

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121719\  
 Data File : VL034505.D  
 Acq On : 17 Dec 2019 23:11  
 Operator : SY/AP  
 Sample : K6319-05  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-OA1

Manual Integrations  
 APPROVED

MMDadoda  
 12/19/2019 3:48:04 PM

Quant Time: Dec 19 16:36:42 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111919AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Nov 19 16:36:42 2019  
 QLast Update : Tue Nov 19 14:15:35 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 950434   | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 7.19  | 114  | 1867147  | 10.00 | ppbv  | -0.01    |
| 55) Chlorobenzene-d5    | 12.13 | 117  | 1838291  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 14.47  | 95    | 1570873  | 10.16    | ppbv | -0.01   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 101.60% |

| Target Compounds           | R.T. | QIon | Response | Conc  | Units  | Ovalue |
|----------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane | 3.02 | 85   | 94773    | 0.551 | ppbv   | 91     |
| 3) Chlorodifluoromethane   | 2.96 | 51   | 36070m   | 0.304 | ppbv   |        |
| 4) Chloromethane           | 3.11 | 50   | 28769m   | 0.411 | ppbv   |        |
| 9) Propene                 | 2.99 | 41   | 30404m   | 0.578 | ppbv   |        |
| 11) Trichlorofluoromethane | 3.93 | 101  | 39419    | 0.230 | ppbv   | 98     |
| 13) Ethanol                | 3.59 | 45   | 46401    | 3.164 | ppbv   | 98     |
| 15) Acetone                | 3.84 | 43   | 243941   | 1.792 | ppbv   | 99     |
| 19) Isopropyl Alcohol      | 3.98 | 45   | 29544    | 0.339 | ppbv # | 96     |
| 20) Methylene Chloride     | 4.33 | 84   | 32577    | 0.675 | ppbv   | 86     |
| 26) Hexane                 | 5.69 | 57   | 25870    | 0.248 | ppbv # | 43     |
| 34) 2-Butanone             | 5.26 | 43   | 25888m   | 0.168 | ppbv   |        |
| 35) Carbon Tetrachloride   | 7.03 | 117  | 10964m   | 0.068 | ppbv   |        |
| 36) Benzene                | 6.90 | 78   | 24354    | 0.130 | ppbv # | 79     |
| 53) Toluene                | 9.85 | 91   | 33642m   | 0.159 | ppbv   |        |

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

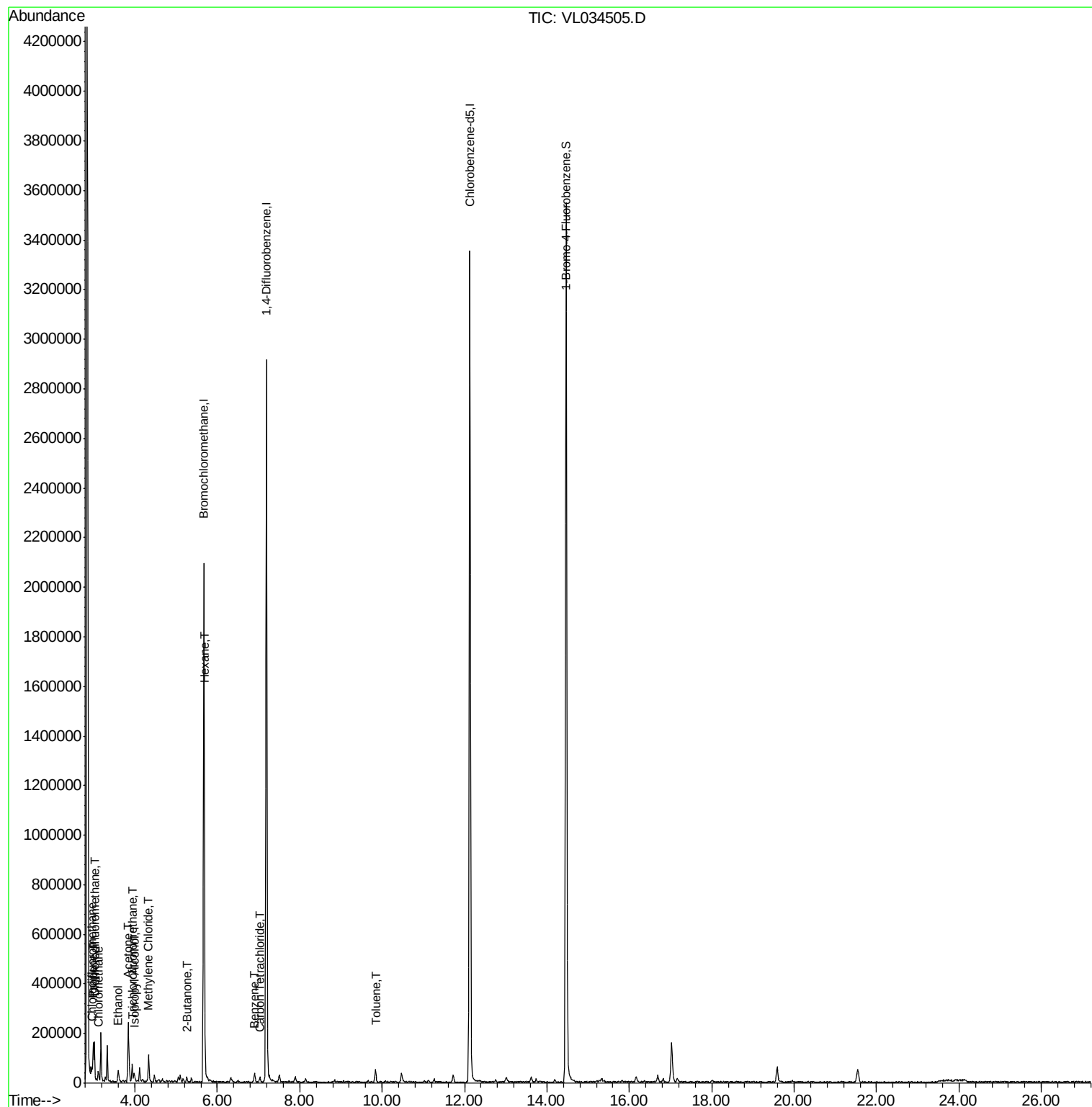
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL121719\  
Data File : VL034505.D  
Acq On : 17 Dec 2019 23:11  
Operator : SY/AP  
Sample : K6319-05  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

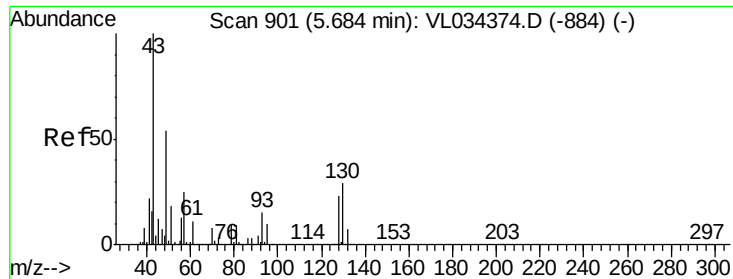
Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

Manual Integrations  
APPROVED

MMDadoda  
12/19/2019 3:48:04 PM

Quant Time: Dec 19 16:36:42 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL111919AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LTue Nov  
QLast Update : Tue Nov 19 14:15:35 2019  
Response via : Initial Calibration





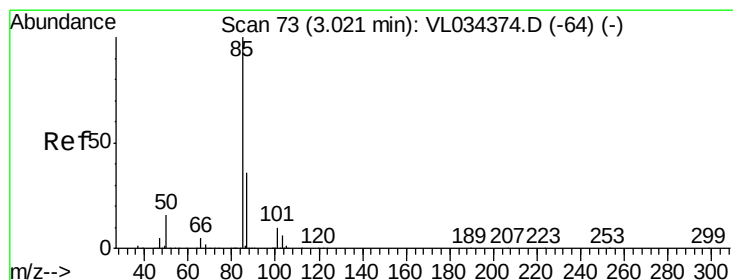
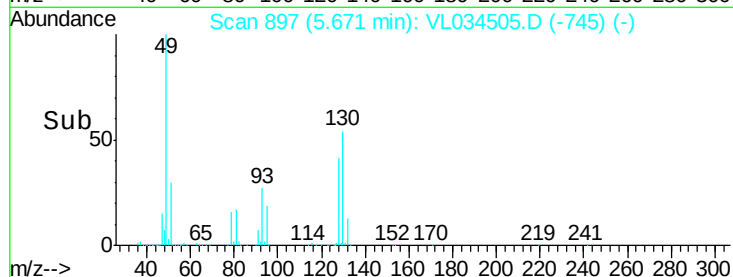
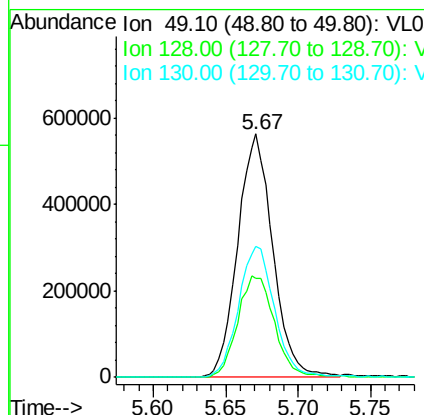
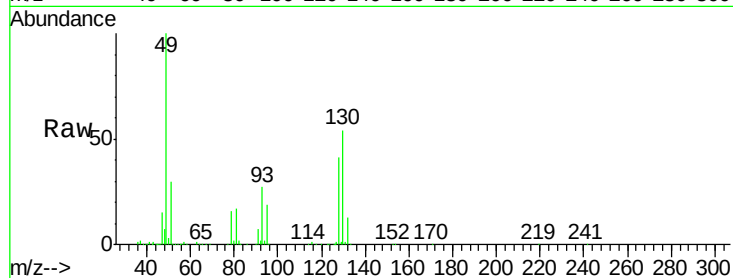
#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.67 min Scan# 897  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 44.1  | 21.8  | 65.3  |
| 130     | 55.8  | 28.0  | 84.0  |

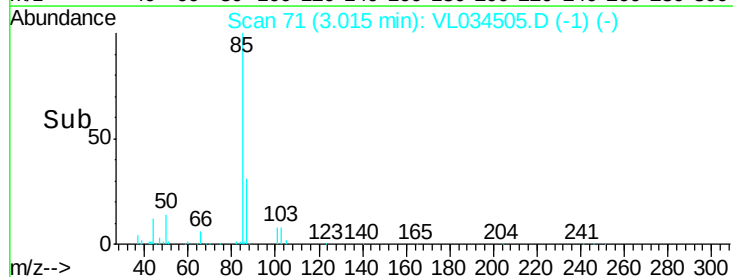
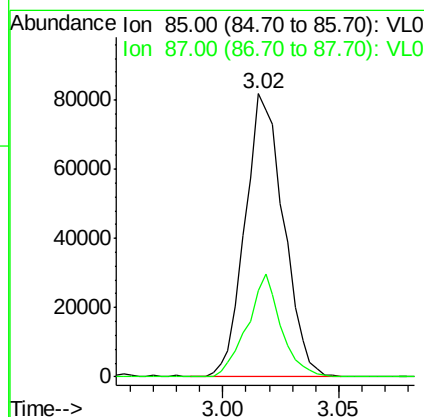
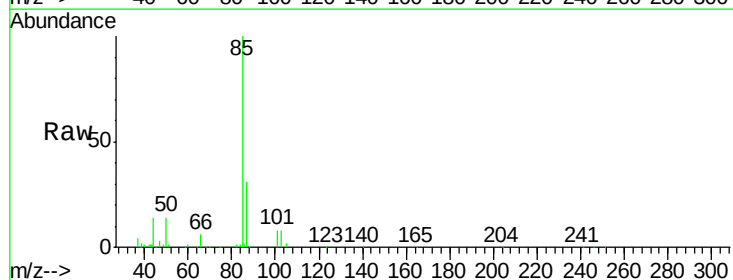
Manual Integrations  
APPROVED

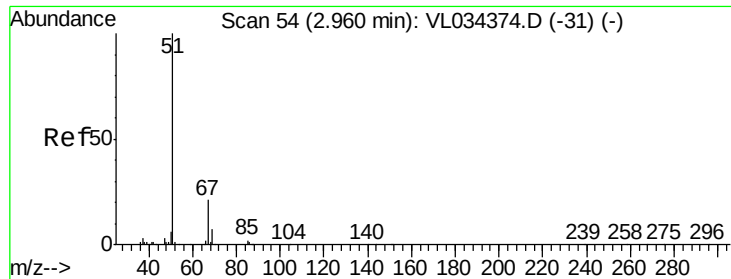
MMDadoda  
12/19/2019 3:48:04 PM



#2  
Dichlorodifluoromethane  
Concen: 0.551 ppbv  
RT: 3.02 min Scan# 71  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 85      | 100   |       |       |
| 87      | 30.6  | 28.5  | 42.7  |





#3

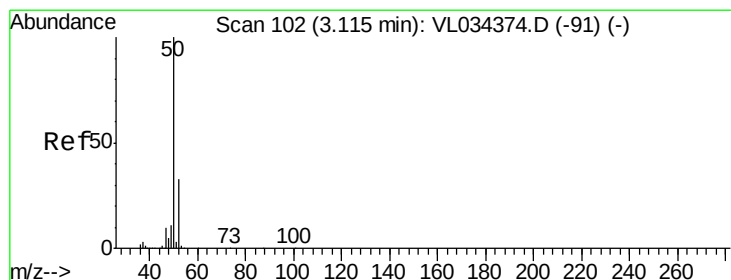
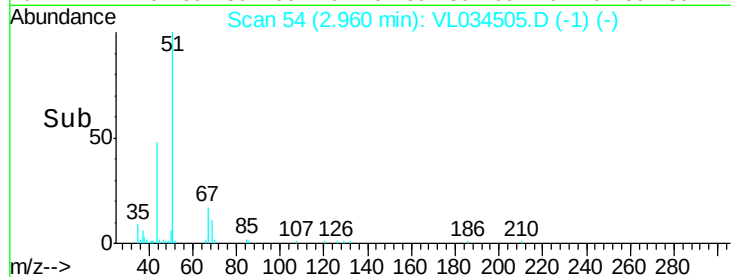
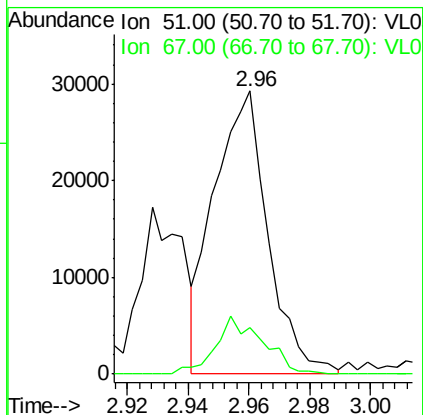
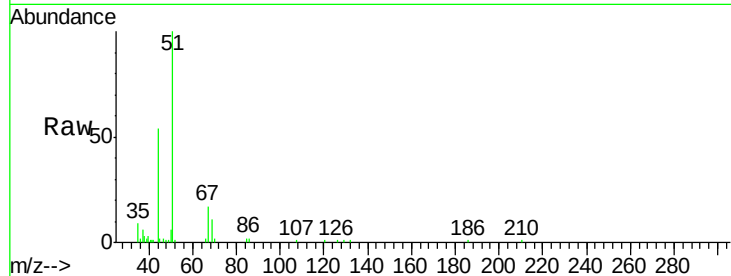
Chlorodifluoromethane  
Concen: 0.304 ppbv m  
RT: 2.96 min Scan# 54  
Delta R.T. 0.00 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion   | 51    | Resp  | 36070 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 51        | 100   |       |       |
| 67        | 18.0  | 16.2  | 24.2  |

Manual Integrations  
APPROVED

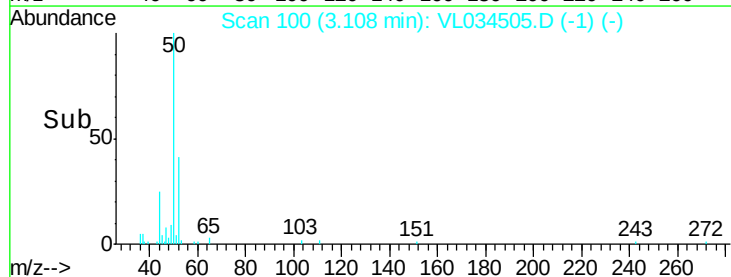
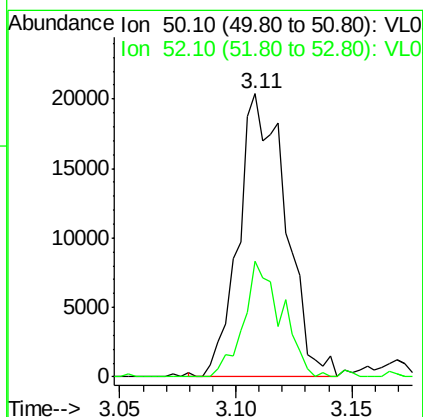
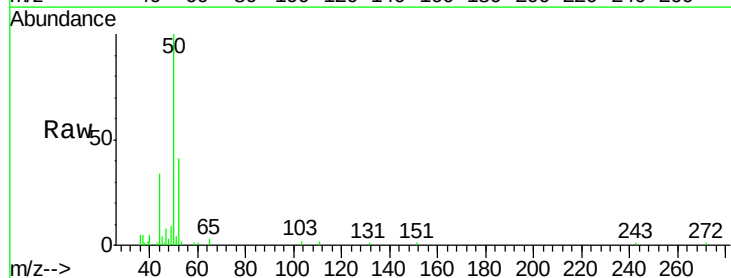
MMDadoda  
12/19/2019 3:48:04 PM

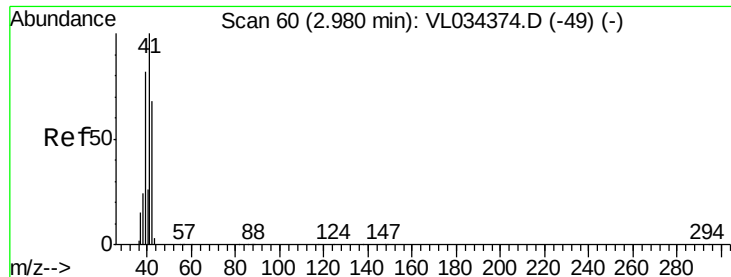


#4

Chloromethane  
Concen: 0.411 ppbv m  
RT: 3.11 min Scan# 100  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion   | 50    | Resp  | 28769 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 50        | 100   |       |       |
| 52        | 41.0  | 26.8  | 40.2# |





#9

Propene

Concen: 0.578 ppbv m

RT: 2.99 min Scan# 63

Delta R.T. 0.01 min

Lab File: VL034505.D

Acq: 17 Dec 2019 23:11

Instrument :

MSVOA\_L

ClientSampleId :

LIHA-OA1

Tot Ion: 41 Resp: 30404

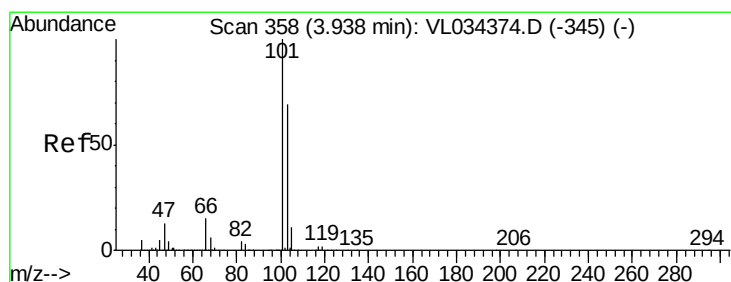
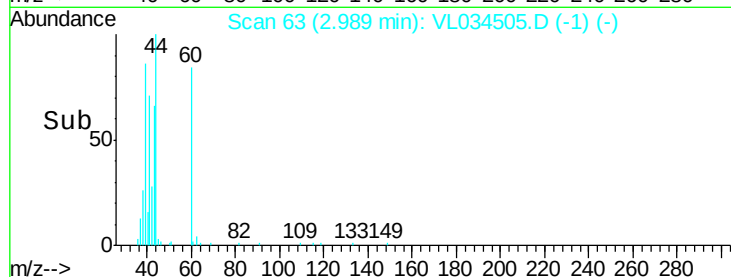
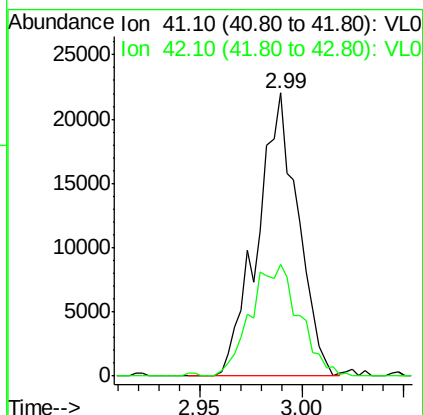
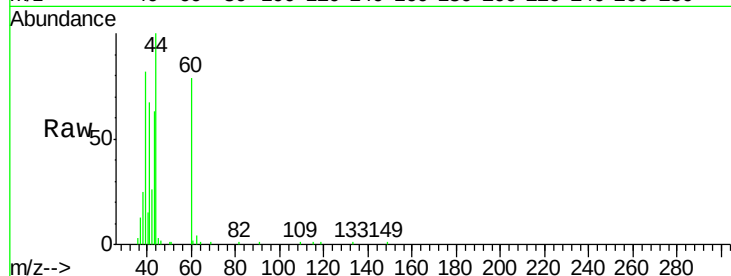
Ion Ratio Lower Upper

41 100

42 47.5 54.6 82.0#

Manual Integrations  
APPROVED

MMDadoda  
12/19/2019 3:48:04 PM



#11

Trichlorofluoromethane

Concen: 0.230 ppbv

RT: 3.93 min Scan# 357

Delta R.T. -0.00 min

Lab File: VL034505.D

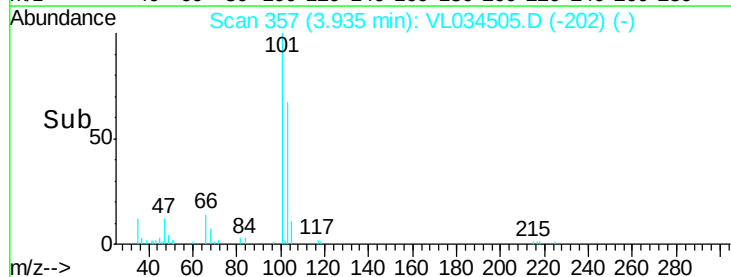
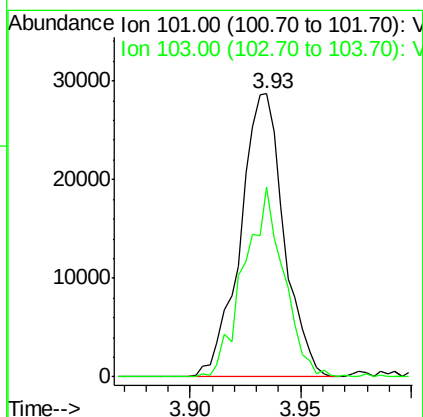
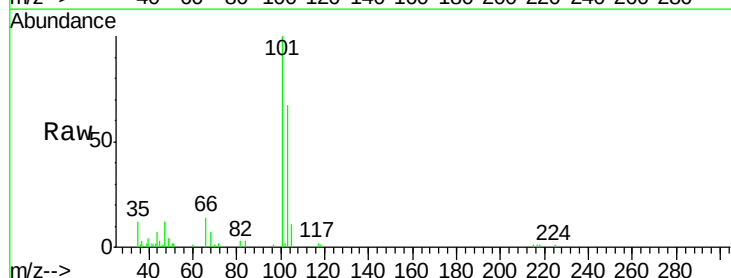
Acq: 17 Dec 2019 23:11

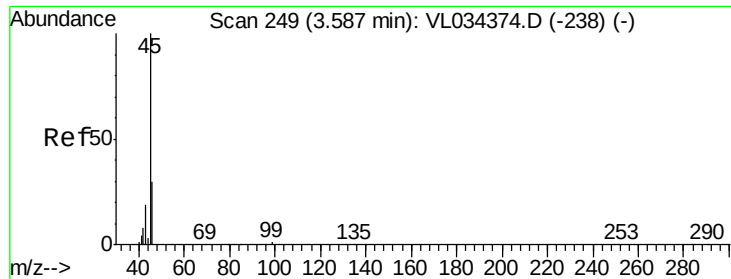
Tgt Ion: 101 Resp: 39419

Ion Ratio Lower Upper

101 100

103 67.3 55.4 83.0





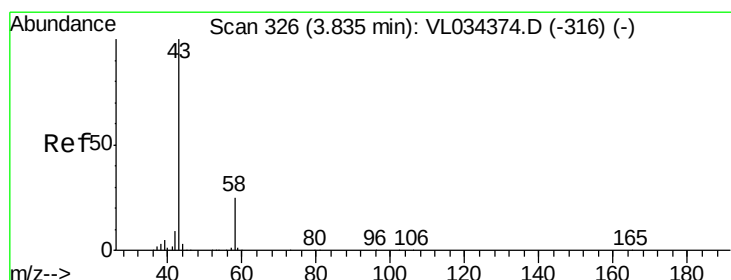
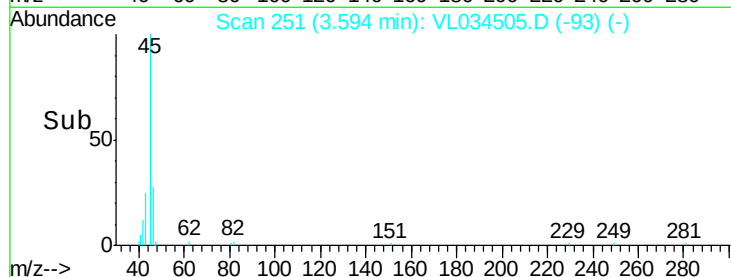
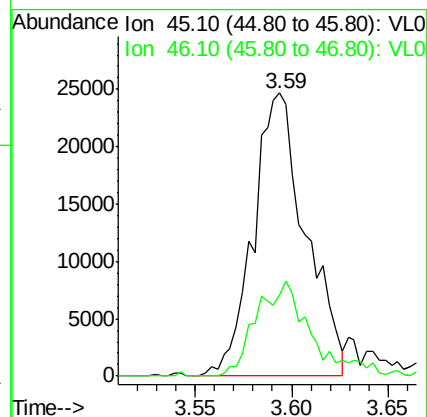
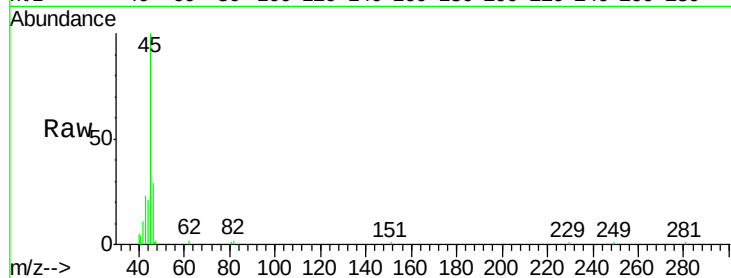
#13  
Ethanol  
Concen: 3.164 ppbv  
RT: 3.59 min Scan# 251  
Delta R.T. 0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | 45   | 46 | Ratio | Lower | Upper |
|---------|------|----|-------|-------|-------|
| 45      | 100  |    |       |       |       |
| 46      | 35.6 |    |       | 13.8  | 55.4  |

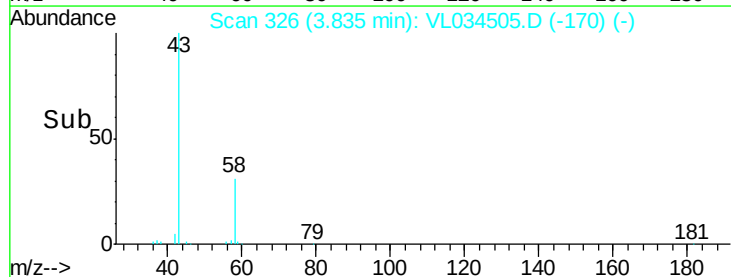
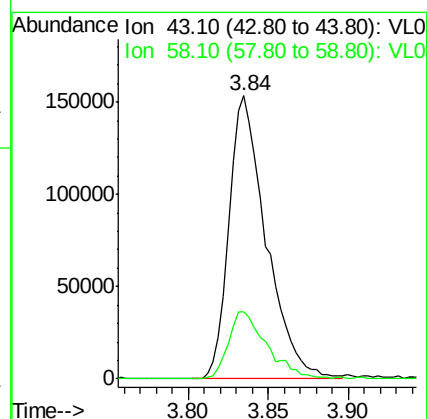
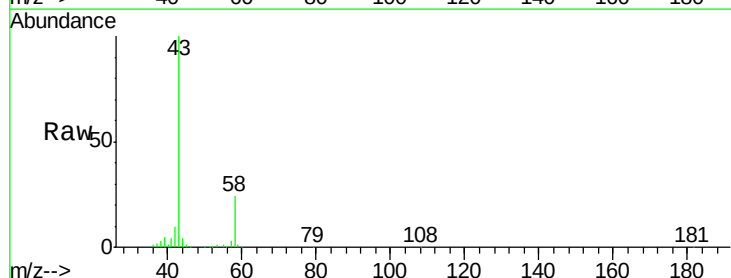
Manual Integrations  
APPROVED

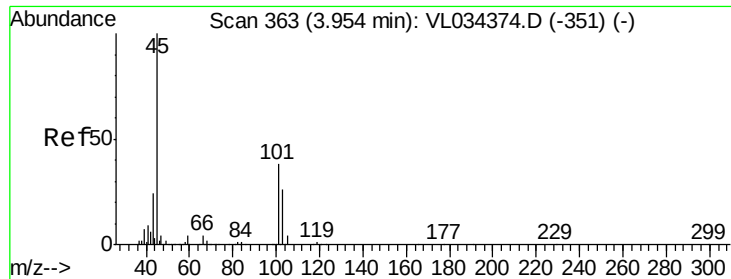
MMDadoda  
12/19/2019 3:48:04 PM



#15  
Acetone  
Concen: 1.792 ppbv  
RT: 3.84 min Scan# 326  
Delta R.T. 0.00 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | 43   | 58 | Ratio | Lower | Upper |
|---------|------|----|-------|-------|-------|
| 43      | 100  |    |       |       |       |
| 58      | 24.9 |    |       | 20.2  | 30.4  |





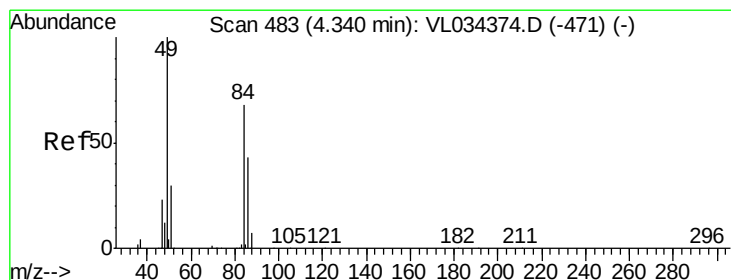
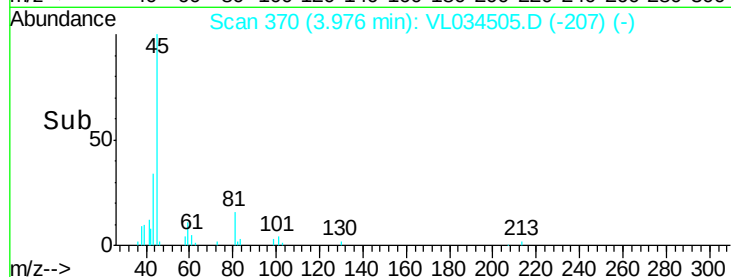
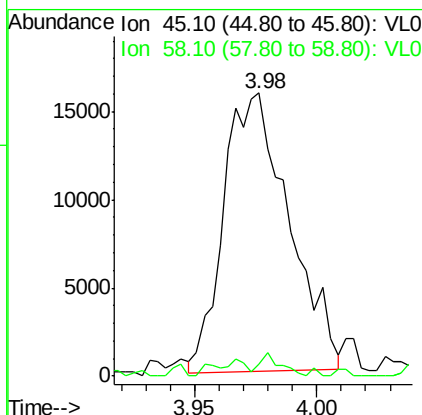
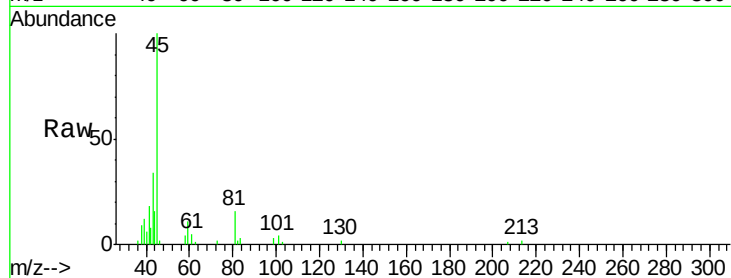
#19  
Isopropyl Alcohol  
Concen: 0.339 ppbv  
RT: 3.98 min Scan# 370  
Delta R.T. 0.02 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 45      | 100   |       |       |
| 58      | 0.0   | 1.3   | 1.9#  |

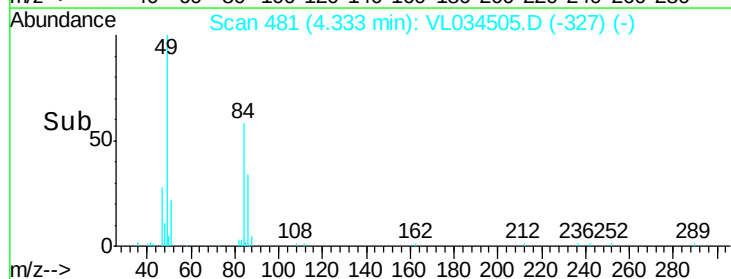
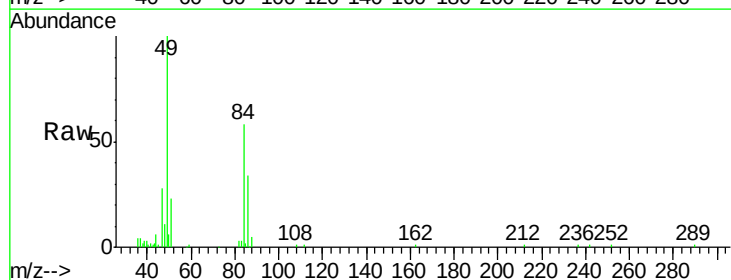
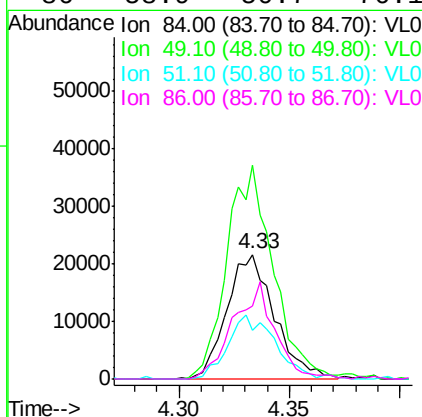
Manual Integrations  
APPROVED

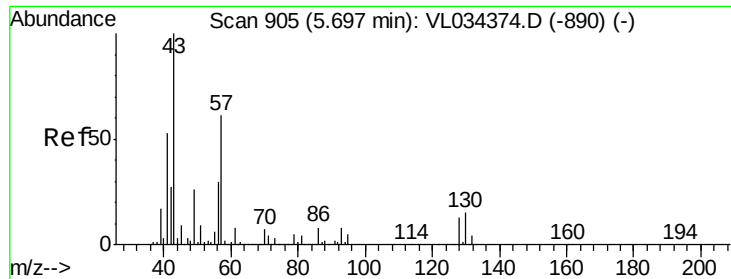
MMDadoda  
12/19/2019 3:48:04 PM



#20  
Methylene Chloride  
Concen: 0.675 ppbv  
RT: 4.33 min Scan# 481  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 84      | 100   |       |       |
| 49      | 170.9 | 116.8 | 175.2 |
| 51      | 39.5  | 35.6  | 53.4  |
| 86      | 58.9  | 50.7  | 76.1  |





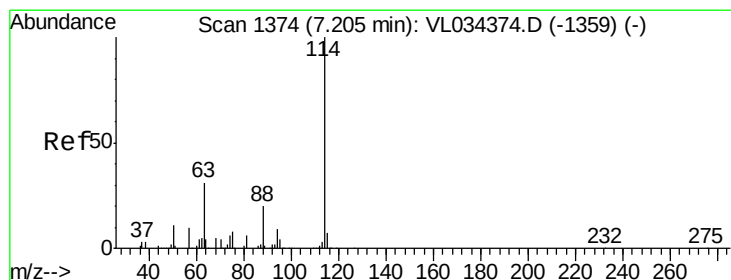
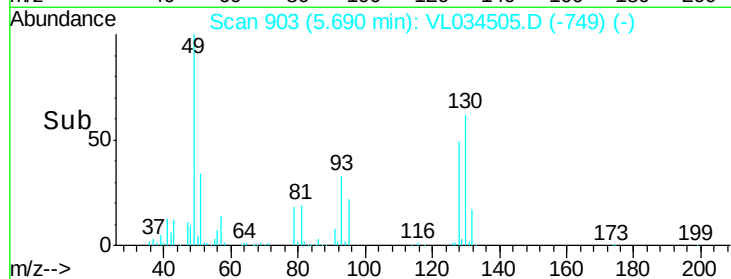
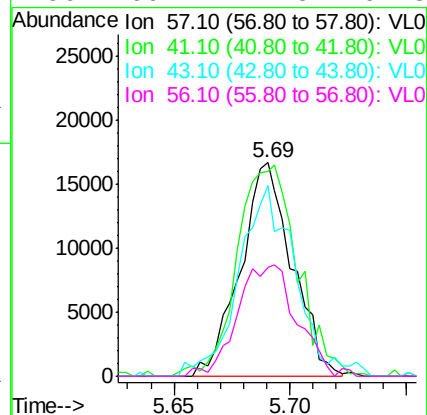
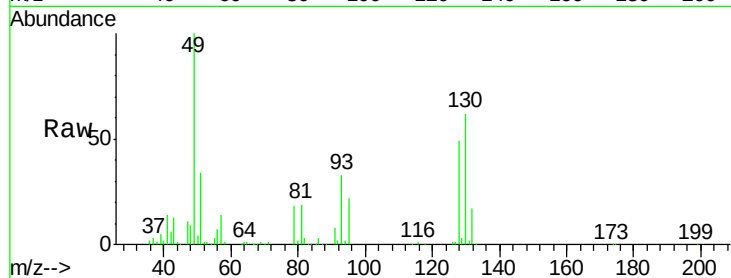
#26  
Hexane  
Concen: 0.248 ppbv  
RT: 5.69 min Scan# 903  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 57      | 100   |       |        |
| 41      | 114.9 | 75.0  | 112.4# |
| 43      | 97.0  | 186.6 | 279.8# |
| 56      | 60.1  | 41.5  | 62.3   |

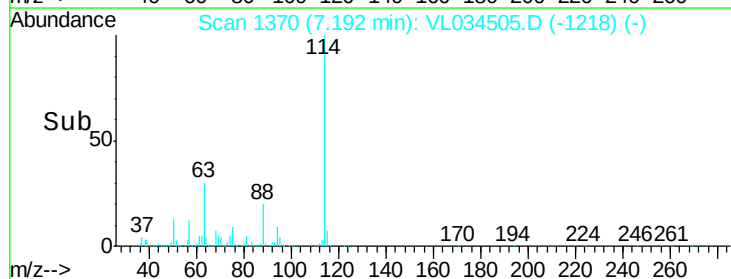
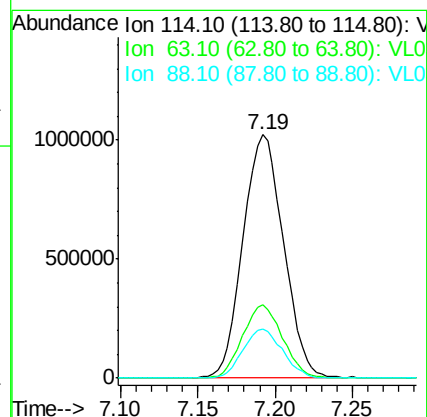
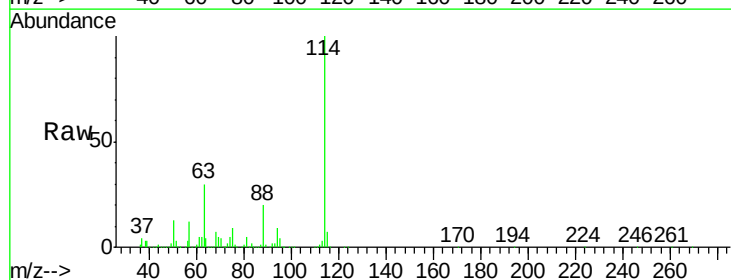
Manual Integrations  
APPROVED

MMDadoda  
12/19/2019 3:48:04 PM

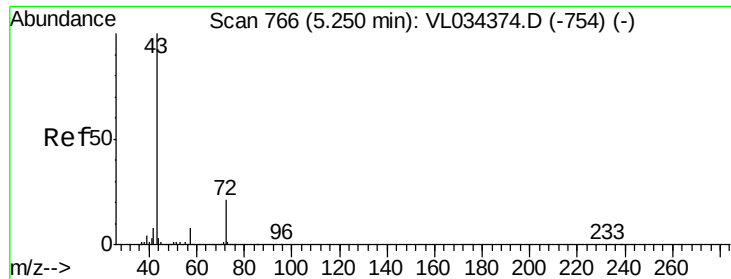


#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.19 min Scan# 1370  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 29.8  | 24.2  | 36.4  |
| 88      | 19.6  | 15.9  | 23.9  |







#34

2-Butanone

Concen: 0.168 ppbv m

RT: 5.26 min Scan# 768

Delta R.T. 0.01 min

Lab File: VL034505.D

Acq: 17 Dec 2019 23:11

Instrument :

MSVOA\_L

ClientSampleId :

LIHA-OA1

Tot Ion: 43 Resp: 25888

Ion Ratio Lower Upper

43 100

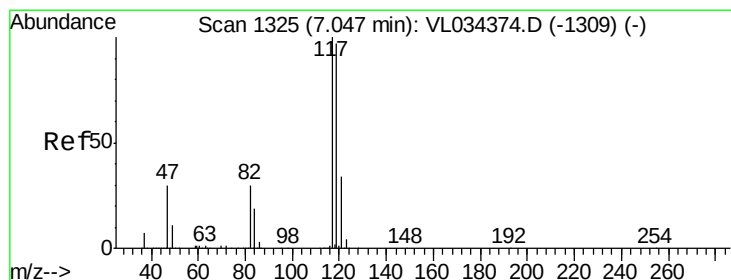
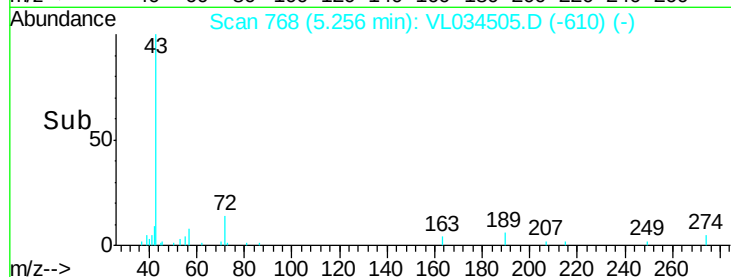
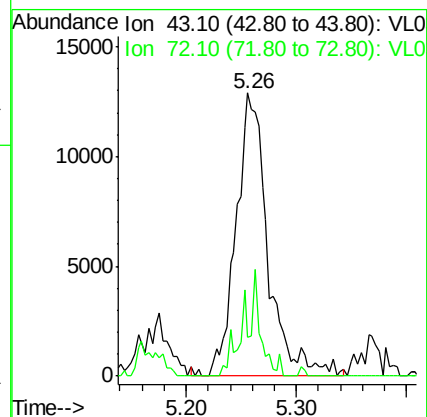
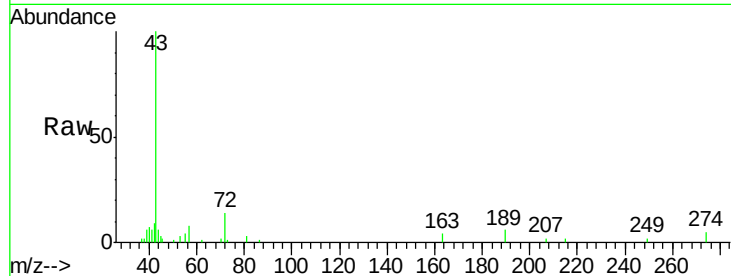
72 19.5 17.0 25.6

Manual Integrations

APPROVED

MMDadoda

12/19/2019 3:48:04 PM



#35

Carbon Tetrachloride

Concen: 0.068 ppbv m

RT: 7.03 min Scan# 1321

Delta R.T. -0.01 min

Lab File: VL034505.D

Acq: 17 Dec 2019 23:11

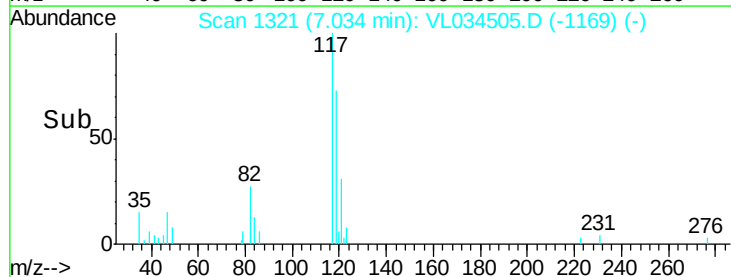
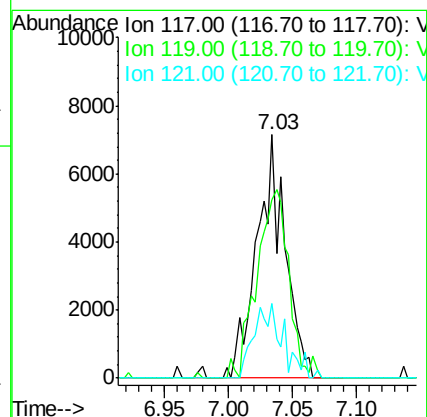
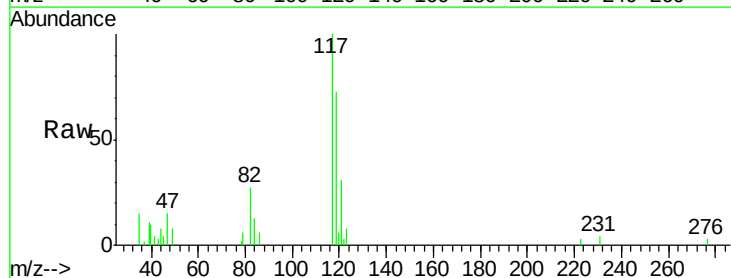
Tgt Ion: 117 Resp: 10964

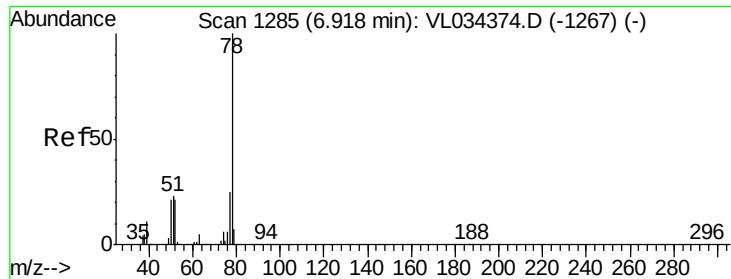
Ion Ratio Lower Upper

117 100

119 73.5 77.3 115.9#

121 30.8 27.4 41.2





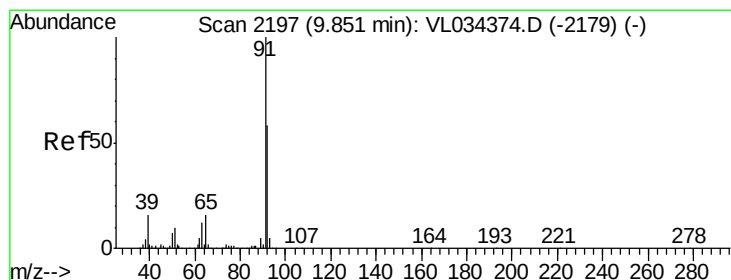
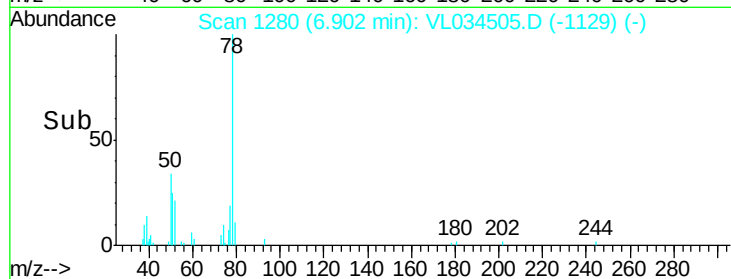
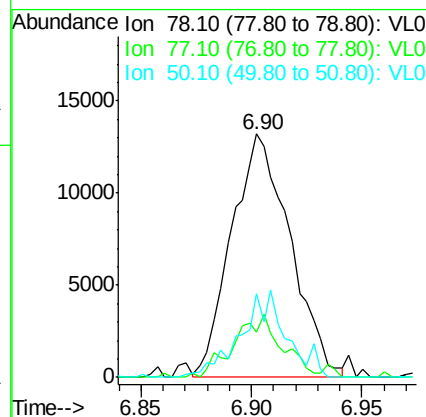
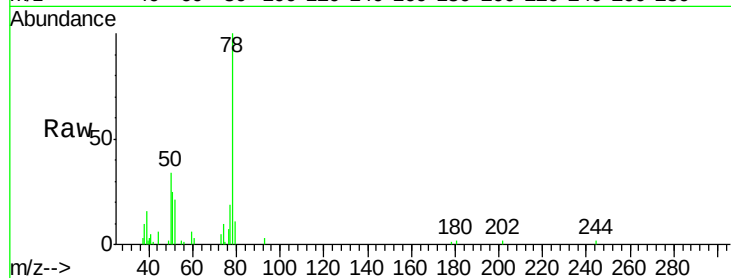
#36  
Benzene  
Concen: 0.130 ppbv  
RT: 6.90 min Scan# 1280  
Delta R.T. -0.02 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 17.5  | 20.2  | 30.4# |
| 50      | 34.6  | 17.1  | 25.7# |

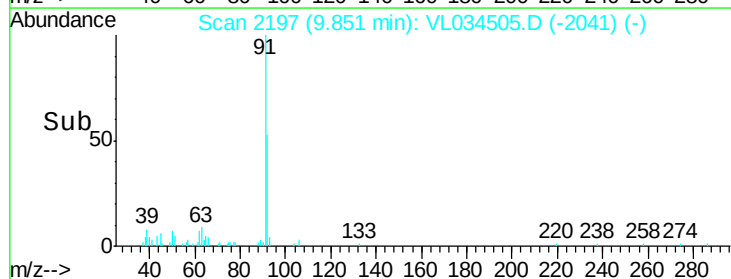
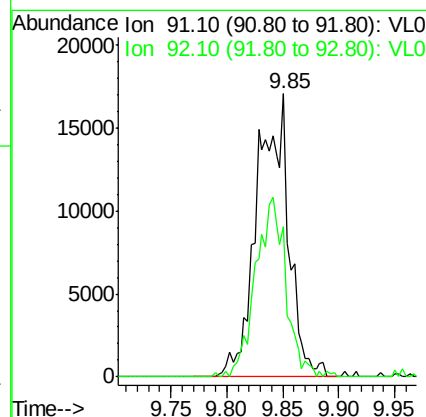
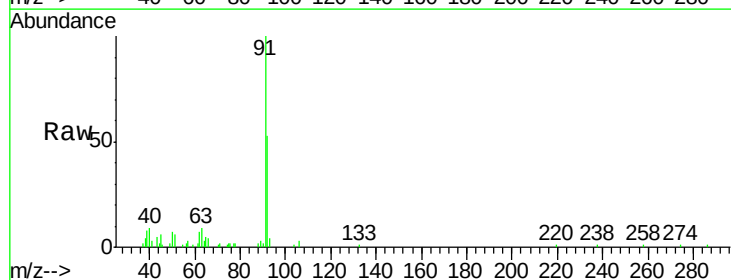
Manual Integrations  
APPROVED

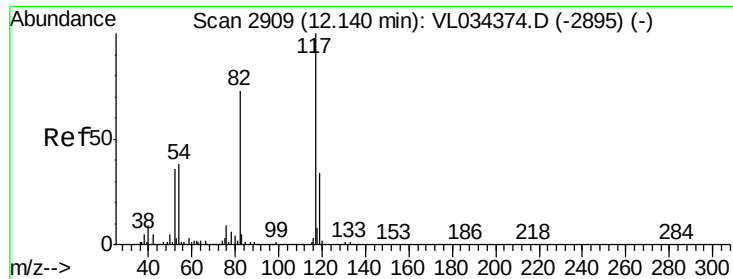
MMDadoda  
12/19/2019 3:48:04 PM



#53  
Toluene  
Concen: 0.159 ppbv m  
RT: 9.85 min Scan# 2197  
Delta R.T. 0.00 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 0.0   | 47.9  | 71.9# |





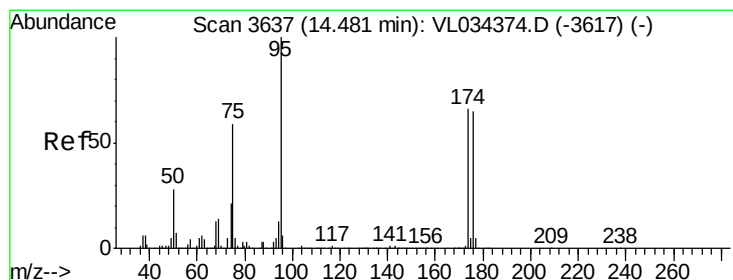
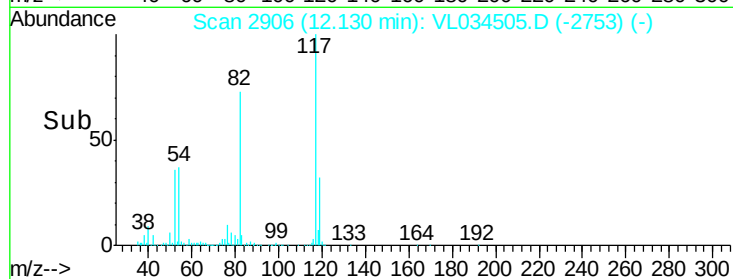
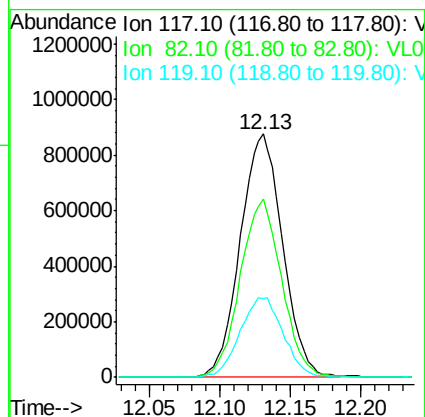
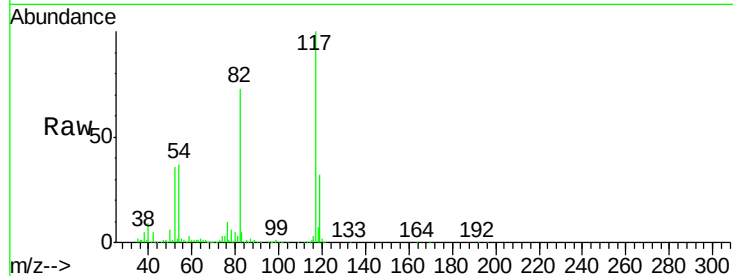
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.13 min Scan# 2906  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-OA1

| Tot Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 117     | 100  |       |       |       |
| 82      | 72.4 | 57.5  | 86.3  |       |
| 119     | 33.5 | 25.4  | 38.2  |       |

Manual Integrations  
APPROVED

MMDadoda  
12/19/2019 3:48:04 PM



#68  
1-Bromo-4-Fluorobenzene  
Concen: 10.158 ppbv  
RT: 14.47 min Scan# 3633  
Delta R.T. -0.01 min  
Lab File: VL034505.D  
Acq: 17 Dec 2019 23:11

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 95      | 100  |       |       |       |
| 174     | 65.9 | 52.2  | 78.2  |       |
| 175     | 4.6  | 3.8   | 5.8   |       |

