

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_X\Data\VX071924\  
 Data File : VX042401.D  
 Acq On : 19 Jul 2024 13:59  
 Operator : JC/MD  
 Sample : P3289-02  
 Misc : 5.0mL/MSVOA\_X/WATER  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: Jul 19 16:09:31 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_X\Method\624X071924W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jul 19 11:30:14 2024  
 Response via : Initial Calibration

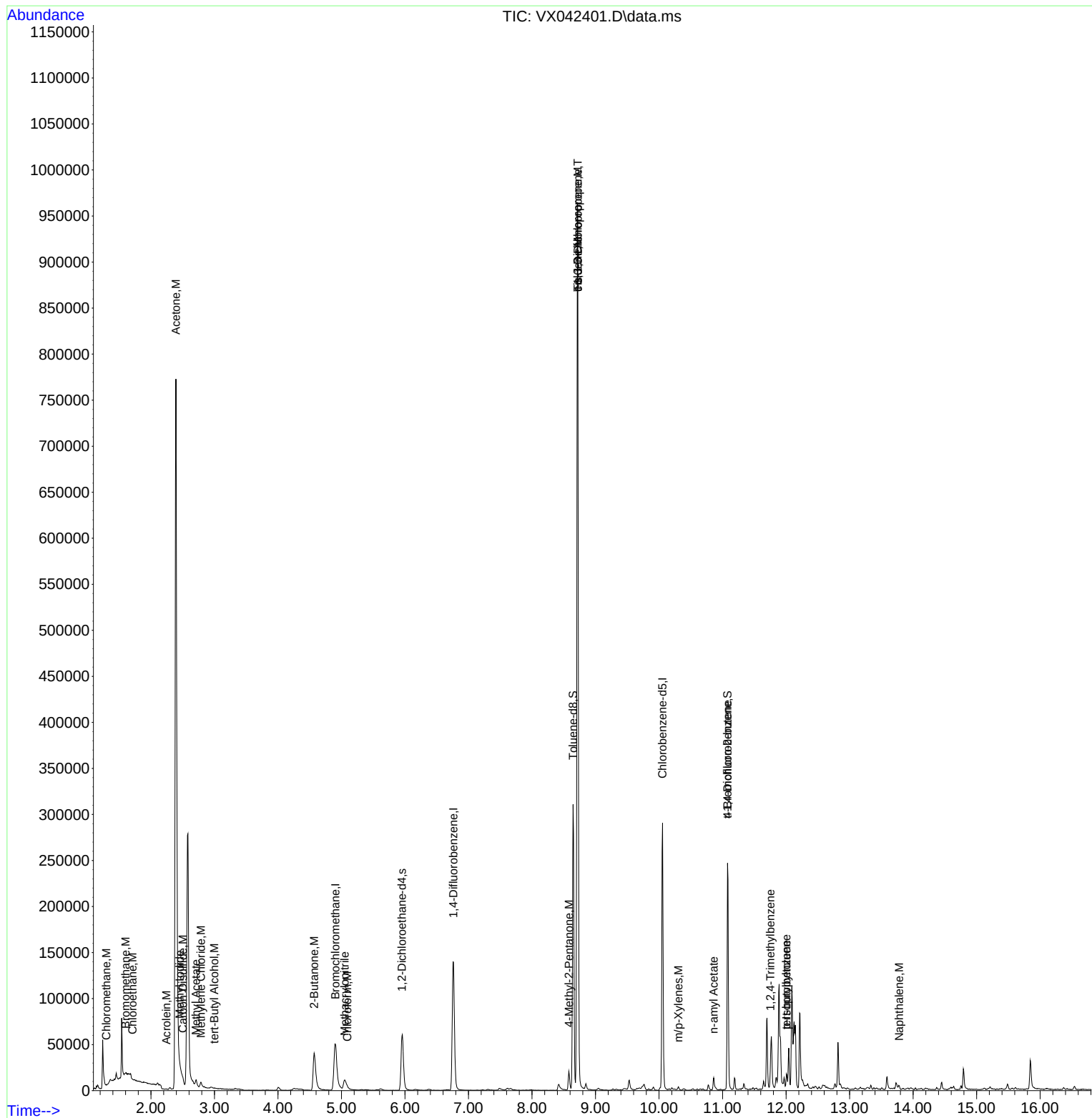
| Compound                    | R.T.           | QIon | Response            | Conc     | Units  | Dev(Min) |
|-----------------------------|----------------|------|---------------------|----------|--------|----------|
| -----                       |                |      |                     |          |        |          |
| Internal Standards          |                |      |                     |          |        |          |
| 1) Bromochloromethane       | 4.903          | 128  | 26785               | 30.000   | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene     | 6.763          | 114  | 158205              | 30.000   | ug/l   | 0.00     |
| 57) Chlorobenzene-d5        | 10.055         | 117  | 144653              | 30.000   | ug/l   | 0.00     |
|                             |                |      |                     |          |        |          |
| System Monitoring Compounds |                |      |                     |          |        |          |
| 27) 1,2-Dichloroethane-d4   | 5.952          | 65   | 58583               | 30.534   | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 91 - 110 |      | Recovery = 101.767% |          |        |          |
| 60) 4-Bromofluorobenzene    | 11.079         | 95   | 66800               | 29.680   | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 63 - 112 |      | Recovery = 98.933%  |          |        |          |
| 63) Toluene-d8              | 8.647          | 98   | 189747              | 30.196   | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 91 - 112 |      | Recovery = 100.667% |          |        |          |
|                             |                |      |                     |          |        |          |
| Target Compounds            |                |      |                     |          |        | Qvalue   |
| 3) Chloromethane            | 1.294          | 50   | 489                 | 0.291    | ug/l   | 100      |
| 5) Bromomethane             | 1.599          | 94   | 323                 | 0.386    | ug/l   | 81       |
| 6) Chloroethane             | 1.709          | 64   | 2919                | 4.061    | ug/l # | 42       |
| 11) Methyl Iodide           | 2.453          | 142  | 509                 | 0.288    | ug/l # | 55       |
| 12) Methyl Acetate          | 2.709          | 43   | 8996                | 3.505    | ug/l   | 99       |
| 13) Acrolein                | 2.239          | 56   | 350                 | 1.085    | ug/l   | 90       |
| 15) Acetone                 | 2.392          | 58   | 308573              | 1076.222 | ug/l   | 98       |
| 16) Carbon Disulfide        | 2.501          | 76   | 5940                | 1.924    | ug/l   | 99       |
| 18) Methylene Chloride      | 2.788          | 84   | 3101                | 1.739    | ug/l   | 95       |
| 23) tert-Butyl Alcohol      | 2.995          | 59   | 187                 | 0.509    | ug/l # | 100      |
| 25) Chloroform              | 5.092          | 83   | 1074                | 0.350    | ug/l # | 81       |
| 30) 2-Butanone              | 4.568          | 43   | 79532               | 57.743   | ug/l   | 98       |
| 35) Methacrylonitrile       | 5.050          | 41   | 3017                | 2.220    | ug/l # | 46       |
| 47) n-amyl Acetate          | 10.860         | 43   | 1688                | 0.495    | ug/l # | 1        |
| 48) t-1,3-Dichloropropene   | 8.720          | 75   | 4170                | 1.855    | ug/l # | 1        |
| 49) cis-1,3-Dichloropropene | 8.720          | 75   | 4170                | 1.651    | ug/l # | 1        |
| 58) 4-Methyl-2-Pentanone    | 8.580          | 43   | 12446               | 4.882    | ug/l   | 99       |
| 62) Toluene                 | 8.720          | 91   | 656387              | 90.762   | ug/l   | 100      |
| 67) m/p-Xylenes             | 10.305         | 106  | 1083                | 0.344    | ug/l   | 79       |
| 77) t-1,4-Dichloro-2-butene | 11.079         | 75   | 30924               | 38.596   | ug/l # | 7        |
| 79) tert-butylbenzene       | 12.006         | 119  | 5749                | 0.806    | ug/l   | 72       |
| 80) 1,2,4-Trimethylbenzene  | 11.756         | 105  | 6998                | 1.041    | ug/l   | 43       |
| 82) p-Isopropyltoluene      | 12.006         | 119  | 5749                | 0.787    | ug/l   | 96       |
| 91) Naphthalene             | 13.780         | 128  | 3004                | 0.359    | ug/l # | 96       |
| -----                       |                |      |                     |          |        |          |

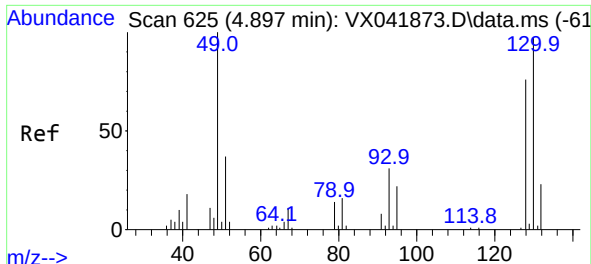
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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MSVOA\_X  
ClientSampleId :

Quant Time: Jul 19 16:09:31 2024  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_X\Method\624X071924W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Fri Jul 19 11:30:14 2024  
Response via : Initial Calibration

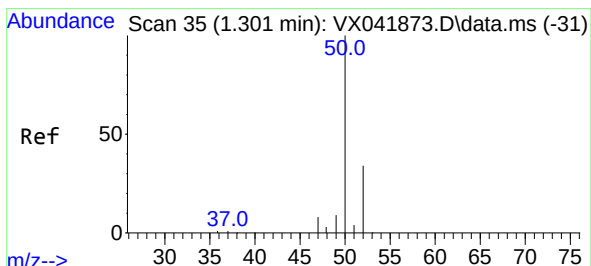
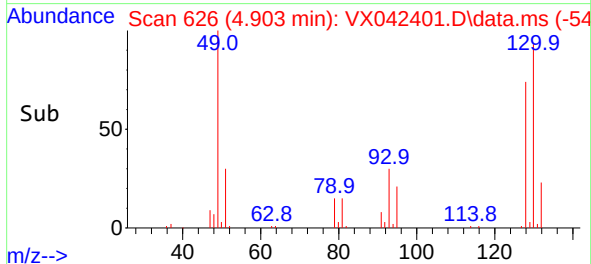
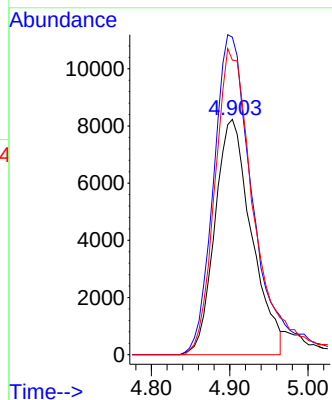
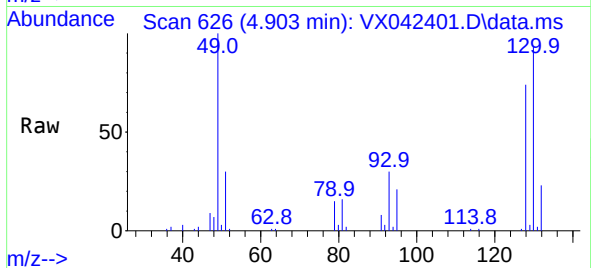




#1  
Bromochloromethane  
Concen: 30.000 ug/l  
RT: 4.903 min Scan# 61  
Delta R.T. 0.006 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

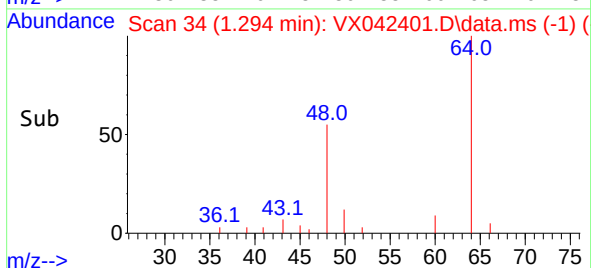
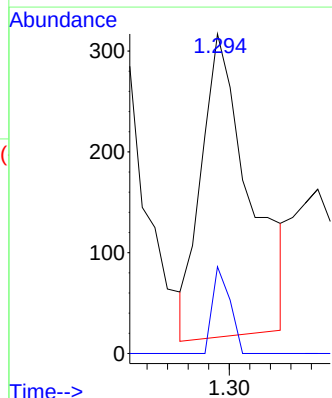
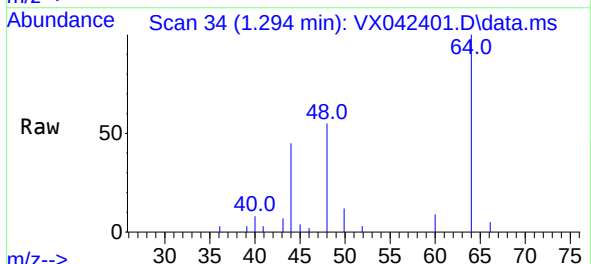
Instrument :  
MSVOA\_X  
ClientSampleId :

Tgt Ion:128 Resp: 26785  
Ion Ratio Lower Upper  
128 100  
49 143.5 0.0 338.5  
130 138.6 0.0 324.5

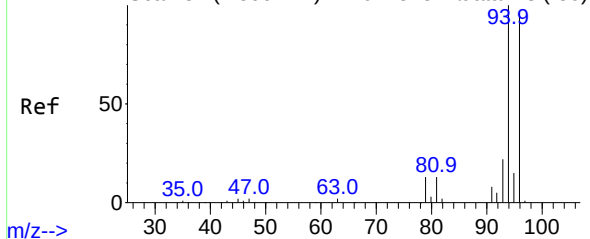


#3  
Chloromethane  
Concen: 0.291 ug/l  
RT: 1.294 min Scan# 34  
Delta R.T. -0.006 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 50 Resp: 489  
Ion Ratio Lower Upper  
50 100  
52 33.6 26.9 40.3



Abundance Scan 84 (1.599 min): VX041873.D\data.ms (-80)



#5

Bromomethane

Concen: 0.386 ug/l

RT: 1.599 min Scan# 84

Delta R.T. -0.000 min

Lab File: VX042401.D

Acq: 19 Jul 2024 13:59

Instrument :

MSVOA\_X

ClientSampleId :

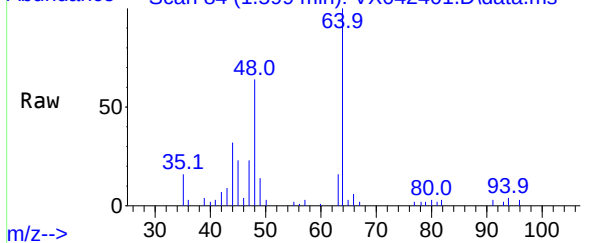
Tgt Ion: 94 Resp: 323

Ion Ratio Lower Upper

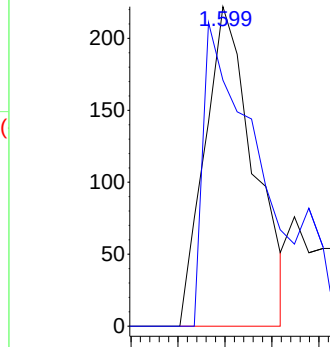
94 100

96 77.0 76.6 115.0

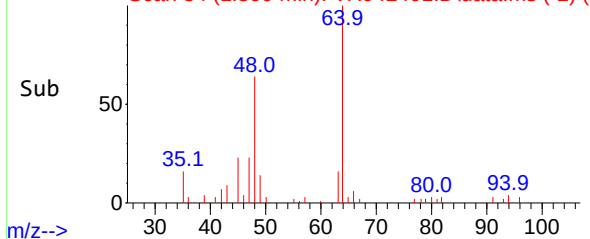
Abundance Scan 84 (1.599 min): VX042401.D\data.ms



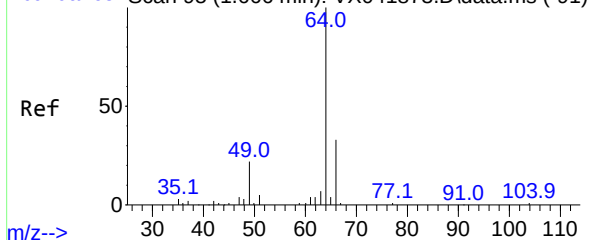
Abundance



Abundance Scan 84 (1.599 min): VX042401.D\data.ms (-2)



Abundance Scan 95 (1.666 min): VX041873.D\data.ms (-91)



#6

Chloroethane

Concen: 4.061 ug/l

RT: 1.709 min Scan# 102

Delta R.T. 0.043 min

Lab File: VX042401.D

Acq: 19 Jul 2024 13:59

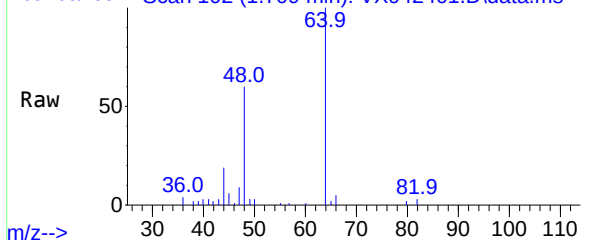
Tgt Ion: 64 Resp: 2919

Ion Ratio Lower Upper

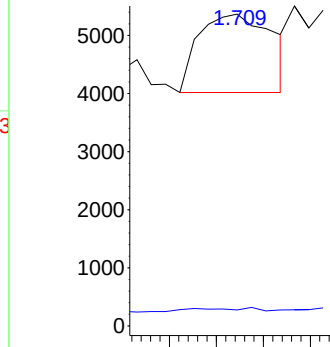
64 100

66 0.1 26.4 39.6#

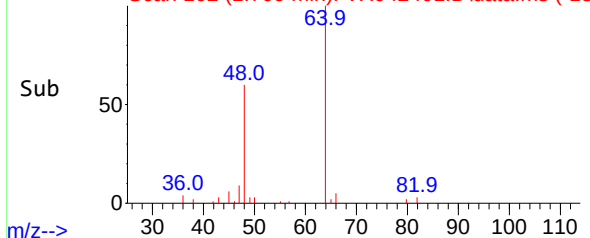
Abundance Scan 102 (1.709 min): VX042401.D\data.ms

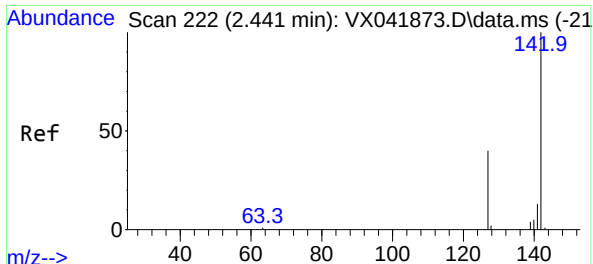


Abundance



Abundance Scan 102 (1.709 min): VX042401.D\data.ms (-13)

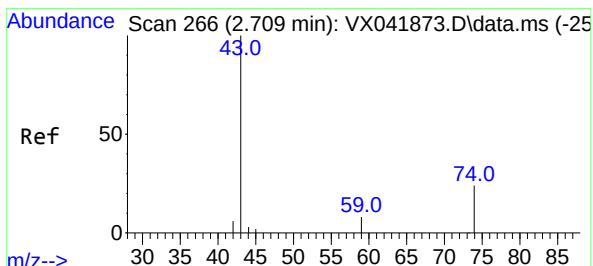
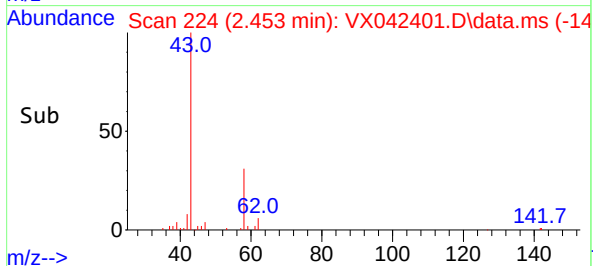
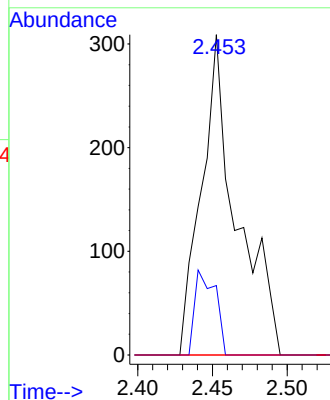
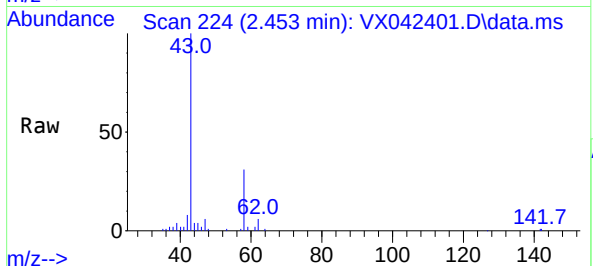




#11  
Methyl Iodide  
Concen: 0.288 ug/l  
RT: 2.453 min Scan# 211  
Delta R.T. 0.012 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

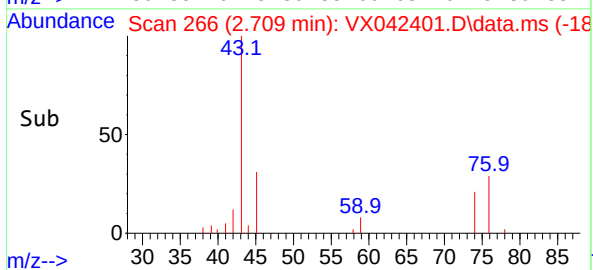
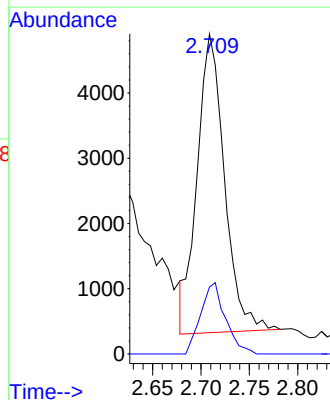
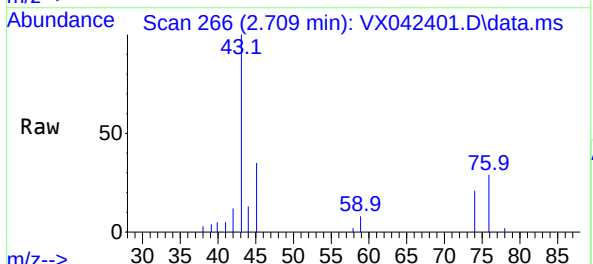
Instrument :  
MSVOA\_X  
ClientSampleId :

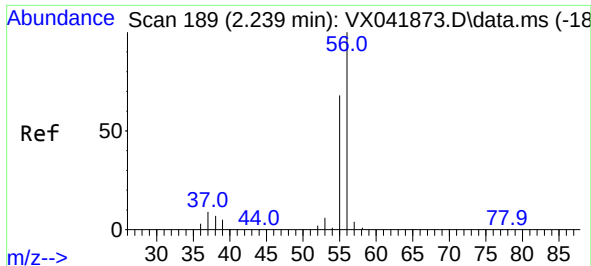
Tgt Ion:142 Resp: 509  
Ion Ratio Lower Upper  
142 100  
127 21.7 19.8 59.3  
141 50.8 6.7 20.1#



#12  
Methyl Acetate  
Concen: 3.505 ug/l  
RT: 2.709 min Scan# 266  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

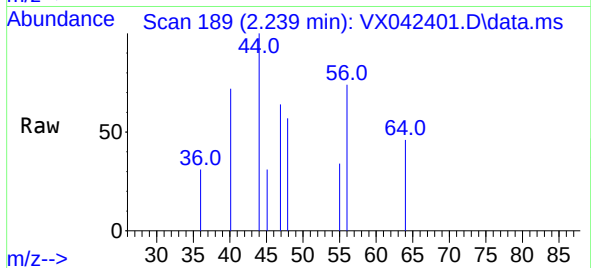
Tgt Ion: 43 Resp: 8996  
Ion Ratio Lower Upper  
43 100  
74 24.7 19.4 29.2



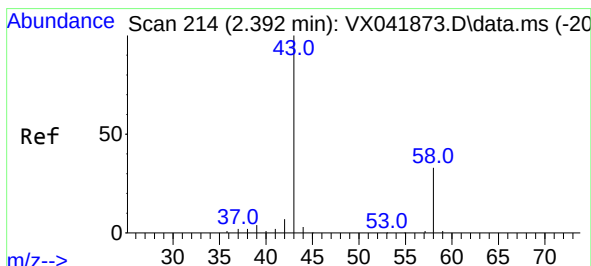
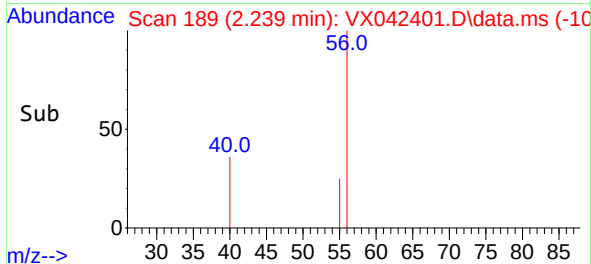
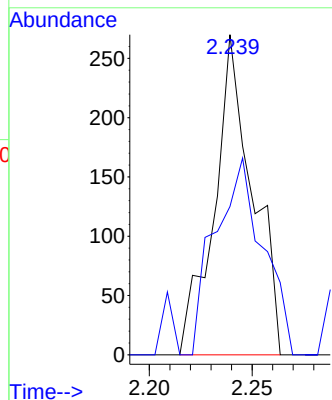


#13  
Acrolein  
Concen: 1.085 ug/l  
RT: 2.239 min Scan# 189  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Instrument :  
MSVOA\_X  
ClientSampleId :

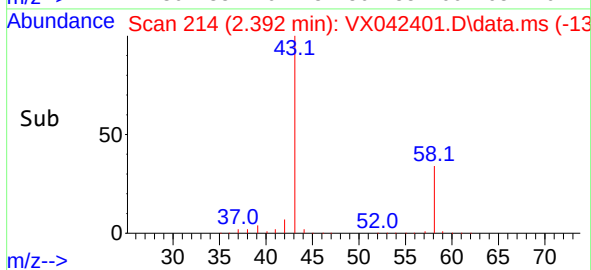
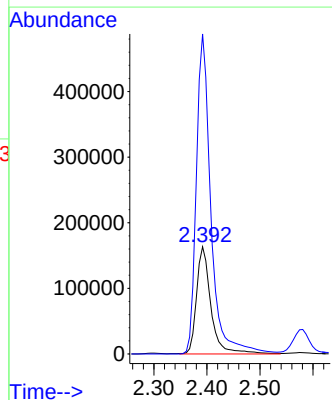
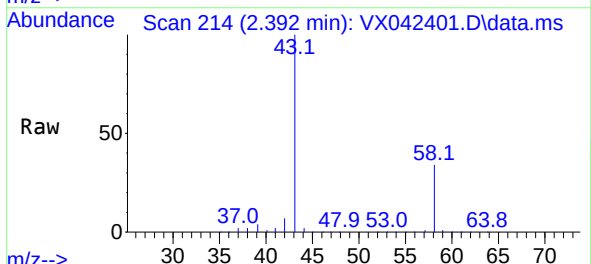


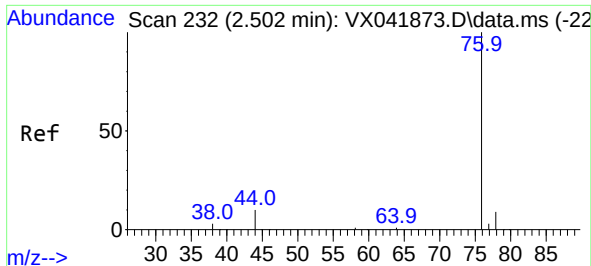
Tgt Ion: 56 Resp: 350  
Ion Ratio Lower Upper  
56 100  
55 77.1 55.4 83.0



#15  
Acetone  
Concen: 1076.222 ug/l  
RT: 2.392 min Scan# 214  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

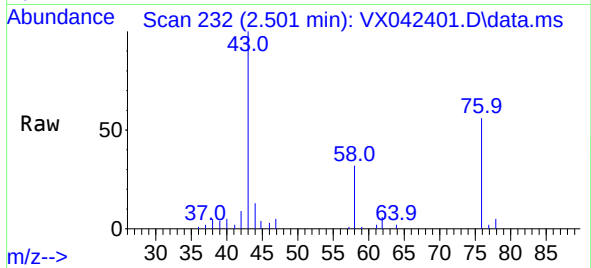
Tgt Ion: 58 Resp: 308573  
Ion Ratio Lower Upper  
58 100  
43 299.5 243.4 365.2



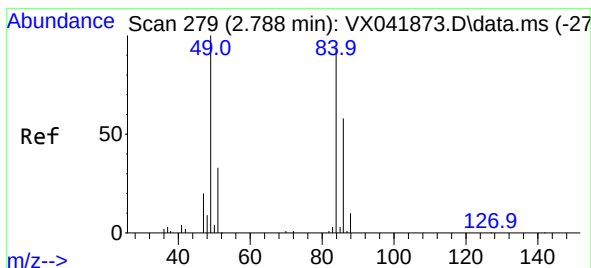
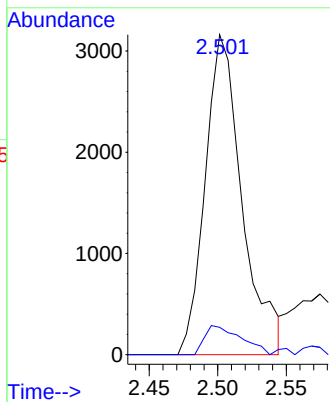
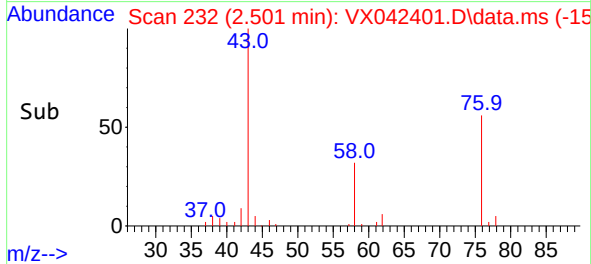


#16  
Carbon Disulfide  
Concen: 1.924 ug/l  
RT: 2.501 min Scan# 21  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Instrument :  
MSVOA\_X  
ClientSampleId :

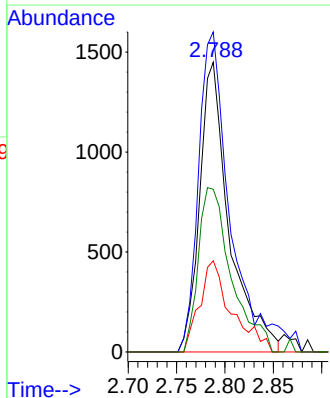
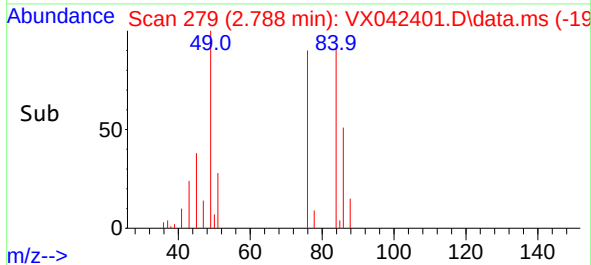
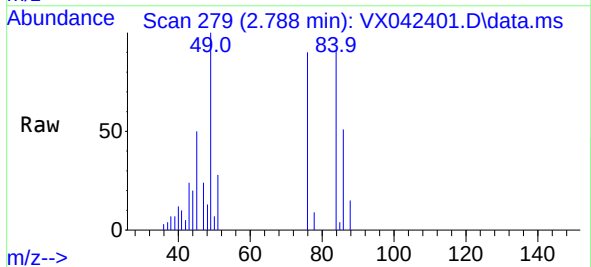


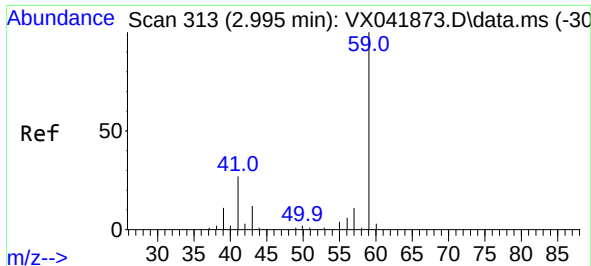
Tgt Ion: 76 Resp: 5940  
Ion Ratio Lower Upper  
76 100  
78 8.6 7.3 10.9



#18  
Methylene Chloride  
Concen: 1.739 ug/l  
RT: 2.788 min Scan# 279  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

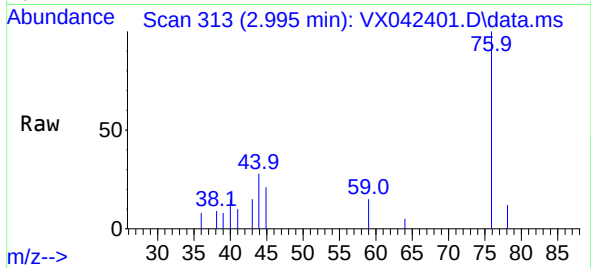
Tgt Ion: 84 Resp: 3101  
Ion Ratio Lower Upper  
84 100  
49 110.4 85.3 127.9  
51 31.4 28.5 42.7  
86 56.1 49.6 74.4



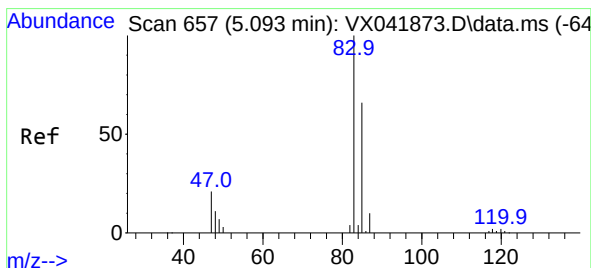


#23  
tert-Butyl Alcohol  
Concen: 0.509 ug/l  
RT: 2.995 min Scan# 313  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Instrument :  
MSVOA\_X  
ClientSampleId :

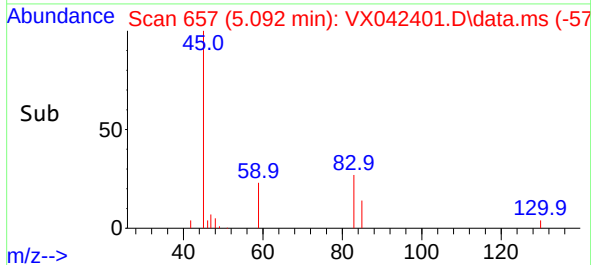
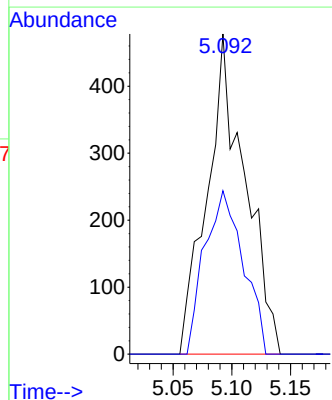
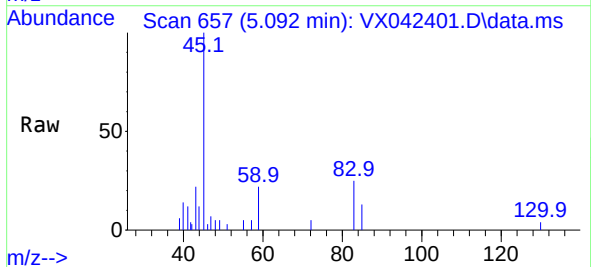


Tgt Ion: 59 Resp: 187  
Ion Ratio Lower Upper  
59 100  
52 0.0 0.0 0.0

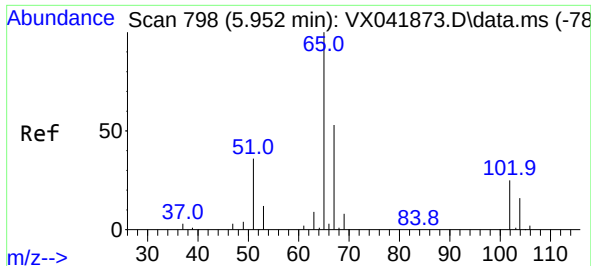


#25  
Chloroform  
Concen: 0.350 ug/l  
RT: 5.092 min Scan# 657  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 83 Resp: 1074  
Ion Ratio Lower Upper  
83 100  
85 51.0 52.7 79.1#



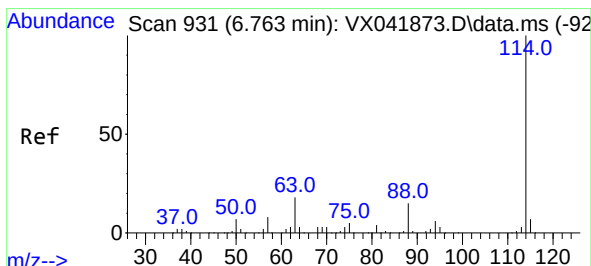
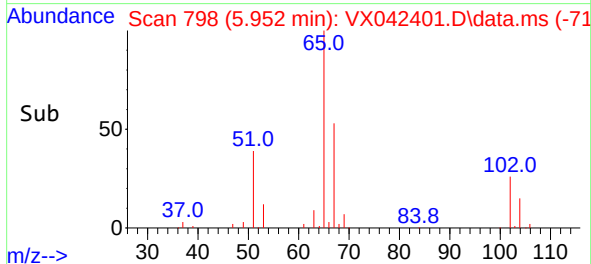
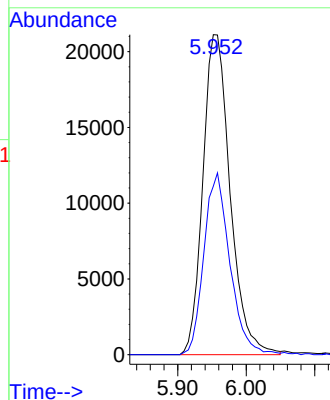
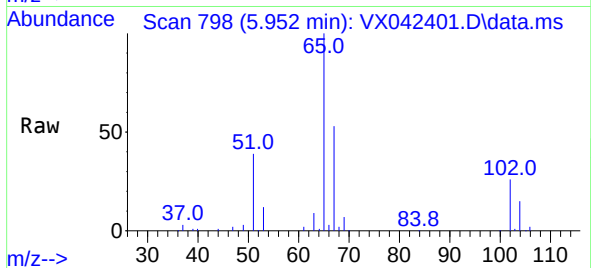




#27  
1,2-Dichloroethane-d4  
Concen: 30.534 ug/l  
RT: 5.952 min Scan# 798  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

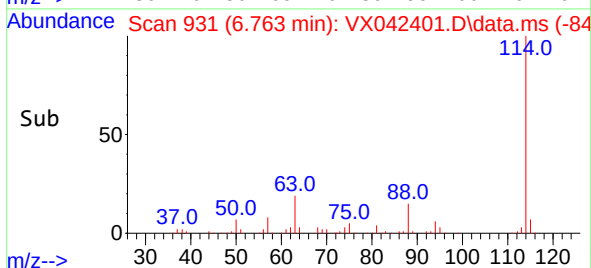
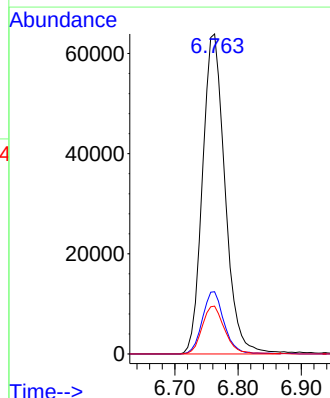
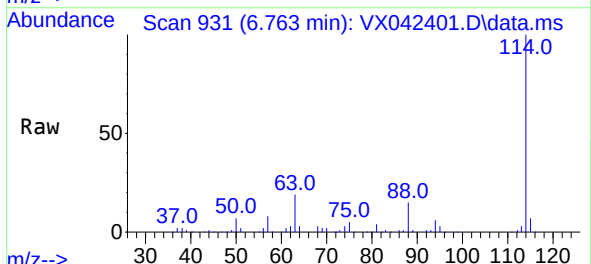
Instrument :  
MSVOA\_X  
ClientSampleId :

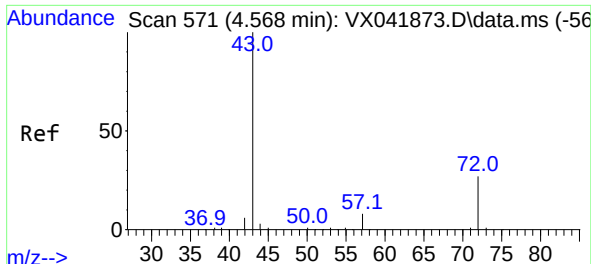
Tgt Ion: 65 Resp: 58583  
Ion Ratio Lower Upper  
65 100  
67 53.5 43.4 65.0



#28  
1,4-Difluorobenzene  
Concen: 30.000 ug/l  
RT: 6.763 min Scan# 931  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

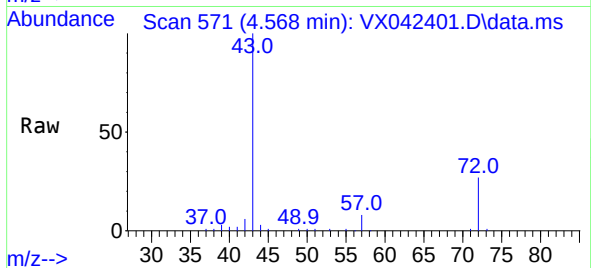
Tgt Ion: 114 Resp: 158205  
Ion Ratio Lower Upper  
114 100  
63 18.7 14.6 21.8  
88 15.0 11.8 17.8



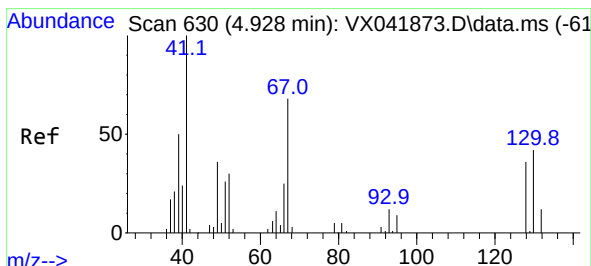
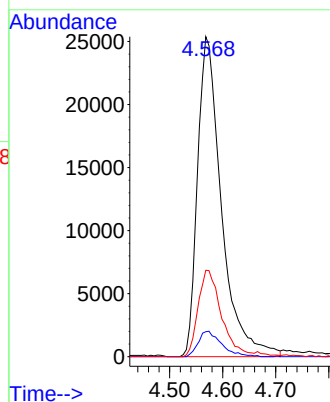
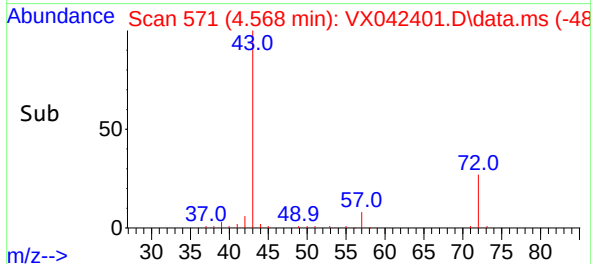


#30  
2-Butanone  
Concen: 57.743 ug/l  
RT: 4.568 min Scan# 51  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

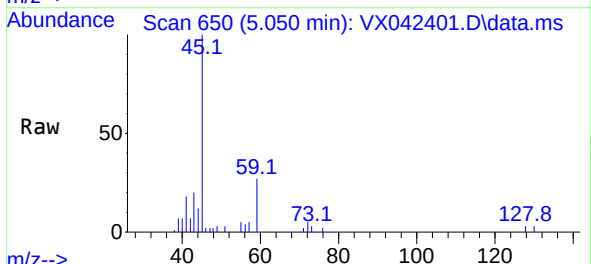
Instrument :  
MSVOA\_X  
ClientSampleId :



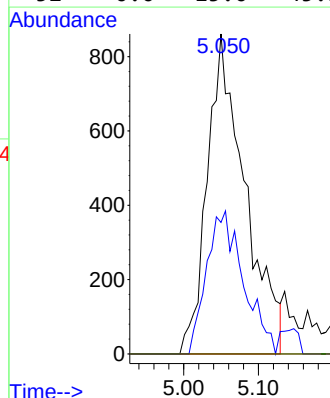
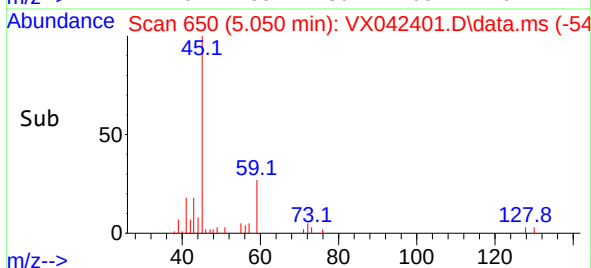
Tgt Ion: 43 Resp: 79532  
Ion Ratio Lower Upper  
43 100  
57 7.8 6.5 9.7  
72 26.2 22.0 33.0

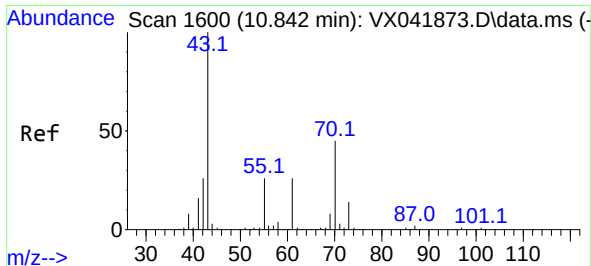


#35  
Methacrylonitrile  
Concen: 2.220 ug/l  
RT: 5.050 min Scan# 650  
Delta R.T. 0.122 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59



Tgt Ion: 41 Resp: 3017  
Ion Ratio Lower Upper  
41 100  
39 41.1 25.2 75.6  
67 0.0 34.2 102.5#  
52 0.0 15.0 45.1#

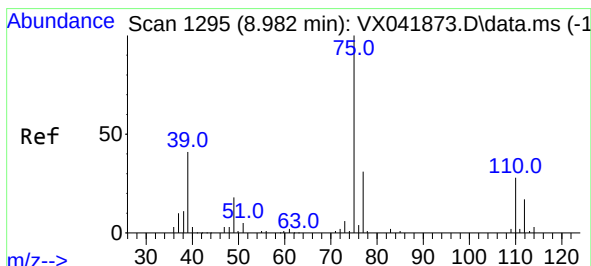
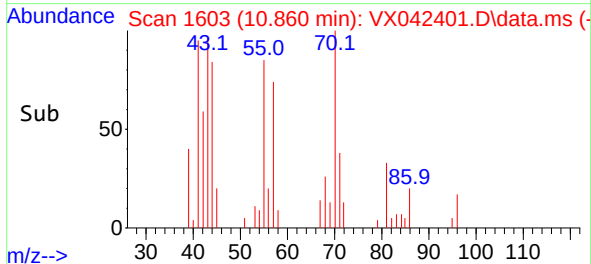
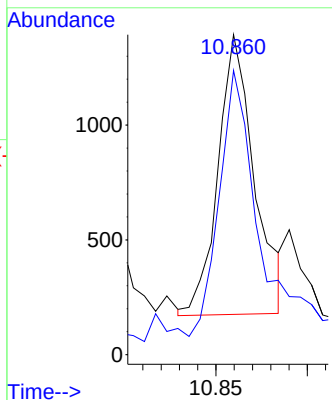
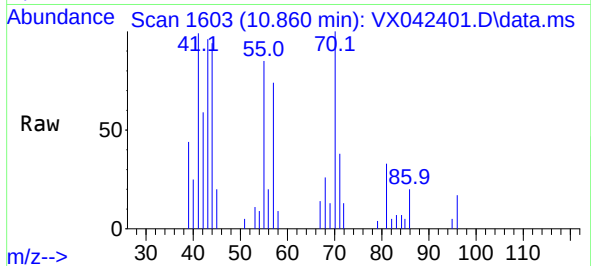




#47  
n-amyl acetate  
Concen: 0.495 ug/l  
RT: 10.860 min Scan# 1603  
Delta R.T. 0.018 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

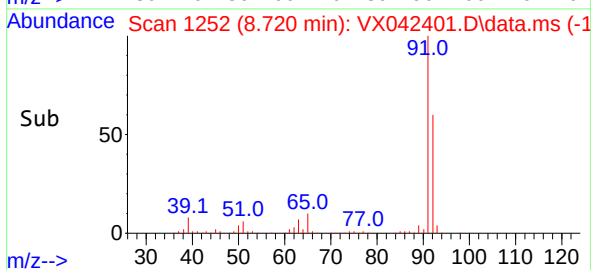
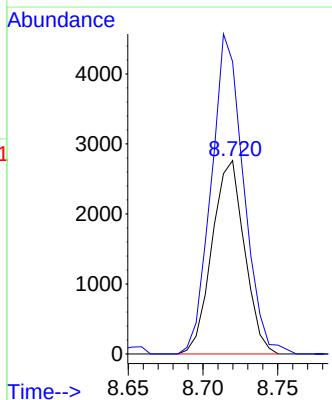
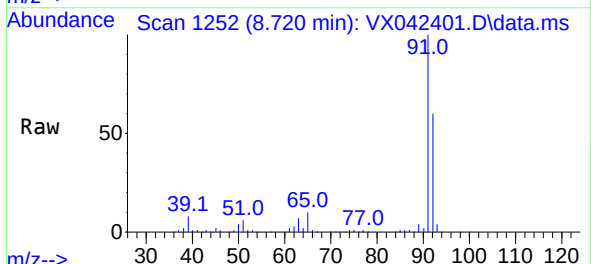
Instrument :  
MSVOA\_X  
ClientSampleId :

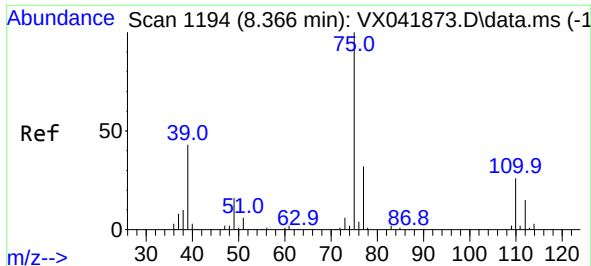
Tgt Ion: 43 Resp: 1688  
Ion Ratio Lower Upper  
43 100  
55 124.2 21.0 31.4#



#48  
t-1,3-Dichloropropene  
Concen: 1.855 ug/l  
RT: 8.720 min Scan# 1252  
Delta R.T. -0.262 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 75 Resp: 4170  
Ion Ratio Lower Upper  
75 100  
77 151.1 25.1 37.7#

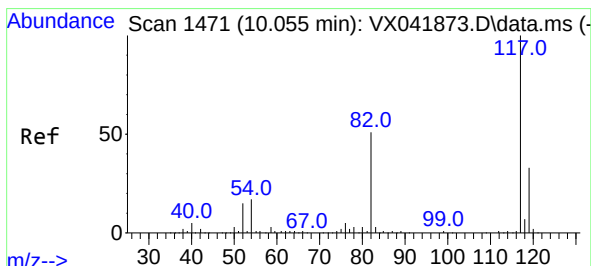
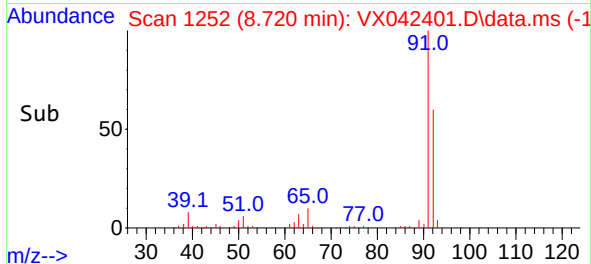
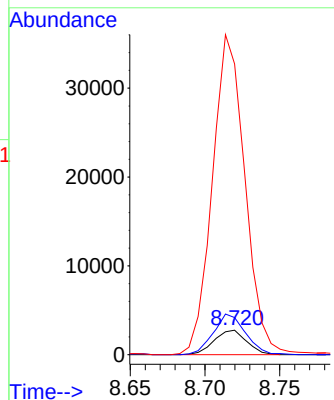
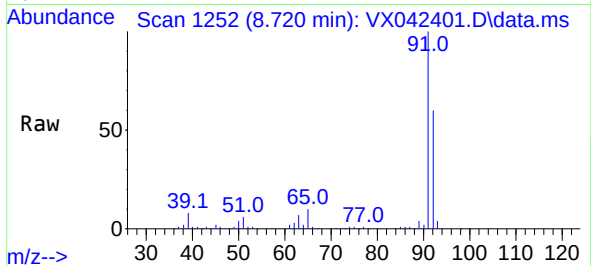




#49  
cis-1,3-Dichloropropene  
Concen: 1.651 ug/l  
RT: 8.720 min Scan# 1194  
Delta R.T. 0.353 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

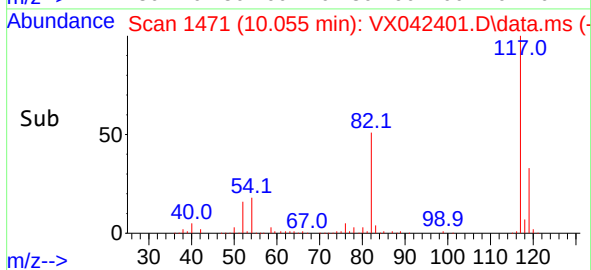
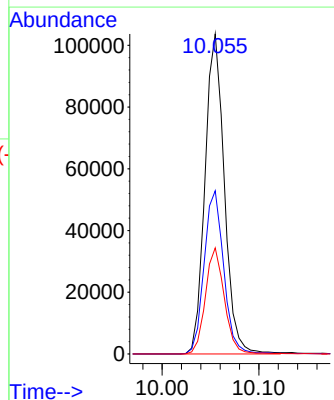
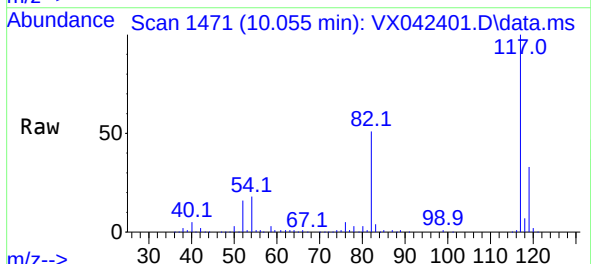
Instrument :  
MSVOA\_X  
ClientSampleId :

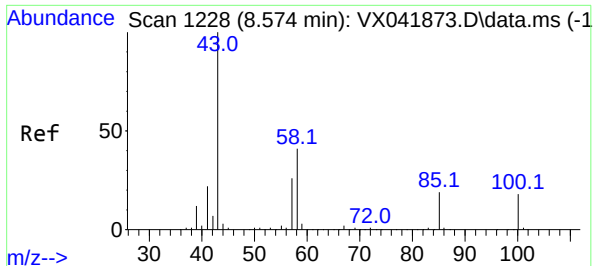
Tgt Ion: 75 Resp: 4170  
Ion Ratio Lower Upper  
75 100  
77 151.1 25.8 38.8#  
39 1180.5 34.8 52.2#



#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 10.055 min Scan# 1471  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 117 Resp: 144653  
Ion Ratio Lower Upper  
117 100  
82 51.4 41.1 61.7  
119 32.5 26.1 39.1





#58

4-Methyl-2-Pentanone

Concen: 4.882 ug/l

RT: 8.580 min Scan# 1229

Delta R.T. 0.006 min

Lab File: VX042401.D

Acq: 19 Jul 2024 13:59

Instrument :

MSVOA\_X

ClientSampleId :

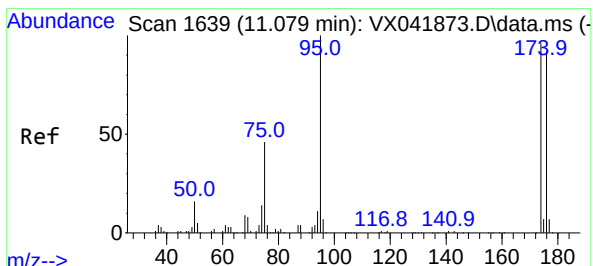
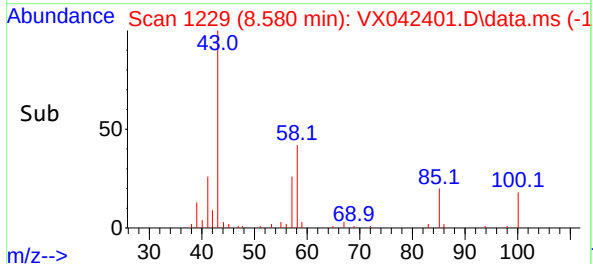
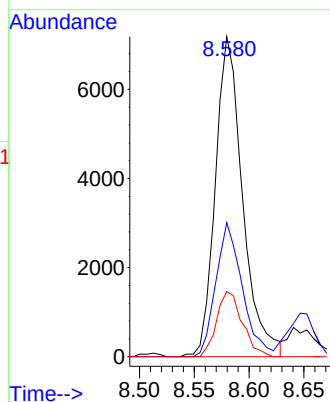
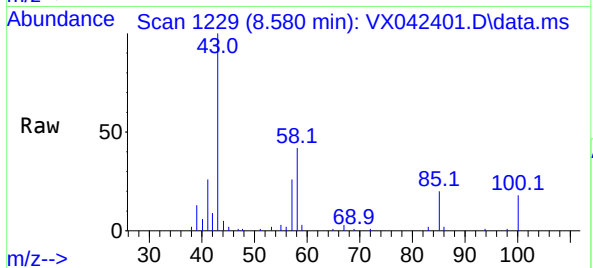
Tgt Ion: 43 Resp: 12446

Ion Ratio Lower Upper

43 100

58 40.5 33.2 49.8

85 19.2 15.5 23.3



#60

4-Bromofluorobenzene

Concen: 29.680 ug/l

RT: 11.079 min Scan# 1639

Delta R.T. -0.000 min

Lab File: VX042401.D

Acq: 19 Jul 2024 13:59

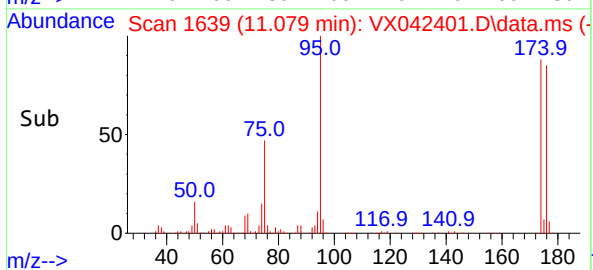
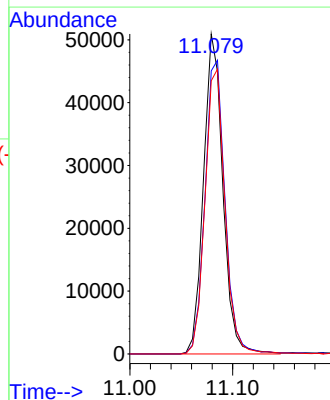
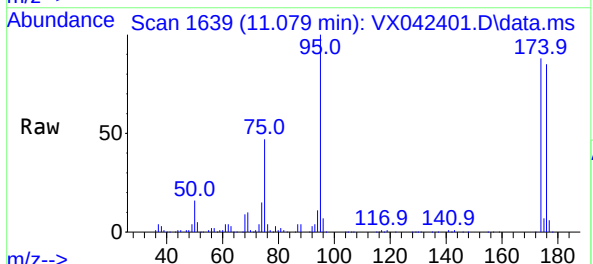
Tgt Ion: 95 Resp: 66800

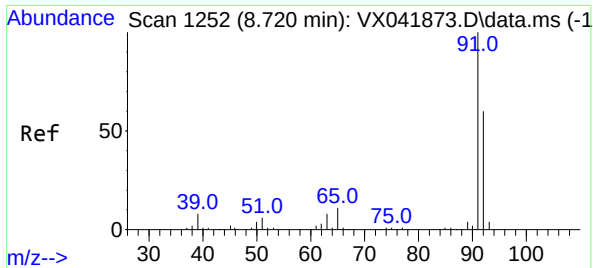
Ion Ratio Lower Upper

95 100

174 95.2 78.9 118.3

176 92.0 77.1 115.7

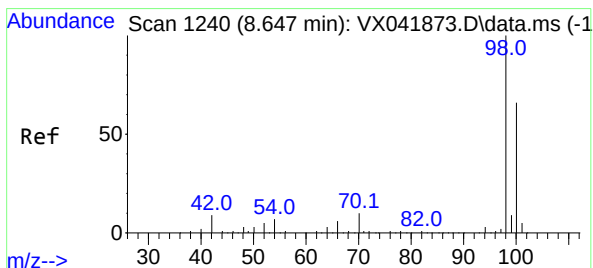
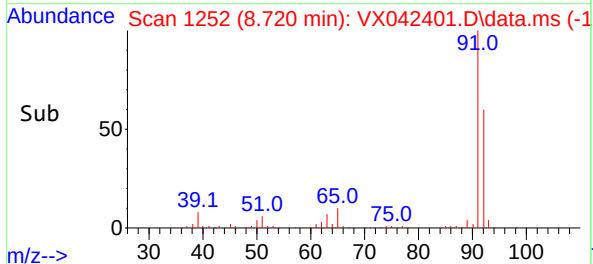
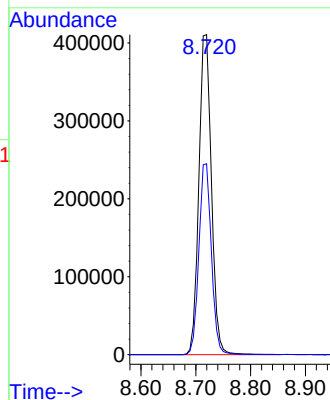
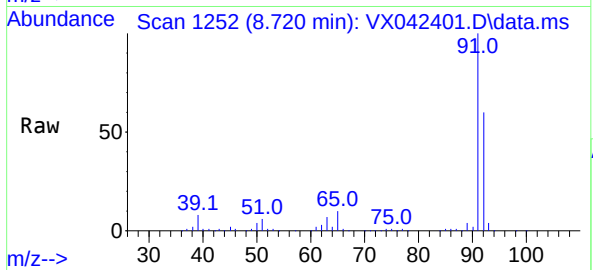




#62  
Toluene  
Concen: 90.762 ug/l  
RT: 8.720 min Scan# 1252  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

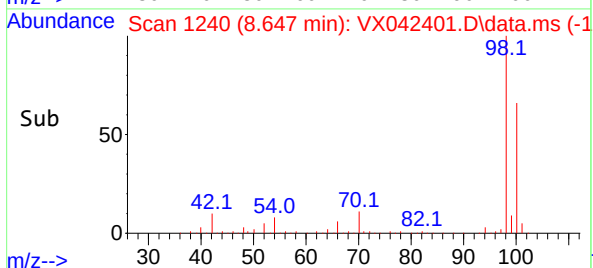
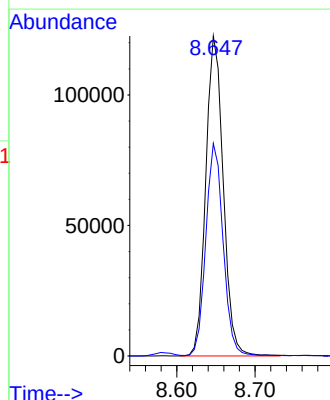
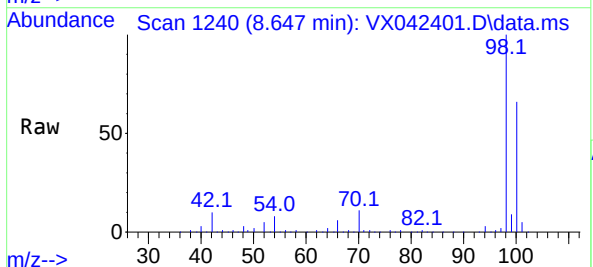
Instrument :  
MSVOA\_X  
ClientSampleId :

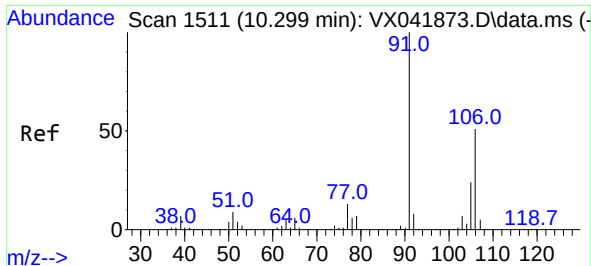
Tgt Ion: 91 Resp: 656387  
Ion Ratio Lower Upper  
91 100  
92 59.4 47.4 71.2



#63  
Toluene-d8  
Concen: 30.196 ug/l  
RT: 8.647 min Scan# 1240  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 98 Resp: 189747  
Ion Ratio Lower Upper  
98 100  
100 66.0 52.7 79.1

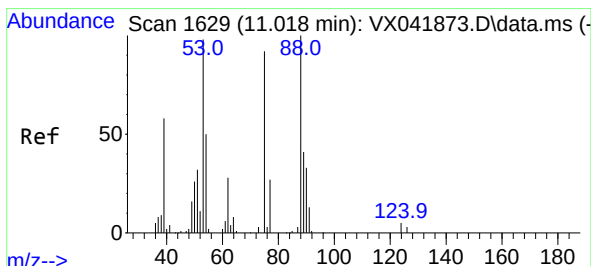
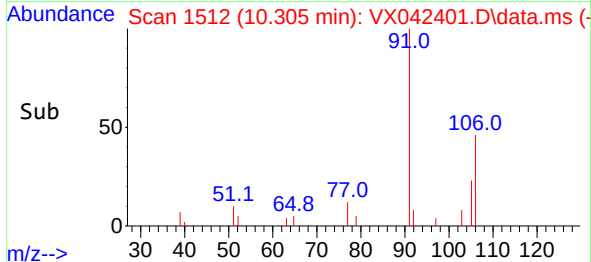
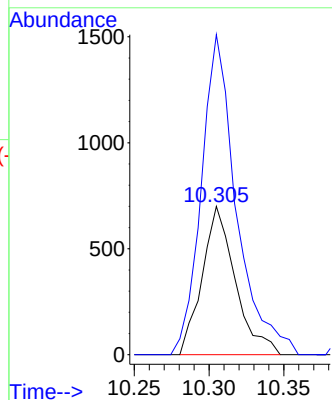
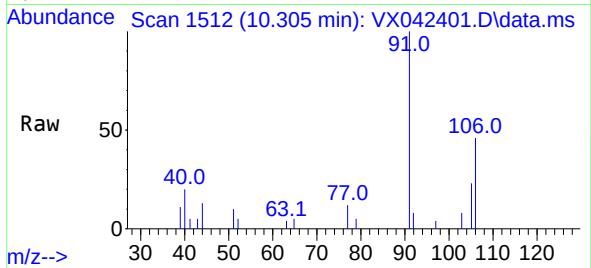




#67  
m/p-Xylenes  
Concen: 0.344 ug/l  
RT: 10.305 min Scan# 11  
Delta R.T. 0.006 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

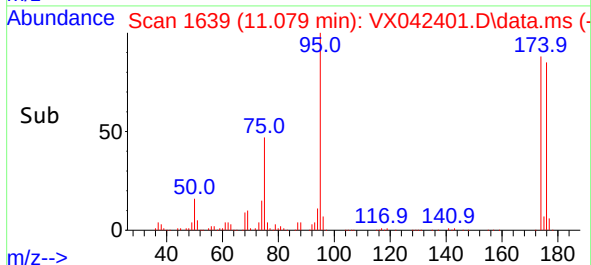
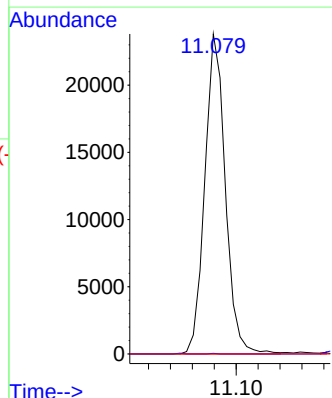
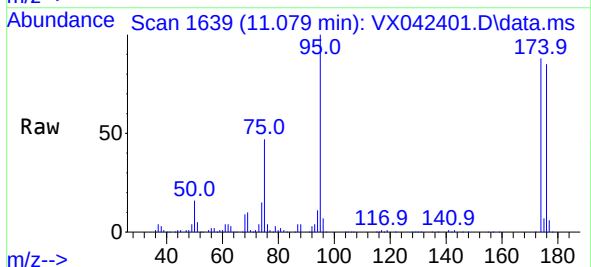
Instrument :  
MSVOA\_X  
ClientSampleId :

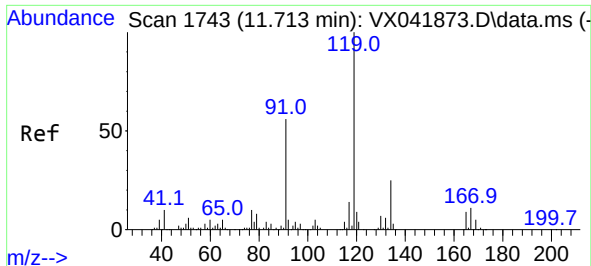
Tgt Ion:106 Resp: 1083  
Ion Ratio Lower Upper  
106 100  
91 227.6 157.0 235.6



#77  
t-1,4-Dichloro-2-butene  
Concen: 38.596 ug/l  
RT: 11.079 min Scan# 1639  
Delta R.T. 0.061 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Tgt Ion: 75 Resp: 30924  
Ion Ratio Lower Upper  
75 100  
53 0.2 53.4 160.2#  
89 0.0 22.5 67.5#





#79

tert-butylbenzene

Concen: 0.806 ug/l

RT: 12.006 min Scan# 11

Delta R.T. 0.292 min

Lab File: VX042401.D

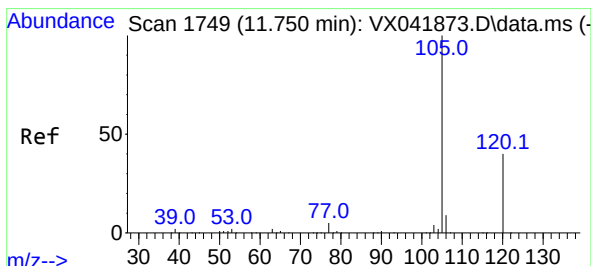
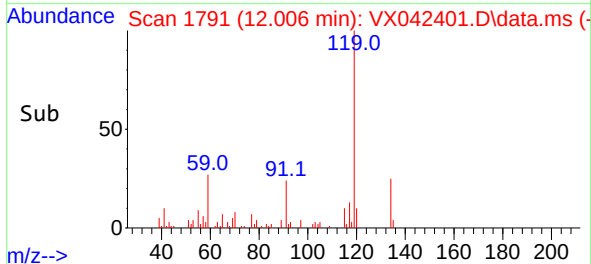
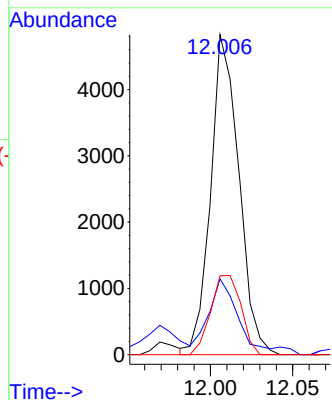
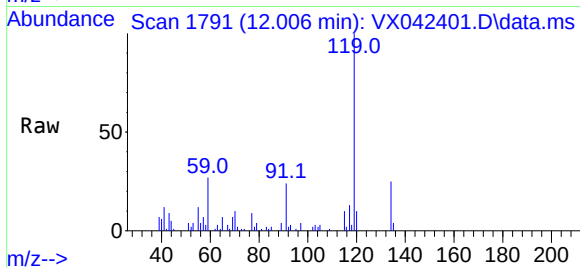
Acq: 19 Jul 2024 13:59

Instrument :

MSVOA\_X

ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 119   | Resp: | 5749  |
| Ion      | Ratio | Lower | Upper |
| 119      | 100   |       |       |
| 91       | 24.6  | 0.0   | 106.0 |
| 134      | 26.6  | 0.0   | 49.4  |



#80

1,2,4-Trimethylbenzene

Concen: 1.041 ug/l

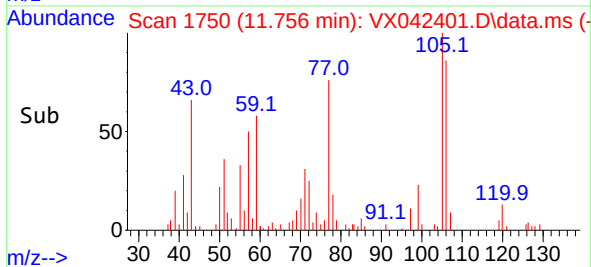
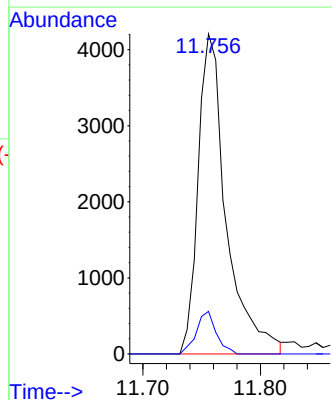
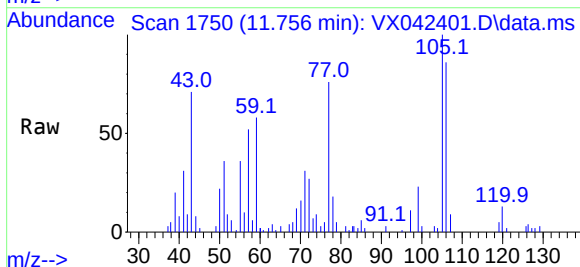
RT: 11.756 min Scan# 1750

Delta R.T. 0.006 min

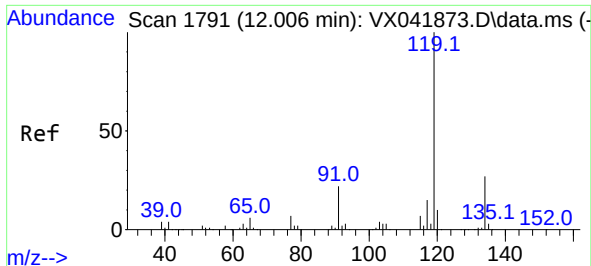
Lab File: VX042401.D

Acq: 19 Jul 2024 13:59

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 105   | Resp: | 6998  |
| Ion      | Ratio | Lower | Upper |
| 105      | 100   |       |       |
| 120      | 9.5   | 0.0   | 96.2  |



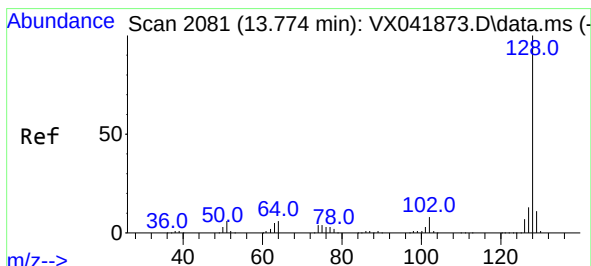
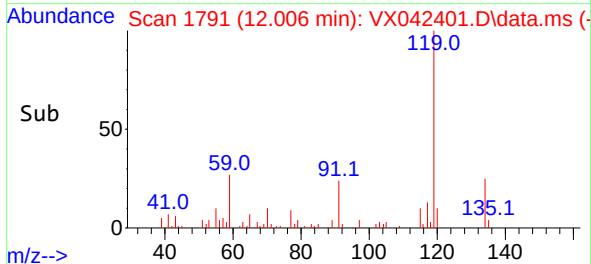
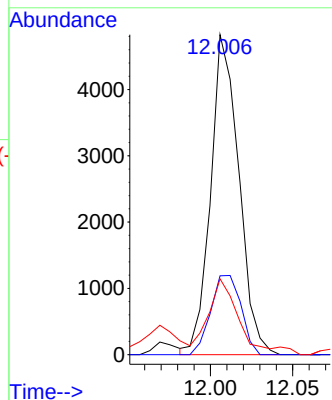
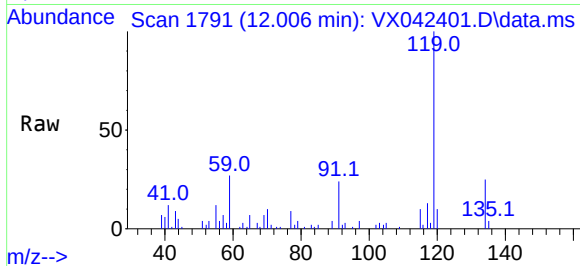




#82  
p-Isopropyltoluene  
Concen: 0.787 ug/l  
RT: 12.006 min Scan# 119  
Delta R.T. -0.000 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

Instrument :  
MSVOA\_X  
ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 119   | Resp: | 5749  |
| Ion      | Ratio | Lower | Upper |
| 119      | 100   |       |       |
| 134      | 26.6  | 0.0   | 54.0  |
| 91       | 24.6  | 0.0   | 42.2  |



#91  
Naphthalene  
Concen: 0.359 ug/l  
RT: 13.780 min Scan# 2082  
Delta R.T. 0.006 min  
Lab File: VX042401.D  
Acq: 19 Jul 2024 13:59

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 128   | Resp: | 3004  |
| Ion      | Ratio | Lower | Upper |
| 128      | 100   |       |       |
| 127      | 10.4  | 10.4  | 15.6# |
| 129      | 10.2  | 8.7   | 13.1  |

