

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120225\
 Data File : VL043300.D
 Acq On : 02 Dec 2025 15:57
 Operator : SY/MD
 Sample : Q3744-01 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

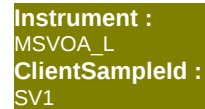
Quant Time: Dec 03 00:07:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

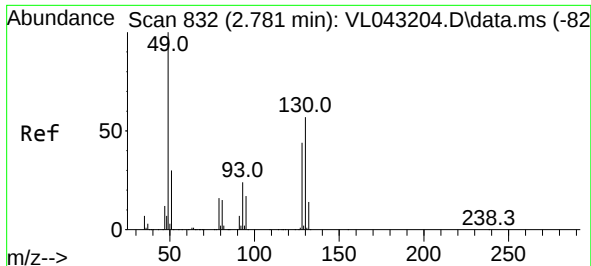
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	2.803	49	128412	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.981	114	316515	10.000	ppbv	0.03
55) Chlorobenzene-d5	8.901	117	246017	10.000	ppbv	0.03
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.393	95	170475	9.453	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.500%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.505	85	2940	0.162	ppbv	89
3) Chlorodifluoromethane	1.482	51	2070	0.116	ppbv	96
4) Chloromethane	1.541	50	355	0.052	ppbv #	60
9) Propene	1.495	41	9594	1.268	ppbv #	1
11) Trichlorofluoromethane	1.890	101	3784	0.216	ppbv #	81
12) 1,1,2-Trichlorotrifluo...	2.149	101	454	0.033	ppbv #	61
13) Ethanol	1.444	45	144067	54.167	ppbv #	1
15) Acetone	1.845	43	61815	3.465	ppbv	97
16) 1,3-Butadiene	1.631	39	2879	0.362	ppbv #	36
17) tert-Butyl alcohol	2.052	59	772	0.033	ppbv #	46
19) Isopropyl Alcohol	1.444	45	144067	14.291	ppbv #	38
20) Methylene Chloride	2.072	84	3985	Below Cal		86
21) Allyl Chloride	2.091	41	2077	0.173	ppbv #	41
23) Vinyl Acetate	2.486	43	3106	0.144	ppbv #	79
26) Hexane	2.842	57	2281	0.135	ppbv #	49
27) Carbon Disulfide	2.162	76	5651	0.328	ppbv #	1
29) Chloroform	2.861	83	8903	0.371	ppbv	93
30) Cyclohexane	3.871	84	463	0.033	ppbv #	1
32) 1,1,1-Trichloroethane	3.389	97	4343	0.170	ppbv	97
34) 2-Butanone	2.576	43	5464	0.245	ppbv	96
36) Benzene	3.680	78	19414	0.640	ppbv #	88
39) 1,2-Dichloropropane	3.981	63	80429	7.250	ppbv #	24
52) Tetrachloroethene	8.244	164	7694	0.682	ppbv	89
53) Toluene	6.975	91	1456	0.041	ppbv #	21
58) Ethyl Benzene	9.367	91	2780	0.059	ppbv #	78
59) m/p-Xylene	9.571	91	1158	0.031	ppbv #	31
60) o-Xylene	9.985	91	2948	0.078	ppbv	100
66) Benzyl Chloride	11.665	91	187	0.030	ppbv #	59
73) 1,3,5-Trimethylbenzene	11.215	105	1364	0.035	ppbv #	86

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

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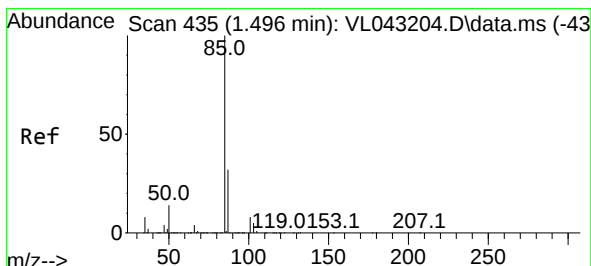
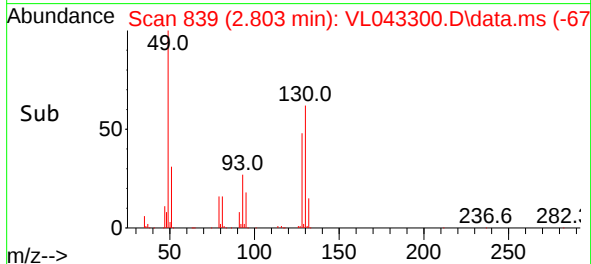
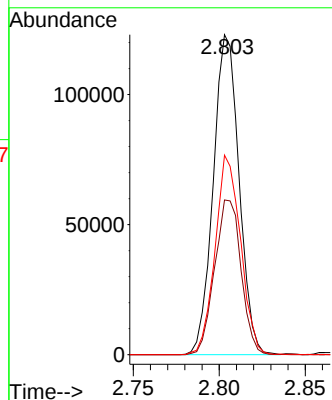
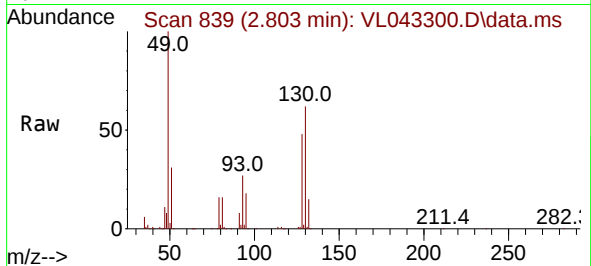




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.803 min Scan# 81
Delta R.T. 0.022 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

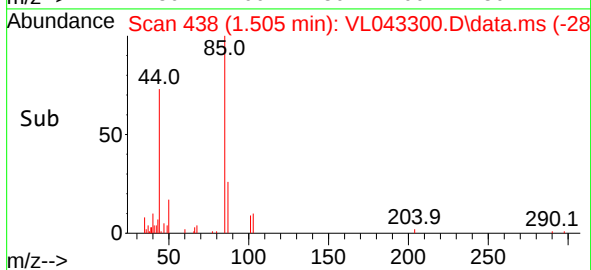
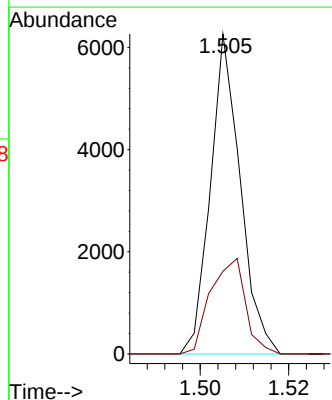
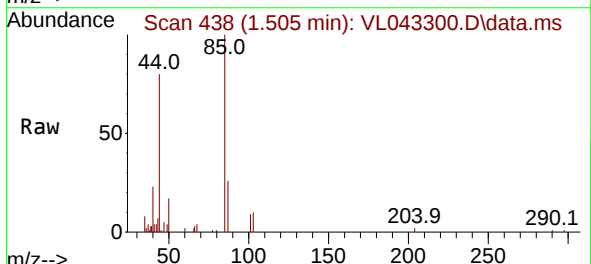
Instrument :
MSVOA_L
ClientSampleId :
SV1

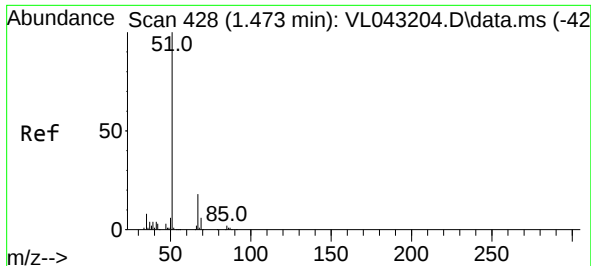
Tgt Ion: 49 Resp: 128412
Ion Ratio Lower Upper
49 100
128 49.5 23.0 69.0
130 61.5 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.162 ppbv
RT: 1.505 min Scan# 438
Delta R.T. 0.009 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 85 Resp: 2940
Ion Ratio Lower Upper
85 100
87 25.8 25.4 38.2

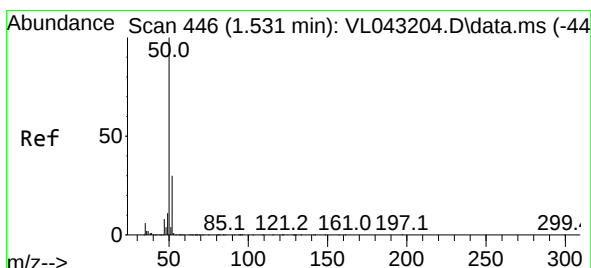
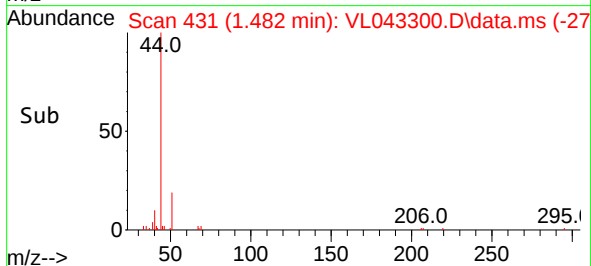
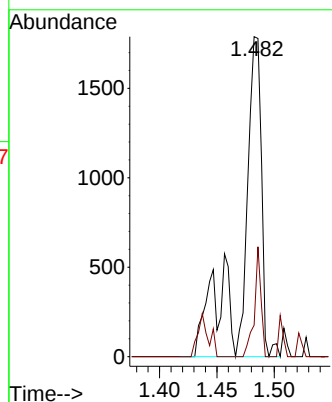
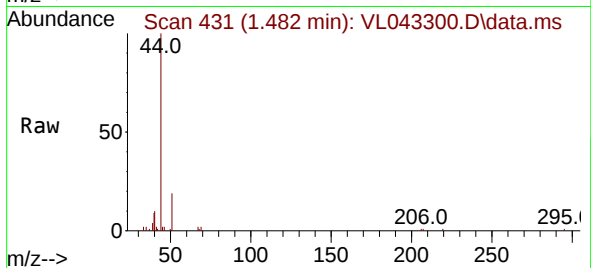




#3
Chlorodifluoromethane
Concen: 0.116 ppbv
RT: 1.482 min Scan# 41
Delta R.T. 0.009 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

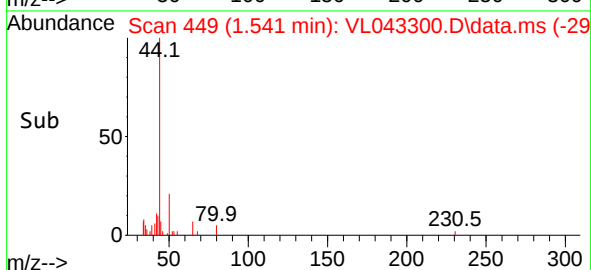
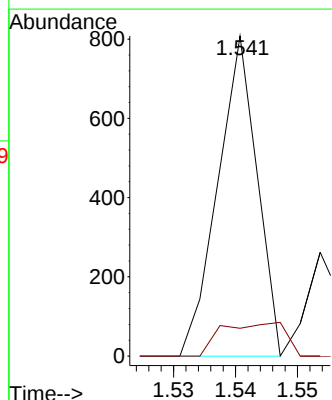
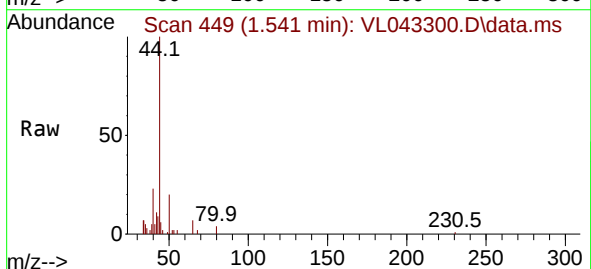
Instrument :
MSVOA_L
ClientSampleId :
SV1

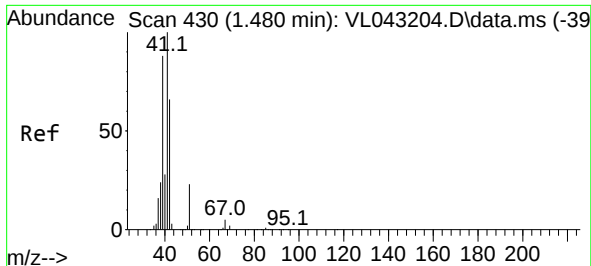
Tgt Ion: 51 Resp: 2070
Ion Ratio Lower Upper
51 100
67 16.7 14.9 22.3



#4
Chloromethane
Concen: 0.052 ppbv
RT: 1.541 min Scan# 449
Delta R.T. 0.009 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 50 Resp: 355
Ion Ratio Lower Upper
50 100
52 8.7 24.1 36.1#





#9

Propene

Concen: 1.268 ppbv

RT: 1.495 min Scan# 41

Delta R.T. 0.016 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Instrument :

MSVOA_L

ClientSampleId :

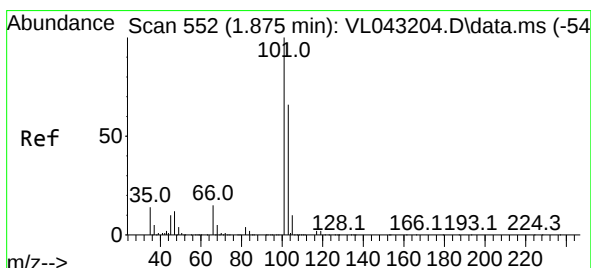
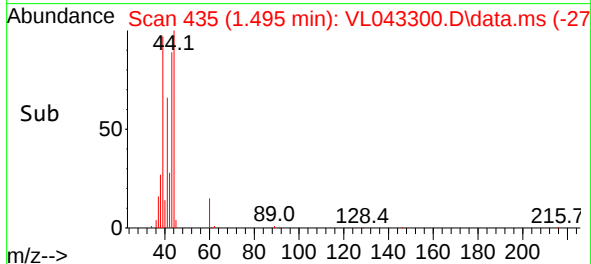
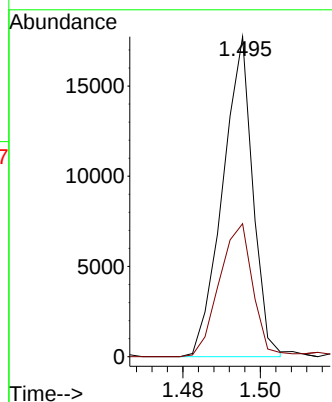
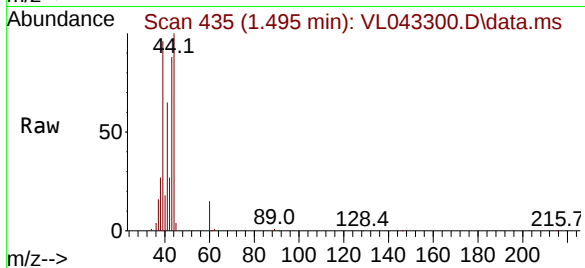
SV1

Tgt Ion: 41 Resp: 9594

Ion Ratio Lower Upper

41 100

42 48.9 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.216 ppbv

RT: 1.890 min Scan# 557

Delta R.T. 0.016 min

Lab File: VL043300.D

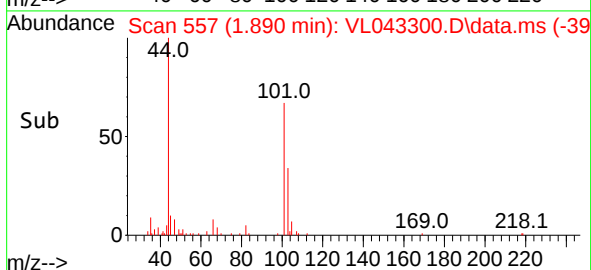
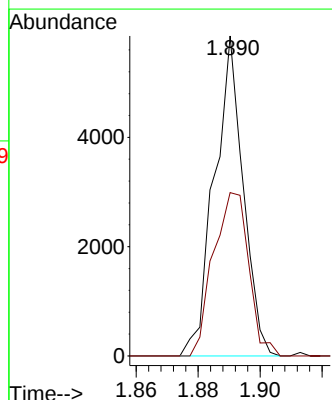
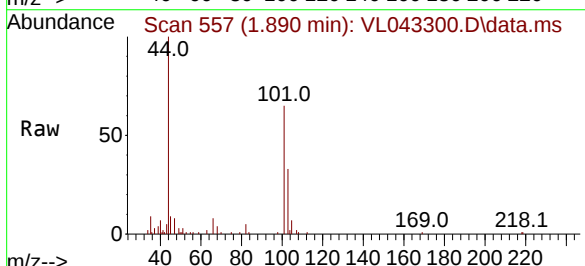
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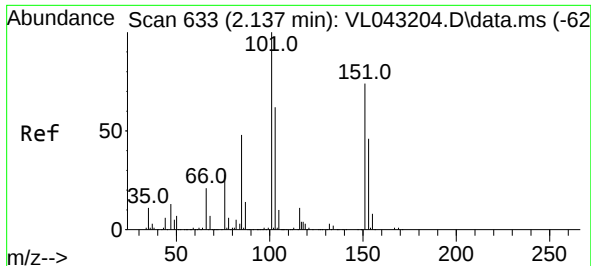
Tgt Ion: 101 Resp: 3784

Ion Ratio Lower Upper

101 100

103 51.0 52.6 79.0#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 2.149 min Scan# 61

Delta R.T. 0.013 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Instrument :

MSVOA_L

ClientSampleId :

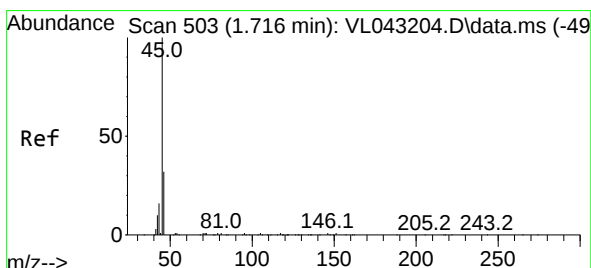
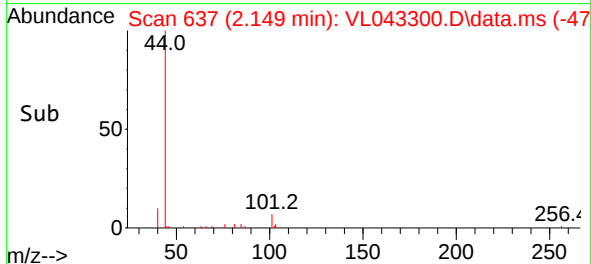
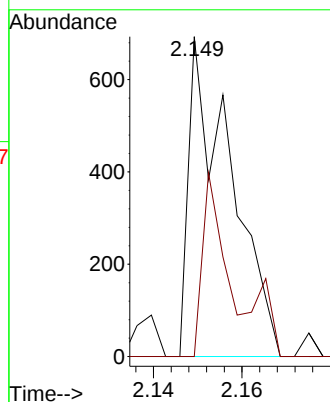
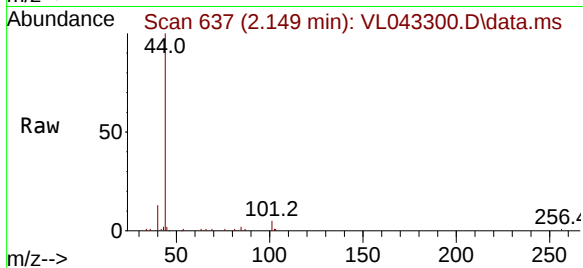
SV1

Tgt Ion:101 Resp: 454

Ion Ratio Lower Upper

101 100

151 41.4 59.2 88.8#



#13

Ethanol

Concen: 54.167 ppbv

RT: 1.444 min Scan# 419

Delta R.T. -0.272 min

Lab File: VL043300.D

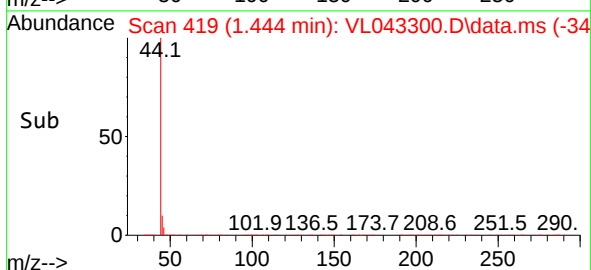
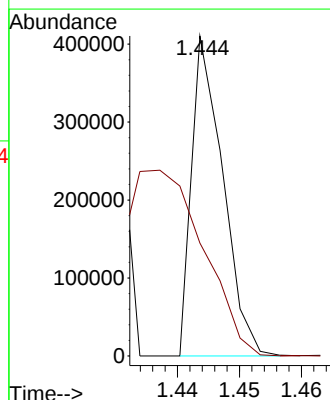
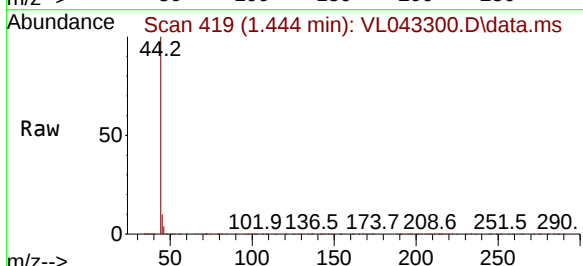
Acq: 02 Dec 2025 15:57

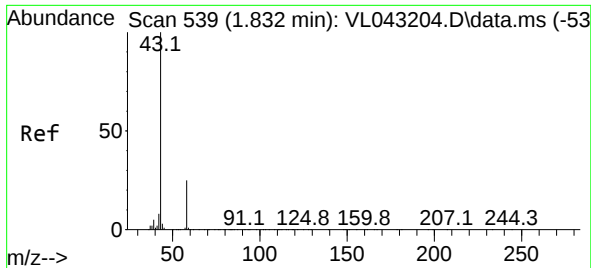
Tgt Ion: 45 Resp: 144067

Ion Ratio Lower Upper

45 100

46 147.2 15.0 59.8#

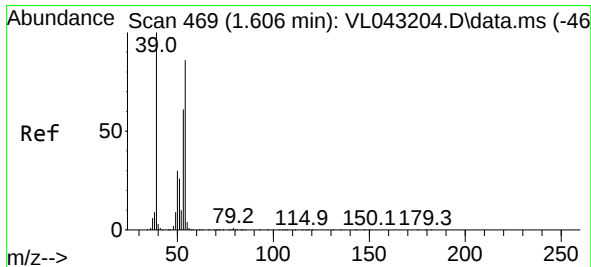
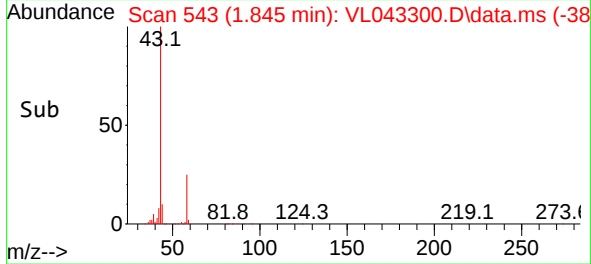
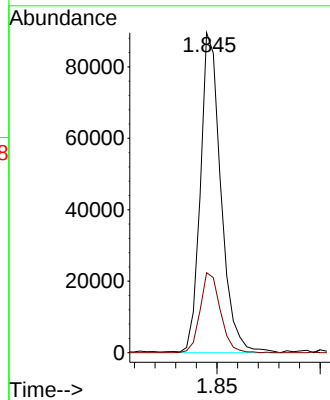
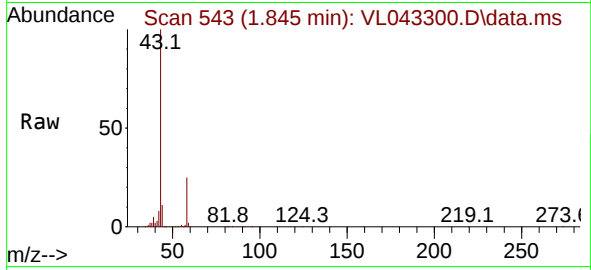




#15
Acetone
Concen: 3.465 ppbv
RT: 1.845 min Scan# 54
Delta R.T. 0.013 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

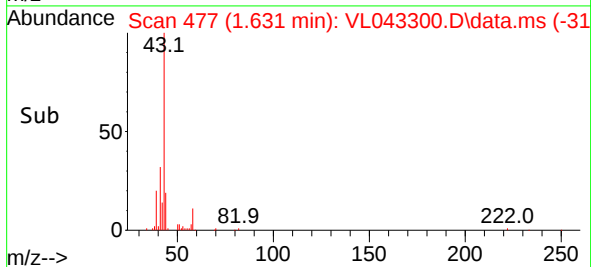
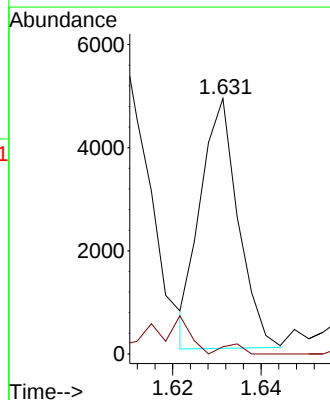
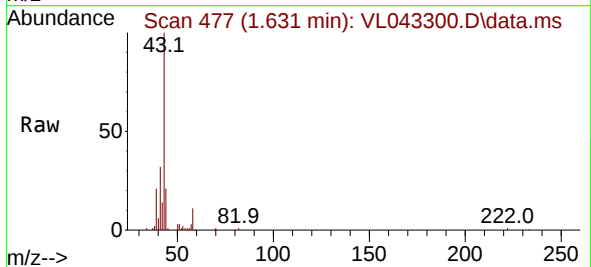
Instrument :
MSVOA_L
ClientSampleId :
SV1

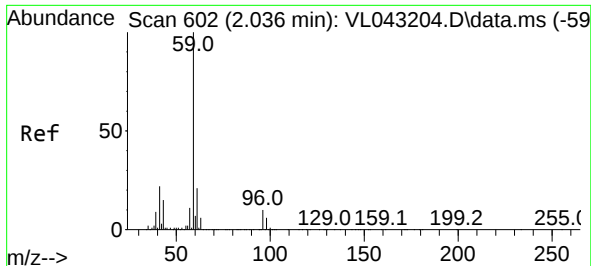
Tgt Ion: 43 Resp: 61815
Ion Ratio Lower Upper
43 100
58 24.6 20.7 31.1



#16
1,3-Butadiene
Concen: 0.362 ppbv
RT: 1.631 min Scan# 477
Delta R.T. 0.025 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 39 Resp: 2879
Ion Ratio Lower Upper
39 100
54 20.0 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.033 ppbv

RT: 2.052 min Scan# 602

Delta R.T. 0.016 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Instrument :

MSVOA_L

ClientSampleId :

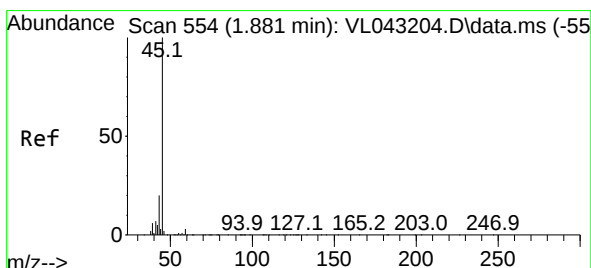
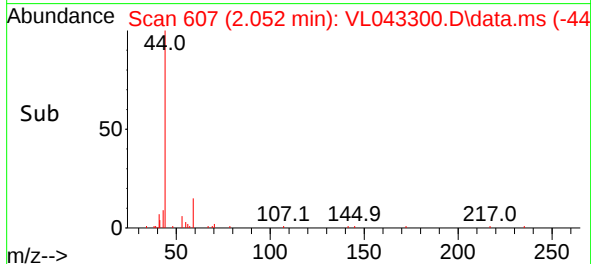
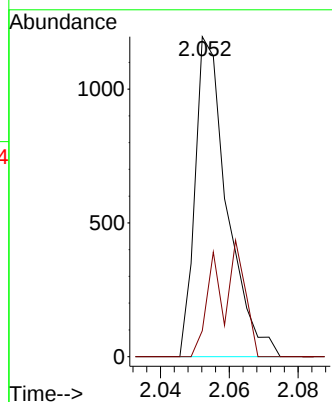
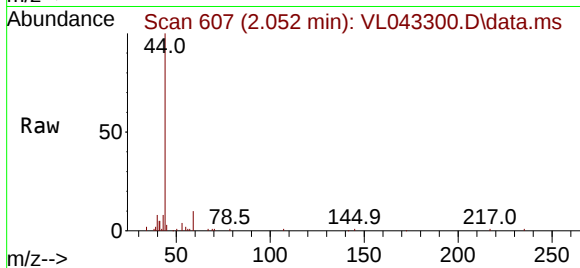
SV1

Tgt Ion: 59 Resp: 772

Ion Ratio Lower Upper

59 100

57 31.7 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 14.291 ppbv

RT: 1.444 min Scan# 419

Delta R.T. -0.437 min

Lab File: VL043300.D

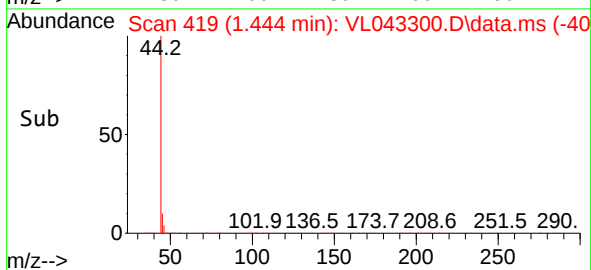
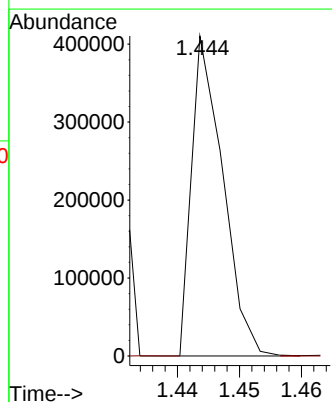
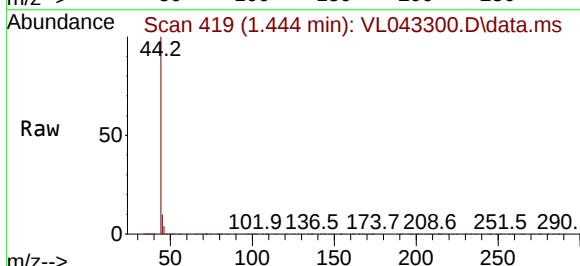
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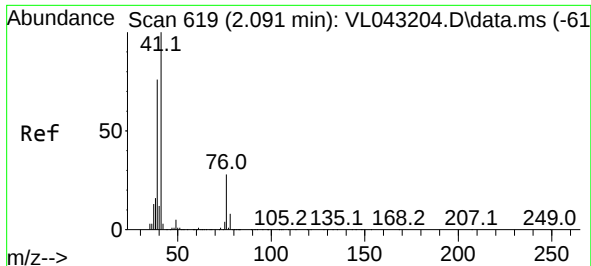
Tgt Ion: 45 Resp: 144067

Ion Ratio Lower Upper

45 100

58 1.1 31.3 46.9#

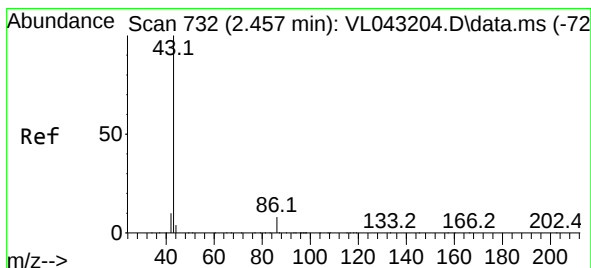
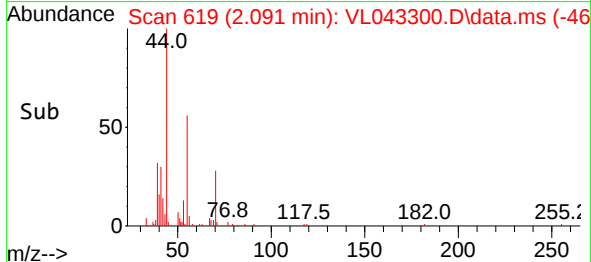
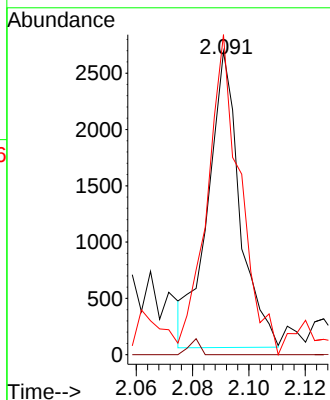
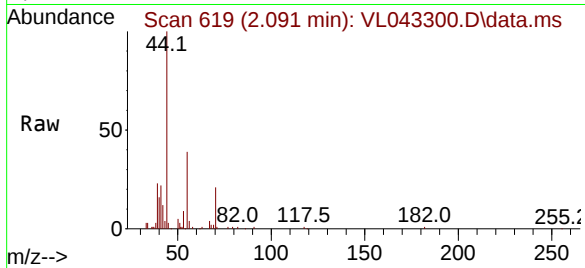




#21
 Allyl Chloride
 Concen: 0.173 ppbv
 RT: 2.091 min Scan# 619
 Delta R.T. -0.000 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

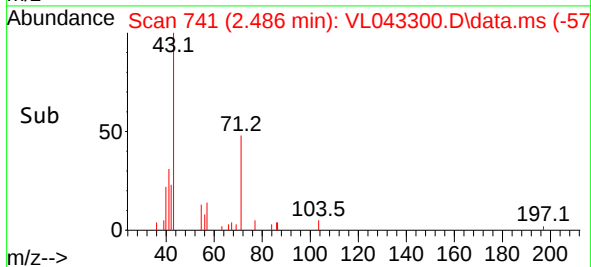
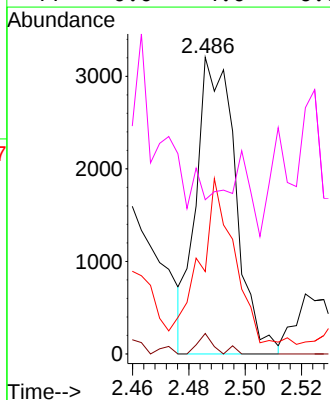
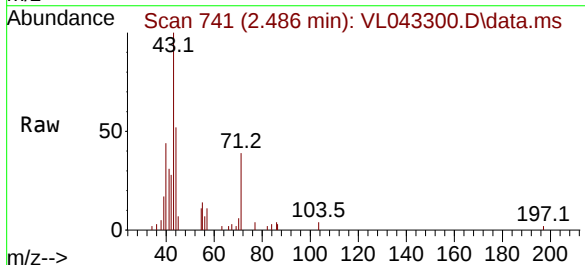
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

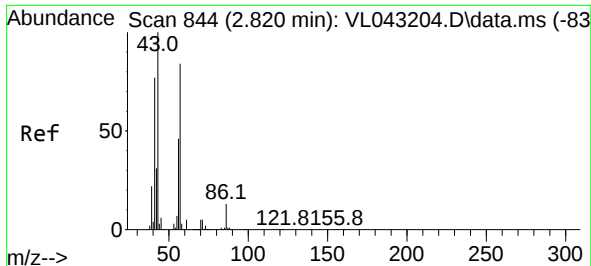
Tgt Ion:	41	Resp:	2077
Ion Ratio	Lower	Upper	
41	100		
76	0.0	22.1	33.1#
39	128.5	61.0	91.4#



#23
 Vinyl Acetate
 Concen: 0.144 ppbv
 RT: 2.486 min Scan# 741
 Delta R.T. 0.029 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

Tgt Ion:	43	Resp:	3106
Ion Ratio	Lower	Upper	
43	100		
86	7.1	6.2	9.2
42	24.5	8.0	12.0#
44	0.0	4.0	6.0#

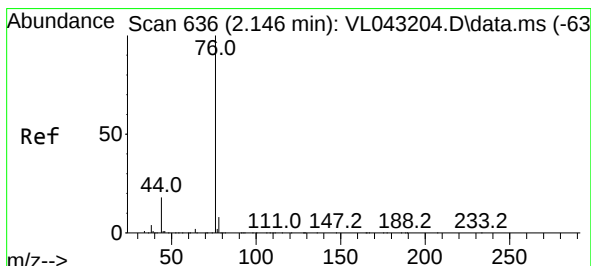
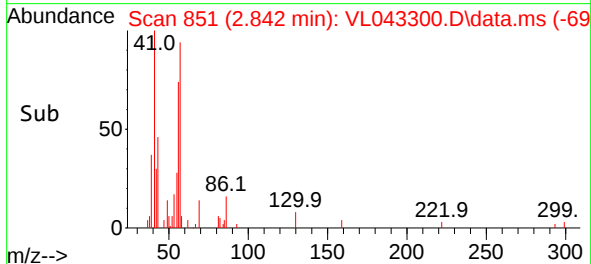
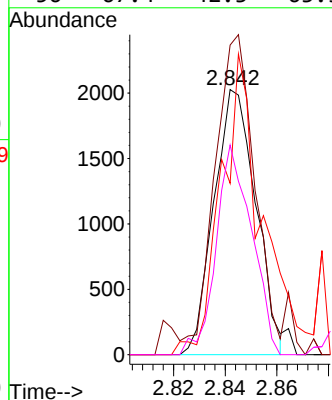
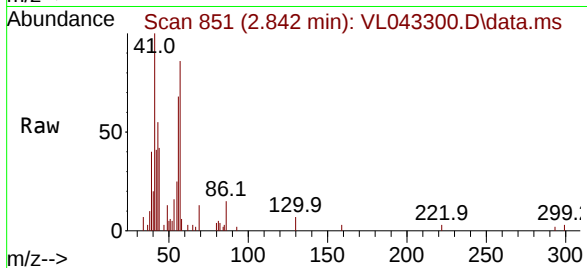




#26
Hexane
Concen: 0.135 ppbv
RT: 2.842 min Scan# 81
Delta R.T. 0.022 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

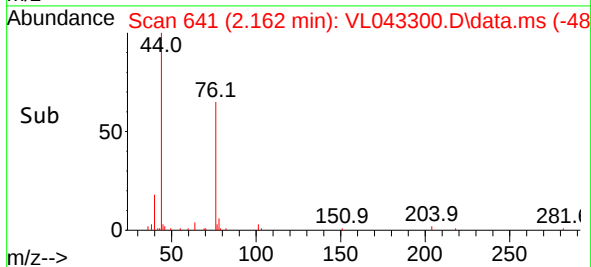
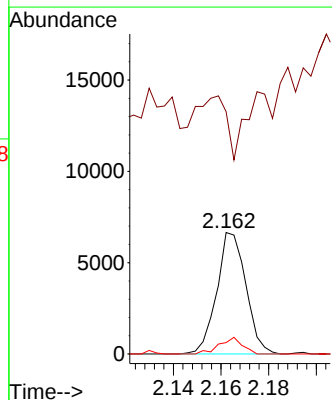
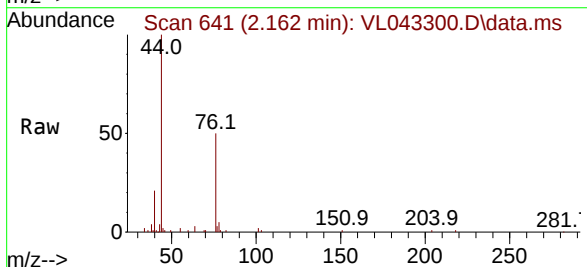
Instrument :
MSVOA_L
ClientSampleId :
SV1

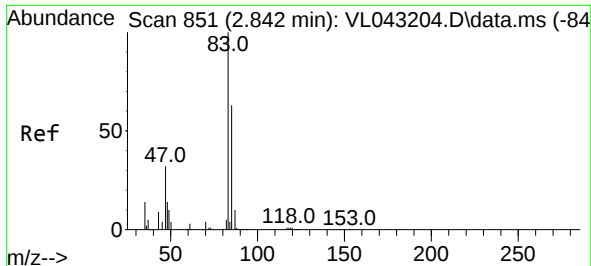
Tgt Ion: 57	Resp: 2281
Ion Ratio	Lower Upper
57 100	
41 125.7	74.6 111.8#
43 118.5	179.0 268.4#
56 67.4	42.3 63.5#



#27
Carbon Disulfide
Concen: 0.328 ppbv
RT: 2.162 min Scan# 641
Delta R.T. 0.016 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 76	Resp: 5651		
Ion Ratio	Lower	Upper	
76 100			
44 458.5	16.1	24.1#	
78 10.7	9.6	14.4	





#29

Chloroform

Concen: 0.371 ppbv

RT: 2.861 min Scan# 81

Delta R.T. 0.019 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Instrument :

MSVOA_L

ClientSampleId :

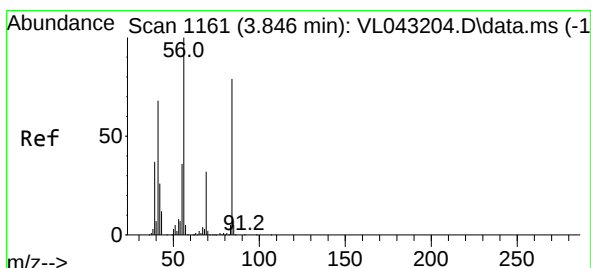
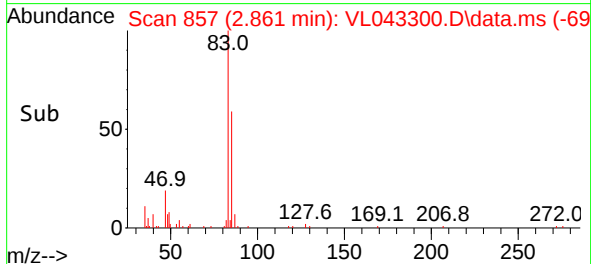
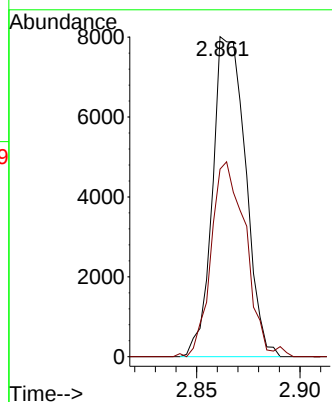
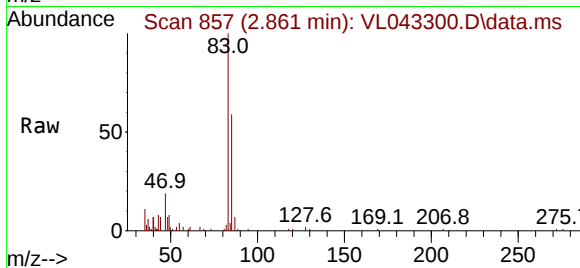
SV1

Tgt Ion: 83 Resp: 8903

Ion Ratio Lower Upper

83 100

85 57.6 50.5 75.7



#30

Cyclohexane

Concen: 0.033 ppbv

RT: 3.871 min Scan# 1169

Delta R.T. 0.025 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

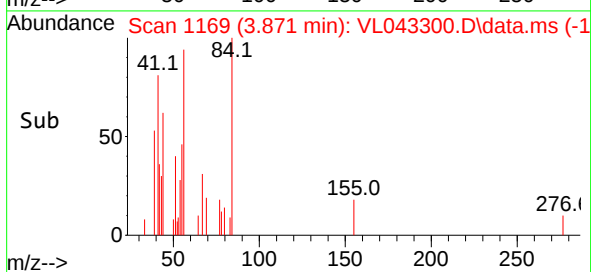
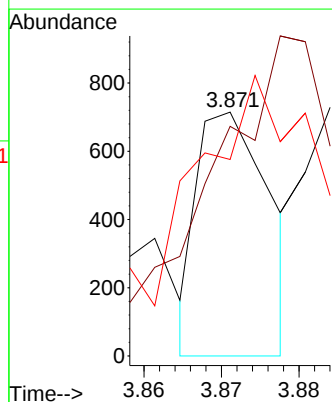
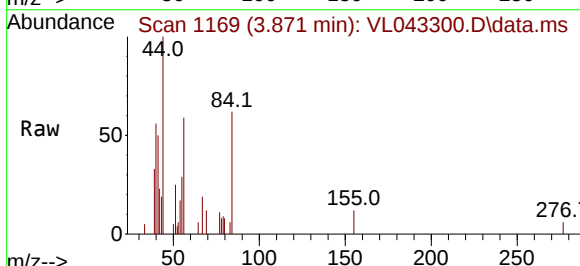
Tgt Ion: 84 Resp: 463

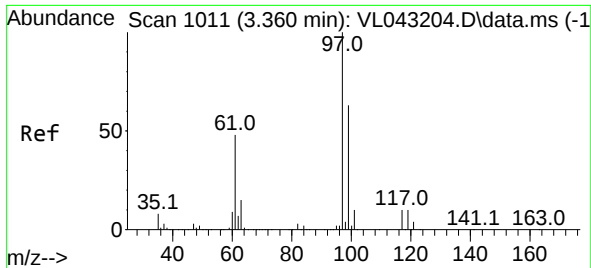
Ion Ratio Lower Upper

84 100

56 314.5 104.7 157.1#

41 311.4 69.0 103.6#

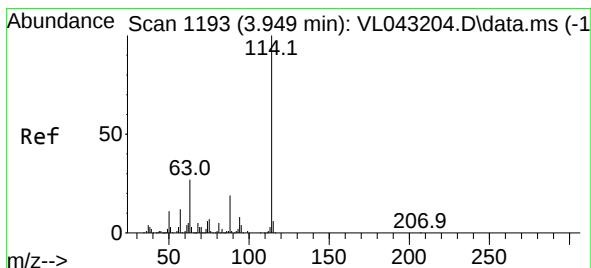
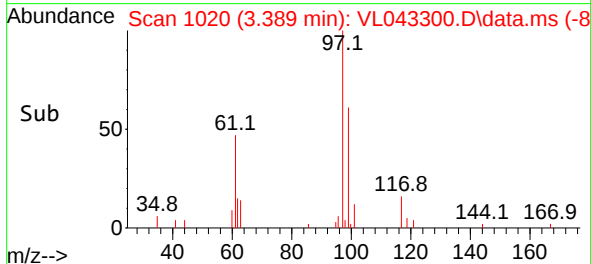
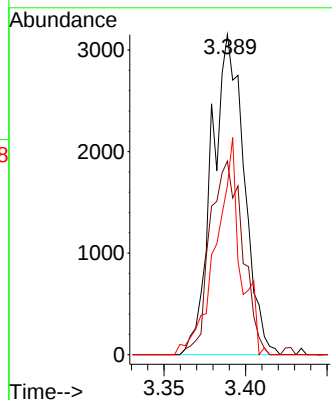
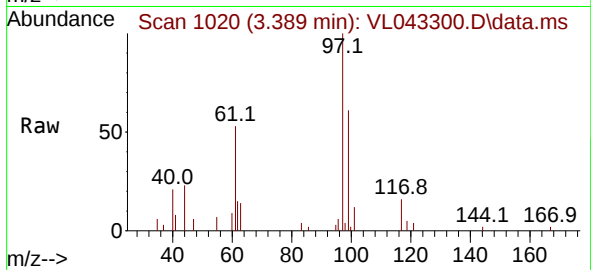




#32
 1,1,1-Trichloroethane
 Concen: 0.170 ppbv
 RT: 3.389 min Scan# 1011
 Delta R.T. 0.029 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

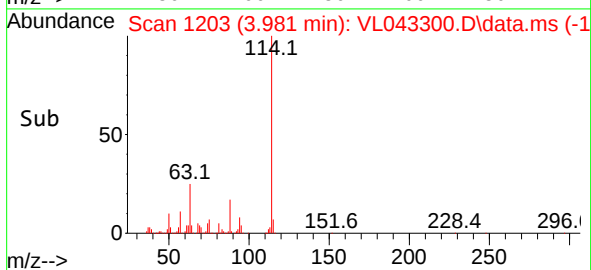
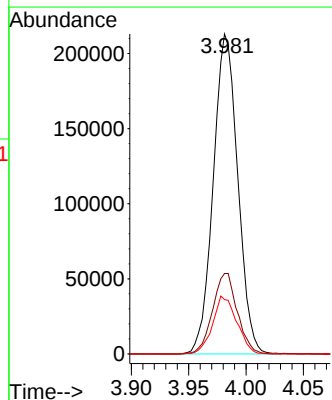
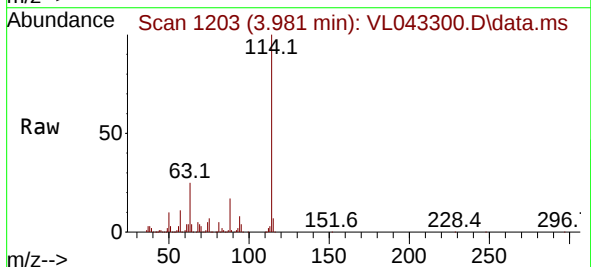
Instrument :
 MSVOA_1
 ClientSampleId :
 SV1

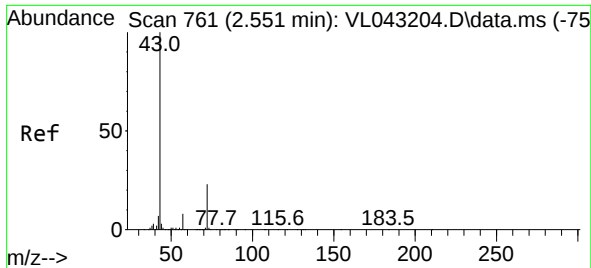
Tgt Ion: 97 Resp: 4343
 Ion Ratio Lower Upper
 97 100
 99 61.8 50.3 75.5
 61 51.9 38.9 58.3



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.981 min Scan# 1203
 Delta R.T. 0.032 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

Tgt Ion: 114 Resp: 316515
 Ion Ratio Lower Upper
 114 100
 63 25.5 21.0 31.6
 88 17.8 14.9 22.3

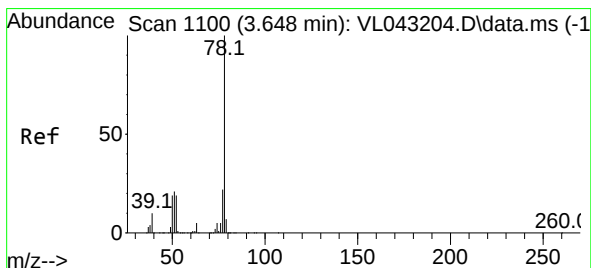
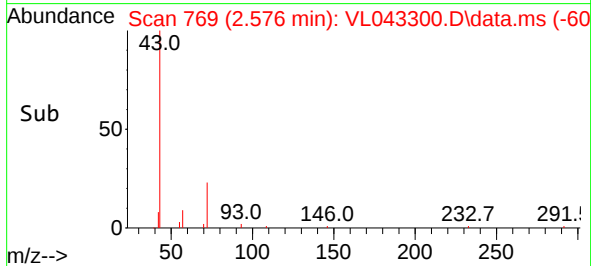
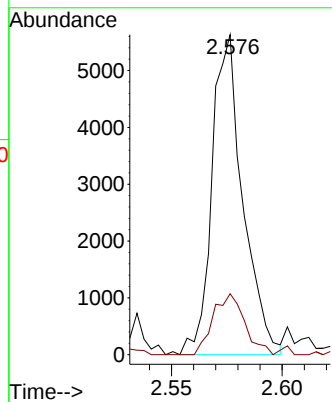
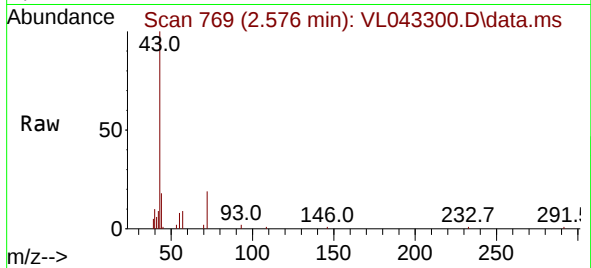




#34
2-Butanone
Concen: 0.245 ppbv
RT: 2.576 min Scan# 769
Delta R.T. 0.025 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

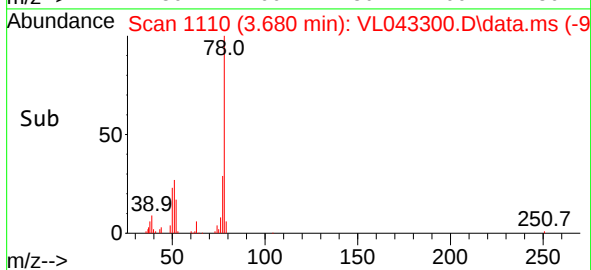
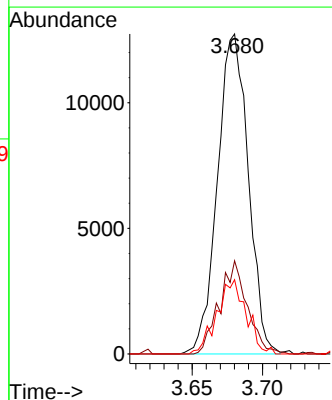
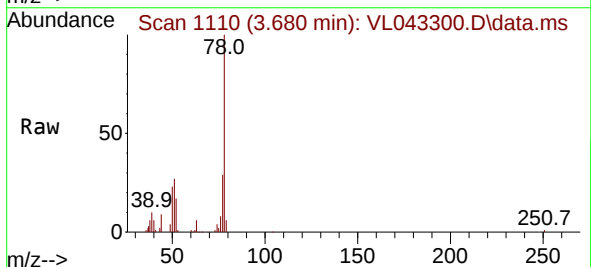
Instrument :
MSVOA_L
ClientSampleId :
SV1

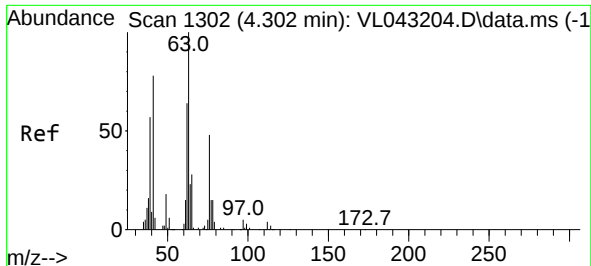
Tgt Ion: 43 Resp: 5464
Ion Ratio Lower Upper
43 100
72 20.7 18.1 27.1



#36
Benzene
Concen: 0.640 ppbv
RT: 3.680 min Scan# 1110
Delta R.T. 0.032 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 78 Resp: 19414
Ion Ratio Lower Upper
78 100
77 29.1 17.5 26.3#
50 23.2 15.5 23.3





#39

1,2-Dichloropropane

Concen: 7.250 ppbv

RT: 3.981 min Scan# 11

Delta R.T. -0.321 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Instrument :

MSVOA_L

ClientSampleId :

SV1

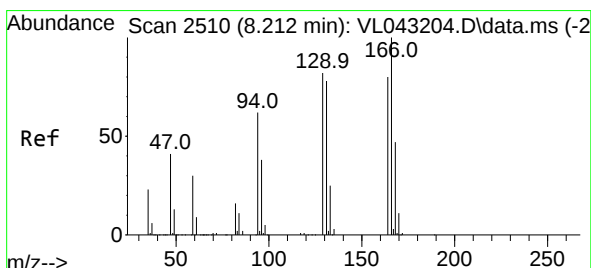
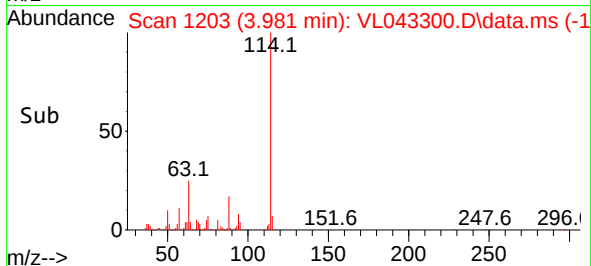
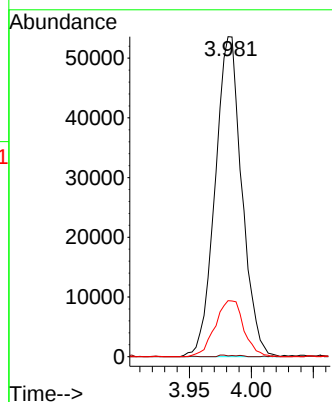
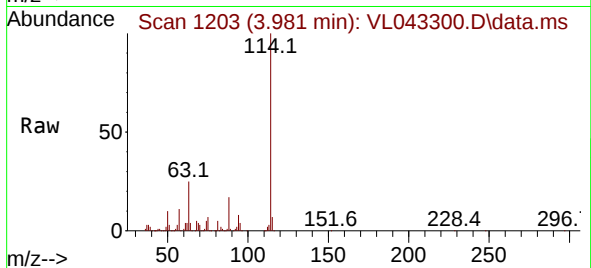
Tgt Ion: 63 Resp: 80429

Ion Ratio Lower Upper

63 100

41 0.2 62.6 93.8#

62 17.5 51.0 76.6#



#52

Tetrachloroethene

Concen: 0.682 ppbv

RT: 8.244 min Scan# 2520

Delta R.T. 0.032 min

Lab File: VL043300.D

Acq: 02 Dec 2025 15:57

Tgt Ion: 164 Resp: 7694

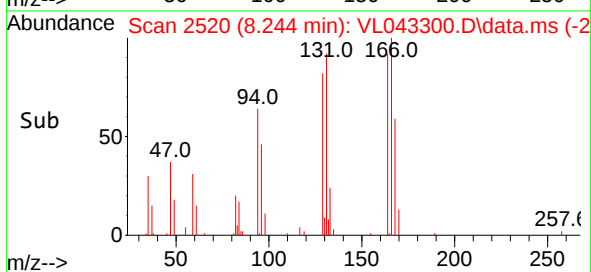
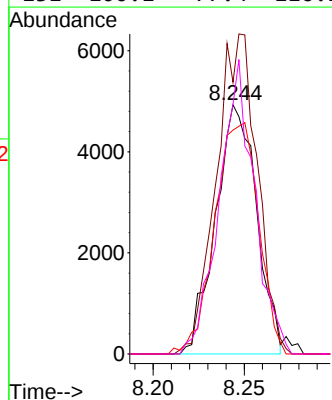
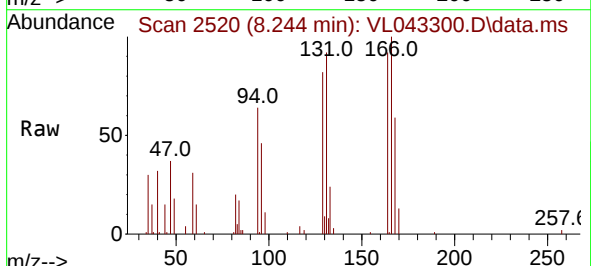
Ion Ratio Lower Upper

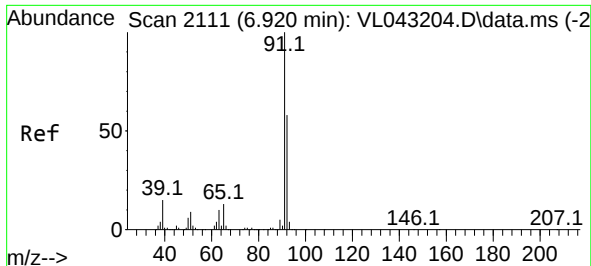
164 100

166 107.4 99.4 149.2

129 88.3 81.8 122.8

131 100.1 77.4 116.2

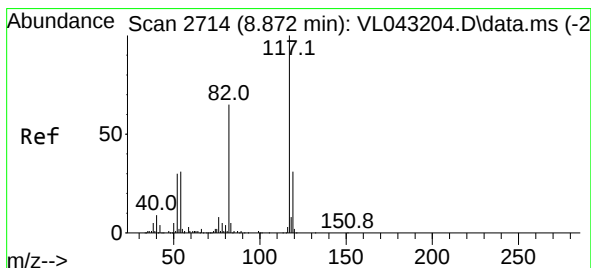
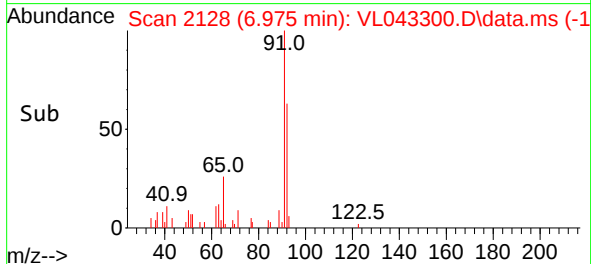
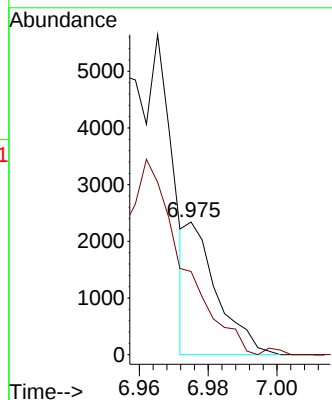
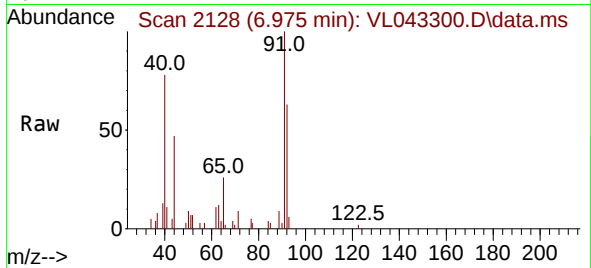




#53
Toluene
Concen: 0.041 ppbv
RT: 6.975 min Scan# 2111
Delta R.T. 0.055 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

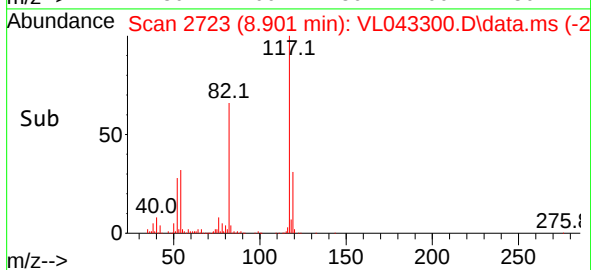
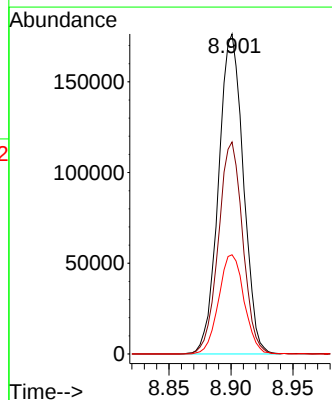
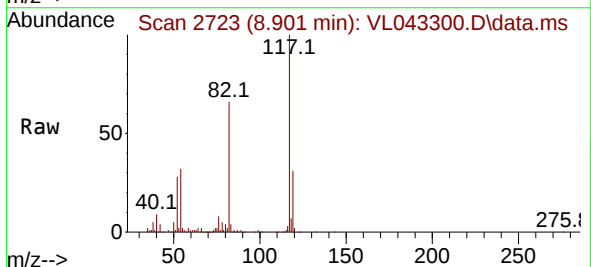
Instrument :
MSVOA_L
ClientSampleId :
SV1

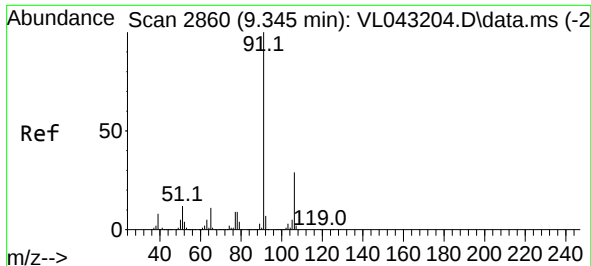
Tgt Ion: 91 Resp: 1456
Ion Ratio Lower Upper
91 100
92 0.0 47.4 71.0#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.901 min Scan# 2723
Delta R.T. 0.029 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 117 Resp: 246017
Ion Ratio Lower Upper
117 100
82 65.1 56.1 84.1
119 31.9 25.0 37.6

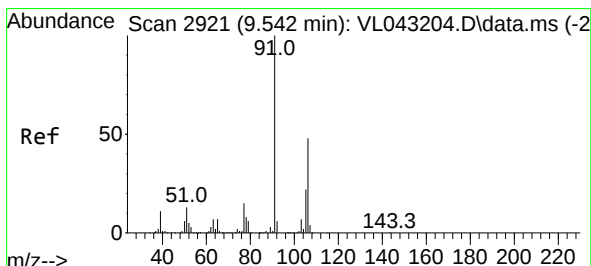
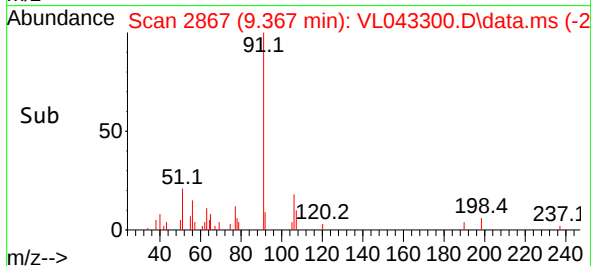
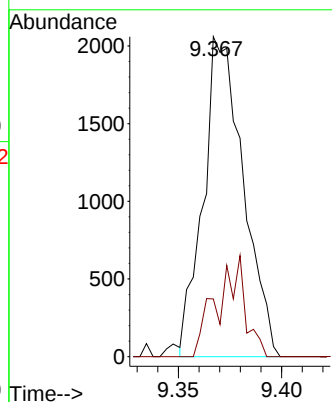
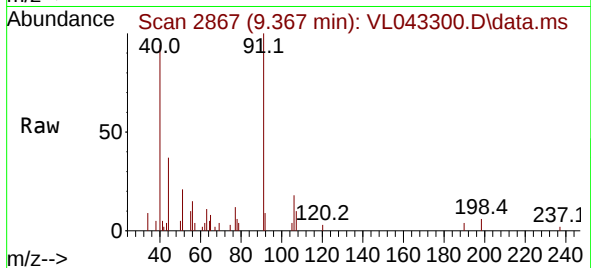




#58
Ethyl Benzene
Concen: 0.059 ppbv
RT: 9.367 min Scan# 21
Delta R.T. 0.022 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

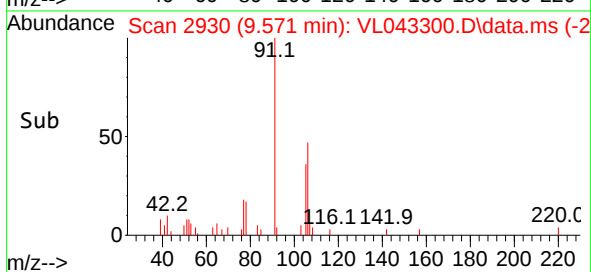
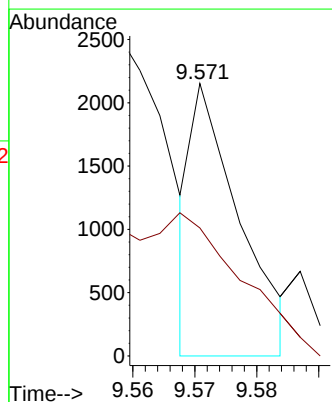
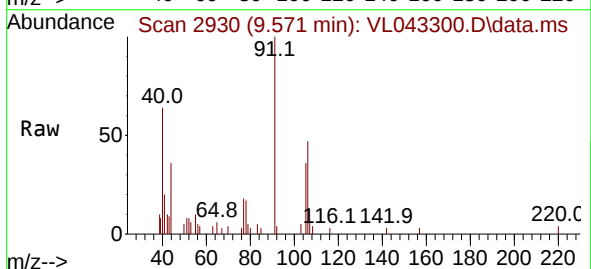
Instrument :
MSVOA_L
ClientSampleId :
SV1

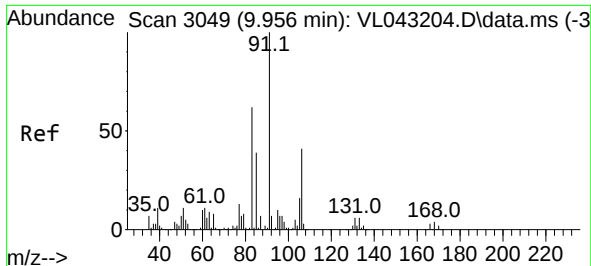
Tgt Ion: 91 Resp: 2780
Ion Ratio Lower Upper
91 100
106 16.6 22.8 34.2#



#59
m/p-Xylene
Concen: 0.031 ppbv
RT: 9.571 min Scan# 2930
Delta R.T. 0.029 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 91 Resp: 1158
Ion Ratio Lower Upper
91 100
106 0.0 36.1 54.1#

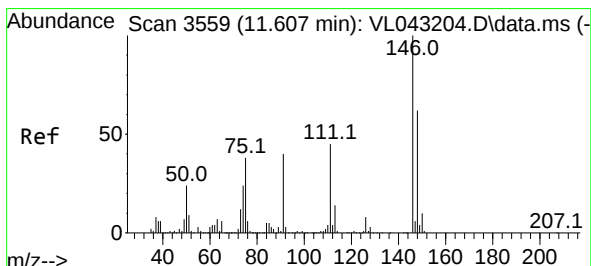
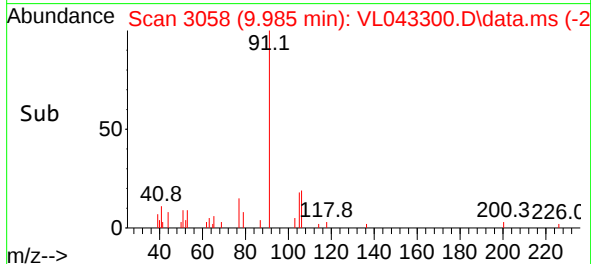
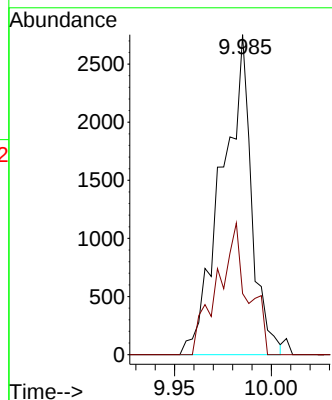
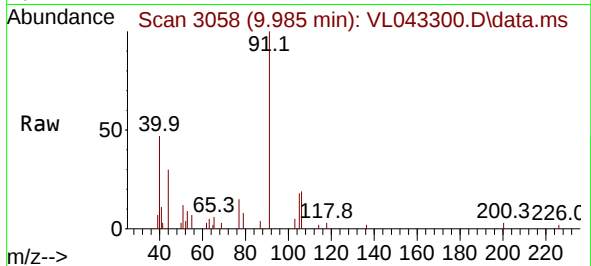




#60
o-Xylene
Concen: 0.078 ppbv
RT: 9.985 min Scan# 3049
Delta R.T. 0.029 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

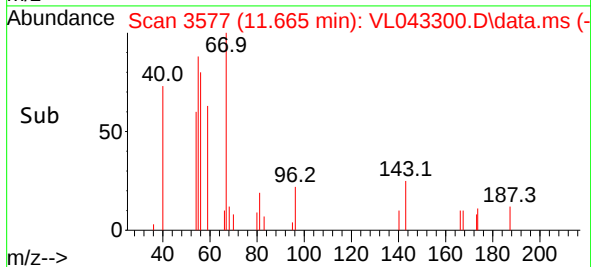
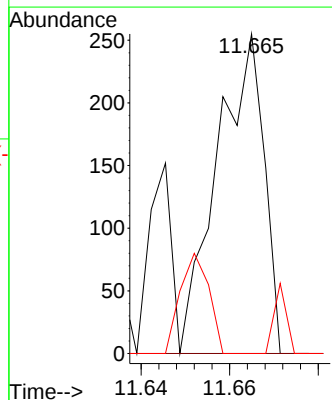
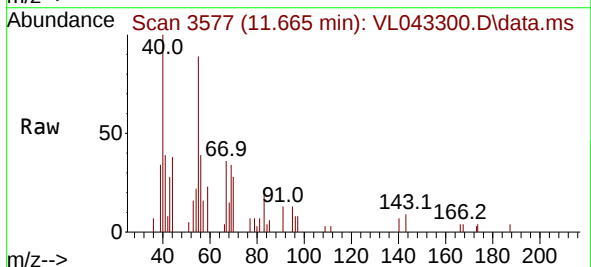
Instrument :
MSVOA_L
ClientSampleId :
SV1

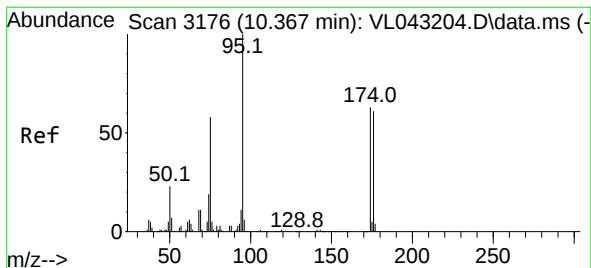
Tgt Ion: 91 Resp: 2948
Ion Ratio Lower Upper
91 100
106 41.9 20.9 62.8



#66
Benzyl Chloride
Concen: 0.030 ppbv
RT: 11.665 min Scan# 3577
Delta R.T. 0.058 min
Lab File: VL043300.D
Acq: 02 Dec 2025 15:57

Tgt Ion: 91 Resp: 187
Ion Ratio Lower Upper
91 100
126 0.0 14.4 21.6#
128 19.3 4.6 6.8#

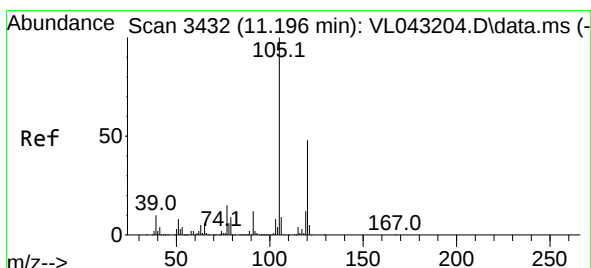
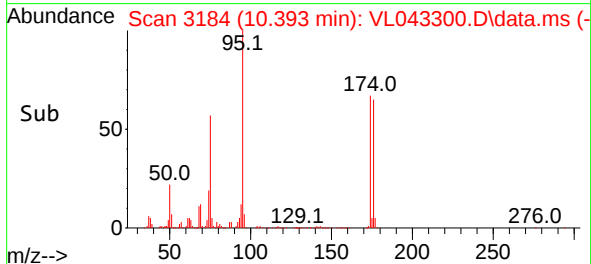
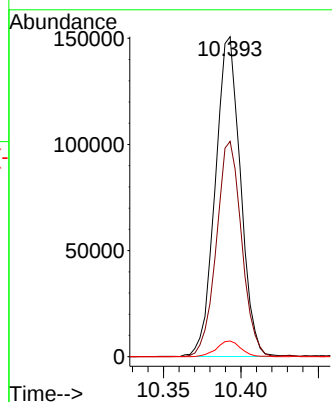
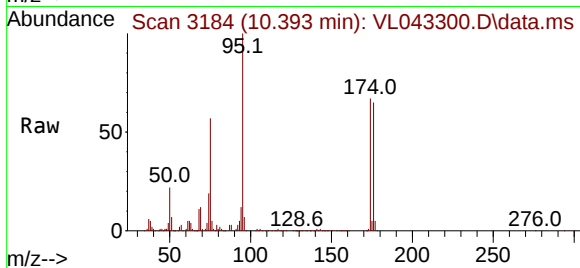




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.453 ppbv
 RT: 10.393 min Scan# 3176
 Delta R.T. 0.025 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

Tgt Ion: 95 Resp: 170475
 Ion Ratio Lower Upper
 95 100
 174 68.0 50.2 75.2
 175 4.8 4.1 6.1



#73
 1,3,5-Trimethylbenzene
 Concen: 0.035 ppbv
 RT: 11.215 min Scan# 3438
 Delta R.T. 0.019 min
 Lab File: VL043300.D
 Acq: 02 Dec 2025 15:57

Tgt Ion: 105 Resp: 1364
 Ion Ratio Lower Upper
 105 100
 120 38.5 38.6 57.8#

