

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL112024\  
 Data File : VL041706.D  
 Acq On : 20 Nov 2024 19:15  
 Operator : SY/MD  
 Sample : P4911-02DUP  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1DUP

Quant Time: Nov 21 05:14:42 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL110724AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Fri Nov 08 01:01:00 2024  
 Response via : Initial Calibration

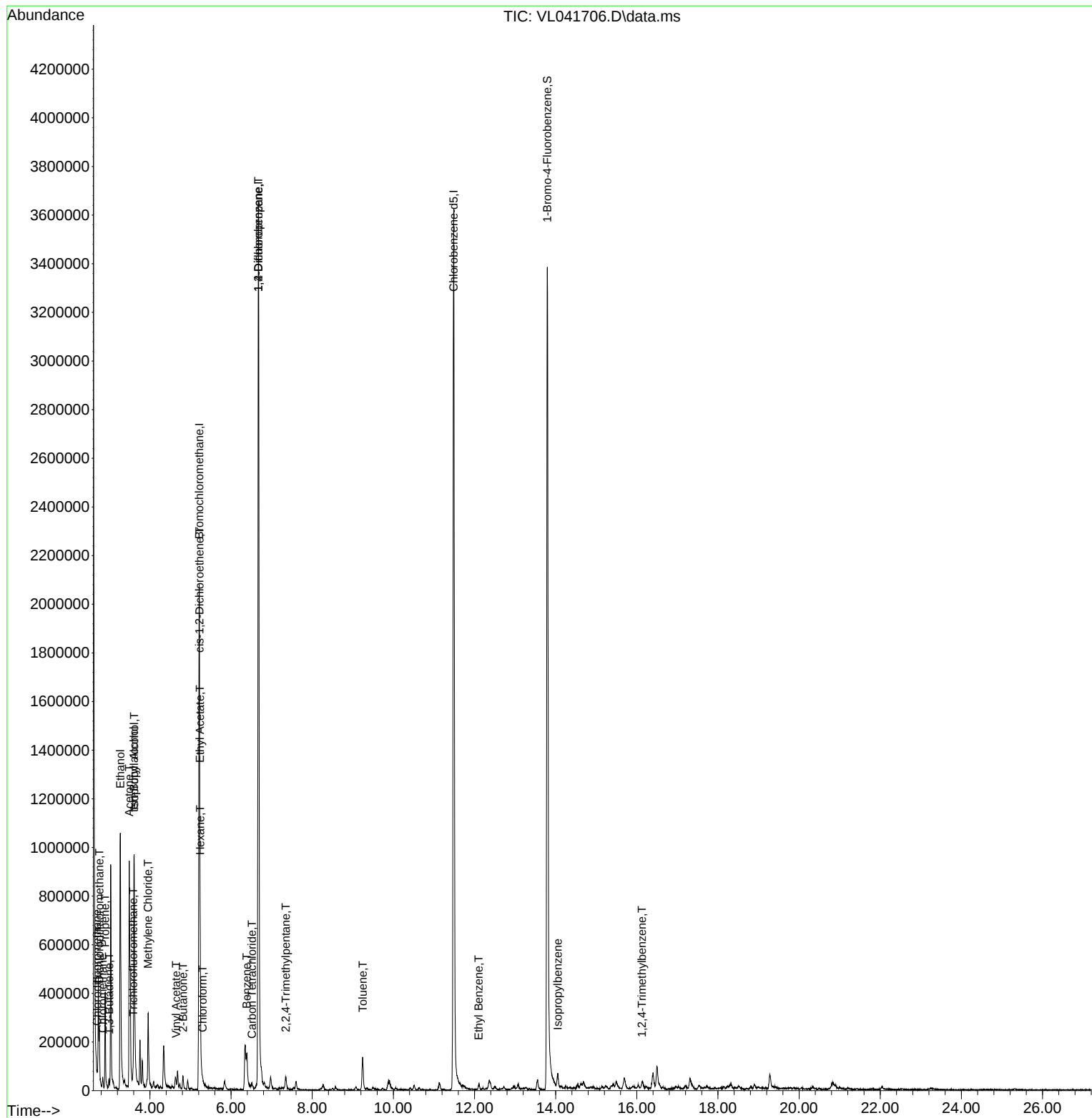
| Compound                    | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|-----------------------------|--------|-------|----------|----------|--------|----------|
| -----                       |        |       |          |          |        |          |
| Internal Standards          |        |       |          |          |        |          |
| 1) Bromochloromethane       | 5.214  | 49    | 985172   | 10.000   | ppbv   | 0.03     |
| 33) 1,4-Difluorobenzene     | 6.674  | 114   | 2701411  | 10.000   | ppbv   | 0.02     |
| 55) Chlorobenzene-d5        | 11.487 | 117   | 2316943  | 10.000   | ppbv   | 0.02     |
|                             |        |       |          |          |        |          |
| System Monitoring Compounds |        |       |          |          |        |          |
| 68) 1-Bromo-4-Fluorobenzene | 13.796 | 95    | 1672611  | 9.798    | ppbv   | 0.02     |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =      | 98.000%  |
|                             |        |       |          |          |        |          |
| Target Compounds            |        |       |          |          |        |          |
|                             |        |       |          |          | Qvalue |          |
| 2) Dichlorodifluoromethane  | 2.755  | 85    | 136866   | 0.769    | ppbv   | 100      |
| 3) Chlorodifluoromethane    | 2.697  | 51    | 77486    | 0.604    | ppbv # | 80       |
| 4) Chloromethane            | 2.835  | 50    | 33829    | 0.498    | ppbv   | 96       |
| 9) Propene                  | 2.896  | 41    | 87405    | 1.563    | ppbv   | 88       |
| 11) Trichlorofluoromethane  | 3.587  | 101   | 36382    | 0.235    | ppbv   | 99       |
| 13) Ethanol                 | 3.269  | 45    | 1051782  | 307.113  | ppbv   | 99       |
| 15) Acetone                 | 3.491  | 43    | 994871   | 8.205    | ppbv   | 98       |
| 16) 1,3-Butadiene           | 2.992  | 39    | 10073    | 0.165    | ppbv # | 76       |
| 17) tert-Butyl alcohol      | 3.607  | 59    | 30641    | 0.288    | ppbv   | 95       |
| 19) Isopropyl Alcohol       | 3.610  | 45    | 952581   | 16.437   | ppbv   | 99       |
| 20) Methylene Chloride      | 3.954  | 84    | 100856   | 2.261    | ppbv   | 94       |
| 23) Vinyl Acetate           | 4.648  | 43    | 4699     | 0.088    | ppbv # | 33       |
| 25) Ethyl Acetate           | 5.230  | 43    | 112770   | 0.449    | ppbv # | 90       |
| 26) Hexane                  | 5.237  | 57    | 105301   | 1.092    | ppbv # | 44       |
| 29) Chloroform              | 5.298  | 83    | 6276     | 0.039    | ppbv   | 98       |
| 31) cis-1,2-Dichloroethene  | 5.224  | 61    | 3194     | 0.034    | ppbv # | 41       |
| 34) 2-Butanone              | 4.816  | 43    | 56708    | 0.422    | ppbv   | 99       |
| 35) Carbon Tetrachloride    | 6.516  | 117   | 4643     | 0.033    | ppbv   | 95       |
| 36) Benzene                 | 6.388  | 78    | 75939    | 0.379    | ppbv   | 95       |
| 39) 1,2-Dichloropropane     | 6.674  | 63    | 662112   | 8.371    | ppbv # | 24       |
| 44) 2,2,4-Trimethylpentane  | 7.349  | 57    | 20583    | 0.061    | ppbv # | 1        |
| 53) Toluene                 | 9.243  | 91    | 91299    | 0.434    | ppbv   | 98       |
| 58) Ethyl Benzene           | 12.105 | 91    | 9233     | 0.036    | ppbv   | 100      |
| 62) Isopropylbenzene        | 14.053 | 105   | 19927    | 0.059    | ppbv # | 49       |
| 74) 1,2,4-Trimethylbenzene  | 16.127 | 105   | 13785    | 0.054    | ppbv # | 70       |
| -----                       |        |       |          |          |        |          |

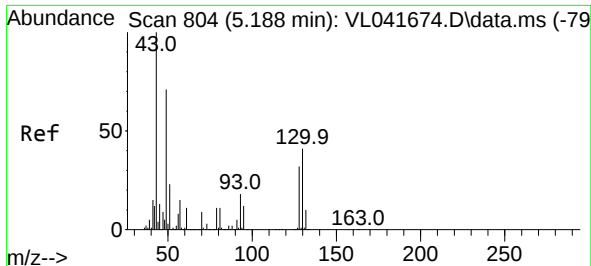
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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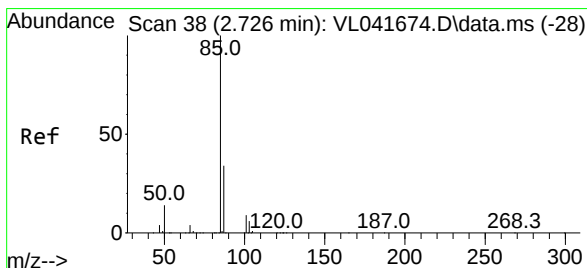
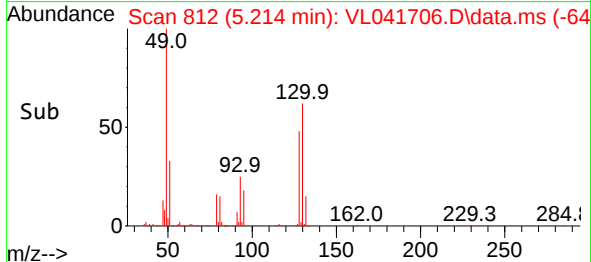
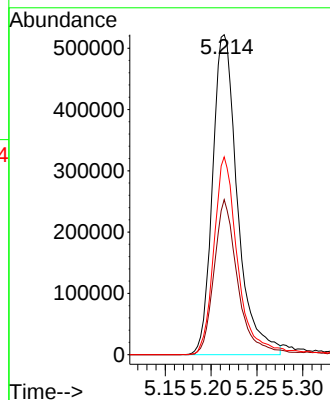
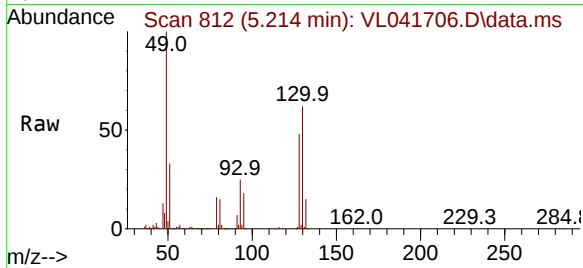




#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.214 min Scan# 81  
Delta R.T. 0.026 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

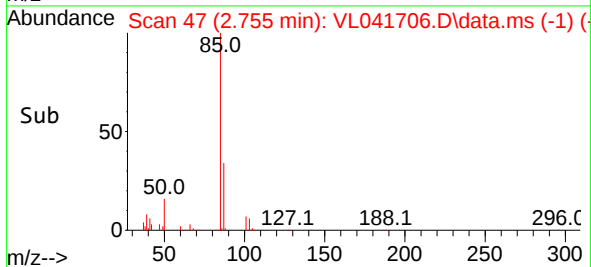
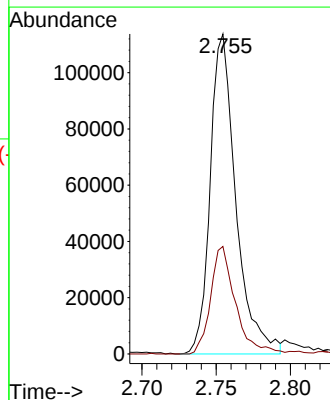
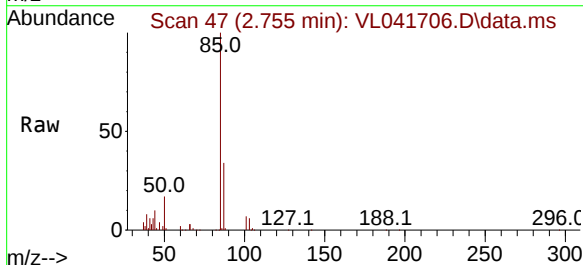
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1DUP

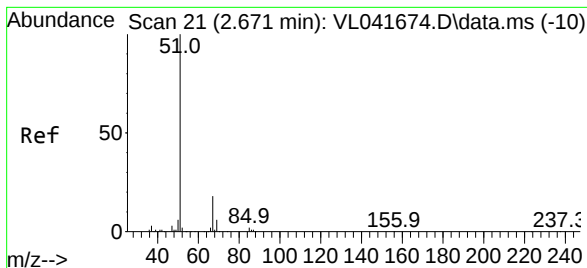
Tgt Ion: 49 Resp: 985172  
Ion Ratio Lower Upper  
49 100  
128 46.9 23.8 71.2  
130 60.5 30.1 90.5



#2  
Dichlorodifluoromethane  
Concen: 0.769 ppbv  
RT: 2.755 min Scan# 47  
Delta R.T. 0.029 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 85 Resp: 136866  
Ion Ratio Lower Upper  
85 100  
87 33.6 26.8 40.2





#3

Chlorodifluoromethane

Concen: 0.604 ppbv

RT: 2.697 min Scan# 21

Delta R.T. 0.026 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

Instrument :

MSVOA\_L

ClientSampleId :

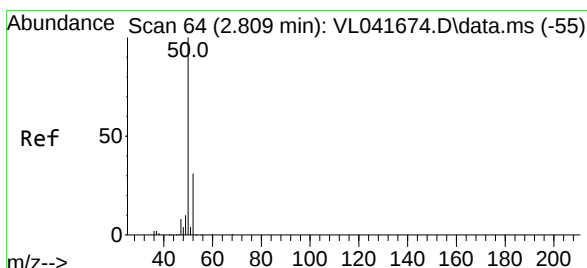
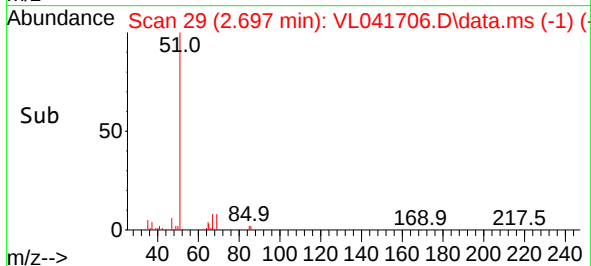
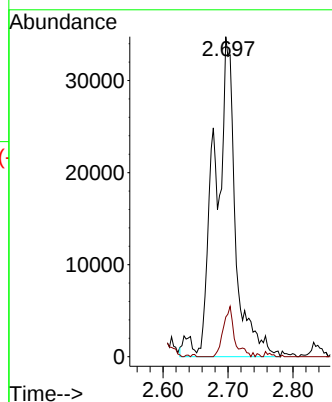
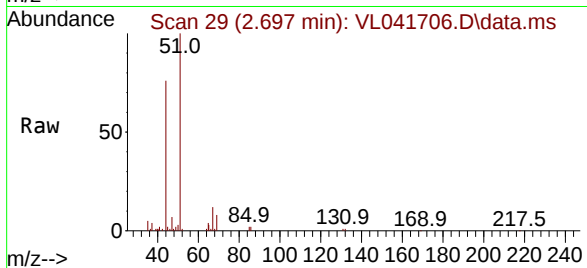
IA1DUP

Tgt Ion: 51 Resp: 77486

Ion Ratio Lower Upper

51 100

67 8.5 13.9 20.9#



#4

Chloromethane

Concen: 0.498 ppbv

RT: 2.835 min Scan# 72

Delta R.T. 0.026 min

Lab File: VL041706.D

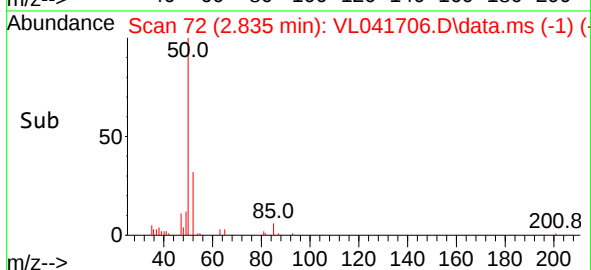
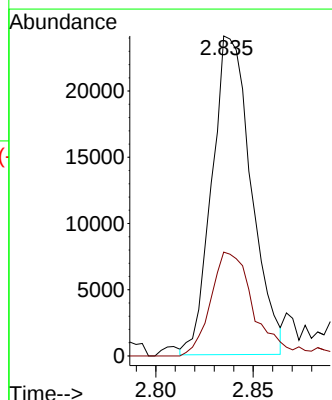
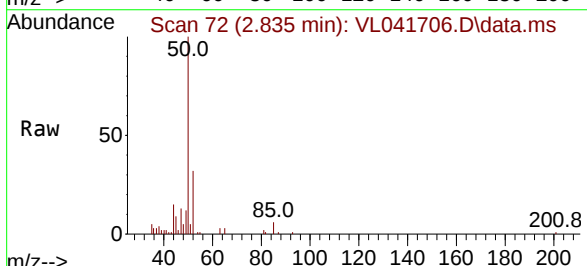
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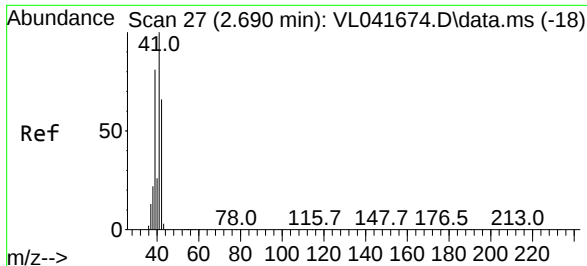
Tgt Ion: 50 Resp: 33829

Ion Ratio Lower Upper

50 100

52 33.5 24.9 37.3

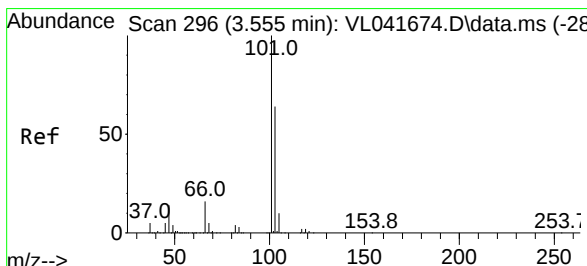
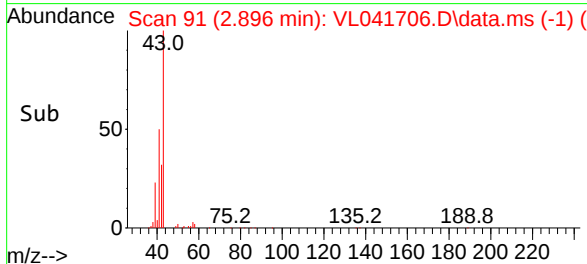
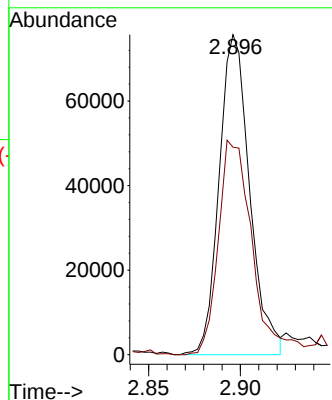
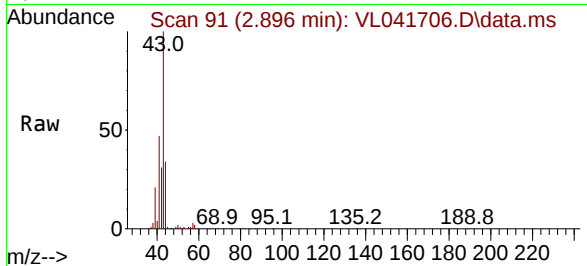




#9  
Propene  
Concen: 1.563 ppbv  
RT: 2.896 min Scan# 91  
Delta R.T. 0.206 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

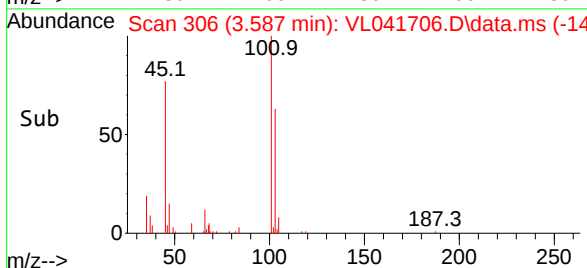
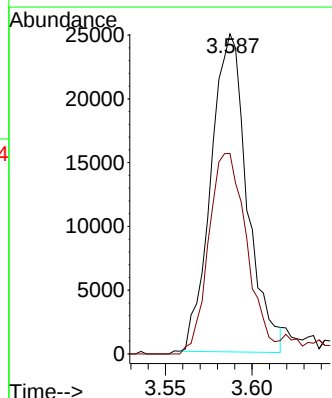
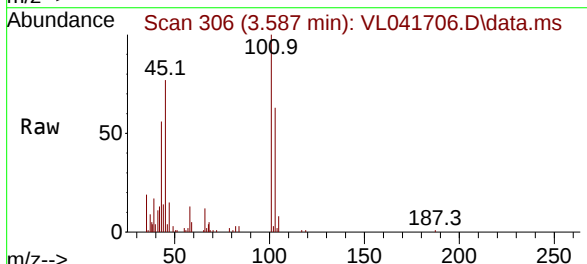
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MSVOA\_L  
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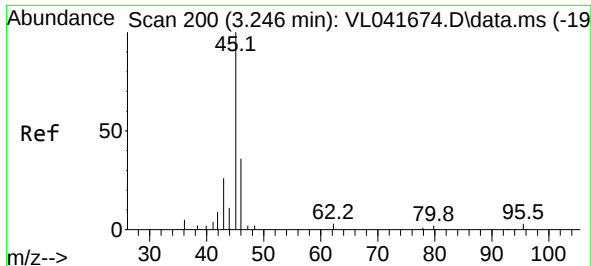
Tgt Ion: 41 Resp: 87405  
Ion Ratio Lower Upper  
41 100  
42 78.6 55.0 82.4



#11  
Trichlorofluoromethane  
Concen: 0.235 ppbv  
RT: 3.587 min Scan# 306  
Delta R.T. 0.032 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 101 Resp: 36382  
Ion Ratio Lower Upper  
101 100  
103 63.2 51.0 76.6

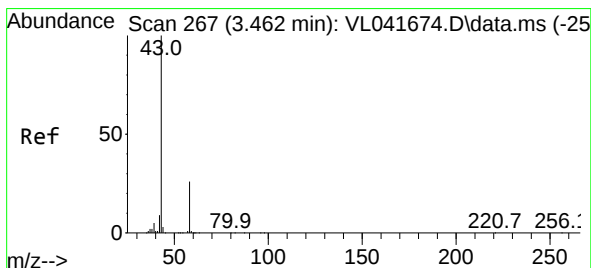
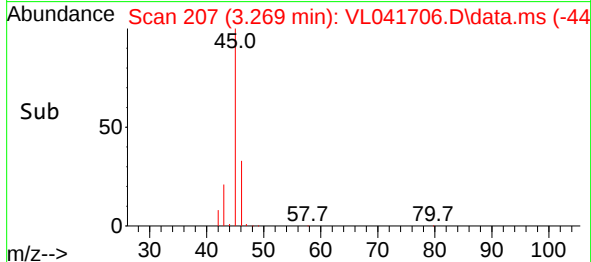
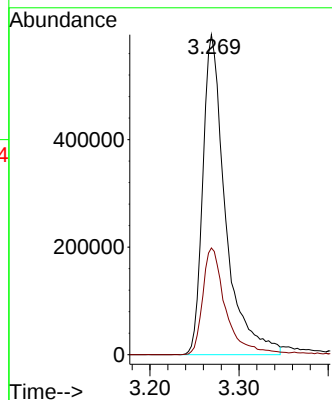
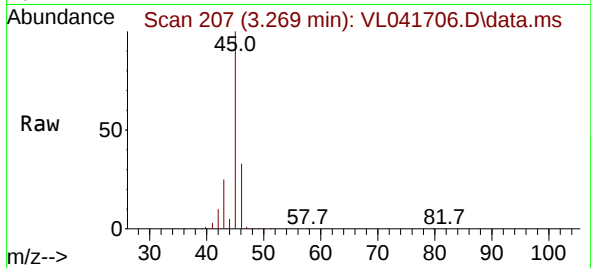




#13  
Ethanol  
Concen: 307.113 ppbv  
RT: 3.269 min Scan# 207  
Delta R.T. 0.023 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

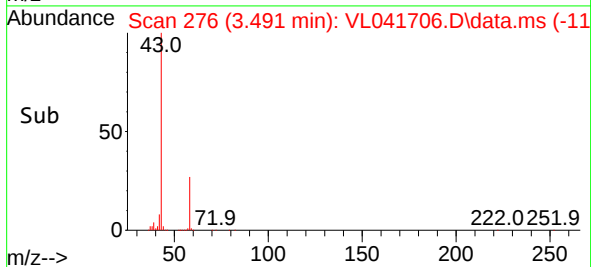
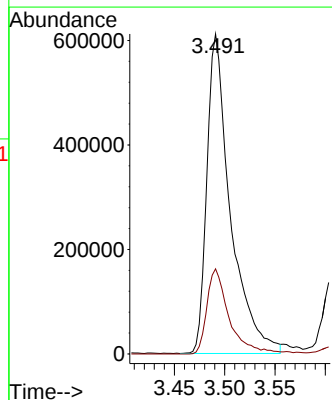
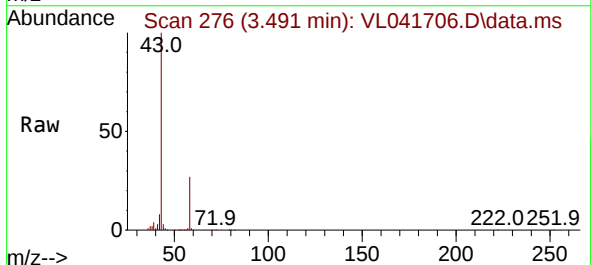
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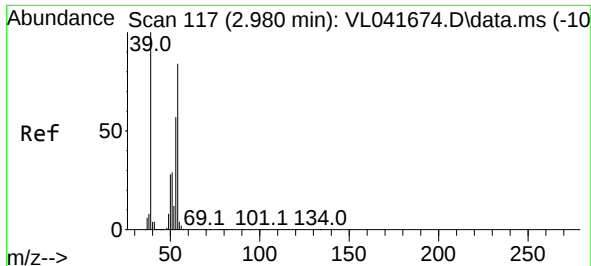
Tgt Ion: 45 Resp: 1051782  
Ion Ratio Lower Upper  
45 100  
46 35.0 13.8 55.2



#15  
Acetone  
Concen: 8.205 ppbv  
RT: 3.491 min Scan# 276  
Delta R.T. 0.029 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 43 Resp: 994871  
Ion Ratio Lower Upper  
43 100  
58 25.6 21.4 32.0

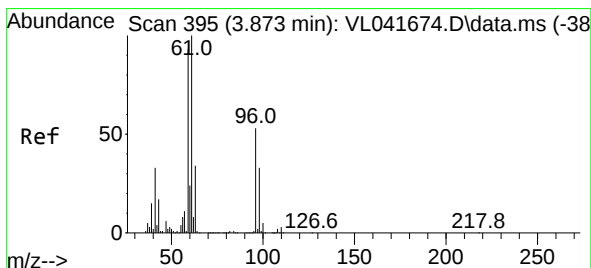
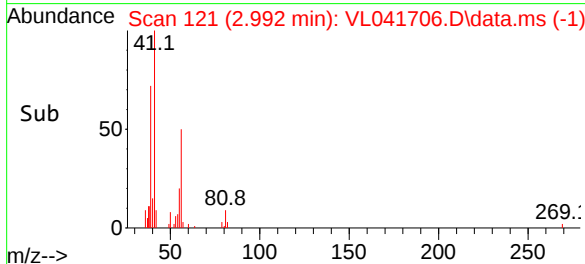
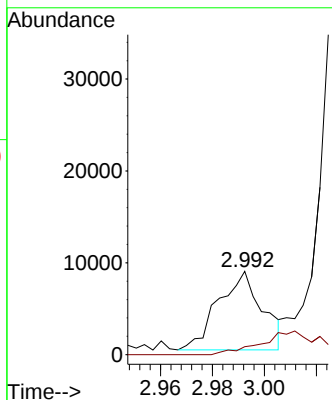
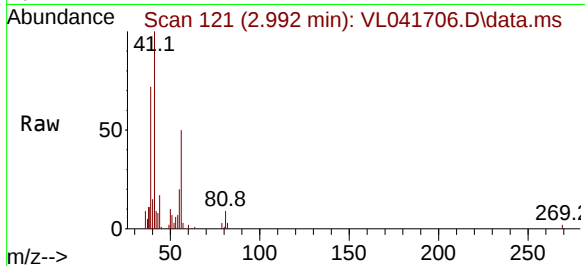




#16  
1,3-Butadiene  
Concen: 0.165 ppbv  
RT: 2.992 min Scan# 117  
Delta R.T. 0.013 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

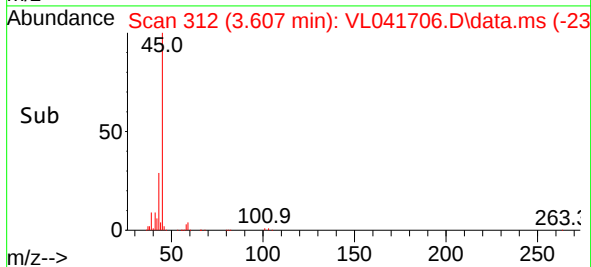
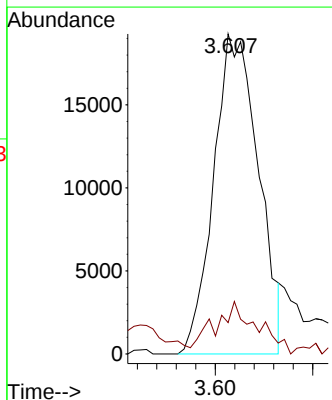
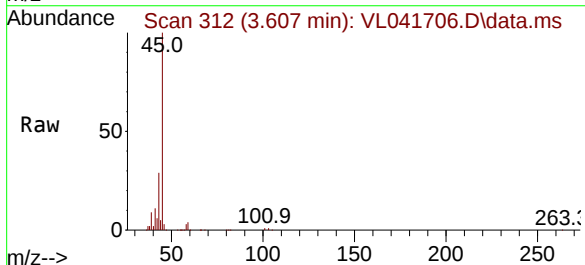
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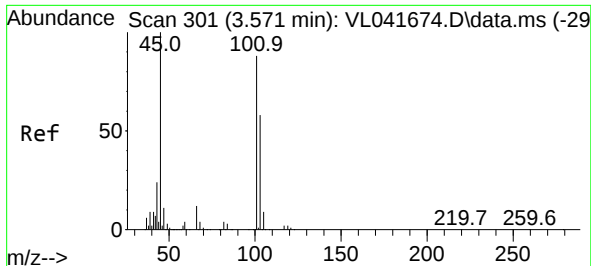
Tgt Ion: 39 Resp: 10073  
Ion Ratio Lower Upper  
39 100  
54 55.7 61.3 91.9#



#17  
tert-Butyl alcohol  
Concen: 0.288 ppbv  
RT: 3.607 min Scan# 312  
Delta R.T. -0.267 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 59 Resp: 30641  
Ion Ratio Lower Upper  
59 100  
57 12.6 8.5 12.7

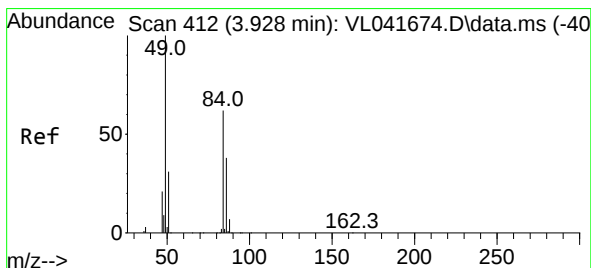
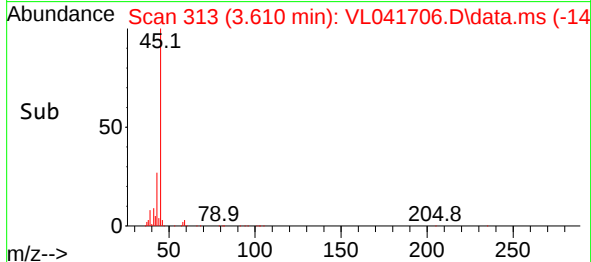
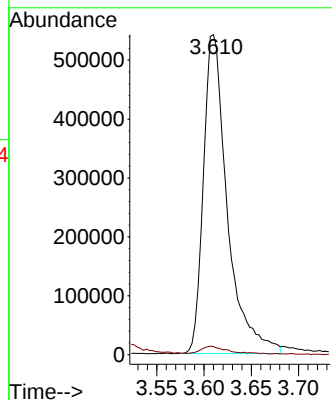
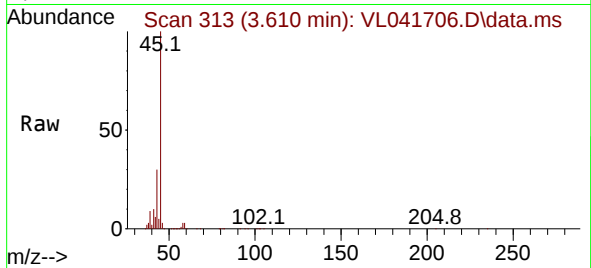




#19  
Isopropyl Alcohol  
Concen: 16.437 ppbv  
RT: 3.610 min Scan# 313  
Delta R.T. 0.039 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

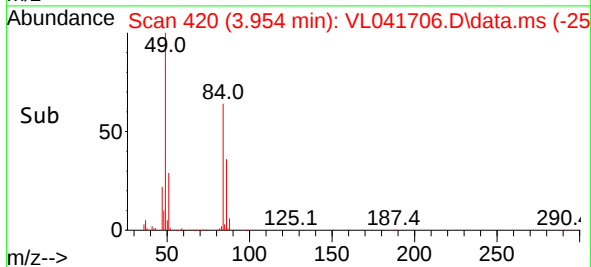
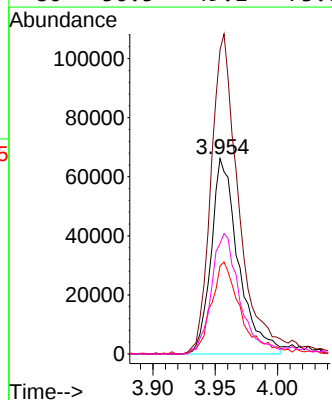
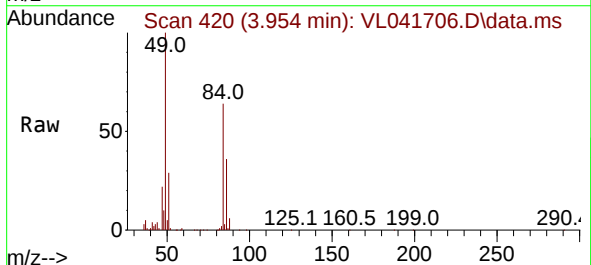
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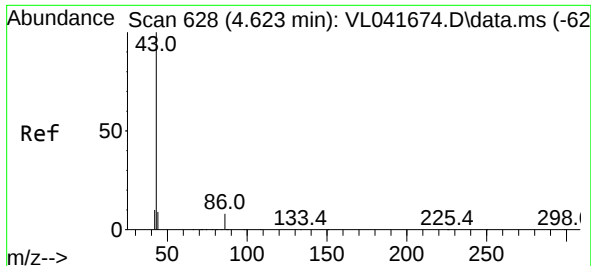
Tgt Ion: 45 Resp: 952581  
Ion Ratio Lower Upper  
45 100  
58 3.5 2.5 3.7



#20  
Methylene Chloride  
Concen: 2.261 ppbv  
RT: 3.954 min Scan# 420  
Delta R.T. 0.026 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 84 Resp: 100856  
Ion Ratio Lower Upper  
84 100  
49 155.7 129.7 194.5  
51 45.0 39.8 59.6  
86 56.5 49.1 73.7

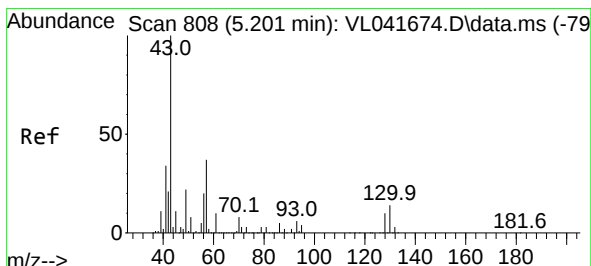
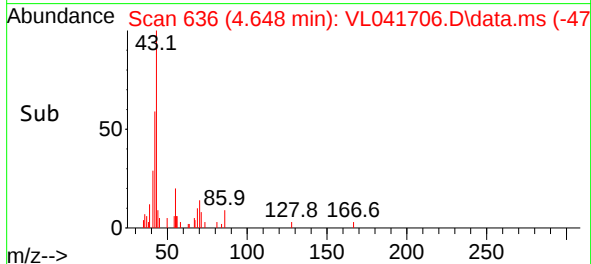
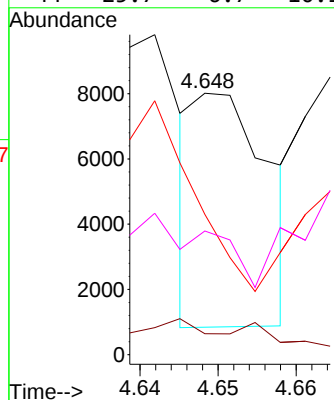
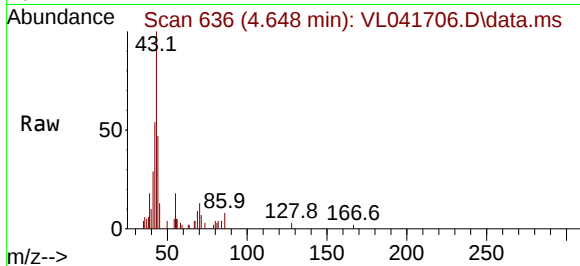




#23  
 Vinyl Acetate  
 Concen: 0.088 ppbv  
 RT: 4.648 min Scan# 61  
 Delta R.T. 0.026 min  
 Lab File: VL041706.D  
 Acq: 20 Nov 2024 19:15

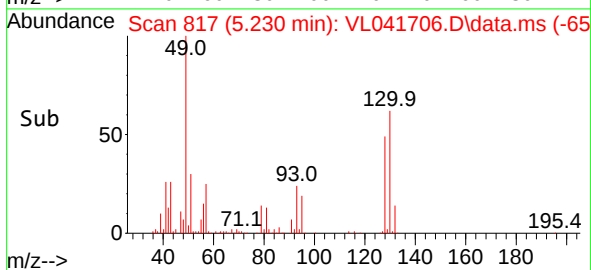
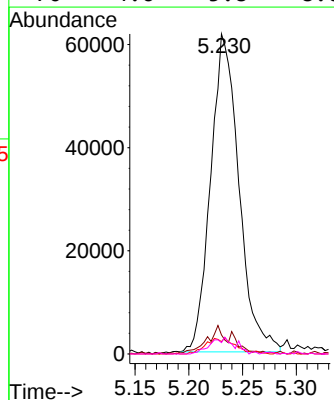
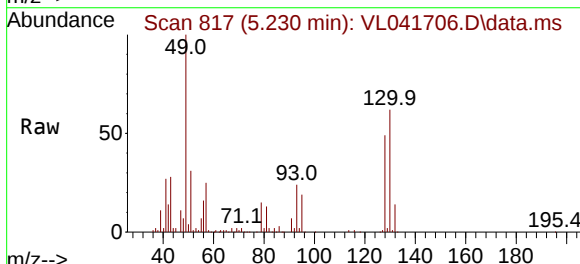
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1DUP

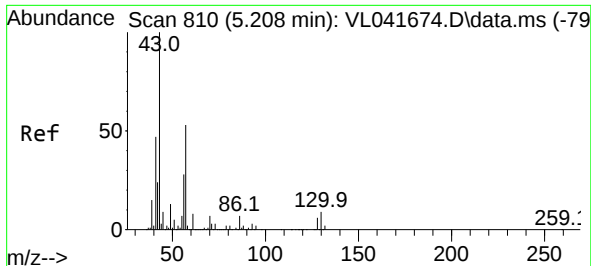
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 4699  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 11.9  | 5.3   | 7.9#  |
| 42       | 53.3  | 8.5   | 12.7# |
| 44       | 25.7  | 6.7   | 10.1# |



#25  
 Ethyl Acetate  
 Concen: 0.449 ppbv  
 RT: 5.230 min Scan# 817  
 Delta R.T. 0.029 min  
 Lab File: VL041706.D  
 Acq: 20 Nov 2024 19:15

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 112770 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 8.3   | 8.6   | 13.0#  |
| 61       | 5.3   | 8.4   | 12.6#  |
| 70       | 4.6   | 5.8   | 8.6#   |

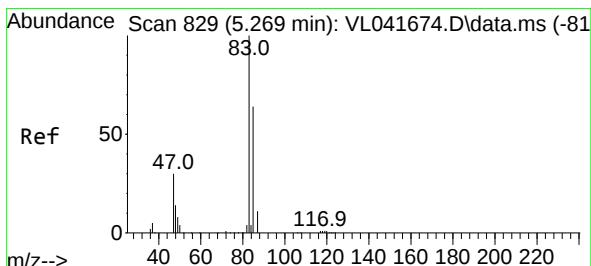
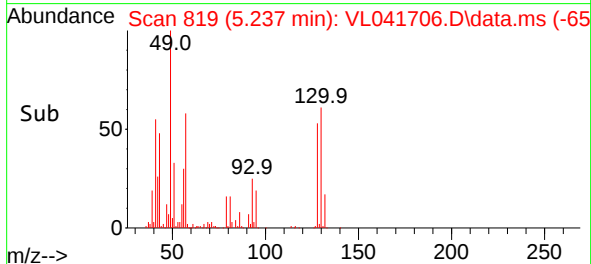
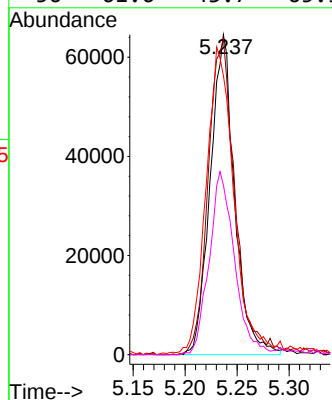
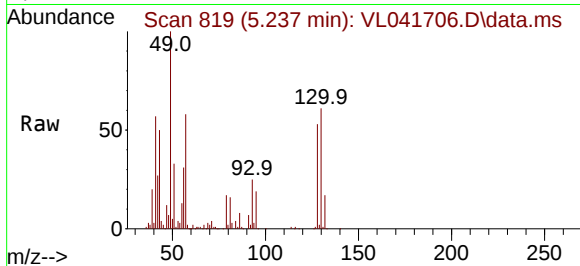




#26  
Hexane  
Concen: 1.092 ppbv  
RT: 5.237 min Scan# 810  
Delta R.T. 0.029 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

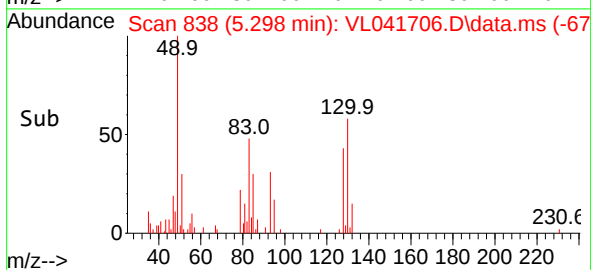
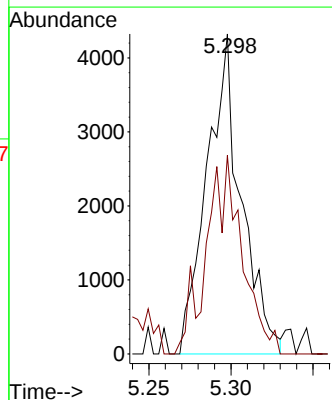
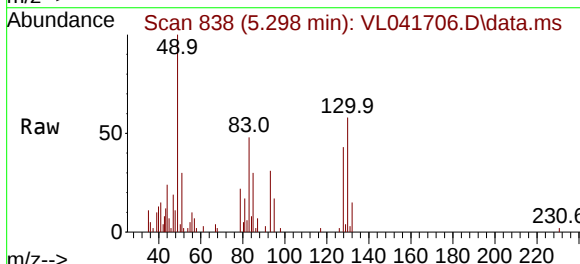
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1DUP

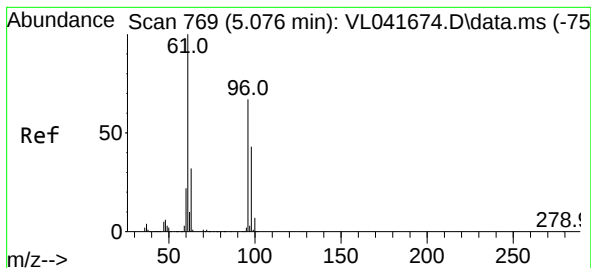
Tgt Ion: 57 Resp: 105301  
Ion Ratio Lower Upper  
57 100  
41 109.9 76.1 114.1  
43 113.9 207.0 310.6#  
56 61.6 43.7 65.5



#29  
Chloroform  
Concen: 0.039 ppbv  
RT: 5.298 min Scan# 838  
Delta R.T. 0.029 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 83 Resp: 6276  
Ion Ratio Lower Upper  
83 100  
85 62.0 51.1 76.7





#31

cis-1,2-Dichloroethene

Concen: 0.034 ppbv

RT: 5.224 min Scan# 81

Delta R.T. 0.148 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

Instrument :

MSVOA\_L

ClientSampleId :

IA1DUP

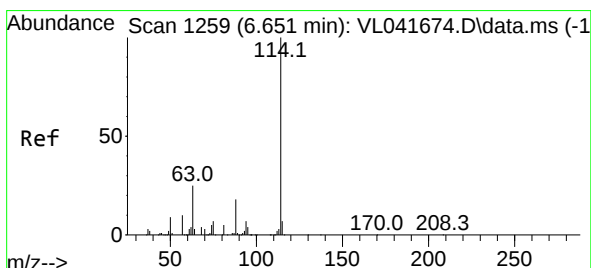
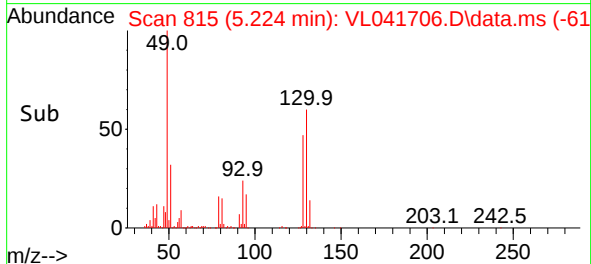
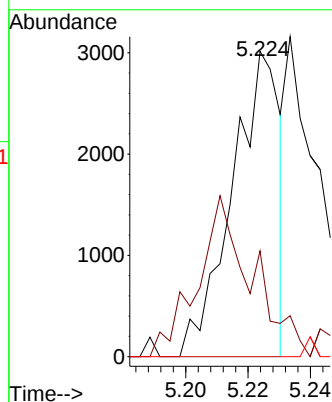
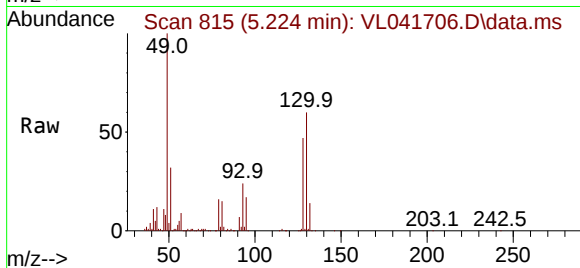
Tgt Ion: 61 Resp: 3194

Ion Ratio Lower Upper

61 100

96 23.8 53.4 80.2#

98 0.0 34.0 51.0#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.674 min Scan# 1266

Delta R.T. 0.023 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

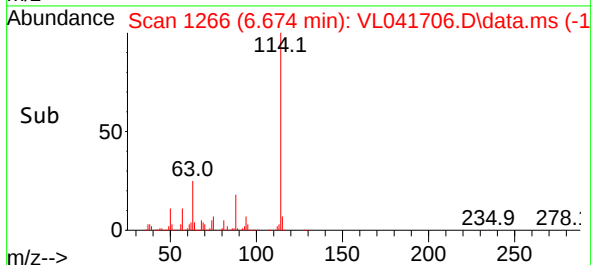
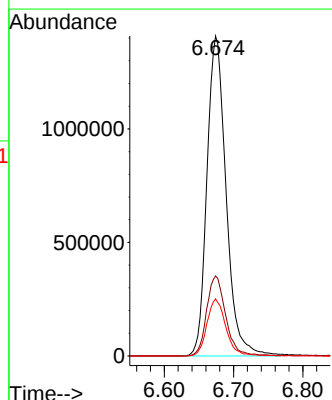
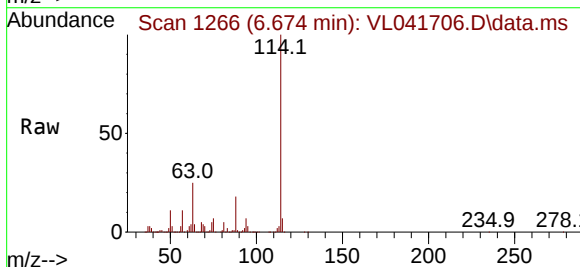
Tgt Ion: 114 Resp: 2701411

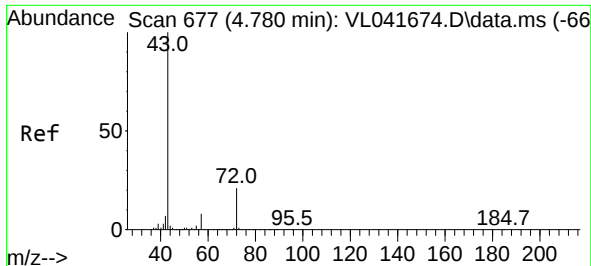
Ion Ratio Lower Upper

114 100

63 25.2 20.3 30.5

88 17.7 14.2 21.4

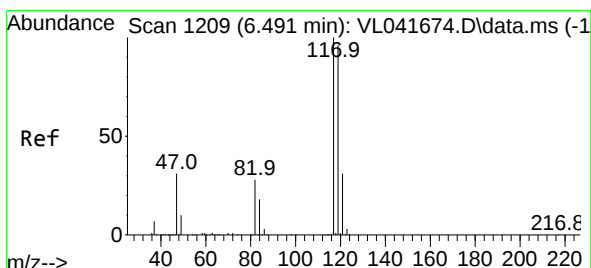
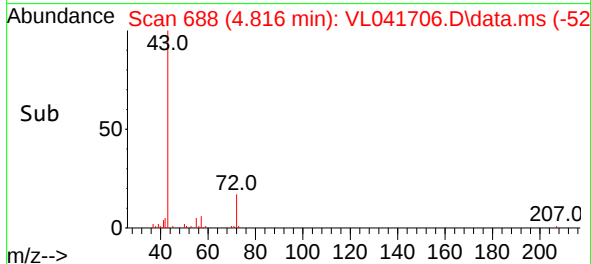
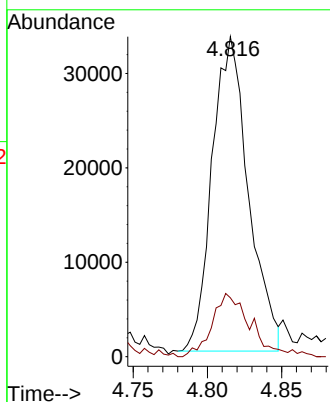
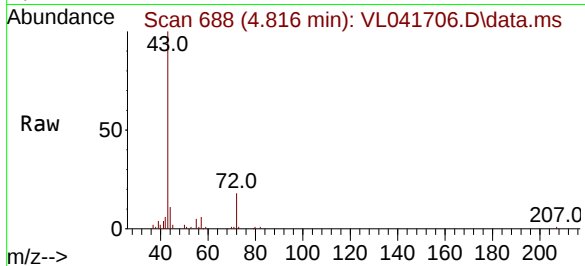




#34  
2-Butanone  
Concen: 0.422 ppbv  
RT: 4.816 min Scan# 61  
Delta R.T. 0.035 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

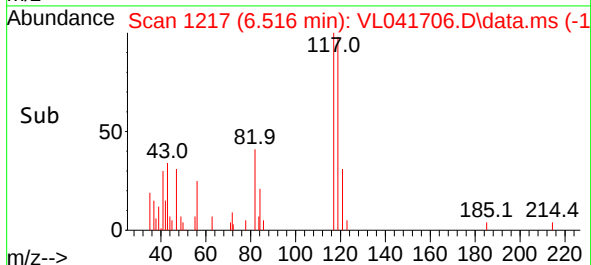
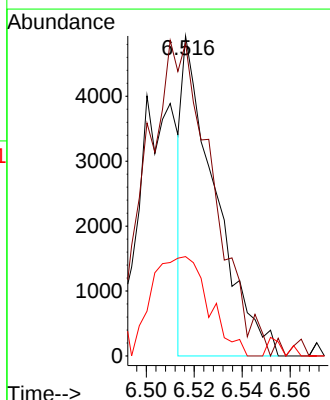
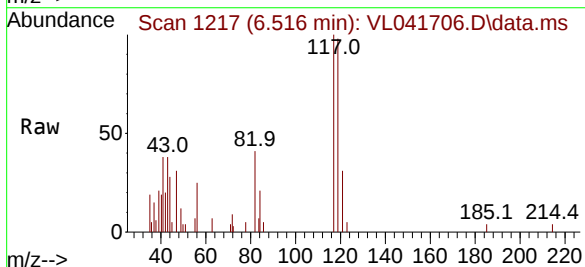
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1DUP

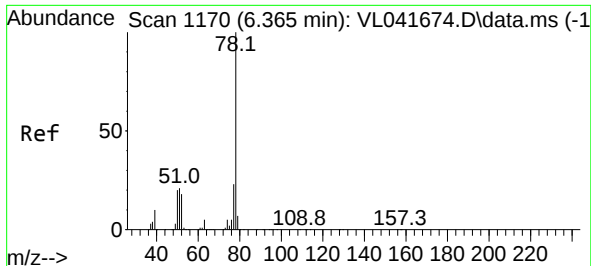
Tgt Ion: 43 Resp: 56708  
Ion Ratio Lower Upper  
43 100  
72 21.9 17.4 26.0



#35  
Carbon Tetrachloride  
Concen: 0.033 ppbv  
RT: 6.516 min Scan# 1217  
Delta R.T. 0.026 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 117 Resp: 4643  
Ion Ratio Lower Upper  
117 100  
119 92.2 77.2 115.8  
121 26.7 25.0 37.4

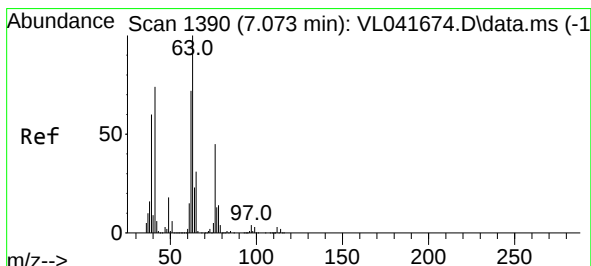
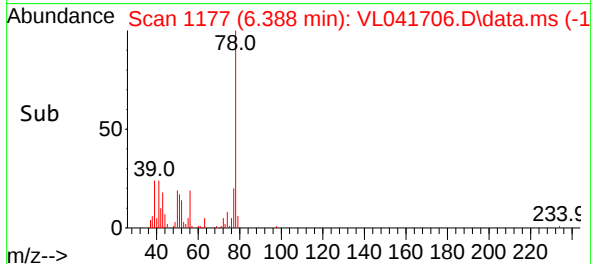
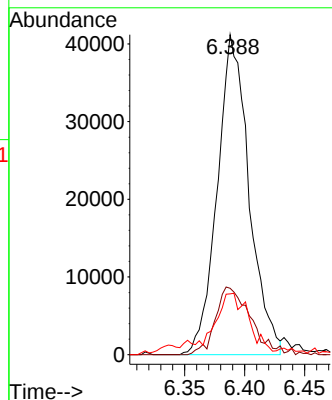
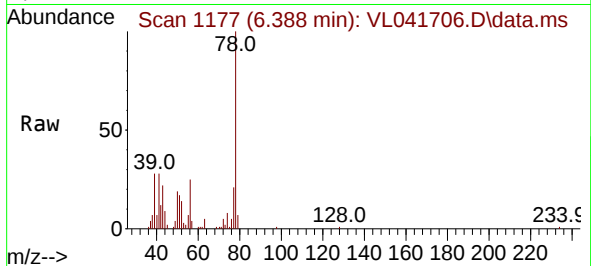




#36  
Benzene  
Concen: 0.379 ppbv  
RT: 6.388 min Scan# 1177  
Delta R.T. 0.023 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

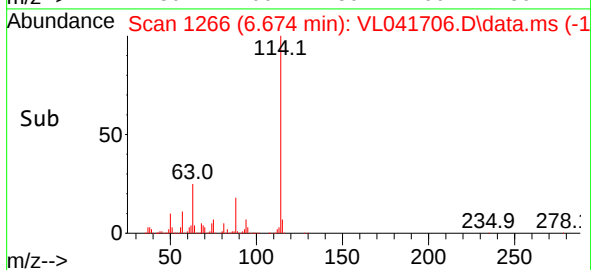
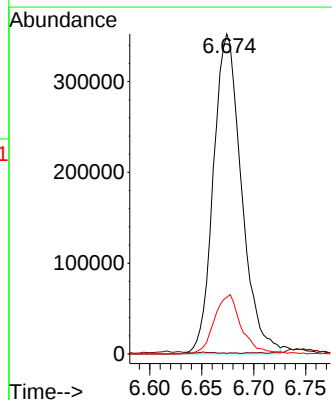
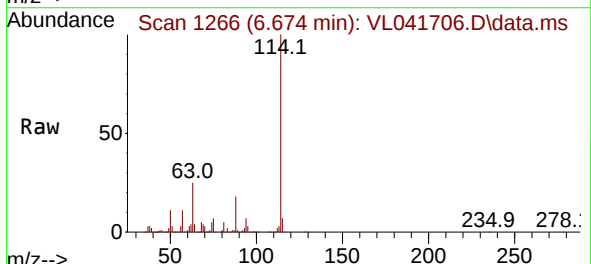
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1DUP

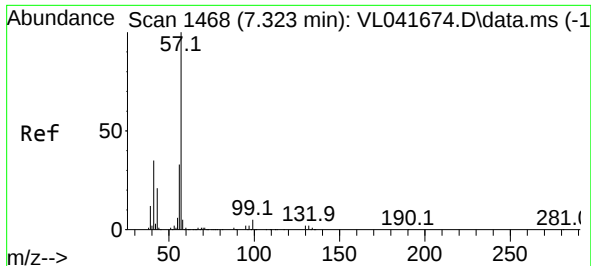
Tgt Ion: 78 Resp: 75939  
Ion Ratio Lower Upper  
78 100  
77 20.7 18.5 27.7  
50 17.2 15.6 23.4



#39  
1,2-Dichloropropane  
Concen: 8.371 ppbv  
RT: 6.674 min Scan# 1266  
Delta R.T. -0.399 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 63 Resp: 662112  
Ion Ratio Lower Upper  
63 100  
41 0.0 59.1 88.7#  
62 17.7 57.7 86.5#

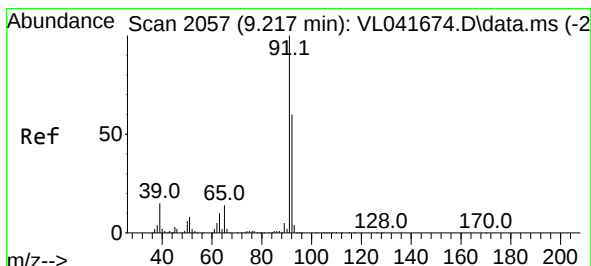
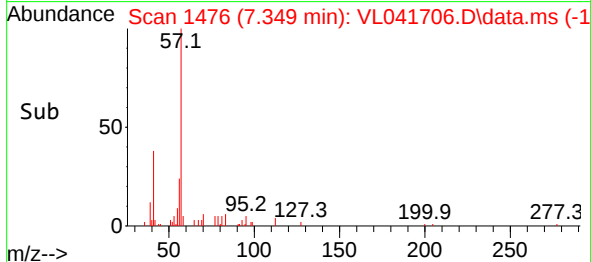
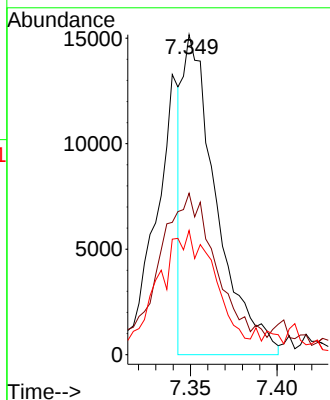
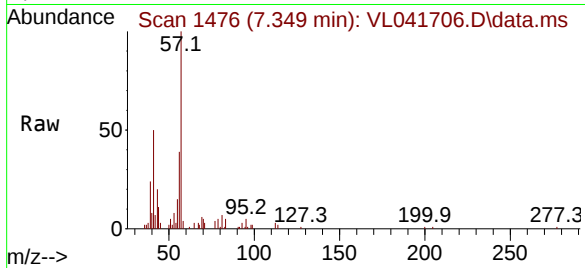




#44  
2,2,4-Trimethylpentane  
Concen: 0.061 ppbv  
RT: 7.349 min Scan# 1468  
Delta R.T. 0.026 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

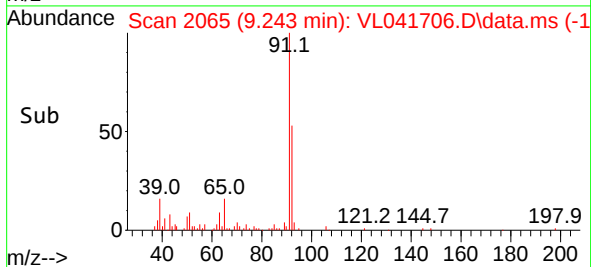
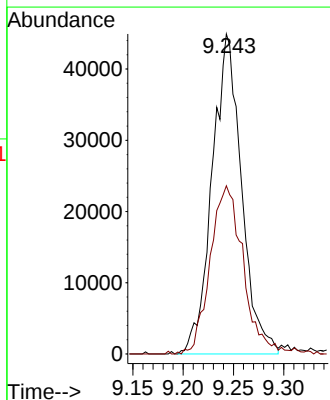
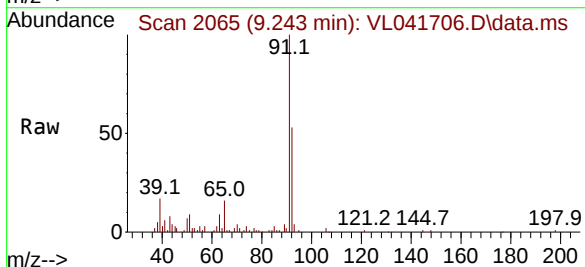
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1DUP

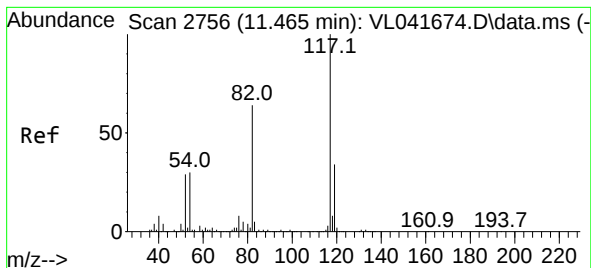
Tgt Ion: 57 Resp: 20583  
Ion Ratio Lower Upper  
57 100  
41 106.1 27.0 40.6#  
56 76.6 25.8 38.6#



#53  
Toluene  
Concen: 0.434 ppbv  
RT: 9.243 min Scan# 2065  
Delta R.T. 0.026 min  
Lab File: VL041706.D  
Acq: 20 Nov 2024 19:15

Tgt Ion: 91 Resp: 91299  
Ion Ratio Lower Upper  
91 100  
92 59.4 49.0 73.4





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.487 min Scan# 21

Delta R.T. 0.023 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

Instrument :

MSVOA\_L

ClientSampleId :

IA1DUP

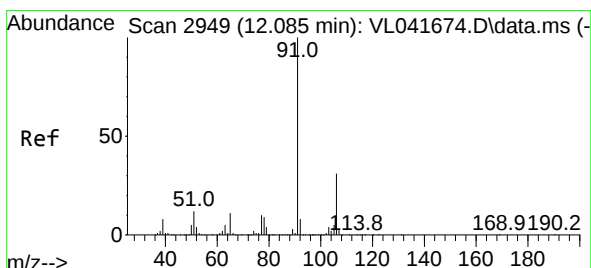
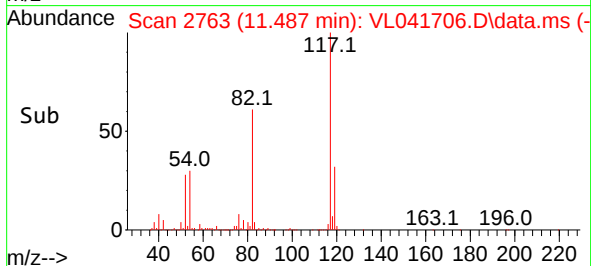
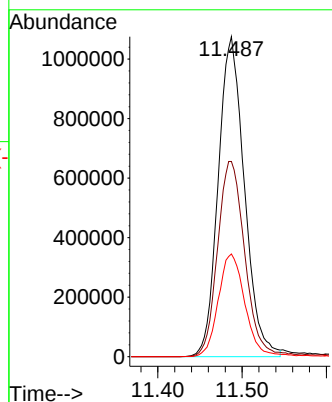
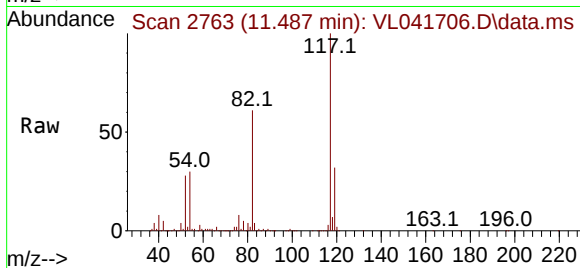
Tgt Ion:117 Resp: 2316943

Ion Ratio Lower Upper

117 100

82 65.0 49.8 74.8

119 33.3 24.2 36.4



#58

Ethyl Benzene

Concen: 0.036 ppbv

RT: 12.105 min Scan# 2955

Delta R.T. 0.019 min

Lab File: VL041706.D

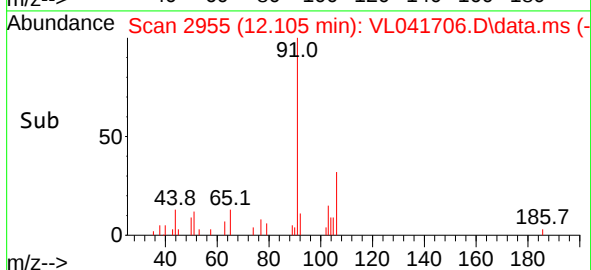
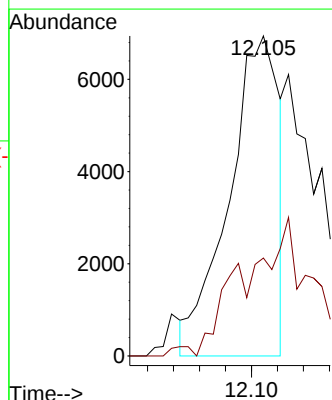
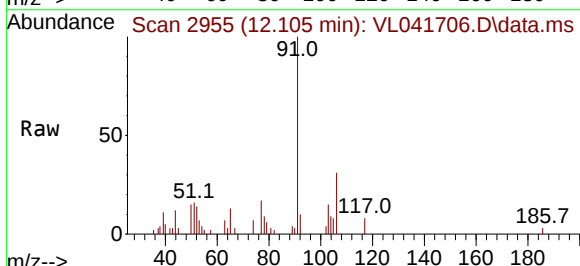
Acq: 20 Nov 2024 19:15

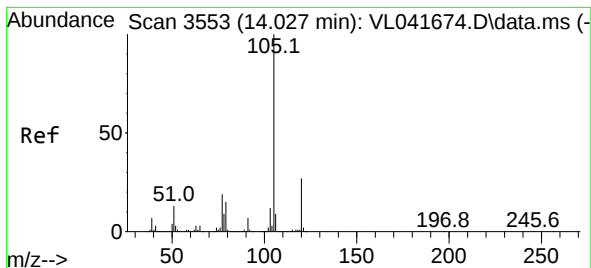
Tgt Ion: 91 Resp: 9233

Ion Ratio Lower Upper

91 100

106 31.2 24.9 37.3





#62

Isopropylbenzene

Concen: 0.059 ppbv

RT: 14.053 min Scan# 3561

Delta R.T. 0.026 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

Instrument :

MSVOA\_L

ClientSampleId :

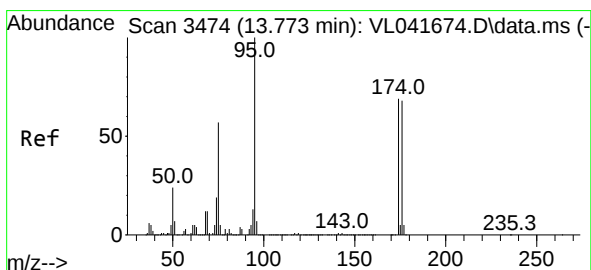
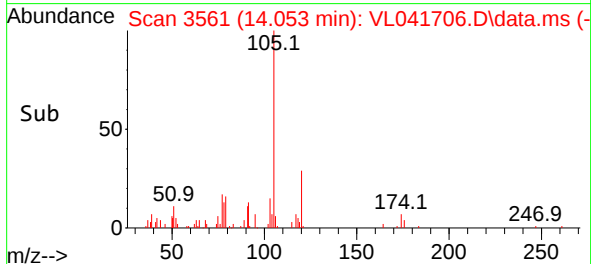
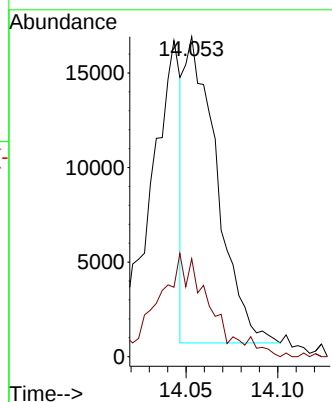
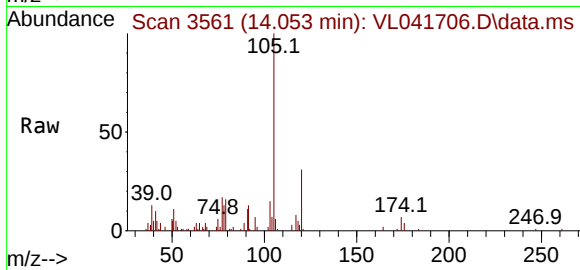
IA1DUP

Tgt Ion:105 Resp: 19927

Ion Ratio Lower Upper

105 100

120 0.0 21.1 31.7#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.798 ppbv

RT: 13.796 min Scan# 3481

Delta R.T. 0.023 min

Lab File: VL041706.D

Acq: 20 Nov 2024 19:15

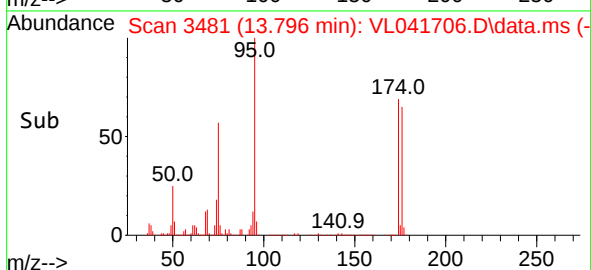
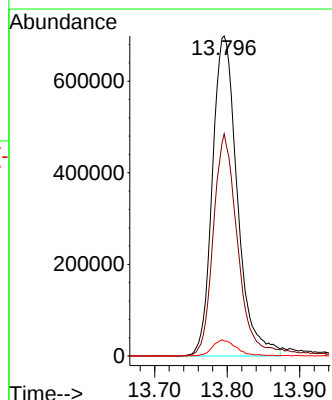
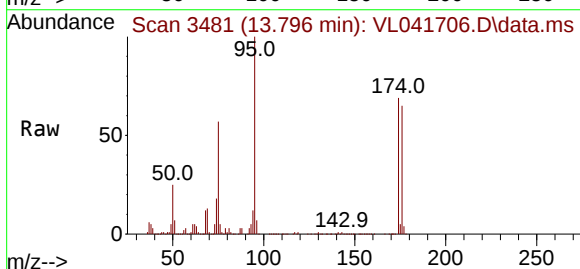
Tgt Ion: 95 Resp: 1672611

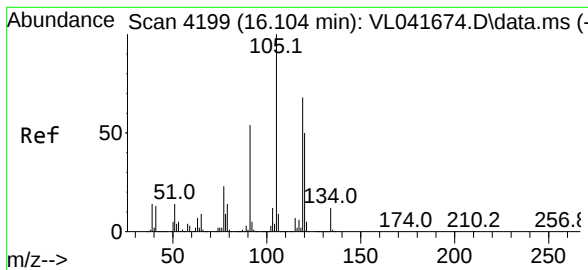
Ion Ratio Lower Upper

95 100

174 69.8 55.6 83.4

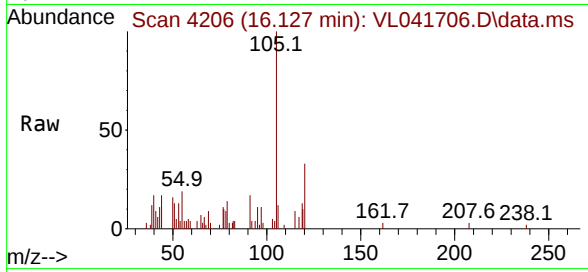
175 5.0 4.2 6.2





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.054 ppbv  
 RT: 16.127 min Scan# 4199  
 Delta R.T. 0.023 min  
 Lab File: VL041706.D  
 Acq: 20 Nov 2024 19:15

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1DUP



|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 105   | Resp: | 13785 |
| Ion      | Ratio | Lower | Upper |
| 105      | 100   |       |       |
| 120      | 40.7  | 39.8  | 59.8  |
| 91       | 14.1  | 43.2  | 64.8# |
| 77       | 19.3  | 18.5  | 27.7  |

