

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_U\Data\VU031723\  
 Data File : VU053289.D  
 Acq On : 18 Mar 2023 00:20  
 Operator : JC/MD  
 Sample : 01956-04  
 Misc : 5.0mL/MSVOA\_U/WATER  
 ALS Vial : 38 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 E0287

Quant Time: Mar 18 05:00:15 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_U\Method\SFAMULM031523WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Sat Mar 18 04:29:10 2023  
 Response via : Initial Calibration

| Compound                      | R.T.    | QIon  | Response | Conc     | Units  | Dev(Min)  |
|-------------------------------|---------|-------|----------|----------|--------|-----------|
| -----                         |         |       |          |          |        |           |
| Internal Standards            |         |       |          |          |        |           |
| 1) 1,4-Difluorobenzene        | 6.243   | 114   | 143070   | 50.000   | ug/L   | 0.00      |
| 28) Chlorobenzene-d5          | 9.414   | 117   | 134589   | 50.000   | ug/L   | 0.00      |
| 58) 1,4-Dichlorobenzene-d4    | 11.809  | 152   | 66446    | 50.000   | ug/L   | 0.00      |
| System Monitoring Compounds   |         |       |          |          |        |           |
| 4) Vinyl Chloride-d3          | 1.597   | 65    | 55130    | 41.768   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 60 - 135 | Recovery | =      | 83.540%   |
| 7) Chloroethane-d5            | 1.909   | 69    | 46360    | 43.423   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 70 - 130 | Recovery | =      | 86.840%   |
| 11) 1,1-Dichloroethene-d2     | 2.562   | 63    | 70412    | 30.795   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 60 - 125 | Recovery | =      | 61.580%   |
| 21) 2-Butanone-d5             | 4.610   | 46    | 82779    | 135.221  | ug/L   | 0.00      |
| Spiked Amount                 | 100.000 | Range | 40 - 130 | Recovery | =      | 135.220%# |
| 24) Chloroform-d              | 5.057   | 84    | 100075   | 46.034   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 70 - 125 | Recovery | =      | 92.060%   |
| 26) 1,2-Dichloroethane-d4     | 5.697   | 65    | 68288    | 50.579   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 70 - 125 | Recovery | =      | 101.160%  |
| 32) Benzene-d6                | 5.722   | 84    | 209191   | 47.920   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 70 - 125 | Recovery | =      | 95.840%   |
| 36) 1,2-Dichloropropane-d6    | 6.684   | 67    | 73482    | 52.155   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 70 - 120 | Recovery | =      | 104.300%  |
| 41) Toluene-d8                | 7.893   | 98    | 194127   | 47.763   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 80 - 120 | Recovery | =      | 95.520%   |
| 43) trans-1,3-Dichloroprop... | 8.172   | 79    | 32134    | 46.226   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 60 - 125 | Recovery | =      | 92.460%   |
| 47) 2-Hexanone-d5             | 8.626   | 63    | 69936    | 158.771  | ug/L   | 0.00      |
| Spiked Amount                 | 100.000 | Range | 45 - 130 | Recovery | =      | 158.770%# |
| 56) 1,1,2,2-Tetrachloroeth... | 10.751  | 84    | 106164   | 58.167   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 65 - 120 | Recovery | =      | 116.340%  |
| 66) 1,2-Dichlorobenzene-d4    | 12.188  | 152   | 67195    | 52.228   | ug/L   | 0.00      |
| Spiked Amount                 | 50.000  | Range | 80 - 120 | Recovery | =      | 104.460%  |
| Target Compounds              |         |       |          |          |        |           |
|                               |         |       |          |          | Qvalue |           |
| 5) Vinyl chloride             | 1.604   | 62    | 2457     | 1.632    | ug/L # | 1         |
| 13) Acetone                   | 2.616   | 43    | 27866    | 39.967   | ug/L   | 99        |
| 14) Carbon disulfide          | 2.793   | 76    | 2292     | 0.720    | ug/L # | 76        |
| 15) Methyl Acetate            | 2.941   | 43    | 17783    | 18.608   | ug/L   | 95        |
| 20) cis-1,2-Dichloroethene    | 4.665   | 96    | 2714     | 2.167    | ug/L   | 96        |
| 22) 2-Butanone                | 4.697   | 43    | 25087    | 31.583   | ug/L   | 98        |
| 27) 1,2-Dichloroethane        | 5.777   | 62    | 61957    | 36.042   | ug/L # | 84        |
| 29) Cyclohexane               | 5.385   | 56    | 200233   | 99.845   | ug/L   | 99        |
| 33) Benzene                   | 5.771   | 78    | 4385992  | 939.973  | ug/L   | 100       |
| 34) Trichloroethene           | 6.539   | 95    | 1022     | 0.840    | ug/L   | 92        |
| 35) Methylcyclohexane         | 6.758   | 83    | 113618   | 53.276   | ug/L   | 95        |
| 39) cis-1,3-Dichloropropene   | 7.558   | 75    | 2353     | 1.100    | ug/L # | 67        |
| 40) 4-Methyl-2-pentanone      | 7.783   | 43    | 28075    | 20.982   | ug/L   | 99        |
| 42) Toluene                   | 7.963   | 91    | 142824   | 28.471   | ug/L   | 97        |
| 45) 1,1,2-Trichloroethane     | 8.362   | 97    | 4354     | 3.673    | ug/L # | 19        |
| 51) Chlorobenzene             | 9.443   | 112   | 1817806  | 581.423  | ug/L   | 99        |
| 52) Ethylbenzene              | 9.565   | 91    | 553230   | 97.251   | ug/L   | 99        |
| 53) m,p-Xylene                | 9.690   | 106   | 227498   | 107.147  | ug/L   | 100       |
| 54) o-Xylene                  | 10.095  | 106   | 9896     | 4.712    | ug/L   | 93        |

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Misc : 5.0mL/MSVOA\_U/WATER  
ALS Vial : 38 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

Quant Time: Mar 18 05:00:15 2023  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_U\Method\SFAMULM031523WMA.M  
Quant Title : VOC Analysis  
QLast Update : Sat Mar 18 04:29:10 2023  
Response via : Initial Calibration

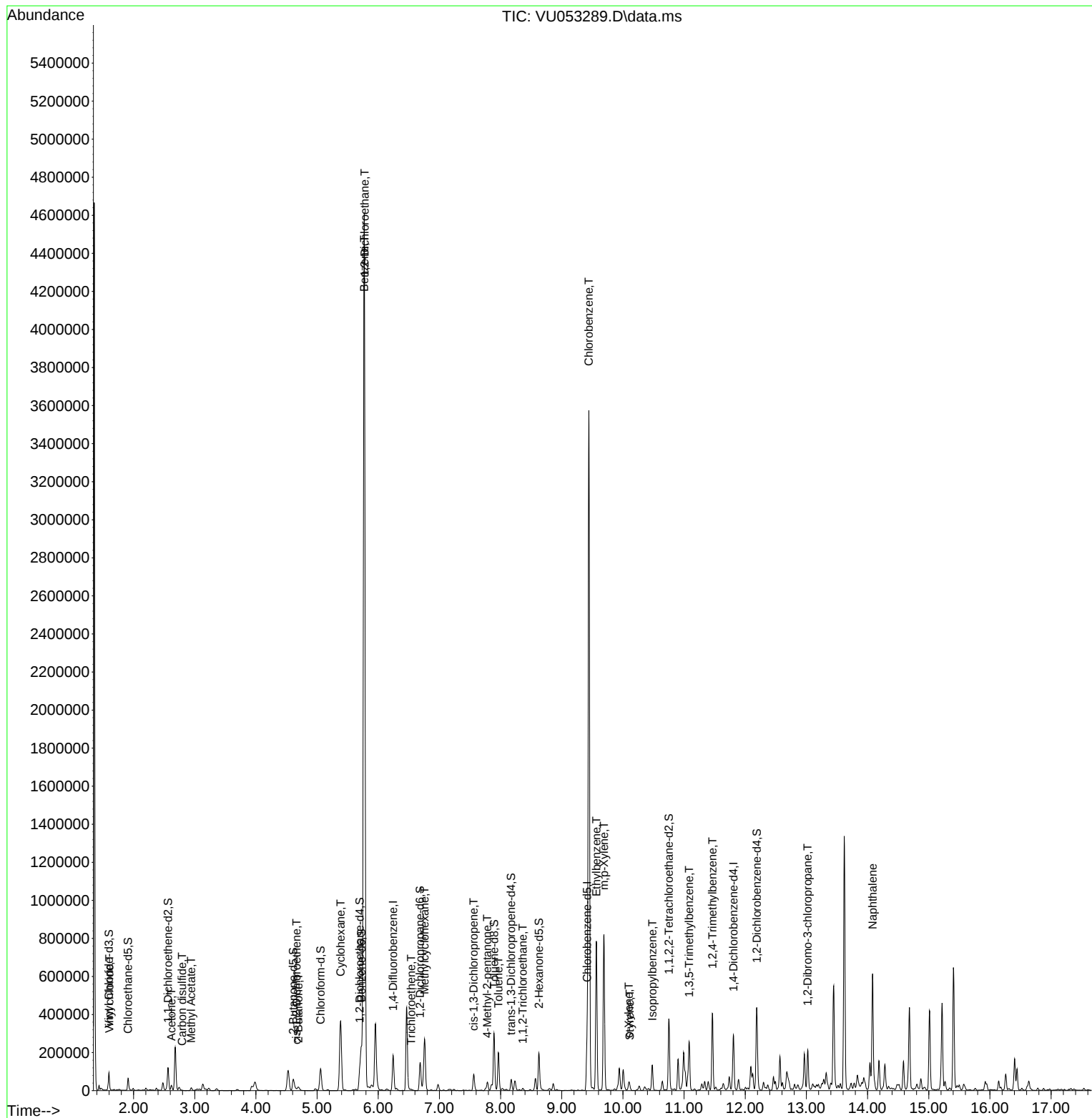
| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 55) Styrene                   | 10.111 | 104  | 10015    | 2.862   | ug/L   | 92       |
| 61) Isopropylbenzene          | 10.481 | 105  | 85489    | 16.284  | ug/L   | 99       |
| 62) 1,3,5-Trimethylbenzene    | 11.082 | 105  | 134763   | 31.011  | ug/L   | 100      |
| 63) 1,2,4-Trimethylbenzene    | 11.462 | 105  | 220947   | 52.161  | ug/L   | 100      |
| 68) 1,2-Dibromo-3-chloropr... | 13.021 | 75   | 1412     | 3.867   | ug/L # | 7        |
| 71) Naphthalene               | 14.082 | 128  | 454745   | 107.564 | ug/L   | 99       |

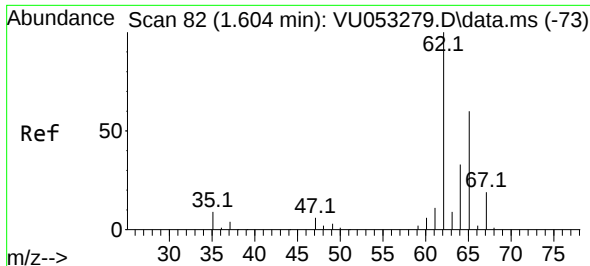
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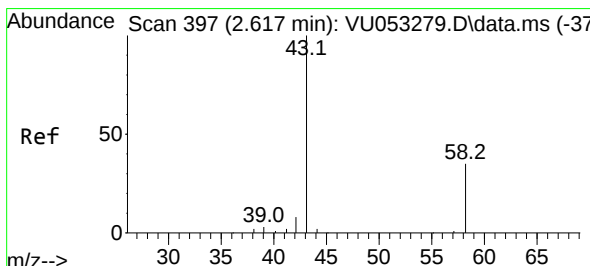
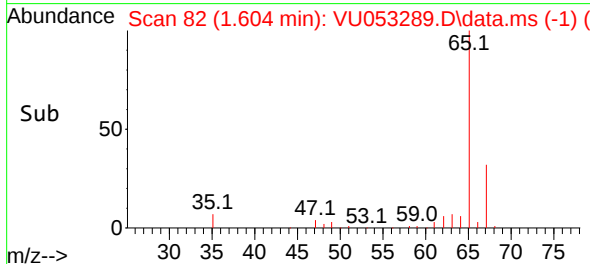
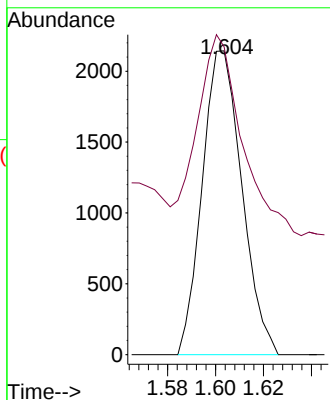
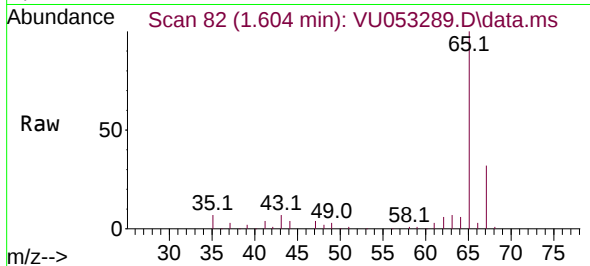




#5  
 Vinyl chloride  
 Concen: 1.632 ug/L  
 RT: 1.604 min Scan# 81  
 Delta R.T. -0.000 min  
 Lab File: VU053289.D  
 Acq: 18 Mar 2023 00:20

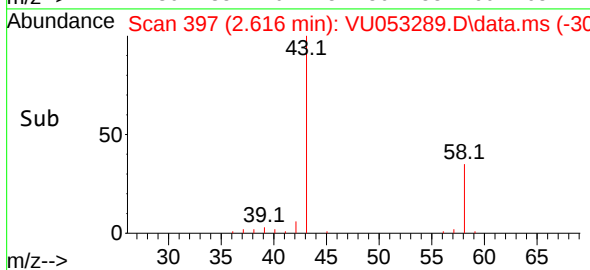
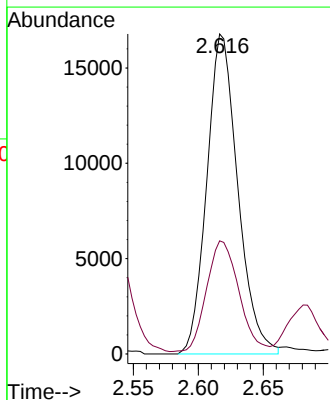
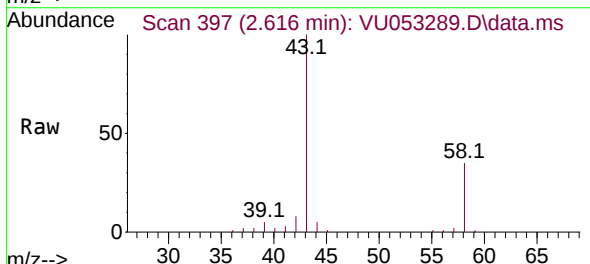
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 E0287

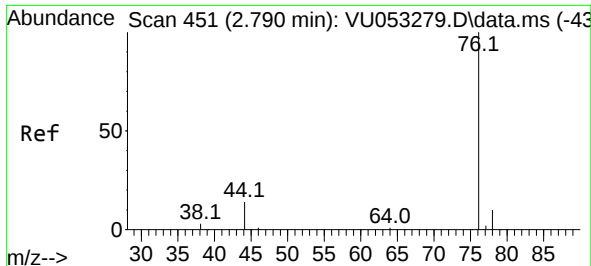
Tgt Ion: 62 Resp: 2457  
 Ion Ratio Lower Upper  
 62 100  
 64 101.3 23.2 43.0#



#13  
 Acetone  
 Concen: 39.967 ug/L  
 RT: 2.616 min Scan# 397  
 Delta R.T. -0.000 min  
 Lab File: VU053289.D  
 Acq: 18 Mar 2023 00:20

Tgt Ion: 43 Resp: 27866  
 Ion Ratio Lower Upper  
 43 100  
 58 37.9 0.0 75.0

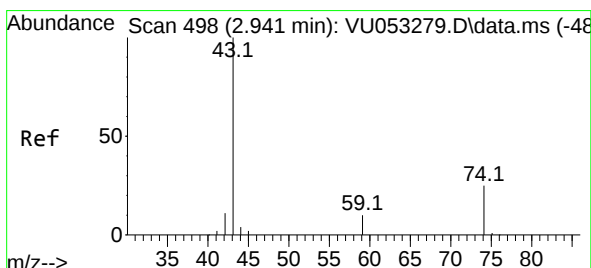
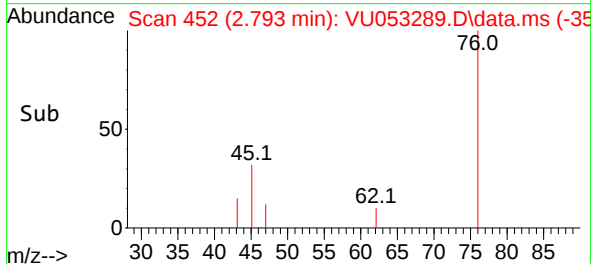
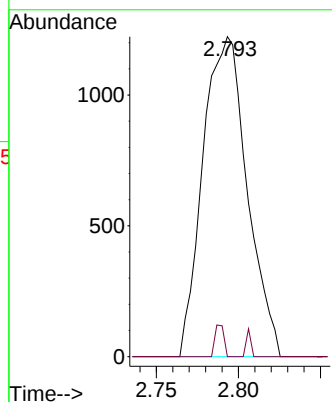
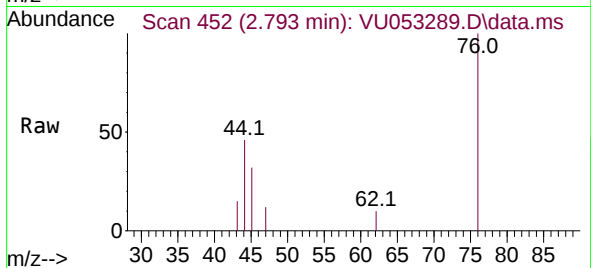




#14  
Carbon disulfide  
Concen: 0.720 ug/L  
RT: 2.793 min Scan# 411  
Delta R.T. 0.003 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

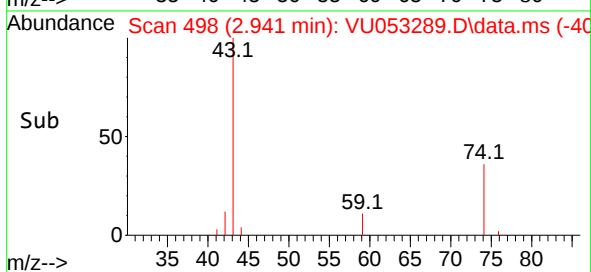
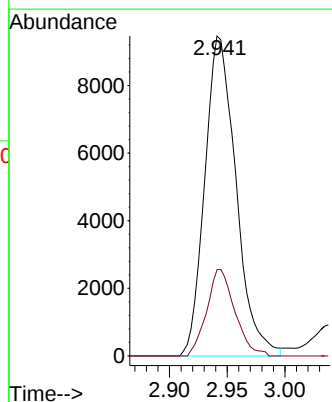
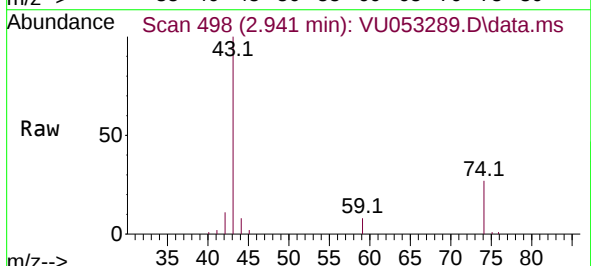
Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

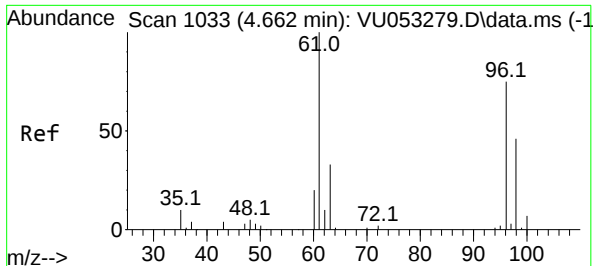
Tgt Ion: 76 Resp: 2292  
Ion Ratio Lower Upper  
76 100  
78 0.0 7.0 10.6#



#15  
Methyl Acetate  
Concen: 18.608 ug/L  
RT: 2.941 min Scan# 498  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

Tgt Ion: 43 Resp: 17783  
Ion Ratio Lower Upper  
43 100  
74 24.3 21.4 32.0

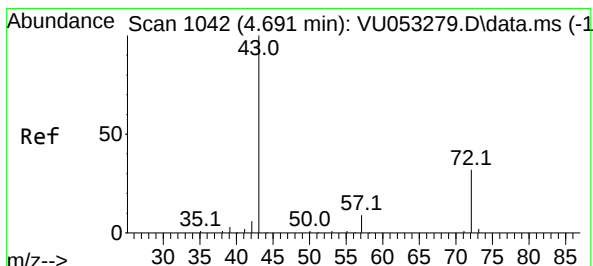
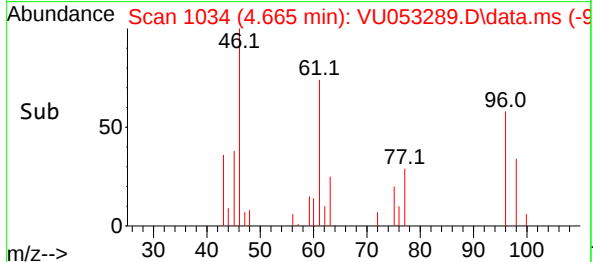
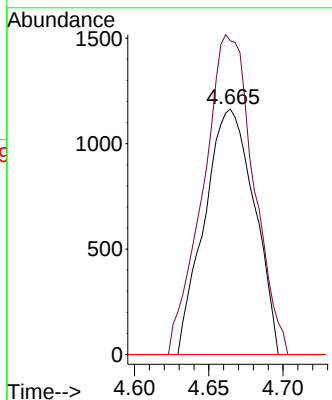
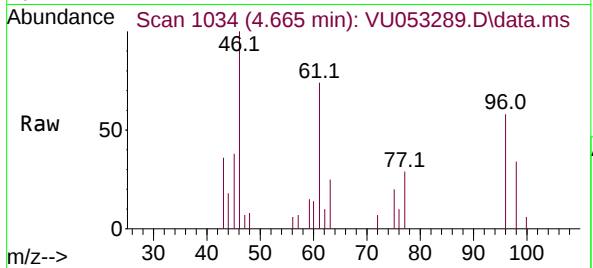




#20  
 cis-1,2-Dichloroethene  
 Concen: 2.167 ug/L  
 RT: 4.665 min Scan# 1033  
 Delta R.T. 0.003 min  
 Lab File: VU053289.D  
 Acq: 18 Mar 2023 00:20

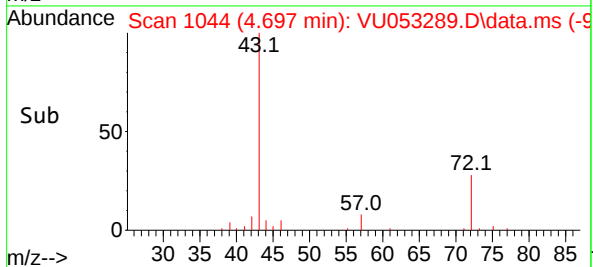
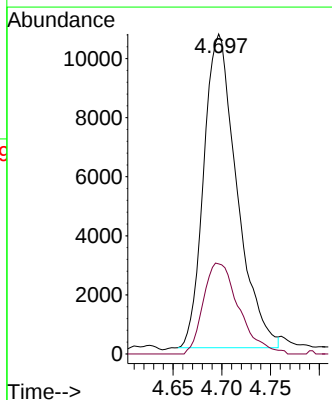
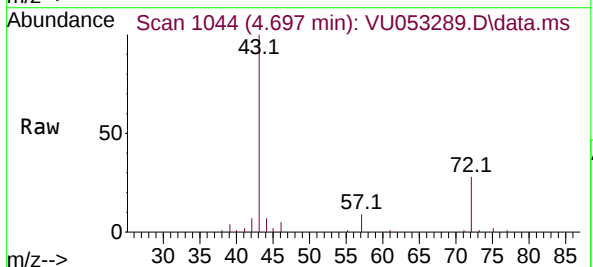
Instrument :  
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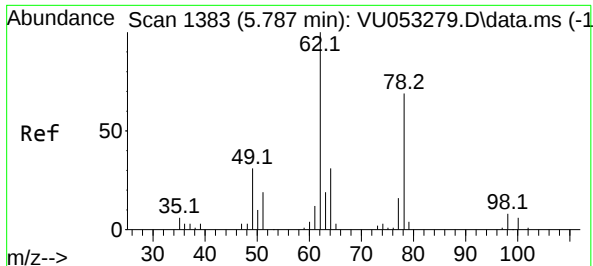
|             |             |
|-------------|-------------|
| Tgt Ion: 96 | Resp: 2714  |
| Ion Ratio   | Lower Upper |
| 96 100      |             |
| 61 127.8    | 92.5 171.7  |
| 68 0.0      | 0.0 0.0     |



#22  
 2-Butanone  
 Concen: 31.583 ug/L  
 RT: 4.697 min Scan# 1044  
 Delta R.T. 0.006 min  
 Lab File: VU053289.D  
 Acq: 18 Mar 2023 00:20

|             |             |       |  |
|-------------|-------------|-------|--|
| Tgt Ion: 43 | Resp: 25087 |       |  |
| Ion Ratio   | Lower       | Upper |  |
| 43 100      |             |       |  |
| 72 31.1     | 16.0        | 47.9  |  |





#27

1,2-Dichloroethane

Concen: 36.042 ug/L

RT: 5.777 min Scan# 11

Delta R.T. -0.010 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

Instrument :

MSVOA\_U

ClientSampleId :

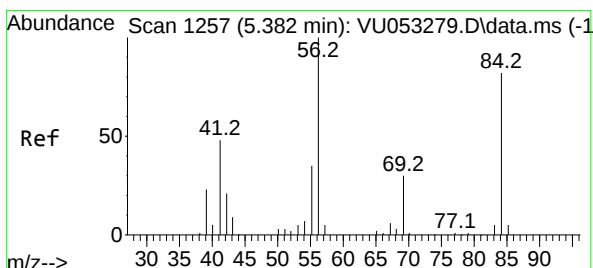
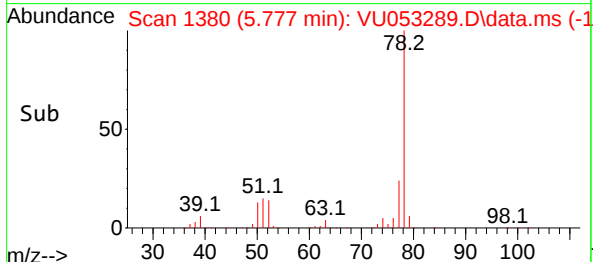
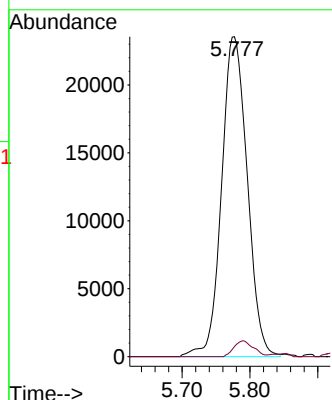
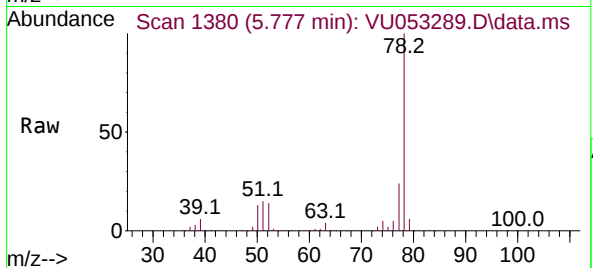
E0287

Tgt Ion: 62 Resp: 61957

Ion Ratio Lower Upper

62 100

98 3.1 7.0 10.6#



#29

Cyclohexane

Concen: 99.845 ug/L

RT: 5.385 min Scan# 1258

Delta R.T. 0.003 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

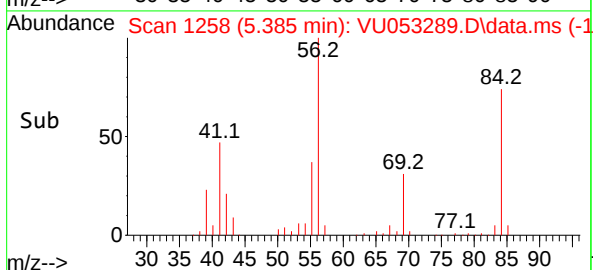
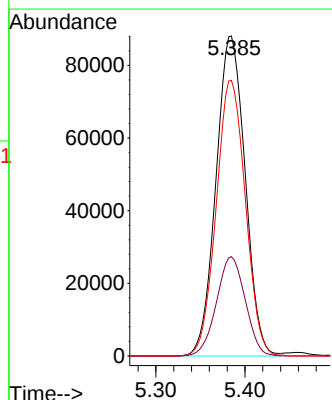
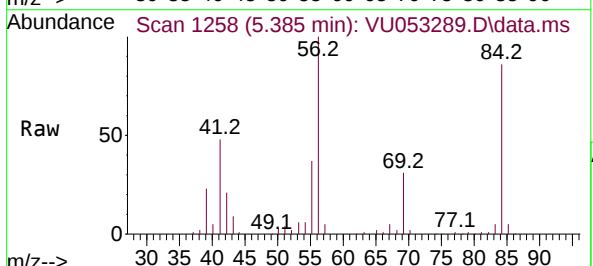
Tgt Ion: 56 Resp: 200233

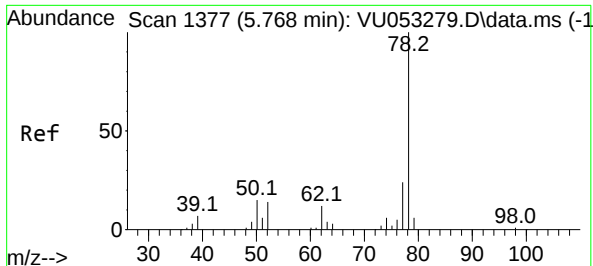
Ion Ratio Lower Upper

56 100

69 30.6 25.4 38.0

84 86.2 69.0 103.6





#33

Benzene

Concen: 939.973 ug/L

RT: 5.771 min Scan# 11

Delta R.T. 0.003 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

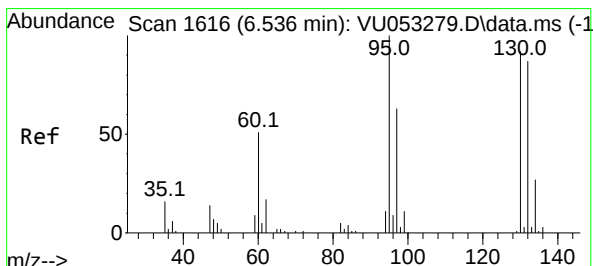
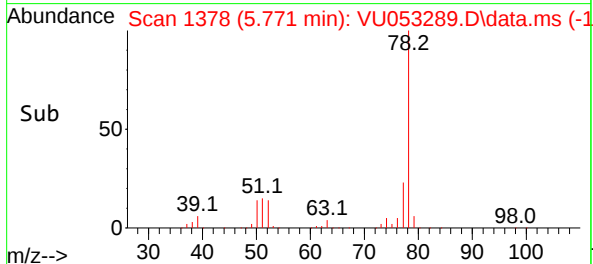
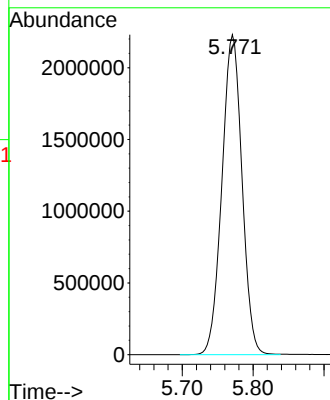
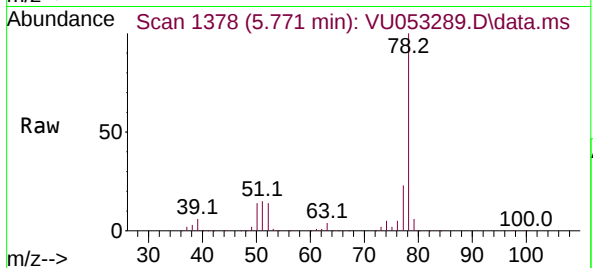
Instrument :

MSVOA\_U

ClientSampleId :

E0287

Tgt Ion: 78 Resp: 4385992



#34

Trichloroethene

Concen: 0.840 ug/L

RT: 6.539 min Scan# 1617

Delta R.T. 0.003 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

Tgt Ion: 95 Resp: 1022

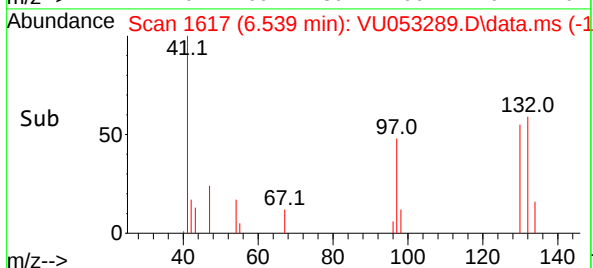
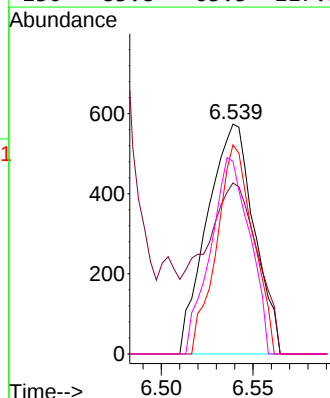
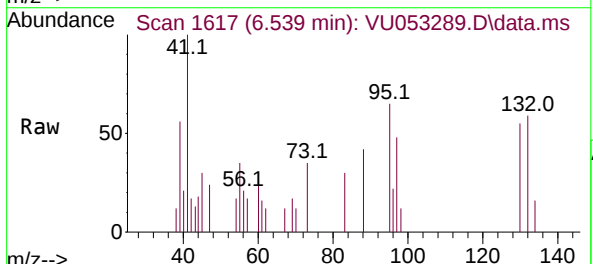
Ion Ratio Lower Upper

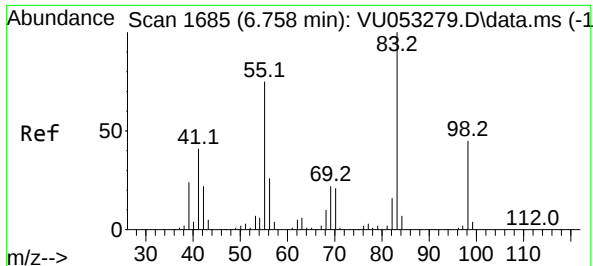
95 100

97 74.4 43.8 81.3

132 90.9 61.5 114.3

130 83.8 63.3 117.5

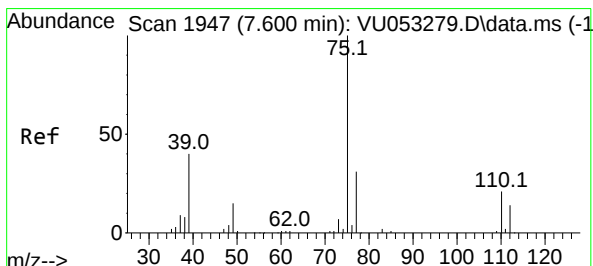
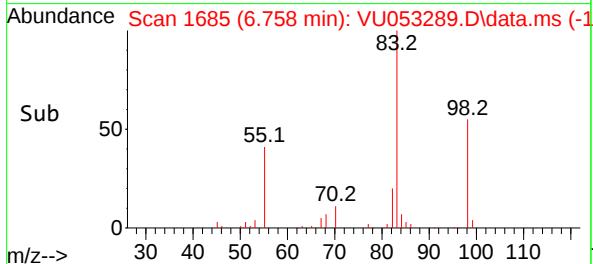
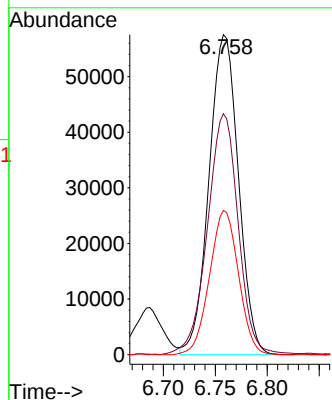
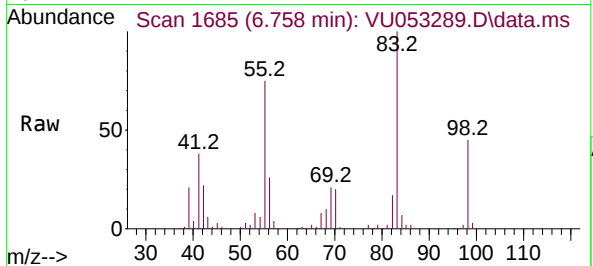




#35  
Methylcyclohexane  
Concen: 53.276 ug/L  
RT: 6.758 min Scan# 11  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

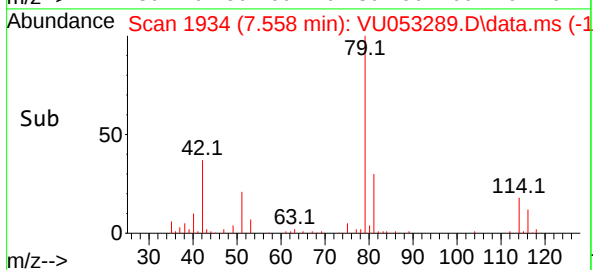
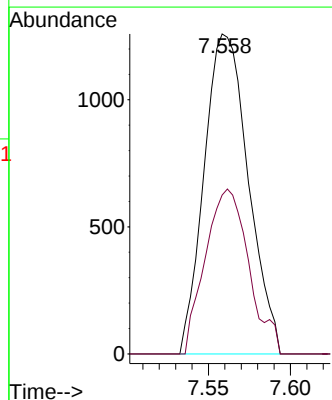
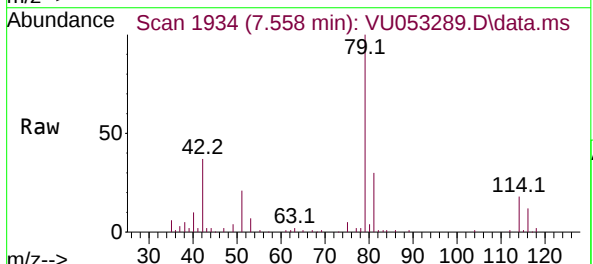
Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

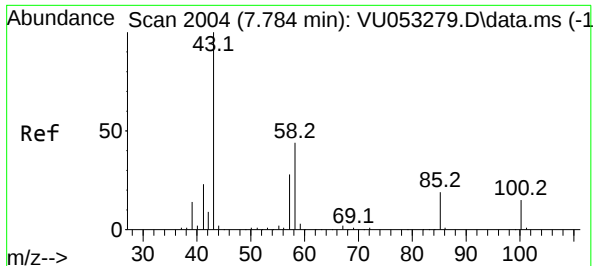
Tgt Ion: 83 Resp: 113618  
Ion Ratio Lower Upper  
83 100  
55 78.9 58.2 87.4  
98 44.3 35.4 53.2



#39  
cis-1,3-Dichloropropene  
Concen: 1.100 ug/L  
RT: 7.558 min Scan# 1934  
Delta R.T. -0.042 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

Tgt Ion: 75 Resp: 2353  
Ion Ratio Lower Upper  
75 100  
77 49.6 21.9 40.7#





#40

4-Methyl-2-pentanone

Concen: 20.982 ug/L

RT: 7.783 min Scan# 2004

Delta R.T. -0.000 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

Instrument :

MSVOA\_U

ClientSampleId :

E0287

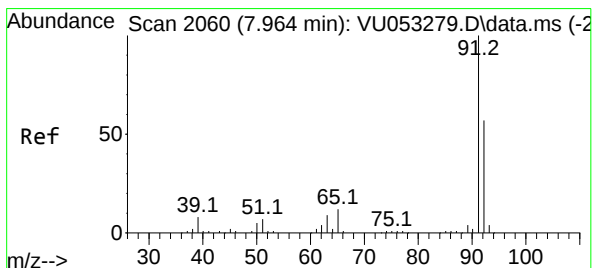
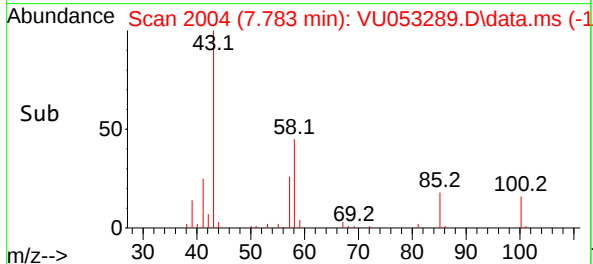
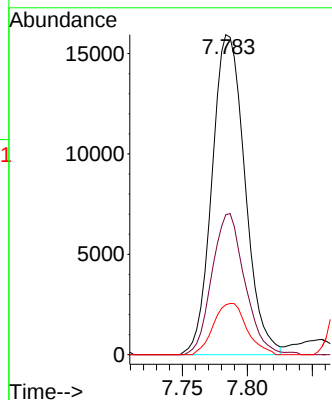
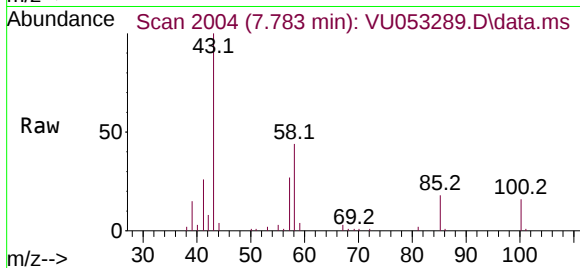
Tgt Ion: 43 Resp: 28075

Ion Ratio Lower Upper

43 100

58 43.9 35.8 53.6

100 16.2 13.0 19.6



#42

Toluene

Concen: 28.471 ug/L

RT: 7.963 min Scan# 2060

Delta R.T. -0.000 min

Lab File: VU053289.D

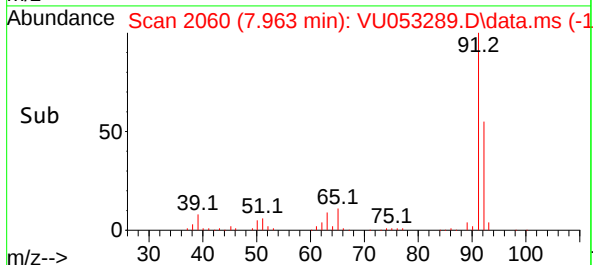
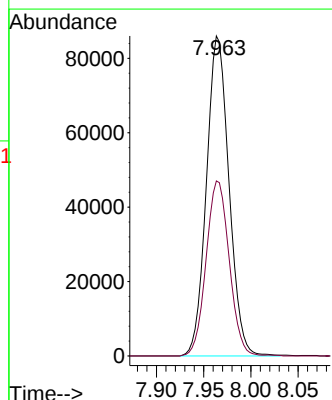
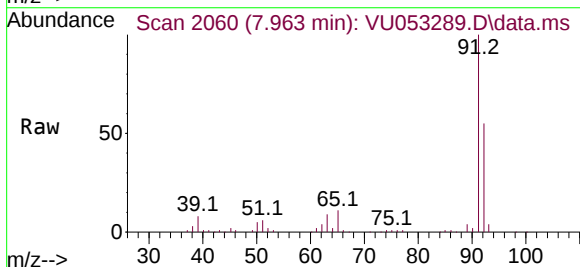
Acq: 18 Mar 2023 00:20

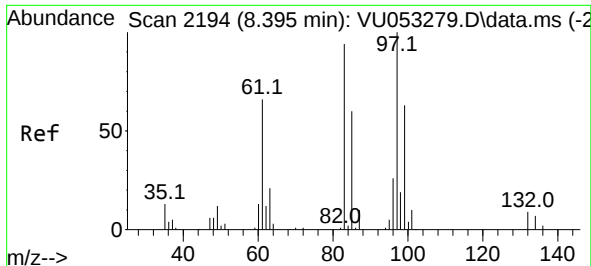
Tgt Ion: 91 Resp: 142824

Ion Ratio Lower Upper

91 100

92 54.7 39.6 73.6

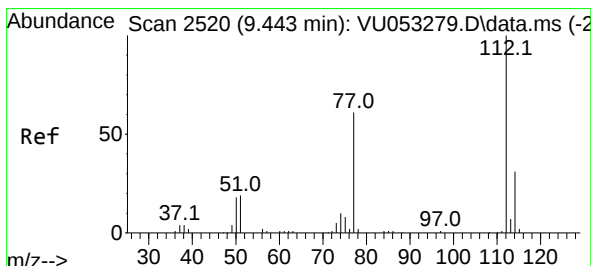
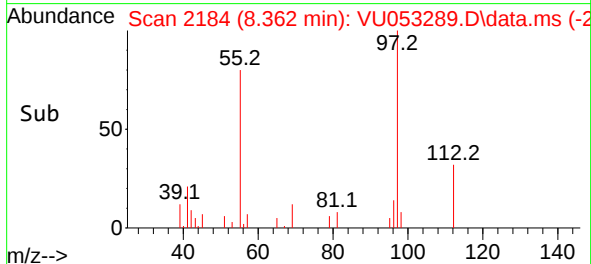
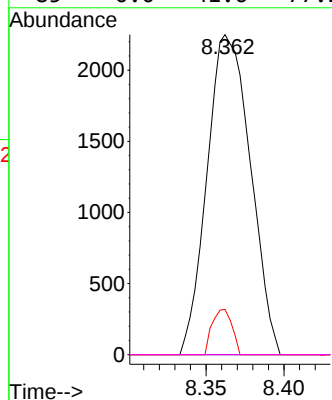
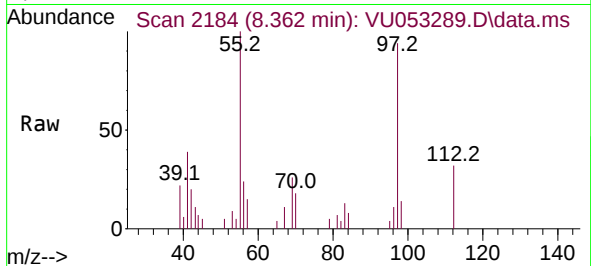




#45  
1,1,2-Trichloroethane  
Concen: 3.673 ug/L  
RT: 8.362 min Scan# 2194  
Delta R.T. -0.032 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

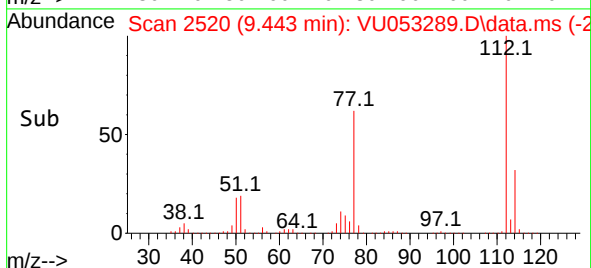
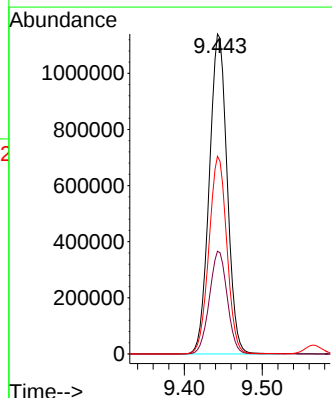
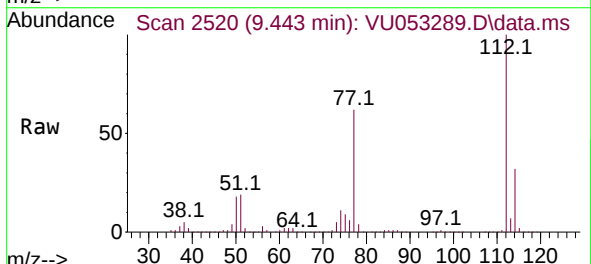
Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

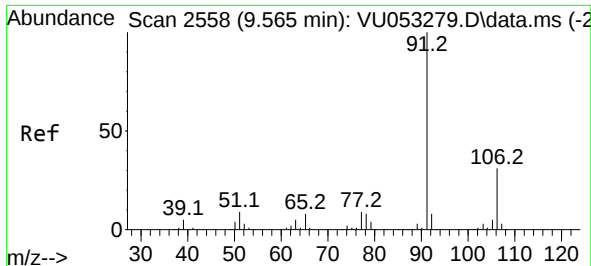
|             |             |
|-------------|-------------|
| Tgt Ion: 97 | Resp: 4354  |
| Ion Ratio   | Lower Upper |
| 97 100      |             |
| 99 0.0      | 44.4 82.4#  |
| 83 14.1     | 63.8 118.6# |
| 85 0.0      | 41.6 77.2#  |



#51  
Chlorobenzene  
Concen: 581.423 ug/L  
RT: 9.443 min Scan# 2520  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

|              |               |
|--------------|---------------|
| Tgt Ion: 112 | Resp: 1817806 |
| Ion Ratio    | Lower Upper   |
| 112 100      |               |
| 114 32.1     | 21.8 40.6     |
| 77 61.8      | 48.8 73.2     |

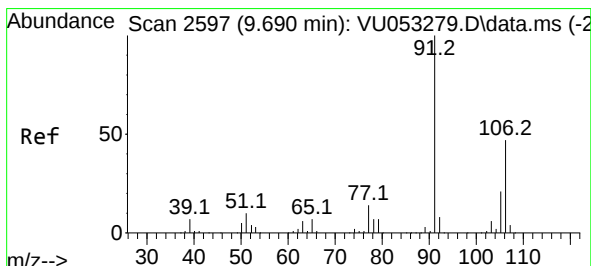
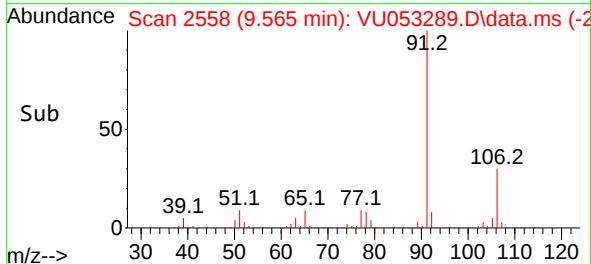
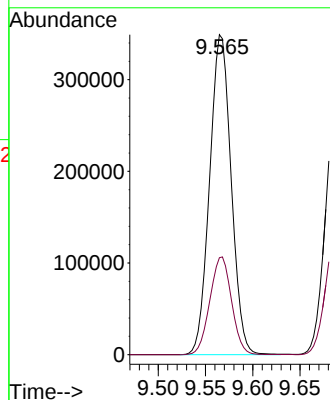
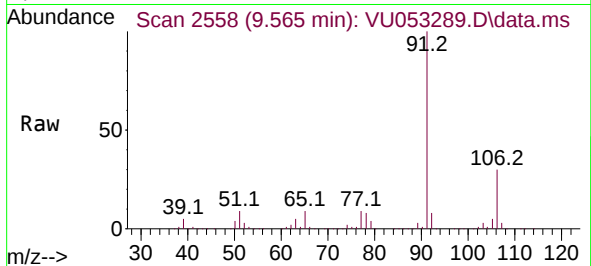




#52  
Ethylbenzene  
Concen: 97.251 ug/L  
RT: 9.565 min Scan# 2558  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

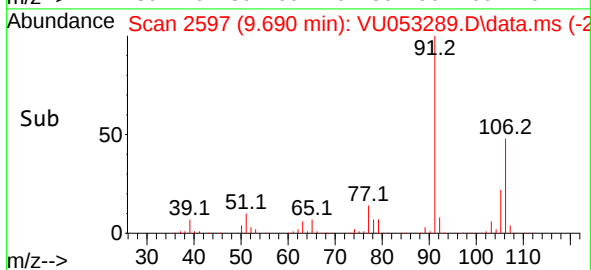
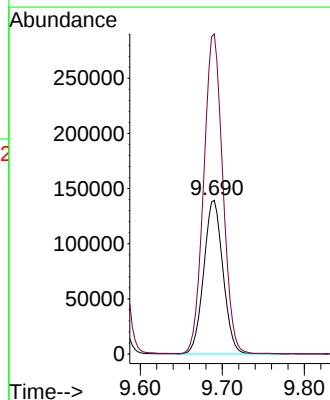
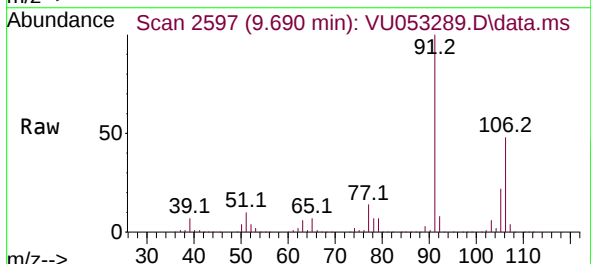
Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

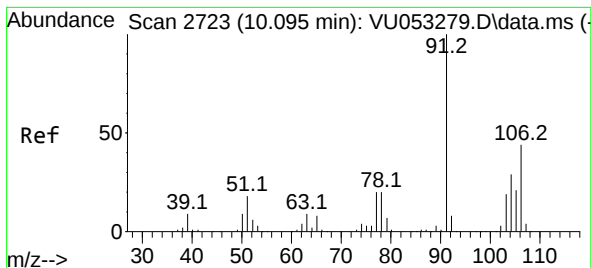
Tgt Ion: 91 Resp: 553230  
Ion Ratio Lower Upper  
91 100  
106 30.3 21.6 40.0



#53  
m,p-Xylene  
Concen: 107.147 ug/L  
RT: 9.690 min Scan# 2597  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

Tgt Ion: 106 Resp: 227498  
Ion Ratio Lower Upper  
106 100  
91 208.2 145.3 269.8





#54

o-Xylene

Concen: 4.712 ug/L

RT: 10.095 min Scan# 21

Delta R.T. -0.000 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

Instrument :

MSVOA\_U

ClientSampleId :

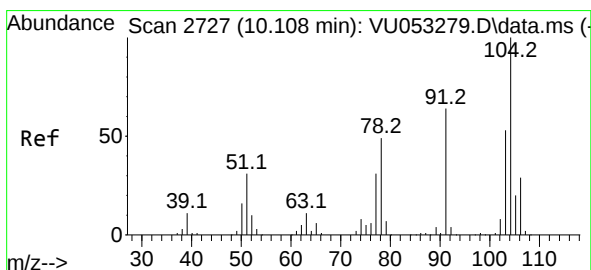
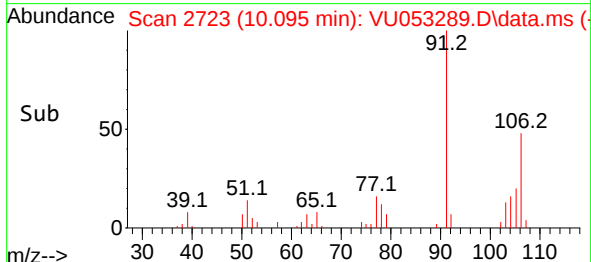
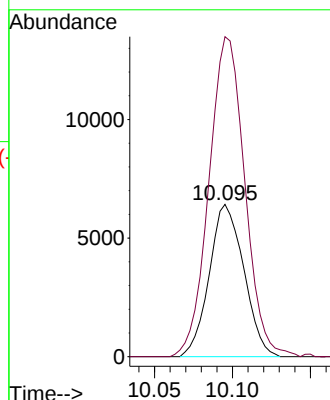
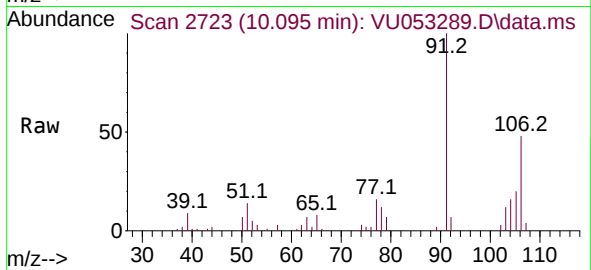
E0287

Tgt Ion:106 Resp: 9896

Ion Ratio Lower Upper

106 100

91 210.2 154.9 287.7



#55

Styrene

Concen: 2.862 ug/L

RT: 10.111 min Scan# 2728

Delta R.T. 0.003 min

Lab File: VU053289.D

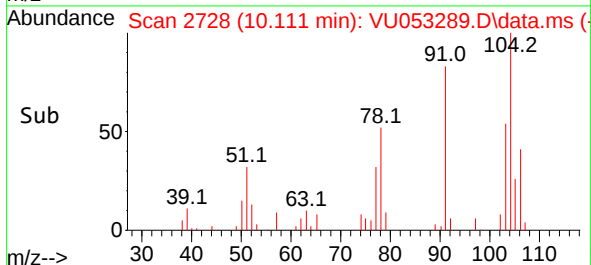
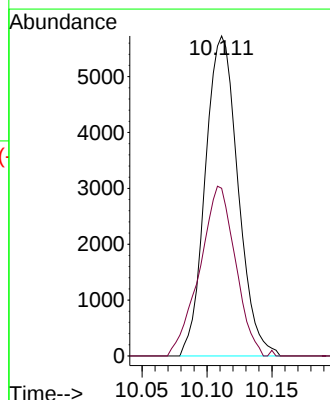
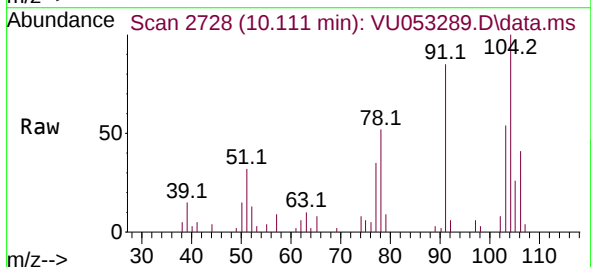
Acq: 18 Mar 2023 00:20

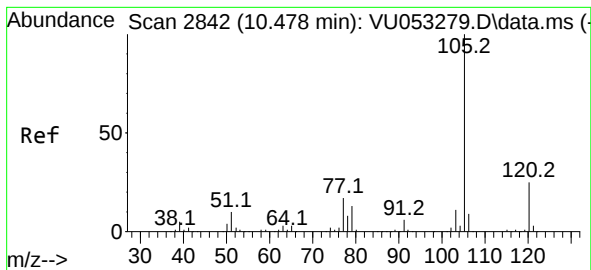
Tgt Ion:104 Resp: 10015

Ion Ratio Lower Upper

104 100

78 52.4 32.9 61.1





#61

Isopropylbenzene

Concen: 16.284 ug/L

RT: 10.481 min Scan# 2843

Delta R.T. 0.003 min

Lab File: VU053289.D

Acq: 18 Mar 2023 00:20

Instrument :

MSVOA\_U

ClientSampleId :

E0287

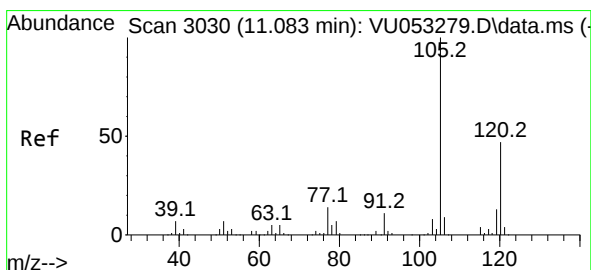
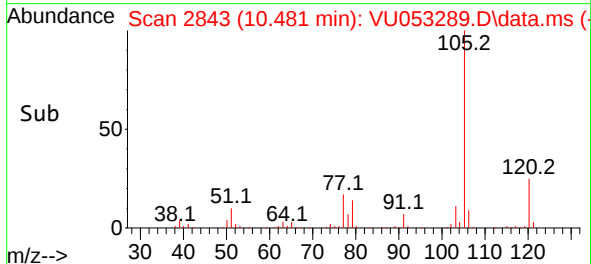
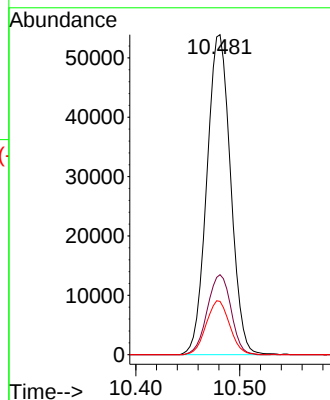
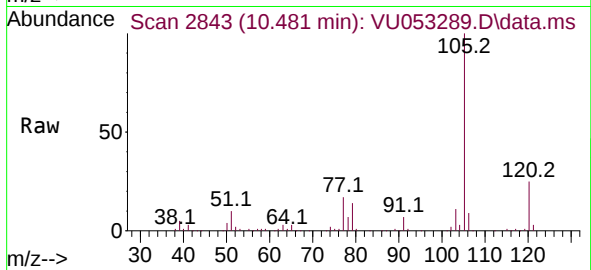
Tgt Ion:105 Resp: 85489

Ion Ratio Lower Upper

105 100

120 25.0 20.4 30.6

77 16.7 13.0 19.4



#62

1,3,5-Trimethylbenzene

Concen: 31.011 ug/L

RT: 11.082 min Scan# 3030

Delta R.T. -0.000 min

Lab File: VU053289.D

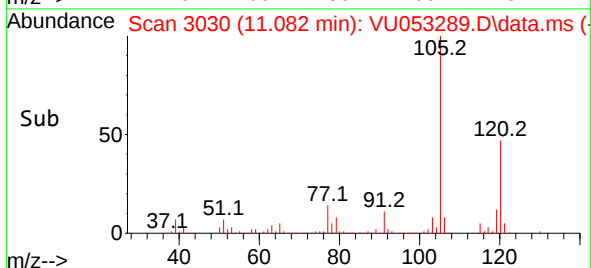
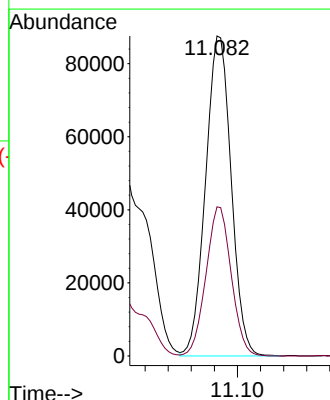
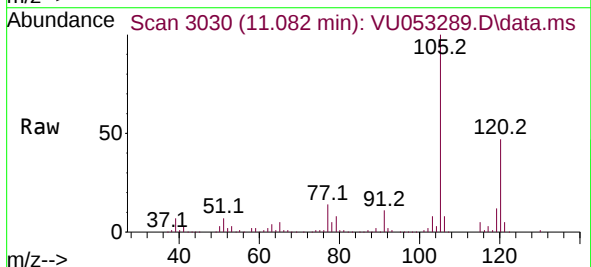
Acq: 18 Mar 2023 00:20

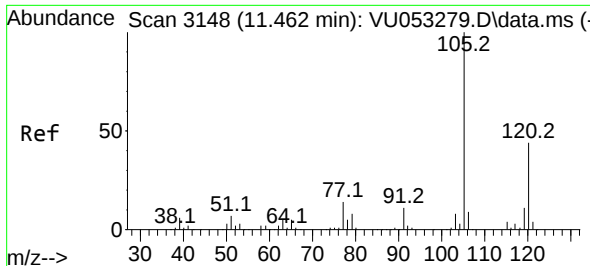
Tgt Ion:105 Resp: 134763

Ion Ratio Lower Upper

105 100

120 46.0 37.0 55.4

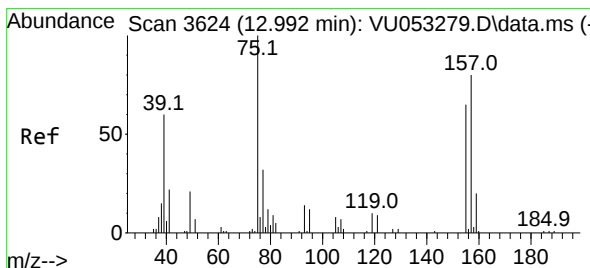
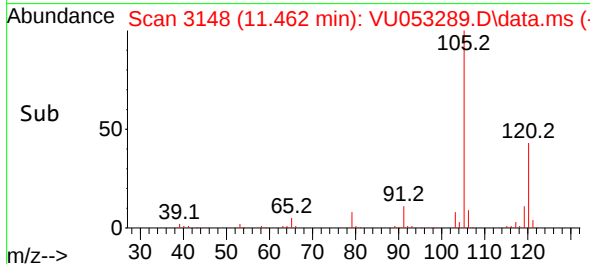
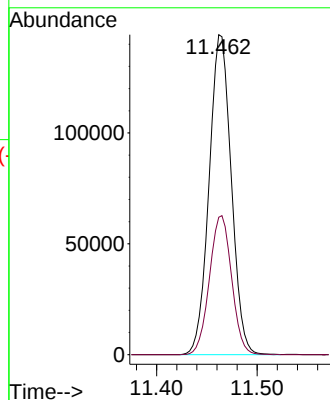
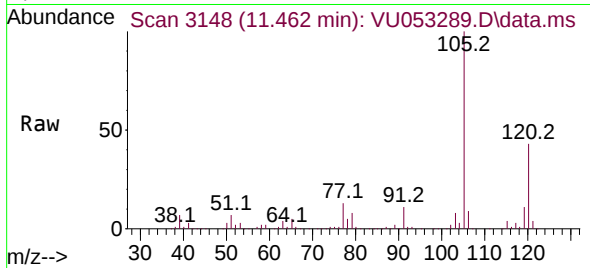




#63  
1,2,4-Trimethylbenzene  
Concen: 52.161 ug/L  
RT: 11.462 min Scan# 3148  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

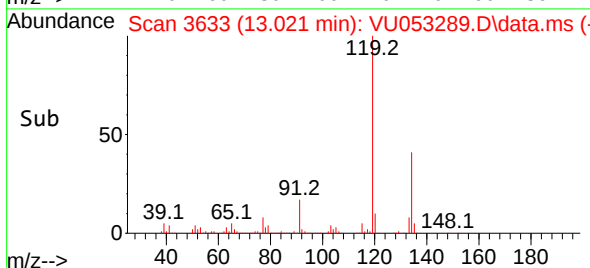
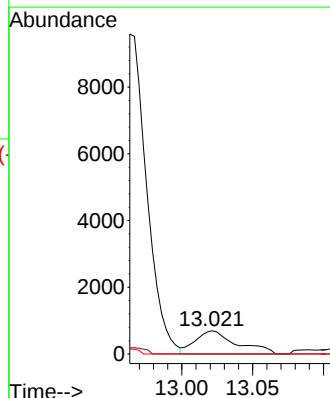
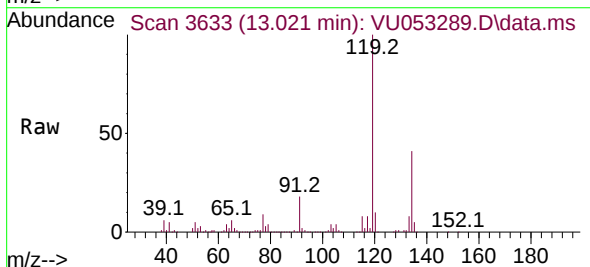
Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287

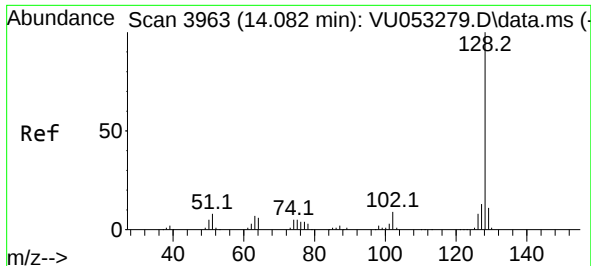
Tgt Ion:105 Resp: 220947  
Ion Ratio Lower Upper  
105 100  
120 43.5 34.6 52.0



#68  
1,2-Dibromo-3-chloropropane  
Concen: 3.867 ug/L  
RT: 13.021 min Scan# 3633  
Delta R.T. 0.029 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

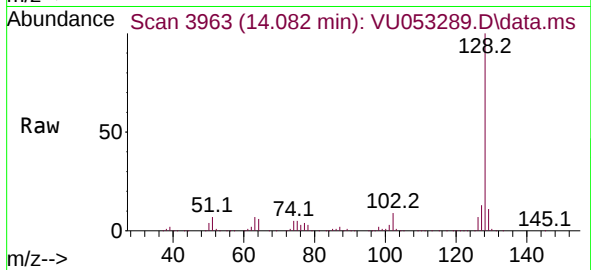
Tgt Ion: 75 Resp: 1412  
Ion Ratio Lower Upper  
75 100  
155 0.0 60.2 90.4#  
157 0.0 73.0 109.4#





#71  
Naphthalene  
Concen: 107.564 ug/L  
RT: 14.082 min Scan# 3963  
Delta R.T. -0.000 min  
Lab File: VU053289.D  
Acq: 18 Mar 2023 00:20

Instrument :  
MSVOA\_U  
ClientSampleId :  
E0287



Tgt Ion:128 Resp: 454745  
Ion Ratio Lower Upper  
128 100  
127 12.8 10.0 15.0  
129 11.2 8.6 13.0

