

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL112025\
 Data File : VL043263.D
 Acq On : 20 Nov 2025 13:58
 Operator : SY/MD
 Sample : Q3655-03 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-3

Quant Time: Nov 21 00:38:44 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	106133	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.956	114	277609	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.875	117	213831	10.000	ppbv	0.00

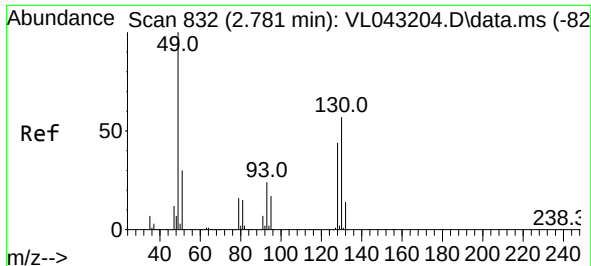
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	155552	9.924	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.200%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	3994	0.267	ppbv	97
3) Chlorodifluoromethane	1.451	51	10548	0.717	ppbv #	67
4) Chloromethane	1.535	50	1928	0.344	ppbv	99
9) Propene	1.486	41	1264	0.202	ppbv #	1
13) Ethanol	1.722	45	3804	1.730	ppbv #	38
15) Acetone	1.839	43	25935	1.759	ppbv	94
16) 1,3-Butadiene	1.603	39	837	0.127	ppbv #	12
17) tert-Butyl alcohol	2.043	59	862	0.045	ppbv #	71
19) Isopropyl Alcohol	1.884	45	2937	0.352	ppbv #	1
20) Methylene Chloride	2.062	84	7004	0.898	ppbv	93
23) Vinyl Acetate	2.454	43	2512	0.141	ppbv #	83
25) Ethyl Acetate	2.829	43	5507	0.173	ppbv #	85
26) Hexane	2.829	57	5946	0.426	ppbv #	46
34) 2-Butanone	2.561	43	9638	0.492	ppbv	93
36) Benzene	3.655	78	2355	0.089	ppbv #	55
38) Trichloroethene	4.545	130	326	0.031	ppbv #	57
39) 1,2-Dichloropropane	3.956	63	69599	7.153	ppbv #	24
44) 2,2,4-Trimethylpentane	4.635	57	1624	0.036	ppbv #	1
52) Tetrachloroethene	8.222	164	422485	42.721	ppbv	98
53) Toluene	6.927	91	4588	0.146	ppbv #	41
60) o-Xylene	9.960	91	1826	0.055	ppbv	75
74) 1,2,4-Trimethylbenzene	11.533	105	3583	0.097	ppbv #	51
79) Naphthalene	13.517	128	1145	0.035	ppbv #	7

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

Quant Time: Nov 21 00:38:44 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

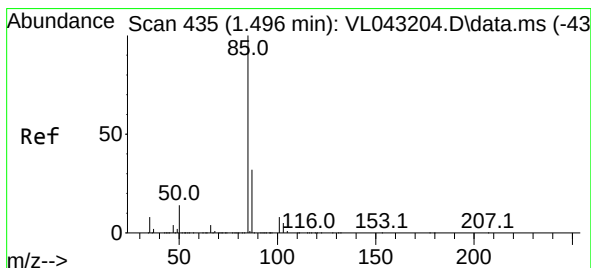
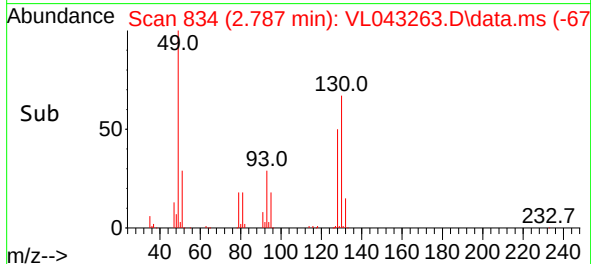
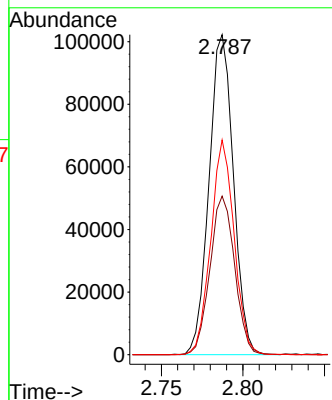
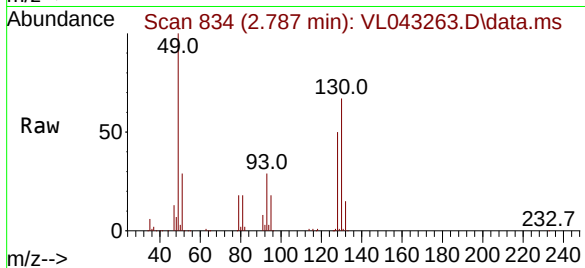




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.006 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

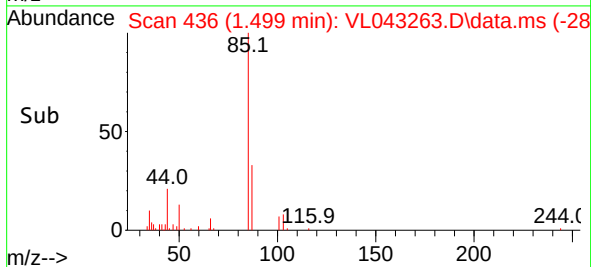
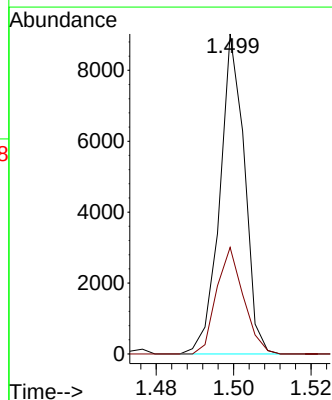
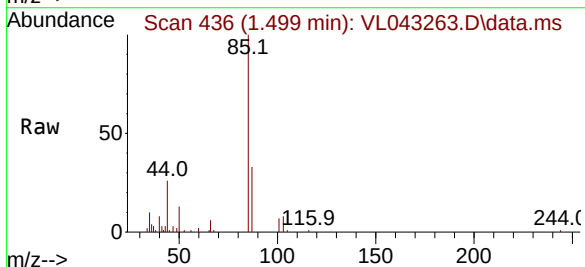
Instrument :
MSVOA_L
ClientSampleId :
SG-3

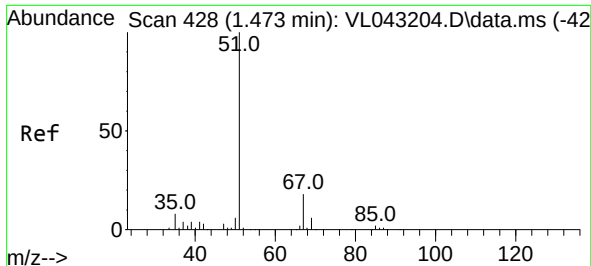
Tgt Ion: 49 Resp: 106133
Ion Ratio Lower Upper
49 100
128 50.3 23.0 69.0
130 64.4 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.267 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 85 Resp: 3994
Ion Ratio Lower Upper
85 100
87 33.3 25.4 38.2

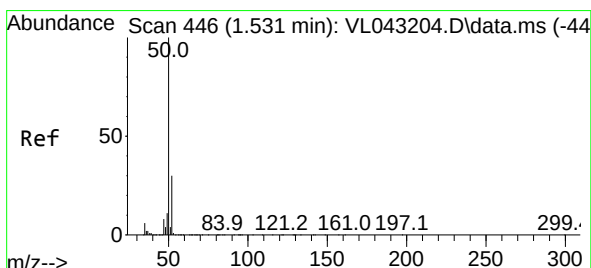
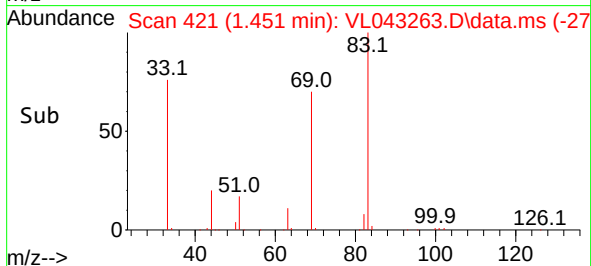
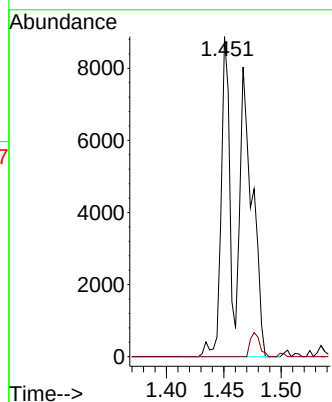
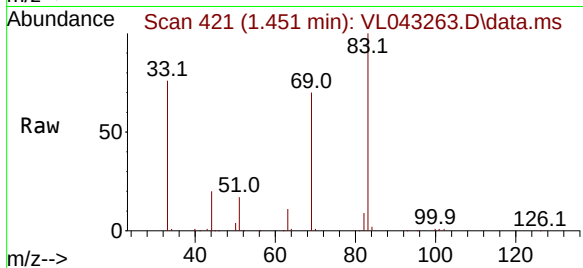




#3
Chlorodifluoromethane
Concen: 0.717 ppbv
RT: 1.451 min Scan# 41
Delta R.T. -0.023 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

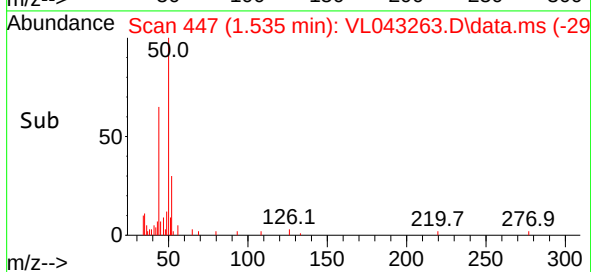
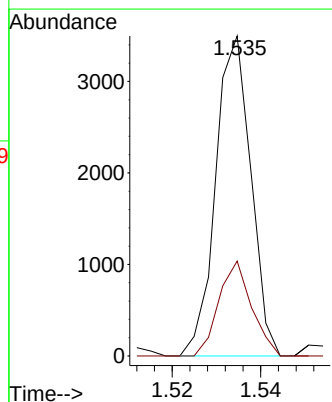
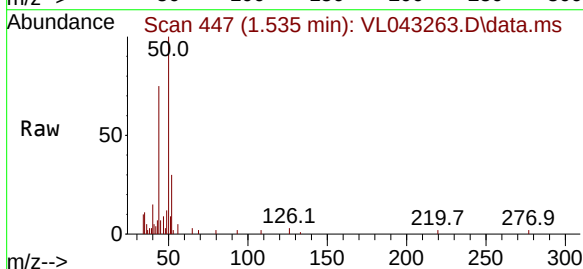
Instrument :
MSVOA_L
ClientSampleId :
SG-3

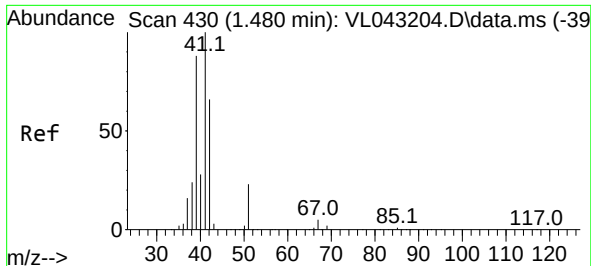
Tgt Ion: 51 Resp: 10548
Ion Ratio Lower Upper
51 100
67 3.9 14.9 22.3#



#4
Chloromethane
Concen: 0.344 ppbv
RT: 1.535 min Scan# 447
Delta R.T. 0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 50 Resp: 1928
Ion Ratio Lower Upper
50 100
52 29.7 24.1 36.1





#9

Propene

Concen: 0.202 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

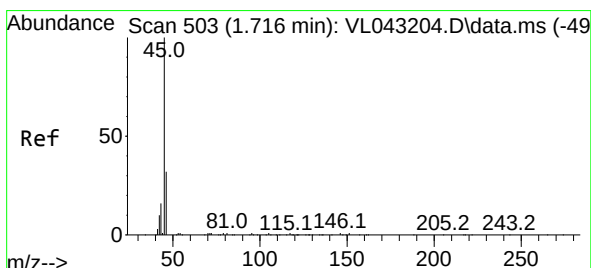
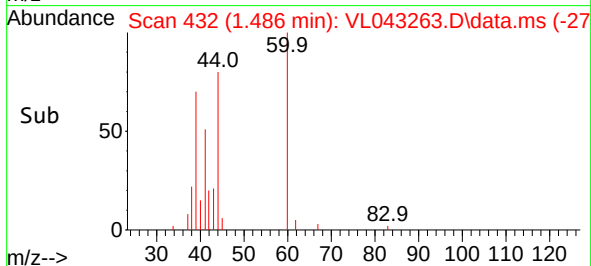
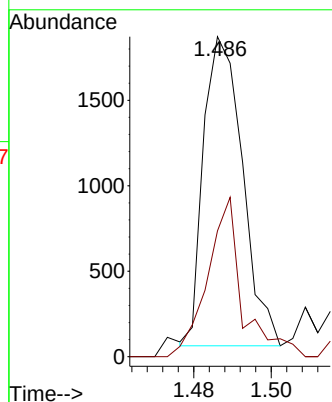
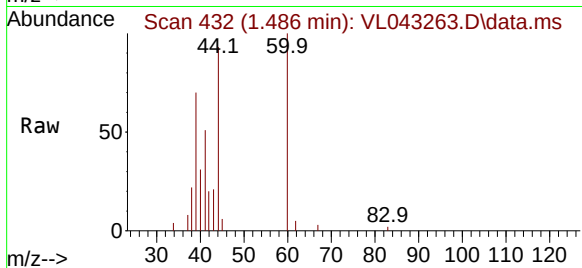
SG-3

Tgt Ion: 41 Resp: 1264

Ion Ratio Lower Upper

41 100

42 50.0 3.7 5.5#



#13

Ethanol

Concen: 1.730 ppbv

RT: 1.722 min Scan# 505

Delta R.T. 0.006 min

Lab File: VL043263.D

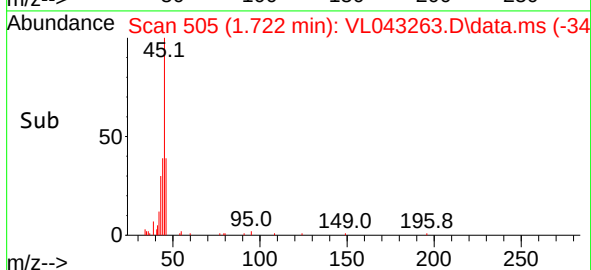
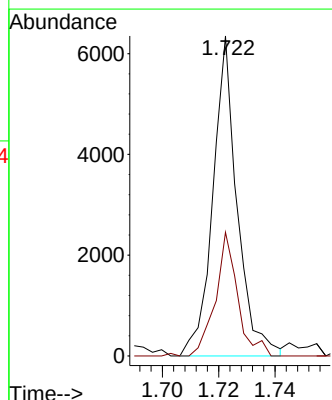
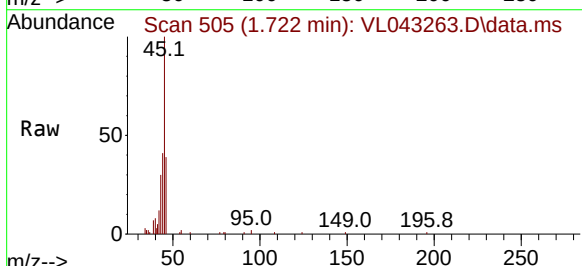
Acq: 20 Nov 2025 13:58

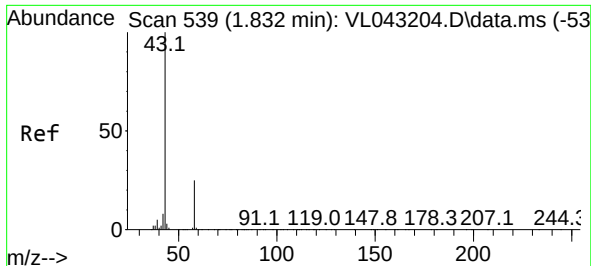
Tgt Ion: 45 Resp: 3804

Ion Ratio Lower Upper

45 100

46 0.0 15.0 59.8#

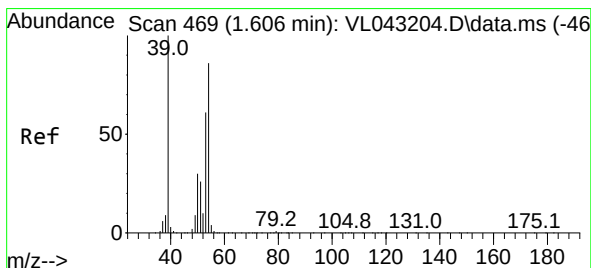
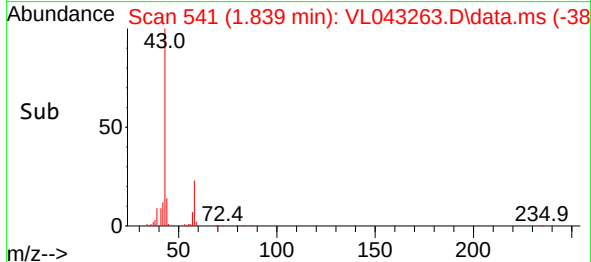
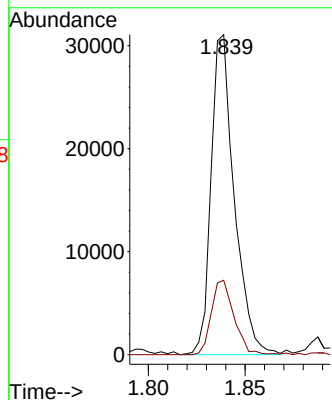
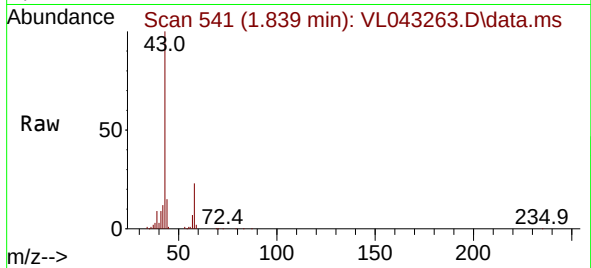




#15
Acetone
Concen: 1.759 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.006 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

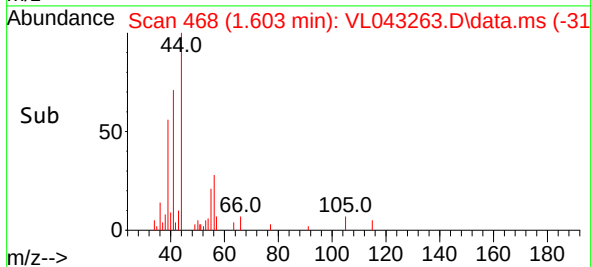
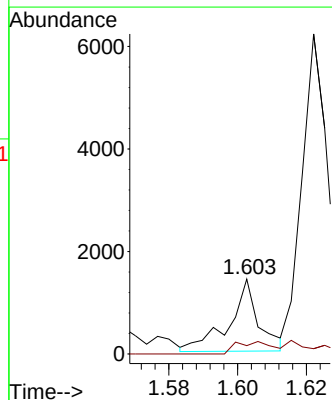
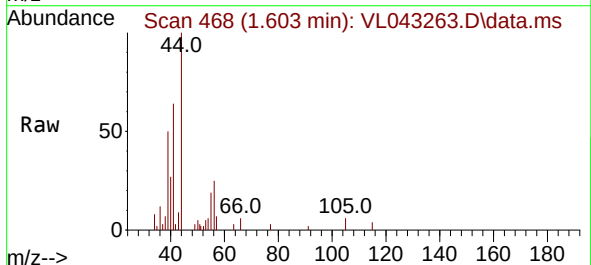
Instrument :
MSVOA_L
ClientSampleId :
SG-3

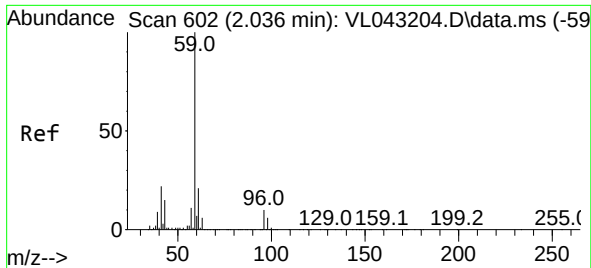
Tgt Ion: 43 Resp: 25935
Ion Ratio Lower Upper
43 100
58 22.7 20.7 31.1



#16
1,3-Butadiene
Concen: 0.127 ppbv
RT: 1.603 min Scan# 468
Delta R.T. -0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 39 Resp: 837
Ion Ratio Lower Upper
39 100
54 0.0 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.045 ppbv

RT: 2.043 min Scan# 602

Delta R.T. 0.006 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

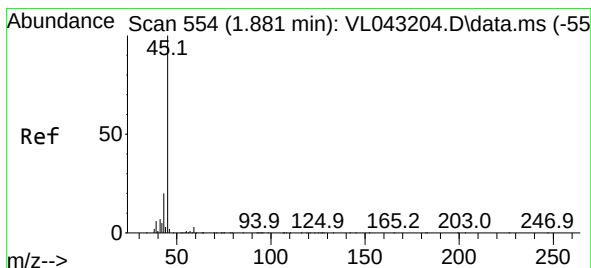
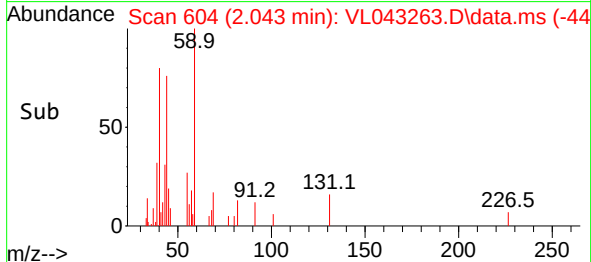
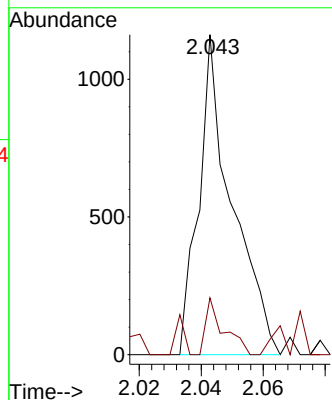
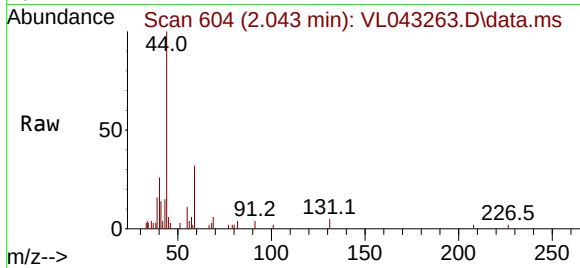
SG-3

Tgt Ion: 59 Resp: 862

Ion Ratio Lower Upper

59 100

57 0.0 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 0.352 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.003 min

Lab File: VL043263.D

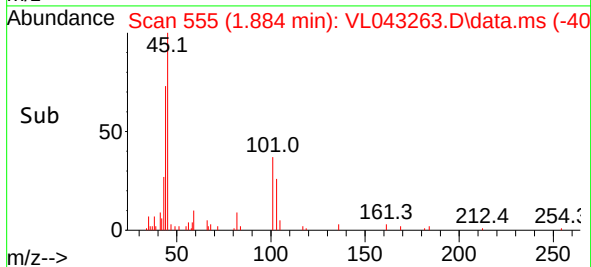
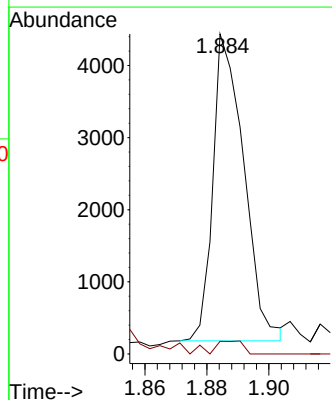
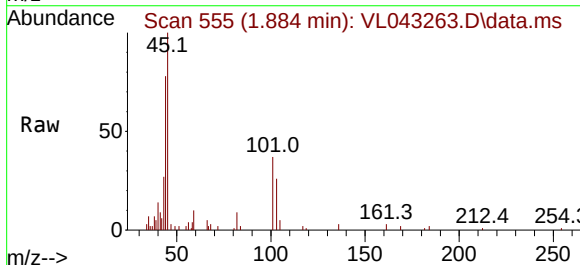
Acq: 20 Nov 2025 13:58

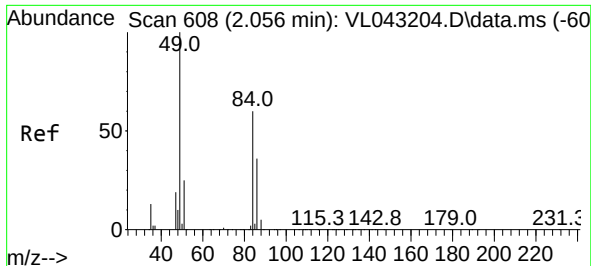
Tgt Ion: 45 Resp: 2937

Ion Ratio Lower Upper

45 100

58 200.1 31.3 46.9#

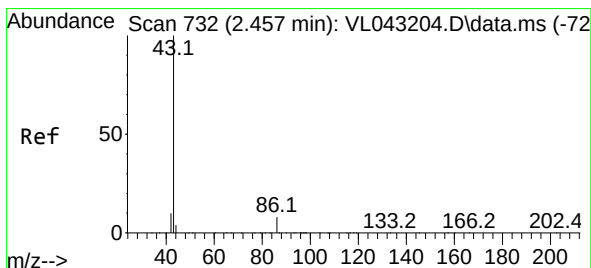
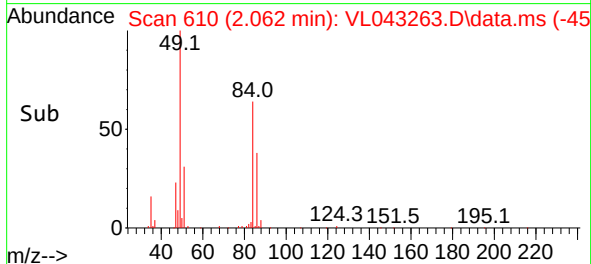
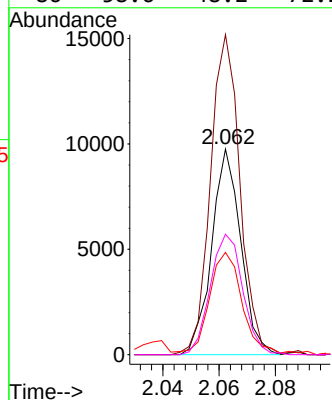
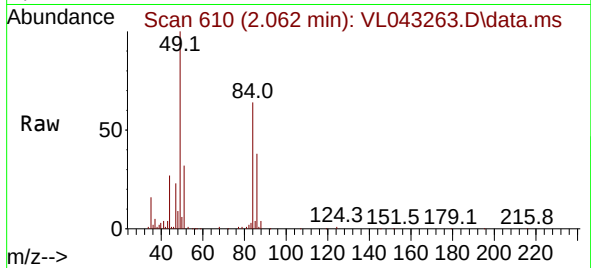




#20
Methylene Chloride
Concen: 0.898 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.006 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

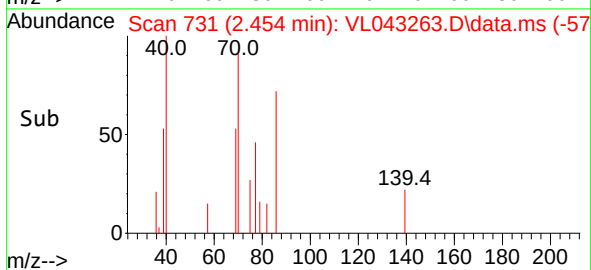
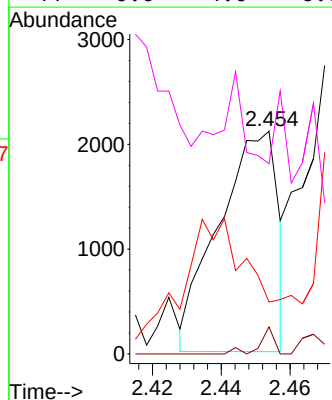
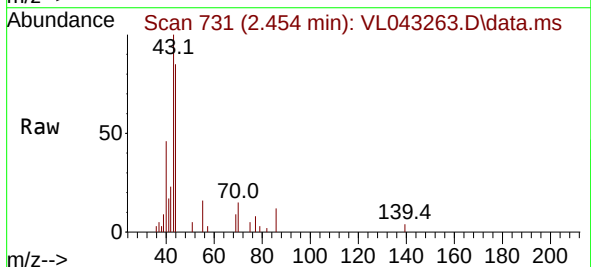
Instrument :
MSVOA_L
ClientSampleId :
SG-3

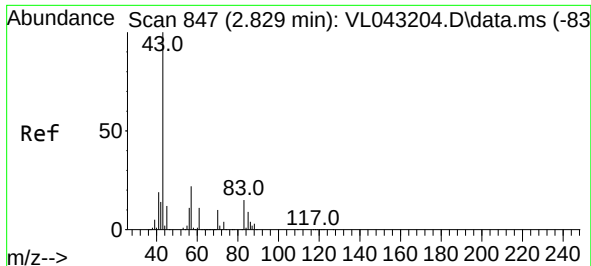
Tgt Ion: 84 Resp: 7004
Ion Ratio Lower Upper
84 100
49 155.1 132.9 199.3
51 48.8 34.8 52.2
86 58.6 48.2 72.2



#23
Vinyl Acetate
Concen: 0.141 ppbv
RT: 2.454 min Scan# 731
Delta R.T. -0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 43 Resp: 2512
Ion Ratio Lower Upper
43 100
86 13.7 6.2 9.2#
42 3.7 8.0 12.0#
44 0.0 4.0 6.0#

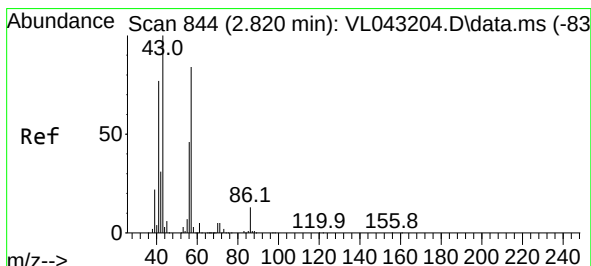
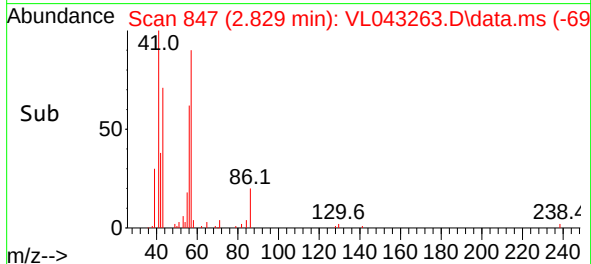
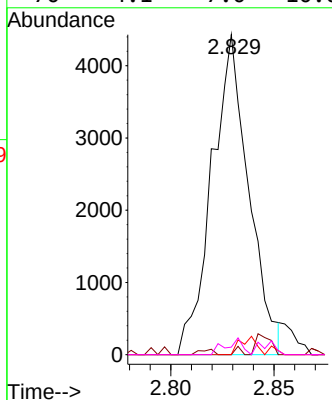
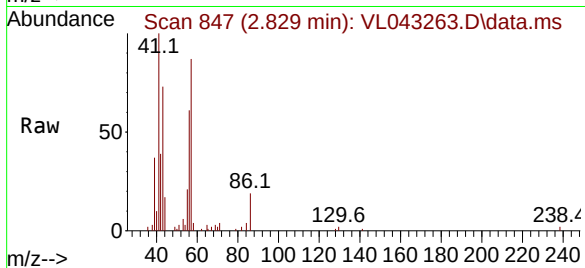




#25
Ethyl Acetate
Concen: 0.173 ppbv
RT: 2.829 min Scan# 847
Delta R.T. 0.000 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

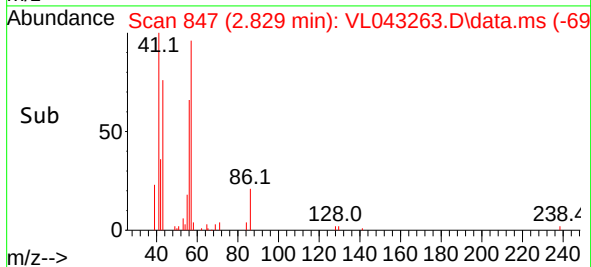
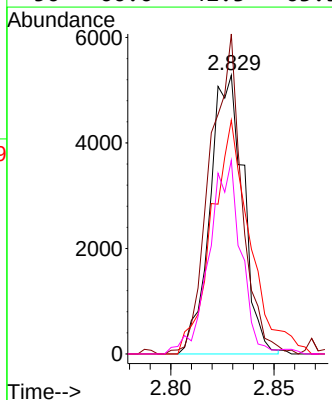
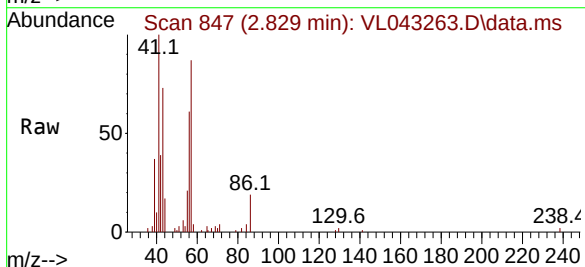
Instrument :
MSVOA_1
ClientSampleId :
SG-3

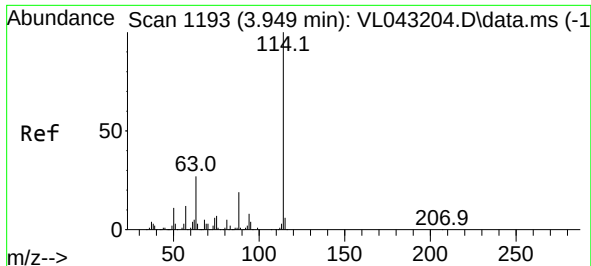
Tgt Ion: 43	Resp: 5507
Ion Ratio	Lower Upper
43 100	
45 3.6	8.1 12.1#
61 3.1	7.0 10.4#
70 4.1	7.0 10.6#



#26
Hexane
Concen: 0.426 ppbv
RT: 2.829 min Scan# 847
Delta R.T. 0.010 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 57	Resp: 5946
Ion Ratio	Lower Upper
57 100	
41 110.5	74.6 111.8
43 98.4	179.0 268.4#
56 66.6	42.3 63.5#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.956 min Scan# 1195

Delta R.T. 0.006 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

SG-3

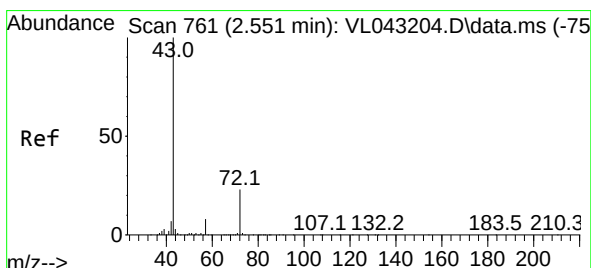
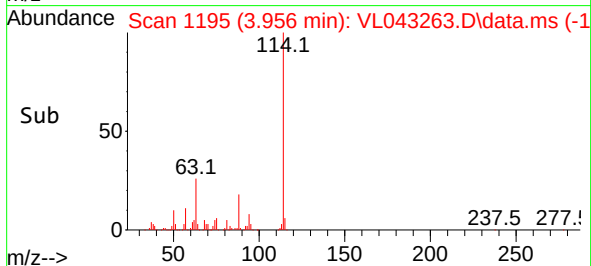
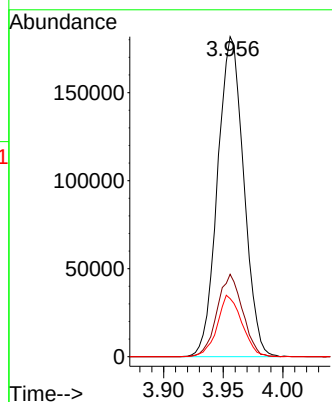
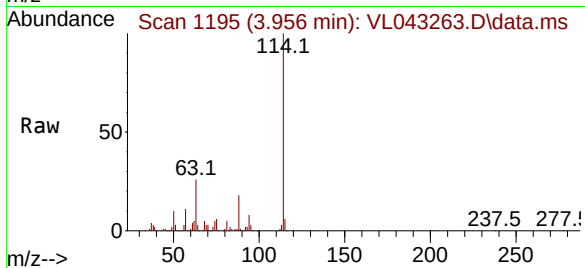
Tgt Ion:114 Resp: 277609

Ion Ratio Lower Upper

114 100

63 25.1 21.0 31.6

88 18.1 14.9 22.3



#34

2-Butanone

Concen: 0.492 ppbv

RT: 2.561 min Scan# 764

Delta R.T. 0.010 min

Lab File: VL043263.D

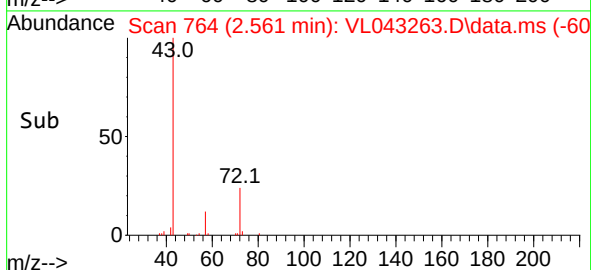
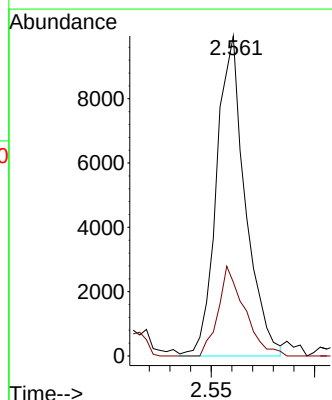
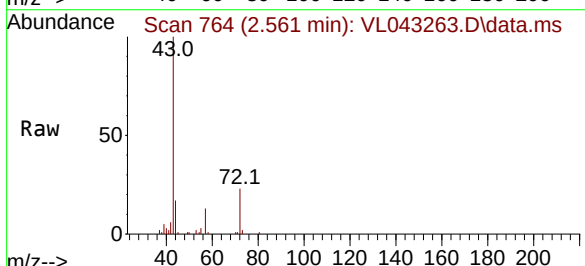
Acq: 20 Nov 2025 13:58

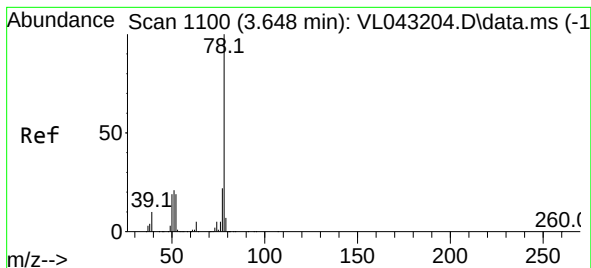
Tgt Ion: 43 Resp: 9638

Ion Ratio Lower Upper

43 100

72 25.8 18.1 27.1





#36

Benzene

Concen: 0.089 ppbv

RT: 3.655 min Scan# 1102

Delta R.T. 0.006 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

SG-3

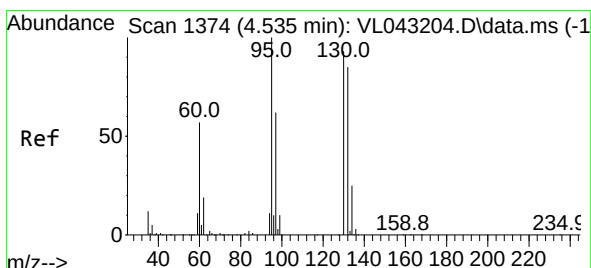
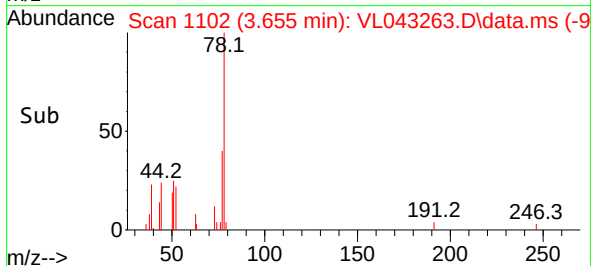
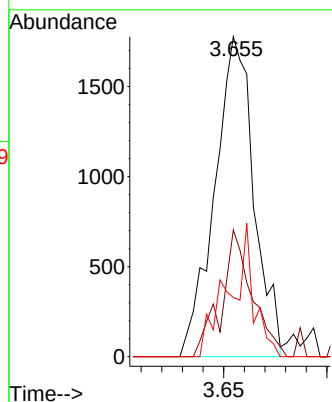
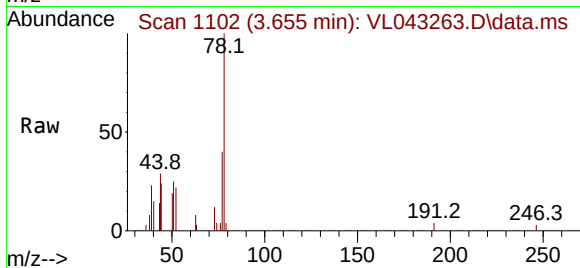
Tgt Ion: 78 Resp: 2355

Ion Ratio Lower Upper

78 100

77 39.6 17.5 26.3#

50 43.8 15.5 23.3#



#38

Trichloroethene

Concen: 0.031 ppbv

RT: 4.545 min Scan# 1377

Delta R.T. 0.010 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Tgt Ion: 130 Resp: 326

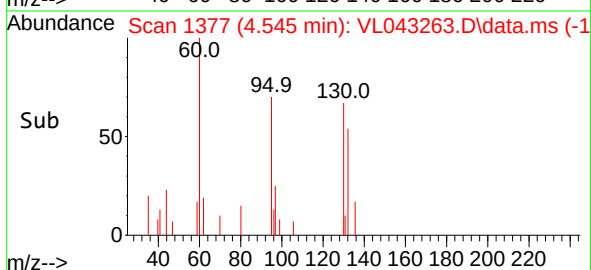
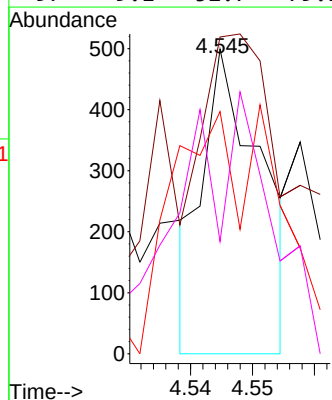
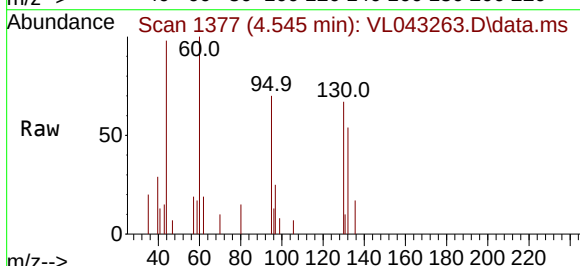
Ion Ratio Lower Upper

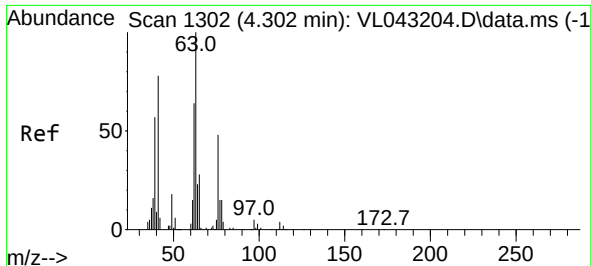
130 100

95 87.7 85.7 128.5

132 43.9 73.4 110.0#

97 9.1 52.7 79.1#





#39

1,2-Dichloropropane

Concen: 7.153 ppbv

RT: 3.956 min Scan# 1195

Delta R.T. -0.346 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

SG-3

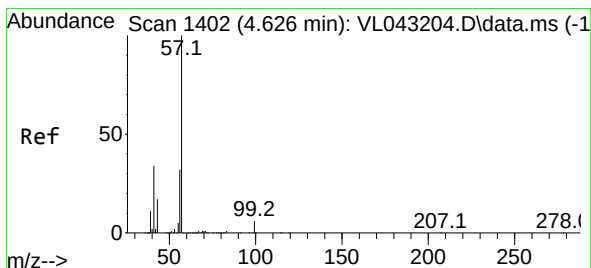
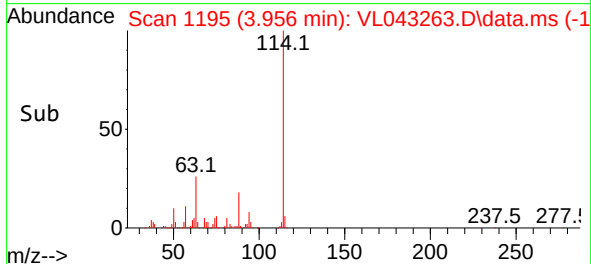
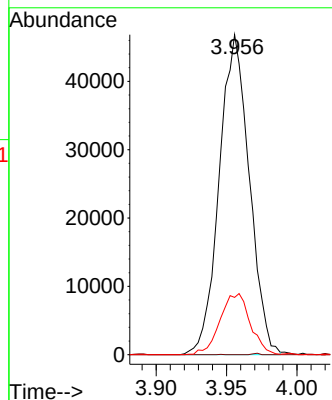
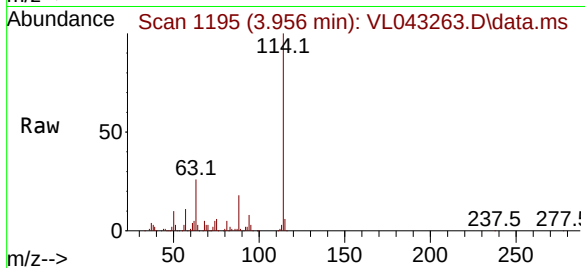
Tgt Ion: 63 Resp: 69599

Ion Ratio Lower Upper

63 100

41 0.0 62.6 93.8#

62 17.9 51.0 76.6#



#44

2,2,4-Trimethylpentane

Concen: 0.036 ppbv

RT: 4.635 min Scan# 1405

Delta R.T. 0.010 min

Lab File: VL043263.D

Acq: 20 Nov 2025 13:58

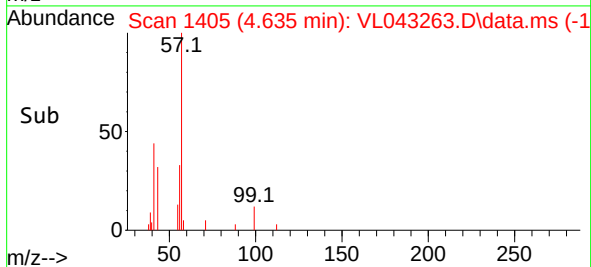
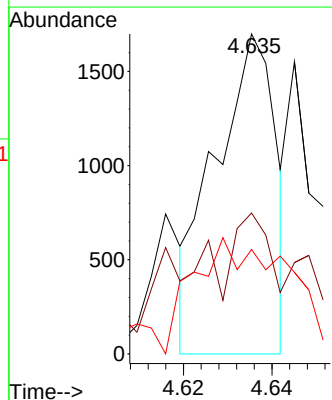
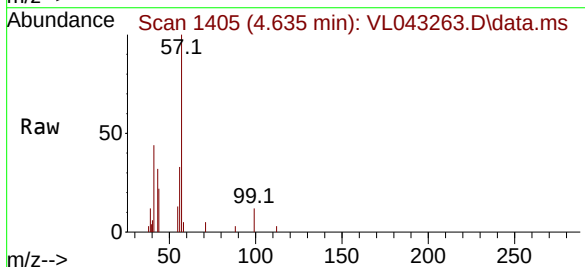
Tgt Ion: 57 Resp: 1624

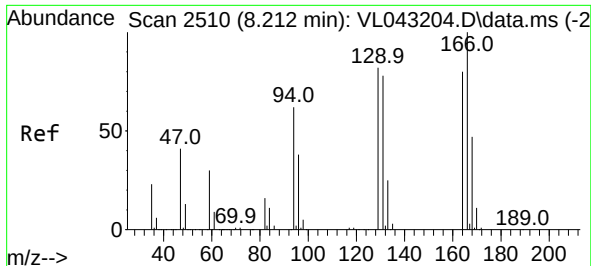
Ion Ratio Lower Upper

57 100

41 99.6 28.0 42.0#

56 79.6 25.6 38.4#

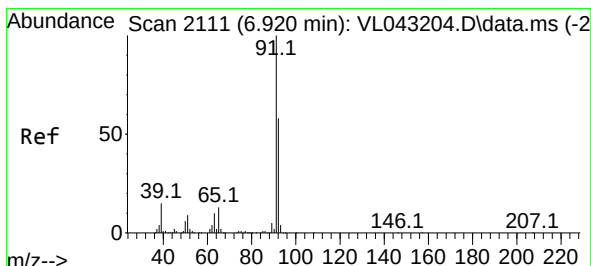
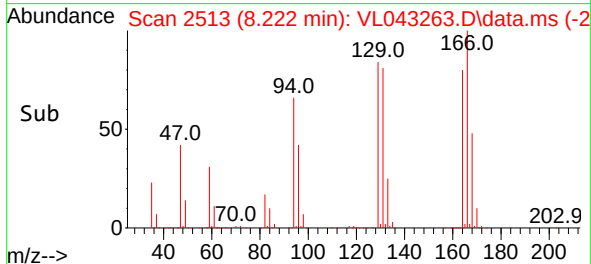
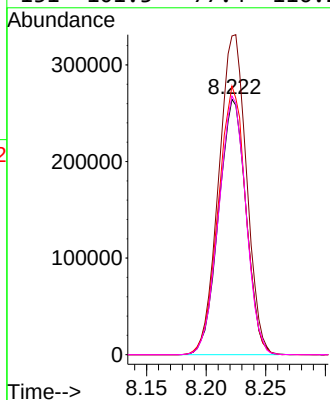
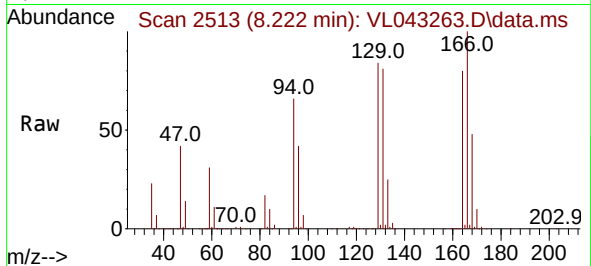




#52
Tetrachloroethene
Concen: 42.721 ppbv
RT: 8.222 min Scan# 2113
Delta R.T. 0.010 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

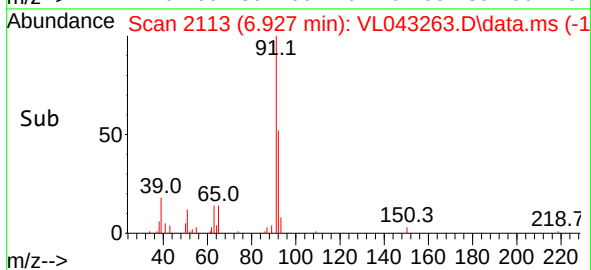
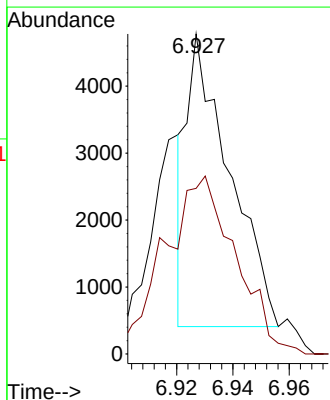
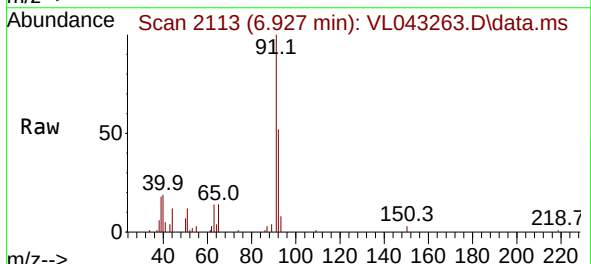
Instrument :
MSVOA_L
ClientSampleId :
SG-3

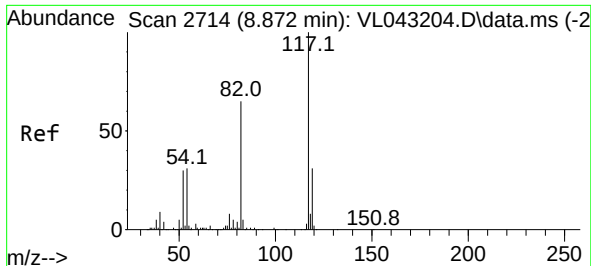
Tgt Ion:164 Resp: 422485
Ion Ratio Lower Upper
164 100
166 124.8 99.4 149.2
129 105.2 81.8 122.8
131 101.3 77.4 116.2



#53
Toluene
Concen: 0.146 ppbv
RT: 6.927 min Scan# 2113
Delta R.T. 0.006 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 91 Resp: 4588
Ion Ratio Lower Upper
91 100
92 103.2 47.4 71.0#

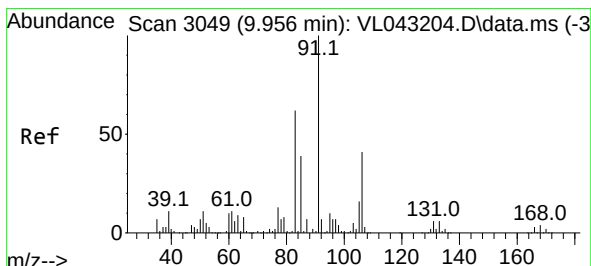
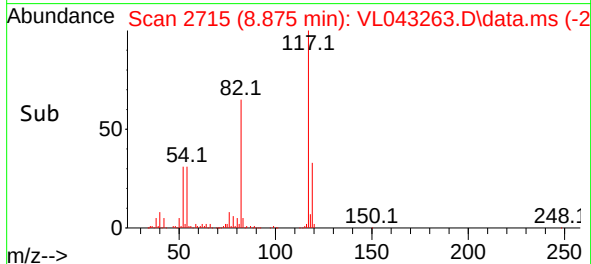
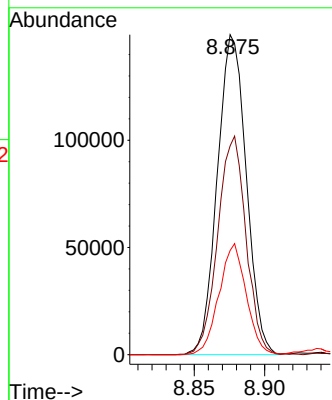
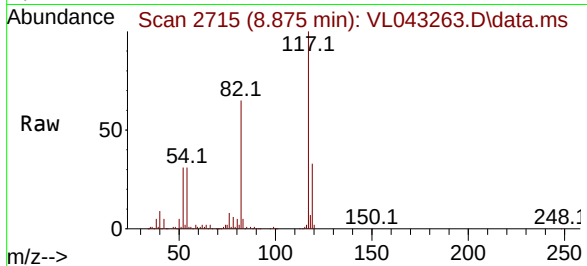




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.875 min Scan# 21
Delta R.T. 0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

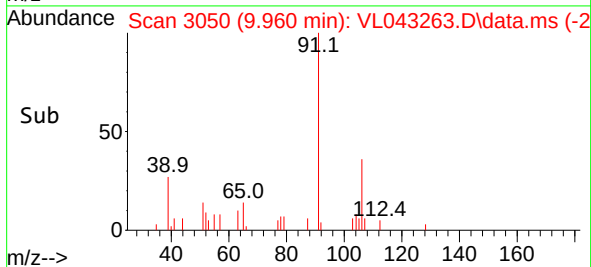
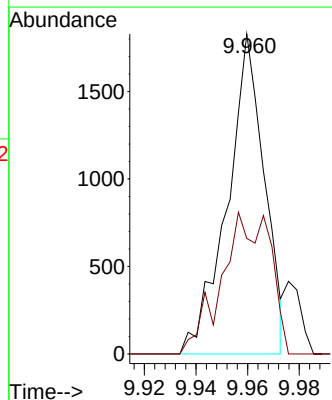
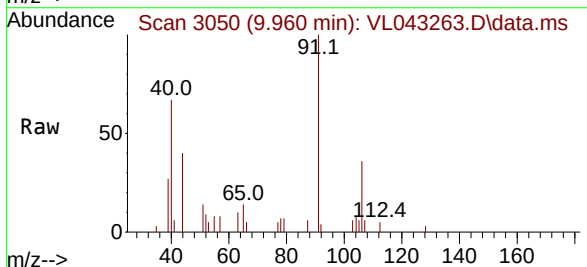
Instrument :
MSVOA_L
ClientSampleId :
SG-3

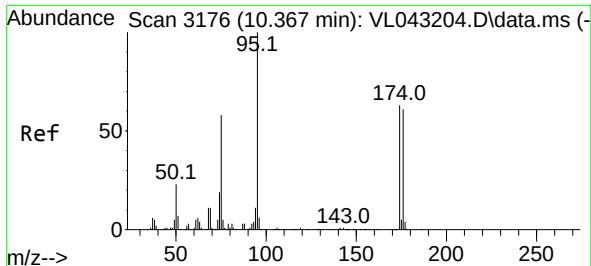
Tgt Ion:117 Resp: 213831
Ion Ratio Lower Upper
117 100
82 66.9 56.1 84.1
119 32.7 25.0 37.6



#60
o-Xylene
Concen: 0.055 ppbv
RT: 9.960 min Scan# 3050
Delta R.T. 0.003 min
Lab File: VL043263.D
Acq: 20 Nov 2025 13:58

Tgt Ion: 91 Resp: 1826
Ion Ratio Lower Upper
91 100
106 57.9 20.9 62.8

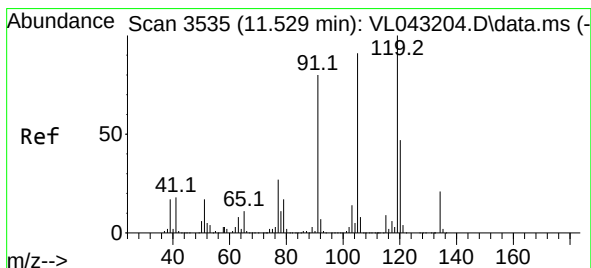
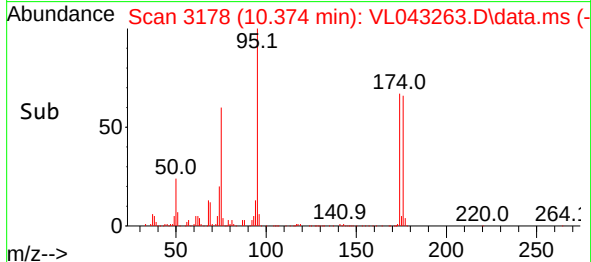
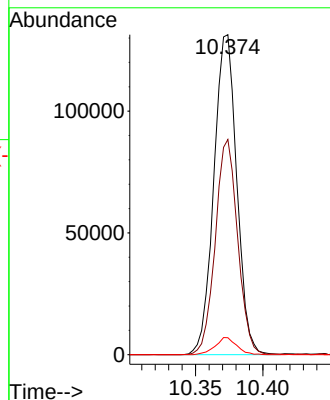
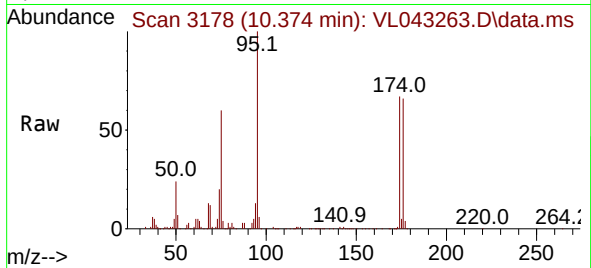




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.924 ppbv
 RT: 10.374 min Scan# 3176
 Delta R.T. 0.006 min
 Lab File: VL043263.D
 Acq: 20 Nov 2025 13:58

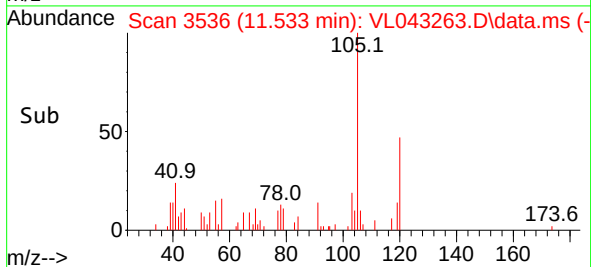
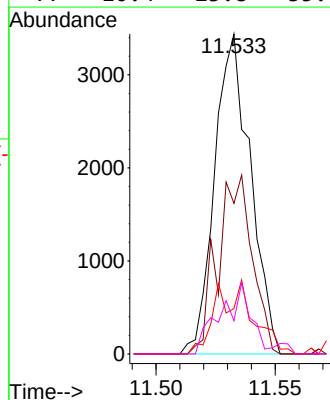
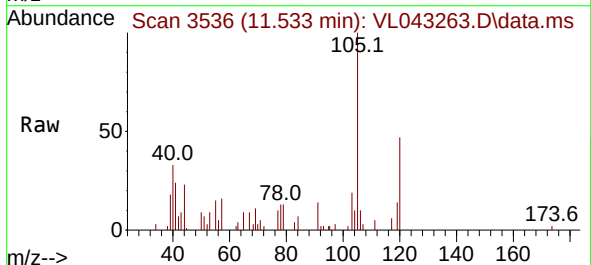
Instrument :
 MSVOA_L
 ClientSampleId :
 SG-3

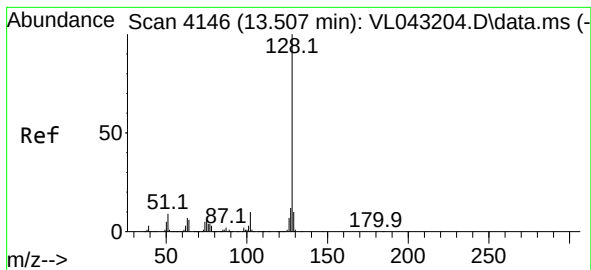
Tgt Ion: 95 Resp: 155552
 Ion Ratio Lower Upper
 95 100
 174 65.7 50.2 75.2
 175 5.0 4.1 6.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.097 ppbv
 RT: 11.533 min Scan# 3536
 Delta R.T. 0.003 min
 Lab File: VL043263.D
 Acq: 20 Nov 2025 13:58

Tgt Ion: 105 Resp: 3583
 Ion Ratio Lower Upper
 105 100
 120 47.1 41.7 62.5
 91 14.2 70.0 105.0#
 77 10.4 23.8 35.8#





#79

Naphthalene

Concen: 0.035 ppbv

RT: 13.517 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043263.D

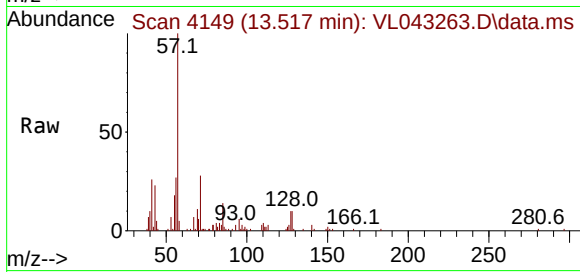
Acq: 20 Nov 2025 13:58

Instrument :

MSVOA_L

ClientSampleId :

SG-3



Tgt Ion:	128	Resp:	1145
Ion	Ratio	Lower	Upper
128	100		
127	78.6	9.9	14.9#
129	9.4	8.4	12.6

