

Data File : VF061307.D  
Acq On : 9 Jan 2019 18:06  
Operator : VA/AP  
Sample : K1082-30  
Misc : 5.63g/5mL/MSVOA-F/SOIL  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :  
SP-1-4

Quant Time: Jan 10 05:57:40 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F010819S.M  
Quant Title : SW846 8260  
QLast Update : Wed Jan 09 07:13:51 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.88  | 168  | 223801   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.61  | 114  | 413480   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 9.79  | 117  | 369727   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.56 | 152  | 185132   | 50.00 | ug/l  | 0.00     |

|                             |        |     |          |       |         |      |
|-----------------------------|--------|-----|----------|-------|---------|------|
| System Monitoring Compounds |        |     |          |       |         |      |
| 33) 1,2-Dichloroethane-d4   | 4.86   | 65  | 145260   | 58.31 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 116.62% |      |
| 35) Dibromofluoromethane    | 4.13   | 113 | 169391   | 53.54 | ug/l    | 0.02 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 107.08% |      |
| 50) Toluene-d8              | 7.57   | 98  | 440953   | 47.10 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 94.20%  |      |
| 62) 4-Bromofluorobenzene    | 11.42  | 95  | 201732   | 49.34 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 98.68%  |      |

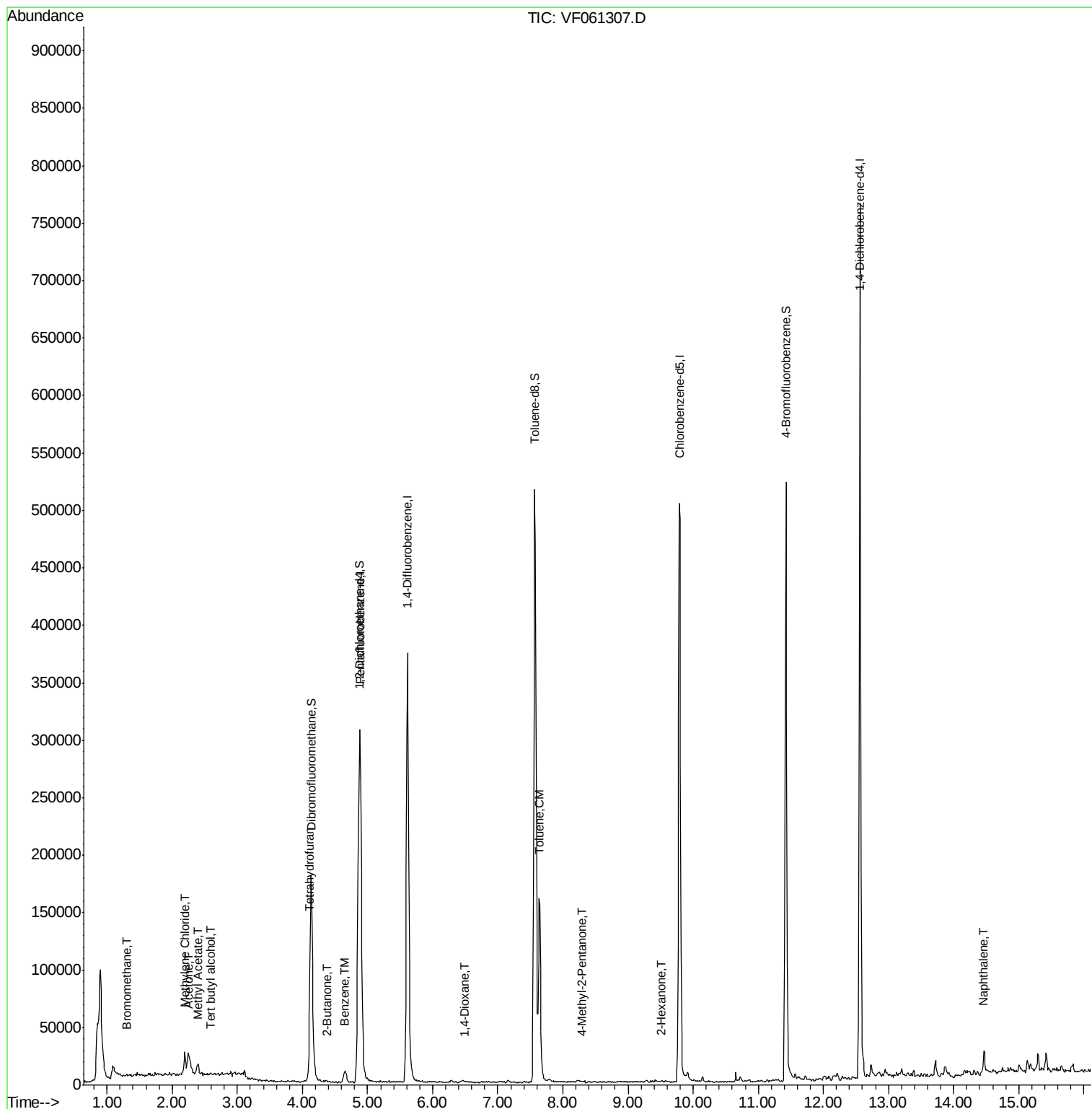
|                          |       |     |        |           |        |    |
|--------------------------|-------|-----|--------|-----------|--------|----|
| Target Compounds         |       |     | Qvalue |           |        |    |
| 5) Bromomethane          | 1.29  | 94  | 772    | 3.167     | ug/l # | 6  |
| 11) Tert butyl alcohol   | 2.58  | 59  | 291    | 2.918     | ug/l # | 76 |
| 13) Acrolein             | 2.08  | 56  | 302    | Below Cal |        | 89 |
| 16) Acetone              | 2.24  | 43  | 15109  | 26.074    | ug/l   | 98 |
| 18) Methyl Acetate       | 2.40  | 43  | 3373   | 2.959     | ug/l # | 65 |
| 20) Methylene Chloride   | 2.19  | 84  | 6804   | 2.775     | ug/l   | 88 |
| 25) 2-Butanone           | 4.38  | 43  | 2031   | 2.178     | ug/l # | 56 |
| 29) Tetrahydrofuran      | 4.10  | 42  | 405    | 1.039     | ug/l # | 49 |
| 40) Benzene              | 4.66  | 78  | 13069  | 1.159     | ug/l   | 91 |
| 49) 1,4-Dioxane          | 6.49  | 88  | 67     | 7.047     | ug/l # | 1  |
| 51) 4-Methyl-2-Pentanone | 8.29  | 43  | 1819   | 1.038     | ug/l # | 82 |
| 52) Toluene              | 7.65  | 92  | 87587  | 12.088    | ug/l   | 99 |
| 59) 2-Hexanone           | 9.52  | 43  | 1852   | 1.492     | ug/l   | 66 |
| 95) Naphthalene          | 14.46 | 128 | 11507  | 1.469     | ug/l   | 99 |

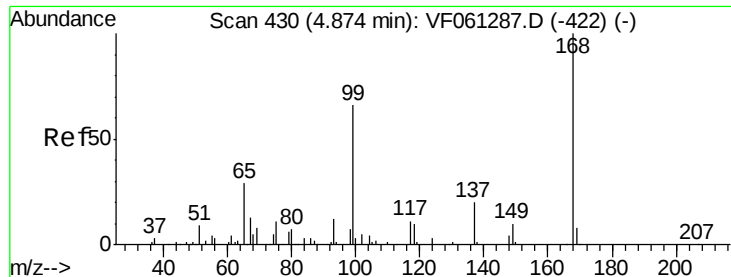
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 4.88 min Scan# 431

Delta R.T. 0.01 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampleId :

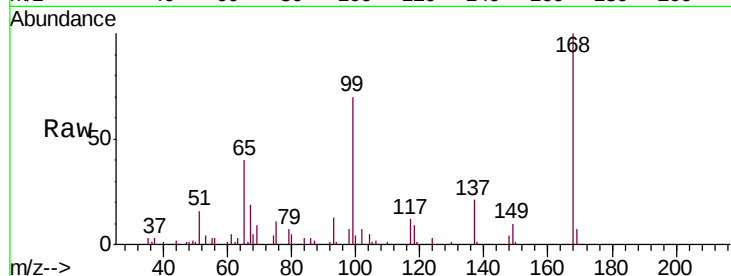
SP-1-4

Tgt Ion: 168 Resp: 223801

Ion Ratio Lower Upper

168 100

99 69.6 52.7 79.1



Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0

4.88

80000

60000

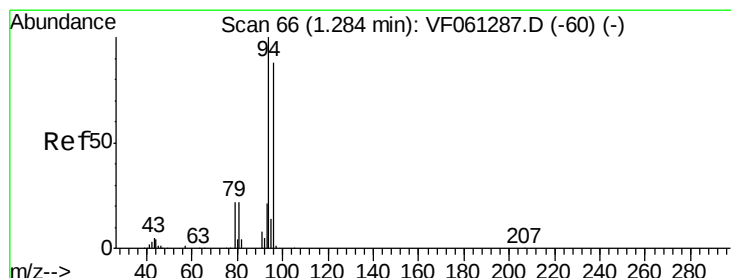
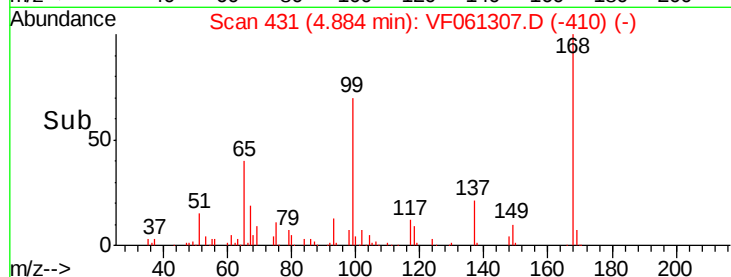
40000

20000

0

Time-->

4.70 4.80 4.90 5.00 5.10



#5

Bromomethane

Concen: 3.167 ug/l

RT: 1.29 min Scan# 67

Delta R.T. 0.01 min

Lab File: VF061307.D

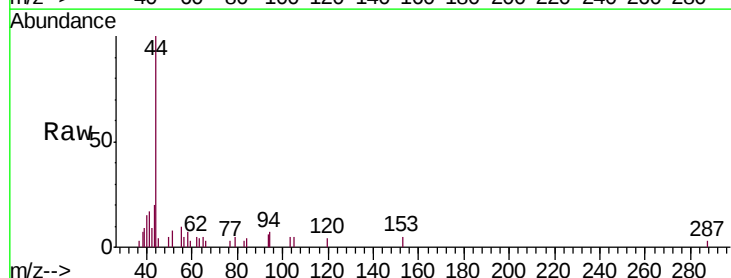
Acq: 9 Jan 2019 18:06

Tgt Ion: 94 Resp: 772

Ion Ratio Lower Upper

94 100

96 0.0 70.2 105.4#



Abundance Ion 94.00 (93.70 to 94.70): VF0

Ion 96.00 (95.70 to 96.70): VF0

1.29

400

300

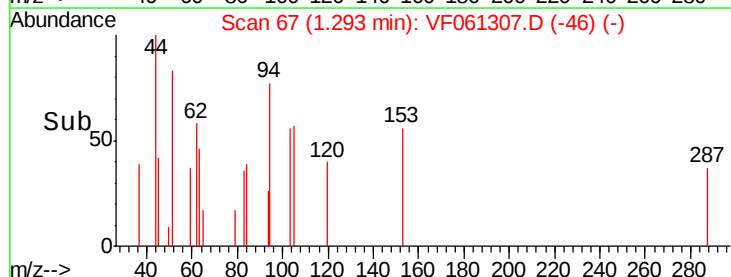
200

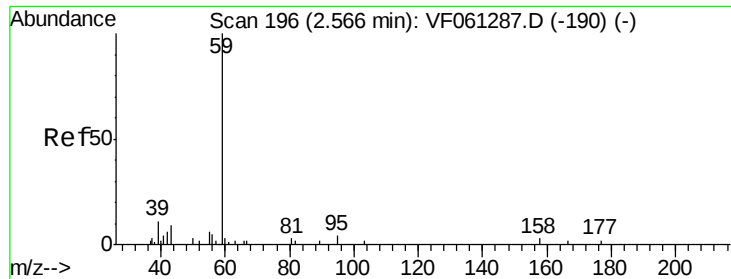
100

0

Time-->

1.30 1.35



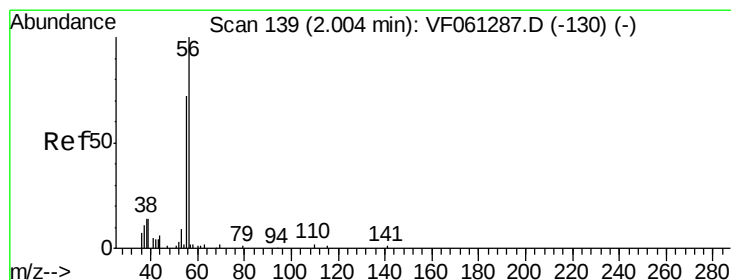
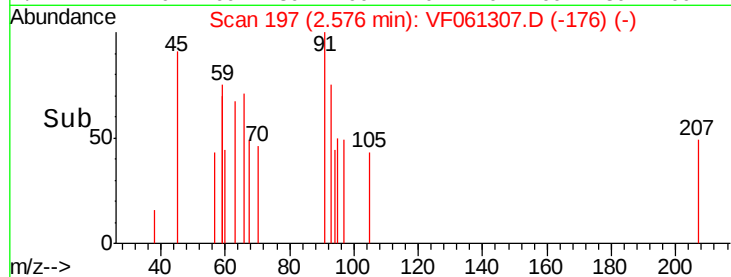
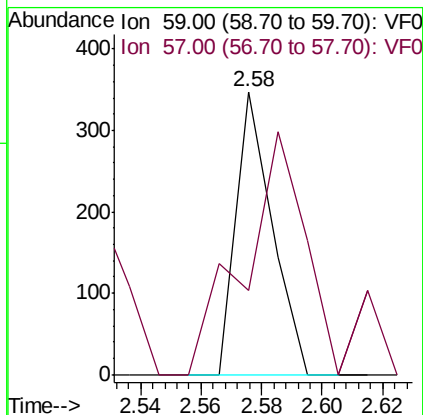
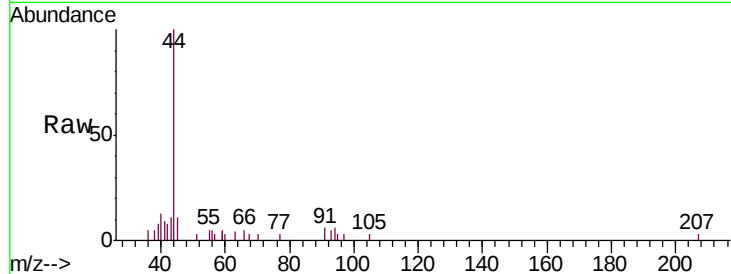


#11

Tert butyl alcohol  
 Concen: 2.918 ug/l  
 RT: 2.58 min Scan# 197  
 Delta R.T. 0.01 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 SP-1-4

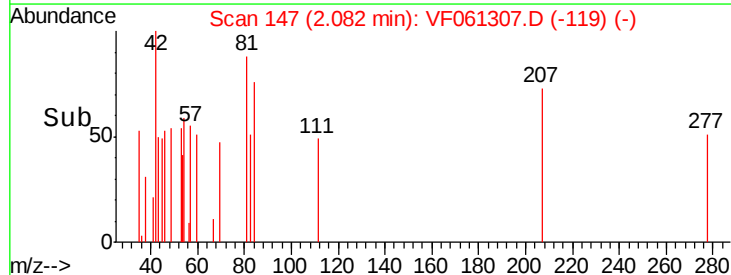
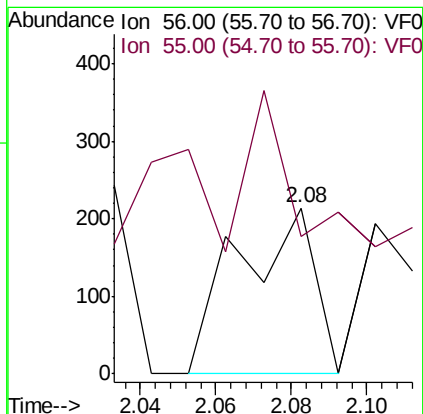
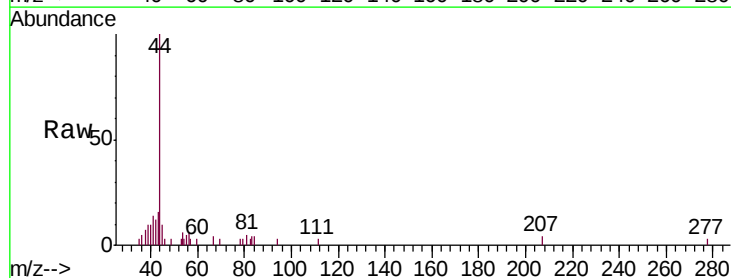
Tgt Ion: 59 Resp: 291  
 Ion Ratio Lower Upper  
 59 100  
 57 29.6 15.1 22.7#

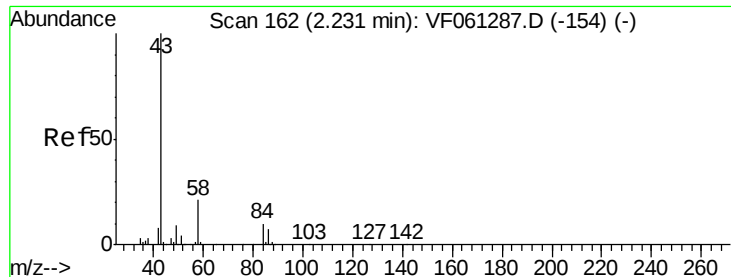


#13

Acrolein  
 Concen: Below Cal  
 RT: 2.08 min Scan# 147  
 Delta R.T. 0.08 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Tgt Ion: 56 Resp: 302  
 Ion Ratio Lower Upper  
 56 100  
 55 83.2 59.4 89.0





#16

Acetone

Concen: 26.074 ug/l

RT: 2.24 min Scan# 163

Delta R.T. 0.01 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampled :

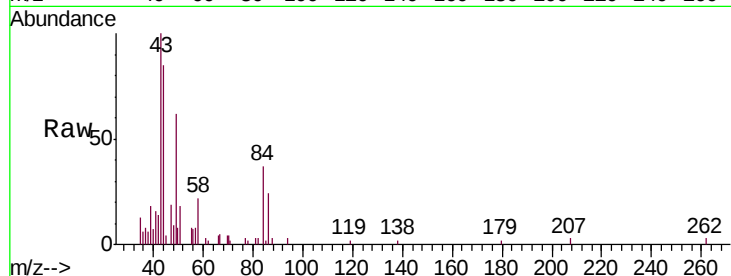
SP-1-4

Tgt Ion: 43 Resp: 15109

Ion Ratio Lower Upper

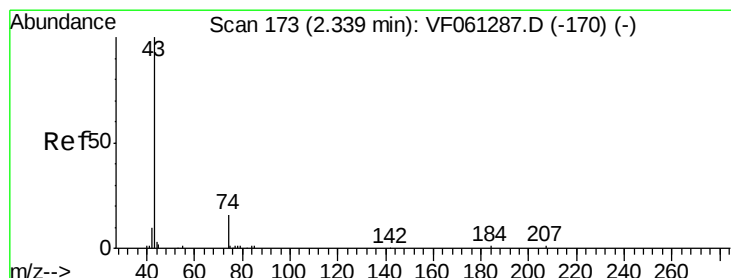
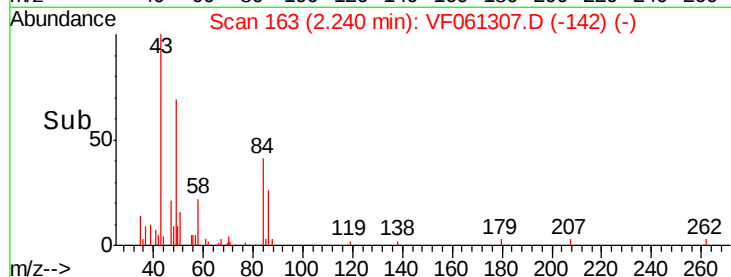
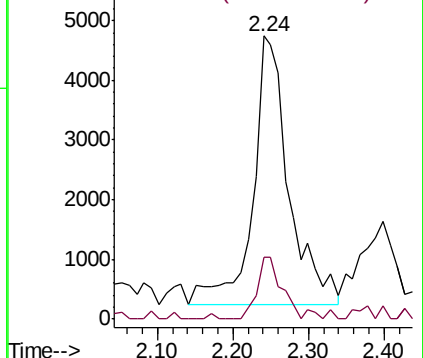
43 100

58 21.8 16.6 25.0



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0



#18

Methyl Acetate

Concen: 2.959 ug/l

RT: 2.40 min Scan# 179

Delta R.T. 0.06 min

Lab File: VF061307.D

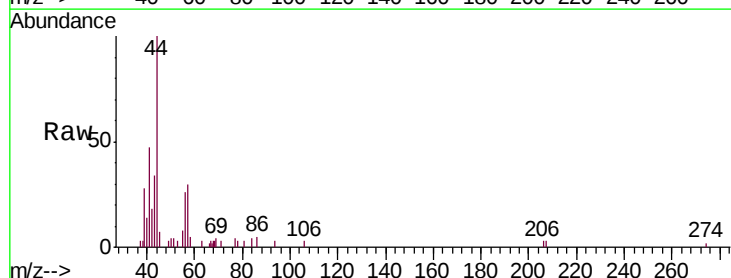
Acq: 9 Jan 2019 18:06

Tgt Ion: 43 Resp: 3373

Ion Ratio Lower Upper

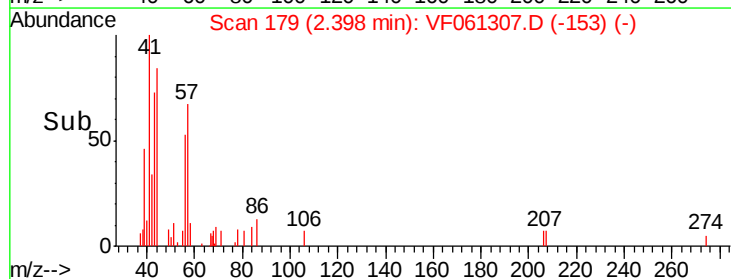
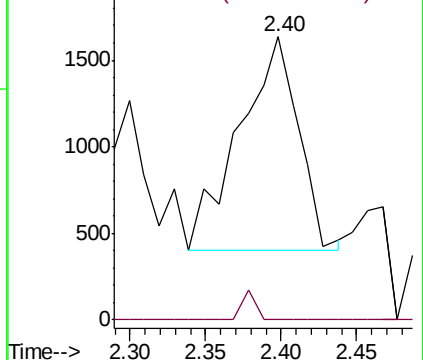
43 100

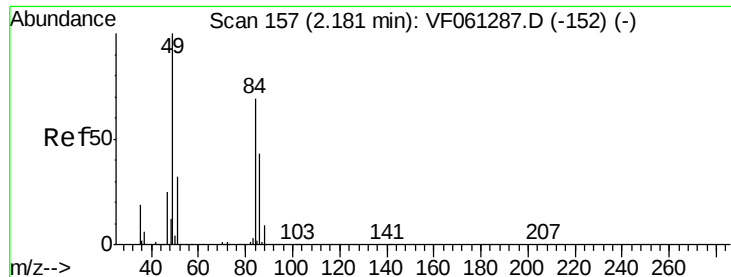
74 0.0 11.6 17.4#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 74.00 (73.70 to 74.70): VF0

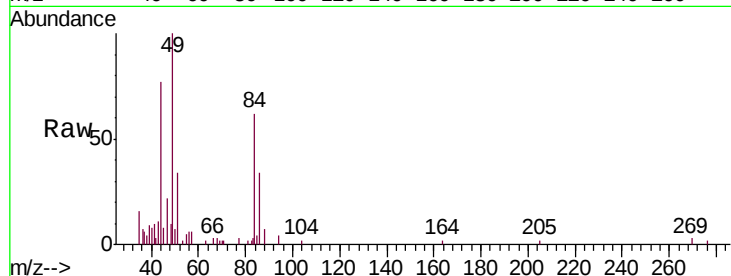




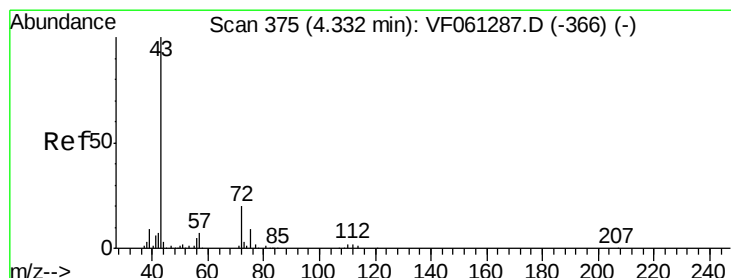
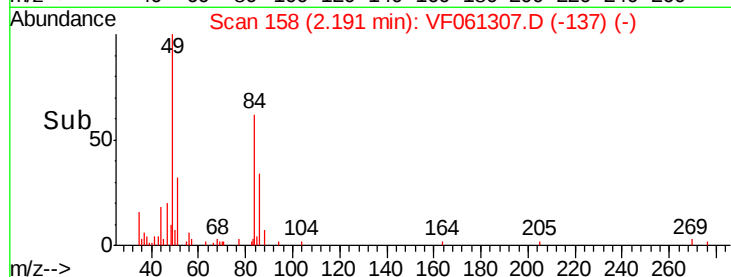
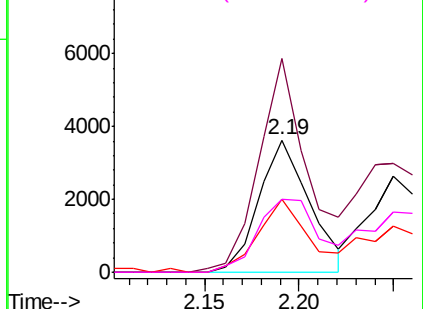
#20  
Methylene Chloride  
Concen: 2.775 ug/l  
RT: 2.19 min Scan# 158  
Delta R.T. 0.01 min  
Lab File: VF061307.D  
Acq: 9 Jan 2019 18:06

Instrument :  
MSVOA\_F  
ClientSampleId :  
SP-1-4

Tgt Ion: 84 Resp: 6804  
Ion Ratio Lower Upper  
84 100  
49 161.3 116.6 175.0  
51 54.8 37.7 56.5  
86 54.6 49.8 74.8

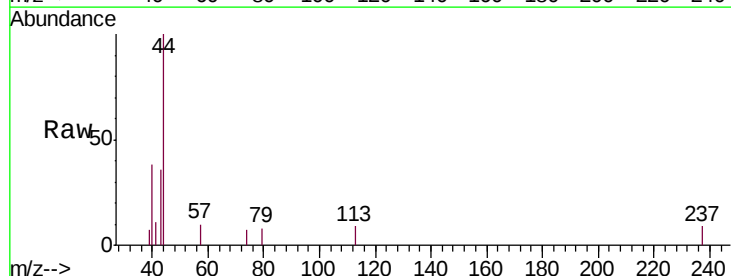


Abundance Ion 84.00 (83.70 to 84.70): VF0  
Ion 49.00 (48.70 to 49.70): VF0  
Ion 51.00 (50.70 to 51.70): VF0  
Ion 86.00 (85.70 to 86.70): VF0

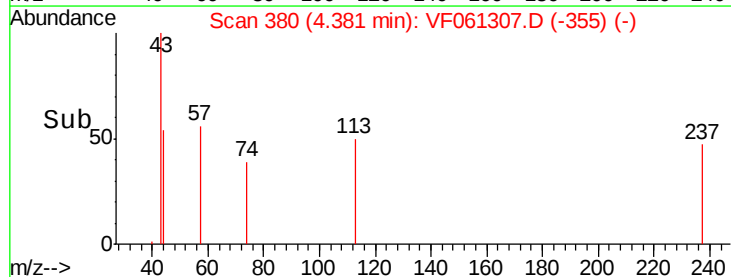
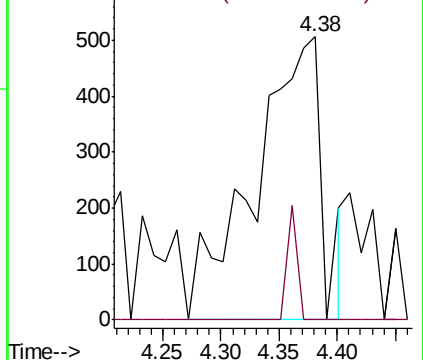


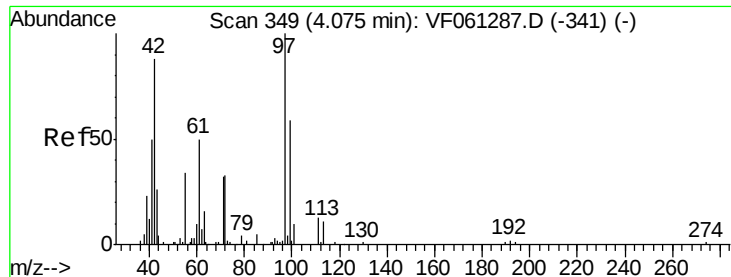
#25  
2-Butanone  
Concen: 2.178 ug/l  
RT: 4.38 min Scan# 380  
Delta R.T. 0.05 min  
Lab File: VF061307.D  
Acq: 9 Jan 2019 18:06

Tgt Ion: 43 Resp: 2031  
Ion Ratio Lower Upper  
43 100  
72 0.0 16.5 24.7#



Abundance Ion 43.00 (42.70 to 43.70): VF0  
Ion 72.00 (71.70 to 72.70): VF0





#29

Tetrahydrofuran

Concen: 1.039 ug/l

RT: 4.10 min Scan# 352

Delta R.T. 0.03 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampleId :

SP-1-4

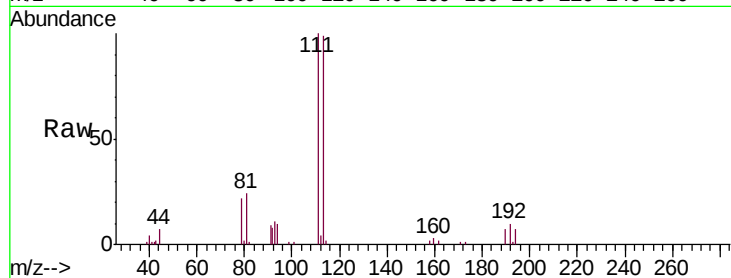
Tgt Ion: 42 Resp: 405

Ion Ratio Lower Upper

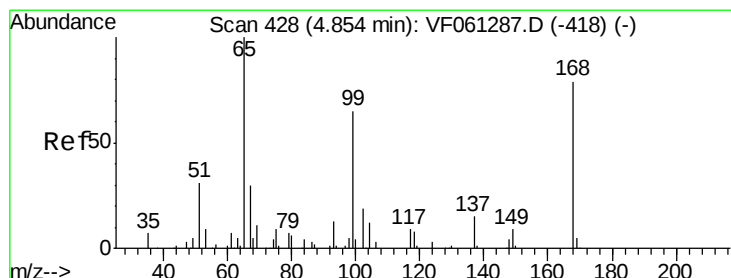
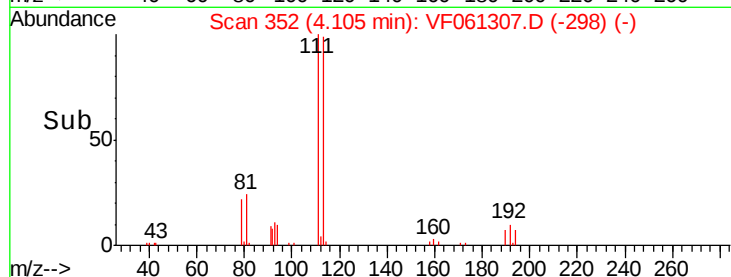
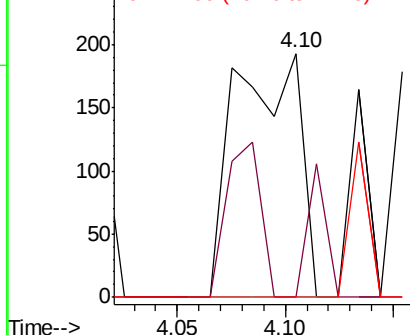
42 100

72 15.6 32.3 48.5#

71 0.0 29.5 44.3#



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: 58.313 ug/l

RT: 4.86 min Scan# 429

Delta R.T. 0.01 min

Lab File: VF061307.D

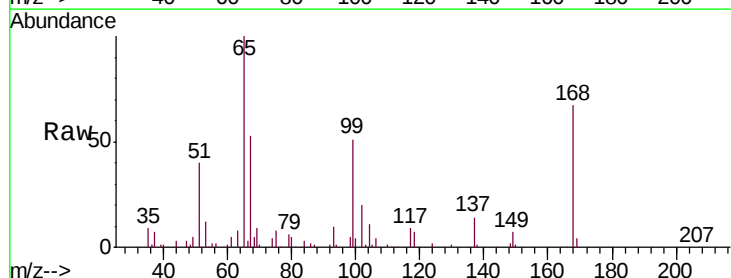
Acq: 9 Jan 2019 18:06

Tgt Ion: 65 Resp: 145260

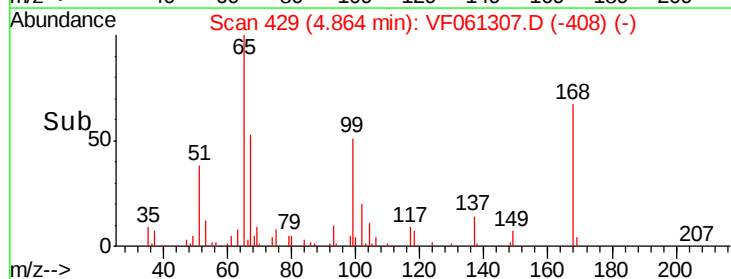
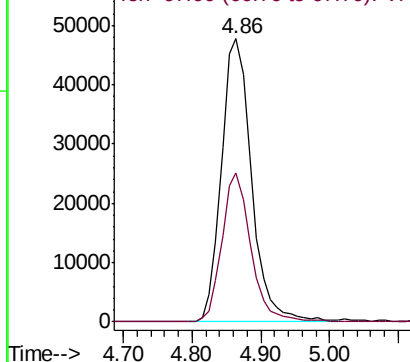
Ion Ratio Lower Upper

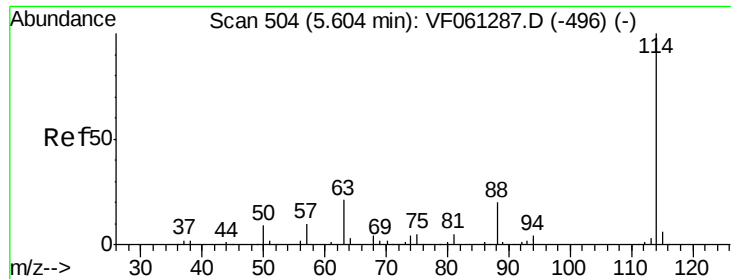
65 100

67 52.8 0.0 98.2



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

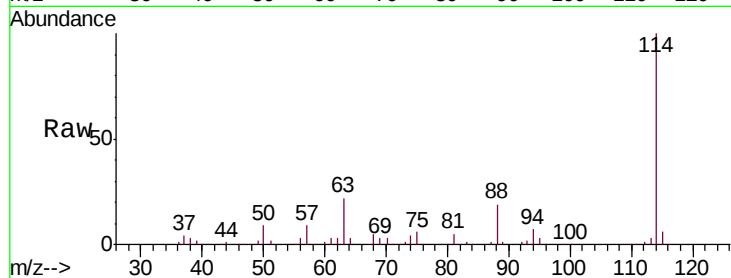




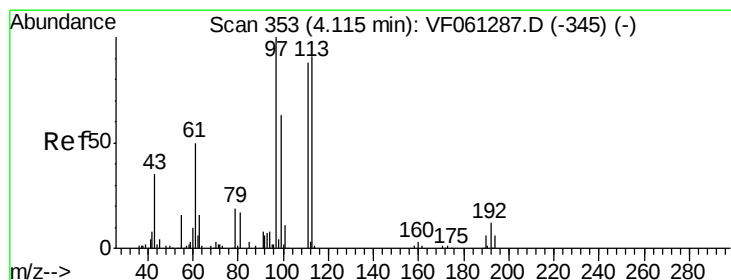
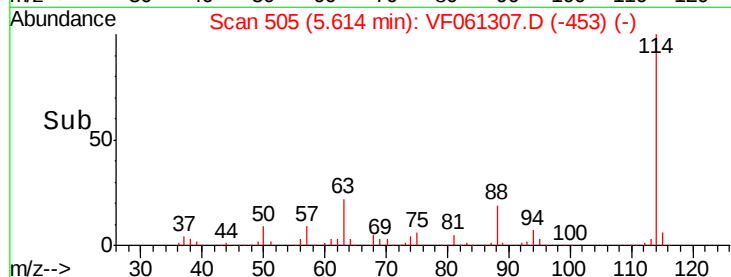
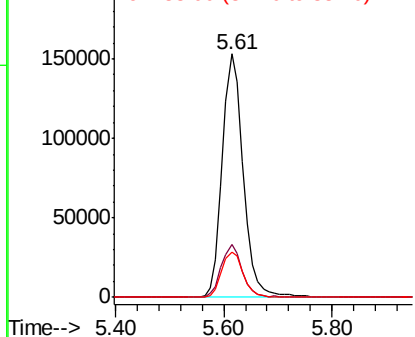
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 5.61 min Scan# 505  
 Delta R.T. 0.01 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 SP-1-4

Tgt Ion:114 Resp: 413480  
 Ion Ratio Lower Upper  
 114 100  
 63 21.7 0.0 42.8  
 88 18.7 0.0 40.0

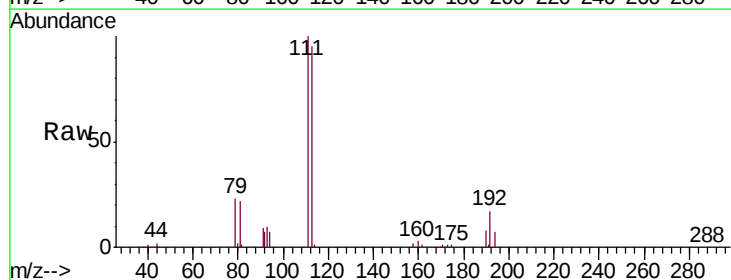


Abundance Ion 114.00 (113.70 to 114.70): V  
 Ion 63.00 (62.70 to 63.70): VF0  
 Ion 88.00 (87.70 to 88.70): VF0

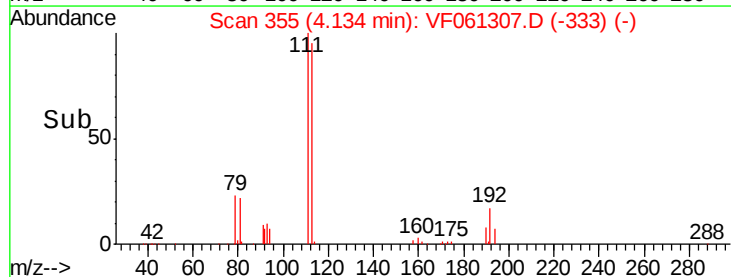
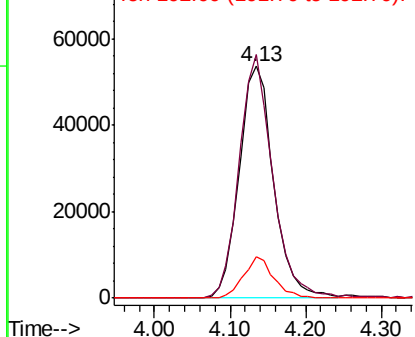


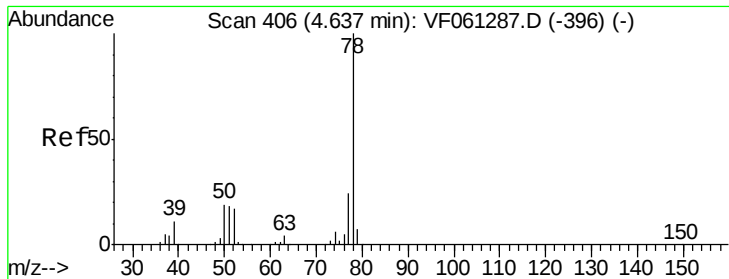
#35  
 Dibromofluoromethane  
 Concen: 53.540 ug/l  
 RT: 4.13 min Scan# 355  
 Delta R.T. 0.02 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Tgt Ion:113 Resp: 169391  
 Ion Ratio Lower Upper  
 113 100  
 111 105.1 78.0 117.0  
 192 17.6 10.6 16.0#



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





#40

Benzene

Concen: 1.159 ug/l

RT: 4.66 min Scan# 408

Delta R.T. 0.02 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampleId :

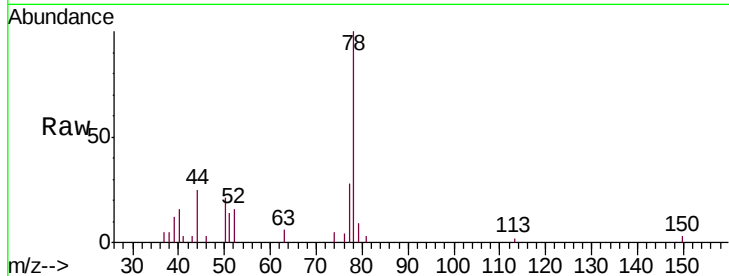
SP-1-4

Tgt Ion: 78 Resp: 13069

Ion Ratio Lower Upper

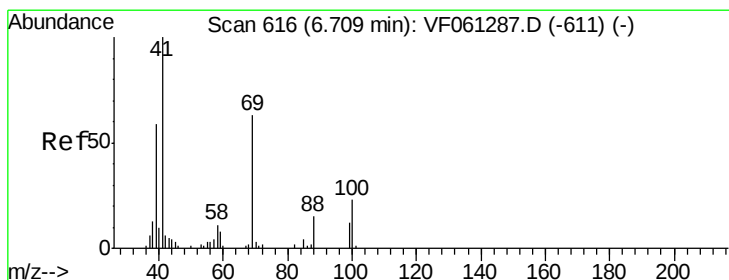
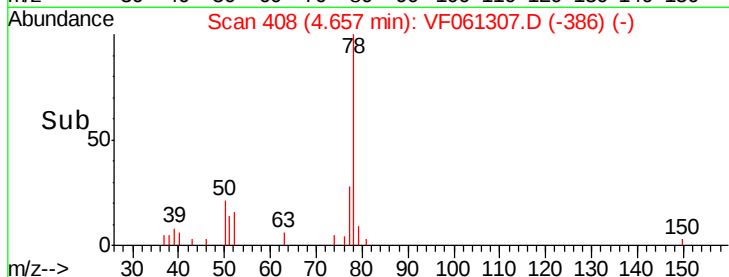
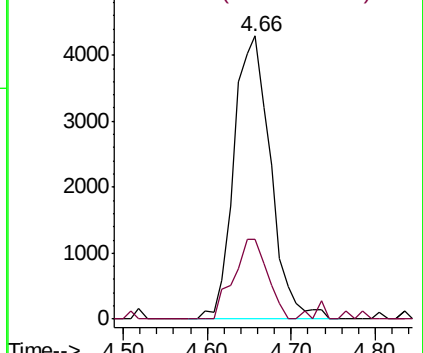
78 100

77 28.3 19.1 28.7



Abundance Ion 78.10 (77.80 to 78.80): VF0

Ion 77.00 (76.70 to 77.70): VF0



#49

1,4-Dioxane

Concen: 7.047 ug/l

RT: 6.49 min Scan# 594

Delta R.T. -0.22 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

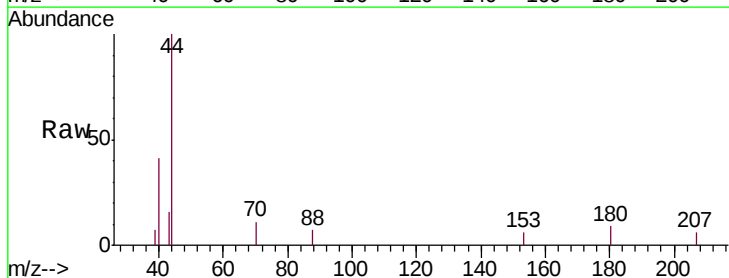
Tgt Ion: 88 Resp: 67

Ion Ratio Lower Upper

88 100

43 233.6 38.5 57.7#

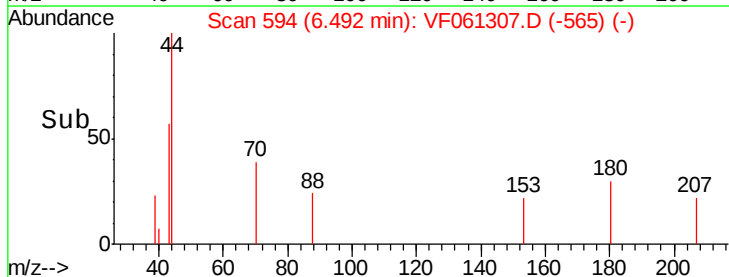
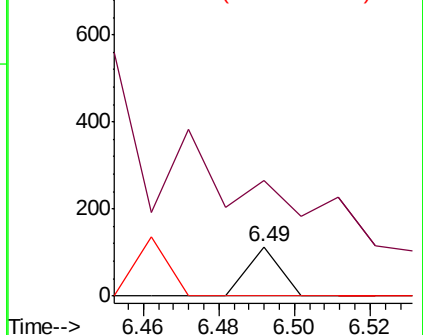
58 0.0 57.0 85.4#

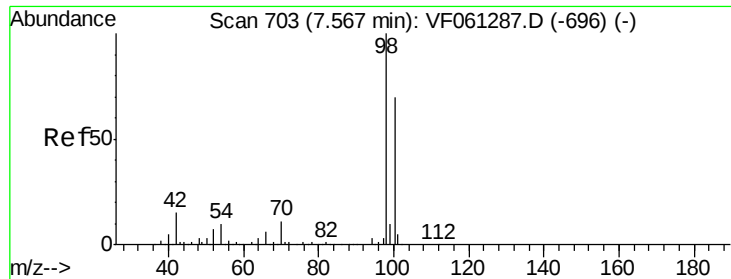


Abundance Ion 88.00 (87.70 to 88.70): VF0

Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0

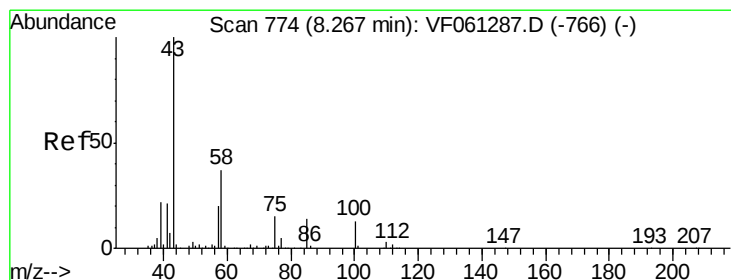
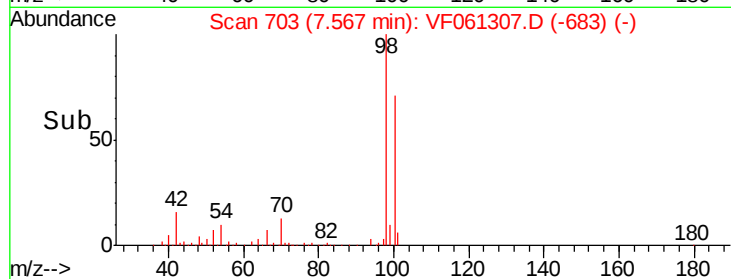
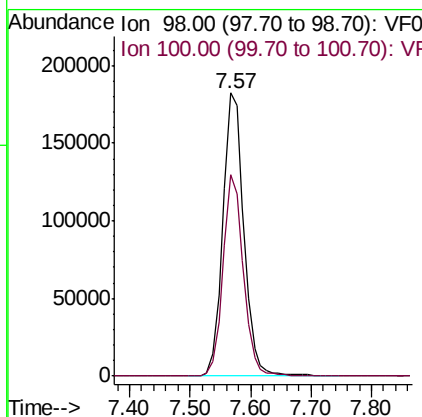
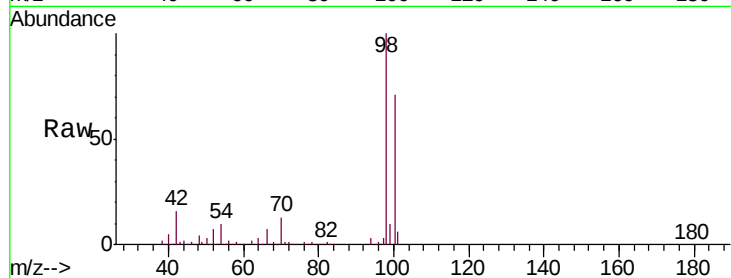




#50  
Toluene-d8  
Concen: 47.098 ug/l  
RT: 7.57 min Scan# 703  
Delta R.T. -0.00 min  
Lab File: VF061307.D  
Acq: 9 Jan 2019 18:06

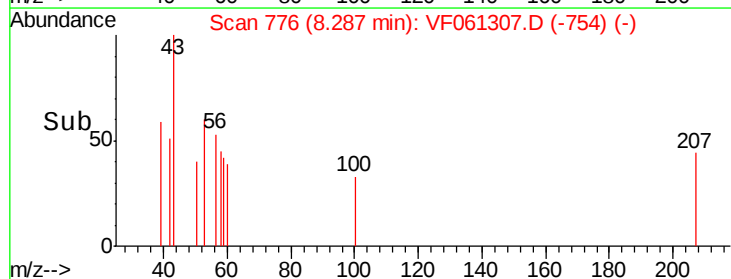
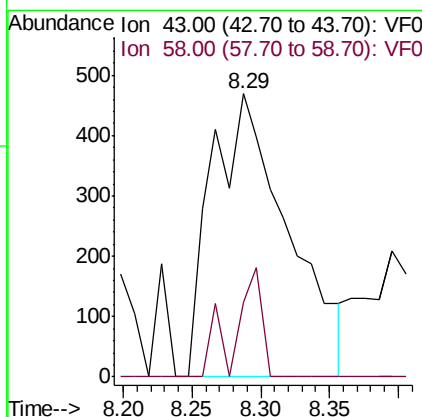
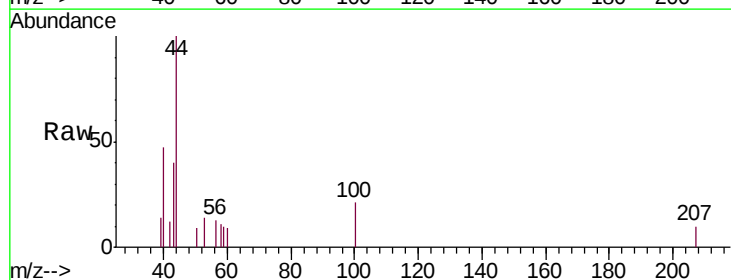
Instrument :  
MSVOA\_F  
ClientSampleId :  
SP-1-4

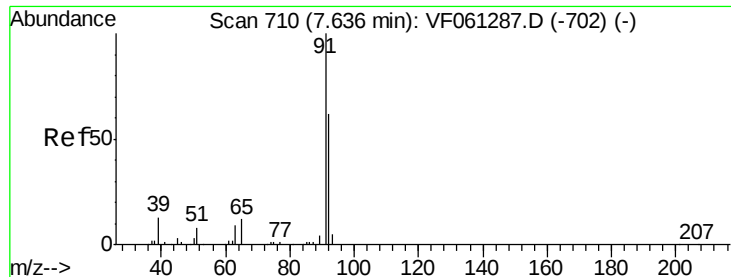
Tgt Ion: 98 Resp: 440953  
Ion Ratio Lower Upper  
98 100  
100 71.1 55.6 83.4



#51  
4-Methyl-2-Pentanone  
Concen: 1.038 ug/l  
RT: 8.29 min Scan# 776  
Delta R.T. 0.02 min  
Lab File: VF061307.D  
Acq: 9 Jan 2019 18:06

Tgt Ion: 43 Resp: 1819  
Ion Ratio Lower Upper  
43 100  
58 26.4 29.6 44.4#





#52

Toluene

Concen: 12.088 ug/l

RT: 7.65 min Scan# 711

Delta R.T. 0.01 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampled :

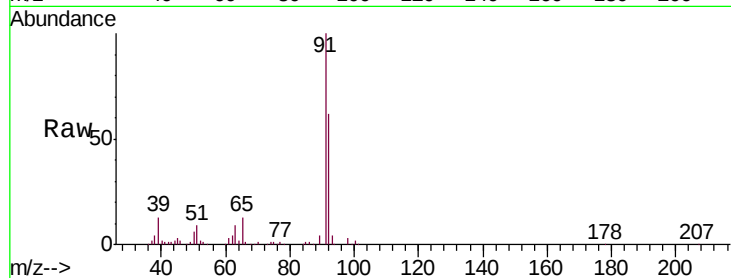
SP-1-4

Tgt Ion: 92 Resp: 87587

Ion Ratio Lower Upper

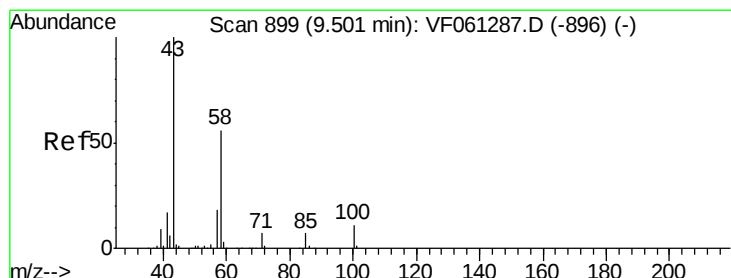
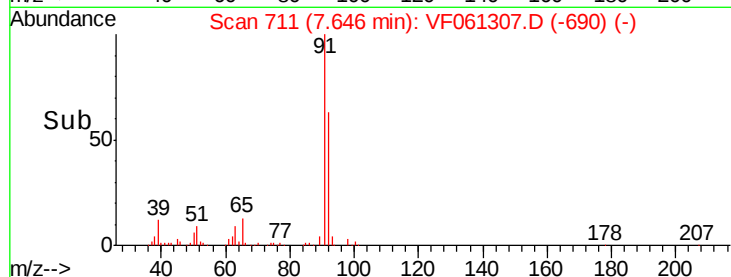
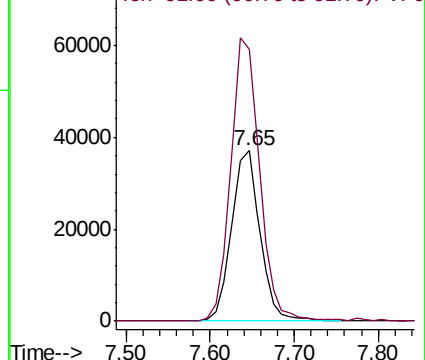
92 100

91 160.1 129.2 193.8



Abundance Ion 92.00 (91.70 to 92.70): VF0

Ion 91.00 (90.70 to 91.70): VF0



#59

2-Hexanone

Concen: 1.492 ug/l

RT: 9.52 min Scan# 901

Delta R.T. 0.02 min

Lab File: VF061307.D

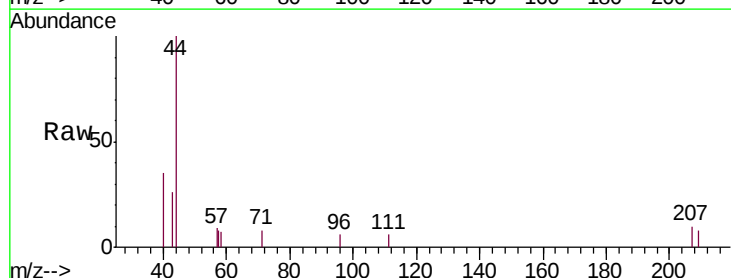
Acq: 9 Jan 2019 18:06

Tgt Ion: 43 Resp: 1852

Ion Ratio Lower Upper

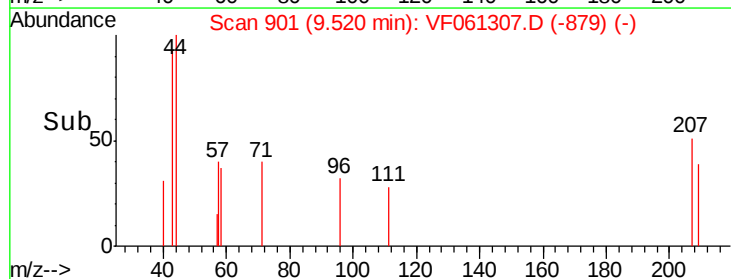
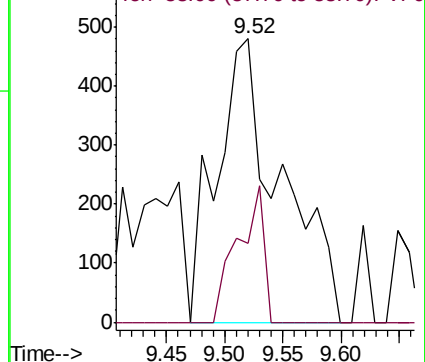
43 100

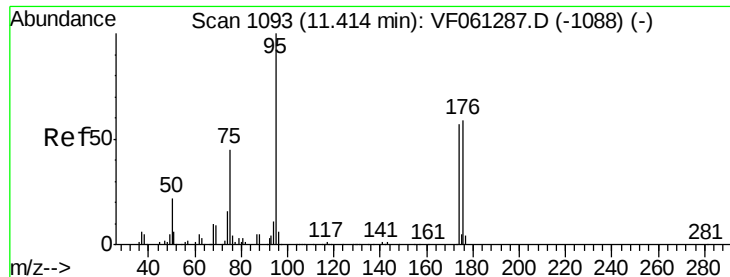
58 27.7 25.6 76.8



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0





#62

4-Bromofluorobenzene

Concen: 49.345 ug/l

RT: 11.42 min Scan# 1094

Delta R.T. 0.01 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

Instrument :

MSVOA\_F

ClientSampled :

SP-1-4

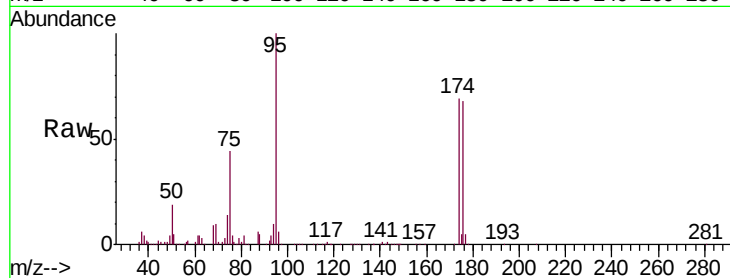
Tgt Ion: 95 Resp: 201732

Ion Ratio Lower Upper

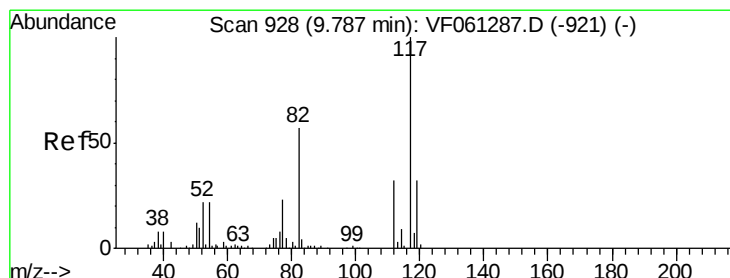
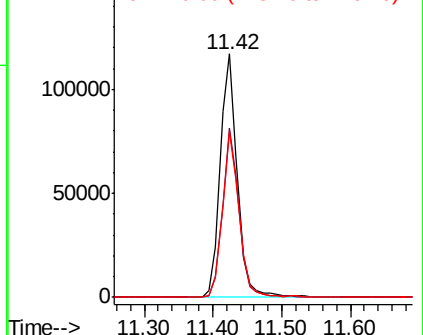
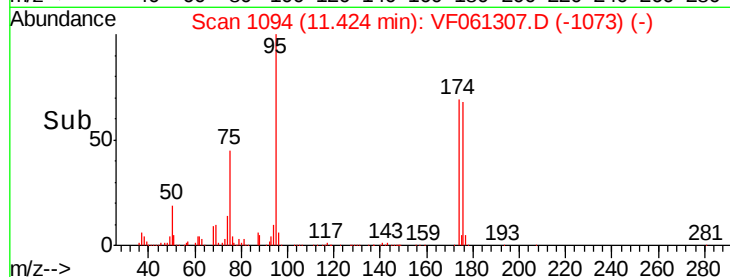
95 100

174 69.4 0.0 114.2

176 67.7 0.0 117.8



Abundance Ion 95.00 (94.70 to 95.70): VF061307.D (-1073) (-)



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 9.79 min Scan# 928

Delta R.T. -0.00 min

Lab File: VF061307.D

Acq: 9 Jan 2019 18:06

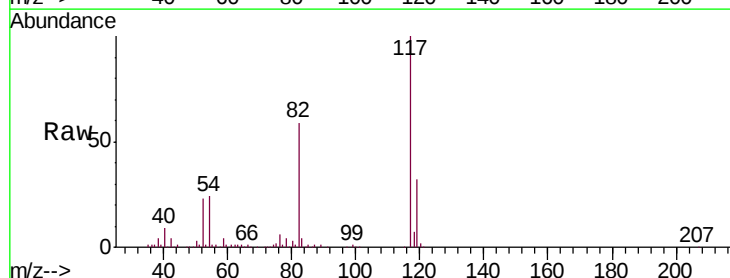
Tgt Ion: 117 Resp: 369727

Ion Ratio Lower Upper

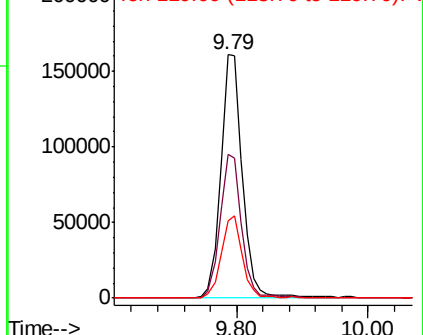
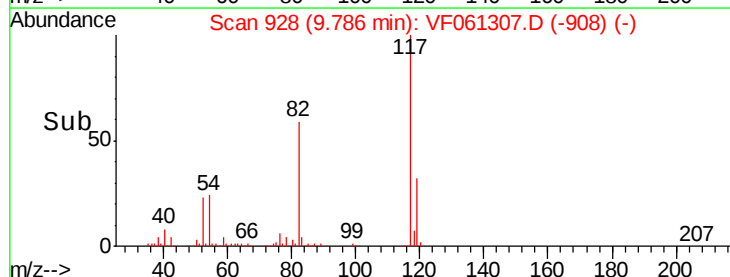
117 100

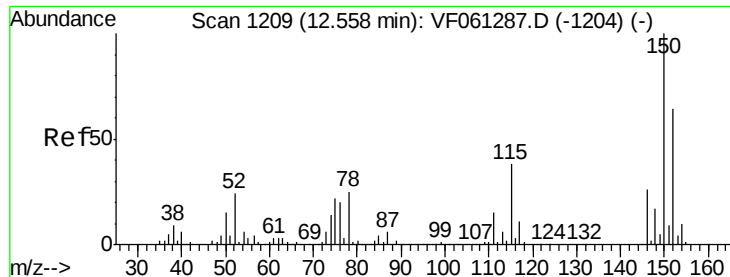
82 58.8 45.3 67.9

119 31.7 25.4 38.0



Abundance Ion 117.00 (116.70 to 117.70): VF061307.D (-908) (-)

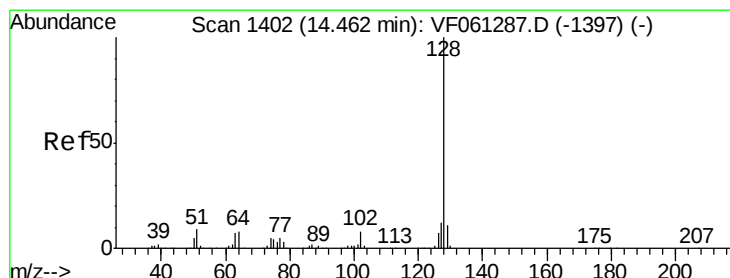
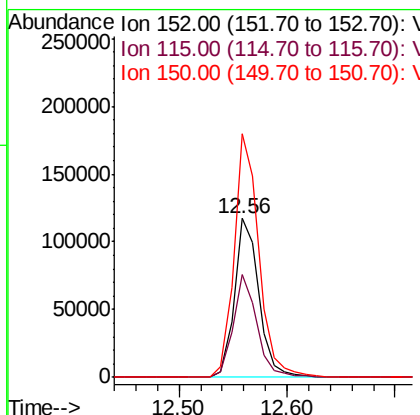
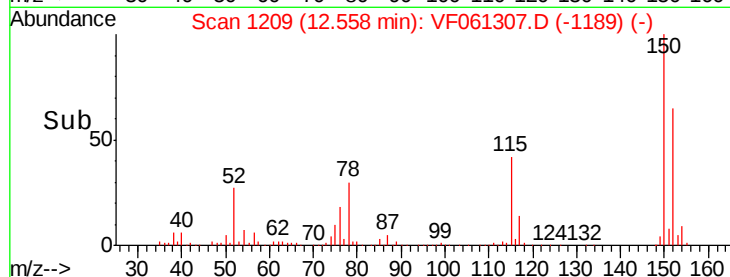
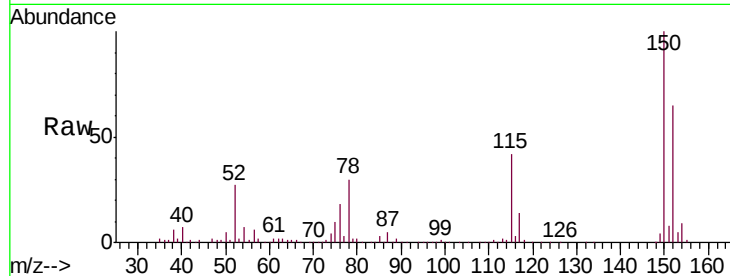




#72  
 1,4-Dichlorobenzene-d4  
 Concen: 50.000 ug/l  
 RT: 12.56 min Scan# 1209  
 Delta R.T. -0.00 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Instrument :  
 MSVOA\_F  
 ClientSampled :  
 SP-1-4

Tgt Ion:152 Resp: 185132  
 Ion Ratio Lower Upper  
 152 100  
 115 65.1 29.6 88.9  
 150 153.5 0.0 315.4



#95  
 Naphthalene  
 Concen: 1.469 ug/l  
 RT: 14.46 min Scan# 1402  
 Delta R.T. -0.00 min  
 Lab File: VF061307.D  
 Acq: 9 Jan 2019 18:06

Tgt Ion:128 Resp: 11507  
 Ion Ratio Lower Upper  
 128 100  
 127 11.1 9.4 14.0  
 129 11.5 8.8 13.2

