

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL082125\
 Data File : VL042876.D
 Acq On : 22 Aug 2025 07:59
 Operator : SY/MD
 Sample : Q2887-03DL 4X
 Misc : 100mL/MSVOA_L
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Quant Time: Aug 22 09:06:39 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL081325AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Aug 14 02:12:54 2025
 Response via : Initial Calibration

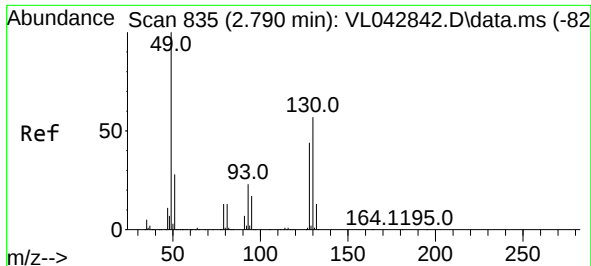
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	126548	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	351580	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.881	117	295590	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	227310	10.254	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.500%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.495	85	2373	0.128	ppbv	96
3) Chlorodifluoromethane	1.463	51	24450	1.193	ppbv #	64
4) Chloromethane	1.531	50	1052	0.141	ppbv #	86
5) Vinyl Chloride	1.486	62	167	0.023	ppbv #	43
6) Bromomethane	1.661	94	68	0.023	ppbv #	67
9) Propene	1.887	41	9595	1.084	ppbv	91
13) Ethanol	1.722	45	477720	590.131	ppbv	90
15) Acetone	1.835	43	39353	2.351	ppbv	100
16) 1,3-Butadiene	1.618	39	1017	0.134	ppbv #	32
17) tert-Butyl alcohol	2.042	59	732	0.037	ppbv #	71
19) Isopropyl Alcohol	1.887	45	106901	10.692	ppbv #	36
20) Methylene Chloride	2.062	84	14802	2.111	ppbv #	91
21) Allyl Chloride	2.062	41	577	0.049	ppbv #	72
23) Vinyl Acetate	2.473	43	1961	0.085	ppbv #	41
25) Ethyl Acetate	2.829	43	21072	0.520	ppbv #	82
26) Hexane	2.826	57	26721	1.429	ppbv #	47
27) Carbon Disulfide	2.149	76	1157	0.064	ppbv #	1
29) Chloroform	2.852	83	555	0.021	ppbv	93
34) 2-Butanone	2.564	43	3168	0.133	ppbv	98
39) 1,2-Dichloropropane	3.959	63	91544	7.445	ppbv #	27
53) Toluene	6.930	91	3294	0.082	ppbv #	46
59) m/p-Xylene	9.535	91	1025	0.025	ppbv #	100
74) 1,2,4-Trimethylbenzene	11.539	105	1590	0.034	ppbv #	45

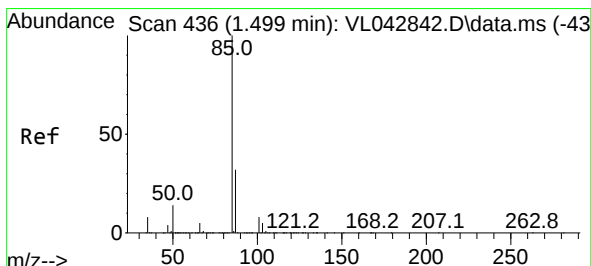
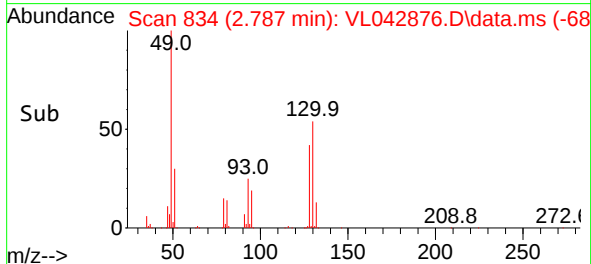
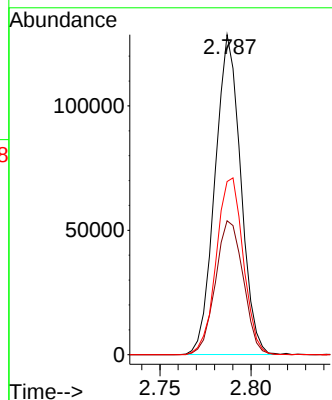
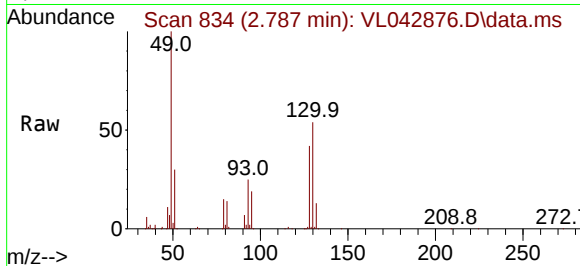
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. -0.003 min
 Lab File: VL042876.D
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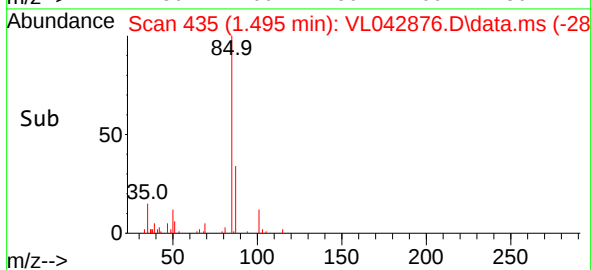
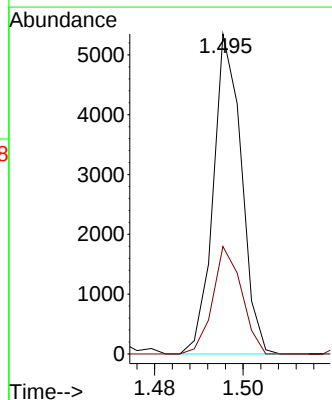
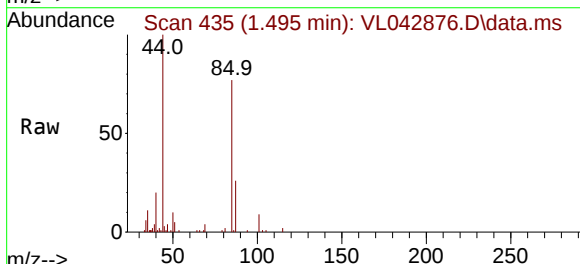
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

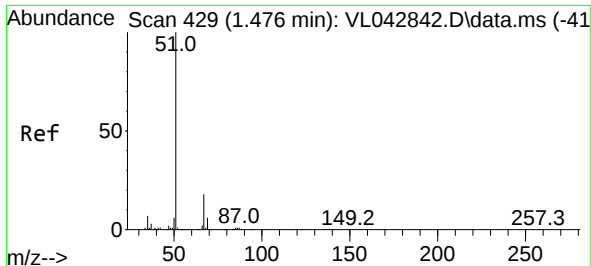
Tgt Ion: 49 Resp: 126548
 Ion Ratio Lower Upper
 49 100
 128 45.2 23.7 71.1
 130 58.0 30.6 91.6



#2
 Dichlorodifluoromethane
 Concen: 0.128 ppbv
 RT: 1.495 min Scan# 435
 Delta R.T. -0.003 min
 Lab File: VL042876.D
 Acq: 22 Aug 2025 07:59

Tgt Ion: 85 Resp: 2373
 Ion Ratio Lower Upper
 85 100
 87 33.6 25.3 37.9

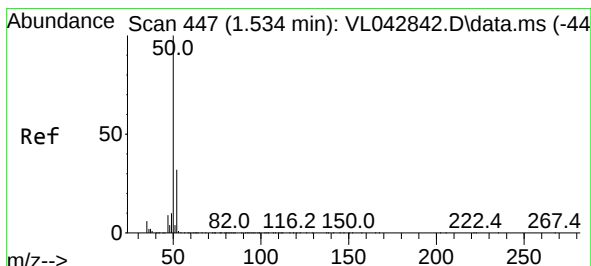
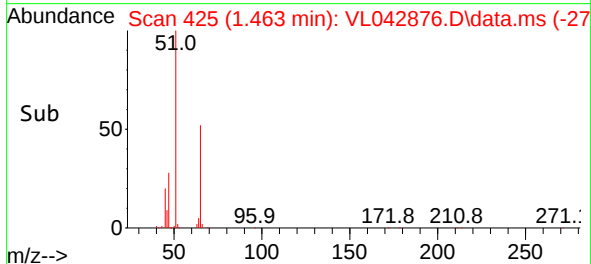
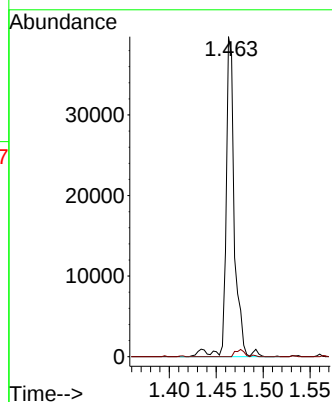
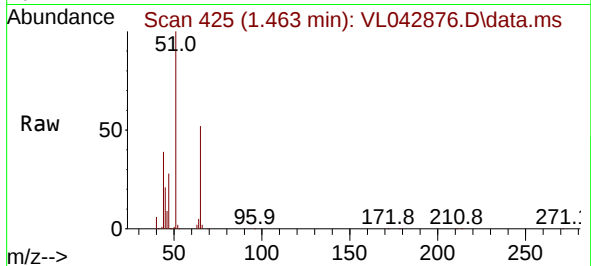




#3
Chlorodifluoromethane
Concen: 1.193 ppbv
RT: 1.463 min Scan# 41
Delta R.T. -0.013 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

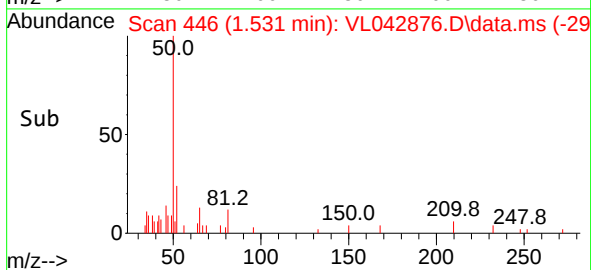
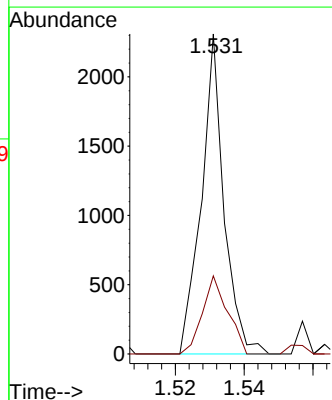
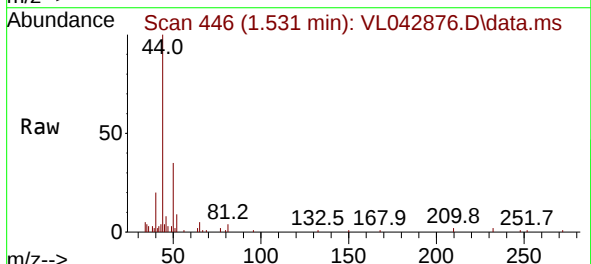
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MSVOA_L
ClientSampleId :
IA1DL

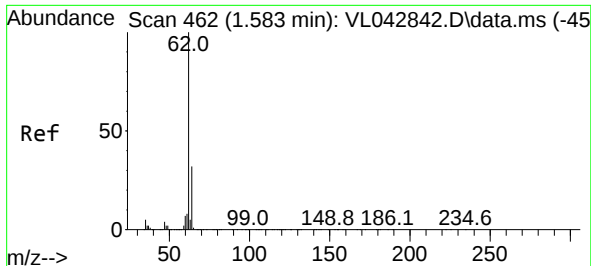
Tgt Ion: 51 Resp: 24450
Ion Ratio Lower Upper
51 100
67 2.6 14.9 22.3#



#4
Chloromethane
Concen: 0.141 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 50 Resp: 1052
Ion Ratio Lower Upper
50 100
52 24.4 25.9 38.9#

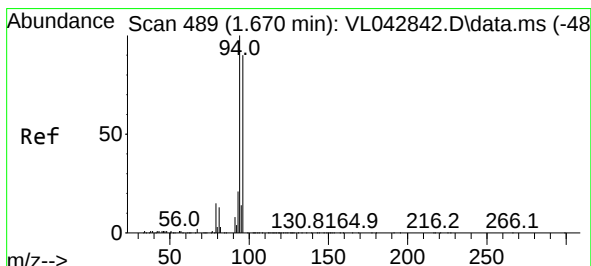
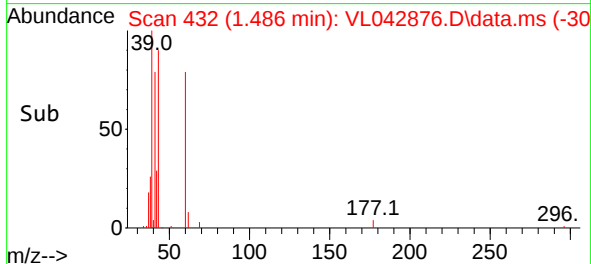
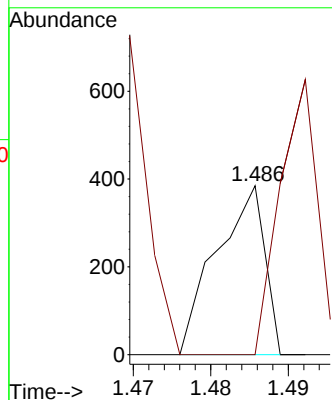
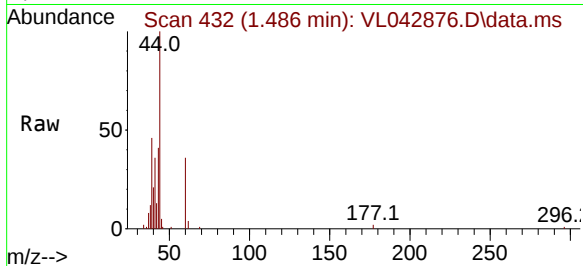




#5
 Vinyl Chloride
 Concen: 0.023 ppbv
 RT: 1.486 min Scan# 41
 Delta R.T. -0.097 min
 Lab File: VL042876.D
 Acq: 22 Aug 2025 07:59

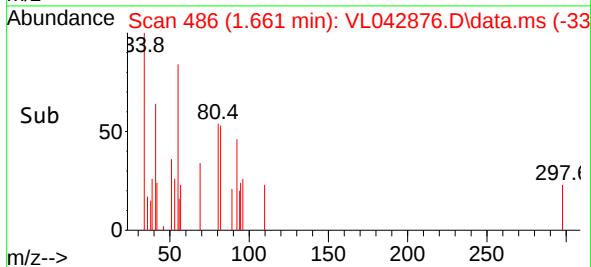
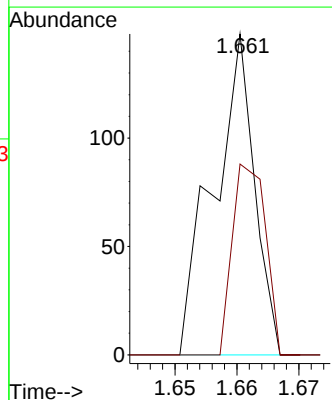
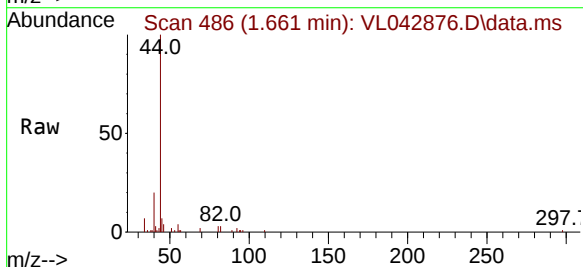
Instrument :
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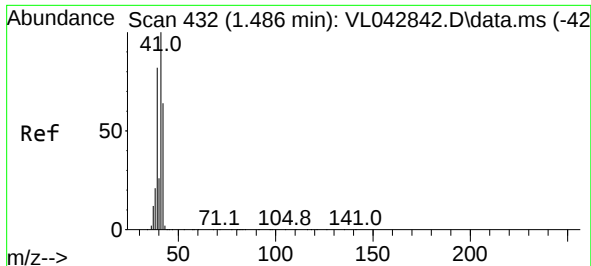
Tgt Ion: 62 Resp: 167
 Ion Ratio Lower Upper
 62 100
 64 0.0 25.4 38.2#



#6
 Bromomethane
 Concen: 0.023 ppbv
 RT: 1.661 min Scan# 486
 Delta R.T. -0.010 min
 Lab File: VL042876.D
 Acq: 22 Aug 2025 07:59

Tgt Ion: 94 Resp: 68
 Ion Ratio Lower Upper
 94 100
 96 59.5 72.1 108.1#

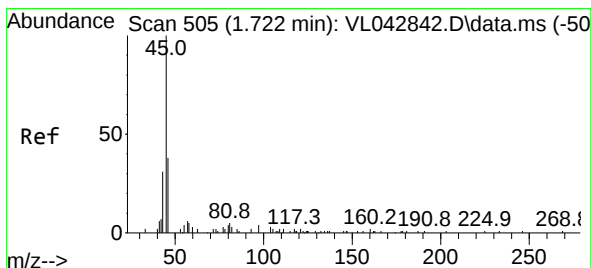
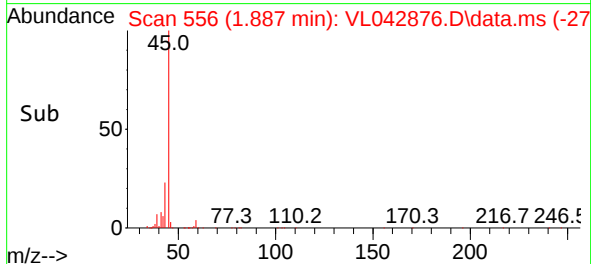
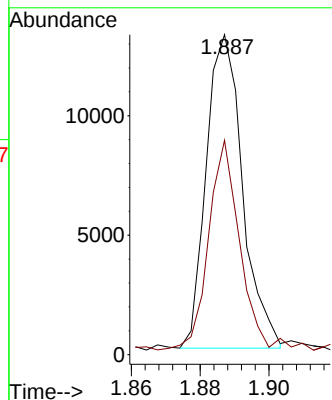
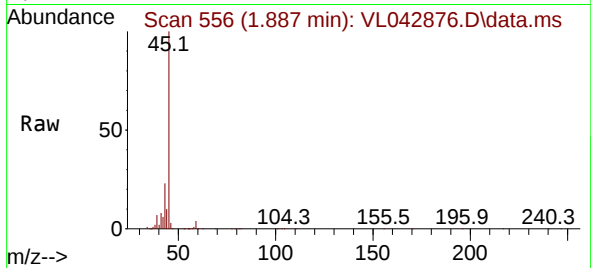




#9
Propene
Concen: 1.084 ppbv
RT: 1.887 min Scan# 51
Delta R.T. 0.401 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

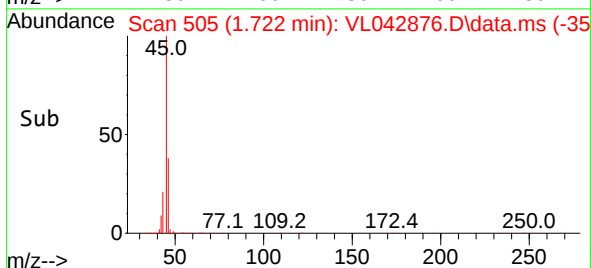
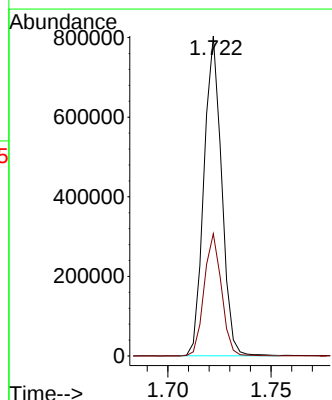
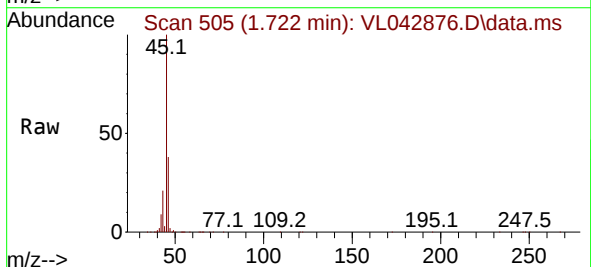
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

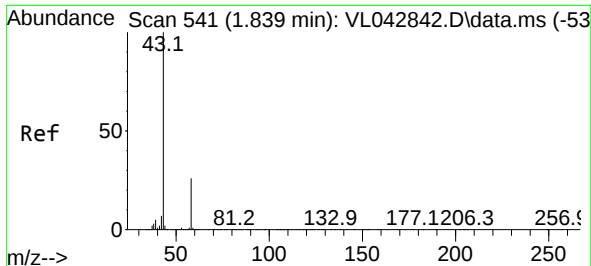
Tgt Ion: 41 Resp: 9595
Ion Ratio Lower Upper
41 100
42 58.9 53.0 79.4



#13
Ethanol
Concen: 590.131 ppbv
RT: 1.722 min Scan# 505
Delta R.T. -0.000 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 45 Resp: 477720
Ion Ratio Lower Upper
45 100
46 37.6 17.5 69.9

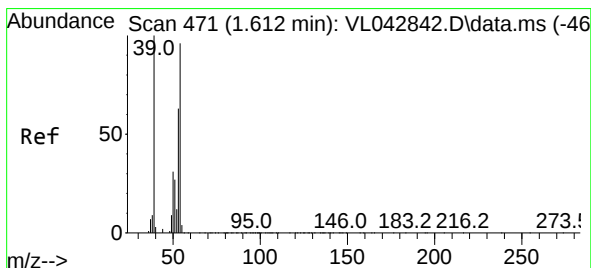
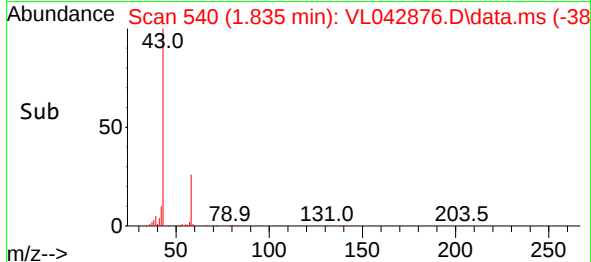
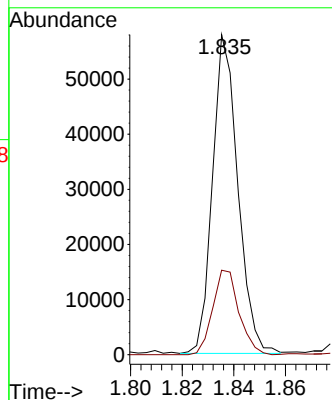
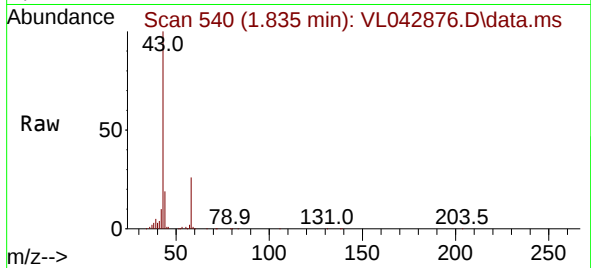




#15
Acetone
Concen: 2.351 ppbv
RT: 1.835 min Scan# 541
Delta R.T. -0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

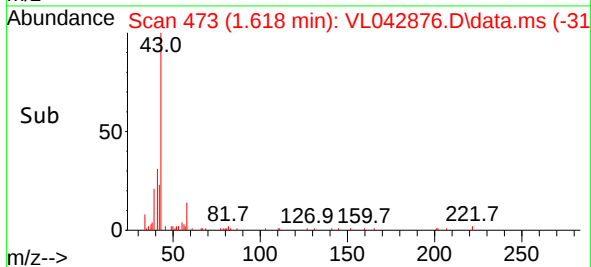
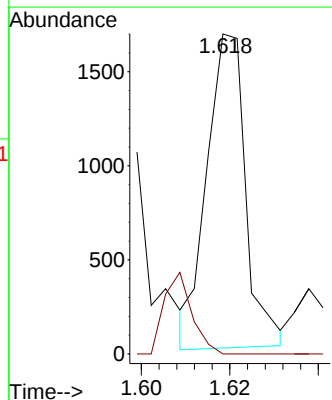
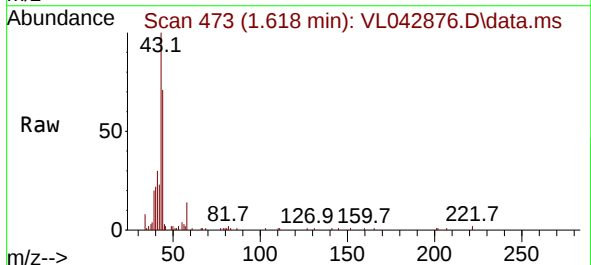
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ClientSampleId :
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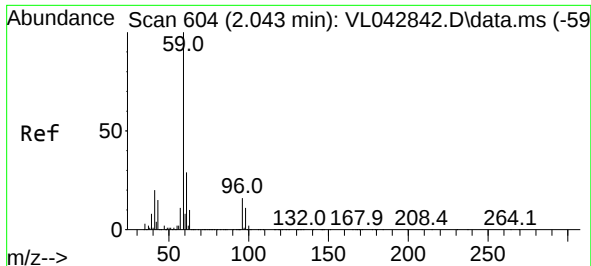
Tgt Ion: 43 Resp: 39353
Ion Ratio Lower Upper
43 100
58 27.8 22.4 33.6



#16
1,3-Butadiene
Concen: 0.134 ppbv
RT: 1.618 min Scan# 473
Delta R.T. 0.006 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 39 Resp: 1017
Ion Ratio Lower Upper
39 100
54 19.9 63.6 95.4#





#17

tert-Butyl alcohol

Concen: 0.037 ppbv

RT: 2.042 min Scan# 604

Delta R.T. -0.000 min

Lab File: VL042876.D

Acq: 22 Aug 2025 07:59

Instrument :

MSVOA_L

ClientSampleId :

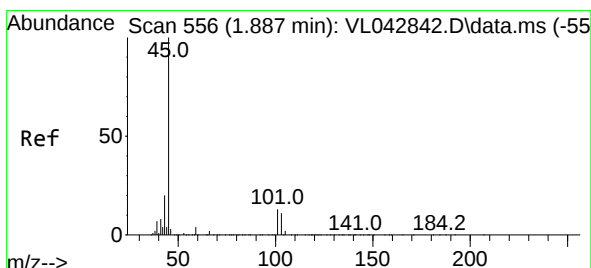
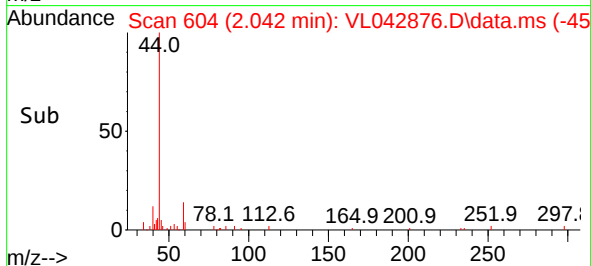
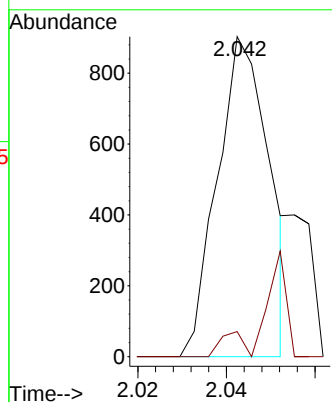
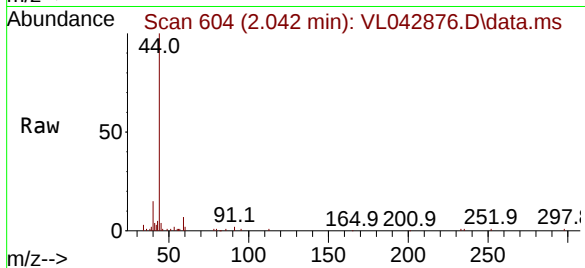
IA1DL

Tgt Ion: 59 Resp: 732

Ion Ratio Lower Upper

59 100

57 0.0 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 10.692 ppbv

RT: 1.887 min Scan# 556

Delta R.T. -0.000 min

Lab File: VL042876.D

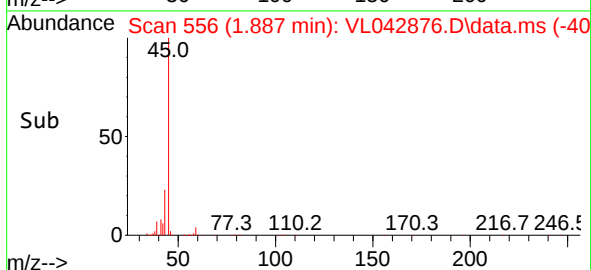
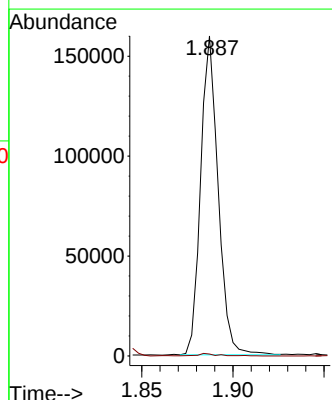
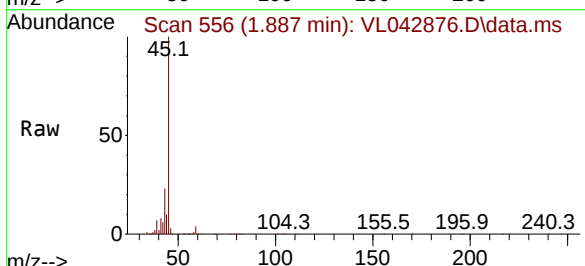
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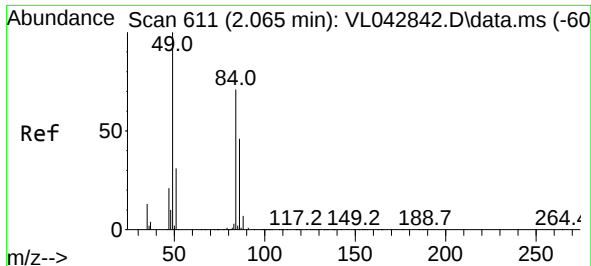
Tgt Ion: 45 Resp: 106901

Ion Ratio Lower Upper

45 100

58 0.8 32.7 49.1#

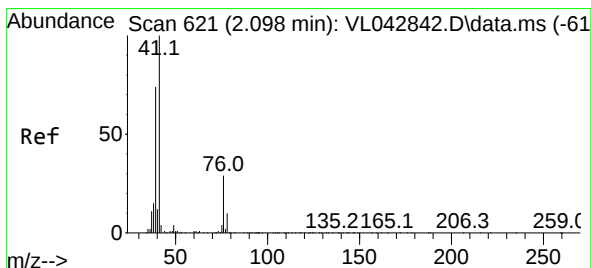
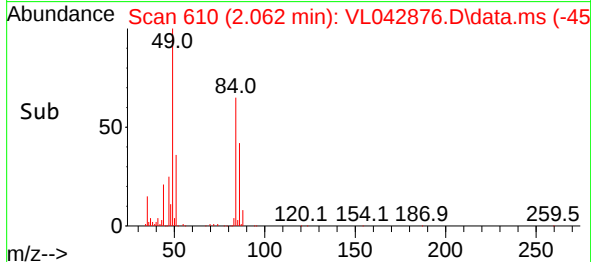
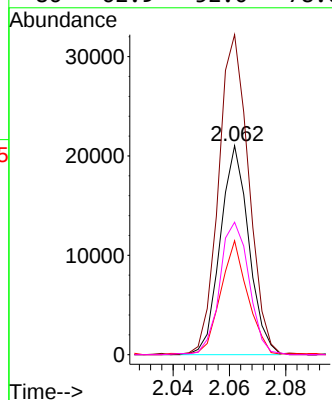
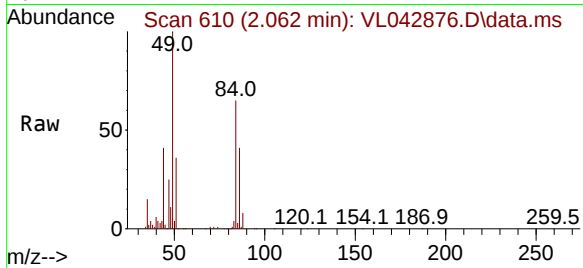




#20
Methylene Chloride
Concen: 2.111 ppbv
RT: 2.062 min Scan# 611
Delta R.T. -0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

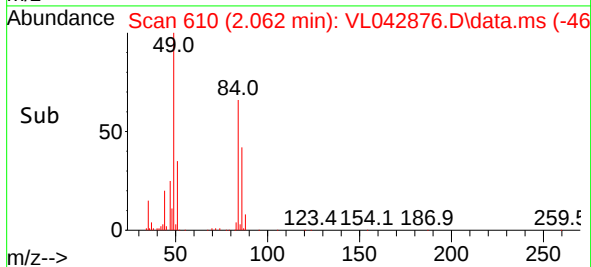
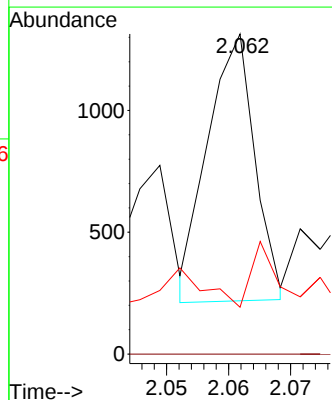
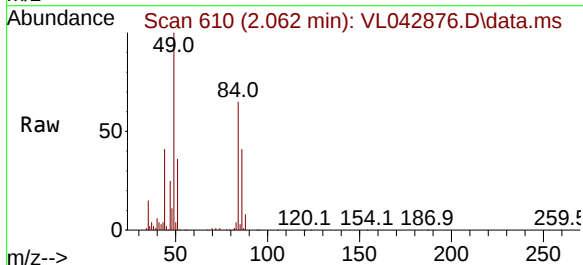
Instrument :
MSVOA_L
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IA1DL

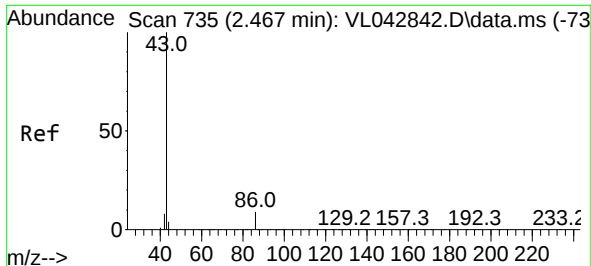
Tgt Ion:	84	Resp:	14802
Ion	Ratio	Lower	Upper
84	100		
49	152.8	112.3	168.5
51	54.2	36.0	54.0#
86	62.9	52.0	78.0



#21
Allyl Chloride
Concen: 0.049 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.036 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion:	41	Resp:	577
Ion	Ratio	Lower	Upper
41	100		
76	0.0	23.9	35.9#
39	58.1	57.8	86.6

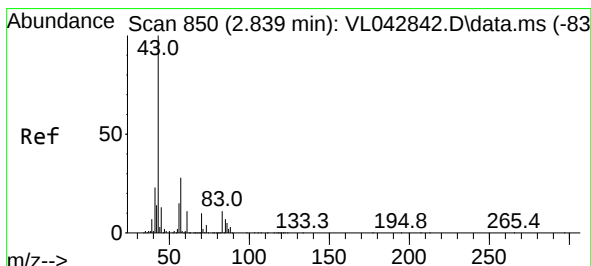
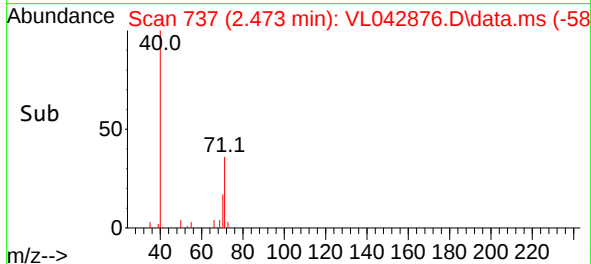
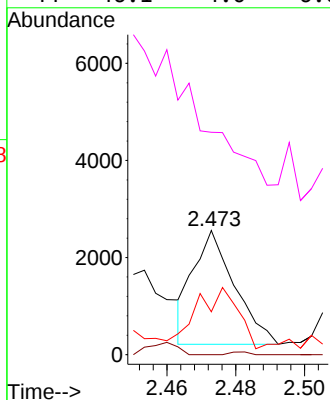
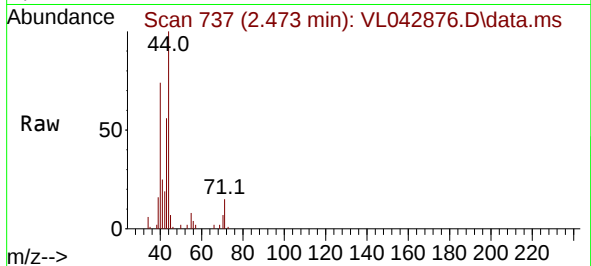




#23
 Vinyl Acetate
 Concen: 0.085 ppbv
 RT: 2.473 min Scan# 71
 Delta R.T. 0.006 min
 Lab File: VL042876.D
 Acq: 22 Aug 2025 07:59

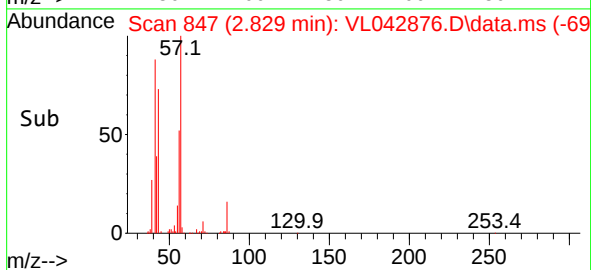
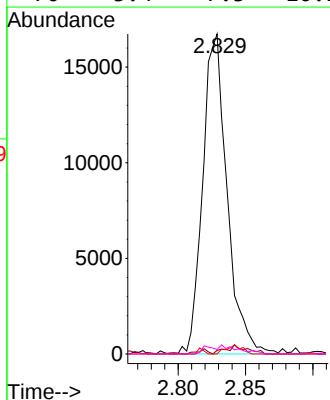
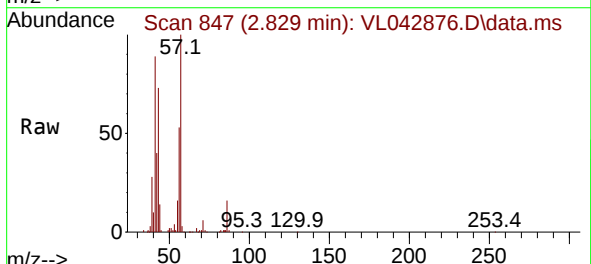
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

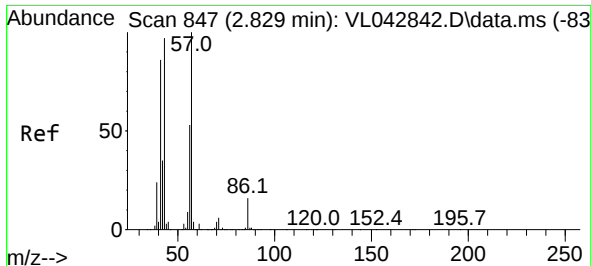
Tgt Ion: 43	Resp: 1961
Ion Ratio	Lower Upper
43 100	
86 0.0	6.6 9.8#
42 28.6	7.0 10.6#
44 46.1	4.0 6.0#



#25
 Ethyl Acetate
 Concen: 0.520 ppbv
 RT: 2.829 min Scan# 847
 Delta R.T. -0.010 min
 Lab File: VL042876.D
 Acq: 22 Aug 2025 07:59

Tgt	Ion: 43	Resp:	21072
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.1	12.1#
61	2.2	7.4	11.2#
70	3.4	7.3	10.9#

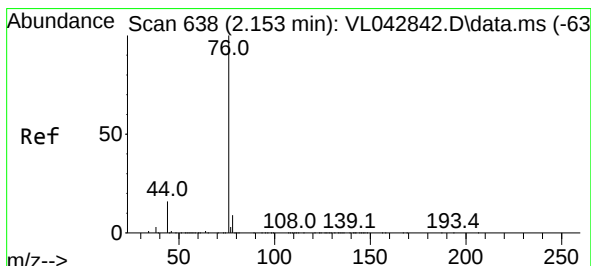
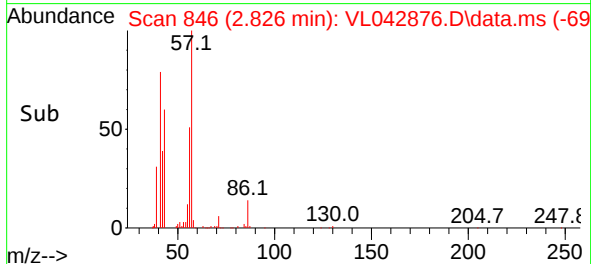
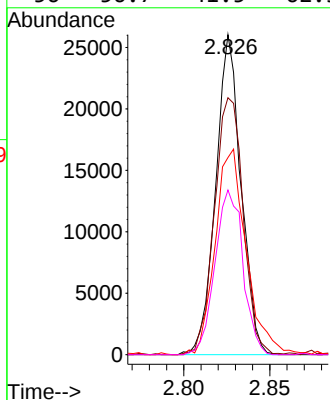
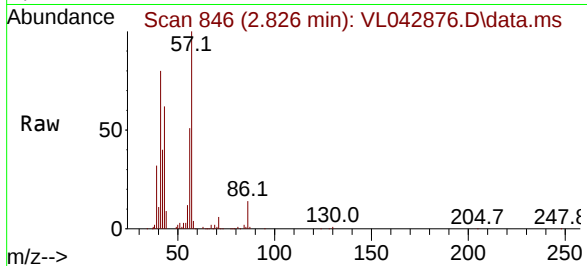




#26
Hexane
Concen: 1.429 ppbv
RT: 2.826 min Scan# 847
Delta R.T. -0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

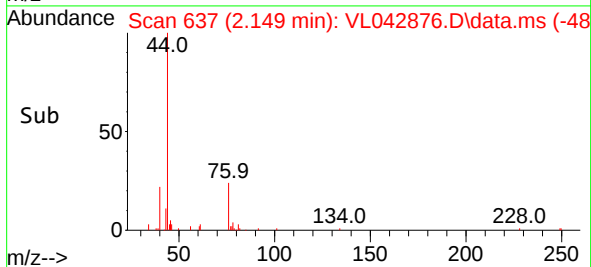
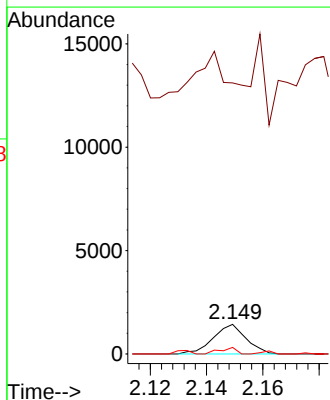
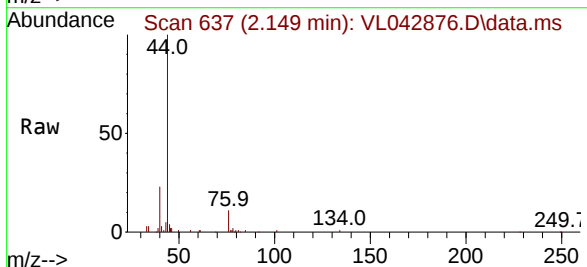
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

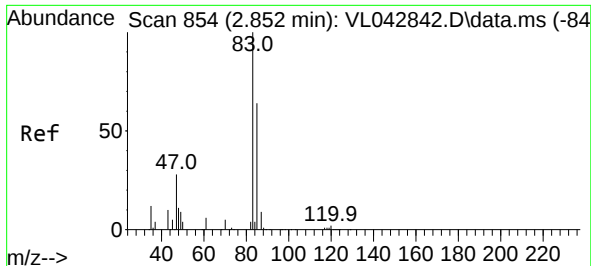
Tgt Ion: 57 Resp: 26721
Ion Ratio Lower Upper
57 100
41 91.9 68.6 103.0
43 79.5 168.5 252.7#
56 56.7 41.5 62.3



#27
Carbon Disulfide
Concen: 0.064 ppbv
RT: 2.149 min Scan# 637
Delta R.T. -0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 76 Resp: 1157
Ion Ratio Lower Upper
76 100
44 2315.0 15.9 23.9#
78 20.1 9.5 14.3#

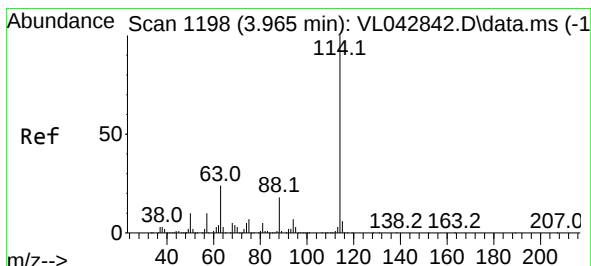
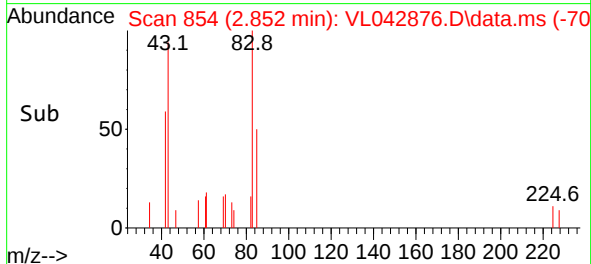
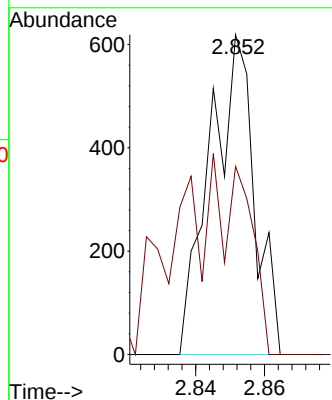
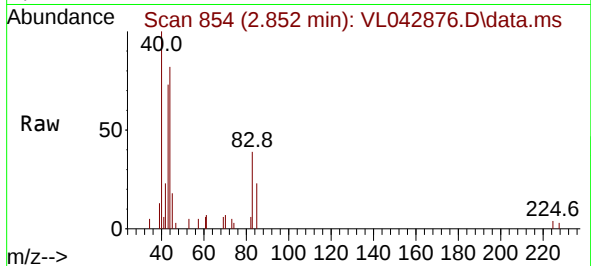




#29
Chloroform
Concen: 0.021 ppbv
RT: 2.852 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

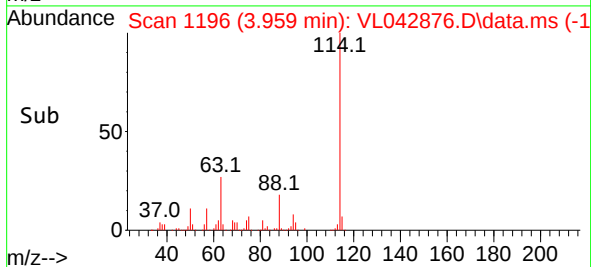
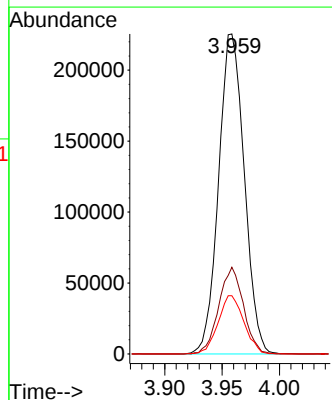
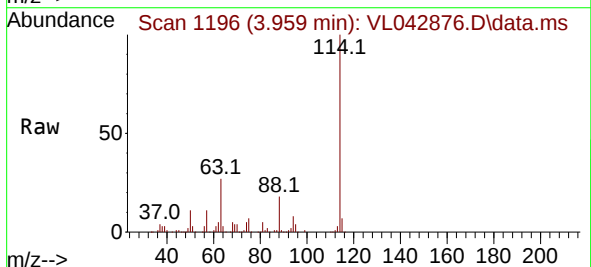
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

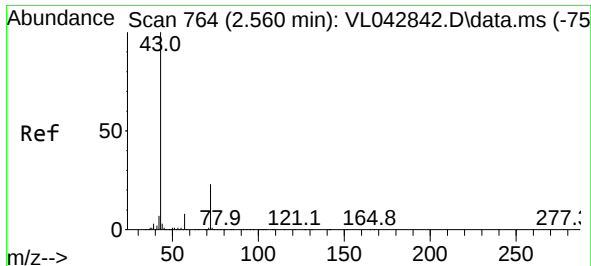
Tgt Ion: 83 Resp: 555
Ion Ratio Lower Upper
83 100
85 58.8 51.1 76.7



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.007 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 114 Resp: 351580
Ion Ratio Lower Upper
114 100
63 26.1 19.7 29.5
88 18.3 14.4 21.6

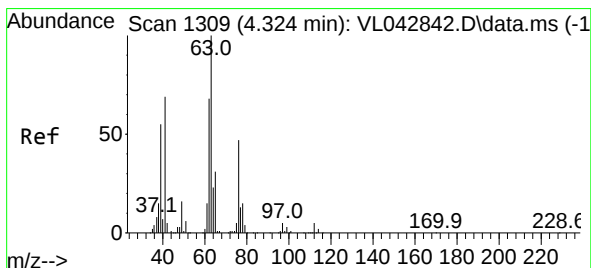
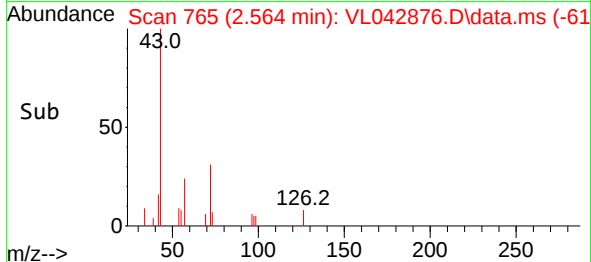
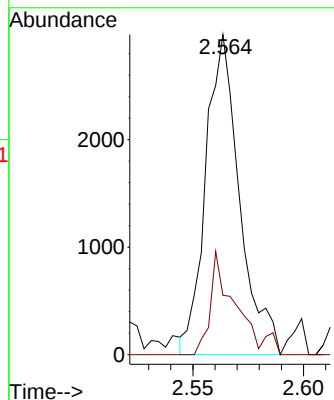
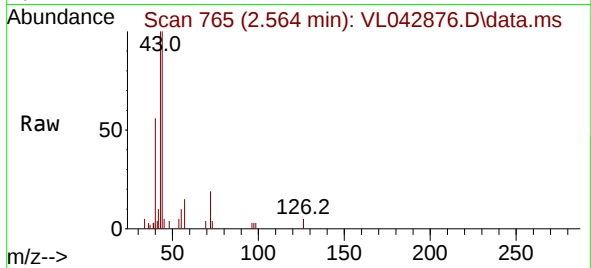




#34
2-Butanone
Concen: 0.133 ppbv
RT: 2.564 min Scan# 765
Delta R.T. 0.003 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

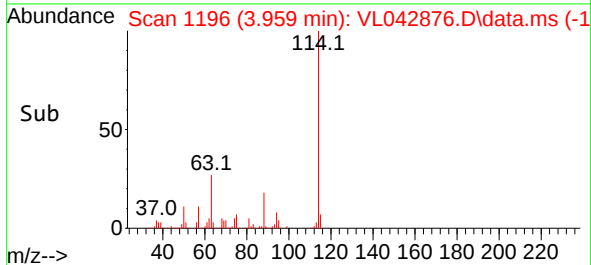
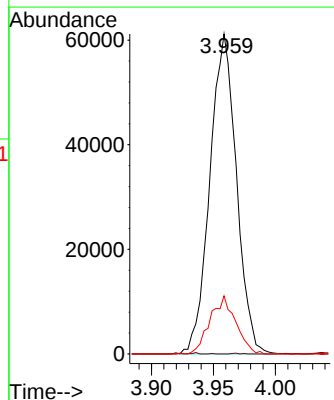
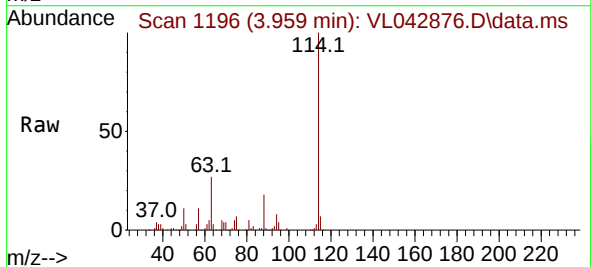
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

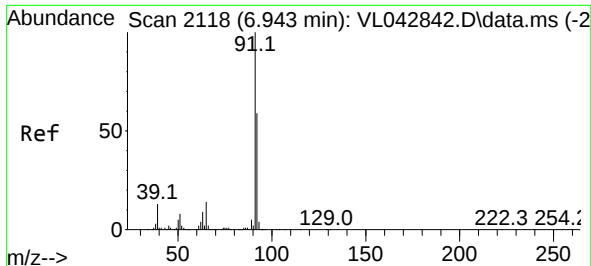
Tgt Ion: 43 Resp: 3168
Ion Ratio Lower Upper
43 100
72 24.4 18.6 28.0



#39
1,2-Dichloropropane
Concen: 7.445 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.366 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 63 Resp: 91544
Ion Ratio Lower Upper
63 100
41 0.0 55.0 82.4#
62 18.2 54.4 81.6#

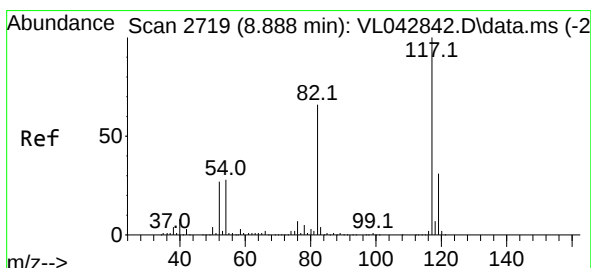
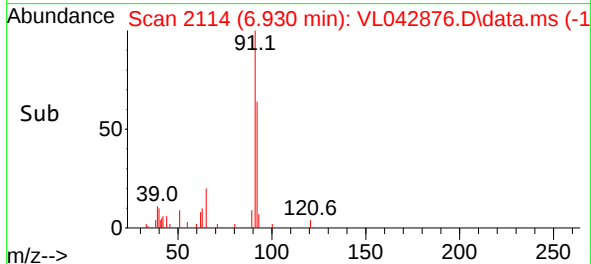
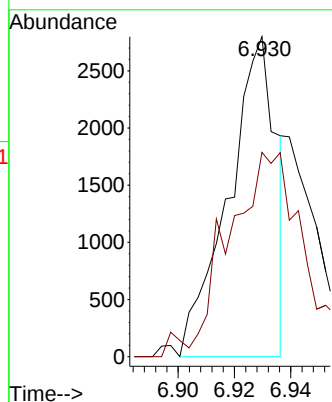
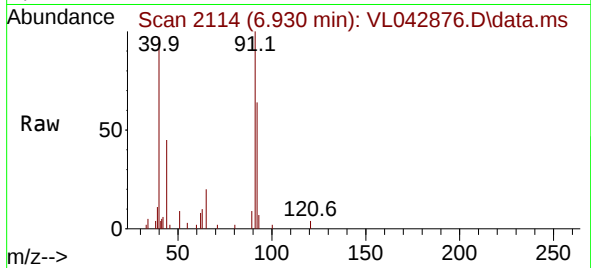




#53
Toluene
Concen: 0.082 ppbv
RT: 6.930 min Scan# 2118
Delta R.T. -0.013 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

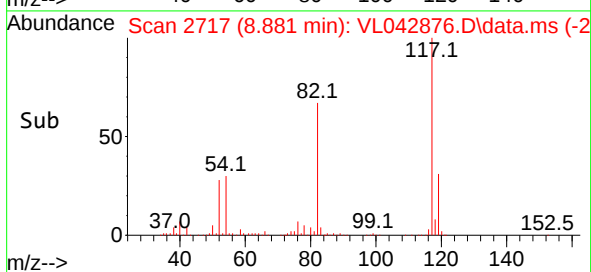
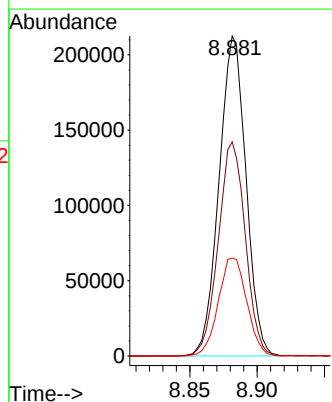
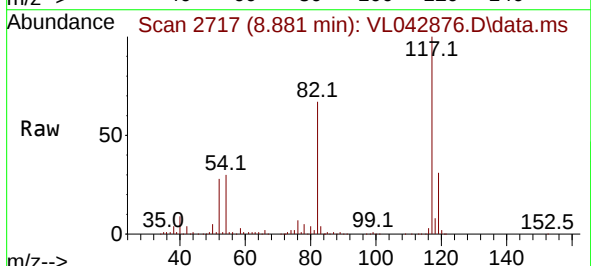
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

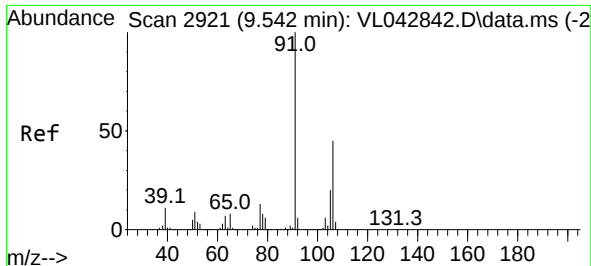
Tgt Ion: 91 Resp: 3294
Ion Ratio Lower Upper
91 100
92 100.2 47.8 71.6#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.881 min Scan# 2717
Delta R.T. -0.007 min
Lab File: VL042876.D
Acq: 22 Aug 2025 07:59

Tgt Ion: 117 Resp: 295590
Ion Ratio Lower Upper
117 100
82 67.1 54.6 81.8
119 32.3 25.9 38.9





#59

m/p-Xylene

Concen: 0.025 ppbv

RT: 9.535 min Scan# 2919

Delta R.T. -0.007 min

Lab File: VL042876.D

Acq: 22 Aug 2025 07:59

Instrument :

MSVOA_L

ClientSampleId :

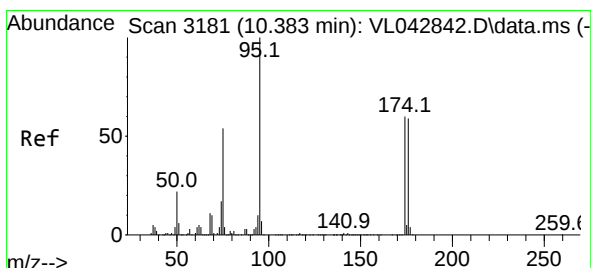
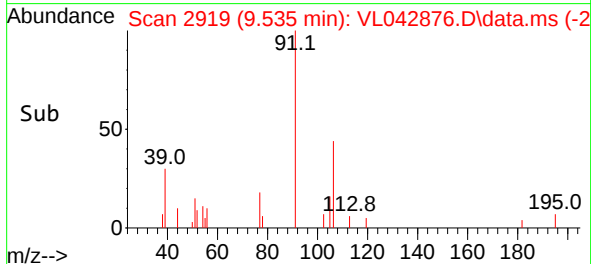
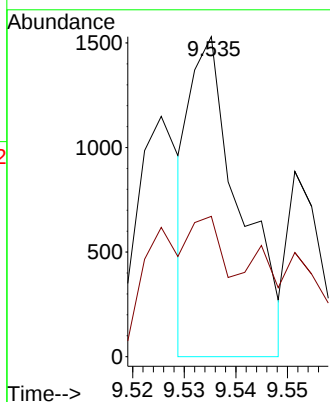
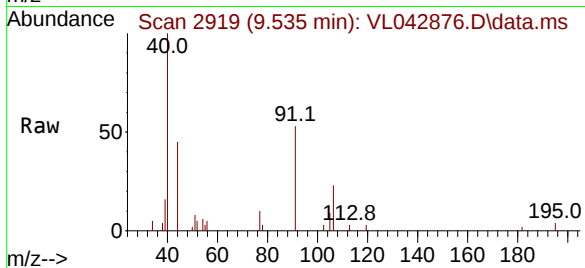
IA1DL

Tgt Ion: 91 Resp: 1025

Ion Ratio Lower Upper

91 100

106 126.7 0.0 0.0#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.254 ppbv

RT: 10.377 min Scan# 3179

Delta R.T. -0.007 min

Lab File: VL042876.D

Acq: 22 Aug 2025 07:59

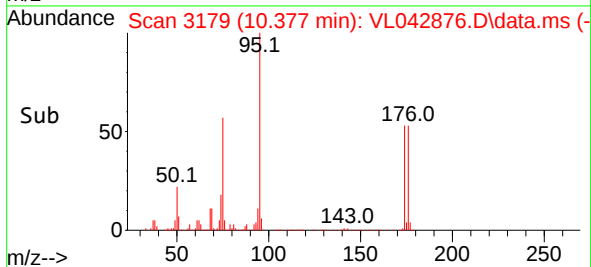
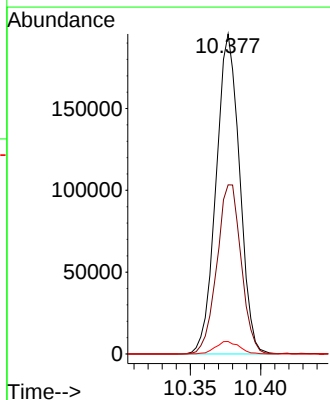
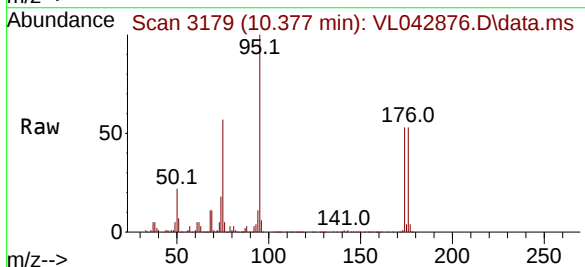
Tgt Ion: 95 Resp: 227310

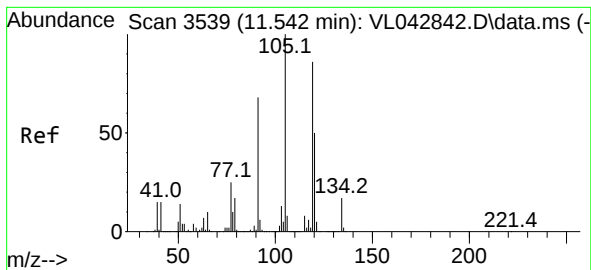
Ion Ratio Lower Upper

95 100

174 54.9 48.4 72.6

175 4.0 3.8 5.8





#74

1,2,4-Trimethylbenzene

Concen: 0.034 ppbv

RT: 11.539 min Scan# 31

Delta R.T. -0.003 min

Lab File: VL042876.D

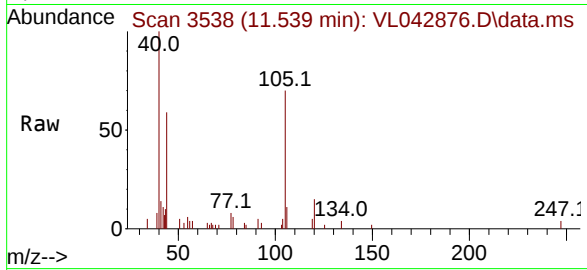
Acq: 22 Aug 2025 07:59

Instrument :

MSVOA_L

ClientSampleId :

IA1DL



Tgt Ion:	105	Resp:	1590
Ion	Ratio	Lower	Upper
105	100		
120	20.8	39.8	59.6#
91	6.9	54.2	81.4#
77	11.0	19.8	29.6#

