

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110425\
 Data File : VL043153.D
 Acq On : 04 Nov 2025 13:31
 Operator : SY/MD
 Sample : Q3530-14 0.03 LOQ
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 LOQ-AIR-02-QT4-2025

Quant Time: Nov 05 06:32:03 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)

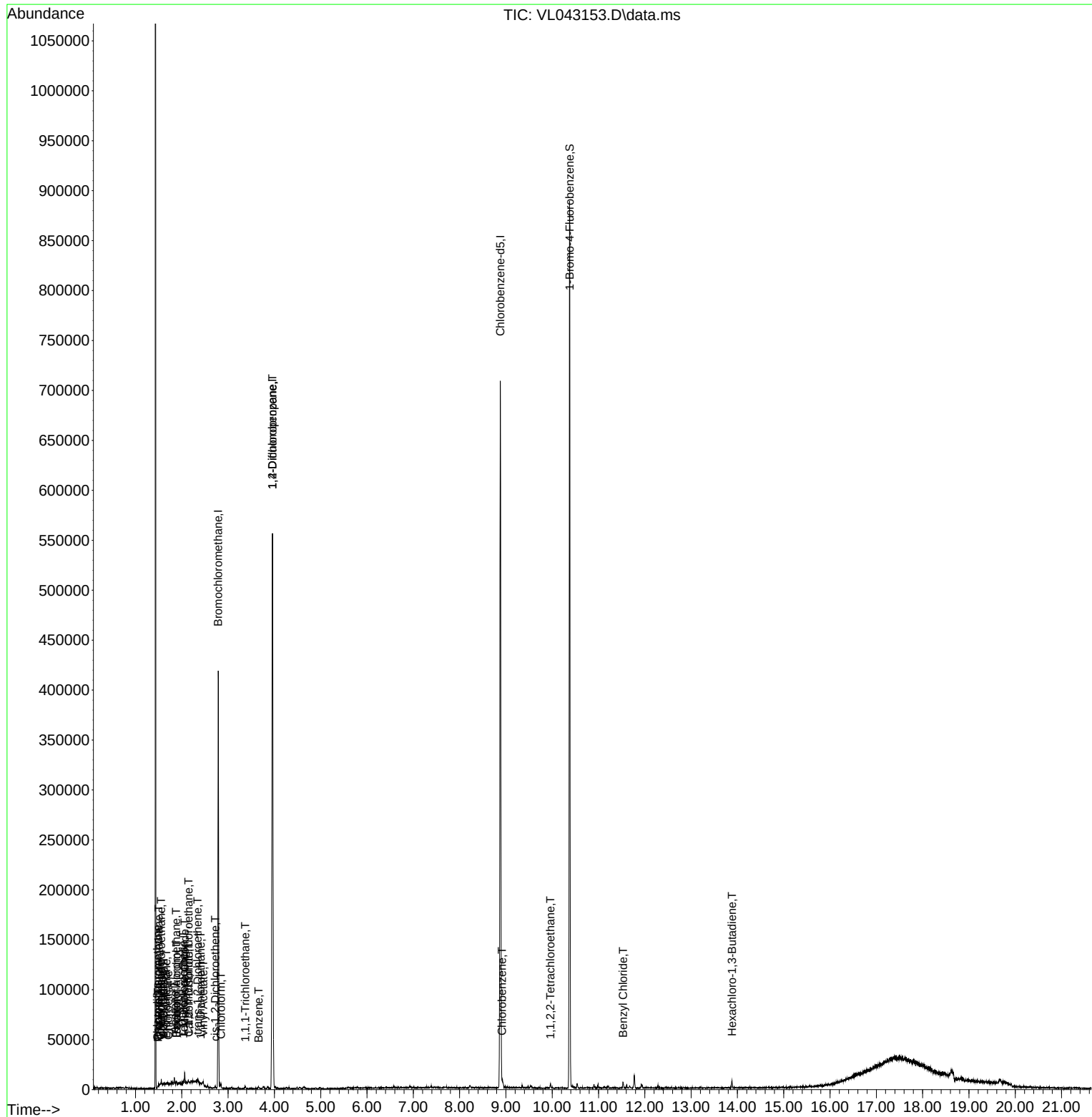
Internal Standards						
1) Bromochloromethane	2.787	49	109507	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	336404	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	291017	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	220810	9.762	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.600%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.502	85	777	0.050	ppbv	95
3) Chlorodifluoromethane	1.476	51	657	0.039	ppbv	99
4) Chloromethane	1.534	50	278	0.045	ppbv #	78
5) Vinyl Chloride	1.583	62	234	0.039	ppbv #	44
6) Bromomethane	1.670	94	129	0.039	ppbv #	55
7) Chloroethane	1.706	64	90	0.036	ppbv #	82
8) Dichlorotetrafluoroethane	1.554	85	578	0.046	ppbv	87
9) Propene	1.486	41	311	0.042	ppbv #	68
11) Trichlorofluoromethane	1.881	101	653	0.043	ppbv	93
12) 1,1,2-Trichlorotrifluo...	2.143	101	511	0.042	ppbv #	72
13) Ethanol	1.887	45	609	0.220	ppbv #	38
15) Acetone	1.839	43	2449	0.166	ppbv	91
16) 1,3-Butadiene	1.609	39	260	0.037	ppbv #	78
17) tert-Butyl alcohol	2.043	59	945	0.047	ppbv #	87
18) 1,1-Dichloroethene	2.033	96	181	0.034	ppbv #	85
19) Isopropyl Alcohol	1.887	45	609	0.066	ppbv #	1
20) Methylene Chloride	2.062	84	1790	0.307	ppbv #	83
22) trans-1,2-Dichloroethene	2.340	96	236	0.037	ppbv #	61
23) Vinyl Acetate	2.463	43	853	0.039	ppbv #	14
24) 1,1-Dichloroethane	2.408	63	546	0.044	ppbv #	75
27) Carbon Disulfide	2.149	76	531	0.034	ppbv #	1
29) Chloroform	2.848	83	849	0.035	ppbv	90
31) cis-1,2-Dichloroethene	2.722	61	556	0.035	ppbv #	89
32) 1,1,1-Trichloroethane	3.373	97	877	0.034	ppbv #	23
36) Benzene	3.661	78	1029	0.032	ppbv #	91
39) 1,2-Dichloropropane	3.959	63	84569	7.301	ppbv #	24
57) Chlorobenzene	8.917	112	817	0.030	ppbv #	35
63) 1,1,2,2-Tetrachloroethane	9.963	83	813	0.031	ppbv	95
66) Benzyl Chloride	11.532	91	1090	0.156	ppbv #	65
78) Hexachloro-1,3-Butadiene	13.882	225	809	0.042	ppbv	94

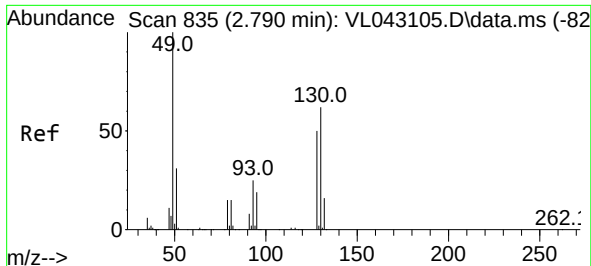
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110425\
Data File : VL043153.D
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ALS Vial : 1 Sample Multiplier: 1

Instrument :
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LOQ-AIR-02-QT4-2025

Quant Time: Nov 05 06:32:03 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

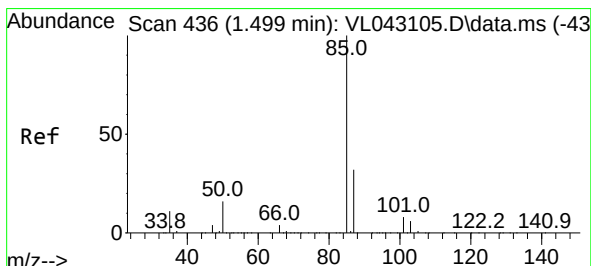
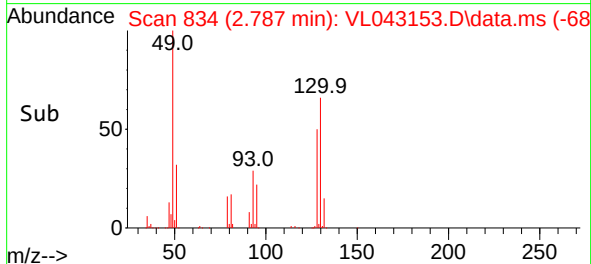
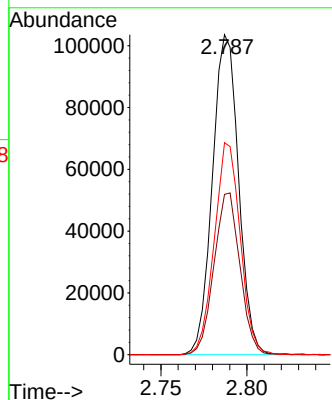
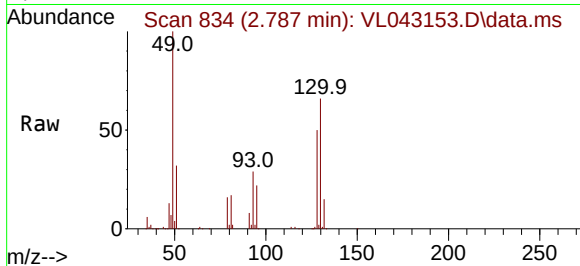




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

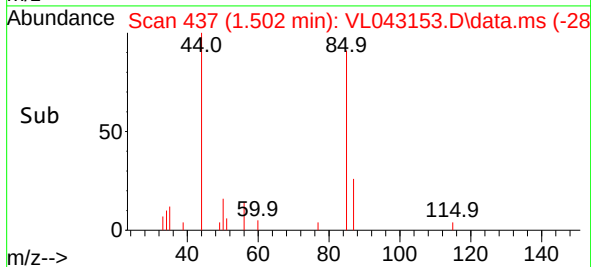
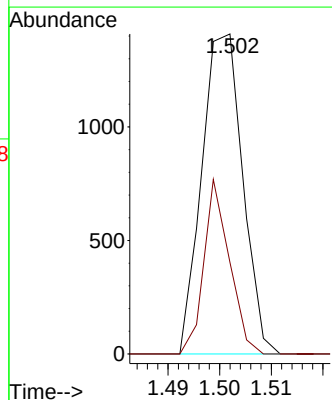
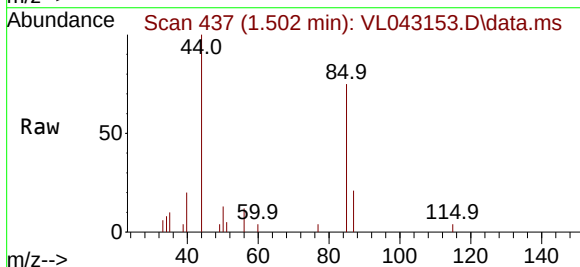
Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

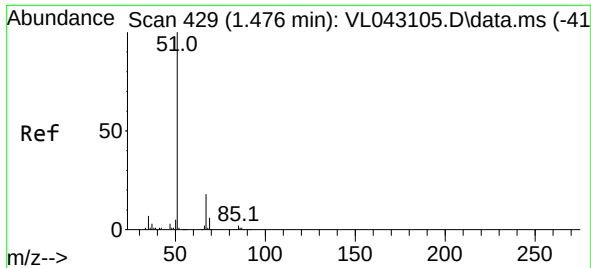
Tgt Ion: 49 Resp: 109507
Ion Ratio Lower Upper
49 100
128 50.3 24.4 73.4
130 65.7 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.050 ppbv
RT: 1.502 min Scan# 437
Delta R.T. 0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 85 Resp: 777
Ion Ratio Lower Upper
85 100
87 28.6 25.3 37.9

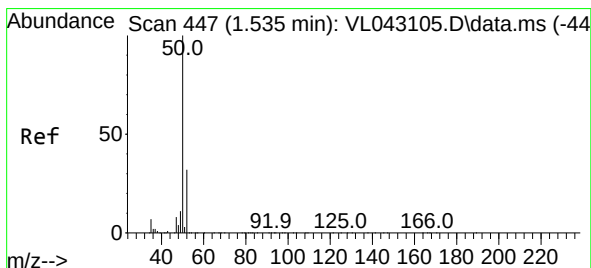
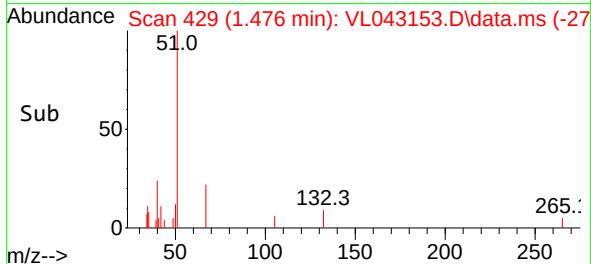
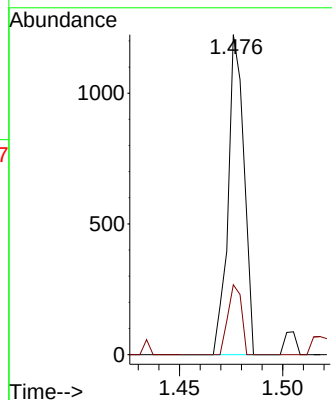
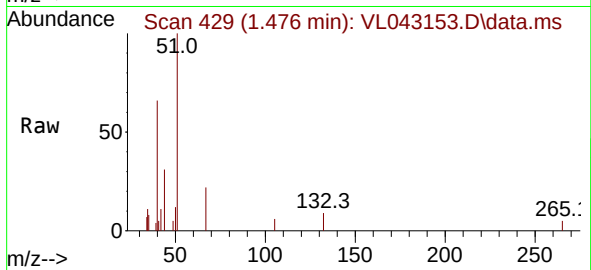




#3
Chlorodifluoromethane
Concen: 0.039 ppbv
RT: 1.476 min Scan# 429
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

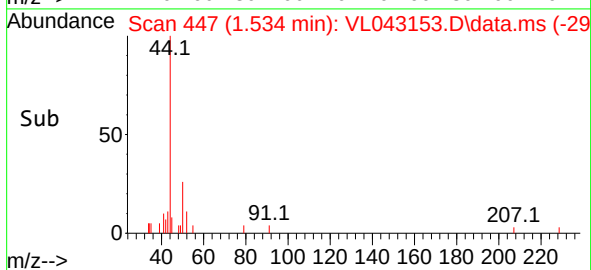
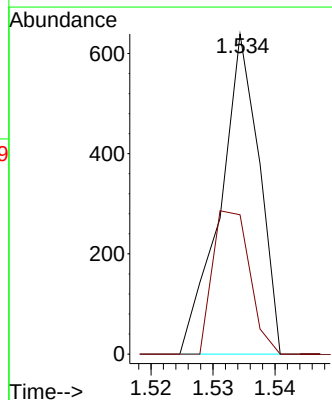
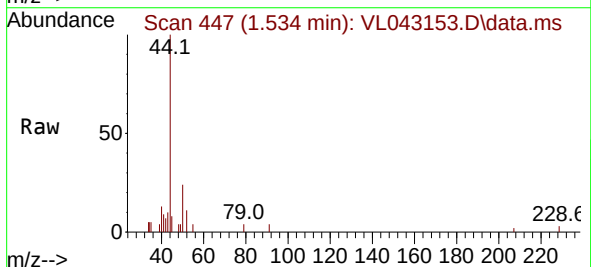
Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

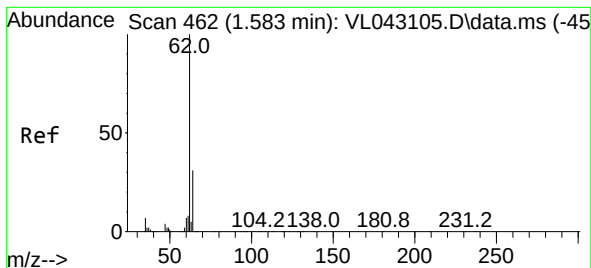
Tgt Ion: 51 Resp: 657
Ion Ratio Lower Upper
51 100
67 18.4 15.1 22.7



#4
Chloromethane
Concen: 0.045 ppbv
RT: 1.534 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 50 Resp: 278
Ion Ratio Lower Upper
50 100
52 43.5 25.2 37.8#





#5

Vinyl Chloride

Concen: 0.039 ppbv

RT: 1.583 min Scan# 462

Delta R.T. -0.000 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_1

ClientSampleId :

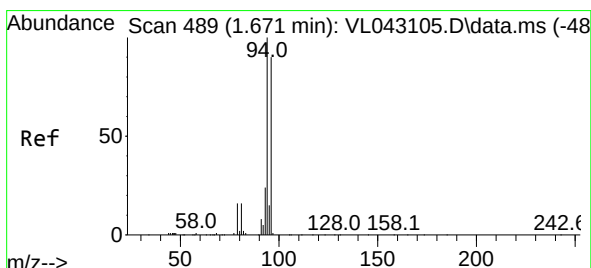
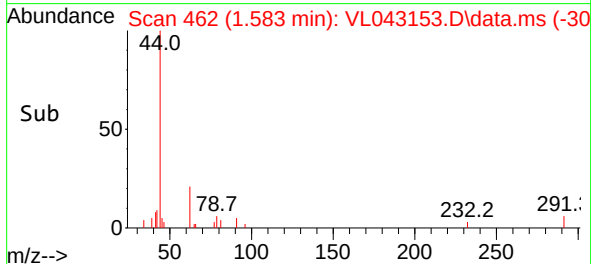
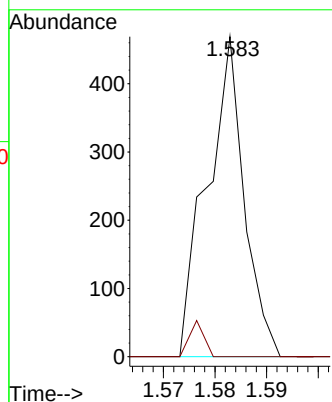
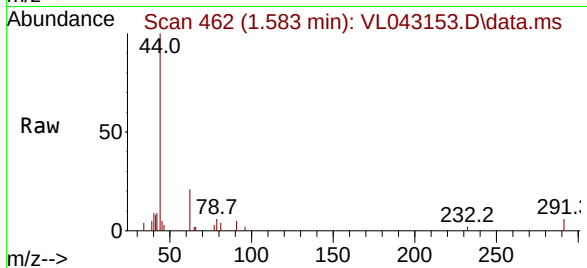
LOQ-AIR-02-QT4-2025

Tgt Ion: 62 Resp: 234

Ion Ratio Lower Upper

62 100

64 0.0 24.6 36.8#



#6

Bromomethane

Concen: 0.039 ppbv

RT: 1.670 min Scan# 489

Delta R.T. -0.000 min

Lab File: VL043153.D

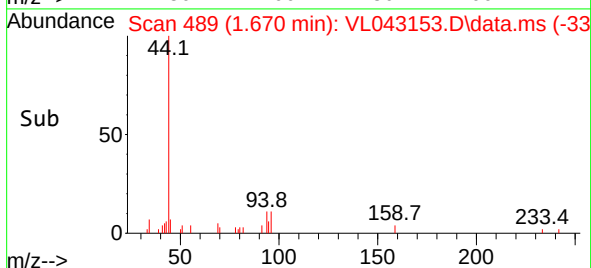
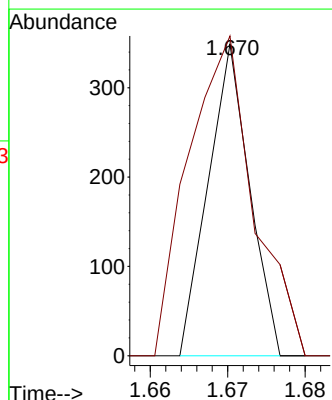
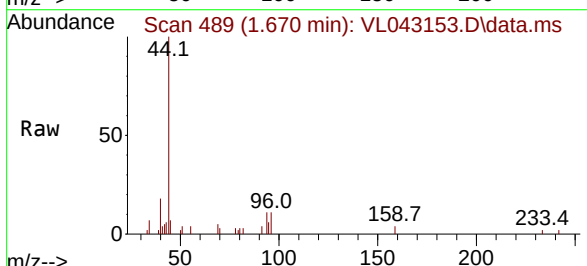
Acq: 04 Nov 2025 13:31

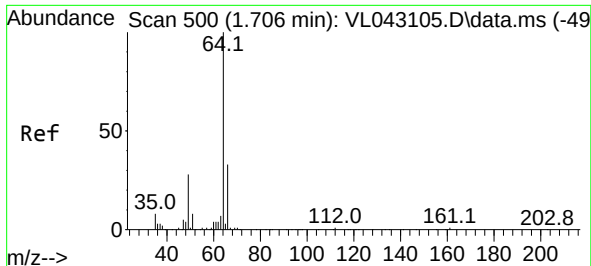
Tgt Ion: 94 Resp: 129

Ion Ratio Lower Upper

94 100

96 47.9 72.2 108.4#

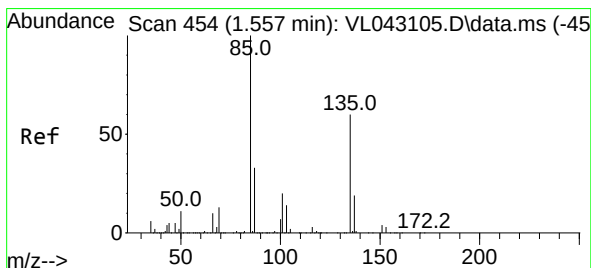
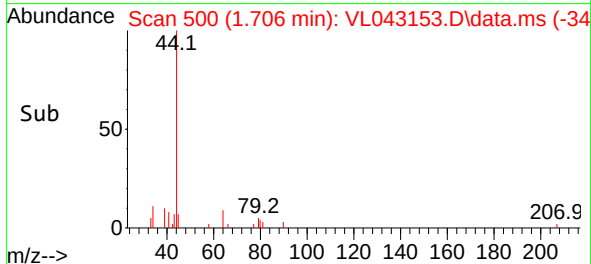
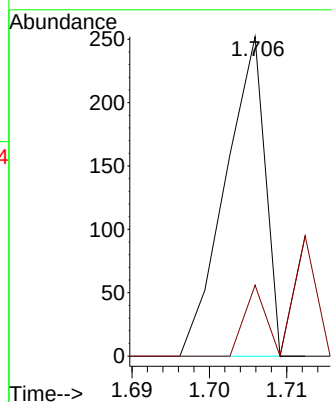
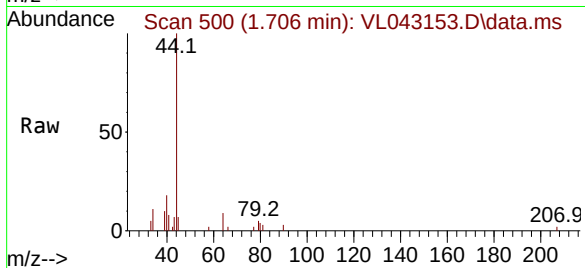




#7
Chloroethane
Concen: 0.036 ppbv
RT: 1.706 min Scan# 50
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

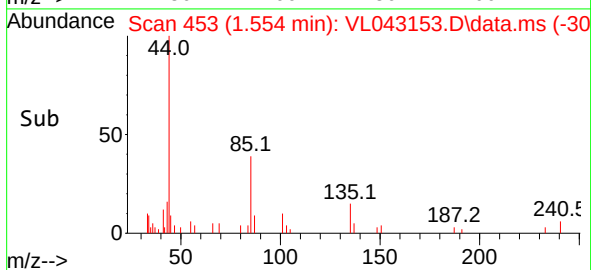
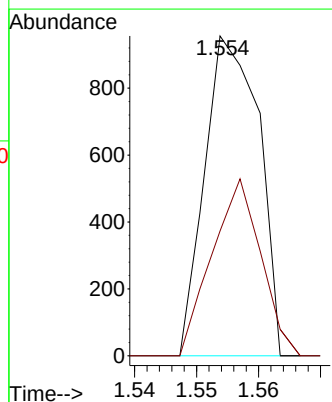
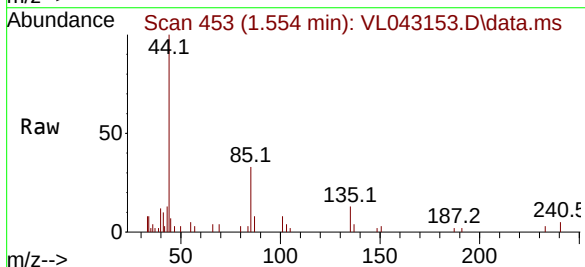
Instrument :
MSVOA_1
ClientSampleId :
LOQ-AIR-02-QT4-2025

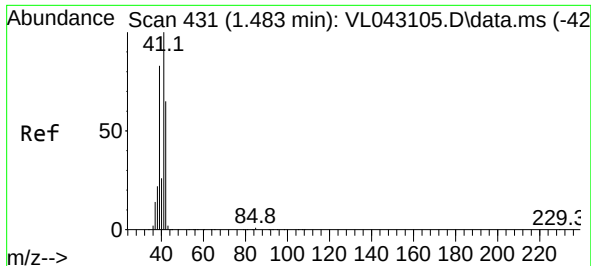
Tgt Ion: 64 Resp: 90
Ion Ratio Lower Upper
64 100
66 22.2 26.0 39.0#



#8
Dichlorotetrafluoroethane
Concen: 0.046 ppbv
RT: 1.554 min Scan# 453
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 85 Resp: 578
Ion Ratio Lower Upper
85 100
135 50.2 48.2 72.4





#9

Propene

Concen: 0.042 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

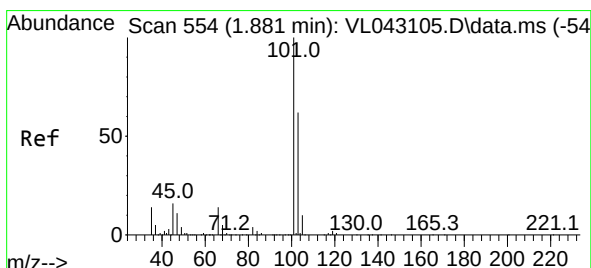
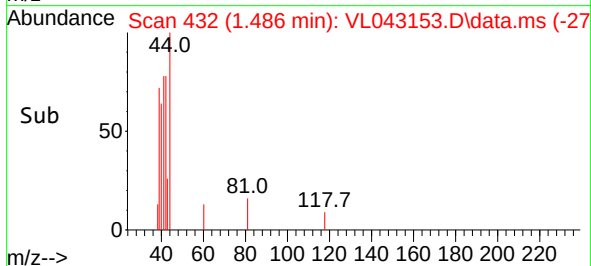
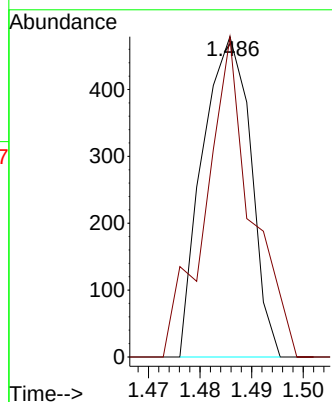
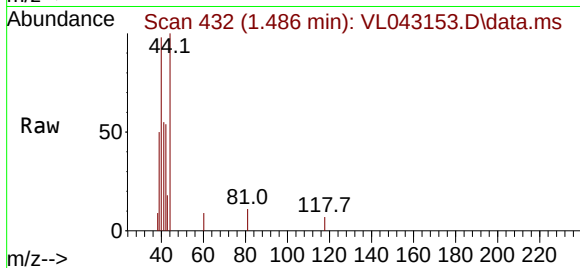
LOQ-AIR-02-QT4-2025

Tgt Ion: 41 Resp: 311

Ion Ratio Lower Upper

41 100

42 95.2 55.1 82.7#



#11

Trichlorofluoromethane

Concen: 0.043 ppbv

RT: 1.881 min Scan# 554

Delta R.T. -0.000 min

Lab File: VL043153.D

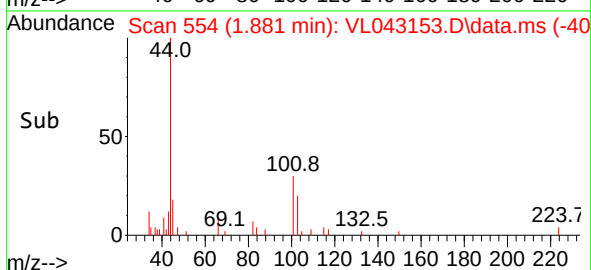
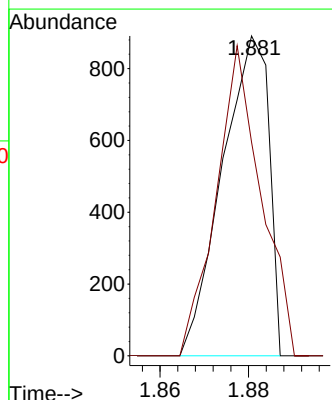
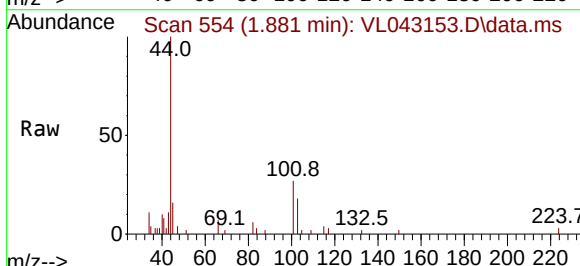
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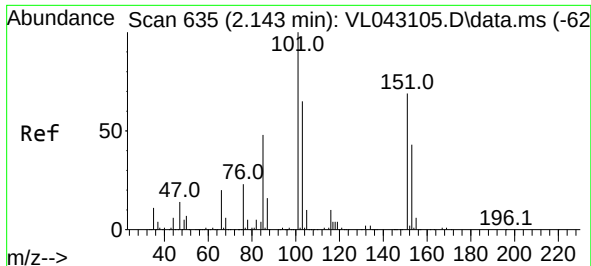
Tgt Ion: 101 Resp: 653

Ion Ratio Lower Upper

101 100

103 66.8 49.3 73.9

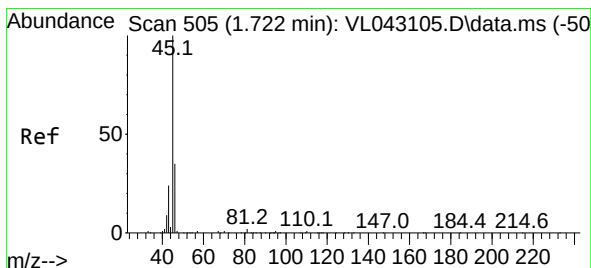
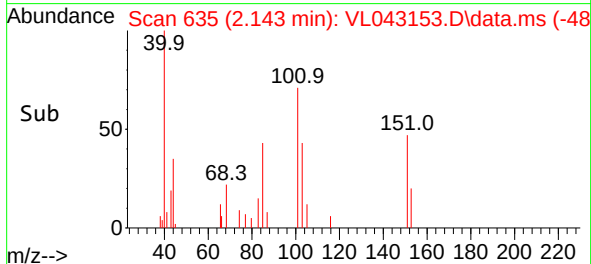
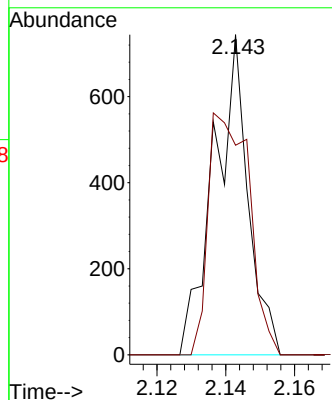
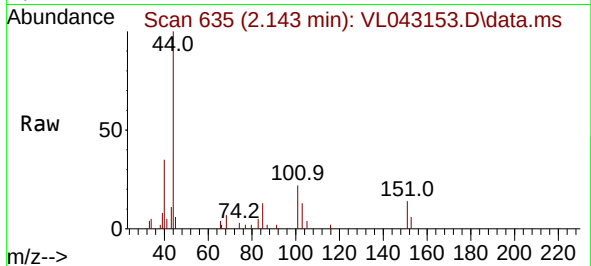




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.042 ppbv
RT: 2.143 min Scan# 611
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

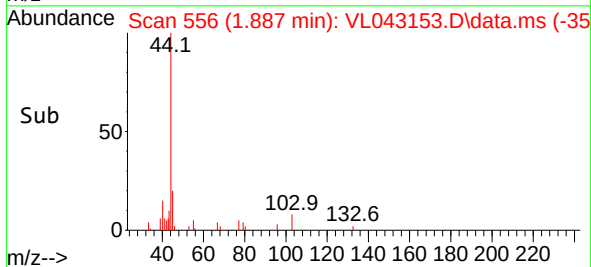
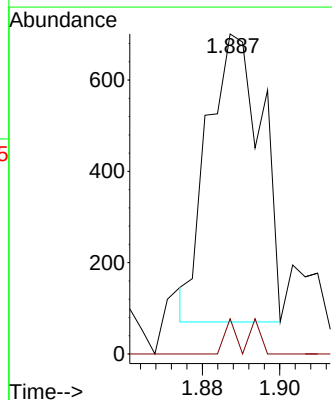
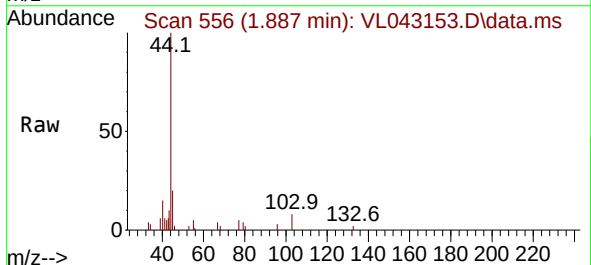
Instrument :
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LOQ-AIR-02-QT4-2025

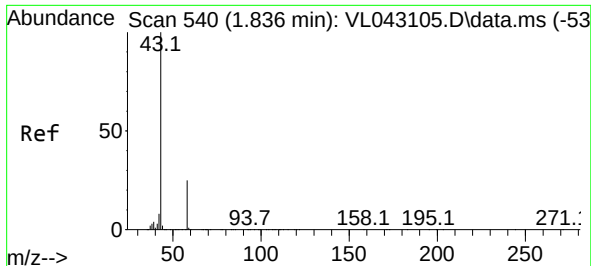
Tgt Ion:101 Resp: 511
Ion Ratio Lower Upper
101 100
151 90.8 54.7 82.1#



#13
Ethanol
Concen: 0.220 ppbv
RT: 1.887 min Scan# 556
Delta R.T. 0.165 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 45 Resp: 609
Ion Ratio Lower Upper
45 100
46 0.0 14.7 58.9#





#15

Acetone

Concen: 0.166 ppbv

RT: 1.839 min Scan# 541

Delta R.T. 0.003 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

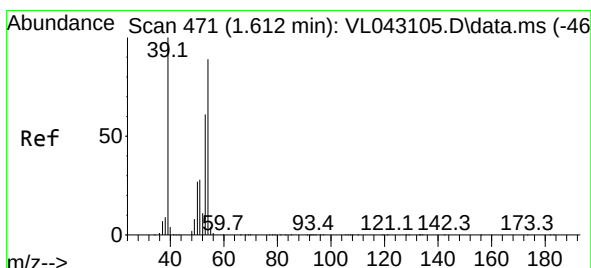
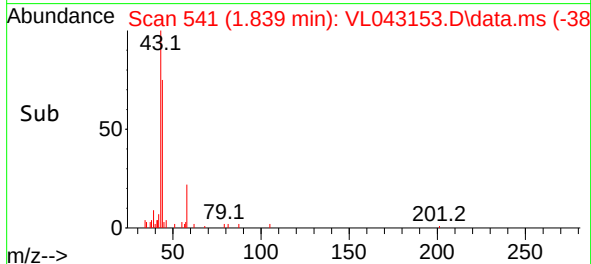
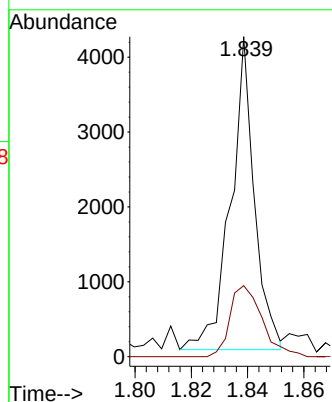
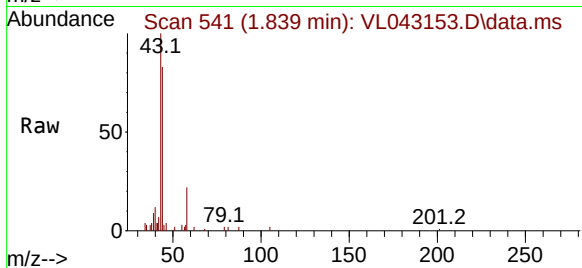
LOQ-AIR-02-QT4-2025

Tgt Ion: 43 Resp: 2449

Ion Ratio Lower Upper

43 100

58 30.8 20.8 31.2



#16

1,3-Butadiene

Concen: 0.037 ppbv

RT: 1.609 min Scan# 470

Delta R.T. -0.003 min

Lab File: VL043153.D

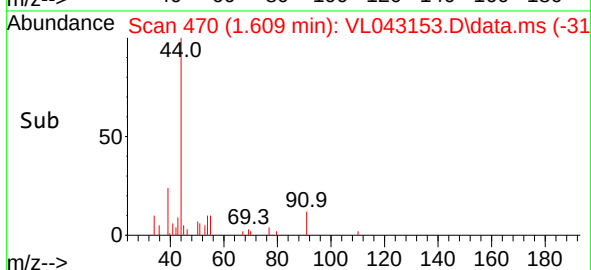
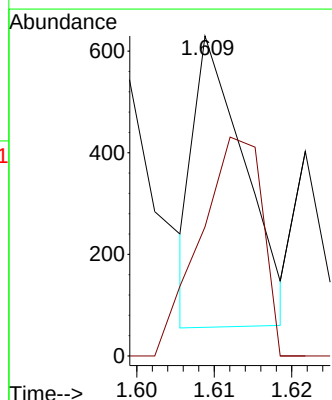
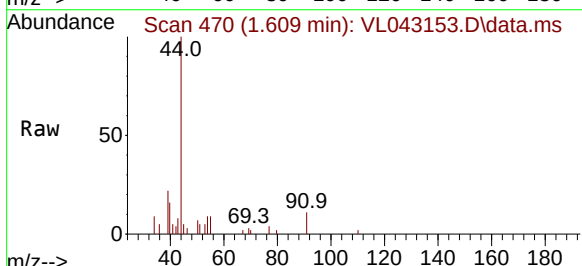
Acq: 04 Nov 2025 13:31

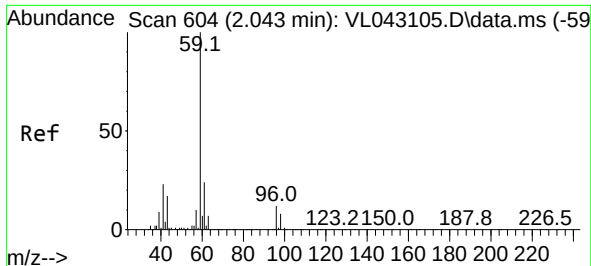
Tgt Ion: 39 Resp: 260

Ion Ratio Lower Upper

39 100

54 91.9 59.0 88.4#





#17

tert-Butyl alcohol

Concen: 0.047 ppbv

RT: 2.043 min Scan# 604

Delta R.T. -0.000 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

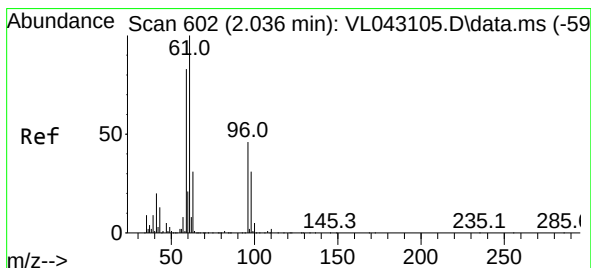
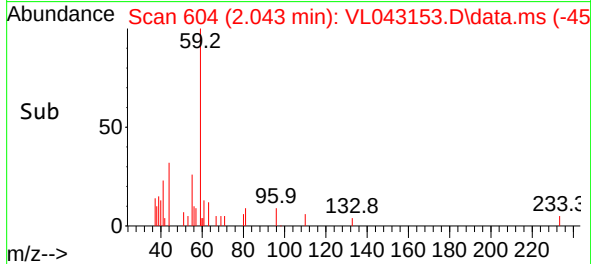
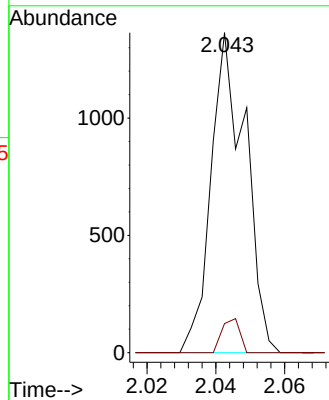
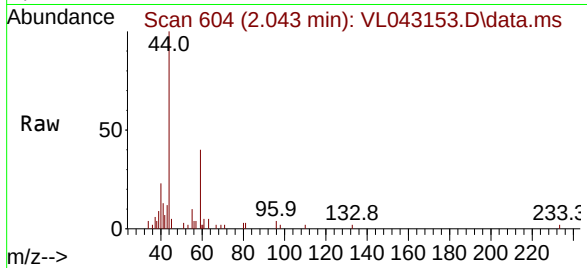
LOQ-AIR-02-QT4-2025

Tgt Ion: 59 Resp: 945

Ion Ratio Lower Upper

59 100

57 5.5 8.2 12.4#



#18

1,1-Dichloroethene

Concen: 0.034 ppbv

RT: 2.033 min Scan# 601

Delta R.T. -0.003 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

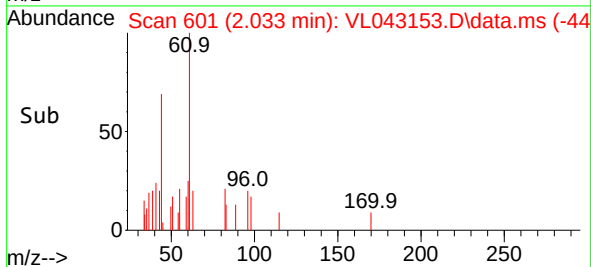
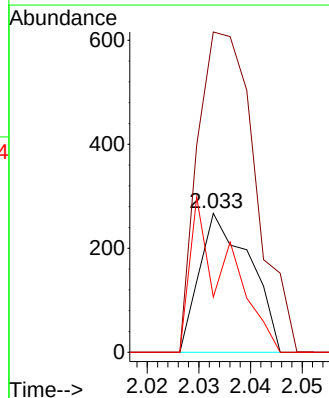
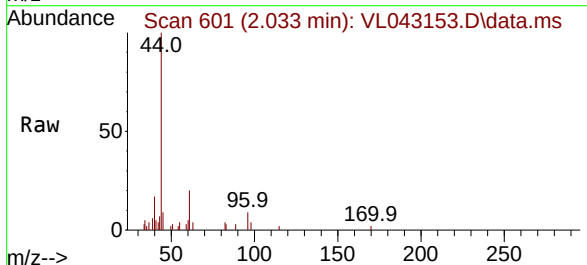
Tgt Ion: 96 Resp: 181

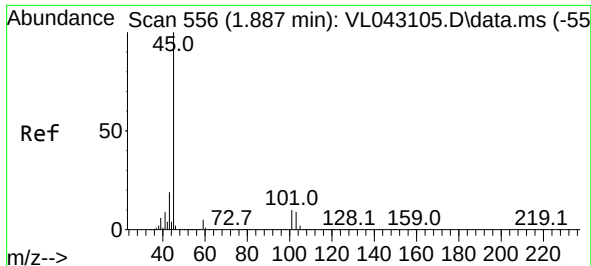
Ion Ratio Lower Upper

96 100

61 230.7 173.4 260.0

98 39.7 53.2 79.8#

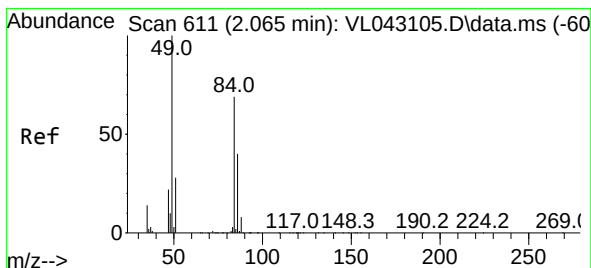
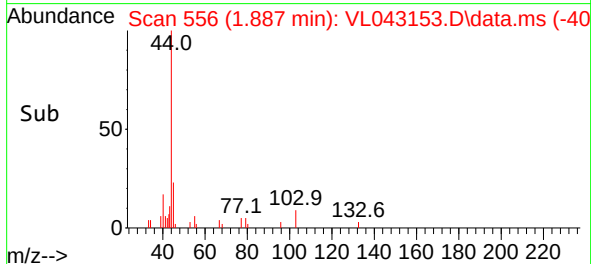
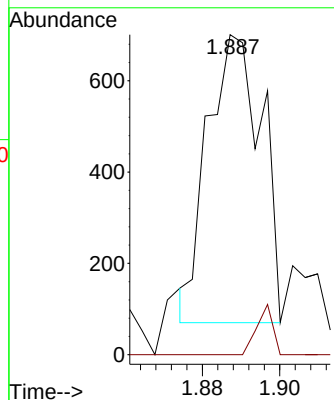
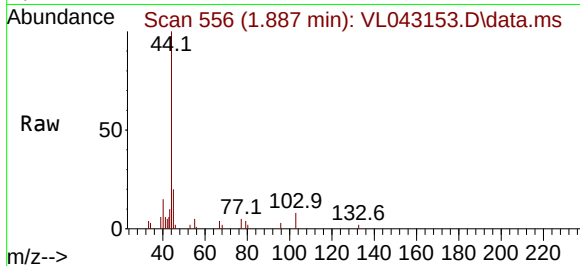




#19
Isopropyl Alcohol
Concen: 0.066 ppbv
RT: 1.887 min Scan# 51
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

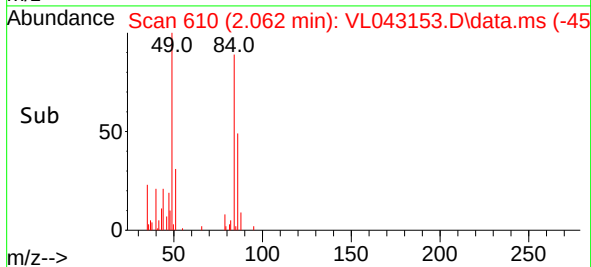
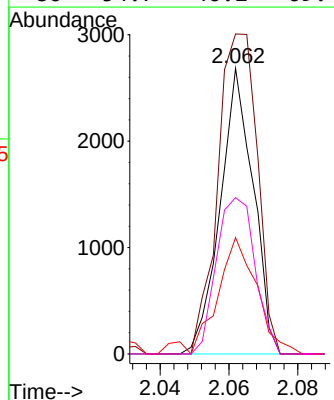
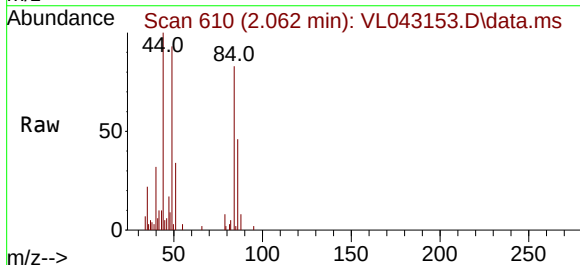
Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

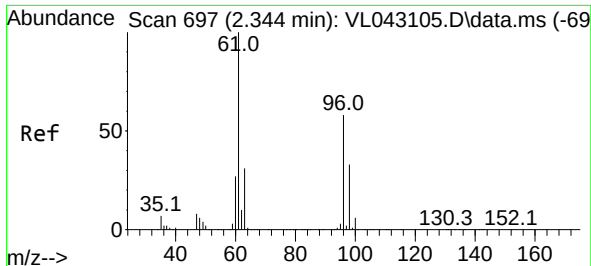
Tgt Ion: 45 Resp: 609
Ion Ratio Lower Upper
45 100
58 123.8 31.3 46.9#



#20
Methylene Chloride
Concen: 0.307 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 84 Resp: 1790
Ion Ratio Lower Upper
84 100
49 115.0 116.6 175.0#
51 36.6 34.8 52.2
86 54.7 46.2 69.4

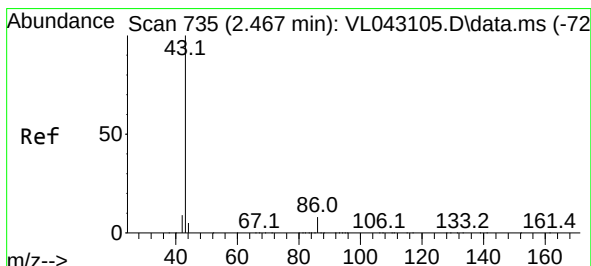
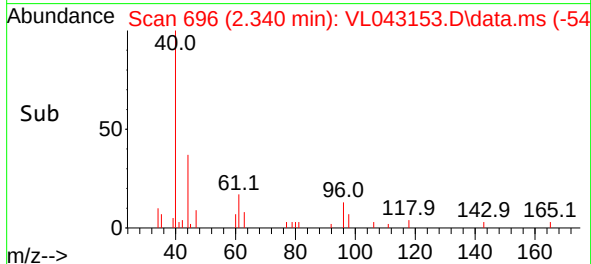
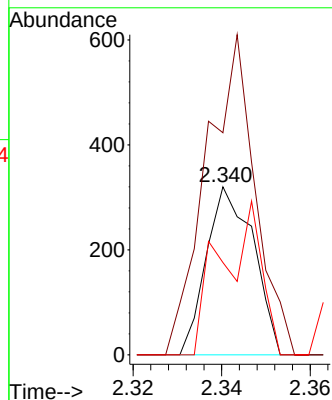
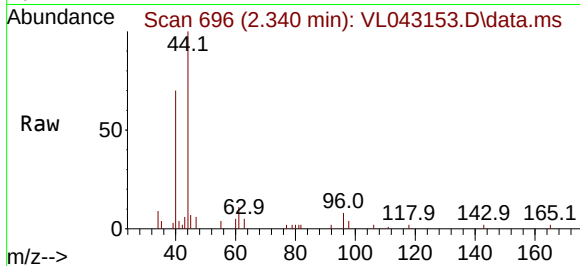




#22
trans-1,2-Dichloroethene
Concen: 0.037 ppbv
RT: 2.340 min Scan# 697
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

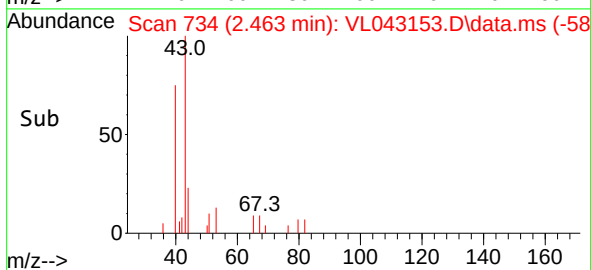
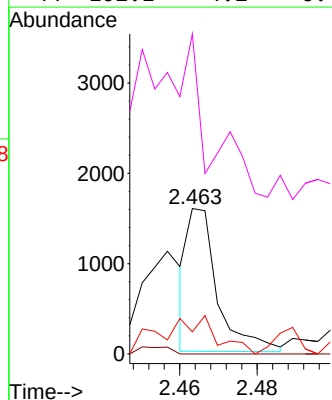
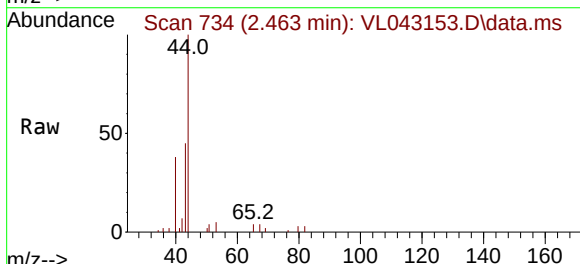
Instrument : MSVOA_1
ClientSampleId : LOQ-AIR-02-QT4-2025

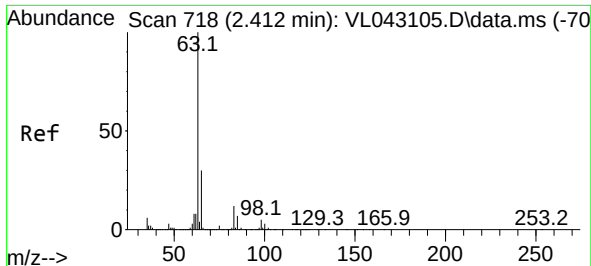
Tgt Ion: 96 Resp: 236
Ion Ratio Lower Upper
96 100
61 101.6 137.0 205.6#
98 55.0 45.5 68.3



#23
Vinyl Acetate
Concen: 0.039 ppbv
RT: 2.463 min Scan# 734
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 43 Resp: 853
Ion Ratio Lower Upper
43 100
86 0.0 6.2 9.2#
42 1.0 7.6 11.4#
44 102.1 4.2 6.4#

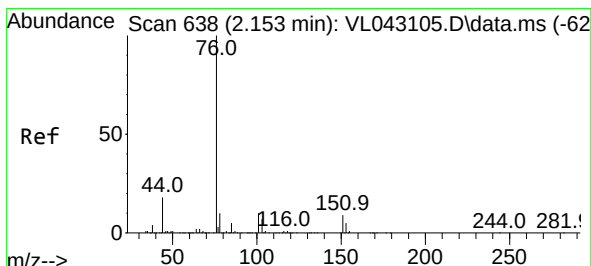
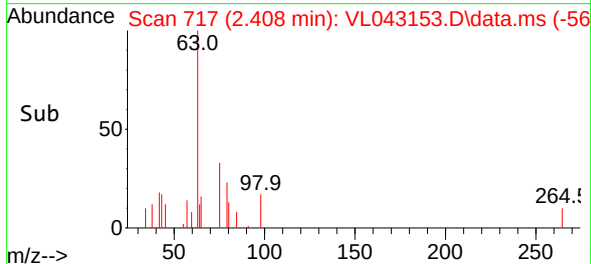
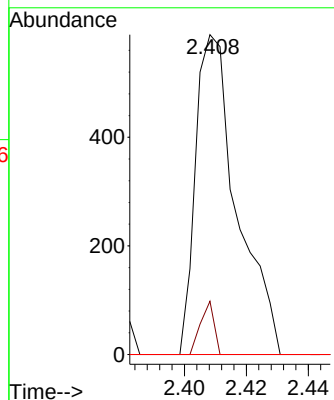
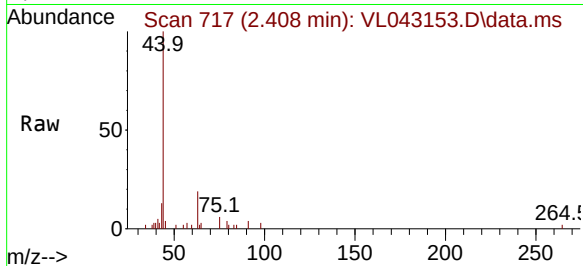




#24
 1,1-Dichloroethane
 Concen: 0.044 ppbv
 RT: 2.408 min Scan# 718
 Delta R.T. -0.003 min
 Lab File: VL043153.D
 Acq: 04 Nov 2025 13:31

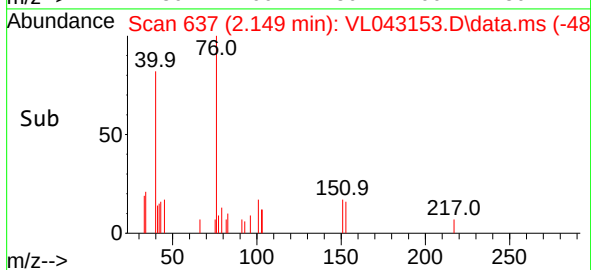
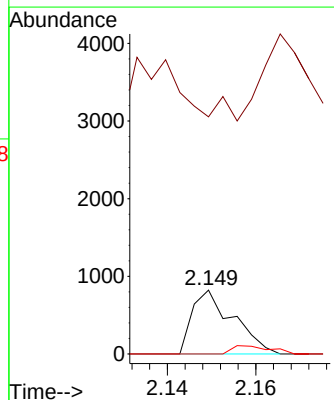
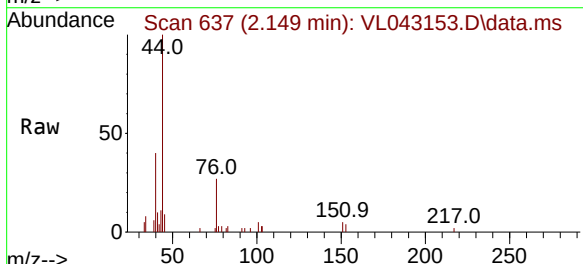
Instrument :
 MSVOA_L
 ClientSampleId :
 LOQ-AIR-02-QT4-2025

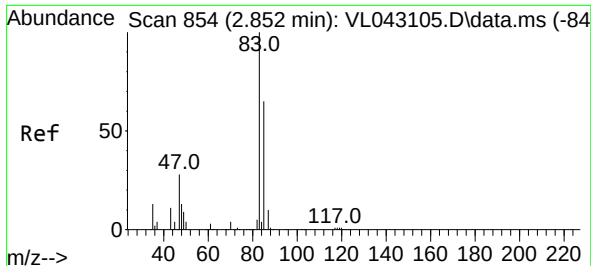
Tgt Ion:	63	Resp:	546
Ion	Ratio	Lower	Upper
63	100		
98	16.6	2.6	7.8#
100	0.0	1.5	4.4#



#27
 Carbon Disulfide
 Concen: 0.034 ppbv
 RT: 2.149 min Scan# 637
 Delta R.T. -0.003 min
 Lab File: VL043153.D
 Acq: 04 Nov 2025 13:31

Tgt Ion:	76	Resp:	531
Ion	Ratio	Lower	Upper
76	100		
44	979.3	16.7	25.1#
78	11.9	9.3	13.9





#29

Chloroform

Concen: 0.035 ppbv

RT: 2.848 min Scan# 81

Delta R.T. -0.003 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

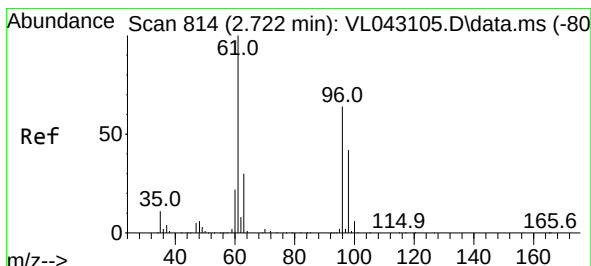
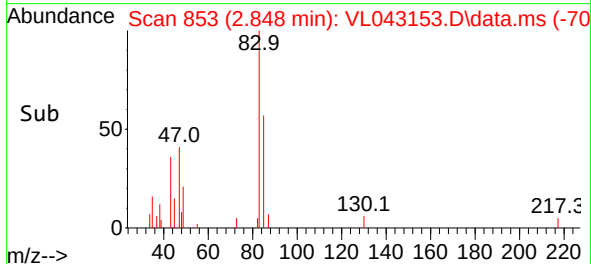
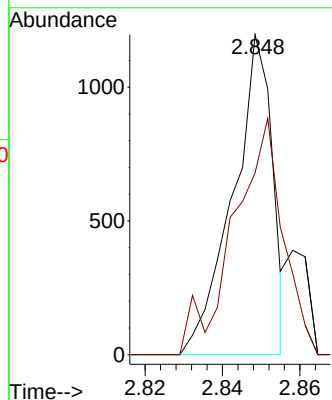
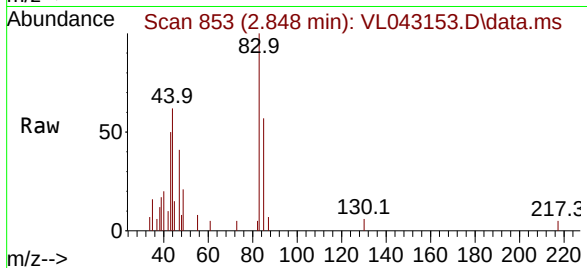
LOQ-AIR-02-QT4-2025

Tgt Ion: 83 Resp: 849

Ion Ratio Lower Upper

83 100

85 56.8 51.8 77.6



#31

cis-1,2-Dichloroethene

Concen: 0.035 ppbv

RT: 2.722 min Scan# 814

Delta R.T. -0.000 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

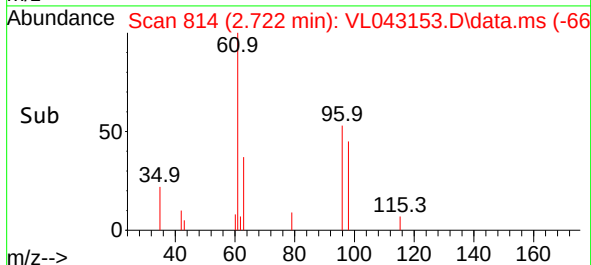
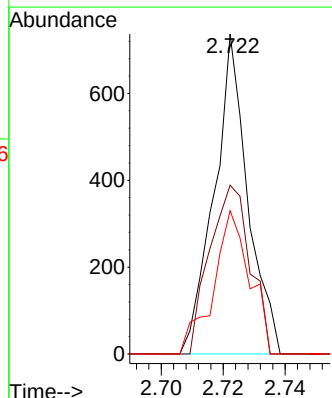
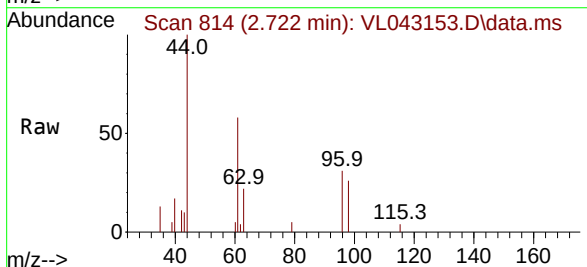
Tgt Ion: 61 Resp: 556

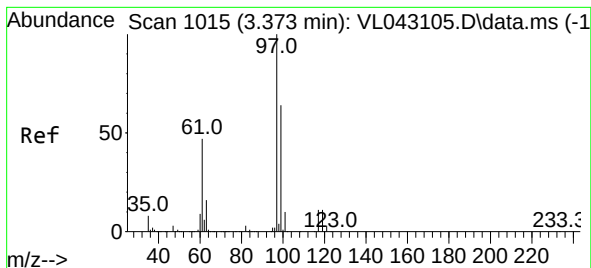
Ion Ratio Lower Upper

61 100

96 49.1 51.0 76.6#

98 41.7 33.5 50.3





#32

1,1,1-Trichloroethane

Concen: 0.034 ppbv

RT: 3.373 min Scan# 1195

Delta R.T. -0.000 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

LOQ-AIR-02-QT4-2025

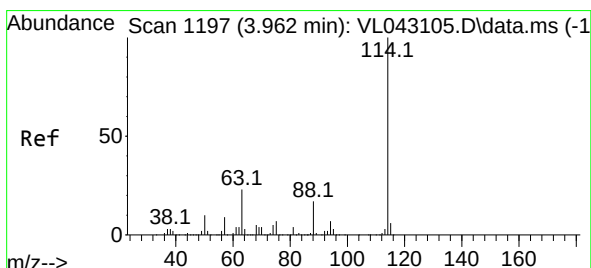
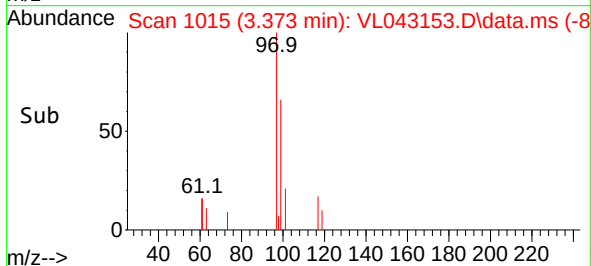
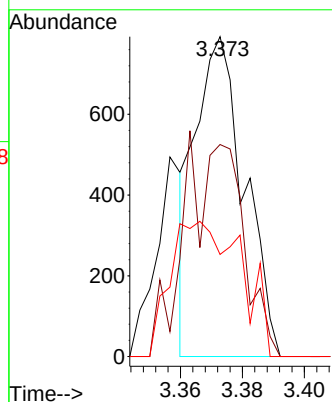
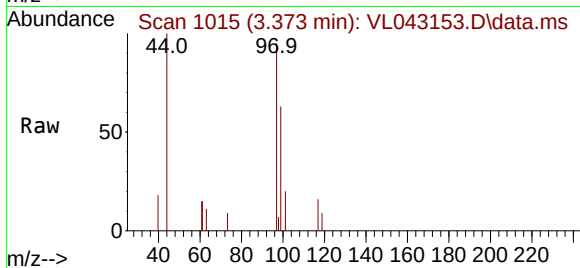
Tgt Ion: 97 Resp: 877

Ion Ratio Lower Upper

97 100

99 0.0 51.3 76.9#

61 0.0 38.4 57.6#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.003 min

Lab File: VL043153.D

Acq: 04 Nov 2025 13:31

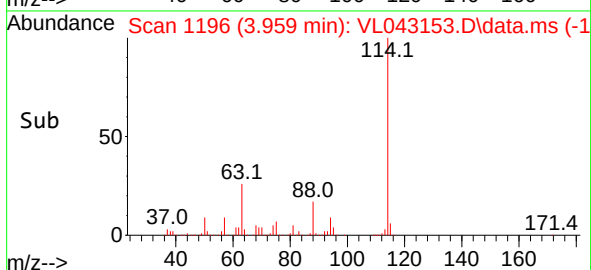
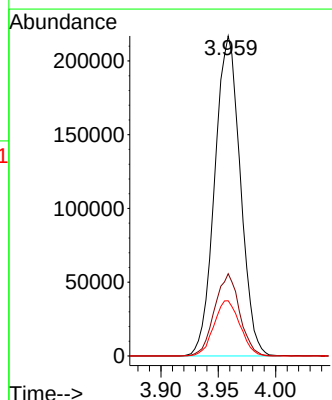
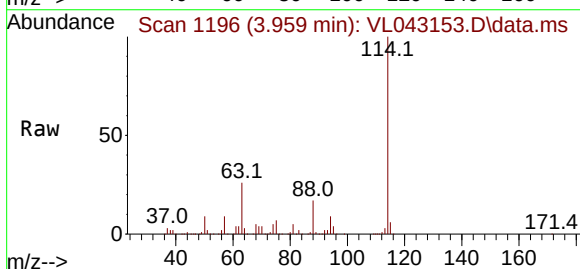
Tgt Ion: 114 Resp: 336404

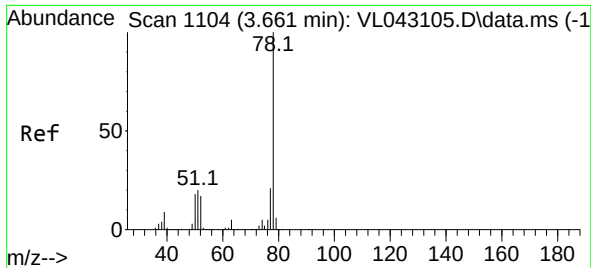
Ion Ratio Lower Upper

114 100

63 25.2 19.3 28.9

88 17.6 13.9 20.9

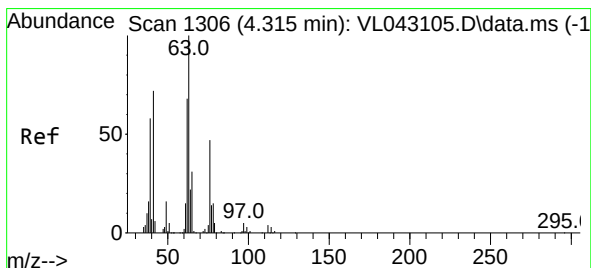
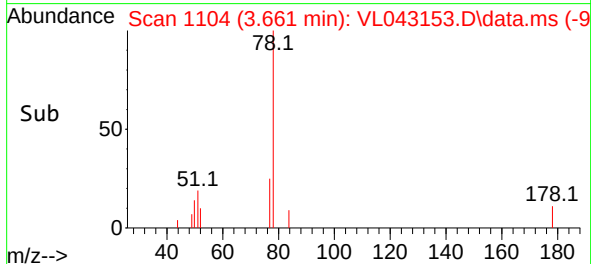
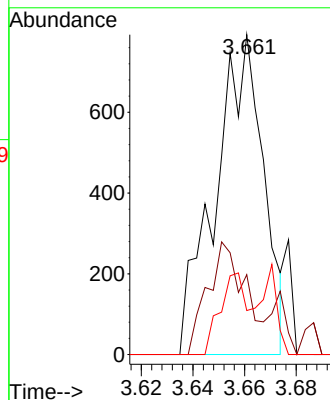
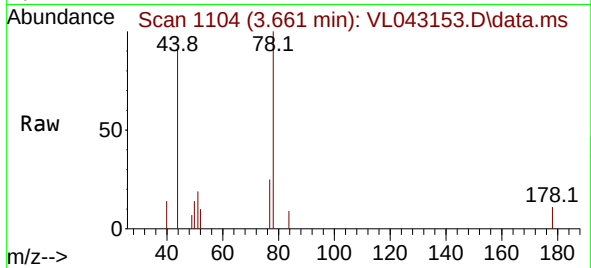




#36
Benzene
Concen: 0.032 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. -0.000 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

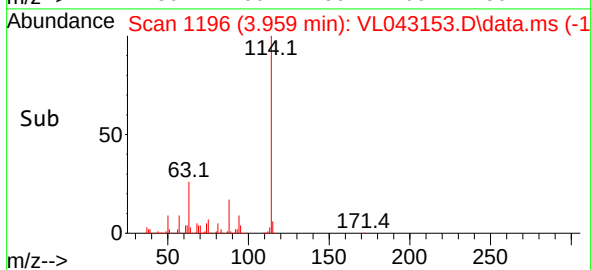
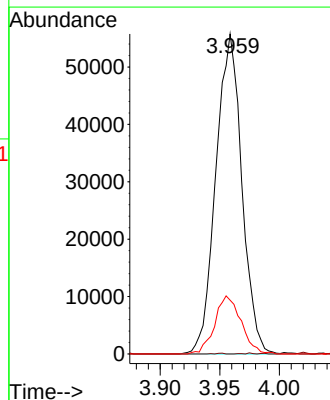
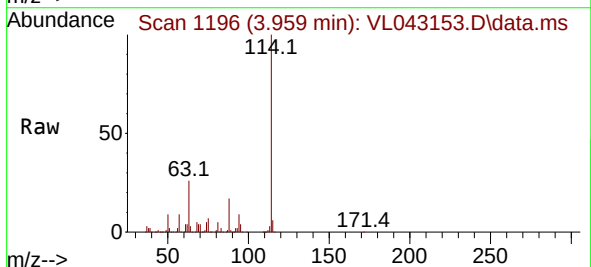
Instrument : MSVOA_L
ClientSampleId : LOQ-AIR-02-QT4-2025

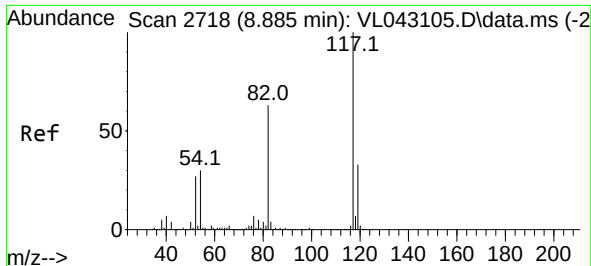
Tgt Ion: 78 Resp: 1029
Ion Ratio Lower Upper
78 100
77 25.0 17.0 25.6
50 13.8 14.6 22.0#



#39
1,2-Dichloropropane
Concen: 7.301 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.356 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 63 Resp: 84569
Ion Ratio Lower Upper
63 100
41 0.0 58.0 87.0#
62 16.8 54.7 82.1#

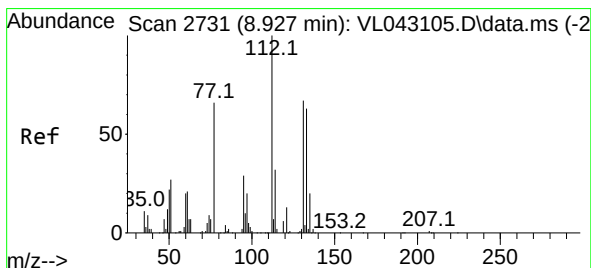
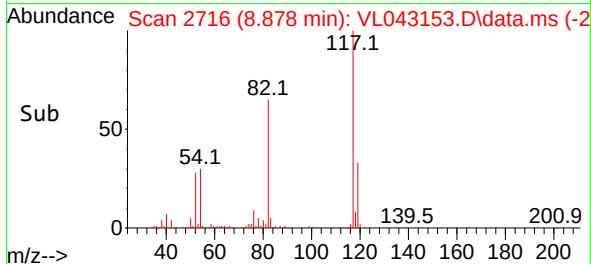
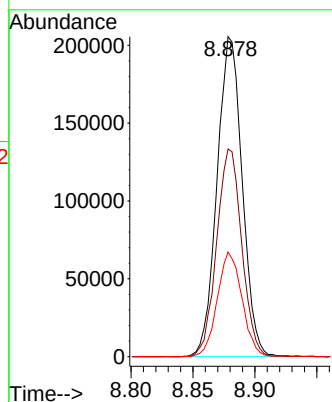
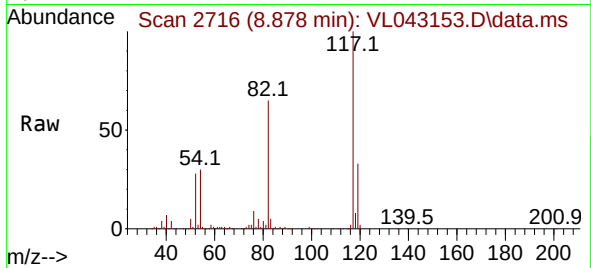




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2716
Delta R.T. -0.007 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

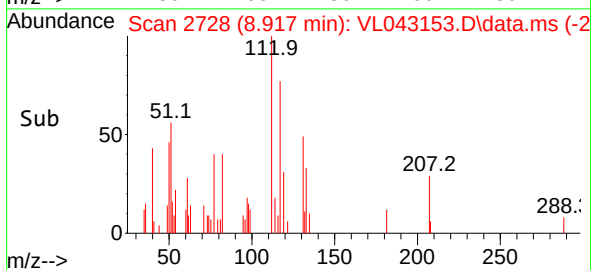
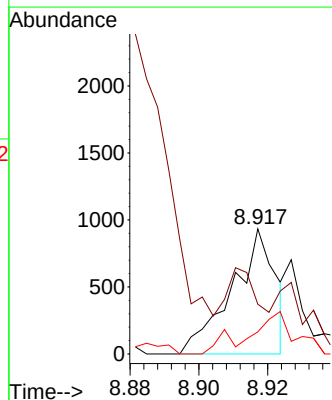
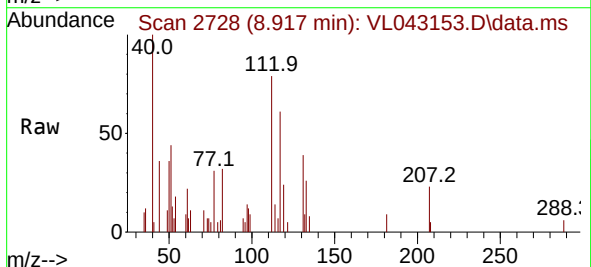
Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

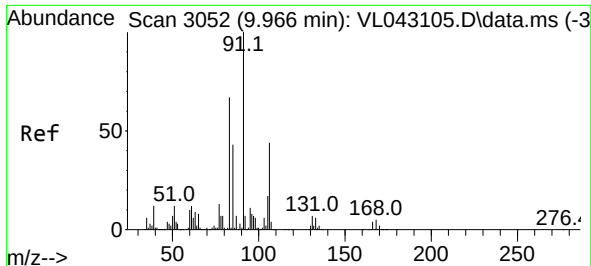
Tgt Ion:117 Resp: 291017
Ion Ratio Lower Upper
117 100
82 64.8 53.8 80.8
119 32.2 25.4 38.0



#57
Chlorobenzene
Concen: 0.030 ppbv
RT: 8.917 min Scan# 2728
Delta R.T. -0.010 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion:112 Resp: 817
Ion Ratio Lower Upper
112 100
77 0.0 53.3 79.9#
114 17.6 29.3 35.8#

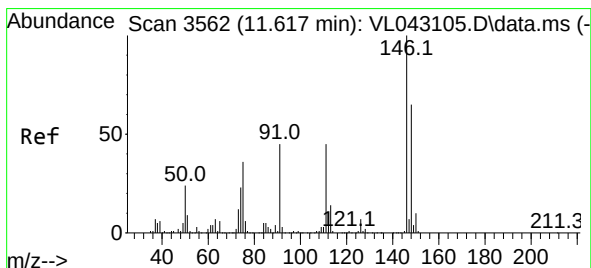
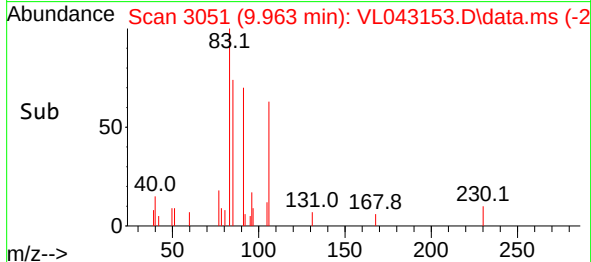
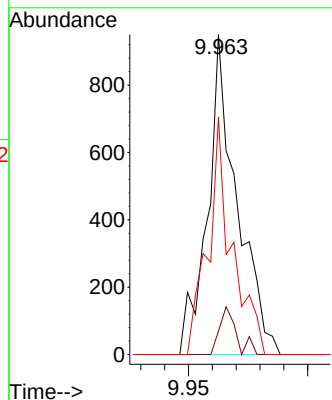
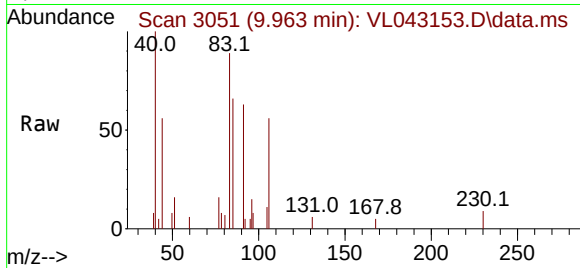




#63
1,1,2,2-Tetrachloroethane
Concen: 0.031 ppbv
RT: 9.963 min Scan# 3052
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

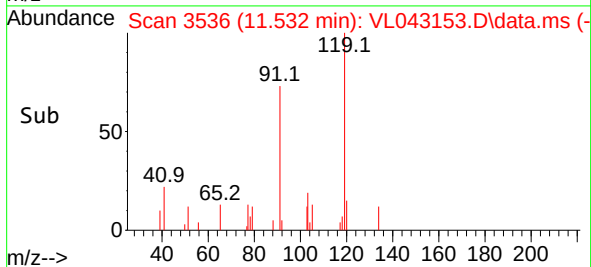
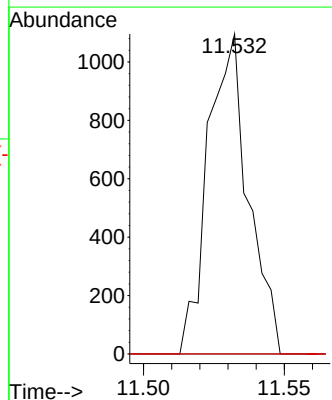
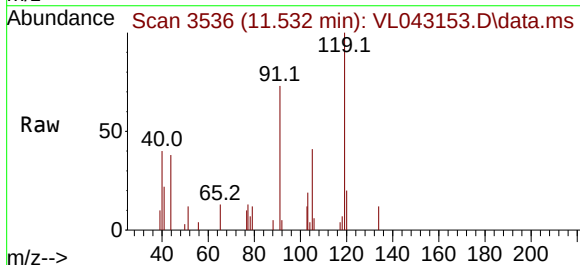
Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

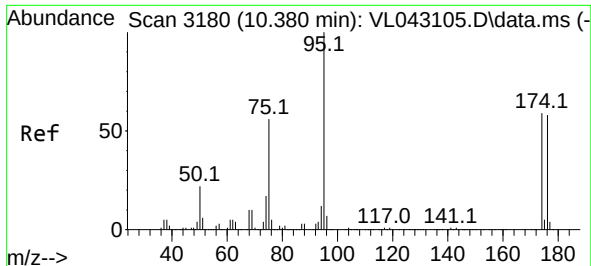
Tgt Ion:	83	Resp:	813
Ion	Ratio	Lower	Upper
83	100		
131	8.5	4.8	14.3
85	60.1	32.0	96.0



#66
Benzyl Chloride
Concen: 0.156 ppbv
RT: 11.532 min Scan# 3536
Delta R.T. -0.084 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion:	91	Resp:	1090
Ion	Ratio	Lower	Upper
91	100		
126	0.0	14.6	22.0#
128	0.0	4.6	6.8#

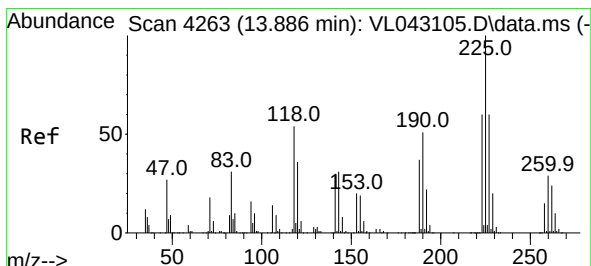
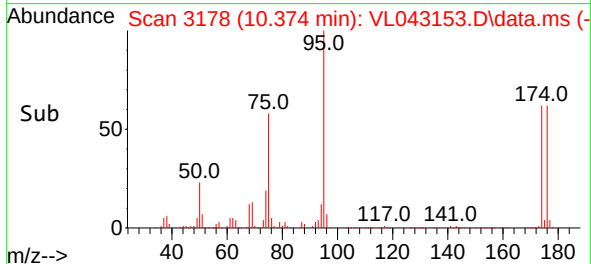
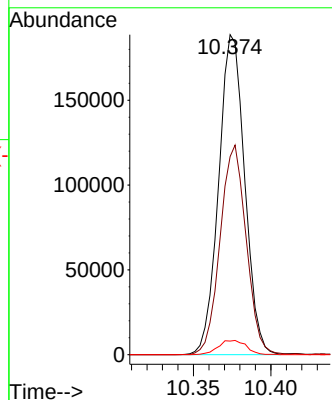
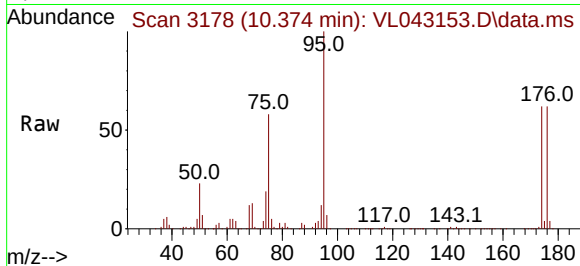




#68
1-Bromo-4-Fluorobenzene
Concen: 9.762 ppbv
RT: 10.374 min Scan# 3180
Delta R.T. -0.007 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Instrument :
MSVOA_L
ClientSampleId :
LOQ-AIR-02-QT4-2025

Tgt Ion: 95 Resp: 220810
Ion Ratio Lower Upper
95 100
174 65.7 48.3 72.5
175 4.8 3.8 5.8



#78
Hexachloro-1,3-Butadiene
Concen: 0.042 ppbv
RT: 13.882 min Scan# 4262
Delta R.T. -0.003 min
Lab File: VL043153.D
Acq: 04 Nov 2025 13:31

Tgt Ion: 225 Resp: 809
Ion Ratio Lower Upper
225 100
223 54.6 50.2 75.4
227 60.7 49.6 74.4

