

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL050219\
 Data File : VL033644.D
 Acq On : 3 May 2019 1:44
 Operator : SY/AP
 Sample : K2628-10
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 A-10

Quant Time: May 03 02:31:37 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

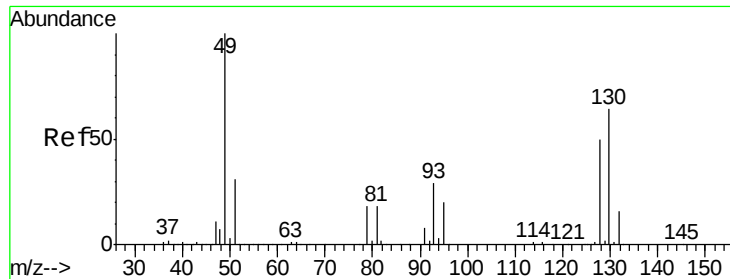
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	863375	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2059432	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.23	117	2007706	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1660283	10.86	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	108.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	52449	0.403	ppbv	90
3) Chlorodifluoromethane	2.99	51	195696	1.896	ppbv #	66
4) Chloromethane	3.17	50	32036	0.570	ppbv	93
5) Vinyl Chloride	3.05	62	868	0.015	ppbv #	82
9) Propene	3.24	41	41452	1.402	ppbv	95
10) Heptane	8.24	43	1367	0.013	ppbv #	1
11) Trichlorofluoromethane	4.00	101	43519	0.281	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.55	101	4688	0.044	ppbv #	12
13) Ethanol	3.65	45	381653	28.478	ppbv	99
15) Acetone	3.90	43	345720	3.289	ppbv	100
16) 1,3-Butadiene	3.35	39	788	0.017	ppbv #	70
19) Isopropyl Alcohol	4.03	45	99413	1.378	ppbv #	91
20) Methylene Chloride	4.41	84	40829	0.997	ppbv	92
23) Vinyl Acetate	5.14	43	6119	0.039	ppbv #	70
25) Ethyl Acetate	5.78	43	41681	0.209	ppbv #	87
26) Hexane	5.77	57	44975	0.535	ppbv #	44
30) Cyclohexane	7.25	84	852	0.012	ppbv #	1
34) 2-Butanone	5.34	43	20854	0.165	ppbv	99
35) Carbon Tetrachloride	7.12	117	10374	0.064	ppbv	85
36) Benzene	7.00	78	13567	0.077	ppbv #	83
37) 1,2-Dichloroethane	6.40	62	1869	0.016	ppbv #	88
39) 1,2-Dichloropropane	7.28	63	547255	8.270	ppbv #	25
41) Tetrahydrofuran	6.14	42	709	0.011	ppbv #	47
44) 2,2,4-Trimethylpentane	7.98	57	4154	0.014	ppbv #	43
53) Toluene	9.94	91	571643	2.581	ppbv	98
58) Ethyl Benzene	12.85	91	3876	0.017	ppbv #	77

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. 0.00 min

Lab File: VL033644.D

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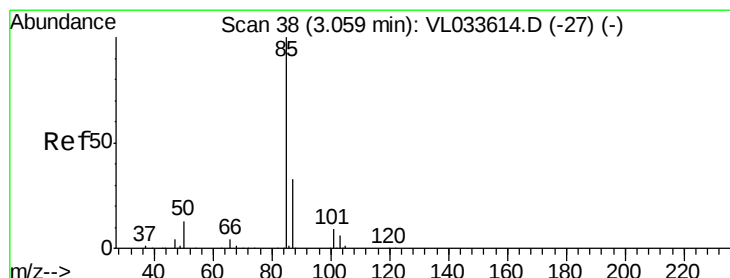
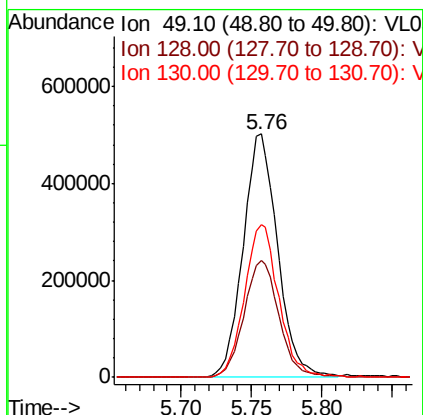
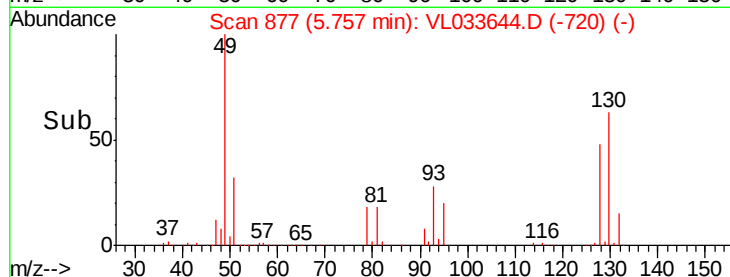
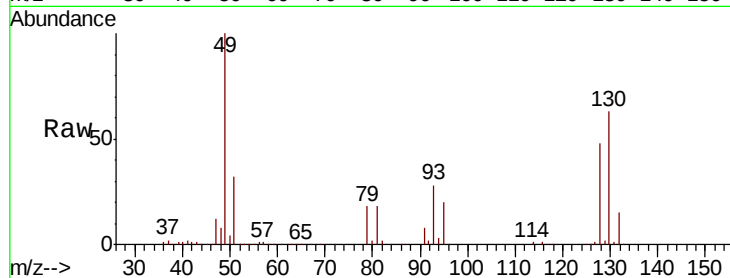
Tgt Ion: 49 Resp: 863375

Ion Ratio Lower Upper

49 100

128 49.0 25.0 75.0

130 62.2 31.9 95.9



#2

Dichlorodifluoromethane

Concen: 0.403 ppbv

RT: 3.08 min Scan# 43

Delta R.T. 0.02 min

Lab File: VL033644.D

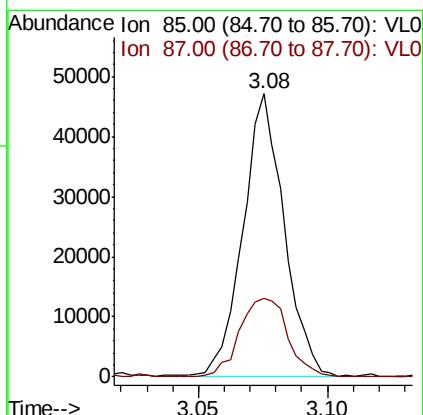
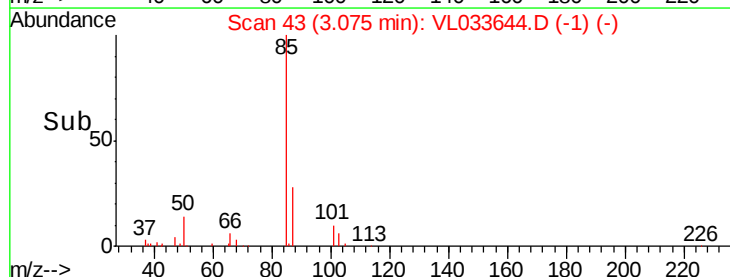
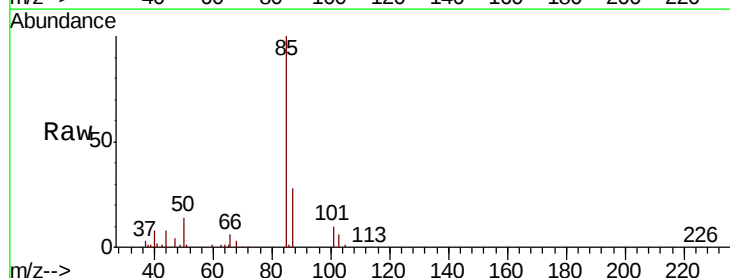
Acq: 3 May 2019 1:44

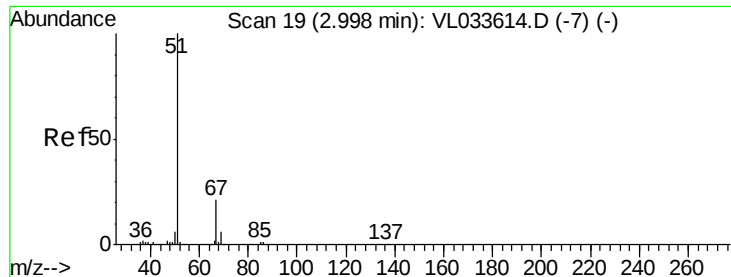
Tgt Ion: 85 Resp: 52449

Ion Ratio Lower Upper

85 100

87 28.0 26.8 40.2

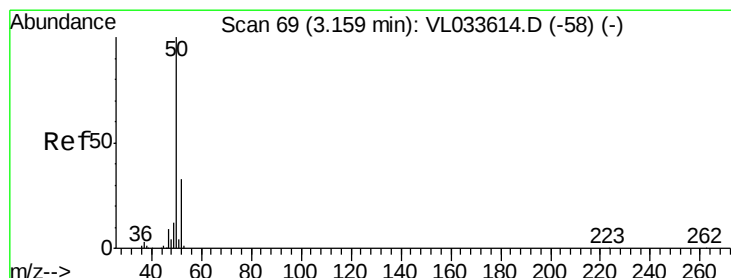
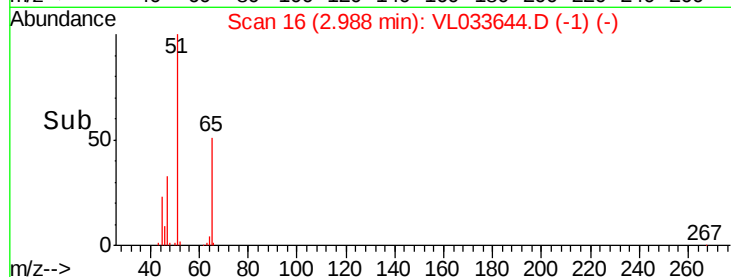
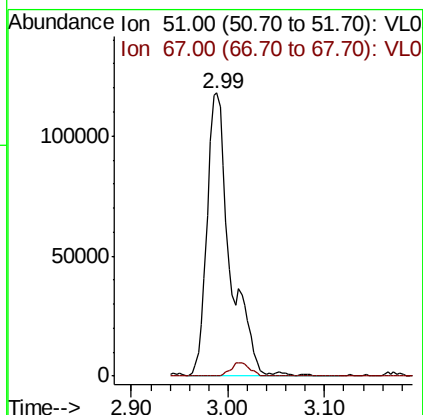
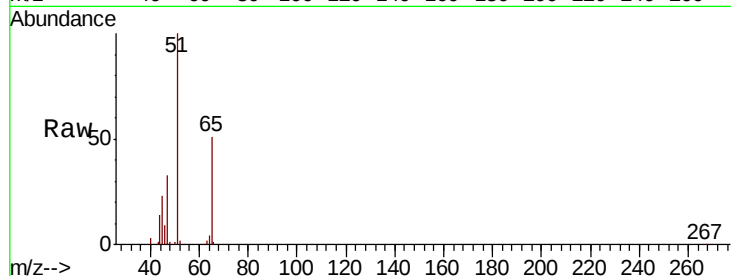




#3
 Chlorodifluoromethane
 Concen: 1.896 ppbv
 RT: 2.99 min Scan# 16
 Delta R.T. -0.01 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

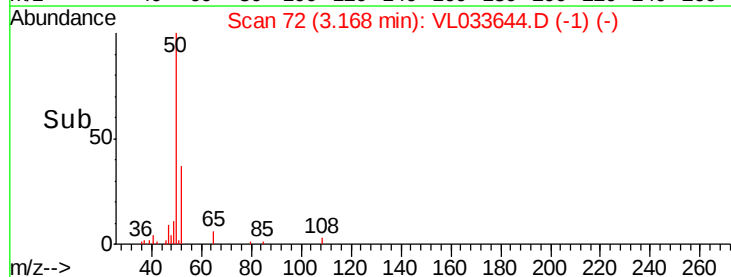
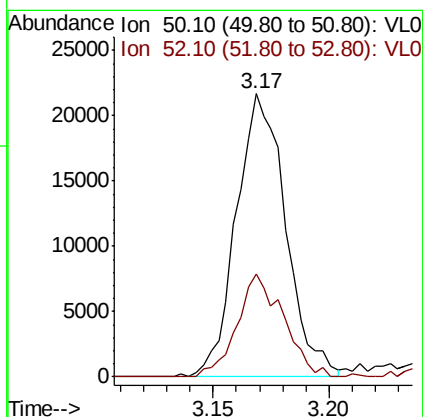
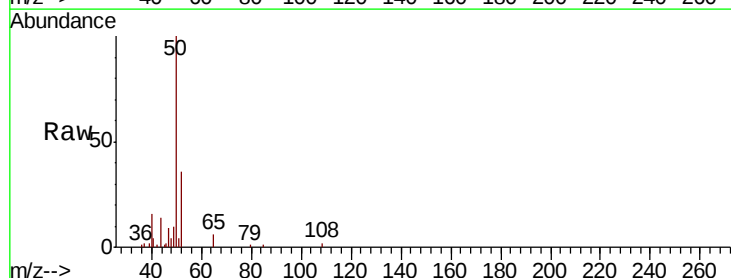
Instrument :
 MSVOA_L
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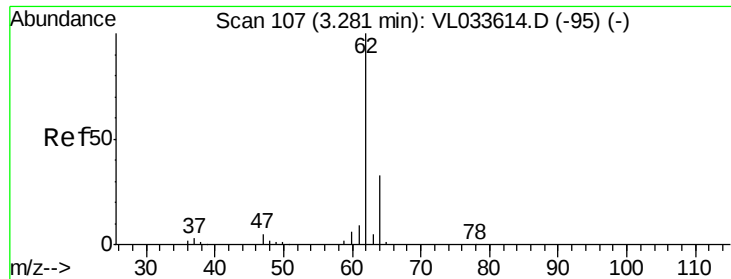
Tgt Ion: 51 Resp: 195696
 Ion Ratio Lower Upper
 51 100
 67 4.0 15.6 23.4#



#4
 Chloromethane
 Concen: 0.570 ppbv
 RT: 3.17 min Scan# 72
 Delta R.T. 0.01 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

Tgt Ion: 50 Resp: 32036
 Ion Ratio Lower Upper
 50 100
 52 36.4 26.0 39.0





#5

Vinyl Chloride

Concen: 0.015 ppbv

RT: 3.05 min Scan# 35

Delta R.T. -0.23 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

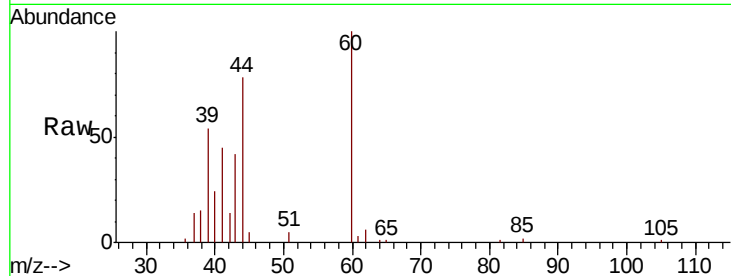
A-10

Tgt Ion: 62 Resp: 868

Ion Ratio Lower Upper

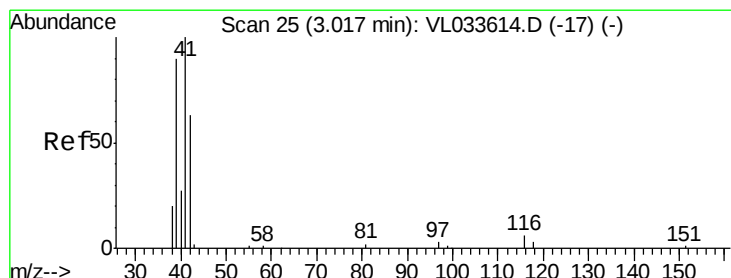
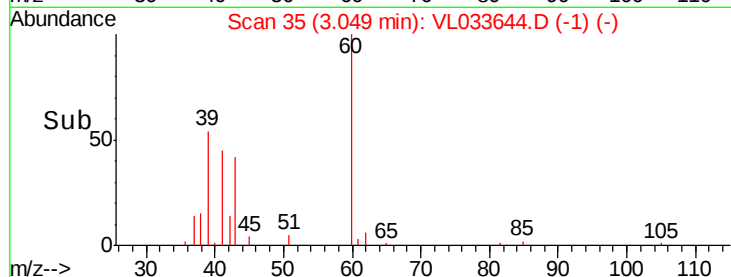
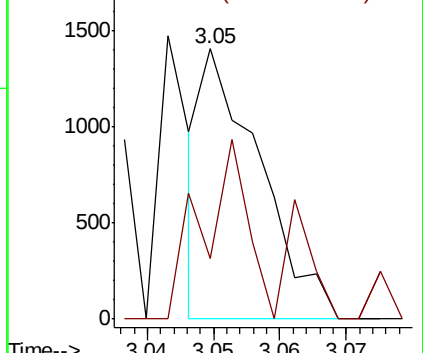
62 100

64 22.6 26.2 39.4#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#9

Propene

Concen: 1.402 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.22 min

Lab File: VL033644.D

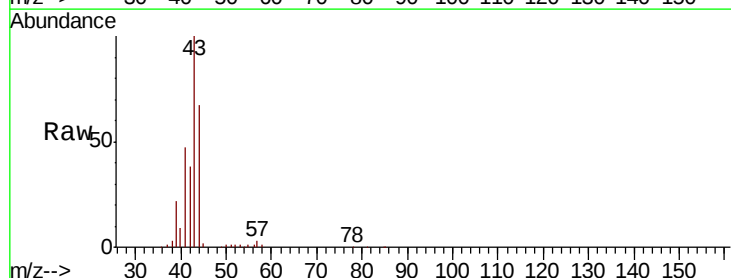
Acq: 3 May 2019 1:44

Tgt Ion: 41 Resp: 41452

Ion Ratio Lower Upper

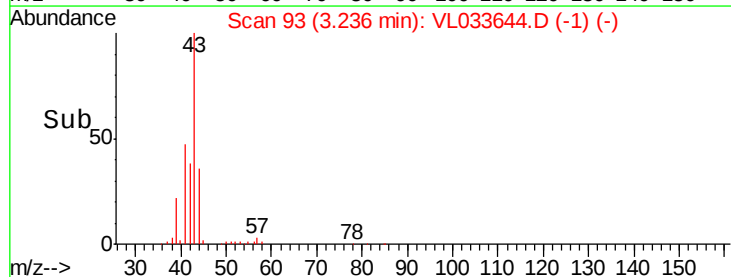
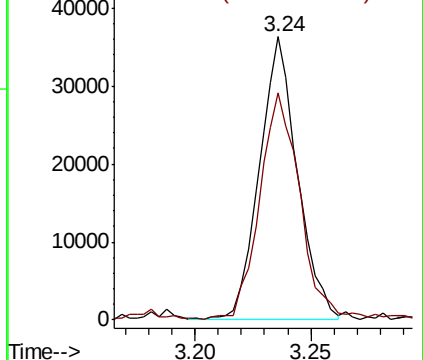
41 100

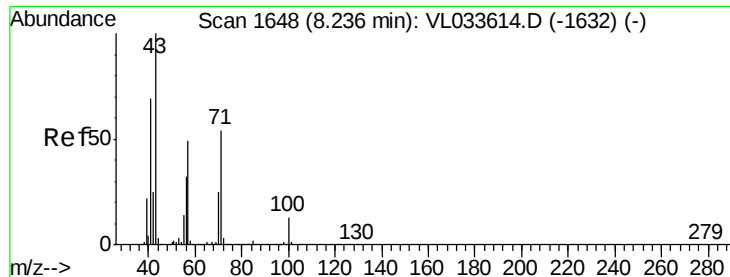
42 87.3 66.0 99.0



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.013 ppbv

RT: 8.24 min Scan# 1648

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

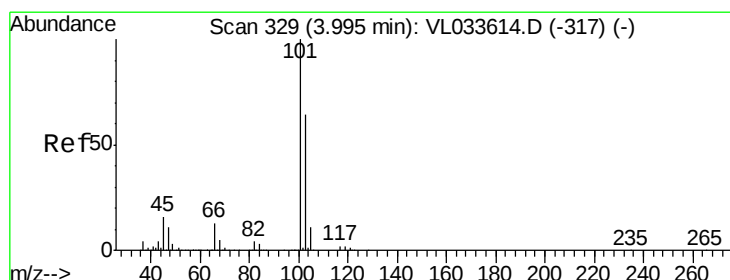
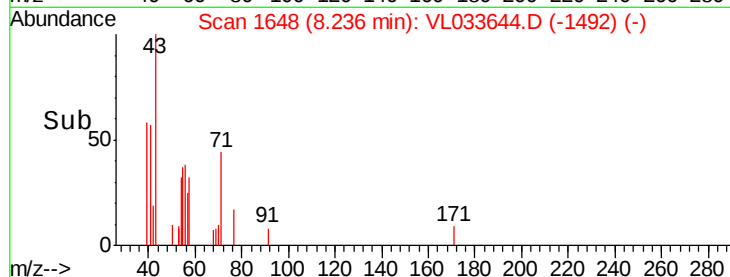
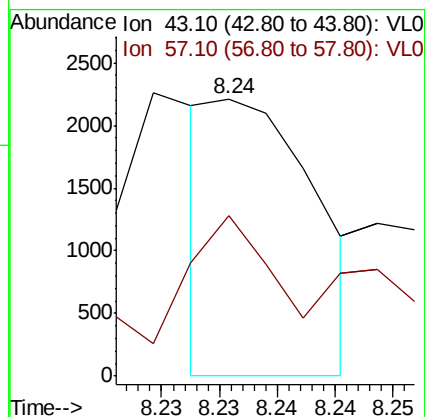
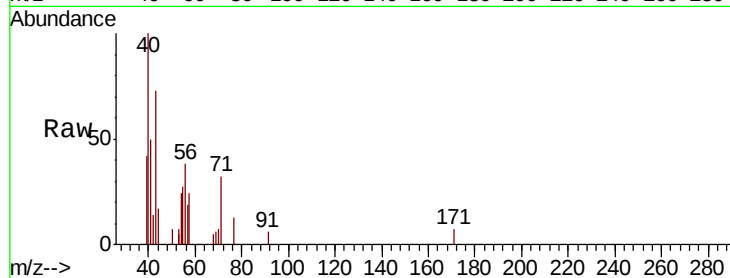
A-10

Tgt Ion: 43 Resp: 1367

Ion Ratio Lower Upper

43 100

57 118.7 40.3 60.5#



#11

Trichlorofluoromethane

Concen: 0.281 ppbv

RT: 4.00 min Scan# 331

Delta R.T. 0.01 min

Lab File: VL033644.D

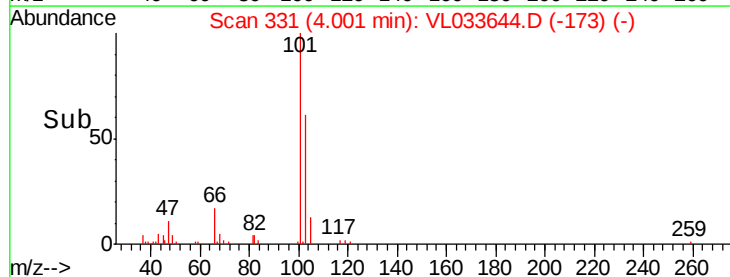
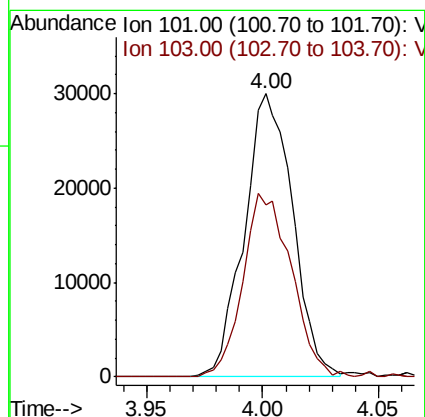
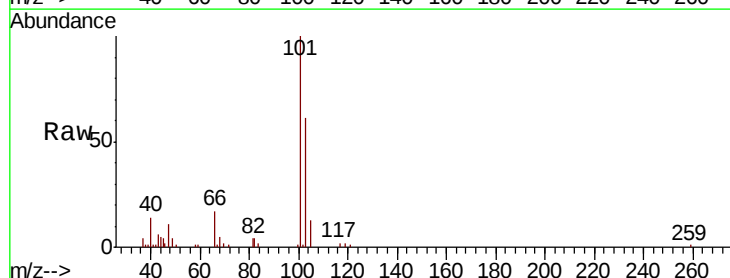
Acq: 3 May 2019 1:44

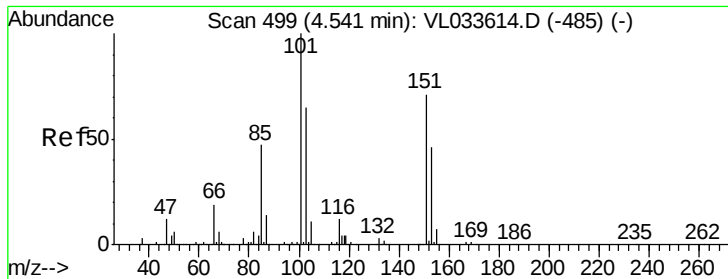
Tgt Ion: 101 Resp: 43519

Ion Ratio Lower Upper

101 100

103 60.6 51.2 76.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.044 ppbv

RT: 4.55 min Scan# 501

Delta R.T. 0.01 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

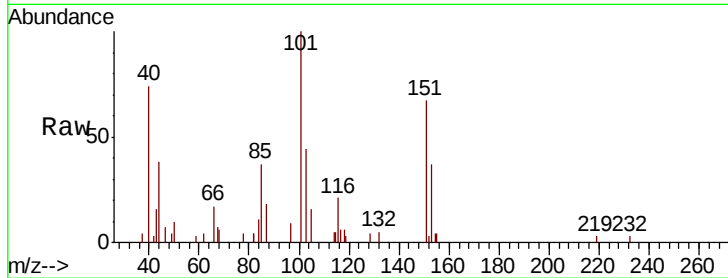
A-10

Tgt Ion: 101 Resp: 4688

Ion Ratio Lower Upper

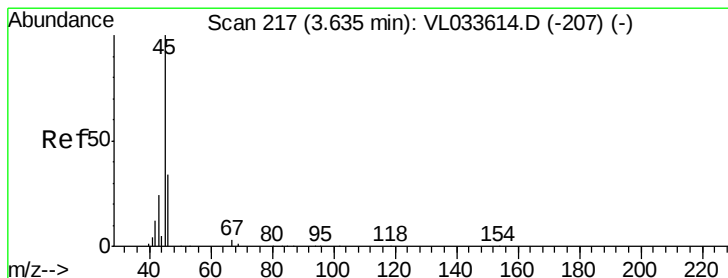
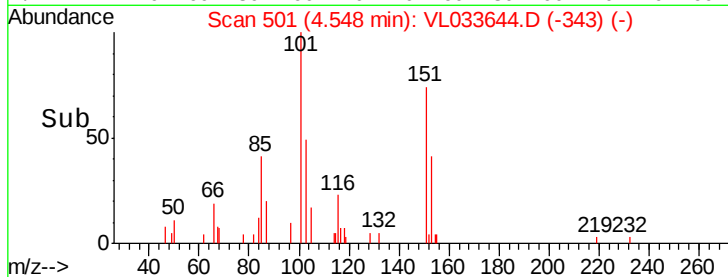
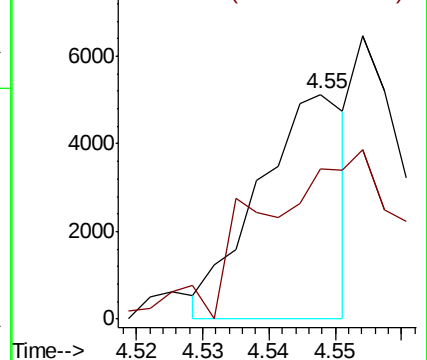
101 100

151 0.0 59.2 88.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 28.478 ppbv

RT: 3.65 min Scan# 221

Delta R.T. 0.01 min

Lab File: VL033644.D

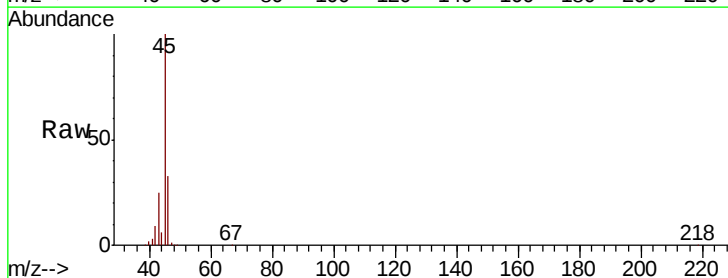
Acq: 3 May 2019 1:44

Tgt Ion: 45 Resp: 381653

Ion Ratio Lower Upper

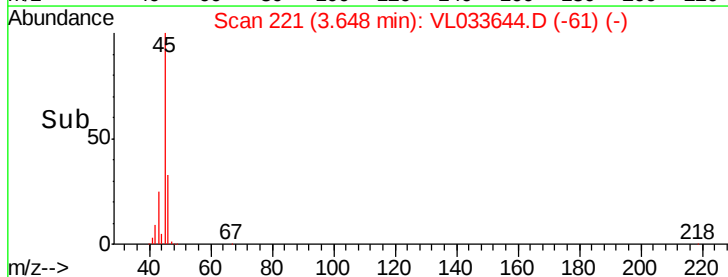
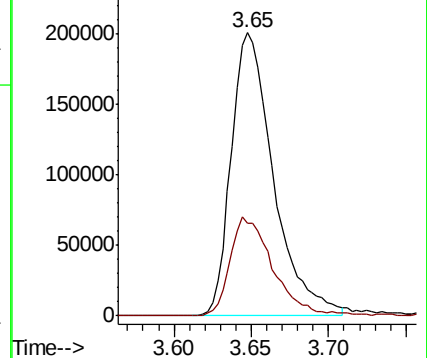
45 100

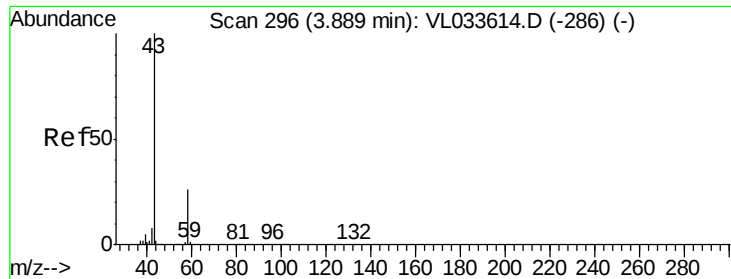
46 35.9 14.6 58.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

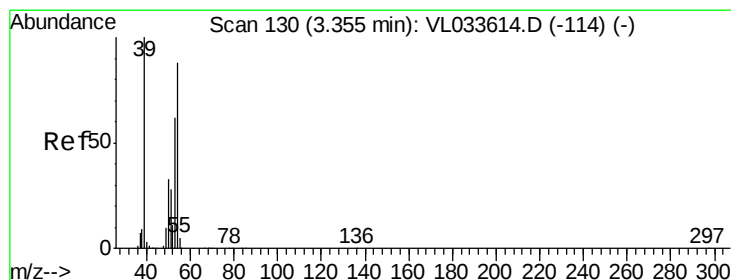
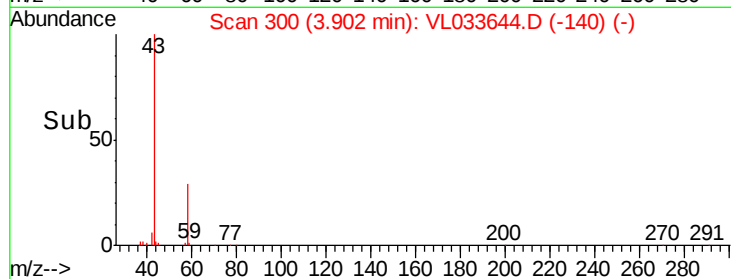
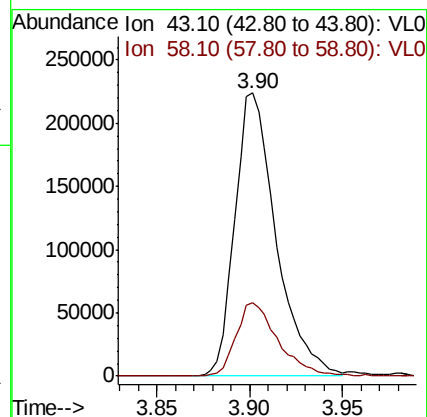
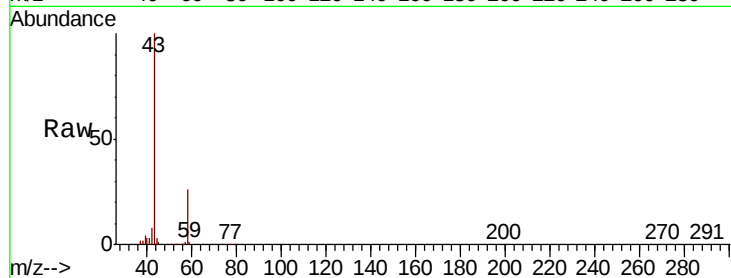




#15
Acetone
Concen: 3.289 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.01 min
Lab File: VL033644.D
Acq: 3 May 2019 1:44

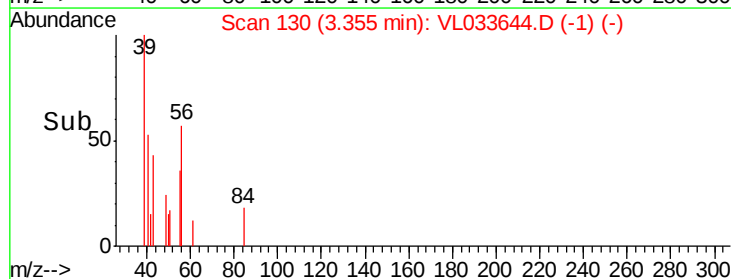
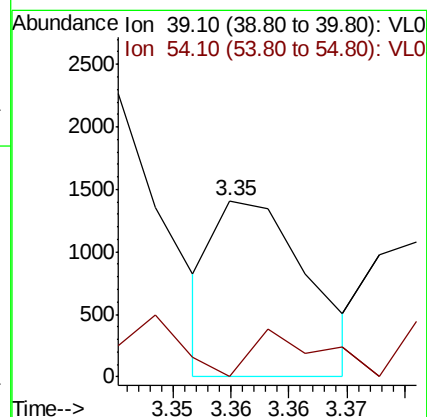
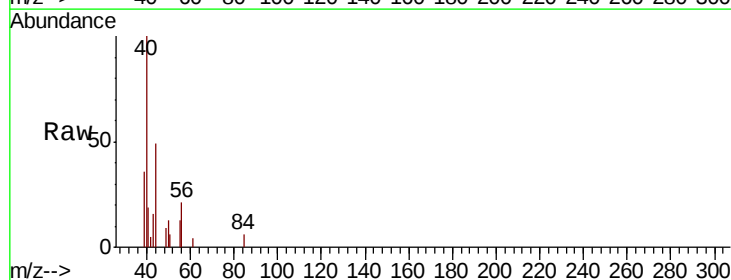
Instrument :
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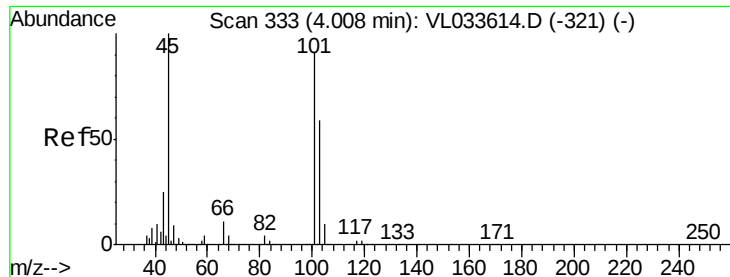
Tgt Ion: 43 Resp: 345720
Ion Ratio Lower Upper
43 100
58 26.6 21.2 31.8



#16
1,3-Butadiene
Concen: 0.017 ppbv
RT: 3.35 min Scan# 130
Delta R.T. 0.00 min
Lab File: VL033644.D
Acq: 3 May 2019 1:44

Tgt Ion: 39 Resp: 788
Ion Ratio Lower Upper
39 100
54 57.6 68.4 102.6#





#19

Isopropyl Alcohol

Concen: 1.378 ppbv

RT: 4.03 min Scan# 339

Delta R.T. 0.02 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampled :

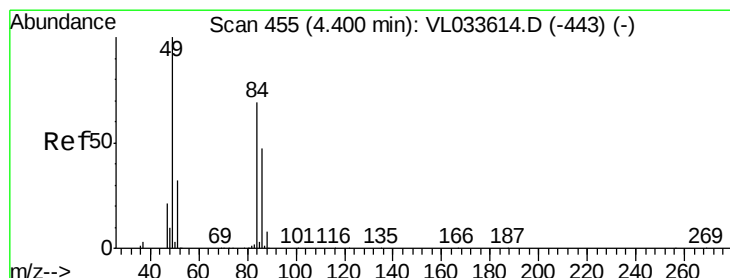
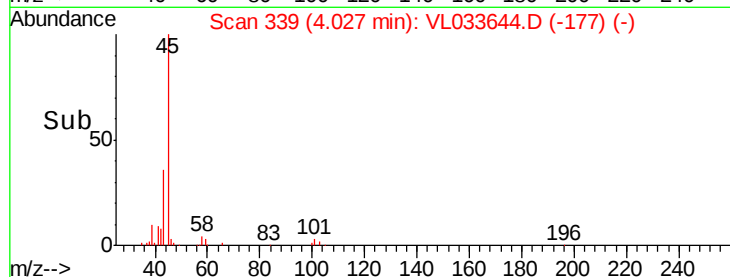
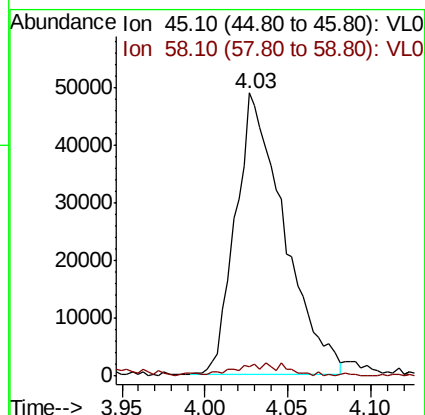
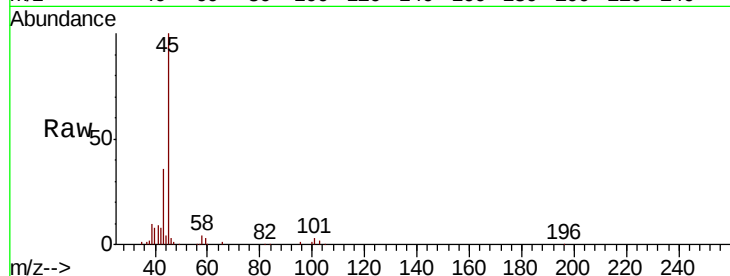
A-10

Tgt Ion: 45 Resp: 99413

Ion Ratio Lower Upper

45 100

58 5.2 1.8 2.6#



#20

Methylene Chloride

Concen: 0.997 ppbv

RT: 4.41 min Scan# 457

Delta R.T. 0.01 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Tgt Ion: 84 Resp: 40829

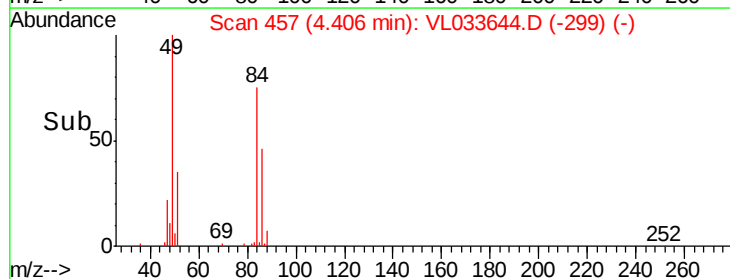
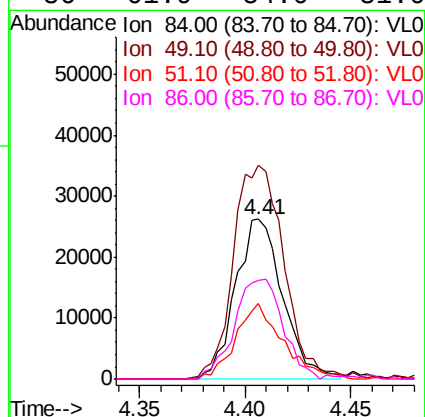
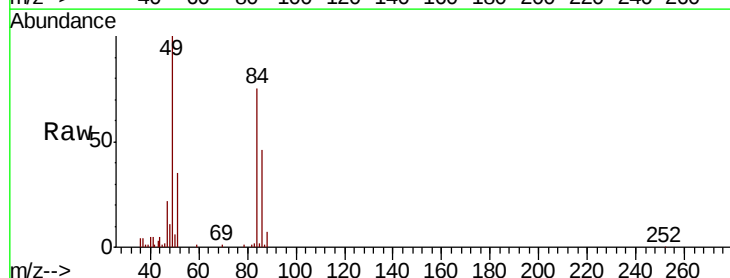
Ion Ratio Lower Upper

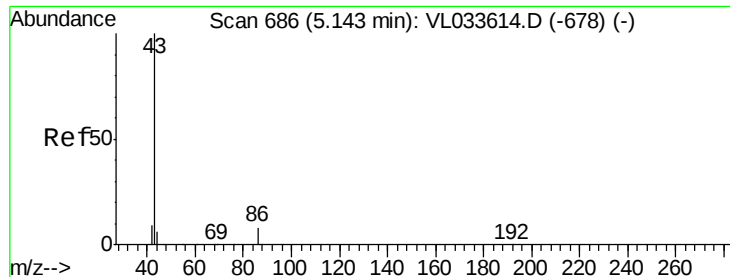
84 100

49 132.9 116.2 174.2

51 47.0 37.0 55.6

86 61.9 54.0 81.0





#23

Vinyl Acetate

Concen: 0.039 ppbv

RT: 5.14 min Scan# 686

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

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Tgt Ion: 43 Resp: 6119

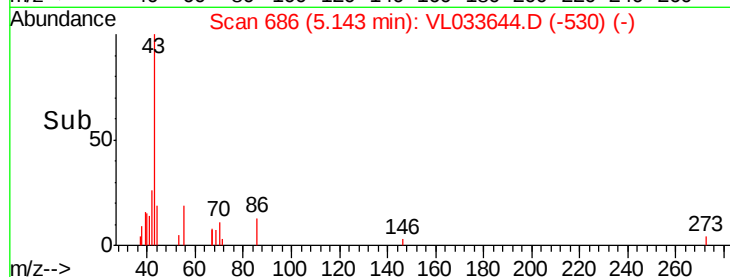
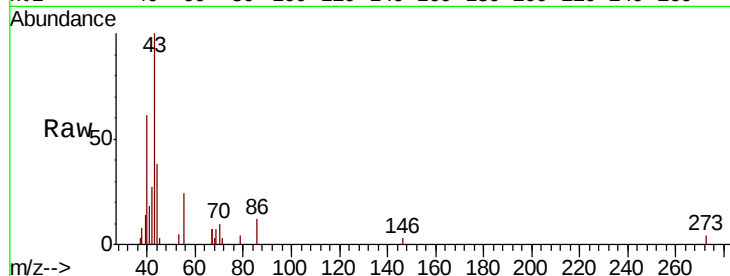
Ion Ratio Lower Upper

43 100

86 13.2 5.8 8.8#

42 1.3 7.8 11.8#

44 25.0 4.6 7.0#

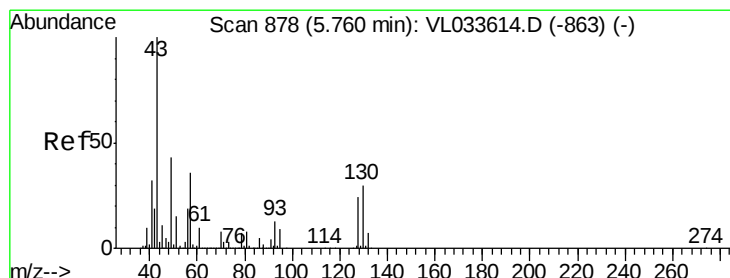
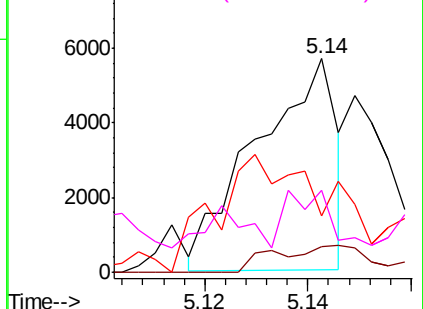


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.209 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.02 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Tgt Ion: 43 Resp: 41681

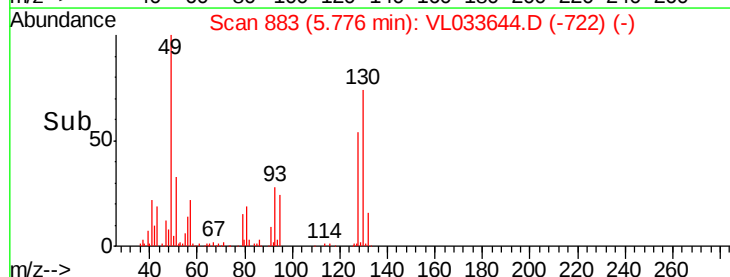
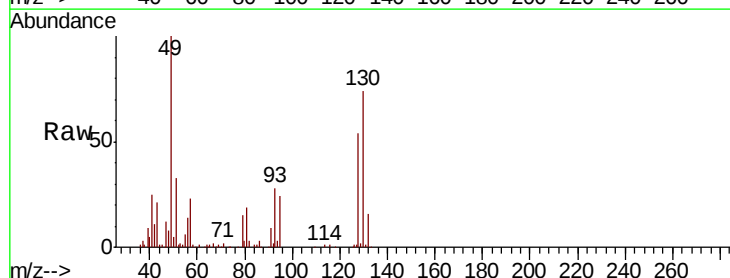
Ion Ratio Lower Upper

43 100

45 7.0 8.1 12.1#

61 3.0 7.5 11.3#

70 2.6 5.8 8.6#

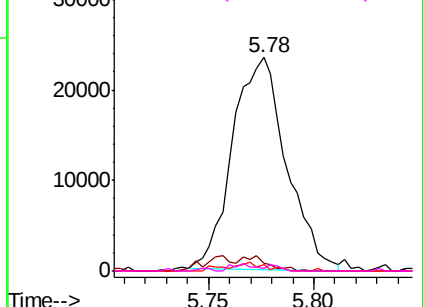


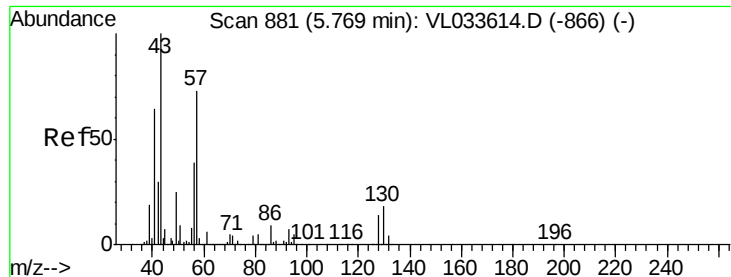
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

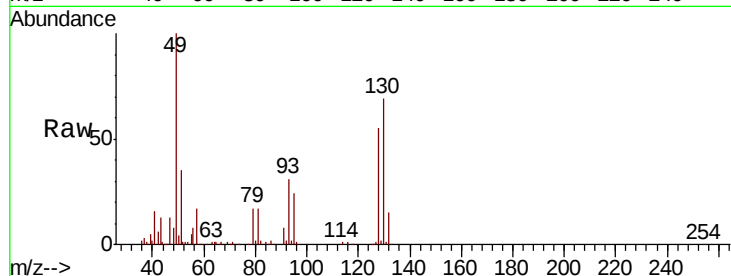




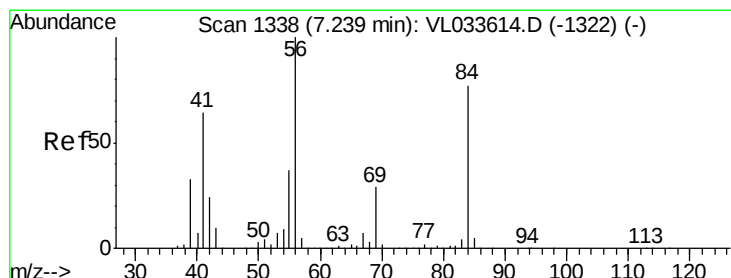
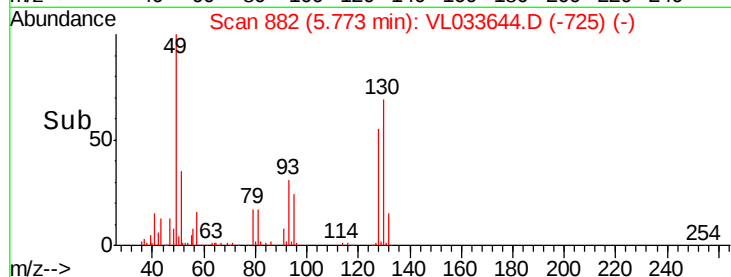
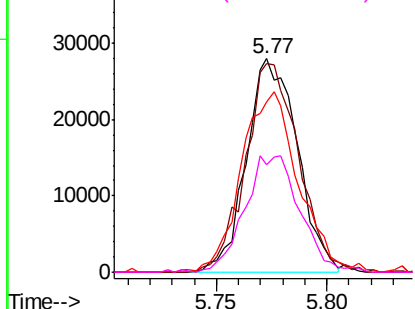
#26
Hexane
Concen: 0.535 ppbv
RT: 5.77 min Scan# 882
Delta R.T. 0.00 min
Lab File: VL033644.D
Acq: 3 May 2019 1:44

Instrument :
MSVOA_L
ClientSampleId :
A-10

Tgt Ion: 57 Resp: 44975
Ion Ratio Lower Upper
57 100
41 102.1 70.6 106.0
43 96.1 186.0 279.0#
56 59.1 42.7 64.1

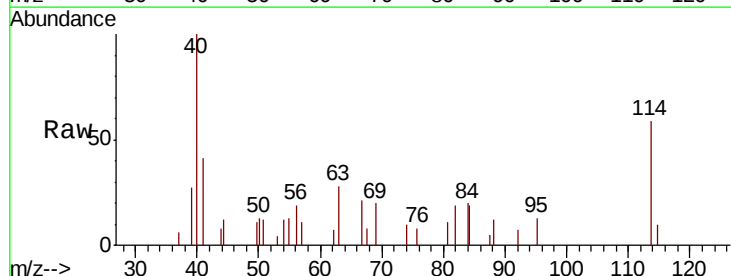


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

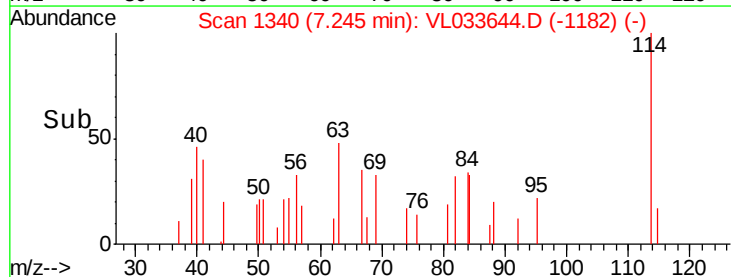
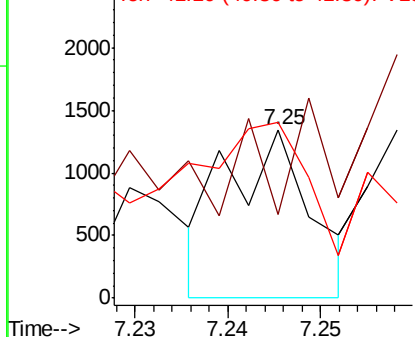


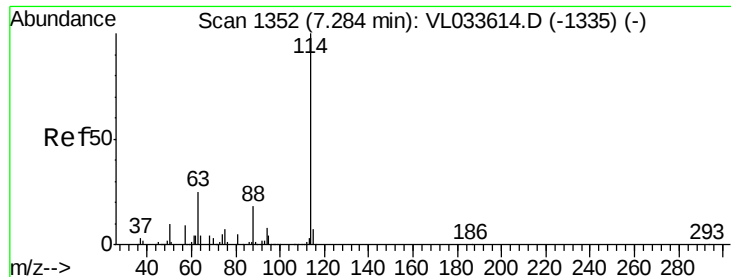
#30
Cyclohexane
Concen: 0.012 ppbv
RT: 7.25 min Scan# 1340
Delta R.T. 0.01 min
Lab File: VL033644.D
Acq: 3 May 2019 1:44

Tgt Ion: 84 Resp: 852
Ion Ratio Lower Upper
84 100
56 0.0 108.4 162.6#
41 314.2 67.0 100.4#



Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

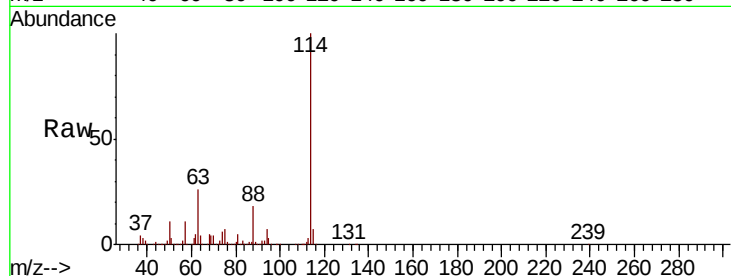




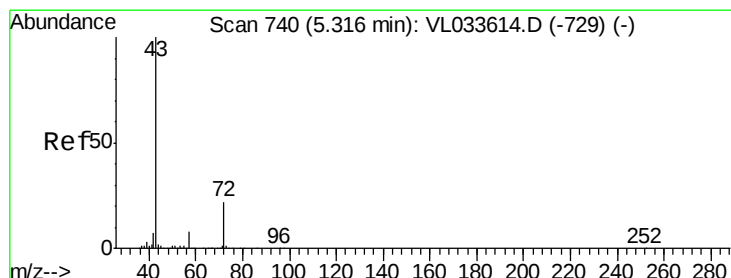
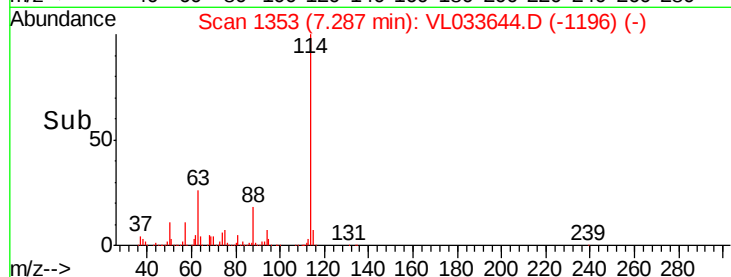
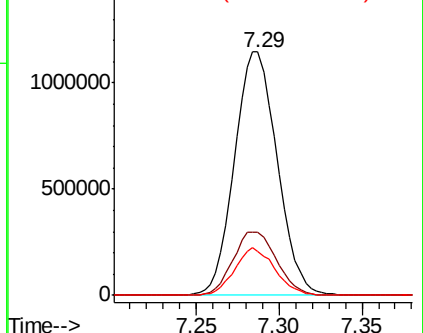
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1353
 Delta R.T. 0.00 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

Instrument :
 MSVOA_L
 ClientSampleId :
 A-10

Tgt Ion:114 Resp: 2059432
 Ion Ratio Lower Upper
 114 100
 63 26.6 21.1 31.7
 88 18.2 14.2 21.4

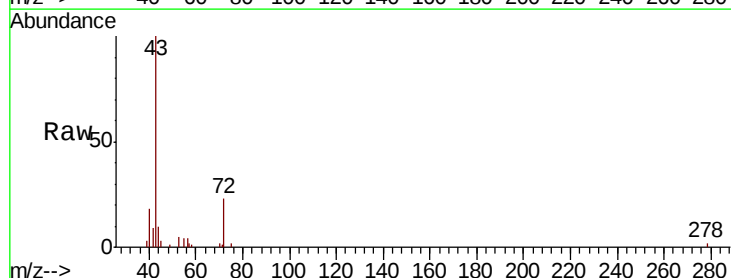


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

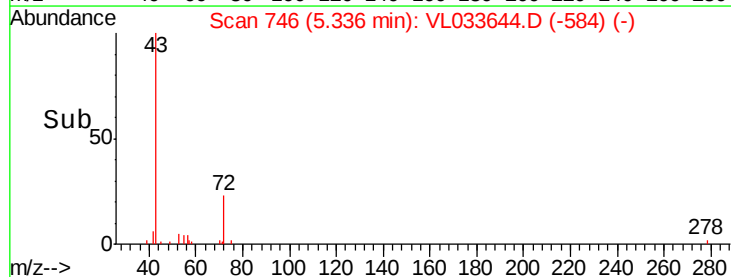
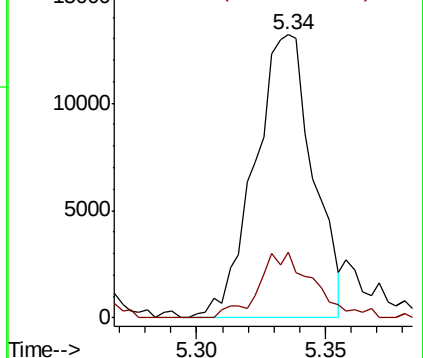


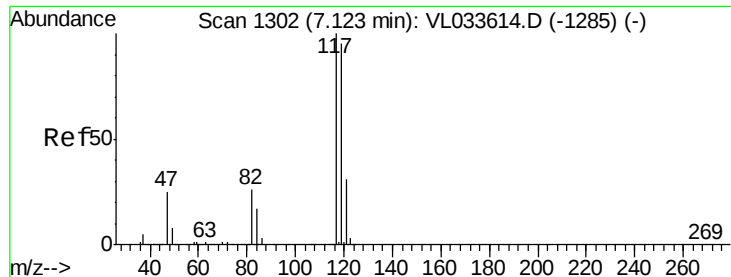
#34
 2-Butanone
 Concen: 0.165 ppbv
 RT: 5.34 min Scan# 746
 Delta R.T. 0.02 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

Tgt Ion: 43 Resp: 20854
 Ion Ratio Lower Upper
 43 100
 72 22.0 17.8 26.8



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.064 ppbv

RT: 7.12 min Scan# 1302

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

A-10

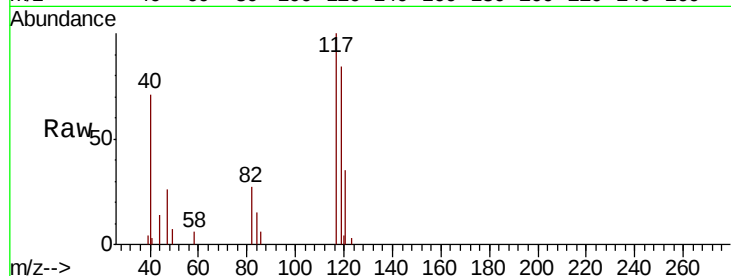
Tgt Ion: 117 Resp: 10374

Ion Ratio Lower Upper

117 100

119 78.7 76.2 114.4

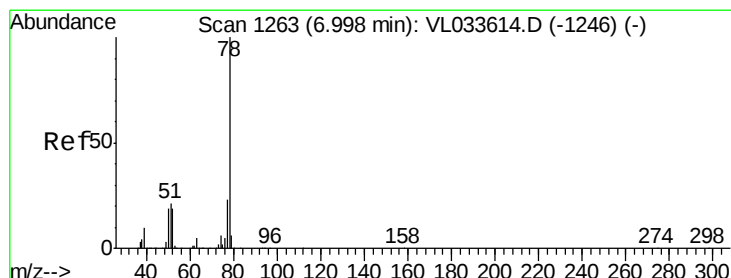
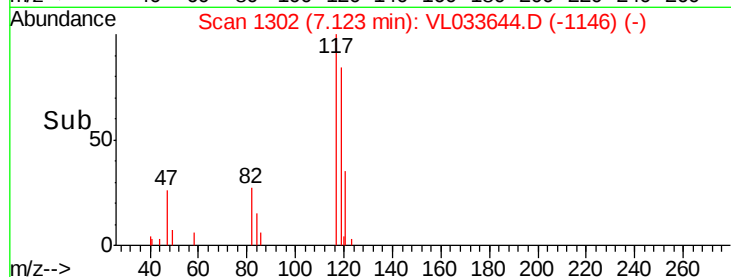
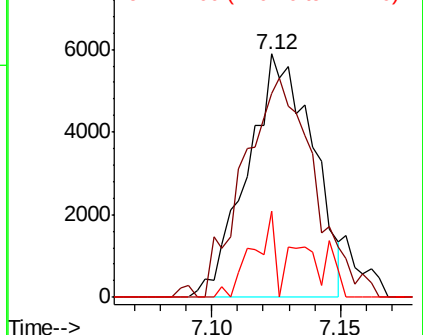
121 35.2 24.9 37.3



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.077 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

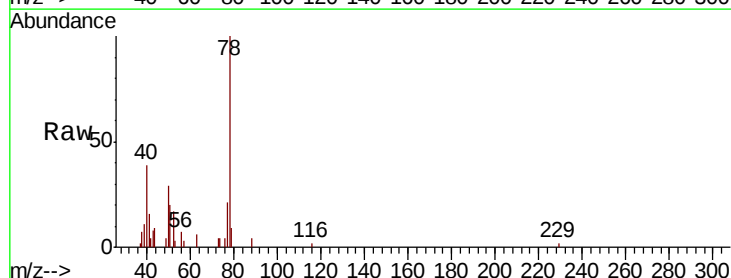
Tgt Ion: 78 Resp: 13567

Ion Ratio Lower Upper

78 100

77 18.0 18.1 27.1#

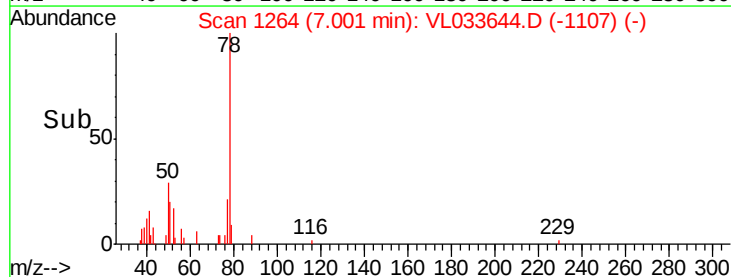
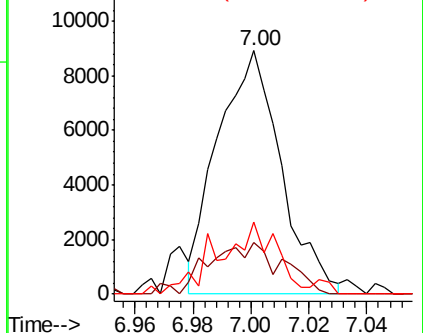
50 30.8 15.1 22.7#

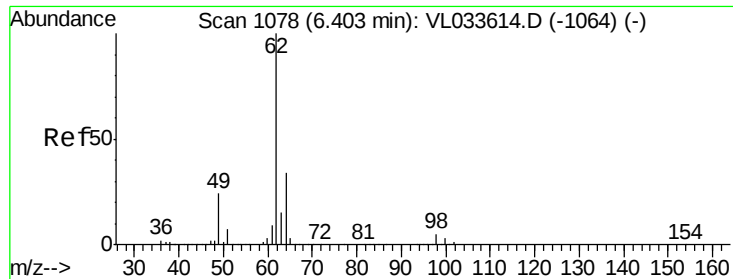


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

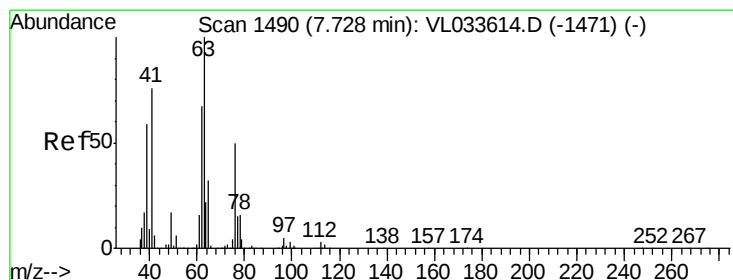
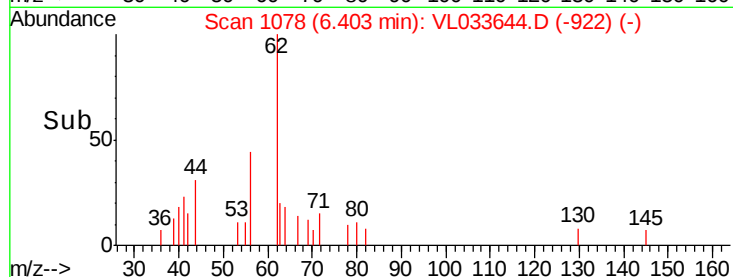
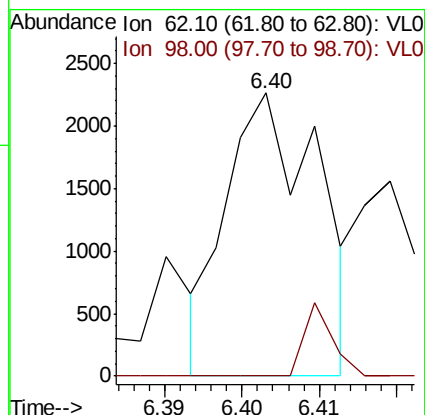
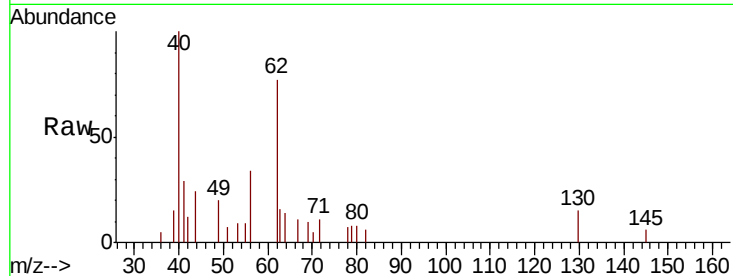




#37
 1,2-Dichloroethane
 Concen: 0.016 ppbv
 RT: 6.40 min Scan# 1078
 Delta R.T. 0.00 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

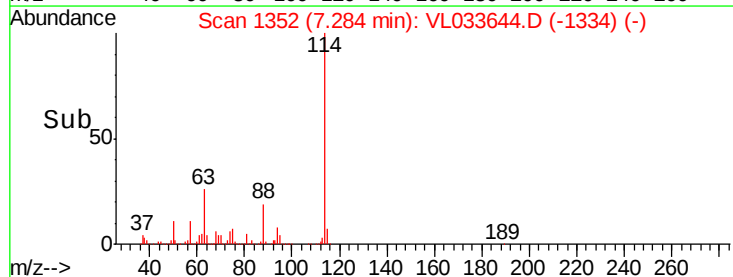
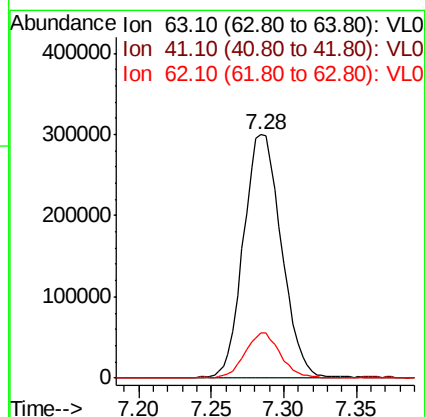
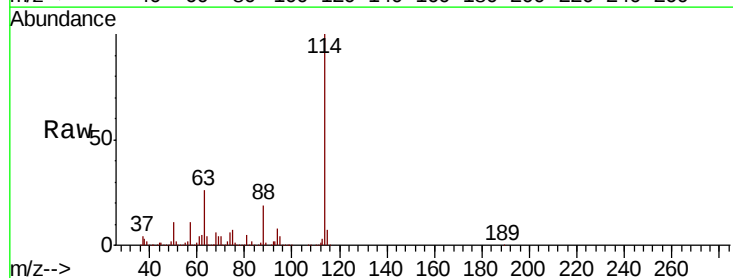
Instrument :
 MSVOA_L
 ClientSampleId :
 A-10

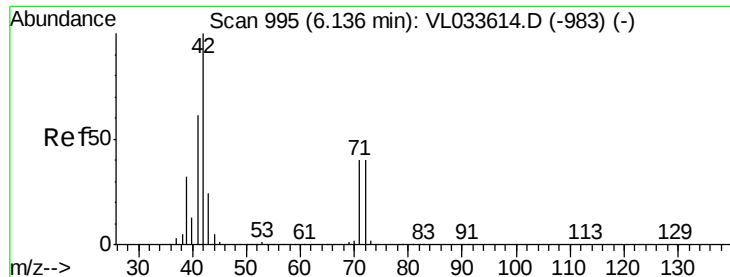
Tgt Ion: 62 Resp: 1869
 Ion Ratio Lower Upper
 62 100
 98 9.6 4.4 6.6#



#39
 1,2-Dichloropropane
 Concen: 8.270 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.44 min
 Lab File: VL033644.D
 Acq: 3 May 2019 1:44

Tgt Ion: 63 Resp: 547255
 Ion Ratio Lower Upper
 63 100
 41 0.0 60.9 91.3#
 62 18.8 53.3 79.9#





#41

Tetrahydrofuran

Concen: 0.011 ppbv

RT: 6.14 min Scan# 995

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

A-10

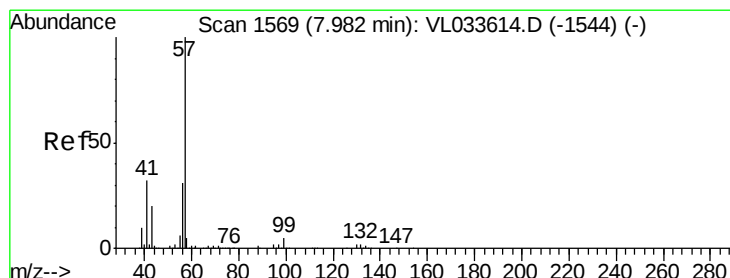
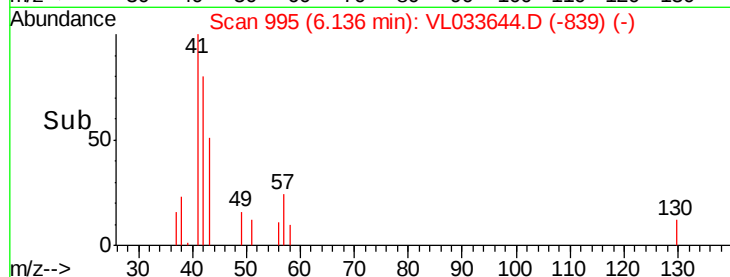
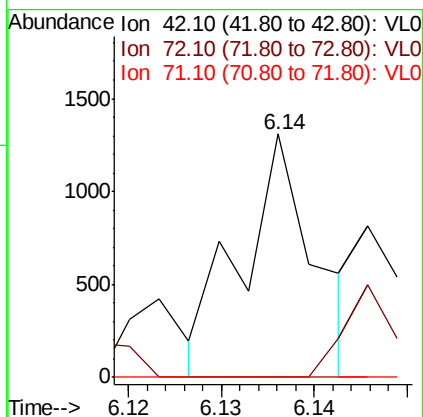
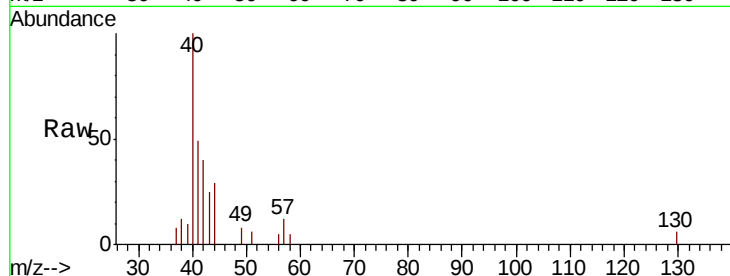
Tgt Ion: 42 Resp: 709

Ion Ratio Lower Upper

42 100

72 14.0 31.8 47.6#

71 0.0 31.0 46.4#



#44

2,2,4-Trimethylpentane

Concen: 0.014 ppbv

RT: 7.98 min Scan# 1570

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

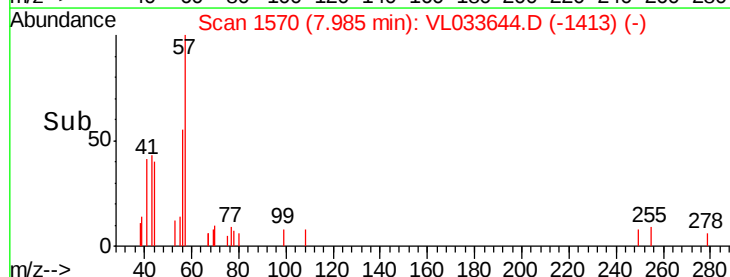
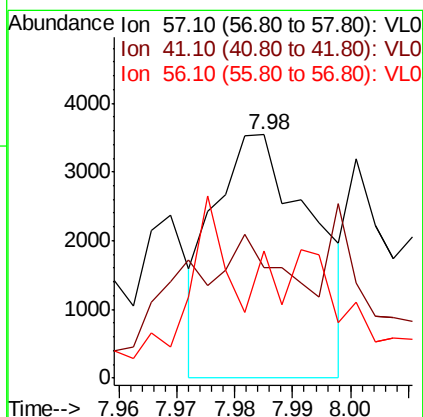
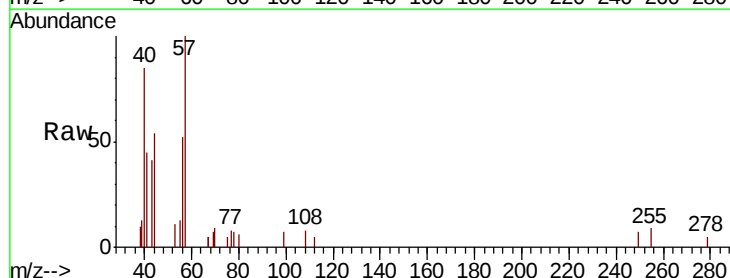
Tgt Ion: 57 Resp: 4154

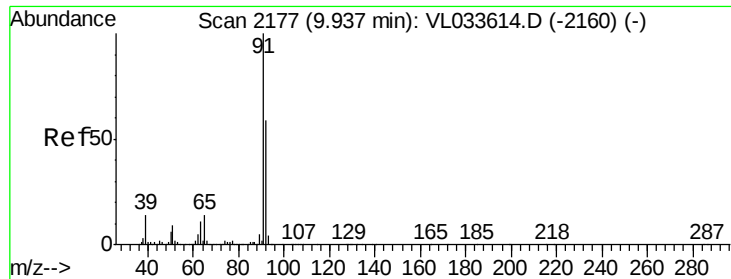
Ion Ratio Lower Upper

57 100

41 0.0 25.4 38.2#

56 0.0 24.6 37.0#





#53

Toluene

Concen: 2.581 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

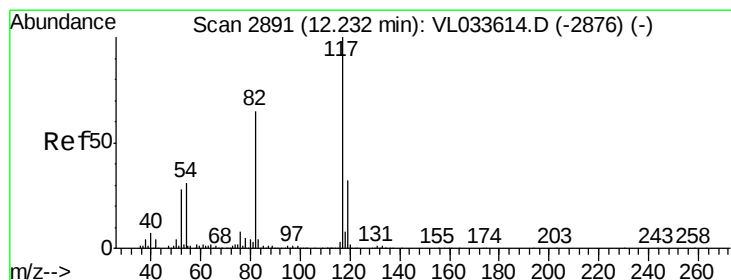
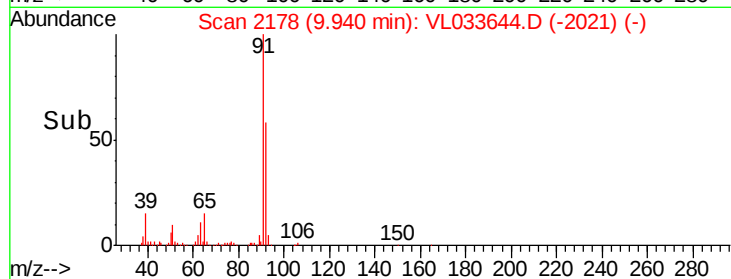
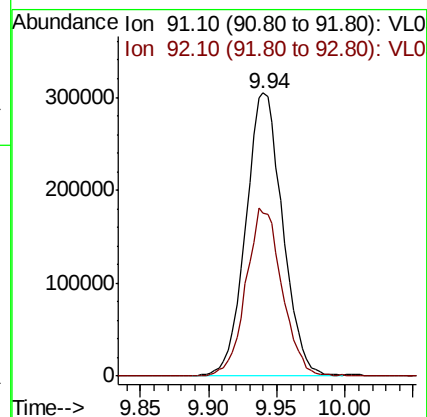
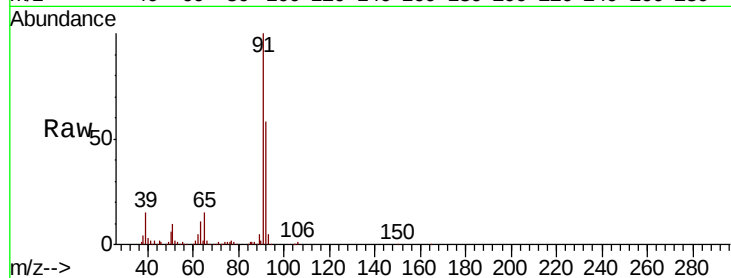
A-10

Tgt Ion: 91 Resp: 571643

Ion Ratio Lower Upper

91 100

92 58.2 47.8 71.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.23 min Scan# 2891

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

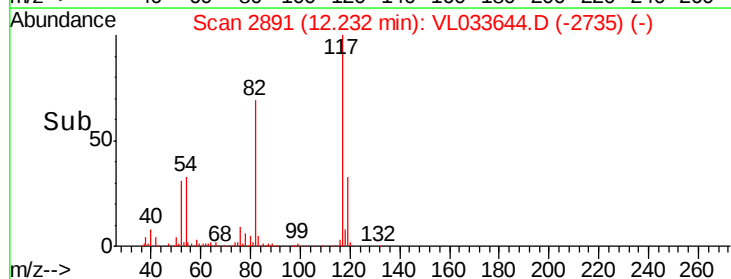
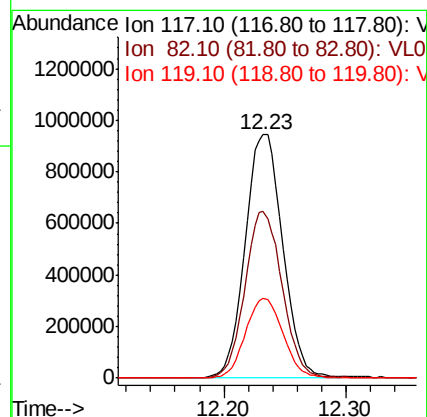
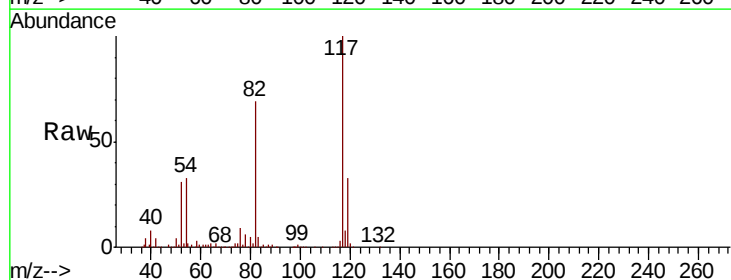
Tgt Ion: 117 Resp: 2007706

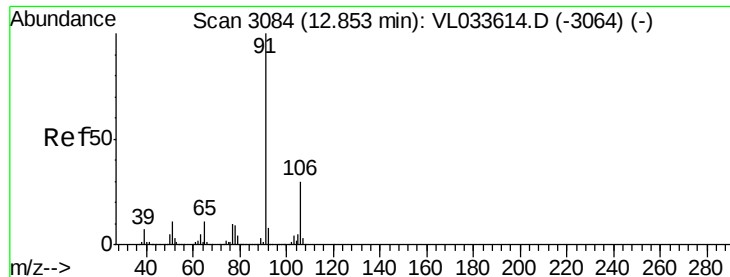
Ion Ratio Lower Upper

117 100

82 68.2 52.6 78.8

119 32.7 28.3 42.5





#58

Ethyl Benzene

Concen: 0.017 ppbv

RT: 12.85 min Scan# 3084

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

Instrument :

MSVOA_L

ClientSampleId :

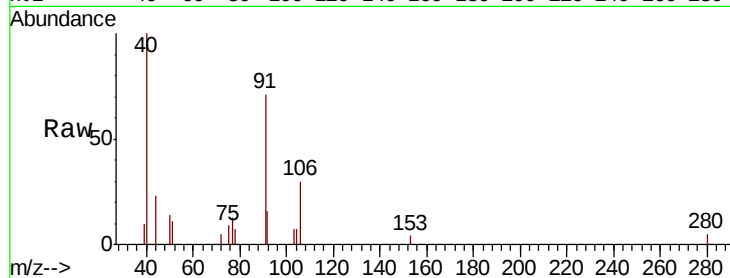
A-10

Tgt Ion: 91 Resp: 3876

Ion Ratio Lower Upper

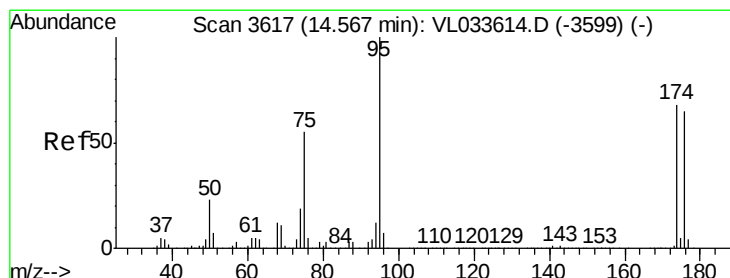
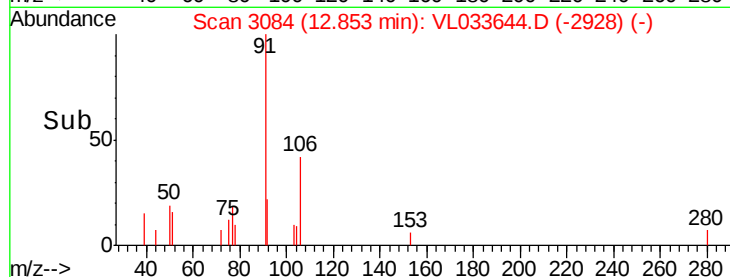
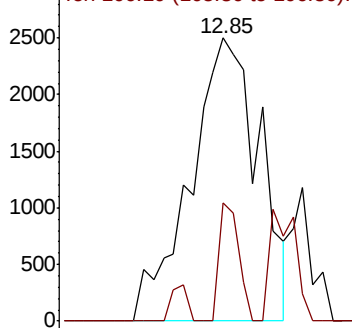
91 100

106 41.9 23.6 35.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.862 ppbv

RT: 14.57 min Scan# 3618

Delta R.T. 0.00 min

Lab File: VL033644.D

Acq: 3 May 2019 1:44

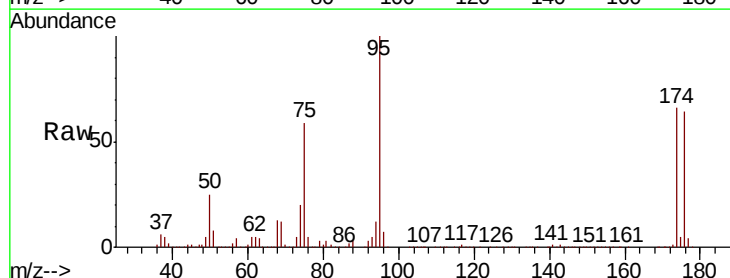
Tgt Ion: 95 Resp: 1660283

Ion Ratio Lower Upper

95 100

174 66.9 53.9 80.9

175 4.7 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

