

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU091919\  
 Data File : VU034669.D  
 Acq On : 20 Sep 2019 00:10  
 Operator : JC/SP  
 Sample : K4895-16  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 24 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 BFDH3

Manual Integrations  
 APPROVED

MMDadoda  
 9/20/2019 12:43:46 PM

Quant Time: Sep 20 05:55:52 2019

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM091919WMA.M

Quant Title : VOC Analysis

QLast Update : Fri Sep 20 04:02:05 2019

Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.86  | 114  | 486894   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.07  | 117  | 468563   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.46 | 152  | 223606   | 50.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.39    | 65    | 219488   | 44.03    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 88.06%  |
| 7) Chloroethane-d5             | 1.67    | 69    | 178708   | 46.39    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 92.78%  |
| 11) 1,1-Dichloroethene-d2      | 2.26    | 63    | 295016   | 34.95    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 69.90%  |
| 21) 2-Butanone-d5              | 4.15    | 46    | 435908   | 114.11   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 114.11% |
| 24) Chloroform-d               | 4.62    | 84    | 342148   | 47.22    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 94.44%  |
| 26) 1,2-Dichloroethane-d4      | 5.29    | 65    | 256614   | 48.17    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 96.34%  |
| 32) Benzene-d6                 | 5.32    | 84    | 699040   | 48.13    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 96.26%  |
| 36) 1,2-Dichloropropane-d6     | 6.31    | 67    | 243070   | 47.88    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 95.76%  |
| 41) Toluene-d8                 | 7.54    | 98    | 659148   | 47.70    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 95.40%  |
| 43) trans-1,3-Dichloropropene- | 7.83    | 79    | 111510   | 45.87    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 91.74%  |
| 47) 2-Hexanone-d5              | 8.29    | 63    | 285406   | 111.94   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 111.94% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.41   | 84    | 329790   | 46.82    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 93.64%  |
| 64) 1,2-Dichlorobenzene-d4     | 11.84   | 152   | 232984   | 49.69    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 99.38%  |

#### Target Compounds

|                            |      |     |         |         | Ovalue   |
|----------------------------|------|-----|---------|---------|----------|
| 13) Acetone                | 2.31 | 43  | 78613   | 17.690  | ug/L 98  |
| 15) Methyl Acetate         | 2.61 | 43  | 7888m   | 1.329   | ug/L     |
| 16) Methylene chloride     | 2.68 | 84  | 5562    | 1.378   | ug/L 90  |
| 20) cis-1,2-Dichloroethene | 4.20 | 96  | 14706   | 3.611   | ug/L 91  |
| 22) 2-Butanone             | 4.25 | 43  | 20294m  | 3.839   | ug/L     |
| 29) Cyclohexane            | 4.97 | 56  | 38447   | 4.971   | ug/L 95  |
| 33) Benzene                | 5.37 | 78  | 733603  | 45.142  | ug/L 100 |
| 34) Trichloroethene        | 6.16 | 95  | 98114   | 24.446  | ug/L 98  |
| 35) Methylcyclohexane      | 6.39 | 83  | 32056   | 4.707   | ug/L 93  |
| 37) 1,2-Dichloropropane    | 6.41 | 63  | 11041   | 2.282   | ug/L 98  |
| 40) 4-Methyl-2-pentanone   | 7.44 | 43  | 129572  | 14.026  | ug/L 99  |
| 42) Toluene                | 7.61 | 91  | 6585254 | 374.955 | ug/L 99  |
| 46) Tetrachloroethene      | 8.20 | 164 | 22238   | 7.877   | ug/L 95  |
| 51) Chlorobenzene          | 9.10 | 112 | 24394   | 2.285   | ug/L 97  |
| 52) Ethylbenzene           | 9.23 | 91  | 1380941 | 69.825  | ug/L 100 |
| 53) m,p-Xylene             | 9.35 | 106 | 1922257 | 274.413 | ug/L 97  |
| 54) o-xylene               | 9.76 | 106 | 1112224 | 160.529 | ug/L 98  |

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Sample : K4895-16  
Misc : 5.0mL/MSVOA U/WATER  
ALS Vial : 24 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
BFDH3

Manual Integrations  
APPROVED

MMDadoda  
9/20/2019 12:43:46 PM

Quant Time: Sep 20 05:55:52 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM091919WMA.M  
Quant Title : VOC Analysis  
QLast Update : Fri Sep 20 04:02:05 2019  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|-------|------|----------|--------|-------|----------|
| 56) Isopropylbenzene    | 10.14 | 105  | 104923   | 5.616  | uq/L  | 99       |
| 63) 1,4-Dichlorobenzene | 11.49 | 146  | 12194    | 1.546  | uq/L  | 91       |
| 65) 1,2-Dichlorobenzene | 11.85 | 146  | 110135   | 14.076 | uq/L  | 97       |

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

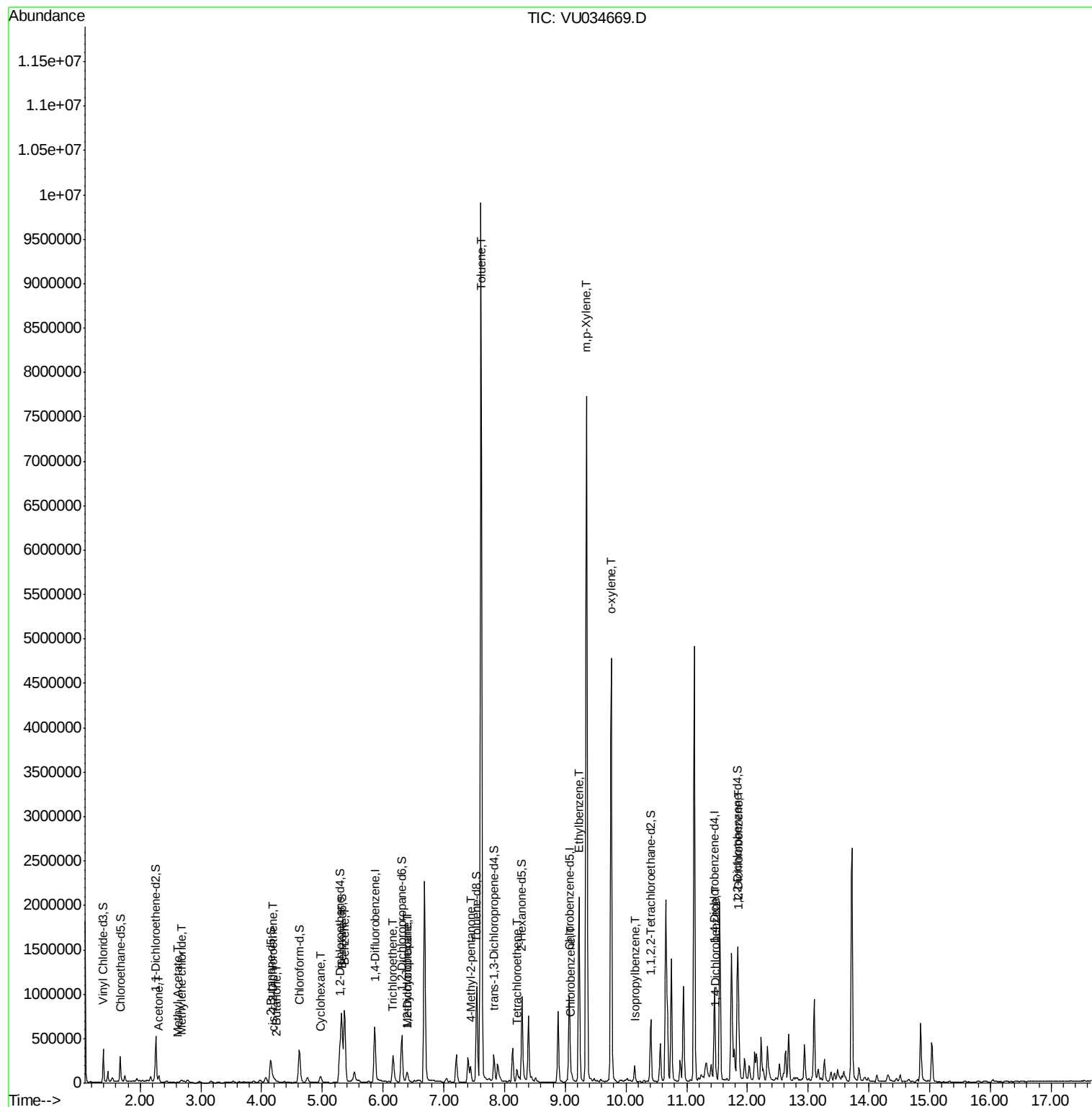
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Data File : VU034669.D  
Acq On : 20 Sep 2019 00:10  
Operator : JC/SP  
Sample : K4895-16  
Misc : 5.0mL/MSVOA U/WATER  
ALS Vial : 24 Sample Multiplier: 1

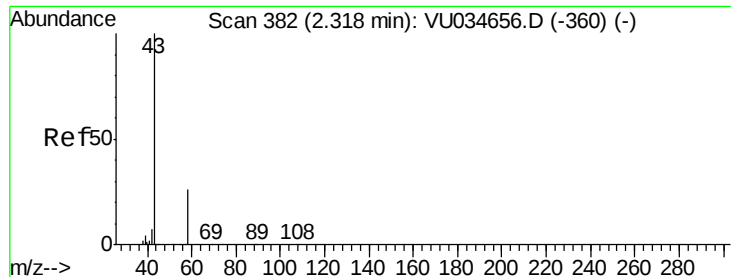
Instrument :  
MSVOA\_U  
ClientSampleId :  
BFDH3

Manual Integrations  
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9/20/2019 12:43:46 PM

Quant Time: Sep 20 05:55:52 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM091919WMA.M  
Quant Title : VOC Analysis  
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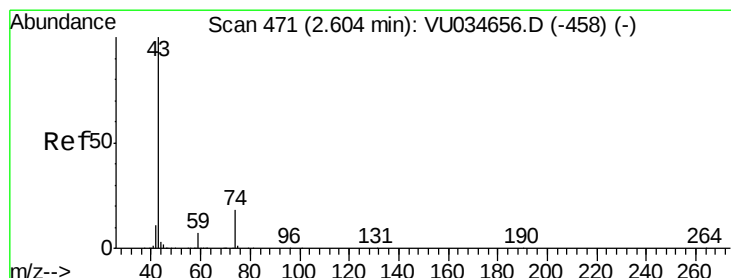
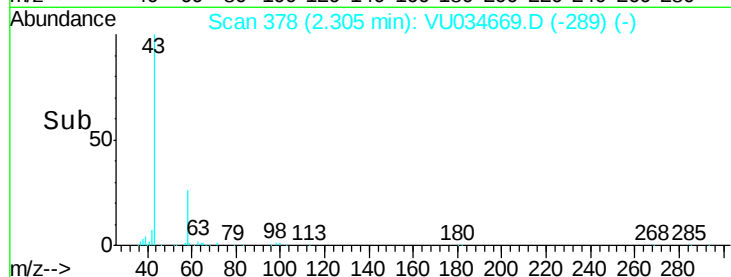
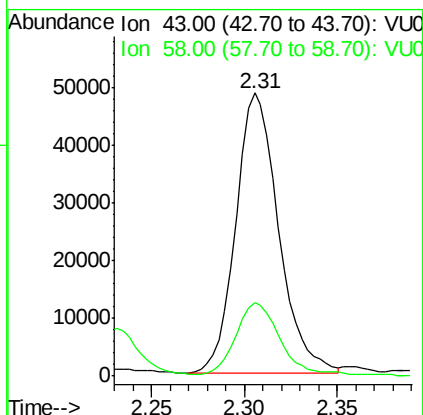
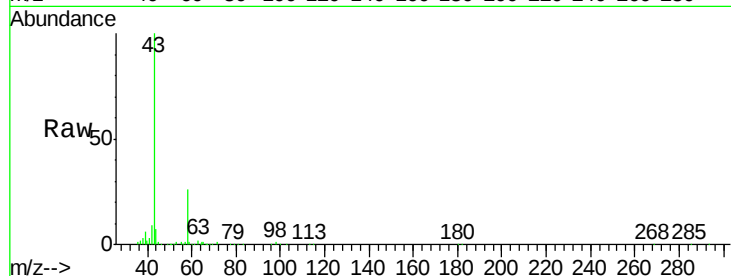
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Acetone  
Concen: 17.690 ug/L  
RT: 2.31 min Scan# 378  
Delta R.T. -0.01 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Instrument :  
MSVOA\_U  
ClientSampled :  
BFDH3

| Tot Ion   | 43   | Resp  | 78613 |
|-----------|------|-------|-------|
| Ion Ratio | 100  | Lower | Upper |
| 43        | 100  | 0.0   | 53.4  |
| 58        | 25.5 |       |       |

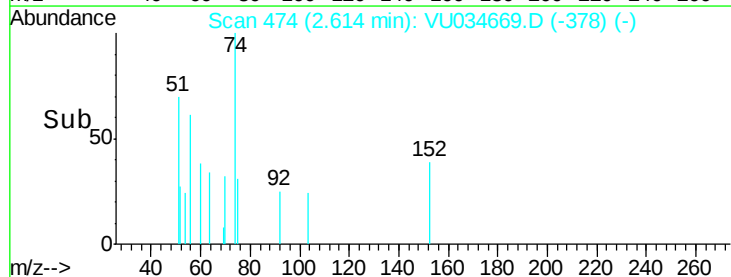
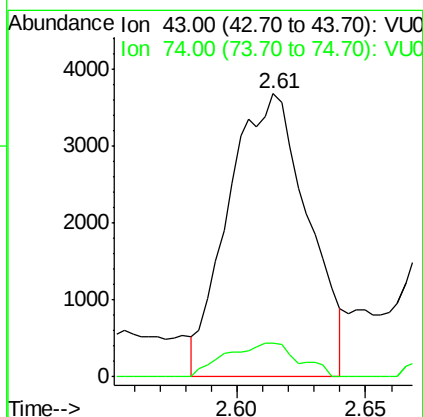
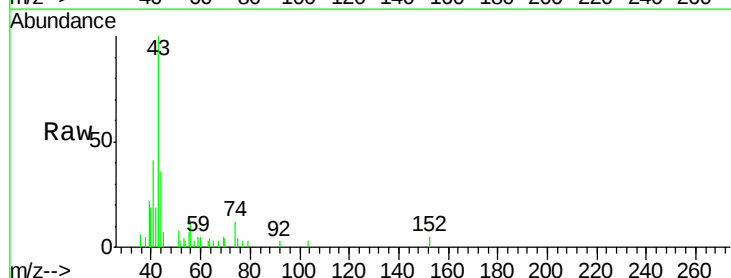
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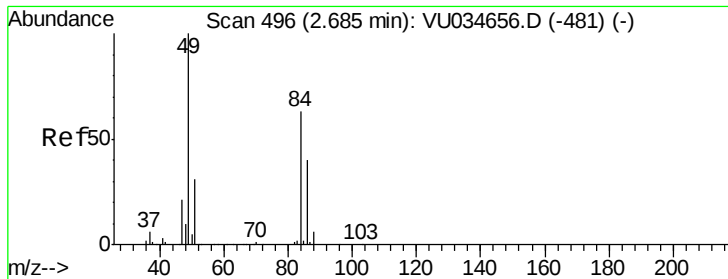
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#15  
Methyl Acetate  
Concen: 1.329 ug/L m  
RT: 2.61 min Scan# 474  
Delta R.T. 0.01 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

| Tgt Ion   | 43  | Resp  | 7888  |
|-----------|-----|-------|-------|
| Ion Ratio | 100 | Lower | Upper |
| 43        | 100 | 14.4  | 21.6# |
| 74        | 3.5 |       |       |





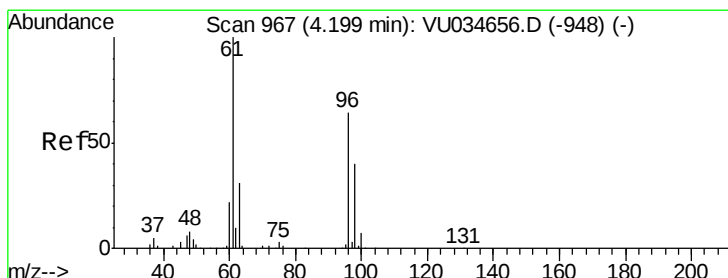
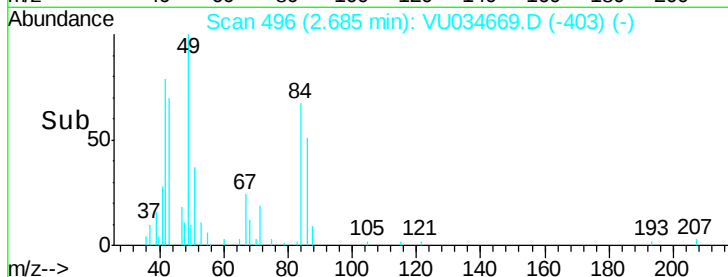
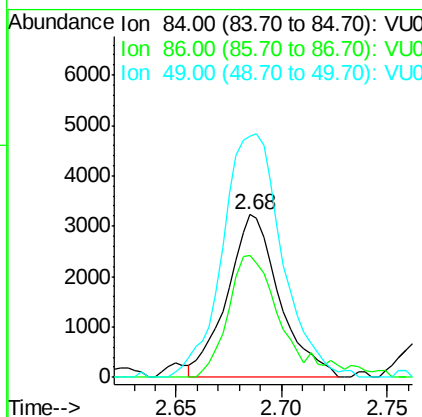
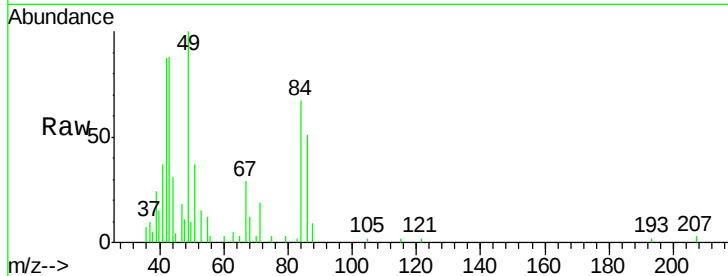
#16  
Methylene chloride  
Concen: 1.378 ug/L  
RT: 2.68 min Scan# 496  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Instrument :  
MSVOA\_U  
ClientSampled :  
BFDH3

| Tot Ion | 84    | Resp  | 5562  |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 84      | 100   |       |       |
| 86      | 75.3  | 43.0  | 80.0  |
| 49      | 148.3 | 109.7 | 203.7 |

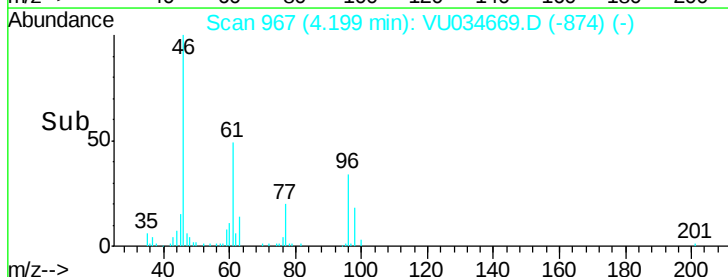
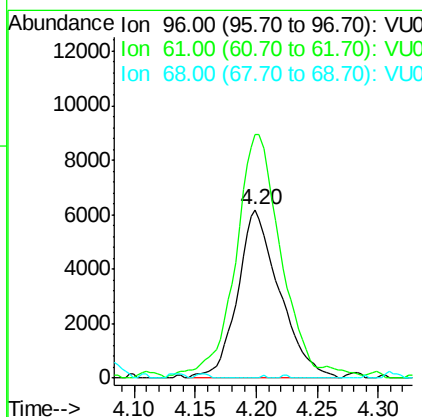
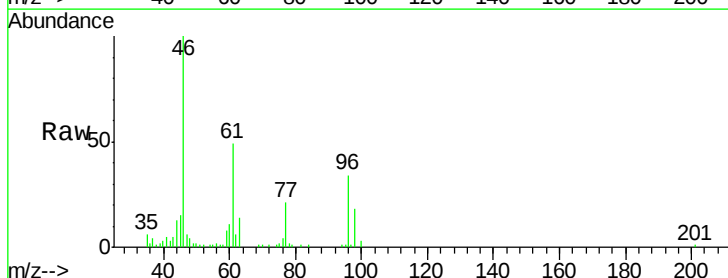
Manual Integrations  
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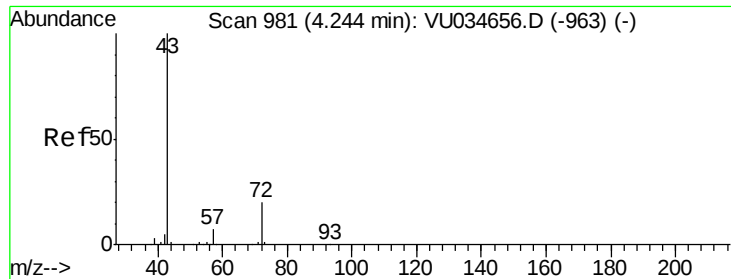
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#20  
cis-1,2-Dichloroethene  
Concen: 3.611 ug/L  
RT: 4.20 min Scan# 967  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

| Tgt Ion | 96    | Resp  | 14706 |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 96      | 100   |       |       |
| 61      | 144.4 | 108.8 | 202.2 |
| 68      | 0.0   | 0.0   | 0.0   |





#22

2-Butanone

Concen: 3.839 ug/L m

RT: 4.25 min Scan# 983

Delta R.T. 0.01 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

Instrument :

MSVOA\_U

ClientSampled :

BFDH3

Tot Ion: 43 Resp: 20294

Ion Ratio Lower Upper

43 100

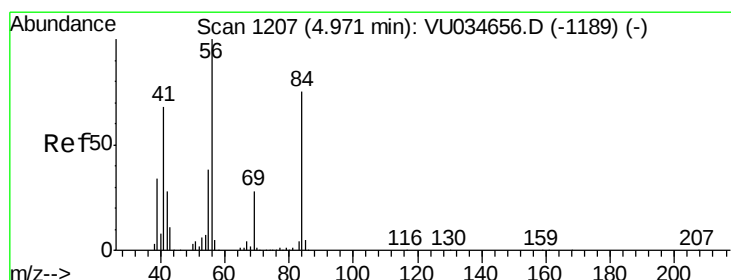
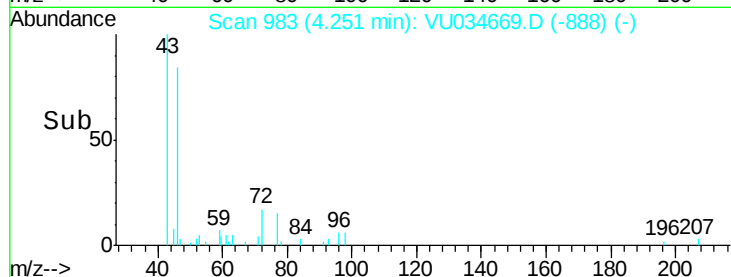
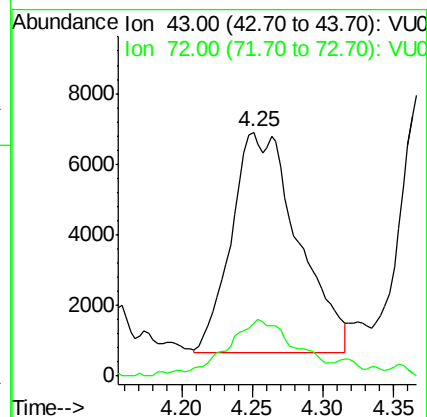
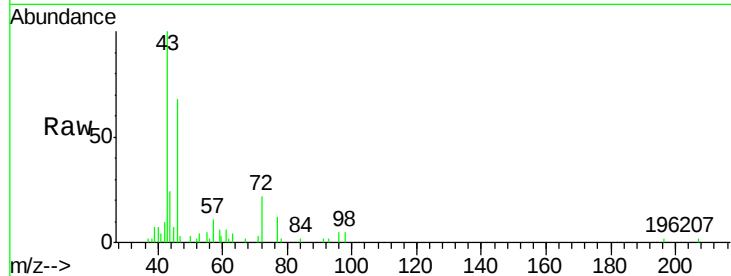
72 6.2 10.2 30.6#

Manual Integrations

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9/20/2019 12:43:46 PM



#29

Cyclohexane

Concen: 4.971 ug/L

RT: 4.97 min Scan# 1207

Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

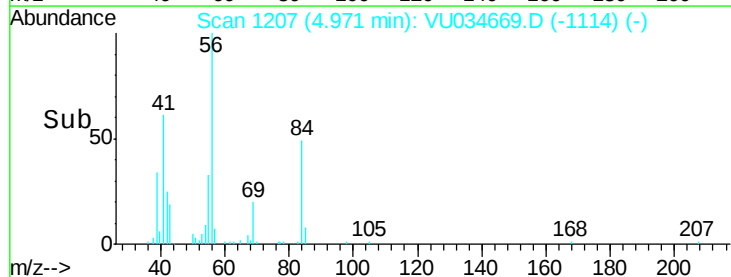
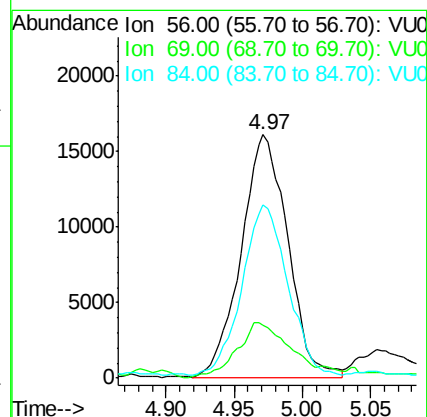
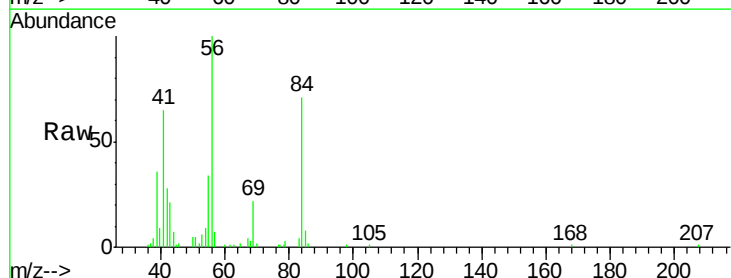
Tgt Ion: 56 Resp: 38447

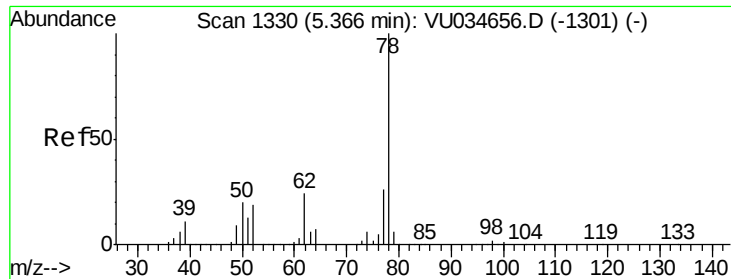
Ion Ratio Lower Upper

56 100

69 25.1 21.7 32.5

84 68.7 58.8 88.2





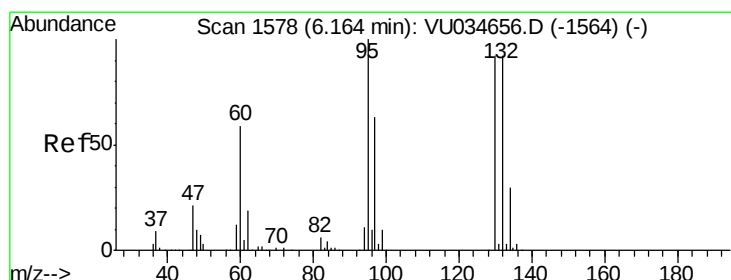
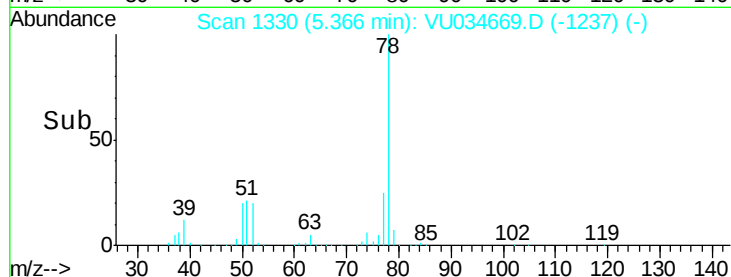
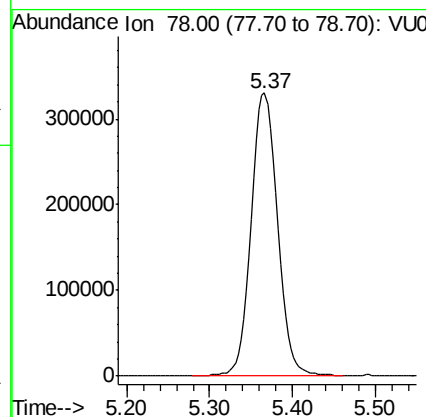
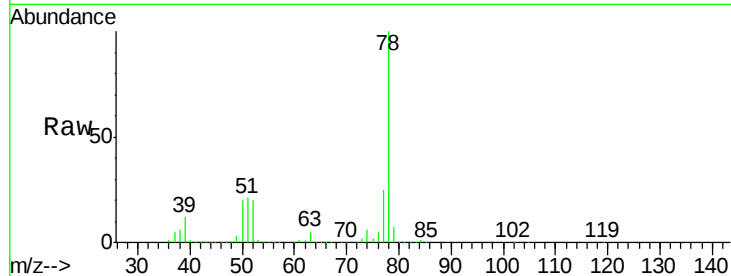
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Benzene  
Concen: 45.142 ug/L  
RT: 5.37 min Scan# 1330  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Instrument :  
MSVOA\_U  
ClientSampleId :  
BFDH3

Tgt Ion: 78 Resp: 733603

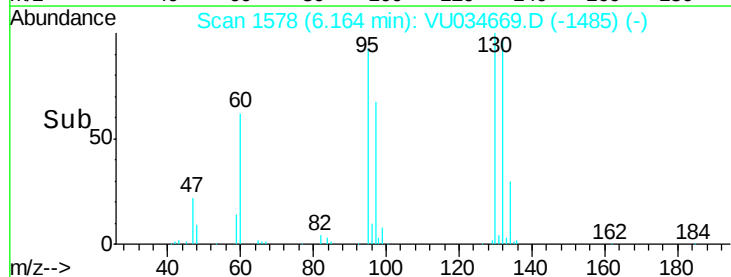
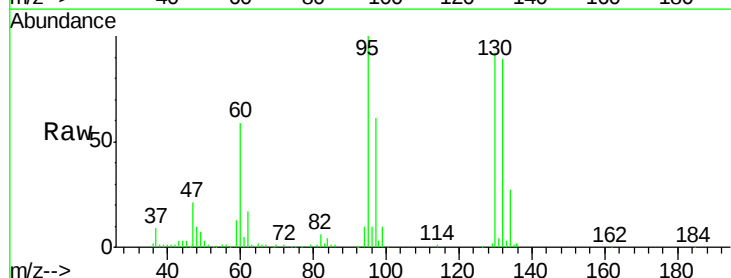
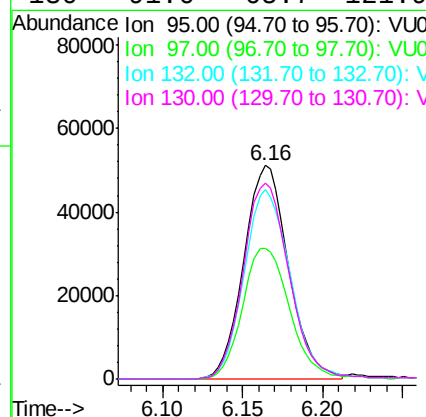
Manual Integrations  
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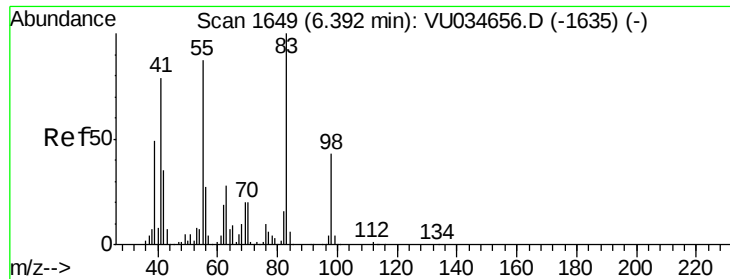
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#34  
Trichloroethene  
Concen: 24.446 ug/L  
RT: 6.16 min Scan# 1578  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Tgt Ion: 95 Resp: 98114  
Ion Ratio Lower Upper  
95 100  
97 61.2 43.7 81.1  
132 88.8 61.0 113.2  
130 91.6 65.7 121.9





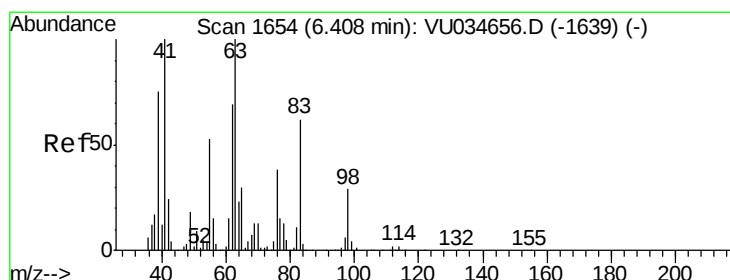
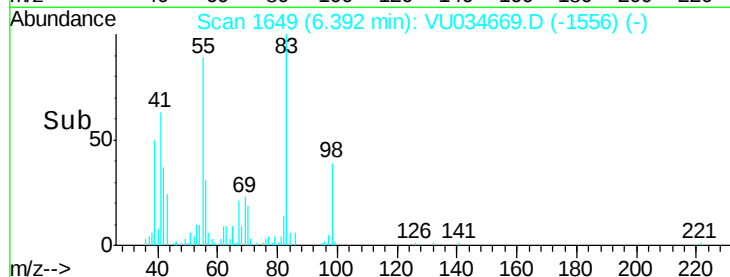
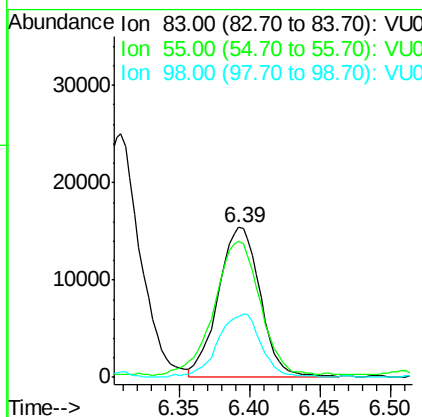
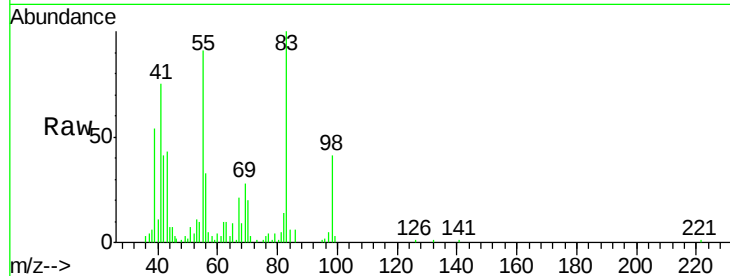
#35  
Methvlcvclohexane  
Concen: 4.707 ug/L  
RT: 6.39 min Scan# 1649  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Instrument :  
MSVOA\_U  
ClientSampled :  
BFDH3

| Tot Ion   | 83    | Resp  | 32056 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 83        | 100   |       |       |
| 55        | 97.9  | 71.6  | 107.4 |
| 98        | 42.7  | 35.7  | 53.5  |

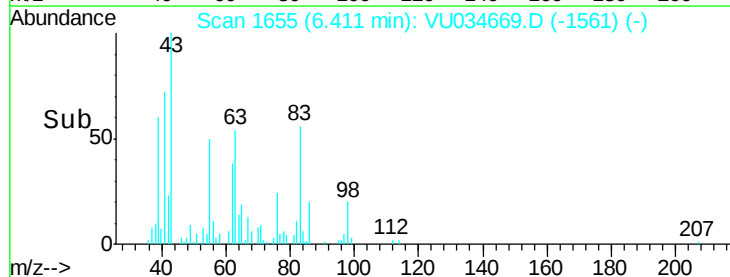
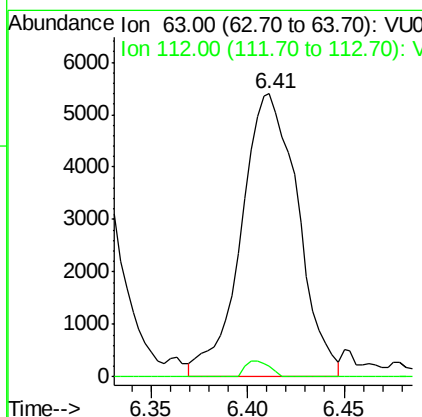
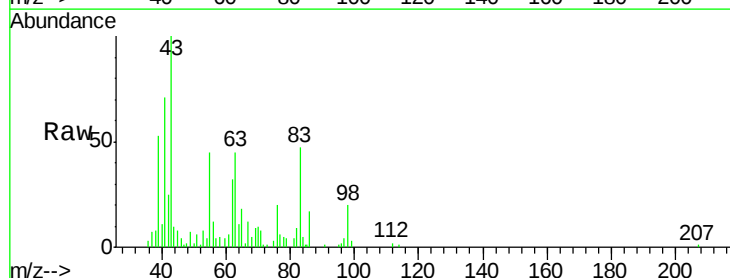
Manual Integrations  
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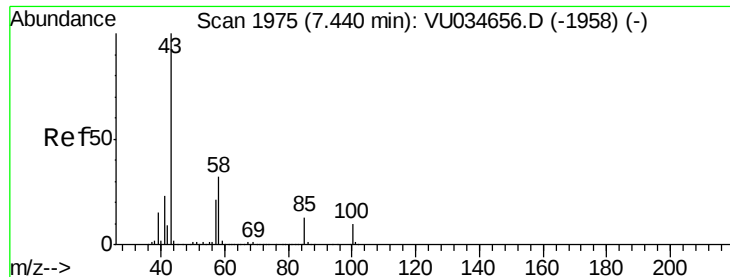
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#37  
1,2-Dichloropropane  
Concen: 2.282 ug/L  
RT: 6.41 min Scan# 1655  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

| Tgt Ion   | 63    | Resp  | 11041 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 63        | 100   |       |       |
| 112       | 2.4   | 2.4   | 3.6   |





#40

4-Methyl-2-pentanone

Concen: 14.026 ug/L

RT: 7.44 min Scan# 1975

Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

Instrument :

MSVOA\_U

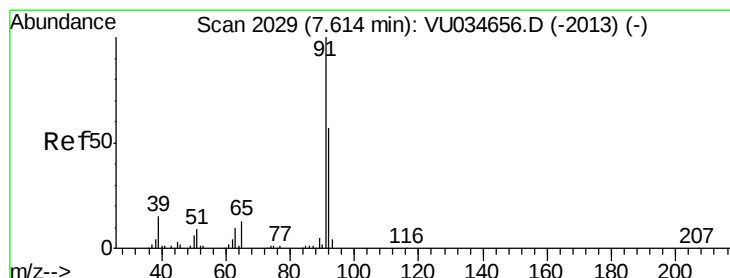
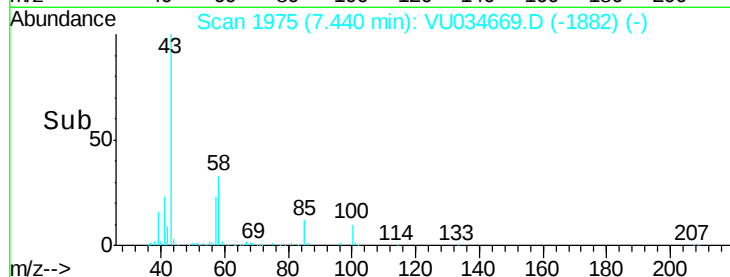
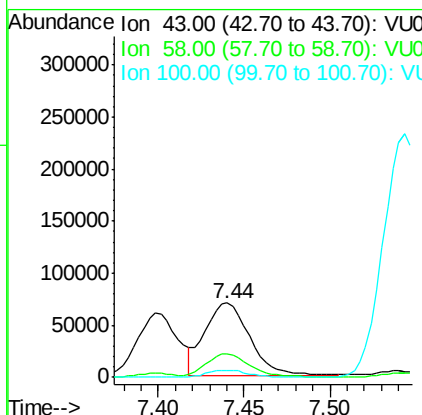
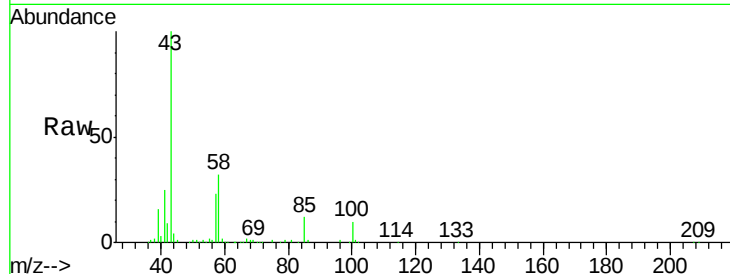
ClientSampled :

BFDH3

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 43    | Resp: | 129572 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 58       | 32.1  | 25.2  | 37.8   |
| 100      | 9.6   | 7.7   | 11.5   |

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9/20/2019 12:43:46 PM



#42

Toluene

Concen: 374.955 ug/L

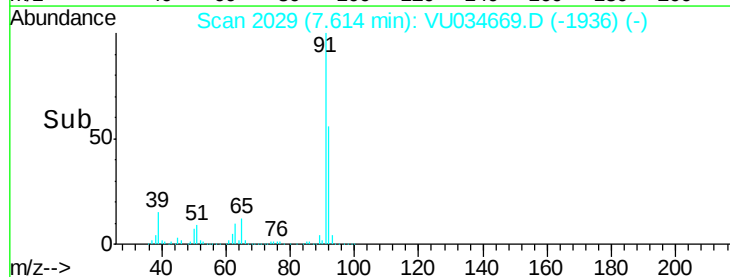
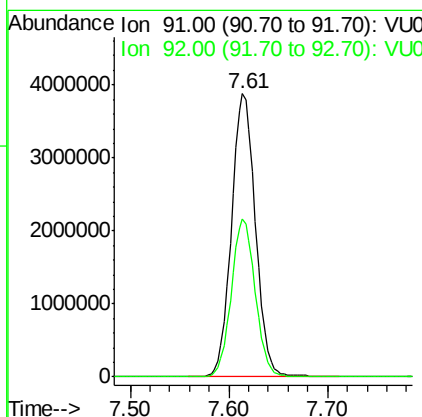
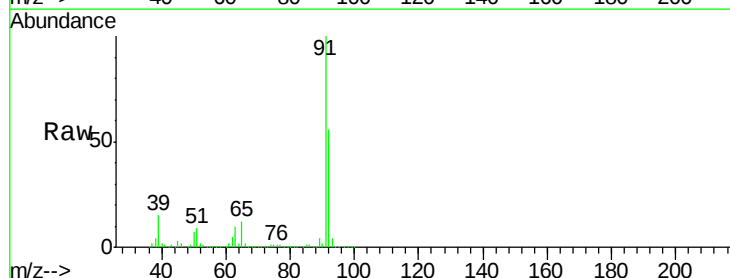
RT: 7.61 min Scan# 2029

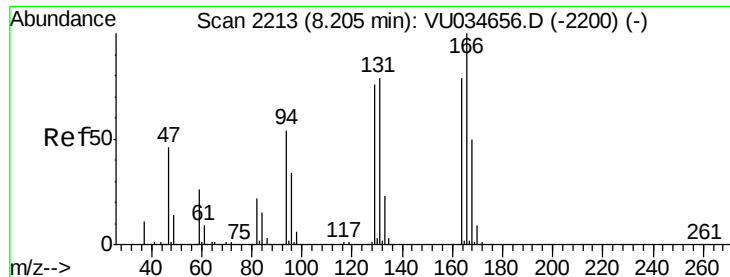
Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 91    | Resp: | 6585254 |
| Ion      | Ratio | Lower | Upper   |
| 91       | 100   |       |         |
| 92       | 55.6  | 38.2  | 71.0    |





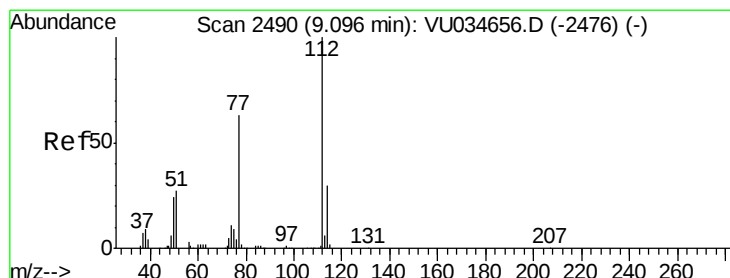
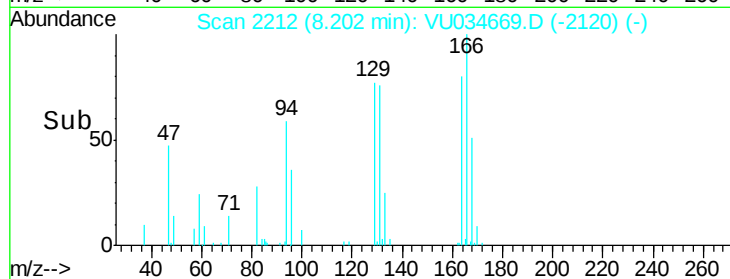
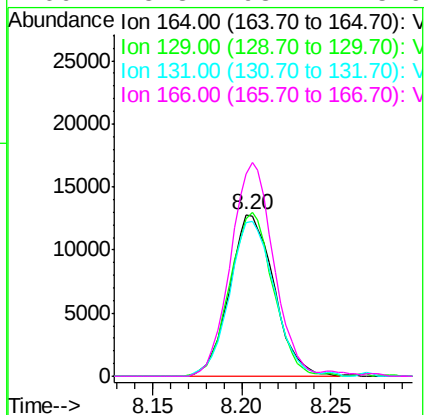
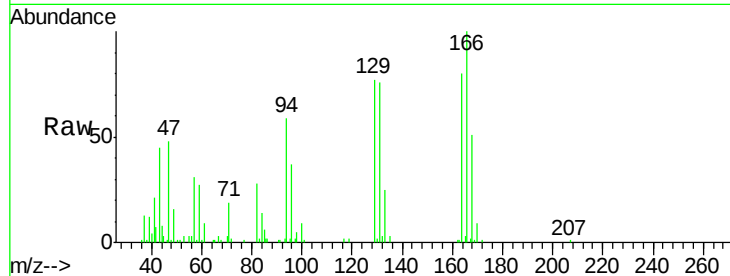
#46  
Tetrachloroethene  
Concen: 7.877 ug/L  
RT: 8.20 min Scan# 2212  
Delta R.T. -0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

Instrument :  
MSVOA\_U  
ClientSampled :  
BFDH3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 129     | 97.1  | 71.9  | 133.5 |
| 131     | 94.7  | 66.3  | 123.1 |
| 166     | 125.3 | 93.4  | 173.6 |

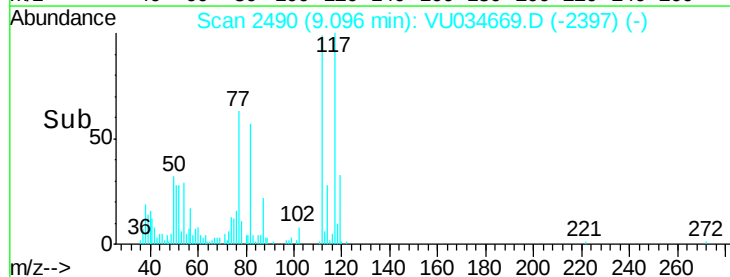
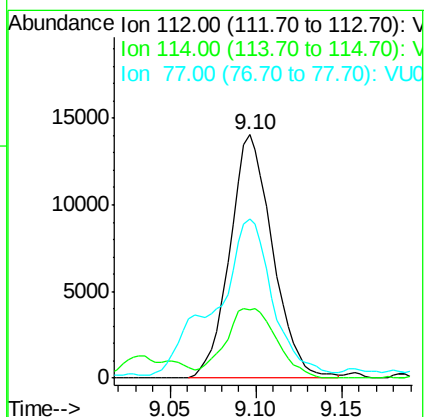
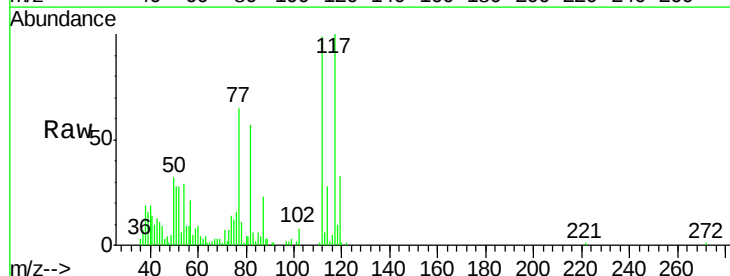
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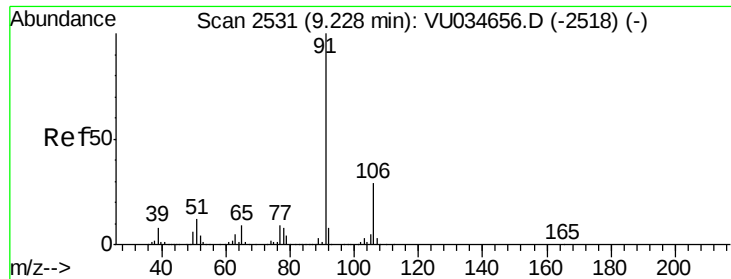
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9/20/2019 12:43:46 PM



#51  
Chlorobenzene  
Concen: 2.285 ug/L  
RT: 9.10 min Scan# 2490  
Delta R.T. 0.00 min  
Lab File: VU034669.D  
Acq: 20 Sep 2019 00:10

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 114     | 28.3  | 22.8  | 42.4  |
| 77      | 65.4  | 51.5  | 77.3  |





#52

Ethylbenzene

Concen: 69.825 ug/L

RT: 9.23 min Scan# 2531

Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

Instrument :

MSVOA\_U

ClientSampleID :

BFDH3

Tot Ion: 91 Resp: 1380941

Ion Ratio Lower Upper

91 100

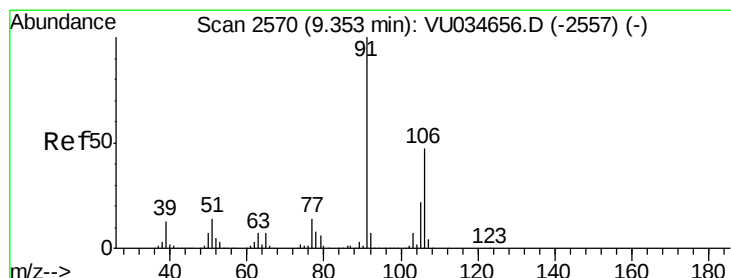
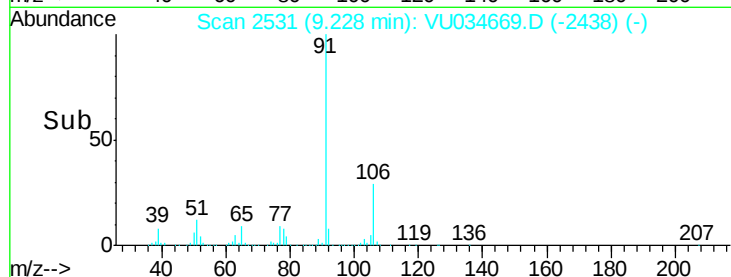
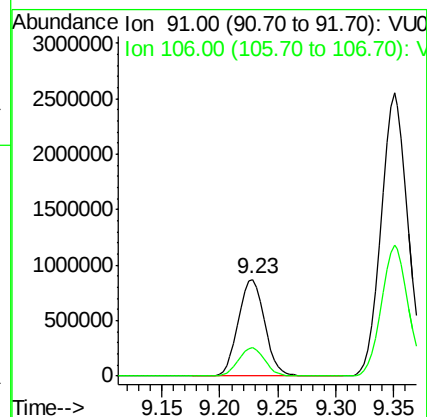
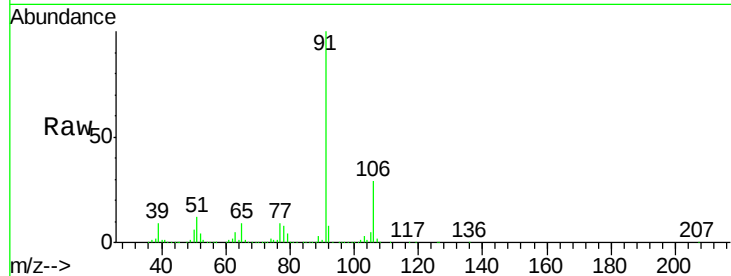
106 29.3 20.6 38.4

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9/20/2019 12:43:46 PM



#53

m,p-Xylene

Concen: 274.413 ug/L

RT: 9.35 min Scan# 2569

Delta R.T. -0.00 min

Lab File: VU034669.D

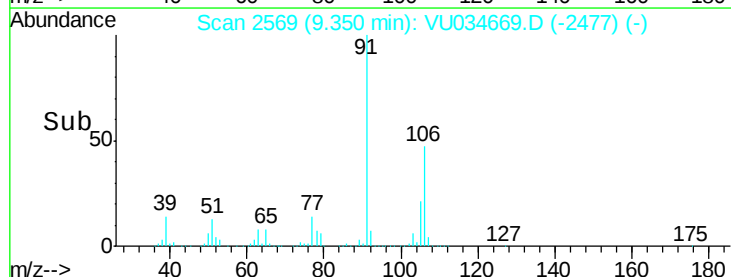
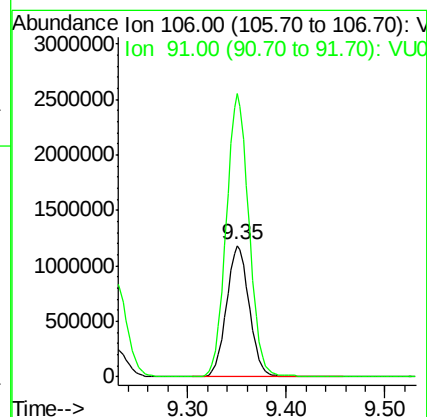
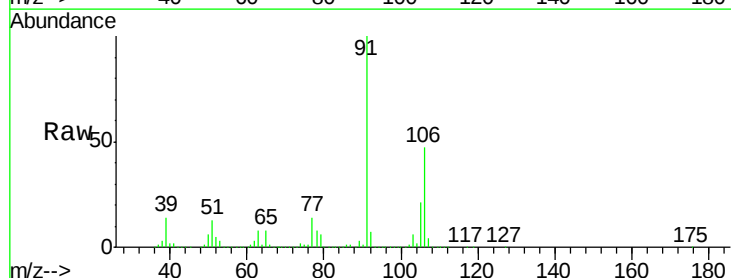
Acq: 20 Sep 2019 00:10

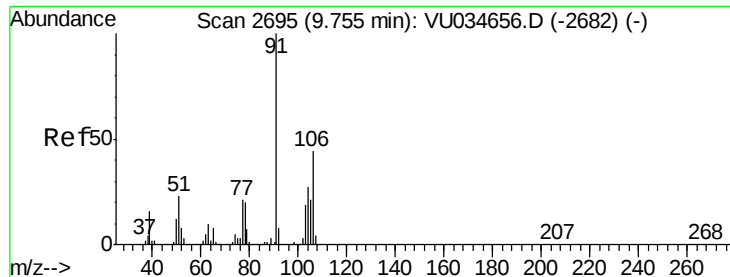
Tgt Ion:106 Resp: 1922257

Ion Ratio Lower Upper

106 100

91 215.0 146.9 272.7





#54

o-xylene

Concen: 160.529 ug/L

RT: 9.76 min Scan# 2695

Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

Instrument :

MSVOA\_U

ClientSampled :

BFDH3

Tot Ion:106 Resp: 1112224

Ion Ratio Lower Upper

106 100

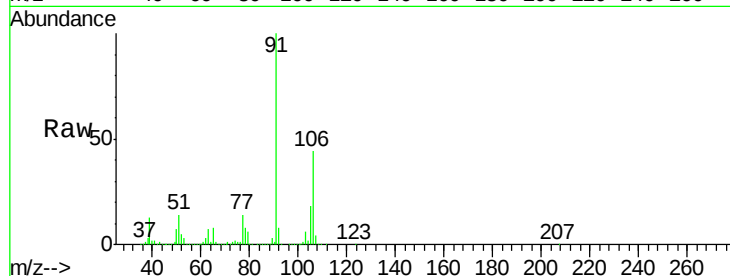
91 225.0 155.6 289.0

Manual Integrations

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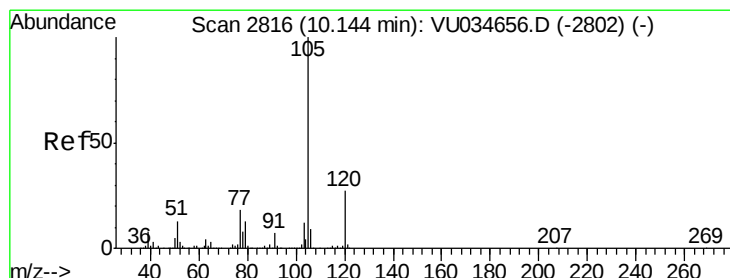
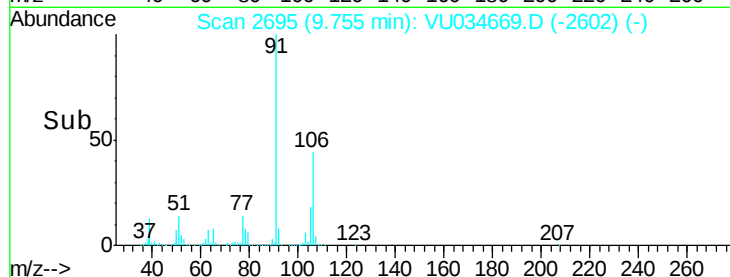
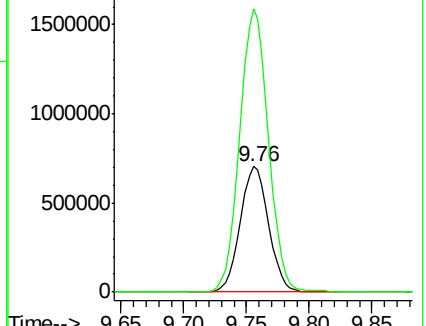
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9/20/2019 12:43:46 PM



Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VU0



#56

Isopropylbenzene

Concen: 5.616 ug/L

RT: 10.14 min Scan# 2816

Delta R.T. 0.00 min

Lab File: VU034669.D

Acq: 20 Sep 2019 00:10

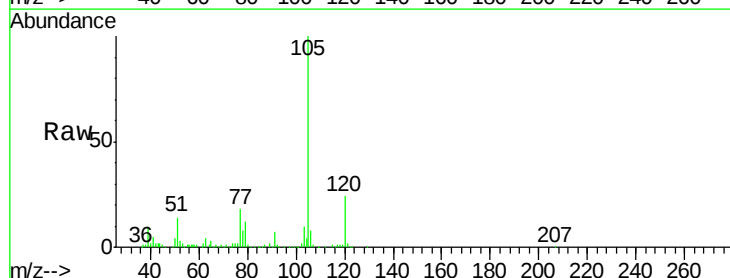
Tgt Ion:105 Resp: 104923

Ion Ratio Lower Upper

105 100

120 25.1 20.4 30.6

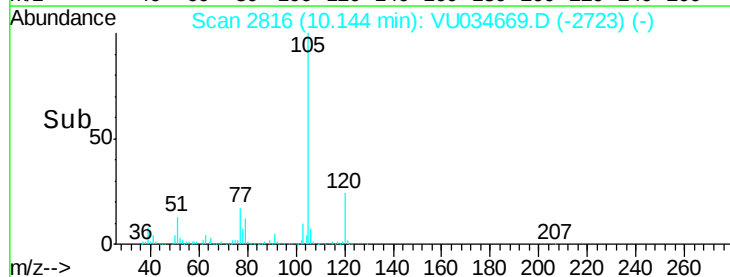
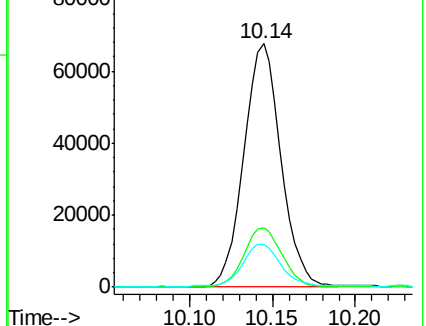
77 17.3 14.2 21.4

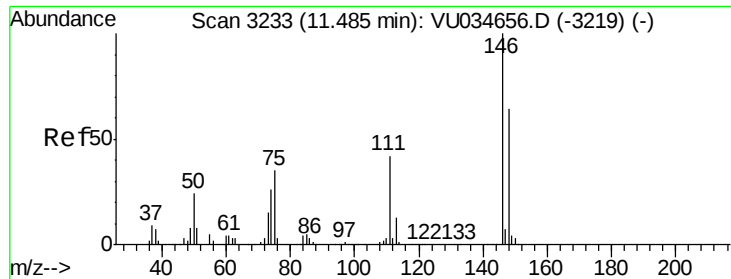


Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

Ion 77.00 (76.70 to 77.70): VU0





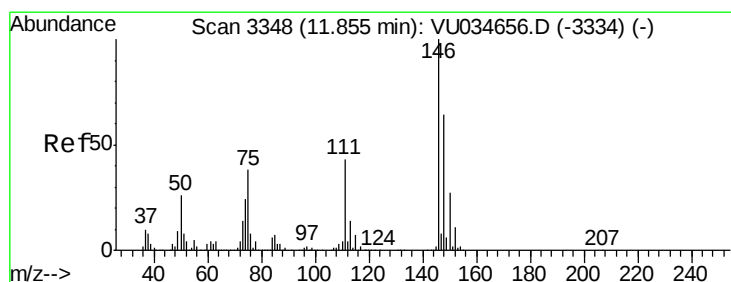
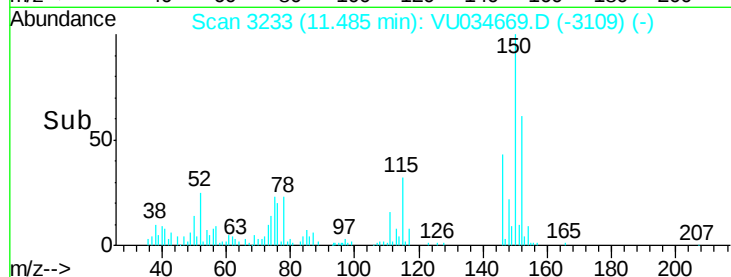
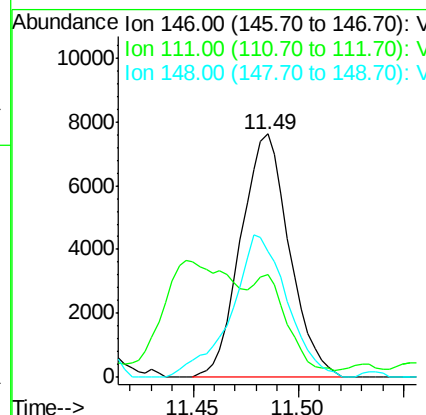
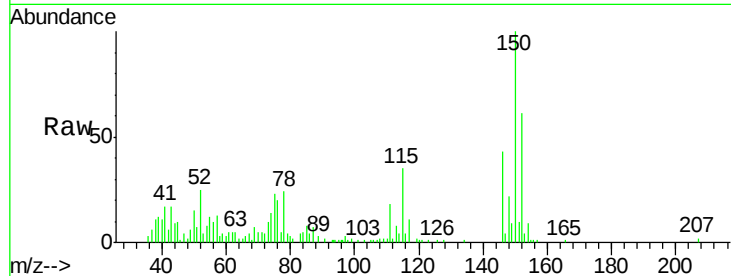
#63  
 1,4-Dichlorobenzene  
 Concen: 1.546 ug/L  
 RT: 11.49 min Scan# 3233  
 Delta R.T. 0.00 min  
 Lab File: VU034669.D  
 Acq: 20 Sep 2019 00:10

Instrument :  
 MSVOA\_U  
 ClientSampled :  
 BFDH3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 42.2  | 29.5  | 54.9  |
| 148     | 51.5  | 44.4  | 82.4  |

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#65  
 1,2-Dichlorobenzene  
 Concen: 14.076 ug/L  
 RT: 11.85 min Scan# 3348  
 Delta R.T. 0.00 min  
 Lab File: VU034669.D  
 Acq: 20 Sep 2019 00:10

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 42.8  | 35.2  | 52.8  |
| 148     | 63.8  | 53.0  | 79.6  |

