

Data File : VL034610.D  
Acq On : 6 Feb 2020 22:17  
Operator : SY/AP  
Sample : L1435-06  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-6

Quant Time: Feb 07 07:39:15 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL013020AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LThu Jan 30 17:16:44 2020  
QLast Update : Thu Jan 30 17:16:44 2020  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.69  | 49   | 894841   | 10.00 | ppbv  | 0.03     |
| 33) 1,4-Difluorobenzene | 7.21  | 114  | 1891092  | 10.00 | ppbv  | 0.03     |
| 55) Chlorobenzene-d5    | 12.15 | 117  | 1818219  | 10.00 | ppbv  | 0.04     |

System Monitoring Compounds  
68) 1-Bromo-4-Fluorobenzene 14.49 95 1601672 10.42 ppbv 0.04  
Spiked Amount 10.000 Range 65 - 135 Recovery = 104.20%

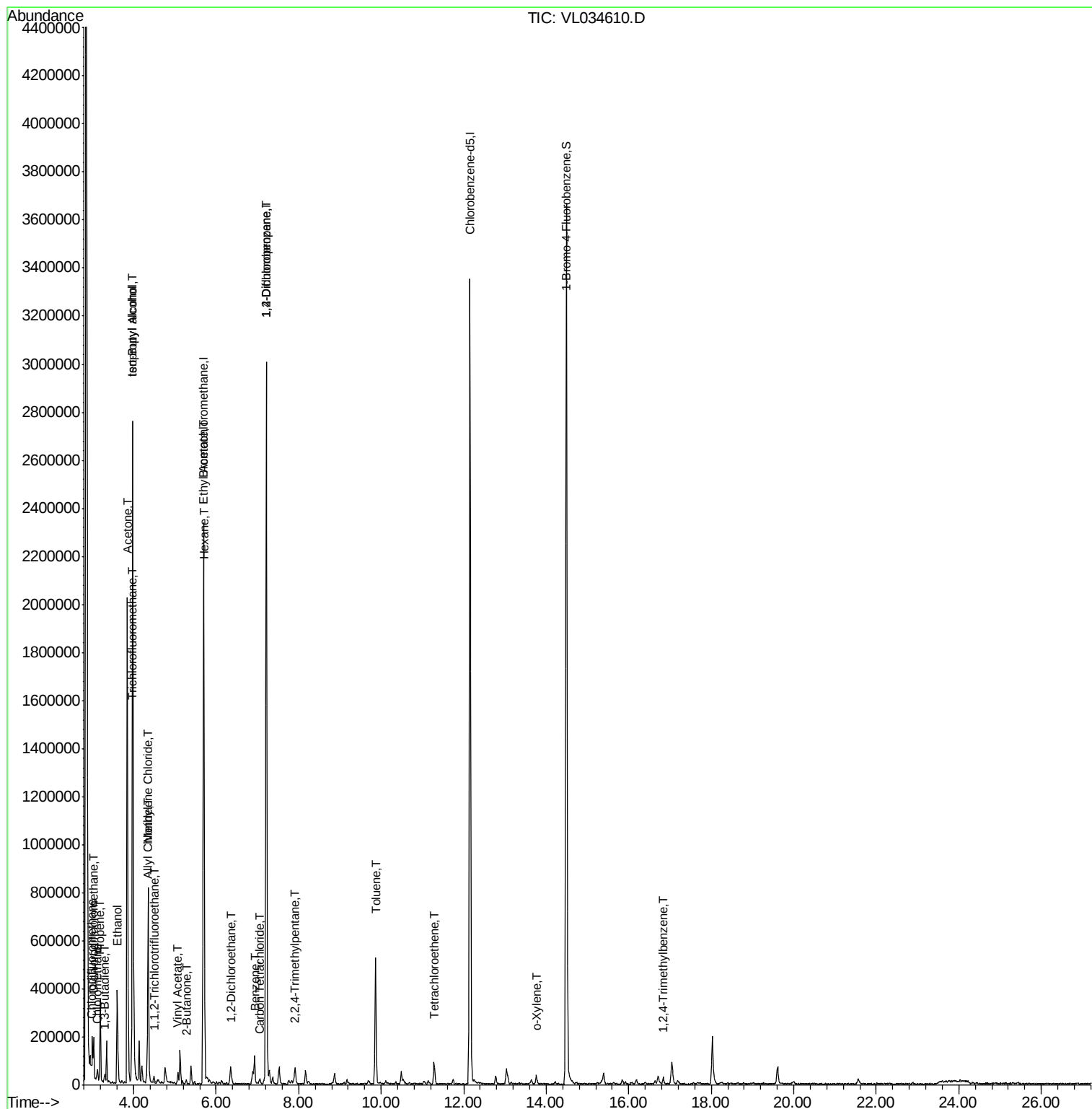
| Target Compounds               |       |     |         |              | Qvalue |
|--------------------------------|-------|-----|---------|--------------|--------|
| 2) Dichlorodifluoromethane     | 3.03  | 85  | 104363  | 0.530 ppbv   | 89     |
| 3) Chlorodifluoromethane       | 2.97  | 51  | 59671   | 0.552 ppbv # | 81     |
| 4) Chloromethane               | 3.12  | 50  | 30851   | 0.466 ppbv   | 89     |
| 9) Propene                     | 3.19  | 41  | 82887   | 1.969 ppbv   | 94     |
| 11) Trichlorofluoromethane     | 3.95  | 101 | 47300   | 0.264 ppbv # | 79     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.49  | 101 | 8839    | 0.076 ppbv   | 99     |
| 13) Ethanol                    | 3.60  | 45  | 361043  | 32.017 ppbv  | 100    |
| 15) Acetone                    | 3.84  | 43  | 1988007 | 15.116 ppbv  | 99     |
| 16) 1,3-Butadiene              | 3.29  | 39  | 12303   | 0.236 ppbv # | 38     |
| 17) tert-Butyl alcohol         | 3.97  | 59  | 107437  | 1.111 ppbv   | 98     |
| 19) Isopropyl Alcohol          | 3.97  | 45  | 2847335 | 37.100 ppbv  | 99     |
| 20) Methylene Chloride         | 4.35  | 84  | 261545  | 5.223 ppbv   | 97     |
| 21) Allyl Chloride             | 4.37  | 41  | 6419    | 0.079 ppbv # | 44     |
| 23) Vinyl Acetate              | 5.08  | 43  | 8870    | 0.059 ppbv # | 57     |
| 25) Ethyl Acetate              | 5.71  | 43  | 142089  | 0.667 ppbv # | 87     |
| 26) Hexane                     | 5.71  | 57  | 149290  | 1.674 ppbv # | 46     |
| 34) 2-Butanone                 | 5.27  | 43  | 11379   | 0.083 ppbv # | 67     |
| 35) Carbon Tetrachloride       | 7.06  | 117 | 8632    | 0.048 ppbv # | 44     |
| 36) Benzene                    | 6.93  | 78  | 74269   | 0.442 ppbv   | 93     |
| 37) 1,2-Dichloroethane         | 6.34  | 62  | 8585    | 0.061 ppbv # | 90     |
| 39) 1,2-Dichloropropane        | 7.21  | 63  | 538280  | 7.721 ppbv # | 19     |
| 44) 2,2,4-Trimethylpentane     | 7.91  | 57  | 27501   | 0.090 ppbv # | 32     |
| 52) Tetrachloroethene          | 11.30 | 164 | 3049    | 0.045 ppbv # | 28     |
| 53) Toluene                    | 9.86  | 91  | 355145  | 1.922 ppbv   | 96     |
| 60) o-Xylene                   | 13.76 | 91  | 7663    | 0.035 ppbv # | 33     |
| 74) 1,2,4-Trimethylbenzene     | 16.84 | 105 | 11443   | 0.045 ppbv # | 74     |

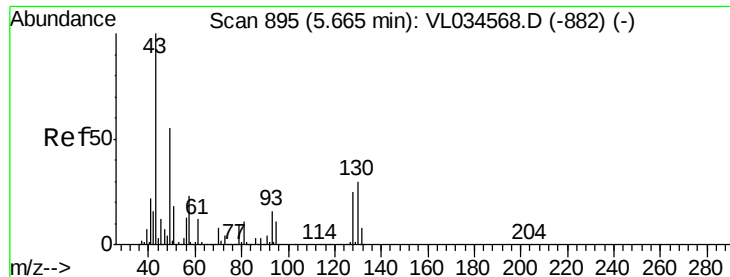
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Feb 07 07:39:15 2020  
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.03 min

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Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

IA-6

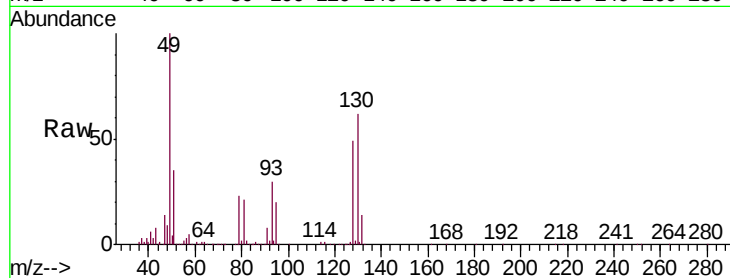
Tgt Ion: 49 Resp: 894841

Ion Ratio Lower Upper

49 100

128 47.4 22.7 68.1

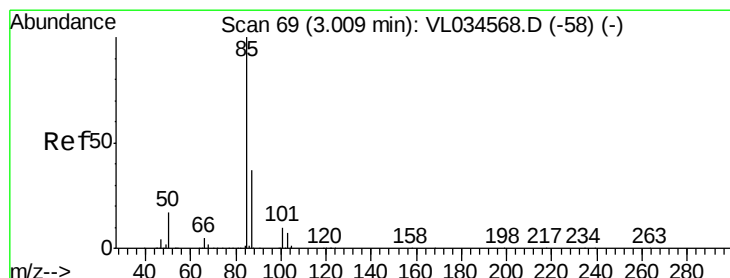
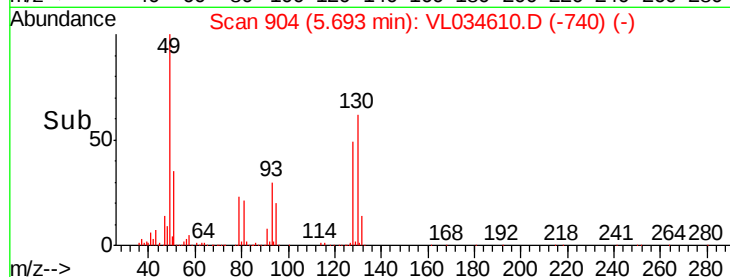
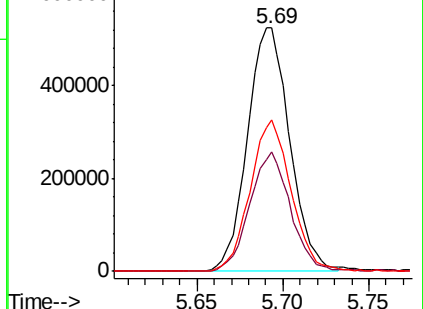
130 60.6 28.6 85.8



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



#2

Dichlorodifluoromethane

Concen: 0.530 ppbv

RT: 3.03 min Scan# 76

Delta R.T. 0.02 min

Lab File: VL034610.D

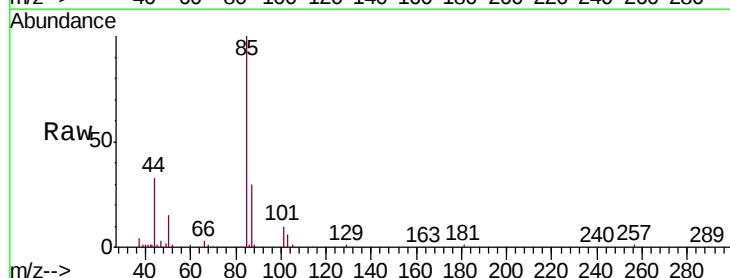
Acq: 6 Feb 2020 22:17

Tgt Ion: 85 Resp: 104363

Ion Ratio Lower Upper

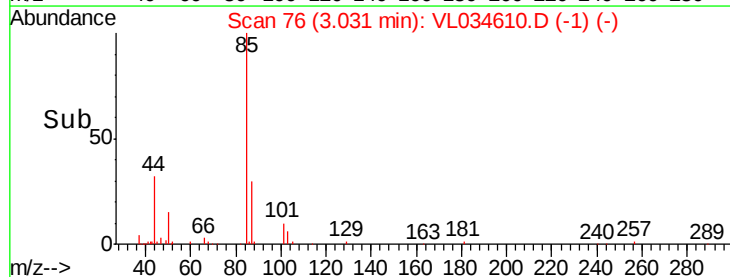
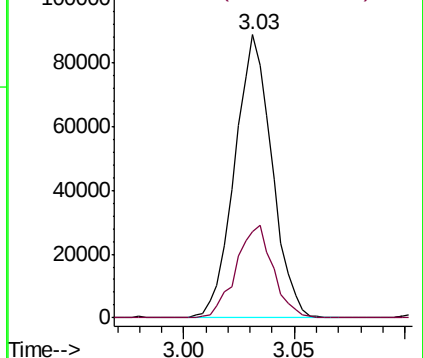
85 100

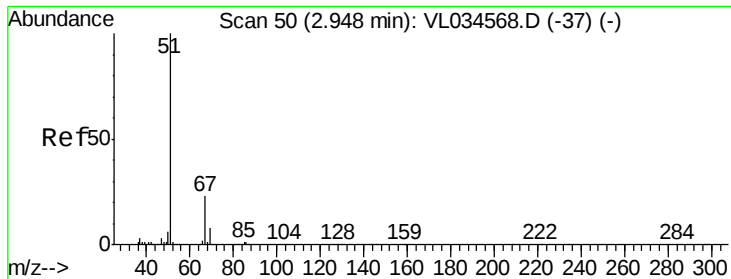
87 30.3 29.5 44.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.552 ppbv

RT: 2.97 min Scan# 57

Delta R.T. 0.02 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

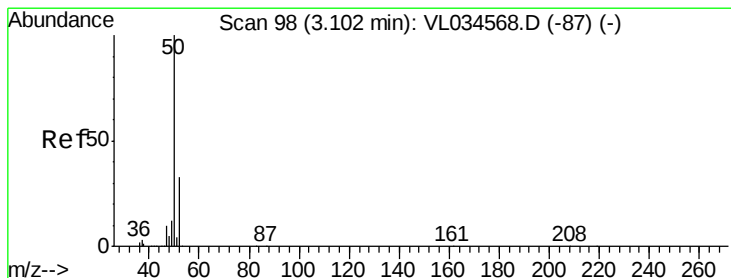
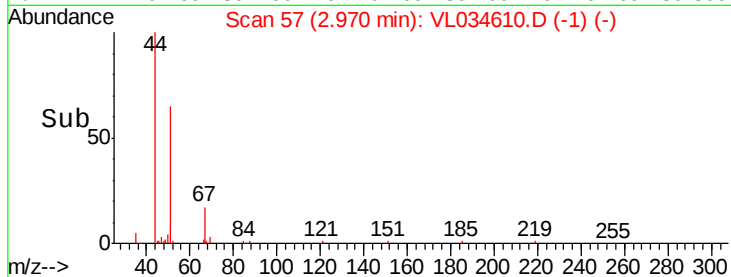
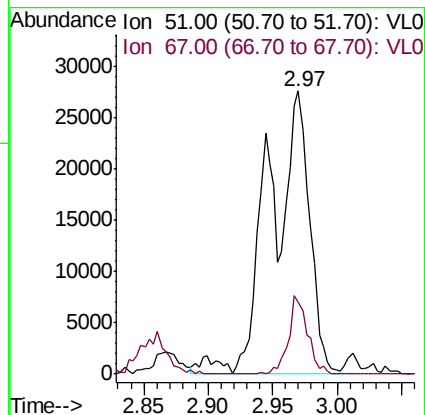
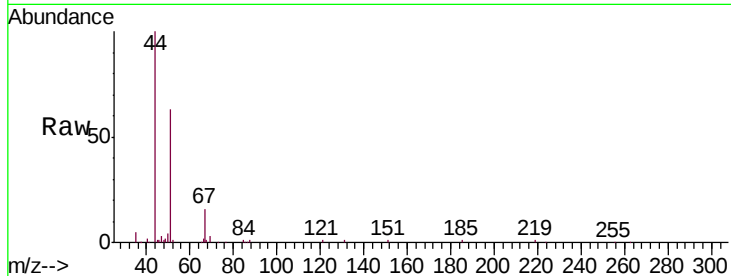
IA-6

Tgt Ion: 51 Resp: 59671

Ion Ratio Lower Upper

51 100

67 13.2 17.8 26.8#



#4

Chloromethane

Concen: 0.466 ppbv

RT: 3.12 min Scan# 105

Delta R.T. 0.02 min

Lab File: VL034610.D

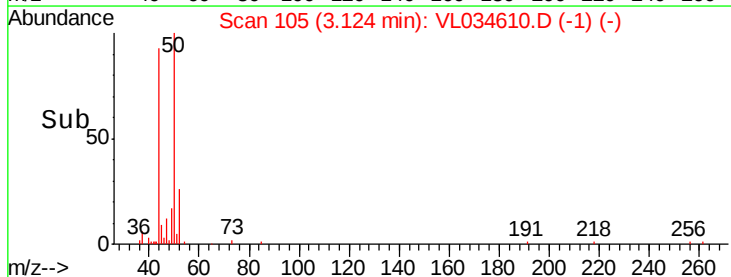
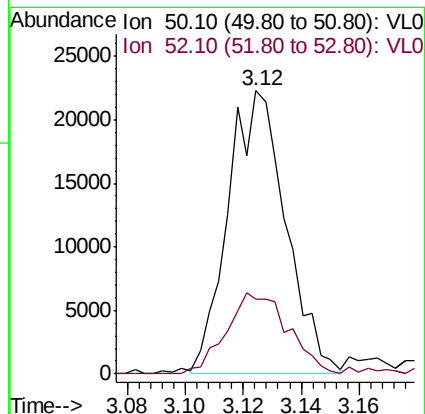
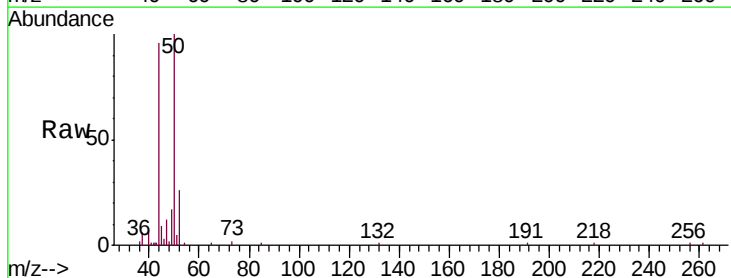
Acq: 6 Feb 2020 22:17

Tgt Ion: 50 Resp: 30851

Ion Ratio Lower Upper

50 100

52 26.8 26.6 39.8





#9

Propene

Concen: 1.969 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.22 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

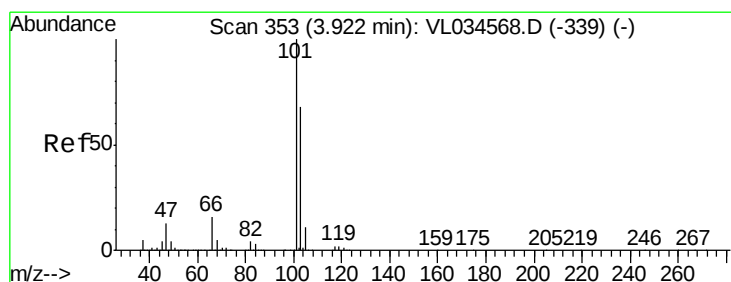
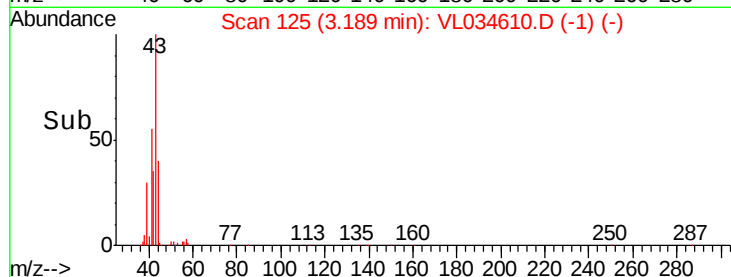
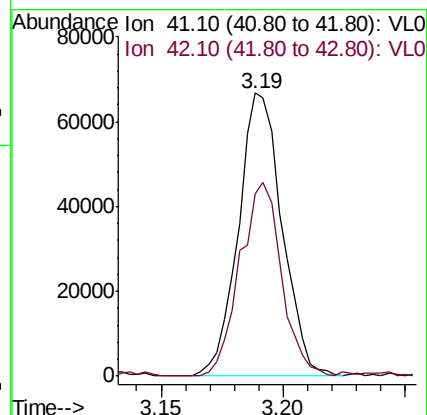
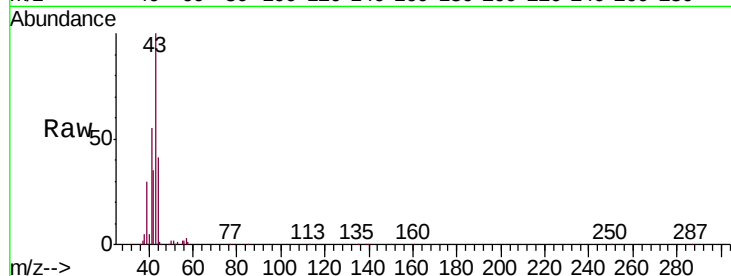
IA-6

Tgt Ion: 41 Resp: 82887

Ion Ratio Lower Upper

41 100

42 66.2 57.0 85.4



#11

Trichlorofluoromethane

Concen: 0.264 ppbv

RT: 3.95 min Scan# 362

Delta R.T. 0.03 min

Lab File: VL034610.D

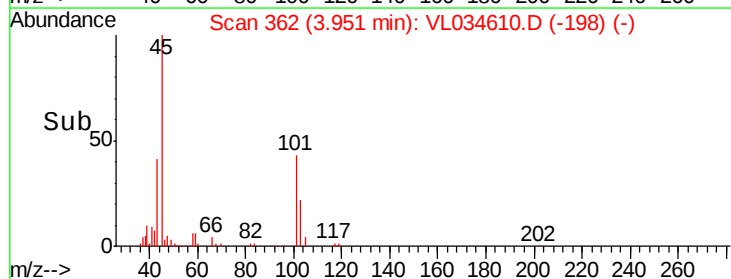
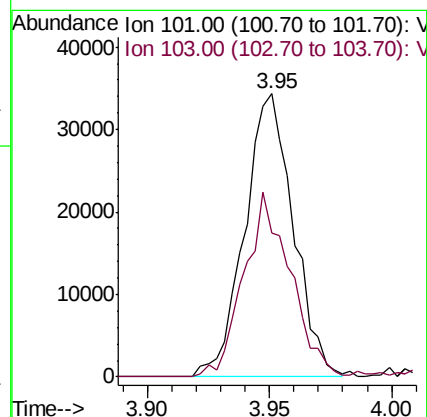
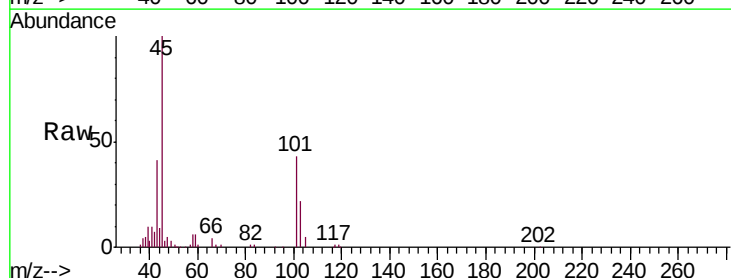
Acq: 6 Feb 2020 22:17

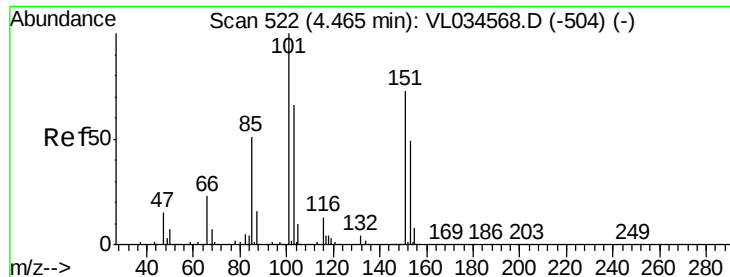
Tgt Ion: 101 Resp: 47300

Ion Ratio Lower Upper

101 100

103 51.0 54.4 81.6#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.076 ppbv

RT: 4.49 min Scan# 531

Delta R.T. 0.03 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

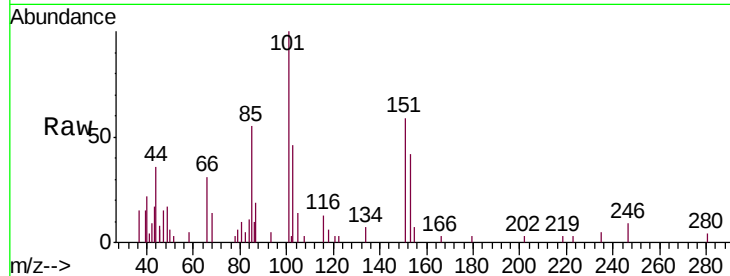
IA-6

Tgt Ion:101 Resp: 8839

Ion Ratio Lower Upper

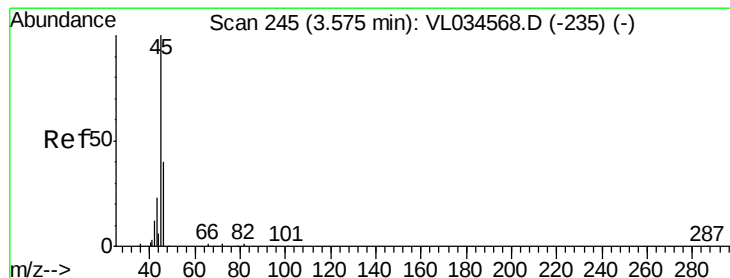
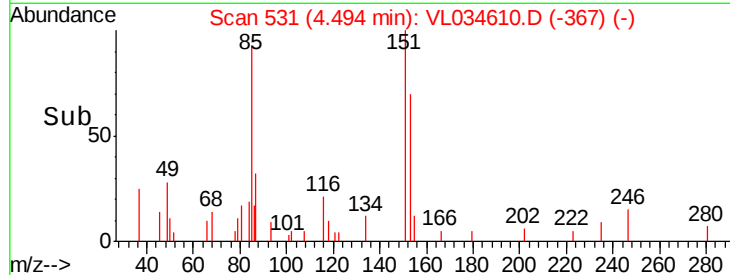
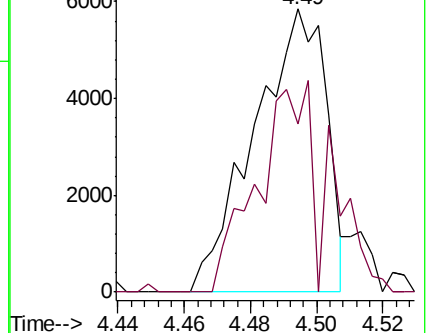
101 100

151 72.2 57.0 85.6



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 32.017 ppbv

RT: 3.60 min Scan# 254

Delta R.T. 0.03 min

Lab File: VL034610.D

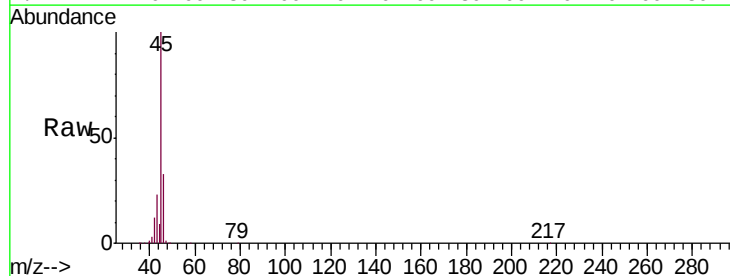
Acq: 6 Feb 2020 22:17

Tgt Ion: 45 Resp: 361043

Ion Ratio Lower Upper

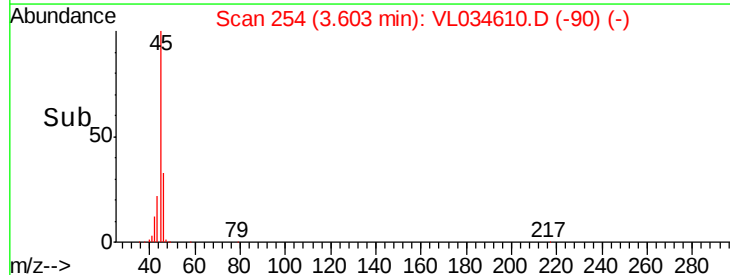
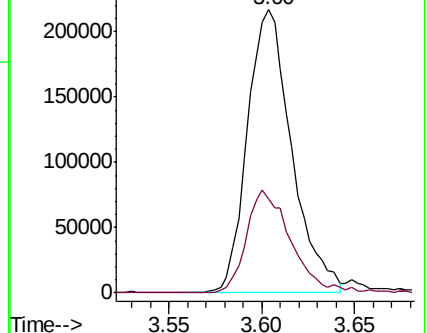
45 100

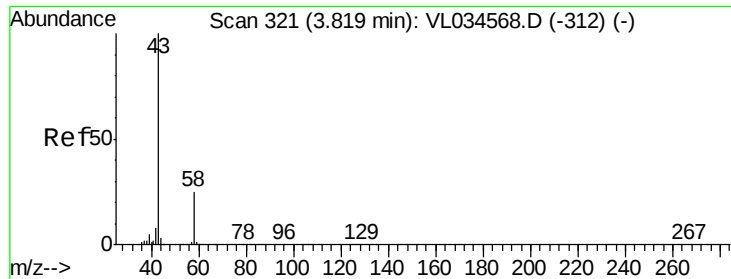
46 37.2 14.8 59.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 15.116 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.03 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

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MSVOA\_L

ClientSampleId :

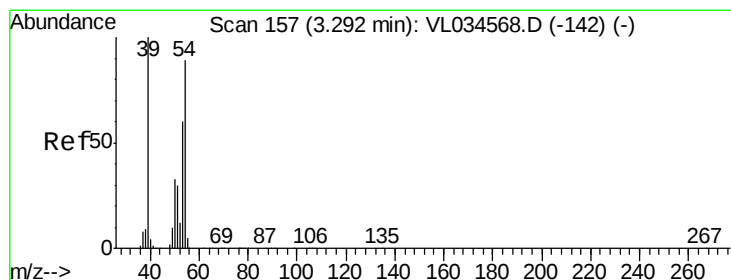
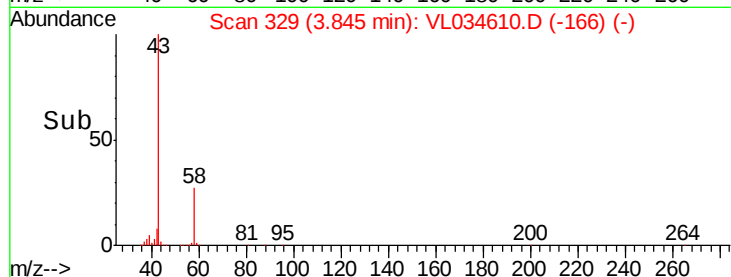
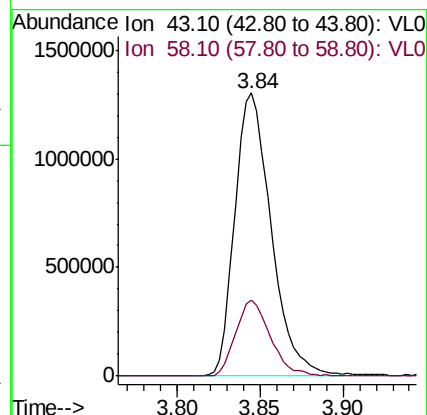
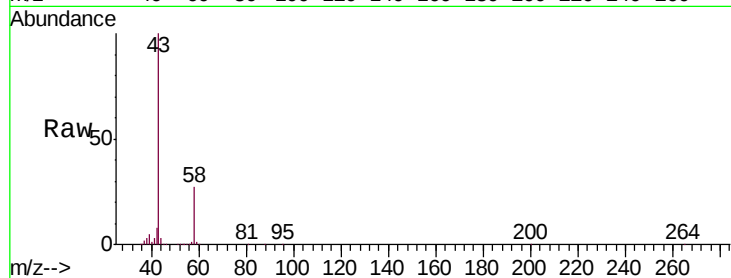
IA-6

Tgt Ion: 43 Resp: 1988007

Ion Ratio Lower Upper

43 100

58 25.9 20.3 30.5



#16

1,3-Butadiene

Concen: 0.236 ppbv

RT: 3.29 min Scan# 157

Delta R.T. -0.00 min

Lab File: VL034610.D

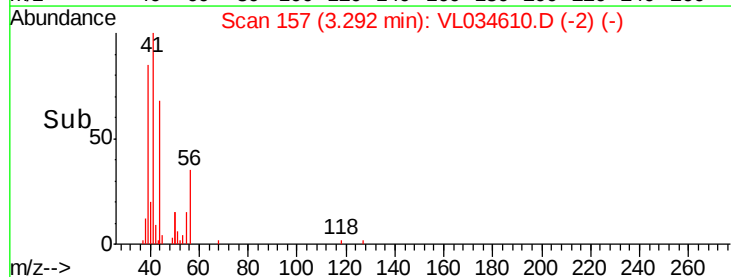
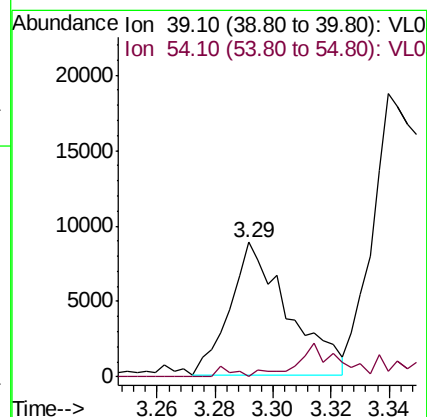
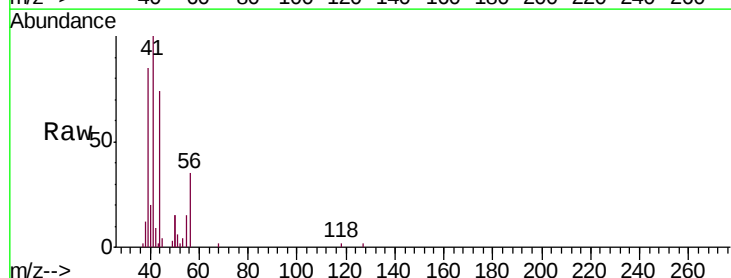
Acq: 6 Feb 2020 22:17

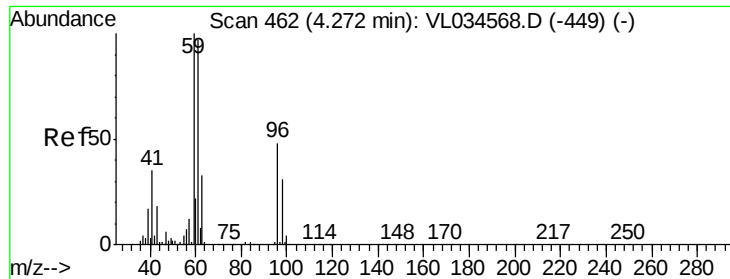
Tgt Ion: 39 Resp: 12303

Ion Ratio Lower Upper

39 100

54 27.5 66.7 100.1#



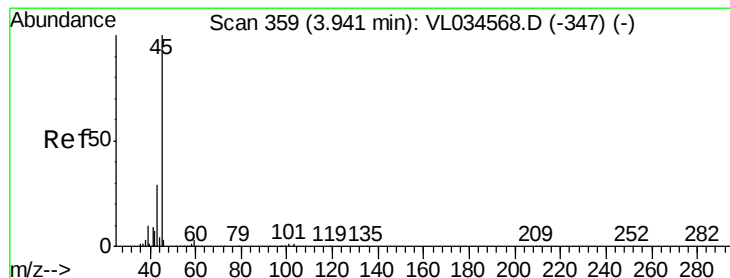
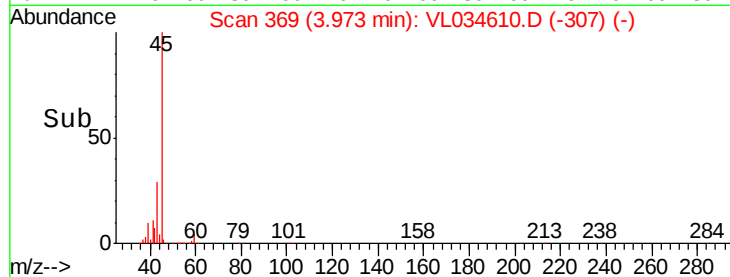
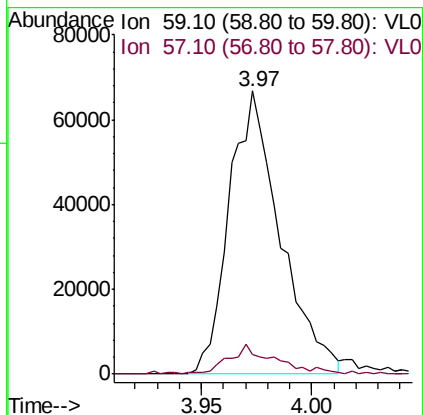
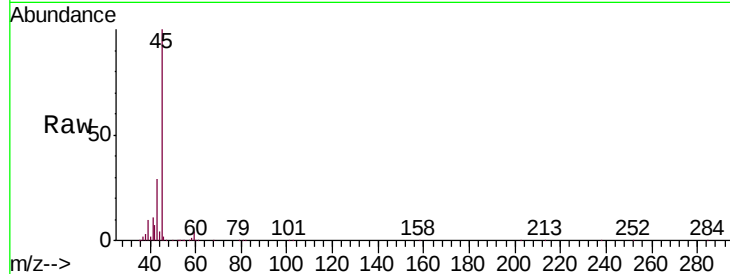


#17

tert-Butyl alcohol  
 Concen: 1.111 ppbv  
 RT: 3.97 min Scan# 369  
 Delta R.T. -0.30 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 IA-6

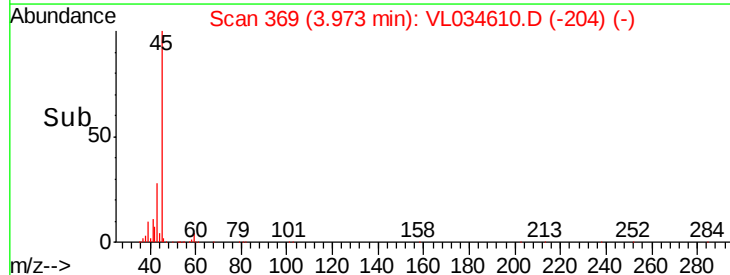
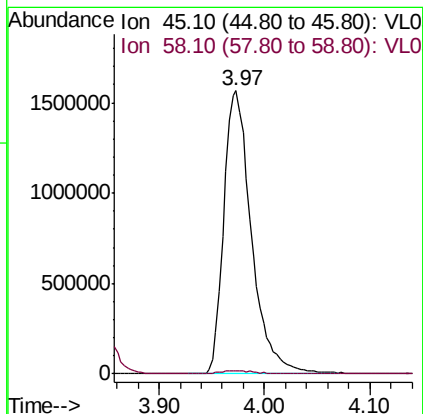
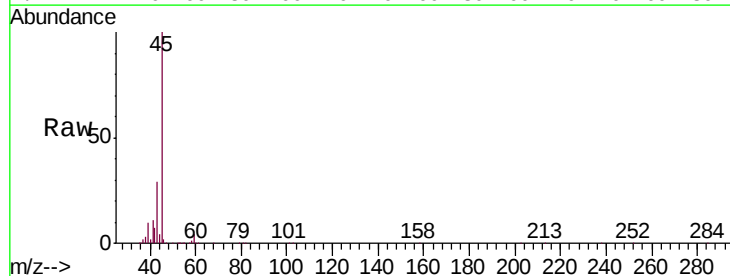
Tgt Ion: 59 Resp: 107437  
 Ion Ratio Lower Upper  
 59 100  
 57 10.1 8.7 13.1

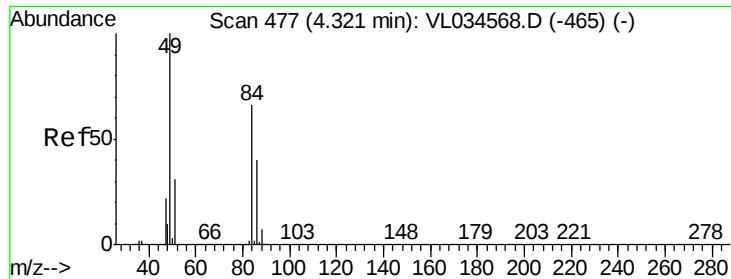


#19

Isopropyl Alcohol  
 Concen: 37.100 ppbv  
 RT: 3.97 min Scan# 369  
 Delta R.T. 0.03 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

Tgt Ion: 45 Resp: 2847335  
 Ion Ratio Lower Upper  
 45 100  
 58 1.7 1.7 2.5

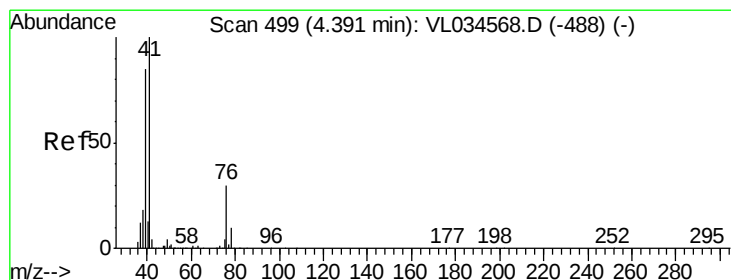
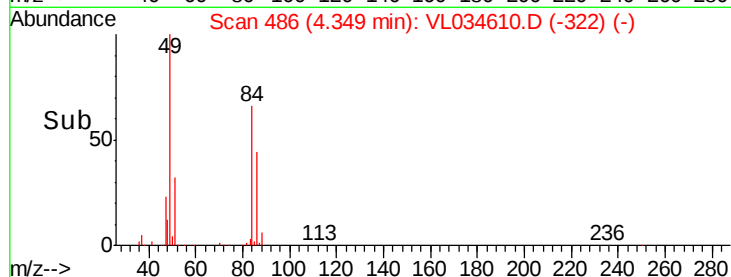
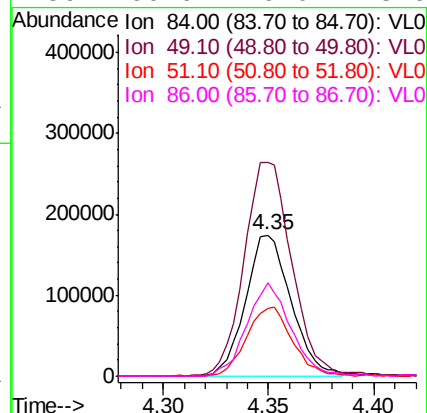
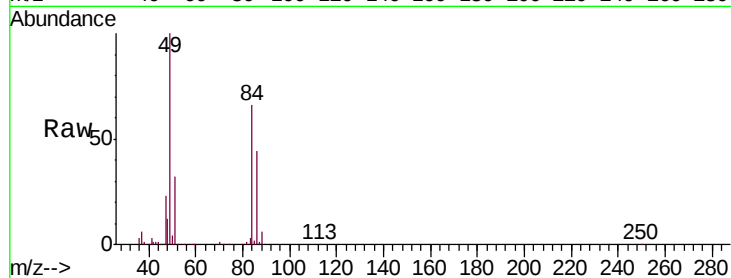




#20  
Methylene Chloride  
Concen: 5.223 ppbv  
RT: 4.35 min Scan# 486  
Delta R.T. 0.03 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

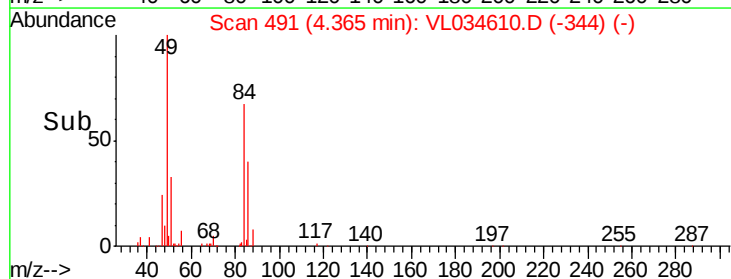
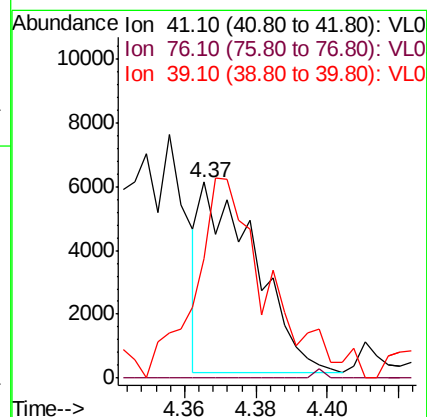
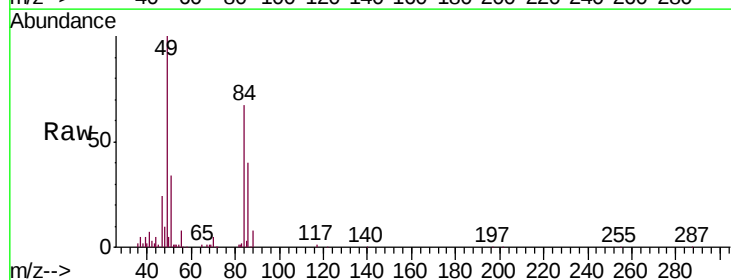
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-6

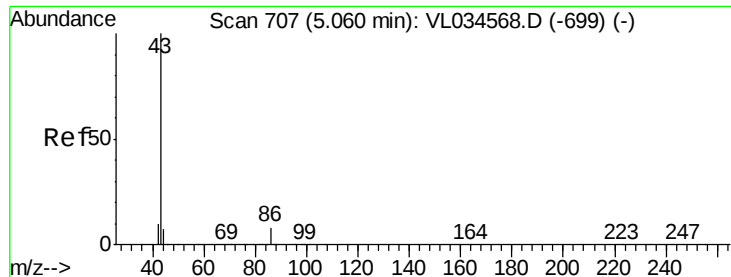
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 84    | Resp: | 261545 |
| Ion      | Ratio | Lower | Upper  |
| 84       | 100   |       |        |
| 49       | 150.7 | 122.4 | 183.6  |
| 51       | 47.9  | 38.6  | 57.8   |
| 86       | 66.6  | 49.0  | 73.6   |



#21  
Allyl Chloride  
Concen: 0.079 ppbv  
RT: 4.37 min Scan# 491  
Delta R.T. -0.03 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 41    | Resp: | 6419   |
| Ion      | Ratio | Lower | Upper  |
| 41       | 100   |       |        |
| 76       | 11.7  | 24.2  | 36.2#  |
| 39       | 144.1 | 68.3  | 102.5# |

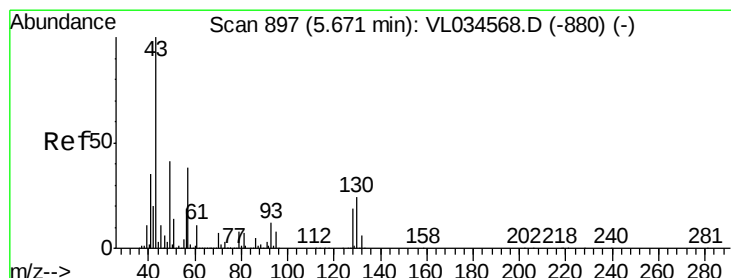
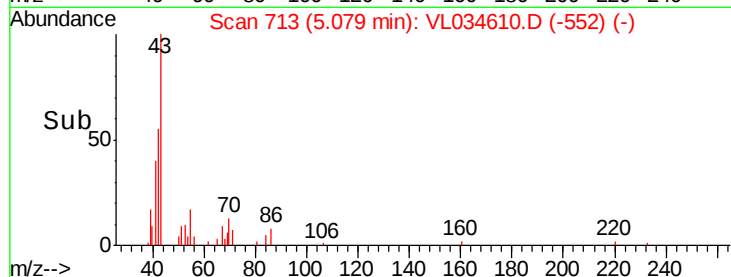
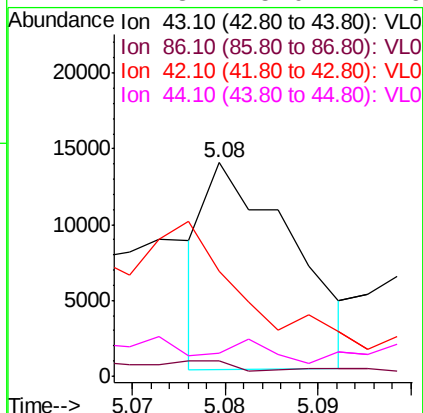
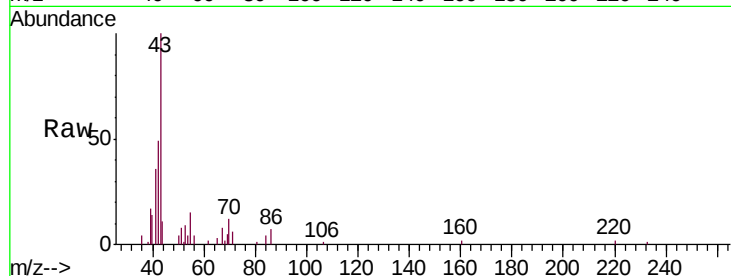




#23  
 Vinyl Acetate  
 Concen: 0.059 ppbv  
 RT: 5.08 min Scan# 713  
 Delta R.T. 0.02 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

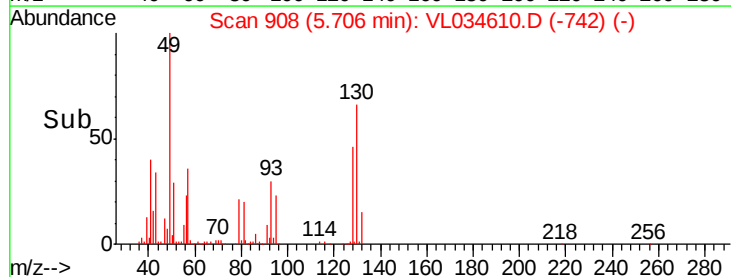
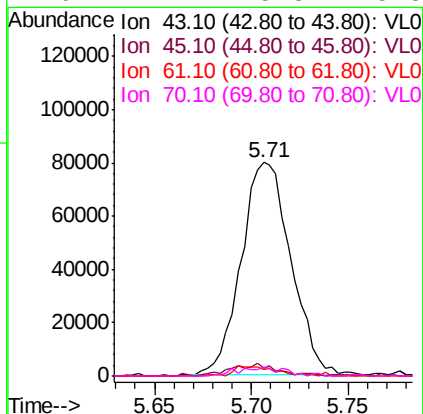
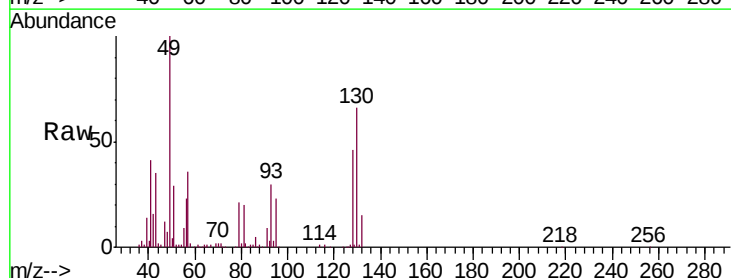
Instrument :  
 MSVOA\_L  
 ClientSampled :  
 IA-6

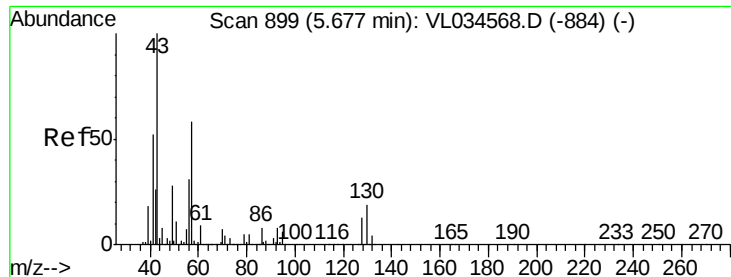
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 8870  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 5.6   | 5.9   | 8.9#  |
| 42       | 44.1  | 8.8   | 13.2# |
| 44       | 2.3   | 5.0   | 7.6#  |



#25  
 Ethyl Acetate  
 Concen: 0.667 ppbv  
 RT: 5.71 min Scan# 908  
 Delta R.T. 0.04 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 142089 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 5.8   | 8.5   | 12.7#  |
| 61       | 3.8   | 7.8   | 11.6#  |
| 70       | 4.2   | 5.8   | 8.8#   |

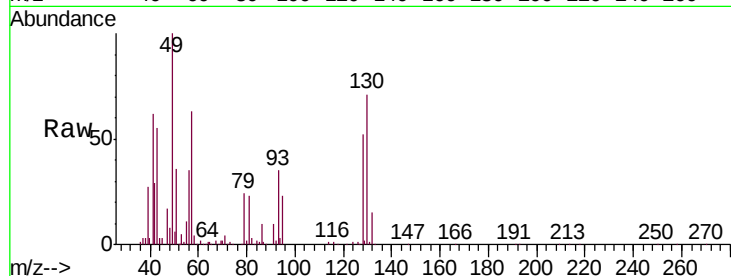




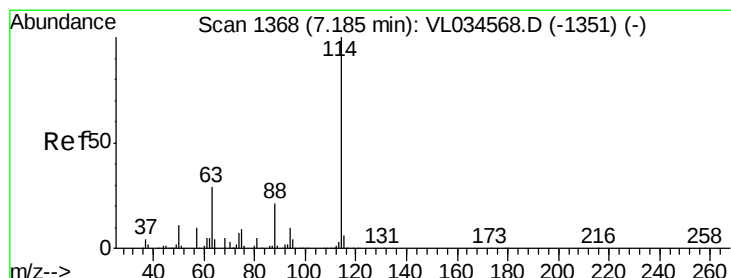
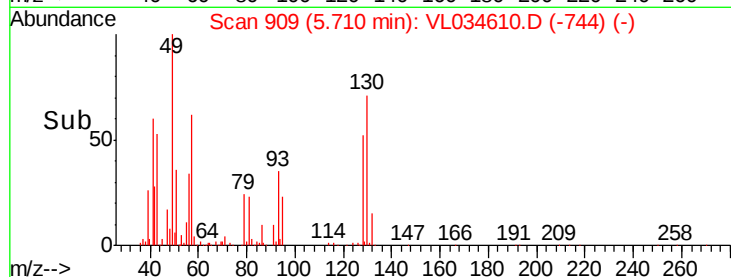
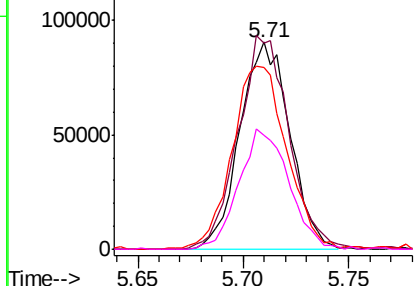
#26  
Hexane  
Concen: 1.674 ppbv  
RT: 5.71 min Scan# 909  
Delta R.T. 0.03 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-6

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 149290 |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 105.2 | 76.2  | 114.2  |
| 43       | 99.0  | 189.9 | 284.9# |
| 56       | 58.0  | 43.6  | 65.4   |

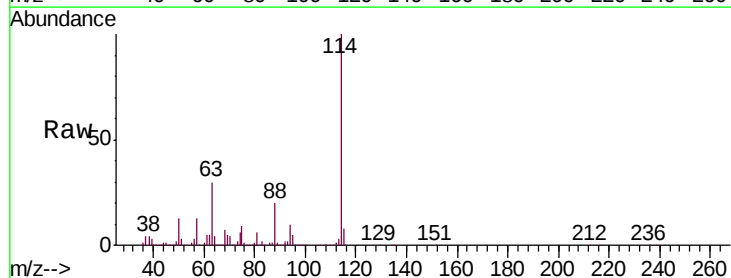


Abundance Ion 57.10 (56.80 to 57.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 43.10 (42.80 to 43.80): VL0  
Ion 56.10 (55.80 to 56.80): VL0

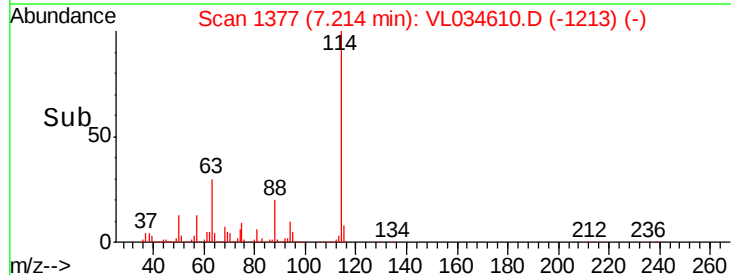
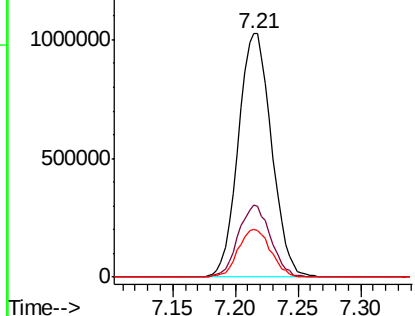


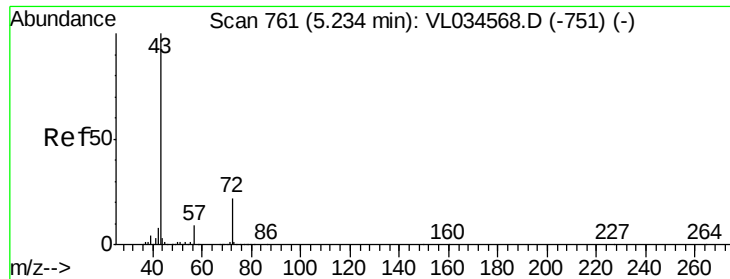
#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.21 min Scan# 1377  
Delta R.T. 0.03 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 114   | Resp: | 1891092 |
| Ion      | Ratio | Lower | Upper   |
| 114      | 100   |       |         |
| 63       | 28.8  | 24.1  | 36.1    |
| 88       | 19.3  | 15.9  | 23.9    |



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

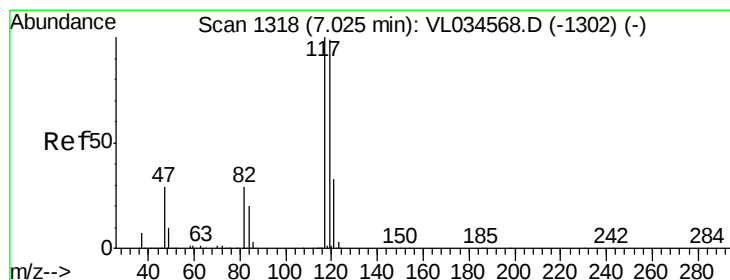
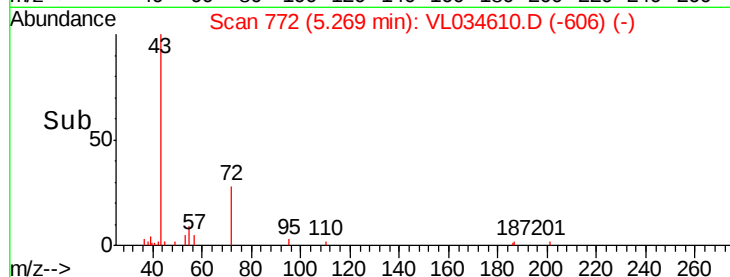
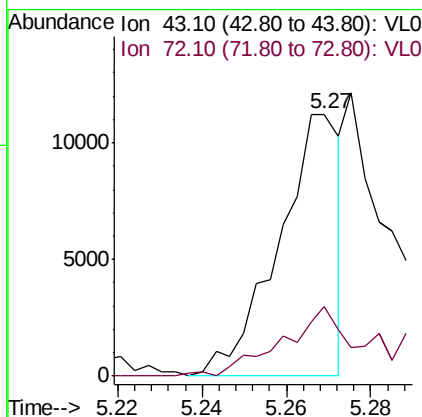
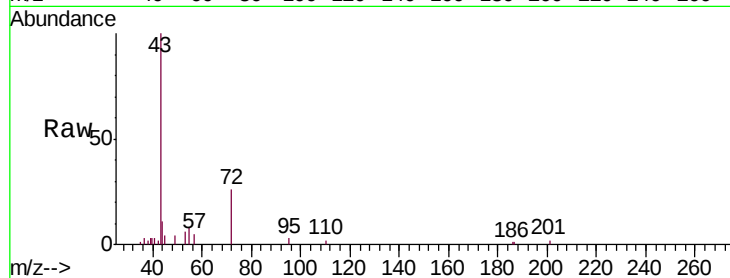




#34  
2-Butanone  
Concen: 0.083 ppbv  
RT: 5.27 min Scan# 772  
Delta R.T. 0.04 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

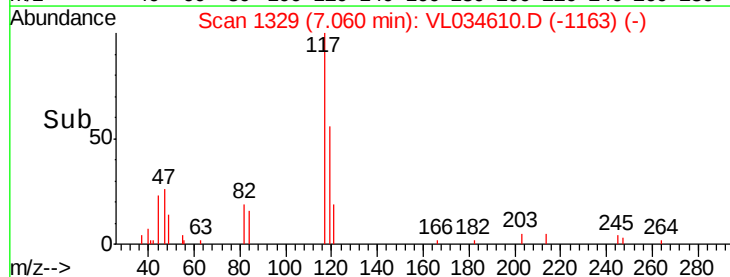
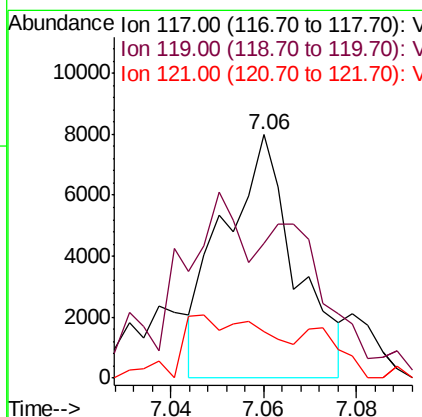
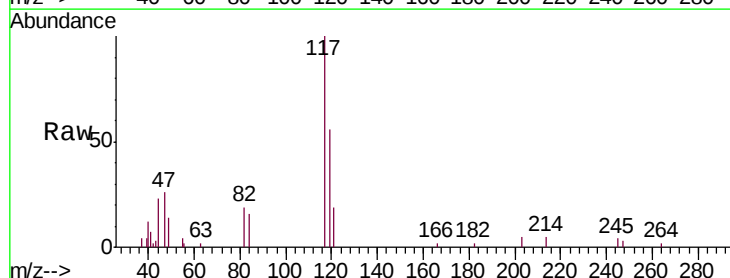
Instrument :  
MSVOA\_L  
ClientSampled :  
IA-6

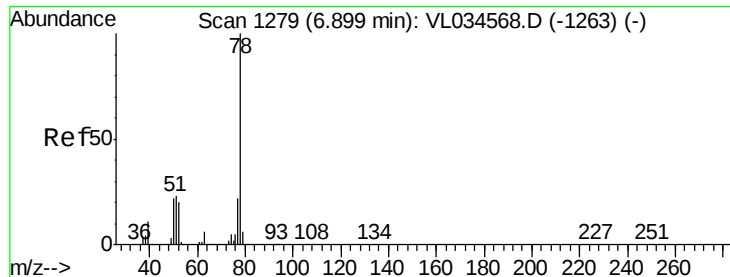
Tgt Ion: 43 Resp: 11379  
Ion Ratio Lower Upper  
43 100  
72 36.9 17.2 25.8#



#35  
Carbon Tetrachloride  
Concen: 0.048 ppbv  
RT: 7.06 min Scan# 1329  
Delta R.T. 0.04 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

Tgt Ion: 117 Resp: 8632  
Ion Ratio Lower Upper  
117 100  
119 38.1 79.5 119.3#  
121 9.8 26.2 39.2#





#36

Benzene

Concen: 0.442 ppbv

RT: 6.93 min Scan# 1289

Delta R.T. 0.03 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

IA-6

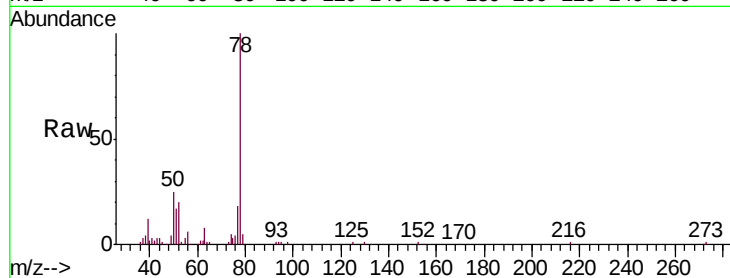
Tgt Ion: 78 Resp: 74269

Ion Ratio Lower Upper

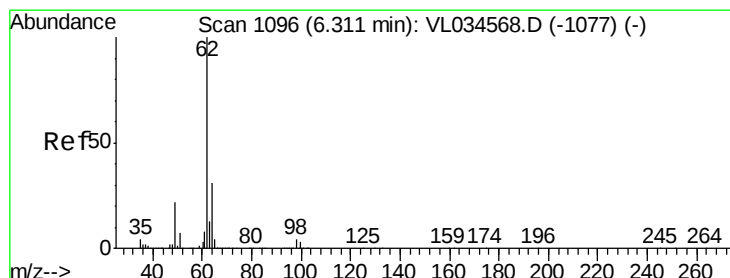
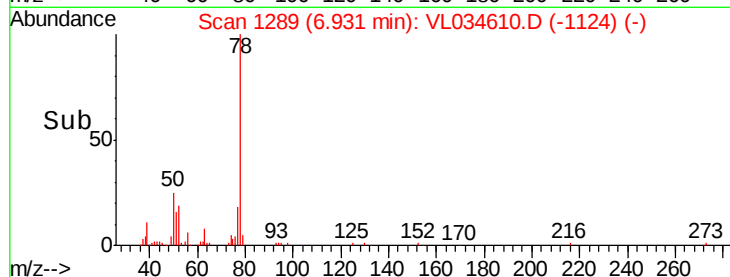
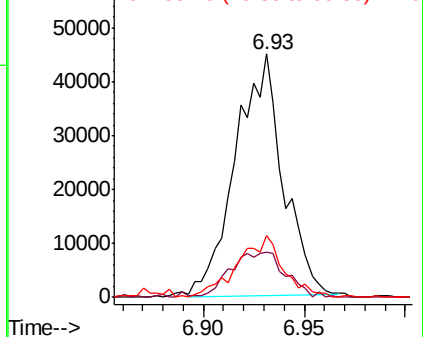
78 100

77 18.6 17.3 25.9

50 25.4 17.4 26.2



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



#37

1,2-Dichloroethane

Concen: 0.061 ppbv

RT: 6.34 min Scan# 1106

Delta R.T. 0.03 min

Lab File: VL034610.D

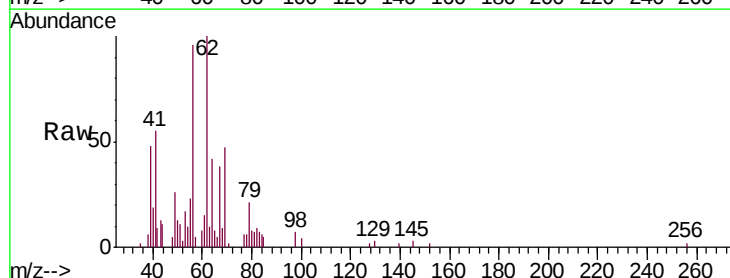
Acq: 6 Feb 2020 22:17

Tgt Ion: 62 Resp: 8585

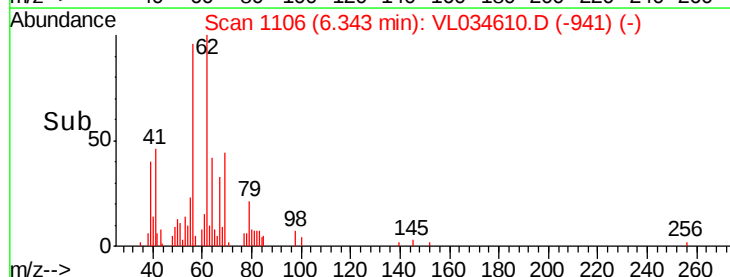
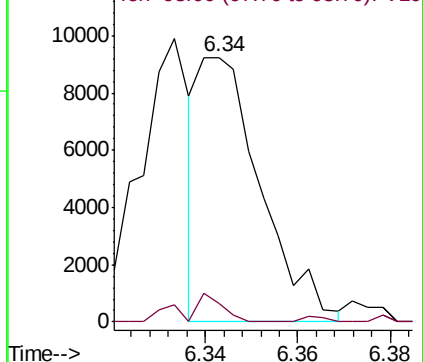
Ion Ratio Lower Upper

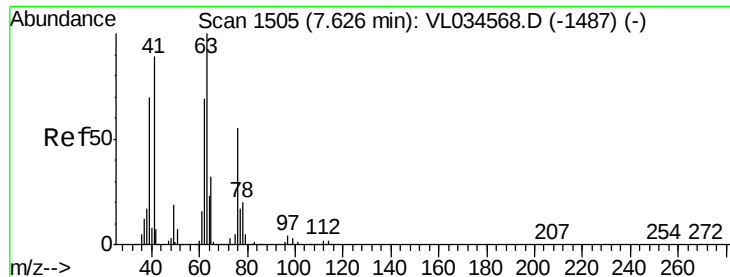
62 100

98 7.8 3.7 5.5#



Abundance Ion 62.10 (61.80 to 62.80): VL0  
Ion 98.00 (97.70 to 98.70): VL0





#39

1,2-Dichloropropane

Concen: 7.721 ppbv

RT: 7.21 min Scan# 1377

Delta R.T. -0.41 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

IA-6

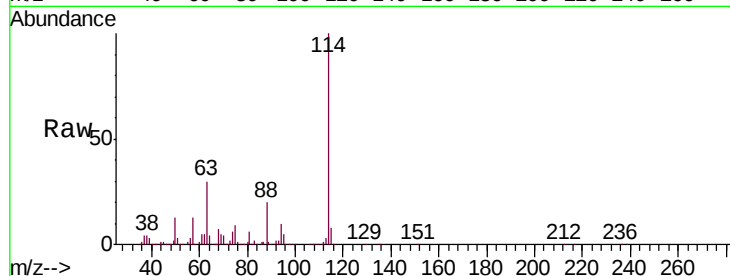
Tgt Ion: 63 Resp: 538280

Ion Ratio Lower Upper

63 100

41 0.0 71.0 106.4#

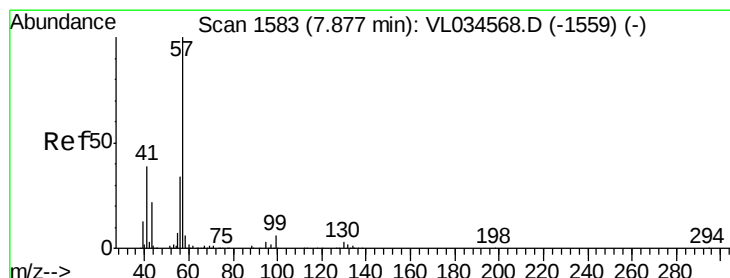
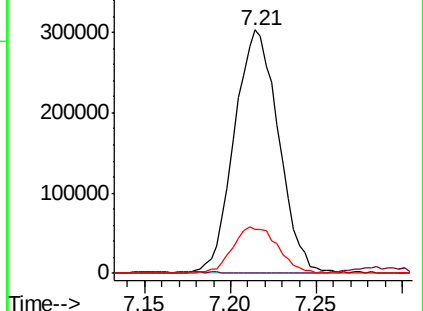
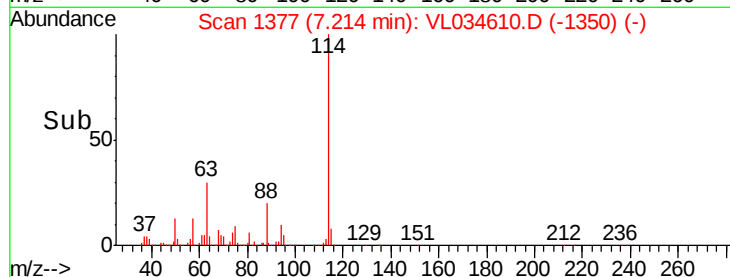
62 17.6 55.4 83.0#



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: 0.090 ppbv

RT: 7.91 min Scan# 1593

Delta R.T. 0.03 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

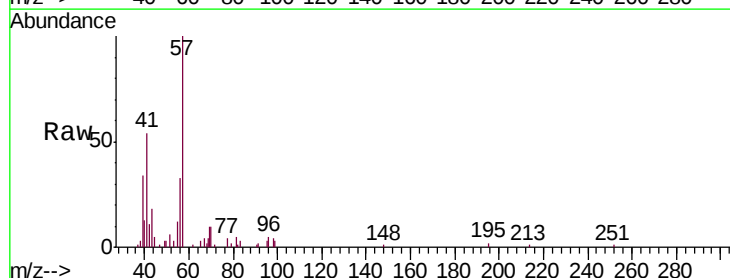
Tgt Ion: 57 Resp: 27501

Ion Ratio Lower Upper

57 100

41 85.7 28.9 43.3#

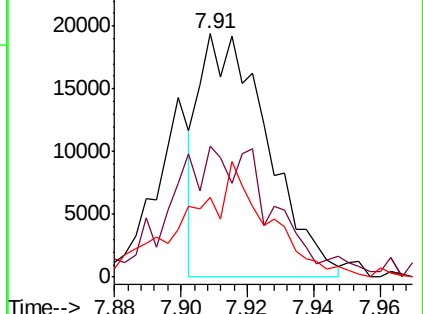
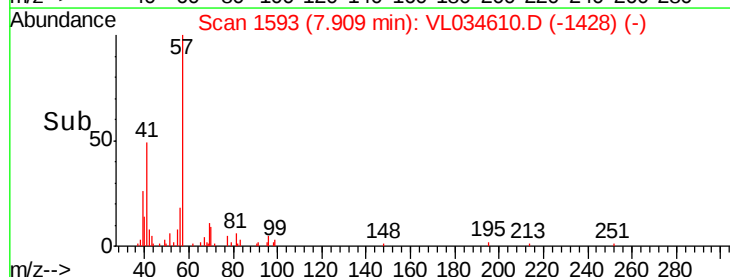
56 59.6 25.5 38.3#

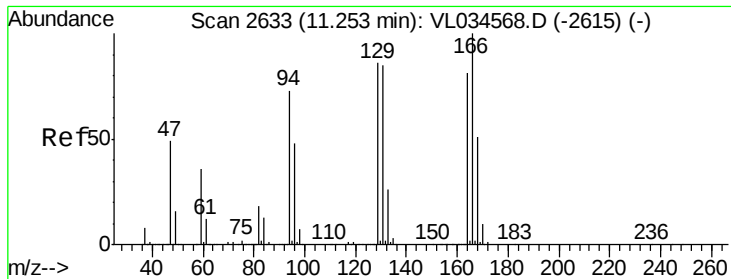


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.045 ppbv

RT: 11.30 min Scan# 2647

Delta R.T. 0.04 min

Lab File: VL034610.D

Acq: 6 Feb 2020 22:17

Instrument :

MSVOA\_L

ClientSampleId :

IA-6

Tgt Ion:164 Resp: 3049

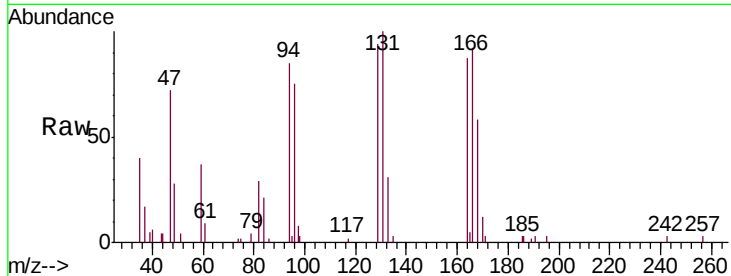
Ion Ratio Lower Upper

164 100

166 22.9 99.0 148.4#

129 29.7 85.3 127.9#

131 54.8 84.2 126.2#

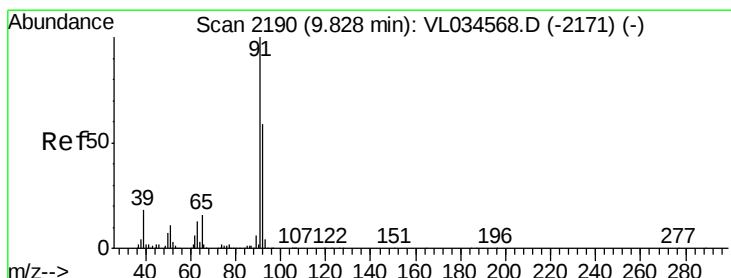
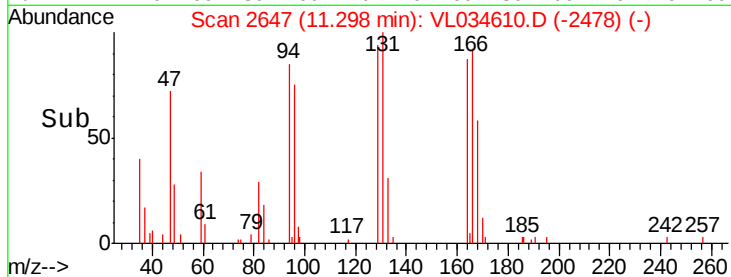
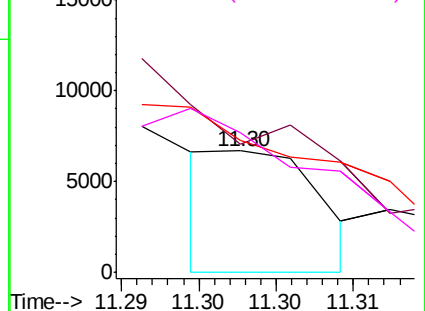


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.922 ppbv

RT: 9.86 min Scan# 2201

Delta R.T. 0.04 min

Lab File: VL034610.D

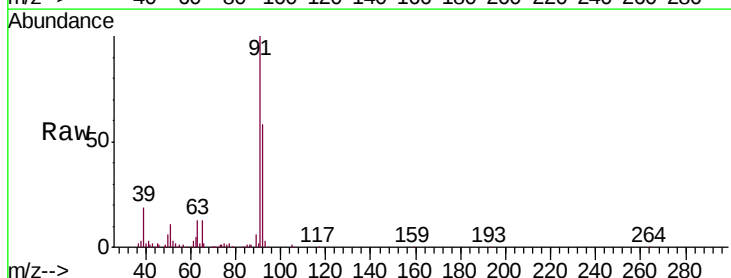
Acq: 6 Feb 2020 22:17

Tgt Ion: 91 Resp: 355145

Ion Ratio Lower Upper

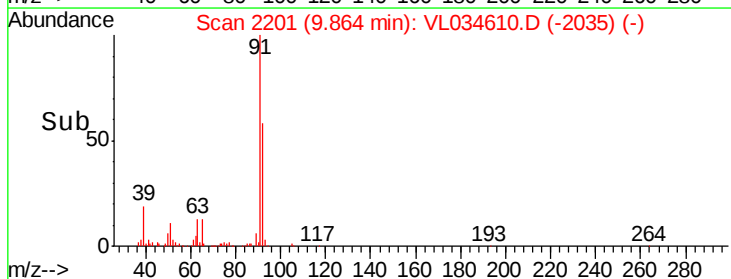
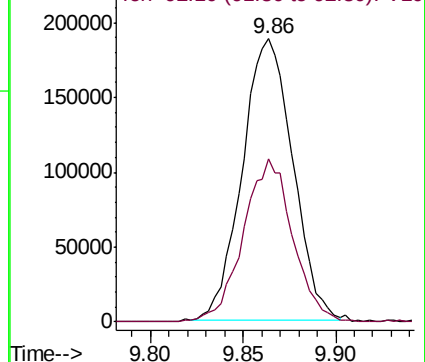
91 100

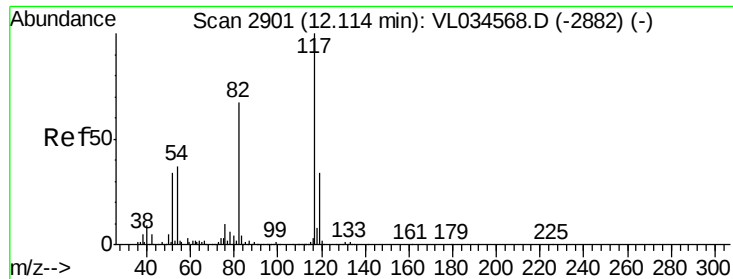
92 57.0 48.2 72.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

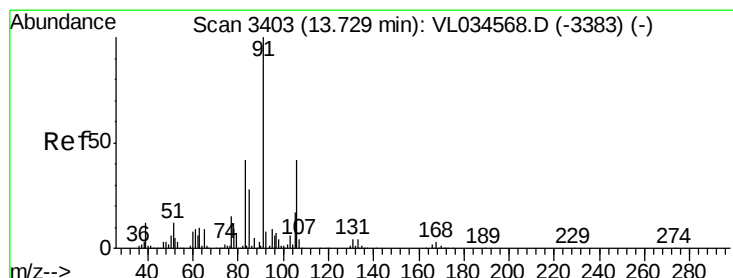
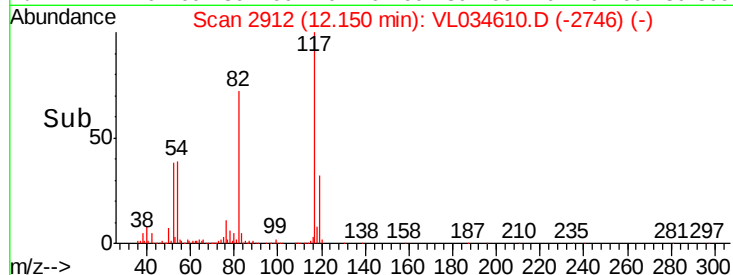
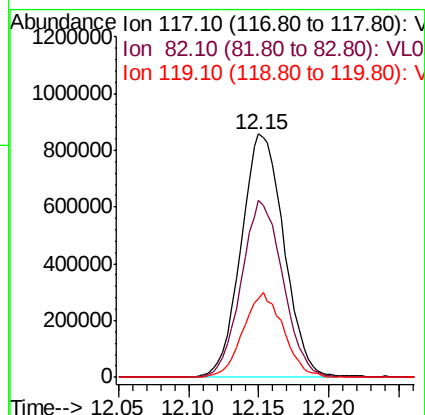
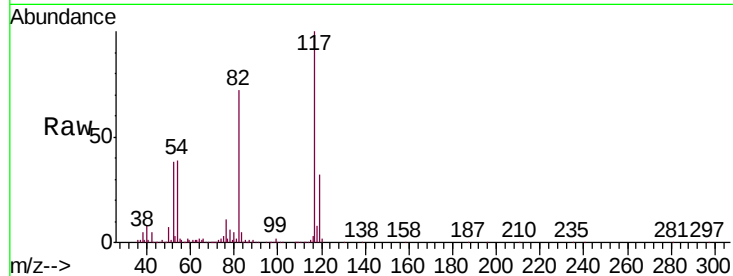




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.15 min Scan# 2912  
Delta R.T. 0.04 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

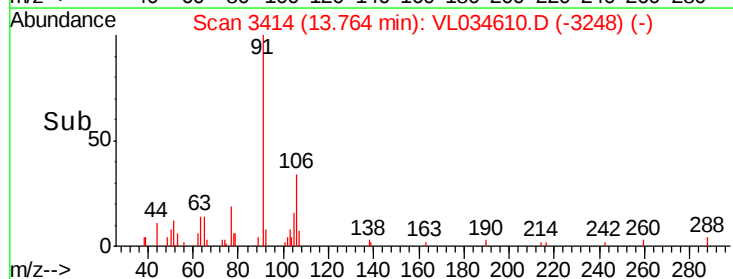
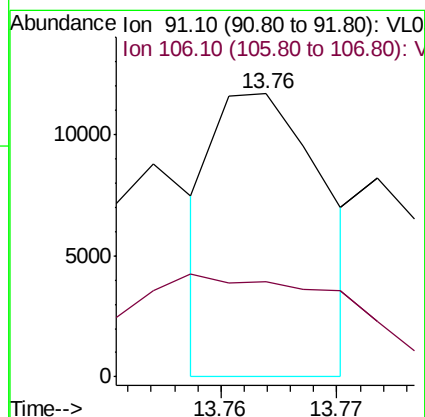
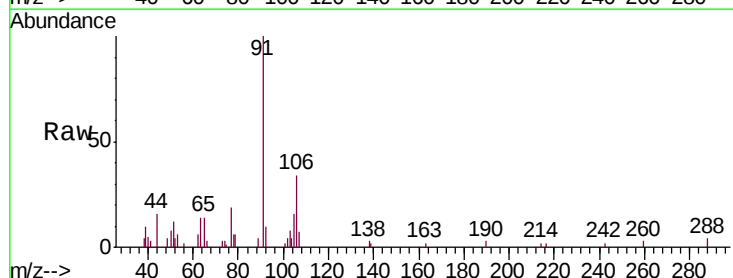
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-6

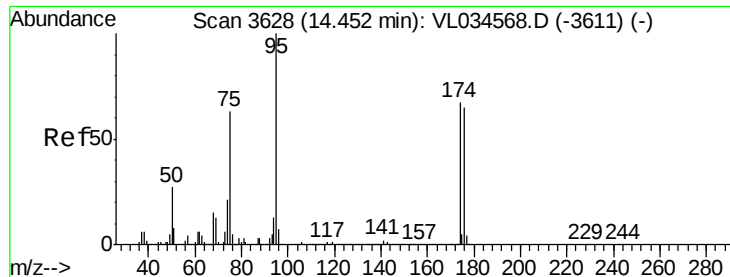
Tgt Ion:117 Resp: 1818219  
Ion Ratio Lower Upper  
117 100  
82 71.5 54.2 81.4  
119 33.1 26.1 39.1



#60  
o-Xylene  
Concen: 0.035 ppbv  
RT: 13.76 min Scan# 3414  
Delta R.T. 0.04 min  
Lab File: VL034610.D  
Acq: 6 Feb 2020 22:17

Tgt Ion: 91 Resp: 7663  
Ion Ratio Lower Upper  
91 100  
106 0.0 21.6 65.0#

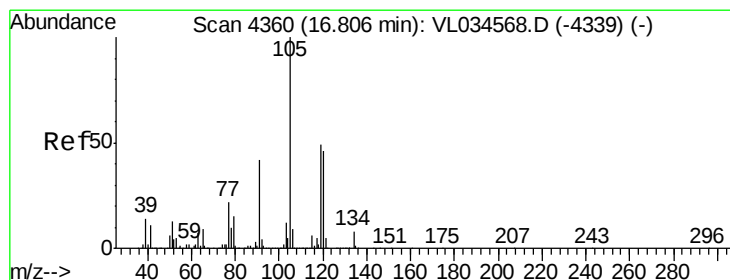
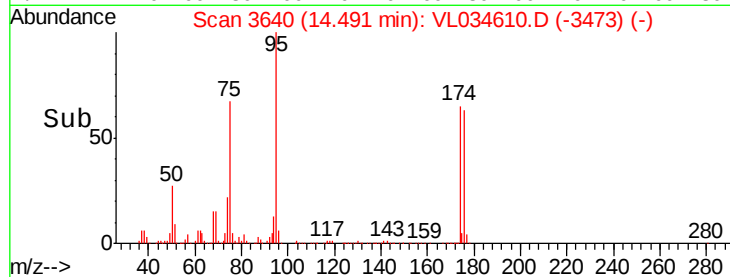
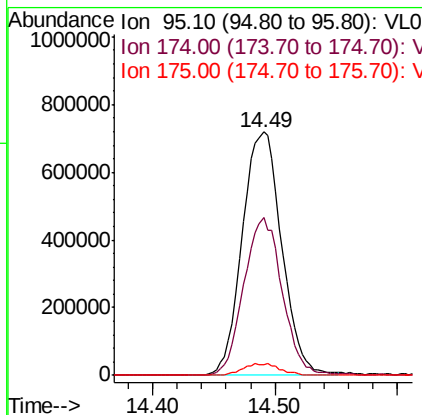
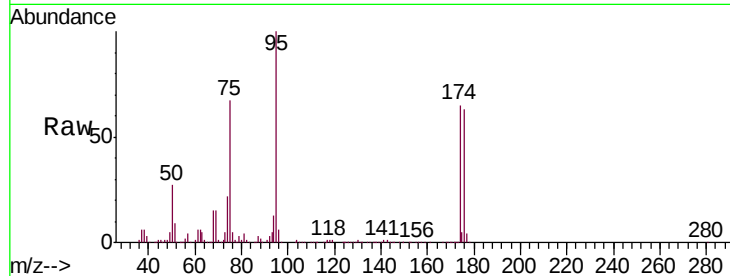




#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.423 ppbv  
 RT: 14.49 min Scan# 3640  
 Delta R.T. 0.04 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA-6

Tgt Ion: 95 Resp: 1601672  
 Ion Ratio Lower Upper  
 95 100  
 174 63.4 52.3 78.5  
 175 4.6 3.8 5.6



#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.045 ppbv  
 RT: 16.84 min Scan# 4372  
 Delta R.T. 0.04 min  
 Lab File: VL034610.D  
 Acq: 6 Feb 2020 22:17

Tgt Ion: 105 Resp: 11443  
 Ion Ratio Lower Upper  
 105 100  
 120 55.0 37.1 55.7  
 91 10.1 34.3 51.5#  
 77 18.9 17.5 26.3

