

Data File : VU031819.D  
Acq On : 08 May 2019 12:53  
Operator : JC/SP  
Sample : VSTDCCC005  
Misc : 25.0mL/MSVOA\_U/WATER  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

Quant Time: May 09 05:28:09 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR050819WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Thu May 09 02:09:13 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.88  | 114  | 365403   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 364026   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 165252   | 5.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |        |       |          |          |      |        |
|--------------------------------|--------|-------|----------|----------|------|--------|
| 4) Vinyl Chloride-d3           | 1.40   | 65    | 105245   | 4.23     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 84.60% |
| 7) Chloroethane-d5             | 1.68   | 69    | 89436    | 4.35     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 87.00% |
| 11) 1,1-Dichloroethene-d2      | 2.27   | 63    | 232601   | 4.34     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 86.80% |
| 20) 2-Butanone-d5              | 4.20   | 46    | 452846   | 46.57    | ug/L | 0.00   |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 93.14% |
| 24) Chloroform-d               | 4.64   | 84    | 246037   | 4.82     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 96.40% |
| 26) 1,2-Dichloroethane-d4      | 5.31   | 65    | 141223   | 4.56     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 91.20% |
| 32) Benzene-d6                 | 5.33   | 84    | 444019   | 4.77     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 95.40% |
| 36) 1,2-Dichloropropane-d6     | 6.33   | 67    | 156118   | 4.56     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 91.20% |
| 41) Toluene-d8                 | 7.56   | 98    | 369693   | 4.64     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 92.80% |
| 43) trans-1,3-Dichloropropene- | 7.85   | 79    | 57459    | 4.78     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 95.60% |
| 46) 2-Hexanone-d5              | 8.31   | 63    | 298215   | 49.10    | ug/L | 0.00   |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 98.20% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43  | 84    | 120793   | 4.53     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 90.60% |
| 64) 1,2-Dichlorobenzene-d4     | 11.86  | 152   | 129305   | 4.73     | ug/L | 0.00   |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 94.60% |

#### Target Compounds

|                                |      |     |        |             | Qvalue |
|--------------------------------|------|-----|--------|-------------|--------|
| 2) Dichlorodifluoromethane     | 1.20 | 85  | 196260 | 4.666 ug/L  | 97     |
| 3) Chloromethane               | 1.32 | 50  | 202773 | 4.044 ug/L  | 100    |
| 5) Vinyl chloride              | 1.40 | 62  | 190401 | 4.345 ug/L  | 99     |
| 6) Bromomethane                | 1.63 | 94  | 93251  | 4.636 ug/L  | 99     |
| 8) Chloroethane                | 1.70 | 64  | 113817 | 4.716 ug/L  | 97     |
| 9) Trichlorofluoromethane      | 1.88 | 101 | 230304 | 4.544 ug/L  | 98     |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.28 | 101 | 120329 | 4.562 ug/L  | 97     |
| 12) 1,1-Dichloroethene         | 2.28 | 96  | 110630 | 4.454 ug/L  | 98     |
| 13) Acetone                    | 2.33 | 43  | 285283 | 42.959 ug/L | 97     |
| 14) Carbon disulfide           | 2.47 | 76  | 381932 | 4.368 ug/L  | 98     |
| 15) Methyl Acetate             | 2.62 | 43  | 71675  | 4.184 ug/L  | 98     |
| 16) Methylene chloride         | 2.69 | 84  | 137111 | 3.978 ug/L  | 98     |
| 17) Methyl tert-butyl Ether    | 3.00 | 73  | 330526 | 4.467 ug/L  | 98     |
| 18) trans-1,2-Dichloroethene   | 2.97 | 96  | 118893 | 4.441 ug/L  | 95     |
| 19) 1,1-Dichloroethane         | 3.43 | 63  | 301860 | 4.584 ug/L  | 99     |
| 21) 2-Butanone                 | 4.28 | 43  | 525677 | 47.370 ug/L | 99     |
| 22) cis-1,2-Dichloroethene     | 4.22 | 96  | 149413 | 4.647 ug/L  | 94     |

Data File : VU031819.D  
Acq On : 08 May 2019 12:53  
Operator : JC/SP  
Sample : VSTDCCC005  
Misc : 25.0mL/MSVOA\_U/WATER  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

Quant Time: May 09 05:28:09 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR050819WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Thu May 09 02:09:13 2019  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 23) Bromochloromethane         | 4.54  | 128  | 58225    | 4.512  | ug/L   | 97       |
| 25) Chloroform                 | 4.67  | 83   | 283935   | 4.382  | ug/L   | 100      |
| 27) 1,2-Dichloroethane         | 5.40  | 62   | 197681   | 4.622  | ug/L   | 97       |
| 29) 1,1,1-Trichloroethane      | 4.91  | 97   | 237805   | 4.767  | ug/L   | 98       |
| 30) Cyclohexane                | 4.98  | 56   | 274262   | 5.020  | ug/L   | 98       |
| 31) Carbon tetrachloride       | 5.12  | 117  | 199728   | 4.701  | ug/L   | 99       |
| 33) Benzene                    | 5.38  | 78   | 611661   | 4.819  | ug/L   | 100      |
| 34) Trichloroethene            | 6.18  | 95   | 149314   | 4.666  | ug/L   | 95       |
| 35) Methylcyclohexane          | 6.41  | 83   | 222630   | 4.843  | ug/L   | 98       |
| 37) 1,2-Dichloropropane        | 6.43  | 63   | 174090   | 4.792  | ug/L   | 100      |
| 38) Bromodichloromethane       | 6.75  | 83   | 197508   | 4.565  | ug/L   | 91       |
| 39) cis-1,3-Dichloropropene    | 7.27  | 75   | 216076   | 4.747  | ug/L   | 99       |
| 40) 4-Methyl-2-pentanone       | 7.46  | 43   | 1216827  | 49.775 | ug/L   | 100      |
| 42) Toluene                    | 7.63  | 91   | 629251   | 5.021  | ug/L   | 94       |
| 44) trans-1,3-Dichloropropene  | 7.88  | 75   | 181073   | 5.022  | ug/L   | 100      |
| 45) 1,1,2-Trichloroethane      | 8.06  | 97   | 97861    | 4.547  | ug/L   | 93       |
| 47) Tetrachloroethene          | 8.22  | 164  | 96991    | 4.661  | ug/L   | 95       |
| 48) 2-Hexanone                 | 8.36  | 43   | 918310   | 52.852 | ug/L   | 98       |
| 49) Dibromochloromethane       | 8.47  | 129  | 117399   | 4.690  | ug/L   | 99       |
| 50) 1,2-Dibromoethane          | 8.59  | 107  | 92189    | 4.707  | ug/L   | 91       |
| 51) Chlorobenzene              | 9.12  | 112  | 358643   | 4.814  | ug/L   | 99       |
| 52) Ethylbenzene               | 9.25  | 91   | 647139   | 4.950  | ug/L   | 100      |
| 53) m,p-Xylene                 | 9.37  | 106  | 230183   | 4.946  | ug/L   | 94       |
| 54) o-Xylene                   | 9.77  | 106  | 223450   | 5.021  | ug/L   | 99       |
| 55) Styrene                    | 9.79  | 104  | 388822   | 5.091  | ug/L   | 97       |
| 56) Isopropylbenzene           | 10.16 | 105  | 593923   | 4.985  | ug/L   | 99       |
| 58) 1,1,2,2-Tetrachloroethane  | 10.45 | 83   | 133640   | 4.649  | ug/L   | 98       |
| 59) 1,2,3-Trichloropropane     | 10.49 | 75   | 98724    | 4.591  | ug/L   | 99       |
| 61) Bromoform                  | 9.95  | 173  | 60334    | 4.563  | ug/L   | 96       |
| 62) 1,3-Dichlorobenzene        | 11.41 | 146  | 249329   | 4.751  | ug/L   | 96       |
| 63) 1,4-Dichlorobenzene        | 11.50 | 146  | 262129   | 4.925  | ug/L   | 99       |
| 65) 1,2-Dichlorobenzene        | 11.87 | 146  | 251429   | 4.911  | ug/L   | 97       |
| 66) 1,2-Dibromo-3-chloropropan | 12.65 | 75   | 22486    | 4.672  | ug/L # | 85       |
| 67) 1,3,5-Trichlorobenzene     | 12.88 | 180  | 197538   | 4.954  | ug/L   | 99       |
| 68) 1,2,4-trichlorobenzene     | 13.50 | 180  | 149314   | 5.070  | ug/L   | 97       |
| 69) Naphthalene                | 13.74 | 128  | 261647   | 5.180  | ug/L   | 98       |
| 70) 1,2,3-Trichlorobenzene     | 13.98 | 180  | 150835   | 5.502  | ug/L   | 100      |

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

Data File : VU031819.D

Acq On : 08 May 2019 12:53

Operator : JC/SP

Sample : VSTDCCC005

Misc : 25.0mL/MSVOA U/WATER

```
ALS Vial      : 8      Sample Multiplier: 1
```

**Instrument :**  
MSVOA\_U  
**ClientSampleId :**  
VSTD00523

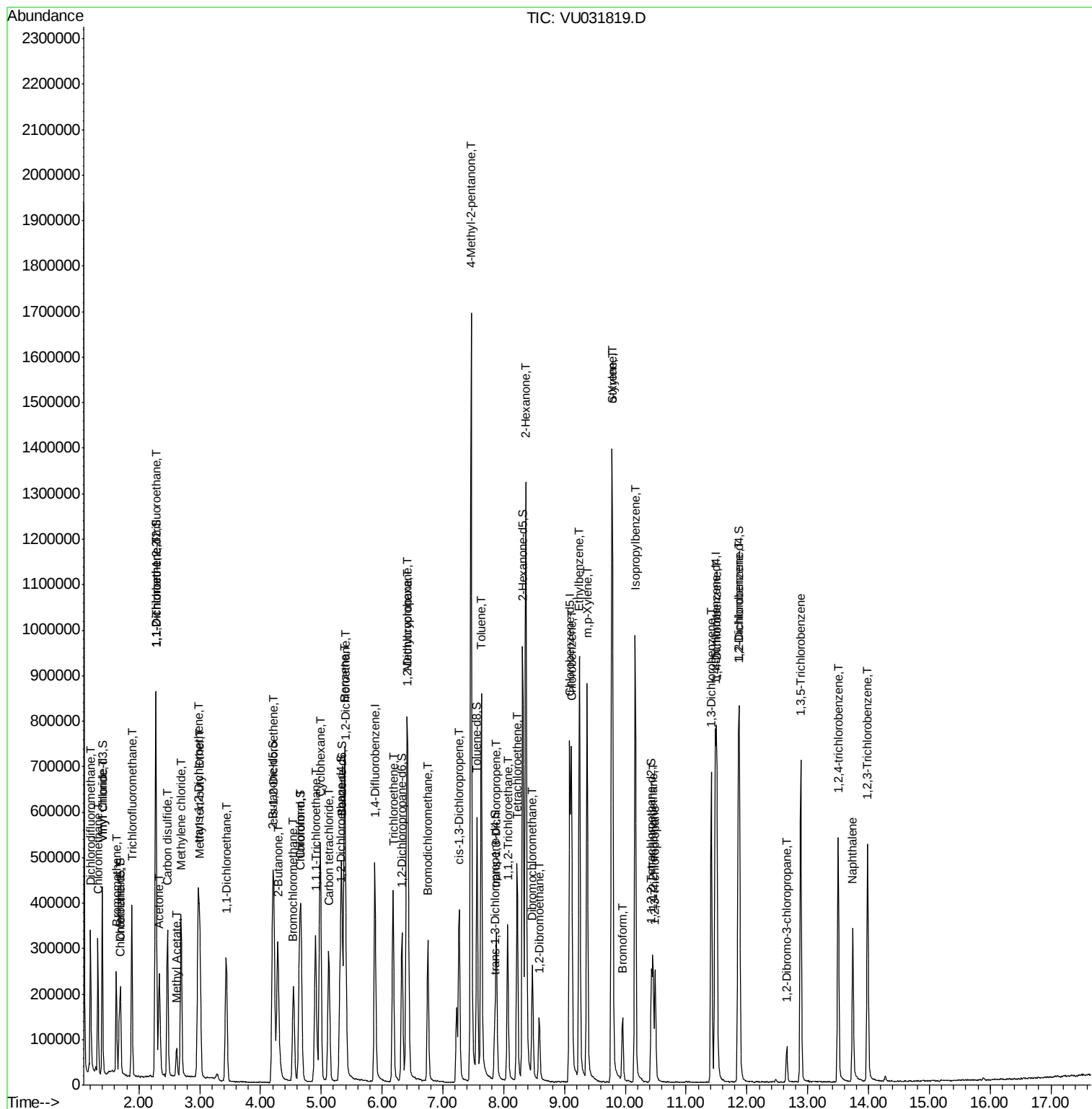
Quant Time: May 09 05:28:09 2019

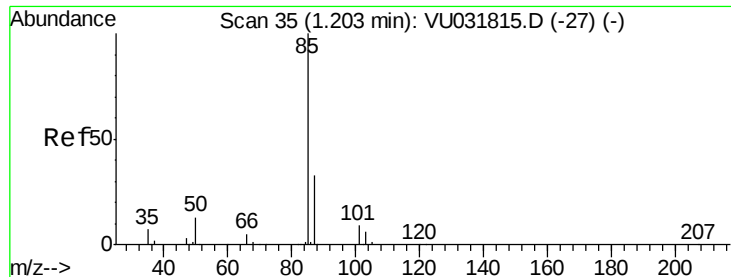
Quant Method : Z:\V0ASRV\HPCHEM1\MSV0A\_U\METHOD\SOMUTR050819WMA.M

Quant Title : TRACE VOA SOM01.0

QLast Update : Thu May 09 02:09:13 2019

Response via : Initial Calibration





#2

Dichlorodifluoromethane

Concen: 4.666 ug/L

RT: 1.20 min Scan# 35

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

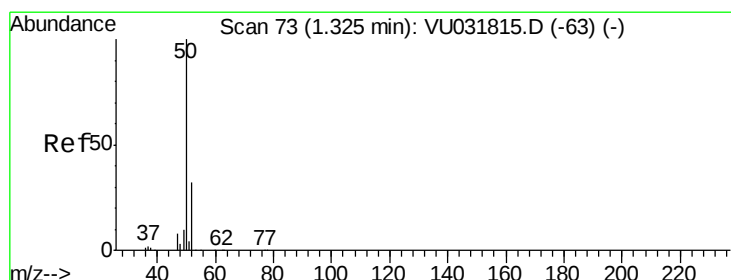
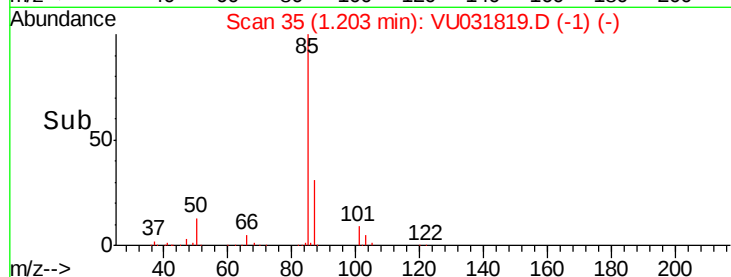
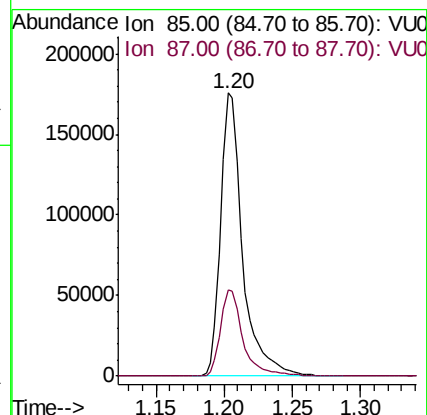
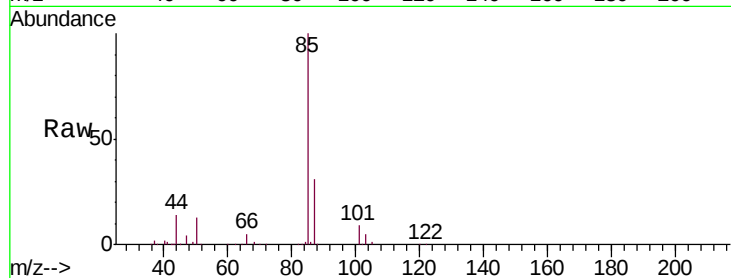
VSTD00523

Tgt Ion: 85 Resp: 196260

Ion Ratio Lower Upper

85 100

87 31.4 26.2 39.4



#3

Chloromethane

Concen: 4.044 ug/L

RT: 1.32 min Scan# 73

Delta R.T. 0.00 min

Lab File: VU031819.D

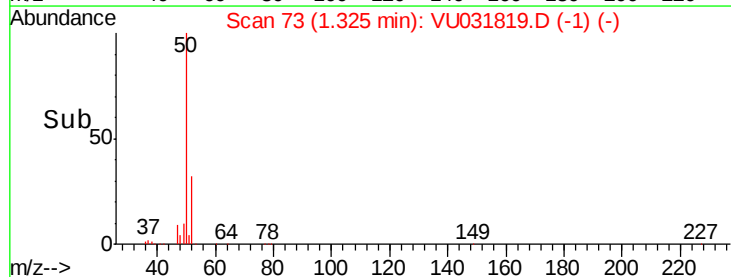
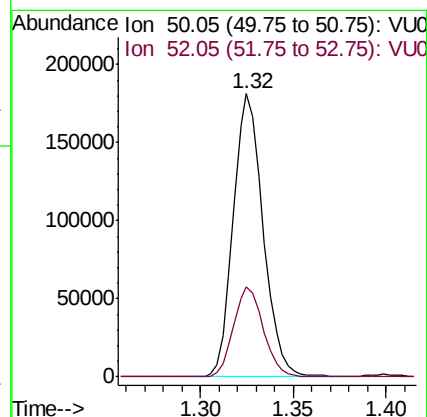
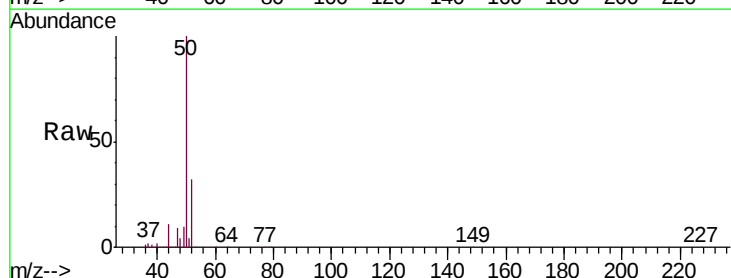
Acq: 08 May 2019 12:53

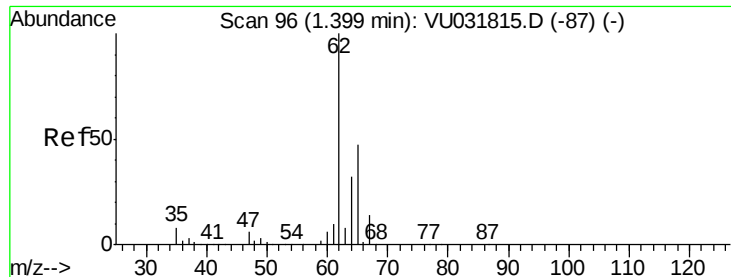
Tgt Ion: 50 Resp: 202773

Ion Ratio Lower Upper

50 100

52 31.9 22.5 41.7





#5

Vinyl chloride

Concen: 4.345 ug/L

RT: 1.40 min Scan# 96

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

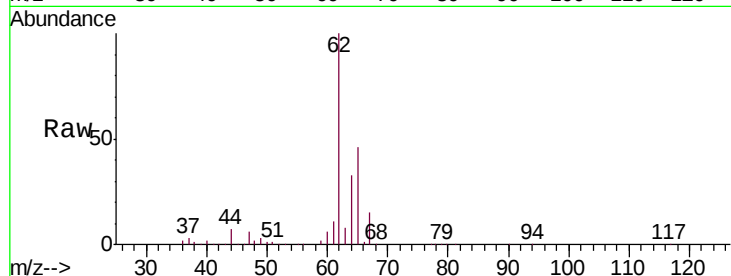
VSTD00523

Tgt Ion: 62 Resp: 190401

Ion Ratio Lower Upper

62 100

64 32.8 22.5 41.9



Abundance Ion 62.00 (61.70 to 62.70): VU031819.D (-87) (-)

Ion 64.10 (63.80 to 64.80): VU031819.D (-87) (-)

1.40

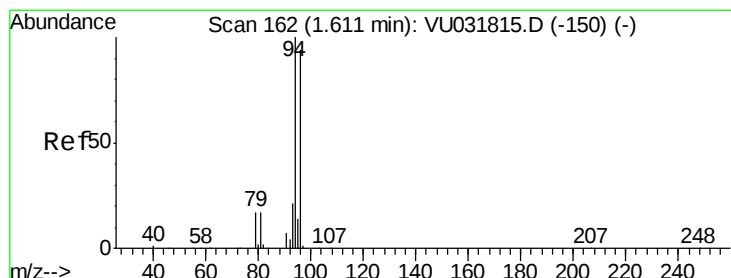
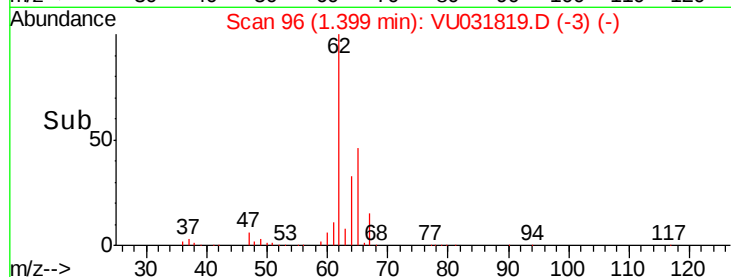
150000

100000

50000

0

Time-->



#6

Bromomethane

Concen: 4.636 ug/L

RT: 1.63 min Scan# 167

Delta R.T. 0.02 min

Lab File: VU031819.D

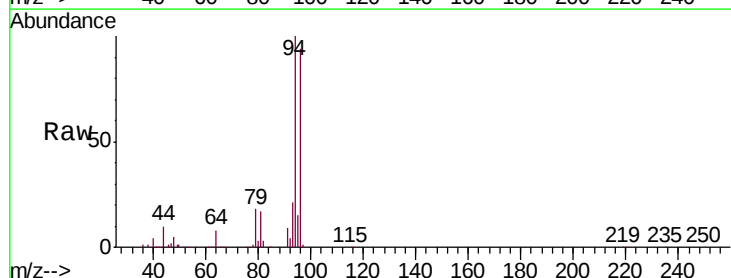
Acq: 08 May 2019 12:53

Tgt Ion: 94 Resp: 93251

Ion Ratio Lower Upper

94 100

96 93.8 66.1 122.8



Abundance Ion 94.00 (93.70 to 94.70): VU031819.D (-150) (-)

Ion 96.00 (95.70 to 96.70): VU031819.D (-150) (-)

1.63

80000

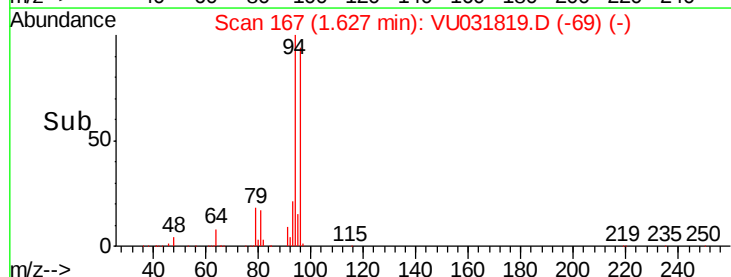
60000

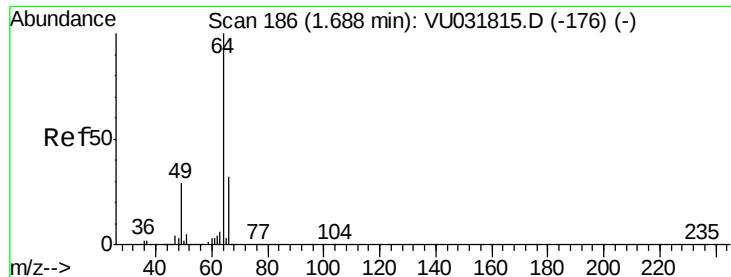
40000

20000

0

Time-->

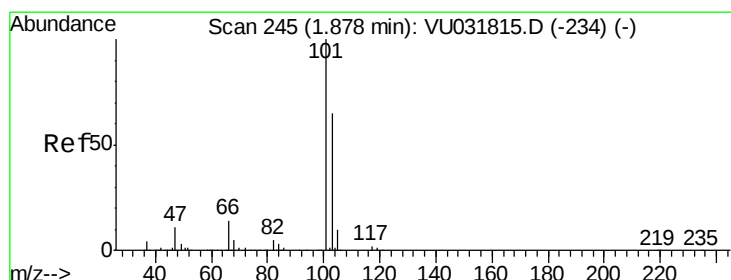
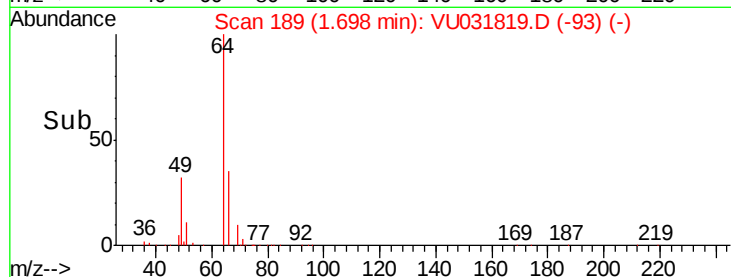
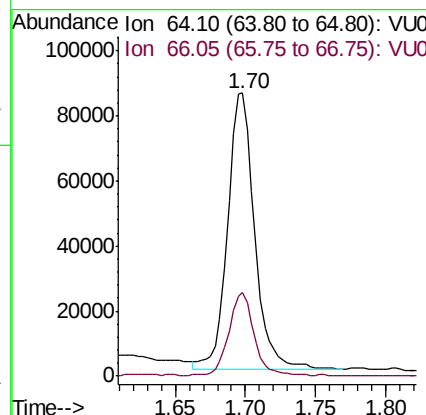
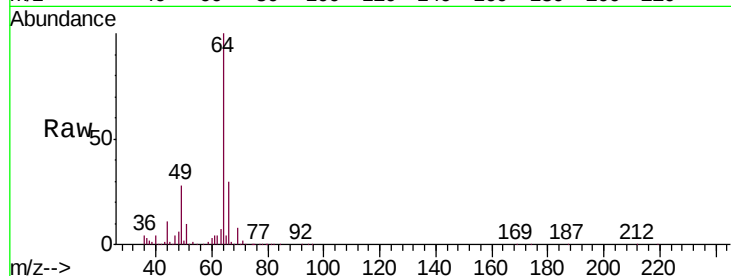




#8  
Chloroethane  
Concen: 4.716 ug/L  
RT: 1.70 min Scan# 189  
Delta R.T. 0.01 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

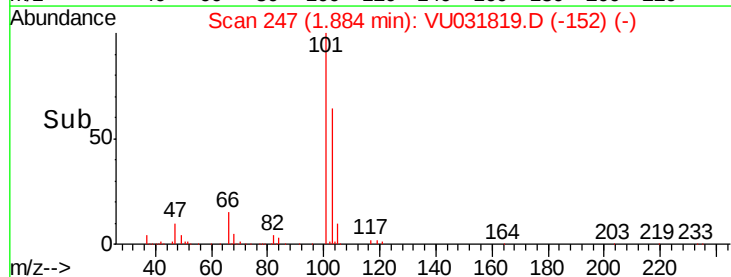
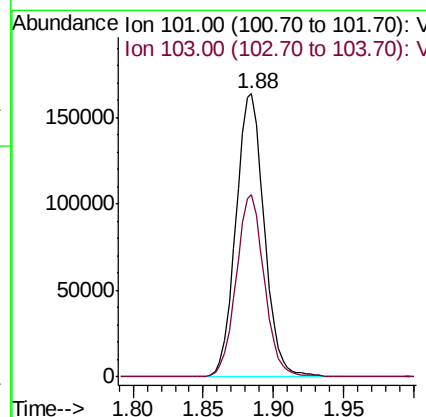
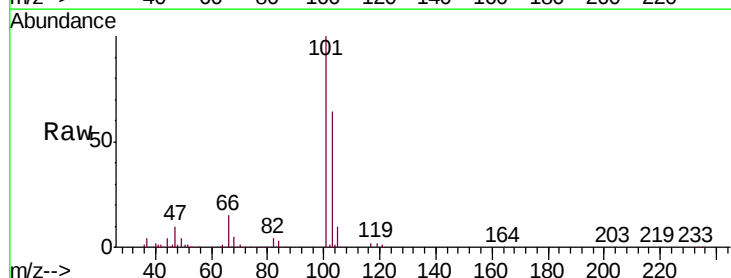
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

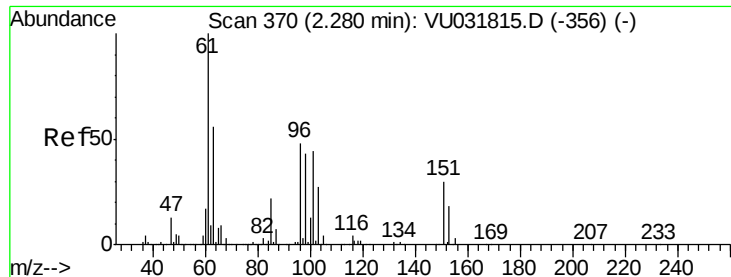
Tgt Ion: 64 Resp: 113817  
Ion Ratio Lower Upper  
64 100  
66 29.7 21.9 40.7



#9  
Trichlorofluoromethane  
Concen: 4.544 ug/L  
RT: 1.88 min Scan# 247  
Delta R.T. 0.01 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

Tgt Ion: 101 Resp: 230304  
Ion Ratio Lower Upper  
101 100  
103 63.9 52.1 78.1





#10

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

Concen: 4.562 ug/L

RT: 2.28 min Scan# 371

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

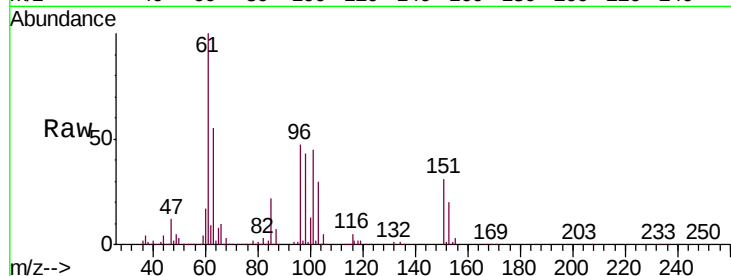
Tgt Ion: 101 Resp: 120329

Ion Ratio Lower Upper

101 100

85 47.2 40.0 60.0

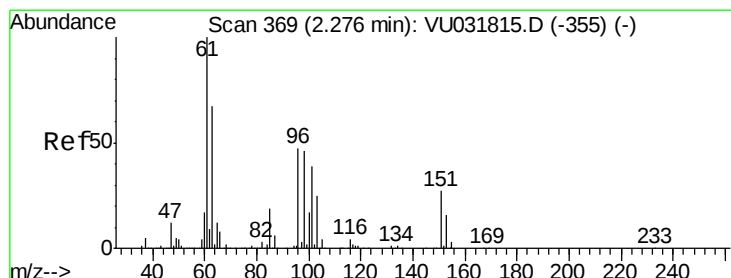
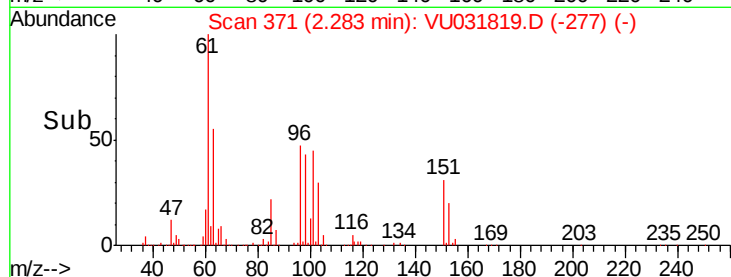
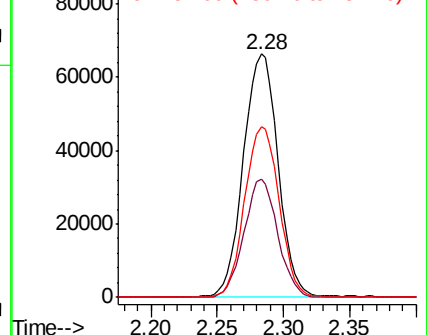
151 69.7 54.6 82.0



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: 4.454 ug/L

RT: 2.28 min Scan# 370

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

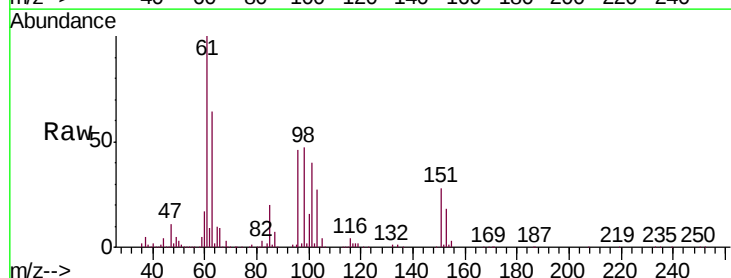
Tgt Ion: 96 Resp: 110630

Ion Ratio Lower Upper

96 100

61 215.8 149.0 276.6

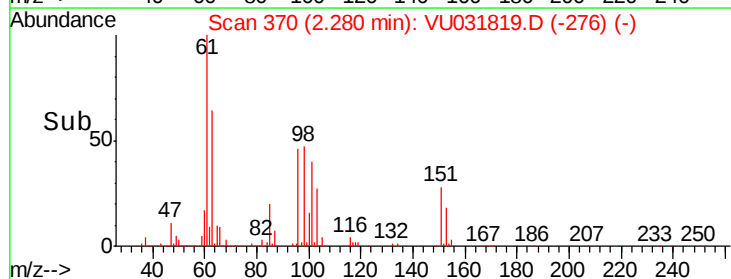
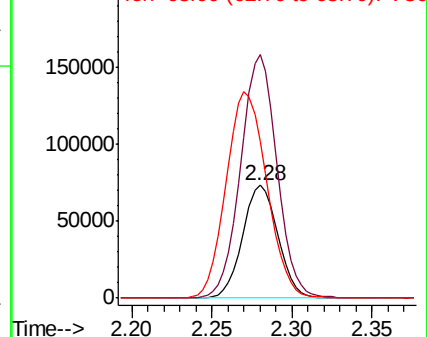
63 139.1 99.8 185.4

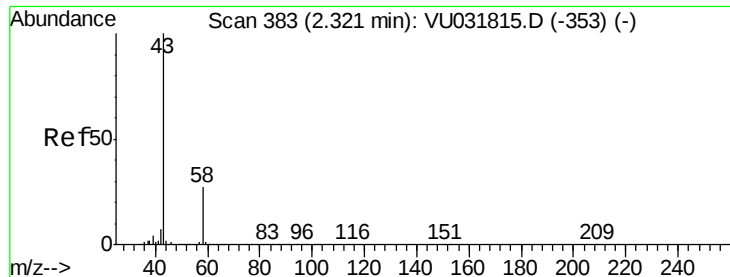


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 42.959 ug/L

RT: 2.33 min Scan# 387

Delta R.T. 0.01 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

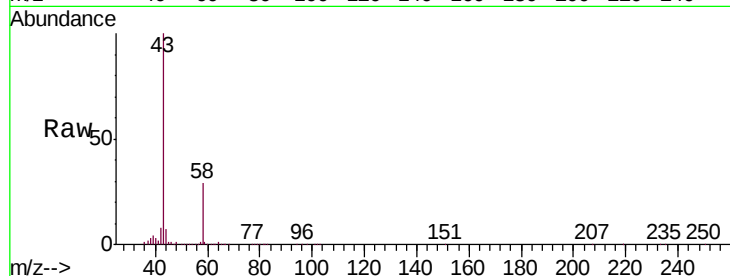
VSTD00523

Tgt Ion: 43 Resp: 285283

Ion Ratio Lower Upper

43 100

58 28.3 0.0 53.6



Abundance Ion 43.05 (42.75 to 43.75): VU031819.D (-353) (-)

Ion 58.05 (57.75 to 58.75): VU031819.D (-353) (-)

2.33

150000

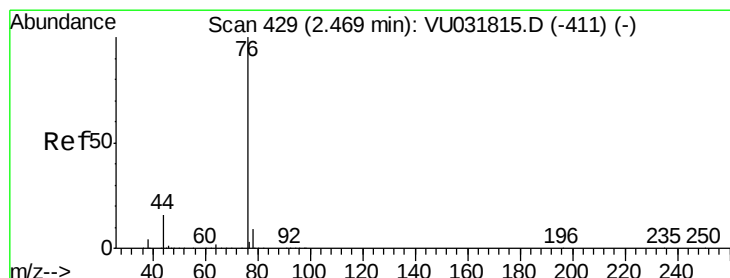
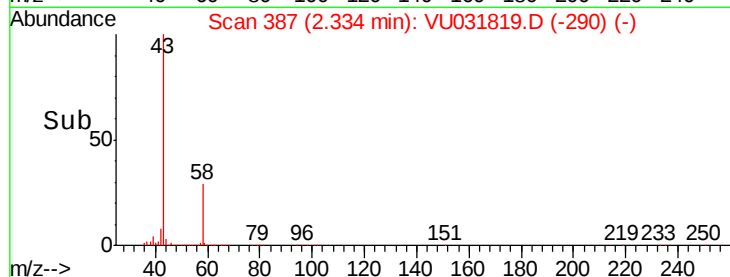
100000

50000

0

2.25 2.30 2.35 2.40 2.45

Time-->



#14

Carbon disulfide

Concen: 4.368 ug/L

RT: 2.47 min Scan# 429

Delta R.T. 0.00 min

Lab File: VU031819.D

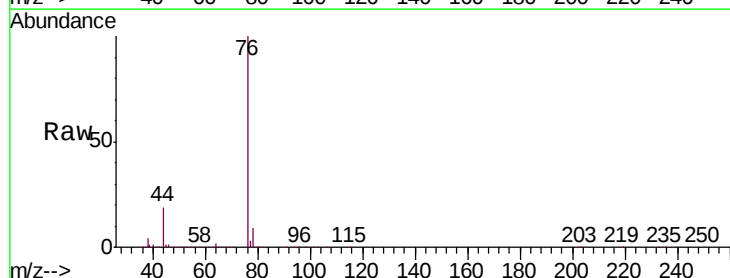
Acq: 08 May 2019 12:53

Tgt Ion: 76 Resp: 381932

Ion Ratio Lower Upper

76 100

78 8.8 7.5 11.3



Abundance Ion 76.05 (75.75 to 76.75): VU031819.D (-411) (-)

Ion 78.00 (77.70 to 78.70): VU031819.D (-411) (-)

2.47

250000

200000

150000

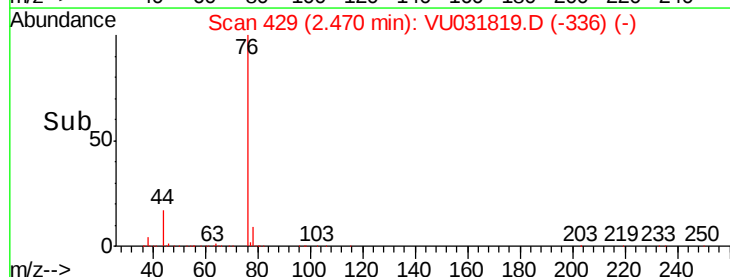
100000

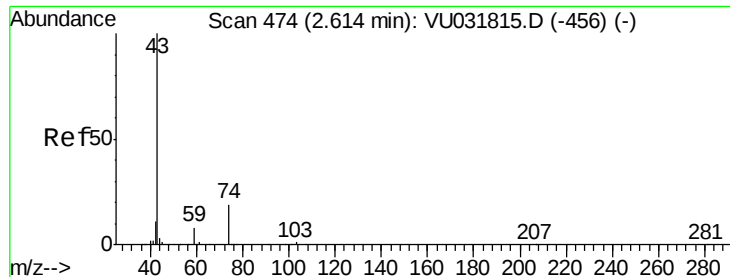
50000

0

2.40 2.45 2.50 2.55

Time-->

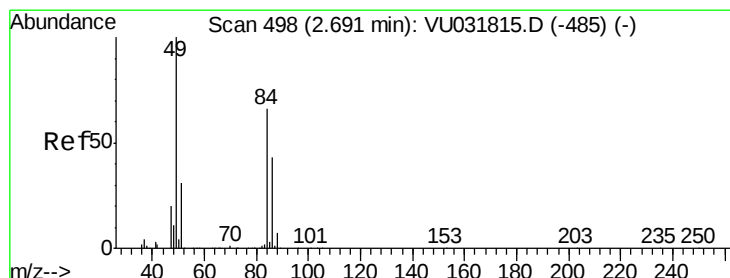
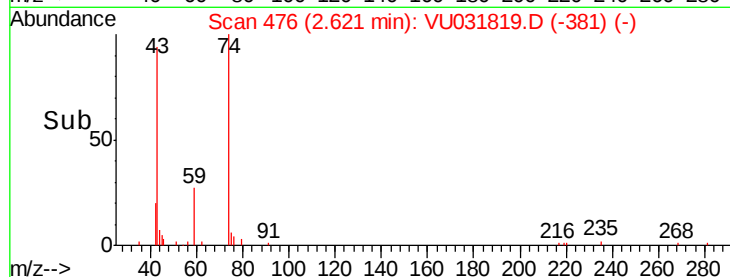
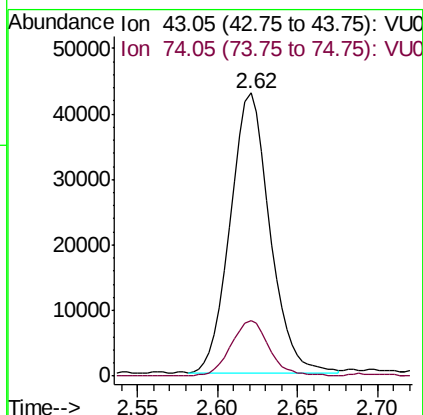
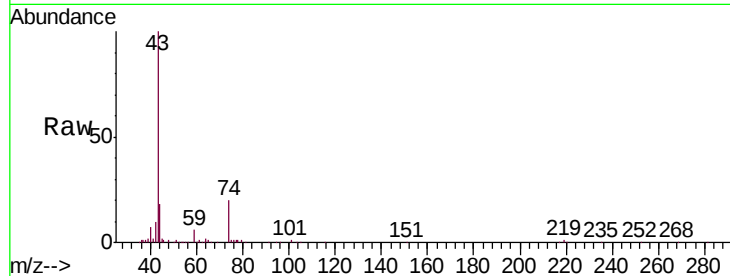




#15  
Methyl Acetate  
Concen: 4.184 ug/L  
RT: 2.62 min Scan# 476  
Delta R.T. 0.01 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

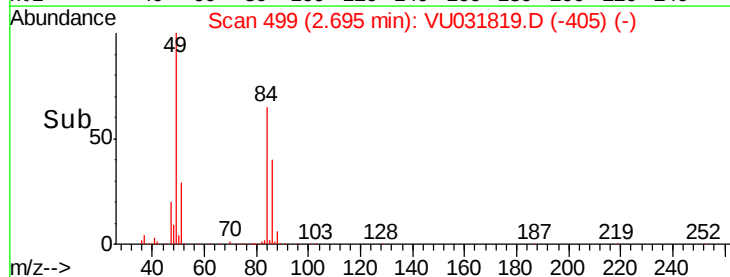
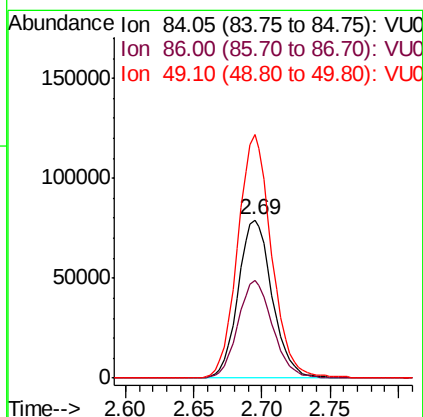
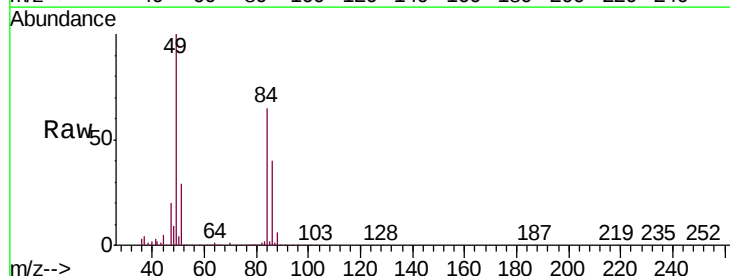
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

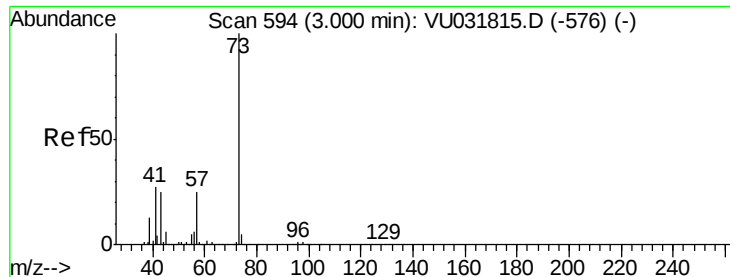
Tgt Ion: 43 Resp: 71675  
Ion Ratio Lower Upper  
43 100  
74 19.3 14.7 22.1



#16  
Methylene chloride  
Concen: 3.978 ug/L  
RT: 2.69 min Scan# 499  
Delta R.T. 0.00 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

Tgt Ion: 84 Resp: 137111  
Ion Ratio Lower Upper  
84 100  
86 61.7 45.6 84.8  
49 154.1 106.7 198.1



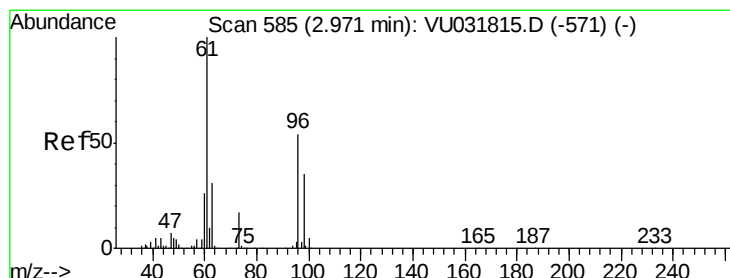
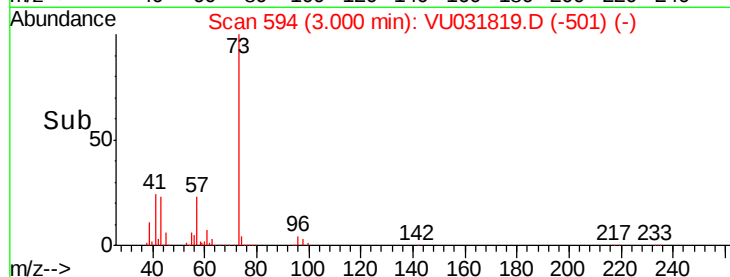
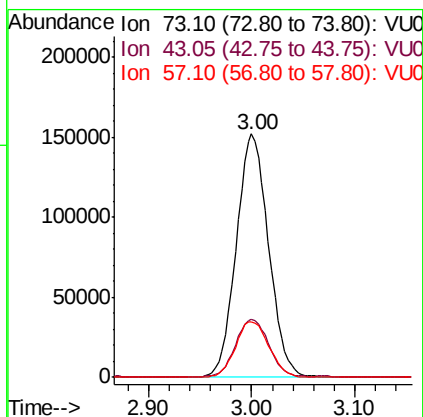
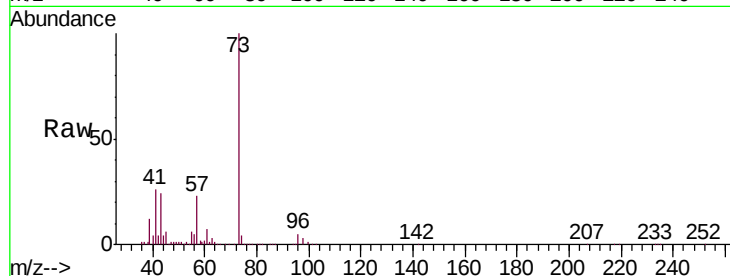


#17

Methyl tert-butyl Ether  
 Concen: 4.467 ug/L  
 RT: 3.00 min Scan# 594  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

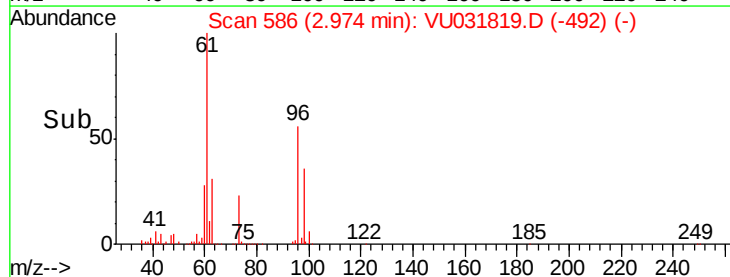
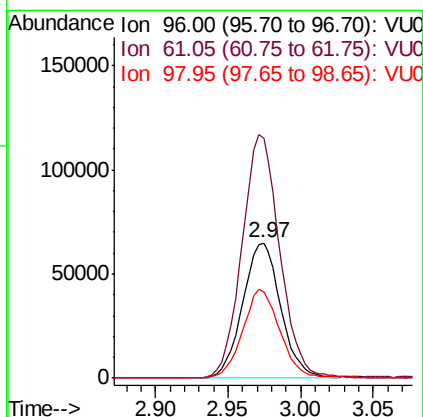
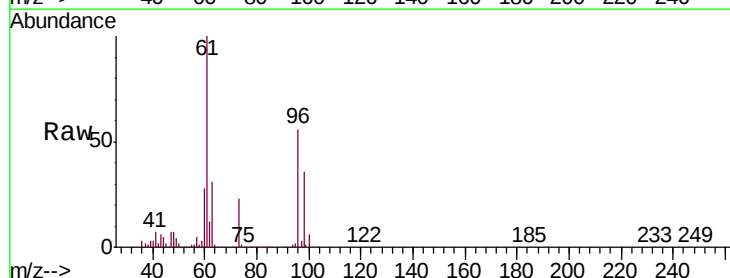
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 73    | Resp: | 330526 |
| Ion      | Ratio | Lower | Upper  |
| 73       | 100   |       |        |
| 43       | 24.2  | 20.5  | 30.7   |
| 57       | 23.8  | 19.9  | 29.9   |

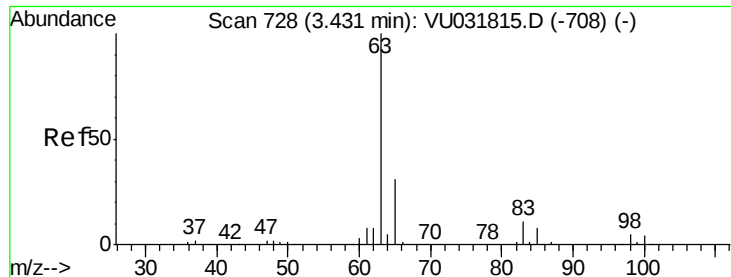


#18

trans-1,2-Dichloroethene  
 Concen: 4.441 ug/L  
 RT: 2.97 min Scan# 586  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 96    | Resp: | 118893 |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 177.5 | 130.9 | 243.1  |
| 98       | 64.1  | 46.2  | 85.8   |

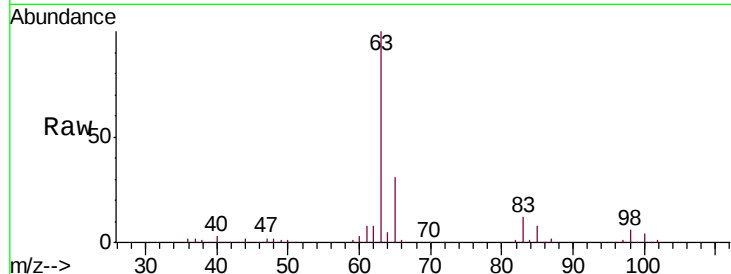




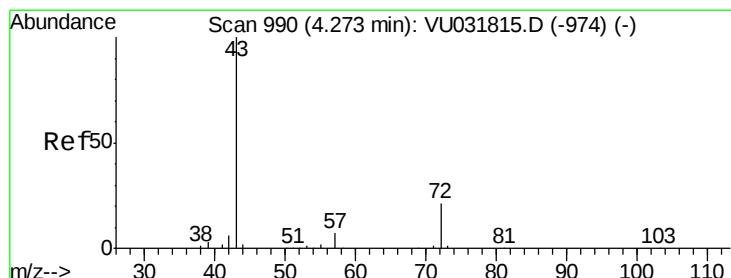
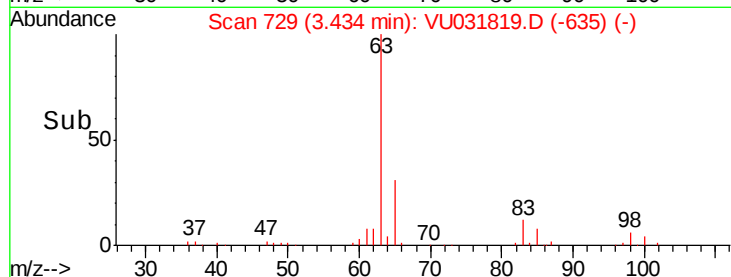
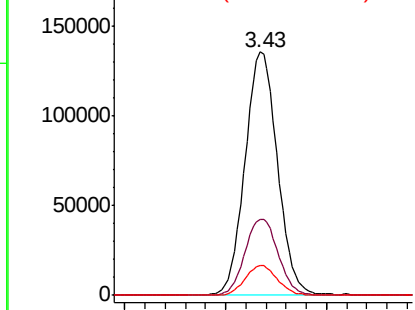
#19  
 1,1-Dichloroethane  
 Concen: 4.584 ug/L  
 RT: 3.43 min Scan# 729  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

Tgt Ion: 63 Resp: 301860  
 Ion Ratio Lower Upper  
 63 100  
 65 31.0 21.8 40.4  
 83 12.3 7.9 14.7

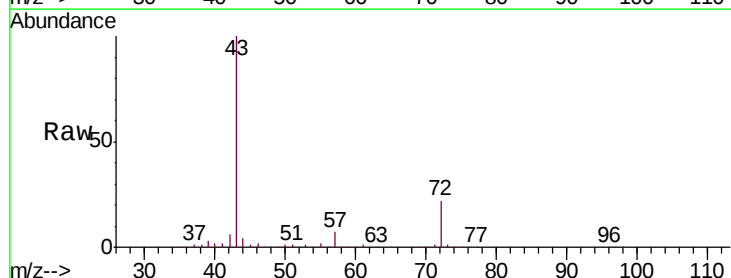


Abundance Ion 63.10 (62.80 to 63.80): VU0  
 Ion 65.10 (64.80 to 65.80): VU0  
 Ion 83.05 (82.75 to 83.75): VU0

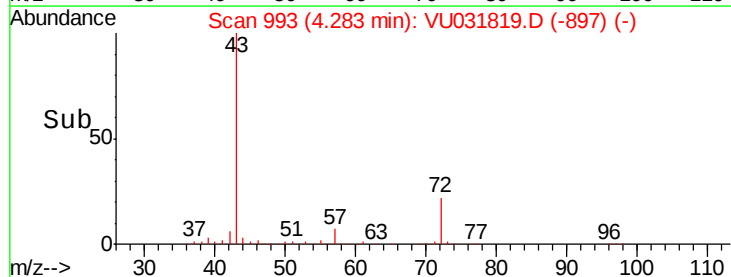
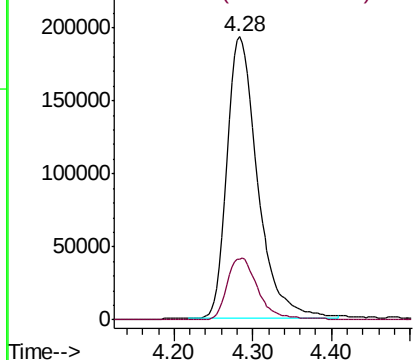


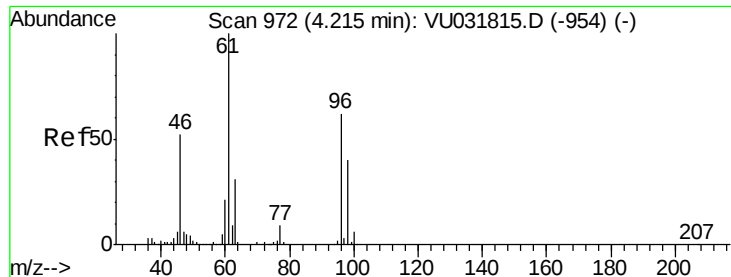
#21  
 2-Butanone  
 Concen: 47.370 ug/L  
 RT: 4.28 min Scan# 993  
 Delta R.T. 0.01 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Tgt Ion: 43 Resp: 525677  
 Ion Ratio Lower Upper  
 43 100  
 72 21.1 10.4 31.1



Abundance Ion 43.05 (42.75 to 43.75): VU0  
 Ion 72.10 (71.80 to 72.80): VU0





#22

cis-1,2-Dichloroethene

Concen: 4.647 ug/L

RT: 4.22 min Scan# 973

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

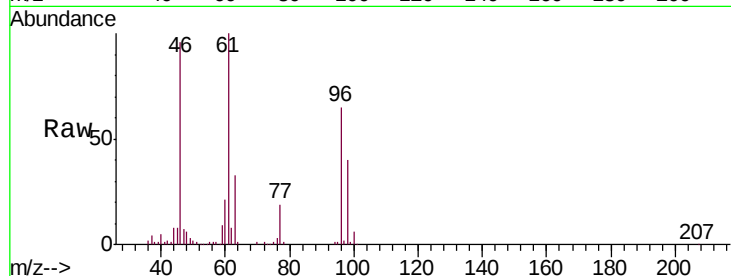
Tgt Ion: 96 Resp: 149413

Ion Ratio Lower Upper

96 100

61 153.7 113.3 210.5

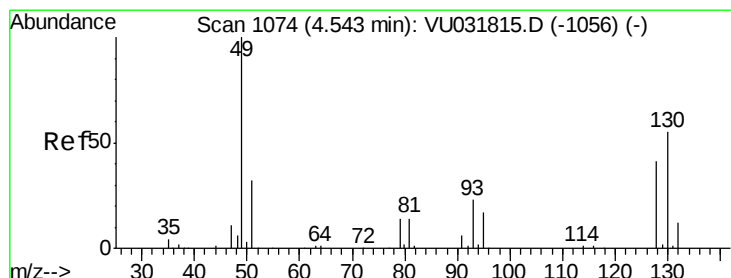
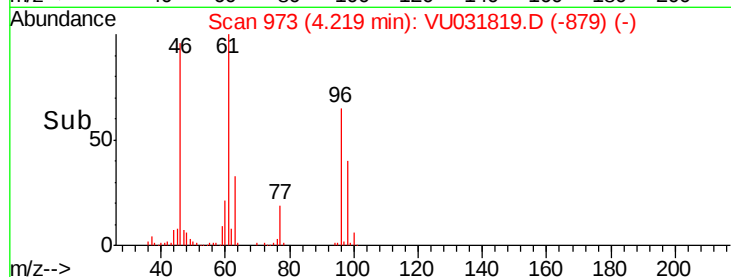
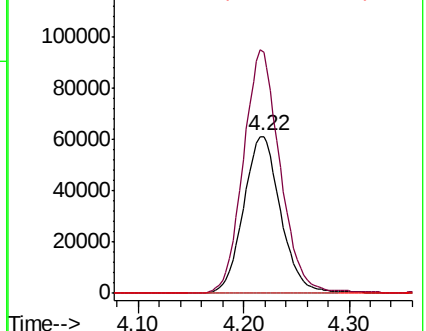
68 0.0 0.0 0.0



Abundance Ion 96.00 (95.70 to 96.70): VU031819.D (-954) (-)

Ion 61.05 (60.75 to 61.75): VU031819.D (-954) (-)

Ion 68.15 (67.85 to 68.85): VU031819.D (-954) (-)



#23

Bromochloromethane

Concen: 4.512 ug/L

RT: 4.54 min Scan# 1073

Delta R.T. -0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Tgt Ion: 128 Resp: 58225

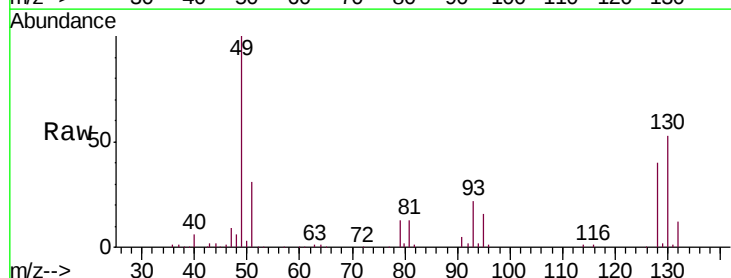
Ion Ratio Lower Upper

128 100

49 250.0 168.8 313.4

130 132.0 93.0 172.8

51 78.0 61.3 91.9

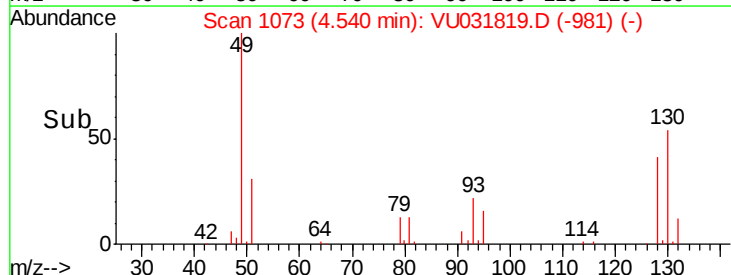
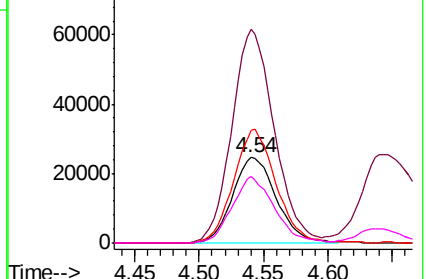


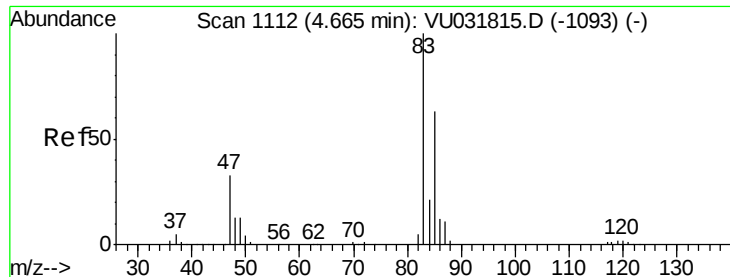
Abundance Ion 127.90 (127.60 to 128.60): VU031819.D (-981) (-)

Ion 49.10 (48.80 to 49.80): VU031819.D (-981) (-)

Ion 129.95 (129.65 to 130.65): VU031819.D (-981) (-)

Ion 51.05 (50.75 to 51.75): VU031819.D (-981) (-)

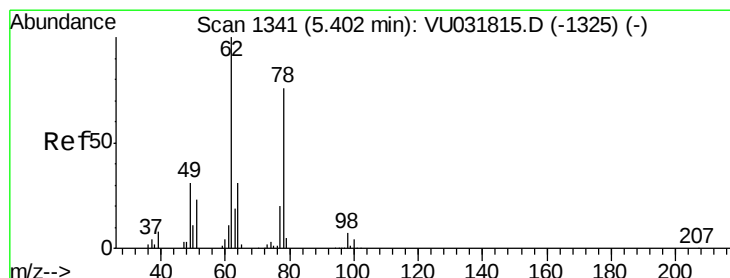
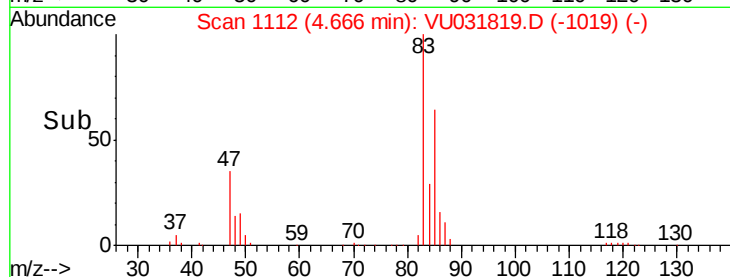
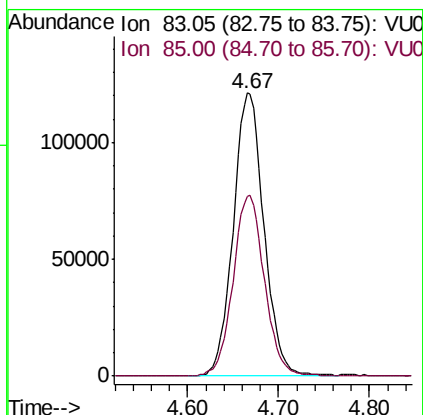
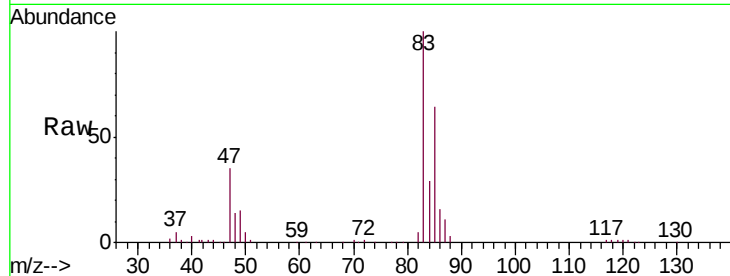




#25  
Chloroform  
Concen: 4.382 ug/L  
RT: 4.67 min Scan# 1112  
Delta R.T. 0.00 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

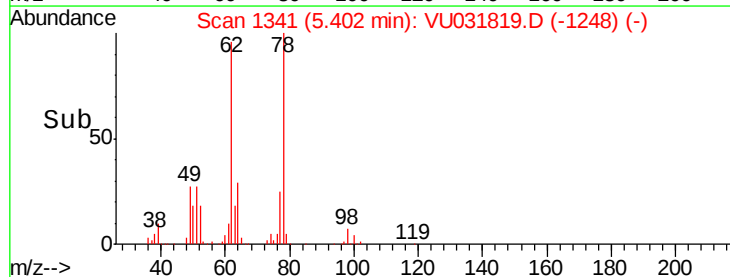
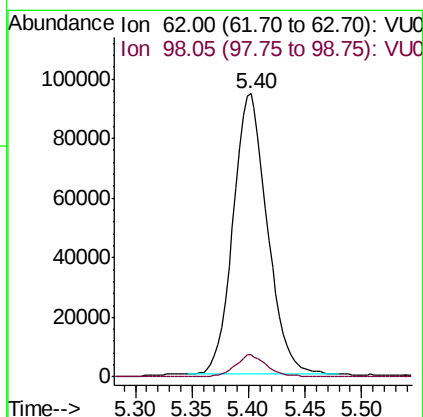
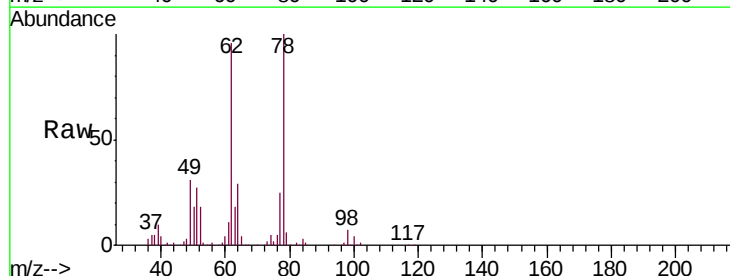
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

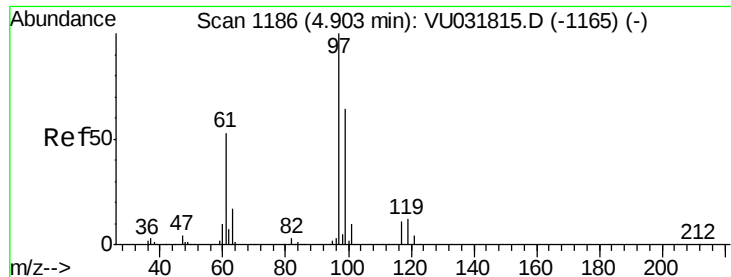
Tgt Ion: 83 Resp: 283935  
Ion Ratio Lower Upper  
83 100  
85 63.6 44.4 82.5



#27  
1,2-Dichloroethane  
Concen: 4.622 ug/L  
RT: 5.40 min Scan# 1341  
Delta R.T. 0.00 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

Tgt Ion: 62 Resp: 197681  
Ion Ratio Lower Upper  
62 100  
98 7.7 5.4 8.2

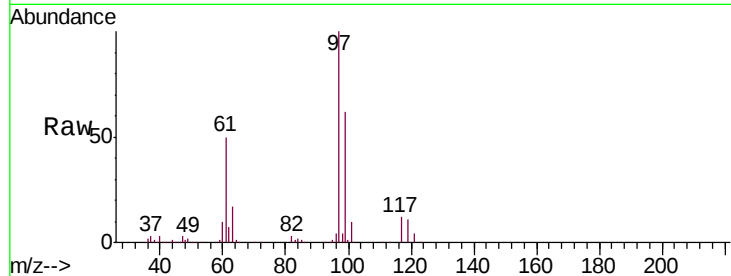




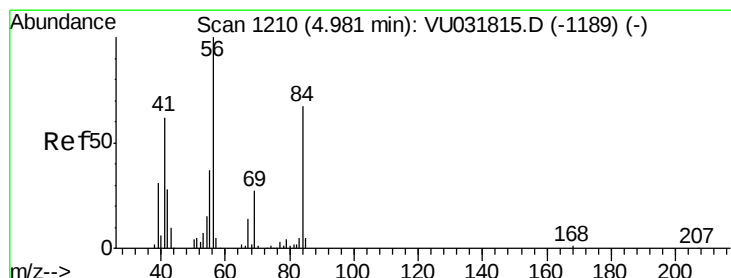
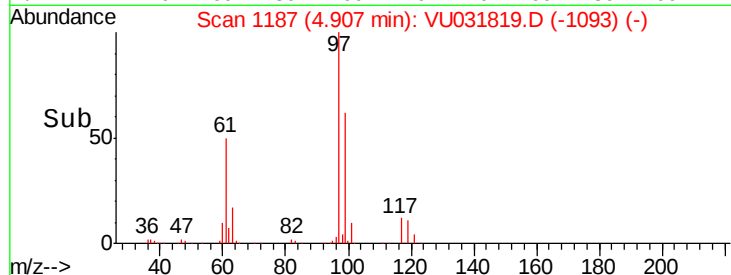
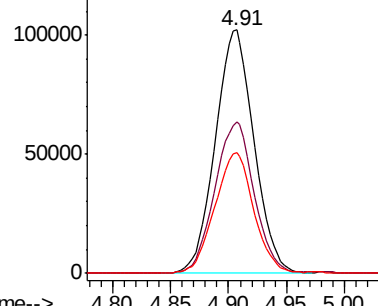
#29  
 1,1,1-Trichloroethane  
 Concen: 4.767 ug/L  
 RT: 4.91 min Scan# 1187  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 62.8  | 50.6  | 75.8  |
| 61      | 50.0  | 42.2  | 63.2  |

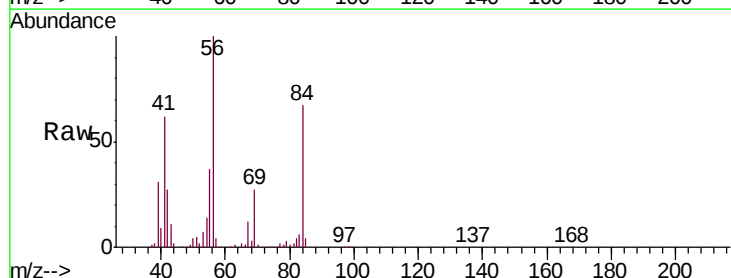


Abundance Ion 96.95 (96.65 to 97.65): VU0  
 Ion 99.05 (98.75 to 99.75): VU0  
 Ion 61.05 (60.75 to 61.75): VU0

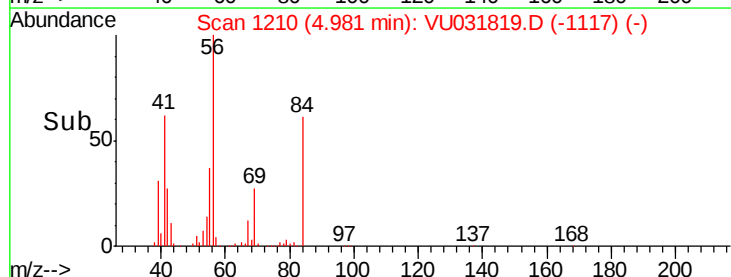
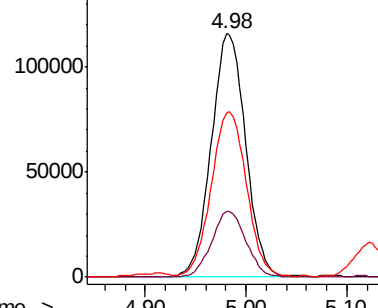


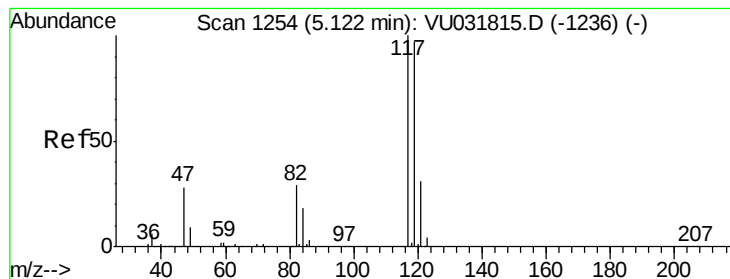
#30  
 Cyclohexane  
 Concen: 5.020 ug/L  
 RT: 4.98 min Scan# 1210  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 56      | 100   |       |       |
| 69      | 27.0  | 21.8  | 32.8  |
| 84      | 68.7  | 56.8  | 85.2  |



Abundance Ion 56.10 (55.80 to 56.80): VU0  
 Ion 69.15 (68.85 to 69.85): VU0  
 Ion 84.15 (83.85 to 84.85): VU0





#31

Carbon tetrachloride

Concen: 4.701 ug/L

RT: 5.12 min Scan# 1254

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

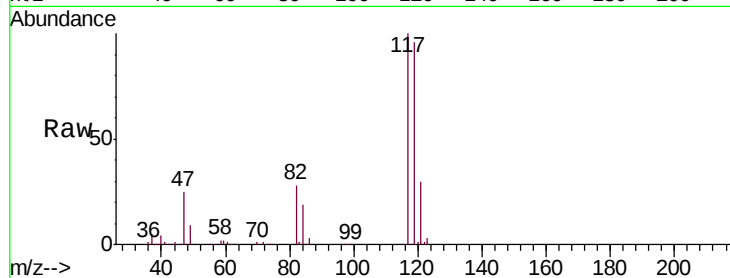
VSTD00523

Tgt Ion:117 Resp: 199728

Ion Ratio Lower Upper

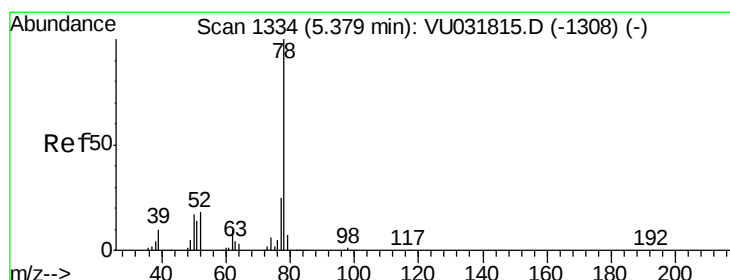
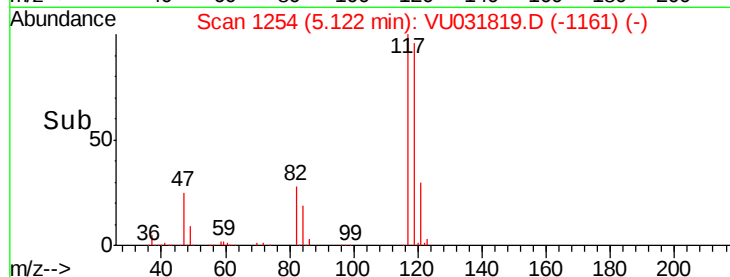
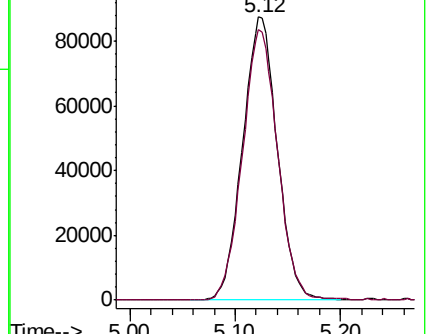
117 100

119 96.5 76.4 114.6



Abundance Ion 116.90 (116.60 to 117.60): V

Ion 118.90 (118.60 to 119.60): V



#33

Benzene

Concen: 4.819 ug/L

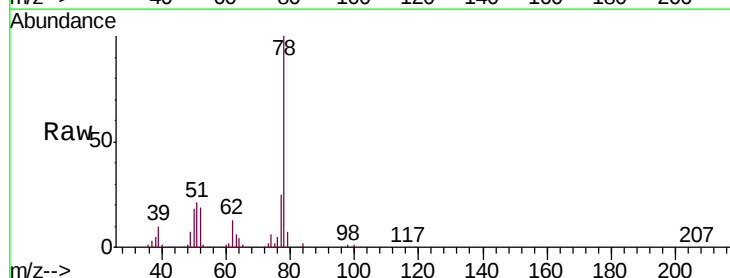
RT: 5.38 min Scan# 1335

Delta R.T. 0.00 min

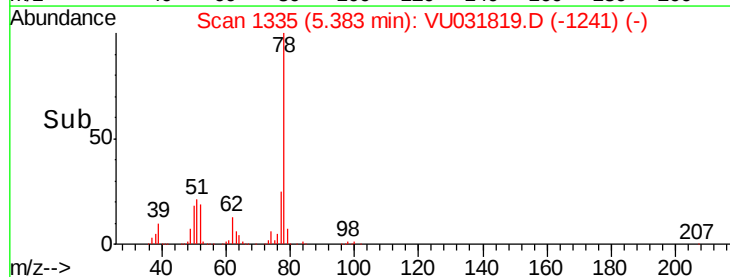
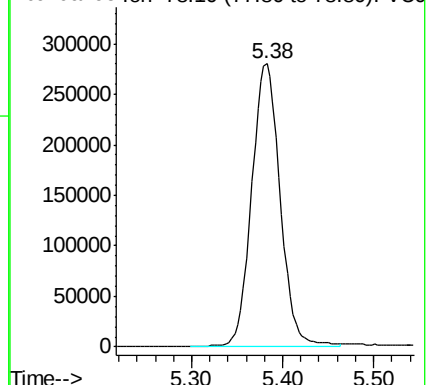
Lab File: VU031819.D

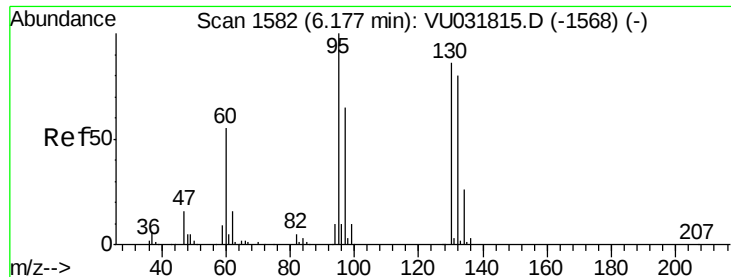
Acq: 08 May 2019 12:53

Tgt Ion: 78 Resp: 611661



Abundance Ion 78.10 (77.80 to 78.80): VU0

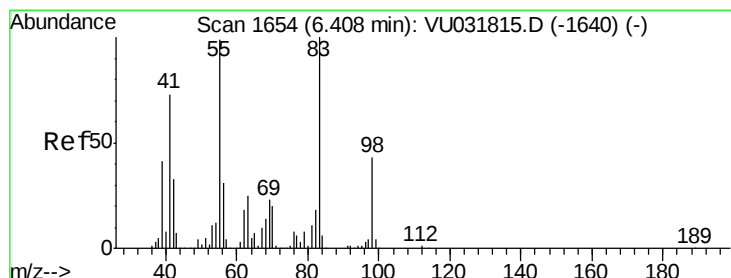
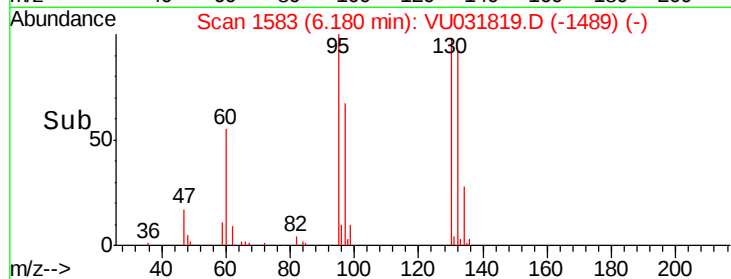
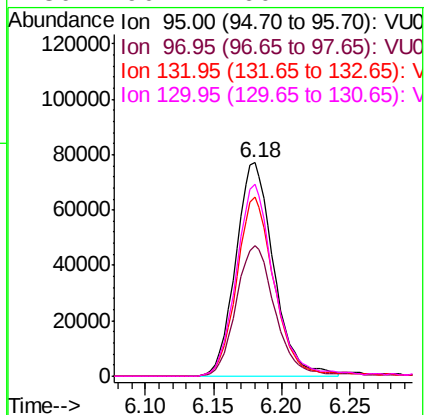
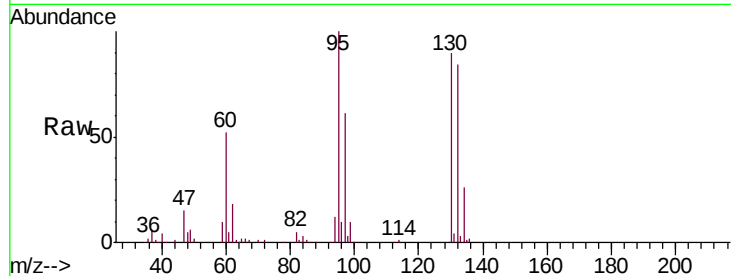




#34  
 Trichloroethene  
 Concen: 4.666 ug/L  
 RT: 6.18 min Scan# 1583  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

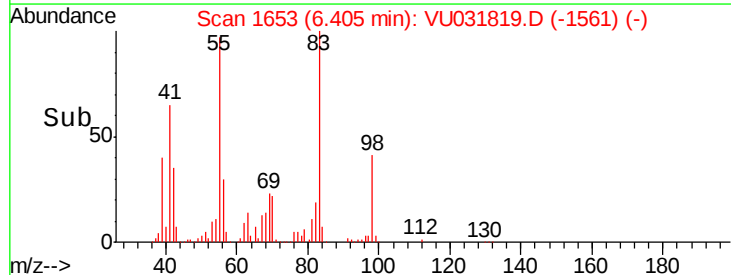
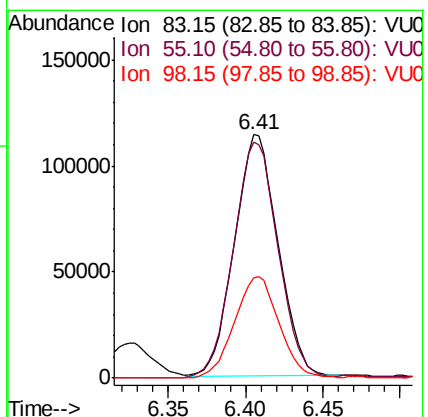
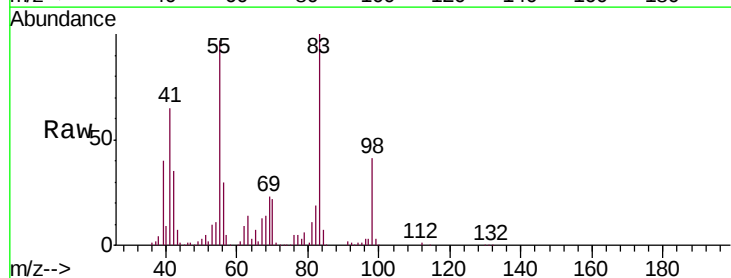
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

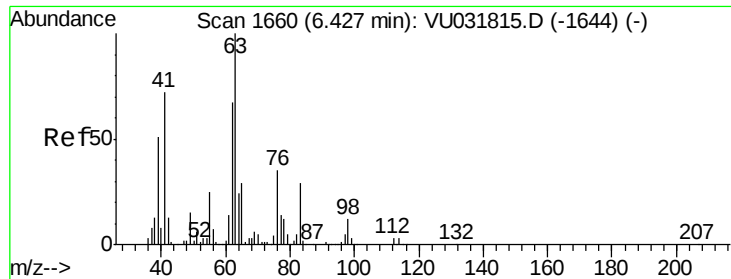
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 95    | Resp: | 149314 |
| Ion      | Ratio | Lower | Upper  |
| 95       | 100   |       |        |
| 97       | 61.1  | 45.8  | 85.2   |
| 132      | 84.0  | 56.0  | 104.0  |
| 130      | 90.1  | 60.4  | 112.2  |



#35  
 Methylcyclohexane  
 Concen: 4.843 ug/L  
 RT: 6.41 min Scan# 1653  
 Delta R.T. -0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 83    | Resp: | 222630 |
| Ion      | Ratio | Lower | Upper  |
| 83       | 100   |       |        |
| 55       | 100.8 | 79.2  | 118.8  |
| 98       | 43.1  | 34.0  | 51.0   |





#37

1,2-Dichloropropane

Concen: 4.792 ug/L

RT: 6.43 min Scan# 1660

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

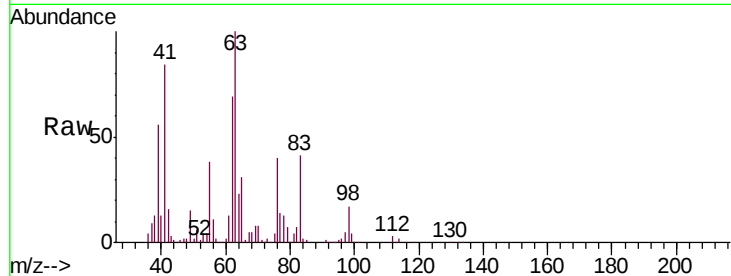
VSTD00523

Tgt Ion: 63 Resp: 174090

Ion Ratio Lower Upper

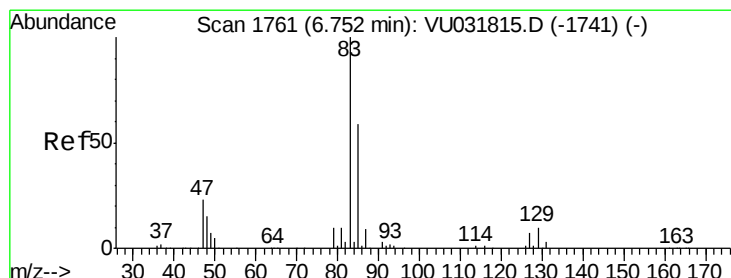
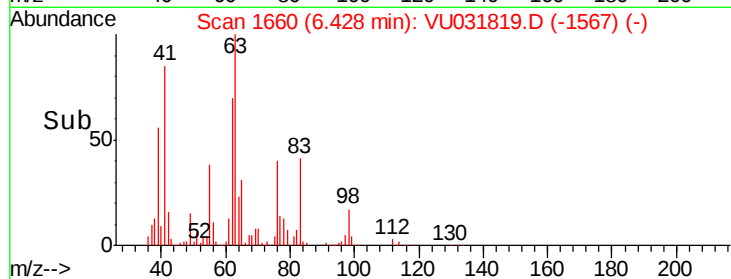
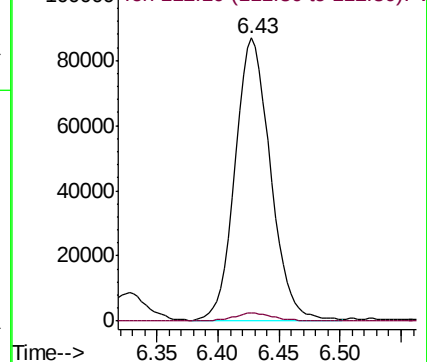
63 100

112 3.2 2.5 3.7



Abundance Ion 63.10 (62.80 to 63.80): VU031819.D (-1644) (-)

Ion 112.10 (111.80 to 112.80): VU031819.D (-1644) (-)



#38

Bromodichloromethane

Concen: 4.565 ug/L

RT: 6.75 min Scan# 1761

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

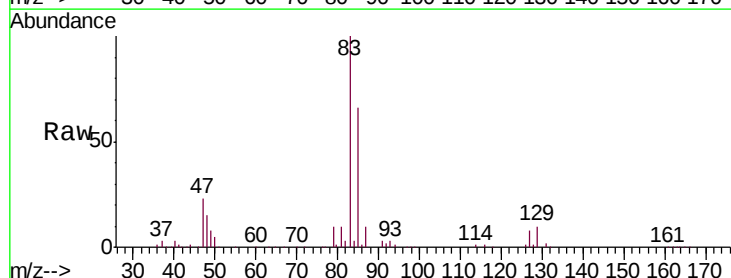
Tgt Ion: 83 Resp: 197508

Ion Ratio Lower Upper

83 100

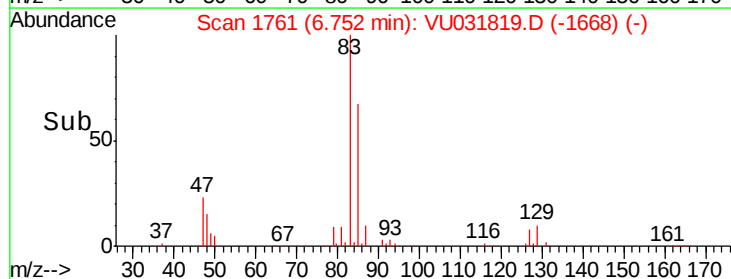
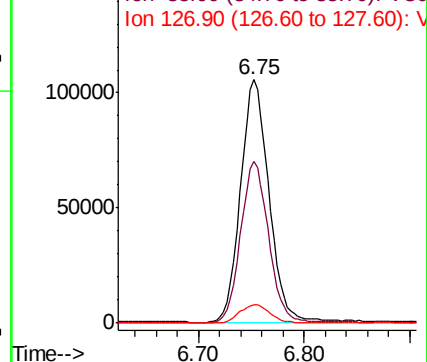
85 66.3 41.3 76.7

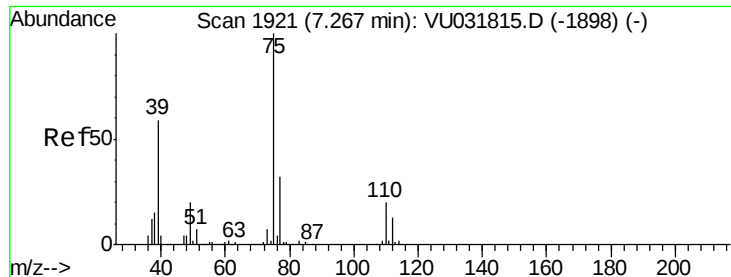
127 7.6 5.8 8.6



Abundance Ion 82.95 (82.65 to 83.65): VU031819.D (-1741) (-)

Ion 85.00 (84.70 to 85.70): VU031819.D (-1741) (-)

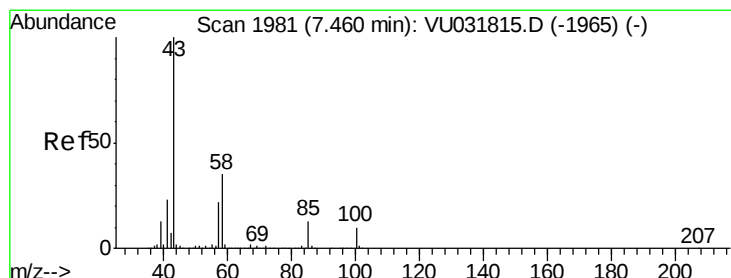
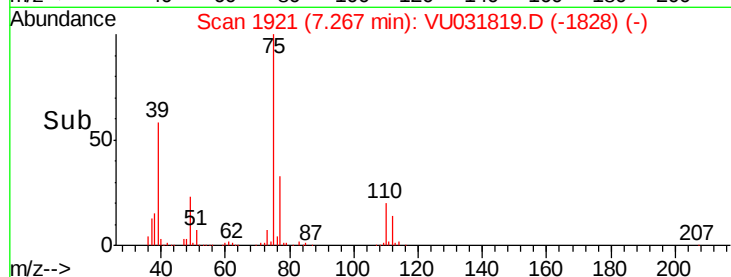
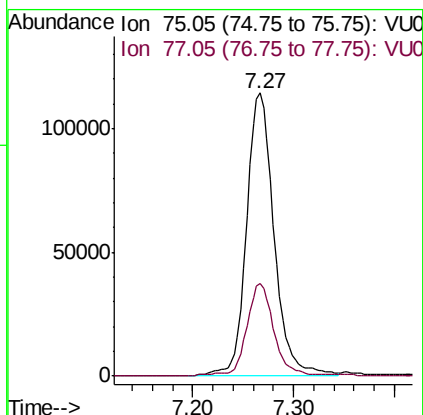
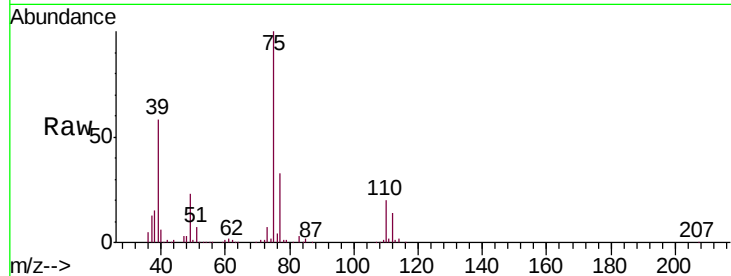




#39  
 cis-1,3-Dichloropropene  
 Concen: 4.747 ug/L  
 RT: 7.27 min Scan# 1921  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

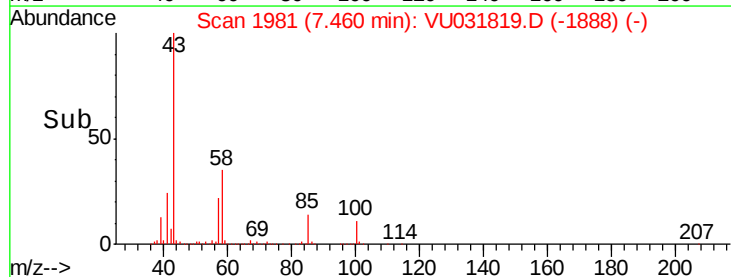
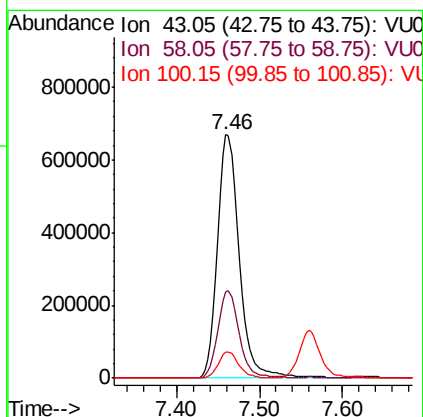
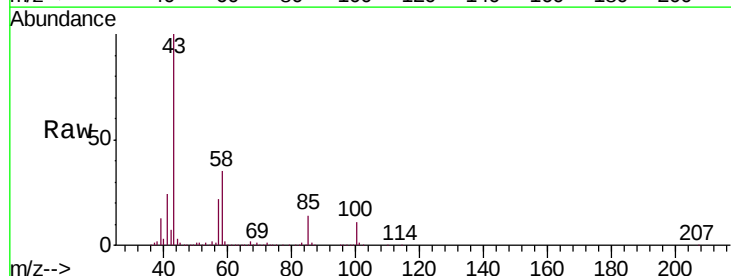
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

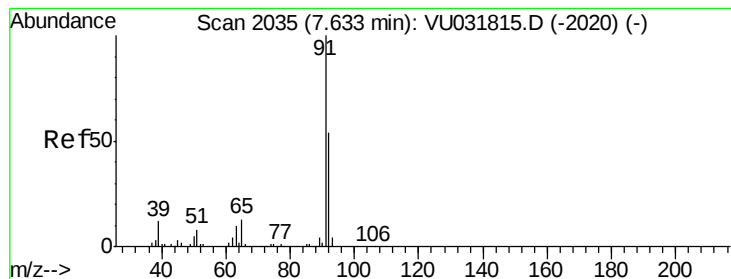
Tgt Ion: 75 Resp: 216076  
 Ion Ratio Lower Upper  
 75 100  
 77 32.5 22.3 41.5



#40  
 4-Methyl-2-pentanone  
 Concen: 49.775 ug/L  
 RT: 7.46 min Scan# 1981  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Tgt Ion: 43 Resp: 1216827  
 Ion Ratio Lower Upper  
 43 100  
 58 35.2 28.0 42.0  
 100 10.2 8.2 12.4





#42

Toluene

Concen: 5.021 ug/L

RT: 7.63 min Scan# 2034

Delta R.T. -0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

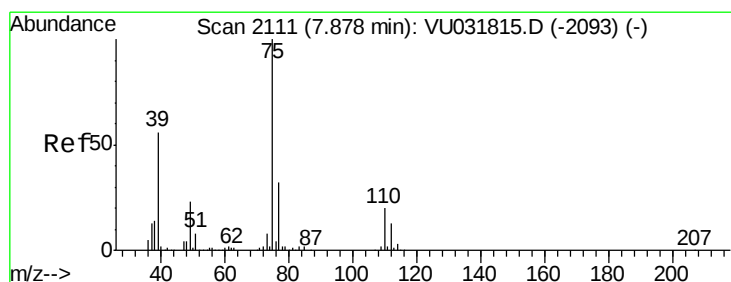
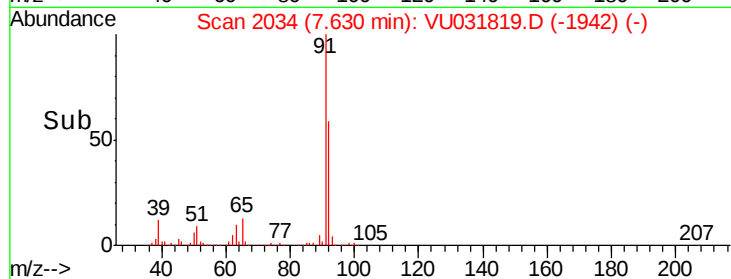
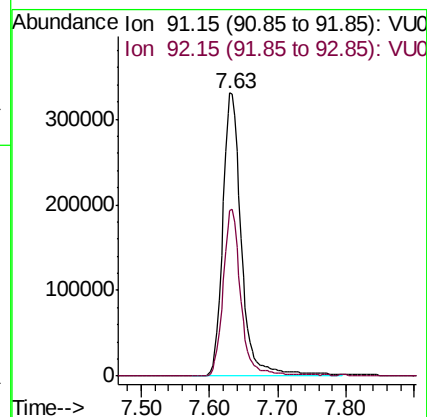
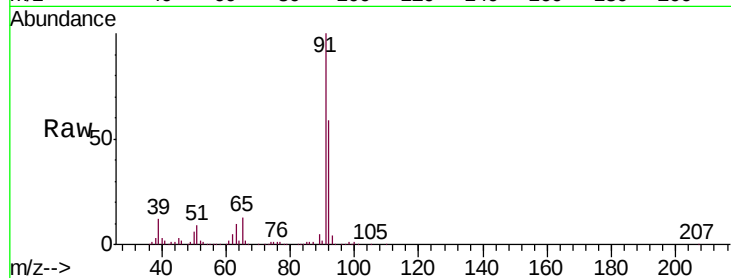
VSTD00523

Tgt Ion: 91 Resp: 629251

Ion Ratio Lower Upper

91 100

92 58.5 38.1 70.9



#44

trans-1,3-Dichloropropene

Concen: 5.022 ug/L

RT: 7.88 min Scan# 2111

Delta R.T. 0.00 min

Lab File: VU031819.D

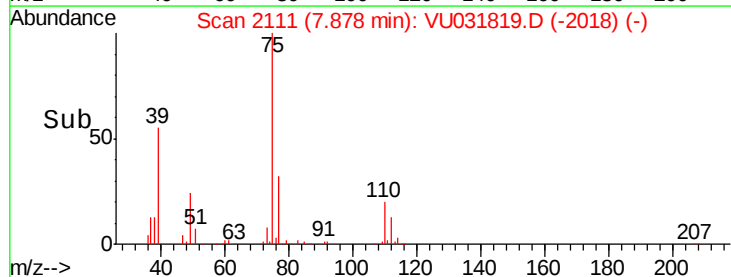
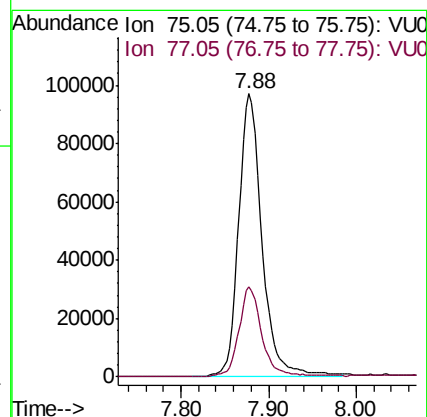
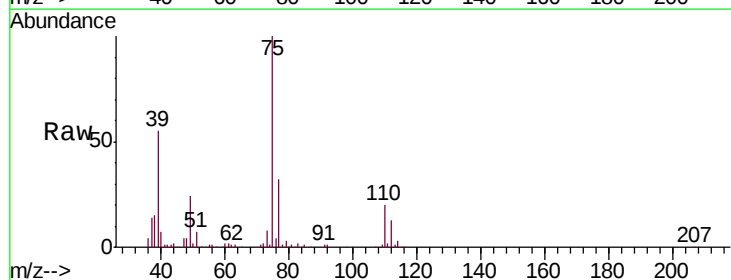
Acq: 08 May 2019 12:53

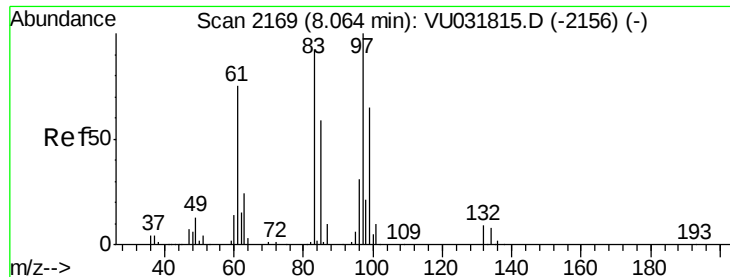
Tgt Ion: 75 Resp: 181073

Ion Ratio Lower Upper

75 100

77 31.8 22.3 41.3

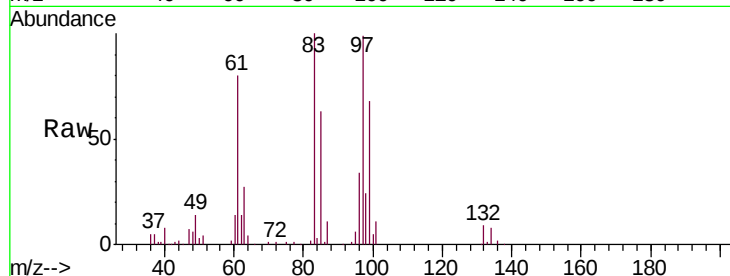




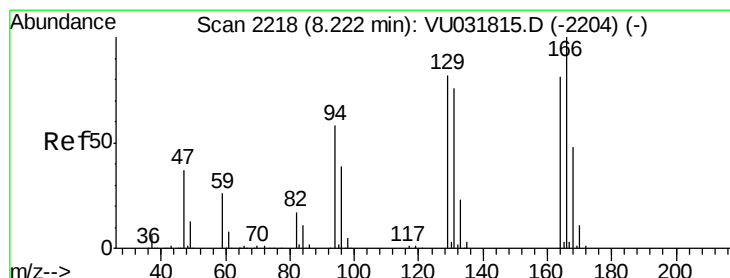
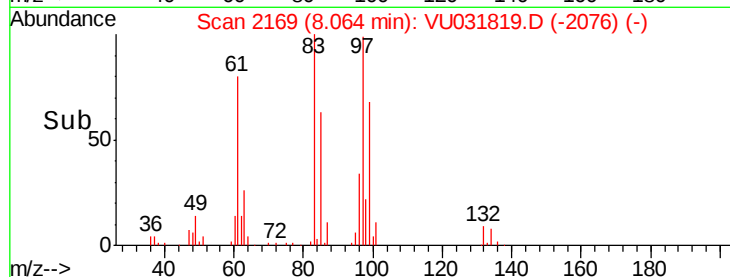
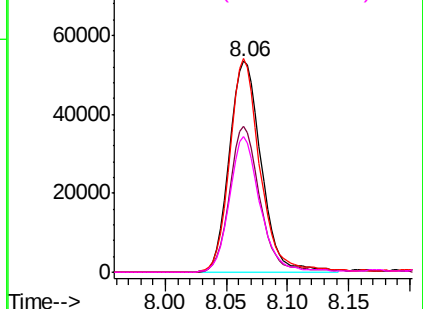
#45  
 1,1,2-Trichloroethane  
 Concen: 4.547 ug/L  
 RT: 8.06 min Scan# 2169  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00523

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 97    | Resp: | 97861 |
| Ion      | Ratio | Lower | Upper |
| 97       | 100   |       |       |
| 99       | 69.1  | 45.8  | 85.0  |
| 83       | 101.3 | 64.5  | 119.7 |
| 85       | 64.2  | 41.6  | 77.3  |

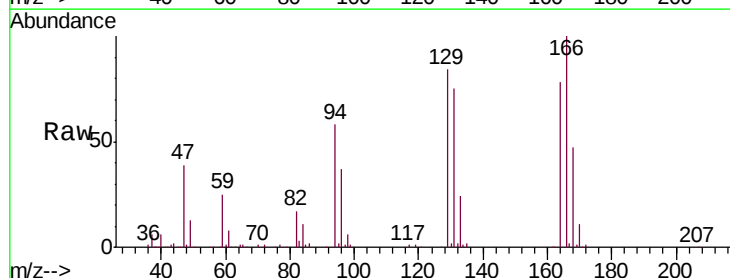


Abundance Ion 96.95 (96.65 to 97.65): VU0  
 Ion 99.05 (98.75 to 99.75): VU0  
 Ion 82.95 (82.65 to 83.65): VU0  
 Ion 85.00 (84.70 to 85.70): VU0

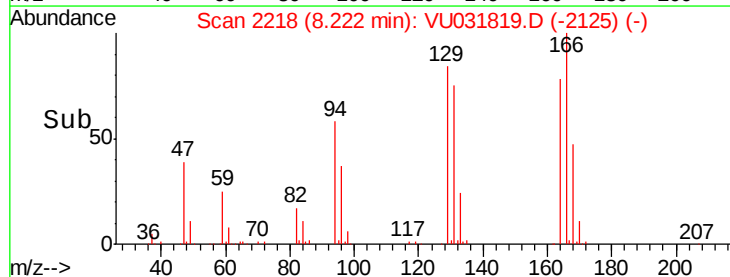
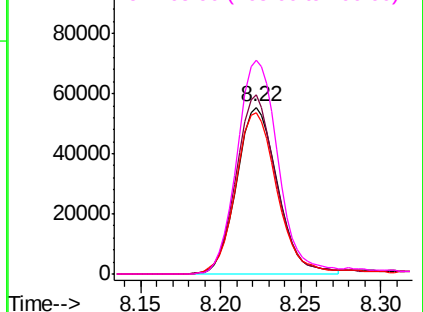


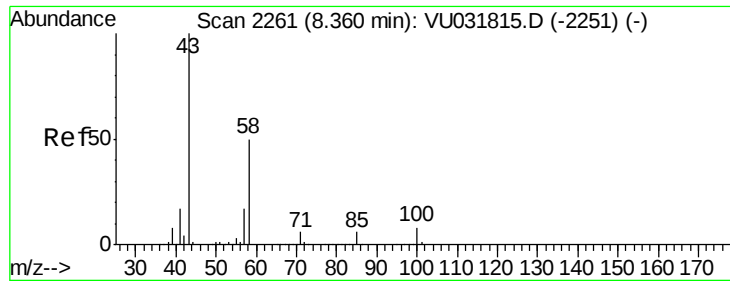
#47  
 Tetrachloroethene  
 Concen: 4.661 ug/L  
 RT: 8.22 min Scan# 2218  
 Delta R.T. 0.00 min  
 Lab File: VU031819.D  
 Acq: 08 May 2019 12:53

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 164   | Resp: | 96991 |
| Ion      | Ratio | Lower | Upper |
| 164      | 100   |       |       |
| 129      | 107.6 | 70.3  | 130.5 |
| 131      | 96.4  | 65.4  | 121.4 |
| 166      | 128.0 | 86.0  | 159.8 |



Abundance Ion 163.90 (163.60 to 164.60): V  
 Ion 128.95 (128.65 to 129.65): V  
 Ion 130.95 (130.65 to 131.65): V  
 Ion 165.90 (165.60 to 166.60): V

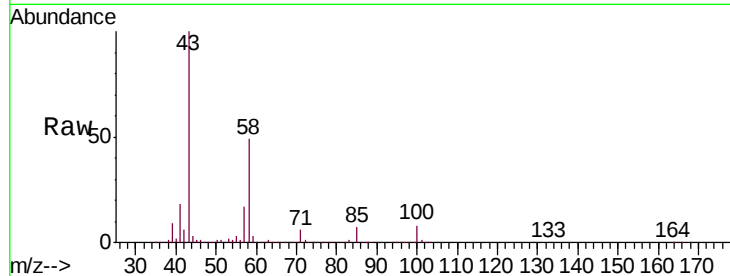




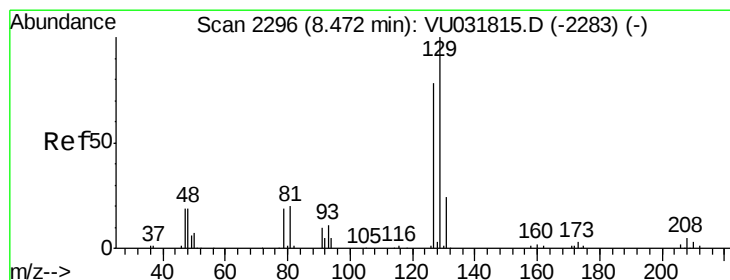
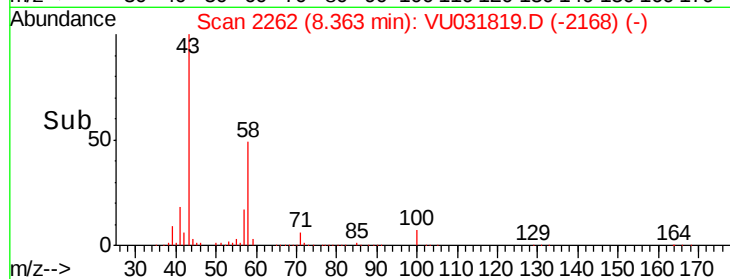
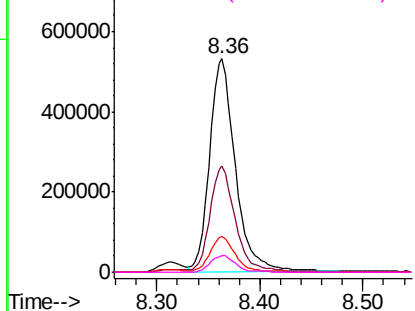
#48  
2-Hexanone  
Concen: 52.852 ug/L  
RT: 8.36 min Scan# 2262  
Delta R.T. 0.00 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00523

Tgt Ion: 43 Resp: 918310  
Ion Ratio Lower Upper  
43 100  
58 49.1 40.2 60.2  
57 16.4 13.8 20.6  
100 7.9 6.4 9.6

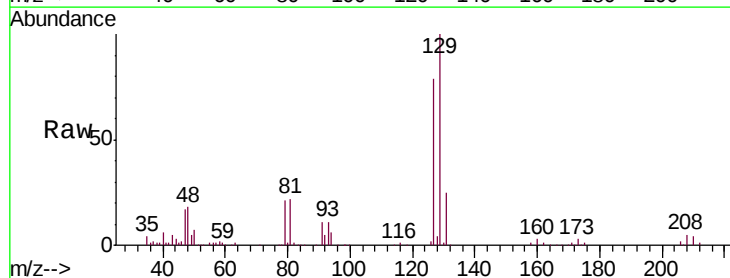


Abundance Ion 43.05 (42.75 to 43.75): VU0  
Ion 58.05 (57.75 to 58.75): VU0  
Ion 57.20 (56.90 to 57.90): VU0  
Ion 100.15 (99.85 to 100.85): VU0

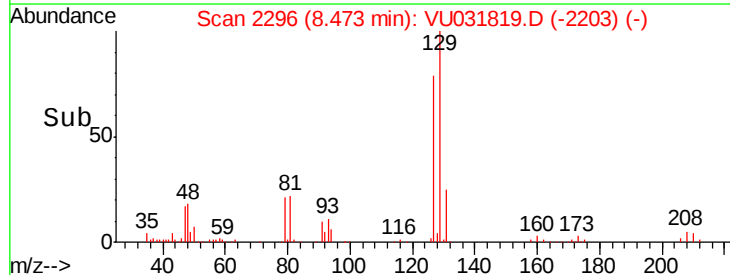
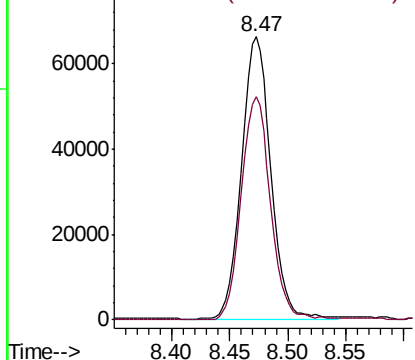


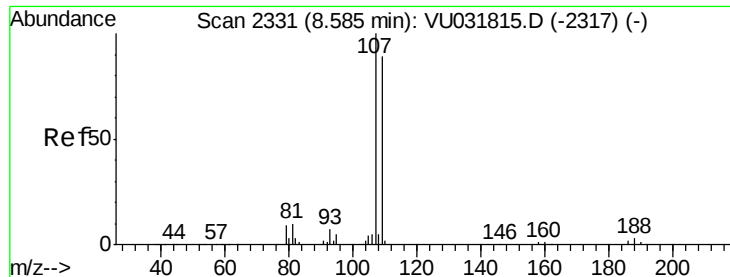
#49  
Dibromochloromethane  
Concen: 4.690 ug/L  
RT: 8.47 min Scan# 2296  
Delta R.T. 0.00 min  
Lab File: VU031819.D  
Acq: 08 May 2019 12:53

Tgt Ion: 129 Resp: 117399  
Ion Ratio Lower Upper  
129 100  
127 78.9 54.7 101.7



Abundance Ion 128.95 (128.65 to 129.65): V  
Ion 126.90 (126.60 to 127.60): V





#50

1,2-Dibromoethane

Concen: 4.707 ug/L

RT: 8.59 min Scan# 2331

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

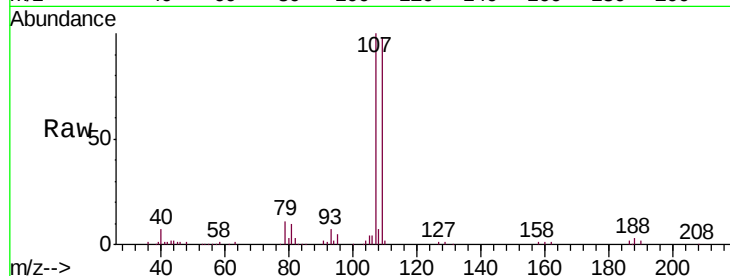
Tgt Ion:107 Resp: 92189

Ion Ratio Lower Upper

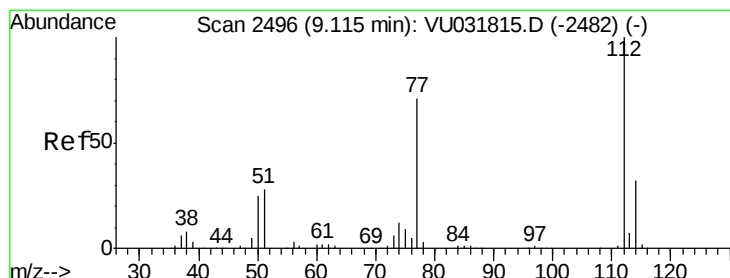
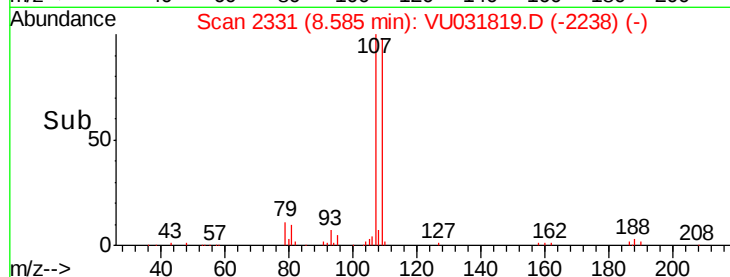
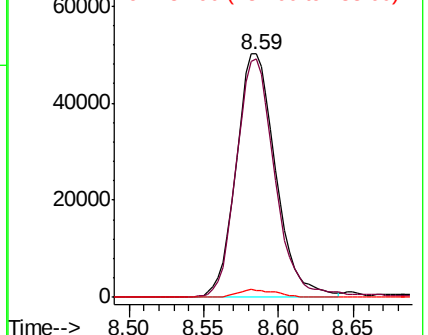
107 100

109 97.9 62.6 116.3

188 2.9 2.1 3.1



Abundance Ion 106.95 (106.65 to 107.65): V  
Ion 109.00 (108.70 to 109.70): V  
Ion 187.90 (187.60 to 188.60): V



#51

Chlorobenzene

Concen: 4.814 ug/L

RT: 9.12 min Scan# 2496

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

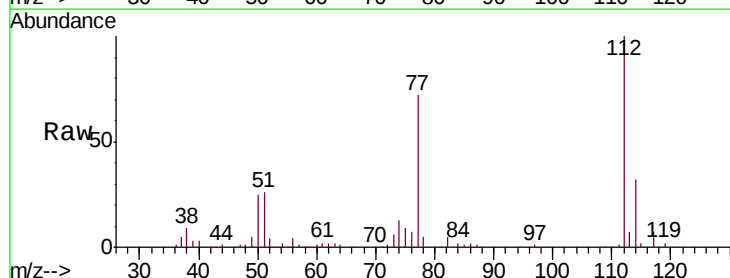
Tgt Ion:112 Resp: 358643

Ion Ratio Lower Upper

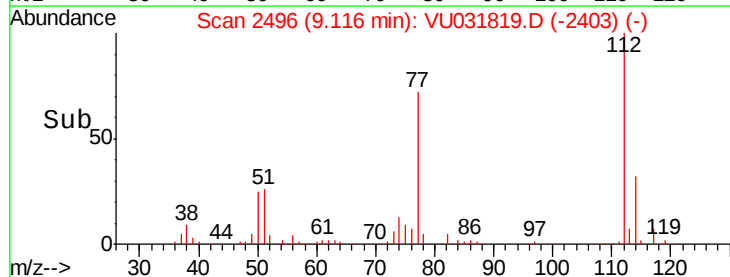
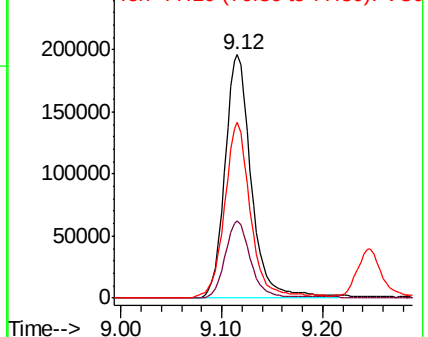
112 100

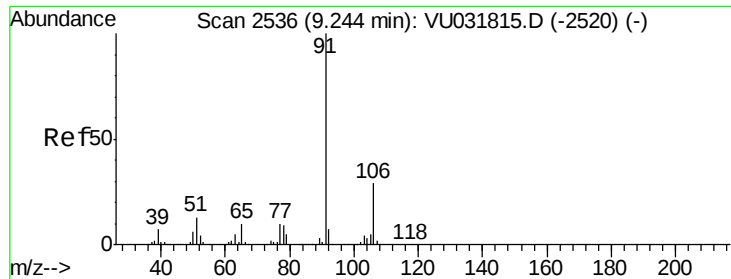
114 31.8 22.5 41.7

77 72.0 56.9 85.3



Abundance Ion 112.10 (111.80 to 112.80): V  
Ion 114.05 (113.75 to 114.75): V  
Ion 77.10 (76.80 to 77.80): V





#52

Ethylbenzene

Concen: 4.950 ug/L

RT: 9.25 min Scan# 2537

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

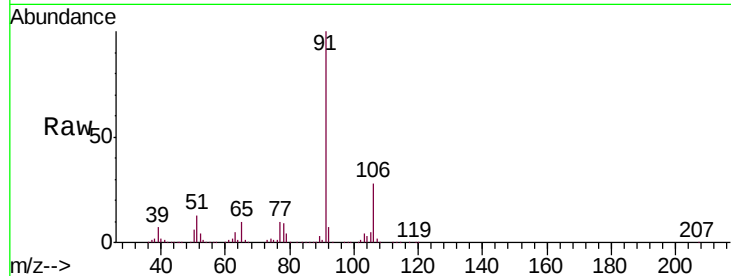
VSTD00523

Tgt Ion: 91 Resp: 647139

Ion Ratio Lower Upper

91 100

106 28.4 20.0 37.2



Abundance Ion 91.15 (90.85 to 91.85): VU031819.D (-2520) (-)

Ion 106.15 (105.85 to 106.85): VU031819.D (-2520) (-)

9.25

400000

300000

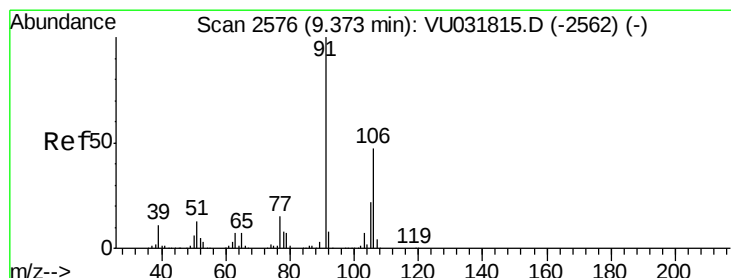
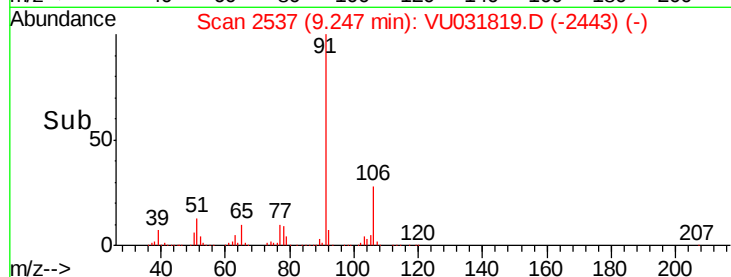
200000

100000

0

9.15 9.20 9.25 9.30 9.35

Time-->



#53

m,p-Xylene

Concen: 4.946 ug/L

RT: 9.37 min Scan# 2576

Delta R.T. 0.00 min

Lab File: VU031819.D

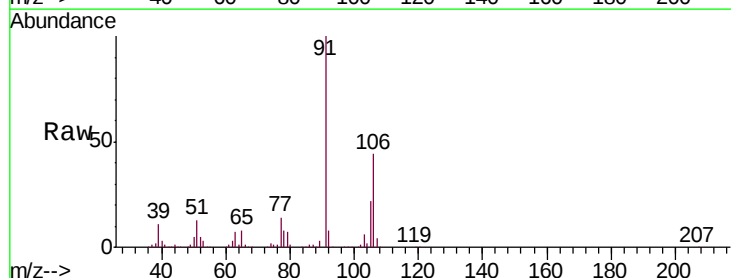
Acq: 08 May 2019 12:53

Tgt Ion: 106 Resp: 230183

Ion Ratio Lower Upper

106 100

91 224.9 150.3 279.1



Abundance Ion 106.15 (105.85 to 106.85): VU031819.D (-2562) (-)

Ion 91.15 (90.85 to 91.85): VU031819.D (-2562) (-)

9.37

300000

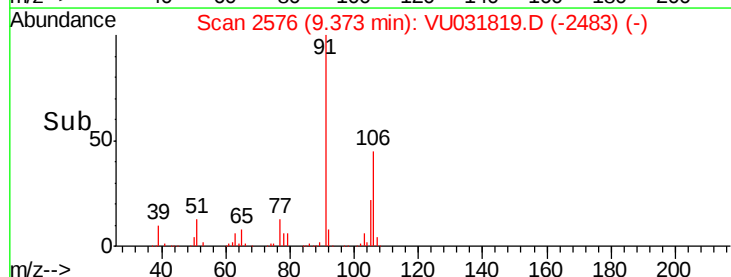
200000

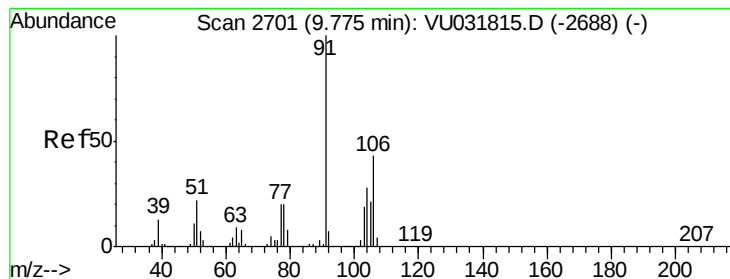
100000

0

9.30 9.35 9.40 9.45

Time-->





#54

o-Xylene

Concen: 5.021 ug/L

RT: 9.77 min Scan# 2701

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

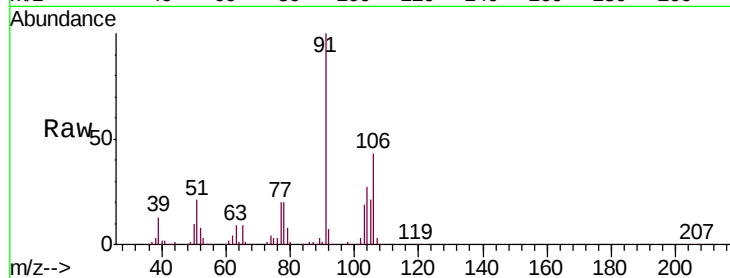
VSTD00523

Tgt Ion:106 Resp: 223450

Ion Ratio Lower Upper

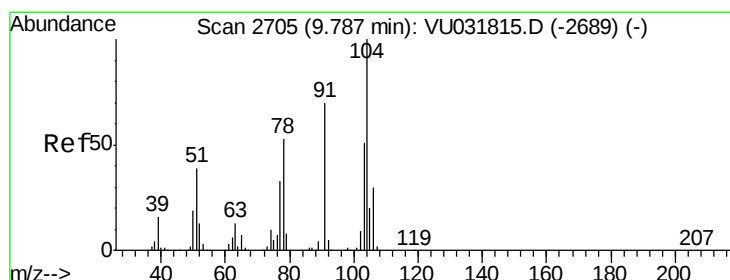
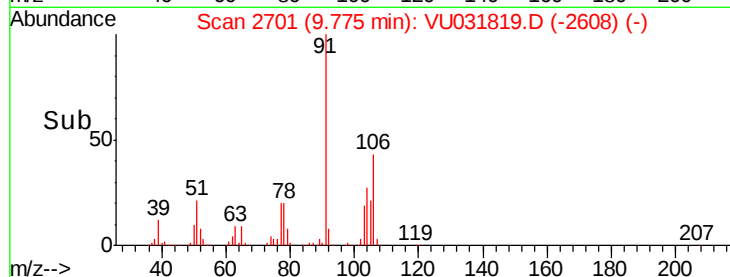
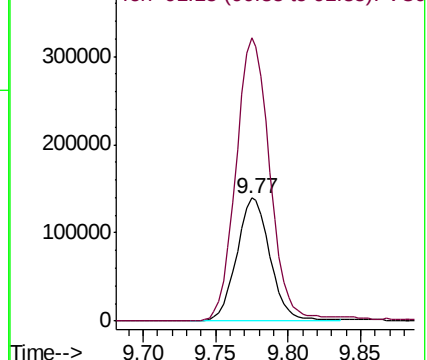
106 100

91 230.2 161.8 300.6



Abundance Ion 106.15 (105.85 to 106.85): V

Ion 91.15 (90.85 to 91.85): VU0



#55

Styrene

Concen: 5.091 ug/L

RT: 9.79 min Scan# 2706

Delta R.T. 0.00 min

Lab File: VU031819.D

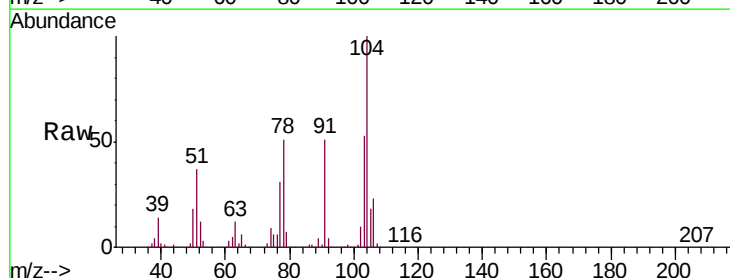
Acq: 08 May 2019 12:53

Tgt Ion:104 Resp: 388822

Ion Ratio Lower Upper

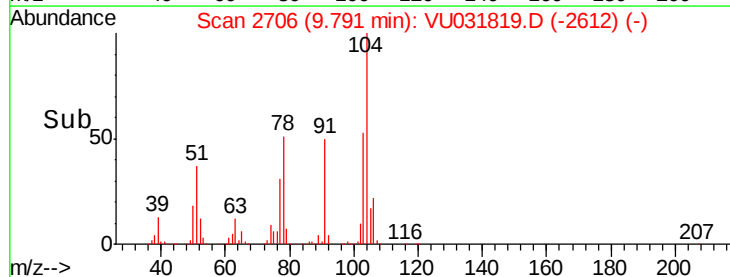
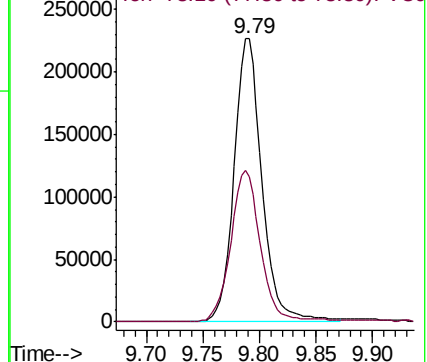
104 100

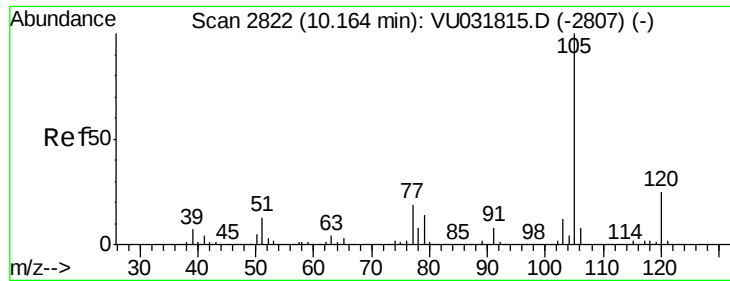
78 51.2 37.2 69.0



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VU0





#56

Isopropylbenzene

Concen: 4.985 ug/L

RT: 10.16 min Scan# 2822

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

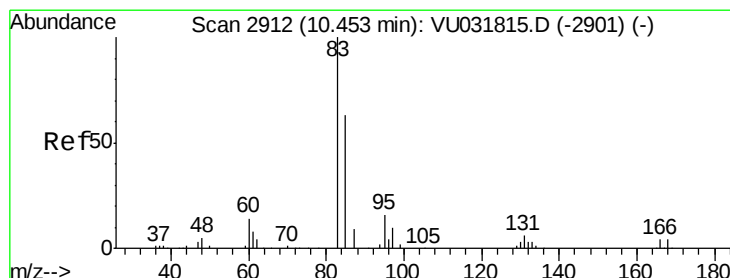
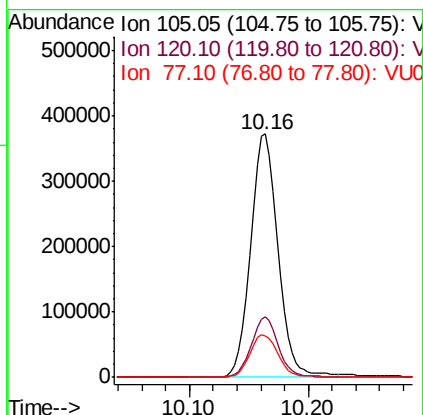
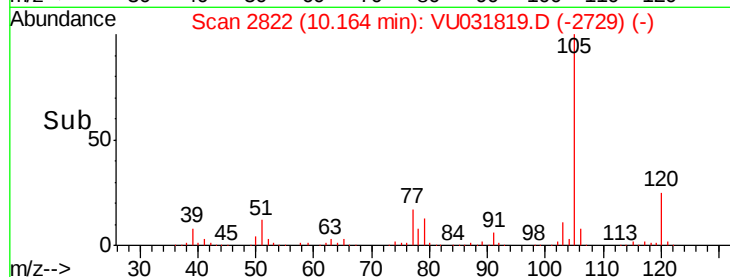
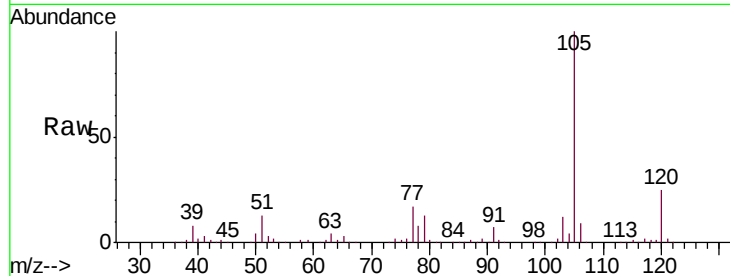
Tgt Ion: 105 Resp: 593923

Ion Ratio Lower Upper

105 100

120 24.7 20.2 30.4

77 18.2 14.8 22.2



#58

1,1,2,2-Tetrachloroethane

Concen: 4.649 ug/L

RT: 10.45 min Scan# 2912

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

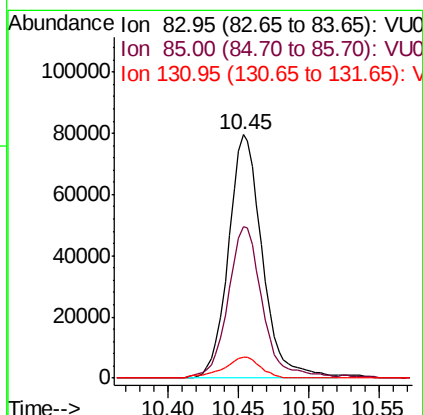
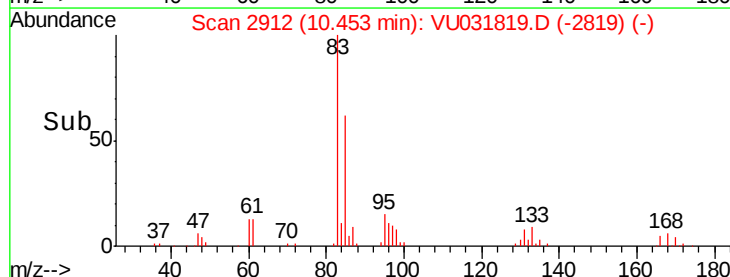
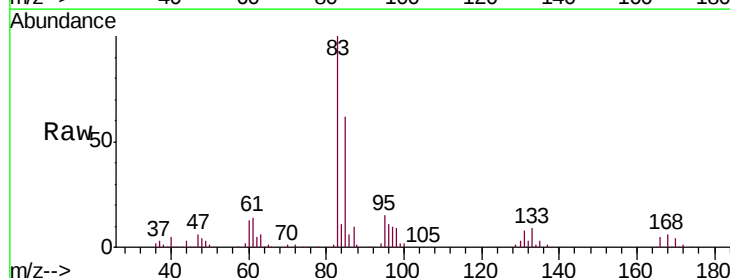
Tgt Ion: 83 Resp: 133640

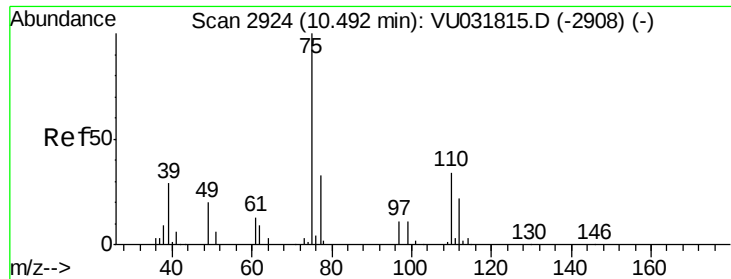
Ion Ratio Lower Upper

83 100

85 62.2 44.3 82.3

131 8.5 6.0 9.0





#59

1,2,3-Trichloropropane

Concen: 4.591 ug/L

RT: 10.49 min Scan# 2924

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

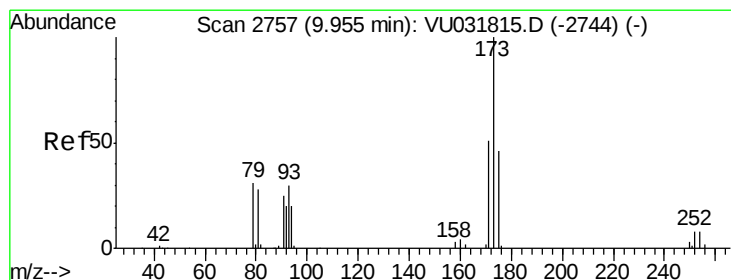
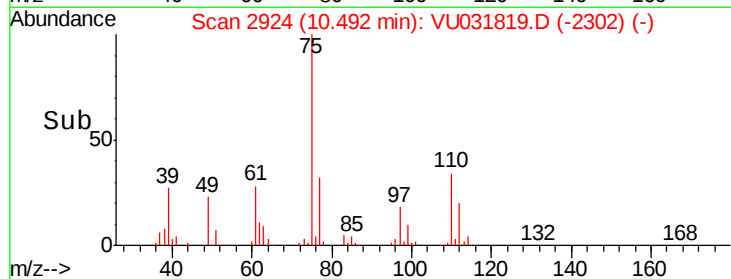
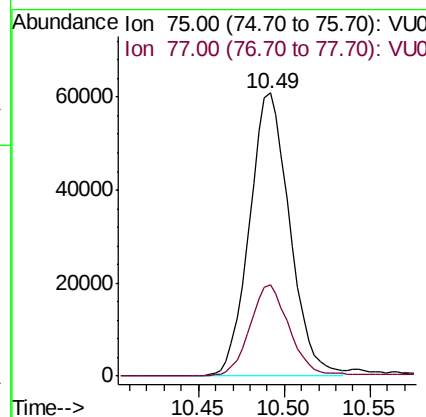
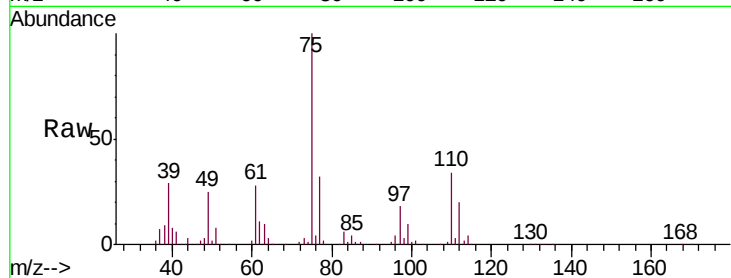
VSTD00523

Tgt Ion: 75 Resp: 98724

Ion Ratio Lower Upper

75 100

77 32.1 26.3 39.5



#61

Bromoform

Concen: 4.563 ug/L

RT: 9.95 min Scan# 2757

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

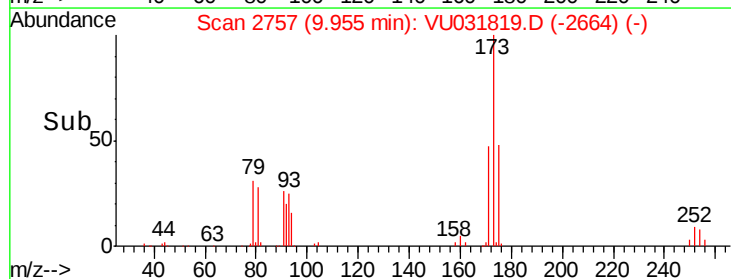
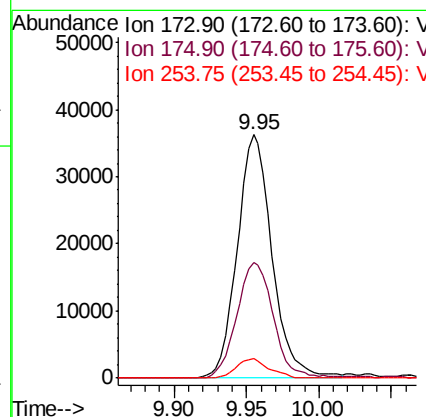
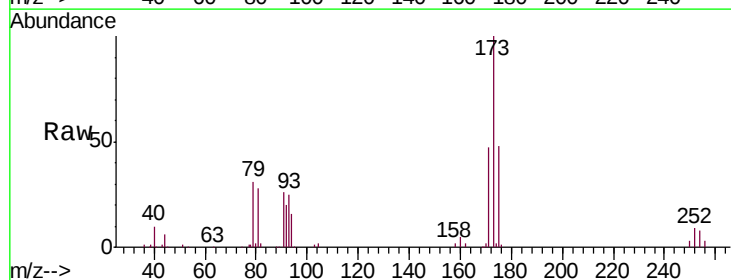
Tgt Ion: 173 Resp: 60334

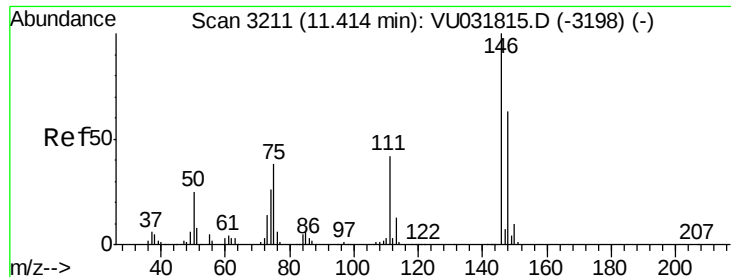
Ion Ratio Lower Upper

173 100

175 49.9 37.2 55.8

254 7.5 5.8 8.8





#62

1,3-Dichlorobenzene

Concen: 4.751 ug/L

RT: 11.41 min Scan# 3211

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

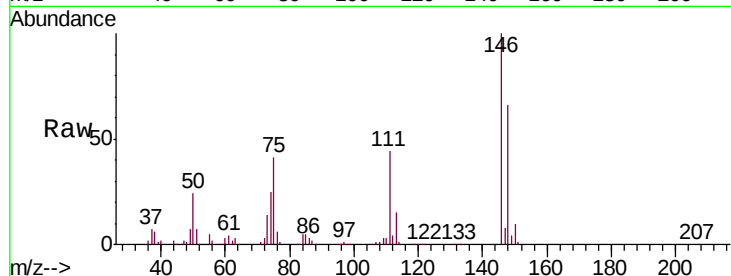
Tgt Ion:146 Resp: 249329

Ion Ratio Lower Upper

146 100

111 44.2 29.4 54.6

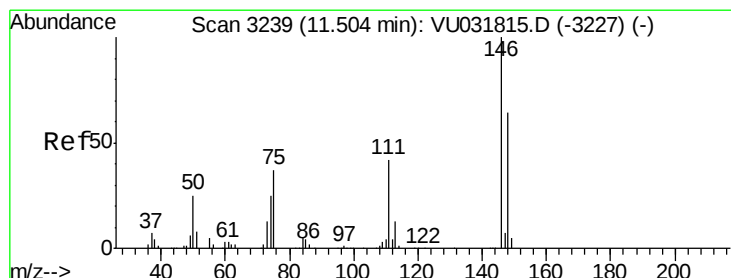
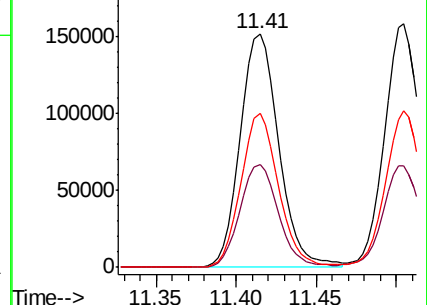
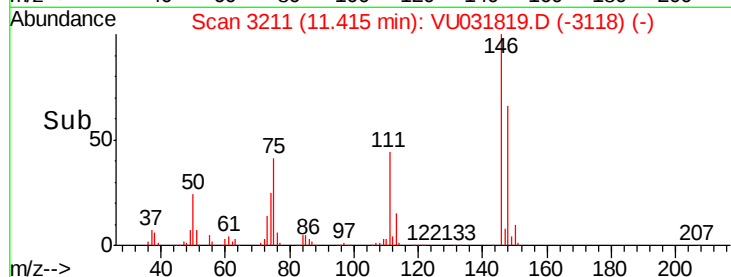
148 65.9 44.0 81.6



Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V



#63

1,4-Dichlorobenzene

Concen: 4.925 ug/L

RT: 11.50 min Scan# 3239

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

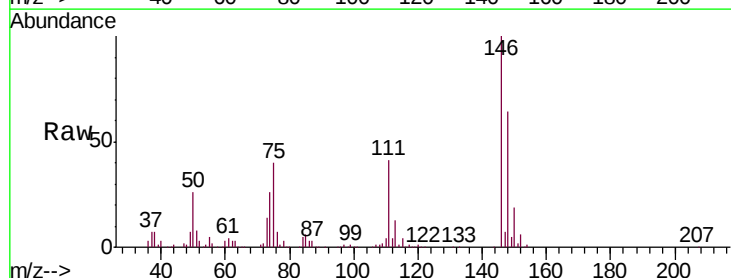
Tgt Ion:146 Resp: 262129

Ion Ratio Lower Upper

146 100

111 41.5 29.5 54.7

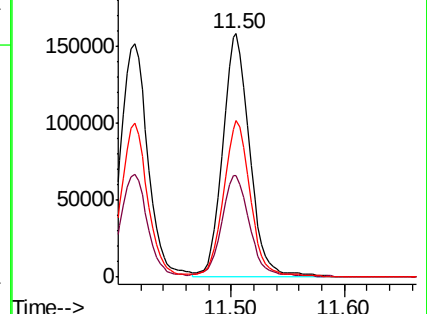
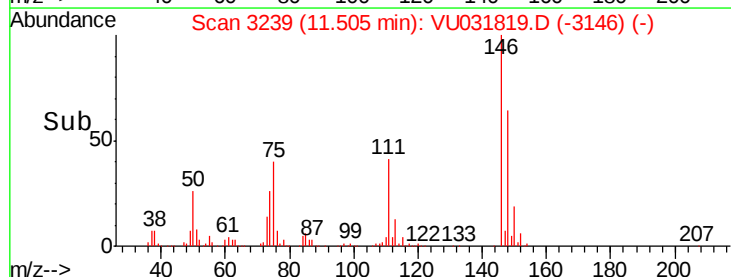
148 64.4 44.8 83.2

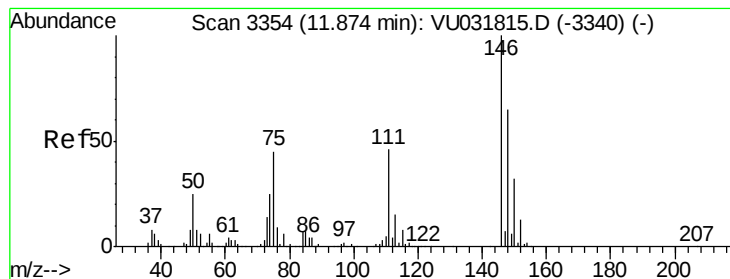


Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V





#65

1,2-Dichlorobenzene

Concen: 4.911 ug/L

RT: 11.87 min Scan# 3354

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

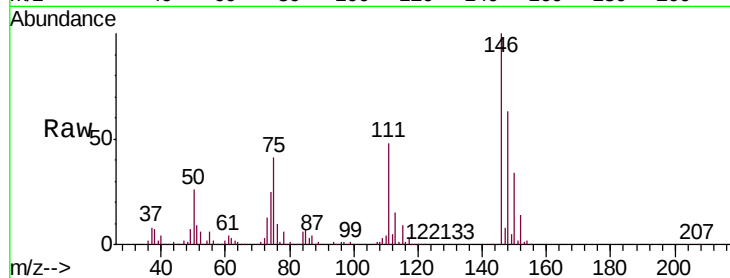
Tgt Ion:146 Resp: 251429

Ion Ratio Lower Upper

146 100

111 47.6 37.0 55.4

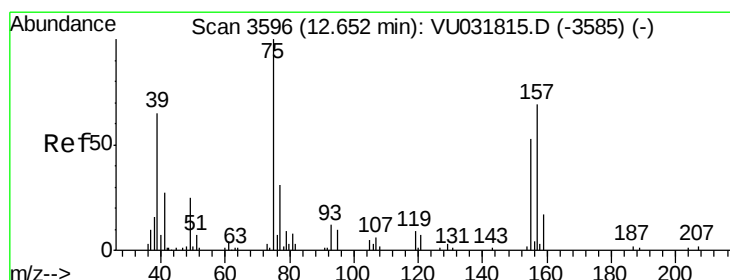
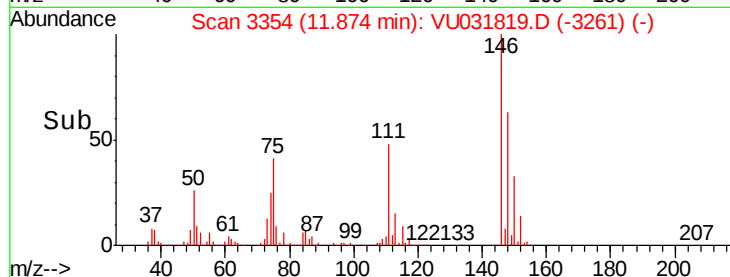
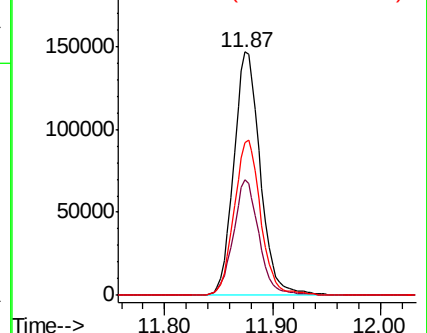
148 62.6 52.2 78.4



Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V



#66

1,2-Dibromo-3-chloropropane

Concen: 4.672 ug/L

RT: 12.65 min Scan# 3596

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

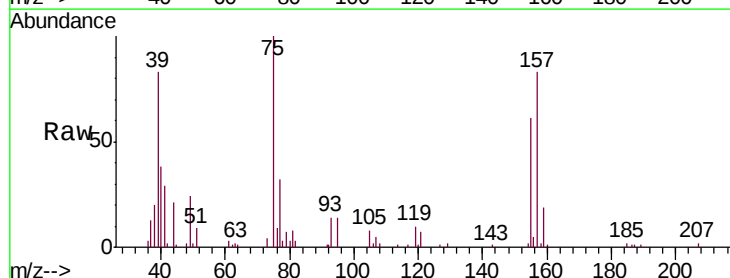
Tgt Ion: 75 Resp: 22486

Ion Ratio Lower Upper

75 100

155 61.0 42.2 63.2

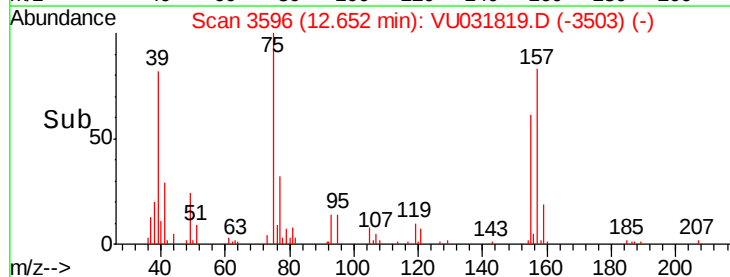
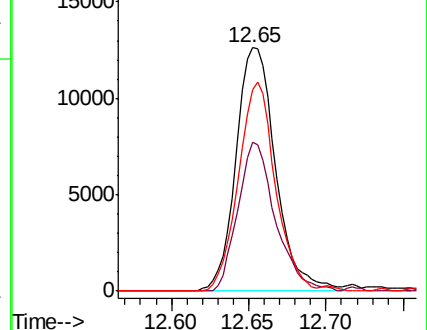
157 82.7 54.9 82.3#

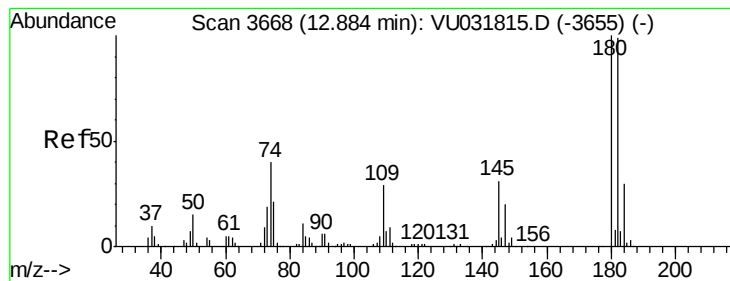


Abundance Ion 75.05 (74.75 to 75.75): VU0

Ion 154.95 (154.65 to 155.65): V

Ion 156.90 (156.60 to 157.60): V





#67

1,3,5-Trichlorobenzene

Concen: 4.954 ug/L

RT: 12.88 min Scan# 3668

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

Tgt Ion:180 Resp: 197538

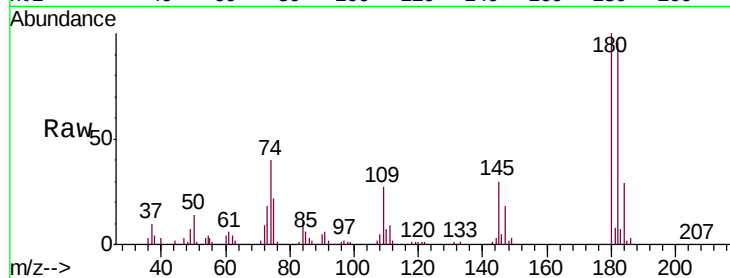
Ion Ratio Lower Upper

180 100

182 95.2 77.0 115.4

184 28.5 24.1 36.1

145 30.0 24.5 36.7

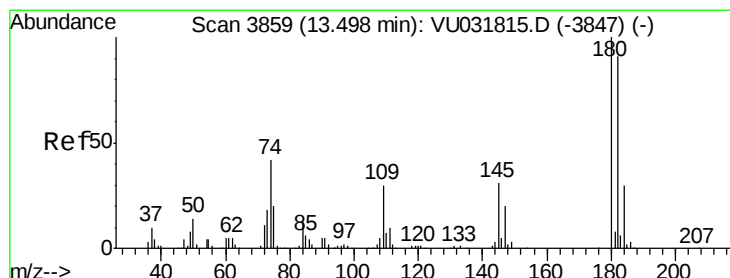
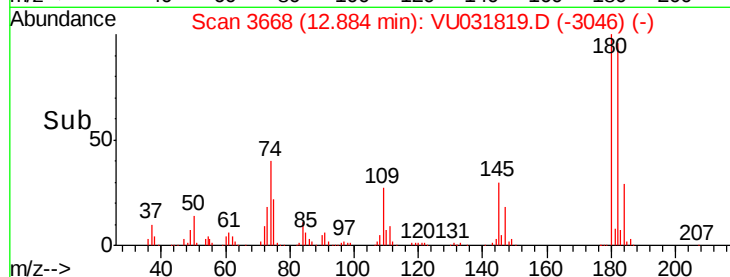
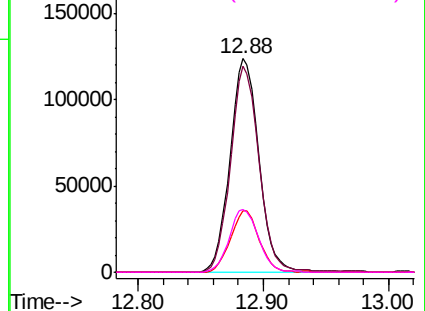


Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 184.00 (183.70 to 184.70): V

Ion 145.00 (144.70 to 145.70): V



#68

1,2,4-trichlorobenzene

Concen: 5.070 ug/L

RT: 13.50 min Scan# 3860

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

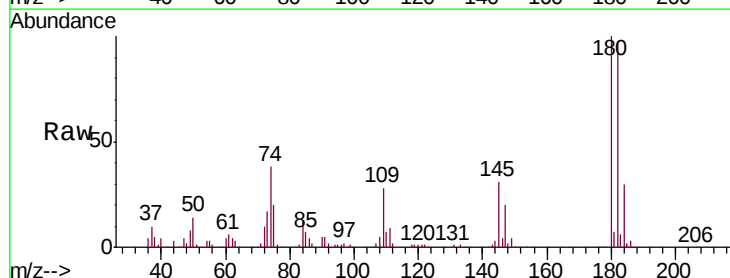
Tgt Ion:180 Resp: 149314

Ion Ratio Lower Upper

180 100

182 97.6 74.8 112.2

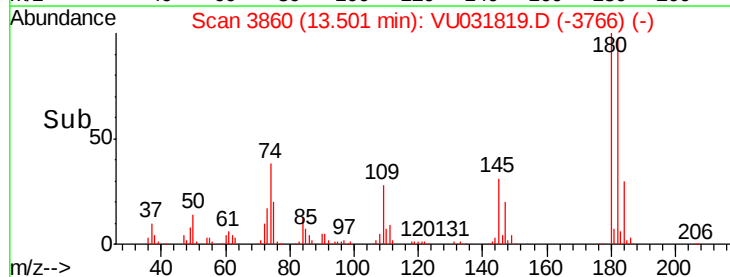
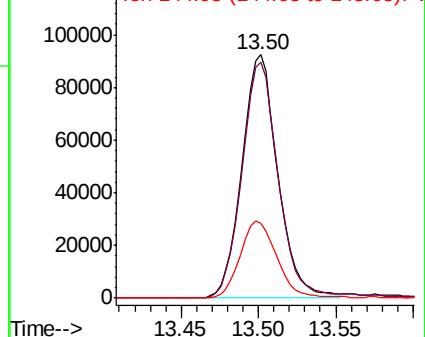
145 32.1 25.4 38.2

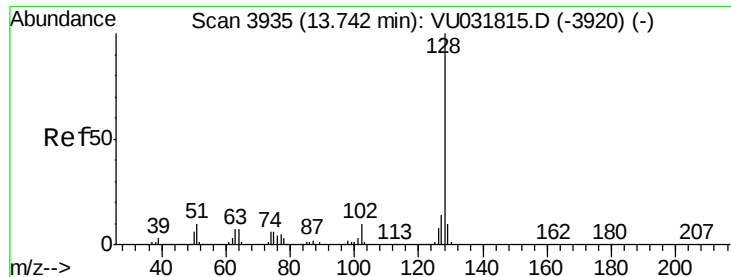


Abundance Ion 179.90 (179.60 to 180.60): V

Ion 182.00 (181.70 to 182.70): V

Ion 144.95 (144.65 to 145.65): V





#69

Naphthalene

Concen: 5.180 ug/L

RT: 13.74 min Scan# 3934

Delta R.T. -0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00523

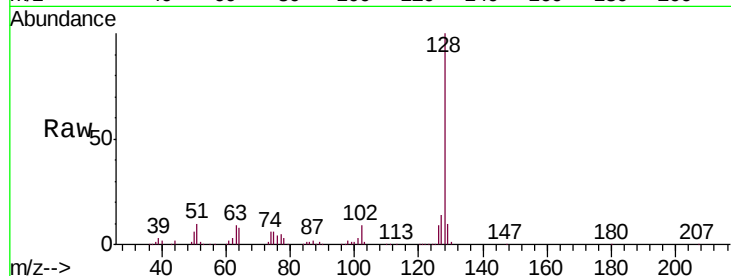
Tgt Ion:128 Resp: 261647

Ion Ratio Lower Upper

128 100

129 10.9 8.0 12.0

127 14.4 10.7 16.1



Abundance Ion 128.00 (127.70 to 128.70): V

200000 Ion 129.00 (128.70 to 129.70): V

Ion 127.00 (126.70 to 127.70): V

150000

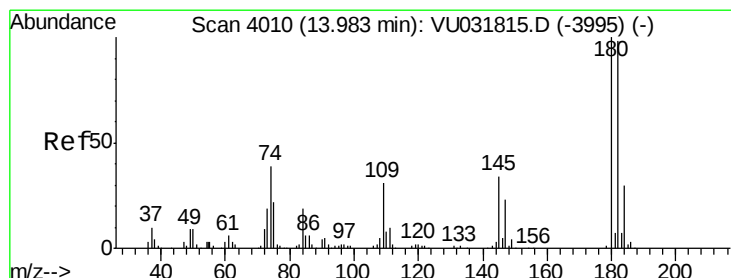
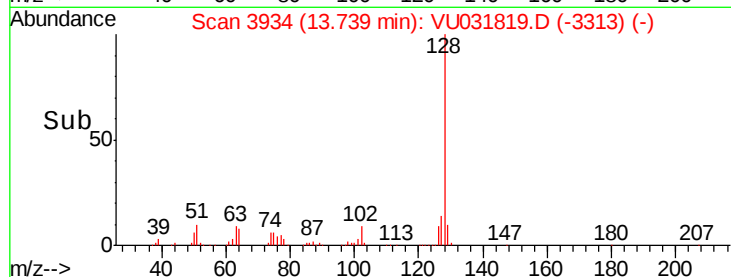
13.74

100000

50000

0

Time--> 13.65 13.70 13.75 13.80



#70

1,2,3-Trichlorobenzene

Concen: 5.502 ug/L

RT: 13.98 min Scan# 4010

Delta R.T. 0.00 min

Lab File: VU031819.D

Acq: 08 May 2019 12:53

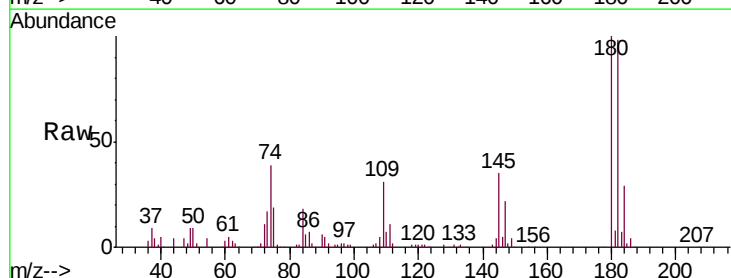
Tgt Ion:180 Resp: 150835

Ion Ratio Lower Upper

180 100

182 98.4 78.4 117.6

145 34.2 27.4 41.0



Abundance Ion 179.90 (179.60 to 180.60): V

120000 Ion 181.90 (181.60 to 182.60): V

Ion 144.95 (144.65 to 145.65): V

100000

13.98

80000

60000

40000

20000

0

Time--> 13.90 14.00

