

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL021021\  
 Data File : VL036336.D  
 Acq On : 11 Feb 2021 3:14  
 Operator : SY/AP  
 Sample : M1343-06  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Feb 11 06:13:59 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL021021AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Feb 10 16:04:02 2021  
 QLast Update : Wed Feb 10 16:04:02 2021  
 Response via : Initial Calibration

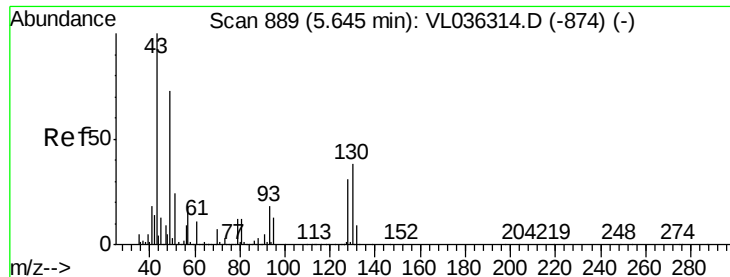
| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.65  | 49   | 1581298  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.16  | 114  | 3433980  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.07 | 117  | 3094346  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.40  | 95    | 2454328  | 9.64     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 96.40% |

| Target Compounds               |       |     |        |        | Ovalue    |
|--------------------------------|-------|-----|--------|--------|-----------|
| 2) Dichlorodifluoromethane     | 3.04  | 85  | 68475  | 0.290  | ppbv 97   |
| 4) Chloromethane               | 3.14  | 50  | 44744  | 0.471  | ppbv # 84 |
| 9) Propene                     | 3.01  | 41  | 59209  | 0.808  | ppbv # 56 |
| 10) Heptane                    | 8.10  | 43  | 11229  | 0.052  | ppbv # 28 |
| 11) Trichlorofluoromethane     | 3.94  | 101 | 47054  | 0.204  | ppbv # 78 |
| 12) 1,1,2-Trichlorotrifluoroet | 4.47  | 101 | 5010   | 0.035  | ppbv # 39 |
| 13) Ethanol                    | 3.60  | 45  | 449060 | 32.637 | ppbv 97   |
| 15) Acetone                    | 3.84  | 43  | 162834 | 0.842  | ppbv # 52 |
| 16) 1,3-Butadiene              | 3.30  | 39  | 3934   | 0.043  | ppbv # 1  |
| 19) Isopropyl Alcohol          | 3.96  | 45  | 195929 | 1.830  | ppbv # 92 |
| 20) Methylene Chloride         | 4.33  | 84  | 39036  | 0.626  | ppbv 99   |
| 21) Allyl Chloride             | 4.36  | 41  | 4310   | 0.040  | ppbv # 1  |
| 23) Vinyl Acetate              | 5.05  | 43  | 7602   | 0.033  | ppbv # 1  |
| 25) Ethyl Acetate              | 5.67  | 43  | 103035 | 0.276  | ppbv # 82 |
| 26) Hexane                     | 5.67  | 57  | 130236 | 0.849  | ppbv # 39 |
| 34) 2-Butanone                 | 5.23  | 43  | 8089   | 0.035  | ppbv # 55 |
| 36) Benzene                    | 6.87  | 78  | 126329 | 0.433  | ppbv 97   |
| 39) 1,2-Dichloropropane        | 7.16  | 63  | 985872 | 8.320  | ppbv # 23 |
| 44) 2,2,4-Trimethylpentane     | 7.85  | 57  | 98917  | 0.186  | ppbv # 73 |
| 53) Toluene                    | 9.79  | 91  | 220571 | 0.698  | ppbv 97   |
| 58) Ethyl Benzene              | 12.69 | 91  | 17158  | 0.040  | ppbv 92   |
| 59) m/p-Xylene                 | 12.98 | 91  | 21315  | 0.057  | ppbv # 33 |
| 60) o-Xylene                   | 13.67 | 91  | 32067  | 0.090  | ppbv 76   |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. 0.00 min

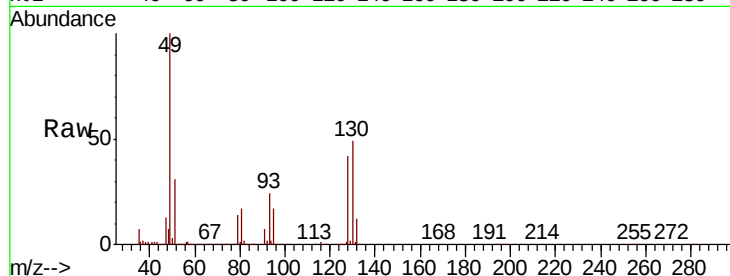
Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 49 Resp: 1581298

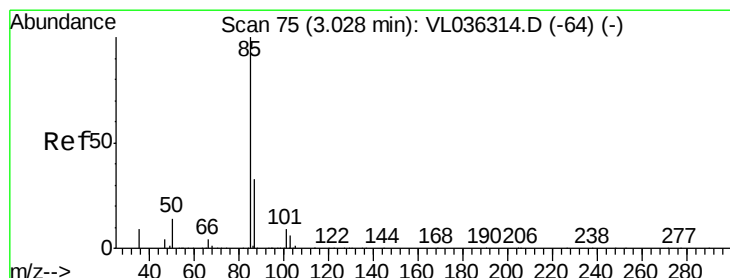
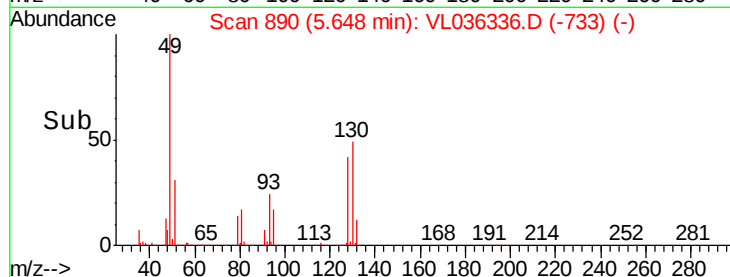
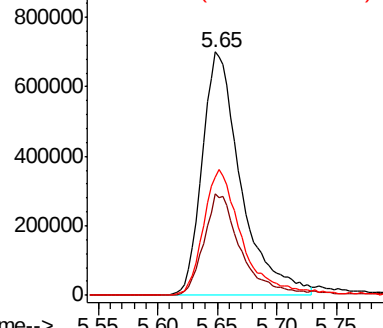
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 49  | 100   |       |       |
| 128 | 41.6  | 20.8  | 62.5  |
| 130 | 53.4  | 26.7  | 80.1  |



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



#2

Dichlorodifluoromethane

Concen: 0.290 ppbv

RT: 3.04 min Scan# 78

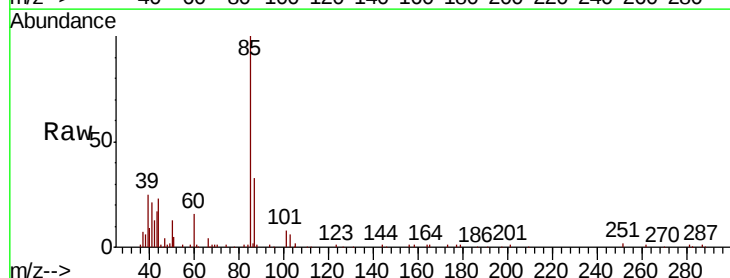
Delta R.T. 0.01 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

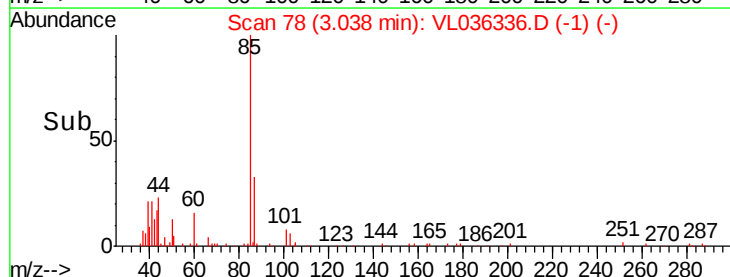
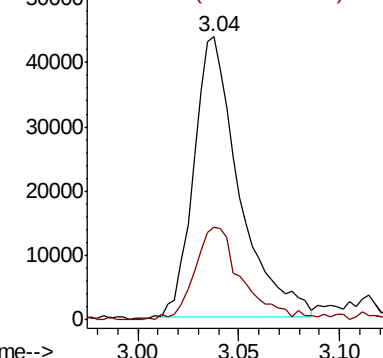
Tgt Ion: 85 Resp: 68475

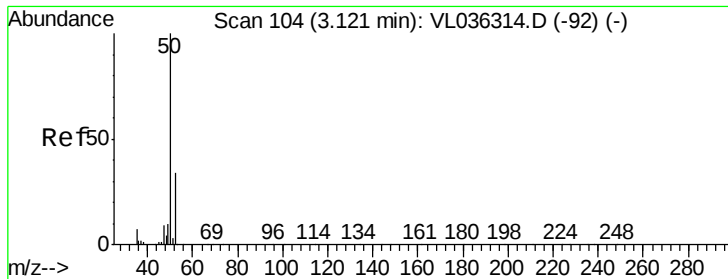
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 85  | 100   |       |       |
| 87  | 31.4  | 26.5  | 39.7  |



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.471 ppbv

RT: 3.14 min Scan# 109

Delta R.T. 0.02 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

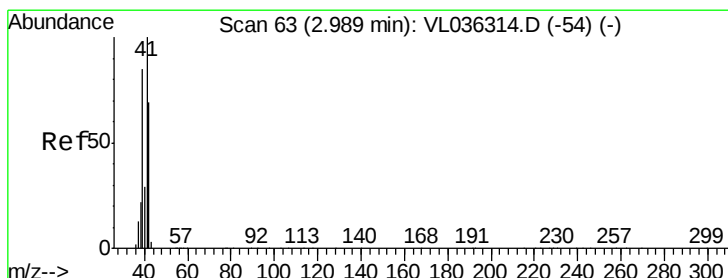
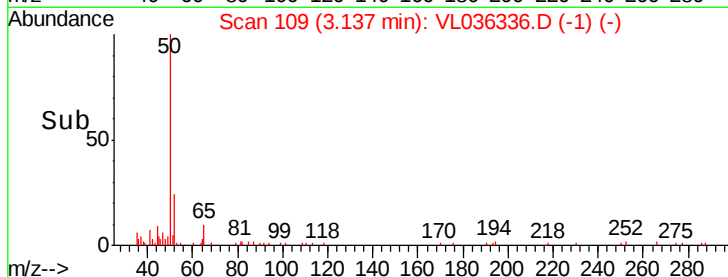
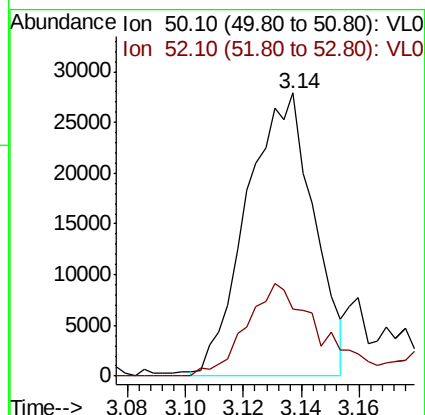
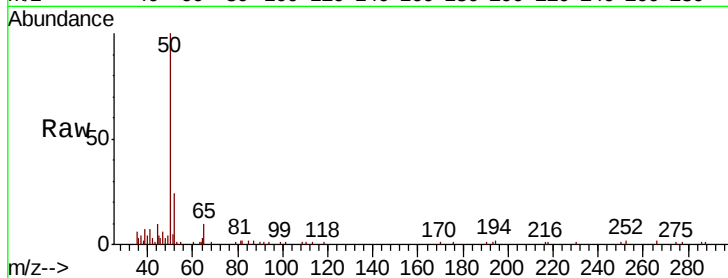
ClientSampleId :

Tot Ion: 50 Resp: 44744

Ion Ratio Lower Upper

50 100

52 24.8 27.0 40.4#



#9

Propene

Concen: 0.808 ppbv

RT: 3.01 min Scan# 68

Delta R.T. 0.02 min

Lab File: VL036336.D

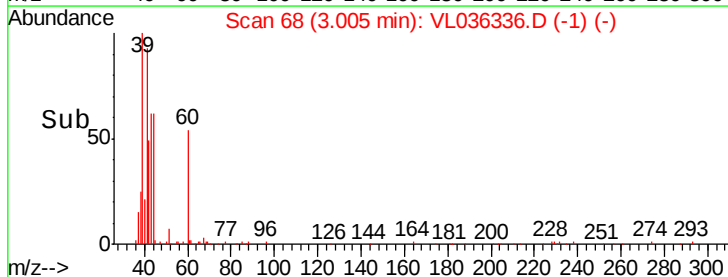
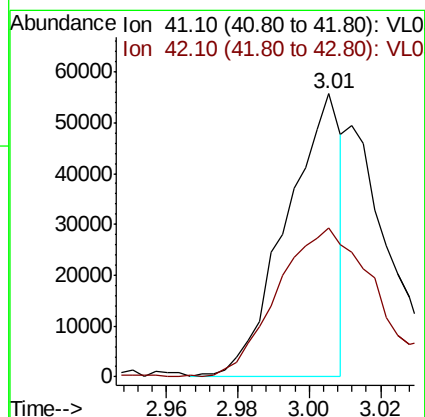
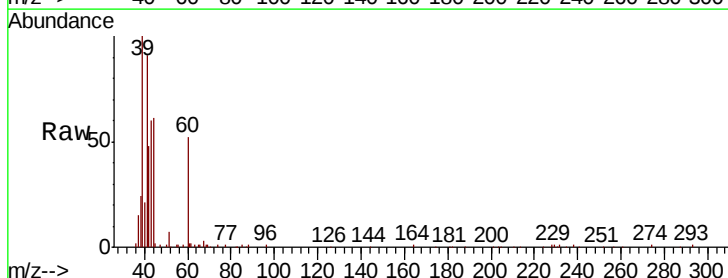
Acq: 11 Feb 2021 3:14

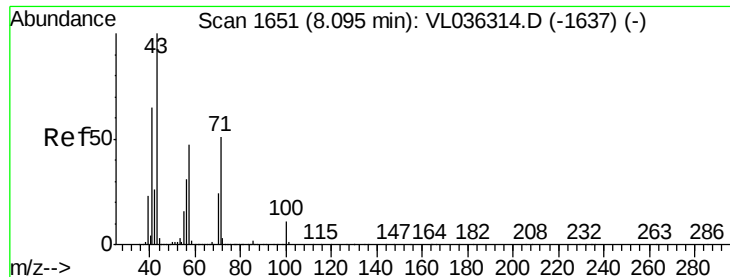
Tgt Ion: 41 Resp: 59209

Ion Ratio Lower Upper

41 100

42 106.5 56.2 84.2#

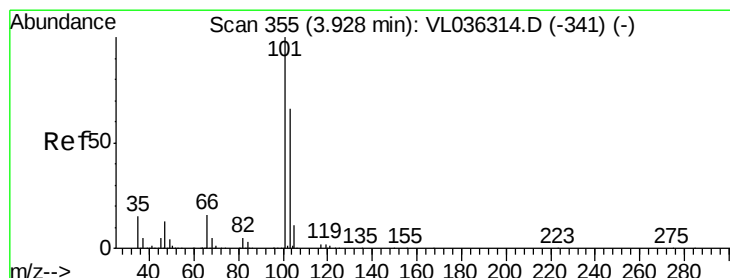
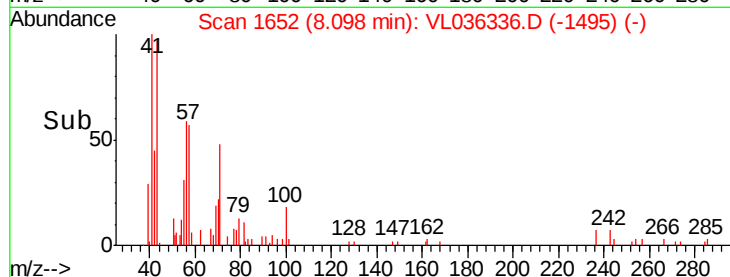
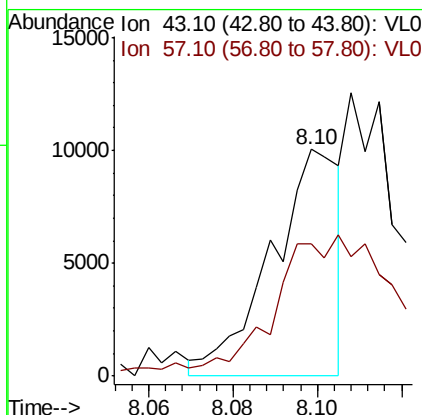
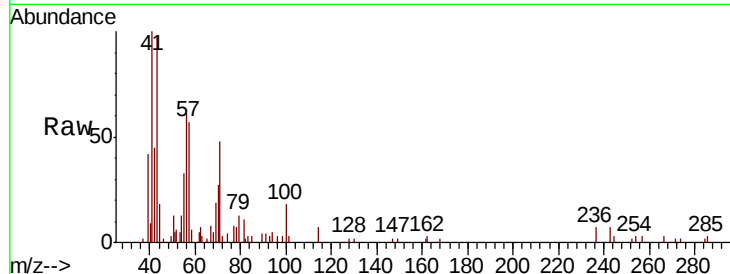




#10  
Heptane  
Concen: 0.052 ppbv  
RT: 8.10 min Scan# 1652  
Delta R.T. 0.00 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

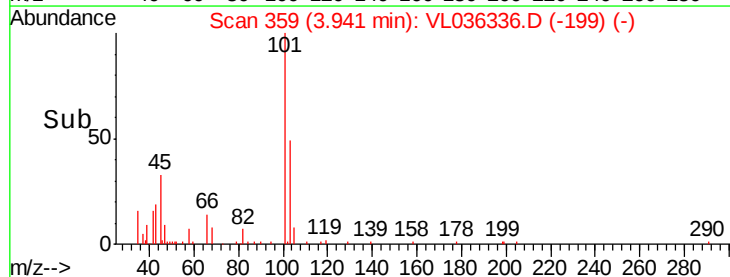
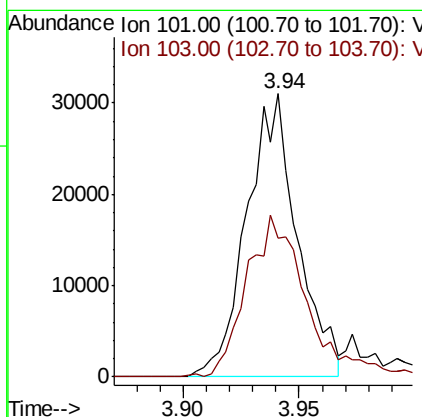
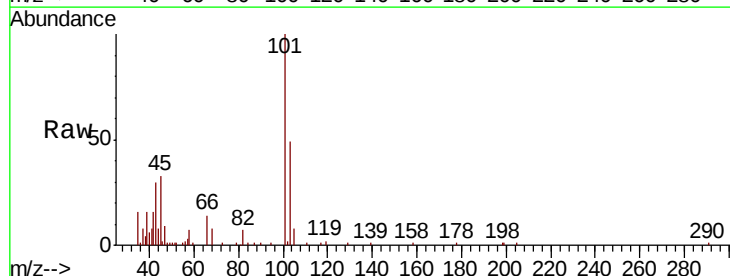
Instrument :  
MSVOA\_L  
ClientSampleId :

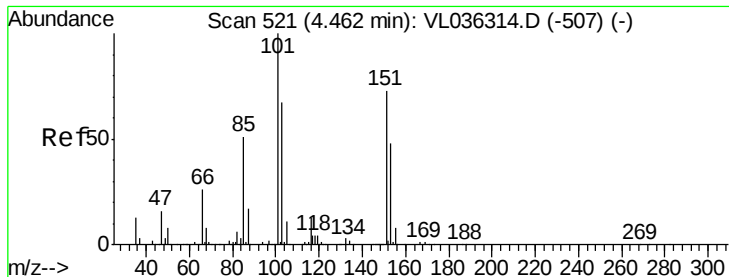
Tot Ion: 43 Resp: 11229  
Ion Ratio Lower Upper  
43 100  
57 0.0 39.4 59.2#



#11  
Trichlorofluoromethane  
Concen: 0.204 ppbv  
RT: 3.94 min Scan# 359  
Delta R.T. 0.01 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

Tgt Ion: 101 Resp: 47054  
Ion Ratio Lower Upper  
101 100  
103 48.3 52.9 79.3#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.035 ppbv

RT: 4.47 min Scan# 523

Delta R.T. 0.01 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

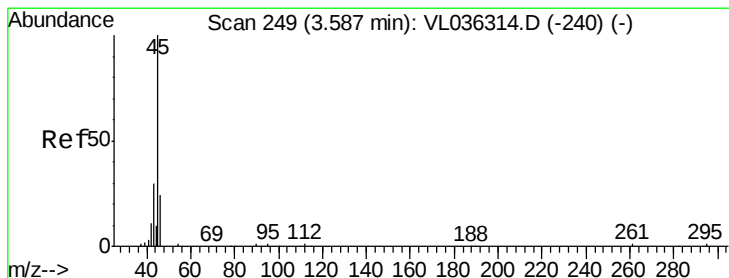
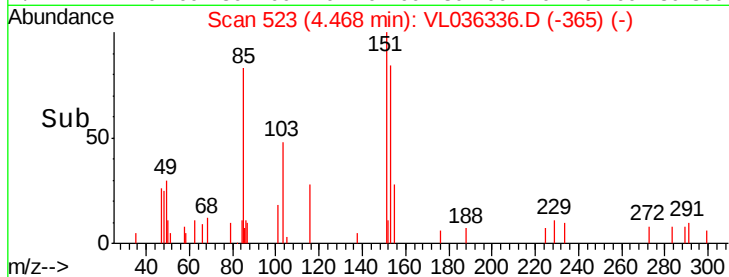
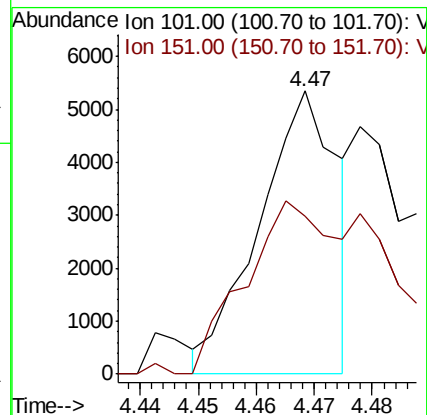
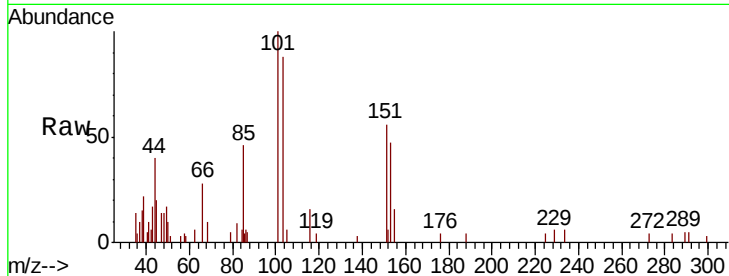
ClientSampleId :

Tot Ion:101 Resp: 5010

Ion Ratio Lower Upper

101 100

151 124.3 58.2 87.4#



#13

Ethanol

Concen: 32.637 ppbv

RT: 3.60 min Scan# 252

Delta R.T. 0.01 min

Lab File: VL036336.D

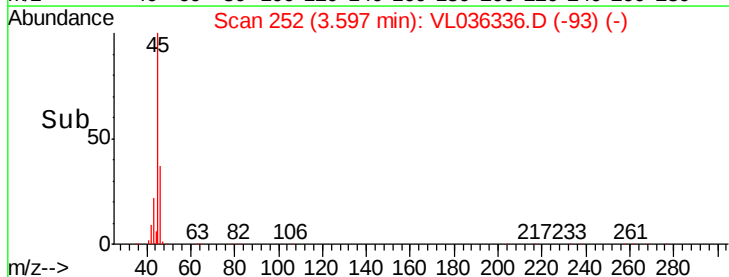
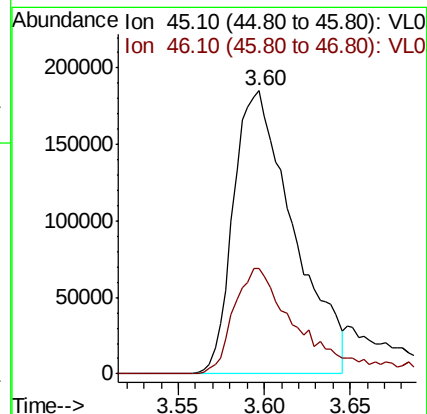
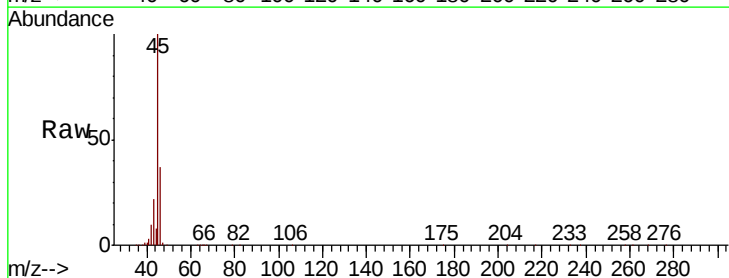
Acq: 11 Feb 2021 3:14

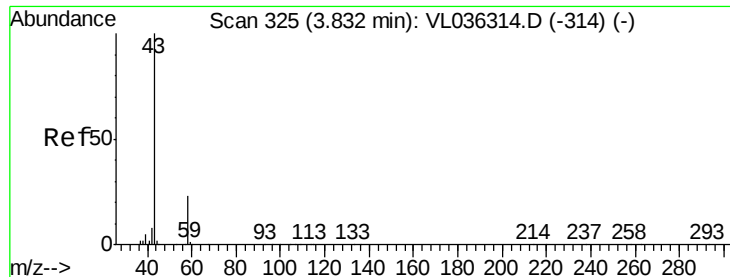
Tgt Ion: 45 Resp: 449060

Ion Ratio Lower Upper

45 100

46 42.6 17.7 70.7





#15

Acetone

Concen: 0.842 ppbv

RT: 3.84 min Scan# 328

Delta R.T. 0.01 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

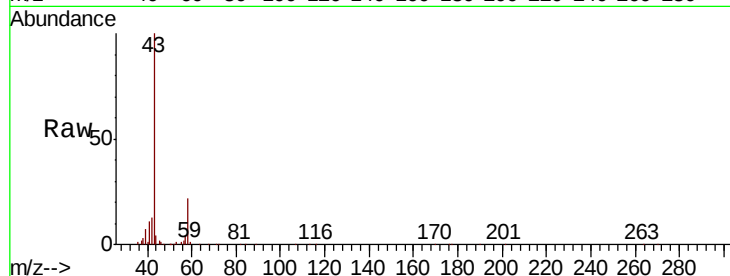
ClientSampleId :

Tot Ion: 43 Resp: 162834

Ion Ratio Lower Upper

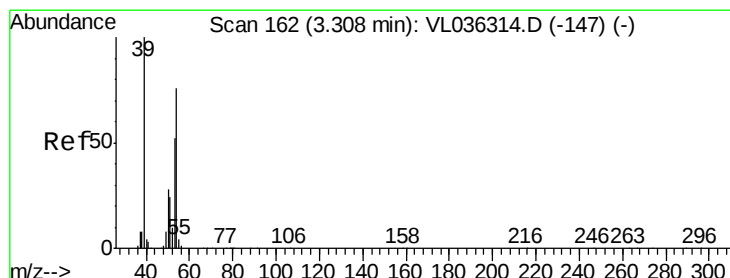
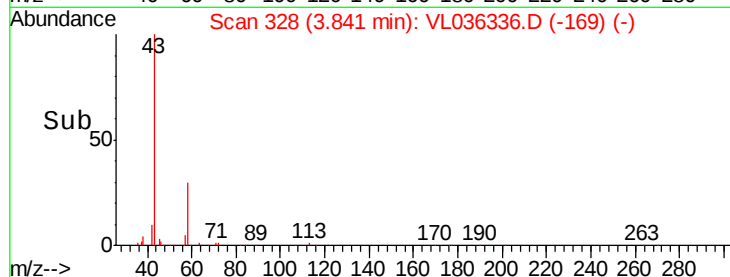
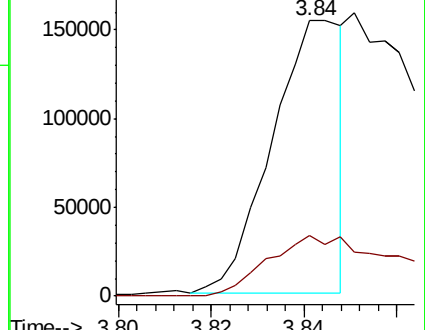
43 100

58 49.4 20.3 30.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.043 ppbv

RT: 3.30 min Scan# 160

Delta R.T. -0.01 min

Lab File: VL036336.D

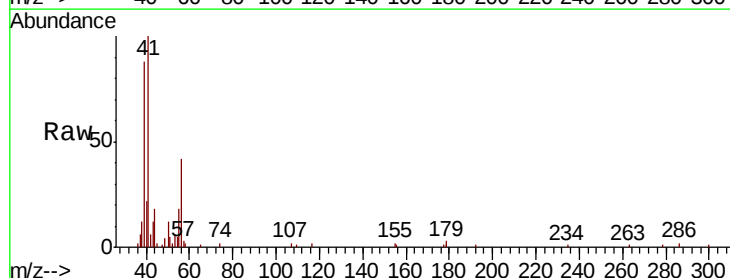
Acq: 11 Feb 2021 3:14

Tgt Ion: 39 Resp: 3934

Ion Ratio Lower Upper

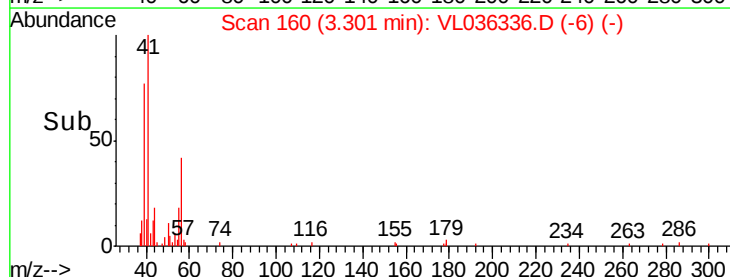
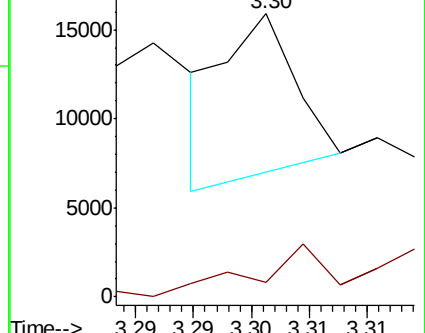
39 100

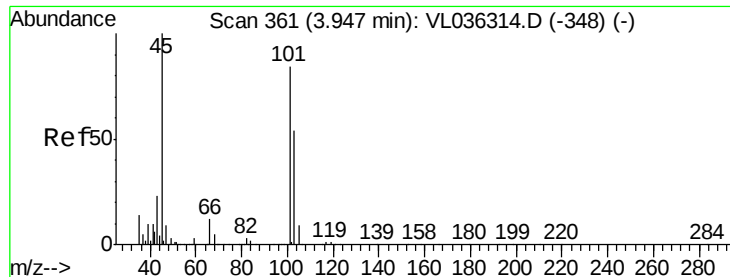
54 179.4 64.4 96.6#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 1.830 ppbv

RT: 3.96 min Scan# 366

Delta R.T. 0.02 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

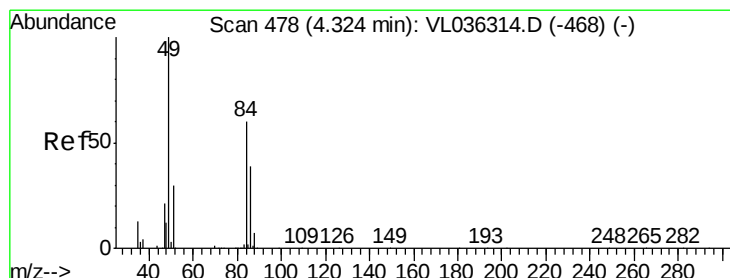
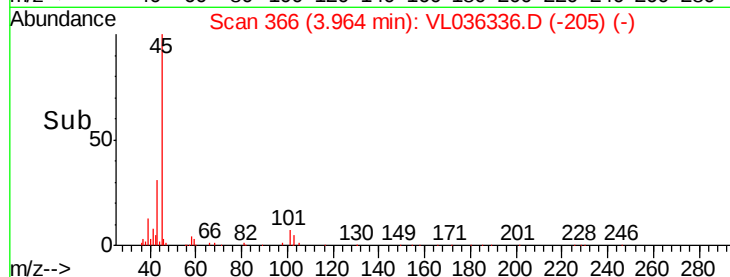
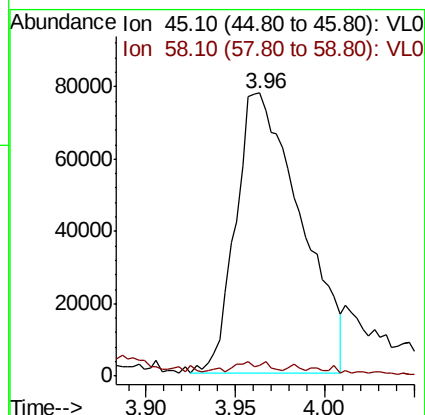
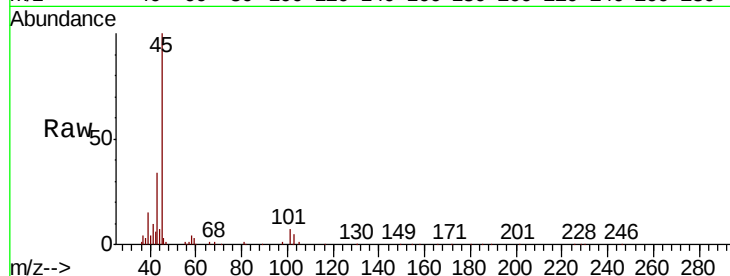
ClientSampleId :

Tot Ion: 45 Resp: 195929

Ion Ratio Lower Upper

45 100

58 5.0 1.9 2.9#



#20

Methylene Chloride

Concen: 0.626 ppbv

RT: 4.33 min Scan# 479

Delta R.T. 0.00 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Tgt Ion: 84 Resp: 39036

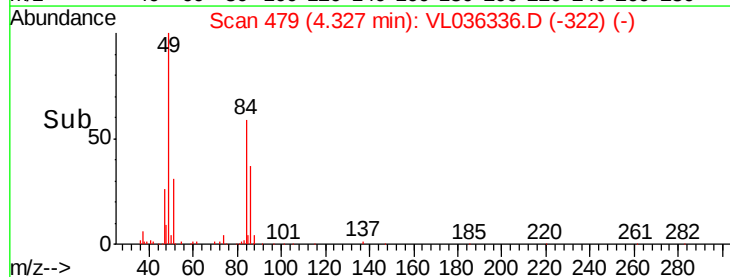
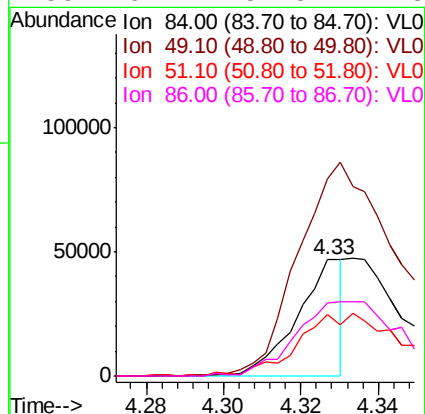
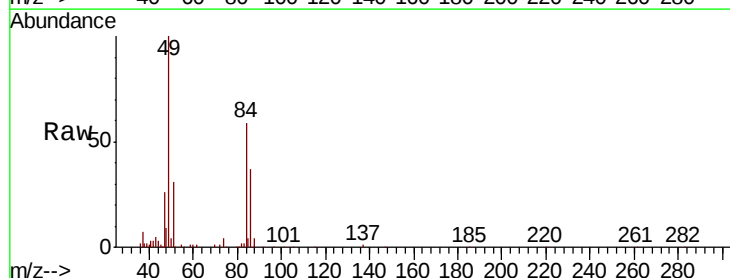
Ion Ratio Lower Upper

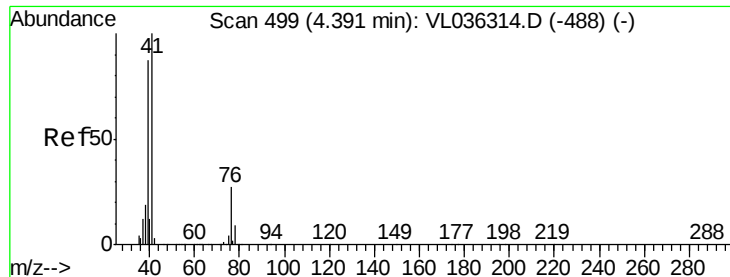
84 100

49 169.1 133.8 200.8

51 51.8 41.4 62.0

86 62.7 51.5 77.3





#21

Allvl Chloride

Concen: 0.040 ppbv

RT: 4.36 min Scan# 489

Delta R.T. -0.03 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

ClientSampled :

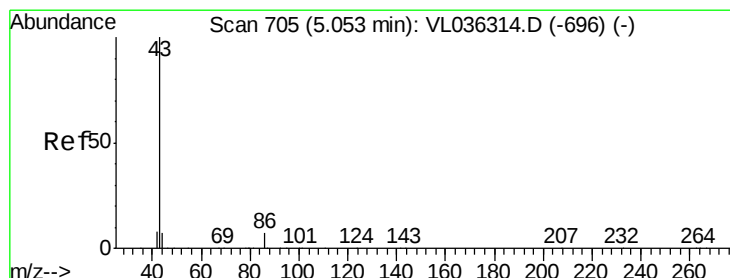
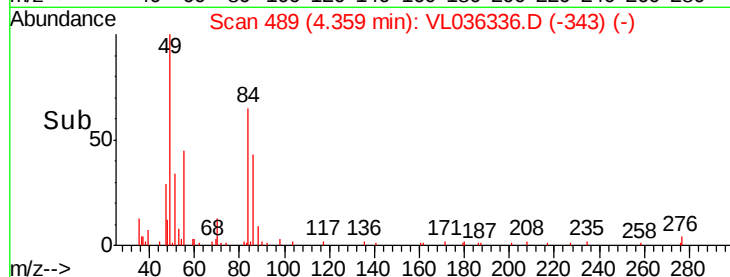
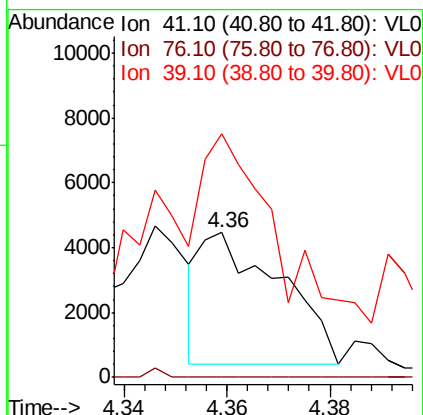
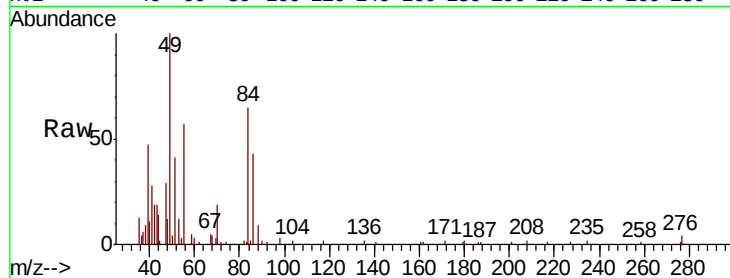
Tot Ion: 41 Resp: 4310

Ion Ratio Lower Upper

41 100

76 0.0 22.0 33.0#

39 296.8 70.2 105.2#



#23

Vinyl Acetate

Concen: 0.033 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.00 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Tgt Ion: 43 Resp: 7602

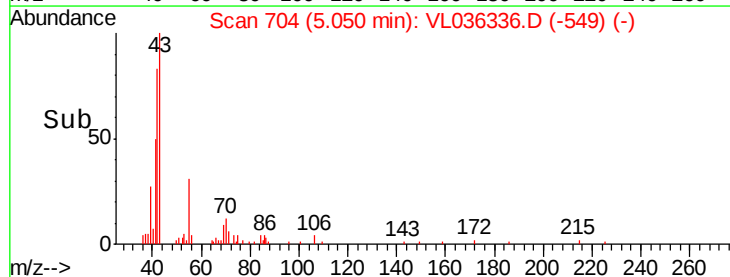
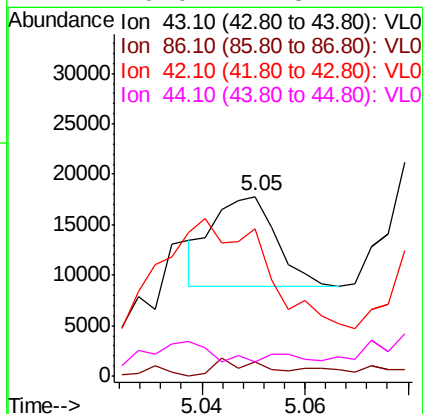
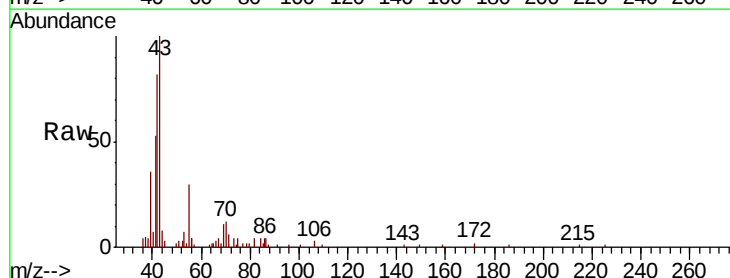
Ion Ratio Lower Upper

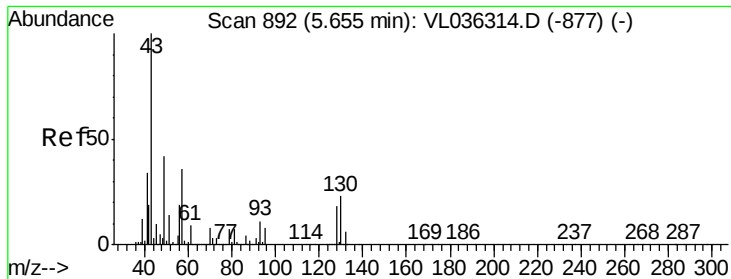
43 100

86 15.4 4.8 7.2#

42 105.5 7.4 11.0#

44 0.0 4.8 7.2#

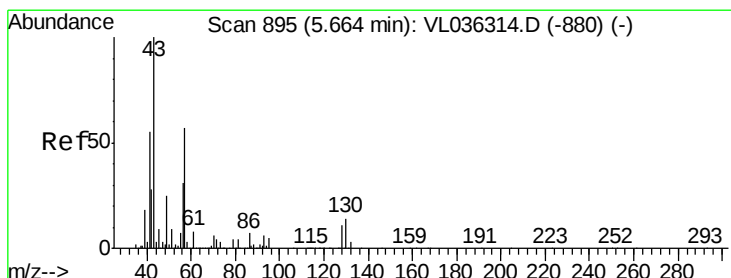
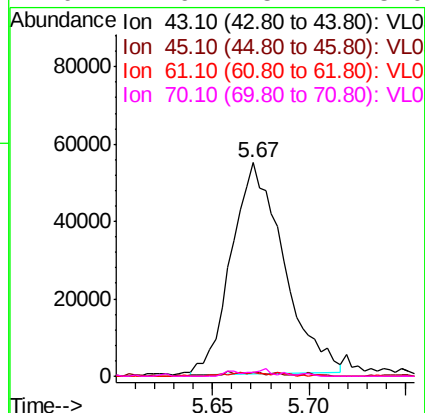
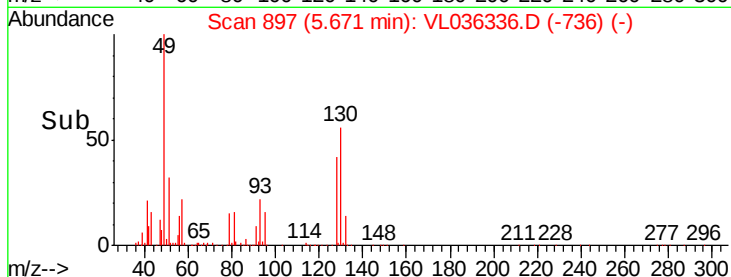
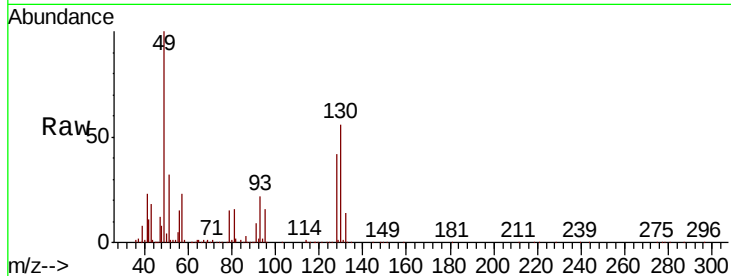




#25  
Ethyl Acetate  
Concen: 0.276 ppbv  
RT: 5.67 min Scan# 897  
Delta R.T. 0.02 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

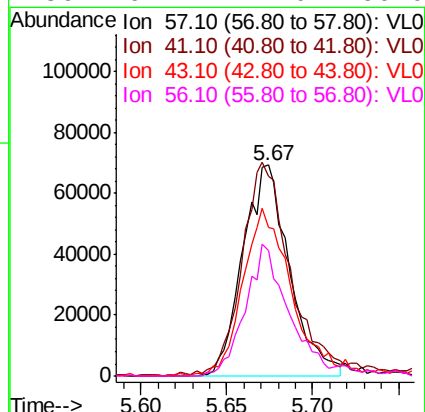
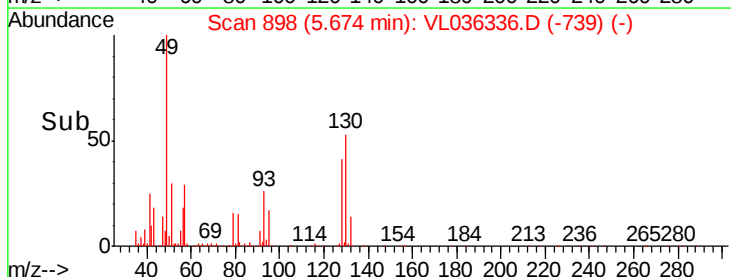
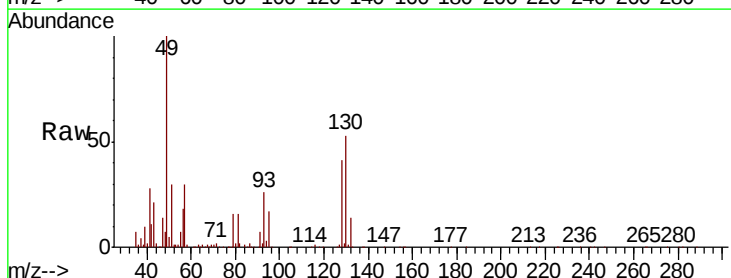
Instrument :  
MSVOA\_L  
ClientSampled :

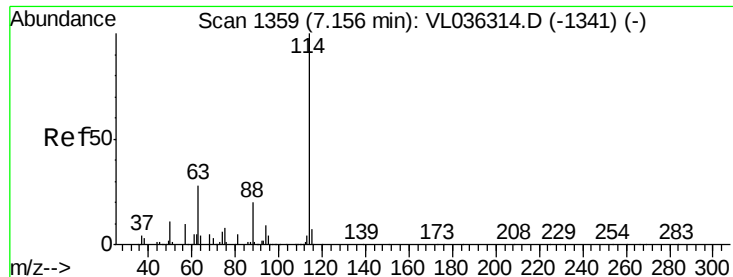
|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 43    | Resp: | 103035 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 2.6   | 8.3   | 12.5#  |
| 61       | 2.1   | 7.3   | 10.9#  |
| 70       | 2.6   | 5.4   | 8.0#   |



#26  
Hexane  
Concen: 0.849 ppbv  
RT: 5.67 min Scan# 898  
Delta R.T. 0.01 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 130236 |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 110.4 | 81.7  | 122.5  |
| 43       | 85.6  | 199.1 | 298.7# |
| 56       | 62.2  | 44.0  | 66.0   |



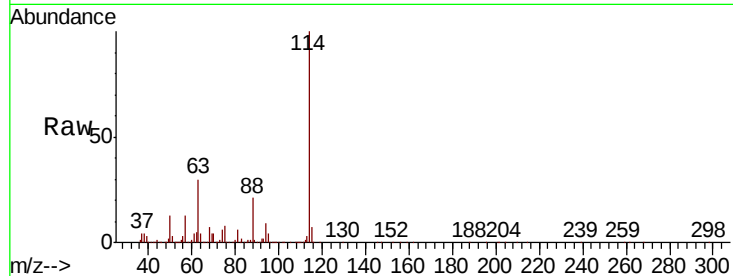


#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.16 min Scan# 1359  
 Delta R.T. 0.00 min  
 Lab File: VL036336.D  
 Acq: 11 Feb 2021 3:14

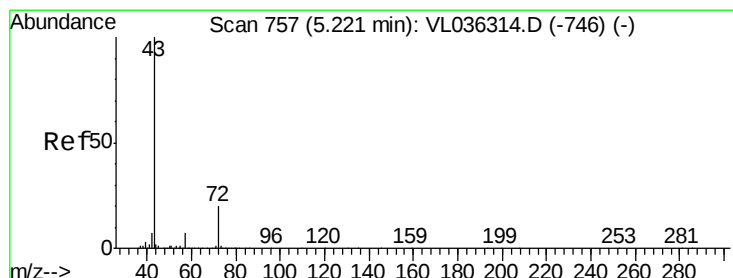
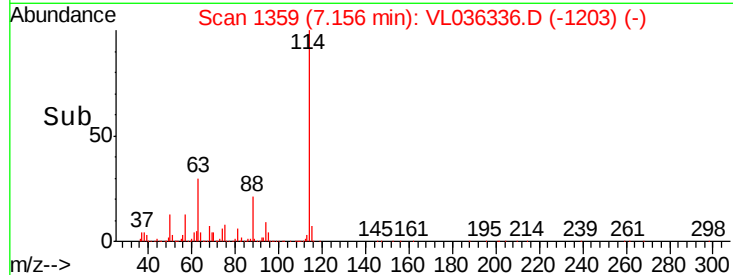
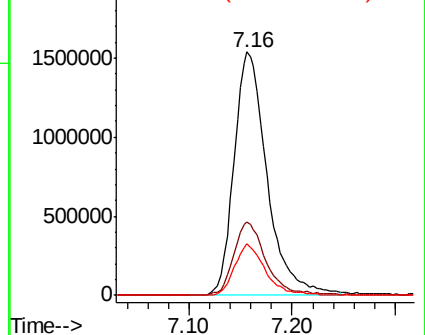
Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion:114 Resp: 3433980  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 114 | 100   |       |       |
| 63  | 29.8  | 24.1  | 36.1  |
| 88  | 19.9  | 16.0  | 24.0  |



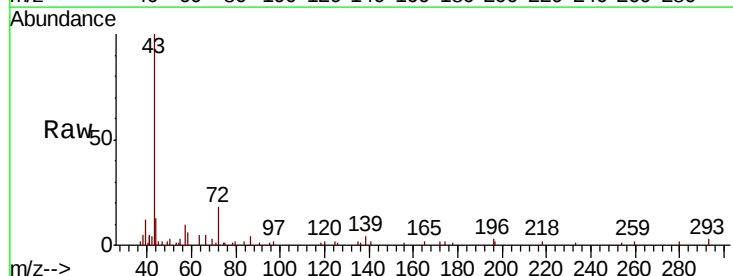
Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0



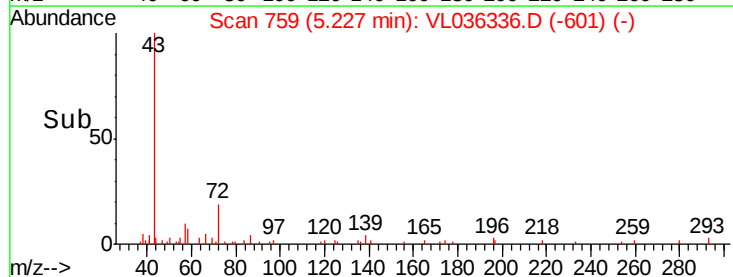
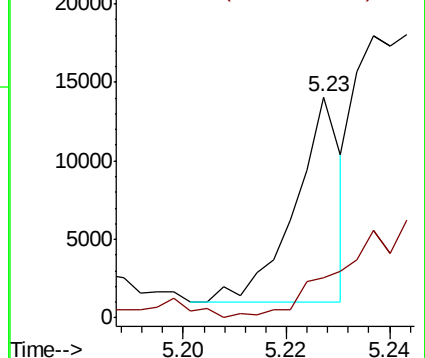
#34  
 2-Butanone  
 Concen: 0.035 ppbv  
 RT: 5.23 min Scan# 759  
 Delta R.T. 0.01 min  
 Lab File: VL036336.D  
 Acq: 11 Feb 2021 3:14

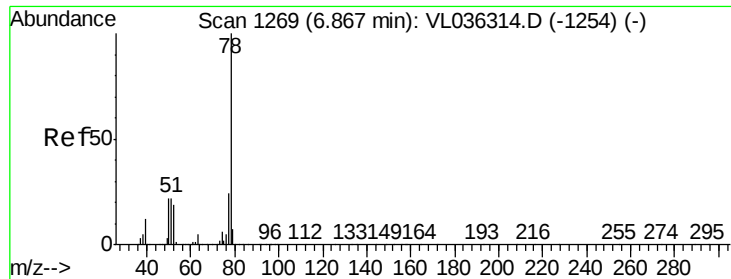
Tgt Ion: 43 Resp: 8089  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 43  | 100   |       |       |
| 72  | 0.0   | 16.7  | 25.1# |



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





#36

Benzene

Concen: 0.433 ppbv

RT: 6.87 min Scan# 1270

Delta R.T. 0.00 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

ClientSampleId :

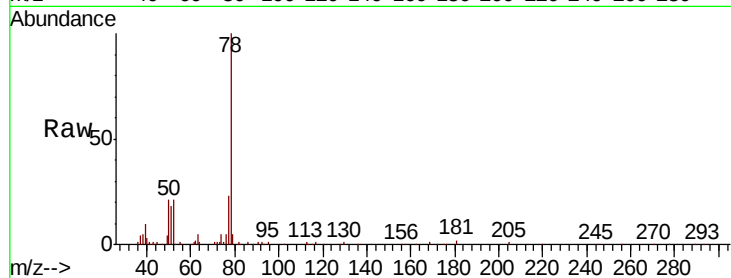
Tot Ion: 78 Resp: 126329

Ion Ratio Lower Upper

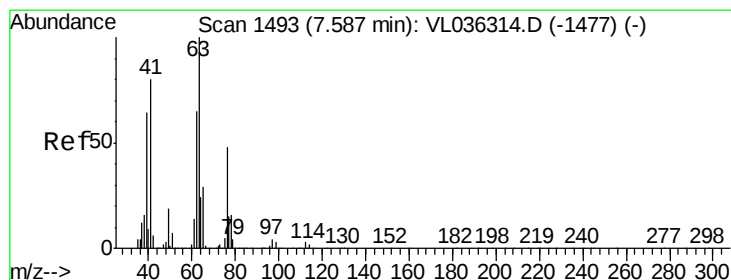
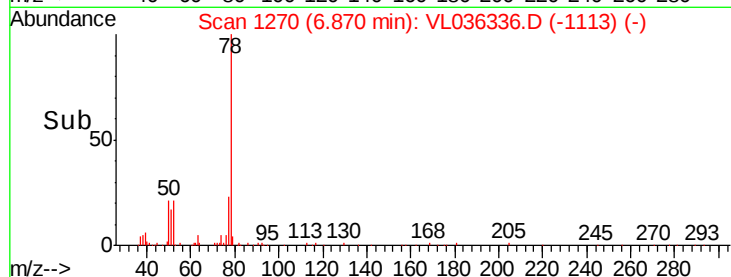
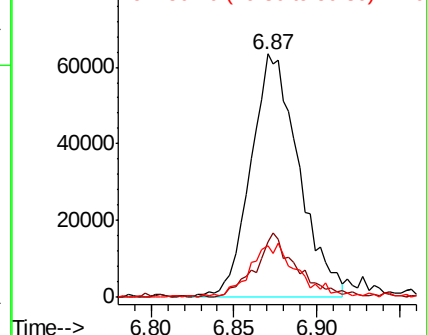
78 100

77 22.3 18.9 28.3

50 20.3 17.3 25.9



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: 8.320 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.43 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

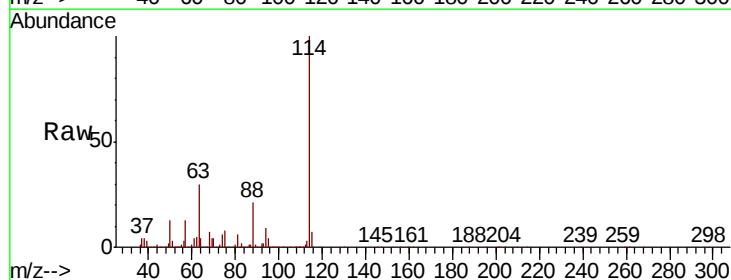
Tgt Ion: 63 Resp: 985872

Ion Ratio Lower Upper

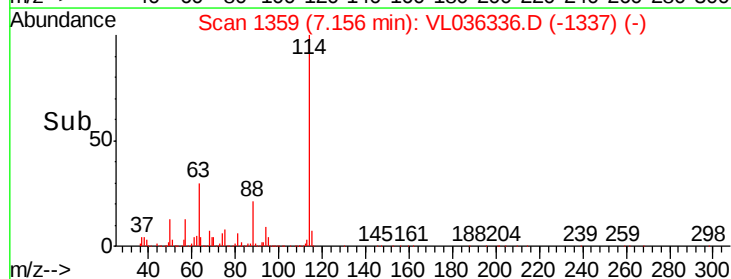
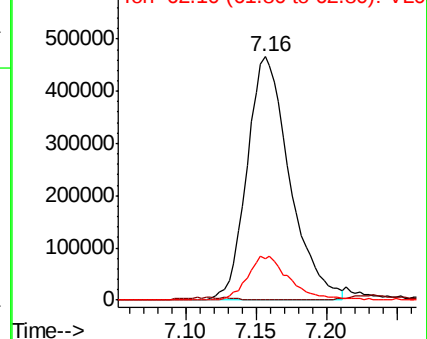
63 100

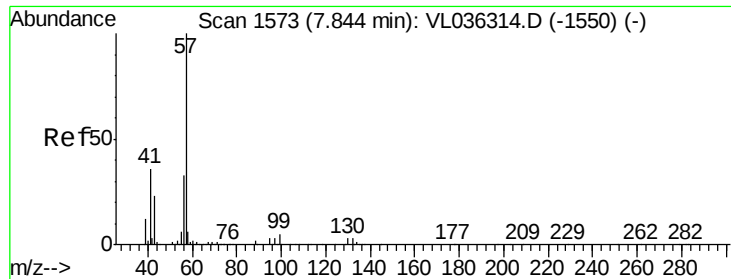
41 0.0 63.8 95.6#

62 16.9 52.3 78.5#



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

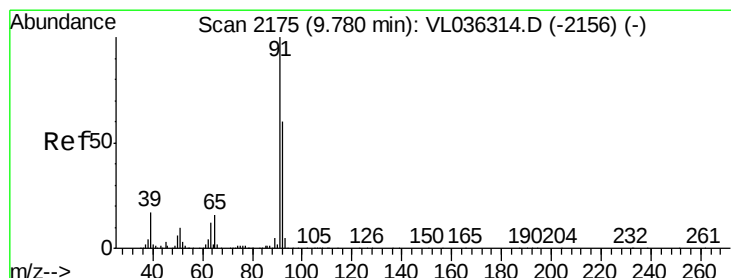
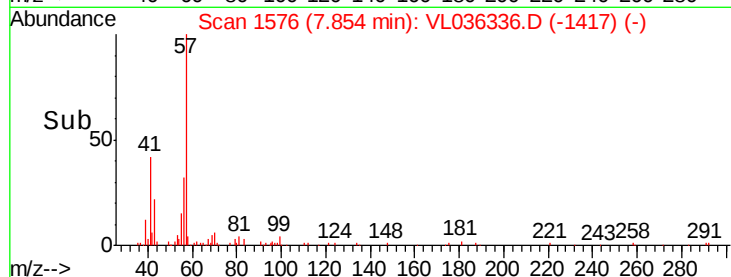
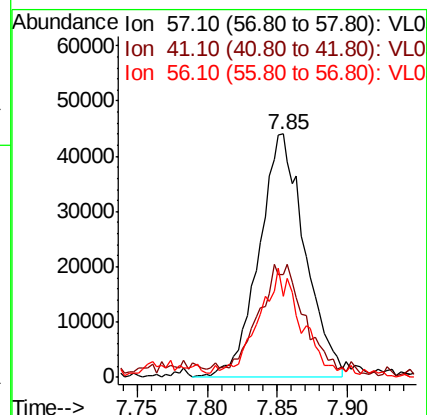
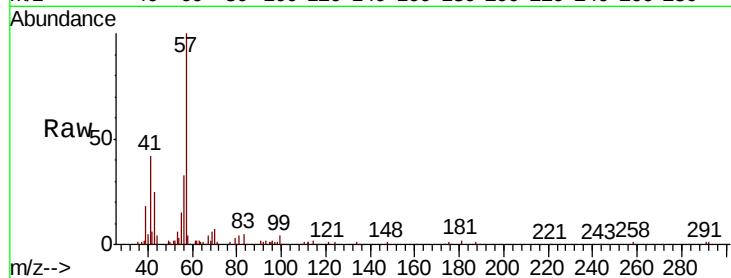




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.186 ppbv  
 RT: 7.85 min Scan# 1576  
 Delta R.T. 0.01 min  
 Lab File: VL036336.D  
 Acq: 11 Feb 2021 3:14

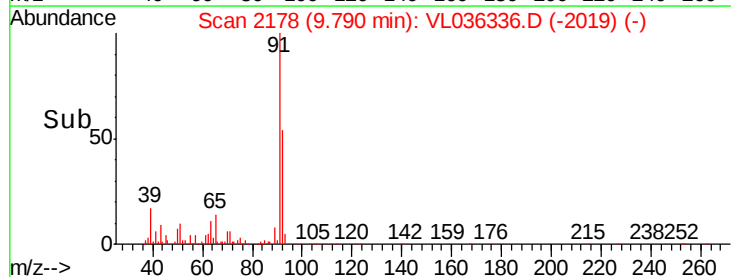
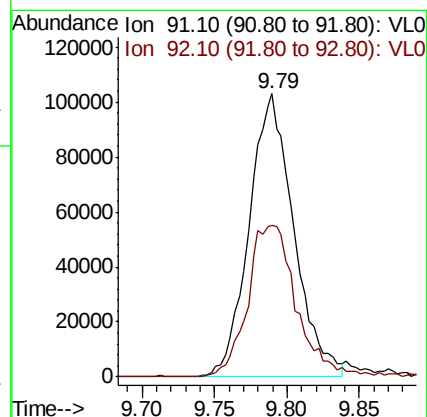
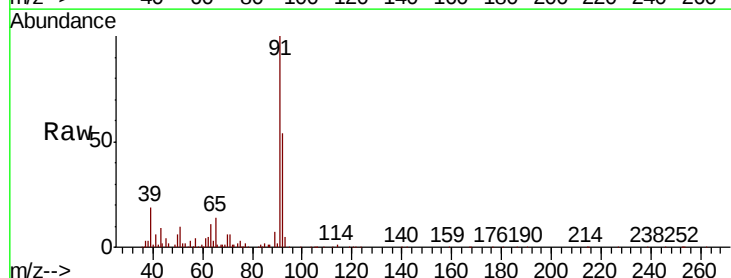
Instrument :  
 MSVOA\_L  
 ClientSampled :

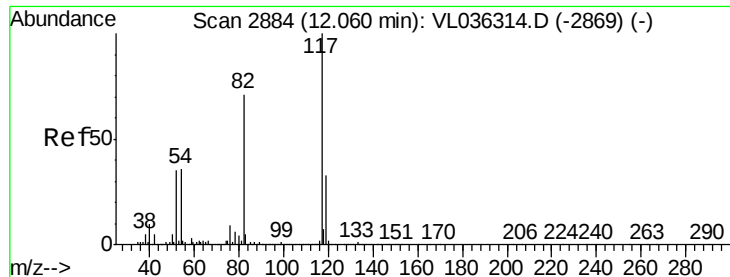
| Tot Ion   | 57    | Resp  | 98917 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 57        | 100   |       |       |
| 41        | 53.1  | 28.8  | 43.2# |
| 56        | 46.0  | 25.8  | 38.6# |



#53  
 Toluene  
 Concen: 0.698 ppbv  
 RT: 9.79 min Scan# 2178  
 Delta R.T. 0.01 min  
 Lab File: VL036336.D  
 Acq: 11 Feb 2021 3:14

| Tgt Ion   | 91    | Resp  | 220571 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 91        | 100   |       |        |
| 92        | 58.6  | 48.6  | 72.8   |

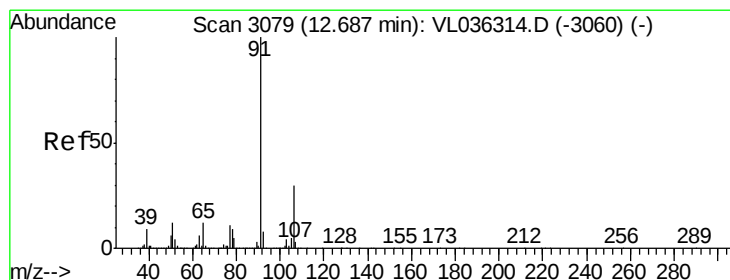
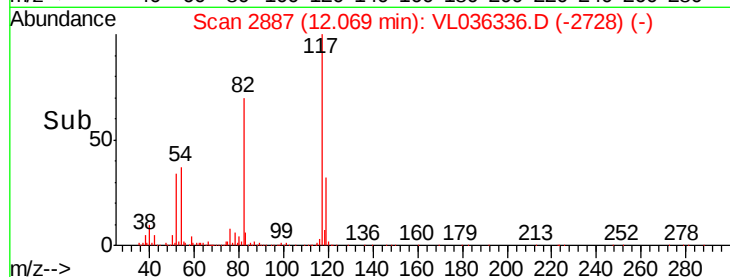
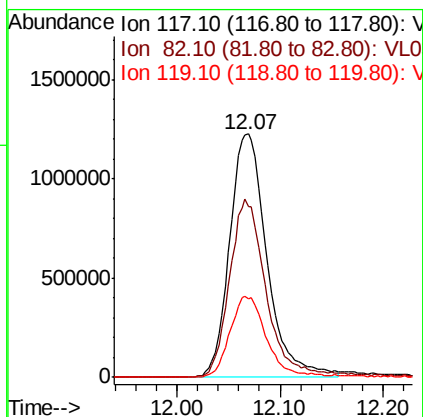
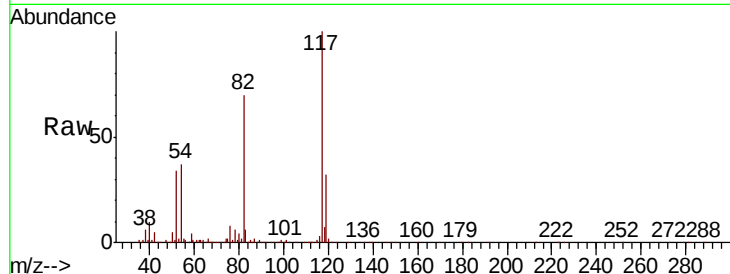




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.07 min Scan# 2887  
Delta R.T. 0.01 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

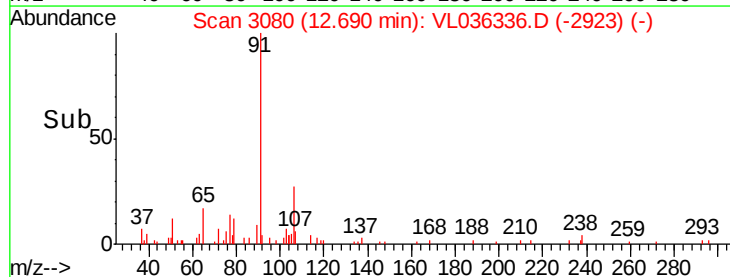
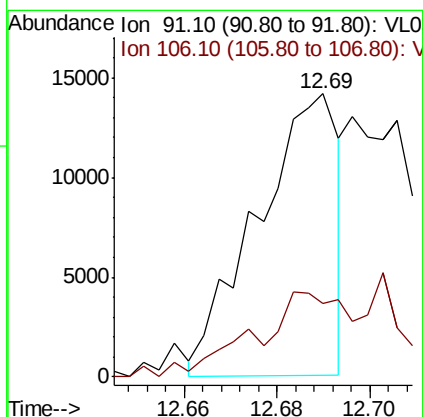
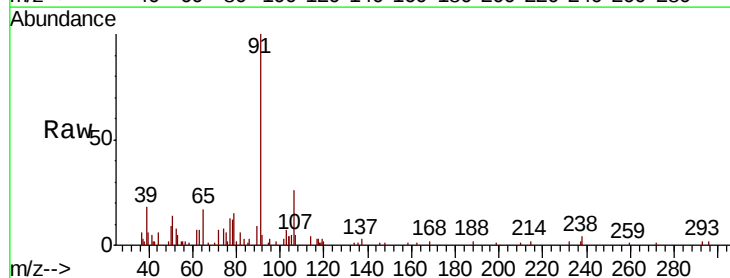
Instrument :  
MSVOA\_L  
ClientSampleId :

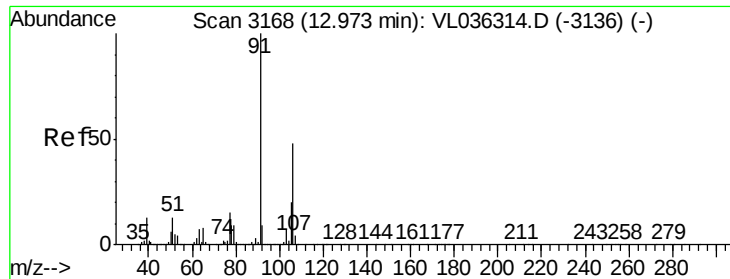
Tot Ion:117 Resp: 3094346  
Ion Ratio Lower Upper  
117 100  
82 73.2 59.1 88.7  
119 33.7 46.3 69.5#



#58  
Ethyl Benzene  
Concen: 0.040 ppbv  
RT: 12.69 min Scan# 3080  
Delta R.T. 0.00 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

Tgt Ion: 91 Resp: 17158  
Ion Ratio Lower Upper  
91 100  
106 25.6 23.8 35.6

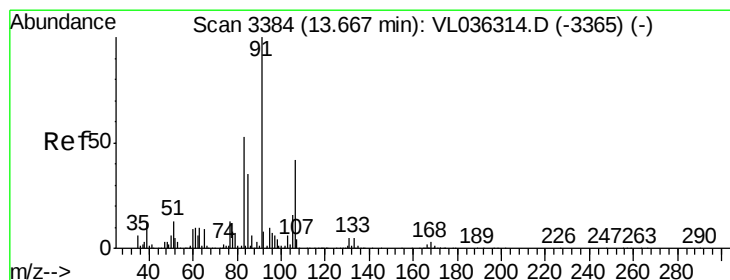
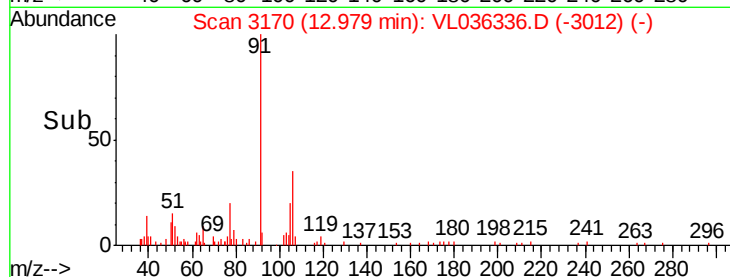
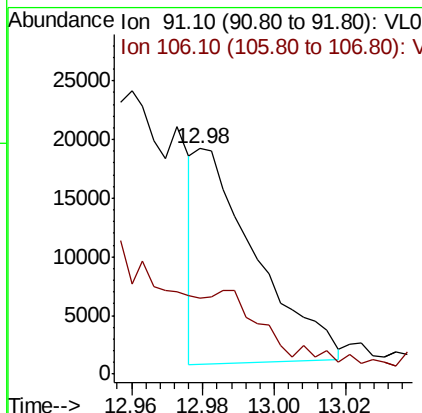
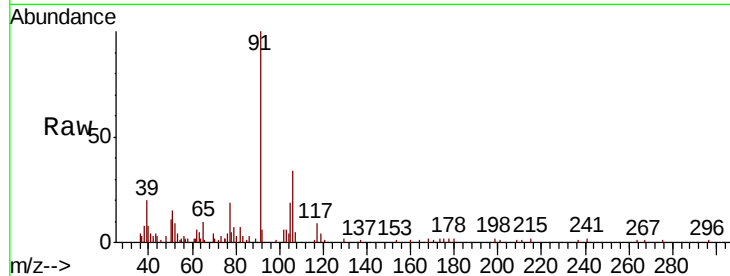




#59  
m/p-Xylene  
Concen: 0.057 ppbv  
RT: 12.98 min Scan# 3170  
Delta R.T. 0.01 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

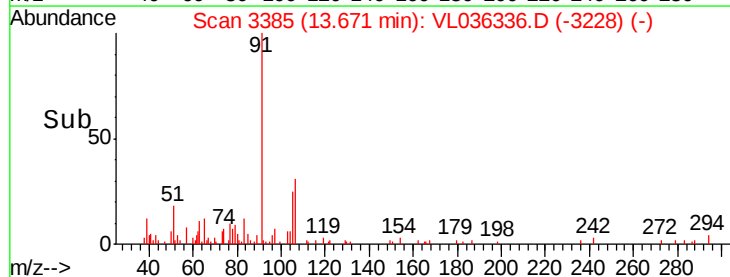
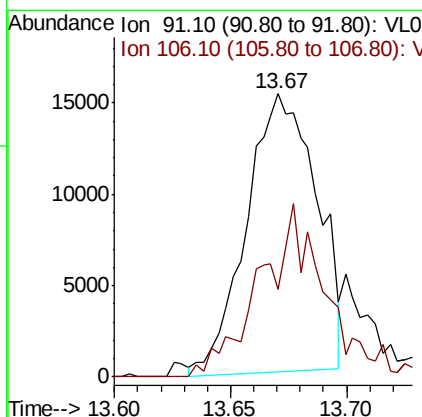
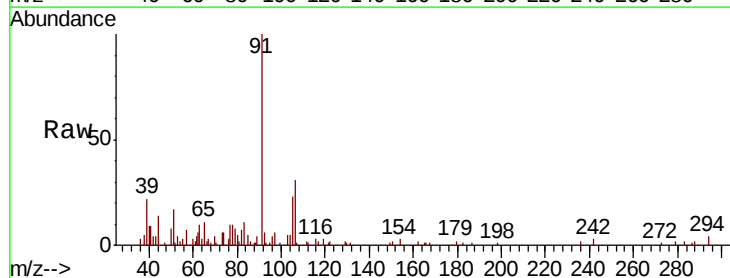
Instrument :  
MSVOA\_L  
ClientSampleId :

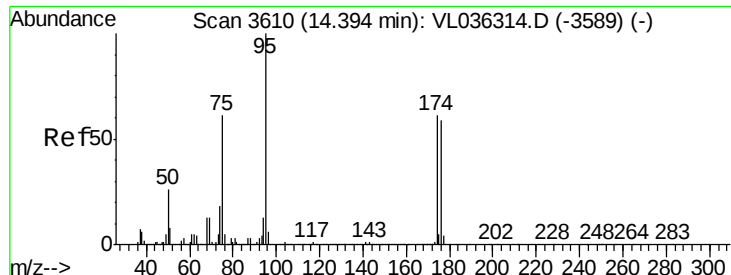
Tot Ion: 91 Resp: 21315  
Ion Ratio Lower Upper  
91 100  
106 0.0 34.2 51.2#



#60  
o-Xylene  
Concen: 0.090 ppbv  
RT: 13.67 min Scan# 3385  
Delta R.T. 0.00 min  
Lab File: VL036336.D  
Acq: 11 Feb 2021 3:14

Tgt Ion: 91 Resp: 32067  
Ion Ratio Lower Upper  
91 100  
106 59.3 22.0 66.0





#68

1-Bromo-4-Fluorobenzene

Concen: 9.640 ppbv

RT: 14.40 min Scan# 3611

Delta R.T. 0.00 min

Lab File: VL036336.D

Acq: 11 Feb 2021 3:14

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 95 Resp: 2454328

Ion Ratio Lower Upper

95 100

174 64.6 49.8 74.6

175 4.8 3.7 5.5

