

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092425\
 Data File : VL043007.D
 Acq On : 24 Sep 2025 13:31
 Operator : SY/MD
 Sample : Q3154-02 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

Quant Time: Sep 25 01:55:12 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	2.790	49	153511	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	468363	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	423322	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	329247	10.419	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.200%

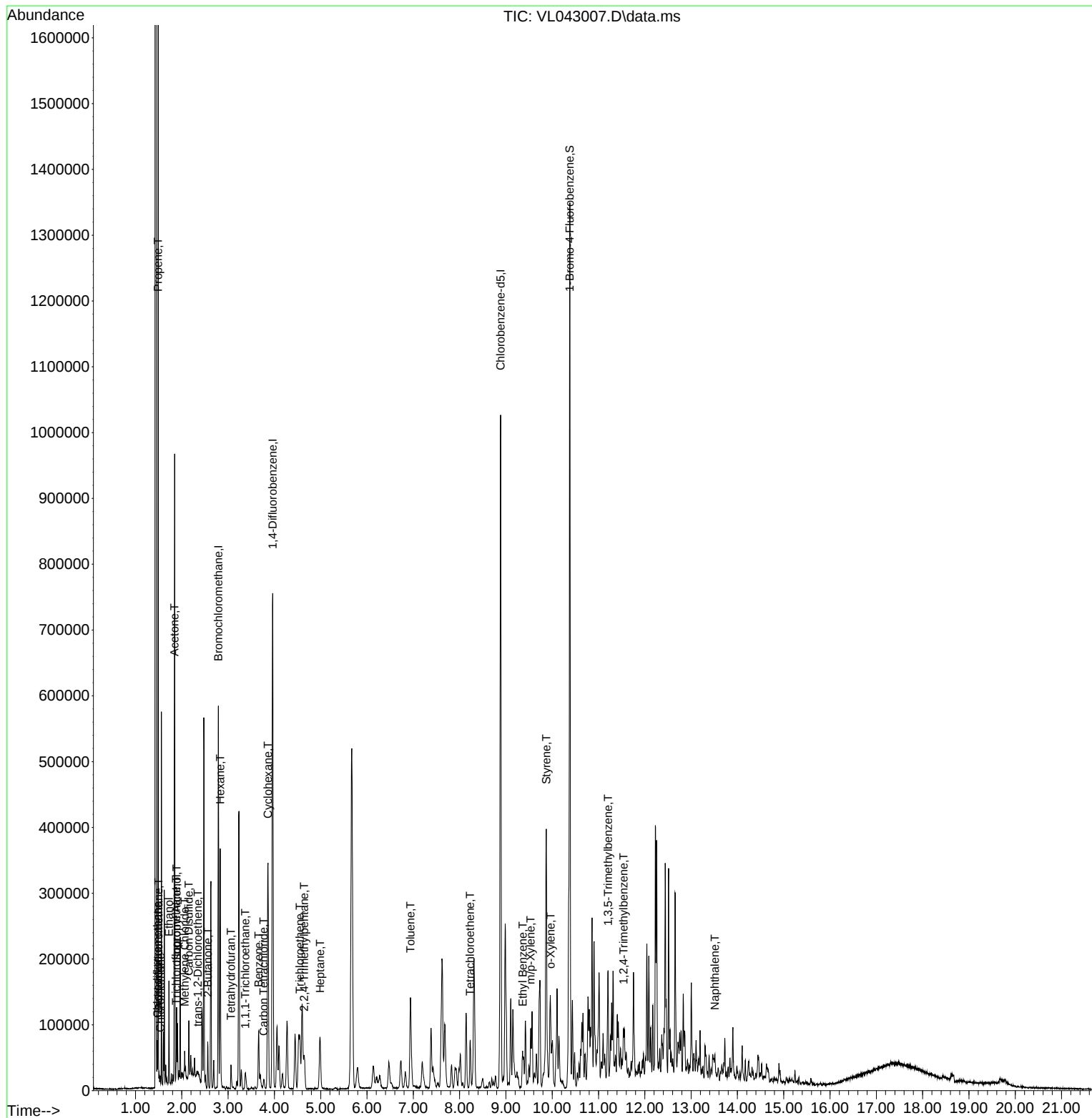
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	5397	0.261	ppbv	100
3) Chlorodifluoromethane	1.476	51	4525m	0.176	ppbv	
4) Chloromethane	1.534	50	2229	0.239	ppbv #	69
9) Propene	1.489	41	284054m	25.373	ppbv	
10) Heptane	4.988	43	32568	1.090	ppbv	99
11) Trichlorofluoromethane	1.881	101	7073	0.355	ppbv	91
13) Ethanol	1.722	45	50887	46.856	ppbv	96
15) Acetone	1.839	43	206043m	10.305	ppbv	
19) Isopropyl Alcohol	1.887	45	43645	3.631	ppbv #	1
20) Methylene Chloride	2.062	84	5362	0.246	ppbv	94
22) trans-1,2-Dichloroethene	2.347	96	1034	0.122	ppbv #	61
26) Hexane	2.829	57	82930	3.600	ppbv #	42
27) Carbon Disulfide	2.152	76	43286	2.095	ppbv #	1
30) Cyclohexane	3.861	84	91897	4.772	ppbv	96
32) 1,1,1-Trichloroethane	3.373	97	8561	0.263	ppbv	95
34) 2-Butanone	2.560	43	42998	1.310	ppbv	97
35) Carbon Tetrachloride	3.768	117	1254m	0.041	ppbv	
36) Benzene	3.661	78	53997	1.228	ppbv	99
38) Trichloroethene	4.551	130	17242	0.789	ppbv	95
41) Tetrahydrofuran	3.062	42	11968	0.634	ppbv	96
44) 2,2,4-Trimethylpentane	4.645	57	42705	0.562	ppbv #	69
52) Tetrachloroethene	8.228	164	13311	0.782	ppbv	94
53) Toluene	6.939	91	95651	1.837	ppbv	99
58) Ethyl Benzene	9.360	91	23962	0.345	ppbv	95
59) m/p-Xylene	9.535	91	54439	0.993	ppbv #	100
60) o-Xylene	9.966	91	35535	0.649	ppbv	100
61) Styrene	9.872	104	97357	3.758	ppbv	99
73) 1,3,5-Trimethylbenzene	11.205	105	8544	0.154	ppbv	97
74) 1,2,4-Trimethylbenzene	11.539	105	24496	0.399	ppbv #	67
79) Naphthalene	13.513	128	10737	0.198	ppbv #	94

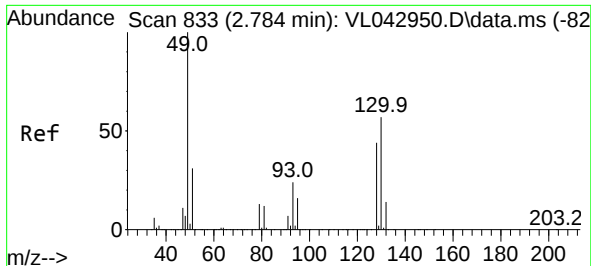
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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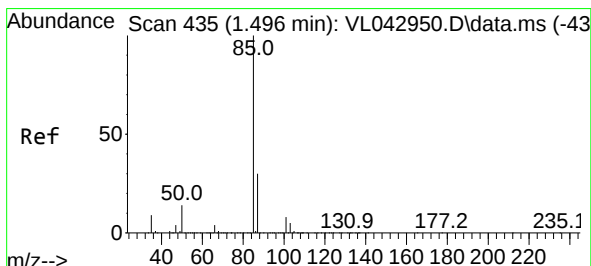
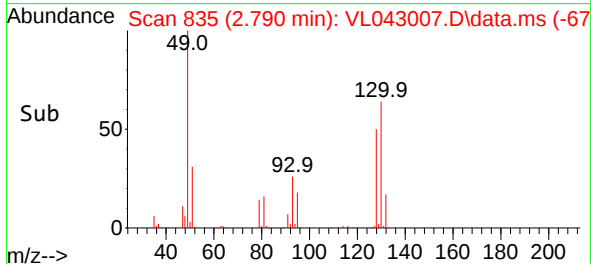
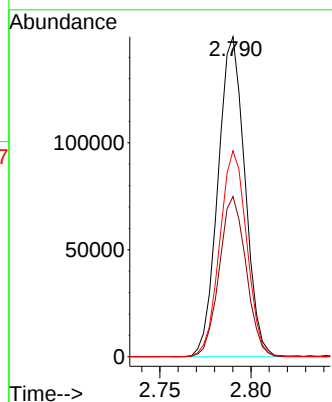
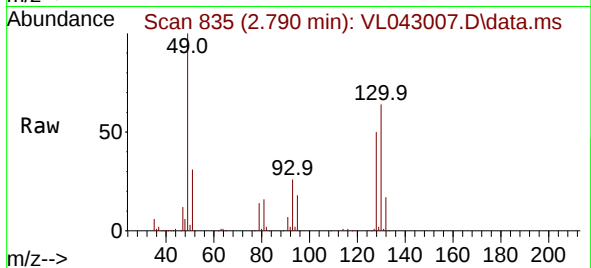




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 833
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

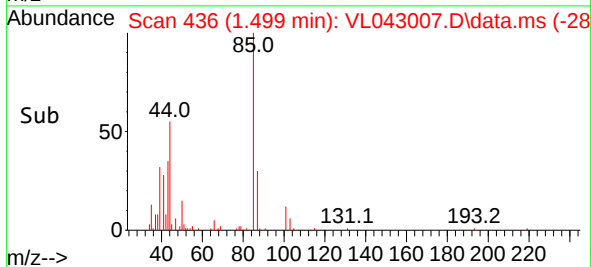
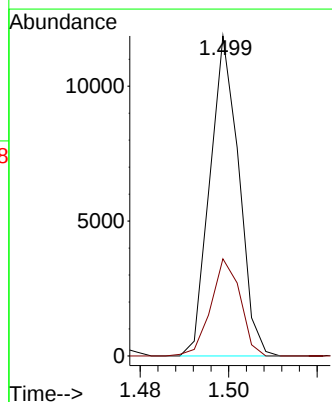
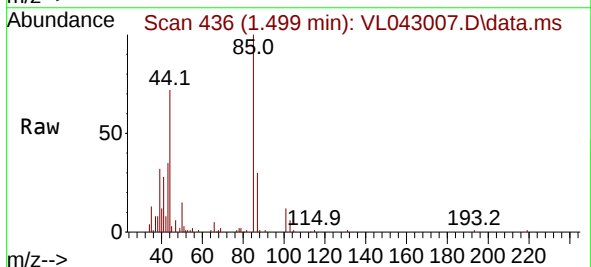
Instrument :
MSVOA_L
ClientSampleId :
SV2

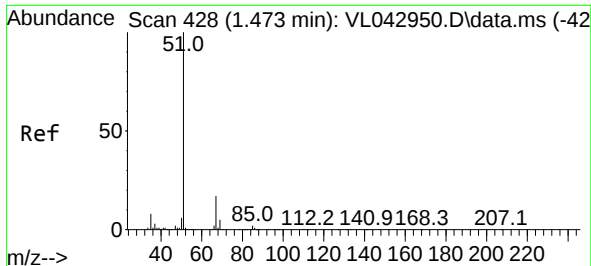
Tgt Ion: 49 Resp: 153511
Ion Ratio Lower Upper
49 100
128 49.8 22.9 68.8
130 64.7 29.1 87.3



#2
Dichlorodifluoromethane
Concen: 0.261 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 85 Resp: 5397
Ion Ratio Lower Upper
85 100
87 30.3 24.3 36.5

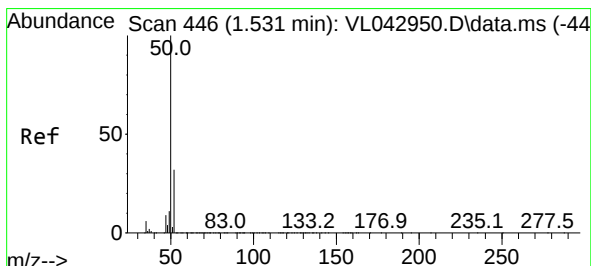
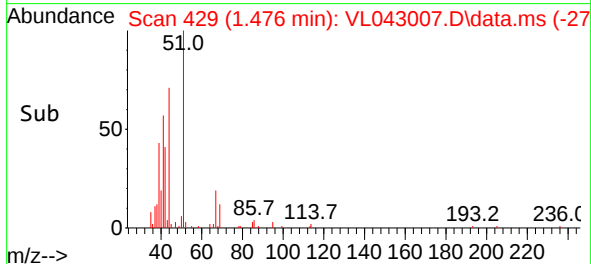
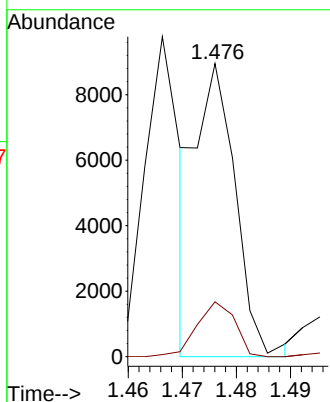
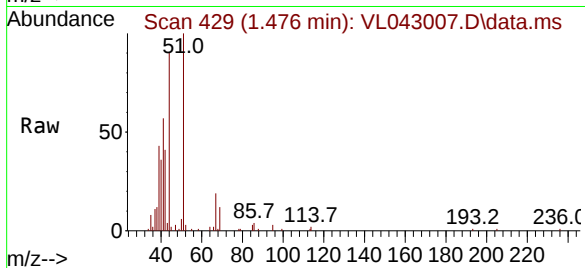




#3
Chlorodifluoromethane
Concen: 0.176 ppbv m
RT: 1.476 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

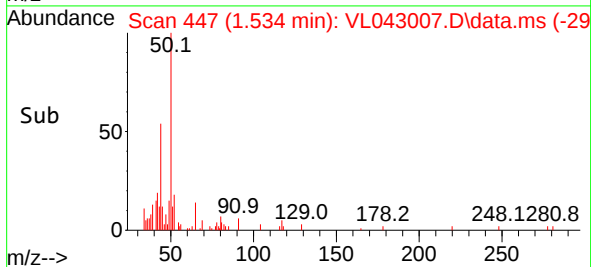
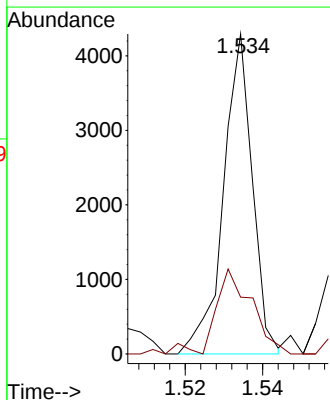
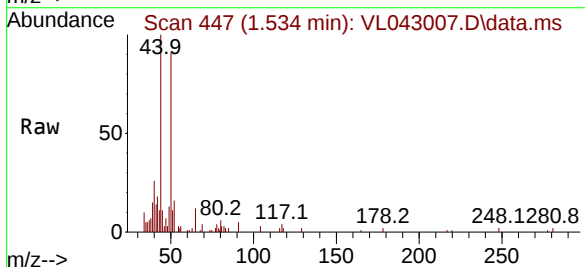
Instrument :
MSVOA_L
ClientSampleId :
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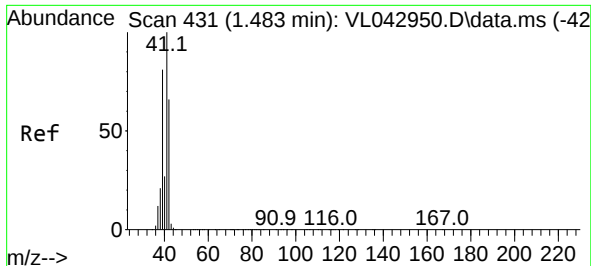
Tgt Ion: 51 Resp: 4525
Ion Ratio Lower Upper
51 100
67 6.5 13.8 20.8#



#4
Chloromethane
Concen: 0.239 ppbv
RT: 1.534 min Scan# 447
Delta R.T. 0.003 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 50 Resp: 2229
Ion Ratio Lower Upper
50 100
52 14.9 25.9 38.9#





#9

Propene

Concen: 25.373 ppbv m

RT: 1.489 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043007.D

Acq: 24 Sep 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

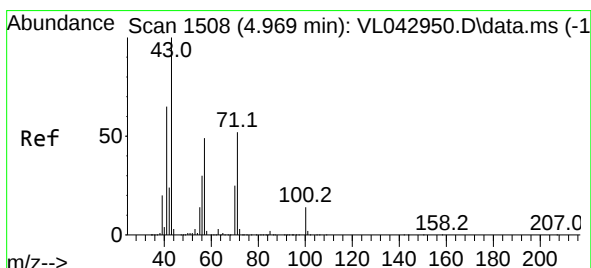
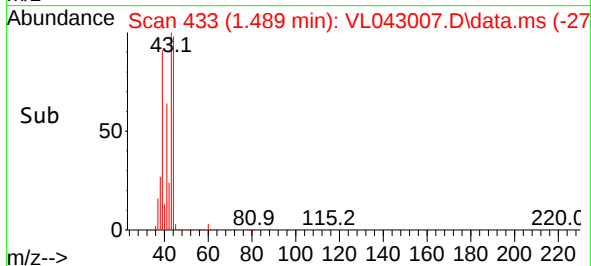
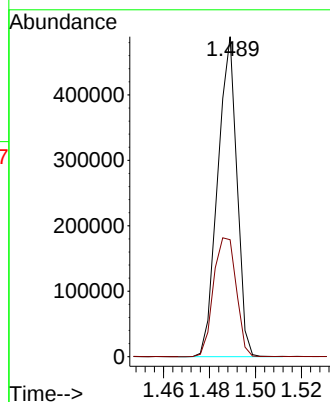
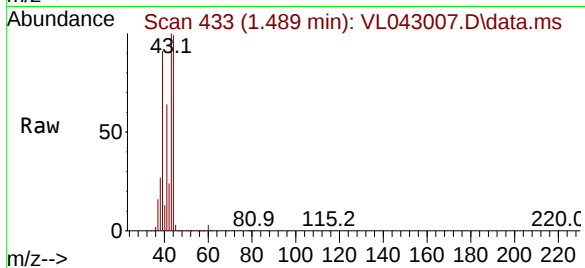
SV2

Tgt Ion: 41 Resp: 284054

Ion Ratio Lower Upper

41 100

42 13.9 57.4 86.2#



#10

Heptane

Concen: 1.090 ppbv

RT: 4.988 min Scan# 1514

Delta R.T. 0.019 min

Lab File: VL043007.D

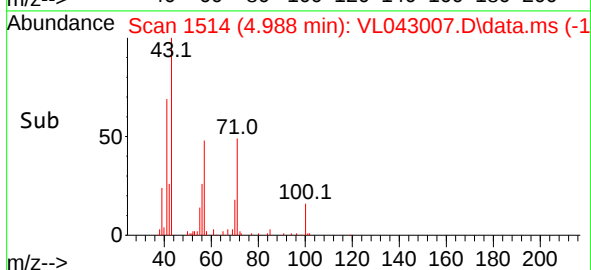
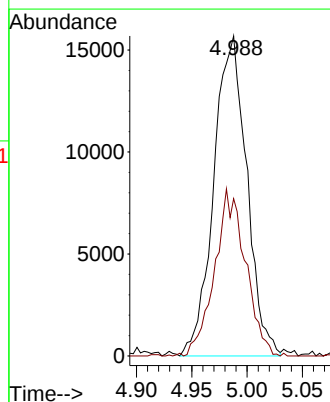
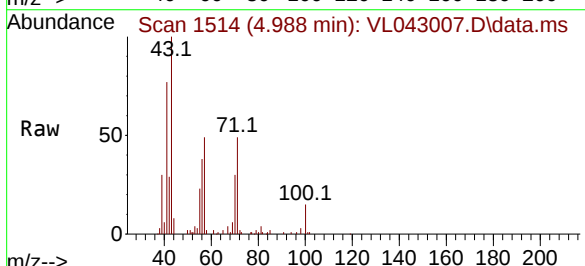
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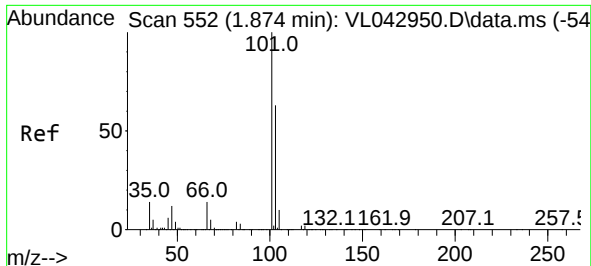
Tgt Ion: 43 Resp: 32568

Ion Ratio Lower Upper

43 100

57 49.0 38.6 57.8

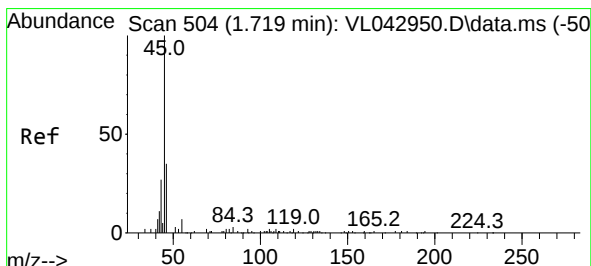
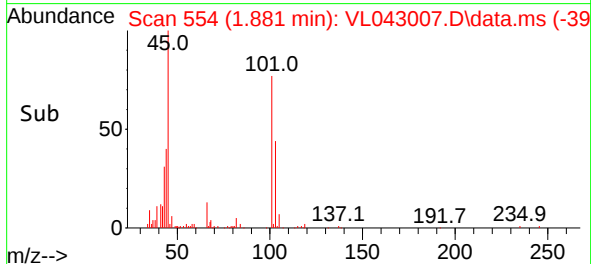
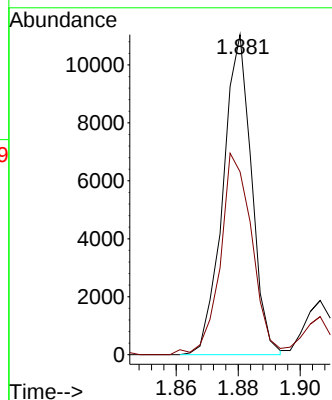
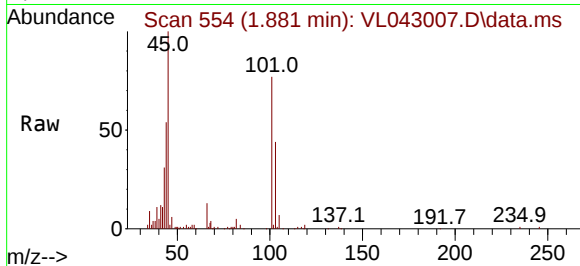




#11
 Trichlorofluoromethane
 Concen: 0.355 ppbv
 RT: 1.881 min Scan# 51
 Delta R.T. 0.006 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

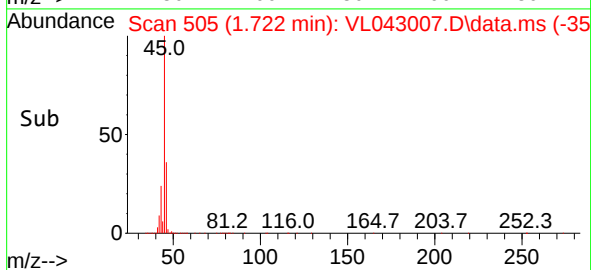
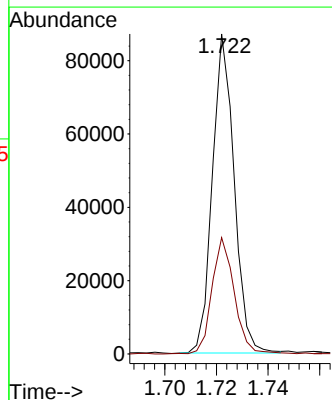
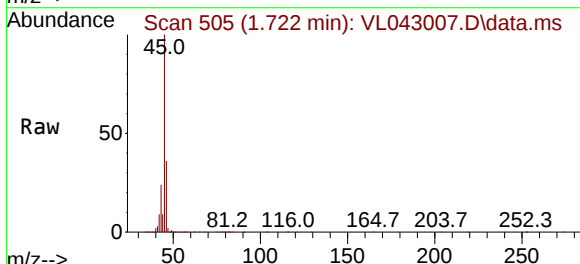
Instrument :
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 ClientSampleId :
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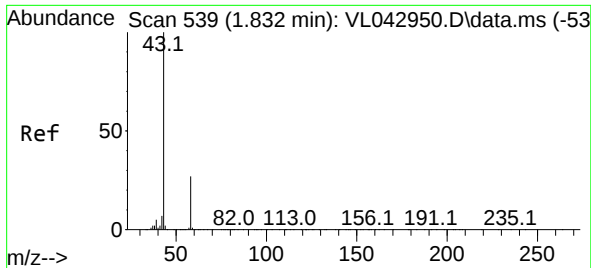
Tgt Ion:101 Resp: 7073
 Ion Ratio Lower Upper
 101 100
 103 55.6 50.1 75.1



#13
 Ethanol
 Concen: 46.856 ppbv
 RT: 1.722 min Scan# 505
 Delta R.T. 0.003 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

Tgt Ion: 45 Resp: 50887
 Ion Ratio Lower Upper
 45 100
 46 38.1 16.2 64.6

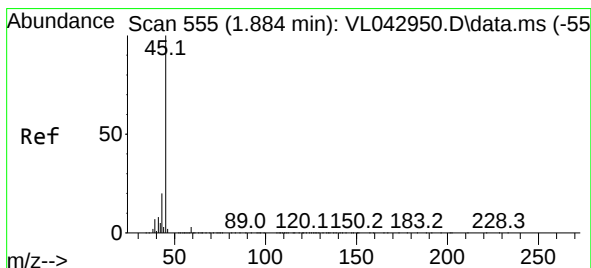
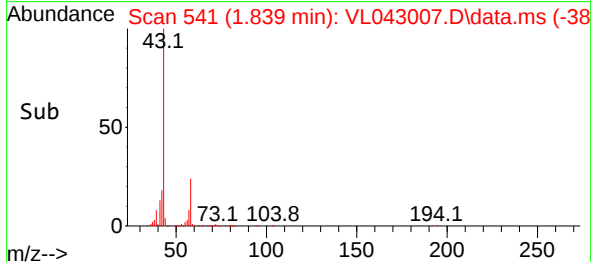
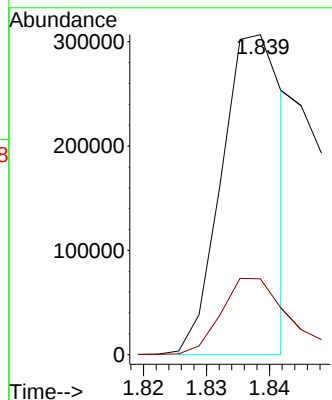
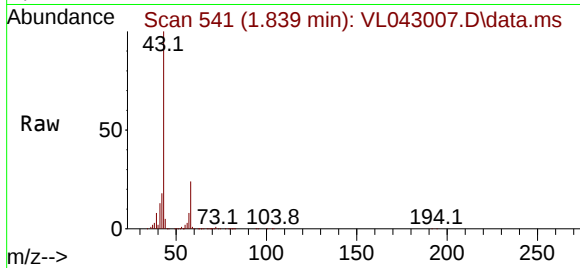




#15
Acetone
Concen: 10.305 ppbv m
RT: 1.839 min Scan# 541
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

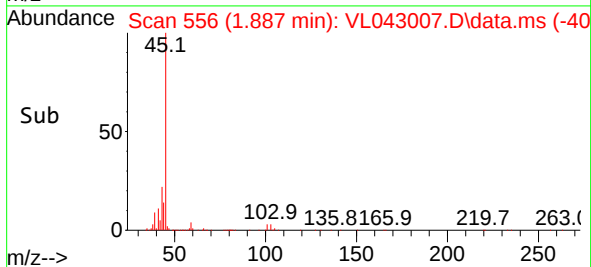
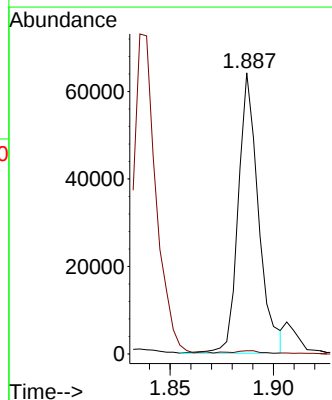
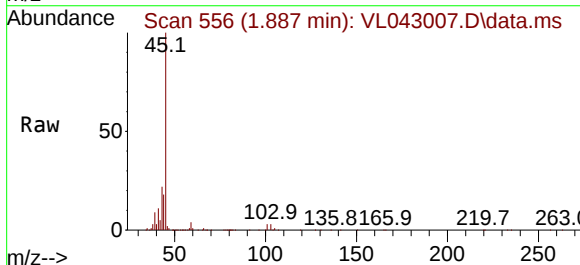
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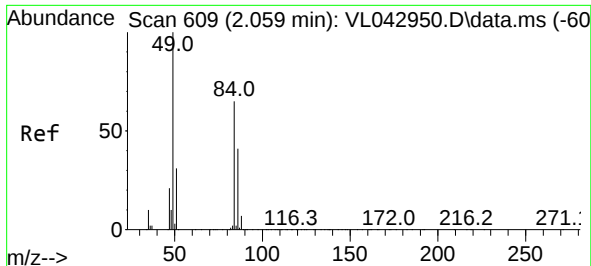
Tgt Ion: 43 Resp: 206043
Ion Ratio Lower Upper
43 100
58 27.1 22.3 33.5



#19
Isopropyl Alcohol
Concen: 3.631 ppbv
RT: 1.887 min Scan# 556
Delta R.T. 0.003 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 45 Resp: 43645
Ion Ratio Lower Upper
45 100
58 127.7 31.0 46.6#

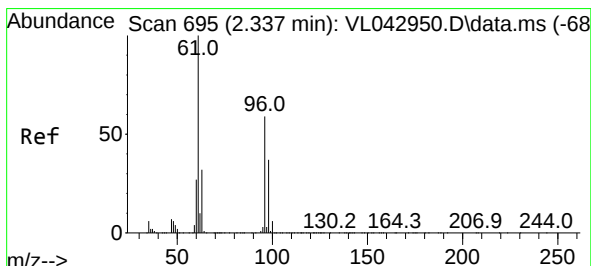
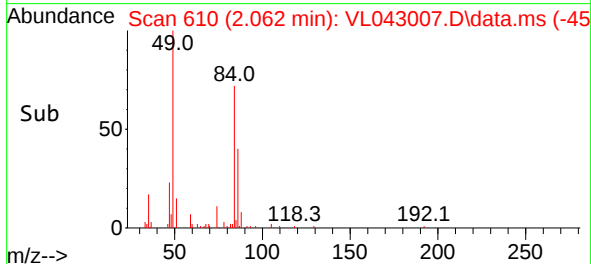
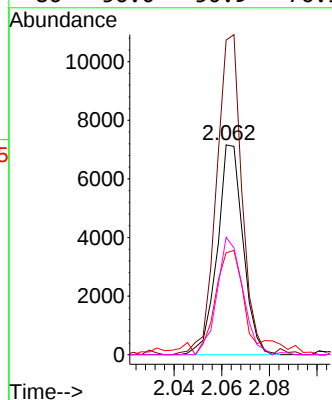
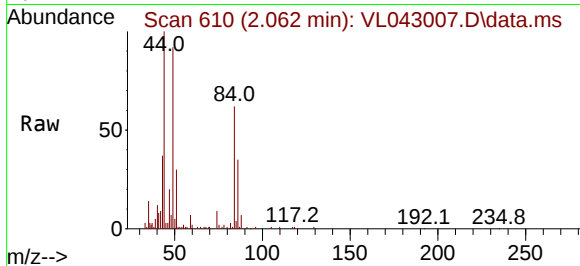




#20
Methylene Chloride
Concen: 0.246 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

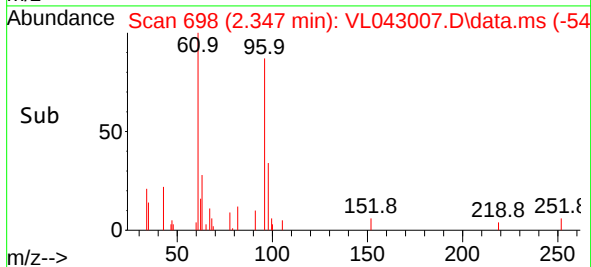
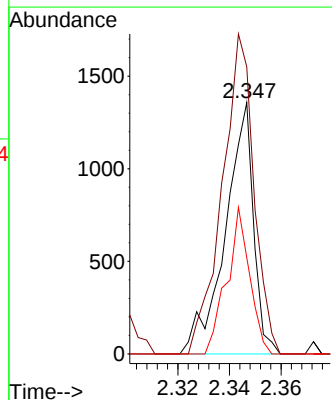
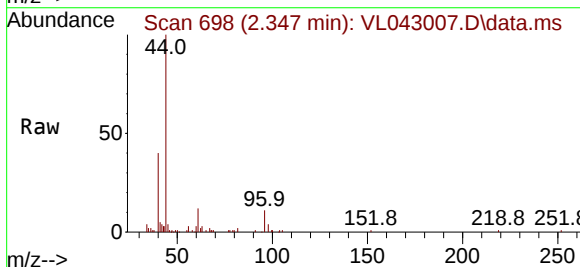
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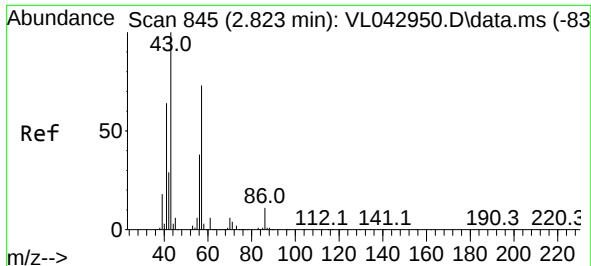
Tgt Ion:	84	Resp:	5362
Ion	Ratio	Lower	Upper
84	100		
49	148.9	124.1	186.1
51	45.7	39.8	59.8
86	56.0	50.9	76.3



#22
trans-1,2-Dichloroethene
Concen: 0.122 ppbv
RT: 2.347 min Scan# 698
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion:	96	Resp:	1034
Ion	Ratio	Lower	Upper
96	100		
61	114.3	136.5	204.7#
98	38.3	50.6	76.0#

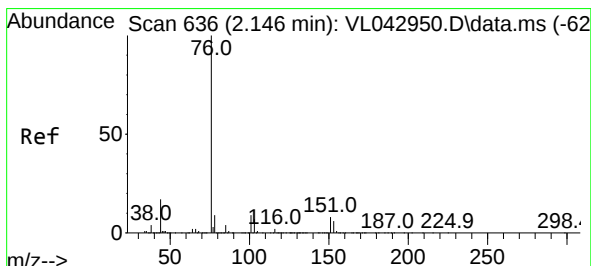
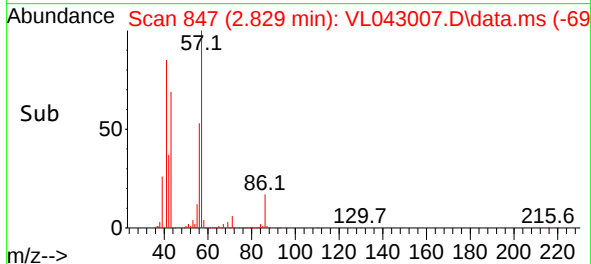
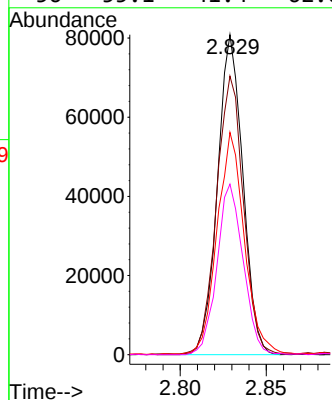
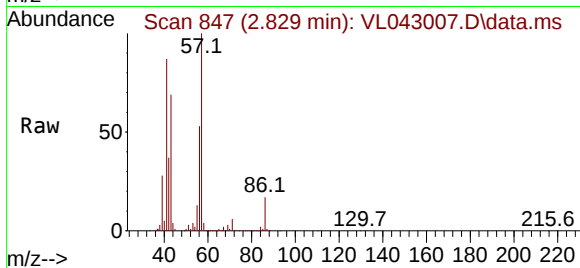




#26
Hexane
Concen: 3.600 ppbv
RT: 2.829 min Scan# 845
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

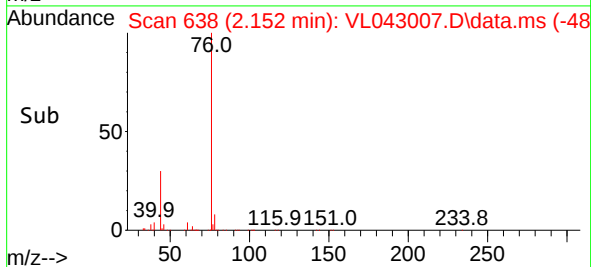
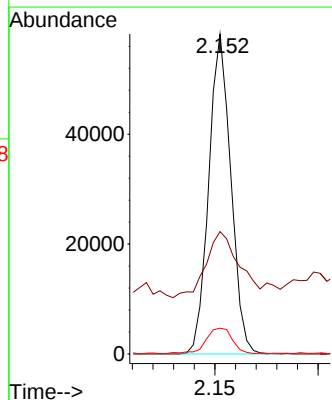
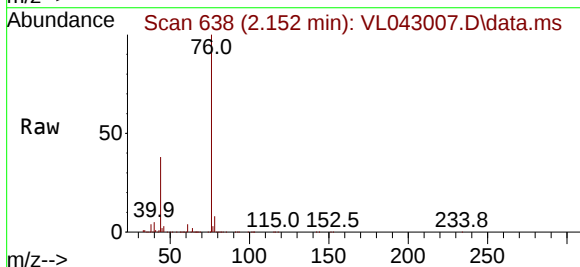
Instrument :
MSVOA_L
ClientSampleId :
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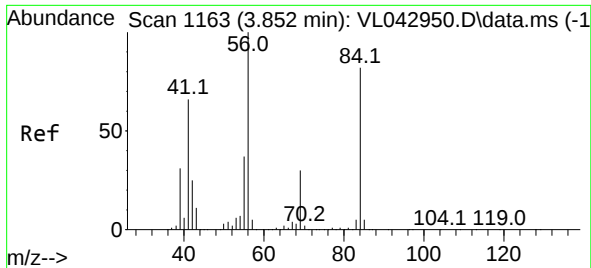
Tgt Ion: 57 Resp: 82930
Ion Ratio Lower Upper
57 100
41 92.7 71.7 107.5
43 76.1 180.8 271.2#
56 55.1 41.4 62.0



#27
Carbon Disulfide
Concen: 2.095 ppbv
RT: 2.152 min Scan# 638
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 76 Resp: 43286
Ion Ratio Lower Upper
76 100
44 97.3 15.6 23.4#
78 9.5 8.9 13.3



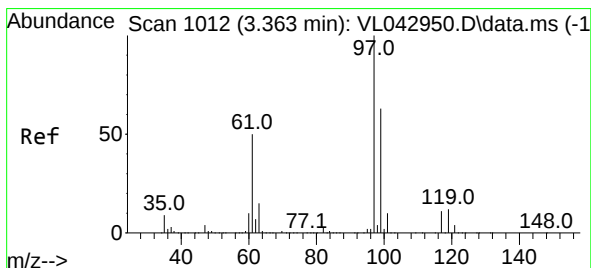
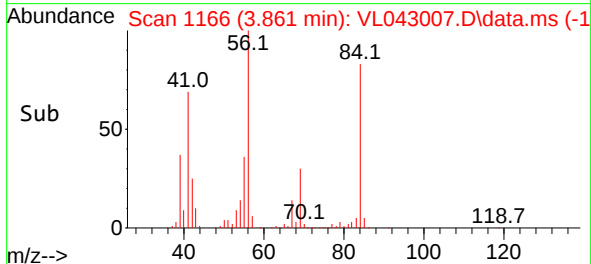
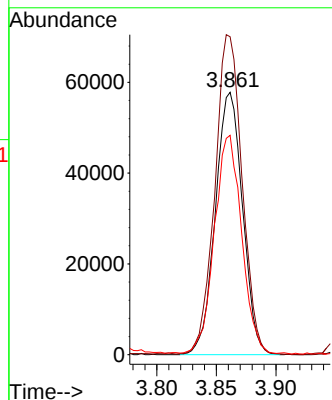
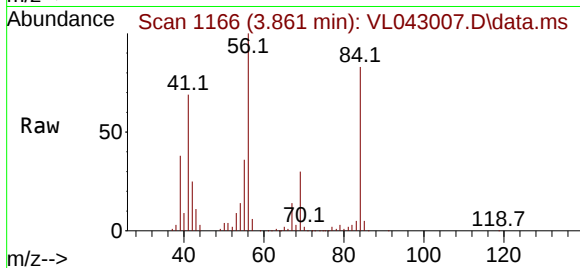


#30
Cyclohexane
Concen: 4.772 ppbv
RT: 3.861 min Scan# 1166
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Instrument :
MSVOA_L
ClientSampleId :
SV2

Tgt Ion: 84 Resp: 91897

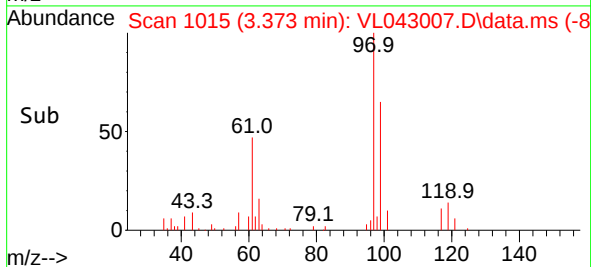
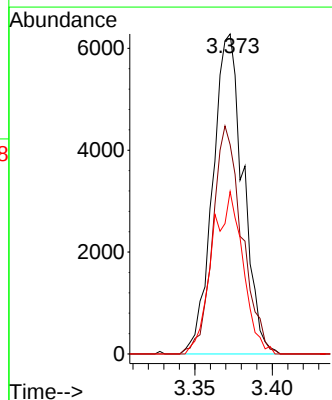
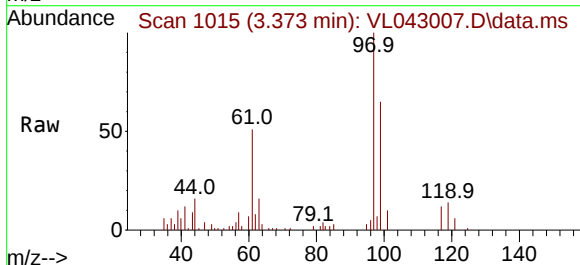
Ion	Ratio	Lower	Upper
84	100		
56	122.4	102.2	153.4
41	84.0	65.6	98.4

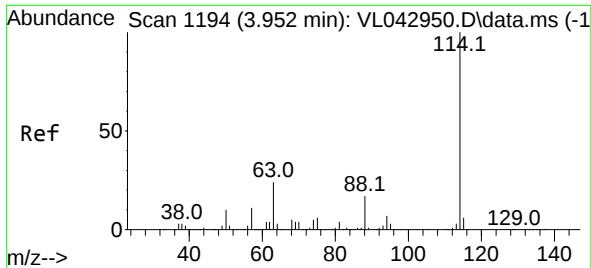


#32
1,1,1-Trichloroethane
Concen: 0.263 ppbv
RT: 3.373 min Scan# 1015
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 97 Resp: 8561

Ion	Ratio	Lower	Upper
97	100		
99	68.8	51.1	76.7
61	51.9	39.8	59.6

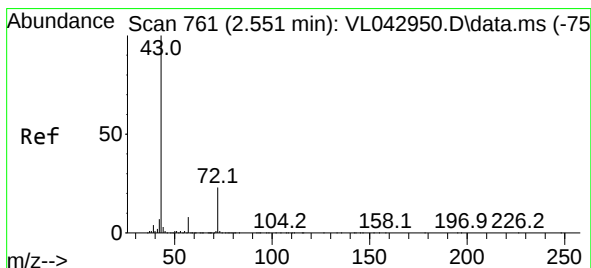
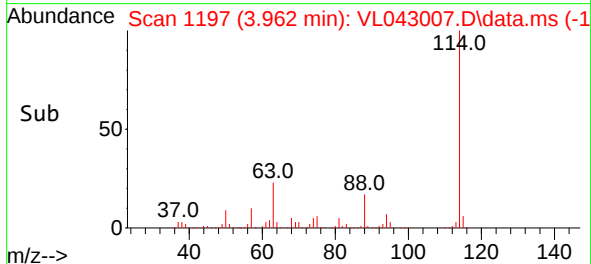
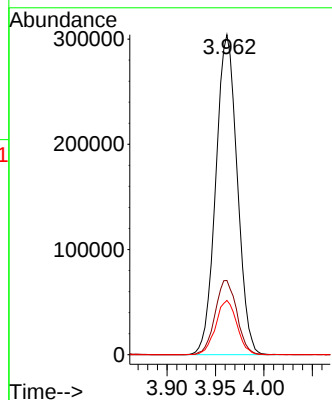
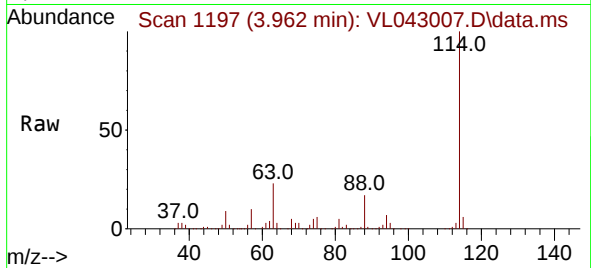




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.962 min Scan# 1194
 Delta R.T. 0.010 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

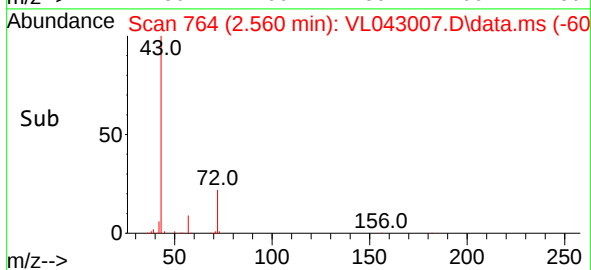
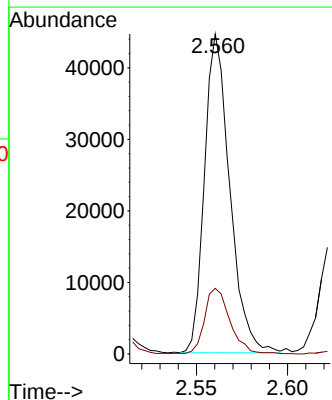
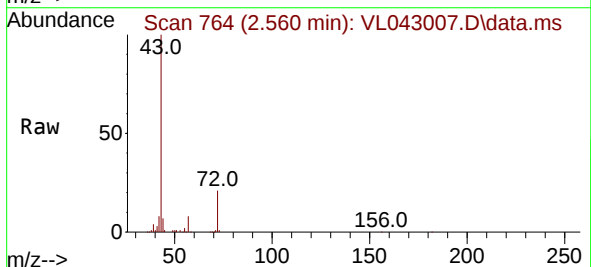
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

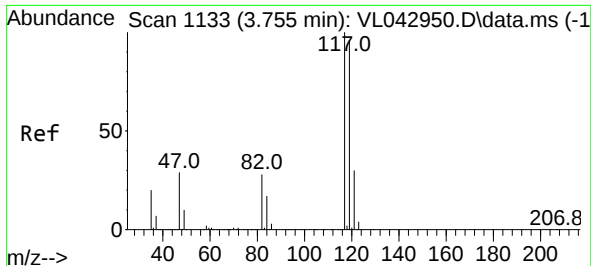
Tgt Ion:114 Resp: 468363
 Ion Ratio Lower Upper
 114 100
 63 23.6 19.4 29.2
 88 16.8 14.2 21.2



#34
 2-Butanone
 Concen: 1.310 ppbv
 RT: 2.560 min Scan# 764
 Delta R.T. 0.009 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

Tgt Ion: 43 Resp: 42998
 Ion Ratio Lower Upper
 43 100
 72 20.8 17.7 26.5

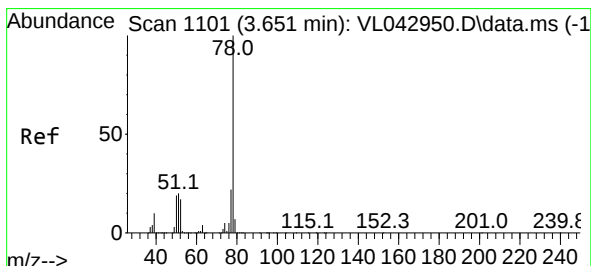
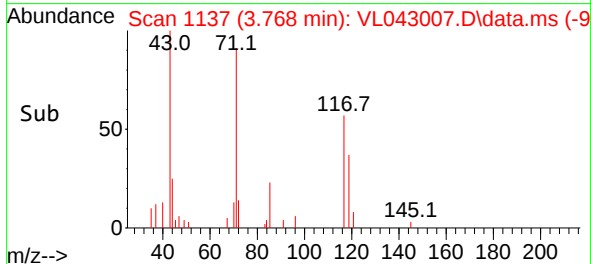
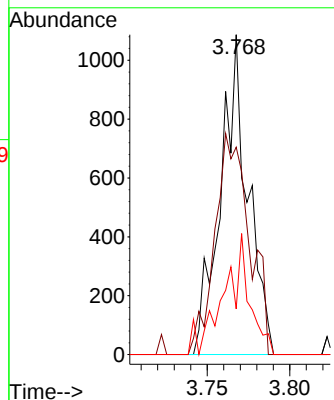
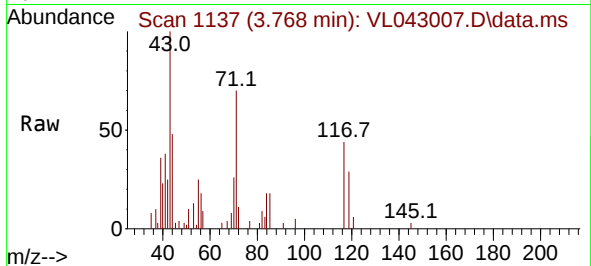




#35
Carbon Tetrachloride
Concen: 0.041 ppbv m
RT: 3.768 min Scan# 1133
Delta R.T. 0.013 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

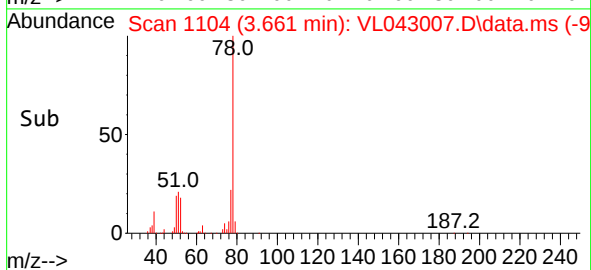
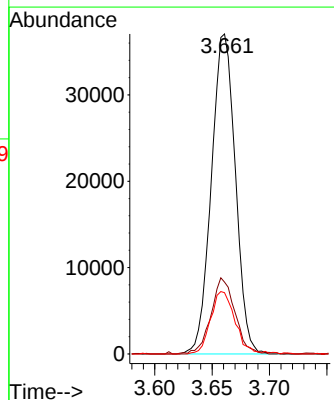
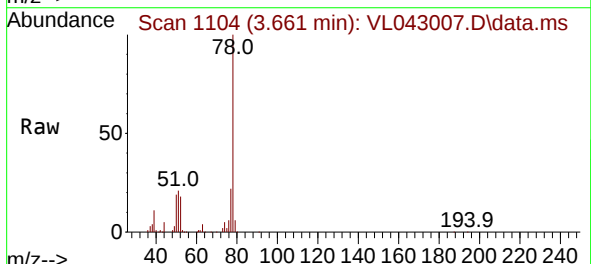
Instrument :
MSVOA_L
ClientSampleId :
SV2

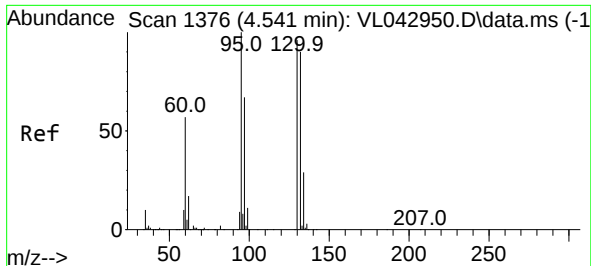
Tgt Ion:117 Resp: 1254
Ion Ratio Lower Upper
117 100
119 64.9 76.9 115.3#
121 14.3 23.7 35.5#



#36
Benzene
Concen: 1.228 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 78 Resp: 53997
Ion Ratio Lower Upper
78 100
77 22.3 17.8 26.6
50 19.2 15.0 22.4

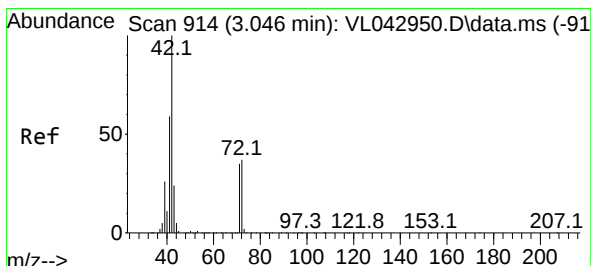
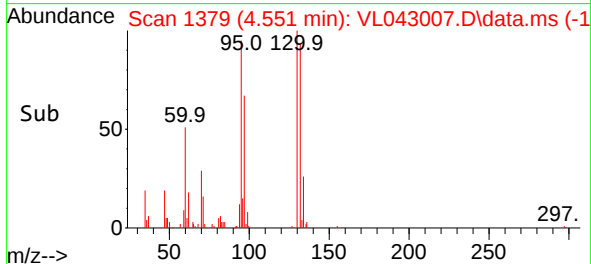
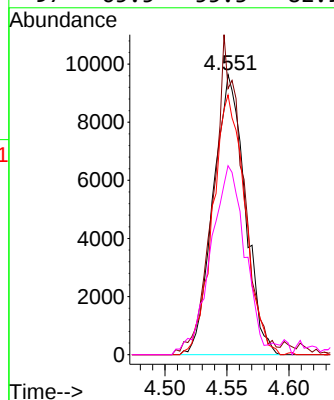
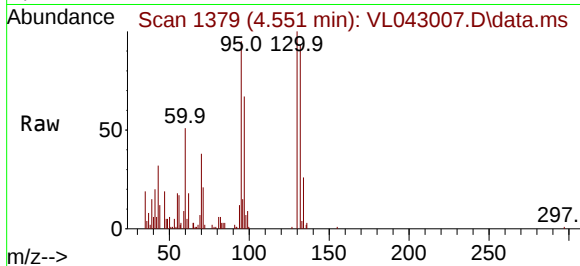




#38
 Trichloroethene
 Concen: 0.789 ppbv
 RT: 4.551 min Scan# 11
 Delta R.T. 0.010 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

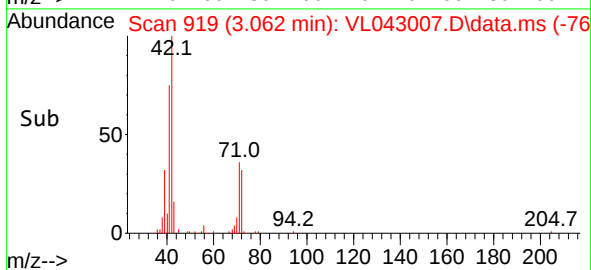
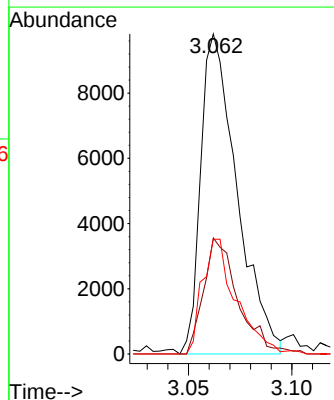
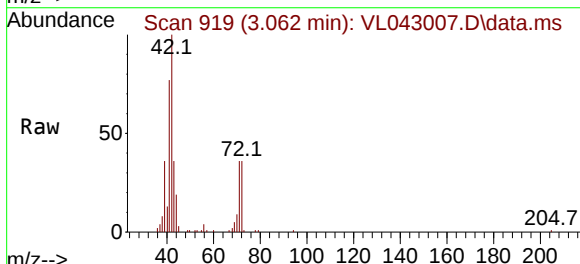
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

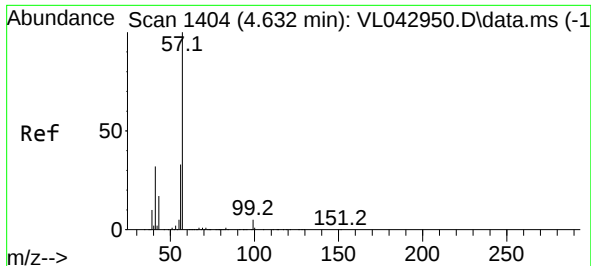
Tgt Ion:	130	Resp:	17242
Ion	Ratio	Lower	Upper
130	100		
95	93.7	83.0	124.4
132	92.7	74.6	112.0
97	65.5	55.3	82.9



#41
 Tetrahydrofuran
 Concen: 0.634 ppbv
 RT: 3.062 min Scan# 919
 Delta R.T. 0.016 min
 Lab File: VL043007.D
 Acq: 24 Sep 2025 13:31

Tgt Ion:	42	Resp:	11968
Ion	Ratio	Lower	Upper
42	100		
72	34.6	30.0	45.0
71	33.7	28.8	43.2

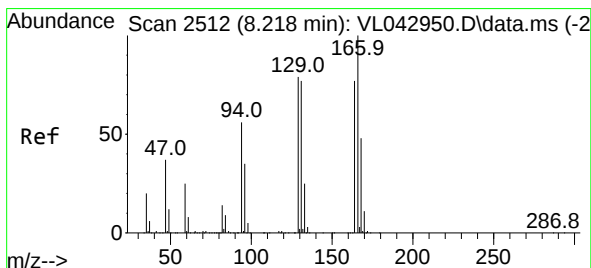
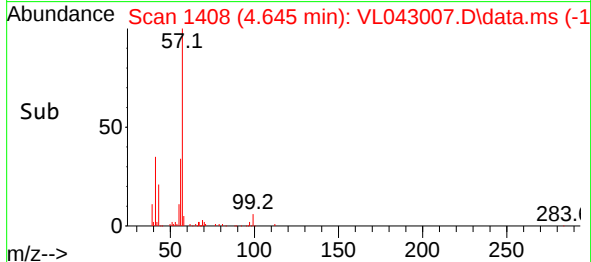
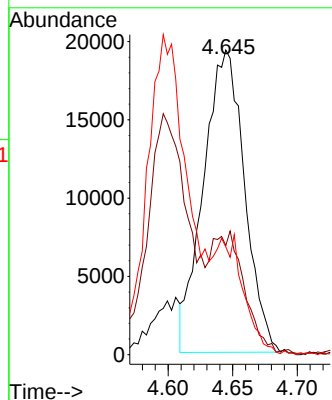
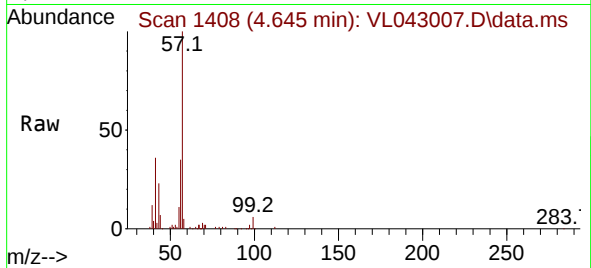




#44
2,2,4-Trimethylpentane
Concen: 0.562 ppbv
RT: 4.645 min Scan# 1404
Delta R.T. 0.013 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

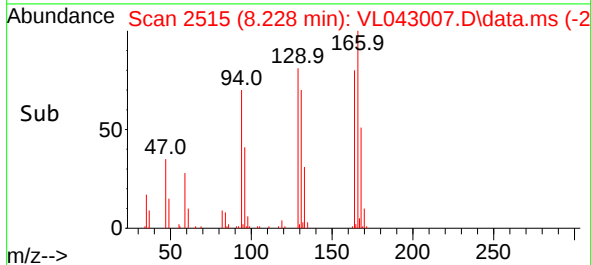
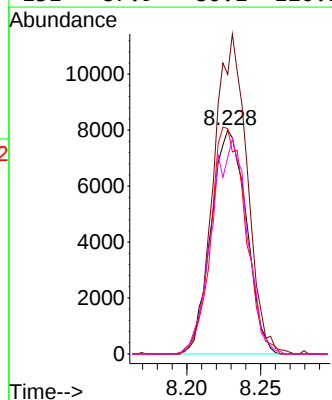
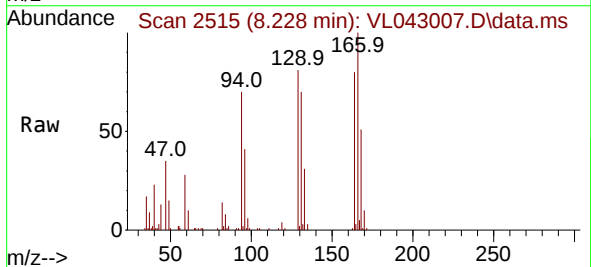
Instrument :
MSVOA_L
ClientSampleId :
SV2

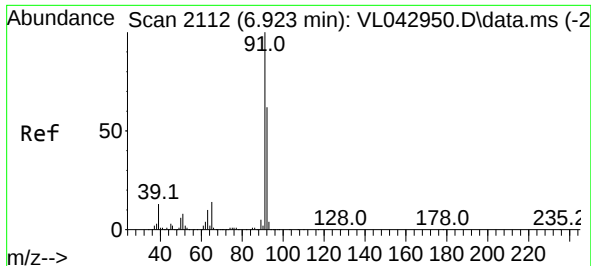
Tgt Ion: 57 Resp: 42705
Ion Ratio Lower Upper
57 100
41 33.8 25.5 38.3
56 0.0 25.8 38.8#



#52
Tetrachloroethene
Concen: 0.782 ppbv
RT: 8.228 min Scan# 2515
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 164 Resp: 13311
Ion Ratio Lower Upper
164 100
166 125.0 103.5 155.3
129 100.8 82.2 123.4
131 87.9 80.1 120.1

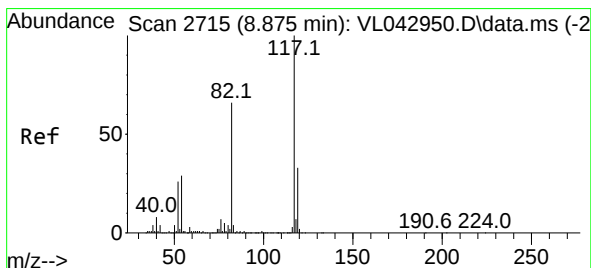
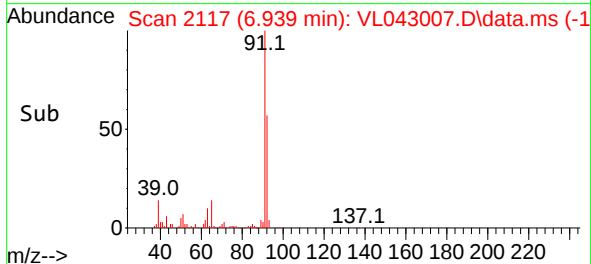
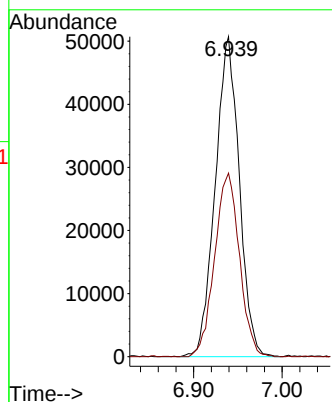
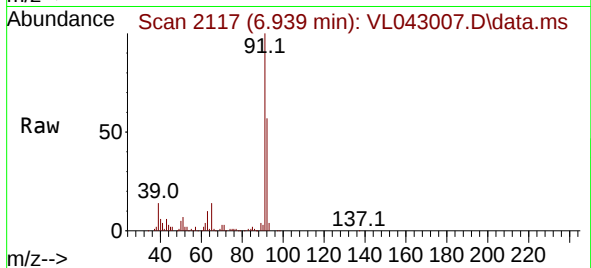




#53
Toluene
Concen: 1.837 ppbv
RT: 6.939 min Scan# 2112
Delta R.T. 0.016 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

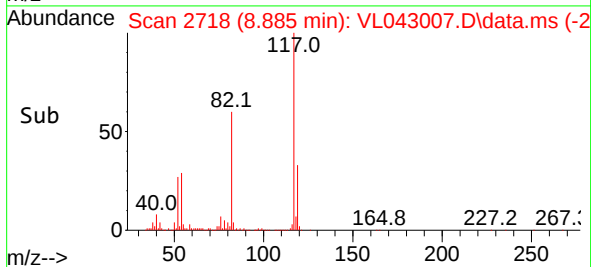
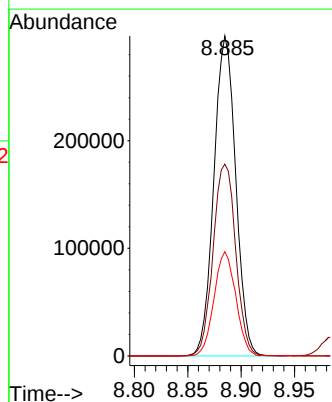
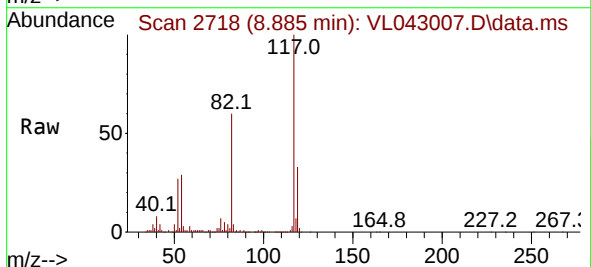
Instrument :
MSVOA_L
ClientSampleId :
SV2

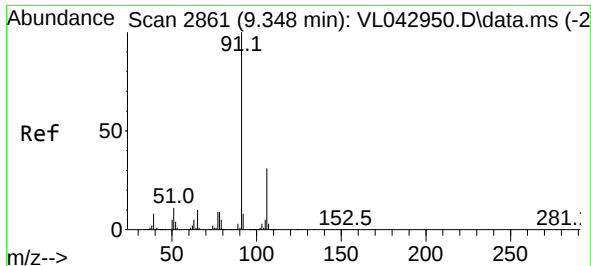
Tgt Ion: 91 Resp: 95651
Ion Ratio Lower Upper
91 100
92 59.1 48.2 72.2



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2718
Delta R.T. 0.010 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 117 Resp: 423322
Ion Ratio Lower Upper
117 100
82 62.2 52.8 79.2
119 32.6 26.5 39.7

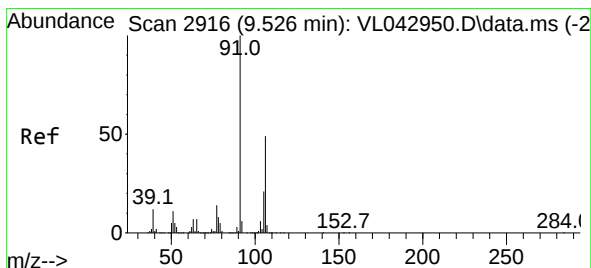
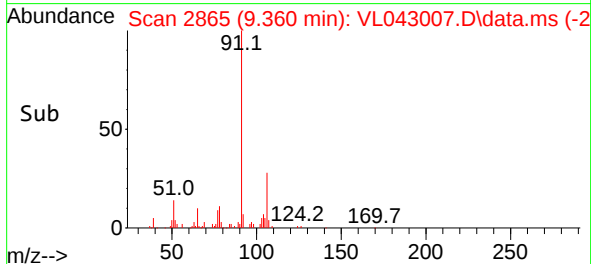
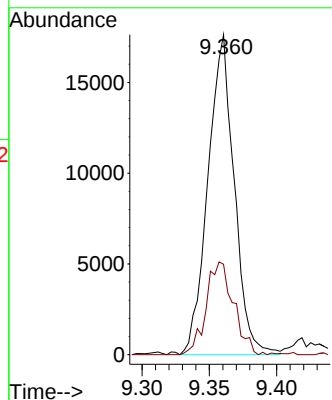
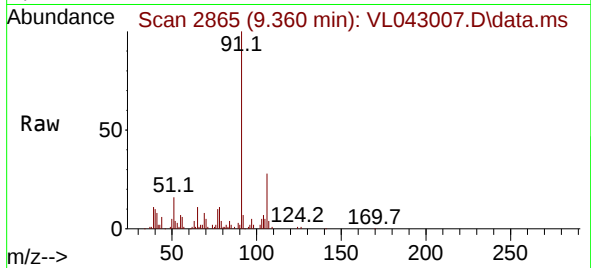




#58
Ethyl Benzene
Concen: 0.345 ppbv
RT: 9.360 min Scan# 21
Delta R.T. 0.013 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

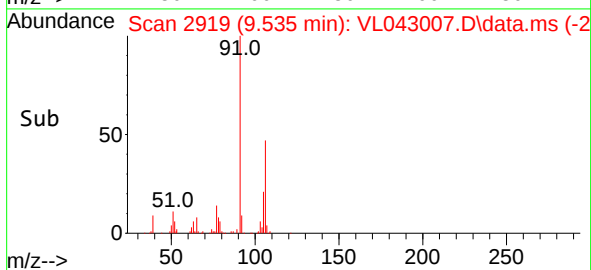
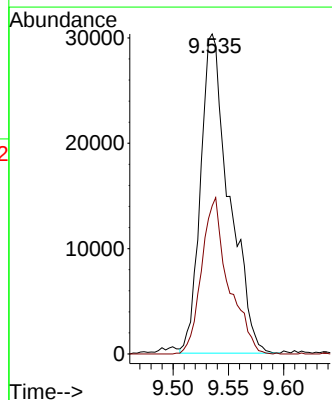
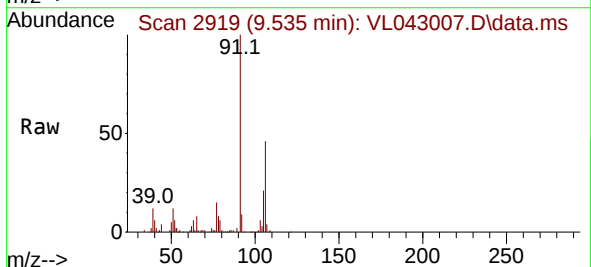
Instrument :
MSVOA_L
ClientSampleId :
SV2

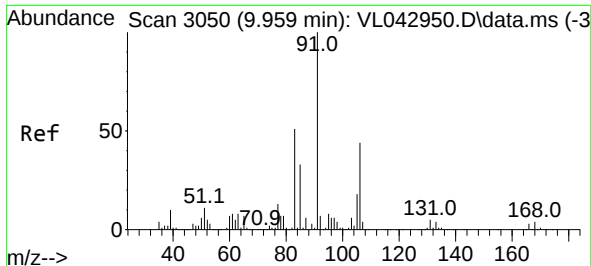
Tgt Ion: 91 Resp: 23962
Ion Ratio Lower Upper
91 100
106 28.3 24.6 37.0



#59
m/p-Xylene
Concen: 0.993 ppbv
RT: 9.535 min Scan# 2919
Delta R.T. 0.009 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 91 Resp: 54439
Ion Ratio Lower Upper
91 100
106 46.1 0.0 0.0#

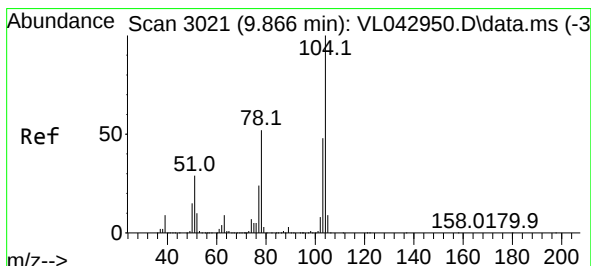
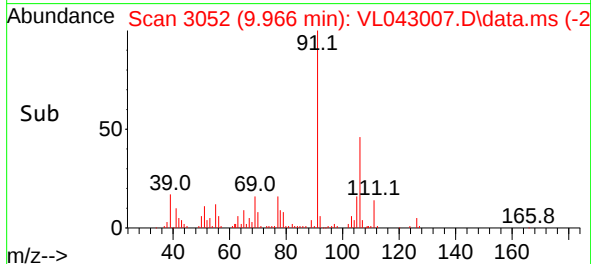
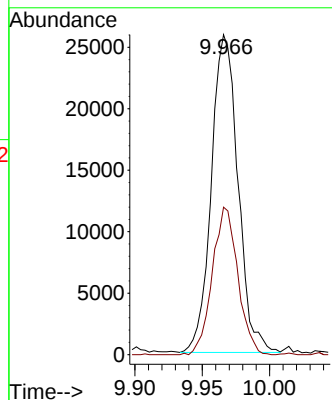
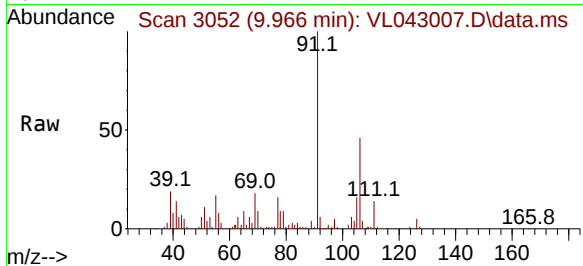




#60
o-Xylene
Concen: 0.649 ppbv
RT: 9.966 min Scan# 3050
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

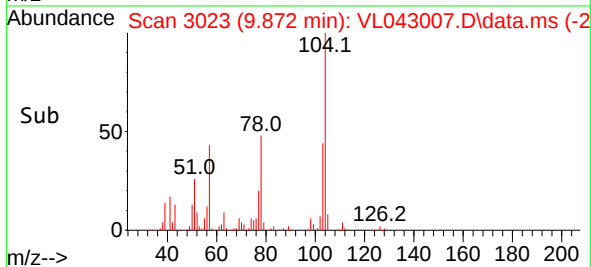
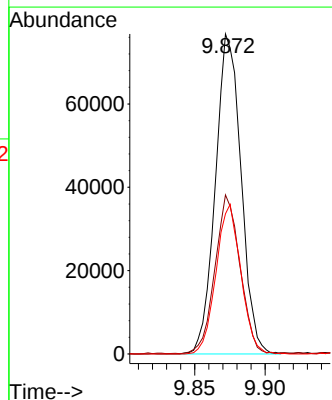
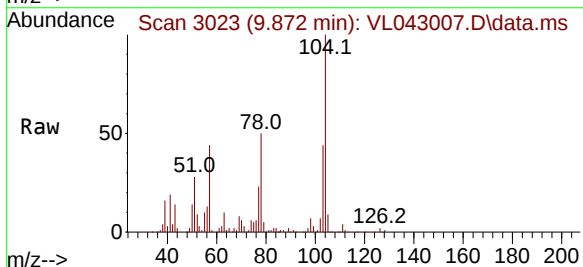
Instrument :
MSVOA_L
ClientSampleId :
SV2

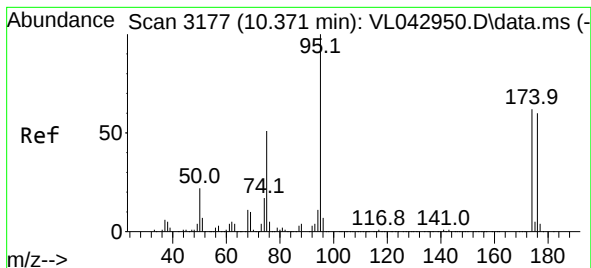
Tgt Ion: 91 Resp: 35535
Ion Ratio Lower Upper
91 100
106 44.4 22.4 67.0



#61
Styrene
Concen: 3.758 ppbv
RT: 9.872 min Scan# 3023
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 104 Resp: 97357
Ion Ratio Lower Upper
104 100
78 49.3 39.9 59.9
103 45.2 36.9 55.3

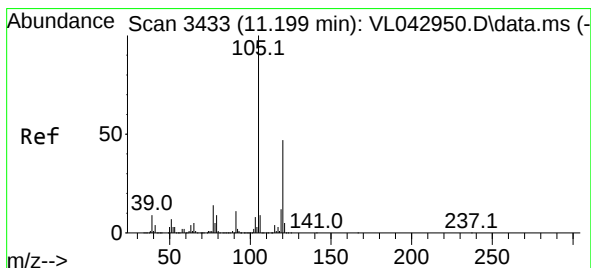
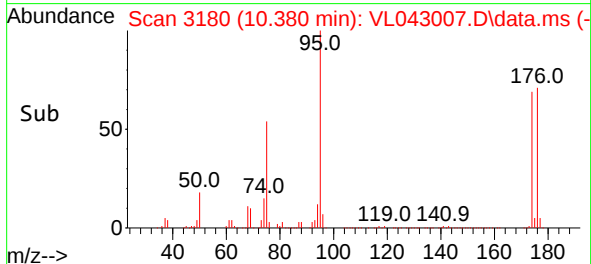
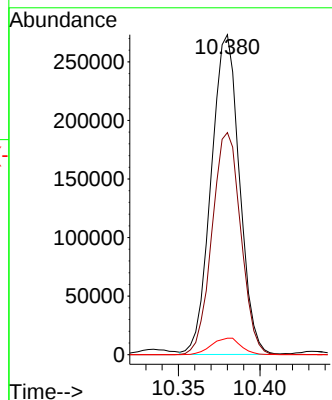
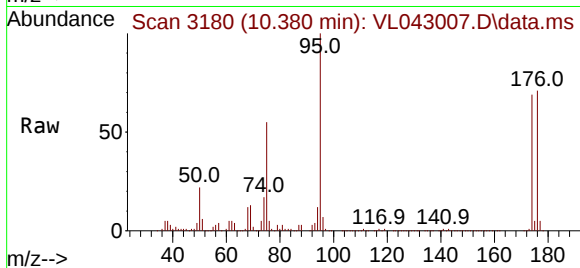




#68
1-Bromo-4-Fluorobenzene
Concen: 10.419 ppbv
RT: 10.380 min Scan# 3177
Delta R.T. 0.009 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

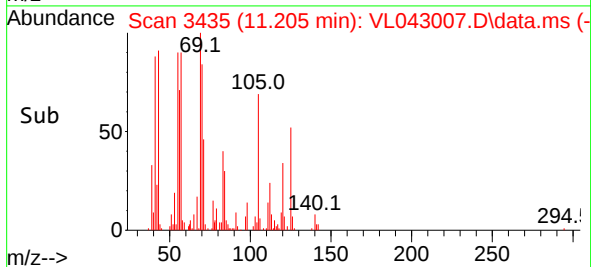
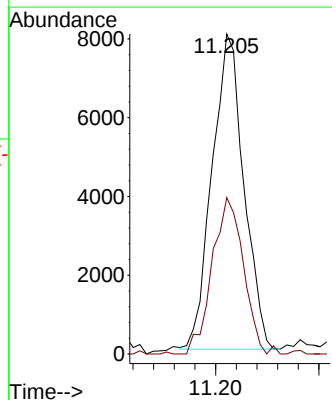
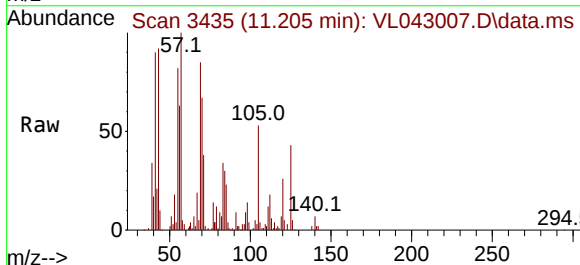
Instrument :
MSVOA_L
ClientSampleId :
SV2

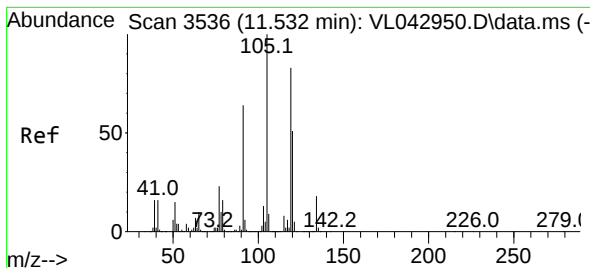
Tgt Ion: 95 Resp: 329247
Ion Ratio Lower Upper
95 100
174 70.8 51.4 77.2
175 5.4 4.0 6.0



#73
1,3,5-Trimethylbenzene
Concen: 0.154 ppbv
RT: 11.205 min Scan# 3435
Delta R.T. 0.006 min
Lab File: VL043007.D
Acq: 24 Sep 2025 13:31

Tgt Ion: 105 Resp: 8544
Ion Ratio Lower Upper
105 100
120 49.6 38.0 57.0





#74

1,2,4-Trimethylbenzene

Concen: 0.399 ppbv

RT: 11.539 min Scan# 3538

Delta R.T. 0.006 min

Lab File: VL043007.D

Acq: 24 Sep 2025 13:31

Instrument :

MSVOA_L

ClientSampleId :

SV2

Tgt Ion:105 Resp: 24496

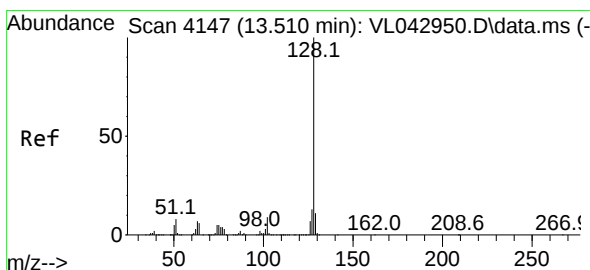
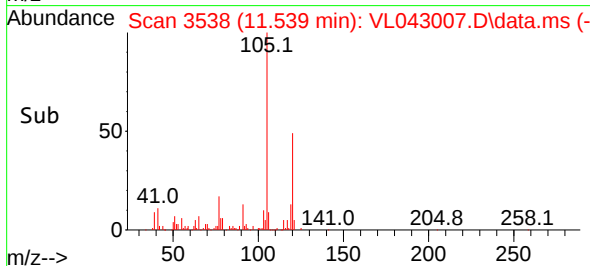
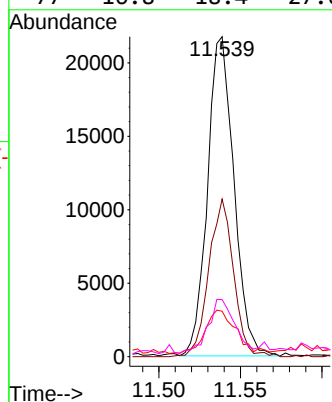
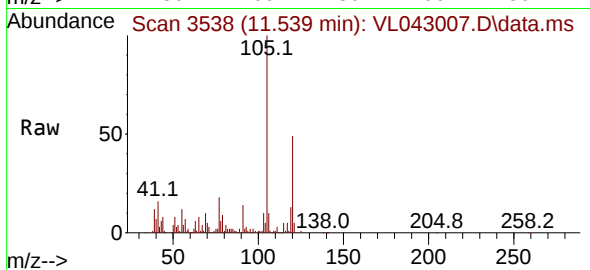
Ion Ratio Lower Upper

105 100

120 49.0 40.9 61.3

91 13.1 51.2 76.8#

77 16.8 18.4 27.6#



#79

Naphthalene

Concen: 0.198 ppbv

RT: 13.513 min Scan# 4148

Delta R.T. 0.003 min

Lab File: VL043007.D

Acq: 24 Sep 2025 13:31

Tgt Ion:128 Resp: 10737

Ion Ratio Lower Upper

128 100

127 17.7 10.6 15.8#

129 11.2 9.0 13.6

