

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL112425\
 Data File : VL043289.D
 Acq On : 24 Nov 2025 20:07
 Operator : SY/MD
 Sample : Q3696-01DL 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

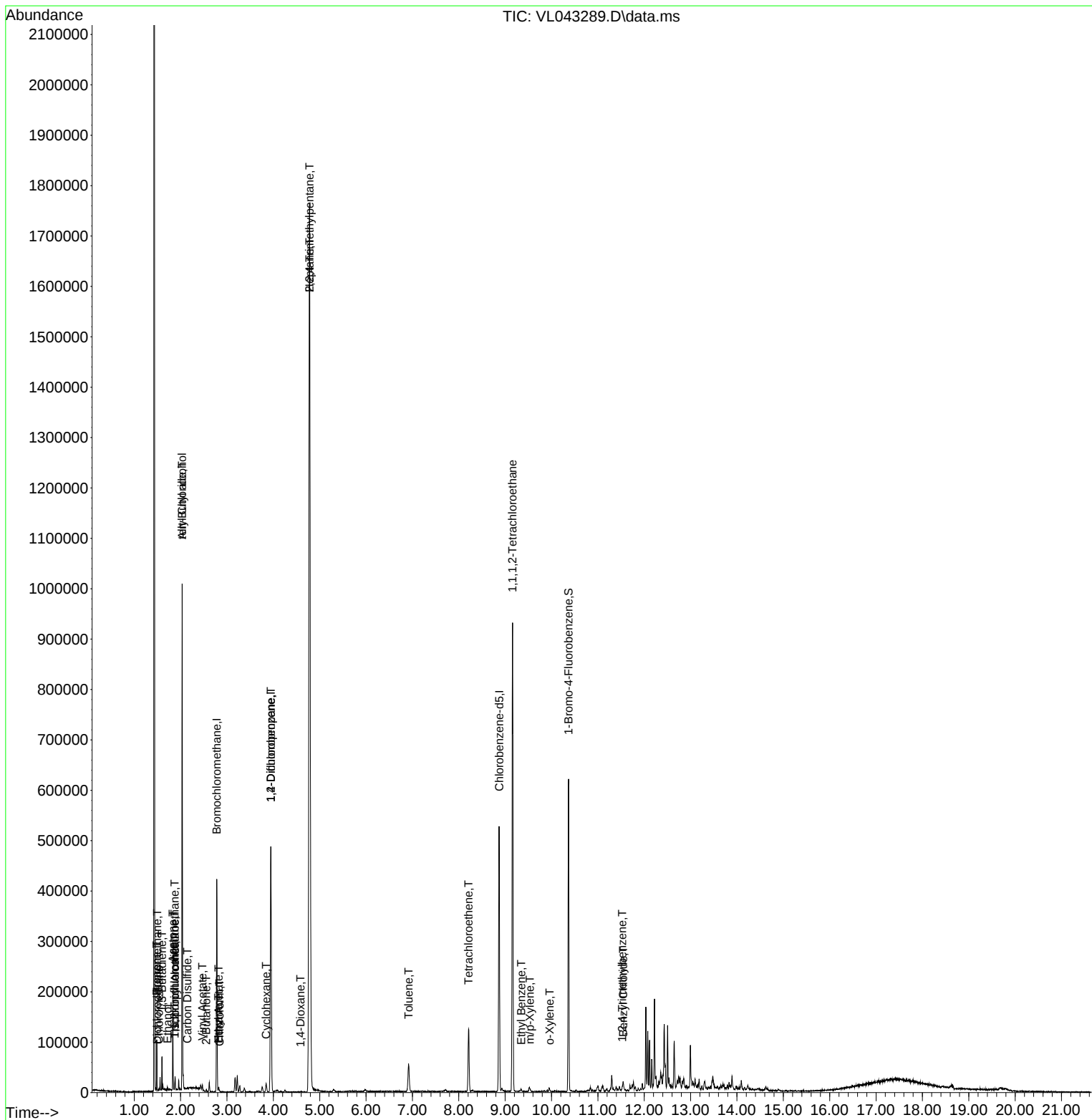
Quant Time: Nov 25 01:24:10 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

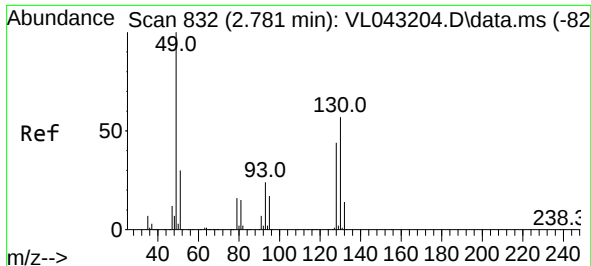
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.780	49	110400	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.946	114	279064	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	209824	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.367	95	151349	9.841	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.400%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.495	85	934	0.060	ppbv #	82
4) Chloromethane	1.531	50	811	0.139	ppbv #	80
9) Propene	1.486	41	9524	1.465	ppbv #	1
10) Heptane	4.781	43	814023	42.062	ppbv	90
11) Trichlorofluoromethane	1.874	101	2202	0.146	ppbv	97
12) 1,1,2-Trichlorotrifluo...	1.874	101	2202	0.187	ppbv #	12
13) Ethanol	1.719	45	1931	0.844	ppbv #	38
15) Acetone	1.832	43	71896	4.687	ppbv	99
16) 1,3-Butadiene	1.599	39	7996	1.169	ppbv #	18
17) tert-Butyl alcohol	2.033	59	394738	19.606	ppbv	100
19) Isopropyl Alcohol	1.881	45	9336	1.077	ppbv #	1
20) Methylene Chloride	2.059	84	3484	Below Cal	#	80
21) Allyl Chloride	2.033	41	106853	10.354	ppbv #	62
23) Vinyl Acetate	2.470	43	2757	0.149	ppbv #	26
25) Ethyl Acetate	2.819	43	1026	0.031	ppbv #	81
26) Hexane	2.816	57	1087	0.075	ppbv #	49
27) Carbon Disulfide	2.146	76	1057	0.071	ppbv #	1
29) Chloroform	2.842	83	683	0.033	ppbv #	83
30) Cyclohexane	3.845	84	2840	0.234	ppbv #	70
34) 2-Butanone	2.554	43	2452	0.124	ppbv	98
39) 1,2-Dichloropropane	3.946	63	68938	7.048	ppbv #	25
40) 1,4-Dioxane	4.586	88	179	0.041	ppbv #	18
44) 2,2,4-Trimethylpentane	4.781	57	459885	10.020	ppbv #	1
52) Tetrachloroethene	8.211	164	22509	2.264	ppbv	97
53) Toluene	6.917	91	39048	1.234	ppbv	98
56) 1,1,1,2-Tetrachloroethane	9.157	131	3462	0.225	ppbv #	9
58) Ethyl Benzene	9.347	91	1346	0.033	ppbv #	89
59) m/p-Xylene	9.532	91	1734	0.054	ppbv #	31
60) o-Xylene	9.959	91	978	0.030	ppbv #	1
66) Benzyl Chloride	11.545	91	176	0.034	ppbv #	65
74) 1,2,4-Trimethylbenzene	11.526	105	2636	0.073	ppbv #	44

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

Quant Time: Nov 25 01:24:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Nov 19 01:11:25 2025
Response via : Initial Calibration

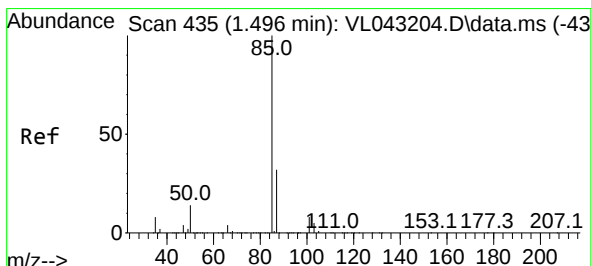
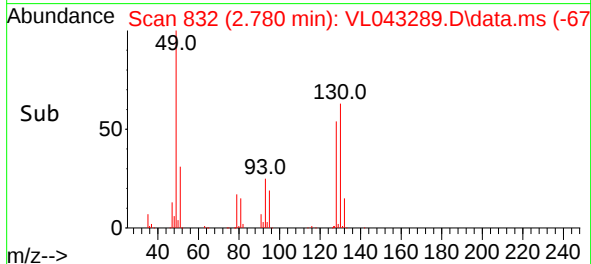
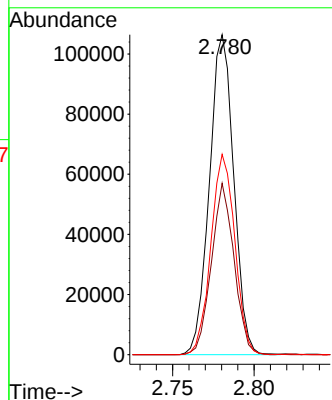
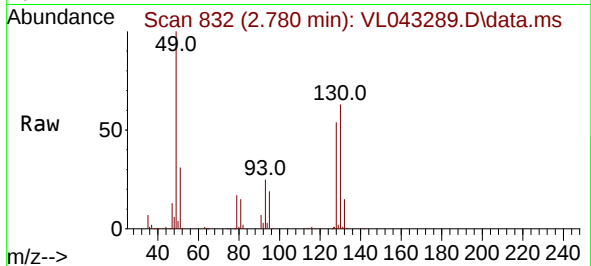




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.780 min Scan# 832
Delta R.T. -0.001 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

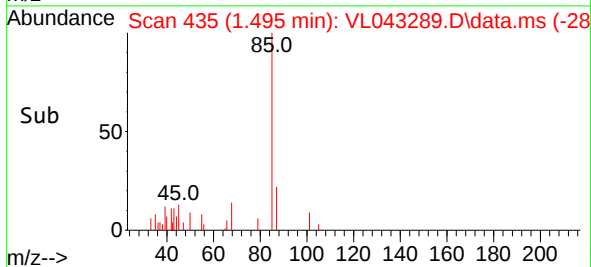
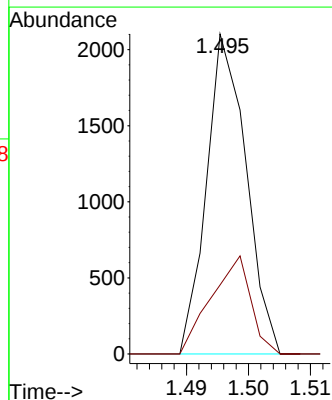
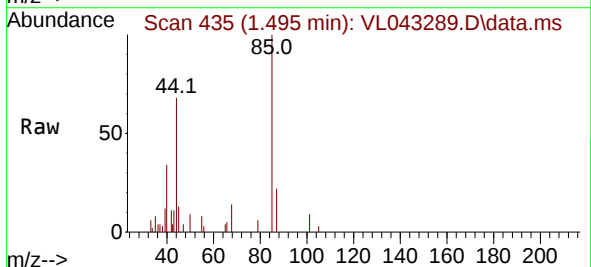
Instrument :
MSVOA_L
ClientSampleId :

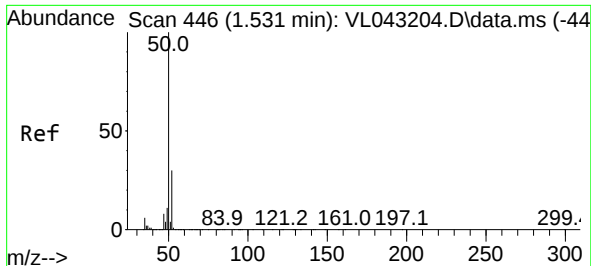
Tgt Ion: 49 Resp: 110400
Ion Ratio Lower Upper
49 100
128 50.0 23.0 69.0
130 61.7 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.060 ppbv
RT: 1.495 min Scan# 435
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 85 Resp: 934
Ion Ratio Lower Upper
85 100
87 21.5 25.4 38.2#

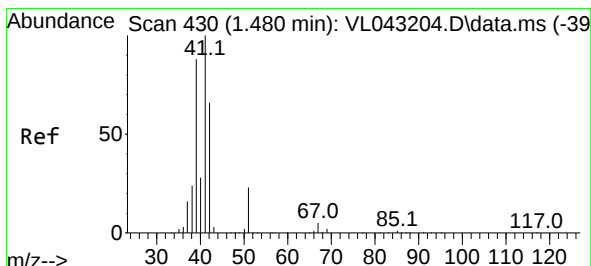
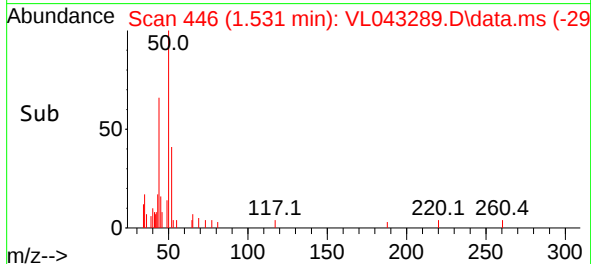
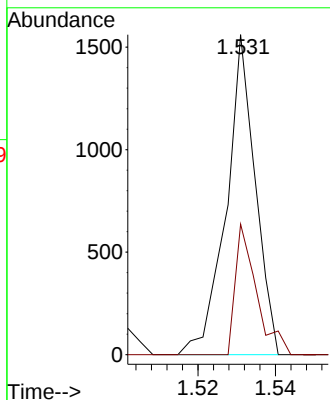
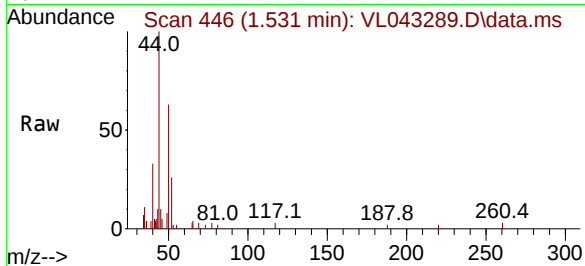




#4
Chloromethane
Concen: 0.139 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

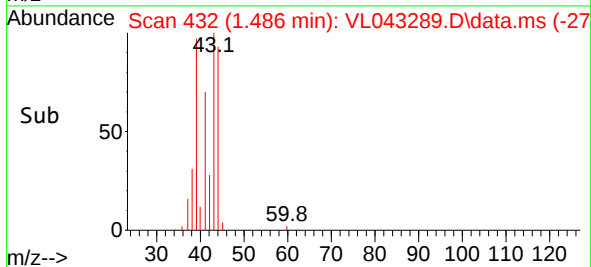
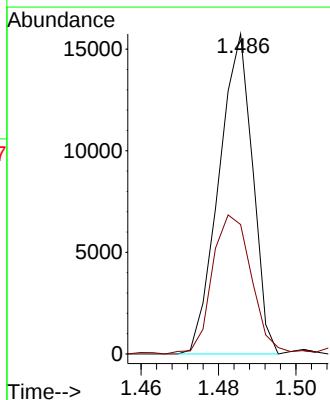
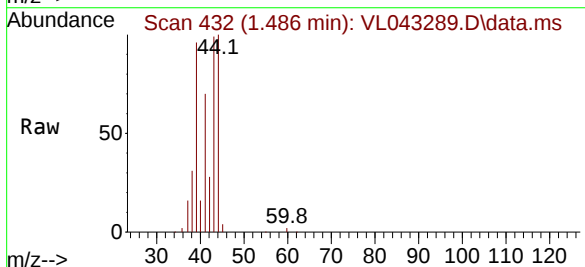
Instrument :
MSVOA_L
ClientSampleId :

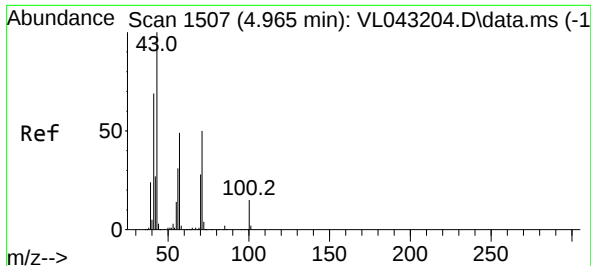
Tgt Ion: 50 Resp: 811
Ion Ratio Lower Upper
50 100
52 40.8 24.1 36.1#



#9
Propene
Concen: 1.465 ppbv
RT: 1.486 min Scan# 432
Delta R.T. 0.006 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 41 Resp: 9524
Ion Ratio Lower Upper
41 100
42 53.6 3.7 5.5#

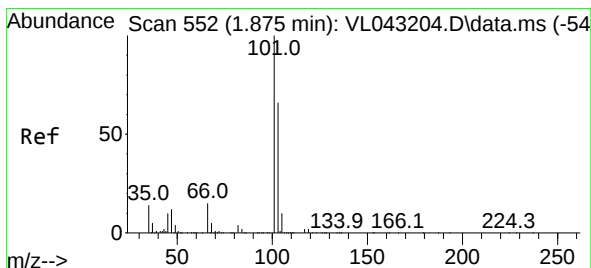
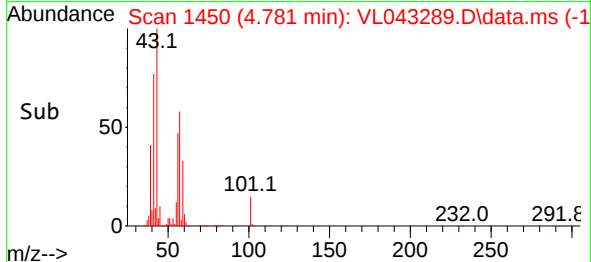
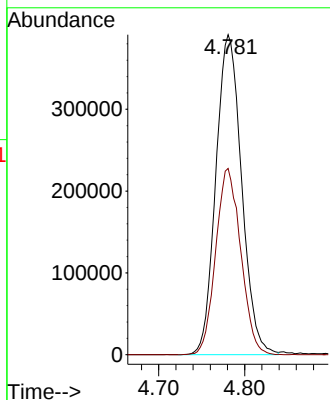
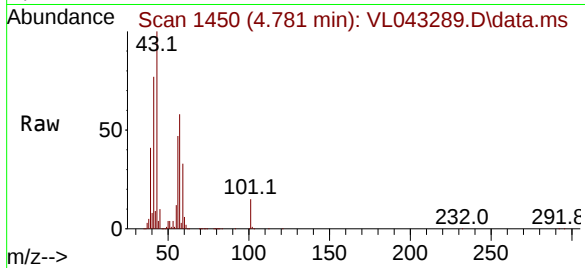




#10
Heptane
Concen: 42.062 ppbv
RT: 4.781 min Scan# 14
Delta R.T. -0.185 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

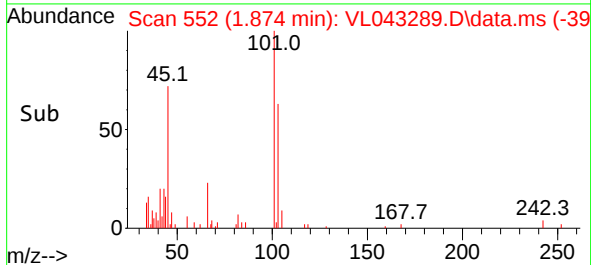
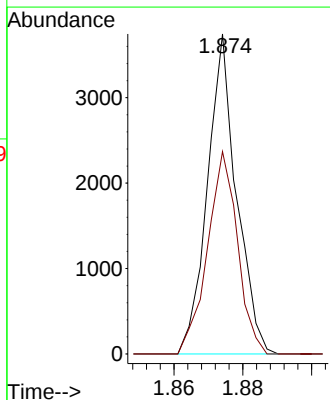
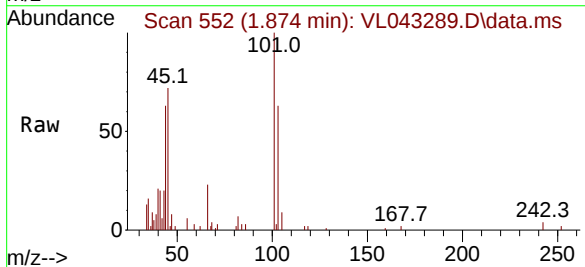
Instrument :
MSVOA_L
ClientSampleId :

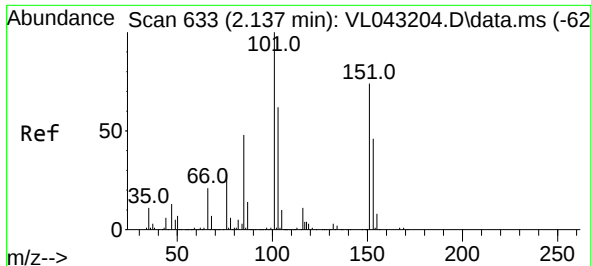
Tgt Ion: 43 Resp: 814023
Ion Ratio Lower Upper
43 100
57 56.5 39.7 59.5



#11
Trichlorofluoromethane
Concen: 0.146 ppbv
RT: 1.874 min Scan# 552
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion:101 Resp: 2202
Ion Ratio Lower Upper
101 100
103 63.2 52.6 79.0

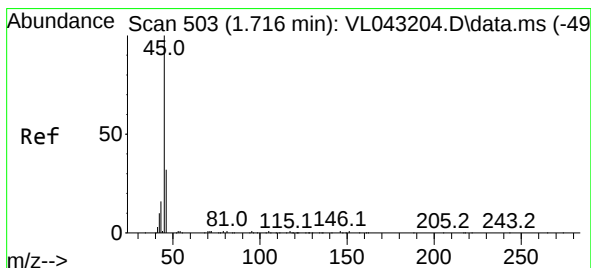
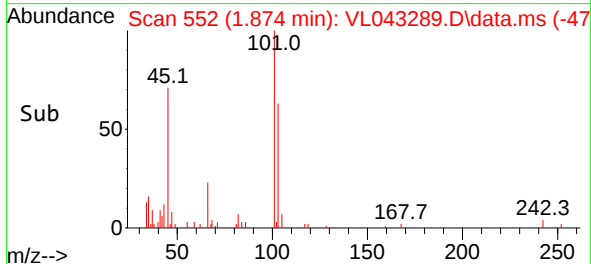
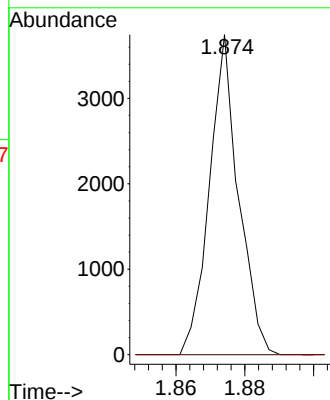
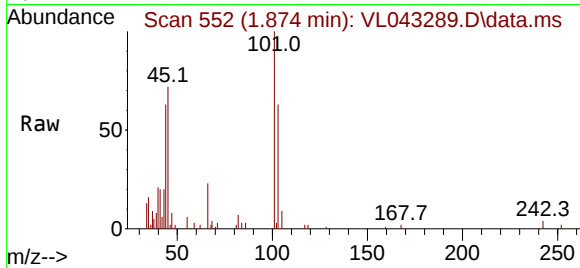




#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.187 ppbv
 RT: 1.874 min Scan# 511
 Delta R.T. -0.263 min
 Lab File: VL043289.D
 Acq: 24 Nov 2025 20:07

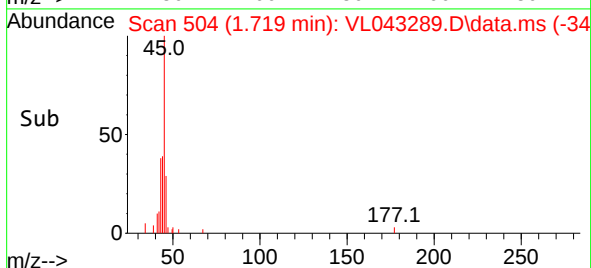
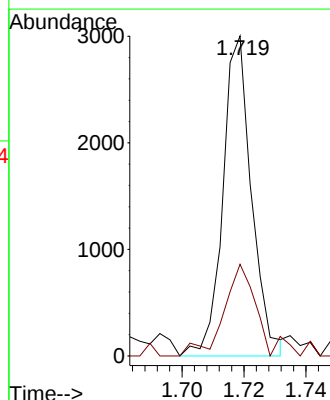
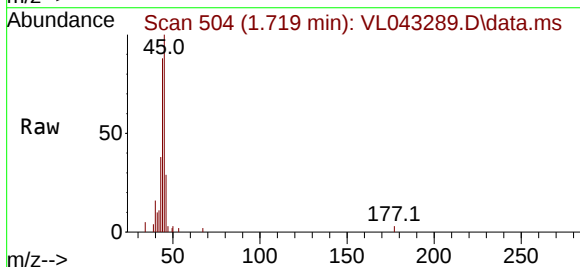
Instrument :
 MSVOA_L
 ClientSampleId :

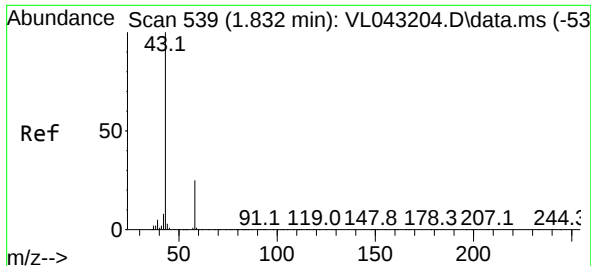
Tgt Ion:101 Resp: 2202
 Ion Ratio Lower Upper
 101 100
 151 0.0 59.2 88.8#



#13
 Ethanol
 Concen: 0.844 ppbv
 RT: 1.719 min Scan# 504
 Delta R.T. 0.003 min
 Lab File: VL043289.D
 Acq: 24 Nov 2025 20:07

Tgt Ion: 45 Resp: 1931
 Ion Ratio Lower Upper
 45 100
 46 0.0 15.0 59.8#

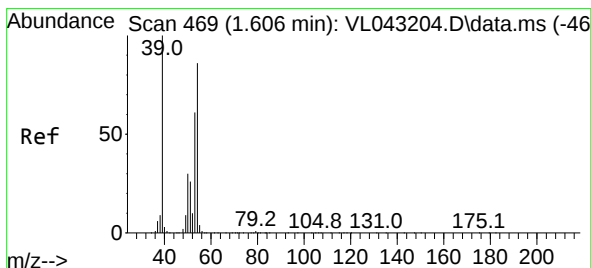
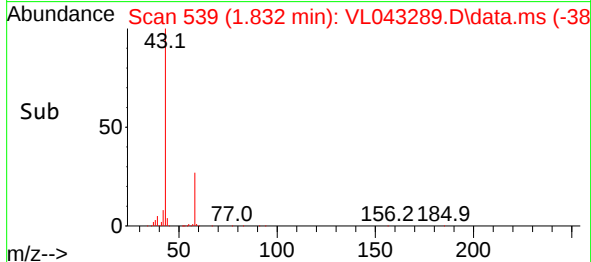
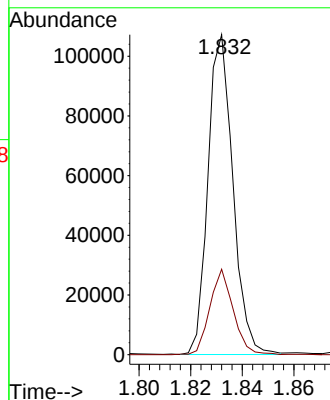
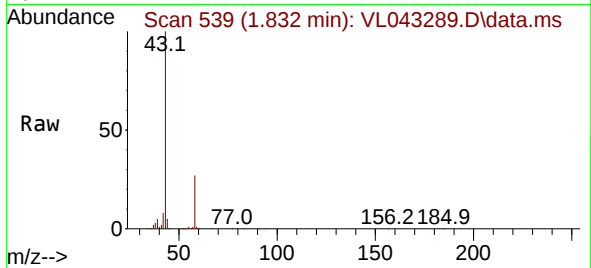




#15
Acetone
Concen: 4.687 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

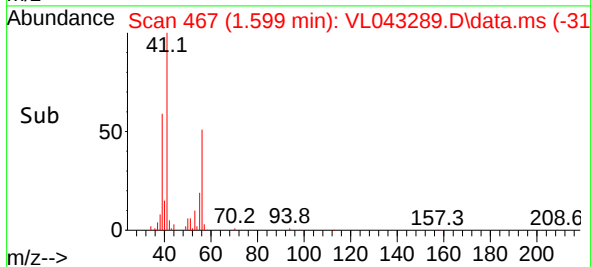
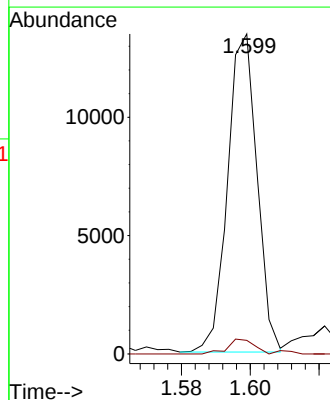
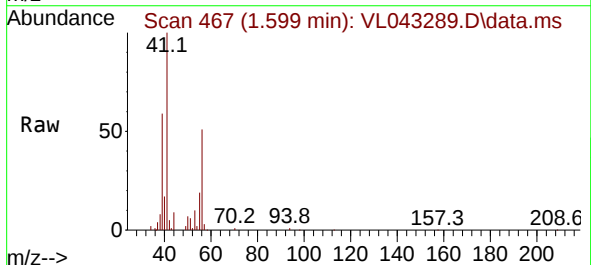
Instrument :
MSVOA_L
ClientSampleId :

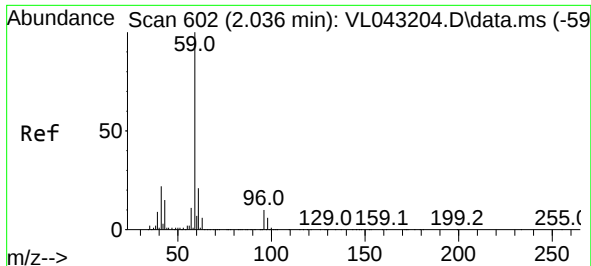
Tgt Ion: 43 Resp: 71896
Ion Ratio Lower Upper
43 100
58 25.2 20.7 31.1



#16
1,3-Butadiene
Concen: 1.169 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.007 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 39 Resp: 7996
Ion Ratio Lower Upper
39 100
54 4.9 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 19.606 ppbv

RT: 2.033 min Scan# 602

Delta R.T. -0.004 min

Lab File: VL043289.D

Acq: 24 Nov 2025 20:07

Instrument :

MSVOA_L

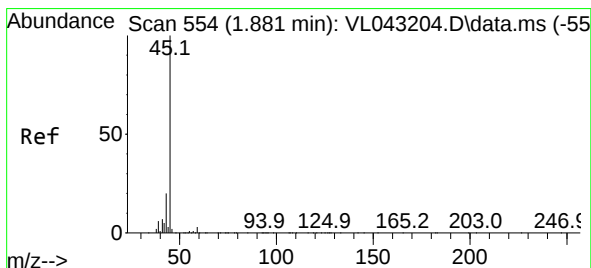
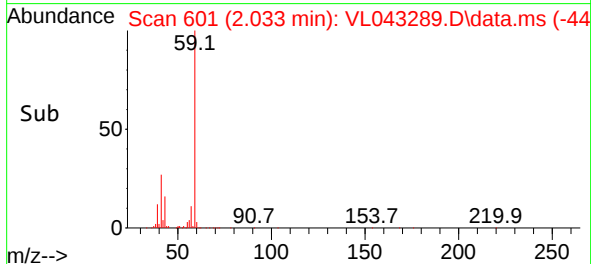
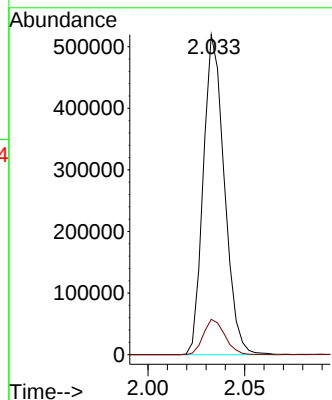
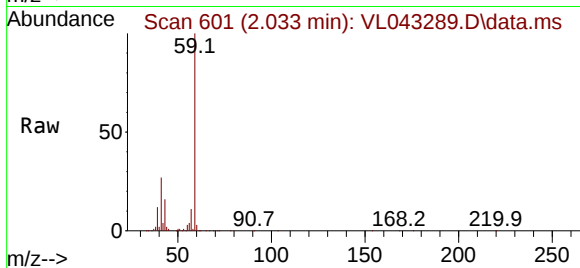
ClientSampleId :

Tgt Ion: 59 Resp: 394738

Ion Ratio Lower Upper

59 100

57 11.3 9.0 13.4



#19

Isopropyl Alcohol

Concen: 1.077 ppbv

RT: 1.881 min Scan# 554

Delta R.T. -0.000 min

Lab File: VL043289.D

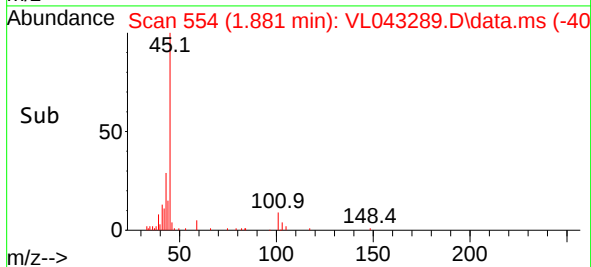
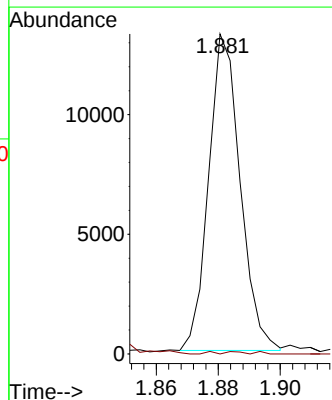
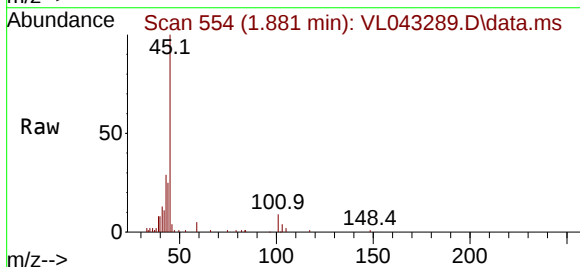
Acq: 24 Nov 2025 20:07

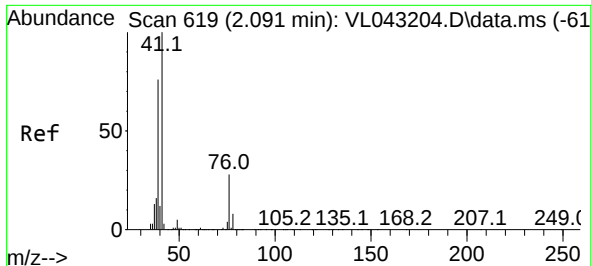
Tgt Ion: 45 Resp: 9336

Ion Ratio Lower Upper

45 100

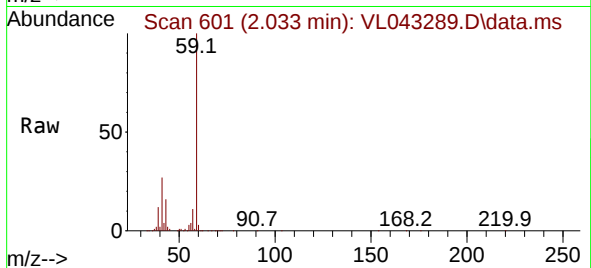
58 194.3 31.3 46.9#



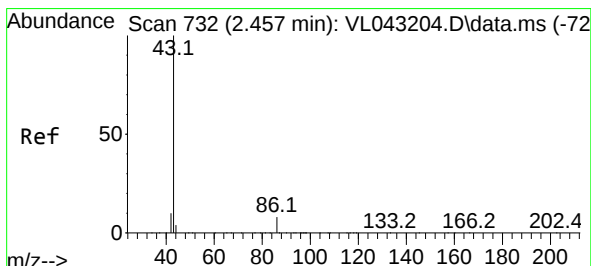
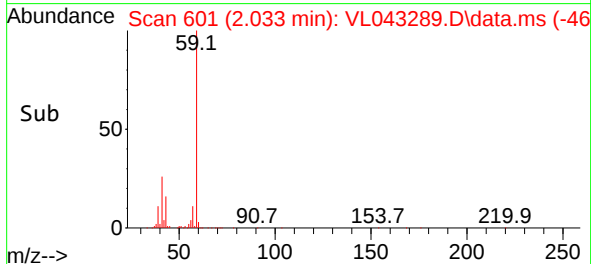
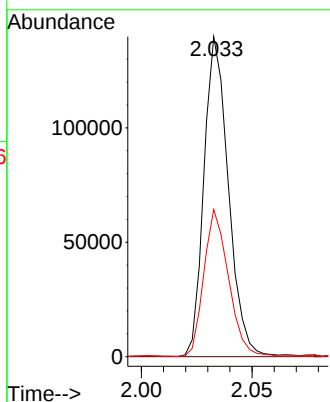


#21
 Allyl Chloride
 Concen: 10.354 ppbv
 RT: 2.033 min Scan# 601
 Delta R.T. -0.059 min
 Lab File: VL043289.D
 Acq: 24 Nov 2025 20:07

Instrument :
 MSVOA_L
 ClientSampleId :

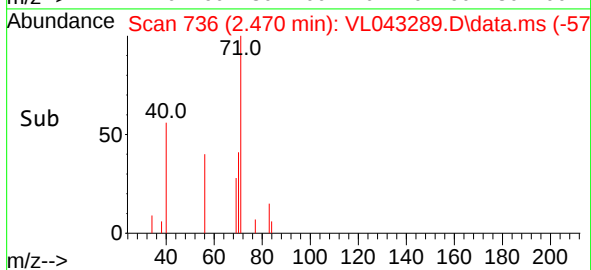
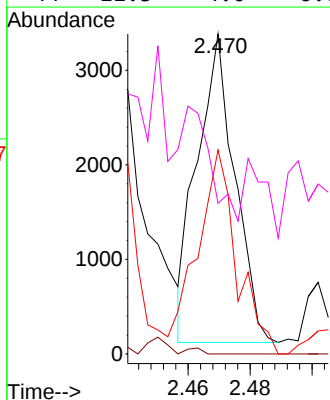
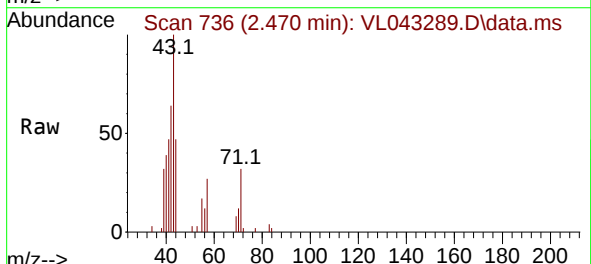


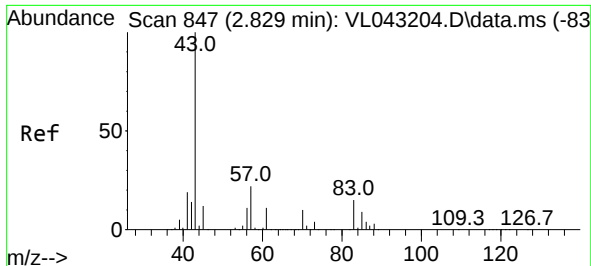
Tgt Ion: 41 Resp: 106853
 Ion Ratio Lower Upper
 41 100
 76 1.0 22.1 33.1#
 39 47.5 61.0 91.4#



#23
 Vinyl Acetate
 Concen: 0.149 ppbv
 RT: 2.470 min Scan# 736
 Delta R.T. 0.013 min
 Lab File: VL043289.D
 Acq: 24 Nov 2025 20:07

Tgt Ion: 43 Resp: 2757
 Ion Ratio Lower Upper
 43 100
 86 0.0 6.2 9.2#
 42 62.4 8.0 12.0#
 44 11.3 4.0 6.0#

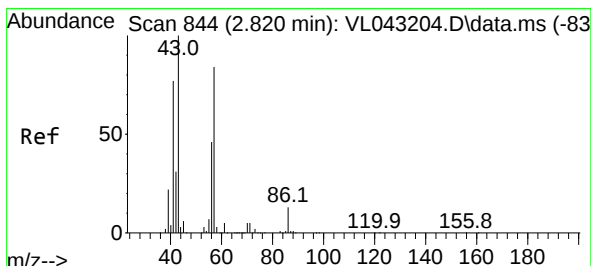
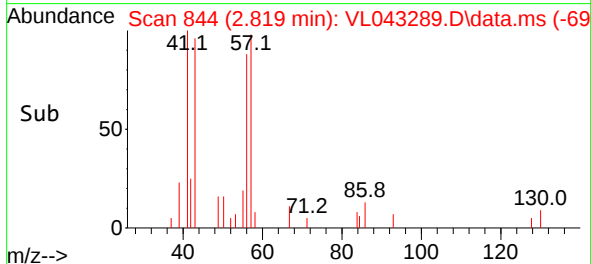
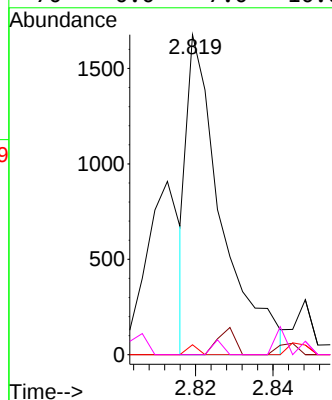
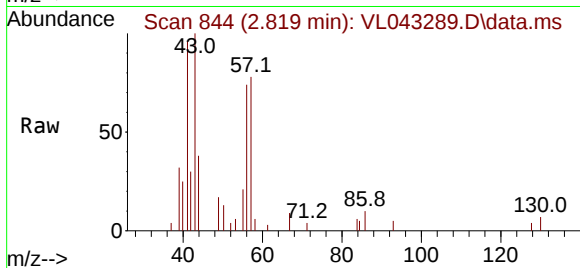




#25
Ethyl Acetate
Concen: 0.031 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.010 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

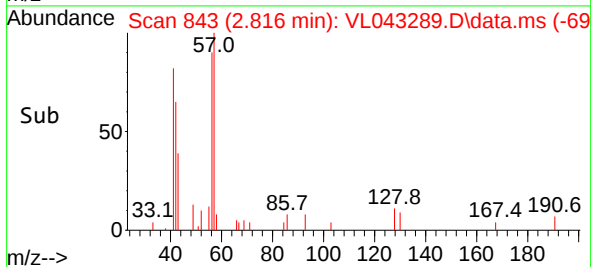
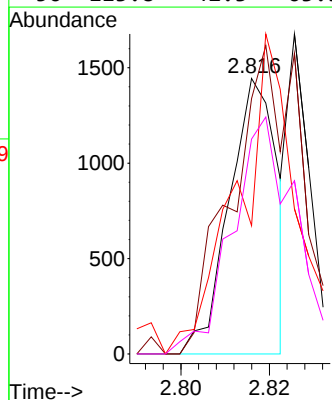
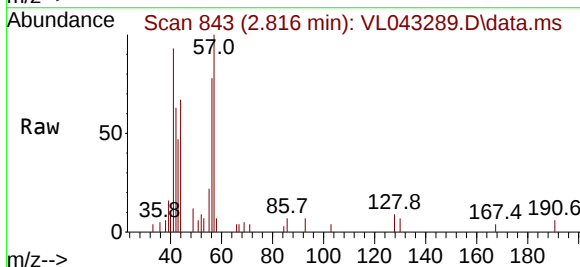
Instrument :
MSVOA_L
ClientSampleId :

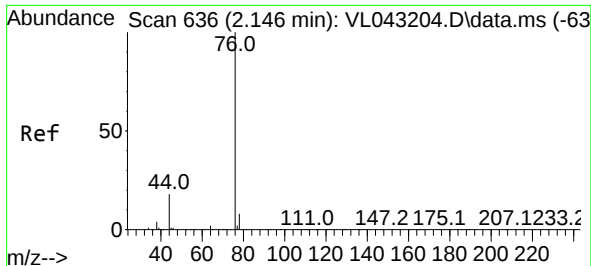
Tgt Ion: 43	Resp: 1026
Ion Ratio	Lower Upper
43 100	
45 6.3	8.1 12.1#
61 0.0	7.0 10.4#
70 0.0	7.0 10.6#



#26
Hexane
Concen: 0.075 ppbv
RT: 2.816 min Scan# 843
Delta R.T. -0.004 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 57	Resp: 1087
Ion Ratio	Lower Upper
57 100	
41 175.1	74.6 111.8#
43 178.0	179.0 268.4#
56 113.8	42.3 63.5#





#27

Carbon Disulfide

Concen: 0.071 ppbv

RT: 2.146 min Scan# 61

Delta R.T. -0.000 min

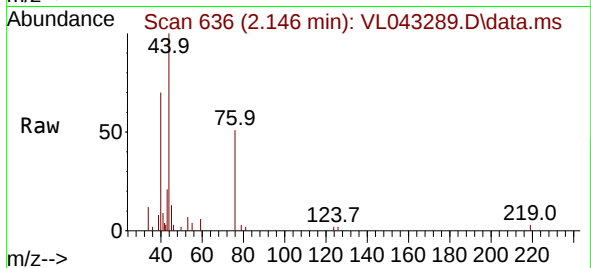
Lab File: VL043289.D

Acq: 24 Nov 2025 20:07

Instrument :

MSVOA_L

ClientSampleId :



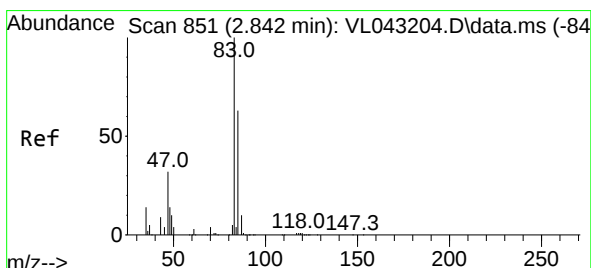
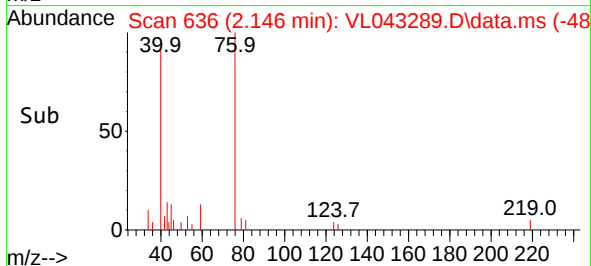
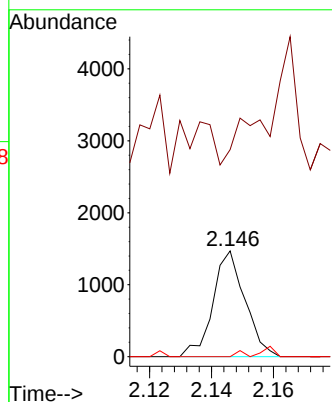
Tgt Ion: 76 Resp: 1057

Ion Ratio Lower Upper

76 100

44 306.7 16.1 24.1#

78 0.0 9.6 14.4#



#29

Chloroform

Concen: 0.033 ppbv

RT: 2.842 min Scan# 851

Delta R.T. -0.000 min

Lab File: VL043289.D

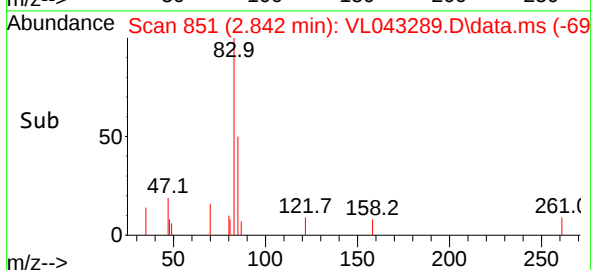
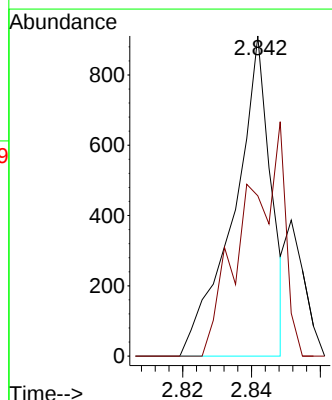
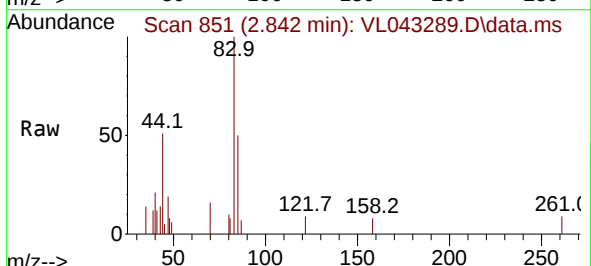
Acq: 24 Nov 2025 20:07

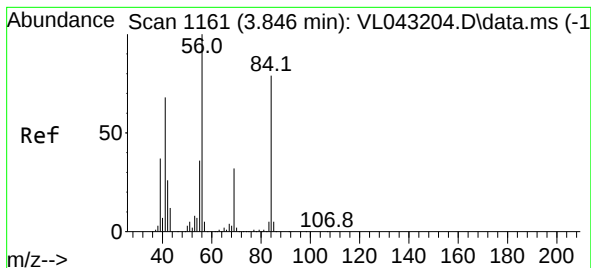
Tgt Ion: 83 Resp: 683

Ion Ratio Lower Upper

83 100

85 50.1 50.5 75.7#





#30

Cyclohexane

Concen: 0.234 ppbv

RT: 3.845 min Scan# 1161

Delta R.T. -0.000 min

Lab File: VL043289.D

Acq: 24 Nov 2025 20:07

Instrument :

MSVOA_L

ClientSampleId :

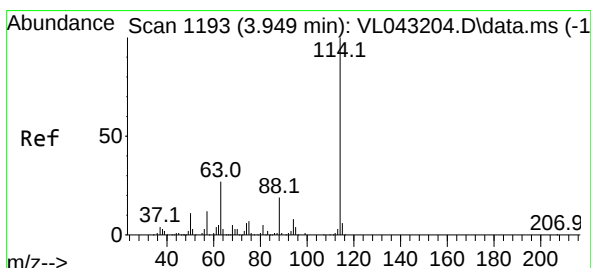
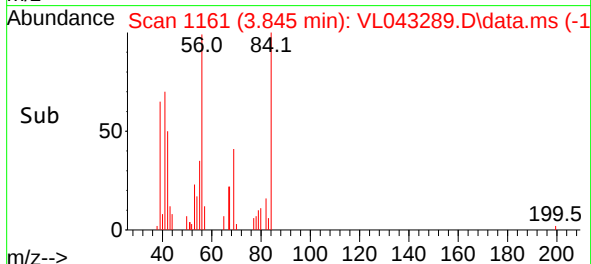
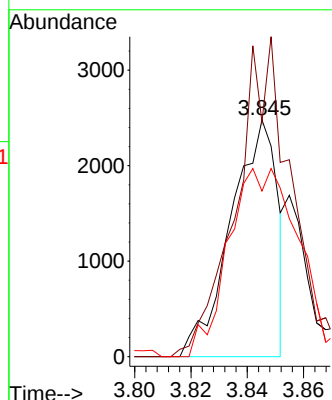
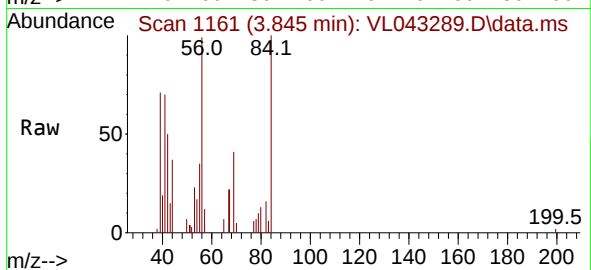
Tgt Ion: 84 Resp: 2840

Ion Ratio Lower Upper

84 100

56 160.7 104.7 157.1#

41 121.0 69.0 103.6#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.946 min Scan# 1192

Delta R.T. -0.004 min

Lab File: VL043289.D

Acq: 24 Nov 2025 20:07

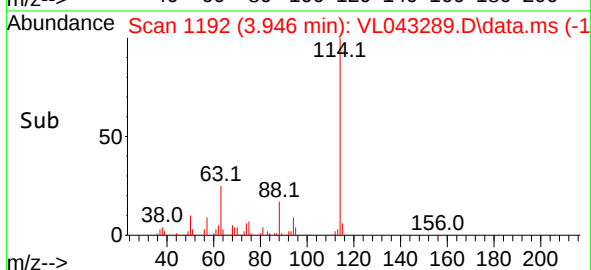
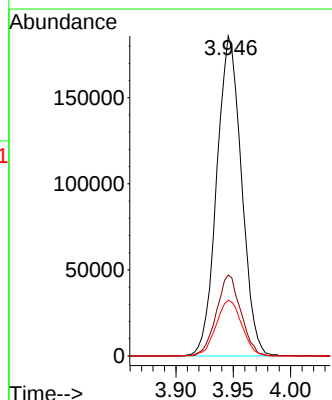
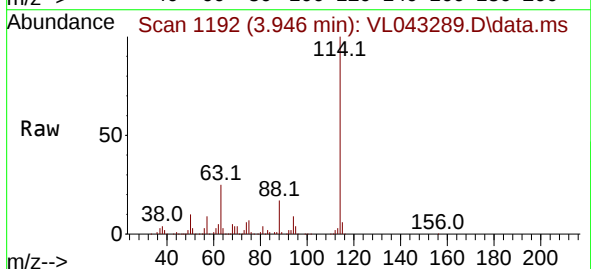
Tgt Ion: 114 Resp: 279064

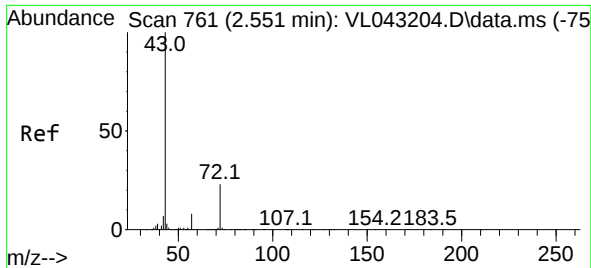
Ion Ratio Lower Upper

114 100

63 25.1 21.0 31.6

88 18.1 14.9 22.3

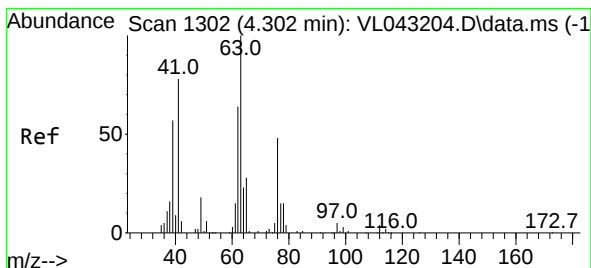
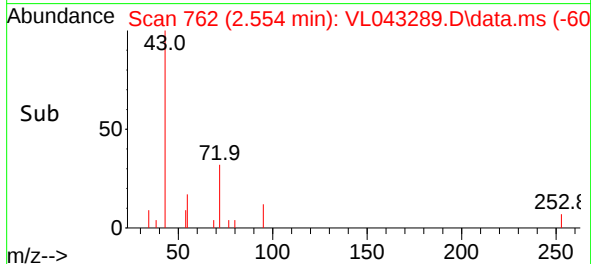
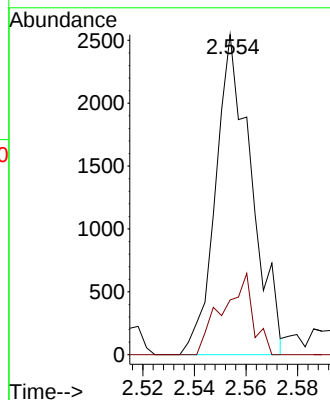
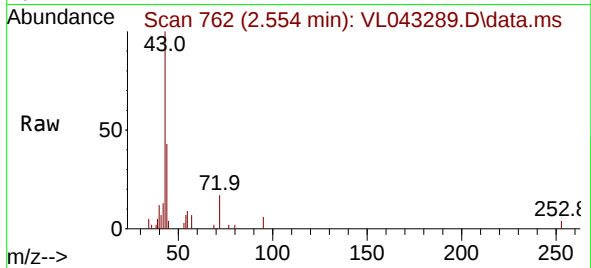




#34
2-Butanone
Concen: 0.124 ppbv
RT: 2.554 min Scan# 761
Delta R.T. 0.003 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

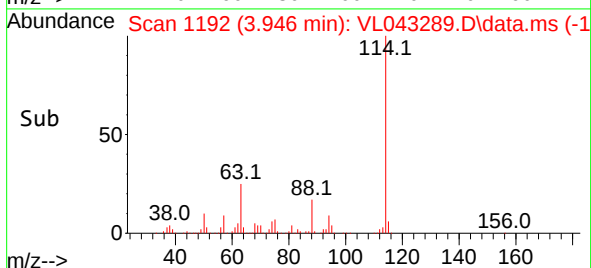
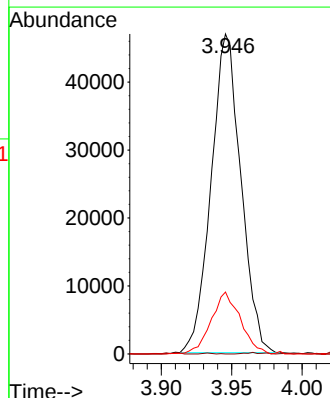
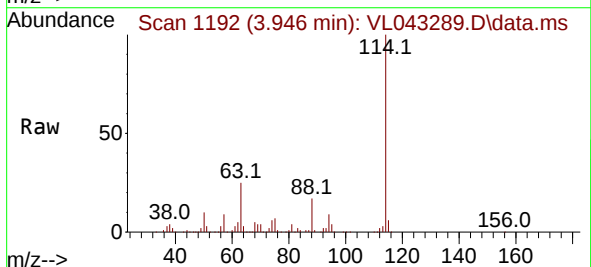
Instrument :
MSVOA_L
ClientSampleId :

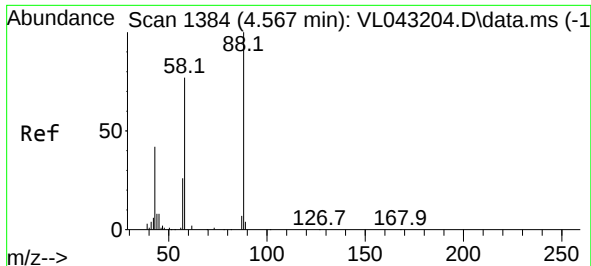
Tgt Ion: 43 Resp: 2452
Ion Ratio Lower Upper
43 100
72 21.8 18.1 27.1



#39
1,2-Dichloropropane
Concen: 7.048 ppbv
RT: 3.946 min Scan# 1192
Delta R.T. -0.356 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

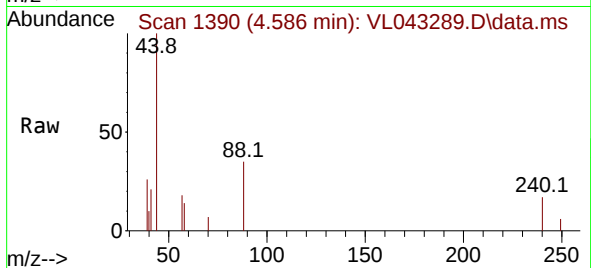
Tgt Ion: 63 Resp: 68938
Ion Ratio Lower Upper
63 100
41 0.0 62.6 93.8#
62 18.8 51.0 76.6#



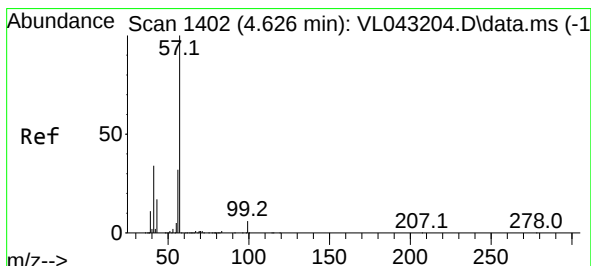
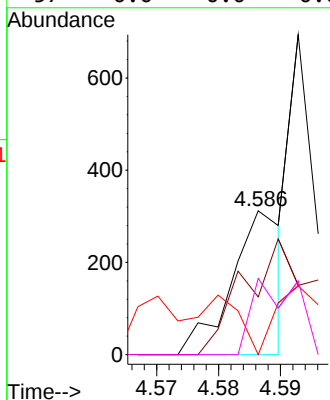
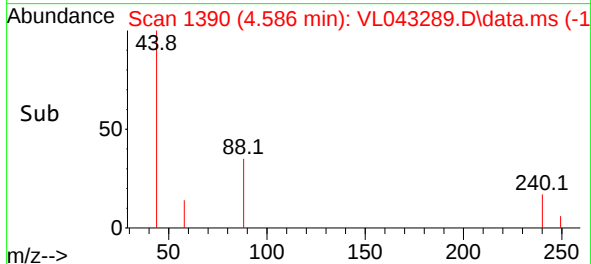


#40
1,4-Dioxane
Concen: 0.041 ppbv
RT: 4.586 min Scan# 11
Delta R.T. 0.019 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Instrument :
MSVOA_L
ClientSampleId :

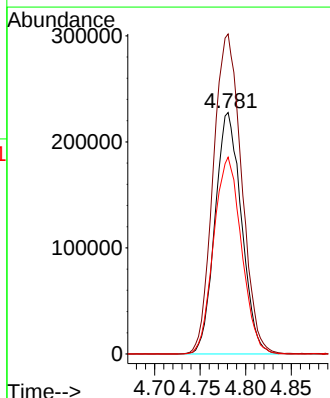
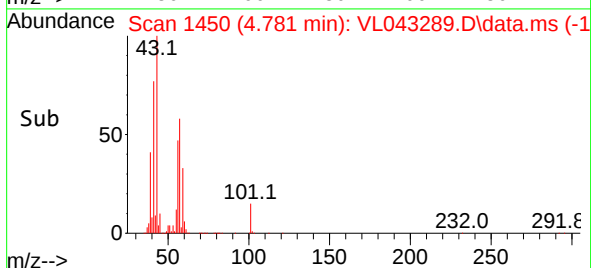
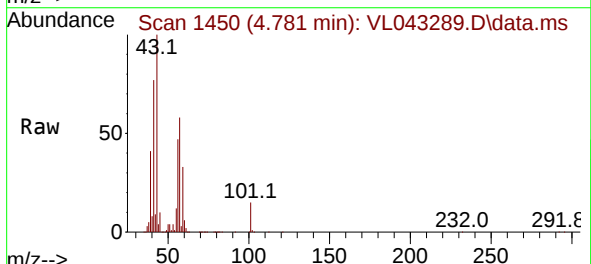


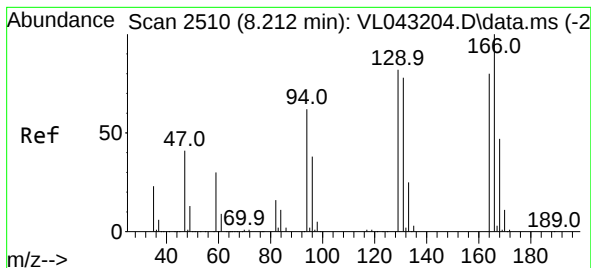
Tgt Ion: 88 Resp: 179
Ion Ratio Lower Upper
88 100
58 0.0 63.0 94.6#
43 0.0 32.5 48.7#
57 0.0 0.0 0.0



#44
2,2,4-Trimethylpentane
Concen: 10.020 ppbv
RT: 4.781 min Scan# 1450
Delta R.T. 0.155 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 57 Resp: 459885
Ion Ratio Lower Upper
57 100
41 142.1 28.0 42.0#
56 85.6 25.6 38.4#





#52

Tetrachloroethene

Concen: 2.264 ppbv

RT: 8.211 min Scan# 2110

Delta R.T. -0.000 min

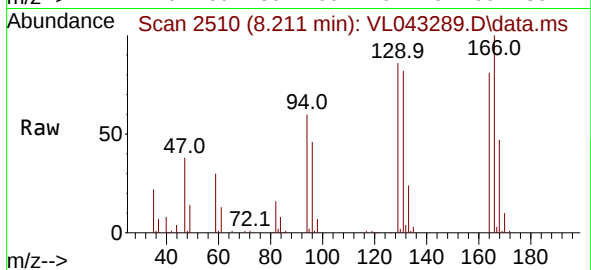
Lab File: VL043289.D

Acq: 24 Nov 2025 20:07

Instrument :

MSVOA_L

ClientSampleId :



Tgt Ion:164 Resp: 22509

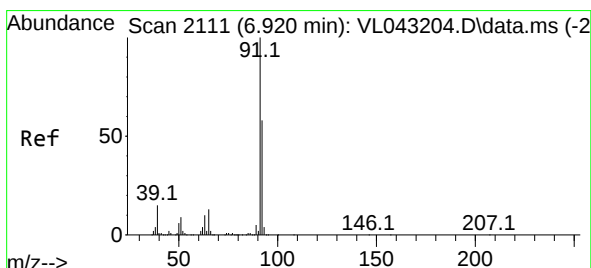
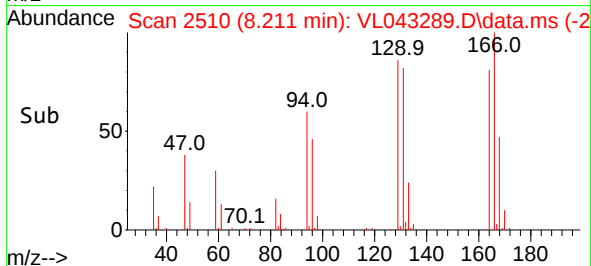
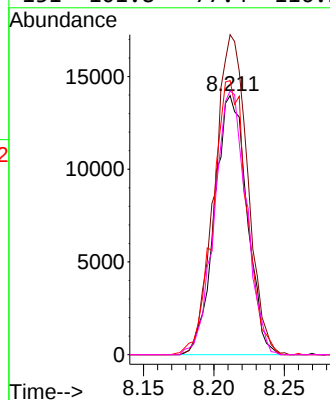
Ion Ratio Lower Upper

164 100

166 123.5 99.4 149.2

129 105.4 81.8 122.8

131 101.8 77.4 116.2



#53

Toluene

Concen: 1.234 ppbv

RT: 6.917 min Scan# 2110

Delta R.T. -0.004 min

Lab File: VL043289.D

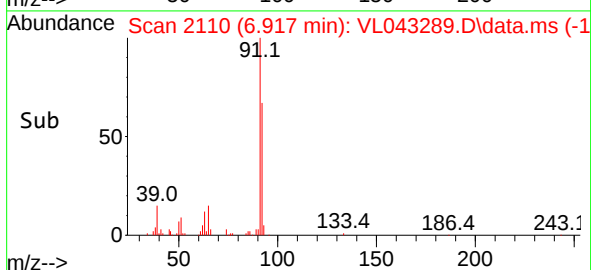
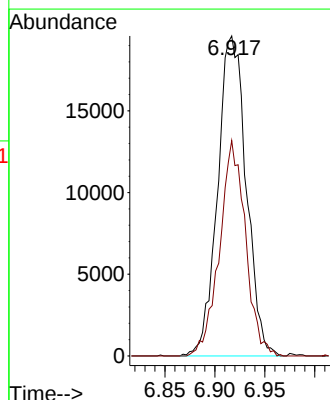
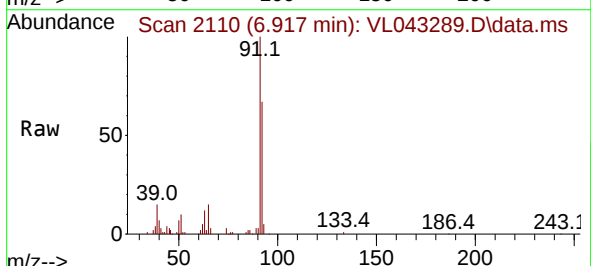
Acq: 24 Nov 2025 20:07

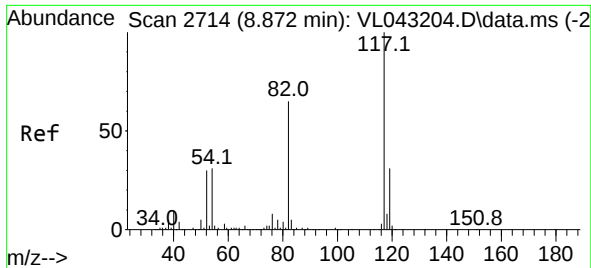
Tgt Ion: 91 Resp: 39048

Ion Ratio Lower Upper

91 100

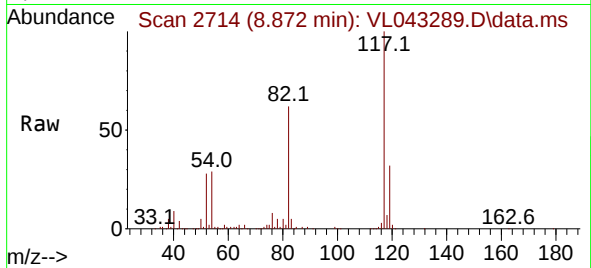
92 61.0 47.4 71.0



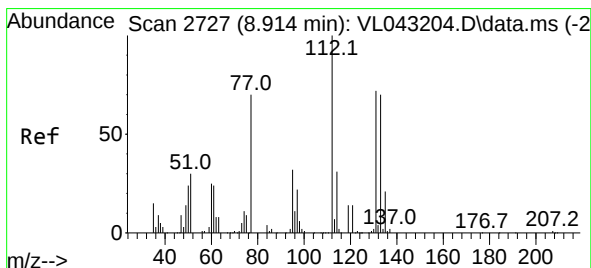
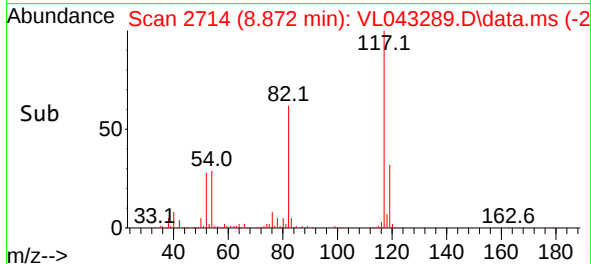
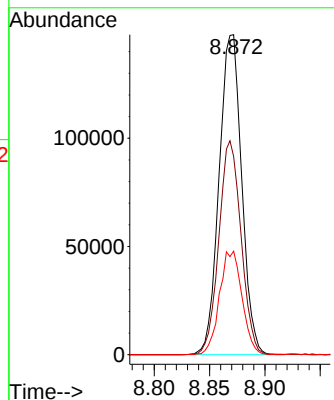


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 21
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Instrument :
MSVOA_L
ClientSampleId :

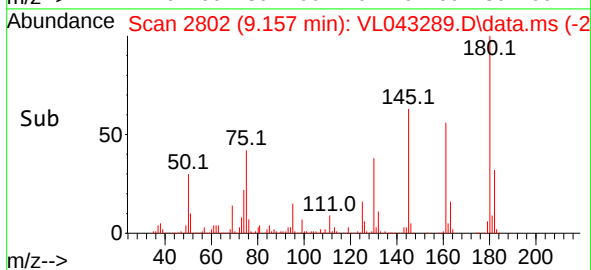
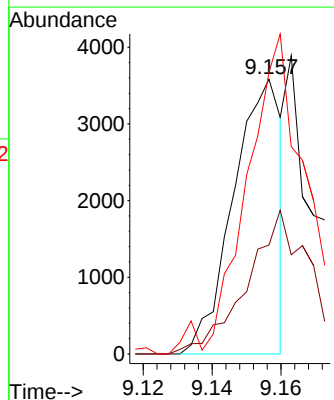
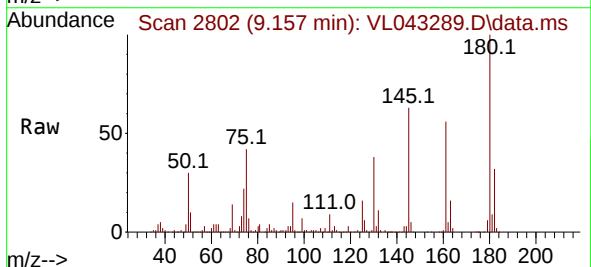


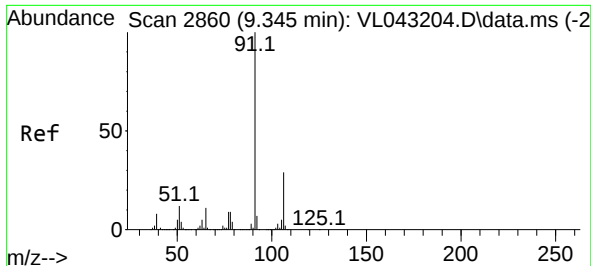
Tgt Ion:117 Resp: 209824
Ion Ratio Lower Upper
117 100
82 65.7 56.1 84.1
119 32.4 25.0 37.6



#56
1,1,1,2-Tetrachloroethane
Concen: 0.225 ppbv
RT: 9.157 min Scan# 2802
Delta R.T. 0.242 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion:131 Resp: 3462
Ion Ratio Lower Upper
131 100
133 0.0 77.4 116.2#
119 0.0 49.1 73.7#

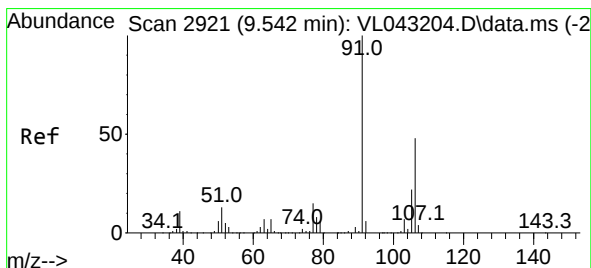
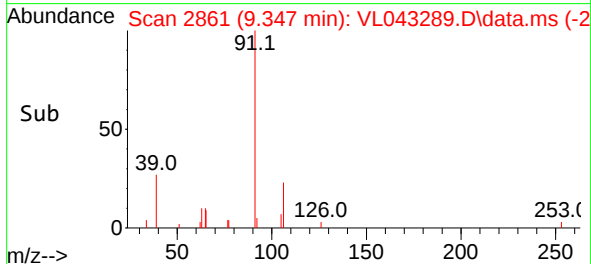
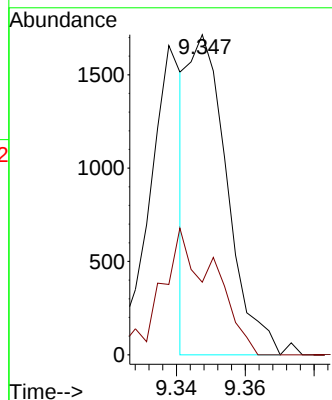
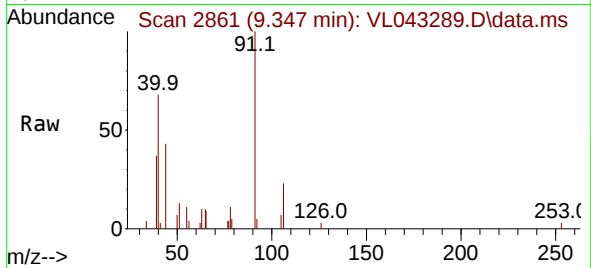




#58
Ethyl Benzene
Concen: 0.033 ppbv
RT: 9.347 min Scan# 21
Delta R.T. 0.003 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

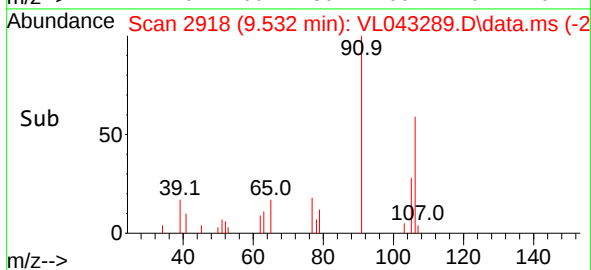
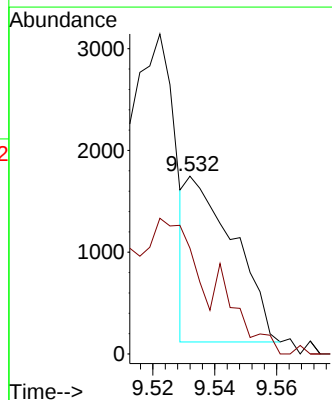
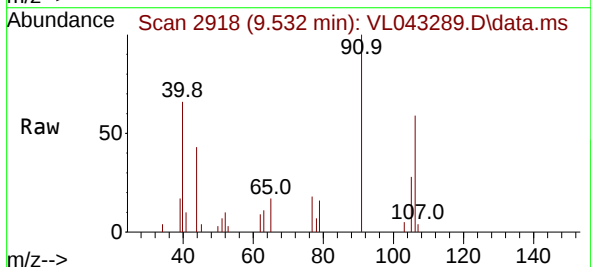
Instrument :
MSVOA_L
ClientSampleId :

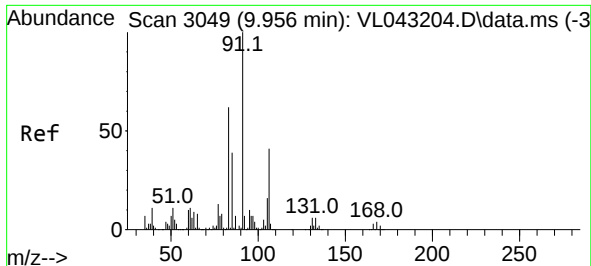
Tgt Ion: 91 Resp: 1346
Ion Ratio Lower Upper
91 100
106 22.7 22.8 34.2#



#59
m/p-Xylene
Concen: 0.054 ppbv
RT: 9.532 min Scan# 2918
Delta R.T. -0.010 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 91 Resp: 1734
Ion Ratio Lower Upper
91 100
106 0.0 36.1 54.1#

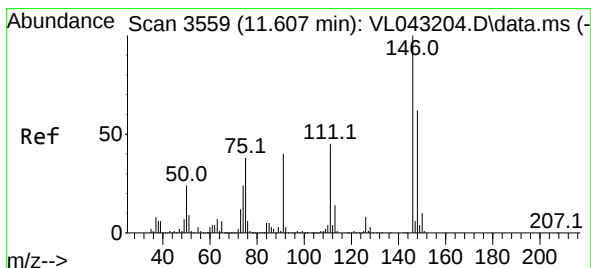
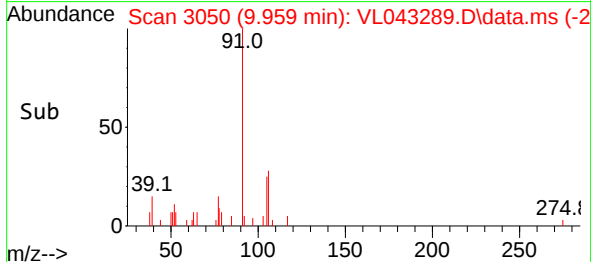
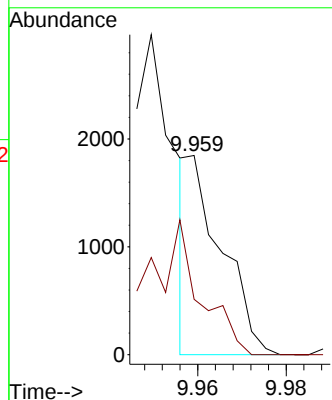
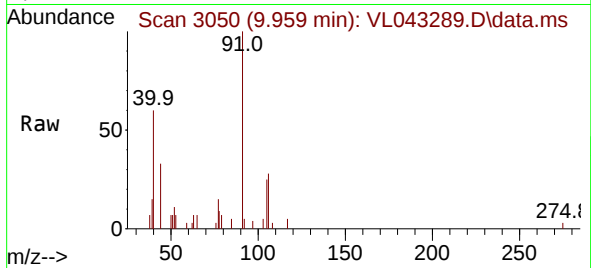




#60
o-Xylene
Concen: 0.030 ppbv
RT: 9.959 min Scan# 3049
Delta R.T. 0.003 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

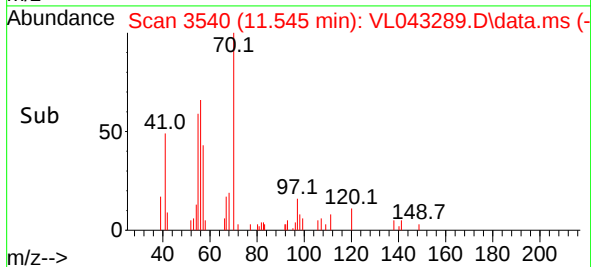
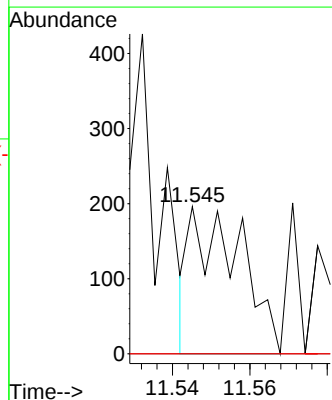
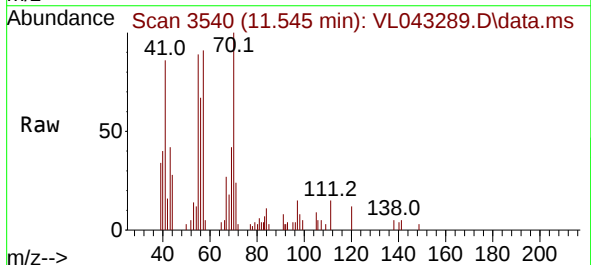
Instrument :
MSVOA_L
ClientSampleId :

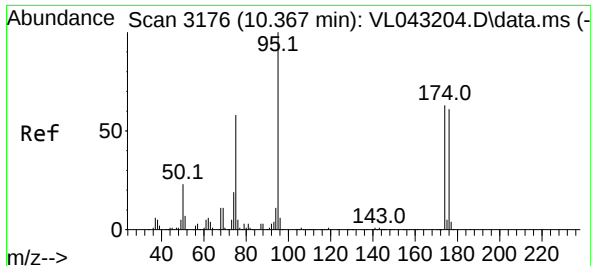
Tgt Ion: 91 Resp: 978
Ion Ratio Lower Upper
91 100
106 117.2 20.9 62.8#



#66
Benzyl Chloride
Concen: 0.034 ppbv
RT: 11.545 min Scan# 3540
Delta R.T. -0.062 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 91 Resp: 176
Ion Ratio Lower Upper
91 100
126 0.0 14.4 21.6#
128 0.0 4.6 6.8#

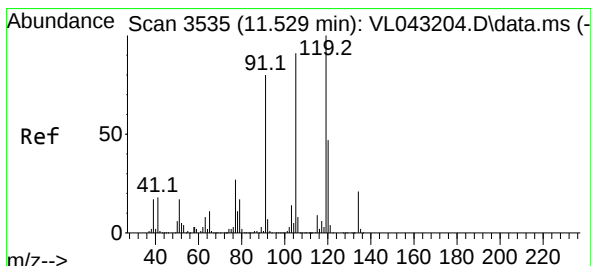
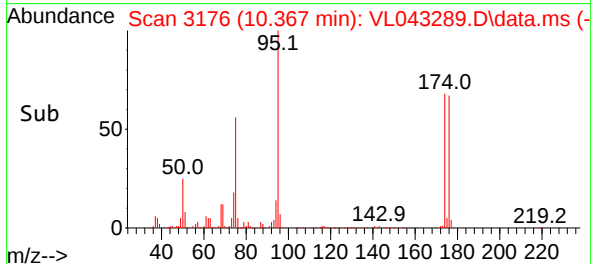
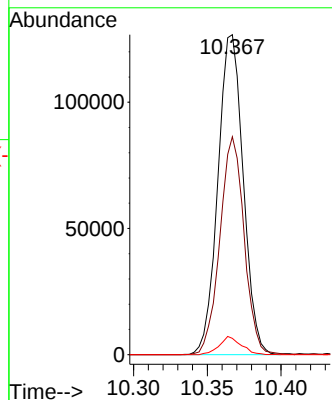
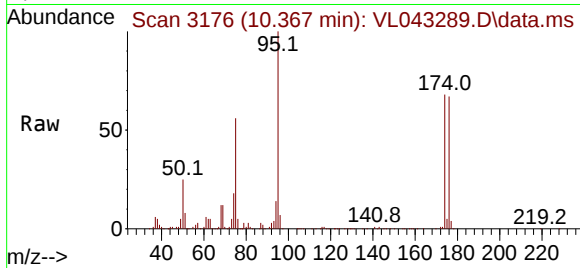




#68
1-Bromo-4-Fluorobenzene
Concen: 9.841 ppbv
RT: 10.367 min Scan# 3176
Delta R.T. -0.000 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Instrument :
MSVOA_L
ClientSampleId :

Tgt Ion: 95 Resp: 151349
Ion Ratio Lower Upper
95 100
174 65.6 50.2 75.2
175 4.9 4.1 6.1



#74
1,2,4-Trimethylbenzene
Concen: 0.073 ppbv
RT: 11.526 min Scan# 3534
Delta R.T. -0.004 min
Lab File: VL043289.D
Acq: 24 Nov 2025 20:07

Tgt Ion: 105 Resp: 2636
Ion Ratio Lower Upper
105 100
120 37.5 41.7 62.5#
91 11.5 70.0 105.0#
77 6.6 23.8 35.8#

