

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL112025\
 Data File : VL043264.D
 Acq On : 20 Nov 2025 14:32
 Operator : SY/MD
 Sample : Q3655-04 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4

Quant Time: Nov 21 00:39:05 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

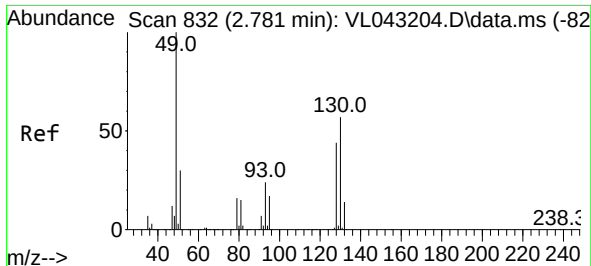
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.781	49	105685	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.949	114	273349	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	207697	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.367	95	149369	9.811	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	4384	0.294	ppbv	99
3) Chlorodifluoromethane	1.619	51	823	0.056	ppbv	93
4) Chloromethane	1.531	50	1762	0.316	ppbv #	85
9) Propene	1.486	41	1459	0.234	ppbv #	1
11) Trichlorofluoromethane	1.878	101	2322	0.161	ppbv #	82
12) 1,1,2-Trichlorotrifluo...	2.133	101	452	0.040	ppbv #	12
13) Ethanol	1.719	45	3212	1.467	ppbv #	38
15) Acetone	1.832	43	27467	1.871	ppbv	100
16) 1,3-Butadiene	1.619	39	2846	0.435	ppbv #	12
17) tert-Butyl alcohol	2.039	59	3663	0.190	ppbv	95
19) Isopropyl Alcohol	1.884	45	11013	1.327	ppbv #	59
20) Methylene Chloride	2.059	84	6390	0.751	ppbv #	88
23) Vinyl Acetate	2.447	43	3761	0.212	ppbv #	68
25) Ethyl Acetate	2.823	43	4702	0.148	ppbv #	80
26) Hexane	2.823	57	6555	0.472	ppbv #	45
27) Carbon Disulfide	2.146	76	818	0.058	ppbv #	1
34) 2-Butanone	2.554	43	10341	0.536	ppbv	97
36) Benzene	3.648	78	1135	0.043	ppbv #	82
39) 1,2-Dichloropropane	3.946	63	69417	7.245	ppbv #	23
52) Tetrachloroethene	8.215	164	31930	3.279	ppbv	94
53) Toluene	6.917	91	3610	0.116	ppbv #	61
58) Ethyl Benzene	9.348	91	1214	0.030	ppbv	95
59) m/p-Xylene	9.545	91	1217	0.038	ppbv #	31
60) o-Xylene	9.959	91	2067	0.065	ppbv	86
66) Benzyl Chloride	11.610	91	180	0.035	ppbv #	1
67) sec-Butylbenzene	11.765	105	2320	0.032	ppbv #	1
73) 1,3,5-Trimethylbenzene	11.196	105	1056	0.032	ppbv #	65
74) 1,2,4-Trimethylbenzene	11.529	105	3815	0.107	ppbv #	55
79) Naphthalene	13.507	128	1180	0.037	ppbv #	1

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

Quant Time: Nov 21 00:39:05 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
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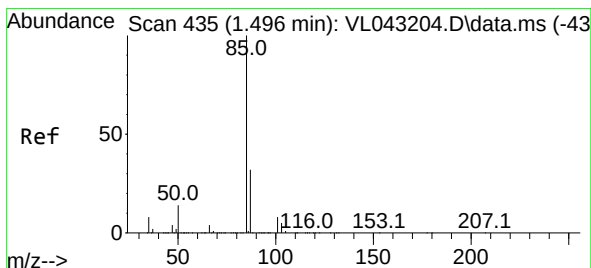
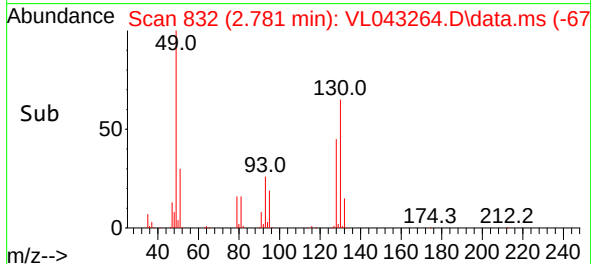
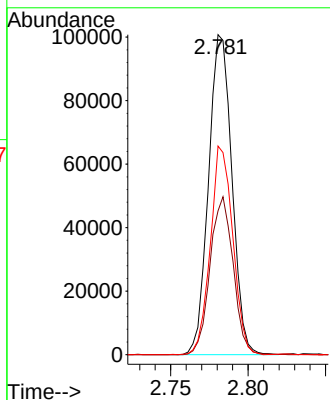
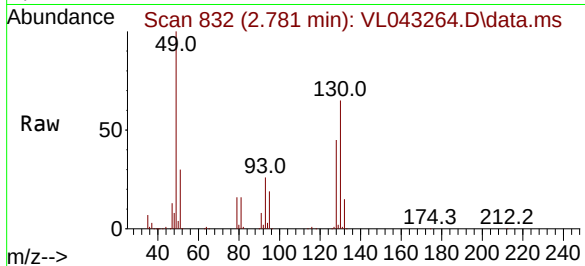




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.781 min Scan# 832
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

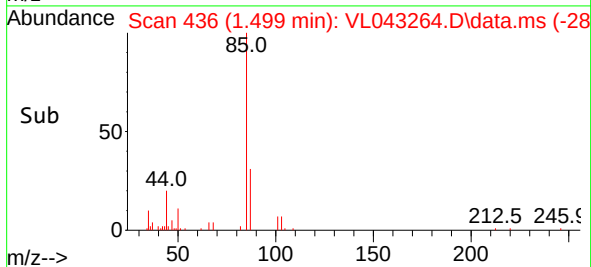
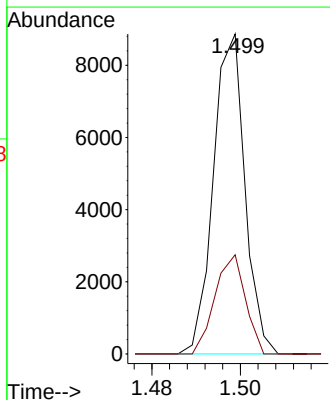
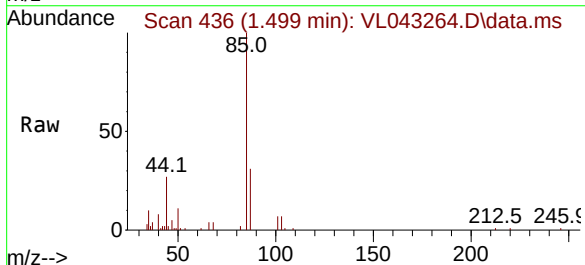
Instrument :
MSVOA_L
ClientSampleId :
SG-4

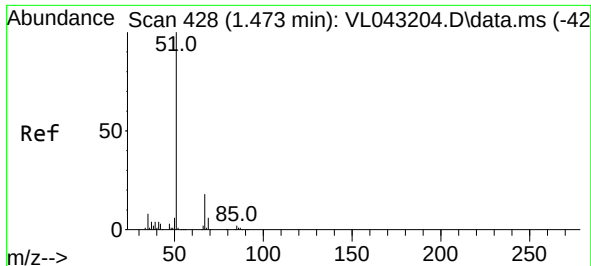
Tgt Ion: 49 Resp: 105685
Ion Ratio Lower Upper
49 100
128 48.8 23.0 69.0
130 62.7 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.294 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 85 Resp: 4384
Ion Ratio Lower Upper
85 100
87 31.0 25.4 38.2

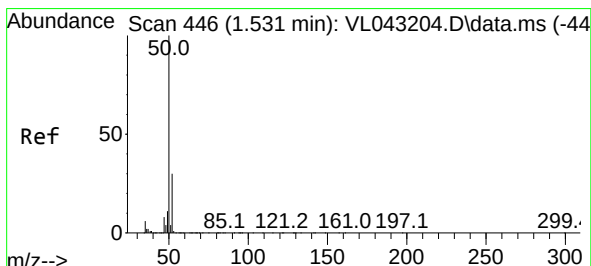
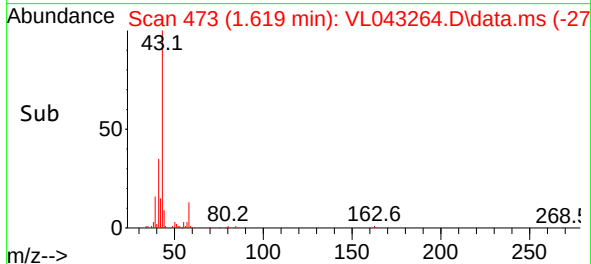
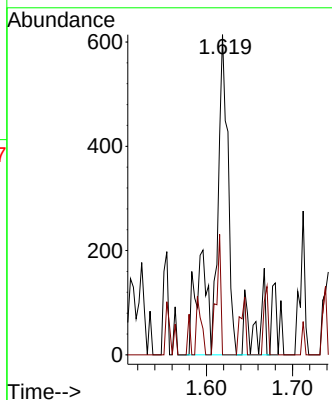
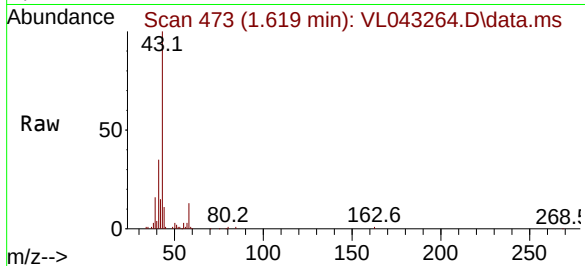




#3
Chlorodifluoromethane
Concen: 0.056 ppbv
RT: 1.619 min Scan# 41
Delta R.T. 0.145 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

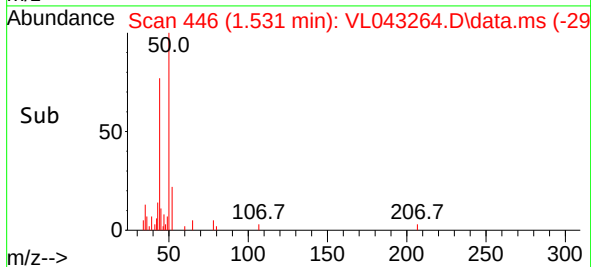
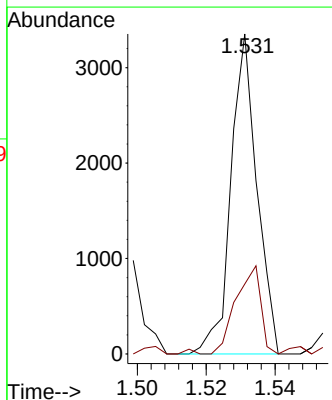
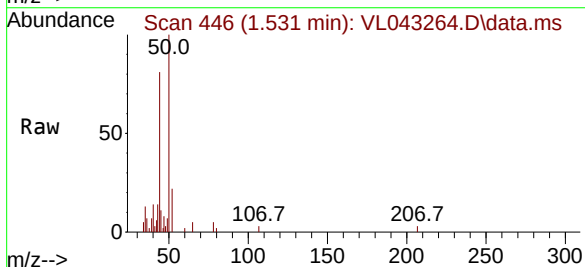
Instrument :
MSVOA_L
ClientSampleId :
SG-4

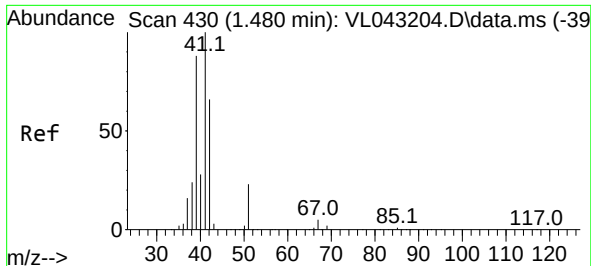
Tgt Ion: 51 Resp: 823
Ion Ratio Lower Upper
51 100
67 15.6 14.9 22.3



#4
Chloromethane
Concen: 0.316 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 50 Resp: 1762
Ion Ratio Lower Upper
50 100
52 21.9 24.1 36.1#





#9

Propene

Concen: 0.234 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

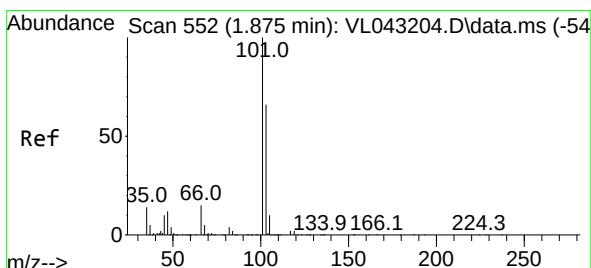
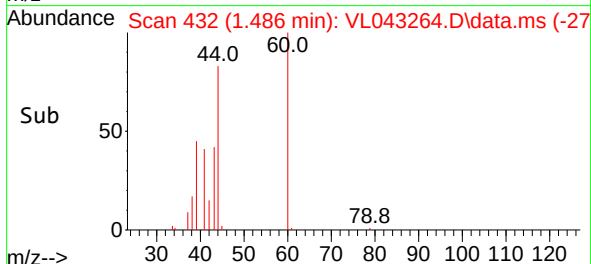
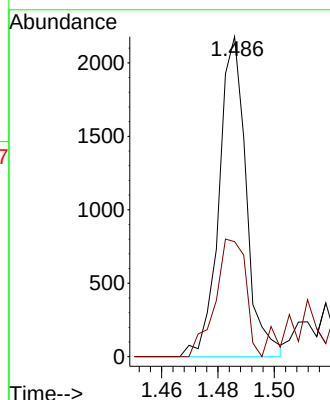
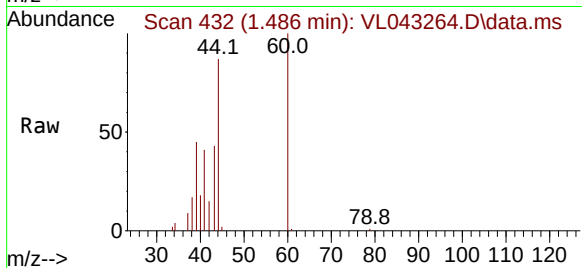
SG-4

Tgt Ion: 41 Resp: 1459

Ion Ratio Lower Upper

41 100

42 57.7 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.161 ppbv

RT: 1.878 min Scan# 553

Delta R.T. 0.003 min

Lab File: VL043264.D

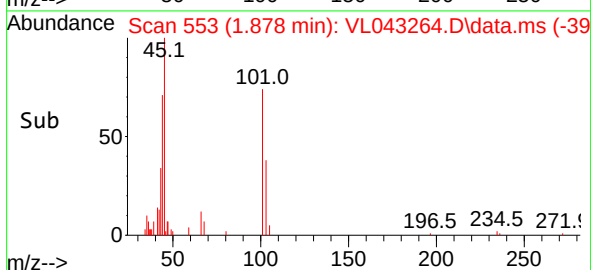
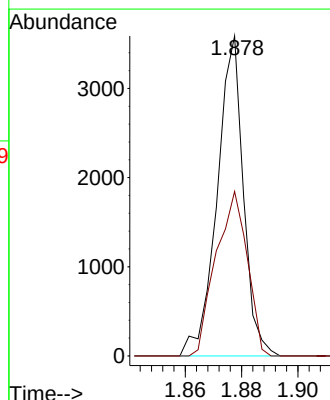
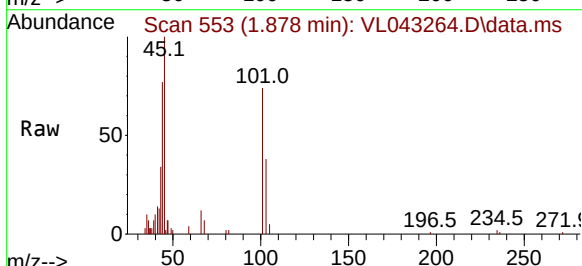
Acq: 20 Nov 2025 14:32

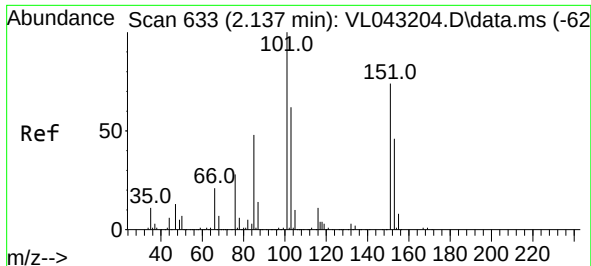
Tgt Ion:101 Resp: 2322

Ion Ratio Lower Upper

101 100

103 51.4 52.6 79.0#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.040 ppbv

RT: 2.133 min Scan# 61

Delta R.T. -0.003 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

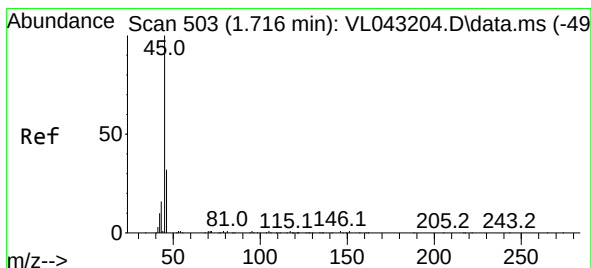
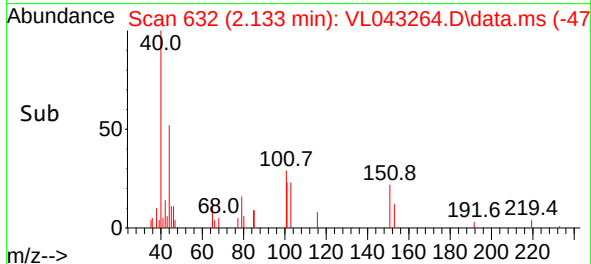
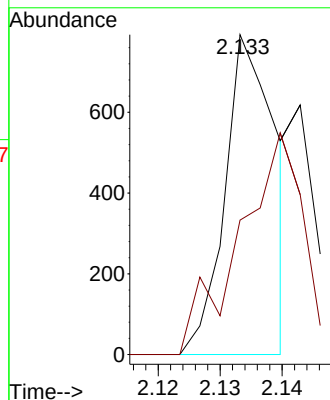
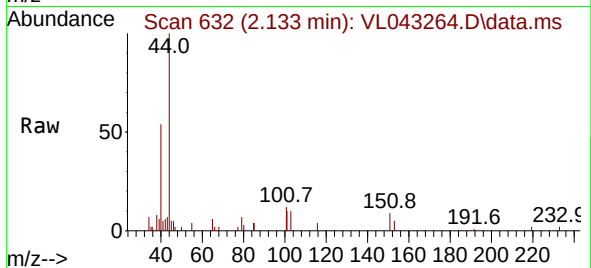
SG-4

Tgt Ion:101 Resp: 452

Ion Ratio Lower Upper

101 100

151 0.0 59.2 88.8#



#13

Ethanol

Concen: 1.467 ppbv

RT: 1.719 min Scan# 504

Delta R.T. 0.003 min

Lab File: VL043264.D

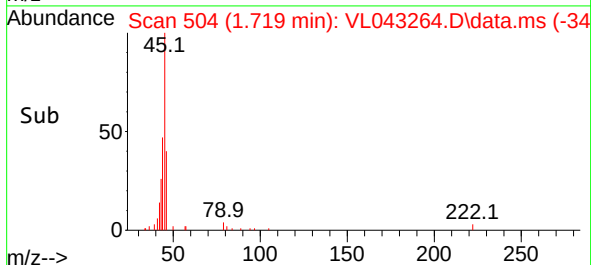
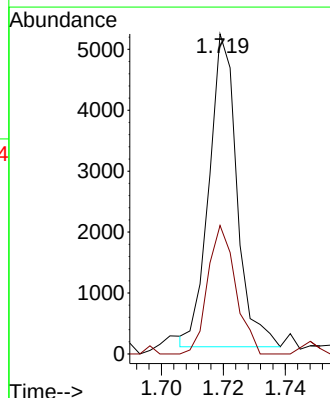
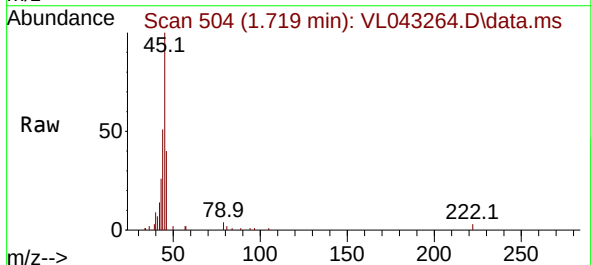
Acq: 20 Nov 2025 14:32

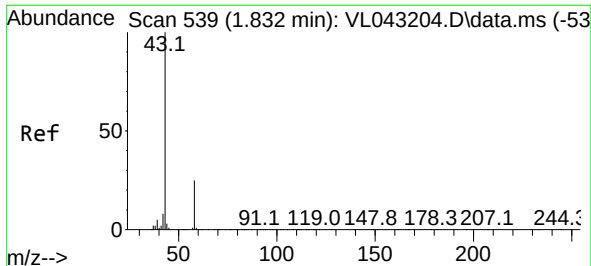
Tgt Ion: 45 Resp: 3212

Ion Ratio Lower Upper

45 100

46 0.0 15.0 59.8#

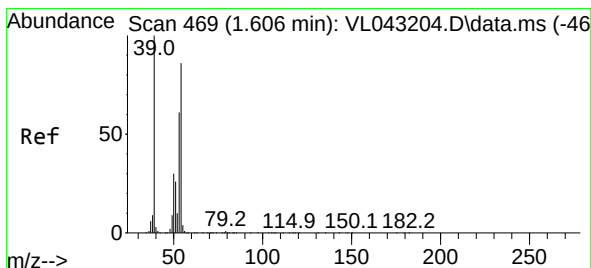
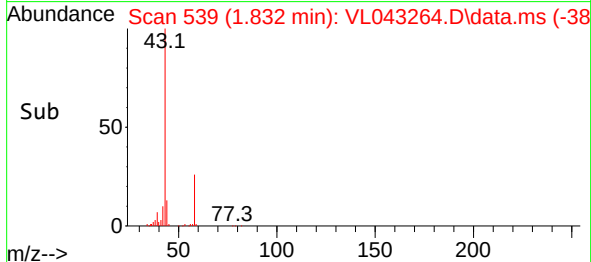
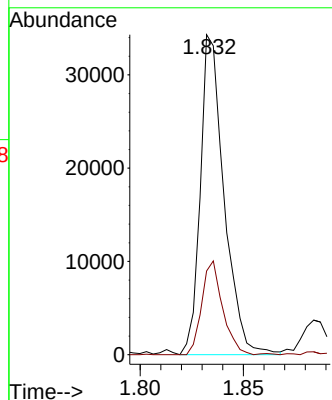
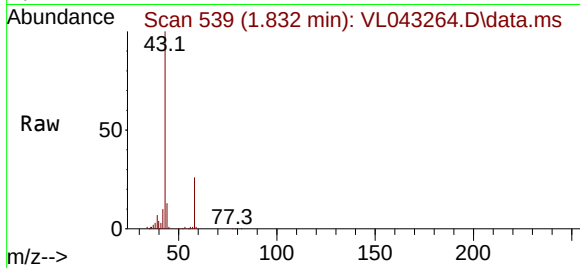




#15
Acetone
Concen: 1.871 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

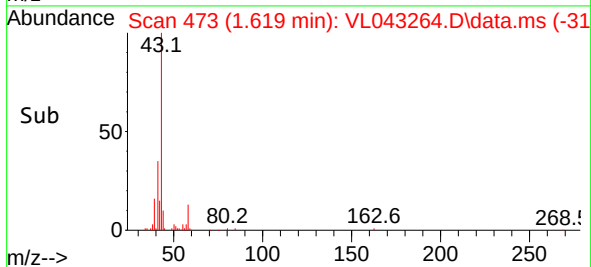
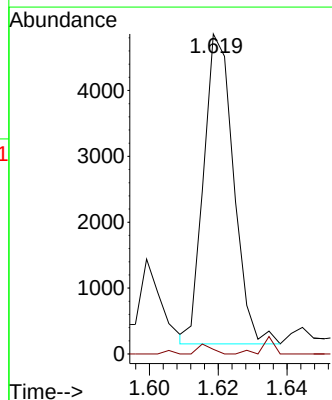
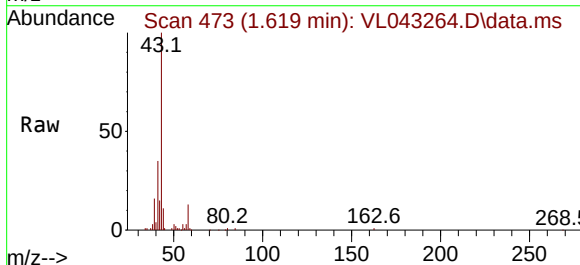
Instrument :
MSVOA_L
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SG-4

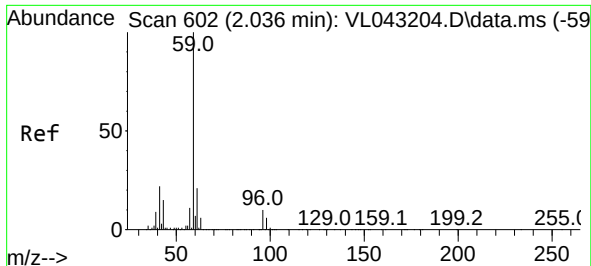
Tgt Ion: 43 Resp: 27467
Ion Ratio Lower Upper
43 100
58 25.8 20.7 31.1



#16
1,3-Butadiene
Concen: 0.435 ppbv
RT: 1.619 min Scan# 473
Delta R.T. 0.013 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 39 Resp: 2846
Ion Ratio Lower Upper
39 100
54 0.0 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.190 ppbv

RT: 2.039 min Scan# 602

Delta R.T. 0.003 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

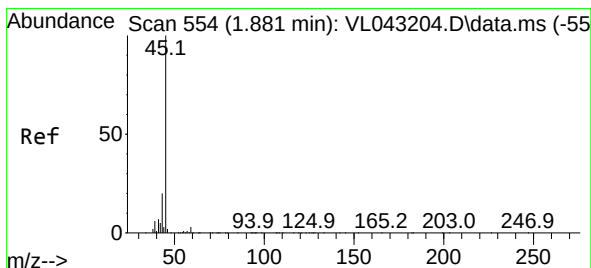
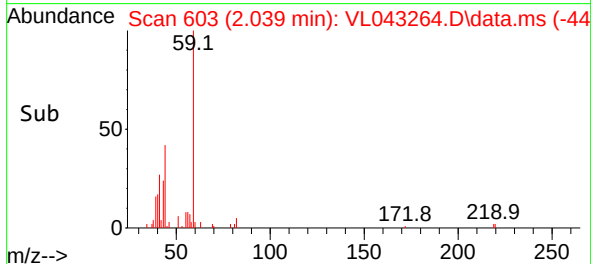
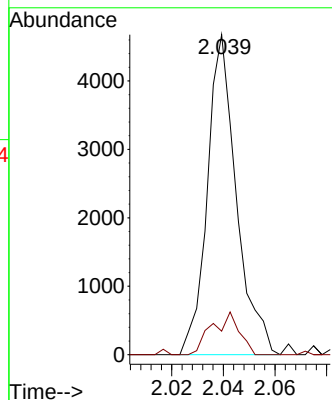
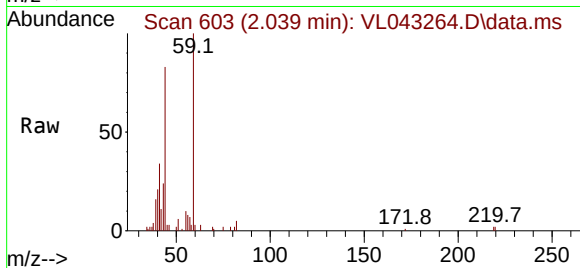
SG-4

Tgt Ion: 59 Resp: 3663

Ion Ratio Lower Upper

59 100

57 13.0 9.0 13.4



#19

Isopropyl Alcohol

Concen: 1.327 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.003 min

Lab File: VL043264.D

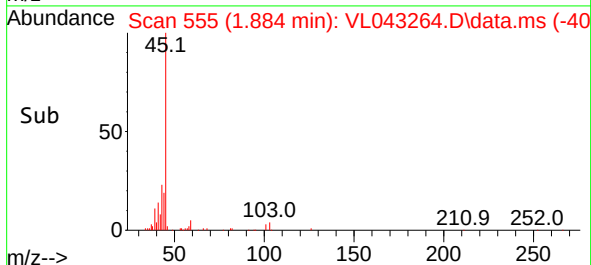
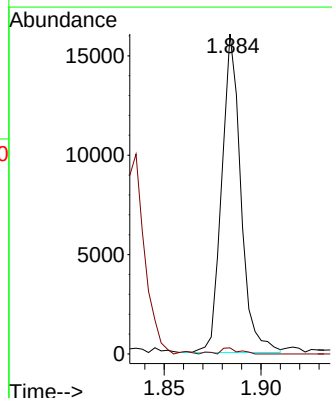
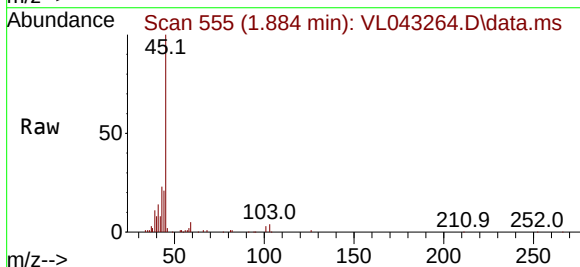
Acq: 20 Nov 2025 14:32

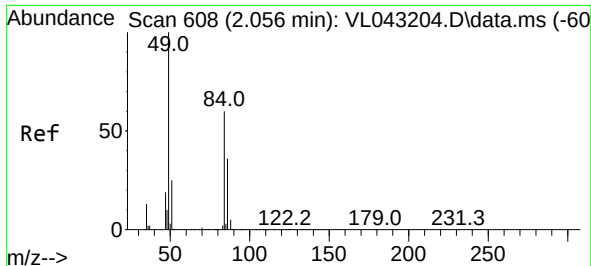
Tgt Ion: 45 Resp: 11013

Ion Ratio Lower Upper

45 100

58 64.3 31.3 46.9#



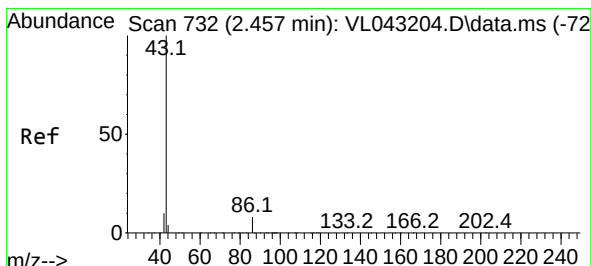
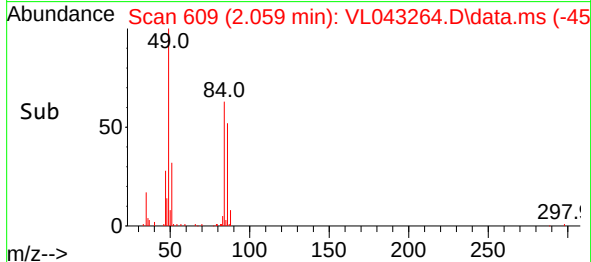
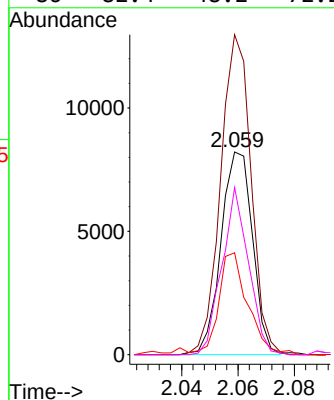
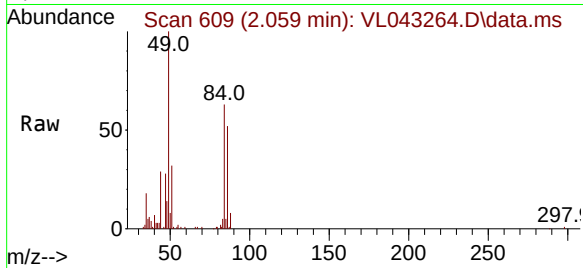


#20
Methylene Chloride
Concen: 0.751 ppbv
RT: 2.059 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Instrument :
MSVOA_L
ClientSampleId :
SG-4

Tgt Ion: 84 Resp: 6390

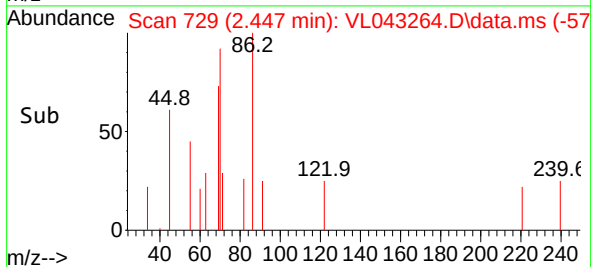
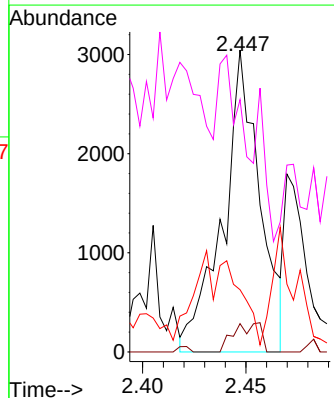
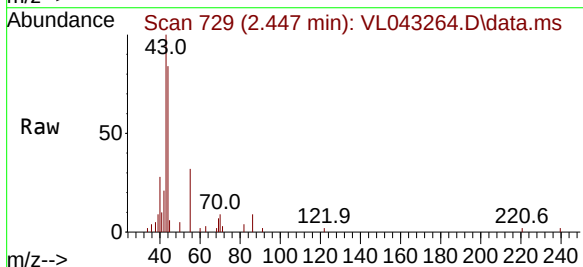
Ion	Ratio	Lower	Upper
84	100		
49	157.8	132.9	199.3
51	48.8	34.8	52.2
86	82.4	48.2	72.2#

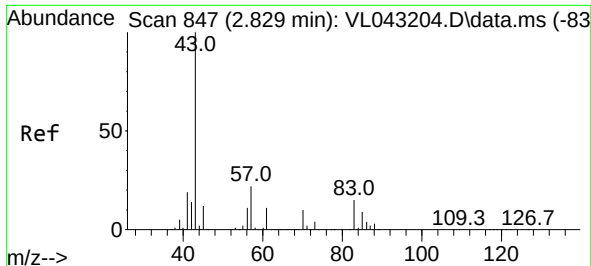


#23
Vinyl Acetate
Concen: 0.212 ppbv
RT: 2.447 min Scan# 729
Delta R.T. -0.010 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 43 Resp: 3761

Ion	Ratio	Lower	Upper
43	100		
86	9.8	6.2	9.2#
42	9.2	8.0	12.0
44	48.6	4.0	6.0#

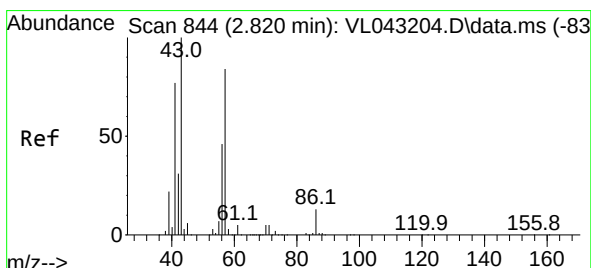
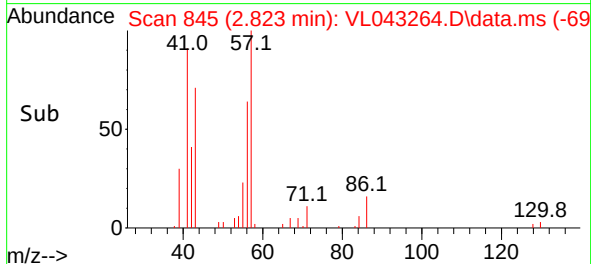
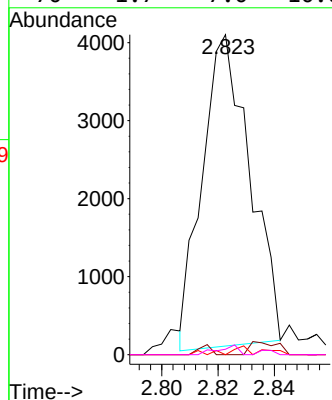
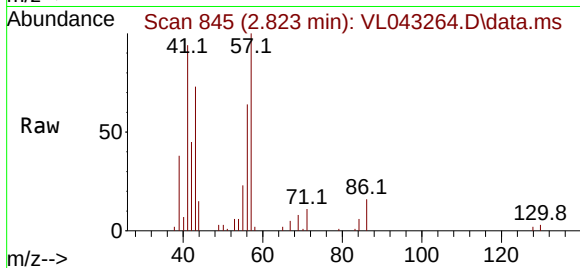




#25
Ethyl Acetate
Concen: 0.148 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.007 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

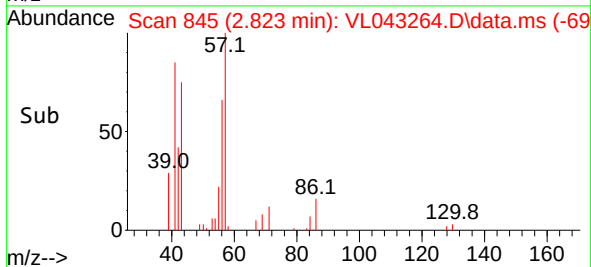
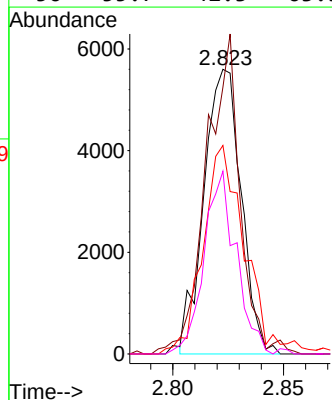
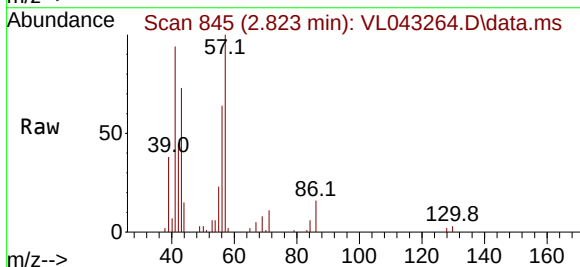
Instrument :
MSVOA_1
ClientSampleId :
SG-4

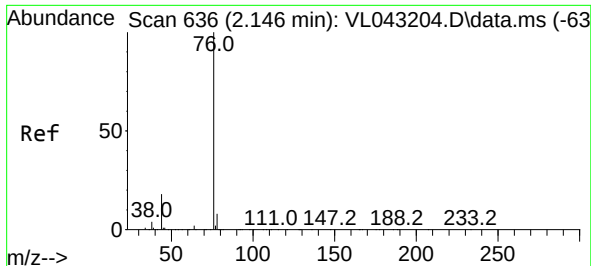
Tgt Ion:	43	Resp:	4702
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.1	12.1#
61	1.2	7.0	10.4#
70	1.7	7.0	10.6#



#26
Hexane
Concen: 0.472 ppbv
RT: 2.823 min Scan# 845
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion:	57	Resp:	6555
Ion	Ratio	Lower	Upper
57	100		
41	101.8	74.6	111.8
43	82.6	179.0	268.4#
56	55.7	42.3	63.5





#27

Carbon Disulfide

Concen: 0.058 ppbv

RT: 2.146 min Scan# 61

Delta R.T. -0.000 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

SG-4

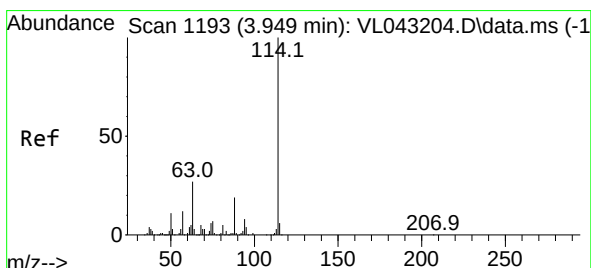
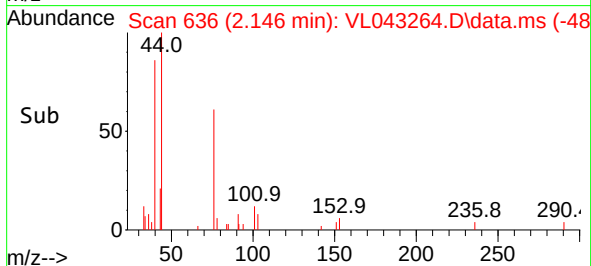
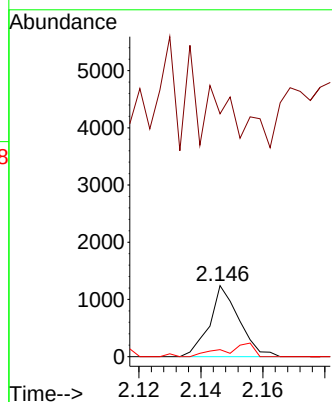
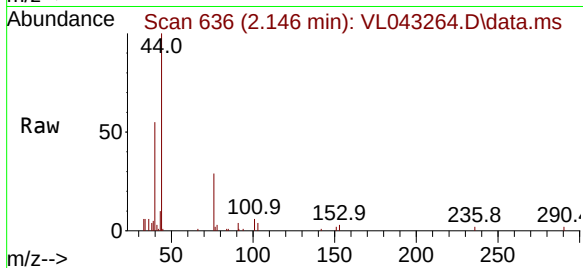
Tgt Ion: 76 Resp: 818

Ion Ratio Lower Upper

76 100

44 809.0 16.1 24.1#

78 19.7 9.6 14.4#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.949 min Scan# 1193

Delta R.T. -0.000 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

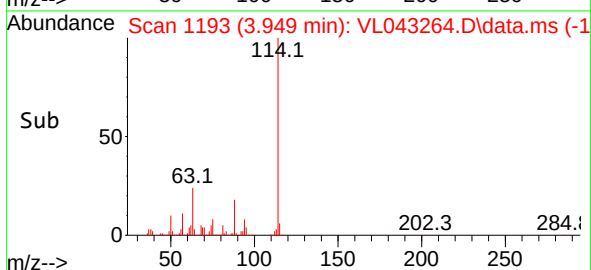
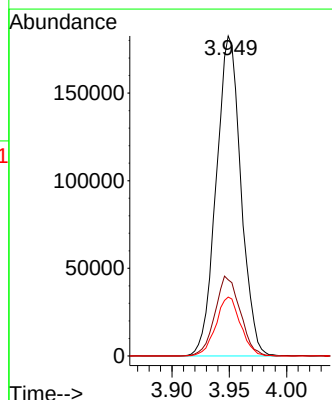
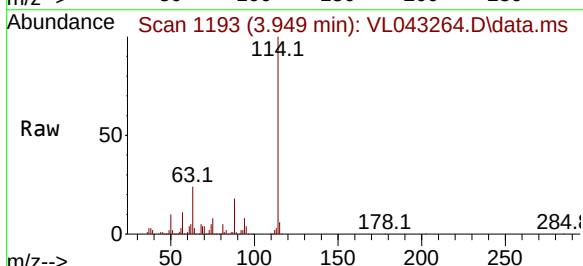
Tgt Ion: 114 Resp: 273349

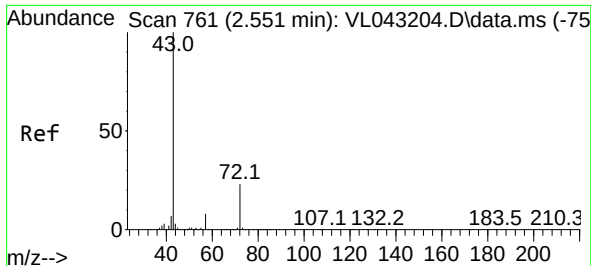
Ion Ratio Lower Upper

114 100

63 25.4 21.0 31.6

88 18.4 14.9 22.3

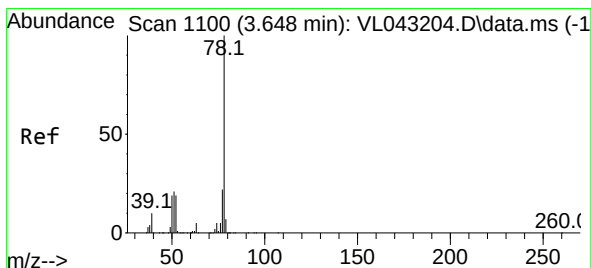
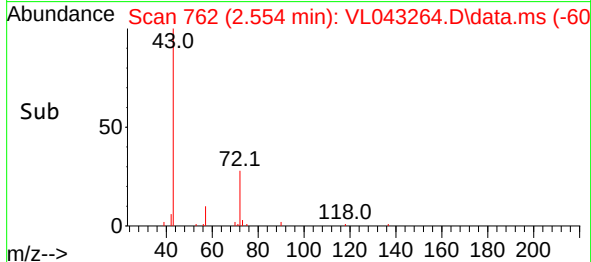
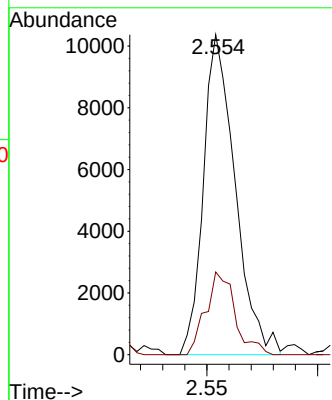
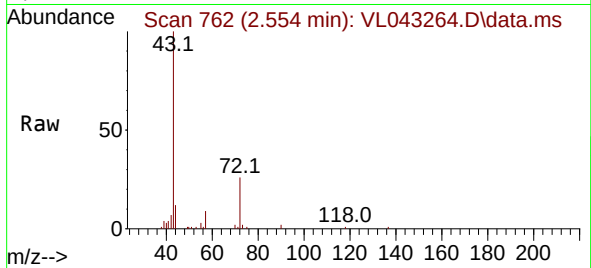




#34
2-Butanone
Concen: 0.536 ppbv
RT: 2.554 min Scan# 762
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

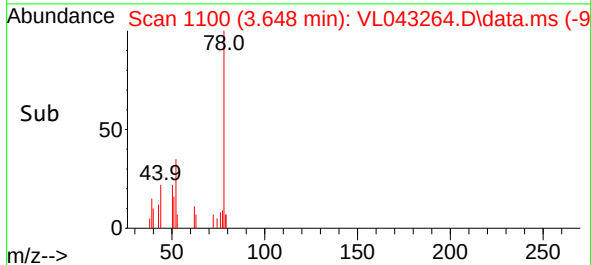
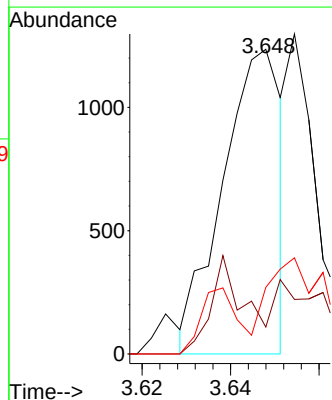
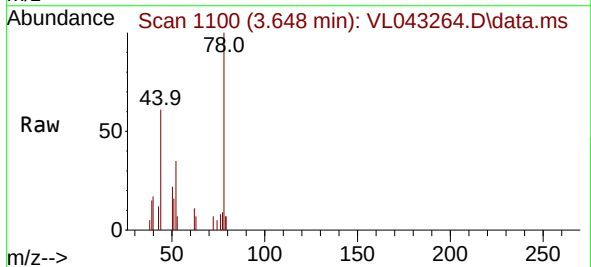
Instrument :
MSVOA_L
ClientSampleId :
SG-4

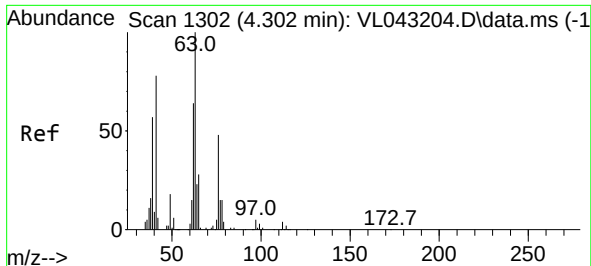
Tgt Ion: 43 Resp: 10341
Ion Ratio Lower Upper
43 100
72 23.8 18.1 27.1



#36
Benzene
Concen: 0.043 ppbv
RT: 3.648 min Scan# 1100
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 78 Resp: 1135
Ion Ratio Lower Upper
78 100
77 9.6 17.5 26.3#
50 23.7 15.5 23.3#





#39

1,2-Dichloropropane

Concen: 7.245 ppbv

RT: 3.946 min Scan# 1192

Delta R.T. -0.356 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

SG-4

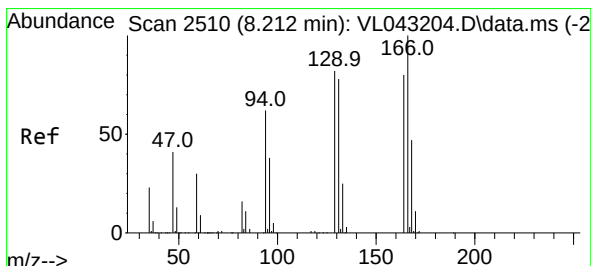
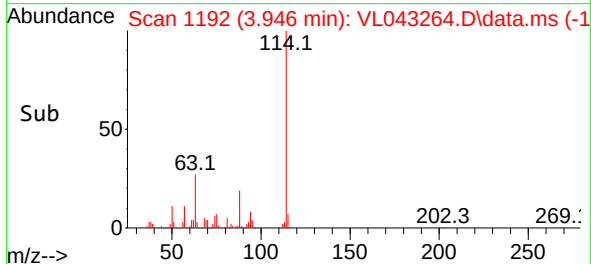
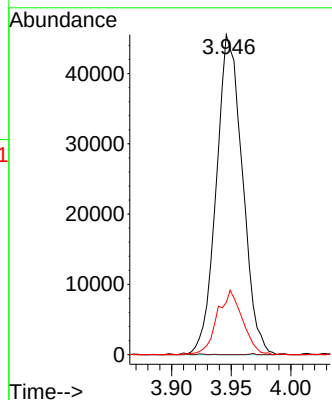
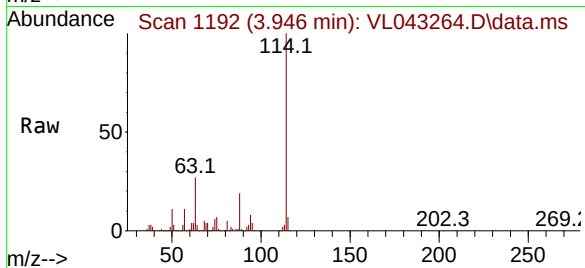
Tgt Ion: 63 Resp: 69417

Ion Ratio Lower Upper

63 100

41 0.0 62.6 93.8#

62 16.3 51.0 76.6#



#52

Tetrachloroethene

Concen: 3.279 ppbv

RT: 8.215 min Scan# 2511

Delta R.T. 0.003 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Tgt Ion: 164 Resp: 31930

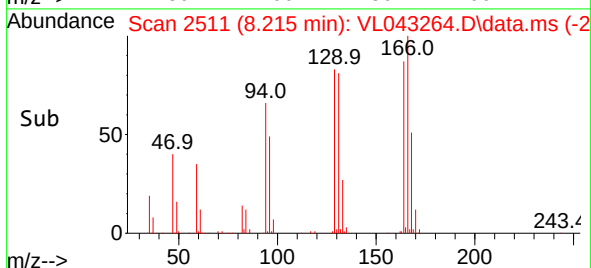
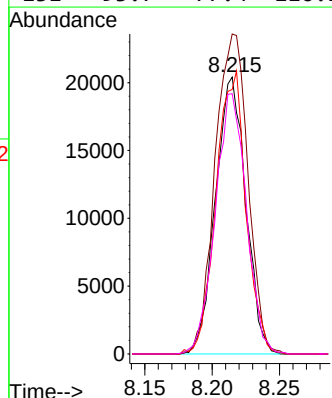
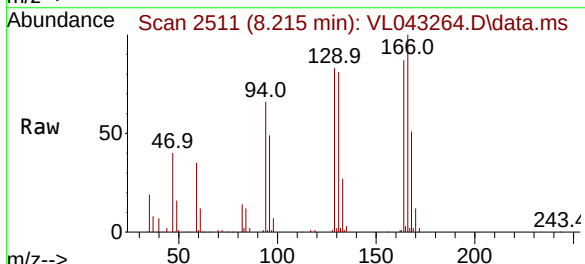
Ion Ratio Lower Upper

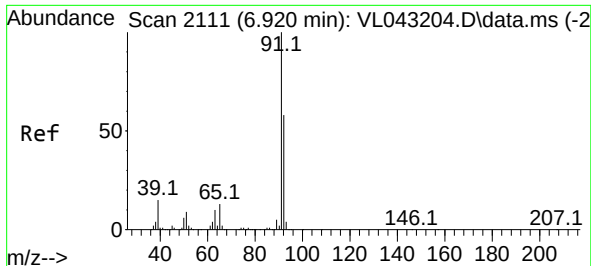
164 100

166 115.6 99.4 149.2

129 95.5 81.8 122.8

131 93.7 77.4 116.2

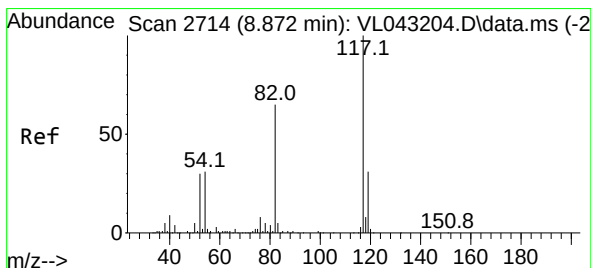
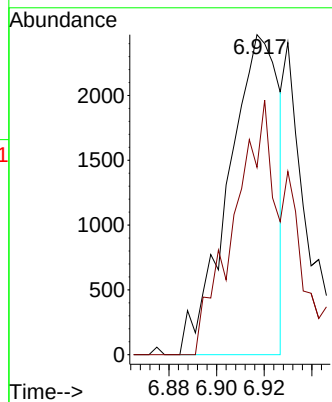
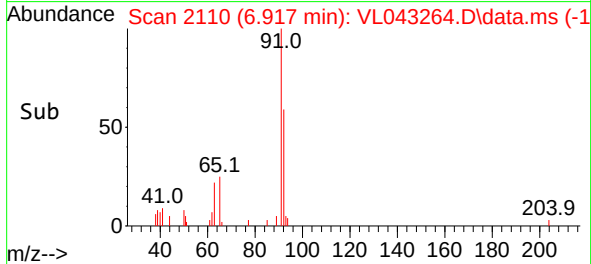
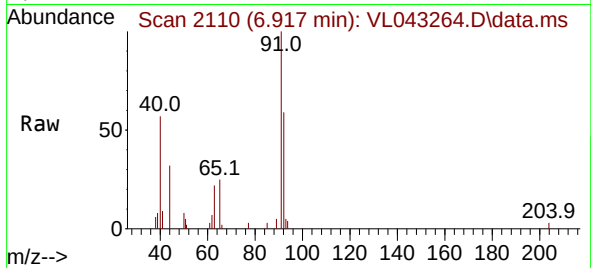




#53
Toluene
Concen: 0.116 ppbv
RT: 6.917 min Scan# 2111
Delta R.T. -0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

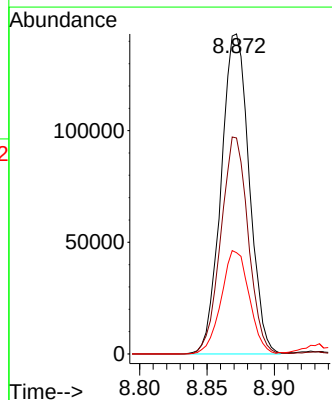
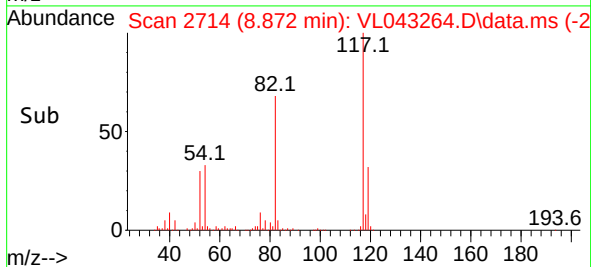
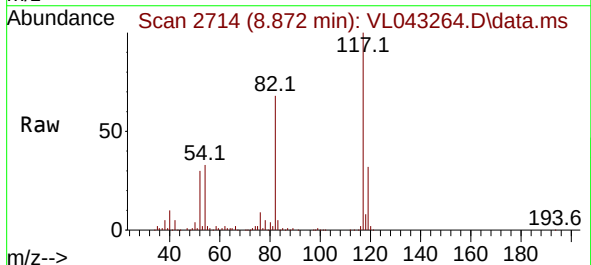
Instrument :
MSVOA_L
ClientSampleId :
SG-4

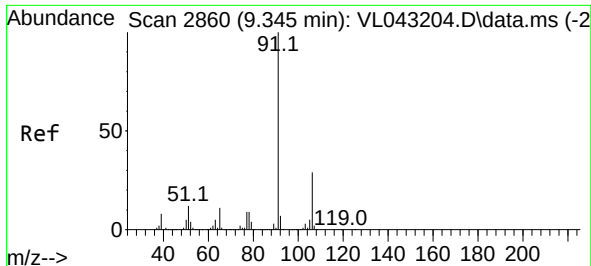
Tgt Ion: 91 Resp: 3610
Ion Ratio Lower Upper
91 100
92 88.2 47.4 71.0#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 2714
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 117 Resp: 207697
Ion Ratio Lower Upper
117 100
82 66.2 56.1 84.1
119 32.3 25.0 37.6

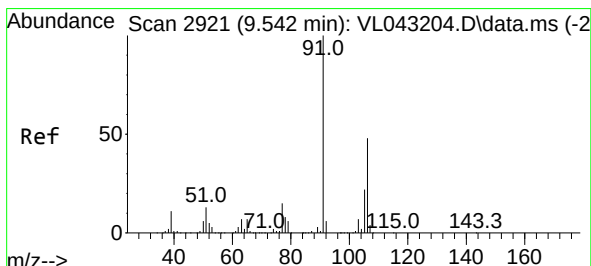
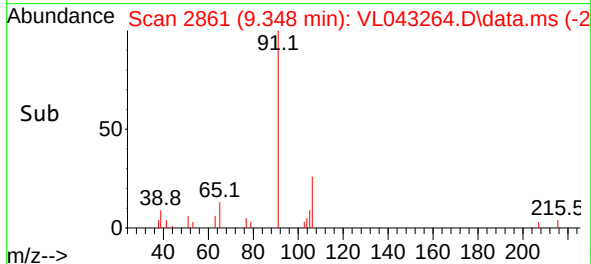
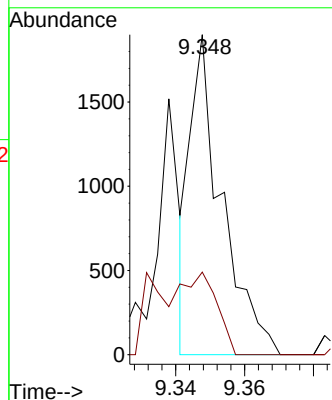
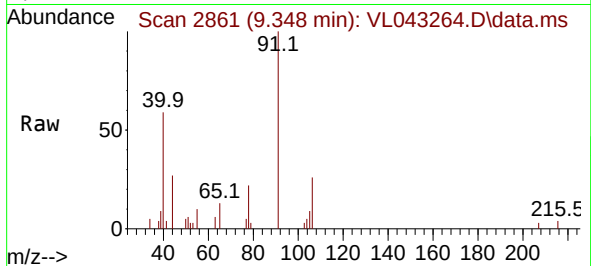




#58
Ethyl Benzene
Concen: 0.030 ppbv
RT: 9.348 min Scan# 21
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

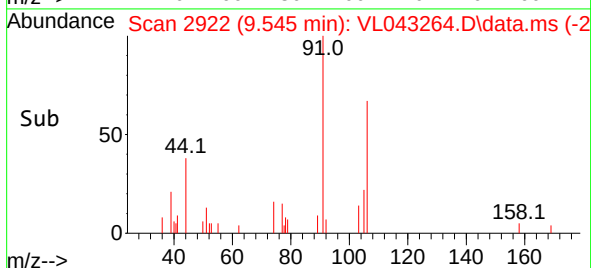
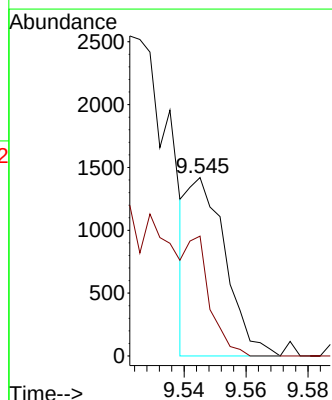
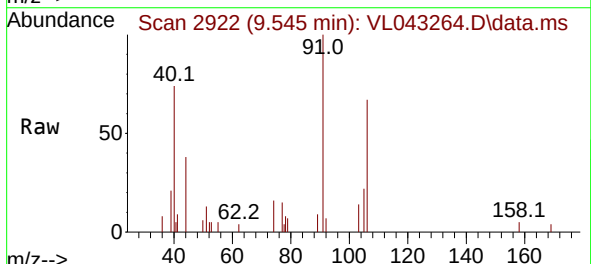
Instrument :
MSVOA_L
ClientSampleId :
SG-4

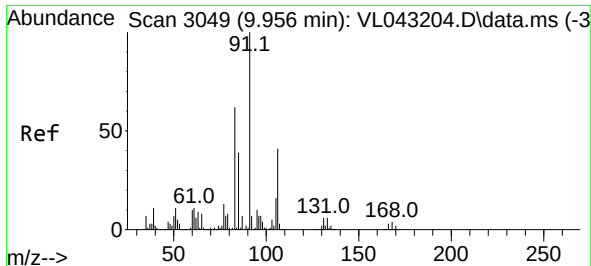
Tgt Ion: 91 Resp: 1214
Ion Ratio Lower Upper
91 100
106 25.8 22.8 34.2



#59
m/p-Xylene
Concen: 0.038 ppbv
RT: 9.545 min Scan# 2922
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 91 Resp: 1217
Ion Ratio Lower Upper
91 100
106 0.0 36.1 54.1#

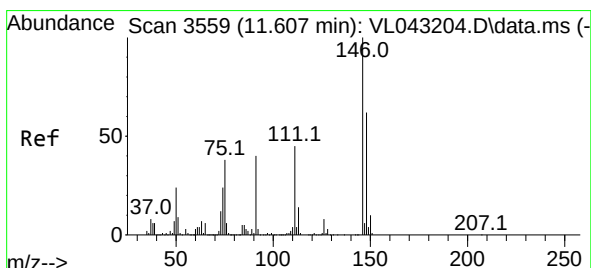
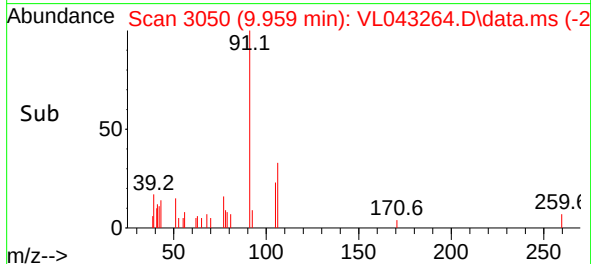
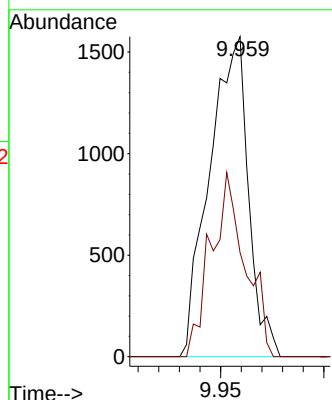
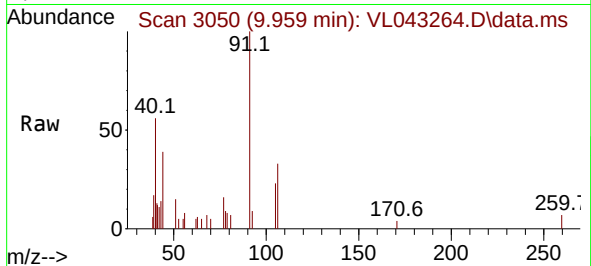




#60
o-Xylene
Concen: 0.065 ppbv
RT: 9.959 min Scan# 3049
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

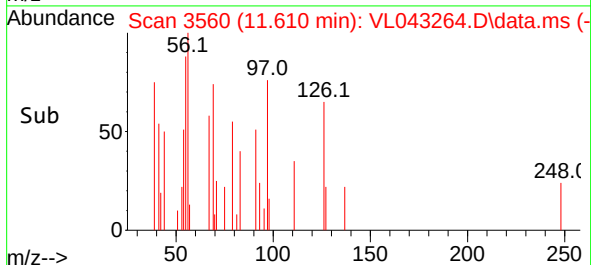
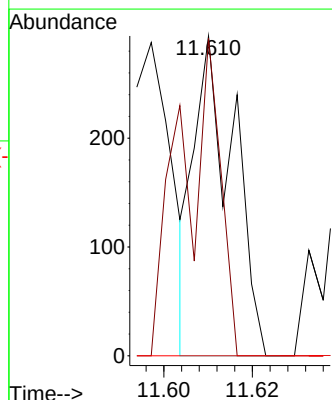
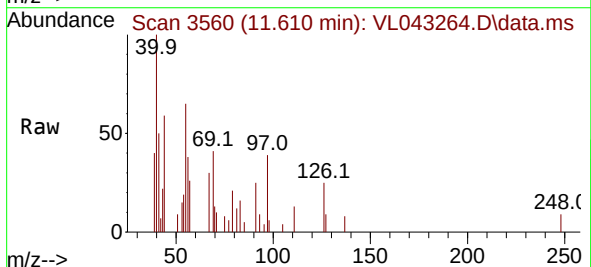
Instrument :
MSVOA_1
ClientSampleId :
SG-4

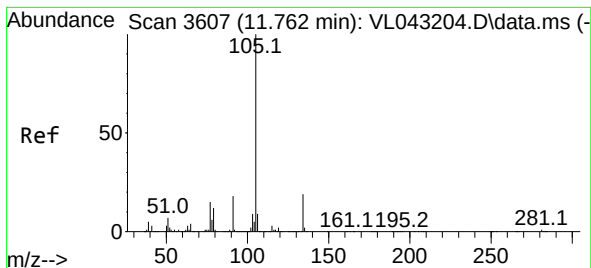
Tgt Ion: 91 Resp: 2067
Ion Ratio Lower Upper
91 100
106 50.6 20.9 62.8



#66
Benzyl Chloride
Concen: 0.035 ppbv
RT: 11.610 min Scan# 3560
Delta R.T. 0.003 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Tgt Ion: 91 Resp: 180
Ion Ratio Lower Upper
91 100
126 99.4 14.4 21.6#
128 0.0 4.6 6.8#





#67

sec-Butylbenzene

Concen: 0.032 ppbv

RT: 11.765 min Scan# 3

Delta R.T. 0.003 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

Instrument :

MSVOA_L

ClientSampleId :

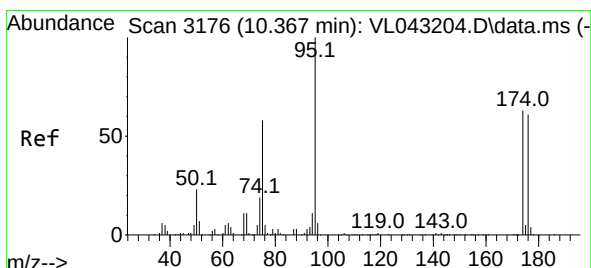
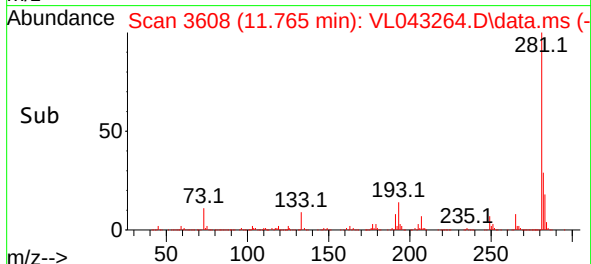
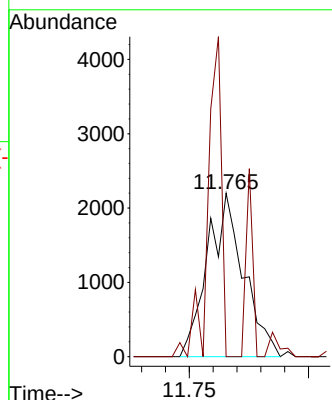
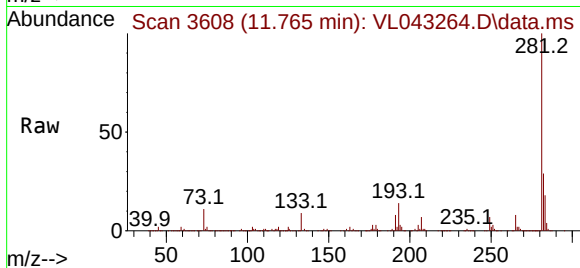
SG-4

Tgt Ion:105 Resp: 2320

Ion Ratio Lower Upper

105 100

134 98.8 15.0 22.6#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.811 ppbv

RT: 10.367 min Scan# 3176

Delta R.T. -0.000 min

Lab File: VL043264.D

Acq: 20 Nov 2025 14:32

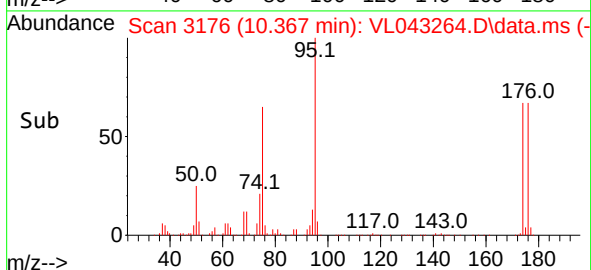
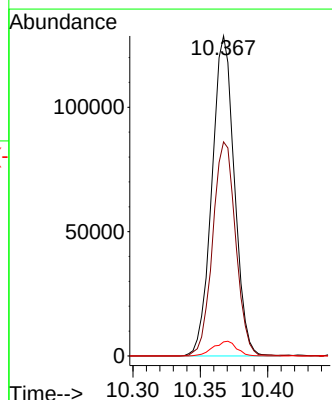
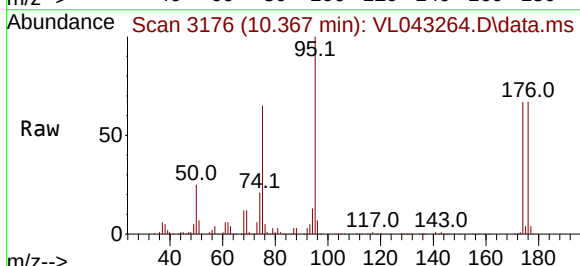
Tgt Ion: 95 Resp: 149369

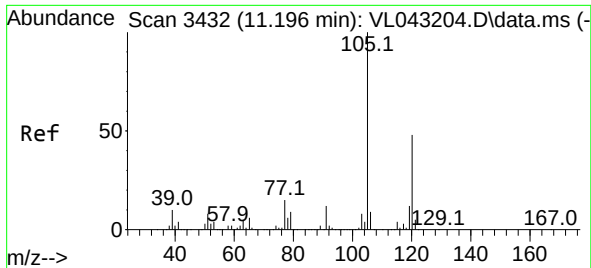
Ion Ratio Lower Upper

95 100

174 68.6 50.2 75.2

175 4.8 4.1 6.1

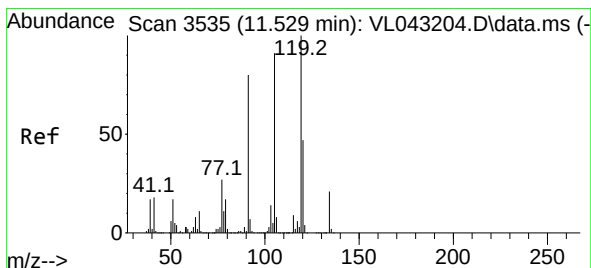
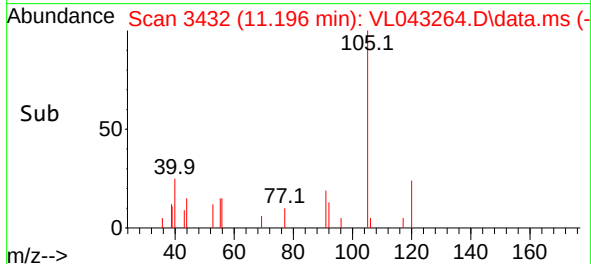
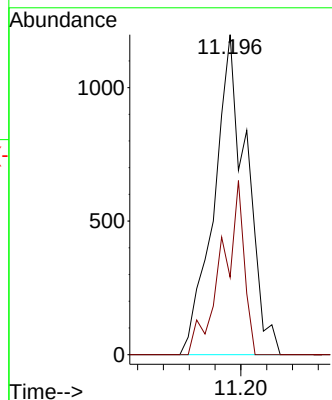
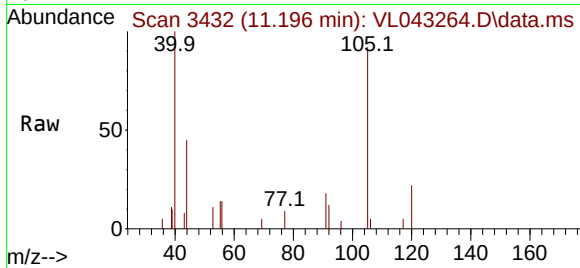




#73
 1,3,5-Trimethylbenzene
 Concen: 0.032 ppbv
 RT: 11.196 min Scan# 3432
 Delta R.T. -0.000 min
 Lab File: VL043264.D
 Acq: 20 Nov 2025 14:32

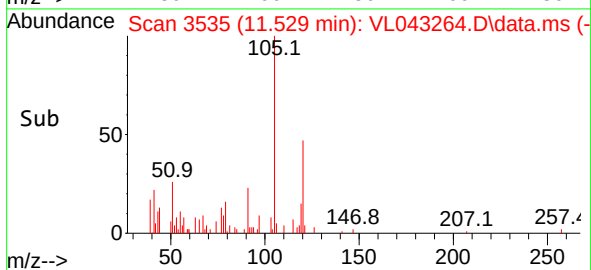
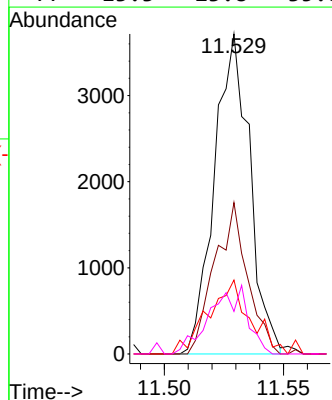
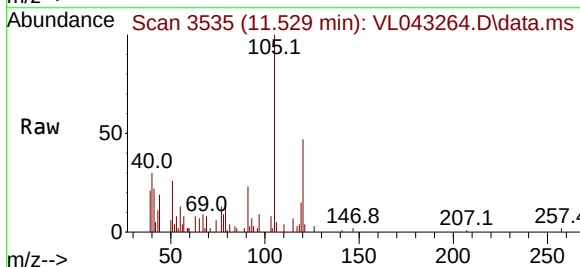
Instrument :
 MSVOA_1
 ClientSampleId :
 SG-4

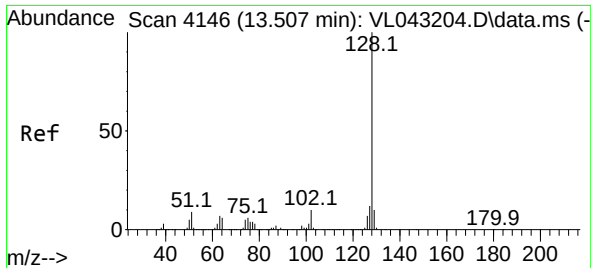
Tgt Ion:105 Resp: 1056
 Ion Ratio Lower Upper
 105 100
 120 24.2 38.6 57.8#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.107 ppbv
 RT: 11.529 min Scan# 3535
 Delta R.T. -0.000 min
 Lab File: VL043264.D
 Acq: 20 Nov 2025 14:32

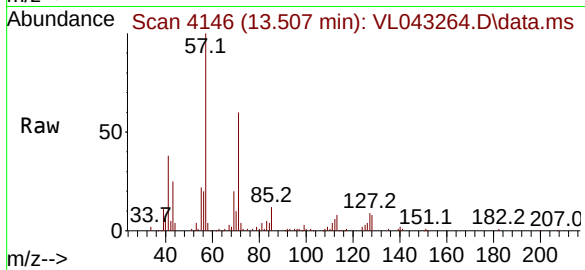
Tgt Ion:105 Resp: 3815
 Ion Ratio Lower Upper
 105 100
 120 47.3 41.7 62.5
 91 20.1 70.0 105.0#
 77 13.3 23.8 35.8#





#79
Naphthalene
Concen: 0.037 ppbv
RT: 13.507 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL043264.D
Acq: 20 Nov 2025 14:32

Instrument :
MSVOA_L
ClientSampleId :
SG-4



Tgt Ion:128 Resp: 1180
Ion Ratio Lower Upper
128 100
127 90.2 9.9 14.9#
129 0.0 8.4 12.6#

