

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092818\  
 Data File : VN051620.D  
 Acq On : 28 Sep 2018 17:34  
 Operator : MD\SY  
 Sample : J4870-02DL 2X  
 Misc : Sample  
 ALS Vial : 16 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

Quant Time: Sep 29 01:57:14 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N092818W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Sat Sep 29 01:07:29 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.19  | 128  | 75984    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 550430   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 484597   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 221802   | 41.92    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 139.73% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 211965   | 28.45    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 94.83%  |
| 63) Toluene-d8            | 10.09  | 98    | 694604   | 30.38    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 101.27% |

## Target Compounds

|                               |       |     |         |        | Ovalue     |
|-------------------------------|-------|-----|---------|--------|------------|
| 3) Chloromethane              | 2.06  | 50  | 4902    | 0.657  | ug/l 97    |
| 4) Vinyl Chloride             | 2.18  | 62  | 221249  | 30.224 | ug/l 97    |
| 5) Bromomethane               | 2.57  | 94  | 166525  | 43.794 | ug/l 97    |
| 6) Chloroethane               | 2.70  | 64  | 79184   | 21.562 | ug/l 98    |
| 11) Methyl Iodide             | 3.96  | 142 | 5464    | 0.925  | ug/l 87    |
| 12) Methyl Acetate            | 4.33  | 43  | 1523    | 0.376  | ug/l 96    |
| 15) Acetone                   | 3.82  | 58  | 20819   | 48.965 | ug/l 87    |
| 16) Carbon Disulfide          | 4.06  | 76  | 3158    | 0.214  | ug/l # 75  |
| 18) Methylene Chloride        | 4.55  | 84  | 65079   | 12.338 | ug/l 92    |
| 19) trans-1,2-Dichloroethene  | 5.05  | 96  | 48525   | 9.963  | ug/l 93    |
| 21) 1,1-Dichloroethane        | 5.85  | 63  | 212474  | 22.019 | ug/l 100   |
| 23) tert-Butyl Alcohol        | 5.03  | 59  | 1363    | 4.394  | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05  | 73  | 544203  | 45.132 | ug/l 100   |
| 25) Chloroform                | 7.37  | 83  | 229325  | 24.855 | ug/l 97    |
| 30) 2-Butanone                | 6.84  | 43  | 140472  | 54.990 | ug/l # 95  |
| 32) 1,1,1-Trichloroethane     | 7.57  | 97  | 66154   | 6.273  | ug/l 96    |
| 34) Benzene                   | 8.04  | 78  | 1070170 | 38.431 | ug/l 95    |
| 37) Trichloroethene           | 8.84  | 130 | 239647  | 33.520 | ug/l 100   |
| 39) 1,2-Dichloropropane       | 9.12  | 63  | 327242  | 42.888 | ug/l 98    |
| 40) Dibromomethane            | 9.21  | 93  | 248643  | 58.662 | ug/l 98    |
| 45) 1,4-Dioxane               | 9.21  | 88  | 653     | 11.402 | ug/l # 31  |
| 49) cis-1,3-Dichloropropene   | 9.84  | 75  | 522905  | 48.434 | ug/l 100   |
| 53) Dibromochloromethane      | 10.90 | 129 | 216522  | 31.738 | ug/l 100   |
| 54) 1,2-Dibromoethane         | 11.01 | 107 | 261622  | 45.518 | ug/l 100   |
| 56) Bromoform                 | 12.13 | 173 | 197295  | 43.583 | ug/l 100   |
| 58) 4-Methyl-2-Pentanone      | 9.99  | 43  | 385400  | 70.048 | ug/l 98    |
| 59) 2-Hexanone                | 10.75 | 43  | 209836  | 57.973 | ug/l 98    |
| 61) Tetrachloroethene         | 10.63 | 164 | 167111  | 24.357 | ug/l 98    |
| 62) Toluene                   | 10.16 | 91  | 716901  | 24.127 | ug/l 99    |
| 64) Chlorobenzene             | 11.43 | 112 | 358807  | 19.972 | ug/l 100   |
| 65) 1,1,1,2-Tetrachloroethane | 11.51 | 131 | 449796  | 65.566 | ug/l 100   |
| 66) Ethyl Benzene             | 11.51 | 91  | 218022  | 7.169  | ug/l 100   |
| 67) m/p-Xylenes               | 11.62 | 106 | 203287  | 17.345 | ug/l 99    |
| 68) o-Xylene                  | 11.95 | 106 | 418973  | 37.447 | ug/l 97    |
| 69) Styrene                   | 11.96 | 104 | 991750  | 56.474 | ug/l 96    |
| 71) 1,1,2,2-Tetrachloroethane | 12.51 | 83  | 484540  | 67.105 | ug/l 98    |
| 72) 1,2,3-Trichloropropane    | 12.56 | 75  | 403788  | 65.408 | ug/l 1     |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Sat Sep 29 01:07:29 2018  
 Response via : Initial Calibration

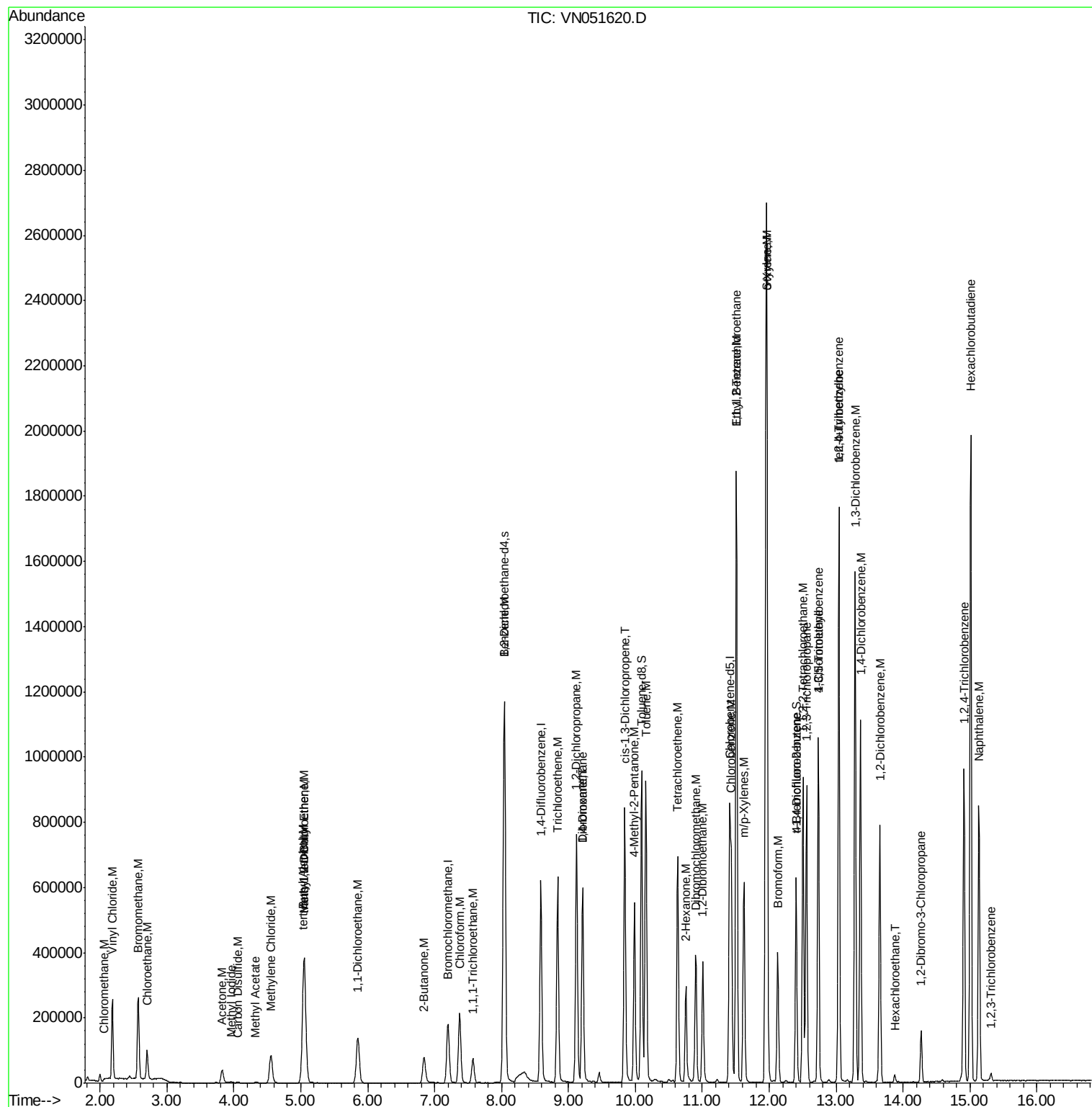
| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 572106   | 22.941 | ug/l   | 100      |
| 77) t-1,4-Dichloro-2-butene    | 12.40 | 75   | 104753   | 53.577 | ug/l # | 11       |
| 78) 4-Chlorotoluene            | 12.73 | 91   | 61653    | 3.008  | ug/l   | 43       |
| 79) tert-butylbenzene          | 13.04 | 119  | 126879   | 5.873  | ug/l   | 75       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 958779   | 38.492 | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 687713   | 53.139 | ug/l   | 100      |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 486380   | 39.981 | ug/l   | 99       |
| 86) Hexachloroethane           | 13.87 | 117  | 3768     | 0.739  | ug/l   | 94       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 346178   | 27.344 | ug/l   | 100      |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 40105    | 38.108 | ug/l   | 97       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 324480   | 54.760 | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 413275   | 85.550 | ug/l   | 98       |
| 91) Naphthalene                | 15.13 | 128  | 724637   | 49.890 | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 15.32 | 180  | 8953     | 1.502  | ug/l   | 92       |

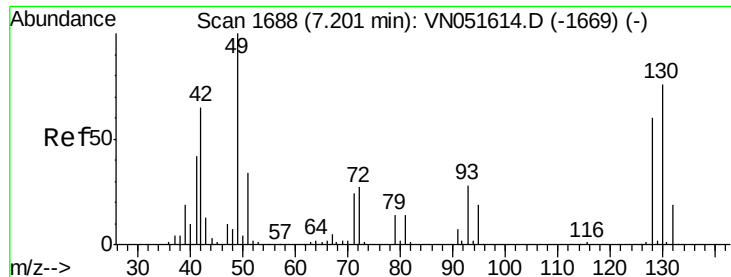
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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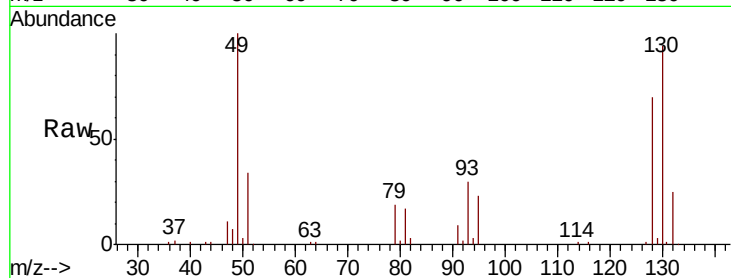




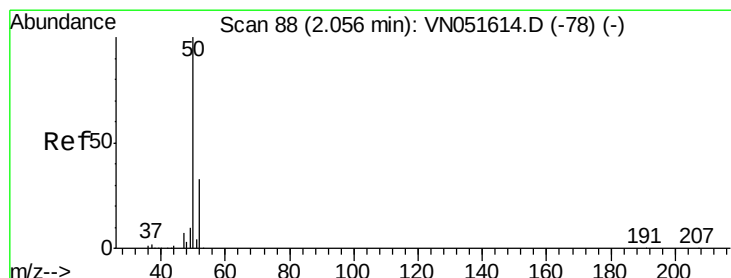
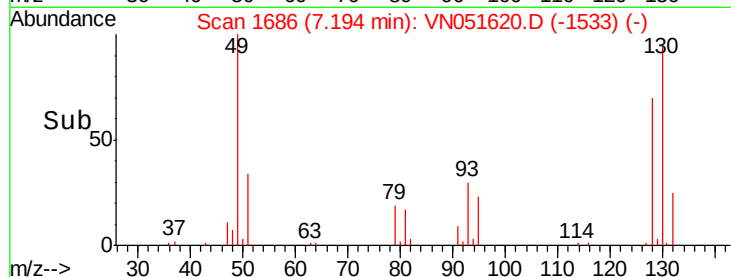
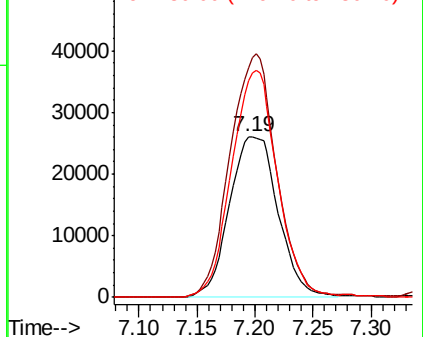
#1  
Bromochloromethane  
Concen: 30.000 ug/l  
RT: 7.19 min Scan# 1686  
Delta R.T. -0.01 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Instrument :  
MSVOA\_N  
ClientSampled :  
PT-VOA-WPDL

Tot Ion:128 Resp: 75984  
Ion Ratio Lower Upper  
128 100  
49 144.9 0.0 426.8  
130 132.8 0.0 326.3

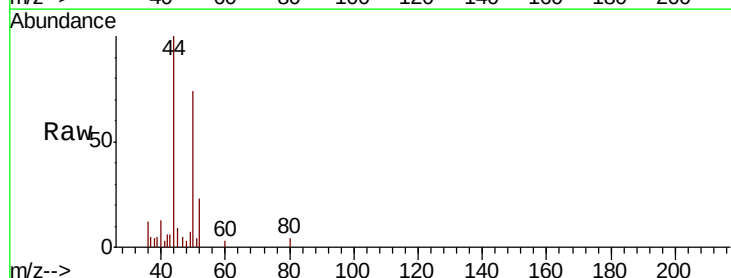


Abundance Ion 128.00 (127.70 to 128.70): V  
Ion 49.00 (48.70 to 49.70): VN  
Ion 130.00 (129.70 to 130.70): V

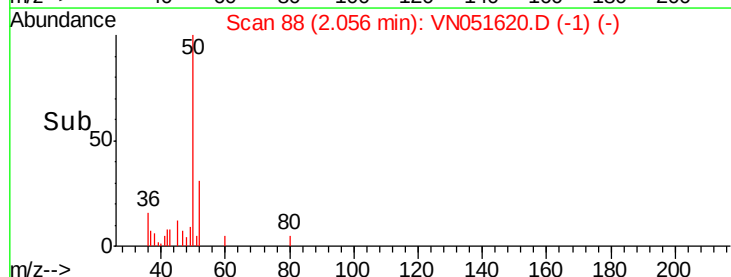
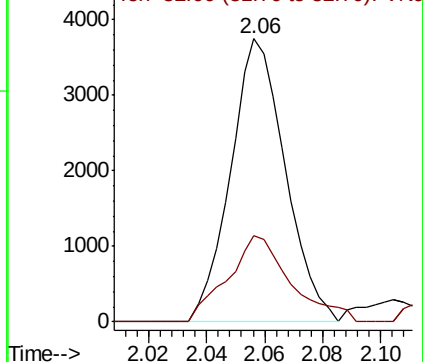


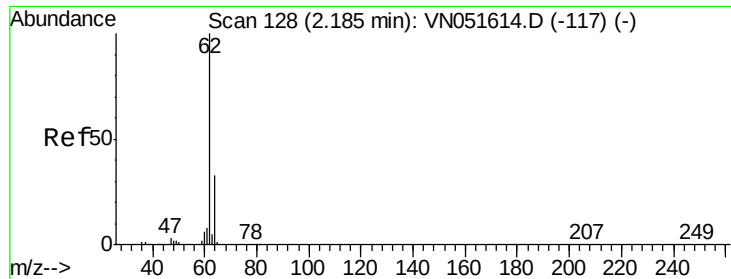
#3  
Chloromethane  
Concen: 0.657 ug/l  
RT: 2.06 min Scan# 88  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion: 50 Resp: 4902  
Ion Ratio Lower Upper  
50 100  
52 30.6 26.0 39.0



Abundance Ion 50.00 (49.70 to 50.70): VN  
Ion 52.00 (51.70 to 52.70): VN





#4

Vinyl Chloride

Concen: 30.224 ug/l

RT: 2.18 min Scan# 128

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

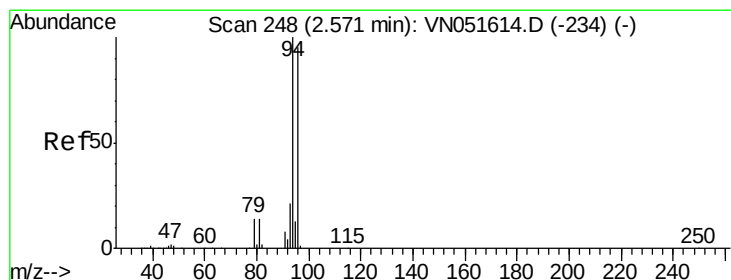
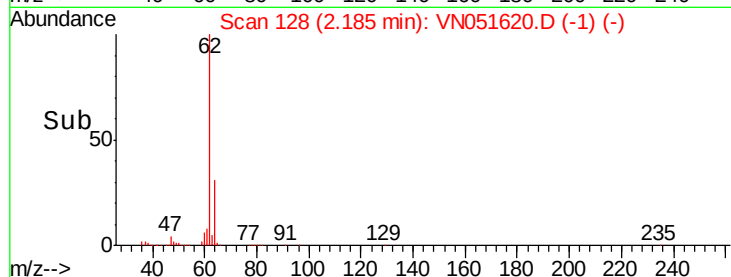
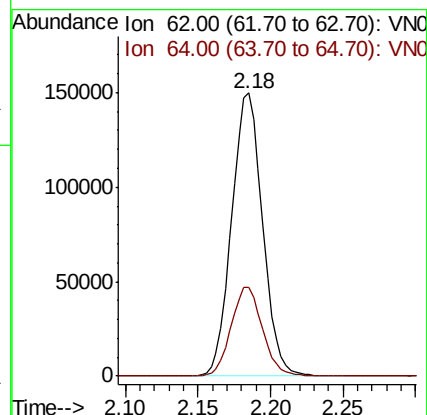
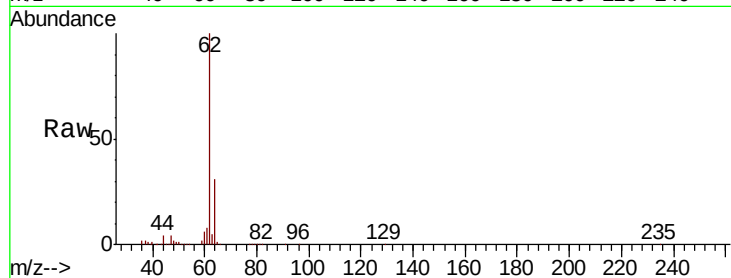
PT-VOA-WPDL

Tot Ion: 62 Resp: 221249

Ion Ratio Lower Upper

62 100

64 31.1 26.3 39.5



#5

Bromomethane

Concen: 43.794 ug/l

RT: 2.57 min Scan# 248

Delta R.T. -0.00 min

Lab File: VN051620.D

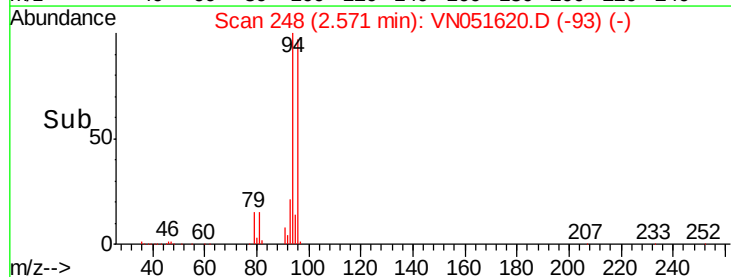
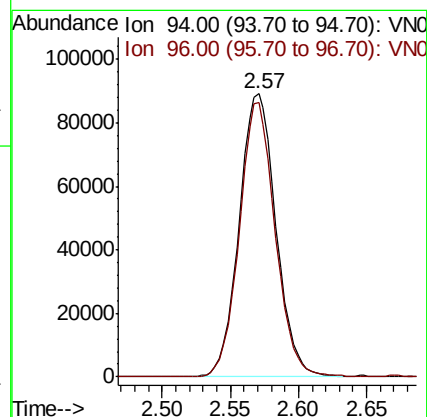
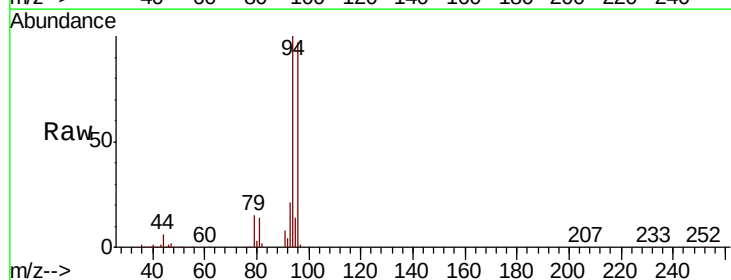
Acq: 28 Sep 2018 17:34

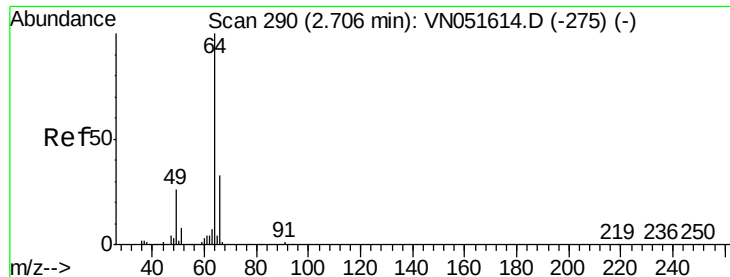
Tgt Ion: 94 Resp: 166525

Ion Ratio Lower Upper

94 100

96 97.1 75.8 113.6





#6

Chloroethane

Concen: 21.562 ug/l

RT: 2.70 min Scan# 289

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

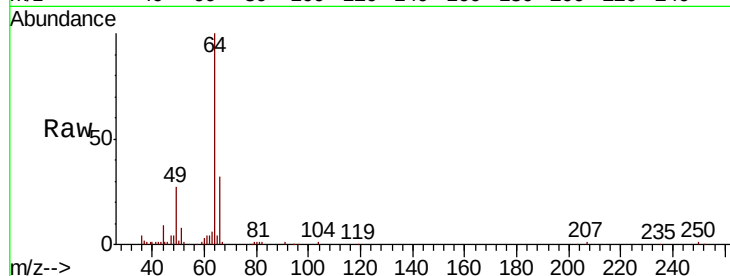
PT-VOA-WPDL

Tot Ion: 64 Resp: 79184

Ion Ratio Lower Upper

64 100

66 31.3 26.1 39.1



Abundance Ion 64.00 (63.70 to 64.70): VN051614.D (-275) (-)

Ion 66.00 (65.70 to 66.70): VN051614.D (-275) (-)

2.70

40000

30000

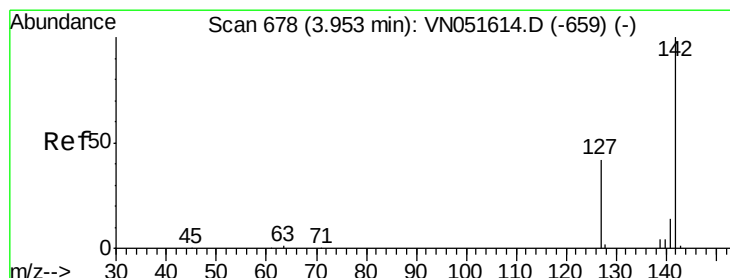
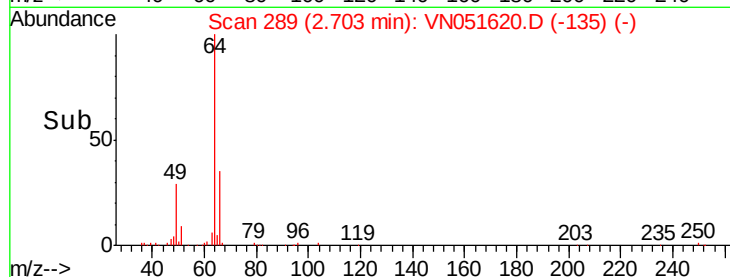
20000

10000

0

Time-->

2.65 2.70 2.75 2.80



#11

Methyl Iodide

Concen: 0.925 ug/l

RT: 3.96 min Scan# 679

Delta R.T. 0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

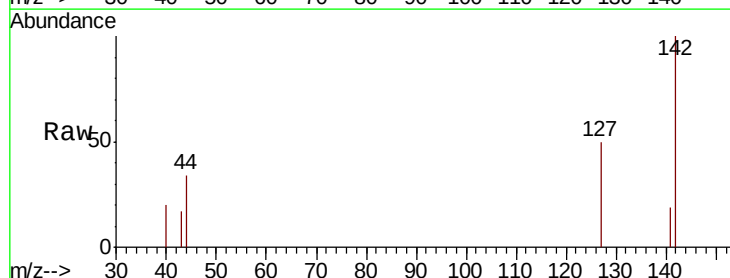
Tgt Ion: 142 Resp: 5464

Ion Ratio Lower Upper

142 100

127 50.4 21.1 63.1

141 19.2 7.1 21.4



Abundance Ion 142.00 (141.70 to 142.70): VN051614.D (-659) (-)

Ion 127.00 (126.70 to 127.70): VN051614.D (-659) (-)

Ion 141.00 (140.70 to 141.70): VN051614.D (-659) (-)

3.96

2500

2000

1500

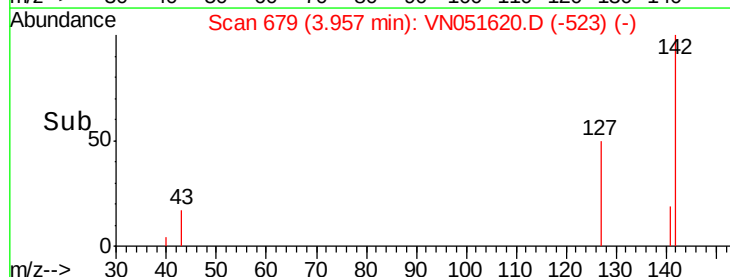
1000

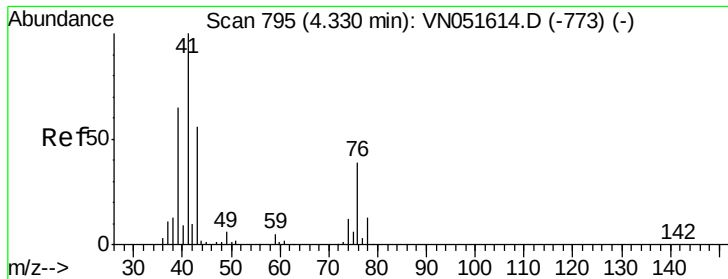
500

0

Time-->

3.90 3.95 4.00

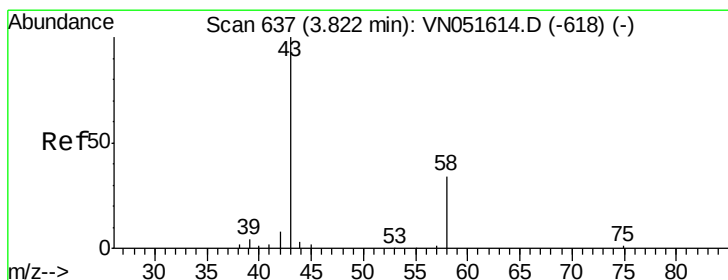
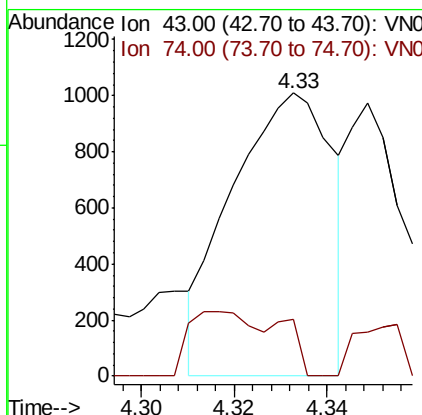
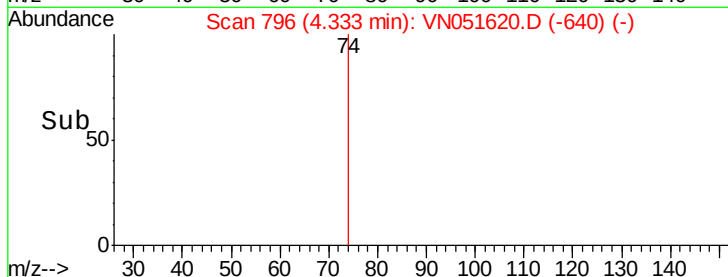
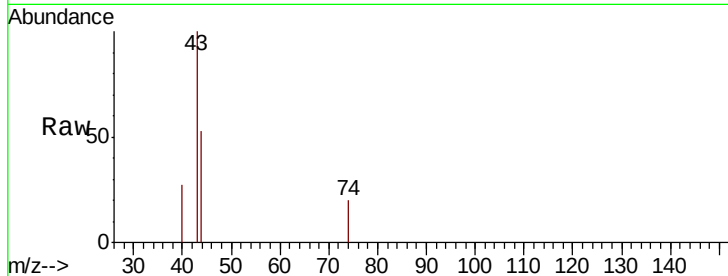




#12  
Methvl Acetate  
Concen: 0.376 ug/l  
RT: 4.33 min Scan# 796  
Delta R.T. 0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

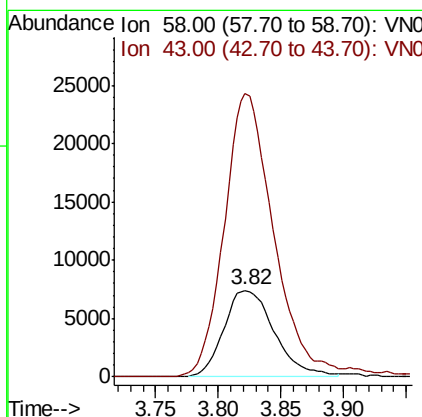
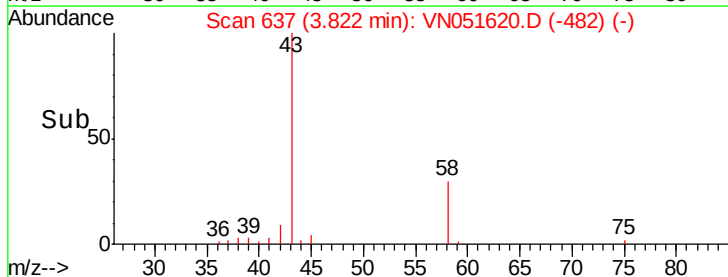
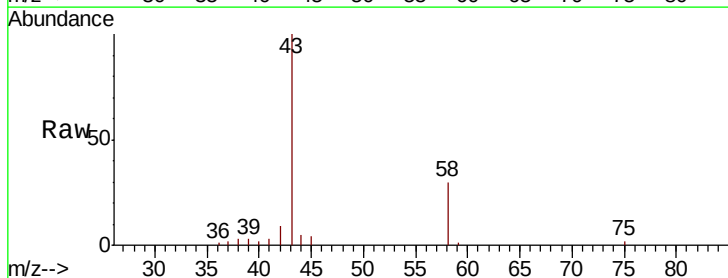
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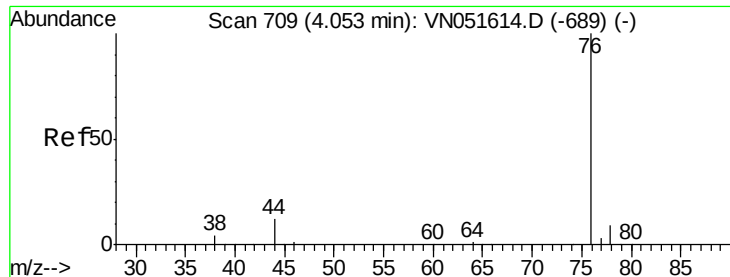
Tot Ion: 43 Resp: 1523  
Ion Ratio Lower Upper  
43 100  
74 23.1 17.0 25.4



#15  
Acetone  
Concen: 48.965 ug/l  
RT: 3.82 min Scan# 637  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion: 58 Resp: 20819  
Ion Ratio Lower Upper  
58 100  
43 323.7 238.0 357.0

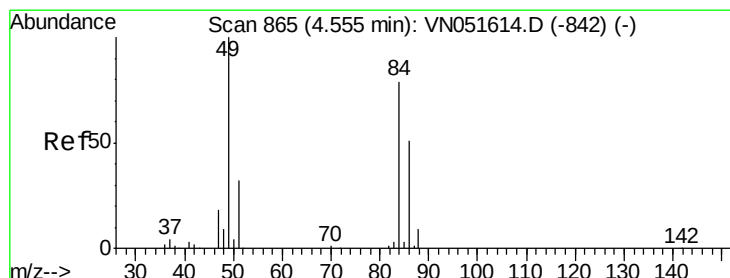
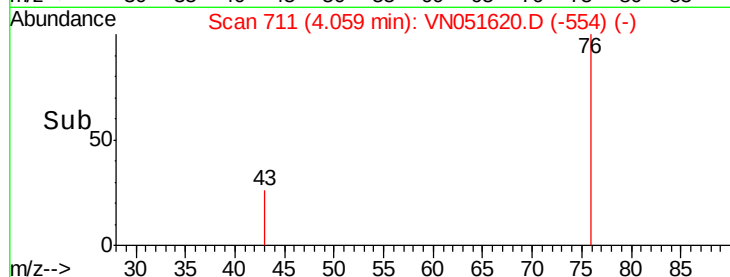
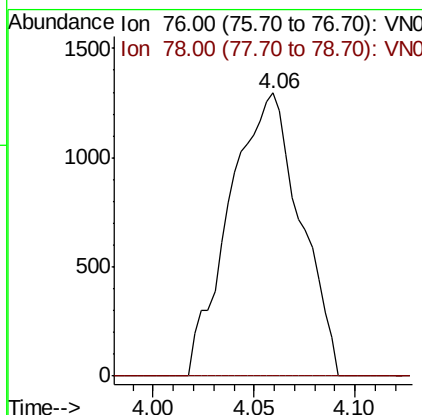
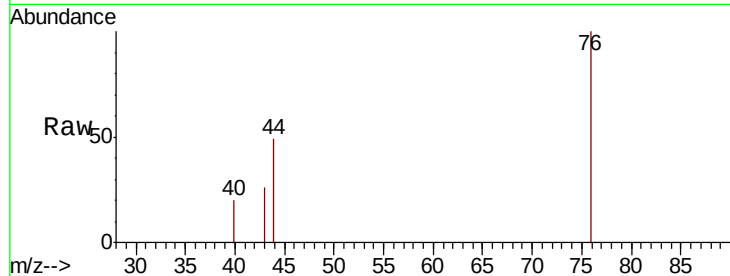




#16  
Carbon Disulfide  
Concen: 0.214 ug/l  
RT: 4.06 min Scan# 711  
Delta R.T. 0.01 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

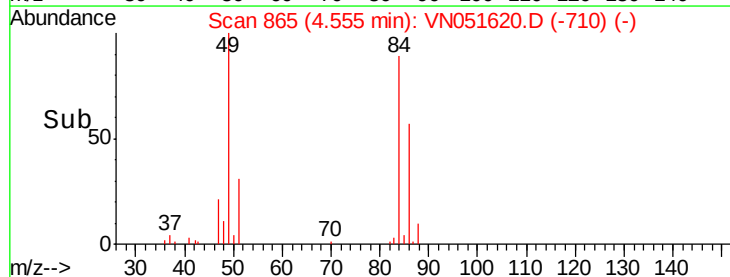
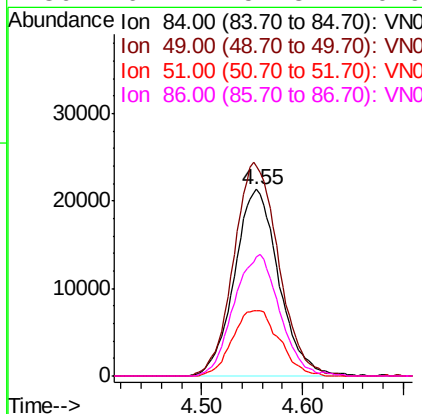
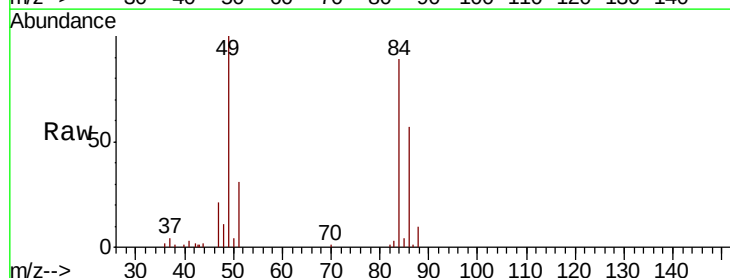
Instrument :  
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ClientSampled :  
PT-VOA-WPDL

Tot Ion: 76 Resp: 3158  
Ion Ratio Lower Upper  
76 100  
78 0.0 7.3 10.9#

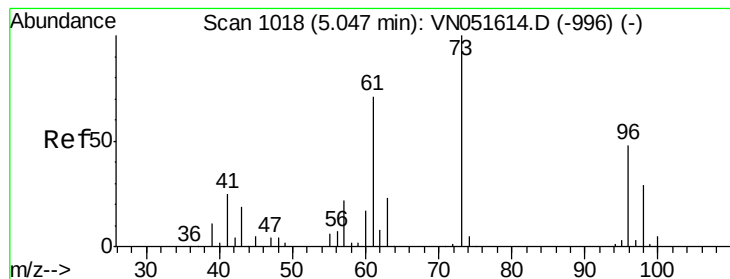


#18  
Methylene Chloride  
Concen: 12.338 ug/l  
RT: 4.55 min Scan# 865  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion: 84 Resp: 65079  
Ion Ratio Lower Upper  
84 100  
49 113.0 100.9 151.3  
51 35.3 32.5 48.7  
86 64.2 51.3 76.9







#19

trans-1,2-Dichloroethene

Concen: 9.963 ug/l

RT: 5.05 min Scan# 1018

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampled :

PT-VOA-WPDL

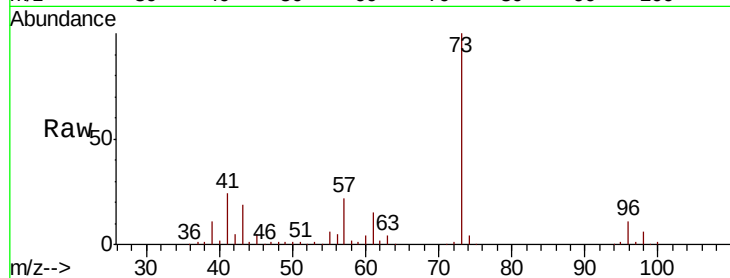
Tot Ion: 96 Resp: 48525

Ion Ratio Lower Upper

96 100

61 136.7 118.0 177.0

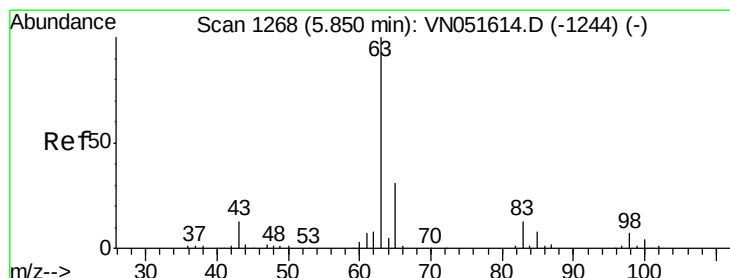
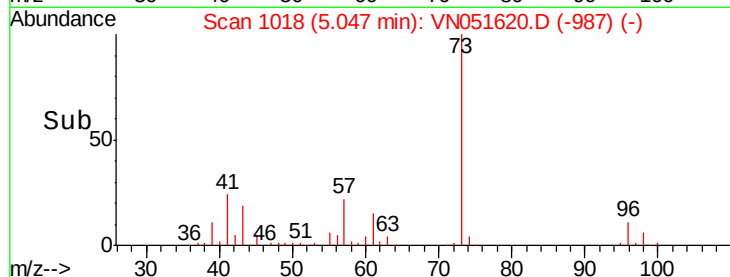
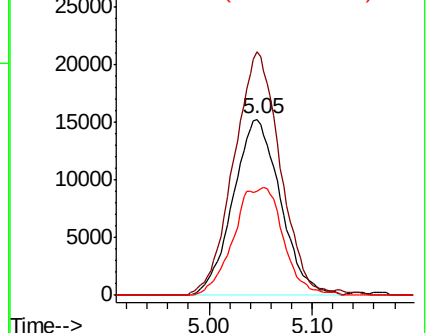
98 58.9 49.0 73.4



Abundance Ion 96.00 (95.70 to 96.70): VN051620.D (-987) (-)

Ion 61.00 (60.70 to 61.70): VN051620.D (-987) (-)

Ion 98.00 (97.70 to 98.70): VN051620.D (-987) (-)



#21

1,1-Dichloroethane

Concen: 22.019 ug/l

RT: 5.85 min Scan# 1268

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

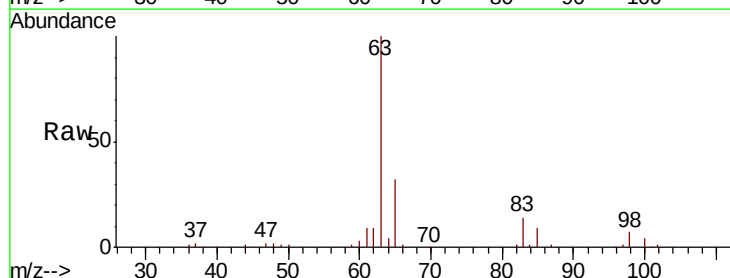
Tgt Ion: 63 Resp: 212474

Ion Ratio Lower Upper

63 100

98 6.6 3.3 9.9

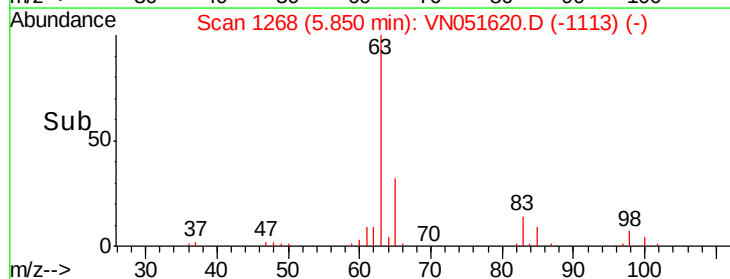
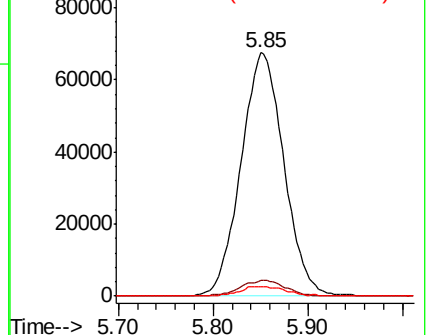
100 3.7 2.0 5.8

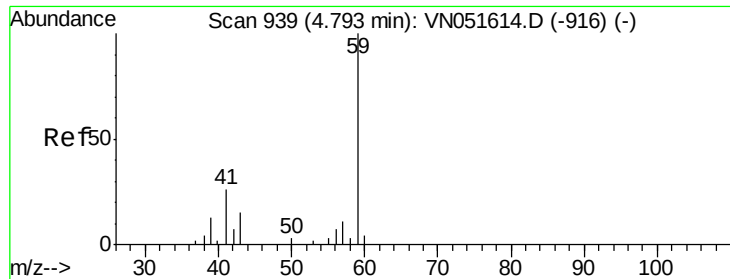


Abundance Ion 63.00 (62.70 to 63.70): VN051620.D (-1113) (-)

Ion 98.00 (97.70 to 98.70): VN051620.D (-1113) (-)

Ion 100.00 (99.70 to 100.70): VN051620.D (-1113) (-)





#23

tert-Butyl Alcohol

Concen: 4.394 ug/l

RT: 5.03 min Scan# 1012

Delta R.T. 0.23 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

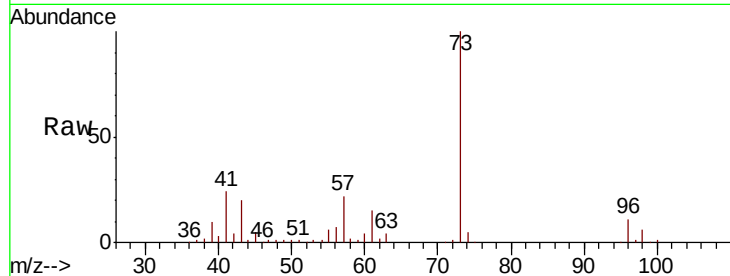
PT-VOA-WPDL

Tot Ion: 59 Resp: 1363

Ion Ratio Lower Upper

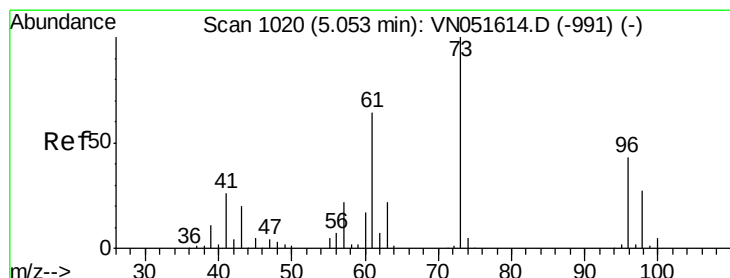
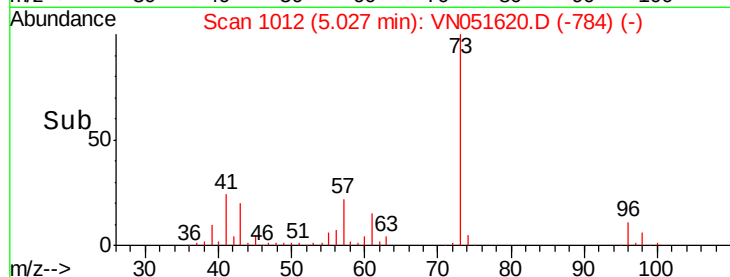
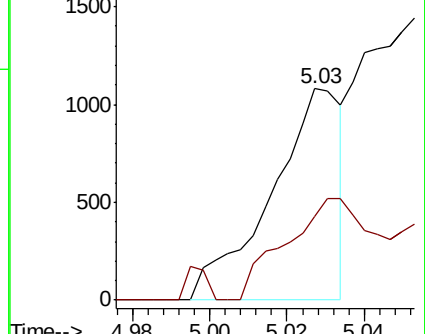
59 100

52 60.1 0.0 0.0#



Abundance Ion 59.00 (58.70 to 59.70): VN0

Ion 52.00 (51.70 to 52.70): VN0



#24

Methyl tert-Butyl Ether

Concen: 45.132 ug/l

RT: 5.05 min Scan# 1020

Delta R.T. -0.00 min

Lab File: VN051620.D

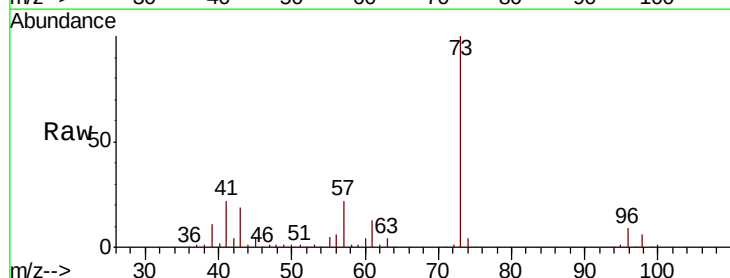
Acq: 28 Sep 2018 17:34

Tgt Ion: 73 Resp: 544203

Ion Ratio Lower Upper

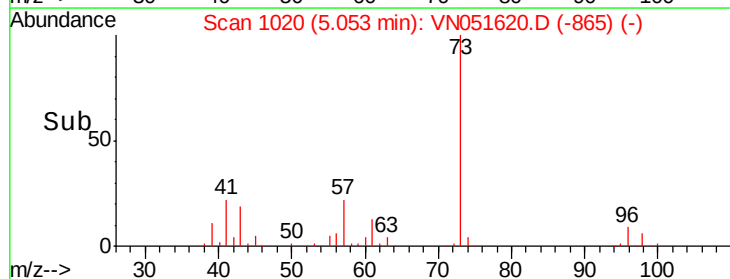
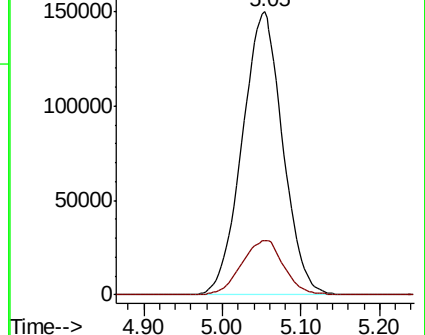
73 100

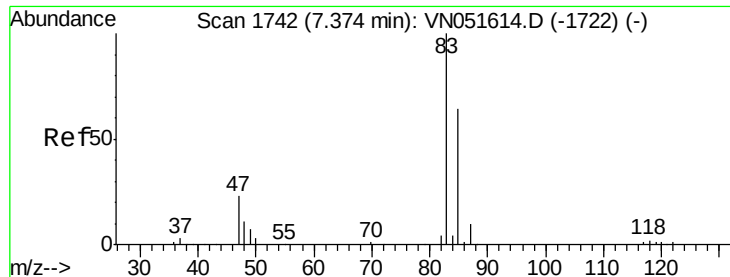
43 20.0 16.1 24.1



Abundance Ion 73.00 (72.70 to 73.70): VN0

Ion 43.00 (42.70 to 43.70): VN0

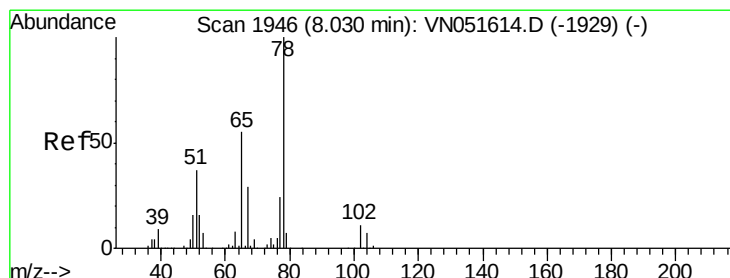
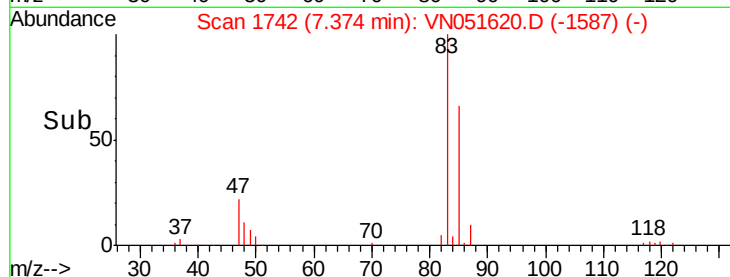
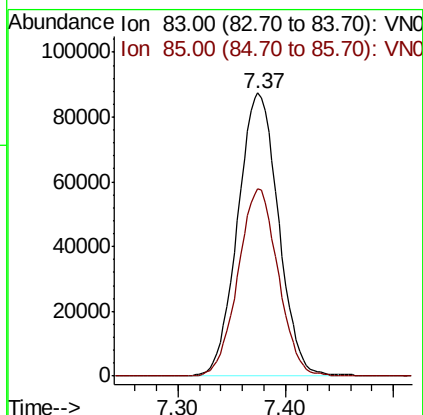
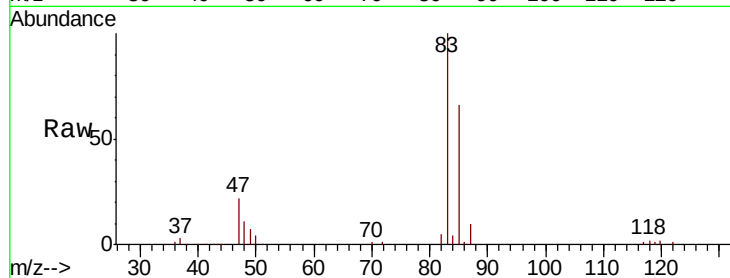




#25  
Chloroform  
Concen: 24.855 ug/l  
RT: 7.37 min Scan# 1742  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

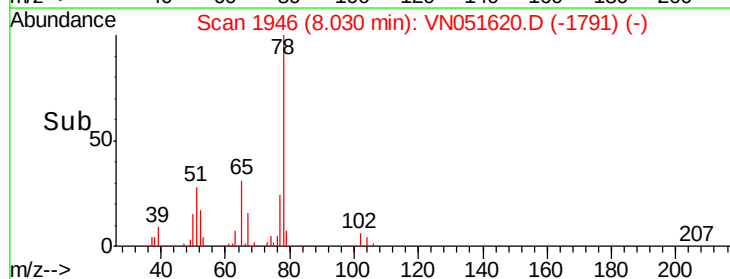
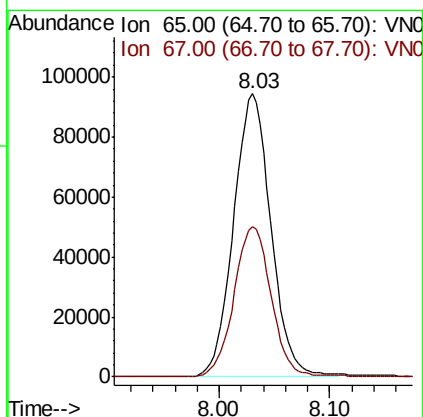
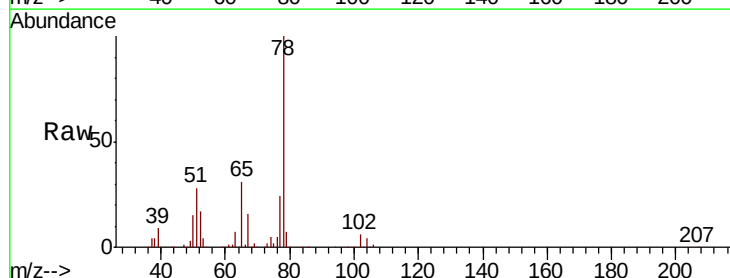
Instrument :  
MSVOA\_N  
ClientSampleId :  
PT-VOA-WPDL

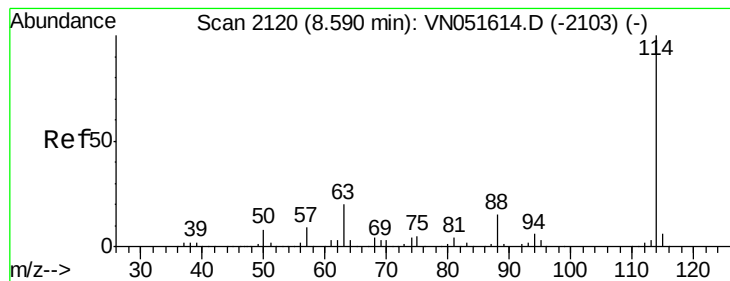
Tot Ion: 83 Resp: 229325  
Ion Ratio Lower Upper  
83 100  
85 66.4 51.4 77.0



#27  
1,2-Dichloroethane-d4  
Concen: Below ug/l  
RT: 8.03 min Scan# 1946  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion: 65 Resp: 221802  
Ion Ratio Lower Upper  
65 100  
67 52.7 43.1 64.7





#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 8.59 min Scan# 2119

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

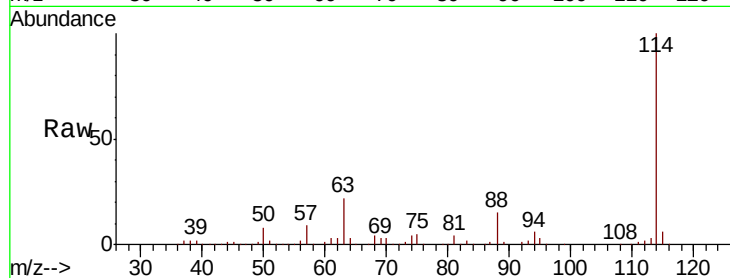
Tot Ion:114 Resp: 550430

Ion Ratio Lower Upper

114 100

63 21.0 16.4 24.6

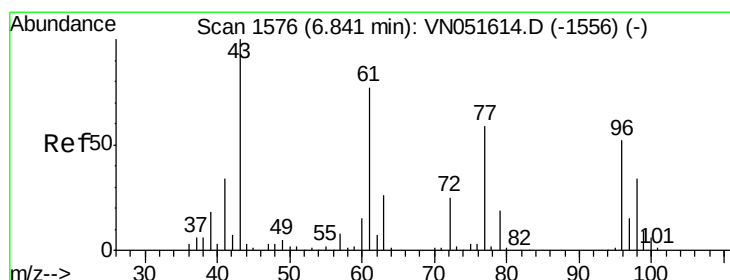
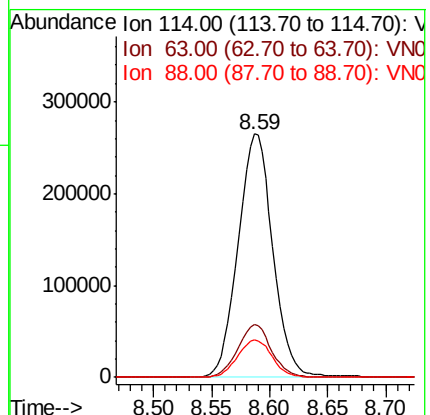
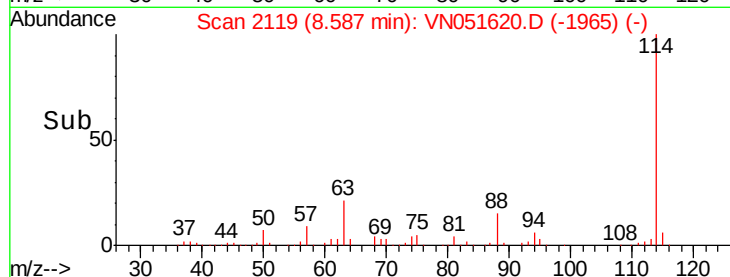
88 15.3 12.6 18.8



Abundance Ion 114.00 (113.70 to 114.70): VN051614.D (-2103) (-)

Ion 63.00 (62.70 to 63.70): VN051614.D (-2103) (-)

Ion 88.00 (87.70 to 88.70): VN051614.D (-2103) (-)



#30

2-Butanone

Concen: 54.990 ug/l

RT: 6.84 min Scan# 1576

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

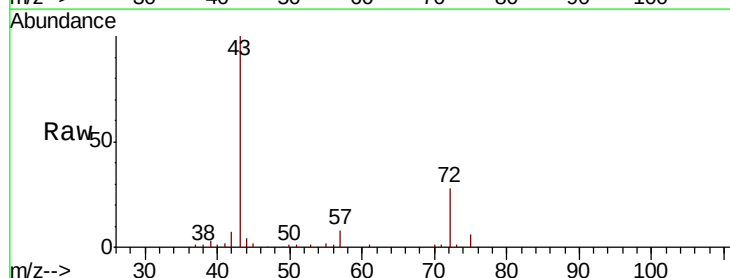
Tgt Ion: 43 Resp: 140472

Ion Ratio Lower Upper

43 100

57 3.3 6.6 10.0#

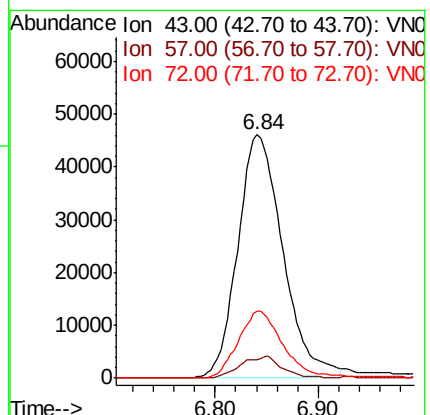
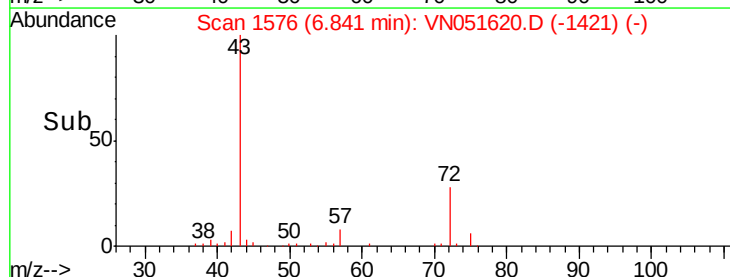
72 27.2 20.8 31.2

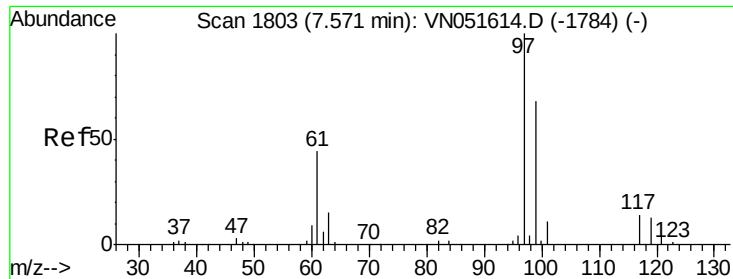


Abundance Ion 43.00 (42.70 to 43.70): VN051614.D (-1556) (-)

Ion 57.00 (56.70 to 57.70): VN051614.D (-1556) (-)

Ion 72.00 (71.70 to 72.70): VN051614.D (-1556) (-)





#32

1,1,1-Trichloroethane

Concen: 6.273 ug/l

RT: 7.57 min Scan# 1804

Delta R.T. 0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

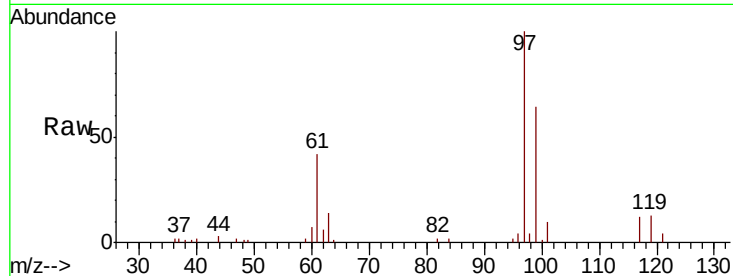
Tot Ion: 97 Resp: 66154

Ion Ratio Lower Upper

97 100

99 62.6 52.2 78.4

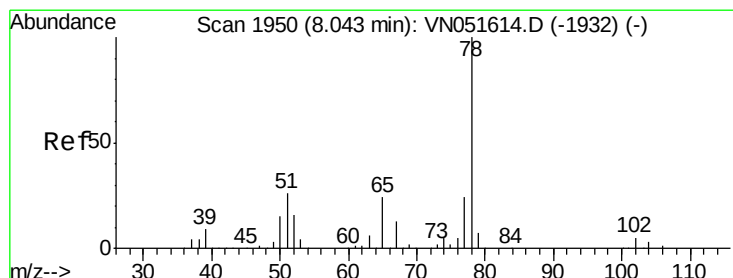
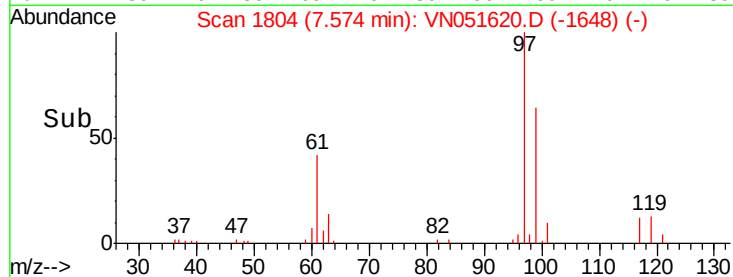
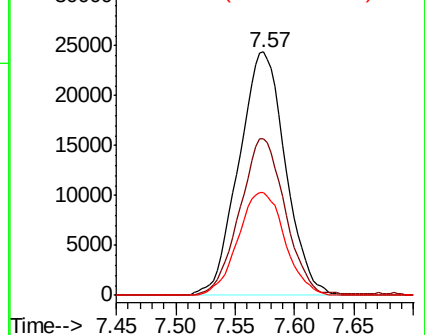
61 42.4 36.2 54.4



Abundance Ion 97.00 (96.70 to 97.70): VN051614.D (-1784) (-)

Ion 99.00 (98.70 to 99.70): VN051614.D (-1784) (-)

Ion 61.00 (60.70 to 61.70): VN051614.D (-1784) (-)



#34

Benzene

Concen: 38.431 ug/l

RT: 8.04 min Scan# 1950

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

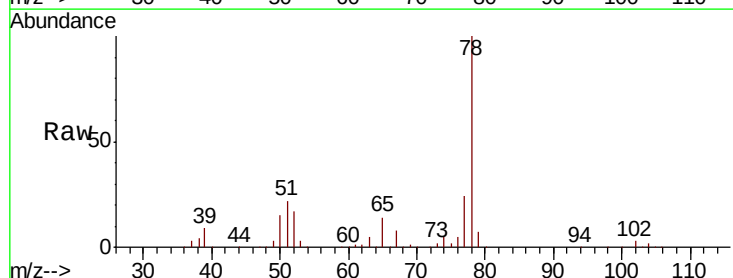
Tgt Ion: 78 Resp: 1070170

Ion Ratio Lower Upper

78 100

77 24.5 19.3 28.9

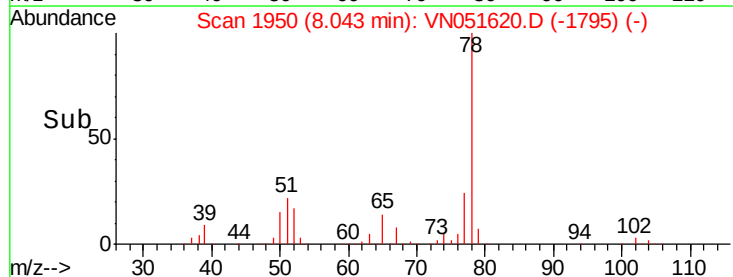
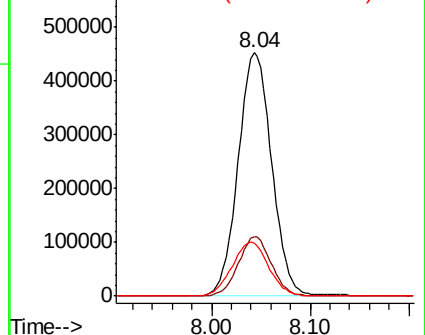
51 21.8 20.8 31.2

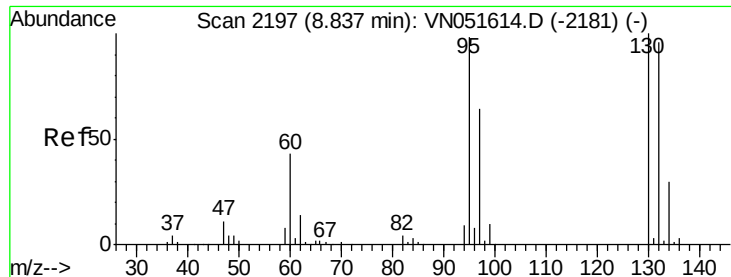


Abundance Ion 78.10 (77.80 to 78.80): VN051614.D (-1932) (-)

Ion 77.00 (76.70 to 77.70): VN051614.D (-1932) (-)

Ion 51.00 (50.70 to 51.70): VN051614.D (-1932) (-)

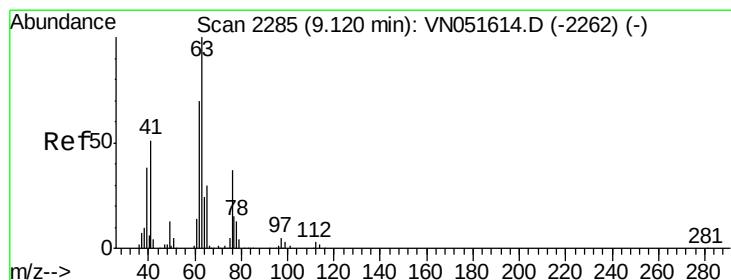
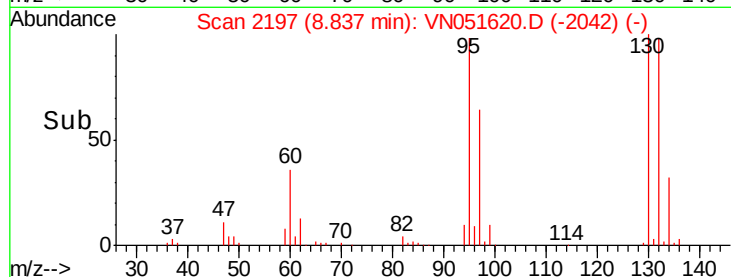
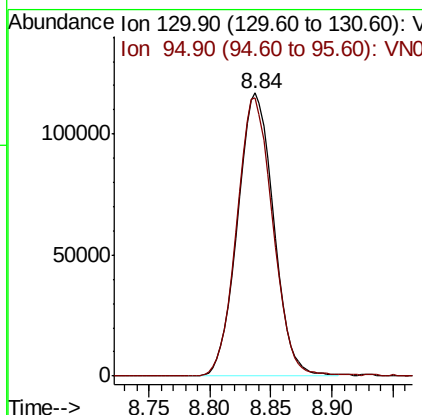
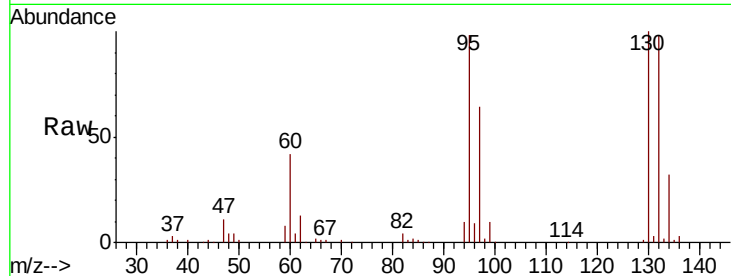




#37  
 Trichloroethene  
 Concen: 33.520 ug/l  
 RT: 8.84 min Scan# 2197  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

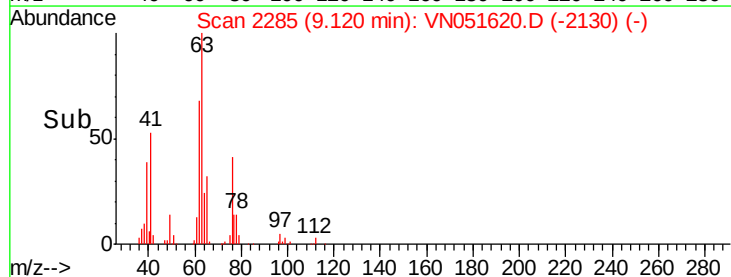
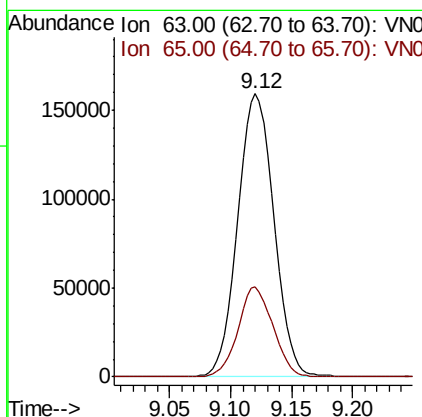
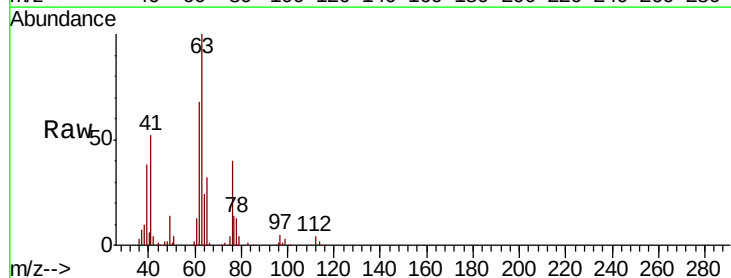
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

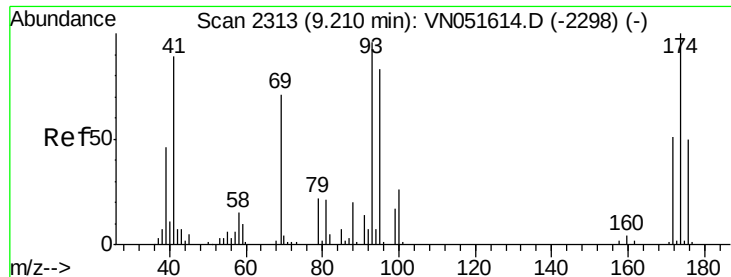
Tot Ion:130 Resp: 239647  
 Ion Ratio Lower Upper  
 130 100  
 95 98.3 78.4 117.6



#39  
 1,2-Dichloropropane  
 Concen: 42.888 ug/l  
 RT: 9.12 min Scan# 2285  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Tgt Ion: 63 Resp: 327242  
 Ion Ratio Lower Upper  
 63 100  
 65 31.7 24.4 36.6

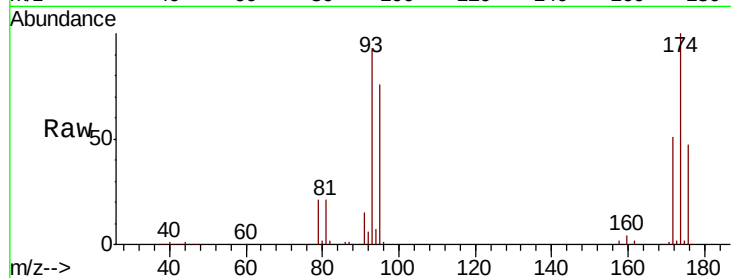




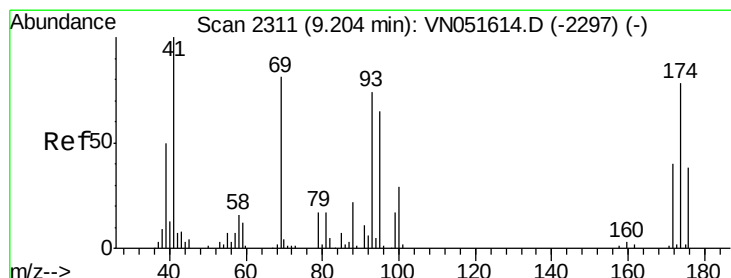
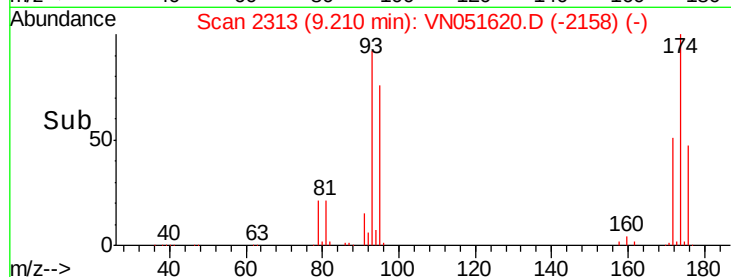
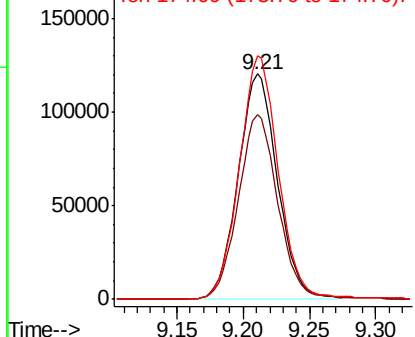
#40  
Dibromomethane  
Concen: 58.662 ug/l  
RT: 9.21 min Scan# 2313  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Instrument :  
MSVOA\_N  
ClientSampleId :  
PT-VOA-WPDL

Tot Ion: 93 Resp: 248643  
Ion Ratio Lower Upper  
93 100  
95 82.1 0.0 171.0  
174 107.1 0.0 212.0

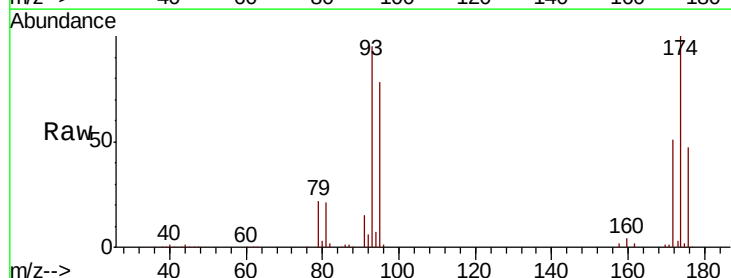


Abundance Ion 93.00 (92.70 to 93.70): VN0  
Ion 95.00 (94.70 to 95.70): VN0  
Ion 174.00 (173.70 to 174.70): VN0

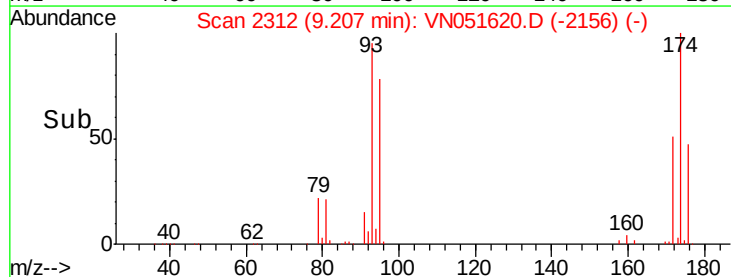
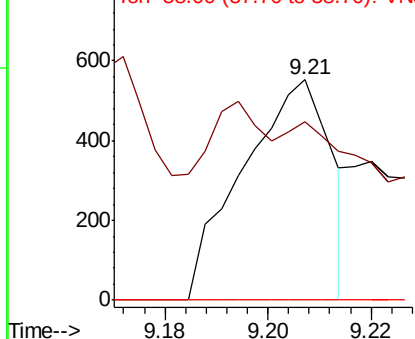


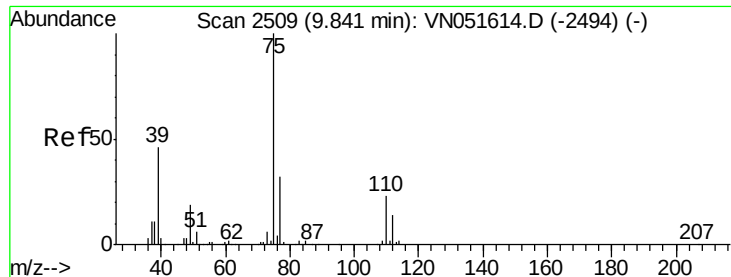
#45  
1,4-Dioxane  
Concen: 11.402 ug/l  
RT: 9.21 min Scan# 2312  
Delta R.T. 0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion: 88 Resp: 653  
Ion Ratio Lower Upper  
88 100  
43 18.5 29.0 43.6#  
58 0.0 59.0 88.6#



Abundance Ion 88.00 (87.70 to 88.70): VN0  
Ion 43.00 (42.70 to 43.70): VN0  
Ion 58.00 (57.70 to 58.70): VN0



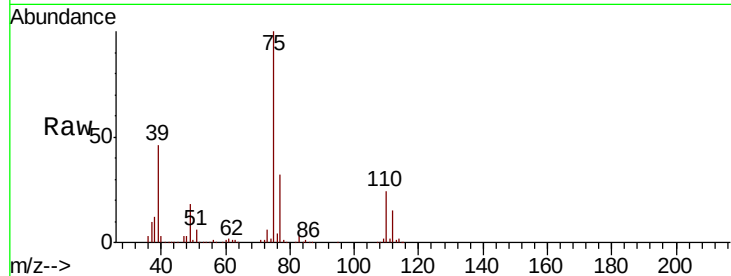


#49

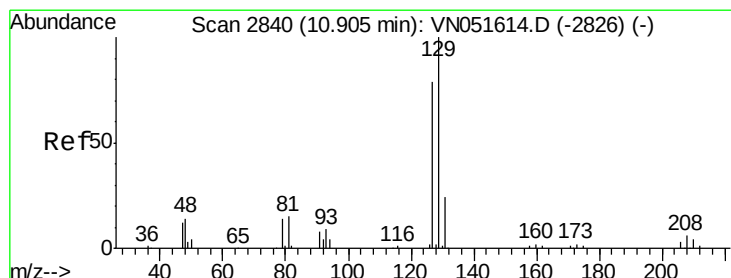
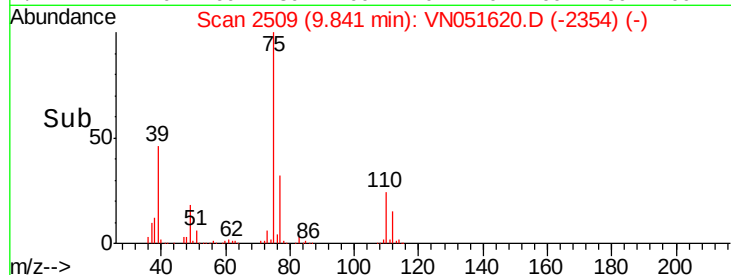
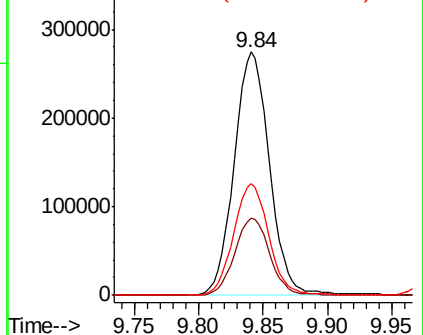
cis-1,3-Dichloropropene  
 Concen: 48.434 ug/l  
 RT: 9.84 min Scan# 2509  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 31.7  | 25.4  | 38.0  |
| 39      | 46.0  | 36.6  | 55.0  |



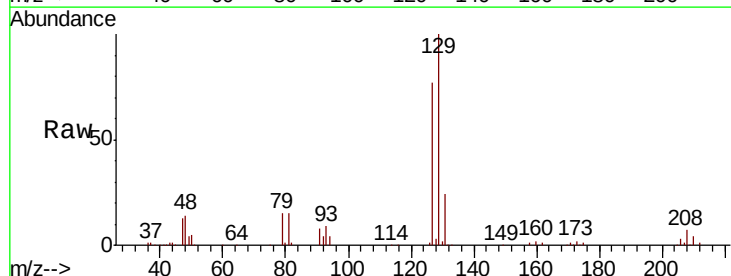
Abundance Ion 75.00 (74.70 to 75.70): VN051614.D (-2494) (-)



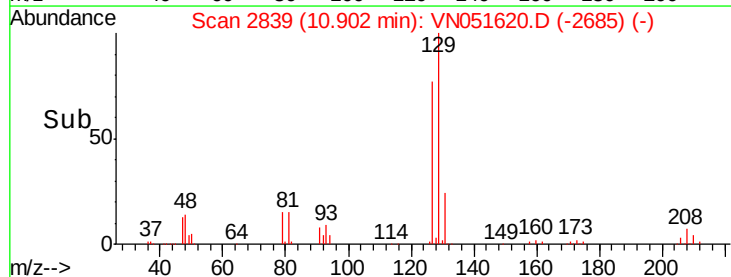
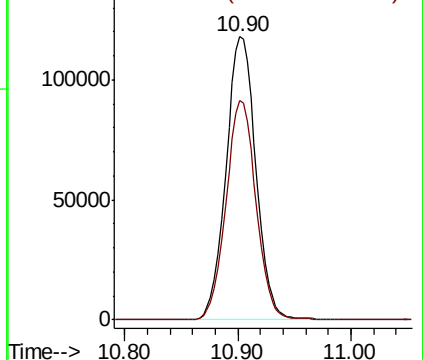
#53

Dibromochloromethane  
 Concen: 31.738 ug/l  
 RT: 10.90 min Scan# 2839  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

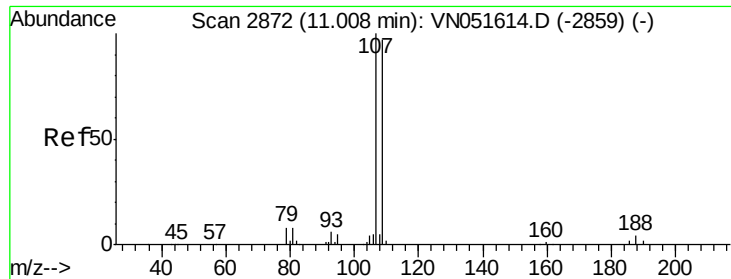
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 129     | 100   |       |       |
| 127     | 77.6  | 38.9  | 116.7 |



Abundance Ion 129.00 (128.70 to 129.70): VN051614.D (-2826) (-)



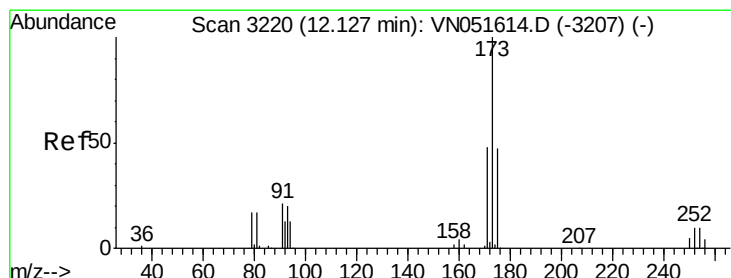
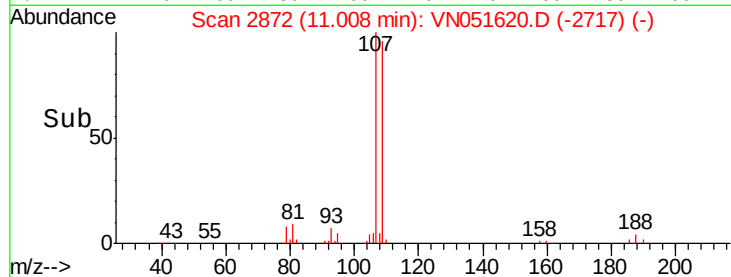
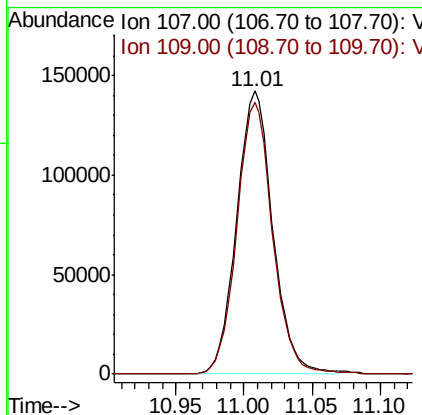
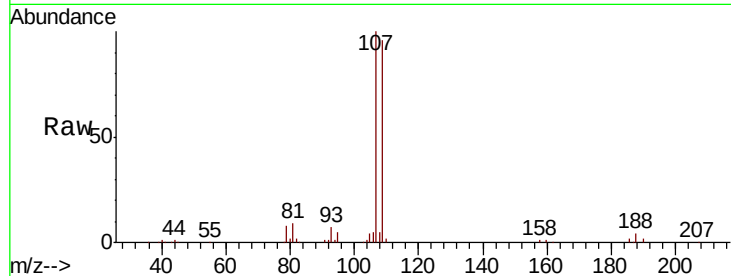




#54  
 1,2-Dibromoethane  
 Concen: 45.518 ug/l  
 RT: 11.01 min Scan# 2872  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

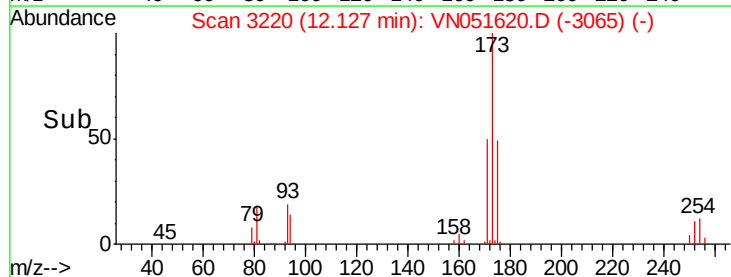
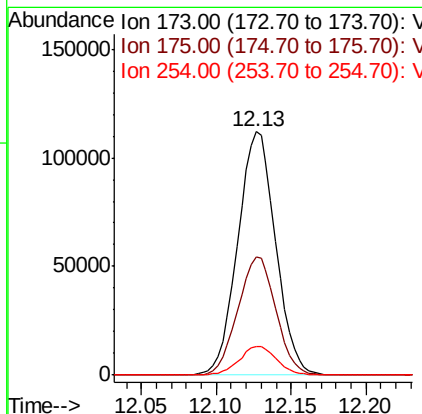
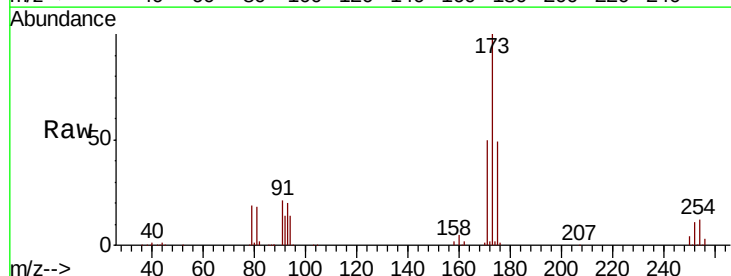
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

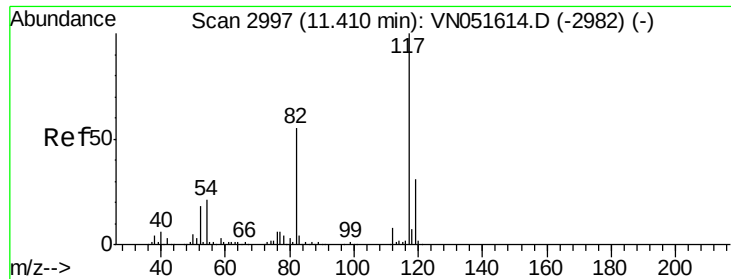
Tot Ion:107 Resp: 261622  
 Ion Ratio Lower Upper  
 107 100  
 109 95.2 76.5 114.7



#56  
 Bromoform  
 Concen: 43.583 ug/l  
 RT: 12.13 min Scan# 3220  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Tgt Ion:173 Resp: 197295  
 Ion Ratio Lower Upper  
 173 100  
 175 48.8 39.0 58.4  
 254 11.6 8.7 13.1

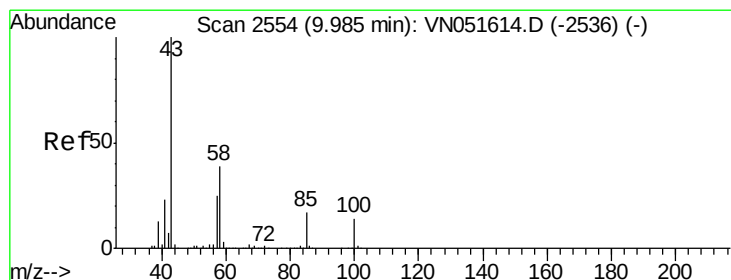
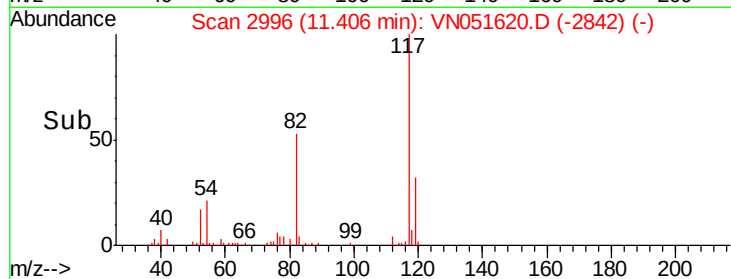
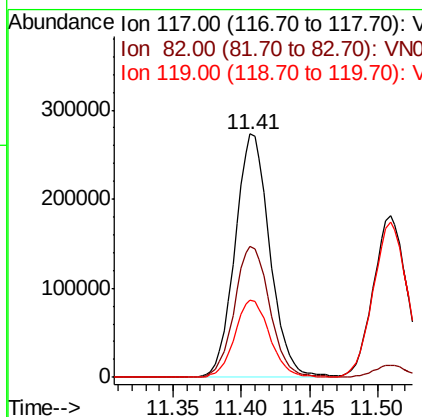
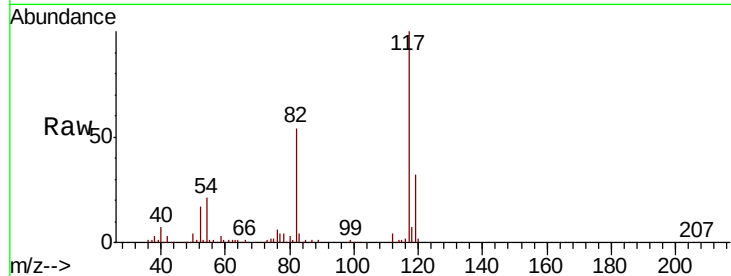




#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

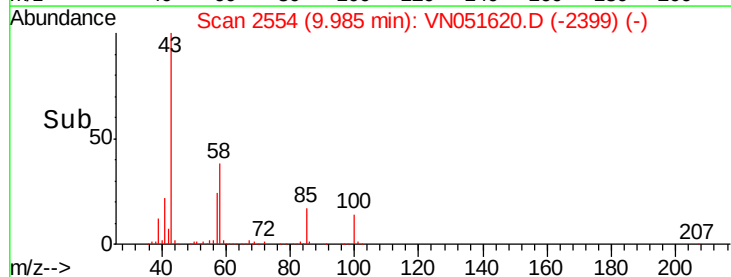
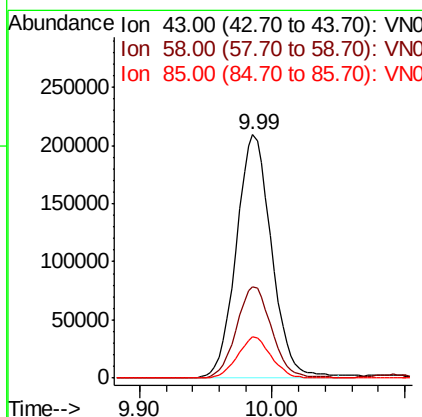
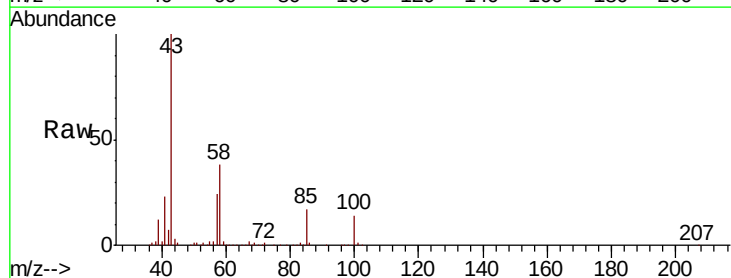
Instrument :  
MSVOA\_N  
ClientSampleId :  
PT-VOA-WPDL

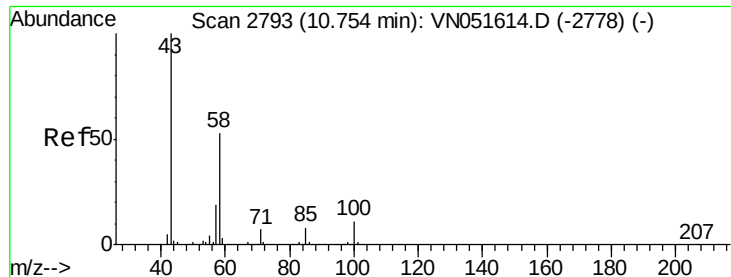
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 54.8  | 44.2  | 66.2  |
| 119     | 32.0  | 25.2  | 37.8  |



#58  
4-Methyl-2-Pentanone  
Concen: 70.048 ug/l  
RT: 9.99 min Scan# 2554  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 37.7  | 31.0  | 46.4  |
| 85      | 16.2  | 13.4  | 20.2  |

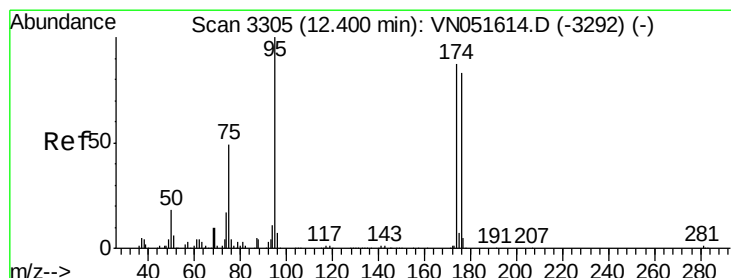
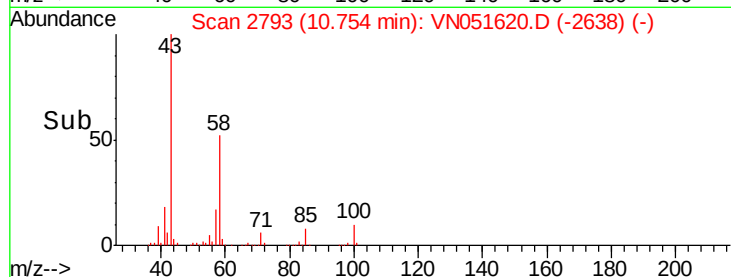
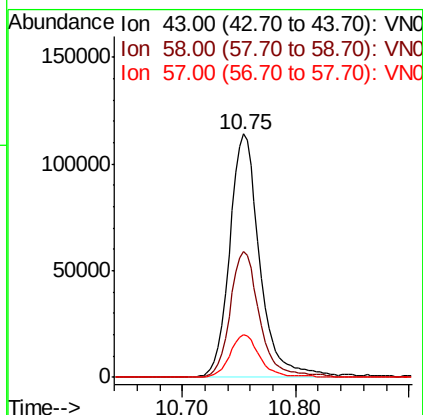
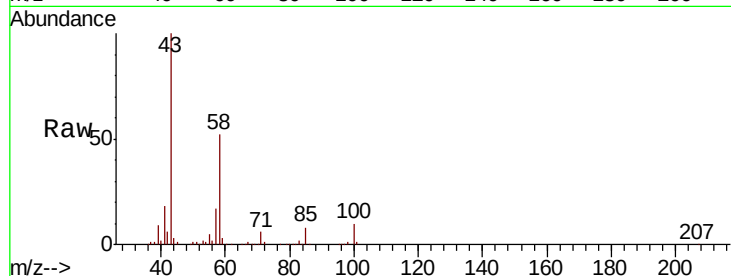




#59  
2-Hexanone  
Concen: 57.973 ug/l  
RT: 10.75 min Scan# 2793  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

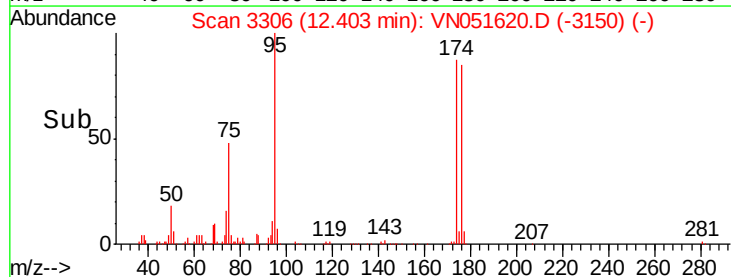
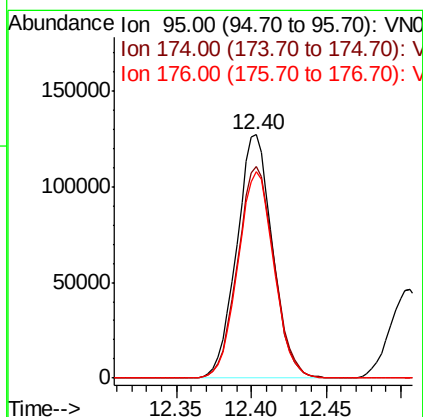
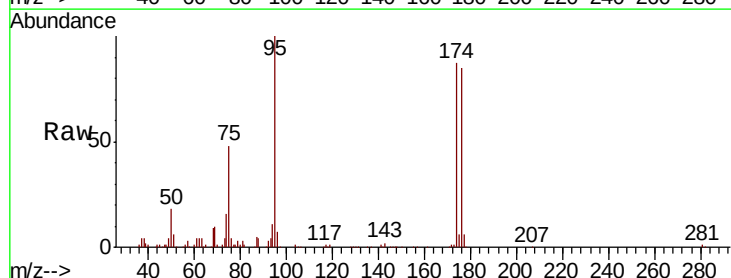
Instrument :  
MSVOA\_N  
ClientSampled :  
PT-VOA-WPDL

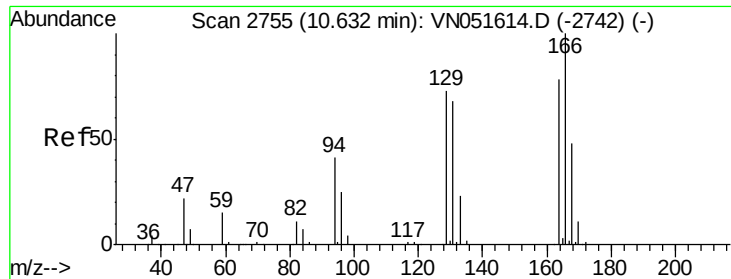
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 50.8  | 41.5  | 62.3  |
| 57      | 17.2  | 14.2  | 21.4  |



#60  
4-Bromofluorobenzene  
Concen: 57.973 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 88.7  | 71.2  | 106.8 |
| 176     | 85.2  | 67.8  | 101.8 |





#61

Tetrachloroethene

Concen: 24.357 ug/l

RT: 10.63 min Scan# 2755

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

Tot Ion:164 Resp: 167111

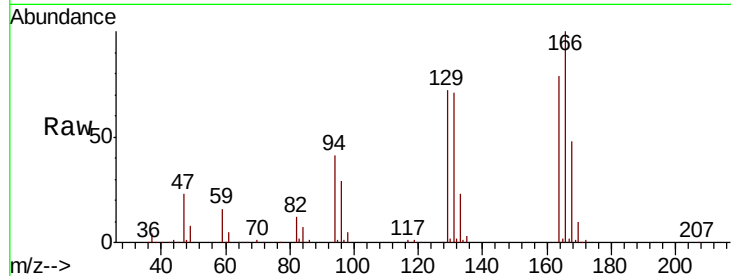
Ion Ratio Lower Upper

164 100

166 125.9 103.1 154.7

129 91.3 75.3 112.9

131 89.7 70.8 106.2

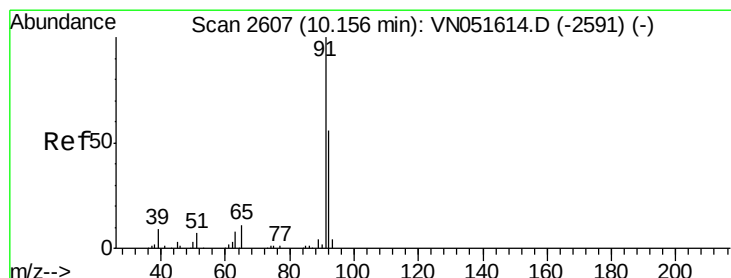
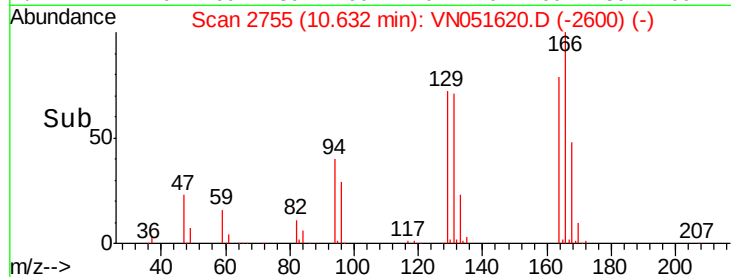
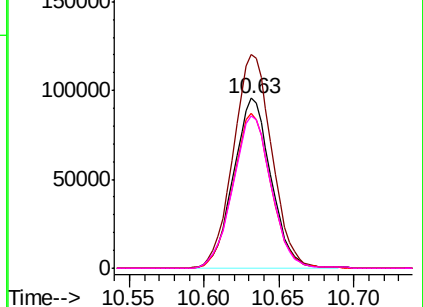


Abundance Ion 163.85 (163.55 to 164.55): V

Ion 165.80 (165.50 to 166.50): V

Ion 128.90 (128.60 to 129.60): V

Ion 130.90 (130.60 to 131.60): V



#62

Toluene

Concen: 24.127 ug/l

RT: 10.16 min Scan# 2607

Delta R.T. -0.00 min

Lab File: VN051620.D

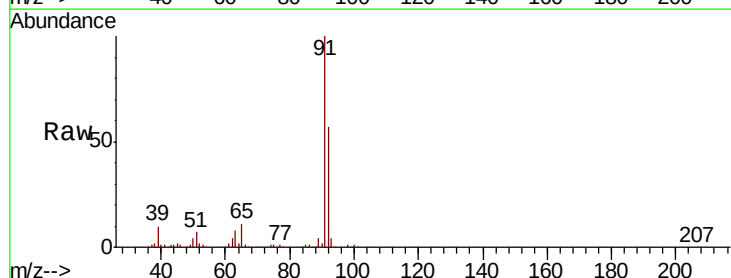
Acq: 28 Sep 2018 17:34

Tgt Ion: 91 Resp: 716901

Ion Ratio Lower Upper

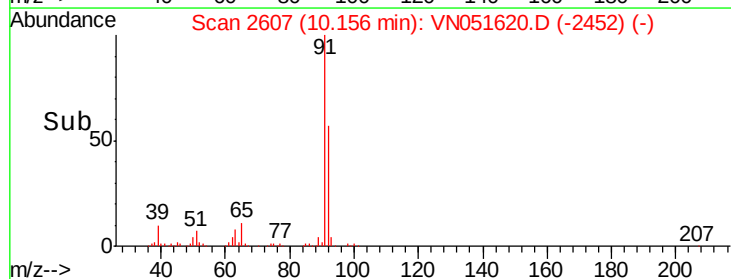
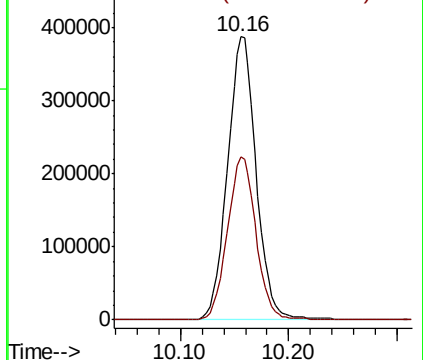
91 100

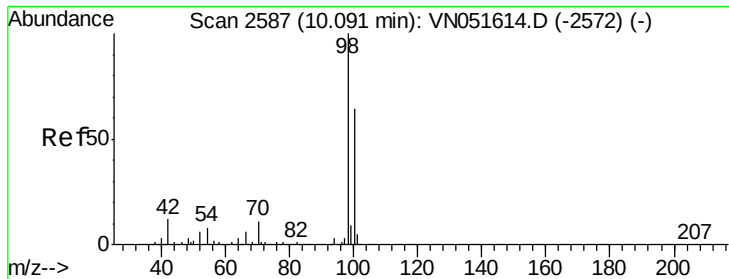
92 57.5 45.3 67.9



Abundance Ion 91.00 (90.70 to 91.70): VN0

Ion 92.00 (91.70 to 92.70): VN0





#63

Toluene-d8

Concen: 24.127 ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

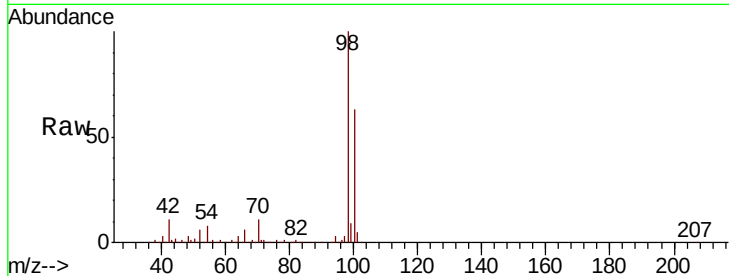
PT-VOA-WPDL

Tot Ion: 98 Resp: 694604

Ion Ratio Lower Upper

98 100

100 63.0 51.4 77.0



Abundance Ion 98.00 (97.70 to 98.70): VN051614.D (-2572) (-)

Ion 100.00 (99.70 to 100.70): VN051620.D (-2432) (-)

10.09

400000

300000

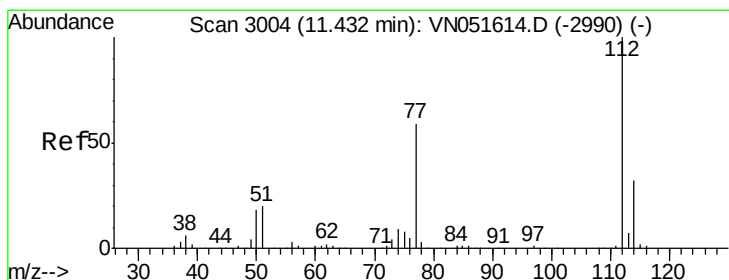
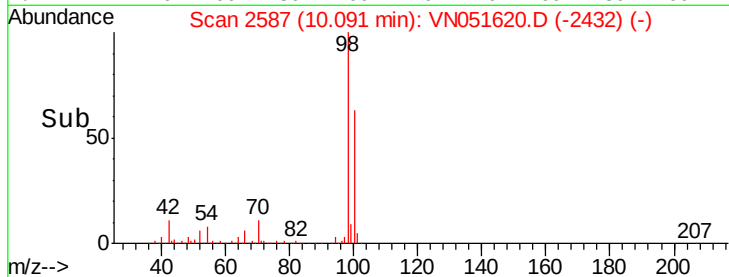
200000

100000

0

10.00 10.10 10.20

Time-->



#64

Chlorobenzene

Concen: 19.972 ug/l

RT: 11.43 min Scan# 3004

Delta R.T. -0.00 min

Lab File: VN051620.D

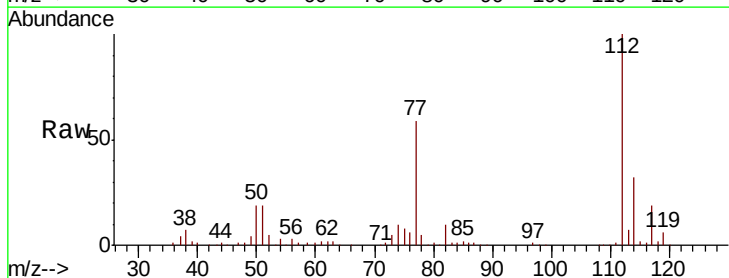
Acq: 28 Sep 2018 17:34

Tgt Ion: 112 Resp: 358807

Ion Ratio Lower Upper

112 100

114 32.2 25.9 38.9



Abundance Ion 112.00 (111.70 to 112.70): VN051614.D (-2990) (-)

Ion 114.00 (113.70 to 114.70): VN051620.D (-2849) (-)

11.43

200000

150000

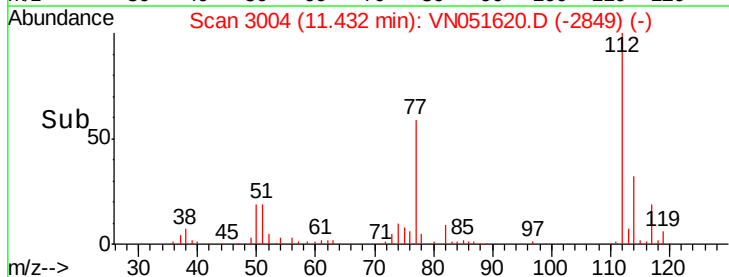
100000

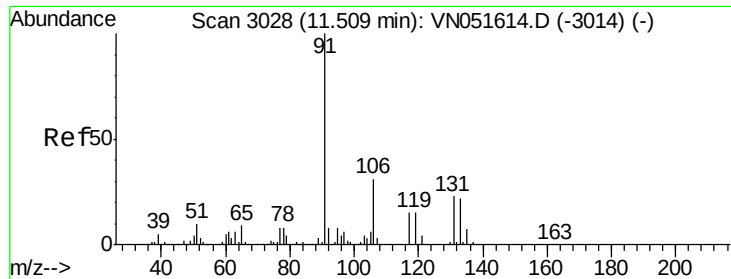
50000

0

11.40 11.50

Time-->





#65

1,1,1,2-Tetrachloroethane

Concen: 65.566 ug/l

RT: 11.51 min Scan# 3028

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

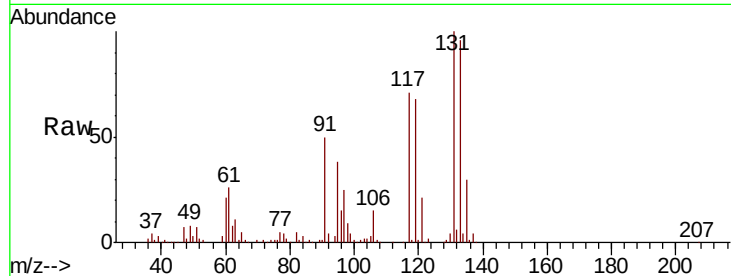
Tot Ion:131 Resp: 449796

Ion Ratio Lower Upper

131 100

133 96.0 0.0 193.0

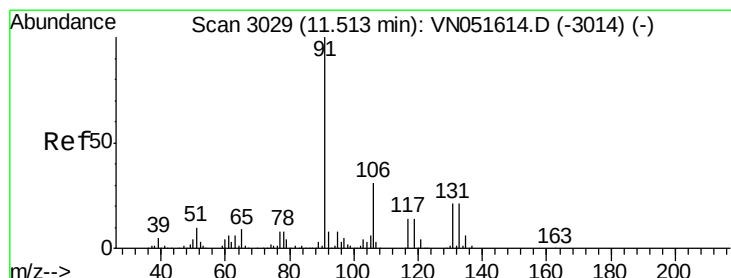
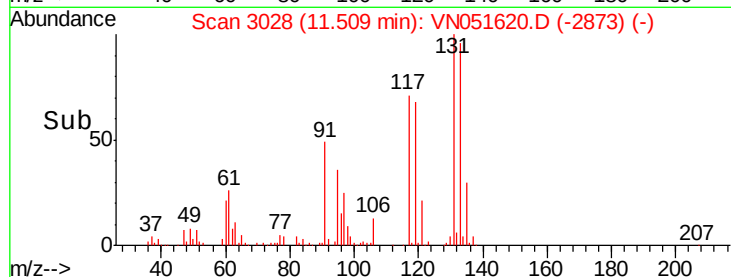
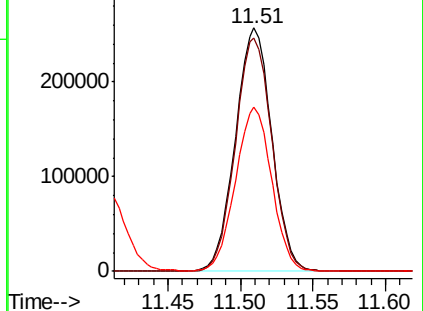
119 67.2 0.0 135.0



Abundance Ion 131.00 (130.70 to 131.70): V

Ion 133.00 (132.70 to 133.70): V

Ion 119.00 (118.70 to 119.70): V



#66

Ethyl Benzene

Concen: 7.169 ug/l

RT: 11.51 min Scan# 3029

Delta R.T. -0.00 min

Lab File: VN051620.D

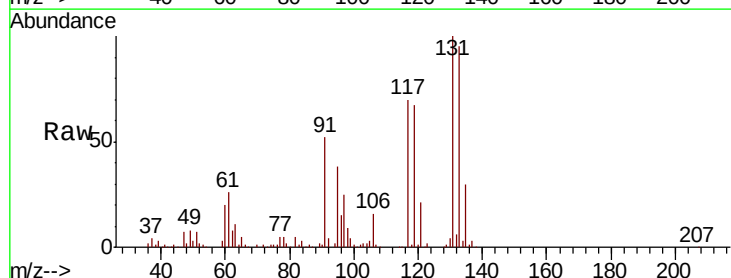
Acq: 28 Sep 2018 17:34

Tgt Ion: 91 Resp: 218022

Ion Ratio Lower Upper

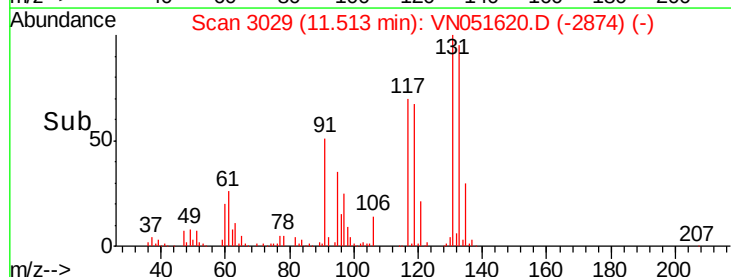
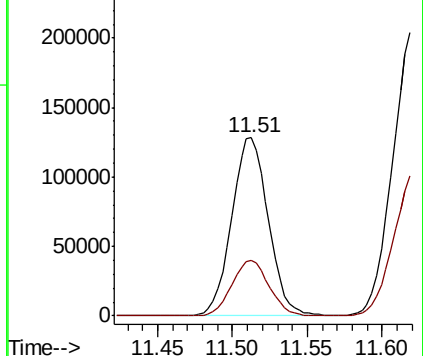
91 100

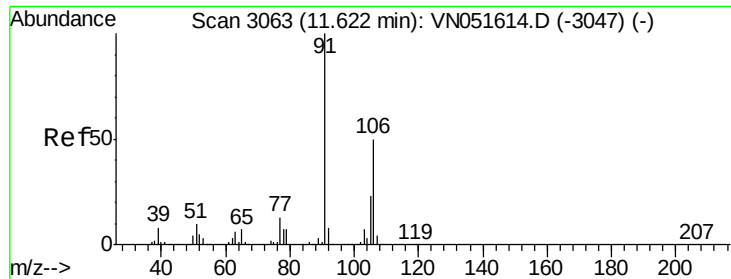
106 31.3 25.0 37.4



Abundance Ion 91.00 (90.70 to 91.70): V

Ion 106.00 (105.70 to 106.70): V

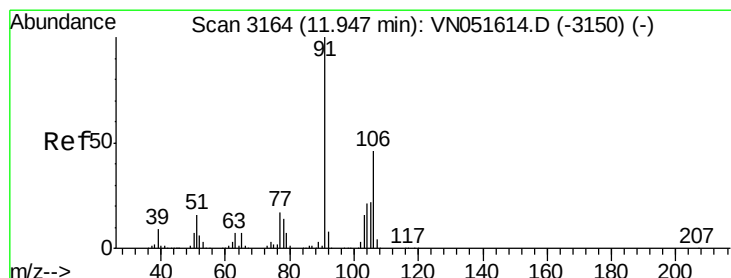
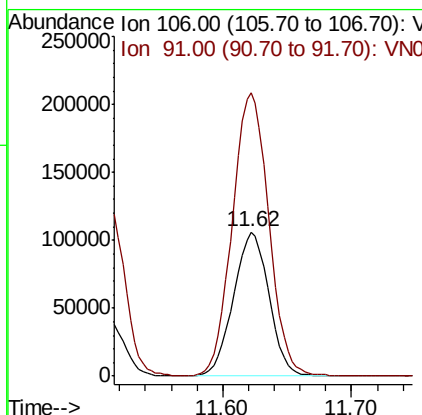
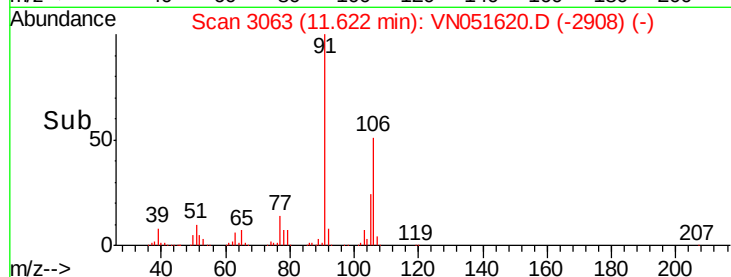
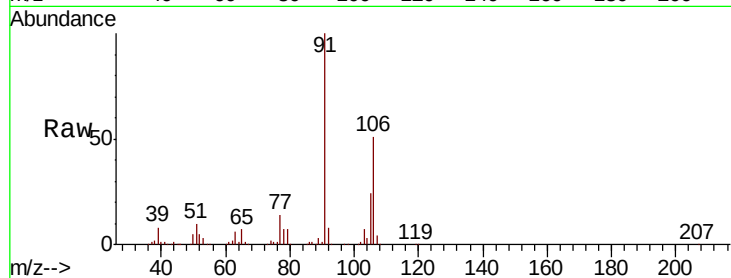




#67  
m/p-Xylenes  
Concen: 17.345 ug/l  
RT: 11.62 min Scan# 3063  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

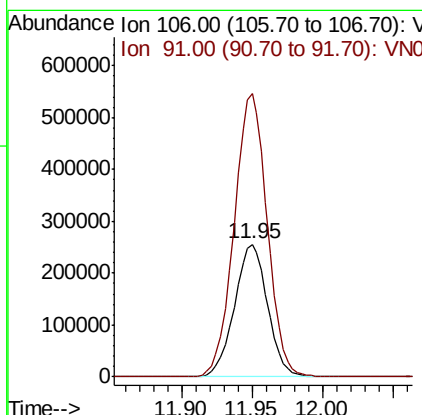
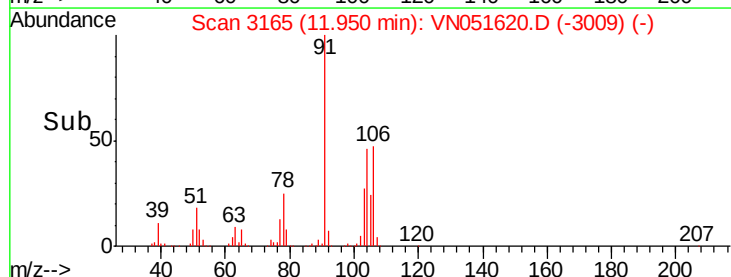
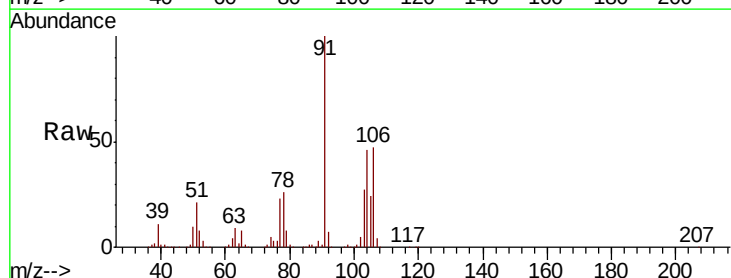
Instrument :  
MSVOA\_N  
ClientSampleId :  
PT-VOA-WPDL

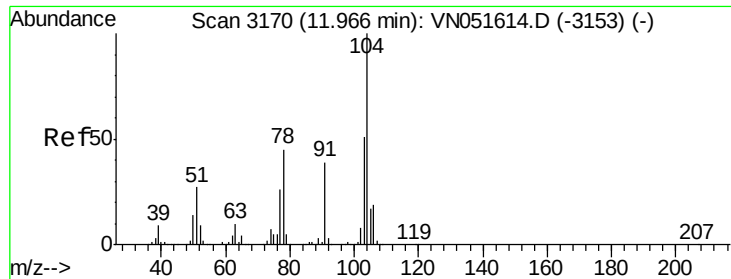
Tot Ion:106 Resp: 203287  
Ion Ratio Lower Upper  
106 100  
91 200.4 161.5 242.3



#68  
o-Xylene  
Concen: 37.447 ug/l  
RT: 11.95 min Scan# 3165  
Delta R.T. 0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

Tgt Ion:106 Resp: 418973  
Ion Ratio Lower Upper  
106 100  
91 213.9 109.7 329.1

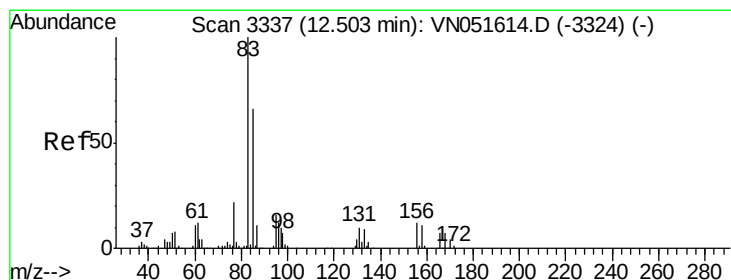
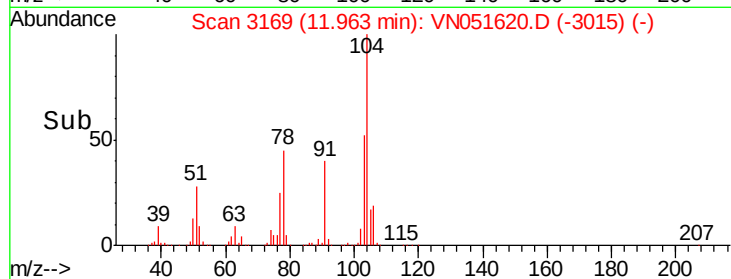
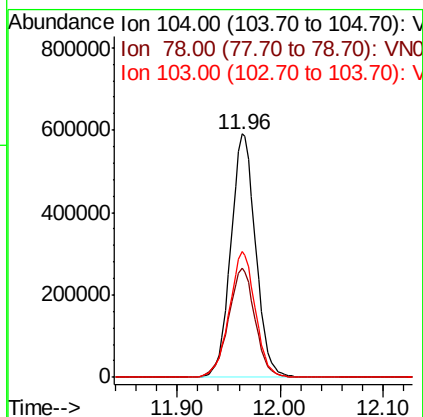
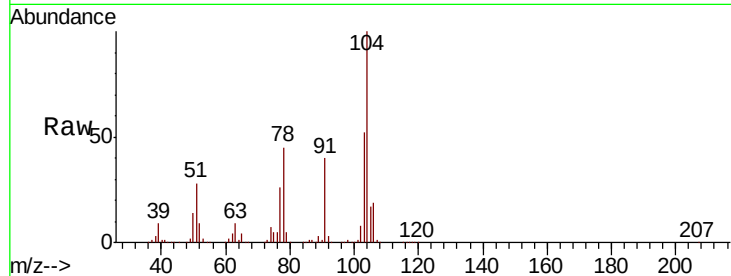




#69  
 Stvrene  
 Concen: 56.474 ug/l  
 RT: 11.96 min Scan# 3169  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

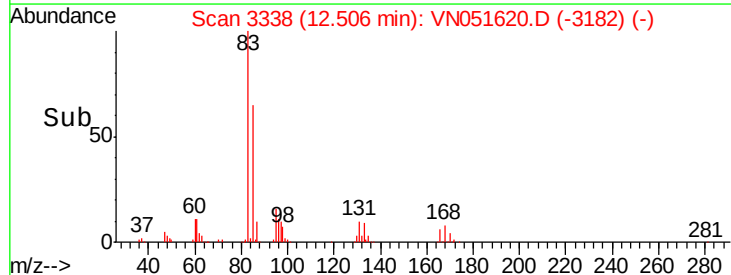
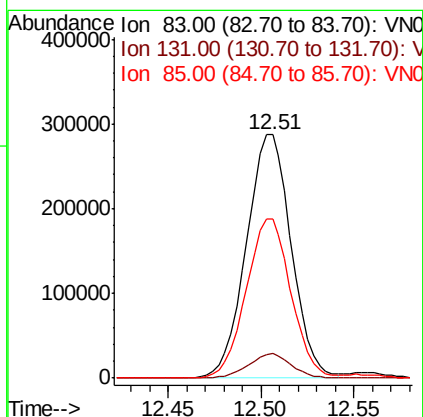
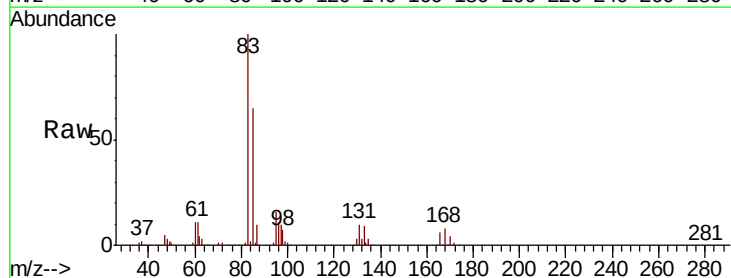
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 104     | 100   |       |       |
| 78      | 47.9  | 40.3  | 60.5  |
| 103     | 53.9  | 45.7  | 68.5  |

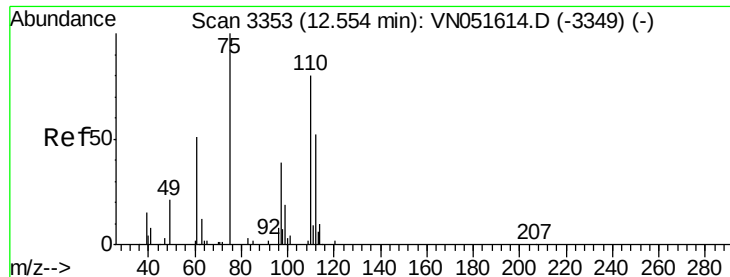


#71  
 1,1,2,2-Tetrachloroethane  
 Concen: 67.105 ug/l  
 RT: 12.51 min Scan# 3338  
 Delta R.T. 0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 131     | 9.6   | 5.2   | 15.6  |
| 85      | 65.2  | 32.0  | 96.2  |







#72

1,2,3-Trichloropropane

Concen: 65.408 ug/l

RT: 12.56 min Scan# 3354

Delta R.T. 0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampled :

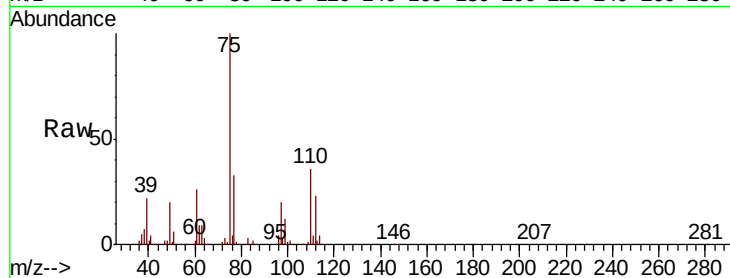
PT-VOA-WPDL

Tot Ion: 75 Resp: 403788

Ion Ratio Lower Upper

75 100

77 32.7 0.0 492.2



Abundance Ion 75.00 (74.70 to 75.70): VN051614.D (-3349) (-)

Ion 77.00 (76.70 to 77.70): VN051614.D (-3349) (-)

12.56

250000

200000

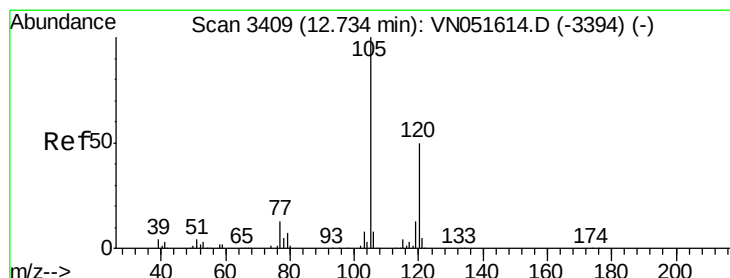
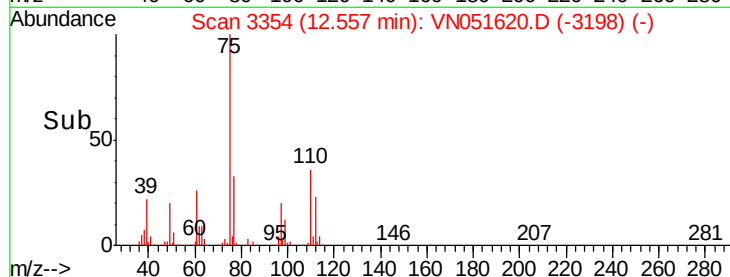
150000

100000

50000

0

Time-->



#76

1,3,5-Trimethylbenzene

Concen: 22.941 ug/l

RT: 12.73 min Scan# 3409

Delta R.T. -0.00 min

Lab File: VN051620.D

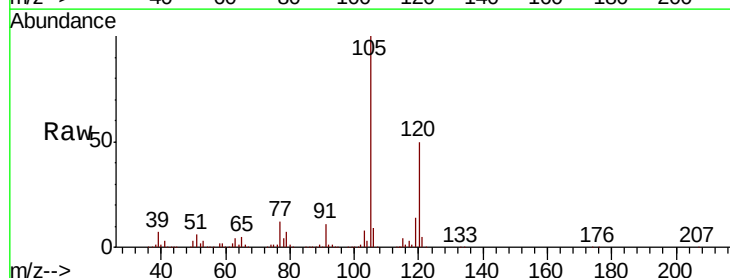
Acq: 28 Sep 2018 17:34

Tgt Ion: 105 Resp: 572106

Ion Ratio Lower Upper

105 100

120 49.7 0.0 99.8



Abundance Ion 105.00 (104.70 to 105.70): VN051614.D (-3394) (-)

Ion 120.00 (119.70 to 120.70): VN051614.D (-3394) (-)

12.73

400000

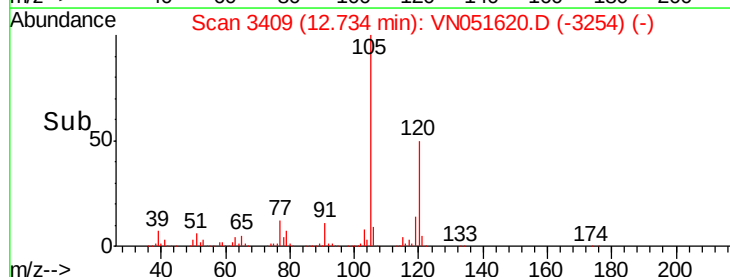
300000

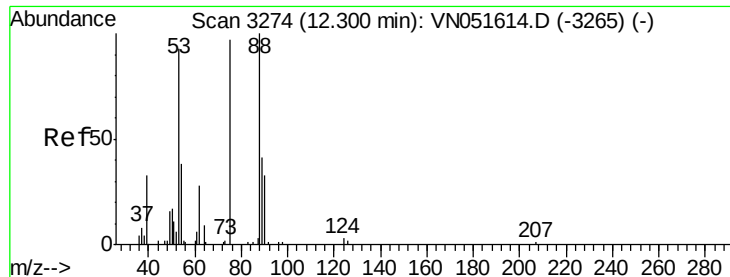
200000

100000

0

Time-->





#77

t-1,4-Dichloro-2-butene

Concen: 53.577 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

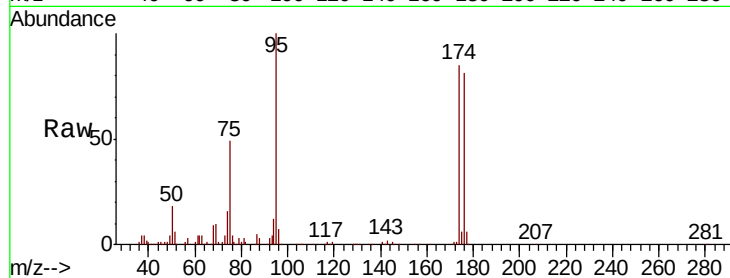
Tot Ion: 75 Resp: 104753

Ion Ratio Lower Upper

75 100

53 0.0 48.1 144.4#

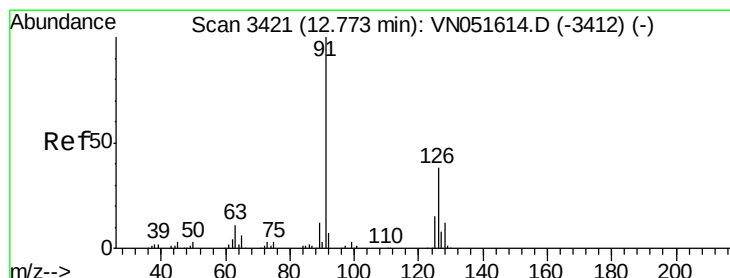
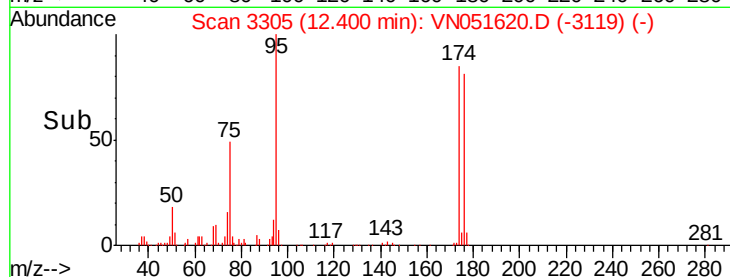
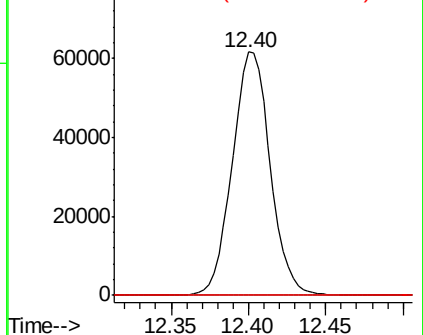
89 0.0 22.4 67.3#



Abundance Ion 75.00 (74.70 to 75.70): VN0

Ion 53.00 (52.70 to 53.70): VN0

Ion 89.00 (88.70 to 89.70): VN0



#78

4-Chlorotoluene

Concen: 3.008 ug/l

RT: 12.73 min Scan# 3409

Delta R.T. -0.04 min

Lab File: VN051620.D

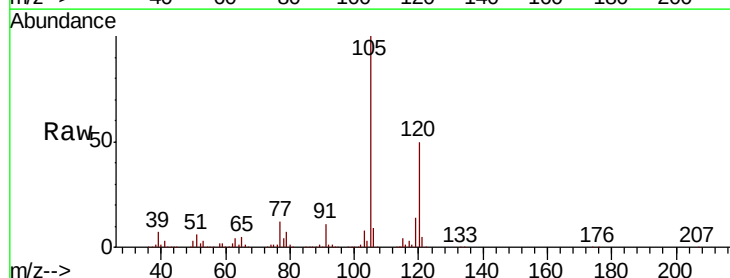
Acq: 28 Sep 2018 17:34

Tgt Ion: 91 Resp: 61653

Ion Ratio Lower Upper

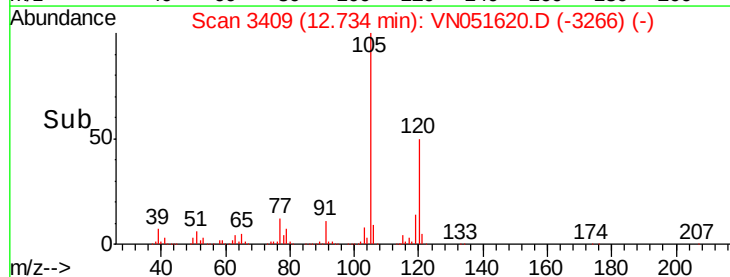
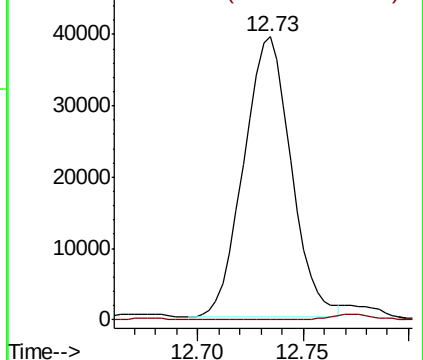
91 100

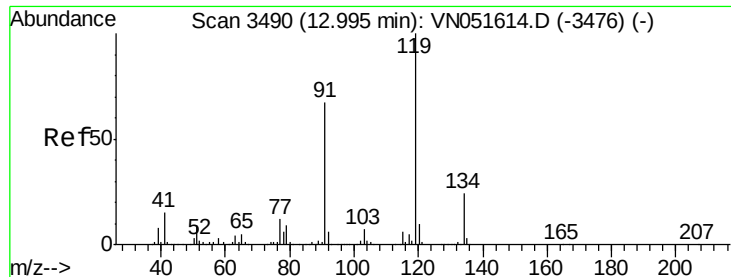
126 1.7 0.0 68.6



Abundance Ion 91.00 (90.70 to 91.70): VN0

Ion 126.00 (125.70 to 126.70): V

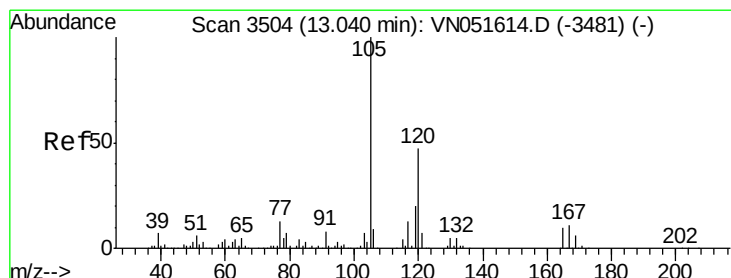
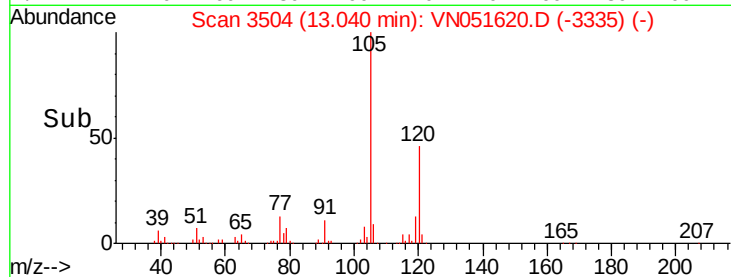
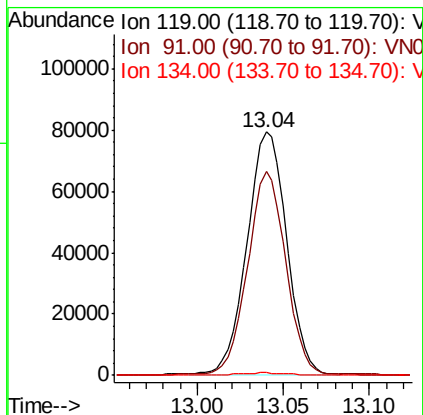
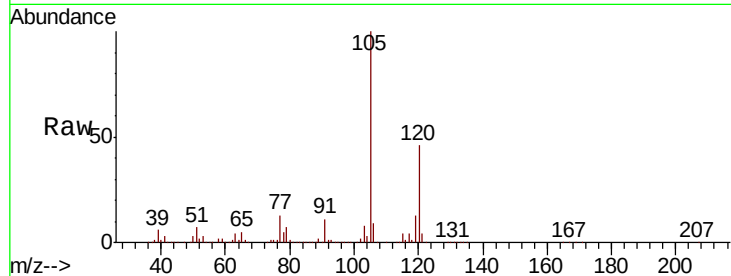




#79  
 tert-butylbenzene  
 Concen: 5.873 ug/l  
 RT: 13.04 min Scan# 3504  
 Delta R.T. 0.04 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

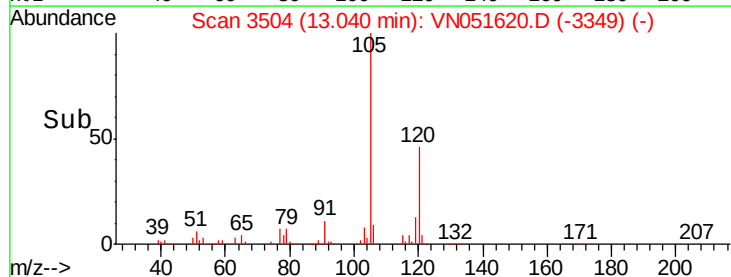
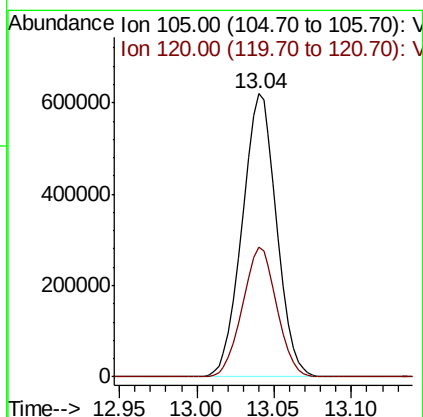
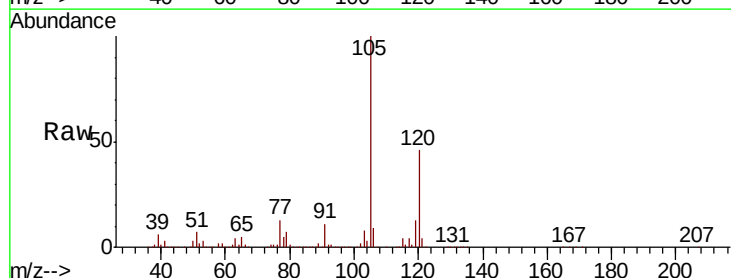
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

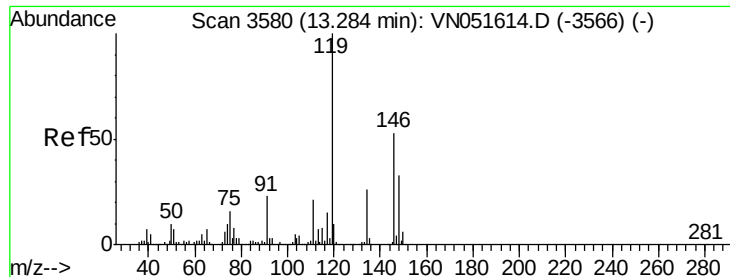
Tot Ion:119 Resp: 126879  
 Ion Ratio Lower Upper  
 119 100  
 91 79.9 0.0 132.4  
 134 1.2 0.0 48.4



#80  
 1,2,4-Trimethylbenzene  
 Concen: 38.492 ug/l  
 RT: 13.04 min Scan# 3504  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Tgt Ion:105 Resp: 958779  
 Ion Ratio Lower Upper  
 105 100  
 120 45.8 0.0 91.6

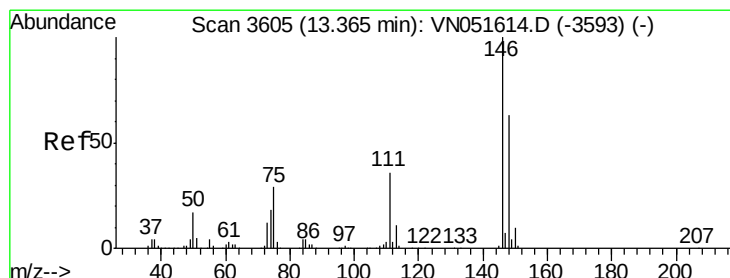
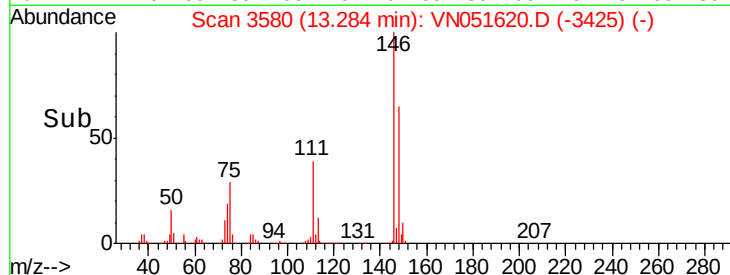
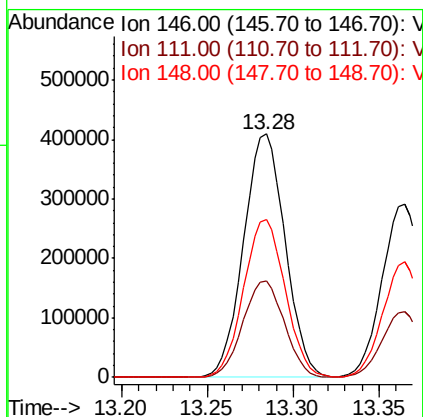
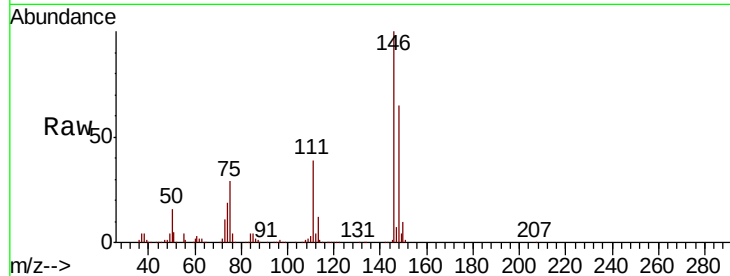




#83  
 1,3-Dichlorobenzene  
 Concen: 53.139 ug/l  
 RT: 13.28 min Scan# 3580  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

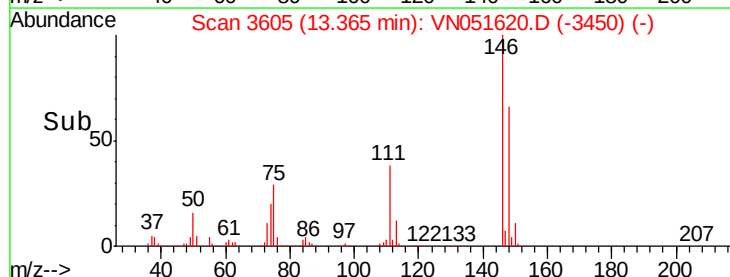
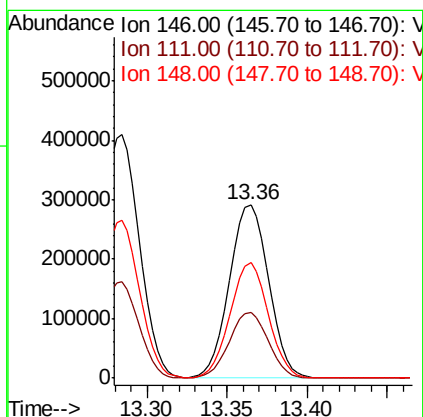
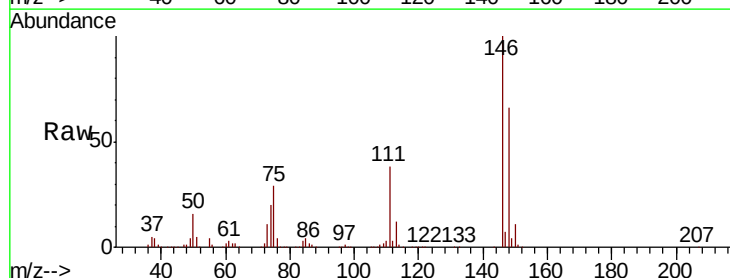
Instrument :  
 MSVOA\_N  
 ClientSampled :  
 PT-VOA-WPDL

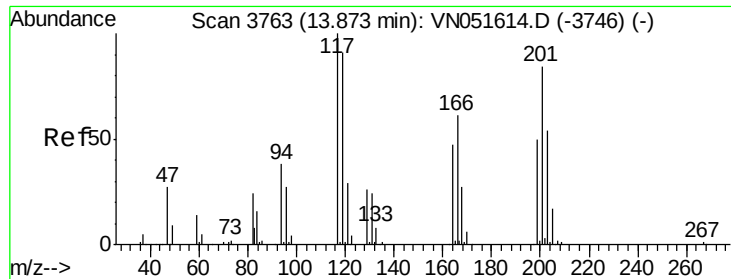
Tot Ion:146 Resp: 687713  
 Ion Ratio Lower Upper  
 146 100  
 111 39.4 19.9 59.6  
 148 64.6 32.4 97.2



#84  
 1,4-Dichlorobenzene  
 Concen: 39.981 ug/l  
 RT: 13.36 min Scan# 3605  
 Delta R.T. -0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Tgt Ion:146 Resp: 486380  
 Ion Ratio Lower Upper  
 146 100  
 111 37.6 18.6 55.8  
 148 64.9 32.1 96.5





#86

Hexachloroethane

Concen: 0.739 ug/l

RT: 13.87 min Scan# 3763

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

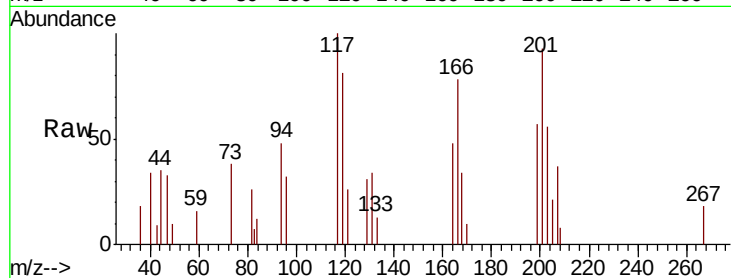
PT-VOA-WPDL

Tot Ion:117 Resp: 3768

Ion Ratio Lower Upper

117 100

201 90.9 42.9 128.5



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 201.00 (200.70 to 201.70): V

2500

2000

1500

1000

500

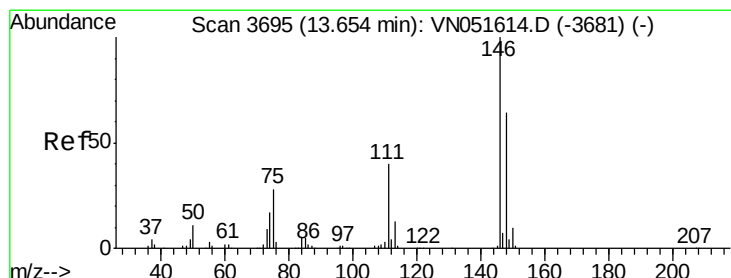
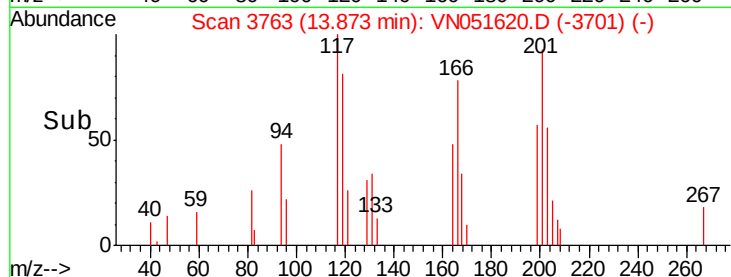
0

13.85

13.87

13.90

Time-->



#87

1,2-Dichlorobenzene

Concen: 27.344 ug/l

RT: 13.65 min Scan# 3695

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

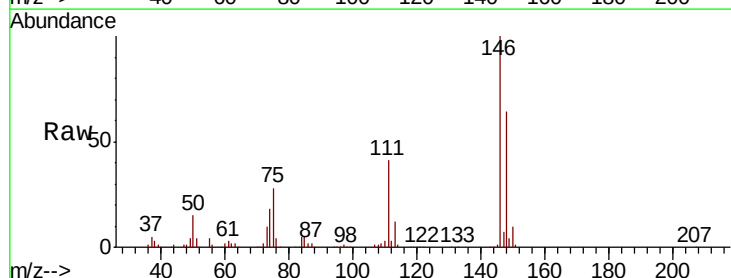
Tgt Ion:146 Resp: 346178

Ion Ratio Lower Upper

146 100

111 40.4 20.1 60.3

148 64.3 32.1 96.5



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V

250000

200000

150000

100000

50000

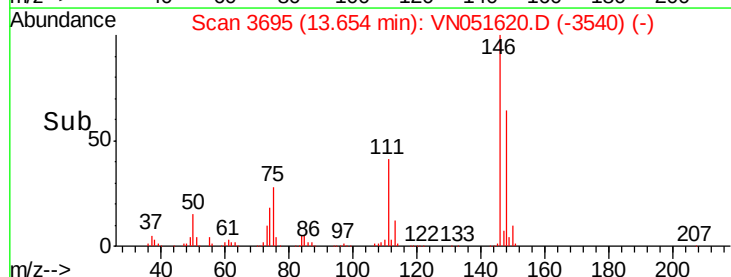
0

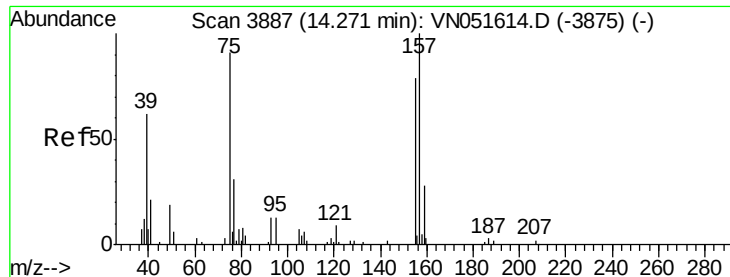
13.60

13.65

13.70

Time-->





#88

1,2-Dibromo-3-Chloropropane

Concen: 38.108 ug/l

RT: 14.27 min Scan# 3886

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

Instrument :

MSVOA\_N

ClientSampleId :

PT-VOA-WPDL

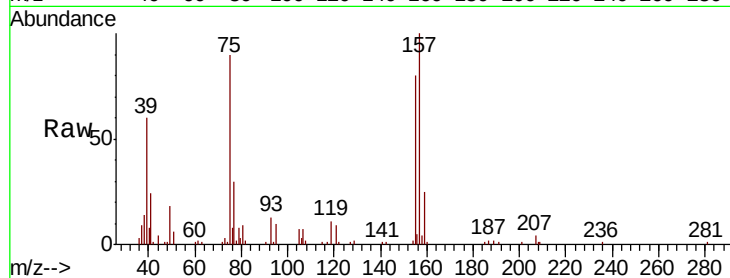
Tot Ion: 75 Resp: 40105

Ion Ratio Lower Upper

75 100

155 85.6 67.1 100.7

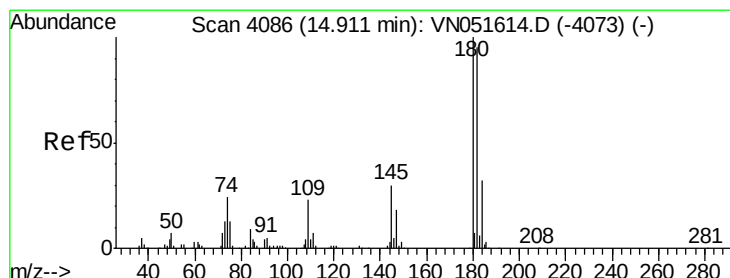
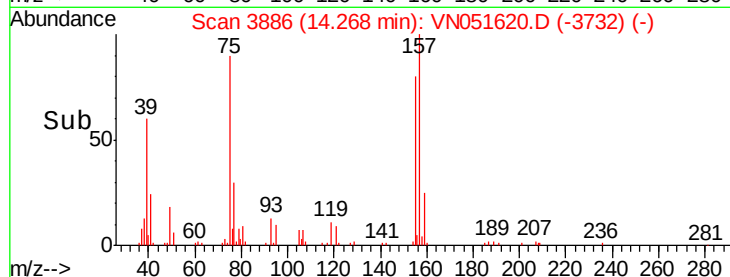
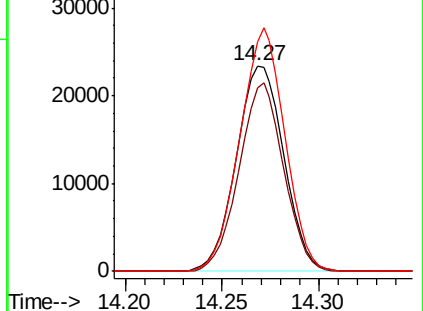
157 112.1 85.8 128.6



Abundance Ion 75.00 (74.70 to 75.70): VN051614.D (-3875) (-)

Ion 155.00 (154.70 to 155.70): VN051614.D (-3875) (-)

Ion 157.00 (156.70 to 157.70): VN051614.D (-3875) (-)



#89

1,2,4-Trichlorobenzene

Concen: 54.760 ug/l

RT: 14.91 min Scan# 4086

Delta R.T. -0.00 min

Lab File: VN051620.D

Acq: 28 Sep 2018 17:34

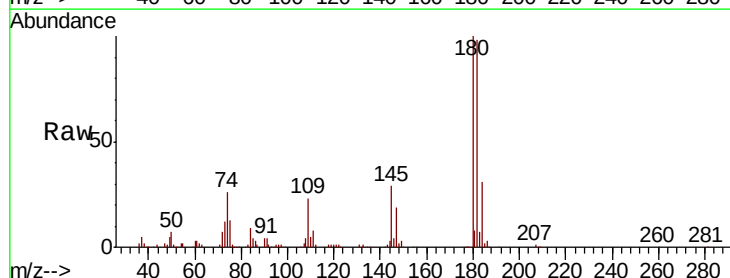
Tgt Ion: 180 Resp: 324480

Ion Ratio Lower Upper

180 100

182 97.5 75.2 112.8

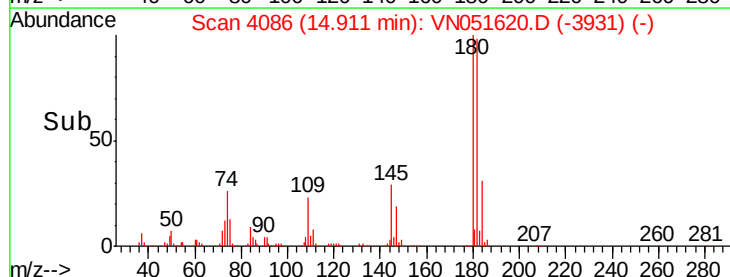
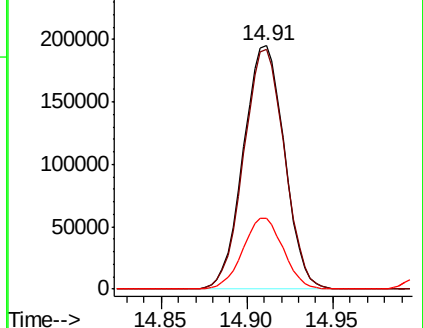
145 28.9 22.9 34.3

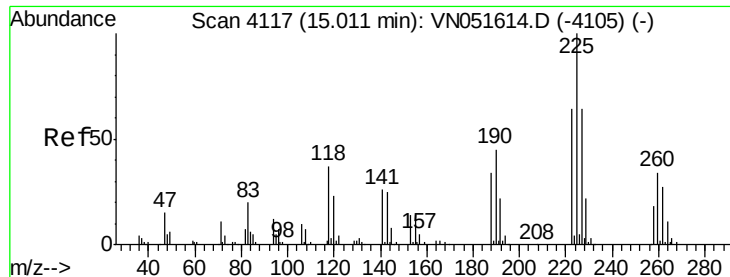


Abundance Ion 180.00 (179.70 to 180.70): VN051614.D (-4073) (-)

Ion 182.00 (181.70 to 182.70): VN051614.D (-4073) (-)

Ion 145.00 (144.70 to 145.70): VN051614.D (-4073) (-)

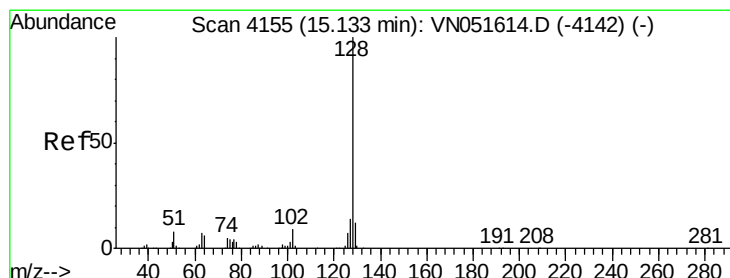
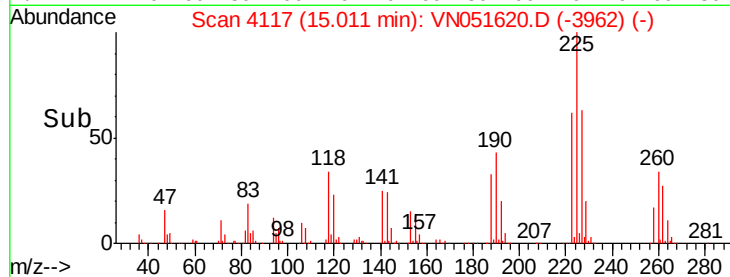
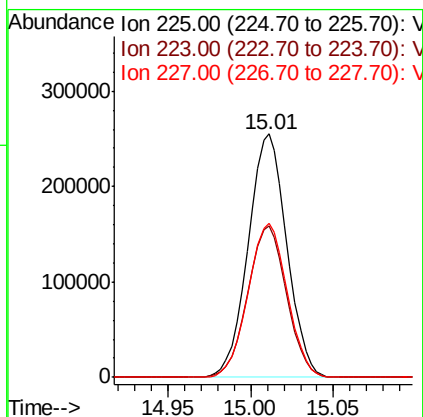
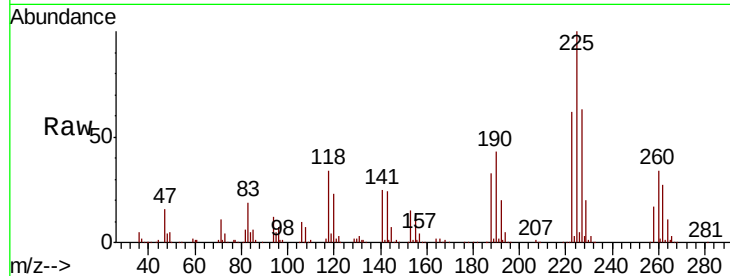




#90  
Hexachlorobutadiene  
Concen: 85.550 ug/l  
RT: 15.01 min Scan# 4117  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

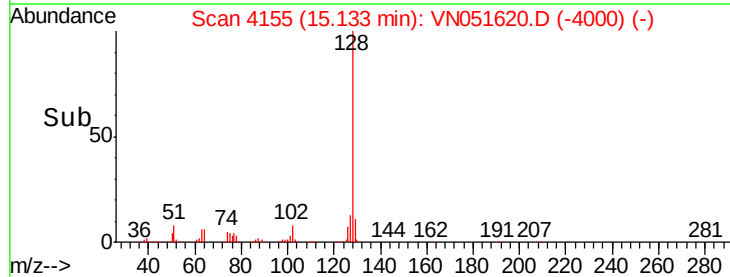
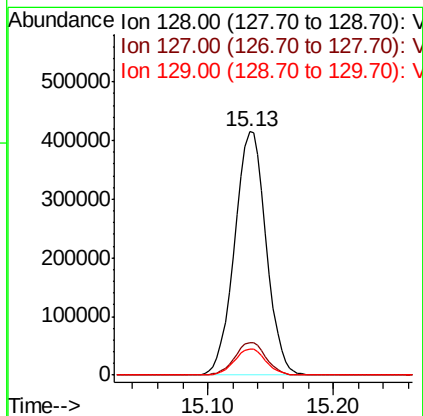
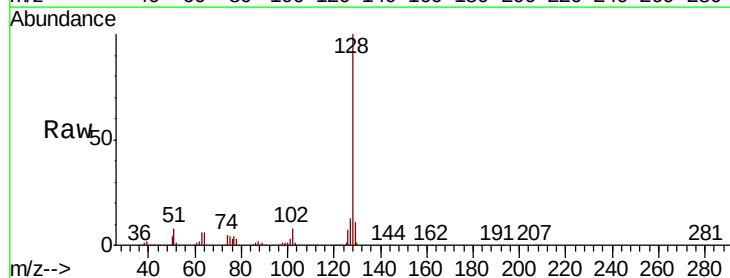
Instrument :  
MSVOA\_N  
ClientSampleId :  
PT-VOA-WPDL

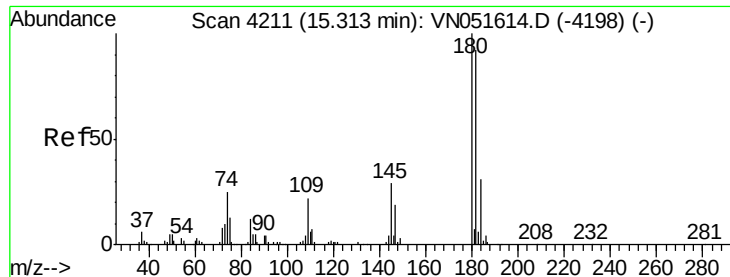
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 225     | 100   |       |       |
| 223     | 62.7  | 0.0   | 131.0 |
| 227     | 64.1  | 0.0   | 129.0 |



#91  
Naphthalene  
Concen: 49.890 ug/l  
RT: 15.13 min Scan# 4155  
Delta R.T. -0.00 min  
Lab File: VN051620.D  
Acq: 28 Sep 2018 17:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 13.2  | 10.8  | 16.2  |
| 129     | 10.8  | 9.1   | 13.7  |

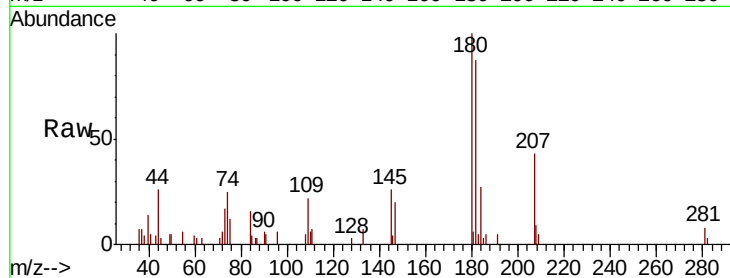




#92  
 1,2,3-Trichlorobenzene  
 Concen: 1.502 ug/l  
 RT: 15.32 min Scan# 4212  
 Delta R.T. 0.00 min  
 Lab File: VN051620.D  
 Acq: 28 Sep 2018 17:34

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PT-VOA-WPDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 86.9  | 0.0   | 191.8 |
| 145     | 28.3  | 0.0   | 60.4  |



Abundance

Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V

