

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN071522\  
 Data File : VN073480.D  
 Acq On : 15 Jul 2022 12:53  
 Operator : JC\MD  
 Sample : N3697-01 20X  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 PIPELINE-PIGGING-TK2045L

Quant Time: Jul 16 04:12:57 2022  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\82N062822W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jun 29 01:54:03 2022  
 Response via : Initial Calibration

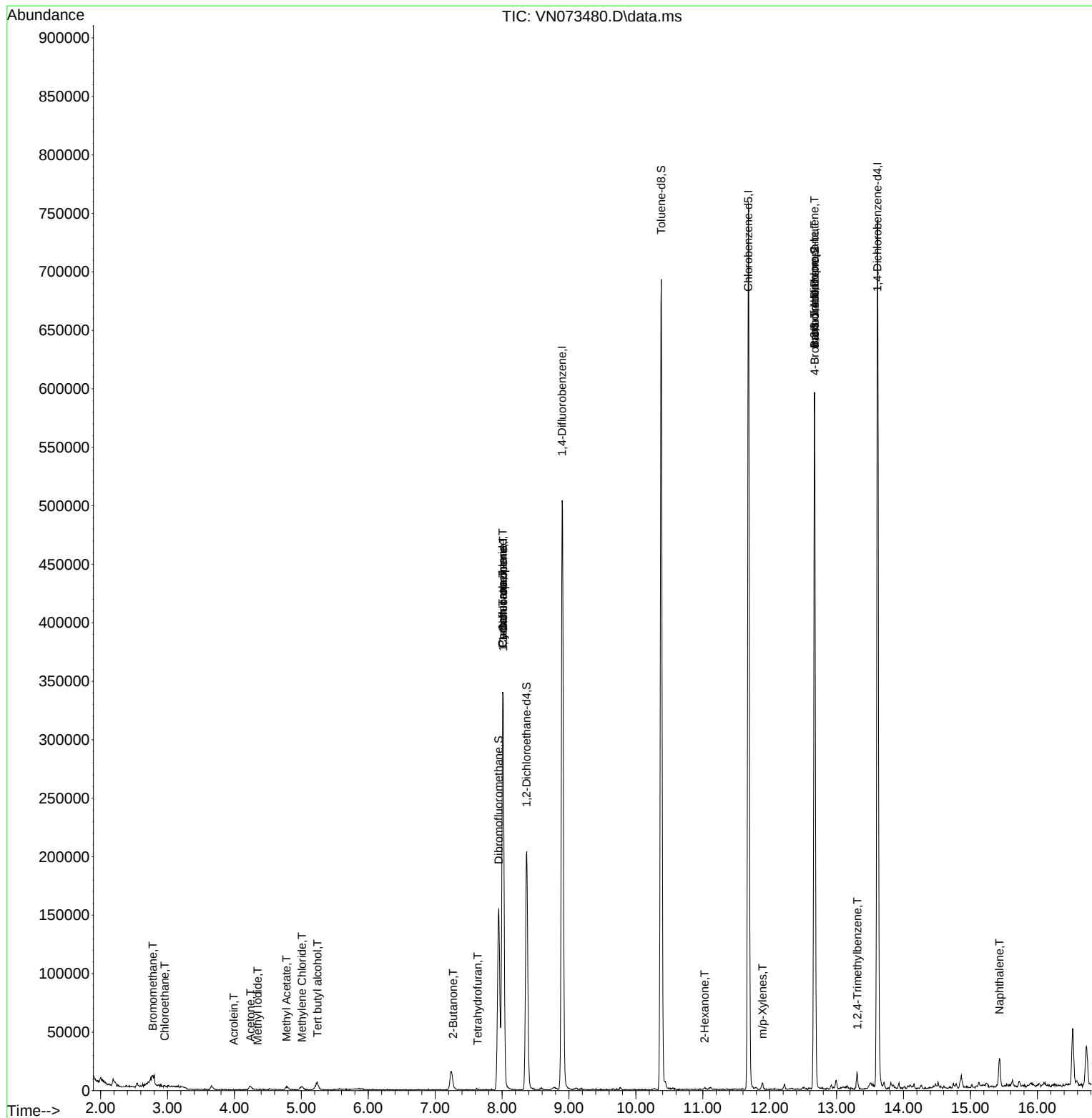
| Compound                      | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|-------------------------------|----------------|------|------------|----------|--------|----------|
| -----                         |                |      |            |          |        |          |
| Internal Standards            |                |      |            |          |        |          |
| 1) Pentafluorobenzene         | 8.010          | 168  | 255795     | 50.000   | ug/l   | 0.00     |
| 34) 1,4-Difluorobenzene       | 8.898          | 114  | 441452     | 50.000   | ug/l   | 0.00     |
| 63) Chlorobenzene-d5          | 11.680         | 117  | 420115     | 50.000   | ug/l   | 0.00     |
| 72) 1,4-Dichlorobenzene-d4    | 13.610         | 152  | 198887     | 50.000   | ug/l   | 0.00     |
|                               |                |      |            |          |        |          |
| System Monitoring Compounds   |                |      |            |          |        |          |
| 33) 1,2-Dichloroethane-d4     | 8.369          | 65   | 170251     | 46.105   | ug/l   | 0.00     |
| Spiked Amount 50.000          | Range 74 - 125 |      | Recovery = | 92.200%  |        |          |
| 35) Dibromofluoromethane      | 7.951          | 113  | 115022     | 39.162   | ug/l   | 0.00     |
| Spiked Amount 50.000          | Range 75 - 124 |      | Recovery = | 78.320%  |        |          |
| 50) Toluene-d8                | 10.380         | 98   | 472448     | 45.291   | ug/l   | 0.00     |
| Spiked Amount 50.000          | Range 86 - 113 |      | Recovery = | 90.580%  |        |          |
| 62) 4-Bromofluorobenzene      | 12.674         | 95   | 205421     | 51.243   | ug/l   | 0.00     |
| Spiked Amount 50.000          | Range 83 - 123 |      | Recovery = | 102.480% |        |          |
|                               |                |      |            |          |        |          |
| Target Compounds              |                |      |            |          |        | Qvalue   |
| 5) Bromomethane               | 2.781          | 94   | 469        | 0.322    | ug/l # | 54       |
| 6) Chloroethane               | 2.957          | 64   | 437        | 0.241    | ug/l # | 42       |
| 10) Methyl Iodide             | 4.345          | 142  | 130        | 3.764    | ug/l # | 44       |
| 11) Tert butyl alcohol        | 5.239          | 59   | 5683       | 6.353    | ug/l # | 72       |
| 13) Acrolein                  | 3.993          | 56   | 126        | 0.223    | ug/l # | 16       |
| 16) Acetone                   | 4.240          | 43   | 5942       | 2.867    | ug/l # | 80       |
| 18) Methyl Acetate            | 4.781          | 43   | 5374       | 0.925    | ug/l # | 73       |
| 20) Methylene Chloride        | 5.010          | 84   | 2491       | 0.684    | ug/l # | 76       |
| 25) 2-Butanone                | 7.269          | 43   | 1946       | 0.590    | ug/l # | 45       |
| 29) Tetrahydrofuran           | 7.633          | 42   | 607        | 0.269    | ug/l # | 51       |
| 31) Cyclohexane               | 8.010          | 56   | 6444       | 1.066    | ug/l # | 31       |
| 36) 1,1-Dichloropropene       | 8.016          | 75   | 22411      | 4.959    | ug/l # | 48       |
| 38) Carbon Tetrachloride      | 8.010          | 117  | 26929      | 5.762    | ug/l # | 18       |
| 59) 2-Hexanone                | 11.027         | 43   | 1298       | 0.274    | ug/l   | 71       |
| 68) m/p-Xylenes               | 11.892         | 106  | 1782       | 0.274    | ug/l   | 94       |
| 71) Bromoform                 | 12.668         | 173  | 1756       | 0.687    | ug/l # | 1        |
| 76) 1,2,3-Trichloropropane    | 12.668         | 75   | 106656     | 20.509   | ug/l # | 1        |
| 81) trans-1,4-Dichloro-2-b... | 12.668         | 75   | 106656     | 56.245   | ug/l # | 11       |
| 84) 1,2,4-Trimethylbenzene    | 13.310         | 105  | 7296       | 0.522    | ug/l   | 95       |
| 95) Naphthalene               | 15.433         | 128  | 22455      | 1.465    | ug/l   | 97       |
| -----                         |                |      |            |          |        |          |

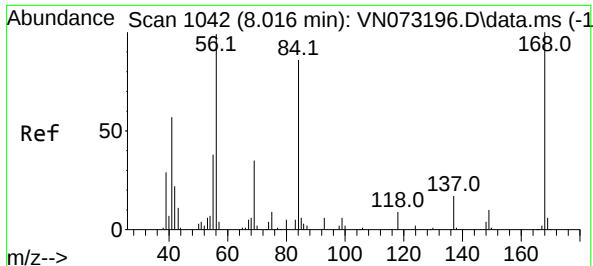
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
QLast Update : Wed Jun 29 01:54:03 2022  
Response via : Initial Calibration

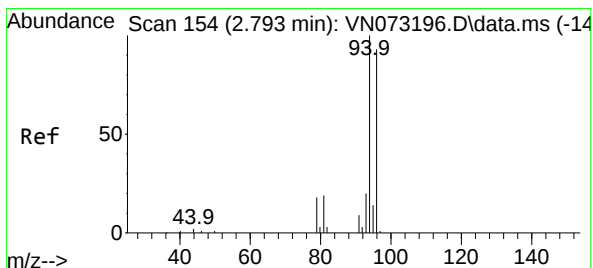
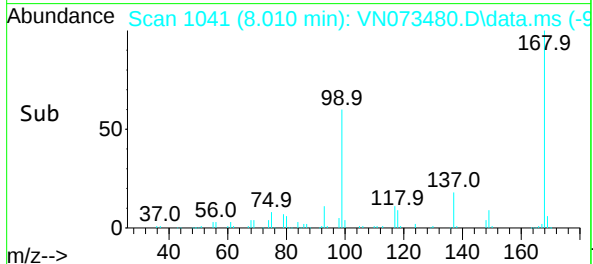
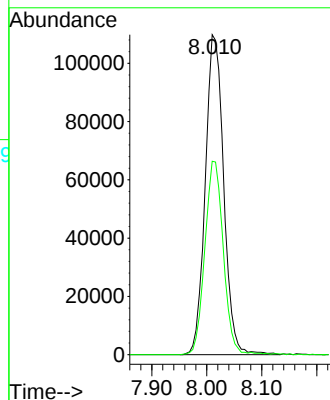
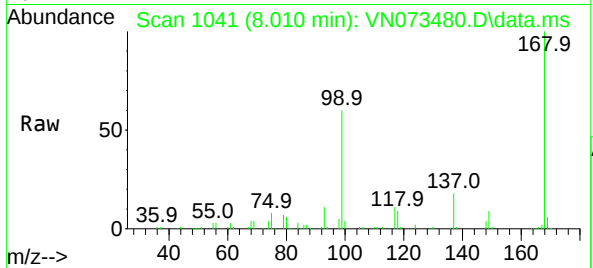




#1  
Pentafluorobenzene  
Concen: 50.000 ug/l  
RT: 8.010 min Scan# 1042  
Delta R.T. -0.006 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

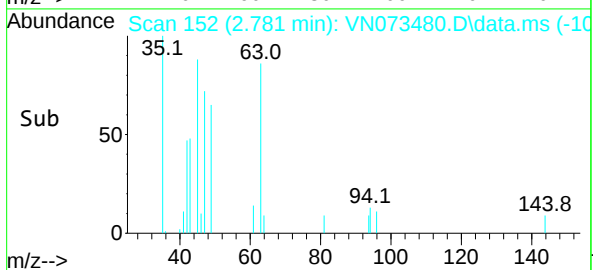
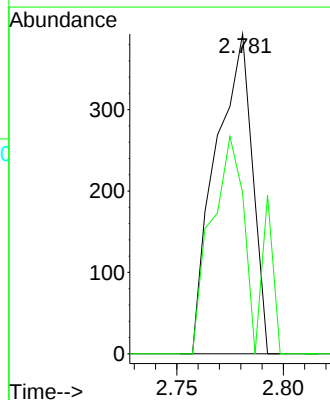
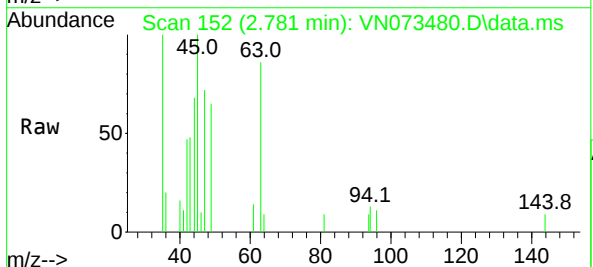
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

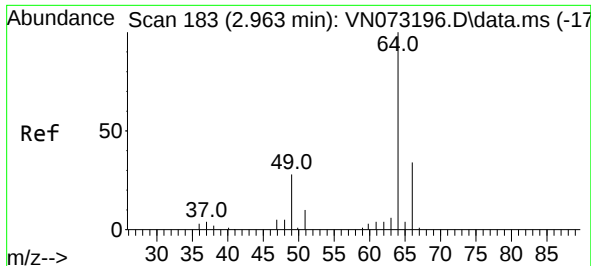
Tgt Ion:168 Resp: 255795  
Ion Ratio Lower Upper  
168 100  
99 60.5 42.3 63.5



#5  
Bromomethane  
Concen: 0.322 ug/l  
RT: 2.781 min Scan# 152  
Delta R.T. -0.012 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 94 Resp: 469  
Ion Ratio Lower Upper  
94 100  
96 50.4 76.0 114.0#

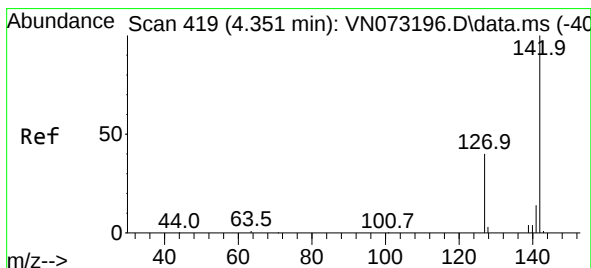
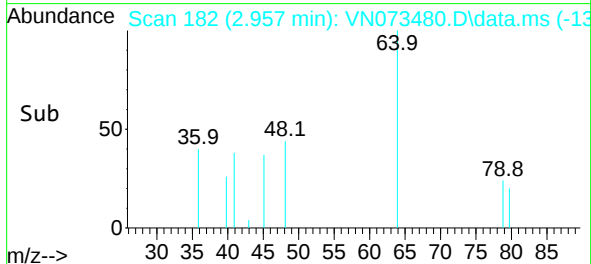
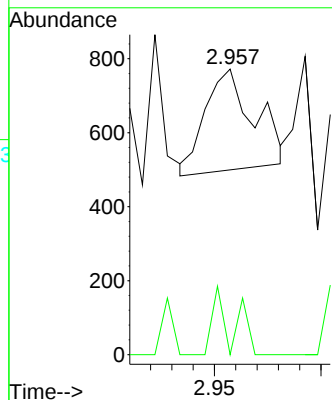
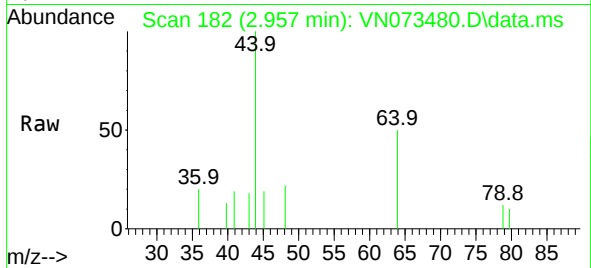




#6  
Chloroethane  
Concen: 0.241 ug/l  
RT: 2.957 min Scan# 11  
Delta R.T. -0.006 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

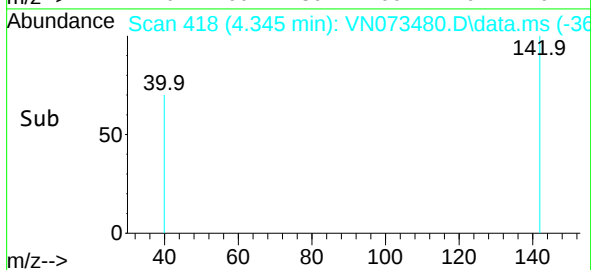
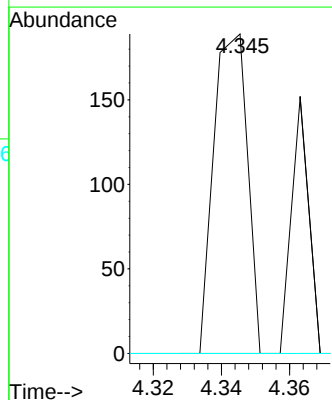
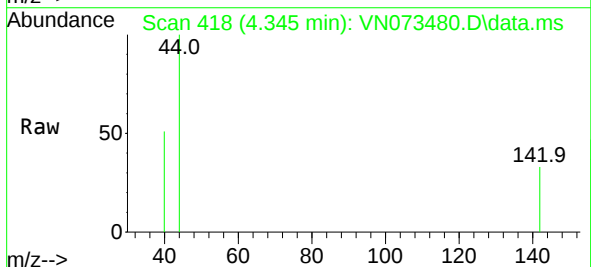
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

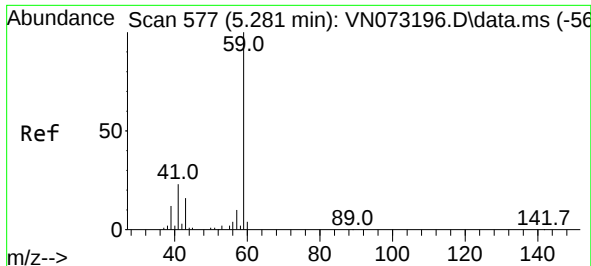
Tgt Ion: 64 Resp: 437  
Ion Ratio Lower Upper  
64 100  
66 0.0 26.2 39.4#



#10  
Methyl Iodide  
Concen: 3.764 ug/l  
RT: 4.345 min Scan# 418  
Delta R.T. -0.006 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 142 Resp: 130  
Ion Ratio Lower Upper  
142 100  
127 0.0 31.3 46.9#  
141 0.0 11.2 16.8#

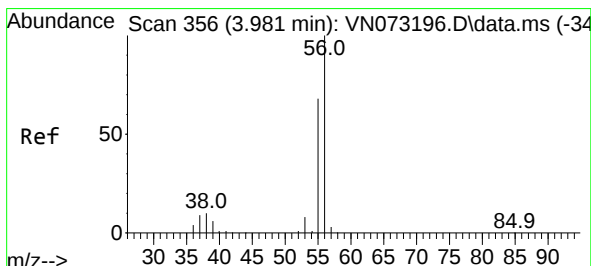
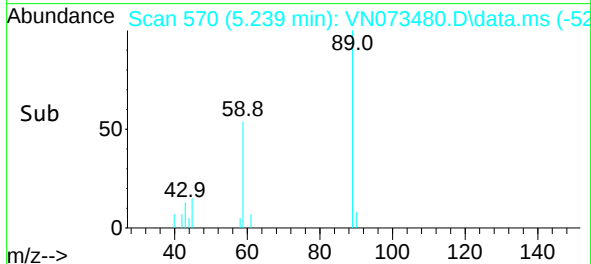
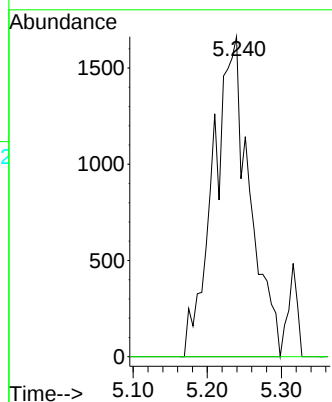
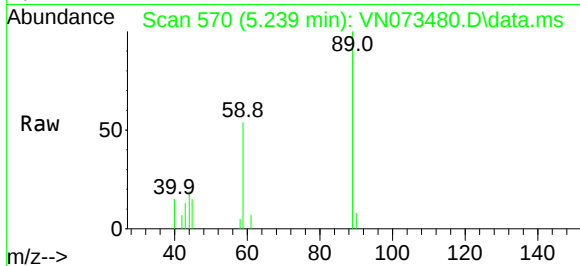




#11  
Tert butyl alcohol  
Concen: 6.353 ug/l  
RT: 5.239 min Scan# 51  
Delta R.T. -0.042 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

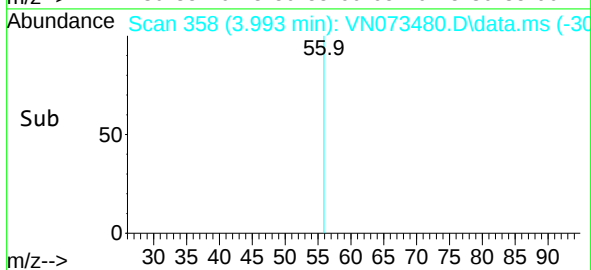
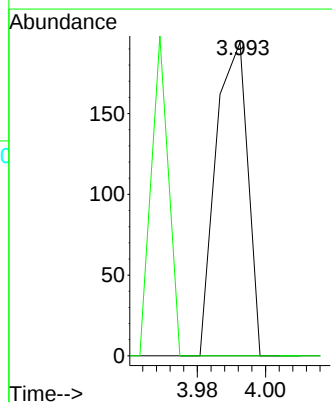
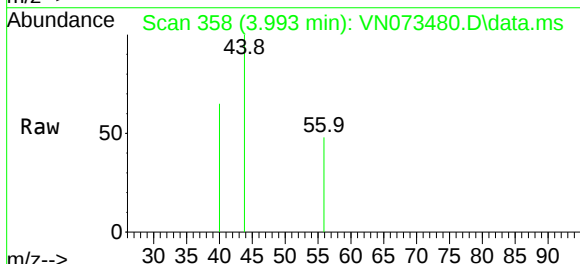
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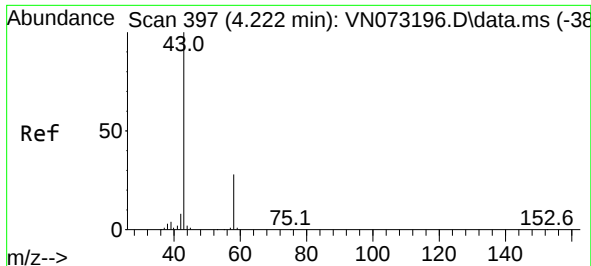
Tgt Ion: 59 Resp: 5683  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.3 12.5#



#13  
Acrolein  
Concen: 0.223 ug/l  
RT: 3.993 min Scan# 358  
Delta R.T. 0.012 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 56 Resp: 126  
Ion Ratio Lower Upper  
56 100  
55 0.0 54.8 82.2#

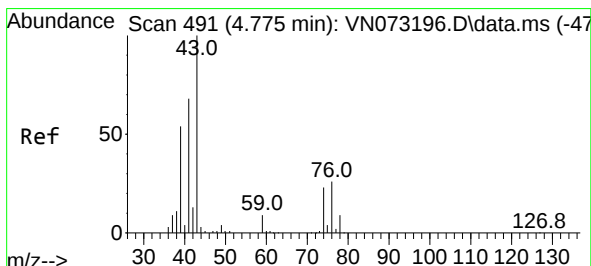
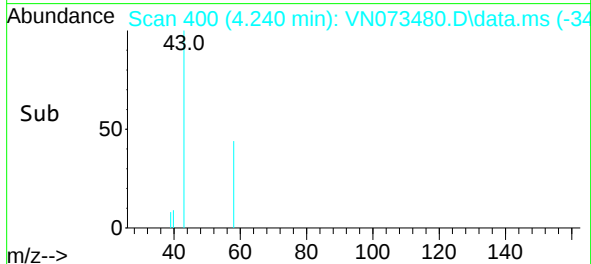
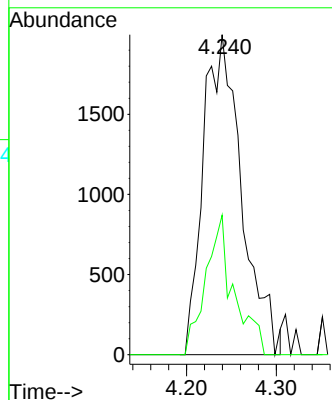
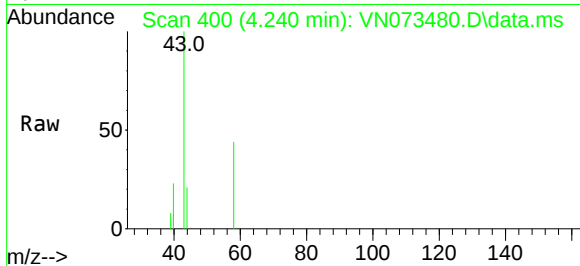




#16  
Acetone  
Concen: 2.867 ug/l  
RT: 4.240 min Scan# 400  
Delta R.T. 0.018 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

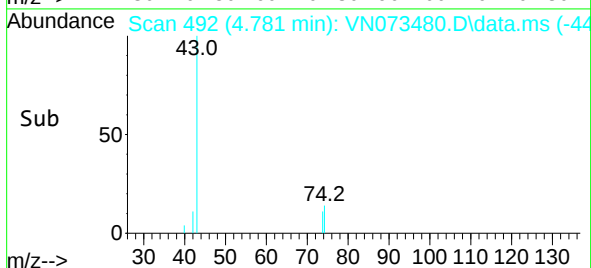
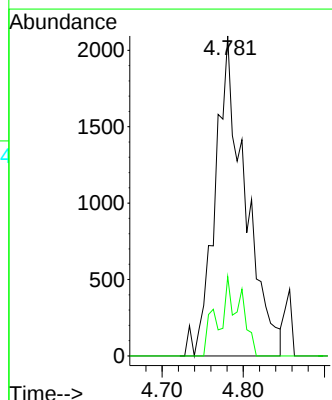
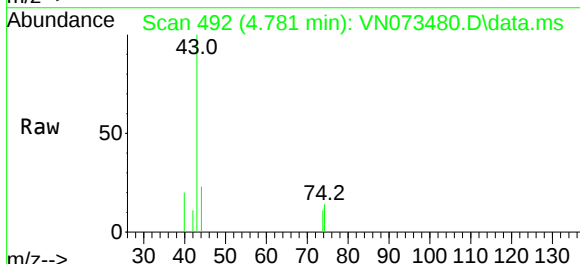
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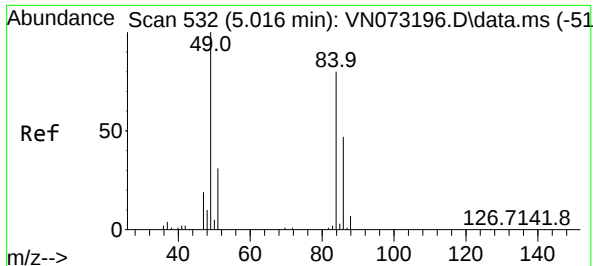
Tgt Ion: 43 Resp: 5942  
Ion Ratio Lower Upper  
43 100  
58 43.6 26.0 39.0#



#18  
Methyl Acetate  
Concen: 0.925 ug/l  
RT: 4.781 min Scan# 492  
Delta R.T. 0.006 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 43 Resp: 5374  
Ion Ratio Lower Upper  
43 100  
74 13.2 21.6 32.4#

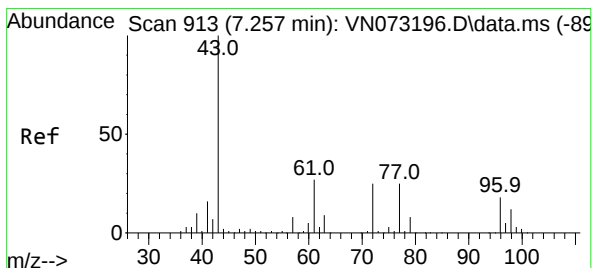
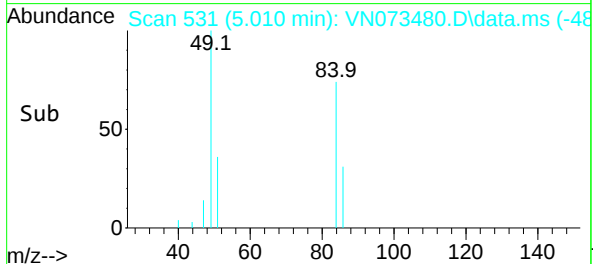
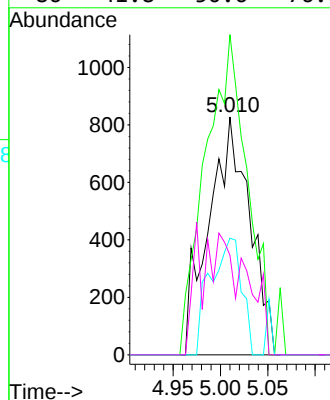
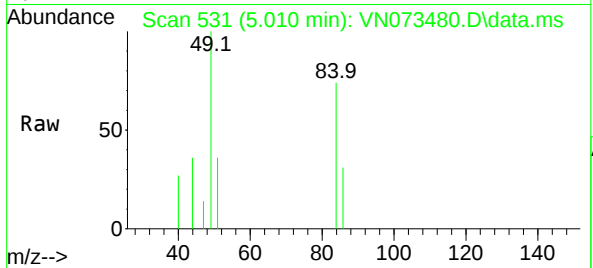




#20  
Methylene Chloride  
Concen: 0.684 ug/l  
RT: 5.010 min Scan# 51  
Delta R.T. -0.006 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

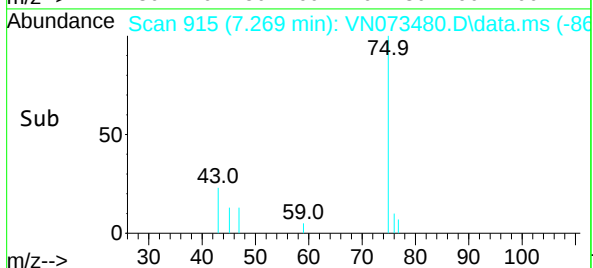
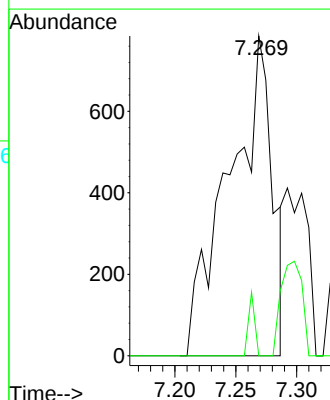
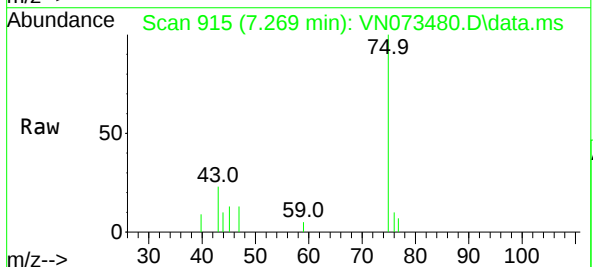
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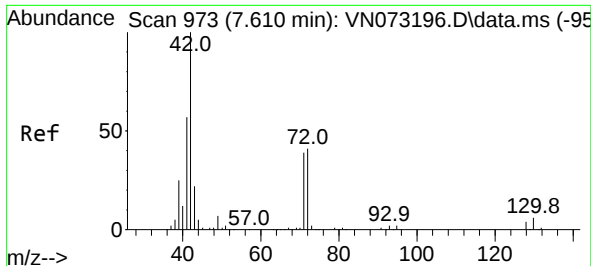
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|----------|-------|-------|--------|
| Tgt Ion: | 84    | Resp: | 2491   |
| Ion      | Ratio | Lower | Upper  |
| 84       | 100   |       |        |
| 49       | 134.5 | 88.3  | 132.5# |
| 51       | 49.0  | 28.2  | 42.2#  |
| 86       | 41.8  | 50.6  | 76.0#  |



#25  
2-Butanone  
Concen: 0.590 ug/l  
RT: 7.269 min Scan# 915  
Delta R.T. 0.012 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 1946  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 72       | 0.0   | 23.7  | 35.5# |





#29

Tetrahydrofuran

Concen: 0.269 ug/l

RT: 7.633 min Scan# 91

Delta R.T. 0.023 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

Instrument :

MSVOA\_N

ClientSampleId :

PIPELINE-PIGGING-TK2045L

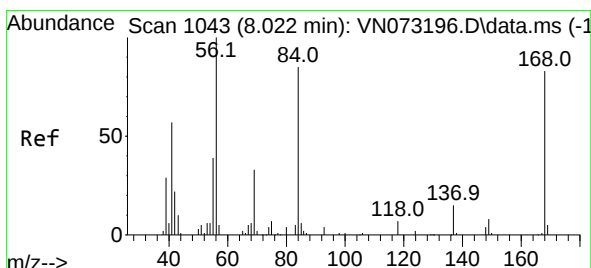
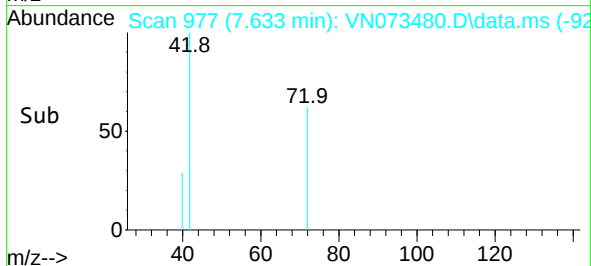
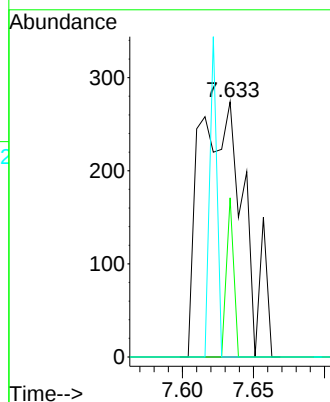
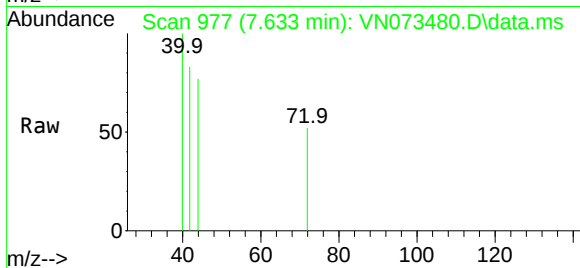
Tgt Ion: 42 Resp: 607

Ion Ratio Lower Upper

42 100

72 9.9 39.7 59.5#

71 19.9 36.6 55.0#



#31

Cyclohexane

Concen: 1.066 ug/l

RT: 8.010 min Scan# 1041

Delta R.T. -0.012 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

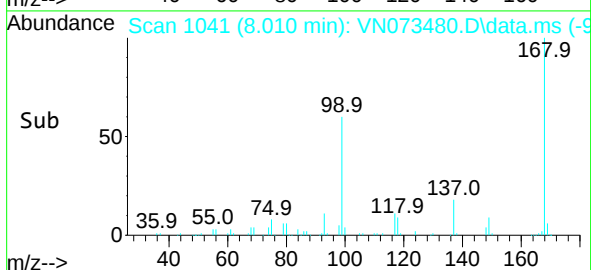
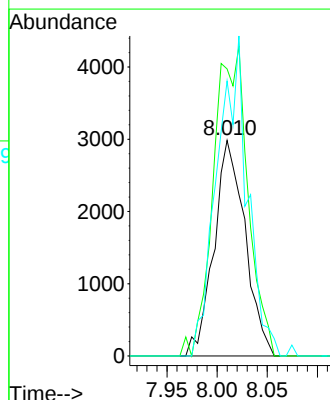
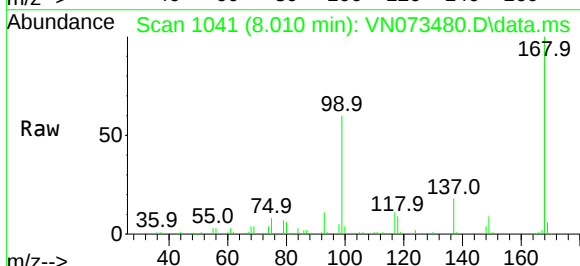
Tgt Ion: 56 Resp: 6444

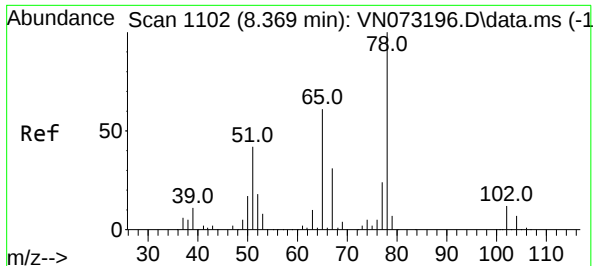
Ion Ratio Lower Upper

56 100

69 133.1 27.8 41.8#

84 127.5 76.9 115.3#





#33

1,2-Dichloroethane-d4

Concen: 46.105 ug/l

RT: 8.369 min Scan# 1102

Delta R.T. -0.000 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

Instrument :

MSVOA\_N

ClientSampleId :

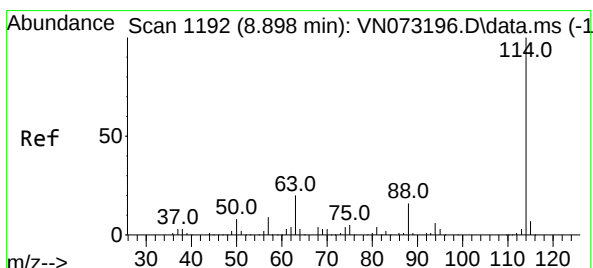
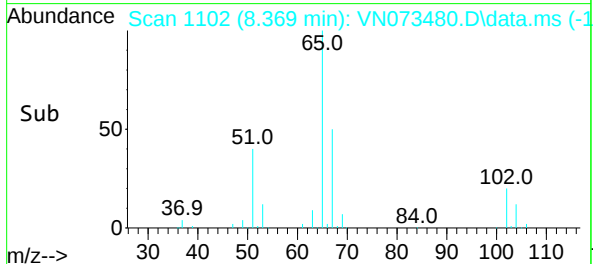
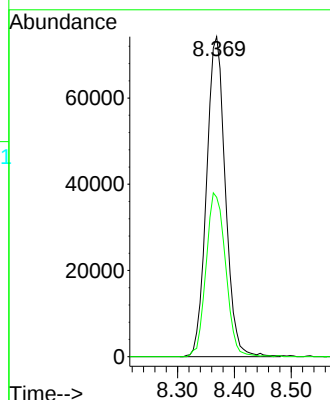
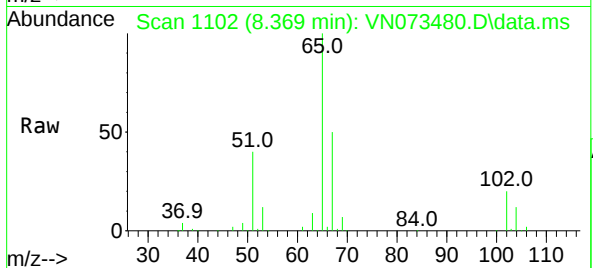
PIPELINE-PIGGING-TK2045L

Tgt Ion: 65 Resp: 170251

Ion Ratio Lower Upper

65 100

67 53.2 0.0 104.8



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.898 min Scan# 1192

Delta R.T. 0.000 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

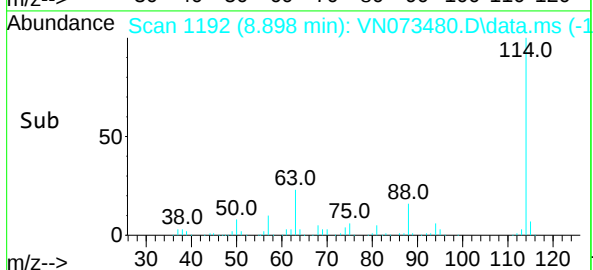
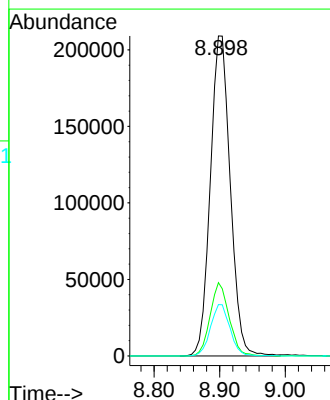
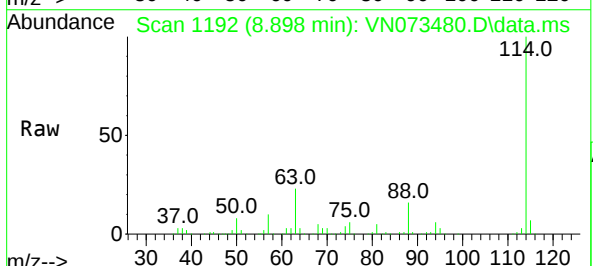
Tgt Ion: 114 Resp: 441452

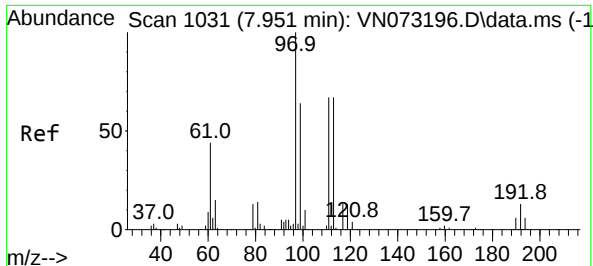
Ion Ratio Lower Upper

114 100

63 22.9 0.0 40.0

88 16.0 0.0 32.6





#35

Dibromofluoromethane

Concen: 39.162 ug/l

RT: 7.951 min Scan# 1031

Delta R.T. 0.000 min

Lab File: VN073480.D

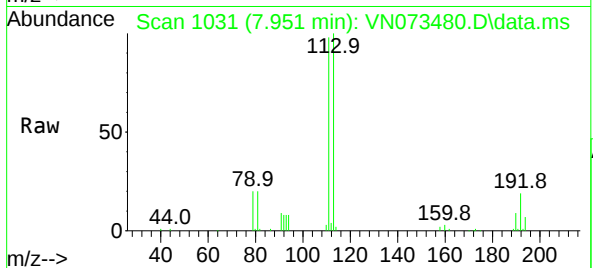
Acq: 15 Jul 2022 12:53

Instrument :

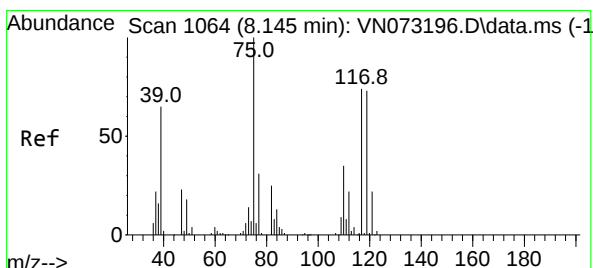
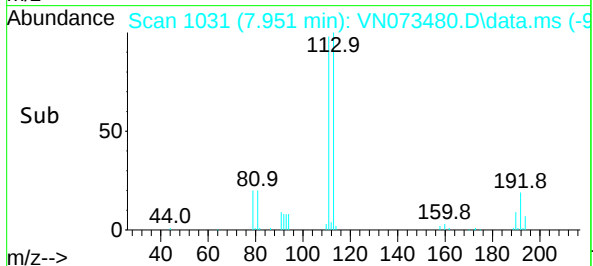
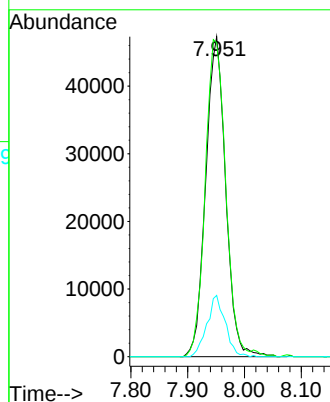
MSVOA\_N

ClientSampleId :

PIPELINE-PIGGING-TK2045L



|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 113   | Resp: | 115022 |
| Ion      | Ratio | Lower | Upper  |
| 113      | 100   |       |        |
| 111      | 102.6 | 81.4  | 122.0  |
| 192      | 17.6  | 17.0  | 25.6   |



#36

1,1-Dichloropropene

Concen: 4.959 ug/l

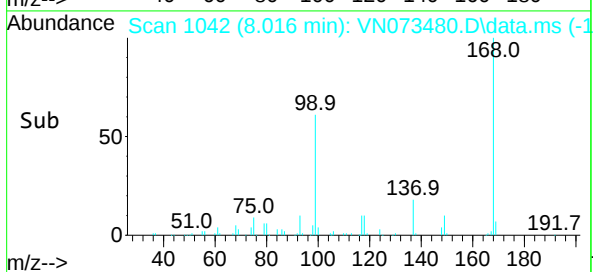
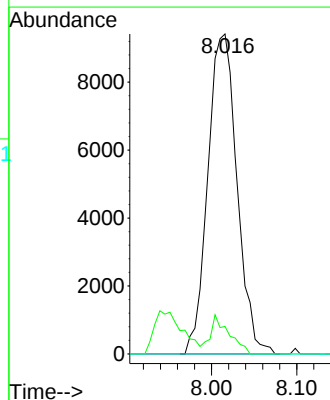
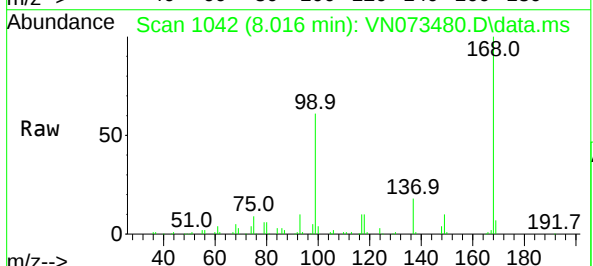
RT: 8.016 min Scan# 1042

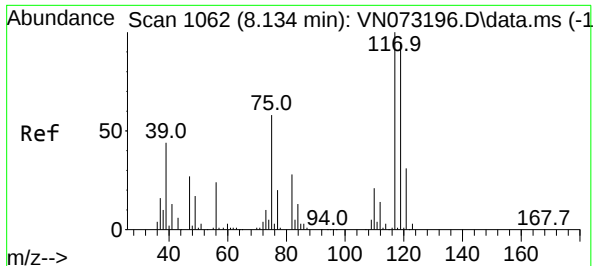
Delta R.T. -0.129 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 75    | Resp: | 22411 |
| Ion      | Ratio | Lower | Upper |
| 75       | 100   |       |       |
| 110      | 7.9   | 18.3  | 54.8# |
| 77       | 0.0   | 25.1  | 37.7# |

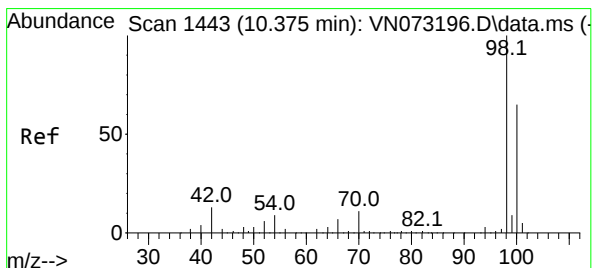
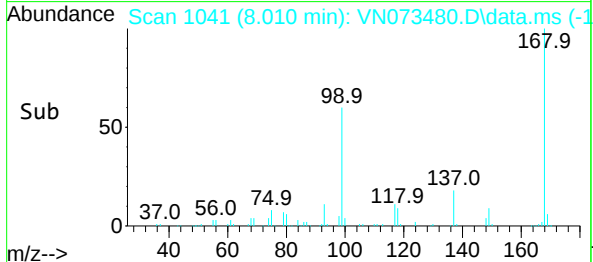
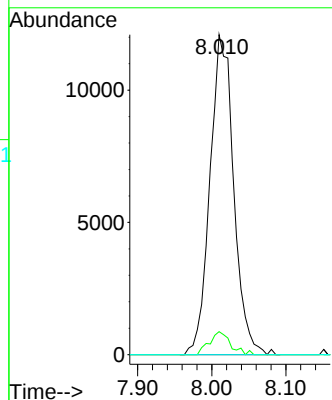
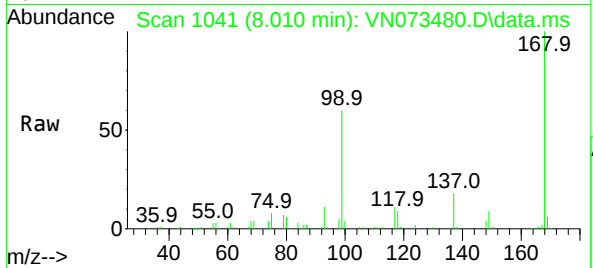




#38  
Carbon Tetrachloride  
Concen: 5.762 ug/l  
RT: 8.010 min Scan# 1062  
Delta R.T. -0.124 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

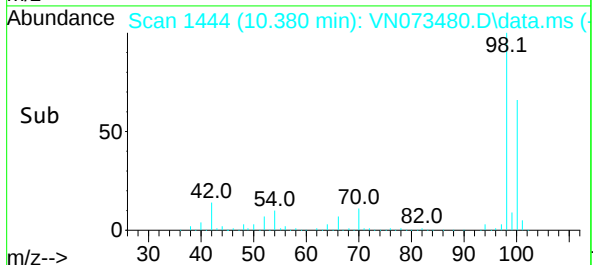
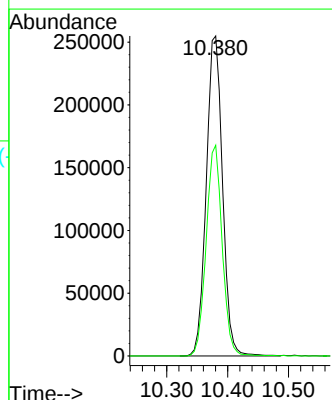
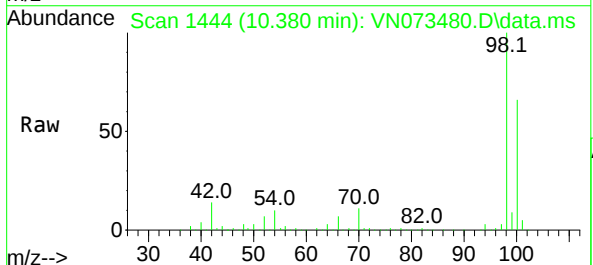
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

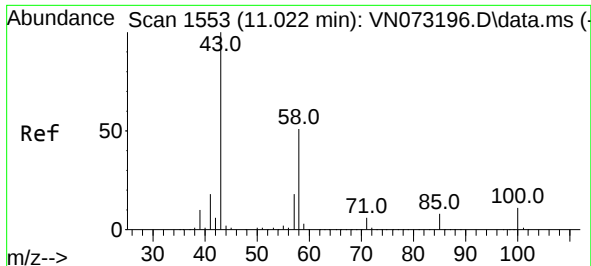
Tgt Ion:117 Resp: 26929  
Ion Ratio Lower Upper  
117 100  
119 7.2 75.8 113.8#  
121 0.0 24.6 37.0#



#50  
Toluene-d8  
Concen: 45.291 ug/l  
RT: 10.380 min Scan# 1444  
Delta R.T. 0.005 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 98 Resp: 472448  
Ion Ratio Lower Upper  
98 100  
100 65.1 52.6 78.8

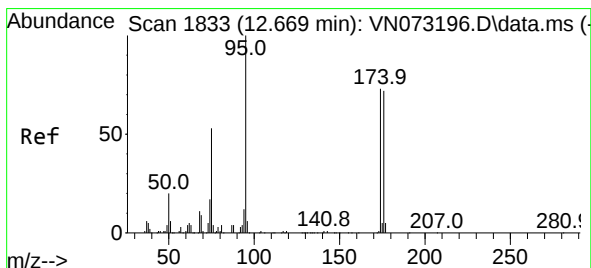
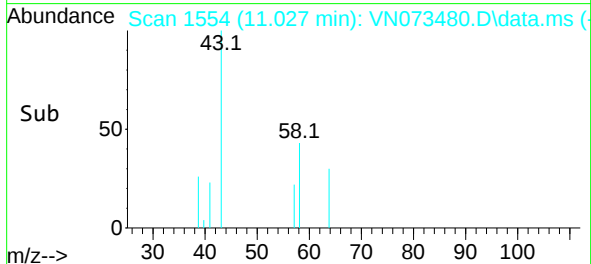
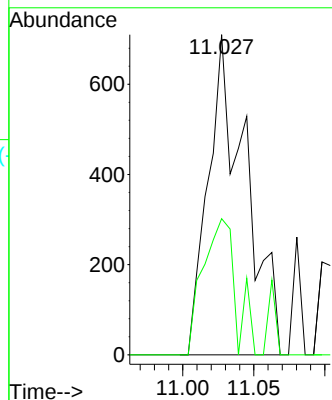
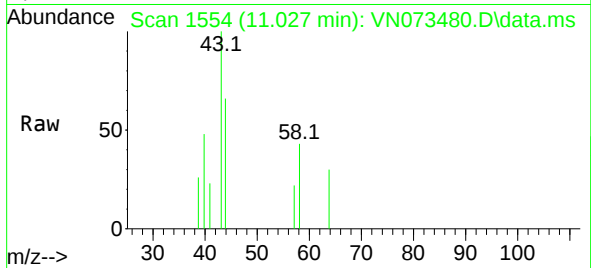




#59  
2-Hexanone  
Concen: 0.274 ug/l  
RT: 11.027 min Scan# 11553  
Delta R.T. 0.005 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

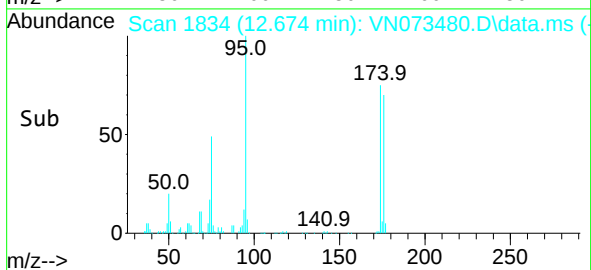
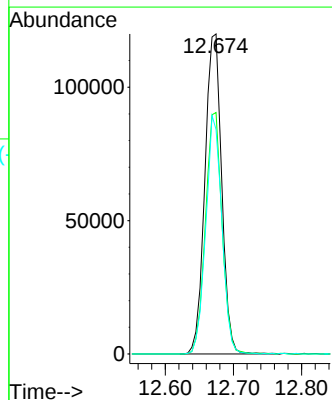
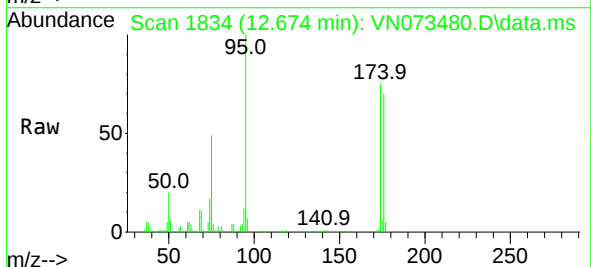
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

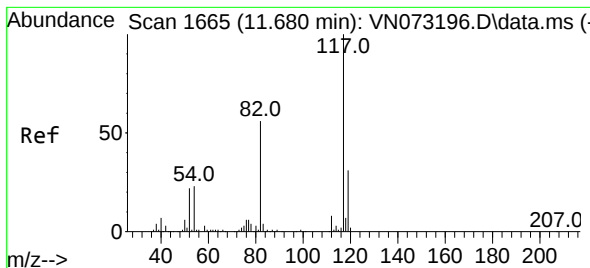
Tgt Ion: 43 Resp: 1298  
Ion Ratio Lower Upper  
43 100  
58 37.3 29.7 89.1



#62  
4-Bromofluorobenzene  
Concen: 51.243 ug/l  
RT: 12.674 min Scan# 1834  
Delta R.T. 0.005 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 95 Resp: 205421  
Ion Ratio Lower Upper  
95 100  
174 74.8 0.0 167.6  
176 71.4 0.0 163.4





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.680 min Scan# 1

Delta R.T. 0.000 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

Instrument :

MSVOA\_N

ClientSampleId :

PIPELINE-PIGGING-TK2045L

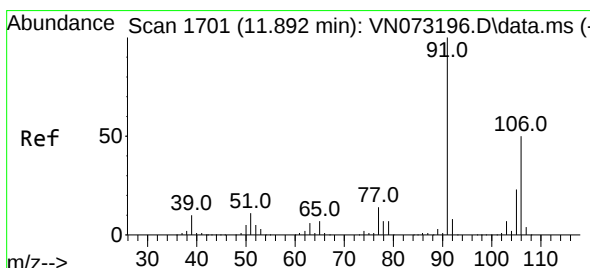
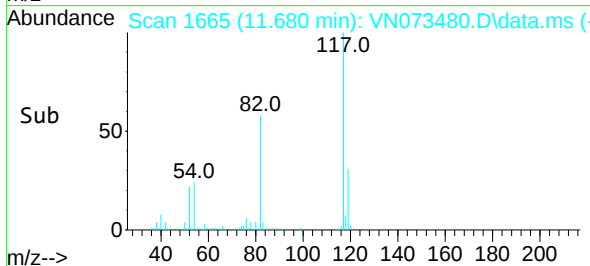
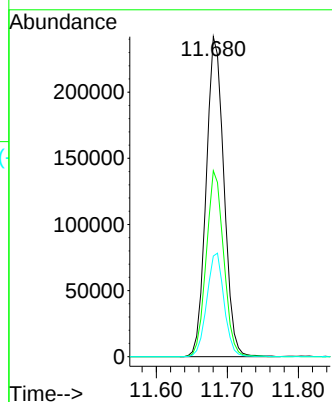
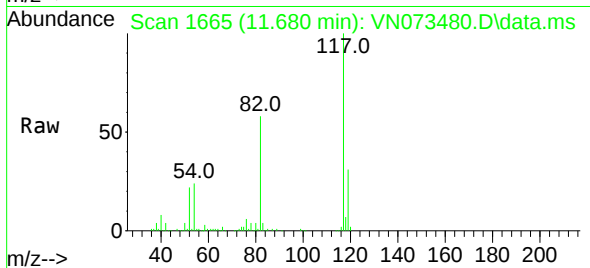
Tgt Ion:117 Resp: 420115

Ion Ratio Lower Upper

117 100

82 58.1 44.2 66.2

119 31.4 25.4 38.0



#68

m/p-Xylenes

Concen: 0.274 ug/l

RT: 11.892 min Scan# 1701

Delta R.T. 0.000 min

Lab File: VN073480.D

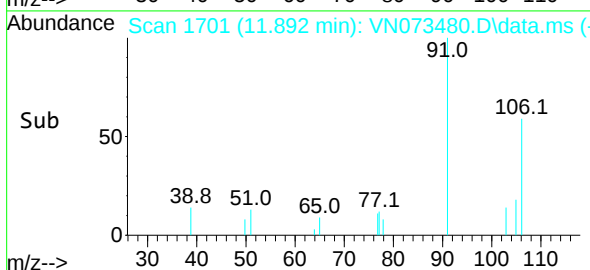
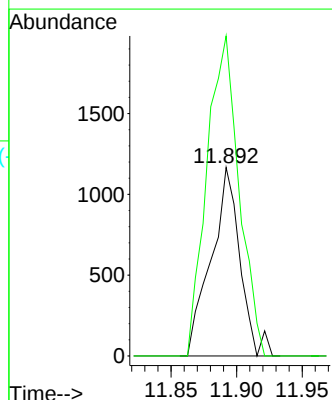
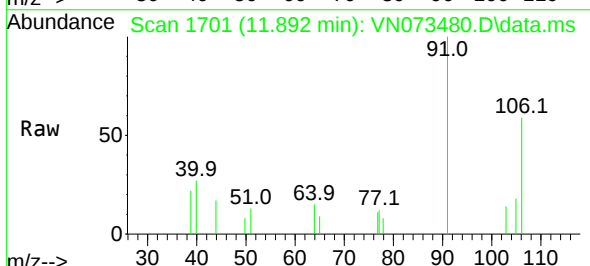
Acq: 15 Jul 2022 12:53

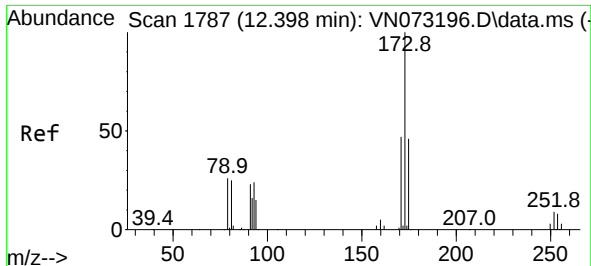
Tgt Ion:106 Resp: 1782

Ion Ratio Lower Upper

106 100

91 189.5 158.9 238.3

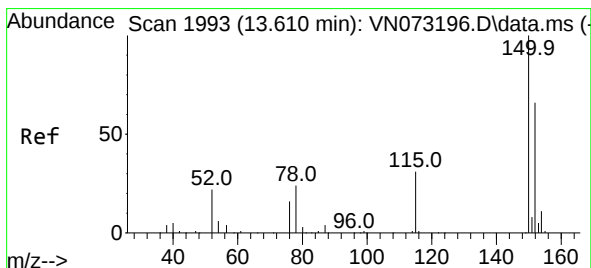
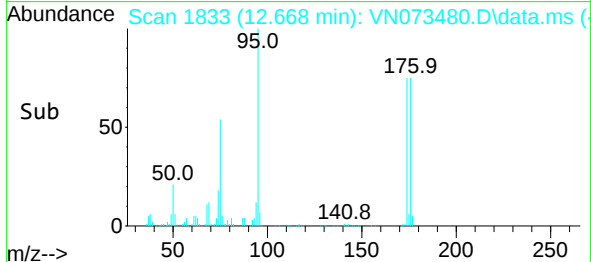
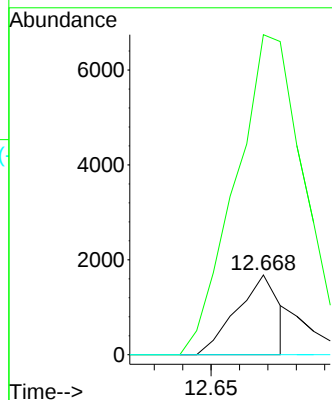
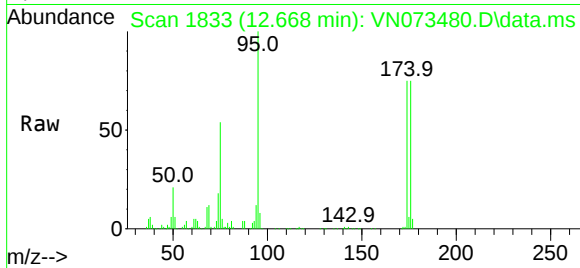




#71  
Bromoform  
Concen: 0.687 ug/l  
RT: 12.668 min Scan# 1833  
Delta R.T. 0.270 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

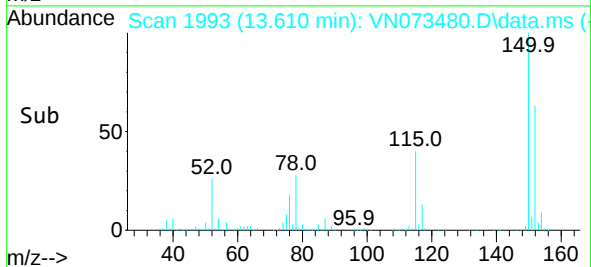
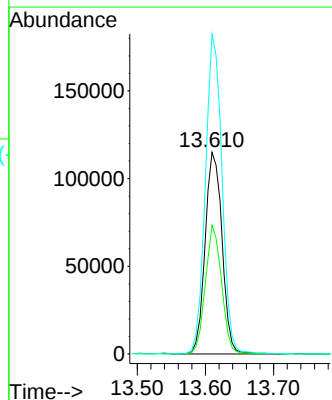
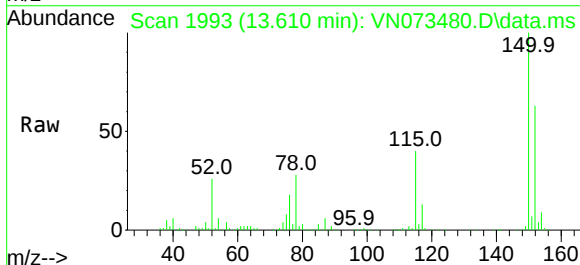
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

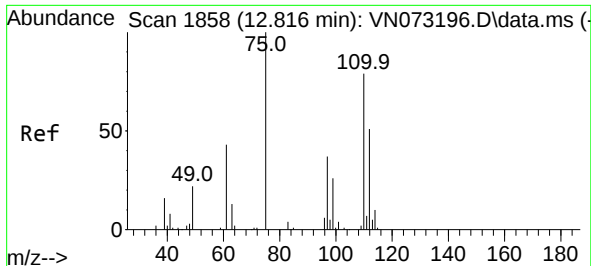
Tgt Ion:173 Resp: 1756  
Ion Ratio Lower Upper  
173 100  
175 469.6 24.6 73.6#  
254 0.0 0.1 0.1#



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.610 min Scan# 1993  
Delta R.T. -0.000 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion:152 Resp: 198887  
Ion Ratio Lower Upper  
152 100  
115 61.0 28.9 86.7  
150 155.5 0.0 356.2

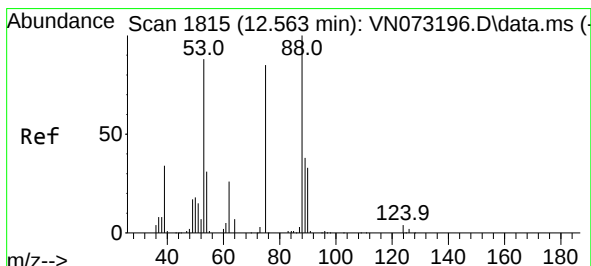
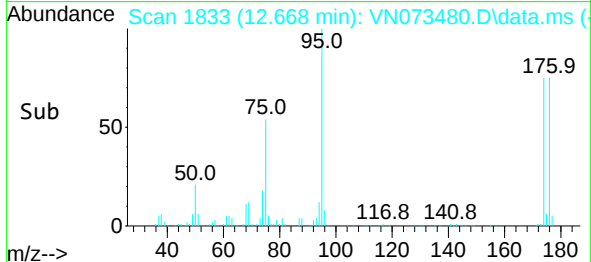
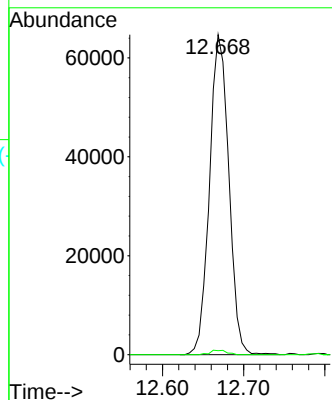
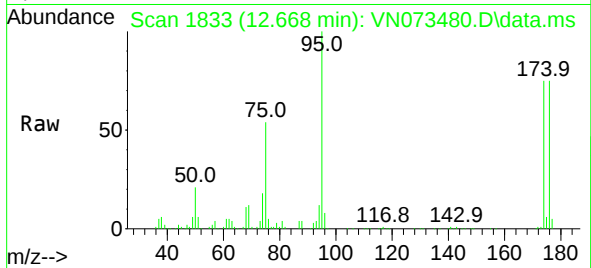




#76  
1,2,3-Trichloropropane  
Concen: 20.509 ug/l  
RT: 12.668 min Scan# 1858  
Delta R.T. -0.148 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

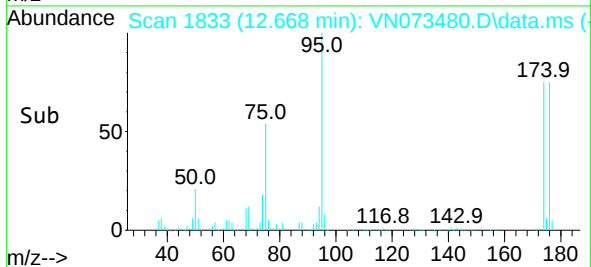
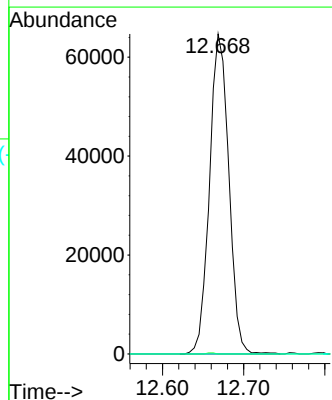
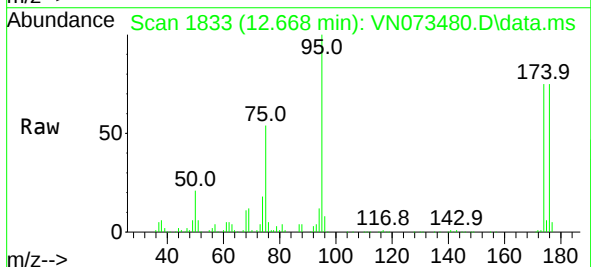
Instrument :  
MSVOA\_N  
ClientSampleId :  
PIPELINE-PIGGING-TK2045L

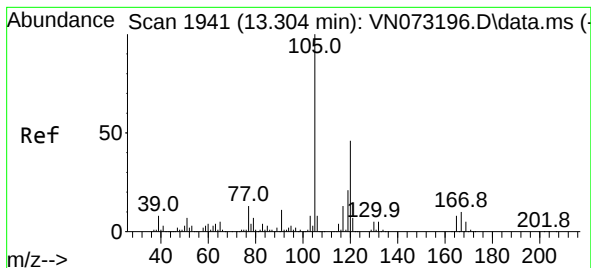
Tgt Ion: 75 Resp: 106656  
Ion Ratio Lower Upper  
75 100  
77 1.2 98.5 295.5#



#81  
trans-1,4-Dichloro-2-butene  
Concen: 56.245 ug/l  
RT: 12.668 min Scan# 1833  
Delta R.T. 0.105 min  
Lab File: VN073480.D  
Acq: 15 Jul 2022 12:53

Tgt Ion: 75 Resp: 106656  
Ion Ratio Lower Upper  
75 100  
53 0.1 78.0 117.0#  
89 0.0 37.2 55.8#





#84

1,2,4-Trimethylbenzene

Concen: 0.522 ug/l

RT: 13.310 min Scan# 1941

Delta R.T. 0.006 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

Instrument :

MSVOA\_N

ClientSampleId :

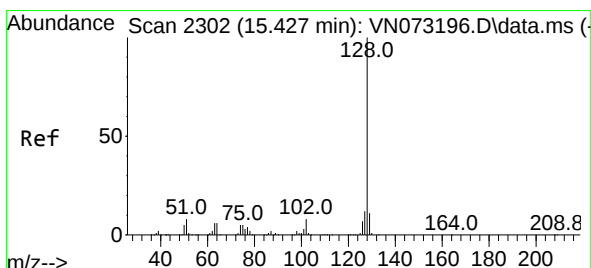
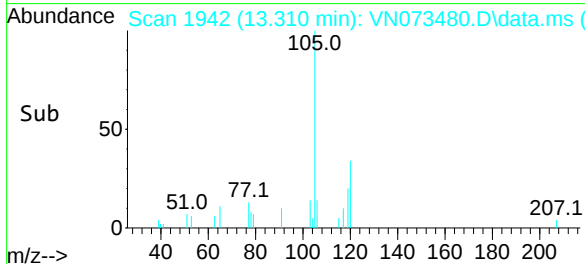
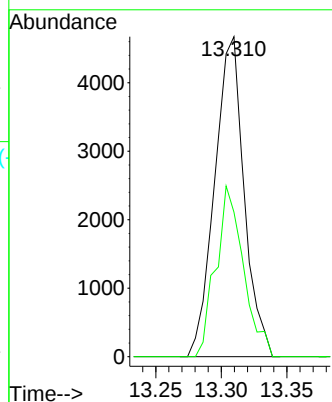
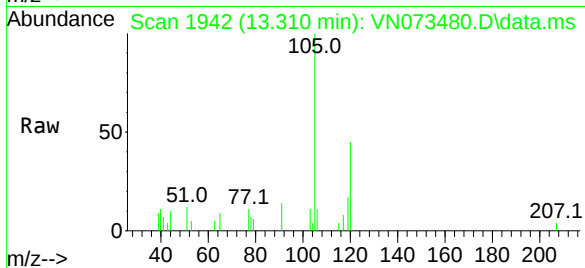
PIPELINE-PIGGING-TK2045L

Tgt Ion:105 Resp: 7296

Ion Ratio Lower Upper

105 100

120 49.9 23.3 69.8



#95

Naphthalene

Concen: 1.465 ug/l

RT: 15.433 min Scan# 2303

Delta R.T. 0.006 min

Lab File: VN073480.D

Acq: 15 Jul 2022 12:53

Tgt Ion:128 Resp: 22455

Ion Ratio Lower Upper

128 100

127 13.4 10.3 15.5

129 12.8 8.6 13.0

