

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX062520\  
 Data File : VX016957.D  
 Acq On : 25 Jun 2020 16:36  
 Operator : JC/SP  
 Sample : L3076-01 5X  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 11 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 EFF-WW

Manual Integrations  
 APPROVED

MMDadoda  
 6/26/2020 3:34:22 PM

Quant Time: Jun 26 09:24:39 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X062520W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jun 26 09:03:25 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 4.98  | 128  | 40341    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.84  | 114  | 222387   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.10 | 117  | 201512   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.03   | 65    | 93214    | 29.69    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 98.97% |
| 60) 4-Bromofluorobenzene  | 11.12  | 95    | 92529    | 27.53    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 91.77% |
| 63) Toluene-d8            | 8.70   | 98    | 261308   | 29.42    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.07% |

## Target Compounds

|                            |       |     |         |          | Ovalue    |
|----------------------------|-------|-----|---------|----------|-----------|
| 15) Acetone                | 2.42  | 58  | 2084861 | 5839.022 | ug/l 98   |
| 16) Carbon Disulfide       | 2.55  | 76  | 4012    | 0.553    | ug/l 99   |
| 18) Methylene Chloride     | 2.84  | 84  | 2082    | 0.748    | ug/l # 71 |
| 20) Diisopropyl ether      | 3.82  | 45  | 404762  | 46.848   | ug/l # 78 |
| 23) tert-Butyl Alcohol     | 3.01  | 59  | 1874m   | 3.066    | ug/l      |
| 25) Chloroform             | 5.17  | 83  | 4708m   | 0.975    | ug/l      |
| 30) 2-Butanone             | 4.64  | 43  | 111441  | 59.015   | ug/l 98   |
| 58) 4-Methyl-2-Pentanone   | 8.62  | 43  | 6428m   | 1.732    | ug/l      |
| 59) 2-Hexanone             | 9.48  | 43  | 4576    | 1.652    | ug/l # 92 |
| 85) n-Butylbenzene         | 12.37 | 91  | 4892    | 0.501    | ug/l 93   |
| 89) 1,2,4-Trichlorobenzene | 13.63 | 180 | 2090    | 0.609    | ug/l 95   |
| 90) Hexachlorobutadiene    | 13.76 | 225 | 1400    | 1.073    | ug/l 91   |
| 91) Naphthalene            | 13.82 | 128 | 4272    | 0.380    | ug/l 98   |
| 92) 1,2,3-Trichlorobenzene | 14.00 | 180 | 1769    | 0.528    | ug/l 92   |

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

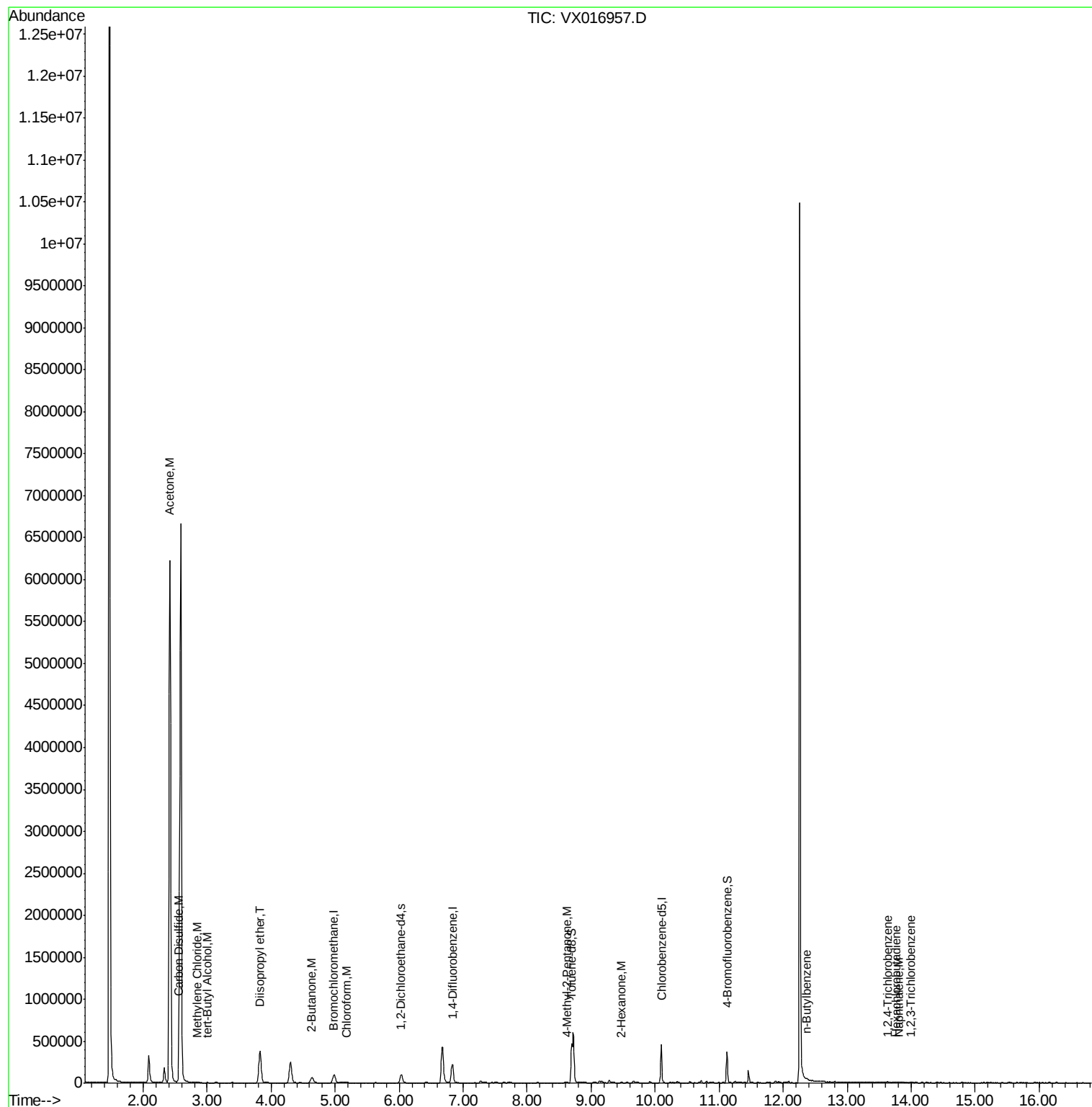
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA X\DATA\VX062520\  
Data File : VX016957.D  
Acq On : 25 Jun 2020 16:36  
Operator : JC/SP  
Sample : L3076-01 5X  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 11 Sample Multiplier: 1

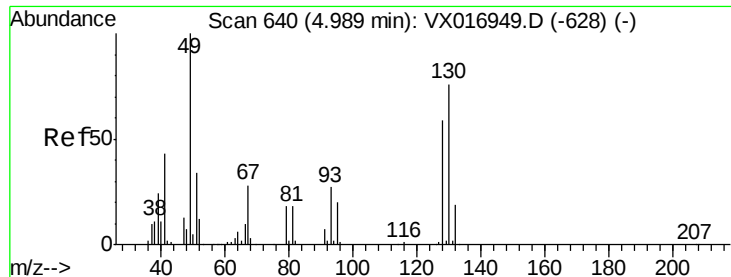
Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

Manual Integrations  
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6/26/2020 3:34:22 PM

Quant Time: Jun 26 09:24:39 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA X\METHOD\624X062520W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Fri Jun 26 09:03:25 2020  
Response via : Initial Calibration





#1

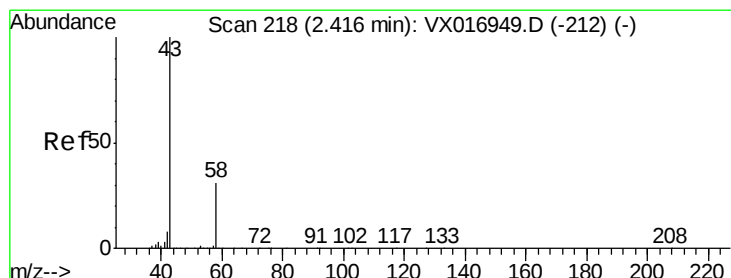
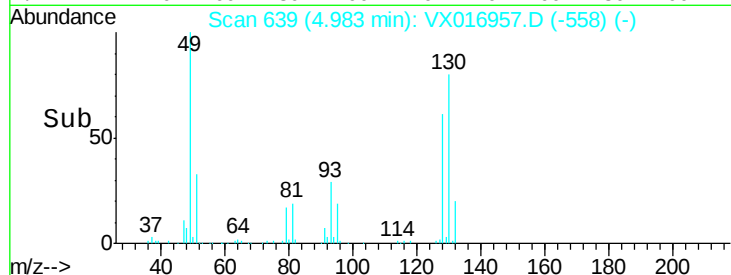
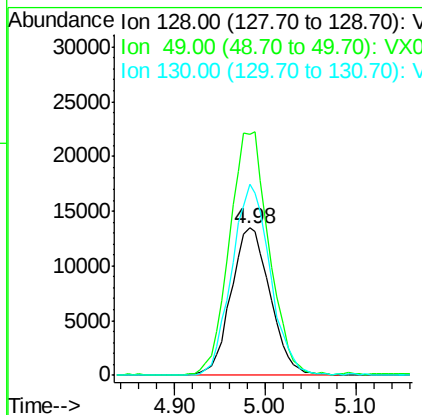
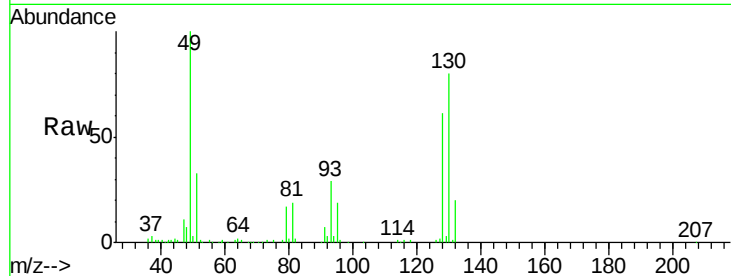
Bromochloromethane  
Concen: 30.000 ug/l  
RT: 4.98 min Scan# 639  
Delta R.T. -0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 49      | 167.1 | 0.0   | 428.0 |
| 130     | 127.3 | 0.0   | 318.0 |

Manual Integrations  
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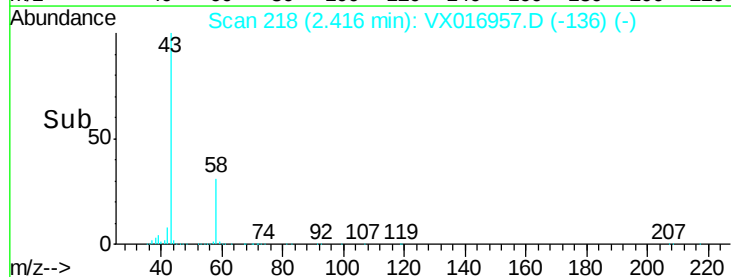
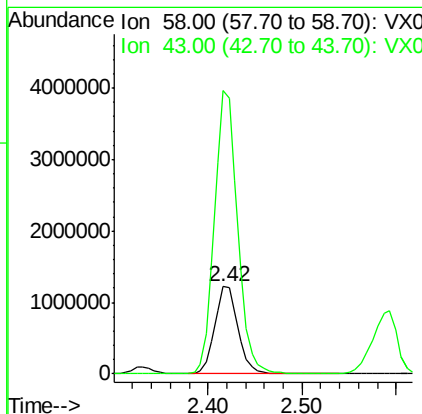
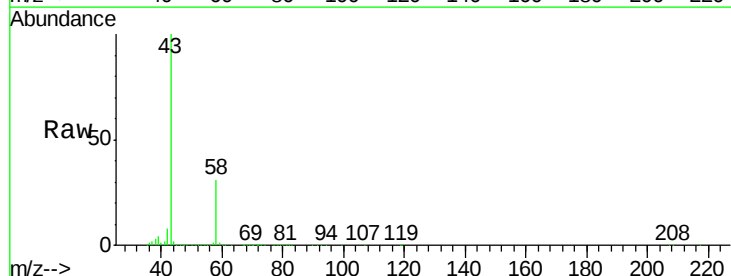
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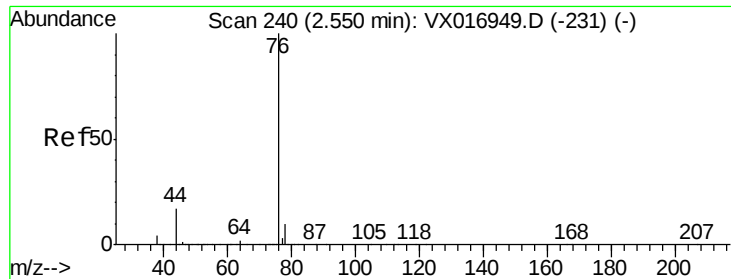


#15

Acetone  
Concen: 5839.022 ug/l  
RT: 2.42 min Scan# 218  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 58      | 100   |       |       |
| 43      | 325.2 | 257.6 | 386.4 |





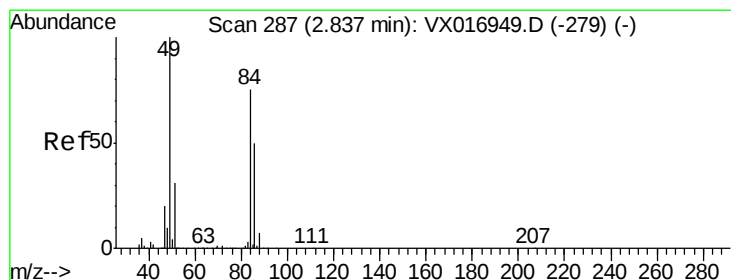
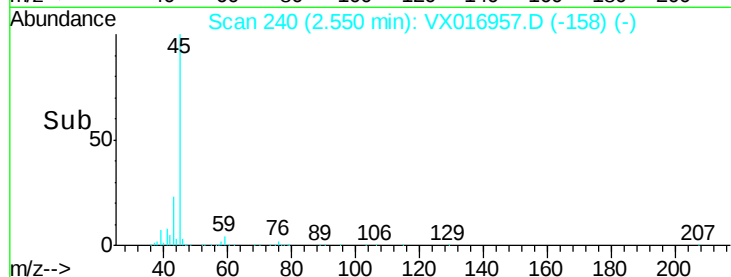
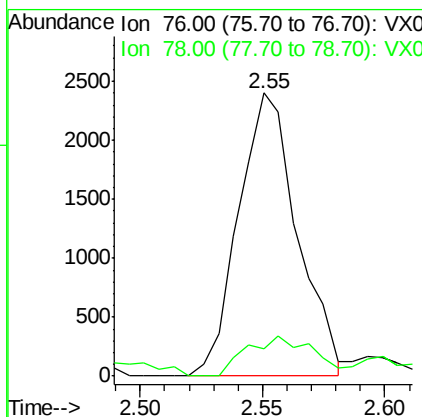
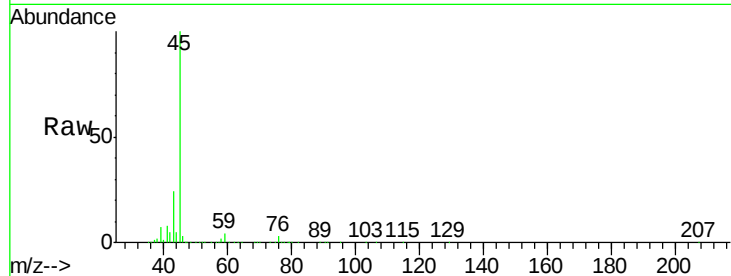
#16  
Carbon Disulfide  
Concen: 0.553 ug/l  
RT: 2.55 min Scan# 240  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 76      | 100   |       |       |
| 78      | 9.8   | 7.6   | 11.4  |

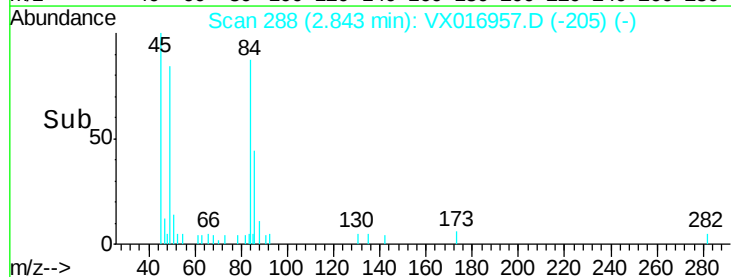
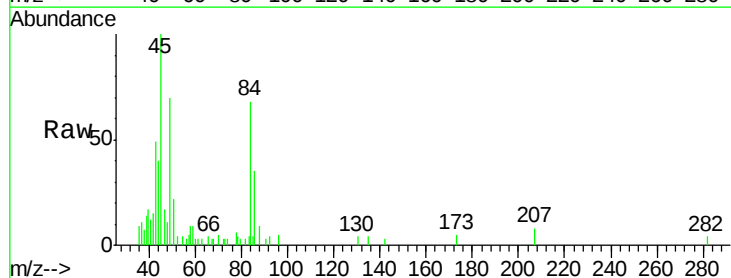
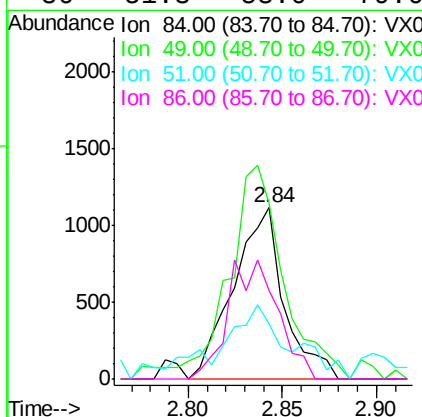
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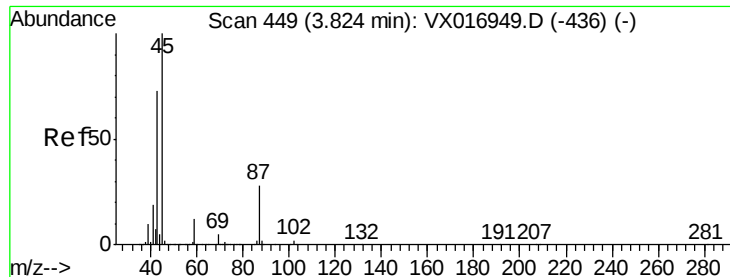
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#18  
Methylene Chloride  
Concen: 0.748 ug/l  
RT: 2.84 min Scan# 288  
Delta R.T. 0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 84      | 100   |       |        |
| 49      | 93.6  | 106.6 | 159.8# |
| 51      | 21.2  | 32.7  | 49.1#  |
| 86      | 51.3  | 53.0  | 79.6#  |





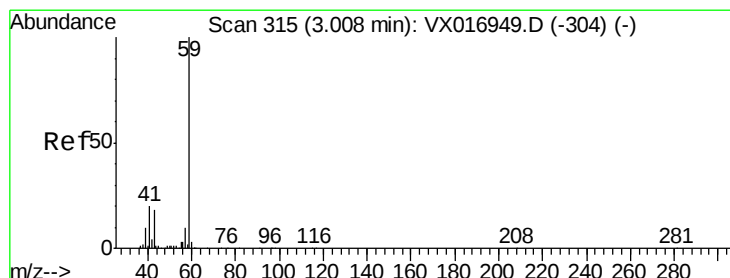
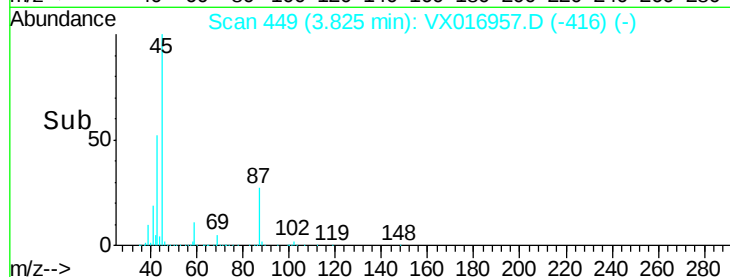
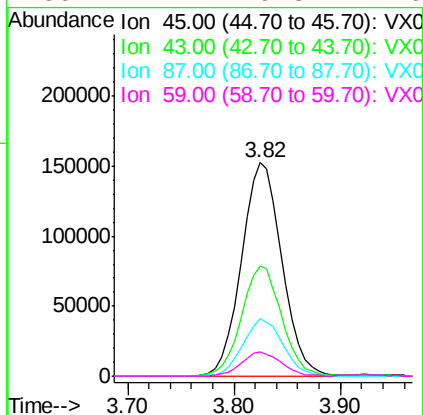
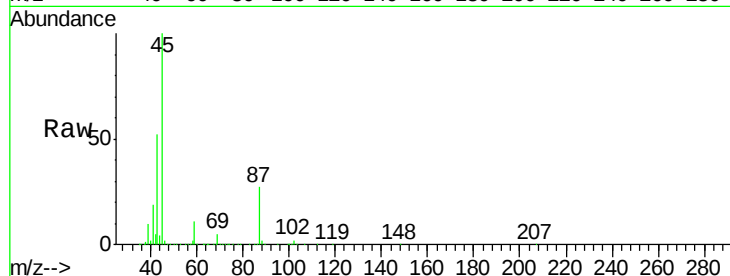
#20  
Diisopropyl ether  
Concen: 46.848 ug/l  
RT: 3.82 min Scan# 449  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 45      | 100  |       |       |       |
| 43      | 51.7 | 63.9  | 95.9# |       |
| 87      | 27.2 | 22.2  | 33.4  |       |
| 59      | 11.4 | 9.8   | 14.6  |       |

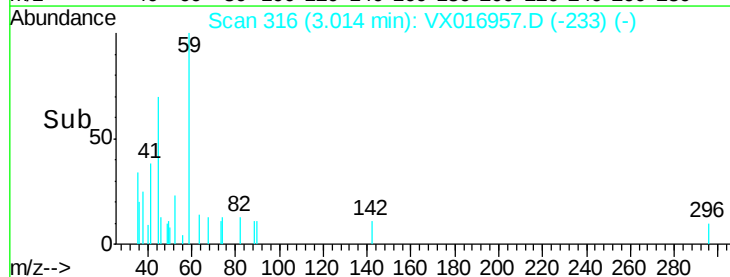
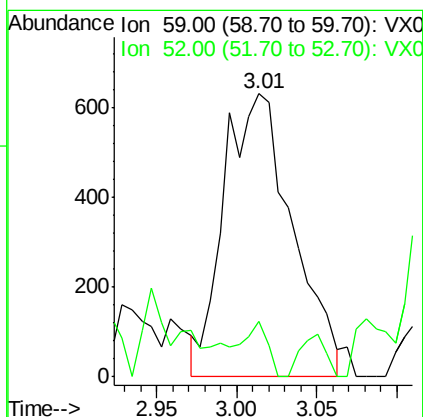
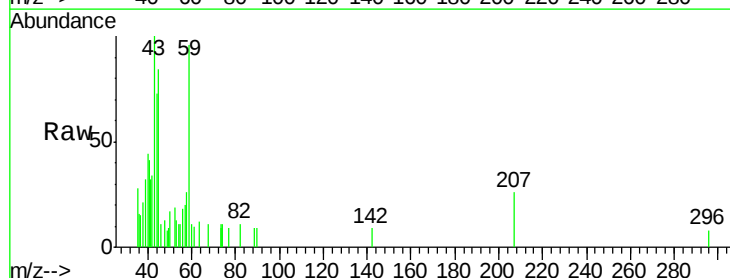
Manual Integrations  
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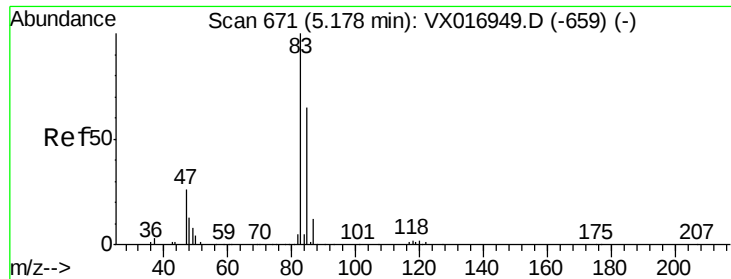
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#23  
tert-Butyl Alcohol  
Concen: 3.066 ug/l m  
RT: 3.01 min Scan# 316  
Delta R.T. 0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 59      | 100 |       |       |       |
| 52      | 6.9 | 0.1   | 0.1#  |       |





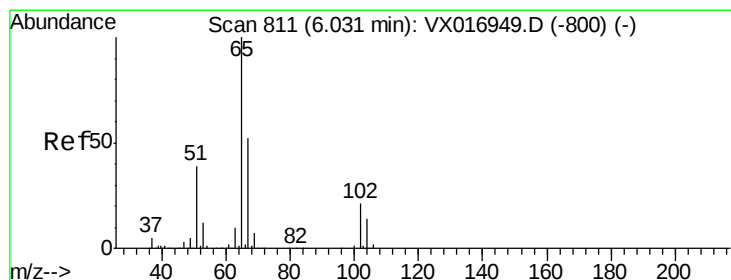
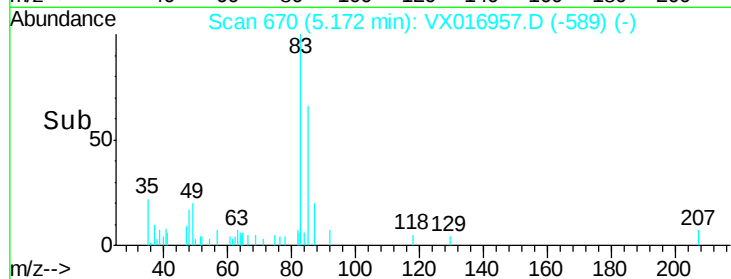
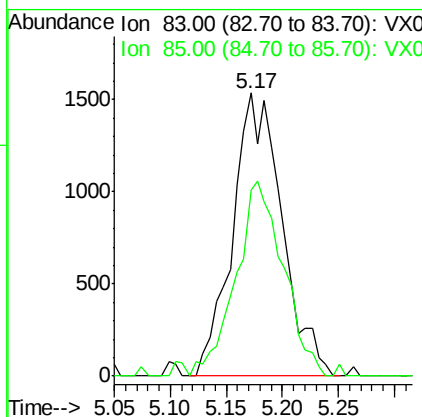
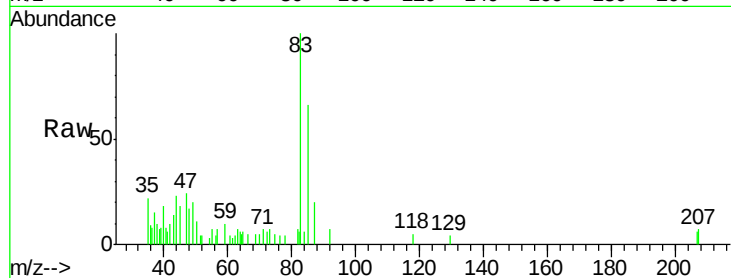
#25  
Chloroform  
Concen: 0.975 ug/l m  
RT: 5.17 min Scan# 670  
Delta R.T. -0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion   | 83   | Resp  | 4708  |
|-----------|------|-------|-------|
| Ion Ratio | 100  | Lower | Upper |
| 85        | 65.8 | 52.1  | 78.1  |

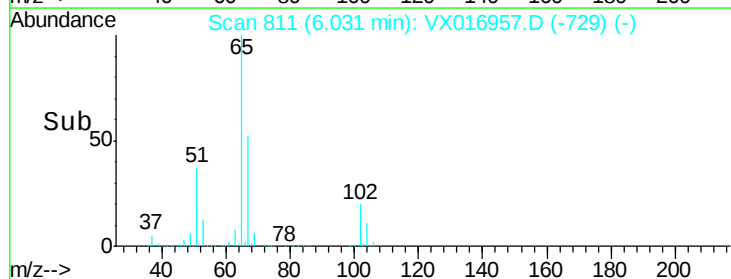
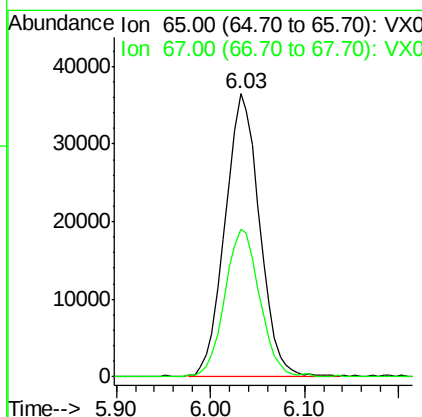
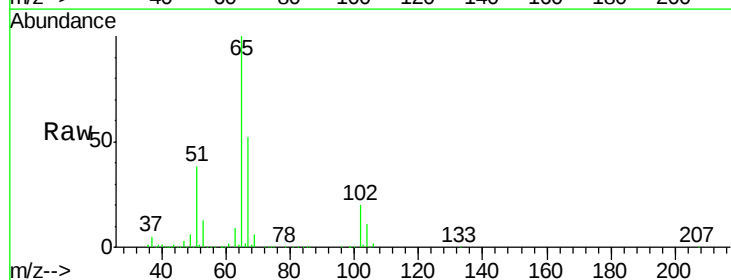
Manual Integrations  
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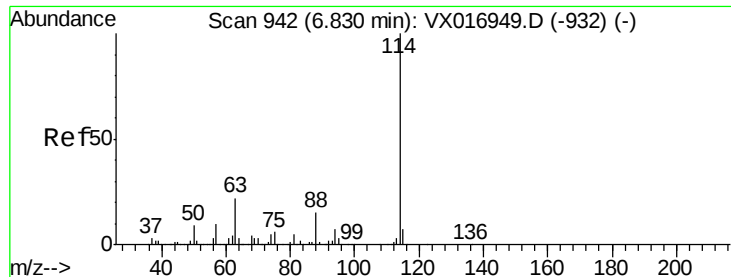
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#27  
1,2-Dichloroethane-d4  
Concen: 29.687 ug/l  
RT: 6.03 min Scan# 811  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion   | 65   | Resp  | 93214 |
|-----------|------|-------|-------|
| Ion Ratio | 100  | Lower | Upper |
| 67        | 52.4 | 41.5  | 62.3  |





#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 6.84 min Scan# 943

Delta R.T. 0.01 min

Lab File: VX016957.D

Acq: 25 Jun 2020 16:36

Instrument :

MSVOA\_X

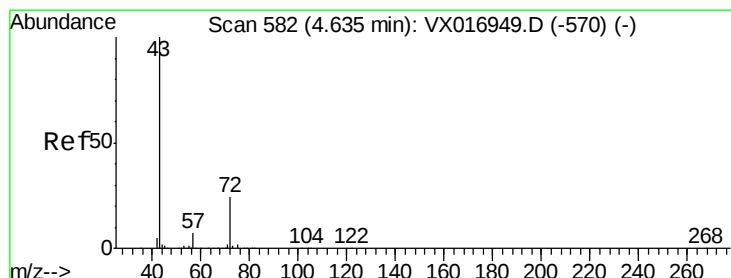
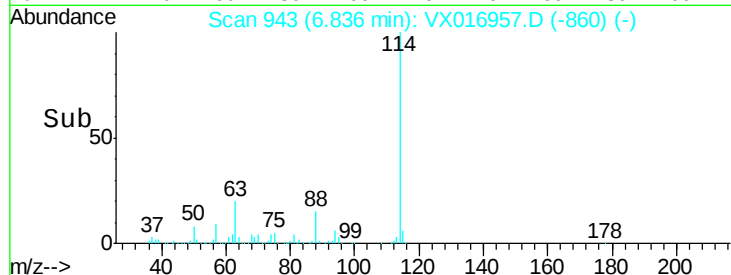
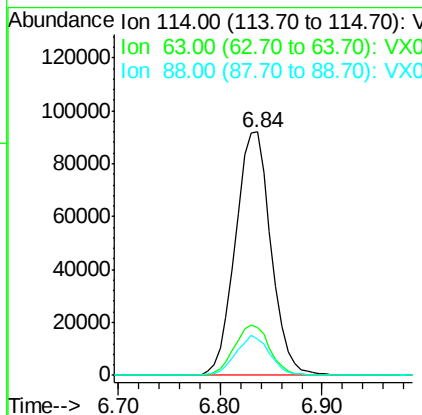
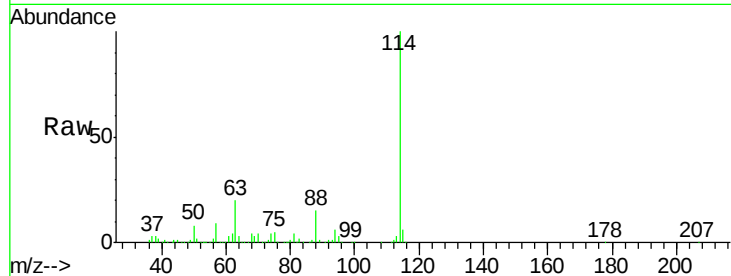
ClientSampleId :

EFF-WW

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 114   | Resp: | 222387 |
| Ion Ratio | Lower | Upper |        |
| 114       | 100   |       |        |
| 63        | 20.8  | 17.4  | 26.2   |
| 88        | 15.6  | 13.0  | 19.6   |

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6/26/2020 3:34:22 PM



#30

2-Butanone

Concen: 59.015 ug/l

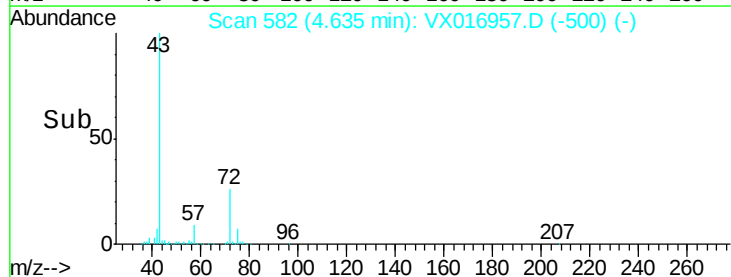
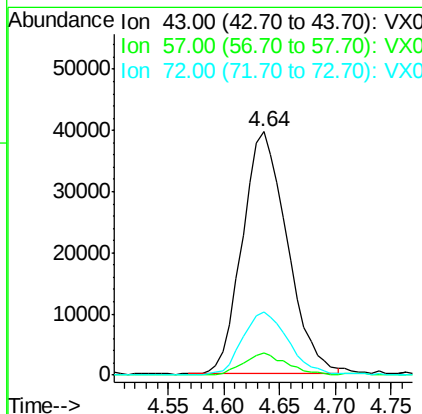
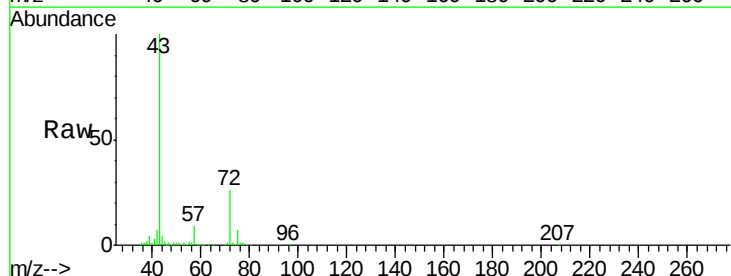
RT: 4.64 min Scan# 582

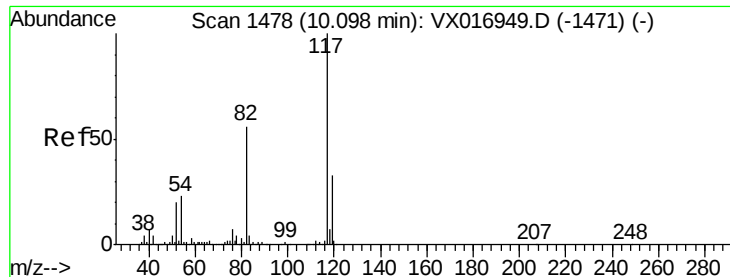
Delta R.T. 0.00 min

Lab File: VX016957.D

Acq: 25 Jun 2020 16:36

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 43    | Resp: | 111441 |
| Ion Ratio | Lower | Upper |        |
| 43        | 100   |       |        |
| 57        | 8.7   | 6.2   | 9.4    |
| 72        | 27.0  | 20.6  | 31.0   |





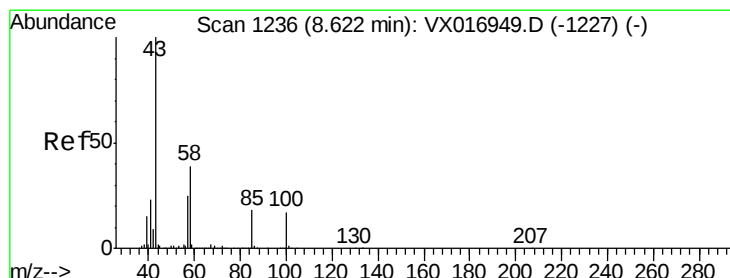
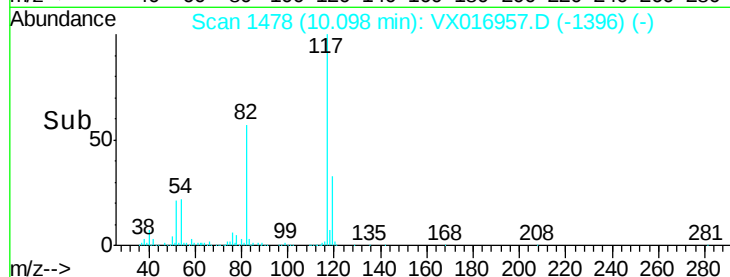
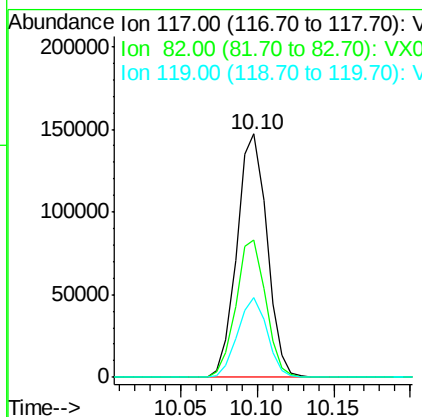
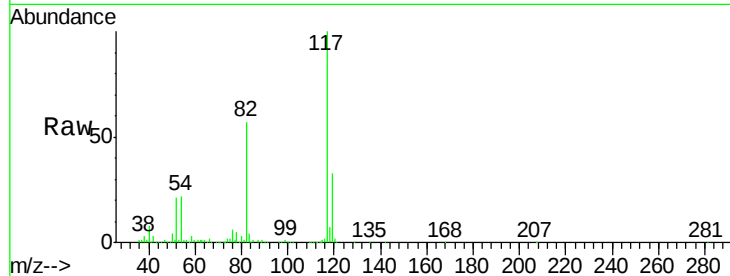
#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 10.10 min Scan# 1478  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 117     | 100   |            |       |
| 82      | 55.6  | 44.9       | 67.3  |
| 119     | 32.0  | 25.8       | 38.8  |

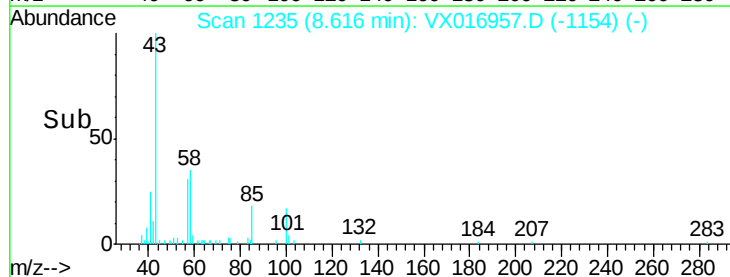
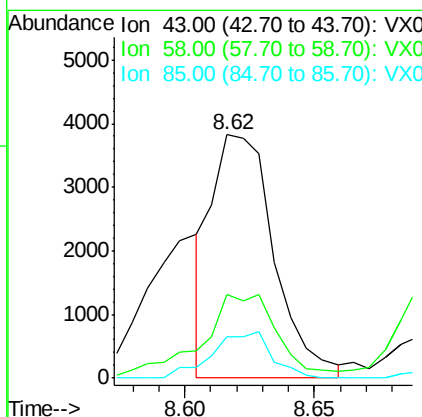
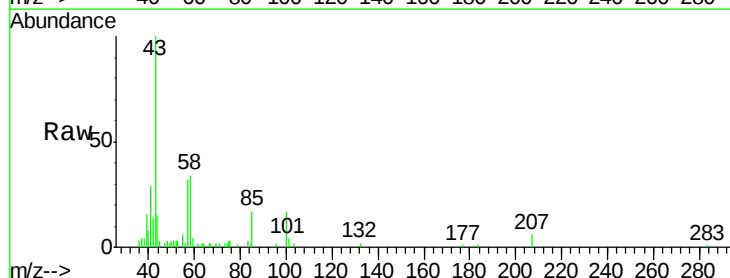
Manual Integrations  
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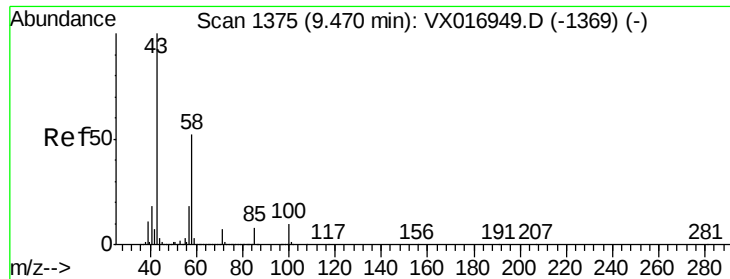
MMDadoda  
6/26/2020 3:34:22 PM



#58  
4-Methyl-2-Pentanone  
Concen: 1.732 ug/l m  
RT: 8.62 min Scan# 1235  
Delta R.T. -0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 43      | 100   |            |       |
| 58      | 39.4  | 30.4       | 45.6  |
| 85      | 18.0  | 13.5       | 20.3  |





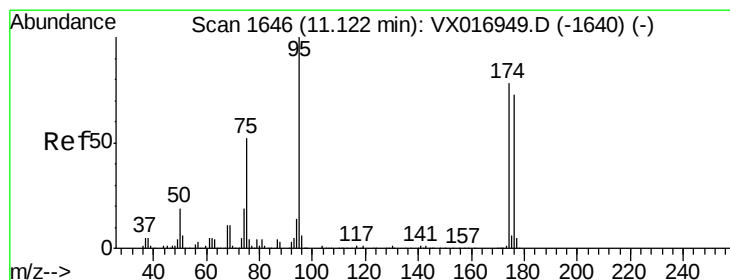
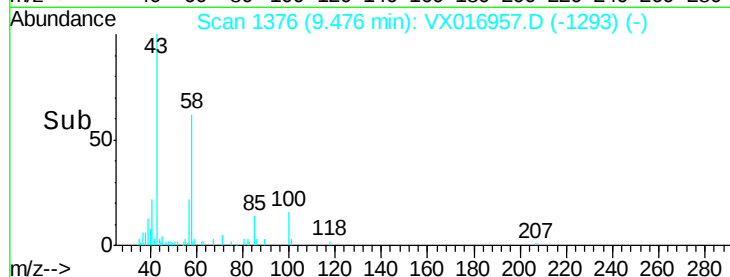
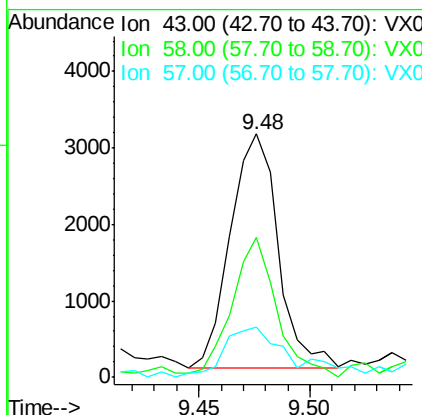
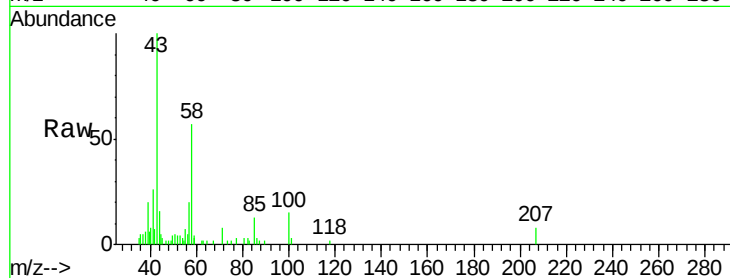
#59  
2-Hexanone  
Concen: 1.652 ug/l  
RT: 9.48 min Scan# 1376  
Delta R.T. 0.01 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 56.3  | 42.3  | 63.5  |
| 57      | 24.5  | 14.1  | 21.1  |

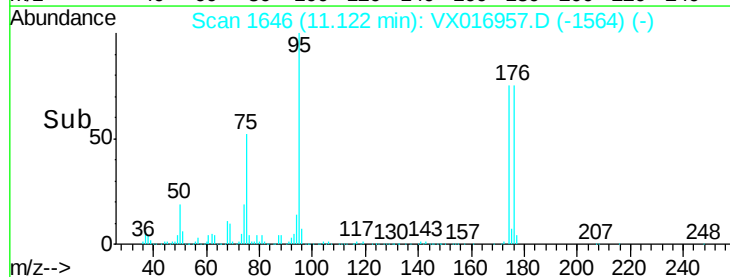
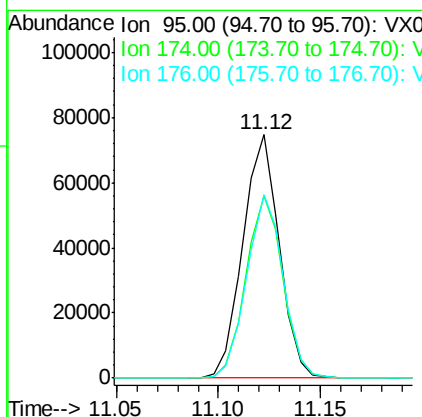
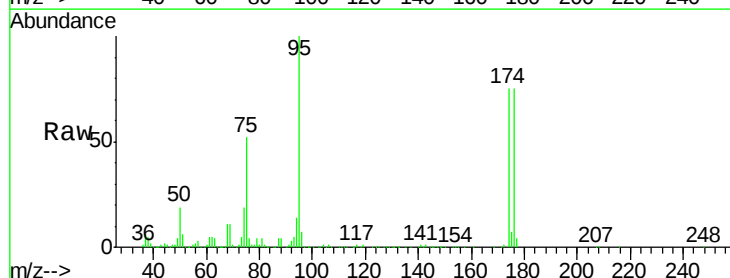
Manual Integrations  
APPROVED

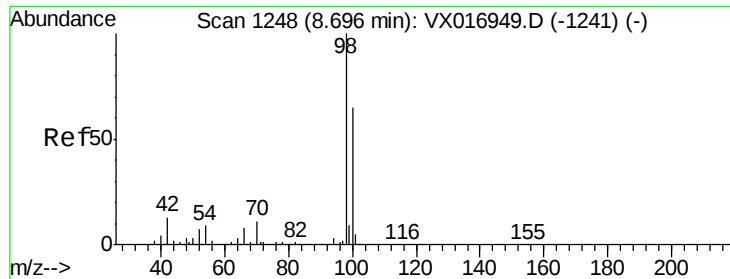
MMDadoda  
6/26/2020 3:34:22 PM



#60  
4-Bromofluorobenzene  
Concen: 27.533 ug/l  
RT: 11.12 min Scan# 1646  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 76.1  | 62.2  | 93.4  |
| 176     | 75.9  | 58.9  | 88.3  |





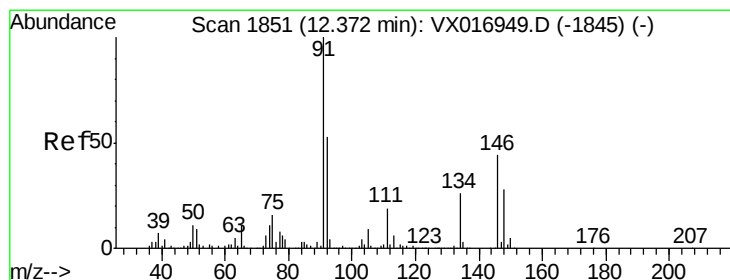
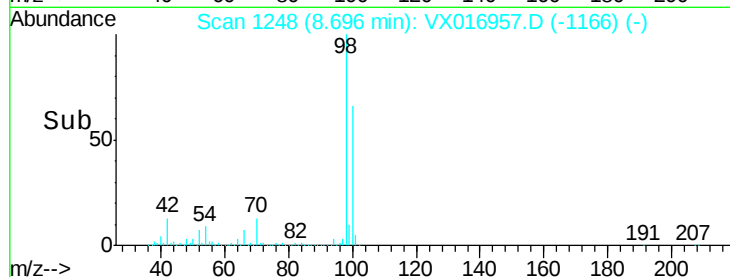
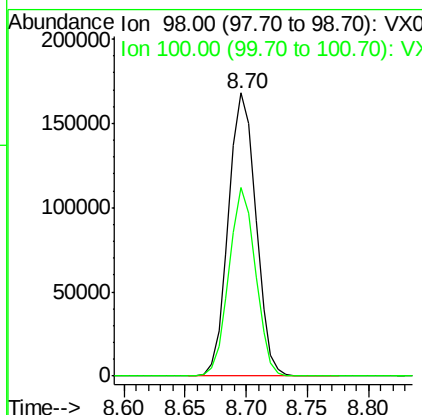
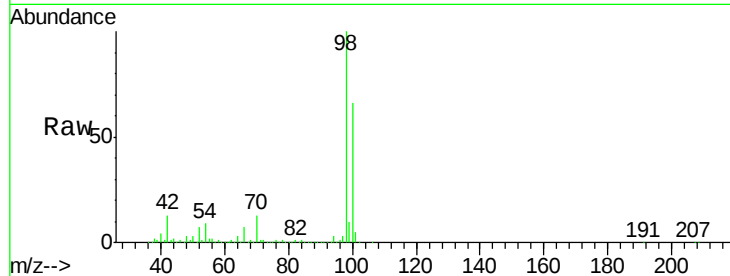
#63  
Toluene-d8  
Concen: 29.417 ug/l  
RT: 8.70 min Scan# 1248  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

Instrument :  
MSVOA\_X  
ClientSampleId :  
EFF-WW

| Tot Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 98      | 100  |       | 261308 |       |       |
| 100     | 64.5 | 52.3  |        |       | 78.5  |

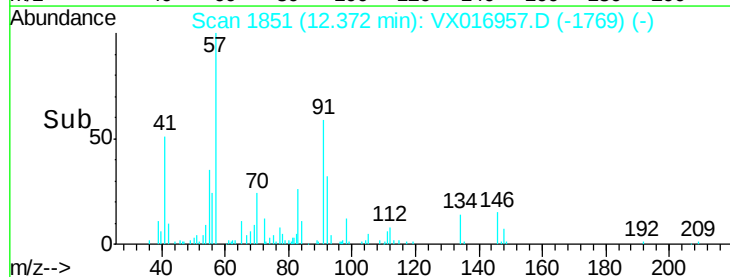
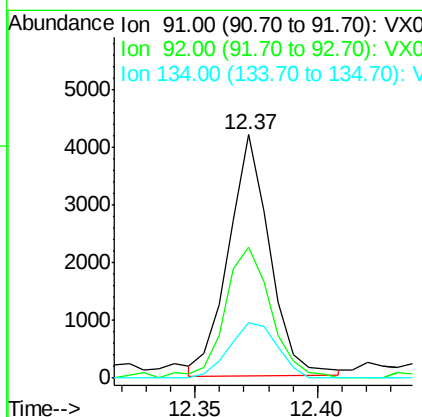
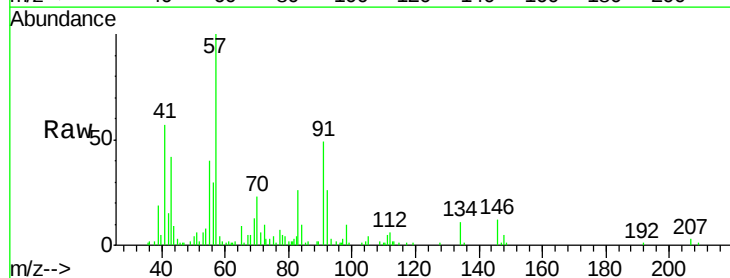
Manual Integrations  
APPROVED

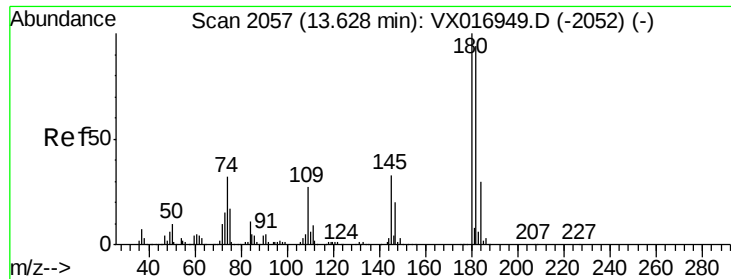
MMDadoda  
6/26/2020 3:34:22 PM



#85  
n-Butylbenzene  
Concen: 0.501 ug/l  
RT: 12.37 min Scan# 1851  
Delta R.T. 0.00 min  
Lab File: VX016957.D  
Acq: 25 Jun 2020 16:36

| Tgt Ion | Ion  | Ratio | Resp | Lower | Upper |
|---------|------|-------|------|-------|-------|
| 91      | 100  |       | 4892 |       |       |
| 92      | 59.5 | 0.0   |      |       | 105.8 |
| 134     | 26.8 | 0.0   |      |       | 52.2  |





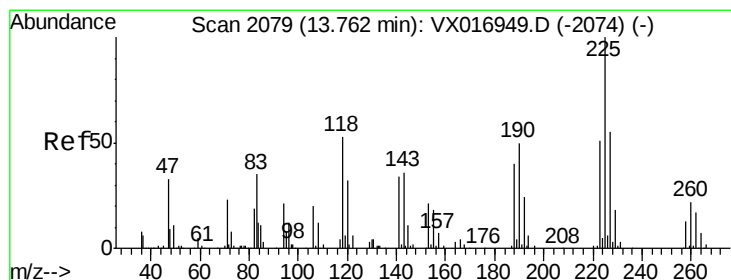
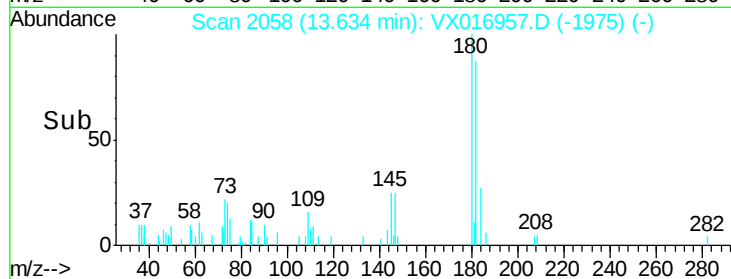
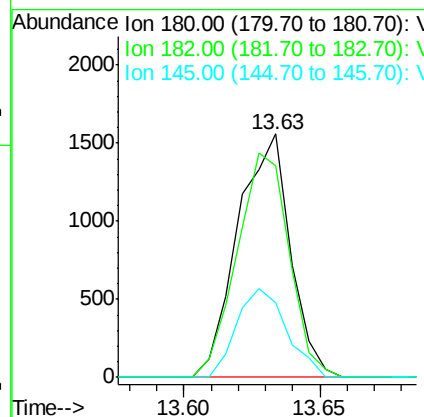
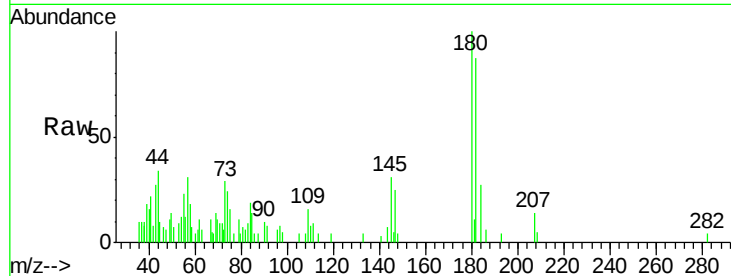
#89  
 1,2,4-Trichlorobenzene  
 Concen: 0.609 ug/l  
 RT: 13.63 min Scan# 2058  
 Delta R.T. 0.01 min  
 Lab File: VX016957.D  
 Acq: 25 Jun 2020 16:36

Instrument :  
 MSVOA\_X  
 ClientSampled :  
 EFF-WW

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 91.6  | 77.7  | 116.5 |
| 145     | 34.4  | 26.2  | 39.2  |

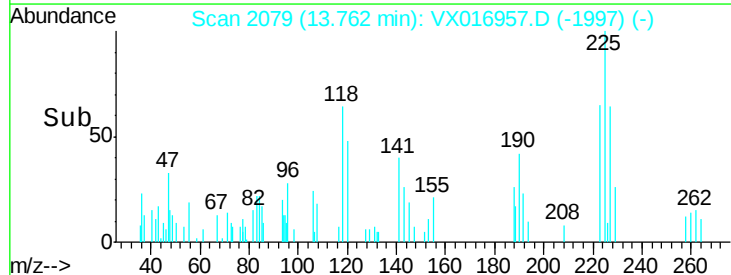
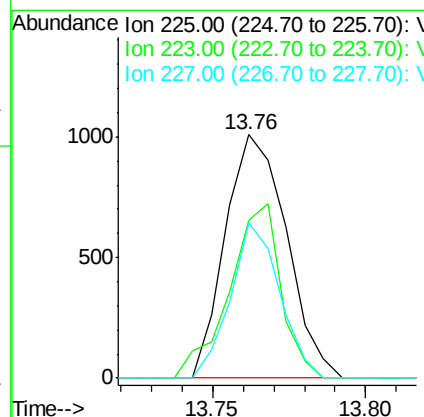
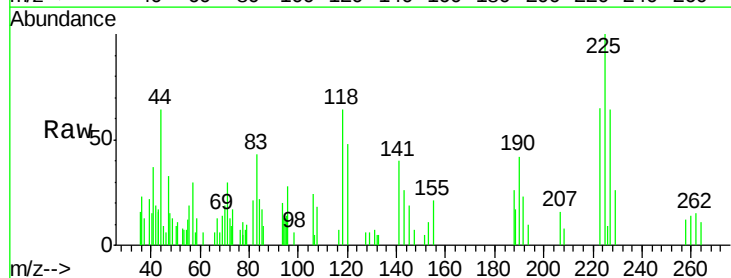
Manual Integrations  
 APPROVED

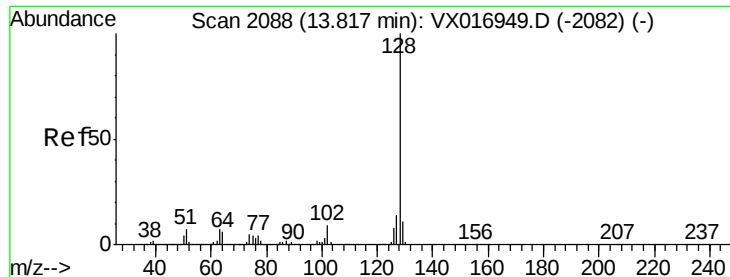
MMDadoda  
 6/26/2020 3:34:22 PM



#90  
 Hexachlorobutadiene  
 Concen: 1.073 ug/l  
 RT: 13.76 min Scan# 2079  
 Delta R.T. 0.00 min  
 Lab File: VX016957.D  
 Acq: 25 Jun 2020 16:36

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 225     | 100   |       |       |
| 223     | 60.1  | 0.0   | 125.0 |
| 227     | 50.9  | 0.0   | 124.0 |





#91

Naphthalene

Concen: 0.380 ug/l

RT: 13.82 min Scan# 2088

Delta R.T. 0.00 min

Lab File: VX016957.D

Acq: 25 Jun 2020 16:36

Instrument :

MSVOA\_X

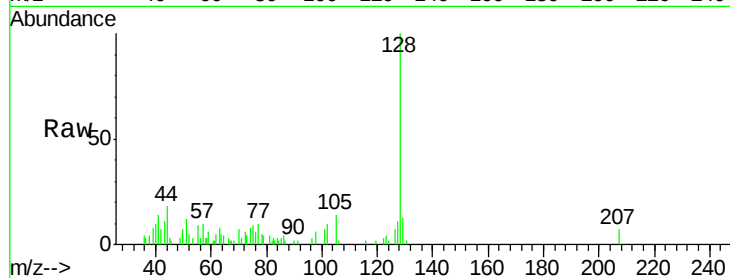
ClientSampleId :

EFF-WW

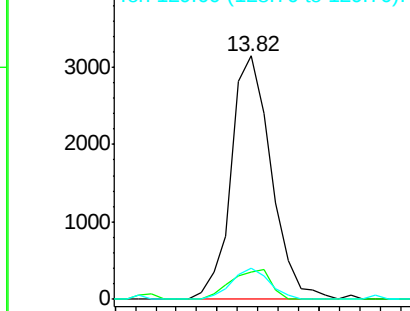
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 128   | Resp: | 4272  |
| Ion      | Ratio | Lower | Upper |
| 128      | 100   |       |       |
| 127      | 12.2  | 10.5  | 15.7  |
| 129      | 12.2  | 9.0   | 13.4  |

Manual Integrations  
APPROVED

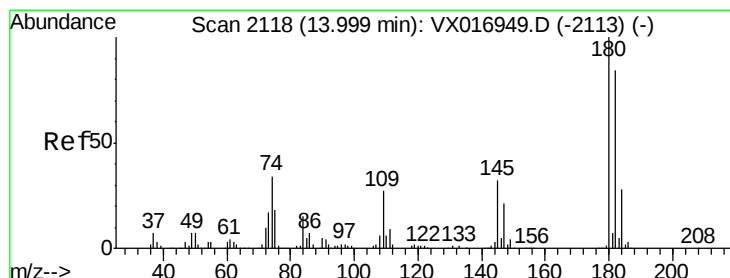
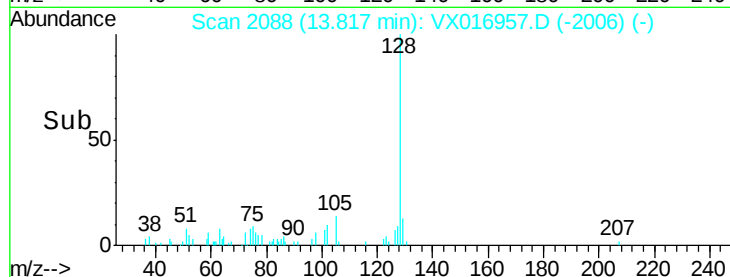
MMDadoda  
6/26/2020 3:34:22 PM



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



Time--> 13.75 13.80 13.85



#92

1,2,3-Trichlorobenzene

Concen: 0.528 ug/l

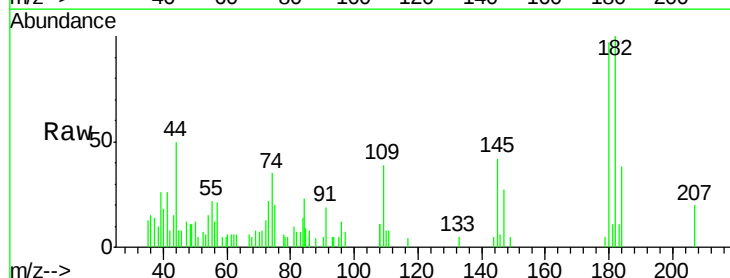
RT: 14.00 min Scan# 2118

Delta R.T. 0.00 min

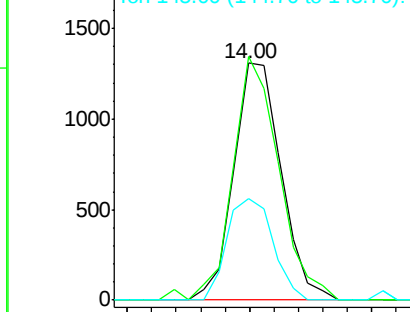
Lab File: VX016957.D

Acq: 25 Jun 2020 16:36

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 180   | Resp: | 1769  |
| Ion      | Ratio | Lower | Upper |
| 180      | 100   |       |       |
| 182      | 98.8  | 0.0   | 184.8 |
| 145      | 41.6  | 0.0   | 68.0  |



Abundance Ion 180.00 (179.70 to 180.70): V  
Ion 182.00 (181.70 to 182.70): V  
Ion 145.00 (144.70 to 145.70): V



Time--> 13.95 14.00 14.05

