

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX111419\  
 Data File : VX013424.D  
 Acq On : 14 Nov 2019 15:59  
 Operator : JC/SP  
 Sample : K5837-01 5X  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: Nov 15 00:57:37 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X111119W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Nov 12 01:16:13 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.01  | 128  | 106666   | 30.00 | ug/l  | 0.01     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 630620   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 556840   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 246645   | 31.31    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 104.37% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 266314   | 29.76    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.20%  |
| 63) Toluene-d8            | 8.71   | 98    | 770096   | 30.58    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 101.93% |

## Target Compounds

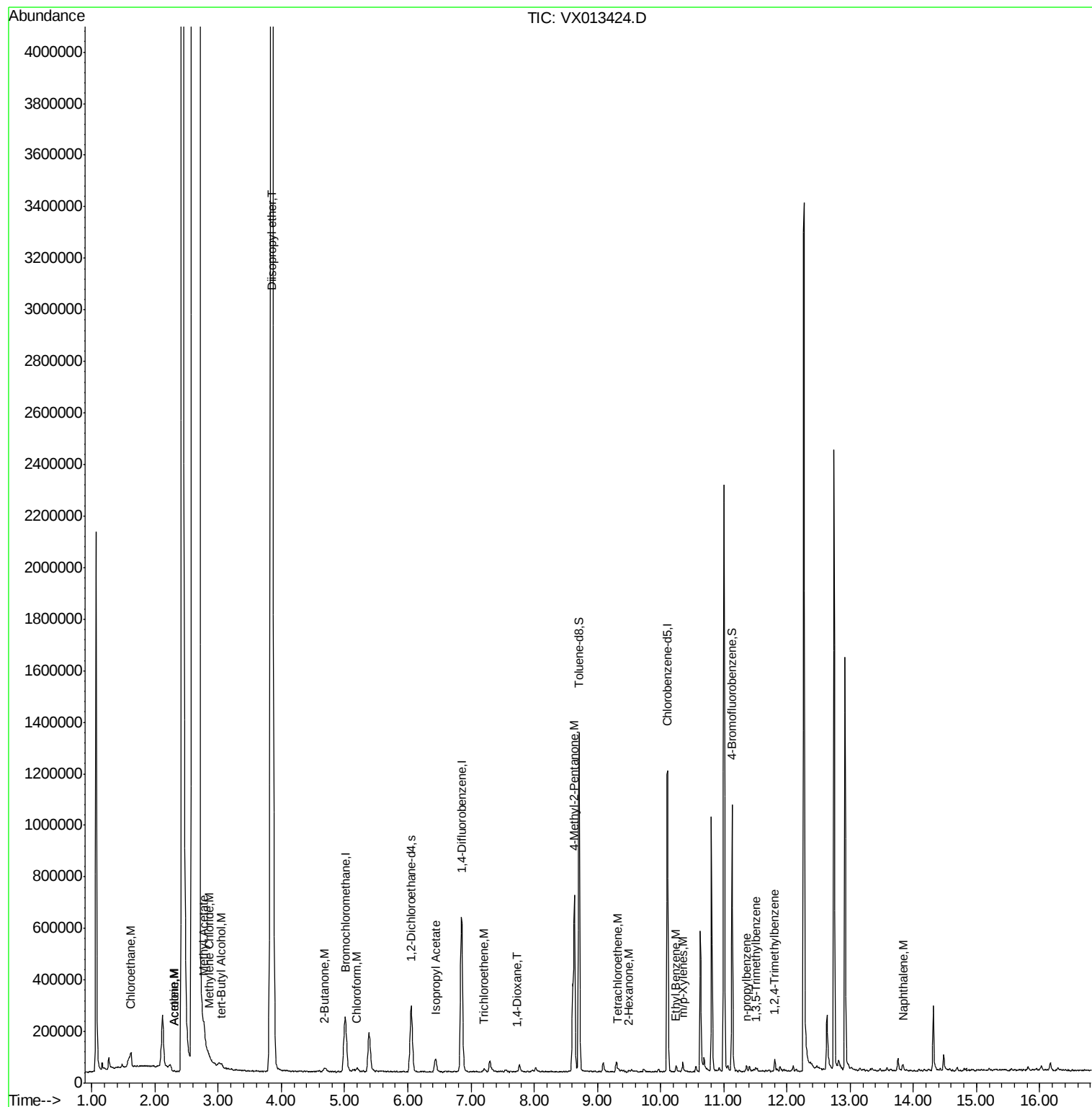
|                            |       |     |         |         | Ovalue    |
|----------------------------|-------|-----|---------|---------|-----------|
| 6) Chloroethane            | 1.61  | 64  | 1205    | 0.221   | ug/l 95   |
| 12) Methyl Acetate         | 2.78  | 43  | 90431   | 7.834   | ug/l 98   |
| 13) Acrolein               | 2.30  | 56  | 499     | 0.407   | ug/l 91   |
| 15) Acetone                | 2.31  | 58  | 372     | 0.289   | ug/l 85   |
| 18) Methylene Chloride     | 2.85  | 84  | 1840    | 0.246   | ug/l # 48 |
| 20) Diisopropyl ether      | 3.84  | 45  | 7438095 | 318.688 | ug/l # 72 |
| 23) tert-Butyl Alcohol     | 3.05  | 59  | 26366   | 12.907  | ug/l # 99 |
| 25) Chloroform             | 5.20  | 83  | 15689   | 1.261   | ug/l 87   |
| 30) 2-Butanone             | 4.67  | 43  | 19503   | 3.068   | ug/l # 75 |
| 37) Trichloroethene        | 7.21  | 130 | 4716    | 0.603   | ug/l 92   |
| 44) Isopropyl Acetate      | 6.44  | 43  | 69590   | 3.734   | ug/l 96   |
| 45) 1,4-Dioxane            | 7.73  | 88  | 233     | 1.132   | ug/l # 1  |
| 58) 4-Methyl-2-Pentanone   | 8.64  | 43  | 488918  | 42.030  | ug/l # 90 |
| 59) 2-Hexanone             | 9.50  | 43  | 3768    | 0.409   | ug/l # 95 |
| 61) Tetrachloroethene      | 9.33  | 164 | 1523    | 0.222   | ug/l # 78 |
| 66) Ethyl Benzene          | 10.25 | 91  | 16845   | 0.494   | ug/l 96   |
| 67) m/p-Xylenes            | 10.35 | 106 | 7121    | 0.542   | ug/l 89   |
| 74) n-propylbenzene        | 11.35 | 91  | 11358   | 0.299   | ug/l 100  |
| 76) 1,3,5-Trimethylbenzene | 11.50 | 105 | 8727    | 0.311   | ug/l 96   |
| 80) 1,2,4-Trimethylbenzene | 11.80 | 105 | 9945    | 0.355   | ug/l 87   |
| 91) Naphthalene            | 13.83 | 128 | 15463   | 0.457   | ug/l # 90 |

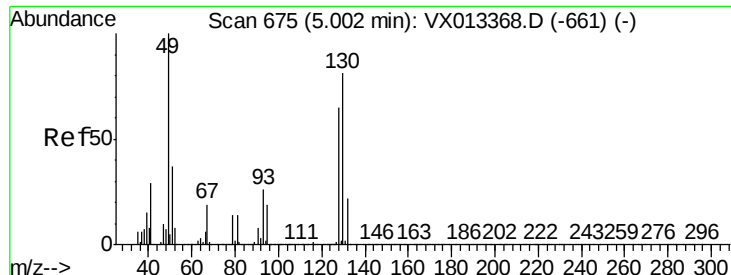
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA X\DATA\VX111419\  
Data File : VX013424.D  
Acq On : 14 Nov 2019 15:59  
Operator : JC/SP  
Sample : K5837-01 5X  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :

Quant Time: Nov 15 00:57:37 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA X\METHOD\624X111119W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Tue Nov 12 01:16:13 2019  
Response via : Initial Calibration



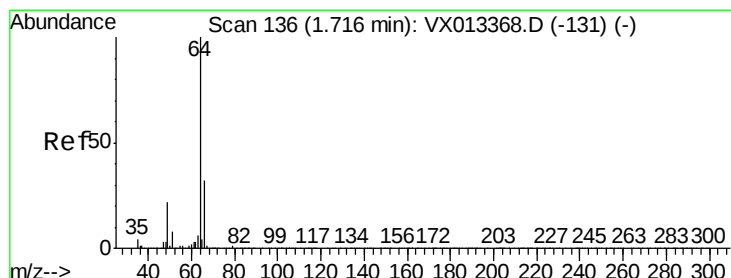
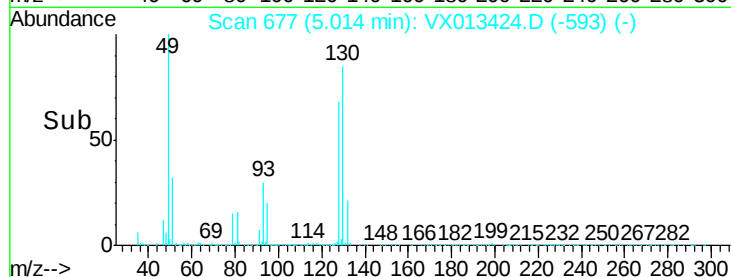
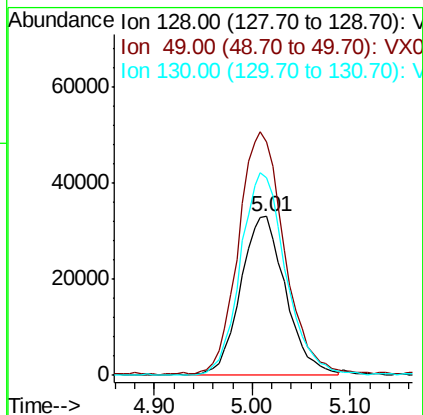
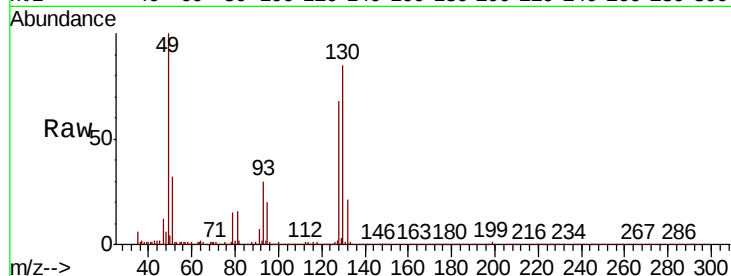


#1

Bromochloromethane  
 Concen: 30.000 ug/l  
 RT: 5.01 min Scan# 677  
 Delta R.T. 0.01 min  
 Lab File: VX013424.D  
 Acq: 14 Nov 2019 15:59

Instrument :  
 MSVOA\_X  
 ClientSampleId :

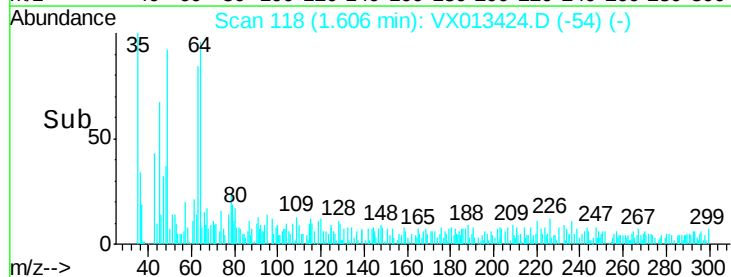
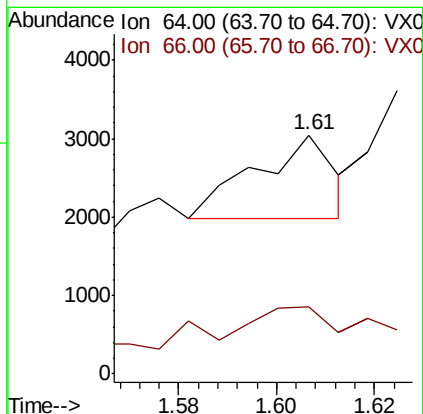
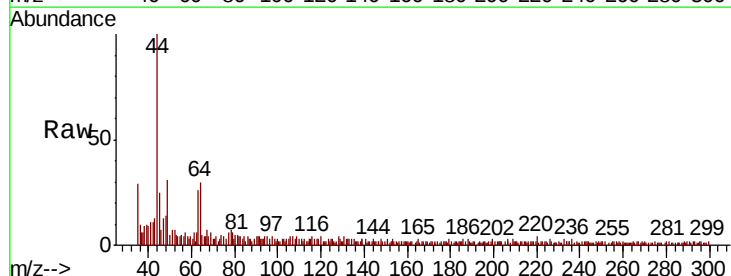
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 49      | 154.1 | 0.0   | 388.3 |
| 130     | 127.7 | 0.0   | 318.5 |

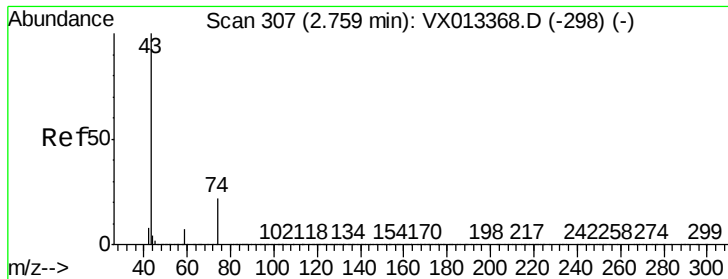


#6

Chloroethane  
 Concen: 0.221 ug/l  
 RT: 1.61 min Scan# 118  
 Delta R.T. -0.11 min  
 Lab File: VX013424.D  
 Acq: 14 Nov 2019 15:59

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 64      | 100   |       |       |
| 66      | 29.2  | 25.5  | 38.3  |

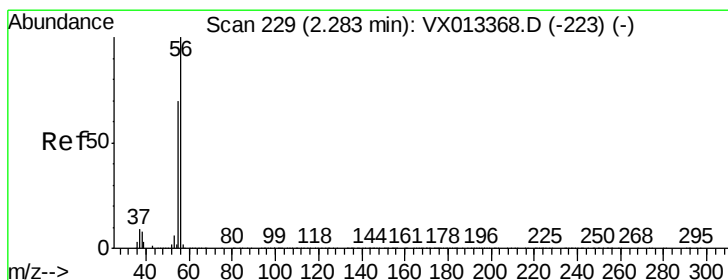
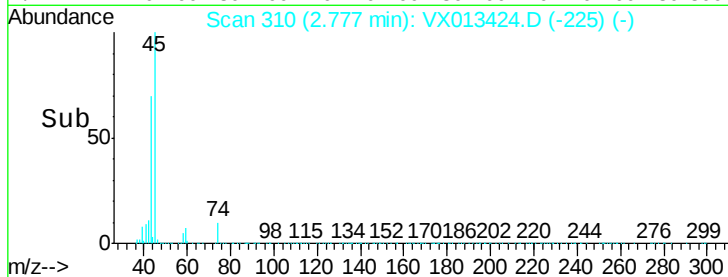
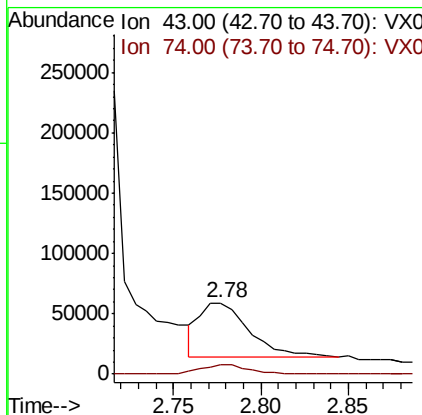
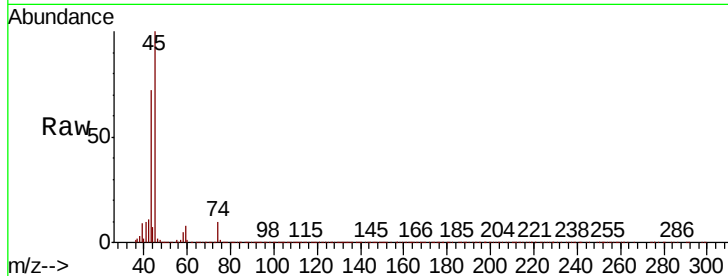




#12  
Methvl Acetate  
Concen: 7.834 ug/l  
RT: 2.78 min Scan# 310  
Delta R.T. 0.02 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

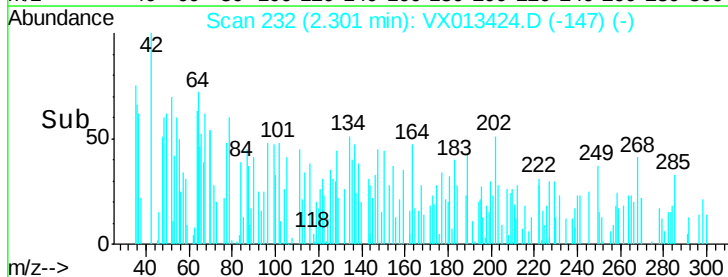
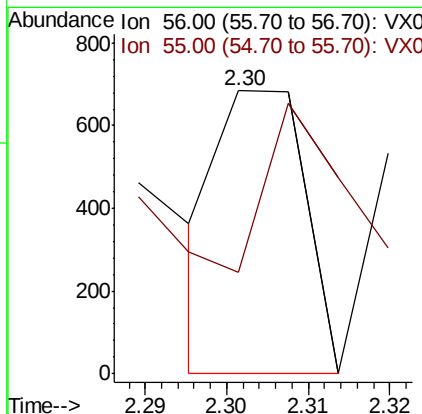
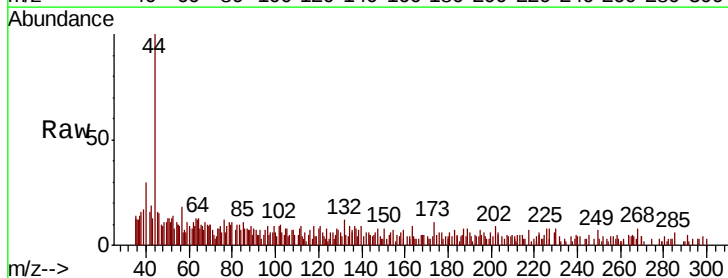
Instrument :  
MSVOA\_X  
ClientSampled :

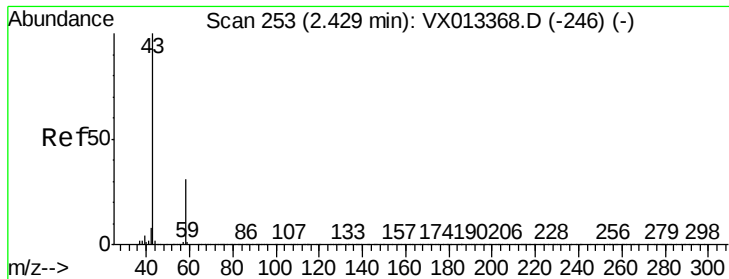
Tot Ion: 43 Resp: 90431  
Ion Ratio Lower Upper  
43 100  
74 21.4 18.0 27.0



#13  
Acrolein  
Concen: 0.407 ug/l  
RT: 2.30 min Scan# 232  
Delta R.T. 0.02 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Tgt Ion: 56 Resp: 499  
Ion Ratio Lower Upper  
56 100  
55 62.3 55.8 83.8

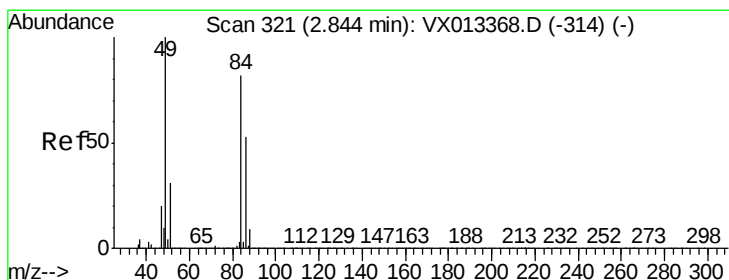
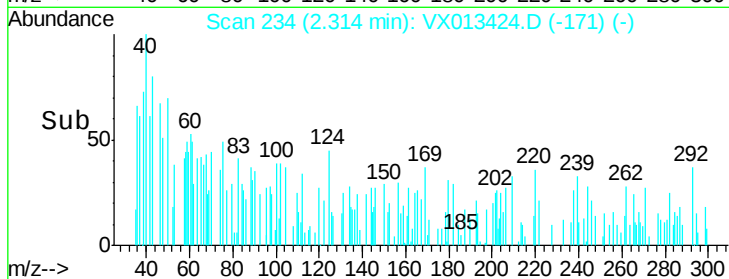
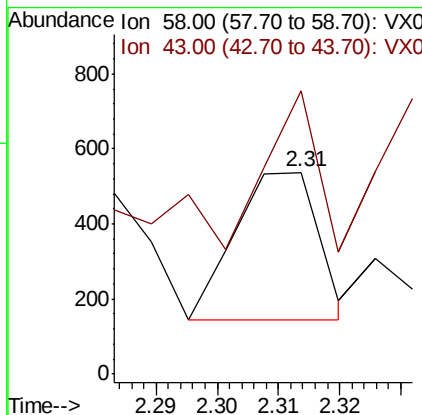
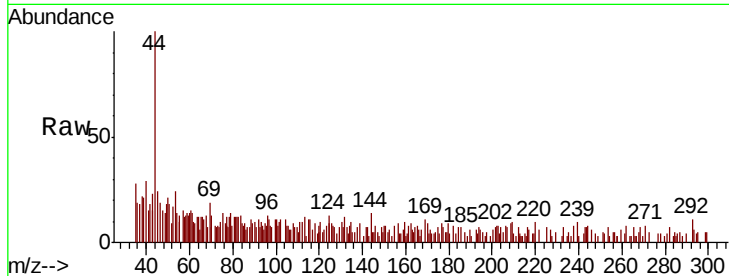




#15  
Acetone  
Concen: 0.289 ug/l  
RT: 2.31 min Scan# 234  
Delta R.T. -0.12 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

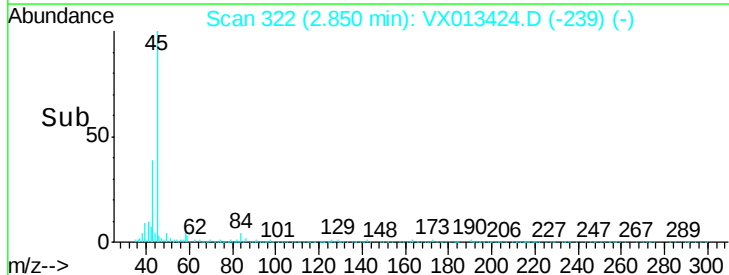
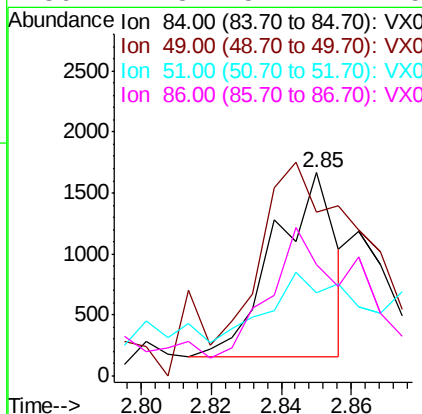
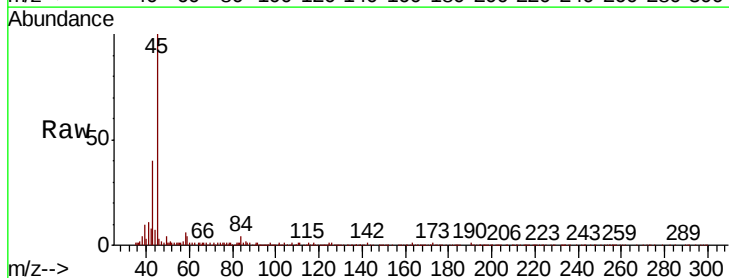
Instrument :  
MSVOA\_X  
ClientSampled :

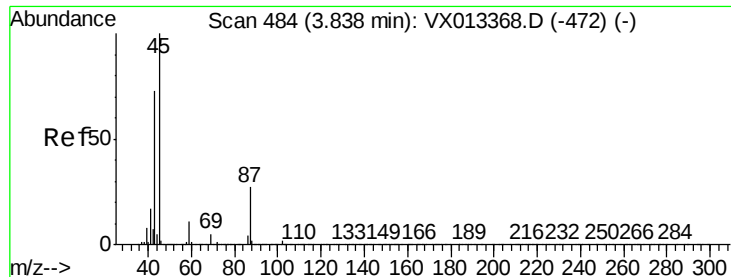
Tot Ion: 58 Resp: 372  
Ion Ratio Lower Upper  
58 100  
43 295.9 261.4 392.2



#18  
Methylene Chloride  
Concen: 0.246 ug/l  
RT: 2.85 min Scan# 322  
Delta R.T. 0.01 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Tgt Ion: 84 Resp: 1840  
Ion Ratio Lower Upper  
84 100  
49 42.5 96.8 145.2#  
51 16.7 30.0 45.0#  
86 41.8 51.7 77.5#

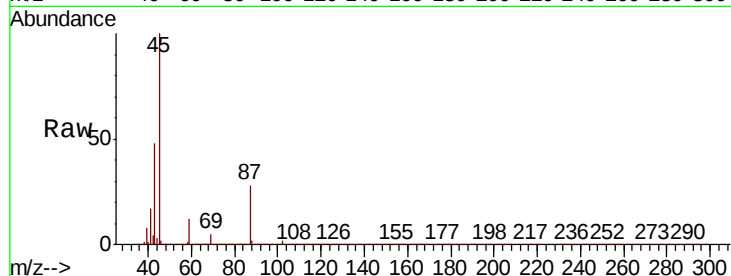




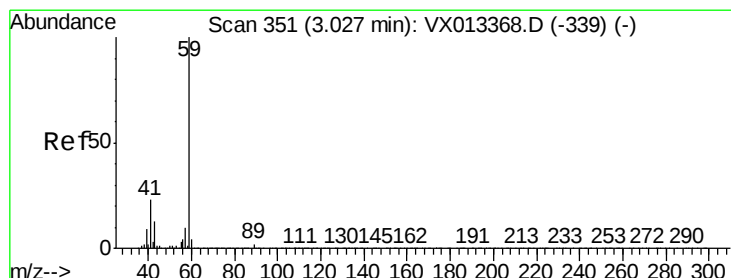
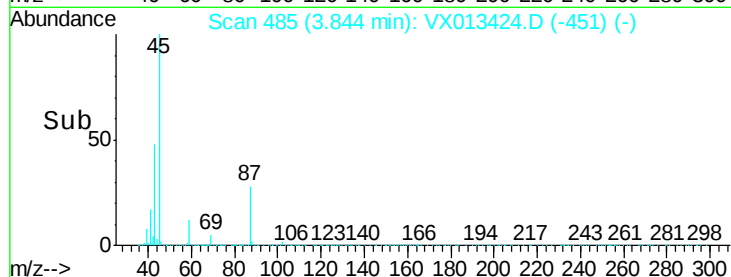
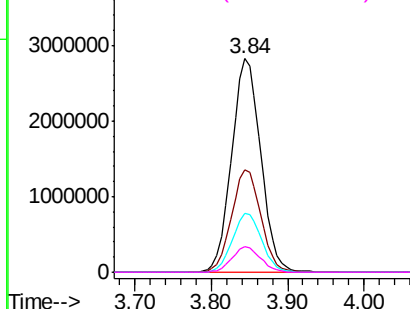
#20  
Diisopropyl ether  
Concen: 318.688 ug/l  
RT: 3.84 min Scan# 485  
Delta R.T. 0.01 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion: 45 Resp: 7438095  
Ion Ratio Lower Upper  
45 100  
43 48.1 67.7 101.5#  
87 27.6 21.5 32.3  
59 11.7 8.5 12.7

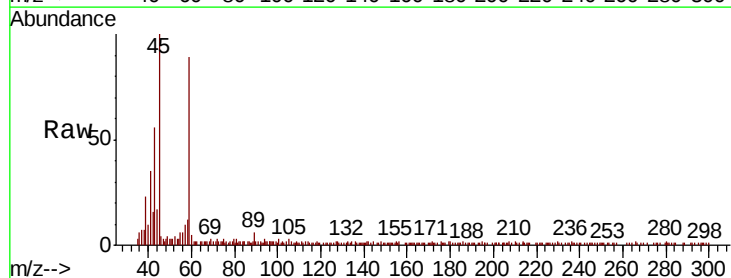


Abundance Ion 45.00 (44.70 to 45.70): VX0  
Ion 43.00 (42.70 to 43.70): VX0  
Ion 87.00 (86.70 to 87.70): VX0  
Ion 59.00 (58.70 to 59.70): VX0

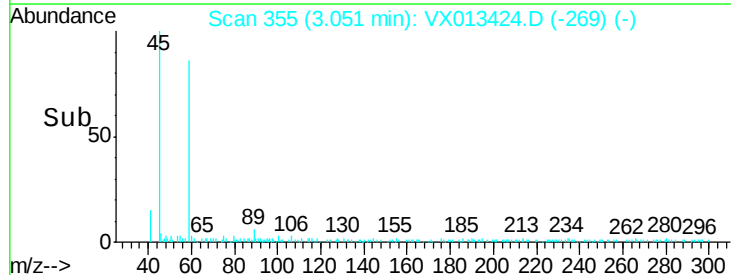
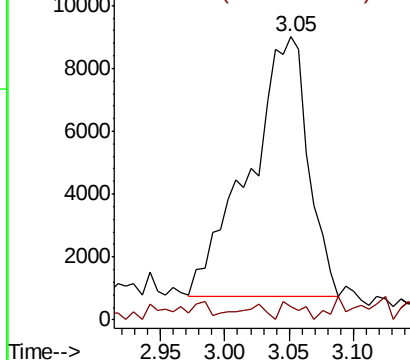


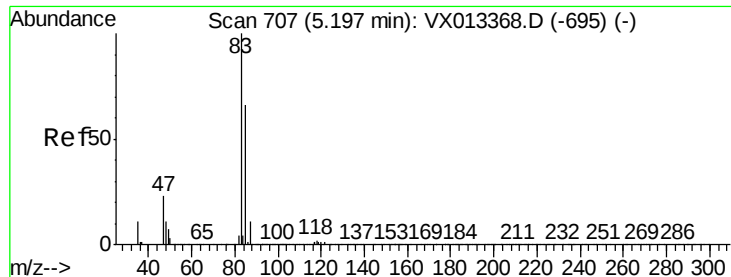
#23  
tert-Butyl Alcohol  
Concen: 12.907 ug/l  
RT: 3.05 min Scan# 355  
Delta R.T. 0.02 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Tgt Ion: 59 Resp: 26366  
Ion Ratio Lower Upper  
59 100  
52 1.8 0.1 0.1#



Abundance Ion 59.00 (58.70 to 59.70): VX0  
Ion 52.00 (51.70 to 52.70): VX0

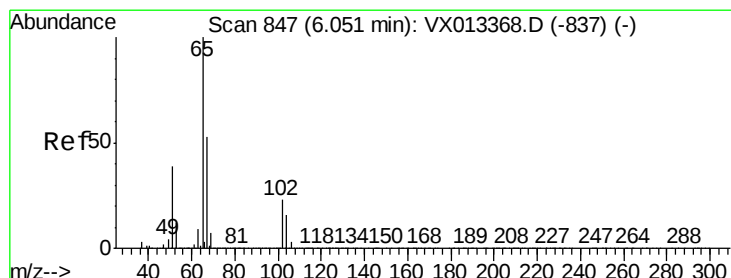
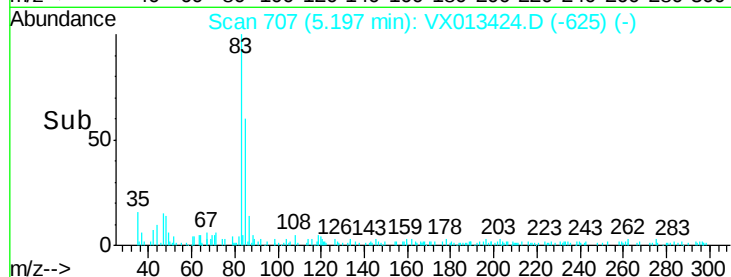
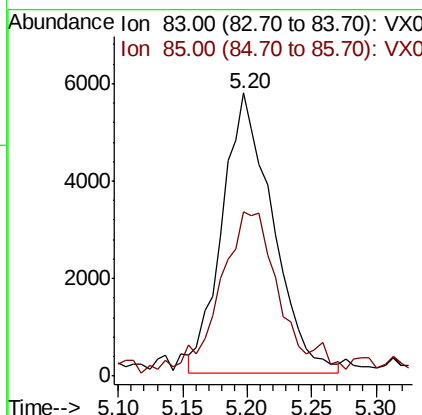
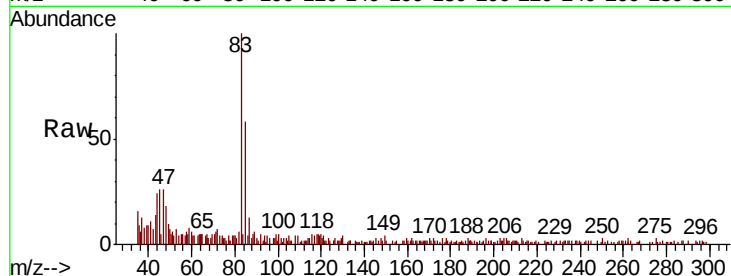




#25  
Chloroform  
Concen: 1.261 ug/l  
RT: 5.20 min Scan# 707  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

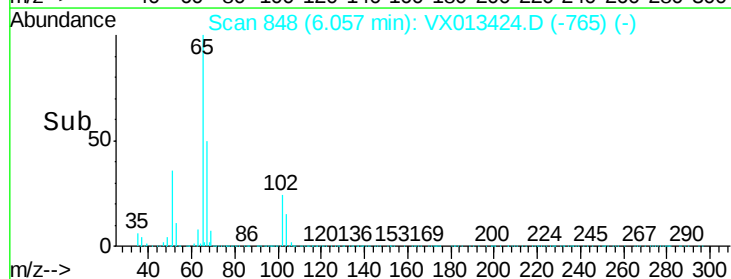
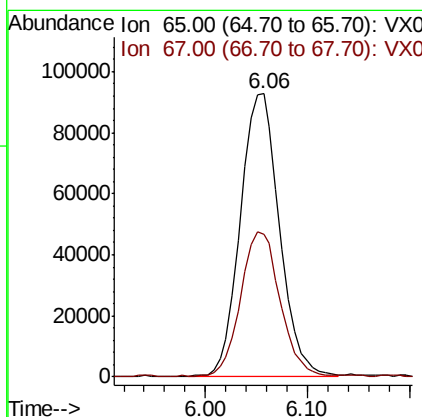
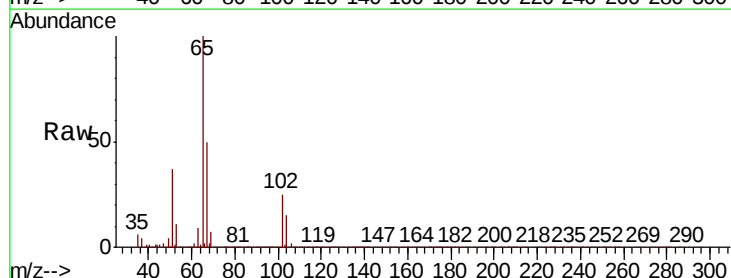
Instrument :  
MSVOA\_X  
ClientSampleId :

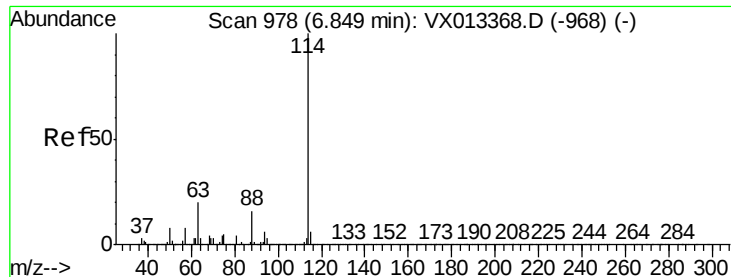
Tot Ion: 83 Resp: 15689  
Ion Ratio Lower Upper  
83 100  
85 54.8 52.4 78.6



#27  
1,2-Dichloroethane-d4  
Concen: 31.314 ug/l  
RT: 6.06 min Scan# 848  
Delta R.T. 0.01 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Tgt Ion: 65 Resp: 246645  
Ion Ratio Lower Upper  
65 100  
67 51.2 41.0 61.6

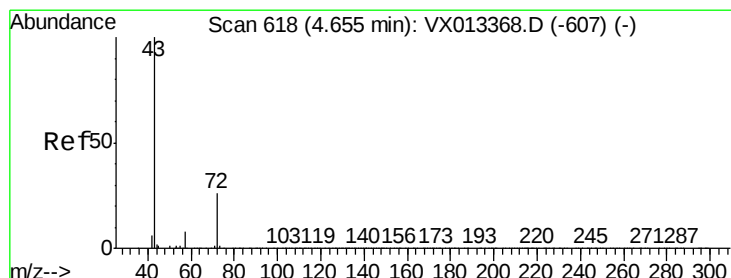
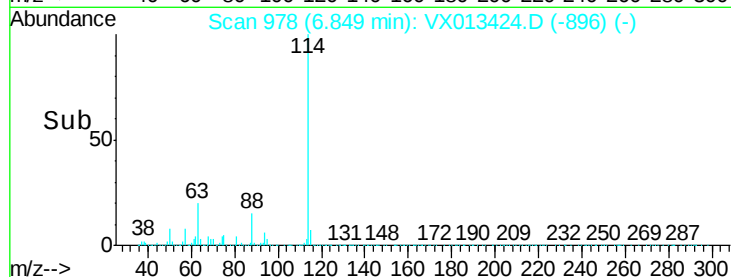
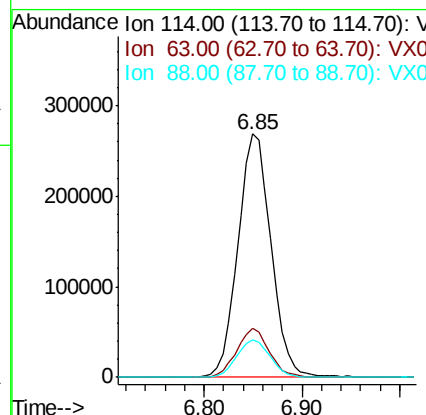
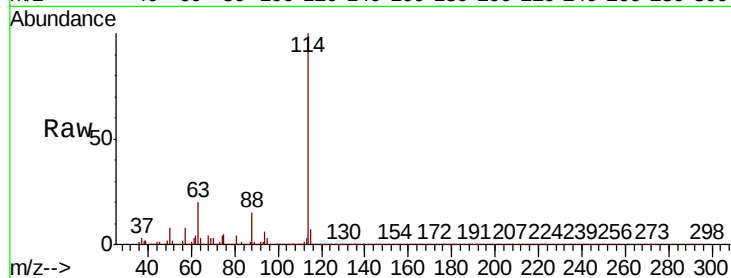




#28  
 1,4-Difluorobenzene  
 Concen: 30.000 ug/l  
 RT: 6.85 min Scan# 978  
 Delta R.T. 0.00 min  
 Lab File: VX013424.D  
 Acq: 14 Nov 2019 15:59

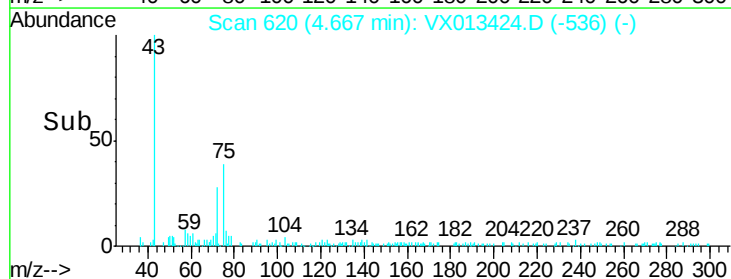
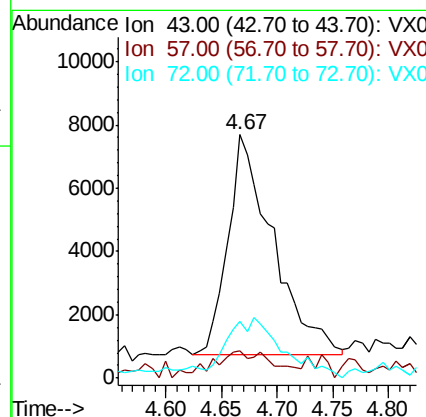
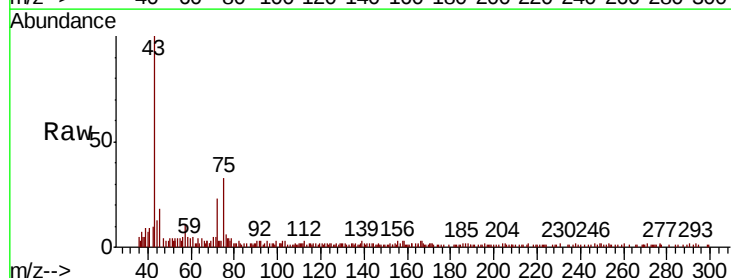
Instrument :  
 MSVOA\_X  
 ClientSampleId :

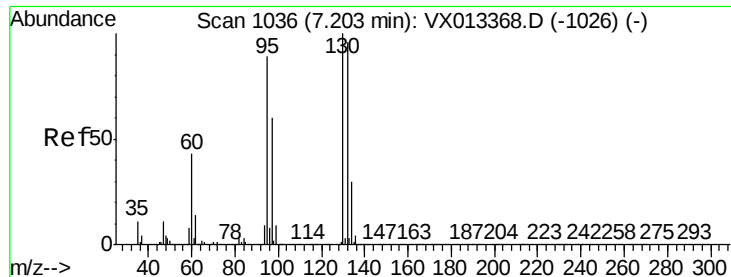
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 19.9  | 16.1  | 24.1  |
| 88      | 15.3  | 12.3  | 18.5  |



#30  
 2-Butanone  
 Concen: 3.068 ug/l  
 RT: 4.67 min Scan# 620  
 Delta R.T. 0.01 min  
 Lab File: VX013424.D  
 Acq: 14 Nov 2019 15:59

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 57      | 3.9   | 6.1   | 9.1#  |
| 72      | 10.5  | 20.5  | 30.7# |





#37

Trichloroethene

Concen: 0.603 ug/l

RT: 7.21 min Scan# 1037

Delta R.T. 0.01 min

Lab File: VX013424.D

Acq: 14 Nov 2019 15:59

Instrument :

MSVOA\_X

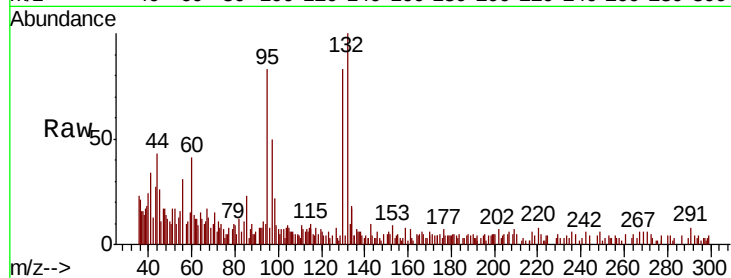
ClientSampled :

Tot Ion:130 Resp: 4716

Ion Ratio Lower Upper

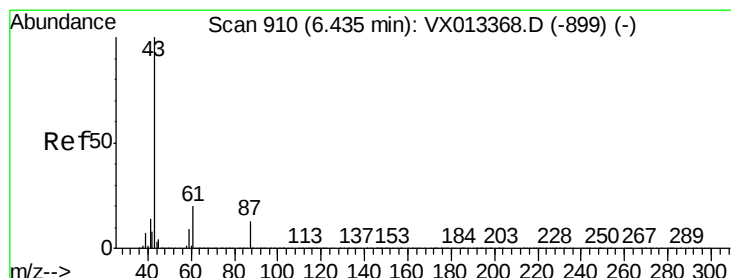
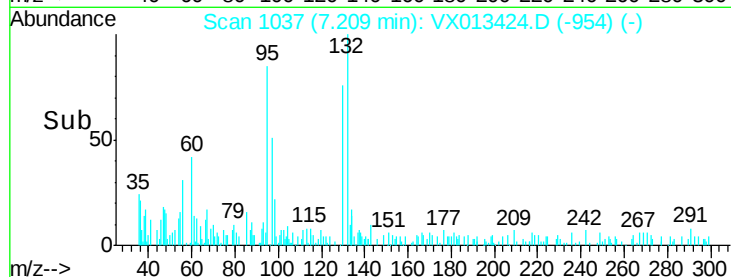
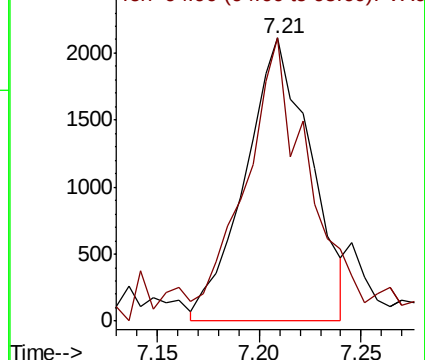
130 100

95 96.4 71.3 106.9



Abundance Ion 129.90 (129.60 to 130.60): V

Ion 94.90 (94.60 to 95.60): VX0



#44

Isopropyl Acetate

Concen: 3.734 ug/l

RT: 6.44 min Scan# 911

Delta R.T. 0.01 min

Lab File: VX013424.D

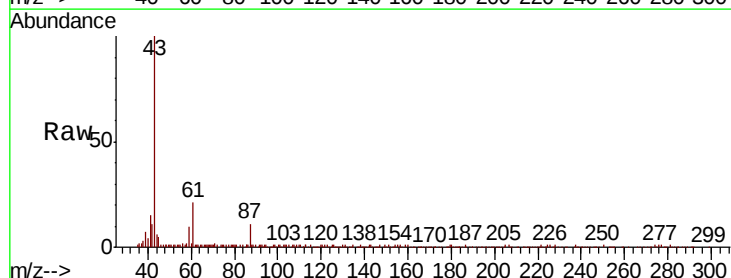
Acq: 14 Nov 2019 15:59

Tgt Ion: 43 Resp: 69590

Ion Ratio Lower Upper

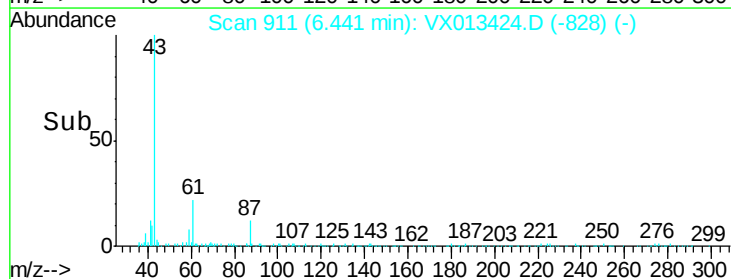
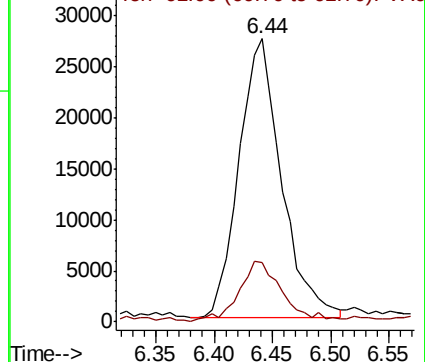
43 100

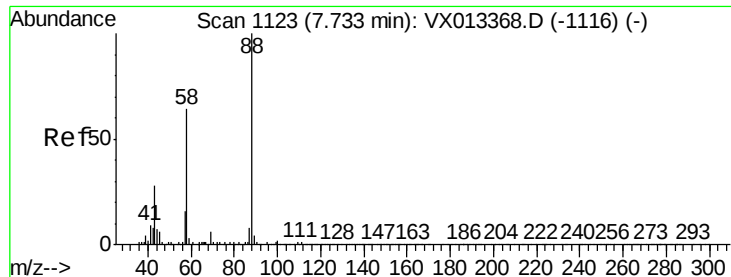
61 18.1 15.8 23.8



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 61.00 (60.70 to 61.70): VX0

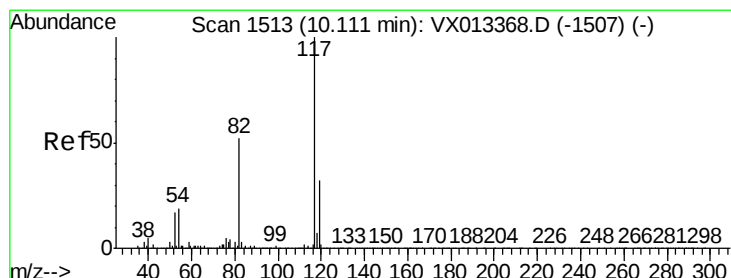
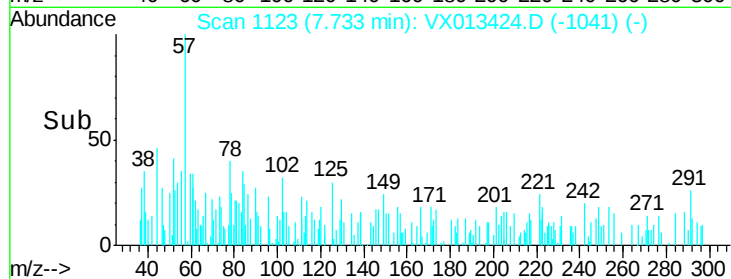
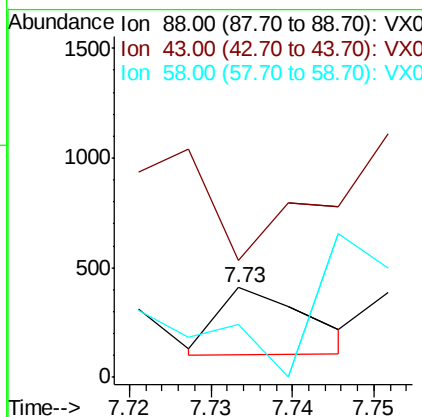
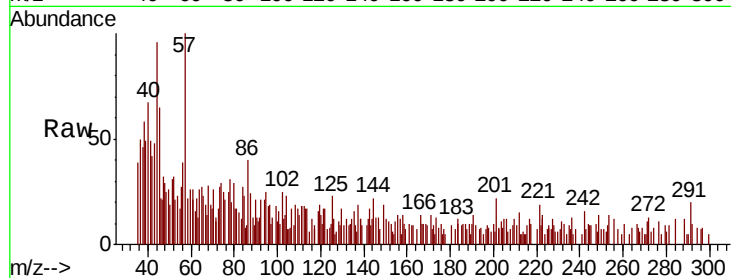




#45  
1,4-Dioxane  
Concen: 1.132 ug/l  
RT: 7.73 min Scan# 1123  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

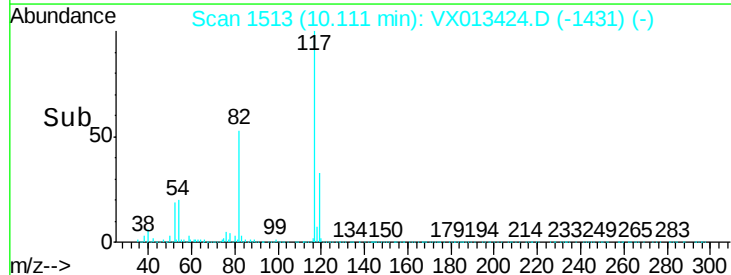
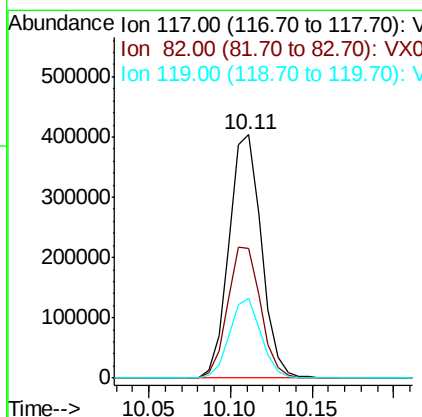
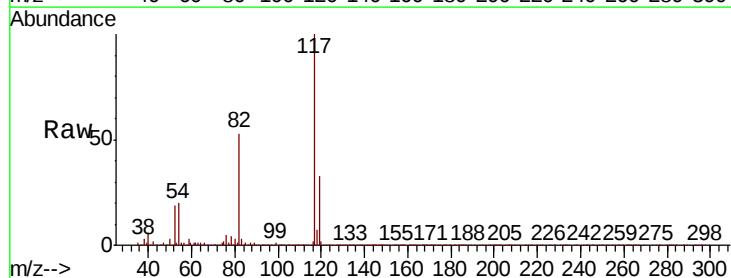
Instrument :  
MSVOA\_X  
ClientSampled :

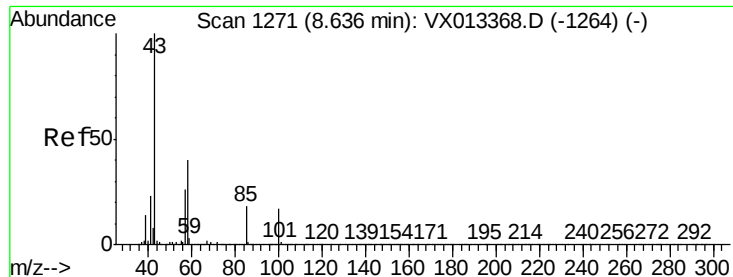
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 88      | 100   |       |       |
| 43      | 209.0 | 26.1  | 39.1# |
| 58      | 0.0   | 55.8  | 83.8# |



#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 10.11 min Scan# 1513  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 55.1  | 43.7  | 65.5  |
| 119     | 31.8  | 25.5  | 38.3  |

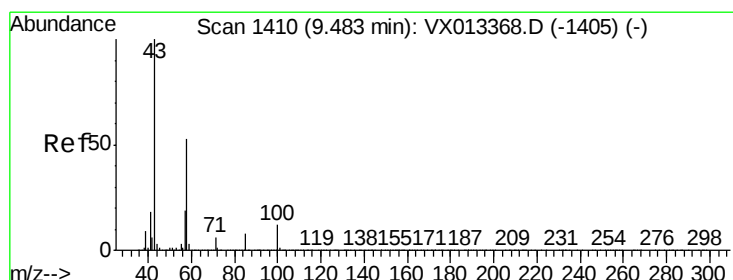
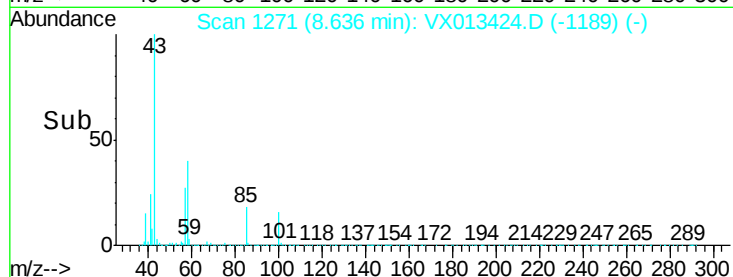
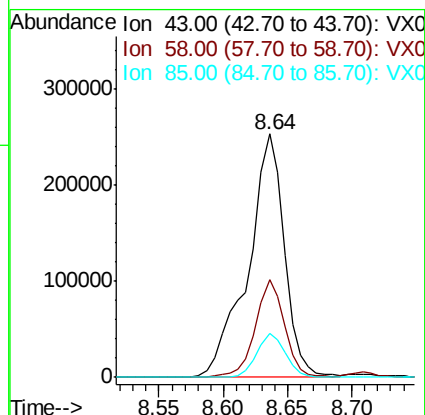
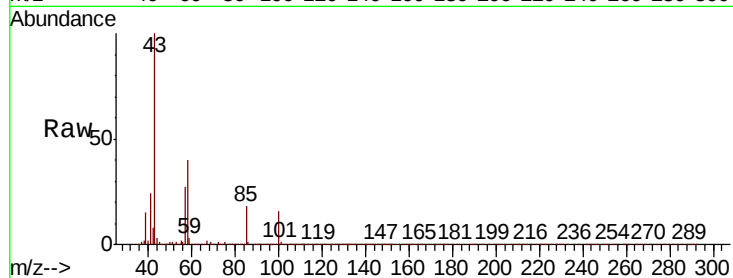




#58  
4-Methyl-2-Pentanone  
Concen: 42.030 ug/l  
RT: 8.64 min Scan# 1271  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

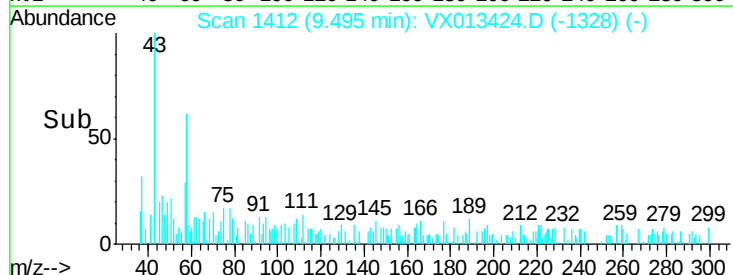
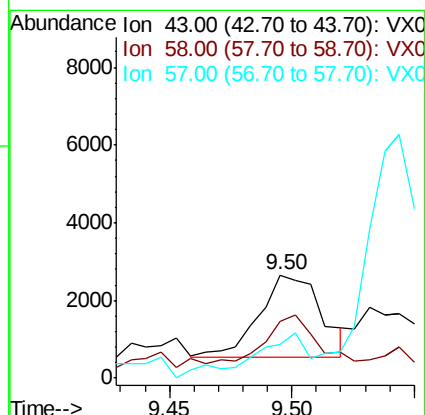
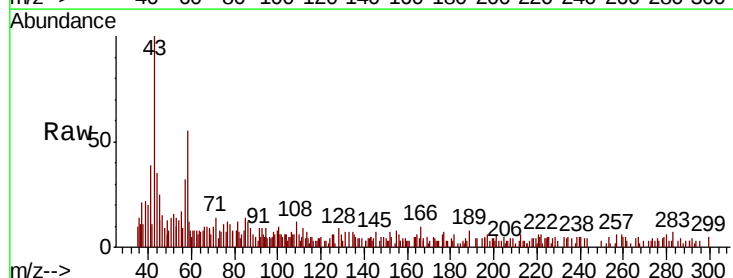
Instrument :  
MSVOA\_X  
ClientSampleId :

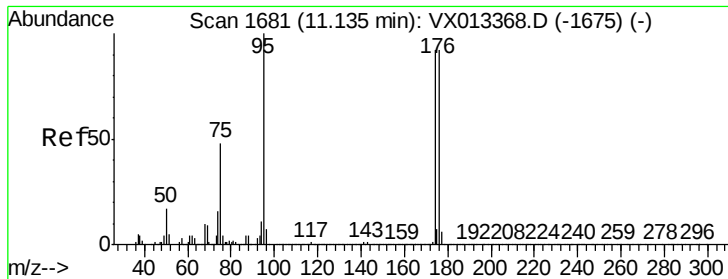
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 32.5  | 31.6  | 47.4  |
| 85      | 14.2  | 14.2  | 21.2  |



#59  
2-Hexanone  
Concen: 0.409 ug/l  
RT: 9.50 min Scan# 1412  
Delta R.T. 0.01 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 54.0  | 43.8  | 65.6  |
| 57      | 26.1  | 15.1  | 22.7  |

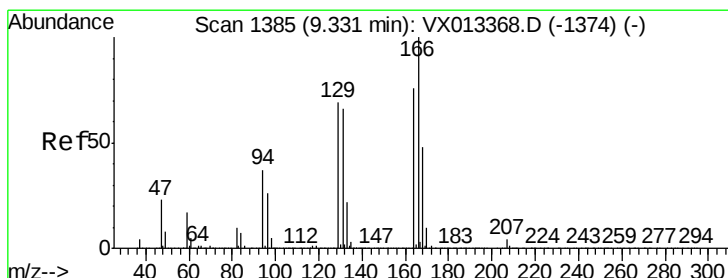
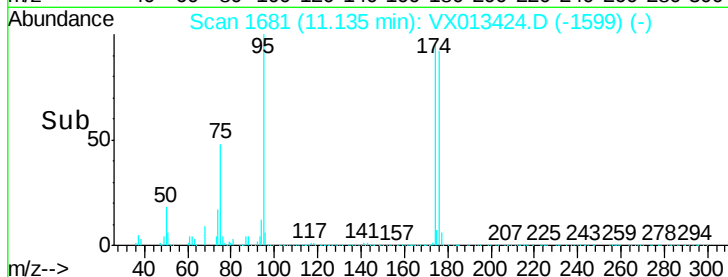
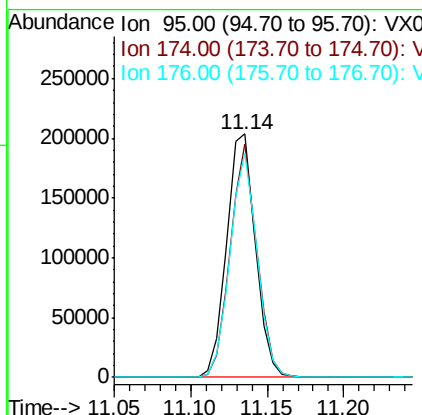
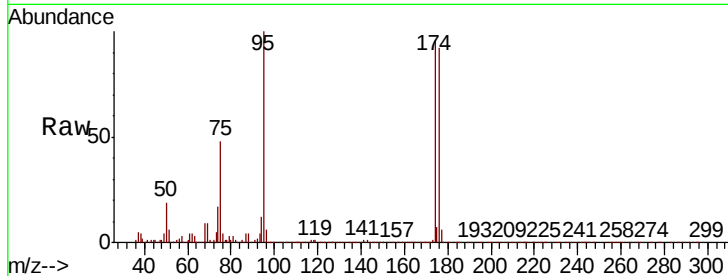




#60  
4-Bromofluorobenzene  
Concen: 29.756 ug/l  
RT: 11.14 min Scan# 1681  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

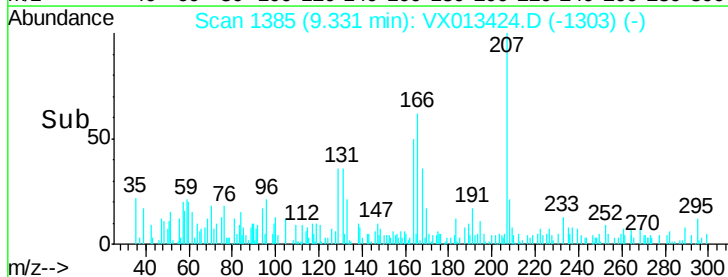
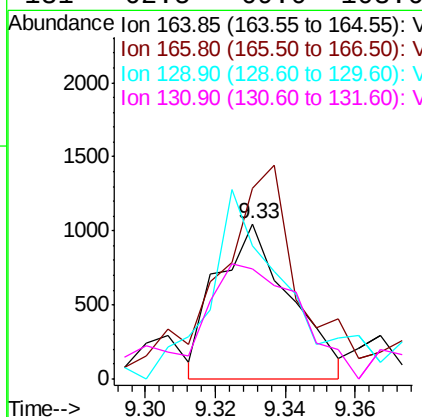
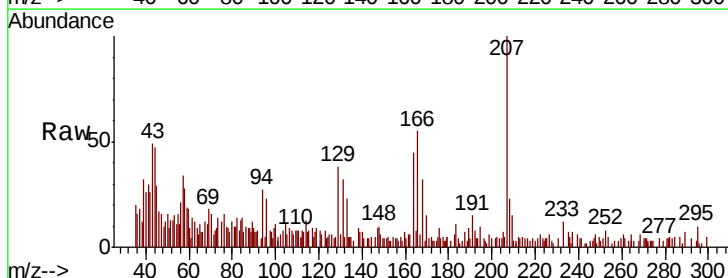
Instrument :  
MSVOA\_X  
ClientSampleId :

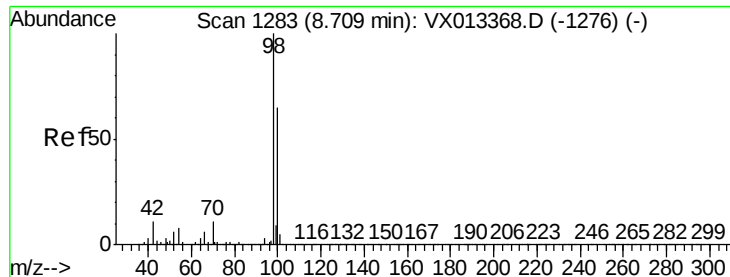
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 87.8  | 70.2  | 105.2 |
| 176     | 86.9  | 68.3  | 102.5 |



#61  
Tetrachloroethene  
Concen: 0.222 ug/l  
RT: 9.33 min Scan# 1385  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 164     | 100   |       |        |
| 166     | 112.4 | 104.9 | 157.3  |
| 129     | 66.0  | 72.3  | 108.5# |
| 131     | 62.5  | 69.0  | 103.6# |





#63

Toluene-d8

Concen: 30.583 ug/l

RT: 8.71 min Scan# 1283

Delta R.T. 0.00 min

Lab File: VX013424.D

Acq: 14 Nov 2019 15:59

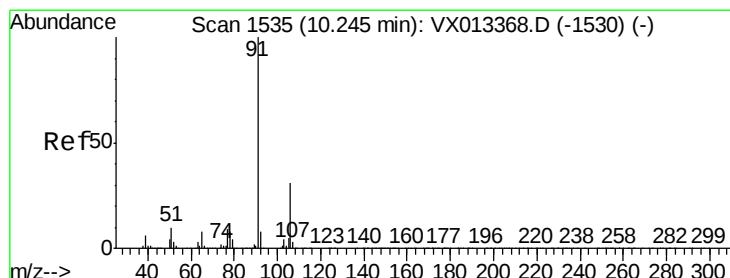
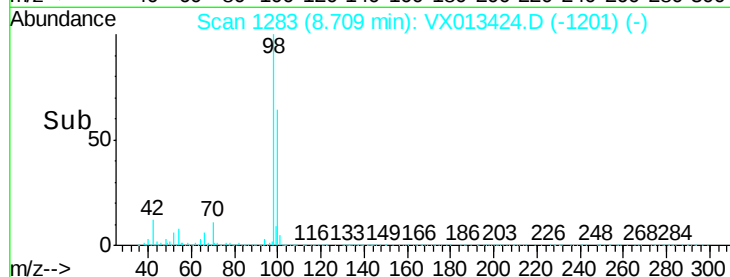
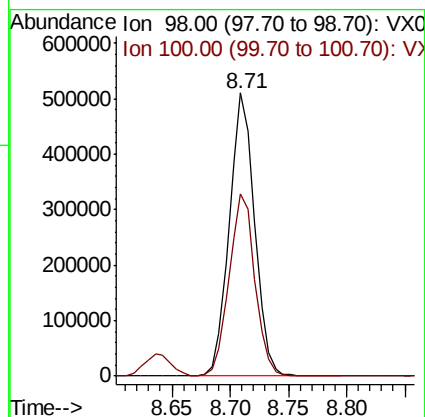
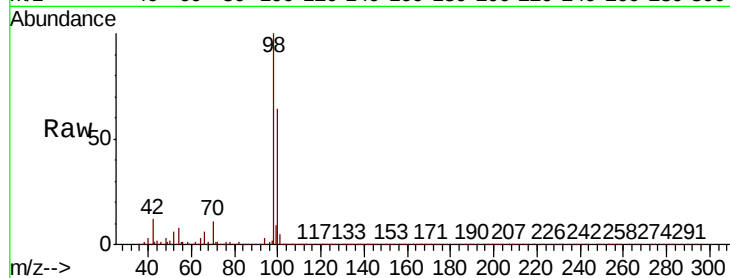
Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion: 98 Resp: 770096

Ion Ratio Lower Upper

98 100

100 64.9 52.5 78.7



#66

Ethyl Benzene

Concen: 0.494 ug/l

RT: 10.25 min Scan# 1536

Delta R.T. 0.01 min

Lab File: VX013424.D

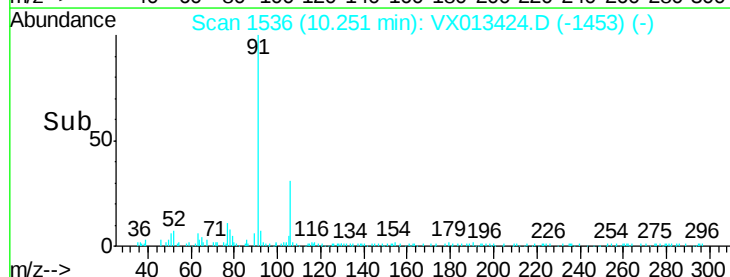
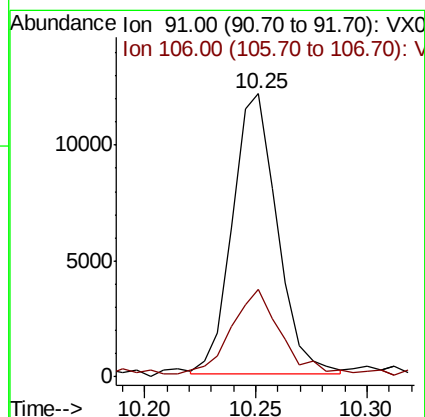
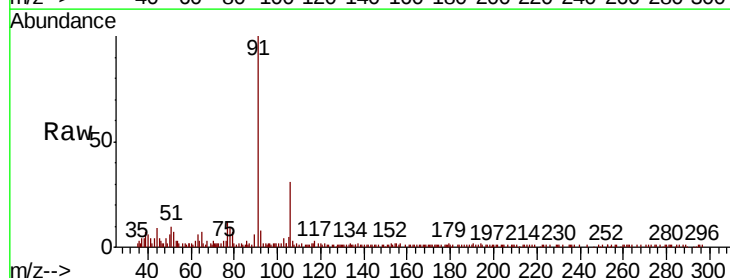
Acq: 14 Nov 2019 15:59

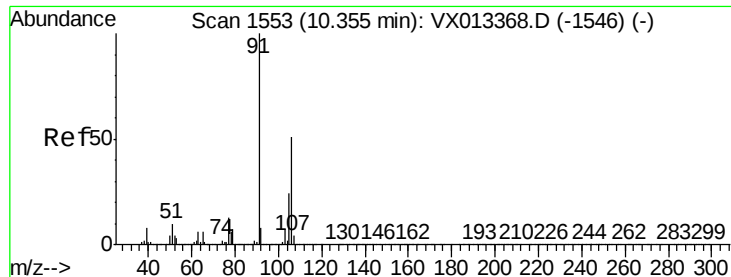
Tgt Ion: 91 Resp: 16845

Ion Ratio Lower Upper

91 100

106 29.0 25.0 37.4





#67

m/p-Xvlenes

Concen: 0.542 ug/l

RT: 10.35 min Scan# 1553

Delta R.T. 0.00 min

Lab File: VX013424.D

Acq: 14 Nov 2019 15:59

Instrument :

MSVOA\_X

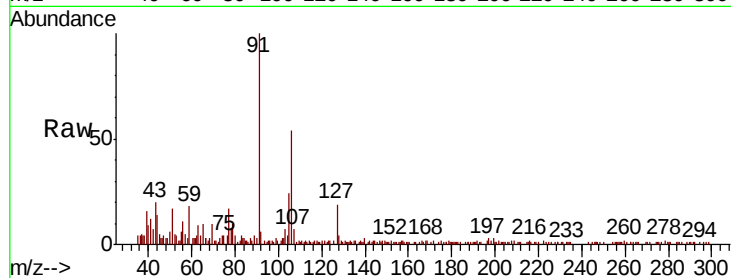
ClientSampleId :

Tot Ion:106 Resp: 7121

Ion Ratio Lower Upper

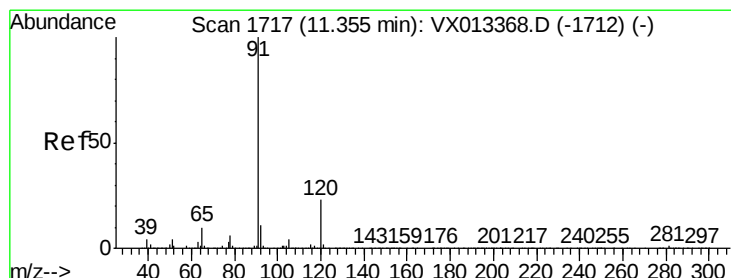
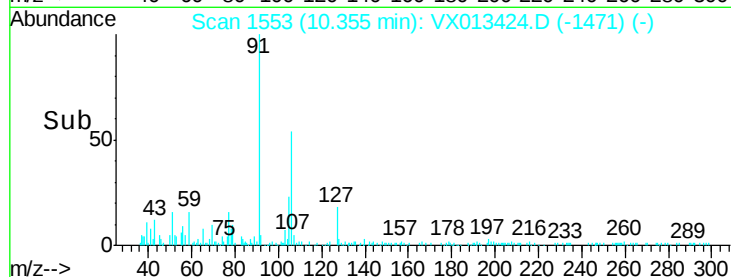
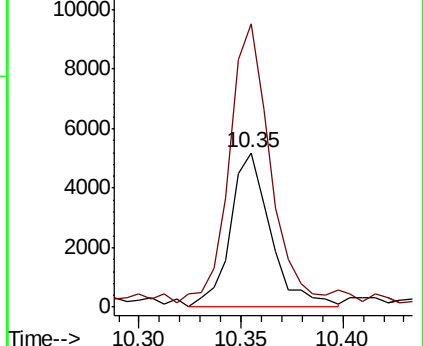
106 100

91 181.2 158.4 237.6



Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VX0



#74

n-propylbenzene

Concen: 0.299 ug/l

RT: 11.35 min Scan# 1717

Delta R.T. 0.00 min

Lab File: VX013424.D

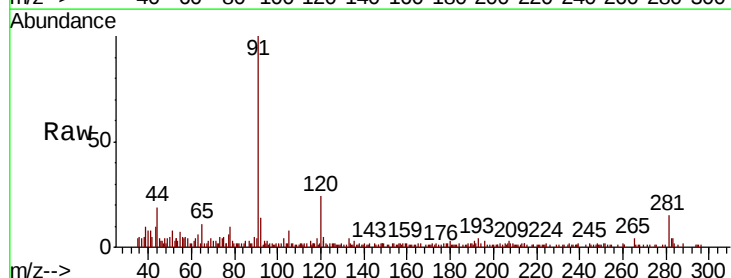
Acq: 14 Nov 2019 15:59

Tgt Ion: 91 Resp: 11358

Ion Ratio Lower Upper

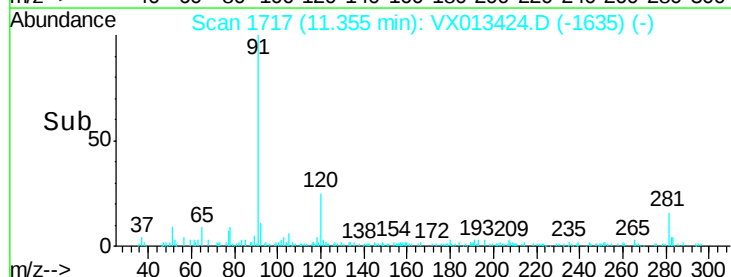
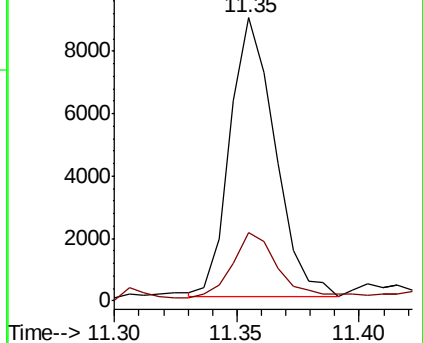
91 100

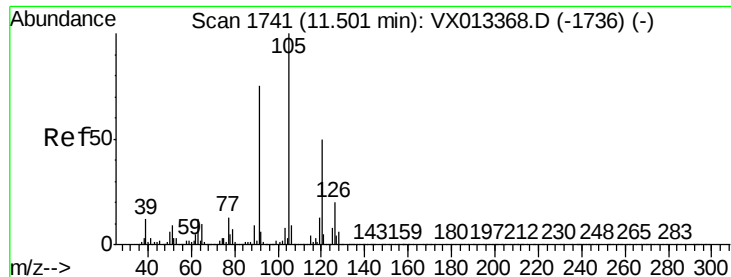
120 23.1 0.0 46.2



Abundance Ion 91.00 (90.70 to 91.70): VX0

Ion 120.00 (119.70 to 120.70): V





#76

1,3,5-Trimethylbenzene

Concen: 0.311 ug/l

RT: 11.50 min Scan# 1741

Delta R.T. 0.00 min

Lab File: VX013424.D

Acq: 14 Nov 2019 15:59

Instrument :

MSVOA\_X

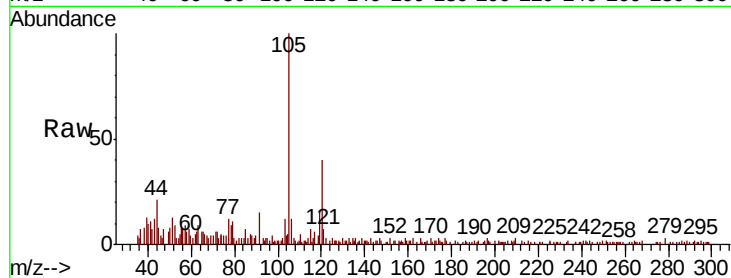
ClientSampleId :

Tot Ion:105 Resp: 8727

Ion Ratio Lower Upper

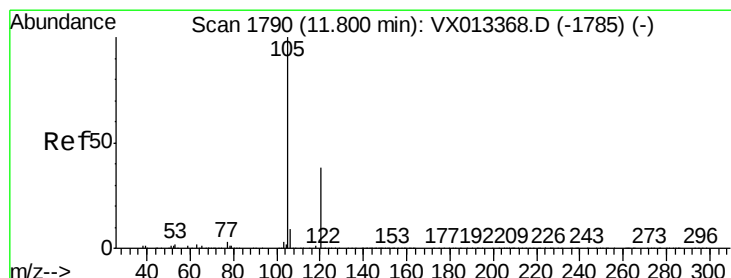
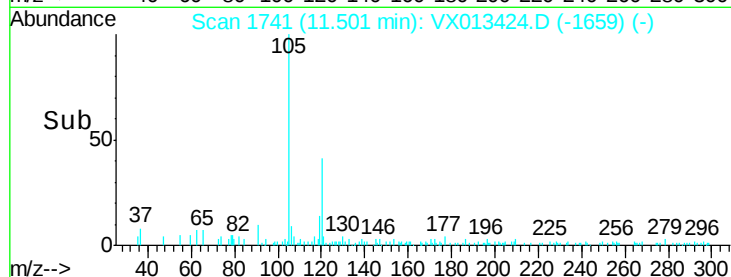
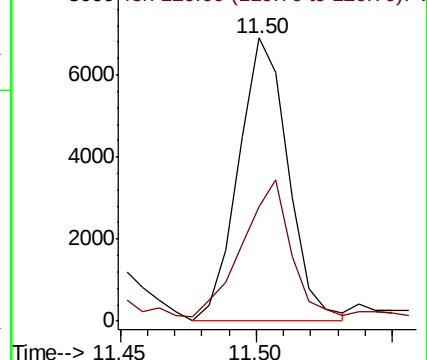
105 100

120 46.9 0.0 100.0



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V



#80

1,2,4-Trimethylbenzene

Concen: 0.355 ug/l

RT: 11.80 min Scan# 1790

Delta R.T. 0.00 min

Lab File: VX013424.D

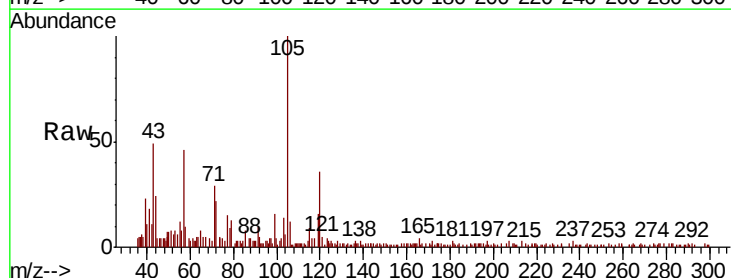
Acq: 14 Nov 2019 15:59

Tgt Ion:105 Resp: 9945

Ion Ratio Lower Upper

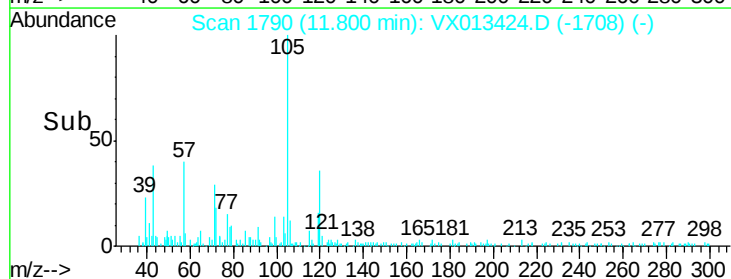
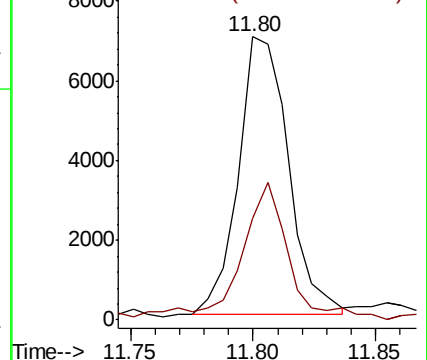
105 100

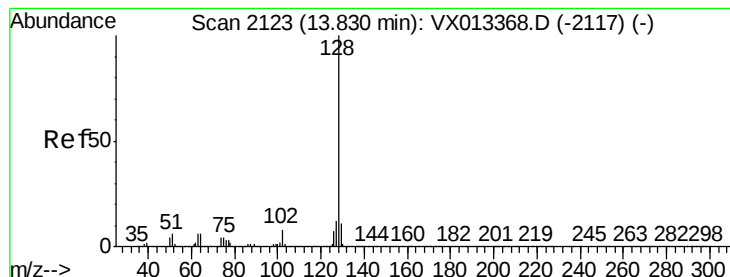
120 38.5 0.0 94.0



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

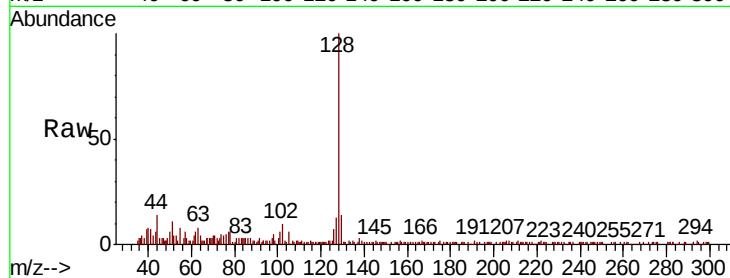




#91  
Naphthalene  
Concen: 0.457 ug/l  
RT: 13.83 min Scan# 2123  
Delta R.T. 0.00 min  
Lab File: VX013424.D  
Acq: 14 Nov 2019 15:59

Instrument :  
MSVOA\_X  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 17.4  | 10.2  | 15.2  |
| 129     | 14.0  | 8.8   | 13.2  |



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

