

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL040925\
 Data File : VL042296.D
 Acq On : 09 Apr 2025 16:57
 Operator : SY/MD
 Sample : Q1665-20
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B9-3-3242025

Quant Time: Apr 10 01:46:46 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Mar 28 02:00:52 2025
 Response via : Initial Calibration

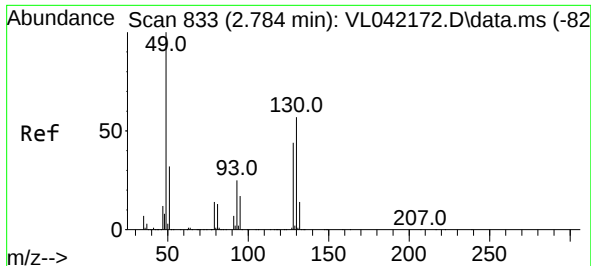
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	161865	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	384782	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	329132	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	253889	9.393	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.900%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	10098	0.423	ppbv	94
3) Chlorodifluoromethane	1.622	51	2003	0.082	ppbv	99
4) Chloromethane	1.531	50	4745	0.486	ppbv	96
7) Chloroethane	1.706	64	129	0.033	ppbv #	70
9) Propene	1.884	41	48825	4.363	ppbv	91
10) Heptane	4.981	43	1866	0.063	ppbv #	28
11) Trichlorofluoromethane	1.877	101	4945	0.213	ppbv #	74
12) 1,1,2-Trichlorotrifluo...	2.140	101	1447	0.076	ppbv	95
13) Ethanol	1.722	45	33576	31.739	ppbv	81
15) Acetone	1.835	43	182118	8.045	ppbv	92
16) 1,3-Butadiene	1.599	39	2415	0.218	ppbv #	48
17) tert-Butyl alcohol	1.884	59	17996	0.638	ppbv	100
19) Isopropyl Alcohol	1.884	45	498343	39.016	ppbv #	32
20) Methylene Chloride	2.062	84	11004	1.305	ppbv	96
21) Allyl Chloride	2.230	41	746	0.047	ppbv #	26
23) Vinyl Acetate	2.473	43	11170	1.140	ppbv #	44
25) Ethyl Acetate	2.826	43	31835	0.542	ppbv #	87
26) Hexane	2.826	57	33283	1.467	ppbv #	36
29) Chloroform	2.845	83	1483	0.045	ppbv #	57
34) 2-Butanone	2.560	43	71103	2.548	ppbv	95
35) Carbon Tetrachloride	3.758	117	2271	0.076	ppbv #	90
36) Benzene	3.654	78	10547	0.276	ppbv #	94
39) 1,2-Dichloropropane	3.959	63	102058	7.346	ppbv #	23
41) Tetrahydrofuran	3.062	42	4483	0.279	ppbv	92
44) 2,2,4-Trimethylpentane	4.641	57	2009	0.031	ppbv #	42
53) Toluene	6.930	91	24055	0.532	ppbv	98
57) Chlorobenzene	8.920	112	1926	0.062	ppbv #	89
58) Ethyl Benzene	9.354	91	4472	0.076	ppbv	96
59) m/p-Xylene	9.542	91	3344	0.072	ppbv #	31
60) o-Xylene	9.963	91	5830	0.125	ppbv	99
74) 1,2,4-Trimethylbenzene	11.536	105	2269	0.039	ppbv #	74

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

Quant Time: Apr 10 01:46:46 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
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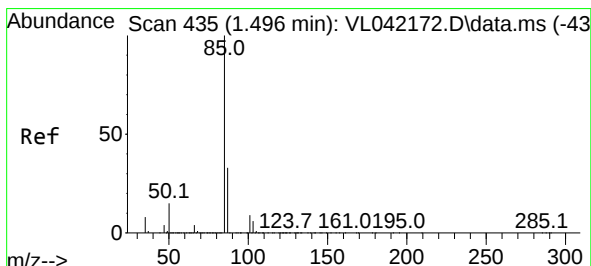
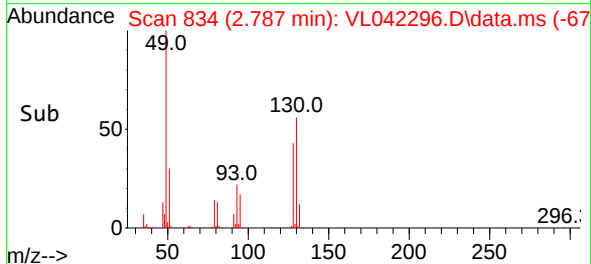
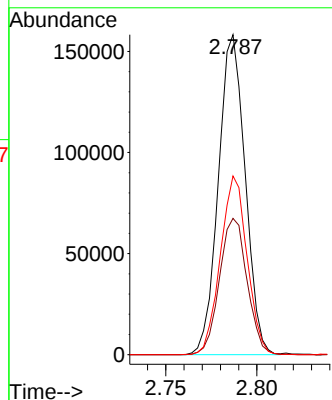
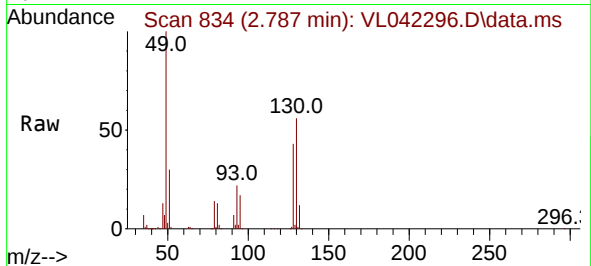




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

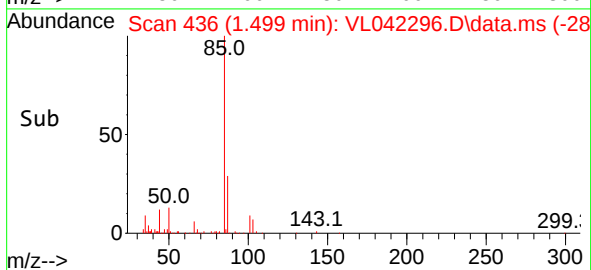
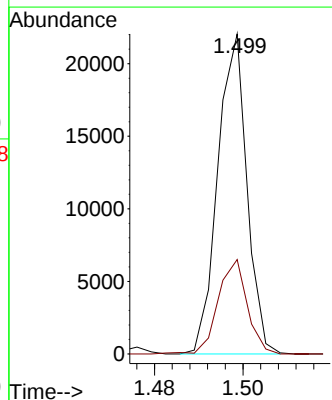
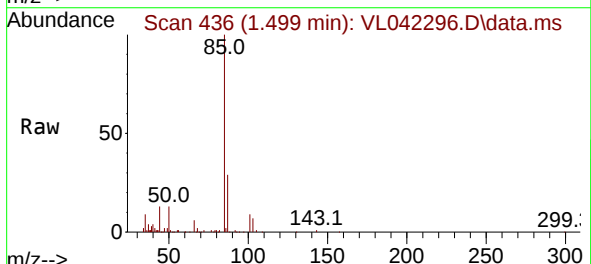
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

Tgt Ion: 49 Resp: 161865
Ion Ratio Lower Upper
49 100
128 43.9 22.9 68.5
130 55.7 28.8 86.4



#2
Dichlorodifluoromethane
Concen: 0.423 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 85 Resp: 10098
Ion Ratio Lower Upper
85 100
87 29.5 26.1 39.1

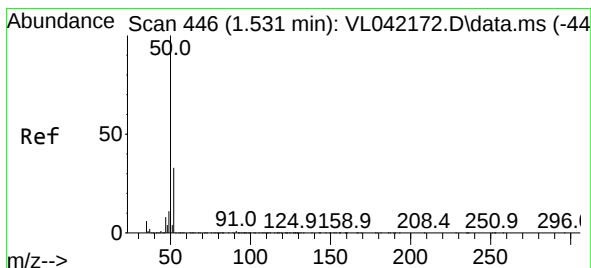
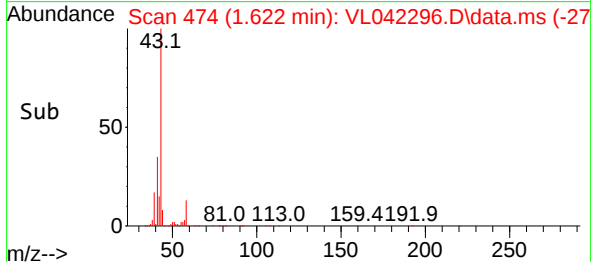
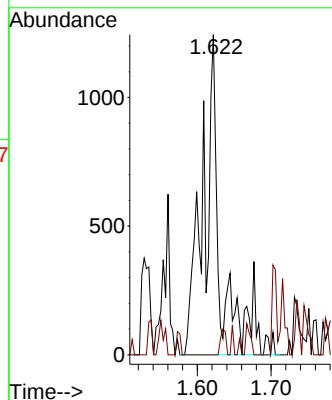
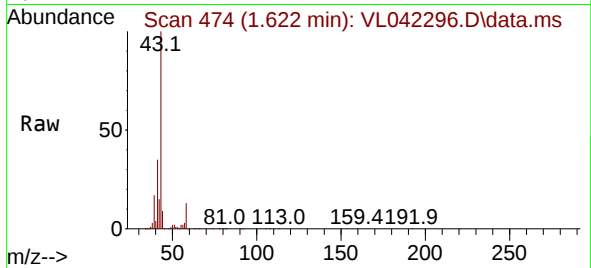




#3
Chlorodifluoromethane
Concen: 0.082 ppbv
RT: 1.622 min Scan# 41
Delta R.T. 0.149 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

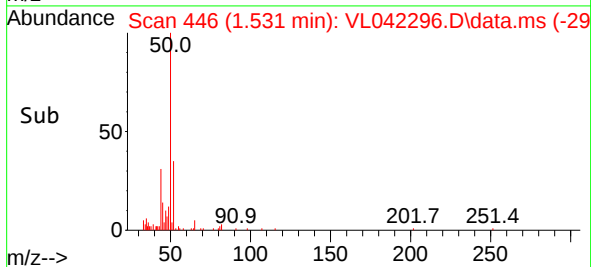
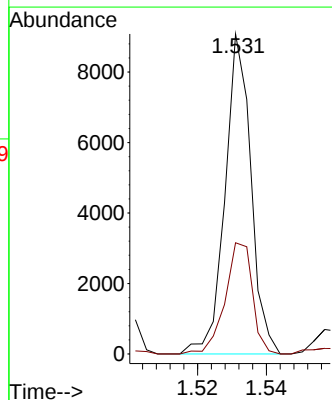
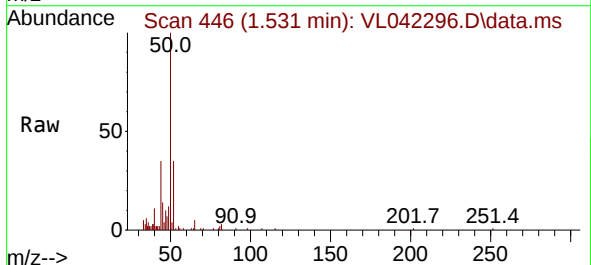
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MSVOA_L
ClientSampleId :
IA-B9-3-3242025

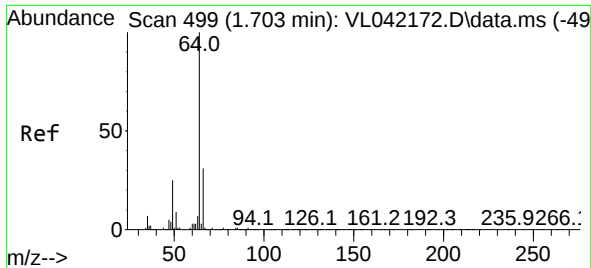
Tgt Ion: 51 Resp: 2003
Ion Ratio Lower Upper
51 100
67 19.4 15.0 22.6



#4
Chloromethane
Concen: 0.486 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 50 Resp: 4745
Ion Ratio Lower Upper
50 100
52 34.8 26.1 39.1

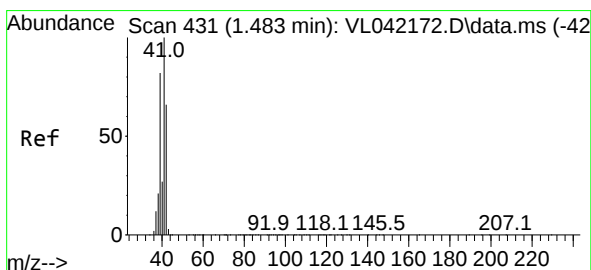
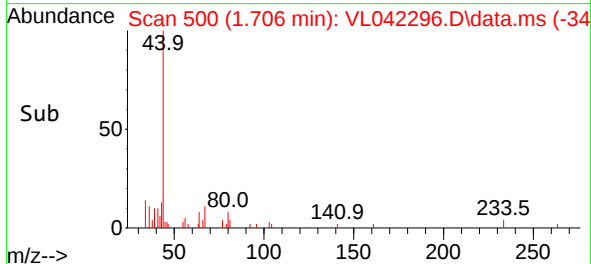
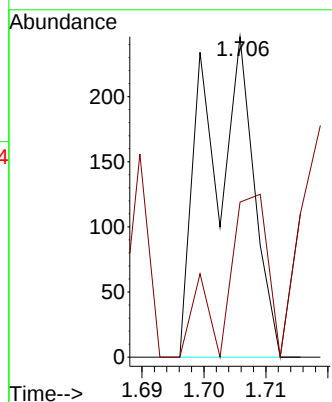
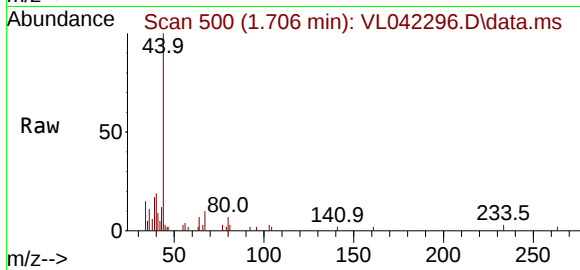




#7
Chloroethane
Concen: 0.033 ppbv
RT: 1.706 min Scan# 500
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

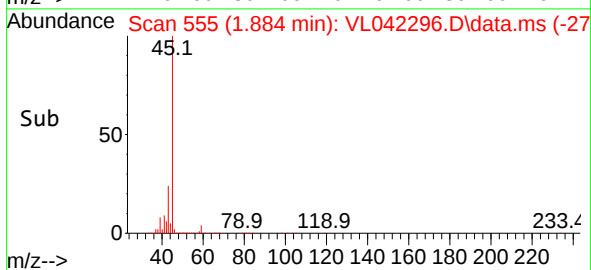
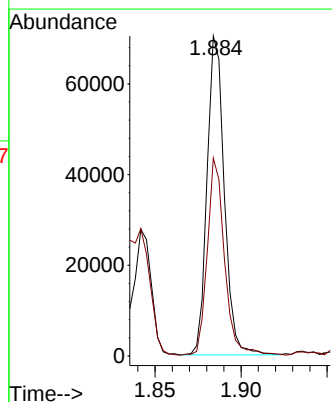
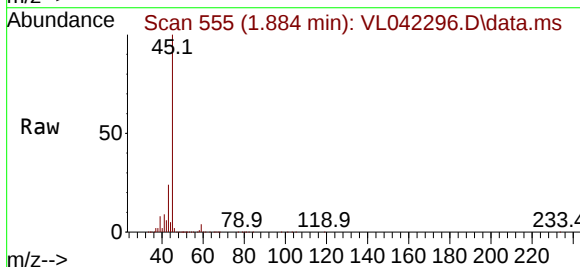
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

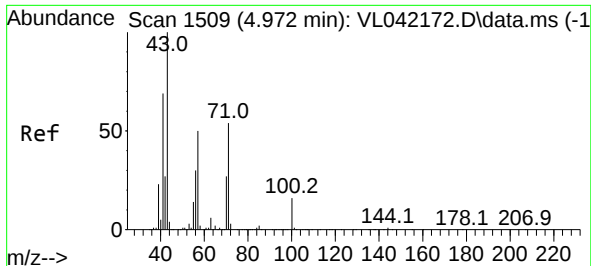
Tgt Ion: 64 Resp: 129
Ion Ratio Lower Upper
64 100
66 48.4 25.2 37.8#



#9
Propene
Concen: 4.363 ppbv
RT: 1.884 min Scan# 555
Delta R.T. 0.401 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 41 Resp: 48825
Ion Ratio Lower Upper
41 100
42 61.7 55.4 83.2

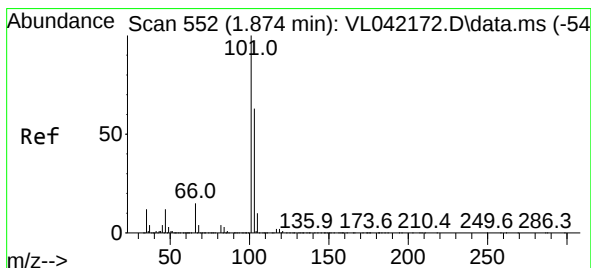
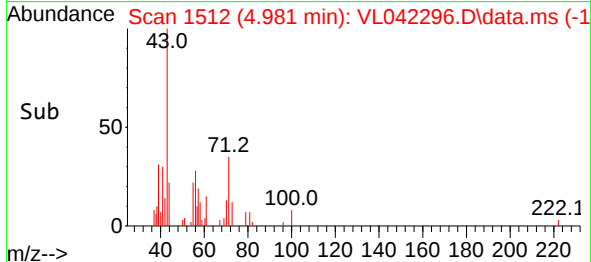
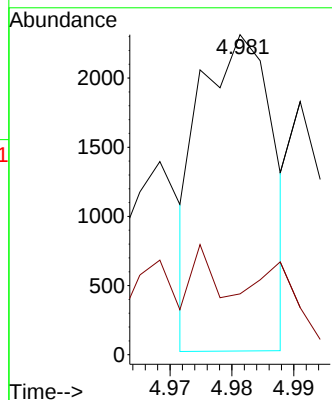
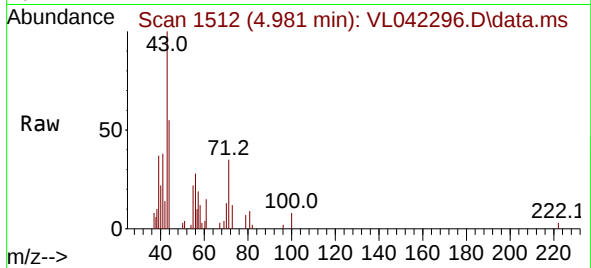




#10
Heptane
Concen: 0.063 ppbv
RT: 4.981 min Scan# 11
Delta R.T. 0.009 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

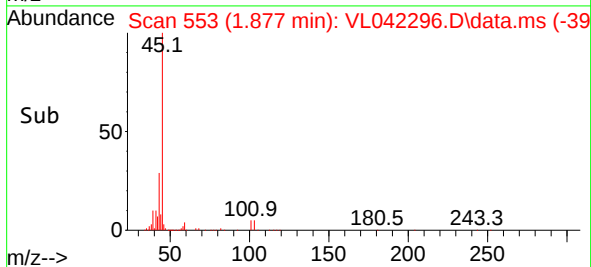
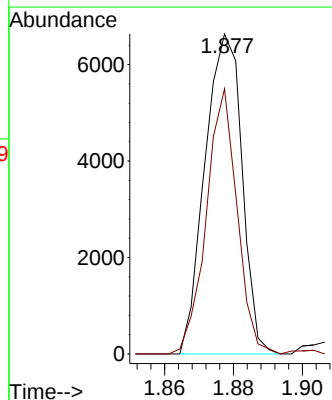
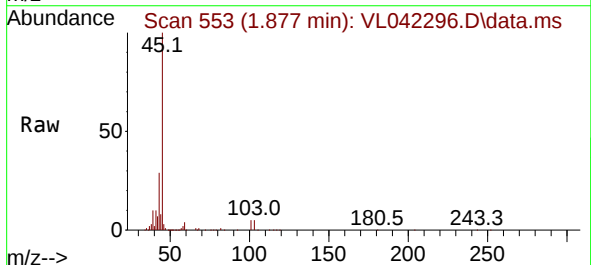
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

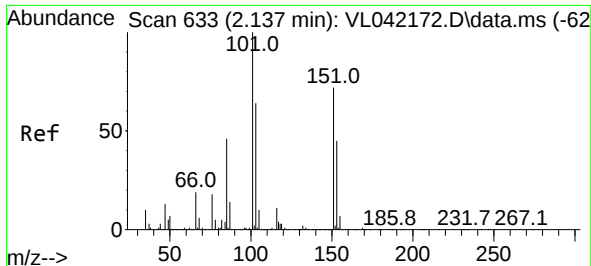
Tgt Ion: 43 Resp: 1866
Ion Ratio Lower Upper
43 100
57 0.0 39.4 59.2#



#11
Trichlorofluoromethane
Concen: 0.213 ppbv
RT: 1.877 min Scan# 553
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 101 Resp: 4945
Ion Ratio Lower Upper
101 100
103 82.8 50.2 75.2#

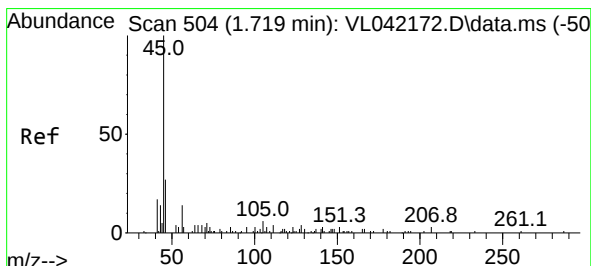
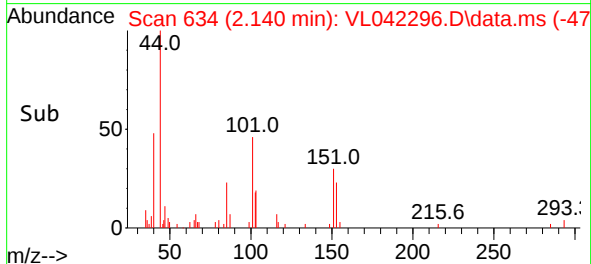
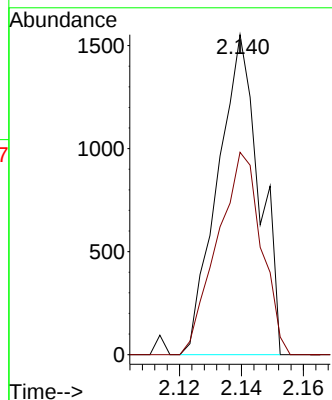
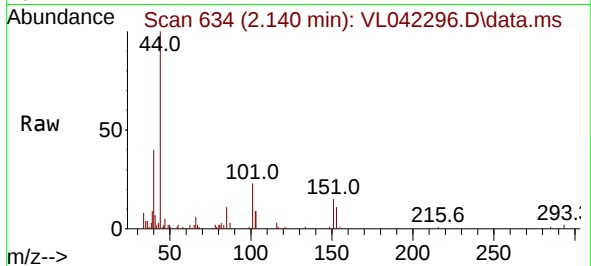




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.076 ppbv
RT: 2.140 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

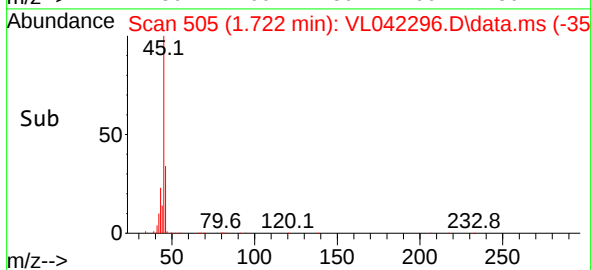
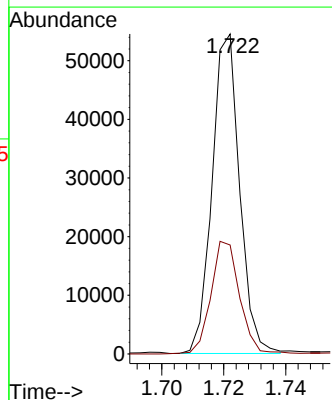
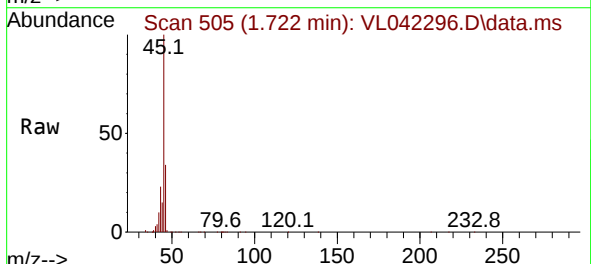
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

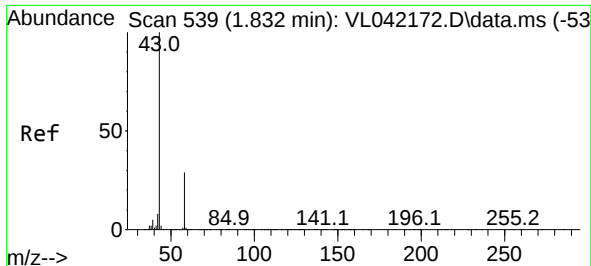
Tgt Ion:101 Resp: 1447
Ion Ratio Lower Upper
101 100
151 67.2 57.1 85.7



#13
Ethanol
Concen: 31.739 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 45 Resp: 33576
Ion Ratio Lower Upper
45 100
46 37.1 20.2 80.8





#15

Acetone

Concen: 8.045 ppbv

RT: 1.835 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

Instrument :

MSVOA_L

ClientSampleId :

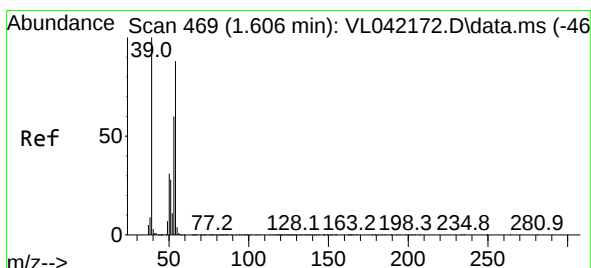
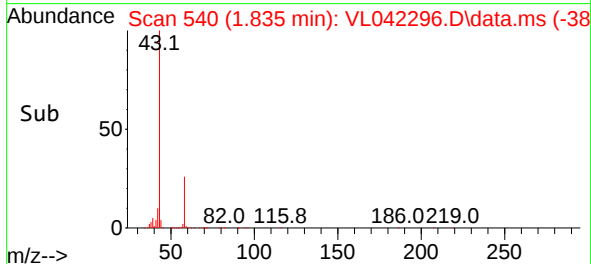
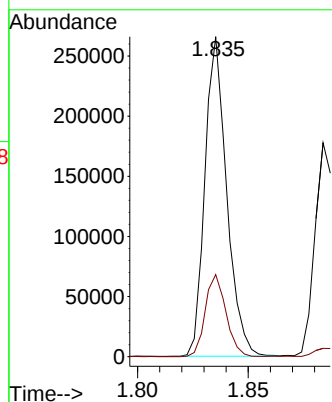
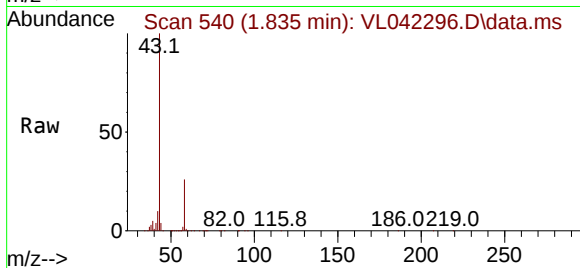
IA-B9-3-3242025

Tgt Ion: 43 Resp: 182118

Ion Ratio Lower Upper

43 100

58 24.5 23.2 34.8



#16

1,3-Butadiene

Concen: 0.218 ppbv

RT: 1.599 min Scan# 467

Delta R.T. -0.007 min

Lab File: VL042296.D

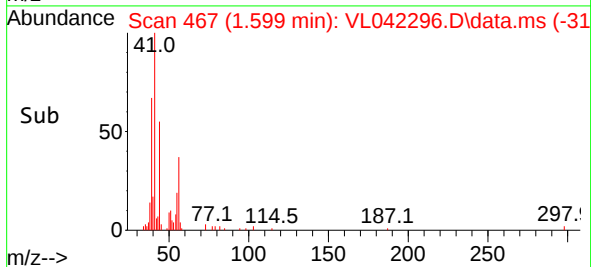
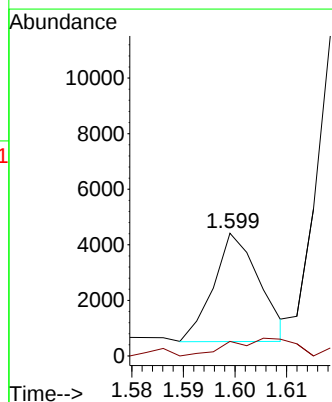
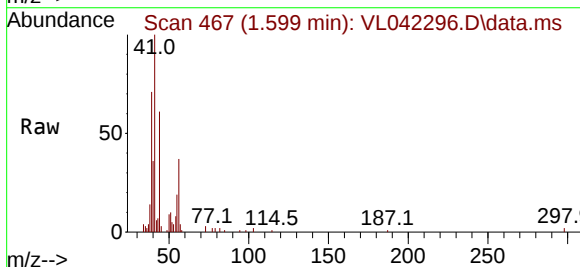
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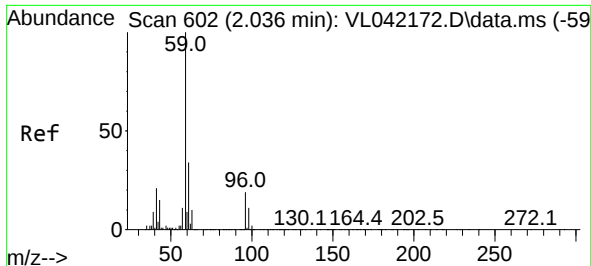
Tgt Ion: 39 Resp: 2415

Ion Ratio Lower Upper

39 100

54 31.7 60.7 91.1#

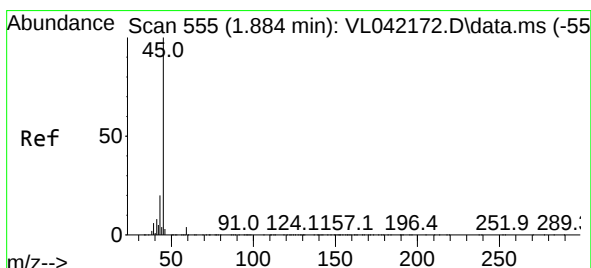
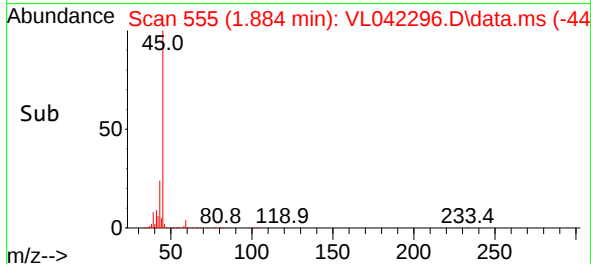
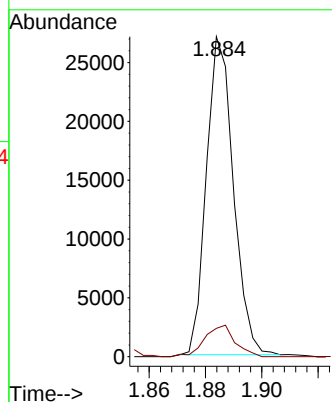
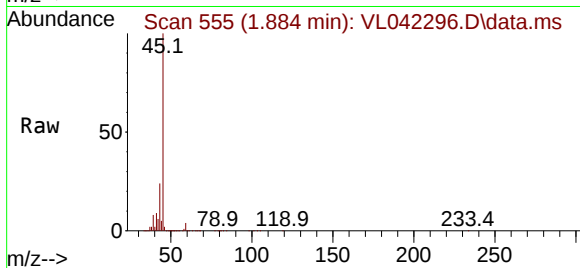




#17
tert-Butyl alcohol
Concen: 0.638 ppbv
RT: 1.884 min Scan# 51
Delta R.T. -0.152 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

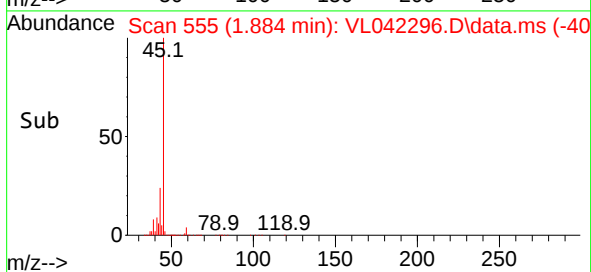
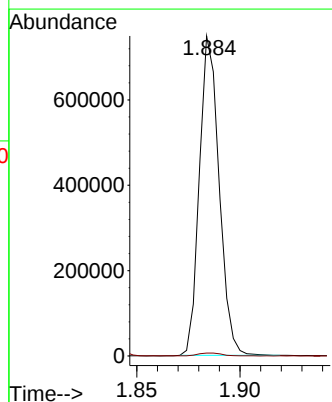
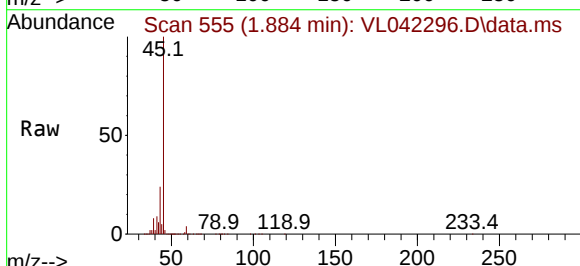
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

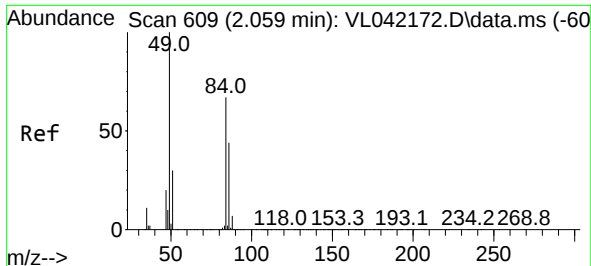
Tgt Ion: 59 Resp: 17996
Ion Ratio Lower Upper
59 100
57 11.1 8.9 13.3



#19
Isopropyl Alcohol
Concen: 39.016 ppbv
RT: 1.884 min Scan# 555
Delta R.T. -0.000 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 45 Resp: 498343
Ion Ratio Lower Upper
45 100
58 1.2 36.9 55.3#





#20

Methylene Chloride

Concen: 1.305 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.003 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

Instrument :

MSVOA_L

ClientSampleId :

IA-B9-3-3242025

Tgt Ion: 84 Resp: 11004

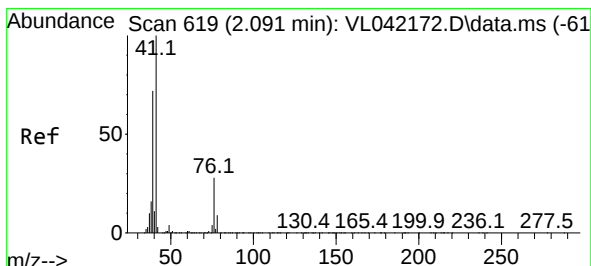
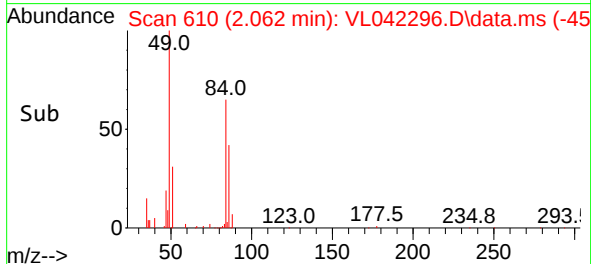
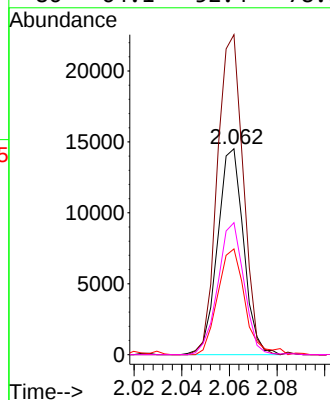
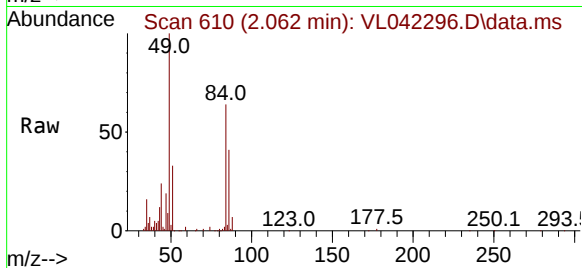
Ion Ratio Lower Upper

84 100

49 155.3 120.2 180.4

51 51.4 37.4 56.0

86 64.1 52.4 78.6



#21

Allyl Chloride

Concen: 0.047 ppbv

RT: 2.230 min Scan# 662

Delta R.T. 0.139 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

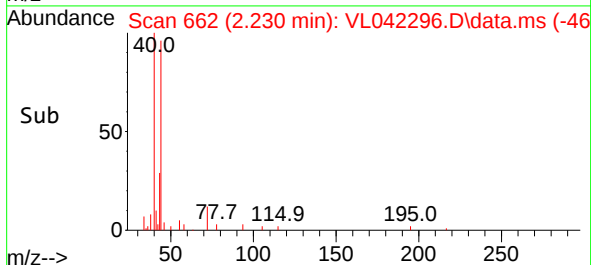
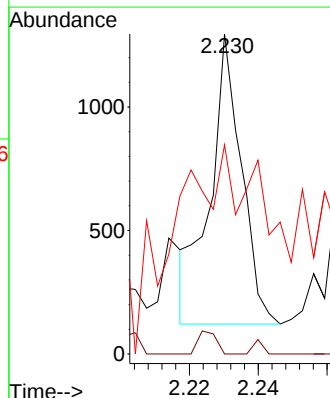
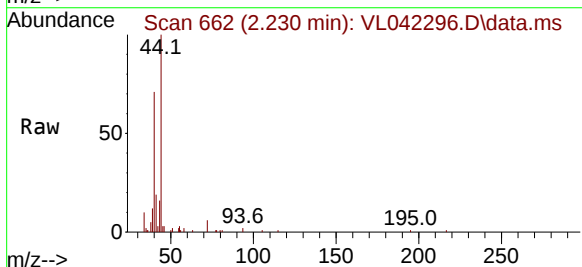
Tgt Ion: 41 Resp: 746

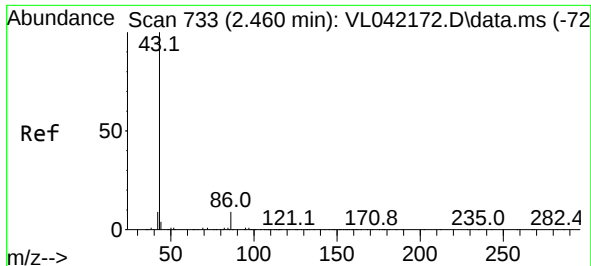
Ion Ratio Lower Upper

41 100

76 10.3 24.1 36.1#

39 0.0 61.1 91.7#

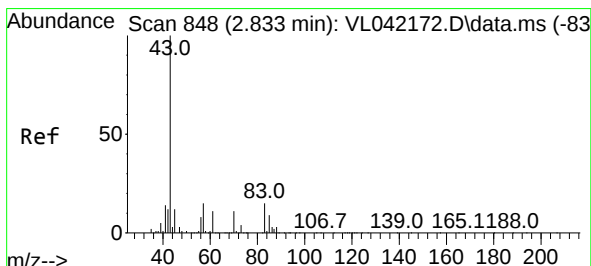
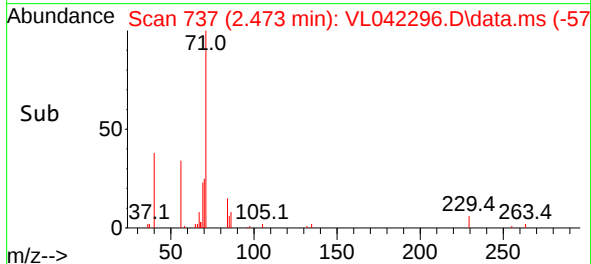
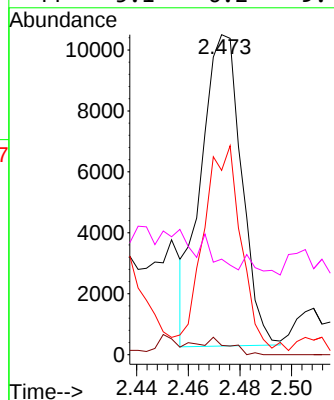
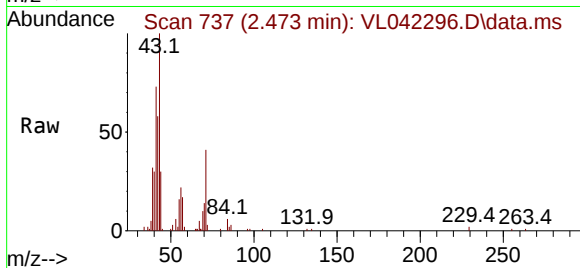




#23
 Vinyl Acetate
 Concen: 1.140 ppbv
 RT: 2.473 min Scan# 71
 Delta R.T. 0.013 min
 Lab File: VL042296.D
 Acq: 09 Apr 2025 16:57

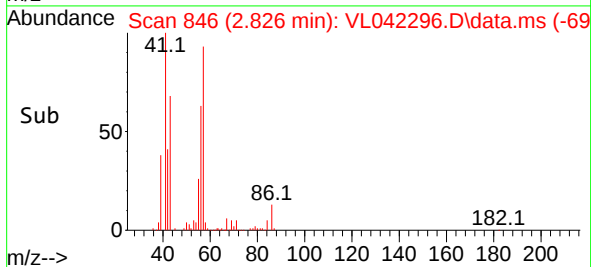
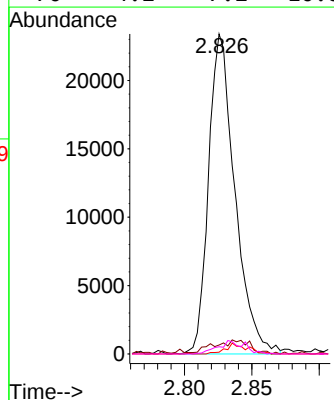
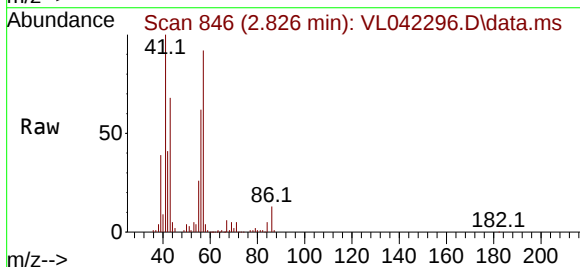
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B9-3-3242025

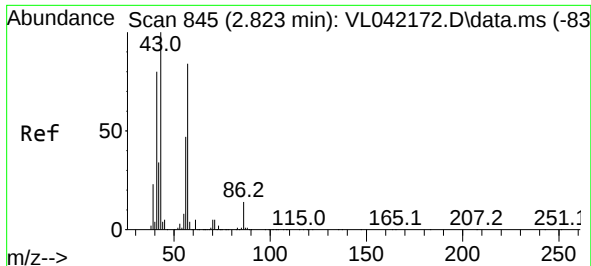
Tgt Ion: 43	Resp: 11170
Ion Ratio	Lower Upper
43 100	
86 3.1	5.5 8.3#
42 56.1	8.6 13.0#
44 5.1	6.2 9.4#



#25
 Ethyl Acetate
 Concen: 0.542 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.007 min
 Lab File: VL042296.D
 Acq: 09 Apr 2025 16:57

Tgt	Ion: 43	Resp:	31835
Ion	Ratio	Lower	Upper
43	100		
45	6.9	8.2	12.2#
61	2.7	7.3	10.9#
70	4.2	7.2	10.8#

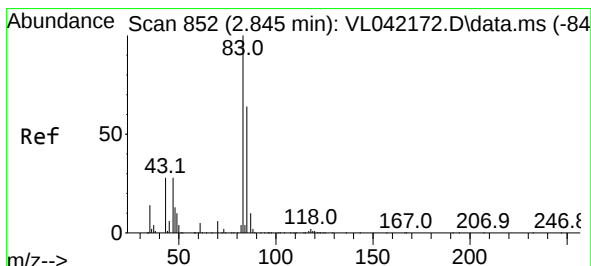
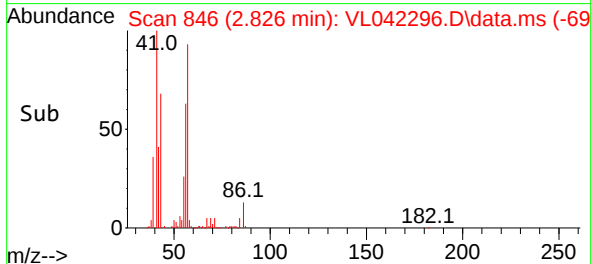
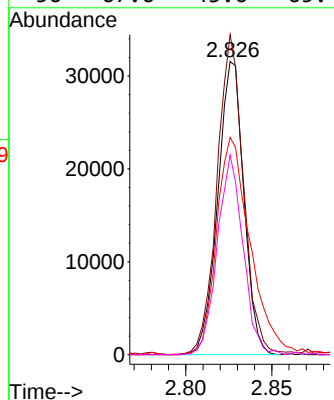
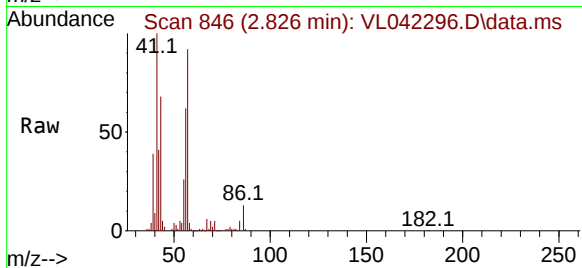




#26
Hexane
Concen: 1.467 ppbv
RT: 2.826 min Scan# 84
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

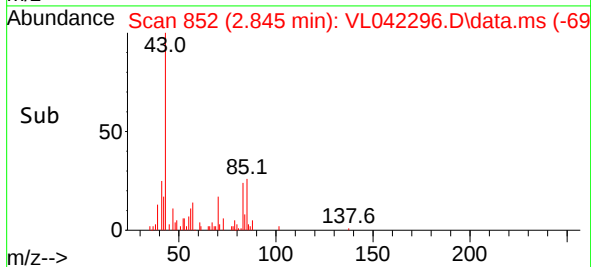
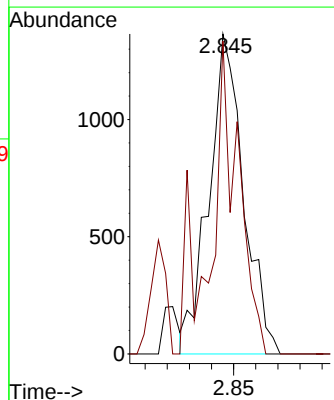
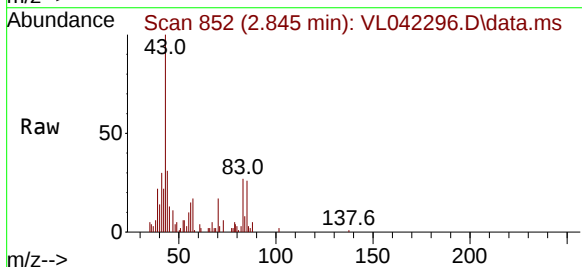
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

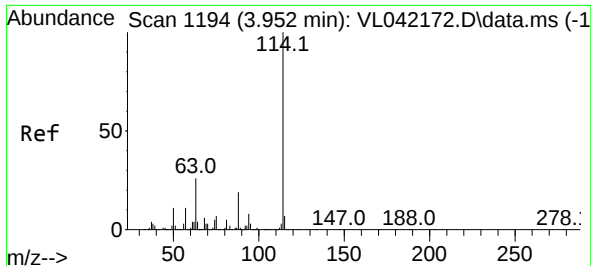
Tgt Ion: 57 Resp: 33283
Ion Ratio Lower Upper
57 100
41 112.6 76.6 114.8
43 96.8 207.8 311.8#
56 67.6 43.6 65.4#



#29
Chloroform
Concen: 0.045 ppbv
RT: 2.845 min Scan# 852
Delta R.T. -0.000 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 83 Resp: 1483
Ion Ratio Lower Upper
83 100
85 97.8 51.4 77.2#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. 0.006 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

Instrument :

MSVOA_L

ClientSampleId :

IA-B9-3-3242025

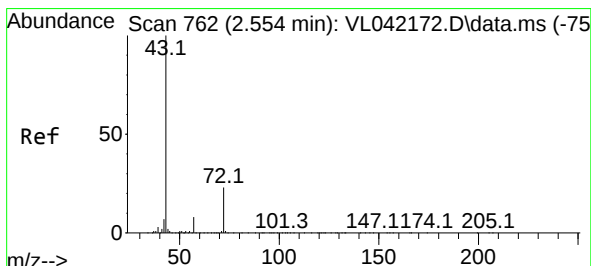
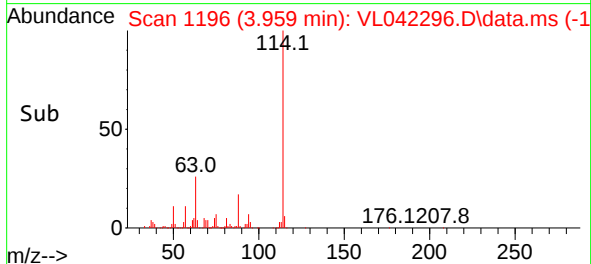
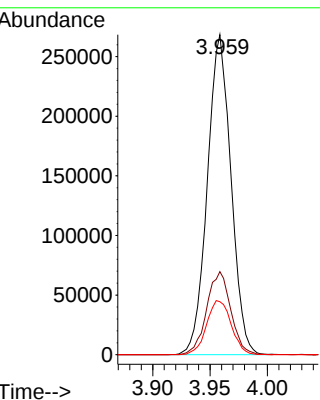
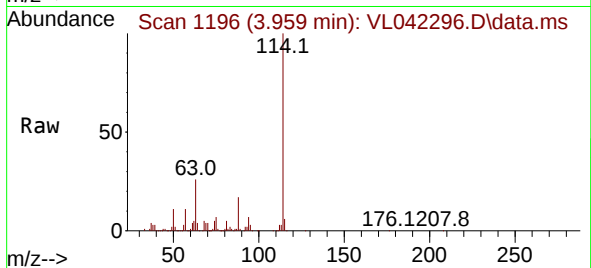
Tgt Ion:114 Resp: 384782

Ion Ratio Lower Upper

114 100

63 26.6 20.7 31.1

88 17.6 15.0 22.4



#34

2-Butanone

Concen: 2.548 ppbv

RT: 2.560 min Scan# 764

Delta R.T. 0.006 min

Lab File: VL042296.D

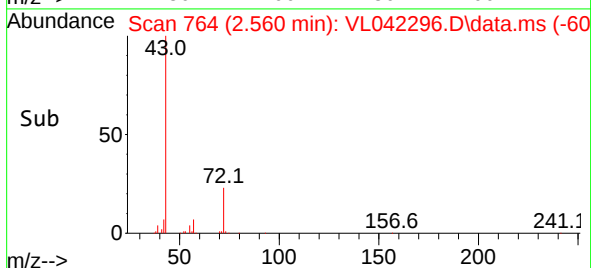
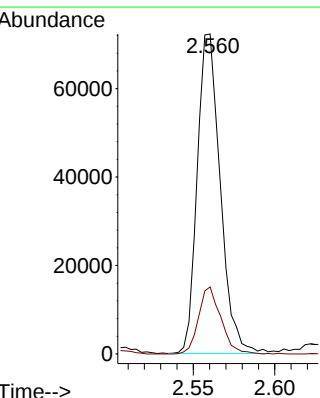
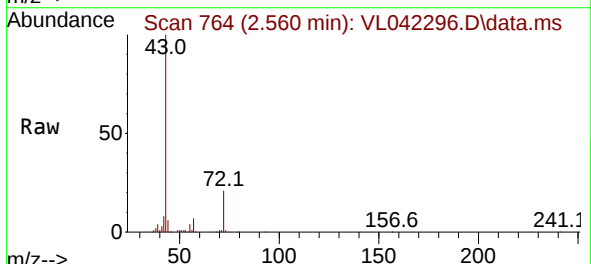
Acq: 09 Apr 2025 16:57

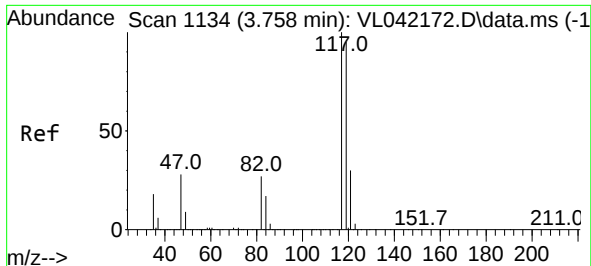
Tgt Ion: 43 Resp: 71103

Ion Ratio Lower Upper

43 100

72 20.4 18.2 27.2

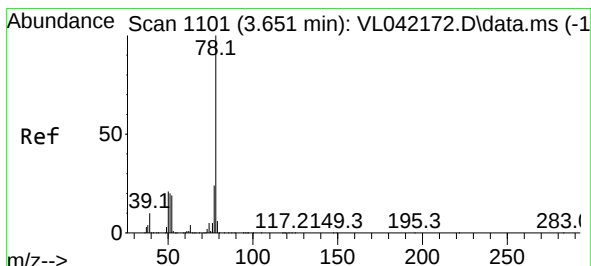
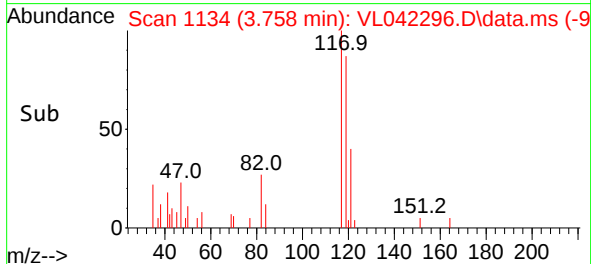
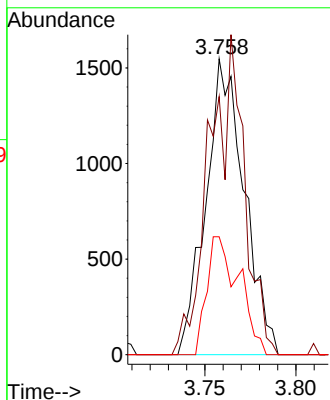
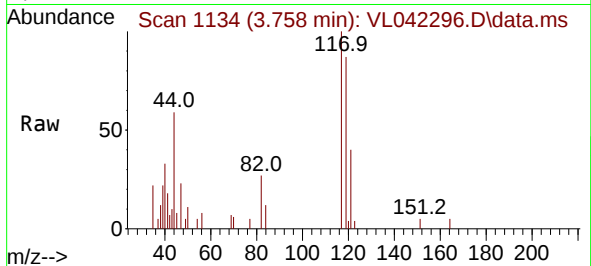




#35
Carbon Tetrachloride
Concen: 0.076 ppbv
RT: 3.758 min Scan# 1134
Delta R.T. -0.000 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

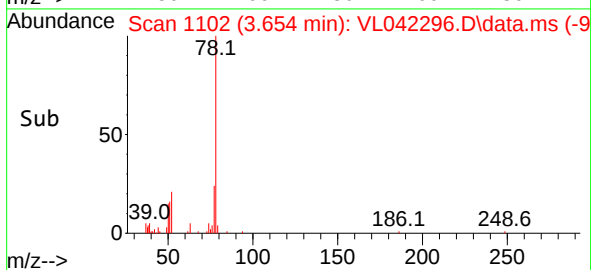
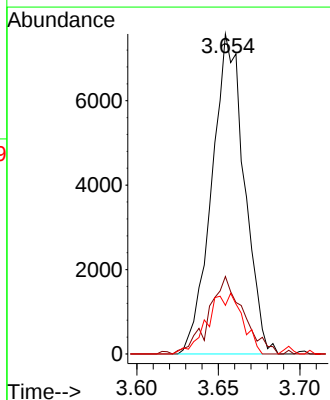
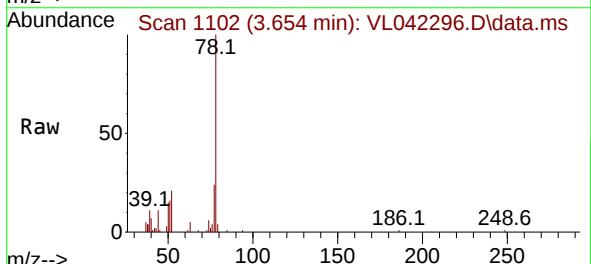
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

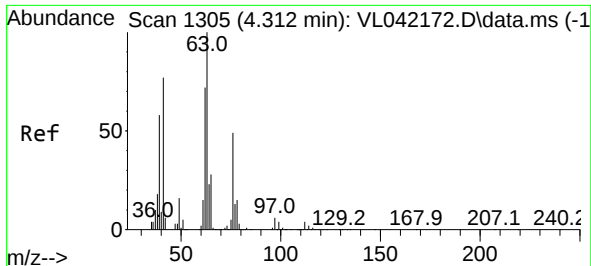
Tgt Ion:117 Resp: 2271
Ion Ratio Lower Upper
117 100
119 87.2 76.2 114.2
121 39.9 24.2 36.4#



#36
Benzene
Concen: 0.276 ppbv
RT: 3.654 min Scan# 1102
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 78 Resp: 10547
Ion Ratio Lower Upper
78 100
77 24.2 19.1 28.7
50 15.2 16.6 24.8#





#39

1,2-Dichloropropane

Concen: 7.346 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.353 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

Instrument :

MSVOA_L

ClientSampleId :

IA-B9-3-3242025

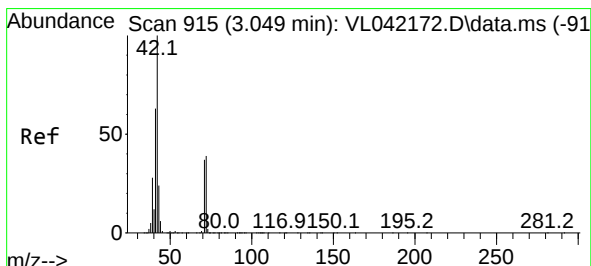
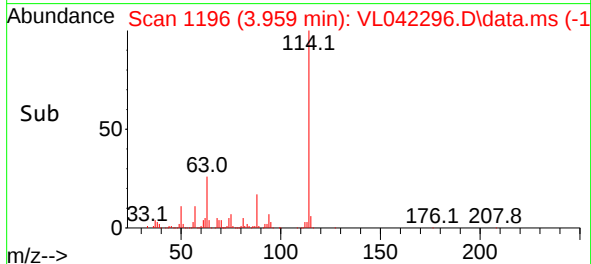
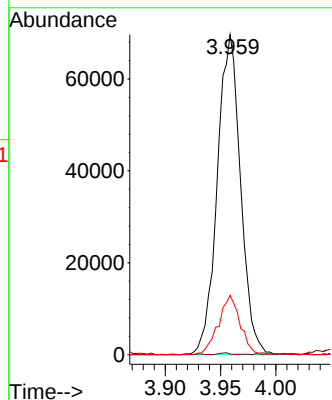
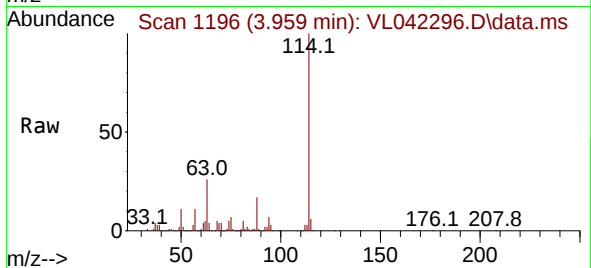
Tgt Ion: 63 Resp: 102058

Ion Ratio Lower Upper

63 100

41 0.2 61.7 92.5#

62 18.5 57.6 86.4#



#41

Tetrahydrofuran

Concen: 0.279 ppbv

RT: 3.062 min Scan# 919

Delta R.T. 0.013 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

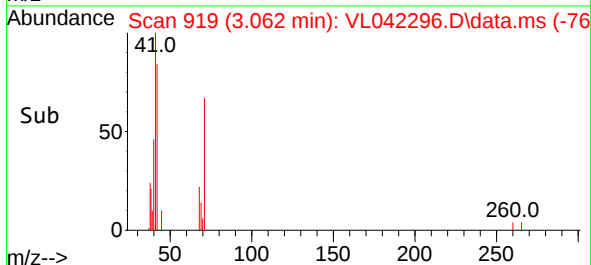
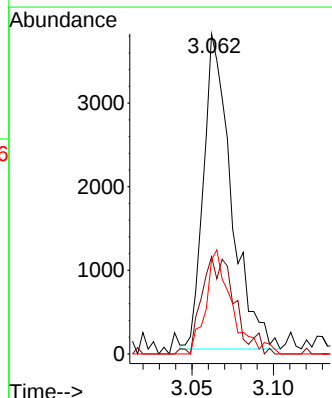
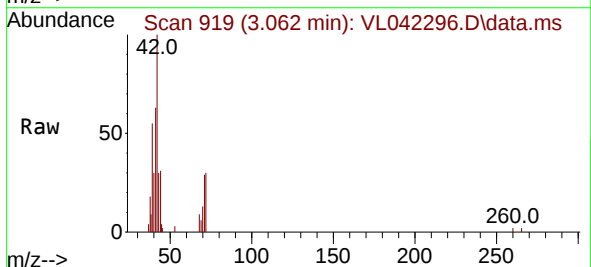
Tgt Ion: 42 Resp: 4483

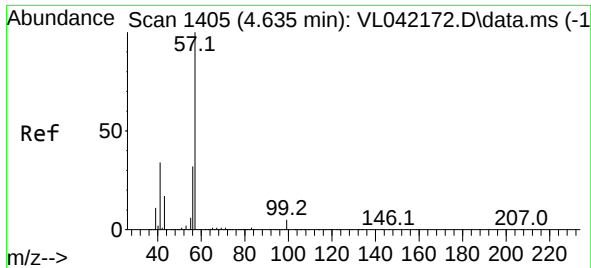
Ion Ratio Lower Upper

42 100

72 36.6 31.4 47.0

71 30.6 30.2 45.4

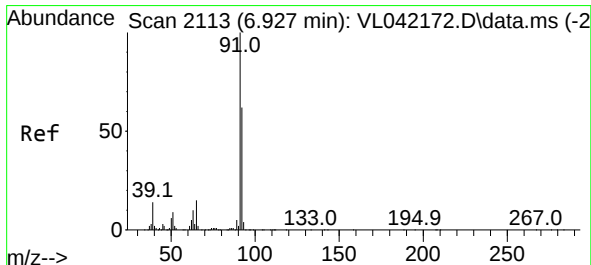
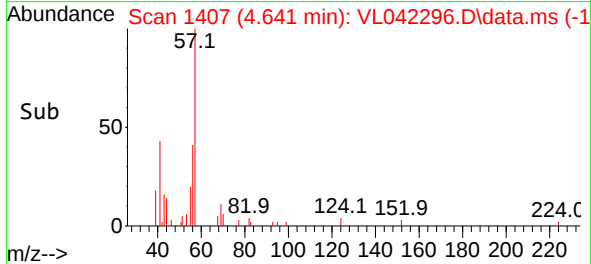
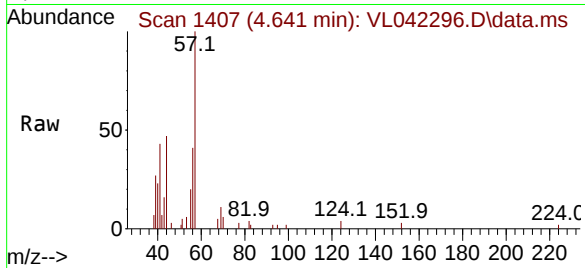




#44
2,2,4-Trimethylpentane
Concen: 0.031 ppbv
RT: 4.641 min Scan# 1405
Delta R.T. 0.006 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

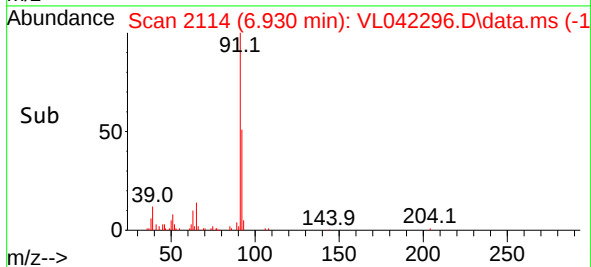
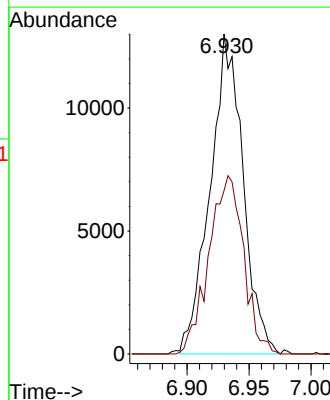
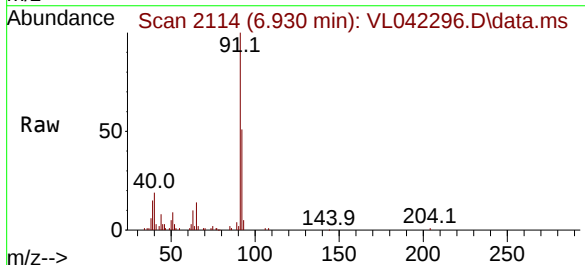
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

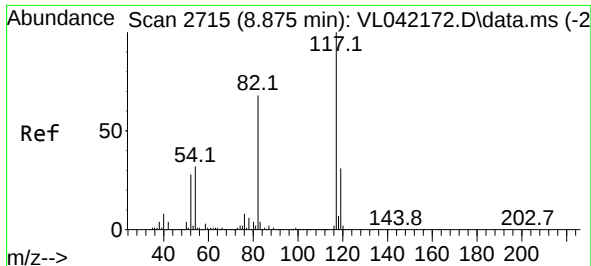
Tgt Ion: 57 Resp: 2009
Ion Ratio Lower Upper
57 100
41 0.0 26.8 40.2#
56 0.0 25.6 38.4#



#53
Toluene
Concen: 0.532 ppbv
RT: 6.930 min Scan# 2114
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion: 91 Resp: 24055
Ion Ratio Lower Upper
91 100
92 58.8 48.4 72.6

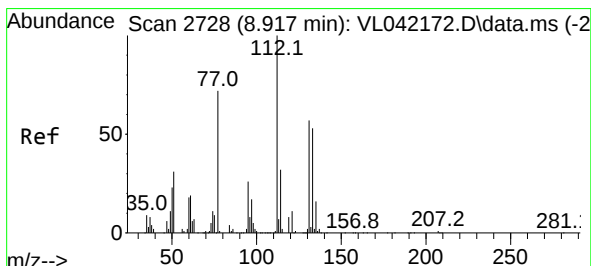
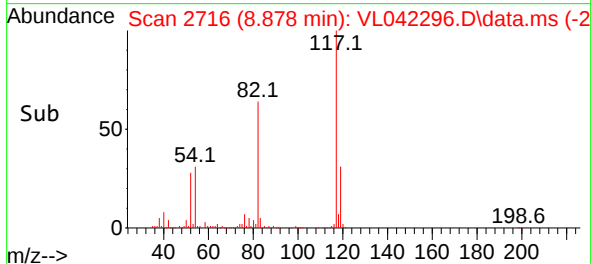
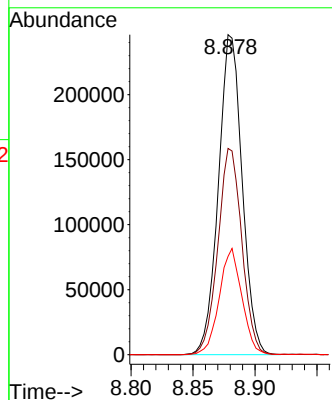
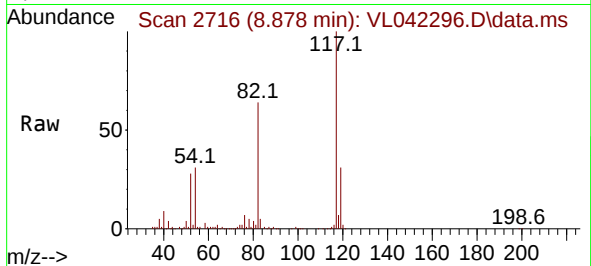




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2715
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

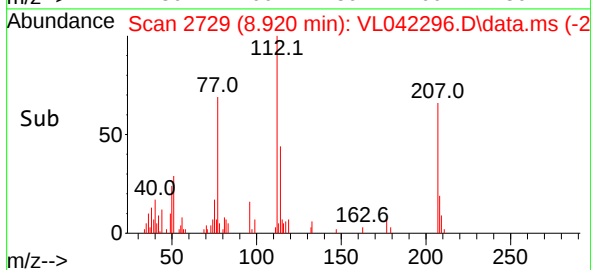
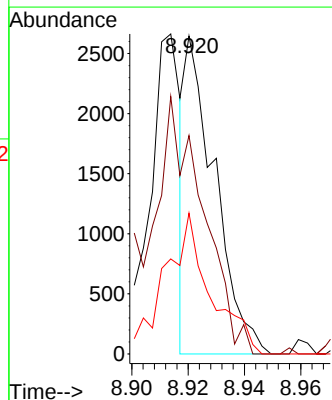
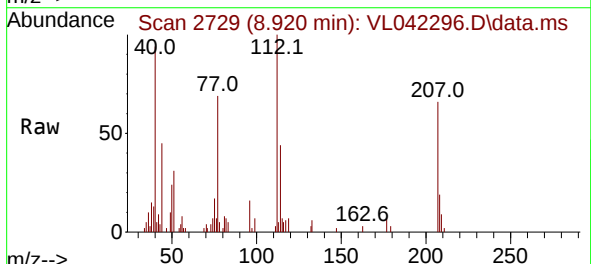
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

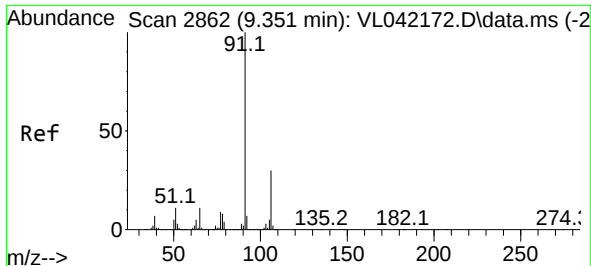
Tgt Ion:117 Resp: 329132
Ion Ratio Lower Upper
117 100
82 64.9 55.8 83.6
119 31.8 25.5 38.3



#57
Chlorobenzene
Concen: 0.062 ppbv
RT: 8.920 min Scan# 2729
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

Tgt Ion:112 Resp: 1926
Ion Ratio Lower Upper
112 100
77 65.6 58.2 87.2
114 42.3 29.1 35.5





#58

Ethyl Benzene

Concen: 0.076 ppbv

RT: 9.354 min Scan# 21

Delta R.T. 0.003 min

Lab File: VL042296.D

Acq: 09 Apr 2025 16:57

Instrument :

MSVOA_L

ClientSampleId :

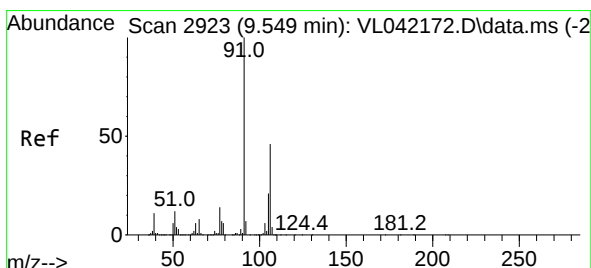
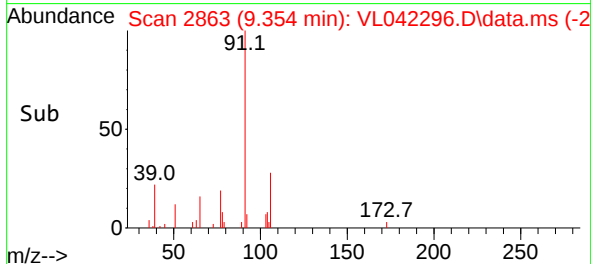
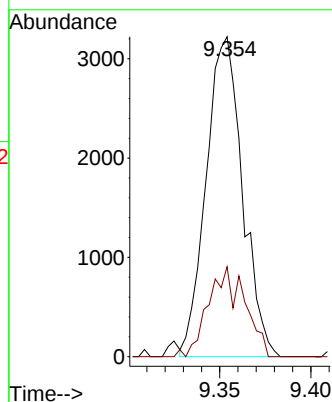
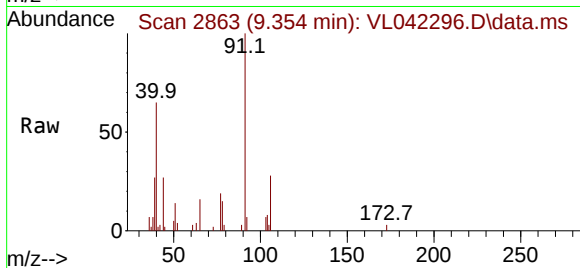
IA-B9-3-3242025

Tgt Ion: 91 Resp: 4472

Ion Ratio Lower Upper

91 100

106 28.1 24.2 36.2



#59

m/p-Xylene

Concen: 0.072 ppbv

RT: 9.542 min Scan# 2921

Delta R.T. -0.007 min

Lab File: VL042296.D

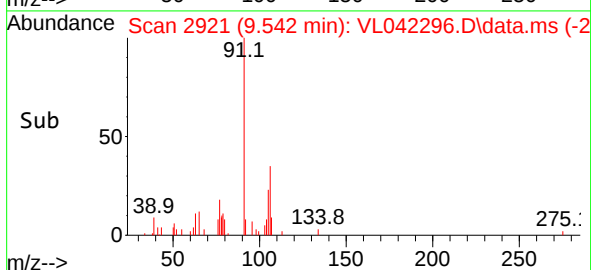
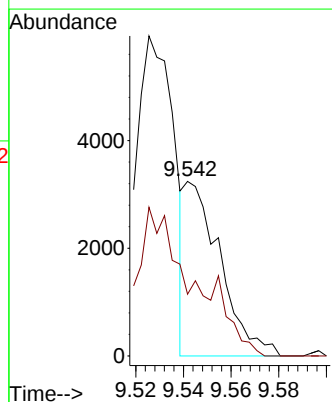
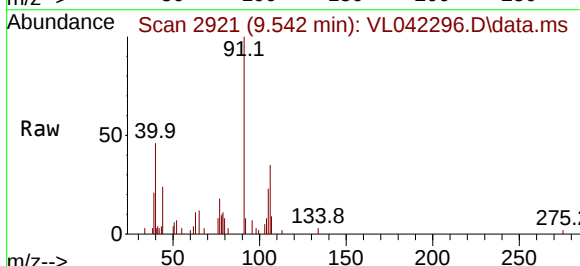
Acq: 09 Apr 2025 16:57

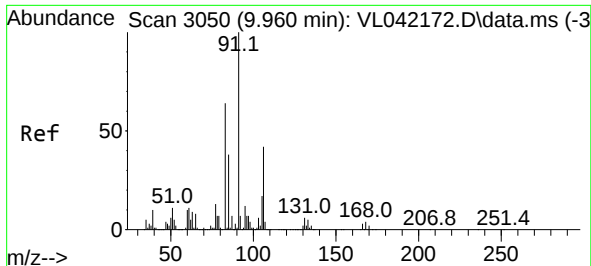
Tgt Ion: 91 Resp: 3344

Ion Ratio Lower Upper

91 100

106 0.0 36.4 54.6#

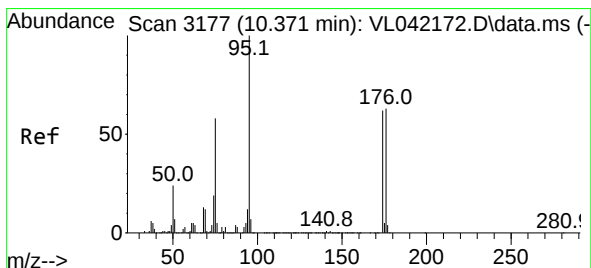
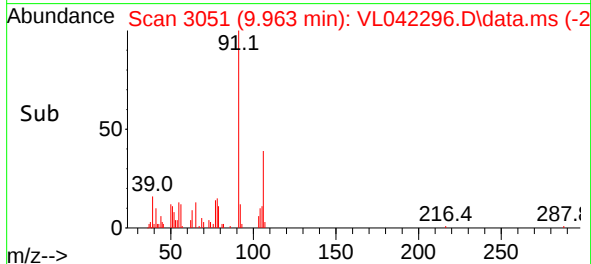
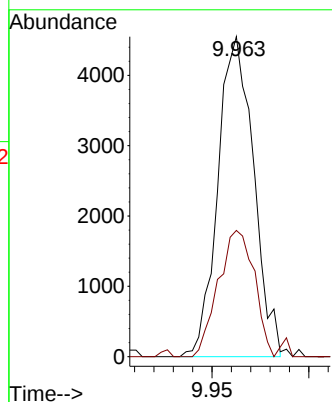
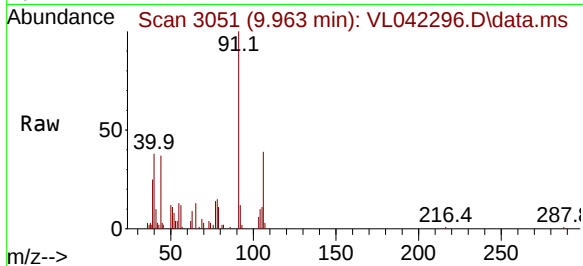




#60
o-Xylene
Concen: 0.125 ppbv
RT: 9.963 min Scan# 3050
Delta R.T. 0.003 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

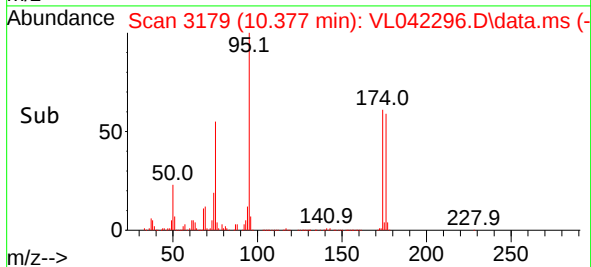
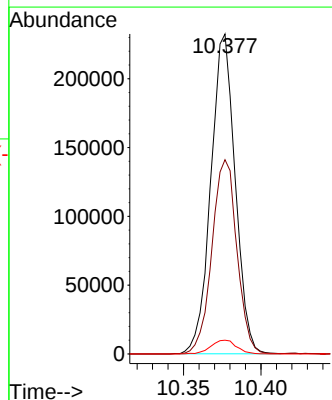
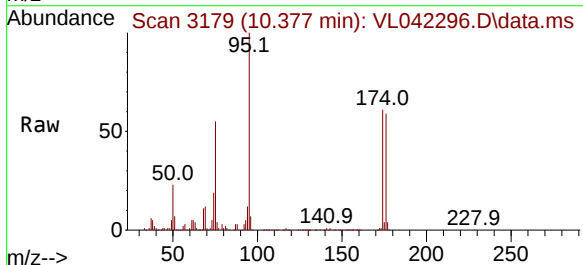
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-3-3242025

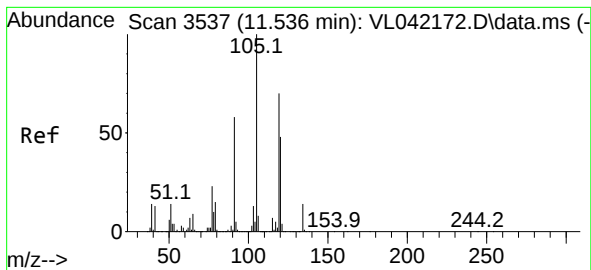
Tgt Ion: 91 Resp: 5830
Ion Ratio Lower Upper
91 100
106 41.2 20.8 62.5



#68
1-Bromo-4-Fluorobenzene
Concen: 9.393 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. 0.006 min
Lab File: VL042296.D
Acq: 09 Apr 2025 16:57

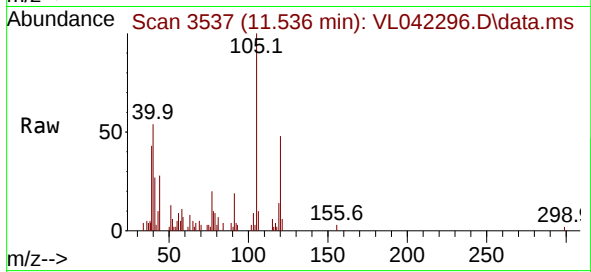
Tgt Ion: 95 Resp: 253889
Ion Ratio Lower Upper
95 100
174 62.7 50.6 76.0
175 4.6 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.039 ppbv
 RT: 11.536 min Scan# 31
 Delta R.T. -0.000 min
 Lab File: VL042296.D
 Acq: 09 Apr 2025 16:57

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B9-3-3242025



Tgt Ion:	105	Resp:	2269
Ion	Ratio	Lower	Upper
105	100		
120	47.6	38.6	58.0
91	16.6	46.2	69.2#
77	19.6	18.6	27.8

