

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF031819\  
 Data File : VF062001.D  
 Acq On : 18 Mar 2019 17:01  
 Operator : VA/AP  
 Sample : K1951-04  
 Misc : 6.53g/5mL/MSVOA-F/SOIL  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Quant Time: Mar 19 01:23:23 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F031619S.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Mar 18 07:28:40 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.86  | 168  | 21258    | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.58  | 114  | 24126    | 50.00 | ug/l  | -0.02    |
| 63) Chlorobenzene-d5       | 9.76  | 117  | 14284    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.54 | 152  | 3456     | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 4.84  | 65   | 3432     | 22.43 | ug/l   | 0.00     |
| Spiked Amount               |       |      |          |       |        |          |
|                             |       |      | Recovery | =     | 44.86% |          |
| 35) Dibromofluoromethane    | 4.10  | 113  | 6002     | 37.05 | ug/l   | 0.00     |
| Spiked Amount               |       |      |          |       |        |          |
|                             |       |      | Recovery | =     | 74.10% |          |
| 50) Toluene-d8              | 7.54  | 98   | 20635    | 43.57 | ug/l   | -0.02    |
| Spiked Amount               |       |      |          |       |        |          |
|                             |       |      | Recovery | =     | 87.14% |          |
| 62) 4-Bromofluorobenzene    | 11.40 | 95   | 4652     | 24.73 | ug/l   | 0.00     |
| Spiked Amount               |       |      |          |       |        |          |
|                             |       |      | Recovery | =     | 49.46% |          |

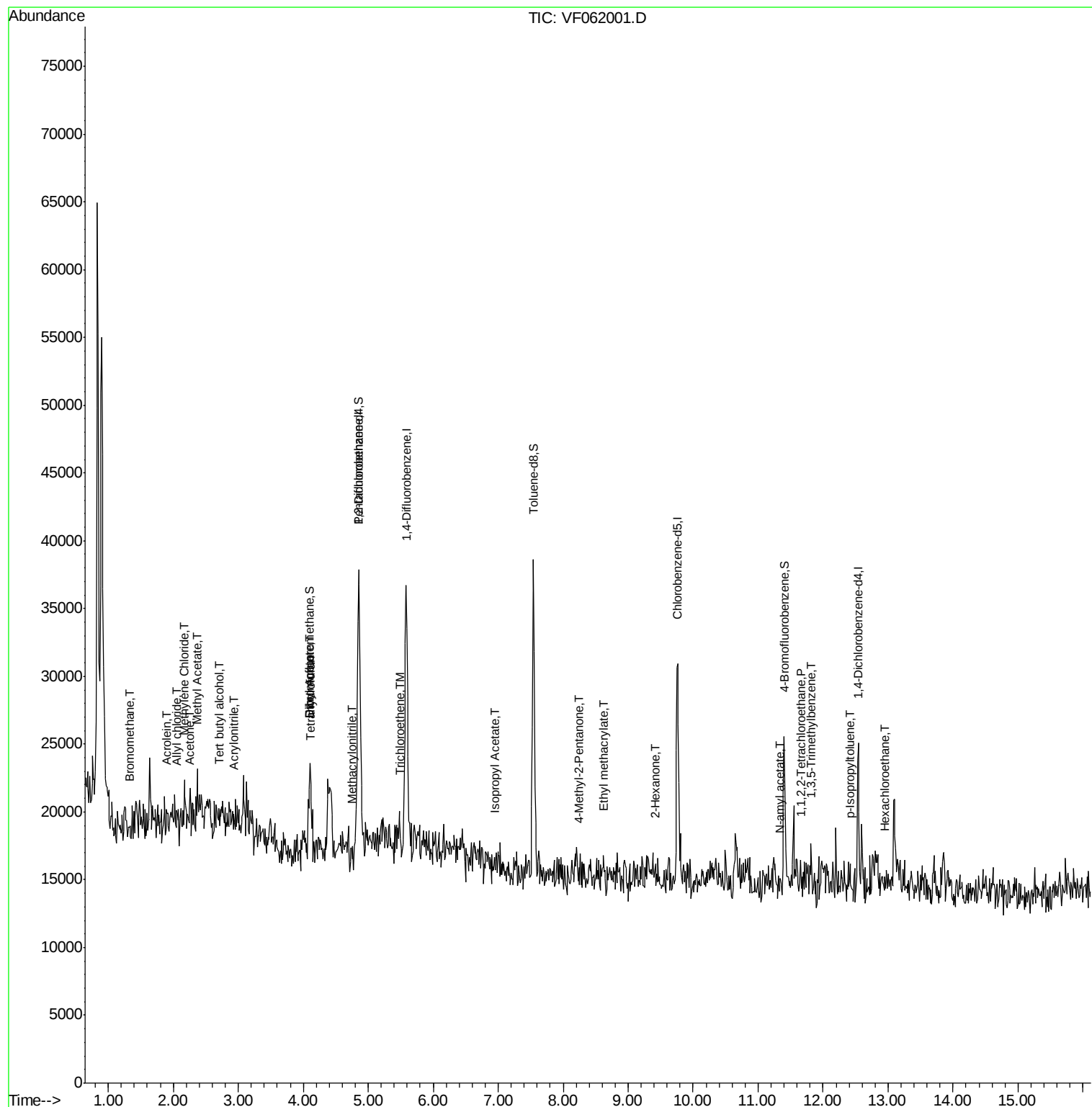
| Target Compounds              | R.T.  | QIon | Response | Conc   | Units  | Qvalue |
|-------------------------------|-------|------|----------|--------|--------|--------|
| 5) Bromomethane               | 1.32  | 94   | 338      | 2.160  | ug/l # | 3      |
| 11) Tert butyl alcohol        | 2.71  | 59   | 75       | 8.010  | ug/l # | 71     |
| 13) Acrolein                  | 1.89  | 56   | 208      | 20.577 | ug/l   | 100    |
| 14) Allyl chloride            | 2.05  | 41   | 516      | 2.253  | ug/l # | 17     |
| 15) Acrylonitrile             | 2.93  | 53   | 344      | 12.081 | ug/l # | 36     |
| 16) Acetone                   | 2.24  | 43   | 516      | 15.017 | ug/l # | 83     |
| 18) Methyl Acetate            | 2.37  | 43   | 2454     | 34.908 | ug/l # | 63     |
| 20) Methylene Chloride        | 2.17  | 84   | 524      | 2.962  | ug/l # | 39     |
| 29) Tetrahydrofuran           | 4.12  | 42   | 267      | 9.022  | ug/l # | 33     |
| 37) Ethyl Acetate             | 4.11  | 43   | 183      | 1.871  | ug/l # | 19     |
| 41) Methacrylonitrile         | 4.74  | 41   | 68       | 1.301  | ug/l # | 22     |
| 43) Isopropyl Acetate         | 6.95  | 43   | 428      | 3.698  | ug/l # | 38     |
| 44) Trichloroethene           | 5.49  | 130  | 410      | 2.318  | ug/l   | 4      |
| 51) 4-Methyl-2-Pentanone      | 8.25  | 43   | 165      | 2.008  | ug/l # | 36     |
| 56) Ethyl methacrylate        | 8.61  | 69   | 363      | 3.244  | ug/l # | 24     |
| 59) 2-Hexanone                | 9.43  | 43   | 378      | 6.355  | ug/l # | 23     |
| 74) N-amyl acetate            | 11.34 | 43   | 202      | 3.692  | ug/l # | 41     |
| 75) 1,1,2,2-Tetrachloroethane | 11.67 | 83   | 156      | 3.958  | ug/l # | 22     |
| 80) 1,3,5-Trimethylbenzene    | 11.81 | 105  | 1283     | 6.652  | ug/l   | 94     |
| 86) p-Isopropyltoluene        | 12.42 | 119  | 969      | 4.261  | ug/l # | 74     |
| 90) Hexachloroethane          | 12.95 | 117  | 95       | 1.831  | ug/l # | 18     |

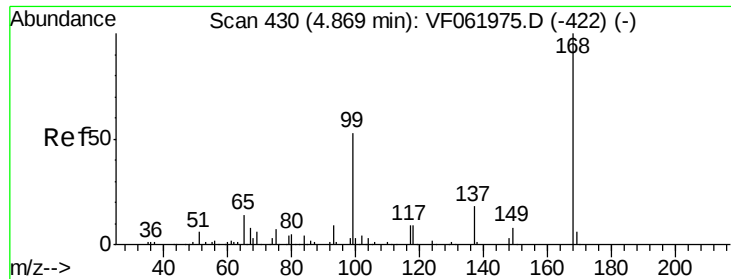
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF031819\  
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Sample : K1951-04  
Misc : 6.53g/5mL/MSVOA-F/SOIL  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :

Quant Time: Mar 19 01:23:23 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F031619S.M  
Quant Title : SW846 8260  
QLast Update : Mon Mar 18 07:28:40 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 4.86 min Scan# 429

Delta R.T. -0.01 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

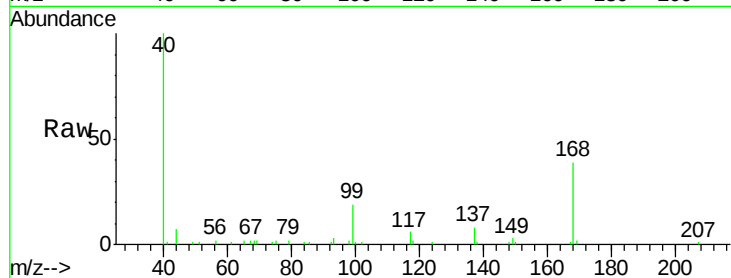
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:168 Resp: 21258

Ion Ratio Lower Upper

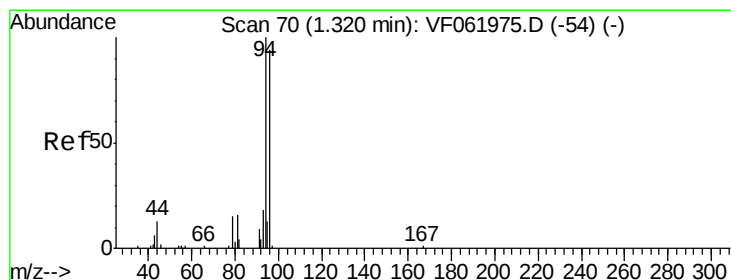
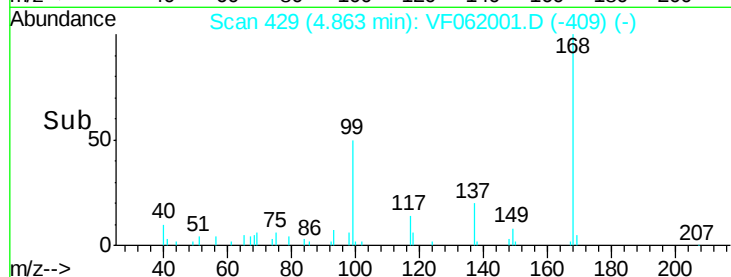
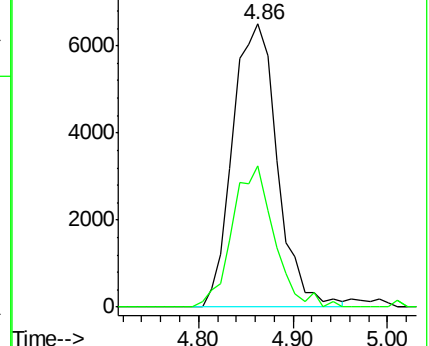
168 100

99 50.0 42.4 63.6



Abundance Ion 168.00 (167.70 to 168.70): V

Ion 99.00 (98.70 to 99.70): VF0



#5

Bromomethane

Concen: 2.160 ug/l

RT: 1.32 min Scan# 70

Delta R.T. 0.00 min

Lab File: VF062001.D

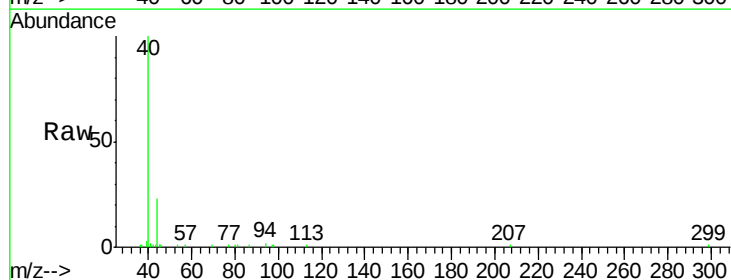
Acq: 18 Mar 2019 17:01

Tgt Ion: 94 Resp: 338

Ion Ratio Lower Upper

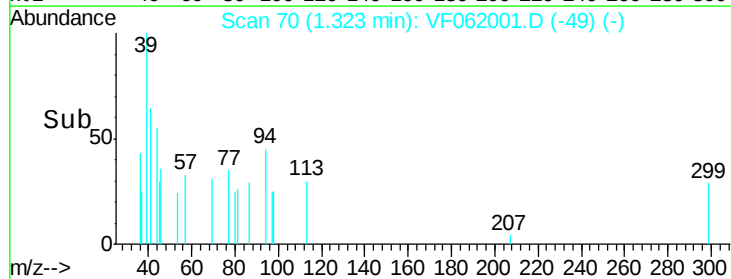
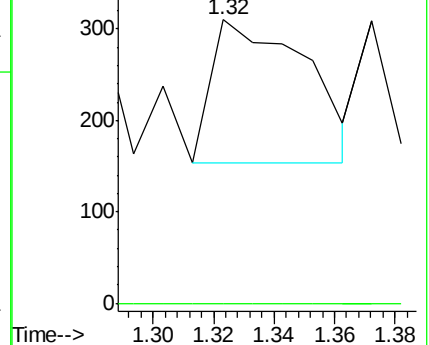
94 100

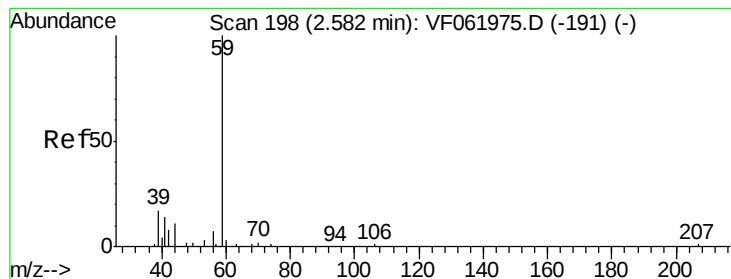
96 0.0 75.0 112.6#



Abundance Ion 94.00 (93.70 to 94.70): VF0

Ion 96.00 (95.70 to 96.70): VF0



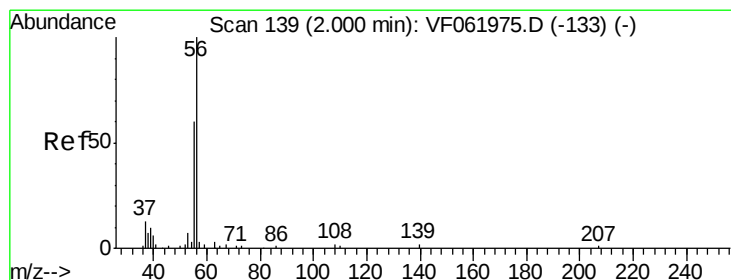
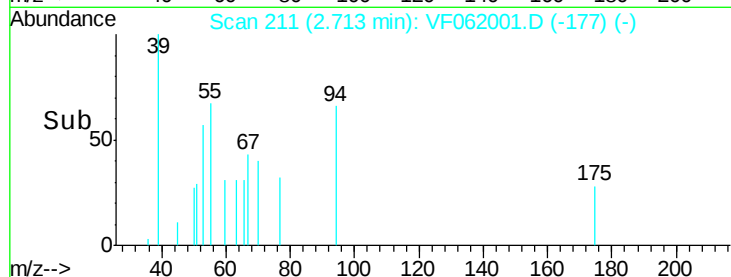
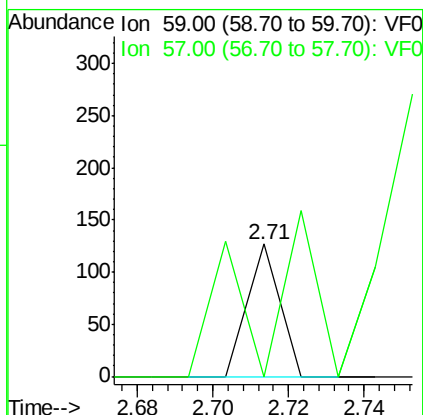
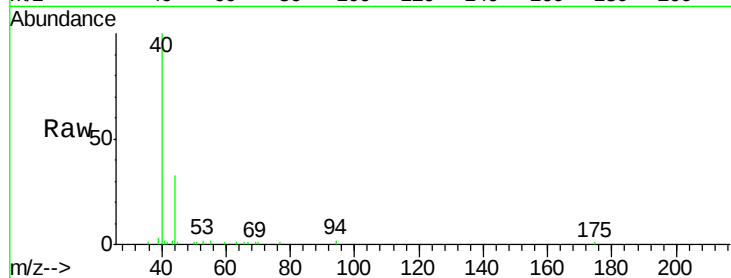


#11

Tert butyl alcohol  
Concen: 8.010 ug/l  
RT: 2.71 min Scan# 211  
Delta R.T. 0.13 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

Instrument :  
MSVOA\_F  
ClientSampleId :

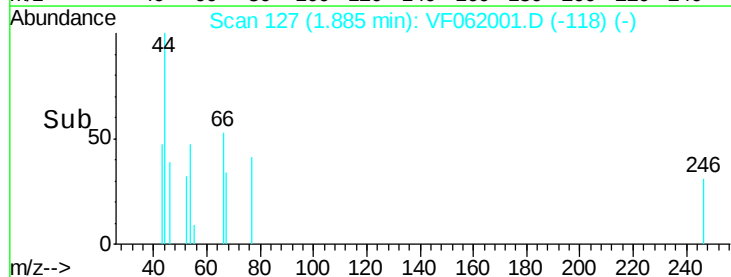
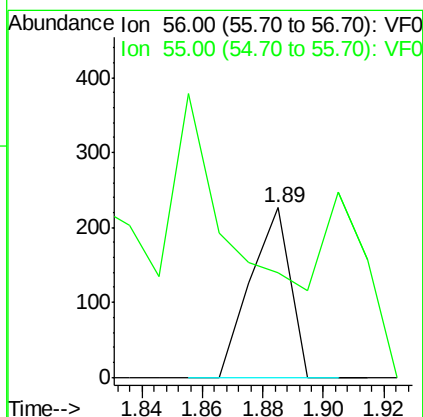
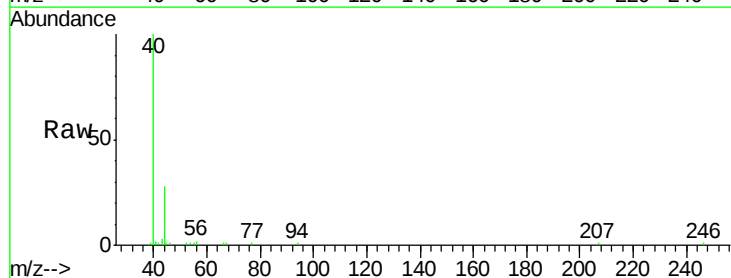
Tot Ion: 59 Resp: 75  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.7 13.1#

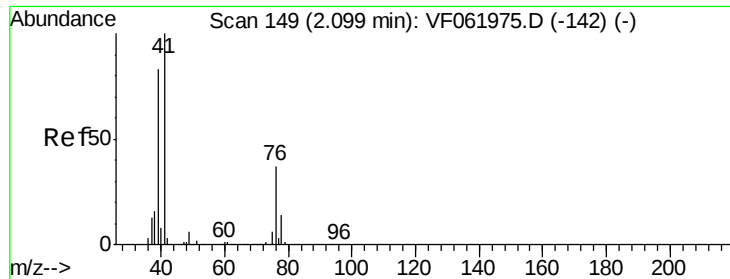


#13

Acrolein  
Concen: 20.577 ug/l  
RT: 1.89 min Scan# 127  
Delta R.T. -0.11 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

Tgt Ion: 56 Resp: 208  
Ion Ratio Lower Upper  
56 100  
55 61.5 49.1 73.7





#14

Allvl chloride

Concen: 2.253 ug/l

RT: 2.05 min Scan# 144

Delta R.T. -0.05 min

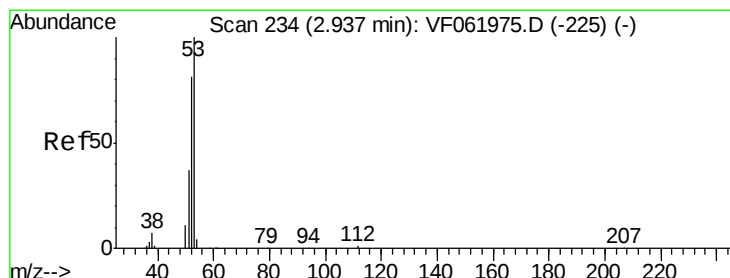
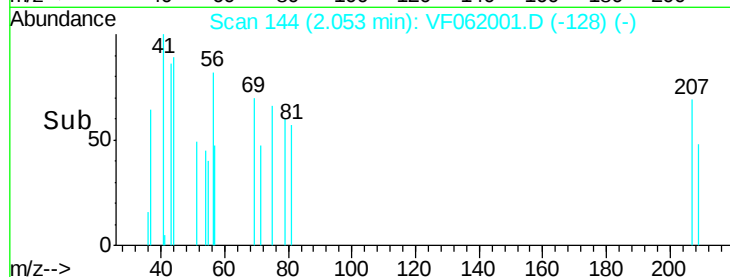
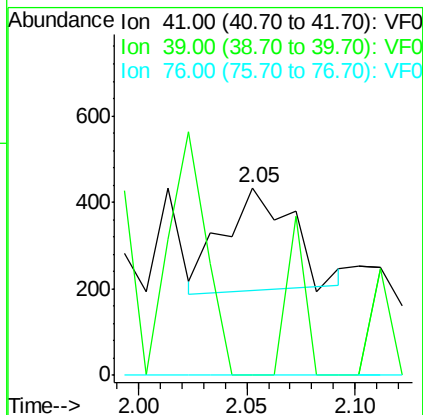
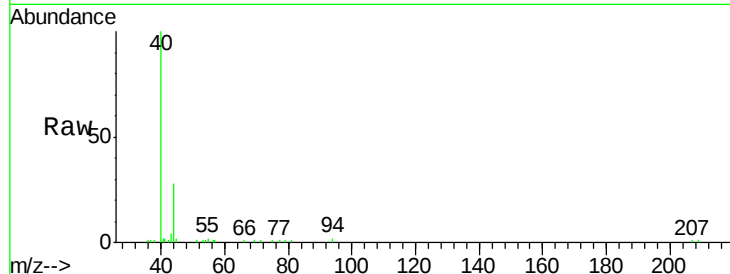
Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Instrument :  
MSVOA\_F  
ClientSampled :

Tot Ion: 41 Resp: 516

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 41  | 100   |       |        |
| 39  | 0.0   | 66.8  | 100.2# |
| 76  | 0.0   | 31.1  | 46.7#  |



#15

Acrylonitrile

Concen: 12.081 ug/l

RT: 2.93 min Scan# 233

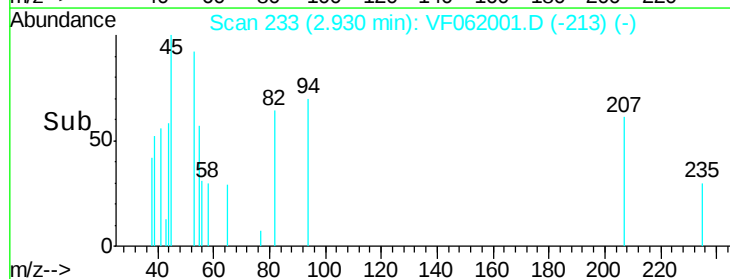
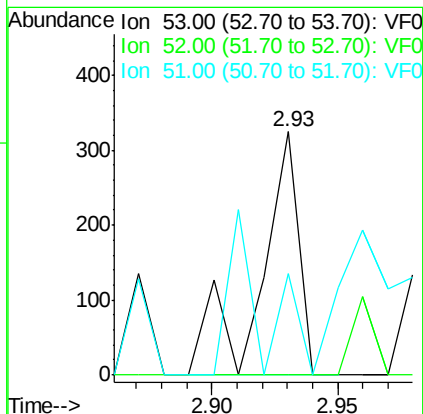
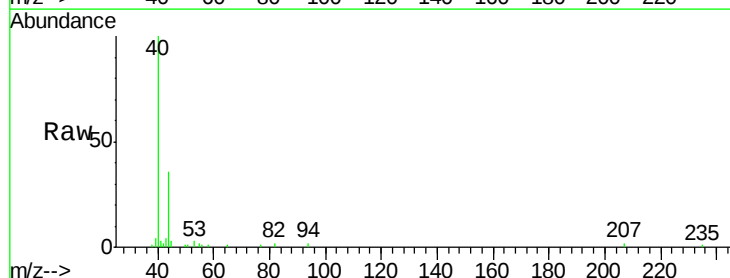
Delta R.T. -0.01 min

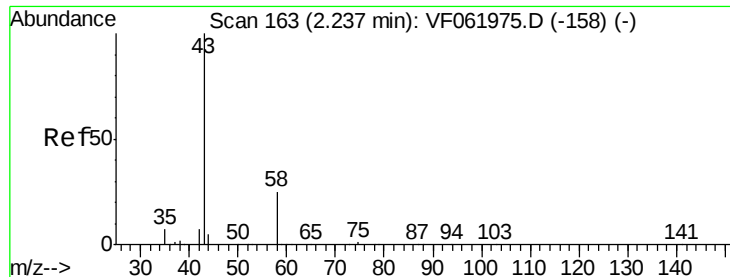
Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Tgt Ion: 53 Resp: 344

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 53  | 100   |       |       |
| 52  | 0.0   | 64.4  | 96.6# |
| 51  | 41.8  | 30.3  | 45.5  |





#16

Acetone

Concen: 15.017 ug/l

RT: 2.24 min Scan# 163

Delta R.T. 0.00 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

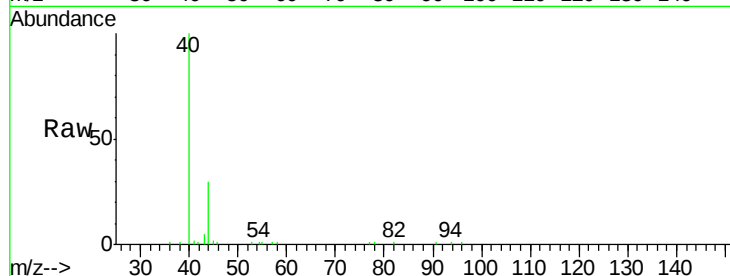
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 43 Resp: 516

Ion Ratio Lower Upper

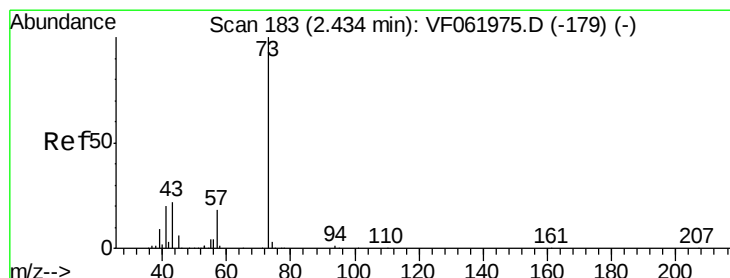
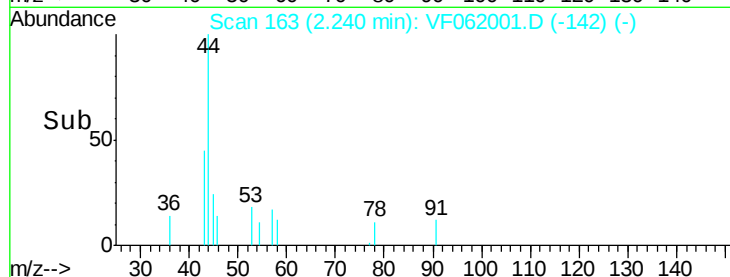
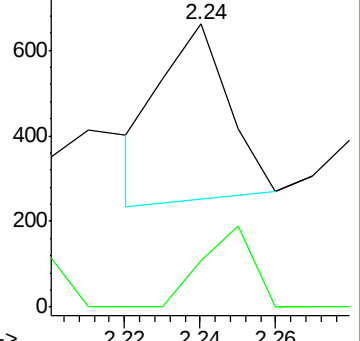
43 100

58 16.3 19.9 29.9#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0



#18

Methyl Acetate

Concen: 34.908 ug/l

RT: 2.37 min Scan# 176

Delta R.T. -0.07 min

Lab File: VF062001.D

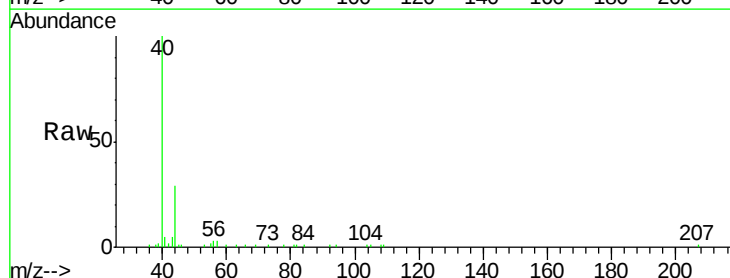
Acq: 18 Mar 2019 17:01

Tgt Ion: 43 Resp: 2454

Ion Ratio Lower Upper

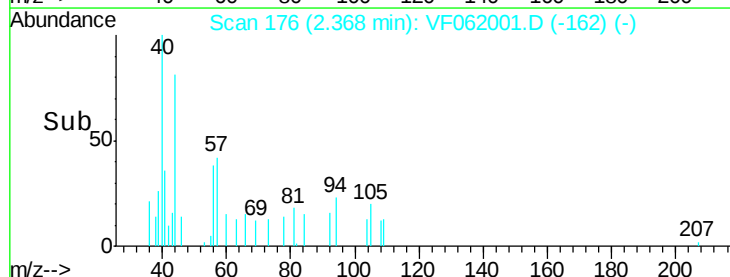
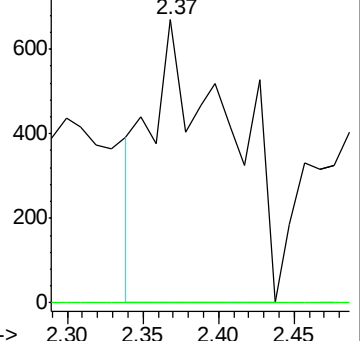
43 100

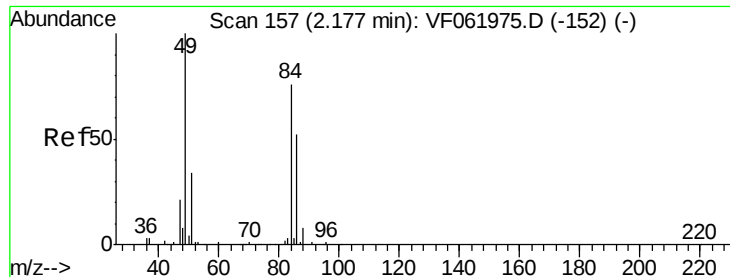
74 0.0 12.6 18.8#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 74.00 (73.70 to 74.70): VF0





#20

Methvlene Chloride

Concen: 2.962 ug/l

RT: 2.17 min Scan# 156

Delta R.T. -0.01 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Instrument :  
MSVOA\_F  
ClientSampled :

Tot Ion: 84 Resp: 524

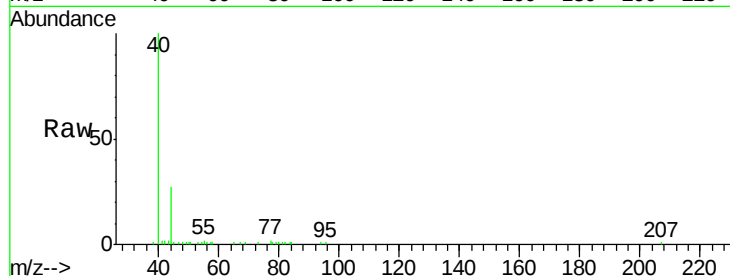
Ion Ratio Lower Upper

84 100

49 56.7 107.0 160.6#

51 56.1 37.2 55.8#

86 0.0 55.3 82.9#

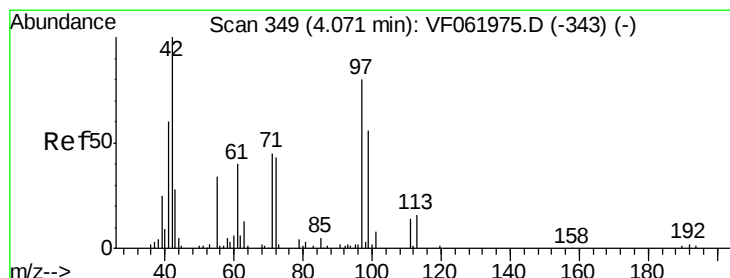
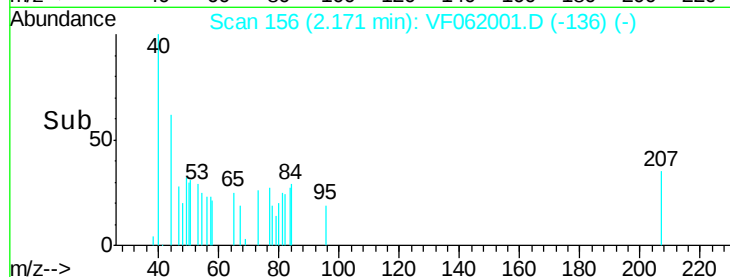
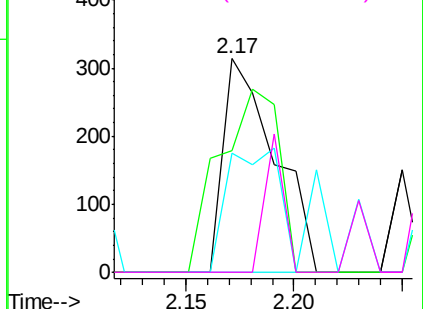


Abundance Ion 84.00 (83.70 to 84.70): VF0

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



#29

Tetrahydrofuran

Concen: 9.022 ug/l

RT: 4.12 min Scan# 354

Delta R.T. 0.05 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

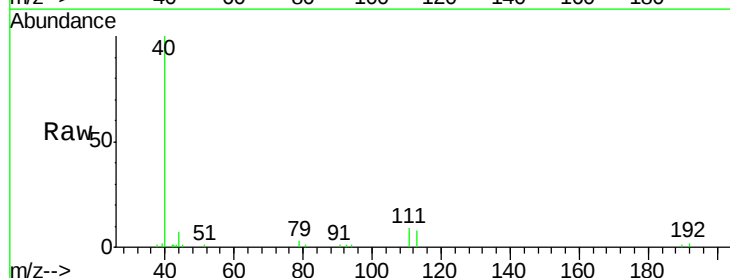
Tgt Ion: 42 Resp: 267

Ion Ratio Lower Upper

42 100

72 0.0 34.0 51.0#

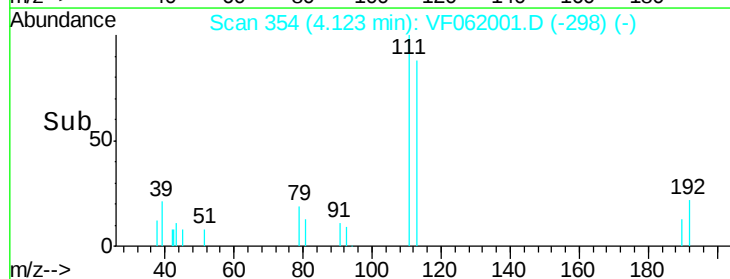
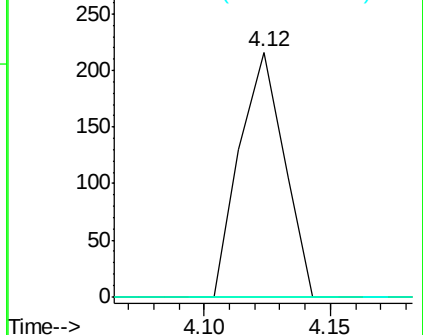
71 0.0 34.2 51.4#

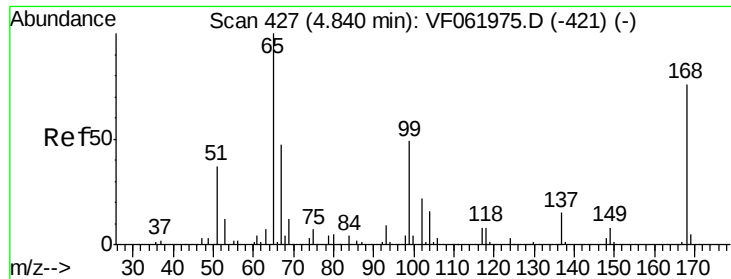


Abundance Ion 42.00 (41.70 to 42.70): VF0

Ion 72.00 (71.70 to 72.70): VF0

Ion 71.00 (70.70 to 71.70): VF0

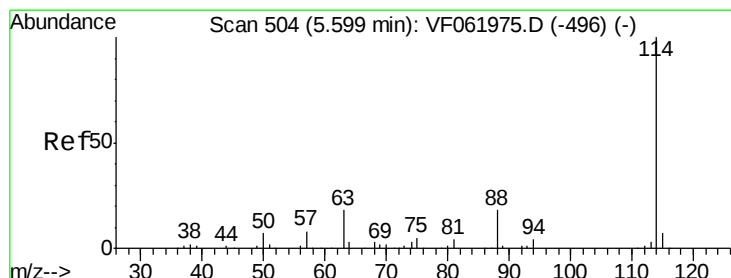
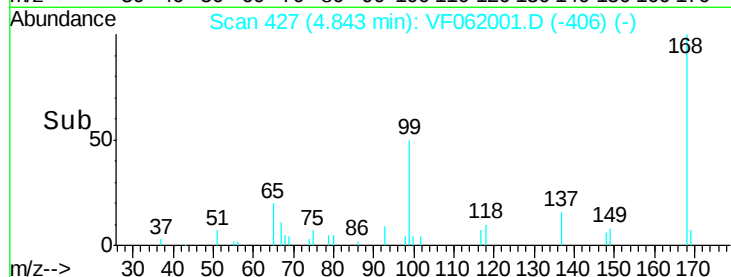
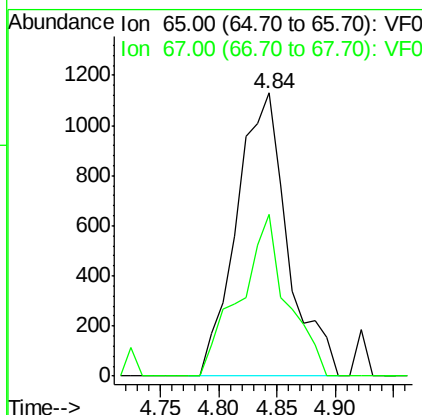
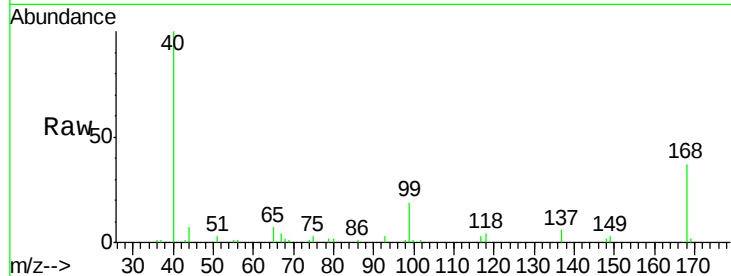




#33  
 1,2-Dichloroethane-d4  
 Concen: 22.428 ug/l  
 RT: 4.84 min Scan# 427  
 Delta R.T. 0.00 min  
 Lab File: VF062001.D  
 Acq: 18 Mar 2019 17:01

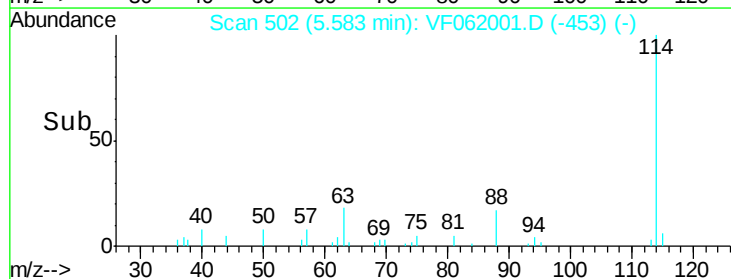
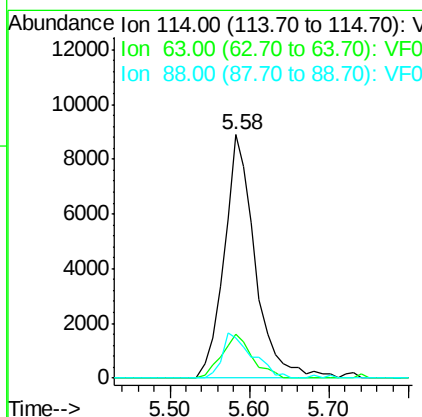
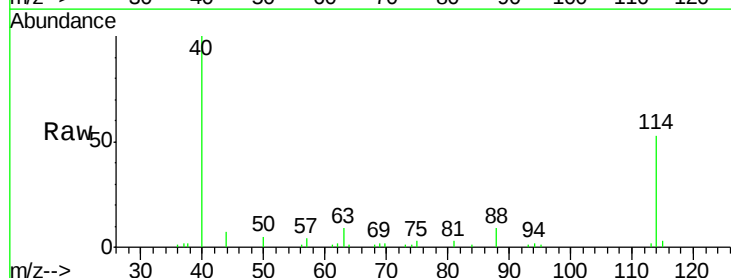
Instrument :  
 MSVOA\_F  
 ClientSampleId :

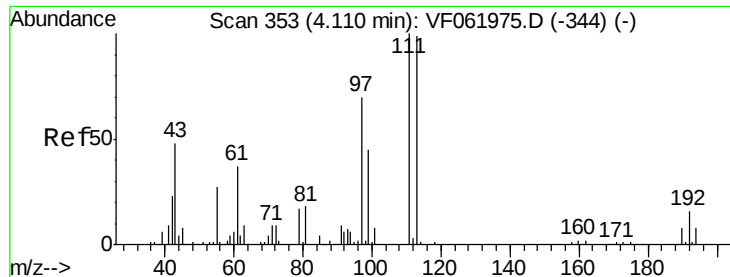
Tot Ion: 65 Resp: 3432  
 Ion Ratio Lower Upper  
 65 100  
 67 57.0 0.0 109.4



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 5.58 min Scan# 502  
 Delta R.T. -0.02 min  
 Lab File: VF062001.D  
 Acq: 18 Mar 2019 17:01

Tgt Ion: 114 Resp: 24126  
 Ion Ratio Lower Upper  
 114 100  
 63 17.8 0.0 36.4  
 88 16.7 0.0 36.4





#35

Dibromofluoromethane

Concen: 37.047 ug/l

RT: 4.10 min Scan# 352

Delta R.T. -0.01 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Instrument :  
MSVOA\_F  
ClientSampleId :

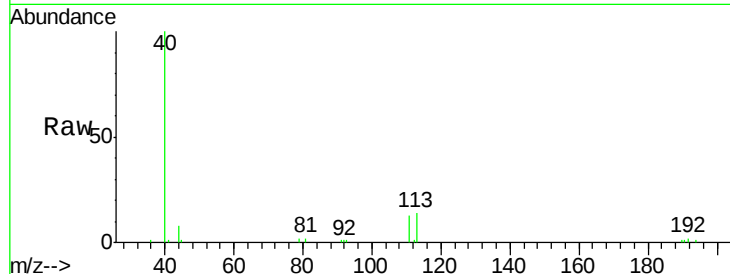
Tot Ion:113 Resp: 6002

Ion Ratio Lower Upper

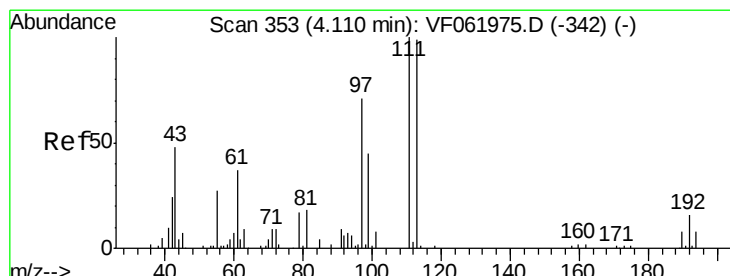
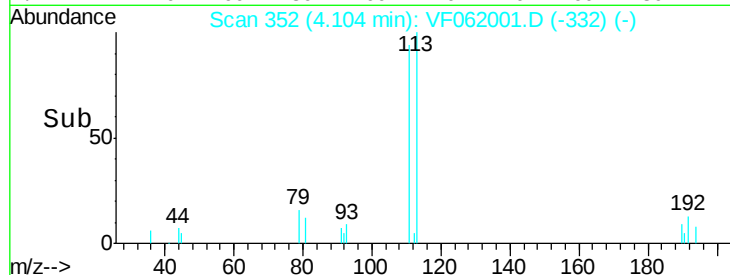
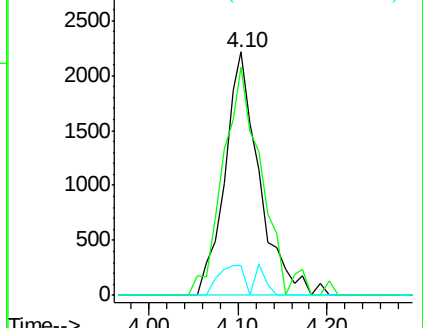
113 100

111 93.6 80.8 121.2

192 12.5 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



#37

Ethyl Acetate

Concen: 1.871 ug/l

RT: 4.11 min Scan# 353

Delta R.T. 0.00 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

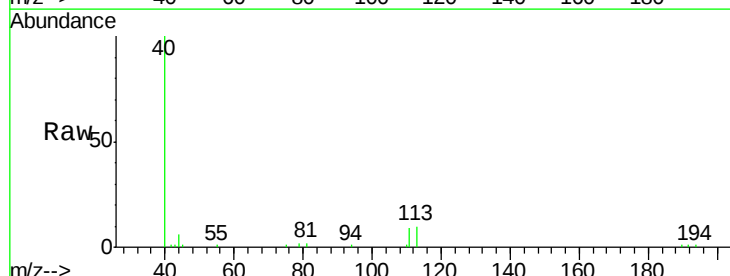
Tgt Ion: 43 Resp: 183

Ion Ratio Lower Upper

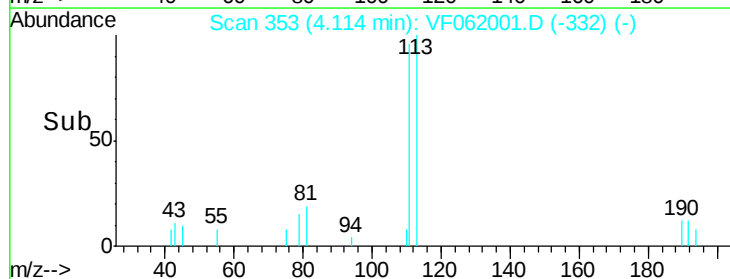
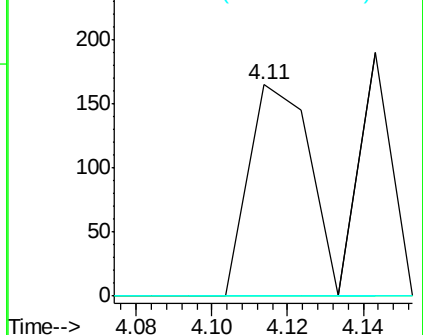
43 100

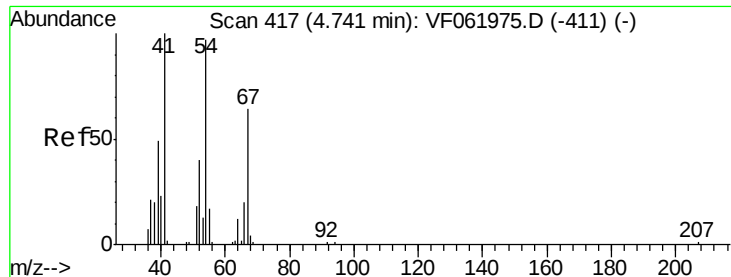
61 0.0 59.8 89.6#

70 0.0 7.8 11.8#



Abundance Ion 43.00 (42.70 to 43.70): VF0  
Ion 61.00 (60.70 to 61.70): VF0  
Ion 70.00 (69.70 to 70.70): VF0

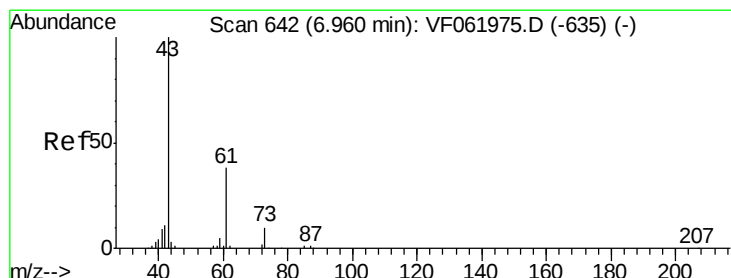
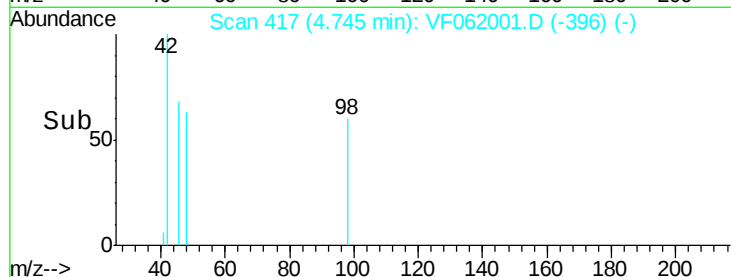
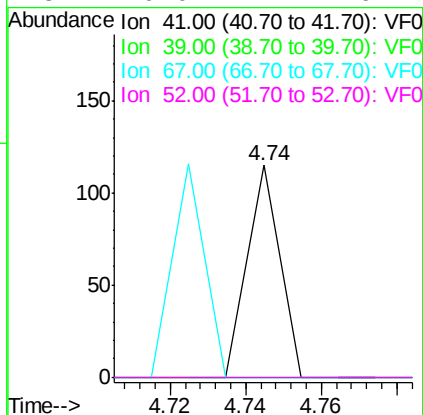
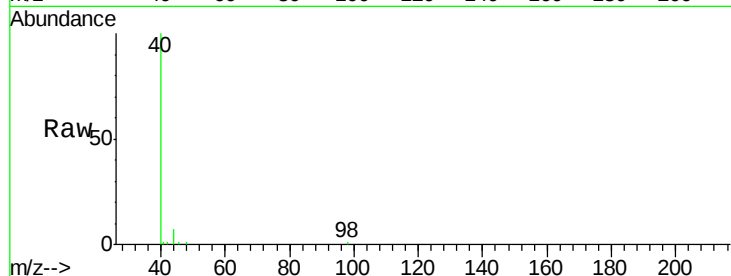




#41  
Methacrylonitrile  
Concen: 1.301 ug/l  
RT: 4.74 min Scan# 417  
Delta R.T. 0.00 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

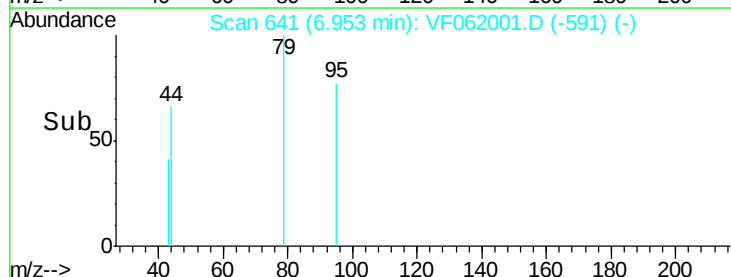
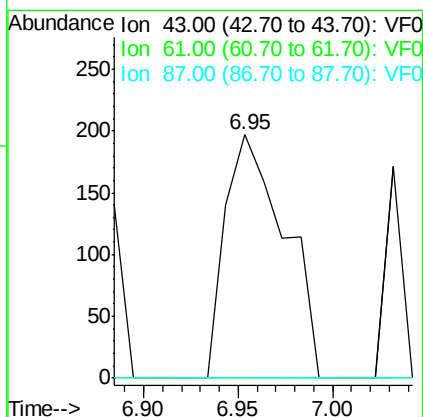
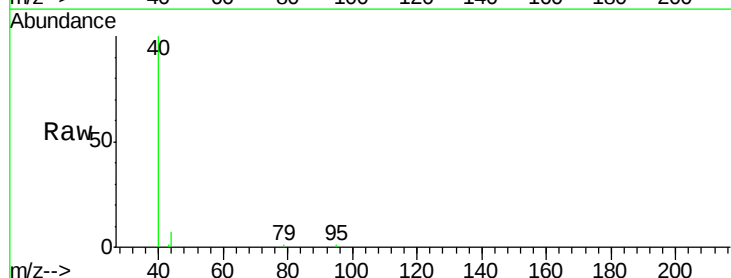
Instrument :  
MSVOA\_F  
ClientSampleId :

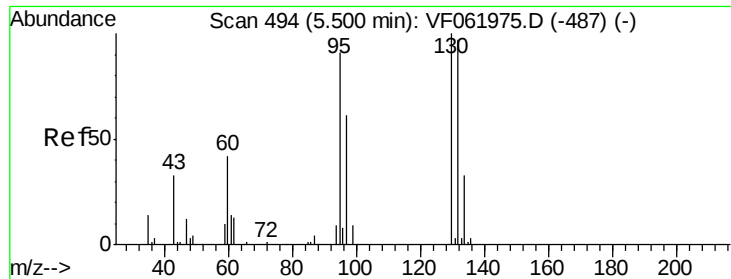
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 41    | Resp: | 68    |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 39       | 0.0   | 46.2  | 69.4# |
| 67       | 0.0   | 49.8  | 74.8# |
| 52       | 0.0   | 42.7  | 64.1# |



#43  
Isopropyl Acetate  
Concen: 3.698 ug/l  
RT: 6.95 min Scan# 641  
Delta R.T. -0.01 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 428   |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 61       | 0.0   | 30.1  | 45.1# |
| 87       | 0.0   | 0.4   | 0.6#  |





#44

Trichloroethene

Concen: 2.318 ug/l

RT: 5.49 min Scan# 493

Delta R.T. -0.01 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

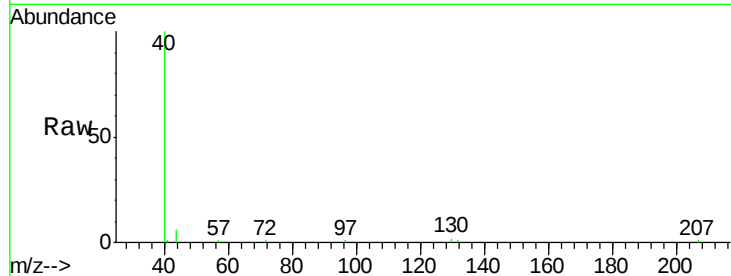
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:130 Resp: 410

Ion Ratio Lower Upper

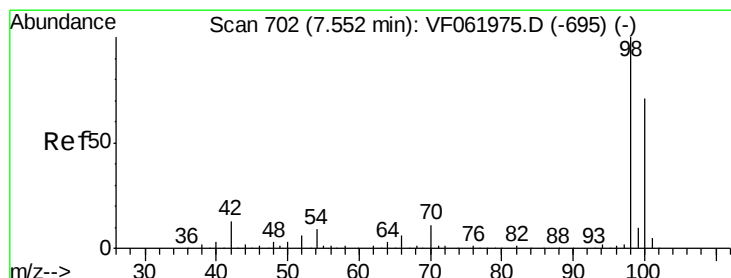
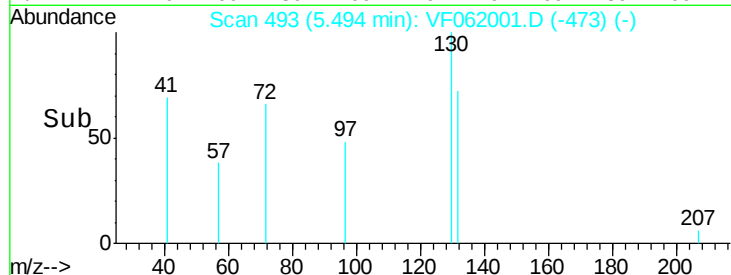
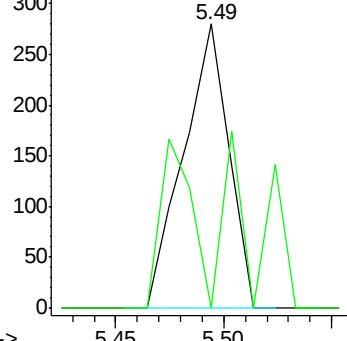
130 100

95 0.0 0.0 181.4



Abundance Ion 129.90 (129.60 to 130.60): V

Ion 94.90 (94.60 to 95.60): VF0



#50

Toluene-d8

Concen: 43.570 ug/l

RT: 7.54 min Scan# 700

Delta R.T. -0.02 min

Lab File: VF062001.D

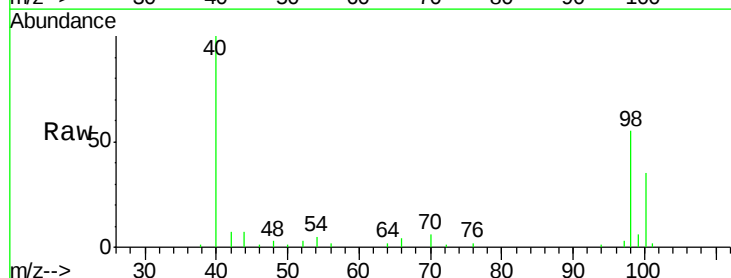
Acq: 18 Mar 2019 17:01

Tgt Ion: 98 Resp: 20635

Ion Ratio Lower Upper

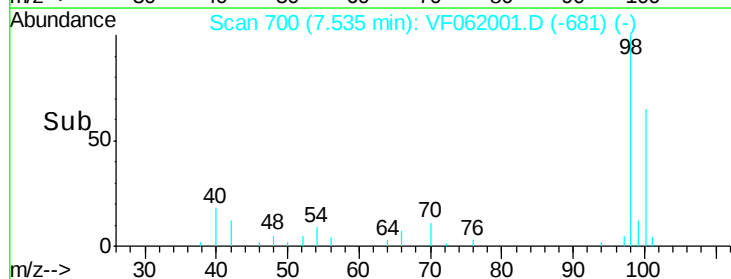
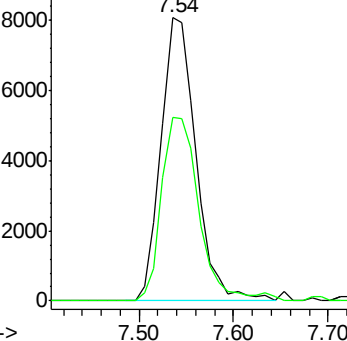
98 100

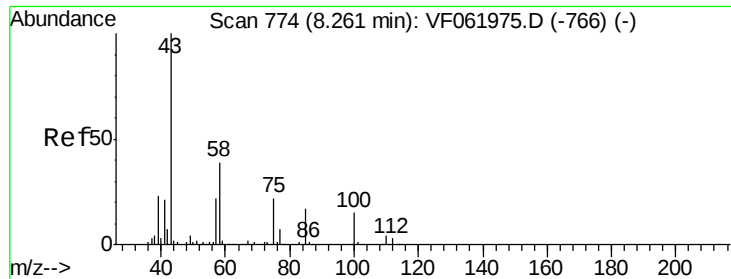
100 64.9 56.8 85.2



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: 2.008 ug/l

RT: 8.25 min Scan# 772

Delta R.T. -0.02 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

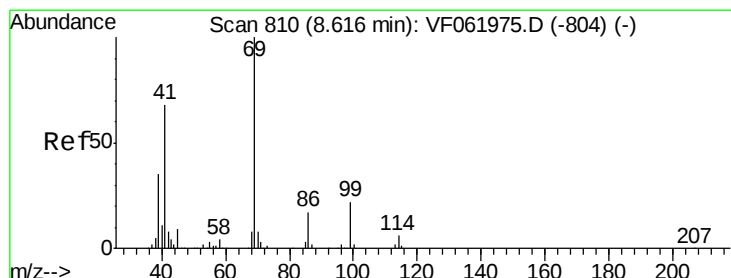
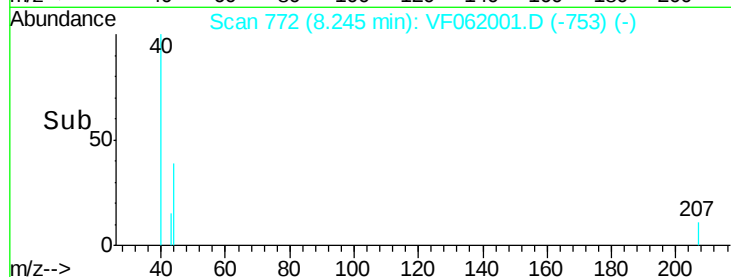
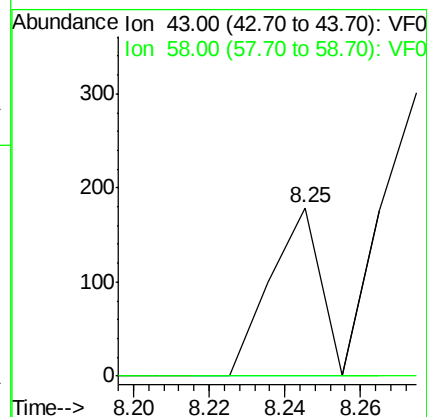
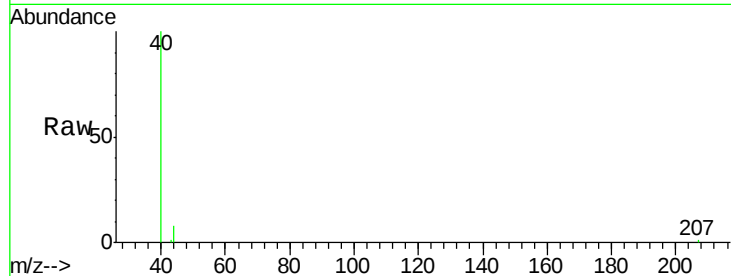
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 43 Resp: 165

Ion Ratio Lower Upper

43 100

58 0.0 31.1 46.7#



#56

Ethyl methacrylate

Concen: 3.244 ug/l

RT: 8.61 min Scan# 809

Delta R.T. -0.01 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

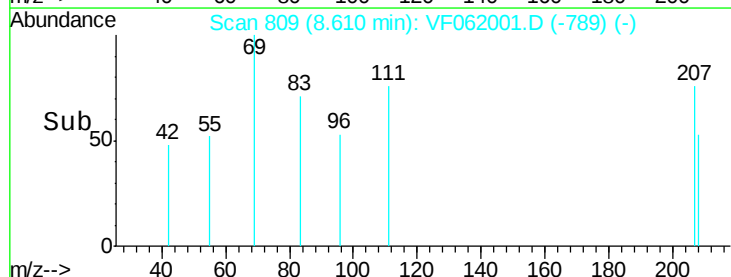
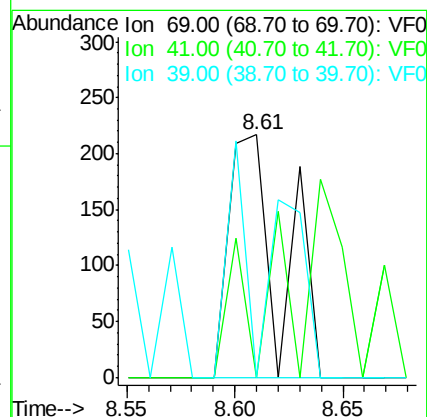
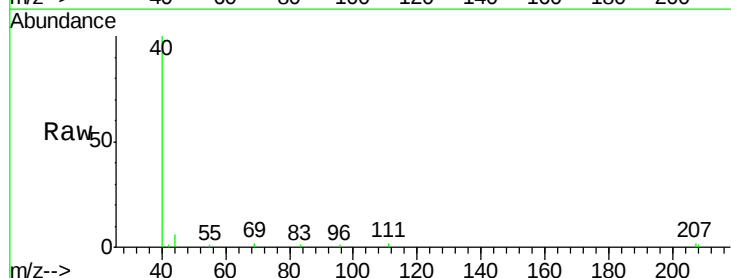
Tgt Ion: 69 Resp: 363

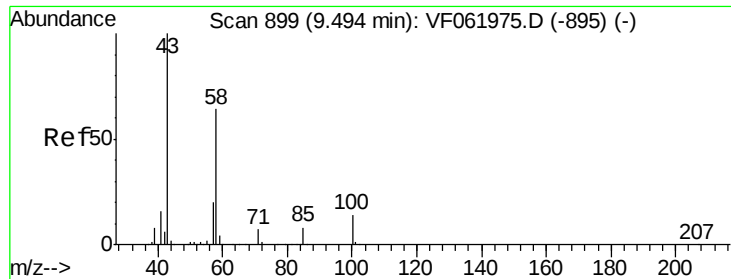
Ion Ratio Lower Upper

69 100

41 0.0 54.7 82.1#

39 0.0 27.9 41.9#

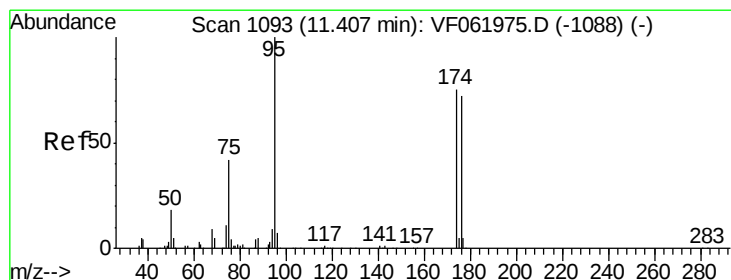
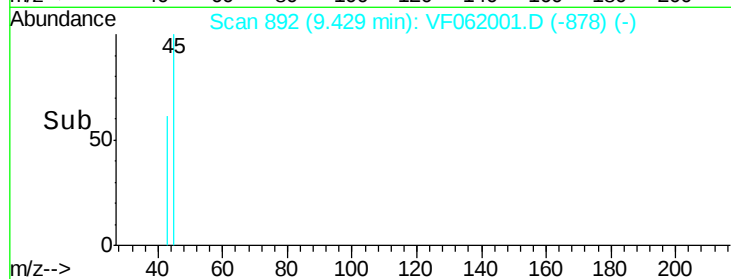
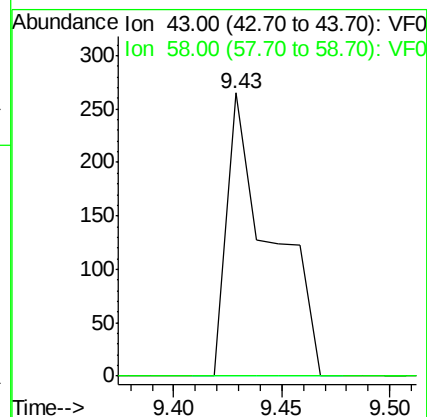
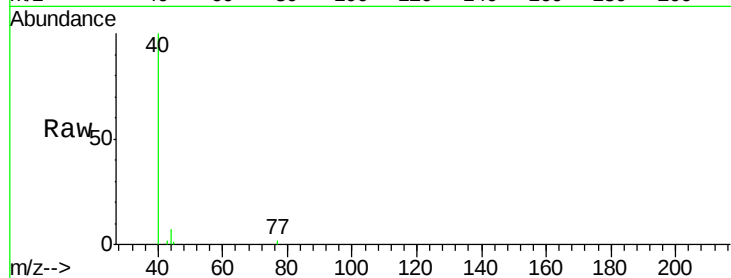




#59  
2-Hexanone  
Concen: 6.355 ug/l  
RT: 9.43 min Scan# 892  
Delta R.T. -0.07 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

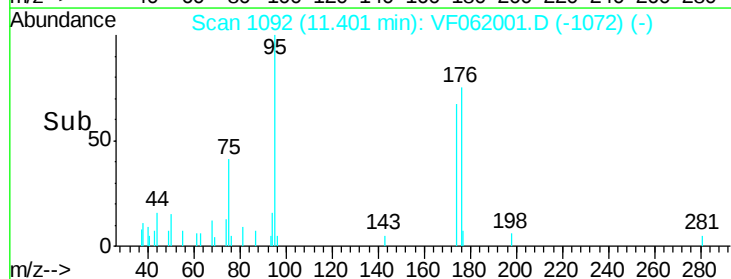
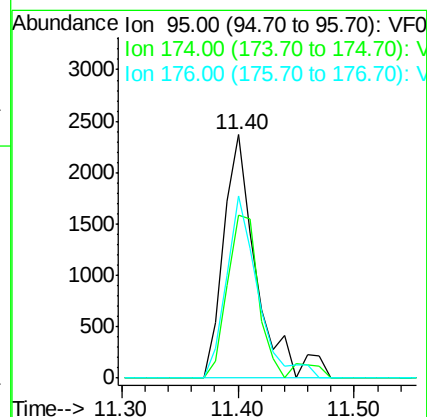
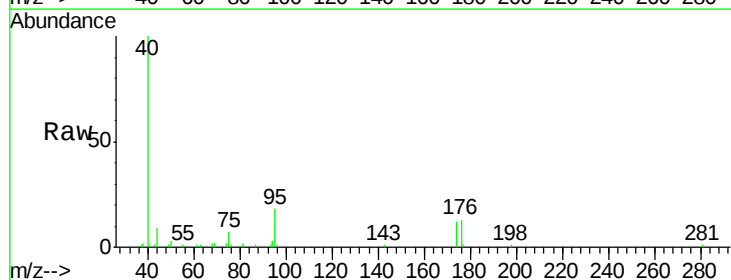
Instrument :  
MSVOA\_F  
ClientSampleId :

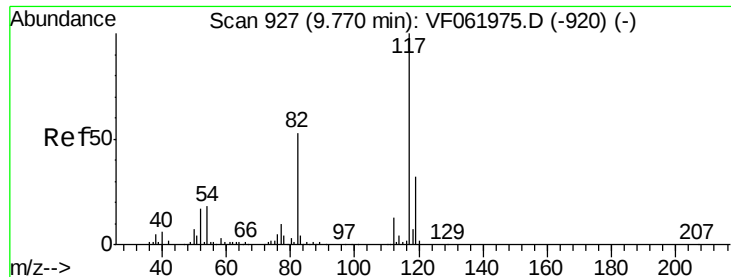
Tot Ion: 43 Resp: 378  
Ion Ratio Lower Upper  
43 100  
58 0.0 28.4 85.2#



#62  
4-Bromofluorobenzene  
Concen: 24.726 ug/l  
RT: 11.40 min Scan# 1092  
Delta R.T. -0.01 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

Tgt Ion: 95 Resp: 4652  
Ion Ratio Lower Upper  
95 100  
174 67.2 0.0 149.4  
176 74.9 0.0 143.4

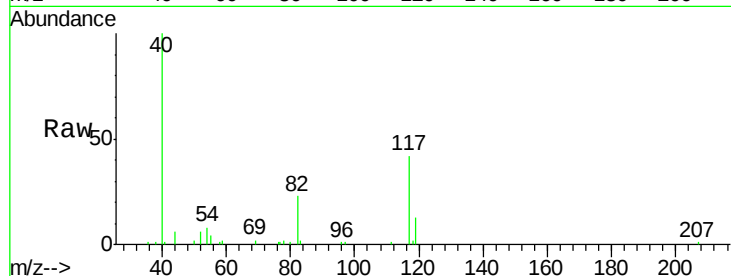




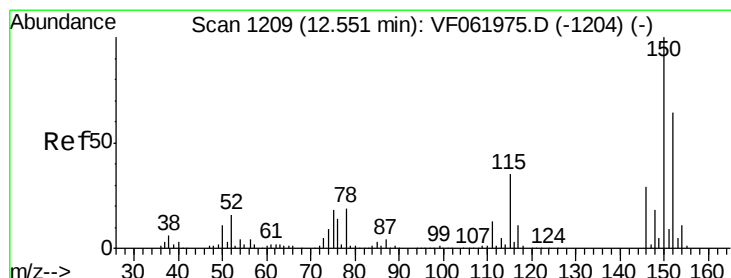
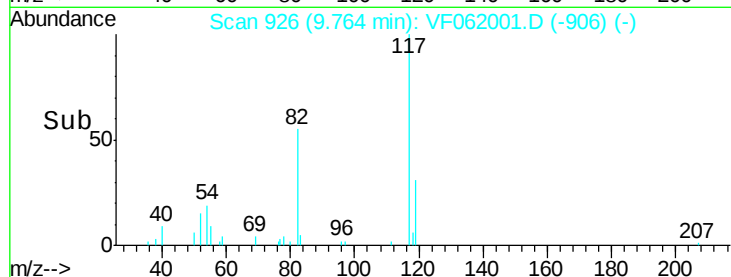
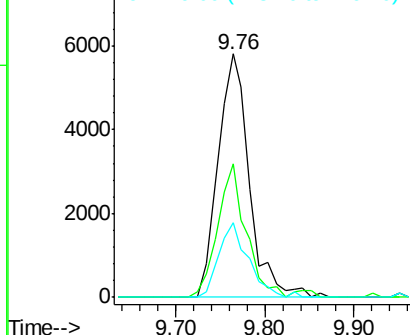
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.76 min Scan# 926  
Delta R.T. -0.01 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:117 Resp: 14284  
Ion Ratio Lower Upper  
117 100  
82 55.1 42.5 63.7  
119 30.8 25.4 38.0

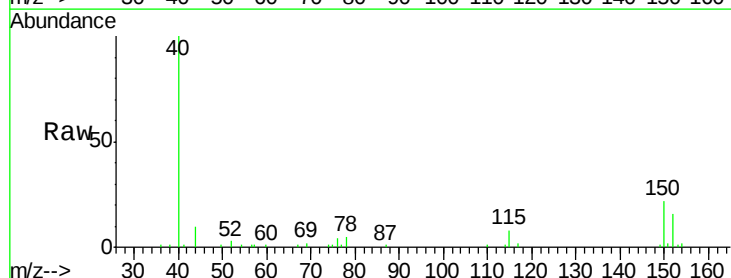


Abundance Ion 117.00 (116.70 to 117.70): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 119.00 (118.70 to 119.70): V

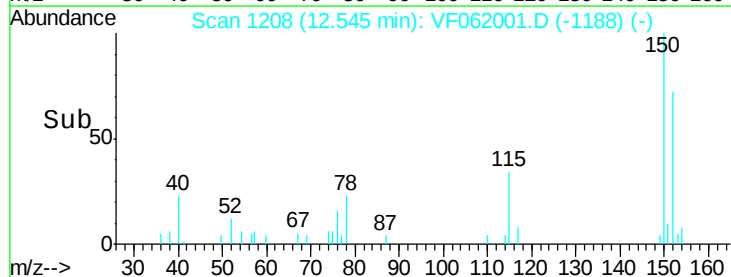
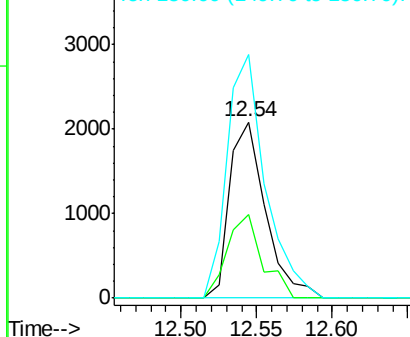


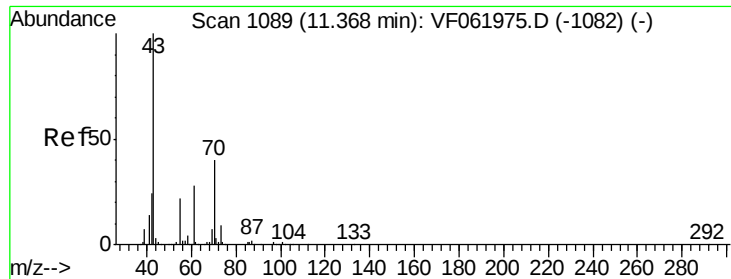
#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.54 min Scan# 1208  
Delta R.T. -0.01 min  
Lab File: VF062001.D  
Acq: 18 Mar 2019 17:01

Tgt Ion:152 Resp: 3456  
Ion Ratio Lower Upper  
152 100  
115 47.1 27.3 81.9  
150 138.1 0.0 316.2



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





#74

N-amvl acetate

Concen: 3.692 ug/l

RT: 11.34 min Scan# 1086

Delta R.T. -0.03 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

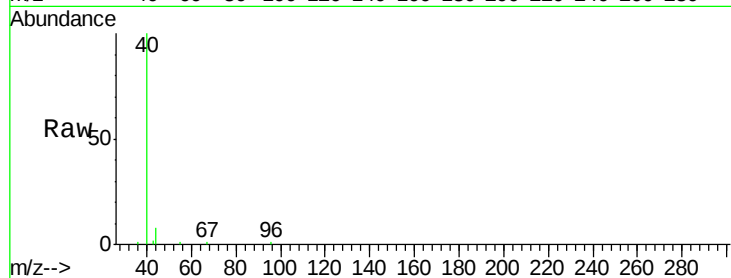
Instrument :

MSVOA\_F

ClientSampleId :

Tot Ion: 43 Resp: 202

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 43  | 100   |       |       |
| 70  | 0.0   | 31.9  | 47.9# |
| 55  | 50.5  | 17.9  | 26.9# |
| 61  | 0.0   | 22.2  | 33.2# |

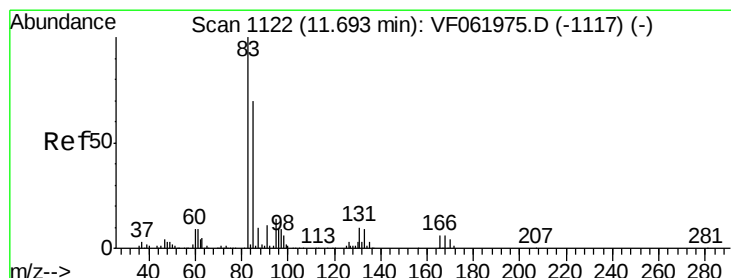
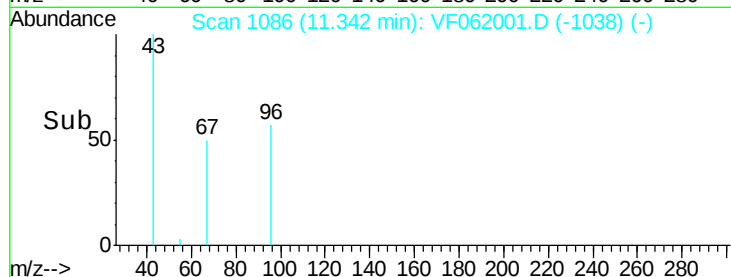
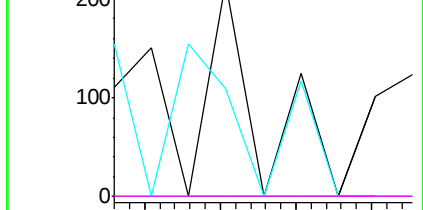


Abundance Ion 43.00 (42.70 to 43.70): VF0

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



#75

1,1,2,2-Tetrachloroethane

Concen: 3.958 ug/l

RT: 11.67 min Scan# 1119

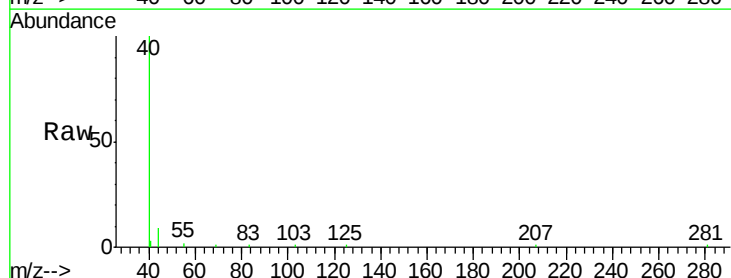
Delta R.T. -0.03 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Tgt Ion: 83 Resp: 156

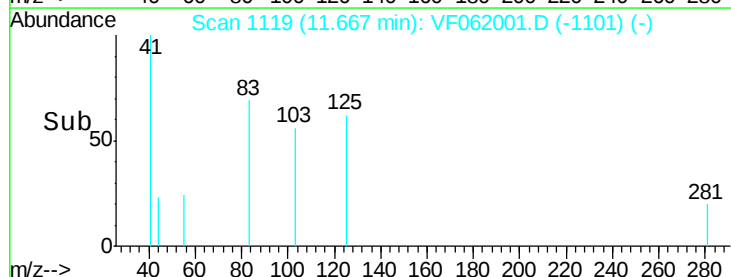
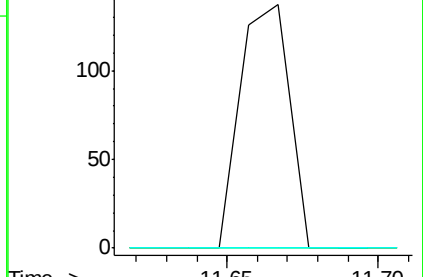
| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 83  | 100   |       |        |
| 131 | 0.0   | 4.9   | 14.7#  |
| 85  | 0.0   | 35.3  | 105.9# |

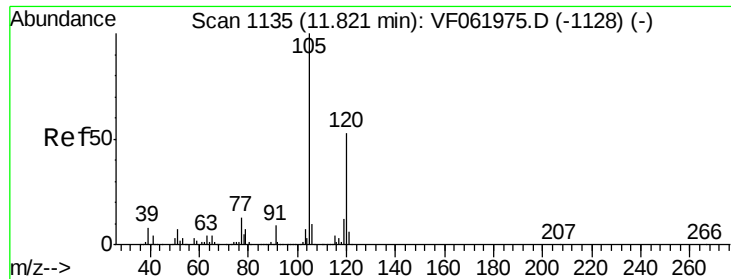


Abundance Ion 83.00 (82.70 to 83.70): VF0

Ion 131.00 (130.70 to 131.70): V

Ion 85.00 (84.70 to 85.70): VF0

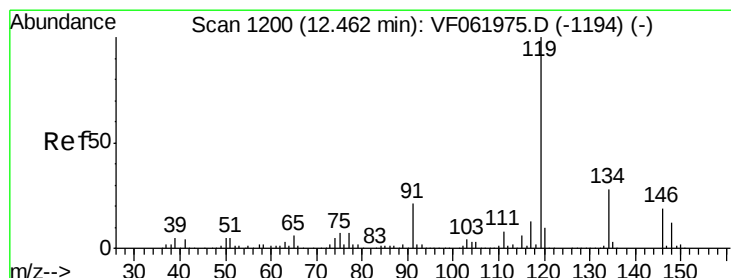
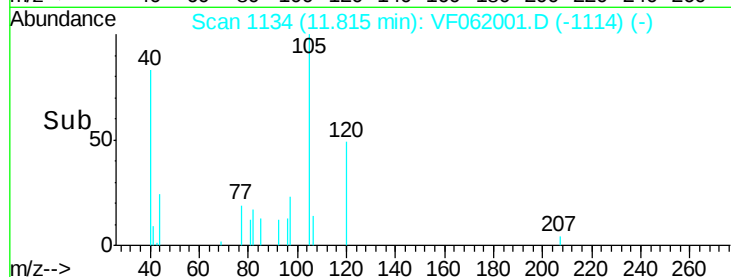
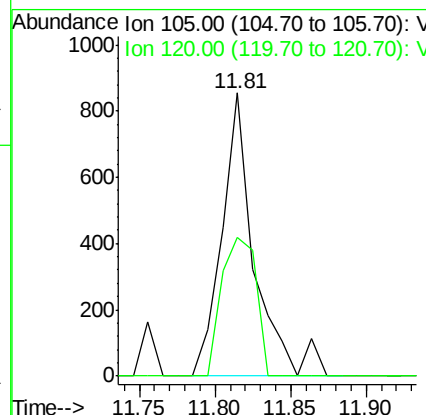
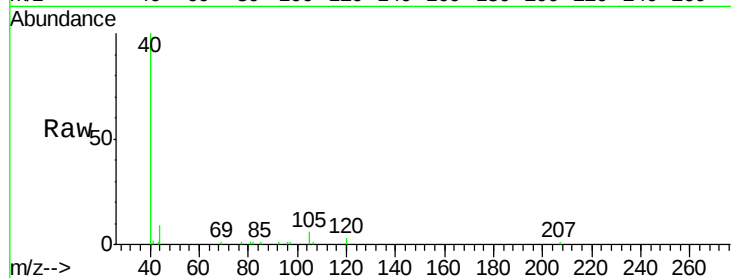




#80  
 1,3,5-Trimethylbenzene  
 Concen: 6.652 ug/l  
 RT: 11.81 min Scan# 1134  
 Delta R.T. -0.01 min  
 Lab File: VF062001.D  
 Acq: 18 Mar 2019 17:01

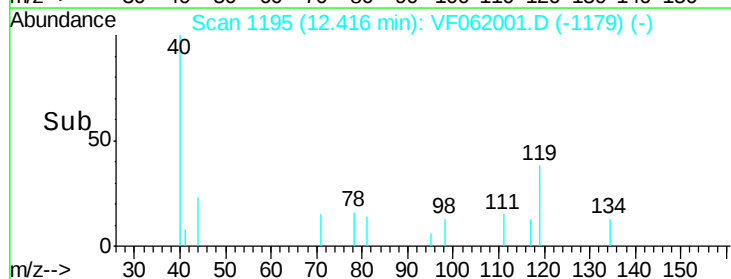
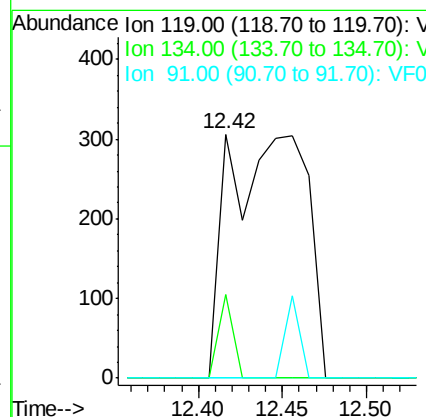
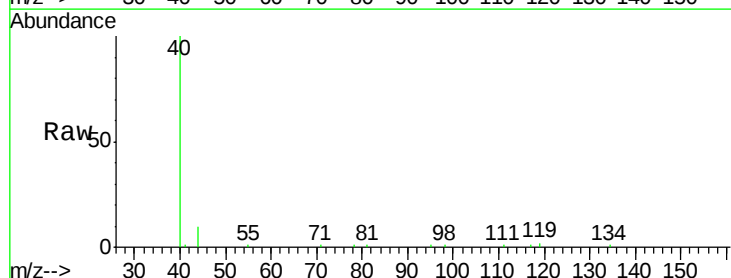
Instrument :  
 MSVOA\_F  
 ClientSampled :

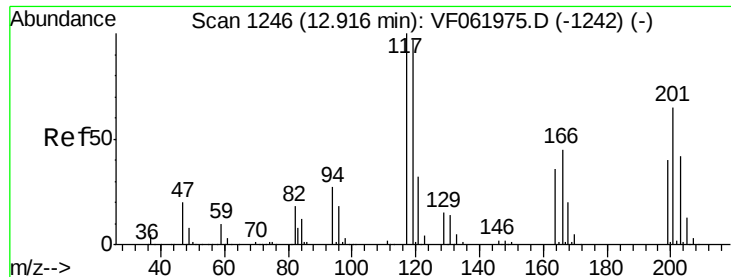
Tot Ion:105 Resp: 1283  
 Ion Ratio Lower Upper  
 105 100  
 120 49.1 26.6 79.7



#86  
 p-Isopropyltoluene  
 Concen: 4.261 ug/l  
 RT: 12.42 min Scan# 1195  
 Delta R.T. -0.05 min  
 Lab File: VF062001.D  
 Acq: 18 Mar 2019 17:01

Tgt Ion:119 Resp: 969  
 Ion Ratio Lower Upper  
 119 100  
 134 34.3 13.9 41.7  
 91 0.0 10.4 31.1#





#90

Hexachloroethane

Concen: 1.831 ug/l

RT: 12.95 min Scan# 1249

Delta R.T. 0.03 min

Lab File: VF062001.D

Acq: 18 Mar 2019 17:01

Instrument :

MSVOA\_F

ClientSampleId :

Tot Ion:117 Resp: 95

Ion Ratio Lower Upper

117 100

201 0.0 32.5 97.5#

