

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL121322\Reviewed data\
 Data File : VL040008.D
 Acq On : 13 Dec 2022 16:20
 Operator : SY/MD
 Sample : N6020-01
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

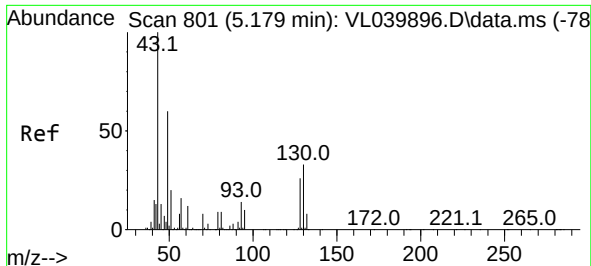
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

Quant Time: Dec 21 15:03:58 2022
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111822AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Dec 02 23:21:36 2022
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	5.176	49	1042577	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	6.639	114	2865548	10.000	ppbv	0.02
55) Chlorobenzene-d5	11.449	117	2403919	10.000	ppbv	0.02
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.757	95	1779213	9.690	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.900%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.713	85	50486	0.338	ppbv	96
3) Chlorodifluoromethane	2.655	51	47161	0.328	ppbv	96
4) Chloromethane	2.796	50	30286	0.329	ppbv	95
9) Propene	3.041	41	2587	0.038	ppbv	90
11) Trichlorofluoromethane	3.542	101	39985	0.220	ppbv	88
12) 1,1,2-Trichlorotrifluo...	4.041	101	5816	0.042	ppbv #	12
13) Ethanol	3.224	45	478990	92.577	ppbv	98
15) Acetone	3.449	43	3788416	27.396	ppbv	99
16) 1,3-Butadiene	2.948	39	5003	0.073	ppbv #	61
19) Isopropyl Alcohol	3.565	45	58761	0.785	ppbv #	29
20) Methylene Chloride	3.915	84	10638281	158.787	ppbv #	72
21) Allyl Chloride	3.976	41	5409	0.056	ppbv #	46
23) Vinyl Acetate	4.616	43	7017	0.124	ppbv #	50
25) Ethyl Acetate	5.195	43	5792713	22.815	ppbv #	75
26) Hexane	5.195	57	8320268	75.016	ppbv #	36
29) Chloroform	5.256	83	43918	0.298	ppbv	93
30) Cyclohexane	6.584	84	44729	0.411	ppbv	87
34) 2-Butanone	5.195	43	5706996	41.622	ppbv #	55
35) Carbon Tetrachloride	6.475	117	10534	0.065	ppbv #	89
36) Benzene	6.349	78	35460	0.146	ppbv #	92
39) 1,2-Dichloropropane	6.635	63	691558	7.287	ppbv #	26
41) Tetrahydrofuran	5.800	42	34315	0.363	ppbv #	36
44) 2,2,4-Trimethylpentane	7.311	57	141951	0.349	ppbv	93
53) Toluene	9.208	91	38704	0.139	ppbv #	19
58) Ethyl Benzene	12.079	91	13304	0.041	ppbv	91
60) o-Xylene	13.040	91	8927	0.034	ppbv #	30
70) n-Butylbenzene	17.883	91	7401	0.020	ppbv #	25
72) 4-Ethyltoluene	15.185	105	6001	0.021	ppbv #	46
74) 1,2,4-Trimethylbenzene	16.101	105	13302	0.047	ppbv #	76
78) Hexachloro-1,3-Butadiene	22.622	225	5362	0.050	ppbv #	1
79) Naphthalene	21.381	128	8554	0.050	ppbv #	76
80) Naphthalene,2-methyl-	24.381	142	9107	0.191	ppbv #	84

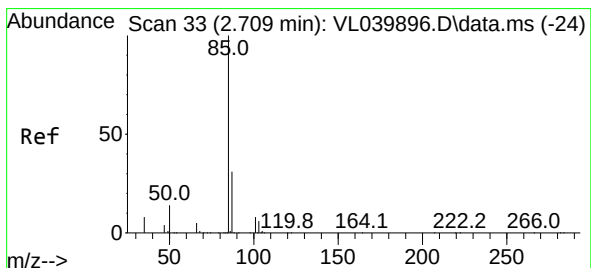
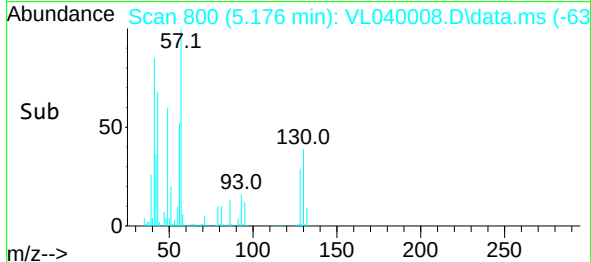
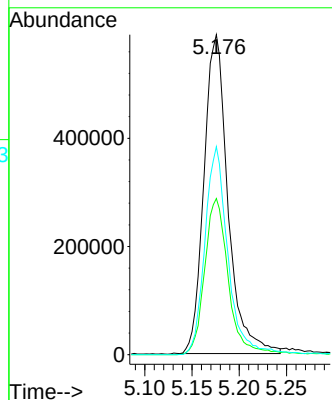
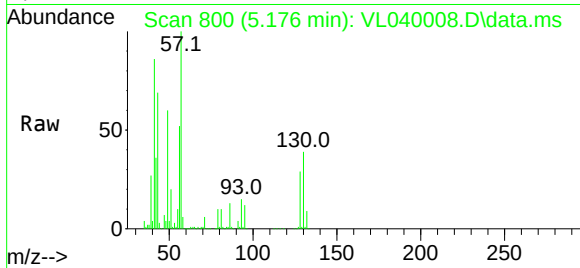
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.176 min Scan# 80
 Delta R.T. 0.020 min
 Lab File: VL040008.D
 Acq: 13 Dec 2022 16:20

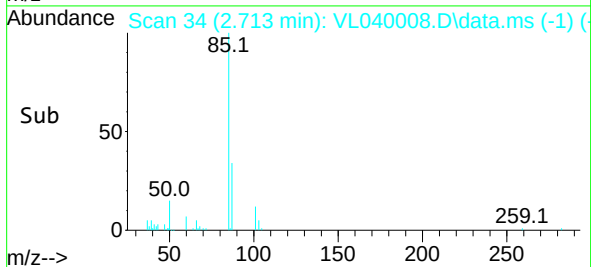
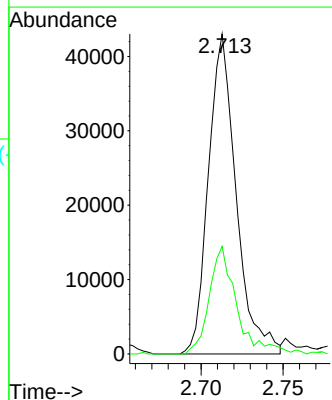
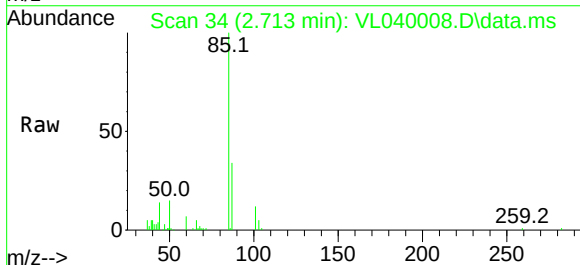
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 SV1

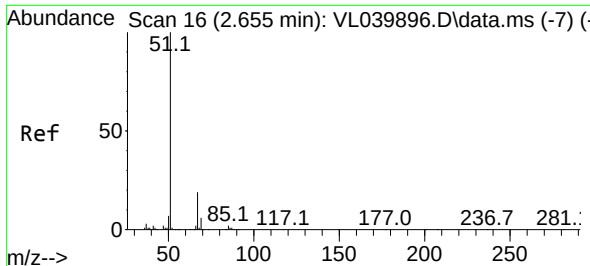
Tgt Ion: 49 Resp: 1042577
 Ion Ratio Lower Upper
 49 100
 128 48.8 22.1 66.3
 130 63.3 27.7 83.1



#2
 Dichlorodifluoromethane
 Concen: 0.338 ppbv
 RT: 2.713 min Scan# 34
 Delta R.T. 0.016 min
 Lab File: VL040008.D
 Acq: 13 Dec 2022 16:20

Tgt Ion: 85 Resp: 50486
 Ion Ratio Lower Upper
 85 100
 87 33.7 25.0 37.4

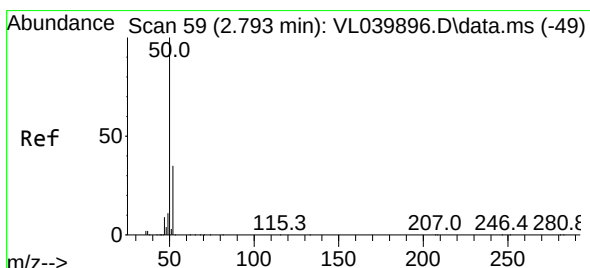
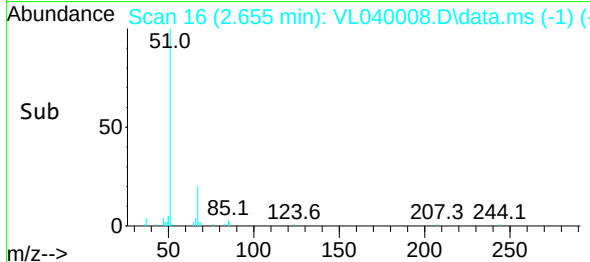
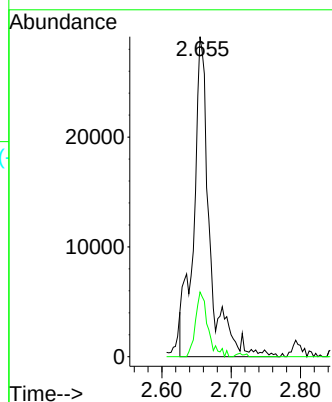
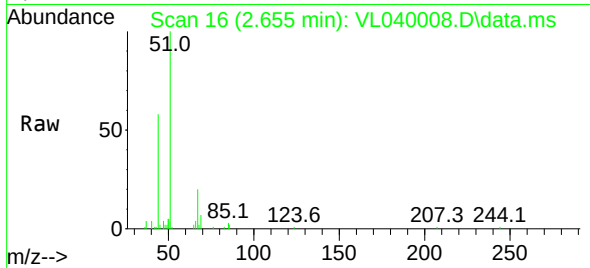




#3
Chlorodifluoromethane
Concen: 0.328 ppbv
RT: 2.655 min Scan# 1
Delta R.T. 0.013 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

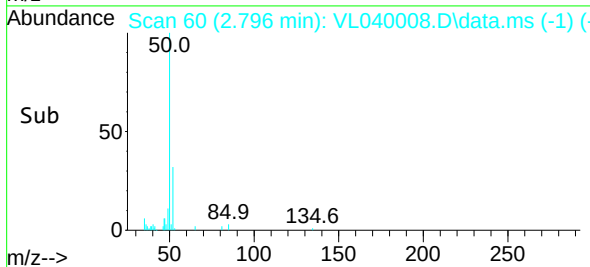
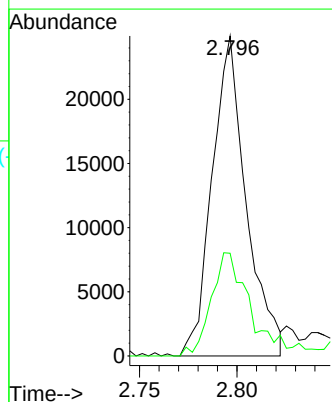
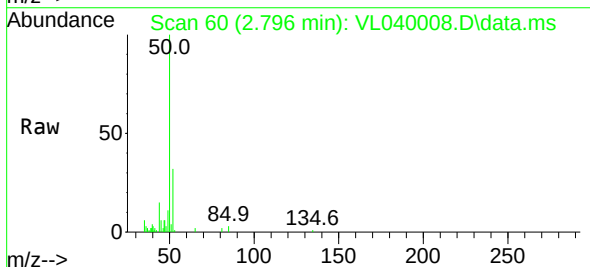
Instrument :
MSVOA_L
ClientSampleId :
SV1

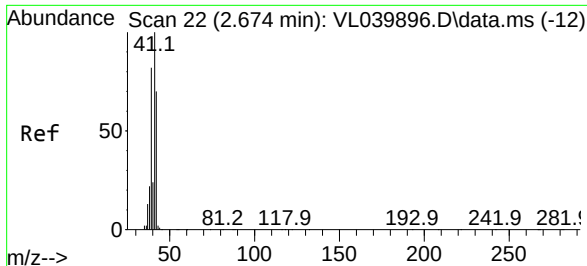
Tgt Ion: 51 Resp: 47161
Ion Ratio Lower Upper
51 100
67 16.2 14.2 21.4



#4
Chloromethane
Concen: 0.329 ppbv
RT: 2.796 min Scan# 60
Delta R.T. 0.016 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 50 Resp: 30286
Ion Ratio Lower Upper
50 100
52 32.1 27.8 41.8





#9

Propene

Concen: 0.038 ppbv

RT: 3.041 min Scan# 11

Delta R.T. 0.380 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

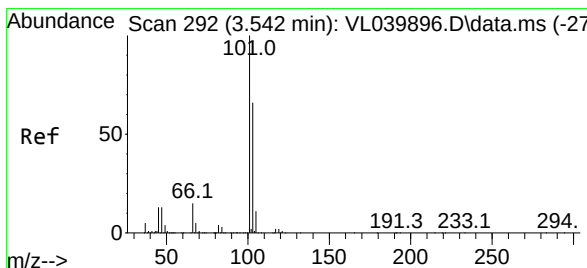
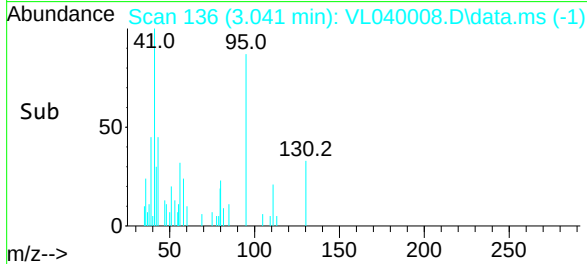
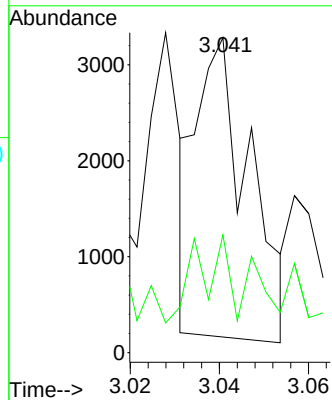
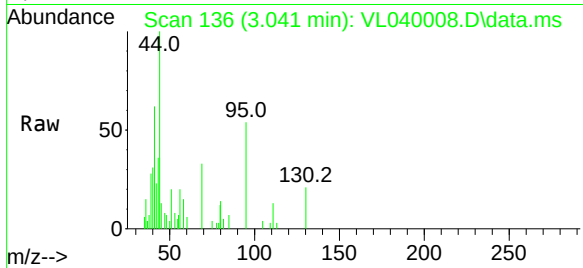
SV1

Tgt Ion: 41 Resp: 2587

Ion Ratio Lower Upper

41 100

42 77.5 55.8 83.6



#11

Trichlorofluoromethane

Concen: 0.220 ppbv

RT: 3.542 min Scan# 292

Delta R.T. 0.013 min

Lab File: VL040008.D

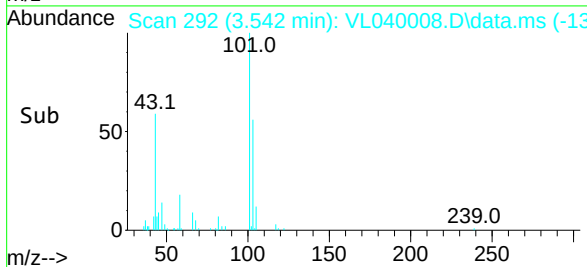
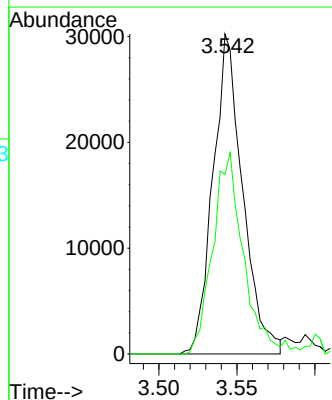
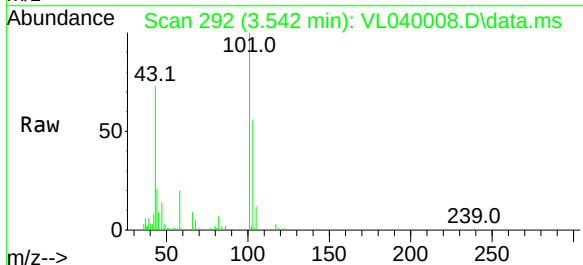
Acq: 13 Dec 2022 16:20

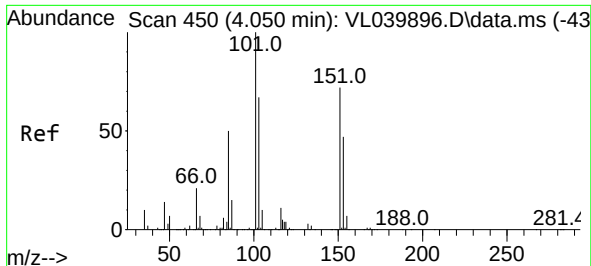
Tgt Ion: 101 Resp: 39985

Ion Ratio Lower Upper

101 100

103 56.1 52.6 78.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.042 ppbv

RT: 4.041 min Scan# 447

Delta R.T. 0.010 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

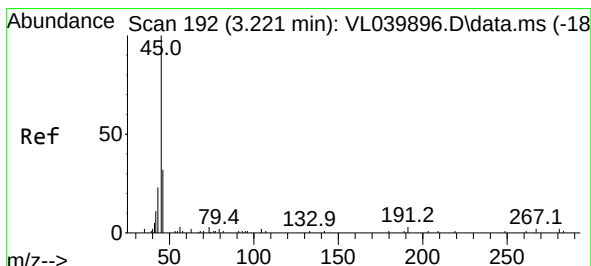
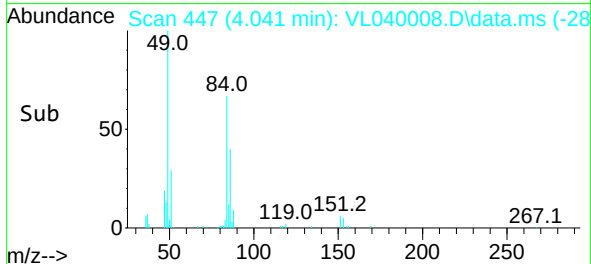
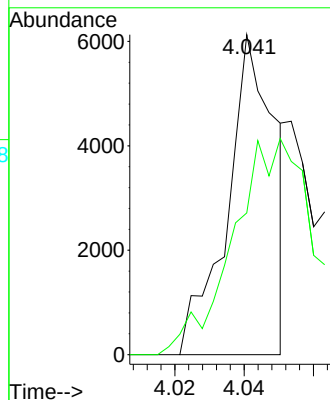
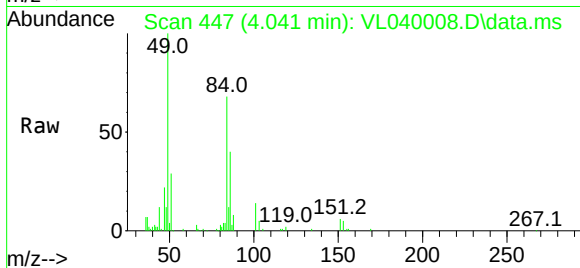
SV1

Tgt Ion:101 Resp: 5816

Ion Ratio Lower Upper

101 100

151 0.0 59.6 89.4#



#13

Ethanol

Concen: 92.577 ppbv

RT: 3.224 min Scan# 193

Delta R.T. 0.010 min

Lab File: VL040008.D

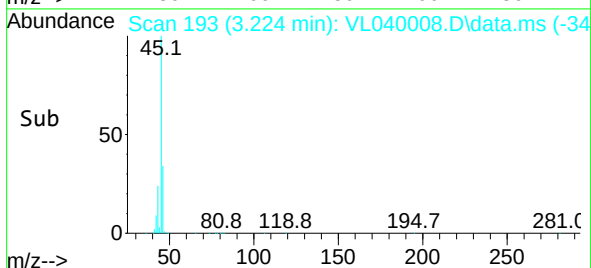
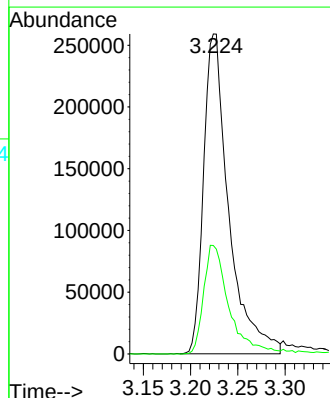
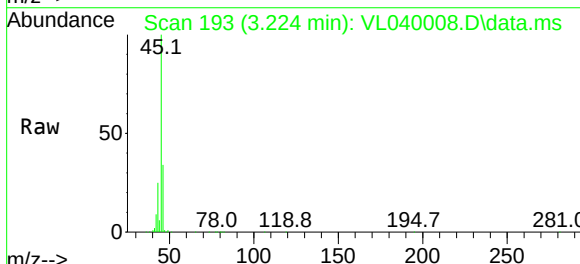
Acq: 13 Dec 2022 16:20

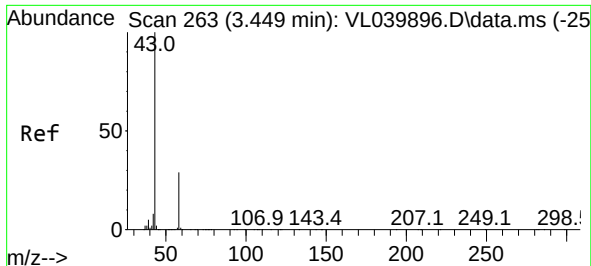
Tgt Ion: 45 Resp: 478990

Ion Ratio Lower Upper

45 100

46 35.2 14.6 58.2

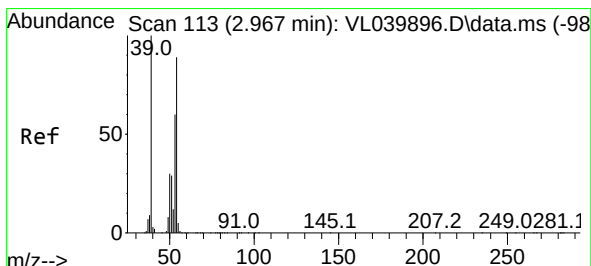
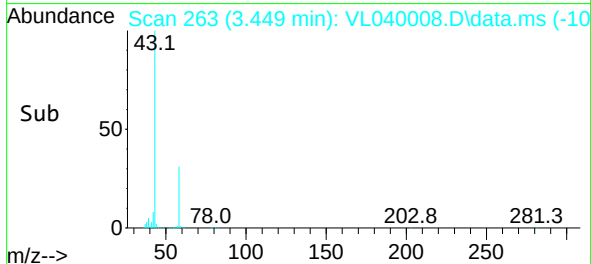
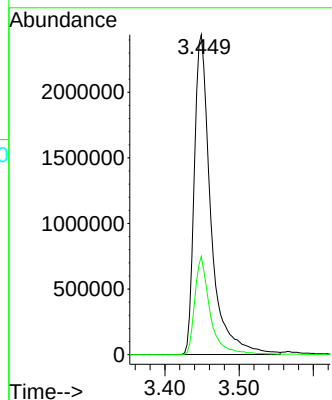
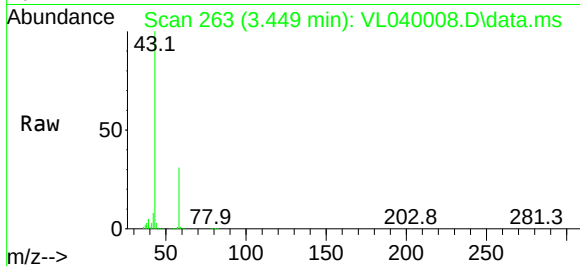




#15
Acetone
Concen: 27.396 ppbv
RT: 3.449 min Scan# 20
Delta R.T. 0.016 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

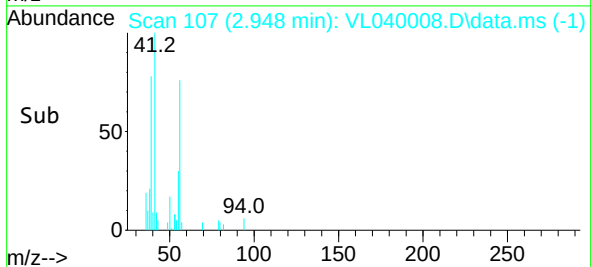
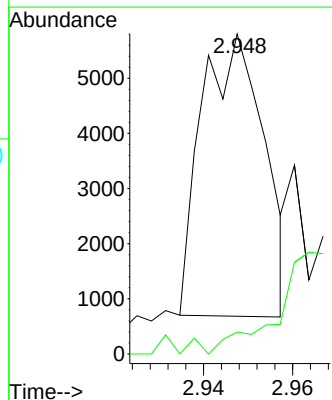
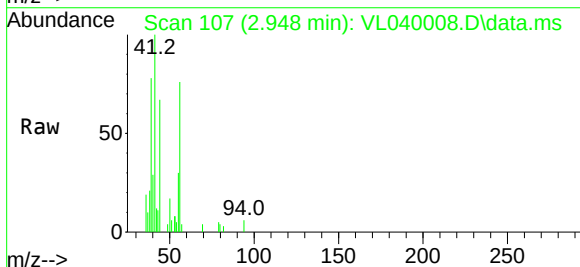
Instrument :
MSVOA_L
ClientSampleId :
SV1

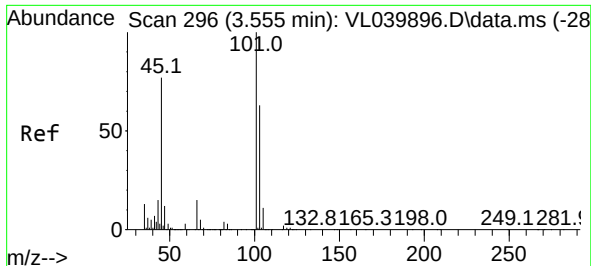
Tgt Ion: 43 Resp: 3788416
Ion Ratio Lower Upper
43 100
58 28.9 22.9 34.3



#16
1,3-Butadiene
Concen: 0.073 ppbv
RT: 2.948 min Scan# 107
Delta R.T. -0.003 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 39 Resp: 5003
Ion Ratio Lower Upper
39 100
54 48.0 66.6 99.8#

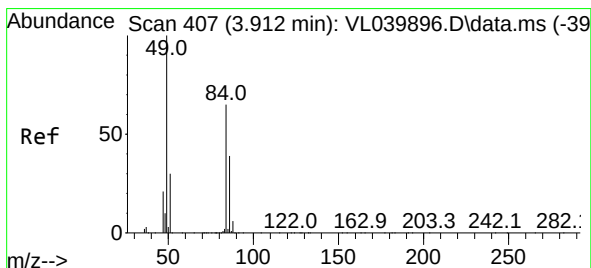
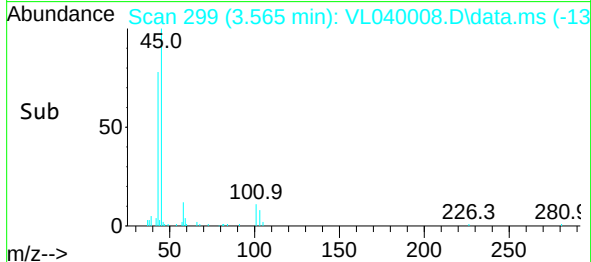
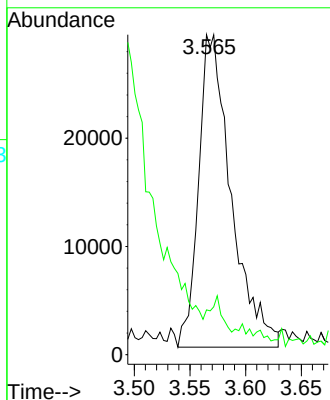
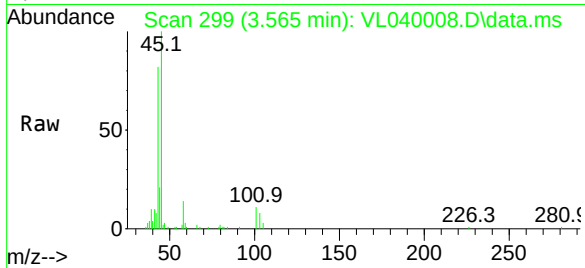




#19
Isopropyl Alcohol
Concen: 0.785 ppbv
RT: 3.565 min Scan# 296
Delta R.T. 0.023 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

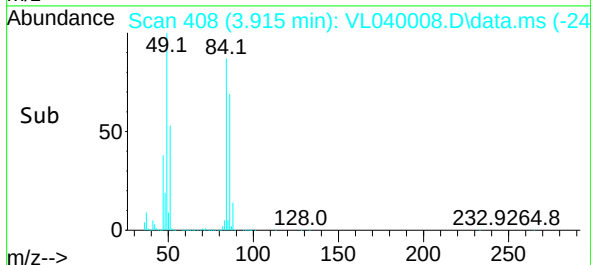
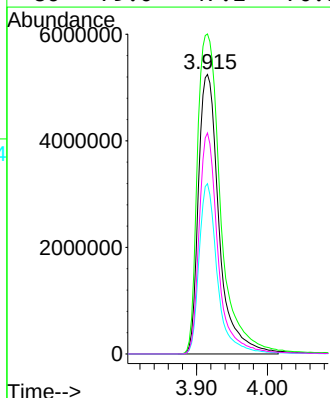
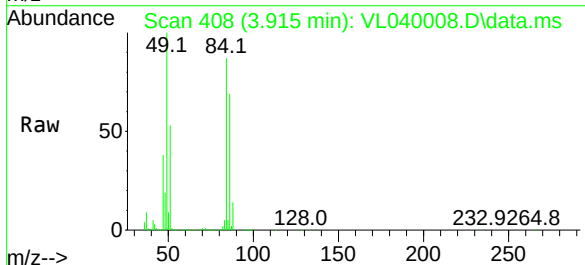
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MSVOA_L
ClientSampleId :
SV1

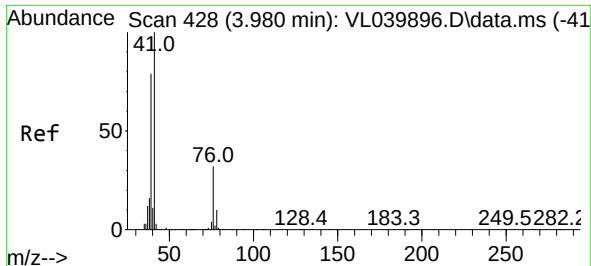
Tgt Ion: 45 Resp: 58761
Ion Ratio Lower Upper
45 100
58 0.0 38.7 58.1#



#20
Methylene Chloride
Concen: 158.787 ppbv
RT: 3.915 min Scan# 408
Delta R.T. 0.019 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 84 Resp:10638281
Ion Ratio Lower Upper
84 100
49 114.5 122.2 183.4#
51 60.9 36.3 54.5#
86 79.0 47.2 70.8#

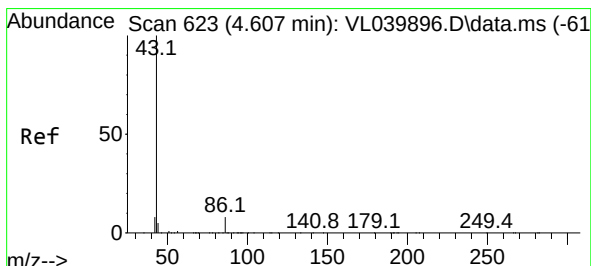
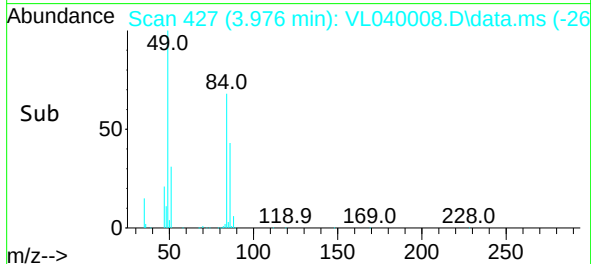
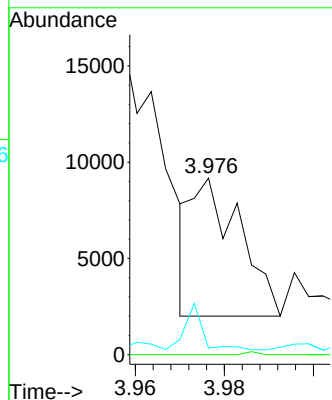
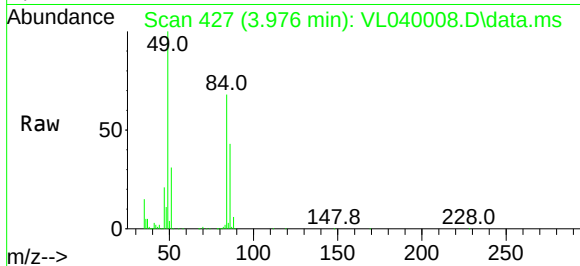




#21
 Allyl Chloride
 Concen: 0.056 ppbv
 RT: 3.976 min Scan# 41
 Delta R.T. 0.016 min
 Lab File: VL040008.D
 Acq: 13 Dec 2022 16:20

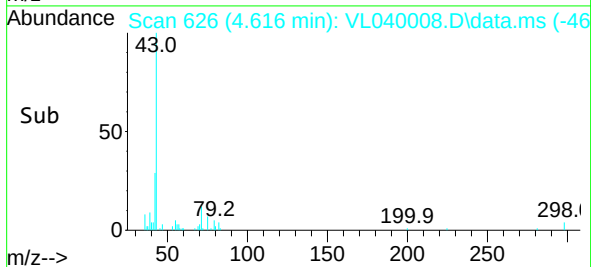
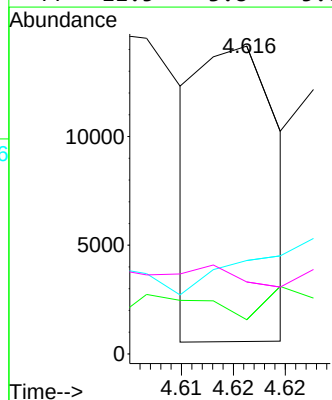
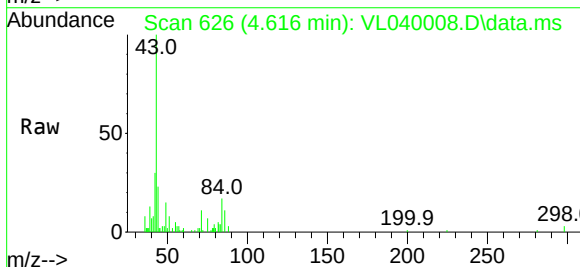
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

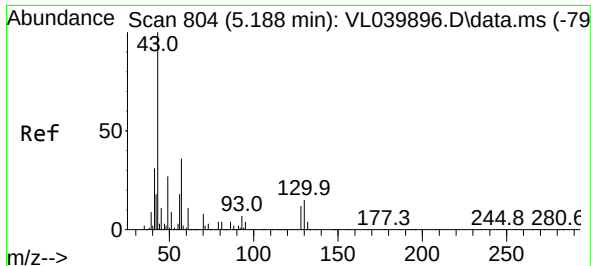
Tgt Ion: 41 Resp: 5409
 Ion Ratio Lower Upper
 41 100
 76 0.0 25.6 38.4#
 39 34.3 65.2 97.8#



#23
 Vinyl Acetate
 Concen: 0.124 ppbv
 RT: 4.616 min Scan# 626
 Delta R.T. 0.023 min
 Lab File: VL040008.D
 Acq: 13 Dec 2022 16:20

Tgt Ion: 43 Resp: 7017
 Ion Ratio Lower Upper
 43 100
 86 0.0 5.0 7.4#
 42 40.3 7.6 11.4#
 44 11.5 3.8 5.6#



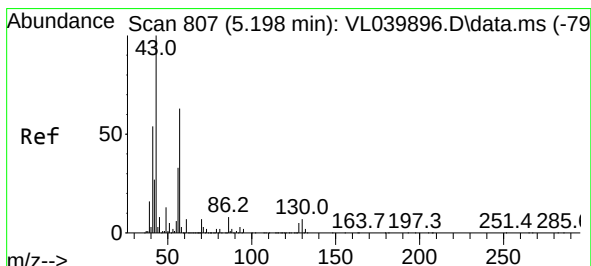
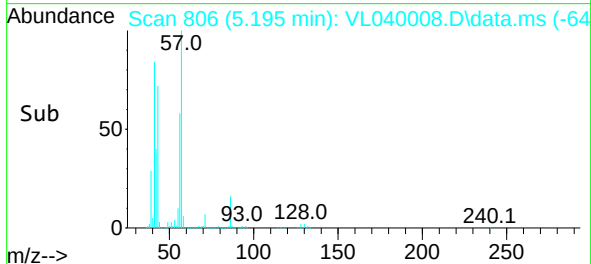
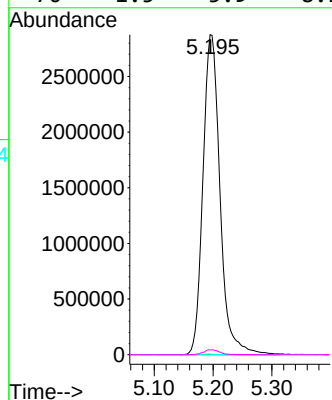
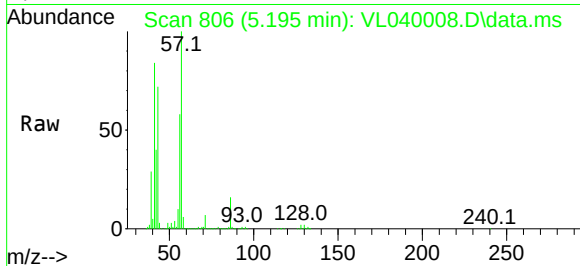


#25
Ethyl Acetate
Concen: 22.815 ppbv
RT: 5.195 min Scan# 806
Delta R.T. 0.026 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Instrument :
MSVOA_L
ClientSampleId :
SV1

Tgt Ion: 43 Resp: 5792713

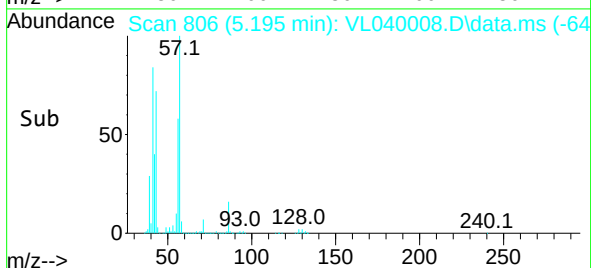
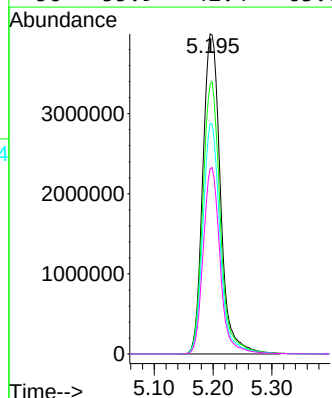
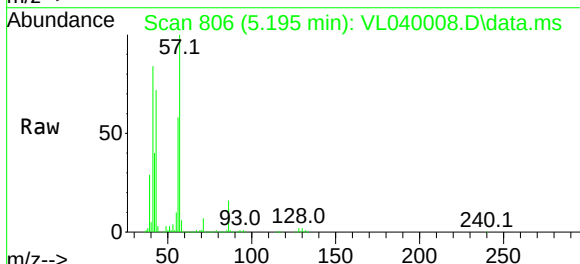
Ion	Ratio	Lower	Upper
43	100		
45	0.1	8.4	12.6#
61	0.2	8.5	12.7#
70	1.5	5.9	8.9#

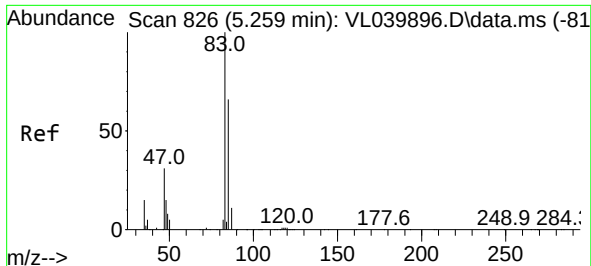


#26
Hexane
Concen: 75.016 ppbv
RT: 5.195 min Scan# 806
Delta R.T. 0.019 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 57 Resp: 8320268

Ion	Ratio	Lower	Upper
57	100		
41	84.2	72.3	108.5
43	69.8	188.7	283.1#
56	55.9	42.4	63.6





#29

Chloroform

Concen: 0.298 ppbv

RT: 5.256 min Scan# 81

Delta R.T. 0.019 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

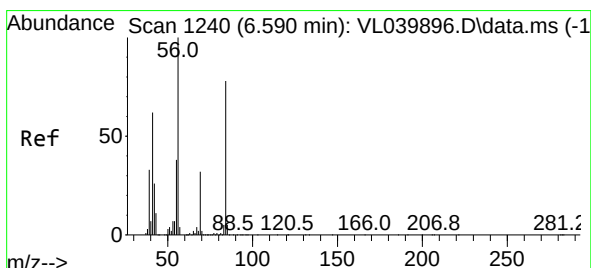
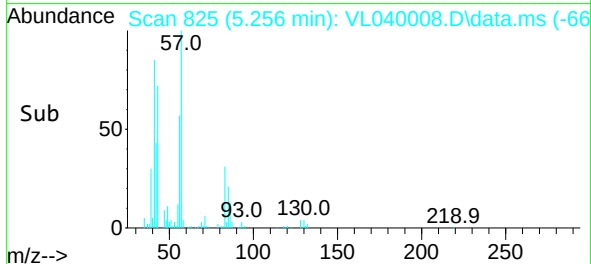
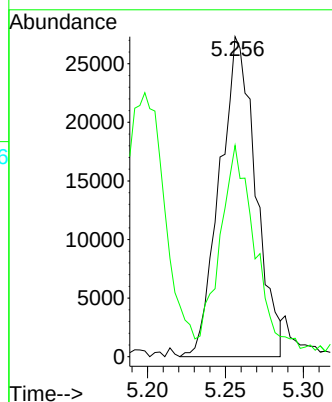
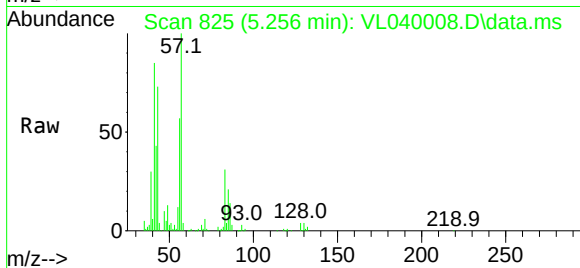
SV1

Tgt Ion: 83 Resp: 43918

Ion Ratio Lower Upper

83 100

85 59.7 52.4 78.6



#30

Cyclohexane

Concen: 0.411 ppbv

RT: 6.584 min Scan# 1238

Delta R.T. 0.019 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

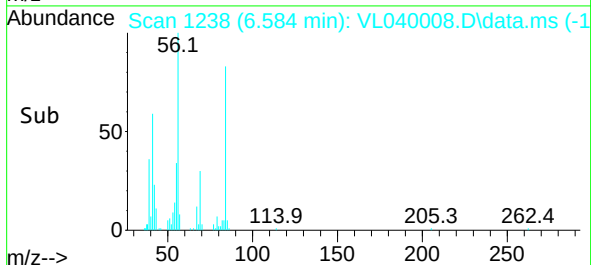
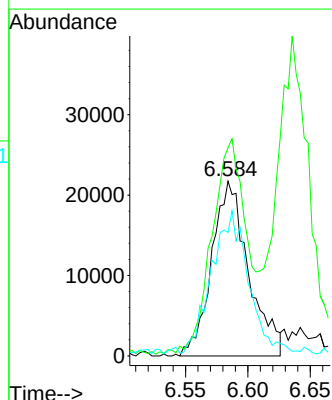
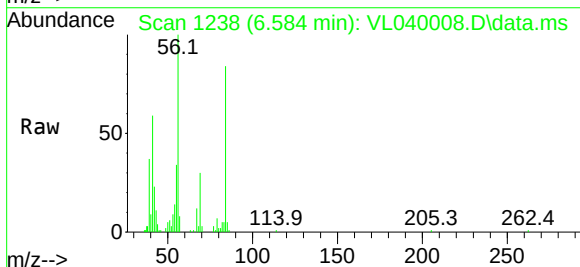
Tgt Ion: 84 Resp: 44729

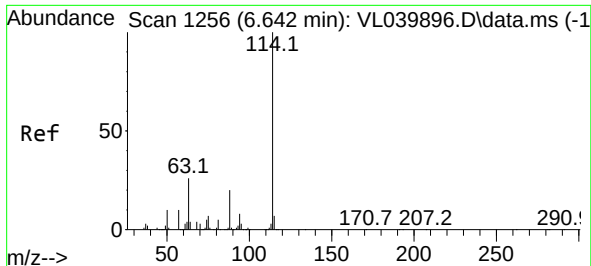
Ion Ratio Lower Upper

84 100

56 116.9 112.5 168.7

41 86.0 67.8 101.8





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.639 min Scan# 11

Delta R.T. 0.019 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

SV1

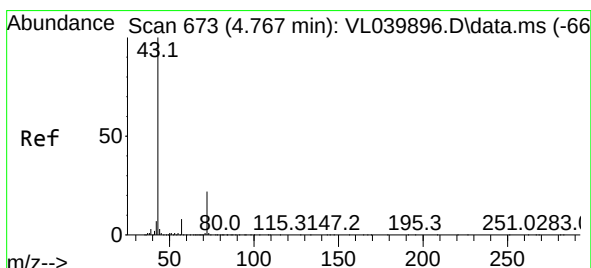
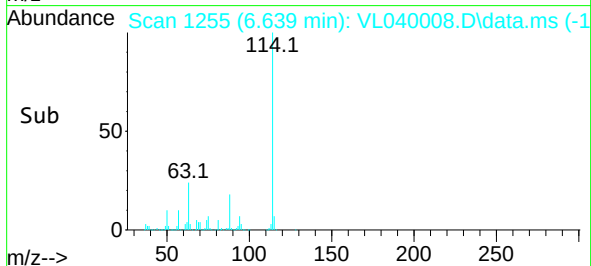
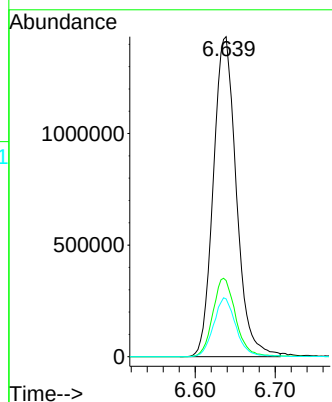
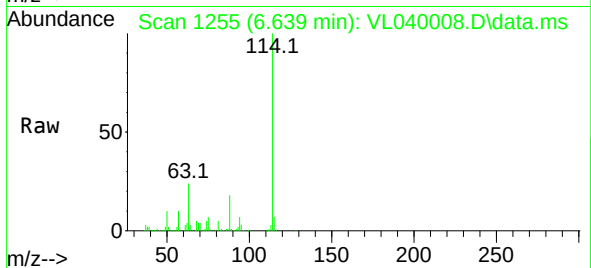
Tgt Ion:114 Resp: 2865548

Ion Ratio Lower Upper

114 100

63 24.5 21.4 32.0

88 17.9 15.3 22.9



#34

2-Butanone

Concen: 41.622 ppbv

RT: 5.195 min Scan# 806

Delta R.T. 0.444 min

Lab File: VL040008.D

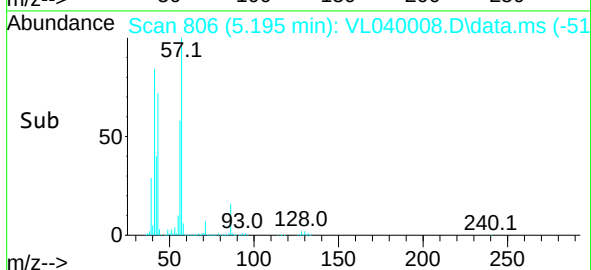
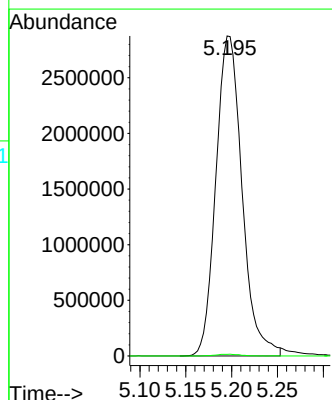
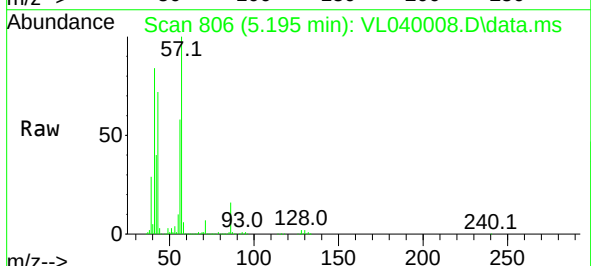
Acq: 13 Dec 2022 16:20

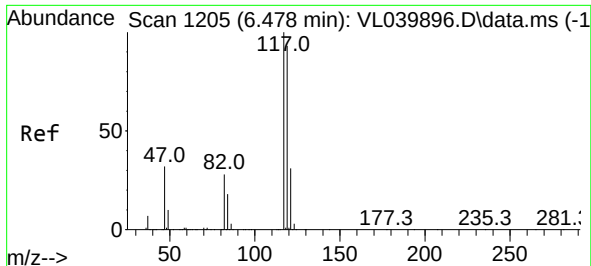
Tgt Ion: 43 Resp: 5706996

Ion Ratio Lower Upper

43 100

72 0.5 17.4 26.2#

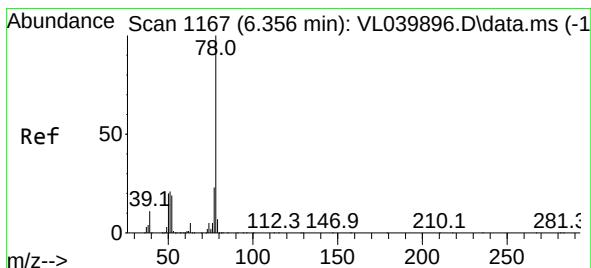
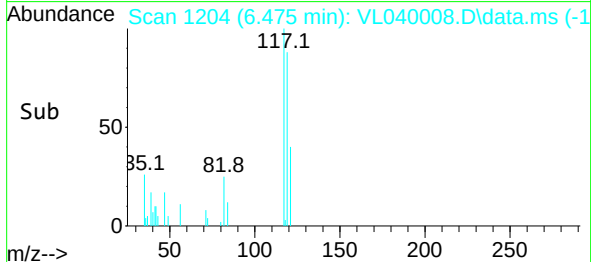
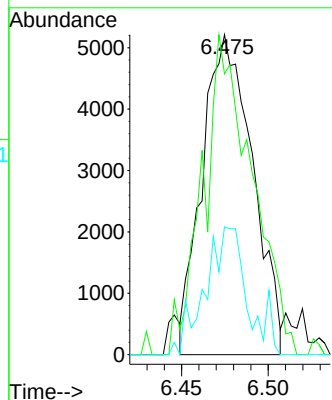
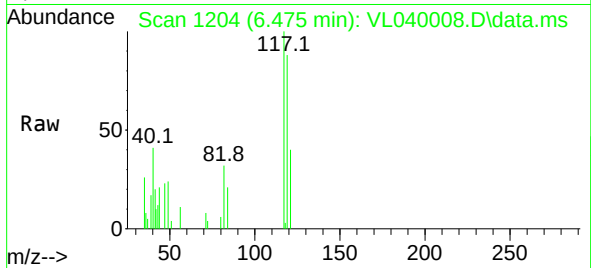




#35
Carbon Tetrachloride
Concen: 0.065 ppbv
RT: 6.475 min Scan# 1165
Delta R.T. 0.019 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

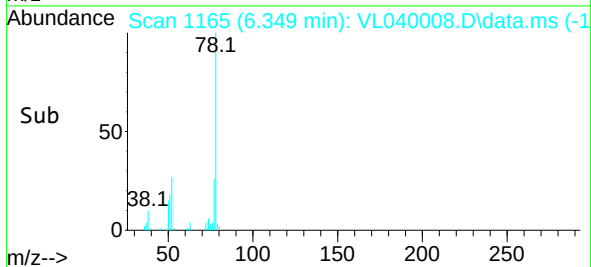
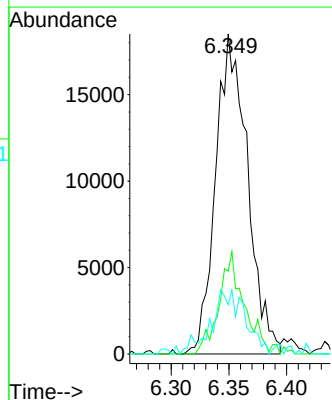
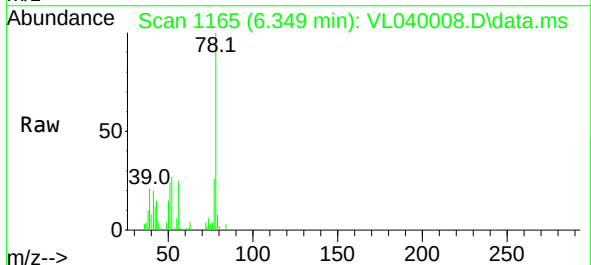
Instrument :
MSVOA_L
ClientSampleId :
SV1

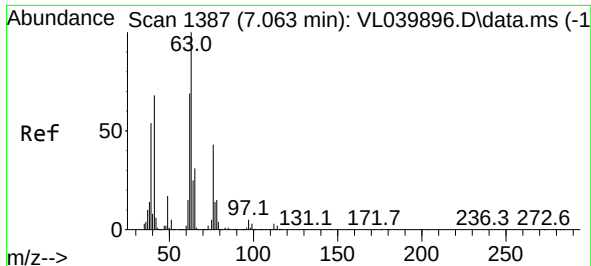
Tgt Ion:117 Resp: 10534
Ion Ratio Lower Upper
117 100
119 87.0 74.7 112.1
121 43.4 24.5 36.7#



#36
Benzene
Concen: 0.146 ppbv
RT: 6.349 min Scan# 1165
Delta R.T. 0.016 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 78 Resp: 35460
Ion Ratio Lower Upper
78 100
77 25.8 18.2 27.2
50 15.4 15.8 23.8#





#39

1,2-Dichloropropane

Concen: 7.287 ppbv

RT: 6.635 min Scan# 11

Delta R.T. -0.399 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

SV1

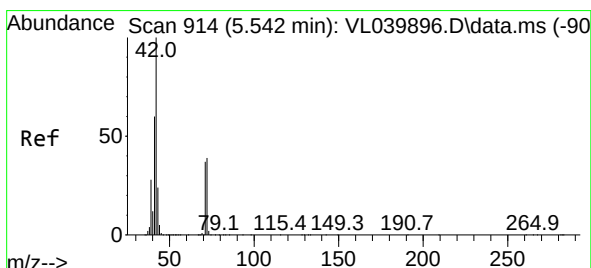
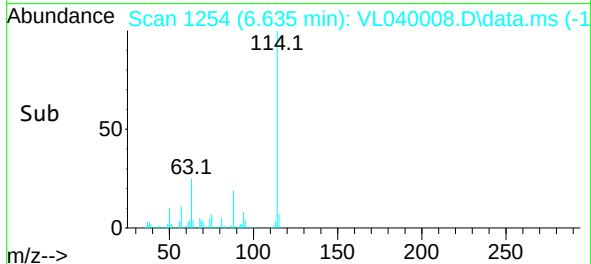
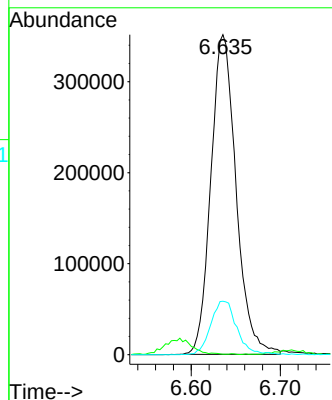
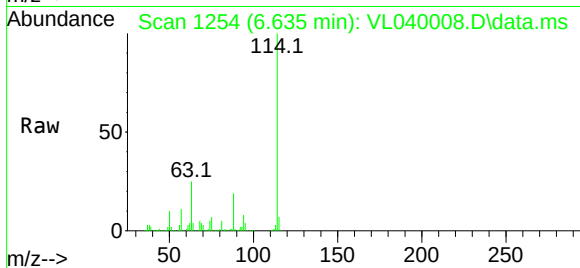
Tgt Ion: 63 Resp: 691558

Ion Ratio Lower Upper

63 100

41 0.0 54.7 82.1#

62 16.7 55.0 82.6#



#41

Tetrahydrofuran

Concen: 0.363 ppbv

RT: 5.800 min Scan# 994

Delta R.T. 0.280 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

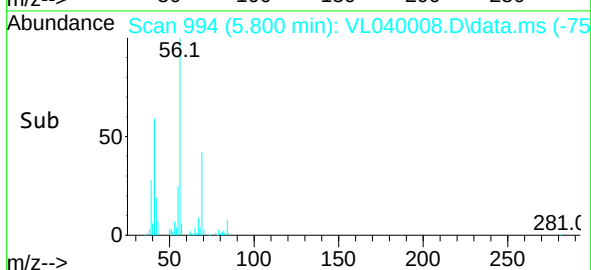
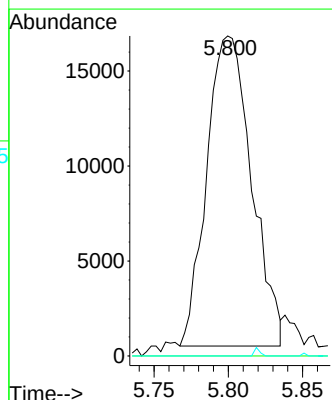
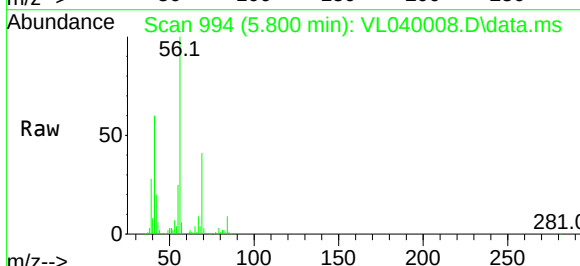
Tgt Ion: 42 Resp: 34315

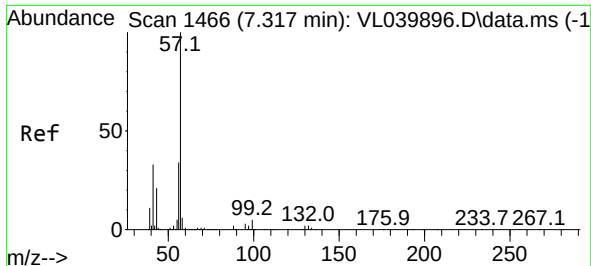
Ion Ratio Lower Upper

42 100

72 0.0 31.6 47.4#

71 0.0 31.2 46.8#





#44

2,2,4-Trimethylpentane

Concen: 0.349 ppbv

RT: 7.311 min Scan# 1466

Delta R.T. 0.019 min

Lab File: VL040008.D

Acq: 13 Dec 2022 16:20

Instrument :

MSVOA_L

ClientSampleId :

SV1

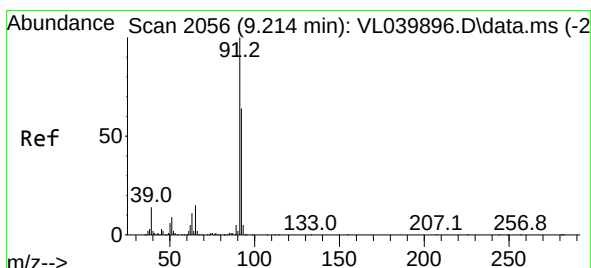
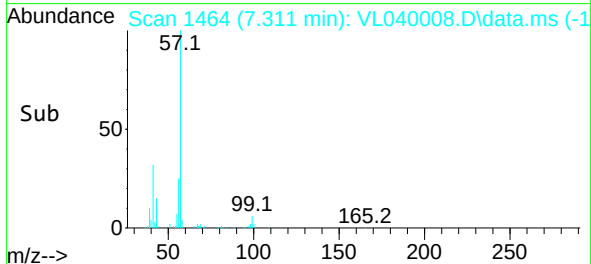
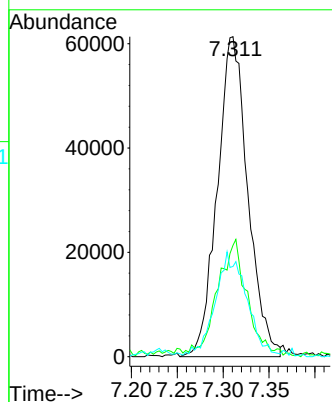
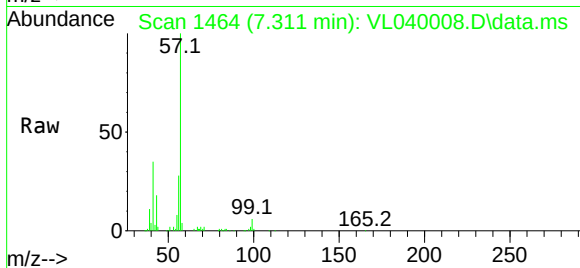
Tgt Ion: 57 Resp: 141951

Ion Ratio Lower Upper

57 100

41 37.9 26.2 39.2

56 34.6 25.5 38.3



#53

Toluene

Concen: 0.139 ppbv

RT: 9.208 min Scan# 2054

Delta R.T. 0.023 min

Lab File: VL040008.D

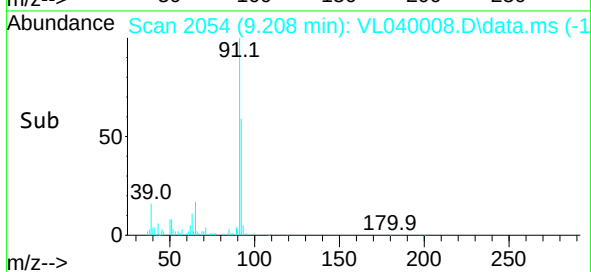
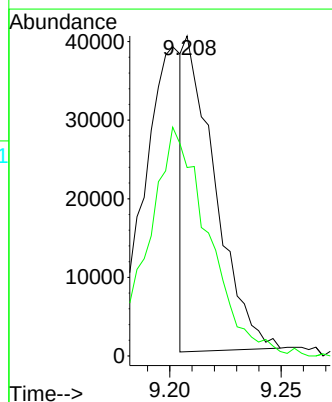
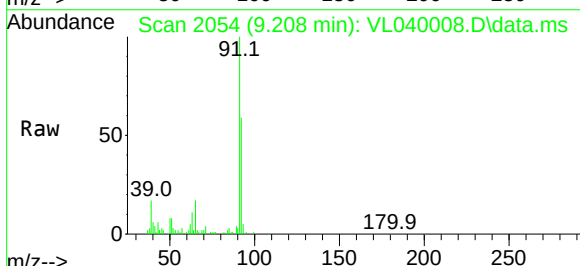
Acq: 13 Dec 2022 16:20

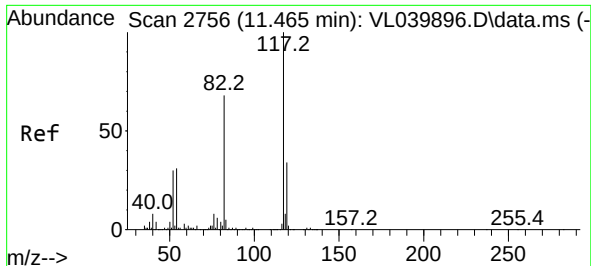
Tgt Ion: 91 Resp: 38704

Ion Ratio Lower Upper

91 100

92 0.0 49.8 74.6#

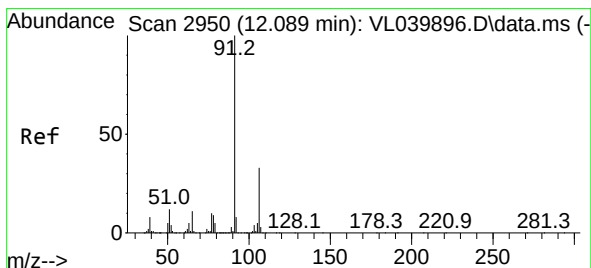
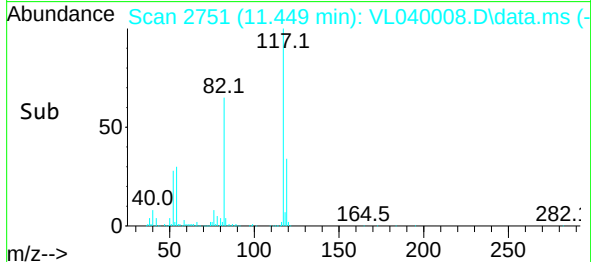
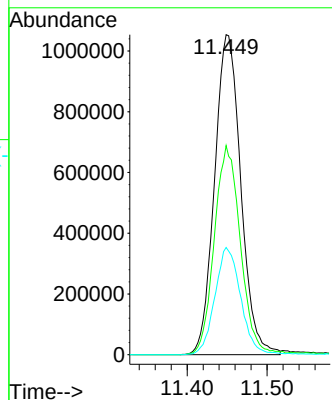
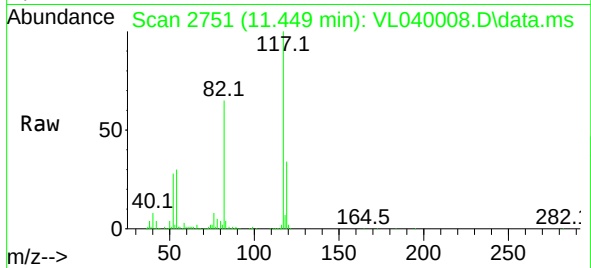




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.449 min Scan# 21
Delta R.T. 0.016 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

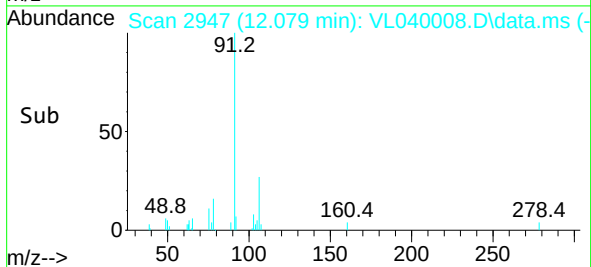
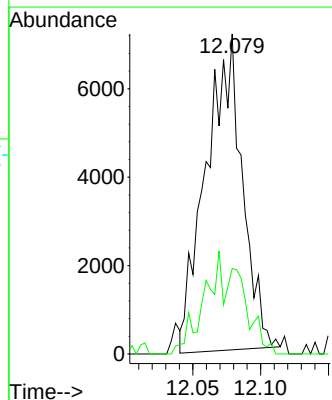
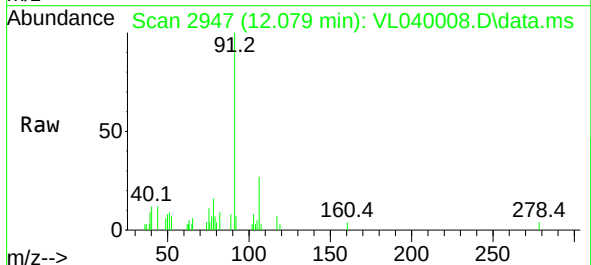
Instrument :
MSVOA_L
ClientSampleId :
SV1

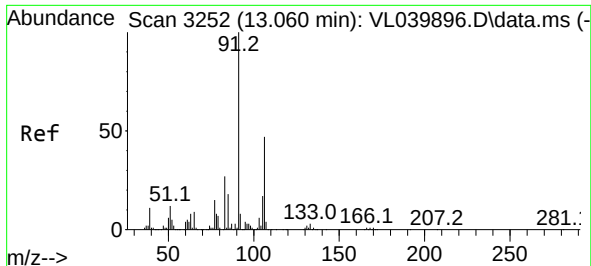
Tgt Ion:117 Resp: 2403919
Ion Ratio Lower Upper
117 100
82 65.8 52.3 78.5
119 33.3 25.7 38.5



#58
Ethyl Benzene
Concen: 0.041 ppbv
RT: 12.079 min Scan# 2947
Delta R.T. 0.023 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 91 Resp: 13304
Ion Ratio Lower Upper
91 100
106 27.3 26.1 39.1

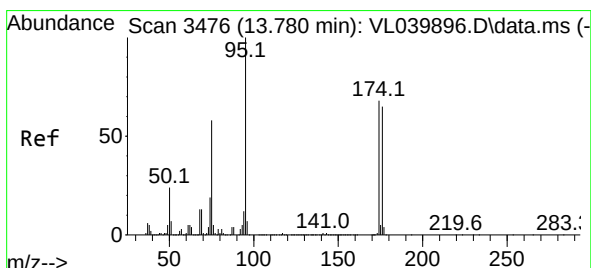
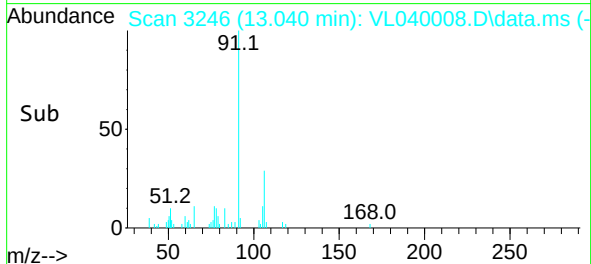
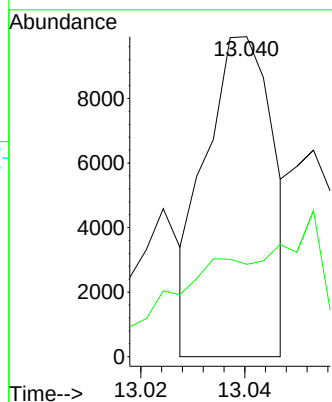
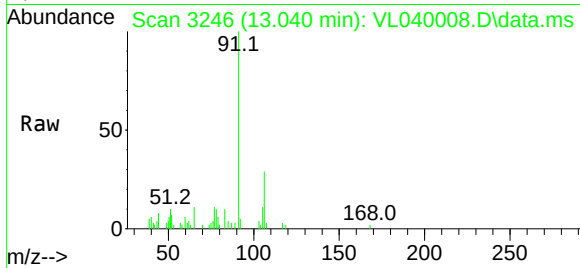




#60
o-Xylene
Concen: 0.034 ppbv
RT: 13.040 min Scan# 31
Delta R.T. 0.013 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

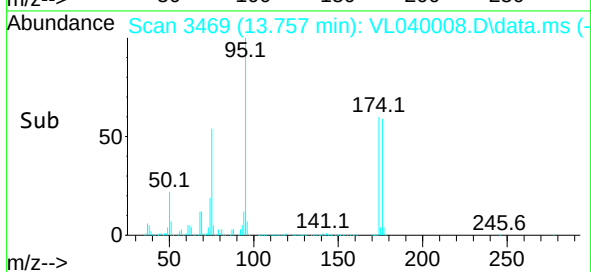
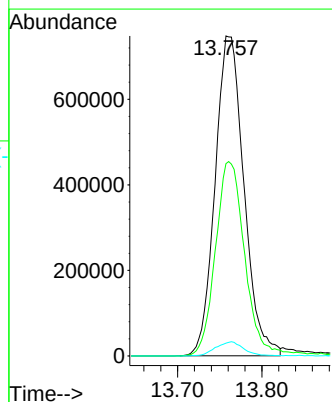
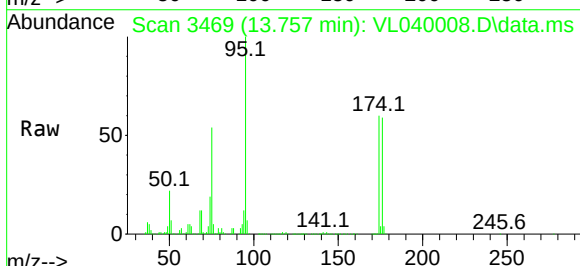
Instrument :
MSVOA_L
ClientSampleId :
SV1

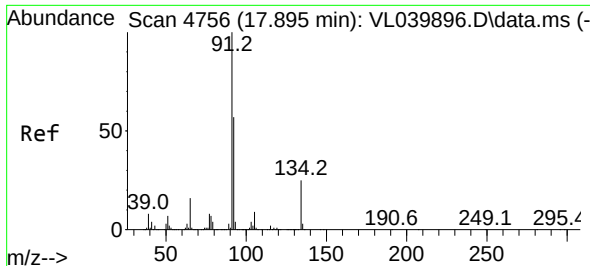
Tgt Ion: 91 Resp: 8927
Ion Ratio Lower Upper
91 100
106 0.0 23.2 69.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.690 ppbv
RT: 13.757 min Scan# 3469
Delta R.T. 0.016 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 95 Resp: 1779213
Ion Ratio Lower Upper
95 100
174 62.5 53.7 80.5
175 4.5 4.0 6.0

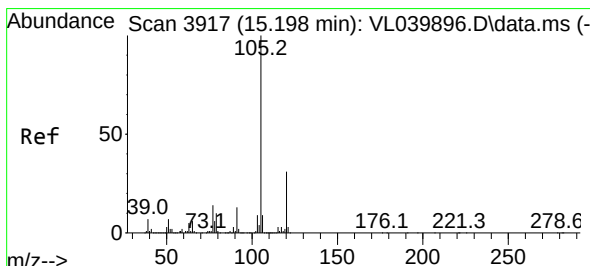
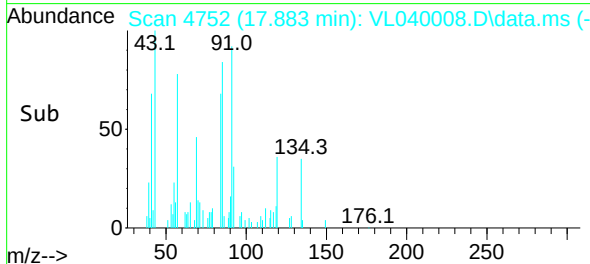
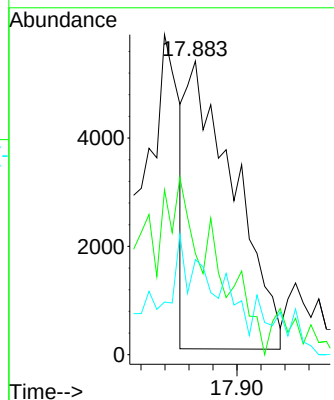
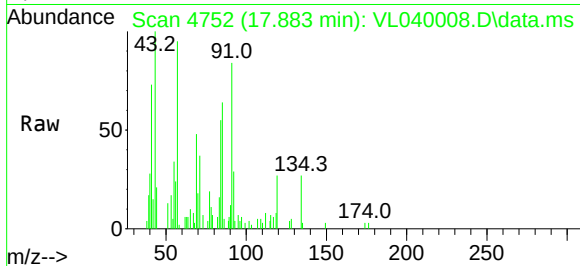




#70
n-Butylbenzene
Concen: 0.020 ppbv
RT: 17.883 min Scan# 41
Delta R.T. 0.026 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

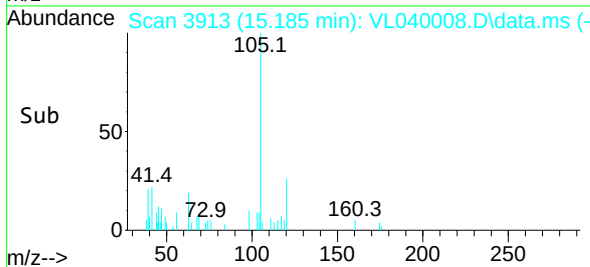
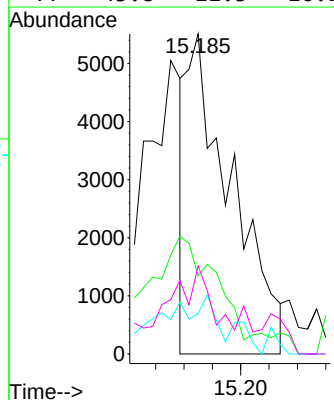
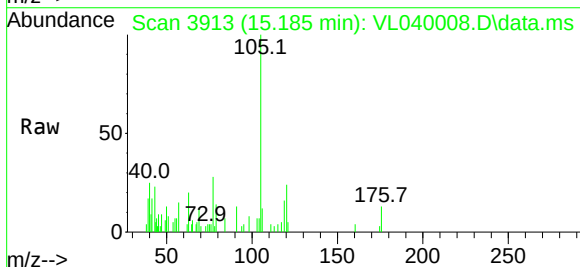
Instrument :
MSVOA_L
ClientSampleId :
SV1

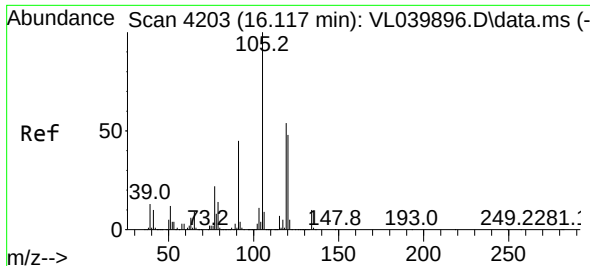
Tgt Ion: 91 Resp: 7401
Ion Ratio Lower Upper
91 100
92 104.1 44.2 66.2#
134 68.2 18.8 28.2#



#72
4-Ethyltoluene
Concen: 0.021 ppbv
RT: 15.185 min Scan# 3913
Delta R.T. 0.023 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion: 105 Resp: 6001
Ion Ratio Lower Upper
105 100
120 0.0 24.5 36.7#
91 25.1 10.4 15.6#
77 43.8 11.3 16.9#

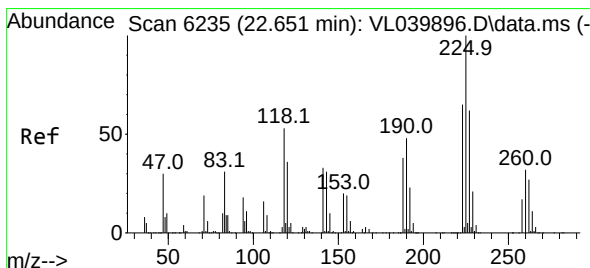
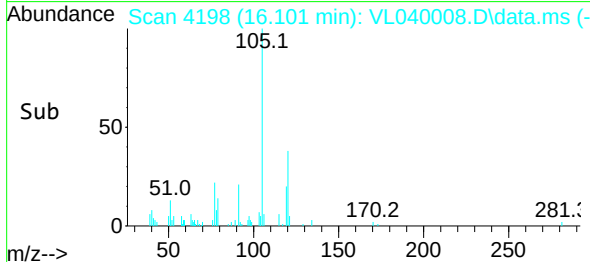
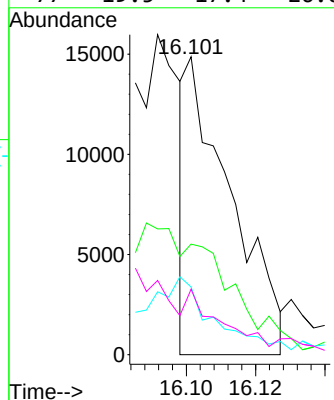
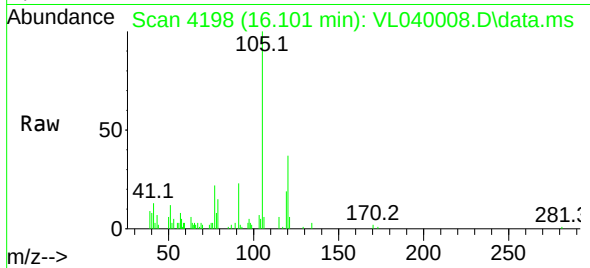




#74
1,2,4-Trimethylbenzene
Concen: 0.047 ppbv
RT: 16.101 min Scan# 41
Delta R.T. 0.026 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

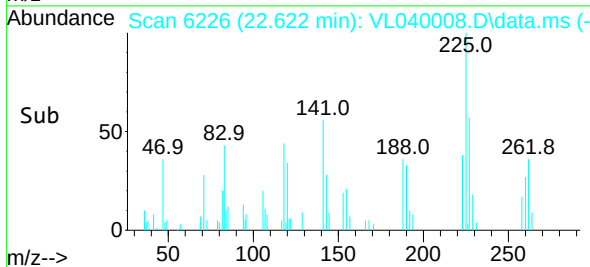
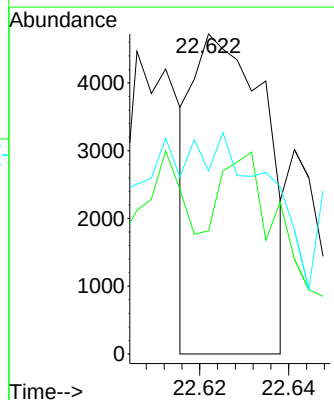
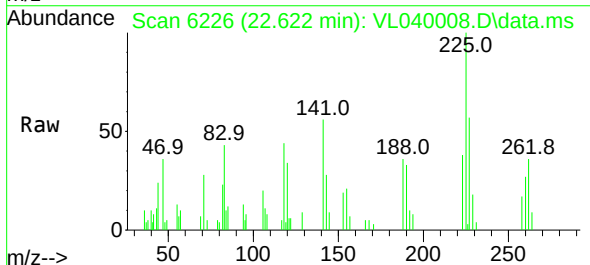
Instrument :
MSVOA_L
ClientSampleId :
SV1

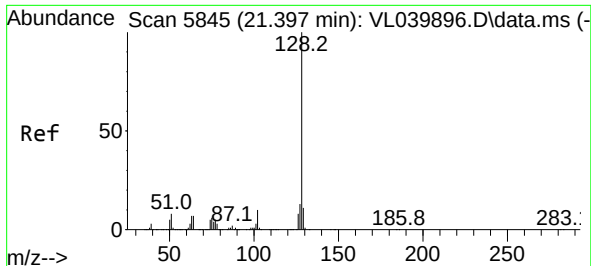
Tgt Ion:	105	Resp:	13302
Ion Ratio	Lower	Upper	
105	100		
120	33.8	38.7	58.1#
91	21.3	36.4	54.6#
77	19.5	17.4	26.0



#78
Hexachloro-1,3-Butadiene
Concen: 0.050 ppbv
RT: 22.622 min Scan# 6226
Delta R.T. 0.023 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion:	225	Resp:	5362
Ion Ratio	Lower	Upper	
225	100		
223	0.0	50.7	76.1#
227	178.1	50.8	76.2#

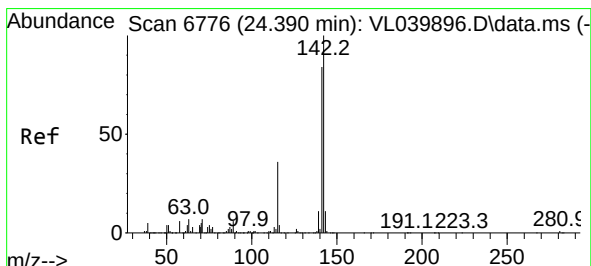
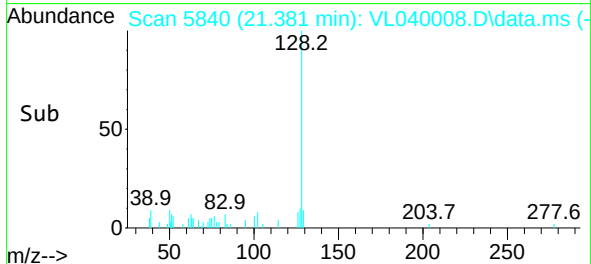
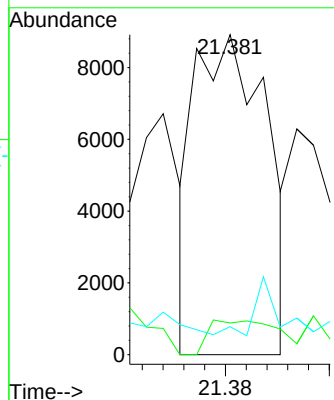
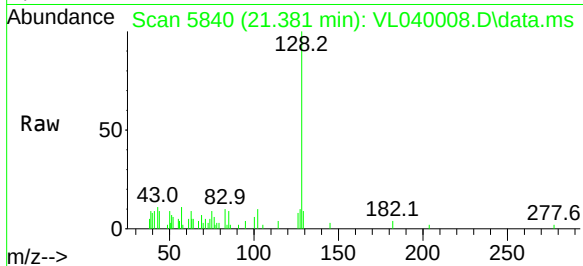




#79
Naphthalene
Concen: 0.050 ppbv
RT: 21.381 min Scan# 51
Delta R.T. 0.032 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Instrument :
MSVOA_L
ClientSampleId :
SV1

Tgt Ion:128 Resp: 8554
Ion Ratio Lower Upper
128 100
127 20.2 10.0 15.0#
129 0.3 8.8 13.2#



#80
Naphthalene,2-methyl-
Concen: 0.191 ppbv
RT: 24.381 min Scan# 6773
Delta R.T. 0.032 min
Lab File: VL040008.D
Acq: 13 Dec 2022 16:20

Tgt Ion:142 Resp: 9107
Ion Ratio Lower Upper
142 100
141 68.8 69.1 103.7#
115 43.1 29.6 44.4

