

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL050219\
 Data File : VL033640.D
 Acq On : 2 May 2019 23:05
 Operator : SY/AP
 Sample : K2628-08
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 A-8

Quant Time: May 03 02:30:47 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL050119AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 02 06:29:02 2019
 QLast Update : Thu May 02 06:29:02 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	877187	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	2026178	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	2025053	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1669892	10.83	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	108.30%

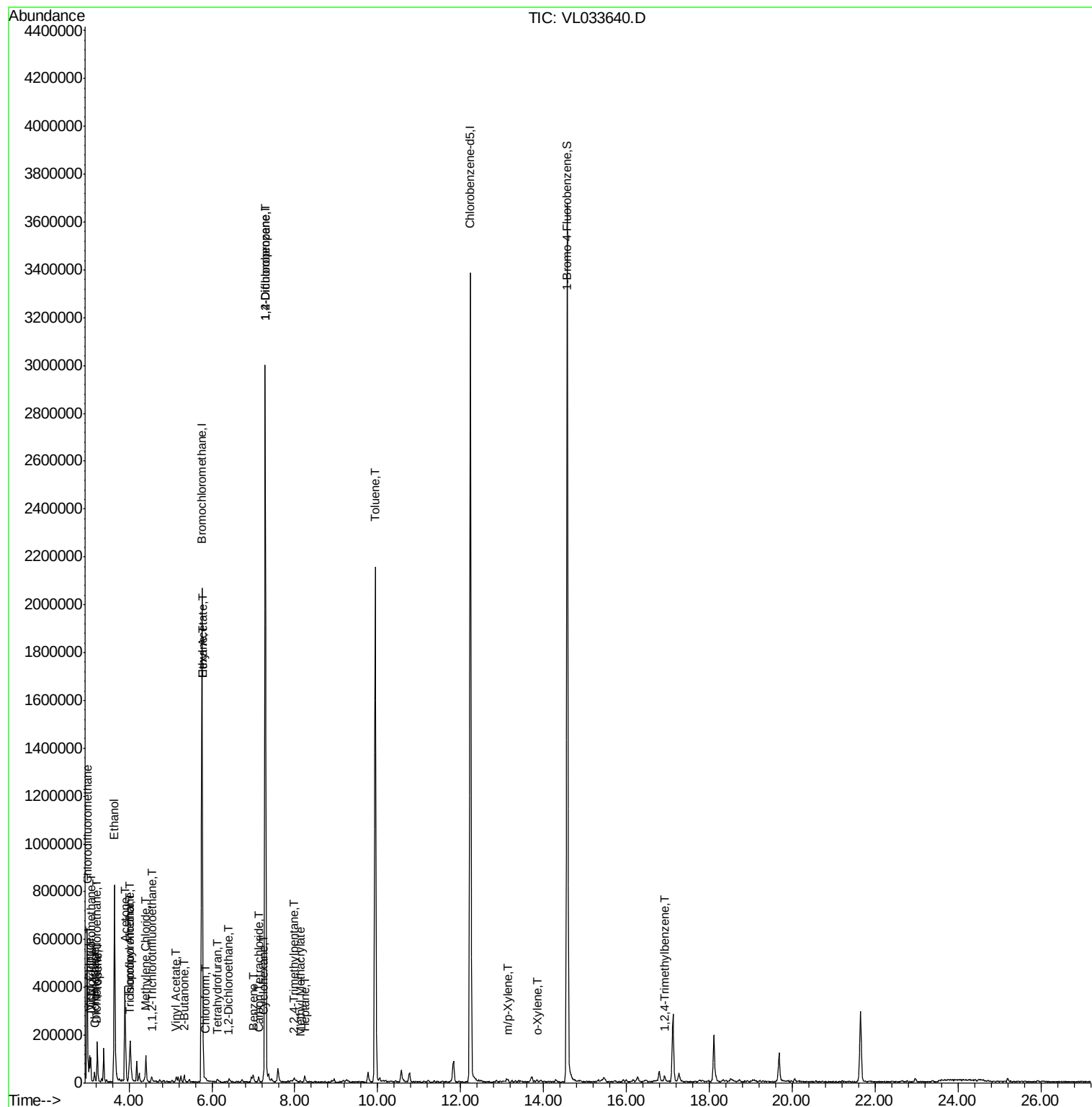
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.08	85	64147	0.485	ppbv 96
3) Chlorodifluoromethane	2.99	51	415538	3.962	ppbv # 64
4) Chloromethane	3.17	50	29080	0.509	ppbv 99
5) Vinyl Chloride	3.05	62	1275	0.021	ppbv # 83
8) Dichlorotetrafluoroethane	3.21	85	2742	0.019	ppbv 96
9) Propene	3.24	41	31171	1.038	ppbv 89
10) Heptane	8.24	43	1118	0.010	ppbv # 1
11) Trichlorofluoromethane	4.00	101	40000	0.255	ppbv 97
12) 1,1,2-Trichlorotrifluoroet	4.54	101	3386	0.031	ppbv # 1
13) Ethanol	3.65	45	849234	62.371	ppbv 99
15) Acetone	3.90	43	392653	3.677	ppbv 99
19) Isopropyl Alcohol	4.03	45	178511	2.435	ppbv # 95
20) Methylene Chloride	4.40	84	34639	0.832	ppbv # 91
23) Vinyl Acetate	5.15	43	4615	0.029	ppbv # 76
25) Ethyl Acetate	5.78	43	58532	0.289	ppbv # 90
26) Hexane	5.78	57	30797	0.361	ppbv # 47
29) Chloroform	5.85	83	1775	0.011	ppbv 90
30) Cyclohexane	7.25	84	2910	0.040	ppbv # 1
34) 2-Butanone	5.33	43	18371	0.148	ppbv # 74
35) Carbon Tetrachloride	7.13	117	7319	0.046	ppbv # 85
36) Benzene	7.00	78	16883	0.098	ppbv # 93
37) 1,2-Dichloroethane	6.40	62	1986	0.017	ppbv # 92
39) 1,2-Dichloropropane	7.28	63	535889	8.231	ppbv # 24
41) Tetrahydrofuran	6.13	42	979	0.015	ppbv # 66
43) Methyl Methacrylate	8.13	69	993	0.015	ppbv # 1
44) 2,2,4-Trimethylpentane	7.98	57	3761	0.013	ppbv # 1
53) Toluene	9.94	91	1569613	7.204	ppbv 99
59) m/p-Xylene	13.14	91	2136	0.011	ppbv # 100
60) o-Xylene	13.84	91	2851	0.014	ppbv # 39
74) 1,2,4-Trimethylbenzene	16.93	105	6421	0.025	ppbv # 72

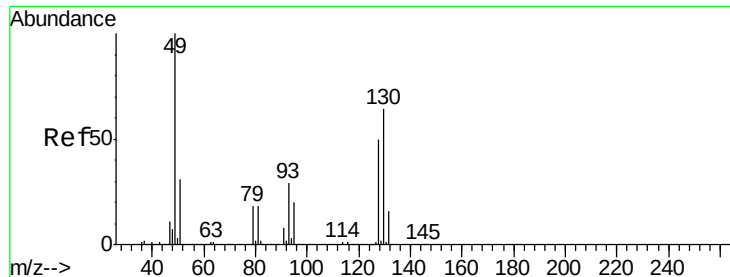
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 02 06:29:02 2019
QLast Update : Thu May 02 06:29:02 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

A-8

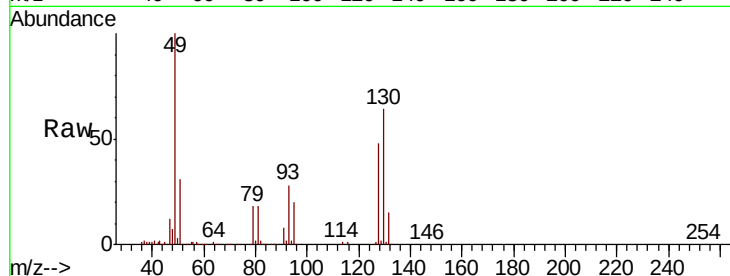
Tgt Ion: 49 Resp: 877187

Ion Ratio Lower Upper

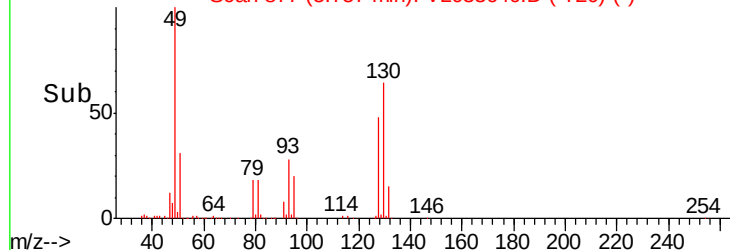
49 100

128 49.0 25.0 75.0

130 63.4 31.9 95.9



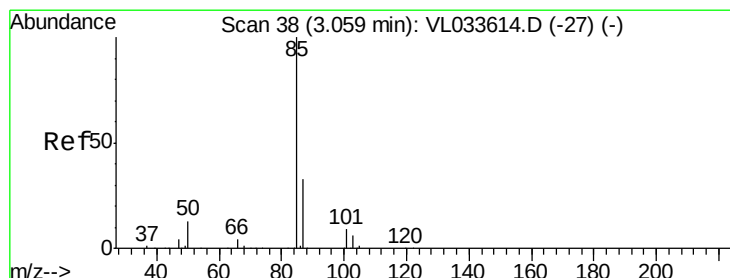
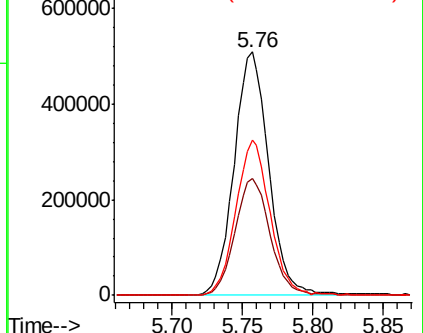
Scan 877 (5.757 min): VL033640.D (-720) (-)



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.485 ppbv

RT: 3.08 min Scan# 43

Delta R.T. 0.02 min

Lab File: VL033640.D

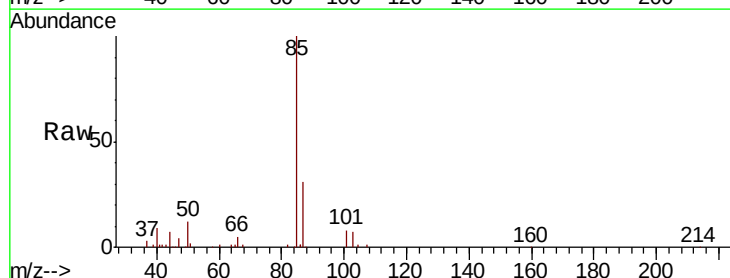
Acq: 2 May 2019 23:05

Tgt Ion: 85 Resp: 64147

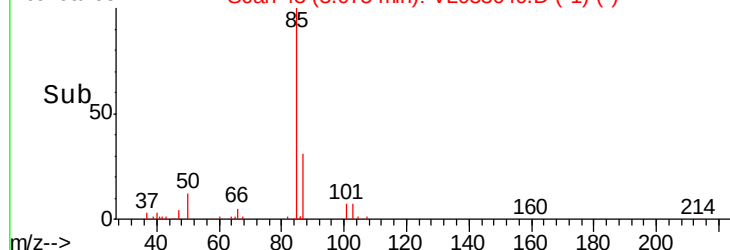
Ion Ratio Lower Upper

85 100

87 31.3 26.8 40.2

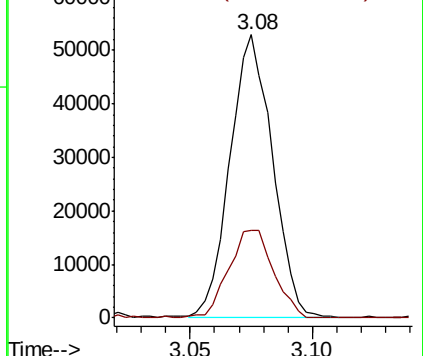


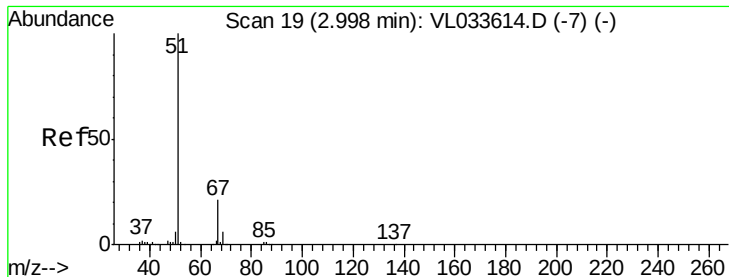
Scan 43 (3.075 min): VL033640.D (-1) (-)



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

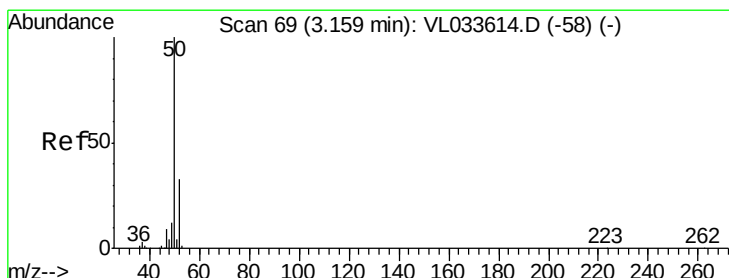
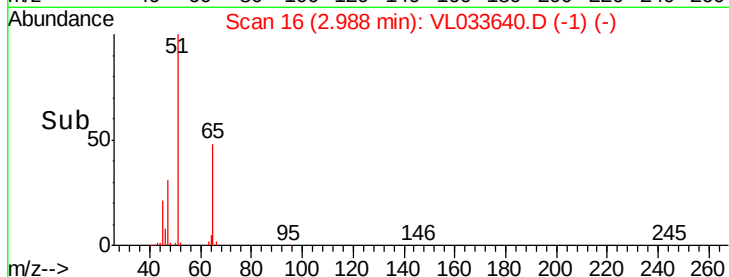
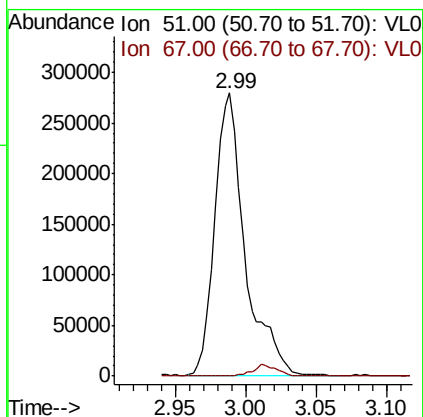
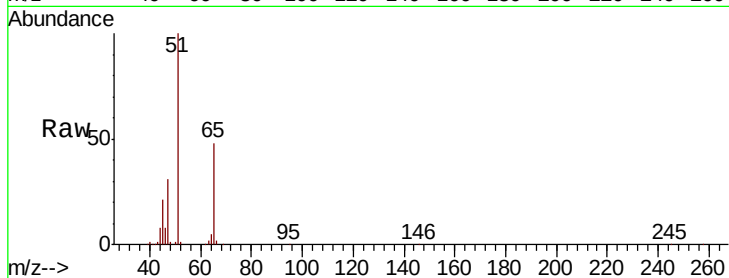




#3
 Chlorodifluoromethane
 Concen: 3.962 ppbv
 RT: 2.99 min Scan# 16
 Delta R.T. -0.01 min
 Lab File: VL033640.D
 Acq: 2 May 2019 23:05

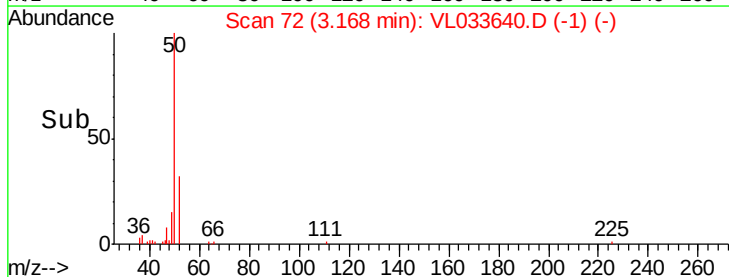
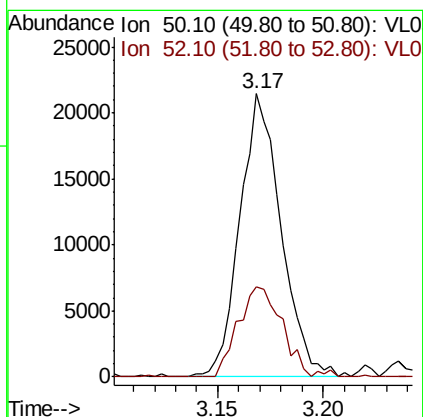
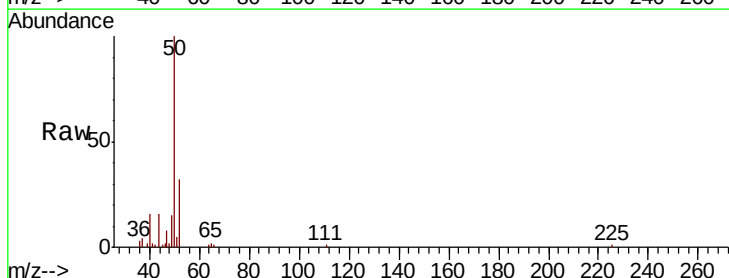
Instrument :
 MSVOA_L
 ClientSampleId :
 A-8

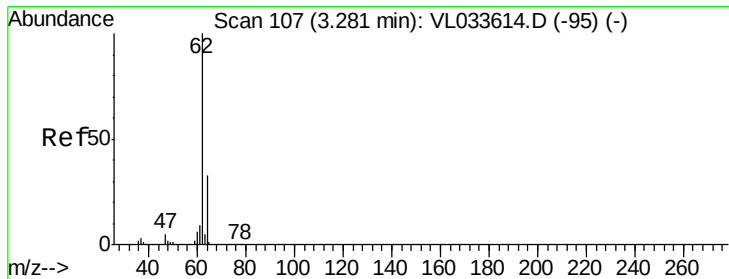
Tgt Ion: 51 Resp: 41538
 Ion Ratio Lower Upper
 51 100
 67 3.2 15.6 23.4#



#4
 Chloromethane
 Concen: 0.509 ppbv
 RT: 3.17 min Scan# 72
 Delta R.T. 0.01 min
 Lab File: VL033640.D
 Acq: 2 May 2019 23:05

Tgt Ion: 50 Resp: 29080
 Ion Ratio Lower Upper
 50 100
 52 31.9 26.0 39.0





#5

Vinyl Chloride

Concen: 0.021 ppbv

RT: 3.05 min Scan# 34

Delta R.T. -0.23 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

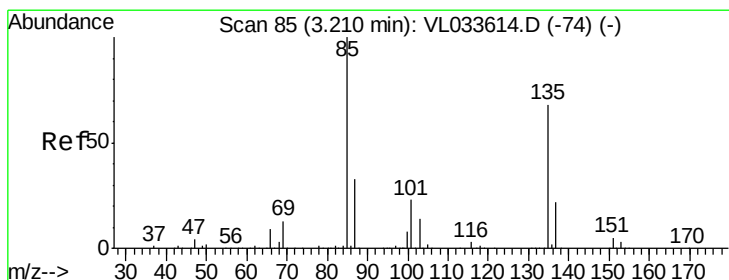
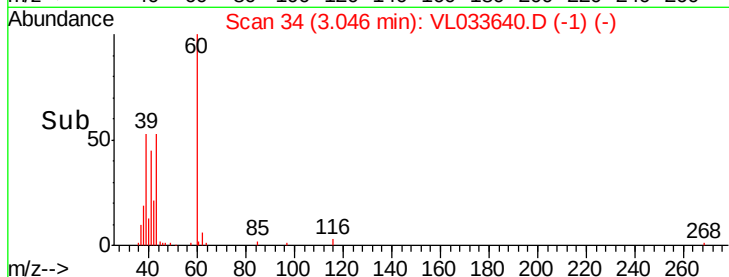
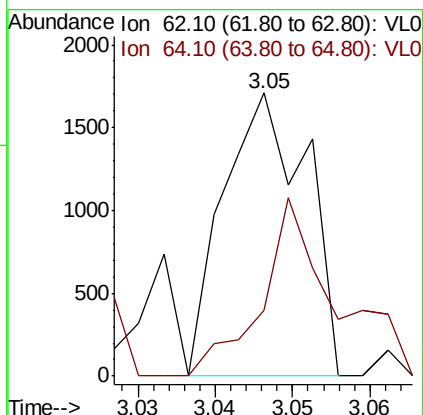
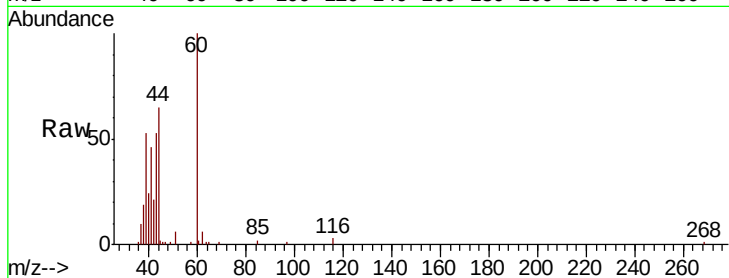
A-8

Tgt Ion: 62 Resp: 1275

Ion Ratio Lower Upper

62 100

64 23.4 26.2 39.4#



#8

Dichlorotetrafluoroethane

Concen: 0.019 ppbv

RT: 3.21 min Scan# 86

Delta R.T. 0.00 min

Lab File: VL033640.D

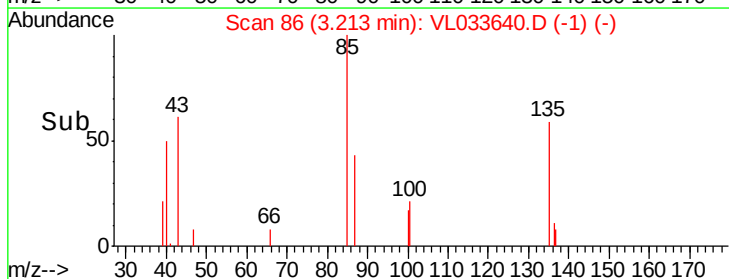
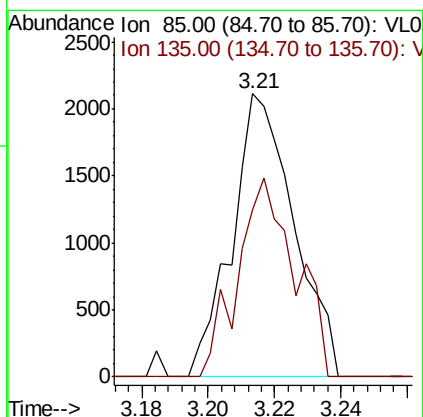
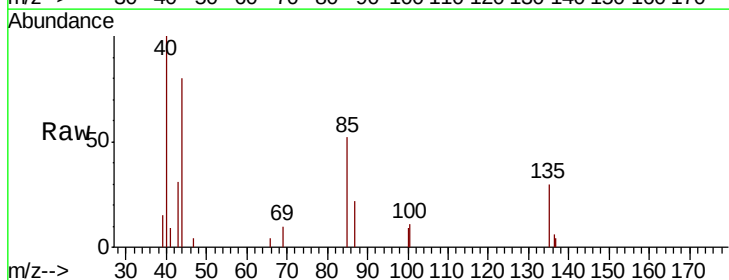
Acq: 2 May 2019 23:05

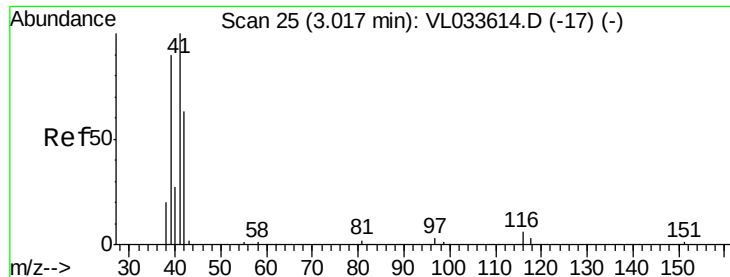
Tgt Ion: 85 Resp: 2742

Ion Ratio Lower Upper

85 100

135 65.2 55.0 82.6





#9

Propene

Concen: 1.038 ppbv

RT: 3.24 min Scan# 94

Delta R.T. 0.22 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

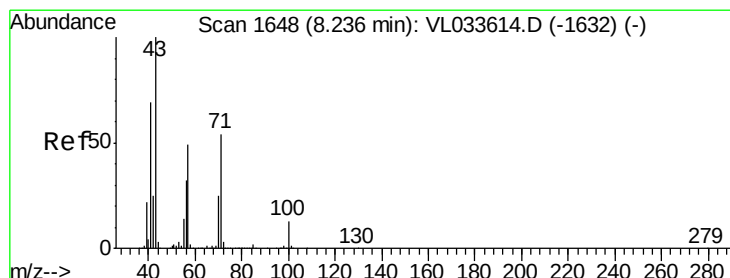
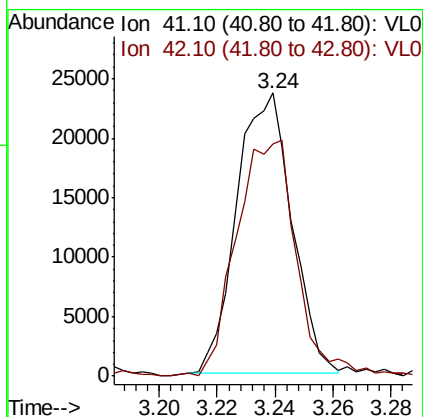
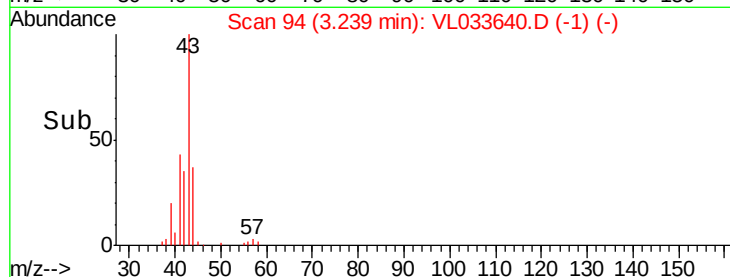
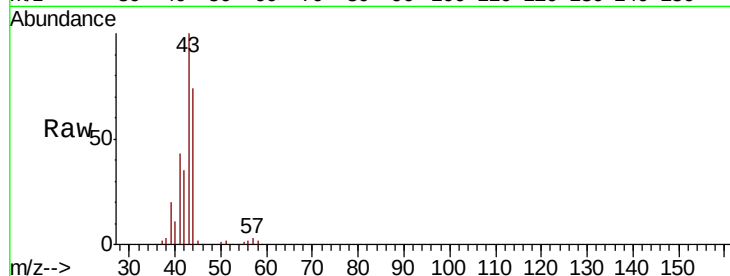
A-8

Tgt Ion: 41 Resp: 31171

Ion Ratio Lower Upper

41 100

42 92.3 66.0 99.0



#10

Heptane

Concen: 0.010 ppbv

RT: 8.24 min Scan# 1648

Delta R.T. 0.00 min

Lab File: VL033640.D

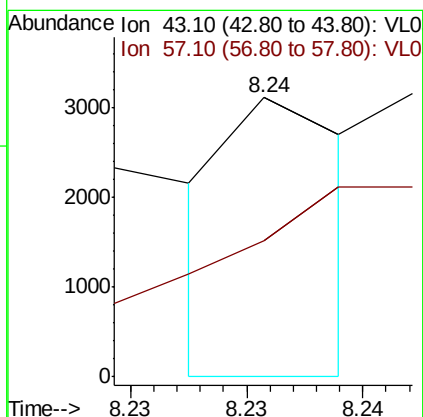
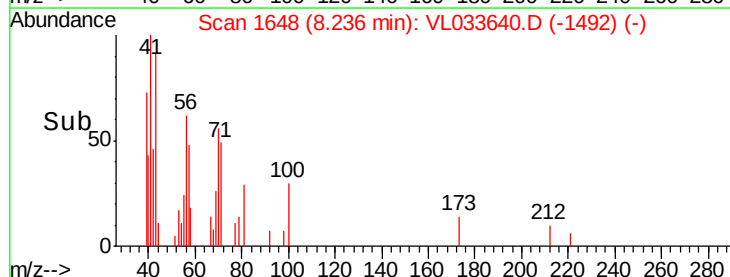
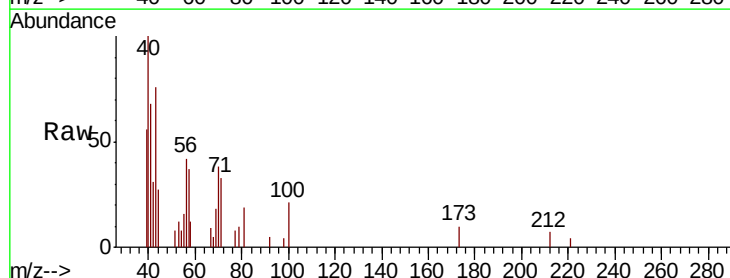
Acq: 2 May 2019 23:05

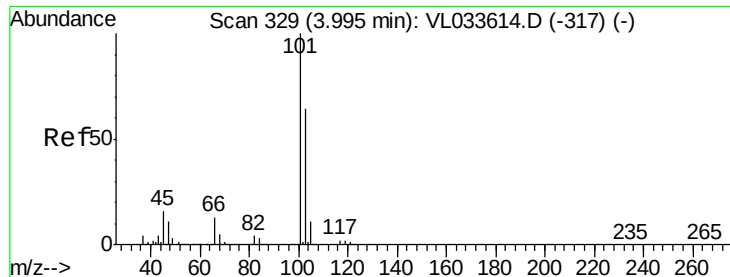
Tgt Ion: 43 Resp: 1118

Ion Ratio Lower Upper

43 100

57 292.2 40.3 60.5#

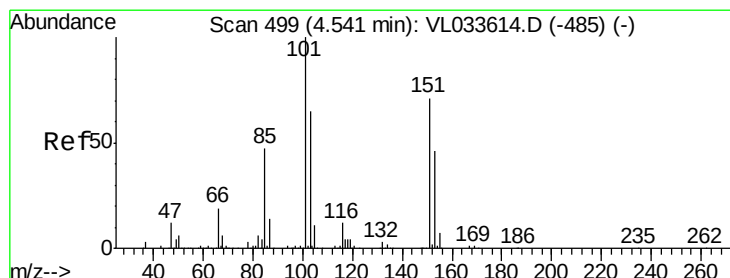
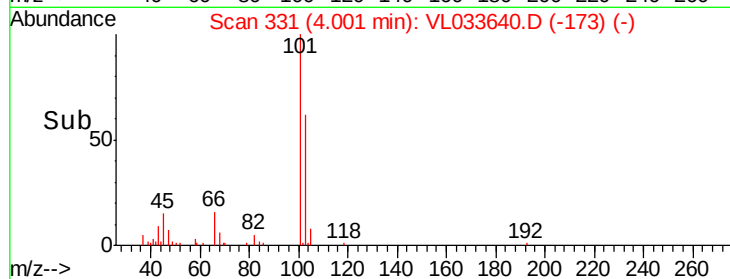
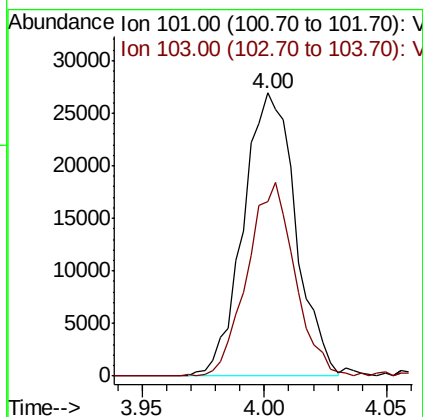
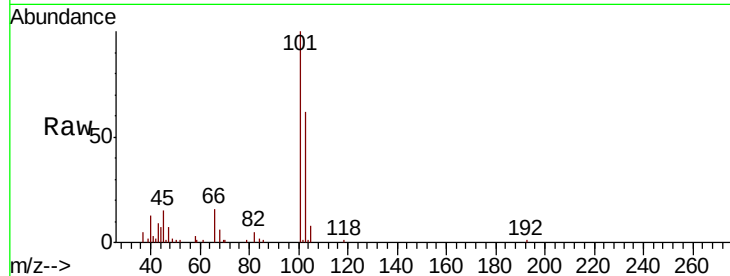




#11
 Trichlorofluoromethane
 Concen: 0.255 ppbv
 RT: 4.00 min Scan# 331
 Delta R.T. 0.01 min
 Lab File: VL033640.D
 Acq: 2 May 2019 23:05

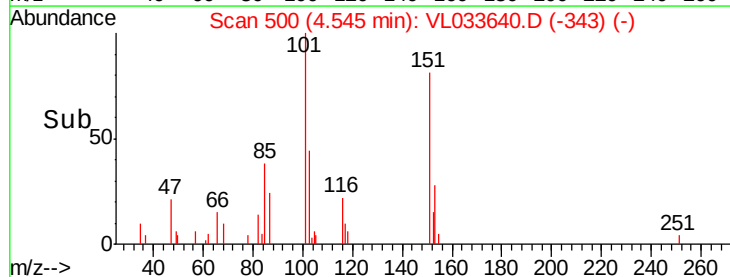
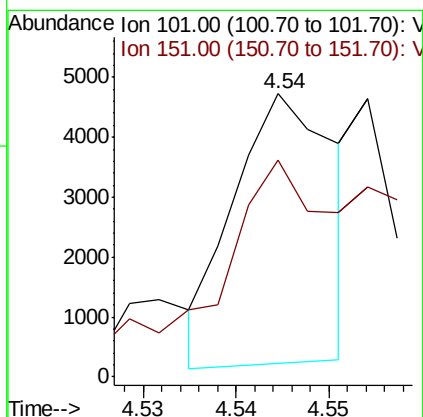
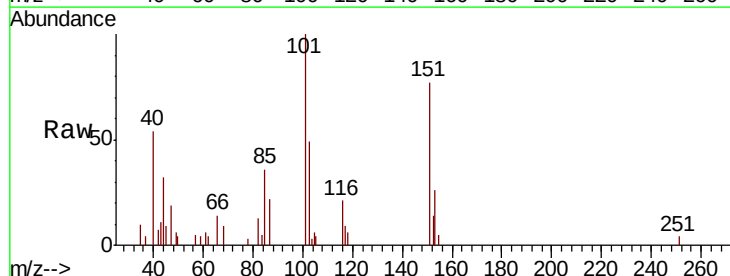
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 MSVOA_L
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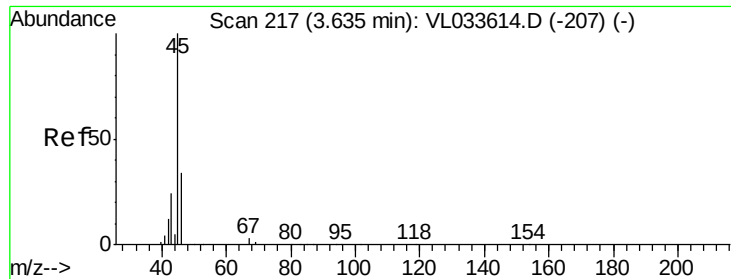
Tgt Ion:101 Resp: 40000
 Ion Ratio Lower Upper
 101 100
 103 61.5 51.2 76.8



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.031 ppbv
 RT: 4.54 min Scan# 500
 Delta R.T. 0.00 min
 Lab File: VL033640.D
 Acq: 2 May 2019 23:05

Tgt Ion:101 Resp: 3386
 Ion Ratio Lower Upper
 101 100
 151 170.8 59.2 88.8#

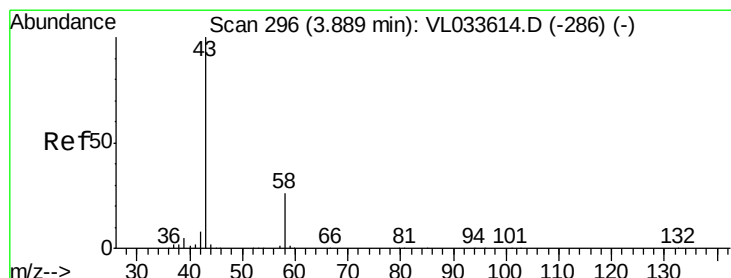
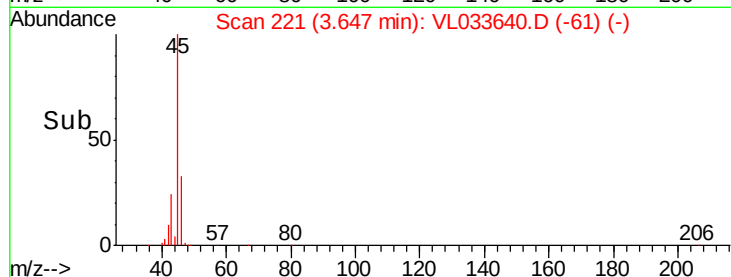
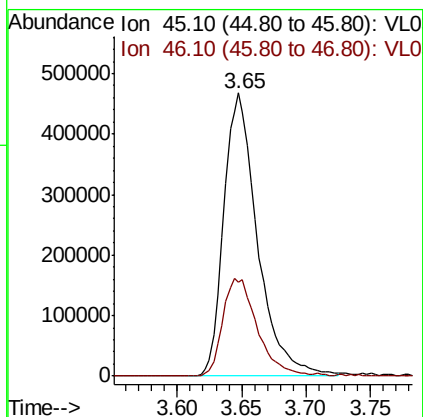
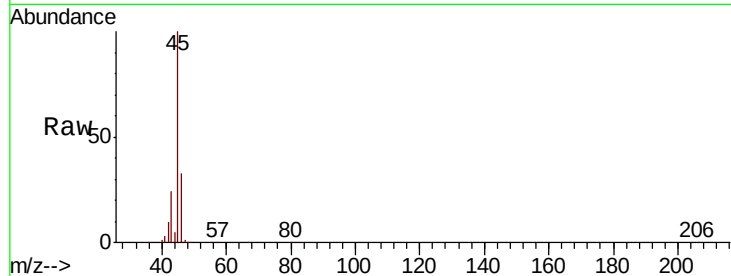




#13
Ethanol
Concen: 62.371 ppbv
RT: 3.65 min Scan# 221
Delta R.T. 0.01 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

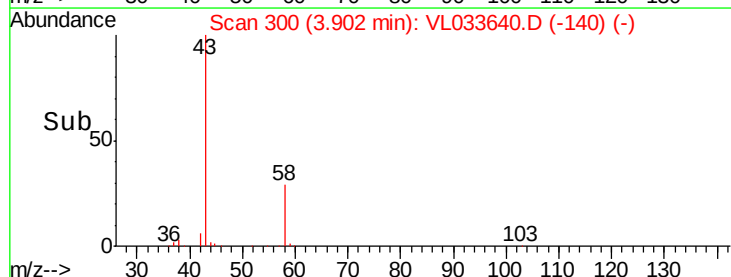
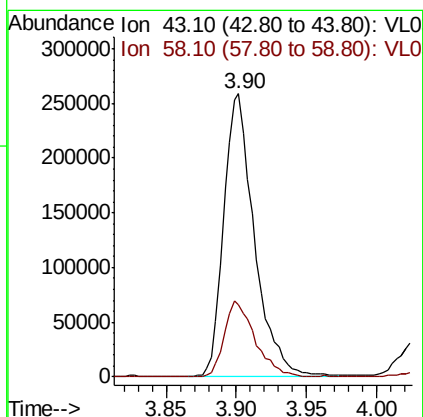
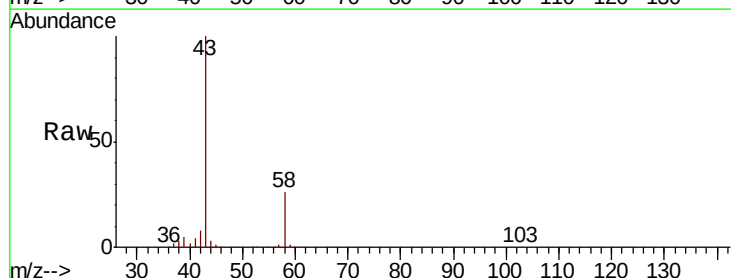
Instrument :
MSVOA_L
ClientSampled :
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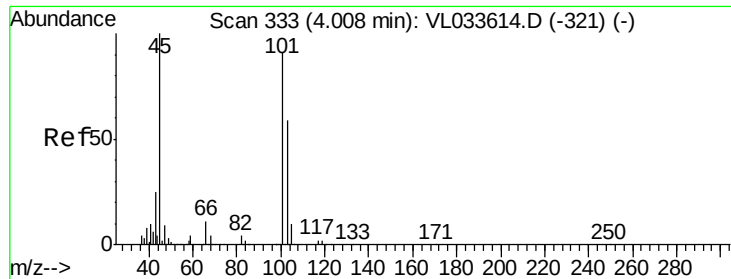
Tgt Ion: 45 Resp: 849234
Ion Ratio Lower Upper
45 100
46 35.8 14.6 58.2



#15
Acetone
Concen: 3.677 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.01 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

Tgt Ion: 43 Resp: 392653
Ion Ratio Lower Upper
43 100
58 27.1 21.2 31.8





#19

Isopropyl Alcohol

Concen: 2.435 ppbv

RT: 4.03 min Scan# 340

Delta R.T. 0.02 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

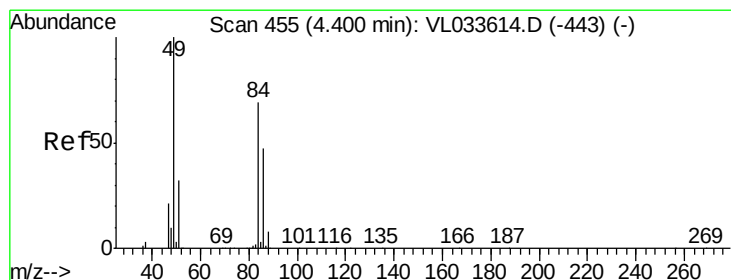
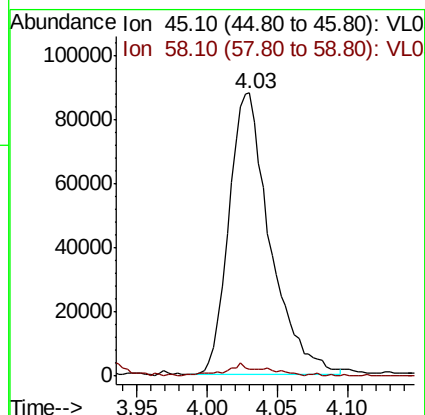
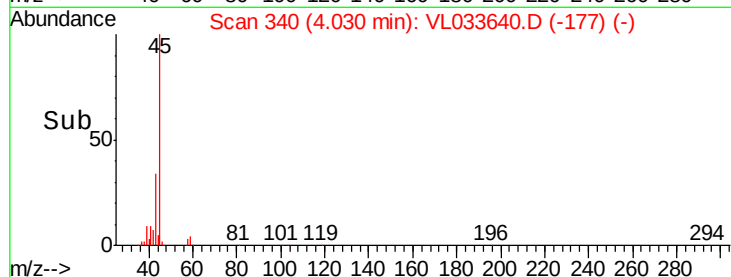
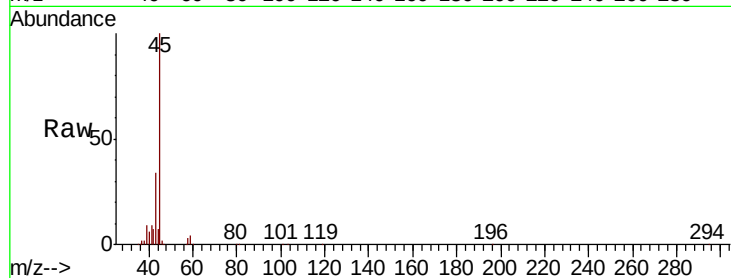
A-8

Tgt Ion: 45 Resp: 178511

Ion Ratio Lower Upper

45 100

58 3.8 1.8 2.6#



#20

Methylene Chloride

Concen: 0.832 ppbv

RT: 4.40 min Scan# 456

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Tgt Ion: 84 Resp: 34639

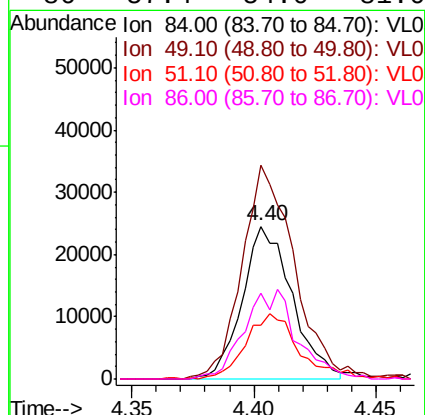
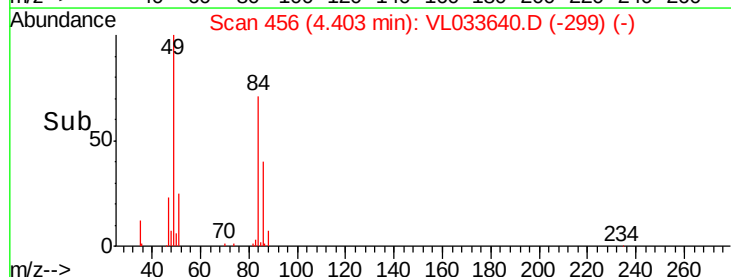
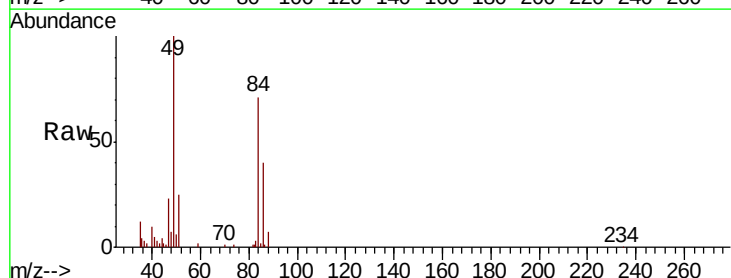
Ion Ratio Lower Upper

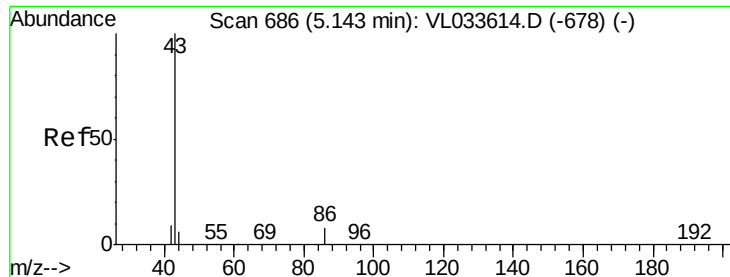
84 100

49 138.5 116.2 174.2

51 34.5 37.0 55.6#

86 57.4 54.0 81.0





#23

Vinyl Acetate

Concen: 0.029 ppbv

RT: 5.15 min Scan# 687

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

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Tgt Ion: 43 Resp: 4615

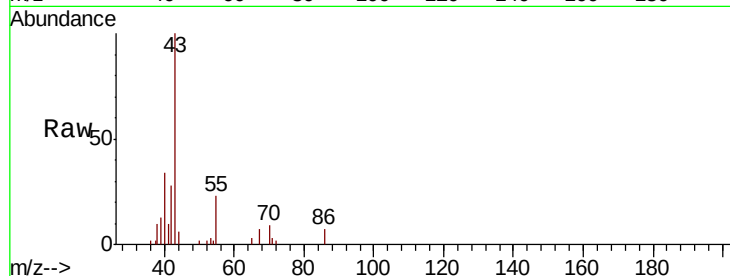
Ion Ratio Lower Upper

43 100

86 9.4 5.8 8.8#

42 25.1 7.8 11.8#

44 0.0 4.6 7.0#

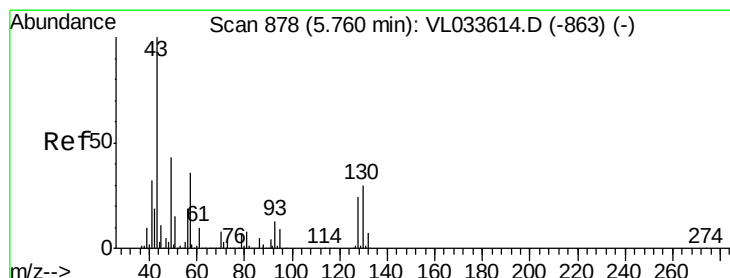
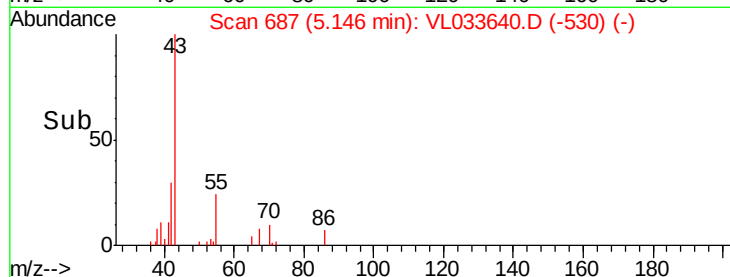
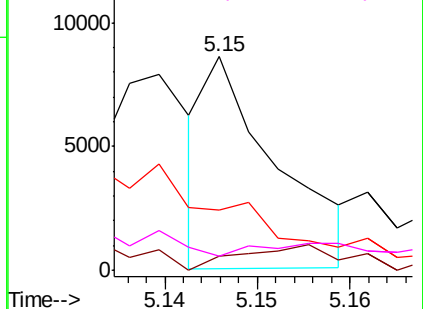


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.289 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.02 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Tgt Ion: 43 Resp: 58532

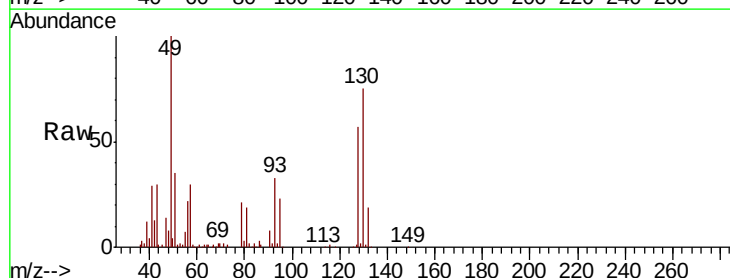
Ion Ratio Lower Upper

43 100

45 7.6 8.1 12.1#

61 4.1 7.5 11.3#

70 3.6 5.8 8.6#

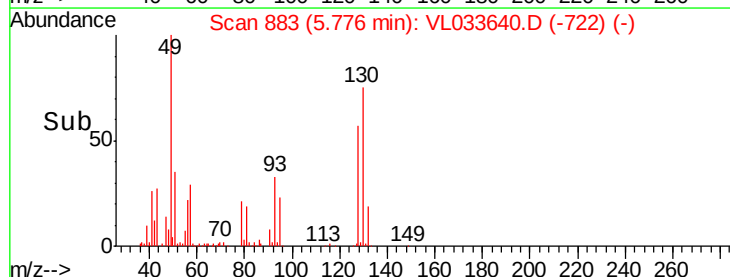
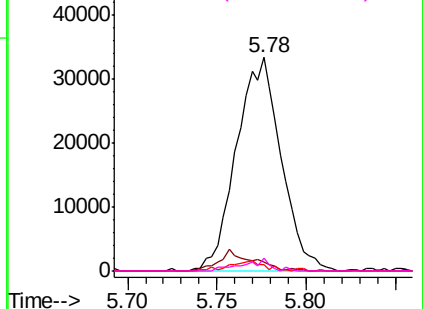


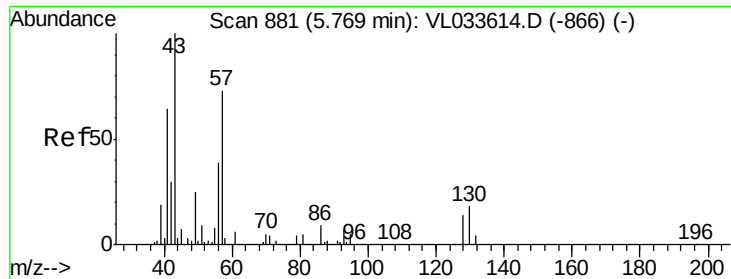
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0

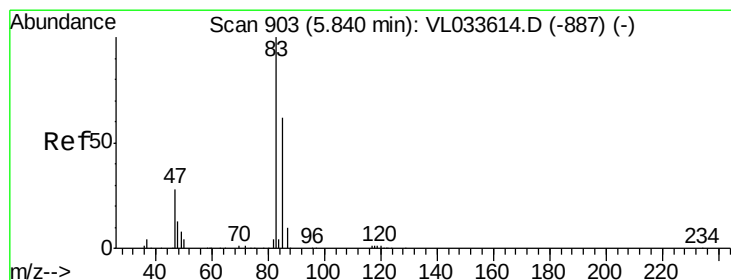
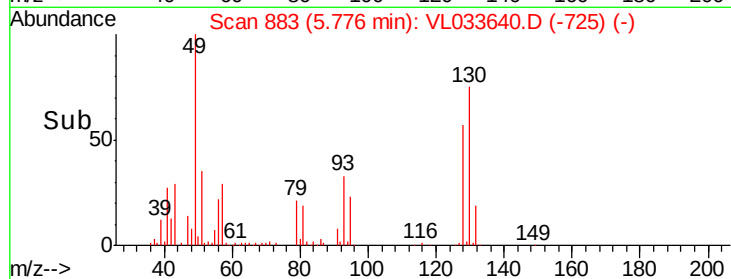
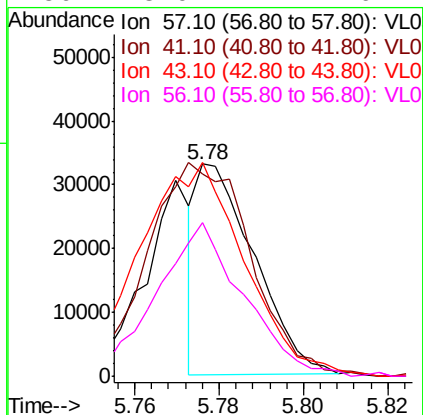
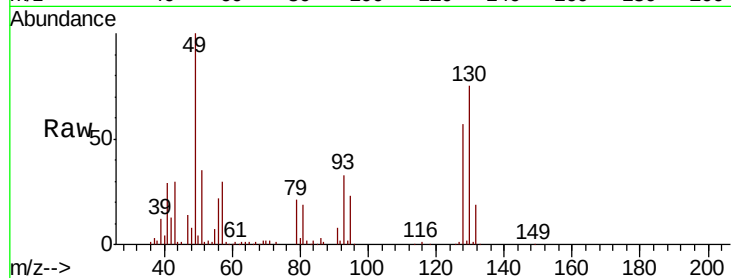




#26
Hexane
Concen: 0.361 ppbv
RT: 5.78 min Scan# 883
Delta R.T. 0.01 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

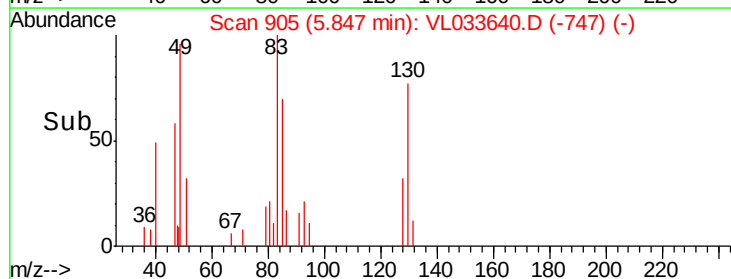
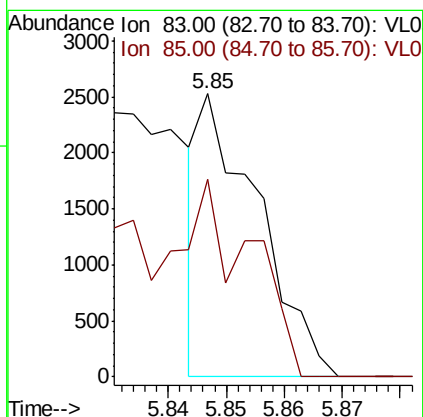
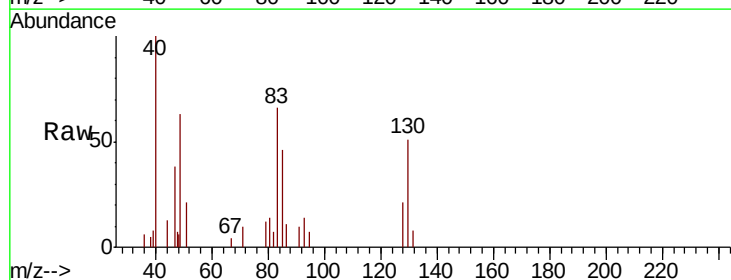
Instrument :
MSVOA_L
ClientSampleId :
A-8

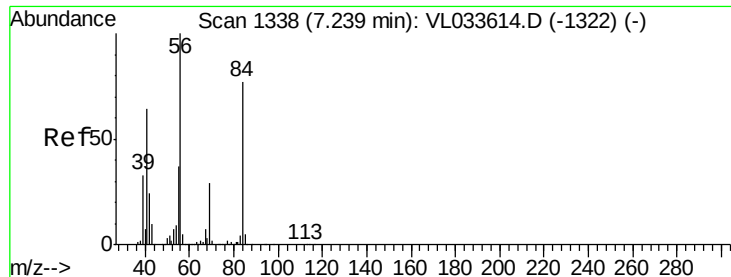
Tgt Ion: 57 Resp: 30797
Ion Ratio Lower Upper
57 100
41 188.4 70.6 106.0#
43 190.5 186.0 279.0
56 113.0 42.7 64.1#



#29
Chloroform
Concen: 0.011 ppbv
RT: 5.85 min Scan# 905
Delta R.T. 0.01 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

Tgt Ion: 83 Resp: 1775
Ion Ratio Lower Upper
83 100
85 69.9 49.9 74.9

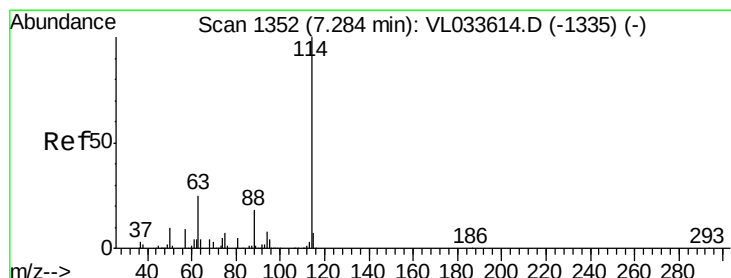
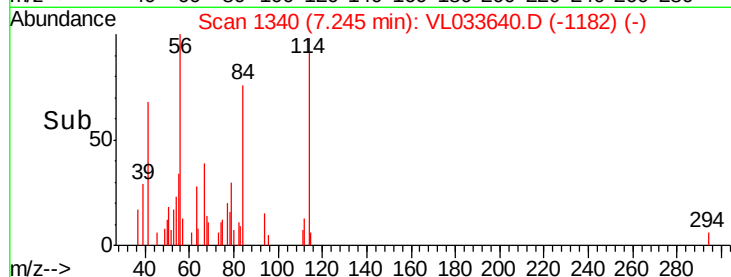
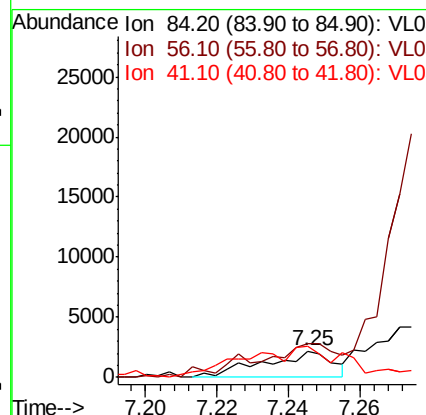
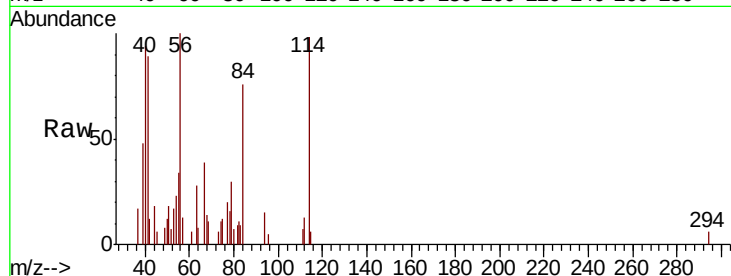




#30
Cyclohexane
Concen: 0.040 ppbv
RT: 7.25 min Scan# 1340
Delta R.T. 0.01 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

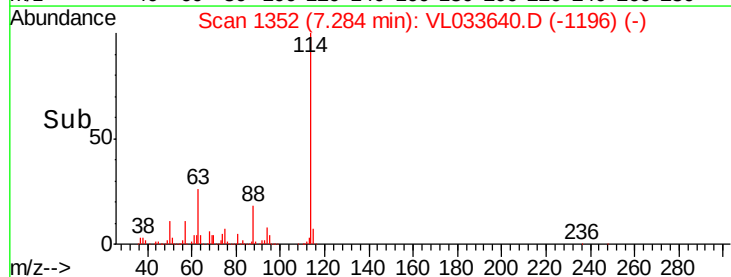
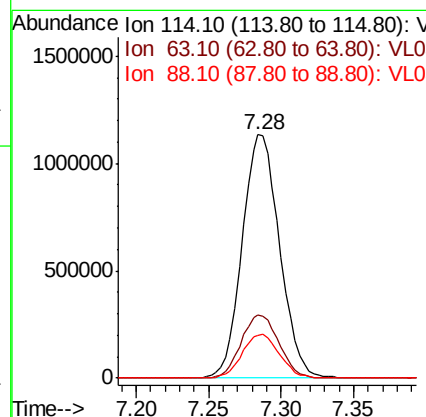
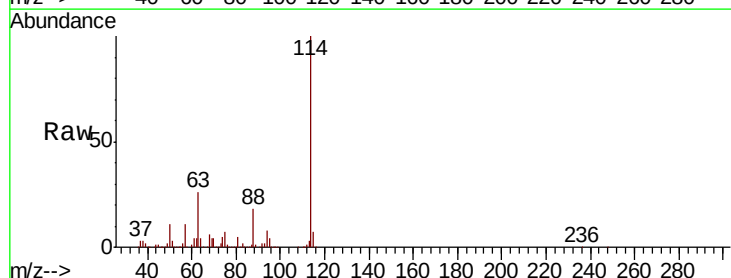
Instrument :
MSVOA_L
ClientSampled :
A-8

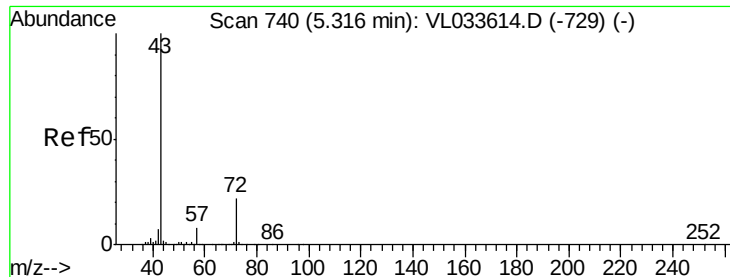
Tgt Ion: 84 Resp: 2910
Ion Ratio Lower Upper
84 100
56 0.0 108.4 162.6#
41 210.0 67.0 100.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.28 min Scan# 1352
Delta R.T. 0.00 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

Tgt Ion: 114 Resp: 2026178
Ion Ratio Lower Upper
114 100
63 26.6 21.1 31.7
88 18.0 14.2 21.4





#34

2-Butanone

Concen: 0.148 ppbv

RT: 5.33 min Scan# 744

Delta R.T. 0.01 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

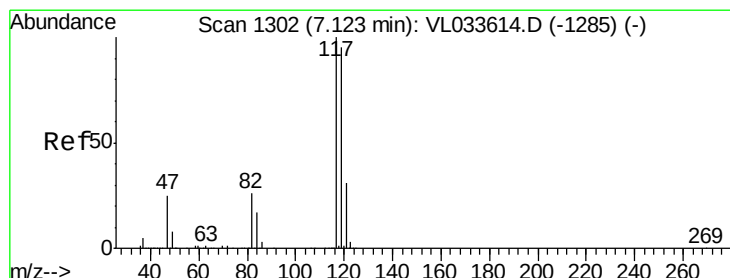
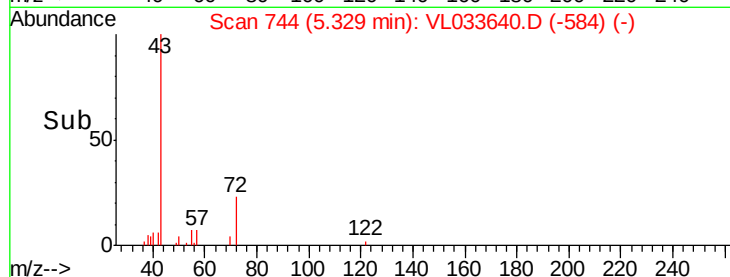
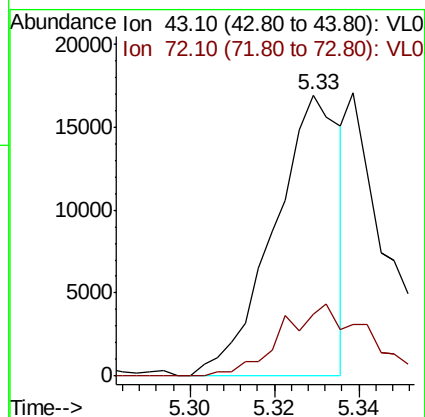
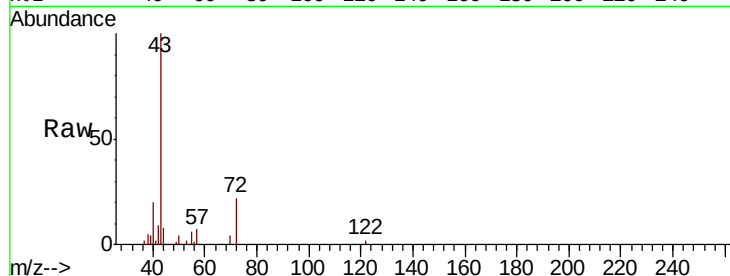
A-8

Tgt Ion: 43 Resp: 18371

Ion Ratio Lower Upper

43 100

72 34.7 17.8 26.8#



#35

Carbon Tetrachloride

Concen: 0.046 ppbv

RT: 7.13 min Scan# 1304

Delta R.T. 0.01 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

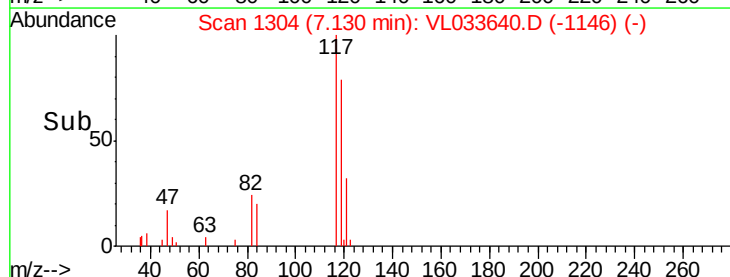
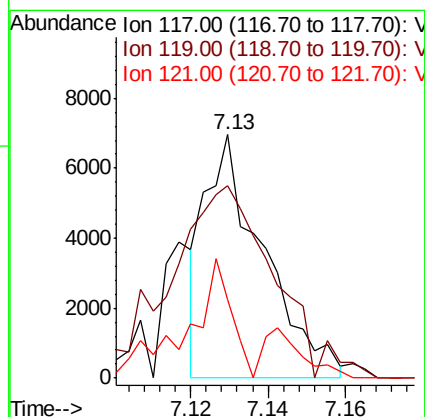
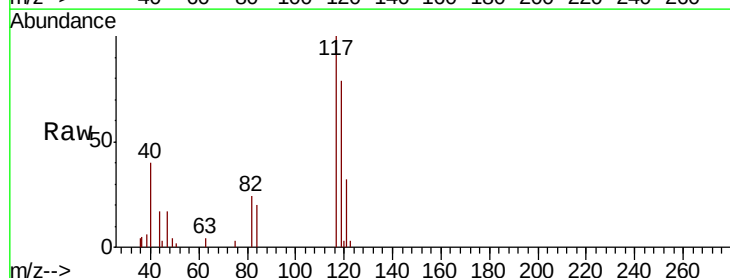
Tgt Ion: 117 Resp: 7319

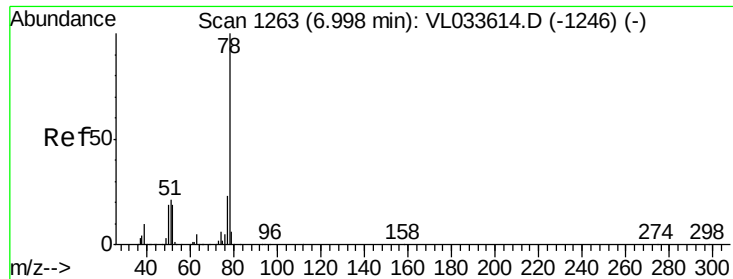
Ion Ratio Lower Upper

117 100

119 76.2 76.2 114.4#

121 31.0 24.9 37.3





#36

Benzene

Concen: 0.098 ppbv

RT: 7.00 min Scan# 1265

Delta R.T. 0.01 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleID :

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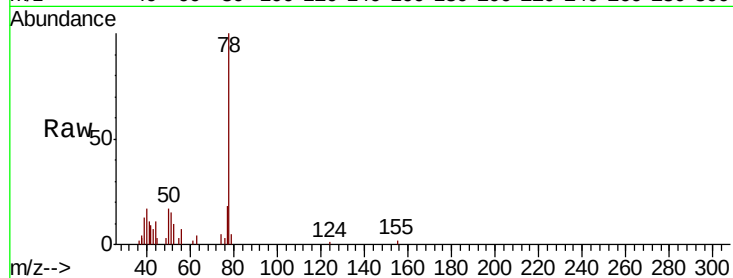
Tgt Ion: 78 Resp: 16883

Ion Ratio Lower Upper

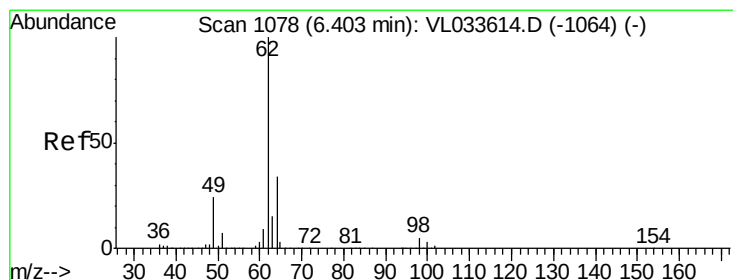
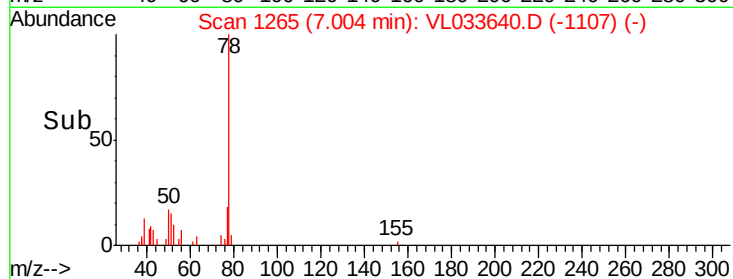
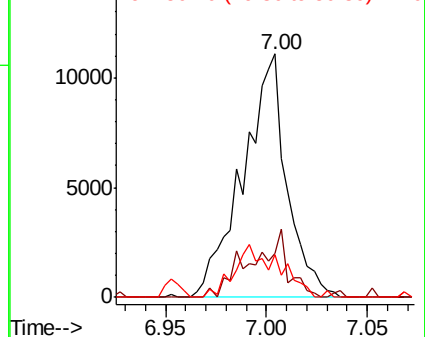
78 100

77 17.8 18.1 27.1#

50 17.4 15.1 22.7



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#37

1,2-Dichloroethane

Concen: 0.017 ppbv

RT: 6.40 min Scan# 1077

Delta R.T. -0.00 min

Lab File: VL033640.D

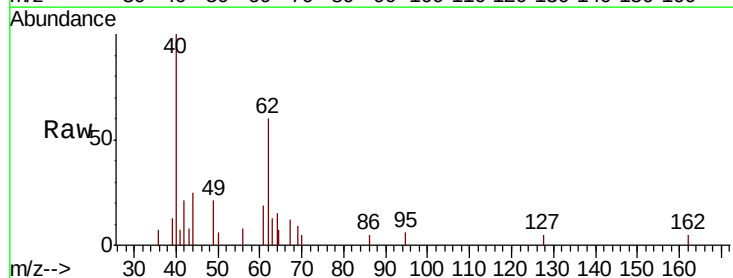
Acq: 2 May 2019 23:05

Tgt Ion: 62 Resp: 1986

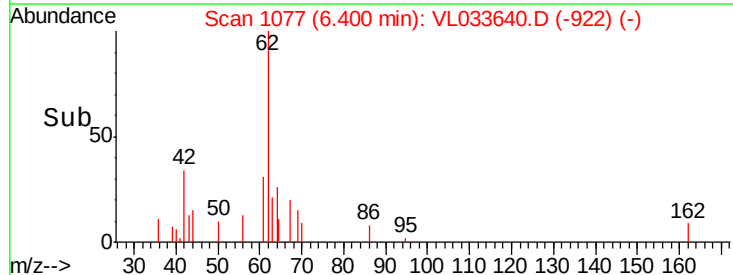
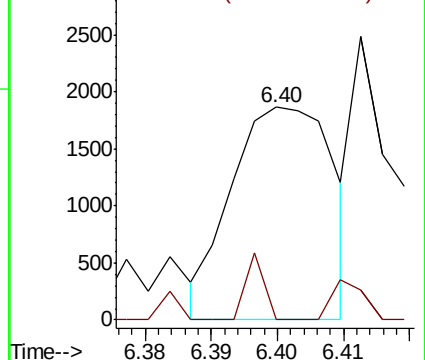
Ion Ratio Lower Upper

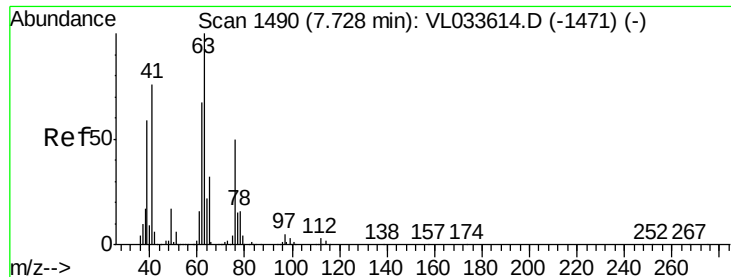
62 100

98 8.2 4.4 6.6#



Abundance Ion 62.10 (61.80 to 62.80): VL0
Ion 98.00 (97.70 to 98.70): VL0





#39

1,2-Dichloropropane

Concen: 8.231 ppbv

RT: 7.28 min Scan# 1352

Delta R.T. -0.44 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

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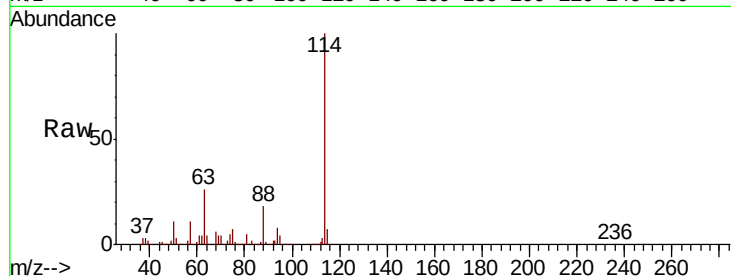
Tgt Ion: 63 Resp: 535889

Ion Ratio Lower Upper

63 100

41 0.0 60.9 91.3#

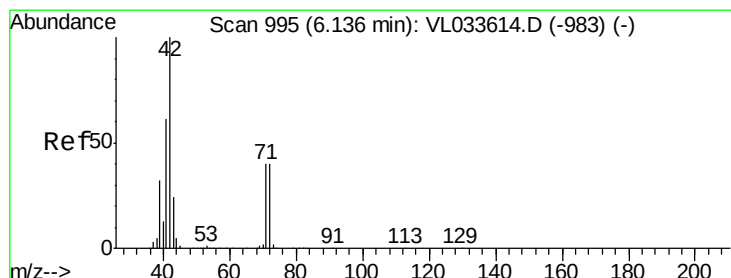
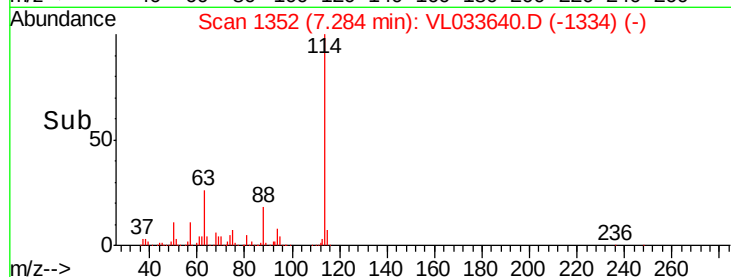
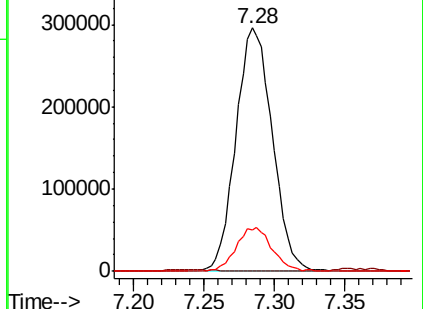
62 17.0 53.3 79.9#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.015 ppbv

RT: 6.13 min Scan# 994

Delta R.T. -0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

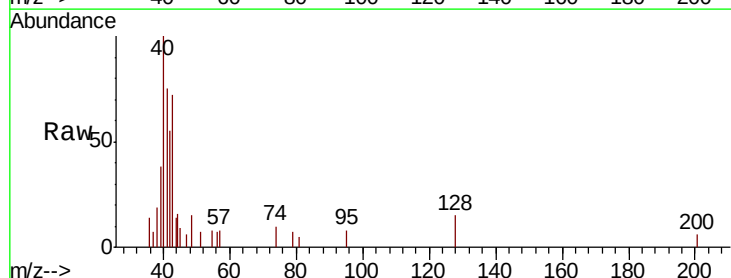
Tgt Ion: 42 Resp: 979

Ion Ratio Lower Upper

42 100

72 36.7 31.8 47.6

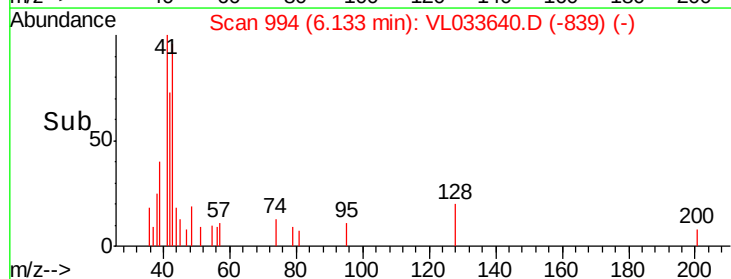
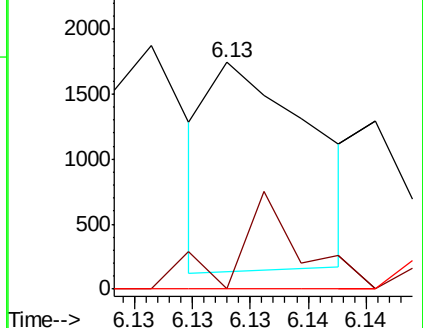
71 0.0 31.0 46.4#

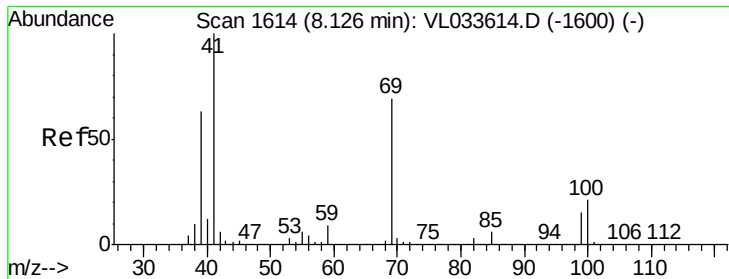


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

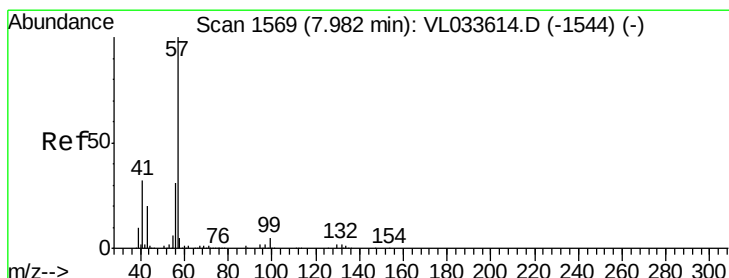
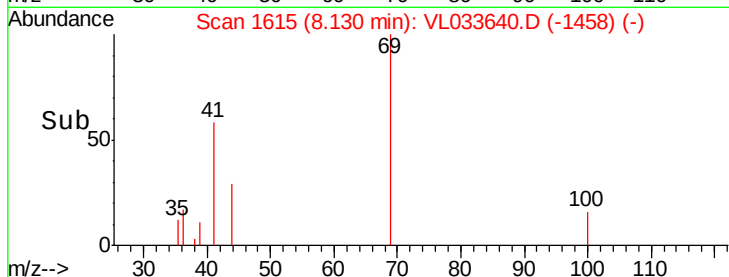
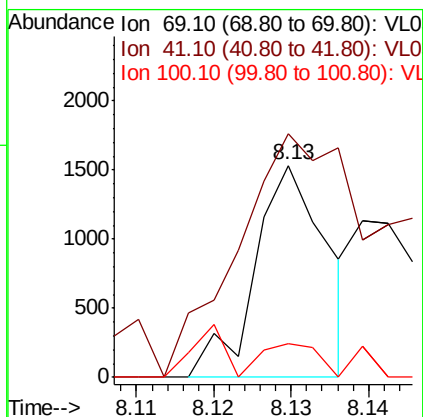
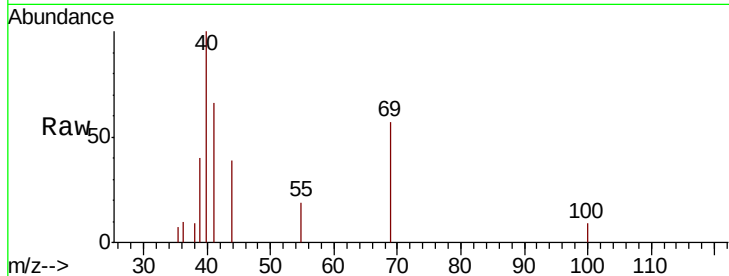




#43
Methyl Methacrylate
Concen: 0.015 ppbv
RT: 8.13 min Scan# 1615
Delta R.T. 0.00 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

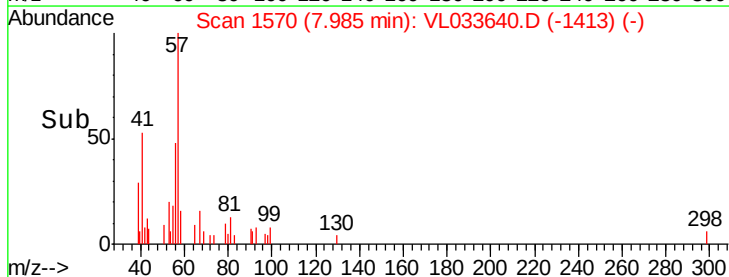
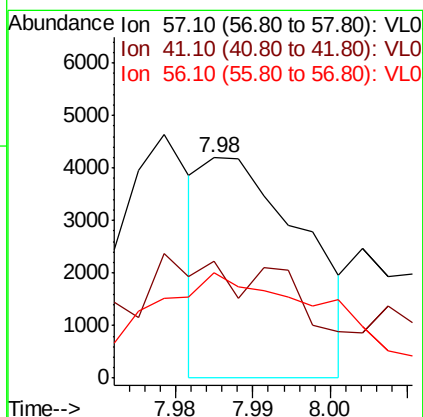
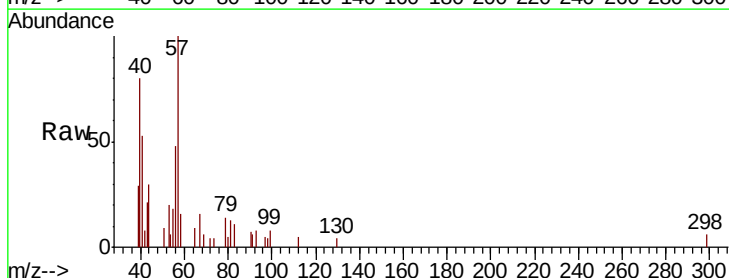
Instrument :
MSVOA_L
ClientSampleId :
A-8

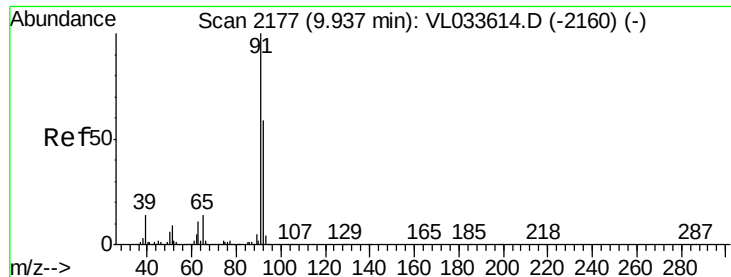
Tgt Ion: 69 Resp: 993
Ion Ratio Lower Upper
69 100
41 292.7 115.0 172.4#
100 28.0 24.7 37.1



#44
2,2,4-Trimethylpentane
Concen: 0.013 ppbv
RT: 7.98 min Scan# 1570
Delta R.T. 0.00 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

Tgt Ion: 57 Resp: 3761
Ion Ratio Lower Upper
57 100
41 0.0 25.4 38.2#
56 113.7 24.6 37.0#





#53

Toluene

Concen: 7.204 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

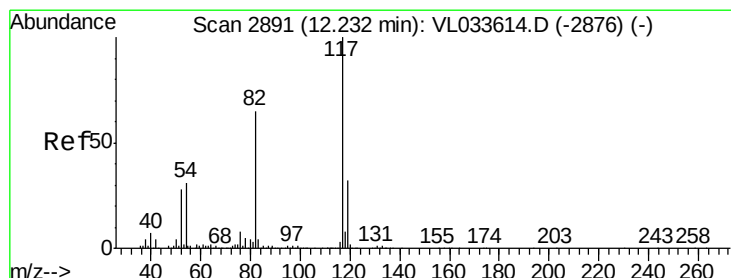
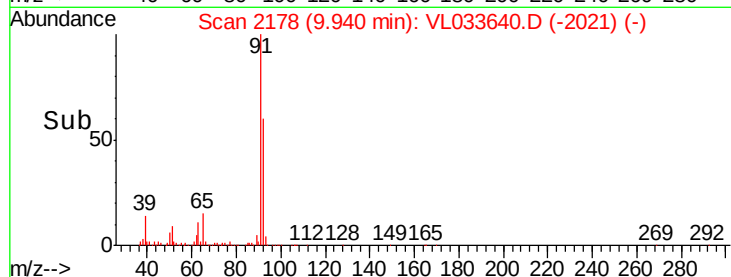
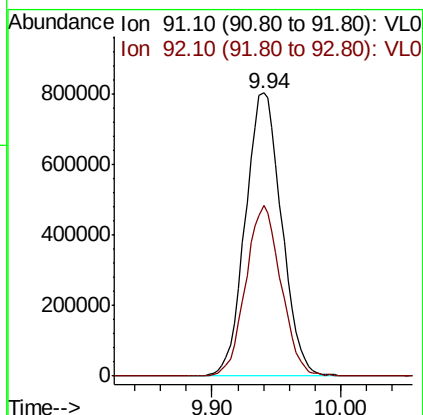
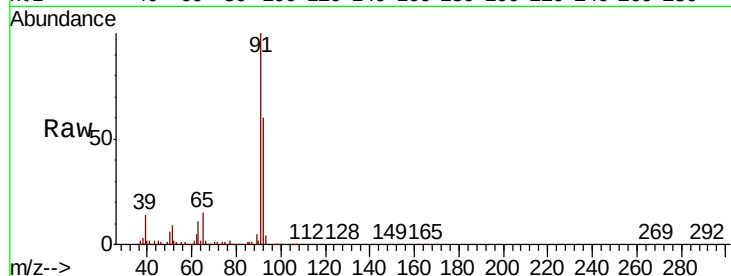
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Tgt Ion: 91 Resp: 1569613

Ion Ratio Lower Upper

91 100

92 58.8 47.8 71.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2892

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

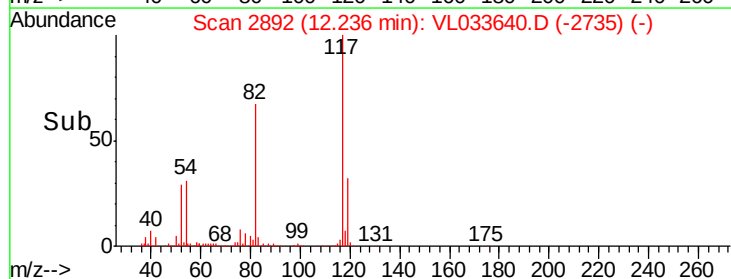
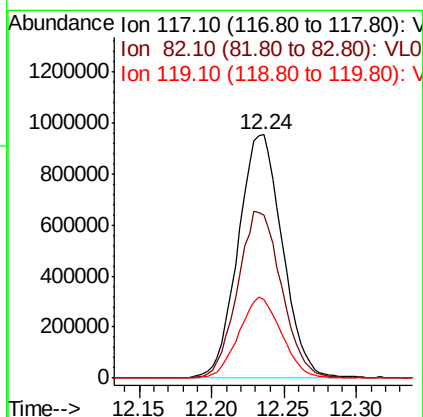
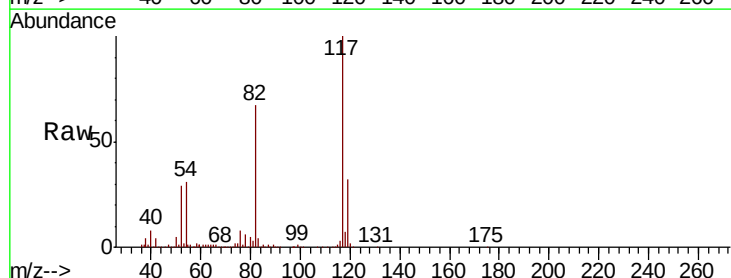
Tgt Ion: 117 Resp: 2025053

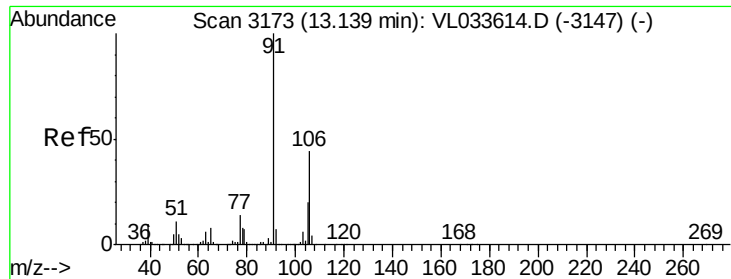
Ion Ratio Lower Upper

117 100

82 68.8 52.6 78.8

119 32.4 28.3 42.5

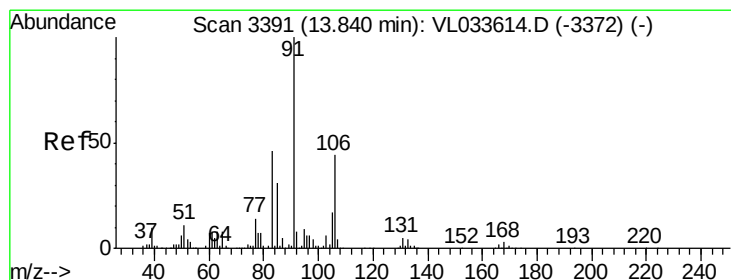
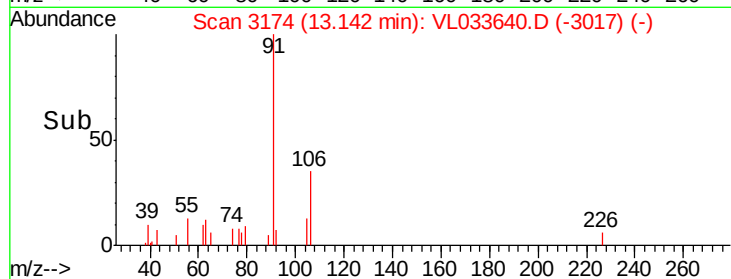
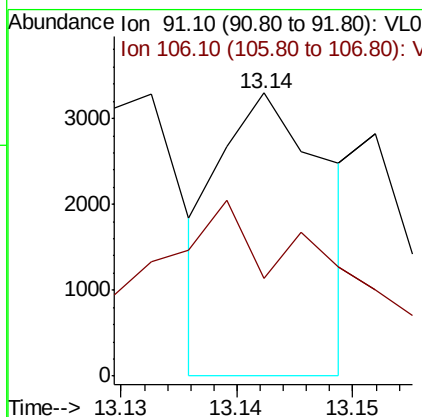
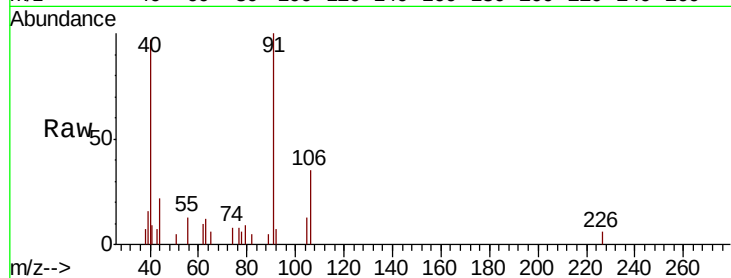




#59
m/p-Xylene
Concen: 0.011 ppbv
RT: 13.14 min Scan# 3174
Delta R.T. 0.00 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

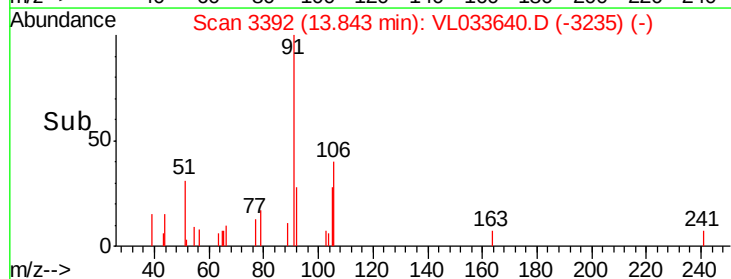
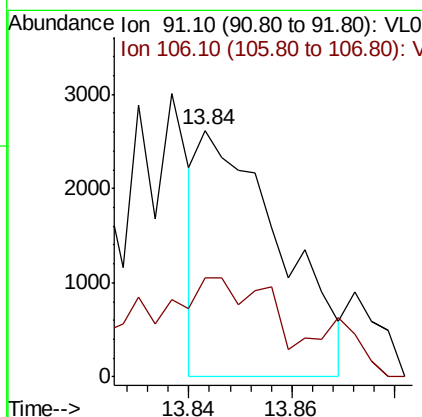
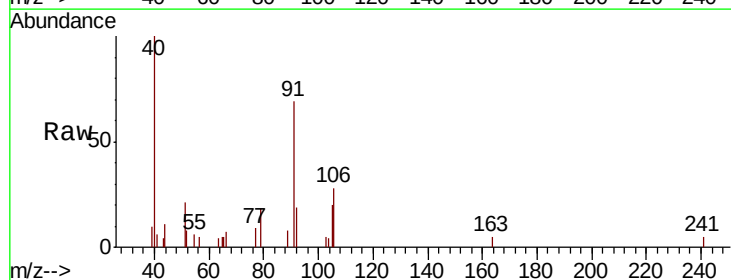
Instrument :
MSVOA_L
ClientSampleId :
A-8

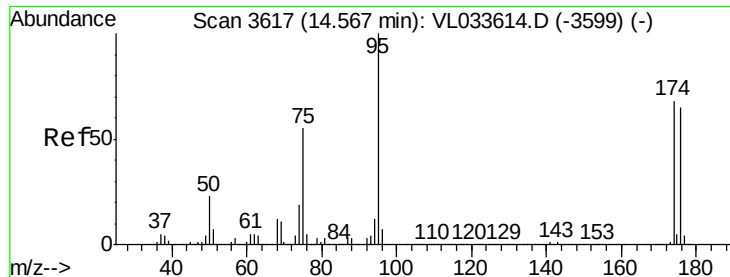
Tgt Ion: 91 Resp: 2136
Ion Ratio Lower Upper
91 100
106 281.5 0.0 0.0#



#60
o-Xylene
Concen: 0.014 ppbv
RT: 13.84 min Scan# 3392
Delta R.T. 0.00 min
Lab File: VL033640.D
Acq: 2 May 2019 23:05

Tgt Ion: 91 Resp: 2851
Ion Ratio Lower Upper
91 100
106 82.8 21.8 65.4#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.832 ppbv

RT: 14.57 min Scan# 3618

Delta R.T. 0.00 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Instrument :

MSVOA_L

ClientSampleId :

A-8

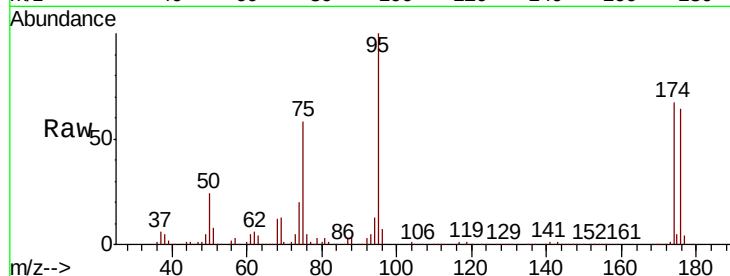
Tgt Ion: 95 Resp: 1669892

Ion Ratio Lower Upper

95 100

174 66.7 53.9 80.9

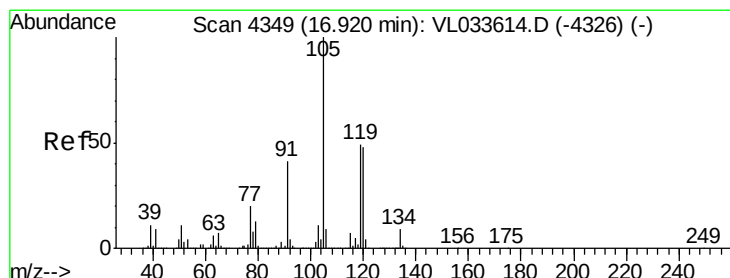
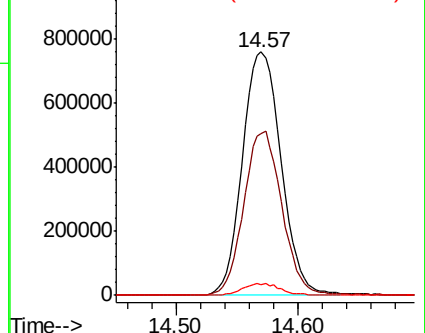
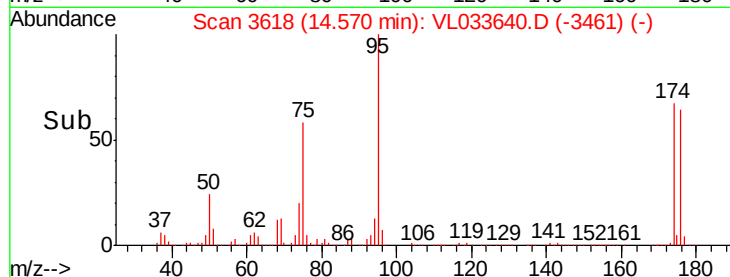
175 4.8 4.0 6.0



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#74

1,2,4-Trimethylbenzene

Concen: 0.025 ppbv

RT: 16.93 min Scan# 4352

Delta R.T. 0.01 min

Lab File: VL033640.D

Acq: 2 May 2019 23:05

Tgt Ion: 105 Resp: 6421

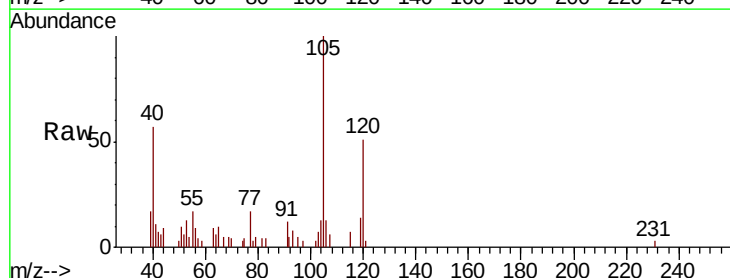
Ion Ratio Lower Upper

105 100

120 59.0 38.4 57.6#

91 7.8 33.0 49.4#

77 18.7 16.2 24.2



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

