

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122418\  
 Data File : VF061177.D  
 Acq On : 24 Dec 2018 20:58  
 Operator : VA/AP  
 Sample : J6446-12  
 Misc : 2.31g/5mL/MSVOA-F/SOIL  
 ALS Vial : 22 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Quant Time: Dec 24 23:49:45 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Dec 20 00:56:59 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.88  | 168  | 77318    | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.60  | 114  | 130935   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 9.78  | 117  | 83753    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.55 | 152  | 23031    | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 4.85   | 65  | 43482    | 43.73 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 87.46% |      |
| 35) Dibromofluoromethane  | 4.12   | 113 | 49180    | 46.89 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 93.78% |      |
| 50) Toluene-d8            | 7.55   | 98  | 117340   | 39.48 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 78.96% |      |
| 62) 4-Bromofluorobenzene  | 11.41  | 95  | 31689    | 23.13 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 46.26% |      |

## Target Compounds

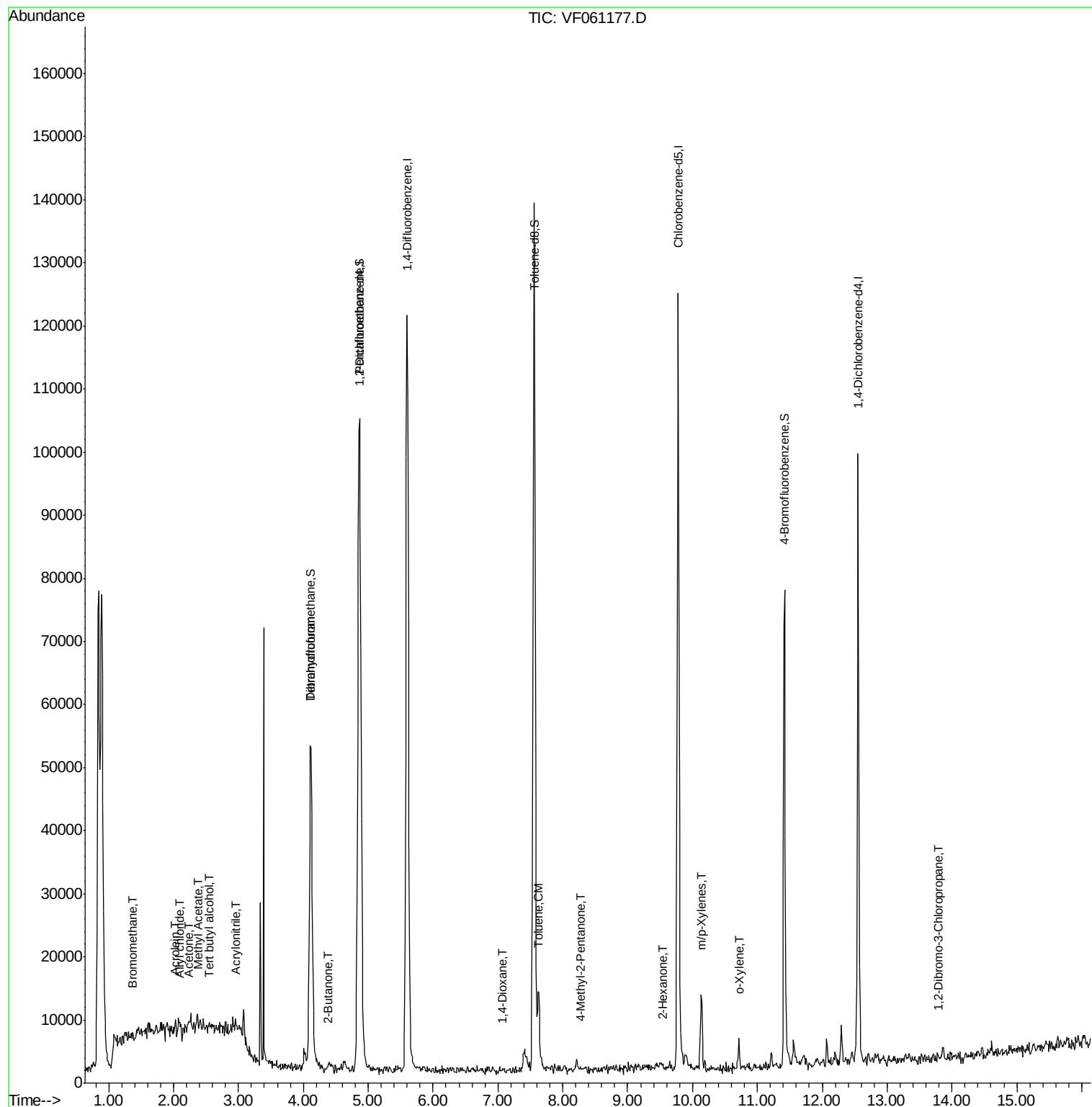
|                                |       |     |      |           |        | Qvalue |
|--------------------------------|-------|-----|------|-----------|--------|--------|
| 5) Bromomethane                | 1.37  | 94  | 647  | 1.021     | ug/l # | 3      |
| 11) Tert butyl alcohol         | 2.56  | 59  | 66   | 1.645     | ug/l # | 65     |
| 13) Acrolein                   | 2.04  | 56  | 333  | 11.484    | ug/l   | 93     |
| 14) Allyl chloride             | 2.11  | 41  | 963  | 1.358     | ug/l # | 78     |
| 15) Acrylonitrile              | 2.95  | 53  | 644  | 6.940     | ug/l # | 20     |
| 16) Acetone                    | 2.24  | 43  | 3246 | 16.328    | ug/l # | 83     |
| 18) Methyl Acetate             | 2.36  | 43  | 723  | 1.758     | ug/l # | 87     |
| 20) Methylene Chloride         | 2.22  | 84  | 59   | Below Cal | #      | 51     |
| 25) 2-Butanone                 | 4.37  | 43  | 939  | 2.912     | ug/l # | 57     |
| 29) Tetrahydrofuran            | 4.11  | 42  | 268  | 2.042     | ug/l # | 37     |
| 49) 1,4-Dioxane                | 7.06  | 88  | 80   | 20.695    | ug/l # | 15     |
| 51) 4-Methyl-2-Pentanone       | 8.27  | 43  | 579  | 1.106     | ug/l # | 38     |
| 52) Toluene                    | 7.63  | 92  | 5599 | 2.489     | ug/l   | 94     |
| 59) 2-Hexanone                 | 9.55  | 43  | 1003 | 2.650     | ug/l # | 27     |
| 68) m/p-Xylenes                | 10.14 | 106 | 4433 | 3.996     | ug/l   | 87     |
| 69) o-Xylene                   | 10.72 | 106 | 1335 | 1.085     | ug/l   | 97     |
| 70) Styrene                    | 10.84 | 104 | 61   | Below Cal | #      | 30     |
| 78) n-propylbenzene            | 11.60 | 91  | 196  | Below Cal | #      | 55     |
| 87) 1,3-Dichlorobenzene        | 12.56 | 146 | 82   | Below Cal | #      | 1      |
| 92) 1,2-Dibromo-3-Chloropropan | 13.80 | 75  | 74   | 1.224     | ug/l # | 2      |

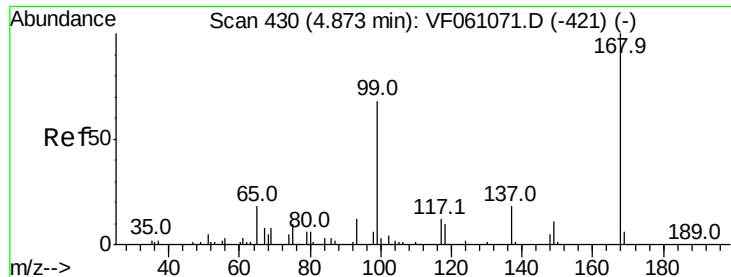
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF122418\  
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Quant Time: Dec 24 23:49:45 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
Quant Title : SW846 8260  
QLast Update : Thu Dec 20 00:56:59 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 4.88 min Scan# 431

Delta R.T. 0.01 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

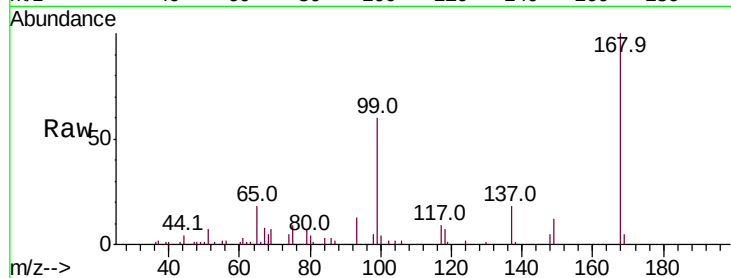
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:168 Resp: 77318

Ion Ratio Lower Upper

168 100

99 60.3 54.4 81.6

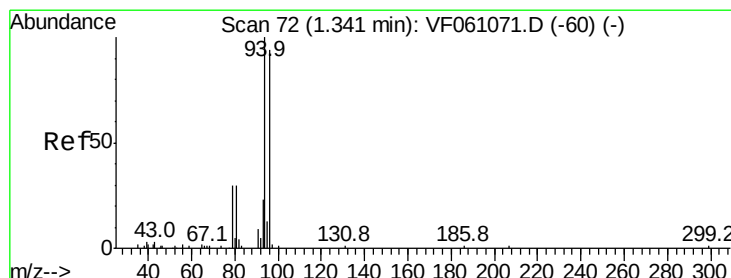
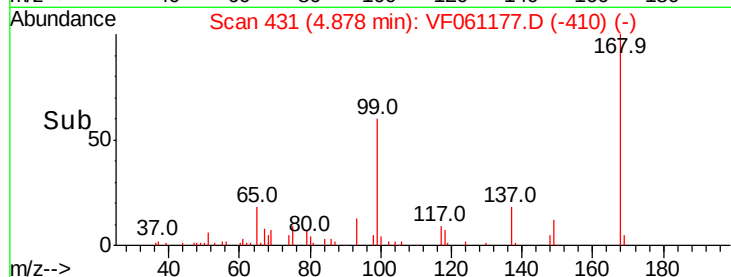


Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0

4.88

Time-->



#5

Bromomethane

Concen: 1.021 ug/l

RT: 1.37 min Scan# 75

Delta R.T. 0.03 min

Lab File: VF061177.D

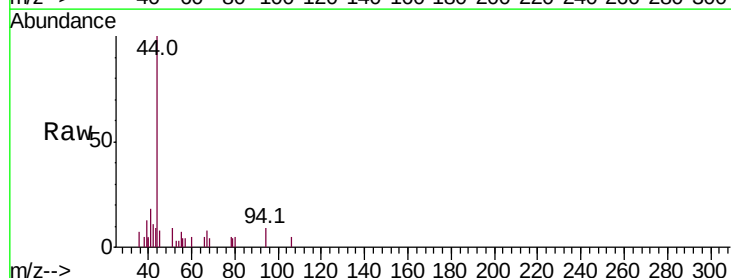
Acq: 24 Dec 2018 20:58

Tgt Ion: 94 Resp: 647

Ion Ratio Lower Upper

94 100

96 0.0 74.4 111.6#

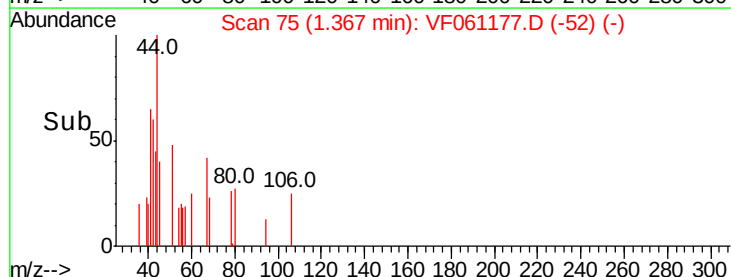


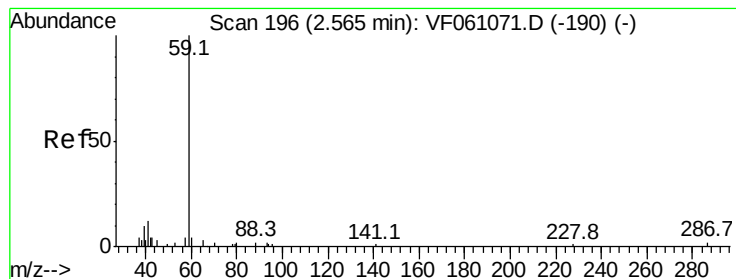
Abundance Ion 94.00 (93.70 to 94.70): VF0

Ion 96.00 (95.70 to 96.70): VF0

1.37

Time-->



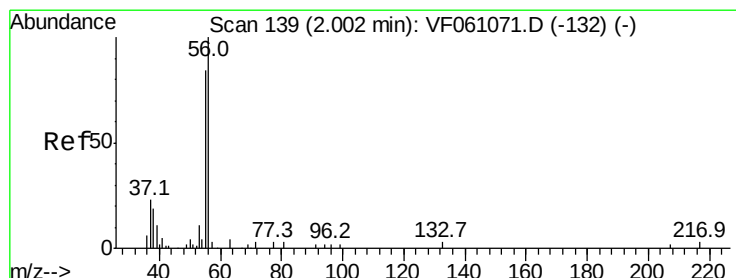
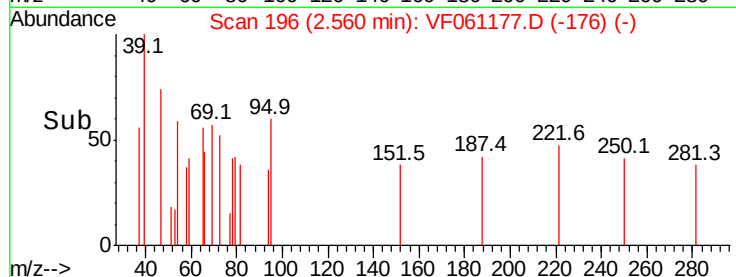
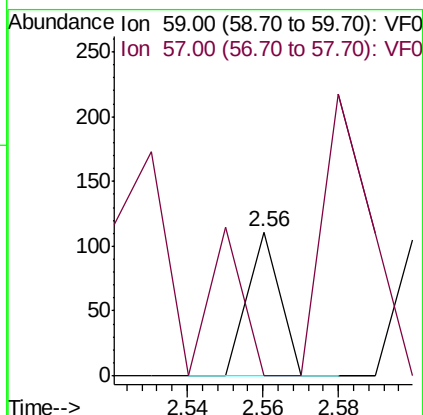
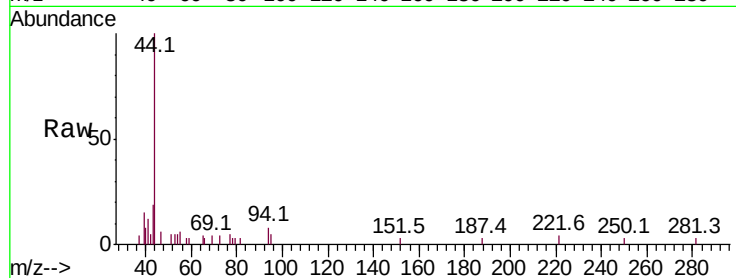


#11

Tert butyl alcohol  
Concen: 1.645 ug/l  
RT: 2.56 min Scan# 196  
Delta R.T. -0.00 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Instrument :  
MSVOA\_F  
ClientSampled :

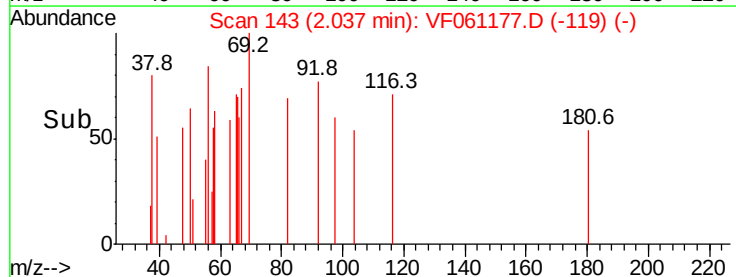
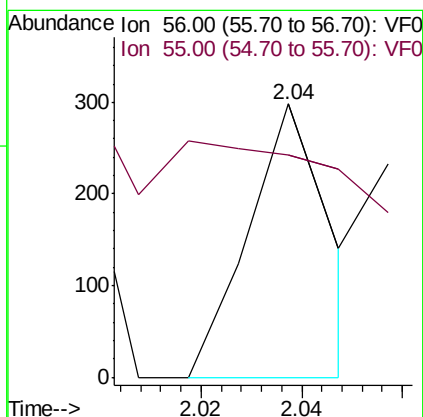
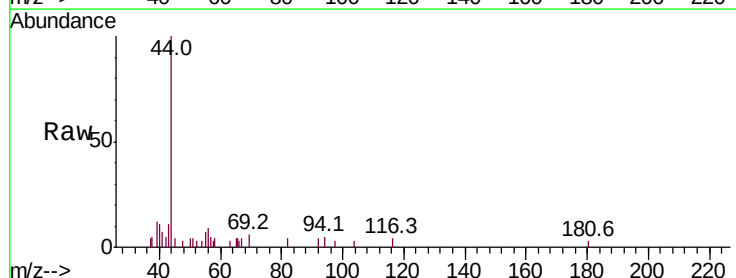
Tot Ion: 59 Resp: 66  
Ion Ratio Lower Upper  
59 100  
57 0.0 11.5 17.3#

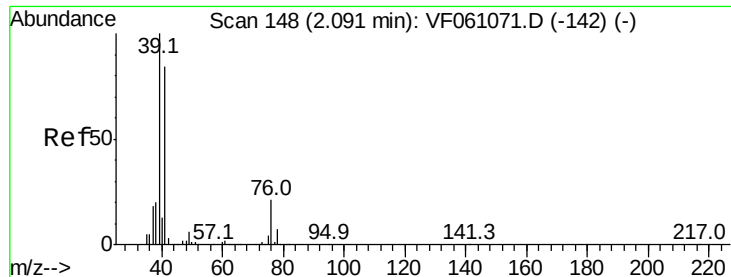


#13

Acrolein  
Concen: 11.484 ug/l  
RT: 2.04 min Scan# 143  
Delta R.T. 0.04 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion: 56 Resp: 333  
Ion Ratio Lower Upper  
56 100  
55 81.5 70.2 105.2

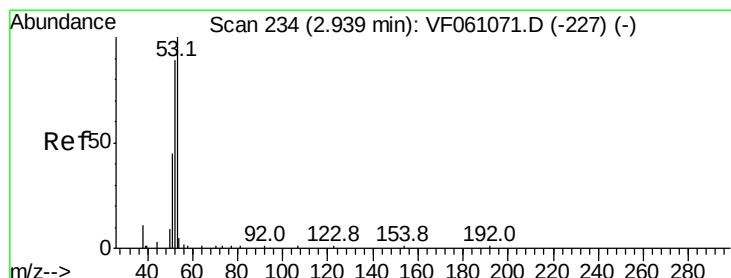
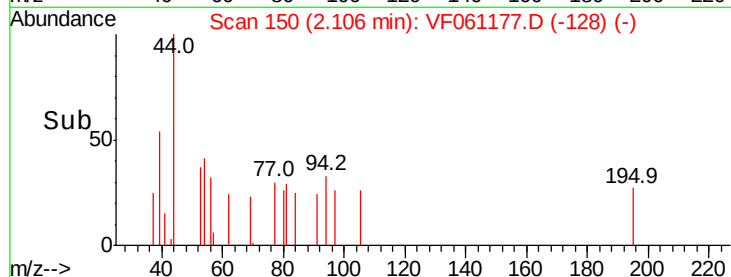
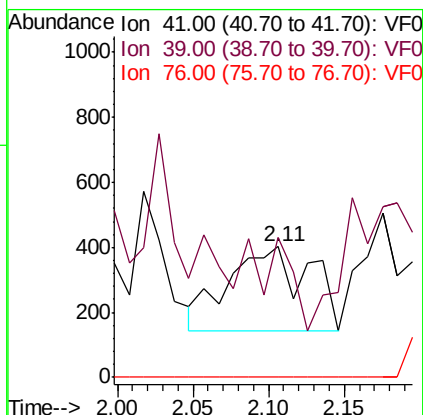
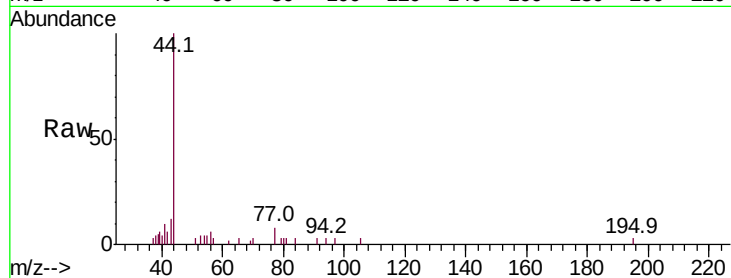




#14  
Allvl chloride  
Concen: 1.358 ug/l  
RT: 2.11 min Scan# 150  
Delta R.T. 0.02 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

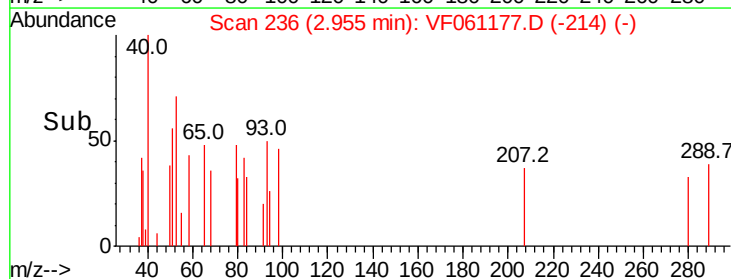
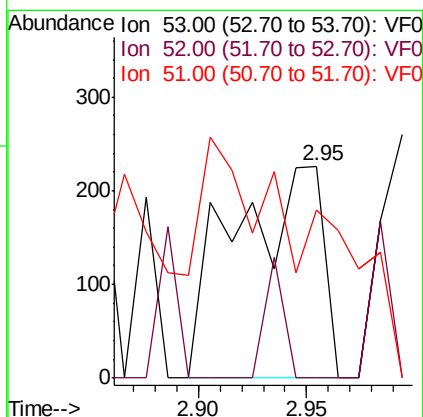
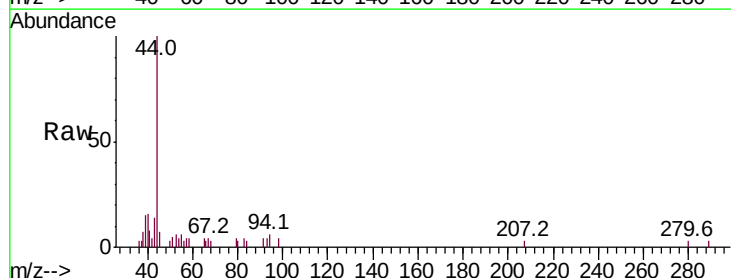
Instrument :  
MSVOA\_F  
ClientSampled :

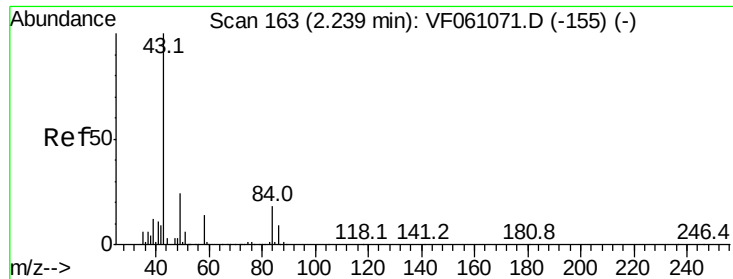
Tot Ion: 41 Resp: 963  
Ion Ratio Lower Upper  
41 100  
39 106.5 96.4 144.6  
76 0.0 25.4 38.0#



#15  
Acrylonitrile  
Concen: 6.940 ug/l  
RT: 2.95 min Scan# 236  
Delta R.T. 0.02 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion: 53 Resp: 644  
Ion Ratio Lower Upper  
53 100  
52 0.0 71.3 106.9#  
51 79.2 36.8 55.2#





#16

Acetone

Concen: 16.328 ug/l

RT: 2.24 min Scan# 164

Delta R.T. 0.01 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

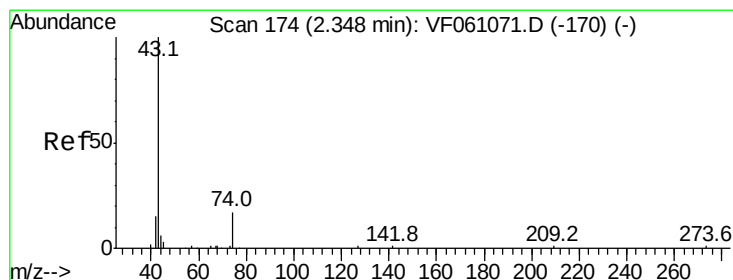
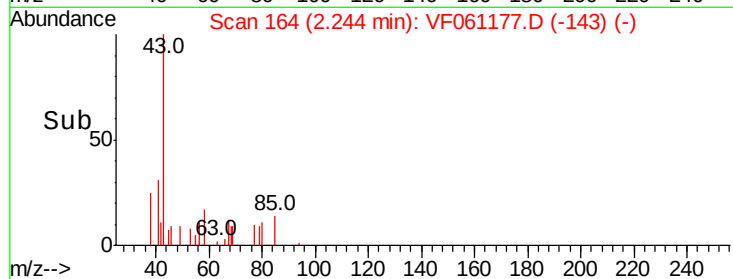
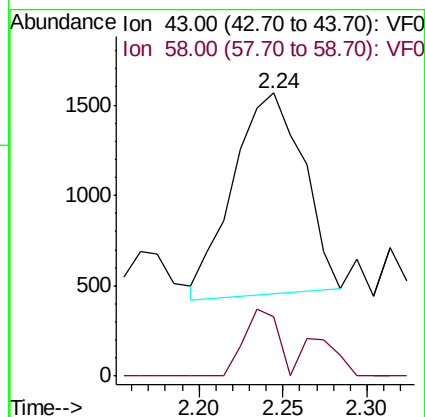
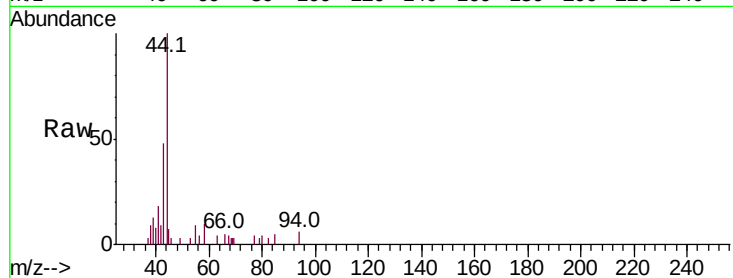
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 43 Resp: 3246

Ion Ratio Lower Upper

43 100

58 20.8 11.1 16.7#



#18

Methyl Acetate

Concen: 1.758 ug/l

RT: 2.36 min Scan# 176

Delta R.T. 0.02 min

Lab File: VF061177.D

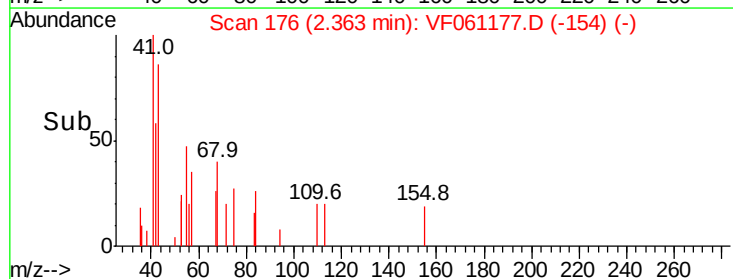
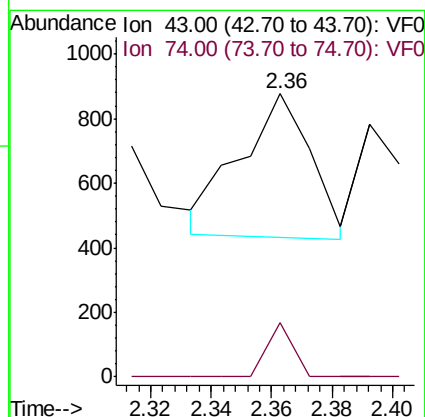
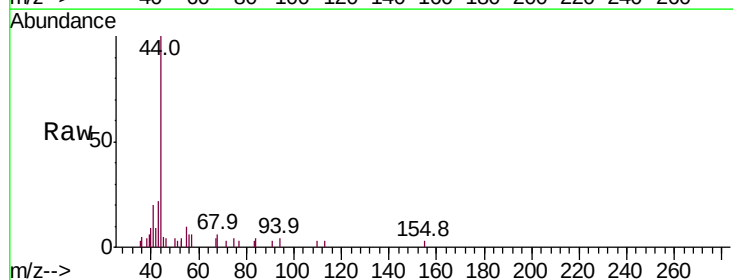
Acq: 24 Dec 2018 20:58

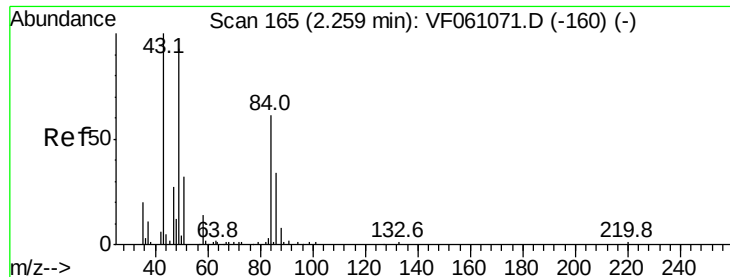
Tgt Ion: 43 Resp: 723

Ion Ratio Lower Upper

43 100

74 19.2 11.0 16.6#

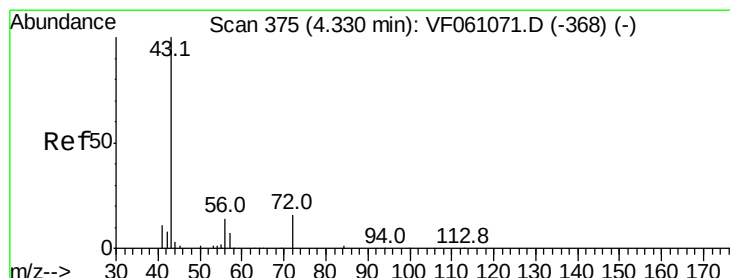
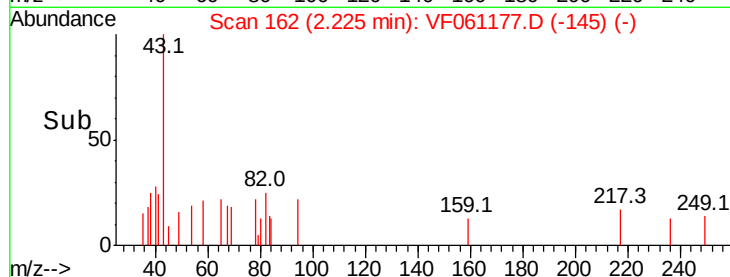
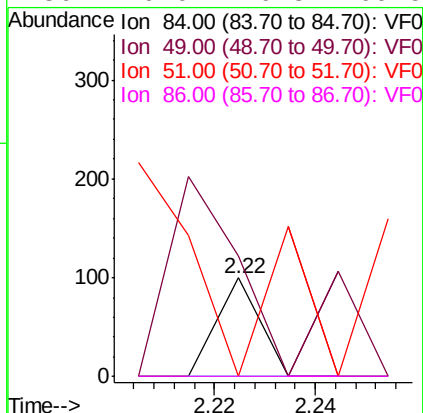
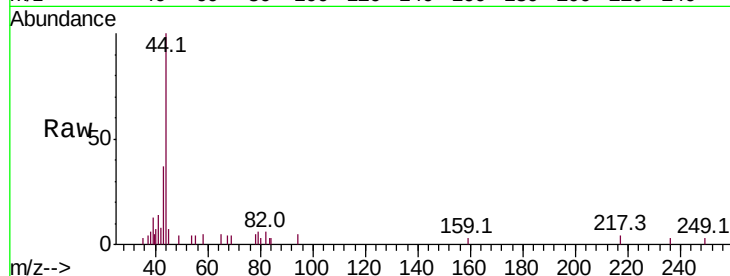




#20  
Methylene Chloride  
Concen: Below Cal  
RT: 2.22 min Scan# 162  
Delta R.T. -0.03 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

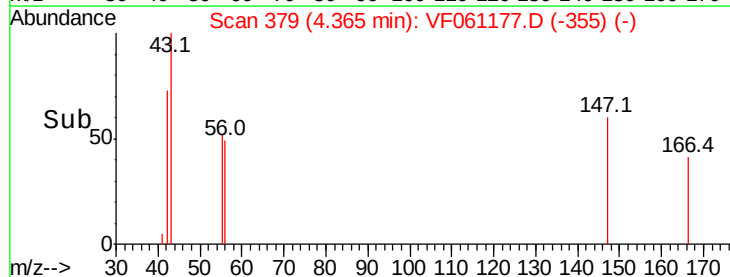
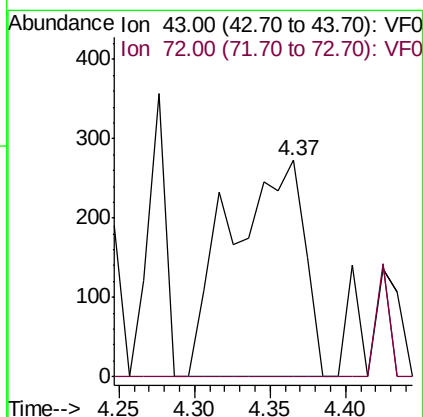
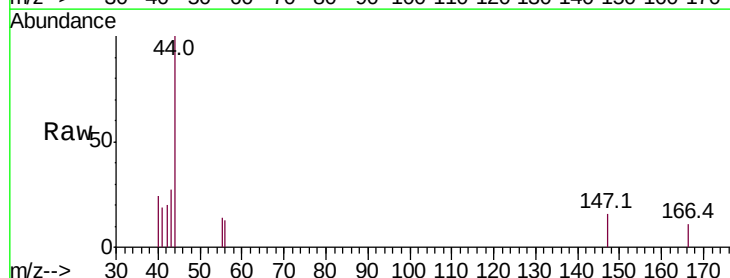
Instrument :  
MSVOA\_F  
ClientSampleId :

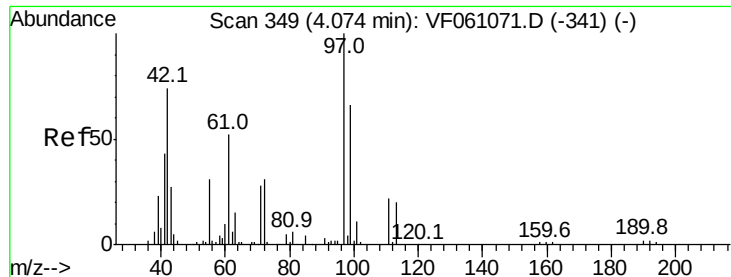
Tot Ion: 84 Resp: 59  
Ion Ratio Lower Upper  
84 100  
49 122.0 129.4 194.2#  
51 0.0 44.0 66.0#  
86 0.0 46.3 69.5#



#25  
2-Butanone  
Concen: 2.912 ug/l  
RT: 4.37 min Scan# 379  
Delta R.T. 0.03 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion: 43 Resp: 939  
Ion Ratio Lower Upper  
43 100  
72 0.0 15.6 23.4#





#29

Tetrahydrofuran

Concen: 2.042 ug/l

RT: 4.11 min Scan# 353

Delta R.T. 0.03 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

Instrument :

MSVOA\_F

ClientSampleId :

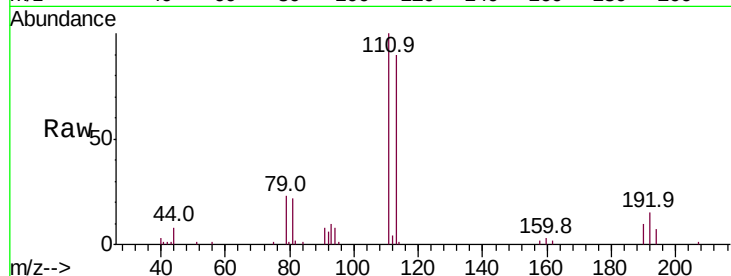
Tot Ion: 42 Resp: 268

Ion Ratio Lower Upper

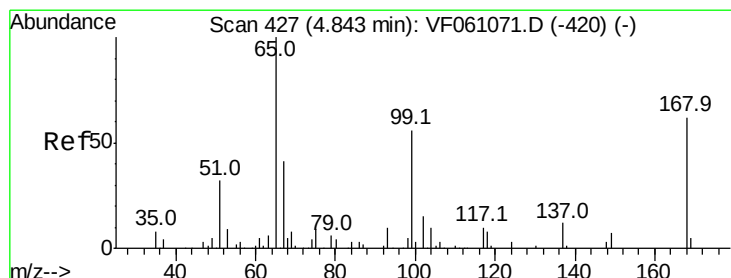
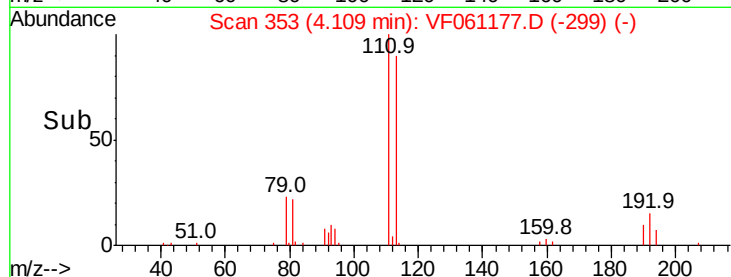
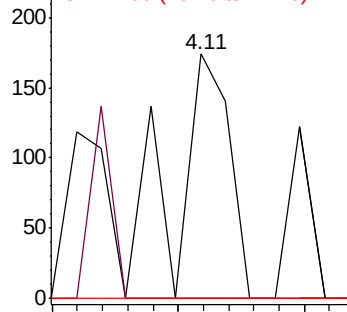
42 100

72 0.0 31.8 47.8#

71 0.0 29.7 44.5#



Abundance Ion 42.00 (41.70 to 42.70): VF0  
Ion 72.00 (71.70 to 72.70): VF0  
Ion 71.00 (70.70 to 71.70): VF0



#33

1,2-Dichloroethane-d4

Concen: 43.725 ug/l

RT: 4.85 min Scan# 428

Delta R.T. 0.01 min

Lab File: VF061177.D

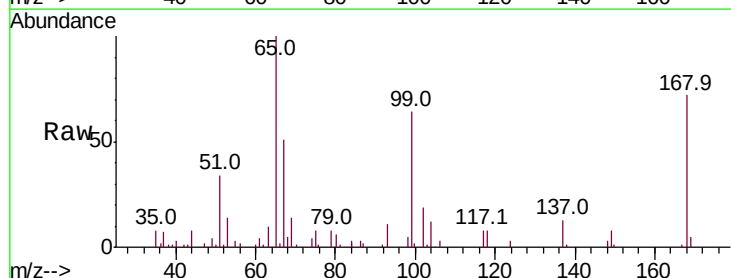
Acq: 24 Dec 2018 20:58

Tgt Ion: 65 Resp: 43482

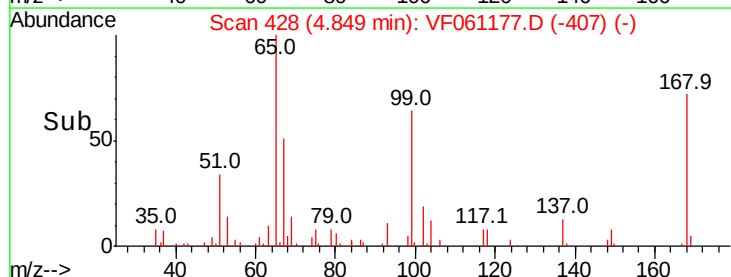
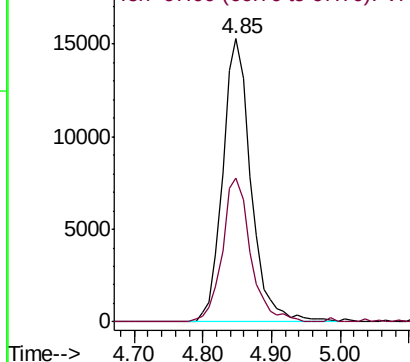
Ion Ratio Lower Upper

65 100

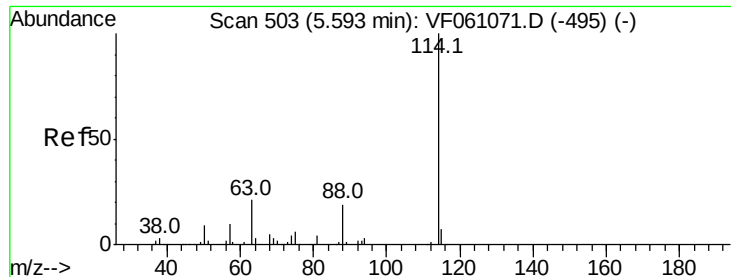
67 50.6 0.0 94.6



Abundance Ion 65.00 (64.70 to 65.70): VF0  
Ion 67.00 (66.70 to 67.70): VF0



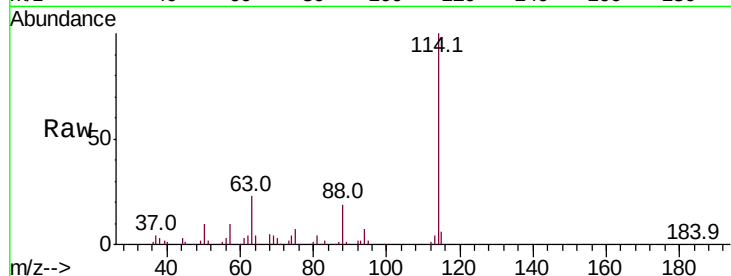




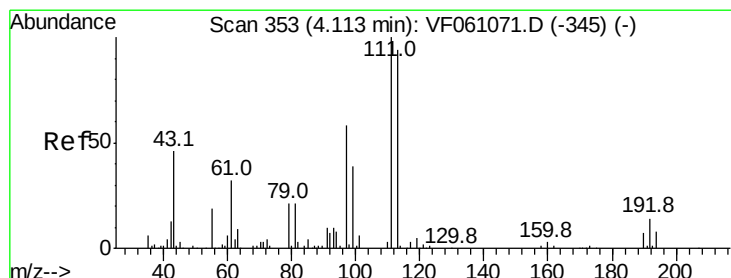
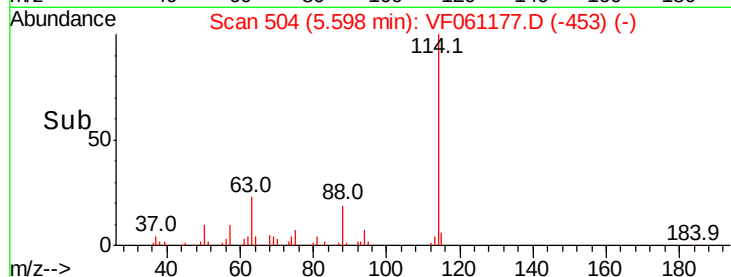
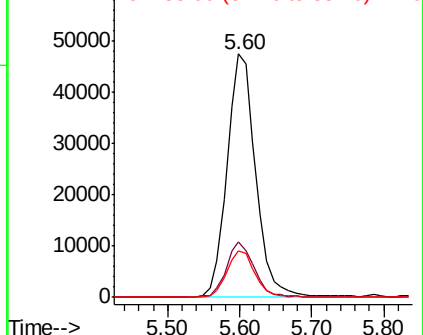
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 5.60 min Scan# 504  
 Delta R.T. 0.01 min  
 Lab File: VF061177.D  
 Acq: 24 Dec 2018 20:58

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Tot Ion:114 Resp: 130935  
 Ion Ratio Lower Upper  
 114 100  
 63 22.7 0.0 41.6  
 88 18.9 0.0 38.0

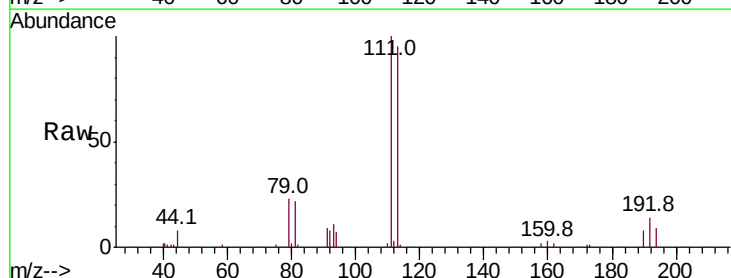


Abundance Ion 114.00 (113.70 to 114.70): V  
 Ion 63.00 (62.70 to 63.70): VF0  
 Ion 88.00 (87.70 to 88.70): VF0

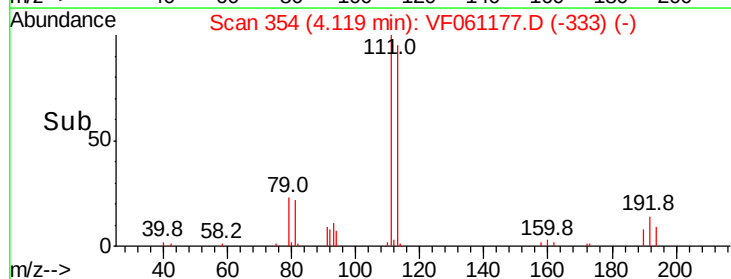
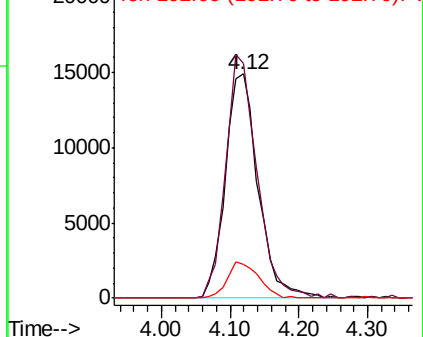


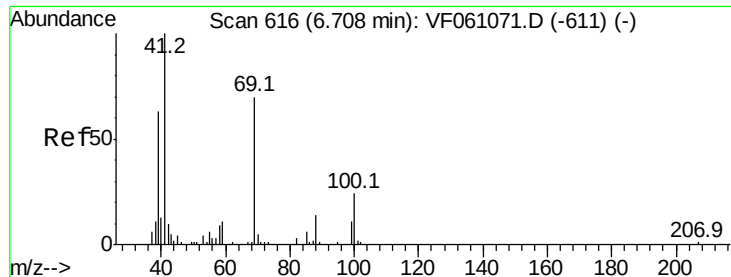
#35  
 Dibromofluoromethane  
 Concen: 46.889 ug/l  
 RT: 4.12 min Scan# 354  
 Delta R.T. 0.01 min  
 Lab File: VF061177.D  
 Acq: 24 Dec 2018 20:58

Tgt Ion:113 Resp: 49180  
 Ion Ratio Lower Upper  
 113 100  
 111 104.8 85.2 127.8  
 192 15.1 12.8 19.2



Abundance Ion 113.00 (112.70 to 113.70): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 192.00 (191.70 to 192.70): V





#49

1,4-Dioxane

Concen: 20.695 ug/l

RT: 7.06 min Scan# 652

Delta R.T. 0.35 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

Instrument :  
MSVOA\_F  
ClientSampleId :

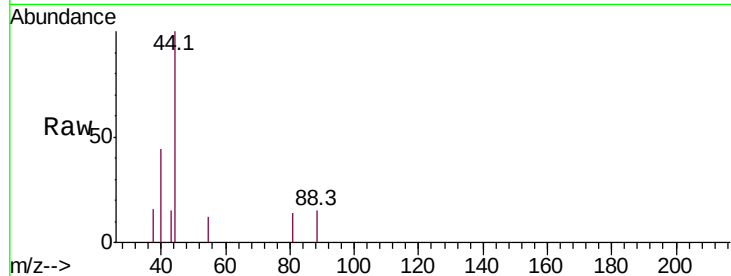
Tot Ion: 88 Resp: 80

Ion Ratio Lower Upper

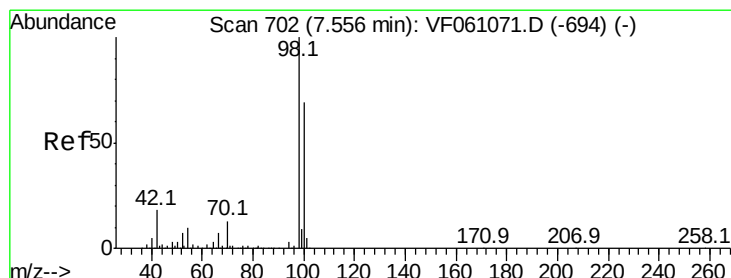
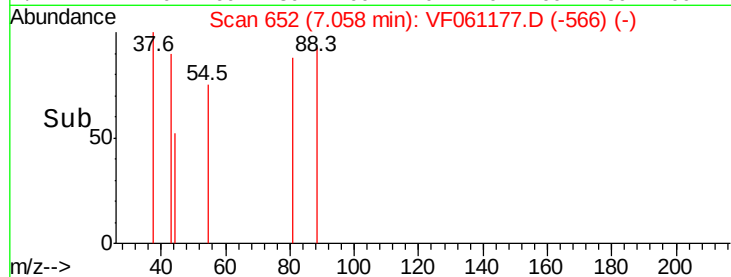
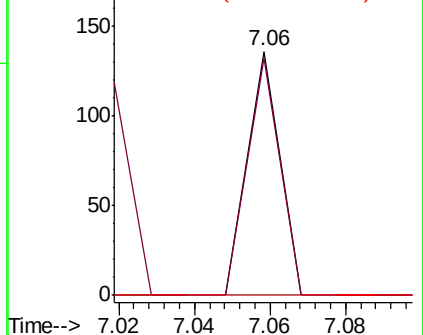
88 100

43 97.1 33.3 49.9#

58 0.0 53.2 79.8#



Abundance Ion 88.00 (87.70 to 88.70): VF0  
Ion 43.00 (42.70 to 43.70): VF0  
Ion 58.00 (57.70 to 58.70): VF0



#50

Toluene-d8

Concen: 39.477 ug/l

RT: 7.55 min Scan# 702

Delta R.T. -0.00 min

Lab File: VF061177.D

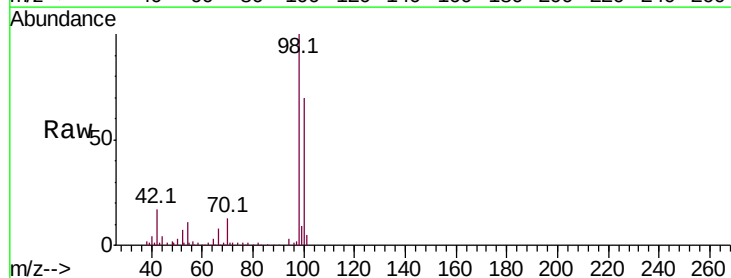
Acq: 24 Dec 2018 20:58

Tgt Ion: 98 Resp: 117340

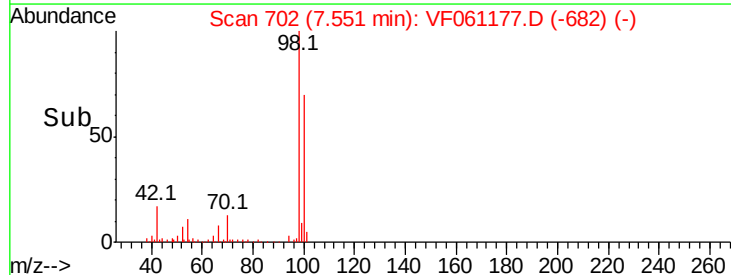
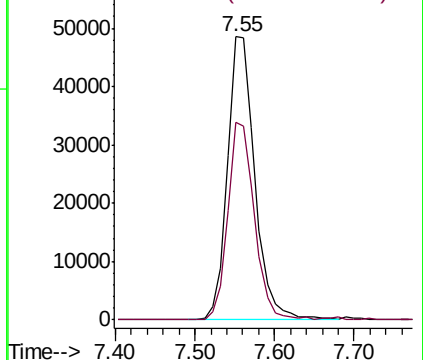
Ion Ratio Lower Upper

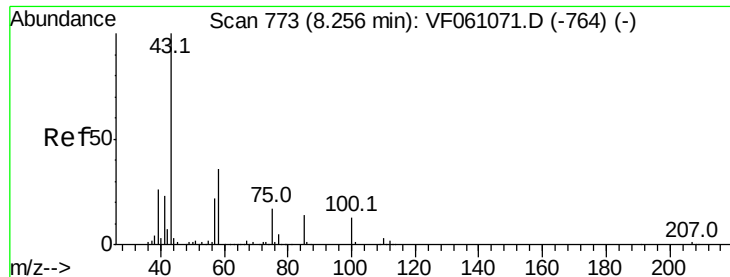
98 100

100 70.0 55.3 82.9



Abundance Ion 98.00 (97.70 to 98.70): VF0  
Ion 100.00 (99.70 to 100.70): VF0





#51

4-Methyl-2-Pentanone

Concen: 1.106 ug/l

RT: 8.27 min Scan# 775

Delta R.T. 0.02 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

Instrument :

MSVOA\_F

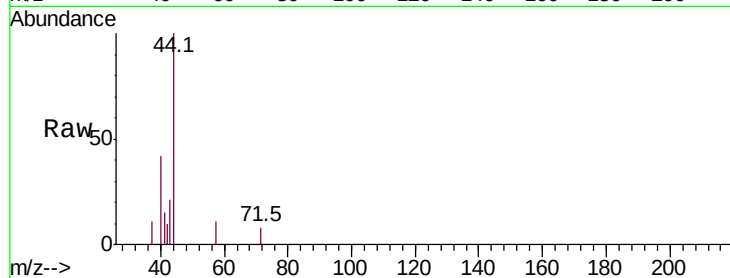
ClientSampled :

Tot Ion: 43 Resp: 579

Ion Ratio Lower Upper

43 100

58 0.0 29.1 43.7#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0

8.27

250

200

150

100

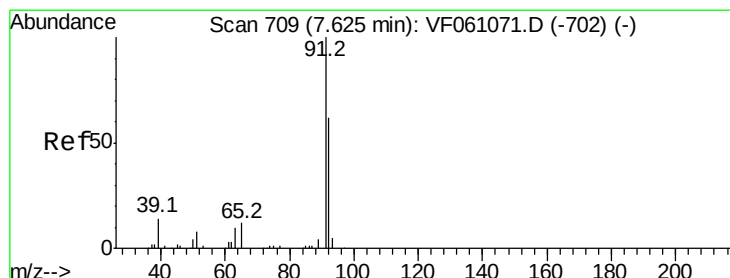
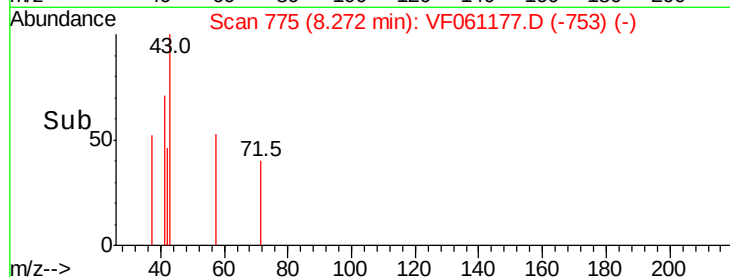
50

0

8.25

8.30

Time-->



#52

Toluene

Concen: 2.489 ug/l

RT: 7.63 min Scan# 710

Delta R.T. 0.01 min

Lab File: VF061177.D

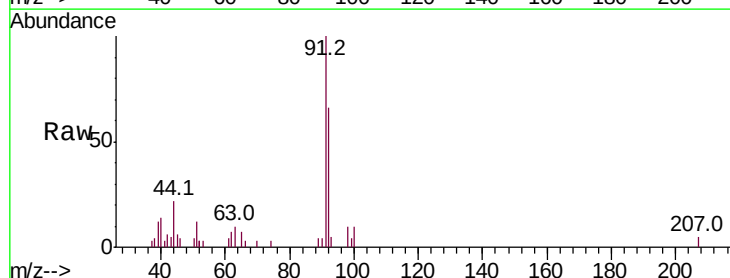
Acq: 24 Dec 2018 20:58

Tgt Ion: 92 Resp: 5599

Ion Ratio Lower Upper

92 100

91 152.4 128.8 193.2



Abundance Ion 92.00 (91.70 to 92.70): VF0

Ion 91.00 (90.70 to 91.70): VF0

5000

4000

3000

2000

1000

0

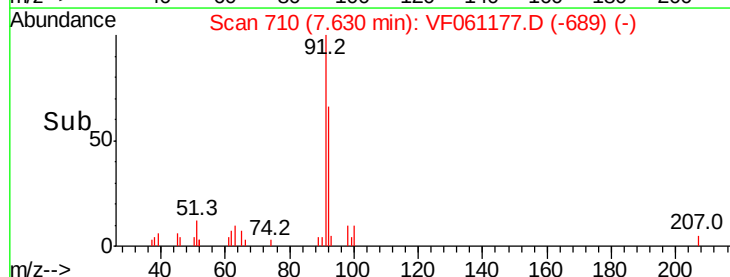
7.55

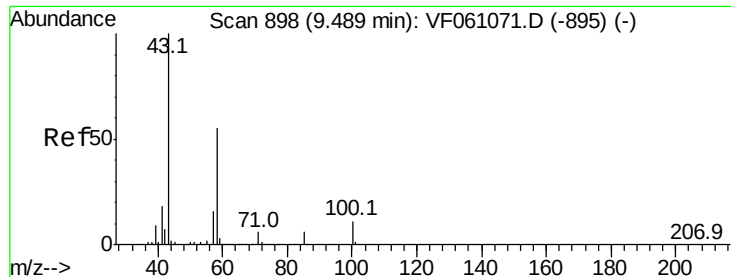
7.60

7.65

7.70

Time-->

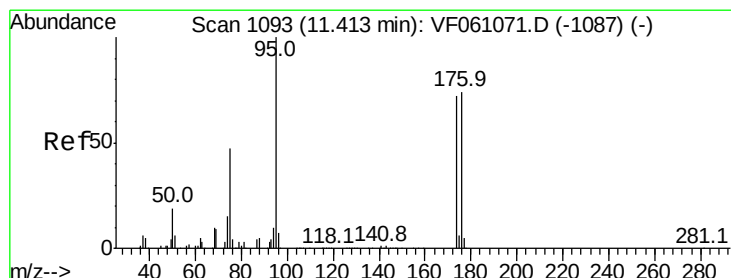
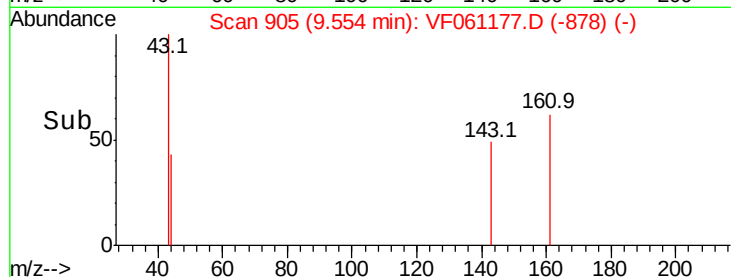
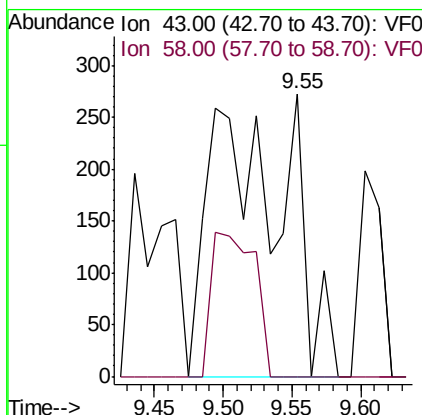
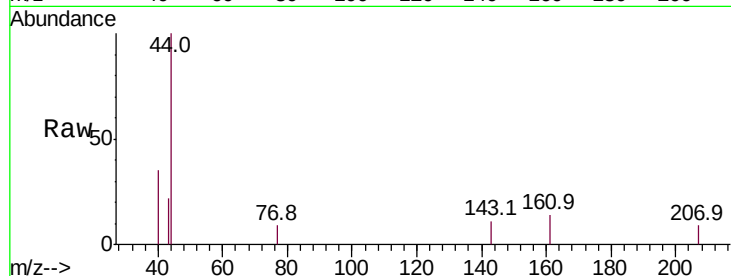




#59  
2-Hexanone  
Concen: 2.650 ug/l  
RT: 9.55 min Scan# 905  
Delta R.T. 0.06 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

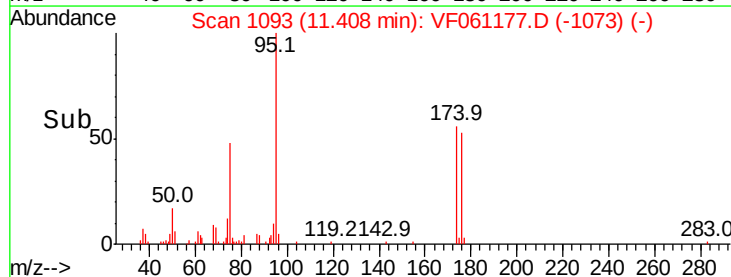
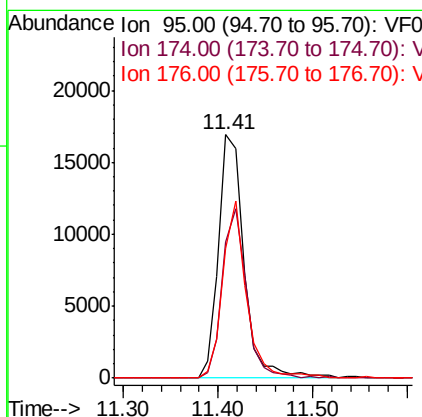
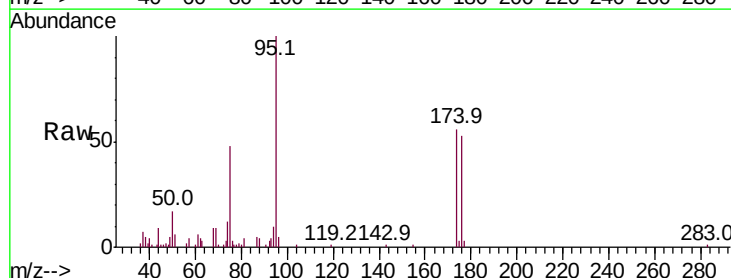
Instrument :  
MSVOA\_F  
ClientSampled :

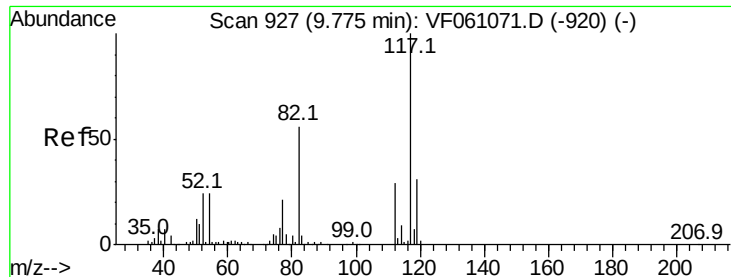
Tot Ion: 43 Resp: 1003  
Ion Ratio Lower Upper  
43 100  
58 0.0 25.1 75.2#



#62  
4-Bromofluorobenzene  
Concen: 23.126 ug/l  
RT: 11.41 min Scan# 1093  
Delta R.T. -0.00 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion: 95 Resp: 31689  
Ion Ratio Lower Upper  
95 100  
174 55.7 0.0 143.8  
176 53.2 0.0 147.6

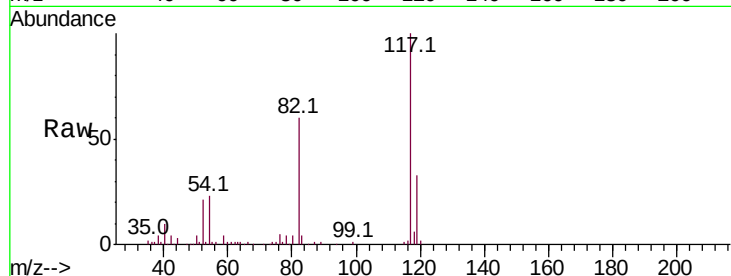




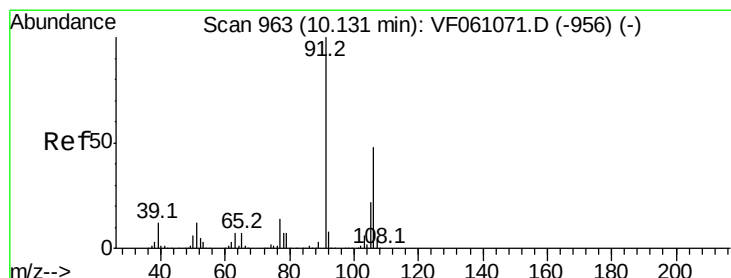
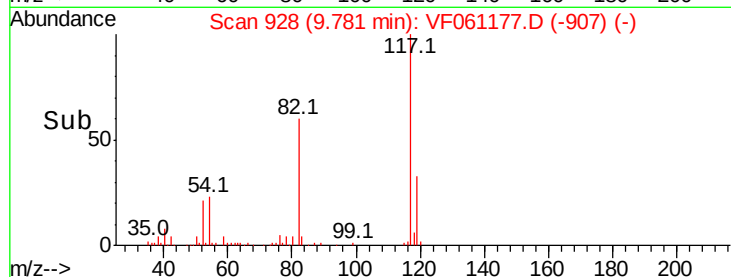
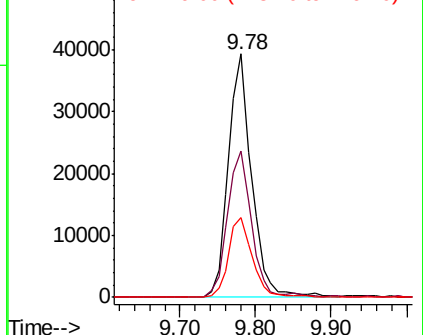
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.78 min Scan# 928  
Delta R.T. 0.01 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:117 Resp: 83753  
Ion Ratio Lower Upper  
117 100  
82 59.9 45.0 67.4  
119 32.7 24.8 37.2

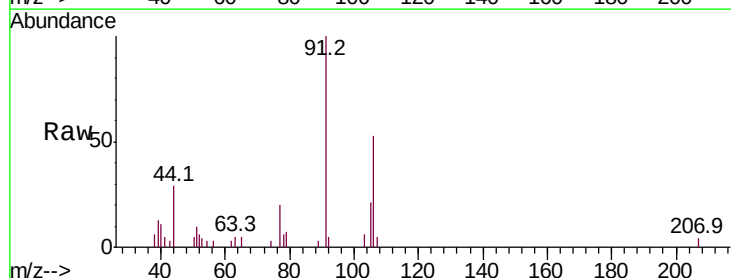


Abundance Ion 117.00 (116.70 to 117.70): V  
Ion 82.00 (81.70 to 82.70): VF0  
Ion 119.00 (118.70 to 119.70): V

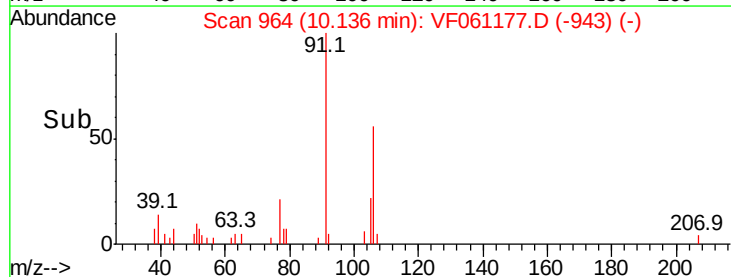
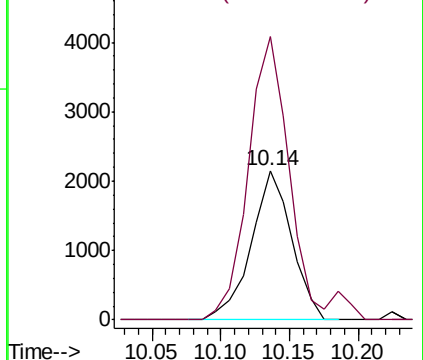


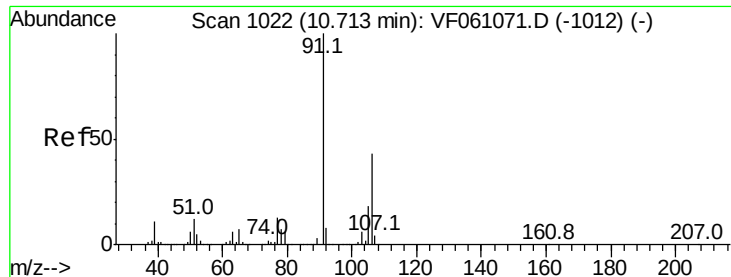
#68  
m/p-Xylenes  
Concen: 3.996 ug/l  
RT: 10.14 min Scan# 964  
Delta R.T. 0.01 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion:106 Resp: 4433  
Ion Ratio Lower Upper  
106 100  
91 189.5 168.2 252.2



Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VF0

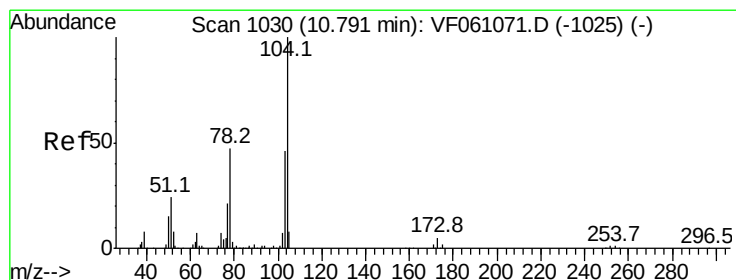
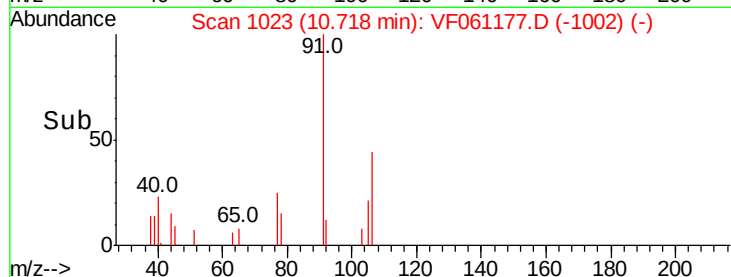
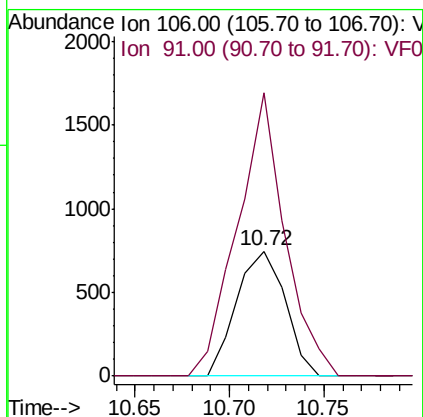
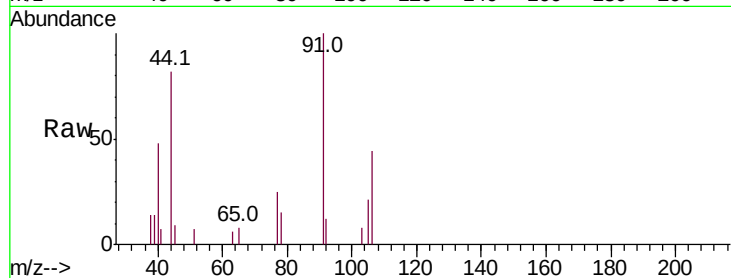




#69  
o-Xylene  
Concen: 1.085 ug/l  
RT: 10.72 min Scan# 1023  
Delta R.T. 0.01 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

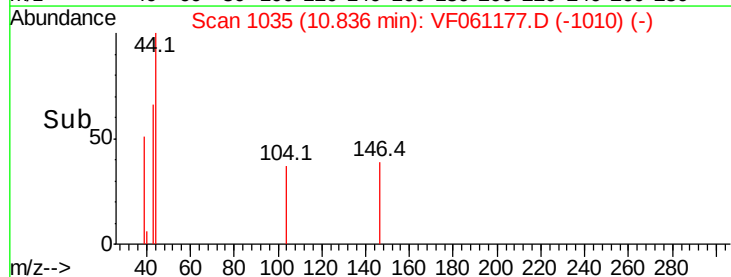
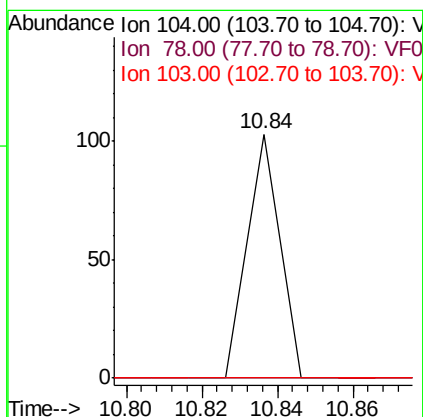
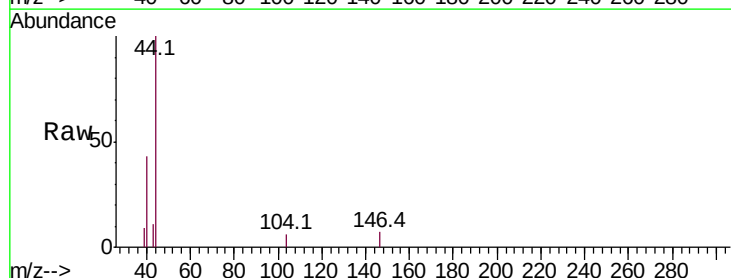
Instrument :  
MSVOA\_F  
ClientSampleId :

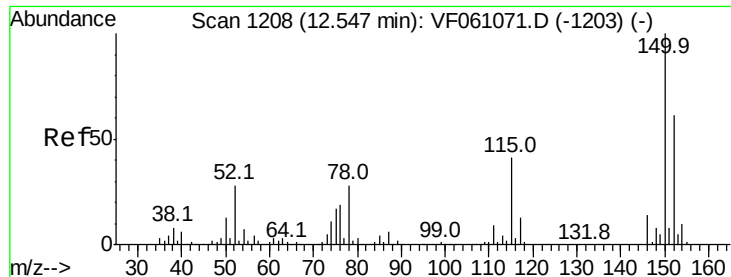
Tot Ion:106 Resp: 1335  
Ion Ratio Lower Upper  
106 100  
91 226.4 115.9 347.7



#70  
Styrene  
Concen: Below Cal  
RT: 10.84 min Scan# 1035  
Delta R.T. 0.05 min  
Lab File: VF061177.D  
Acq: 24 Dec 2018 20:58

Tgt Ion:104 Resp: 61  
Ion Ratio Lower Upper  
104 100  
78 0.0 38.4 57.6#  
103 0.0 37.0 55.6#





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.55 min Scan# 1209

Delta R.T. 0.01 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

Instrument :

MSVOA\_F

ClientSampleId :

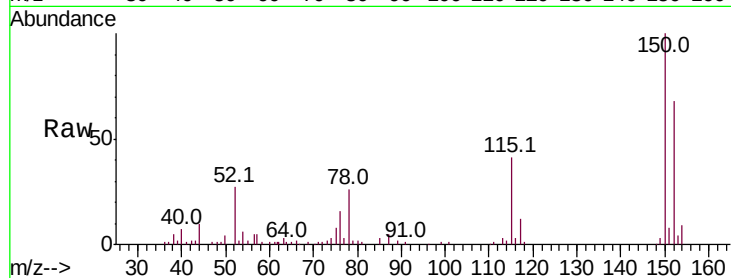
Tot Ion:152 Resp: 23031

Ion Ratio Lower Upper

152 100

115 59.7 33.3 99.9

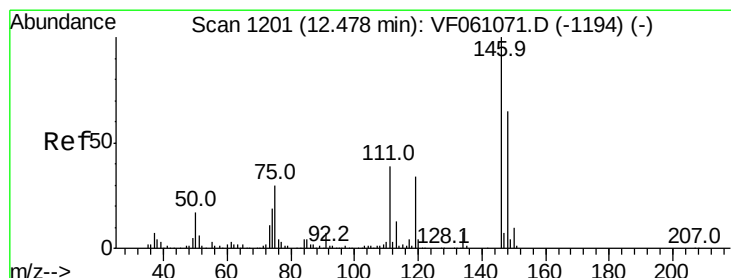
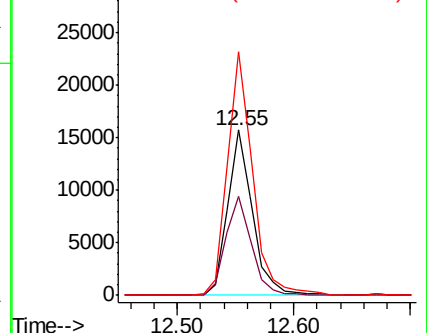
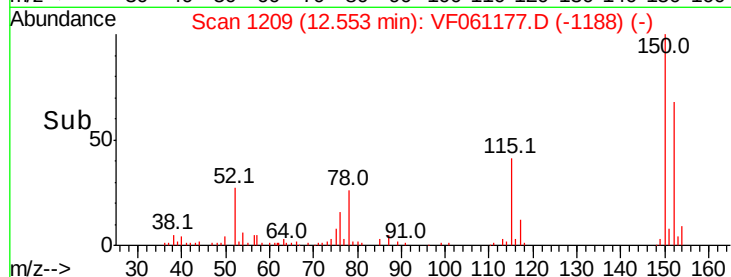
150 147.2 0.0 328.2



Abundance Ion 152.00 (151.70 to 152.70): V

Ion 115.00 (114.70 to 115.70): V

Ion 150.00 (149.70 to 150.70): V



#87

1,3-Dichlorobenzene

Concen: Below Cal

RT: 12.56 min Scan# 1210

Delta R.T. 0.08 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

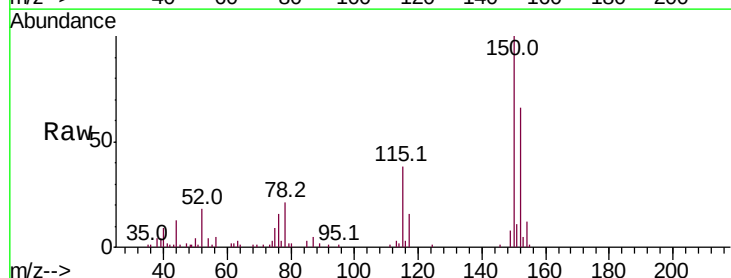
Tgt Ion:146 Resp: 82

Ion Ratio Lower Upper

146 100

111 146.0 19.3 57.9#

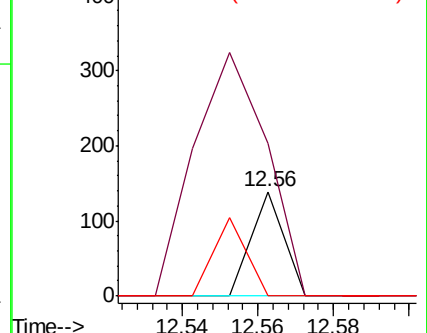
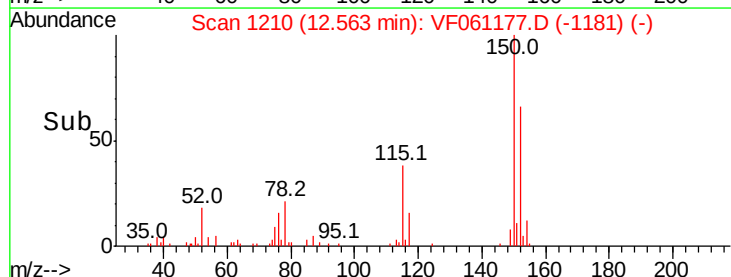
148 0.0 32.4 97.2#

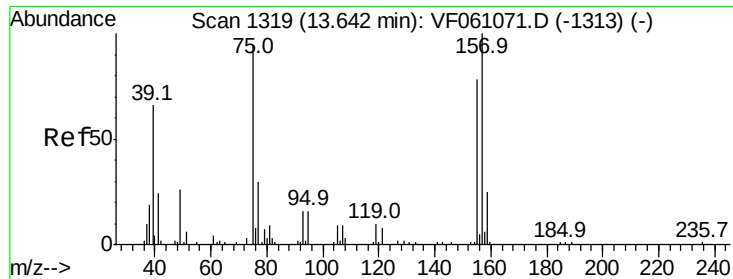


Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V





#92

1,2-Dibromo-3-Chloropropane

Concen: 1.224 ug/l

RT: 13.80 min Scan# 1335

Delta R.T. 0.15 min

Lab File: VF061177.D

Acq: 24 Dec 2018 20:58

Instrument :

MSVOA\_F

ClientSampleId :

Tot Ion: 75 Resp: 74

Ion Ratio Lower Upper

75 100

155 0.0 41.5 124.5#

157 0.0 53.2 159.6#

