

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF052219\  
 Data File : VF062717.D  
 Acq On : 22 May 2019 20:33  
 Operator : FY/SY  
 Sample : K3002-09RE  
 Misc : 5.03g/5mL/MSVOA F/SOIL  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Quant Time: May 23 01:25:29 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri May 17 05:49:09 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.05  | 168  | 501644   | 50.00 | ug/l  | -0.02    |
| 34) 1,4-Difluorobenzene    | 5.77  | 114  | 810166   | 50.00 | ug/l  | -0.02    |
| 63) Chlorobenzene-d5       | 9.90  | 117  | 481466   | 50.00 | ug/l  | -0.02    |
| 72) 1,4-Dichlorobenzene-d4 | 12.60 | 152  | 177073   | 50.00 | ug/l  | -0.02    |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 5.02  | 65   | 154112   | 43.47 | ug/l   | -0.02    |
| Spiked Amount               |       |      | Recovery | =     | 86.94% |          |
| 35) Dibromofluoromethane    | 4.29  | 113  | 286800   | 46.26 | ug/l   | -0.03    |
| Spiked Amount               |       |      | Recovery | =     | 92.52% |          |
| 50) Toluene-d8              | 7.70  | 98   | 519033   | 35.07 | ug/l   | -0.02    |
| Spiked Amount               |       |      | Recovery | =     | 70.14% |          |
| 62) 4-Bromofluorobenzene    | 11.48 | 95   | 154364   | 27.50 | ug/l   | -0.02    |
| Spiked Amount               |       |      | Recovery | =     | 55.00% |          |

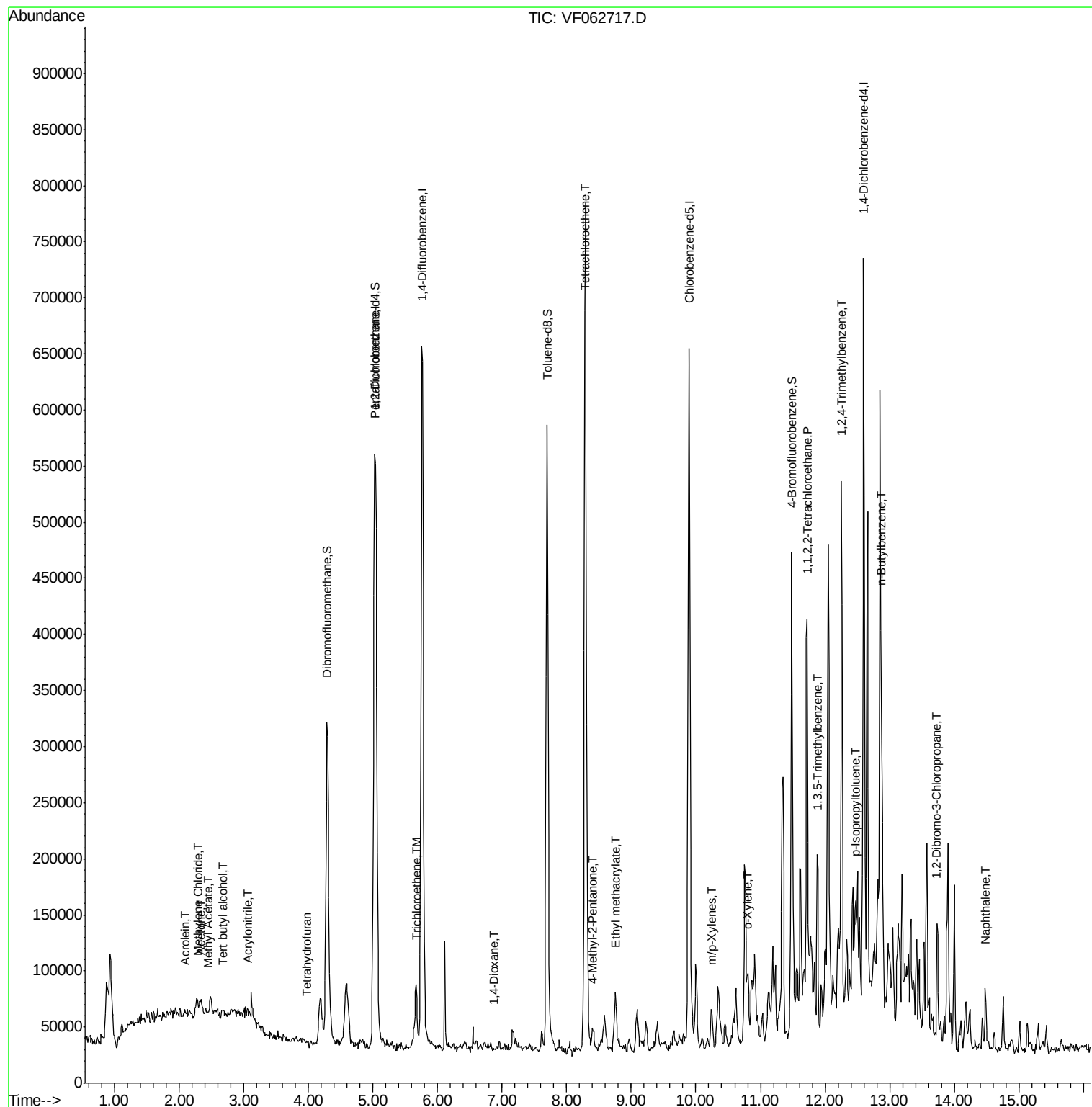
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 11) Tert butyl alcohol         | 2.67  | 59   | 2298     | 9.819     | ug/l # | 35     |
| 13) Acrolein                   | 2.10  | 56   | 1586     | 6.492     | ug/l   | 86     |
| 15) Acrylonitrile              | 3.06  | 53   | 2297     | 3.479     | ug/l # | 60     |
| 16) Acetone                    | 2.34  | 43   | 14903    | 16.205    | ug/l # | 63     |
| 18) Methyl Acetate             | 2.45  | 43   | 1860     | 1.287     | ug/l   | 100    |
| 20) Methylene Chloride         | 2.29  | 84   | 6326     | 1.372     | ug/l # | 80     |
| 29) Tetrahydrofuran            | 3.98  | 42   | 1860     | 2.339     | ug/l   | 94     |
| 44) Trichloroethene            | 5.67  | 130  | 28159    | 4.430     | ug/l   | 97     |
| 49) 1,4-Dioxane                | 6.88  | 88   | 189      | 6.429     | ug/l # | 1      |
| 51) 4-Methyl-2-Pentanone       | 8.40  | 43   | 16092    | 5.361     | ug/l # | 52     |
| 56) Ethyl methacrylate         | 8.75  | 69   | 28233    | 6.748     | ug/l # | 70     |
| 59) 2-Hexanone                 | 9.62  | 43   | 2150     | Below Cal |        | 65     |
| 64) Tetrachloroethene          | 8.29  | 164  | 244118   | 64.001    | ug/l   | 94     |
| 68) m/p-Xylenes                | 10.24 | 106  | 13982    | 2.265     | ug/l # | 49     |
| 69) o-Xylene                   | 10.80 | 106  | 10671    | 1.678     | ug/l   | 79     |
| 74) N-amyl acetate             | 11.46 | 43   | 4900     | Below Cal | #      | 51     |
| 75) 1,1,2,2-Tetrachloroethane  | 11.73 | 83   | 17371    | 6.698     | ug/l # | 62     |
| 80) 1,3,5-Trimethylbenzene     | 11.88 | 105  | 68198    | 6.702     | ug/l   | 95     |
| 84) 1,2,4-Trimethylbenzene     | 12.25 | 105  | 137537   | 13.964    | ug/l   | 87     |
| 86) p-Isopropyltoluene         | 12.48 | 119  | 28520    | 2.442     | ug/l   | 93     |
| 89) n-Butylbenzene             | 12.87 | 91   | 19312    | 1.677     | ug/l # | 1      |
| 92) 1,2-Dibromo-3-Chloropropan | 13.73 | 75   | 571      | 1.845     | ug/l # | 46     |
| 95) Naphthalene                | 14.48 | 128  | 25447    | 3.846     | ug/l # | 93     |

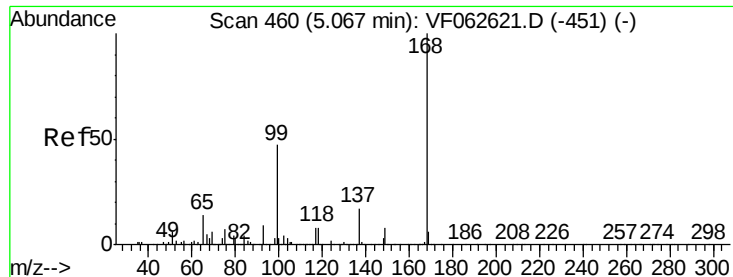
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF052219\  
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Sample : K3002-09RE  
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Instrument :  
MSVOA\_F  
ClientSampleId :

Quant Time: May 23 01:25:29 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
Quant Title : SW846 8260  
QLast Update : Fri May 17 05:49:09 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.05 min Scan# 458

Delta R.T. -0.02 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

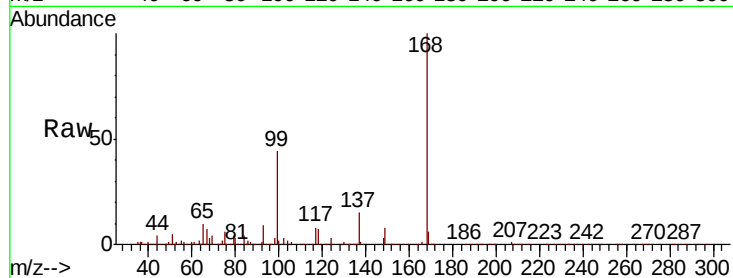
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:168 Resp: 501644

Ion Ratio Lower Upper

168 100

99 44.5 37.8 56.8



Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0

5.05

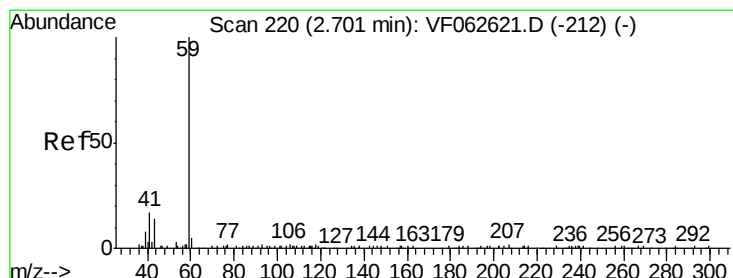
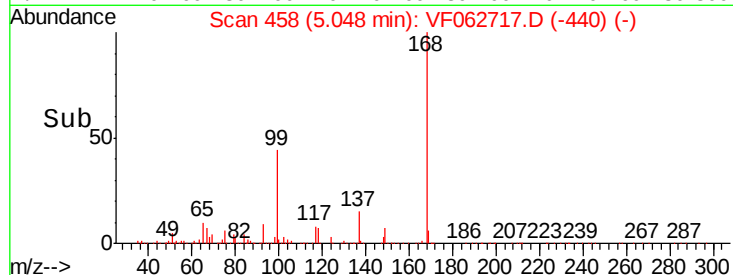
150000

100000

50000

0

Time--> 4.80 5.00 5.20



#11

Tert butyl alcohol

Concen: 9.819 ug/l

RT: 2.67 min Scan# 217

Delta R.T. -0.03 min

Lab File: VF062717.D

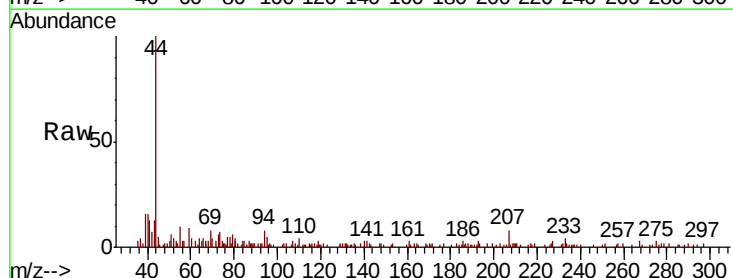
Acq: 22 May 2019 20:33

Tgt Ion: 59 Resp: 2298

Ion Ratio Lower Upper

59 100

57 36.7 9.3 13.9#



Abundance Ion 59.00 (58.70 to 59.70): VF0

Ion 57.00 (56.70 to 57.70): VF0

1200

1000

800

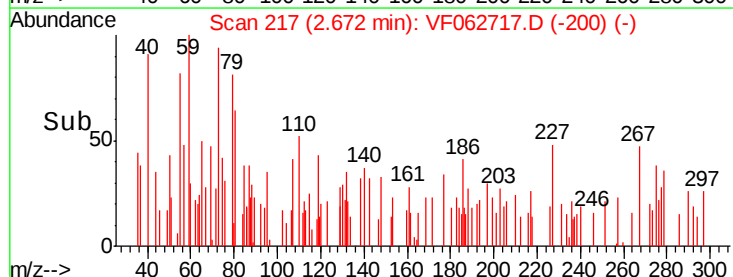
600

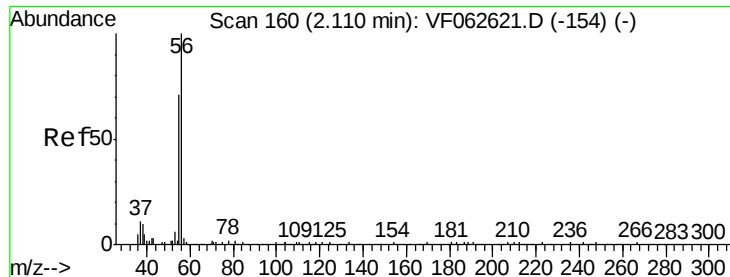
400

200

0

Time--> 2.60 2.65 2.70

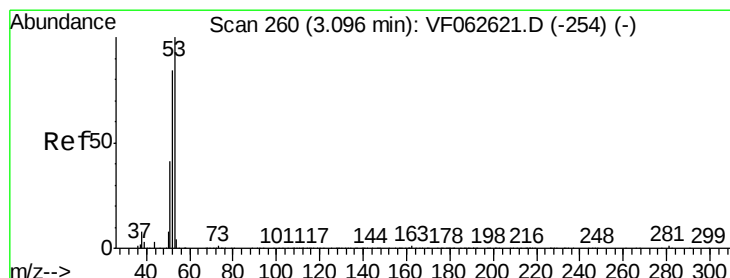
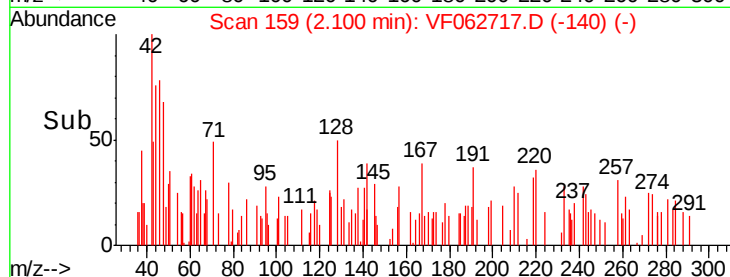
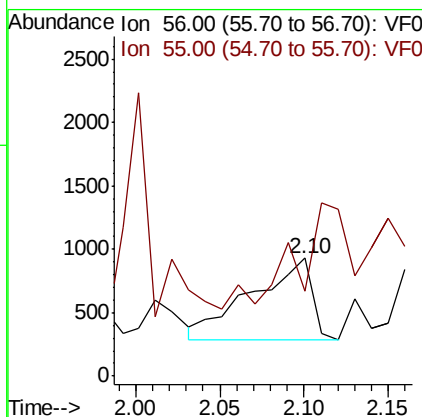
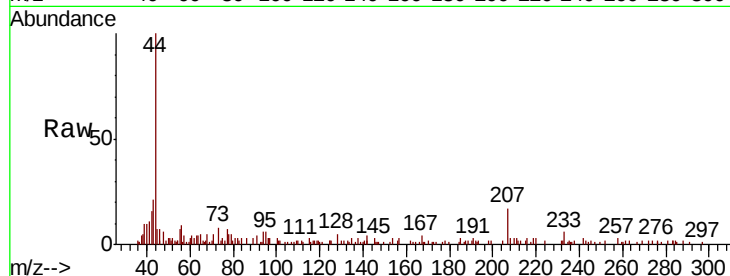




#13  
Acrolein  
Concen: 6.492 ug/l  
RT: 2.10 min Scan# 159  
Delta R.T. -0.01 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

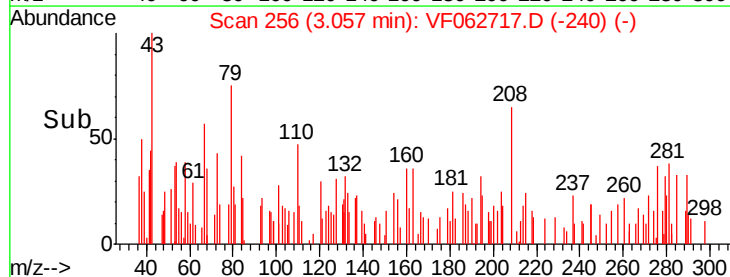
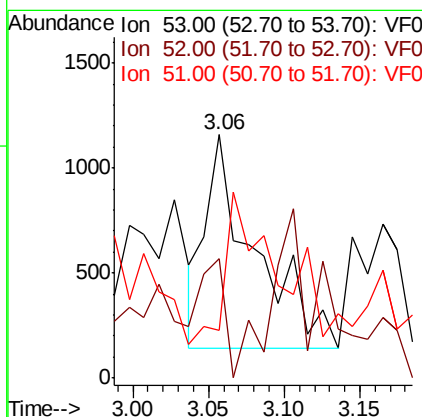
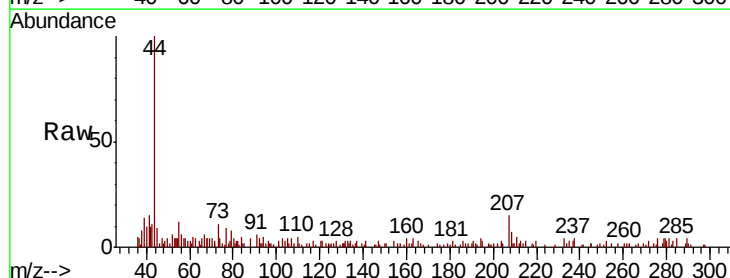
Instrument :  
MSVOA\_F  
ClientSampleId :

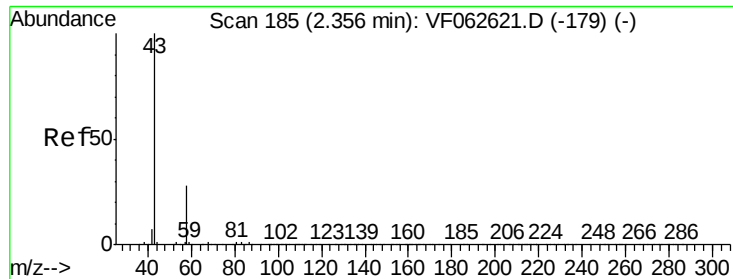
Tot Ion: 56 Resp: 1586  
Ion Ratio Lower Upper  
56 100  
55 62.6 59.4 89.0



#15  
Acrylonitrile  
Concen: 3.479 ug/l  
RT: 3.06 min Scan# 256  
Delta R.T. -0.04 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

Tgt Ion: 53 Resp: 2297  
Ion Ratio Lower Upper  
53 100  
52 48.8 67.3 100.9#  
51 68.6 33.0 49.6#

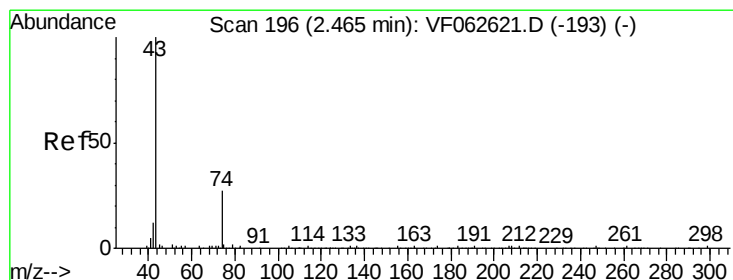
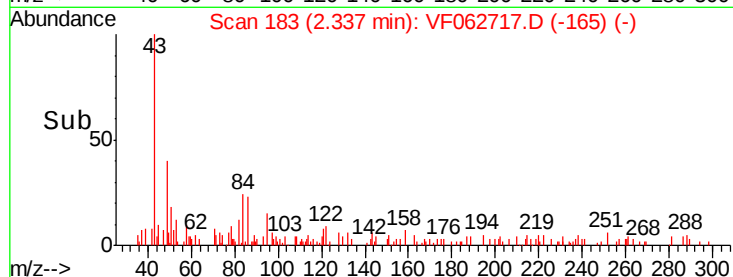
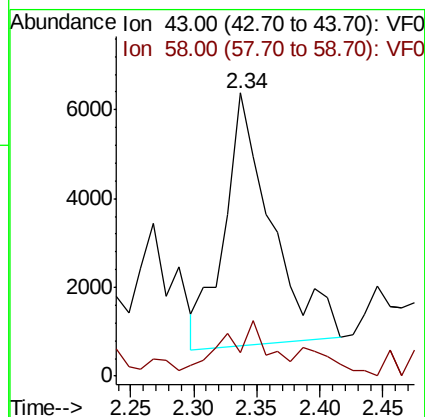
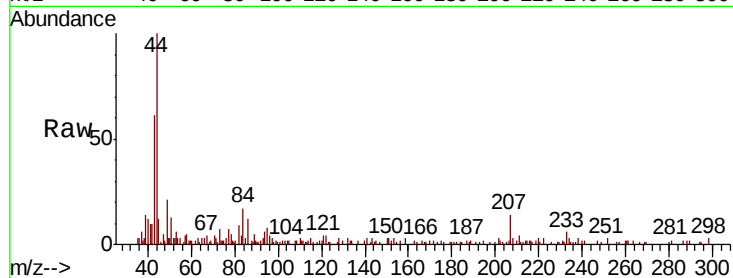




#16  
Acetone  
Concen: 16.205 ug/l  
RT: 2.34 min Scan# 183  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

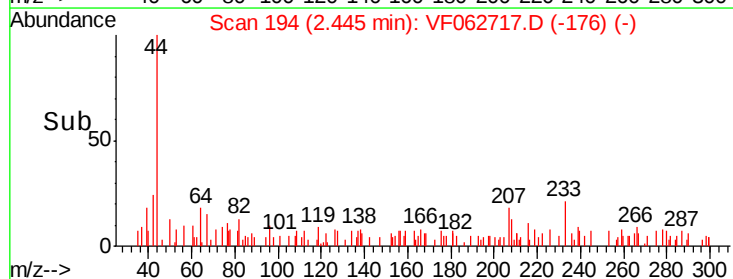
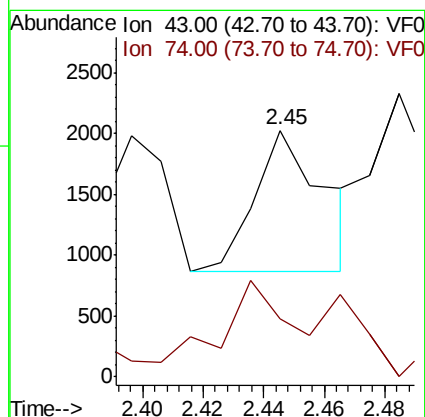
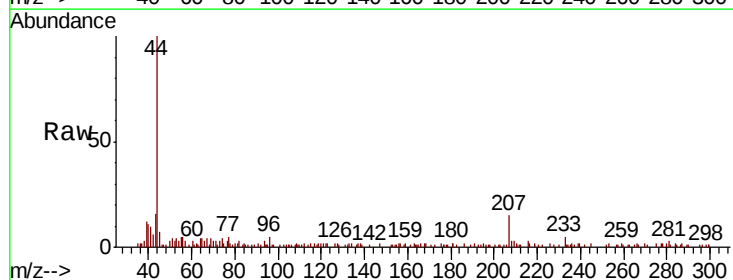
Instrument :  
MSVOA\_F  
ClientSampleId :

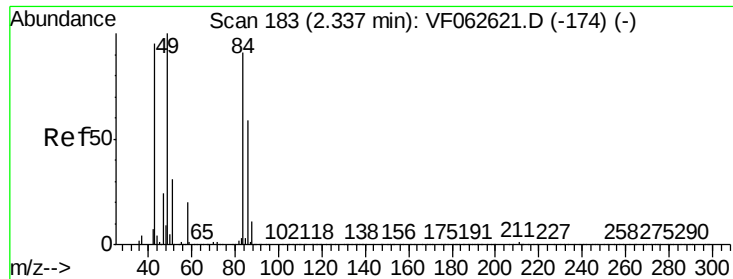
Tot Ion: 43 Resp: 14903  
Ion Ratio Lower Upper  
43 100  
58 8.5 22.6 33.8#



#18  
Methyl Acetate  
Concen: 1.287 ug/l  
RT: 2.45 min Scan# 194  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

Tgt Ion: 43 Resp: 1860  
Ion Ratio Lower Upper  
43 100  
74 23.4 18.9 28.3

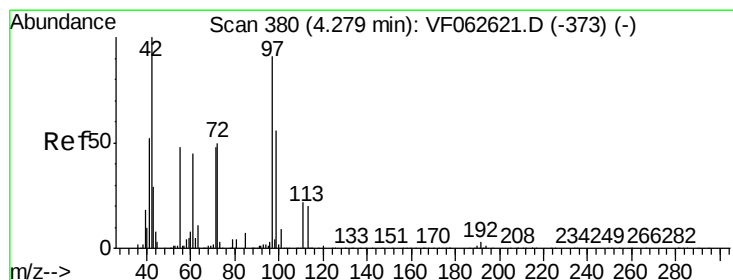
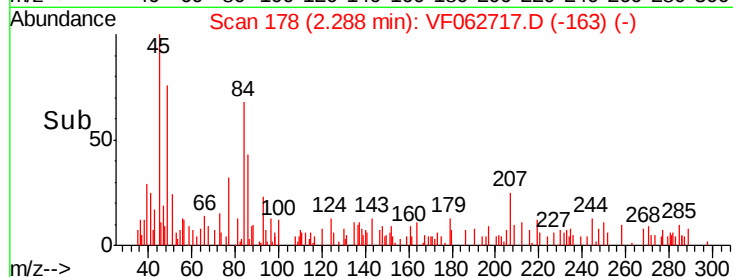
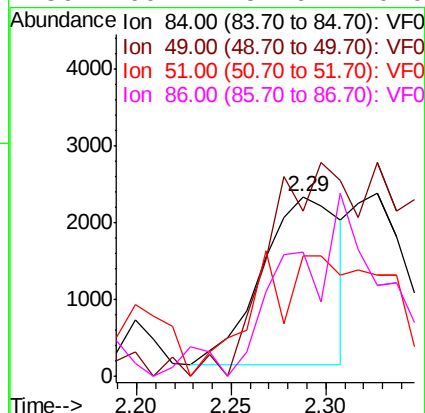
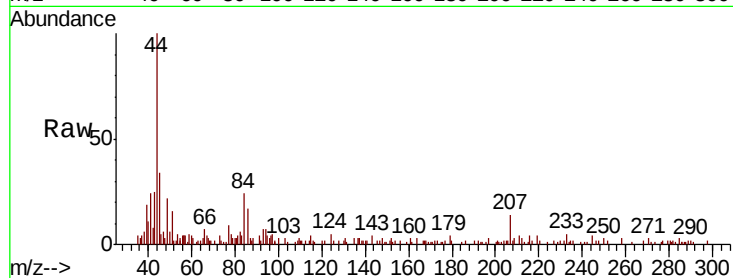




#20  
Methvlene Chloride  
Concen: 1.372 ug/l  
RT: 2.29 min Scan# 178  
Delta R.T. -0.05 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

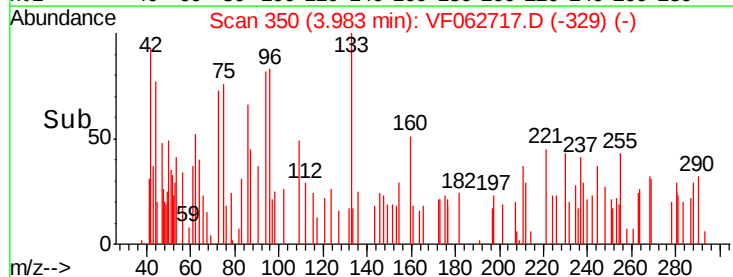
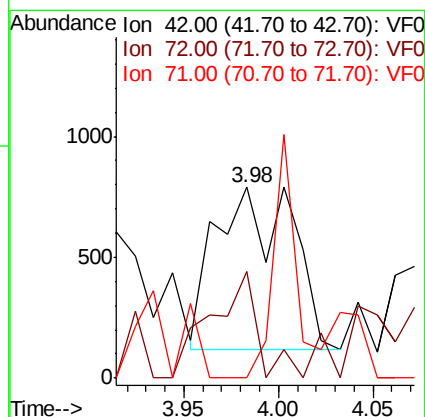
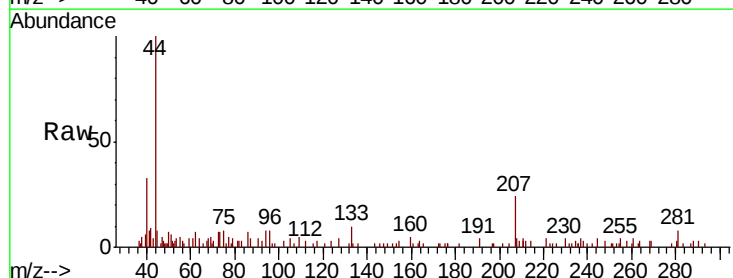
Instrument :  
MSVOA\_F  
ClientSampled :

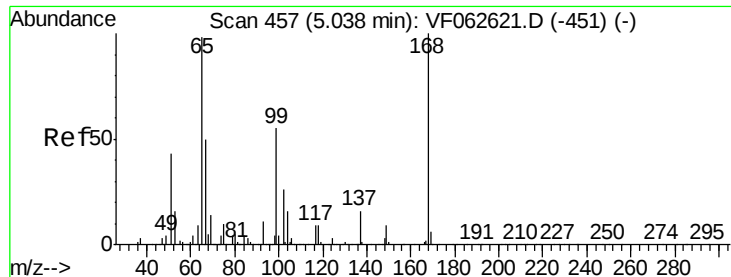
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 84    | Resp: | 6326  |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 92.1  | 89.8  | 134.8 |
| 51       | 66.8  | 28.4  | 42.6# |
| 86       | 69.2  | 52.6  | 79.0  |



#29  
Tetrahydrofuran  
Concen: 2.339 ug/l  
RT: 3.98 min Scan# 350  
Delta R.T. -0.30 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 42    | Resp: | 1860  |
| Ion      | Ratio | Lower | Upper |
| 42       | 100   |       |       |
| 72       | 41.0  | 38.2  | 57.2  |
| 71       | 45.6  | 35.8  | 53.6  |





#33

1,2-Dichloroethane-d4

Concen: 43.475 ug/l

RT: 5.02 min Scan# 455

Delta R.T. -0.02 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :

MSVOA\_F

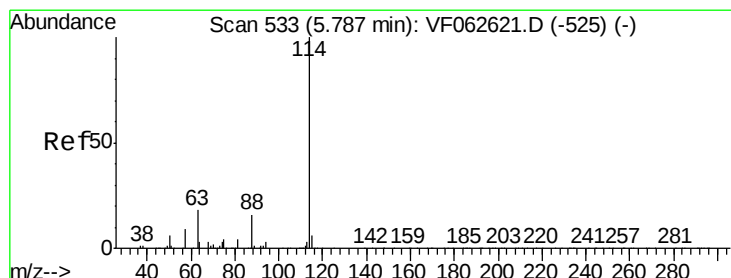
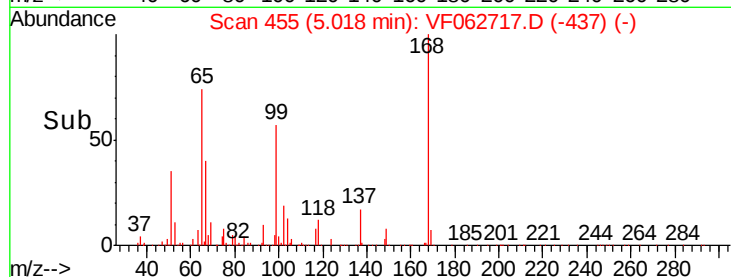
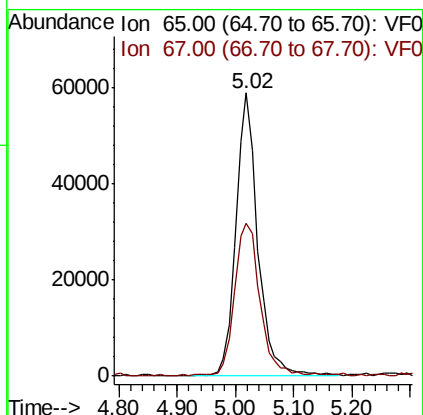
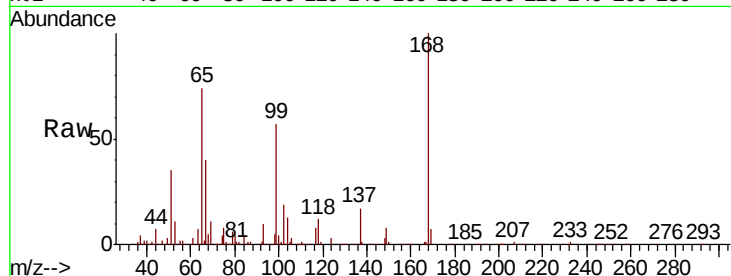
ClientSampleId :

Tot Ion: 65 Resp: 154112

Ion Ratio Lower Upper

65 100

67 54.1 0.0 117.6



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 5.77 min Scan# 531

Delta R.T. -0.02 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

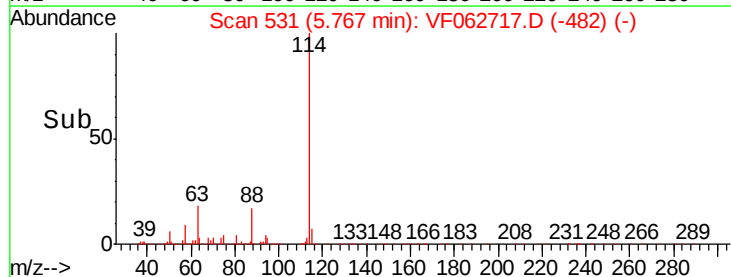
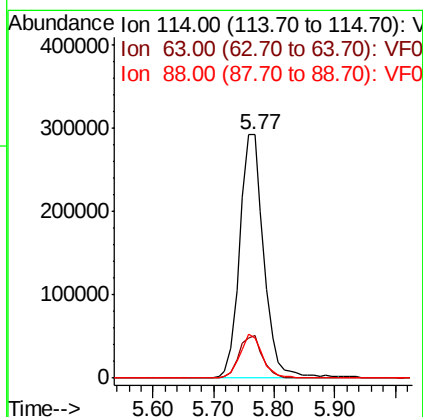
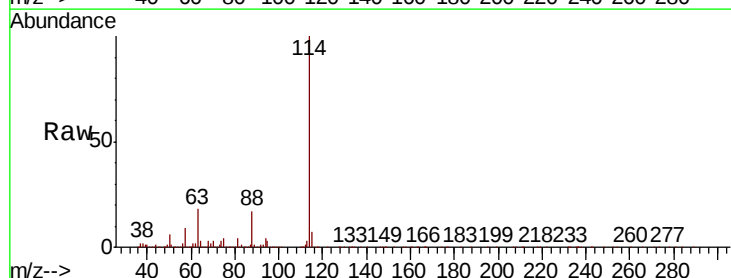
Tgt Ion: 114 Resp: 810166

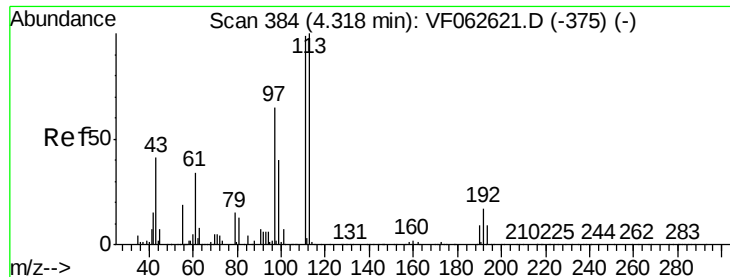
Ion Ratio Lower Upper

114 100

63 17.7 0.0 35.4

88 16.6 0.0 32.4

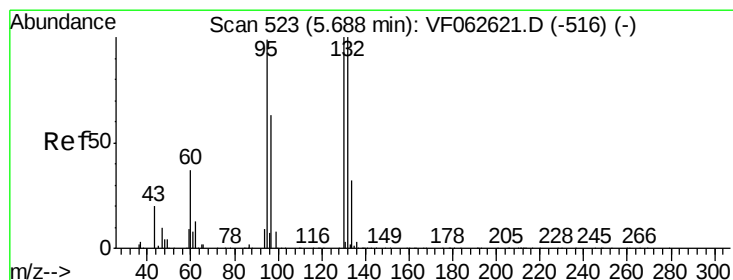
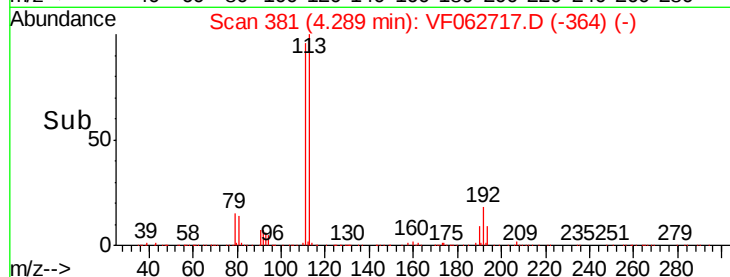
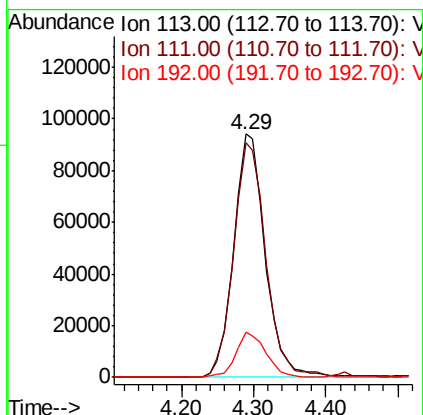
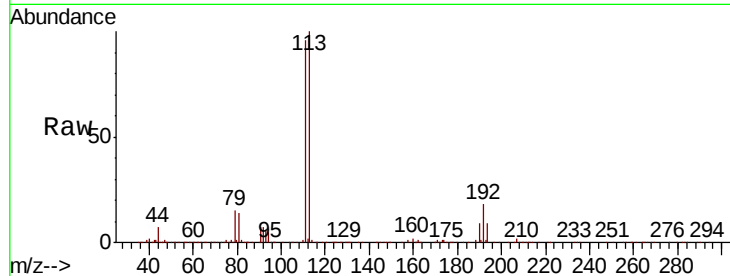




#35  
Dibromofluoromethane  
Concen: 46.262 ug/l  
RT: 4.29 min Scan# 381  
Delta R.T. -0.03 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

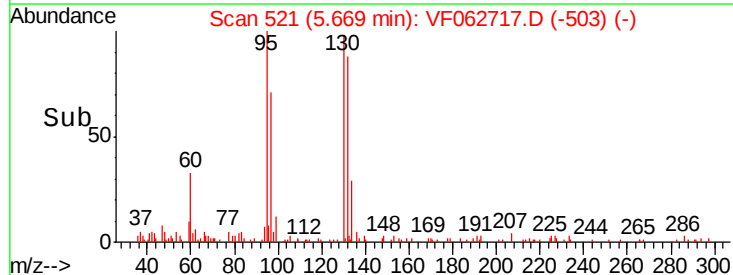
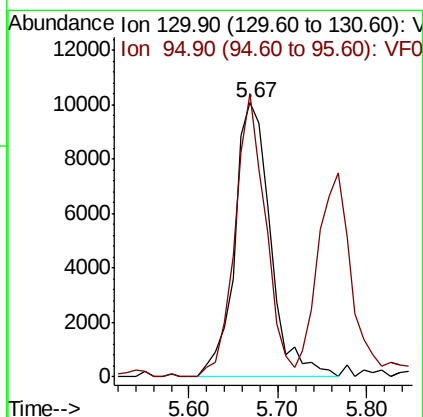
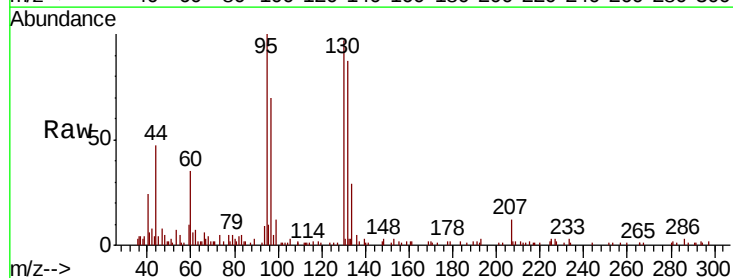
Instrument :  
MSVOA\_F  
ClientSampleId :

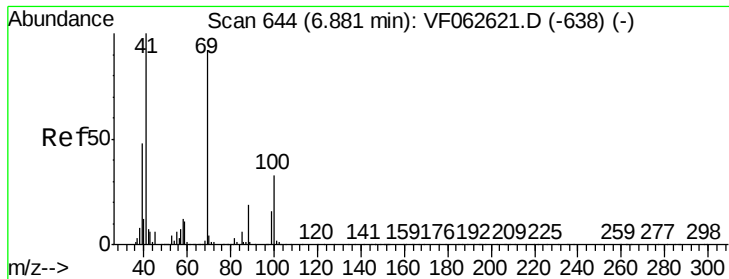
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 96.1  | 79.4  | 119.2 |
| 192     | 18.3  | 13.4  | 20.2  |



#44  
Trichloroethene  
Concen: 4.430 ug/l  
RT: 5.67 min Scan# 521  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 130     | 100   |       |       |
| 95      | 103.2 | 0.0   | 199.4 |





#49

1,4-Dioxane

Concen: 6.429 ug/l

RT: 6.88 min Scan# 644

Delta R.T. 0.00 min

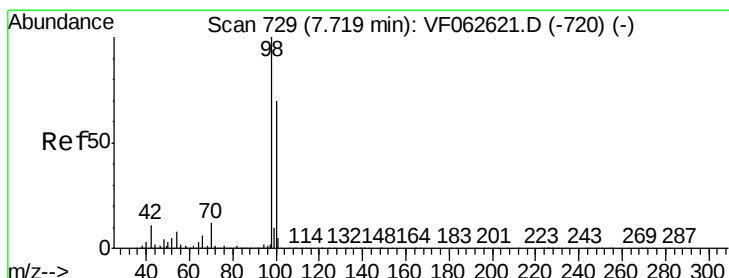
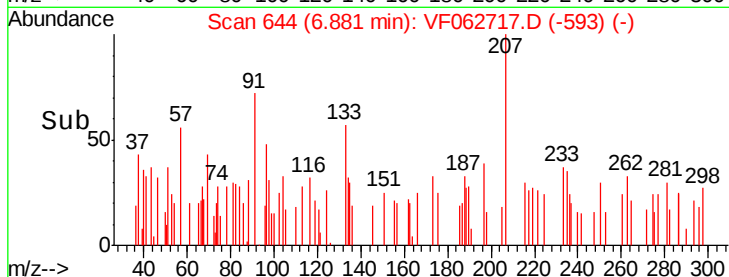
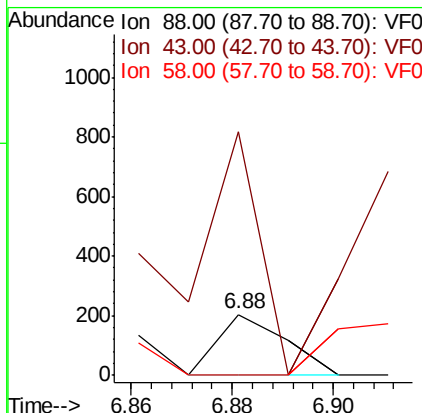
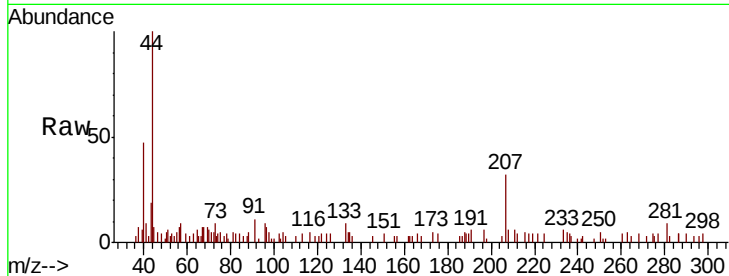
Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 88 Resp: 189

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 88  | 100   |       |       |
| 43  | 400.5 | 30.0  | 45.0# |
| 58  | 0.0   | 51.1  | 76.7# |



#50

Toluene-d8

Concen: 35.065 ug/l

RT: 7.70 min Scan# 727

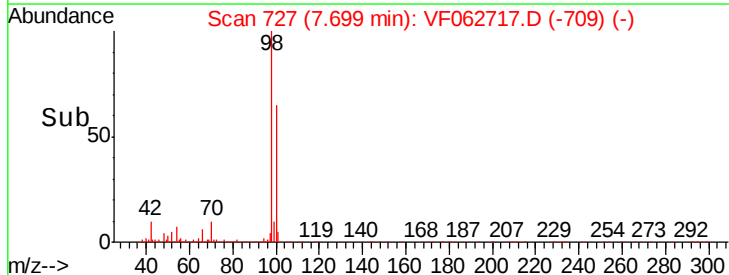
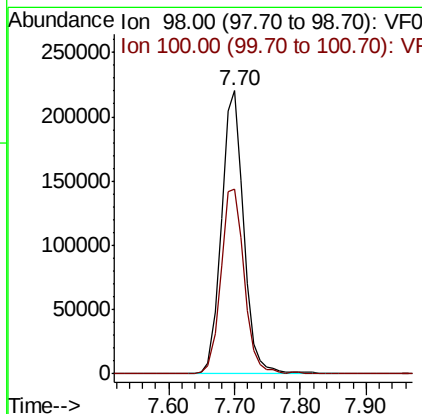
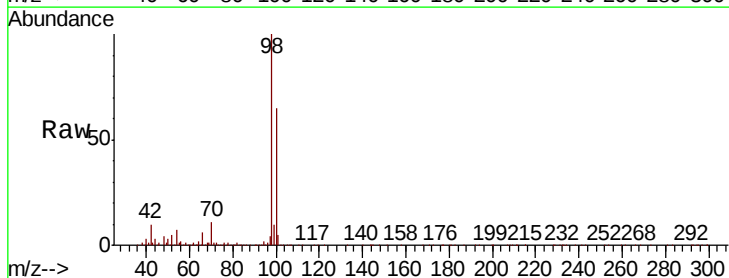
Delta R.T. -0.02 min

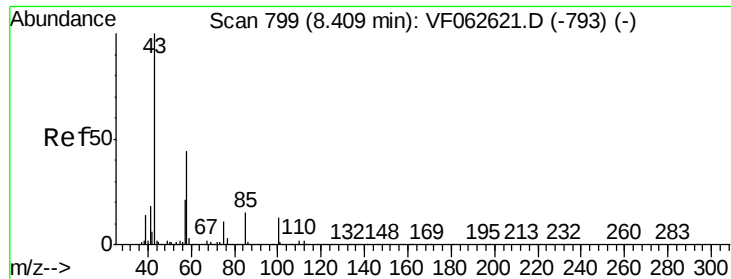
Lab File: VF062717.D

Acq: 22 May 2019 20:33

Tgt Ion: 98 Resp: 519033

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 98  | 100   |       |       |
| 100 | 65.1  | 56.2  | 84.2  |





#51

4-Methyl-2-Pentanone

Concen: 5.361 ug/l

RT: 8.40 min Scan# 798

Delta R.T. -0.01 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :

MSVOA\_F

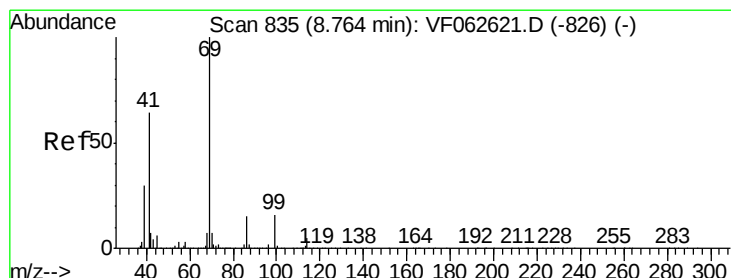
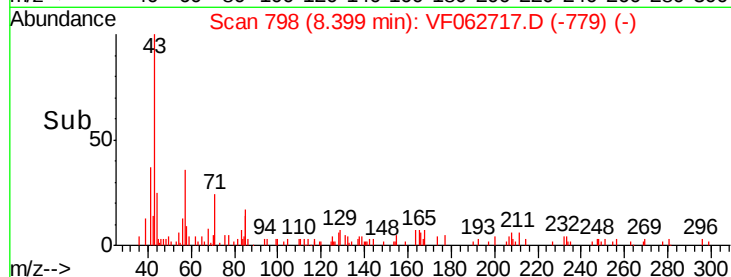
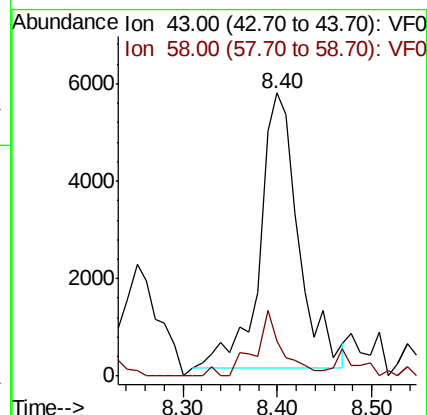
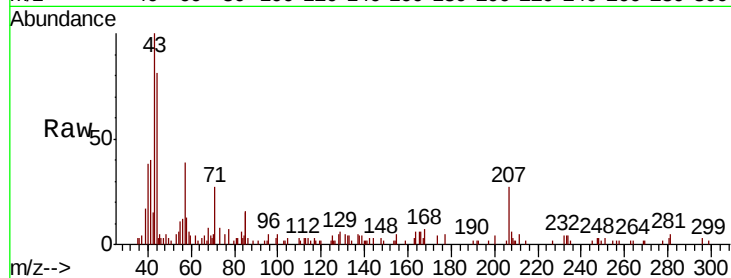
ClientSampleId :

Tot Ion: 43 Resp: 16092

Ion Ratio Lower Upper

43 100

58 12.5 34.9 52.3#



#56

Ethyl methacrylate

Concen: 6.748 ug/l

RT: 8.75 min Scan# 834

Delta R.T. -0.01 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

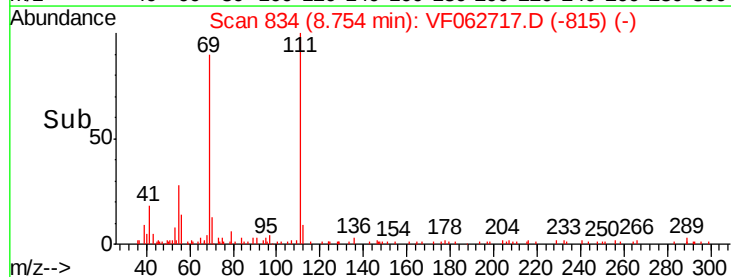
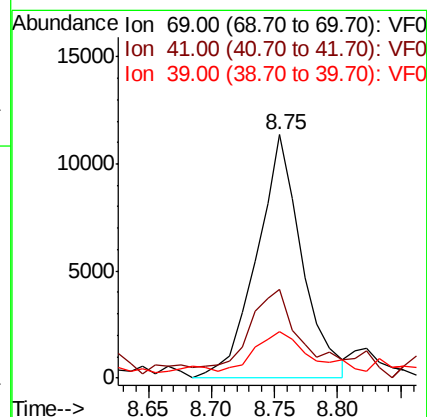
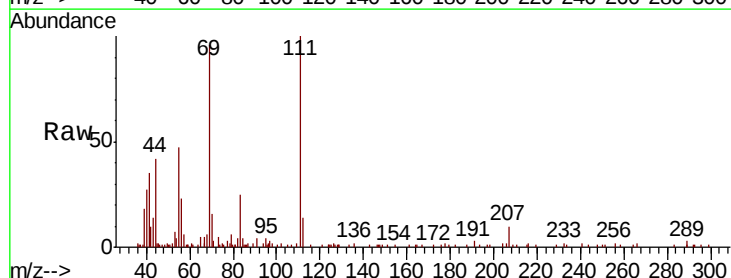
Tgt Ion: 69 Resp: 28233

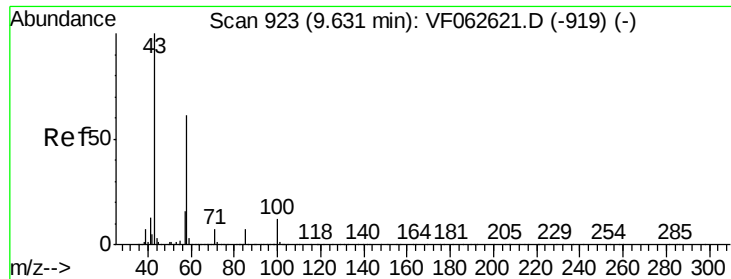
Ion Ratio Lower Upper

69 100

41 36.3 51.4 77.2#

39 19.3 23.6 35.4#

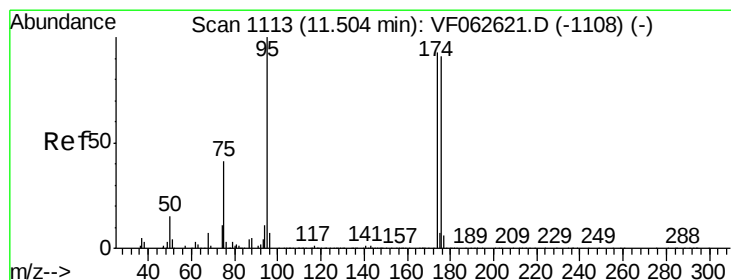
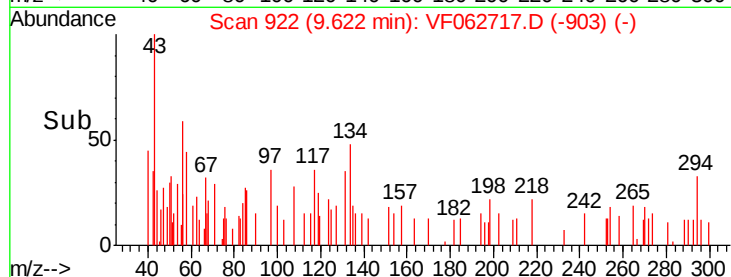
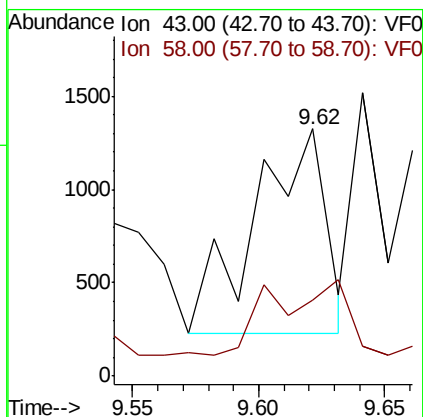
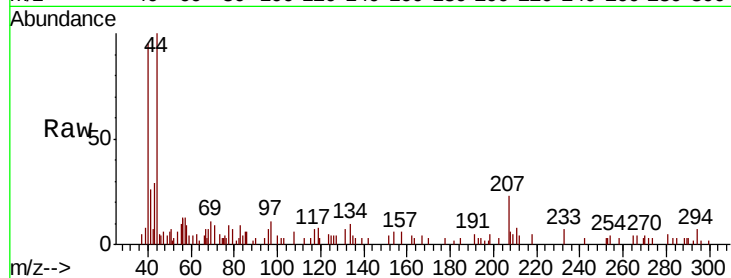




#59  
2-Hexanone  
Concen: Below Cal  
RT: 9.62 min Scan# 922  
Delta R.T. -0.01 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

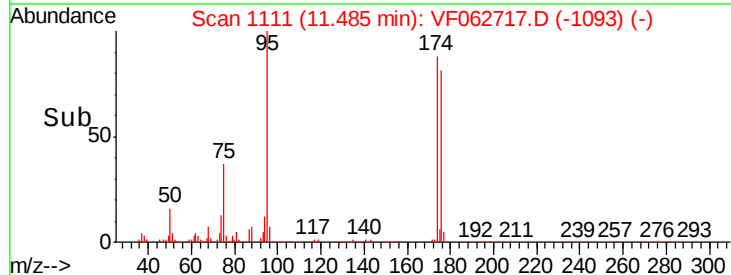
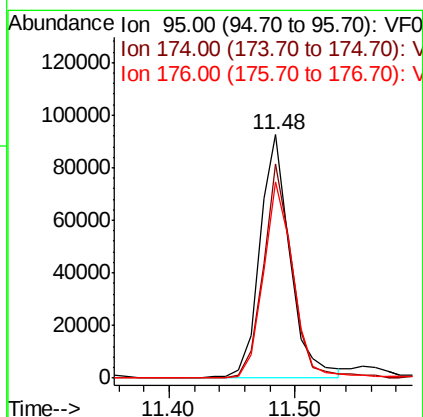
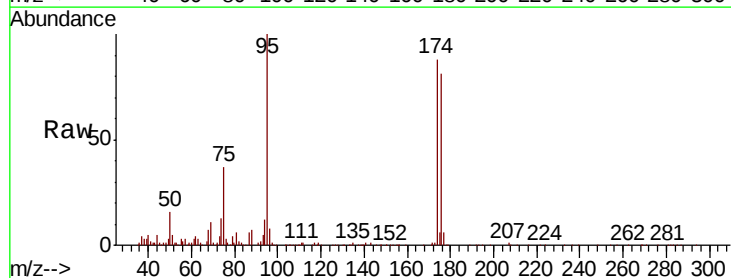
Instrument :  
MSVOA\_F  
ClientSampled :

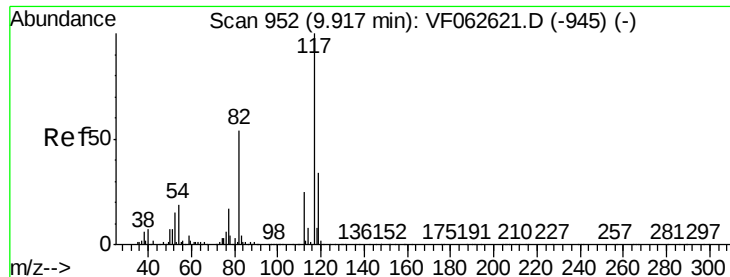
Tot Ion: 43 Resp: 2150  
Ion Ratio Lower Upper  
43 100  
58 30.8 28.1 84.4



#62  
4-Bromofluorobenzene  
Concen: 27.497 ug/l  
RT: 11.48 min Scan# 1111  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

Tgt Ion: 95 Resp: 154364  
Ion Ratio Lower Upper  
95 100  
174 87.8 0.0 185.6  
176 80.9 0.0 182.4

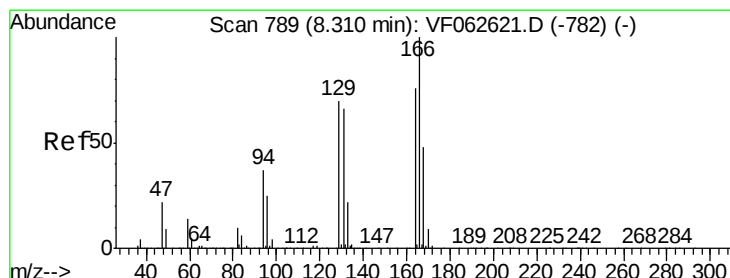
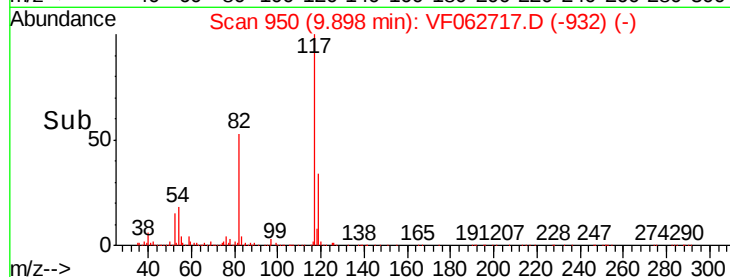
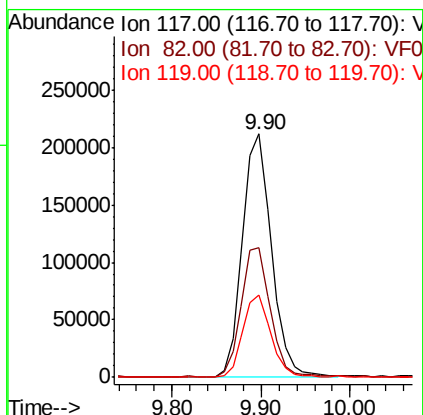
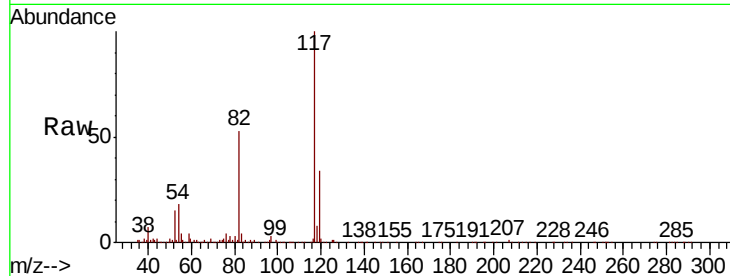




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.90 min Scan# 950  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

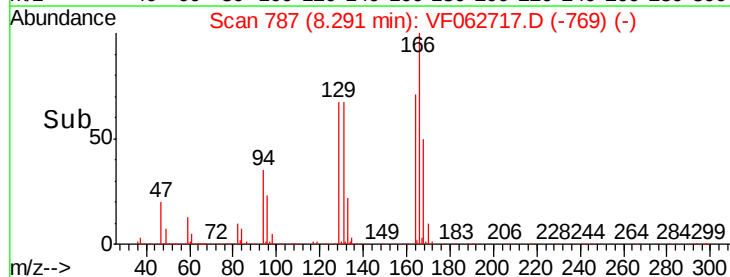
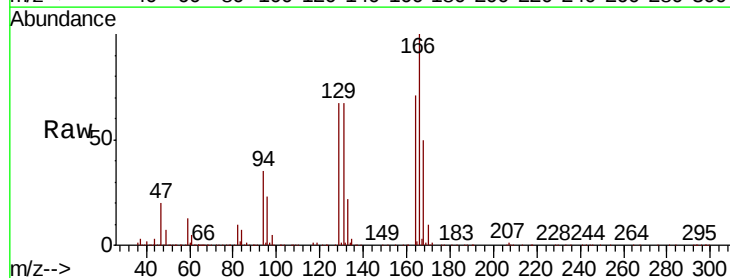
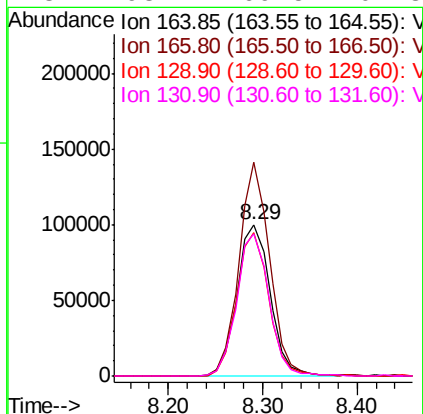
Instrument :  
MSVOA\_F  
ClientSampled :

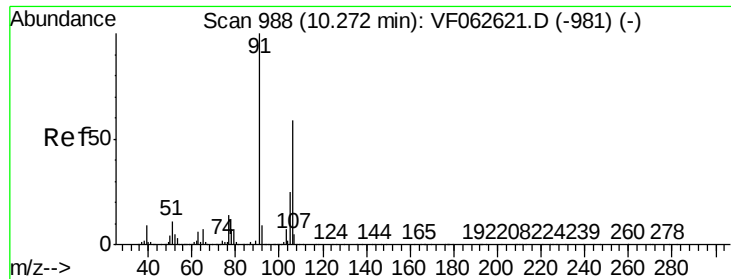
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 53.3  | 43.3  | 64.9  |
| 119     | 33.6  | 27.4  | 41.0  |



#64  
Tetrachloroethene  
Concen: 64.001 ug/l  
RT: 8.29 min Scan# 787  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 140.8 | 105.5 | 158.3 |
| 129     | 94.4  | 73.8  | 110.6 |
| 131     | 93.7  | 69.5  | 104.3 |

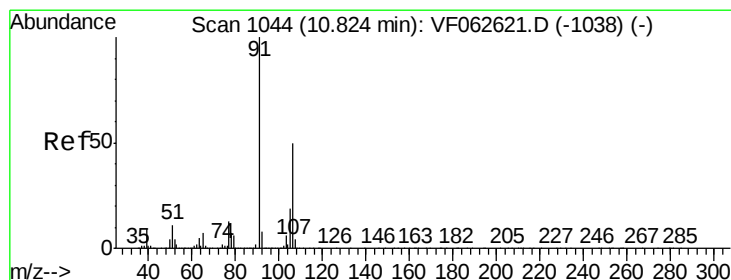
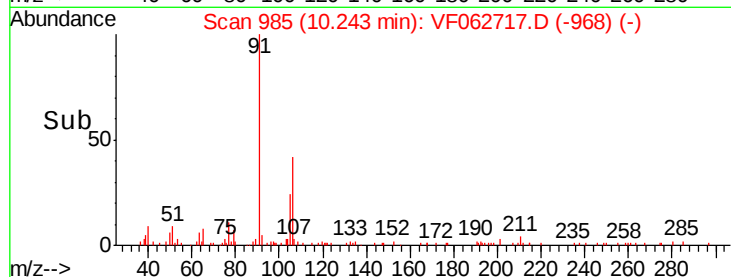
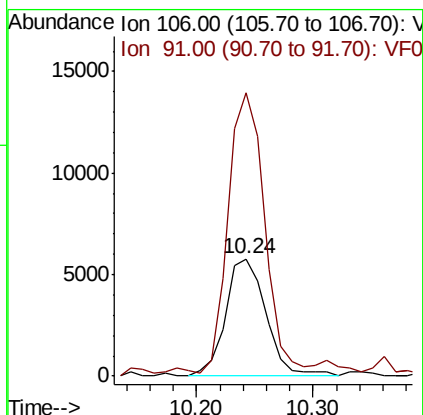
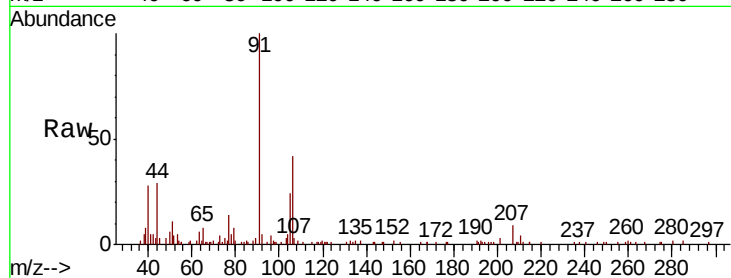




#68  
m/p-Xylenes  
Concen: 2.265 ug/l  
RT: 10.24 min Scan# 985  
Delta R.T. -0.03 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

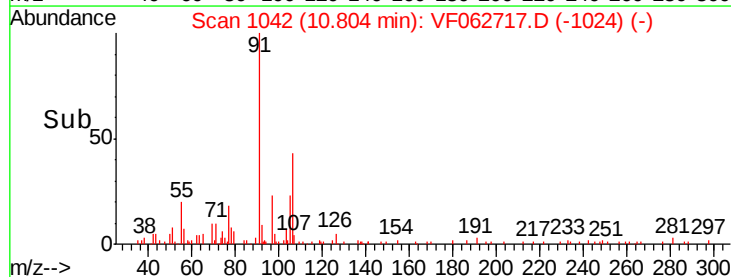
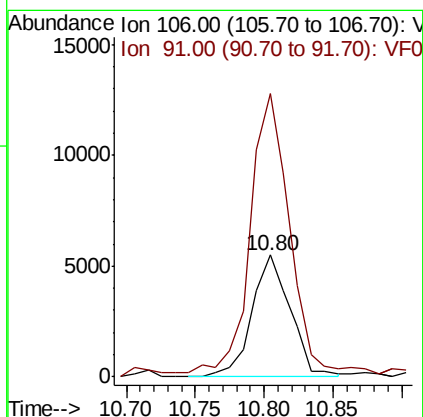
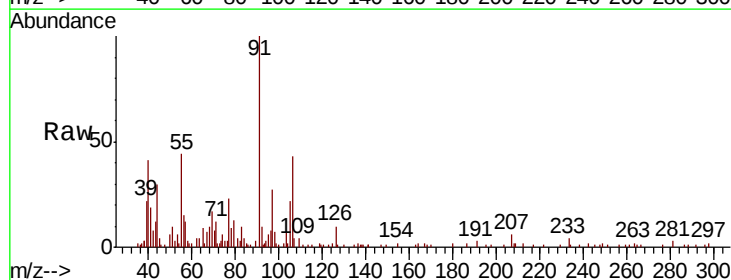
Instrument :  
MSVOA\_F  
ClientSampleId :

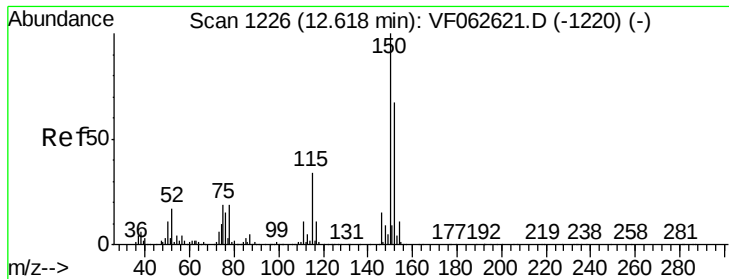
Tot Ion:106 Resp: 13982  
Ion Ratio Lower Upper  
106 100  
91 240.9 136.9 205.3#



#69  
o-Xylene  
Concen: 1.678 ug/l  
RT: 10.80 min Scan# 1042  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

Tgt Ion:106 Resp: 10671  
Ion Ratio Lower Upper  
106 100  
91 232.2 100.2 300.5



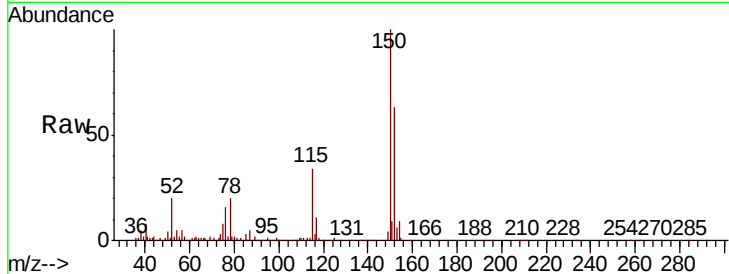


#72

1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.60 min Scan# 1224  
Delta R.T. -0.02 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

Instrument :  
MSVOA\_F  
ClientSampled :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 54.1  | 25.2  | 75.6  |
| 150     | 160.0 | 0.0   | 306.2 |

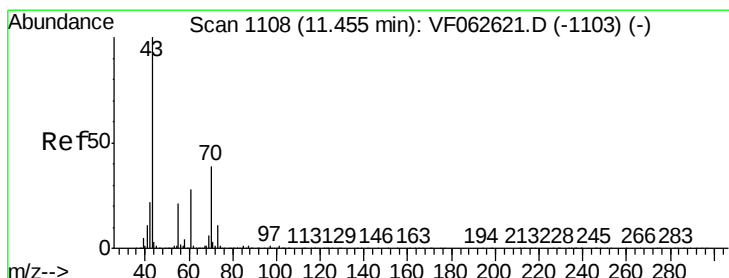
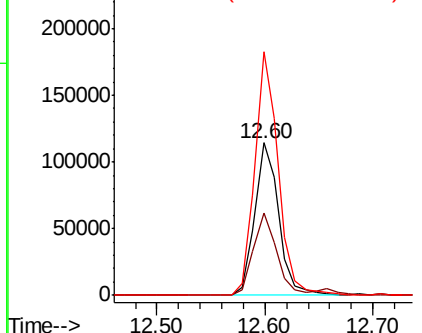
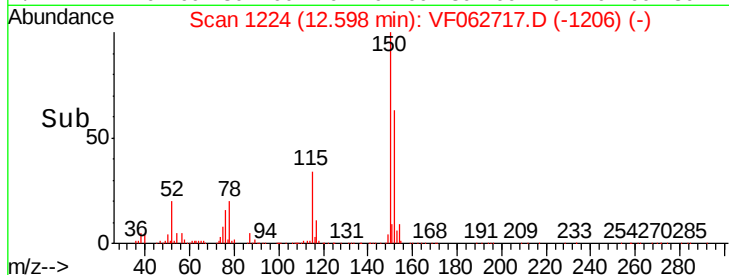


Abundance

Ion 152.00 (151.70 to 152.70): V

Ion 115.00 (114.70 to 115.70): V

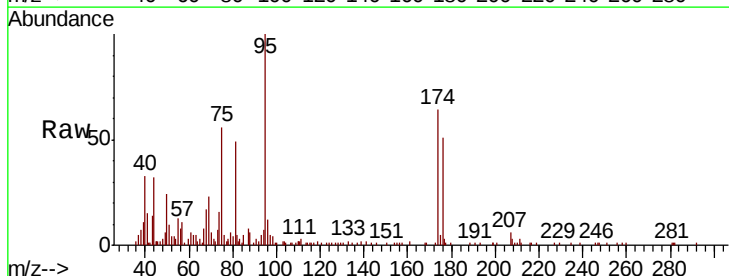
Ion 150.00 (149.70 to 150.70): V



#74

N-amil acetate  
Concen: Below Cal  
RT: 11.46 min Scan# 1109  
Delta R.T. 0.01 min  
Lab File: VF062717.D  
Acq: 22 May 2019 20:33

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 70      | 43.6  | 30.9  | 46.3  |
| 55      | 91.8  | 17.0  | 25.4# |
| 61      | 42.9  | 22.6  | 34.0# |



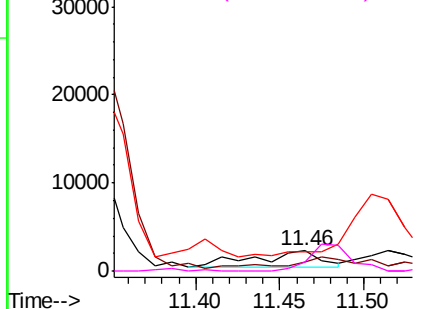
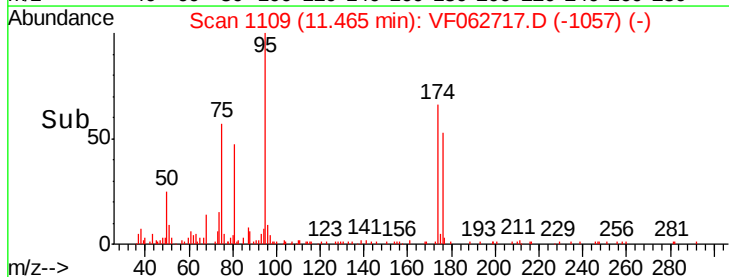
Abundance

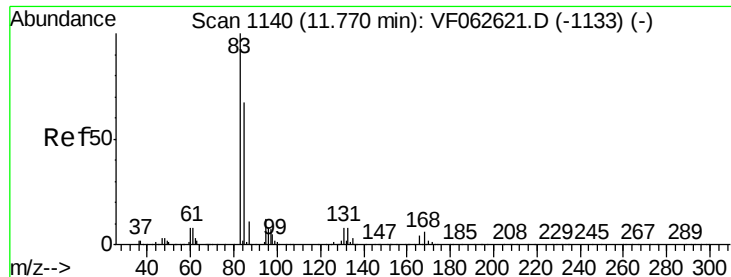
Ion 43.00 (42.70 to 43.70): VF0

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: 6.698 ug/l

RT: 11.73 min Scan# 1136

Delta R.T. -0.04 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :

MSVOA\_F

ClientSampleId :

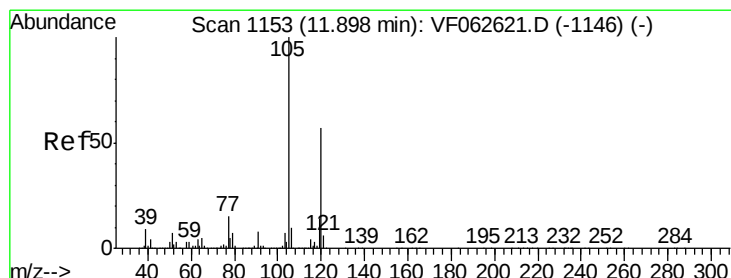
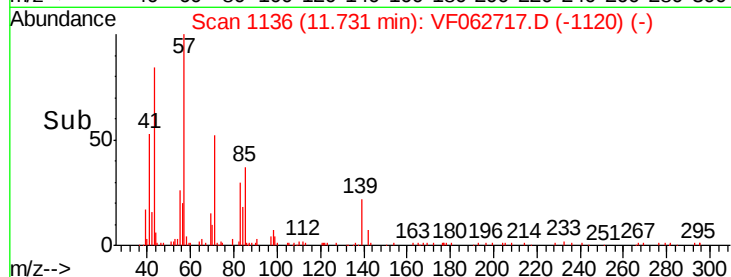
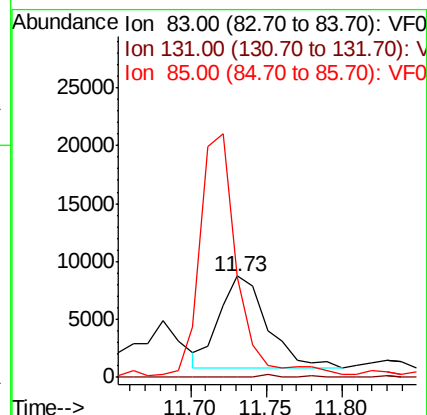
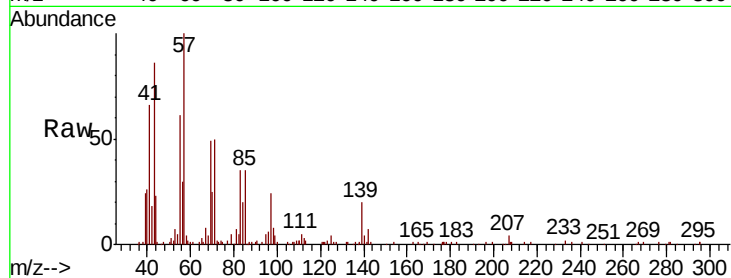
Tot Ion: 83 Resp: 17371

Ion Ratio Lower Upper

83 100

131 0.0 4.0 12.0#

85 98.9 33.5 100.5



#80

1,3,5-Trimethylbenzene

Concen: 6.702 ug/l

RT: 11.88 min Scan# 1151

Delta R.T. -0.02 min

Lab File: VF062717.D

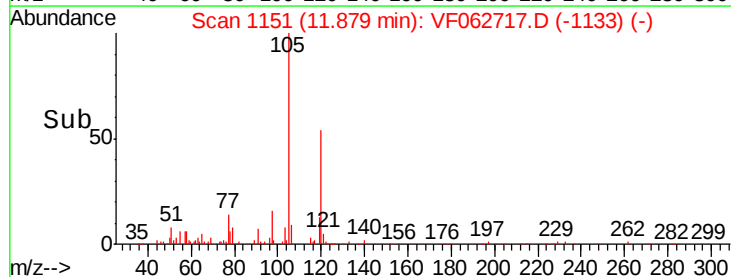
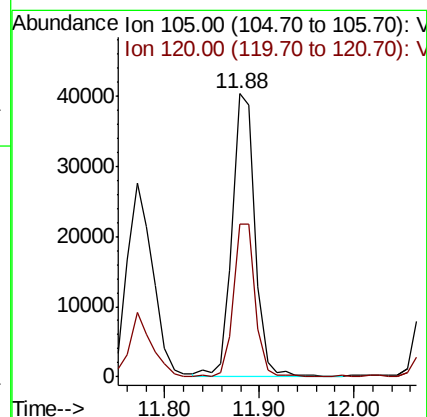
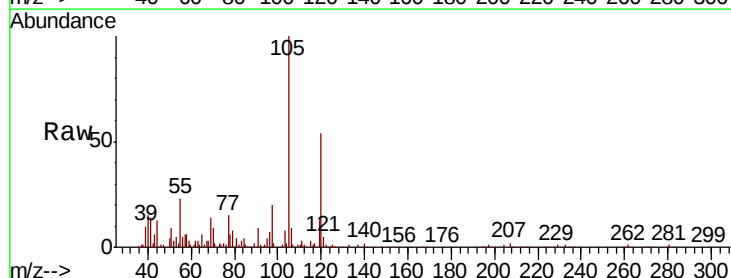
Acq: 22 May 2019 20:33

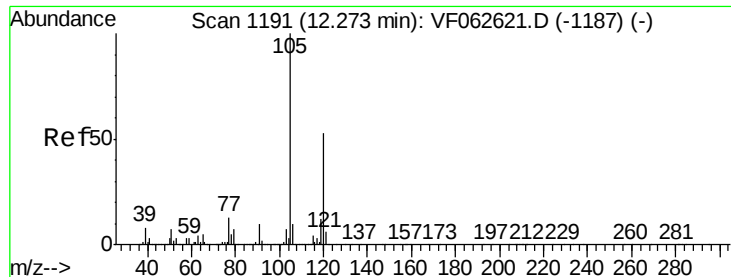
Tgt Ion:105 Resp: 68198

Ion Ratio Lower Upper

105 100

120 53.9 28.7 86.3

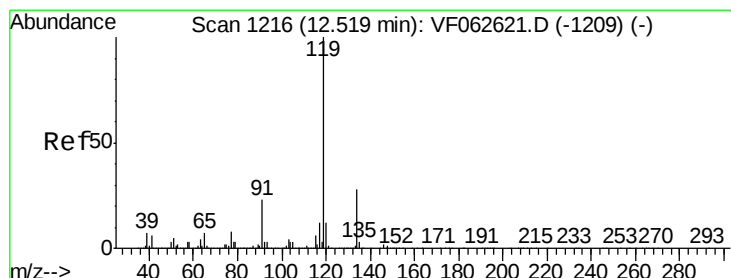
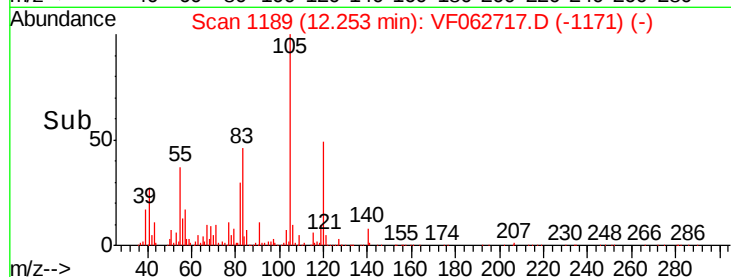
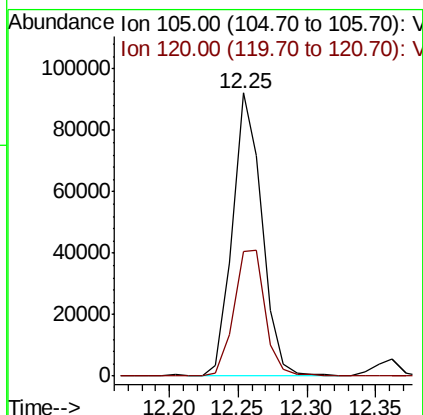
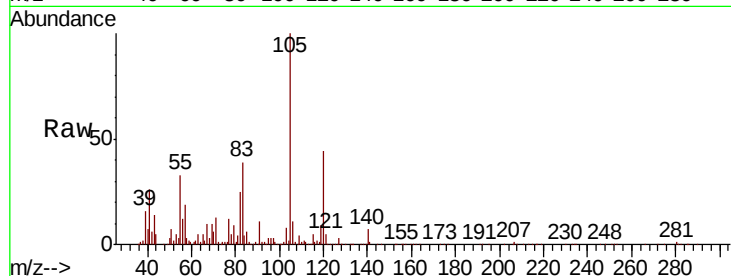




#84  
 1,2,4-Trimethylbenzene  
 Concen: 13.964 ug/l  
 RT: 12.25 min Scan# 1189  
 Delta R.T. -0.02 min  
 Lab File: VF062717.D  
 Acq: 22 May 2019 20:33

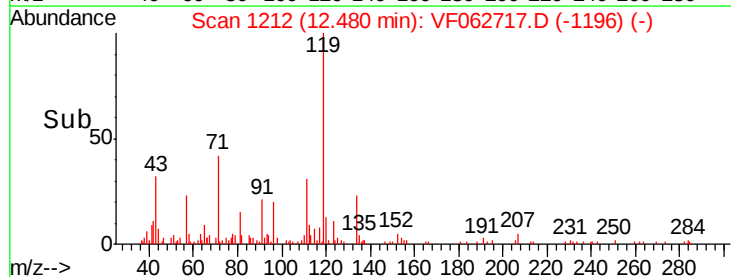
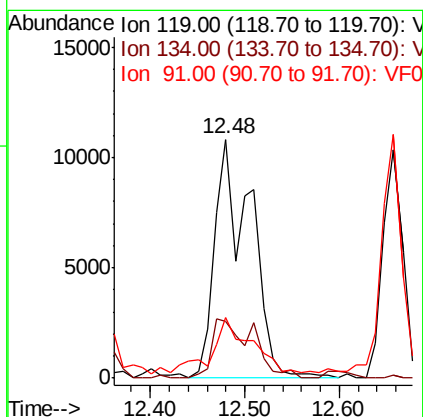
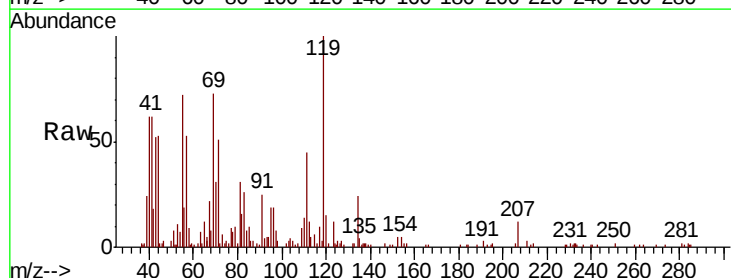
Instrument :  
 MSVOA\_F  
 ClientSampleId :

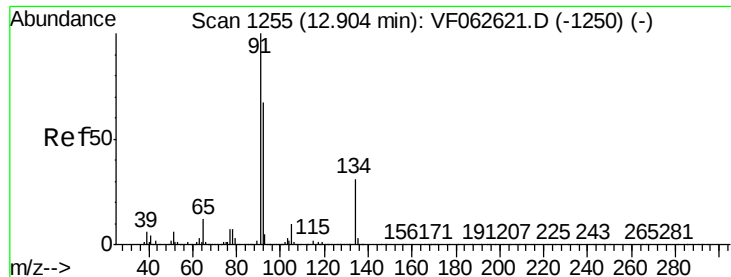
Tot Ion:105 Resp: 137537  
 Ion Ratio Lower Upper  
 105 100  
 120 44.1 26.7 80.1



#86  
 p-Isopropyltoluene  
 Concen: 2.442 ug/l  
 RT: 12.48 min Scan# 1212  
 Delta R.T. -0.04 min  
 Lab File: VF062717.D  
 Acq: 22 May 2019 20:33

Tgt Ion:119 Resp: 28520  
 Ion Ratio Lower Upper  
 119 100  
 134 23.7 14.1 42.3  
 91 25.3 11.4 34.2





#89

n-Butylbenzene

Concen: 1.677 ug/l

RT: 12.87 min Scan# 1252

Delta R.T. -0.03 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :

MSVOA\_F

ClientSampled :

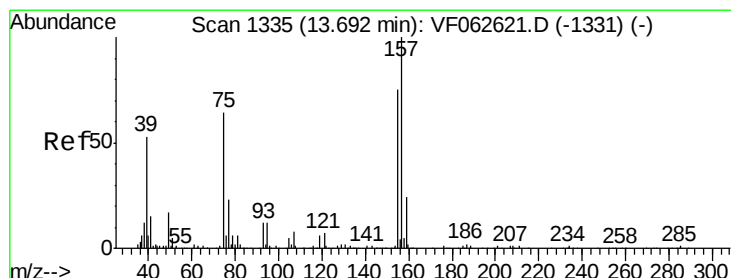
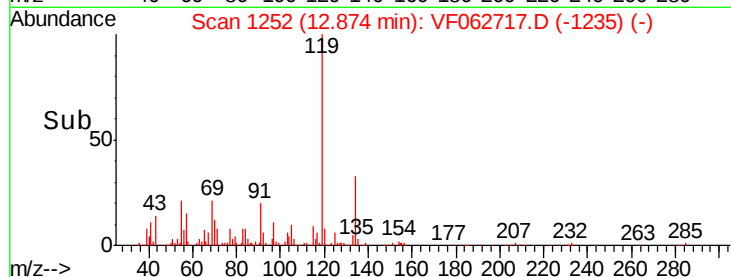
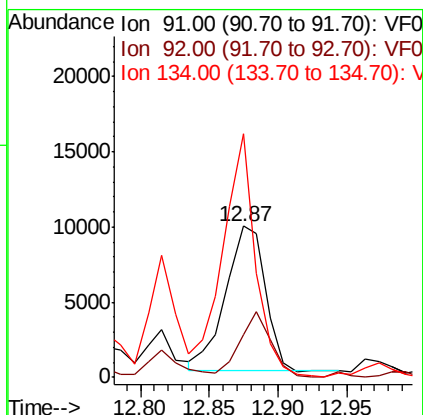
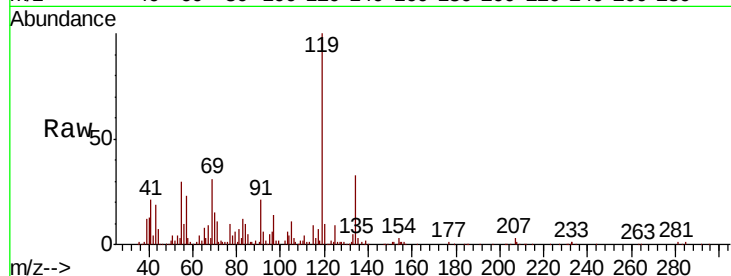
Tot Ion: 91 Resp: 19312

Ion Ratio Lower Upper

91 100

92 28.2 33.3 99.8#

134 161.2 15.4 46.4#



#92

1,2-Dibromo-3-Chloropropane

Concen: 1.845 ug/l

RT: 13.73 min Scan# 1339

Delta R.T. 0.04 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

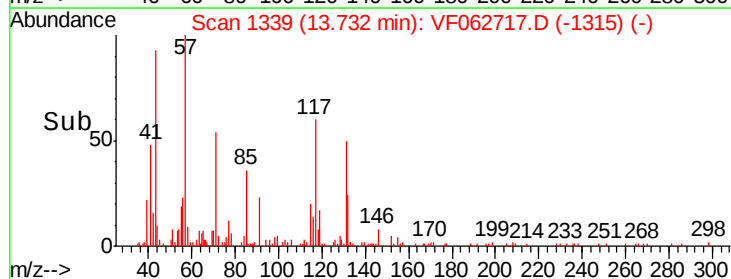
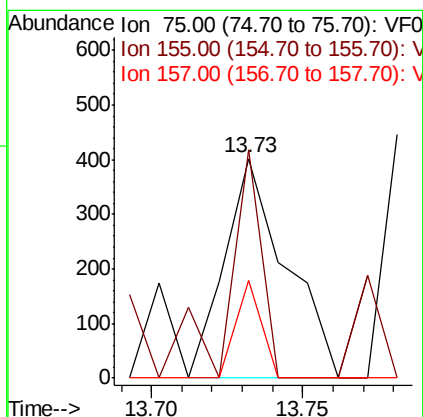
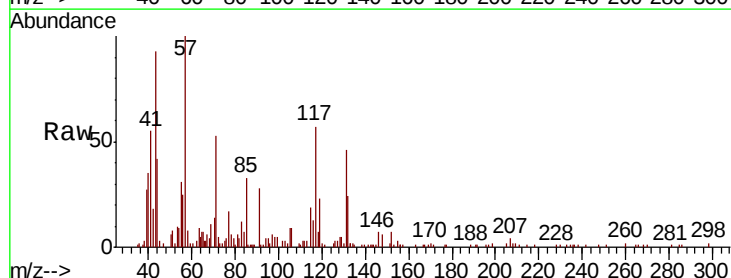
Tgt Ion: 75 Resp: 571

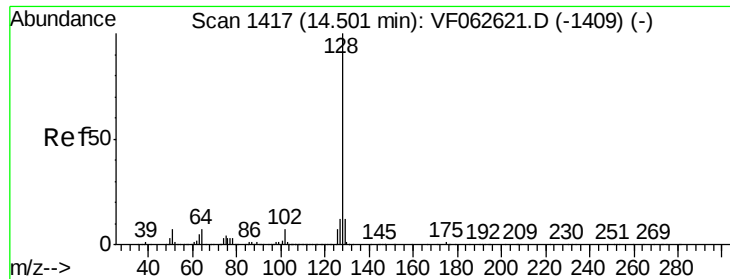
Ion Ratio Lower Upper

75 100

155 103.7 58.1 174.3

157 44.3 77.8 233.4#





#95

Naphthalene

Concen: 3.846 ug/l

RT: 14.48 min Scan# 1415

Delta R.T. -0.02 min

Lab File: VF062717.D

Acq: 22 May 2019 20:33

Instrument :

MSVOA\_F

ClientSampleId :

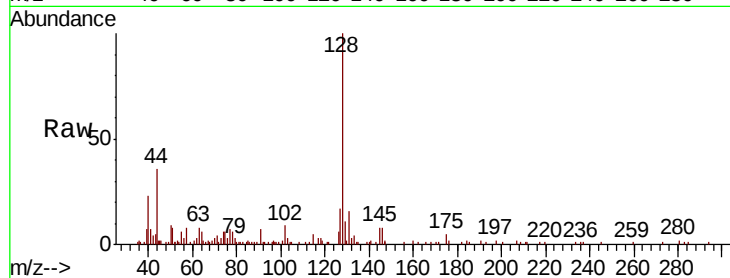
Tot Ion:128 Resp: 25447

Ion Ratio Lower Upper

128 100

127 16.6 9.7 14.5#

129 11.0 9.3 13.9



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

