

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100825\
 Data File : VL043070.D
 Acq On : 08 Oct 2025 22:10
 Operator : SY/MD
 Sample : Q3320-13
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Oct 09 01:24:43 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL100225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Oct 03 08:23:34 2025
 Response via : Initial Calibration

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

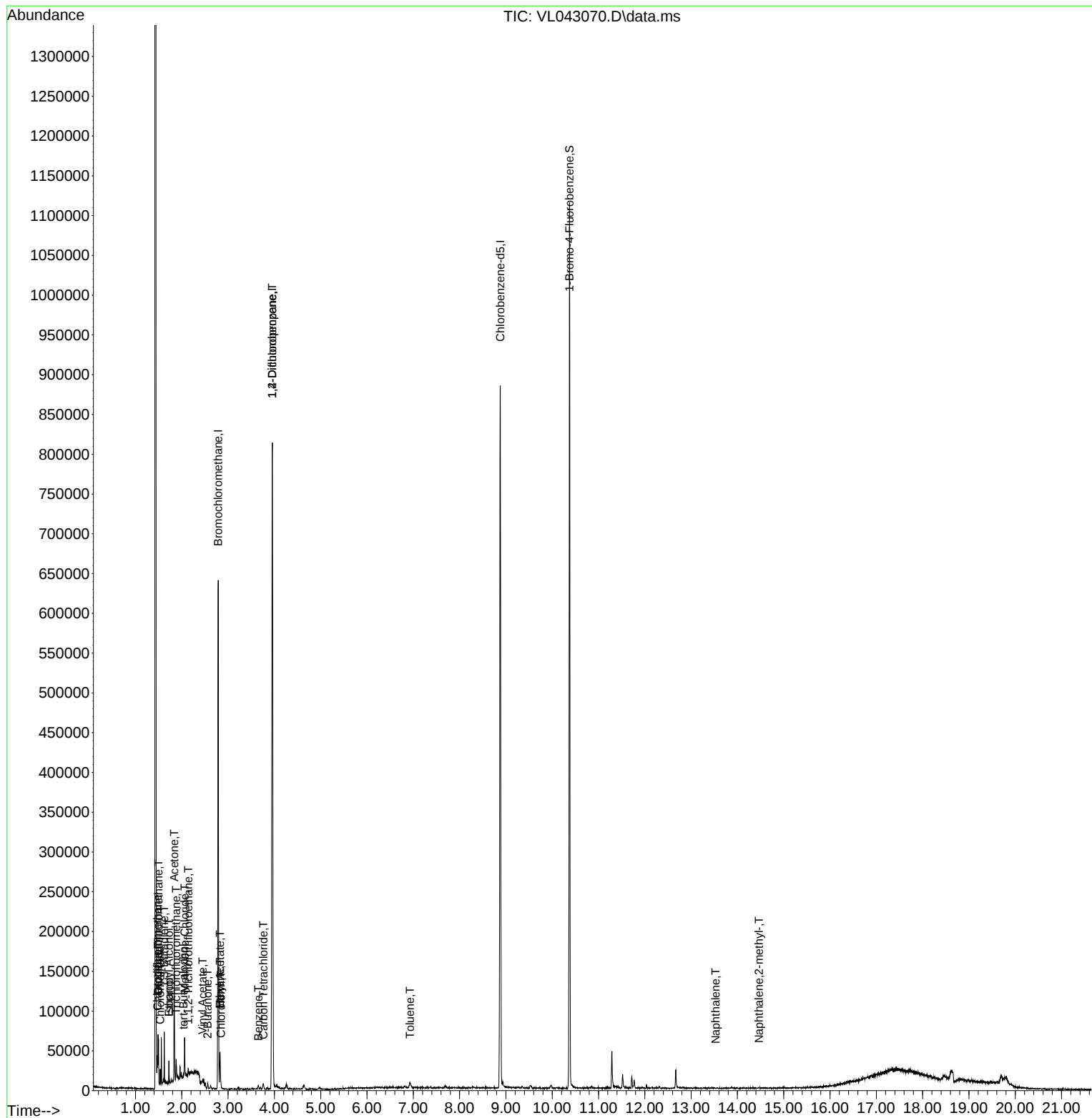
Internal Standards						
1) Bromochloromethane	2.784	49	172065	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.955	114	450631	10.000	ppbv	0.02
55) Chlorobenzene-d5	8.878	117	352768	10.000	ppbv	0.02
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	249094	9.802	ppbv	0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.000%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	13542	0.467	ppbv	99
3) Chlorodifluoromethane	1.476	51	15947	0.568	ppbv #	84
4) Chloromethane	1.531	50	4682	0.442	ppbv	92
9) Propene	1.489	41	4700	0.415	ppbv	84
11) Trichlorofluoromethane	1.878	101	6729	0.226	ppbv	87
12) 1,1,2-Trichlorotrifluo...	2.140	101	1640	0.070	ppbv	96
13) Ethanol	1.722	45	9891	22.860	ppbv #	31
15) Acetone	1.835	43	82318	3.417	ppbv	100
16) 1,3-Butadiene	1.622	39	2870	0.289	ppbv #	24
17) tert-Butyl alcohol	2.039	59	1018	0.040	ppbv #	66
19) Isopropyl Alcohol	1.722	45	9891	0.857	ppbv #	58
20) Methylene Chloride	2.062	84	7340	0.698	ppbv	97
23) Vinyl Acetate	2.450	43	1738	0.340	ppbv #	1
25) Ethyl Acetate	2.823	43	6396	0.106	ppbv #	74
26) Hexane	2.826	57	7831	0.337	ppbv #	33
29) Chloroform	2.845	83	1551	0.039	ppbv	94
34) 2-Butanone	2.557	43	4241	0.139	ppbv	97
35) Carbon Tetrachloride	3.761	117	1785	0.048	ppbv	87
36) Benzene	3.654	78	1843	0.043	ppbv #	83
39) 1,2-Dichloropropane	3.955	63	113676	7.123	ppbv #	23
53) Toluene	6.930	91	1916	0.044	ppbv #	21
79) Naphthalene	13.529	128	19	0.235	ppbv #	69
80) Naphthalene,2-methyl-	14.465	142	278	0.674	ppbv #	66

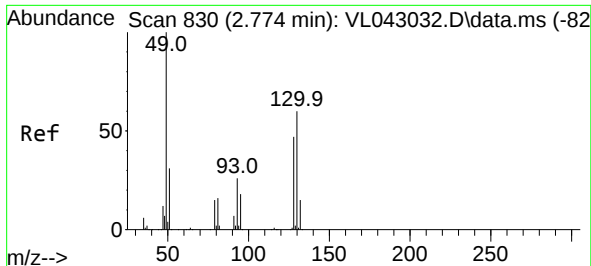
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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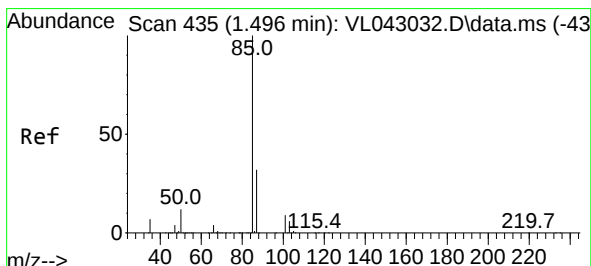
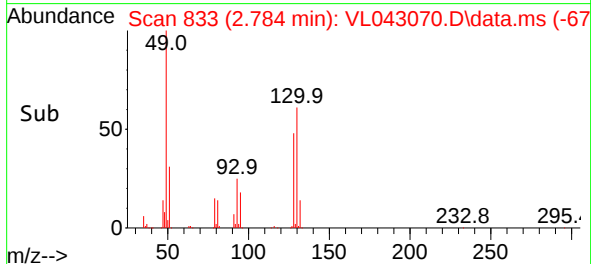
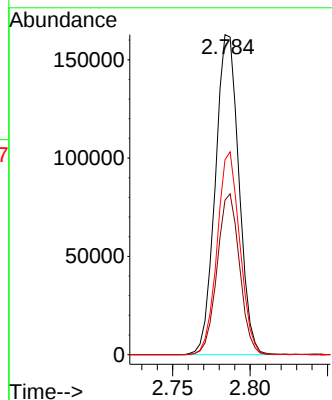
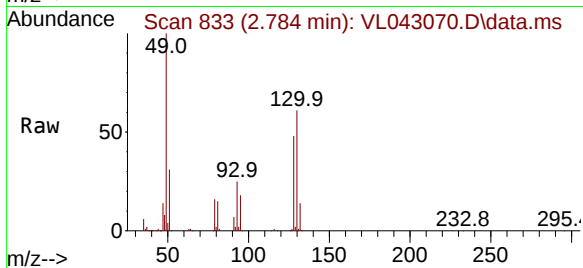




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 81
Delta R.T. 0.010 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

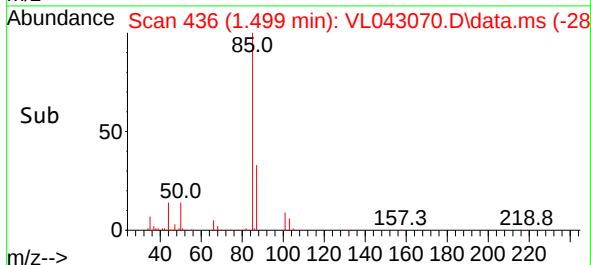
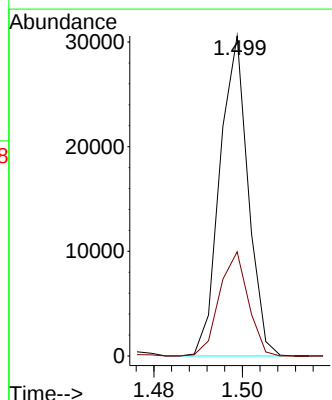
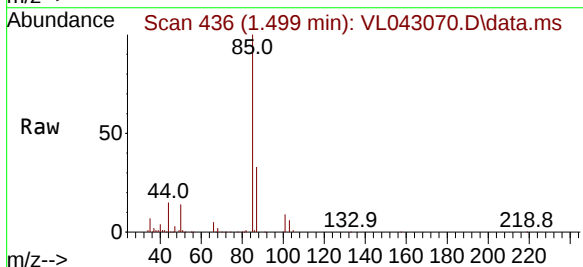
Instrument :
MSVOA_L
ClientSampleId :
OA1

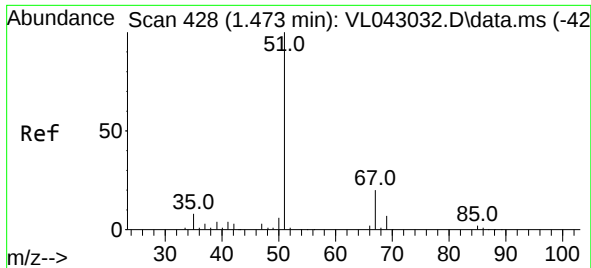
Tgt Ion: 49 Resp: 172065
Ion Ratio Lower Upper
49 100
128 48.0 24.1 72.2
130 61.1 31.4 94.3



#2
Dichlorodifluoromethane
Concen: 0.467 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 85 Resp: 13542
Ion Ratio Lower Upper
85 100
87 32.6 25.8 38.6





#3

Chlorodifluoromethane

Concen: 0.568 ppbv

RT: 1.476 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

Instrument :

MSVOA_L

ClientSampleId :

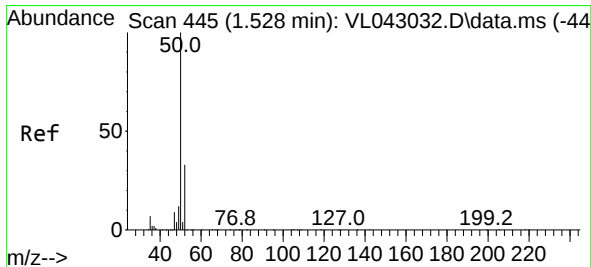
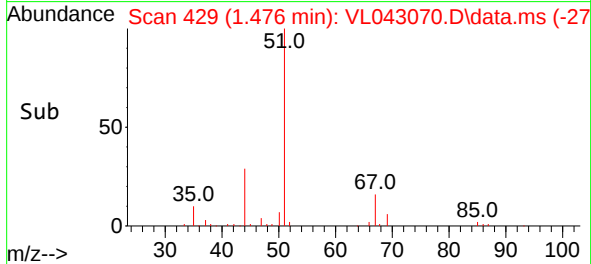
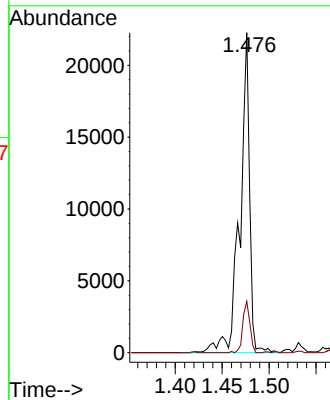
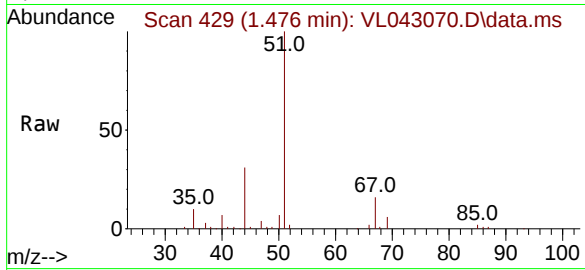
OA1

Tgt Ion: 51 Resp: 15947

Ion Ratio Lower Upper

51 100

67 11.9 15.1 22.7#



#4

Chloromethane

Concen: 0.442 ppbv

RT: 1.531 min Scan# 446

Delta R.T. 0.003 min

Lab File: VL043070.D

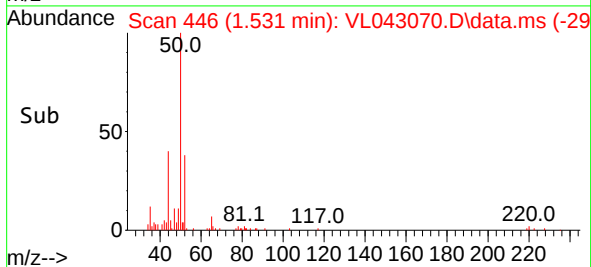
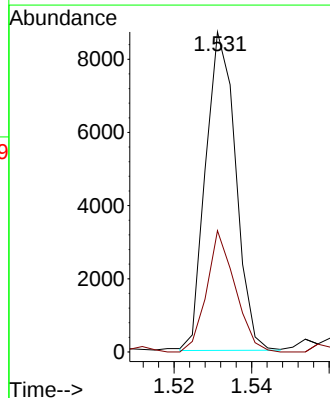
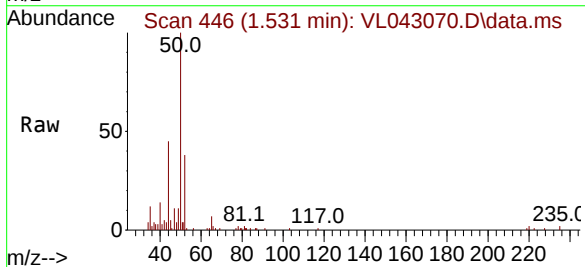
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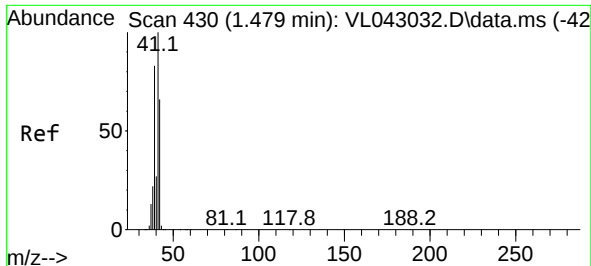
Tgt Ion: 50 Resp: 4682

Ion Ratio Lower Upper

50 100

52 37.0 26.2 39.2





#9

Propene

Concen: 0.415 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

Instrument :

MSVOA_L

ClientSampleId :

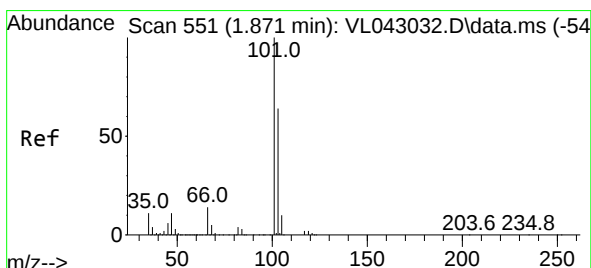
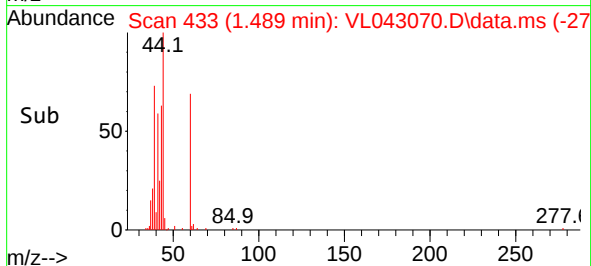
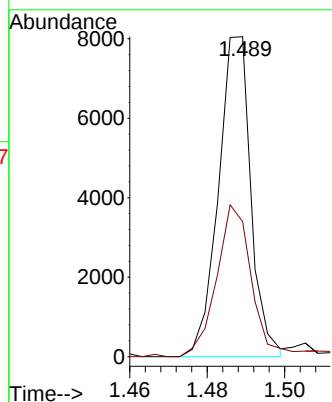
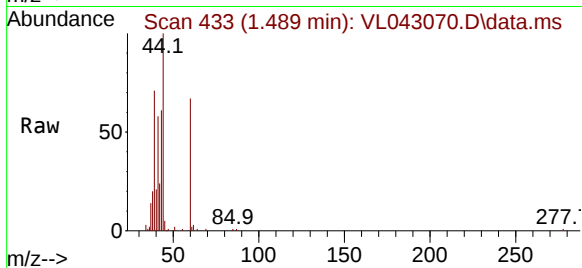
OA1

Tgt Ion: 41 Resp: 4700

Ion Ratio Lower Upper

41 100

42 53.5 53.3 79.9



#11

Trichlorofluoromethane

Concen: 0.226 ppbv

RT: 1.878 min Scan# 553

Delta R.T. 0.007 min

Lab File: VL043070.D

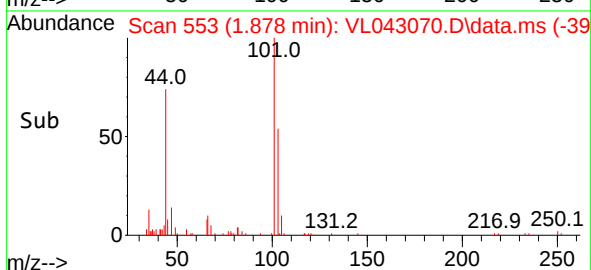
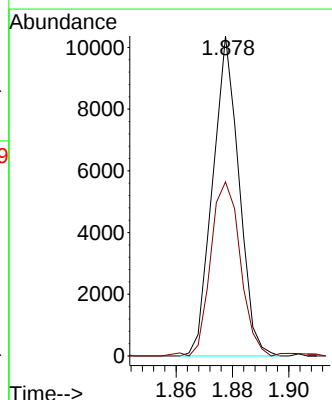
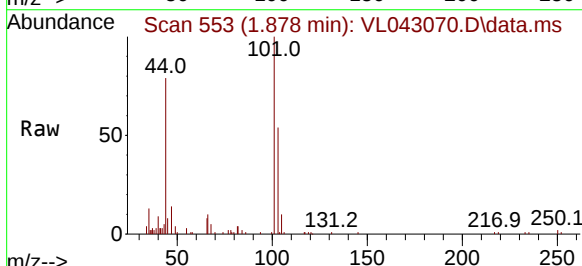
Acq: 08 Oct 2025 22:10

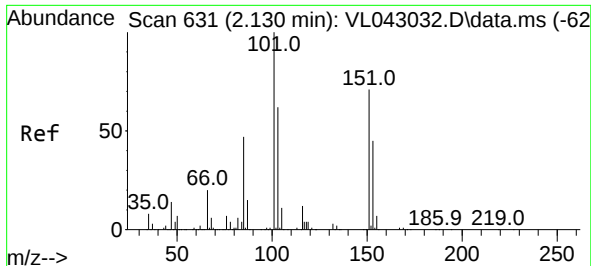
Tgt Ion: 101 Resp: 6729

Ion Ratio Lower Upper

101 100

103 53.6 51.1 76.7

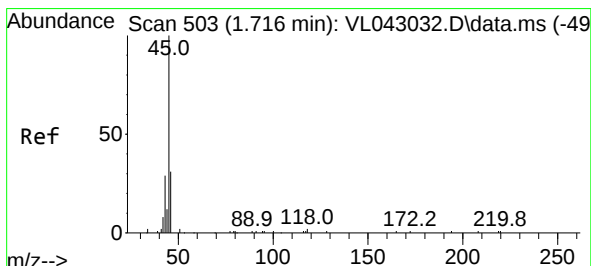
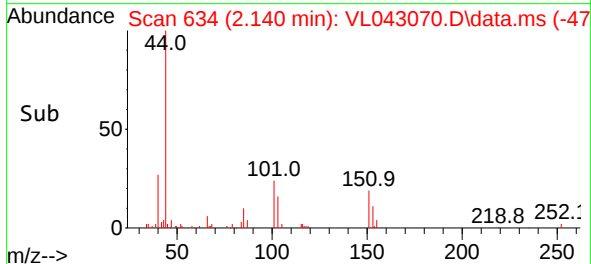
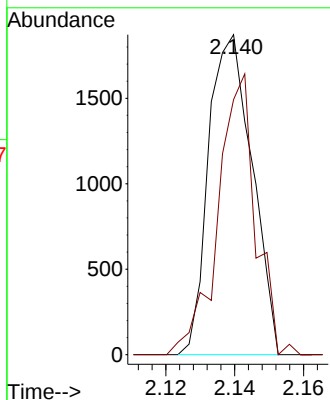
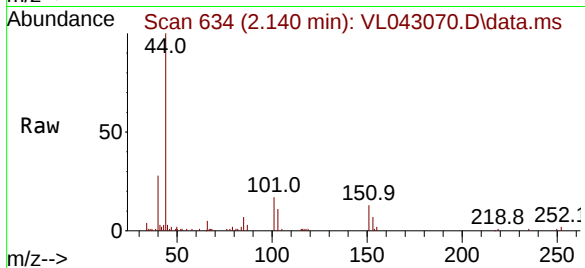




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.070 ppbv
RT: 2.140 min Scan# 61
Delta R.T. 0.010 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

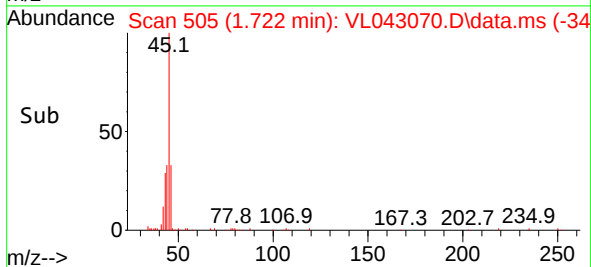
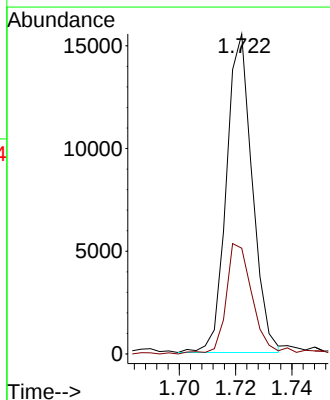
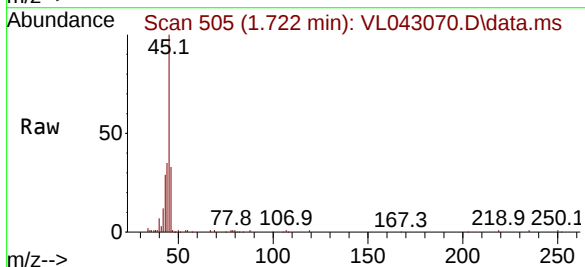
Instrument :
MSVOA_L
ClientSampleId :
OA1

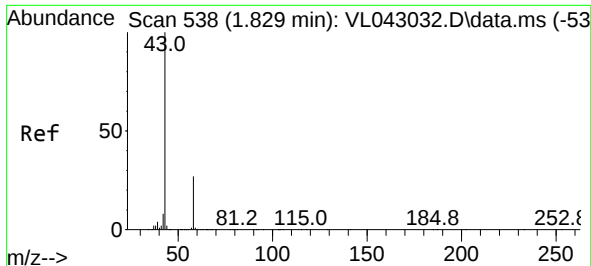
Tgt Ion:101 Resp: 1640
Ion Ratio Lower Upper
101 100
151 76.0 58.1 87.1



#13
Ethanol
Concen: 22.860 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.006 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 45 Resp: 9891
Ion Ratio Lower Upper
45 100
46 0.0 17.8 71.4#

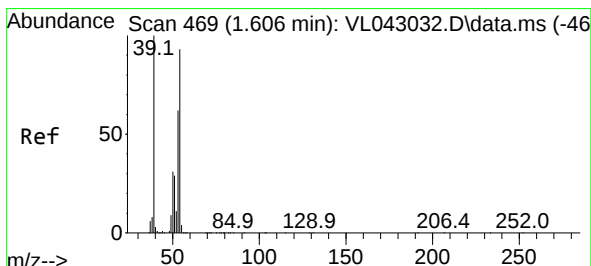
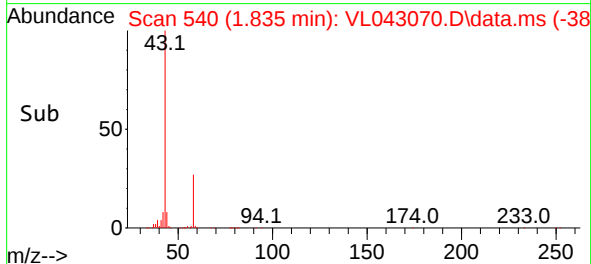
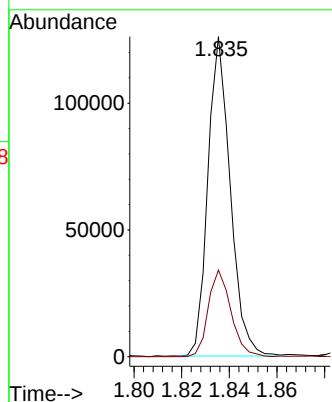
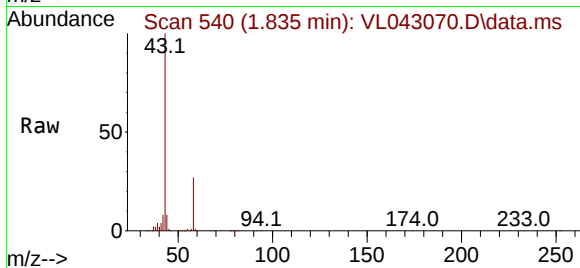




#15
Acetone
Concen: 3.417 ppbv
RT: 1.835 min Scan# 54
Delta R.T. 0.006 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

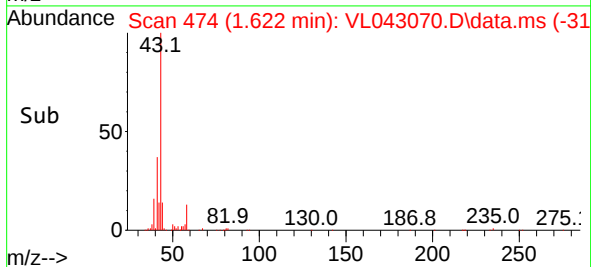
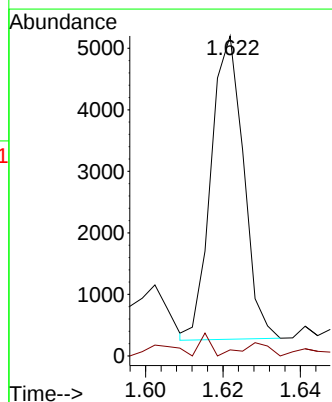
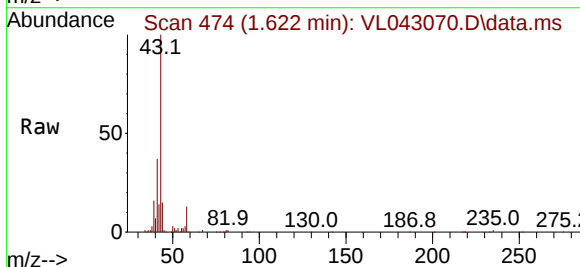
Instrument :
MSVOA_L
ClientSampleId :
OA1

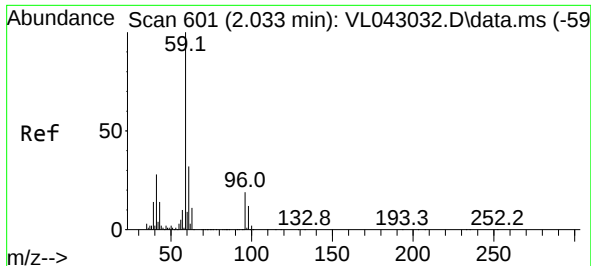
Tgt Ion: 43 Resp: 82318
Ion Ratio Lower Upper
43 100
58 27.7 22.2 33.4



#16
1,3-Butadiene
Concen: 0.289 ppbv
RT: 1.622 min Scan# 474
Delta R.T. 0.016 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 39 Resp: 2870
Ion Ratio Lower Upper
39 100
54 11.0 61.4 92.2#

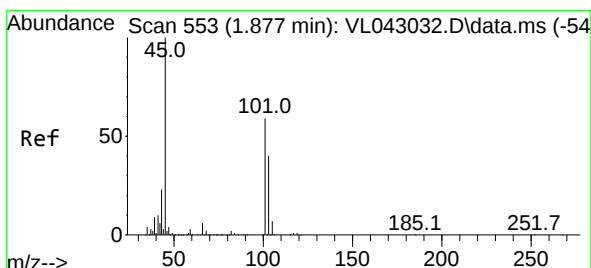
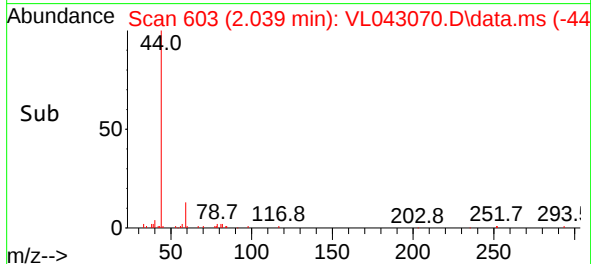
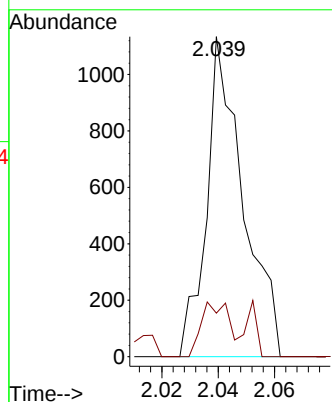
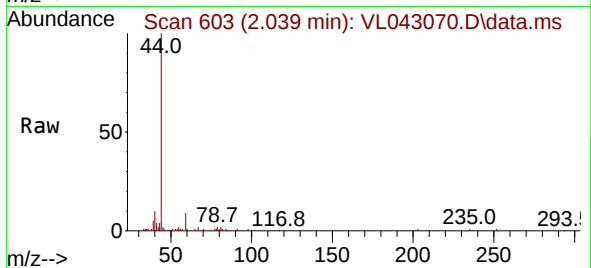




#17
tert-Butyl alcohol
Concen: 0.040 ppbv
RT: 2.039 min Scan# 601
Delta R.T. 0.006 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

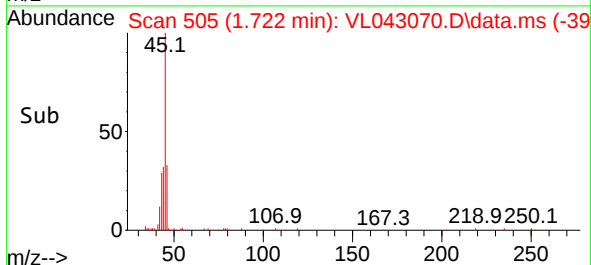
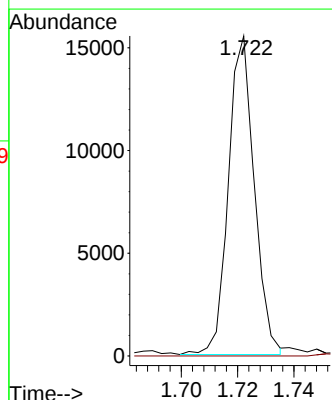
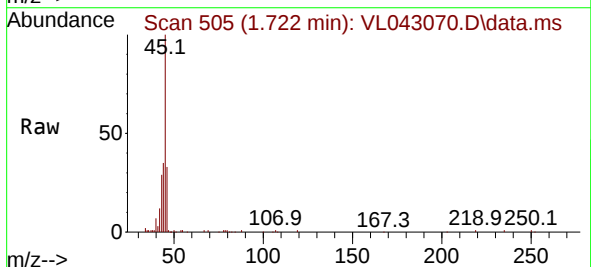
Instrument :
MSVOA_1
ClientSampleId :
OA1

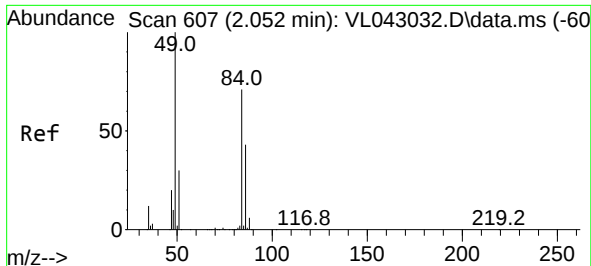
Tgt Ion: 59 Resp: 1018
Ion Ratio Lower Upper
59 100
57 23.4 8.5 12.7#



#19
Isopropyl Alcohol
Concen: 0.857 ppbv
RT: 1.722 min Scan# 505
Delta R.T. -0.155 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 45 Resp: 9891
Ion Ratio Lower Upper
45 100
58 23.3 42.3 63.5#



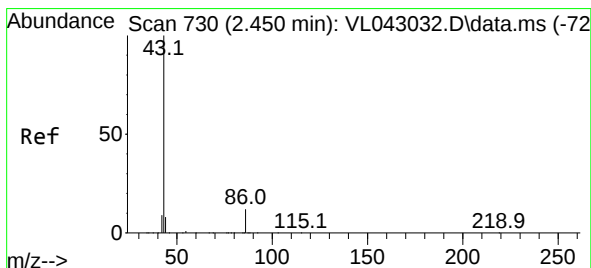
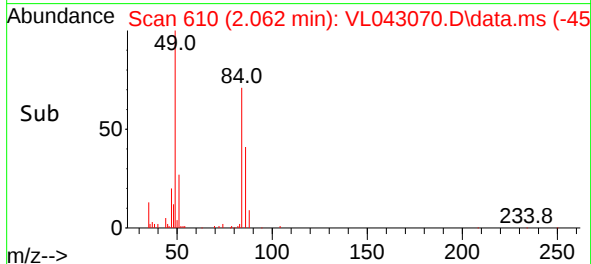
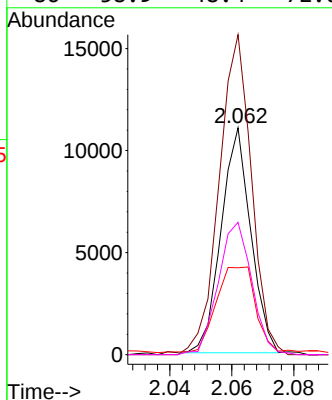
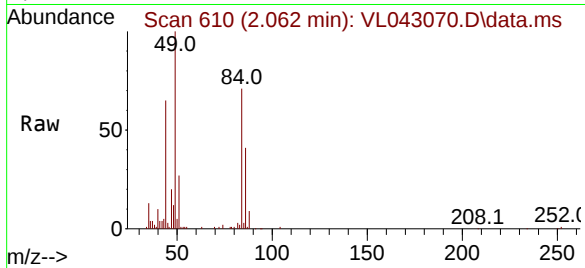


#20
Methylene Chloride
Concen: 0.698 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.010 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Instrument :
MSVOA_L
ClientSampleId :
OA1

Tgt Ion: 84 Resp: 7340

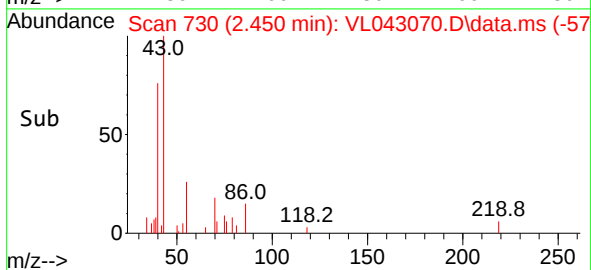
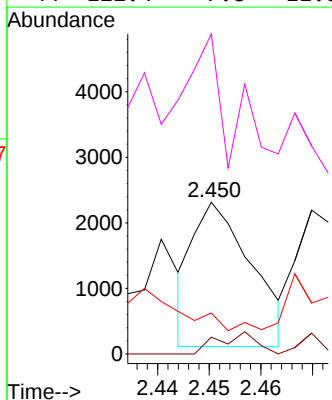
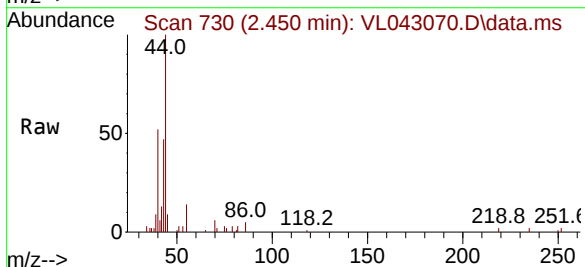
Ion	Ratio	Lower	Upper
84	100		
49	142.3	112.5	168.7
51	37.4	34.2	51.2
86	58.9	48.4	72.6

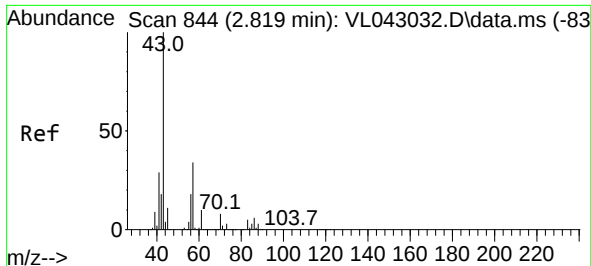


#23
Vinyl Acetate
Concen: 0.340 ppbv
RT: 2.450 min Scan# 730
Delta R.T. 0.000 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 43 Resp: 1738

Ion	Ratio	Lower	Upper
43	100		
86	17.1	7.5	11.3#
42	10.1	8.4	12.6
44	122.4	7.8	11.8#

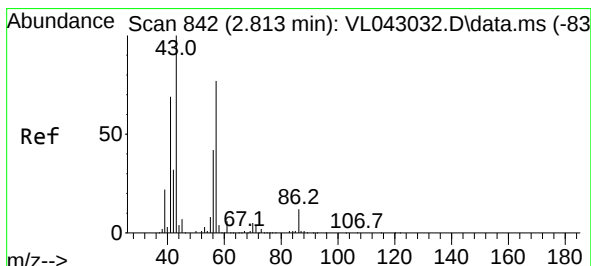
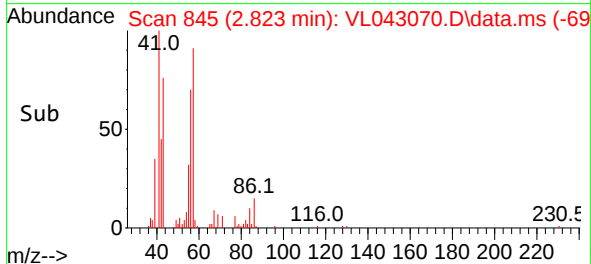
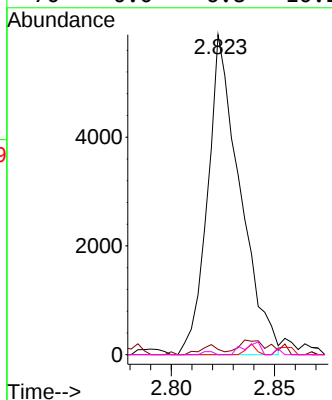
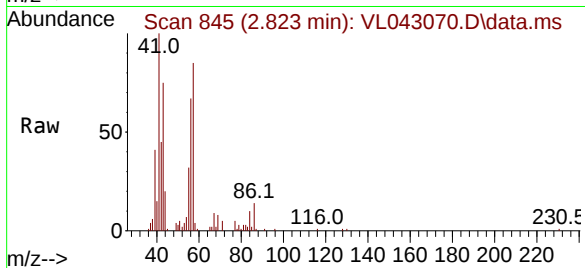




#25
Ethyl Acetate
Concen: 0.106 ppbv
RT: 2.823 min Scan# 845
Delta R.T. 0.003 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

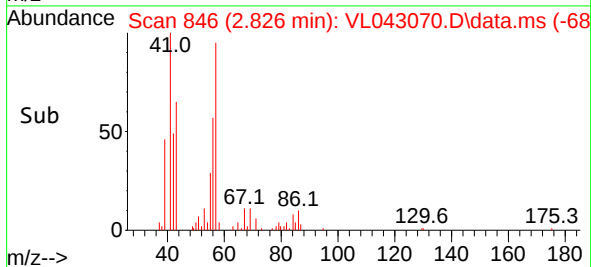
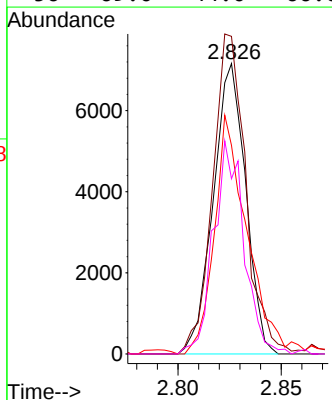
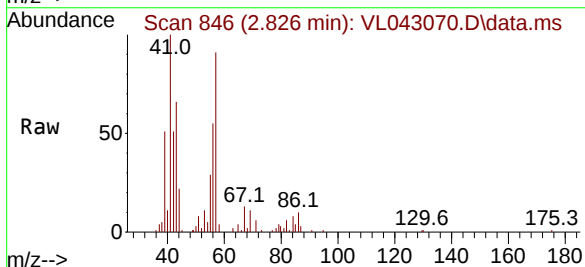
Instrument :
MSVOA_L
ClientSampleId :
OA1

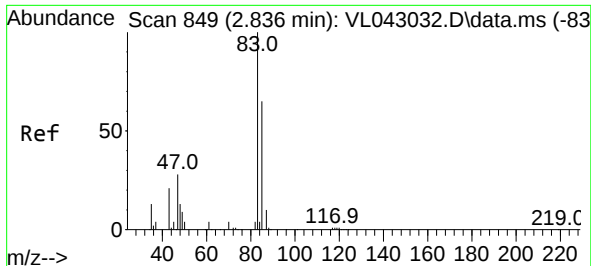
Tgt Ion: 43	Resp: 6396
Ion Ratio	Lower Upper
43 100	
45 0.0	8.3 12.5#
61 0.0	7.5 11.3#
70 0.0	6.8 10.2#



#26
Hexane
Concen: 0.337 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.013 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt	Ion: 57	Resp:	7831
Ion	Ratio	Lower	Upper
57	100		
41	114.0	76.1	114.1
43	85.6	201.4	302.0#
56	69.0	44.0	66.0#





#29

Chloroform

Concen: 0.039 ppbv

RT: 2.845 min Scan# 81

Delta R.T. 0.010 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

Instrument :

MSVOA_L

ClientSampleId :

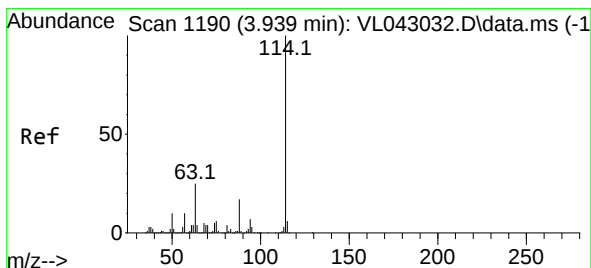
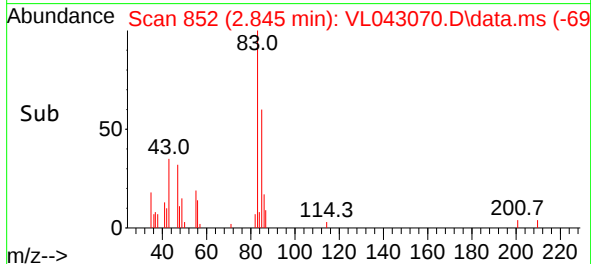
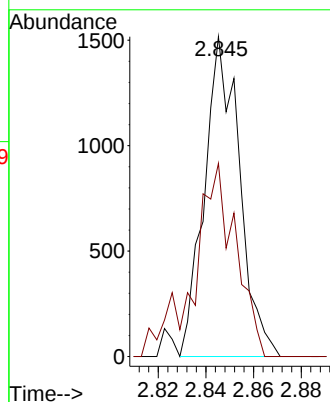
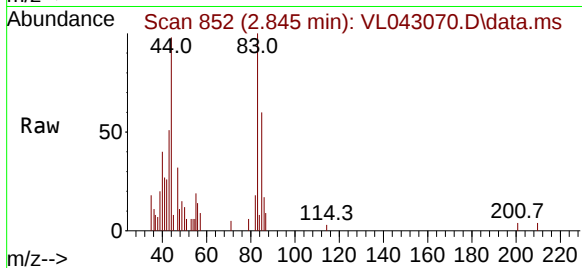
OA1

Tgt Ion: 83 Resp: 1551

Ion Ratio Lower Upper

83 100

85 60.4 52.0 78.0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. 0.016 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

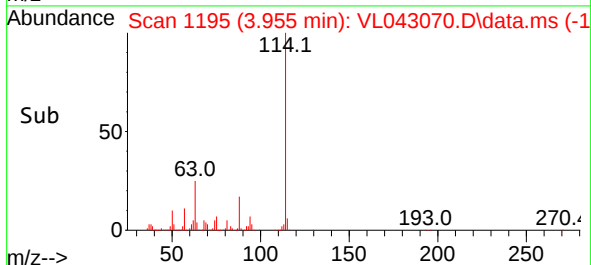
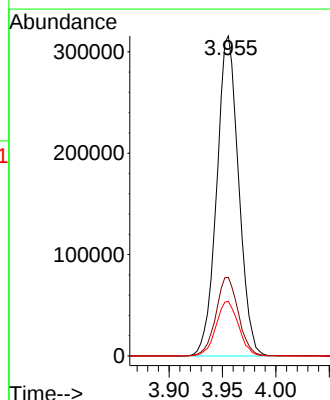
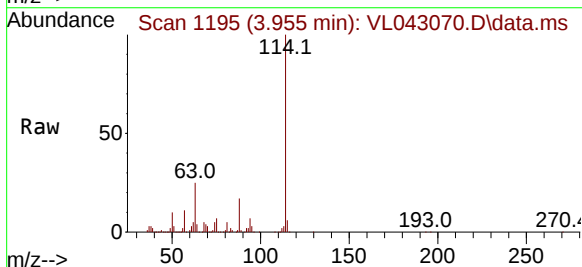
Tgt Ion:114 Resp: 450631

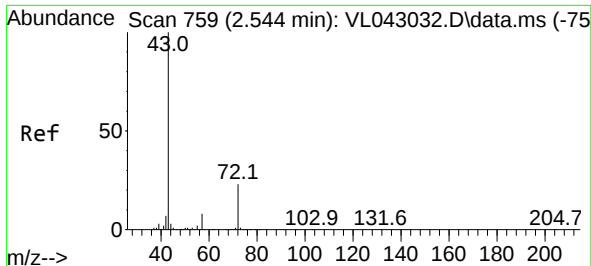
Ion Ratio Lower Upper

114 100

63 25.4 19.4 29.2

88 17.5 13.9 20.9

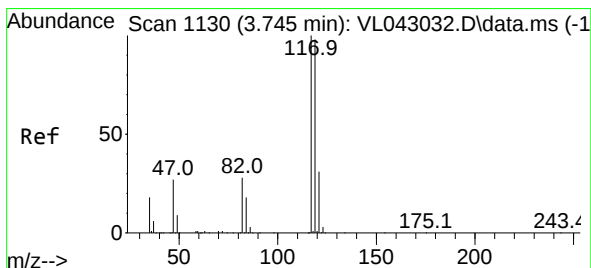
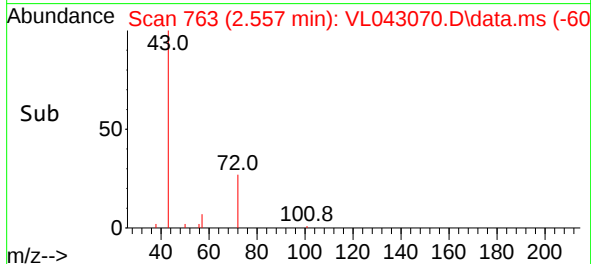
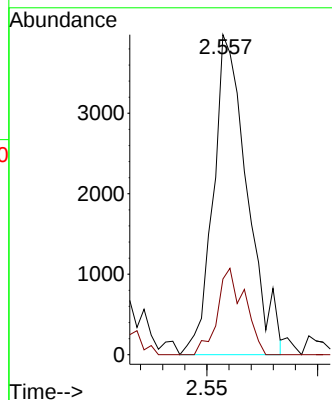
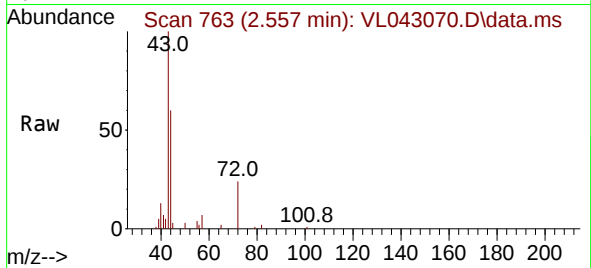




#34
2-Butanone
Concen: 0.139 ppbv
RT: 2.557 min Scan# 71
Delta R.T. 0.013 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

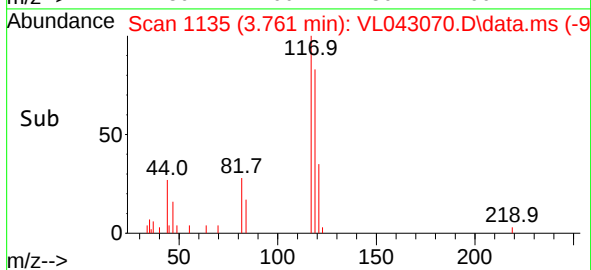
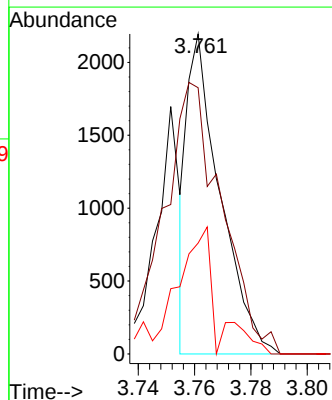
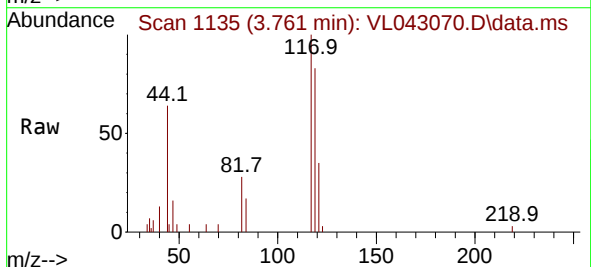
Instrument :
MSVOA_L
ClientSampleId :
OA1

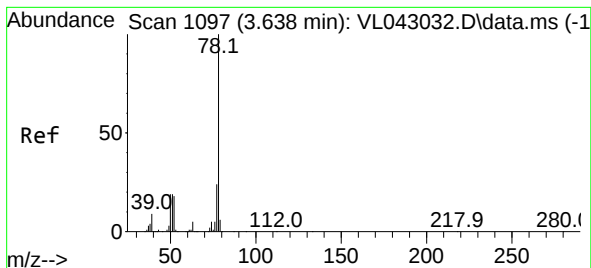
Tgt Ion: 43 Resp: 4241
Ion Ratio Lower Upper
43 100
72 21.8 18.4 27.6



#35
Carbon Tetrachloride
Concen: 0.048 ppbv
RT: 3.761 min Scan# 1135
Delta R.T. 0.016 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 117 Resp: 1785
Ion Ratio Lower Upper
117 100
119 83.2 78.2 117.4
121 34.6 24.8 37.2





#36

Benzene

Concen: 0.043 ppbv

RT: 3.654 min Scan# 1102

Delta R.T. 0.016 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

Instrument :

MSVOA_L

ClientSampleId :

OA1

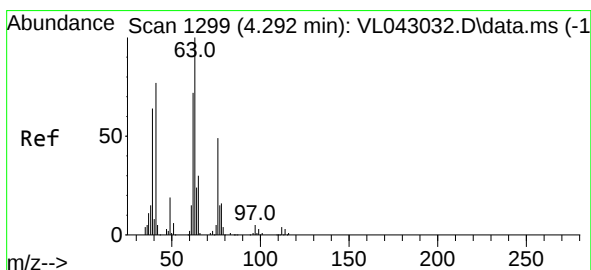
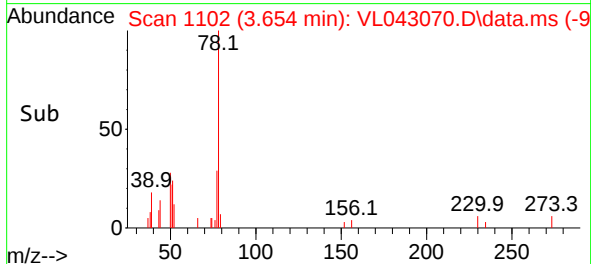
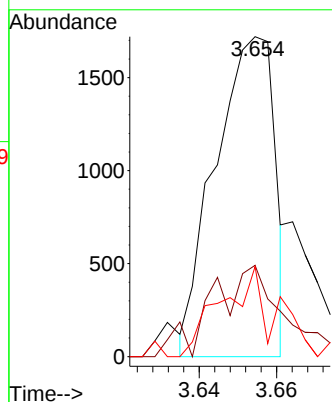
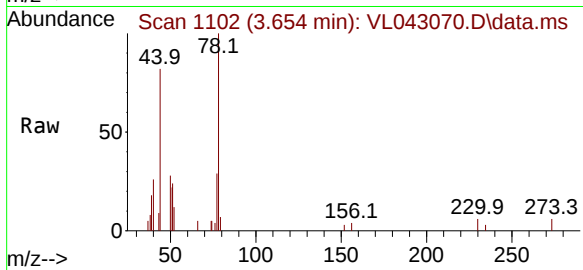
Tgt Ion: 78 Resp: 1843

Ion Ratio Lower Upper

78 100

77 19.1 19.2 28.8#

50 30.2 14.9 22.3#



#39

1,2-Dichloropropane

Concen: 7.123 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. -0.337 min

Lab File: VL043070.D

Acq: 08 Oct 2025 22:10

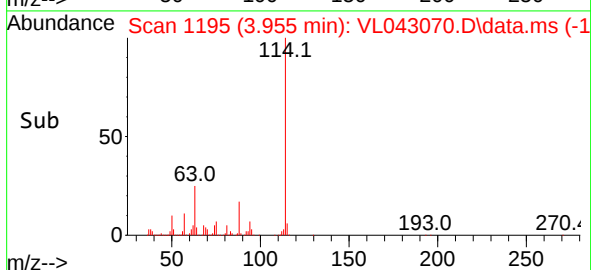
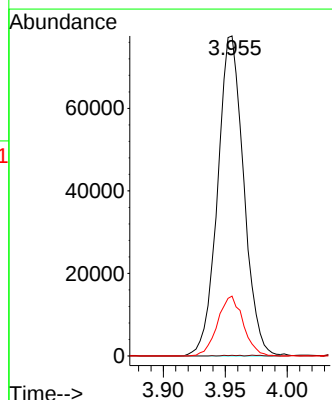
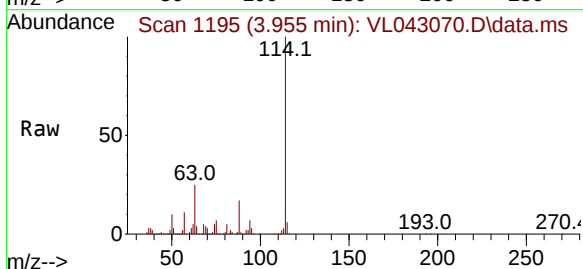
Tgt Ion: 63 Resp: 113676

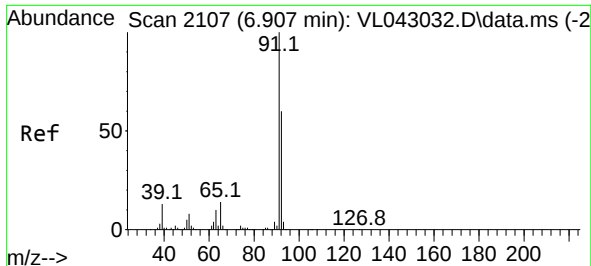
Ion Ratio Lower Upper

63 100

41 0.2 61.6 92.4#

62 18.7 58.1 87.1#

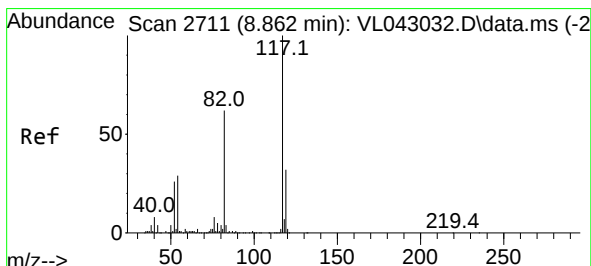
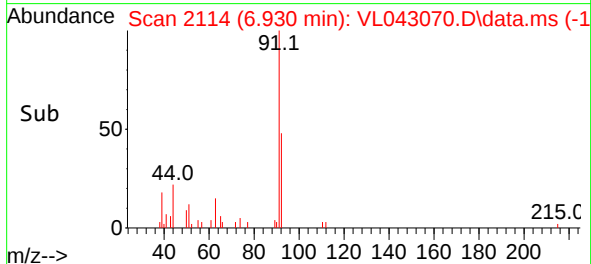
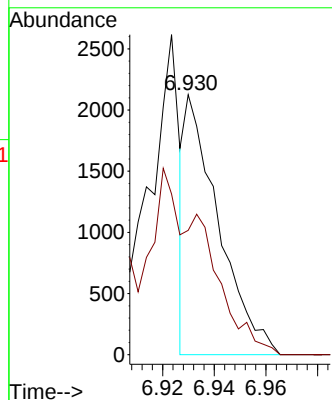
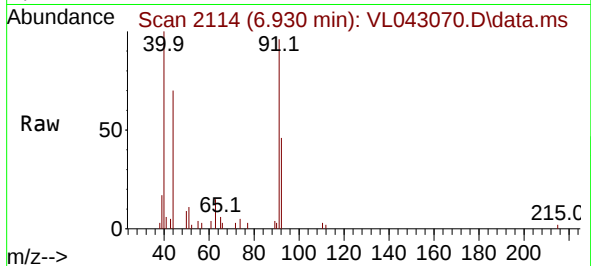




#53
Toluene
Concen: 0.044 ppbv
RT: 6.930 min Scan# 2107
Delta R.T. 0.023 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

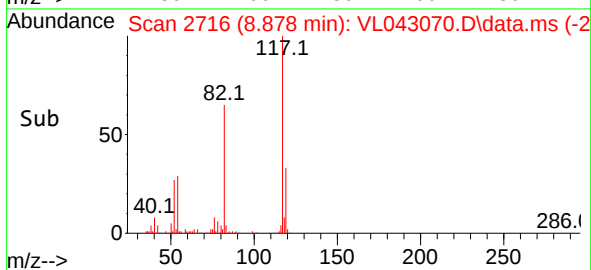
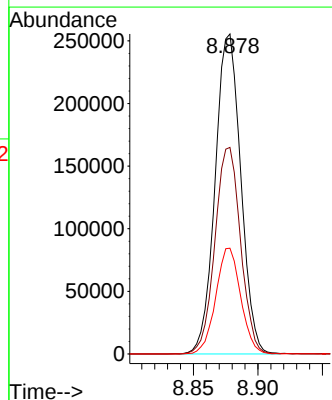
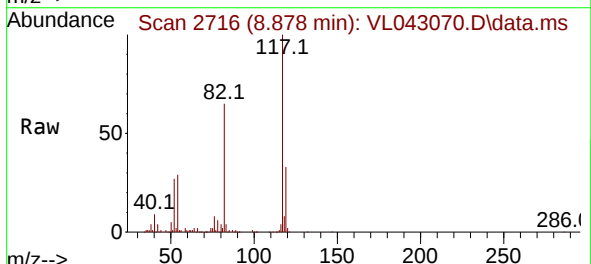
Instrument :
MSVOA_L
ClientSampleId :
OA1

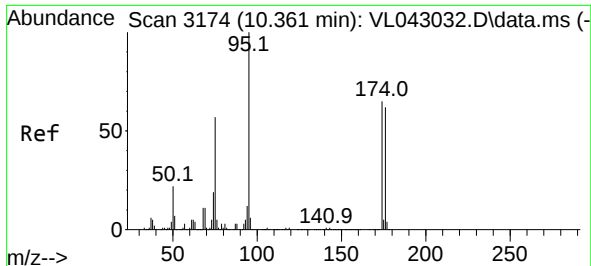
Tgt Ion: 91 Resp: 1916
Ion Ratio Lower Upper
91 100
92 0.0 47.8 71.6#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2716
Delta R.T. 0.016 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 117 Resp: 352768
Ion Ratio Lower Upper
117 100
82 64.7 53.0 79.6
119 32.3 25.4 38.2

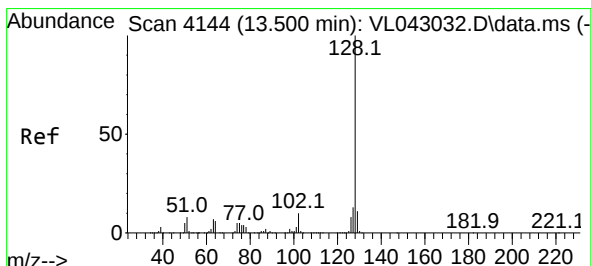
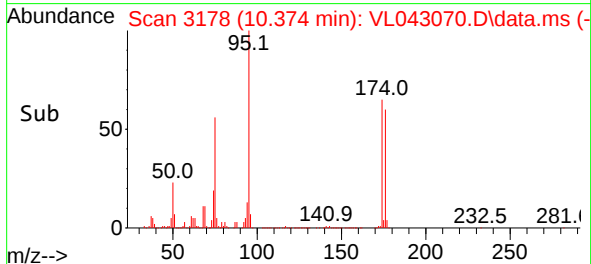
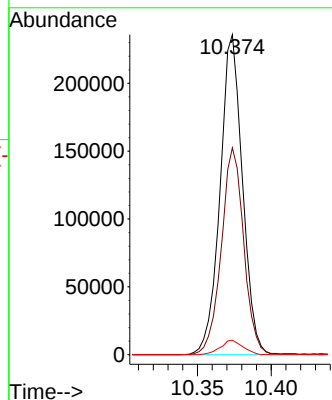
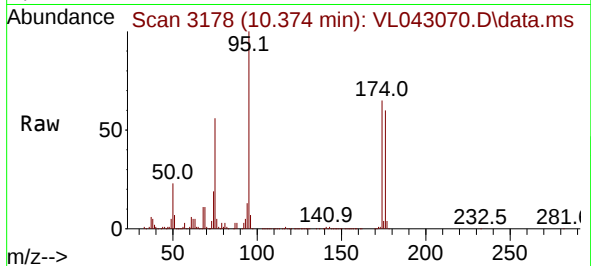




#68
1-Bromo-4-Fluorobenzene
Concen: 9.802 ppbv
RT: 10.374 min Scan# 3174
Delta R.T. 0.013 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

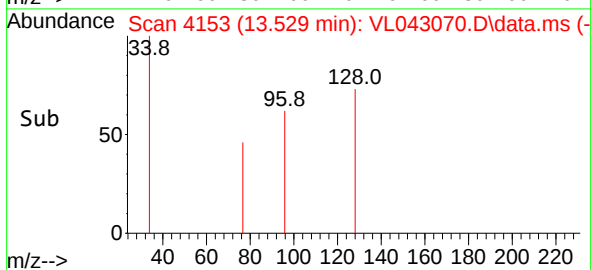
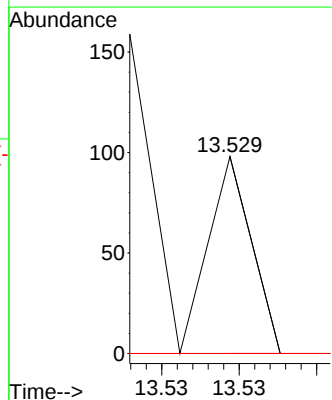
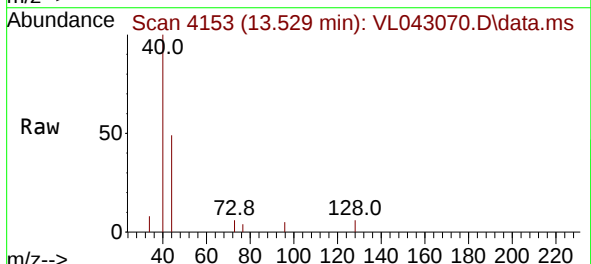
Instrument :
MSVOA_L
ClientSampleId :
OA1

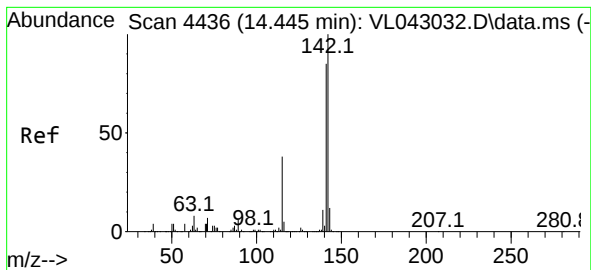
Tgt Ion: 95 Resp: 249094
Ion Ratio Lower Upper
95 100
174 65.0 52.3 78.5
175 4.5 3.8 5.8



#79
Naphthalene
Concen: 0.235 ppbv
RT: 13.529 min Scan# 4153
Delta R.T. 0.029 min
Lab File: VL043070.D
Acq: 08 Oct 2025 22:10

Tgt Ion: 128 Resp: 19
Ion Ratio Lower Upper
128 100
127 0.0 10.6 16.0#
129 0.0 8.8 13.2#





#80

Naphthalene, 2-methyl-

Concen: 0.674 ppbv

RT: 14.465 min Scan# 44

Delta R.T. 0.020 min

Lab File: VL043070.D

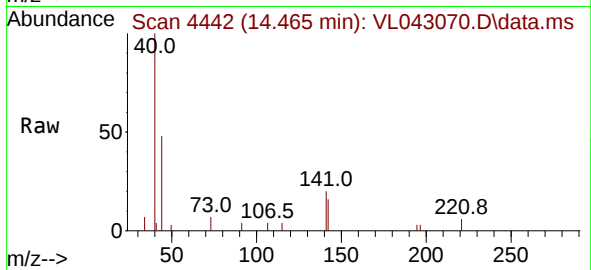
Acq: 08 Oct 2025 22:10

Instrument :

MSVOA_L

ClientSampleId :

OA1



Tgt Ion:142 Resp: 278

Ion Ratio Lower Upper

142 100

141 116.5 66.6 100.0#

115 55.0 30.1 45.1#

