

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_X\DATA\VX011520\  
 Data File : VX014619.D  
 Acq On : 15 Jan 2020 15:28  
 Operator : JC/SP  
 Sample : L1102-01 5X  
 Misc : 5.0mL/MSVOA\_X/WATER  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 EFF-WW

Quant Time: Jan 16 01:11:59 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\624X011520W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Jan 15 12:41:12 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 71635    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 397087   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.10 | 117  | 365819   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.05   | 65    | 158050   | 31.39    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 104.63% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 174090   | 29.74    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.13%  |
| 63) Toluene-d8            | 8.71   | 98    | 488452   | 29.56    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.53%  |

## Target Compounds

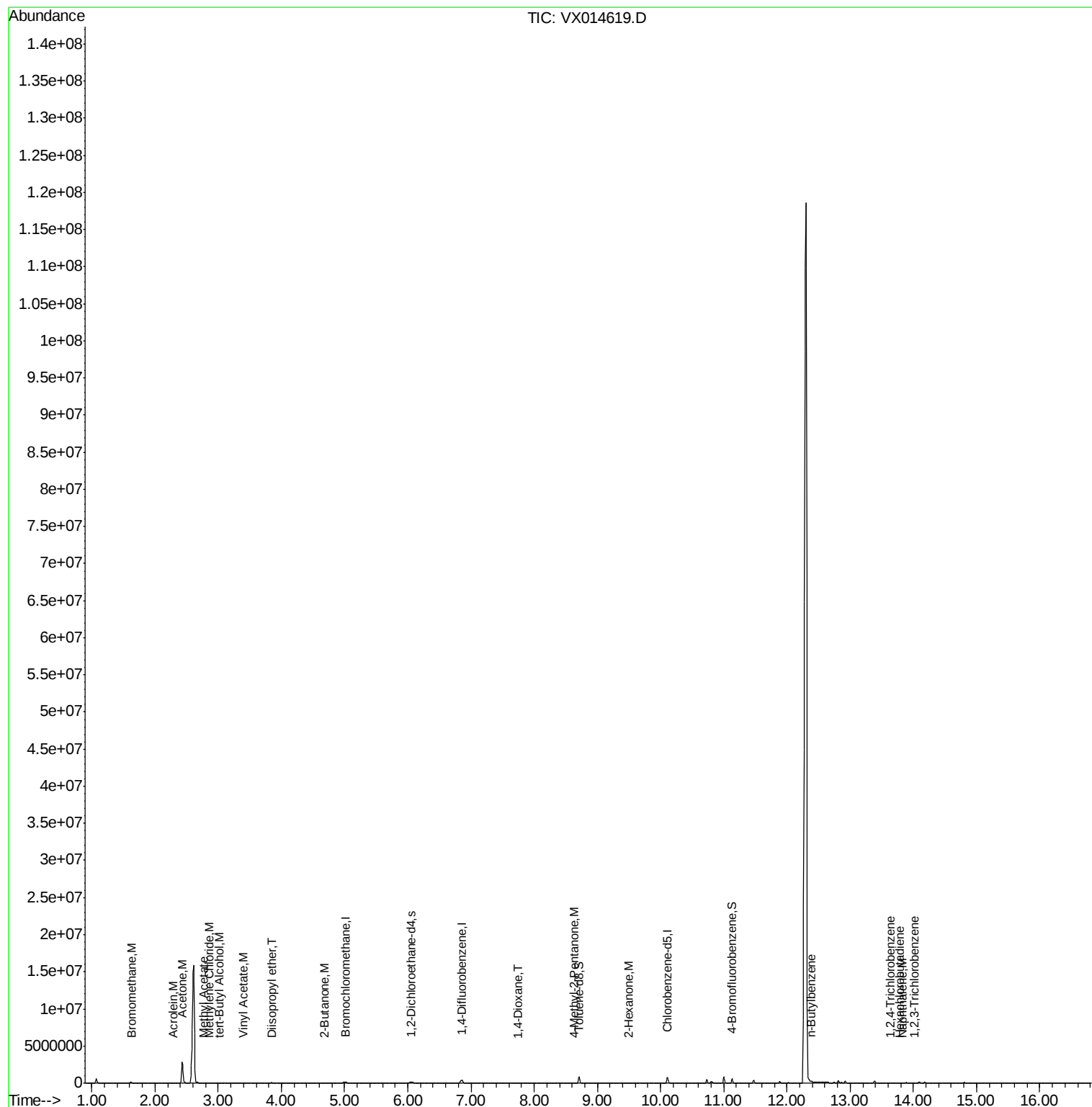
|                            |       |     |        |          | Qvalue |    |
|----------------------------|-------|-----|--------|----------|--------|----|
| 5) Bromomethane            | 1.64  | 94  | 1613   | 0.425    | ug/l   | 84 |
| 12) Methyl Acetate         | 2.76  | 43  | 40953  | 5.717    | ug/l   | 99 |
| 13) Acrolein               | 2.29  | 56  | 206    | 0.274    | ug/l   | 99 |
| 15) Acetone                | 2.43  | 58  | 921632 | 1121.536 | ug/l   | 90 |
| 18) Methylene Chloride     | 2.85  | 84  | 2243   | 0.483    | ug/l # | 80 |
| 20) Diisopropyl ether      | 3.84  | 45  | 48259  | 3.324    | ug/l # | 88 |
| 23) tert-Butyl Alcohol     | 3.02  | 59  | 7234   | 7.136    | ug/l # | 99 |
| 30) 2-Butanone             | 4.67  | 43  | 7926   | 2.149    | ug/l # | 62 |
| 42) Vinyl Acetate          | 3.40  | 43  | 3300   | 0.290    | ug/l   | 96 |
| 45) 1,4-Dioxane            | 7.75  | 88  | 254    | 2.357    | ug/l # | 1  |
| 58) 4-Methyl-2-Pentanone   | 8.64  | 43  | 14396  | 2.090    | ug/l   | 97 |
| 59) 2-Hexanone             | 9.49  | 43  | 18402  | 3.454    | ug/l   | 99 |
| 85) n-Butylbenzene         | 12.38 | 91  | 3402   | 0.214    | ug/l   | 89 |
| 89) 1,2,4-Trichlorobenzene | 13.64 | 180 | 1691   | 0.266    | ug/l   | 89 |
| 90) Hexachlorobutadiene    | 13.78 | 225 | 870    | 0.273    | ug/l   | 97 |
| 91) Naphthalene            | 13.83 | 128 | 4500   | 0.234    | ug/l # | 88 |
| 92) 1,2,3-Trichlorobenzene | 14.01 | 180 | 1456   | 0.225    | ug/l   | 87 |

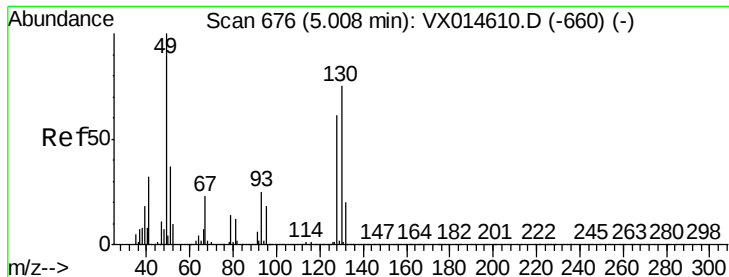
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA\_X\DATA\VX011520\  
Data File : VX014619.D  
Acq On : 15 Jan 2020 15:28  
Operator : JC/SP  
Sample : L1102-01 5X  
Misc : 5.0mL/MSVOA\_X/WATER  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

Quant Time: Jan 16 01:11:59 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_X\METHOD\624X011520W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Wed Jan 15 12:41:12 2020  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 5.01 min Scan# 676

Delta R.T. 0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampleId :

EFF-WW

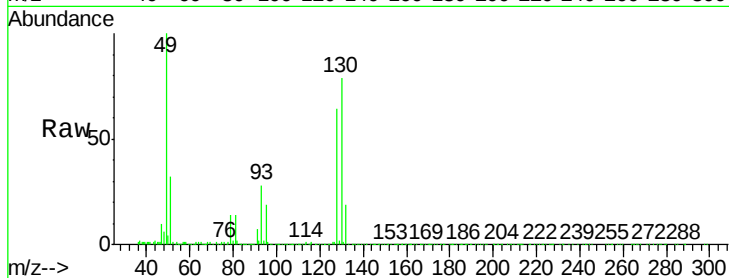
Tgt Ion:128 Resp: 71635

Ion Ratio Lower Upper

128 100

49 159.1 0.0 405.0

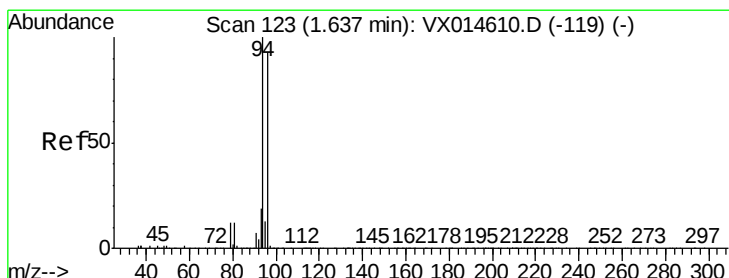
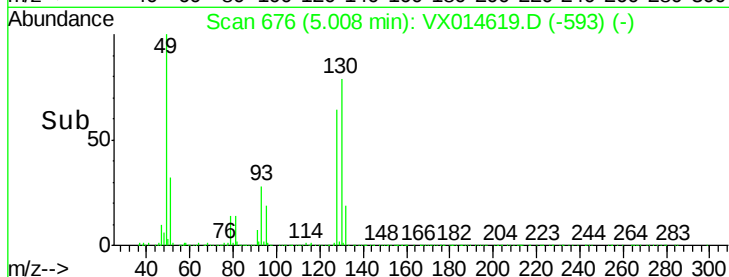
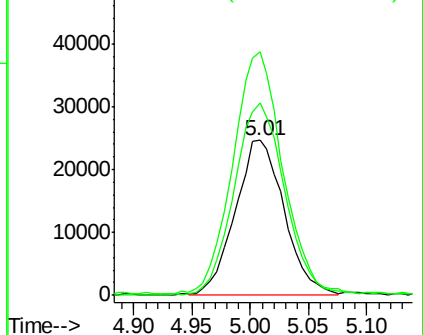
130 128.6 0.0 321.5



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 49.00 (48.70 to 49.70): VX0

Ion 130.00 (129.70 to 130.70): V



#5

Bromomethane

Concen: 0.425 ug/l

RT: 1.64 min Scan# 123

Delta R.T. 0.01 min

Lab File: VX014619.D

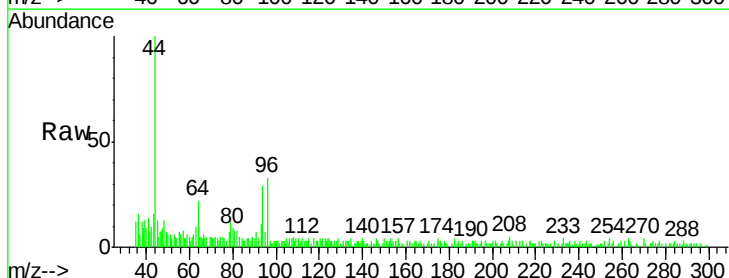
Acq: 15 Jan 2020 15:28

Tgt Ion: 94 Resp: 1613

Ion Ratio Lower Upper

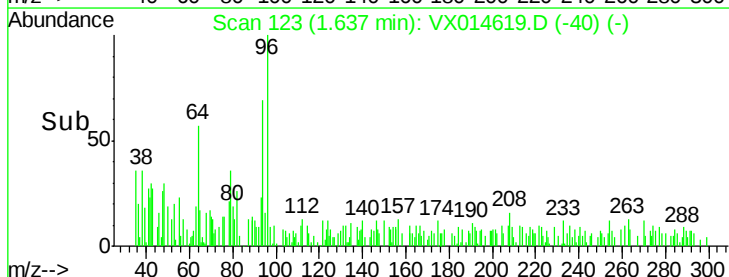
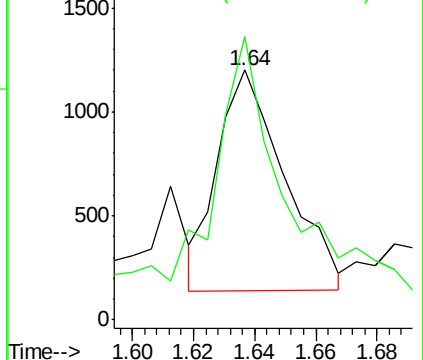
94 100

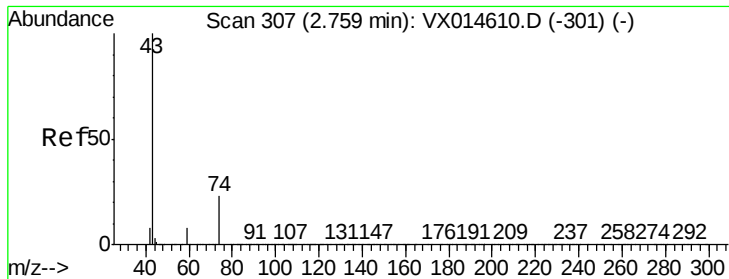
96 108.5 74.4 111.6



Abundance Ion 94.00 (93.70 to 94.70): VX0

Ion 96.00 (95.70 to 96.70): VX0





#12

Methyl Acetate

Concen: 5.717 ug/l

RT: 2.76 min Scan# 308

Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampleId :

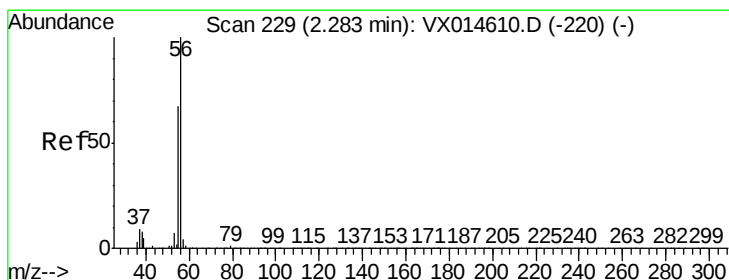
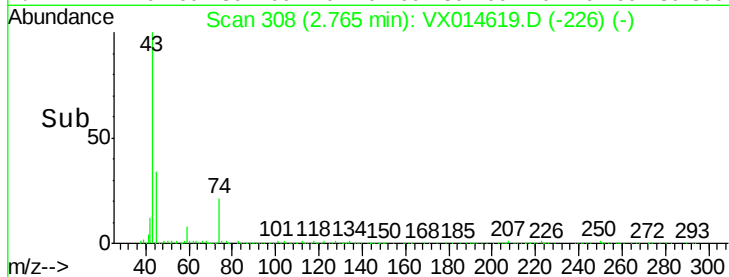
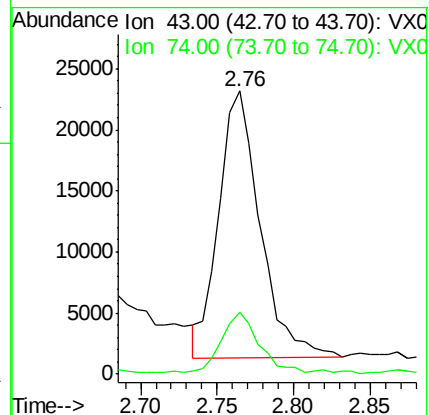
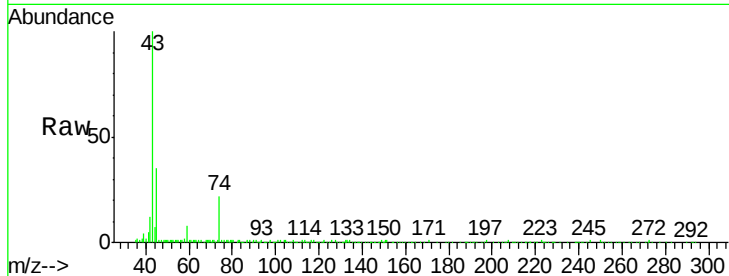
EFF-WW

Tgt Ion: 43 Resp: 40953

Ion Ratio Lower Upper

43 100

74 23.4 18.5 27.7



#13

Acrolein

Concen: 0.274 ug/l

RT: 2.29 min Scan# 230

Delta R.T. 0.01 min

Lab File: VX014619.D

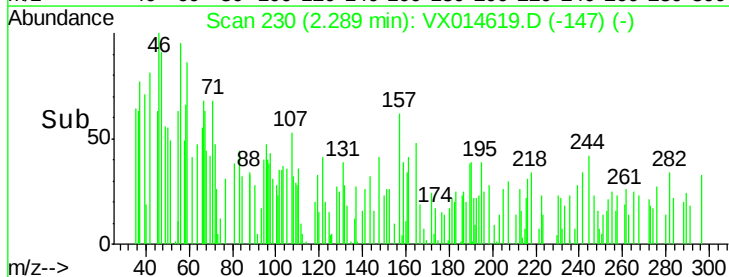
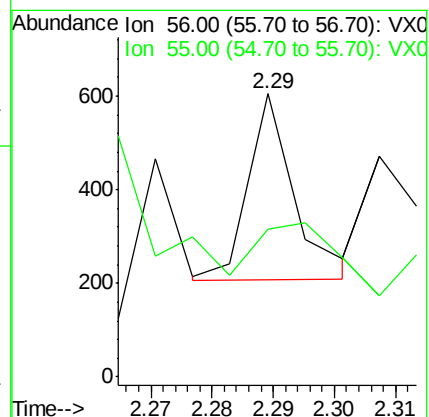
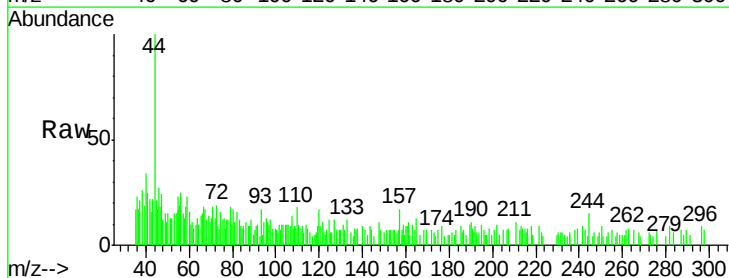
Acq: 15 Jan 2020 15:28

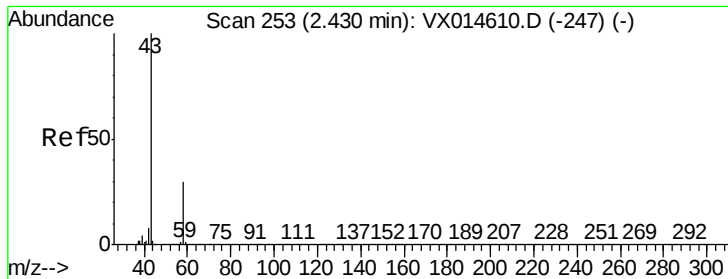
Tgt Ion: 56 Resp: 206

Ion Ratio Lower Upper

56 100

55 69.4 54.9 82.3





#15

Acetone

Concen: 1121.536 ug/l

RT: 2.43 min Scan# 253

Delta R.T. -0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampleId :

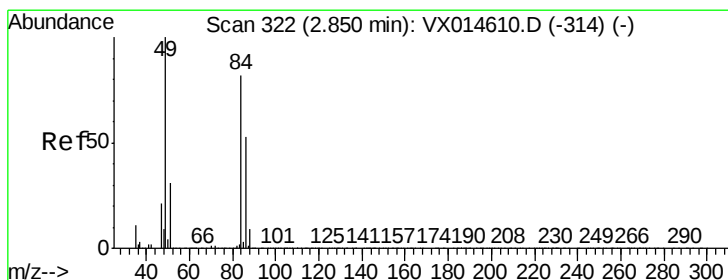
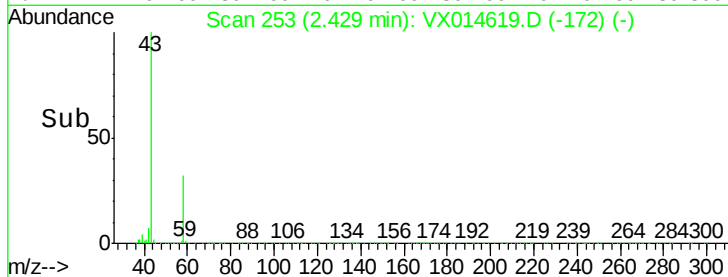
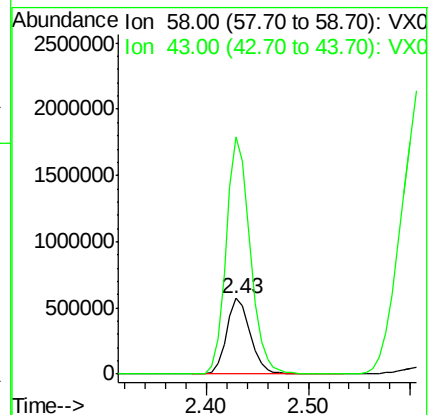
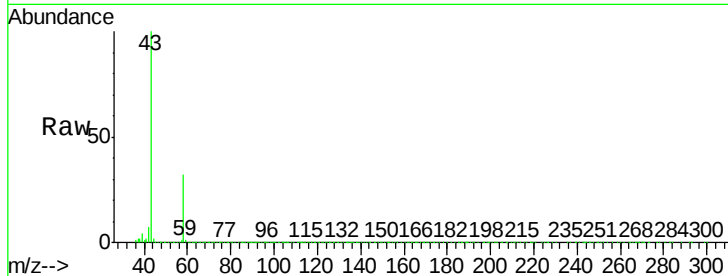
EFF-WW

Tgt Ion: 58 Resp: 921632

Ion Ratio Lower Upper

58 100

43 314.5 236.3 354.5



#18

Methylene Chloride

Concen: 0.483 ug/l

RT: 2.85 min Scan# 322

Delta R.T. 0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Tgt Ion: 84 Resp: 2243

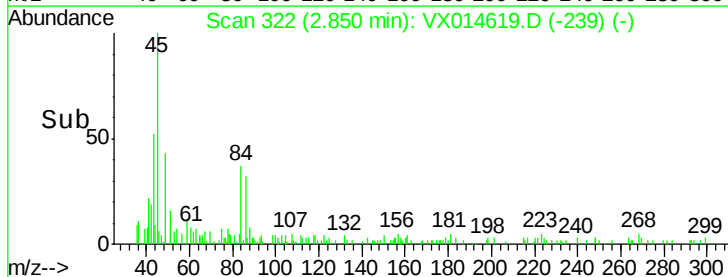
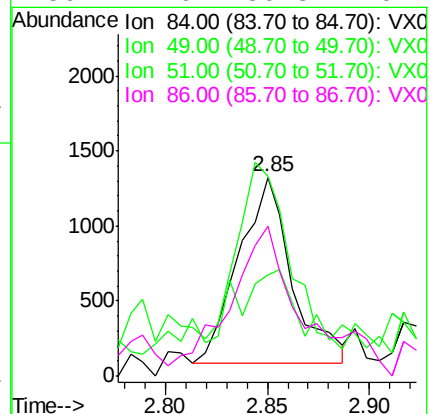
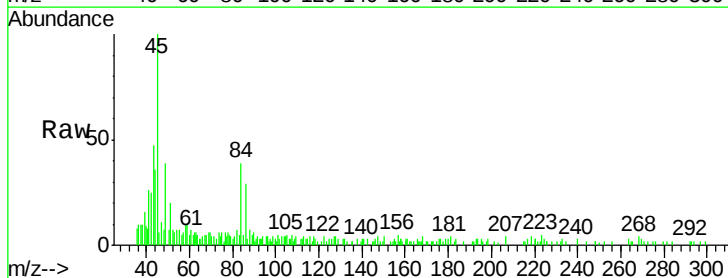
Ion Ratio Lower Upper

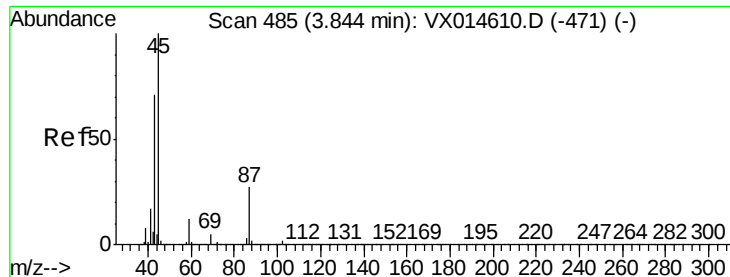
84 100

49 97.9 102.2 153.2#

51 28.2 31.4 47.0#

86 71.9 50.8 76.2

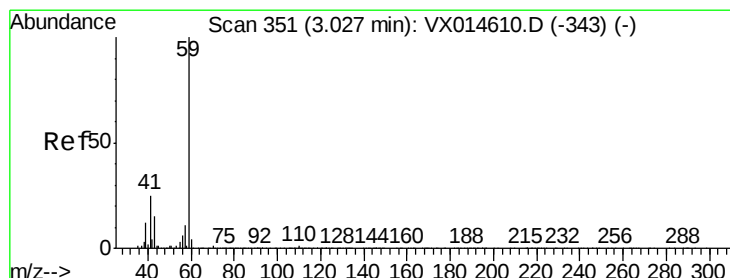
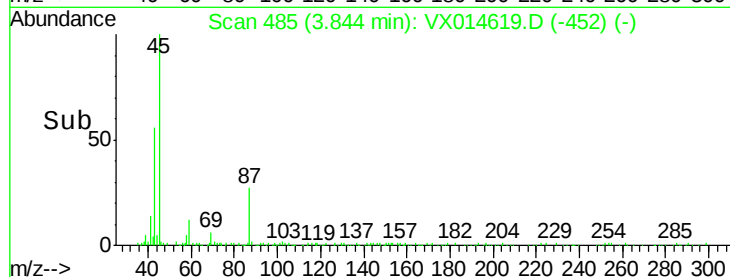
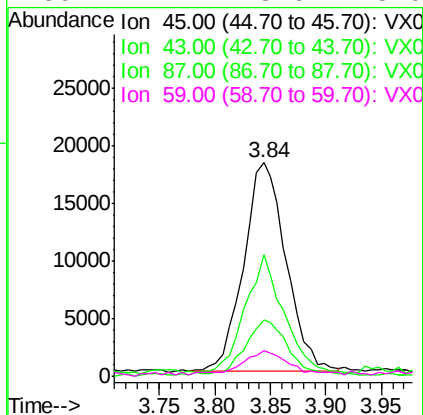
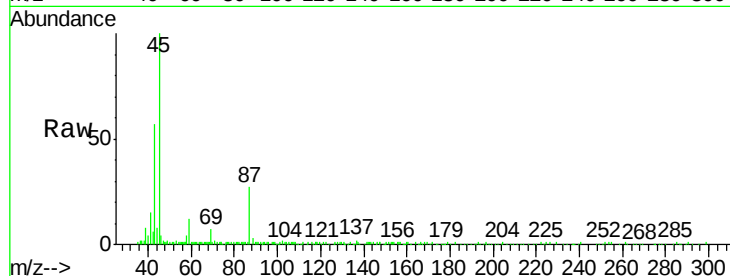




#20  
Diisopropyl ether  
Concen: 3.324 ug/l  
RT: 3.84 min Scan# 485  
Delta R.T. -0.00 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

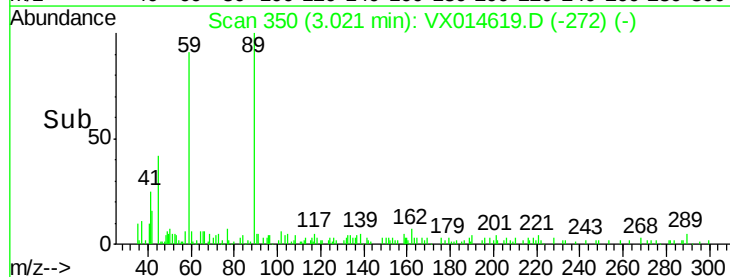
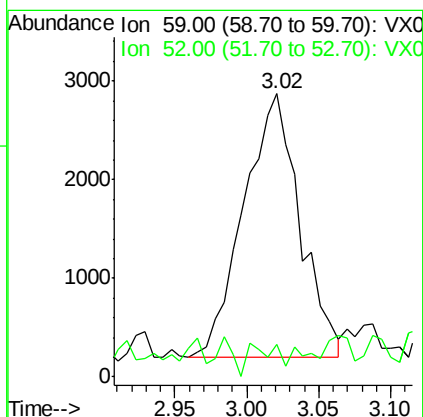
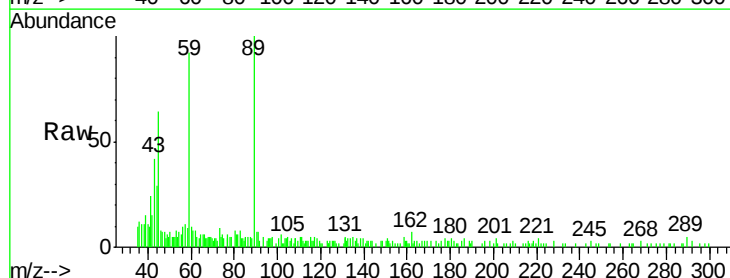
Instrument :  
MSVOA\_X  
ClientSampled :  
EFF-WW

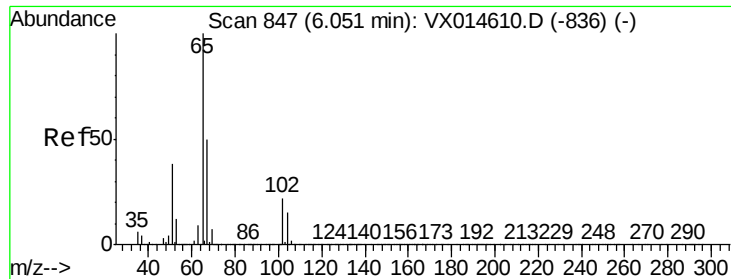
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 45    | Resp: | 48259 |
| Ion      | Ratio | Lower | Upper |
| 45       | 100   |       |       |
| 43       | 55.4  | 55.9  | 83.9# |
| 87       | 26.6  | 22.2  | 33.2  |
| 59       | 11.7  | 8.6   | 13.0  |



#23  
tert-Butyl Alcohol  
Concen: 7.136 ug/l  
RT: 3.02 min Scan# 350  
Delta R.T. -0.02 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 59    | Resp: | 7234  |
| Ion      | Ratio | Lower | Upper |
| 59       | 100   |       |       |
| 52       | 1.1   | 0.2   | 0.2#  |





#27

1,2-Dichloroethane-d4

Concen: 31.389 ug/l

RT: 6.05 min Scan# 847

Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampleId :

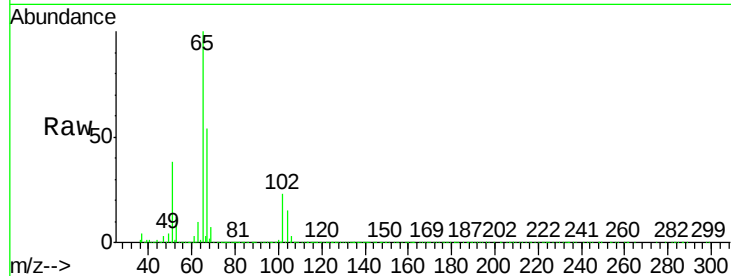
EFF-WW

Tgt Ion: 65 Resp: 158050

Ion Ratio Lower Upper

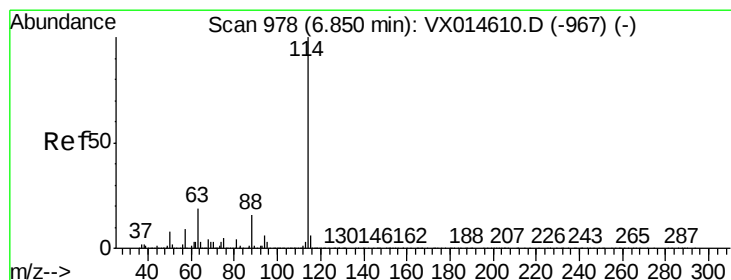
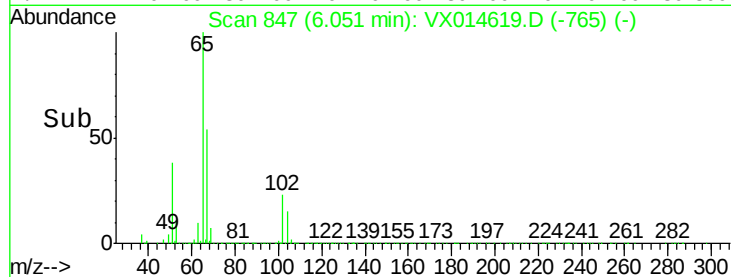
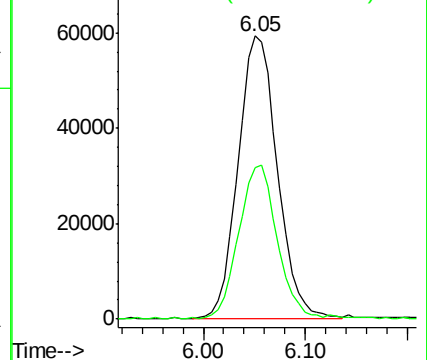
65 100

67 52.7 43.1 64.7



Abundance Ion 65.00 (64.70 to 65.70): VX0

Ion 67.00 (66.70 to 67.70): VX0



#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 6.85 min Scan# 978

Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

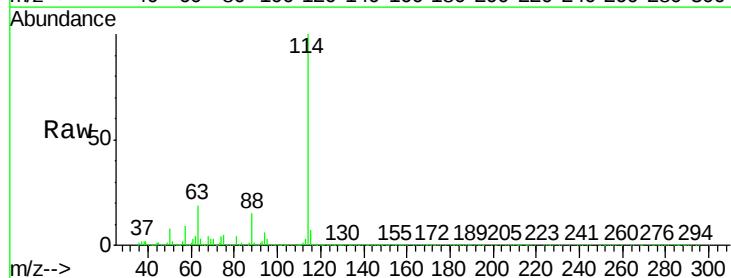
Tgt Ion: 114 Resp: 397087

Ion Ratio Lower Upper

114 100

63 20.0 16.1 24.1

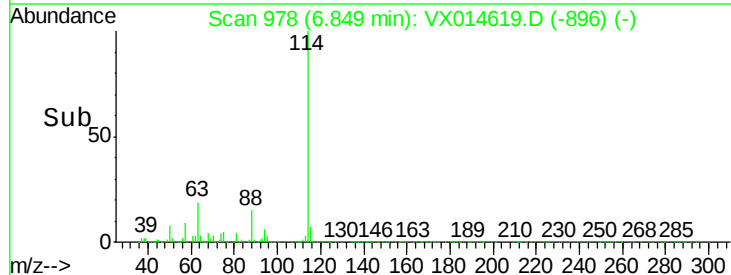
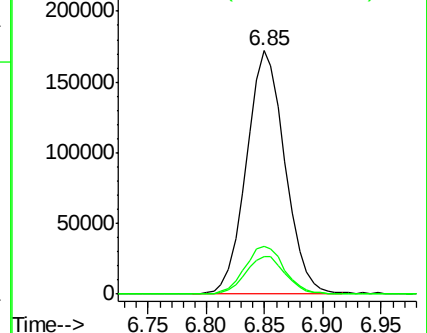
88 15.9 12.5 18.7

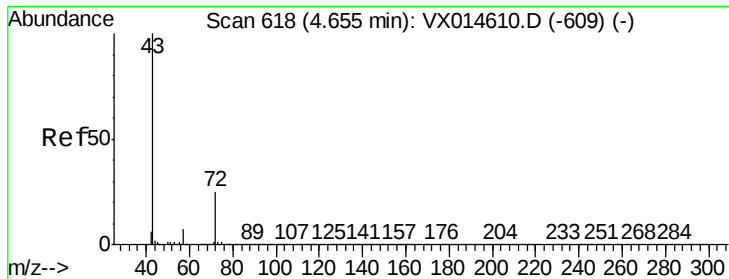


Abundance Ion 114.00 (113.70 to 114.70): V

Ion 63.00 (62.70 to 63.70): VX0

Ion 88.00 (87.70 to 88.70): VX0

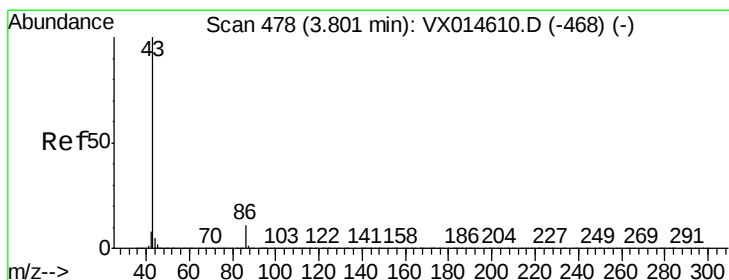
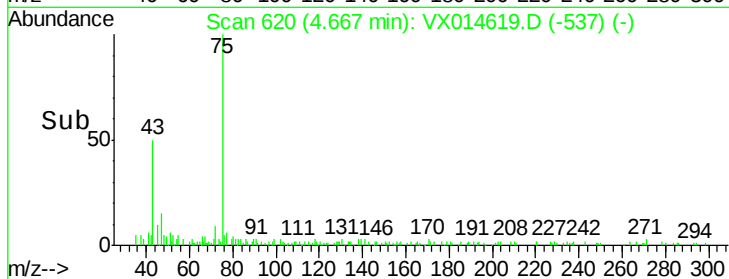
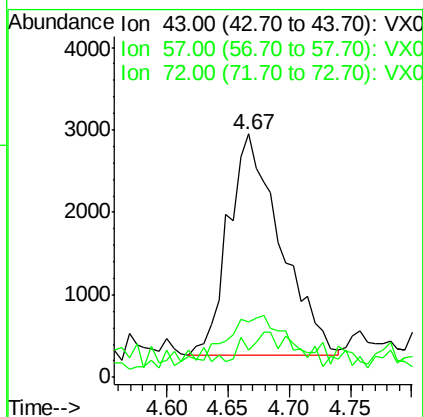
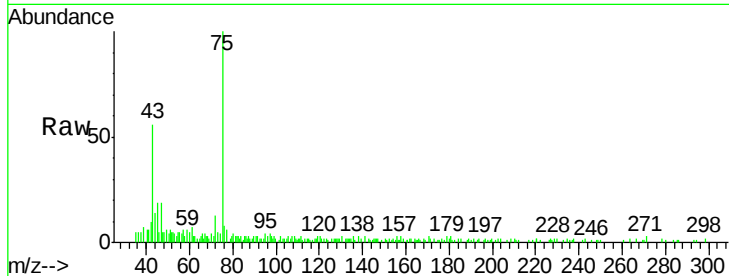




#30  
2-Butanone  
Concen: 2.149 ug/l  
RT: 4.67 min Scan# 620  
Delta R.T. 0.01 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

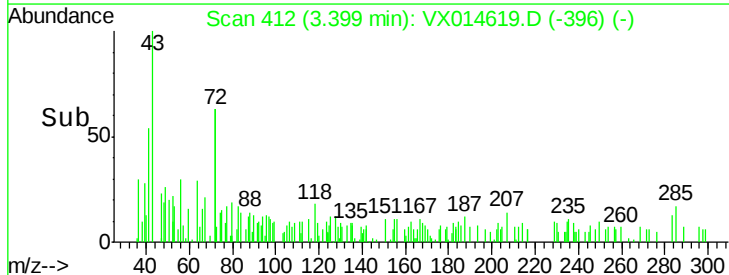
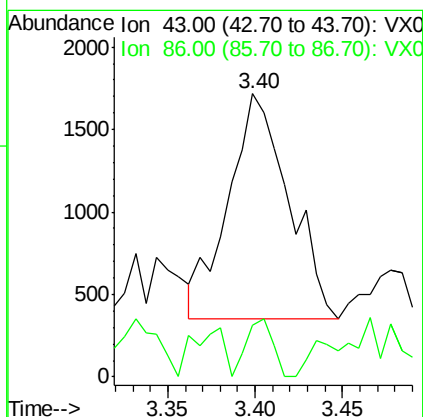
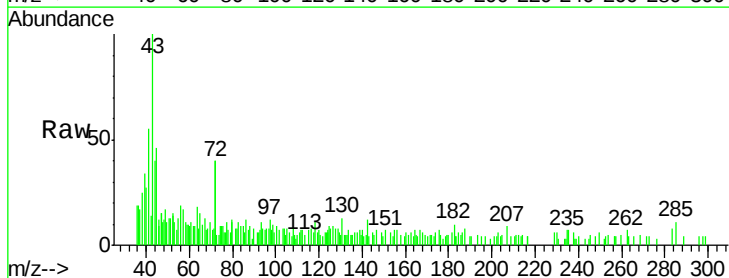
Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

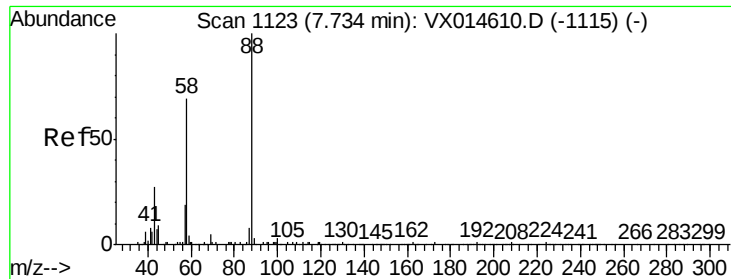
Tgt Ion: 43 Resp: 7926  
Ion Ratio Lower Upper  
43 100  
57 3.0 6.2 9.2#  
72 2.7 20.3 30.5#



#42  
Vinyl Acetate  
Concen: 0.290 ug/l  
RT: 3.40 min Scan# 412  
Delta R.T. -0.40 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

Tgt Ion: 43 Resp: 3300  
Ion Ratio Lower Upper  
43 100  
86 11.1 7.7 11.5





#45

1,4-Dioxane

Concen: 2.357 ug/l

RT: 7.75 min Scan# 1125

Delta R.T. 0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampleId :

EFF-WW

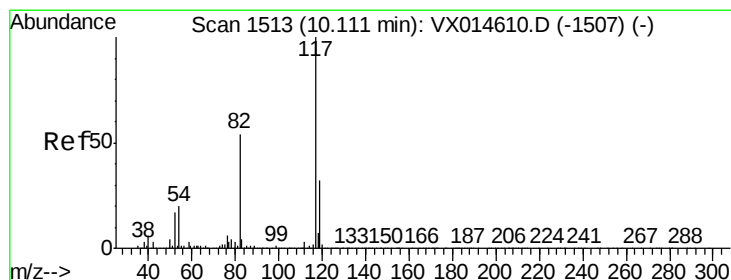
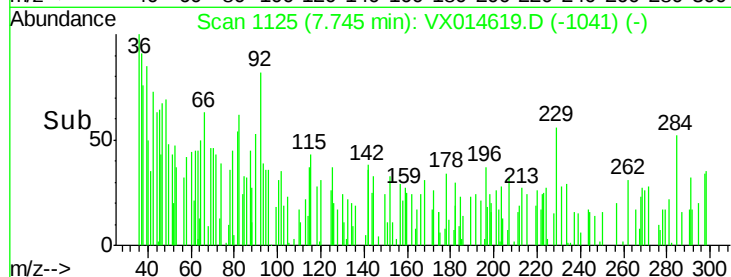
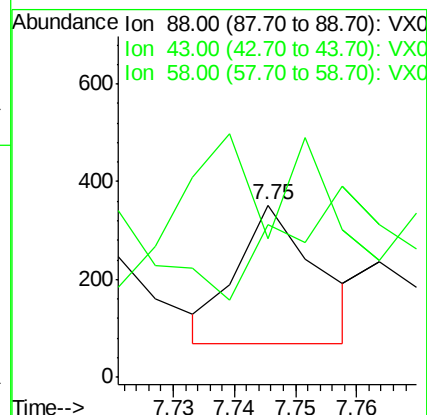
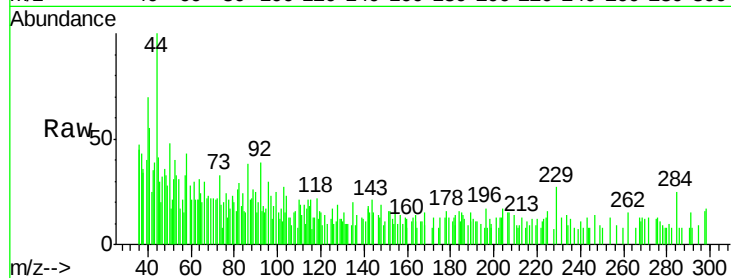
Tgt Ion: 88 Resp: 254

Ion Ratio Lower Upper

88 100

43 103.1 25.4 38.2#

58 223.6 56.5 84.7#



#57

Chlorobenzene-d5

Concen: 30.000 ug/l

RT: 10.10 min Scan# 1512

Delta R.T. -0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

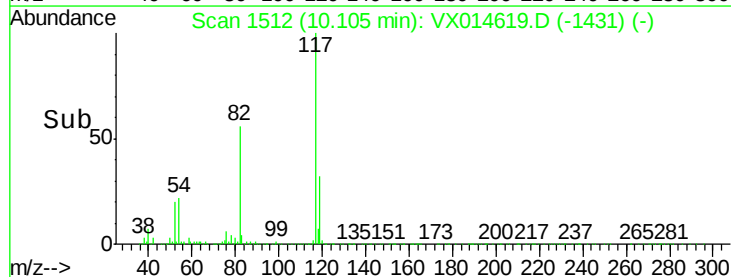
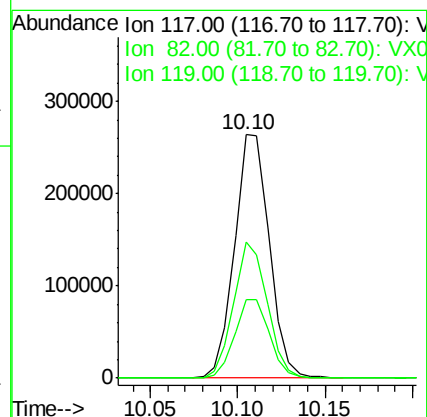
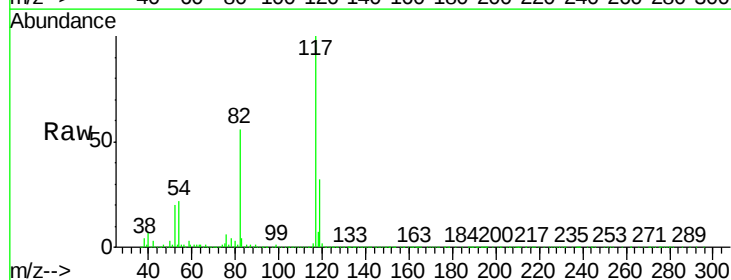
Tgt Ion: 117 Resp: 365819

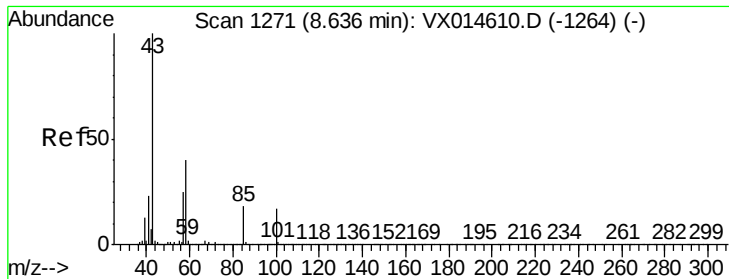
Ion Ratio Lower Upper

117 100

82 53.5 43.8 65.6

119 32.2 25.8 38.6

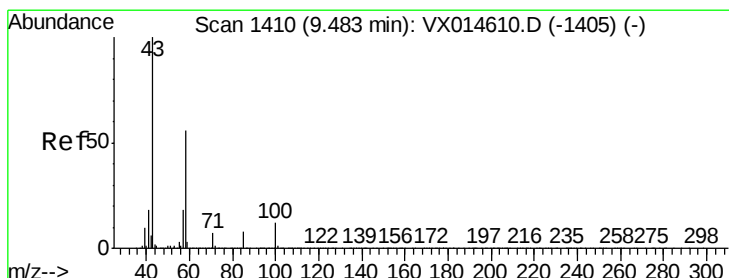
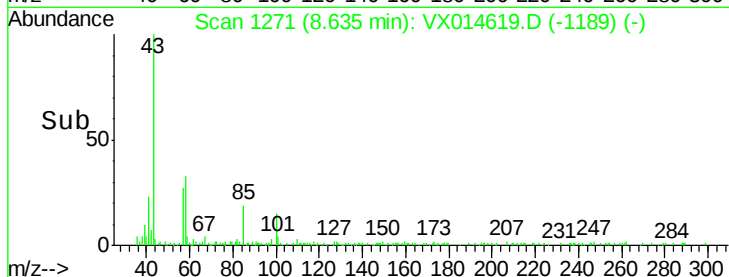
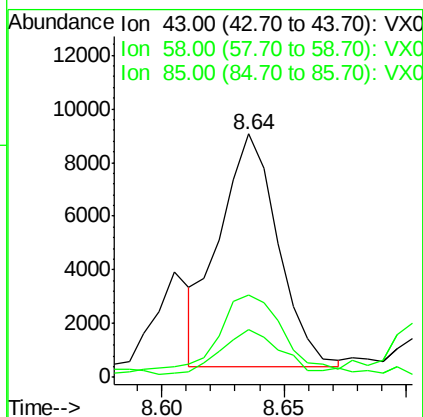
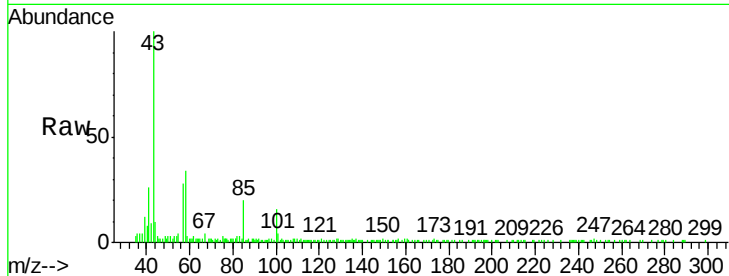




#58  
 4-Methyl-2-Pentanone  
 Concen: 2.090 ug/l  
 RT: 8.64 min Scan# 1271  
 Delta R.T. -0.00 min  
 Lab File: VX014619.D  
 Acq: 15 Jan 2020 15:28

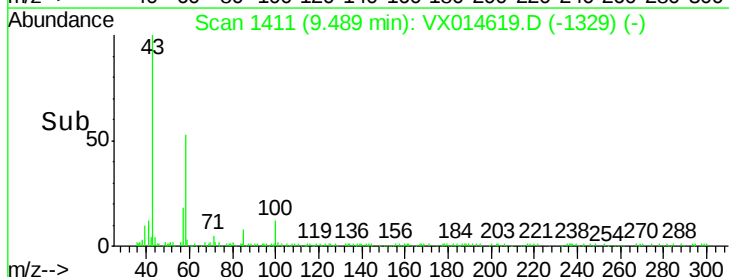
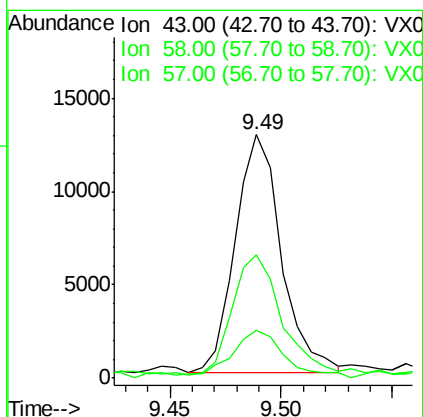
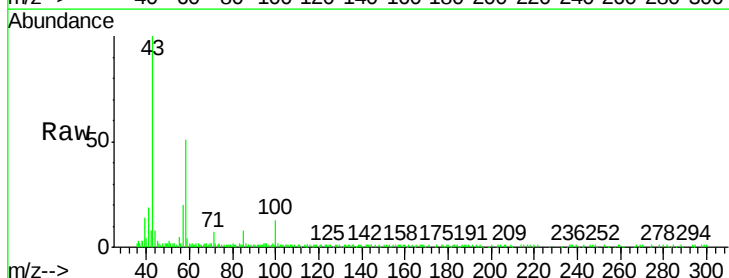
Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 EFF-WW

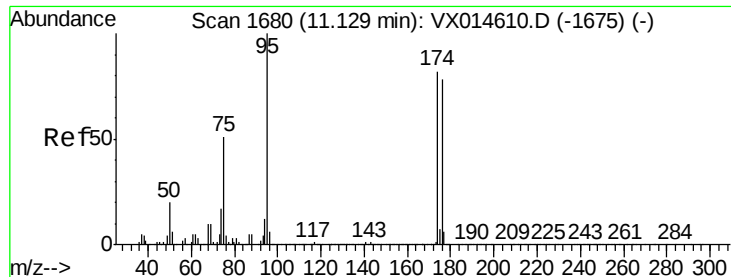
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 14396 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 58       | 38.2  | 31.2  | 46.8  |
| 85       | 20.3  | 14.2  | 21.2  |



#59  
 2-Hexanone  
 Concen: 3.454 ug/l  
 RT: 9.49 min Scan# 1411  
 Delta R.T. -0.00 min  
 Lab File: VX014619.D  
 Acq: 15 Jan 2020 15:28

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 18402 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 58       | 55.6  | 43.8  | 65.6  |
| 57       | 18.2  | 15.4  | 23.0  |

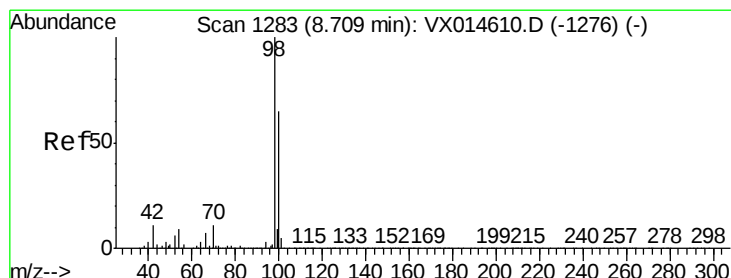
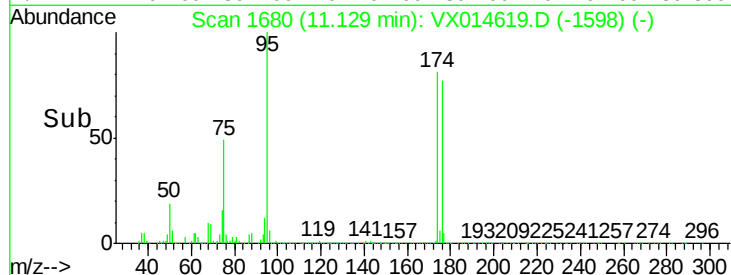
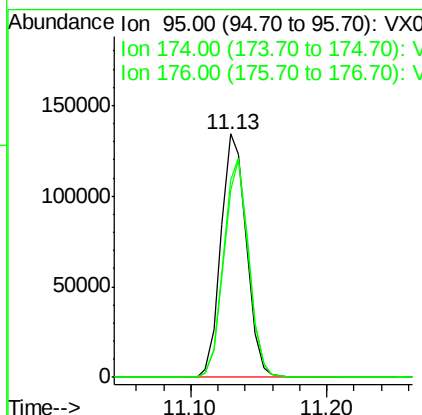
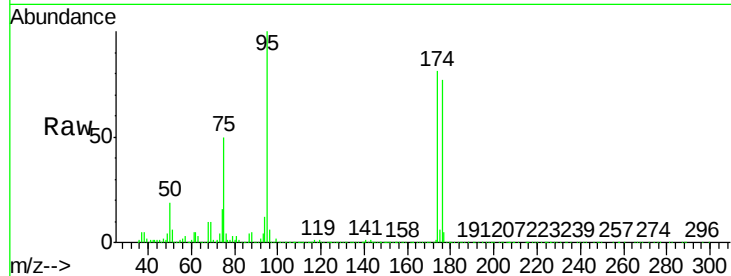




#60  
4-Bromofluorobenzene  
Concen: 29.739 ug/l  
RT: 11.13 min Scan# 1680  
Delta R.T. -0.00 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

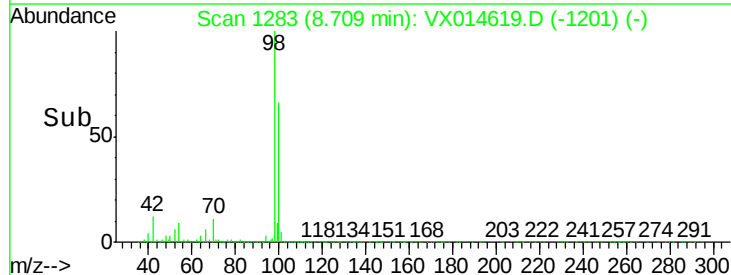
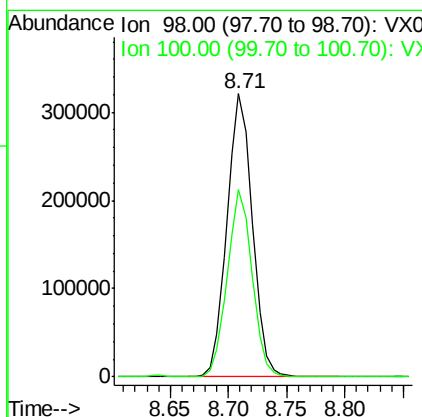
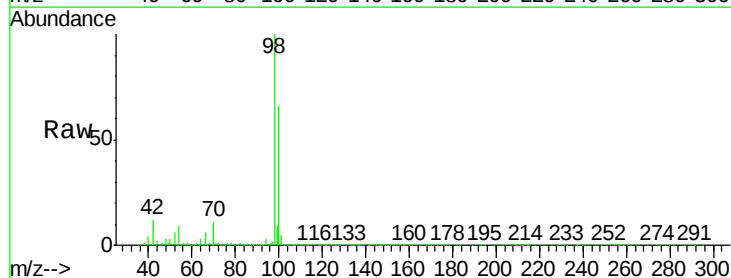
Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

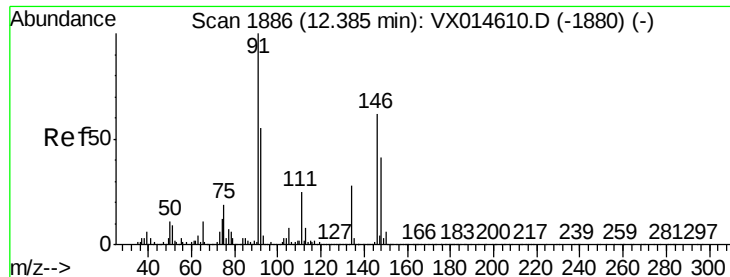
Tgt Ion: 95 Resp: 174090  
Ion Ratio Lower Upper  
95 100  
174 88.6 70.2 105.2  
176 86.3 68.3 102.5



#63  
Toluene-d8  
Concen: 29.560 ug/l  
RT: 8.71 min Scan# 1283  
Delta R.T. -0.00 min  
Lab File: VX014619.D  
Acq: 15 Jan 2020 15:28

Tgt Ion: 98 Resp: 488452  
Ion Ratio Lower Upper  
98 100  
100 64.2 52.2 78.2





#85

n-Butylbenzene

Concen: 0.214 ug/l

RT: 12.38 min Scan# 1886

Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

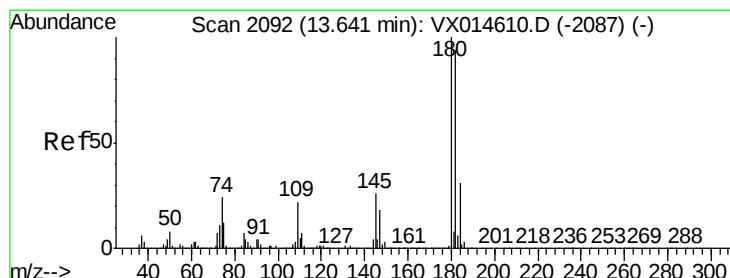
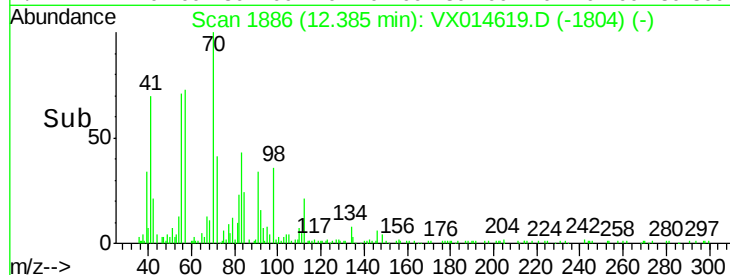
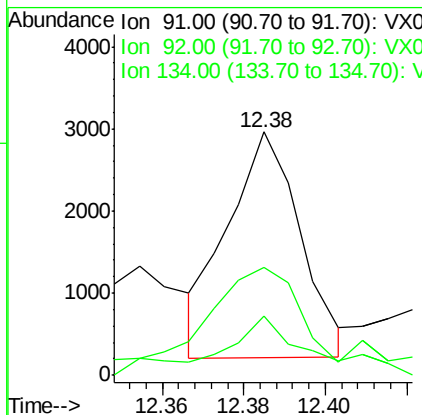
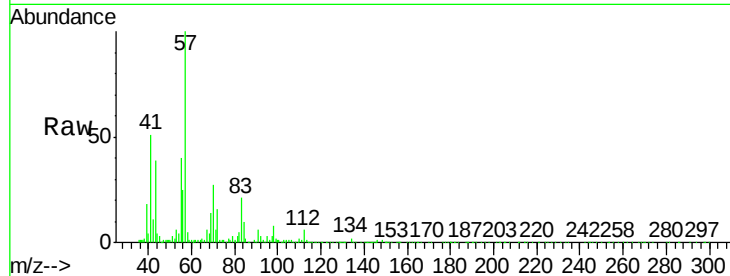
Instrument :

MSVOA\_X

ClientSampleId :

EFF-WW

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 91    | Resp: | 3402  |
| Ion      | Ratio | Lower | Upper |
| 91       | 100   |       |       |
| 92       | 47.8  | 0.0   | 109.0 |
| 134      | 19.2  | 0.0   | 54.0  |



#89

1,2,4-Trichlorobenzene

Concen: 0.266 ug/l

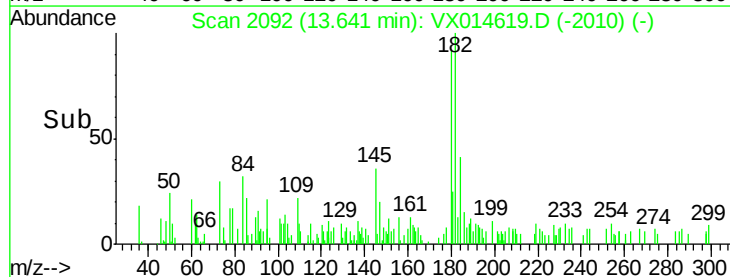
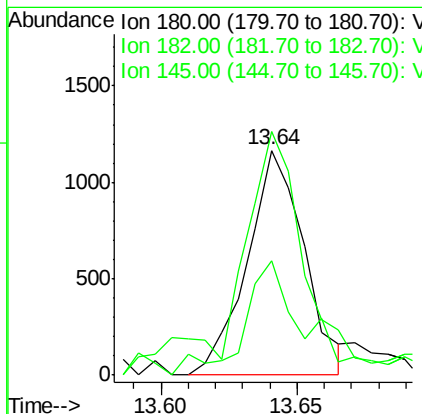
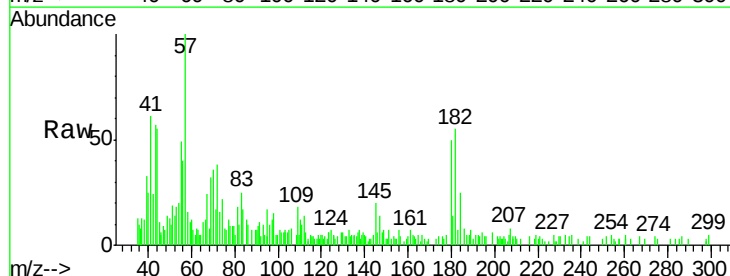
RT: 13.64 min Scan# 2092

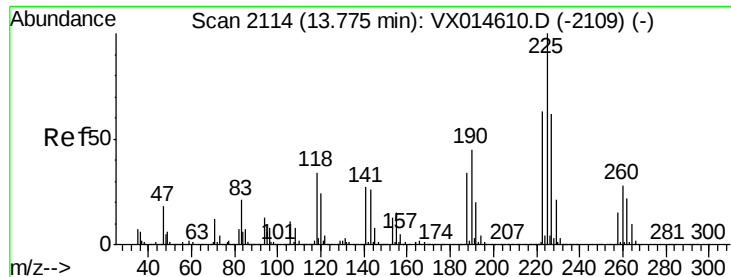
Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 180   | Resp: | 1691  |
| Ion      | Ratio | Lower | Upper |
| 180      | 100   |       |       |
| 182      | 108.2 | 76.4  | 114.6 |
| 145      | 29.7  | 21.9  | 32.9  |





#90

Hexachlorobutadiene

Concen: 0.273 ug/l

RT: 13.78 min Scan# 2115

Delta R.T. 0.01 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

Instrument :

MSVOA\_X

ClientSampled :

EFF-WW

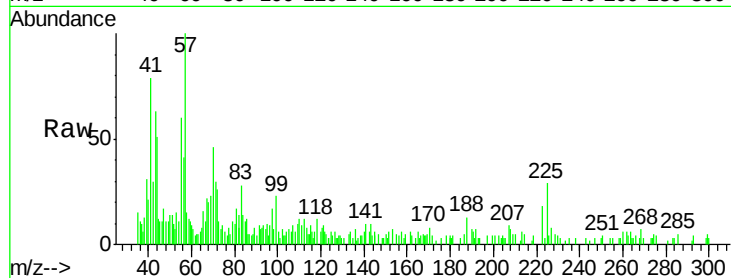
Tgt Ion:225 Resp: 870

Ion Ratio Lower Upper

225 100

223 63.9 0.0 127.4

227 65.2 0.0 122.8

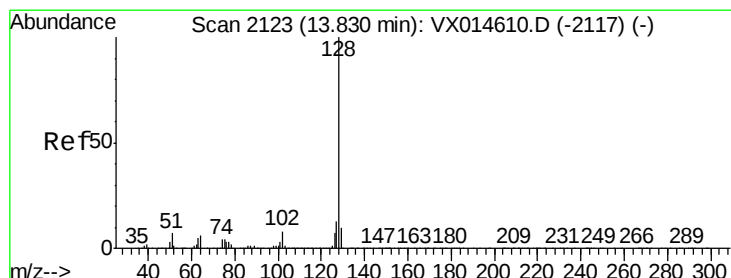
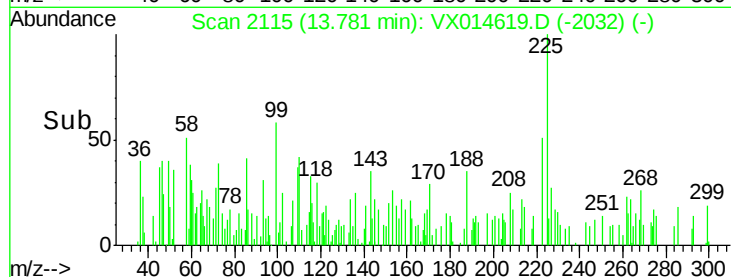
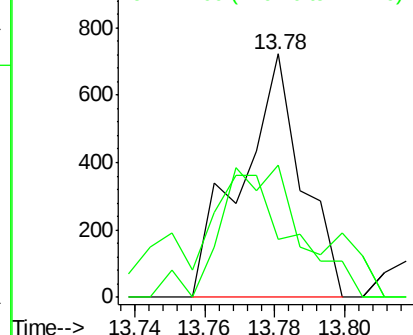


Abundance

Ion 225.00 (224.70 to 225.70): V

Ion 223.00 (222.70 to 223.70): V

Ion 227.00 (226.70 to 227.70): V



#91

Naphthalene

Concen: 0.234 ug/l

RT: 13.83 min Scan# 2123

Delta R.T. -0.00 min

Lab File: VX014619.D

Acq: 15 Jan 2020 15:28

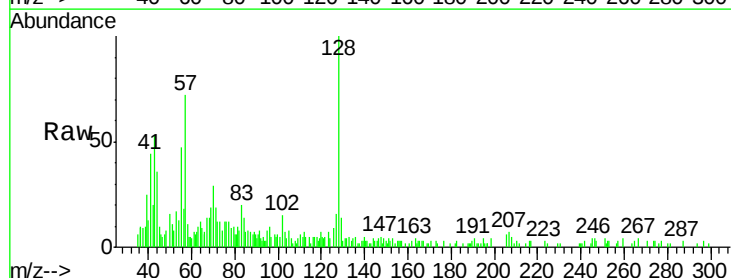
Tgt Ion:128 Resp: 4500

Ion Ratio Lower Upper

128 100

127 20.4 10.4 15.6#

129 12.6 8.9 13.3

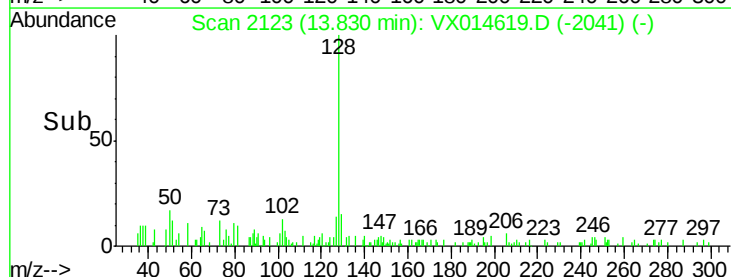
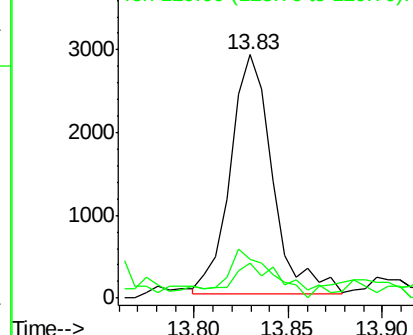


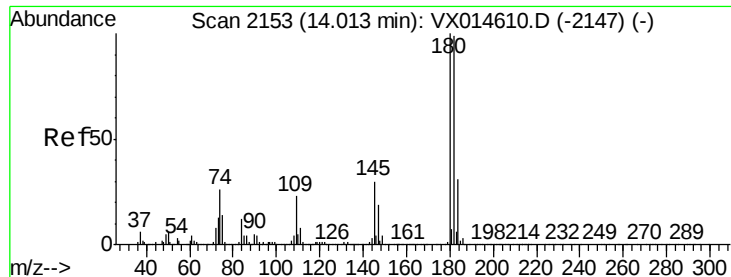
Abundance

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





#92  
 1,2,3-Trichlorobenzene  
 Concen: 0.225 ug/l  
 RT: 14.01 min Scan# 2153  
 Delta R.T. -0.00 min  
 Lab File: VX014619.D  
 Acq: 15 Jan 2020 15:28

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 EFF-WW

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 99.8  | 0.0   | 192.8 |
| 145     | 54.5  | 0.0   | 60.0  |

