

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL032725\
 Data File : VL042188.D
 Acq On : 27 Mar 2025 20:12
 Operator : SY/MD
 Sample : Q1669-04
 Misc : 400mL/MSVOA_L
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1-3262025

Quant Time: Mar 28 02:16:44 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)

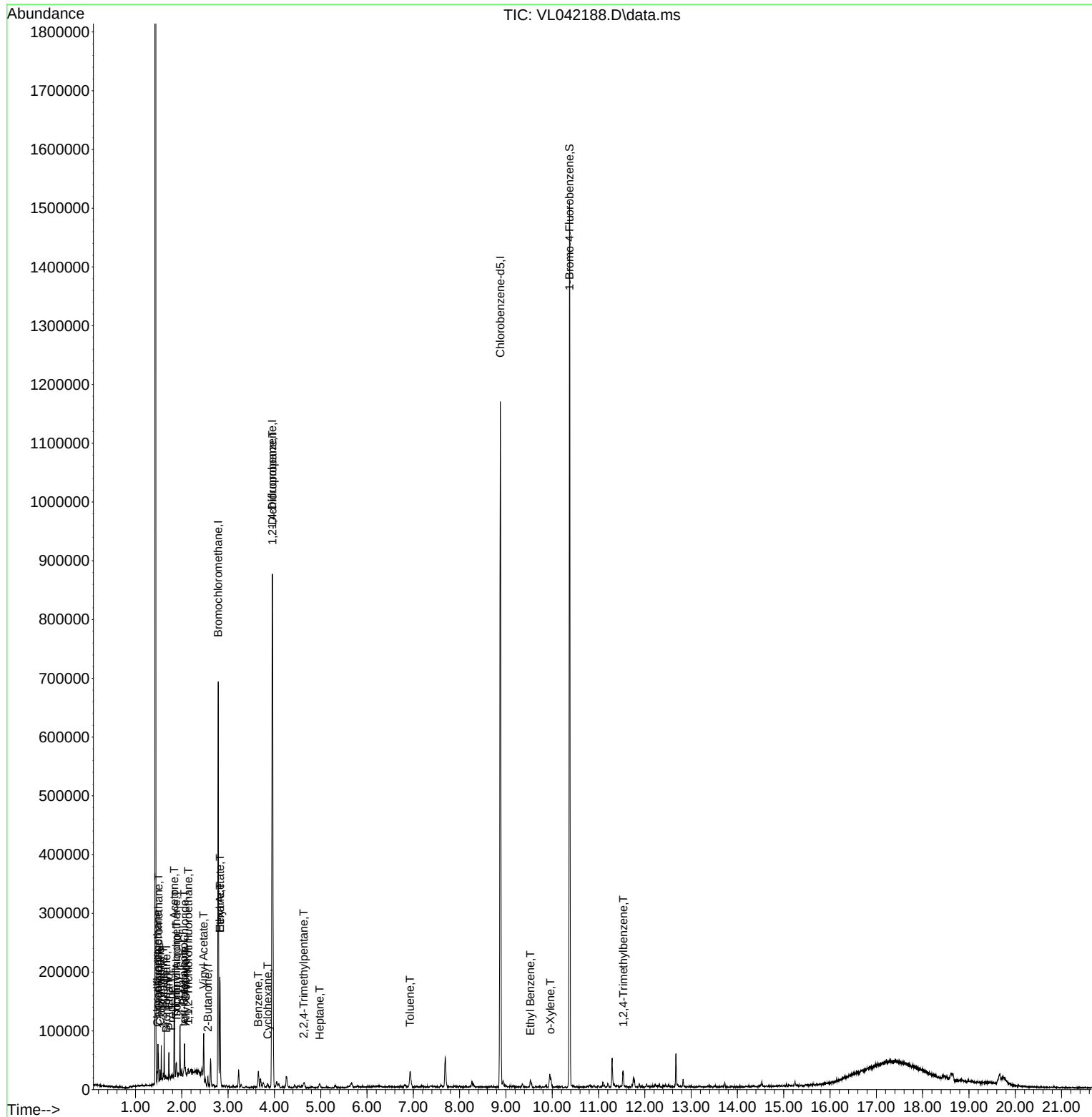
Internal Standards						
1) Bromochloromethane	2.787	49	185847	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.955	114	529516	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	474604	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	386837	9.925	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.300%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	10856	0.396	ppbv	94
3) Chlorodifluoromethane	1.473	51	10278	0.367	ppbv	99
4) Chloromethane	1.531	50	5306	0.473	ppbv	100
6) Bromomethane	1.670	94	185	0.036	ppbv #	38
9) Propene	1.774	41	1755	0.137	ppbv	84
10) Heptane	4.978	43	1567	0.046	ppbv #	40
11) Trichlorofluoromethane	1.878	101	5846	0.219	ppbv	95
12) 1,1,2-Trichlorotrifluo...	2.140	101	1399	0.064	ppbv	95
13) Ethanol	1.719	45	15071	12.408	ppbv	93
15) Acetone	1.836	43	83691	3.220	ppbv	92
16) 1,3-Butadiene	1.599	39	1660	0.131	ppbv #	69
17) tert-Butyl alcohol	2.043	59	1963	0.061	ppbv #	48
19) Isopropyl Alcohol	1.887	45	9528	0.650	ppbv #	1
20) Methylene Chloride	2.059	84	7575	0.783	ppbv	85
21) Allyl Chloride	2.082	41	706	0.039	ppbv #	1
23) Vinyl Acetate	2.473	43	24377	2.167	ppbv #	52
25) Ethyl Acetate	2.823	43	31575	0.468	ppbv #	81
26) Hexane	2.823	57	44184	1.696	ppbv #	33
30) Cyclohexane	3.855	84	1537	0.068	ppbv #	43
34) 2-Butanone	2.564	43	9069	0.236	ppbv	98
36) Benzene	3.651	78	16130	0.307	ppbv #	93
39) 1,2-Dichloropropane	3.959	63	136667	7.149	ppbv #	22
44) 2,2,4-Trimethylpentane	4.635	57	3242	0.037	ppbv #	1
53) Toluene	6.930	91	19259	0.309	ppbv	97
58) Ethyl Benzene	9.529	91	4355	0.052	ppbv	100
60) o-Xylene	9.959	91	3145	0.047	ppbv	96
74) 1,2,4-Trimethylbenzene	11.536	105	6973	0.082	ppbv #	62

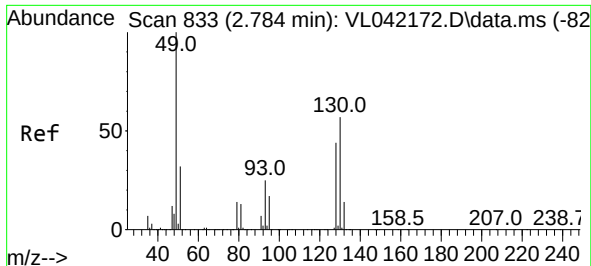
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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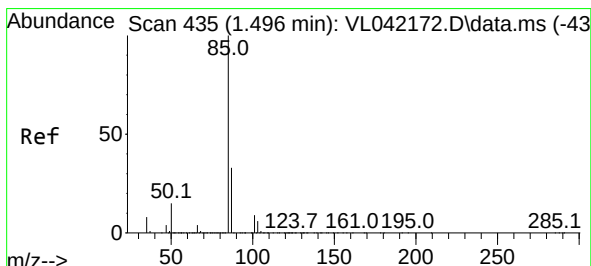
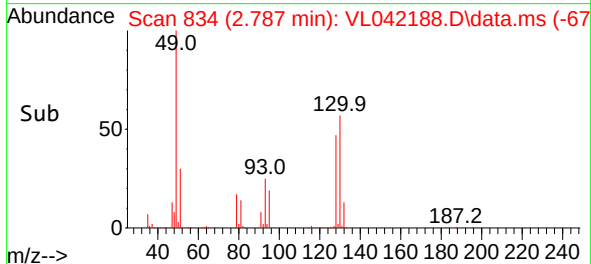
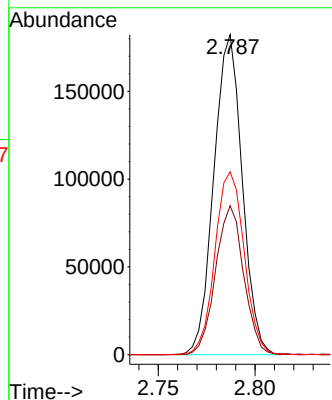
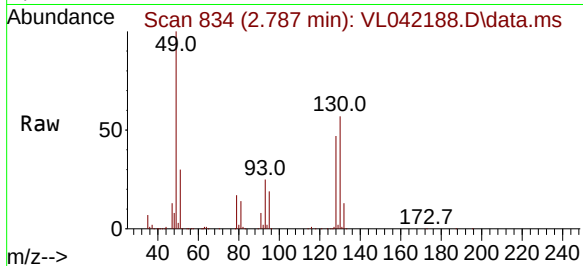




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

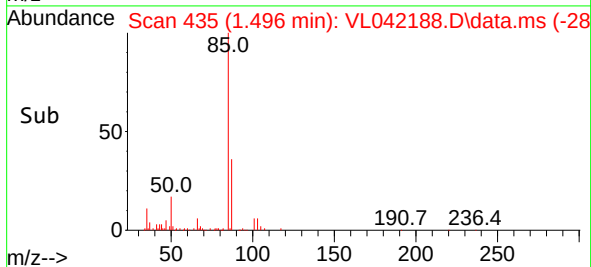
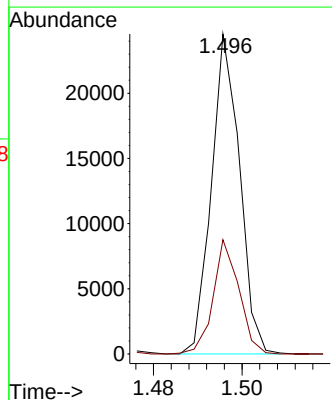
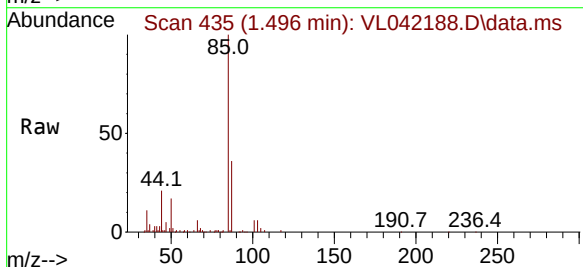
Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

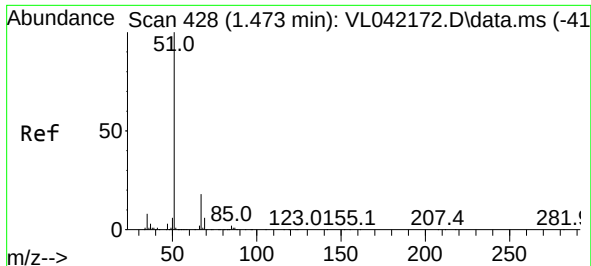
Tgt Ion: 49 Resp: 185847
Ion Ratio Lower Upper
49 100
128 46.1 22.9 68.5
130 59.0 28.8 86.4



#2
Dichlorodifluoromethane
Concen: 0.396 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 85 Resp: 10856
Ion Ratio Lower Upper
85 100
87 35.7 26.1 39.1

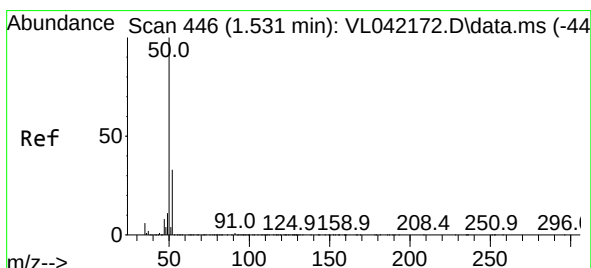
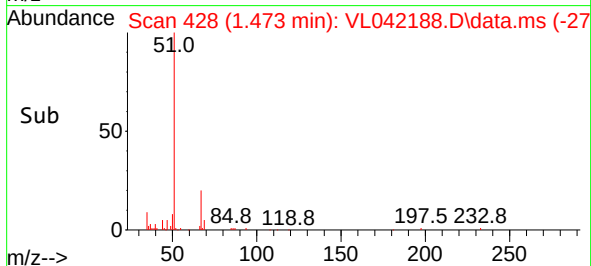
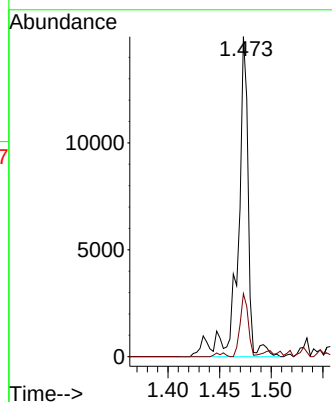
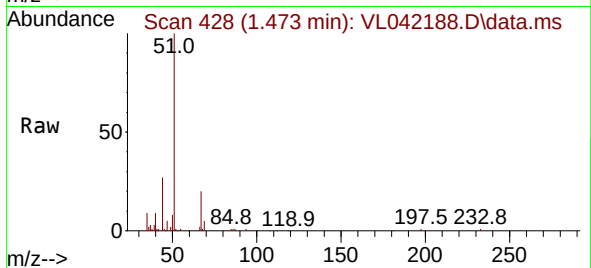




#3
Chlorodifluoromethane
Concen: 0.367 ppbv
RT: 1.473 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

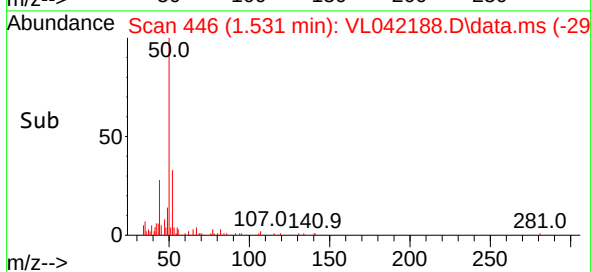
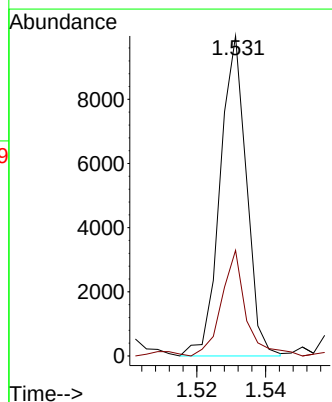
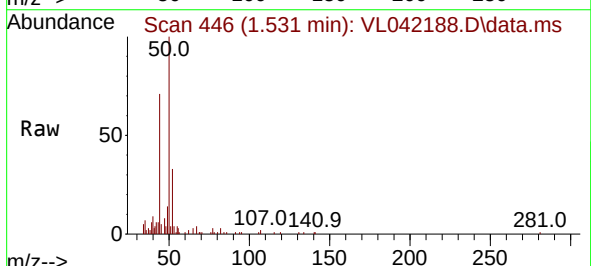
Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

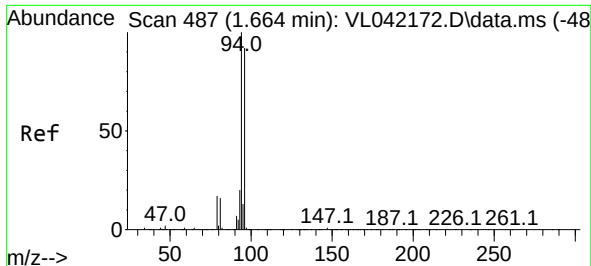
Tgt Ion: 51 Resp: 10278
Ion Ratio Lower Upper
51 100
67 19.1 15.0 22.6



#4
Chloromethane
Concen: 0.473 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 50 Resp: 5306
Ion Ratio Lower Upper
50 100
52 32.6 26.1 39.1

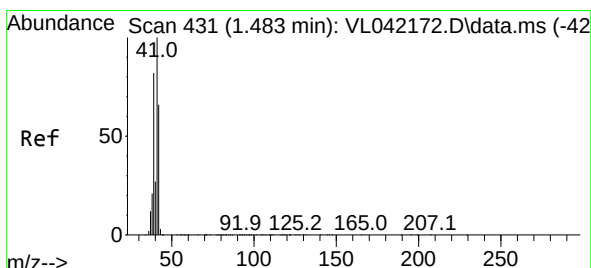
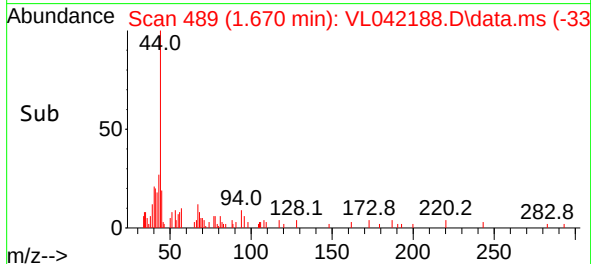
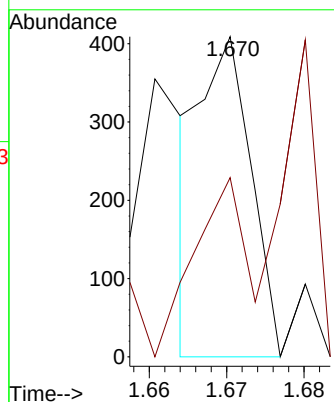
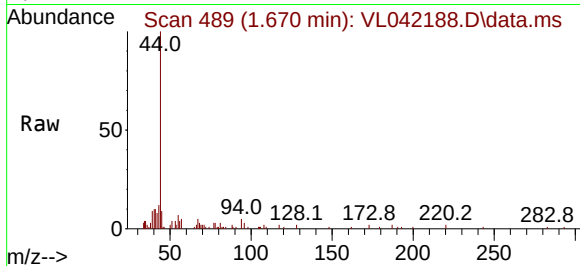




#6
Bromomethane
Concen: 0.036 ppbv
RT: 1.670 min Scan# 41
Delta R.T. 0.006 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

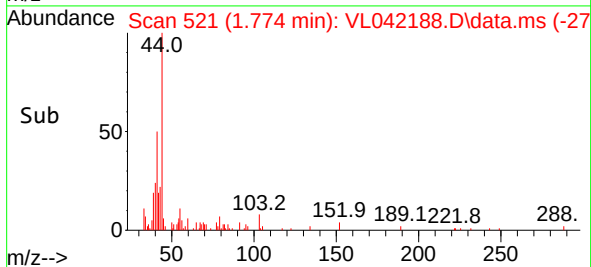
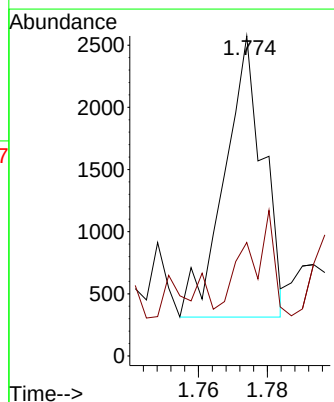
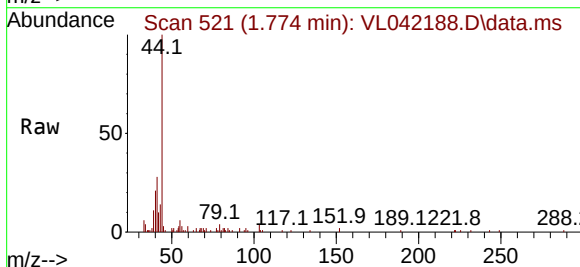
Instrument :
MSVOA_1
ClientSampleId :
AA-1-3262025

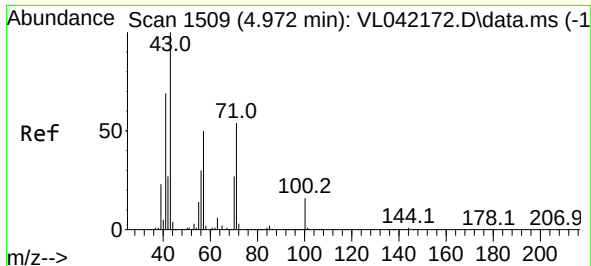
Tgt Ion: 94 Resp: 185
Ion Ratio Lower Upper
94 100
96 32.8 73.1 109.7#



#9
Propene
Concen: 0.137 ppbv
RT: 1.774 min Scan# 521
Delta R.T. 0.291 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 41 Resp: 1755
Ion Ratio Lower Upper
41 100
42 82.2 55.4 83.2

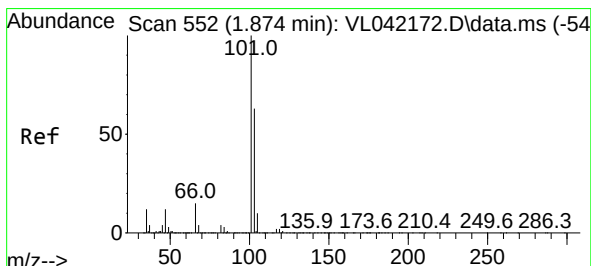
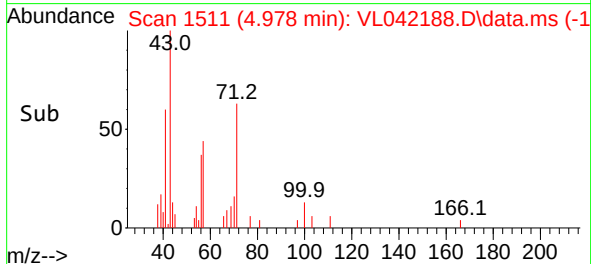
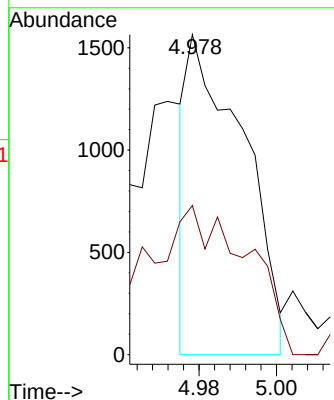
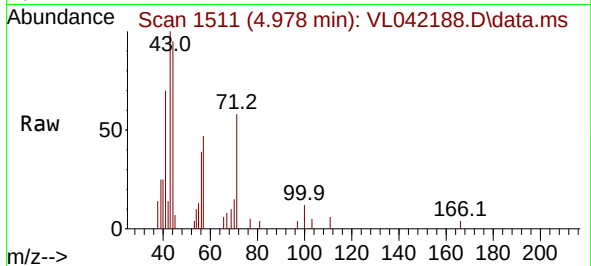




#10
Heptane
Concen: 0.046 ppbv
RT: 4.978 min Scan# 11
Delta R.T. 0.006 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

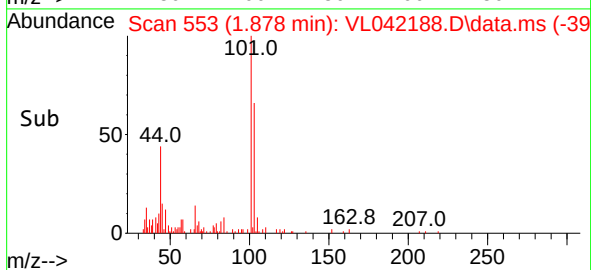
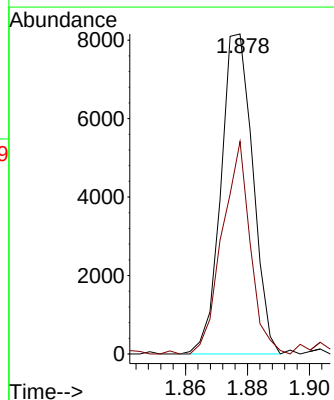
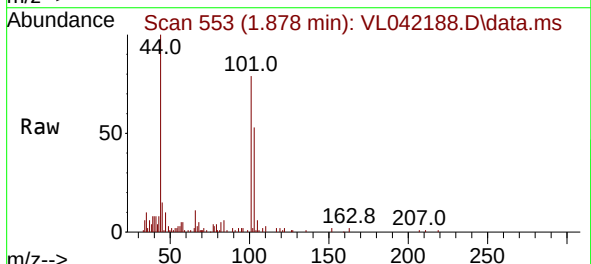
Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

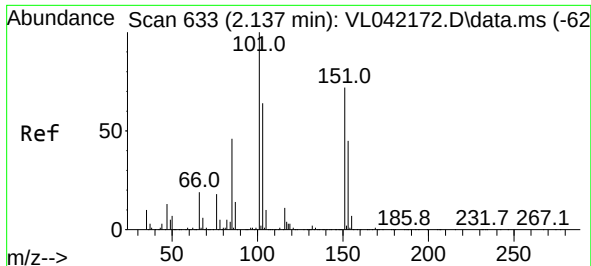
Tgt Ion: 43 Resp: 1567
Ion Ratio Lower Upper
43 100
57 90.7 39.4 59.2#



#11
Trichlorofluoromethane
Concen: 0.219 ppbv
RT: 1.878 min Scan# 553
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 101 Resp: 5846
Ion Ratio Lower Upper
101 100
103 66.4 50.2 75.2

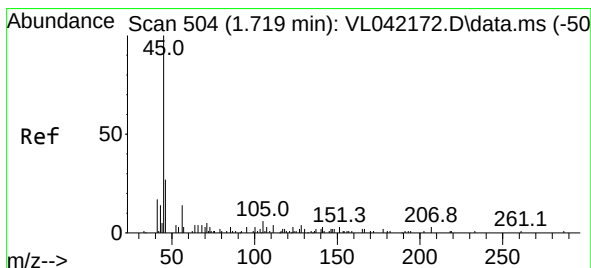
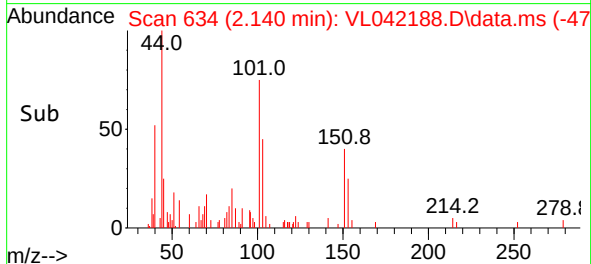
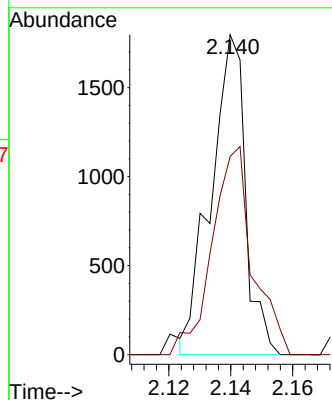
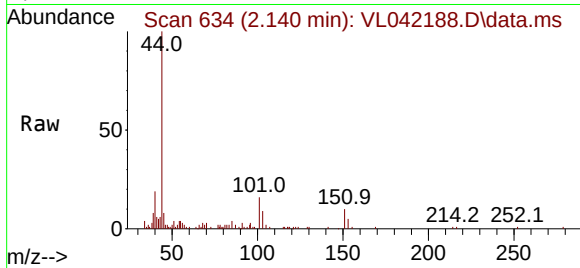




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.064 ppbv
RT: 2.140 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

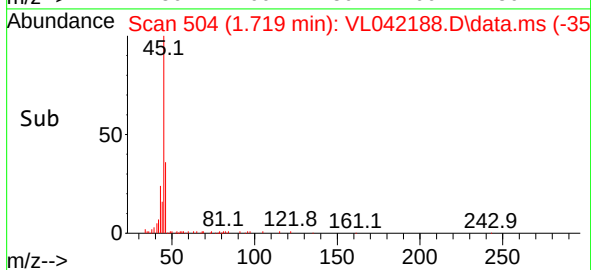
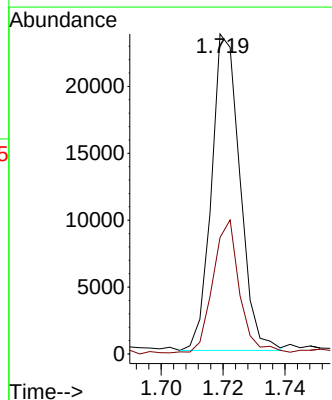
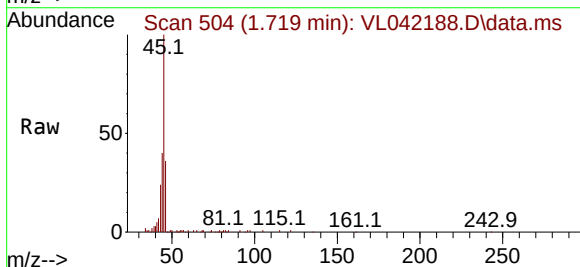
Instrument :
MSVOA_1
ClientSampleId :
AA-1-3262025

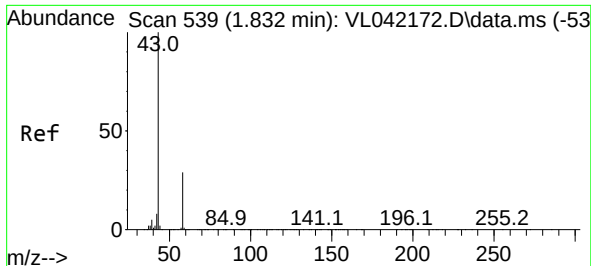
Tgt Ion:101 Resp: 1399
Ion Ratio Lower Upper
101 100
151 75.7 57.1 85.7



#13
Ethanol
Concen: 12.408 ppbv
RT: 1.719 min Scan# 504
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 45 Resp: 15071
Ion Ratio Lower Upper
45 100
46 45.5 20.2 80.8





#15

Acetone

Concen: 3.220 ppbv

RT: 1.836 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL042188.D

Acq: 27 Mar 2025 20:12

Instrument :

MSVOA_L

ClientSampleId :

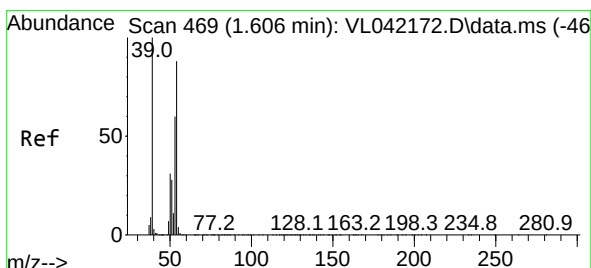
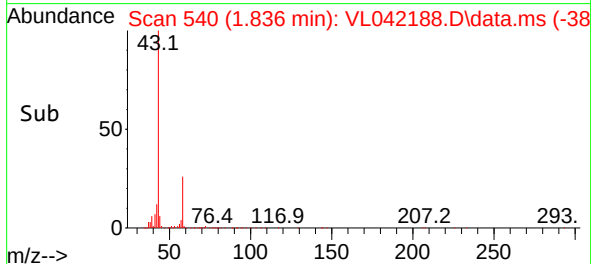
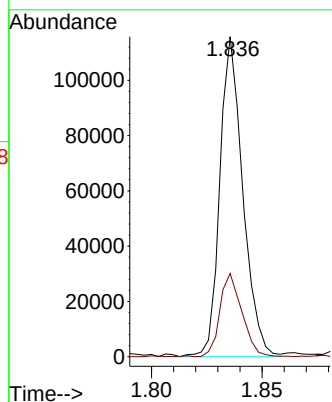
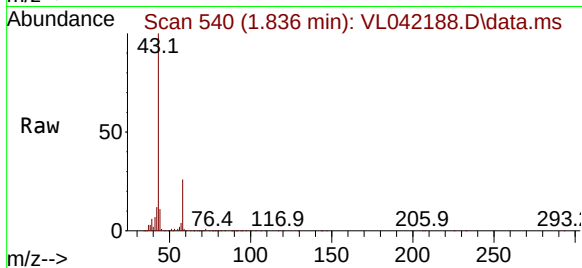
AA-1-3262025

Tgt Ion: 43 Resp: 83691

Ion Ratio Lower Upper

43 100

58 24.7 23.2 34.8



#16

1,3-Butadiene

Concen: 0.131 ppbv

RT: 1.599 min Scan# 467

Delta R.T. -0.007 min

Lab File: VL042188.D

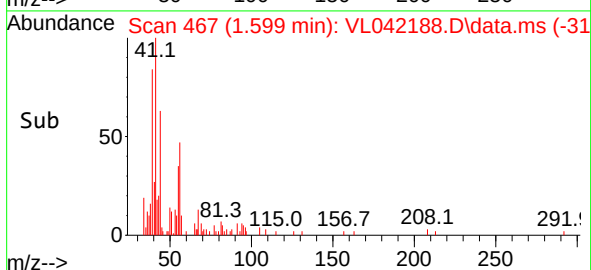
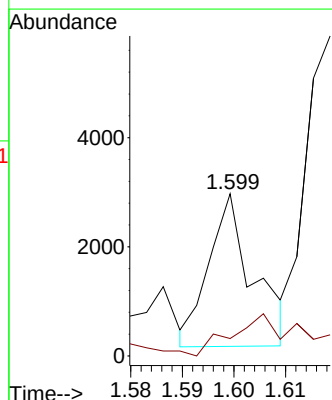
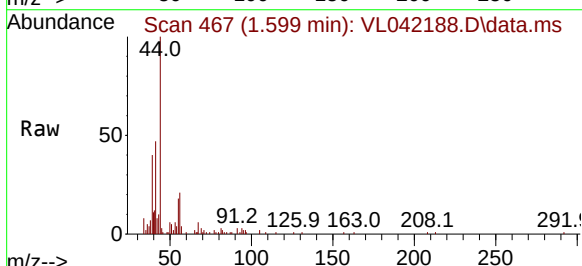
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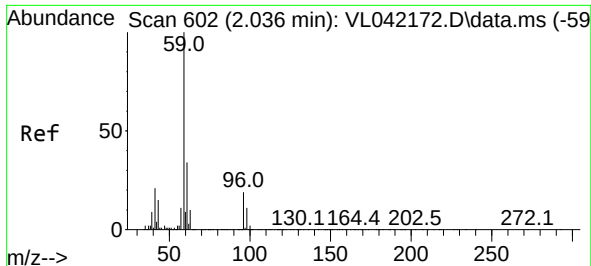
Tgt Ion: 39 Resp: 1660

Ion Ratio Lower Upper

39 100

54 49.1 60.7 91.1#





#17

tert-Butyl alcohol

Concen: 0.061 ppbv

RT: 2.043 min Scan# 602

Delta R.T. 0.006 min

Lab File: VL042188.D

Acq: 27 Mar 2025 20:12

Instrument :

MSVOA_L

ClientSampleId :

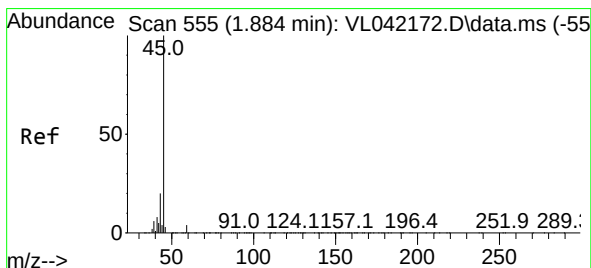
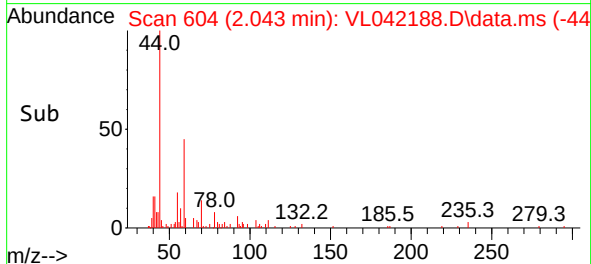
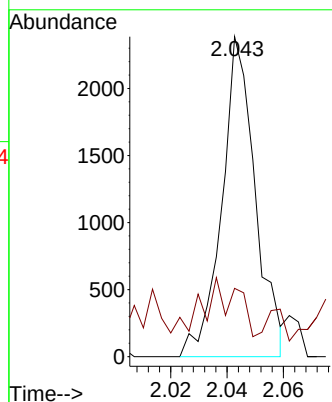
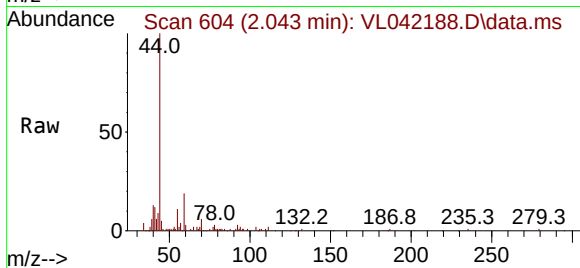
AA-1-3262025

Tgt Ion: 59 Resp: 1963

Ion Ratio Lower Upper

59 100

57 30.9 8.9 13.3#



#19

Isopropyl Alcohol

Concen: 0.650 ppbv

RT: 1.887 min Scan# 556

Delta R.T. 0.003 min

Lab File: VL042188.D

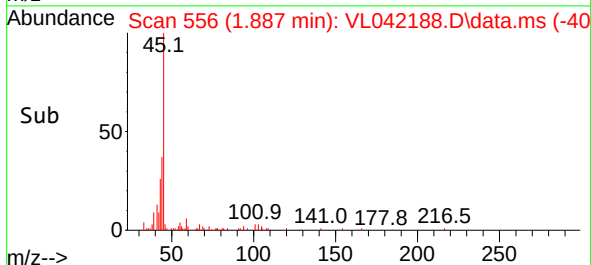
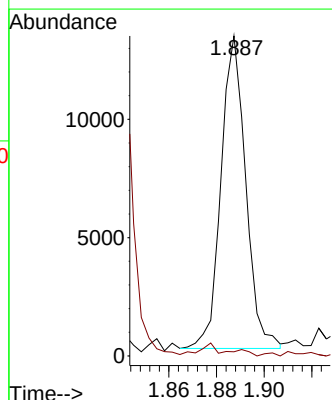
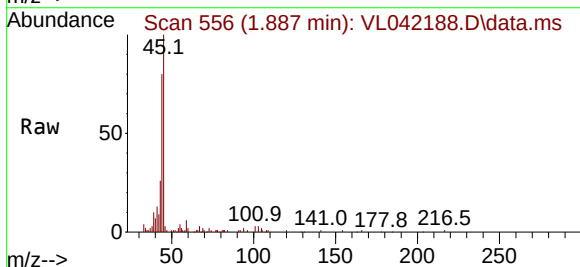
Acq: 27 Mar 2025 20:12

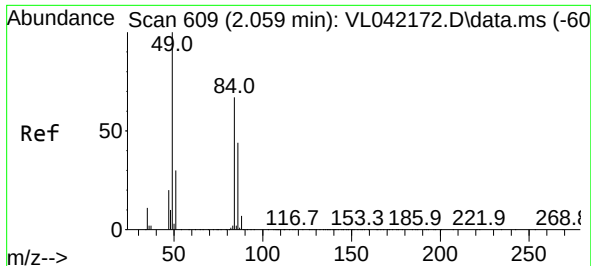
Tgt Ion: 45 Resp: 9528

Ion Ratio Lower Upper

45 100

58 223.8 36.9 55.3#

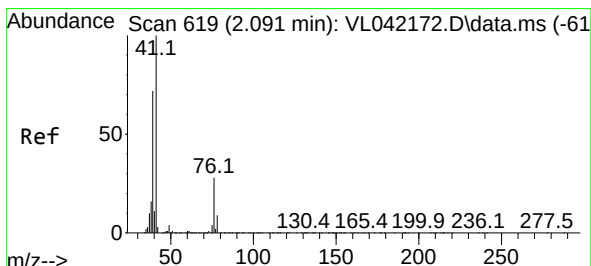
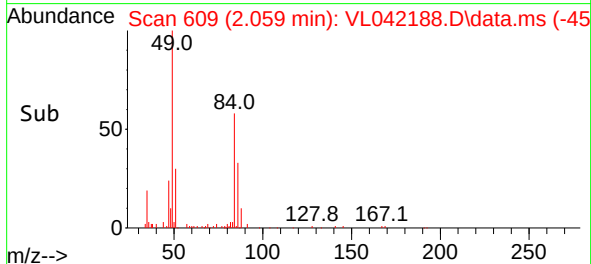
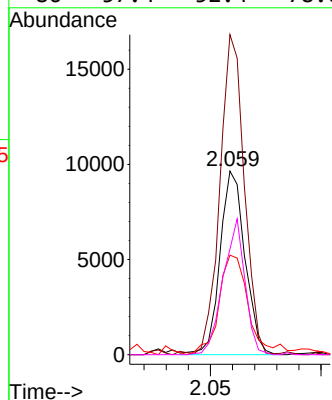
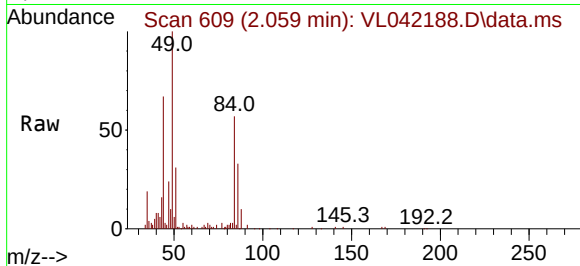




#20
Methylene Chloride
Concen: 0.783 ppbv
RT: 2.059 min Scan# 609
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

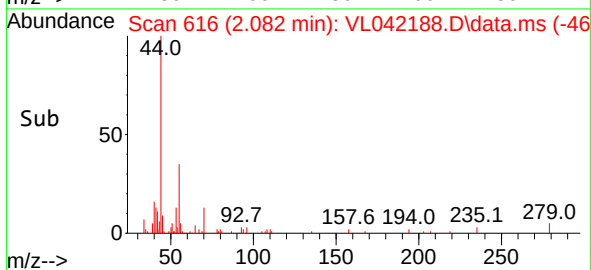
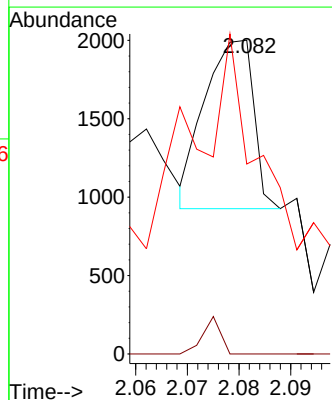
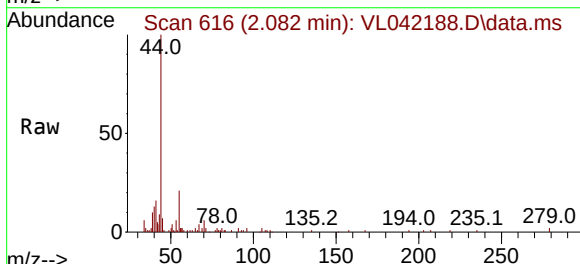
Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

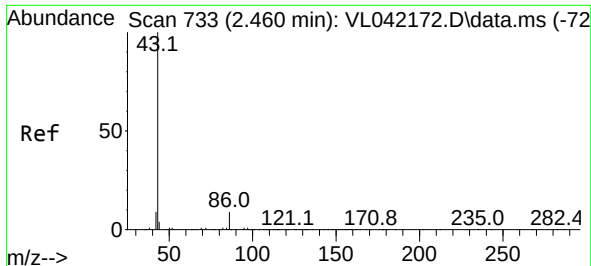
Tgt Ion: 84	Resp:	7575	
Ion	Ratio	Lower	Upper
84	100		
49	173.6	120.2	180.4
51	53.1	37.4	56.0
86	57.4	52.4	78.6



#21
Allyl Chloride
Concen: 0.039 ppbv
RT: 2.082 min Scan# 616
Delta R.T. -0.010 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 41	Resp:	706	
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.1	36.1#
39	259.5	61.1	91.7#

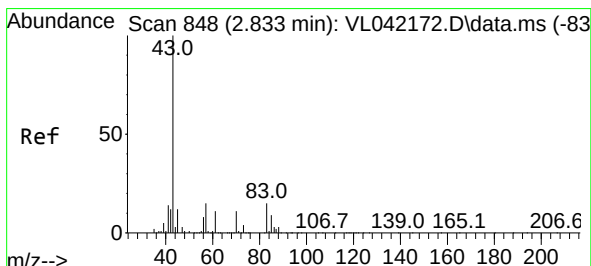
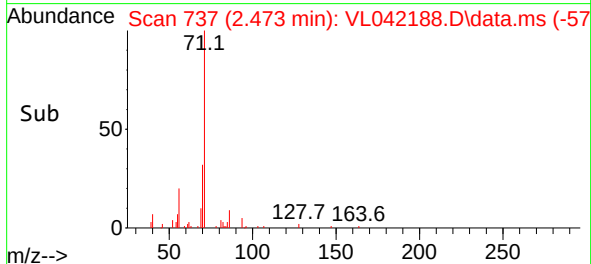
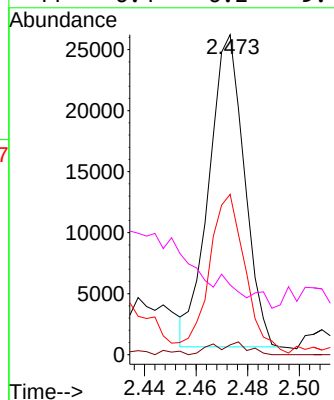
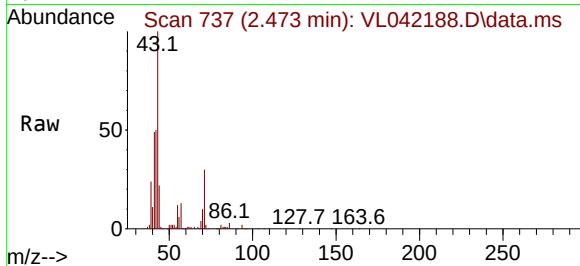




#23
 Vinyl Acetate
 Concen: 2.167 ppbv
 RT: 2.473 min Scan# 71
 Delta R.T. 0.013 min
 Lab File: VL042188.D
 Acq: 27 Mar 2025 20:12

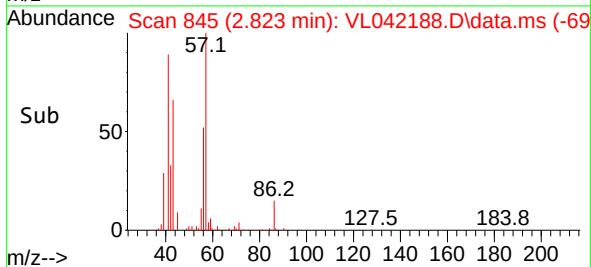
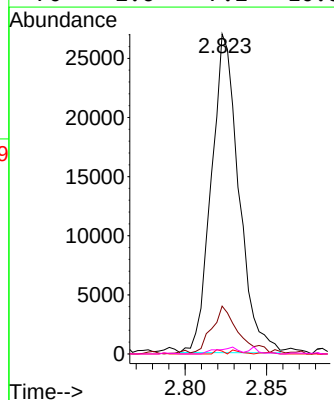
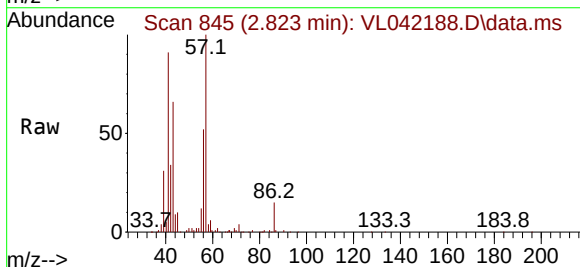
Instrument :
 MSVOA_1
 ClientSampleId :
 AA-1-3262025

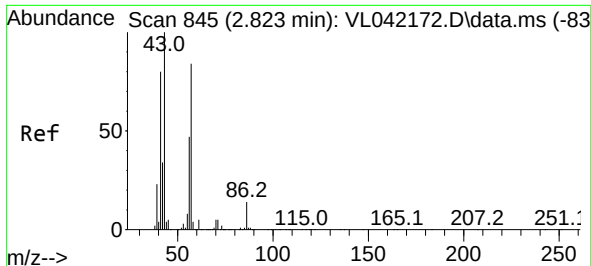
Tgt Ion: 43	Resp: 24377
Ion Ratio	Lower Upper
43 100	
86 3.1	5.5 8.3#
42 49.6	8.6 13.0#
44 6.4	6.2 9.4



#25
 Ethyl Acetate
 Concen: 0.468 ppbv
 RT: 2.823 min Scan# 845
 Delta R.T. -0.010 min
 Lab File: VL042188.D
 Acq: 27 Mar 2025 20:12

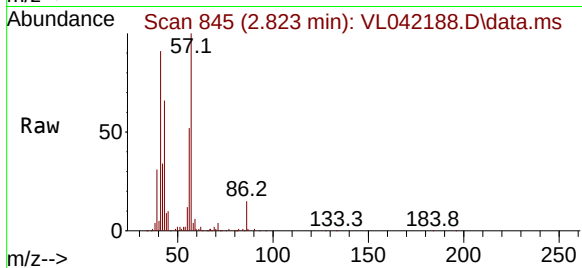
Tgt	Ion: 43	Resp:	31575
Ion	Ratio	Lower	Upper
43	100		
45	16.1	8.2	12.2#
61	1.1	7.3	10.9#
70	2.6	7.2	10.8#



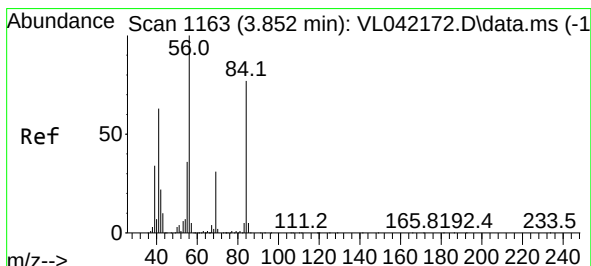
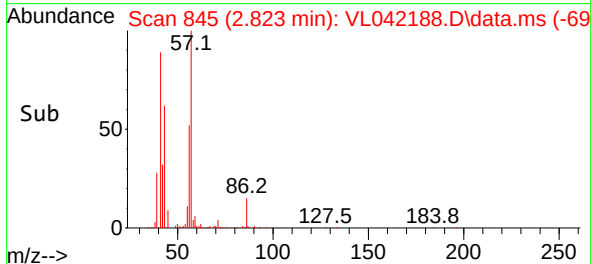
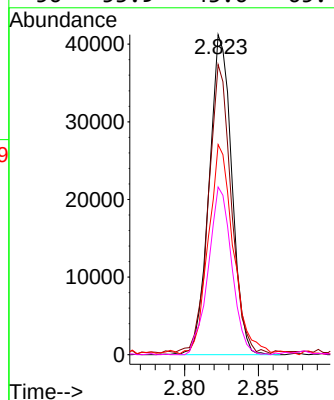


#26
Hexane
Concen: 1.696 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

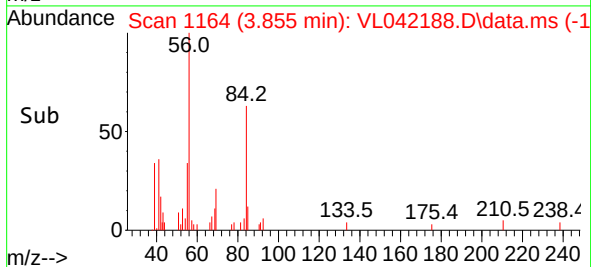
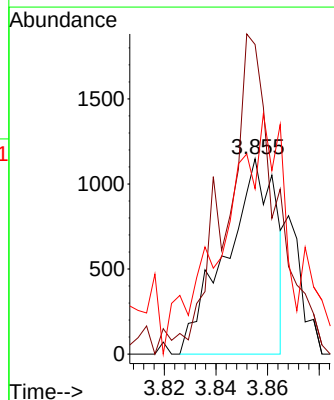
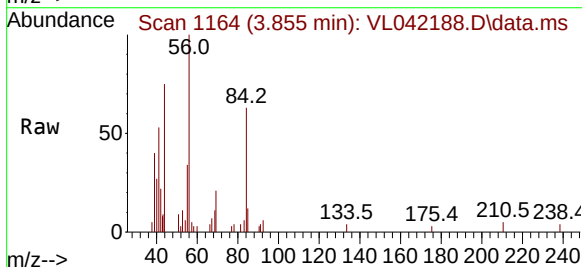


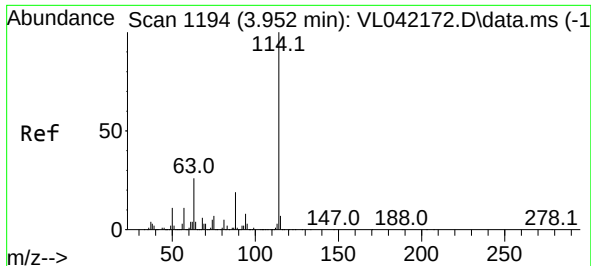
Tgt Ion:	57	Resp:	44184
Ion	Ratio	Lower	Upper
57	100		
41	91.3	76.6	114.8
43	74.7	207.8	311.8#
56	53.9	43.6	65.4



#30
Cyclohexane
Concen: 0.068 ppbv
RT: 3.855 min Scan# 1164
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion:	84	Resp:	1537
Ion	Ratio	Lower	Upper
84	100		
56	172.0	102.8	154.2#
41	160.4	66.5	99.7#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. 0.003 min

Lab File: VL042188.D

Acq: 27 Mar 2025 20:12

Instrument :

MSVOA_L

ClientSampleId :

AA-1-3262025

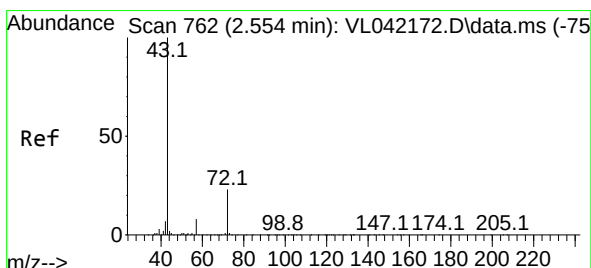
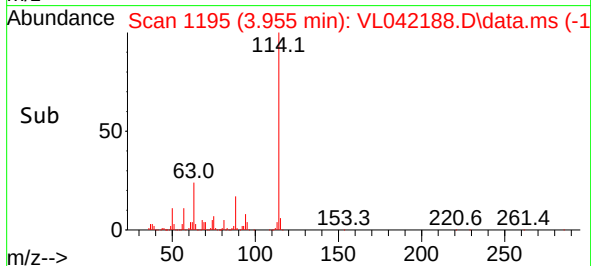
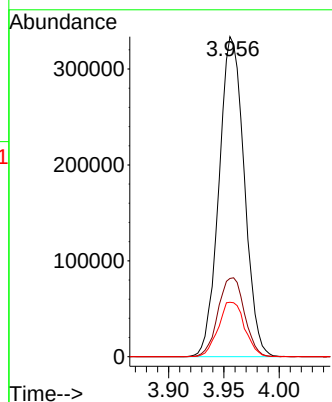
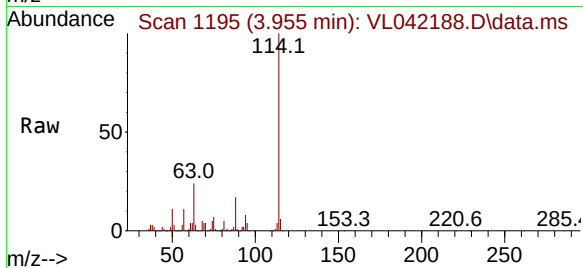
Tgt Ion:114 Resp: 529516

Ion Ratio Lower Upper

114 100

63 25.8 20.7 31.1

88 17.8 15.0 22.4



#34

2-Butanone

Concen: 0.236 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.010 min

Lab File: VL042188.D

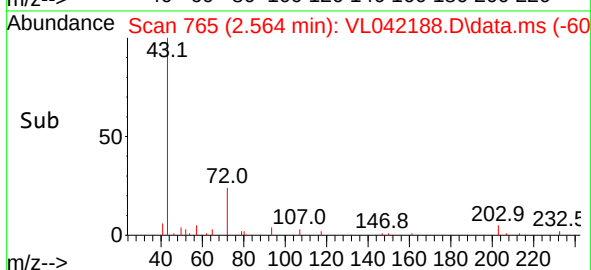
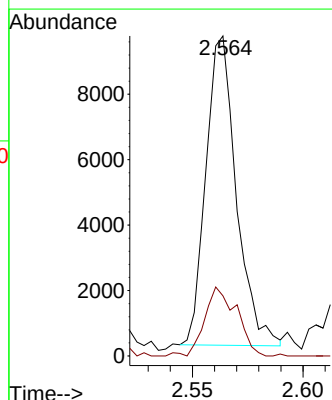
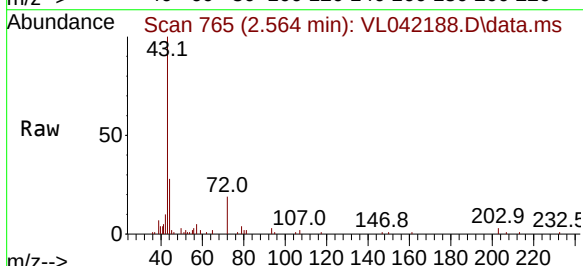
Acq: 27 Mar 2025 20:12

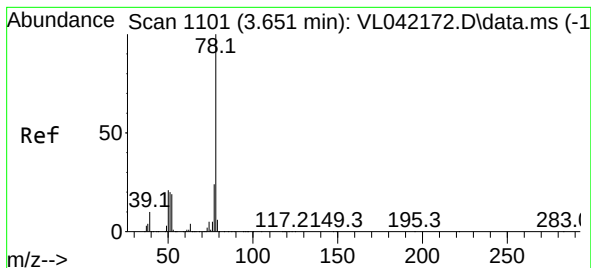
Tgt Ion: 43 Resp: 9069

Ion Ratio Lower Upper

43 100

72 23.6 18.2 27.2





#36

Benzene

Concen: 0.307 ppbv

RT: 3.651 min Scan# 1101

Delta R.T. -0.000 min

Lab File: VL042188.D

Acq: 27 Mar 2025 20:12

Instrument :

MSVOA_L

ClientSampleId :

AA-1-3262025

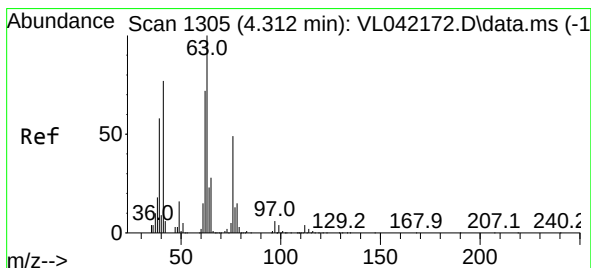
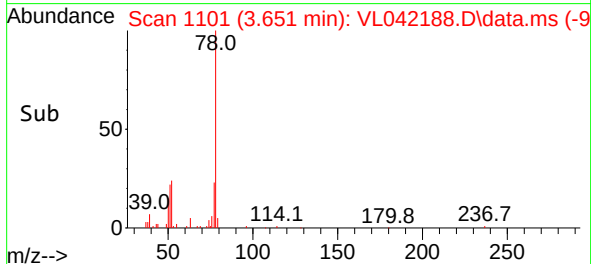
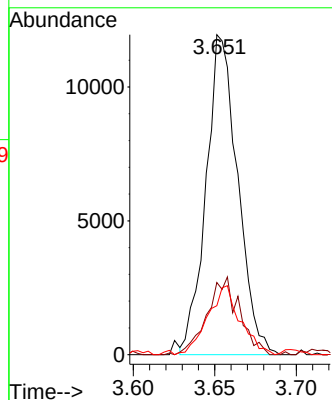
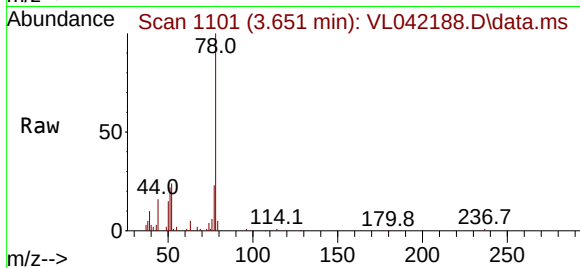
Tgt Ion: 78 Resp: 16130

Ion Ratio Lower Upper

78 100

77 22.6 19.1 28.7

50 14.8 16.6 24.8#



#39

1,2-Dichloropropane

Concen: 7.149 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.353 min

Lab File: VL042188.D

Acq: 27 Mar 2025 20:12

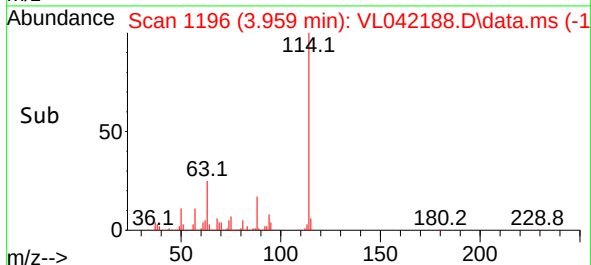
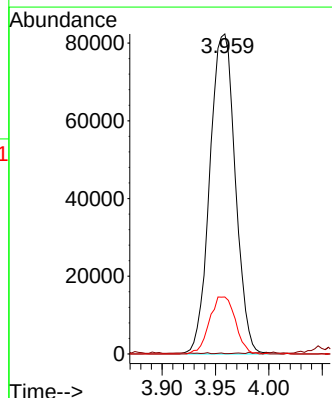
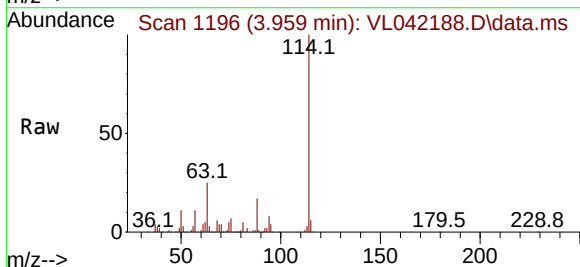
Tgt Ion: 63 Resp: 136667

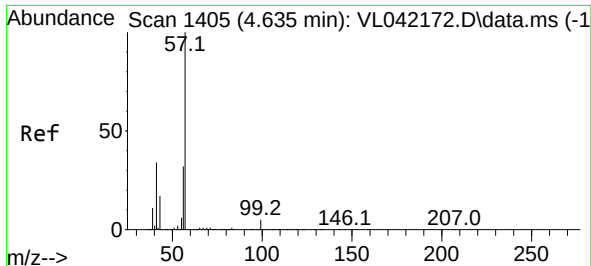
Ion Ratio Lower Upper

63 100

41 0.0 61.7 92.5#

62 17.8 57.6 86.4#

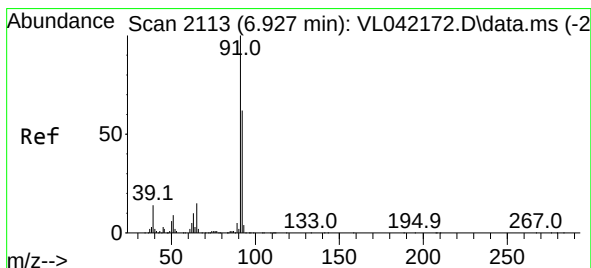
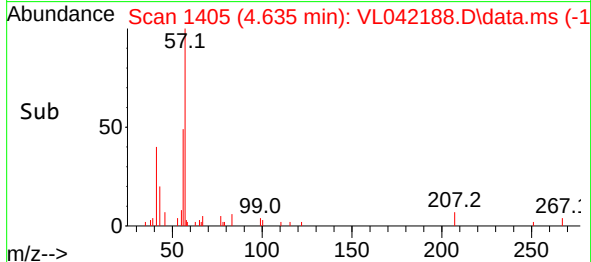
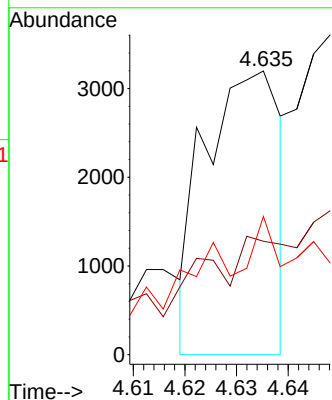
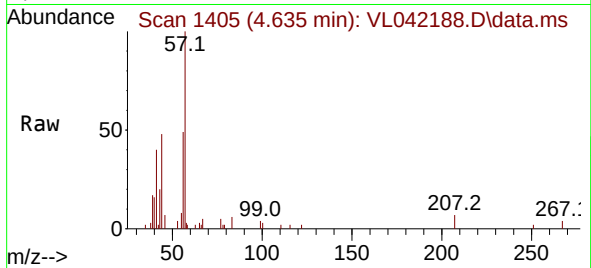




#44
 2,2,4-Trimethylpentane
 Concen: 0.037 ppbv
 RT: 4.635 min Scan# 1405
 Delta R.T. -0.000 min
 Lab File: VL042188.D
 Acq: 27 Mar 2025 20:12

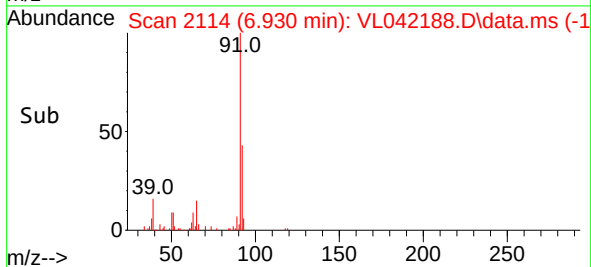
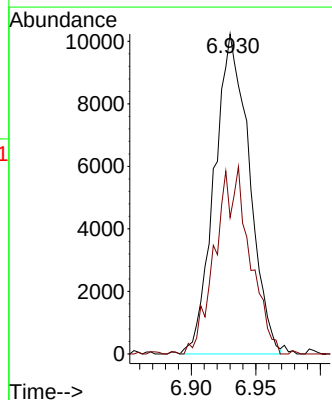
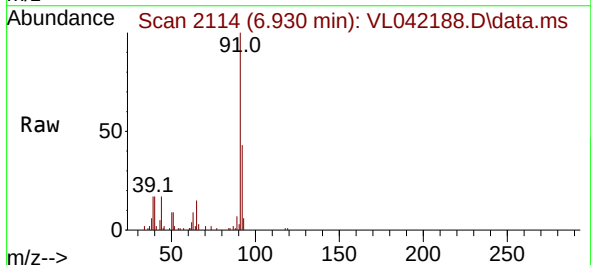
Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1-3262025

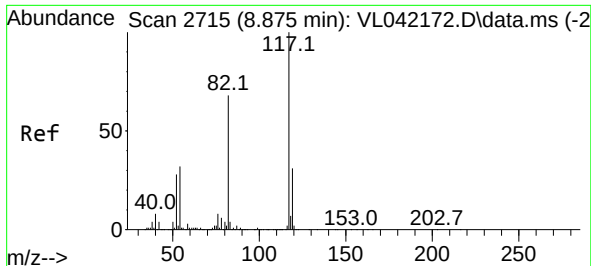
Tgt Ion: 57 Resp: 3242
 Ion Ratio Lower Upper
 57 100
 41 0.0 26.8 40.2#
 56 122.0 25.6 38.4#



#53
 Toluene
 Concen: 0.309 ppbv
 RT: 6.930 min Scan# 2114
 Delta R.T. 0.003 min
 Lab File: VL042188.D
 Acq: 27 Mar 2025 20:12

Tgt Ion: 91 Resp: 19259
 Ion Ratio Lower Upper
 91 100
 92 58.4 48.4 72.6

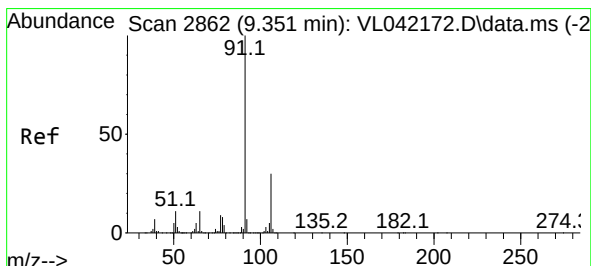
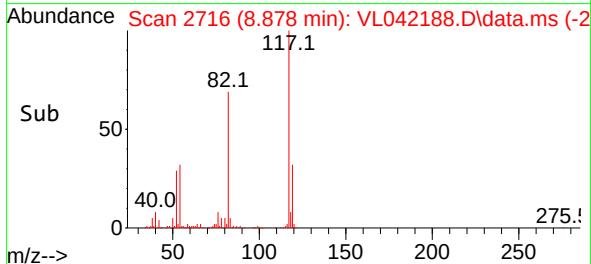
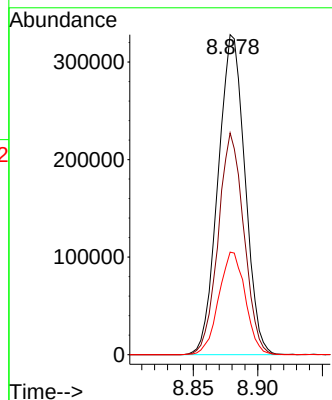
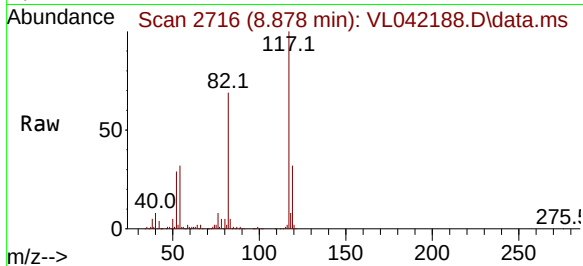




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2117
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

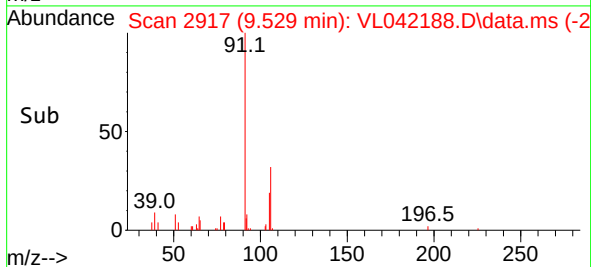
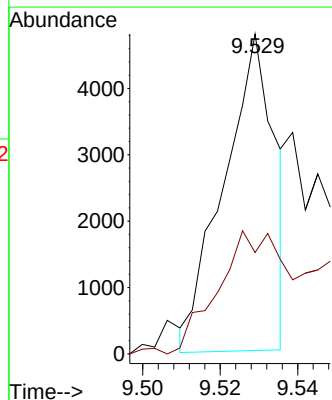
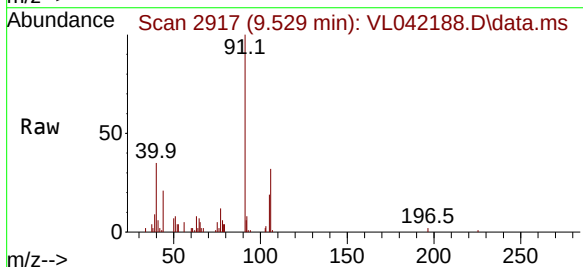
Instrument :
MSVOA_1
ClientSampleId :
AA-1-3262025

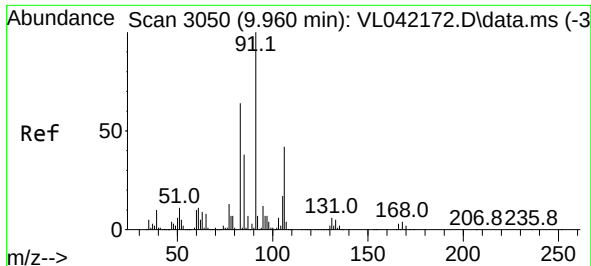
Tgt Ion:117 Resp: 474604
Ion Ratio Lower Upper
117 100
82 66.3 55.8 83.6
119 31.6 25.5 38.3



#58
Ethyl Benzene
Concen: 0.052 ppbv
RT: 9.529 min Scan# 2917
Delta R.T. 0.178 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 91 Resp: 4355
Ion Ratio Lower Upper
91 100
106 30.4 24.2 36.2

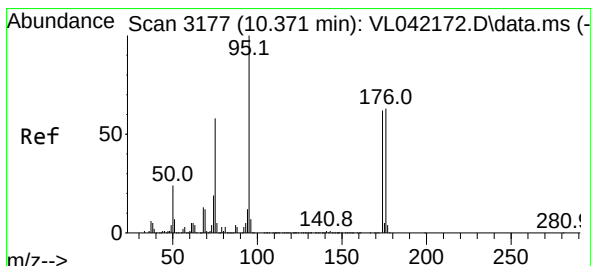
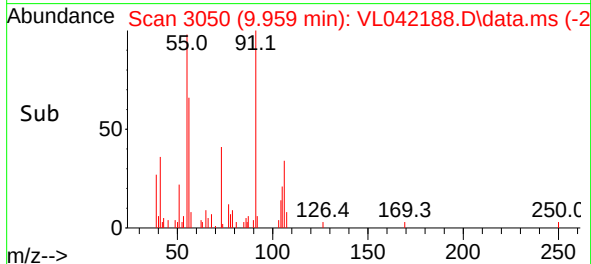
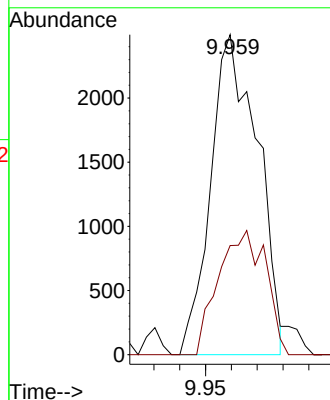
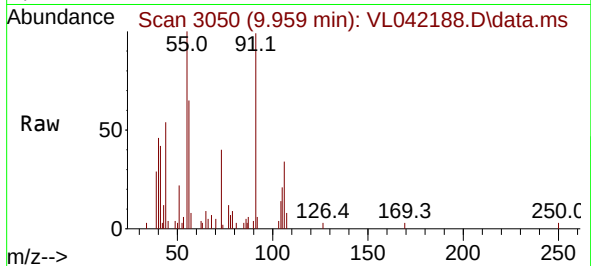




#60
o-Xylene
Concen: 0.047 ppbv
RT: 9.959 min Scan# 3050
Delta R.T. -0.000 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

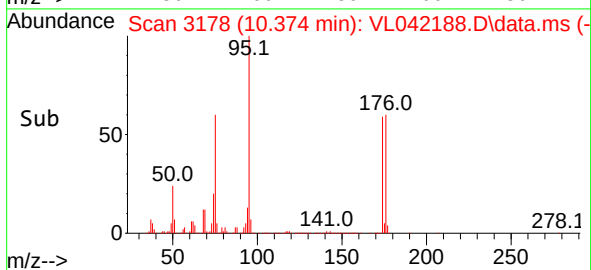
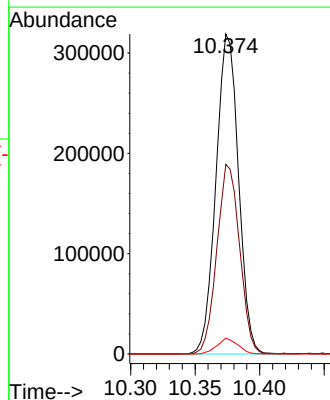
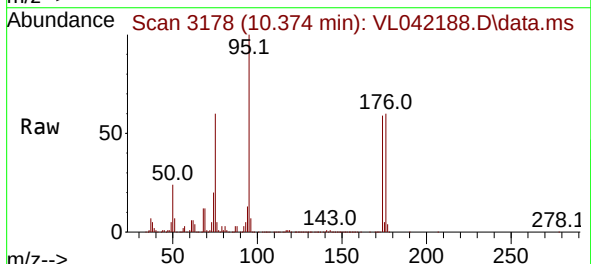
Instrument :
MSVOA_L
ClientSampleId :
AA-1-3262025

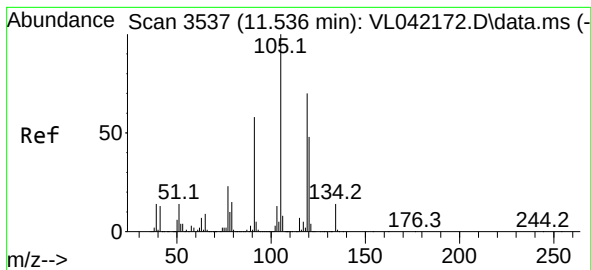
Tgt Ion: 91 Resp: 3145
Ion Ratio Lower Upper
91 100
106 39.1 20.8 62.5



#68
1-Bromo-4-Fluorobenzene
Concen: 9.925 ppbv
RT: 10.374 min Scan# 3178
Delta R.T. 0.003 min
Lab File: VL042188.D
Acq: 27 Mar 2025 20:12

Tgt Ion: 95 Resp: 386837
Ion Ratio Lower Upper
95 100
174 59.7 50.6 76.0
175 4.6 3.8 5.6





#74

1,2,4-Trimethylbenzene

Concen: 0.082 ppbv

RT: 11.536 min Scan# 31

Delta R.T. -0.000 min

Lab File: VL042188.D

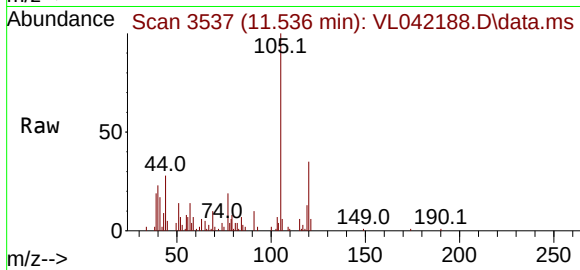
Acq: 27 Mar 2025 20:12

Instrument :

MSVOA_L

ClientSampleId :

AA-1-3262025



Tgt Ion:	105	Resp:	6973
Ion	Ratio	Lower	Upper
105	100		
120	35.0	38.6	58.0#
91	9.9	46.2	69.2#
77	19.3	18.6	27.8

