

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU040719\  
 Data File : VU030840.D  
 Acq On : 07 Apr 2019 06:51  
 Operator : JC/SP  
 Sample : K2249-14  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 50 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 E3YE6

Manual Integrations  
 APPROVED

MMDadoda  
 4/10/2019 9:29:06 AM

Quant Time: Apr 09 01:27:09 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM040519WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Mon Apr 08 07:03:53 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.88  | 114  | 479357   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 463885   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 219303   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40    | 65    | 219689   | 51.34    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 102.68% |
| 7) Chloroethane-d5             | 1.68    | 69    | 164518   | 50.66    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 101.32% |
| 11) 1,1-Dichloroethene-d2      | 2.27    | 63    | 364525   | 47.10    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 94.20%  |
| 21) 2-Butanone-d5              | 4.17    | 46    | 348115   | 102.65   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 102.65% |
| 24) Chloroform-d               | 4.64    | 84    | 315362   | 48.25    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 96.50%  |
| 26) 1,2-Dichloroethane-d4      | 5.30    | 65    | 225686   | 50.60    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 101.20% |
| 32) Benzene-d6                 | 5.33    | 84    | 669590   | 49.44    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 98.88%  |
| 36) 1,2-Dichloropropane-d6     | 6.32    | 67    | 232128   | 50.02    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 100.04% |
| 41) Toluene-d8                 | 7.56    | 98    | 569846   | 47.47    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 94.94%  |
| 43) trans-1,3-Dichloropropene- | 7.85    | 79    | 90607    | 42.82    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 85.64%  |
| 47) 2-Hexanone-d5              | 8.31    | 63    | 192515   | 90.76    | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 90.76%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43   | 84    | 313292   | 50.05    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 100.10% |
| 64) 1,2-Dichlorobenzene-d4     | 11.85   | 152   | 210380   | 48.78    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 97.56%  |

## Target Compounds

| Target Compounds             | R.T. | QIon | Response | Conc     | Units | Ovalue |
|------------------------------|------|------|----------|----------|-------|--------|
| 5) Vinyl chloride            | 1.40 | 62   | 807608   | 153.184  | ug/L  | 98     |
| 8) Chloroethane              | 1.69 | 64   | 482019   | 160.299  | ug/L  | 99     |
| 12) 1,1-Dichloroethene       | 2.28 | 96   | 114211m  | 34.468   | ug/L  |        |
| 13) Acetone                  | 2.32 | 43   | 15201    | 4.380    | ug/L  | 100    |
| 15) Methyl Acetate           | 2.62 | 43   | 7003     | 1.301    | ug/L  | 94     |
| 17) trans-1,2-Dichloroethene | 2.98 | 96   | 42764    | 12.155   | ug/L  | 99     |
| 19) 1,1-Dichloroethane       | 3.44 | 63   | 7193808  | 990.790  | ug/L  | 98     |
| 20) cis-1,2-Dichloroethene   | 4.22 | 96   | 6846383  | 1762.367 | ug/L  | 98     |
| 27) 1,2-Dichloroethane       | 5.41 | 62   | 16126    | 2.895    | ug/L  | 99     |
| 30) 1,1,1-Trichloroethane    | 4.91 | 97   | 3021037  | 534.380  | ug/L  | 100    |
| 33) Benzene                  | 5.39 | 78   | 19118    | 1.259    | ug/L  | 100    |
| 34) Trichloroethene          | 6.19 | 95   | 7457     | 2.003    | ug/L  | 95     |
| 35) Methylcyclohexane        | 6.41 | 83   | 3927m    | 0.683    | ug/L  |        |
| 40) 4-Methyl-2-pentanone     | 7.47 | 43   | 8328     | 1.205    | ug/L  | 96     |
| 42) Toluene                  | 7.63 | 91   | 532629   | 34.373   | ug/L  | 99     |
| 46) Tetrachloroethene        | 8.22 | 164  | 16334    | 6.034    | ug/L  | 88     |
| 52) Ethylbenzene             | 9.25 | 91   | 360474   | 21.342   | ug/L  | 100    |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU040719\  
Data File : VU030840.D  
Acq On : 07 Apr 2019 06:51  
Operator : JC/SP  
Sample : K2249-14  
Misc : 5.0mL/MSVOA U/WATER  
ALS Vial : 50 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
E3YE6

Manual Integrations  
APPROVED

MMDadoda  
4/10/2019 9:29:06 AM

Quant Time: Apr 09 01:27:09 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM040519WMA.M  
Quant Title : VOC Analysis  
QLast Update : Mon Apr 08 07:03:53 2019  
Response via : Initial Calibration

| Internal Standards   | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------|-------|------|----------|--------|-------|----------|
| 53) m,p-Xylene       | 9.37  | 106  | 427140   | 72.509 | ug/L  | 95       |
| 54) o-xylene         | 9.77  | 106  | 255448   | 43.595 | ug/L  | 99       |
| 56) Isopropylbenzene | 10.16 | 105  | 42179    | 2.734  | ug/L  | 99       |

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

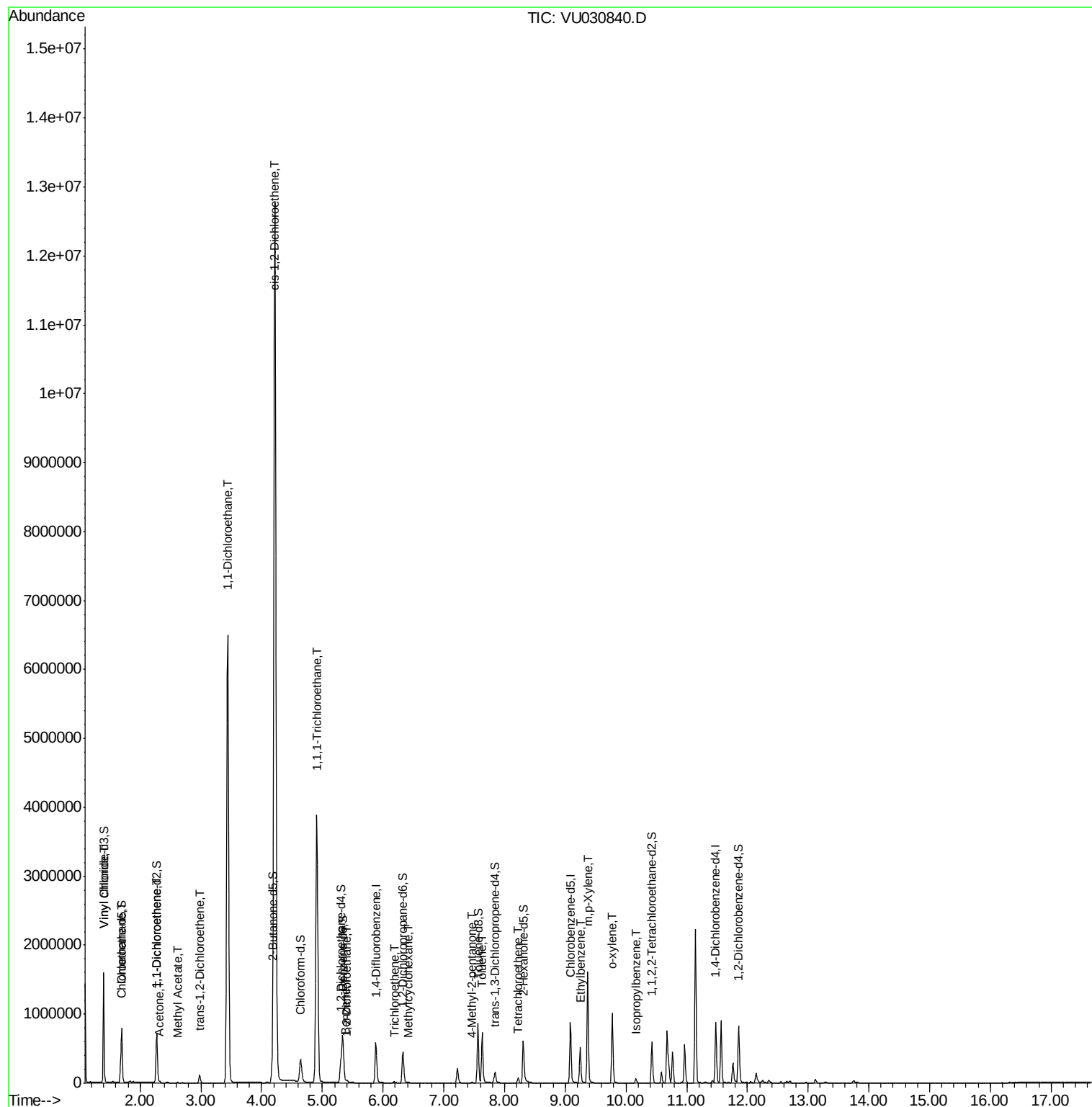
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA U\DATA\VU040719\  
Data File : VU030840.D  
Acq On : 07 Apr 2019 06:51  
Operator : JC/SP  
Sample : K2249-14  
Misc : 5.0mL/MSVOA U/WATER  
ALS Vial : 50 Sample Multiplier: 1

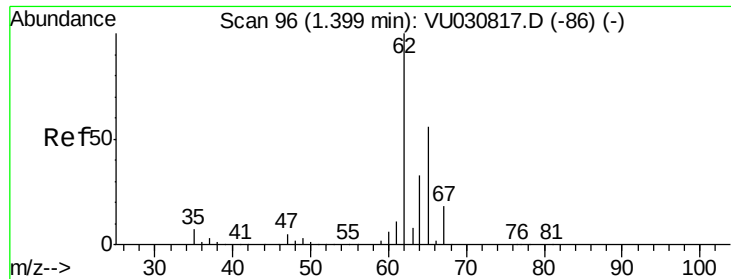
Instrument :  
MSVOA\_U  
ClientSampleId :  
E3YE6

Manual Integrations  
APPROVED

MMDadoda  
4/10/2019 9:29:06 AM

Quant Time: Apr 09 01:27:09 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM040519WMA.M  
Quant Title : VOC Analysis  
QLast Update : Mon Apr 08 07:03:53 2019  
Response via : Initial Calibration





#5

Vinyl chloride

Concen: 153.184 ug/L

RT: 1.40 min Scan# 96

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

ClientSampled :

E3YE6

Tot Ion: 62 Resp: 807608

Ion Ratio Lower Upper

62 100

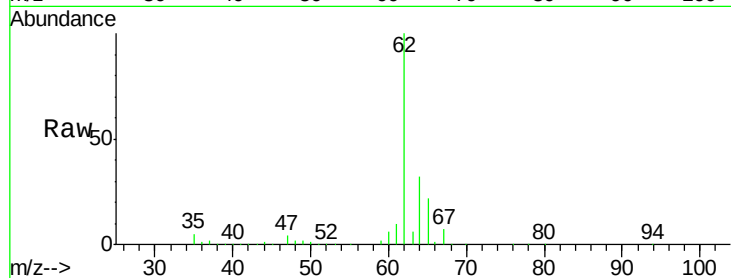
64 31.5 21.5 39.9

Manual Integrations

APPROVED

MMDadoda

4/10/2019 9:29:06 AM



Abundance Ion 62.00 (61.70 to 62.70): VU030840.D (-3) (-)

Ion 64.00 (63.70 to 64.70): VU030840.D (-3) (-)

800000

600000

400000

200000

0

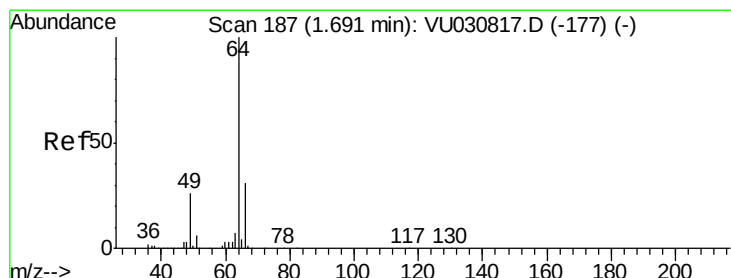
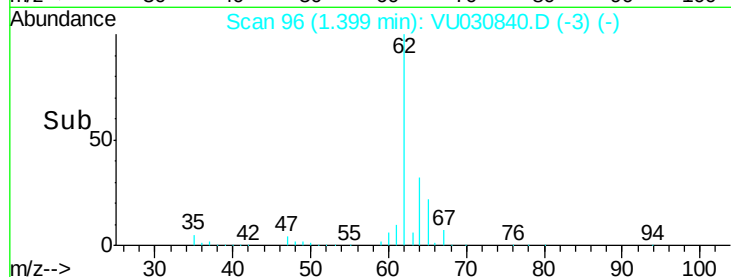
1.35

1.40

1.45

1.50

Time-->



#8

Chloroethane

Concen: 160.299 ug/L

RT: 1.69 min Scan# 188

Delta R.T. 0.00 min

Lab File: VU030840.D

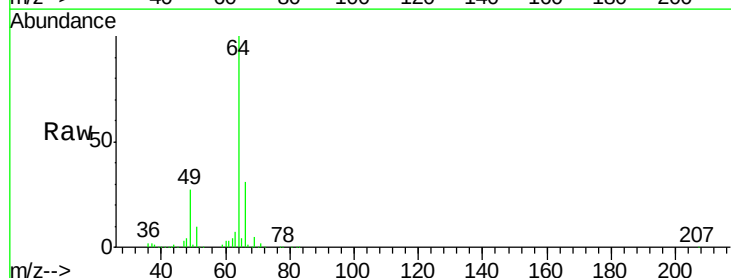
Acq: 07 Apr 2019 06:51

Tgt Ion: 64 Resp: 482019

Ion Ratio Lower Upper

64 100

66 31.5 22.4 41.6



Abundance Ion 64.00 (63.70 to 64.70): VU030840.D (-63) (-)

Ion 66.00 (65.70 to 66.70): VU030840.D (-63) (-)

400000

300000

200000

100000

0

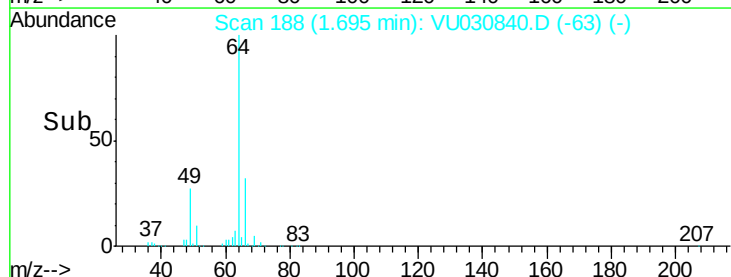
1.65

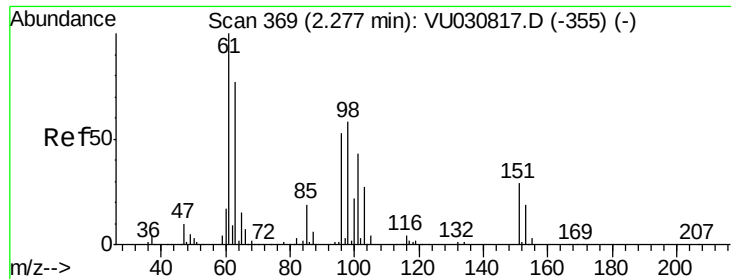
1.70

1.75

1.80

Time-->





#12

1,1-Dichloroethene

Concen: 34.468 ug/L m

RT: 2.28 min Scan# 370

Delta R.T. 0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

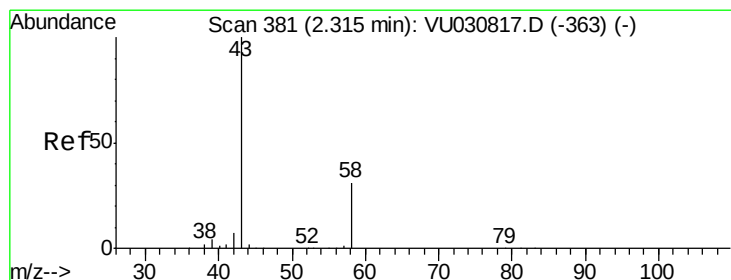
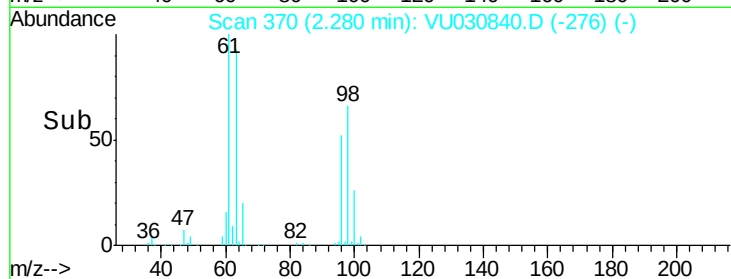
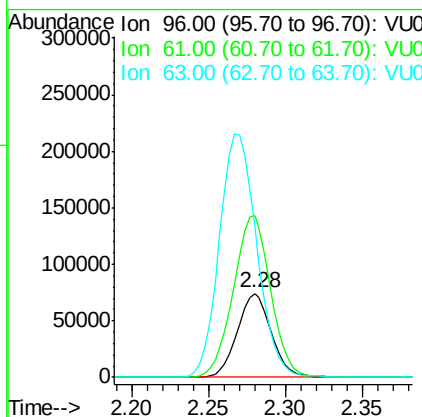
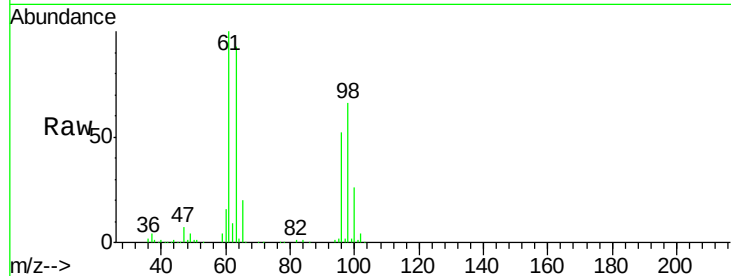
ClientSampled :

E3YE6

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 96    | Resp: | 114211 |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 191.8 | 132.0 | 245.2  |
| 63       | 178.2 | 90.9  | 168.9# |

Manual Integrations  
APPROVED

MMDadoda  
4/10/2019 9:29:06 AM



#13

Acetone

Concen: 4.380 ug/L

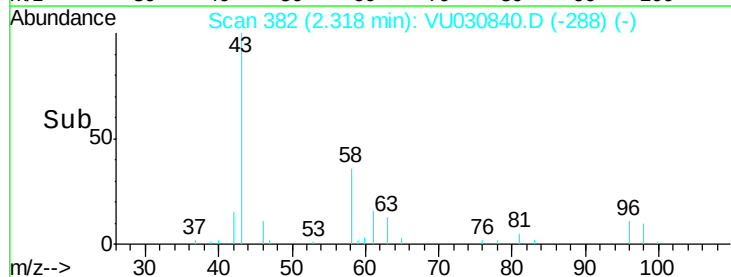
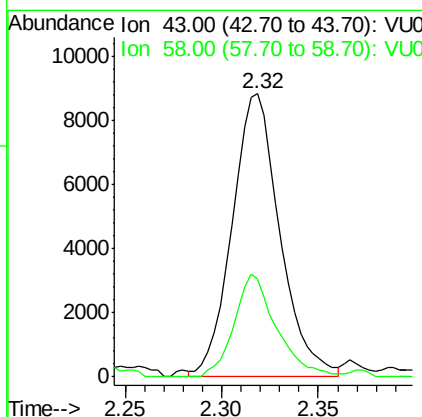
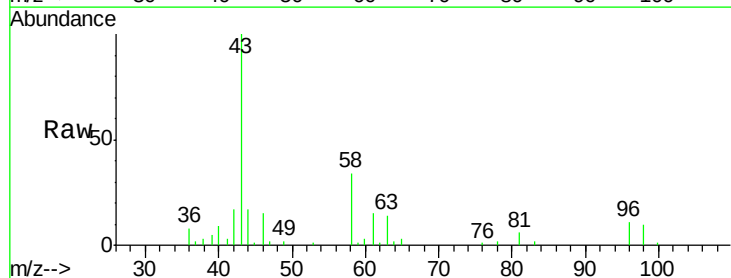
RT: 2.32 min Scan# 382

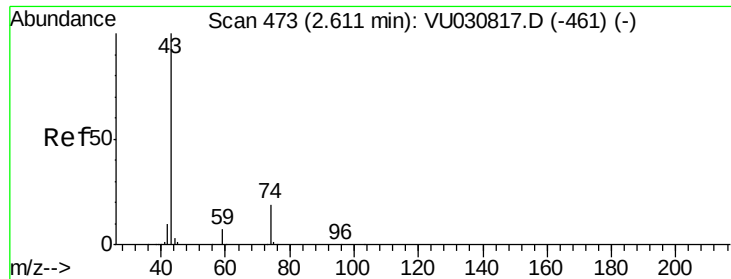
Delta R.T. 0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 15201 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 58       | 32.1  | 0.0   | 64.0  |





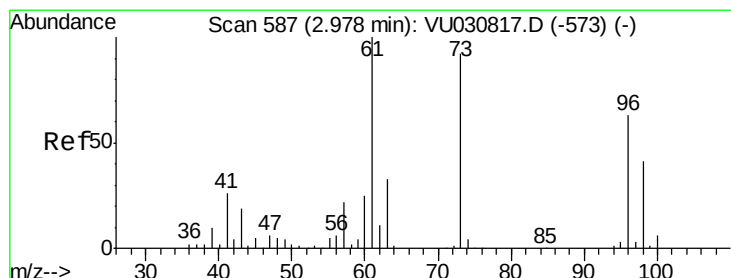
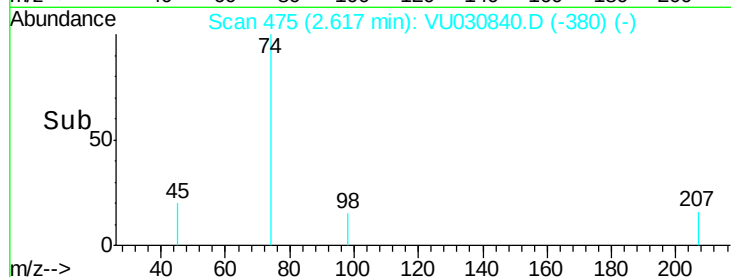
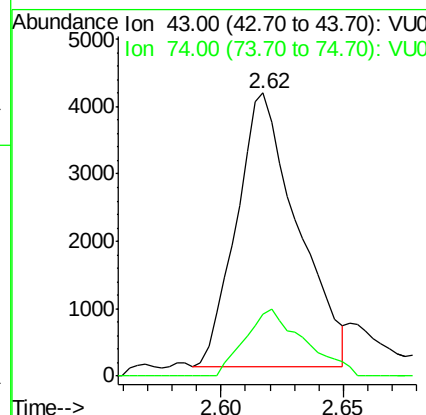
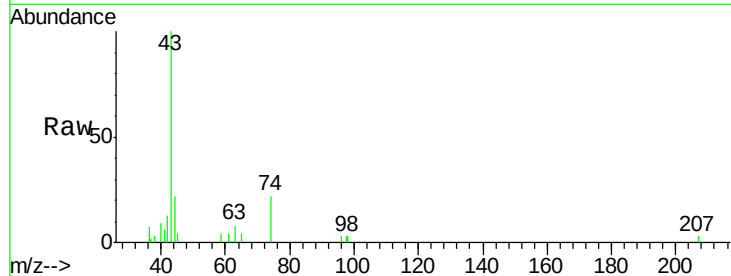
#15  
Methyl Acetate  
Concen: 1.301 ug/L  
RT: 2.62 min Scan# 475  
Delta R.T. 0.01 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

Instrument :  
MSVOA\_U  
ClientSampleId :  
E3YE6

Tot Ion: 43 Resp: 7003  
Ion Ratio Lower Upper  
43 100  
74 24.0 17.1 25.7

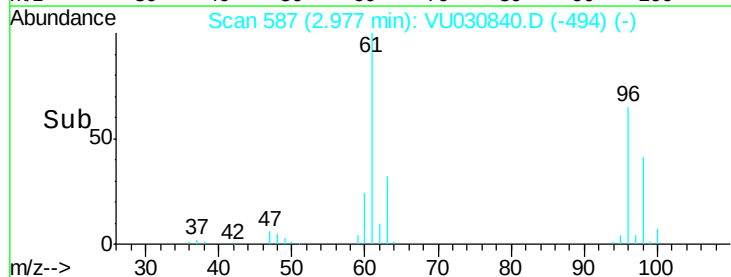
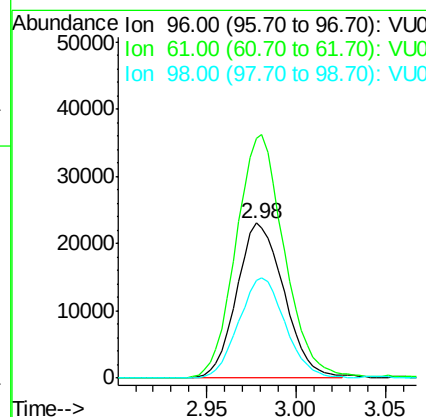
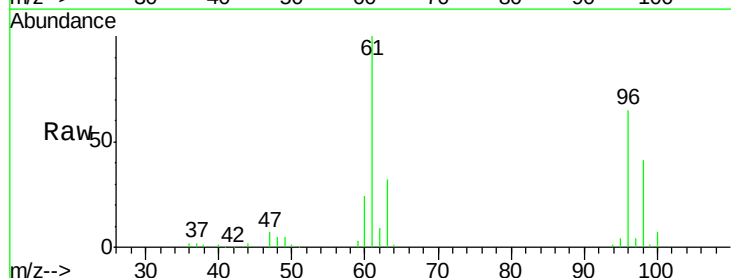
Manual Integrations  
APPROVED

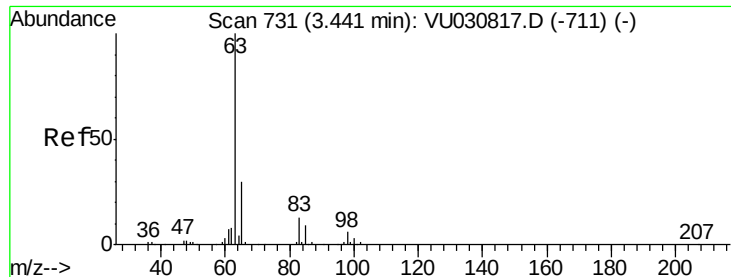
MMDadoda  
4/10/2019 9:29:06 AM



#17  
trans-1,2-Dichloroethene  
Concen: 12.155 ug/L  
RT: 2.98 min Scan# 587  
Delta R.T. -0.00 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

Tgt Ion: 96 Resp: 42764  
Ion Ratio Lower Upper  
96 100  
61 154.7 109.5 203.3  
98 62.7 44.0 81.6





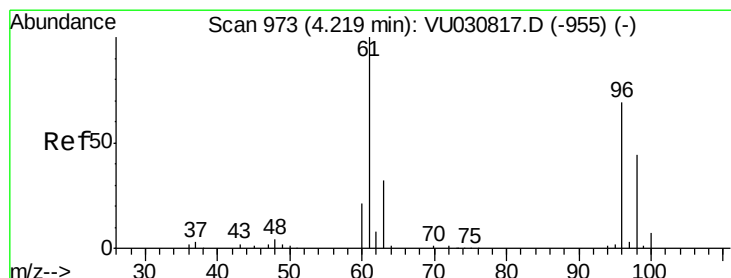
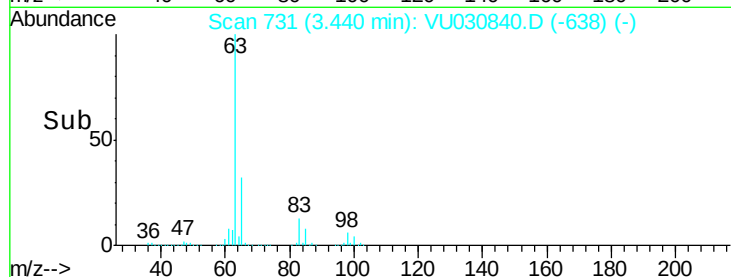
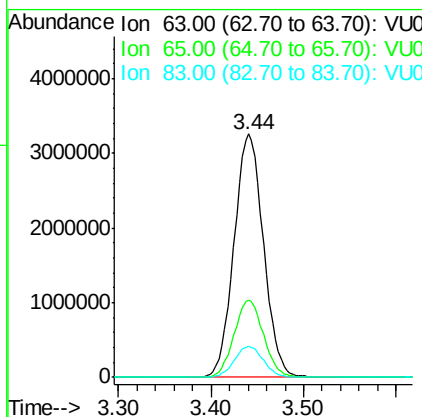
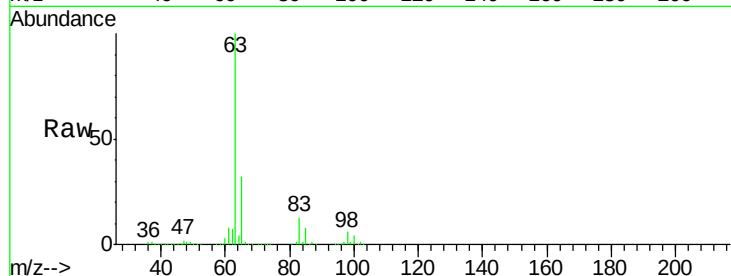
#19  
 1,1-Dichloroethane  
 Concen: 990.790 ug/L  
 RT: 3.44 min Scan# 731  
 Delta R.T. -0.00 min  
 Lab File: VU030840.D  
 Acq: 07 Apr 2019 06:51

Instrument :  
 MSVOA\_U  
 ClientSampled :  
 E3YE6

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 65      | 31.7  | 21.4  | 39.8  |
| 83      | 12.8  | 8.5   | 15.7  |

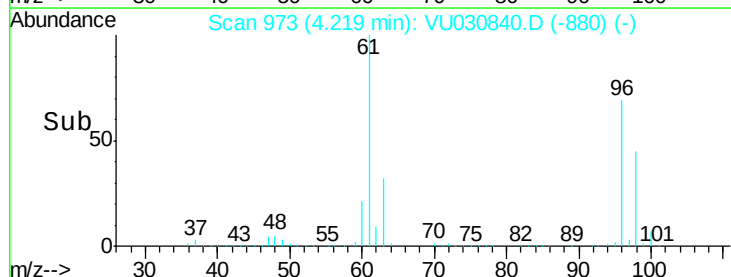
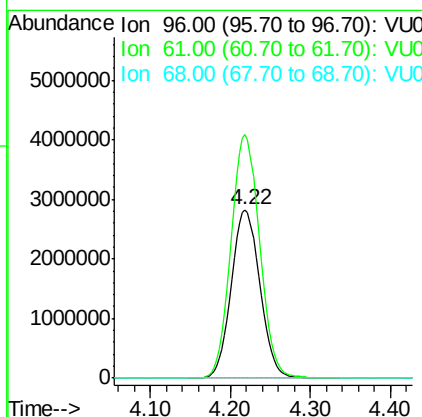
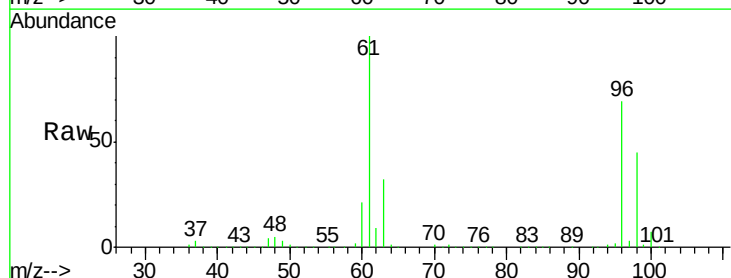
Manual Integrations  
 APPROVED

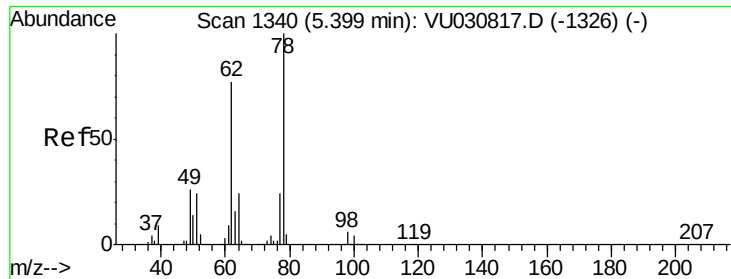
MMDadoda  
 4/10/2019 9:29:06 AM



#20  
 cis-1,2-Dichloroethene  
 Concen: 1762.367 ug/L  
 RT: 4.22 min Scan# 973  
 Delta R.T. -0.00 min  
 Lab File: VU030840.D  
 Acq: 07 Apr 2019 06:51

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 144.6 | 102.9 | 191.1 |
| 68      | 0.0   | 0.0   | 0.0   |





#27

1,2-Dichloroethane

Concen: 2.895 ug/L

RT: 5.41 min Scan# 1343

Delta R.T. 0.01 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

ClientSampled :

E3YE6

Tot Ion: 62 Resp: 16126

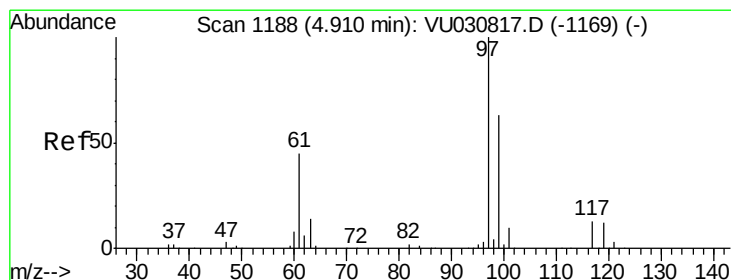
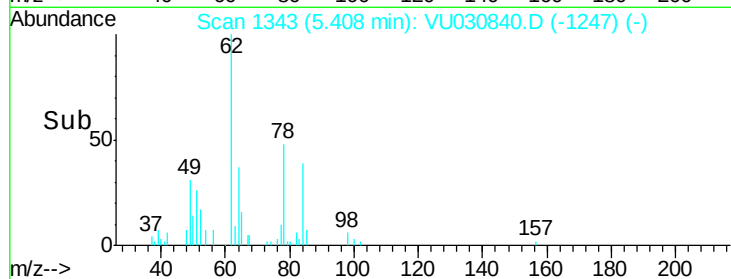
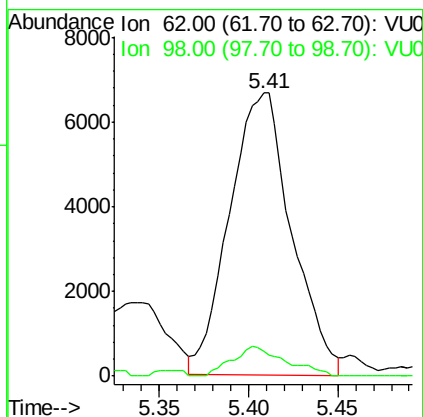
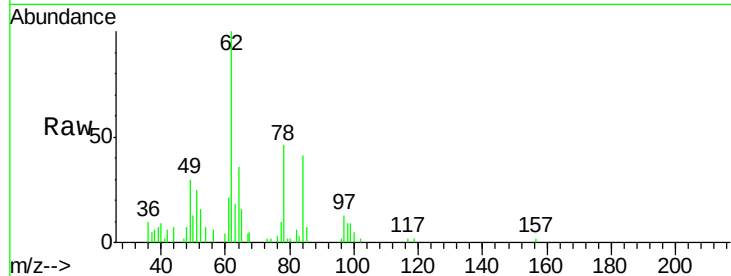
Ion Ratio Lower Upper

62 100

98 8.6 7.2 10.8

Manual Integrations  
APPROVED

MMDadoda  
4/10/2019 9:29:06 AM



#30

1,1,1-Trichloroethane

Concen: 534.380 ug/L

RT: 4.91 min Scan# 1188

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

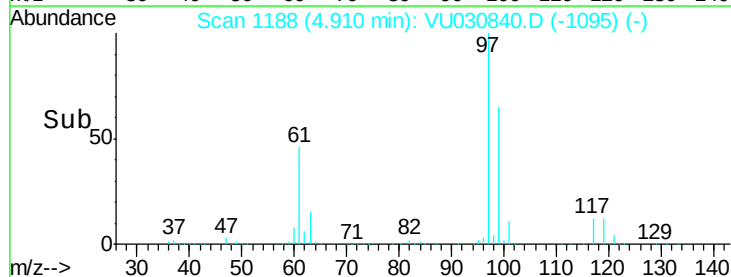
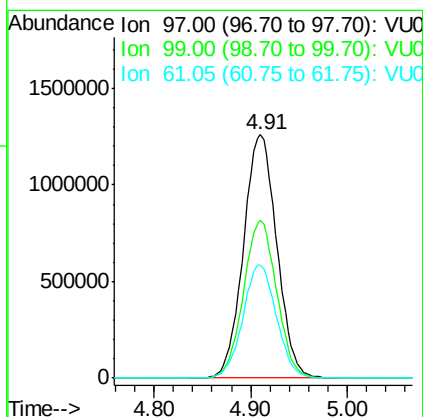
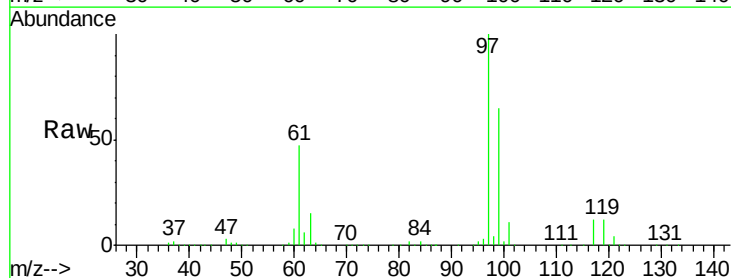
Tgt Ion: 97 Resp: 3021037

Ion Ratio Lower Upper

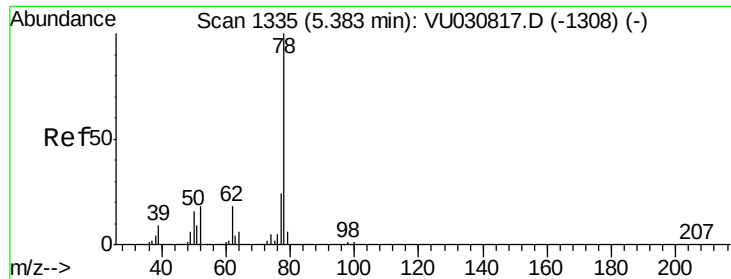
97 100

99 64.4 51.4 77.2

61 46.1 37.1 55.7







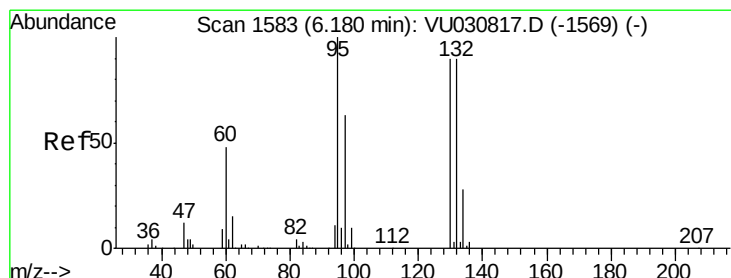
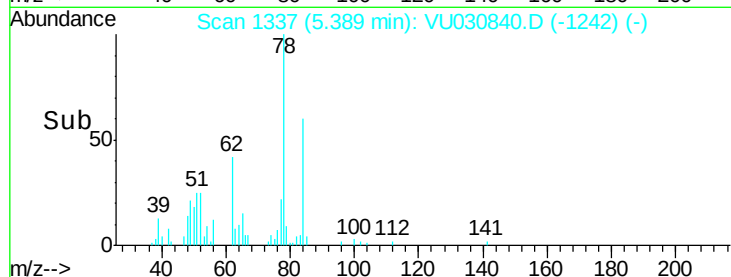
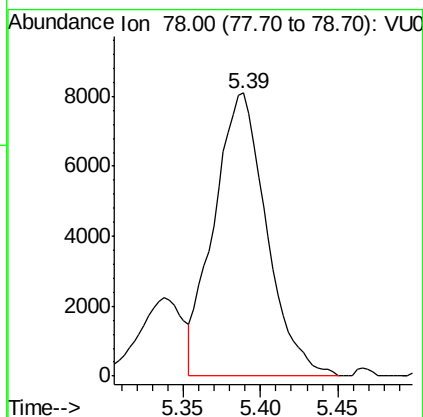
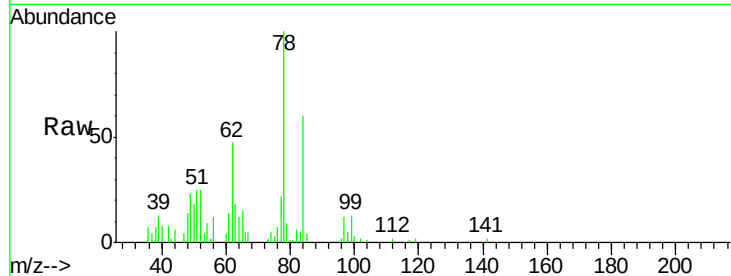
#33  
Benzene  
Concen: 1.259 ug/L  
RT: 5.39 min Scan# 1337  
Delta R.T. 0.01 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

Instrument :  
MSVOA\_U  
ClientSampleId :  
E3YE6

Tgt Ion: 78 Resp: 19118

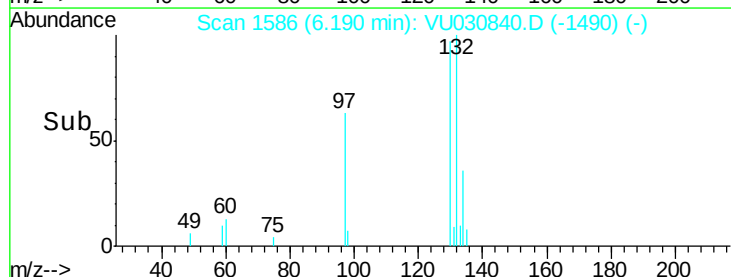
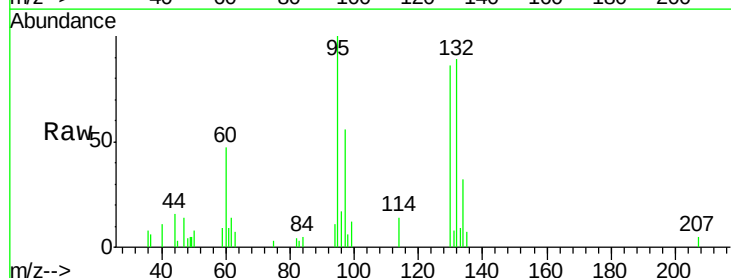
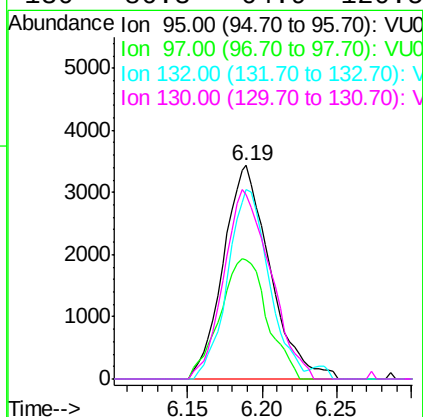
Manual Integrations  
APPROVED

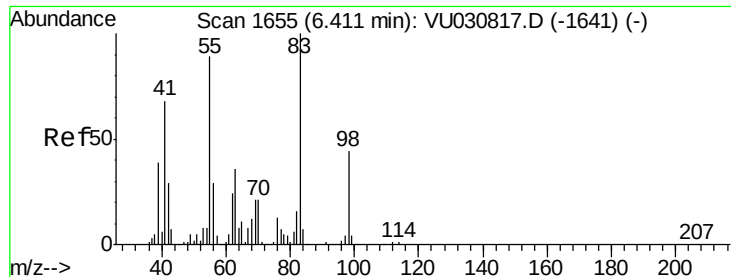
MMDadoda  
4/10/2019 9:29:06 AM



#34  
Trichloroethene  
Concen: 2.003 ug/L  
RT: 6.19 min Scan# 1586  
Delta R.T. 0.01 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

Tgt Ion: 95 Resp: 7457  
Ion Ratio Lower Upper  
95 100  
97 55.7 44.5 82.7  
132 88.5 61.5 114.1  
130 86.3 64.9 120.5





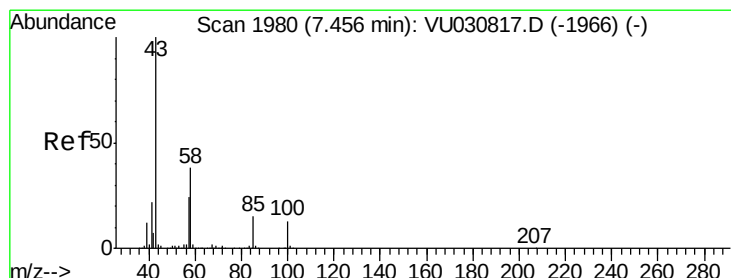
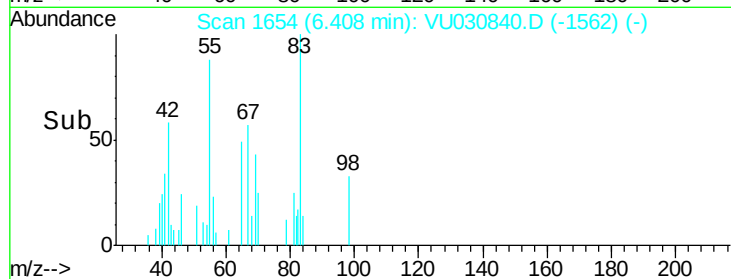
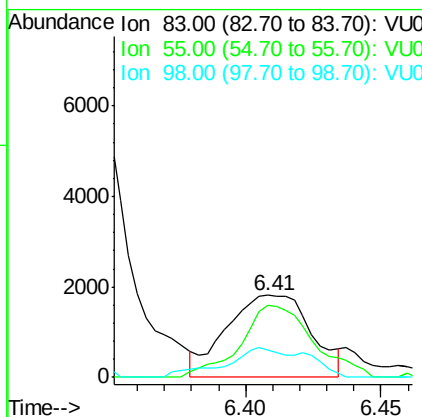
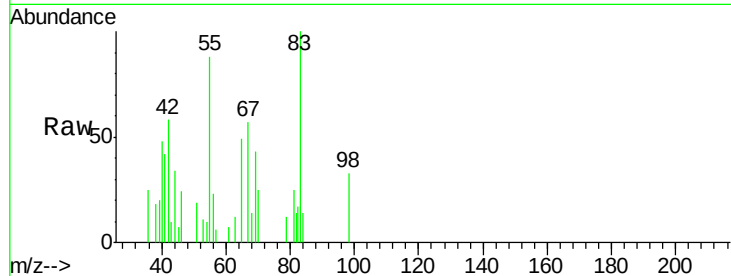
#35  
Methylcyclohexane  
Concen: 0.683 ug/L m  
RT: 6.41 min Scan# 1654  
Delta R.T. -0.00 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

Instrument :  
MSVOA\_U  
ClientSampleId :  
E3YE6

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 83      | 100   |       |        |
| 55      | 1.9   | 71.6  | 107.4# |
| 98      | 1.2   | 35.4  | 53.0#  |

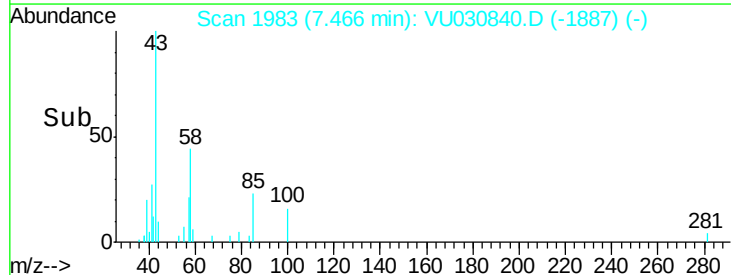
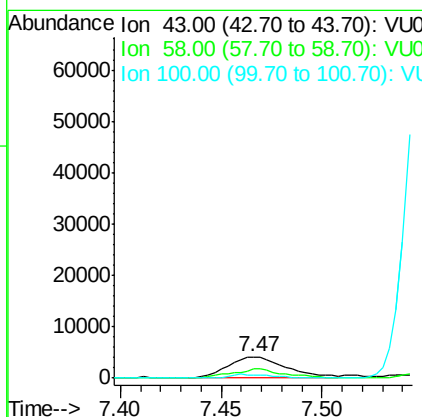
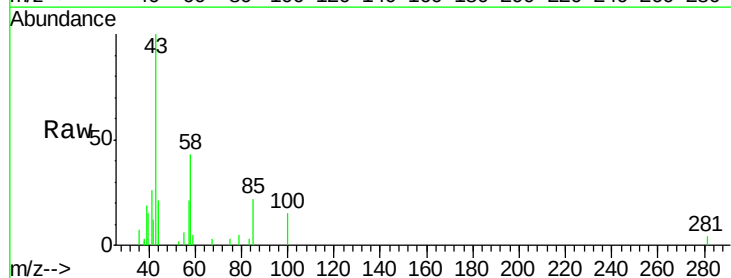
Manual Integrations  
APPROVED

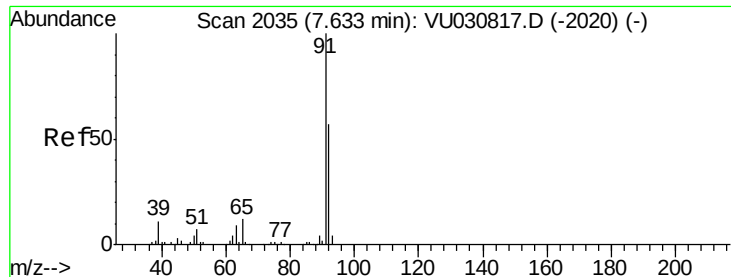
MMDadoda  
4/10/2019 9:29:06 AM



#40  
4-Methyl-2-pentanone  
Concen: 1.205 ug/L  
RT: 7.47 min Scan# 1983  
Delta R.T. 0.01 min  
Lab File: VU030840.D  
Acq: 07 Apr 2019 06:51

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 39.6  | 29.7  | 44.5  |
| 100     | 13.1  | 9.8   | 14.6  |





#42

Toluene

Concen: 34.373 ug/L

RT: 7.63 min Scan# 2035

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

ClientSampleId :

E3YE6

Tot Ion: 91 Resp: 532629

Ion Ratio Lower Upper

91 100

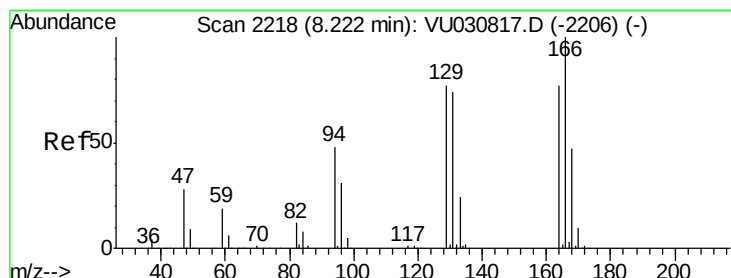
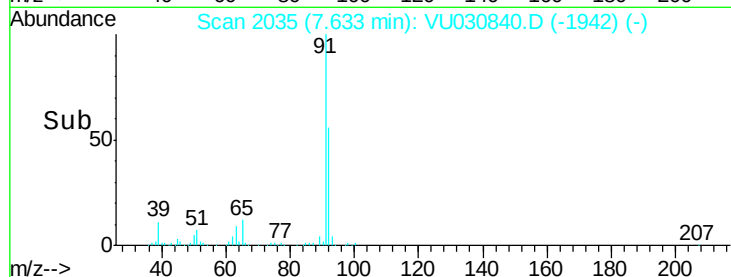
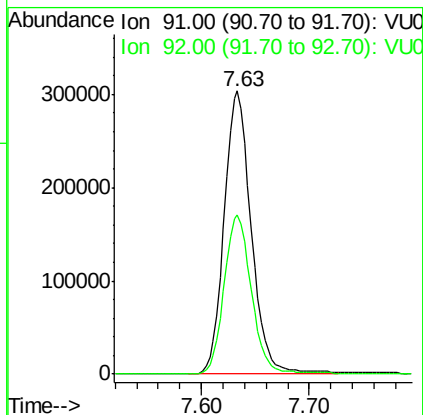
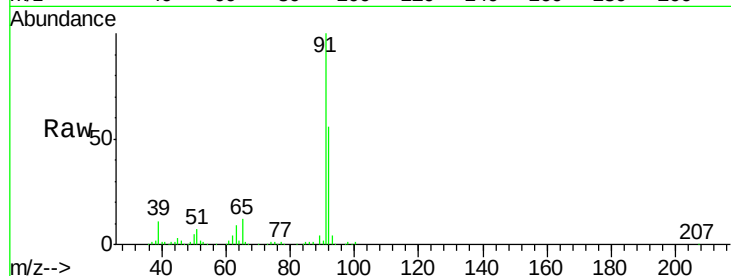
92 56.2 40.0 74.4

Manual Integrations

APPROVED

MMDadoda

4/10/2019 9:29:06 AM



#46

Tetrachloroethene

Concen: 6.034 ug/L

RT: 8.22 min Scan# 2219

Delta R.T. 0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Tgt Ion:164 Resp: 16334

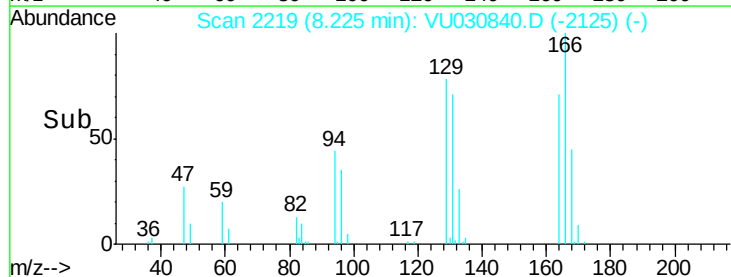
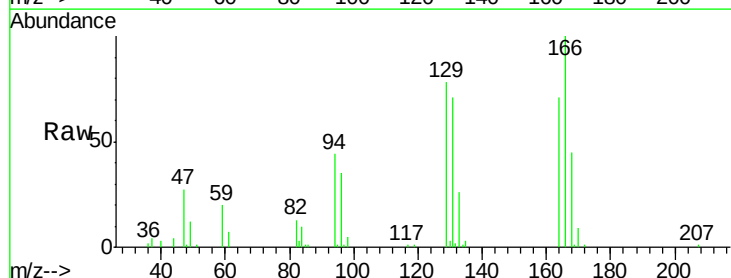
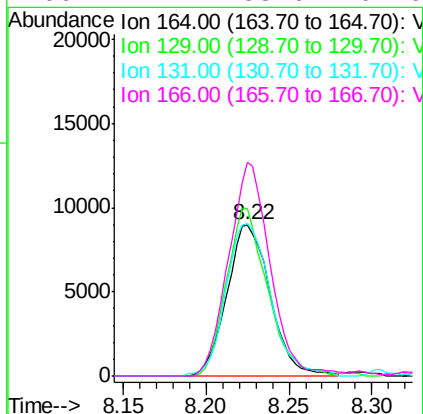
Ion Ratio Lower Upper

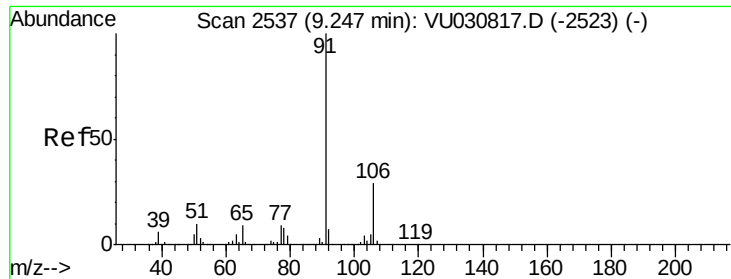
164 100

129 110.5 67.4 125.2

131 100.8 65.9 122.5

166 141.2 88.6 164.6





#52

Ethylbenzene

Concen: 21.342 ug/L

RT: 9.25 min Scan# 2537

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

ClientSampled :

E3YE6

Tot Ion: 91 Resp: 360474

Ion Ratio Lower Upper

91 100

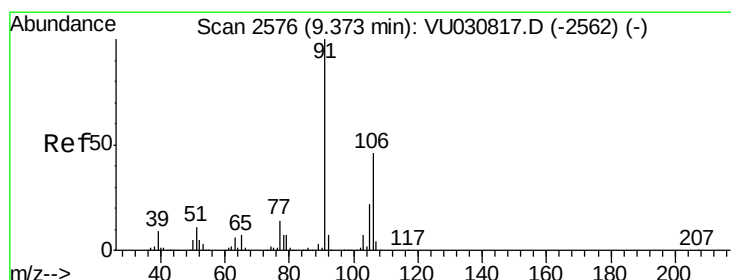
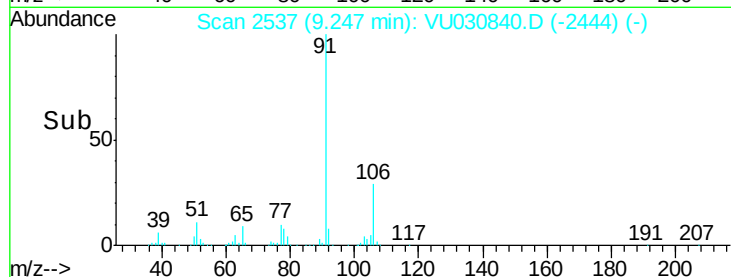
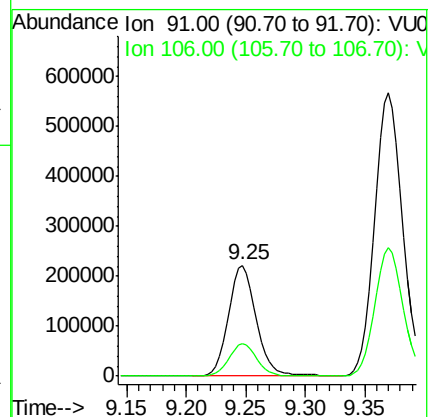
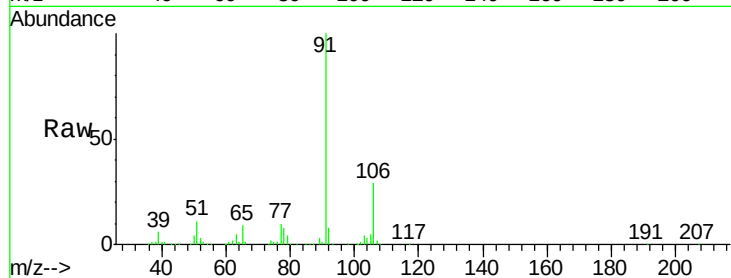
106 29.3 20.4 37.8

Manual Integrations

APPROVED

MMDadoda

4/10/2019 9:29:06 AM



#53

m,p-Xylene

Concen: 72.509 ug/L

RT: 9.37 min Scan# 2575

Delta R.T. -0.00 min

Lab File: VU030840.D

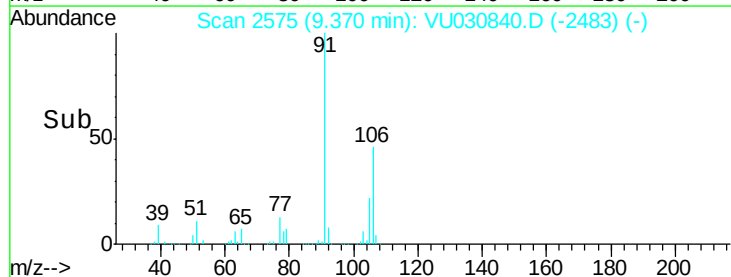
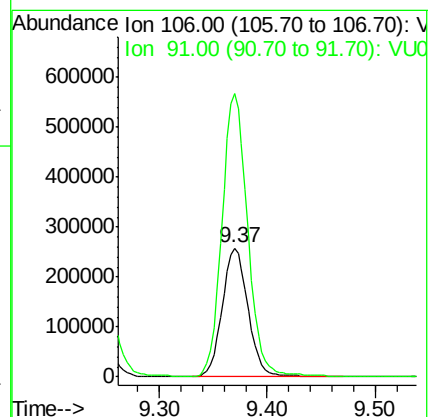
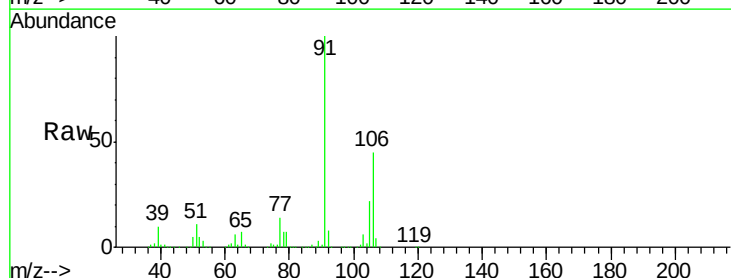
Acq: 07 Apr 2019 06:51

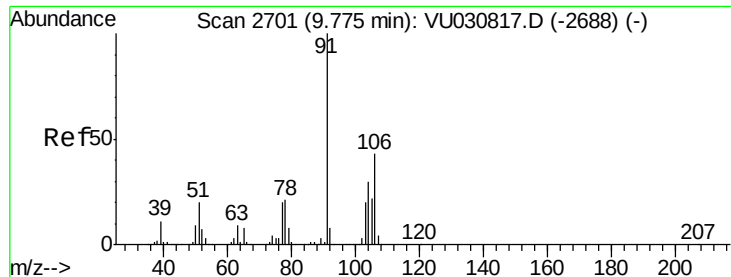
Tgt Ion: 106 Resp: 427140

Ion Ratio Lower Upper

106 100

91 219.9 148.0 274.8





#54

o-xylene

Concen: 43.595 ug/L

RT: 9.77 min Scan# 2701

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Instrument :

MSVOA\_U

ClientSampled :

E3YE6

Tot Ion:106 Resp: 255448

Ion Ratio Lower Upper

106 100

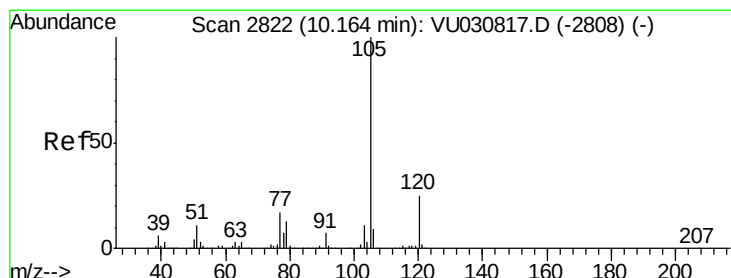
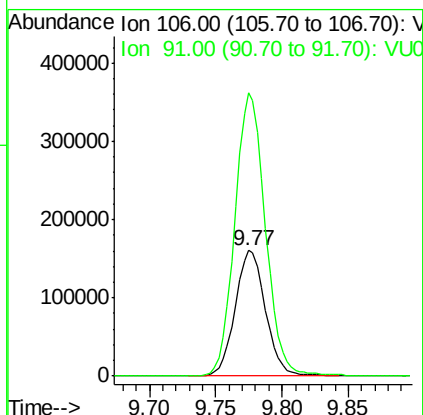
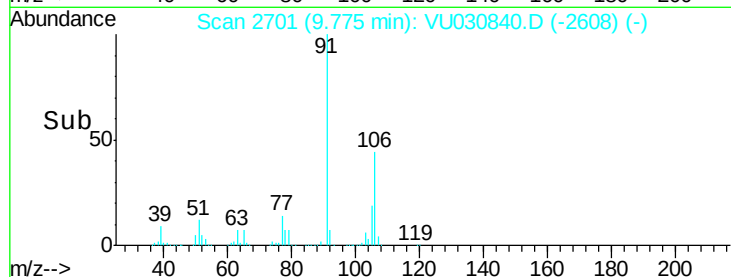
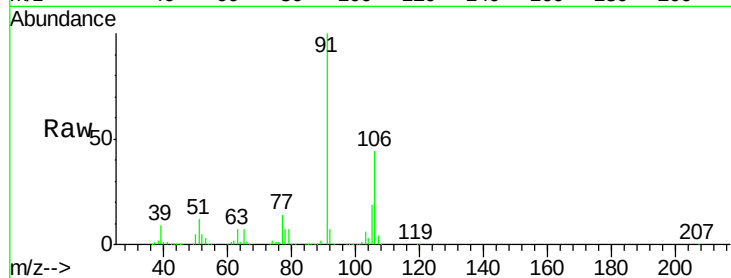
91 225.3 156.7 290.9

Manual Integrations

APPROVED

MMDadoda

4/10/2019 9:29:06 AM



#56

Isopropylbenzene

Concen: 2.734 ug/L

RT: 10.16 min Scan# 2822

Delta R.T. -0.00 min

Lab File: VU030840.D

Acq: 07 Apr 2019 06:51

Tgt Ion:105 Resp: 42179

Ion Ratio Lower Upper

105 100

120 25.0 20.4 30.6

77 16.3 13.4 20.2

