

Data File : VU028966.D  
Acq On : 27 Dec 2018 15:40  
Operator : MD/SY  
Sample : VSTD0.541  
Misc : 25.0mL/MSVOA\_U/WATER  
ALS Vial : 2 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Quant Time: Dec 28 02:08:33 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR122818WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri Dec 28 02:05:59 2018  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.89  | 114  | 139862   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 129361   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 60644    | 5.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |       |     |       |      |      |      |
|--------------------------------|-------|-----|-------|------|------|------|
| 4) Vinyl Chloride-d3           | 1.40  | 65  | 3841  | 0.51 | ug/L | 0.00 |
| 7) Chloroethane-d5             | 1.68  | 69  | 3183  | 0.49 | ug/L | 0.00 |
| 11) 1,1-Dichloroethene-d2      | 2.28  | 63  | 7596  | 0.48 | ug/L | 0.00 |
| 20) 2-Butanone-d5              | 4.20  | 46  | 8687  | 4.44 | ug/L | 0.00 |
| 24) Chloroform-d               | 4.65  | 84  | 6781  | 0.47 | ug/L | 0.00 |
| 26) 1,2-Dichloroethane-d4      | 5.31  | 65  | 3770  | 0.51 | ug/L | 0.00 |
| 32) Benzene-d6                 | 5.34  | 84  | 15142 | 0.50 | ug/L | 0.00 |
| 36) 1,2-Dichloropropane-d6     | 6.33  | 67  | 4584  | 0.47 | ug/L | 0.00 |
| 41) Toluene-d8                 | 7.57  | 98  | 13915 | 0.50 | ug/L | 0.00 |
| 43) trans-1,3-Dichloropropene- | 7.85  | 79  | 1646  | 0.45 | ug/L | 0.00 |
| 46) 2-Hexanone-d5              | 8.32  | 63  | 7139  | 4.31 | ug/L | 0.00 |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43 | 84  | 3561  | 0.46 | ug/L | 0.00 |
| 64) 1,2-Dichlorobenzene-d4     | 11.86 | 152 | 5293  | 0.52 | ug/L | 0.00 |

#### Target Compounds

|                                |      |     |       |              | Qvalue |
|--------------------------------|------|-----|-------|--------------|--------|
| 2) Dichlorodifluoromethane     | 1.21 | 85  | 5817  | 0.475 ug/L   | 98     |
| 3) Chloromethane               | 1.32 | 50  | 6939  | 0.508 ug/L   | 99     |
| 5) Vinyl chloride              | 1.40 | 62  | 6742  | 0.483 ug/L   | 100    |
| 6) Bromomethane                | 1.63 | 94  | 3372  | 0.522 ug/L   | 98     |
| 8) Chloroethane                | 1.70 | 64  | 3977  | 0.499 ug/L   | 99     |
| 9) Trichlorofluoromethane      | 1.89 | 101 | 7849  | 0.491 ug/L   | 97     |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.29 | 101 | 4985  | 0.484 ug/L   | 98     |
| 12) 1,1-Dichloroethene         | 2.29 | 96  | 4899  | 0.489 ug/L   | 94     |
| 13) Acetone                    | 2.32 | 43  | 8337  | 5.280 ug/L   | 97     |
| 14) Carbon disulfide           | 2.48 | 76  | 17974 | 0.513 ug/L   | 98     |
| 15) Methyl Acetate             | 2.62 | 43  | 2709  | 0.585 ug/L   | 93     |
| 16) Methylene chloride         | 2.70 | 84  | 9741  | 0.679 ug/L   | 99     |
| 17) Methyl tert-butyl Ether    | 3.00 | 73  | 11658 | 0.474 ug/L # | 95     |
| 18) trans-1,2-Dichloroethene   | 2.98 | 96  | 5458  | 0.496 ug/L   | 95     |
| 19) 1,1-Dichloroethane         | 3.44 | 63  | 8975  | 0.480 ug/L   | 98     |
| 21) 2-Butanone                 | 4.28 | 43  | 10529 | 4.457 ug/L   | 94     |
| 22) cis-1,2-Dichloroethene     | 4.22 | 96  | 5631  | 0.495 ug/L   | 91     |
| 23) Bromochloromethane         | 4.55 | 128 | 2170  | 0.470 ug/L   | 88     |
| 25) Chloroform                 | 4.67 | 83  | 8948  | 0.504 ug/L   | 99     |
| 27) 1,2-Dichloroethane         | 5.41 | 62  | 4990  | 0.475 ug/L   | 98     |
| 29) 1,1,1-Trichloroethane      | 4.92 | 97  | 6764  | 0.476 ug/L   | 96     |
| 30) Cyclohexane                | 4.99 | 56  | 8037  | 0.472 ug/L   | 99     |
| 31) Carbon tetrachloride       | 5.13 | 117 | 5343  | 0.472 ug/L   | 99     |
| 33) Benzene                    | 5.39 | 78  | 20005 | 0.484 ug/L   | 100    |
| 34) Trichloroethene            | 6.18 | 95  | 4977  | 0.471 ug/L   | 96     |
| 35) Methylcyclohexane          | 6.41 | 83  | 8684  | 0.478 ug/L   | 97     |
| 37) 1,2-Dichloropropane        | 6.44 | 63  | 4932  | 0.468 ug/L # | 89     |
| 38) Bromodichloromethane       | 6.76 | 83  | 5650  | 0.476 ug/L   | 96     |
| 39) cis-1,3-Dichloropropene    | 7.27 | 75  | 7126  | 0.472 ug/L   | 93     |
| 40) 4-Methyl-2-pentanone       | 7.47 | 43  | 25146 | 4.484 ug/L   | 99     |

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ALS Vial : 2 Sample Multiplier: 1

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MSVOA\_U  
ClientSampleId :  
VSTD0.541

Quant Time: Dec 28 02:08:33 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR122818WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri Dec 28 02:05:59 2018  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|-------|--------|----------|
| 42) Toluene                    | 7.64  | 91   | 21440    | 0.484 | ug/L   | 99       |
| 44) trans-1,3-Dichloropropene  | 7.88  | 75   | 5252     | 0.446 | ug/L   | 90       |
| 45) 1,1,2-Trichloroethane      | 8.07  | 97   | 3424     | 0.477 | ug/L   | 98       |
| 47) Tetrachloroethene          | 8.22  | 164  | 4393     | 0.502 | ug/L   | 95       |
| 48) 2-Hexanone                 | 8.37  | 43   | 16462    | 4.244 | ug/L   | 99       |
| 49) Dibromochloromethane       | 8.48  | 129  | 3487     | 0.458 | ug/L   | 89       |
| 50) 1,2-Dibromoethane          | 8.59  | 107  | 3082     | 0.459 | ug/L # | 99       |
| 51) Chlorobenzene              | 9.12  | 112  | 13228    | 0.476 | ug/L   | 98       |
| 52) Ethylbenzene               | 9.25  | 91   | 22682    | 0.483 | ug/L   | 91       |
| 53) m,p-xylene                 | 9.38  | 106  | 8229     | 0.460 | ug/L   | 94       |
| 54) o-xylene                   | 9.78  | 106  | 7729     | 0.445 | ug/L   | 97       |
| 55) Styrene                    | 9.79  | 104  | 12834    | 0.444 | ug/L   | 96       |
| 56) Isopropylbenzene           | 10.17 | 105  | 20949    | 0.458 | ug/L   | 98       |
| 58) 1,1,2,2-Tetrachloroethane  | 10.46 | 83   | 4096     | 0.467 | ug/L   | 93       |
| 59) 1,2,3-Trichloropropane     | 10.50 | 75   | 2759     | 0.449 | ug/L   | 99       |
| 61) Bromoform                  | 9.96  | 173  | 1946     | 0.470 | ug/L # | 92       |
| 62) 1,3-Dichlorobenzene        | 11.42 | 146  | 10213    | 0.498 | ug/L   | 98       |
| 63) 1,4-Dichlorobenzene        | 11.51 | 146  | 10897    | 0.521 | ug/L   | 97       |
| 65) 1,2-Dichlorobenzene        | 11.88 | 146  | 9783     | 0.504 | ug/L   | 93       |
| 66) 1,2-Dibromo-3-chloropropan | 12.66 | 75   | 541      | 0.472 | ug/L # | 85       |
| 67) 1,3,5-Trichlorobenzene     | 12.89 | 180  | 7195     | 0.454 | ug/L   | 96       |
| 68) 1,2,4-trichlorobenzene     | 13.50 | 180  | 5673     | 0.429 | ug/L   | 97       |
| 69) Naphthalene                | 13.75 | 128  | 9081     | 0.402 | ug/L   | 98       |
| 70) 1,2,3-Trichlorobenzene     | 13.99 | 180  | 5717     | 0.453 | ug/L   | 93       |

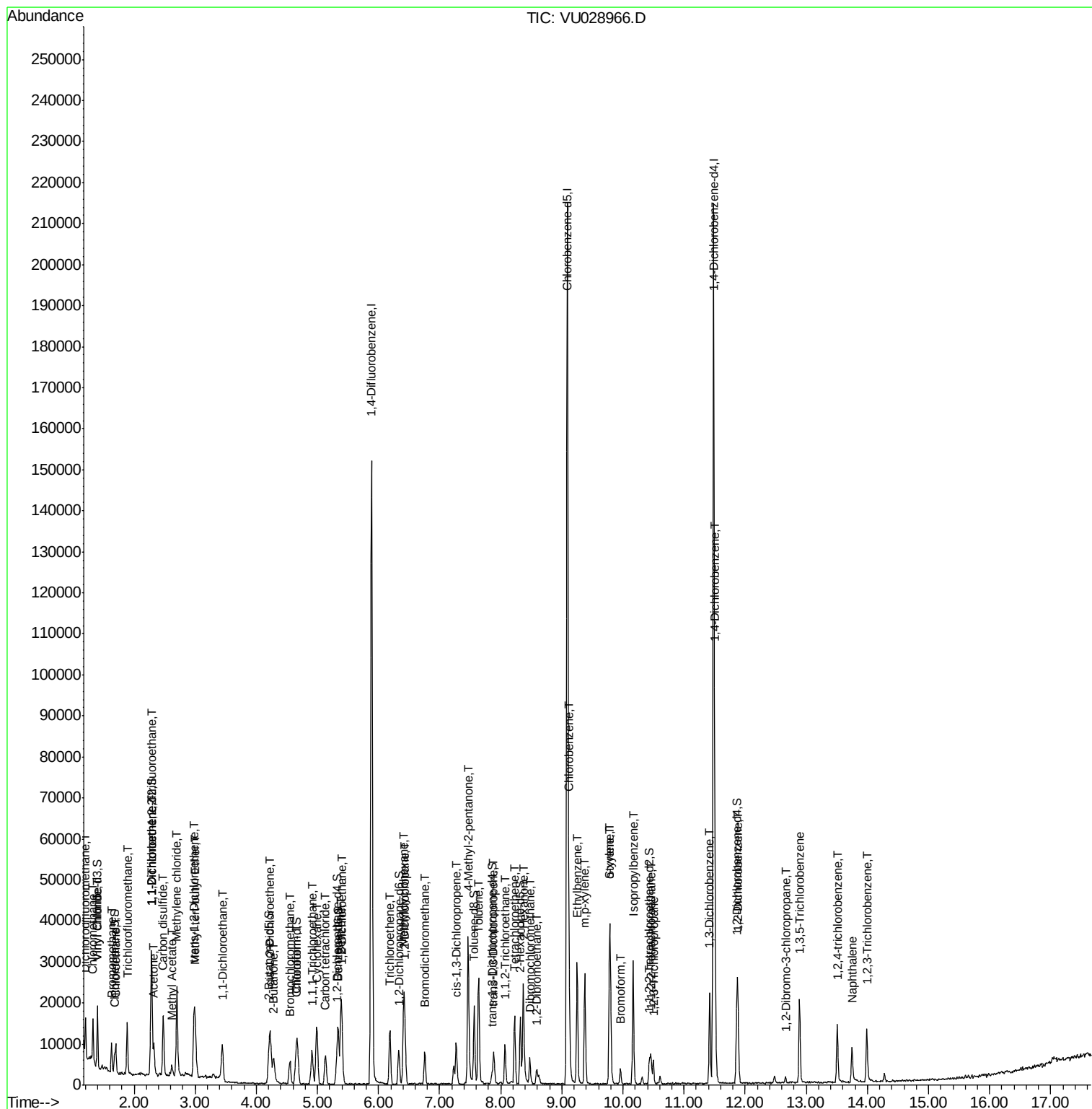
(#) = qualifier out of range (m) = manual integration (+) = signals summed

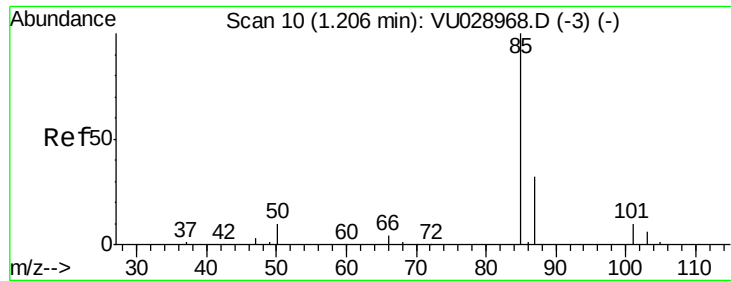
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MSVOA\_U  
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VSTD0.541

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#2

Dichlorodifluoromethane

Concen: 0.475 ug/L

RT: 1.21 min Scan# 10

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

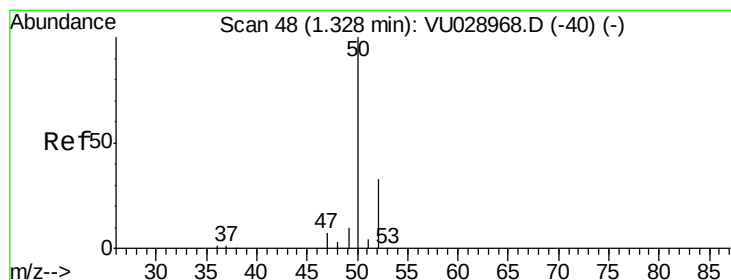
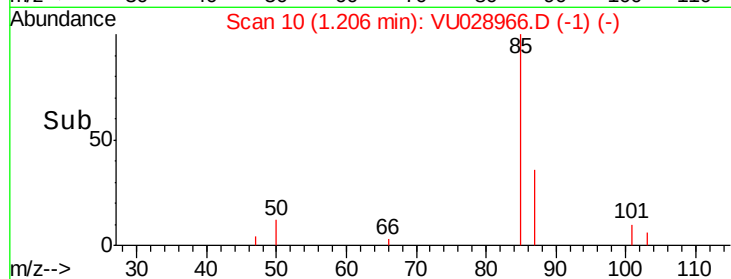
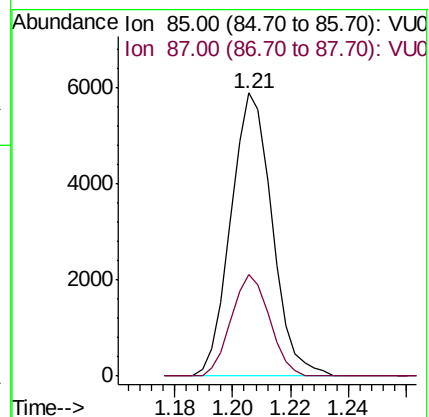
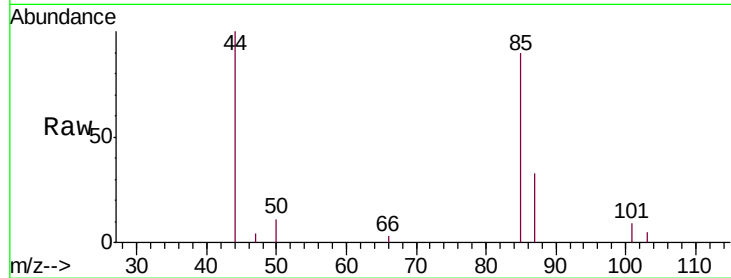
VSTD0.541

Tgt Ion: 85 Resp: 5817

Ion Ratio Lower Upper

85 100

87 33.1 25.5 38.3



#3

Chloromethane

Concen: 0.508 ug/L

RT: 1.32 min Scan# 47

Delta R.T. -0.00 min

Lab File: VU028966.D

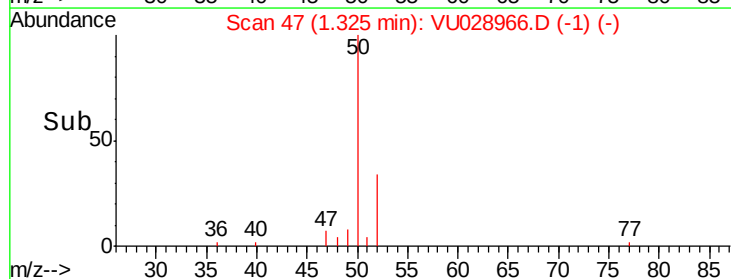
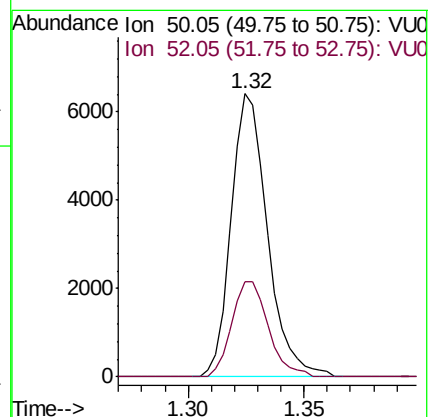
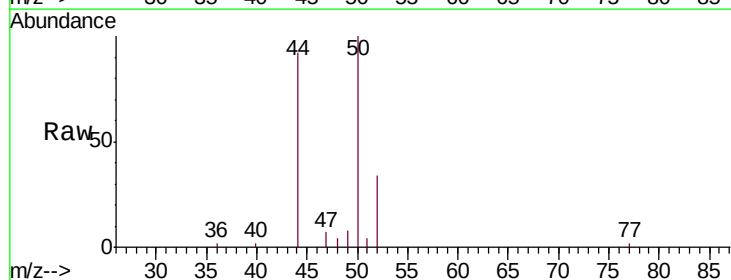
Acq: 27 Dec 2018 15:40

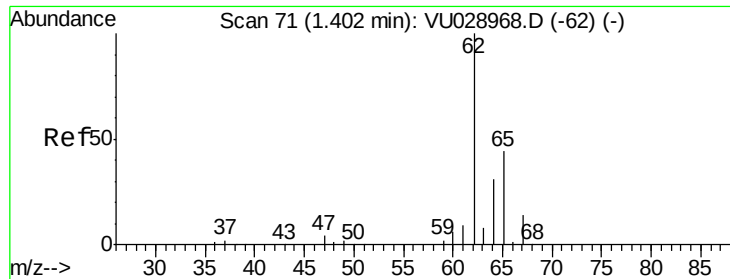
Tgt Ion: 50 Resp: 6939

Ion Ratio Lower Upper

50 100

52 33.8 23.3 43.3





#5

Vinyl chloride

Concen: 0.483 ug/L

RT: 1.40 min Scan# 71

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

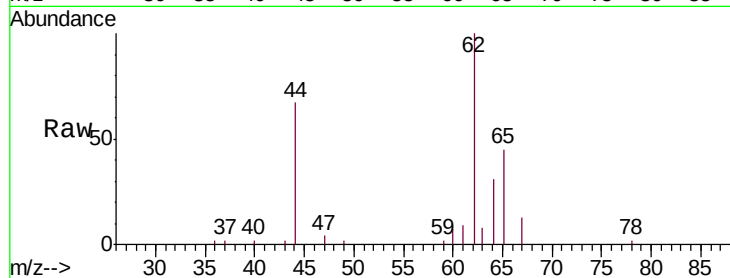
VSTD0.541

Tgt Ion: 62 Resp: 6742

Ion Ratio Lower Upper

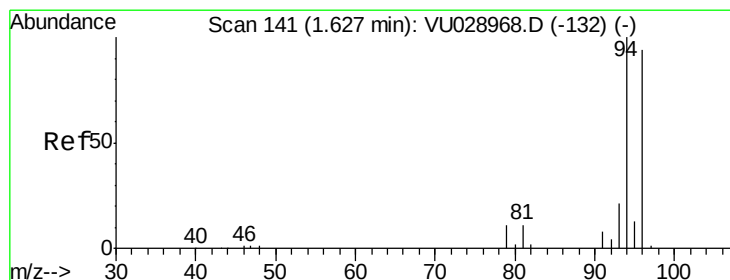
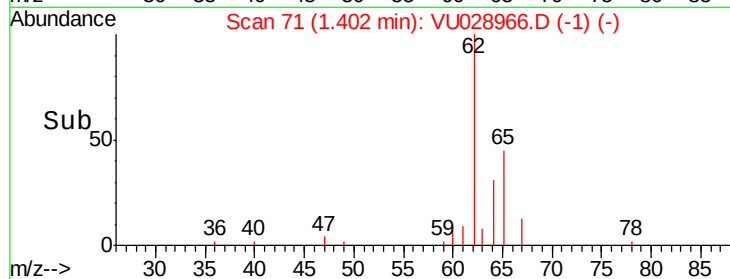
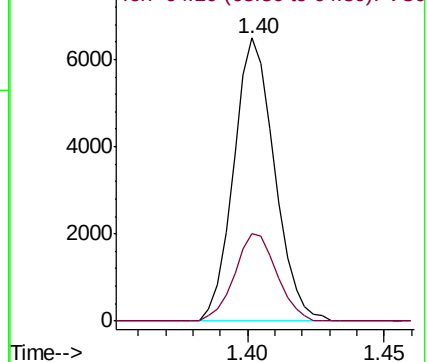
62 100

64 31.0 21.6 40.2



Abundance Ion 62.00 (61.70 to 62.70): VU0

Ion 64.10 (63.80 to 64.80): VU0



#6

Bromomethane

Concen: 0.522 ug/L

RT: 1.63 min Scan# 142

Delta R.T. 0.00 min

Lab File: VU028966.D

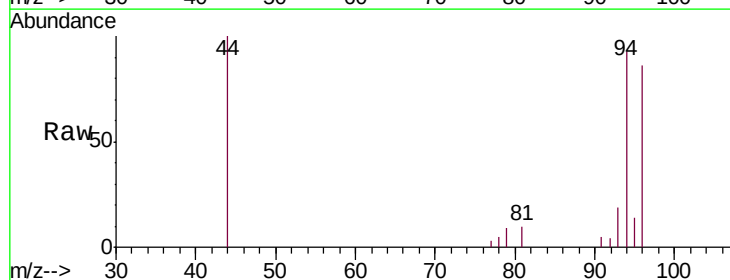
Acq: 27 Dec 2018 15:40

Tgt Ion: 94 Resp: 3372

Ion Ratio Lower Upper

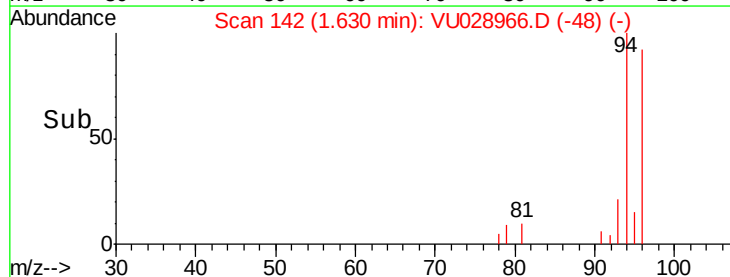
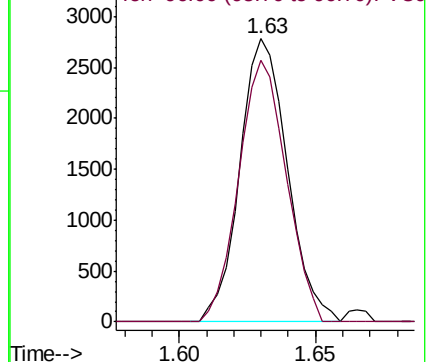
94 100

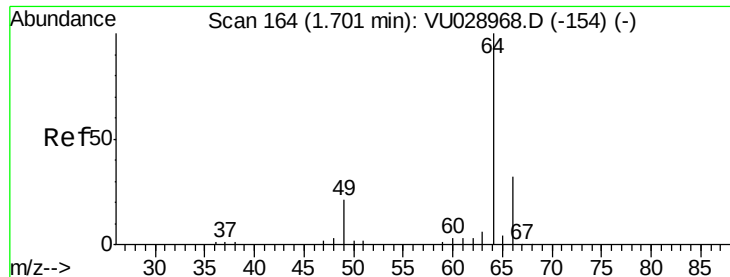
96 92.3 66.0 122.6



Abundance Ion 94.00 (93.70 to 94.70): VU0

Ion 96.00 (95.70 to 96.70): VU0





#8

Chloroethane

Concen: 0.499 ug/L

RT: 1.70 min Scan# 164

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

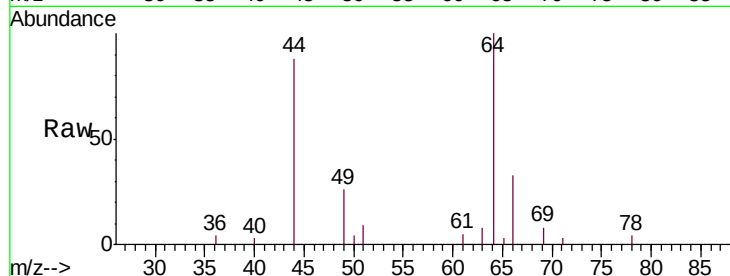
VSTD0.541

Tgt Ion: 64 Resp: 3977

Ion Ratio Lower Upper

64 100

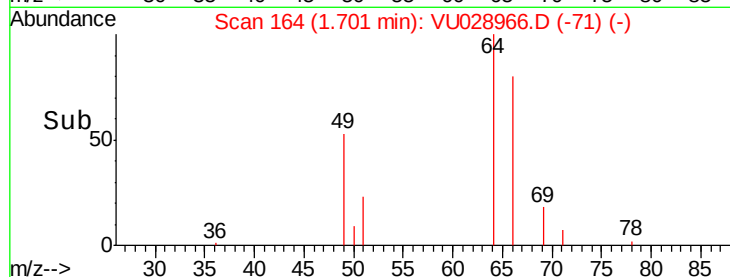
66 33.0 22.6 42.0



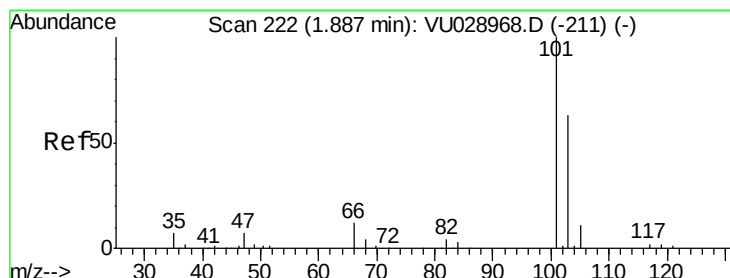
Abundance Ion 64.10 (63.80 to 64.80): VU028966.D (-154) (-)

Ion 66.05 (65.75 to 66.75): VU028966.D (-154) (-)

Time-->



Time-->



#9

Trichlorofluoromethane

Concen: 0.491 ug/L

RT: 1.89 min Scan# 222

Delta R.T. 0.00 min

Lab File: VU028966.D

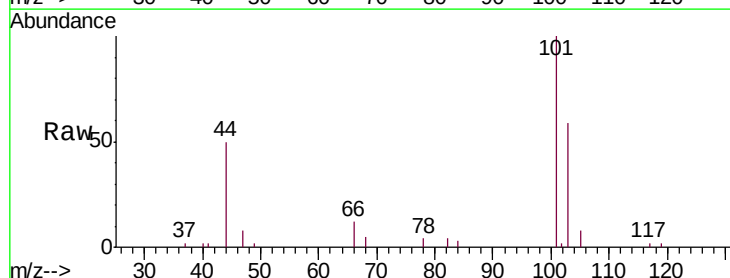
Acq: 27 Dec 2018 15:40

Tgt Ion: 101 Resp: 7849

Ion Ratio Lower Upper

101 100

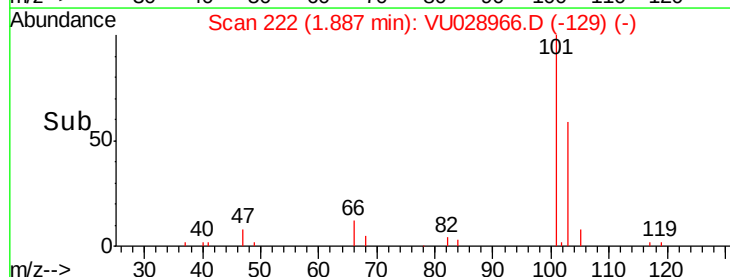
103 61.8 51.2 76.8



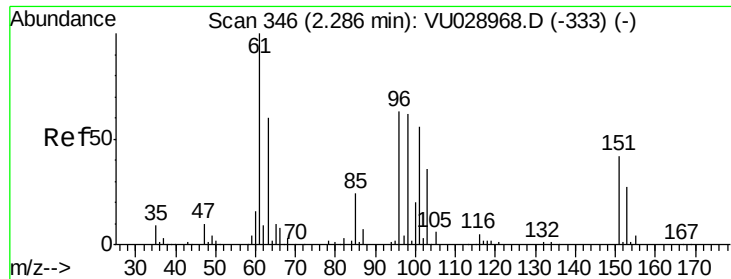
Abundance Ion 101.00 (100.70 to 101.70): VU028966.D (-211) (-)

Ion 103.00 (102.70 to 103.70): VU028966.D (-211) (-)

Time-->



Time-->



#10

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

Concen: 0.484 ug/L

RT: 2.29 min Scan# 347

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

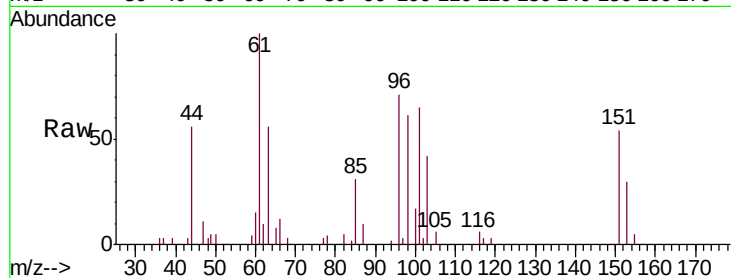
Tgt Ion: 101 Resp: 4985

Ion Ratio Lower Upper

101 100

85 44.7 33.8 50.6

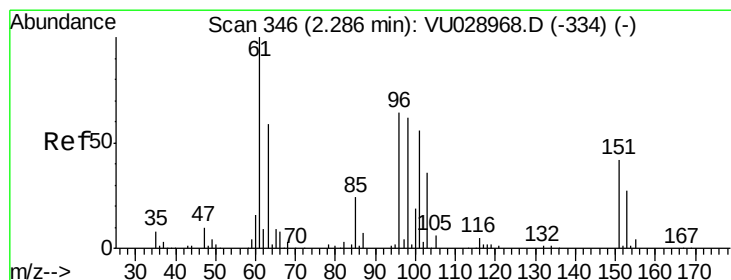
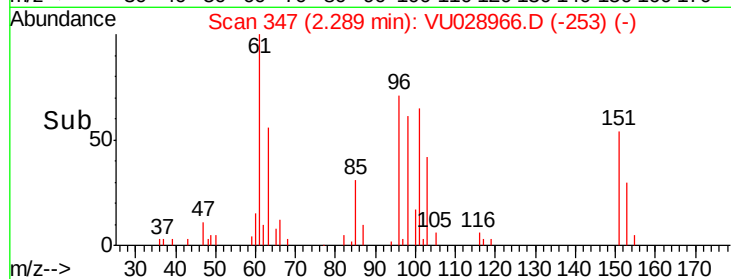
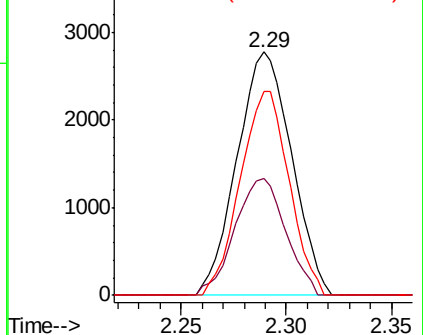
151 75.0 60.9 91.3



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: 0.489 ug/L

RT: 2.29 min Scan# 346

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

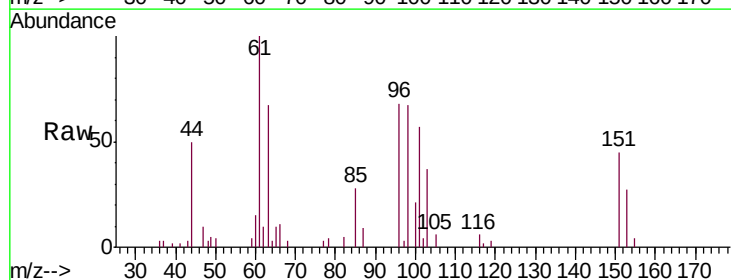
Tgt Ion: 96 Resp: 4899

Ion Ratio Lower Upper

96 100

61 147.4 110.5 205.3

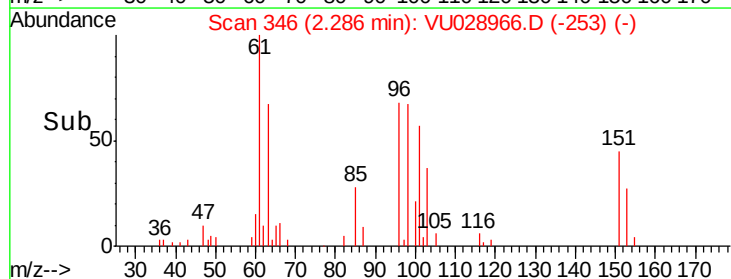
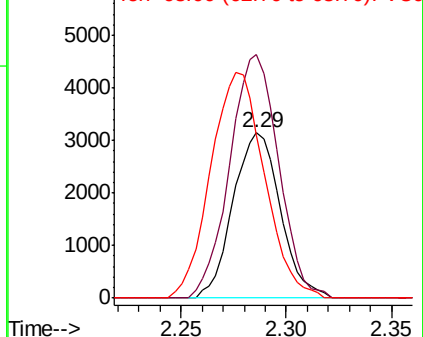
63 98.8 67.6 125.6

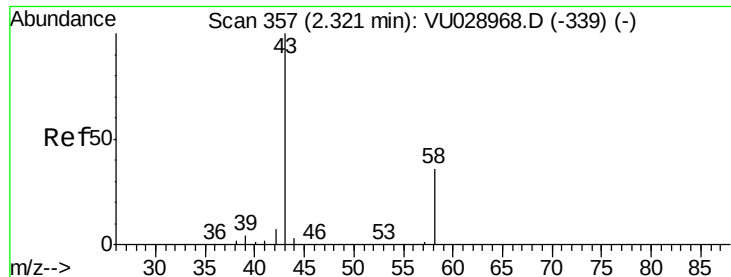


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 5.280 ug/L

RT: 2.32 min Scan# 358

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

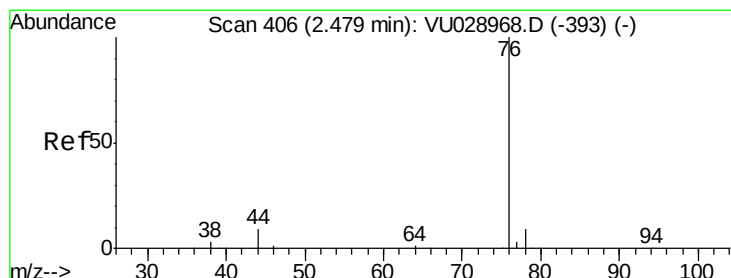
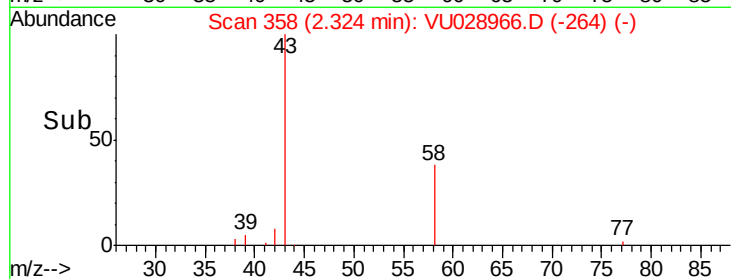
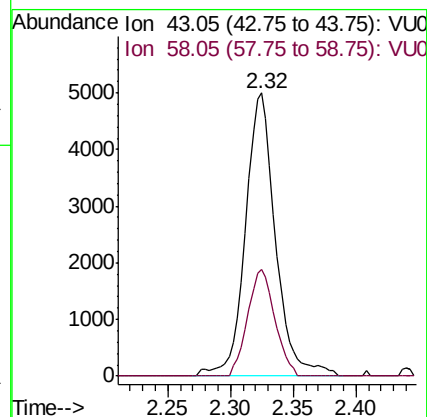
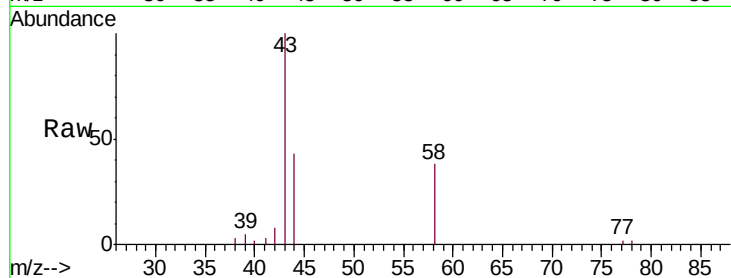
VSTD0.541

Tgt Ion: 43 Resp: 8337

Ion Ratio Lower Upper

43 100

58 34.1 0.0 71.8



#14

Carbon disulfide

Concen: 0.513 ug/L

RT: 2.48 min Scan# 406

Delta R.T. 0.00 min

Lab File: VU028966.D

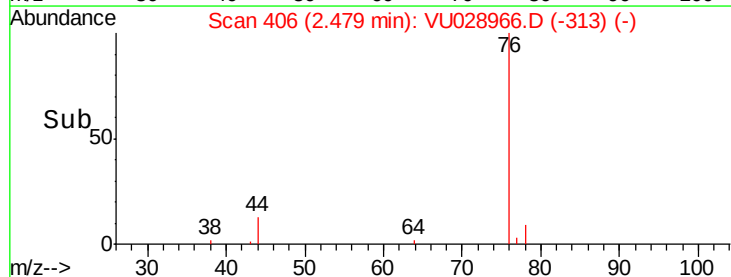
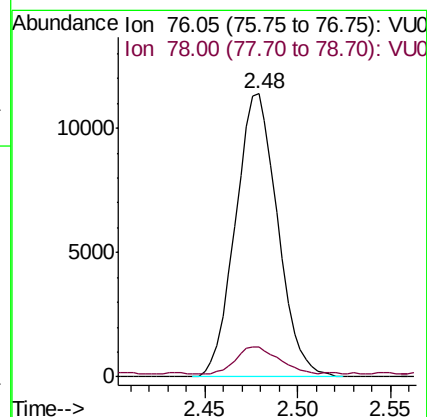
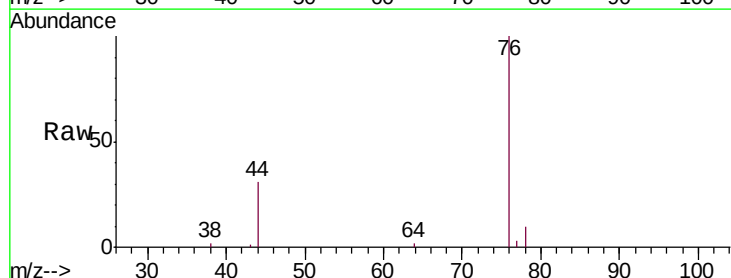
Acq: 27 Dec 2018 15:40

Tgt Ion: 76 Resp: 17974

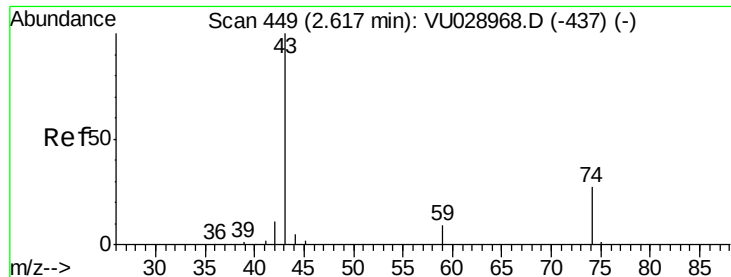
Ion Ratio Lower Upper

76 100

78 10.4 7.7 11.5



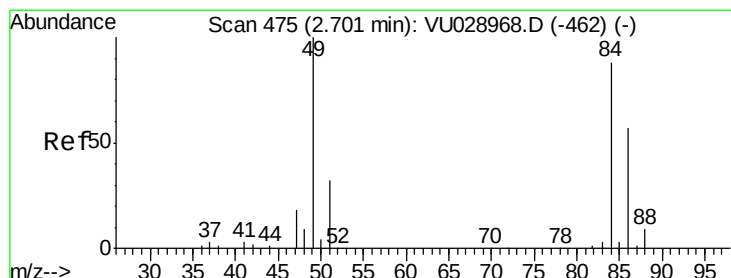
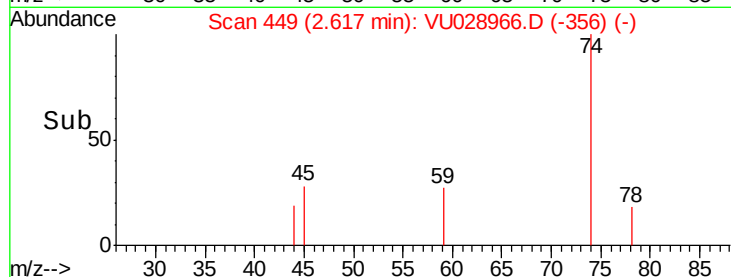
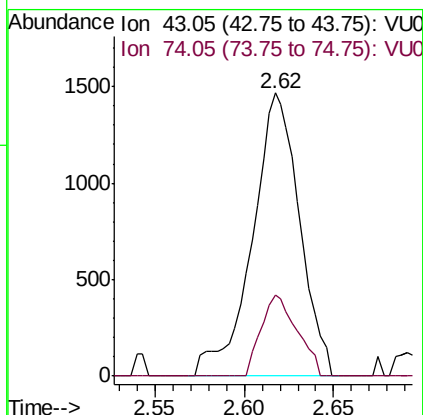
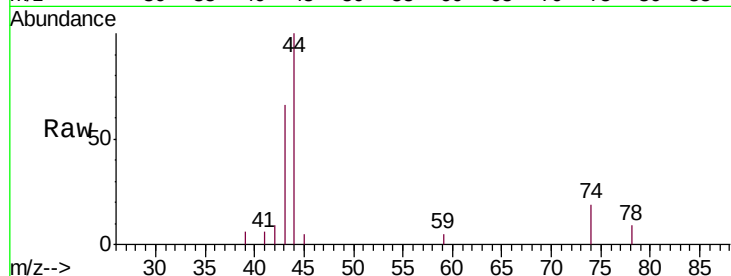




#15  
Methyl Acetate  
Concen: 0.585 ug/L  
RT: 2.62 min Scan# 449  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

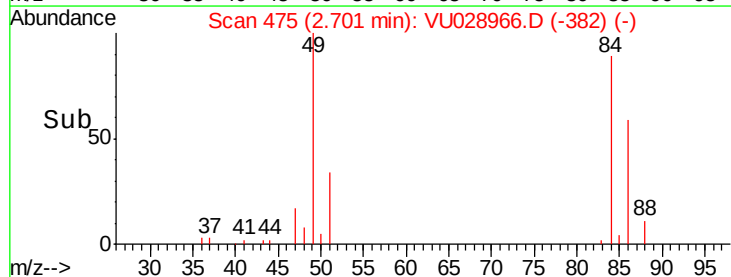
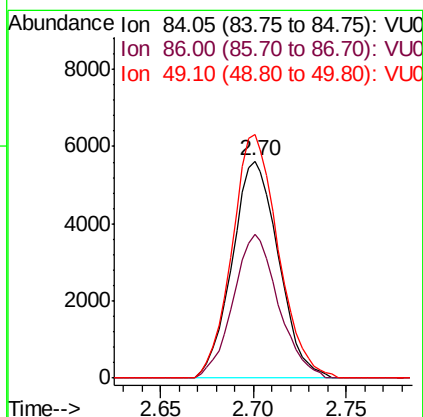
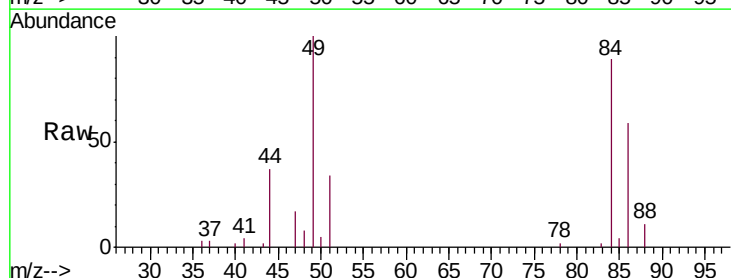
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

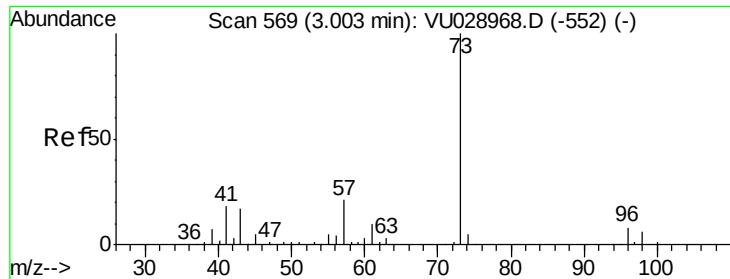
Tgt Ion: 43 Resp: 2709  
Ion Ratio Lower Upper  
43 100  
74 22.0 20.6 30.8



#16  
Methylene chloride  
Concen: 0.679 ug/L  
RT: 2.70 min Scan# 475  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion: 84 Resp: 9741  
Ion Ratio Lower Upper  
84 100  
86 66.3 45.6 84.6  
49 112.3 79.7 148.1





#17

Methyl tert-butyl Ether

Concen: 0.474 ug/L

RT: 3.00 min Scan# 569

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

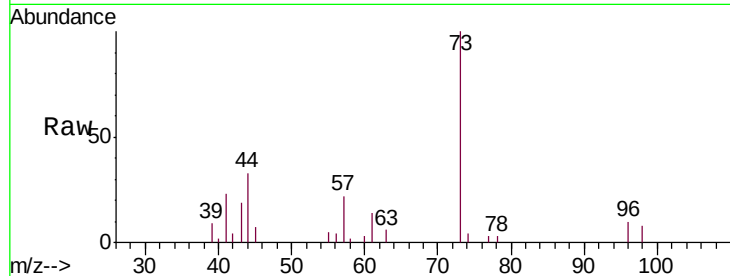
Tgt Ion: 73 Resp: 11658

Ion Ratio Lower Upper

73 100

43 21.1 13.8 20.8#

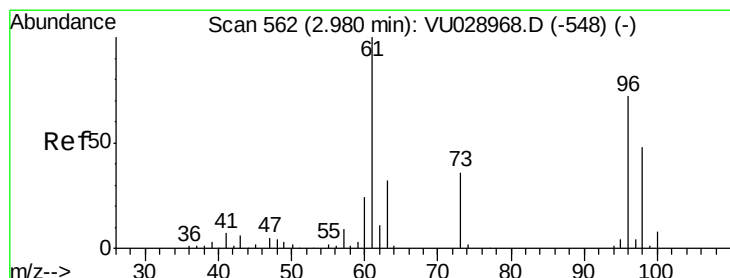
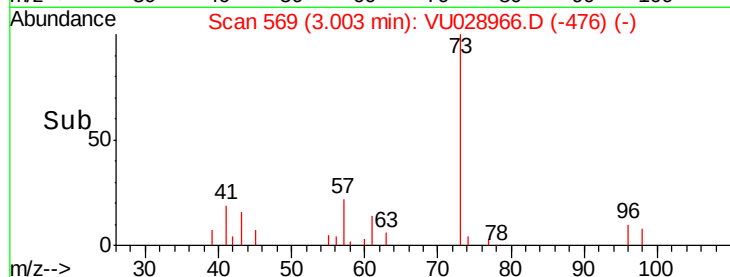
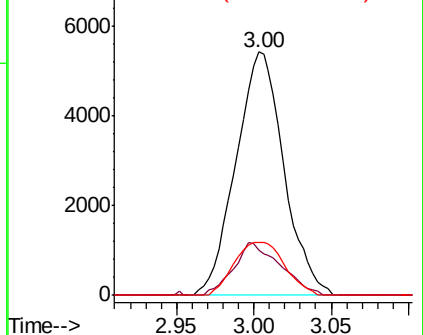
57 22.9 17.5 26.3



Abundance Ion 73.10 (72.80 to 73.80): VU028968.D (-552) (-)

Ion 43.05 (42.75 to 43.75): VU028968.D (-552) (-)

Ion 57.10 (56.80 to 57.80): VU028968.D (-552) (-)



#18

trans-1,2-Dichloroethene

Concen: 0.496 ug/L

RT: 2.98 min Scan# 562

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

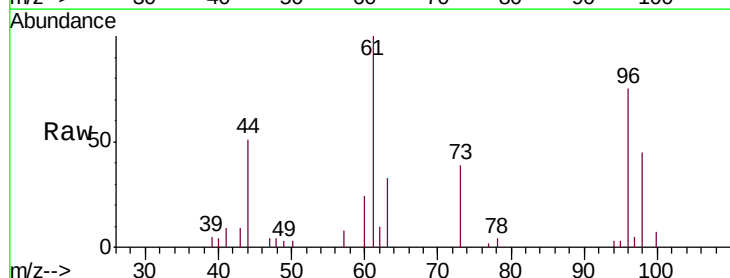
Tgt Ion: 96 Resp: 5458

Ion Ratio Lower Upper

96 100

61 133.4 96.6 179.4

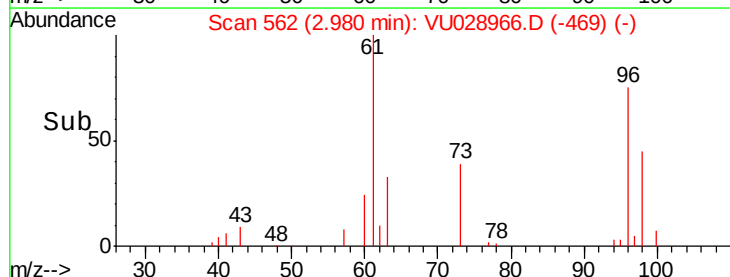
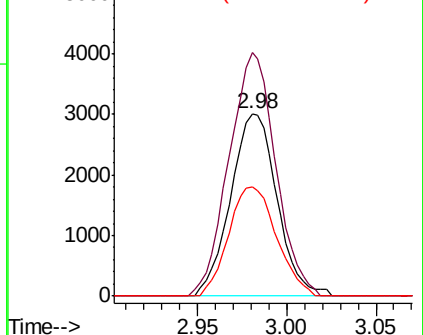
98 59.5 46.0 85.4

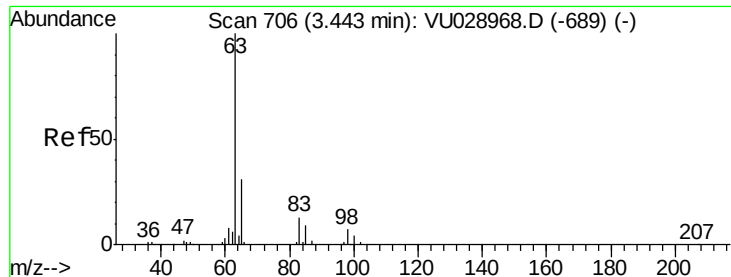


Abundance Ion 96.00 (95.70 to 96.70): VU028968.D (-548) (-)

Ion 61.05 (60.75 to 61.75): VU028968.D (-548) (-)

Ion 97.95 (97.65 to 98.65): VU028968.D (-548) (-)

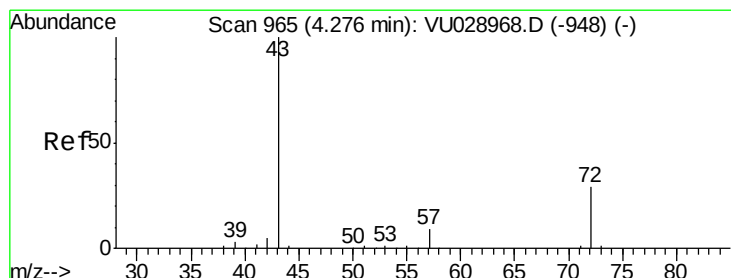
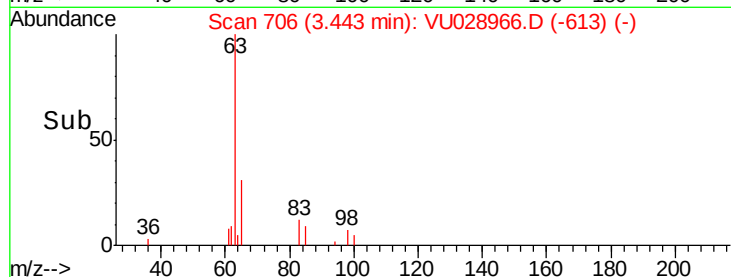
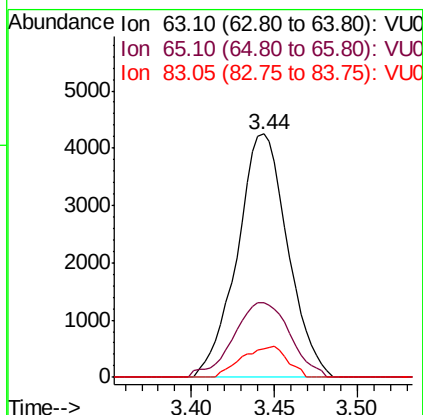
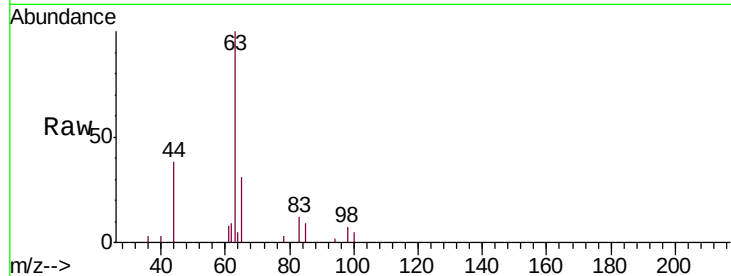




#19  
 1,1-Dichloroethane  
 Concen: 0.480 ug/L  
 RT: 3.44 min Scan# 706  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

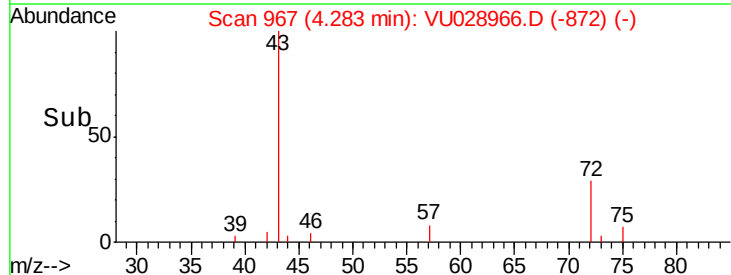
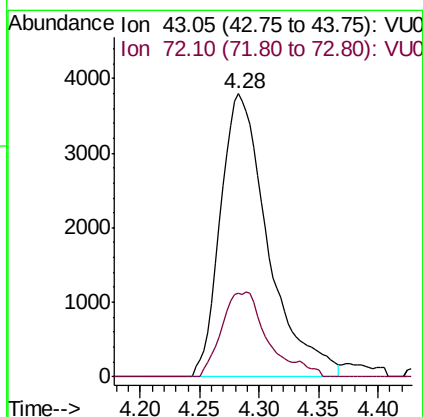
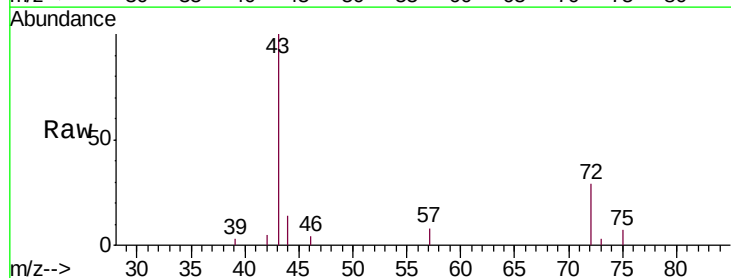
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

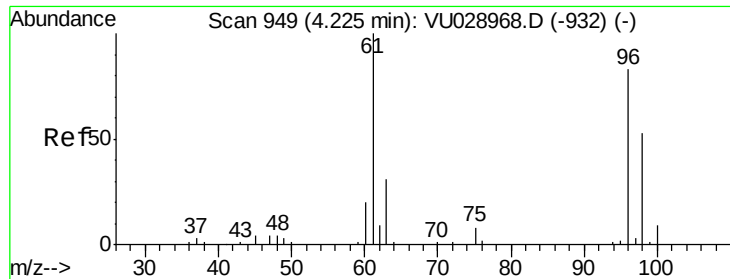
Tgt Ion: 63 Resp: 8975  
 Ion Ratio Lower Upper  
 63 100  
 65 30.7 21.8 40.6  
 83 11.9 9.3 17.3



#21  
 2-Butanone  
 Concen: 4.457 ug/L  
 RT: 4.28 min Scan# 967  
 Delta R.T. 0.01 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion: 43 Resp: 10529  
 Ion Ratio Lower Upper  
 43 100  
 72 27.2 15.2 45.5





#22

cis-1,2-Dichloroethene

Concen: 0.495 ug/L

RT: 4.22 min Scan# 949

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

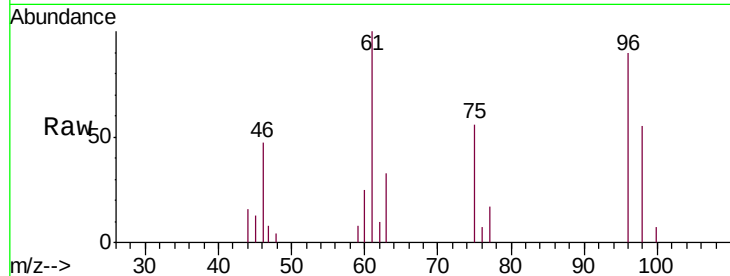
Tgt Ion: 96 Resp: 5631

Ion Ratio Lower Upper

96 100

61 110.9 84.7 157.3

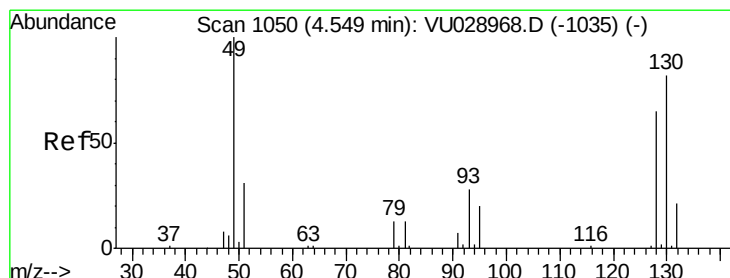
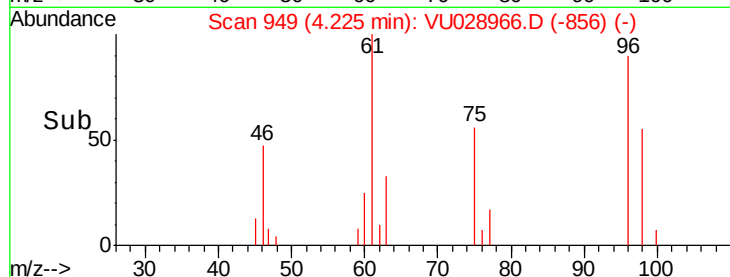
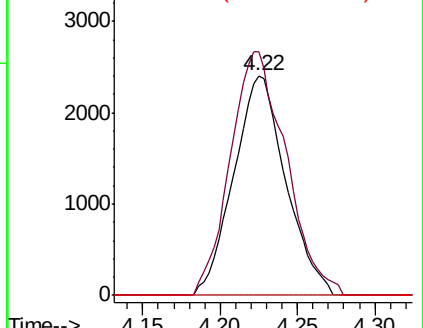
68 0.0 0.0 0.0



Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 68.15 (67.85 to 68.85): VU0



#23

Bromochloromethane

Concen: 0.470 ug/L

RT: 4.55 min Scan# 1049

Delta R.T. -0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Tgt Ion: 128 Resp: 2170

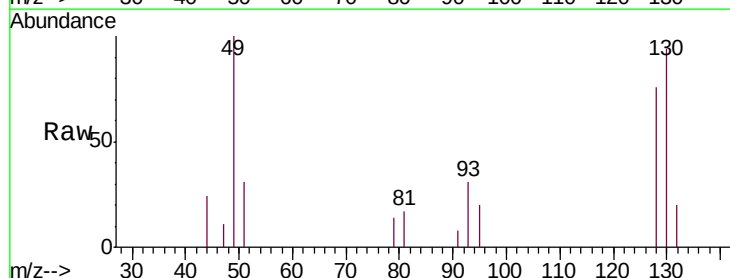
Ion Ratio Lower Upper

128 100

49 131.5 109.3 202.9

130 123.1 88.7 164.7

51 41.1 38.8 58.2

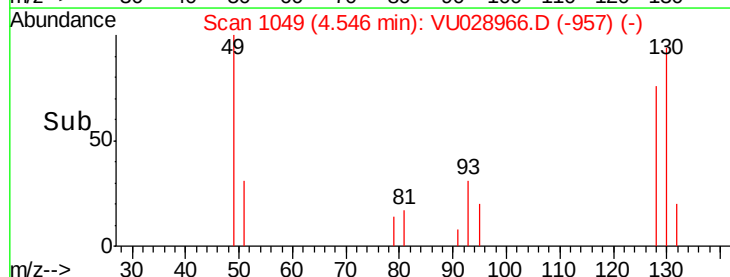
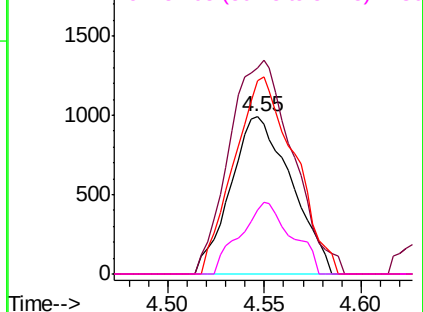


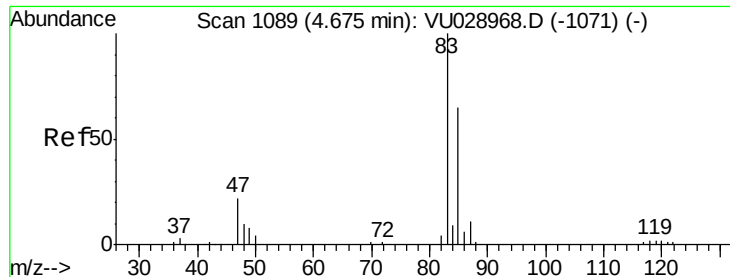
Abundance Ion 127.90 (127.60 to 128.60): V

Ion 49.10 (48.80 to 49.80): VU0

Ion 129.95 (129.65 to 130.65): V

Ion 51.05 (50.75 to 51.75): VU0

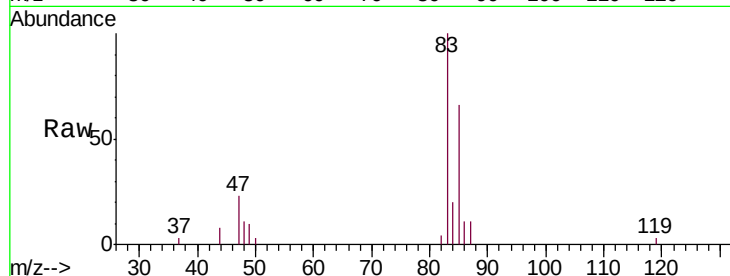




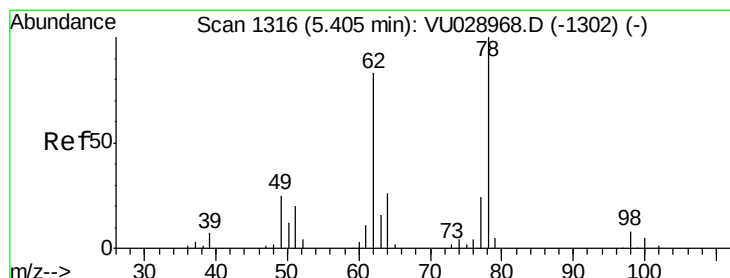
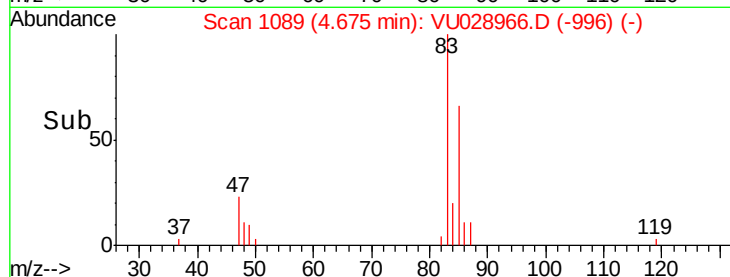
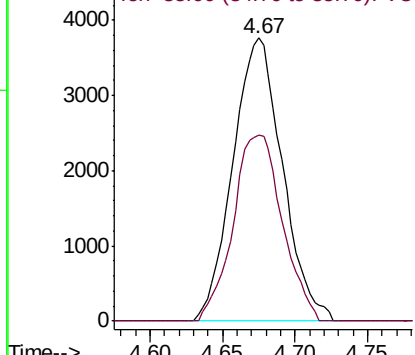
#25  
Chloroform  
Concen: 0.504 ug/L  
RT: 4.67 min Scan# 1089  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Tgt Ion: 83 Resp: 8948  
Ion Ratio Lower Upper  
83 100  
85 65.7 45.6 84.8

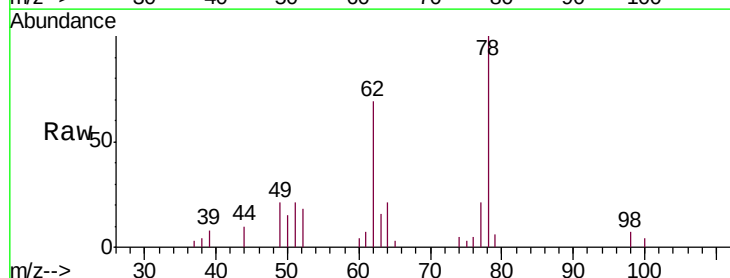


Abundance Ion 83.05 (82.75 to 83.75): VU0  
Ion 85.00 (84.70 to 85.70): VU0

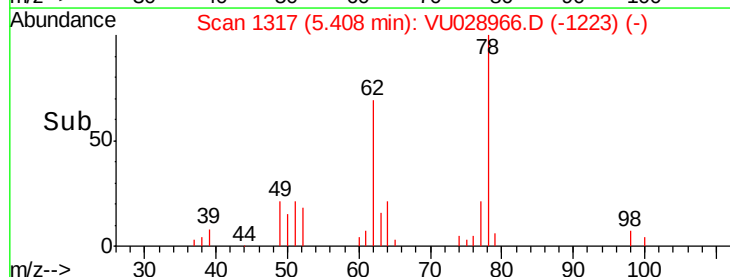
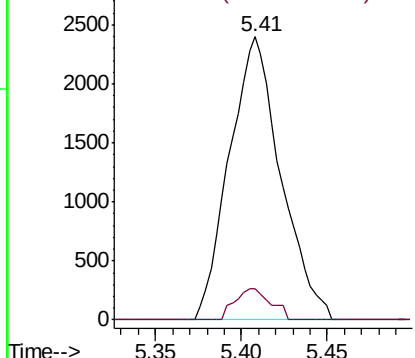


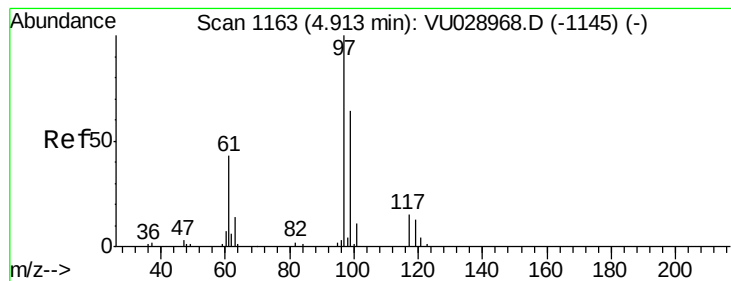
#27  
1,2-Dichloroethane  
Concen: 0.475 ug/L  
RT: 5.41 min Scan# 1317  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion: 62 Resp: 4990  
Ion Ratio Lower Upper  
62 100  
98 10.9 8.2 12.2



Abundance Ion 62.00 (61.70 to 62.70): VU0  
Ion 98.05 (97.75 to 98.75): VU0





#29

1,1,1-Trichloroethane

Concen: 0.476 ug/L

RT: 4.92 min Scan# 1164

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

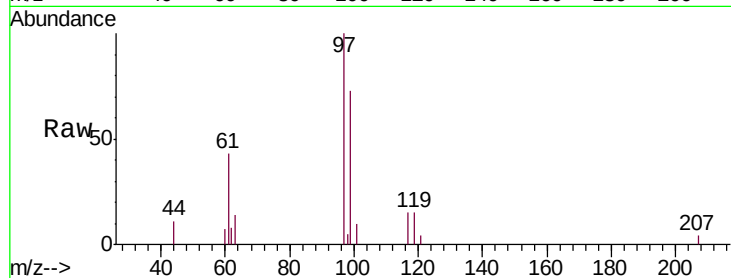
Tgt Ion: 97 Resp: 6764

Ion Ratio Lower Upper

97 100

99 68.8 51.6 77.4

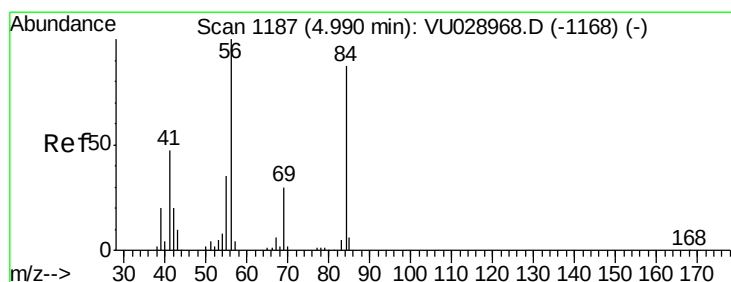
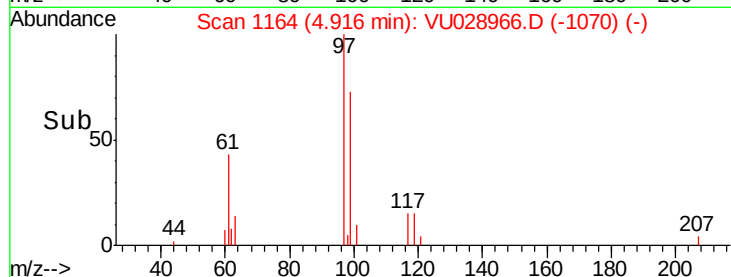
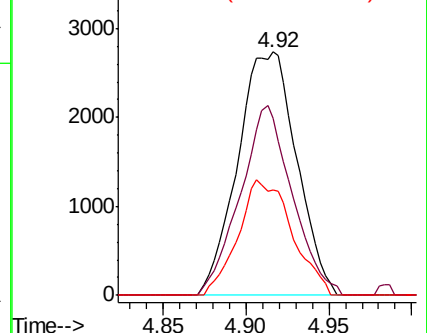
61 43.5 34.1 51.1



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: 0.472 ug/L

RT: 4.99 min Scan# 1187

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

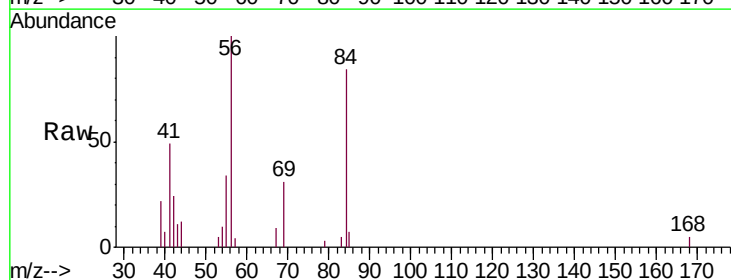
Tgt Ion: 56 Resp: 8037

Ion Ratio Lower Upper

56 100

69 30.8 24.8 37.2

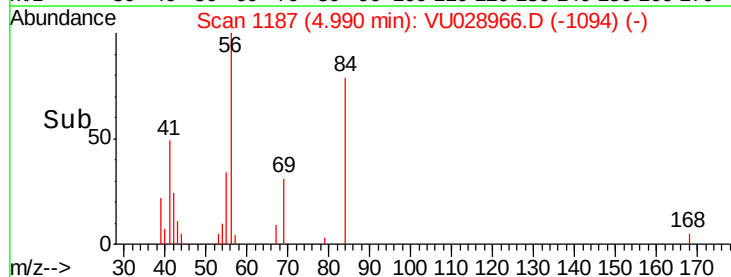
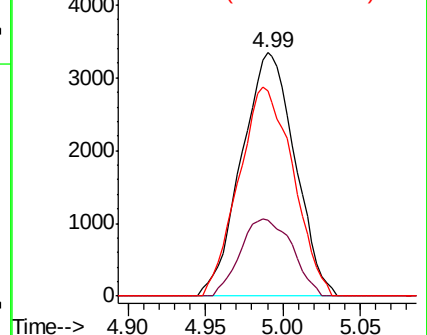
84 87.4 69.1 103.7

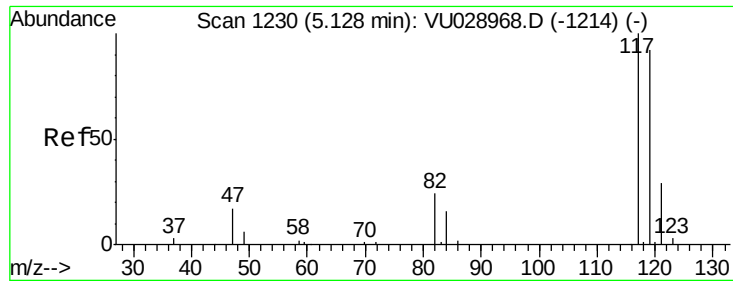


Abundance Ion 56.10 (55.80 to 56.80): VU0

Ion 69.15 (68.85 to 69.85): VU0

Ion 84.15 (83.85 to 84.85): VU0

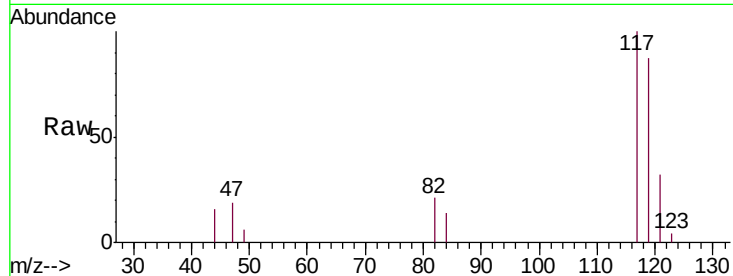




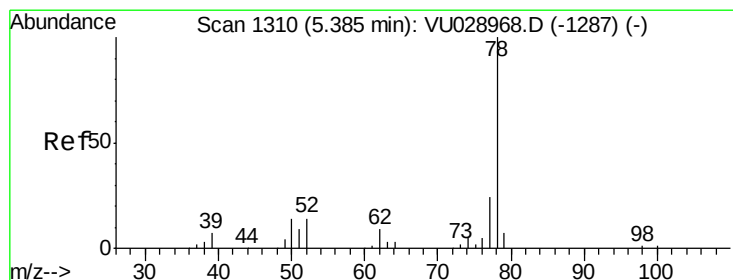
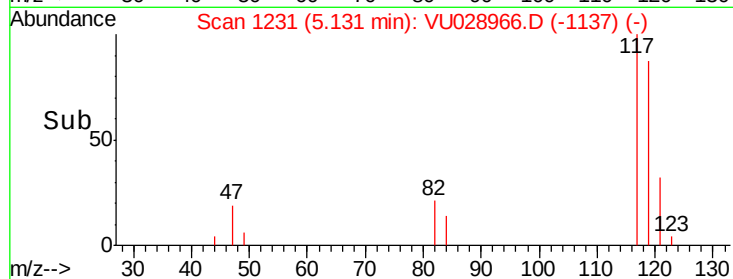
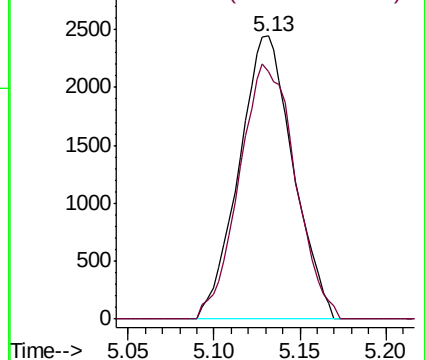
#31  
Carbon tetrachloride  
Concen: 0.472 ug/L  
RT: 5.13 min Scan# 1231  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Tgt Ion:117 Resp: 5343  
Ion Ratio Lower Upper  
117 100  
119 93.3 75.4 113.2

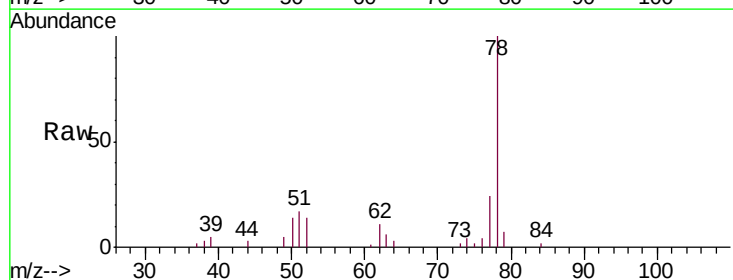


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 118.90 (118.60 to 119.60): V

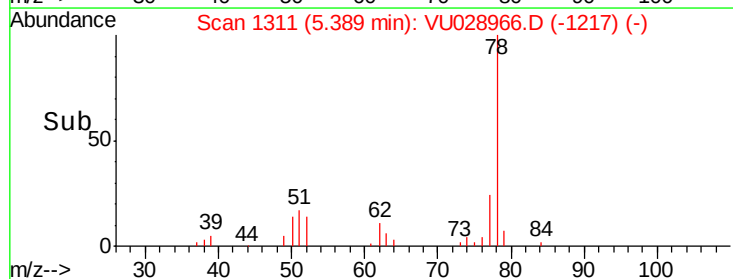
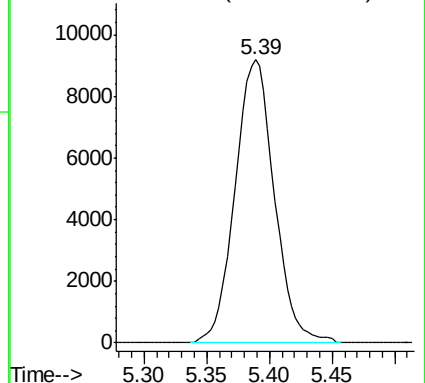


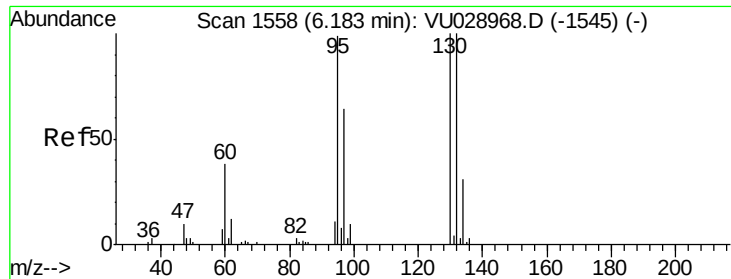
#33  
Benzene  
Concen: 0.484 ug/L  
RT: 5.39 min Scan# 1311  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion: 78 Resp: 20005



Abundance Ion 78.10 (77.80 to 78.80): VU0





#34

Trichloroethene

Concen: 0.471 ug/L

RT: 6.18 min Scan# 1558

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

Tgt Ion: 95 Resp: 4977

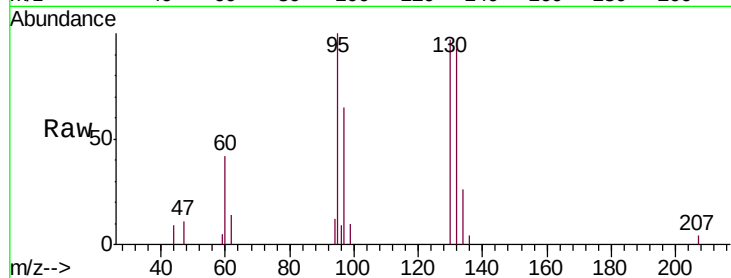
Ion Ratio Lower Upper

95 100

97 64.7 45.4 84.2

132 93.3 70.8 131.6

130 97.4 70.7 131.3

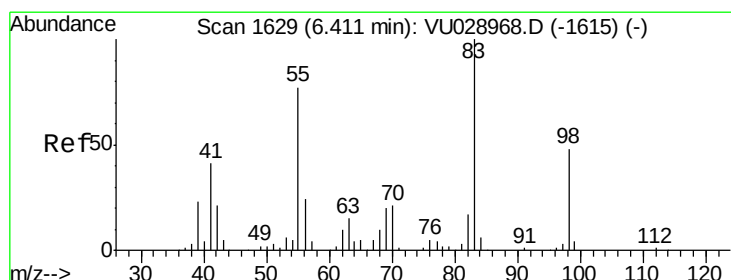
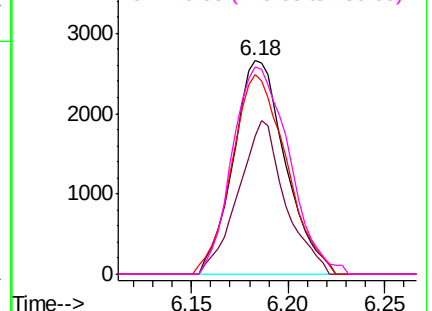
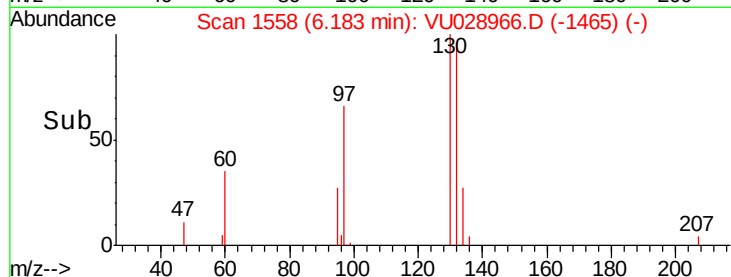


Abundance Ion 95.00 (94.70 to 95.70): VU028966.D (-1465) (-)

Ion 96.95 (96.65 to 97.65): VU028966.D (-1465) (-)

Ion 131.95 (131.65 to 132.65): VU028966.D (-1465) (-)

Ion 129.95 (129.65 to 130.65): VU028966.D (-1465) (-)



#35

Methylcyclohexane

Concen: 0.478 ug/L

RT: 6.41 min Scan# 1630

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

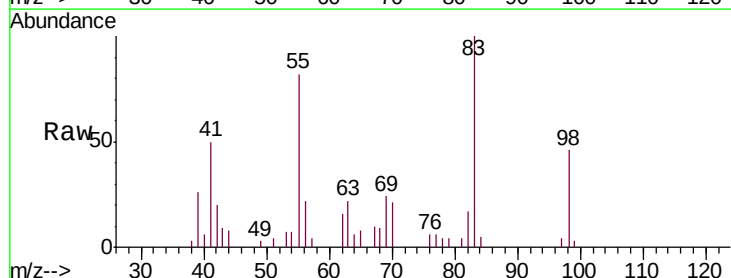
Tgt Ion: 83 Resp: 8684

Ion Ratio Lower Upper

83 100

55 75.8 59.8 89.6

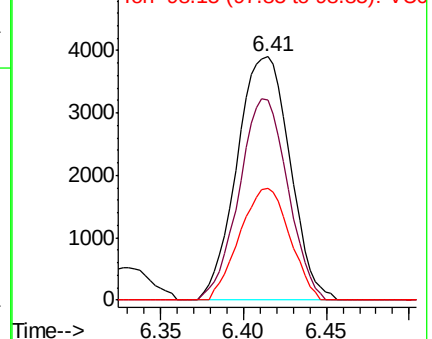
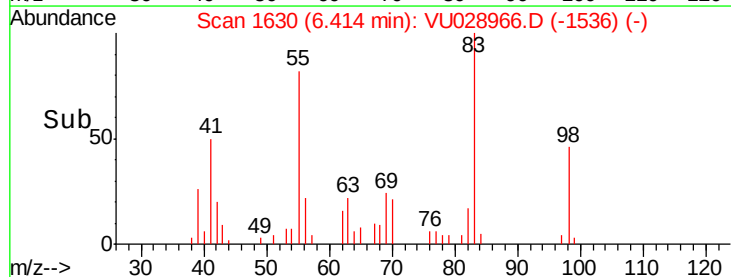
98 43.2 37.0 55.6



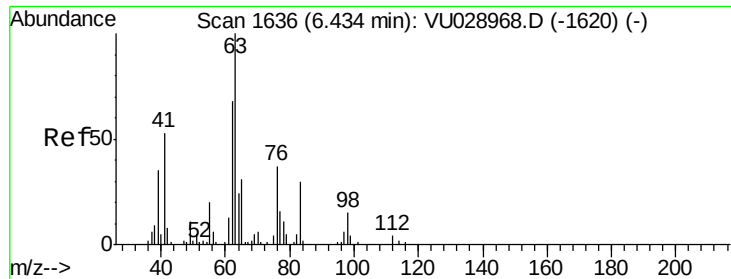
Abundance Ion 83.15 (82.85 to 83.85): VU028966.D (-1536) (-)

Ion 55.10 (54.80 to 55.80): VU028966.D (-1536) (-)

Ion 98.15 (97.85 to 98.85): VU028966.D (-1536) (-)



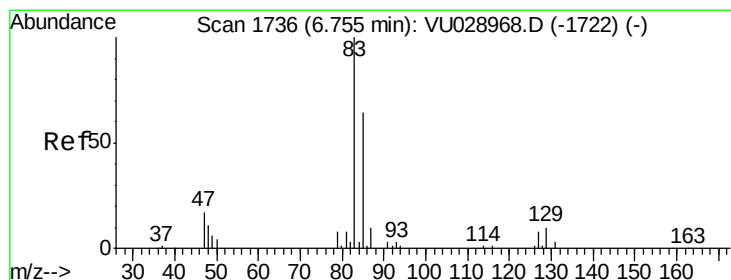
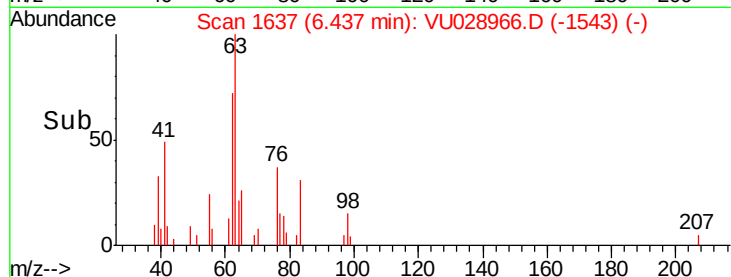
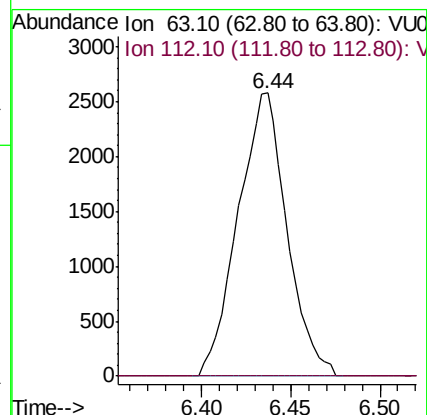
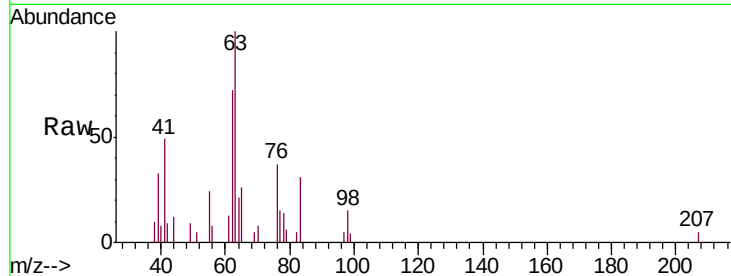




#37  
 1,2-Dichloropropane  
 Concen: 0.468 ug/L  
 RT: 6.44 min Scan# 1637  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

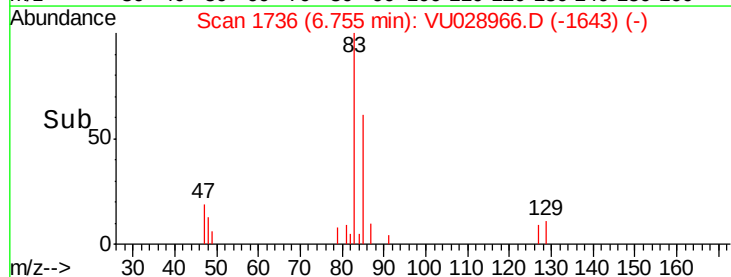
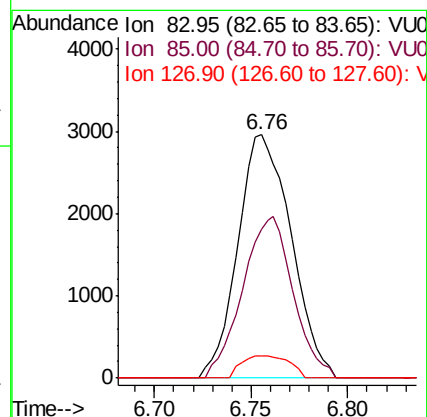
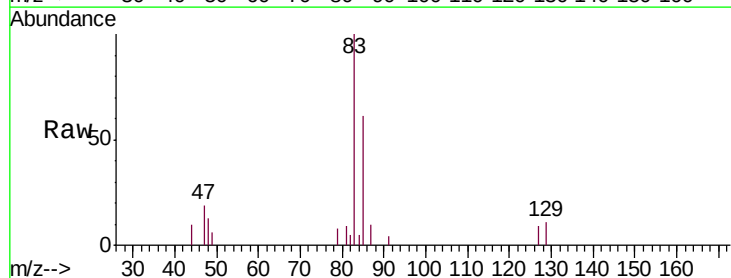
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

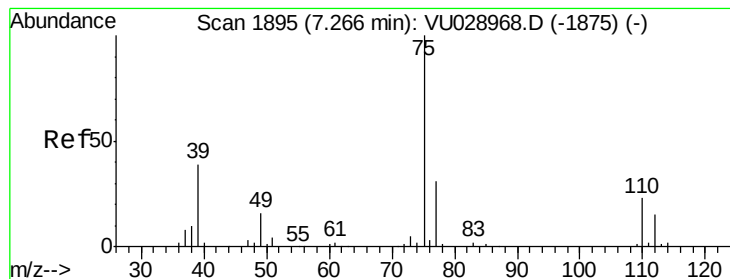
Tgt Ion: 63 Resp: 4932  
 Ion Ratio Lower Upper  
 63 100  
 112 0.0 3.0 4.4#



#38  
 Bromodichloromethane  
 Concen: 0.476 ug/L  
 RT: 6.76 min Scan# 1736  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion: 83 Resp: 5650  
 Ion Ratio Lower Upper  
 83 100  
 85 61.1 45.1 83.9  
 127 9.2 6.8 10.2



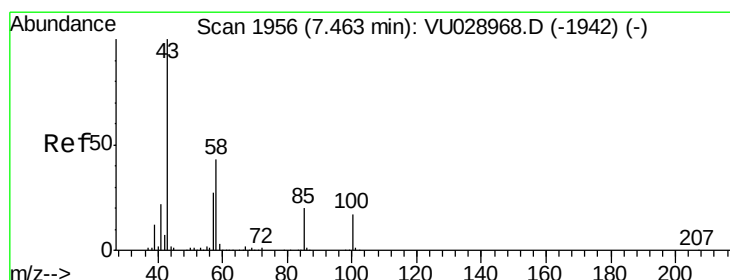
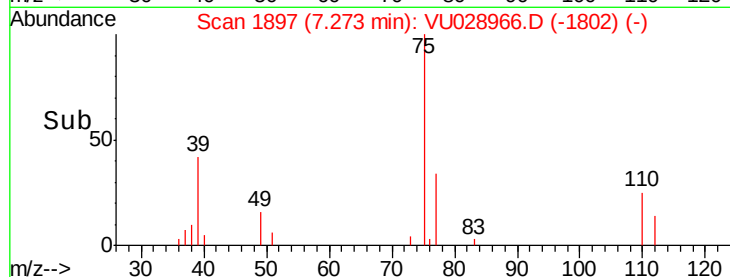
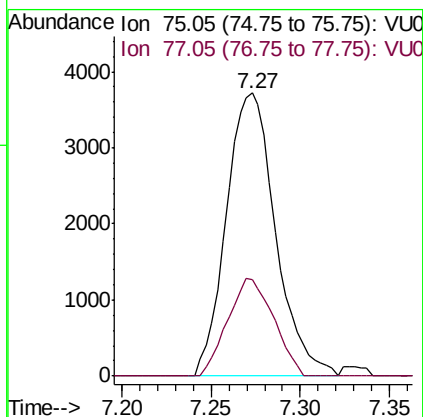
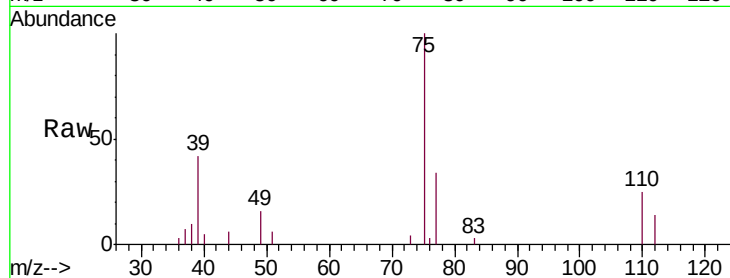


#39

cis-1,3-Dichloropropene  
 Concen: 0.472 ug/L  
 RT: 7.27 min Scan# 1897  
 Delta R.T. 0.01 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

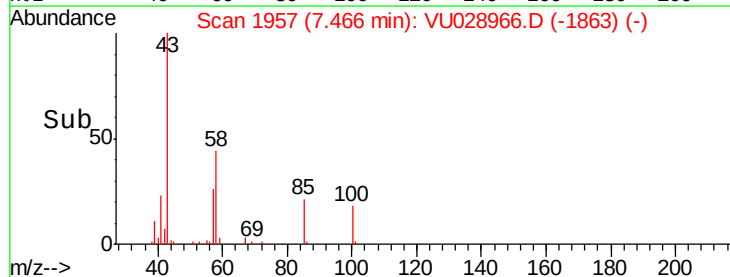
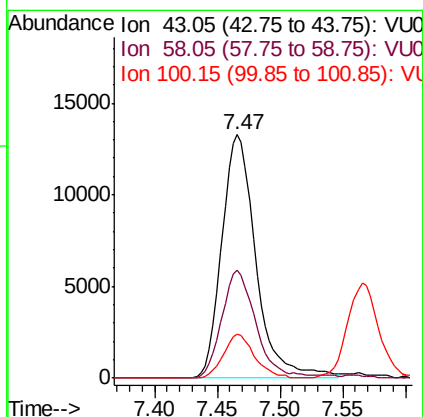
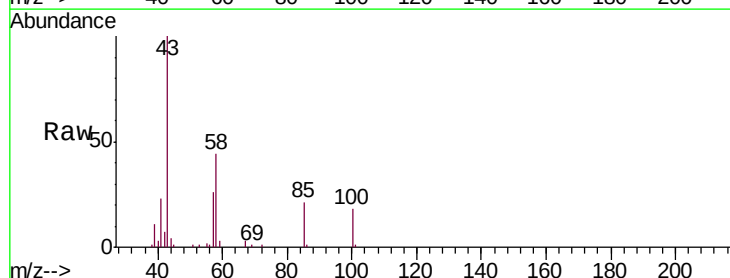
Tgt Ion: 75 Resp: 7126  
 Ion Ratio Lower Upper  
 75 100  
 77 34.3 21.5 39.9

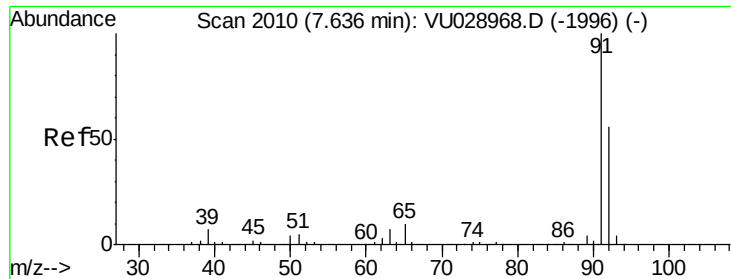


#40

4-Methyl-2-pentanone  
 Concen: 4.484 ug/L  
 RT: 7.47 min Scan# 1957  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion: 43 Resp: 25146  
 Ion Ratio Lower Upper  
 43 100  
 58 43.9 34.6 51.8  
 100 16.2 13.4 20.0





#42

Toluene

Concen: 0.484 ug/L

RT: 7.64 min Scan# 2010

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

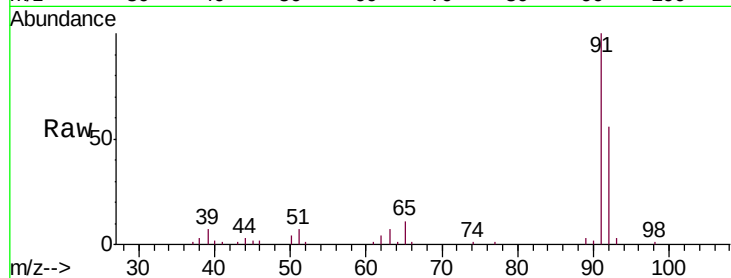
VSTD0.541

Tgt Ion: 91 Resp: 21440

Ion Ratio Lower Upper

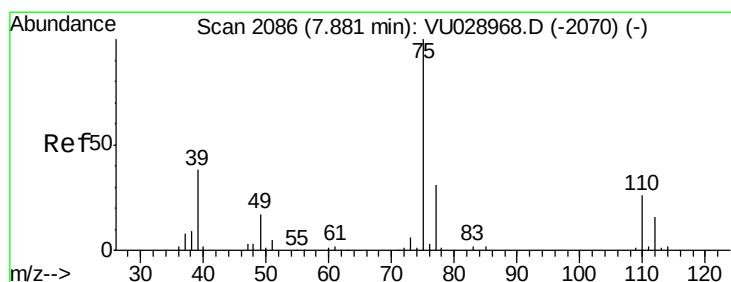
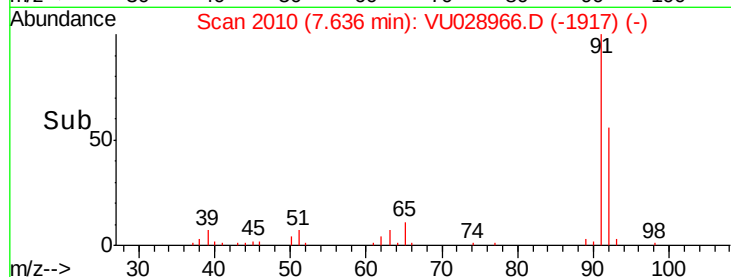
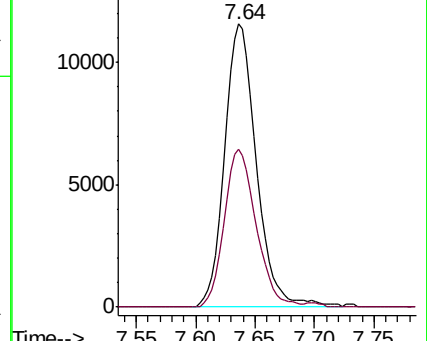
91 100

92 55.7 39.3 73.1



Abundance Ion 91.15 (90.85 to 91.85): VU0

Ion 92.15 (91.85 to 92.85): VU0



#44

trans-1,3-Dichloropropene

Concen: 0.446 ug/L

RT: 7.88 min Scan# 2087

Delta R.T. 0.00 min

Lab File: VU028966.D

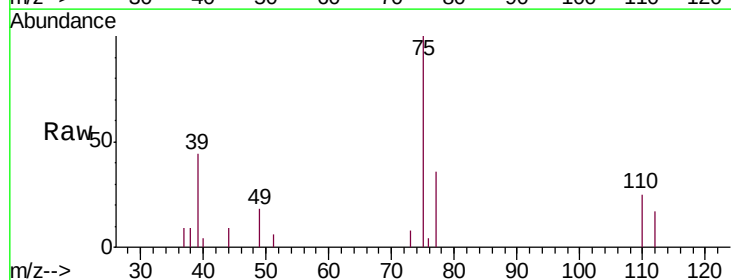
Acq: 27 Dec 2018 15:40

Tgt Ion: 75 Resp: 5252

Ion Ratio Lower Upper

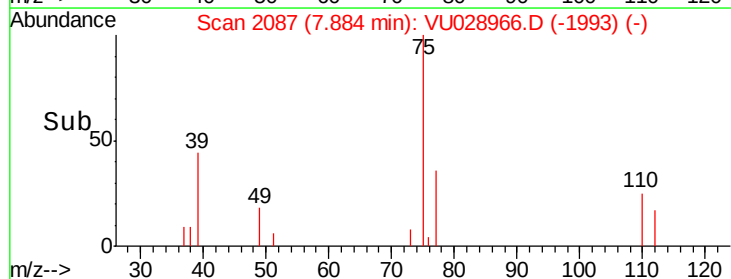
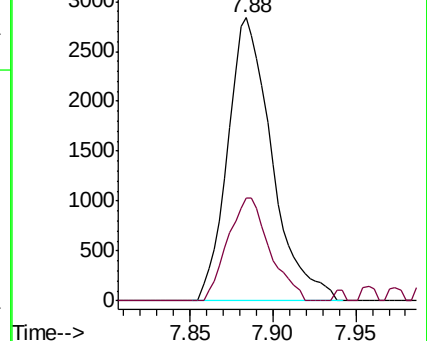
75 100

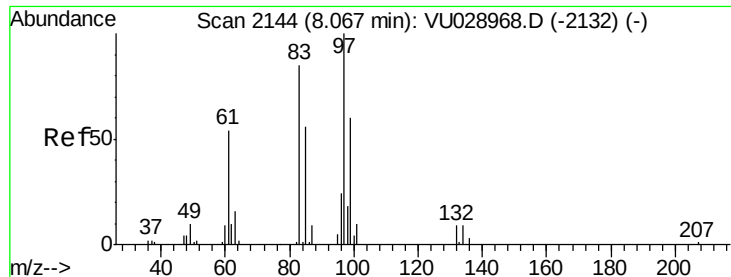
77 36.1 21.6 40.0



Abundance Ion 75.05 (74.75 to 75.75): VU0

Ion 77.05 (76.75 to 77.75): VU0

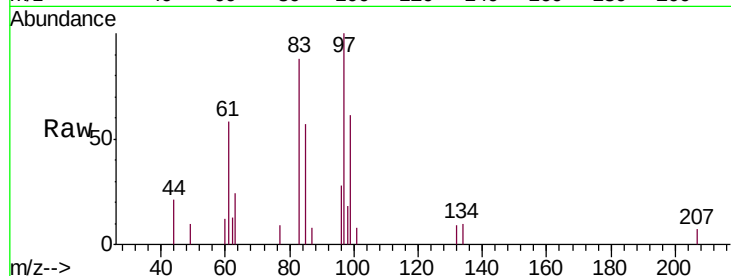




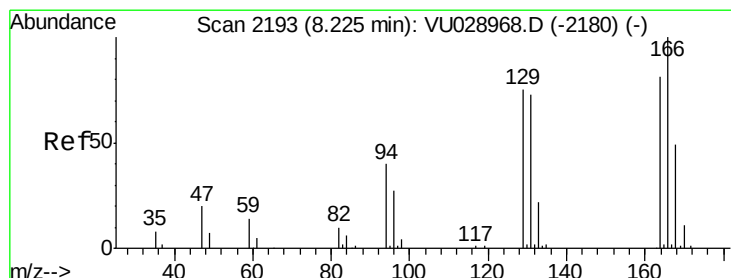
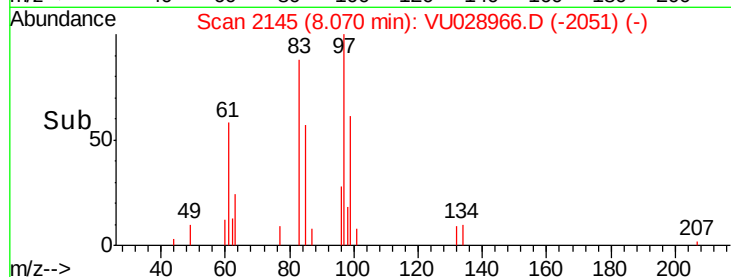
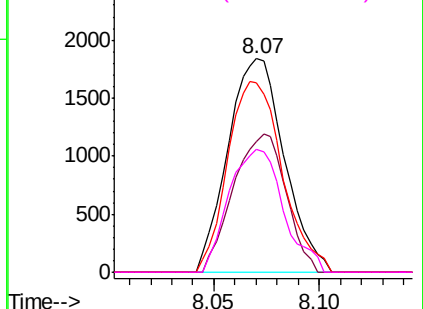
#45  
 1,1,2-Trichloroethane  
 Concen: 0.477 ug/L  
 RT: 8.07 min Scan# 2145  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Instrument :  
 MSVOA\_U  
 ClientSampled :  
 VSTD0.541

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 97    | Resp: | 3424  |
| Ion      | Ratio | Lower | Upper |
| 97       | 100   |       |       |
| 99       | 61.0  | 42.4  | 78.6  |
| 83       | 88.4  | 59.6  | 110.6 |
| 85       | 57.4  | 39.0  | 72.4  |

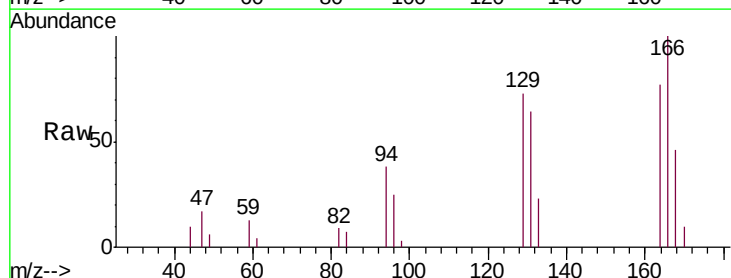


Abundance Ion 96.95 (96.65 to 97.65): VU0  
 Ion 99.05 (98.75 to 99.75): VU0  
 Ion 82.95 (82.65 to 83.65): VU0  
 Ion 85.00 (84.70 to 85.70): VU0

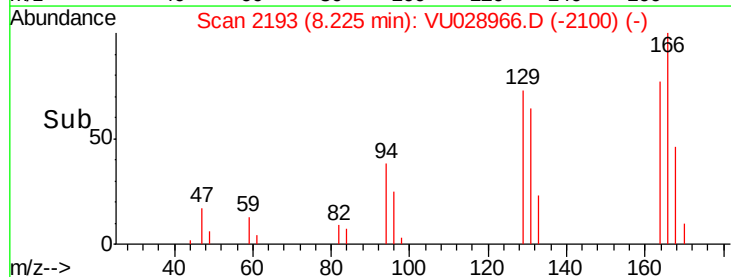
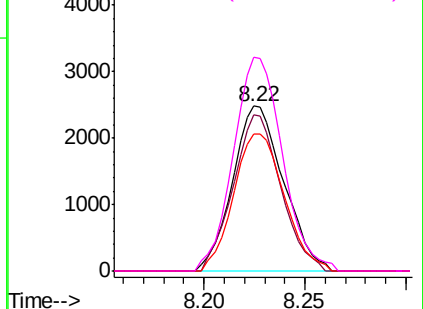


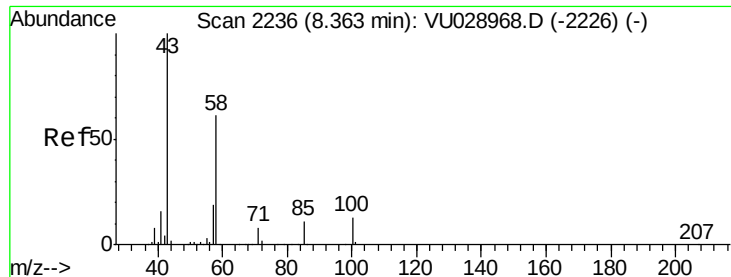
#47  
 Tetrachloroethene  
 Concen: 0.502 ug/L  
 RT: 8.22 min Scan# 2193  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 164   | Resp: | 4393  |
| Ion      | Ratio | Lower | Upper |
| 164      | 100   |       |       |
| 129      | 94.7  | 65.3  | 121.3 |
| 131      | 82.9  | 62.9  | 116.7 |
| 166      | 129.7 | 86.7  | 160.9 |



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

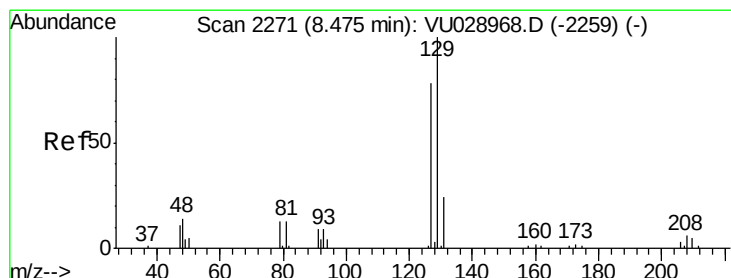
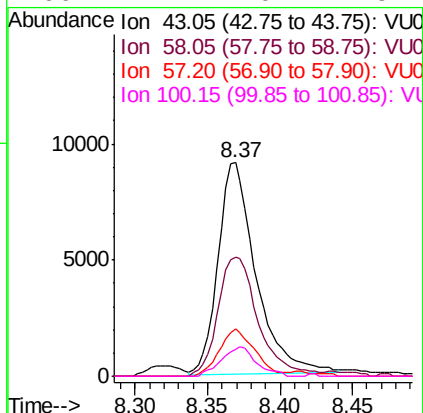
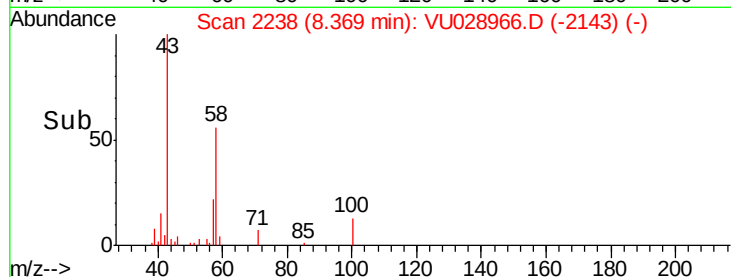
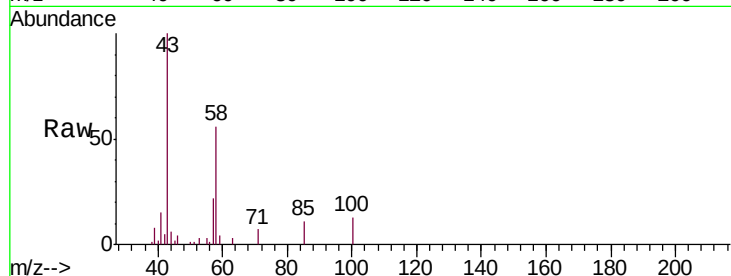




#48  
2-Hexanone  
Concen: 4.244 ug/L  
RT: 8.37 min Scan# 2238  
Delta R.T. 0.01 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

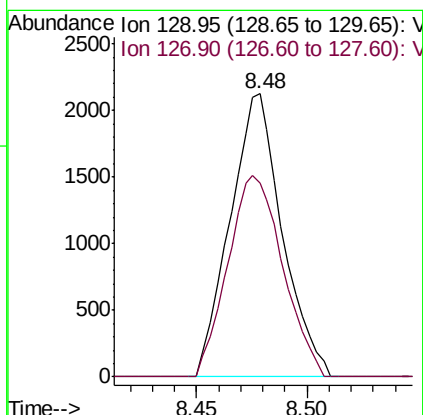
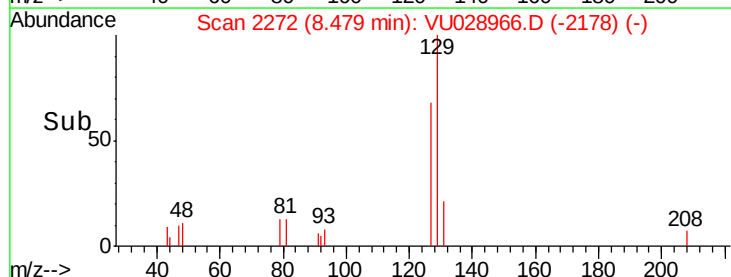
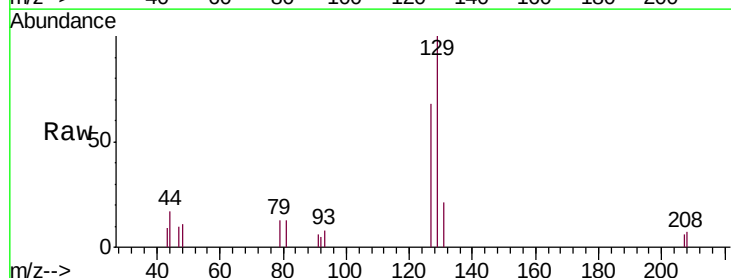
Instrument :  
MSVOA\_U  
ClientSampled :  
VSTD0.541

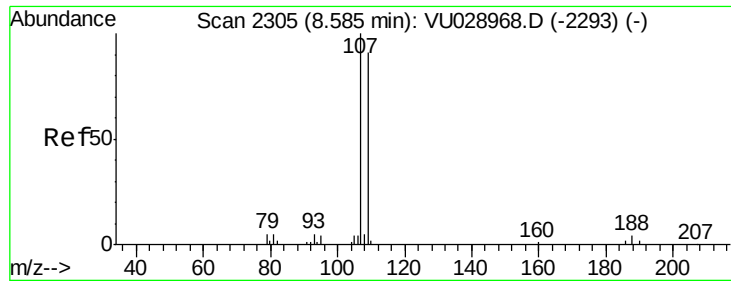
Tgt Ion: 43 Resp: 16462  
Ion Ratio Lower Upper  
43 100  
58 60.0 48.8 73.2  
57 20.7 16.0 24.0  
100 12.7 10.2 15.4



#49  
Dibromochloromethane  
Concen: 0.458 ug/L  
RT: 8.48 min Scan# 2272  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion: 129 Resp: 3487  
Ion Ratio Lower Upper  
129 100  
127 68.4 54.4 101.0

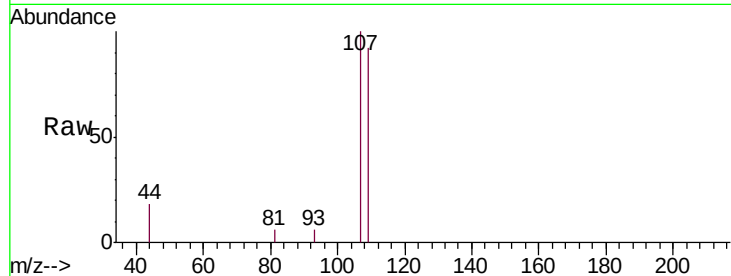




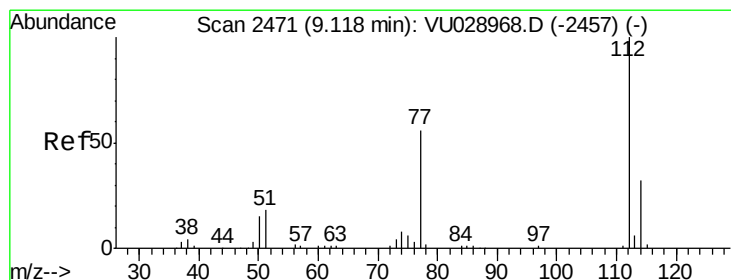
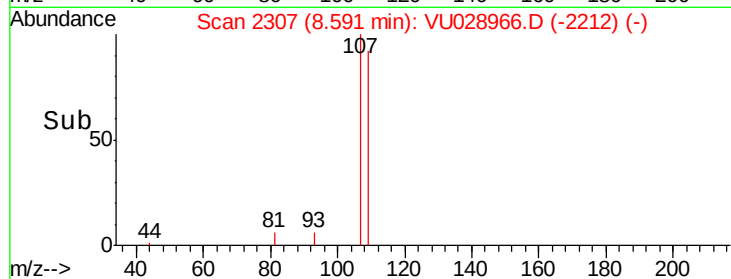
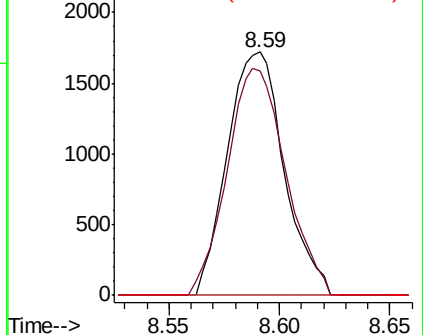
#50  
1,2-Dibromoethane  
Concen: 0.459 ug/L  
RT: 8.59 min Scan# 2307  
Delta R.T. 0.01 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Tgt Ion:107 Resp: 3082  
Ion Ratio Lower Upper  
107 100  
109 92.3 64.0 119.0  
188 0.0 3.0 4.4#

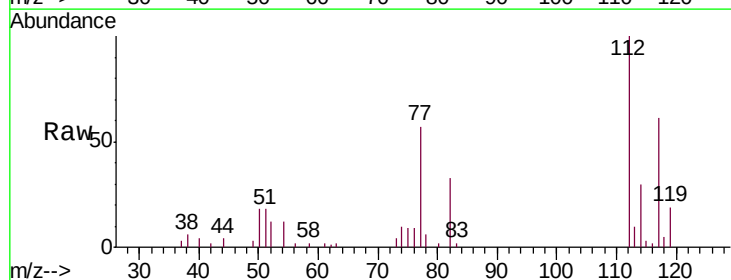


Abundance Ion 106.95 (106.65 to 107.65): V  
Ion 109.00 (108.70 to 109.70): V  
Ion 187.90 (187.60 to 188.60): V

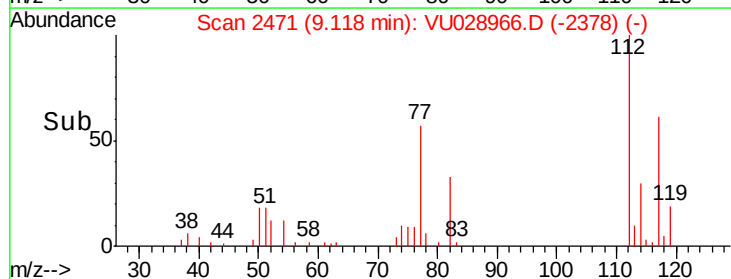
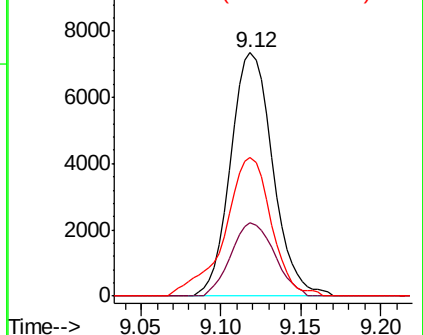


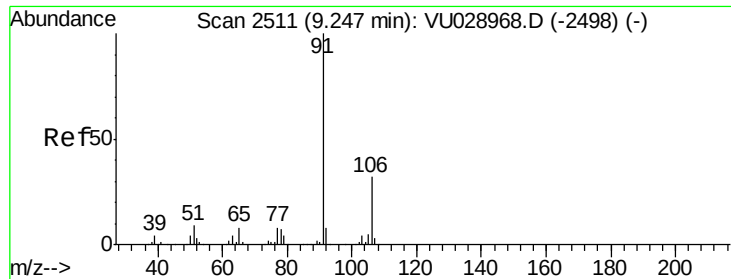
#51  
Chlorobenzene  
Concen: 0.476 ug/L  
RT: 9.12 min Scan# 2471  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion:112 Resp: 13228  
Ion Ratio Lower Upper  
112 100  
114 30.1 22.2 41.2  
77 56.7 44.9 67.3



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: 0.483 ug/L

RT: 9.25 min Scan# 2512

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

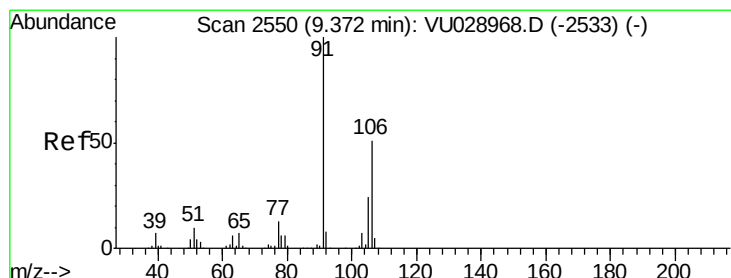
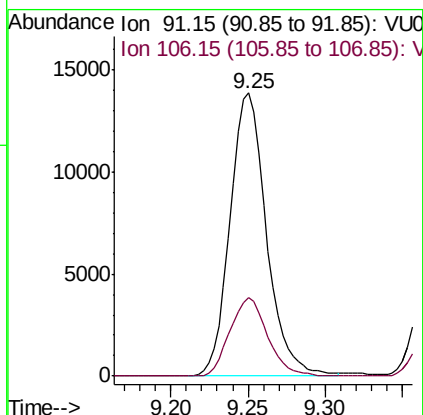
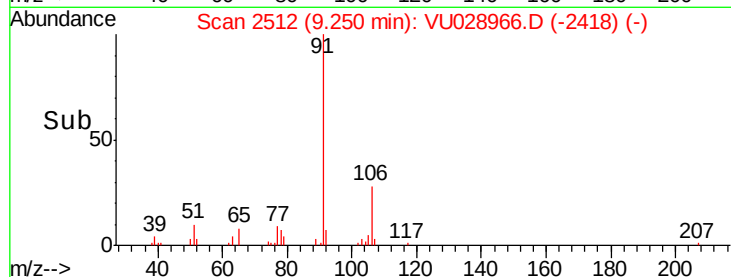
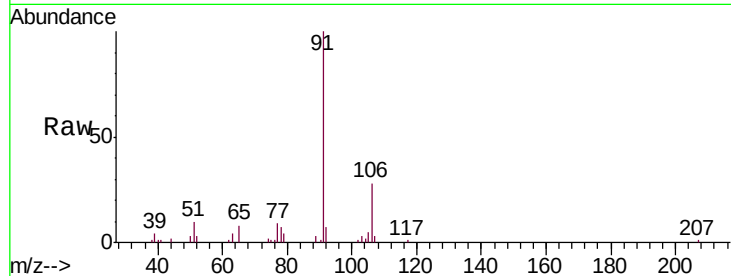
VSTD0.541

Tgt Ion: 91 Resp: 22682

Ion Ratio Lower Upper

91 100

106 27.6 22.7 42.1



#53

m,p-xylene

Concen: 0.460 ug/L

RT: 9.38 min Scan# 2551

Delta R.T. 0.00 min

Lab File: VU028966.D

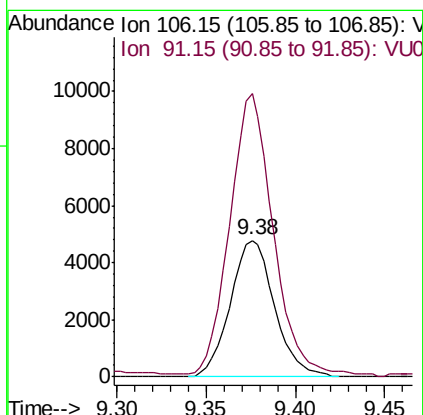
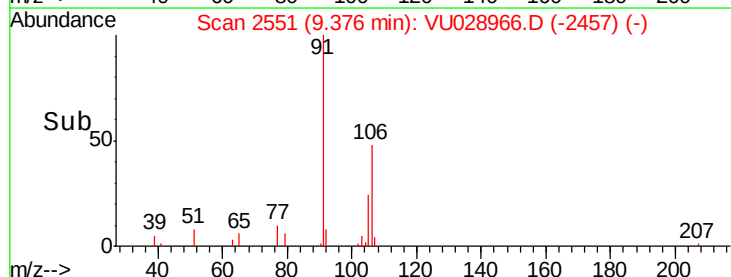
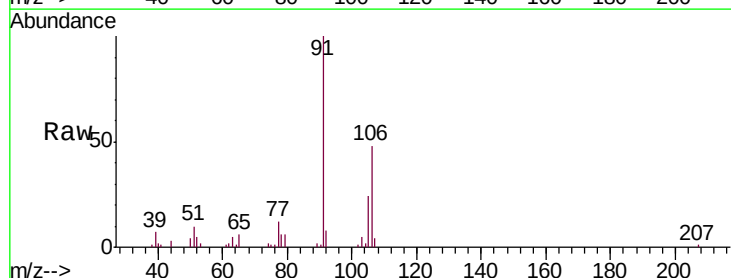
Acq: 27 Dec 2018 15:40

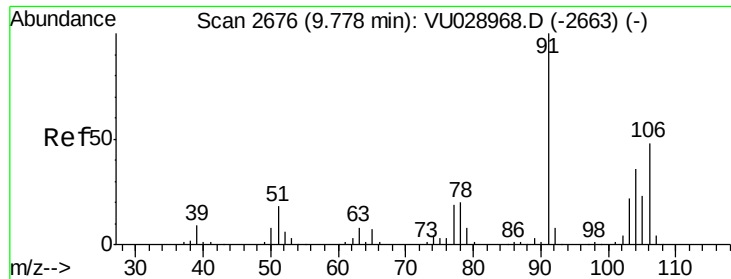
Tgt Ion: 106 Resp: 8229

Ion Ratio Lower Upper

106 100

91 207.2 138.5 257.1

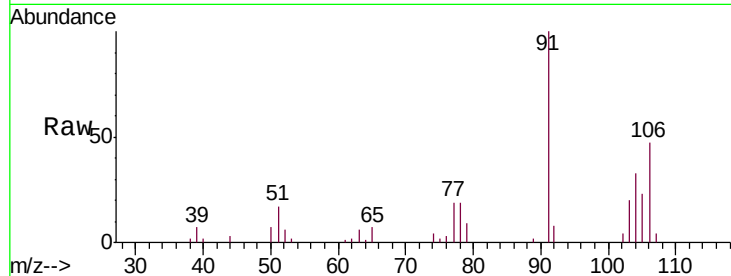




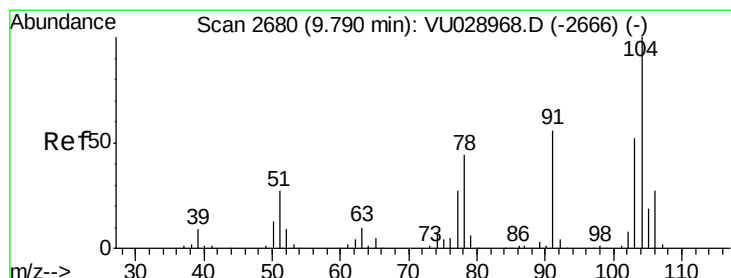
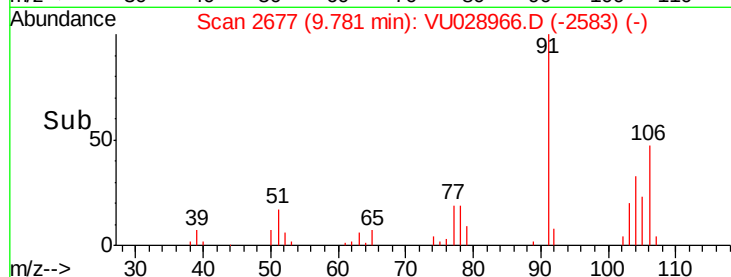
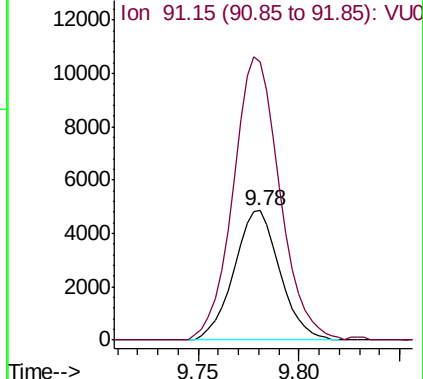
#54  
o-xylene  
Concen: 0.445 ug/L  
RT: 9.78 min Scan# 2677  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Tgt Ion:106 Resp: 7729  
Ion Ratio Lower Upper  
106 100  
91 214.7 146.5 272.1

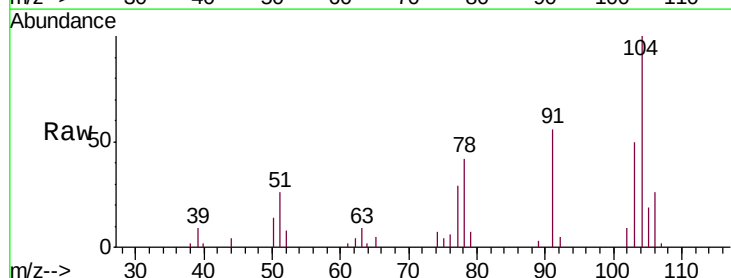


Abundance Ion 106.15 (105.85 to 106.85): V  
Ion 91.15 (90.85 to 91.85): VU0

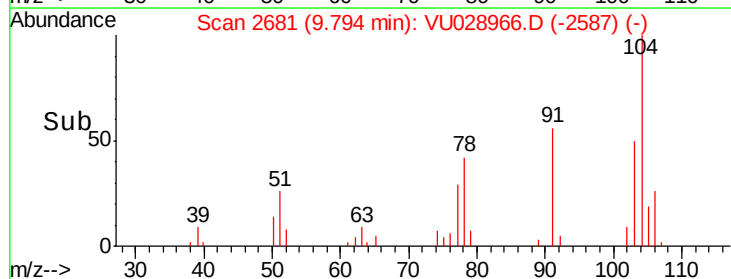
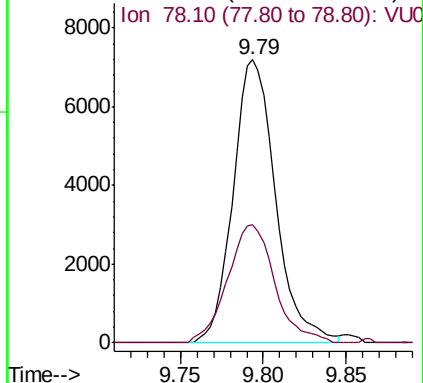


#55  
Styrene  
Concen: 0.444 ug/L  
RT: 9.79 min Scan# 2681  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

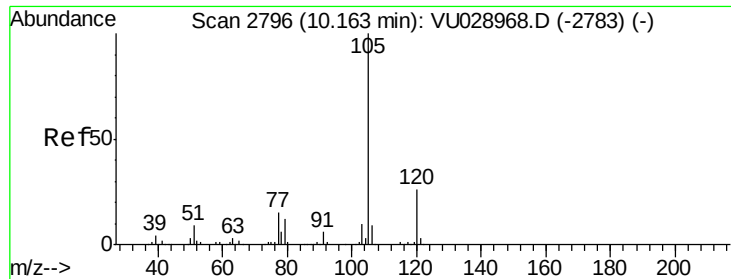
Tgt Ion:104 Resp: 12834  
Ion Ratio Lower Upper  
104 100  
78 41.8 30.9 57.5



Abundance Ion 104.10 (103.80 to 104.80): V  
Ion 78.10 (77.80 to 78.80): VU0







#56

Isopropylbenzene

Concen: 0.458 ug/L

RT: 10.17 min Scan# 2797

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

Instrument :

MSVOA\_U

ClientSampleId :

VSTD0.541

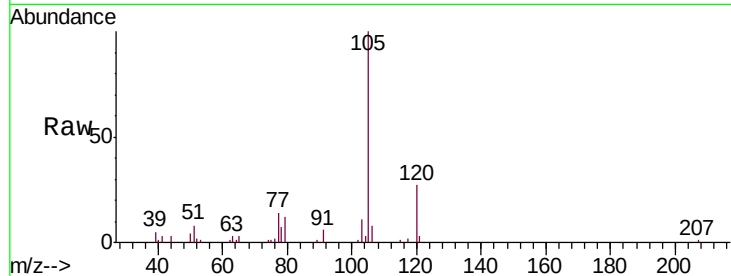
Tgt Ion: 105 Resp: 20949

Ion Ratio Lower Upper

105 100

120 27.3 20.9 31.3

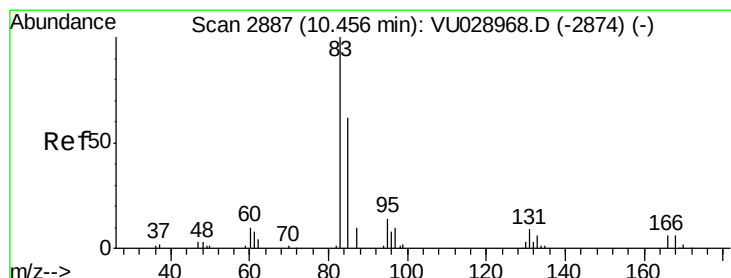
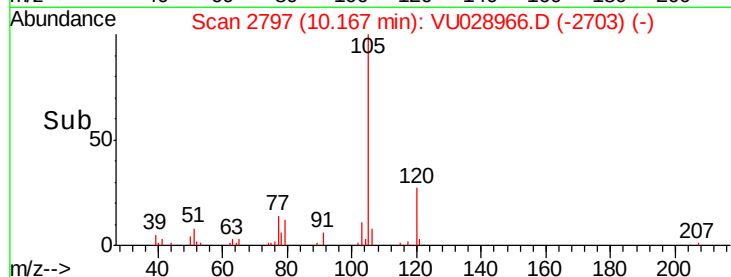
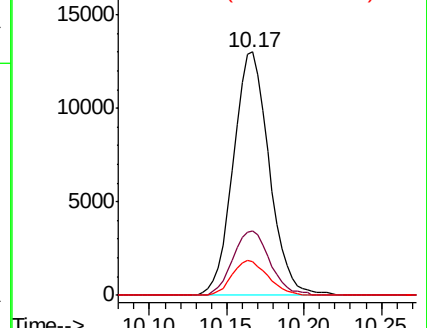
77 14.2 12.0 18.0



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.10 (119.80 to 120.80): V

Ion 77.10 (76.80 to 77.80): V



#58

1,1,2,2-Tetrachloroethane

Concen: 0.467 ug/L

RT: 10.46 min Scan# 2888

Delta R.T. 0.00 min

Lab File: VU028966.D

Acq: 27 Dec 2018 15:40

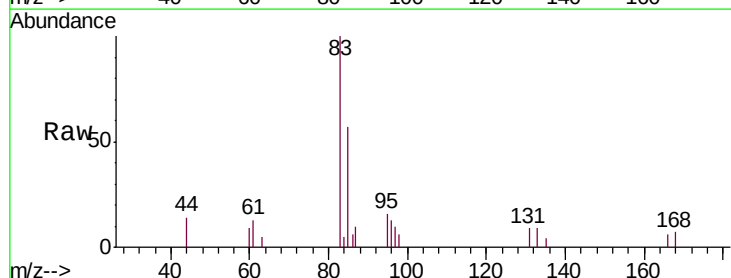
Tgt Ion: 83 Resp: 4096

Ion Ratio Lower Upper

83 100

85 56.8 44.0 81.8

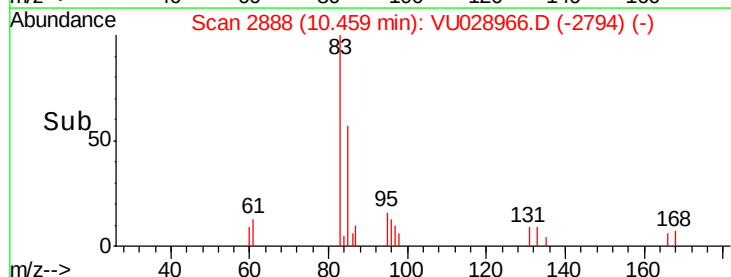
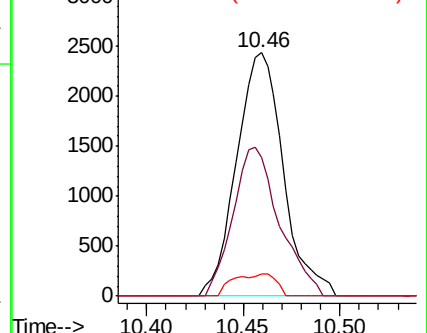
131 9.1 7.8 11.8

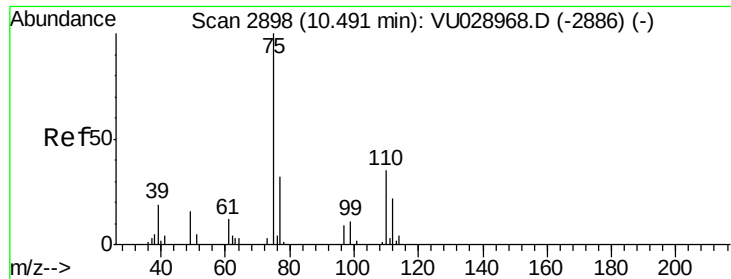


Abundance Ion 82.95 (82.65 to 83.65): VU0

Ion 85.00 (84.70 to 85.70): VU0

Ion 130.95 (130.65 to 131.65): V

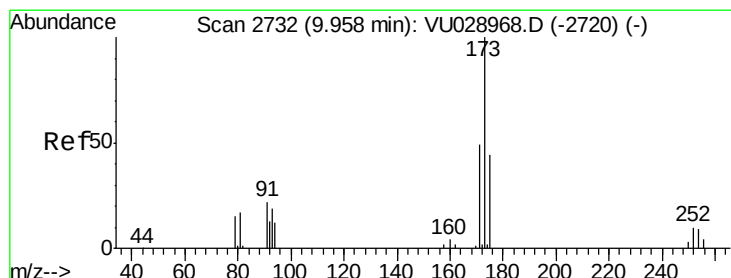
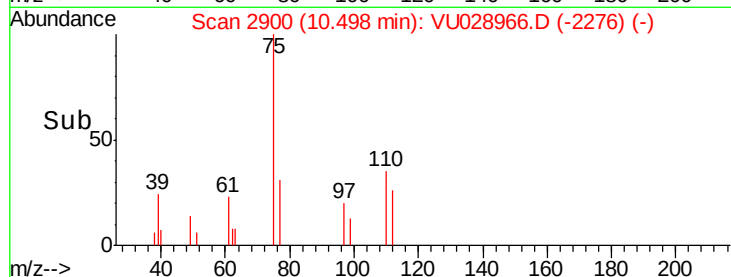
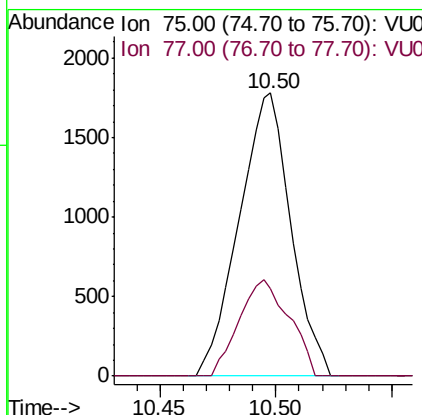
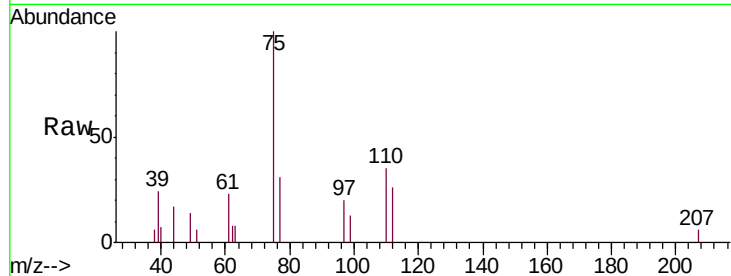




#59  
 1,2,3-Trichloropropane  
 Concen: 0.449 ug/L  
 RT: 10.50 min Scan# 2900  
 Delta R.T. 0.01 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

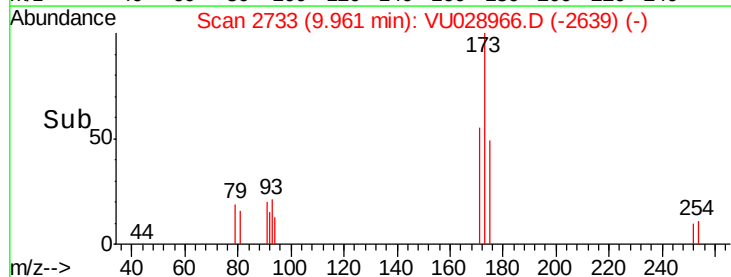
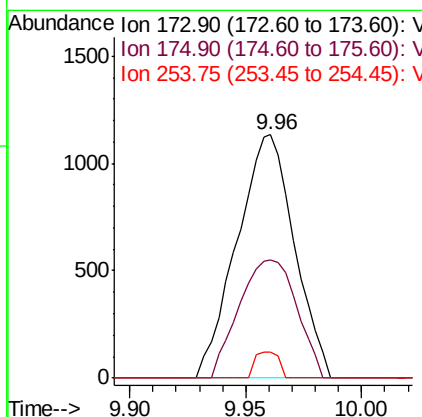
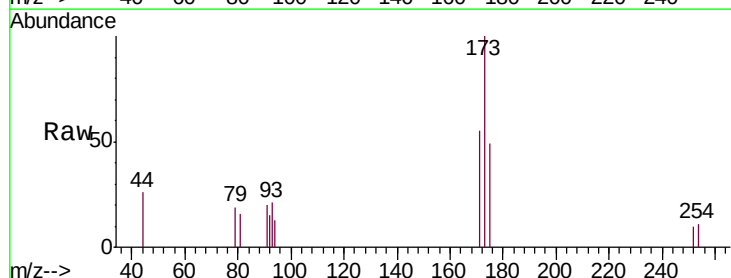
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

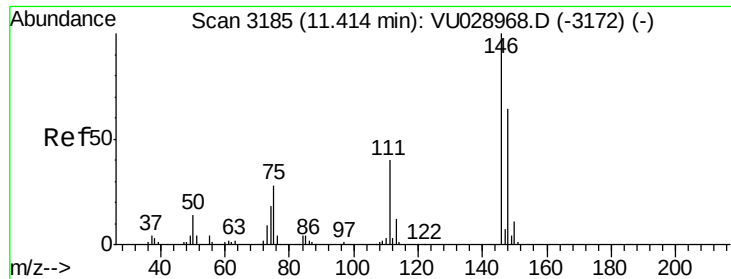
Tgt Ion: 75 Resp: 2759  
 Ion Ratio Lower Upper  
 75 100  
 77 33.1 26.0 39.0



#61  
 Bromoform  
 Concen: 0.470 ug/L  
 RT: 9.96 min Scan# 2733  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion: 173 Resp: 1946  
 Ion Ratio Lower Upper  
 173 100  
 175 48.8 35.4 53.2  
 254 4.5 7.5 11.3#

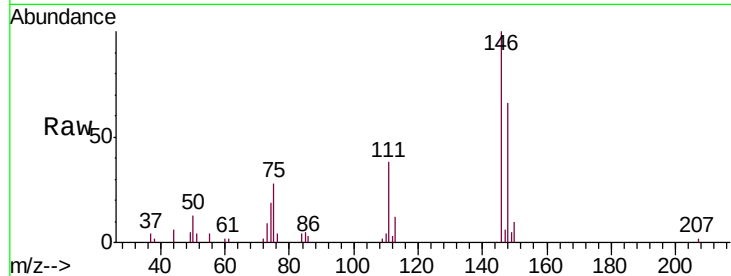




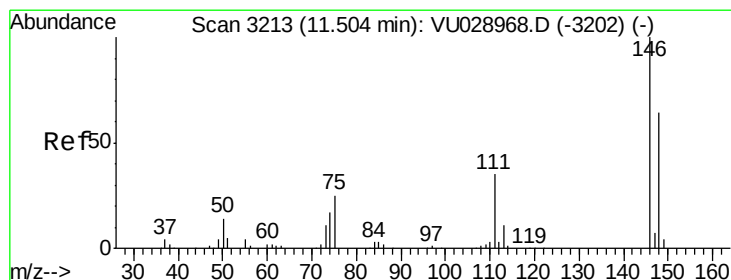
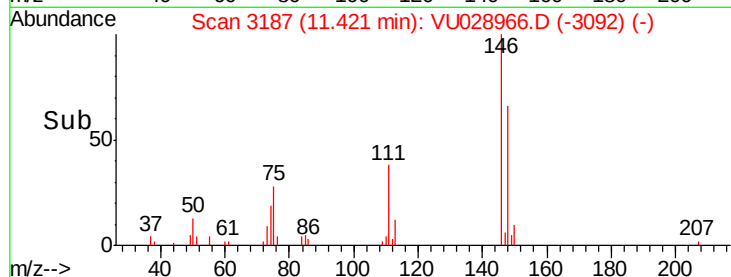
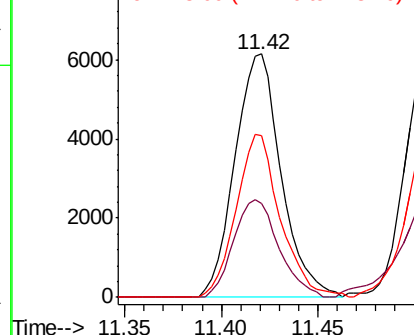
#62  
 1,3-Dichlorobenzene  
 Concen: 0.498 ug/L  
 RT: 11.42 min Scan# 3187  
 Delta R.T. 0.01 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

Tgt Ion:146 Resp: 10213  
 Ion Ratio Lower Upper  
 146 100  
 111 38.5 27.7 51.5  
 148 66.3 44.9 83.5

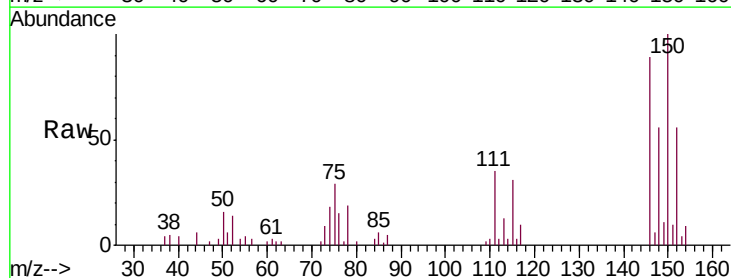


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

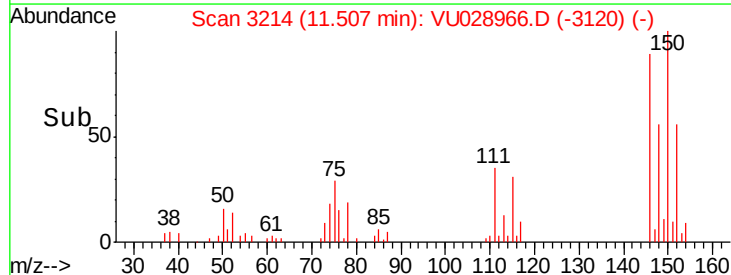
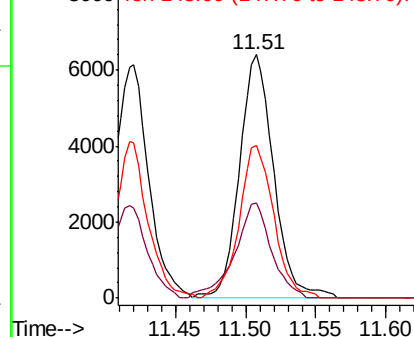


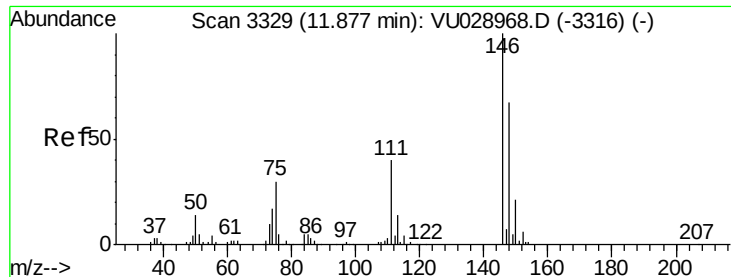
#63  
 1,4-Dichlorobenzene  
 Concen: 0.521 ug/L  
 RT: 11.51 min Scan# 3214  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion:146 Resp: 10897  
 Ion Ratio Lower Upper  
 146 100  
 111 39.1 24.9 46.3  
 148 62.7 44.9 83.3



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

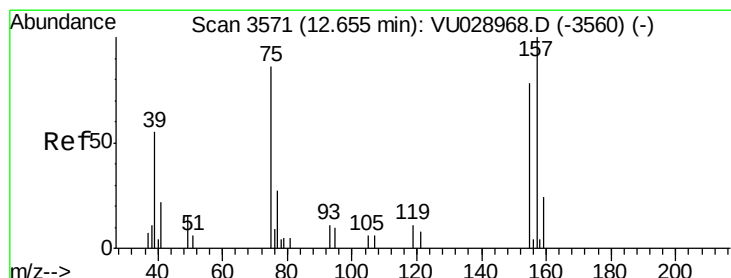
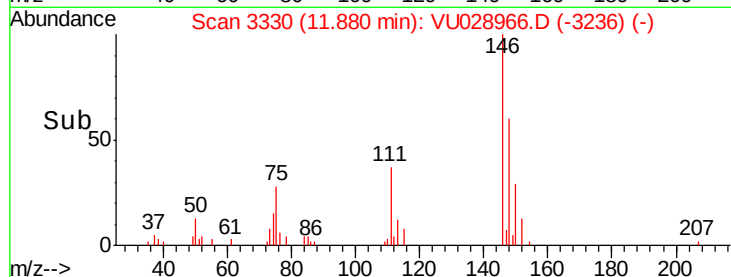
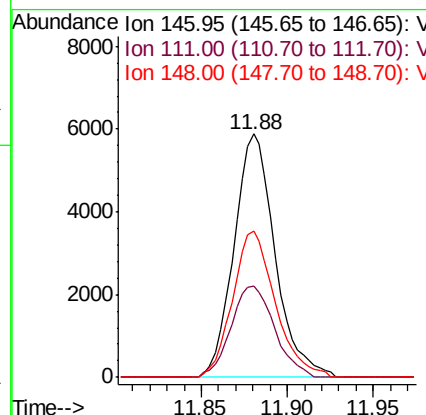
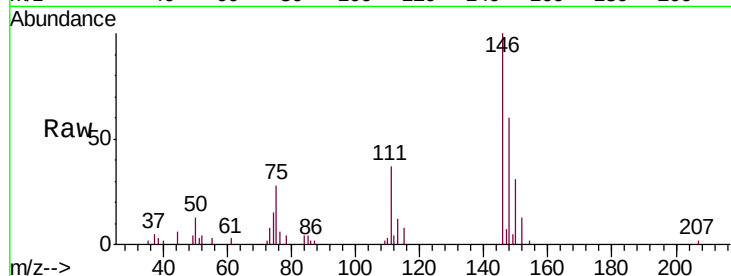




#65  
 1,2-Dichlorobenzene  
 Concen: 0.504 ug/L  
 RT: 11.88 min Scan# 3330  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

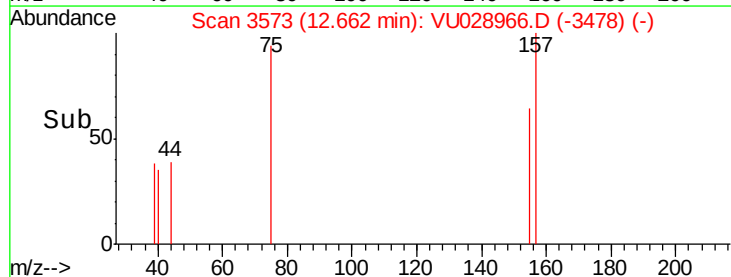
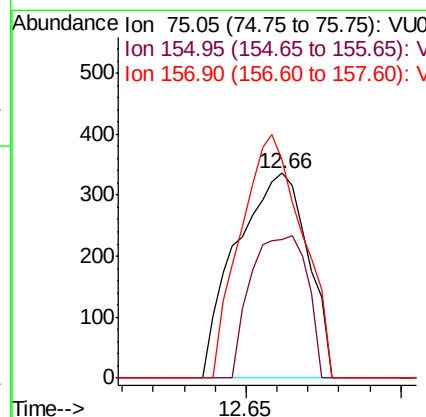
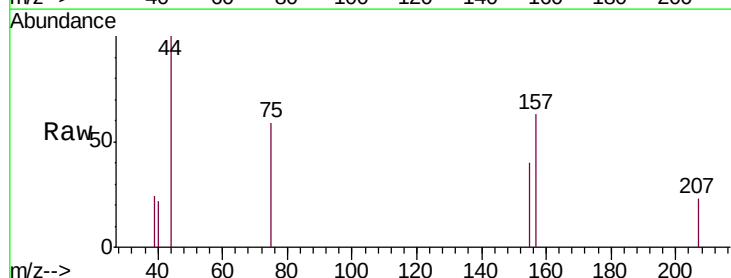
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

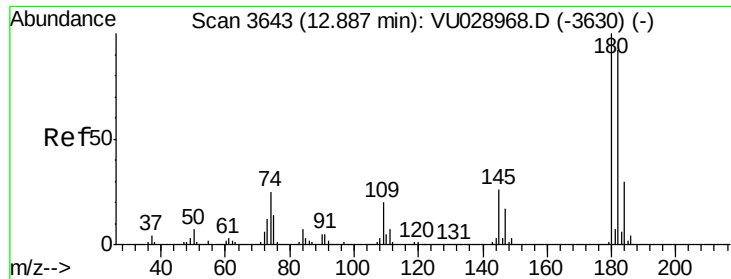
Tgt Ion: 146 Resp: 9783  
 Ion Ratio Lower Upper  
 146 100  
 111 37.3 32.2 48.4  
 148 59.9 53.2 79.8



#66  
 1,2-Dibromo-3-chloropropane  
 Concen: 0.472 ug/L  
 RT: 12.66 min Scan# 3573  
 Delta R.T. 0.01 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Tgt Ion: 75 Resp: 541  
 Ion Ratio Lower Upper  
 75 100  
 155 67.9 72.2 108.2#  
 157 106.5 93.0 139.6

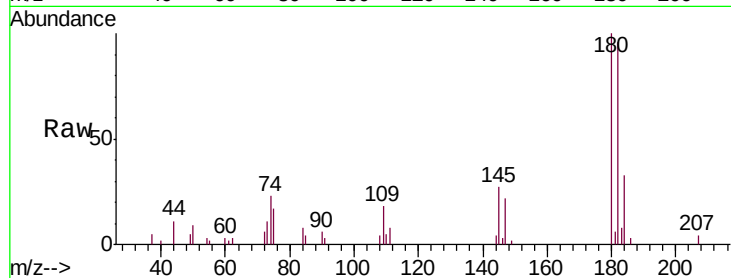




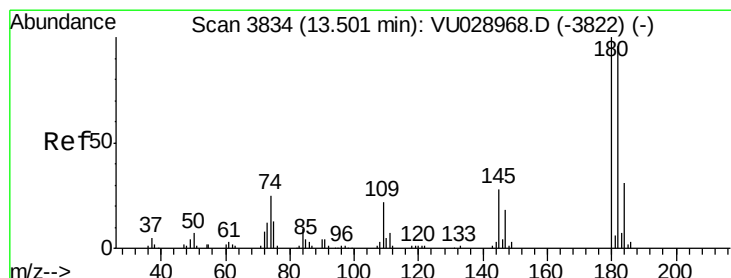
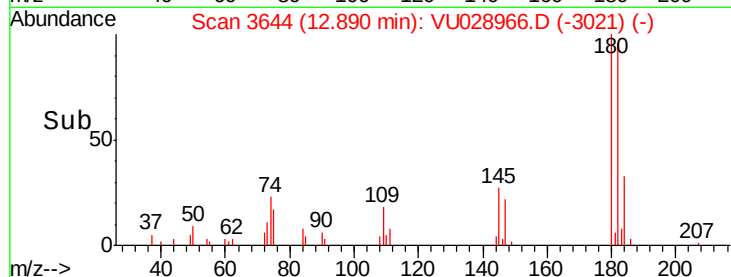
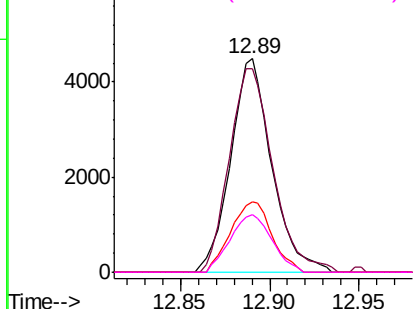
#67  
 1,3,5-Trichlorobenzene  
 Concen: 0.454 ug/L  
 RT: 12.89 min Scan# 3644  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD0.541

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 180   | Resp: | 7195  |
| Ion      | Ratio | Lower | Upper |
| 180      | 100   |       |       |
| 182      | 101.0 | 76.6  | 114.8 |
| 184      | 32.9  | 24.4  | 36.6  |
| 145      | 27.5  | 21.7  | 32.5  |

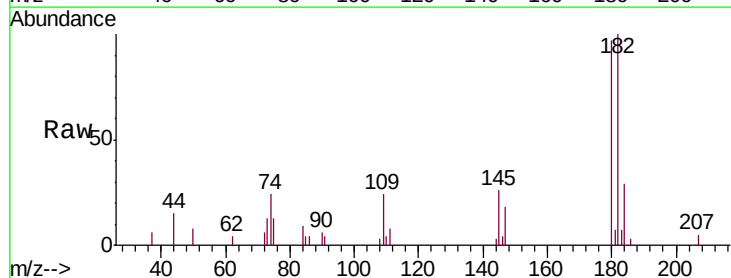


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

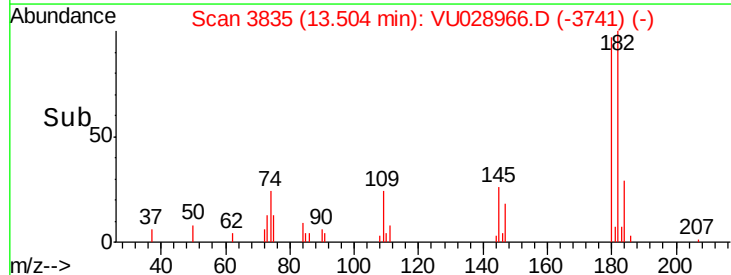
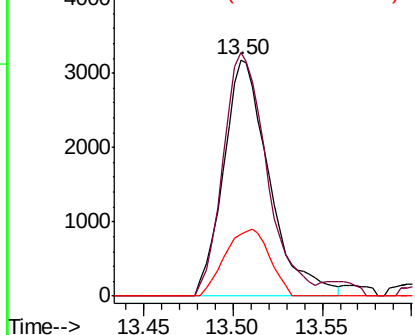


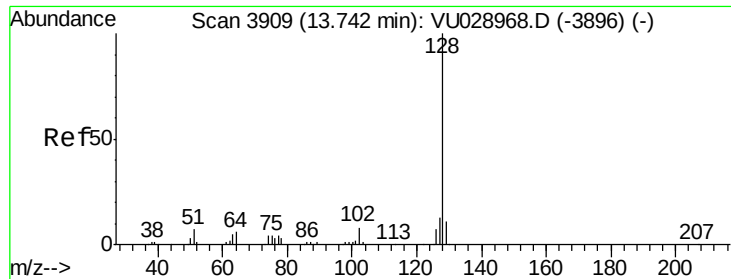
#68  
 1,2,4-trichlorobenzene  
 Concen: 0.429 ug/L  
 RT: 13.50 min Scan# 3835  
 Delta R.T. 0.00 min  
 Lab File: VU028966.D  
 Acq: 27 Dec 2018 15:40

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 180   | Resp: | 5673  |
| Ion      | Ratio | Lower | Upper |
| 180      | 100   |       |       |
| 182      | 98.5  | 76.0  | 114.0 |
| 145      | 27.5  | 22.6  | 33.8  |



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

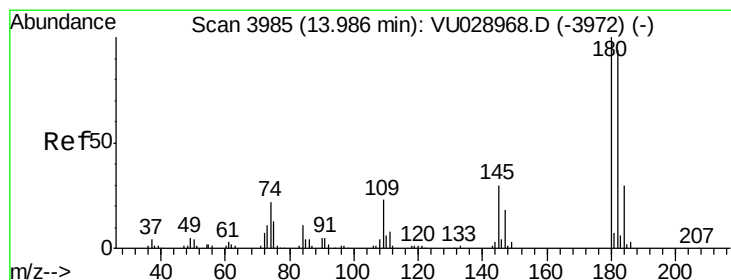
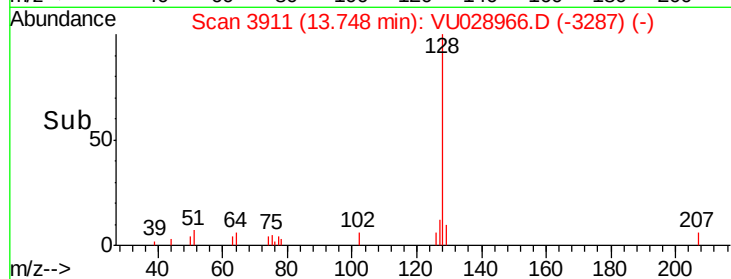
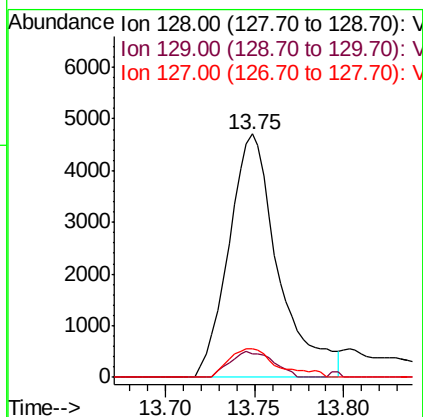
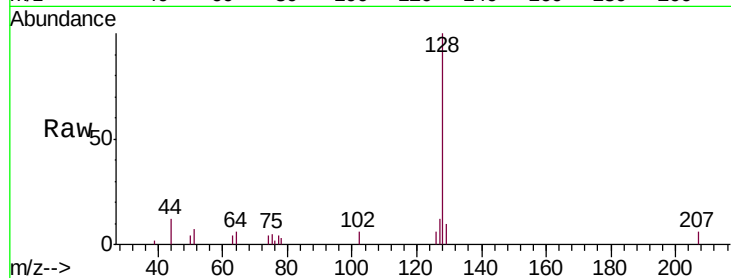




#69  
Naphthalene  
Concen: 0.402 ug/L  
RT: 13.75 min Scan# 3911  
Delta R.T. 0.01 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD0.541

Tgt Ion:128 Resp: 9081  
Ion Ratio Lower Upper  
128 100  
129 9.4 8.3 12.5  
127 11.6 9.8 14.6



#70  
1,2,3-Trichlorobenzene  
Concen: 0.453 ug/L  
RT: 13.99 min Scan# 3986  
Delta R.T. 0.00 min  
Lab File: VU028966.D  
Acq: 27 Dec 2018 15:40

Tgt Ion:180 Resp: 5717  
Ion Ratio Lower Upper  
180 100  
182 89.1 77.1 115.7  
145 27.2 24.6 36.8

