

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL021021\  
 Data File : VL036328.D  
 Acq On : 10 Feb 2021 21:56  
 Operator : SY/AP  
 Sample : M1343-02  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Feb 11 06:11:50 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   | 1559167  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.15  | 114  | 3464643  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.07 | 117  | 3094286  | 10.00 | ppbv  | 0.00     |

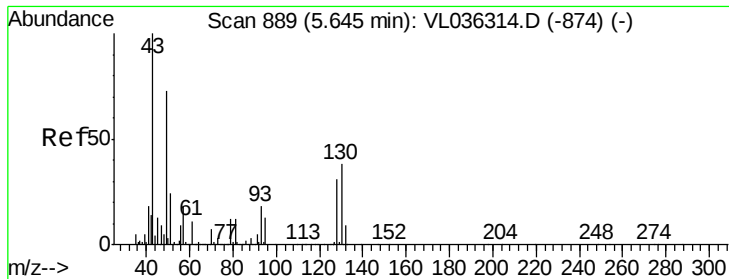
System Monitoring Compounds

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.40  | 95    | 2533930  | 9.95     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.50% |

| Target Compounds               | R.T. | QIon | Response | Conc     | Units  | Ovalue |
|--------------------------------|------|------|----------|----------|--------|--------|
| 3) Chlorodifluoromethane       | 2.98 | 51   | 1077664  | 5.563    | ppbv # | 82     |
| 4) Chloromethane               | 3.13 | 50   | 51711    | 0.553    | ppbv   | 96     |
| 9) Propene                     | 3.19 | 41   | 359731   | 4.980    | ppbv   | 92     |
| 10) Heptane                    | 8.11 | 43   | 6722     | 0.032    | ppbv # | 28     |
| 11) Trichlorofluoromethane     | 3.93 | 101  | 25556    | 0.112    | ppbv   | 86     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.46 | 101  | 4848     | 0.034    | ppbv # | 13     |
| 13) Ethanol                    | 3.62 | 45   | 17848425 | 1315.607 | ppbv   | 93     |
| 15) Acetone                    | 3.84 | 43   | 1521763  | 7.985    | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.30 | 39   | 18291    | 0.201    | ppbv # | 47     |
| 17) tert-Butyl alcohol         | 4.29 | 59   | 6081     | 0.041    | ppbv # | 71     |
| 19) Isopropyl Alcohol          | 3.99 | 45   | 4837221  | 45.811   | ppbv # | 98     |
| 20) Methylene Chloride         | 4.33 | 84   | 139478   | 2.268    | ppbv   | 93     |
| 21) Allyl Chloride             | 4.11 | 41   | 1023276  | 9.643    | ppbv # | 48     |
| 23) Vinyl Acetate              | 5.05 | 43   | 73373    | 0.327    | ppbv # | 69     |
| 25) Ethyl Acetate              | 5.66 | 43   | 138666   | 0.377    | ppbv # | 69     |
| 26) Hexane                     | 5.67 | 57   | 125527   | 0.830    | ppbv   | 93     |
| 29) Chloroform                 | 5.74 | 83   | 36280    | 0.149    | ppbv   | 93     |
| 34) 2-Butanone                 | 5.23 | 43   | 108127   | 0.470    | ppbv   | 97     |
| 35) Carbon Tetrachloride       | 7.00 | 117  | 7273     | 0.031    | ppbv # | 42     |
| 36) Benzene                    | 6.87 | 78   | 492667   | 1.674    | ppbv # | 93     |
| 39) 1,2-Dichloropropane        | 7.15 | 63   | 1003151  | 8.391    | ppbv # | 23     |
| 44) 2,2,4-Trimethylpentane     | 7.85 | 57   | 30686    | 0.057    | ppbv # | 36     |
| 53) Toluene                    | 9.78 | 91   | 155135   | 0.487    | ppbv # | 1      |

(#) = 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: VL036328.D

Acq: 10 Feb 2021 21:56

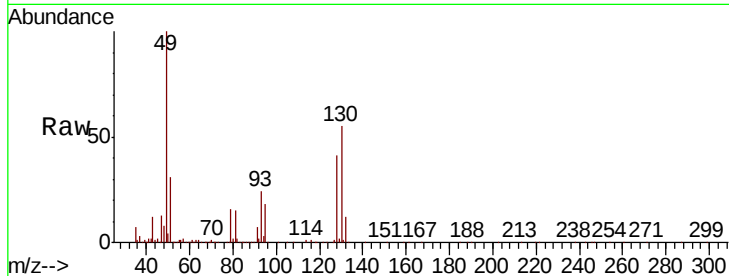
Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 49 Resp: 1559167

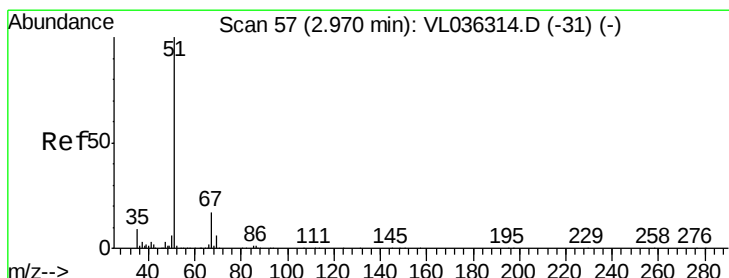
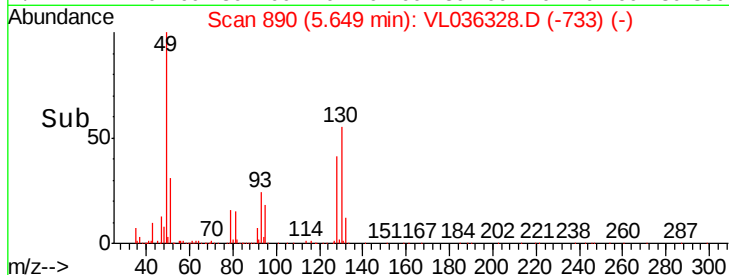
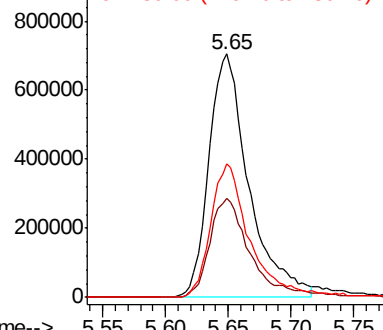
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 49  | 100   |       |       |
| 128 | 42.5  | 20.8  | 62.5  |
| 130 | 54.9  | 26.7  | 80.1  |



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



#3

Chlorodifluoromethane

Concen: 5.563 ppbv

RT: 2.98 min Scan# 59

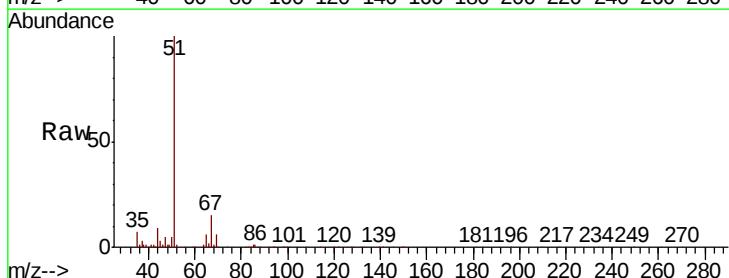
Delta R.T. 0.01 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

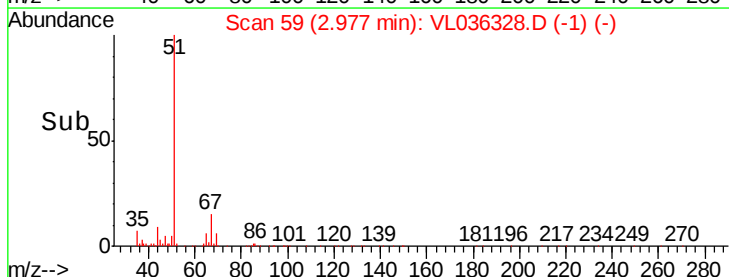
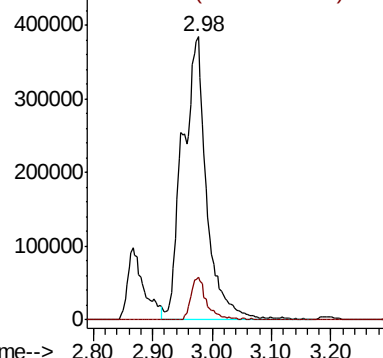
Tgt Ion: 51 Resp: 1077664

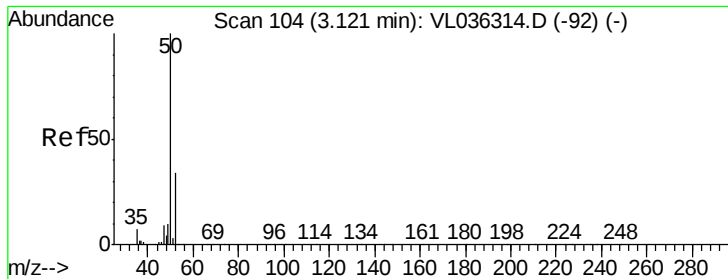
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 51  | 100   |       |       |
| 67  | 10.2  | 14.7  | 22.1  |



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.553 ppbv

RT: 3.13 min Scan# 106

Delta R.T. 0.01 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Instrument :

MSVOA\_L

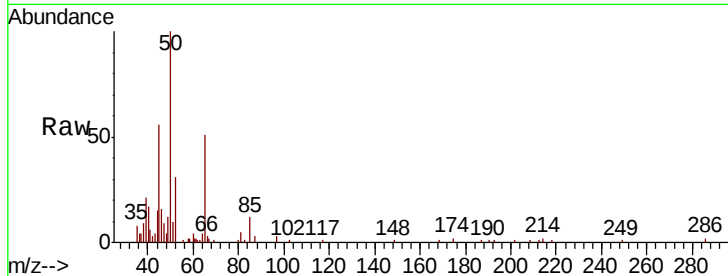
ClientSampleId :

Tot Ion: 50 Resp: 51711

Ion Ratio Lower Upper

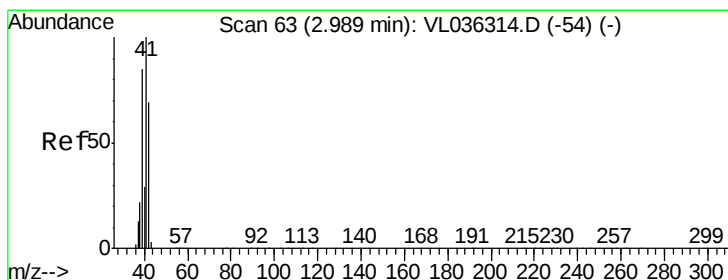
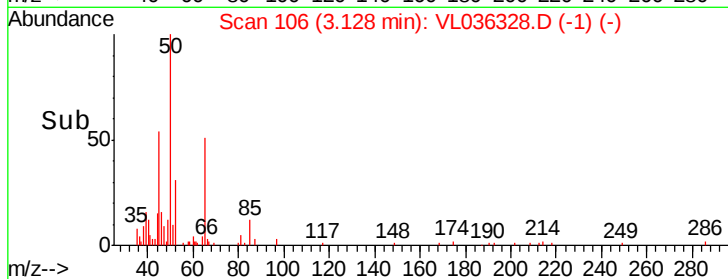
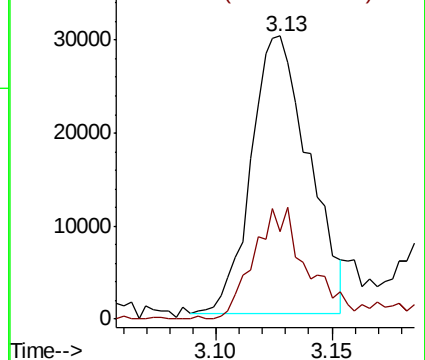
50 100

52 31.6 27.0 40.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 4.980 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.20 min

Lab File: VL036328.D

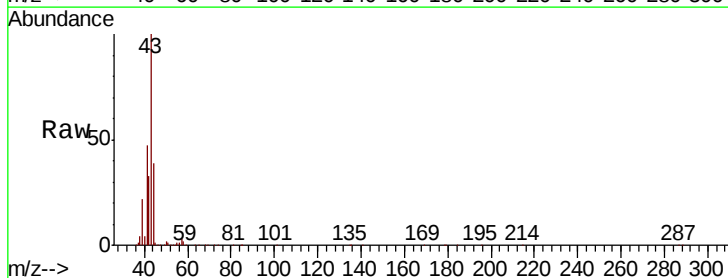
Acq: 10 Feb 2021 21:56

Tgt Ion: 41 Resp: 359731

Ion Ratio Lower Upper

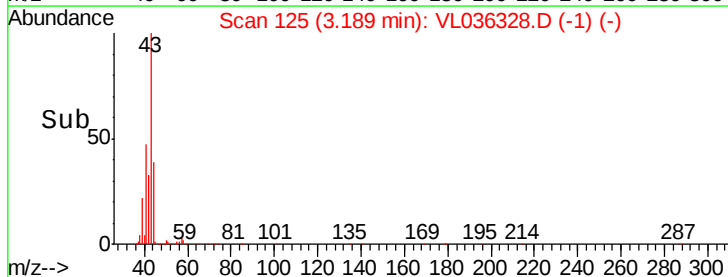
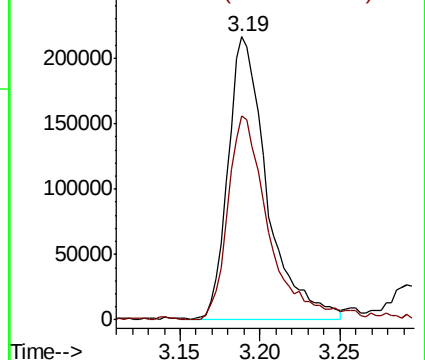
41 100

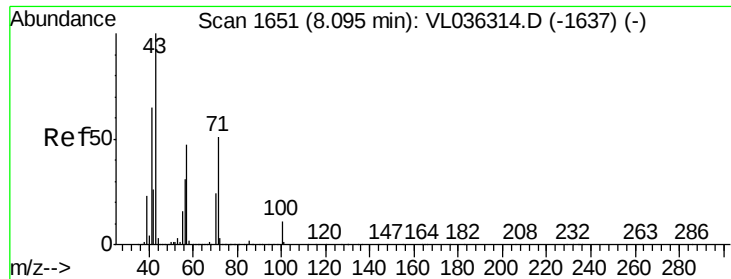
42 76.8 56.2 84.2



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

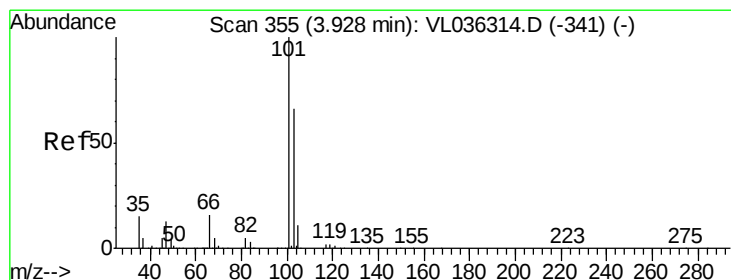
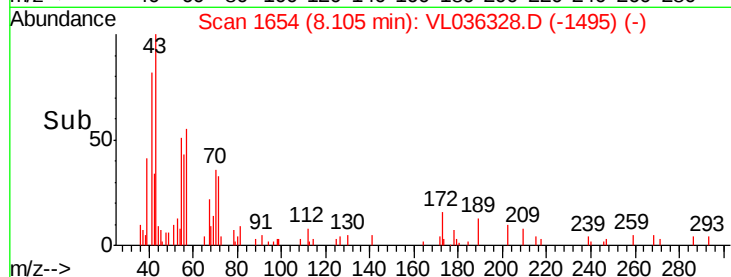
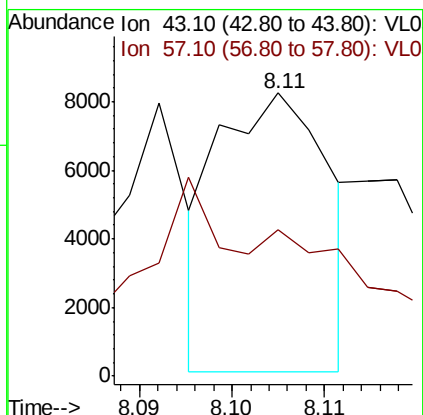
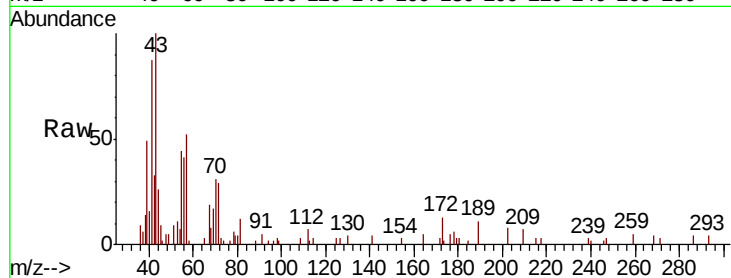




#10  
Heptane  
Concen: 0.032 ppbv  
RT: 8.11 min Scan# 1654  
Delta R.T. 0.01 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

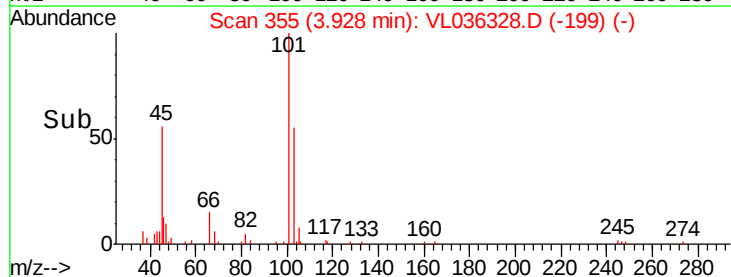
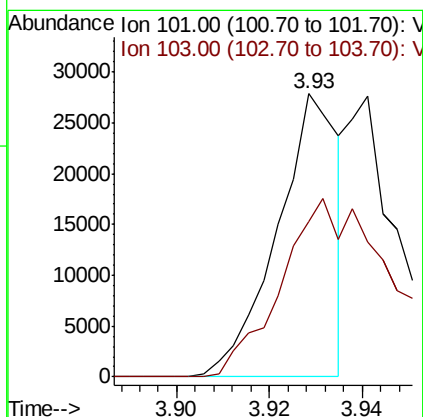
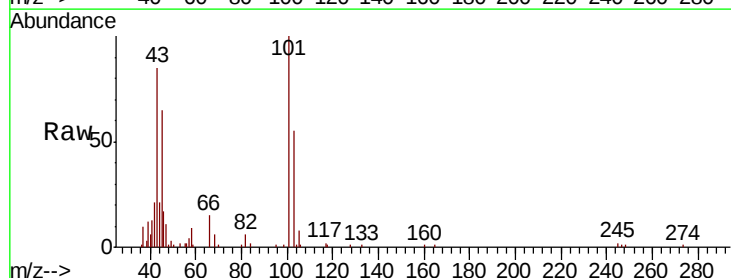
Instrument :  
MSVOA\_L  
ClientSampleId :

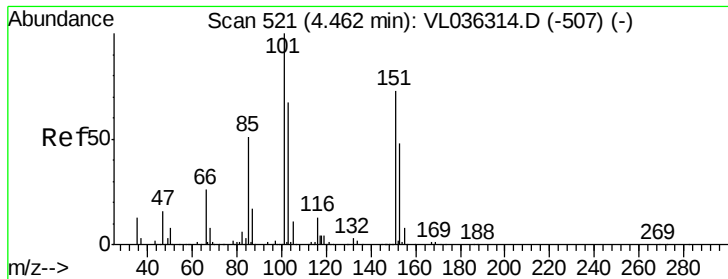
Tot Ion: 43 Resp: 6722  
Ion Ratio Lower Upper  
43 100  
57 0.0 39.4 59.2#



#11  
Trichlorofluoromethane  
Concen: 0.112 ppbv  
RT: 3.93 min Scan# 355  
Delta R.T. 0.00 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Tgt Ion:101 Resp: 25556  
Ion Ratio Lower Upper  
101 100  
103 55.1 52.9 79.3





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.034 ppbv

RT: 4.46 min Scan# 520

Delta R.T. -0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Instrument :

MSVOA\_L

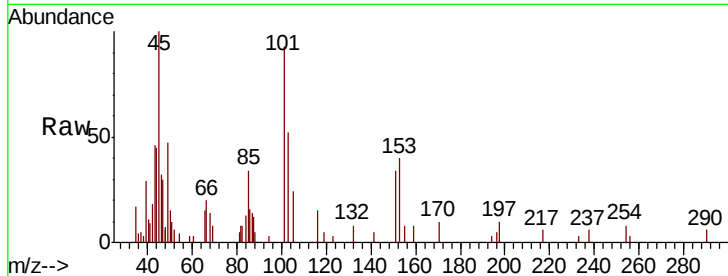
ClientSampled :

Tot Ion:101 Resp: 4848

Ion Ratio Lower Upper

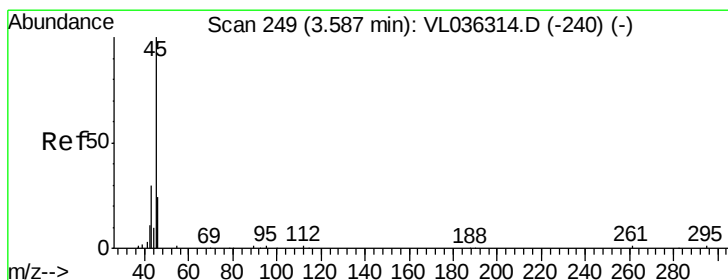
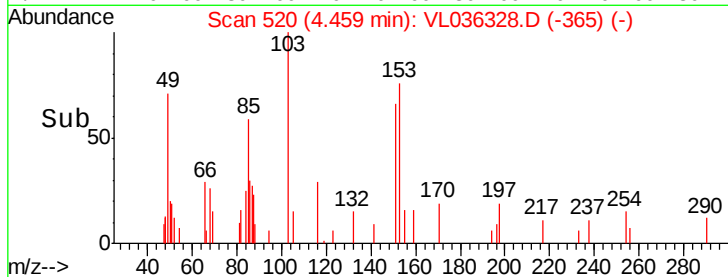
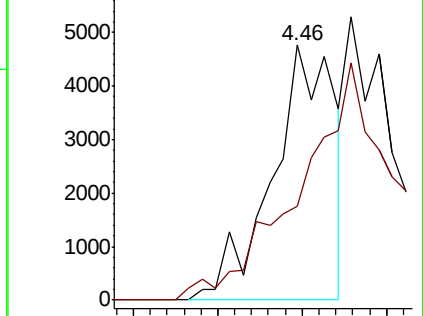
101 100

151 0.0 58.2 87.4#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 1315.607 ppbv

RT: 3.62 min Scan# 259

Delta R.T. 0.03 min

Lab File: VL036328.D

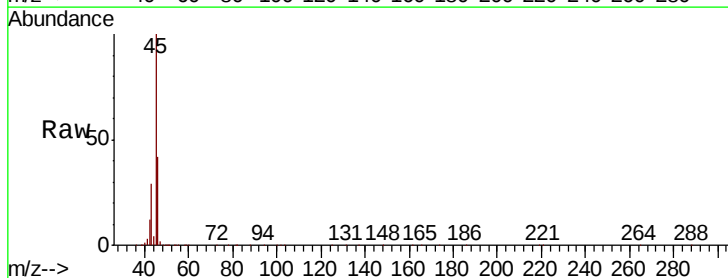
Acq: 10 Feb 2021 21:56

Tgt Ion: 45 Resp:17848425

Ion Ratio Lower Upper

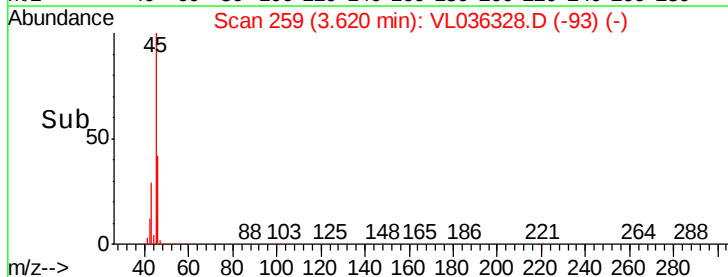
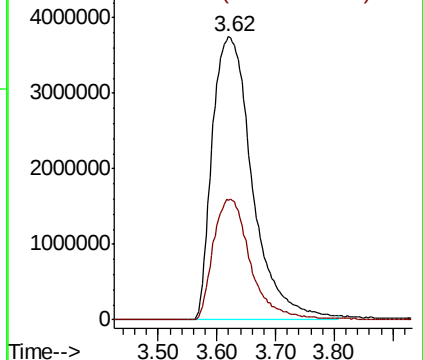
45 100

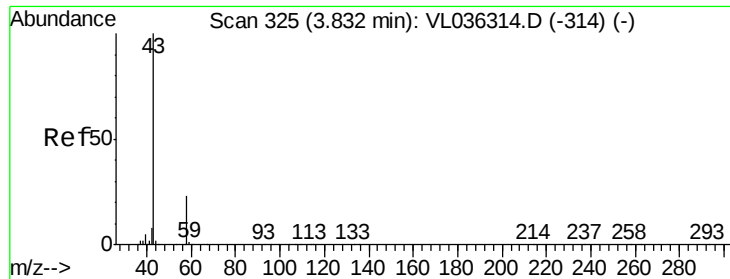
46 39.9 17.7 70.7



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 7.985 ppbv

RT: 3.84 min Scan# 326

Delta R.T. 0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

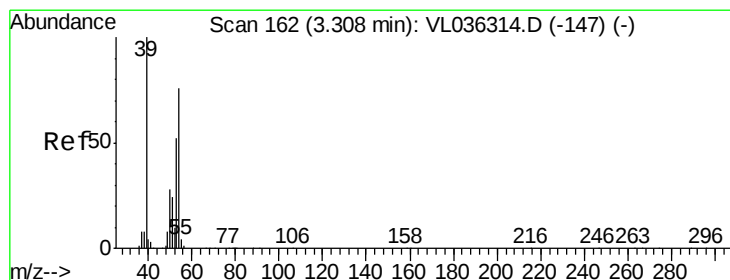
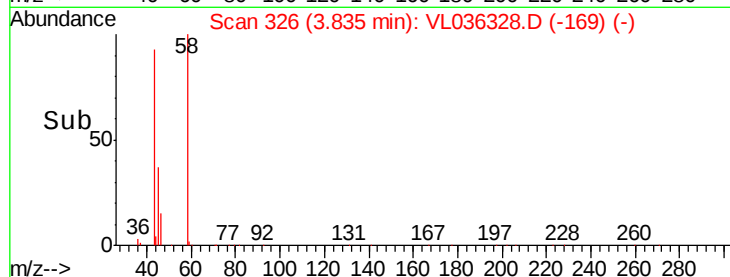
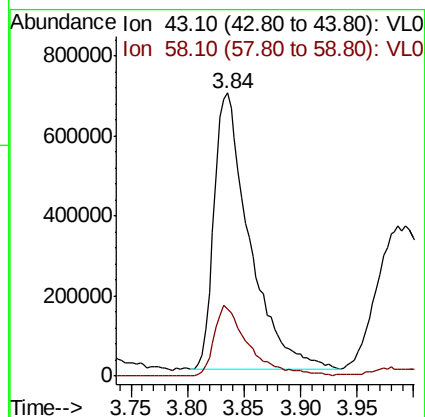
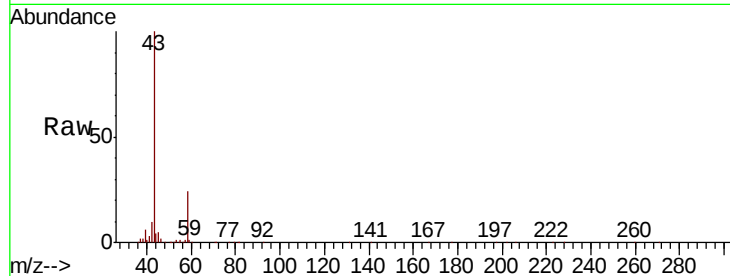
Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 43 Resp: 1521763

Ion Ratio Lower Upper

43 100

58 24.8 20.3 30.5



#16

1,3-Butadiene

Concen: 0.201 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.01 min

Lab File: VL036328.D

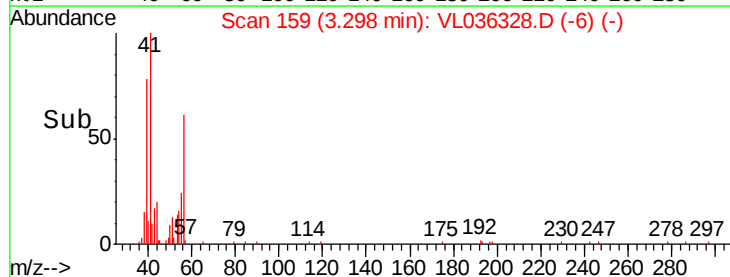
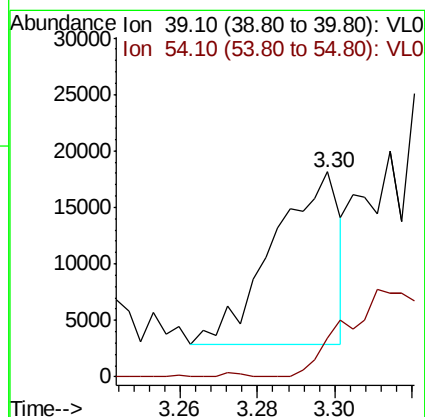
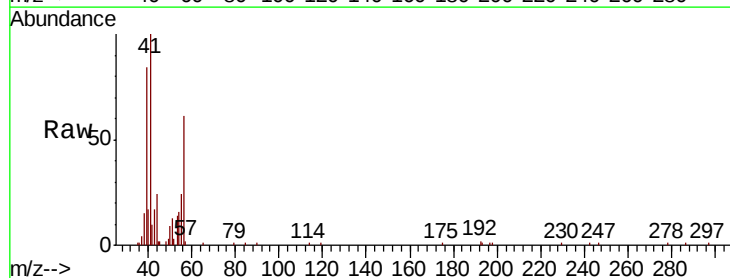
Acq: 10 Feb 2021 21:56

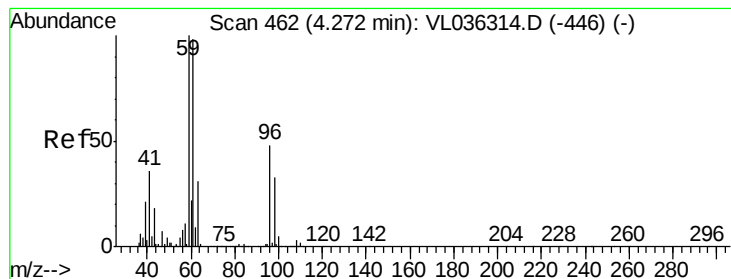
Tgt Ion: 39 Resp: 18291

Ion Ratio Lower Upper

39 100

54 127.6 64.4 96.6#



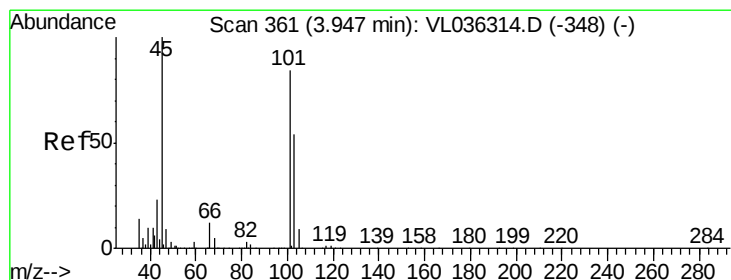
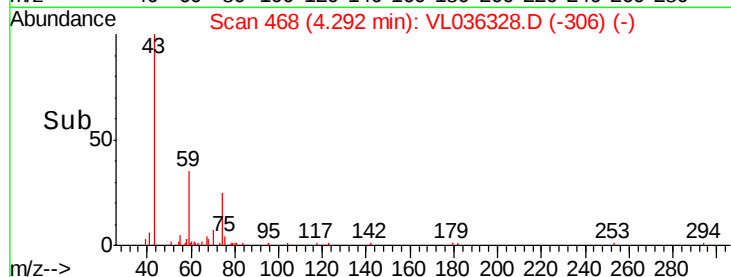
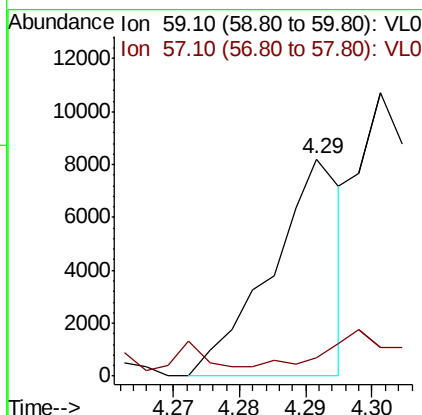
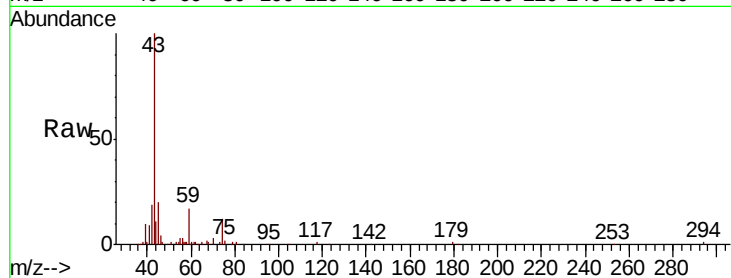


#17

tert-Butyl alcohol  
Concen: 0.041 ppbv  
RT: 4.29 min Scan# 468  
Delta R.T. 0.02 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Instrument :  
MSVOA\_L  
ClientSampleId :

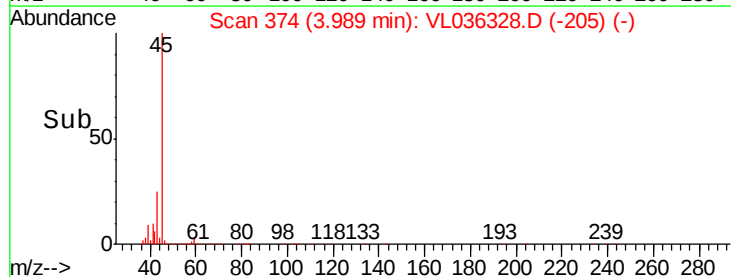
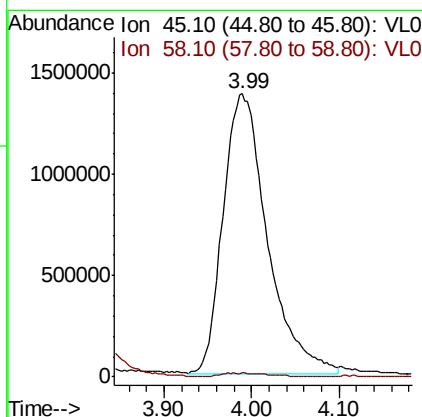
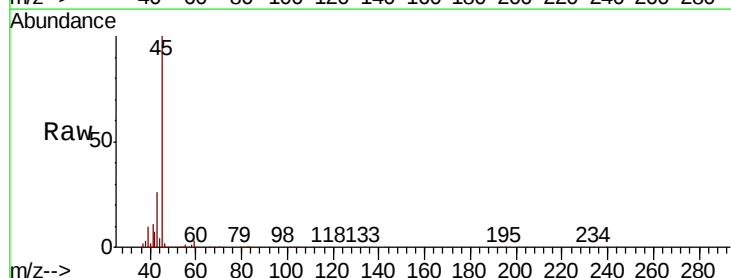
Tot Ion: 59 Resp: 6081  
Ion Ratio Lower Upper  
59 100  
57 0.0 9.0 13.4#

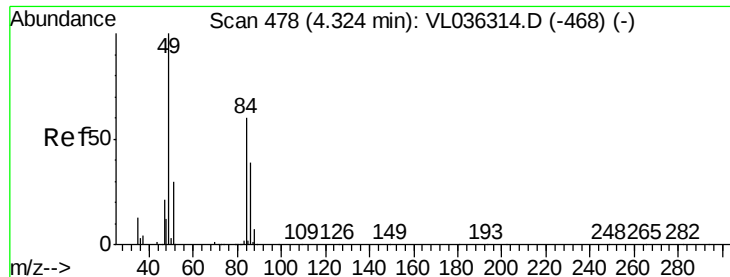


#19

Isopropyl Alcohol  
Concen: 45.811 ppbv  
RT: 3.99 min Scan# 374  
Delta R.T. 0.04 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Tgt Ion: 45 Resp: 4837221  
Ion Ratio Lower Upper  
45 100  
58 1.8 1.9 2.9#

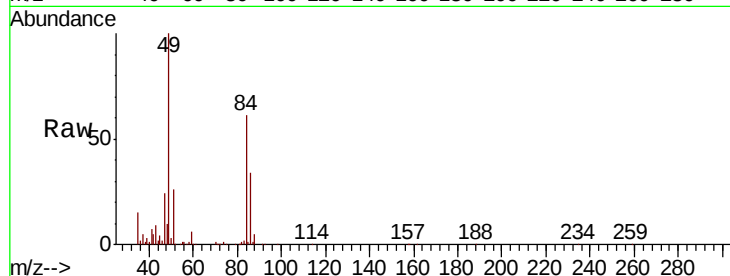




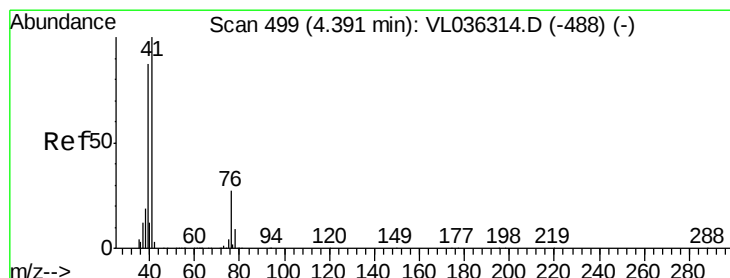
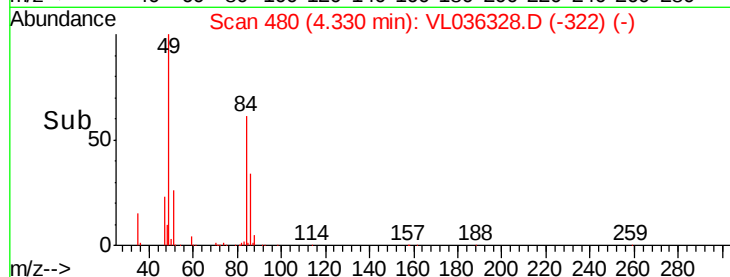
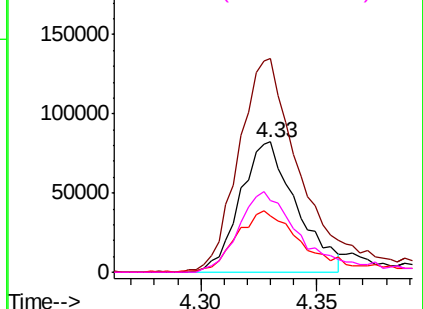
#20  
Methvlene Chloride  
Concen: 2.268 ppbv  
RT: 4.33 min Scan# 480  
Delta R.T. 0.01 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Instrument :  
MSVOA\_L  
ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 84    | Resp: | 139478 |
| Ion      | Ratio | Lower | Upper  |
| 84       | 100   |       |        |
| 49       | 162.4 | 133.8 | 200.8  |
| 51       | 42.5  | 41.4  | 62.0   |
| 86       | 55.0  | 51.5  | 77.3   |

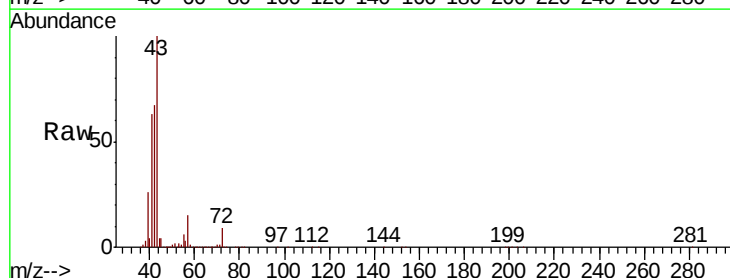


Abundance Ion 84.00 (83.70 to 84.70): VL0  
Ion 49.10 (48.80 to 49.80): VL0  
Ion 51.10 (50.80 to 51.80): VL0  
Ion 86.00 (85.70 to 86.70): VL0

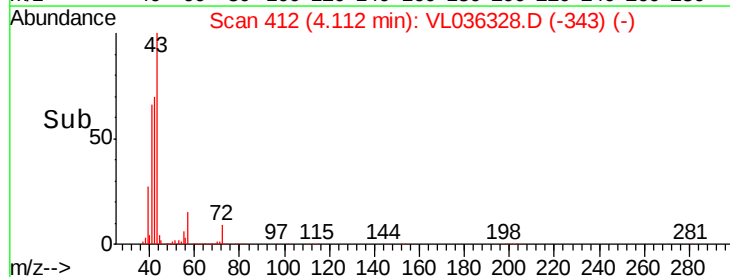
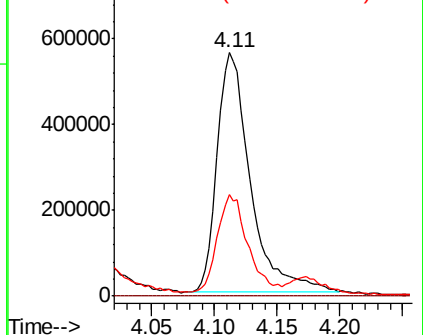


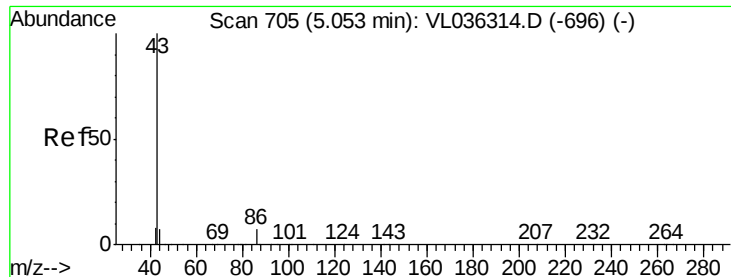
#21  
Allyl Chloride  
Concen: 9.643 ppbv  
RT: 4.11 min Scan# 412  
Delta R.T. -0.28 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 41    | Resp: | 1023276 |
| Ion      | Ratio | Lower | Upper   |
| 41       | 100   |       |         |
| 76       | 0.0   | 22.0  | 33.0#   |
| 39       | 40.0  | 70.2  | 105.2#  |



Abundance Ion 41.10 (40.80 to 41.80): VL0  
Ion 76.10 (75.80 to 76.80): VL0  
Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 0.327 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 43 Resp: 73373

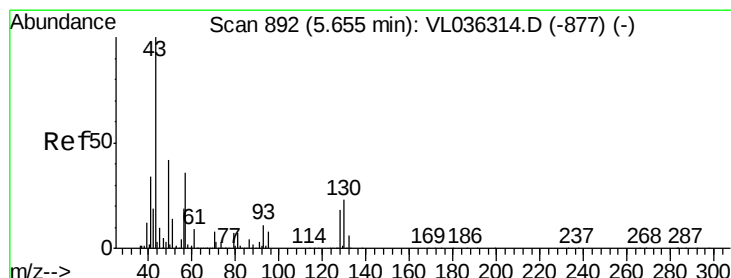
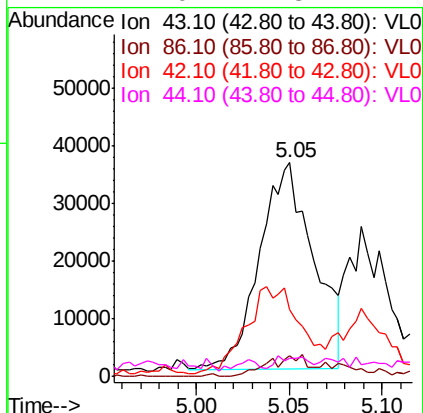
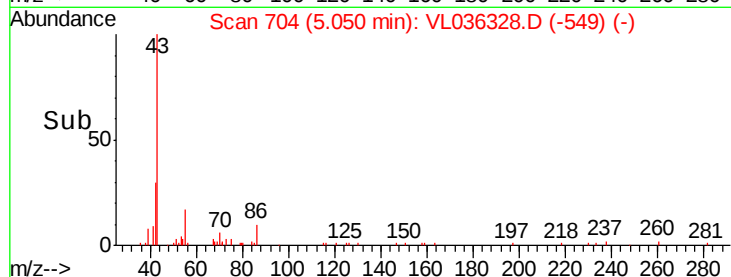
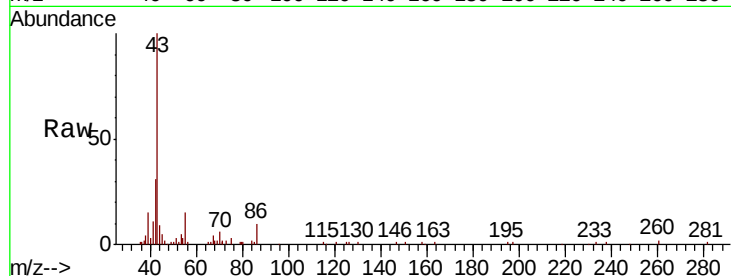
Ion Ratio Lower Upper

43 100

86 10.1 4.8 7.2#

42 30.7 7.4 11.0#

44 4.0 4.8 7.2#



#25

Ethyl Acetate

Concen: 0.377 ppbv

RT: 5.66 min Scan# 893

Delta R.T. 0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Tgt Ion: 43 Resp: 138666

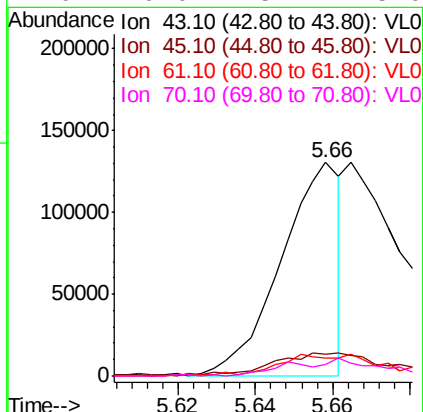
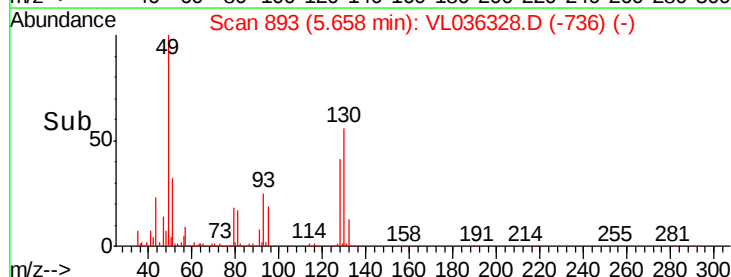
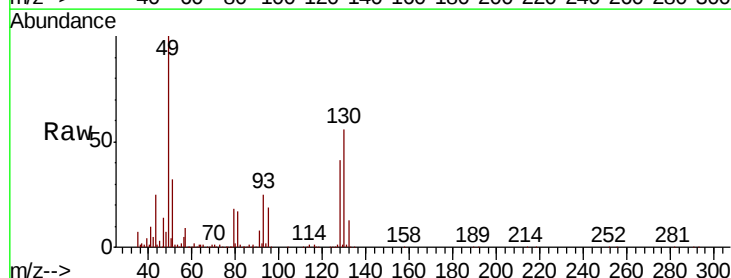
Ion Ratio Lower Upper

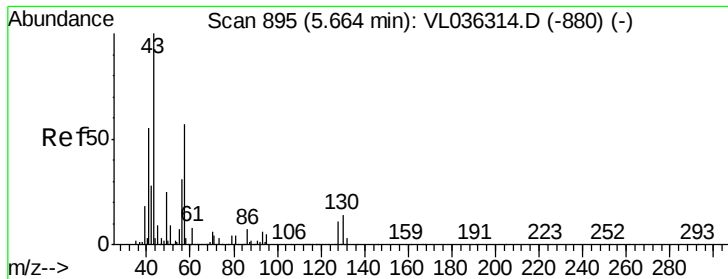
43 100

45 25.6 8.3 12.5#

61 19.4 7.3 10.9#

70 0.0 5.4 8.0#

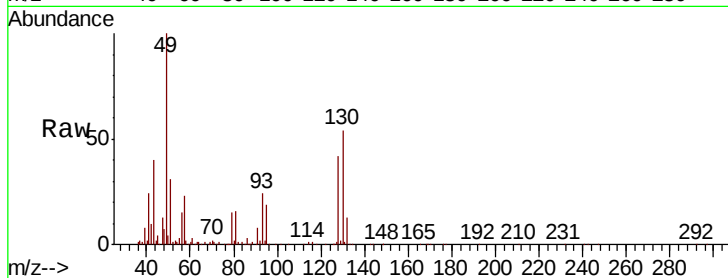




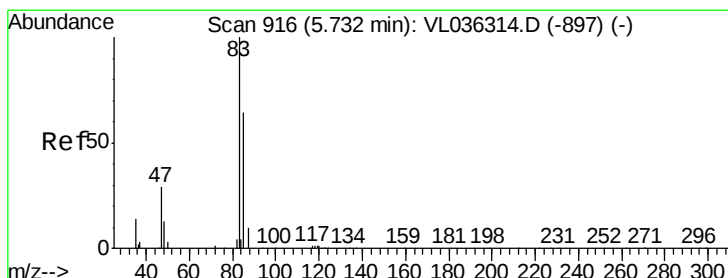
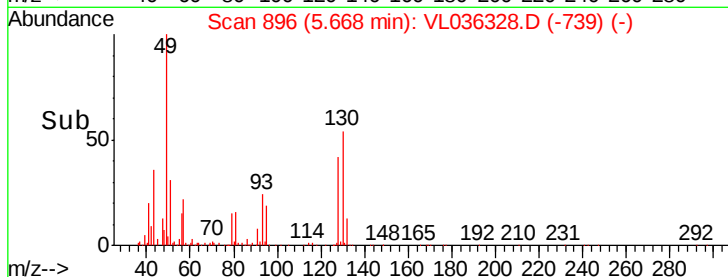
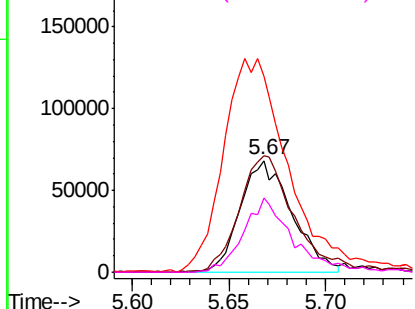
#26  
Hexane  
Concen: 0.830 ppbv  
RT: 5.67 min Scan# 896  
Delta R.T. 0.00 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Instrument :  
MSVOA\_L  
ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 57    | Resp: | 125527 |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 116.9 | 81.7  | 122.5  |
| 43       | 245.0 | 199.1 | 298.7  |
| 56       | 65.8  | 44.0  | 66.0   |

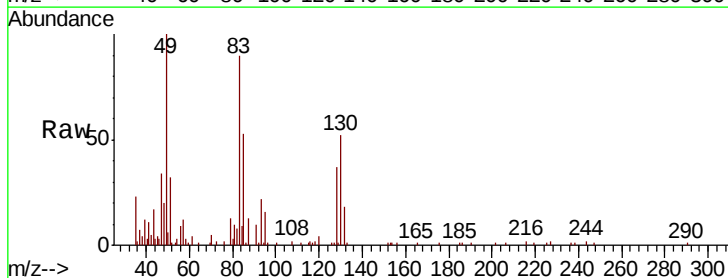


Abundance Ion 57.10 (56.80 to 57.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 43.10 (42.80 to 43.80): VL0  
Ion 56.10 (55.80 to 56.80): VL0

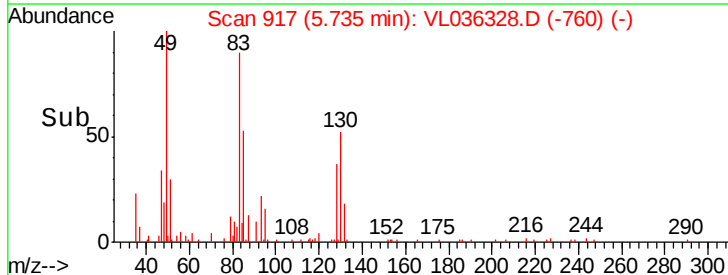
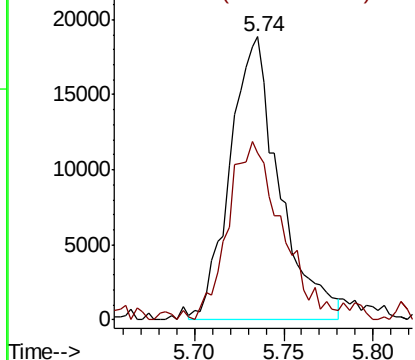


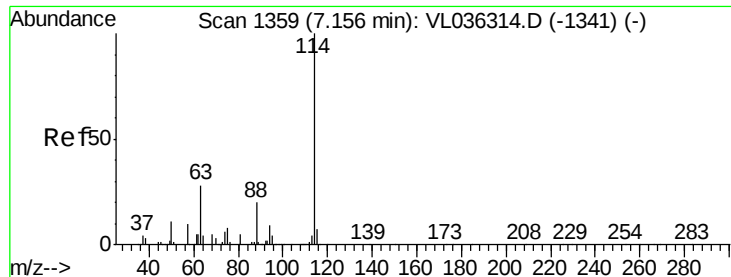
#29  
Chloroform  
Concen: 0.149 ppbv  
RT: 5.74 min Scan# 917  
Delta R.T. 0.00 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 83    | Resp: | 36280 |
| Ion      | Ratio | Lower | Upper |
| 83       | 100   |       |       |
| 85       | 58.9  | 51.4  | 77.2  |



Abundance Ion 83.00 (82.70 to 83.70): VL0  
Ion 85.00 (84.70 to 85.70): VL0

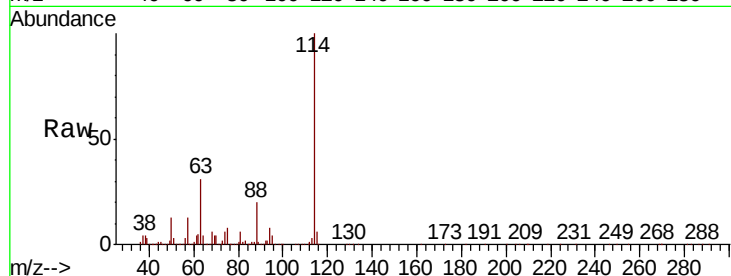




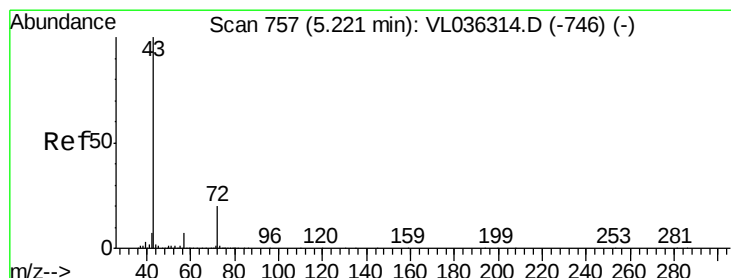
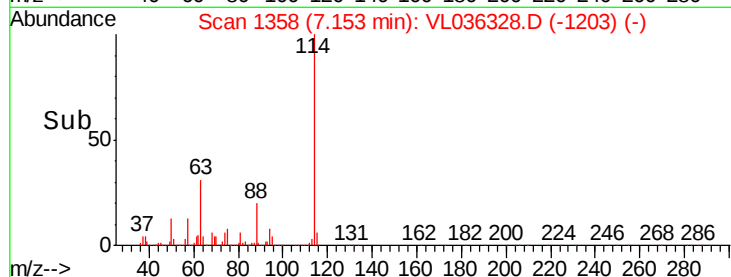
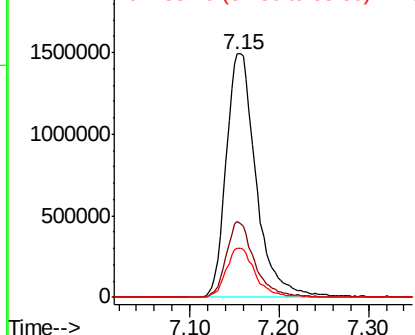
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.15 min Scan# 1358  
 Delta R.T. -0.00 min  
 Lab File: VL036328.D  
 Acq: 10 Feb 2021 21:56

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Tot Ion:114 Resp: 3464643  
 Ion Ratio Lower Upper  
 114 100  
 63 29.7 24.1 36.1  
 88 19.8 16.0 24.0

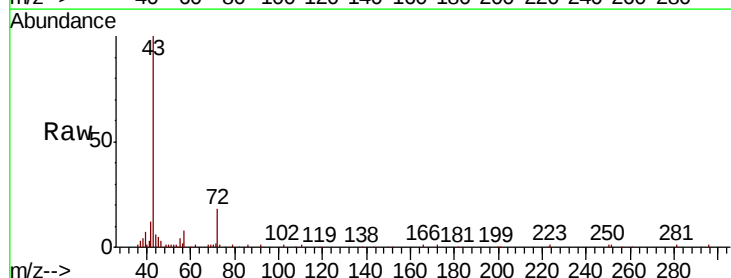


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

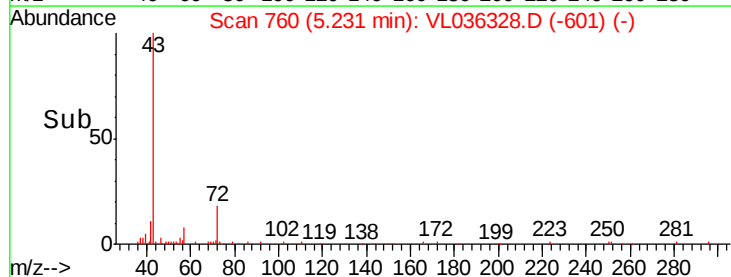
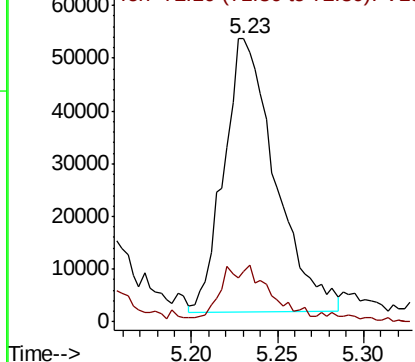


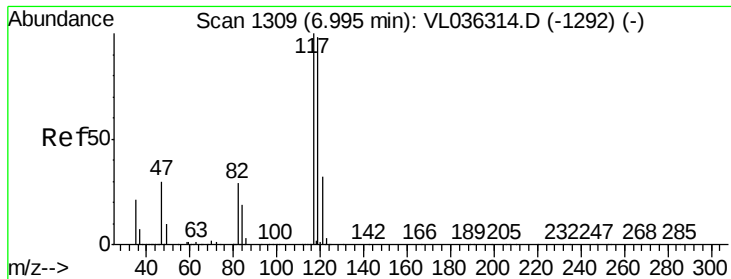
#34  
 2-Butanone  
 Concen: 0.470 ppbv  
 RT: 5.23 min Scan# 760  
 Delta R.T. 0.01 min  
 Lab File: VL036328.D  
 Acq: 10 Feb 2021 21:56

Tgt Ion: 43 Resp: 108127  
 Ion Ratio Lower Upper  
 43 100  
 72 22.3 16.7 25.1



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

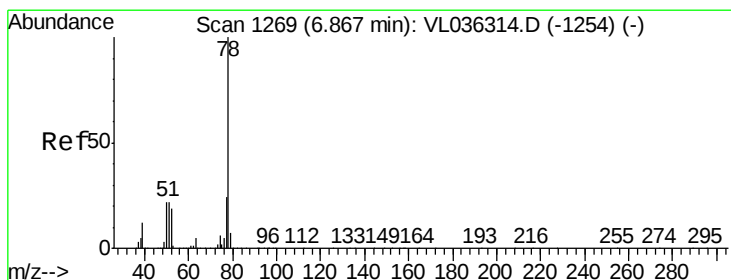
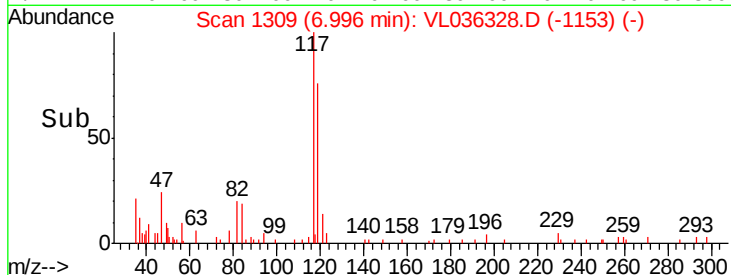
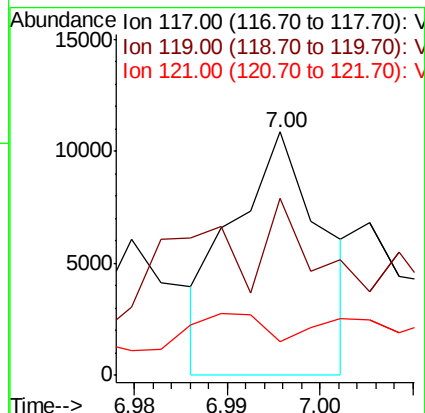
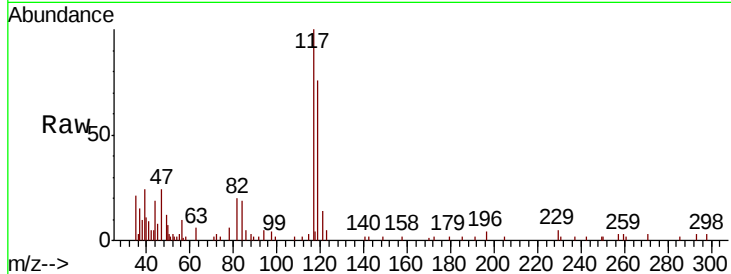




#35  
Carbon Tetrachloride  
Concen: 0.031 ppbv  
RT: 7.00 min Scan# 1309  
Delta R.T. 0.00 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

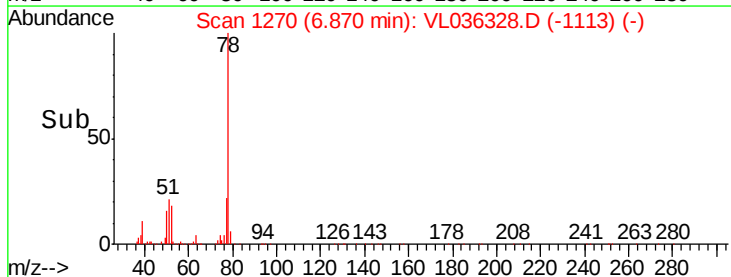
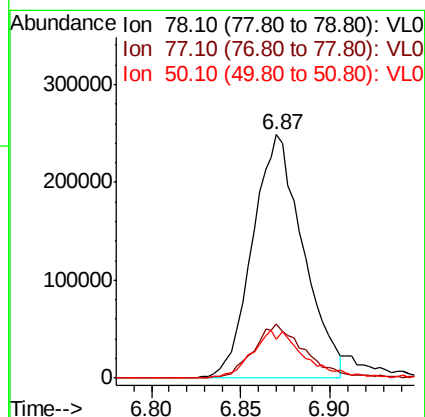
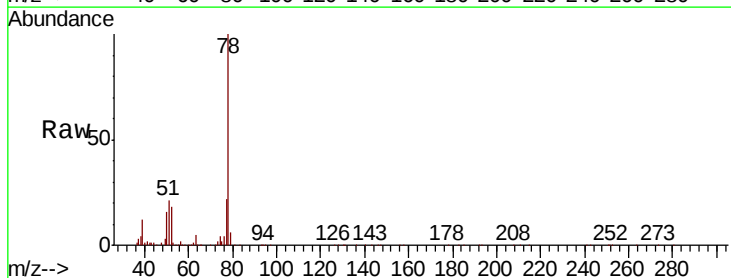
Instrument :  
MSVOA\_L  
ClientSampleId :

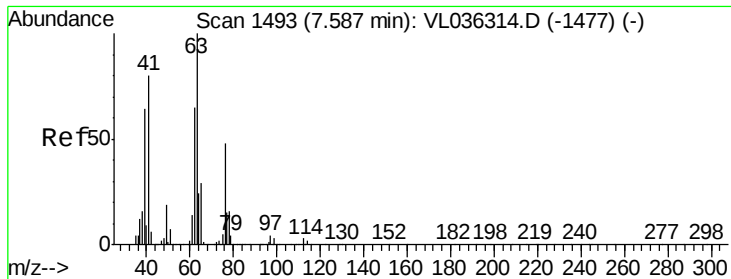
Tot Ion:117 Resp: 7273  
Ion Ratio Lower Upper  
117 100  
119 40.4 78.1 117.1#  
121 0.0 25.8 38.8#



#36  
Benzene  
Concen: 1.674 ppbv  
RT: 6.87 min Scan# 1270  
Delta R.T. 0.00 min  
Lab File: VL036328.D  
Acq: 10 Feb 2021 21:56

Tgt Ion: 78 Resp: 492667  
Ion Ratio Lower Upper  
78 100  
77 22.2 18.9 28.3  
50 15.9 17.3 25.9#

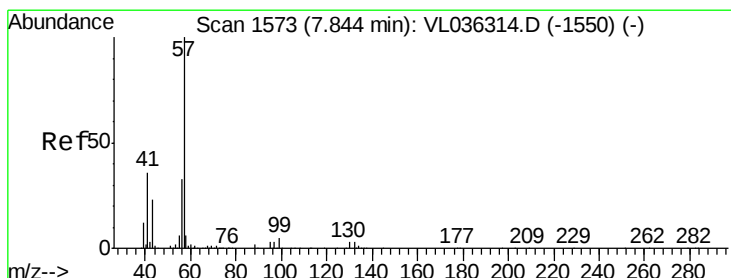
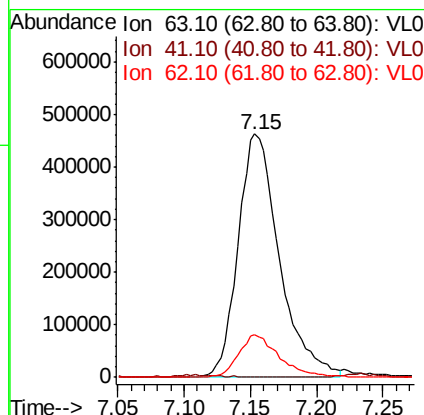
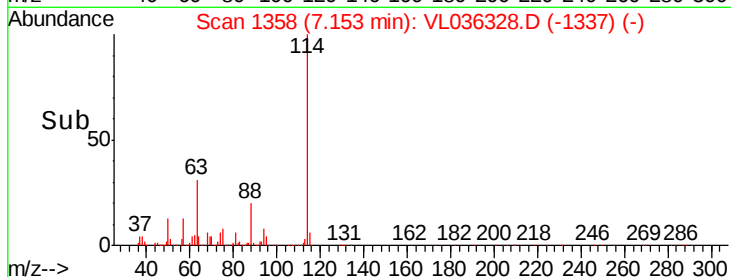
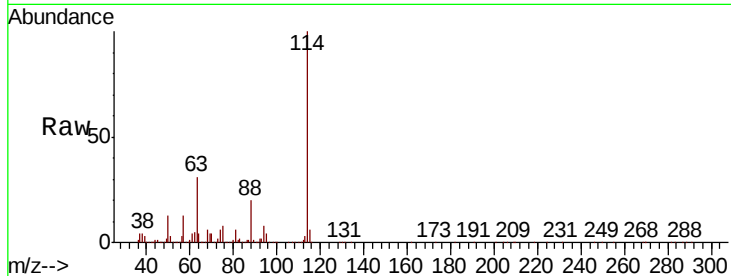




#39  
 1,2-Dichloropropane  
 Concen: 8.391 ppbv  
 RT: 7.15 min Scan# 1358  
 Delta R.T. -0.43 min  
 Lab File: VL036328.D  
 Acq: 10 Feb 2021 21:56

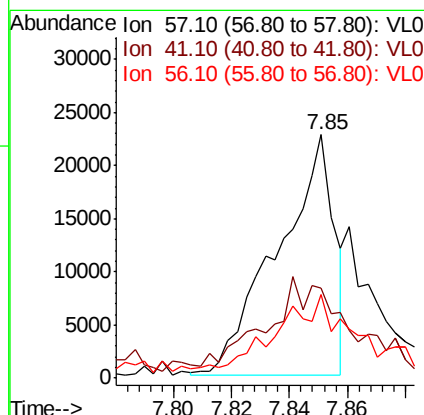
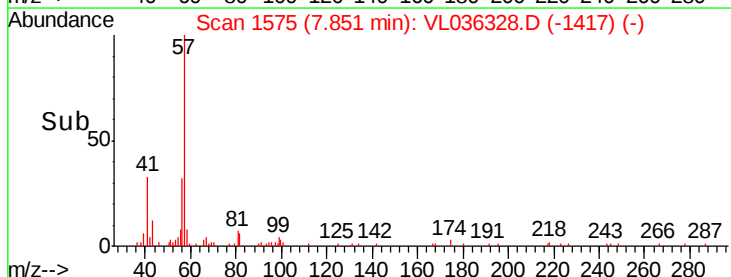
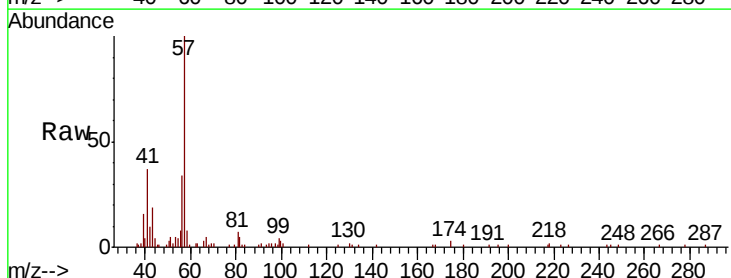
Instrument :  
 MSVOA\_L  
 ClientSampleId :

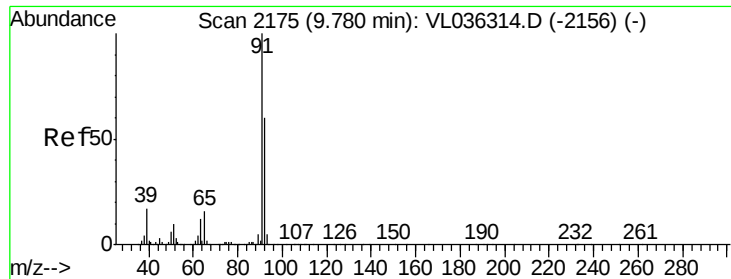
Tot Ion: 63 Resp: 1003151  
 Ion Ratio Lower Upper  
 63 100  
 41 0.0 63.8 95.6#  
 62 17.3 52.3 78.5#



#44  
 2,2,4-Trimethylpentane  
 Concen: 0.057 ppbv  
 RT: 7.85 min Scan# 1575  
 Delta R.T. 0.01 min  
 Lab File: VL036328.D  
 Acq: 10 Feb 2021 21:56

Tgt Ion: 57 Resp: 30686  
 Ion Ratio Lower Upper  
 57 100  
 41 79.2 28.8 43.2#  
 56 61.7 25.8 38.6#





#53

Toluene

Concen: 0.487 ppbv

RT: 9.78 min Scan# 2175

Delta R.T. 0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Instrument :

MSVOA\_L

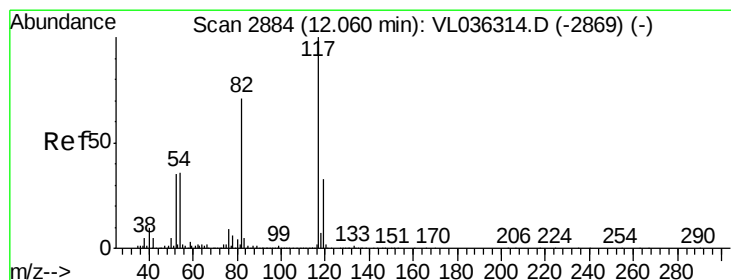
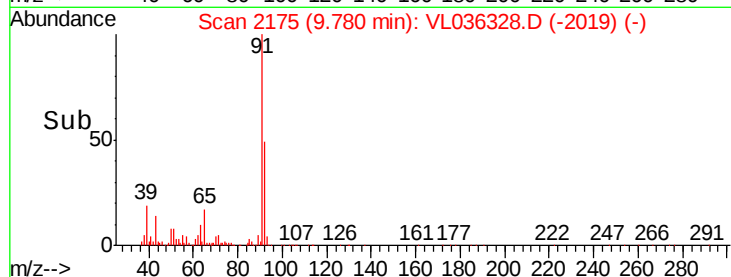
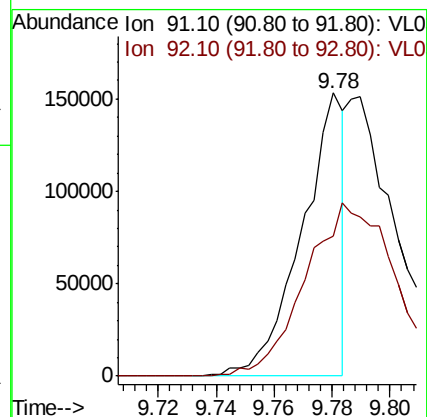
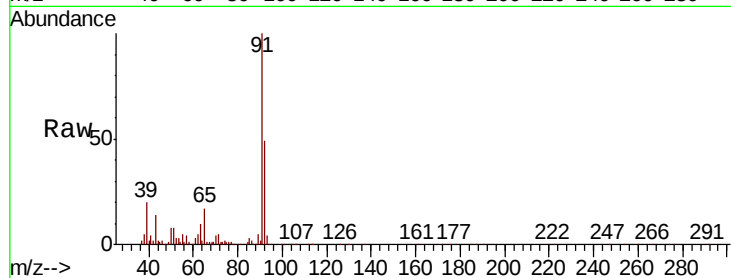
ClientSampleId :

Tot Ion: 91 Resp: 155135

Ion Ratio Lower Upper

91 100

92 136.3 48.6 72.8#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2886

Delta R.T. 0.01 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

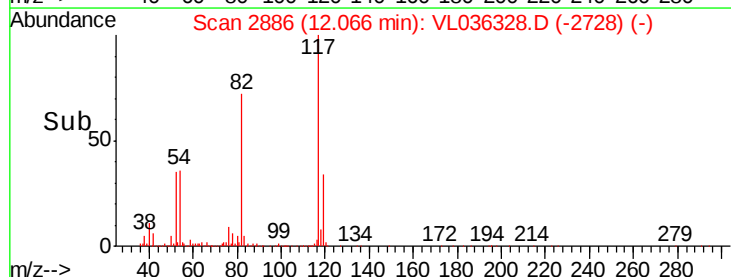
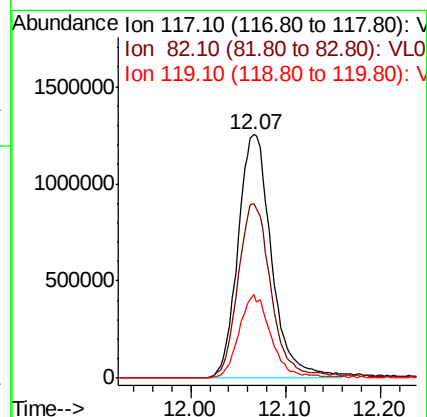
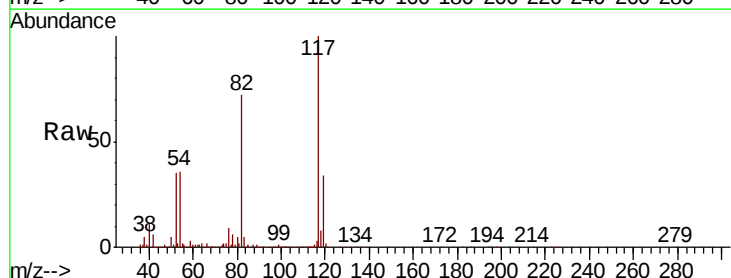
Tgt Ion: 117 Resp: 3094286

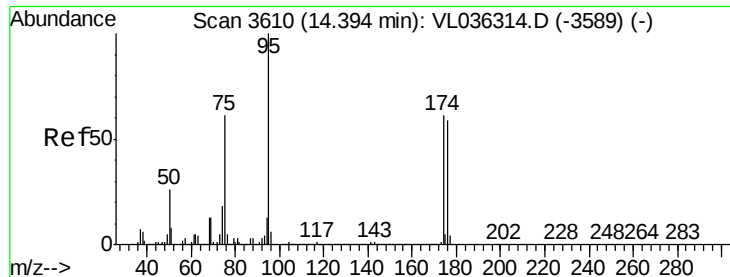
Ion Ratio Lower Upper

117 100

82 72.8 59.1 88.7

119 33.2 46.3 69.5#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.953 ppbv

RT: 14.40 min Scan# 3611

Delta R.T. 0.00 min

Lab File: VL036328.D

Acq: 10 Feb 2021 21:56

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 95 Resp: 2533930

Ion Ratio Lower Upper

95 100

174 59.4 49.8 74.6

175 4.6 3.7 5.5

