

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL111325\
 Data File : VL043196.D
 Acq On : 13 Nov 2025 13:04
 Operator : SY/MD
 Sample : Q3627-01
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 UNIT-8-IA-1

Quant Time: Nov 14 04:39:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Oct 15 02:12:58 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.790	49	143373	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.965	114	385279	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	320935	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	248695	9.970	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.700%

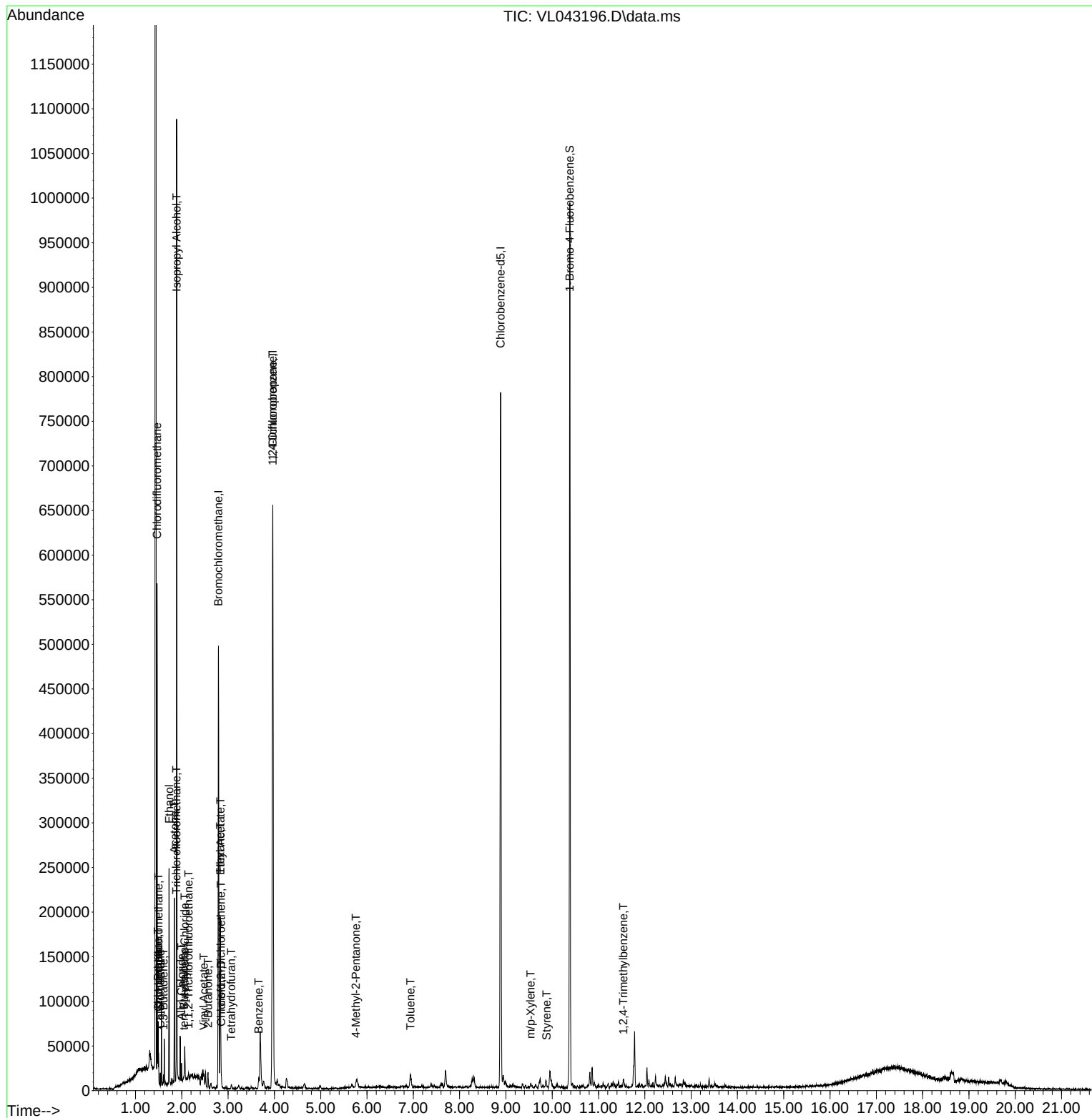
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	8053	0.395	ppbv	96
3) Chlorodifluoromethane	1.467	51	127554	5.784	ppbv #	60
4) Chloromethane	1.535	50	3885	0.481	ppbv	95
7) Chloroethane	1.492	64	497	0.153	ppbv #	64
9) Propene	1.486	41	6695	0.685	ppbv	95
11) Trichlorofluoromethane	1.881	101	5677	0.285	ppbv	94
12) 1,1,2-Trichlorotrifluo...	2.146	101	868	0.054	ppbv	97
13) Ethanol	1.725	45	84748	23.425	ppbv	98
15) Acetone	1.839	43	83838	4.338	ppbv	97
16) 1,3-Butadiene	1.602	39	1332	0.145	ppbv #	57
17) tert-Butyl alcohol	2.049	59	1808	0.068	ppbv	96
19) Isopropyl Alcohol	1.887	45	462070	38.391	ppbv #	37
20) Methylene Chloride	2.065	84	4676	0.612	ppbv	94
21) Allyl Chloride	1.991	41	909	0.064	ppbv #	22
23) Vinyl Acetate	2.476	43	2544	0.090	ppbv #	63
25) Ethyl Acetate	2.832	43	39878	0.832	ppbv #	86
26) Hexane	2.829	57	41872	1.896	ppbv #	49
29) Chloroform	2.852	83	3412	0.107	ppbv	99
31) cis-1,2-Dichloroethene	2.845	61	958	0.045	ppbv #	24
34) 2-Butanone	2.567	43	10888	0.420	ppbv	92
36) Benzene	3.661	78	5966	0.164	ppbv	96
39) 1,2-Dichloropropane	3.962	63	98257	7.407	ppbv #	26
41) Tetrahydrofuran	3.065	42	655	0.045	ppbv #	80
50) 4-Methyl-2-Pentanone	5.762	43	2096	0.059	ppbv #	38
53) Toluene	6.940	91	8701	0.202	ppbv #	82
59) m/p-Xylene	9.535	91	1751	0.040	ppbv #	46
61) Styrene	9.879	104	818	0.042	ppbv #	48
74) 1,2,4-Trimethylbenzene	11.536	105	2240	0.045	ppbv #	43

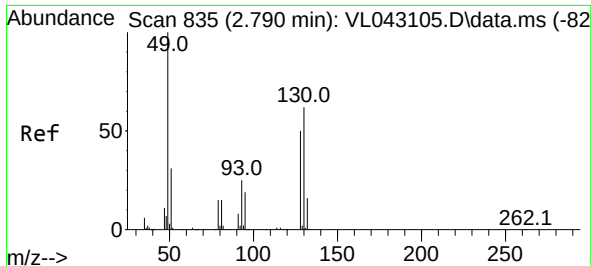
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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UNIT-8-IA-1

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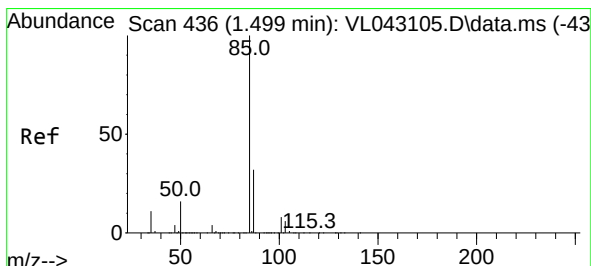
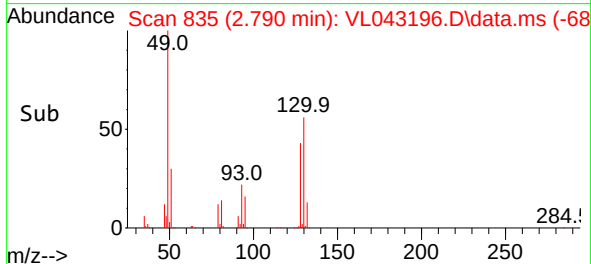
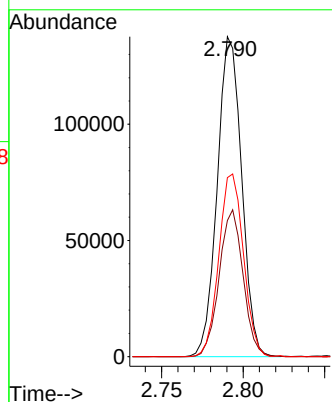
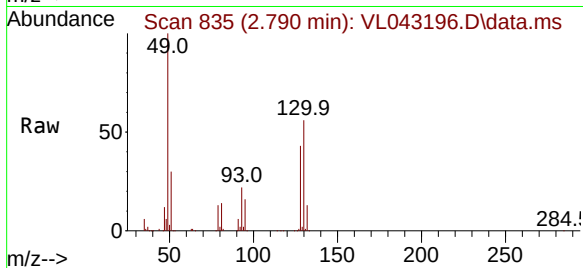




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 835
Delta R.T. 0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

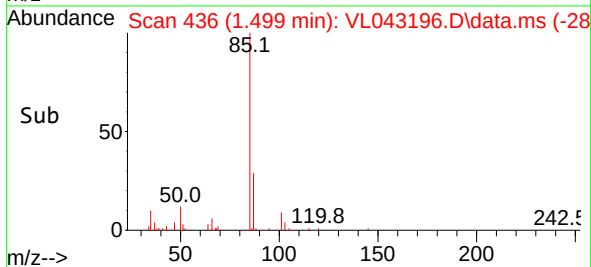
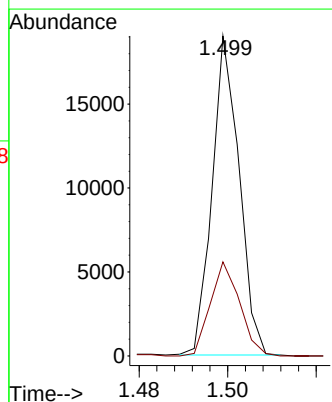
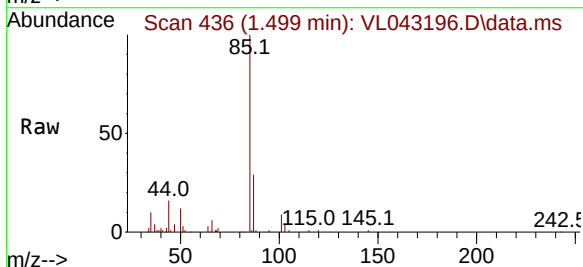
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ClientSampleId :
UNIT-8-IA-1

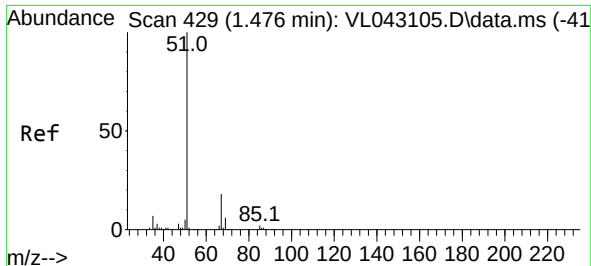
Tgt Ion: 49 Resp: 143373
Ion Ratio Lower Upper
49 100
128 45.0 24.4 73.4
130 57.7 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.395 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 85 Resp: 8053
Ion Ratio Lower Upper
85 100
87 29.5 25.3 37.9

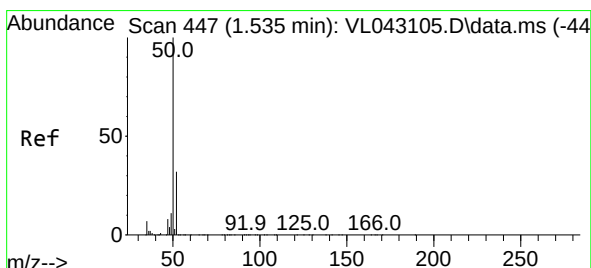
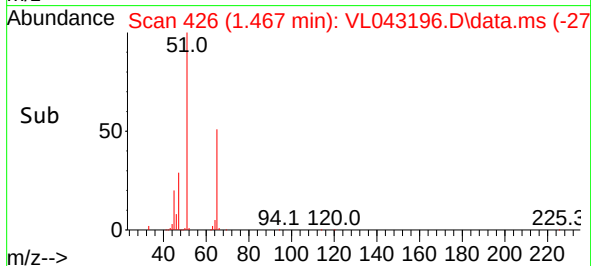
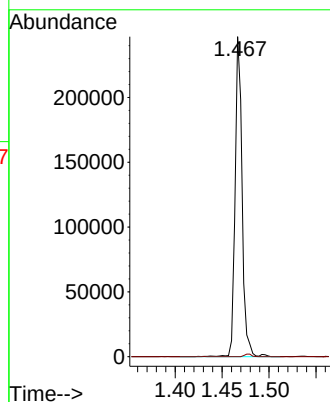
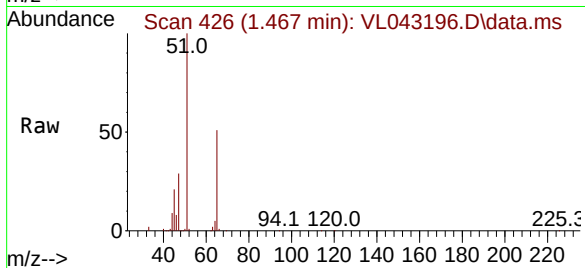




#3
Chlorodifluoromethane
Concen: 5.784 ppbv
RT: 1.467 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

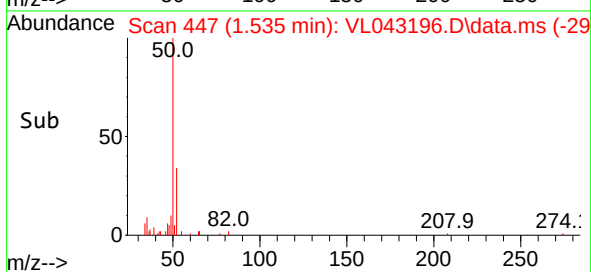
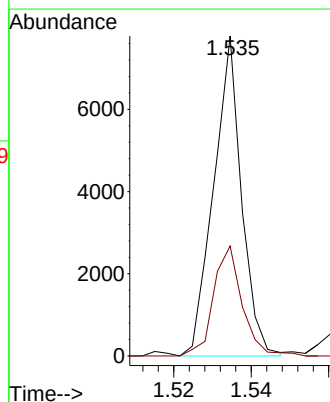
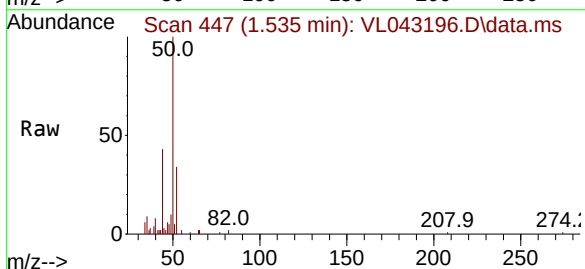
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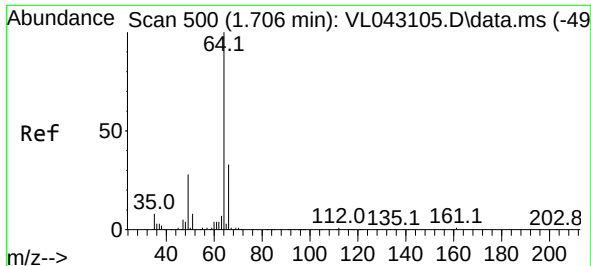
Tgt Ion: 51 Resp: 127554
Ion Ratio Lower Upper
51 100
67 0.8 15.1 22.7#



#4
Chloromethane
Concen: 0.481 ppbv
RT: 1.535 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 50 Resp: 3885
Ion Ratio Lower Upper
50 100
52 34.4 25.2 37.8

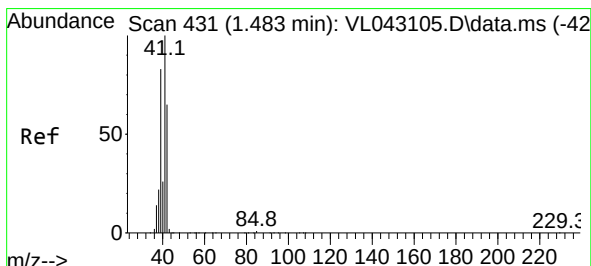
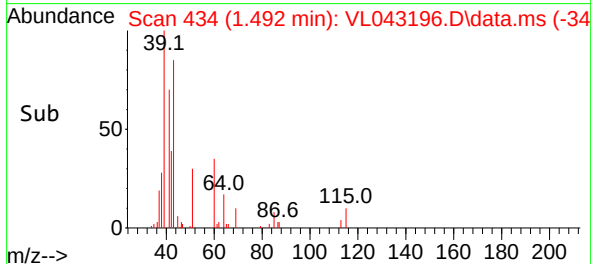
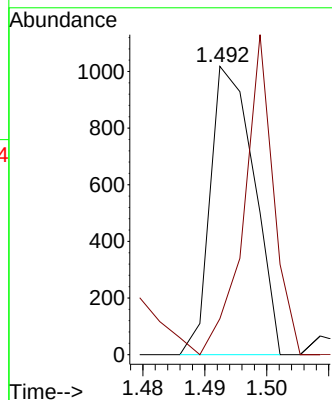
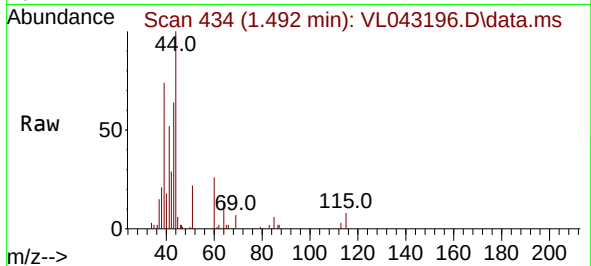




#7
Chloroethane
Concen: 0.153 ppbv
RT: 1.492 min Scan# 41
Delta R.T. -0.214 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

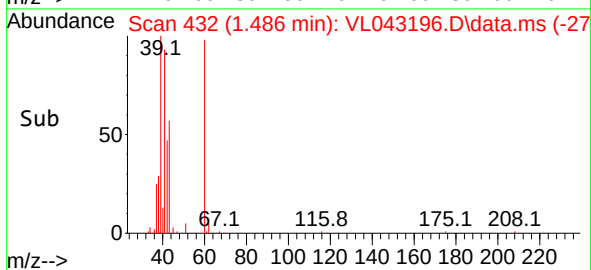
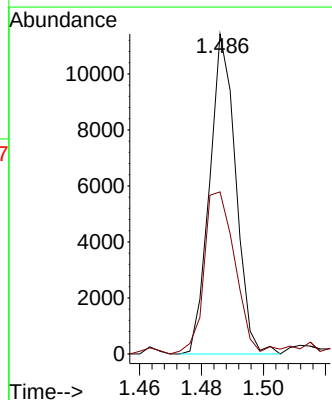
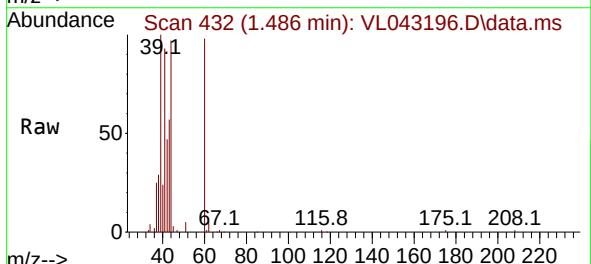
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UNIT-8-IA-1

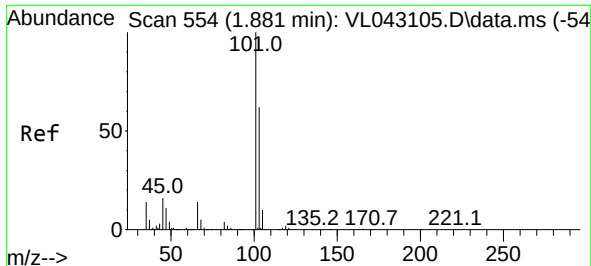
Tgt Ion: 64 Resp: 497
Ion Ratio Lower Upper
64 100
66 12.5 26.0 39.0#



#9
Propene
Concen: 0.685 ppbv
RT: 1.486 min Scan# 432
Delta R.T. 0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 41 Resp: 6695
Ion Ratio Lower Upper
41 100
42 64.7 55.1 82.7

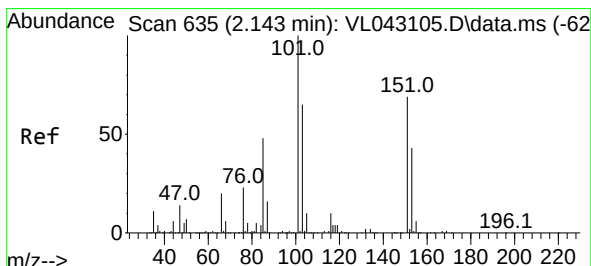
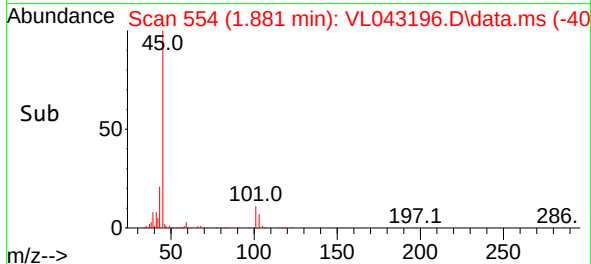
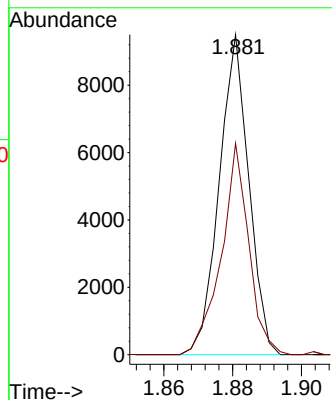
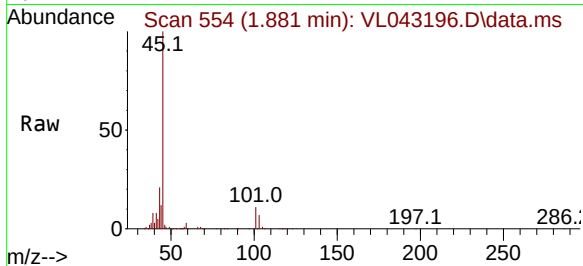




#11
Trichlorofluoromethane
Concen: 0.285 ppbv
RT: 1.881 min Scan# 51
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

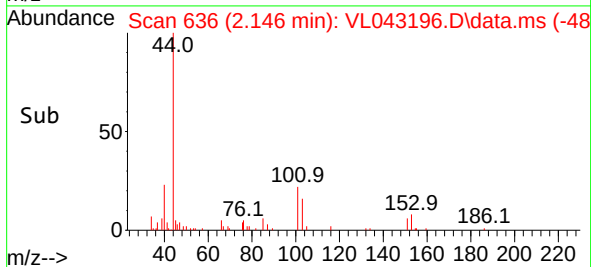
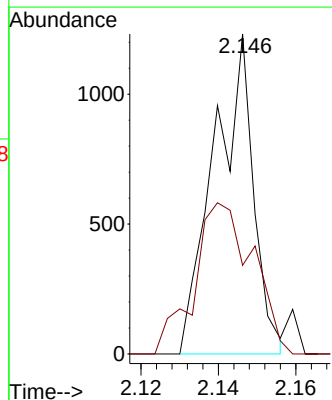
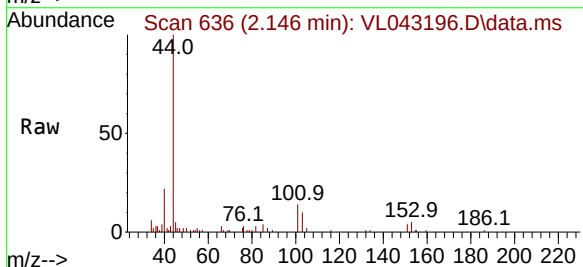
Instrument :
MSVOA_1
ClientSampleId :
UNIT-8-IA-1

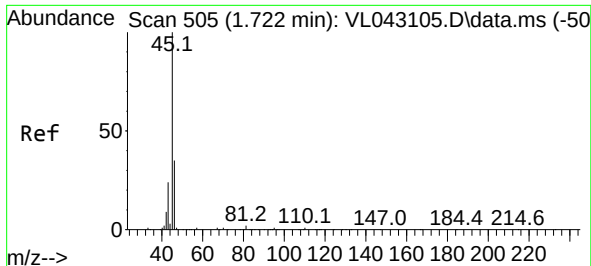
Tgt Ion:101 Resp: 5677
Ion Ratio Lower Upper
101 100
103 66.1 49.3 73.9



#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.054 ppbv
RT: 2.146 min Scan# 636
Delta R.T. 0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion:101 Resp: 868
Ion Ratio Lower Upper
101 100
151 70.5 54.7 82.1

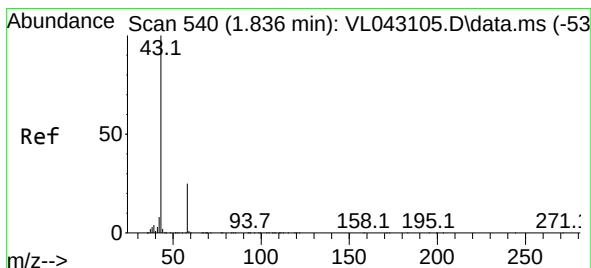
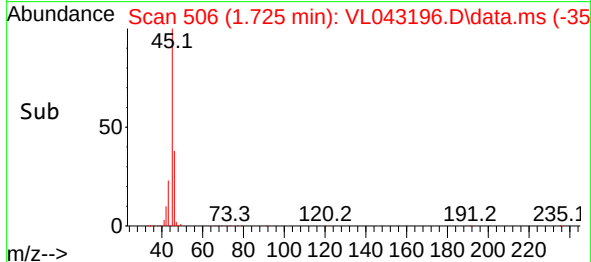
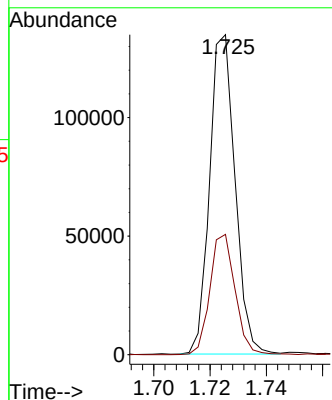
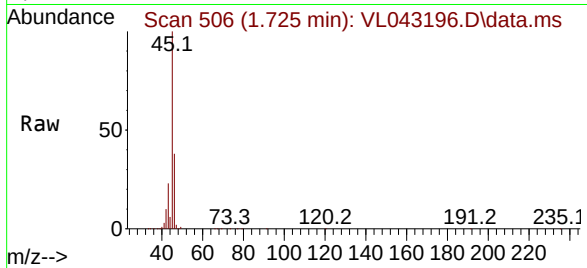




#13
Ethanol
Concen: 23.425 ppbv
RT: 1.725 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

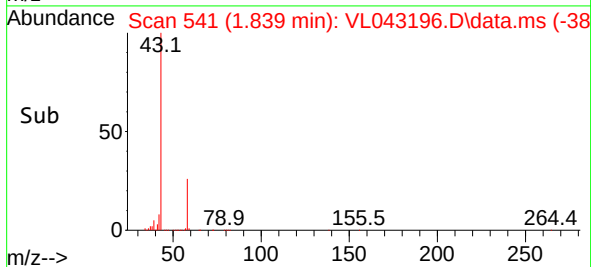
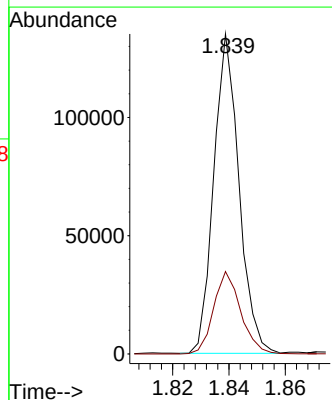
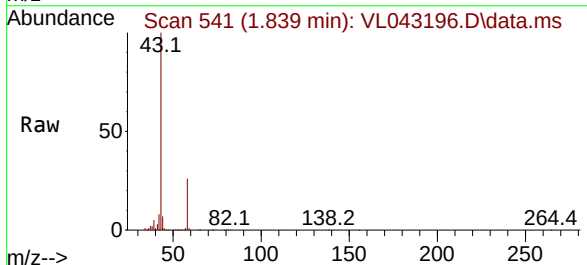
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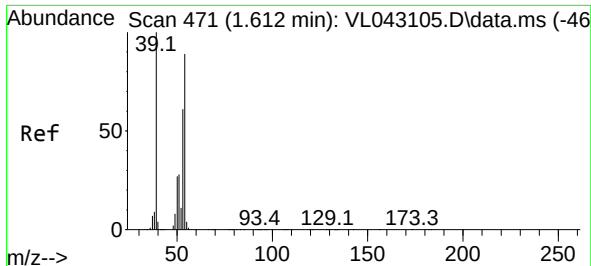
Tgt Ion: 45 Resp: 84748
Ion Ratio Lower Upper
45 100
46 37.8 14.7 58.9



#15
Acetone
Concen: 4.338 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 43 Resp: 83838
Ion Ratio Lower Upper
43 100
58 27.8 20.8 31.2

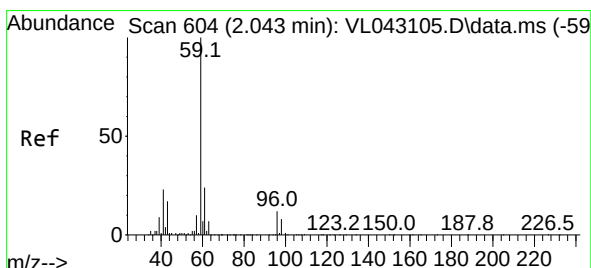
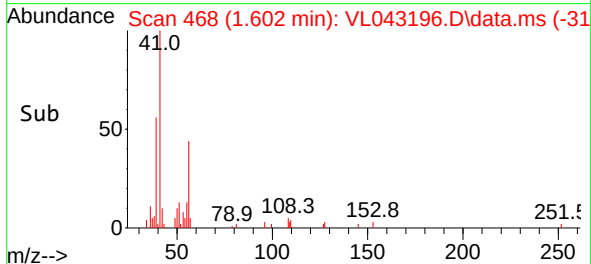
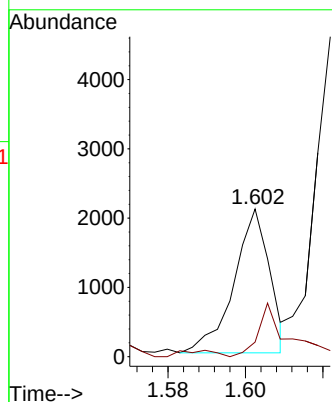
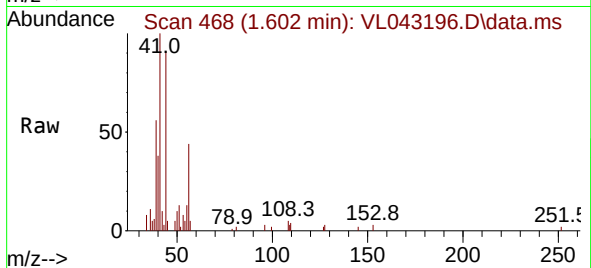




#16
1,3-Butadiene
Concen: 0.145 ppbv
RT: 1.602 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

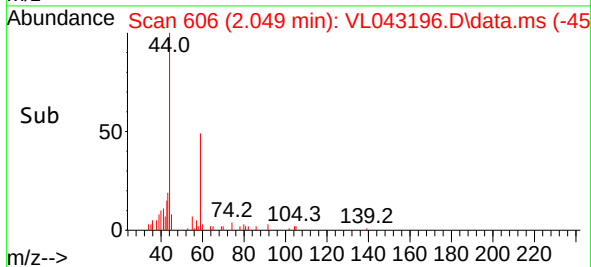
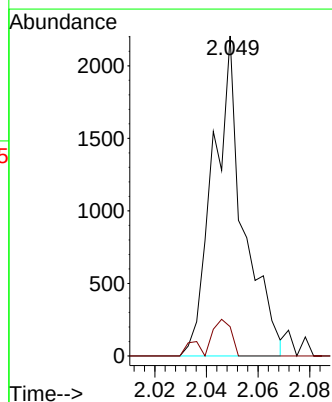
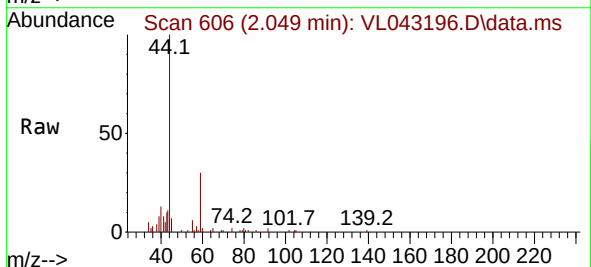
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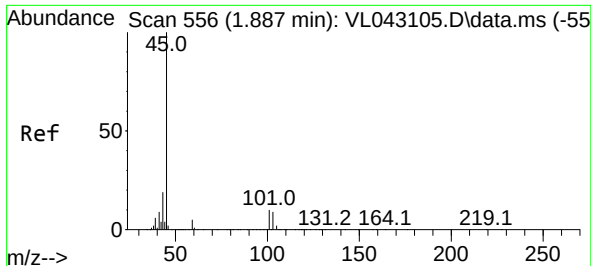
Tgt Ion: 39 Resp: 1332
Ion Ratio Lower Upper
39 100
54 37.3 59.0 88.4#



#17
tert-Butyl alcohol
Concen: 0.068 ppbv
RT: 2.049 min Scan# 606
Delta R.T. 0.006 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 59 Resp: 1808
Ion Ratio Lower Upper
59 100
57 8.9 8.2 12.4

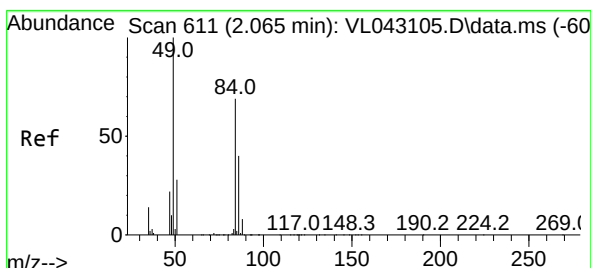
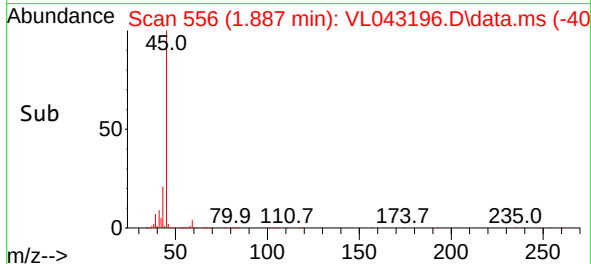
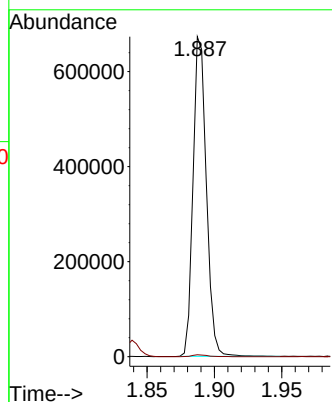
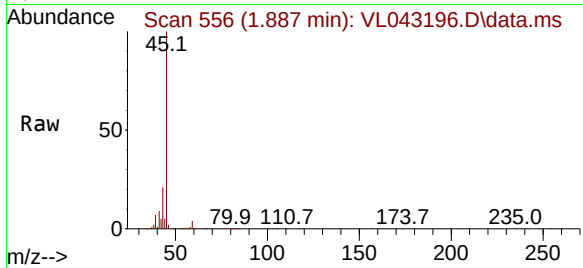




#19
Isopropyl Alcohol
Concen: 38.391 ppbv
RT: 1.887 min Scan# 511
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

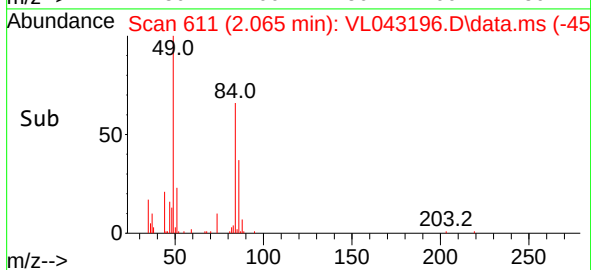
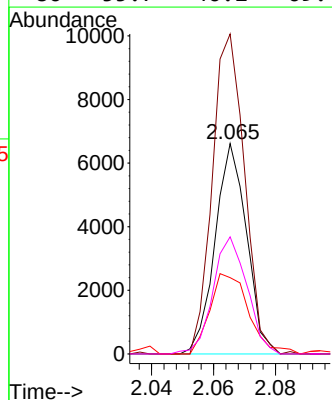
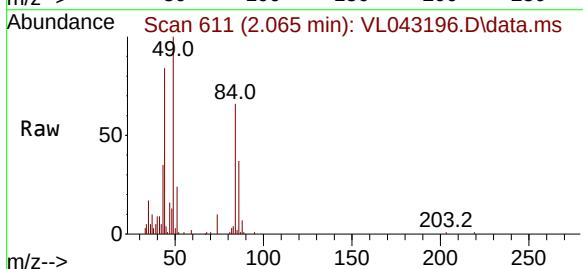
Instrument :
MSVOA_L
ClientSampleId :
UNIT-8-IA-1

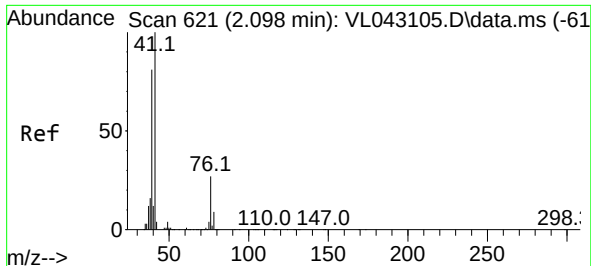
Tgt Ion: 45 Resp: 462070
Ion Ratio Lower Upper
45 100
58 0.7 31.3 46.9#



#20
Methylene Chloride
Concen: 0.612 ppbv
RT: 2.065 min Scan# 611
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 84 Resp: 4676
Ion Ratio Lower Upper
84 100
49 152.1 116.6 175.0
51 36.3 34.8 52.2
86 55.7 46.2 69.4

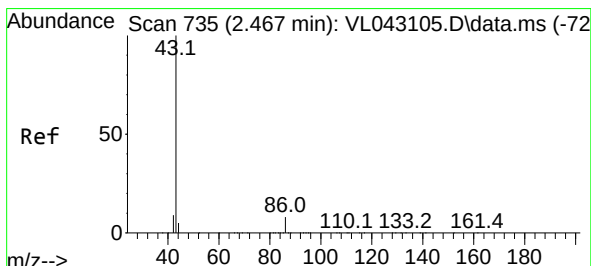
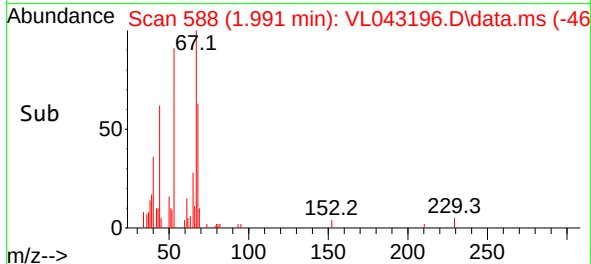
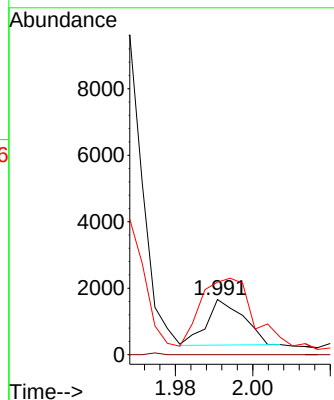
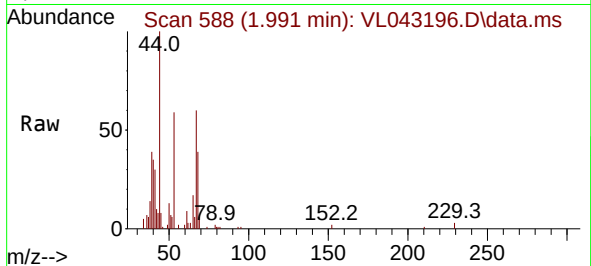




#21
 Allyl Chloride
 Concen: 0.064 ppbv
 RT: 1.991 min Scan# 51
 Delta R.T. -0.107 min
 Lab File: VL043196.D
 Acq: 13 Nov 2025 13:04

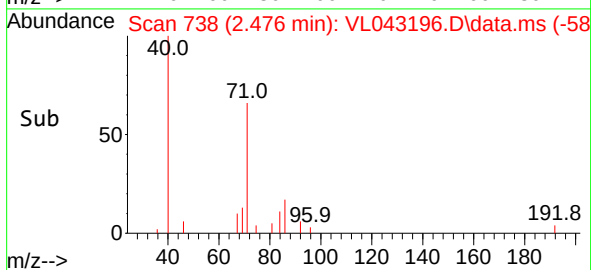
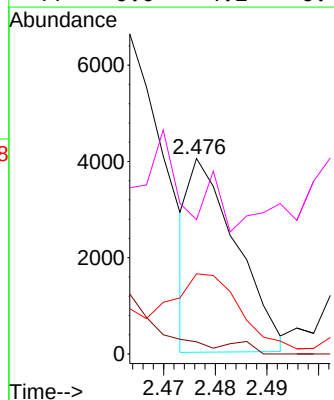
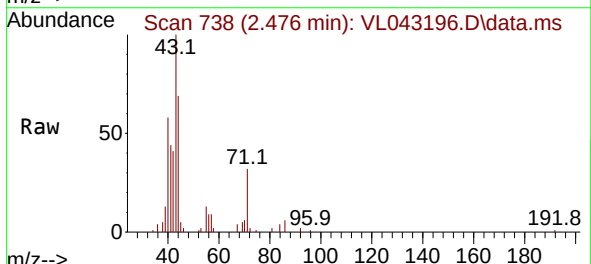
Instrument :
 MSVOA_1
 ClientSampleId :
 UNIT-8-IA-1

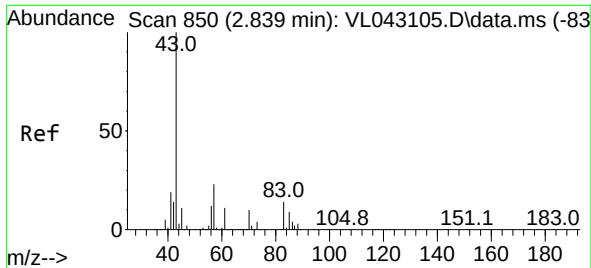
Tgt Ion: 41 Resp: 909
 Ion Ratio Lower Upper
 41 100
 76 52.7 21.5 32.3#
 39 0.0 60.8 91.2#



#23
 Vinyl Acetate
 Concen: 0.090 ppbv
 RT: 2.476 min Scan# 738
 Delta R.T. 0.010 min
 Lab File: VL043196.D
 Acq: 13 Nov 2025 13:04

Tgt Ion: 43 Resp: 2544
 Ion Ratio Lower Upper
 43 100
 86 6.9 6.2 9.2
 42 37.9 7.6 11.4#
 44 0.0 4.2 6.4#

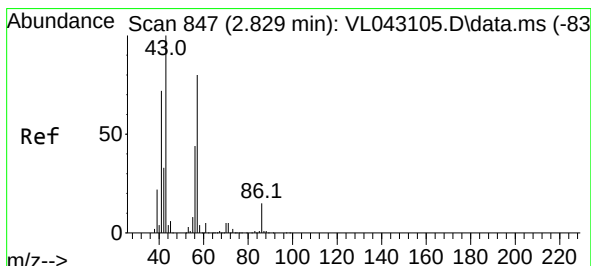
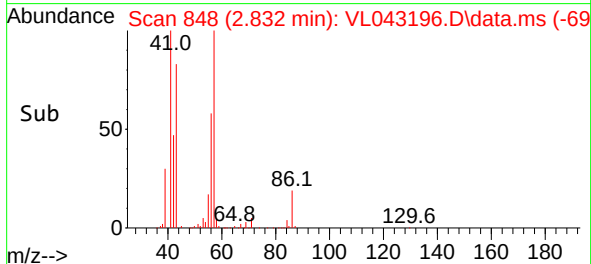
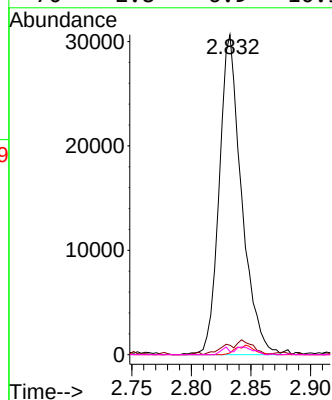
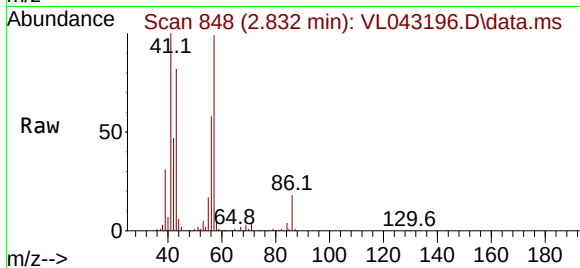




#25
Ethyl Acetate
Concen: 0.832 ppbv
RT: 2.832 min Scan# 847
Delta R.T. -0.007 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

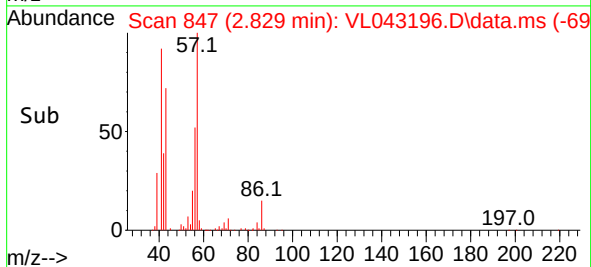
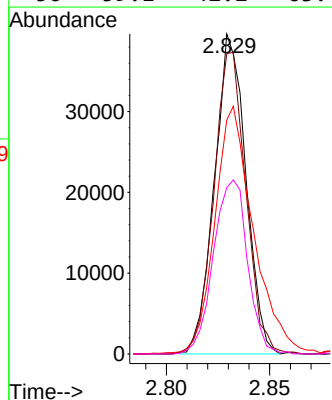
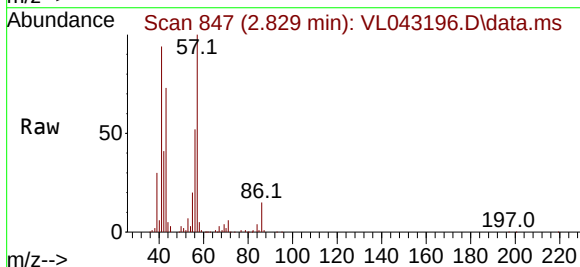
Instrument :
MSVOA_L
ClientSampleId :
UNIT-8-IA-1

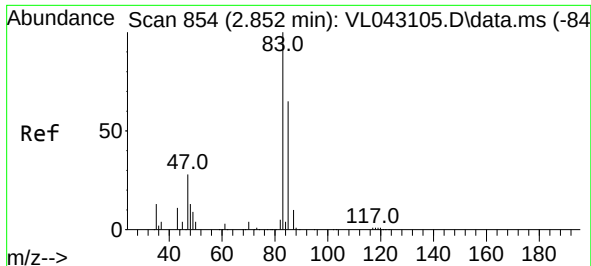
Tgt Ion:	43	Resp:	39878
Ion	Ratio	Lower	Upper
43	100		
45	6.1	7.8	11.8#
61	2.4	7.0	10.6#
70	2.8	6.9	10.3#



#26
Hexane
Concen: 1.896 ppbv
RT: 2.829 min Scan# 847
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion:	57	Resp:	41872
Ion	Ratio	Lower	Upper
57	100		
41	96.5	71.4	107.0
43	95.6	178.5	267.7#
56	59.1	42.2	63.4





#29

Chloroform

Concen: 0.107 ppbv

RT: 2.852 min Scan# 81

Delta R.T. -0.000 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

Instrument :

MSVOA_L

ClientSampleId :

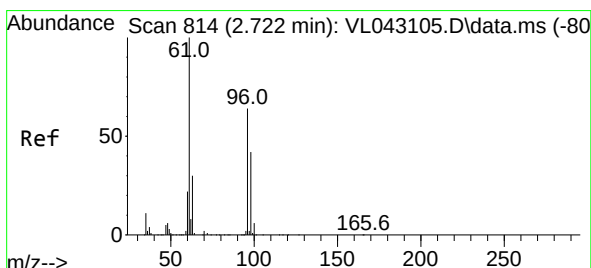
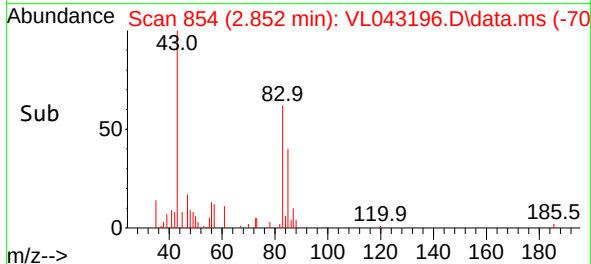
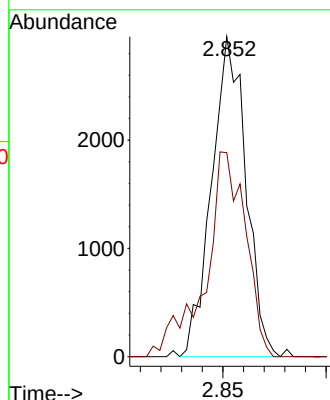
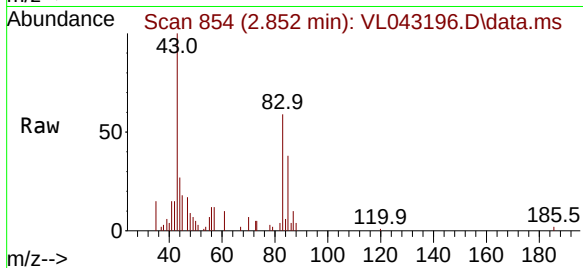
UNIT-8-IA-1

Tgt Ion: 83 Resp: 3412

Ion Ratio Lower Upper

83 100

85 63.7 51.8 77.6



#31

cis-1,2-Dichloroethene

Concen: 0.045 ppbv

RT: 2.845 min Scan# 852

Delta R.T. 0.123 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

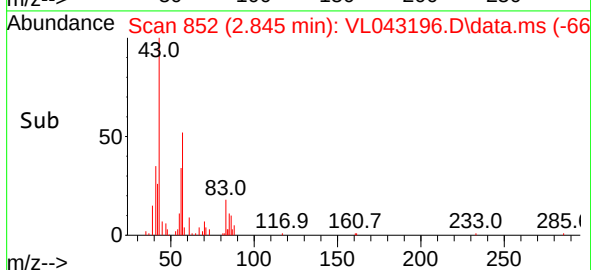
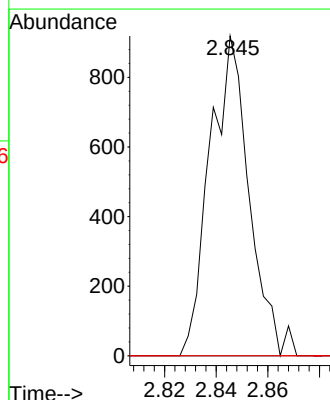
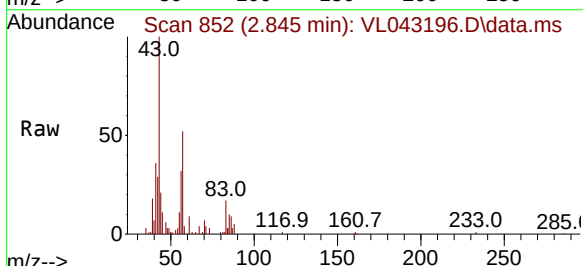
Tgt Ion: 61 Resp: 958

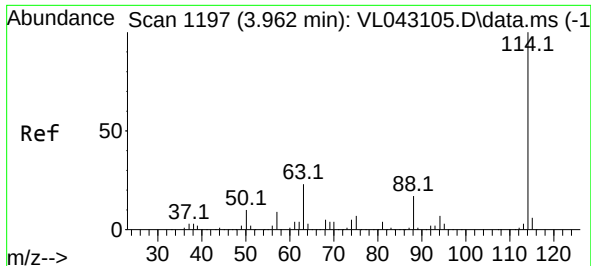
Ion Ratio Lower Upper

61 100

96 0.0 51.0 76.6#

98 0.0 33.5 50.3#

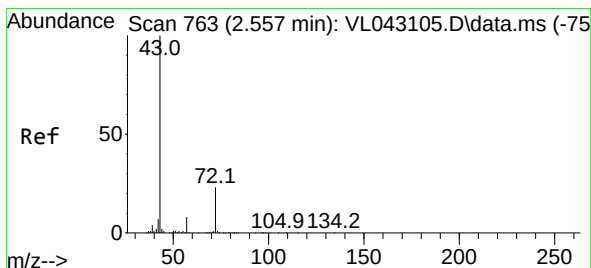
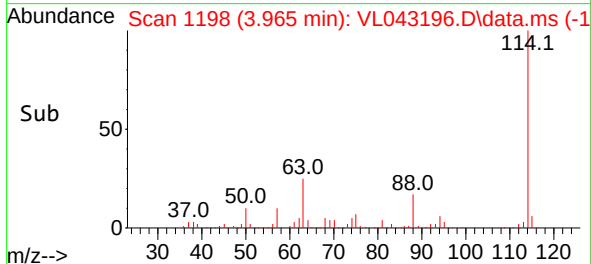
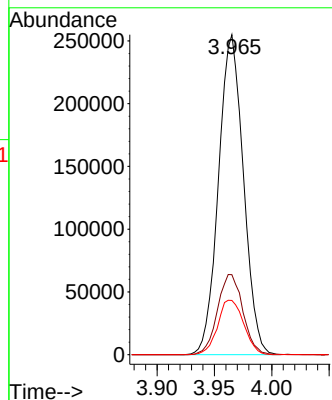
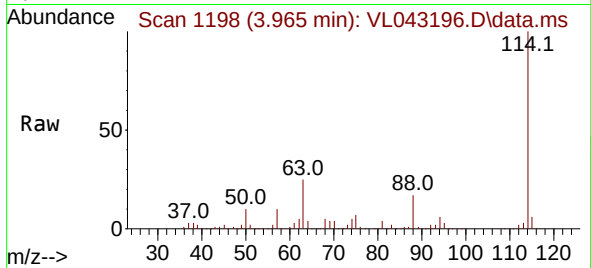




#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.965 min Scan# 1197
Delta R.T. 0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

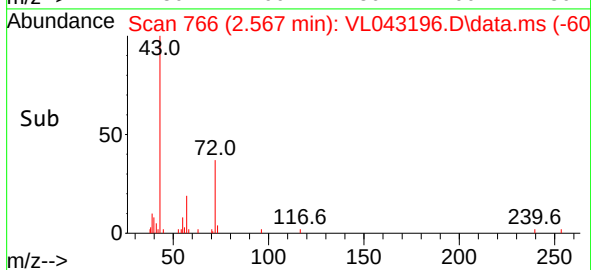
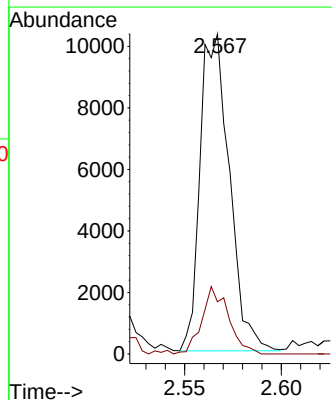
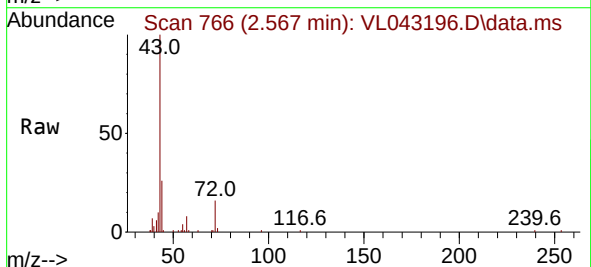
Instrument :
MSVOA_L
ClientSampleId :
UNIT-8-IA-1

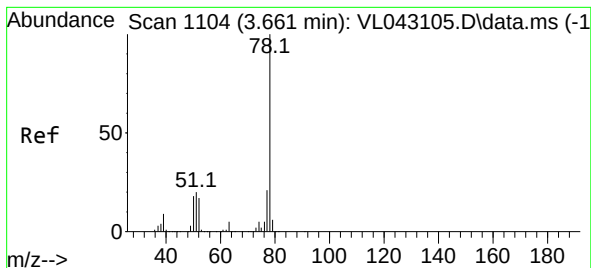
Tgt Ion:114 Resp: 385279
Ion Ratio Lower Upper
114 100
63 25.5 19.3 28.9
88 17.8 13.9 20.9



#34
2-Butanone
Concen: 0.420 ppbv
RT: 2.567 min Scan# 766
Delta R.T. 0.010 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 43 Resp: 10888
Ion Ratio Lower Upper
43 100
72 19.2 18.4 27.6





#36

Benzene

Concen: 0.164 ppbv

RT: 3.661 min Scan# 1104

Delta R.T. -0.000 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

Instrument :

MSVOA_1

ClientSampleId :

UNIT-8-IA-1

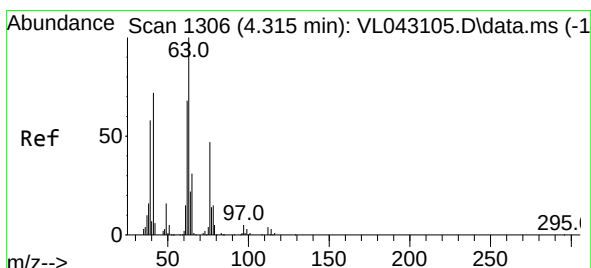
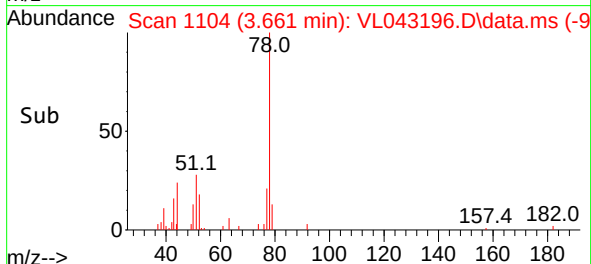
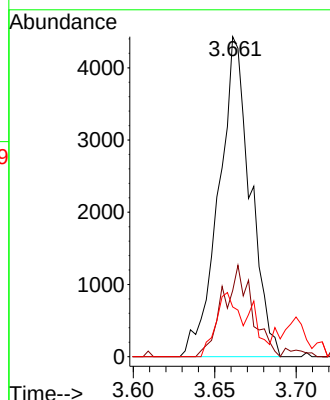
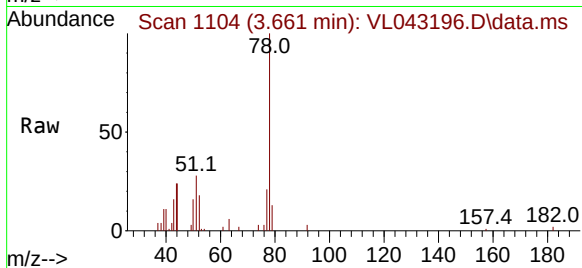
Tgt Ion: 78 Resp: 5966

Ion Ratio Lower Upper

78 100

77 20.6 17.0 25.6

50 15.6 14.6 22.0



#39

1,2-Dichloropropane

Concen: 7.407 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.353 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

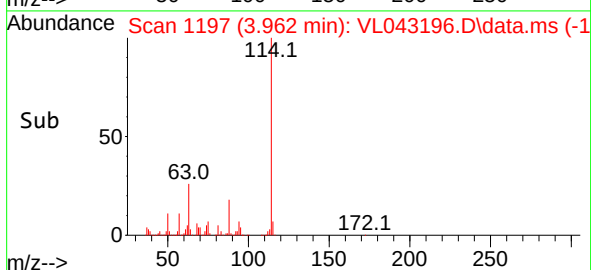
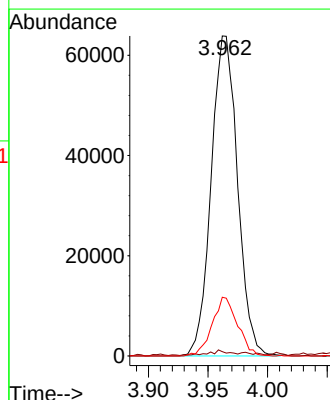
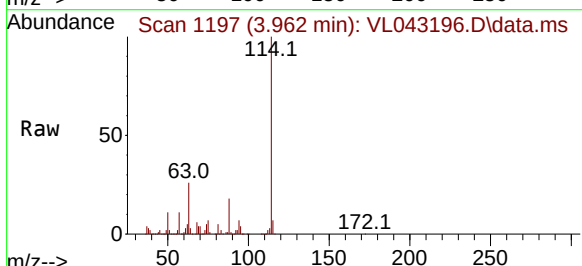
Tgt Ion: 63 Resp: 98257

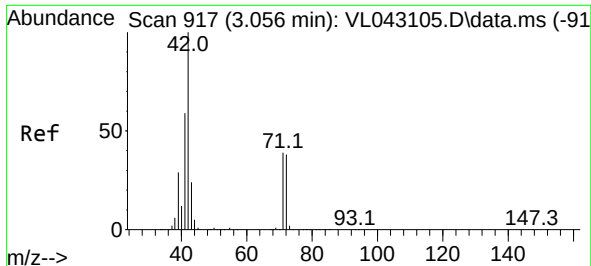
Ion Ratio Lower Upper

63 100

41 1.2 58.0 87.0#

62 18.4 54.7 82.1#

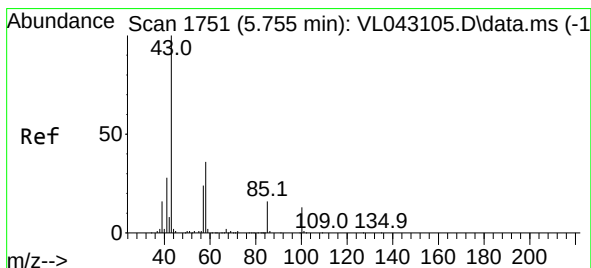
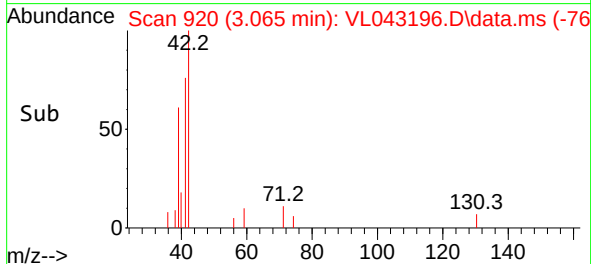
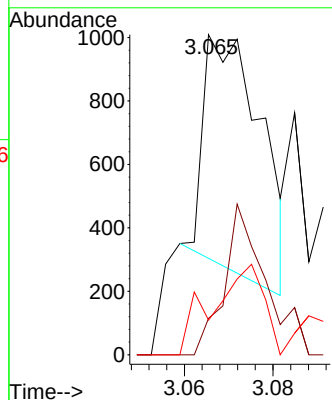
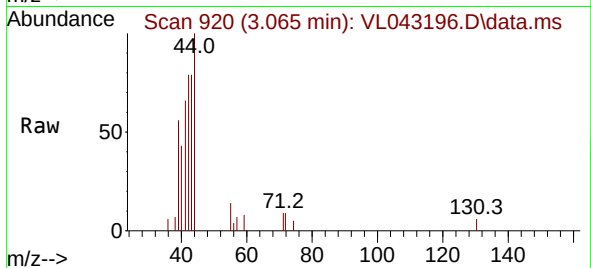




#41
Tetrahydrofuran
Concen: 0.045 ppbv
RT: 3.065 min Scan# 917
Delta R.T. 0.010 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

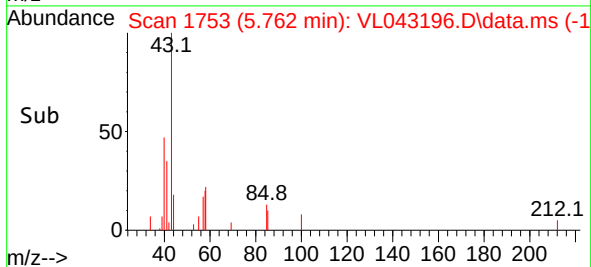
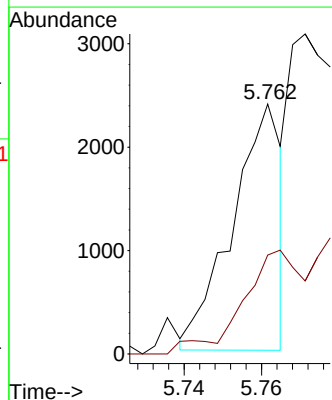
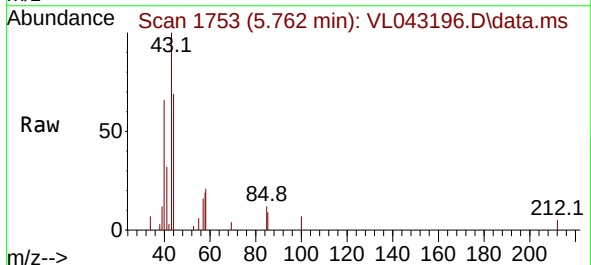
Instrument :
MSVOA_L
ClientSampleId :
UNIT-8-IA-1

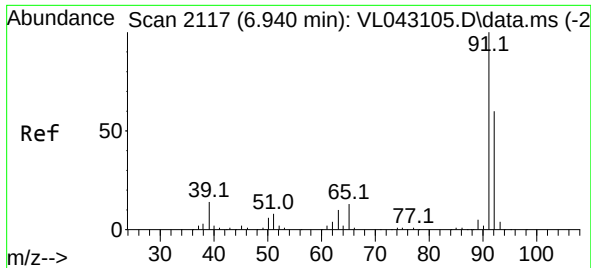
Tgt Ion: 42 Resp: 655
Ion Ratio Lower Upper
42 100
72 52.1 31.3 46.9#
71 49.9 30.4 45.6#



#50
4-Methyl-2-Pentanone
Concen: 0.059 ppbv
RT: 5.762 min Scan# 1753
Delta R.T. 0.006 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 43 Resp: 2096
Ion Ratio Lower Upper
43 100
58 0.0 29.1 43.7#

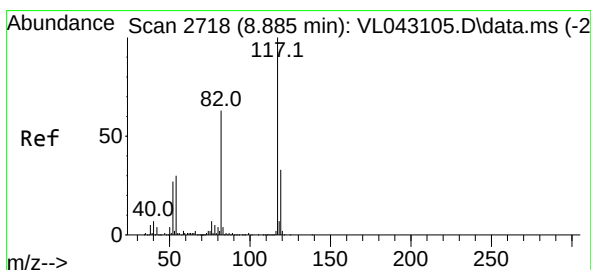
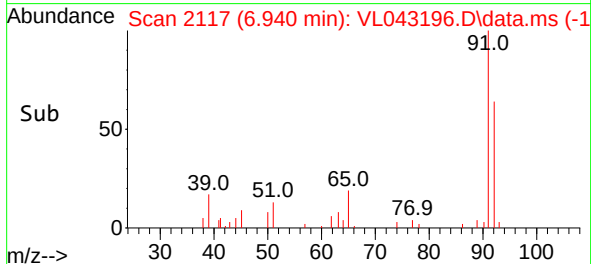
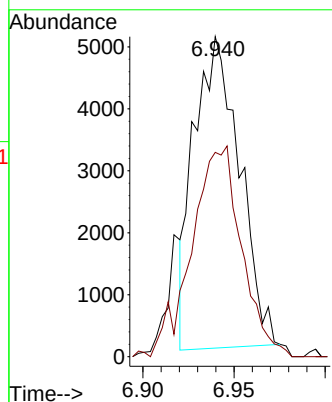
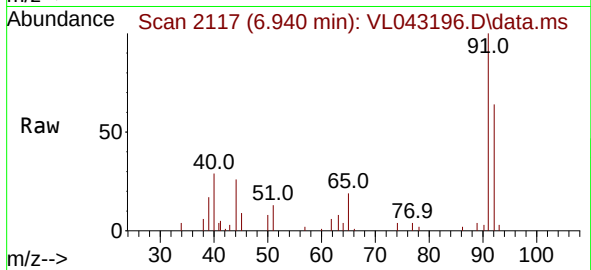




#53
Toluene
Concen: 0.202 ppbv
RT: 6.940 min Scan# 2117
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

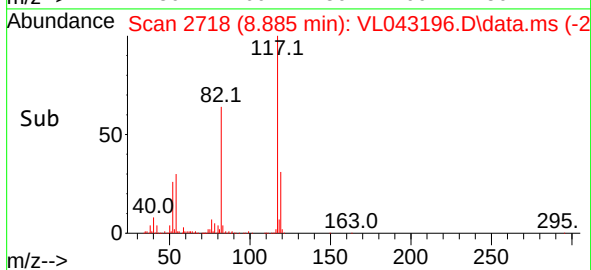
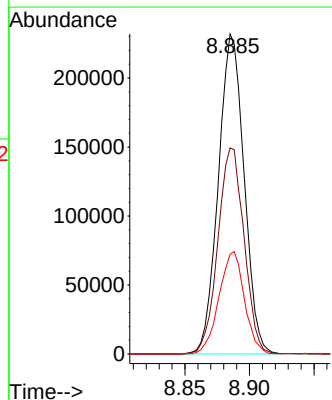
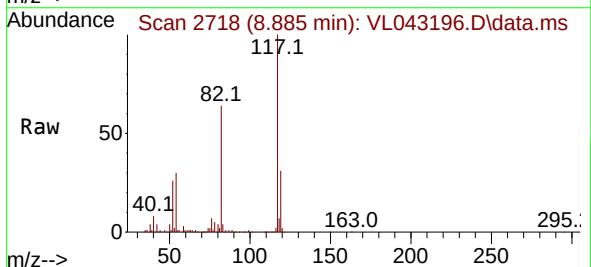
Instrument :
MSVOA_L
ClientSampleId :
UNIT-8-IA-1

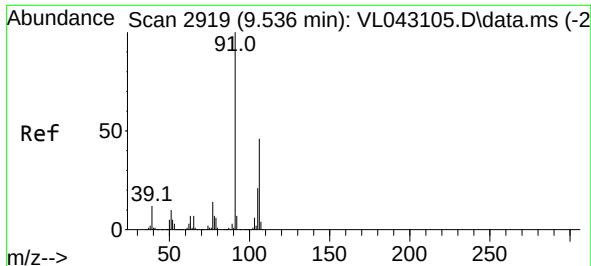
Tgt Ion: 91 Resp: 8701
Ion Ratio Lower Upper
91 100
92 74.5 48.8 73.2#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2718
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 117 Resp: 320935
Ion Ratio Lower Upper
117 100
82 65.6 53.8 80.8
119 31.8 25.4 38.0





#59

m/p-Xylene

Concen: 0.040 ppbv

RT: 9.535 min Scan# 2919

Delta R.T. -0.000 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

Instrument :

MSVOA_1

ClientSampleId :

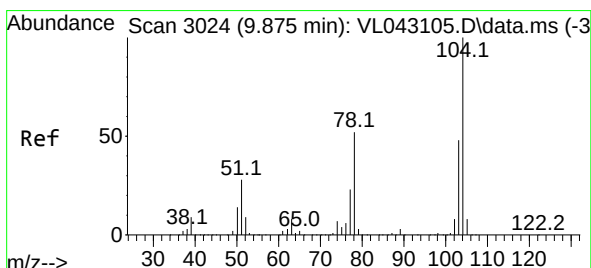
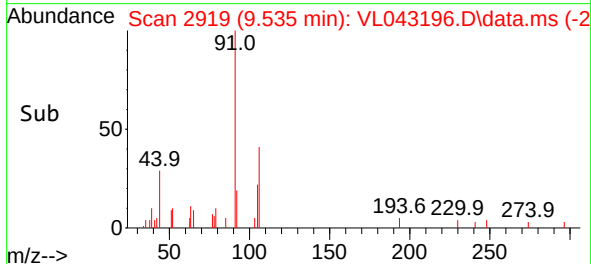
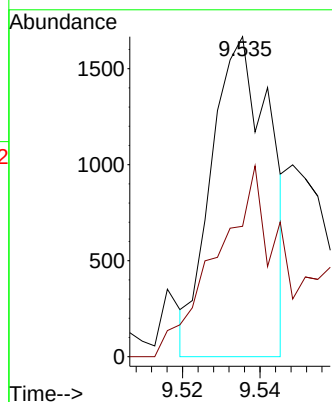
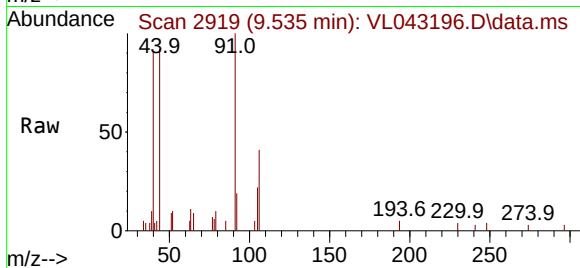
UNIT-8-IA-1

Tgt Ion: 91 Resp: 1751

Ion Ratio Lower Upper

91 100

106 84.1 38.0 57.0#



#61

Styrene

Concen: 0.042 ppbv

RT: 9.879 min Scan# 3025

Delta R.T. 0.003 min

Lab File: VL043196.D

Acq: 13 Nov 2025 13:04

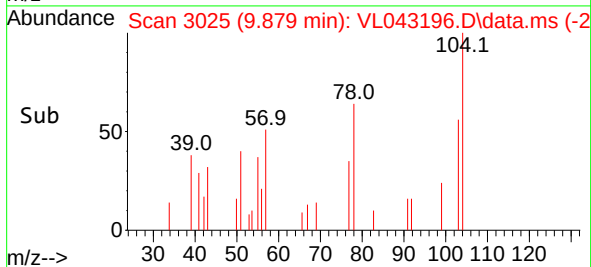
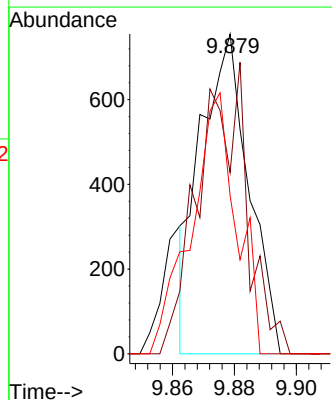
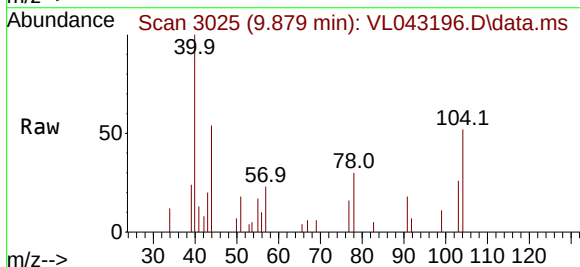
Tgt Ion: 104 Resp: 818

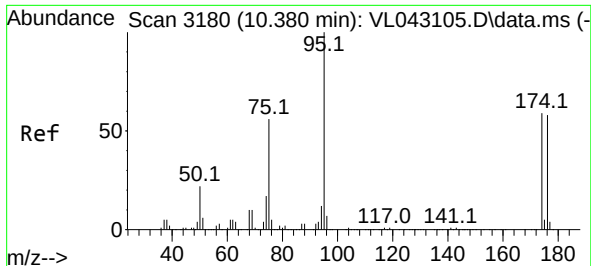
Ion Ratio Lower Upper

104 100

78 89.5 40.2 60.2#

103 76.4 36.9 55.3#

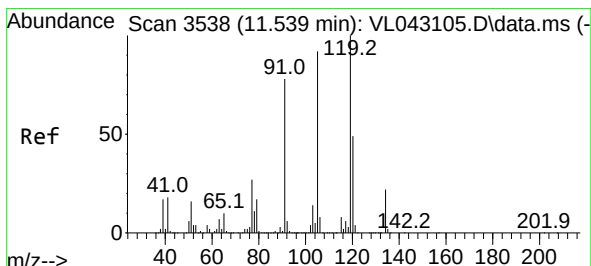
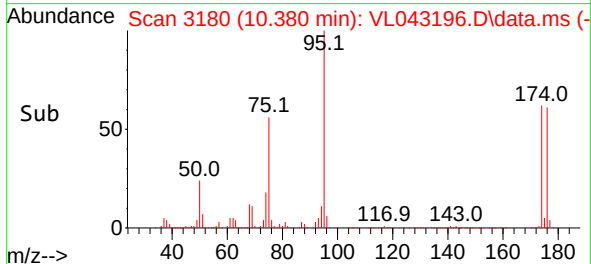
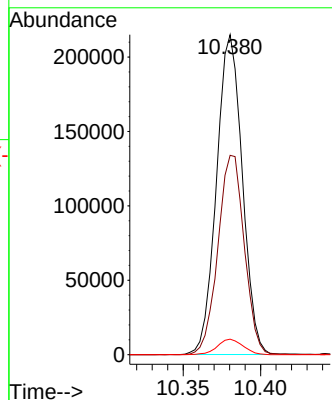
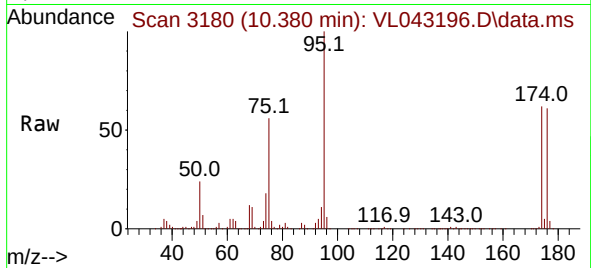




#68
1-Bromo-4-Fluorobenzene
Concen: 9.970 ppbv
RT: 10.380 min Scan# 3180
Delta R.T. -0.000 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Instrument :
MSVOA_1
ClientSampleId :
UNIT-8-IA-1

Tgt Ion: 95 Resp: 248695
Ion Ratio Lower Upper
95 100
174 63.9 48.3 72.5
175 4.8 3.8 5.8



#74
1,2,4-Trimethylbenzene
Concen: 0.045 ppbv
RT: 11.536 min Scan# 3537
Delta R.T. -0.003 min
Lab File: VL043196.D
Acq: 13 Nov 2025 13:04

Tgt Ion: 105 Resp: 2240
Ion Ratio Lower Upper
105 100
120 35.0 42.8 64.2#
91 7.0 68.3 102.5#
77 14.5 23.4 35.0#

