

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF062918\  
 Data File : VF059377.D  
 Acq On : 29 Jun 2018 15:00  
 Operator : VA/AP  
 Sample : VF0629SBL01  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 3 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Quant Time: Jun 29 23:39:01 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F062518S.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Jun 26 08:45:17 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.02  | 168  | 304541   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.74  | 114  | 486758   | 50.00 | ug/l  | -0.01    |
| 63) Chlorobenzene-d5       | 9.90  | 117  | 471984   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.62 | 152  | 309509   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 33) 1,2-Dichloroethane-d4   | 4.99  | 65   | 171175   | 43.50  | ug/l  | -0.01    |
| Spiked Amount               |       |      |          | 50.000 |       |          |
| Recovery                    |       |      |          |        |       | 87.00%   |
| 35) Dibromofluoromethane    | 4.28  | 113  | 168159   | 47.28  | ug/l  | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |       |          |
| Recovery                    |       |      |          |        |       | 94.56%   |
| 50) Toluene-d8              | 7.70  | 98   | 391227   | 44.43  | ug/l  | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |       |          |
| Recovery                    |       |      |          |        |       | 88.86%   |
| 62) 4-Bromofluorobenzene    | 11.50 | 95   | 223131   | 44.92  | ug/l  | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |       |          |
| Recovery                    |       |      |          |        |       | 89.84%   |

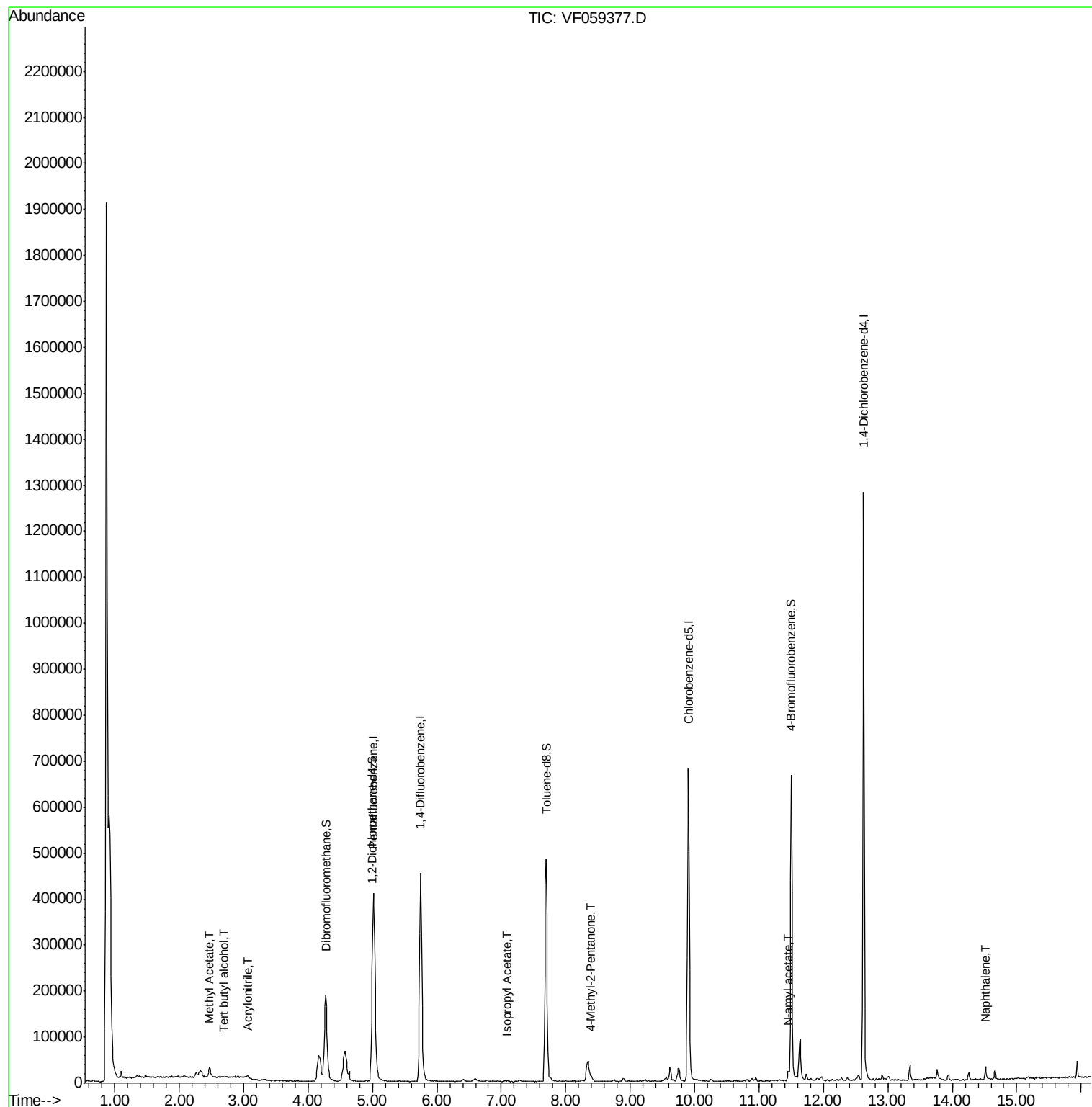
| Target Compounds         | R.T.  | QIon | Response | Conc         | Units | Qvalue |
|--------------------------|-------|------|----------|--------------|-------|--------|
| 5) Bromomethane          | 1.18  | 94   | 231      | Below Cal    |       | 97     |
| 11) Tert butyl alcohol   | 2.69  | 59   | 1302     | 4.971 ug/l # |       | 65     |
| 13) Acrolein             | 2.16  | 56   | 271      | Below Cal    |       | 98     |
| 15) Acrylonitrile        | 3.07  | 53   | 1157     | 2.508 ug/l # |       | 72     |
| 16) Acetone              | 2.32  | 43   | 7242     | Below Cal    |       | 98     |
| 18) Methyl Acetate       | 2.47  | 43   | 8535     | 3.729 ug/l # |       | 61     |
| 20) Methylene Chloride   | 2.27  | 84   | 3672     | Below Cal #  |       | 80     |
| 25) 2-Butanone           | 4.49  | 43   | 1349     | Below Cal #  |       | 77     |
| 29) Tetrahydrofuran      | 4.24  | 42   | 1965     | Below Cal #  |       | 73     |
| 37) Ethyl Acetate        | 4.28  | 43   | 2753     | Below Cal #  |       | 43     |
| 43) Isopropyl Acetate    | 7.10  | 43   | 3647     | 1.030 ug/l # |       | 85     |
| 49) 1,4-Dioxane          | 6.86  | 88   | 135      | Below Cal #  |       | 26     |
| 51) 4-Methyl-2-Pentanone | 8.40  | 43   | 9197     | 3.505 ug/l   |       | 88     |
| 59) 2-Hexanone           | 9.62  | 43   | 23260    | Below Cal    |       | 94     |
| 74) N-amyl acetate       | 11.45 | 43   | 12865    | 1.966 ug/l   |       | 95     |
| 87) 1,3-Dichlorobenzene  | 12.55 | 146  | 2982     | Below Cal    |       | 93     |
| 95) Naphthalene          | 14.52 | 128  | 15926    | 1.134 ug/l   |       | 97     |

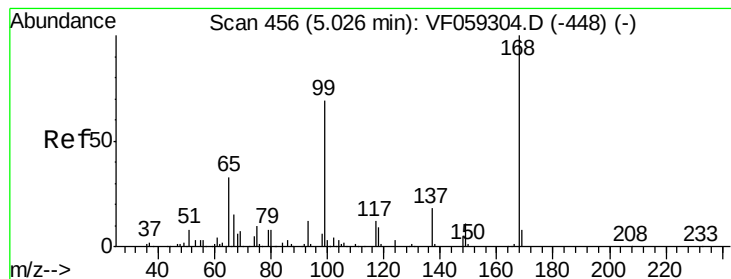
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF062918\  
Data File : VF059377.D  
Acq On : 29 Jun 2018 15:00  
Operator : VA/AP  
Sample : VF0629SBL01  
Misc : 5.00µ/5mL/MSVOA-F/SOIL  
ALS Vial : 3 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :

Quant Time: Jun 29 23:39:01 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F062518S.M  
Quant Title : SW846 8260  
QLast Update : Tue Jun 26 08:45:17 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.02 min Scan# 456

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

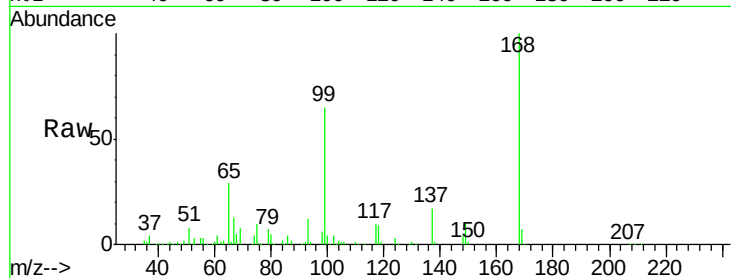
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:168 Resp: 304541

Ion Ratio Lower Upper

168 100

99 64.9 54.9 82.3



Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0

5.02

100000

80000

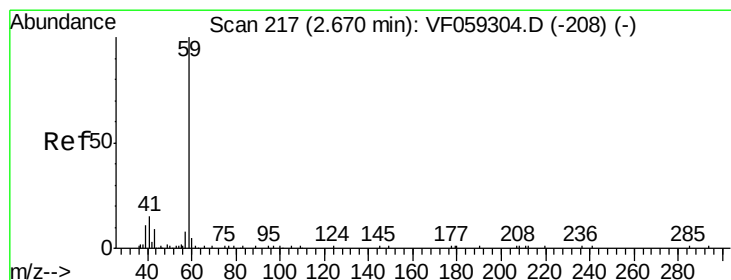
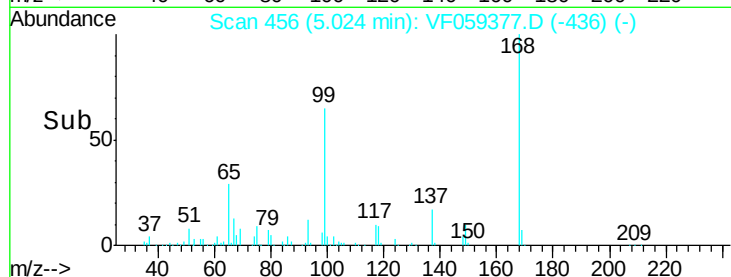
60000

40000

20000

0

Time-->



#11

Tert butyl alcohol

Concen: 4.971 ug/l

RT: 2.69 min Scan# 219

Delta R.T. 0.02 min

Lab File: VF059377.D

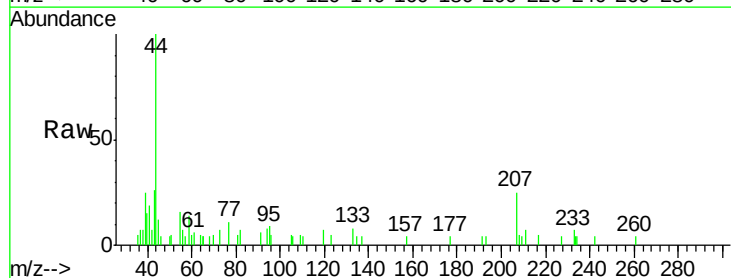
Acq: 29 Jun 2018 15:00

Tgt Ion: 59 Resp: 1302

Ion Ratio Lower Upper

59 100

57 28.0 11.0 16.4#



Abundance Ion 59.00 (58.70 to 59.70): VF0

Ion 57.00 (56.70 to 57.70): VF0

2.69

400

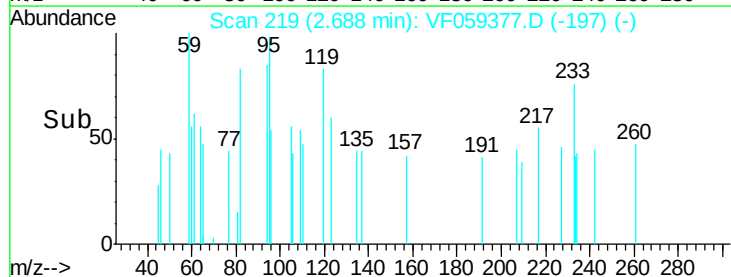
300

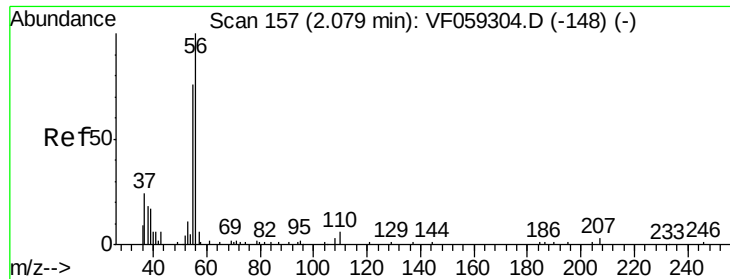
200

100

0

Time-->





#13

Acrolein

Concen: Below Cal

RT: 2.16 min Scan# 165

Delta R.T. 0.08 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

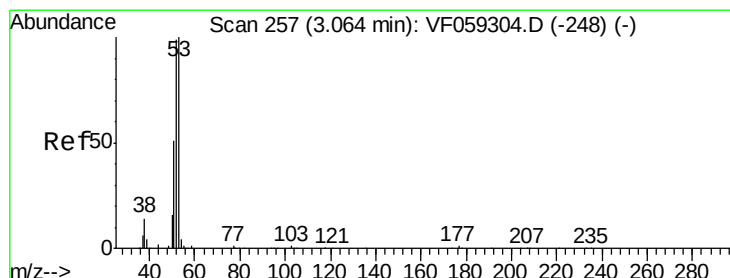
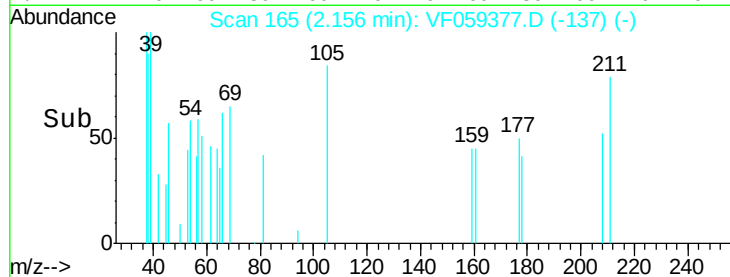
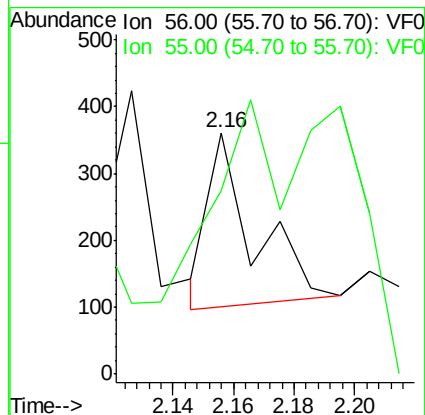
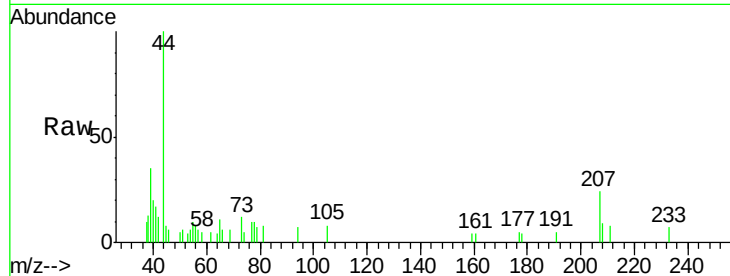
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 56 Resp: 271

Ion Ratio Lower Upper

56 100

55 75.9 62.4 93.6



#15

Acrylonitrile

Concen: 2.508 ug/l

RT: 3.07 min Scan# 258

Delta R.T. 0.01 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

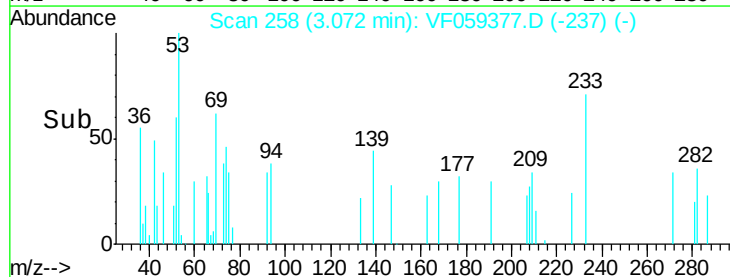
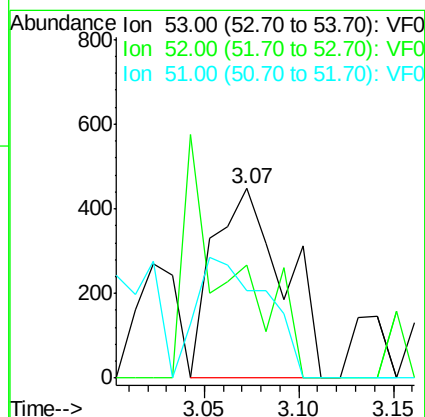
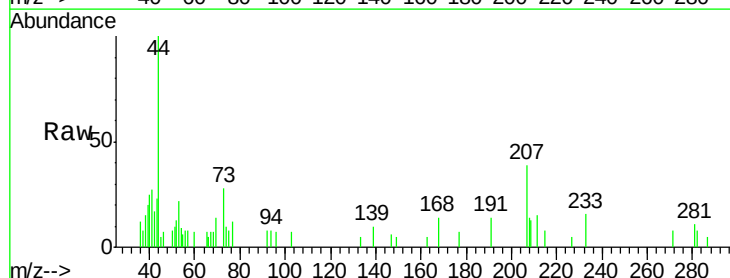
Tgt Ion: 53 Resp: 1157

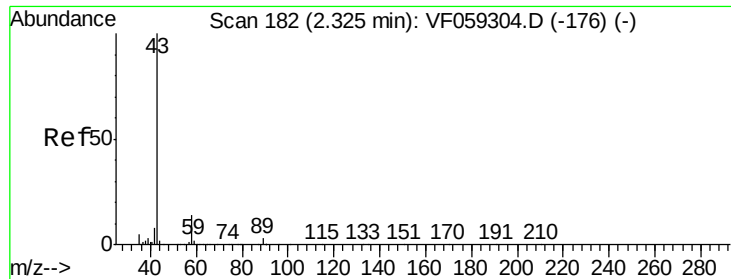
Ion Ratio Lower Upper

53 100

52 60.0 79.2 118.8#

51 46.3 40.9 61.3

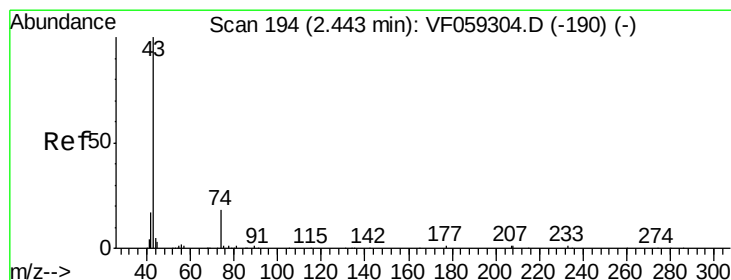
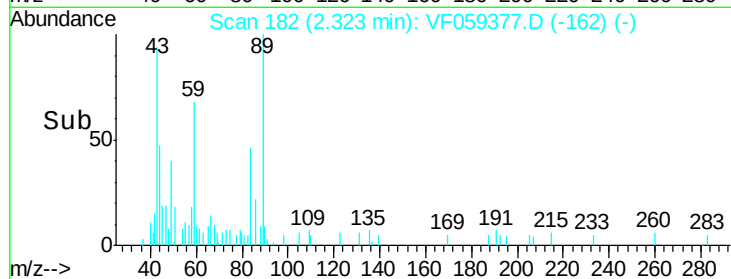
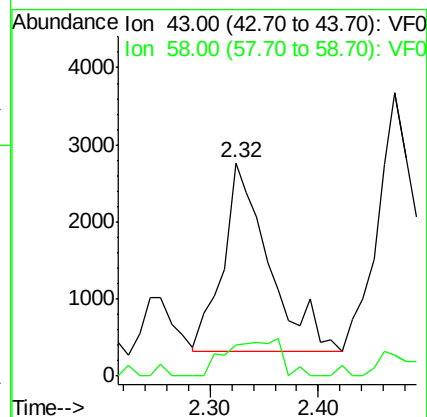
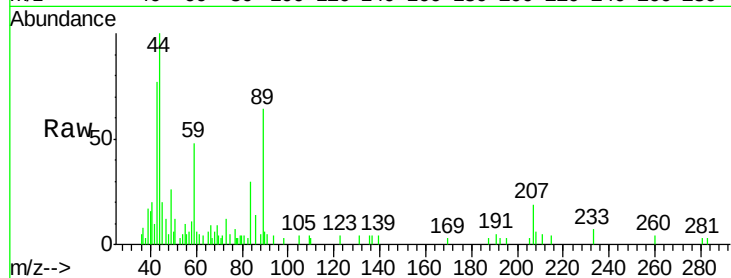




#16  
Acetone  
Concen: Below Cal  
RT: 2.32 min Scan# 182  
Delta R.T. -0.00 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

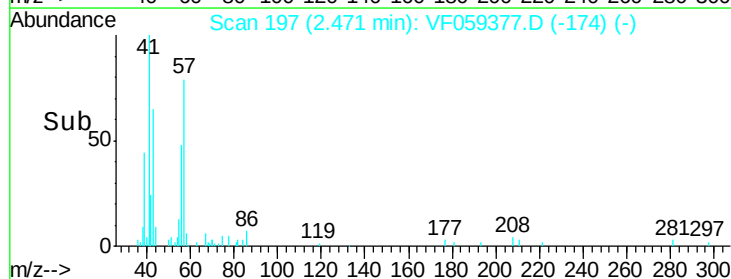
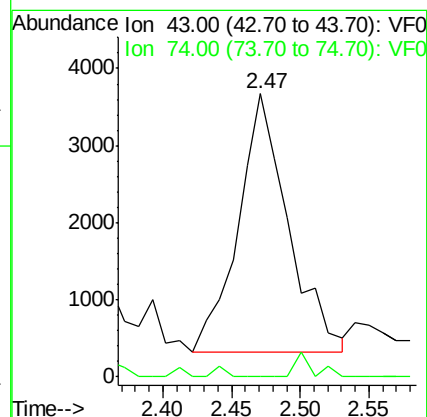
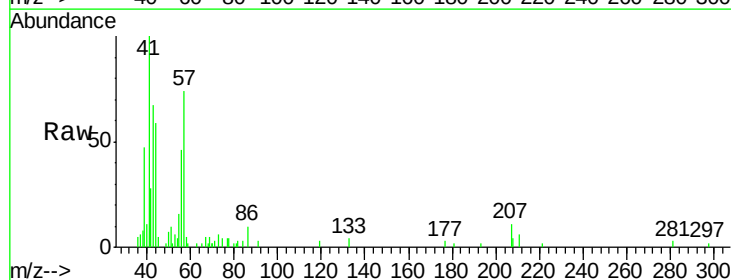
Instrument :  
MSVOA\_F  
ClientSampleId :

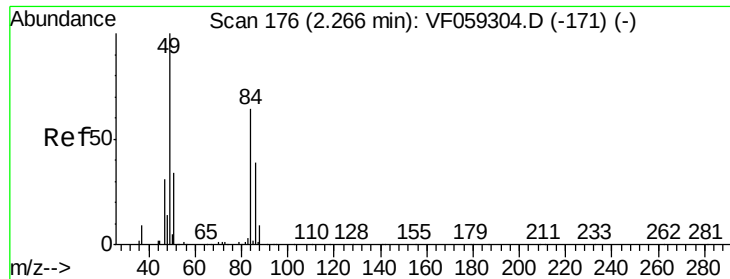
Tot Ion: 43 Resp: 7242  
Ion Ratio Lower Upper  
43 100  
58 14.8 11.4 17.0



#18  
Methyl Acetate  
Concen: 3.729 ug/l  
RT: 2.47 min Scan# 197  
Delta R.T. 0.03 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

Tgt Ion: 43 Resp: 8535  
Ion Ratio Lower Upper  
43 100  
74 0.0 13.3 19.9#

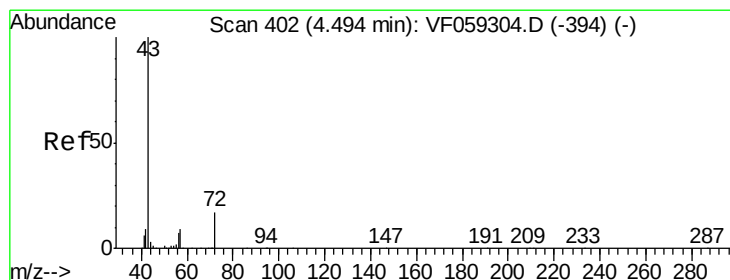
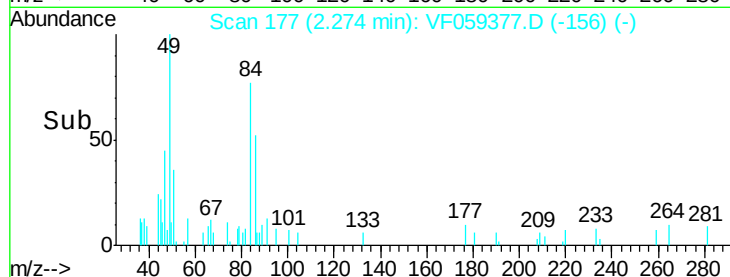
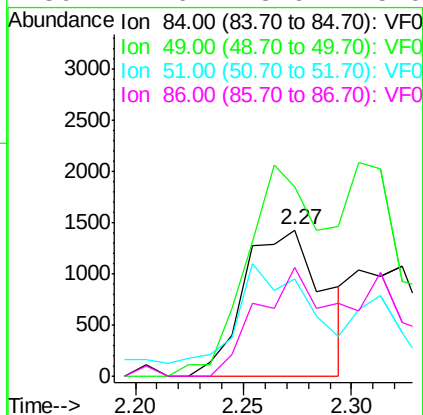
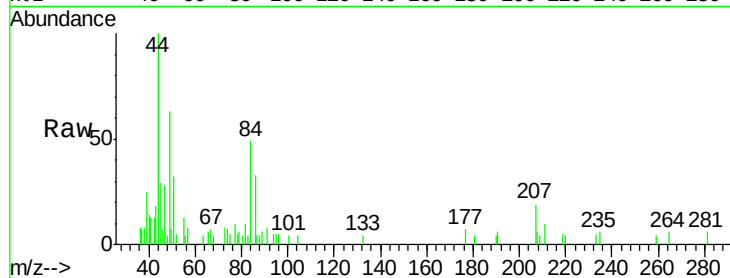




#20  
Methylene Chloride  
Concen: Below Cal  
RT: 2.27 min Scan# 177  
Delta R.T. 0.01 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

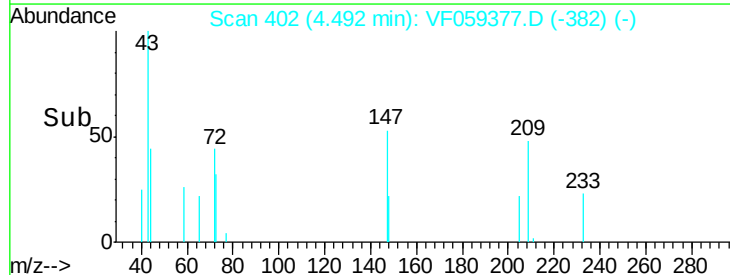
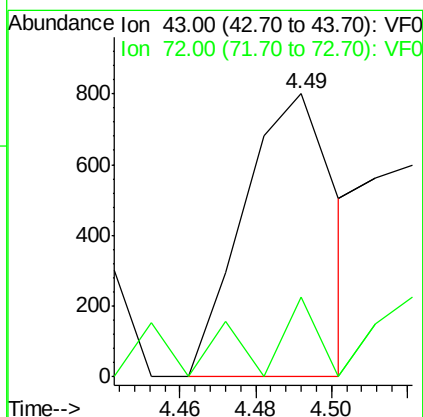
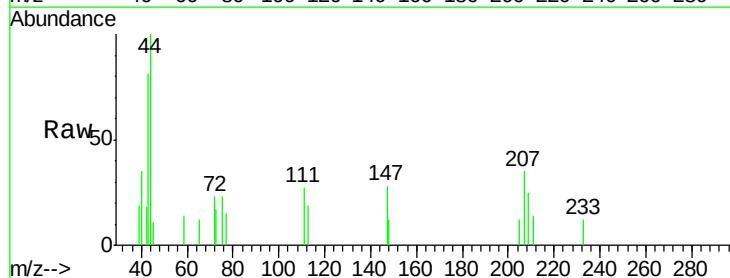
Instrument :  
MSVOA\_F  
ClientSampled :

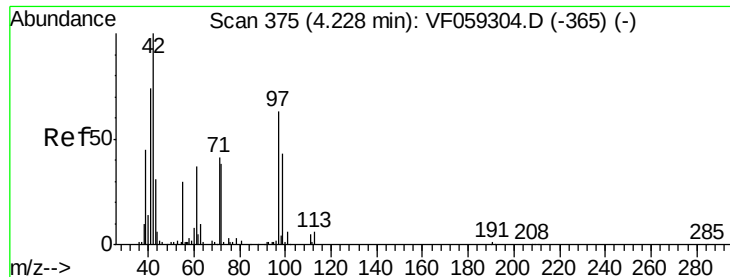
Tot Ion: 84 Resp: 3672  
Ion Ratio Lower Upper  
84 100  
49 129.4 126.5 189.7  
51 66.1 42.9 64.3#  
86 74.6 48.6 73.0#



#25  
2-Butanone  
Concen: Below Cal  
RT: 4.49 min Scan# 402  
Delta R.T. -0.00 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

Tgt Ion: 43 Resp: 1349  
Ion Ratio Lower Upper  
43 100  
72 28.3 14.4 21.6#

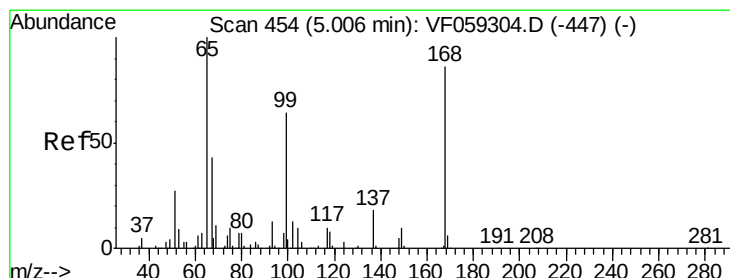
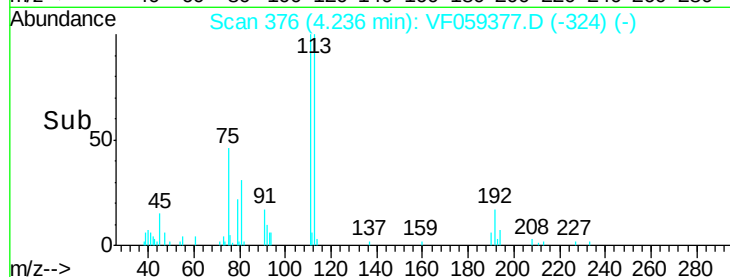
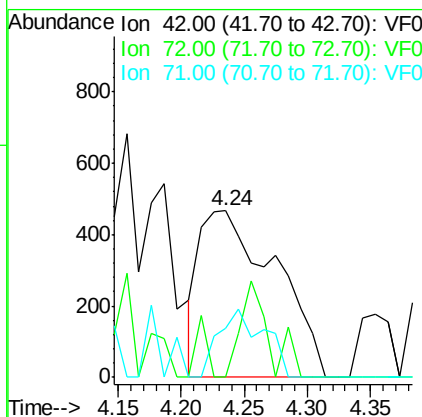
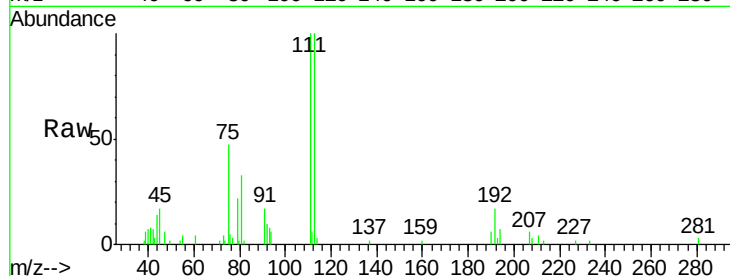




#29  
Tetrahydrofuran  
Concen: Below Cal  
RT: 4.24 min Scan# 376  
Delta R.T. 0.01 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

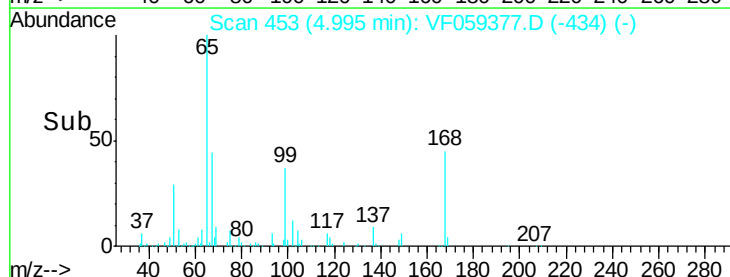
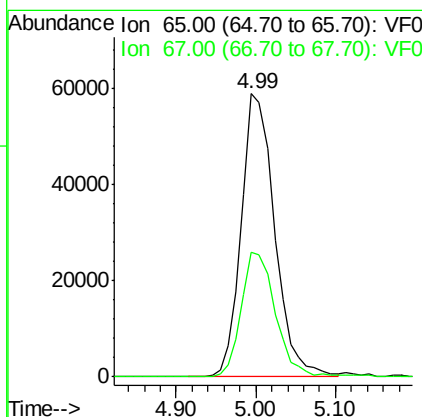
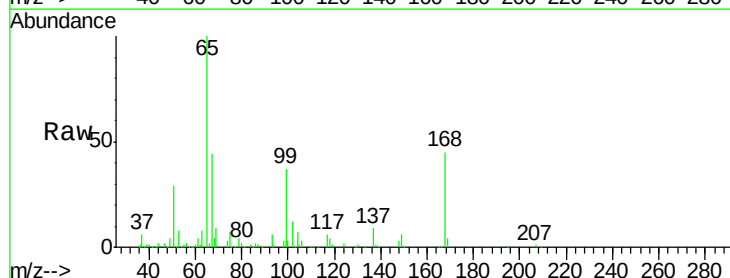
Instrument :  
MSVOA\_F  
ClientSampleId :

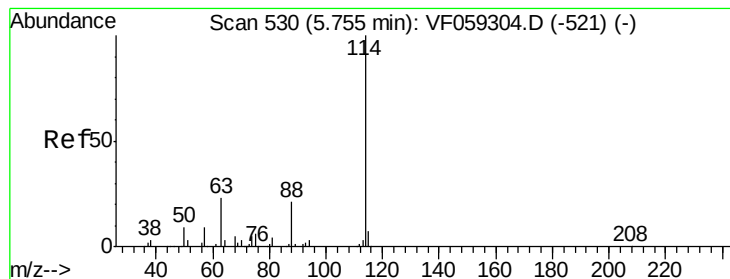
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 21.3  | 30.5  | 45.7# |
| 71      | 24.6  | 32.5  | 48.7# |



#33  
1,2-Dichloroethane-d4  
Concen: 43.505 ug/l  
RT: 4.99 min Scan# 453  
Delta R.T. -0.01 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 65      | 100   |       |       |
| 67      | 44.2  | 0.0   | 96.8  |





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 5.74 min Scan# 529

Delta R.T. -0.01 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

Instrument :

MSVOA\_F

ClientSampleId :

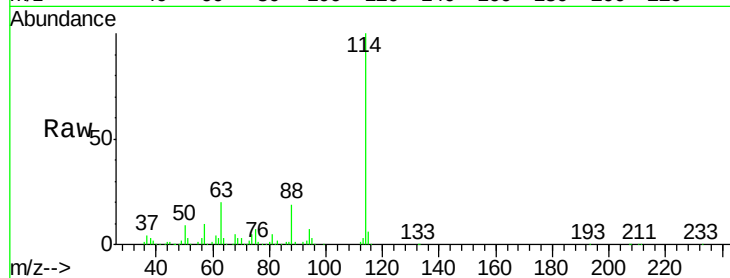
Tot Ion:114 Resp: 486758

Ion Ratio Lower Upper

114 100

63 20.5 0.0 45.8

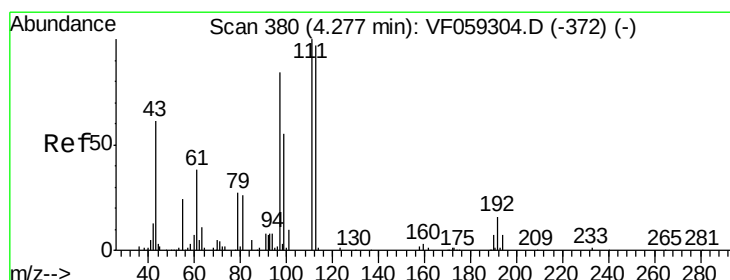
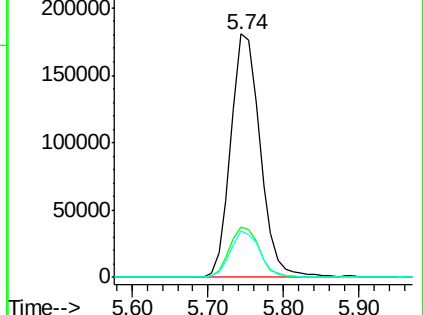
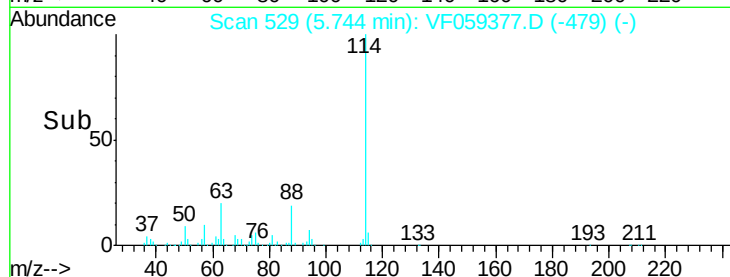
88 19.3 0.0 41.2



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: 47.281 ug/l

RT: 4.28 min Scan# 380

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

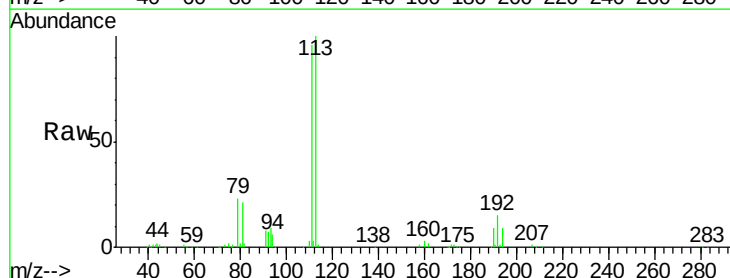
Tgt Ion:113 Resp: 168159

Ion Ratio Lower Upper

113 100

111 95.9 82.1 123.1

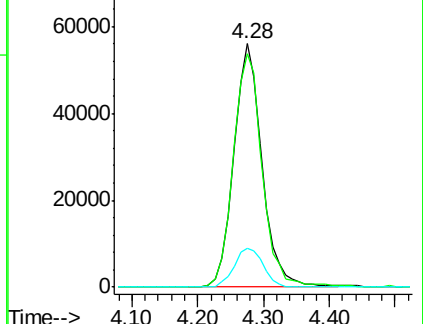
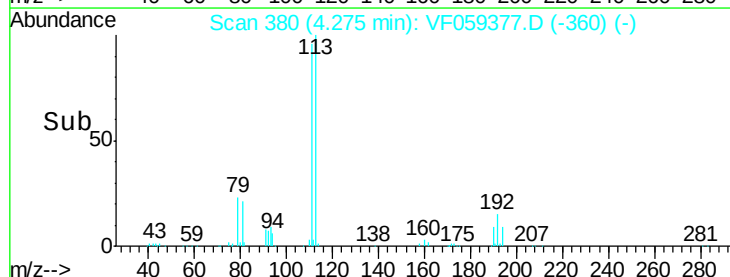
192 15.9 13.0 19.6



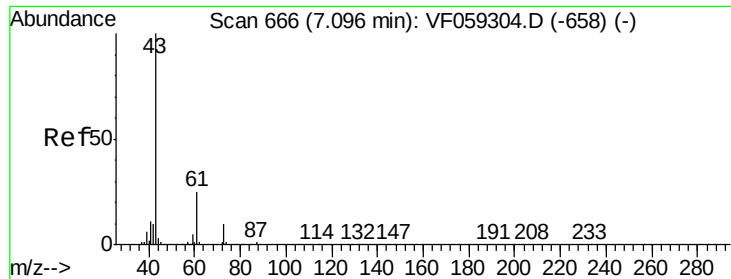
Abundance Ion 113.00 (112.70 to 113.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 192.00 (191.70 to 192.70): V







#43

Isopropyl Acetate

Concen: 1.030 ug/l

RT: 7.10 min Scan# 667

Delta R.T. 0.01 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

Instrument :

MSVOA\_F

ClientSampleId :

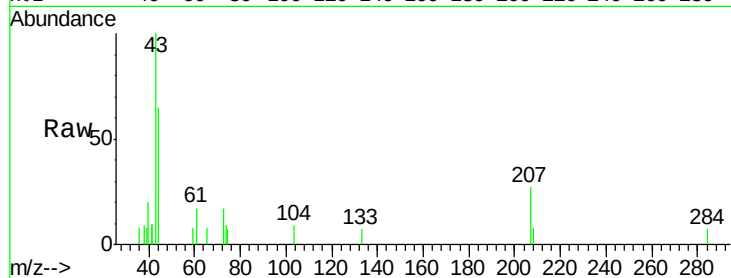
Tot Ion: 43 Resp: 3647

Ion Ratio Lower Upper

43 100

61 17.0 19.7 29.5#

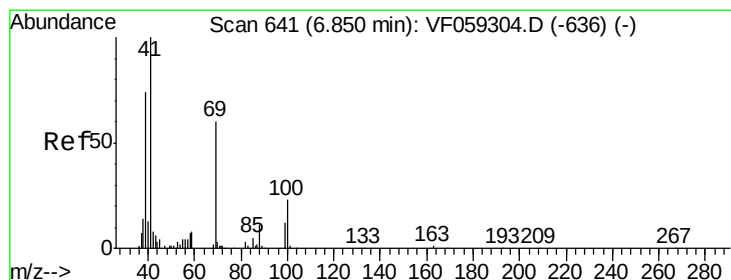
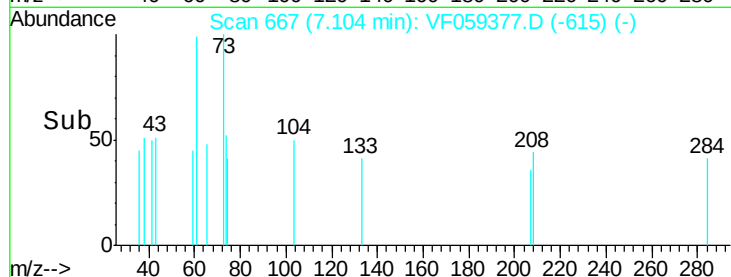
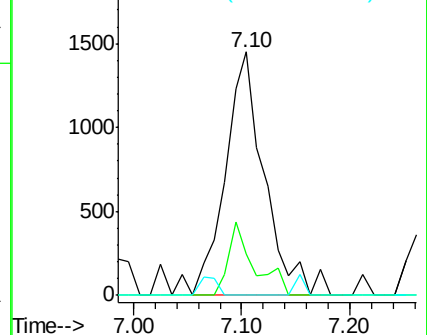
87 0.0 0.5 0.7#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 87.00 (86.70 to 87.70): VF0



#49

1,4-Dioxane

Concen: Below Cal

RT: 6.86 min Scan# 642

Delta R.T. 0.01 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

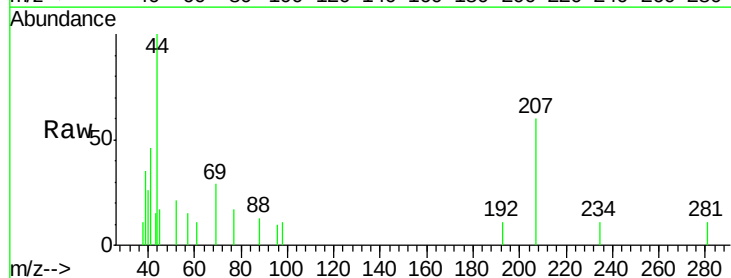
Tgt Ion: 88 Resp: 135

Ion Ratio Lower Upper

88 100

43 118.3 50.6 75.8#

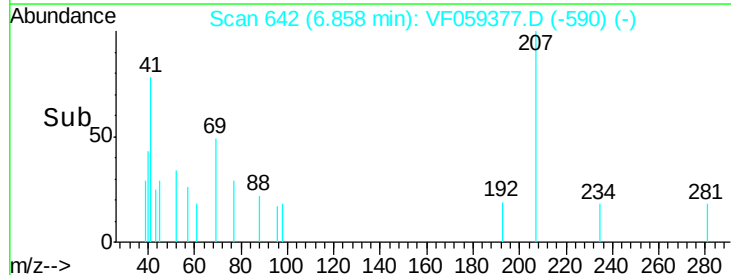
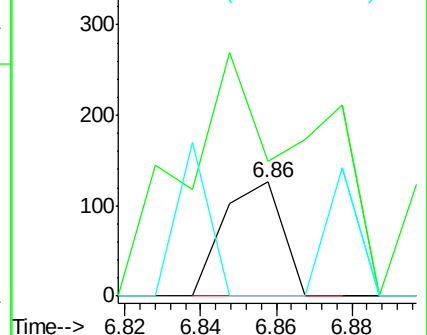
58 0.0 46.6 69.8#

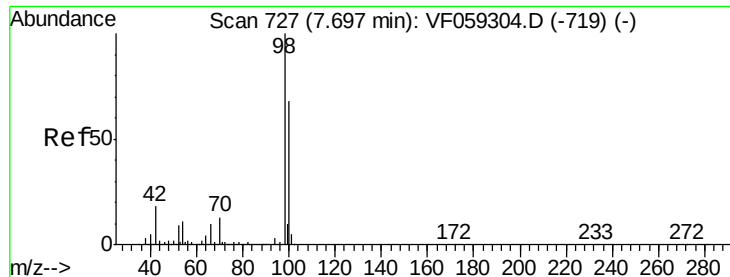


Abundance Ion 88.00 (87.70 to 88.70): VF0

Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0

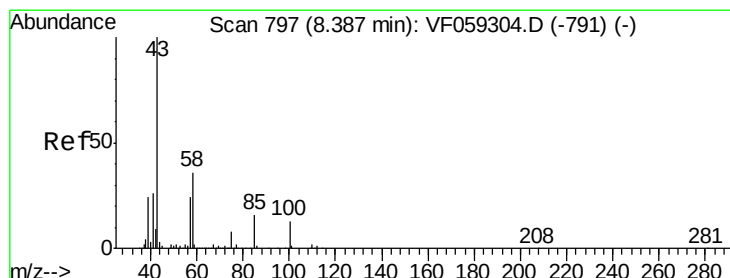
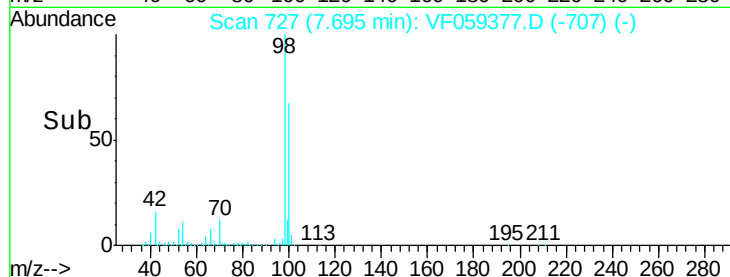
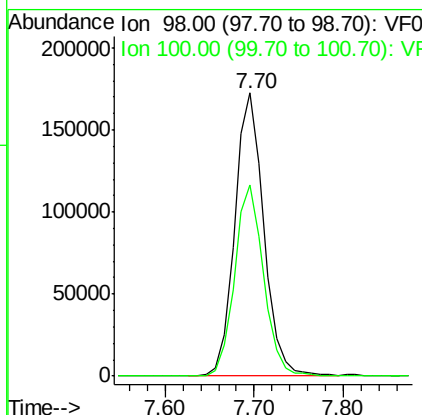
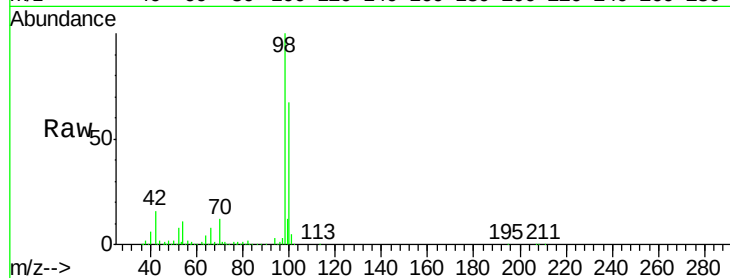




#50  
Toluene-d8  
Concen: 44.429 ug/l  
RT: 7.70 min Scan# 727  
Delta R.T. -0.00 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

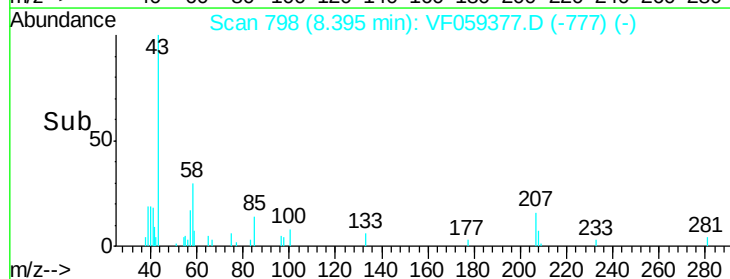
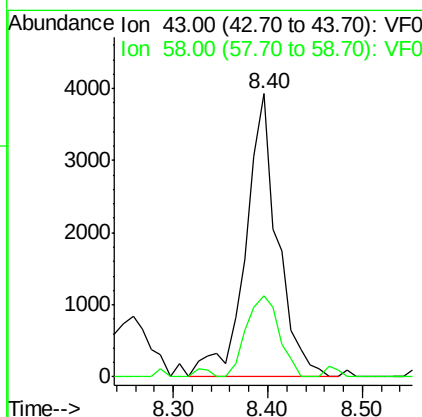
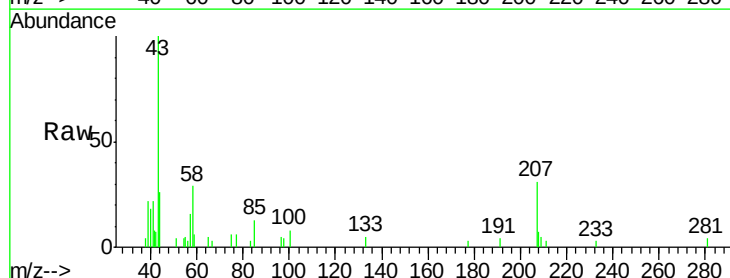
Instrument :  
MSVOA\_F  
ClientSampleId :

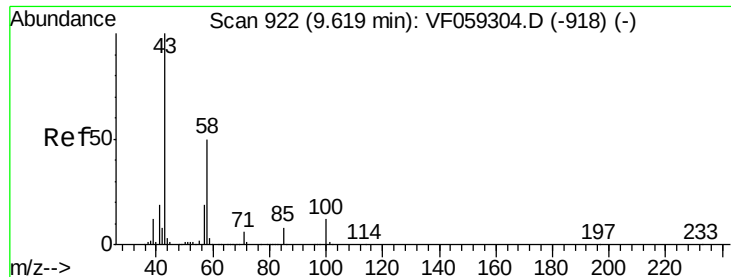
Tot Ion: 98 Resp: 391227  
Ion Ratio Lower Upper  
98 100  
100 67.4 54.6 82.0



#51  
4-Methyl-2-Pentanone  
Concen: 3.505 ug/l  
RT: 8.40 min Scan# 798  
Delta R.T. 0.01 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

Tgt Ion: 43 Resp: 9197  
Ion Ratio Lower Upper  
43 100  
58 28.5 28.4 42.6





#59

2-Hexanone

Concen: Below Cal

RT: 9.62 min Scan# 922

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

Instrument :

MSVOA\_F

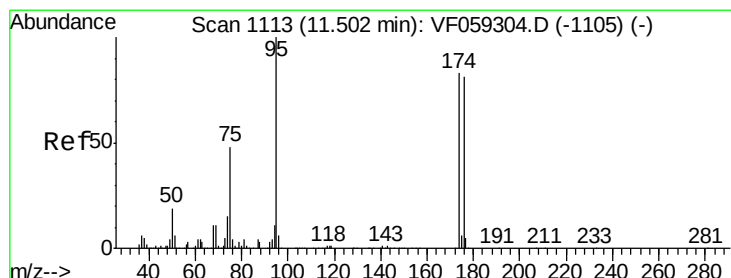
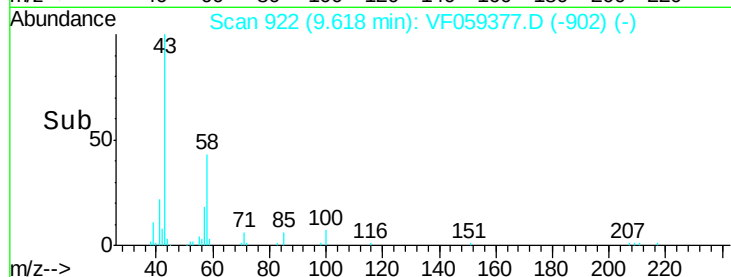
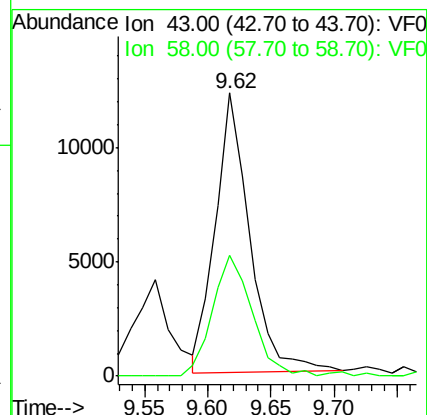
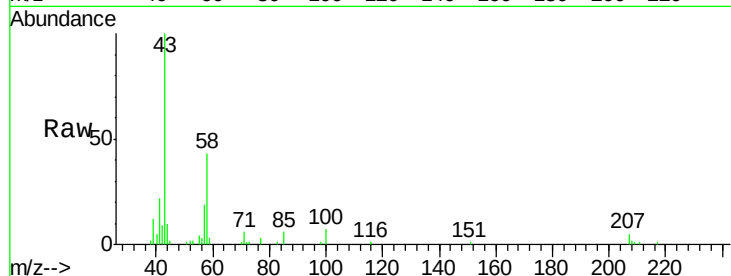
ClientSampled :

Tot Ion: 43 Resp: 23260

Ion Ratio Lower Upper

43 100

58 42.9 23.3 69.9



#62

4-Bromofluorobenzene

Concen: 44.920 ug/l

RT: 11.50 min Scan# 1113

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

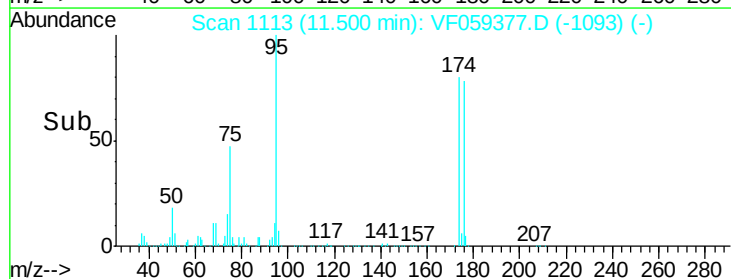
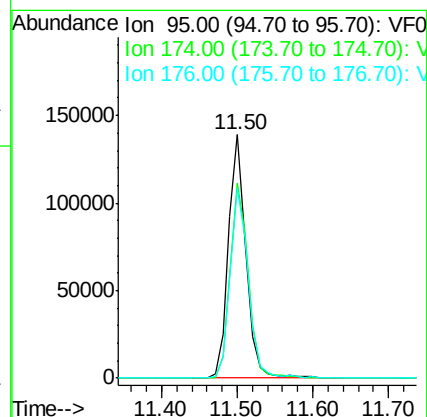
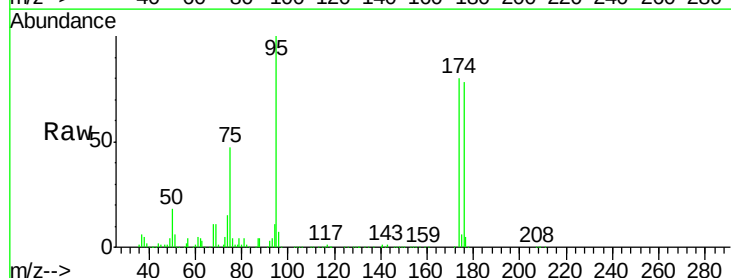
Tgt Ion: 95 Resp: 223131

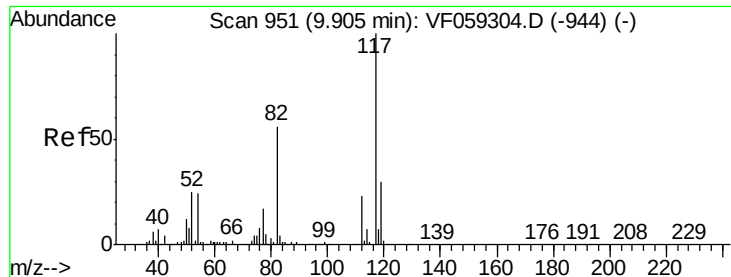
Ion Ratio Lower Upper

95 100

174 80.2 0.0 165.2

176 78.0 0.0 161.0

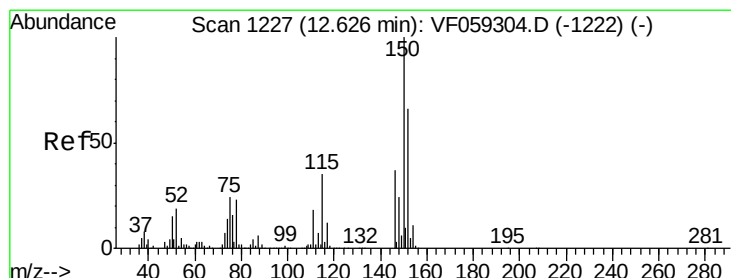
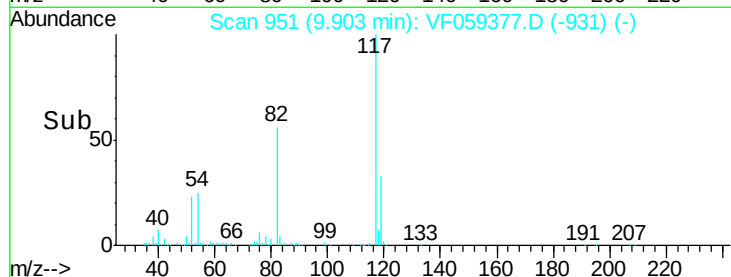
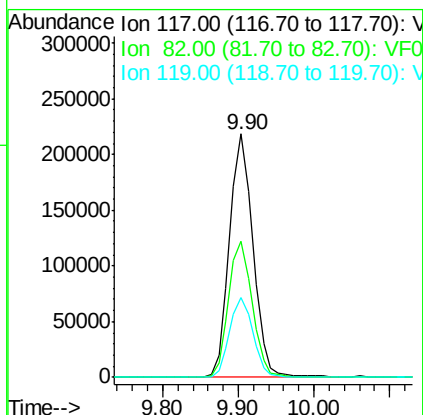
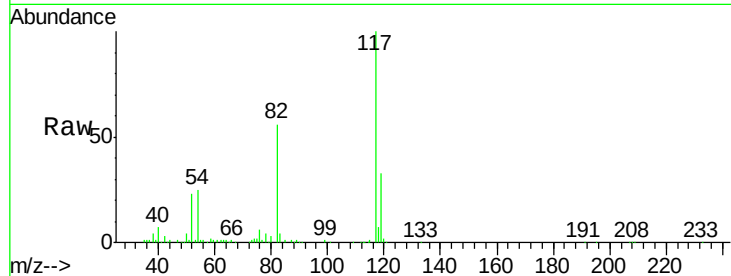




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.90 min Scan# 951  
Delta R.T. -0.00 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

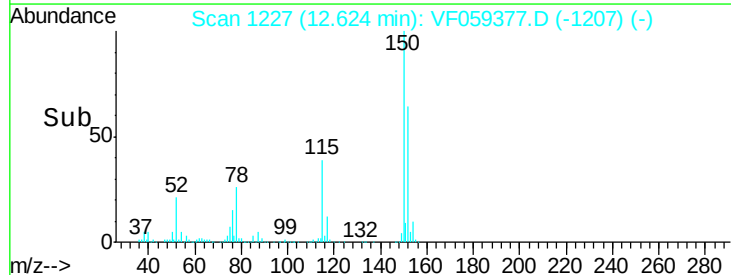
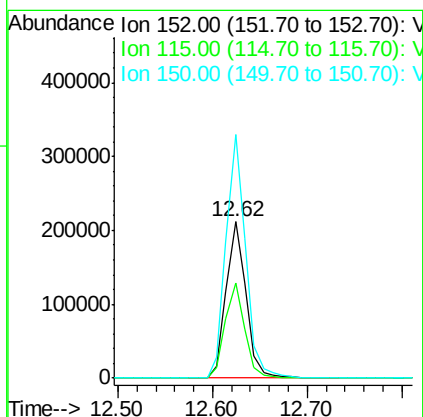
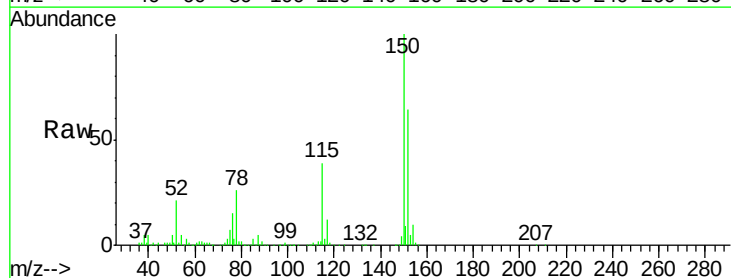
Instrument :  
MSVOA\_F  
ClientSampled :

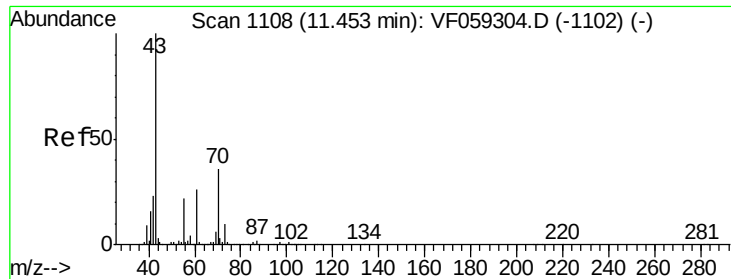
Tot Ion:117 Resp: 471984  
Ion Ratio Lower Upper  
117 100  
82 56.1 44.6 66.8  
119 32.7 24.1 36.1



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.62 min Scan# 1227  
Delta R.T. -0.00 min  
Lab File: VF059377.D  
Acq: 29 Jun 2018 15:00

Tgt Ion:152 Resp: 309509  
Ion Ratio Lower Upper  
152 100  
115 61.2 27.1 81.3  
150 155.6 0.0 305.2





#74

N-amvl acetate

Concen: 1.966 ug/l

RT: 11.45 min Scan# 1108

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

Instrument :

MSVOA\_F

ClientSampled :

Tot Ion: 43 Resp: 12865

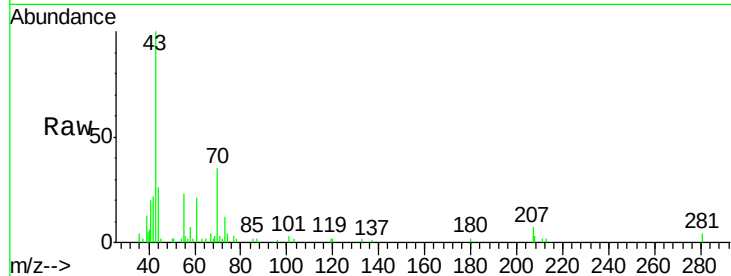
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 43  | 100   |       |       |
| 70  | 34.5  | 28.8  | 43.2  |
| 55  | 22.6  | 17.4  | 26.0  |
| 61  | 21.2  | 21.1  | 31.7  |

43 100

70 34.5 28.8 43.2

55 22.6 17.4 26.0

61 21.2 21.1 31.7



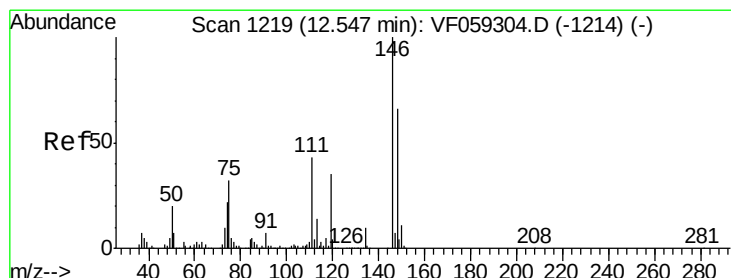
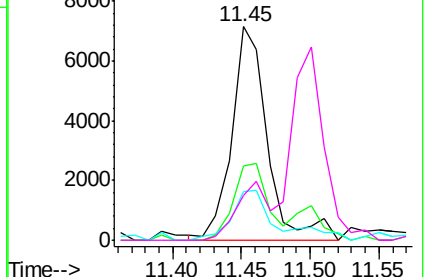
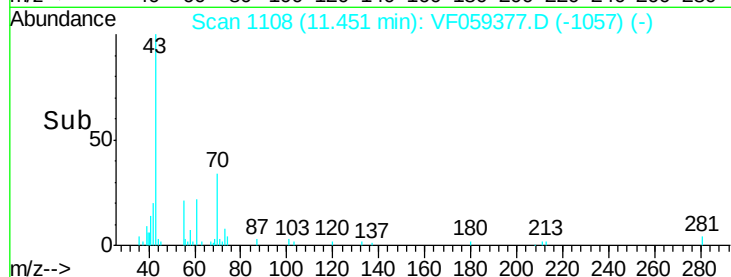
Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 70.00 (69.70 to 70.70): VF0

Ion 55.00 (54.70 to 55.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Time-->



#87

1,3-Dichlorobenzene

Concen: Below Cal

RT: 12.55 min Scan# 1219

Delta R.T. -0.00 min

Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

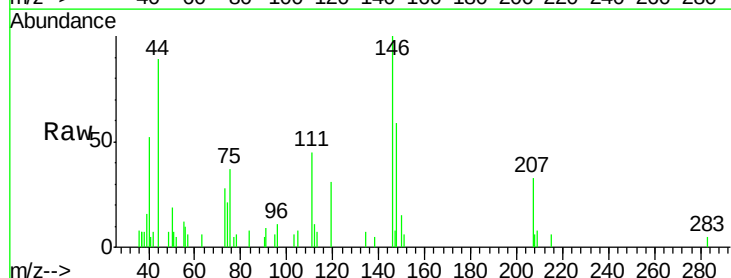
Tgt Ion: 146 Resp: 2982

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 146 | 100   |       |       |
| 111 | 45.2  | 21.4  | 64.2  |
| 148 | 58.6  | 32.8  | 98.4  |

146 100

111 45.2 21.4 64.2

148 58.6 32.8 98.4

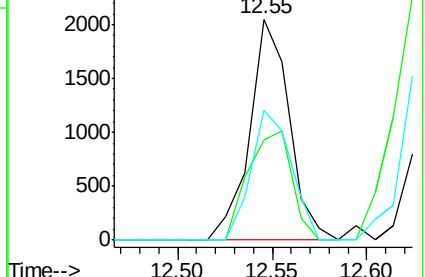
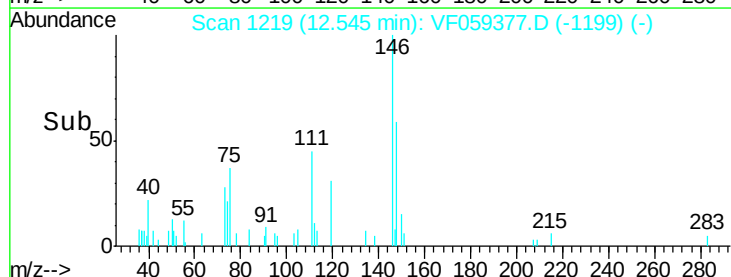


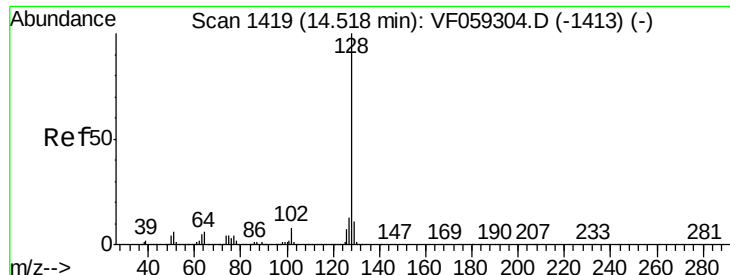
Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V

Time-->





#95

Naphthalene

Concen: 1.134 ug/l

RT: 14.52 min Scan# 1419

Delta R.T. -0.00 min

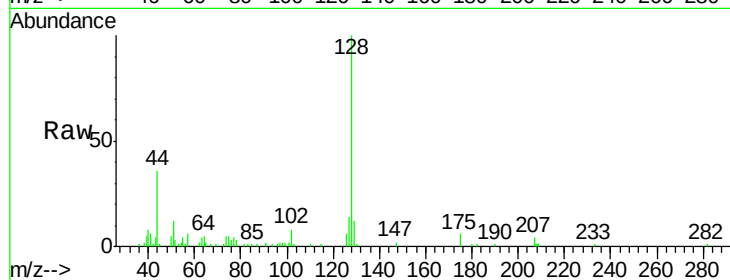
Lab File: VF059377.D

Acq: 29 Jun 2018 15:00

Instrument :

MSVOA\_F

ClientSampleId :



Tot Ion:128 Resp: 15926

Ion Ratio Lower Upper

128 100

127 13.8 10.1 15.1

129 11.7 8.8 13.2

Abundance Ion 128.00 (127.70 to 128.70): V  
 Ion 127.00 (126.70 to 127.70): V  
 Ion 129.00 (128.70 to 129.70): V

