

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
 Data File : VL043162.D
 Acq On : 06 Nov 2025 12:10
 Operator : SY/MD
 Sample : Q3556-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 131-1A2

Quant Time: Nov 07 00:20:41 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Oct 15 02:12:58 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.790	49	115682	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	345961	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	296213	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	230759	10.023	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.200%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.502	85	8022	0.488	ppbv	99
3) Chlorodifluoromethane	1.479	51	10919	0.614	ppbv #	78
4) Chloromethane	1.535	50	2549	0.391	ppbv	96
9) Propene	1.489	41	3218	0.408	ppbv #	82
11) Trichlorofluoromethane	1.881	101	4202	0.261	ppbv	98
12) 1,1,2-Trichlorotrifluo...	2.146	101	985	0.076	ppbv #	82
13) Ethanol	1.725	45	22891	7.842	ppbv	98
15) Acetone	1.839	43	43810	2.810	ppbv	97
16) 1,3-Butadiene	1.606	39	704	0.095	ppbv #	51
17) tert-Butyl alcohol	2.052	59	985	0.046	ppbv #	69
19) Isopropyl Alcohol	1.891	45	4423	0.455	ppbv #	1
20) Methylene Chloride	2.065	84	3546	0.575	ppbv #	78
23) Vinyl Acetate	2.480	43	5449	0.239	ppbv #	57
25) Ethyl Acetate	2.832	43	14044	0.363	ppbv #	84
26) Hexane	2.836	57	18626	1.045	ppbv #	41
29) Chloroform	2.849	83	1691	0.066	ppbv #	79
30) Cyclohexane	3.865	84	610	0.039	ppbv #	53
34) 2-Butanone	2.564	43	5233	0.225	ppbv	97
35) Carbon Tetrachloride	3.768	117	1925	0.077	ppbv #	31
36) Benzene	3.661	78	4029	0.124	ppbv #	92
37) 1,2-Dichloroethane	3.227	62	1106	0.059	ppbv #	79
39) 1,2-Dichloropropane	3.962	63	87030	7.306	ppbv #	26
44) 2,2,4-Trimethylpentane	4.645	57	2398	0.044	ppbv #	17
53) Toluene	6.936	91	1794	0.046	ppbv #	1
59) m/p-Xylene	9.529	91	3278	0.081	ppbv	87
60) o-Xylene	9.529	91	3278	0.082	ppbv	81

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

Quant Time: Nov 07 00:20:41 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Oct 15 02:12:58 2025
Response via : Initial Calibration

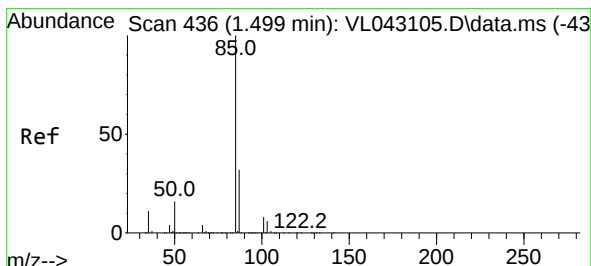
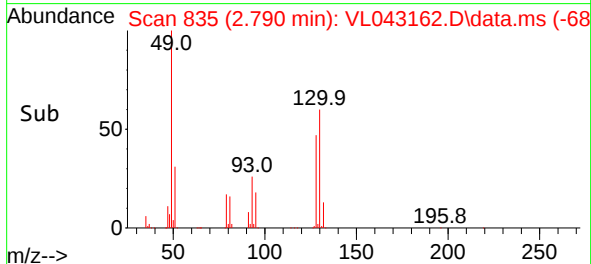
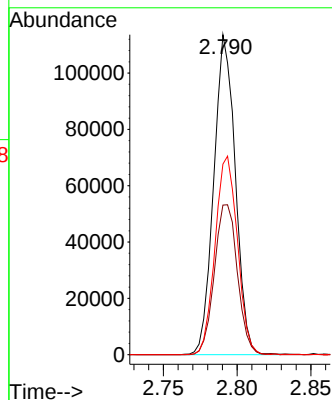
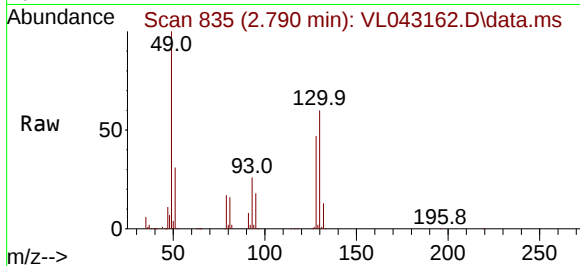




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 81
Delta R.T. 0.000 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

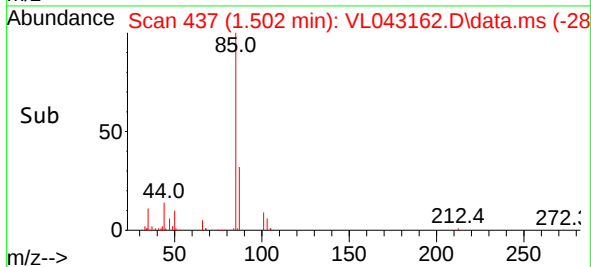
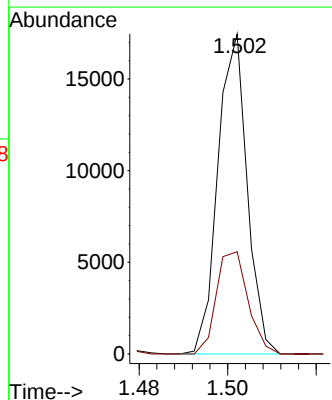
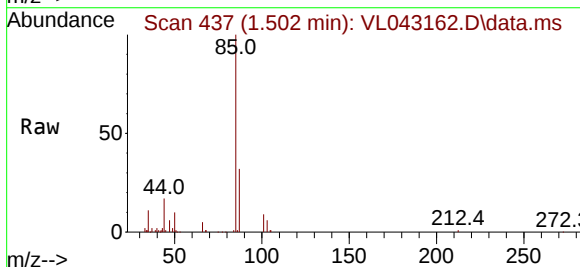
Instrument :
MSVOA_L
ClientSampleId :
131-IA2

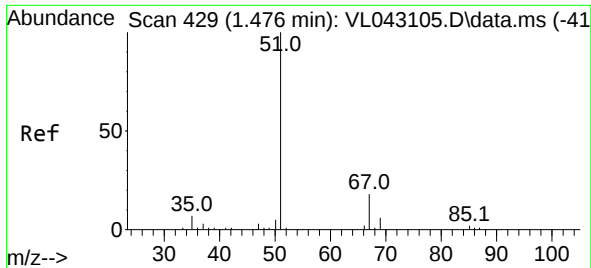
Tgt Ion: 49 Resp: 115682
Ion Ratio Lower Upper
49 100
128 50.1 24.4 73.4
130 64.4 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.488 ppbv
RT: 1.502 min Scan# 437
Delta R.T. 0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 85 Resp: 8022
Ion Ratio Lower Upper
85 100
87 31.9 25.3 37.9

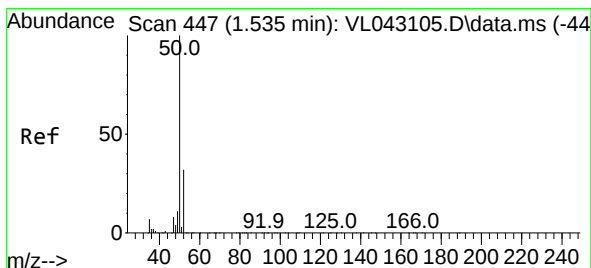
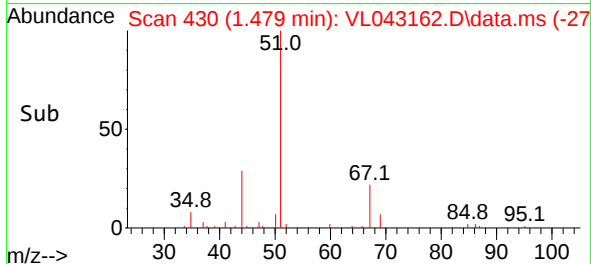
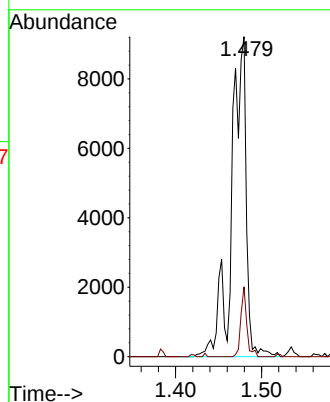
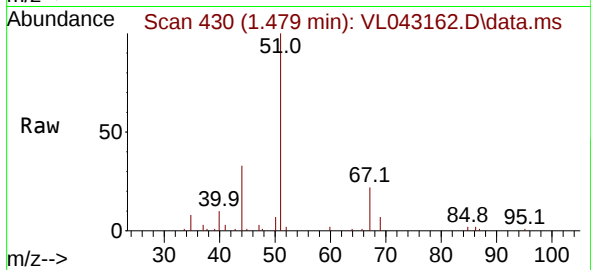




#3
Chlorodifluoromethane
Concen: 0.614 ppbv
RT: 1.479 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

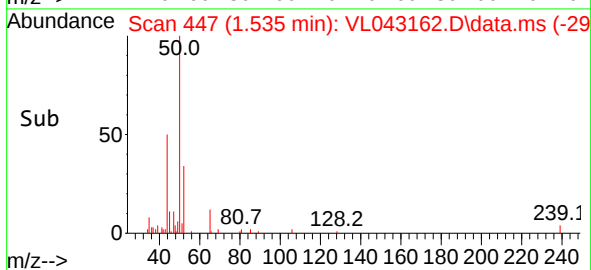
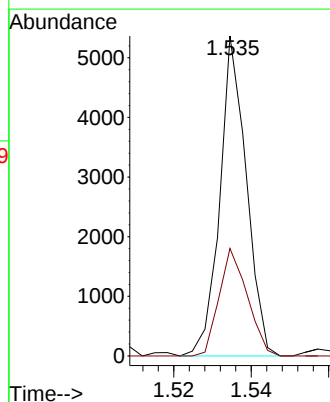
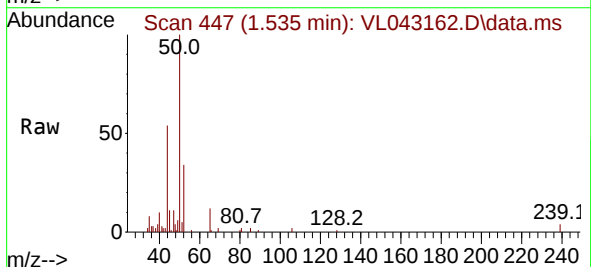
Instrument :
MSVOA_L
ClientSampleId :
131-IA2

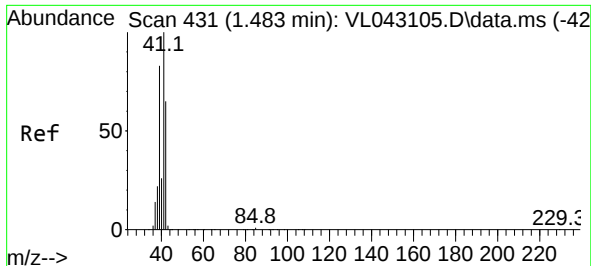
Tgt Ion: 51 Resp: 10919
Ion Ratio Lower Upper
51 100
67 8.8 15.1 22.7#



#4
Chloromethane
Concen: 0.391 ppbv
RT: 1.535 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 50 Resp: 2549
Ion Ratio Lower Upper
50 100
52 33.6 25.2 37.8





#9

Propene

Concen: 0.408 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_1

ClientSampleId :

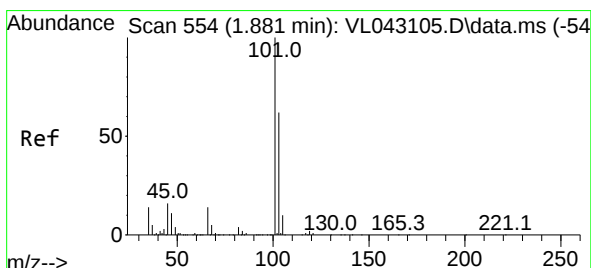
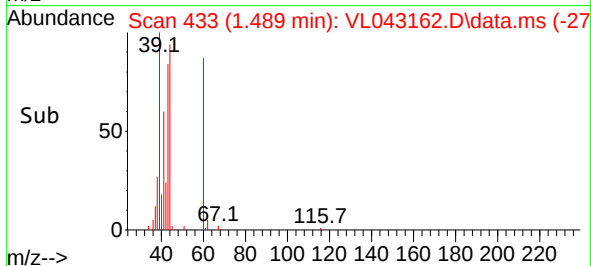
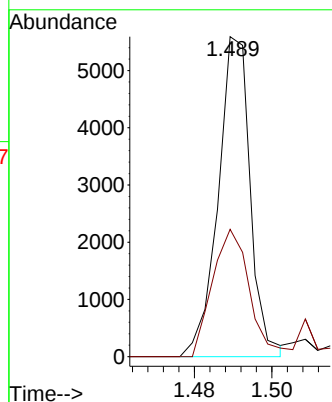
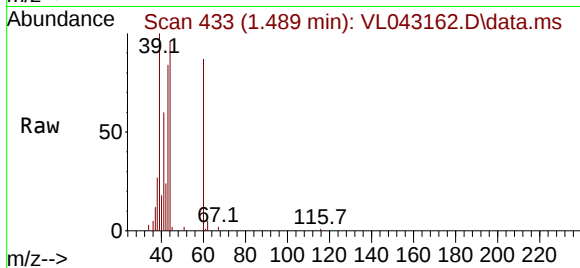
131-IA2

Tgt Ion: 41 Resp: 3218

Ion Ratio Lower Upper

41 100

42 54.0 55.1 82.7#



#11

Trichlorofluoromethane

Concen: 0.261 ppbv

RT: 1.881 min Scan# 554

Delta R.T. -0.000 min

Lab File: VL043162.D

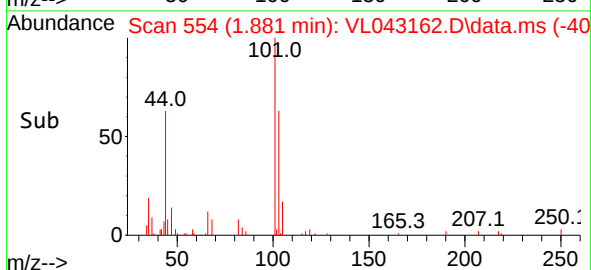
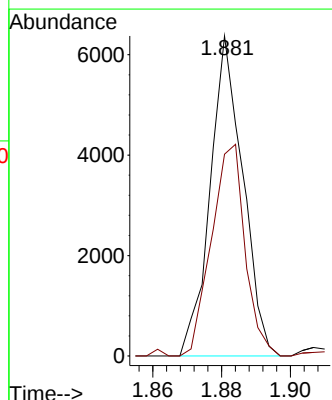
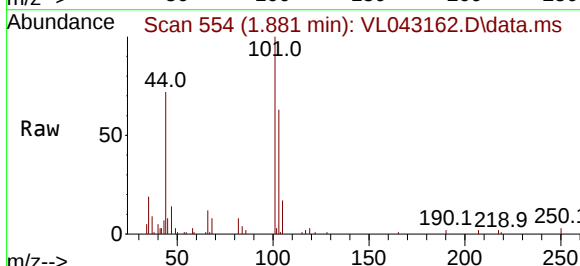
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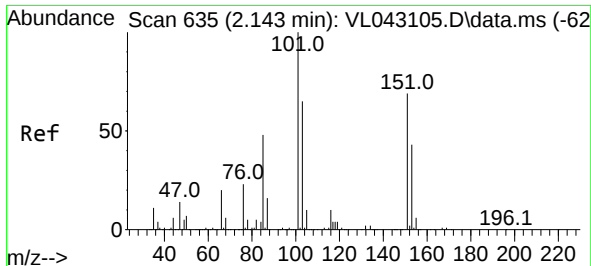
Tgt Ion:101 Resp: 4202

Ion Ratio Lower Upper

101 100

103 63.0 49.3 73.9

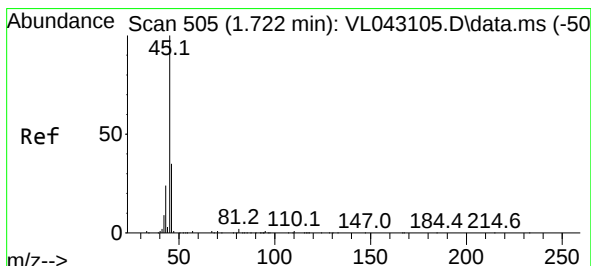
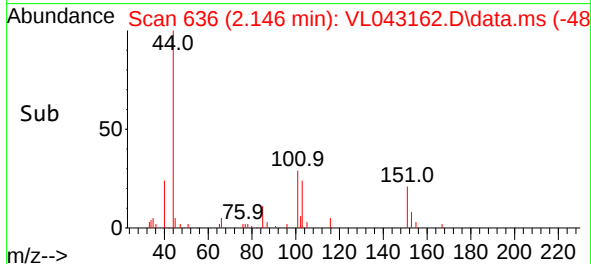
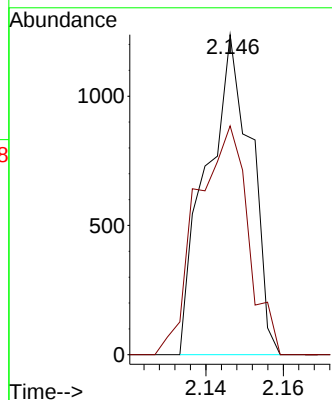
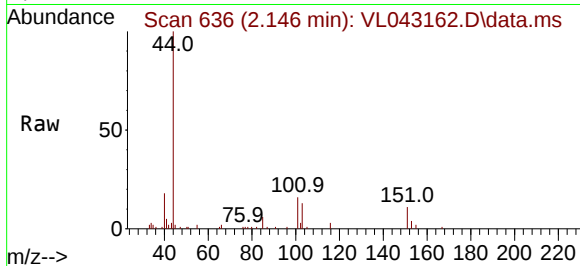




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.076 ppbv
RT: 2.146 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

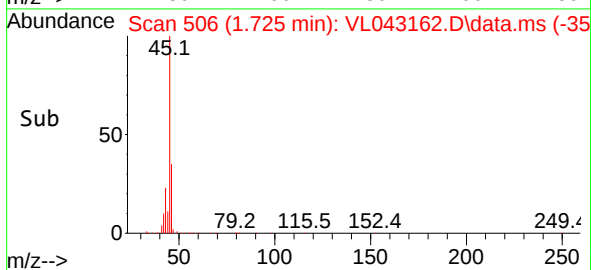
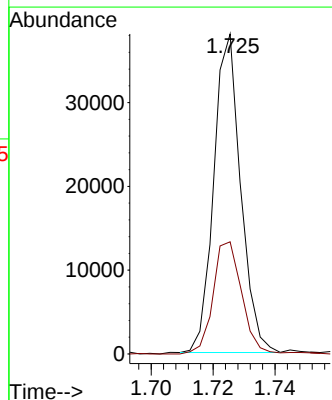
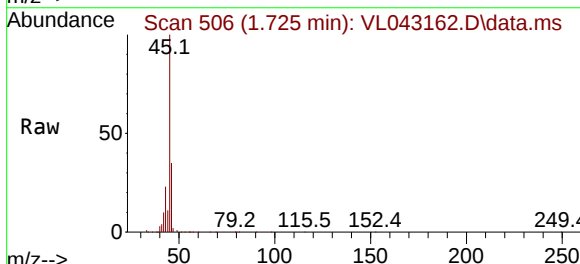
Instrument :
MSVOA_1
ClientSampleId :
131-IA2

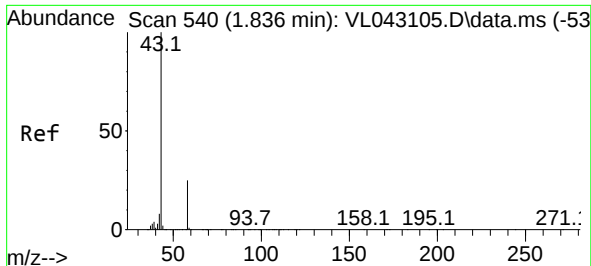
Tgt Ion:101 Resp: 985
Ion Ratio Lower Upper
101 100
151 83.0 54.7 82.1#



#13
Ethanol
Concen: 7.842 ppbv
RT: 1.725 min Scan# 506
Delta R.T. 0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 45 Resp: 22891
Ion Ratio Lower Upper
45 100
46 38.0 14.7 58.9

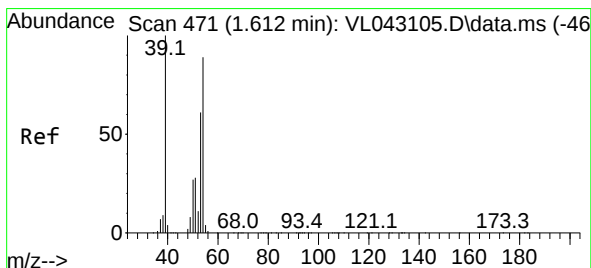
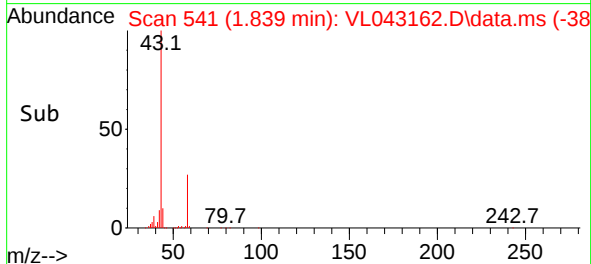
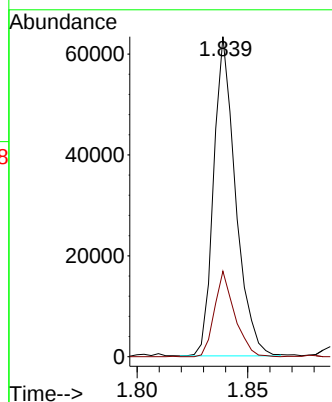
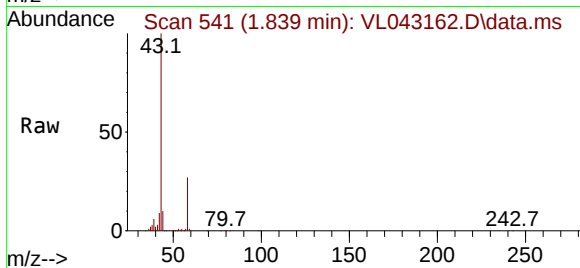




#15
Acetone
Concen: 2.810 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

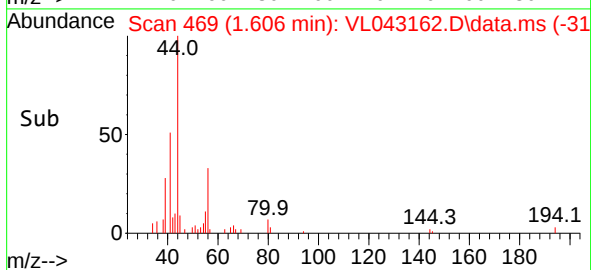
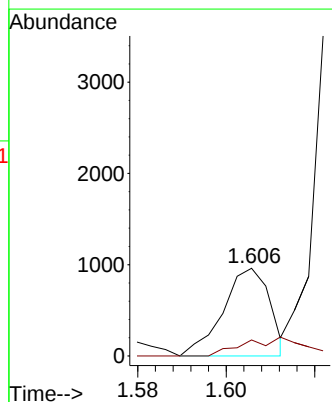
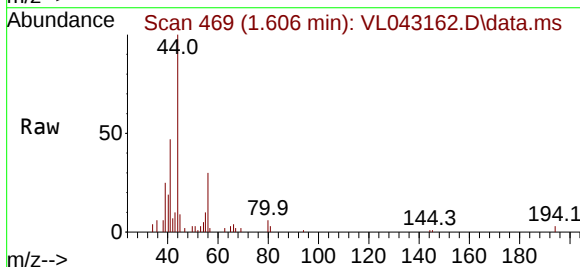
Instrument :
MSVOA_L
ClientSampleId :
131-IA2

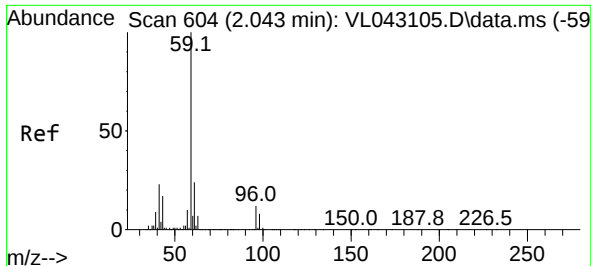
Tgt Ion: 43 Resp: 43810
Ion Ratio Lower Upper
43 100
58 24.6 20.8 31.2



#16
1,3-Butadiene
Concen: 0.095 ppbv
RT: 1.606 min Scan# 469
Delta R.T. -0.007 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 39 Resp: 704
Ion Ratio Lower Upper
39 100
54 32.1 59.0 88.4#





#17

tert-Butyl alcohol

Concen: 0.046 ppbv

RT: 2.052 min Scan# 604

Delta R.T. 0.010 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_L

ClientSampleId :

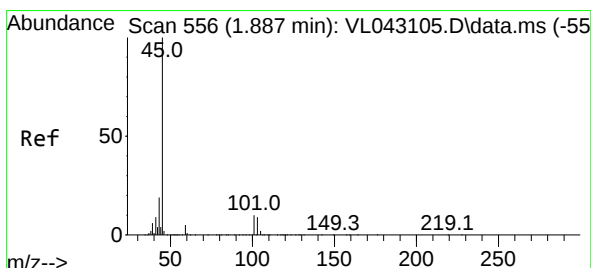
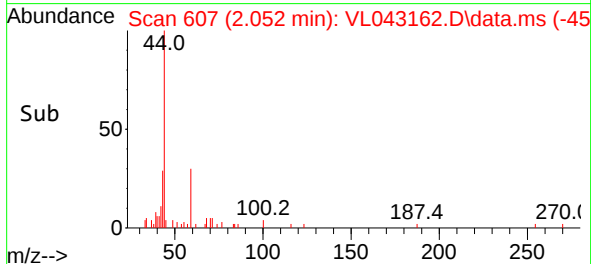
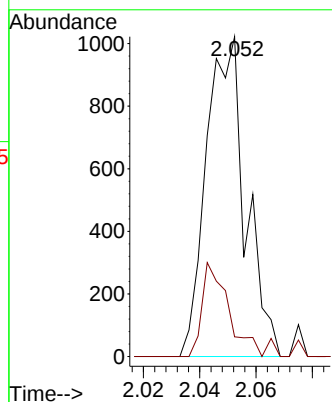
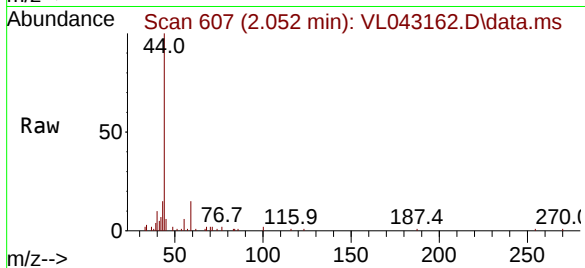
131-IA2

Tgt Ion: 59 Resp: 985

Ion Ratio Lower Upper

59 100

57 21.9 8.2 12.4#



#19

Isopropyl Alcohol

Concen: 0.455 ppbv

RT: 1.891 min Scan# 557

Delta R.T. 0.003 min

Lab File: VL043162.D

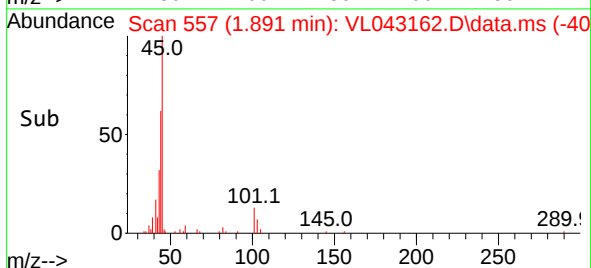
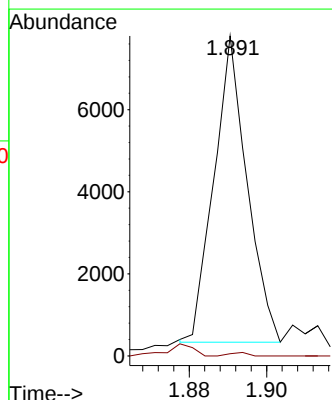
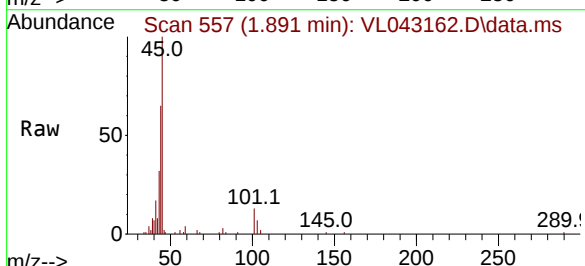
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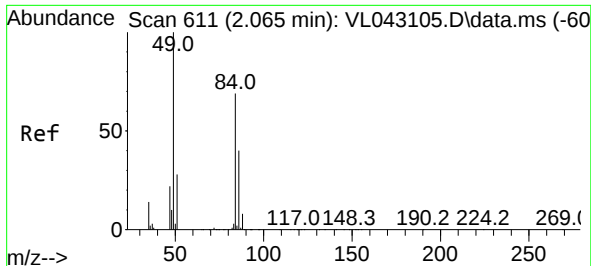
Tgt Ion: 45 Resp: 4423

Ion Ratio Lower Upper

45 100

58 246.9 31.3 46.9#

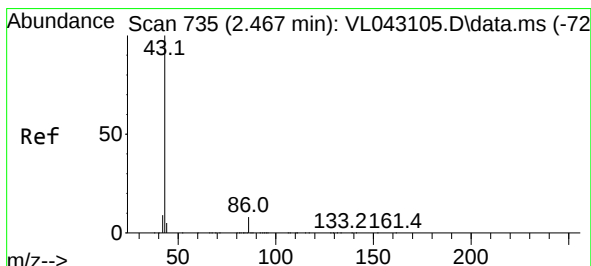
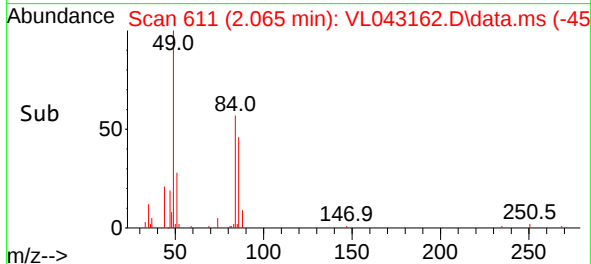
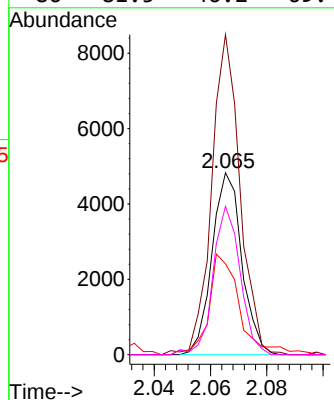
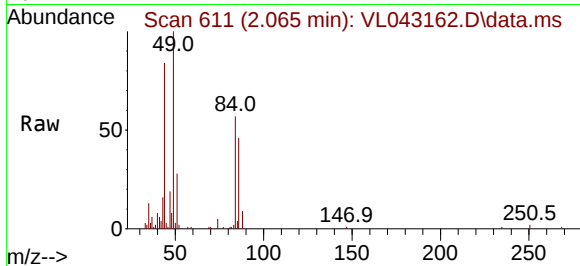




#20
Methylene Chloride
Concen: 0.575 ppbv
RT: 2.065 min Scan# 611
Delta R.T. -0.000 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

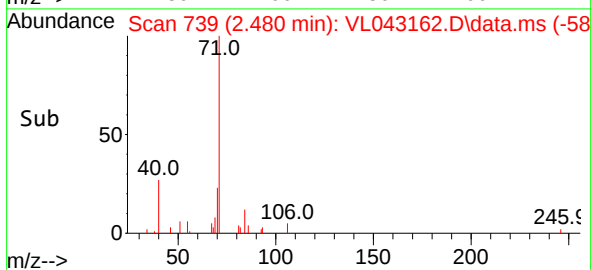
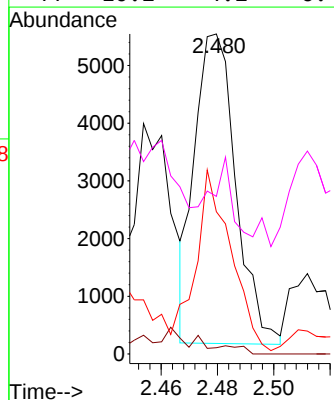
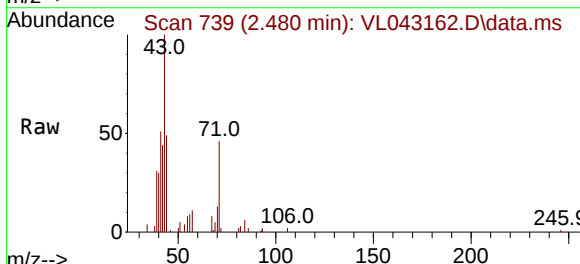
Instrument :
MSVOA_L
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131-IA2

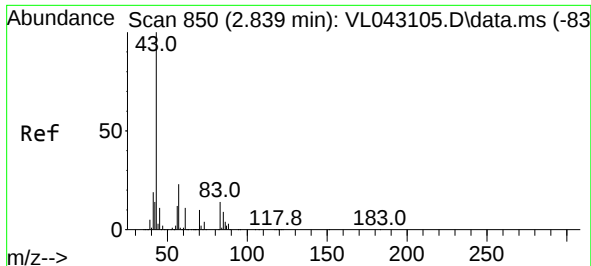
Tgt Ion:	84	Resp:	3546
Ion	Ratio	Lower	Upper
84	100		
49	174.6	116.6	175.0
51	47.4	34.8	52.2
86	81.5	46.2	69.4#



#23
Vinyl Acetate
Concen: 0.239 ppbv
RT: 2.480 min Scan# 739
Delta R.T. 0.013 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion:	43	Resp:	5449
Ion	Ratio	Lower	Upper
43	100		
86	2.1	6.2	9.2#
42	38.6	7.6	11.4#
44	10.2	4.2	6.4#

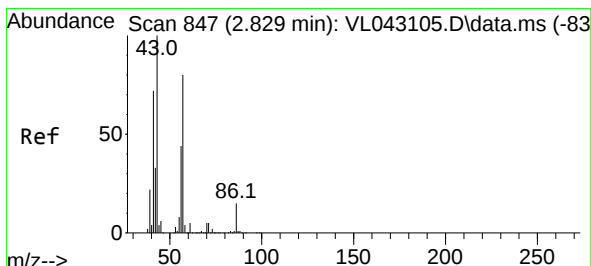
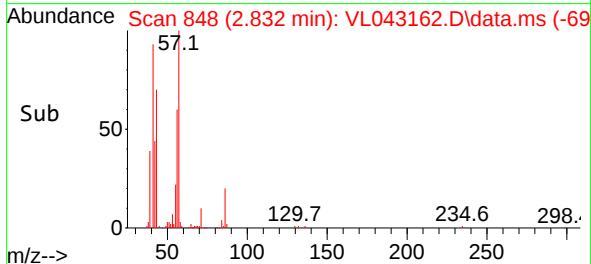
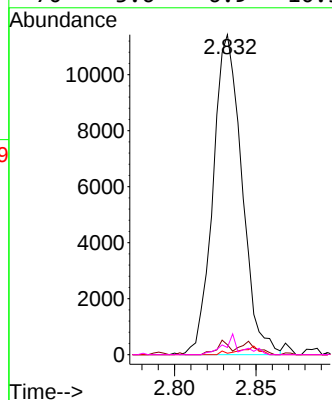
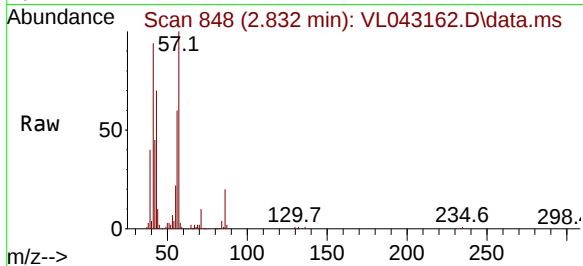




#25
Ethyl Acetate
Concen: 0.363 ppbv
RT: 2.832 min Scan# 848
Delta R.T. -0.007 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

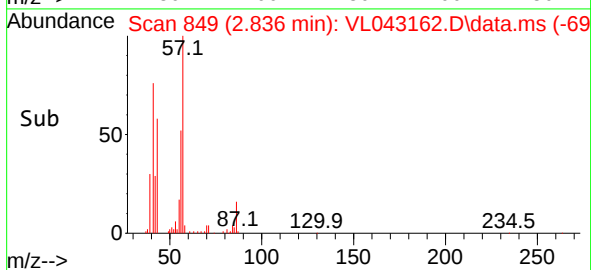
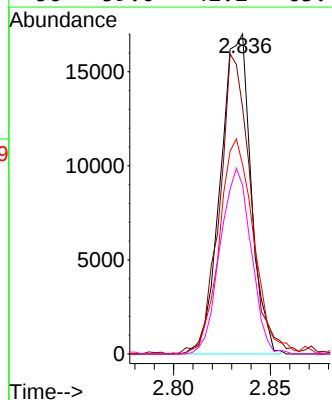
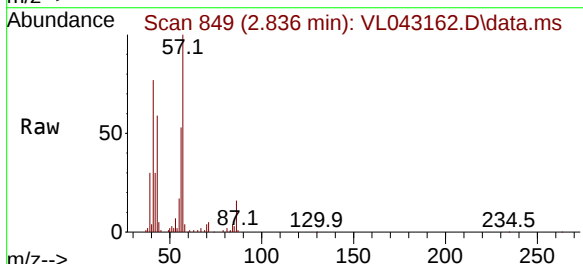
Instrument :
MSVOA_L
ClientSampleId :
131-IA2

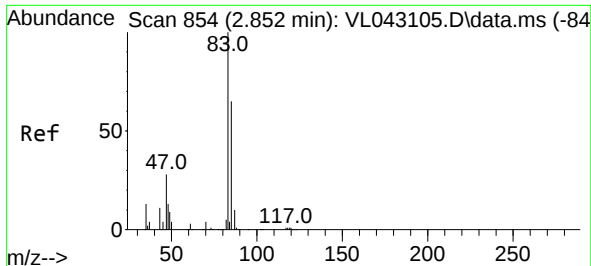
Tgt Ion: 43	Resp: 14044
Ion Ratio	Lower Upper
43	100
45	4.5 7.8 11.8#
61	1.8 7.0 10.6#
70	3.6 6.9 10.3#



#26
Hexane
Concen: 1.045 ppbv
RT: 2.836 min Scan# 849
Delta R.T. 0.006 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 57	Resp: 18626
Ion Ratio	Lower Upper
57	100
41	96.5 71.4 107.0
43	76.1 178.5 267.7#
56	59.0 42.2 63.4





#29

Chloroform

Concen: 0.066 ppbv

RT: 2.849 min Scan# 81

Delta R.T. -0.003 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_L

ClientSampleId :

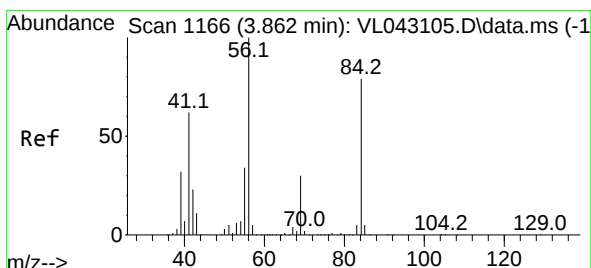
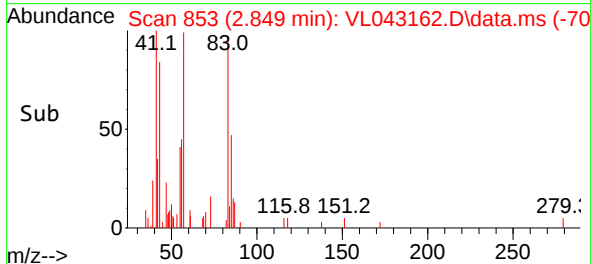
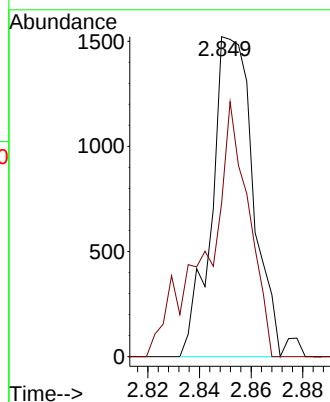
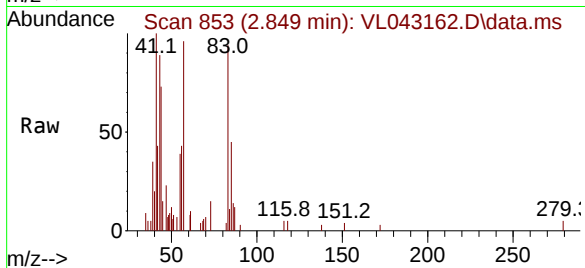
131-IA2

Tgt Ion: 83 Resp: 1691

Ion Ratio Lower Upper

83 100

85 48.0 51.8 77.6#



#30

Cyclohexane

Concen: 0.039 ppbv

RT: 3.865 min Scan# 1167

Delta R.T. 0.003 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

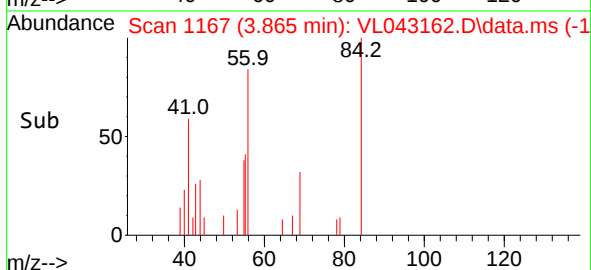
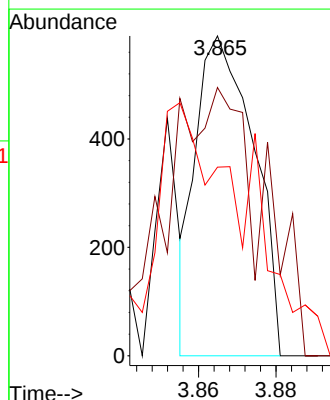
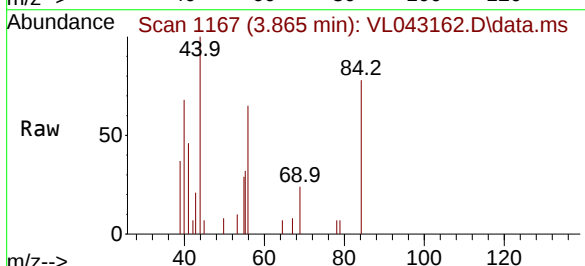
Tgt Ion: 84 Resp: 610

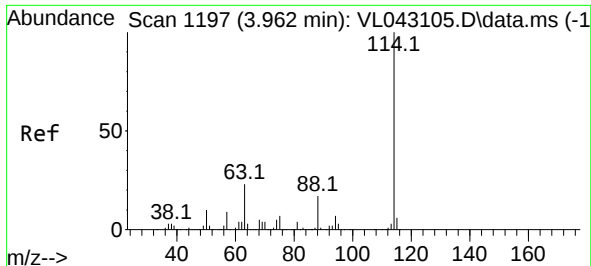
Ion Ratio Lower Upper

84 100

56 148.9 100.9 151.3

41 0.0 63.8 95.6#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.000 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_1

ClientSampleId :

131-IA2

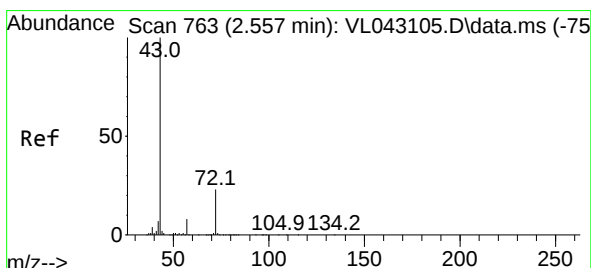
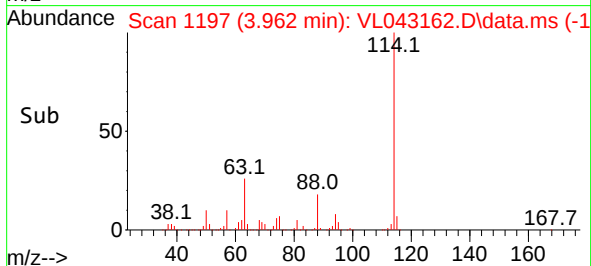
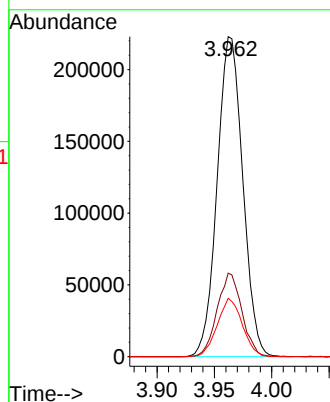
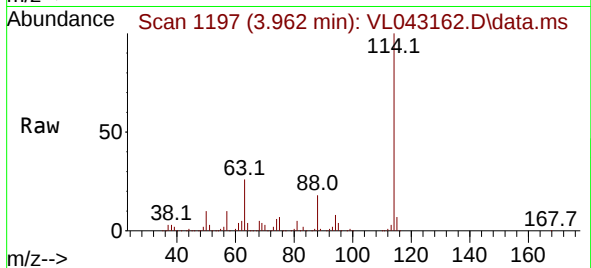
Tgt Ion:114 Resp: 345961

Ion Ratio Lower Upper

114 100

63 25.2 19.3 28.9

88 17.8 13.9 20.9



#34

2-Butanone

Concen: 0.225 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.006 min

Lab File: VL043162.D

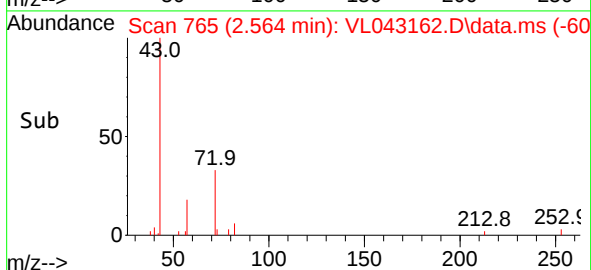
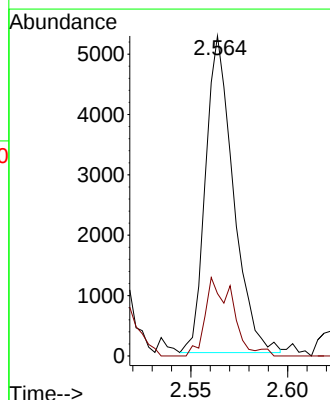
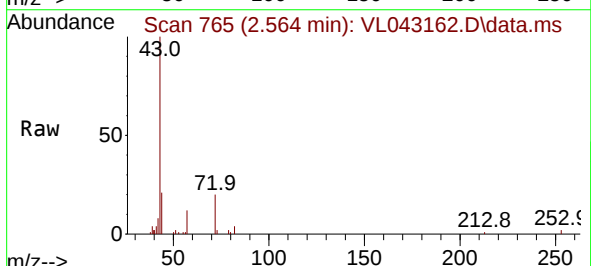
Acq: 06 Nov 2025 12:10

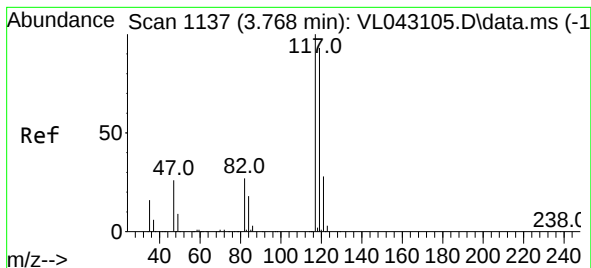
Tgt Ion: 43 Resp: 5233

Ion Ratio Lower Upper

43 100

72 24.5 18.4 27.6





#35

Carbon Tetrachloride

Concen: 0.077 ppbv

RT: 3.768 min Scan# 1137

Delta R.T. -0.000 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_L

ClientSampleId :

131-IA2

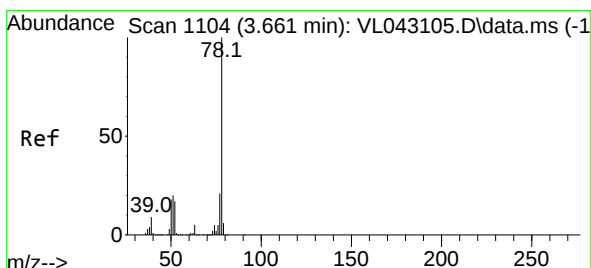
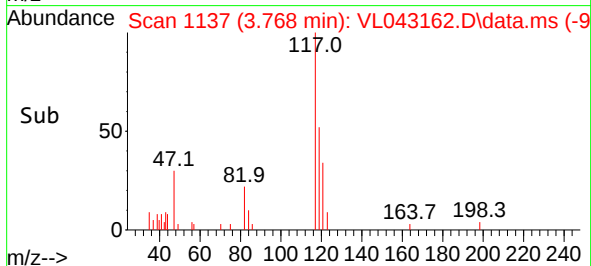
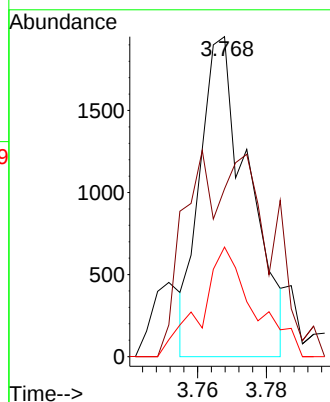
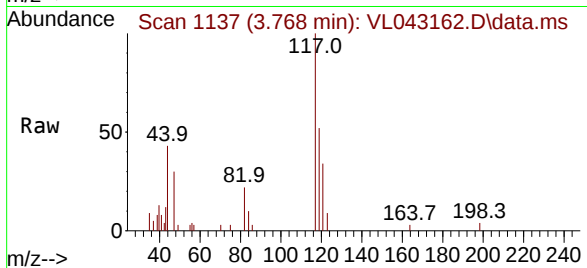
Tgt Ion:117 Resp: 1925

Ion Ratio Lower Upper

117 100

119 8.8 74.1 111.1#

121 32.4 22.2 33.2



#36

Benzene

Concen: 0.124 ppbv

RT: 3.661 min Scan# 1104

Delta R.T. -0.000 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

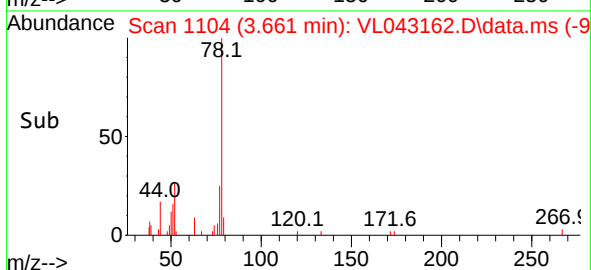
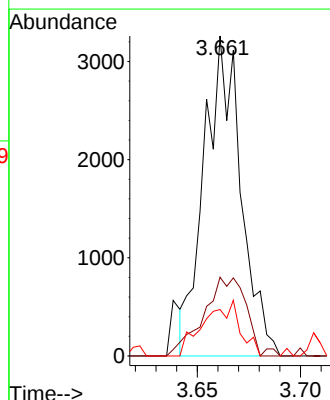
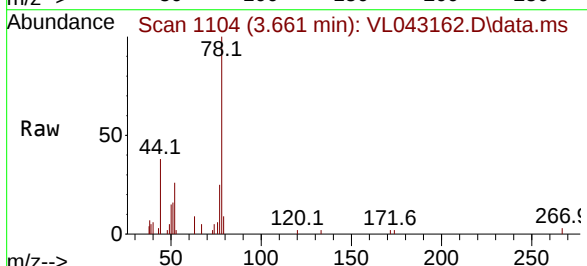
Tgt Ion: 78 Resp: 4029

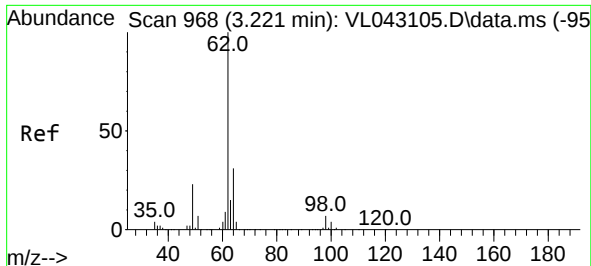
Ion Ratio Lower Upper

78 100

77 24.6 17.0 25.6

50 14.5 14.6 22.0#





#37

1,2-Dichloroethane

Concen: 0.059 ppbv

RT: 3.227 min Scan# 91

Delta R.T. 0.006 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_L

ClientSampleId :

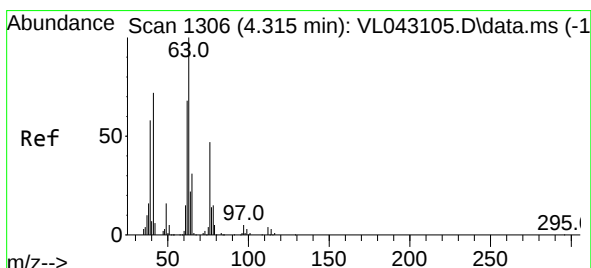
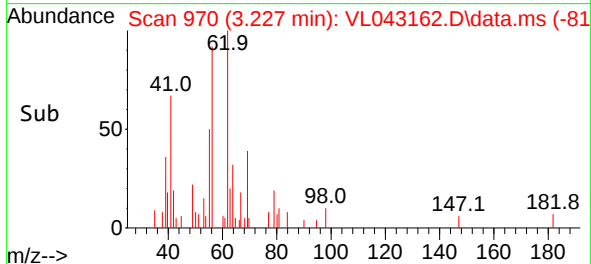
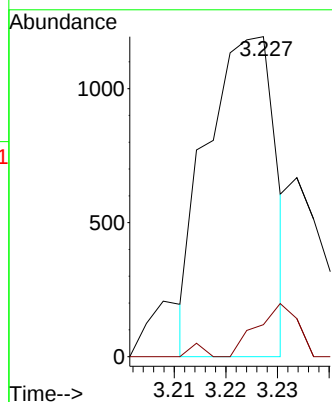
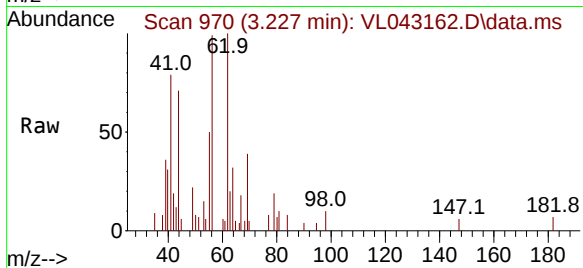
131-IA2

Tgt Ion: 62 Resp: 1106

Ion Ratio Lower Upper

62 100

98 0.0 5.8 8.6#



#39

1,2-Dichloropropane

Concen: 7.306 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.353 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

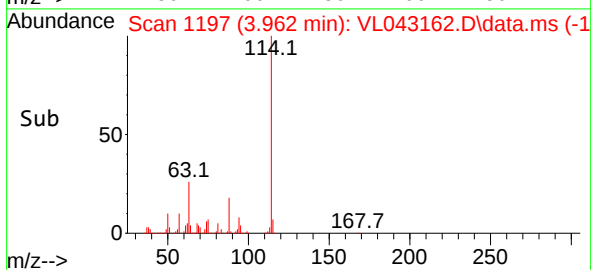
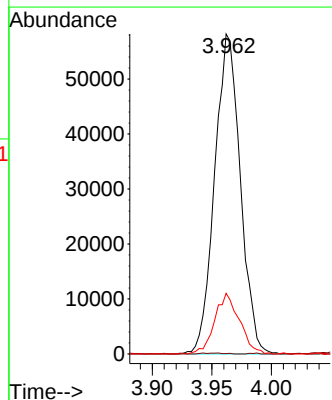
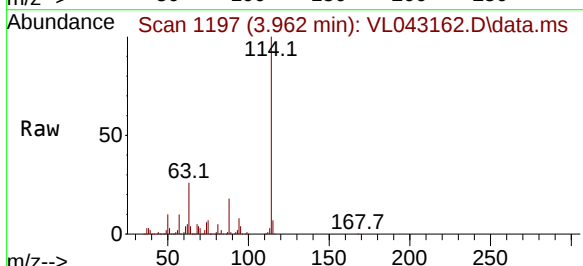
Tgt Ion: 63 Resp: 87030

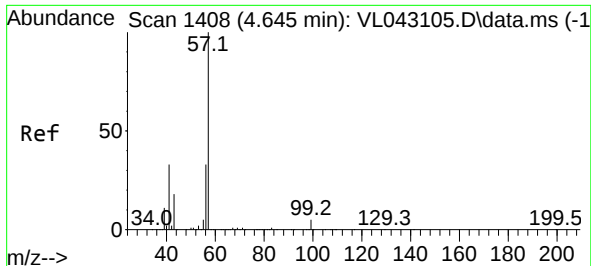
Ion Ratio Lower Upper

63 100

41 0.1 58.0 87.0#

62 19.0 54.7 82.1#





#44

2,2,4-Trimethylpentane

Concen: 0.044 ppbv

RT: 4.645 min Scan# 1408

Delta R.T. -0.000 min

Lab File: VL043162.D

Acq: 06 Nov 2025 12:10

Instrument :

MSVOA_1

ClientSampleId :

131-IA2

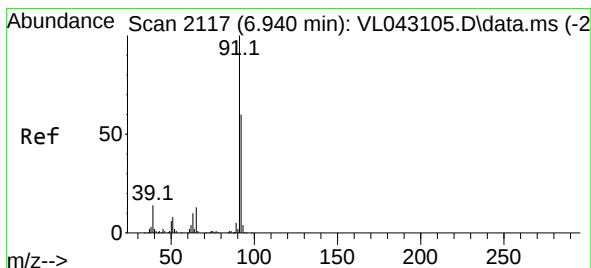
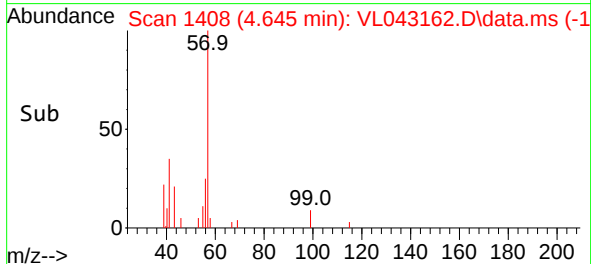
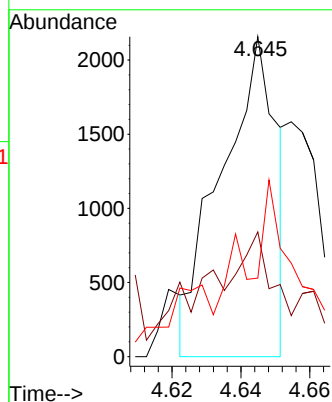
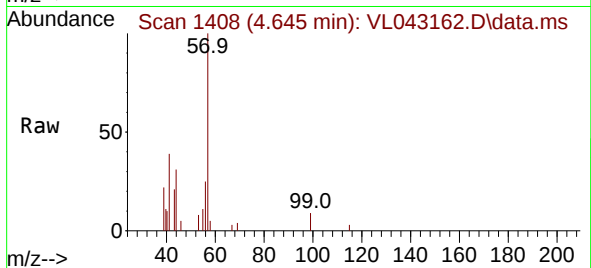
Tgt Ion: 57 Resp: 2398

Ion Ratio Lower Upper

57 100

41 79.6 26.3 39.5#

56 79.2 25.9 38.9#



#53

Toluene

Concen: 0.046 ppbv

RT: 6.936 min Scan# 2116

Delta R.T. -0.003 min

Lab File: VL043162.D

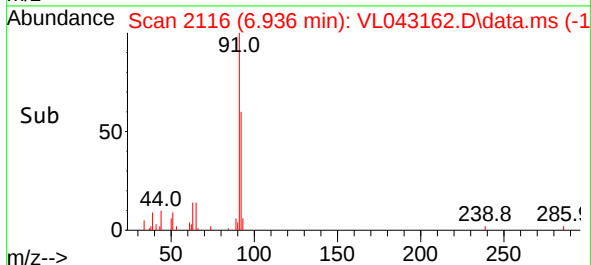
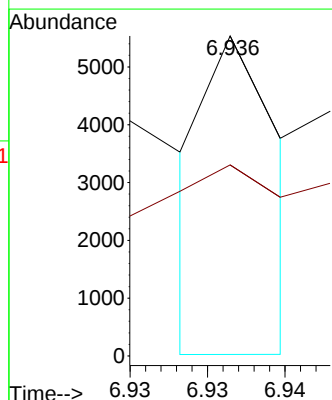
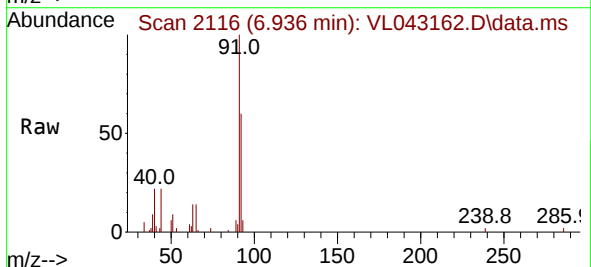
Acq: 06 Nov 2025 12:10

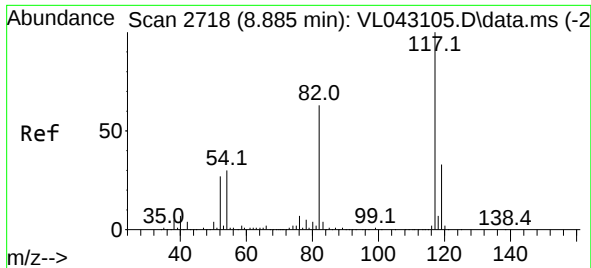
Tgt Ion: 91 Resp: 1794

Ion Ratio Lower Upper

91 100

92 337.4 48.8 73.2#

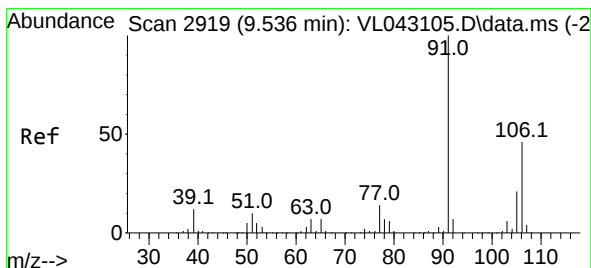
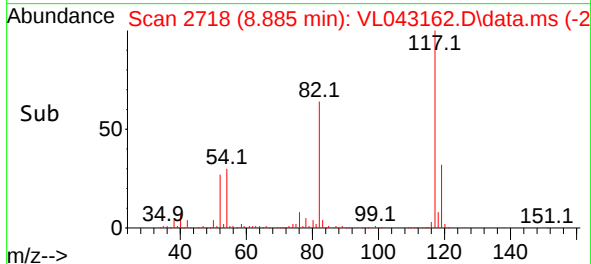
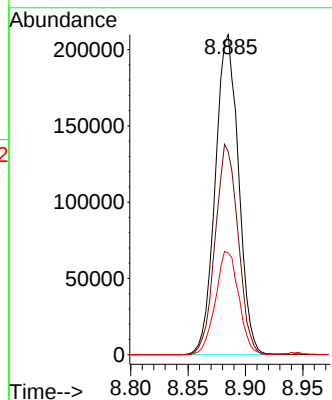
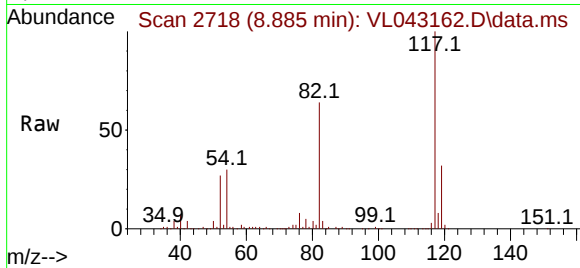




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 21
Delta R.T. -0.000 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

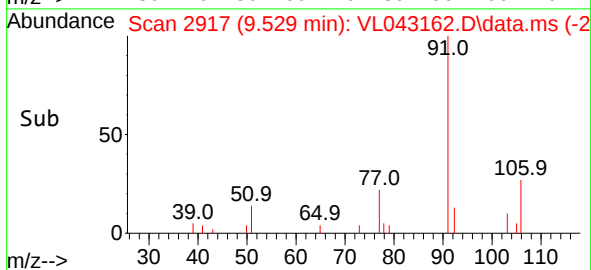
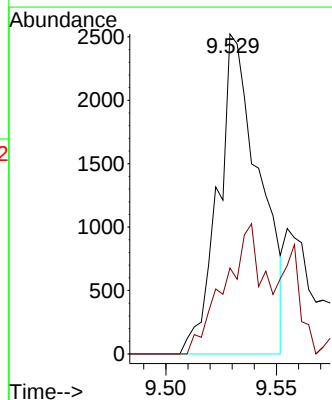
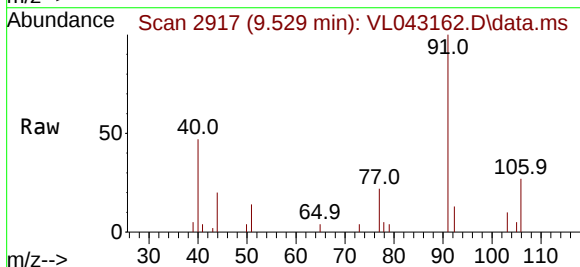
Instrument :
MSVOA_L
ClientSampleId :
131-IA2

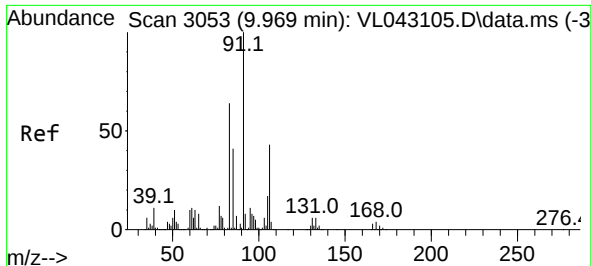
Tgt Ion:117 Resp: 296213
Ion Ratio Lower Upper
117 100
82 64.9 53.8 80.8
119 32.4 25.4 38.0



#59
m/p-Xylene
Concen: 0.081 ppbv
RT: 9.529 min Scan# 2917
Delta R.T. -0.007 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 91 Resp: 3278
Ion Ratio Lower Upper
91 100
106 56.1 38.0 57.0

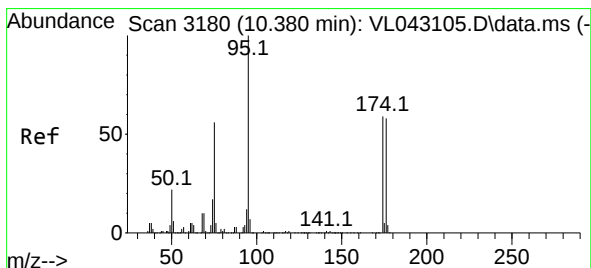
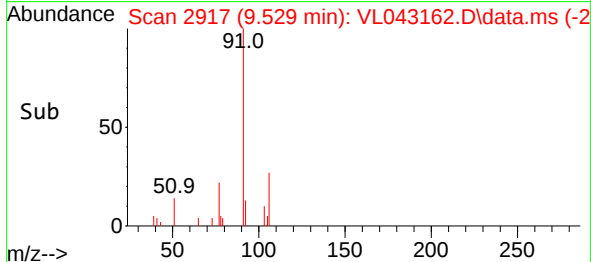
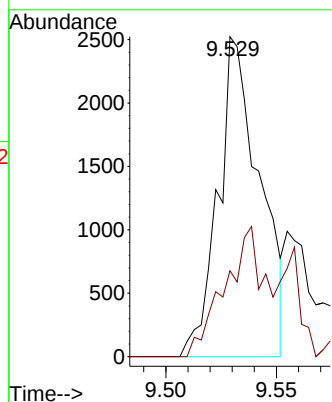
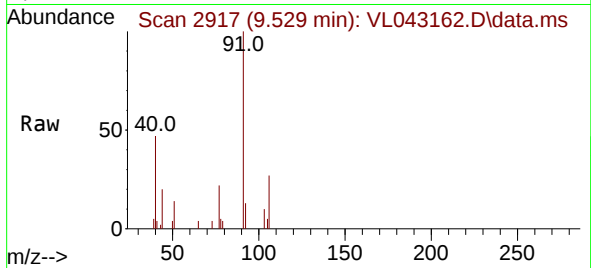




#60
o-Xylene
Concen: 0.082 ppbv
RT: 9.529 min Scan# 2917
Delta R.T. -0.440 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Instrument :
MSVOA_L
ClientSampleId :
131-IA2

Tgt Ion: 91 Resp: 3278
Ion Ratio Lower Upper
91 100
106 56.1 21.9 65.8



#68
1-Bromo-4-Fluorobenzene
Concen: 10.023 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. -0.003 min
Lab File: VL043162.D
Acq: 06 Nov 2025 12:10

Tgt Ion: 95 Resp: 230759
Ion Ratio Lower Upper
95 100
174 65.1 48.3 72.5
175 4.6 3.8 5.8

