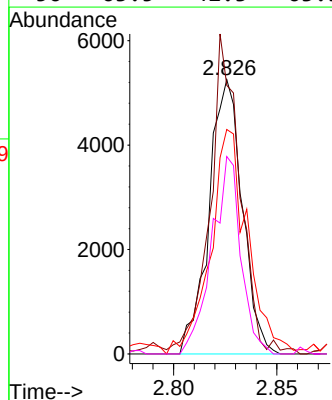
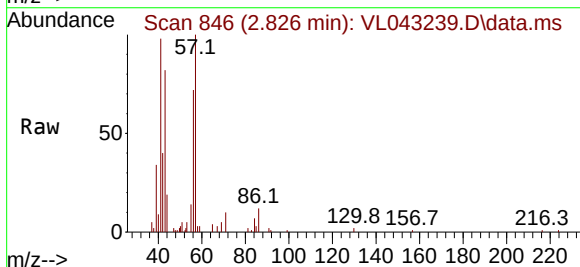
Instrument :
MSVOA_1
ClientSampleId :
10-SG-1

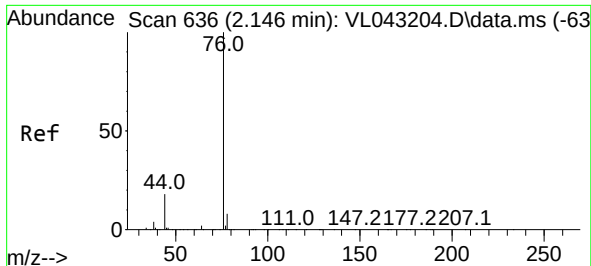
Tgt Ion: 43	Resp: 5321
Ion Ratio	Lower Upper
43 100	
45 0.0	8.1 12.1#
61 2.7	7.0 10.4#
70 7.6	7.0 10.6



#26
Hexane
Concen: 0.434 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.006 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 57	Resp: 5891
Ion Ratio	Lower Upper
57 100	
41 108.8	74.6 111.8
43 94.0	179.0 268.4#
56 63.5	42.3 63.5





#27

Carbon Disulfide

Concen: 0.362 ppbv

RT: 2.149 min Scan# 61

Delta R.T. 0.003 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_L

ClientSampleId :

10-SG-1

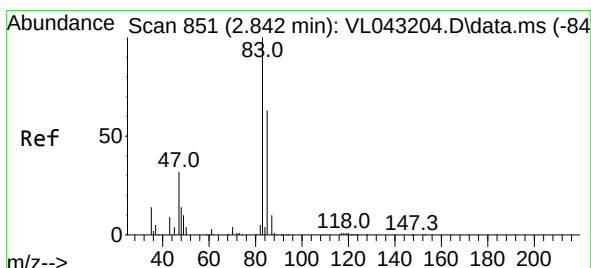
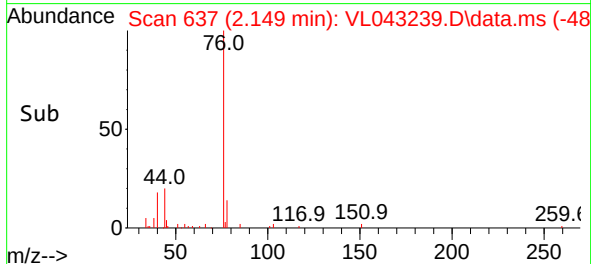
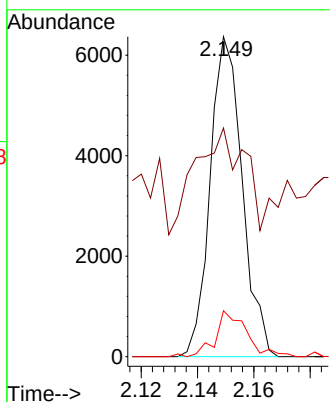
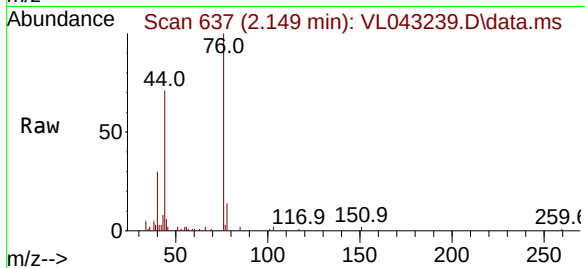
Tgt Ion: 76 Resp: 5026

Ion Ratio Lower Upper

76 100

44 87.8 16.1 24.1#

78 14.3 9.6 14.4



#29

Chloroform

Concen: 0.614 ppbv

RT: 2.845 min Scan# 852

Delta R.T. 0.003 min

Lab File: VL043239.D

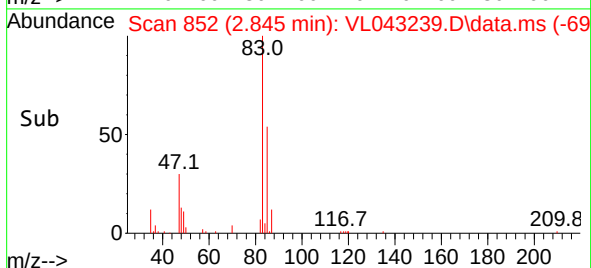
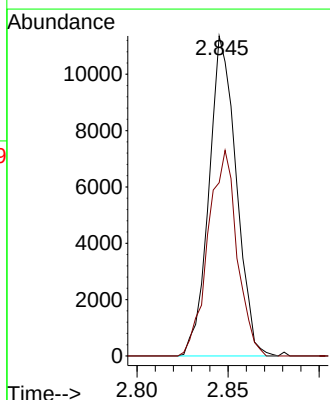
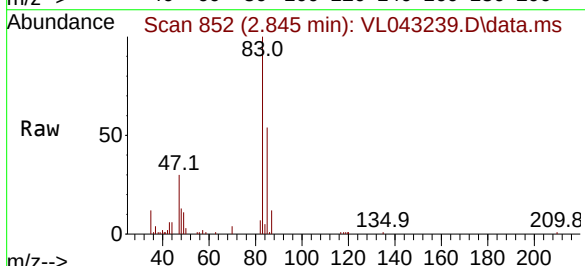
Acq: 19 Nov 2025 14:59

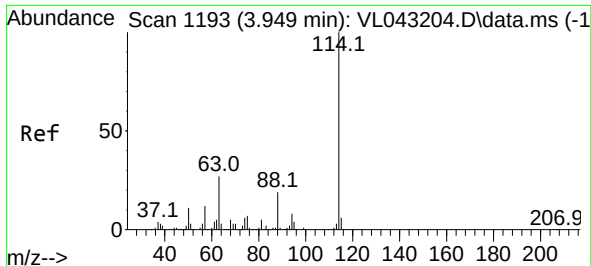
Tgt Ion: 83 Resp: 11863

Ion Ratio Lower Upper

83 100

85 54.1 50.5 75.7





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. 0.006 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_1

ClientSampleId :

10-SG-1

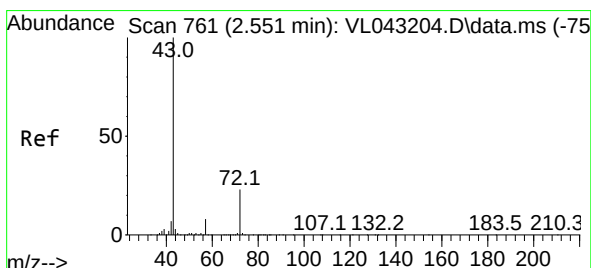
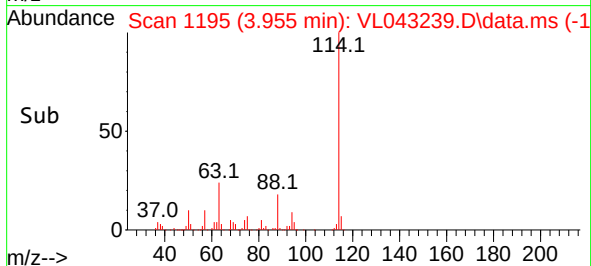
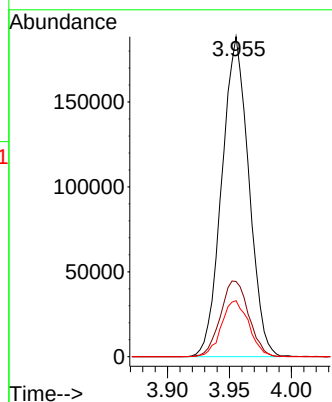
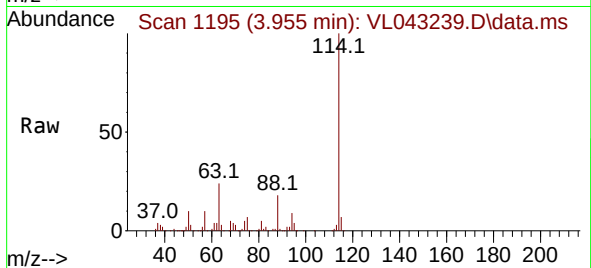
Tgt Ion:114 Resp: 285776

Ion Ratio Lower Upper

114 100

63 24.8 21.0 31.6

88 17.9 14.9 22.3



#34

2-Butanone

Concen: 0.734 ppbv

RT: 2.557 min Scan# 763

Delta R.T. 0.006 min

Lab File: VL043239.D

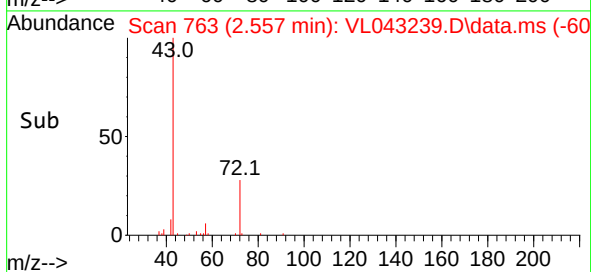
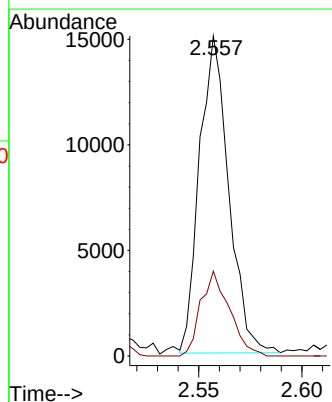
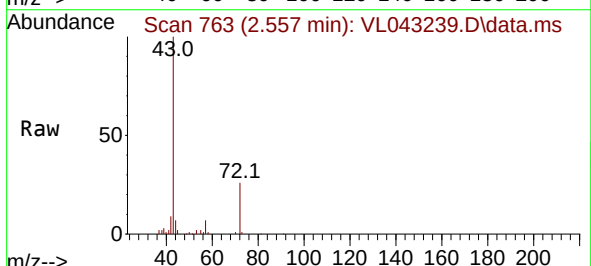
Acq: 19 Nov 2025 14:59

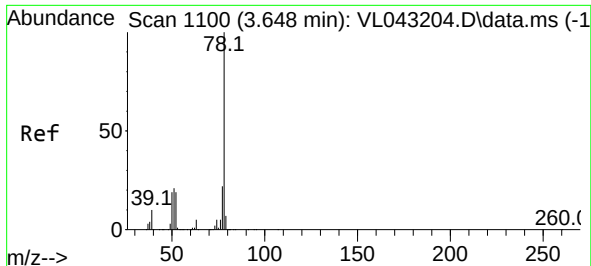
Tgt Ion: 43 Resp: 14813

Ion Ratio Lower Upper

43 100

72 26.2 18.1 27.1





#36

Benzene

Concen: 0.049 ppbv

RT: 3.654 min Scan# 1102

Delta R.T. 0.006 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_1

ClientSampleId :

10-SG-1

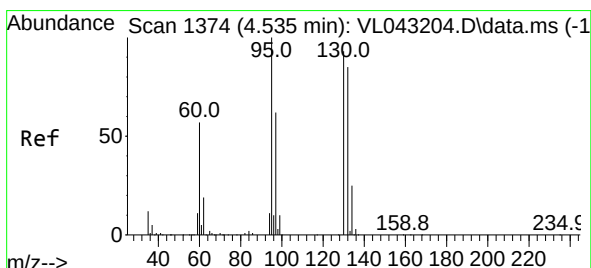
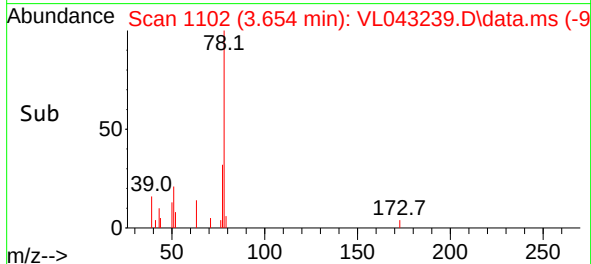
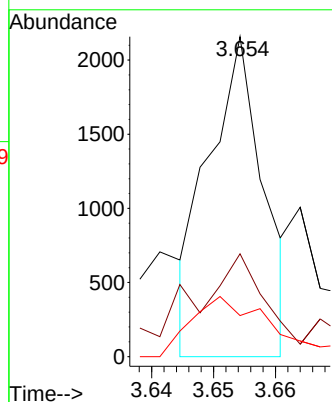
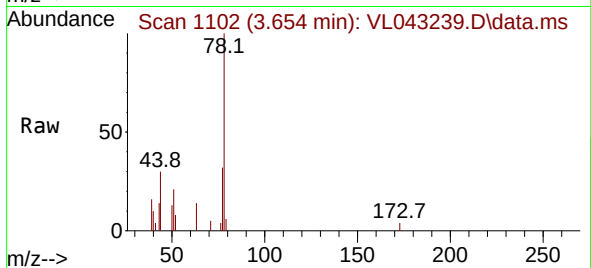
Tgt Ion: 78 Resp: 1336

Ion Ratio Lower Upper

78 100

77 30.1 17.5 26.3#

50 8.4 15.5 23.3#



#38

Trichloroethene

Concen: 0.862 ppbv

RT: 4.541 min Scan# 1376

Delta R.T. 0.006 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Tgt Ion: 130 Resp: 9230

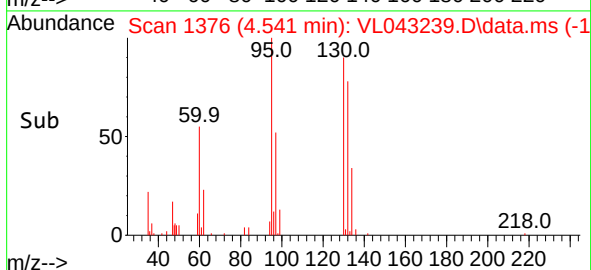
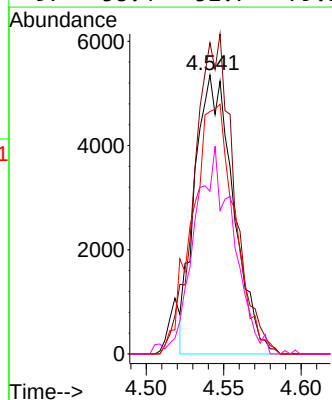
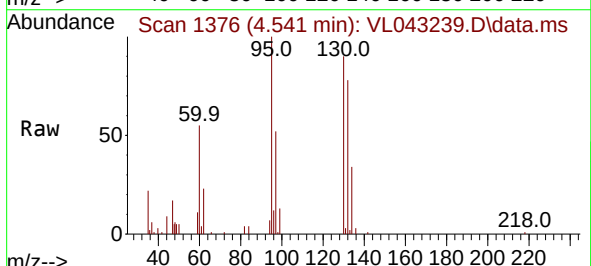
Ion Ratio Lower Upper

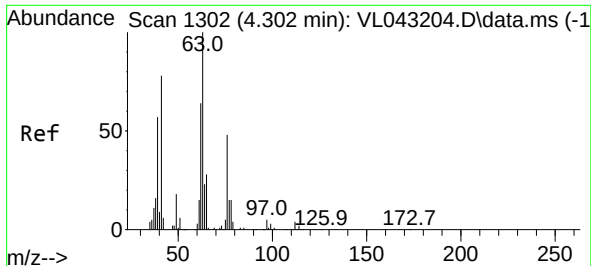
130 100

95 111.6 85.7 128.5

132 86.9 73.4 110.0

97 58.4 52.7 79.1





#39

1,2-Dichloropropane

Concen: 7.082 ppbv

RT: 3.952 min Scan# 1194

Delta R.T. -0.350 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_1

ClientSampleId :

10-SG-1

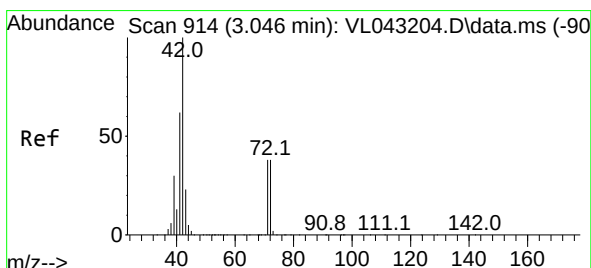
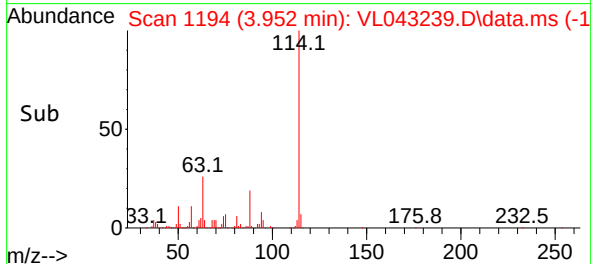
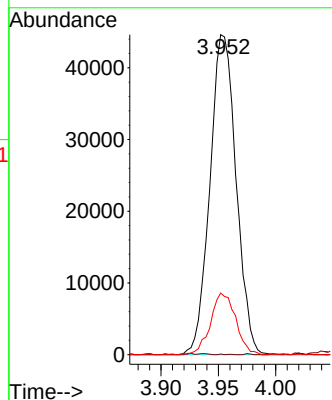
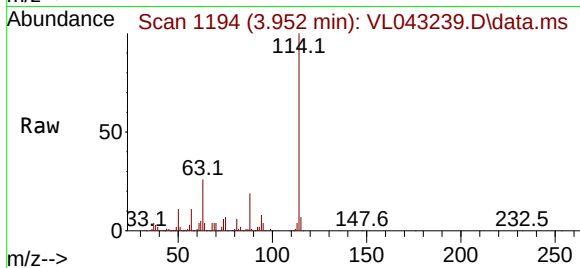
Tgt Ion: 63 Resp: 70936

Ion Ratio Lower Upper

63 100

41 0.2 62.6 93.8#

62 19.3 51.0 76.6#



#41

Tetrahydrofuran

Concen: 0.158 ppbv

RT: 3.059 min Scan# 918

Delta R.T. 0.013 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

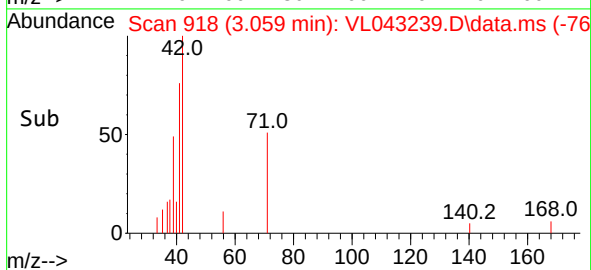
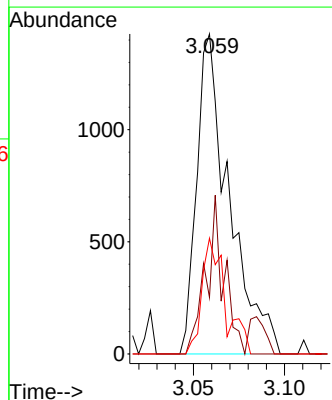
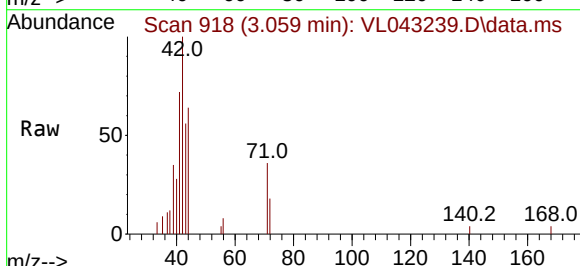
Tgt Ion: 42 Resp: 1765

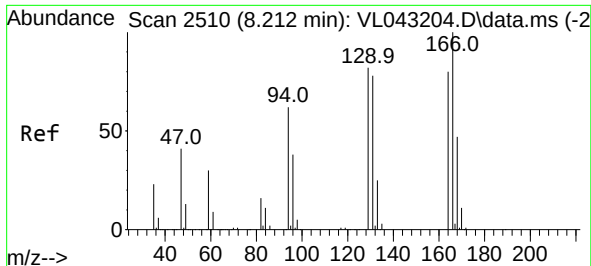
Ion Ratio Lower Upper

42 100

72 33.1 30.6 46.0

71 26.1 30.5 45.7#

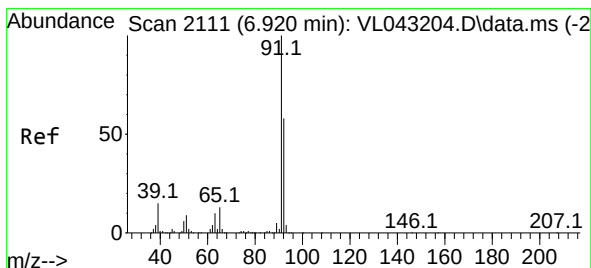
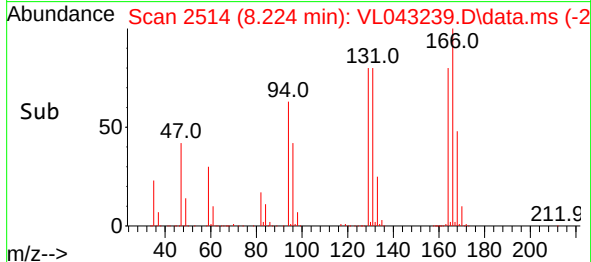
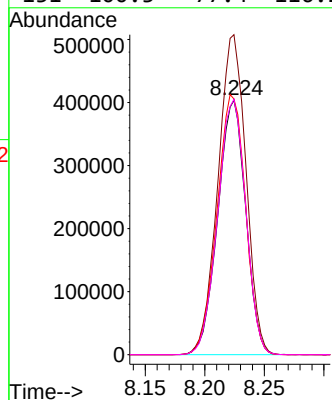
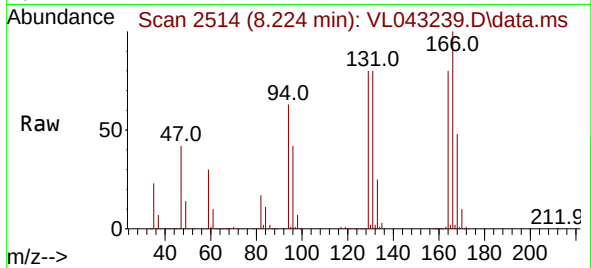




#52
Tetrachloroethene
Concen: 64.467 ppbv
RT: 8.224 min Scan# 2115
Delta R.T. 0.013 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

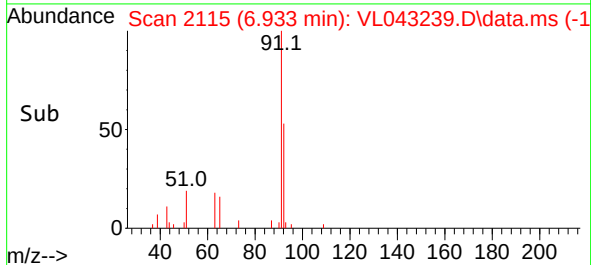
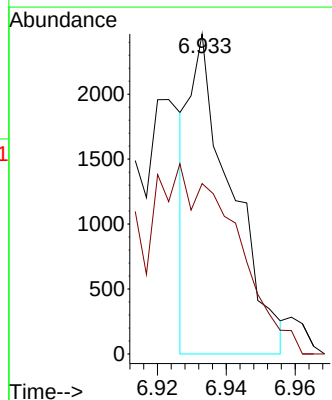
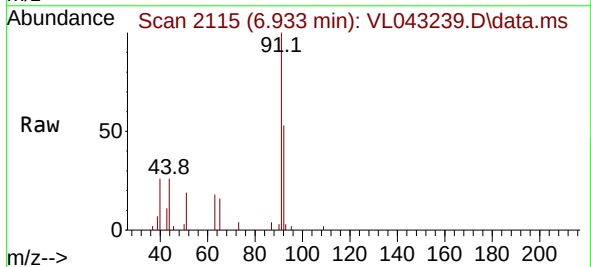
Instrument :
MSVOA_1
ClientSampleId :
10-SG-1

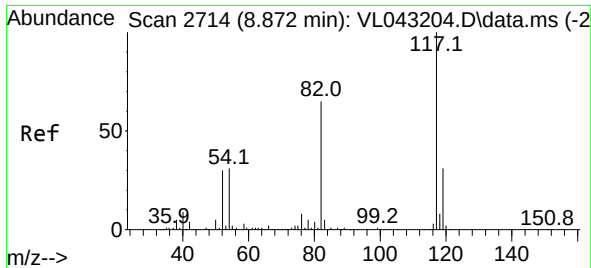
Tgt Ion:164 Resp: 656288
Ion Ratio Lower Upper
164 100
166 125.7 99.4 149.2
129 100.4 81.8 122.8
131 100.3 77.4 116.2



#53
Toluene
Concen: 0.065 ppbv
RT: 6.933 min Scan# 2115
Delta R.T. 0.013 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 91 Resp: 2097
Ion Ratio Lower Upper
91 100
92 0.0 47.4 71.0#

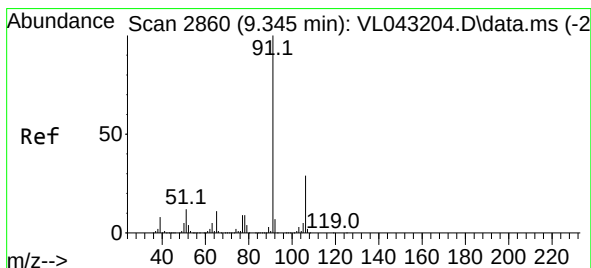
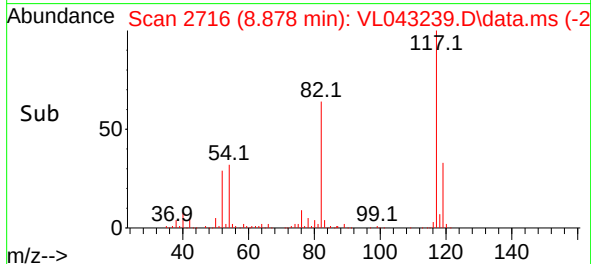
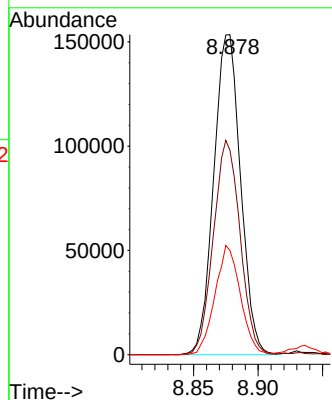
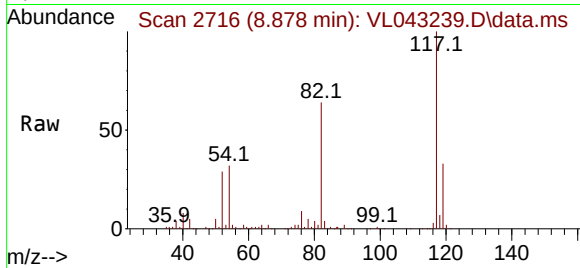




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 21
Delta R.T. 0.006 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

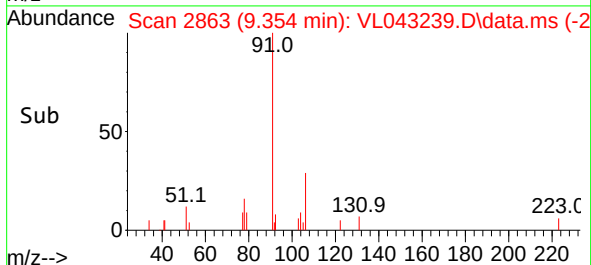
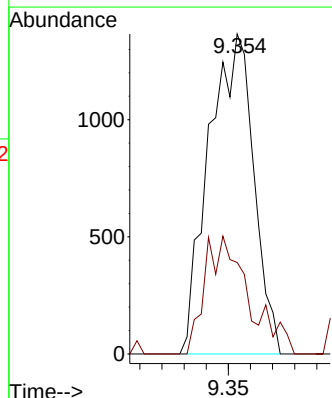
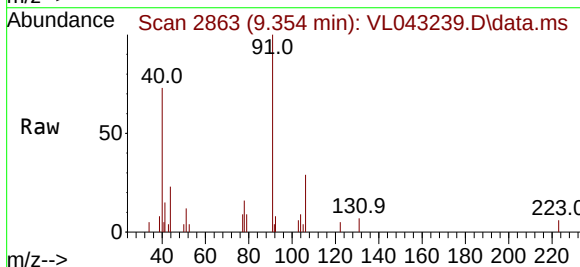
Instrument :
MSVOA_1
ClientSampleId :
10-SG-1

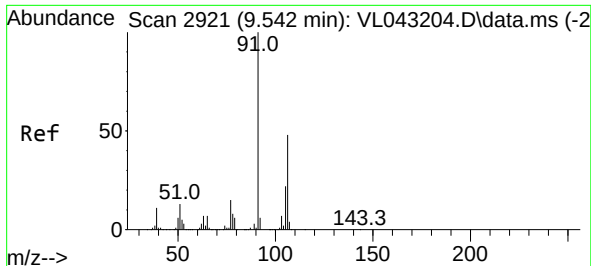
Tgt Ion:117 Resp: 221762
Ion Ratio Lower Upper
117 100
82 66.8 56.1 84.1
119 32.3 25.0 37.6



#58
Ethyl Benzene
Concen: 0.045 ppbv
RT: 9.354 min Scan# 2863
Delta R.T. 0.009 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion: 91 Resp: 1928
Ion Ratio Lower Upper
91 100
106 27.5 22.8 34.2





#59

m/p-Xylene

Concen: 0.049 ppbv

RT: 9.542 min Scan# 2921

Delta R.T. -0.000 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_1

ClientSampleId :

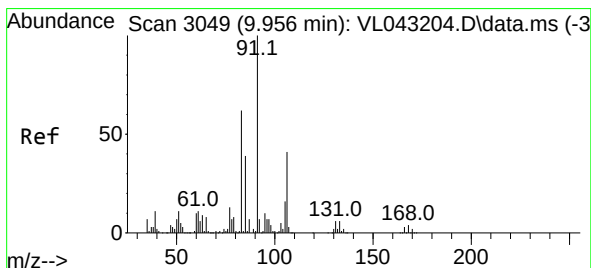
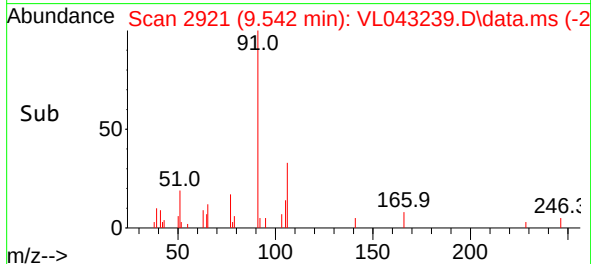
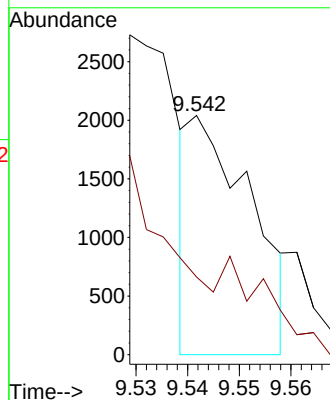
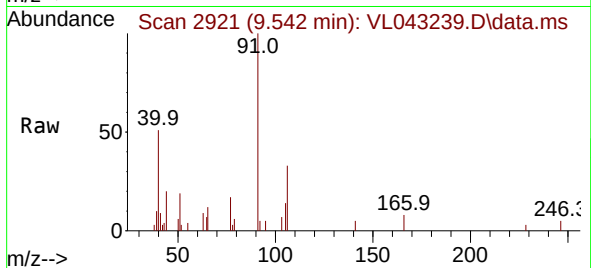
10-SG-1

Tgt Ion: 91 Resp: 1687

Ion Ratio Lower Upper

91 100

106 0.0 36.1 54.1#



#60

o-Xylene

Concen: 0.045 ppbv

RT: 9.962 min Scan# 3051

Delta R.T. 0.006 min

Lab File: VL043239.D

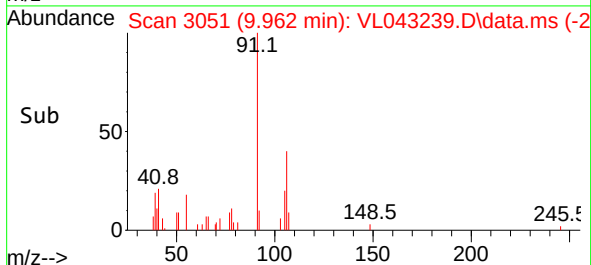
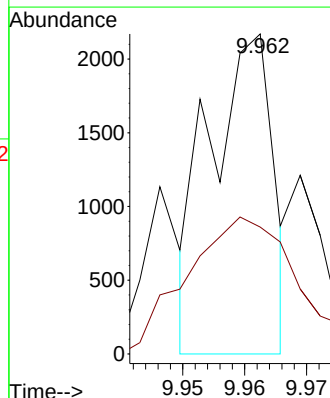
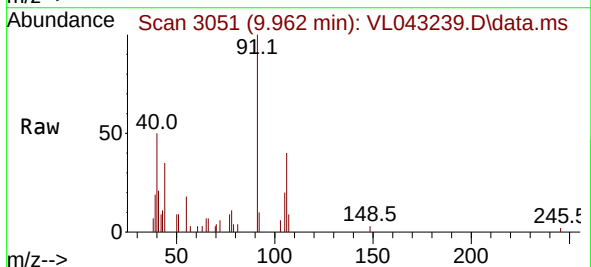
Acq: 19 Nov 2025 14:59

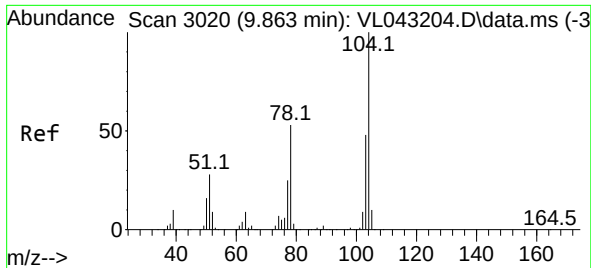
Tgt Ion: 91 Resp: 1547

Ion Ratio Lower Upper

91 100

106 73.2 20.9 62.8#





#61

Styrene

Concen: 0.049 ppbv

RT: 9.865 min Scan# 3020

Delta R.T. 0.003 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

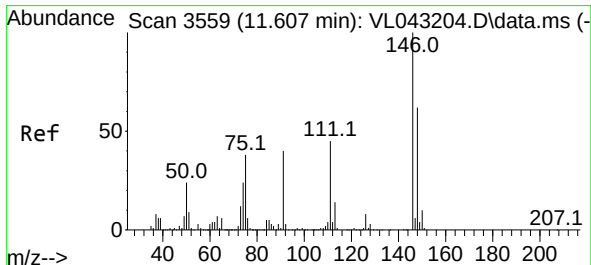
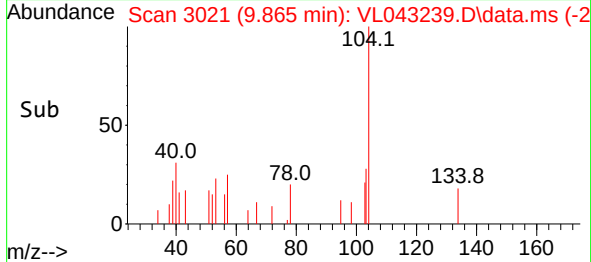
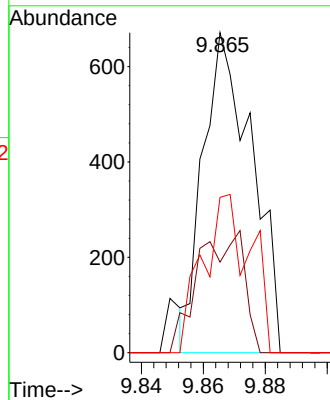
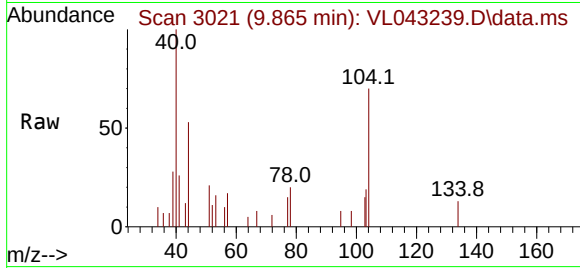
Instrument :

MSVOA_L

ClientSampleId :

10-SG-1

Tgt Ion:	104	Resp:	731
Ion	Ratio	Lower	Upper
104	100		
78	36.3	42.1	63.1#
103	48.2	37.2	55.8



#66

Benzyl Chloride

Concen: 0.046 ppbv

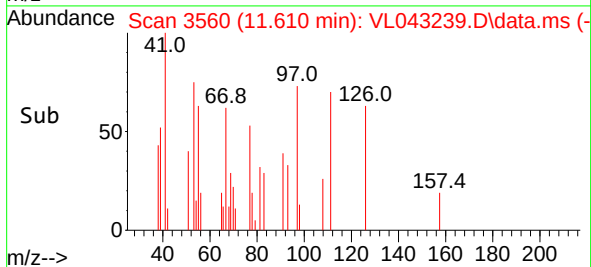
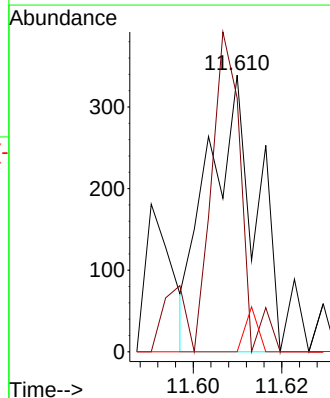
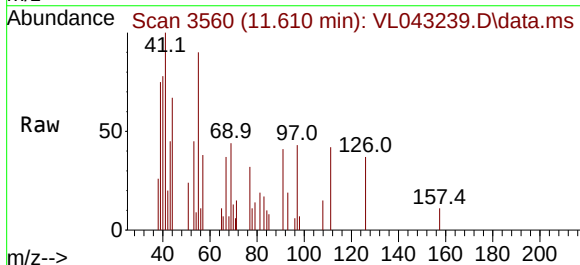
RT: 11.610 min Scan# 3560

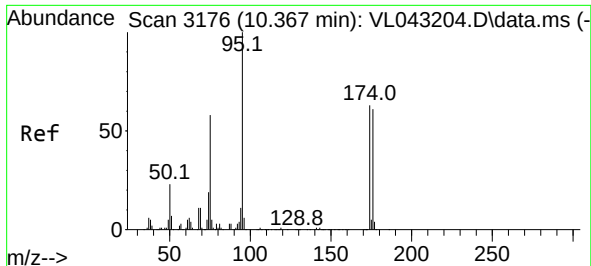
Delta R.T. 0.003 min

Lab File: VL043239.D

Acq: 19 Nov 2025 14:59

Tgt Ion:	91	Resp:	254
Ion	Ratio	Lower	Upper
91	100		
126	81.9	14.4	21.6#
128	0.0	4.6	6.8#

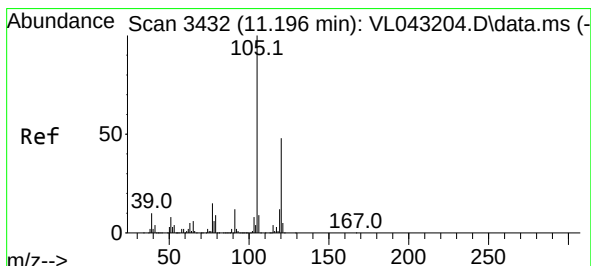
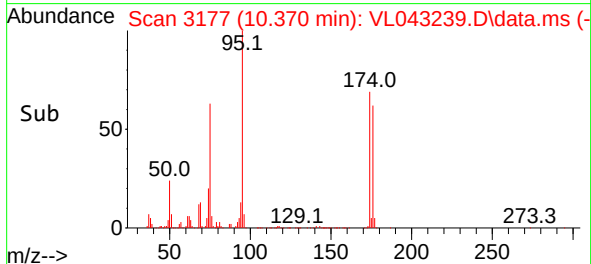
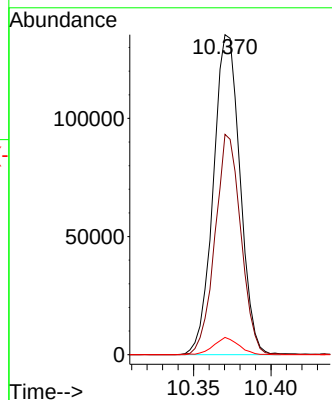
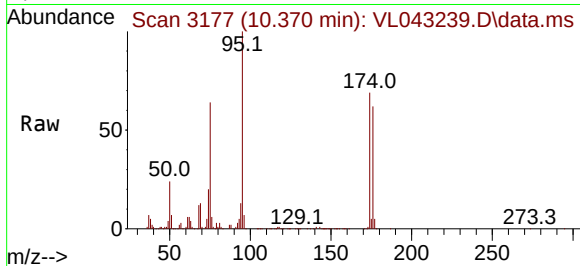




#68
1-Bromo-4-Fluorobenzene
Concen: 9.979 ppbv
RT: 10.370 min Scan# 3176
Delta R.T. 0.003 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

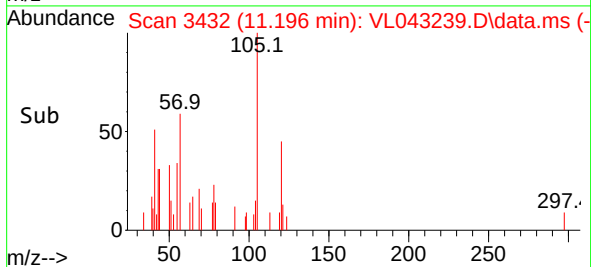
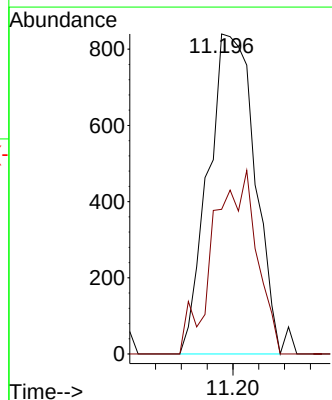
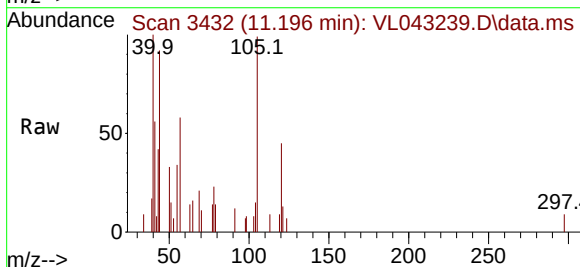
Instrument :
MSVOA_L
ClientSampleId :
10-SG-1

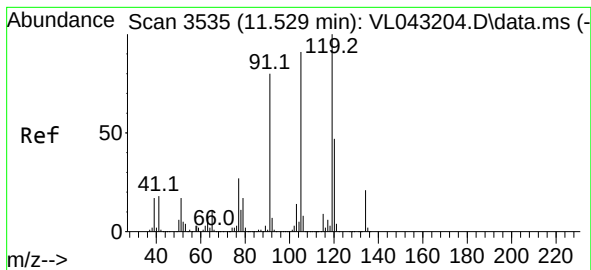
Tgt Ion: 95 Resp: 162206
Ion Ratio Lower Upper
95 100
174 67.0 50.2 75.2
175 5.1 4.1 6.1



#73
1,3,5-Trimethylbenzene
Concen: 0.030 ppbv
RT: 11.196 min Scan# 3432
Delta R.T. -0.000 min
Lab File: VL043239.D
Acq: 19 Nov 2025 14:59

Tgt Ion:105 Resp: 1054
Ion Ratio Lower Upper
105 100
120 45.2 38.6 57.8





#74

1,2,4-Trimethylbenzene

Concen: 0.047 ppbv

RT: 11.535 min Scan# 3

Delta R.T. 0.006 min

Lab File: VL043239.D

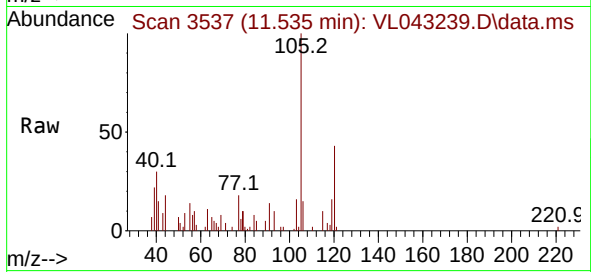
Acq: 19 Nov 2025 14:59

Instrument :

MSVOA_L

ClientSampleId :

10-SG-1



Tgt Ion:105 Resp: 1781

Ion Ratio Lower Upper

105 100

120 43.1 41.7 62.5

91 14.1 70.0 105.0#

77 17.8 23.8 35.8#

