

Data File : VU030355.D  
Acq On : 23 Mar 2019 21:07  
Operator : JC/SP  
Sample : K2063-05  
Misc : 5.0mL/MSVOA\_U/WATER  
ALS Vial : 21 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
DB6R7

Quant Time: Mar 24 02:13:42 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM032319WMA.M  
Quant Title : VOC Analysis  
QLast Update : Sun Mar 24 02:05:17 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.88  | 114  | 513826   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 505797   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 262203   | 50.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40    | 65    | 157060   | 37.98    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 75.96%  |
| 7) Chloroethane-d5             | 1.68    | 69    | 132278   | 40.36    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 80.72%  |
| 11) 1,1-Dichloroethene-d2      | 2.27    | 63    | 232384   | 29.62    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 59.24%# |
| 21) 2-Butanone-d5              | 4.17    | 46    | 357417   | 91.95    | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 91.95%  |
| 24) Chloroform-d               | 4.65    | 84    | 291593   | 40.93    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 81.86%  |
| 26) 1,2-Dichloroethane-d4      | 5.31    | 65    | 196538   | 42.16    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 84.32%  |
| 32) Benzene-d6                 | 5.35    | 84    | 627045   | 43.23    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 86.46%  |
| 36) 1,2-Dichloropropane-d6     | 6.33    | 67    | 215174   | 43.36    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 86.72%  |
| 41) Toluene-d8                 | 7.58    | 98    | 609112   | 46.76    | ug/L | 0.01    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 93.52%  |
| 43) trans-1,3-Dichloropropene- | 7.85    | 79    | 111302   | 47.70    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 95.40%  |
| 47) 2-Hexanone-d5              | 8.31    | 63    | 295326   | 109.82   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 109.82% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43   | 84    | 328076   | 46.20    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 92.40%  |
| 64) 1,2-Dichlorobenzene-d4     | 11.86   | 152   | 233050   | 44.36    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 88.72%  |

#### Target Compounds

|                                |      |     |         |                | Qvalue |
|--------------------------------|------|-----|---------|----------------|--------|
| 6) Bromomethane                | 1.62 | 94  | 3184    | 1.154 ug/L     | 97     |
| 8) Chloroethane                | 1.70 | 64  | 3521    | 1.037 ug/L #   | 63     |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.29 | 101 | 14733   | 3.929 ug/L     | 91     |
| 12) 1,1-Dichloroethene         | 2.27 | 96  | 2122    | 0.577 ug/L #   | 1      |
| 13) Acetone                    | 2.32 | 43  | 212958  | 54.171 ug/L    | 91     |
| 15) Methyl Acetate             | 2.63 | 43  | 35199   | 5.847 ug/L #   | 100    |
| 18) Methyl tert-butyl Ether    | 3.00 | 73  | 629628  | 49.365 ug/L #  | 1      |
| 22) 2-Butanone                 | 4.26 | 43  | 238371  | 50.165 ug/L    | 97     |
| 25) Chloroform                 | 4.67 | 83  | 38439   | 5.109 ug/L     | 99     |
| 27) 1,2-Dichloroethane         | 5.41 | 62  | 1392428 | 235.863 ug/L # | 88     |
| 29) Cyclohexane                | 5.00 | 56  | 2329297 | 304.313 ug/L   | 97     |
| 35) Methylcyclohexane          | 6.41 | 83  | 1529595 | 219.606 ug/L   | 95     |
| 37) 1,2-Dichloropropane        | 6.42 | 63  | 15118   | 3.094 ug/L #   | 95     |
| 40) 4-Methyl-2-pentanone       | 7.49 | 43  | 71439   | 8.704 ug/L #   | 82     |
| 45) 1,1,2-Trichloroethane      | 8.05 | 97  | 96122   | 23.282 ug/L #  | 21     |
| 48) 2-Hexanone                 | 8.36 | 43  | 335533  | 49.881 ug/L #  | 93     |
| 50) 1,2-Dibromoethane          | 8.58 | 107 | 1513539 | 341.592 ug/L   | 100    |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_U\DATA\VU032319\  
Quantitation Report (Not Reviewed)

Data File : VU030355.D  
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Instrument :  
MSVOA\_U  
ClientSampleId :  
DB6R7

Quant Time: Mar 24 02:13:42 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM032319WMA.M  
Quant Title : VOC Analysis  
QLast Update : Sun Mar 24 02:05:17 2019  
Response via : Initial Calibration

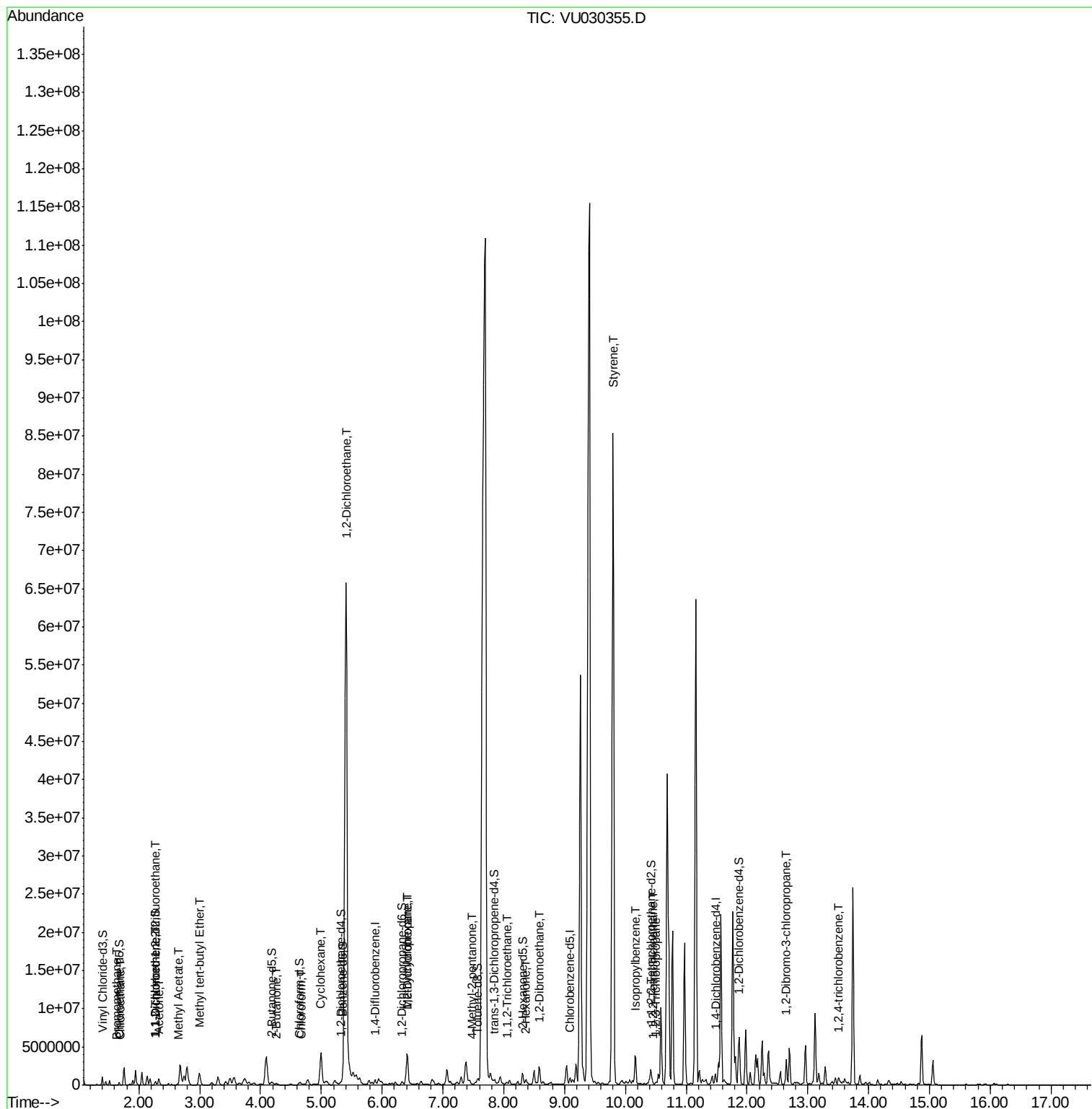
| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 55) Styrene                    | 9.81  | 104  | 5075762  | 432.062 | ug/L # | 38       |
| 56) Isopropylbenzene           | 10.17 | 105  | 2368320  | 131.152 | ug/L   | 99       |
| 58) 1,1,2,2-Tetrachloroethane  | 10.46 | 83   | 26564    | 3.491   | ug/L # | 48       |
| 59) 1,2,3-Trichloropropane     | 10.49 | 75   | 20784    | 3.495   | ug/L # | 55       |
| 66) 1,2-Dibromo-3-chloropropan | 12.65 | 75   | 12687    | 6.572   | ug/L # | 5        |
| 68) 1,2,4-trichlorobenzene     | 13.50 | 180  | 2807     | 0.503   | ug/L # | 1        |

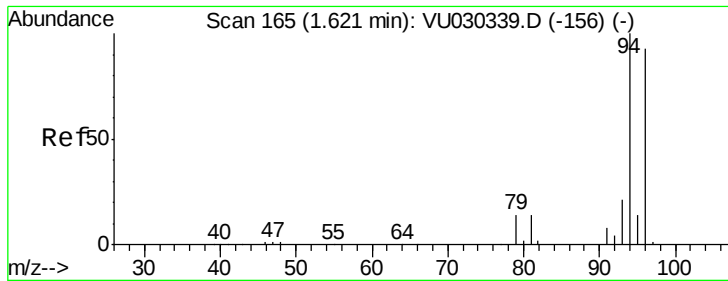
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : VOC Analysis  
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Response via : Initial Calibration





#6

Bromomethane

Concen: 1.154 ug/L

RT: 1.62 min Scan# 166

Delta R.T. 0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

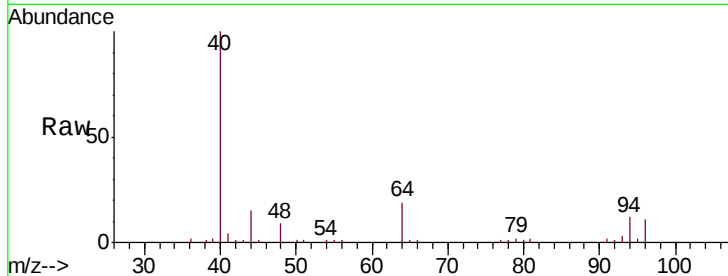
DB6R7

Tgt Ion: 94 Resp: 3184

Ion Ratio Lower Upper

94 100

96 89.3 64.8 120.3



Abundance Ion 94.00 (93.70 to 94.70): VU030339.D (-156) (-)

Ion 96.00 (95.70 to 96.70): VU030339.D (-156) (-)

1.62

2500

2000

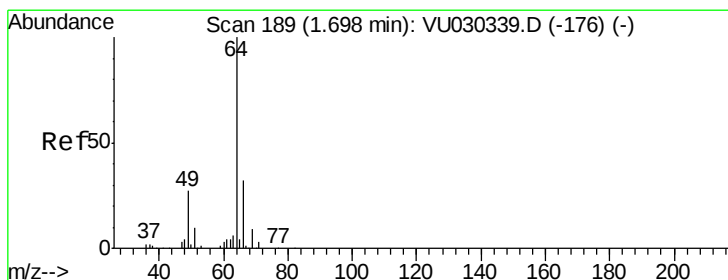
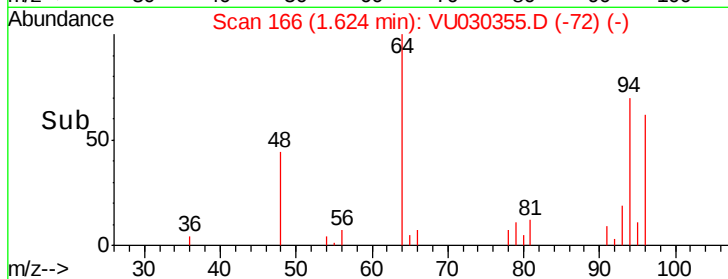
1500

1000

500

0

Time--> 1.58 1.60 1.62 1.64 1.66



#8

Chloroethane

Concen: 1.037 ug/L

RT: 1.70 min Scan# 189

Delta R.T. -0.00 min

Lab File: VU030355.D

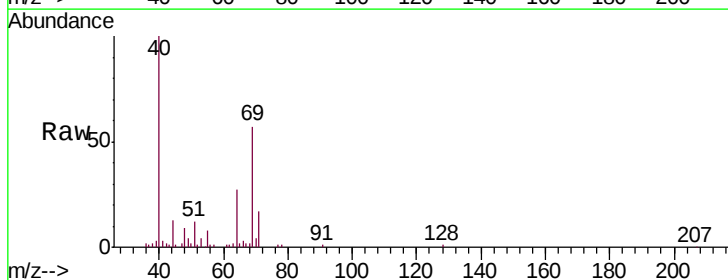
Acq: 23 Mar 2019 21:07

Tgt Ion: 64 Resp: 3521

Ion Ratio Lower Upper

64 100

66 11.6 22.5 41.7#



Abundance Ion 64.00 (63.70 to 64.70): VU030339.D (-176) (-)

Ion 66.00 (65.70 to 66.70): VU030339.D (-176) (-)

1.70

6000

5000

4000

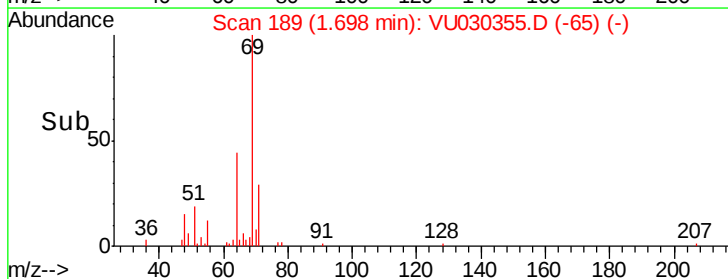
3000

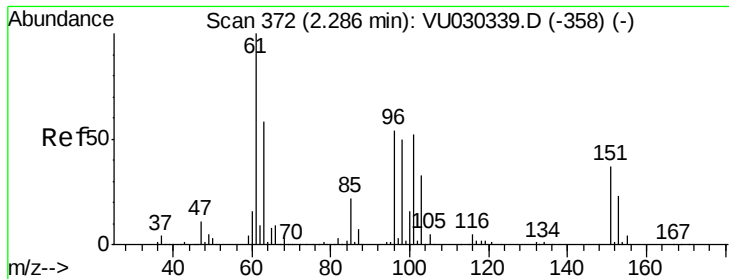
2000

1000

0

Time--> 1.68 1.70 1.72 1.74





#10

1,1,2-Trichloro-1,2,2-trifluoroethane

Concen: 3.929 ug/L

RT: 2.29 min Scan# 372

Delta R.T. -0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

DB6R7

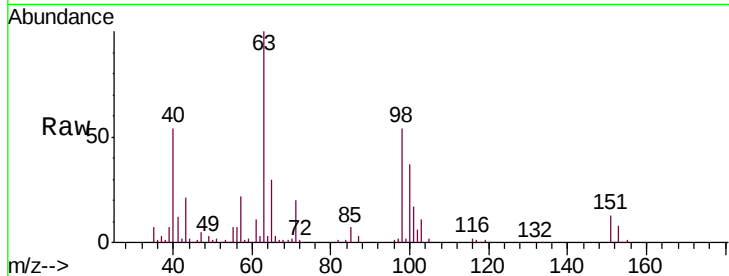
Tgt Ion: 101 Resp: 14733

Ion Ratio Lower Upper

101 100

85 36.7 34.8 52.2

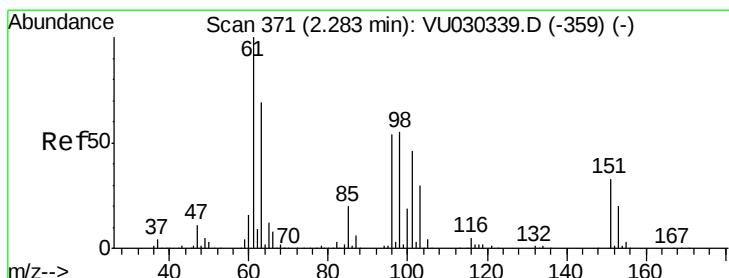
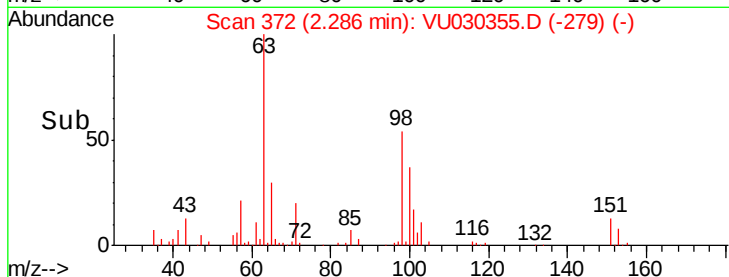
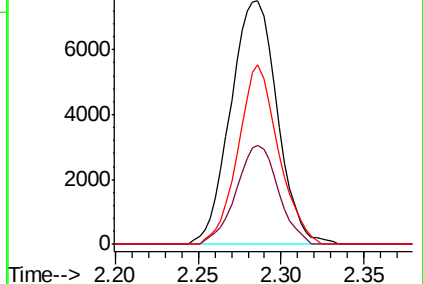
151 63.6 56.6 85.0



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 85.00 (84.70 to 85.70): VU0

Ion 151.00 (150.70 to 151.70): V



#12

1,1-Dichloroethene

Concen: 0.577 ug/L

RT: 2.27 min Scan# 367

Delta R.T. -0.01 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

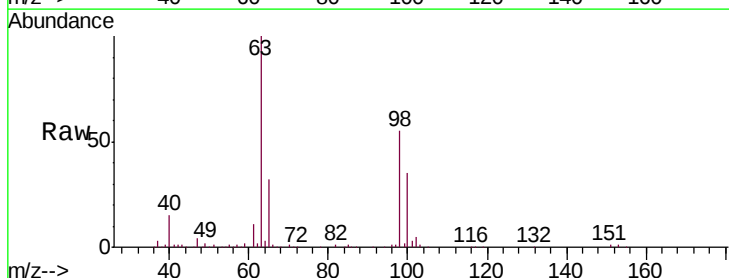
Tgt Ion: 96 Resp: 2122

Ion Ratio Lower Upper

96 100

61 1283.9 131.0 243.4#

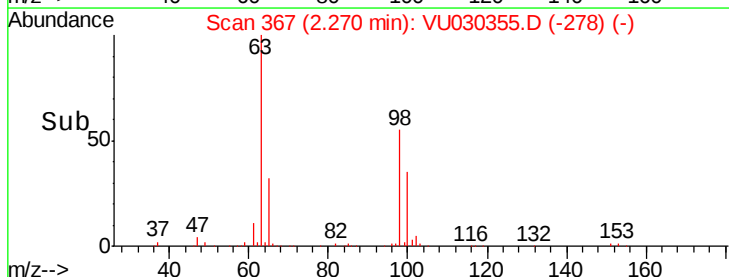
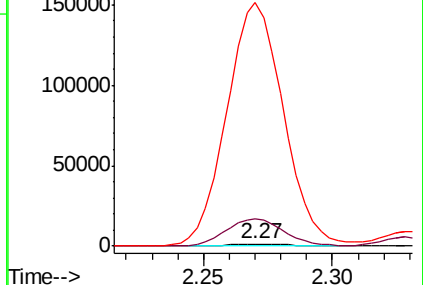
63 11224.9 92.4 171.6#

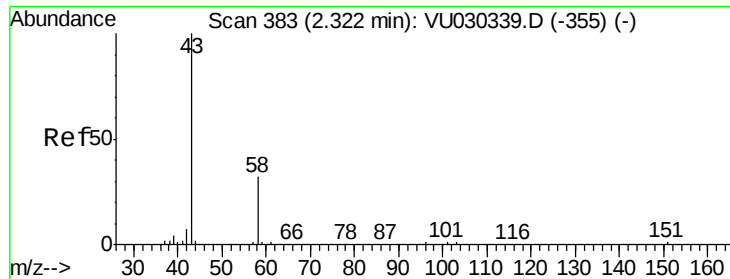


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.00 (60.70 to 61.70): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 54.171 ug/L

RT: 2.32 min Scan# 382

Delta R.T. -0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

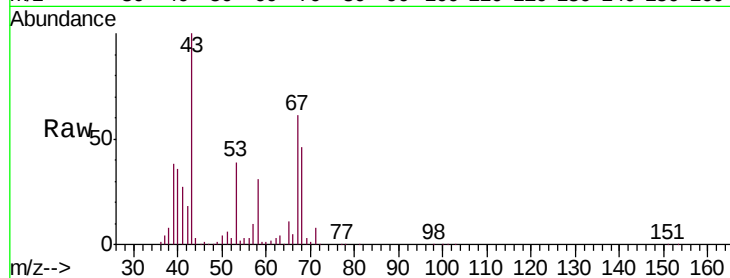
DB6R7

Tgt Ion: 43 Resp: 212958

Ion Ratio Lower Upper

43 100

58 26.5 0.0 62.8



Abundance Ion 43.00 (42.70 to 43.70): VU030339.D (-355) (-)

Ion 58.00 (57.70 to 58.70): VU030339.D (-355) (-)

2.32

120000

100000

80000

60000

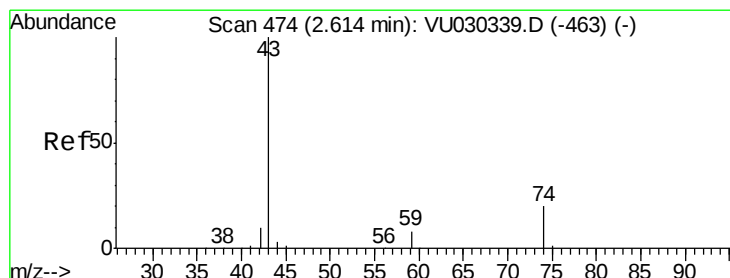
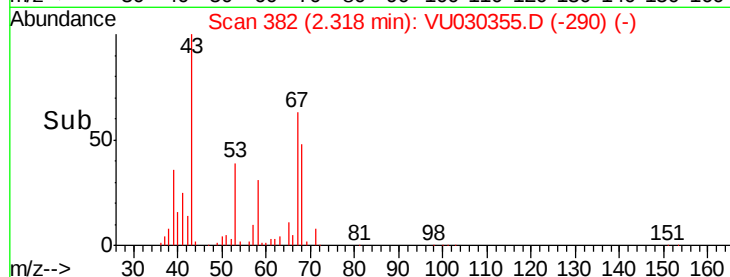
40000

20000

0

2.25 2.30 2.35 2.40

Time-->



#15

Methyl Acetate

Concen: 5.847 ug/L

RT: 2.63 min Scan# 480

Delta R.T. 0.02 min

Lab File: VU030355.D

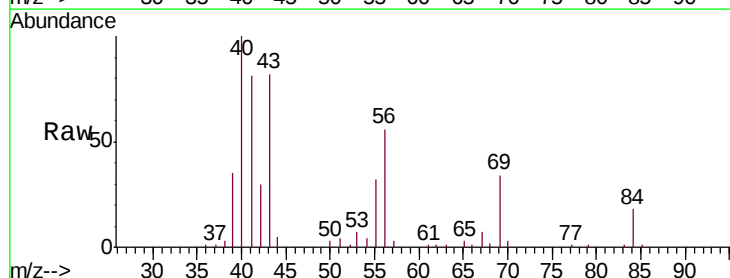
Acq: 23 Mar 2019 21:07

Tgt Ion: 43 Resp: 35199

Ion Ratio Lower Upper

43 100

74 0.0 0.0 0.0



Abundance Ion 43.00 (42.70 to 43.70): VU030339.D (-463) (-)

Ion 74.00 (73.70 to 74.70): VU030339.D (-463) (-)

2.63

120000

100000

80000

60000

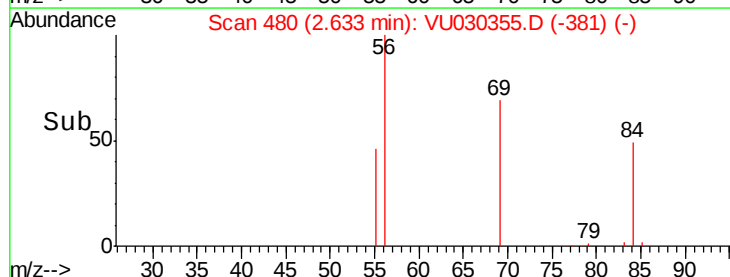
40000

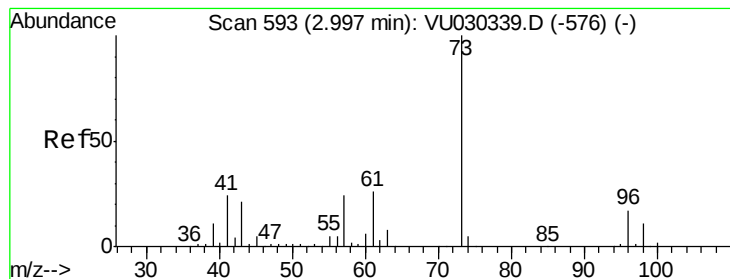
20000

0

2.60 2.65

Time-->





#18

Methyl tert-butyl Ether

Concen: 49.365 ug/L

RT: 3.00 min Scan# 593

Delta R.T. -0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

DB6R7

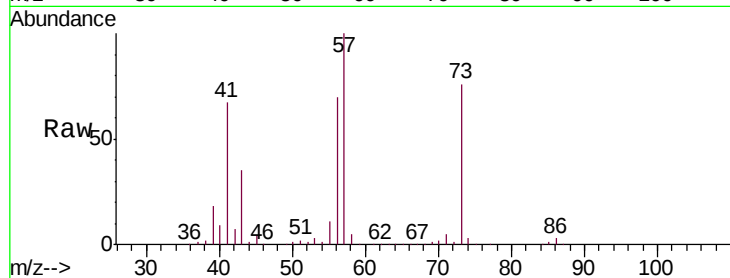
Tgt Ion: 73 Resp: 629628

Ion Ratio Lower Upper

73 100

43 44.9 16.6 24.8#

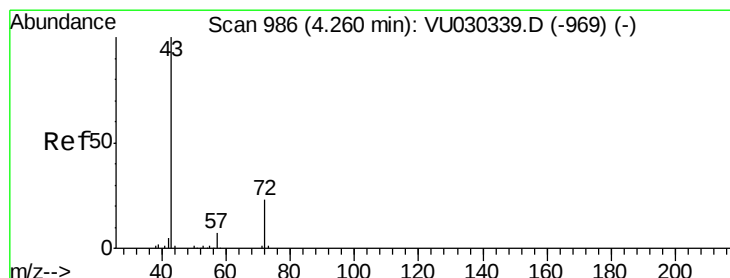
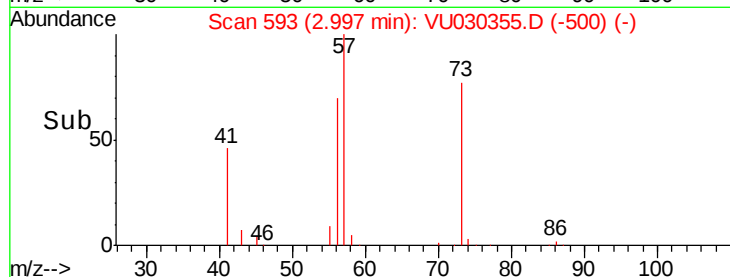
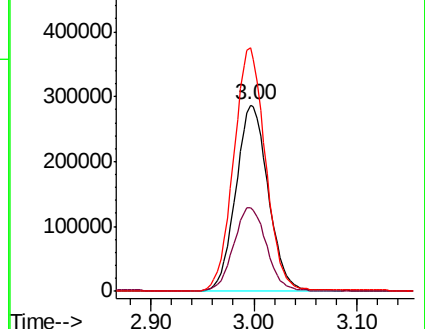
57 128.3 18.9 28.3#



Abundance Ion 73.00 (72.70 to 73.70): VU030339.D (-576) (-)

Ion 43.00 (42.70 to 43.70): VU030339.D (-576) (-)

Ion 57.00 (56.70 to 57.70): VU030339.D (-576) (-)



#22

2-Butanone

Concen: 50.165 ug/L

RT: 4.26 min Scan# 986

Delta R.T. -0.00 min

Lab File: VU030355.D

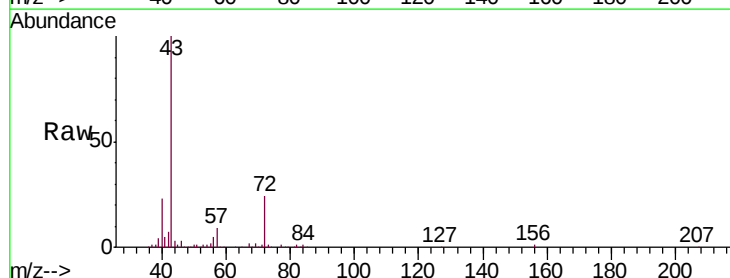
Acq: 23 Mar 2019 21:07

Tgt Ion: 43 Resp: 238371

Ion Ratio Lower Upper

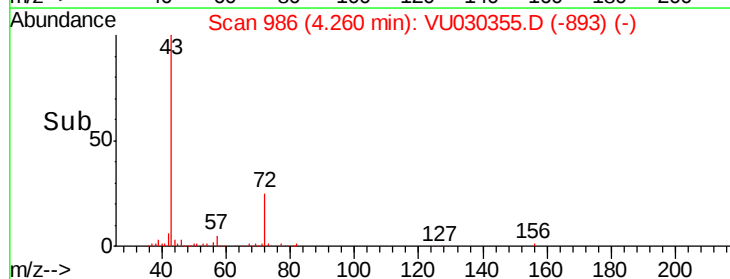
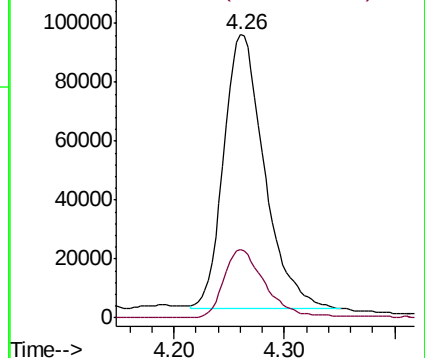
43 100

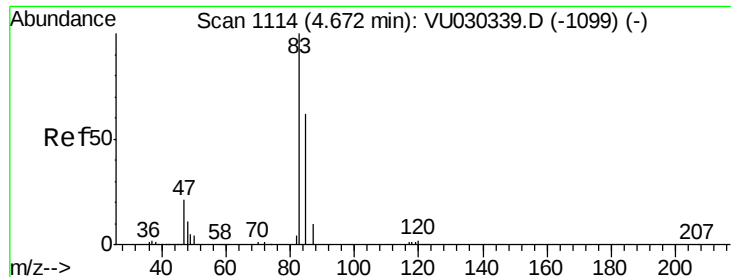
72 25.7 12.0 36.1



Abundance Ion 43.00 (42.70 to 43.70): VU030339.D (-969) (-)

Ion 72.00 (71.70 to 72.70): VU030339.D (-969) (-)

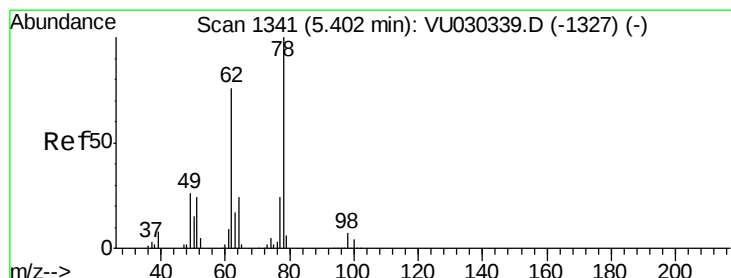
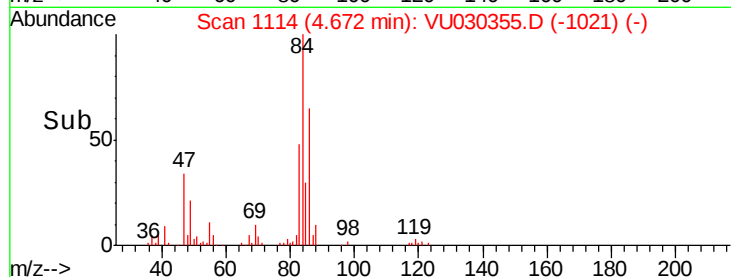
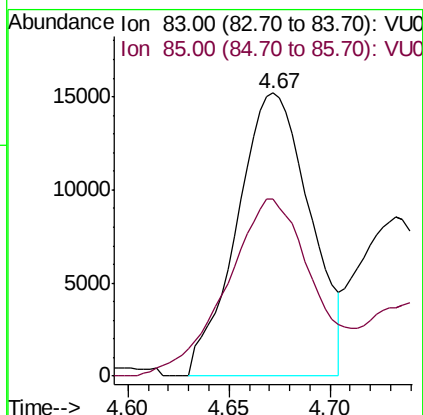
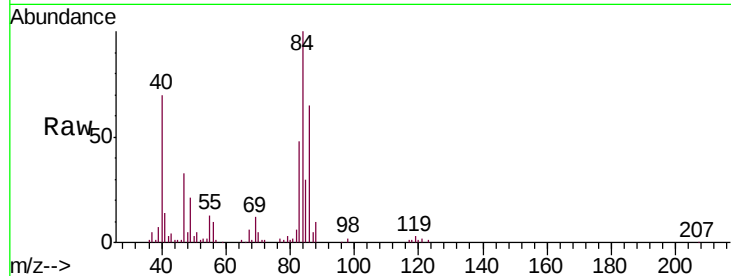




#25  
Chloroform  
Concen: 5.109 ug/L  
RT: 4.67 min Scan# 1114  
Delta R.T. -0.00 min  
Lab File: VU030355.D  
Acq: 23 Mar 2019 21:07

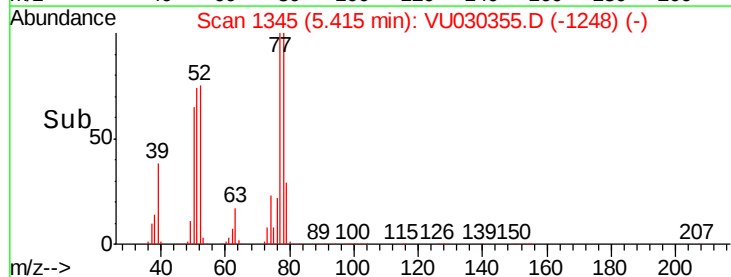
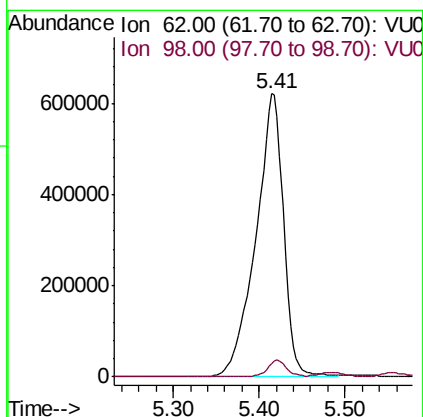
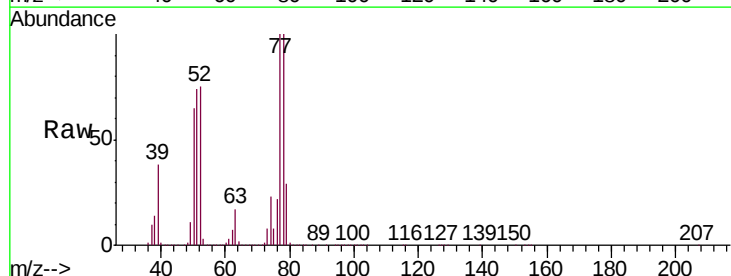
Instrument :  
MSVOA\_U  
ClientSampleId :  
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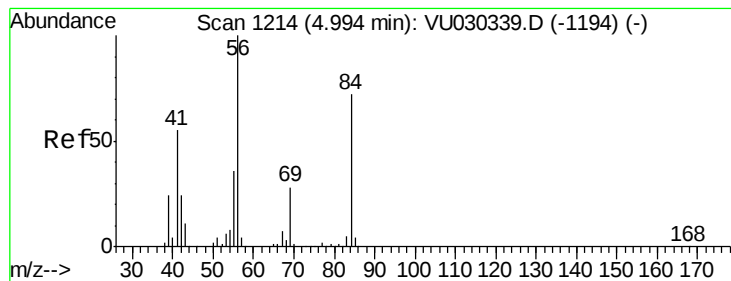
Tgt Ion: 83 Resp: 38439  
Ion Ratio Lower Upper  
83 100  
85 62.5 44.4 82.4



#27  
1,2-Dichloroethane  
Concen: 235.863 ug/L  
RT: 5.41 min Scan# 1345  
Delta R.T. 0.01 min  
Lab File: VU030355.D  
Acq: 23 Mar 2019 21:07

Tgt Ion: 62 Resp: 1392428  
Ion Ratio Lower Upper  
62 100  
98 4.8 7.2 10.8#





#29

Cyclohexane

Concen: 304.313 ug/L

RT: 5.00 min Scan# 1215

Delta R.T. 0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

DB6R7

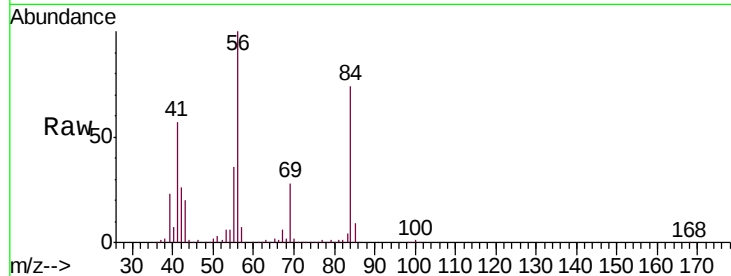
Tgt Ion: 56 Resp: 2329297

Ion Ratio Lower Upper

56 100

69 32.6 22.9 34.3

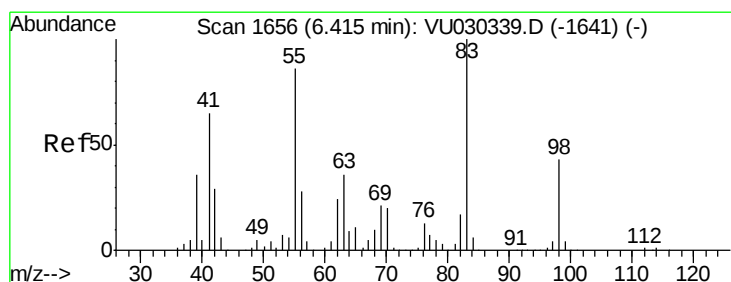
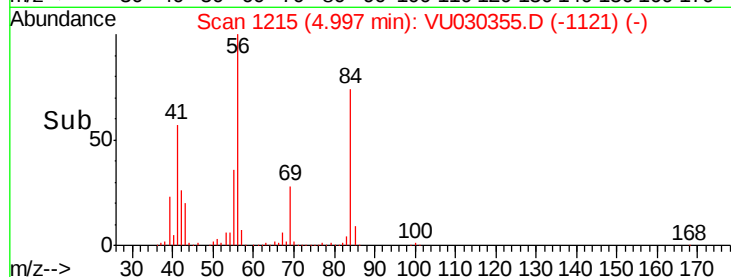
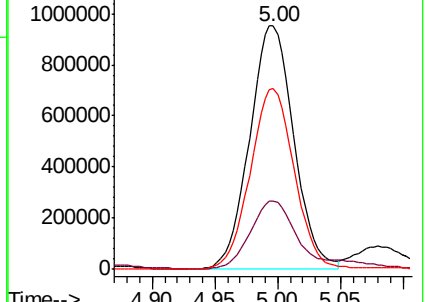
84 74.3 58.9 88.3



Abundance Ion 56.00 (55.70 to 56.70): VU030339.D (-1194) (-)

Ion 69.00 (68.70 to 69.70): VU030339.D (-1194) (-)

Ion 84.00 (83.70 to 84.70): VU030339.D (-1194) (-)



#35

Methylcyclohexane

Concen: 219.606 ug/L

RT: 6.41 min Scan# 1656

Delta R.T. -0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

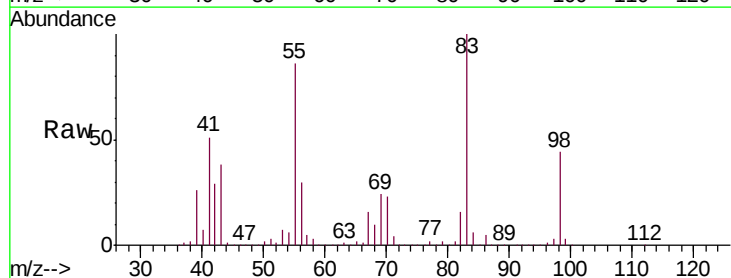
Tgt Ion: 83 Resp: 1529595

Ion Ratio Lower Upper

83 100

55 96.2 71.4 107.0

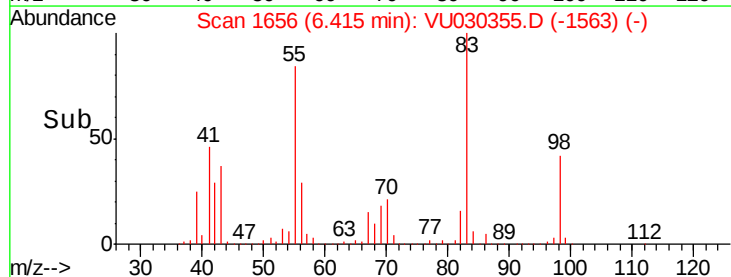
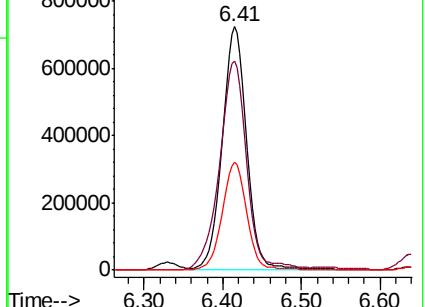
98 45.1 36.0 54.0

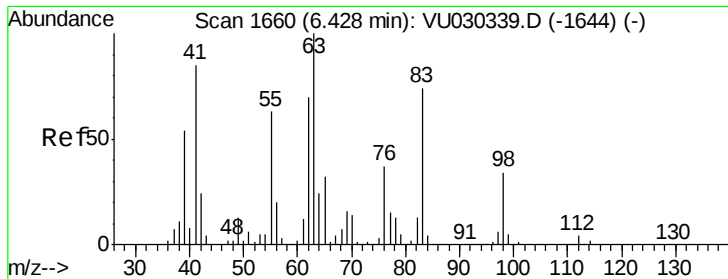


Abundance Ion 83.00 (82.70 to 83.70): VU030339.D (-1641) (-)

Ion 55.00 (54.70 to 55.70): VU030339.D (-1641) (-)

Ion 98.00 (97.70 to 98.70): VU030339.D (-1641) (-)





#37

1,2-Dichloropropane

Concen: 3.094 ug/L

RT: 6.42 min Scan# 1657

Delta R.T. -0.01 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

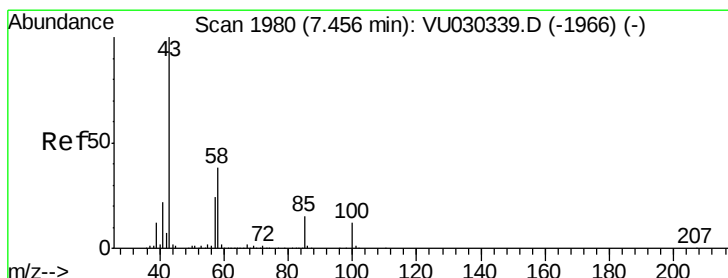
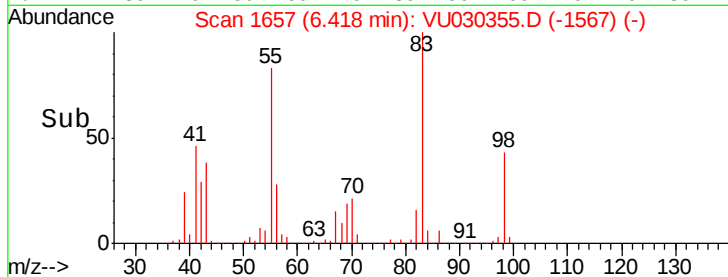
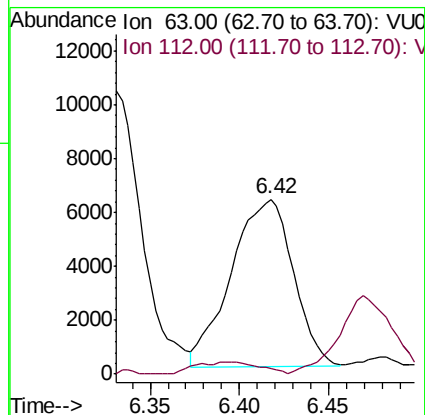
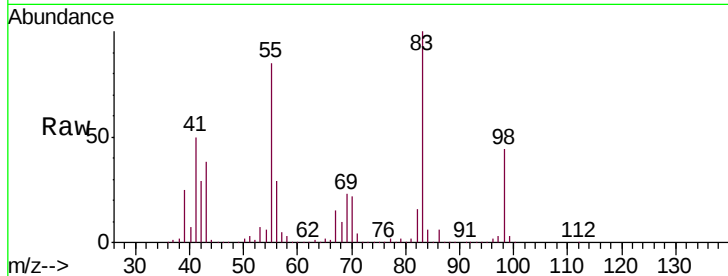
DB6R7

Tgt Ion: 63 Resp: 15118

Ion Ratio Lower Upper

63 100

112 4.9 2.6 4.0#



#40

4-Methyl-2-pentanone

Concen: 8.704 ug/L

RT: 7.49 min Scan# 1989

Delta R.T. 0.03 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

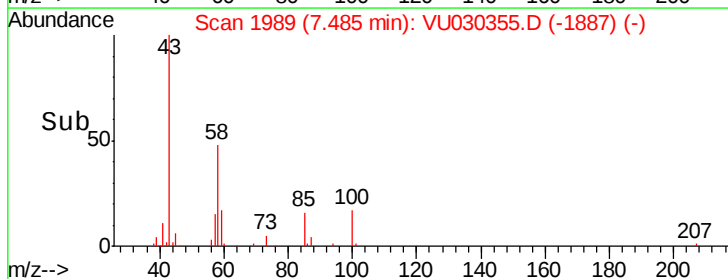
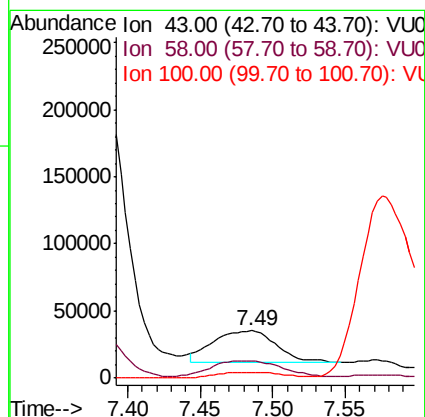
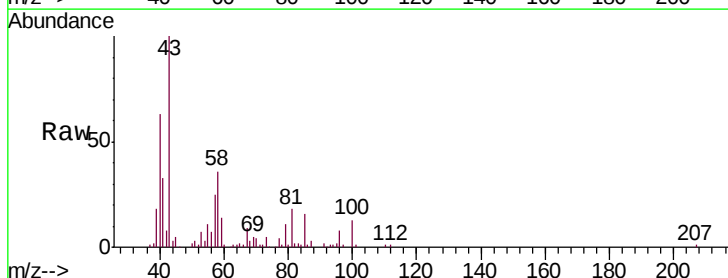
Tgt Ion: 43 Resp: 71439

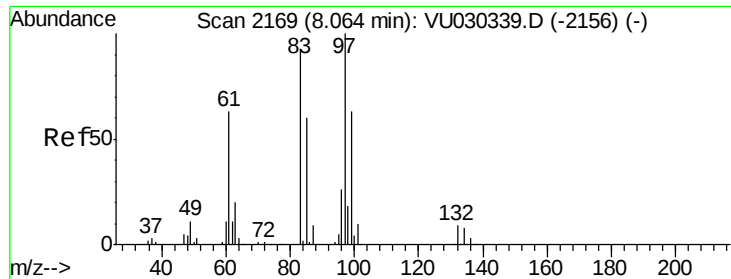
Ion Ratio Lower Upper

43 100

58 27.4 30.6 45.8#

100 19.4 9.5 14.3#

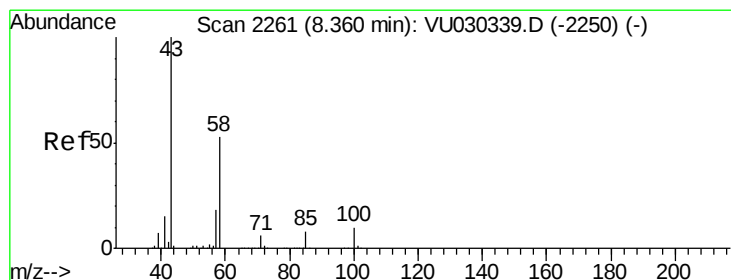
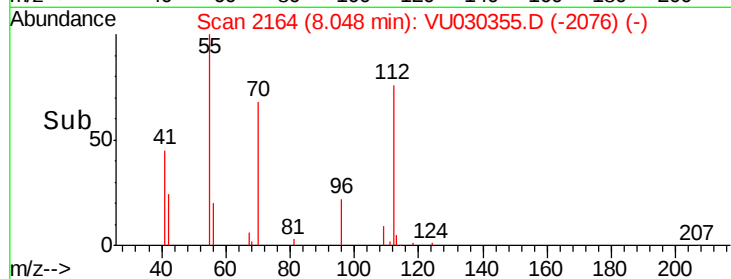
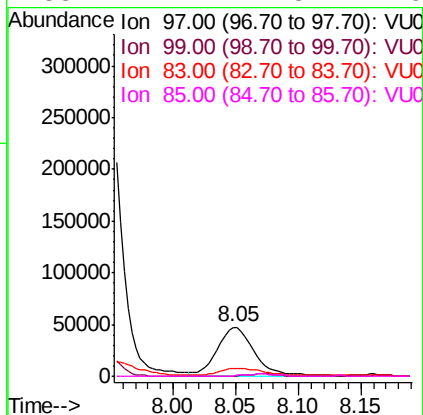
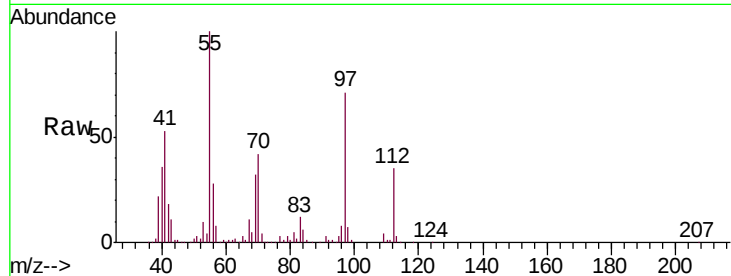




#45  
 1,1,2-Trichloroethane  
 Concen: 23.282 ug/L  
 RT: 8.05 min Scan# 2164  
 Delta R.T. -0.02 min  
 Lab File: VU030355.D  
 Acq: 23 Mar 2019 21:07

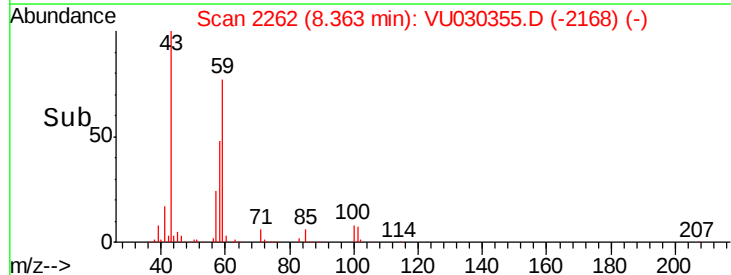
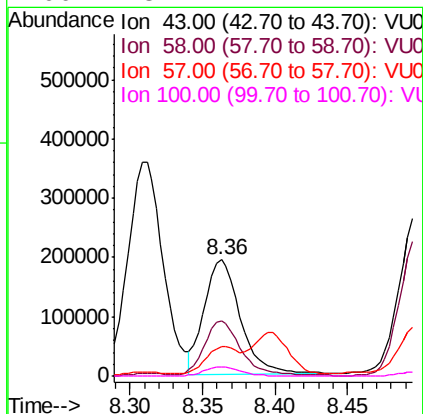
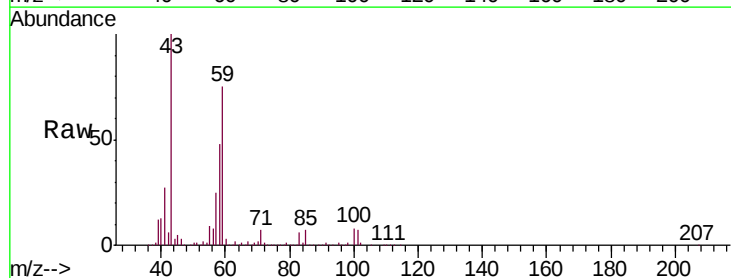
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 DB6R7

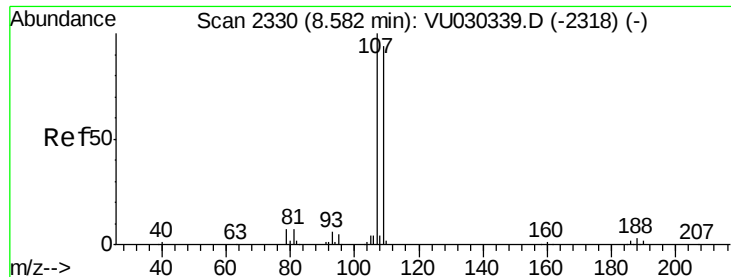
Tgt Ion: 97 Resp: 96122  
 Ion Ratio Lower Upper  
 97 100  
 99 1.2 44.0 81.8#  
 83 16.5 65.3 121.3#  
 85 1.1 41.8 77.6#



#48  
 2-Hexanone  
 Concen: 49.881 ug/L  
 RT: 8.36 min Scan# 2262  
 Delta R.T. 0.00 min  
 Lab File: VU030355.D  
 Acq: 23 Mar 2019 21:07

Tgt Ion: 43 Resp: 335533  
 Ion Ratio Lower Upper  
 43 100  
 58 47.7 42.5 63.7  
 57 22.8 15.0 22.6#  
 100 8.2 7.4 11.2

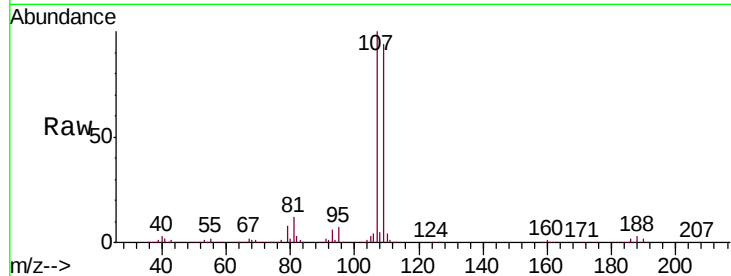




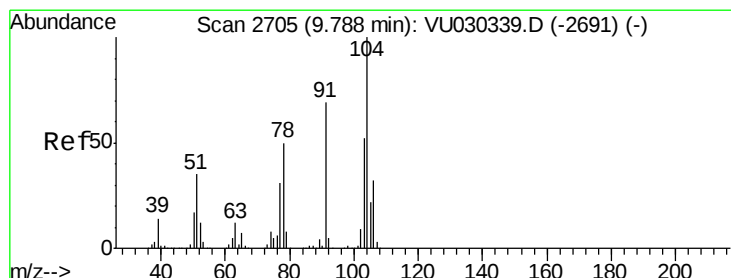
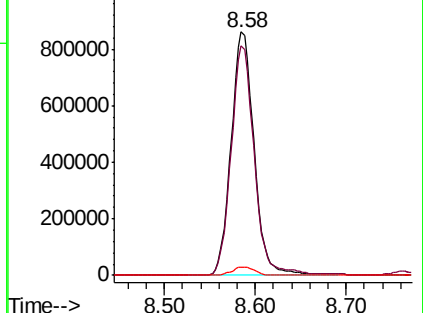
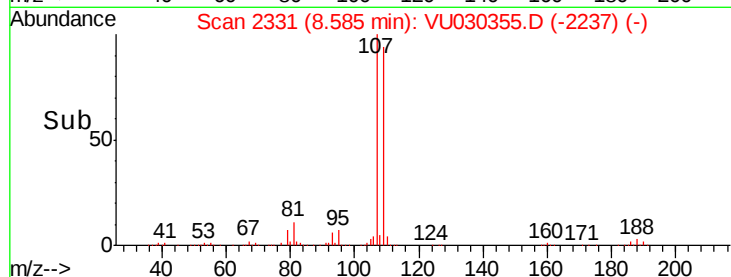
#50  
 1,2-Dibromoethane  
 Concen: 341.592 ug/L  
 RT: 8.58 min Scan# 2331  
 Delta R.T. 0.00 min  
 Lab File: VU030355.D  
 Acq: 23 Mar 2019 21:07

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 DB6R7

Tgt Ion:107 Resp: 1513539  
 Ion Ratio Lower Upper  
 107 100  
 109 94.3 65.8 122.2  
 188 3.4 2.6 4.0

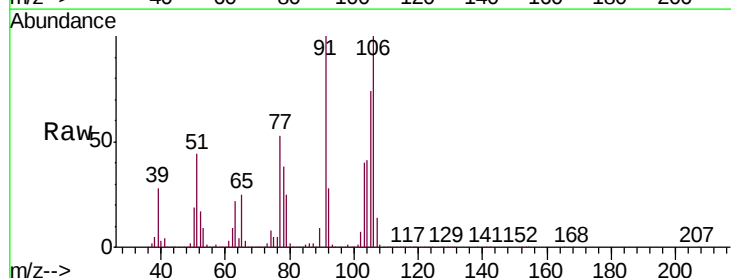


Abundance Ion 107.00 (106.70 to 107.70): V  
 Ion 109.00 (108.70 to 109.70): V  
 Ion 188.00 (187.70 to 188.70): V

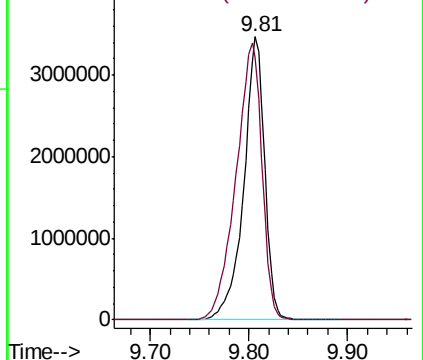
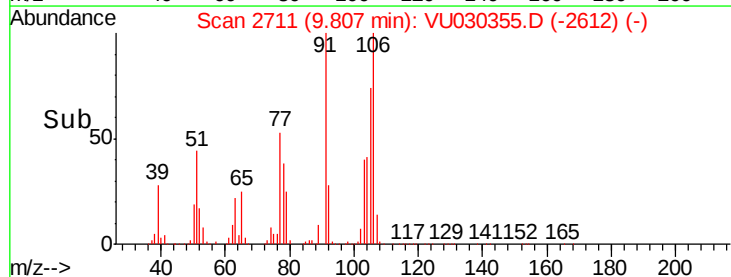


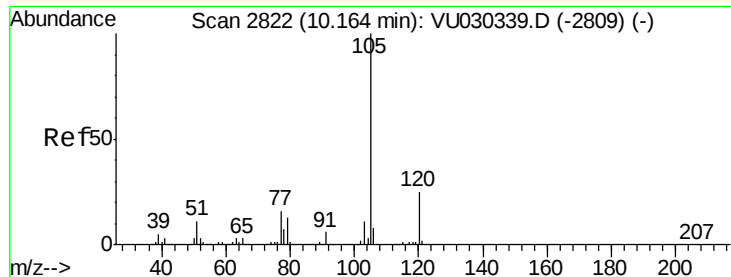
#55  
 Styrene  
 Concen: 432.062 ug/L  
 RT: 9.81 min Scan# 2711  
 Delta R.T. 0.02 min  
 Lab File: VU030355.D  
 Acq: 23 Mar 2019 21:07

Tgt Ion:104 Resp: 5075762  
 Ion Ratio Lower Upper  
 104 100  
 78 92.8 35.1 65.3#



Abundance Ion 104.00 (103.70 to 104.70): V  
 Ion 78.00 (77.70 to 78.70): VU0





#56

Isopropylbenzene

Concen: 131.152 ug/L

RT: 10.17 min Scan# 2823

Delta R.T. 0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampleId :

DB6R7

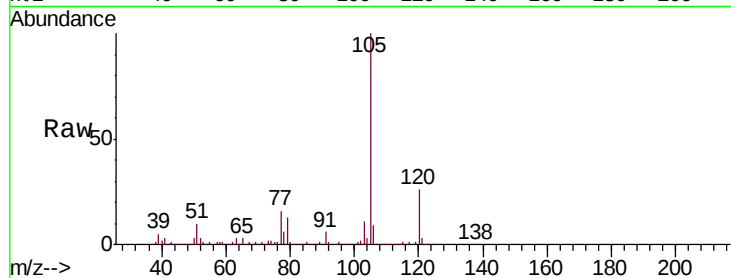
Tgt Ion:105 Resp: 2368320

Ion Ratio Lower Upper

105 100

120 25.6 20.2 30.2

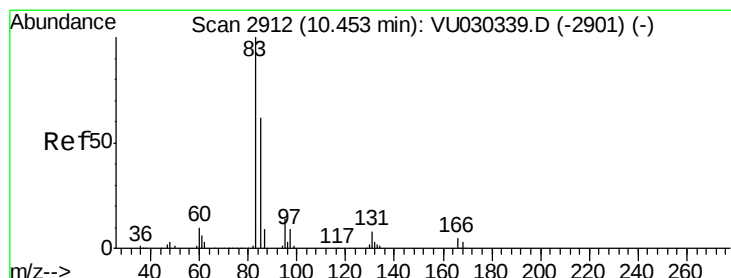
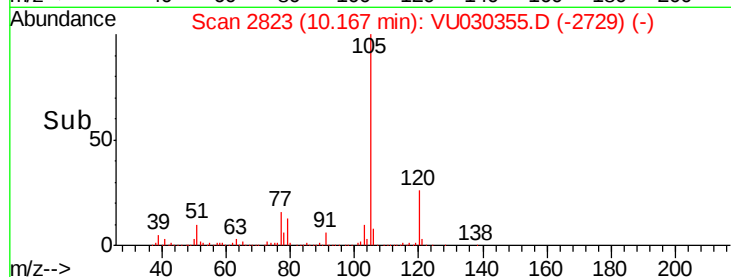
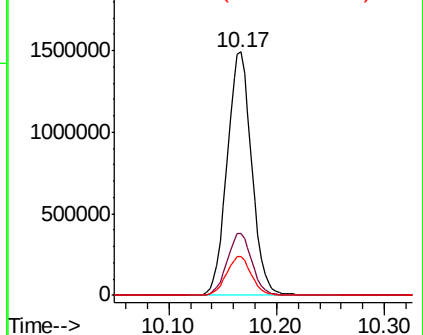
77 15.8 13.2 19.8



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): V



#58

1,1,2,2-Tetrachloroethane

Concen: 3.491 ug/L

RT: 10.46 min Scan# 2915

Delta R.T. 0.01 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

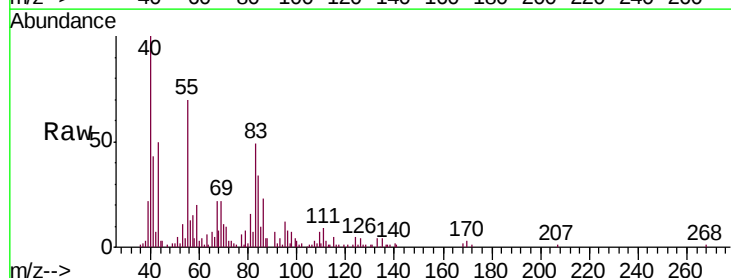
Tgt Ion: 83 Resp: 26564

Ion Ratio Lower Upper

83 100

85 19.5 44.3 82.3#

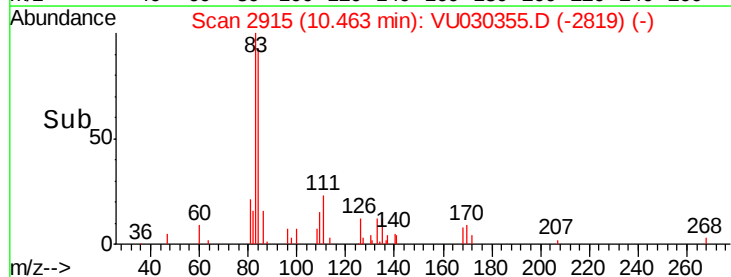
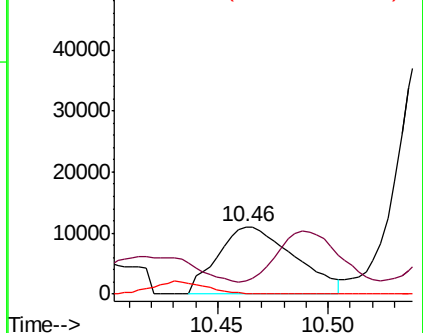
131 1.3 6.7 10.1#

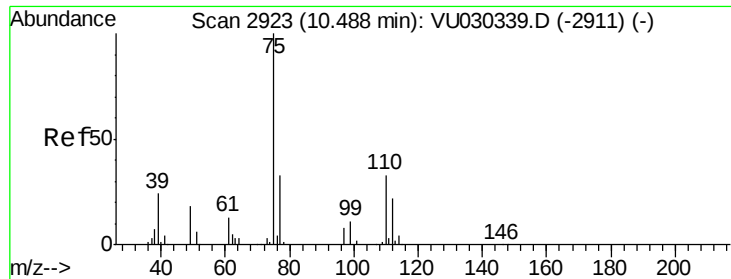


Abundance Ion 83.00 (82.70 to 83.70): V

Ion 85.00 (84.70 to 85.70): V

Ion 131.00 (130.70 to 131.70): V





#59

1,2,3-Trichloropropane

Concen: 3.495 ug/L

RT: 10.49 min Scan# 2924

Delta R.T. 0.00 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

Instrument :

MSVOA\_U

ClientSampled :

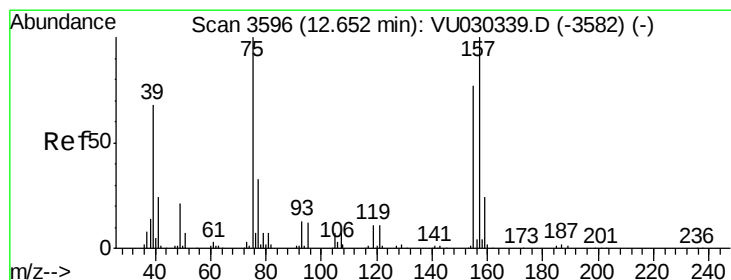
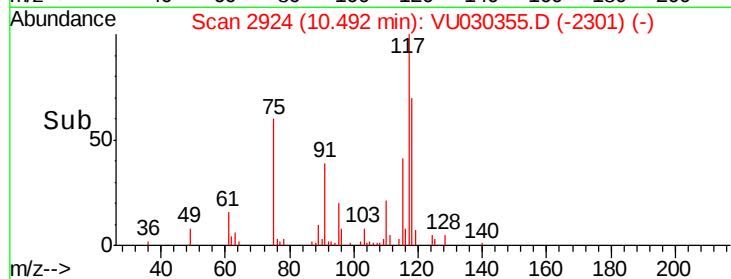
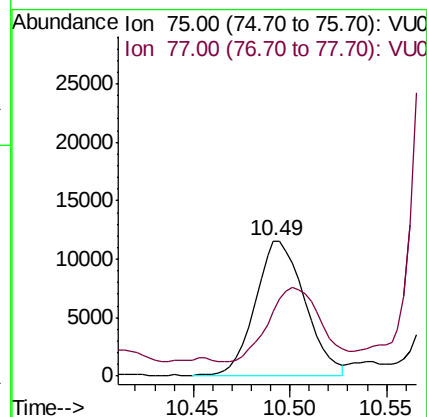
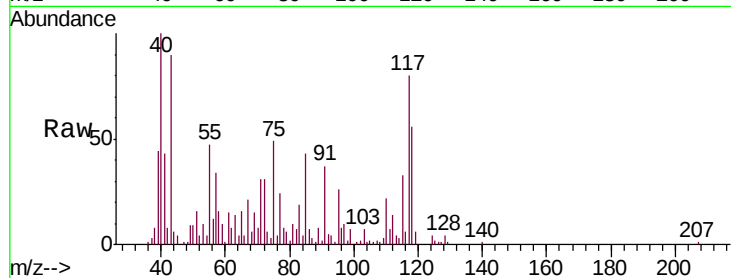
DB6R7

Tgt Ion: 75 Resp: 20784

Ion Ratio Lower Upper

75 100

77 56.7 25.4 38.2#



#66

1,2-Dibromo-3-chloropropane

Concen: 6.572 ug/L

RT: 12.65 min Scan# 3594

Delta R.T. -0.01 min

Lab File: VU030355.D

Acq: 23 Mar 2019 21:07

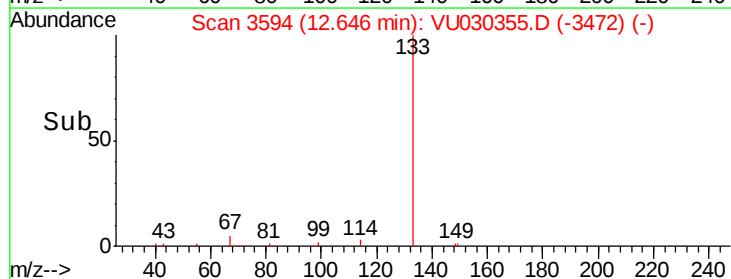
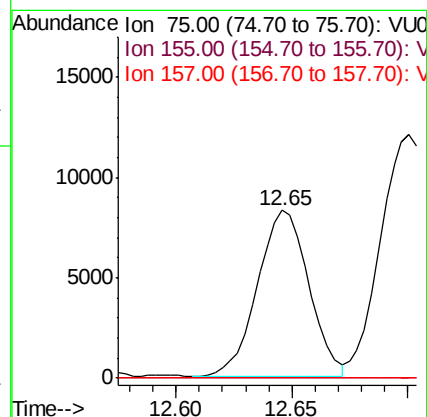
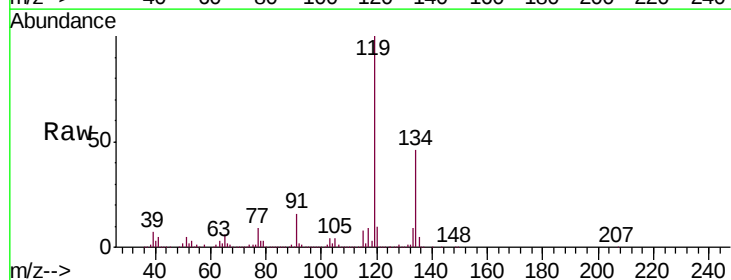
Tgt Ion: 75 Resp: 12687

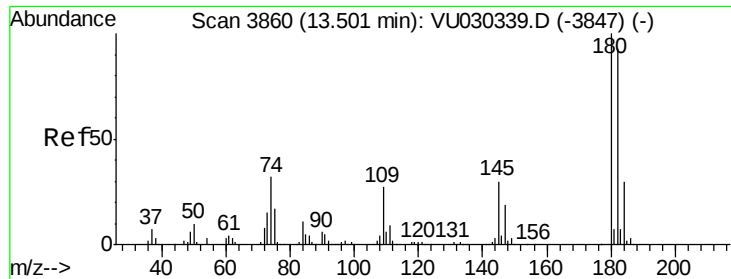
Ion Ratio Lower Upper

75 100

155 0.0 61.8 92.6#

157 0.0 80.2 120.4#





#68  
 1,2,4-trichlorobenzene  
 Concen: 0.503 ug/L  
 RT: 13.50 min Scan# 3860  
 Delta R.T. -0.00 min  
 Lab File: VU030355.D  
 Acq: 23 Mar 2019 21:07

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 DB6R7

Tgt Ion:180 Resp: 2807  
 Ion Ratio Lower Upper  
 180 100  
 182 84.5 76.1 114.1  
 145 862.3 24.5 36.7#

