

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN093019\  
 Data File : VN058441.D  
 Acq On : 30 Sep 2019 17:24  
 Operator : JC/SP  
 Sample : K5080-22  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SA-PZ172I-20190925

Quant Time: Oct 01 01:33:35 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N092719W.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Sep 30 08:07:38 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.65  | 168  | 420400   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.57  | 114  | 690732   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 582295   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 221952   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.01  | 65   | 309510   | 50.38 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 100.76% |          |
| 35) Dibromofluoromethane    | 7.58  | 113  | 214512   | 50.67 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 101.34% |          |
| 50) Toluene-d8              | 10.09 | 98   | 859240   | 51.81 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 103.62% |          |
| 62) 4-Bromofluorobenzene    | 12.41 | 95   | 268711   | 44.81 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 89.62%  |          |

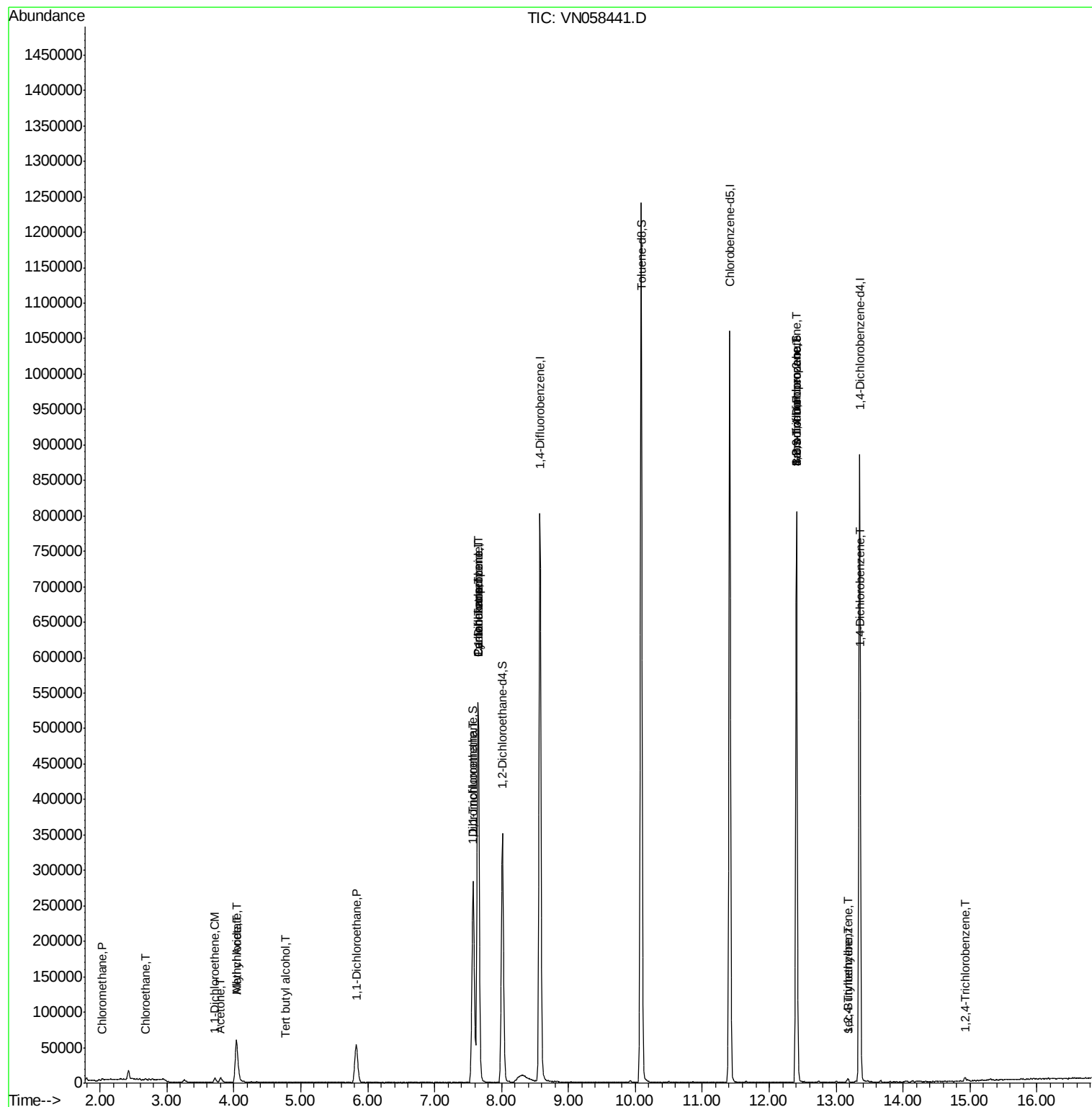
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 3) Chloromethane               | 2.03  | 50   | 1447     | 0.286     | ug/l # | 82     |
| 6) Chloroethane                | 2.69  | 64   | 1357     | 0.456     | ug/l   | 89     |
| 11) Tert butyl alcohol         | 4.76  | 59   | 195      | 0.286     | ug/l # | 71     |
| 12) 1,1-Dichloroethene         | 3.72  | 96   | 3117     | 0.786     | ug/l   | 98     |
| 14) Allyl chloride             | 4.04  | 41   | 8253     | 1.144     | ug/l # | 52     |
| 16) Acetone                    | 3.80  | 43   | 12430    | 5.935     | ug/l   | 98     |
| 18) Methyl Acetate             | 4.03  | 43   | 25162    | 4.777     | ug/l # | 53     |
| 24) 1,1-Dichloroethane         | 5.83  | 63   | 82040    | 9.386     | ug/l   | 99     |
| 31) Cyclohexane                | 7.65  | 56   | 10493    | 1.234     | ug/l # | 1      |
| 32) 1,1,1-Trichloroethane      | 7.56  | 97   | 1512     | 0.208     | ug/l # | 51     |
| 36) 1,1-Dichloropropene        | 7.65  | 75   | 36150    | 5.473     | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 7.65  | 117  | 41859    | 7.021     | ug/l # | 16     |
| 71) Bromoform                  | 12.41 | 173  | 2038     | 1.440     | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 12.41 | 75   | 149544   | 36.888    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.41 | 75   | 149544   | 112.034   | ug/l # | 7      |
| 84) 1,2,4-Trimethylbenzene     | 13.18 | 105  | 3651     | 0.265     | ug/l # | 32     |
| 85) sec-Butylbenzene           | 13.18 | 105  | 3651     | 0.239     | ug/l   | 99     |
| 88) 1,4-Dichlorobenzene        | 13.37 | 146  | 4017     | 0.579     | ug/l # | 35     |
| 93) 1,2,4-Trichlorobenzene     | 14.92 | 180  | 1988     | 0.537     | ug/l # | 76     |
| 95) Naphthalene                | 15.14 | 128  | 224      | Below Cal | #      | 70     |

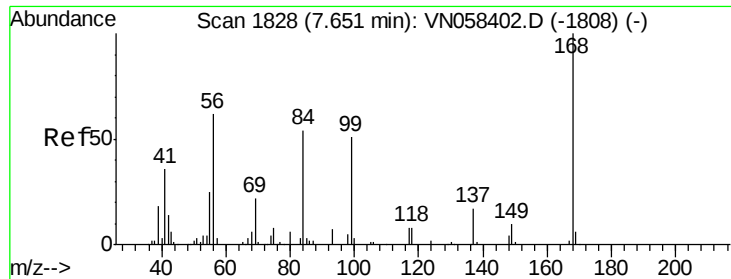
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
QLast Update : Mon Sep 30 08:07:38 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.65 min Scan# 1828

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

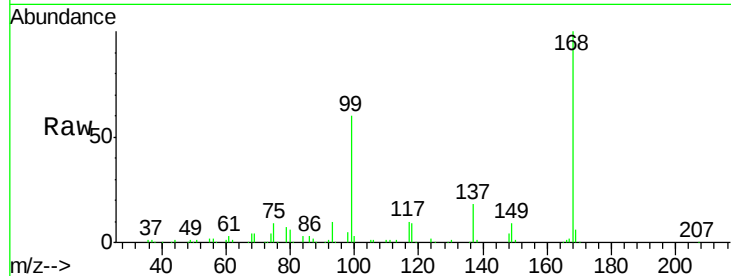
SA-PZ172I-20190925

Tot Ion:168 Resp: 420400

Ion Ratio Lower Upper

168 100

99 60.0 47.7 71.5



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VNO

7.65

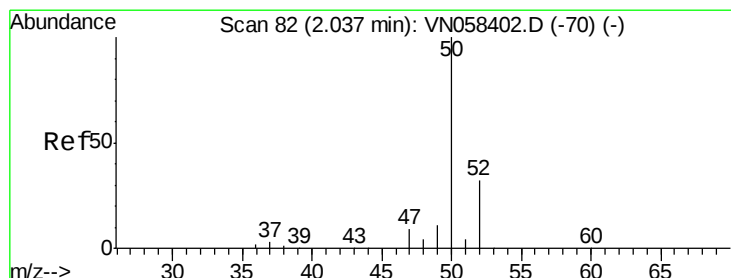
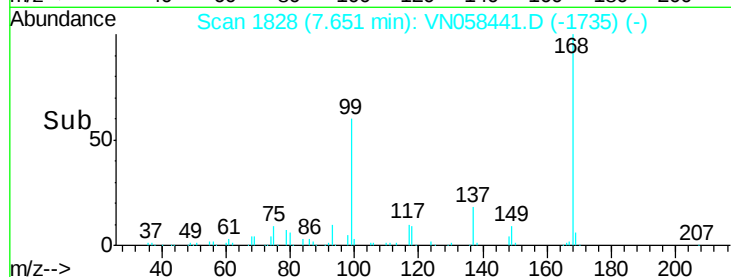
150000

100000

50000

0

Time--> 7.50 7.60 7.70 7.80



#3

Chloromethane

Concen: 0.286 ug/l

RT: 2.03 min Scan# 81

Delta R.T. -0.00 min

Lab File: VN058441.D

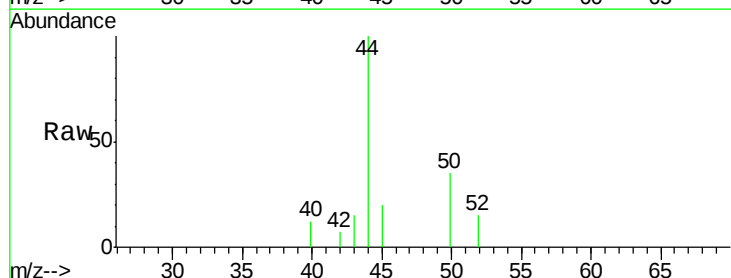
Acq: 30 Sep 2019 17:24

Tgt Ion: 50 Resp: 1447

Ion Ratio Lower Upper

50 100

52 42.5 25.9 38.9#



Abundance Ion 49.90 (49.60 to 50.60): VNO

Ion 51.90 (51.60 to 52.60): VNO

2.03

1000

800

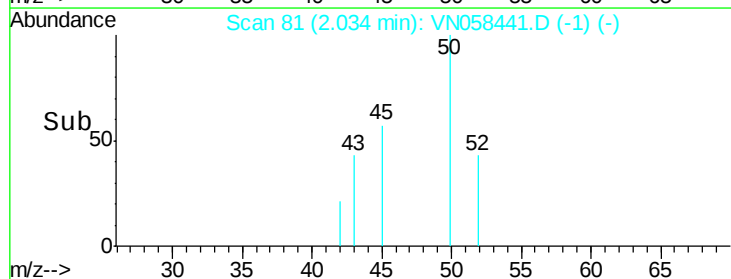
600

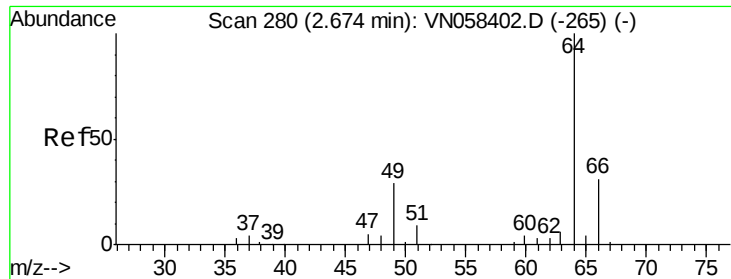
400

200

0

Time--> 2.00 2.02 2.04 2.06 2.08





#6

Chloroethane

Concen: 0.456 ug/l

RT: 2.69 min Scan# 285

Delta R.T. 0.02 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

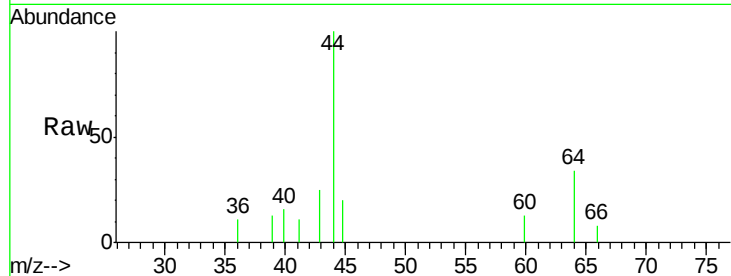
SA-PZ172I-20190925

Tot Ion: 64 Resp: 1357

Ion Ratio Lower Upper

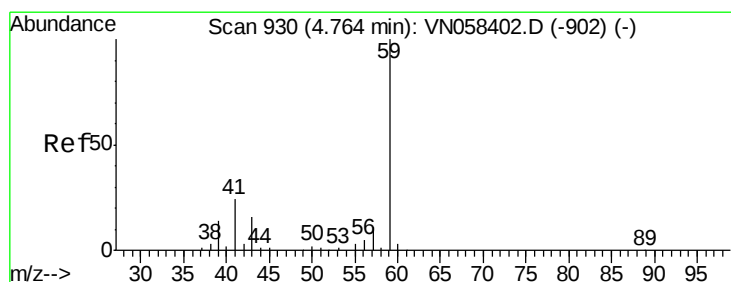
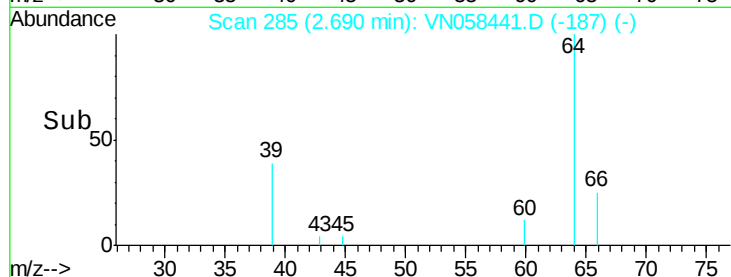
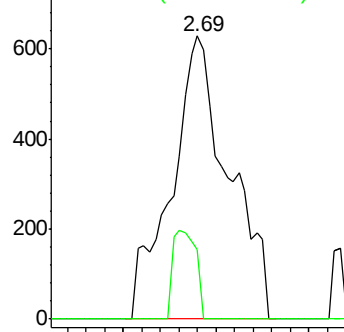
64 100

66 24.7 24.4 36.6



Abundance Ion 63.90 (63.60 to 64.60): VN0

Ion 65.90 (65.60 to 66.60): VN0



#11

Tert butyl alcohol

Concen: 0.286 ug/l

RT: 4.76 min Scan# 930

Delta R.T. 0.00 min

Lab File: VN058441.D

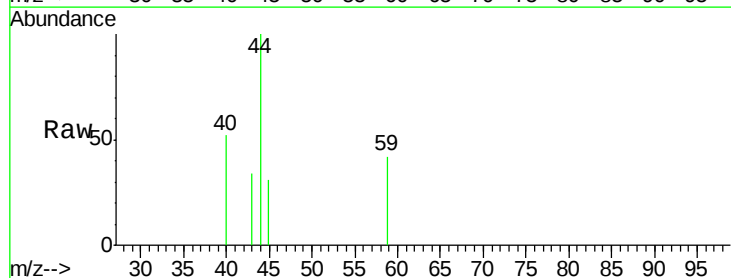
Acq: 30 Sep 2019 17:24

Tgt Ion: 59 Resp: 195

Ion Ratio Lower Upper

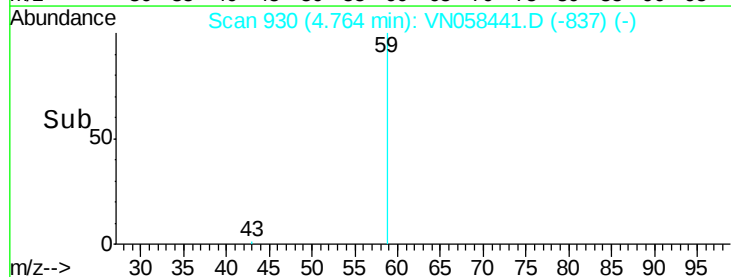
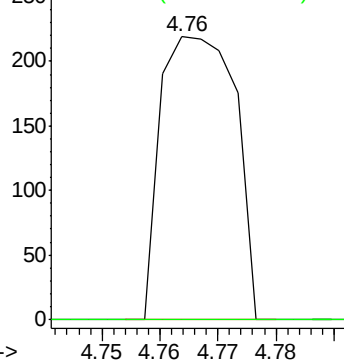
59 100

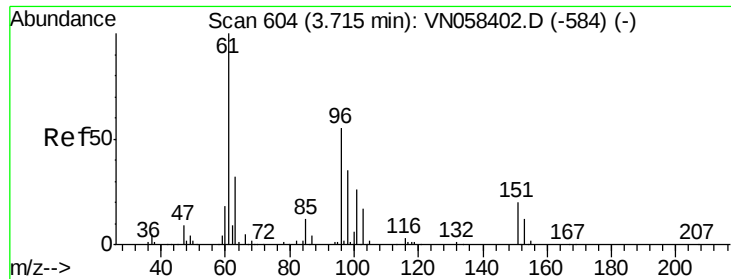
57 0.0 9.0 13.4#



Abundance Ion 59.00 (58.70 to 59.70): VN0

Ion 57.00 (56.70 to 57.70): VN0

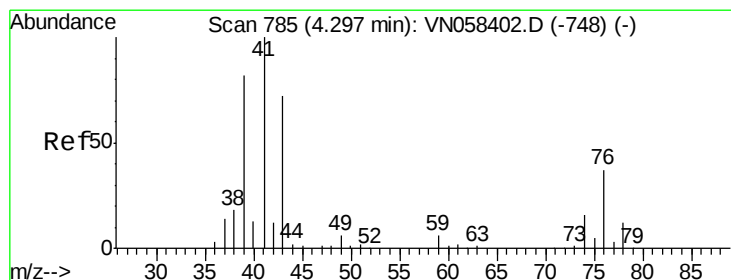
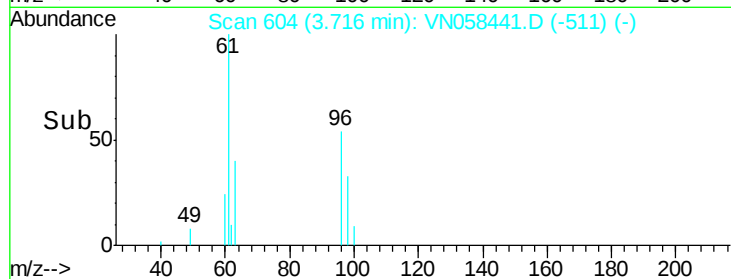
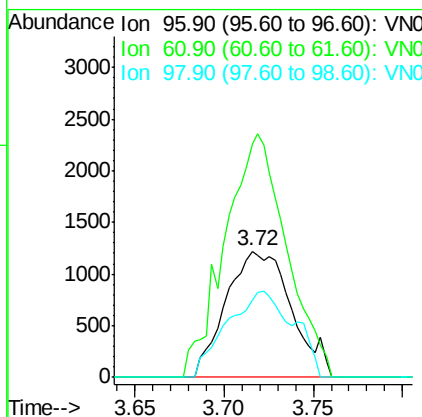
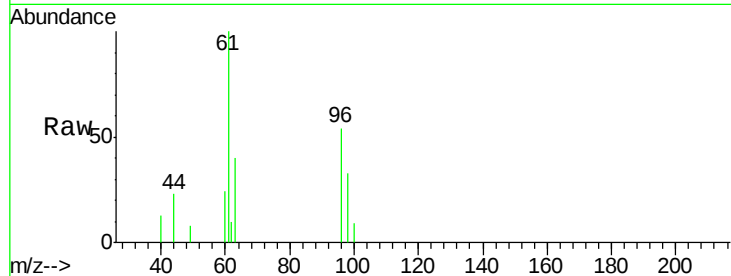




#12  
 1,1-Dichloroethene  
 Concen: 0.786 ug/l  
 RT: 3.72 min Scan# 604  
 Delta R.T. 0.00 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

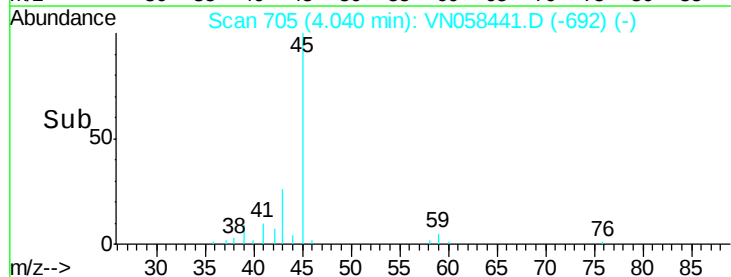
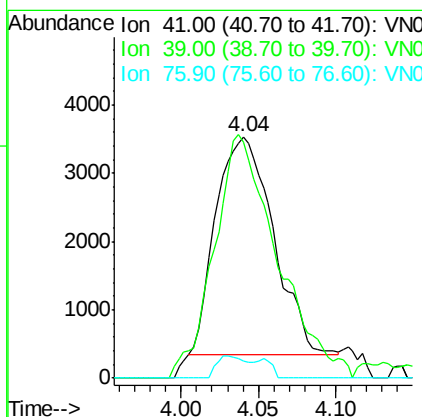
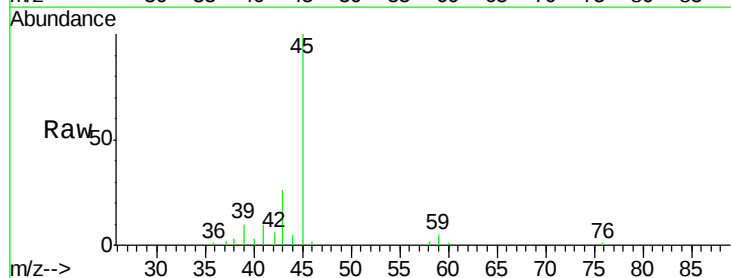
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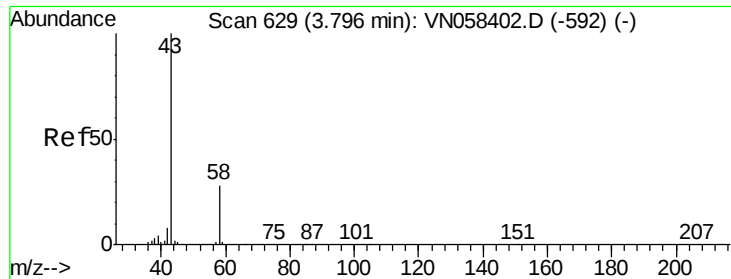
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 185.4 | 146.7 | 220.1 |
| 98      | 61.1  | 51.3  | 76.9  |



#14  
 Allyl chloride  
 Concen: 1.144 ug/l  
 RT: 4.04 min Scan# 705  
 Delta R.T. -0.26 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 39      | 119.4 | 62.3  | 93.5# |
| 76      | 5.5   | 26.9  | 40.3# |

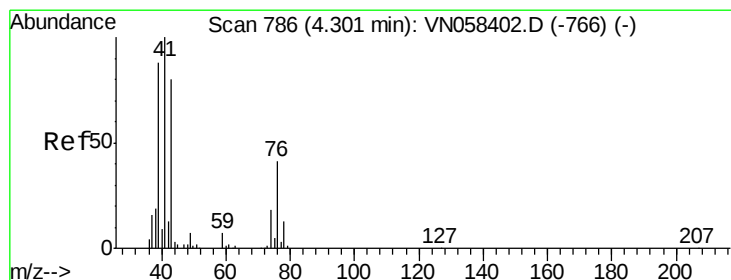
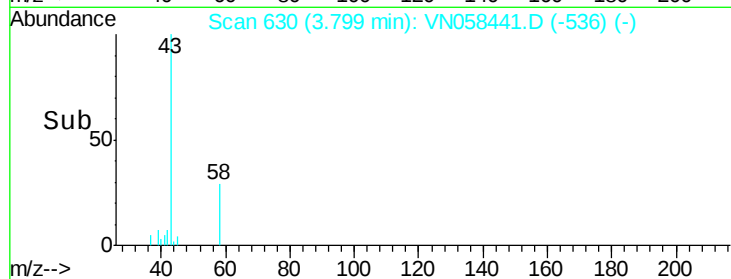
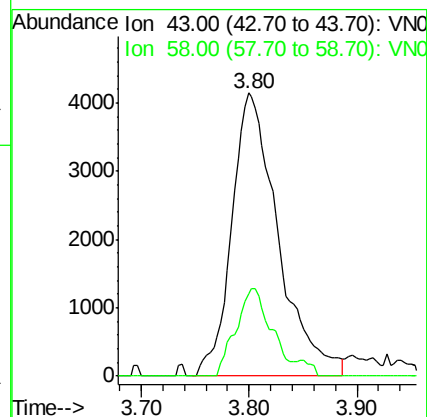
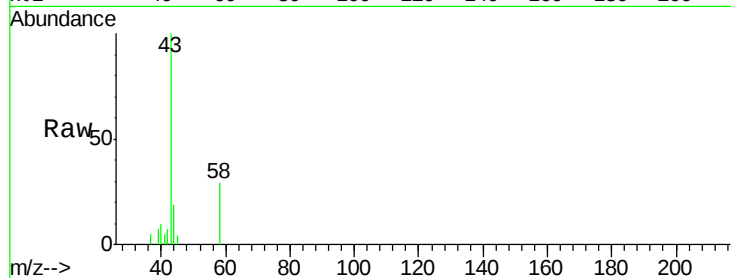




#16  
Acetone  
Concen: 5.935 ug/l  
RT: 3.80 min Scan# 630  
Delta R.T. 0.00 min  
Lab File: VN058441.D  
Acq: 30 Sep 2019 17:24

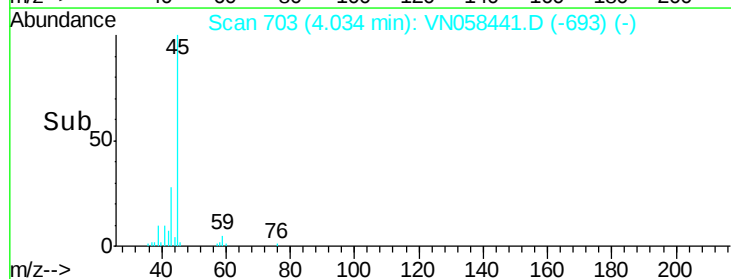
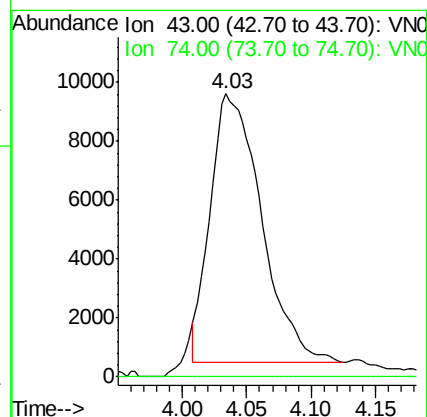
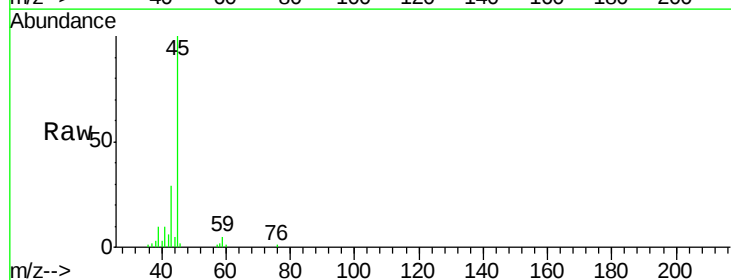
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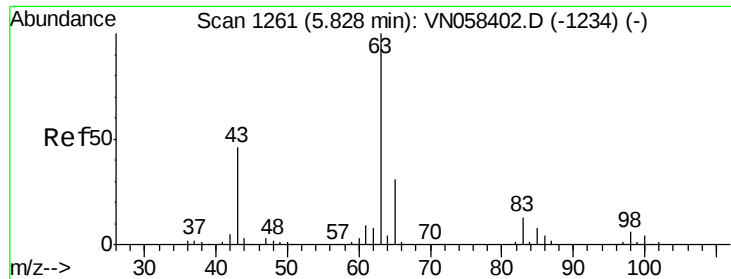
Tot Ion: 43 Resp: 12430  
Ion Ratio Lower Upper  
43 100  
58 29.0 22.4 33.6



#18  
Methyl Acetate  
Concen: 4.777 ug/l  
RT: 4.03 min Scan# 703  
Delta R.T. -0.27 min  
Lab File: VN058441.D  
Acq: 30 Sep 2019 17:24

Tgt Ion: 43 Resp: 25162  
Ion Ratio Lower Upper  
43 100  
74 0.0 18.0 27.0#

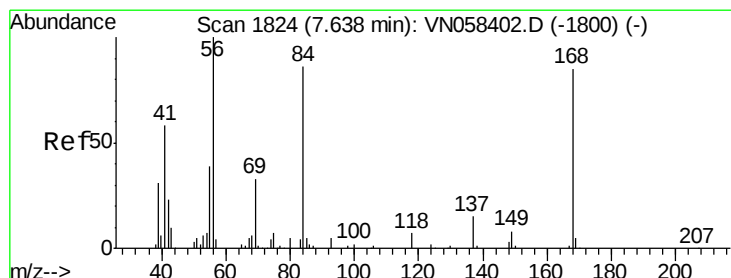
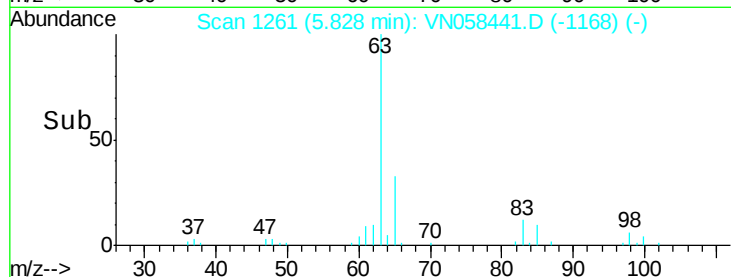
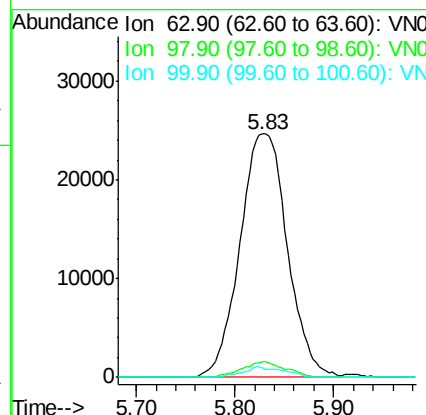
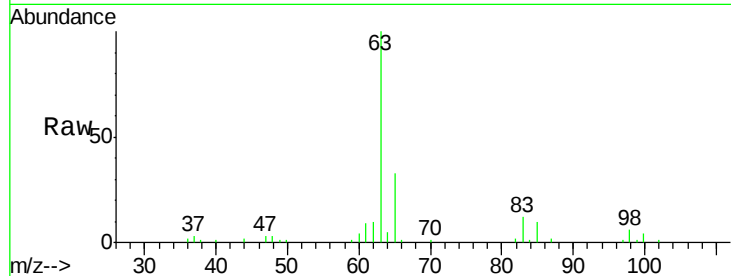




#24  
 1,1-Dichloroethane  
 Concen: 9.386 ug/l  
 RT: 5.83 min Scan# 1261  
 Delta R.T. 0.00 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

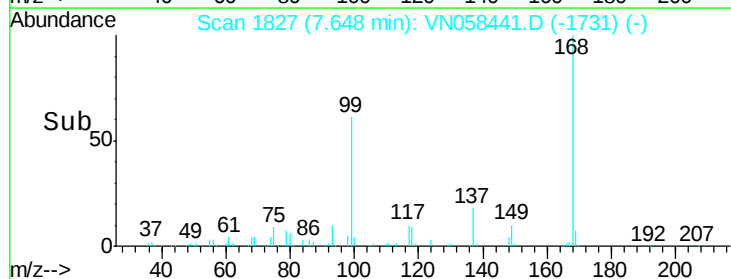
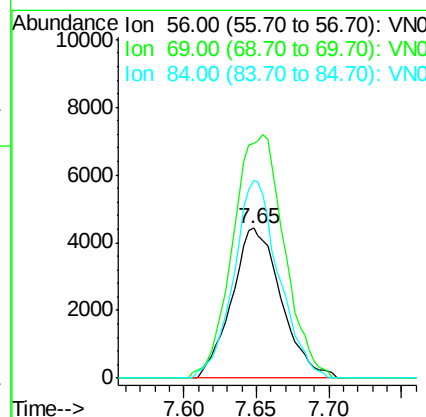
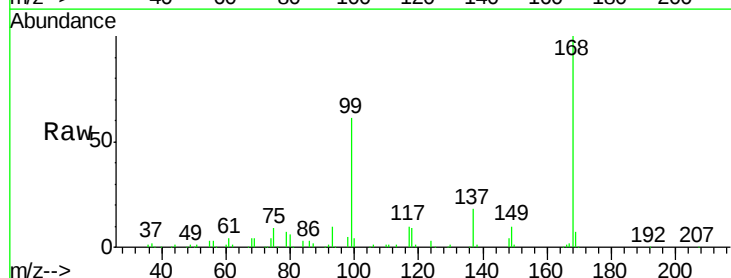
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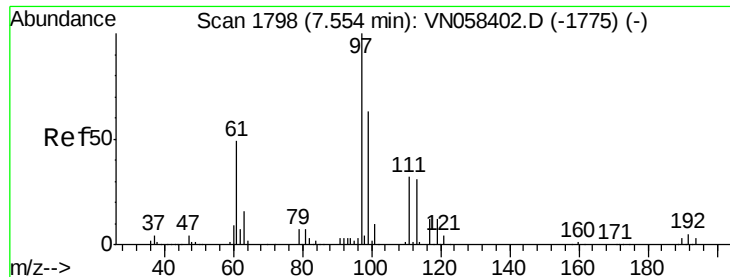
Tot Ion: 63 Resp: 82040  
 Ion Ratio Lower Upper  
 63 100  
 98 6.3 3.0 9.0  
 100 4.0 2.0 5.8



#31  
 Cyclohexane  
 Concen: 1.234 ug/l  
 RT: 7.65 min Scan# 1827  
 Delta R.T. 0.01 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

Tgt Ion: 56 Resp: 10493  
 Ion Ratio Lower Upper  
 56 100  
 69 156.9 26.2 39.4#  
 84 131.4 67.6 101.4#

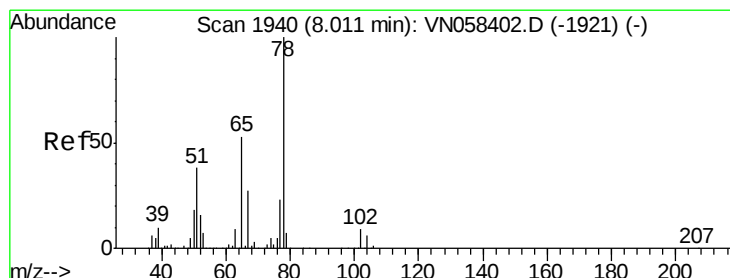
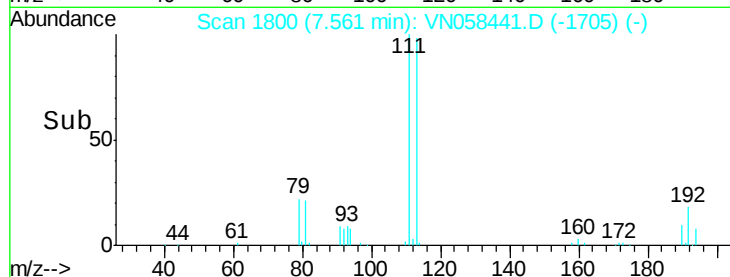
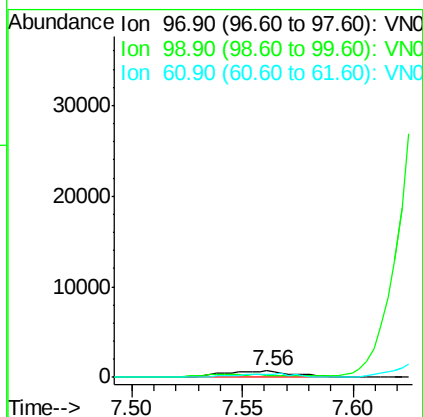
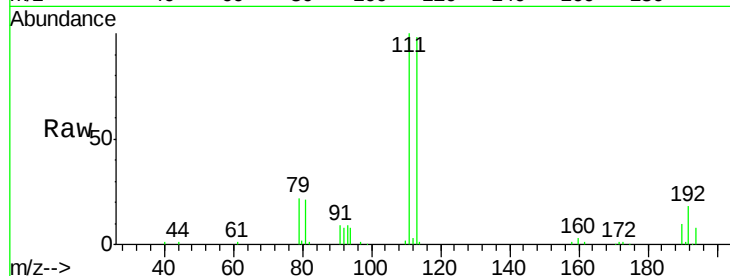




#32  
 1,1,1-Trichloroethane  
 Concen: 0.208 ug/l  
 RT: 7.56 min Scan# 1800  
 Delta R.T. 0.01 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

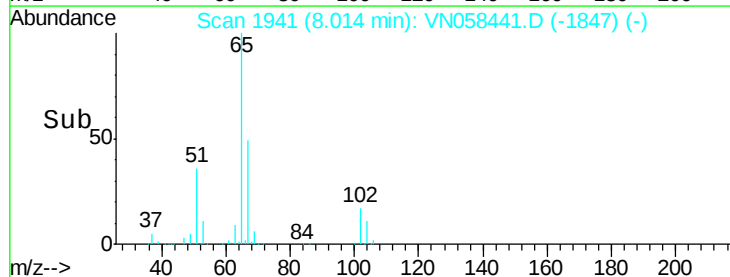
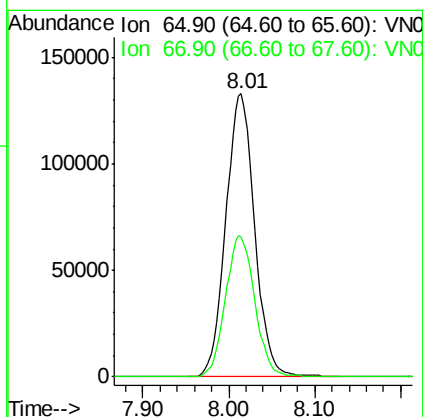
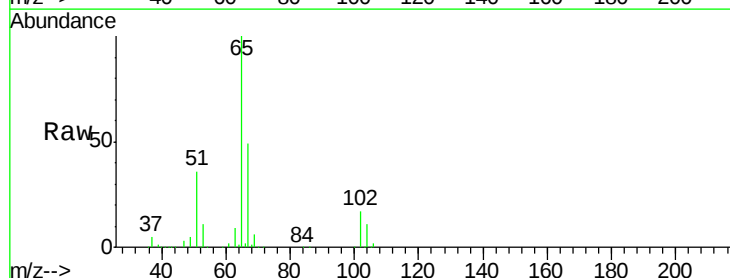
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 ClientSampleId :  
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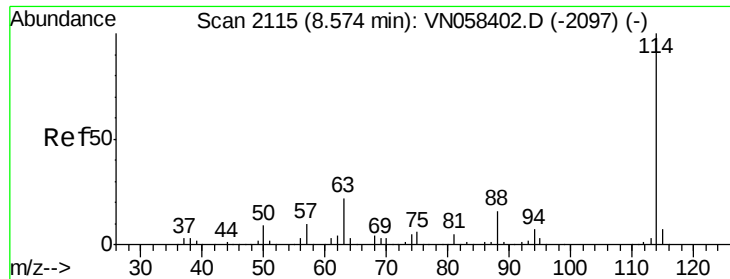
Tot Ion: 97 Resp: 1512  
 Ion Ratio Lower Upper  
 97 100  
 99 0.0 51.1 76.7#  
 61 44.8 39.2 58.8



#33  
 1,2-Dichloroethane-d4  
 Concen: 50.380 ug/l  
 RT: 8.01 min Scan# 1941  
 Delta R.T. 0.00 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

Tgt Ion: 65 Resp: 309510  
 Ion Ratio Lower Upper  
 65 100  
 67 50.5 0.0 102.4

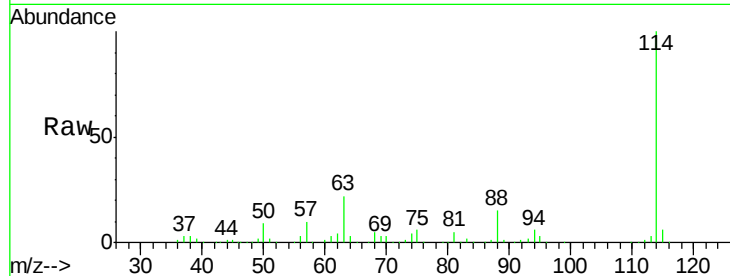




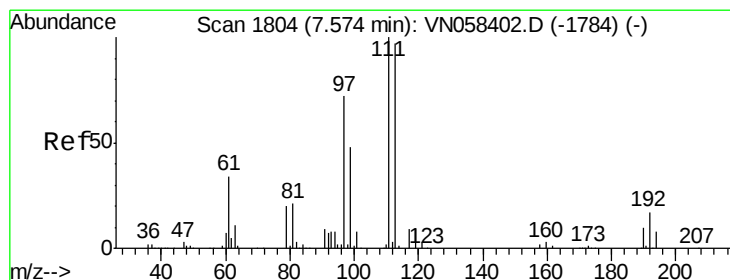
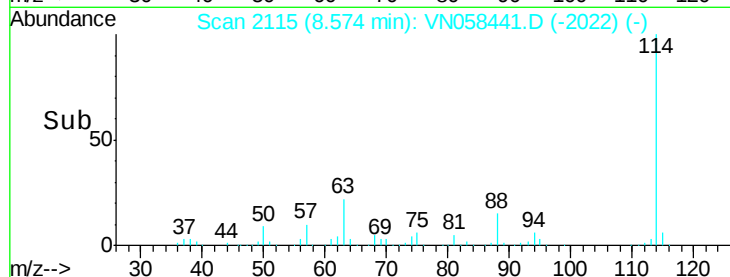
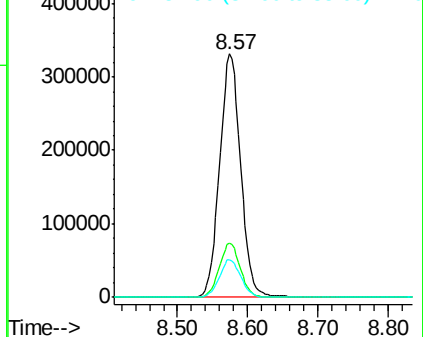
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.57 min Scan# 2115  
 Delta R.T. 0.00 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SA-PZ172I-20190925

Tot Ion:114 Resp: 690732  
 Ion Ratio Lower Upper  
 114 100  
 63 22.4 0.0 45.0  
 88 15.5 0.0 32.2

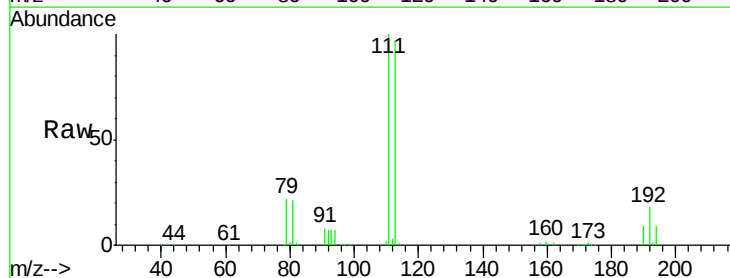


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VN  
 Ion 87.90 (87.60 to 88.60): VN

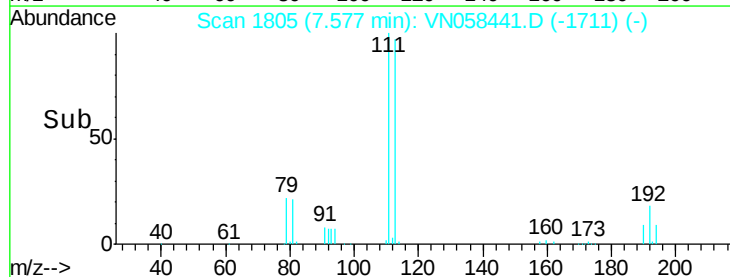
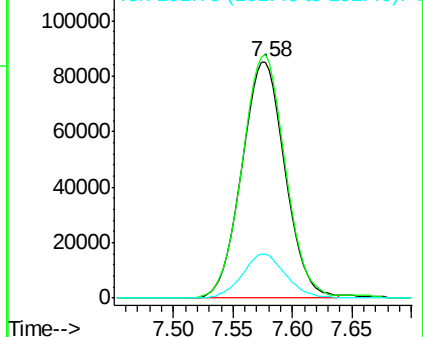


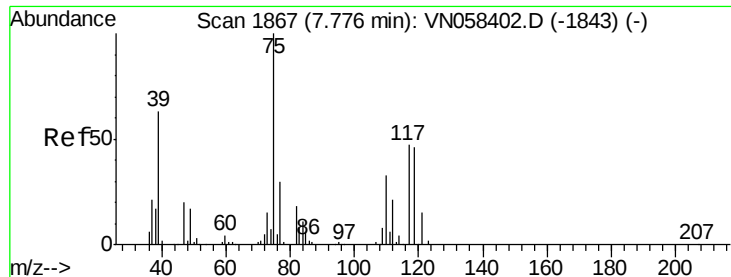
#35  
 Dibromofluoromethane  
 Concen: 50.671 ug/l  
 RT: 7.58 min Scan# 1805  
 Delta R.T. 0.00 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

Tgt Ion:113 Resp: 214512  
 Ion Ratio Lower Upper  
 113 100  
 111 103.2 83.4 125.2  
 192 18.7 14.9 22.3



Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V

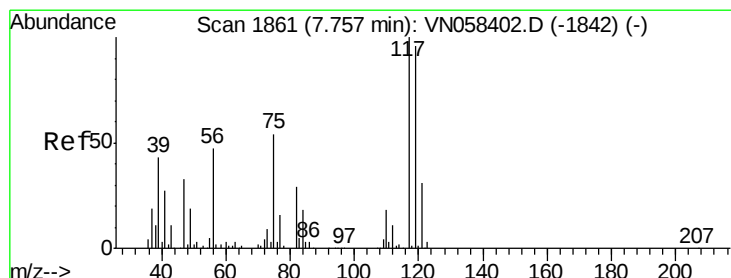
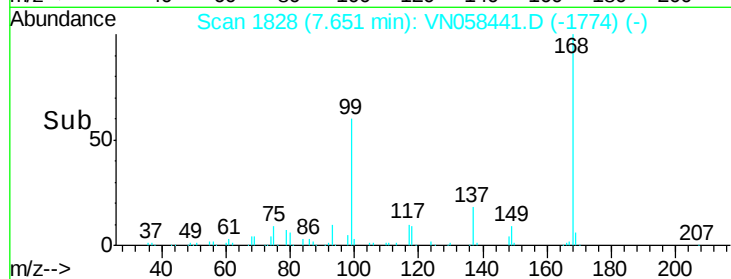
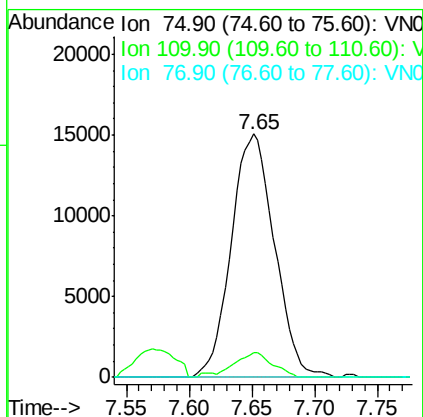
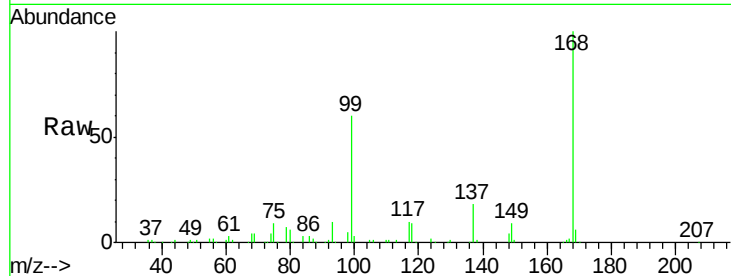




#36  
 1,1-Dichloropropene  
 Concen: 5.473 ug/l  
 RT: 7.65 min Scan# 1828  
 Delta R.T. -0.13 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

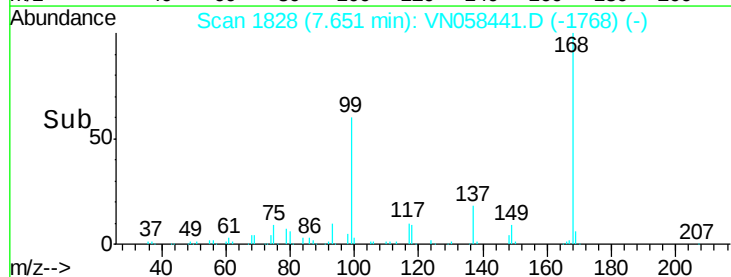
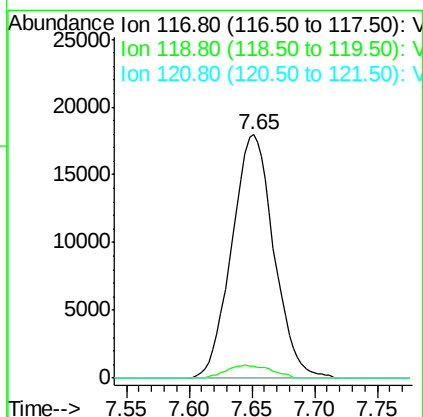
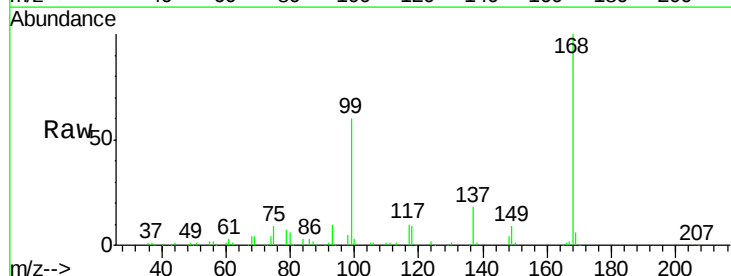
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SA-PZ172I-20190925

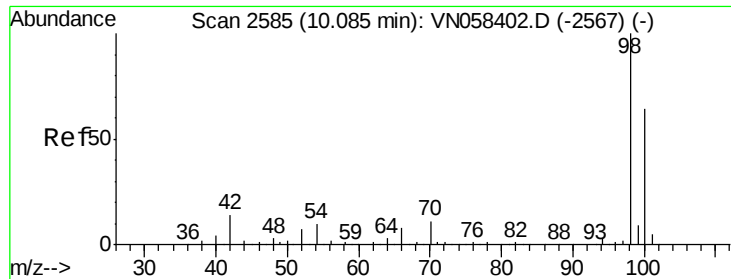
| Tot Ion   | 75    | Resp  | 36150 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 75        | 100   |       |       |
| 110       | 8.7   | 16.4  | 49.2# |
| 77        | 0.0   | 24.3  | 36.5# |



#38  
 Carbon Tetrachloride  
 Concen: 7.021 ug/l  
 RT: 7.65 min Scan# 1828  
 Delta R.T. -0.11 min  
 Lab File: VN058441.D  
 Acq: 30 Sep 2019 17:24

| Tgt Ion                                           | 117   | Resp  | 41859  |
|---------------------------------------------------|-------|-------|--------|
| Ion Ratio <td>Lower</td> <td>Upper</td> <td></td> | Lower | Upper |        |
| 117                                               | 100   |       |        |
| 119                                               | 4.7   | 76.6  | 115.0# |
| 121                                               | 0.0   | 24.7  | 37.1#  |





#50

Toluene-d8

Concen: 51.811 ug/l

RT: 10.09 min Scan# 2585

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

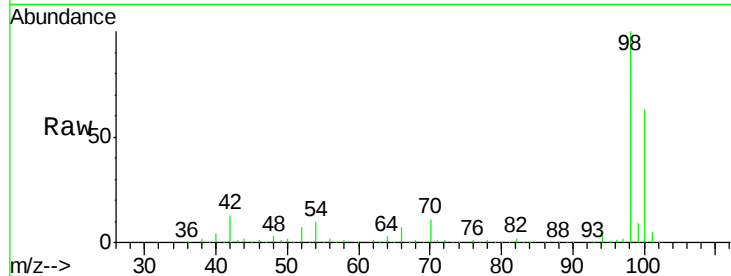
SA-PZ172I-20190925

Tot Ion: 98 Resp: 859240

Ion Ratio Lower Upper

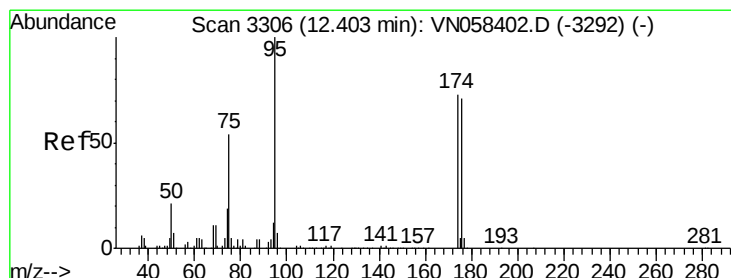
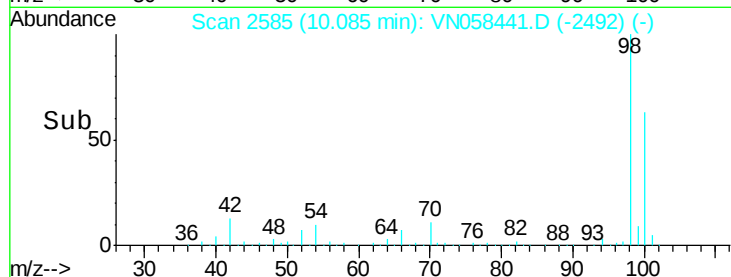
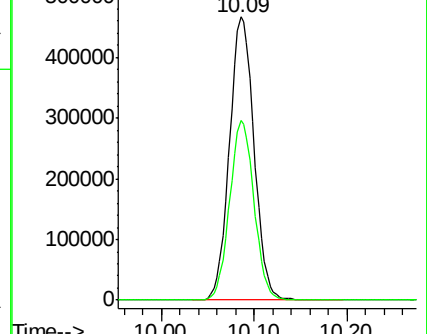
98 100

100 63.0 51.0 76.6



Abundance Ion 98.00 (97.70 to 98.70): VN0

Ion 100.00 (99.70 to 100.70): VN



#62

4-Bromofluorobenzene

Concen: 44.811 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

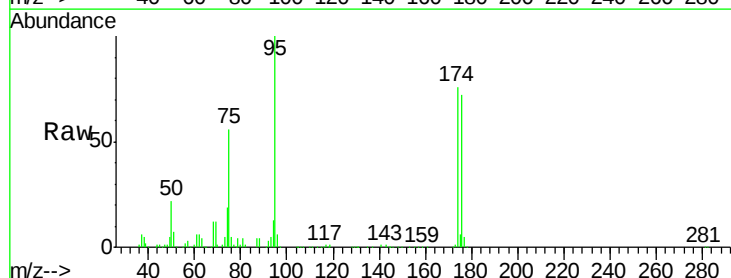
Tgt Ion: 95 Resp: 268711

Ion Ratio Lower Upper

95 100

174 74.8 0.0 150.6

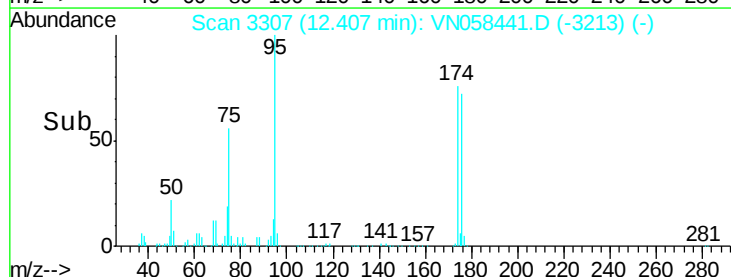
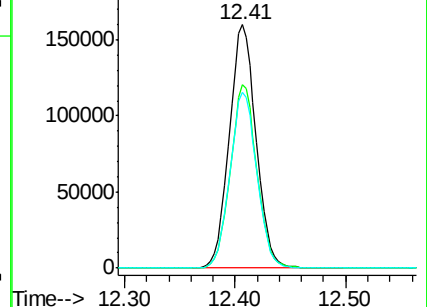
176 72.5 0.0 146.2

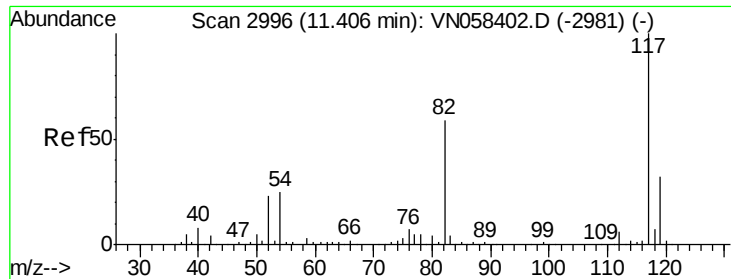


Abundance Ion 94.90 (94.60 to 95.60): VN0

Ion 173.80 (173.50 to 174.50): VN

Ion 175.80 (175.50 to 176.50): VN

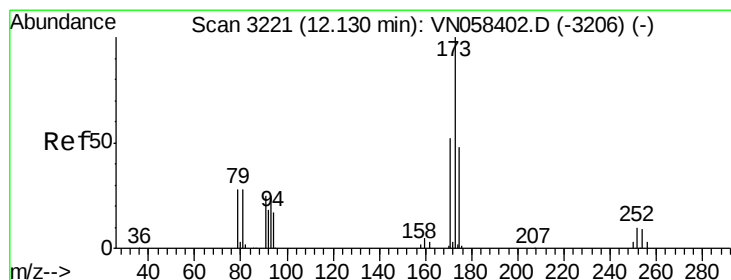
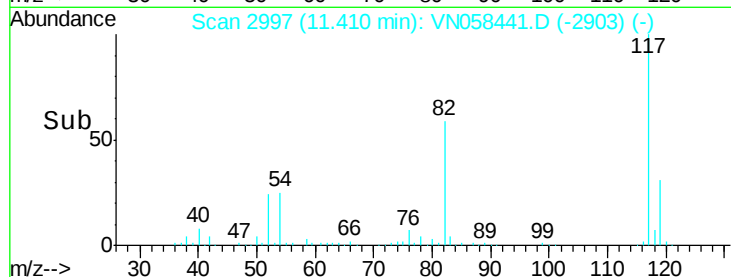
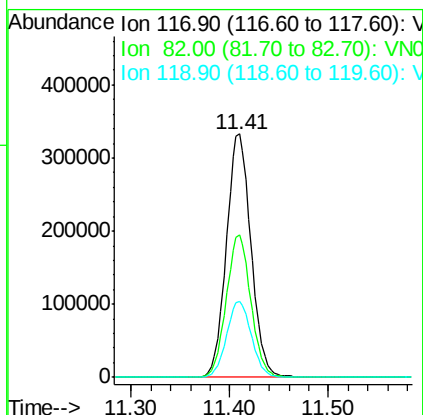
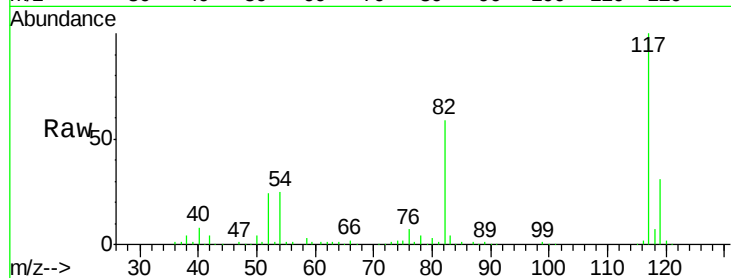




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2997  
Delta R.T. 0.00 min  
Lab File: VN058441.D  
Acq: 30 Sep 2019 17:24

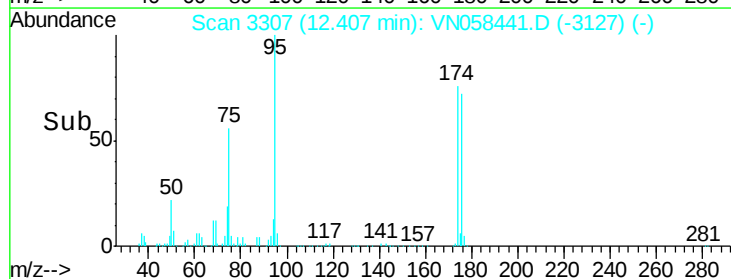
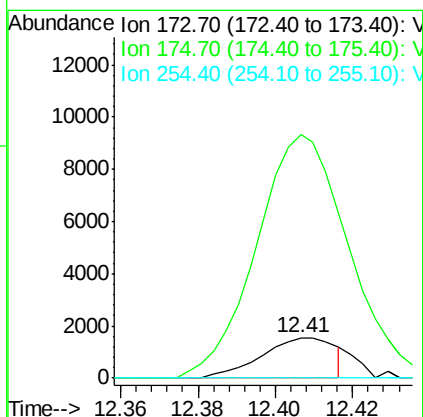
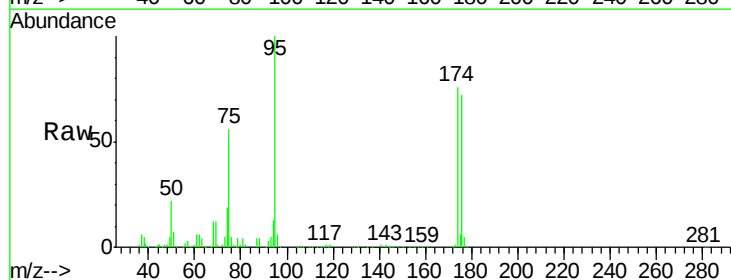
Instrument :  
MSVOA\_N  
ClientSampleId :  
SA-PZ172I-20190925

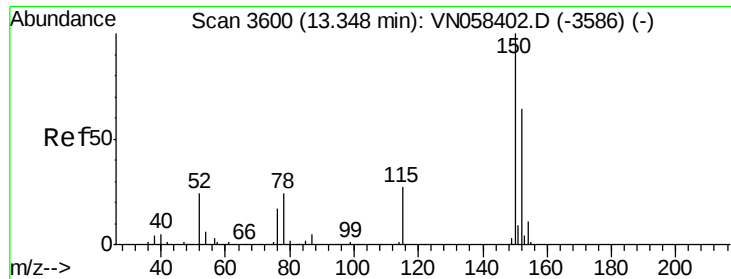
Tot Ion:117 Resp: 582295  
Ion Ratio Lower Upper  
117 100  
82 58.6 47.4 71.0  
119 31.1 25.5 38.3



#71  
Bromoform  
Concen: 1.440 ug/l  
RT: 12.41 min Scan# 3307  
Delta R.T. 0.28 min  
Lab File: VN058441.D  
Acq: 30 Sep 2019 17:24

Tgt Ion:173 Resp: 2038  
Ion Ratio Lower Upper  
173 100  
175 626.6 24.3 73.0#  
254 0.0 0.1 0.1#





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.35 min Scan# 3601

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

SA-PZ172I-20190925

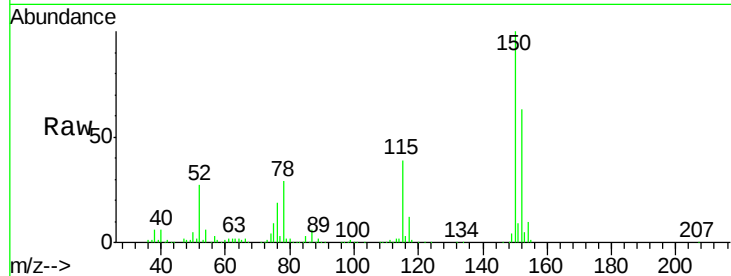
Tot Ion:152 Resp: 221952

Ion Ratio Lower Upper

152 100

115 61.8 30.0 90.0

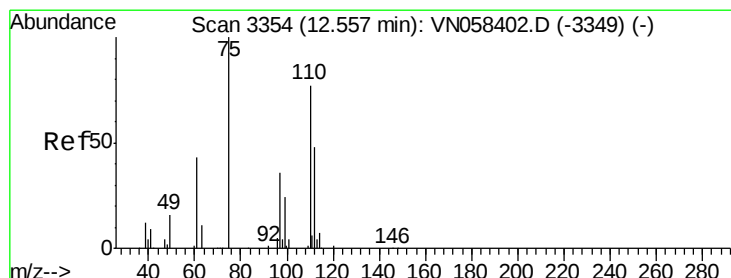
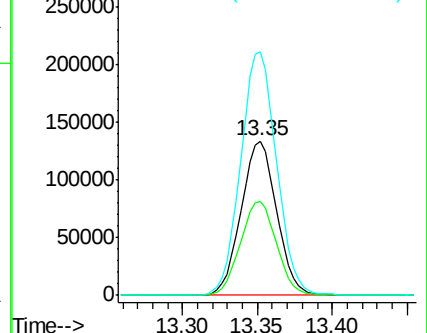
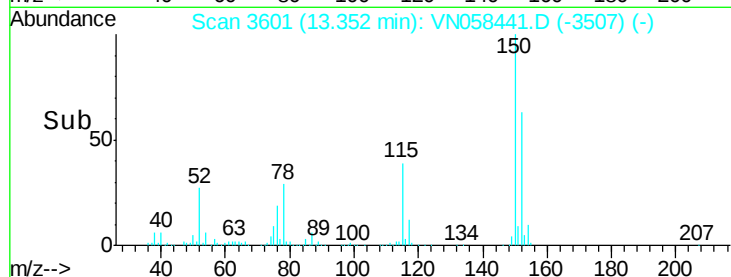
150 159.7 0.0 348.2



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#76

1,2,3-Trichloropropane

Concen: 36.888 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. -0.15 min

Lab File: VN058441.D

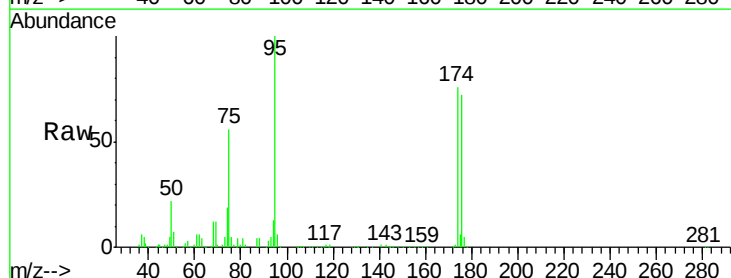
Acq: 30 Sep 2019 17:24

Tgt Ion: 75 Resp: 149544

Ion Ratio Lower Upper

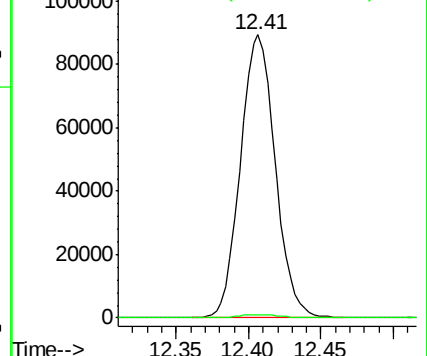
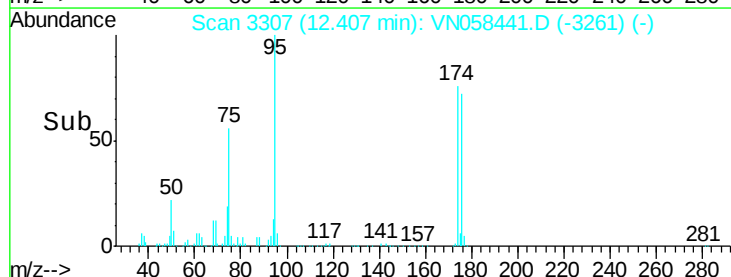
75 100

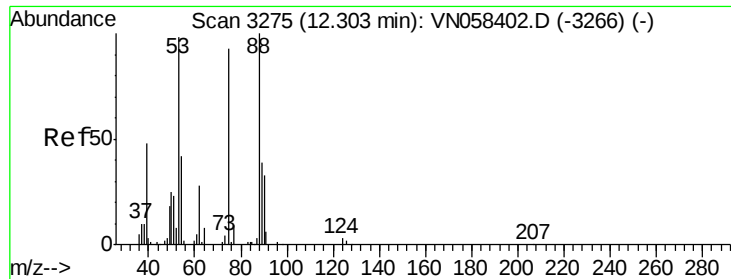
77 1.2 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): V

Ion 77.00 (76.70 to 77.70): V





#81

trans-1,4-Dichloro-2-butene

Concen: 112.034 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. 0.10 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

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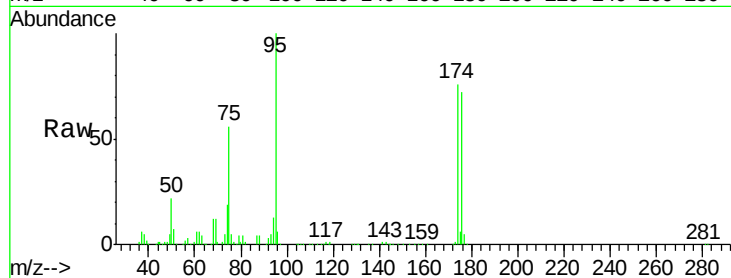
Tot Ion: 75 Resp: 149544

Ion Ratio Lower Upper

75 100

53 0.0 85.4 128.0#

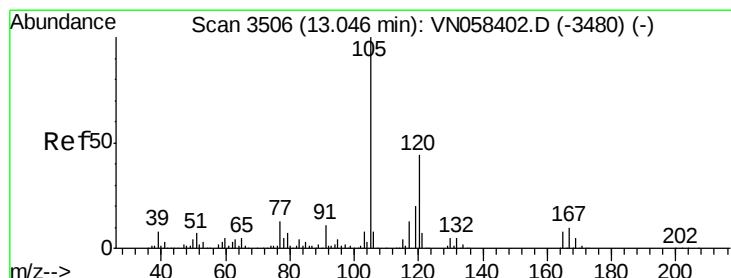
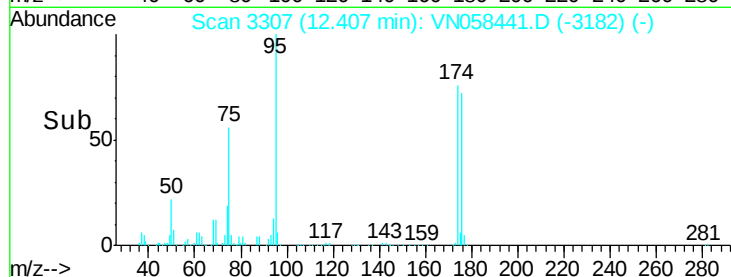
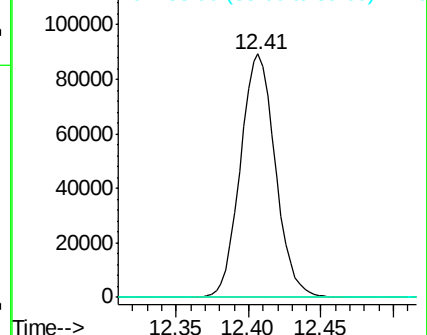
89 0.0 35.0 52.4#



Abundance Ion 74.90 (74.60 to 75.60): VN058441.D (-3307) (-)

Ion 53.00 (52.70 to 53.70): VN058441.D (-3307) (-)

Ion 88.90 (88.60 to 89.60): VN058441.D (-3307) (-)



#84

1,2,4-Trimethylbenzene

Concen: 0.265 ug/l

RT: 13.18 min Scan# 3547

Delta R.T. 0.13 min

Lab File: VN058441.D

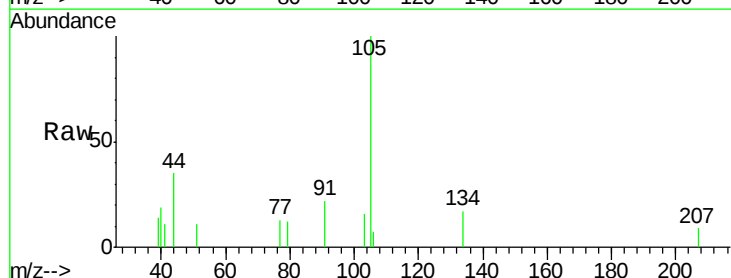
Acq: 30 Sep 2019 17:24

Tgt Ion: 105 Resp: 3651

Ion Ratio Lower Upper

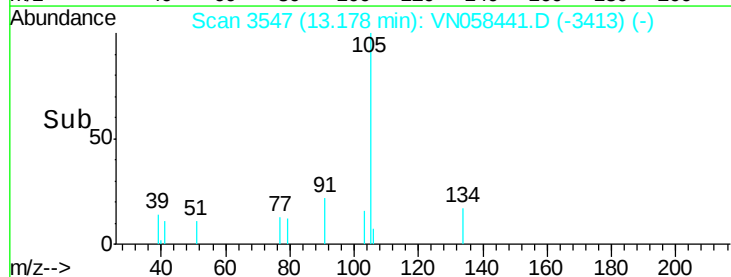
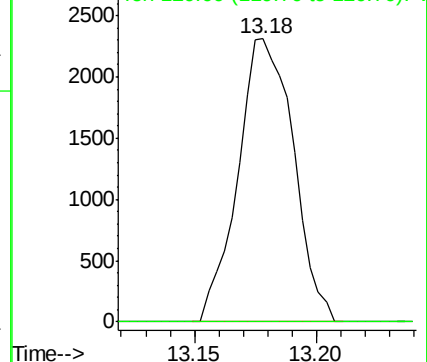
105 100

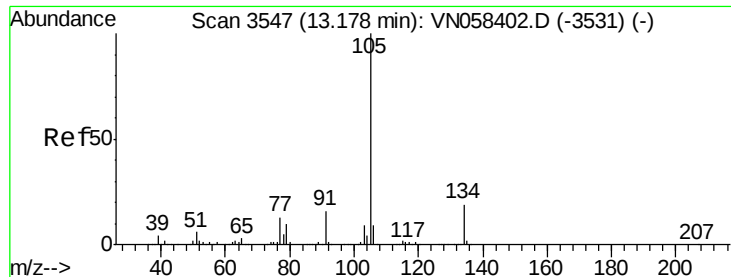
120 0.0 21.7 65.1#



Abundance Ion 105.00 (104.70 to 105.70): VN058441.D (-3547) (-)

Ion 120.00 (119.70 to 120.70): VN058441.D (-3547) (-)





#85

sec-Butylbenzene

Concen: 0.239 ug/l

RT: 13.18 min Scan# 3547

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

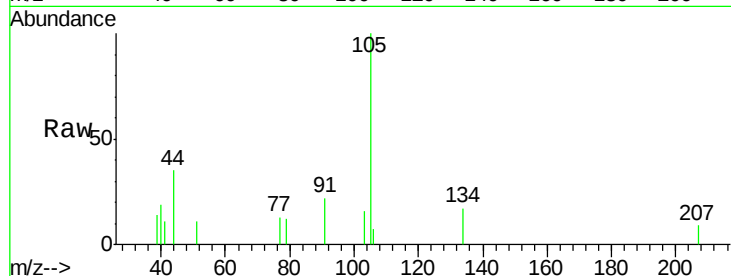
SA-PZ172I-20190925

Tot Ion:105 Resp: 3651

Ion Ratio Lower Upper

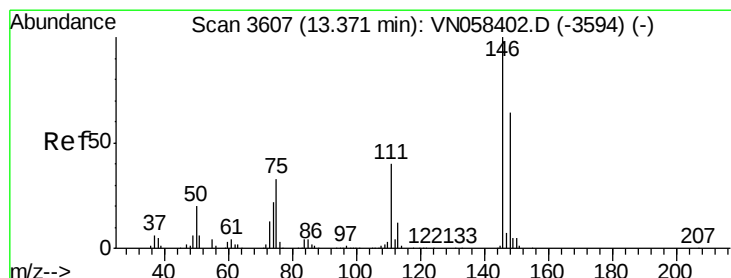
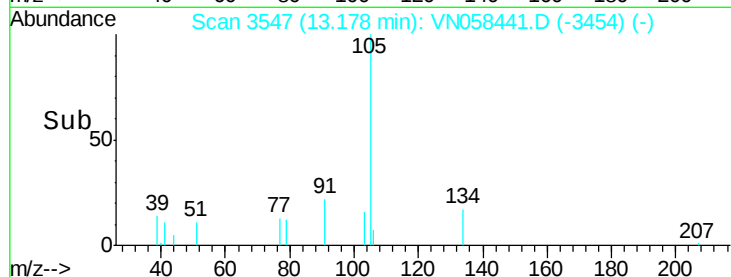
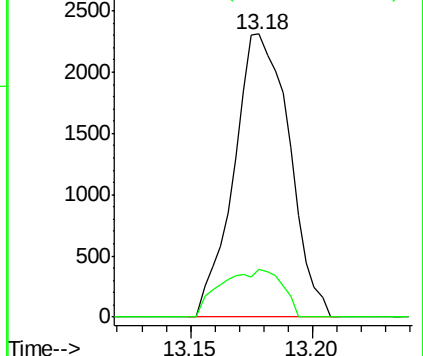
105 100

134 18.5 9.4 28.2



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 134.00 (133.70 to 134.70): V



#88

1,4-Dichlorobenzene

Concen: 0.579 ug/l

RT: 13.37 min Scan# 3607

Delta R.T. 0.00 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

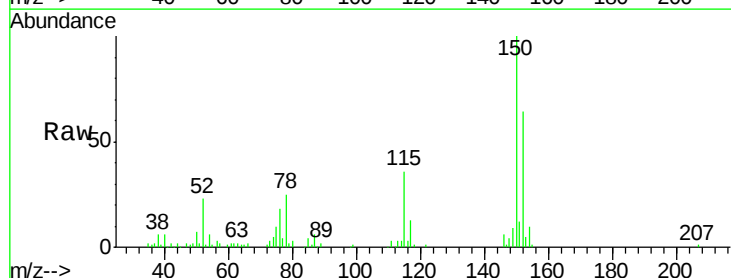
Tgt Ion:146 Resp: 4017

Ion Ratio Lower Upper

146 100

111 117.8 20.5 61.6#

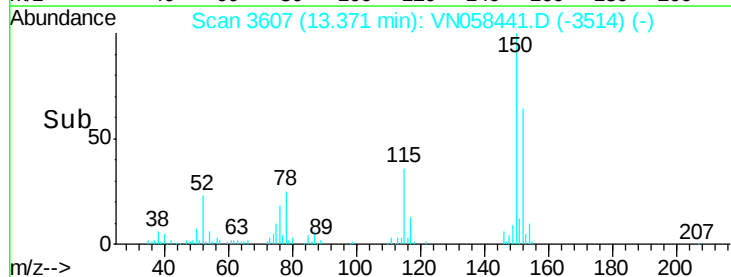
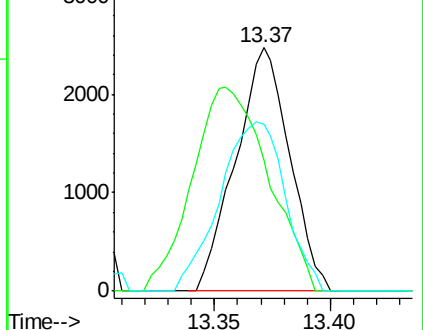
148 84.1 31.5 94.5

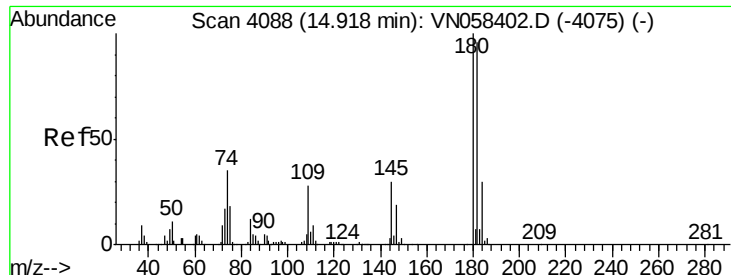


Abundance Ion 145.90 (145.60 to 146.60): V

Ion 110.90 (110.60 to 111.60): V

Ion 147.90 (147.60 to 148.60): V





#93

1,2,4-Trichlorobenzene

Concen: 0.537 ug/l

RT: 14.92 min Scan# 4090

Delta R.T. 0.01 min

Lab File: VN058441.D

Acq: 30 Sep 2019 17:24

Instrument :

MSVOA\_N

ClientSampleId :

SA-PZ172I-20190925

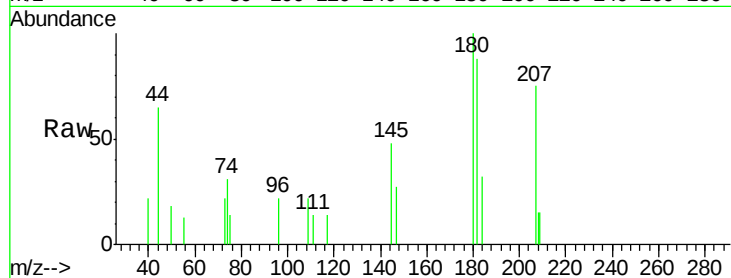
Tot Ion:180 Resp: 1988

Ion Ratio Lower Upper

180 100

182 106.4 47.4 142.3

145 64.2 15.3 45.9#



Abundance Ion 179.80 (179.50 to 180.50): V

Ion 181.80 (181.50 to 182.50): V

Ion 144.80 (144.50 to 145.50): V

