

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120825\
 Data File : VL043310.D
 Acq On : 08 Dec 2025 12:40
 Operator : SY/MD
 Sample : Q3799-01
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1

Quant Time: Dec 09 00:10:41 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

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

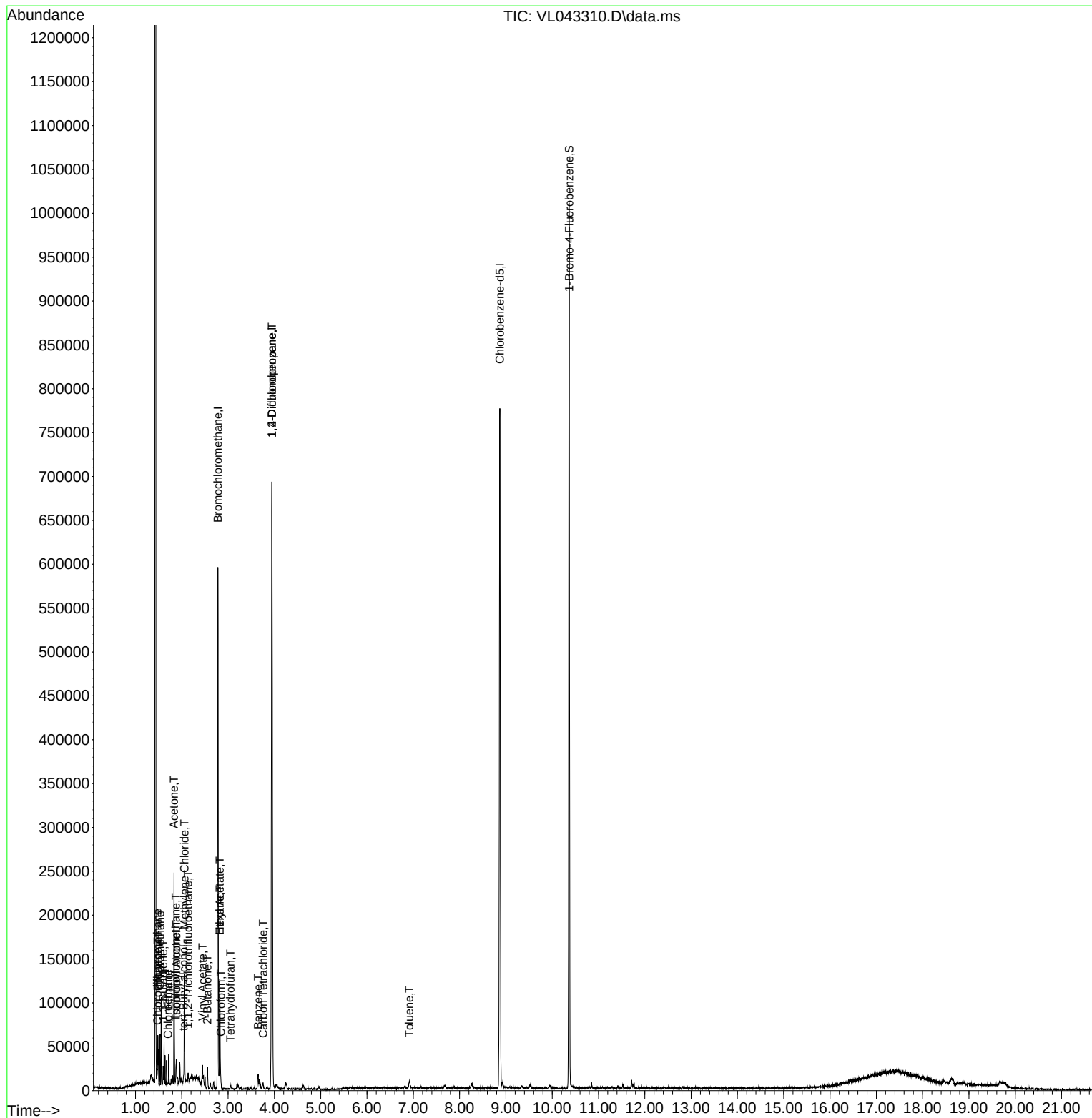
Internal Standards							
1) Bromochloromethane		2.781	49	151890	10.000	ppbv	0.00
33) 1,4-Difluorobenzene		3.946	114	389995	10.000	ppbv	0.00
55) Chlorobenzene-d5		8.869	117	311445	10.000	ppbv	0.00
System Monitoring Compounds							
68) 1-Bromo-4-Fluorobenzene		10.364	95	233482	10.227	ppbv	0.00
Spiked Amount		10.000	Range	65 - 135	Recovery	= 102.300%	
Target Compounds							
							Qvalue
3) Chlorodifluoromethane		1.473	51	9263	0.440	ppbv	# 83
4) Chloromethane		1.531	50	17448	2.178	ppbv	95
7) Chloroethane		1.703	64	142	0.042	ppbv	# 41
9) Propene		1.483	41	5806	0.649	ppbv	# 1
11) Trichlorofluoromethane		1.874	101	4433	0.214	ppbv	95
12) 1,1,2-Trichlorotrifluo...		2.136	101	1181	0.073	ppbv	100
13) Ethanol		1.719	45	11664	3.708	ppbv	# 38
15) Acetone		1.832	43	100928	4.783	ppbv	98
16) 1,3-Butadiene		1.599	39	3163	0.336	ppbv	# 40
17) tert-Butyl alcohol		2.039	59	2939	0.106	ppbv	94
19) Isopropyl Alcohol		1.884	45	9295	0.779	ppbv	# 1
20) Methylene Chloride		2.059	84	18675	2.407	ppbv	89
23) Vinyl Acetate		2.447	43	12208	0.479	ppbv	# 87
25) Ethyl Acetate		2.819	43	19515	0.429	ppbv	# 82
26) Hexane		2.819	57	24551	1.230	ppbv	# 44
29) Chloroform		2.845	83	1625	0.057	ppbv	85
34) 2-Butanone		2.551	43	13762	0.500	ppbv	99
35) Carbon Tetrachloride		3.755	117	1879	0.063	ppbv	100
36) Benzene		3.651	78	3478	0.093	ppbv	96
39) 1,2-Dichloropropane		3.946	63	100423	7.346	ppbv	# 24
41) Tetrahydrofuran		3.052	42	902	0.059	ppbv	# 67
53) Toluene		6.910	91	3785	0.086	ppbv	# 66

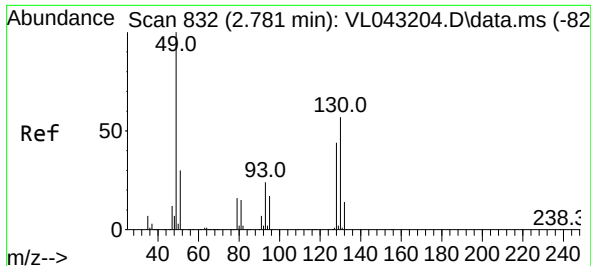
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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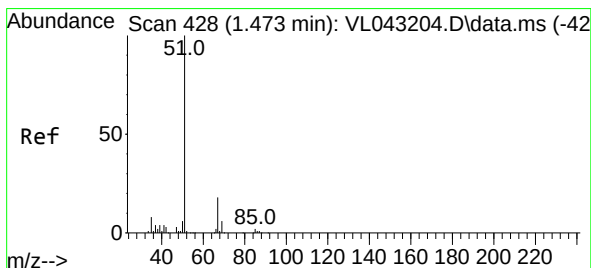
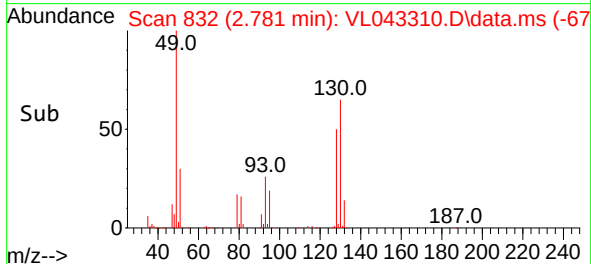
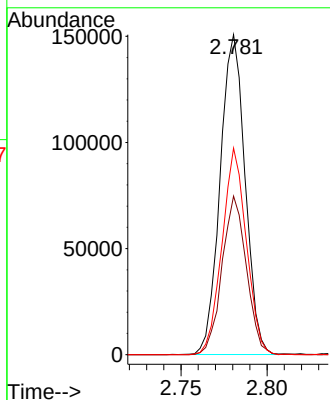
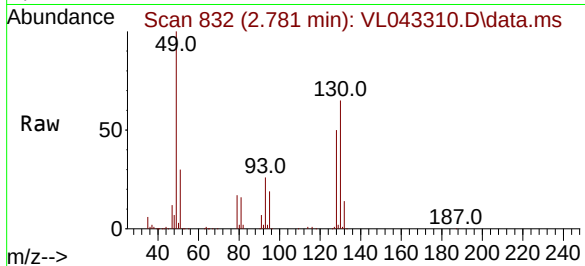




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.781 min Scan# 832
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

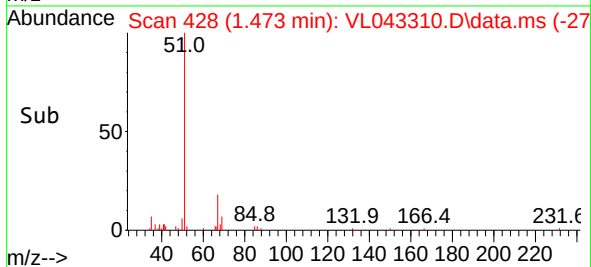
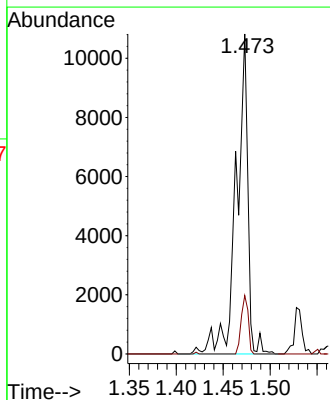
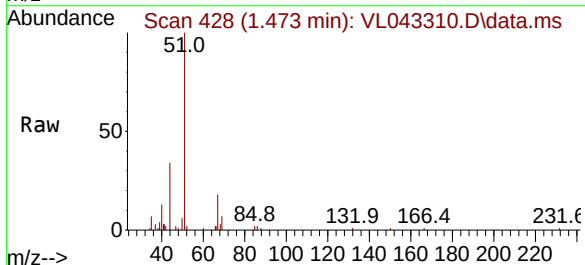
Instrument :
MSVOA_L
ClientSampleId :
AA-1

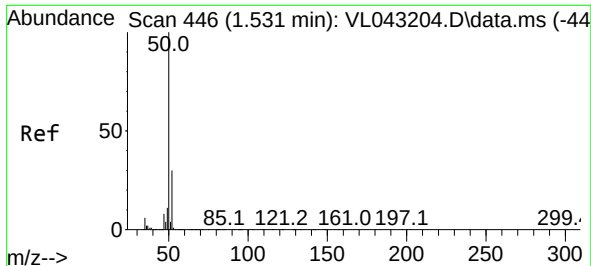
Tgt Ion: 49 Resp: 151890
Ion Ratio Lower Upper
49 100
128 48.5 23.0 69.0
130 62.9 29.9 89.7



#3
Chlorodifluoromethane
Concen: 0.440 ppbv
RT: 1.473 min Scan# 428
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion: 51 Resp: 9263
Ion Ratio Lower Upper
51 100
67 11.1 14.9 22.3#

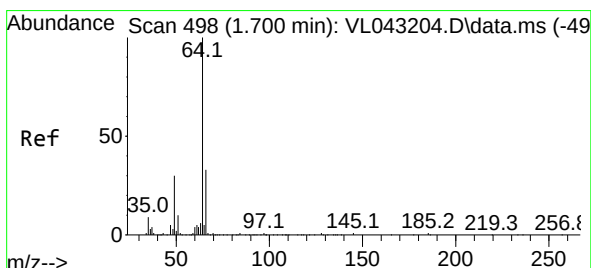
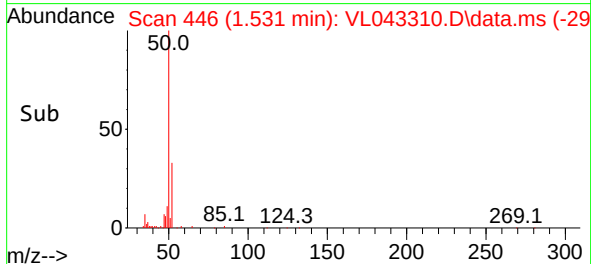
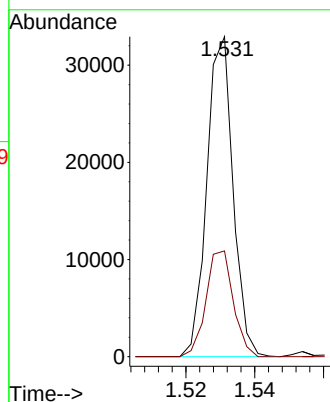
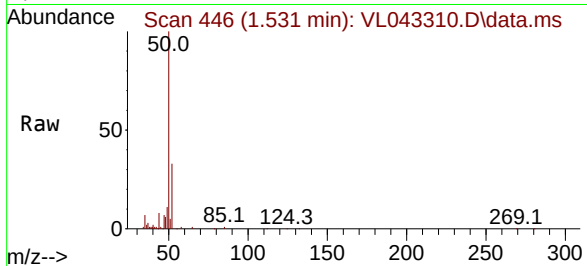




#4
Chloromethane
Concen: 2.178 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

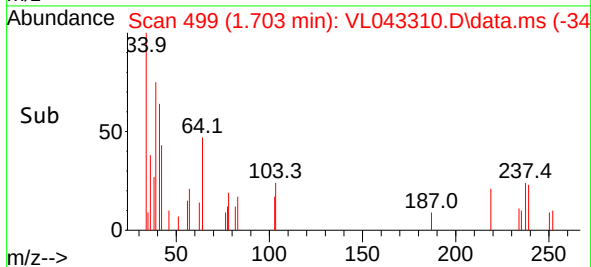
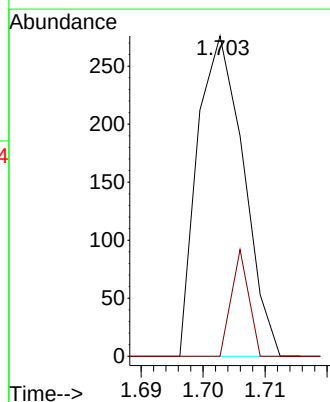
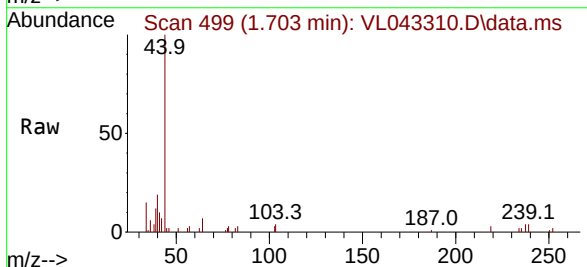
Instrument :
MSVOA_L
ClientSampleId :
AA-1

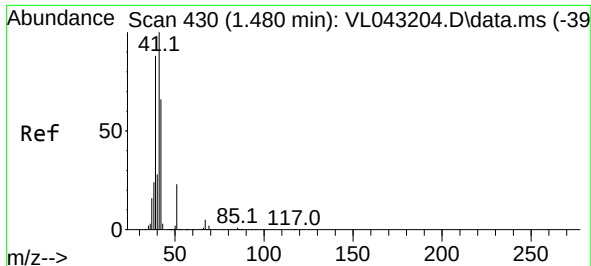
Tgt Ion: 50 Resp: 17448
Ion Ratio Lower Upper
50 100
52 33.1 24.1 36.1



#7
Chloroethane
Concen: 0.042 ppbv
RT: 1.703 min Scan# 499
Delta R.T. 0.003 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion: 64 Resp: 142
Ion Ratio Lower Upper
64 100
66 0.0 26.8 40.2#





#9

Propene

Concen: 0.649 ppbv

RT: 1.483 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_L

ClientSampleId :

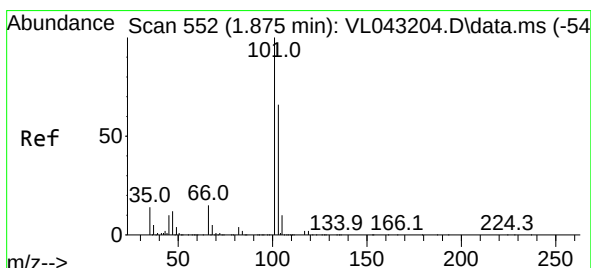
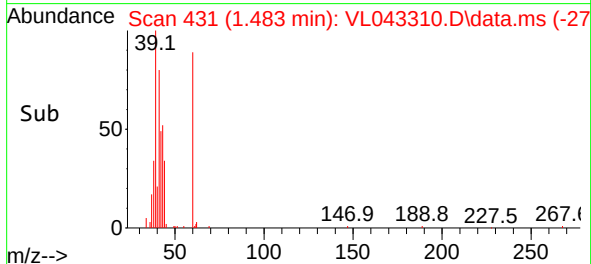
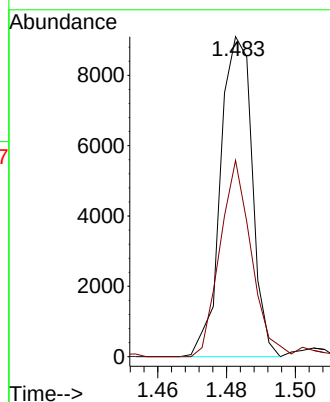
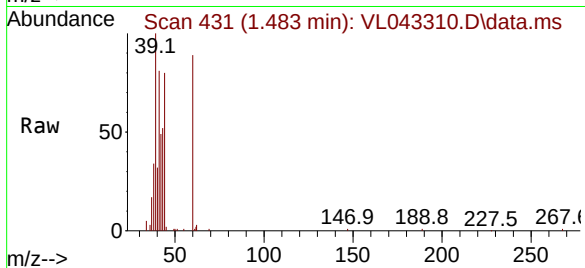
AA-1

Tgt Ion: 41 Resp: 5806

Ion Ratio Lower Upper

41 100

42 64.4 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.214 ppbv

RT: 1.874 min Scan# 552

Delta R.T. -0.000 min

Lab File: VL043310.D

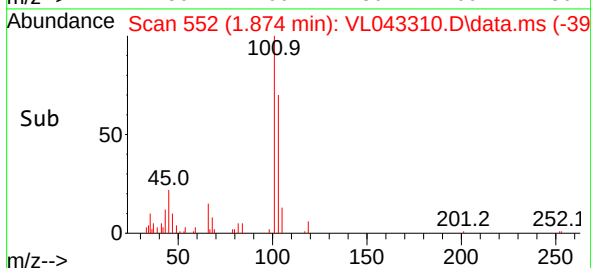
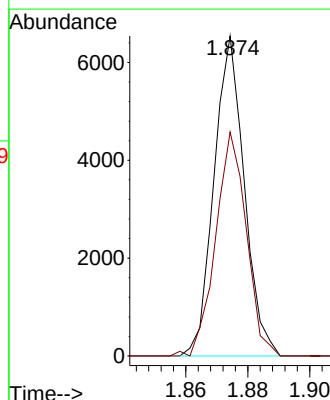
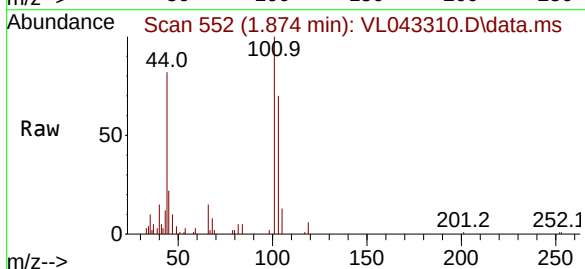
Acq: 08 Dec 2025 12:40

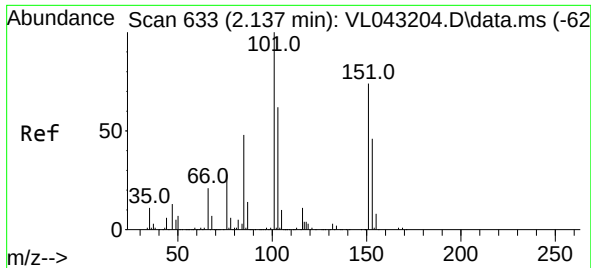
Tgt Ion:101 Resp: 4433

Ion Ratio Lower Upper

101 100

103 70.0 52.6 79.0

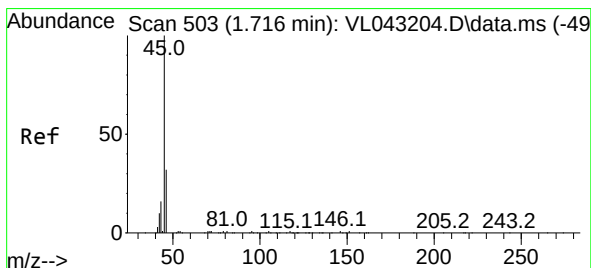
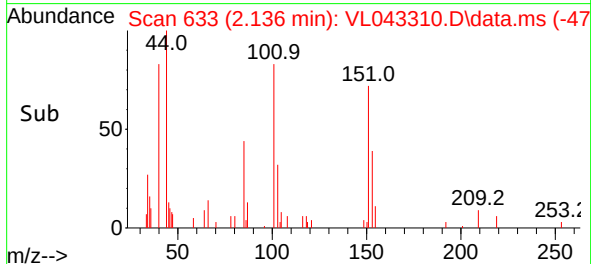
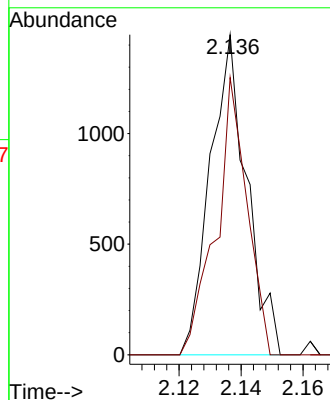
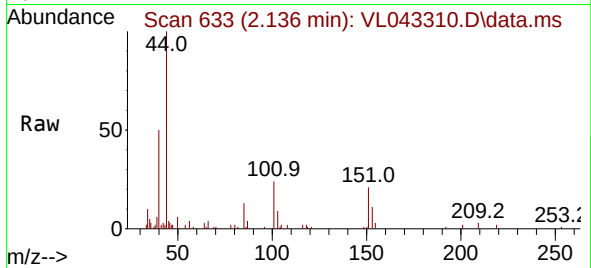




#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.073 ppbv
 RT: 2.136 min Scan# 611
 Delta R.T. -0.000 min
 Lab File: VL043310.D
 Acq: 08 Dec 2025 12:40

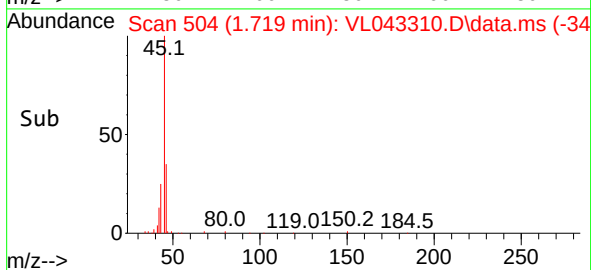
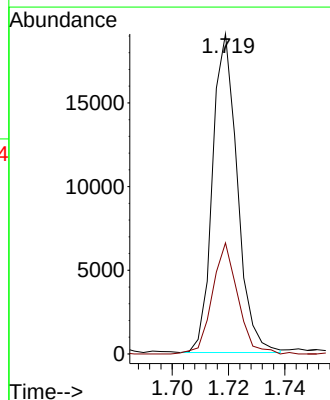
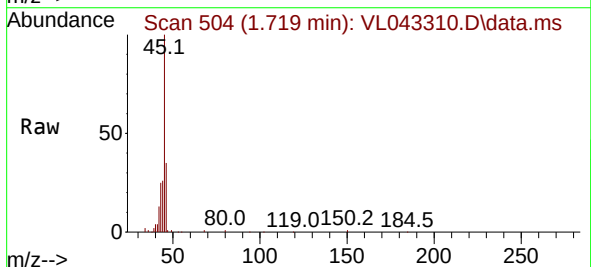
Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1

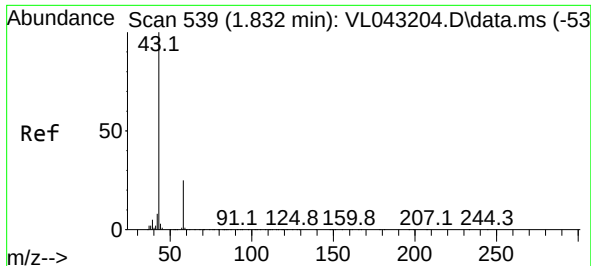
Tgt Ion: 101 Resp: 1181
 Ion Ratio Lower Upper
 101 100
 151 73.8 59.2 88.8



#13
 Ethanol
 Concen: 3.708 ppbv
 RT: 1.719 min Scan# 504
 Delta R.T. 0.003 min
 Lab File: VL043310.D
 Acq: 08 Dec 2025 12:40

Tgt Ion: 45 Resp: 11664
 Ion Ratio Lower Upper
 45 100
 46 0.0 15.0 59.8#





#15

Acetone

Concen: 4.783 ppbv

RT: 1.832 min Scan# 51

Delta R.T. -0.000 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_L

ClientSampleId :

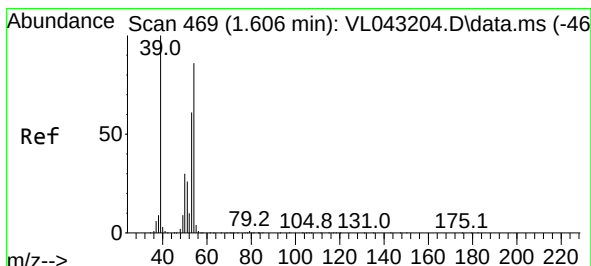
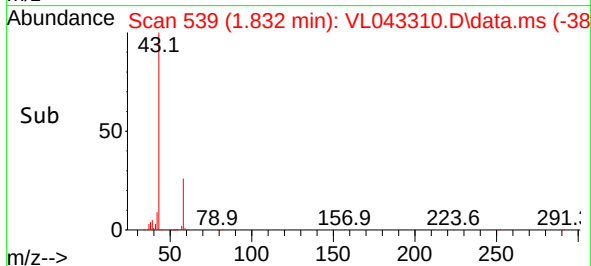
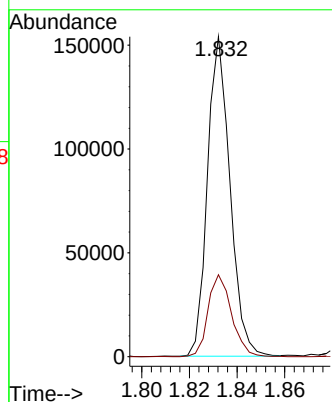
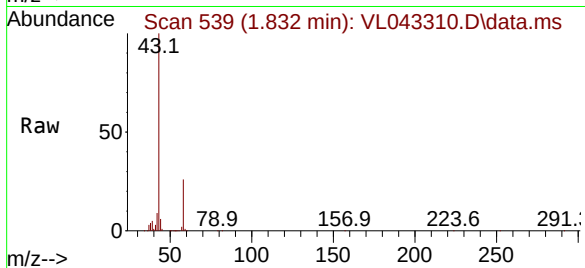
AA-1

Tgt Ion: 43 Resp: 100928

Ion Ratio Lower Upper

43 100

58 26.8 20.7 31.1



#16

1,3-Butadiene

Concen: 0.336 ppbv

RT: 1.599 min Scan# 467

Delta R.T. -0.007 min

Lab File: VL043310.D

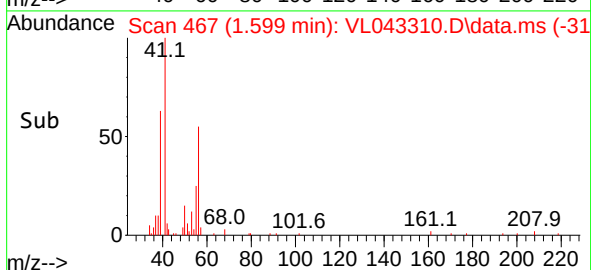
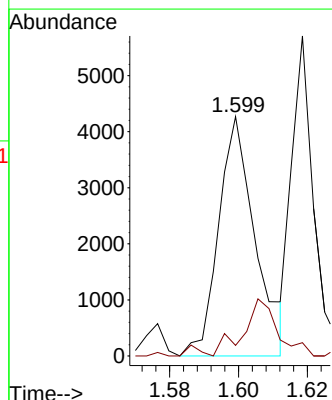
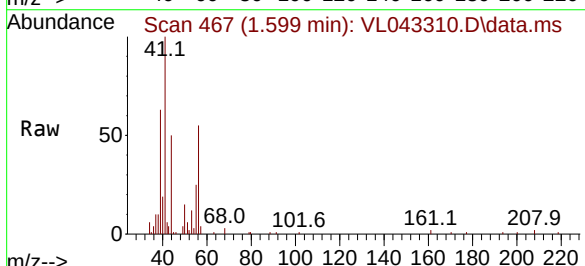
Acq: 08 Dec 2025 12:40

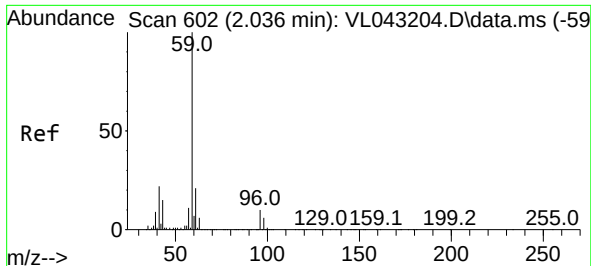
Tgt Ion: 39 Resp: 3163

Ion Ratio Lower Upper

39 100

54 23.6 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.106 ppbv

RT: 2.039 min Scan# 602

Delta R.T. 0.003 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_1

ClientSampleId :

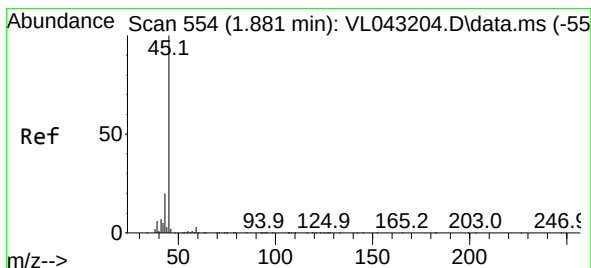
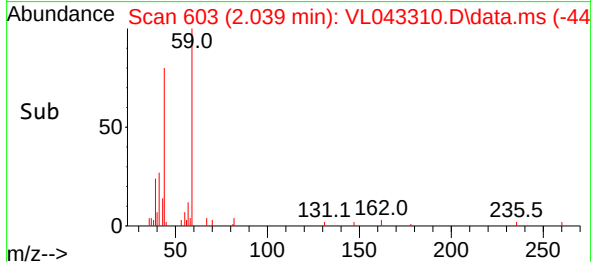
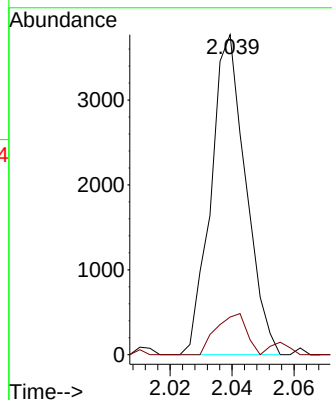
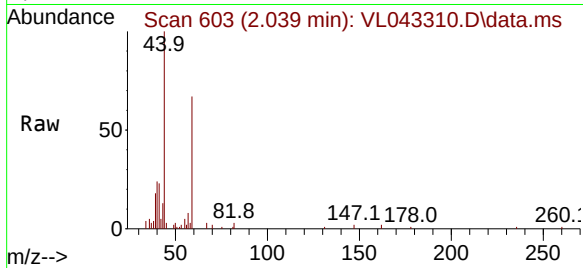
AA-1

Tgt Ion: 59 Resp: 2939

Ion Ratio Lower Upper

59 100

57 13.4 9.0 13.4



#19

Isopropyl Alcohol

Concen: 0.779 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.003 min

Lab File: VL043310.D

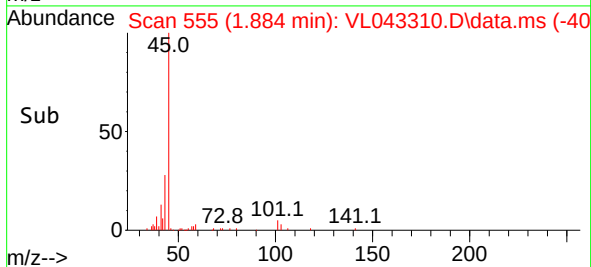
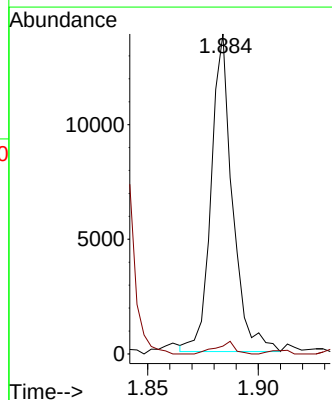
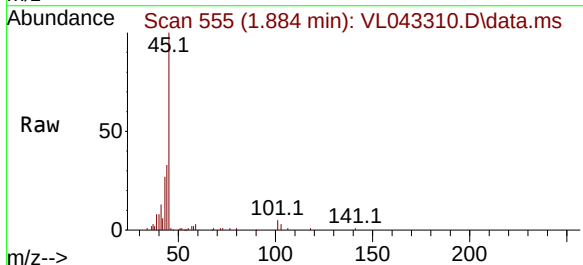
Acq: 08 Dec 2025 12:40

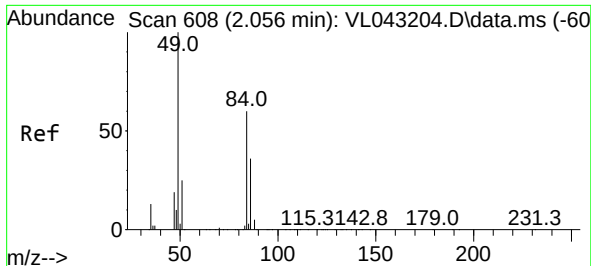
Tgt Ion: 45 Resp: 9295

Ion Ratio Lower Upper

45 100

58 291.0 31.3 46.9#



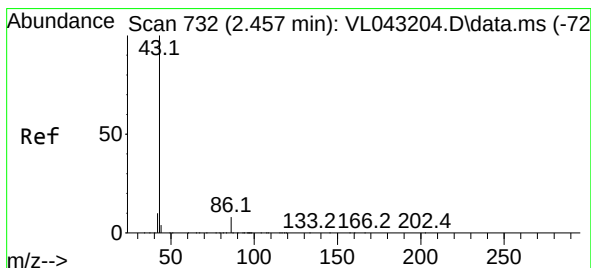
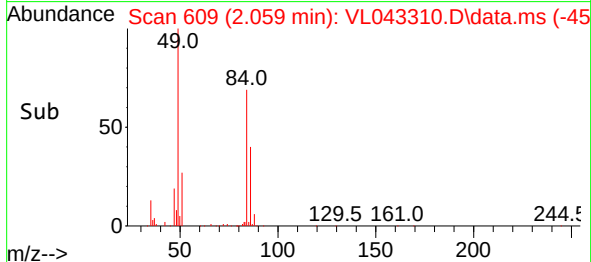
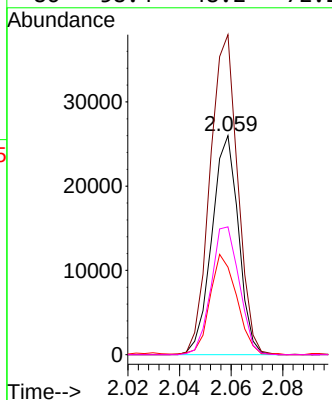
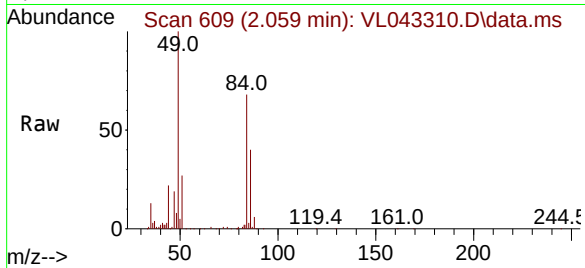


#20
Methylene Chloride
Concen: 2.407 ppbv
RT: 2.059 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Instrument :
MSVOA_1
ClientSampleId :
AA-1

Tgt Ion: 84 Resp: 18675

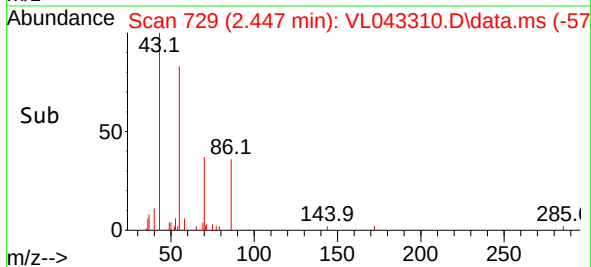
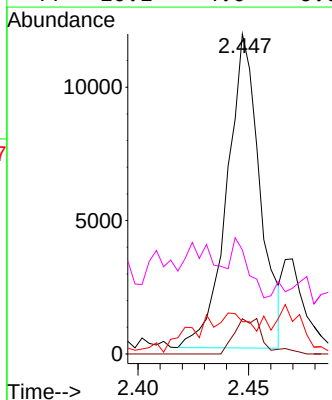
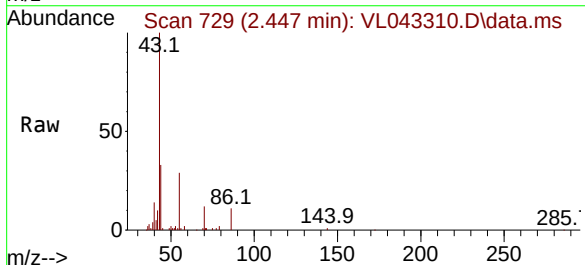
Ion	Ratio	Lower	Upper
84	100		
49	146.1	132.9	199.3
51	39.7	34.8	52.2
86	58.4	48.2	72.2

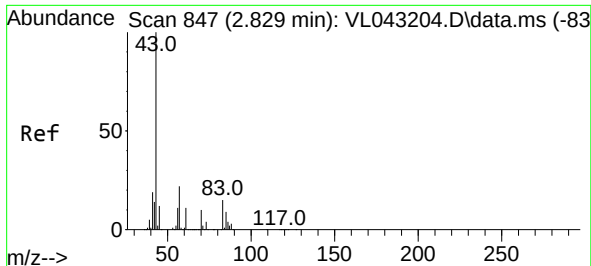


#23
Vinyl Acetate
Concen: 0.479 ppbv
RT: 2.447 min Scan# 729
Delta R.T. -0.010 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion: 43 Resp: 12208

Ion	Ratio	Lower	Upper
43	100		
86	11.2	6.2	9.2#
42	5.1	8.0	12.0#
44	10.1	4.0	6.0#

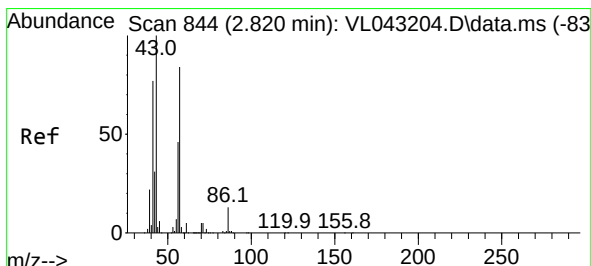
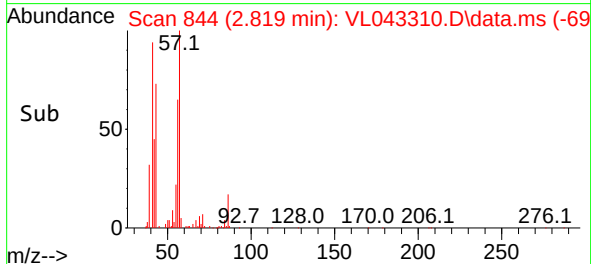
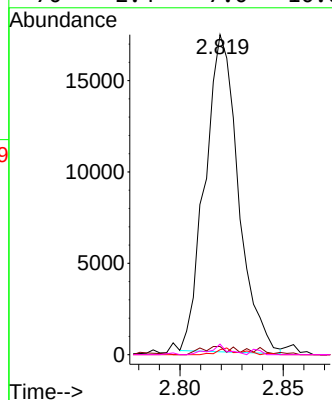
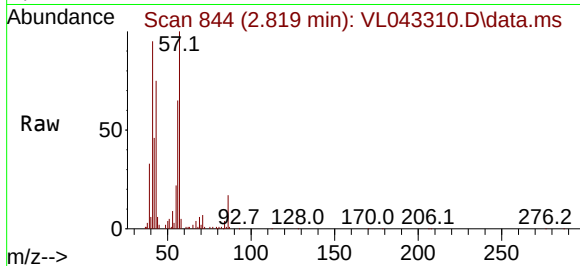




#25
Ethyl Acetate
Concen: 0.429 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.010 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

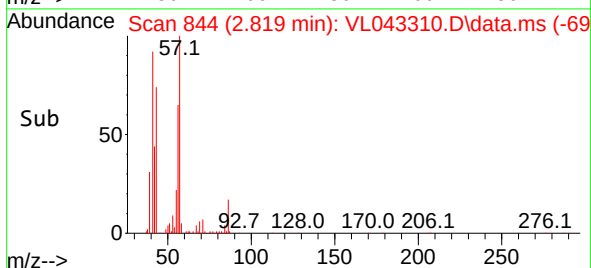
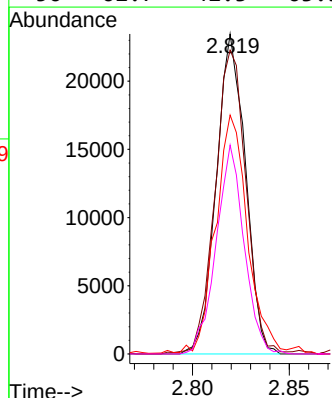
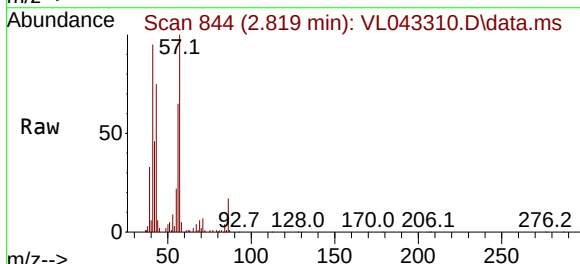
Instrument :
MSVOA_L
ClientSampleId :
AA-1

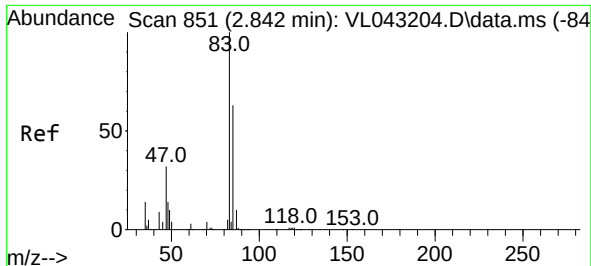
Tgt Ion:	43	Resp:	19515
Ion	Ratio	Lower	Upper
43	100		
45	3.6	8.1	12.1#
61	1.5	7.0	10.4#
70	2.4	7.0	10.6#



#26
Hexane
Concen: 1.230 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion:	57	Resp:	24551
Ion	Ratio	Lower	Upper
57	100		
41	101.6	74.6	111.8
43	83.3	179.0	268.4#
56	62.7	42.3	63.5





#29

Chloroform

Concen: 0.057 ppbv

RT: 2.845 min Scan# 81

Delta R.T. 0.003 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_L

ClientSampleId :

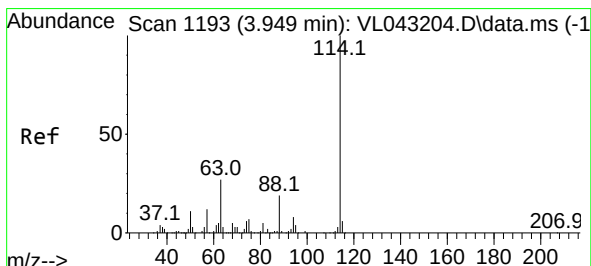
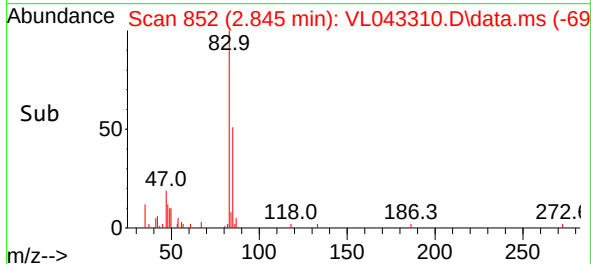
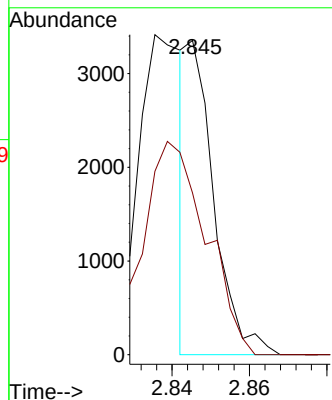
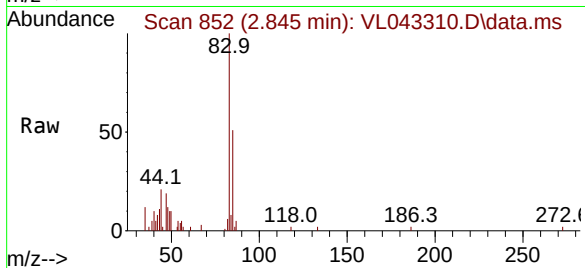
AA-1

Tgt Ion: 83 Resp: 1625

Ion Ratio Lower Upper

83 100

85 51.5 50.5 75.7



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.946 min Scan# 1192

Delta R.T. -0.003 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

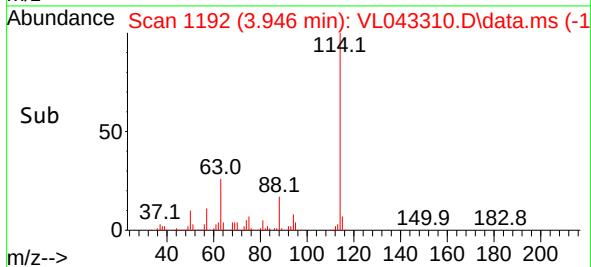
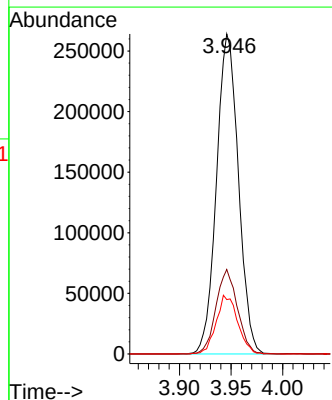
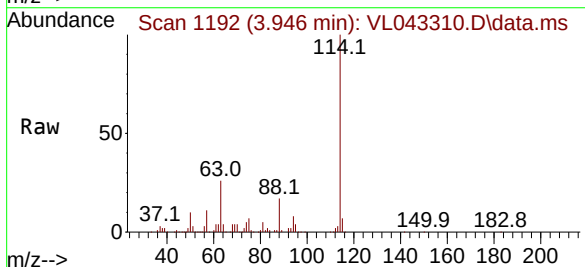
Tgt Ion: 114 Resp: 389995

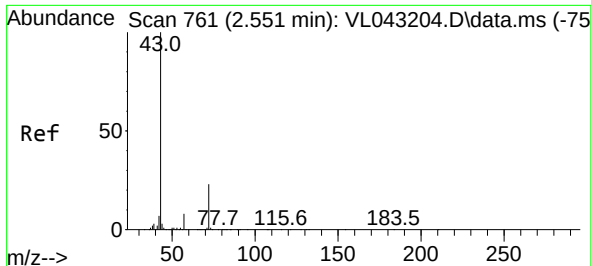
Ion Ratio Lower Upper

114 100

63 25.9 21.0 31.6

88 18.0 14.9 22.3

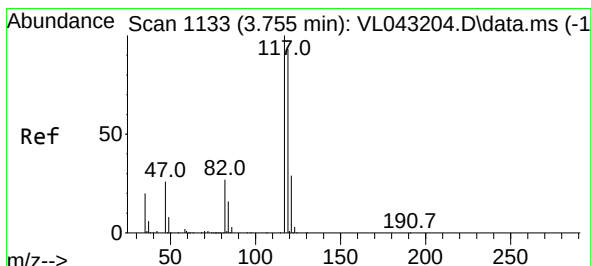
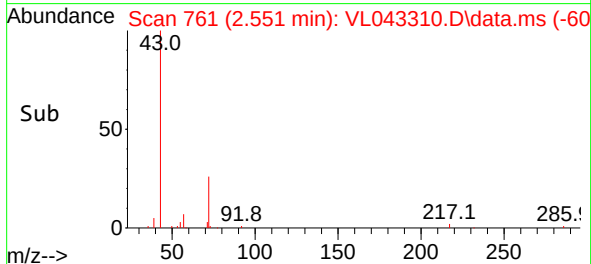
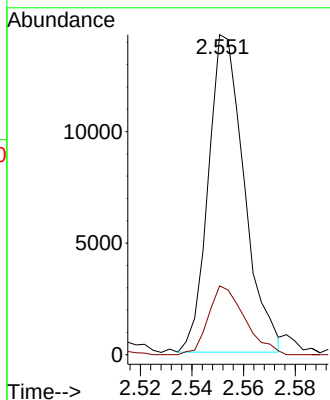
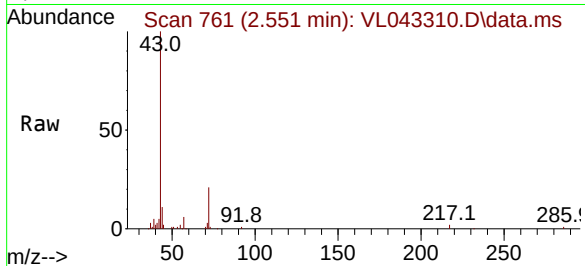




#34
2-Butanone
Concen: 0.500 ppbv
RT: 2.551 min Scan# 761
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

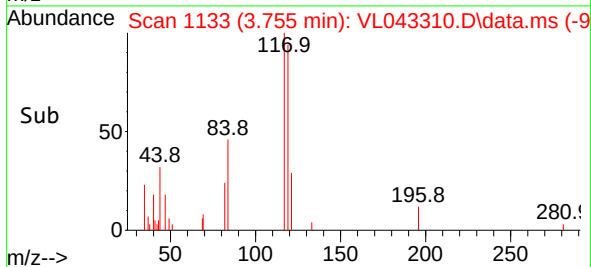
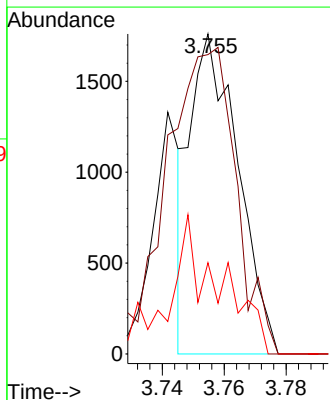
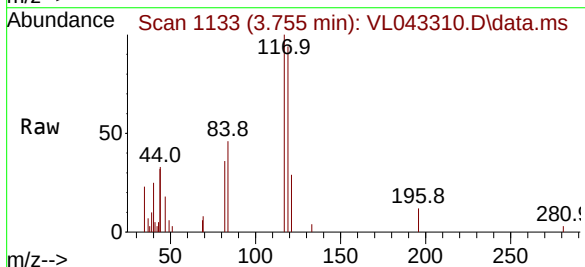
Instrument :
MSVOA_L
ClientSampleId :
AA-1

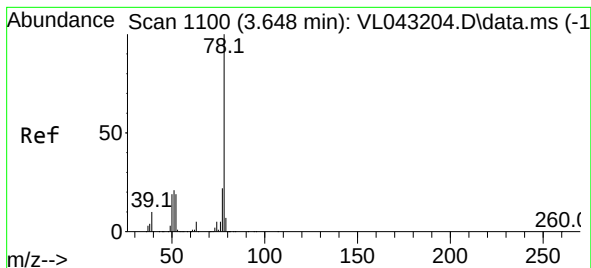
Tgt Ion: 43 Resp: 13762
Ion Ratio Lower Upper
43 100
72 21.9 18.1 27.1



#35
Carbon Tetrachloride
Concen: 0.063 ppbv
RT: 3.755 min Scan# 1133
Delta R.T. -0.000 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion: 117 Resp: 1879
Ion Ratio Lower Upper
117 100
119 93.5 74.6 112.0
121 28.5 23.2 34.8





#36

Benzene

Concen: 0.093 ppbv

RT: 3.651 min Scan# 1101

Delta R.T. 0.003 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_L

ClientSampleId :

AA-1

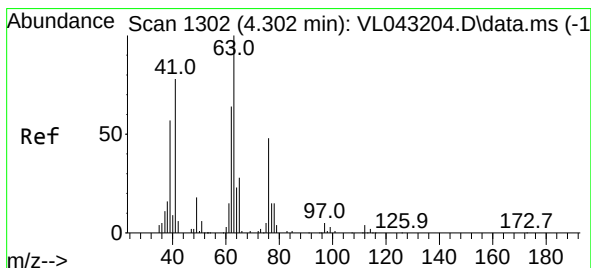
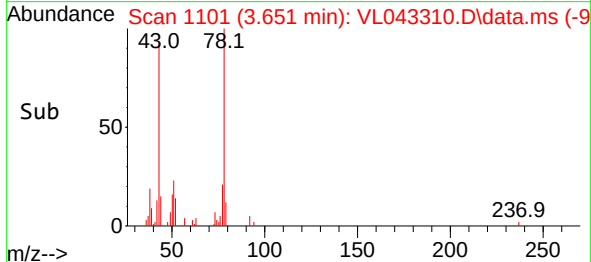
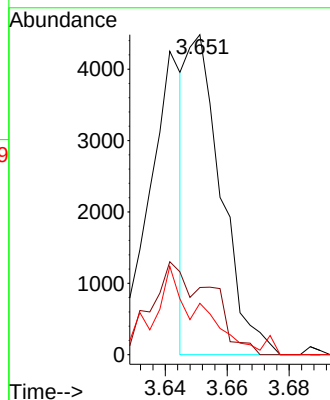
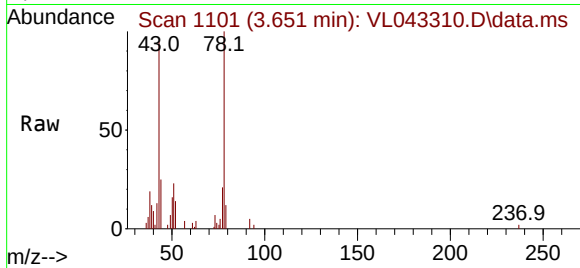
Tgt Ion: 78 Resp: 3478

Ion Ratio Lower Upper

78 100

77 21.0 17.5 26.3

50 16.0 15.5 23.3



#39

1,2-Dichloropropane

Concen: 7.346 ppbv

RT: 3.946 min Scan# 1192

Delta R.T. -0.356 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

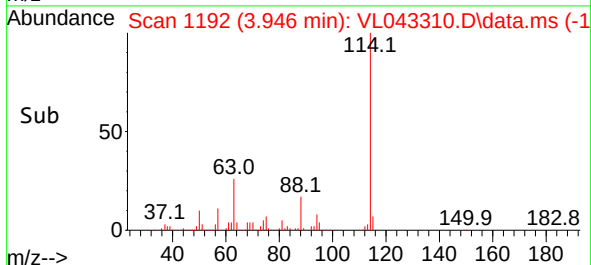
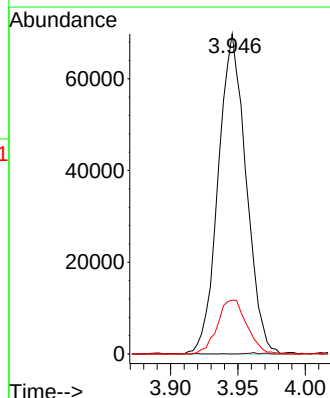
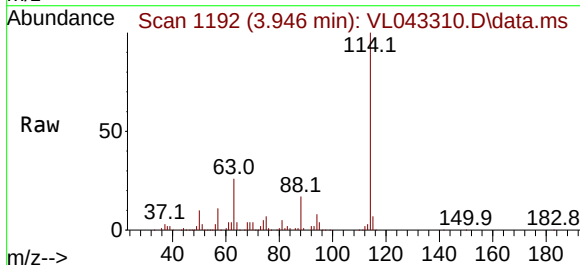
Tgt Ion: 63 Resp: 100423

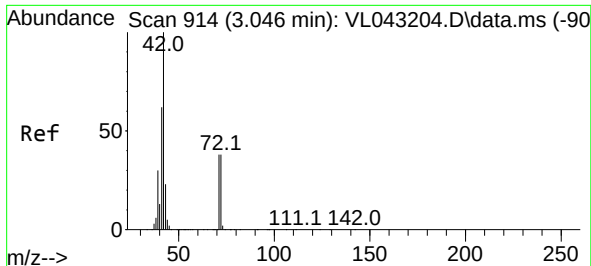
Ion Ratio Lower Upper

63 100

41 0.0 62.6 93.8#

62 16.8 51.0 76.6#





#41

Tetrahydrofuran

Concen: 0.059 ppbv

RT: 3.052 min Scan# 91

Delta R.T. 0.006 min

Lab File: VL043310.D

Acq: 08 Dec 2025 12:40

Instrument :

MSVOA_1

ClientSampleId :

AA-1

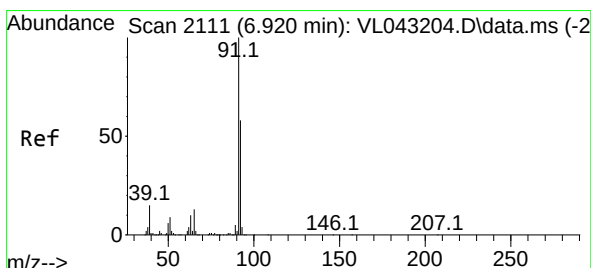
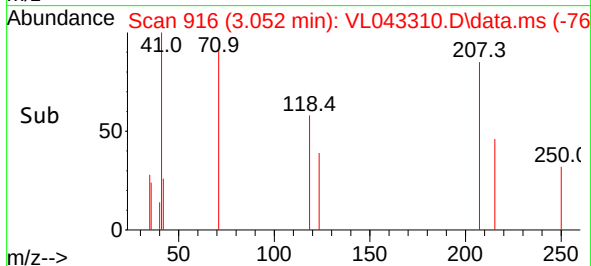
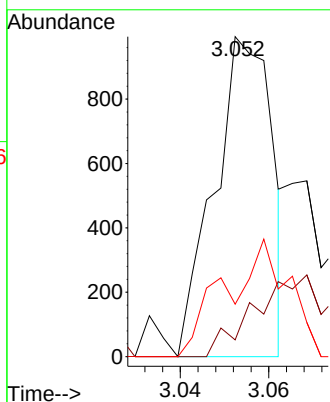
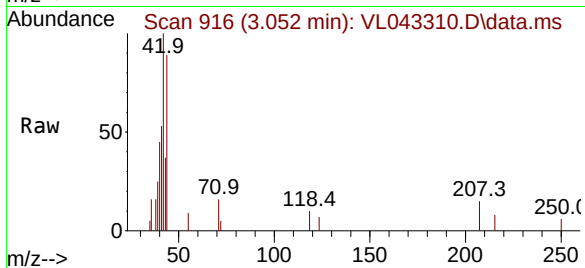
Tgt Ion: 42 Resp: 902

Ion Ratio Lower Upper

42 100

72 0.0 30.6 46.0#

71 39.9 30.5 45.7



#53

Toluene

Concen: 0.086 ppbv

RT: 6.910 min Scan# 2108

Delta R.T. -0.010 min

Lab File: VL043310.D

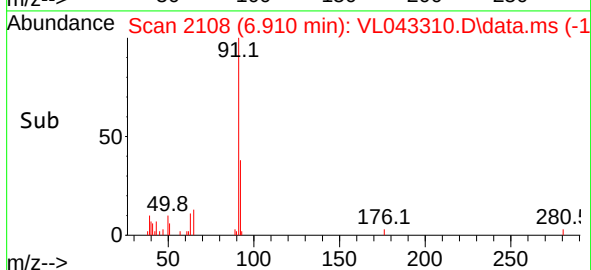
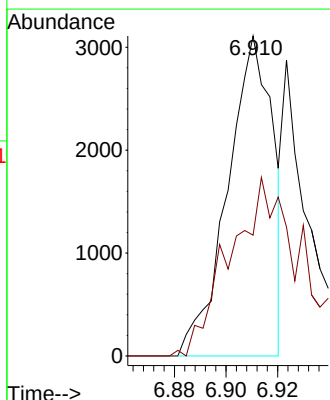
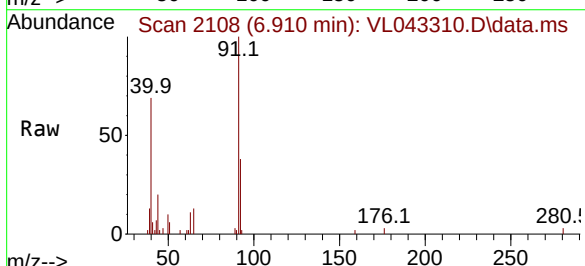
Acq: 08 Dec 2025 12:40

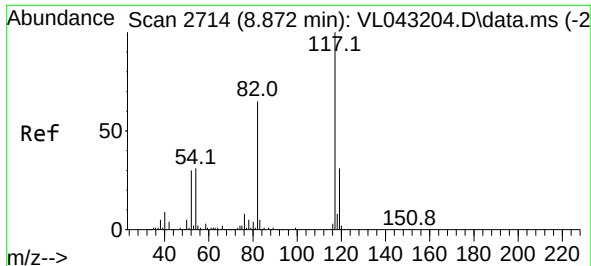
Tgt Ion: 91 Resp: 3785

Ion Ratio Lower Upper

91 100

92 84.9 47.4 71.0#

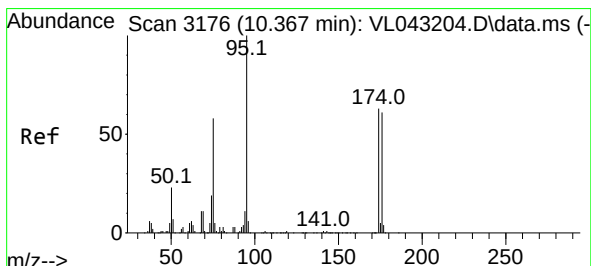
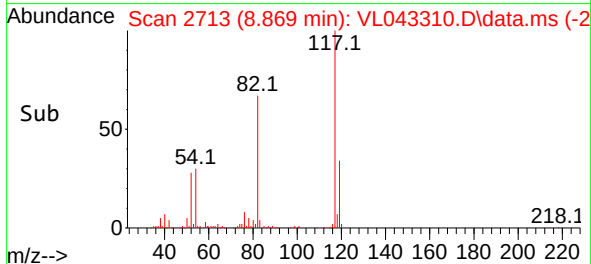
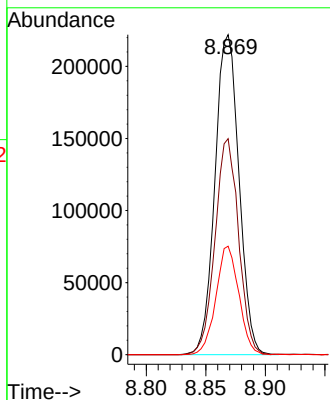
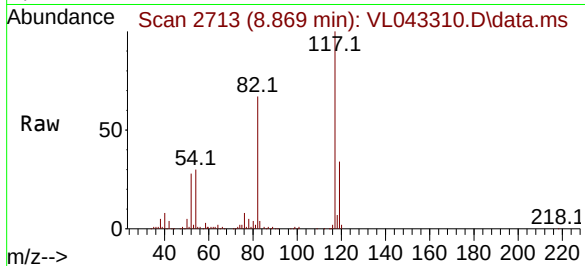




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.869 min Scan# 21
Delta R.T. -0.003 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Instrument :
MSVOA_L
ClientSampleId :
AA-1

Tgt Ion:117 Resp: 311445
Ion Ratio Lower Upper
117 100
82 66.3 56.1 84.1
119 32.4 25.0 37.6



#68
1-Bromo-4-Fluorobenzene
Concen: 10.227 ppbv
RT: 10.364 min Scan# 3175
Delta R.T. -0.003 min
Lab File: VL043310.D
Acq: 08 Dec 2025 12:40

Tgt Ion: 95 Resp: 233482
Ion Ratio Lower Upper
95 100
174 66.4 50.2 75.2
175 5.1 4.1 6.1

