

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062921\  
 Data File : VL037254.D  
 Acq On : 29 Jun 2021 18:16  
 Operator : SY/AP  
 Sample : M2887-04 10X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Jun 30 05:22:05 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL061621AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Jun 16 14:06:32 2021  
 QLast Update : Wed Jun 16 14:06:32 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 1737221  | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 7.17  | 114  | 4938607  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.08 | 117  | 4480533  | 10.00 | ppbv  | -0.02    |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.40  | 95    | 3414300  | 10.06    | ppbv | -0.02   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 100.60% |

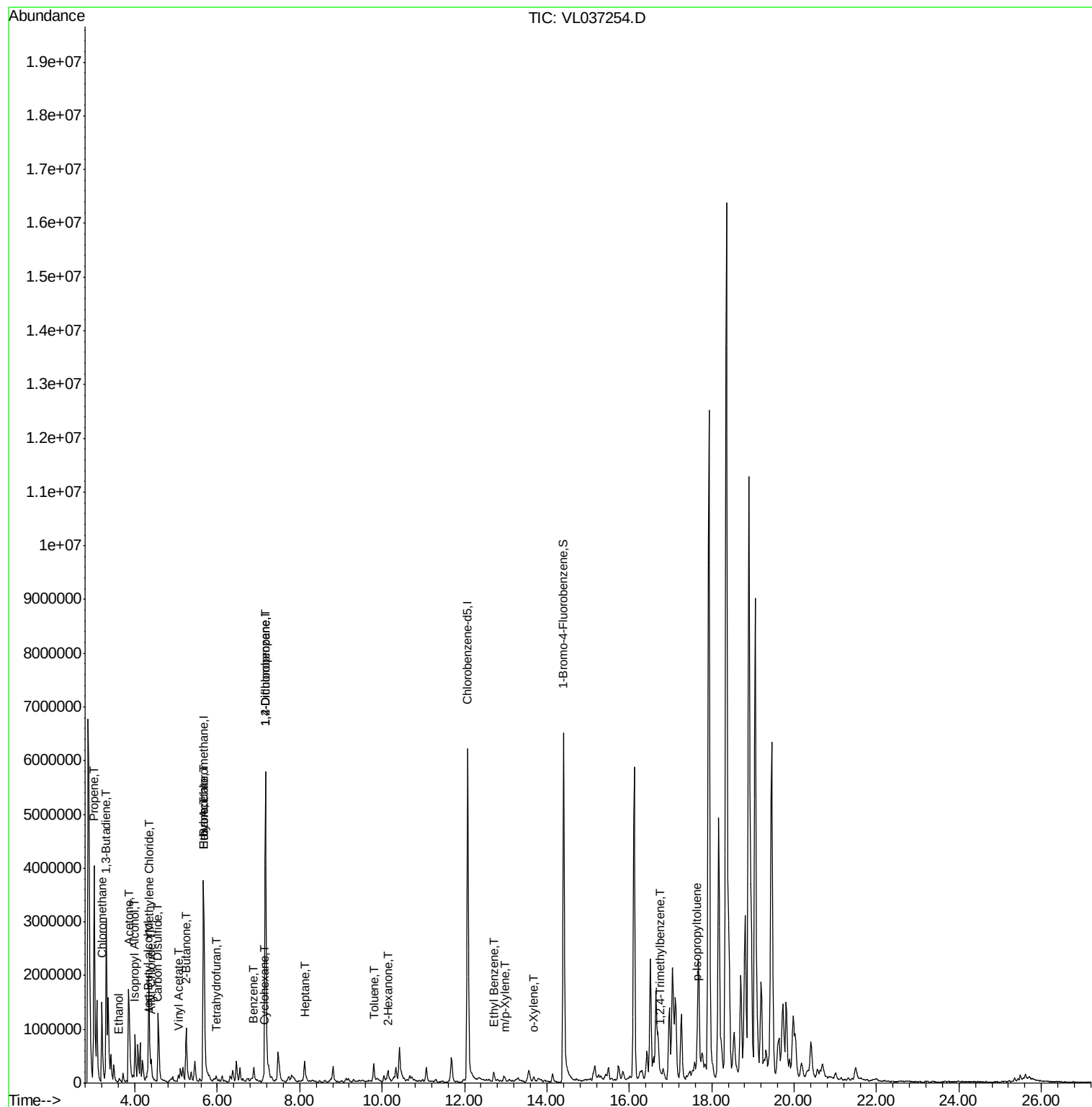
| Target Compounds           | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|-------|------|----------|--------|--------|--------|
| 4) Chloromethane           | 3.20  | 50   | 3796     | 0.034  | ppbv # | 66     |
| 9) Propene                 | 3.01  | 41   | 2288753  | 21.191 | ppbv   | 92     |
| 10) Heptane                | 8.11  | 43   | 165589   | 0.633  | ppbv   | 94     |
| 13) Ethanol                | 3.62  | 45   | 49644    | 2.971  | ppbv   | 69     |
| 15) Acetone                | 3.84  | 43   | 2560630  | 13.071 | ppbv   | 98     |
| 16) 1,3-Butadiene          | 3.30  | 39   | 1164836  | 10.058 | ppbv # | 32     |
| 17) tert-Butyl alcohol     | 4.31  | 59   | 35410    | 0.196  | ppbv # | 71     |
| 19) Isopropyl Alcohol      | 3.99  | 45   | 30267    | 0.255  | ppbv # | 91     |
| 20) Methylene Chloride     | 4.34  | 84   | 779701   | 6.648  | ppbv   | 99     |
| 21) Allyl Chloride         | 4.40  | 41   | 19130    | 0.130  | ppbv # | 1      |
| 23) Vinyl Acetate          | 5.06  | 43   | 42145    | 0.150  | ppbv # | 28     |
| 25) Ethyl Acetate          | 5.68  | 43   | 482900   | 1.139  | ppbv # | 78     |
| 26) Hexane                 | 5.68  | 57   | 674095   | 3.145  | ppbv # | 43     |
| 27) Carbon Disulfide       | 4.55  | 76   | 6461     | 0.031  | ppbv # | 43     |
| 30) Cyclohexane            | 7.12  | 84   | 14912    | 0.083  | ppbv # | 1      |
| 34) 2-Butanone             | 5.24  | 43   | 1497629  | 7.797  | ppbv   | 99     |
| 36) Benzene                | 6.88  | 78   | 237500   | 0.595  | ppbv   | 96     |
| 39) 1,2-Dichloropropane    | 7.17  | 63   | 1198854  | 8.079  | ppbv # | 23     |
| 41) Tetrahydrofuran        | 5.98  | 42   | 4125     | 0.046  | ppbv # | 48     |
| 51) 2-Hexanone             | 10.14 | 43   | 163359   | 1.273  | ppbv # | 83     |
| 53) Toluene                | 9.79  | 91   | 287818   | 0.603  | ppbv   | 99     |
| 58) Ethyl Benzene          | 12.70 | 91   | 46674    | 0.076  | ppbv   | 97     |
| 59) m/p-Xylene             | 12.99 | 91   | 20172    | 0.039  | ppbv # | 30     |
| 60) o-Xylene               | 13.68 | 91   | 22184    | 0.045  | ppbv # | 41     |
| 69) p-Isopropyltoluene     | 17.64 | 119  | 35712    | 0.051  | ppbv # | 48     |
| 74) 1,2,4-Trimethylbenzene | 16.75 | 105  | 35564    | 0.063  | ppbv # | 67     |

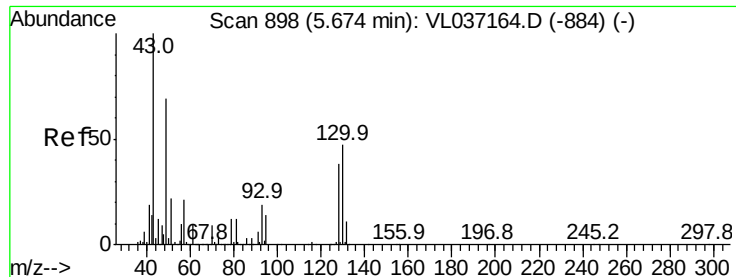
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL062921\  
Data File : VL037254.D  
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Misc : 400mL/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :

Quant Time: Jun 30 05:22:05 2021  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL061621AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Jun 16 14:06:32 2021  
QLast Update : Wed Jun 16 14:06:32 2021  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :  
MSVOA\_L  
ClientSampled :

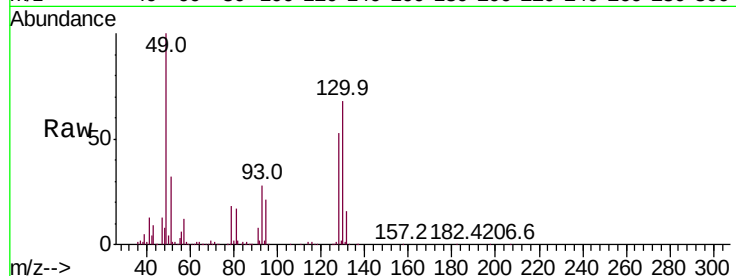
Tot Ion: 49 Resp: 1737221

Ion Ratio Lower Upper

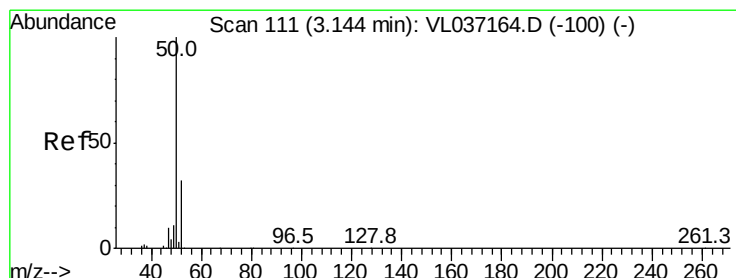
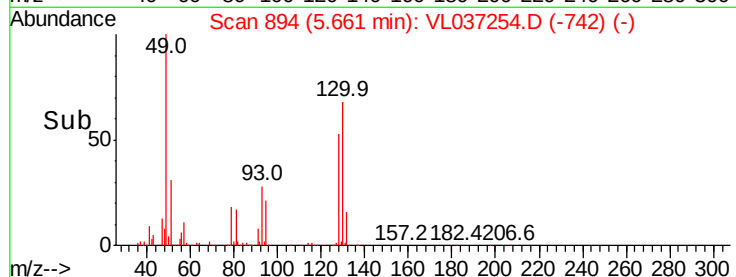
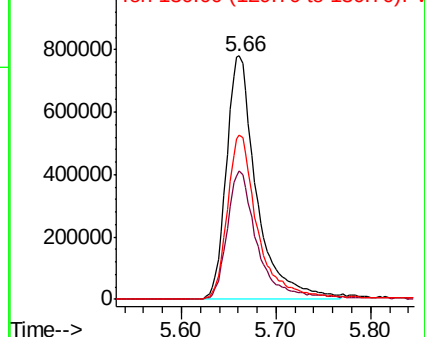
49 100

128 54.0 29.3 88.0

130 70.1 35.9 107.8



Abundance Ion 49.10 (48.80 to 49.80): VL0  
Ion 128.00 (127.70 to 128.70): V  
Ion 130.00 (129.70 to 130.70): V



#4

Chloromethane

Concen: 0.034 ppbv

RT: 3.20 min Scan# 128

Delta R.T. 0.05 min

Lab File: VL037254.D

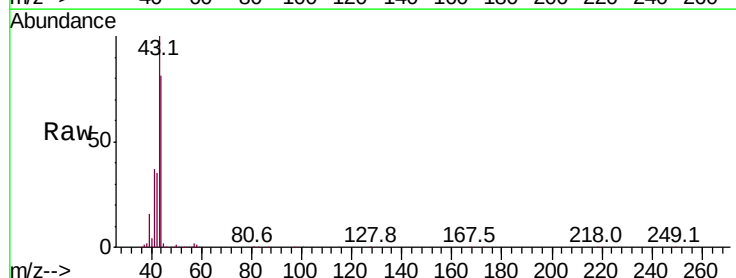
Acq: 29 Jun 2021 18:16

Tgt Ion: 50 Resp: 3796

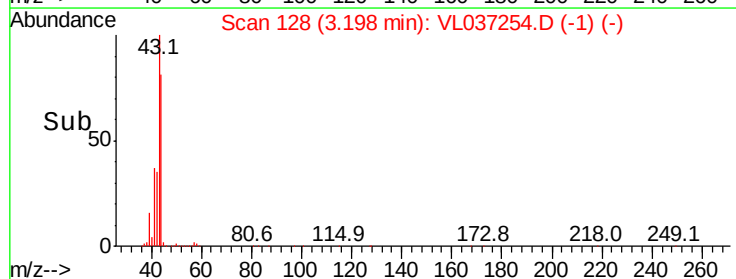
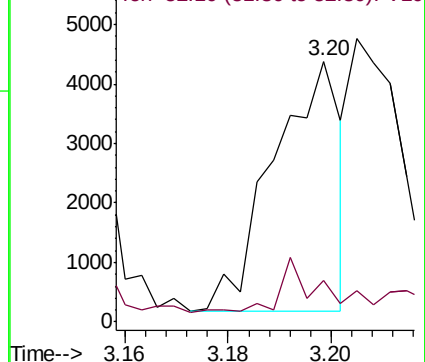
Ion Ratio Lower Upper

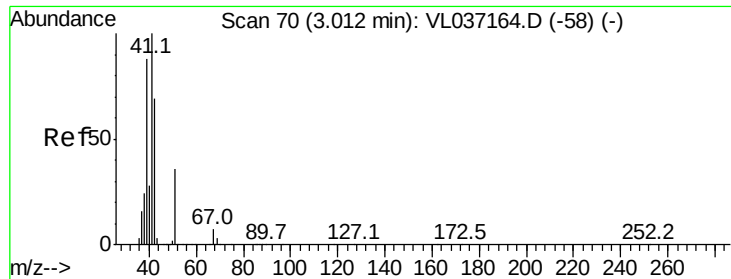
50 100

52 13.0 25.8 38.8#



Abundance Ion 50.10 (49.80 to 50.80): VL0  
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 21.191 ppbv

RT: 3.01 min Scan# 68

Delta R.T. -0.01 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

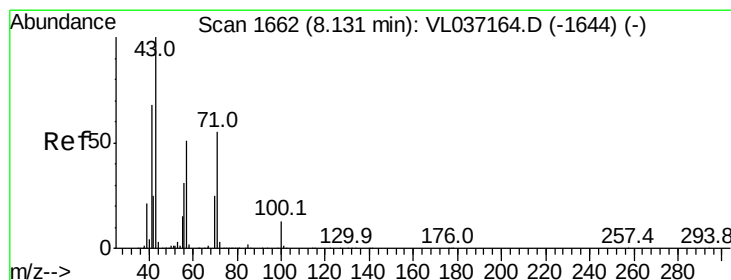
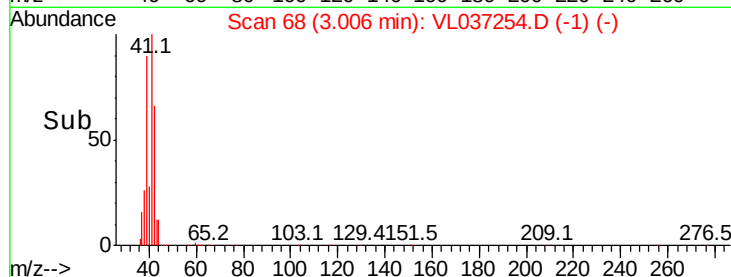
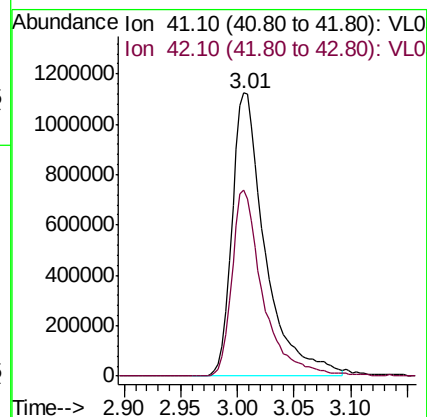
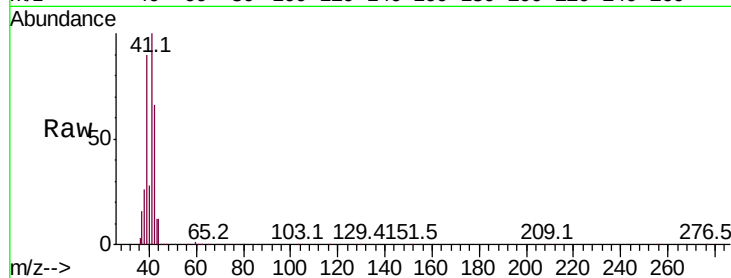
ClientSampleId :

Tot Ion: 41 Resp: 2288753

Ion Ratio Lower Upper

41 100

42 62.0 54.5 81.7



#10

Heptane

Concen: 0.633 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.02 min

Lab File: VL037254.D

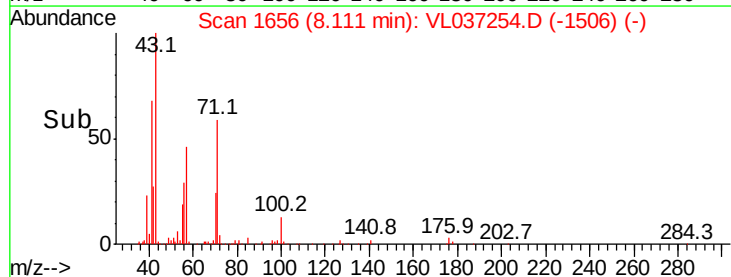
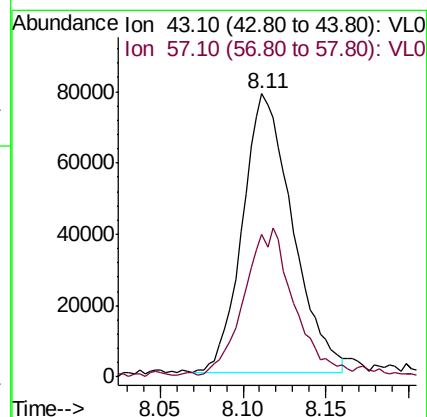
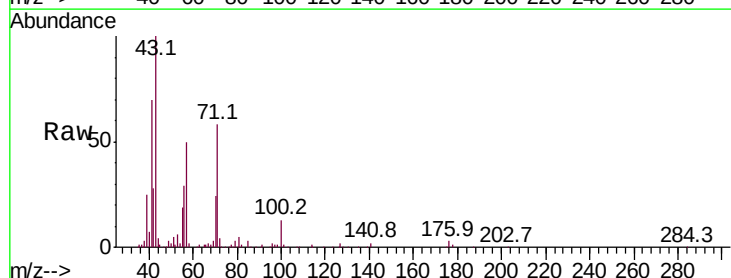
Acq: 29 Jun 2021 18:16

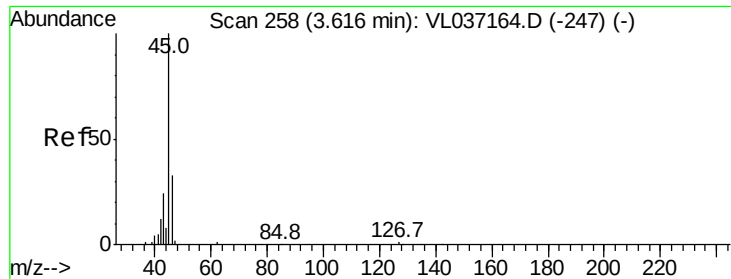
Tgt Ion: 43 Resp: 165589

Ion Ratio Lower Upper

43 100

57 54.7 40.6 61.0

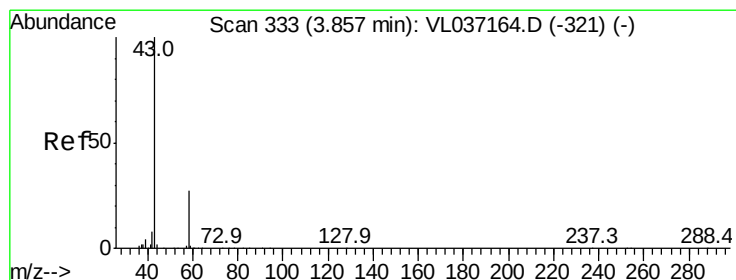
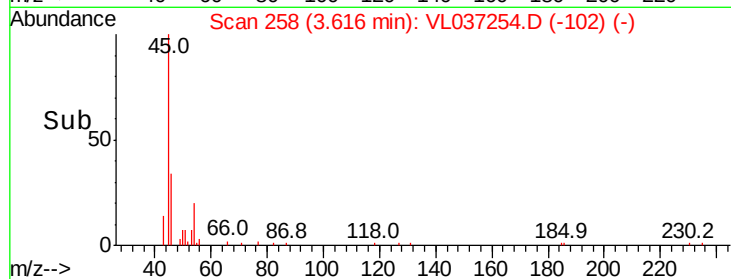
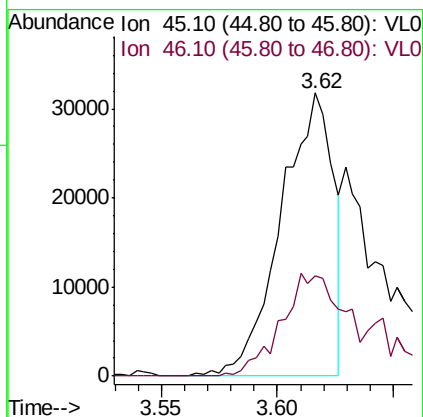
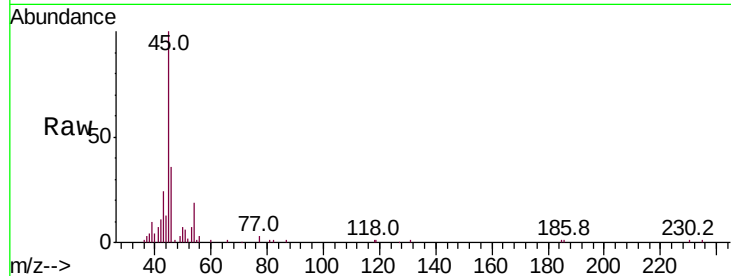




#13  
Ethanol  
Concen: 2.971 ppbv  
RT: 3.62 min Scan# 258  
Delta R.T. 0.00 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

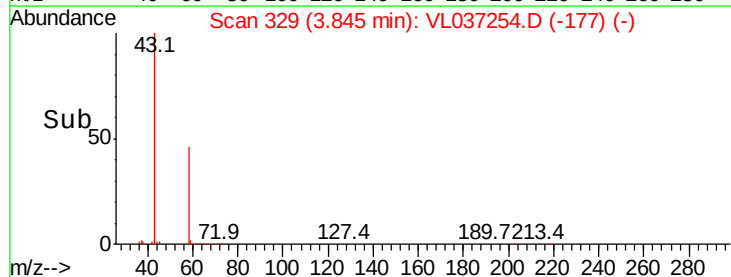
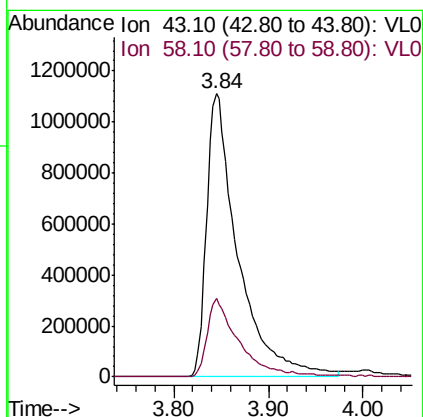
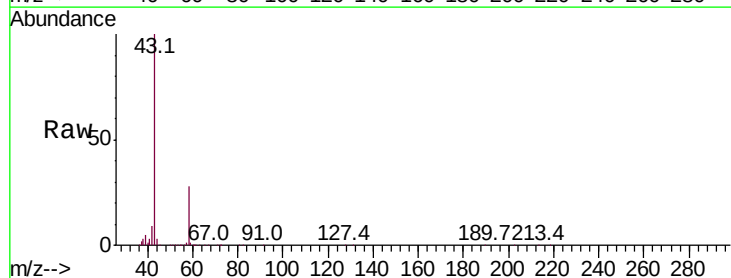
Instrument :  
MSVOA\_L  
ClientSampleId :

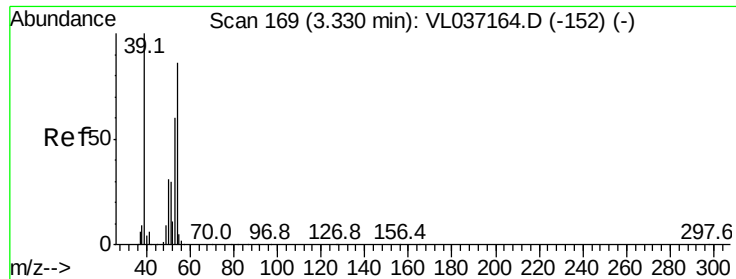
Tot Ion: 45 Resp: 49644  
Ion Ratio Lower Upper  
45 100  
46 56.9 34.2 137.0



#15  
Acetone  
Concen: 13.071 ppbv  
RT: 3.84 min Scan# 329  
Delta R.T. -0.01 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

Tgt Ion: 43 Resp: 2560630  
Ion Ratio Lower Upper  
43 100  
58 28.3 23.7 35.5

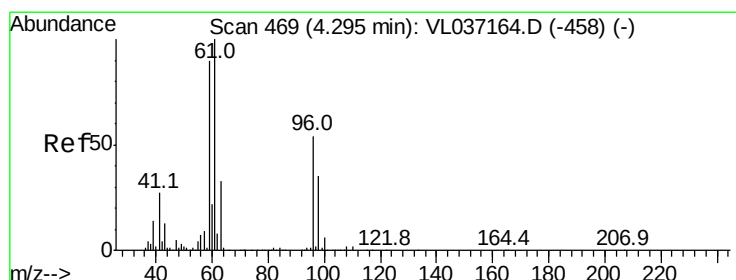
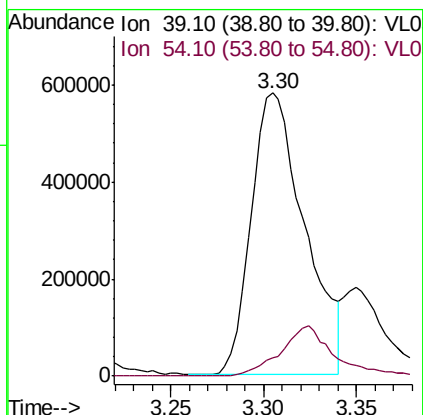
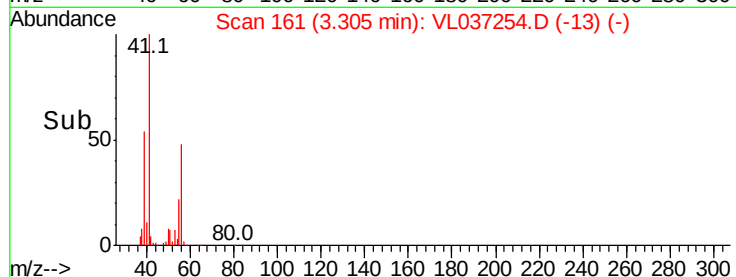
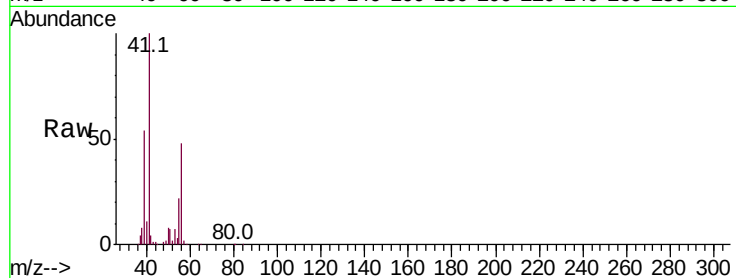




#16  
1,3-Butadiene  
Concen: 10.058 ppbv  
RT: 3.30 min Scan# 161  
Delta R.T. -0.03 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

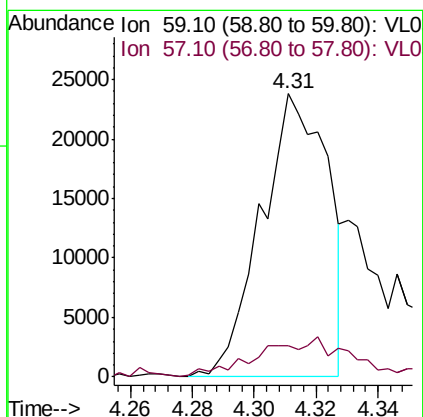
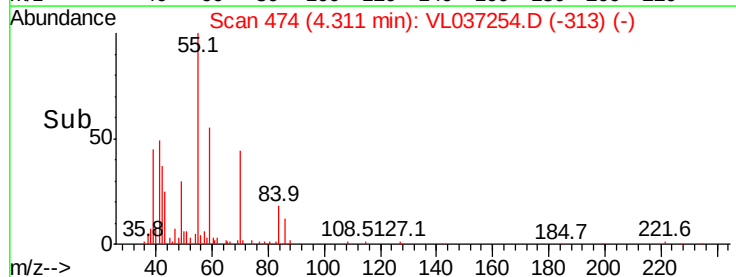
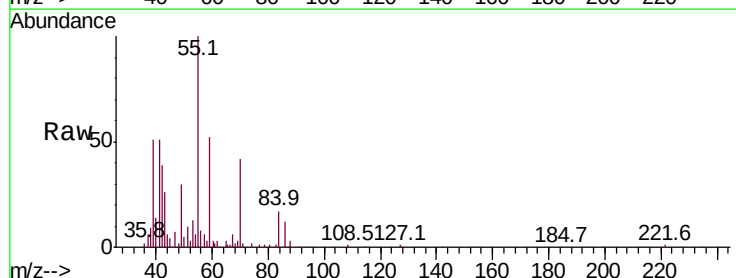
Instrument :  
MSVOA\_L  
ClientSampleId :

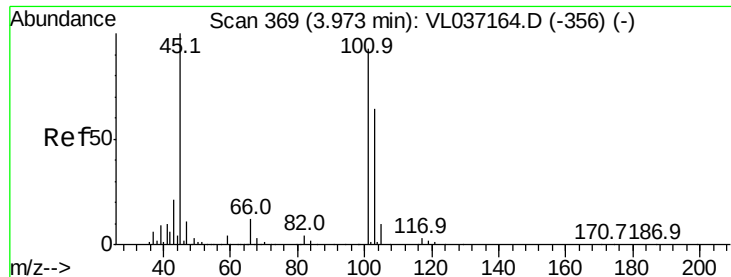
Tot Ion: 39 Resp: 1164836  
Ion Ratio Lower Upper  
39 100  
54 17.8 61.2 91.8#



#17  
tert-Butyl alcohol  
Concen: 0.196 ppbv  
RT: 4.31 min Scan# 474  
Delta R.T. 0.02 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

Tgt Ion: 59 Resp: 35410  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.8 13.2#





#19

Isopropyl Alcohol

Concen: 0.255 ppbv

RT: 3.99 min Scan# 373

Delta R.T. 0.01 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

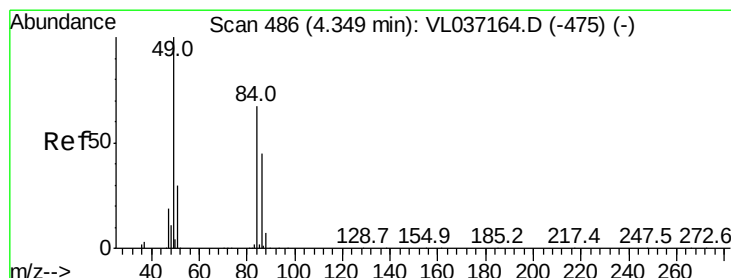
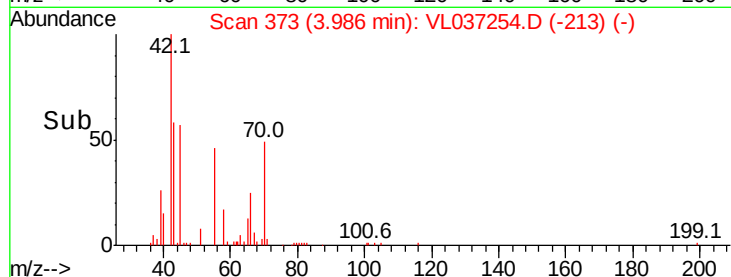
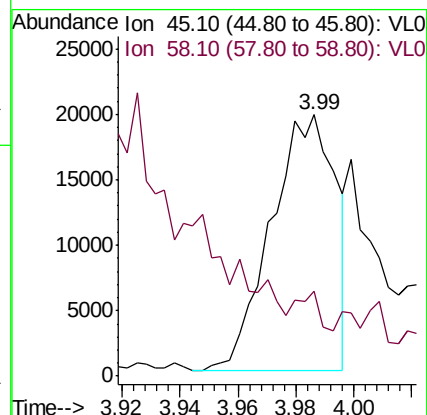
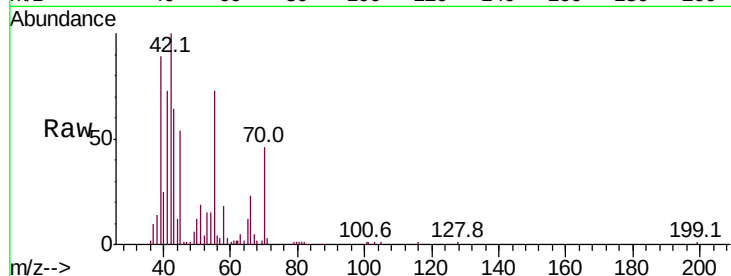
ClientSampled :

Tot Ion: 45 Resp: 30267

Ion Ratio Lower Upper

45 100

58 0.0 2.4 3.6#



#20

Methylene Chloride

Concen: 6.648 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Tgt Ion: 84 Resp: 779701

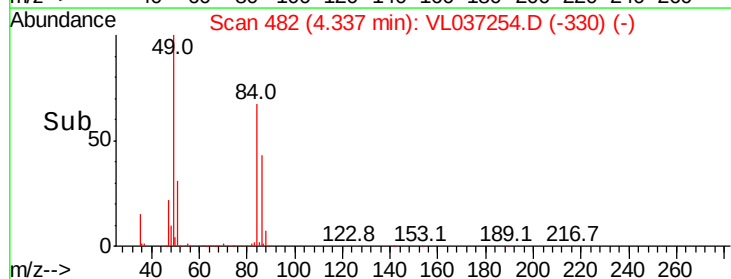
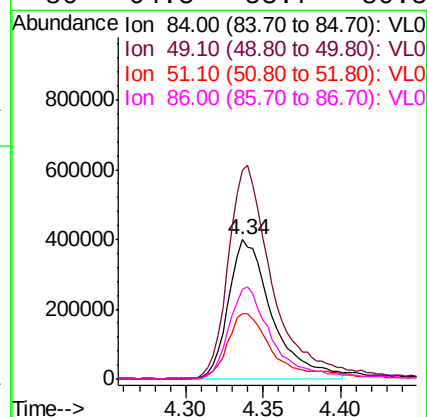
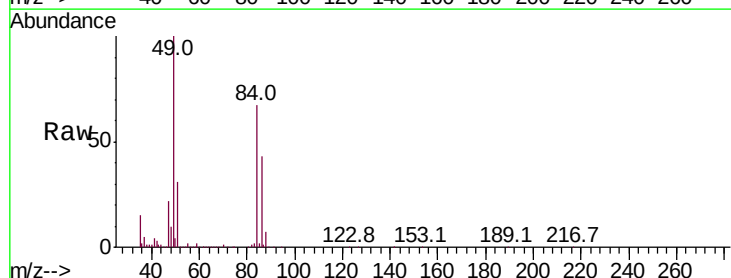
Ion Ratio Lower Upper

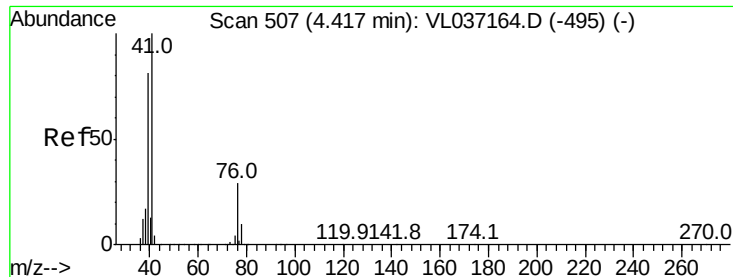
84 100

49 148.7 119.7 179.5

51 45.7 36.1 54.1

86 64.5 53.7 80.5

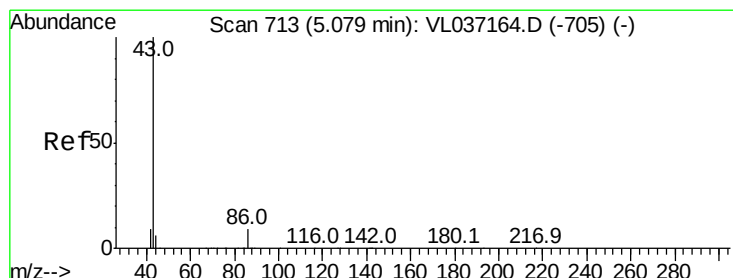
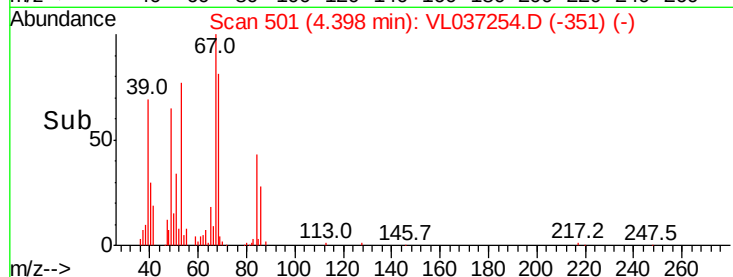
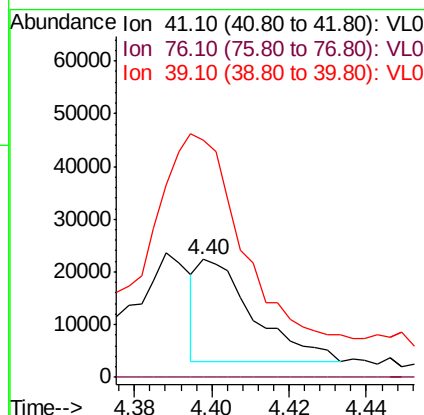
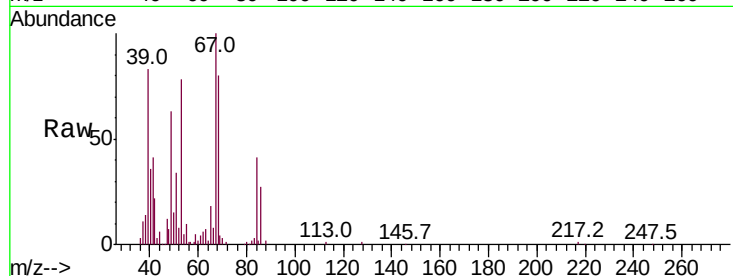




#21  
Allvl Chloride  
Concen: 0.130 ppbv  
RT: 4.40 min Scan# 501  
Delta R.T. -0.02 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

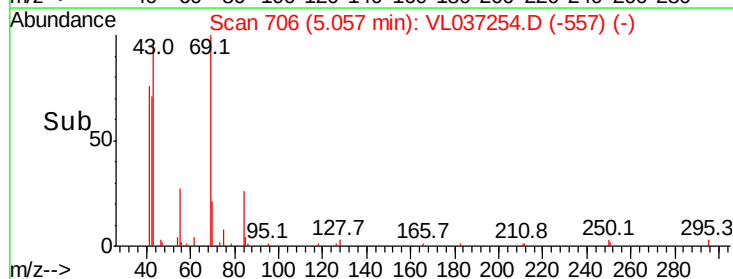
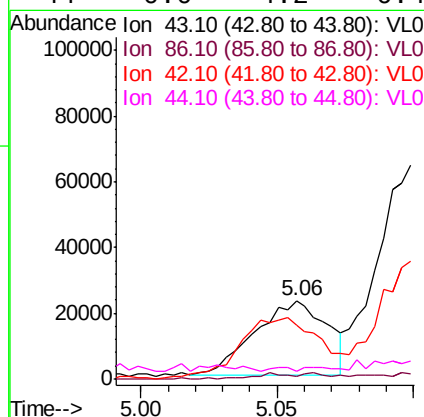
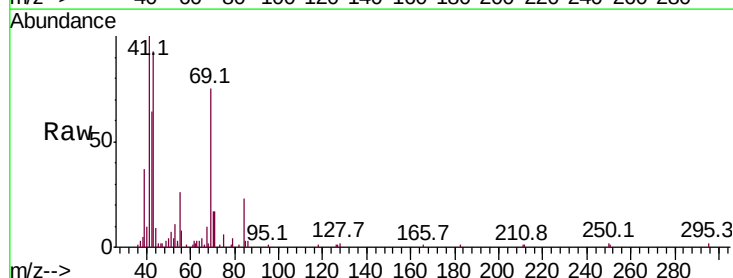
Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 41 Resp: 19130  
Ion Ratio Lower Upper  
41 100  
76 0.0 24.6 37.0#  
39 542.7 65.4 98.0#

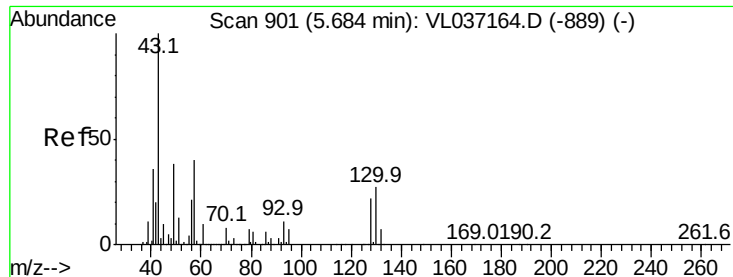


#23  
Vinyl Acetate  
Concen: 0.150 ppbv  
RT: 5.06 min Scan# 706  
Delta R.T. -0.02 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

Tgt Ion: 43 Resp: 42145  
Ion Ratio Lower Upper  
43 100  
86 3.9 5.8 8.8#  
42 64.6 8.2 12.2#  
44 0.0 4.2 6.4#



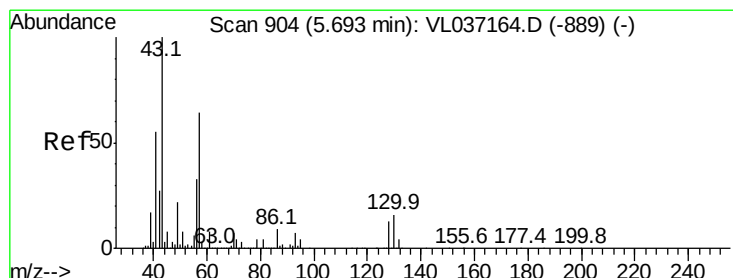
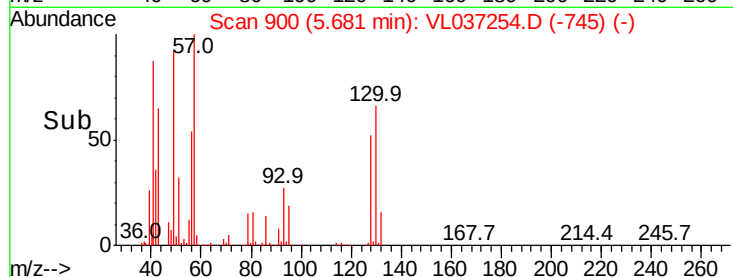
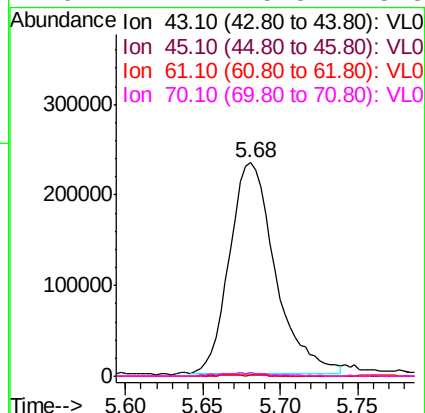
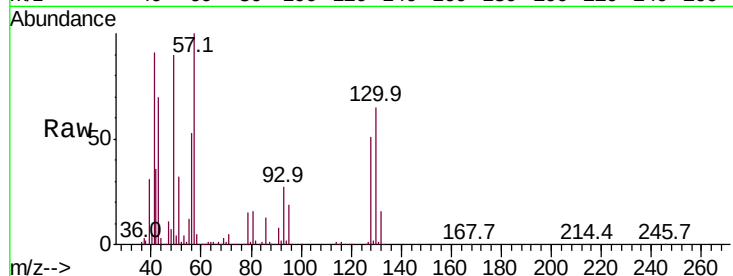




#25  
Ethyl Acetate  
Concen: 1.139 ppbv  
RT: 5.68 min Scan# 900  
Delta R.T. -0.00 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

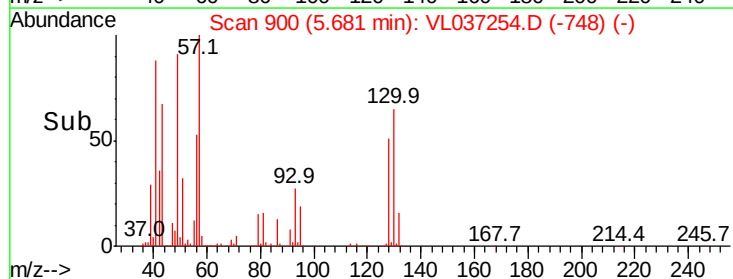
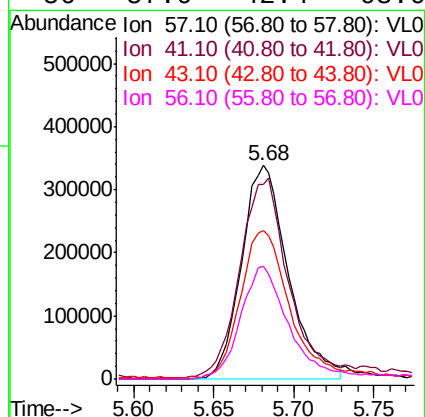
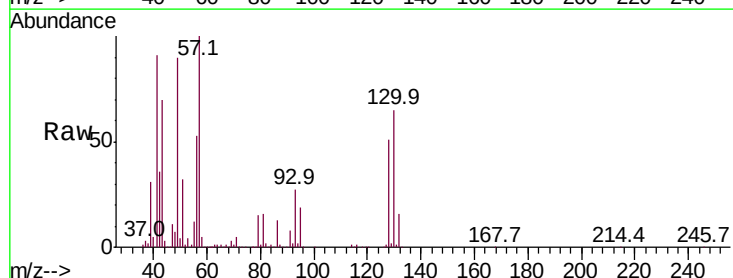
Instrument :  
MSVOA\_L  
ClientSampleId :

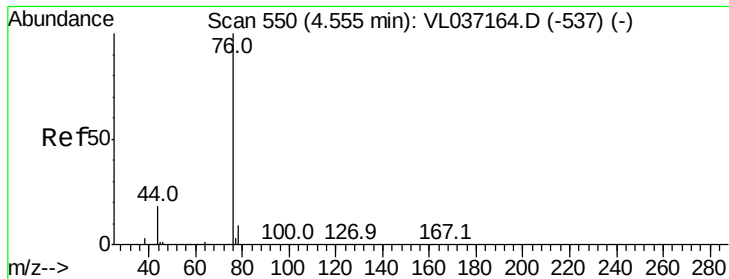
|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 43    | Resp: | 482900 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 0.7   | 8.0   | 12.0#  |
| 61       | 0.7   | 8.1   | 12.1#  |
| 70       | 2.2   | 5.5   | 8.3#   |



#26  
Hexane  
Concen: 3.145 ppbv  
RT: 5.68 min Scan# 900  
Delta R.T. -0.01 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 674095 |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 104.0 | 73.5  | 110.3  |
| 43       | 73.2  | 170.7 | 256.1# |
| 56       | 57.0  | 42.4  | 63.6   |





#27

Carbon Disulfide

Concen: 0.031 ppbv

RT: 4.55 min Scan# 547

Delta R.T. -0.01 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

ClientSampled :

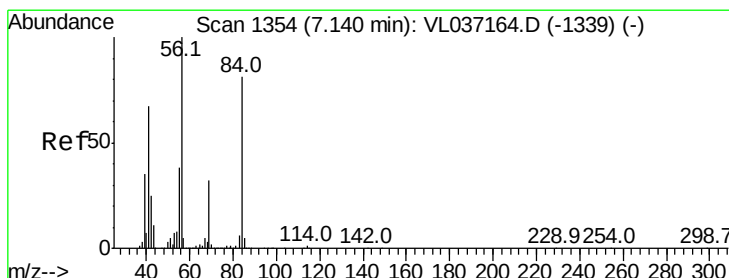
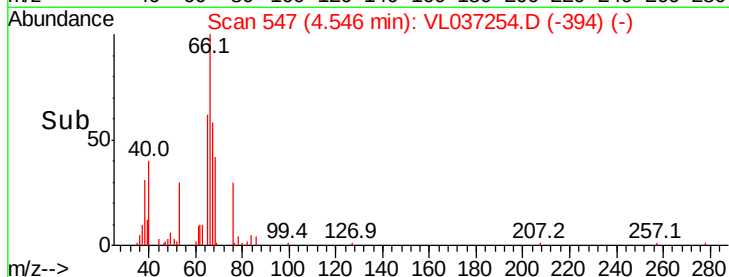
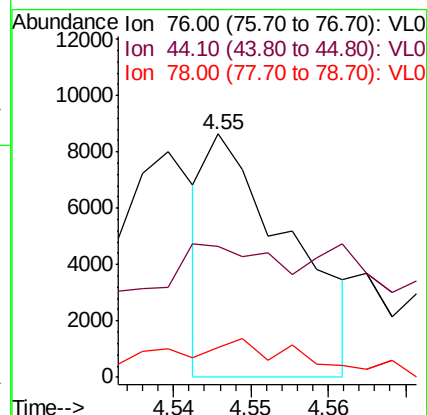
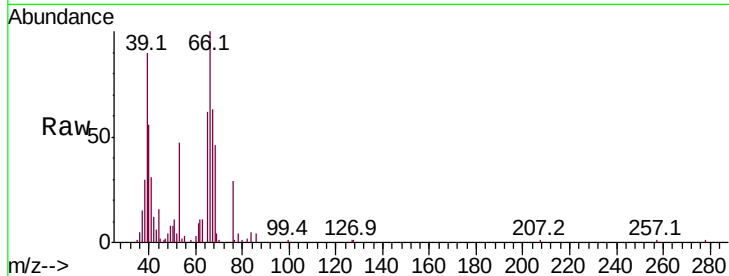
Tot Ion: 76 Resp: 6461

Ion Ratio Lower Upper

76 100

44 0.0 15.4 23.2#

78 41.0 8.0 12.0#



#30

Cyclohexane

Concen: 0.083 ppbv

RT: 7.12 min Scan# 1349

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

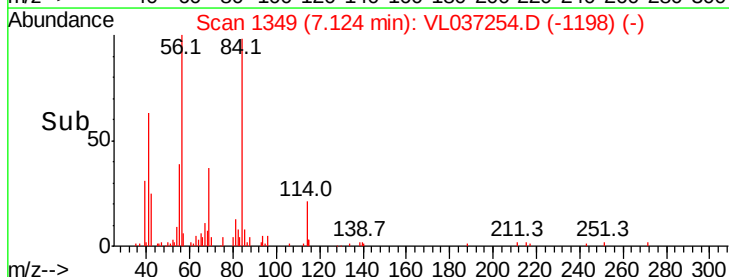
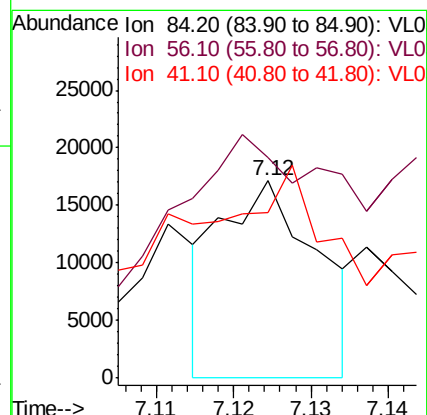
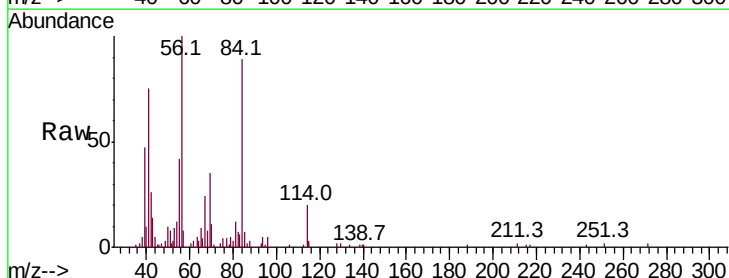
Tgt Ion: 84 Resp: 14912

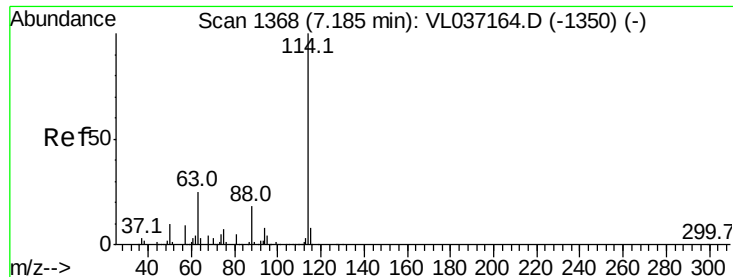
Ion Ratio Lower Upper

84 100

56 0.0 107.7 161.5#

41 225.5 69.0 103.6#

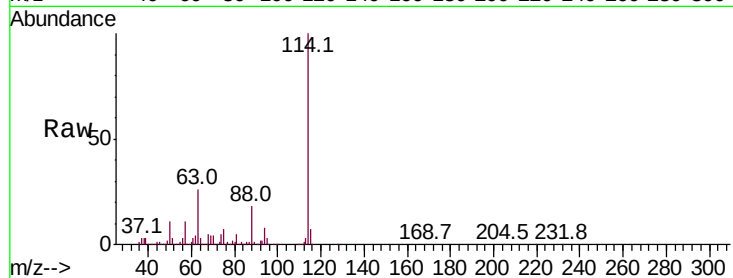




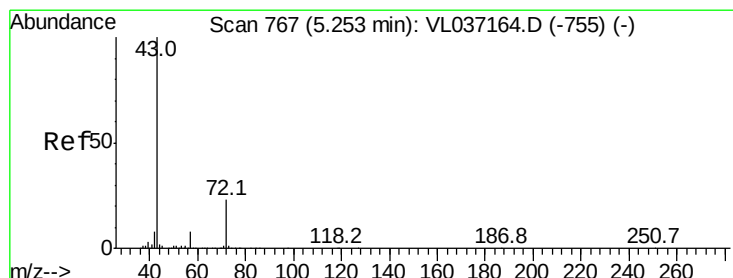
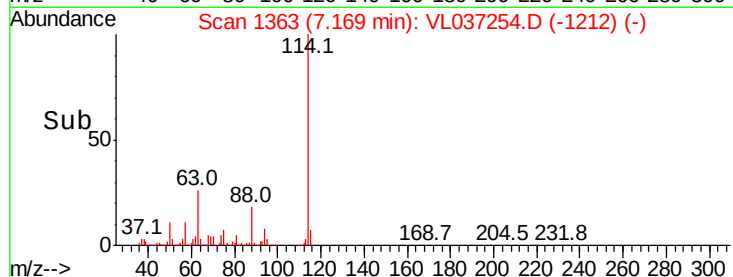
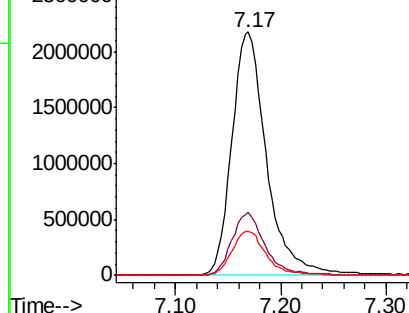
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.17 min Scan# 1363  
 Delta R.T. -0.02 min  
 Lab File: VL037254.D  
 Acq: 29 Jun 2021 18:16

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion:114 Resp: 4938607  
 Ion Ratio Lower Upper  
 114 100  
 63 25.2 19.6 29.4  
 88 18.3 14.2 21.2

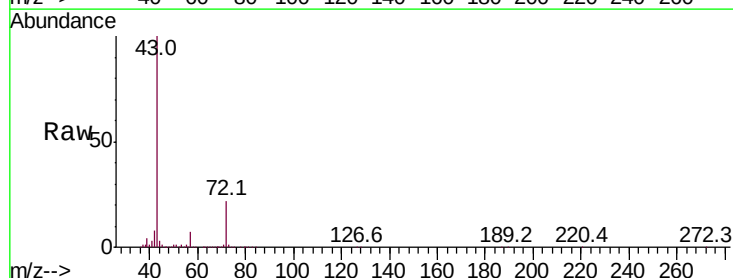


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

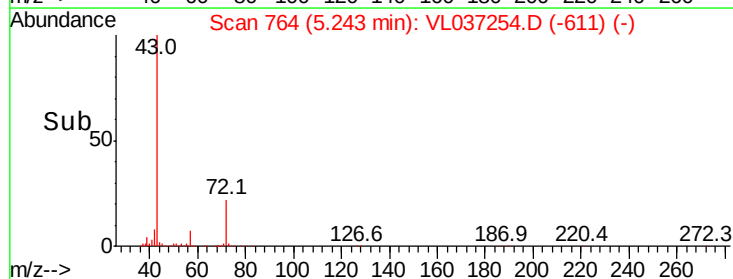
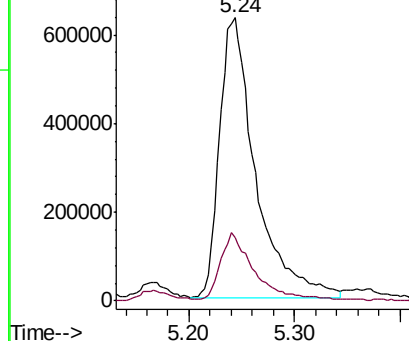


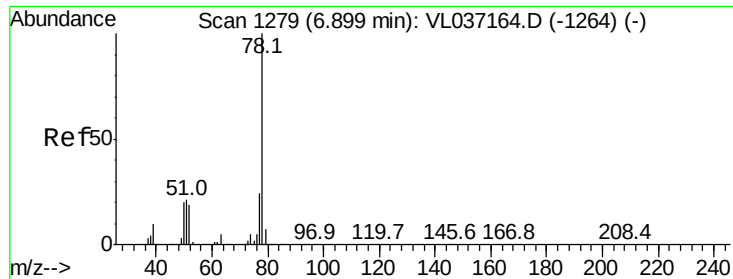
#34  
 2-Butanone  
 Concen: 7.797 ppbv  
 RT: 5.24 min Scan# 764  
 Delta R.T. -0.01 min  
 Lab File: VL037254.D  
 Acq: 29 Jun 2021 18:16

Tgt Ion: 43 Resp: 1497629  
 Ion Ratio Lower Upper  
 43 100  
 72 23.3 18.9 28.3



Abundance Ion 43.10 (42.80 to 43.80): VL0  
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.595 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

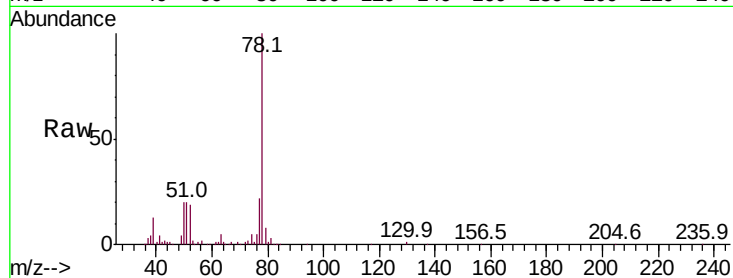
Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 78 Resp: 237500

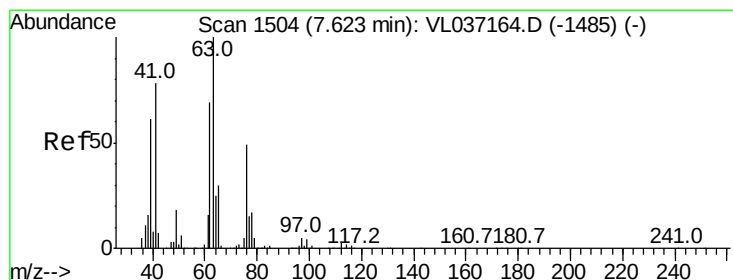
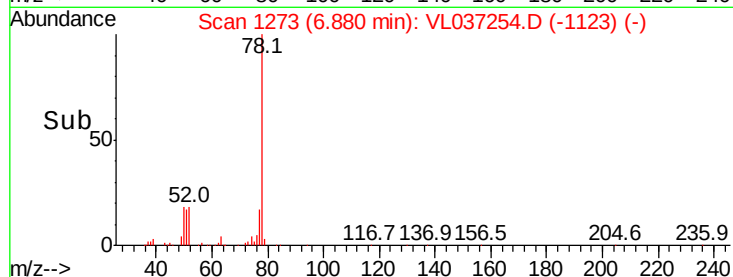
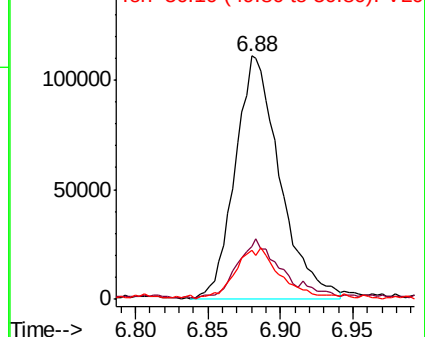
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 78  | 100   |       |       |
| 77  | 21.1  | 19.0  | 28.6  |
| 50  | 19.0  | 15.7  | 23.5  |



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 8.079 ppbv

RT: 7.17 min Scan# 1363

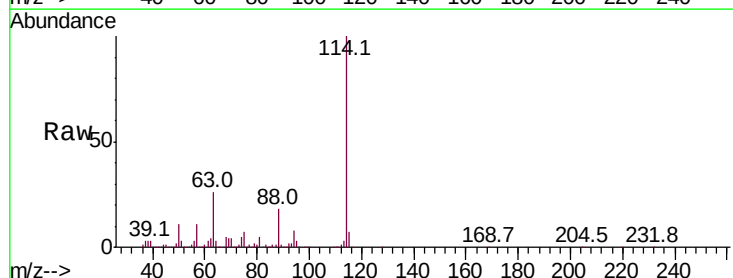
Delta R.T. -0.45 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Tgt Ion: 63 Resp: 1198854

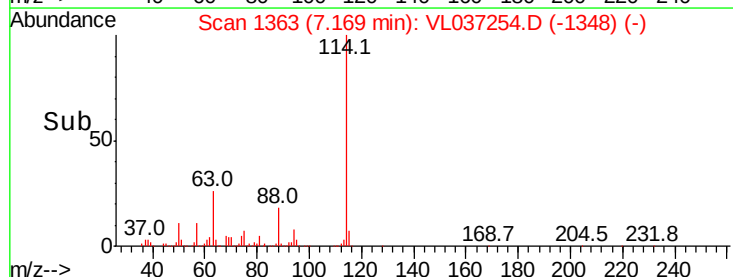
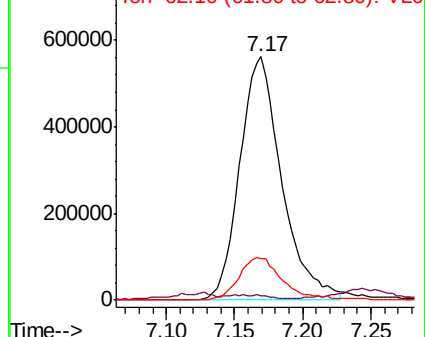
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 63  | 100   |       |       |
| 41  | 0.0   | 62.0  | 93.0# |
| 62  | 16.8  | 54.9  | 82.3# |

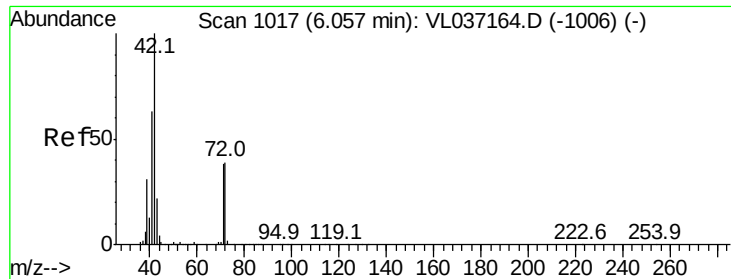


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

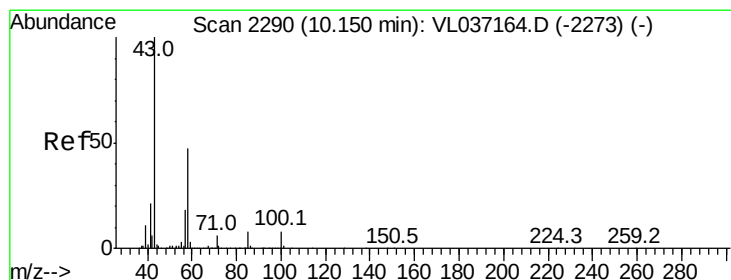
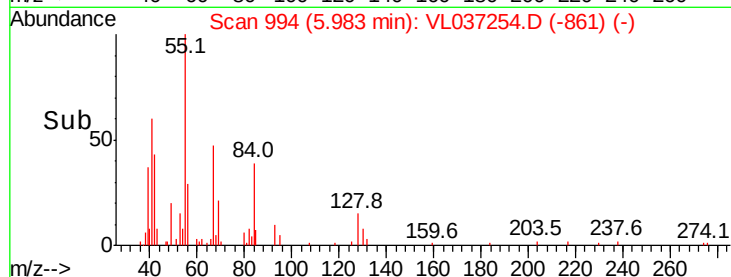
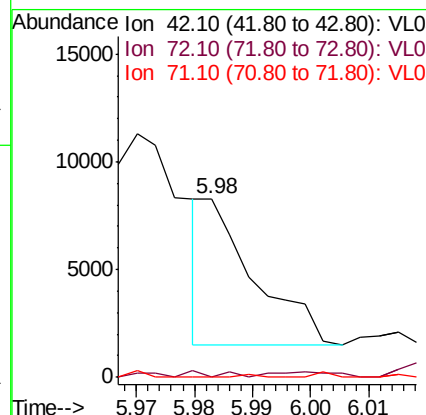
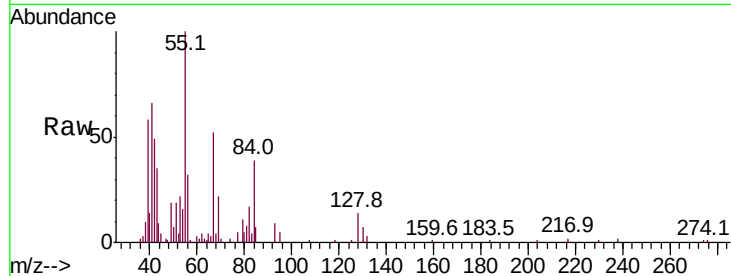




#41  
Tetrahydrofuran  
Concen: 0.046 ppbv  
RT: 5.98 min Scan# 994  
Delta R.T. -0.07 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

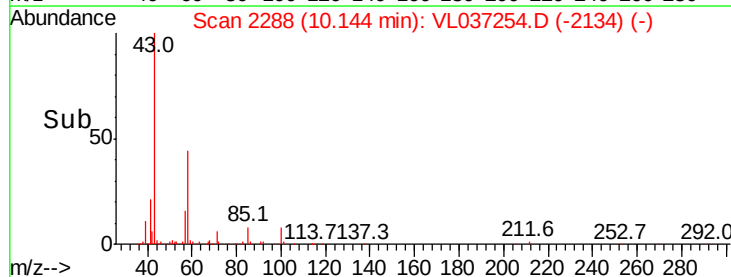
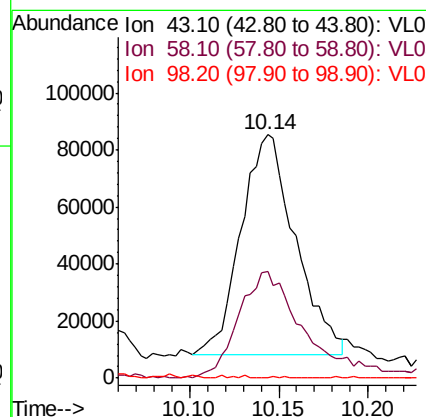
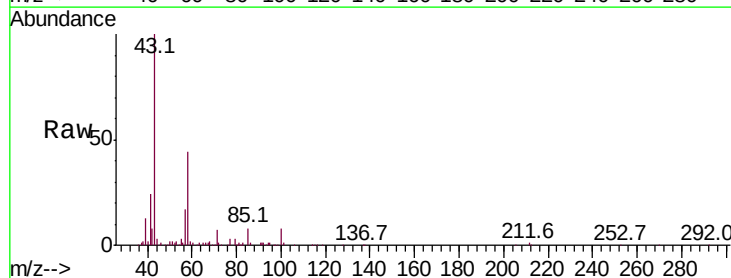
Instrument :  
MSVOA\_L  
ClientSampleId :

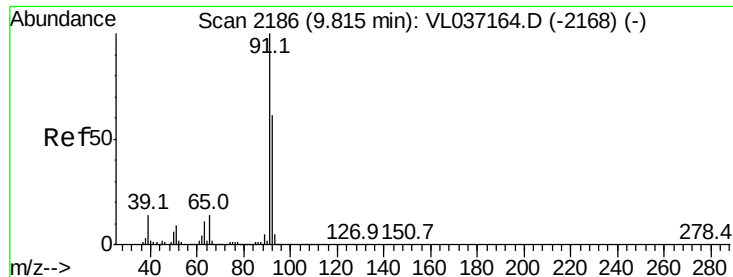
Tot Ion: 42 Resp: 4125  
Ion Ratio Lower Upper  
42 100  
72 15.4 33.0 49.4#  
71 0.0 31.0 46.6#



#51  
2-Hexanone  
Concen: 1.273 ppbv  
RT: 10.14 min Scan# 2288  
Delta R.T. -0.01 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

Tgt Ion: 43 Resp: 163359  
Ion Ratio Lower Upper  
43 100  
58 59.5 38.4 57.6#  
98 0.5 0.3 0.5





#53

Toluene

Concen: 0.603 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

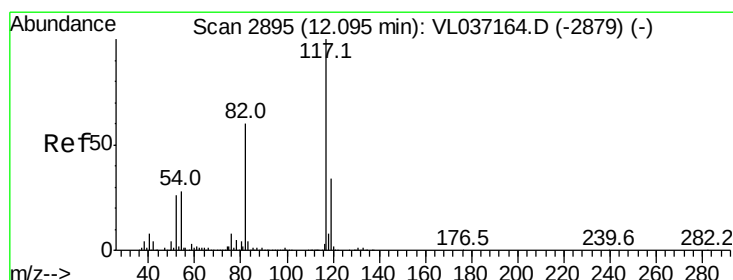
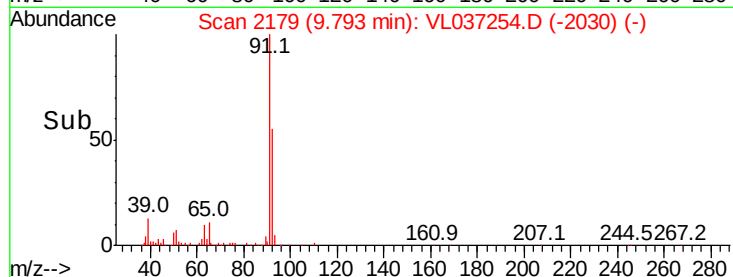
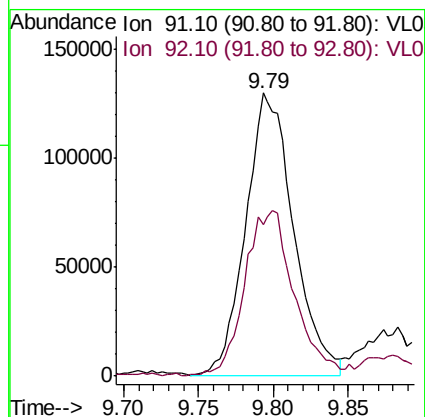
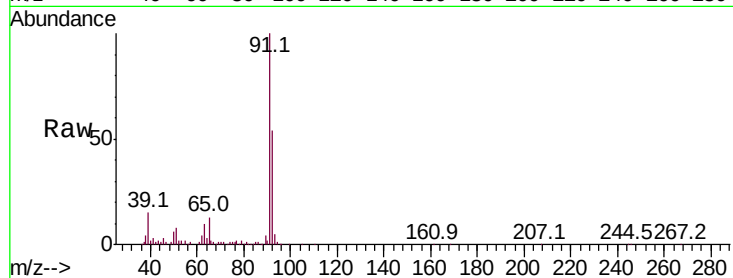
ClientSampled :

Tot Ion: 91 Resp: 287818

Ion Ratio Lower Upper

91 100

92 60.9 48.3 72.5



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

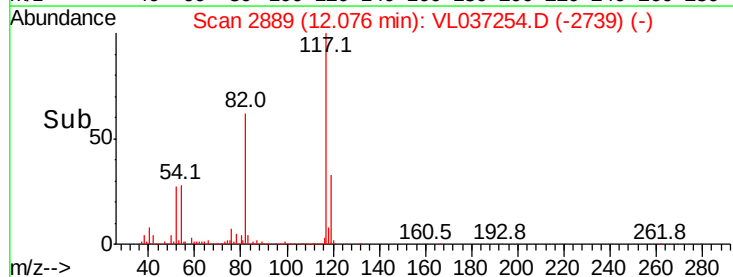
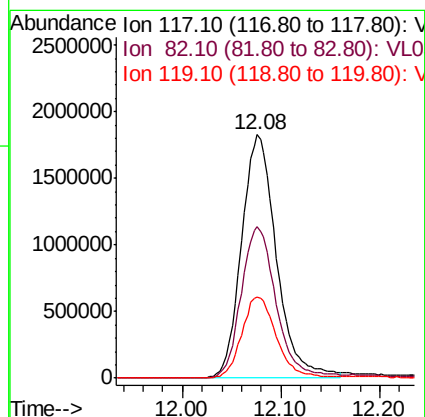
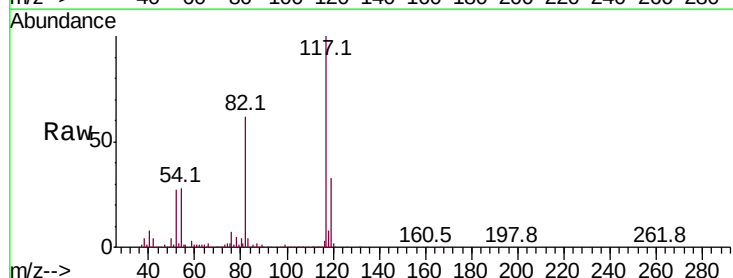
Tgt Ion: 117 Resp: 4480533

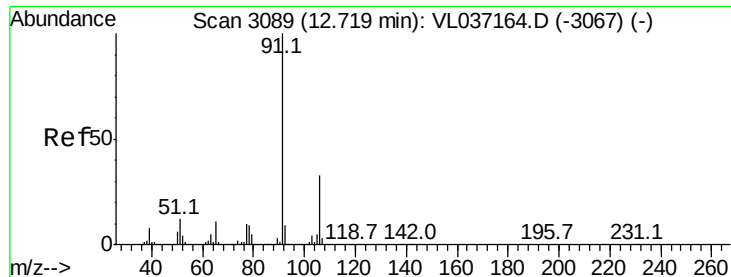
Ion Ratio Lower Upper

117 100

82 65.3 51.7 77.5

119 34.6 47.6 71.4#





#58

Ethyl Benzene

Concen: 0.076 ppbv

RT: 12.70 min Scan# 3084

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

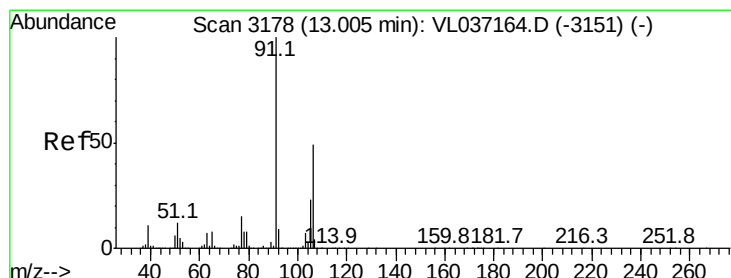
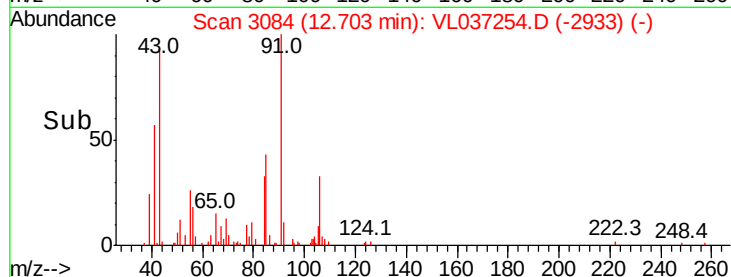
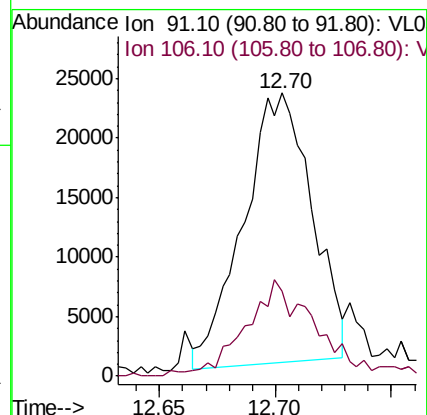
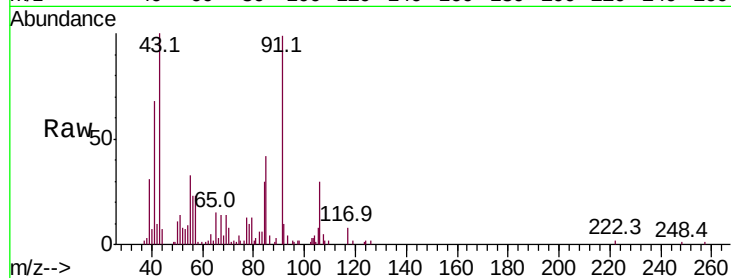
ClientSampleId :

Tot Ion: 91 Resp: 46674

Ion Ratio Lower Upper

91 100

106 31.4 26.3 39.5



#59

m/p-Xylene

Concen: 0.039 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. -0.02 min

Lab File: VL037254.D

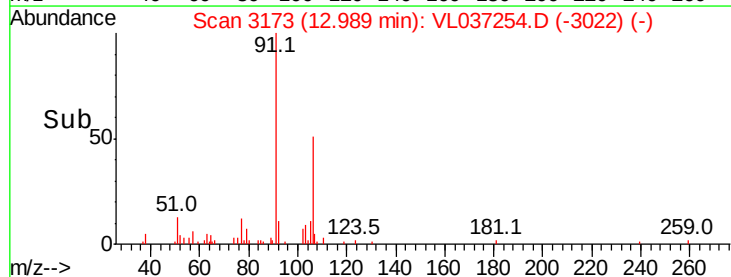
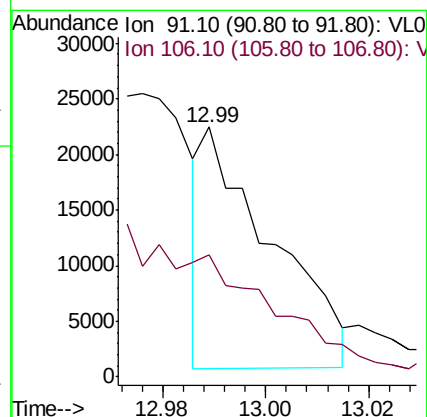
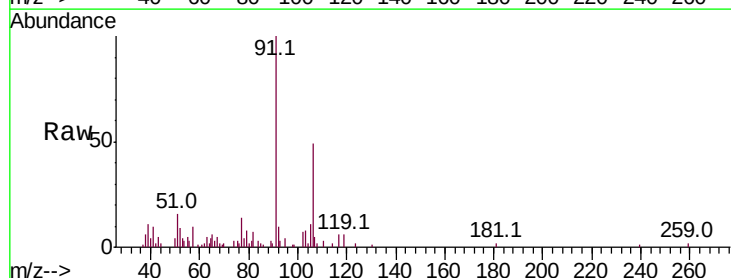
Acq: 29 Jun 2021 18:16

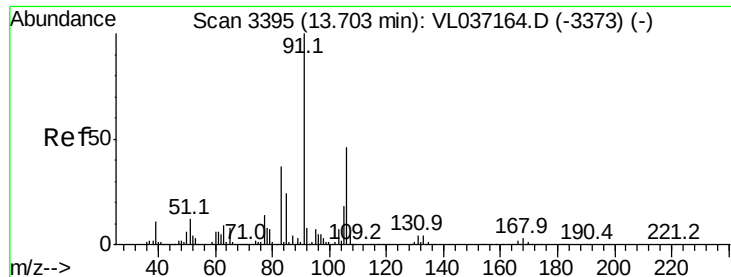
Tgt Ion: 91 Resp: 20172

Ion Ratio Lower Upper

91 100

106 0.0 37.0 55.4#

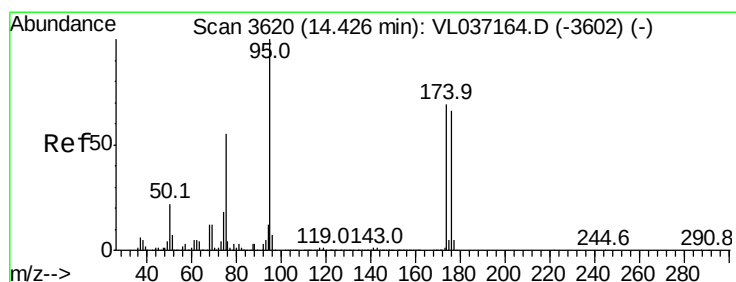
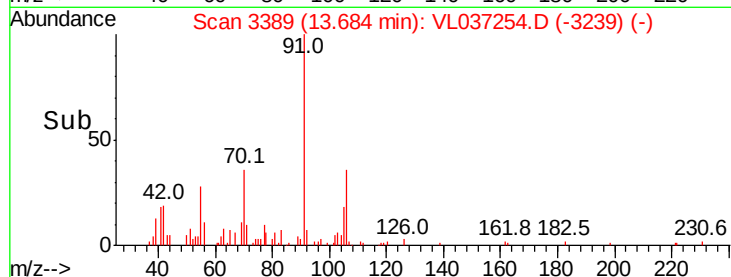
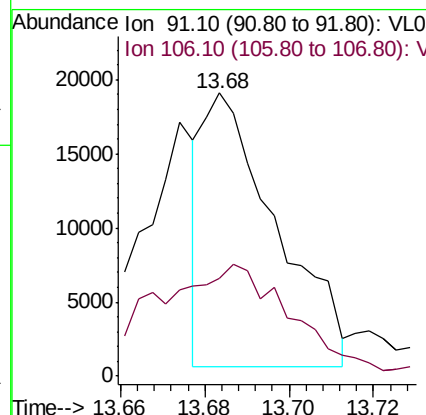
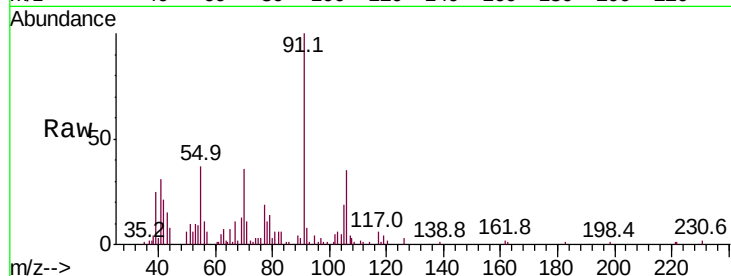




#60  
o-Xylene  
Concen: 0.045 ppbv  
RT: 13.68 min Scan# 3389  
Delta R.T. -0.02 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

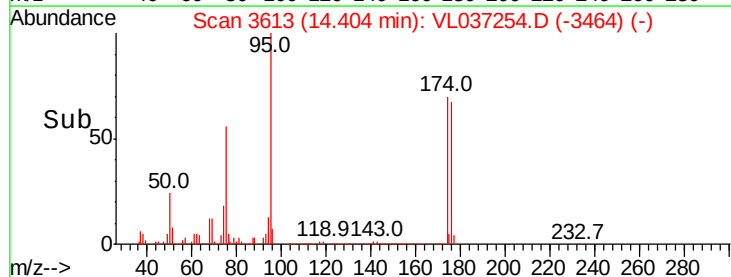
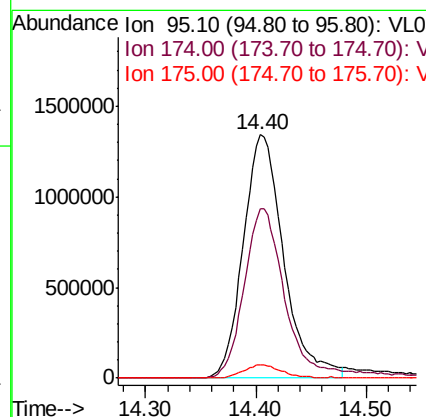
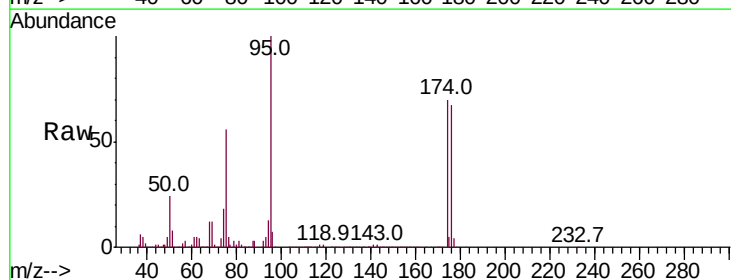
Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 91 Resp: 22184  
Ion Ratio Lower Upper  
91 100  
106 84.8 23.0 69.0#

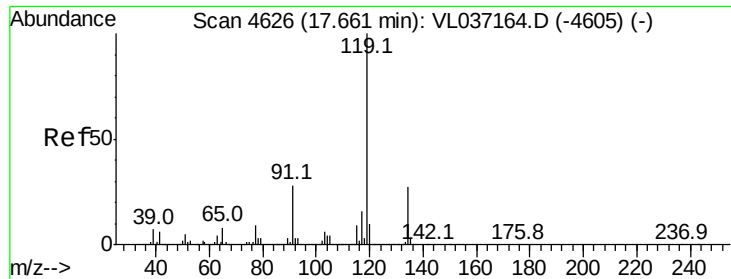


#68  
1-Bromo-4-Fluorobenzene  
Concen: 10.056 ppbv  
RT: 14.40 min Scan# 3613  
Delta R.T. -0.02 min  
Lab File: VL037254.D  
Acq: 29 Jun 2021 18:16

Tgt Ion: 95 Resp: 3414300  
Ion Ratio Lower Upper  
95 100  
174 73.9 57.0 85.4  
175 5.6 4.4 6.6







#69

p-Isopropyltoluene

Concen: 0.051 ppbv

RT: 17.64 min Scan# 4619

Delta R.T. -0.02 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Instrument :

MSVOA\_L

ClientSampleId :

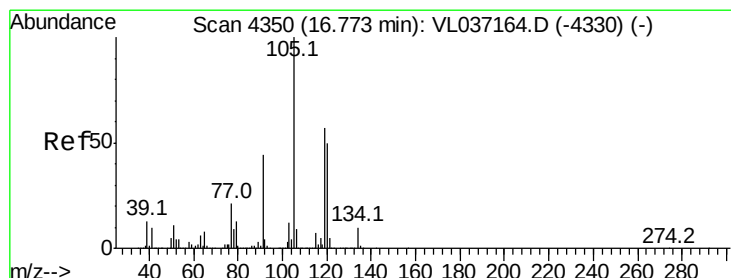
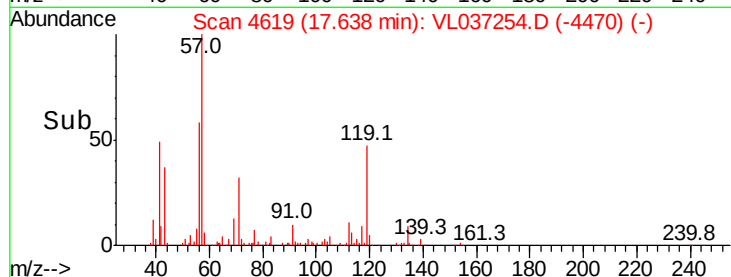
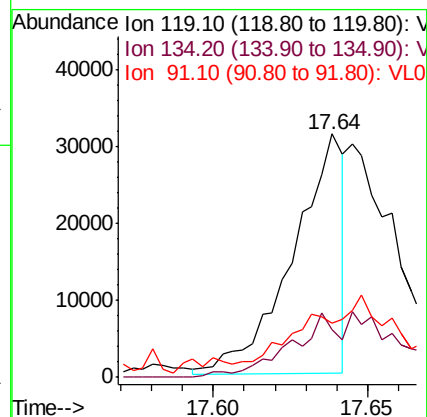
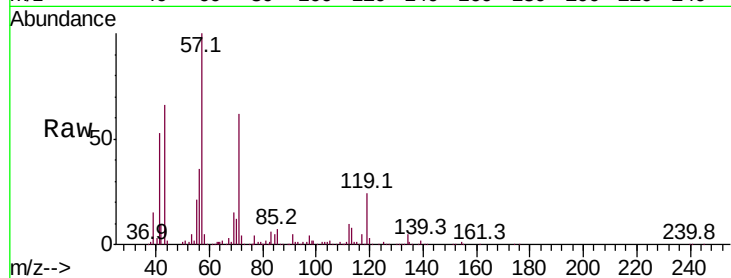
Tot Ion:119 Resp: 35712

Ion Ratio Lower Upper

119 100

134 0.0 20.9 31.3#

91 0.0 22.6 34.0#



#74

1,2,4-Trimethylbenzene

Concen: 0.063 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. -0.03 min

Lab File: VL037254.D

Acq: 29 Jun 2021 18:16

Tgt Ion:105 Resp: 35564

Ion Ratio Lower Upper

105 100

120 36.2 39.8 59.8#

91 12.5 37.0 55.4#

77 9.2 17.0 25.4#

