

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF112718\  
 Data File : VF060848.D  
 Acq On : 27 Nov 2018 19:47  
 Operator : VA/AP  
 Sample : J6082-01RE  
 Misc : 7.07g/5mL/MSVOA-F/SOIL  
 ALS Vial : 15 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 S49-0490RE

Quant Time: Nov 28 03:11:14 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F112618S.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Nov 27 01:36:26 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.91  | 168  | 183335   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.63  | 114  | 294778   | 50.00 | ug/l  | -0.01    |
| 63) Chlorobenzene-d5       | 9.81  | 117  | 259854   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.57 | 152  | 138657   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 4.88  | 65   | 98938    | 45.81 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 91.62% |          |
| 35) Dibromofluoromethane    | 4.15  | 113  | 116232   | 49.70 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 99.40% |          |
| 50) Toluene-d8              | 7.59  | 98   | 324212   | 47.06 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 94.12% |          |
| 62) 4-Bromofluorobenzene    | 11.44 | 95   | 138493   | 44.24 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 88.48% |          |

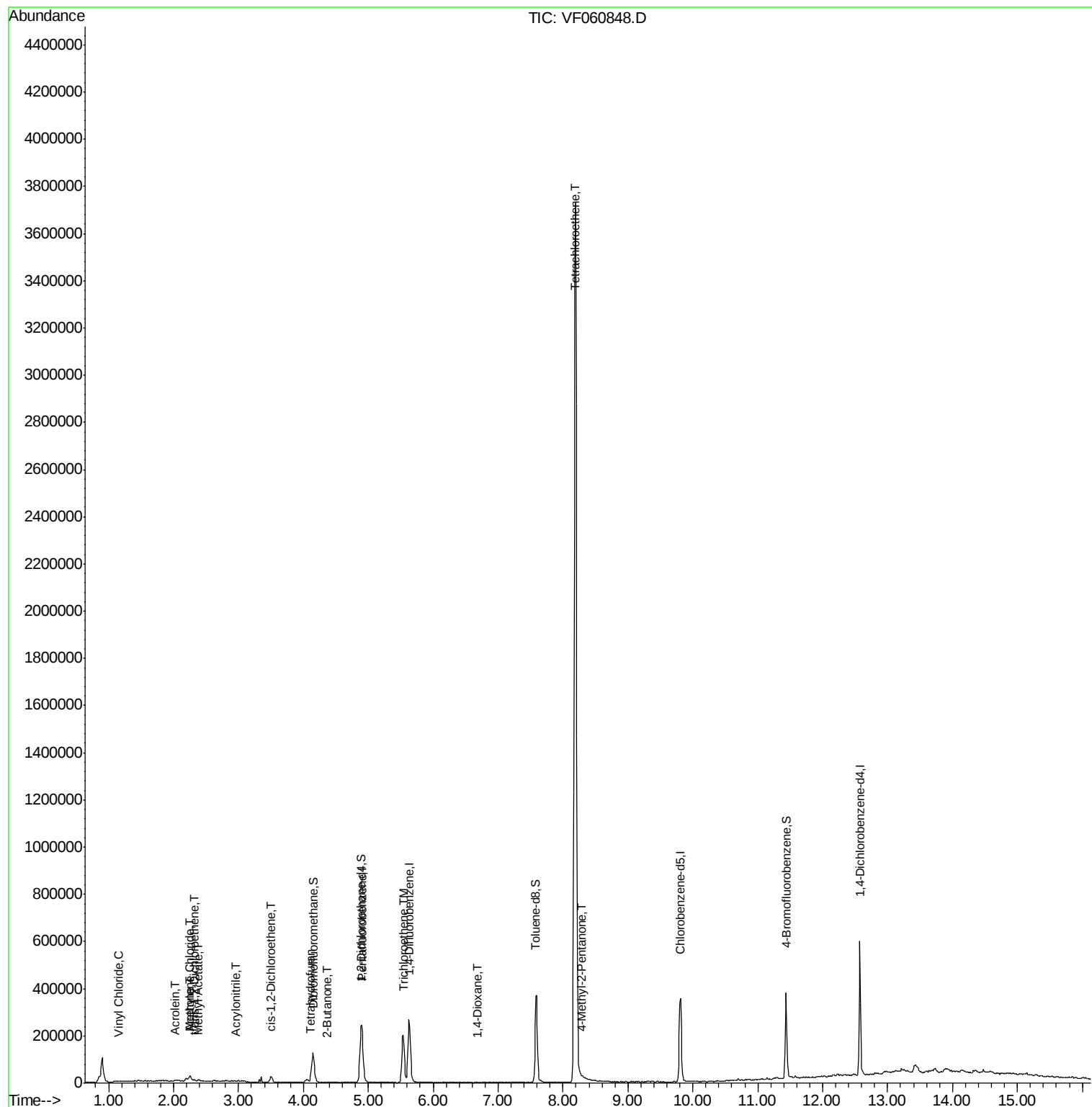
| Target Compounds             | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|------------------------------|-------|------|----------|-----------|--------|--------|
| 4) Vinyl Chloride            | 1.14  | 62   | 1812     | 1.089     | ug/l # | 42     |
| 13) Acrolein                 | 2.02  | 56   | 532      | 6.342     | ug/l # | 1      |
| 15) Acrylonitrile            | 2.96  | 53   | 284      | 1.431     | ug/l # | 26     |
| 16) Acetone                  | 2.25  | 43   | 16384    | 41.138    | ug/l # | 93     |
| 18) Methyl Acetate           | 2.39  | 43   | 3558     | 3.799     | ug/l # | 61     |
| 20) Methylene Chloride       | 2.24  | 84   | 8551     | 5.853     | ug/l # | 93     |
| 21) trans-1,2-Dichloroethene | 2.33  | 96   | 1573     | 1.124     | ug/l   | 88     |
| 25) 2-Butanone               | 4.37  | 43   | 3485     | 5.059     | ug/l # | 88     |
| 27) cis-1,2-Dichloroethene   | 3.50  | 96   | 14156    | 6.213     | ug/l   | 94     |
| 29) Tetrahydrofuran          | 4.10  | 42   | 326      | 1.116     | ug/l # | 37     |
| 41) Methacrylonitrile        | 4.76  | 41   | 306      | Below Cal | #      | 23     |
| 43) Isopropyl Acetate        | 7.00  | 43   | 284      | Below Cal | #      | 49     |
| 44) Trichloroethene          | 5.53  | 130  | 91289    | 38.653    | ug/l   | 97     |
| 49) 1,4-Dioxane              | 6.68  | 88   | 69       | 7.839     | ug/l # | 23     |
| 51) 4-Methyl-2-Pentanone     | 8.30  | 43   | 1987     | 1.622     | ug/l # | 74     |
| 64) Tetrachloroethene        | 8.19  | 164  | 1107514  | 558.006   | ug/l   | 95     |
| 95) Naphthalene              | 14.48 | 128  | 7912     | Below Cal | #      | 92     |

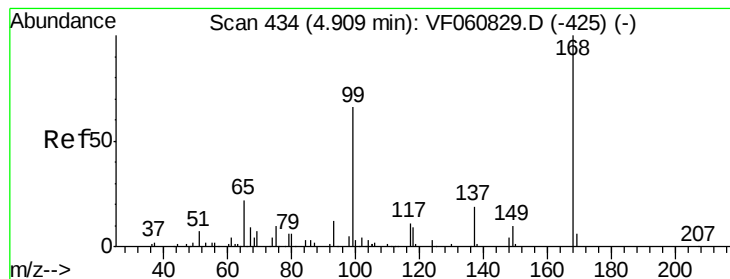
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :  
MSVOA\_F  
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Quant Time: Nov 28 03:11:14 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F112618S.M  
Quant Title : SW846 8260  
QLast Update : Tue Nov 27 01:36:26 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 4.91 min Scan# 434

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

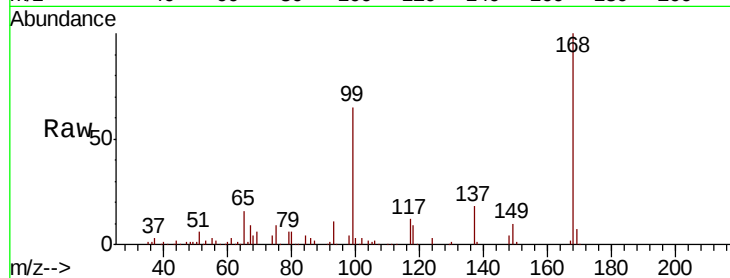
S49-0490RE

Tot Ion:168 Resp: 183335

Ion Ratio Lower Upper

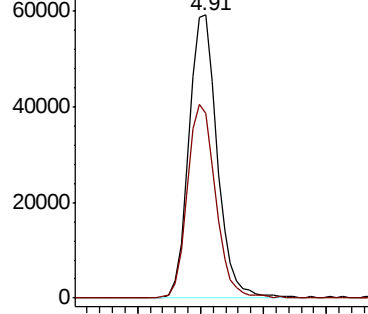
168 100

99 65.2 52.6 79.0

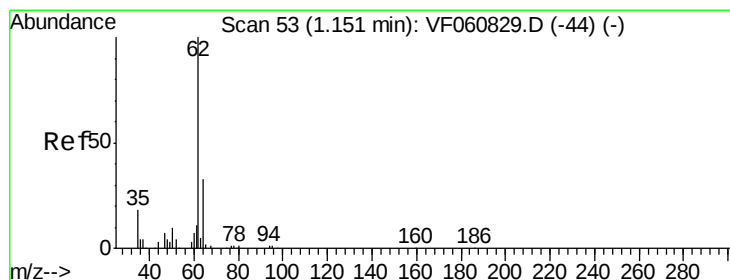
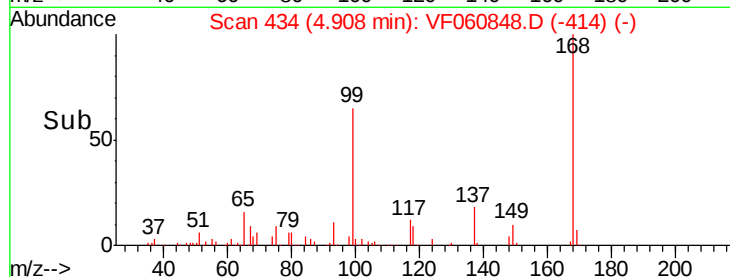


Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0



Time-->



#4

Vinyl Chloride

Concen: 1.089 ug/l

RT: 1.14 min Scan# 52

Delta R.T. -0.01 min

Lab File: VF060848.D

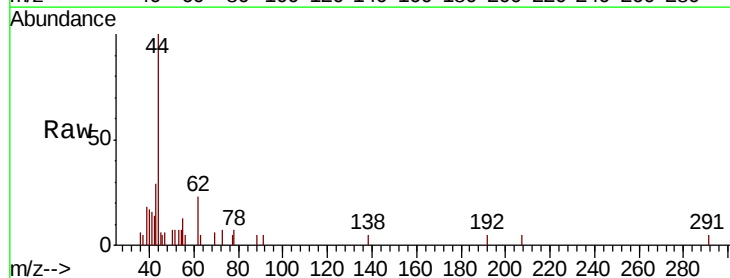
Acq: 27 Nov 2018 19:47

Tgt Ion: 62 Resp: 1812

Ion Ratio Lower Upper

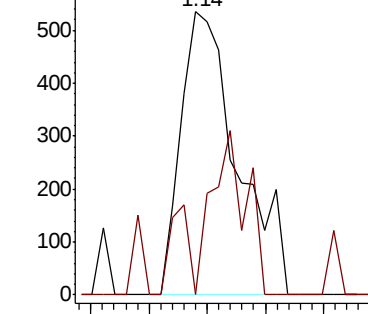
62 100

64 0.0 26.4 39.6#

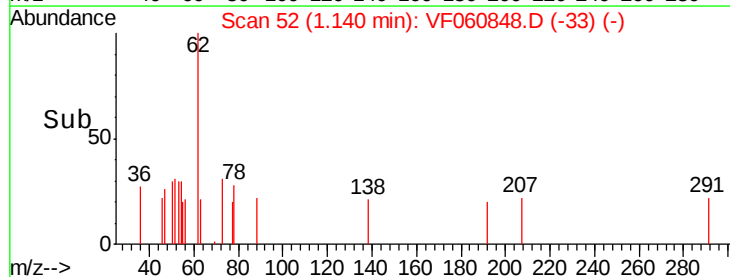


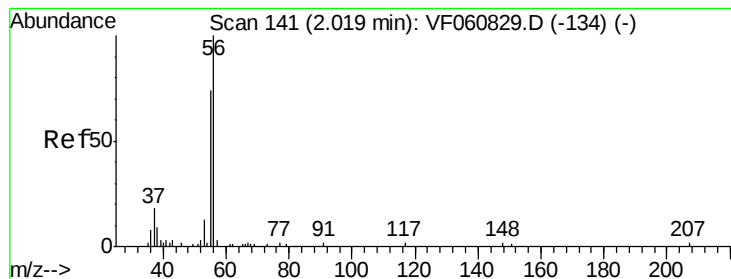
Abundance Ion 62.00 (61.70 to 62.70): VF0

Ion 64.00 (63.70 to 64.70): VF0



Time-->





#13

Acrolein

Concen: 6.342 ug/l

RT: 2.02 min Scan# 141

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampled :

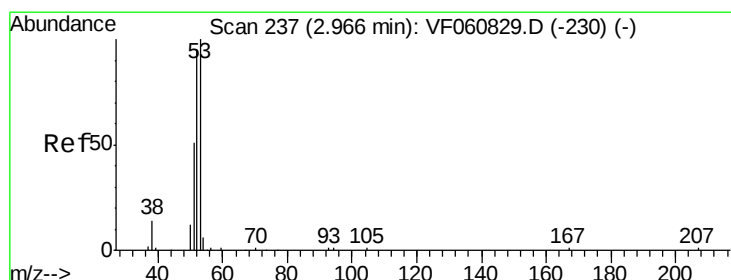
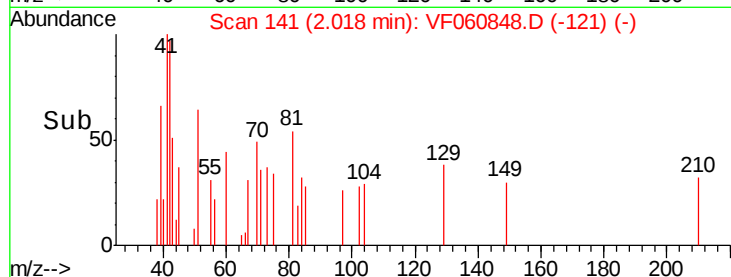
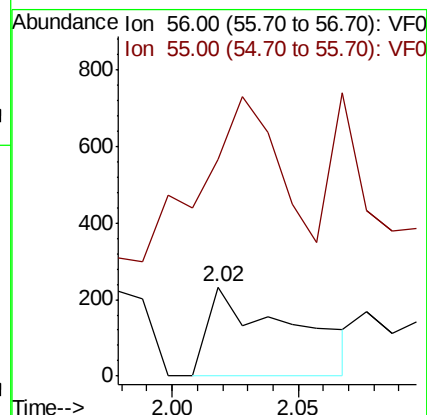
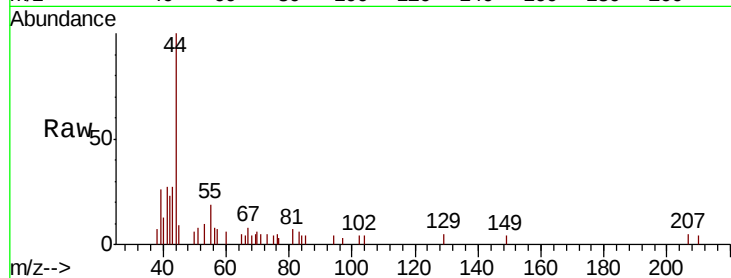
S49-0490RE

Tot Ion: 56 Resp: 532

Ion Ratio Lower Upper

56 100

55 243.1 61.2 91.8#



#15

Acrylonitrile

Concen: 1.431 ug/l

RT: 2.96 min Scan# 236

Delta R.T. -0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

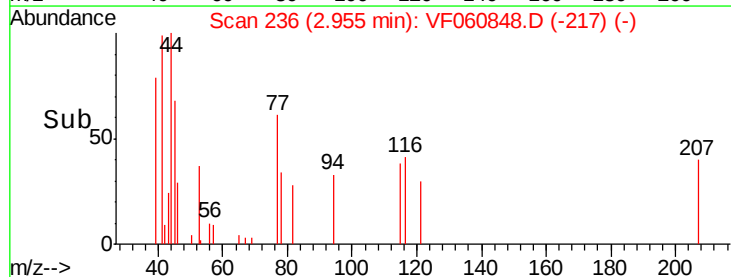
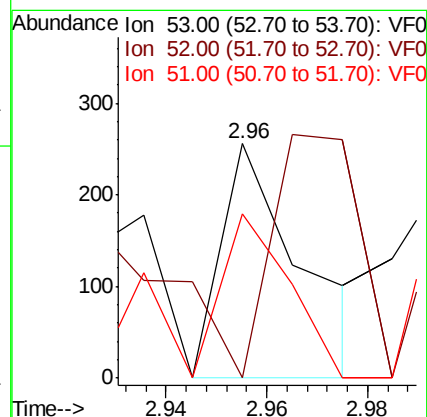
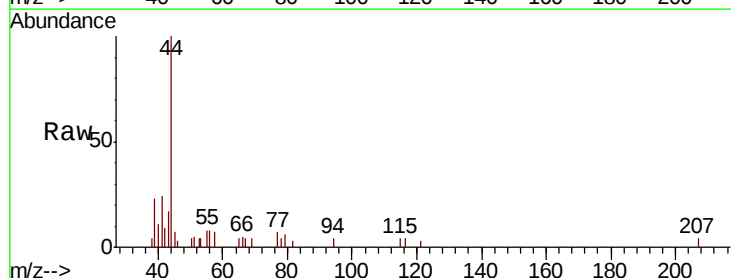
Tgt Ion: 53 Resp: 284

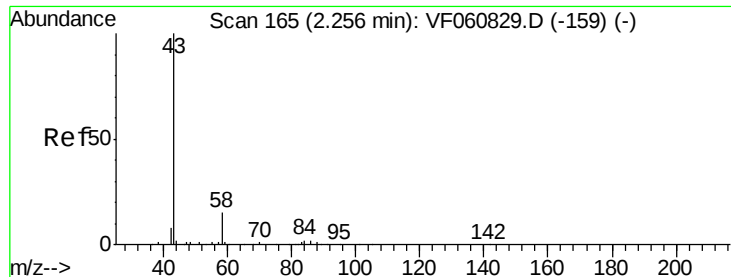
Ion Ratio Lower Upper

53 100

52 0.0 76.5 114.7#

51 69.9 40.7 61.1#





#16

Acetone

Concen: 41.138 ug/l

RT: 2.25 min Scan# 165

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

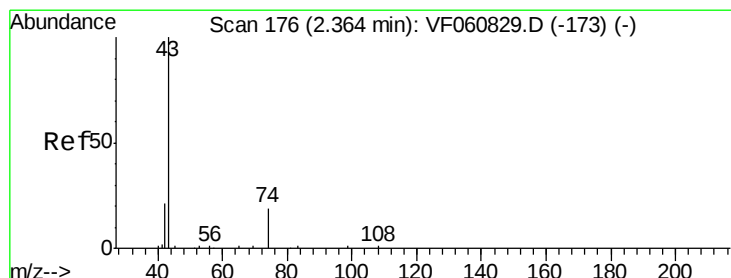
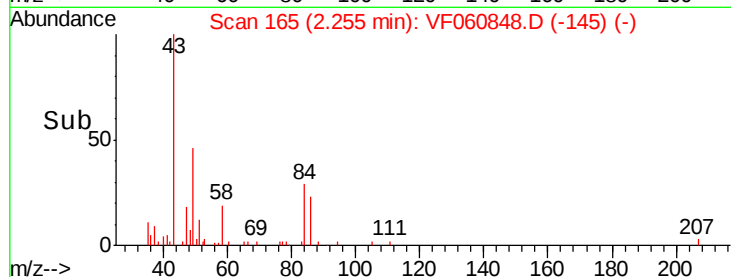
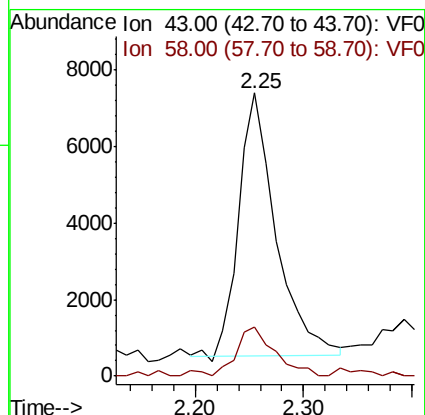
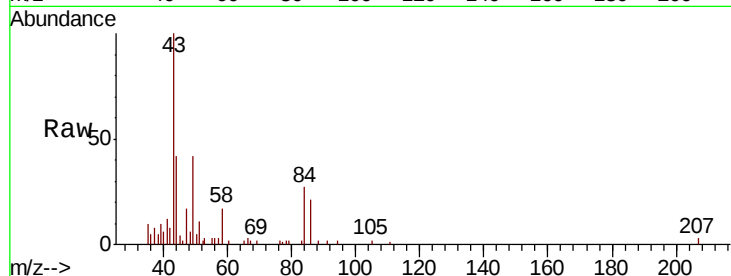
S49-0490RE

Tot Ion: 43 Resp: 16384

Ion Ratio Lower Upper

43 100

58 17.2 11.4 17.2#



#18

Methyl Acetate

Concen: 3.799 ug/l

RT: 2.39 min Scan# 179

Delta R.T. 0.03 min

Lab File: VF060848.D

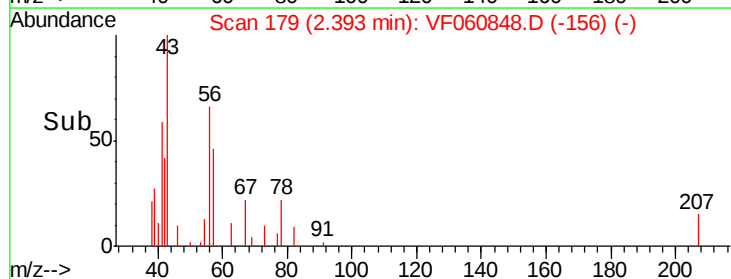
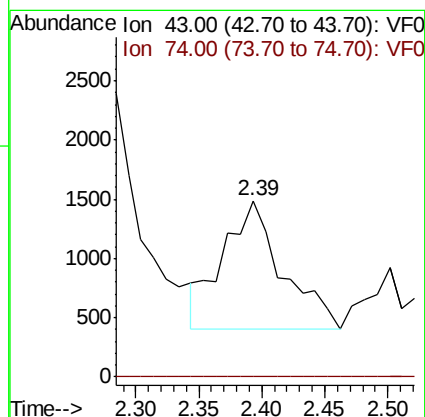
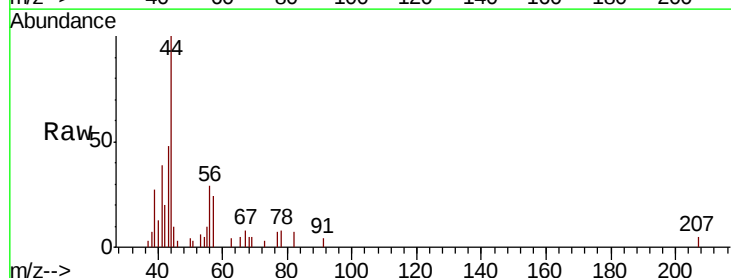
Acq: 27 Nov 2018 19:47

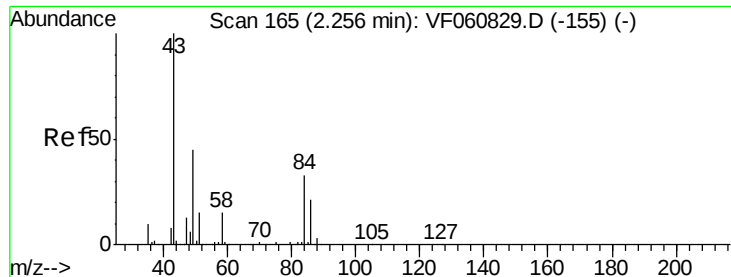
Tgt Ion: 43 Resp: 3558

Ion Ratio Lower Upper

43 100

74 0.0 13.3 19.9#





#20

Methylene Chloride

Concen: 5.853 ug/l

RT: 2.24 min Scan# 164

Delta R.T. -0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampled :

S49-0490RE

Tot Ion: 84 Resp: 8551

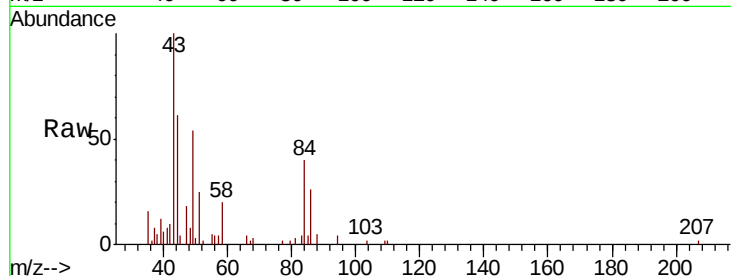
Ion Ratio Lower Upper

84 100

49 134.4 111.3 166.9

51 62.1 38.0 57.0#

86 65.2 49.8 74.8

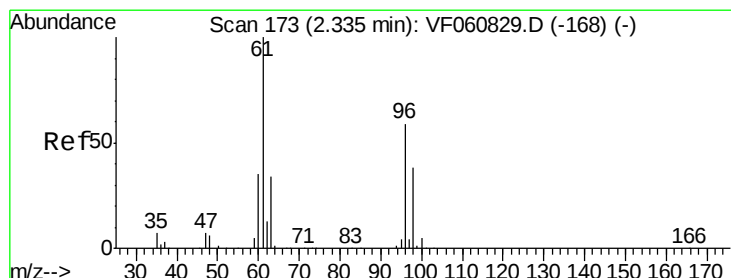
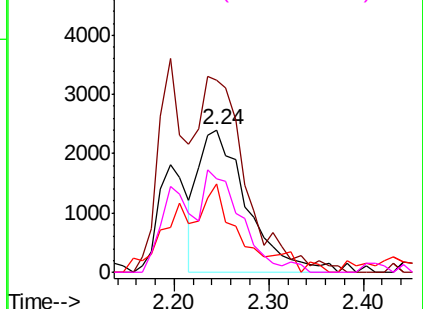
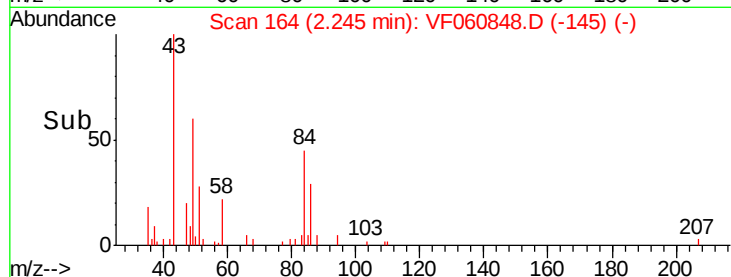


Abundance Ion 84.00 (83.70 to 84.70): VF0

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



#21

trans-1,2-Dichloroethene

Concen: 1.124 ug/l

RT: 2.33 min Scan# 173

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

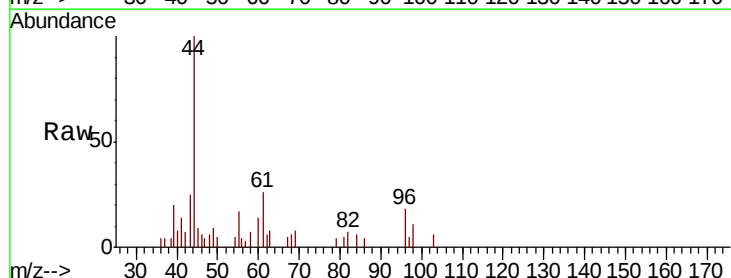
Tgt Ion: 96 Resp: 1573

Ion Ratio Lower Upper

96 100

61 147.3 134.5 201.7

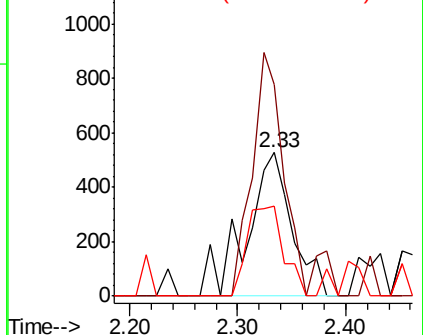
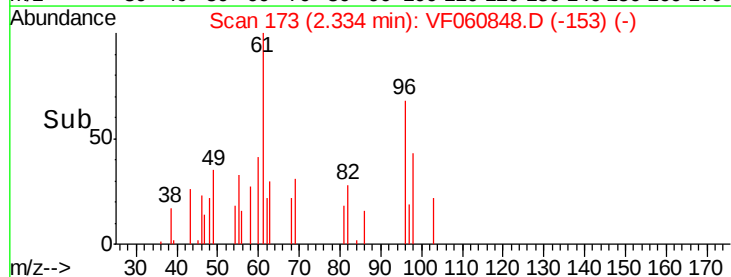
98 62.9 51.6 77.4

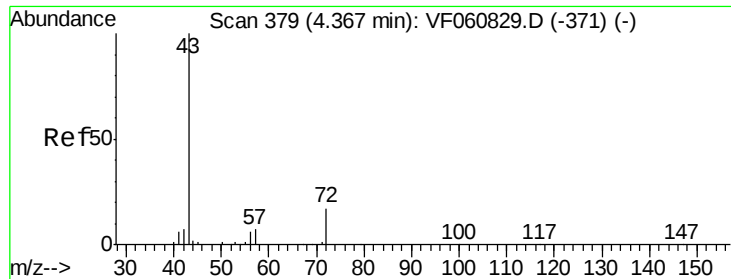


Abundance Ion 96.00 (95.70 to 96.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 98.00 (97.70 to 98.70): VF0

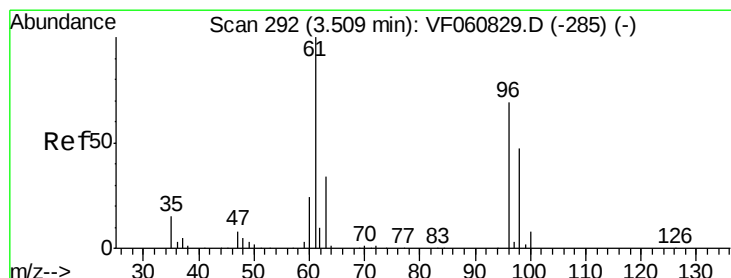
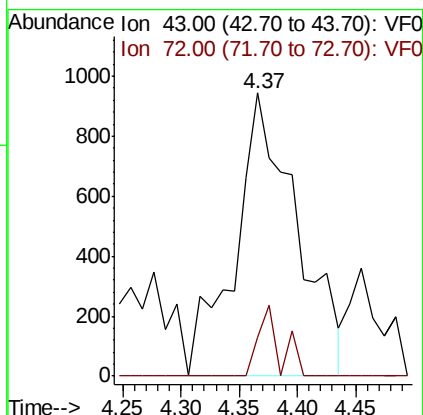
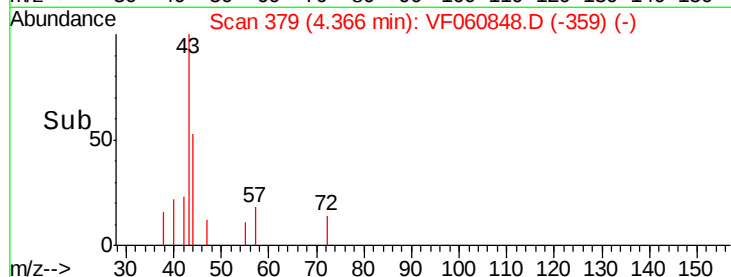
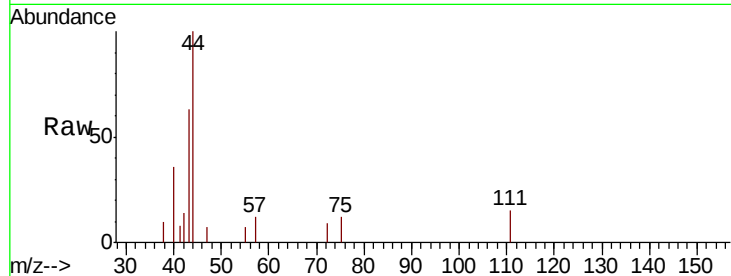




#25  
2-Butanone  
Concen: 5.059 ug/l  
RT: 4.37 min Scan# 379  
Delta R.T. -0.00 min  
Lab File: VF060848.D  
Acq: 27 Nov 2018 19:47

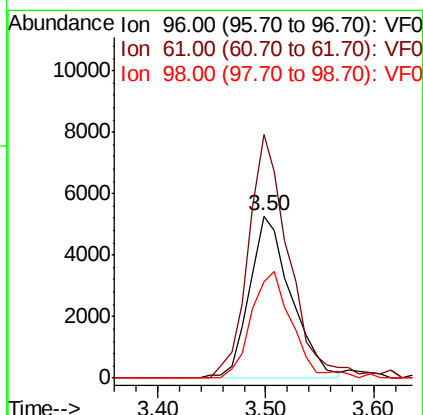
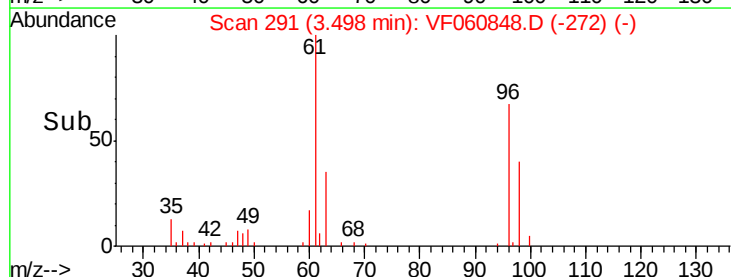
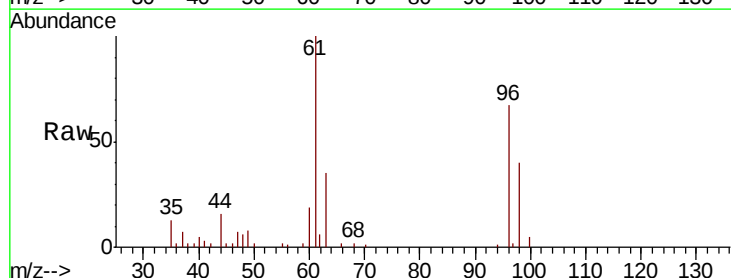
Instrument :  
MSVOA\_F  
ClientSampled :  
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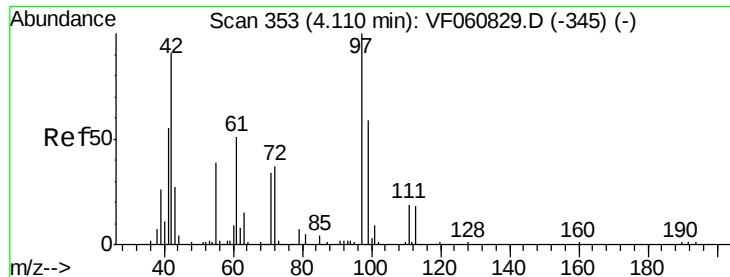
Tot Ion: 43 Resp: 3485  
Ion Ratio Lower Upper  
43 100  
72 13.8 15.4 23.2#



#27  
cis-1,2-Dichloroethene  
Concen: 6.213 ug/l  
RT: 3.50 min Scan# 291  
Delta R.T. -0.01 min  
Lab File: VF060848.D  
Acq: 27 Nov 2018 19:47

Tgt Ion: 96 Resp: 14156  
Ion Ratio Lower Upper  
96 100  
61 150.3 0.0 290.6  
98 59.5 0.0 137.8





#29

Tetrahydrofuran

Concen: 1.116 ug/l

RT: 4.10 min Scan# 352

Delta R.T. -0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

S49-0490RE

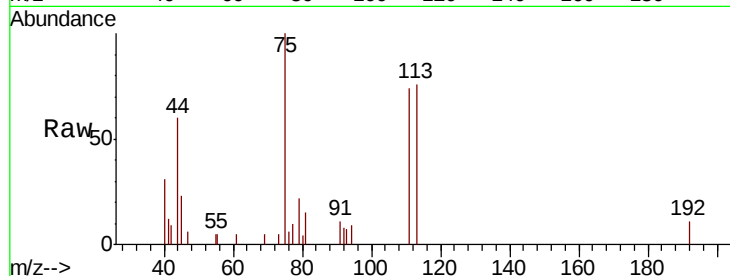
Tot Ion: 42 Resp: 326

Ion Ratio Lower Upper

42 100

72 0.0 31.9 47.9#

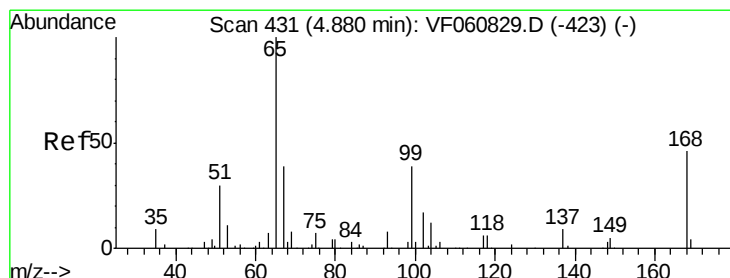
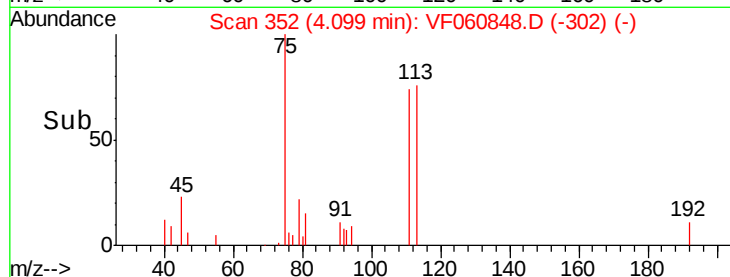
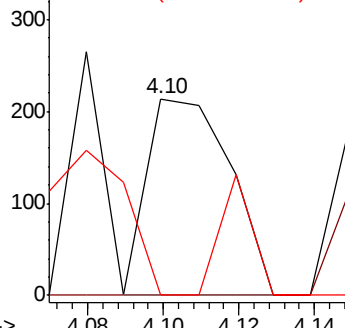
71 71.5 28.7 43.1#



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: 45.810 ug/l

RT: 4.88 min Scan# 431

Delta R.T. -0.00 min

Lab File: VF060848.D

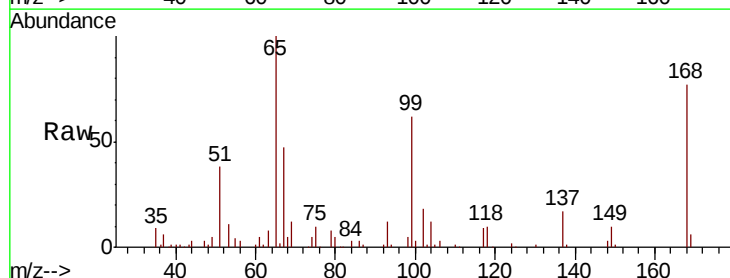
Acq: 27 Nov 2018 19:47

Tgt Ion: 65 Resp: 98938

Ion Ratio Lower Upper

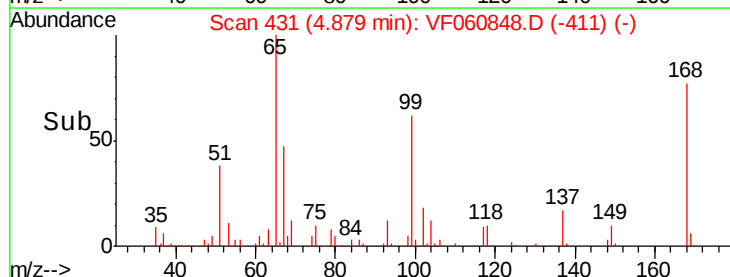
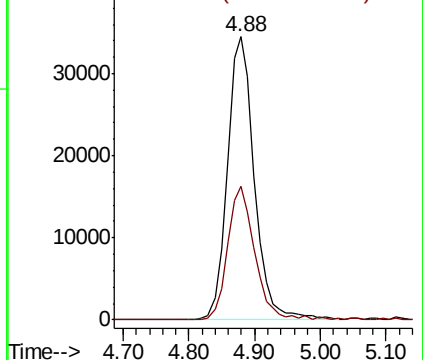
65 100

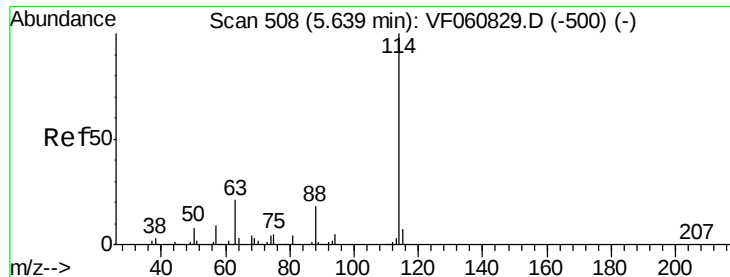
67 47.2 0.0 96.4



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: 5.63 min Scan# 507

Delta R.T. -0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

S49-0490RE

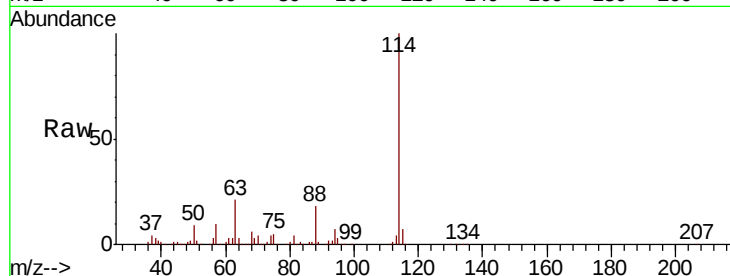
Tot Ion:114 Resp: 294778

Ion Ratio Lower Upper

114 100

63 20.9 0.0 41.6

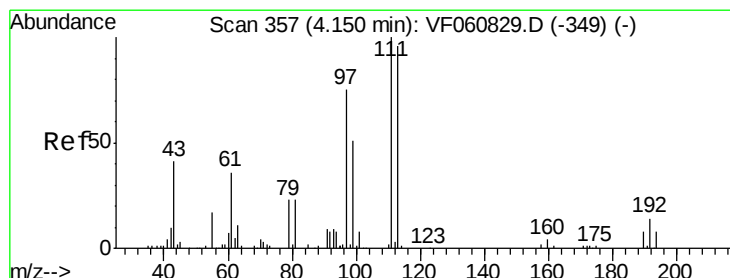
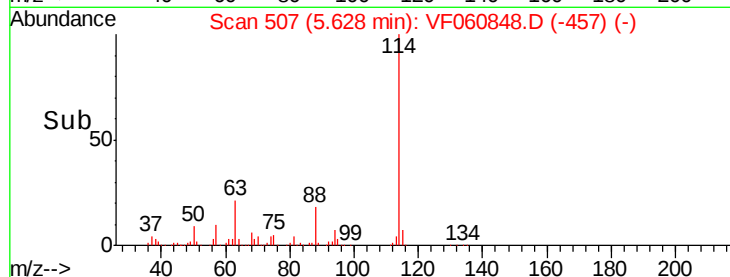
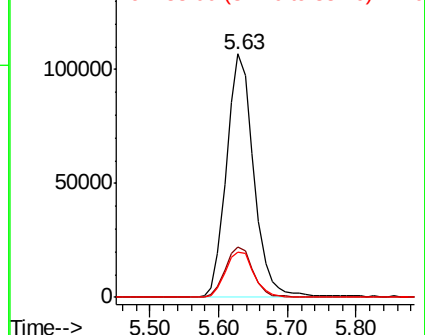
88 18.4 0.0 36.6



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: 49.703 ug/l

RT: 4.15 min Scan# 357

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

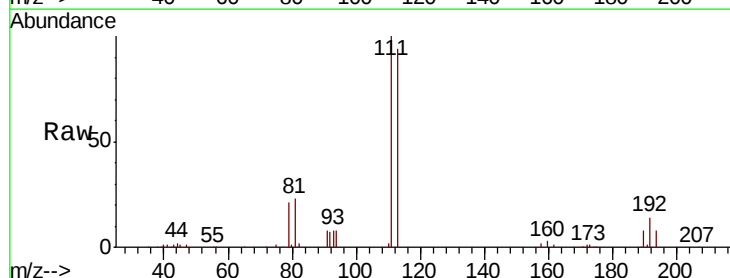
Tgt Ion:113 Resp: 116232

Ion Ratio Lower Upper

113 100

111 106.7 83.0 124.6

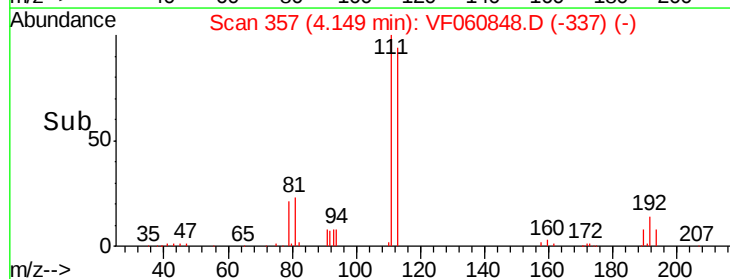
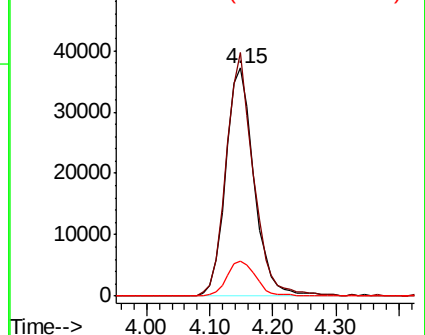
192 15.3 12.3 18.5

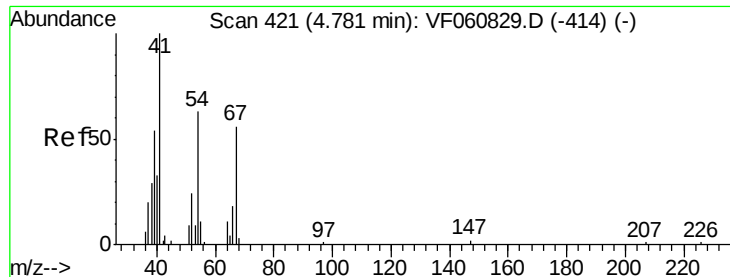


Abundance Ion 113.00 (112.70 to 113.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 192.00 (191.70 to 192.70): V

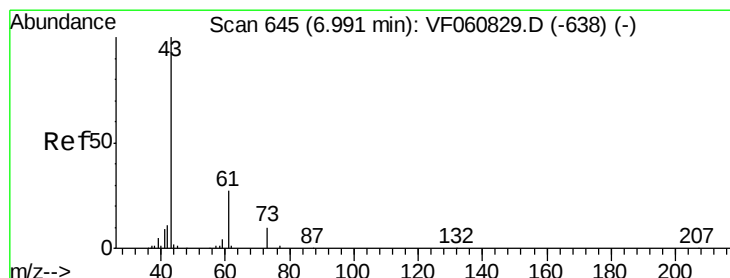
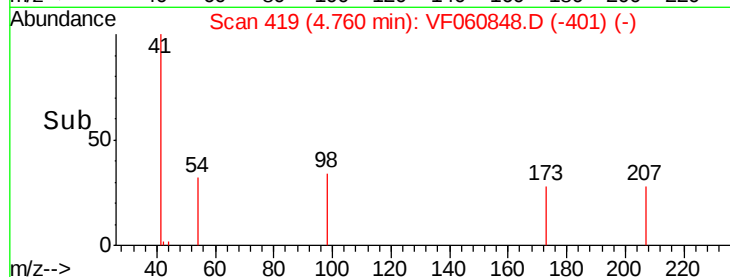
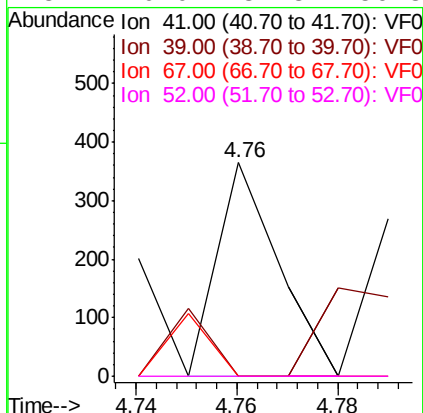
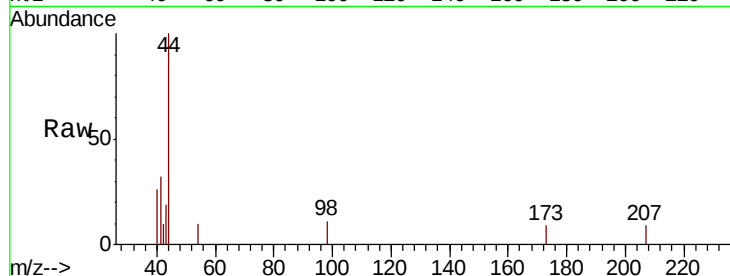




#41  
Methacrylonitrile  
Concen: Below Cal  
RT: 4.76 min Scan# 419  
Delta R.T. -0.02 min  
Lab File: VF060848.D  
Acq: 27 Nov 2018 19:47

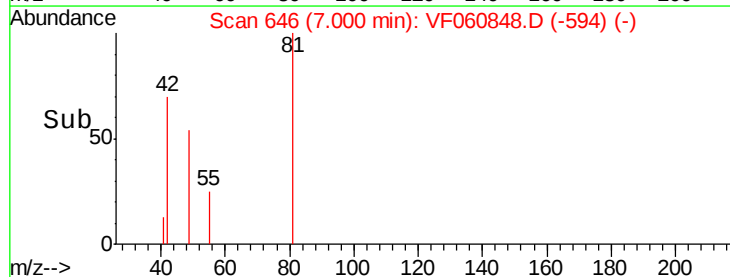
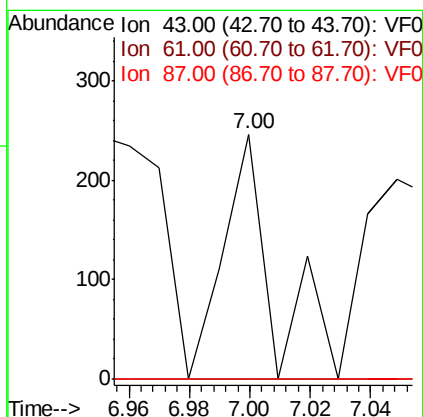
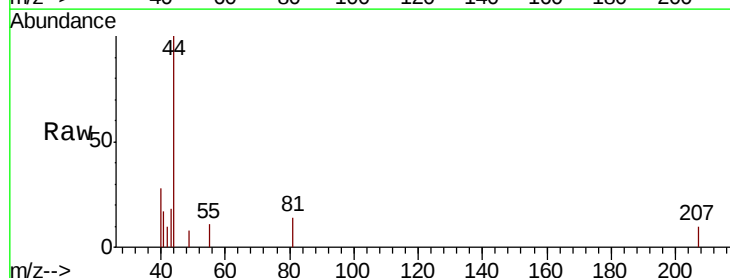
Instrument :  
MSVOA\_F  
ClientSampleId :  
S49-0490RE

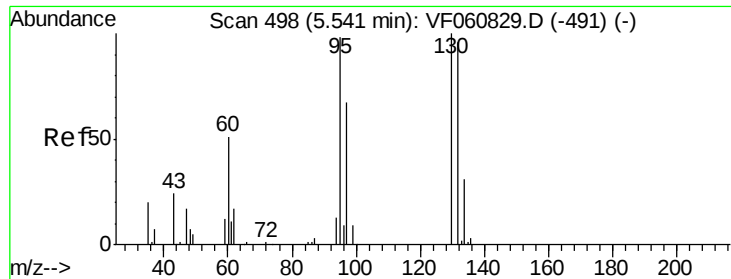
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 41    | Resp: | 306   |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 39       | 0.0   | 53.0  | 79.6# |
| 67       | 0.0   | 43.8  | 65.6# |
| 52       | 0.0   | 37.8  | 56.8# |



#43  
Isopropyl Acetate  
Concen: Below Cal  
RT: 7.00 min Scan# 646  
Delta R.T. 0.01 min  
Lab File: VF060848.D  
Acq: 27 Nov 2018 19:47

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 284   |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 61       | 0.0   | 21.4  | 32.0# |
| 87       | 0.0   | 0.2   | 0.4#  |





#44

Trichloroethene

Concen: 38.653 ug/l

RT: 5.53 min Scan# 497

Delta R.T. -0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

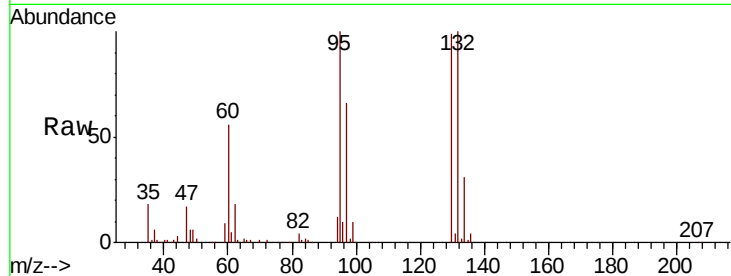
S49-0490RE

Tot Ion:130 Resp: 91289

Ion Ratio Lower Upper

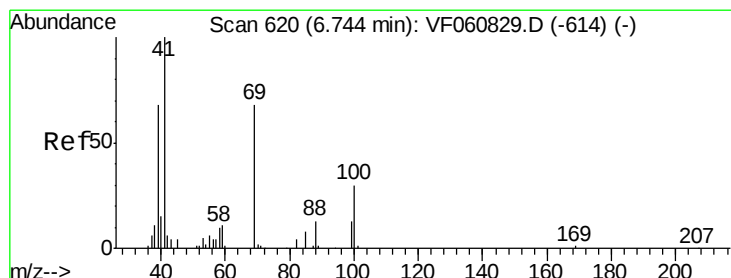
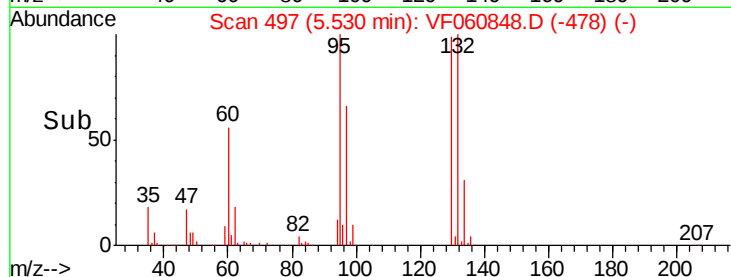
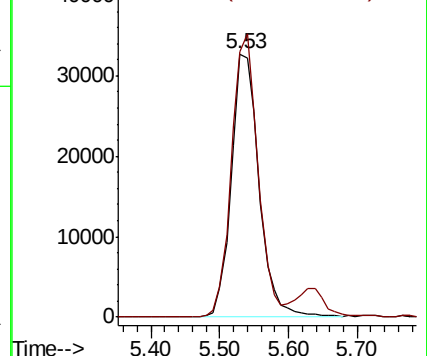
130 100

95 100.8 0.0 195.6



Abundance Ion 129.90 (129.60 to 130.60): V

Ion 94.90 (94.60 to 95.60): VF0



#49

1,4-Dioxane

Concen: 7.839 ug/l

RT: 6.68 min Scan# 614

Delta R.T. -0.06 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

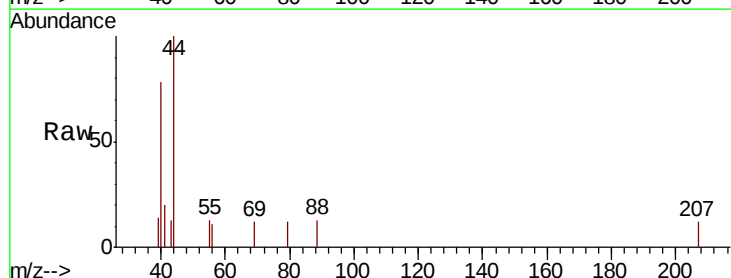
Tgt Ion: 88 Resp: 69

Ion Ratio Lower Upper

88 100

43 94.9 42.0 63.0#

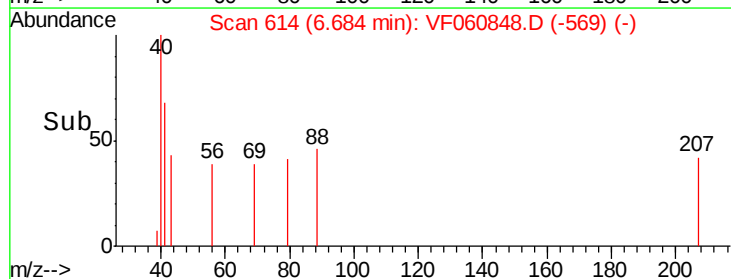
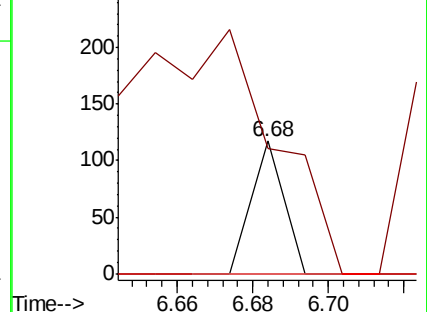
58 0.0 61.8 92.8#

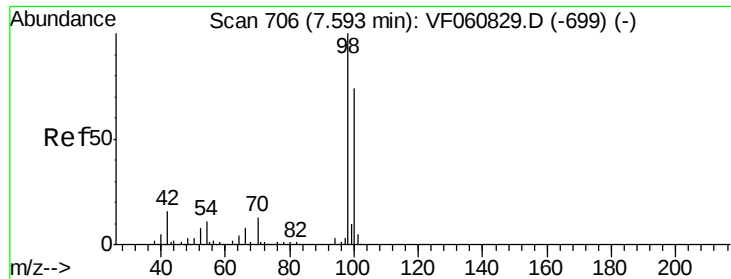


Abundance Ion 88.00 (87.70 to 88.70): VF0

Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0





#50

Toluene-d8

Concen: 47.065 ug/l

RT: 7.59 min Scan# 706

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

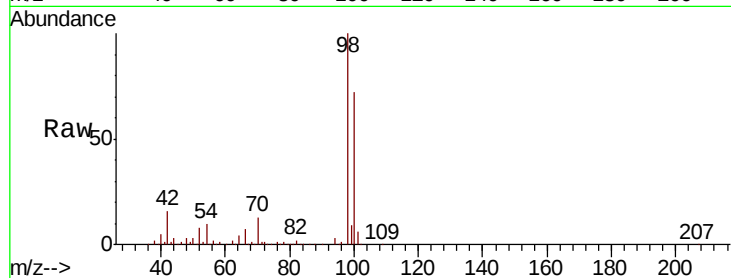
S49-0490RE

Tot Ion: 98 Resp: 324212

Ion Ratio Lower Upper

98 100

100 72.2 59.3 88.9



Abundance Ion 98.00 (97.70 to 98.70): VF0

Ion 100.00 (99.70 to 100.70): VF

7.59

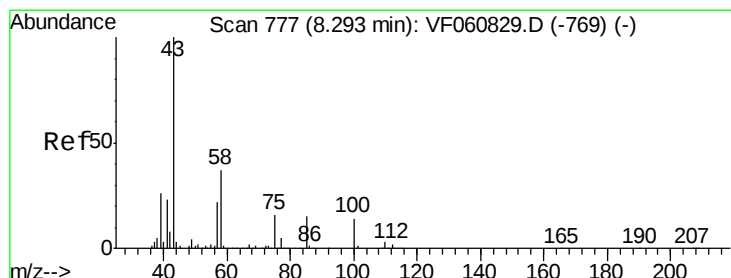
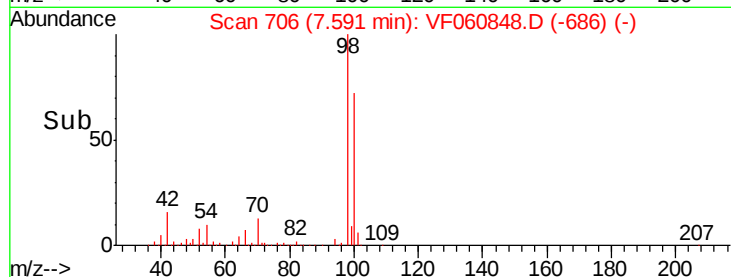
150000

100000

50000

0

Time-->



#51

4-Methyl-2-Pentanone

Concen: 1.622 ug/l

RT: 8.30 min Scan# 778

Delta R.T. 0.01 min

Lab File: VF060848.D

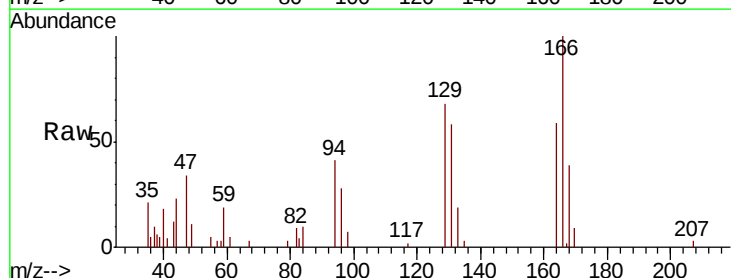
Acq: 27 Nov 2018 19:47

Tgt Ion: 43 Resp: 1987

Ion Ratio Lower Upper

43 100

58 21.6 29.7 44.5#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0

8.30

600

500

400

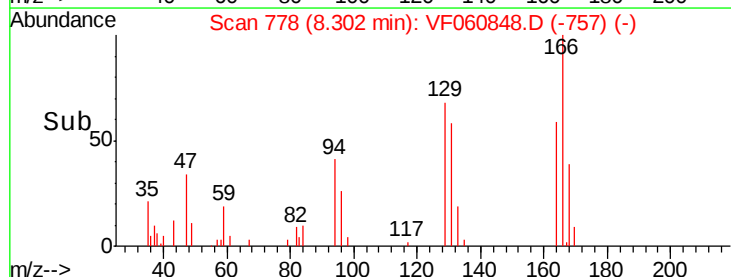
300

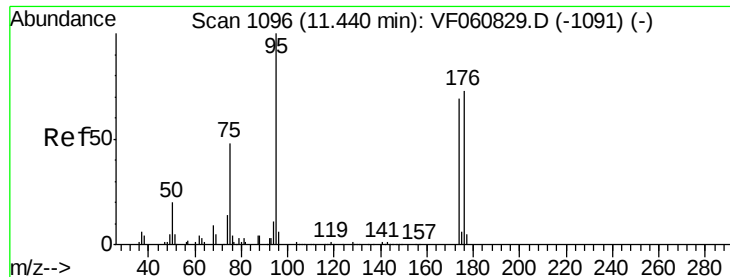
200

100

0

Time-->





#62

4-Bromofluorobenzene

Concen: 44.236 ug/l

RT: 11.44 min Scan# 1096

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

S49-0490RE

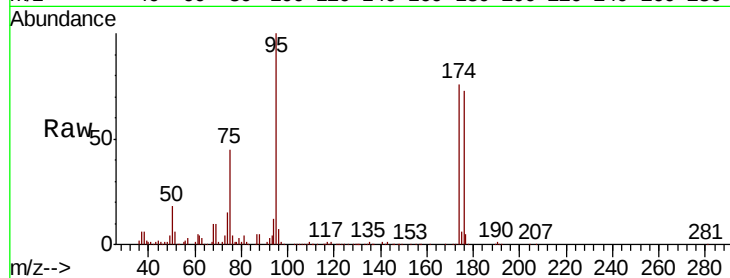
Tot Ion: 95 Resp: 138493

Ion Ratio Lower Upper

95 100

174 75.8 0.0 138.2

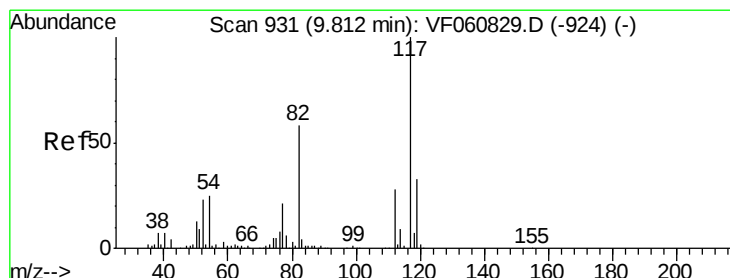
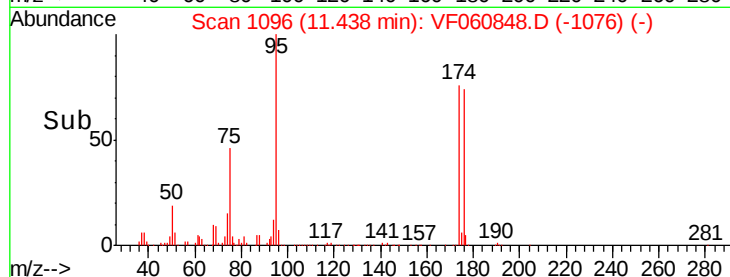
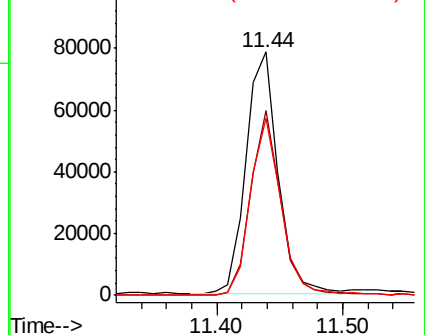
176 72.9 0.0 146.2



Abundance Ion 95.00 (94.70 to 95.70): VF0

Ion 174.00 (173.70 to 174.70): V

Ion 176.00 (175.70 to 176.70): V



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 9.81 min Scan# 931

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

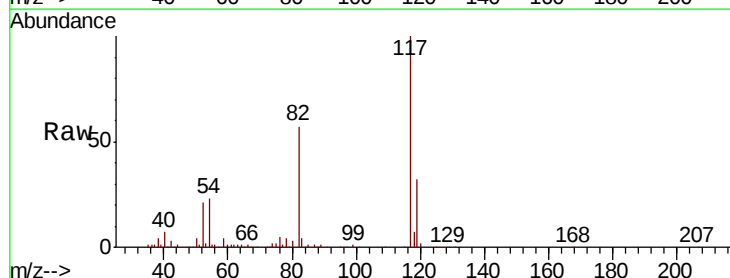
Tgt Ion: 117 Resp: 259854

Ion Ratio Lower Upper

117 100

82 56.7 46.6 69.8

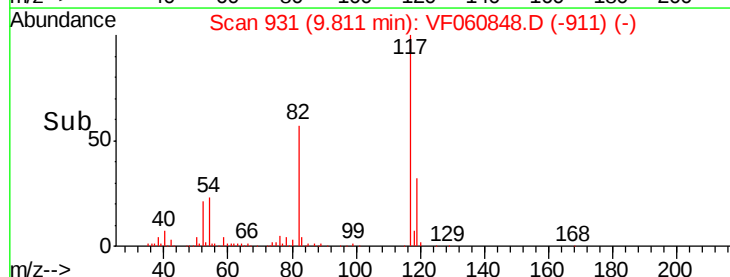
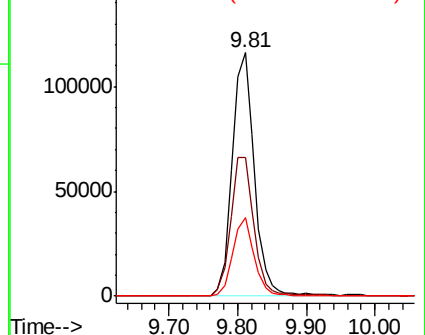
119 32.3 26.4 39.6

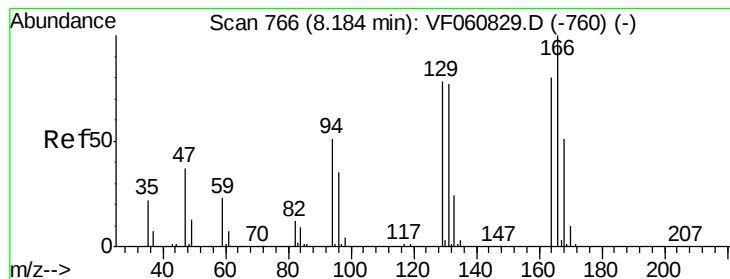


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 82.00 (81.70 to 82.70): VF0

Ion 119.00 (118.70 to 119.70): V





#64

Tetrachloroethene

Concen: 558.006 ug/l

RT: 8.19 min Scan# 767

Delta R.T. 0.01 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

Instrument :

MSVOA\_F

ClientSampleId :

S49-0490RE

Tot Ion:164 Resp: 1107514

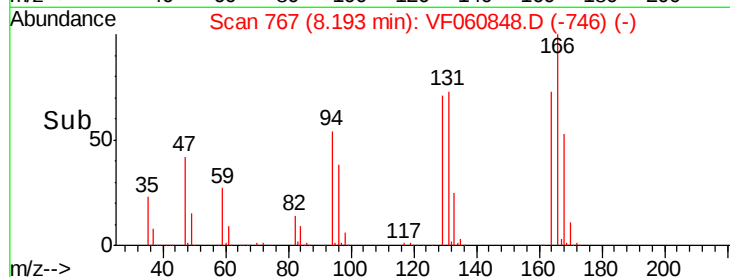
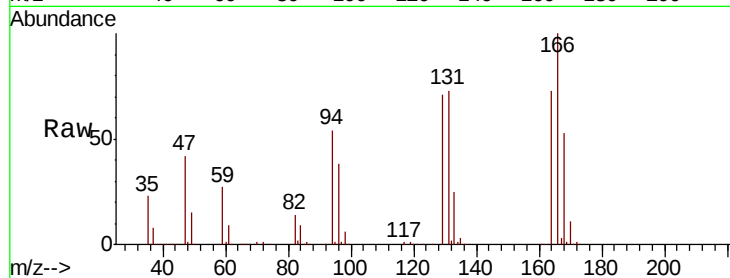
Ion Ratio Lower Upper

164 100

166 136.5 100.3 150.5

129 96.6 77.9 116.9

131 100.0 77.5 116.3



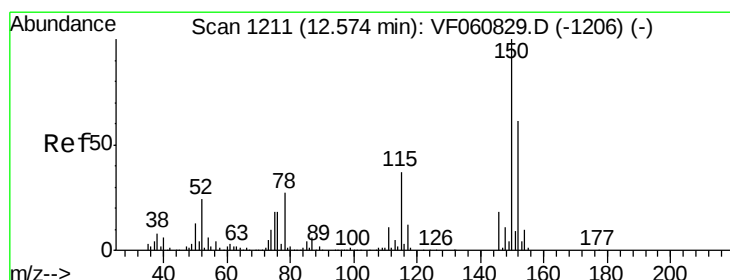
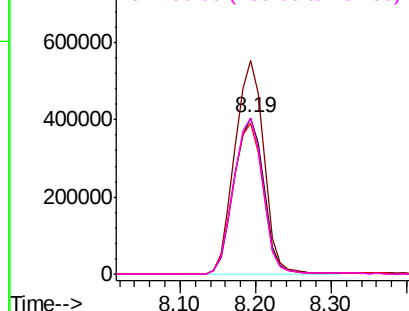
Abundance

Ion 163.85 (163.55 to 164.55): V

Ion 165.80 (165.50 to 166.50): V

Ion 128.90 (128.60 to 129.60): V

Ion 130.90 (130.60 to 131.60): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.57 min Scan# 1211

Delta R.T. -0.00 min

Lab File: VF060848.D

Acq: 27 Nov 2018 19:47

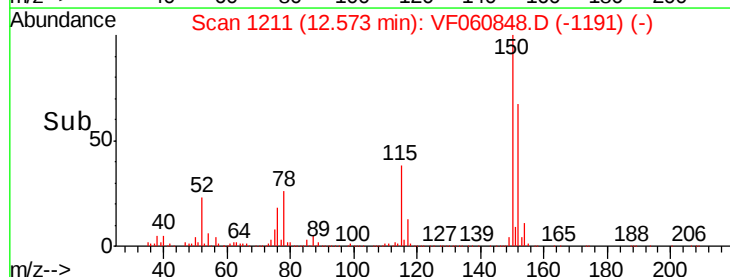
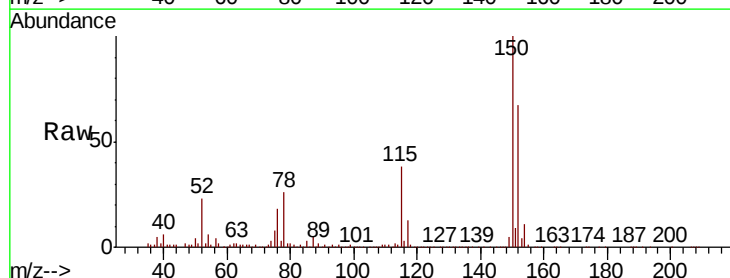
Tgt Ion:152 Resp: 138657

Ion Ratio Lower Upper

152 100

115 56.4 30.1 90.5

150 149.1 0.0 327.6

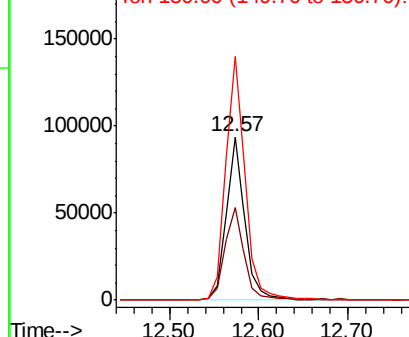


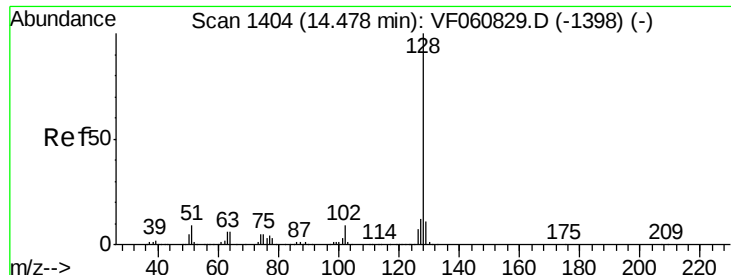
Abundance

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

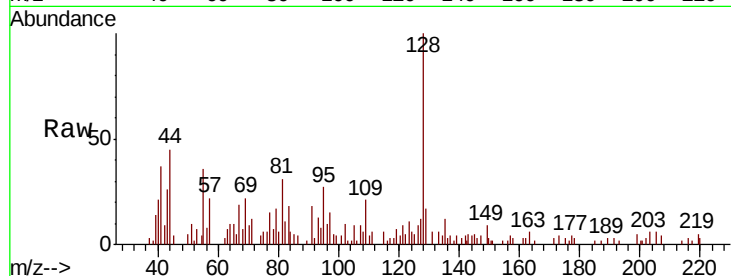




#95  
Naphthalene  
Concen: Below Cal  
RT: 14.48 min Scan# 1404  
Delta R.T. -0.00 min  
Lab File: VF060848.D  
Acq: 27 Nov 2018 19:47

Instrument :  
MSVOA\_F  
ClientSampleId :  
S49-0490RE

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 12.0  | 9.9   | 14.9  |
| 129     | 17.5  | 9.1   | 13.7# |



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

