

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092425\
 Data File : VL043008.D
 Acq On : 24 Sep 2025 14:06
 Operator : SY/MD
 Sample : Q3154-02DUP 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2DUP

Quant Time: Sep 25 01:55:55 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Tue Sep 23 02:39:16 2025
 Response via : Initial Calibration

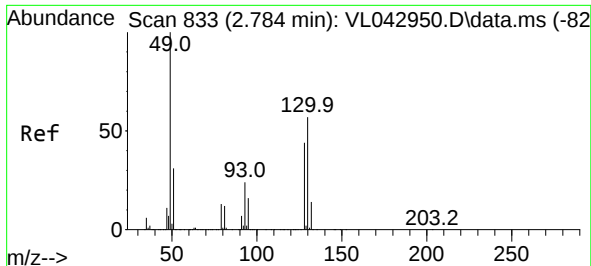
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	156171	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	479208	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	432263	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	328265	10.173	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 101.700%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	5597	0.266	ppbv #	82
3) Chlorodifluoromethane	1.476	51	3358m	0.128	ppbv	
4) Chloromethane	1.531	50	2082	0.219	ppbv #	86
9) Propene	1.489	41	287399m	25.235	ppbv	
10) Heptane	4.985	43	34182	1.125	ppbv	99
11) Trichlorofluoromethane	1.877	101	6964	0.344	ppbv	87
13) Ethanol	1.722	45	51563	46.670	ppbv	95
15) Acetone	1.835	43	209894m	10.319	ppbv	
19) Isopropyl Alcohol	1.887	45	43490	3.557	ppbv #	1
20) Methylene Chloride	2.062	84	5872	0.320	ppbv	89
22) trans-1,2-Dichloroethene	2.340	96	1004	0.116	ppbv	90
26) Hexane	2.829	57	85879	3.665	ppbv #	43
27) Carbon Disulfide	2.152	76	43414	2.066	ppbv #	1
30) Cyclohexane	3.861	84	94323	4.814	ppbv	98
32) 1,1,1-Trichloroethane	3.369	97	8650	0.261	ppbv	98
34) 2-Butanone	2.560	43	43876	1.306	ppbv	98
35) Carbon Tetrachloride	3.764	117	1159m	0.037	ppbv	
36) Benzene	3.661	78	56690	1.260	ppbv	98
38) Trichloroethene	4.551	130	17145	0.767	ppbv	97
41) Tetrahydrofuran	3.065	42	12642	0.655	ppbv	99
44) 2,2,4-Trimethylpentane	4.641	57	46849	0.603	ppbv #	43
52) Tetrachloroethene	8.228	164	14452	0.830	ppbv	87
53) Toluene	6.936	91	100347	1.884	ppbv	100
58) Ethyl Benzene	9.357	91	25737	0.363	ppbv	99
59) m/p-Xylene	9.535	91	58092	1.038	ppbv #	100
60) o-Xylene	9.966	91	35078	0.627	ppbv	93
61) Styrene	9.875	104	100933	3.815	ppbv	98
73) 1,3,5-Trimethylbenzene	11.202	105	8960	0.158	ppbv	99
74) 1,2,4-Trimethylbenzene	11.539	105	25760	0.411	ppbv #	64
79) Naphthalene	13.513	128	11623	0.210	ppbv #	93

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

Quant Time: Sep 25 01:55:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Tue Sep 23 02:39:16 2025
Response via : Initial Calibration

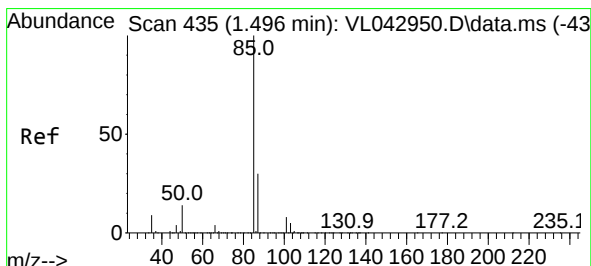
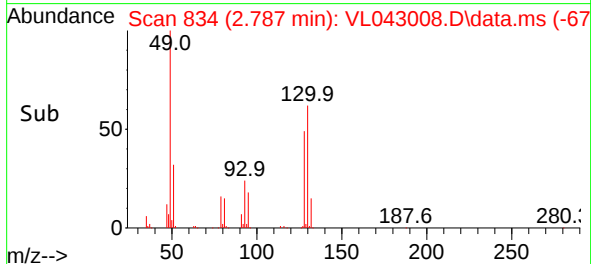
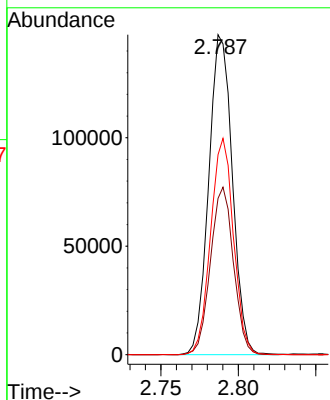
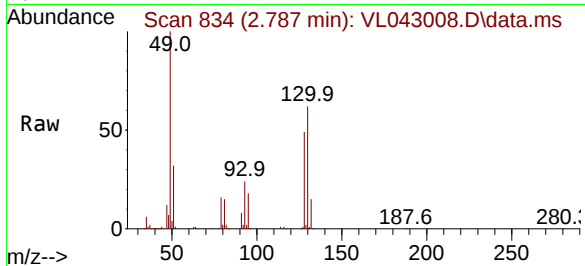




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

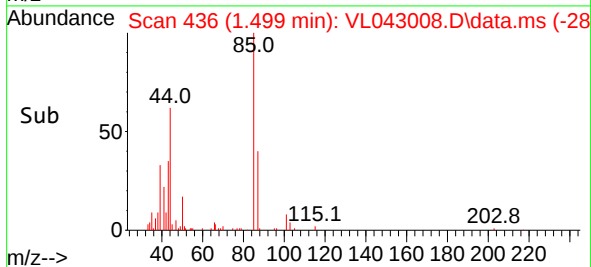
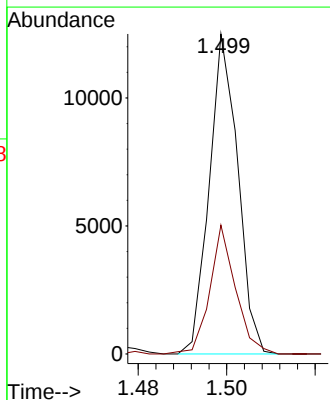
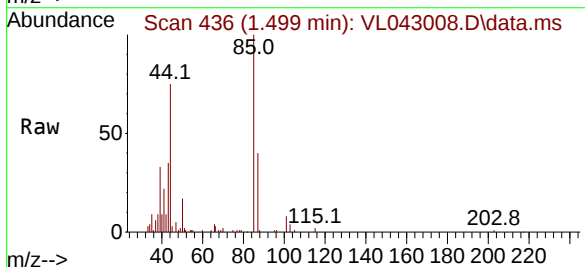
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

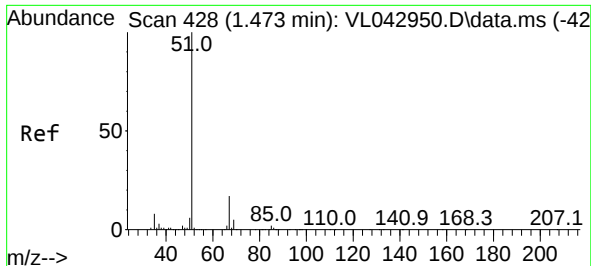
Tgt Ion: 49 Resp: 156171
Ion Ratio Lower Upper
49 100
128 51.0 22.9 68.8
130 65.6 29.1 87.3



#2
Dichlorodifluoromethane
Concen: 0.266 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 85 Resp: 5597
Ion Ratio Lower Upper
85 100
87 40.3 24.3 36.5#

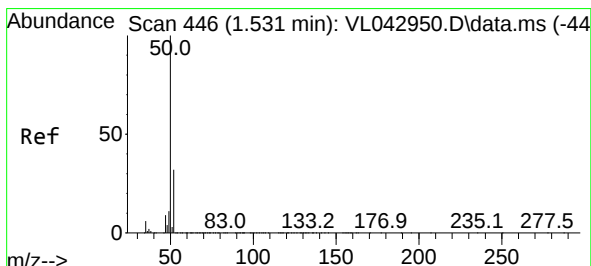
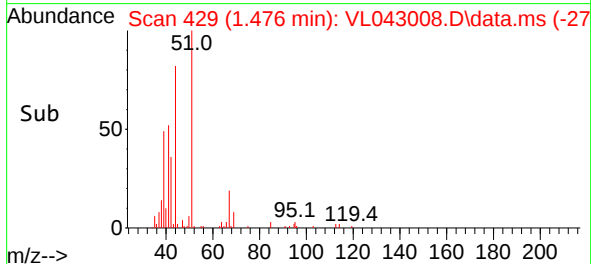
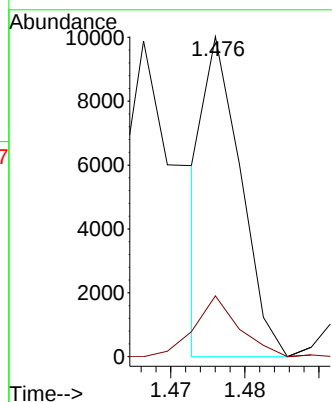
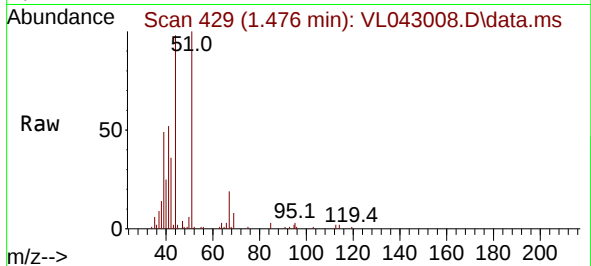




#3
Chlorodifluoromethane
Concen: 0.128 ppbv m
RT: 1.476 min Scan# 428
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

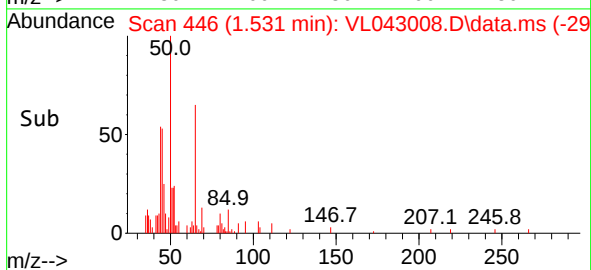
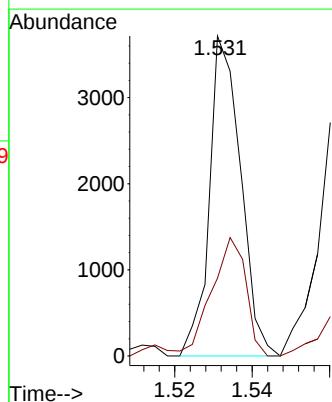
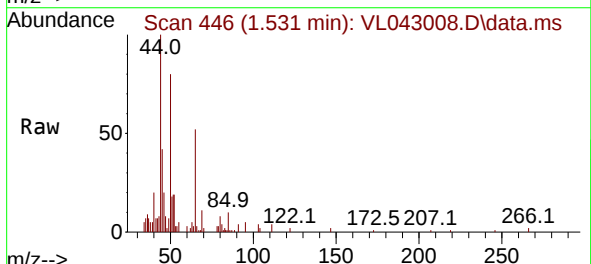
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

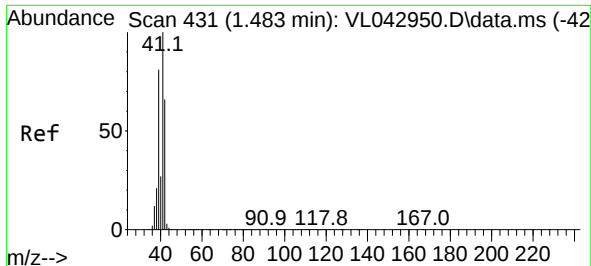
Tgt Ion: 51 Resp: 3358
Ion Ratio Lower Upper
51 100
67 8.2 13.8 20.8#



#4
Chloromethane
Concen: 0.219 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 50 Resp: 2082
Ion Ratio Lower Upper
50 100
52 24.3 25.9 38.9#





#9

Propene

Concen: 25.235 ppbv m

RT: 1.489 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

Instrument :

MSVOA_L

ClientSampleId :

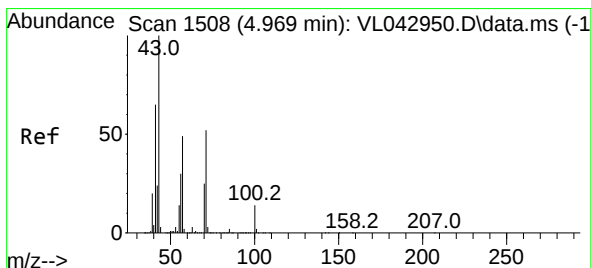
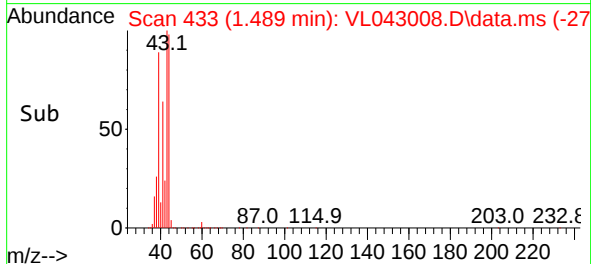
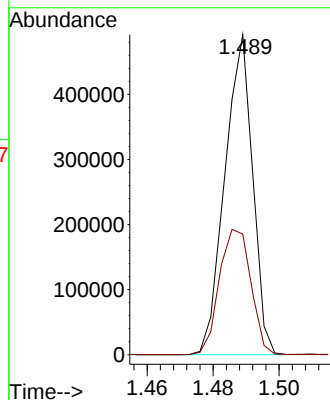
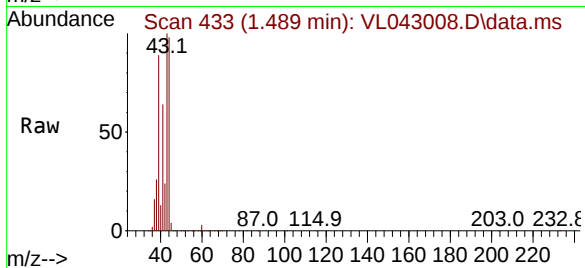
SV2DUP

Tgt Ion: 41 Resp: 287399

Ion Ratio Lower Upper

41 100

42 13.3 57.4 86.2#



#10

Heptane

Concen: 1.125 ppbv

RT: 4.985 min Scan# 1513

Delta R.T. 0.016 min

Lab File: VL043008.D

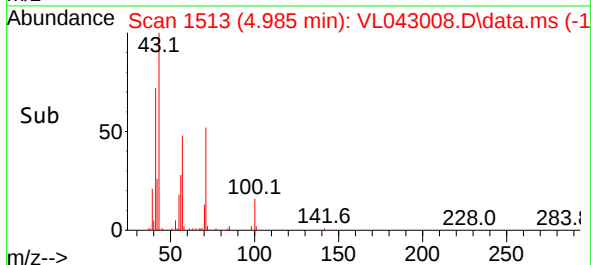
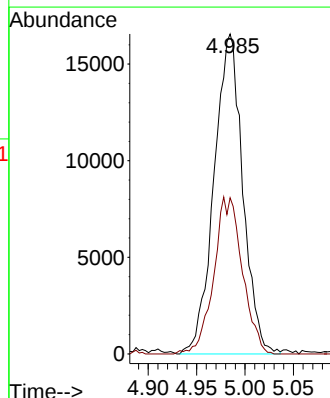
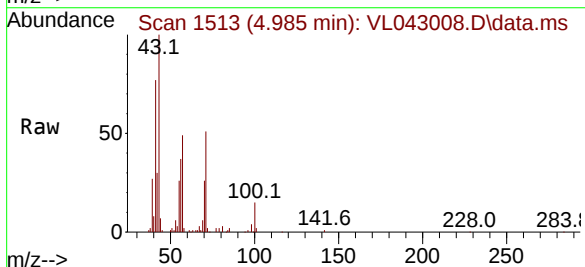
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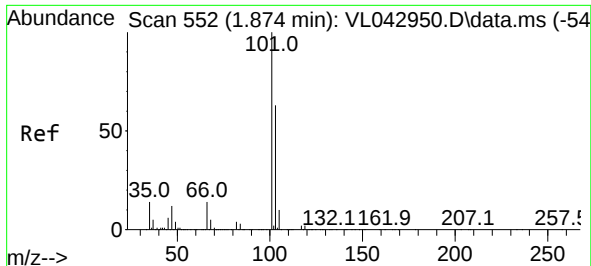
Tgt Ion: 43 Resp: 34182

Ion Ratio Lower Upper

43 100

57 48.9 38.6 57.8

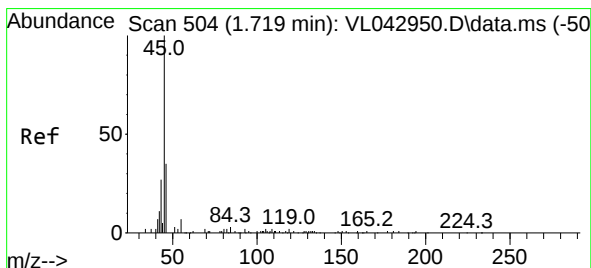
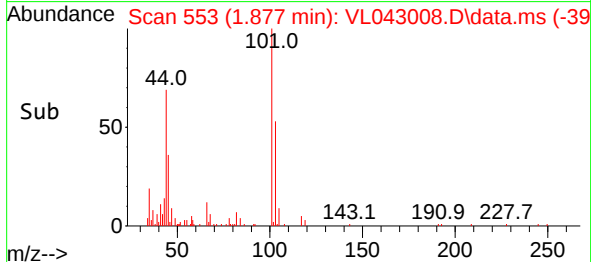
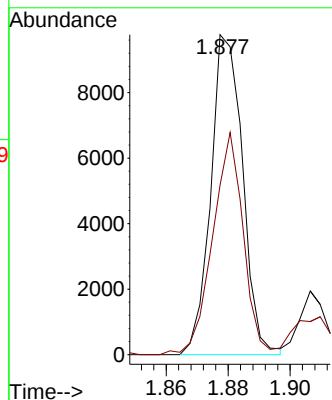
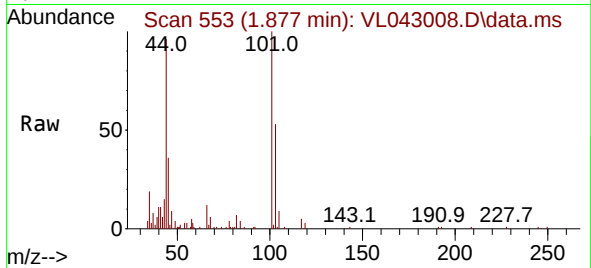




#11
 Trichlorofluoromethane
 Concen: 0.344 ppbv
 RT: 1.877 min Scan# 51
 Delta R.T. 0.003 min
 Lab File: VL043008.D
 Acq: 24 Sep 2025 14:06

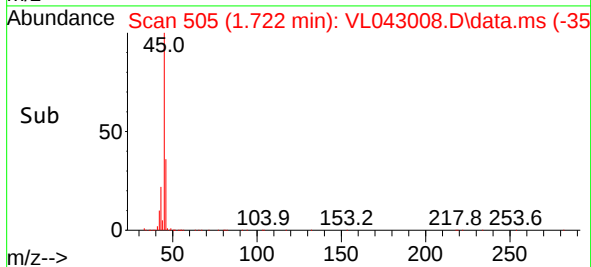
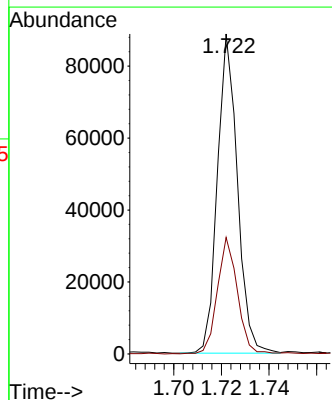
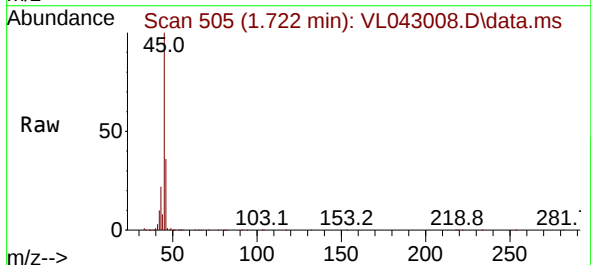
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2DUP

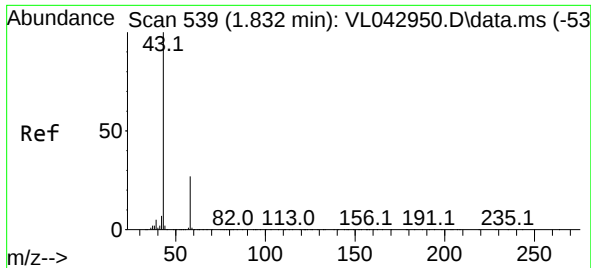
Tgt Ion:101 Resp: 6964
 Ion Ratio Lower Upper
 101 100
 103 52.2 50.1 75.1



#13
 Ethanol
 Concen: 46.670 ppbv
 RT: 1.722 min Scan# 505
 Delta R.T. 0.003 min
 Lab File: VL043008.D
 Acq: 24 Sep 2025 14:06

Tgt Ion: 45 Resp: 51563
 Ion Ratio Lower Upper
 45 100
 46 37.4 16.2 64.6





#15

Acetone

Concen: 10.319 ppbv

RT: 1.835 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

Instrument :

MSVOA_L

ClientSampleId :

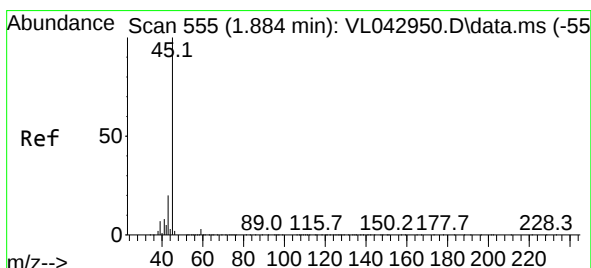
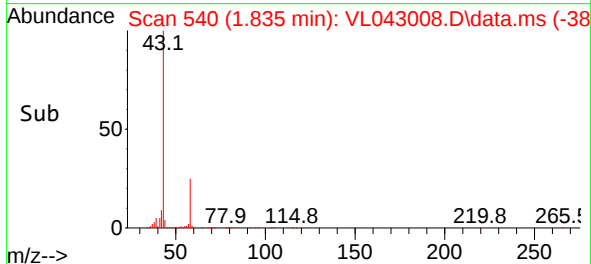
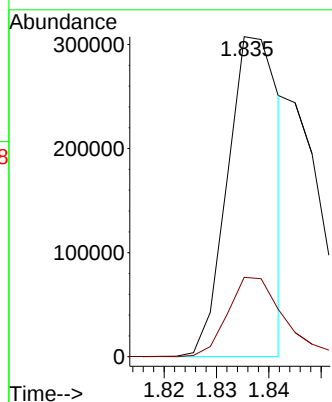
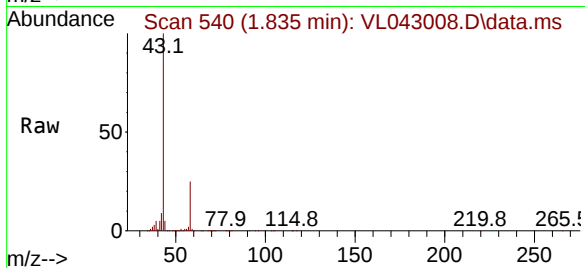
SV2DUP

Tgt Ion: 43 Resp: 209894

Ion Ratio Lower Upper

43 100

58 27.2 22.3 33.5



#19

Isopropyl Alcohol

Concen: 3.557 ppbv

RT: 1.887 min Scan# 556

Delta R.T. 0.003 min

Lab File: VL043008.D

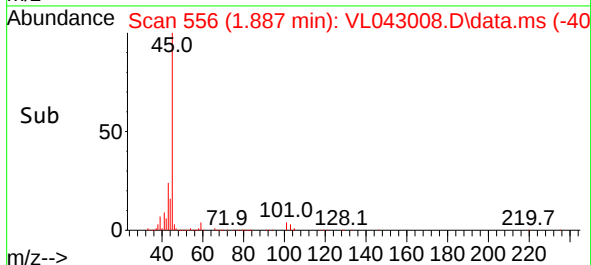
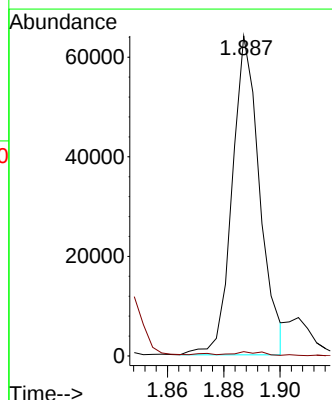
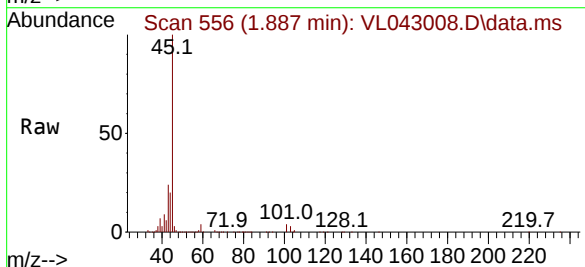
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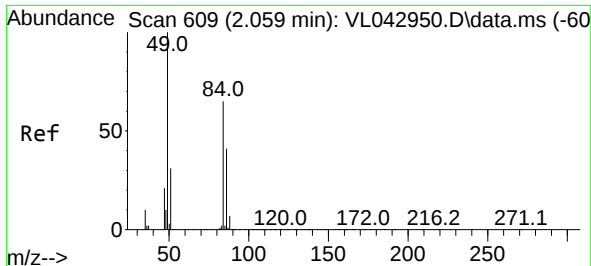
Tgt Ion: 45 Resp: 43490

Ion Ratio Lower Upper

45 100

58 133.5 31.0 46.6#

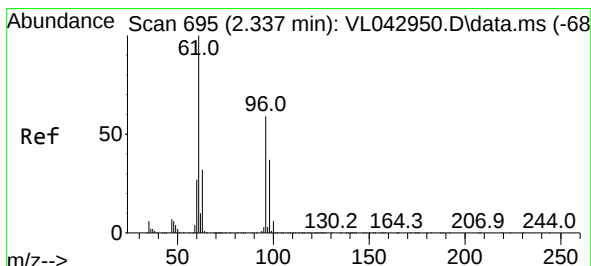
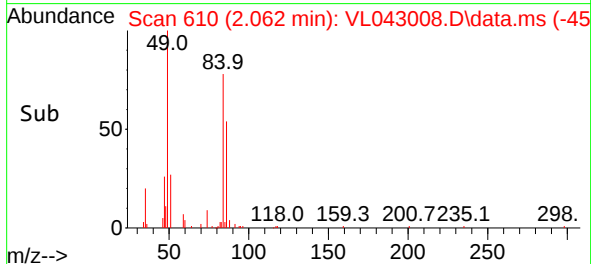
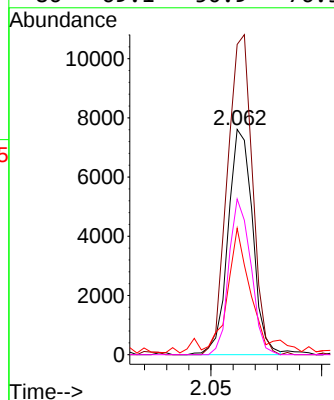
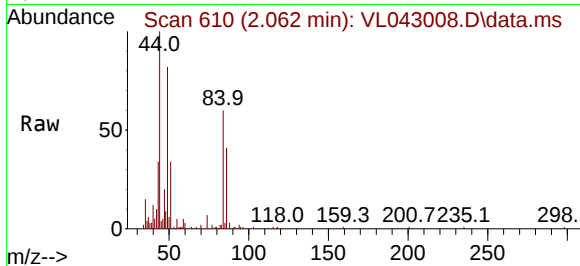




#20
Methylene Chloride
Concen: 0.320 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

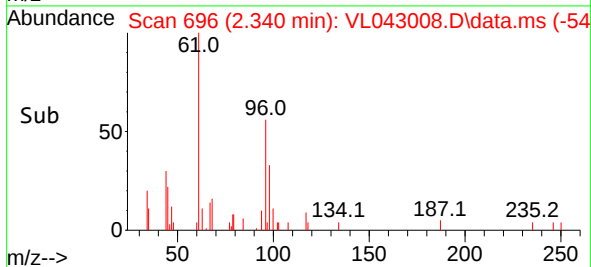
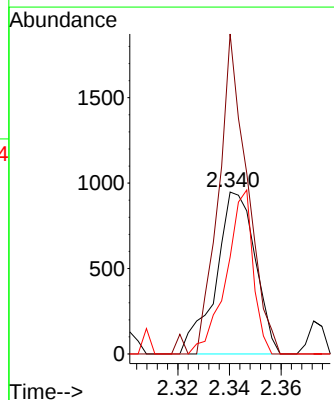
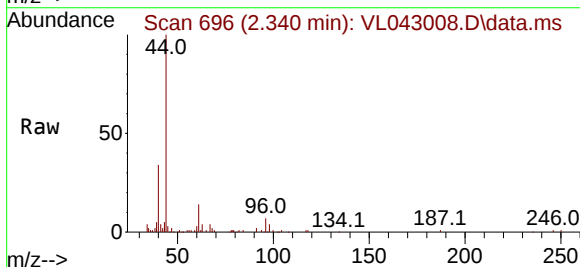
Instrument :
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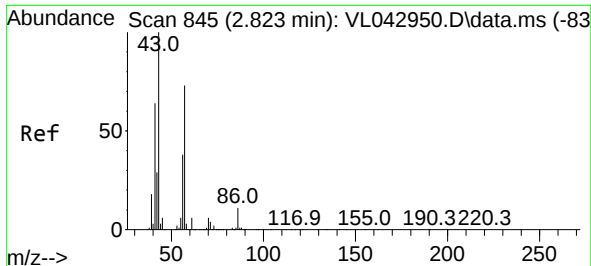
Tgt Ion:	84	Resp:	5872
Ion	Ratio	Lower	Upper
84	100		
49	137.8	124.1	186.1
51	55.3	39.8	59.8
86	69.1	50.9	76.3



#22
trans-1,2-Dichloroethene
Concen: 0.116 ppbv
RT: 2.340 min Scan# 696
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion:	96	Resp:	1004
Ion	Ratio	Lower	Upper
96	100		
61	185.4	136.5	204.7
98	56.1	50.6	76.0

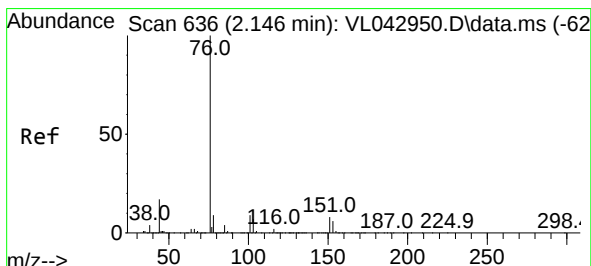
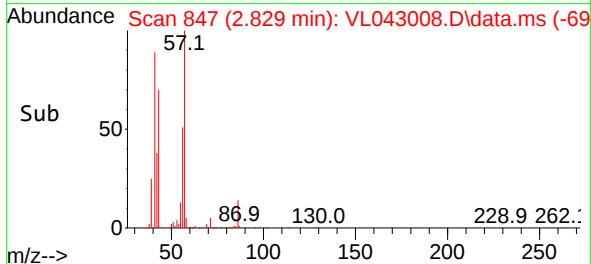
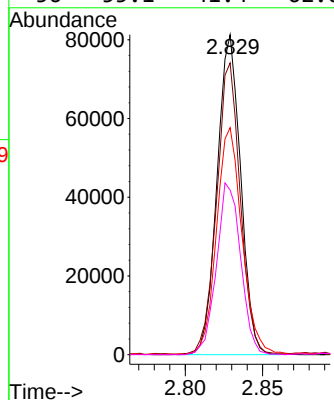
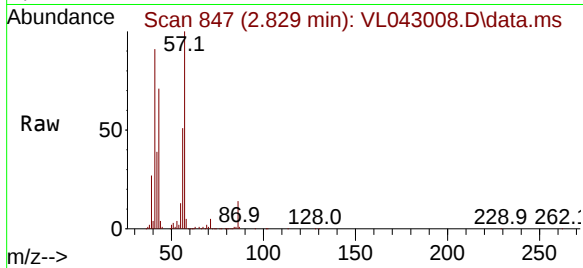




#26
Hexane
Concen: 3.665 ppbv
RT: 2.829 min Scan# 845
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

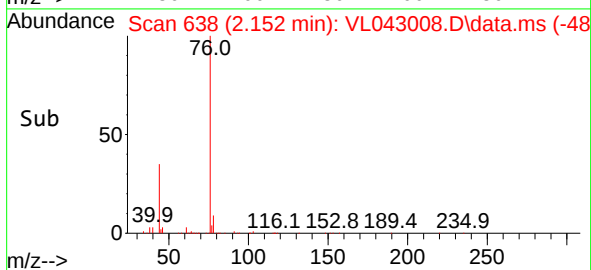
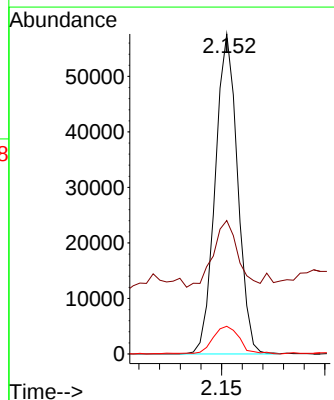
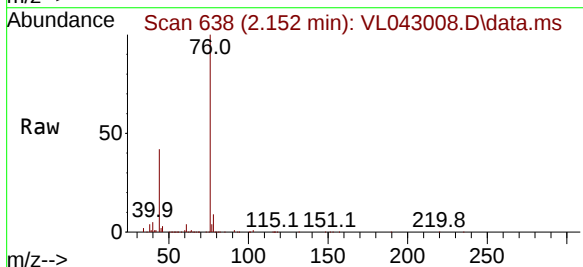
Instrument :
MSVOA_L
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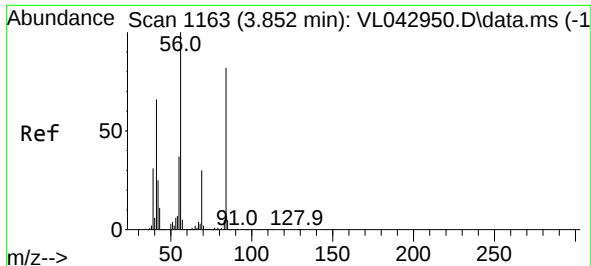
Tgt Ion:	57	Resp:	85879
Ion	Ratio	Lower	Upper
57	100		
41	91.3	71.7	107.5
43	76.5	180.8	271.2#
56	55.1	41.4	62.0



#27
Carbon Disulfide
Concen: 2.066 ppbv
RT: 2.152 min Scan# 638
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion:	76	Resp:	43414
Ion	Ratio	Lower	Upper
76	100		
44	161.5	15.6	23.4#
78	10.8	8.9	13.3

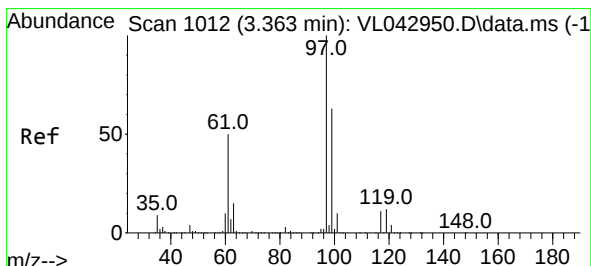
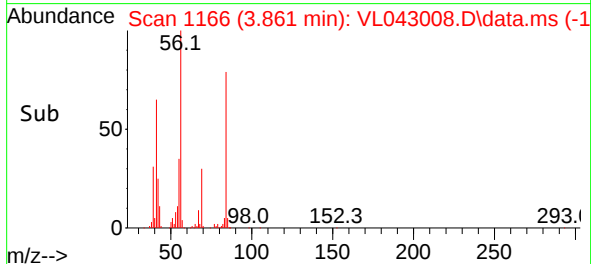
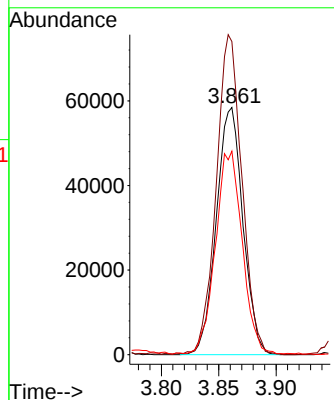
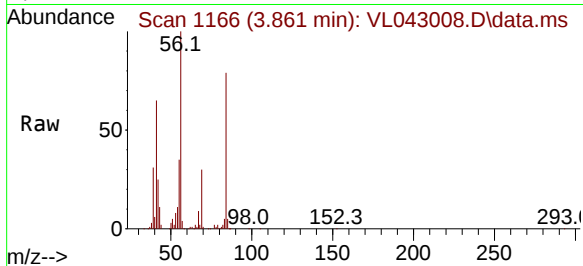




#30
Cyclohexane
Concen: 4.814 ppbv
RT: 3.861 min Scan# 1166
Delta R.T. 0.009 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

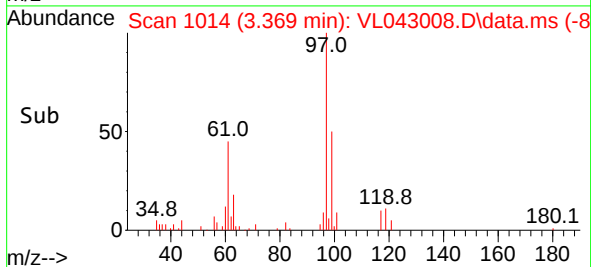
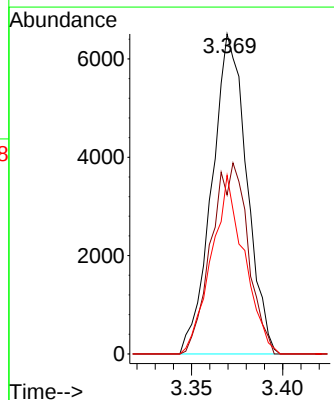
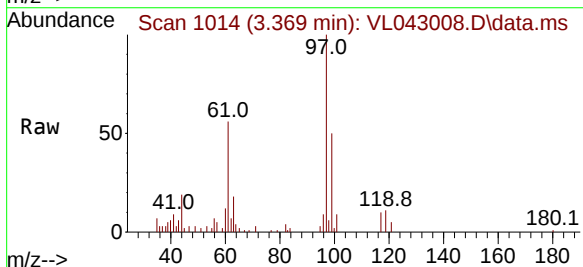
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

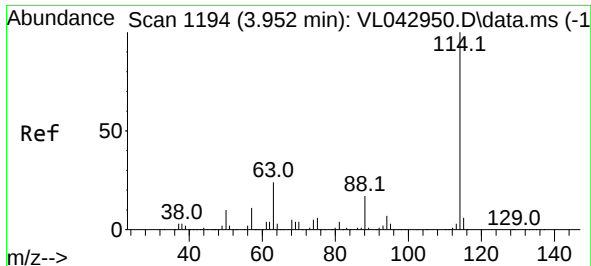
Tgt Ion: 84 Resp: 94323
Ion Ratio Lower Upper
84 100
56 125.3 102.2 153.4
41 83.3 65.6 98.4



#32
1,1,1-Trichloroethane
Concen: 0.261 ppbv
RT: 3.369 min Scan# 1014
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 97 Resp: 8650
Ion Ratio Lower Upper
97 100
99 63.2 51.1 76.7
61 52.7 39.8 59.6





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. 0.010 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

Instrument :

MSVOA_L

ClientSampleId :

SV2DUP

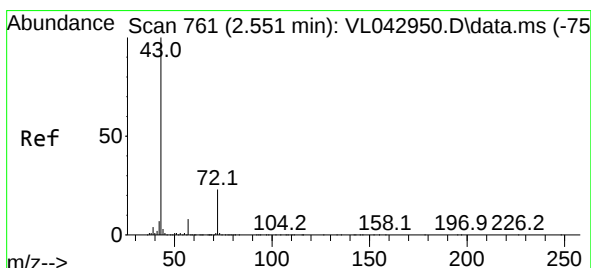
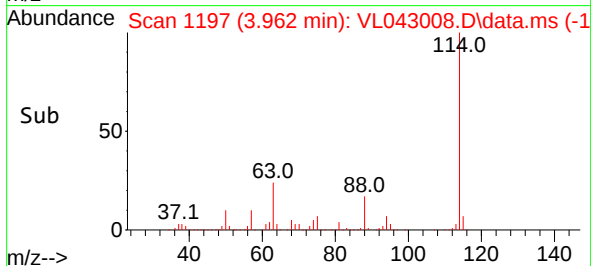
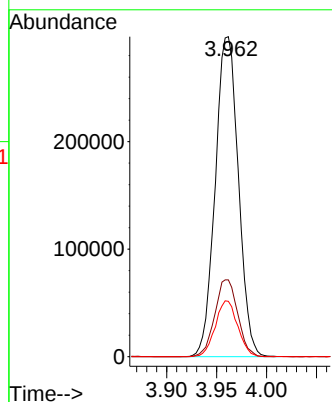
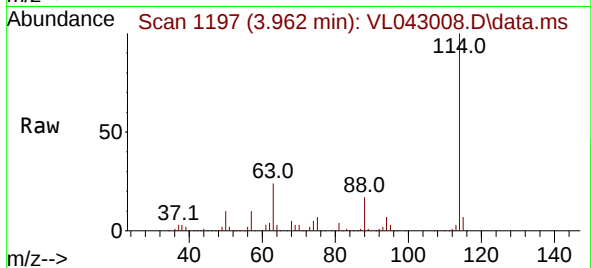
Tgt Ion:114 Resp: 479208

Ion Ratio Lower Upper

114 100

63 23.9 19.4 29.2

88 16.9 14.2 21.2



#34

2-Butanone

Concen: 1.306 ppbv

RT: 2.560 min Scan# 764

Delta R.T. 0.009 min

Lab File: VL043008.D

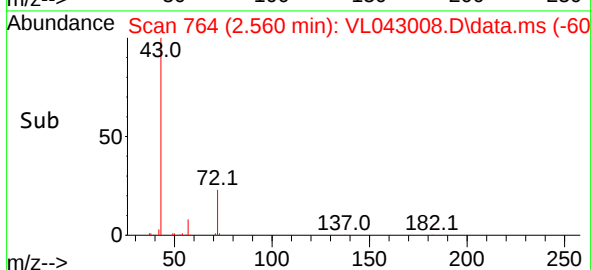
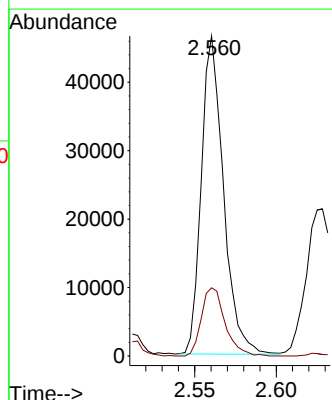
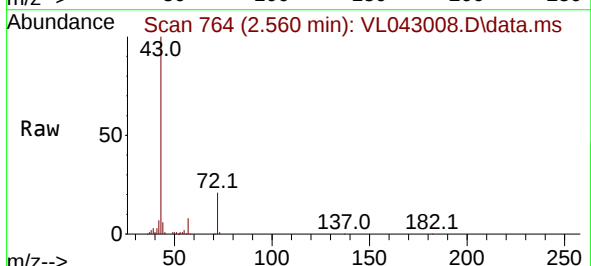
Acq: 24 Sep 2025 14:06

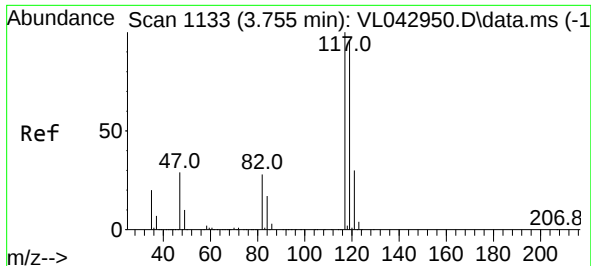
Tgt Ion: 43 Resp: 43876

Ion Ratio Lower Upper

43 100

72 22.8 17.7 26.5

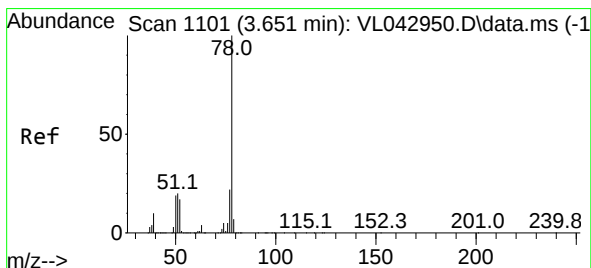
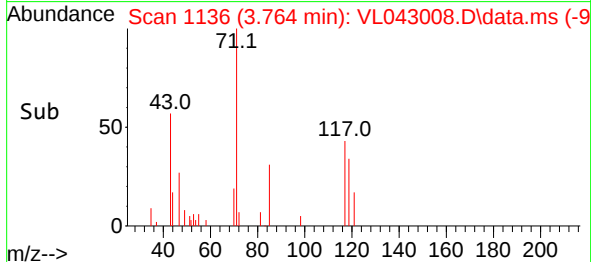
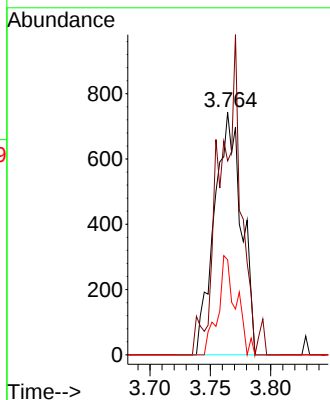
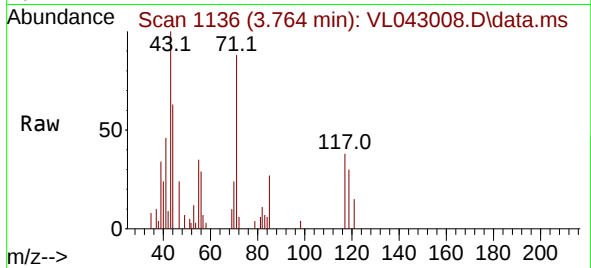




#35
Carbon Tetrachloride
Concen: 0.037 ppbv m
RT: 3.764 min Scan# 1133
Delta R.T. 0.010 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

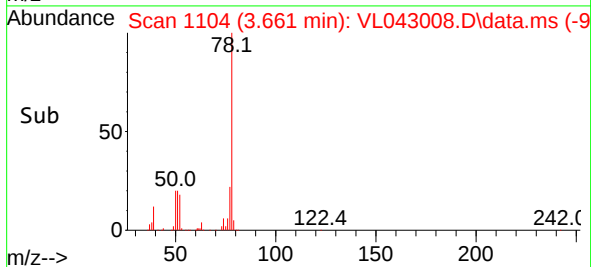
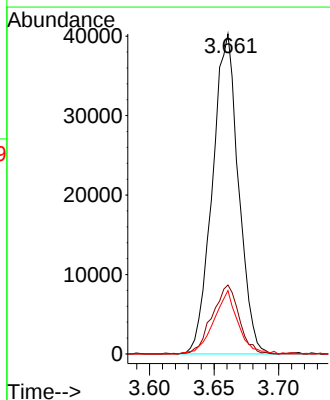
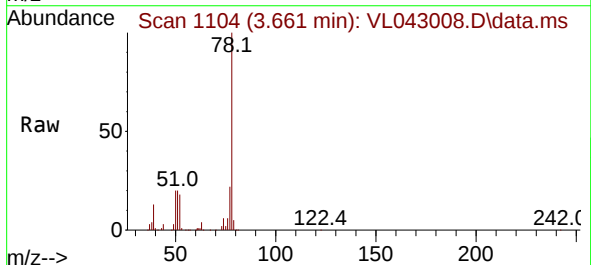
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

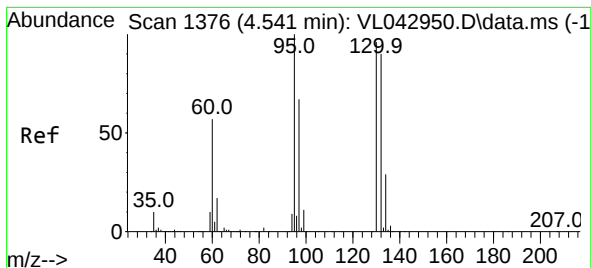
Tgt Ion:117 Resp: 1159
Ion Ratio Lower Upper
117 100
119 79.9 76.9 115.3
121 39.2 23.7 35.5#



#36
Benzene
Concen: 1.260 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. 0.010 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 78 Resp: 56690
Ion Ratio Lower Upper
78 100
77 21.6 17.8 26.6
50 19.8 15.0 22.4





#38

Trichloroethene

Concen: 0.767 ppbv

RT: 4.551 min Scan# 11

Delta R.T. 0.010 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

Instrument :

MSVOA_L

ClientSampleId :

SV2DUP

Tgt Ion:130 Resp: 17145

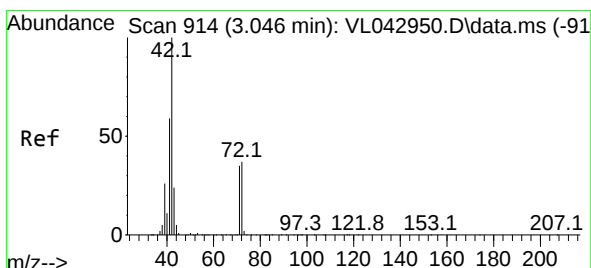
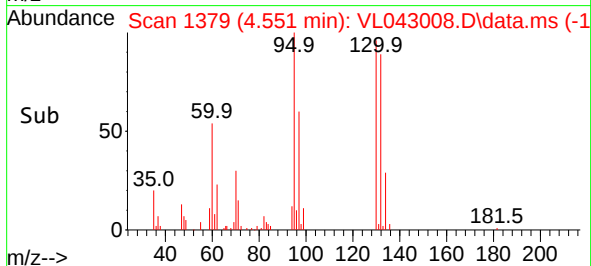
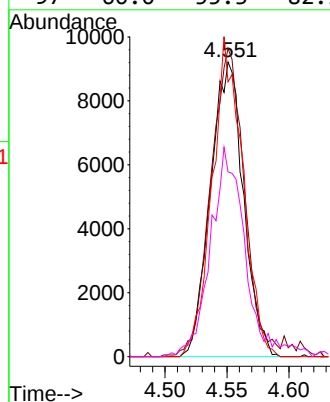
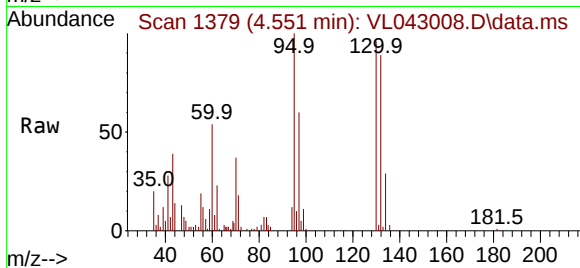
Ion Ratio Lower Upper

130 100

95 102.4 83.0 124.4

132 93.2 74.6 112.0

97 60.0 55.3 82.9



#41

Tetrahydrofuran

Concen: 0.655 ppbv

RT: 3.065 min Scan# 920

Delta R.T. 0.019 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

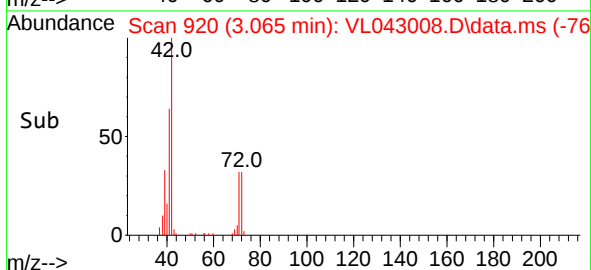
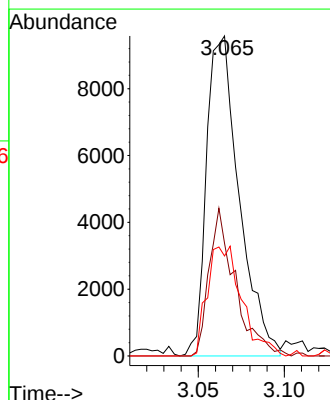
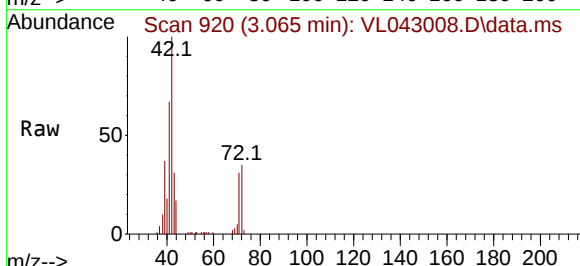
Tgt Ion: 42 Resp: 12642

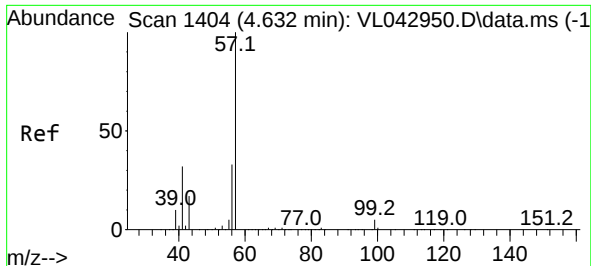
Ion Ratio Lower Upper

42 100

72 37.5 30.0 45.0

71 36.6 28.8 43.2

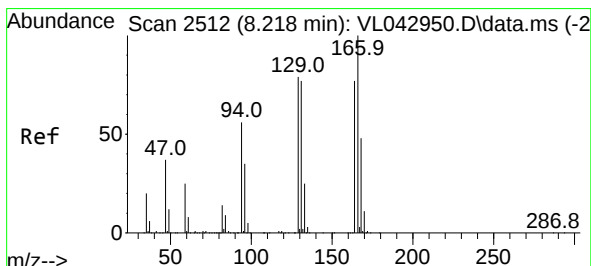
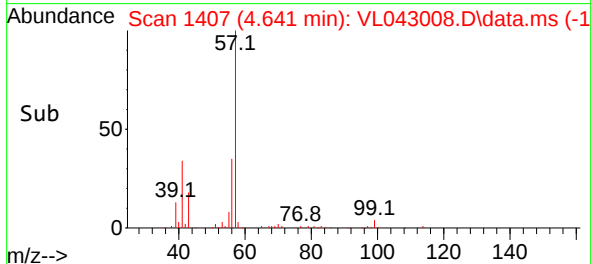
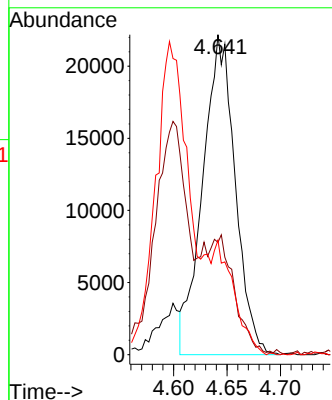
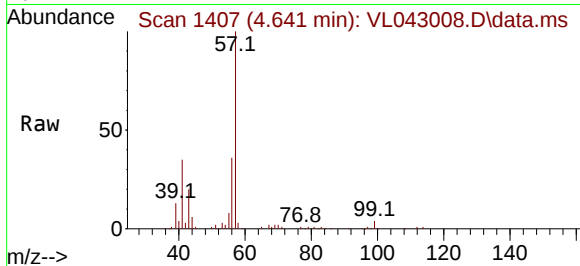




#44
2,2,4-Trimethylpentane
Concen: 0.603 ppbv
RT: 4.641 min Scan# 1404
Delta R.T. 0.009 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

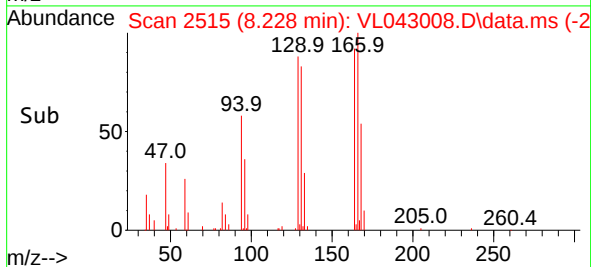
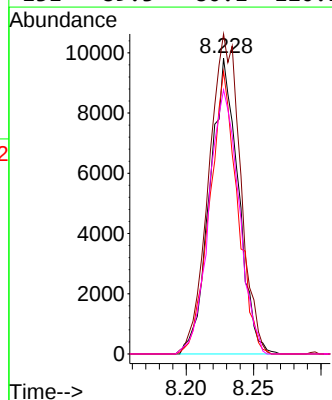
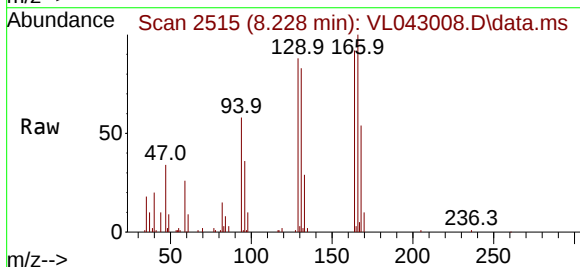
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

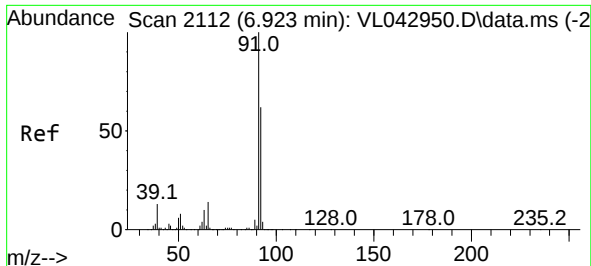
Tgt Ion: 57 Resp: 46849
Ion Ratio Lower Upper
57 100
41 0.0 25.5 38.3#
56 0.0 25.8 38.8#



#52
Tetrachloroethene
Concen: 0.830 ppbv
RT: 8.228 min Scan# 2515
Delta R.T. 0.010 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 164 Resp: 14452
Ion Ratio Lower Upper
164 100
166 108.2 103.5 155.3
129 95.6 82.2 123.4
131 89.3 80.1 120.1

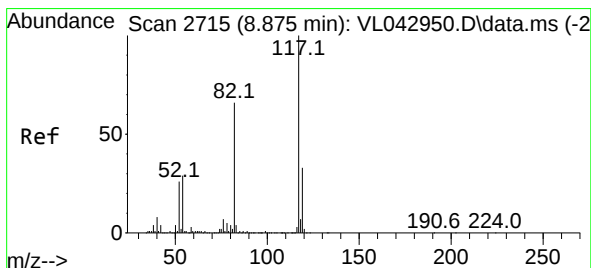
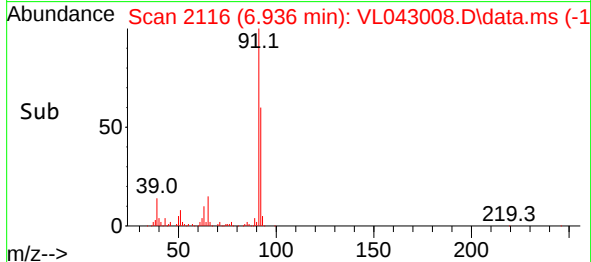
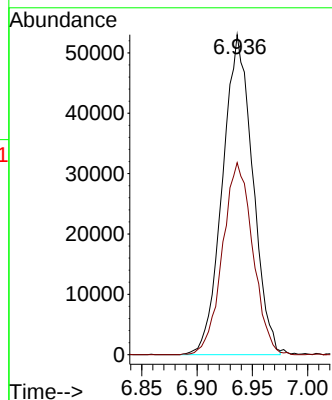
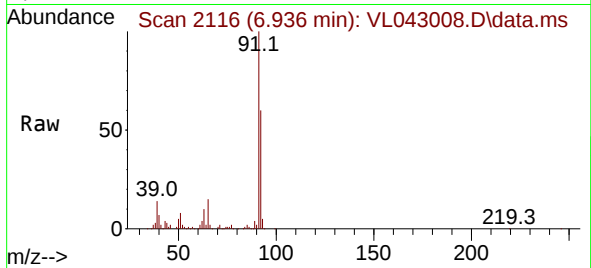




#53
Toluene
Concen: 1.884 ppbv
RT: 6.936 min Scan# 2116
Delta R.T. 0.013 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

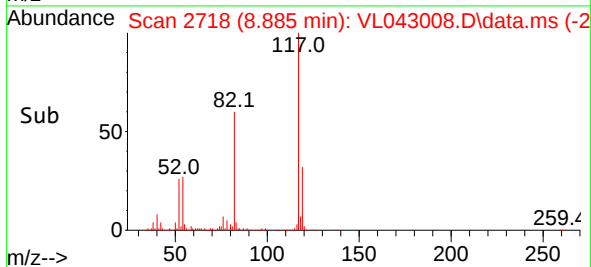
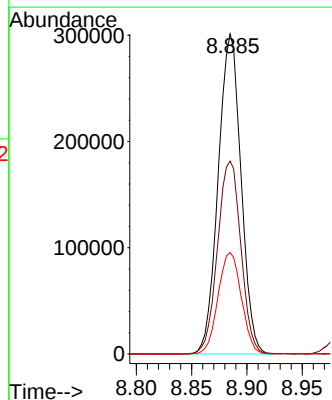
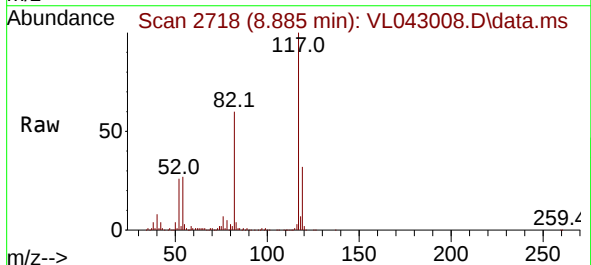
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

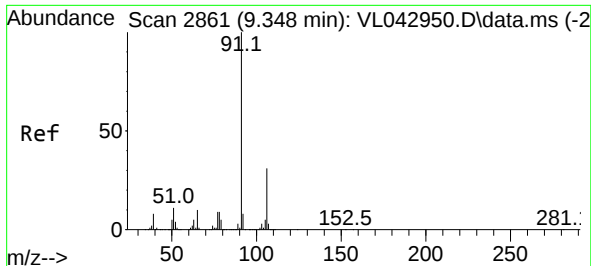
Tgt Ion: 91 Resp: 100347
Ion Ratio Lower Upper
91 100
92 60.3 48.2 72.2



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2718
Delta R.T. 0.009 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 117 Resp: 432263
Ion Ratio Lower Upper
117 100
82 61.7 52.8 79.2
119 32.3 26.5 39.7





#58

Ethyl Benzene

Concen: 0.363 ppbv

RT: 9.357 min Scan# 21

Delta R.T. 0.009 min

Lab File: VL043008.D

Acq: 24 Sep 2025 14:06

Instrument :

MSVOA_L

ClientSampleId :

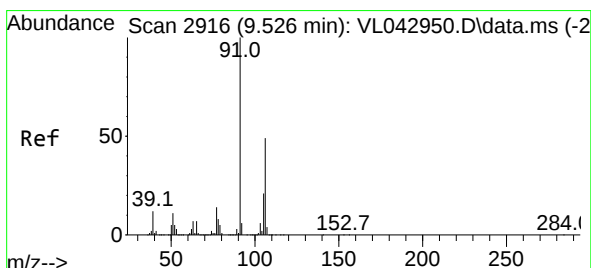
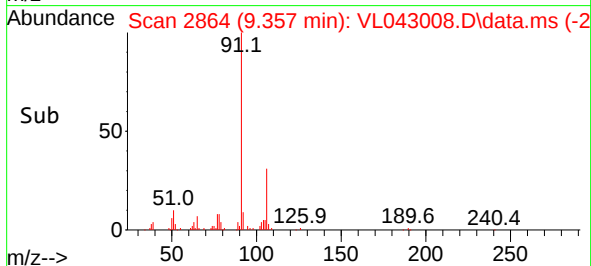
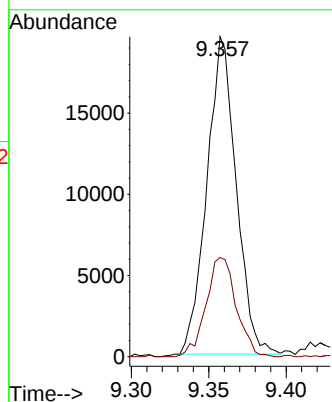
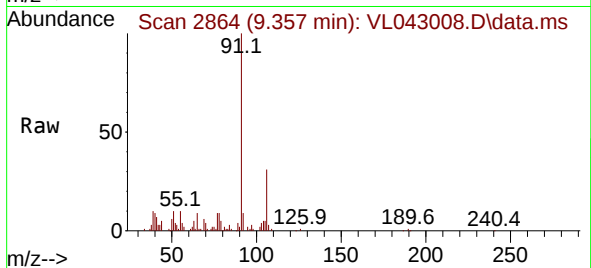
SV2DUP

Tgt Ion: 91 Resp: 25737

Ion Ratio Lower Upper

91 100

106 31.4 24.6 37.0



#59

m/p-Xylene

Concen: 1.038 ppbv

RT: 9.535 min Scan# 2919

Delta R.T. 0.009 min

Lab File: VL043008.D

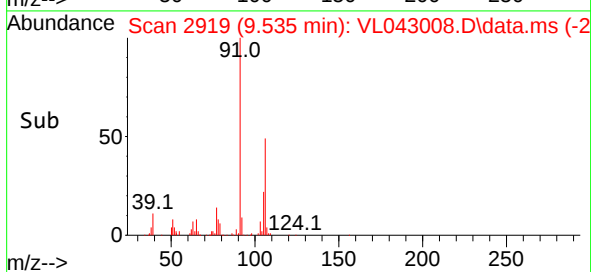
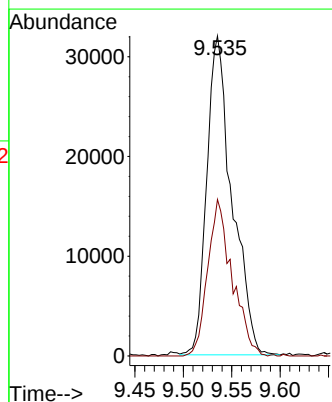
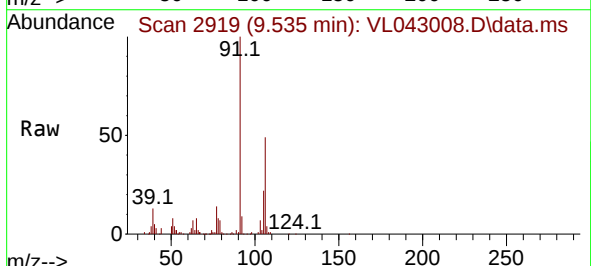
Acq: 24 Sep 2025 14:06

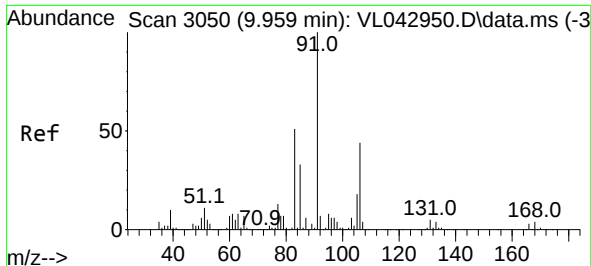
Tgt Ion: 91 Resp: 58092

Ion Ratio Lower Upper

91 100

106 47.6 0.0 0.0#

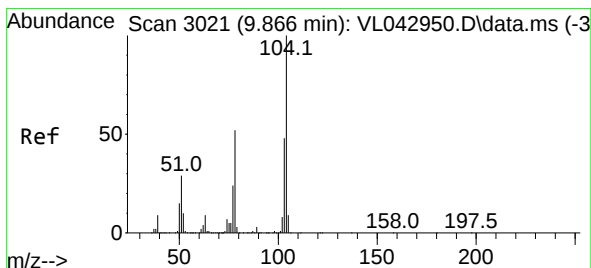
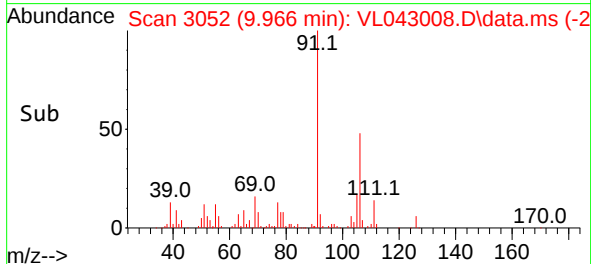
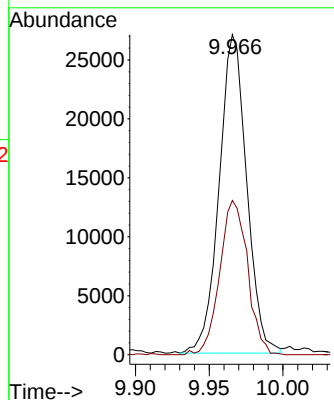
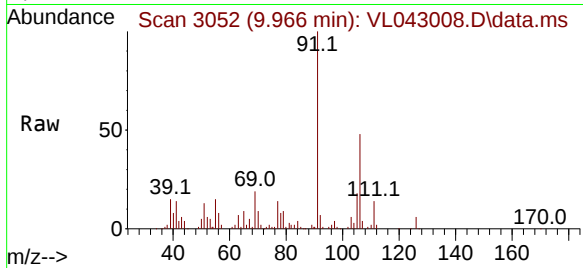




#60
o-Xylene
Concen: 0.627 ppbv
RT: 9.966 min Scan# 3050
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

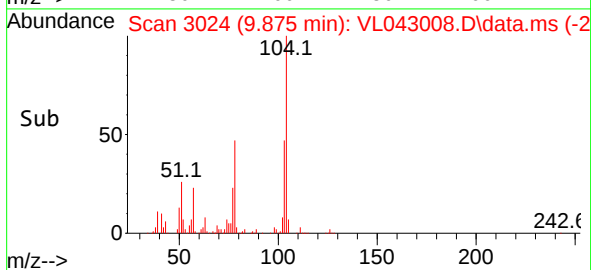
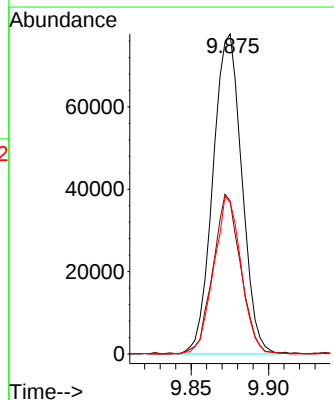
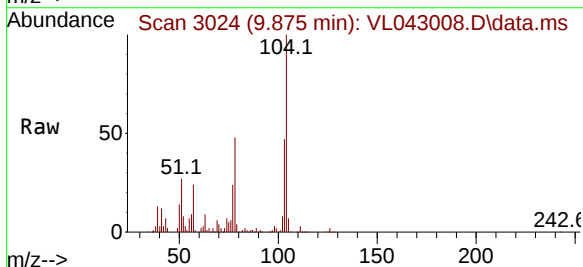
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

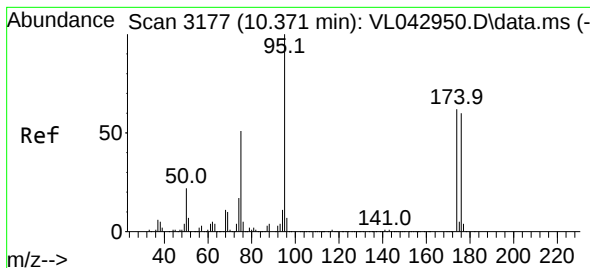
Tgt Ion: 91 Resp: 35078
Ion Ratio Lower Upper
91 100
106 49.0 22.4 67.0



#61
Styrene
Concen: 3.815 ppbv
RT: 9.875 min Scan# 3024
Delta R.T. 0.009 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 104 Resp: 100933
Ion Ratio Lower Upper
104 100
78 48.3 39.9 59.9
103 46.8 36.9 55.3

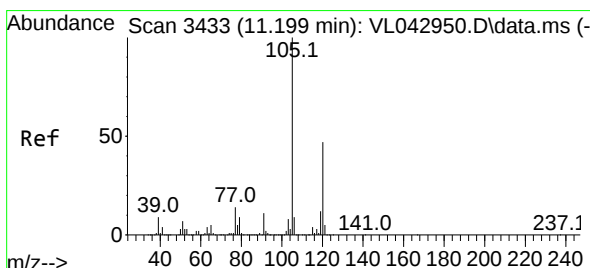
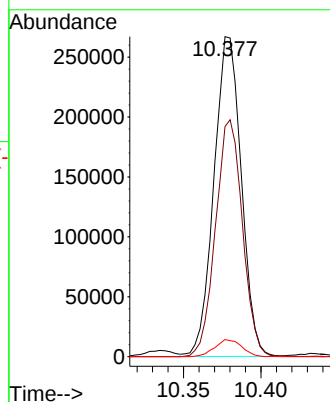
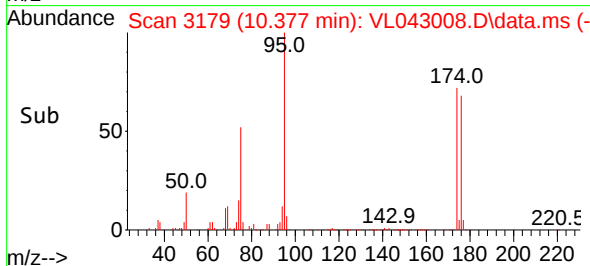
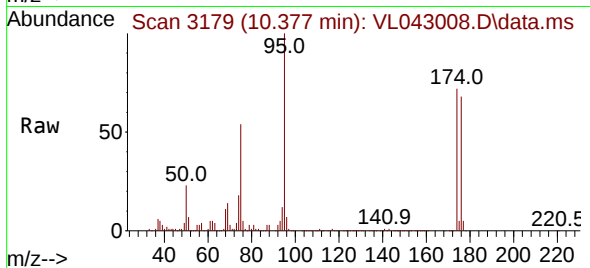




#68
1-Bromo-4-Fluorobenzene
Concen: 10.173 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

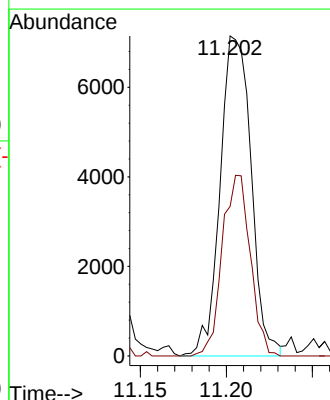
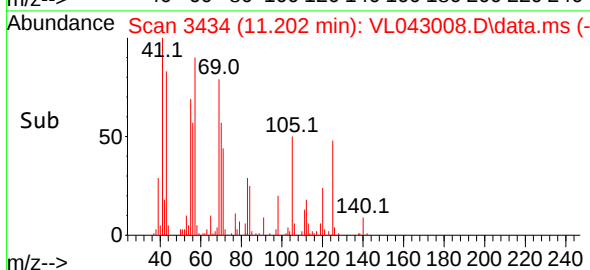
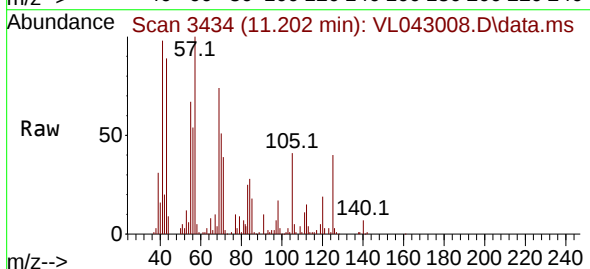
Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

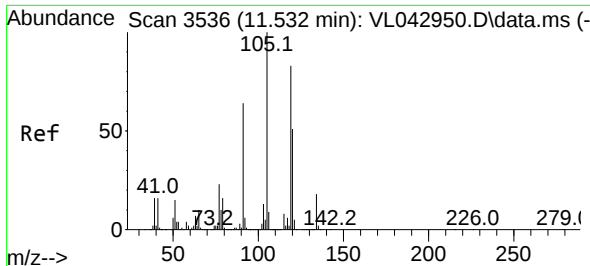
Tgt Ion: 95 Resp: 328265
Ion Ratio Lower Upper
95 100
174 73.0 51.4 77.2
175 5.3 4.0 6.0



#73
1,3,5-Trimethylbenzene
Concen: 0.158 ppbv
RT: 11.202 min Scan# 3434
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion: 105 Resp: 8960
Ion Ratio Lower Upper
105 100
120 46.8 38.0 57.0

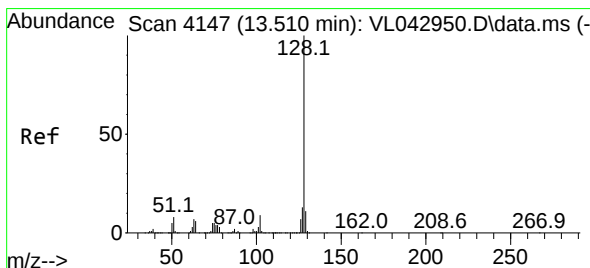
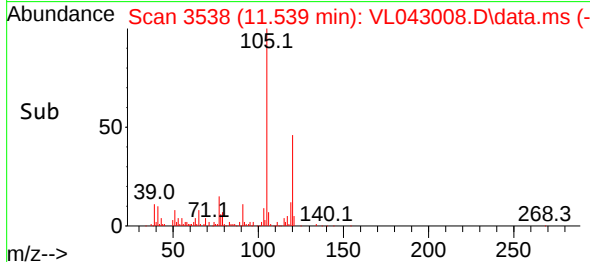
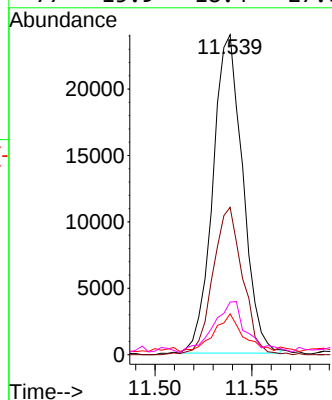
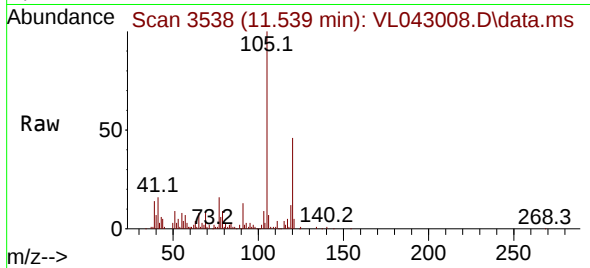




#74
1,2,4-Trimethylbenzene
Concen: 0.411 ppbv
RT: 11.539 min Scan# 31
Delta R.T. 0.006 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Instrument :
MSVOA_L
ClientSampleId :
SV2DUP

Tgt Ion:	105	Resp:	25760
Ion	Ratio	Lower	Upper
105	100		
120	45.9	40.9	61.3
91	11.8	51.2	76.8#
77	15.9	18.4	27.6#



#79
Naphthalene
Concen: 0.210 ppbv
RT: 13.513 min Scan# 4148
Delta R.T. 0.003 min
Lab File: VL043008.D
Acq: 24 Sep 2025 14:06

Tgt Ion:	128	Resp:	11623
Ion	Ratio	Lower	Upper
128	100		
127	15.9	10.6	15.8#
129	8.6	9.0	13.6#

