

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121118\
 Data File : VL032968.D
 Acq On : 11 Dec 2018 23:57
 Operator : SY/AP
 Sample : J6338-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 12 00:53:44 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018
 QLast Update : Fri Dec 07 09:35:17 2018
 Response via : Initial Calibration

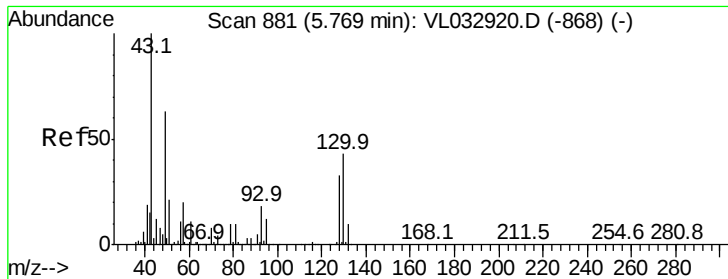
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1369735	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	3409015	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3186630	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2338403	9.93	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.30%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.08	85	74240	0.406	ppbv 97
3) Chlorodifluoromethane	3.02	51	89369	0.862	ppbv # 84
4) Chloromethane	3.17	50	34632	0.573	ppbv 97
9) Propene	3.05	41	81722	1.992	ppbv # 66
11) Trichlorofluoromethane	4.01	101	38601	0.224	ppbv 89
12) 1,1,2-Trichlorotrifluoroet	4.55	101	7643	0.052	ppbv 90
13) Ethanol	3.68	45	8134569	575.985	ppbv 96
15) Acetone	3.90	43	482366	4.103	ppbv 94
16) 1,3-Butadiene	3.35	39	8836	0.189	ppbv # 51
19) Isopropyl Alcohol	3.68	45	8134569	110.175	ppbv # 95
20) Methylene Chloride	4.41	84	717498	12.487	ppbv 96
23) Vinyl Acetate	5.15	43	26510	0.133	ppbv # 1
25) Ethyl Acetate	5.78	43	332164	1.196	ppbv # 91
26) Hexane	5.78	57	296016	2.309	ppbv # 60
29) Chloroform	5.85	83	44609	0.195	ppbv 95
31) cis-1,2-Dichloroethene	5.77	61	17571	0.149	ppbv # 34
34) 2-Butanone	5.34	43	286301	1.928	ppbv 99
35) Carbon Tetrachloride	7.14	117	12693	0.047	ppbv # 76
36) Benzene	7.00	78	56448	0.225	ppbv # 88
37) 1,2-Dichloroethane	6.42	62	11532	0.068	ppbv 98
39) 1,2-Dichloropropane	7.30	63	804430	8.459	ppbv # 21
41) Tetrahydrofuran	6.16	42	69163	0.749	ppbv 97
52) Tetrachloroethene	11.38	164	1399977	15.349	ppbv 98
53) Toluene	9.95	91	318626	1.198	ppbv 99
60) o-Xylene	13.85	91	22198	0.071	ppbv 99
74) 1,2,4-Trimethylbenzene	16.93	105	62540	0.163	ppbv # 70
79) Naphthalene	22.41	128	11740	0.047	ppbv 98
80) Naphthalene,2-methyl-	25.12	142	23554	0.446	ppbv 95

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.01 min

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Instrument :
MSVOA_L
ClientSampleId :

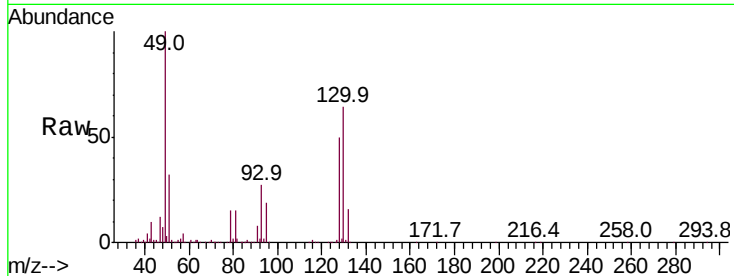
Tot Ion: 49 Resp: 1369735

Ion Ratio Lower Upper

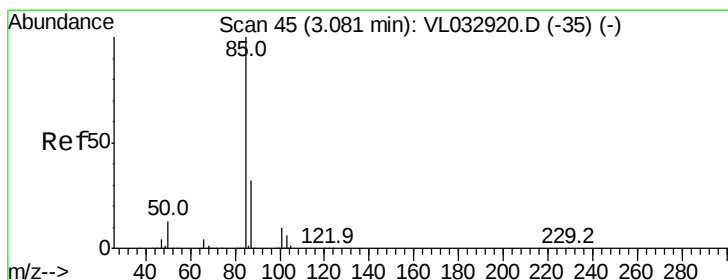
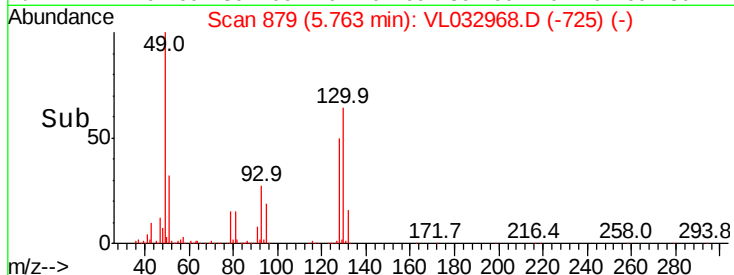
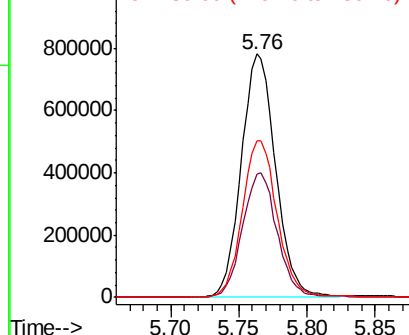
49 100

128 51.9 26.3 78.8

130 65.9 33.9 101.7



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: 0.406 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL032968.D

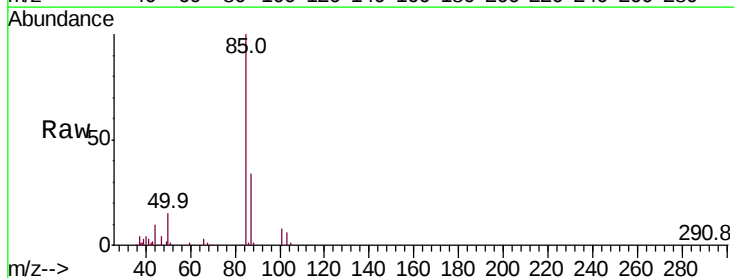
Acq: 11 Dec 2018 23:57

Tgt Ion: 85 Resp: 74240

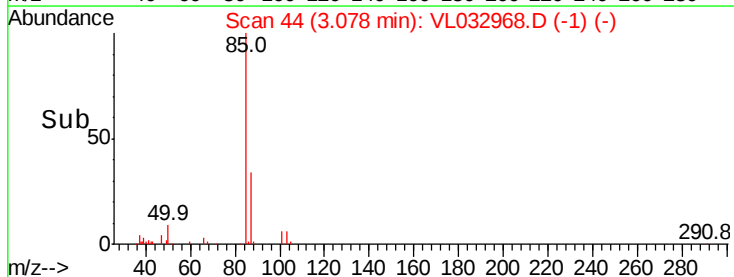
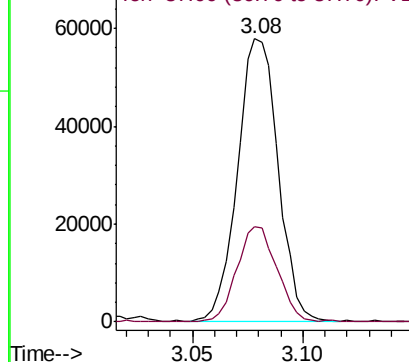
Ion Ratio Lower Upper

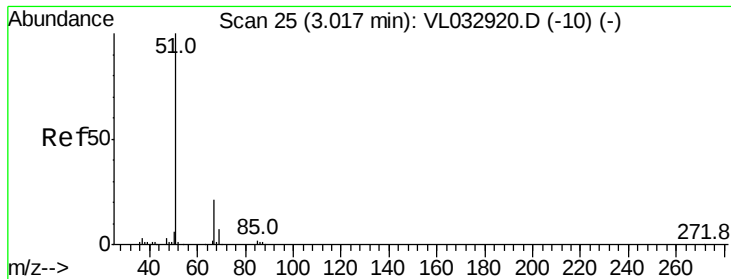
85 100

87 33.6 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.862 ppbv

RT: 3.02 min Scan# 26

Delta R.T. 0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

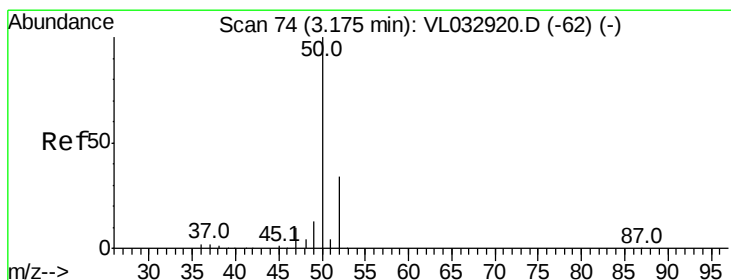
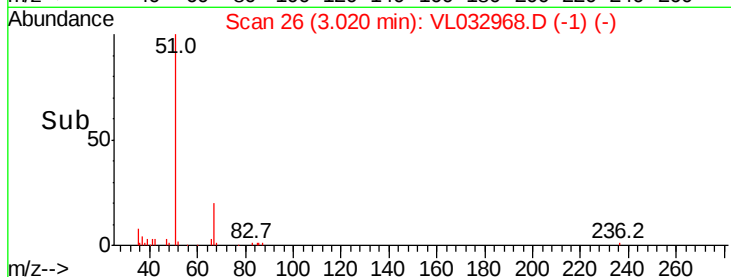
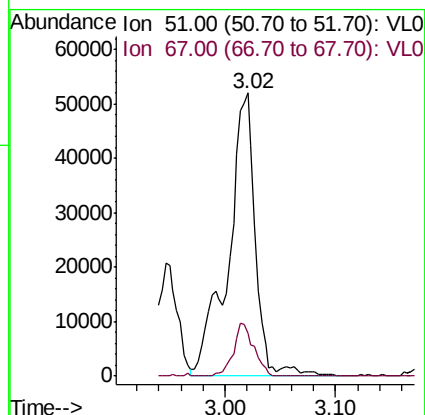
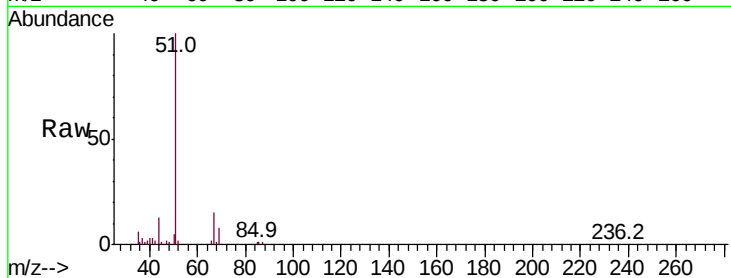
ClientSampleId :

Tot Ion: 51 Resp: 89369

Ion Ratio Lower Upper

51 100

67 13.7 16.8 25.2#



#4

Chloromethane

Concen: 0.573 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.00 min

Lab File: VL032968.D

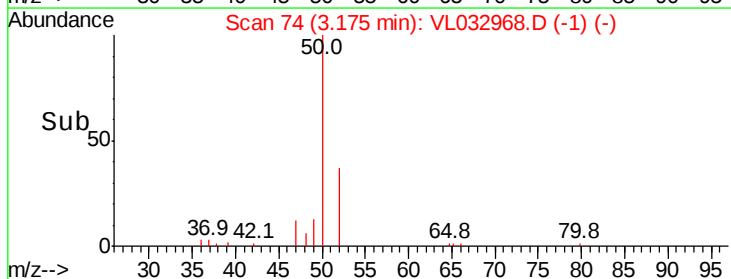
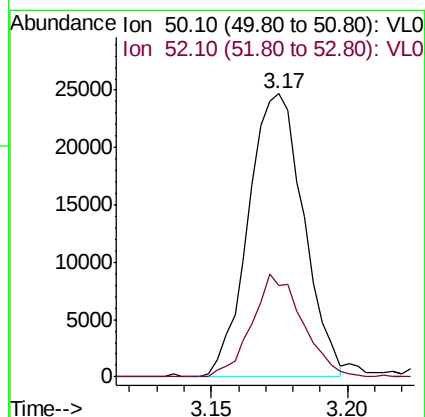
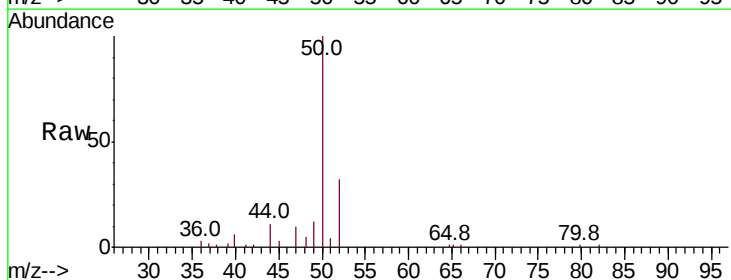
Acq: 11 Dec 2018 23:57

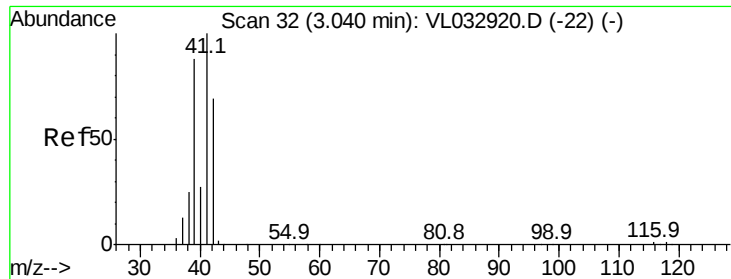
Tgt Ion: 50 Resp: 34632

Ion Ratio Lower Upper

50 100

52 32.5 27.3 40.9





#9

Propene

Concen: 1.992 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

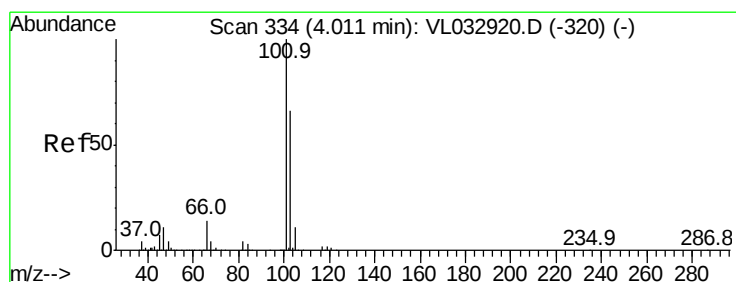
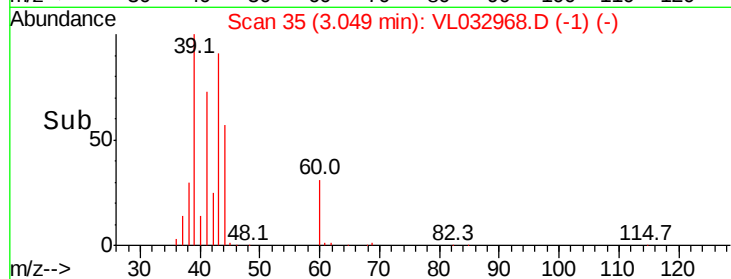
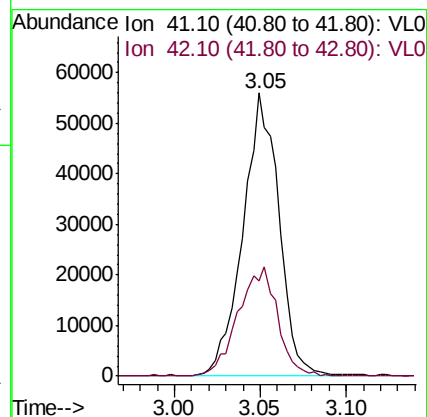
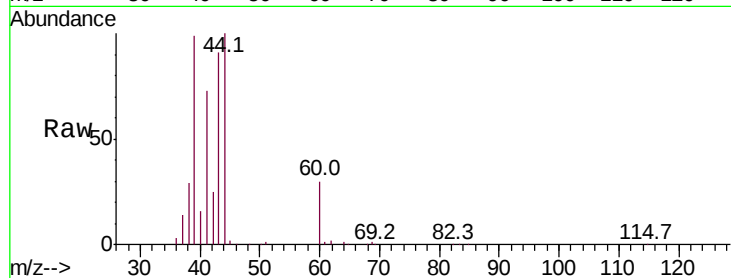
ClientSampleId :

Tot Ion: 41 Resp: 81722

Ion Ratio Lower Upper

41 100

42 42.2 56.2 84.2#



#11

Trichlorofluoromethane

Concen: 0.224 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.00 min

Lab File: VL032968.D

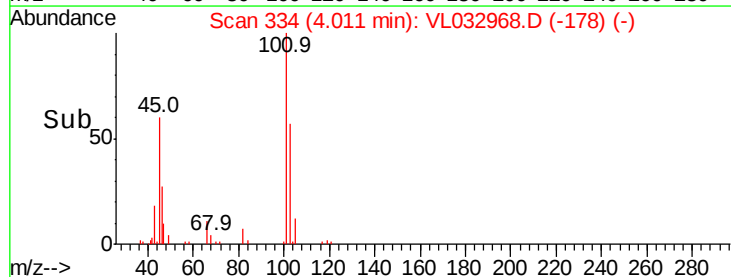
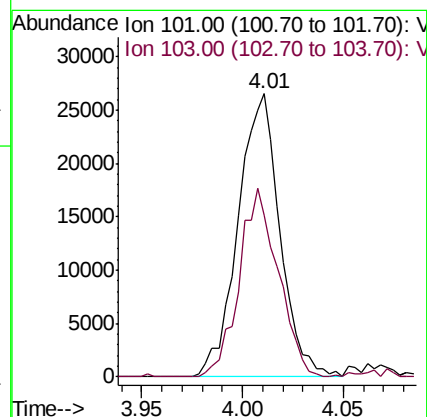
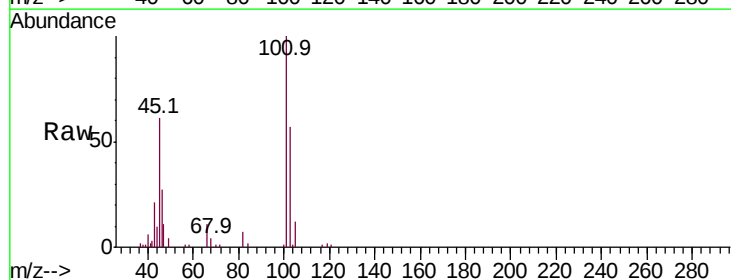
Acq: 11 Dec 2018 23:57

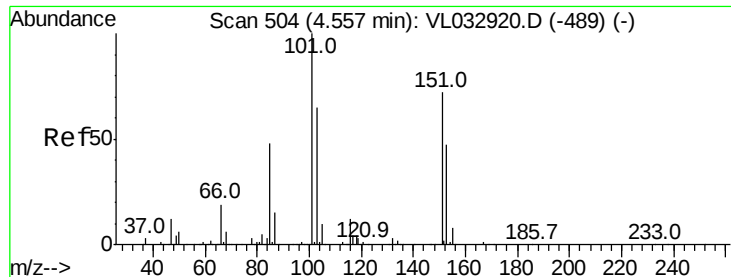
Tgt Ion: 101 Resp: 38601

Ion Ratio Lower Upper

101 100

103 57.3 52.7 79.1





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.052 ppbv

RT: 4.55 min Scan# 503

Delta R.T. -0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

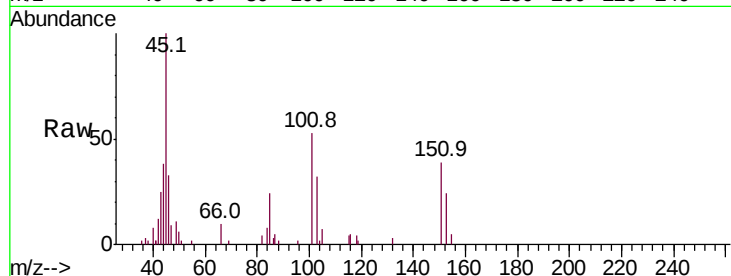
ClientSampleId :

Tot Ion:101 Resp: 7643

Ion Ratio Lower Upper

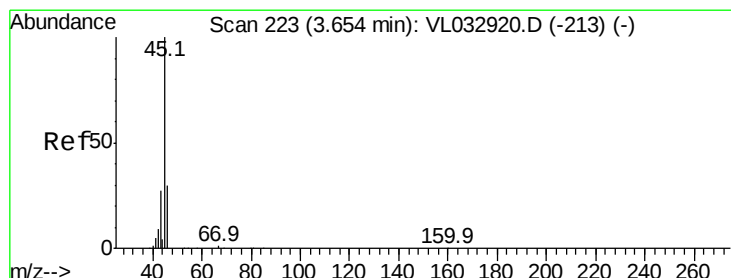
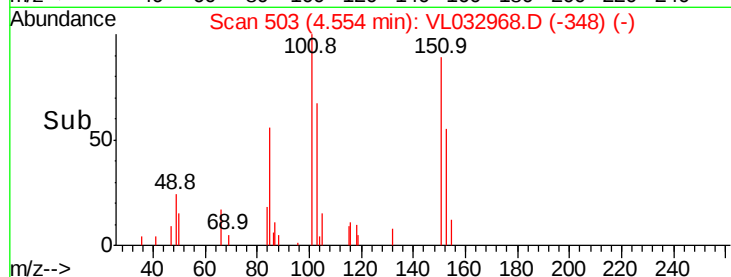
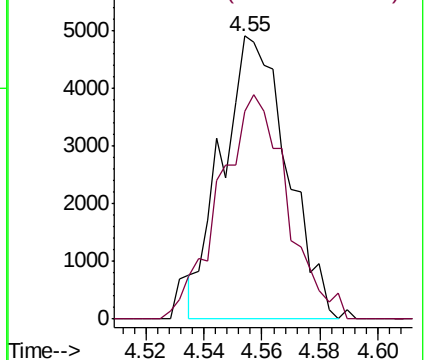
101 100

151 82.8 59.3 88.9



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 575.985 ppbv

RT: 3.68 min Scan# 230

Delta R.T. 0.02 min

Lab File: VL032968.D

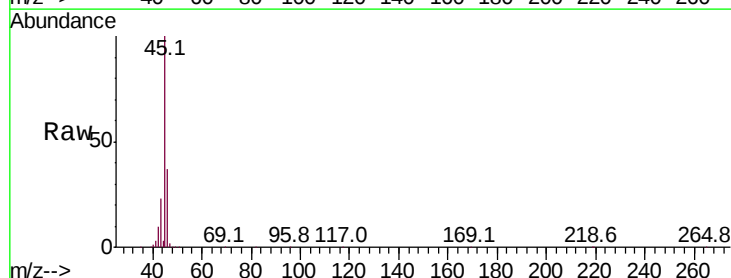
Acq: 11 Dec 2018 23:57

Tgt Ion: 45 Resp: 8134569

Ion Ratio Lower Upper

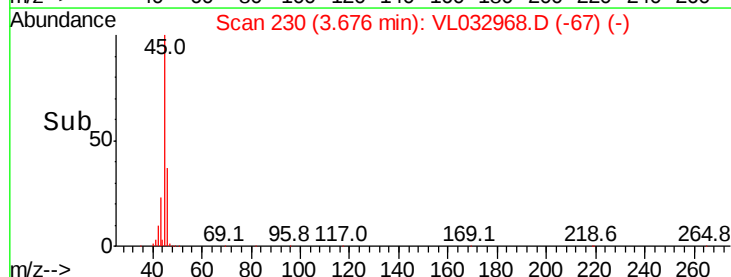
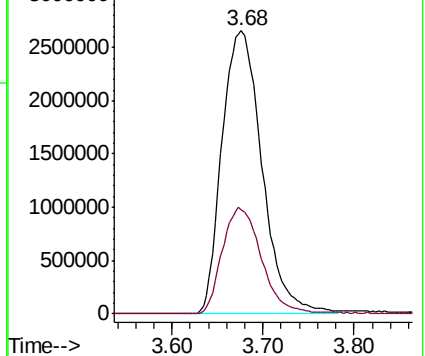
45 100

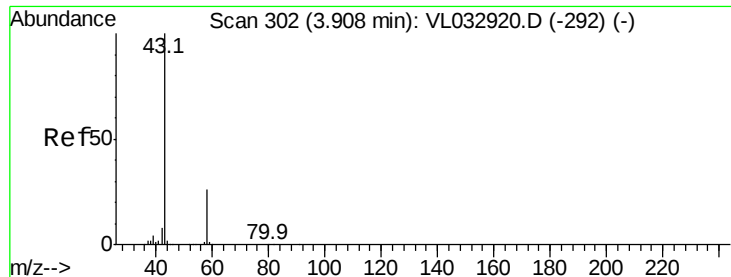
46 36.9 13.8 55.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 4.103 ppbv

RT: 3.90 min Scan# 301

Delta R.T. -0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

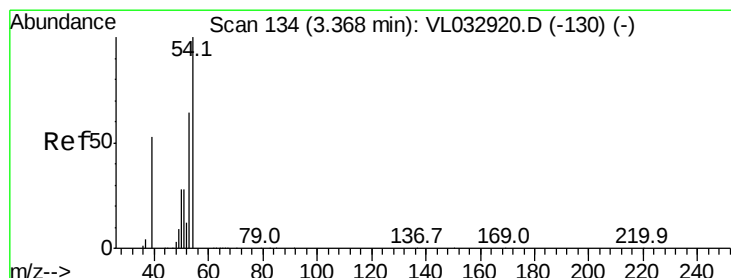
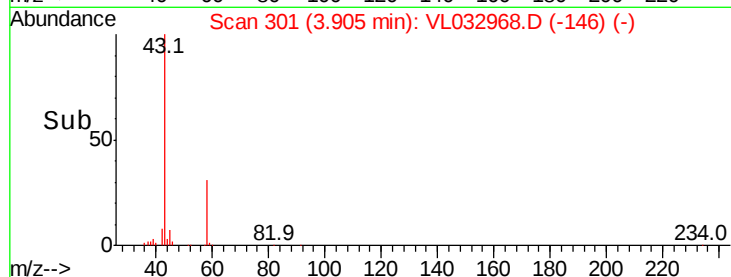
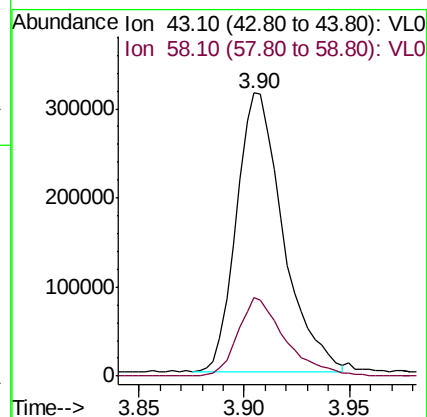
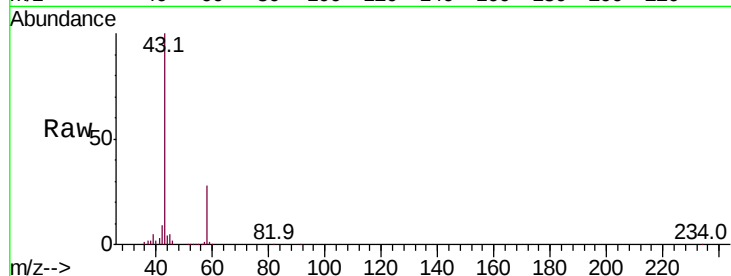
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 482366

Ion Ratio Lower Upper

43 100

58 28.7 20.6 30.8



#16

1,3-Butadiene

Concen: 0.189 ppbv

RT: 3.35 min Scan# 127

Delta R.T. -0.02 min

Lab File: VL032968.D

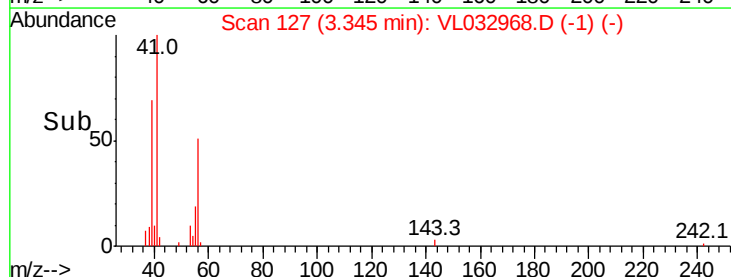
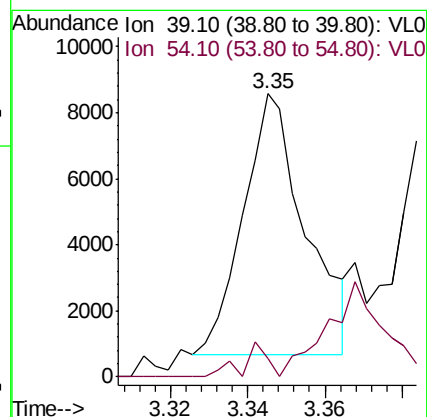
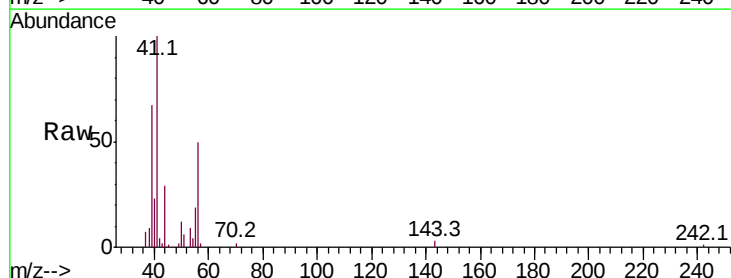
Acq: 11 Dec 2018 23:57

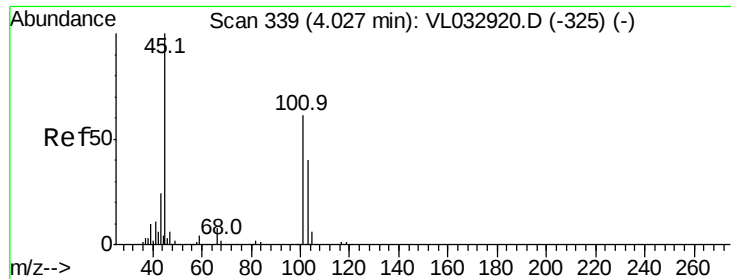
Tgt Ion: 39 Resp: 8836

Ion Ratio Lower Upper

39 100

54 44.8 72.7 109.1#





#19

Isopropyl Alcohol

Concen: 110.175 ppbv

RT: 3.68 min Scan# 230

Delta R.T. -0.35 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

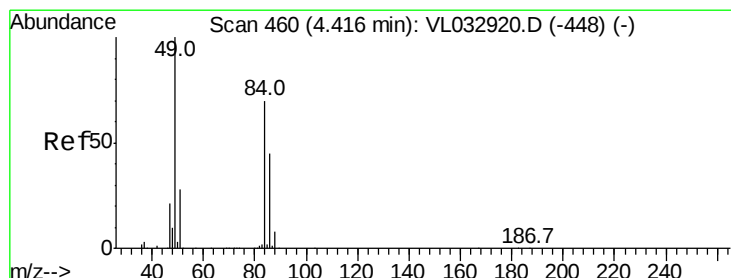
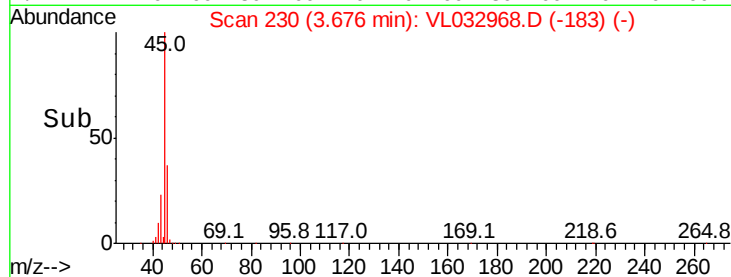
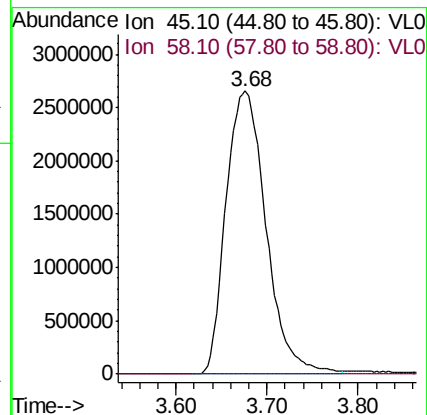
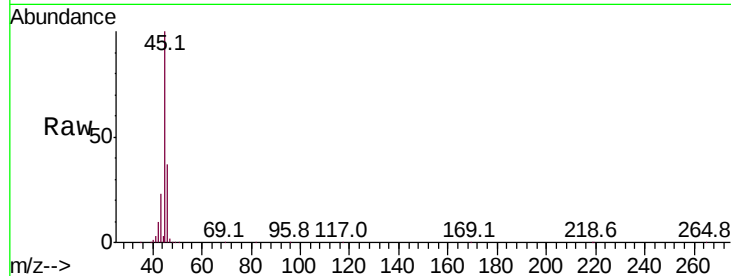
ClientSampleId :

Tot Ion: 45 Resp: 8134569

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#



#20

Methylene Chloride

Concen: 12.487 ppbv

RT: 4.41 min Scan# 459

Delta R.T. -0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Tgt Ion: 84 Resp: 717498

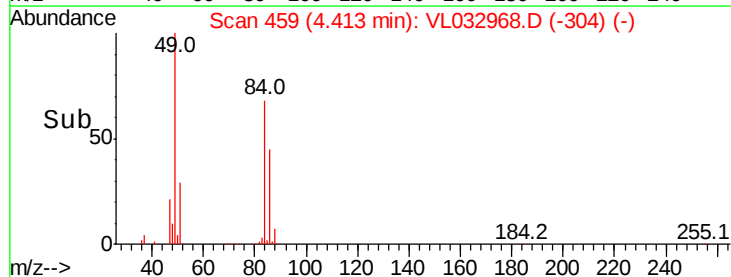
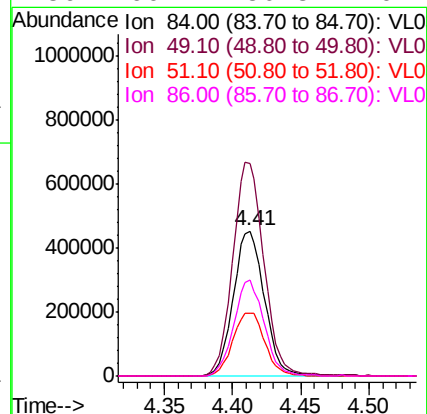
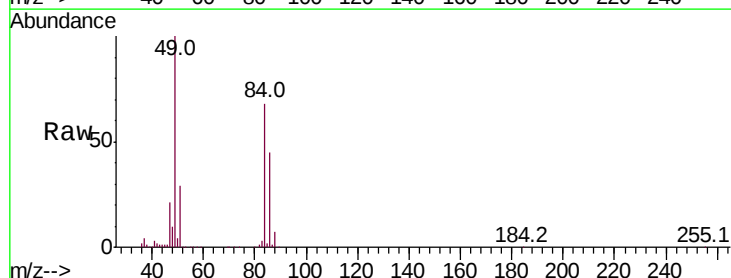
Ion Ratio Lower Upper

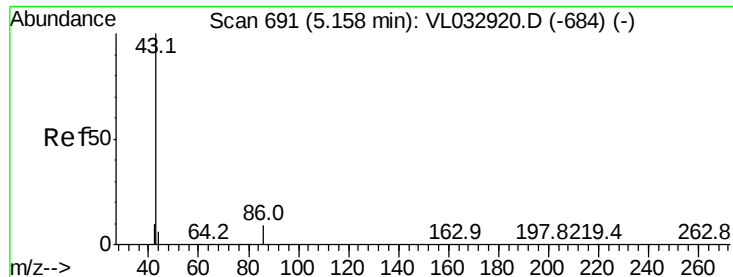
84 100

49 146.9 113.8 170.8

51 43.3 31.8 47.8

86 66.4 50.8 76.2





#23

Vinyl Acetate

Concen: 0.133 ppbv

RT: 5.15 min Scan# 688

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampled :

Tot Ion: 43 Resp: 26510

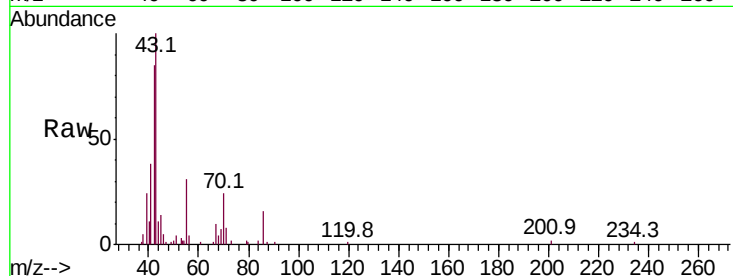
Ion Ratio Lower Upper

43 100

86 15.9 6.6 9.8#

42 86.9 8.3 12.5#

44 0.0 4.2 6.4#

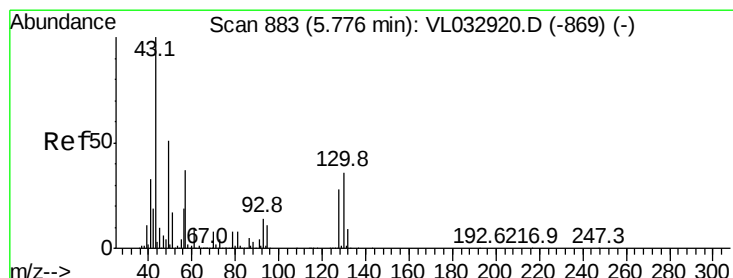
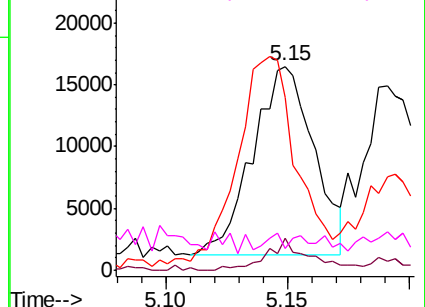
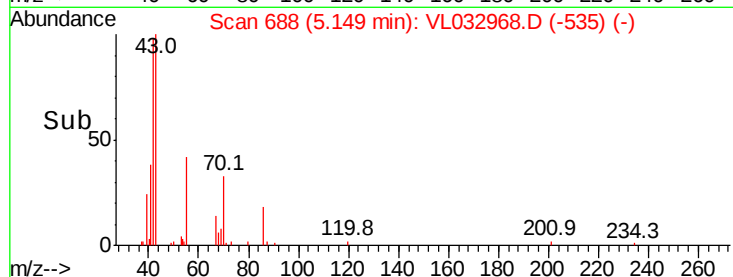


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.196 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Tgt Ion: 43 Resp: 332164

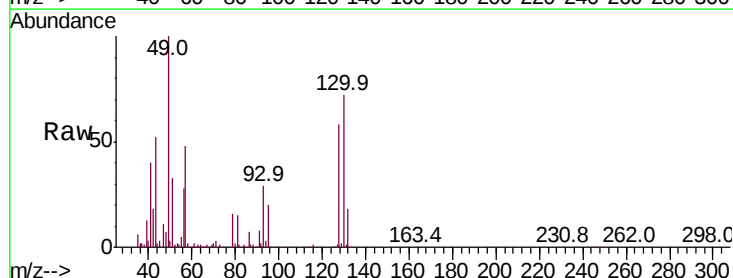
Ion Ratio Lower Upper

43 100

45 6.5 7.8 11.6#

61 5.4 7.4 11.2#

70 4.6 5.7 8.5#

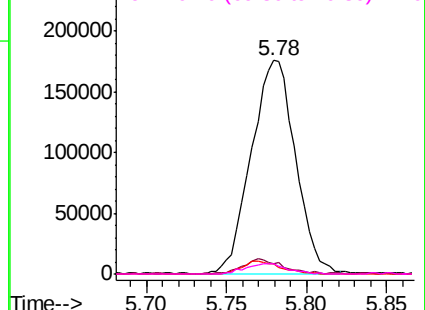
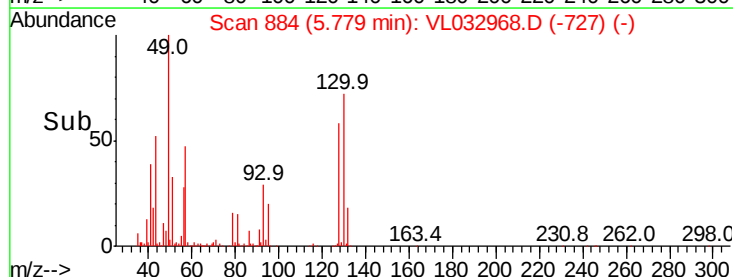


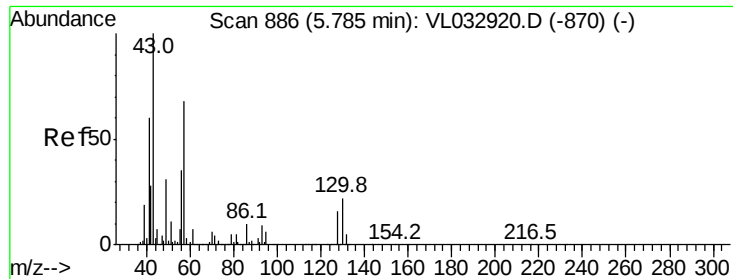
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

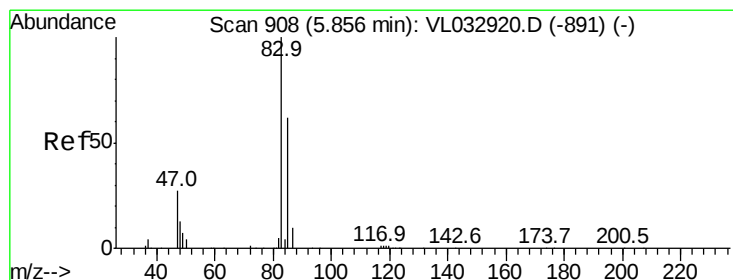
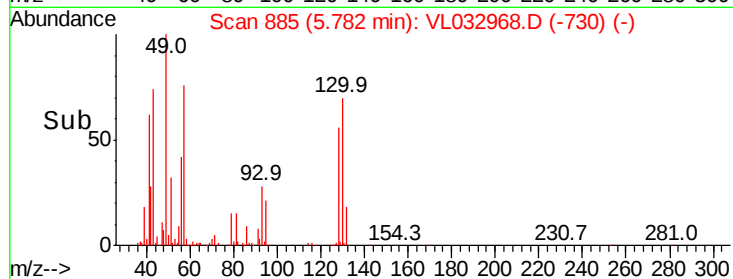
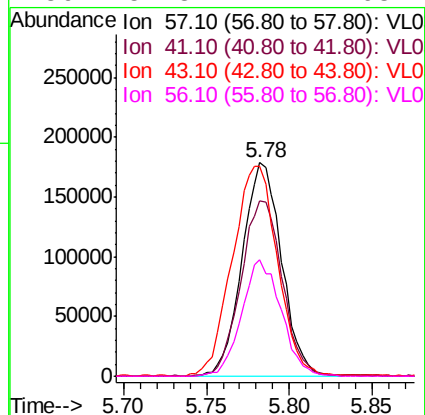
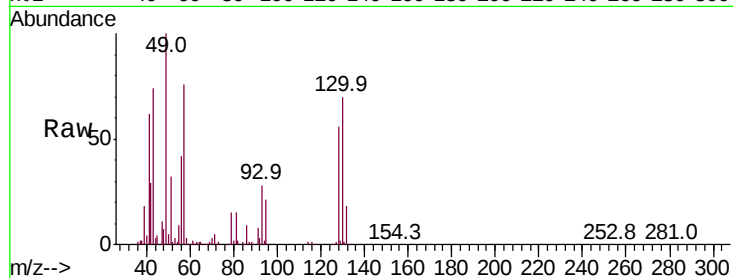




#26
Hexane
Concen: 2.309 ppbv
RT: 5.78 min Scan# 885
Delta R.T. -0.00 min
Lab File: VL032968.D
Acq: 11 Dec 2018 23:57

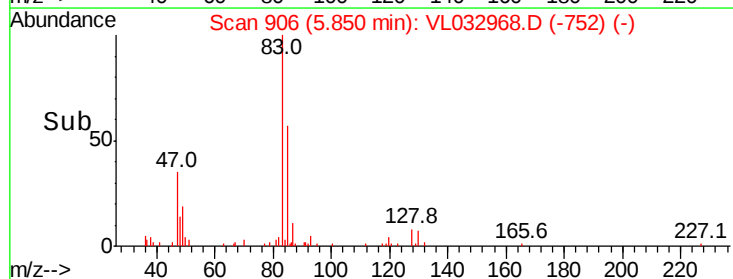
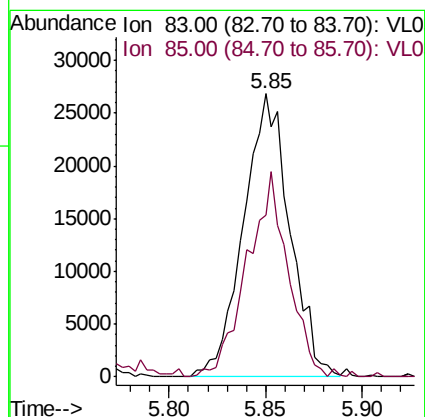
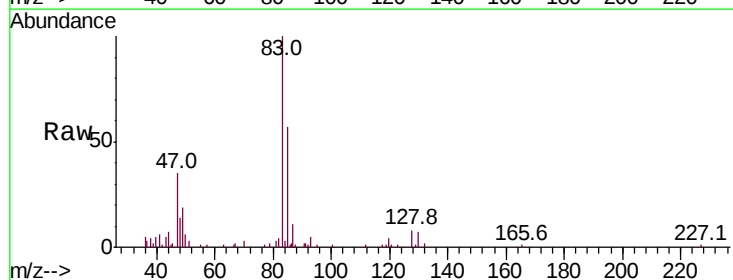
Instrument :
MSVOA_L
ClientSampleId :

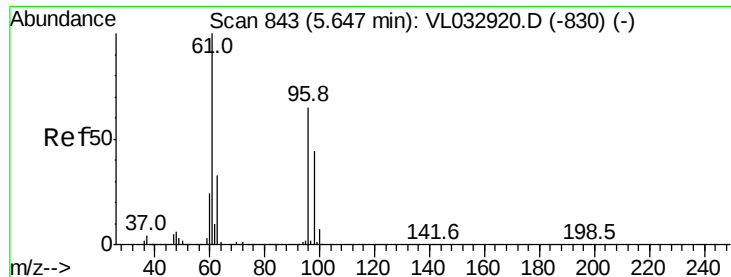
Tot Ion: 57 Resp: 296016
Ion Ratio Lower Upper
57 100
41 86.5 72.2 108.2
43 113.3 171.9 257.9#
56 54.8 42.2 63.2



#29
Chloroform
Concen: 0.195 ppbv
RT: 5.85 min Scan# 906
Delta R.T. -0.01 min
Lab File: VL032968.D
Acq: 11 Dec 2018 23:57

Tgt Ion: 83 Resp: 44609
Ion Ratio Lower Upper
83 100
85 58.1 49.8 74.8





#31

cis-1,2-Dichloroethene

Concen: 0.149 ppbv

RT: 5.77 min Scan# 880

Delta R.T. 0.12 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampleId :

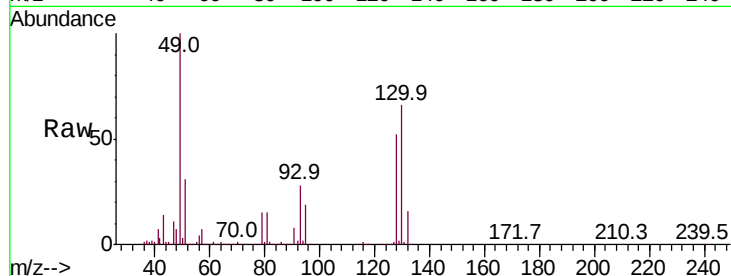
Tot Ion: 61 Resp: 17571

Ion Ratio Lower Upper

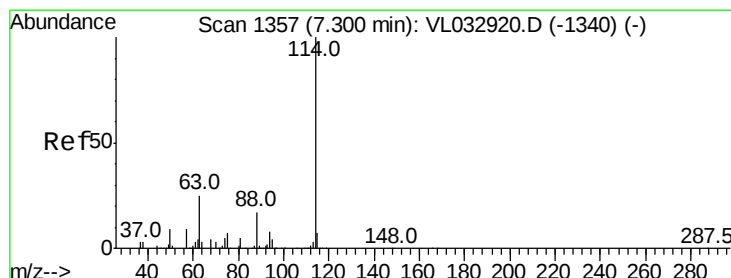
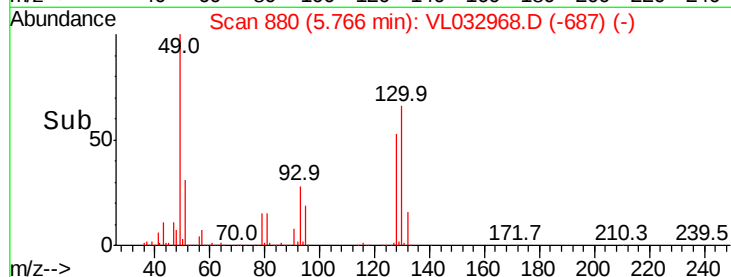
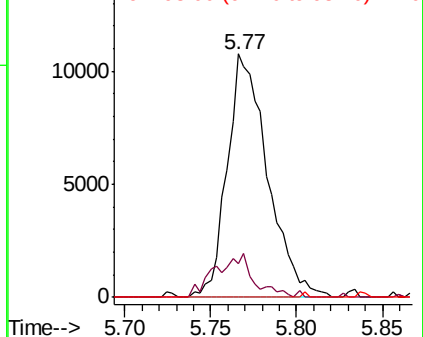
61 100

96 13.5 51.9 77.9#

98 0.0 35.0 52.4#



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.29 min Scan# 1355

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

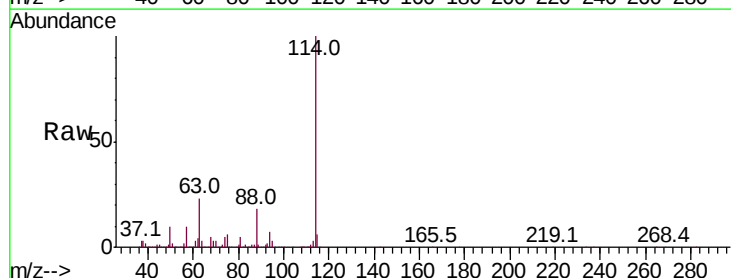
Tgt Ion: 114 Resp: 3409015

Ion Ratio Lower Upper

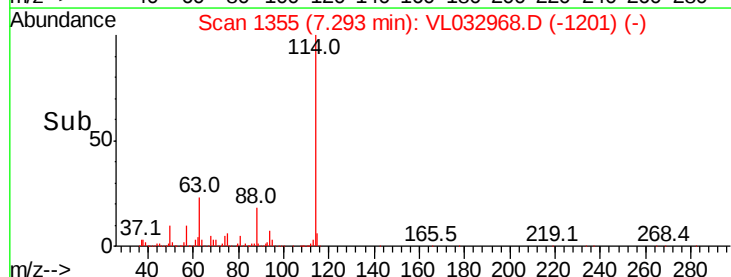
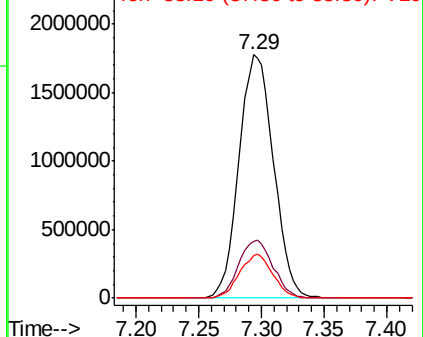
114 100

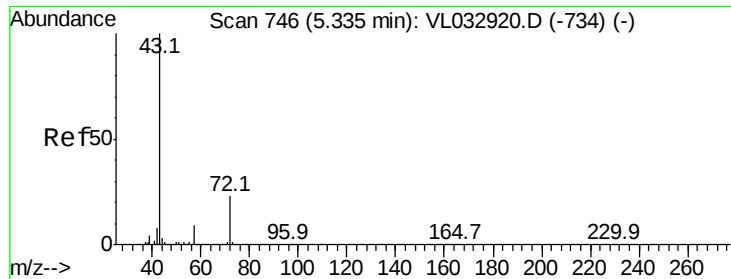
63 23.7 20.1 30.1

88 17.5 14.2 21.4



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





#34

2-Butanone

Concen: 1.928 ppbv

RT: 5.34 min Scan# 746

Delta R.T. 0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

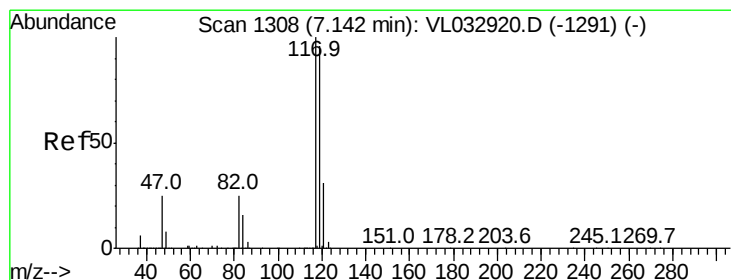
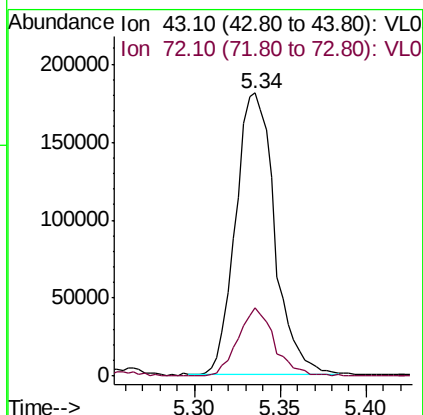
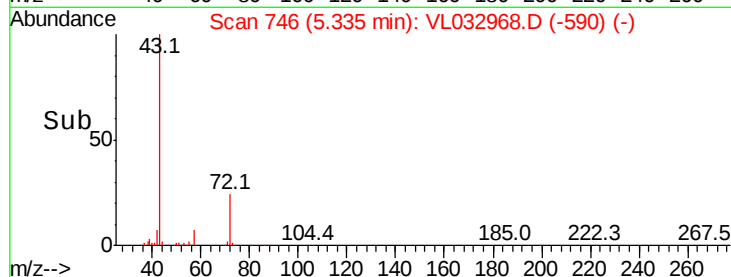
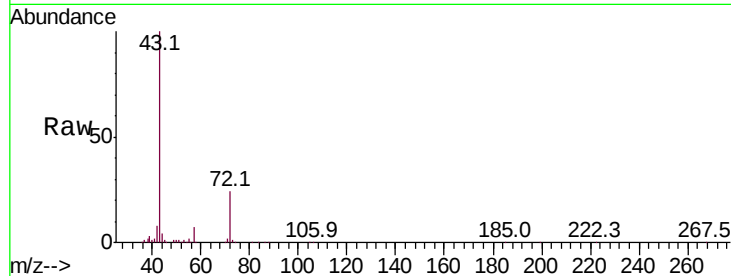
ClientSampleId :

Tot Ion: 43 Resp: 286301

Ion Ratio Lower Upper

43 100

72 22.8 18.8 28.2



#35

Carbon Tetrachloride

Concen: 0.047 ppbv

RT: 7.14 min Scan# 1306

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

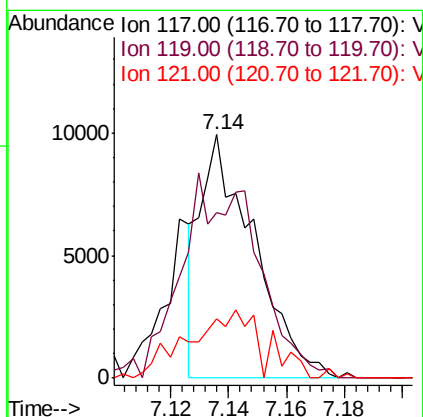
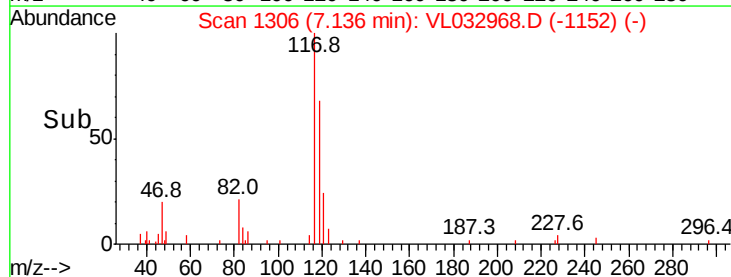
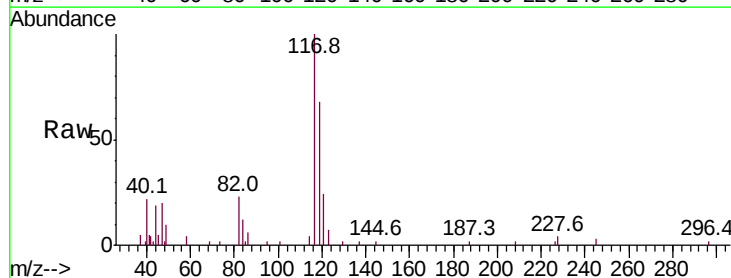
Tgt Ion: 117 Resp: 12693

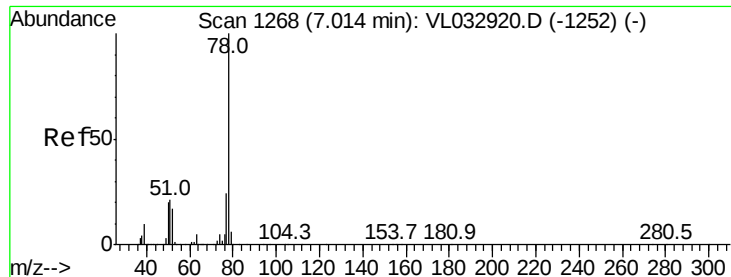
Ion Ratio Lower Upper

117 100

119 68.0 76.5 114.7#

121 24.4 24.5 36.7#





#36

Benzene

Concen: 0.225 ppbv

RT: 7.00 min Scan# 1265

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampleId :

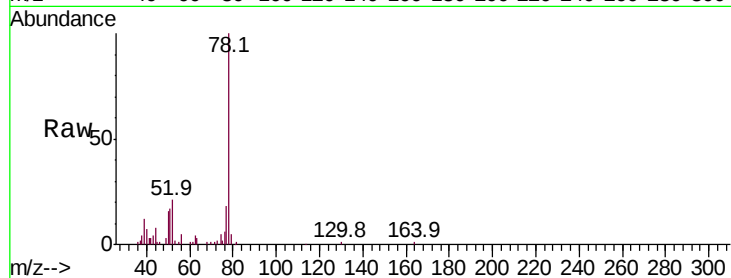
Tot Ion: 78 Resp: 56448

Ion Ratio Lower Upper

78 100

77 17.1 18.9 28.3#

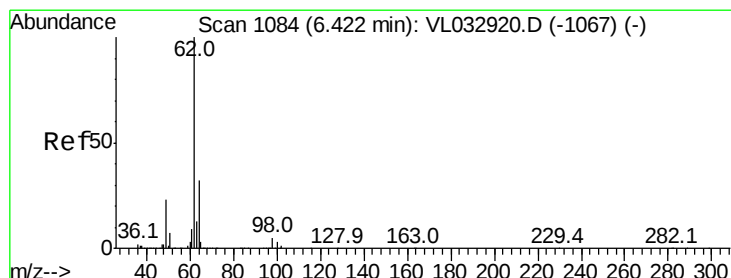
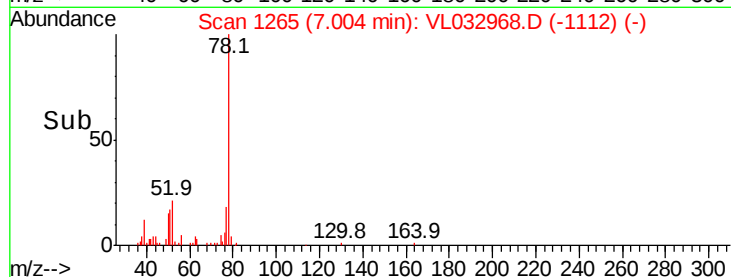
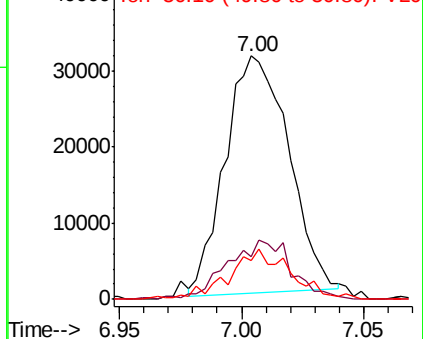
50 15.6 16.1 24.1#



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: 0.068 ppbv

RT: 6.42 min Scan# 1084

Delta R.T. 0.00 min

Lab File: VL032968.D

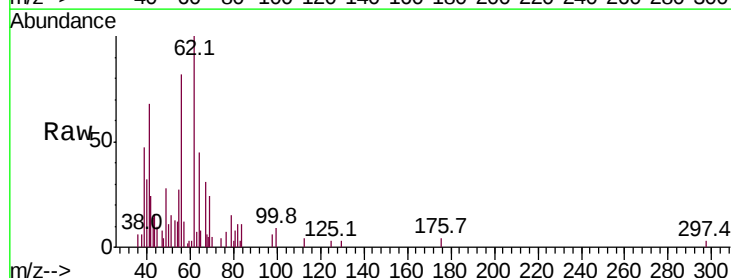
Acq: 11 Dec 2018 23:57

Tgt Ion: 62 Resp: 11532

Ion Ratio Lower Upper

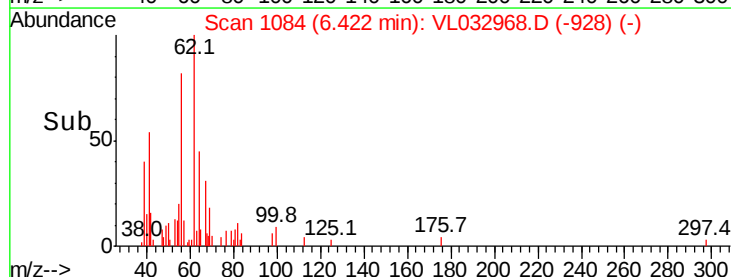
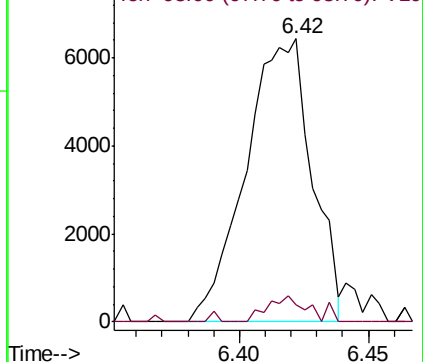
62 100

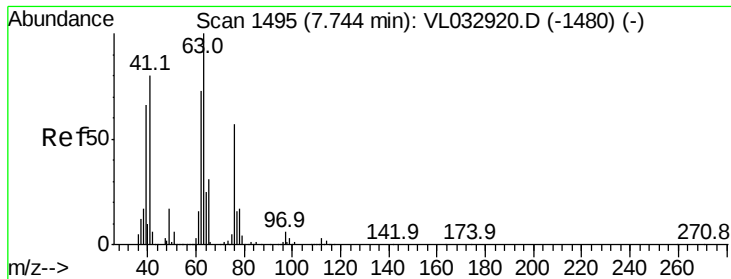
98 6.2 4.3 6.5



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0





#39

1,2-Dichloropropane

Concen: 8.459 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.45 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampleId :

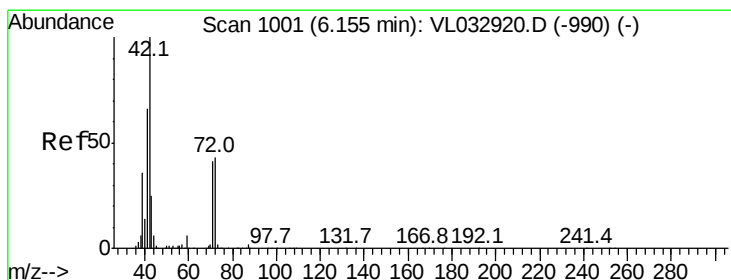
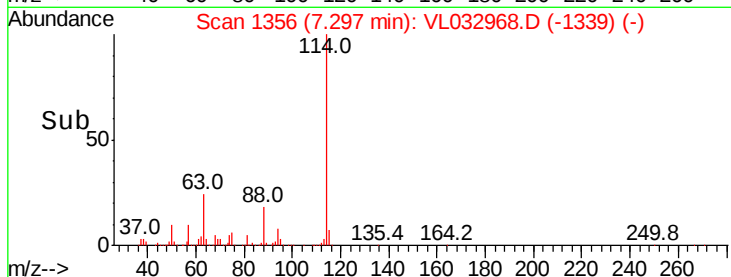
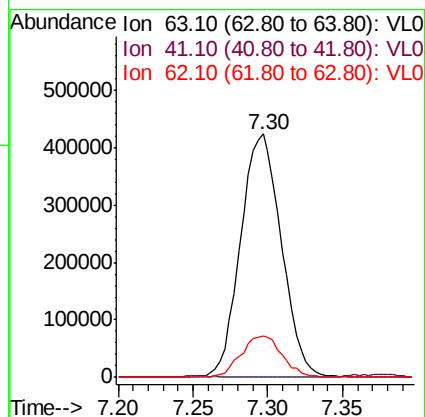
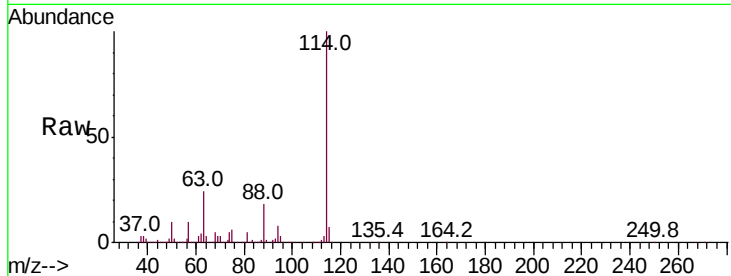
Tot Ion: 63 Resp: 804430

Ion Ratio Lower Upper

63 100

41 0.0 63.9 95.9#

62 17.0 58.8 88.2#



#41

Tetrahydrofuran

Concen: 0.749 ppbv

RT: 6.16 min Scan# 1003

Delta R.T. 0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

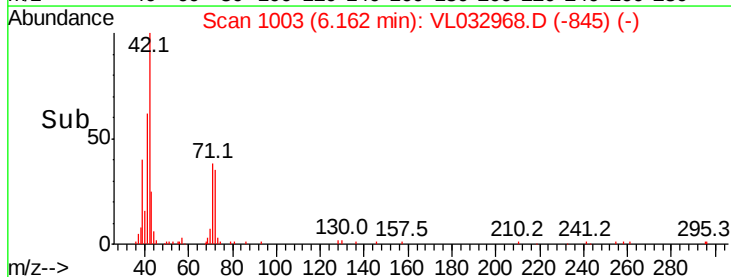
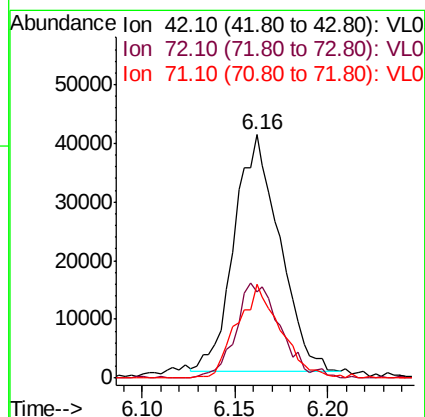
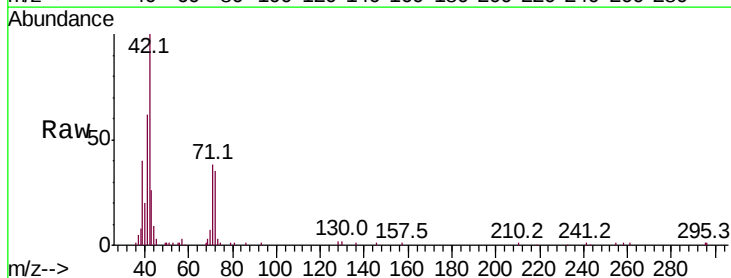
Tgt Ion: 42 Resp: 69163

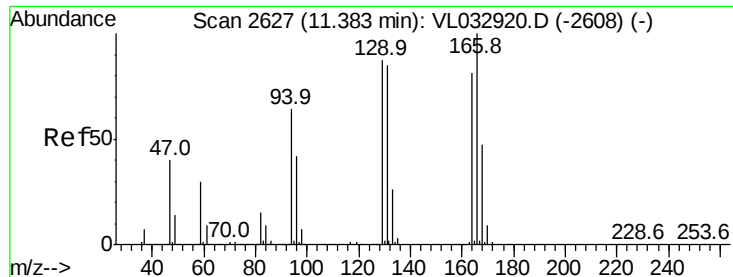
Ion Ratio Lower Upper

42 100

72 39.3 32.9 49.3

71 37.9 32.0 48.0





#52

Tetrachloroethene

Concen: 15.349 ppbv

RT: 11.38 min Scan# 2625

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 1399977

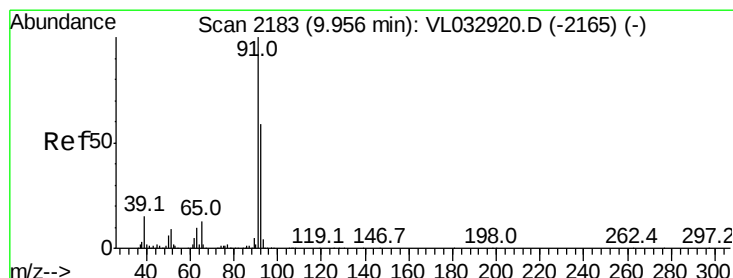
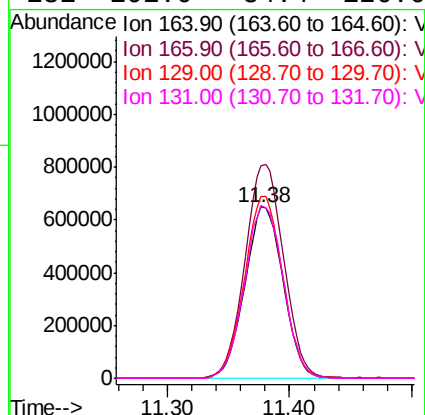
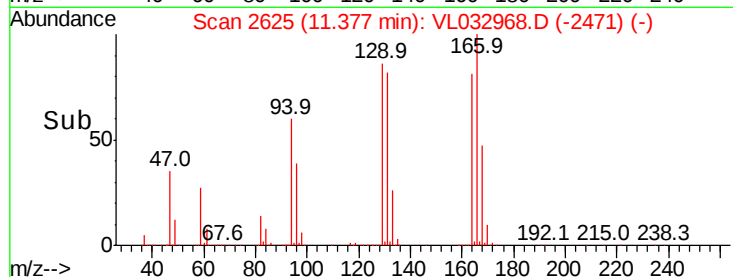
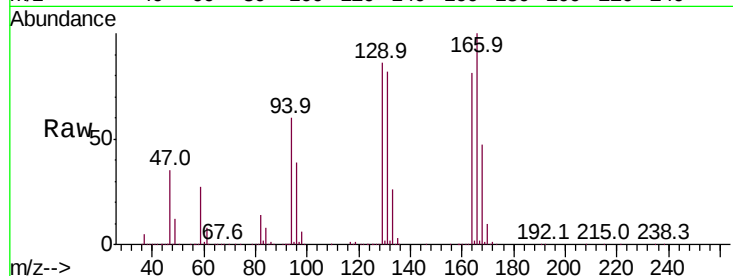
Ion Ratio Lower Upper

164 100

166 123.9 98.8 148.2

129 106.0 85.5 128.3

131 101.0 84.4 126.6



#53

Toluene

Concen: 1.198 ppbv

RT: 9.95 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL032968.D

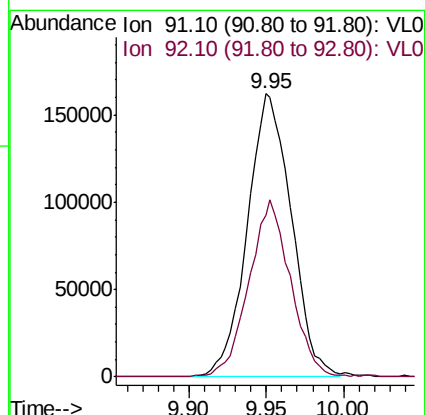
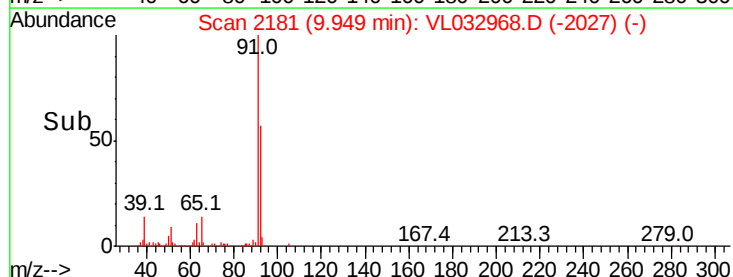
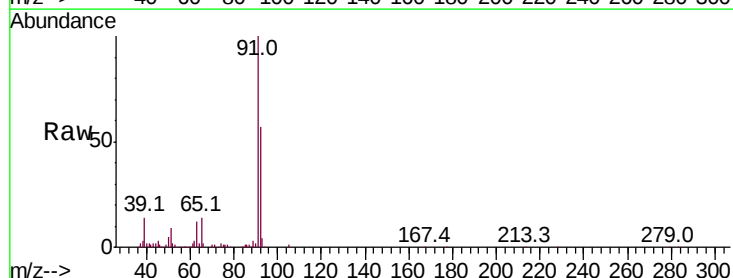
Acq: 11 Dec 2018 23:57

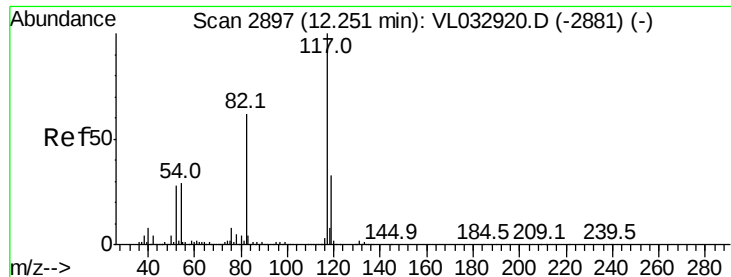
Tgt Ion: 91 Resp: 318626

Ion Ratio Lower Upper

91 100

92 59.9 47.4 71.0

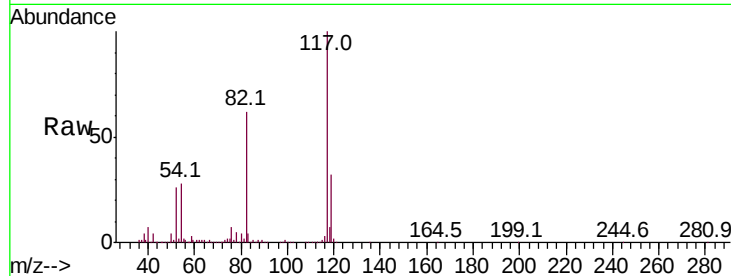




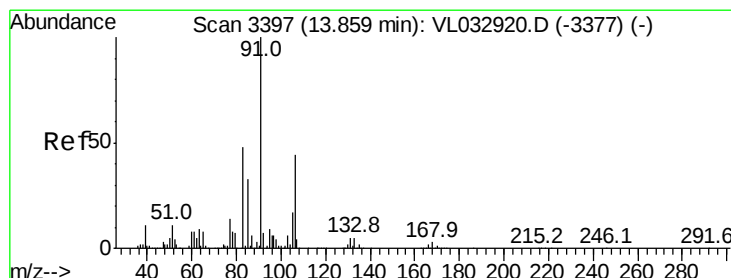
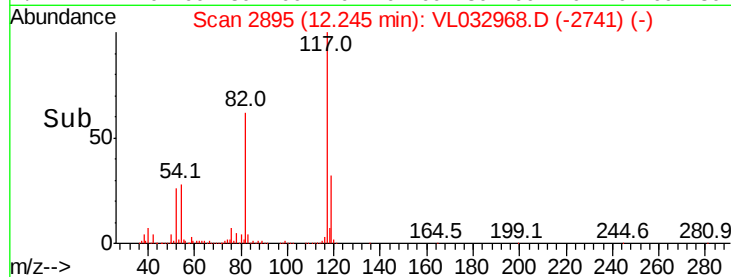
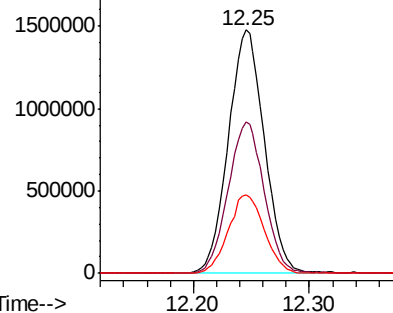
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.25 min Scan# 2895
Delta R.T. -0.01 min
Lab File: VL032968.D
Acq: 11 Dec 2018 23:57

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:117 Resp: 3186630
Ion Ratio Lower Upper
117 100
82 62.9 47.8 71.8
119 32.6 43.1 64.7#

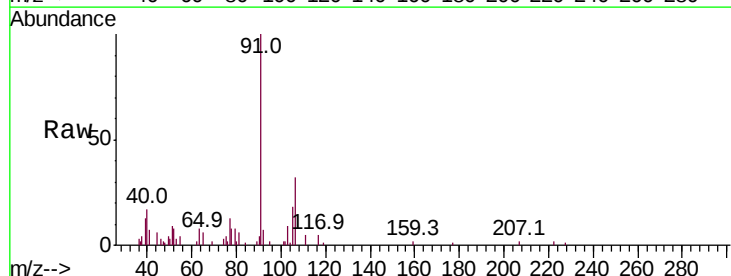


Abundance Ion 117.10 (116.80 to 117.80): V
2000000 Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

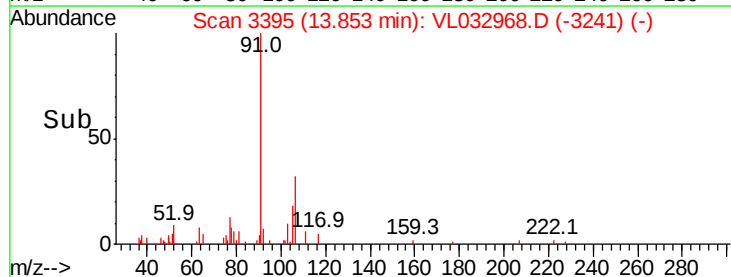
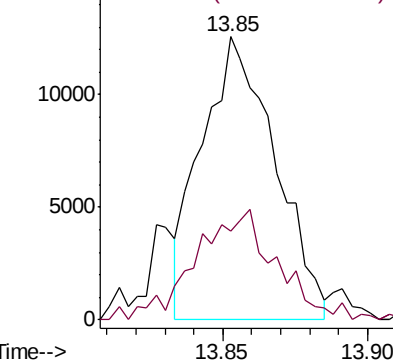


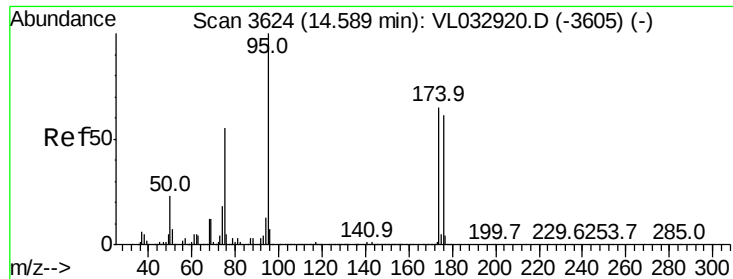
#60
o-Xylene
Concen: 0.071 ppbv
RT: 13.85 min Scan# 3395
Delta R.T. -0.01 min
Lab File: VL032968.D
Acq: 11 Dec 2018 23:57

Tgt Ion: 91 Resp: 22198
Ion Ratio Lower Upper
91 100
106 43.5 21.9 65.8



Abundance Ion 91.10 (90.80 to 91.80): VL0
15000 Ion 106.10 (105.80 to 106.80): V



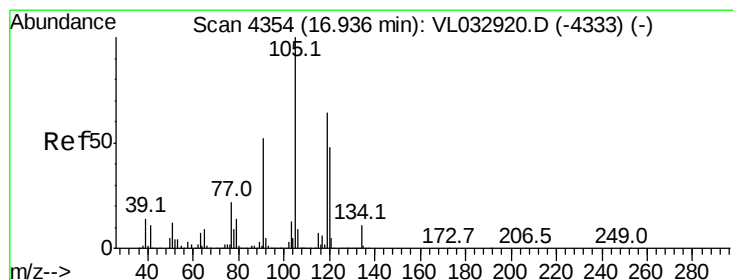
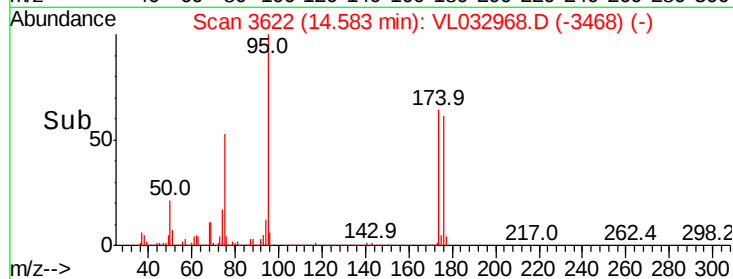
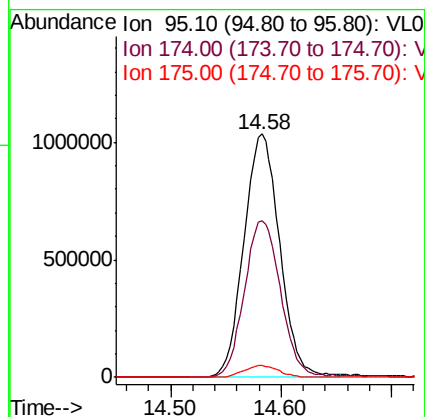
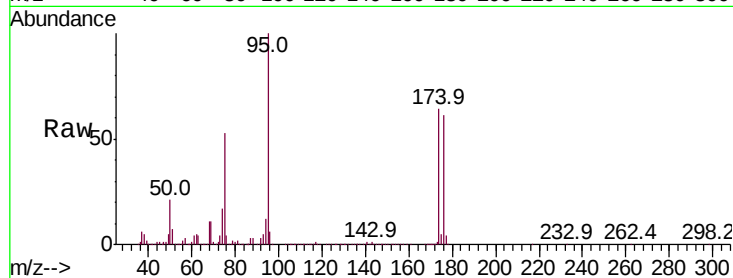


#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.933 ppbv
 RT: 14.58 min Scan# 3622
 Delta R.T. -0.01 min
 Lab File: VL032968.D
 Acq: 11 Dec 2018 23:57

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion: 95 Resp: 2338403

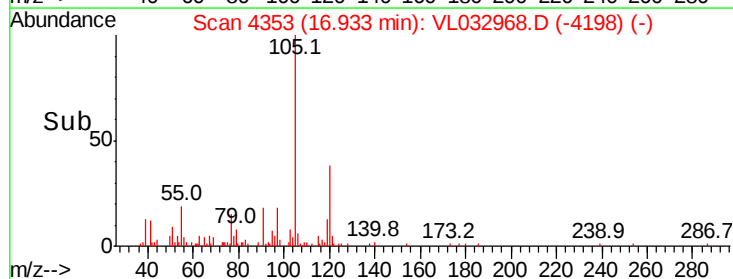
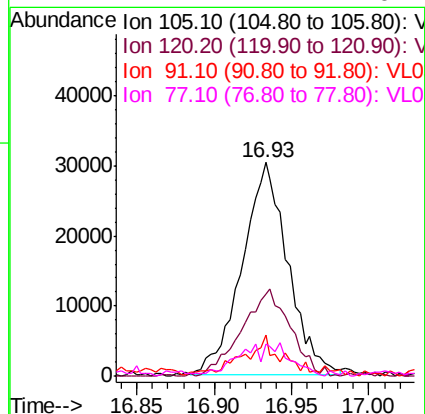
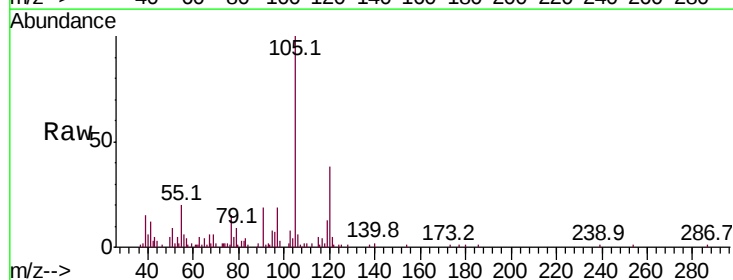
Ion	Ratio	Lower	Upper
95	100		
174	66.1	51.4	77.0
175	4.9	3.8	5.6

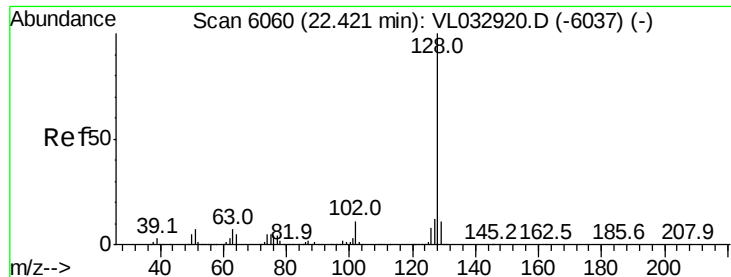


#74
 1,2,4-Trimethylbenzene
 Concen: 0.163 ppbv
 RT: 16.93 min Scan# 4353
 Delta R.T. -0.00 min
 Lab File: VL032968.D
 Acq: 11 Dec 2018 23:57

Tgt Ion:105 Resp: 62540

Ion	Ratio	Lower	Upper
105	100		
120	37.9	38.6	58.0#
91	17.5	41.7	62.5#
77	14.2	17.4	26.2#





#79

Naphthalene

Concen: 0.047 ppbv

RT: 22.41 min Scan# 6057

Delta R.T. -0.01 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Instrument :

MSVOA_L

ClientSampled :

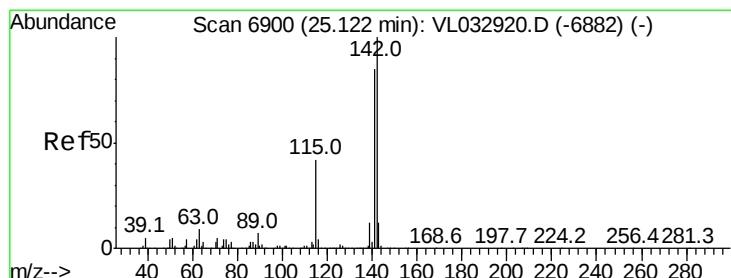
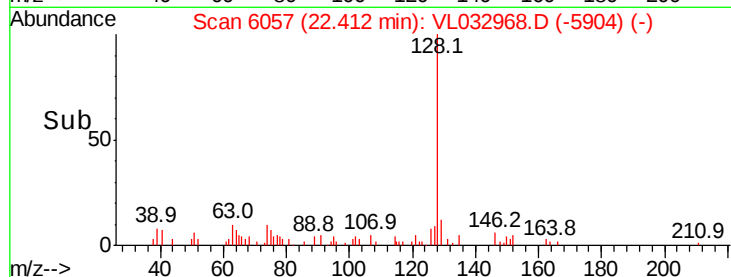
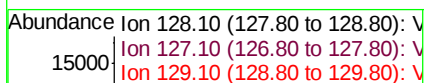
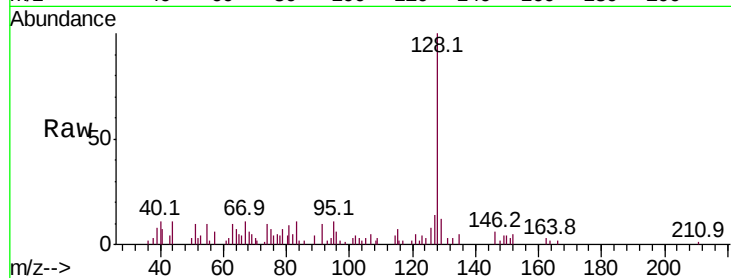
Tot Ion:128 Resp: 11740

Ion Ratio Lower Upper

128 100

127 13.5 9.9 14.9

129 10.1 8.6 13.0



#80

Naphthalene, 2-methyl-

Concen: 0.446 ppbv

RT: 25.12 min Scan# 6899

Delta R.T. -0.00 min

Lab File: VL032968.D

Acq: 11 Dec 2018 23:57

Tgt Ion:142 Resp: 23554

Ion Ratio Lower Upper

142 100

141 83.5 68.2 102.2

115 51.0 35.1 52.7

