

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121620\  
 Data File : VL036178.D  
 Acq On : 16 Dec 2020 22:31  
 Operator : SY/AP  
 Sample : L5061-01DL 10X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AS-EFF-201210DL

Manual Integrations  
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 12/24/2020 7:56:10 AM

Quant Time: Dec 24 05:54:57 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Dec 0  
 QLast Update : Mon Dec 07 16:56:49 2020  
 Response via : Initial Calibration

| Internal Standards          |  |        | R.T.  | QIon     | Response | Conc   | Units   | Dev(Min) |
|-----------------------------|--|--------|-------|----------|----------|--------|---------|----------|
| 1) Bromochloromethane       |  |        | 5.67  | 49       | 1570081  | 10.00  | ppbv    | -0.02    |
| 33) 1,4-Difluorobenzene     |  |        | 7.18  | 114      | 3072282  | 10.00  | ppbv    | -0.02    |
| 55) Chlorobenzene-d5        |  |        | 12.10 | 117      | 2778994  | 10.00  | ppbv    | -0.01    |
| System Monitoring Compounds |  |        |       |          |          |        |         |          |
| 68) 1-Bromo-4-Fluorobenzene |  |        | 14.43 | 95       | 2425324  | 10.99  | ppbv    | -0.02    |
| Spiked Amount               |  | 10.000 | Range | 65 - 135 | Recovery | =      | 109.90% |          |
| Target Compounds            |  |        |       |          |          |        |         | Ovalue   |
| 2) Dichlorodifluoromethane  |  |        | 3.04  | 85       | 70511    | 0.385  | ppbv    | 92       |
| 3) Chlorodifluoromethane    |  |        | 2.98  | 51       | 129589   | 0.723  | ppbv    | 95       |
| 11) Trichlorofluoromethane  |  |        | 3.95  | 101      | 397310   | 1.847  | ppbv    | 97       |
| 13) Ethanol                 |  |        | 3.63  | 45       | 22672m   | 1.833  | ppbv    |          |
| 18) 1,1-Dichloroethene      |  |        | 4.29  | 96       | 22307    | 0.344  | ppbv    | 93       |
| 20) Methylene Chloride      |  |        | 4.35  | 84       | 41646m   | 0.539  | ppbv    |          |
| 24) 1,1-Dichloroethane      |  |        | 5.01  | 63       | 29051    | 0.164  | ppbv    | # 96     |
| 26) Hexane                  |  |        | 5.69  | 57       | 52046m   | 0.307  | ppbv    |          |
| 28) Methyl tert-Butyl Ether |  |        | 5.05  | 73       | 37350m   | 0.155  | ppbv    |          |
| 31) cis-1,2-Dichloroethene  |  |        | 5.55  | 61       | 267854   | 1.737  | ppbv    | # 87     |
| 32) 1,1,1-Trichloroethane   |  |        | 6.51  | 97       | 11274m   | 0.049  | ppbv    |          |
| 38) Trichloroethene         |  |        | 7.84  | 130      | 1181333  | 12.137 | ppbv    | 91       |
| 52) Tetrachloroethene       |  |        | 11.23 | 164      | 900919   | 9.558  | ppbv    | 93       |

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

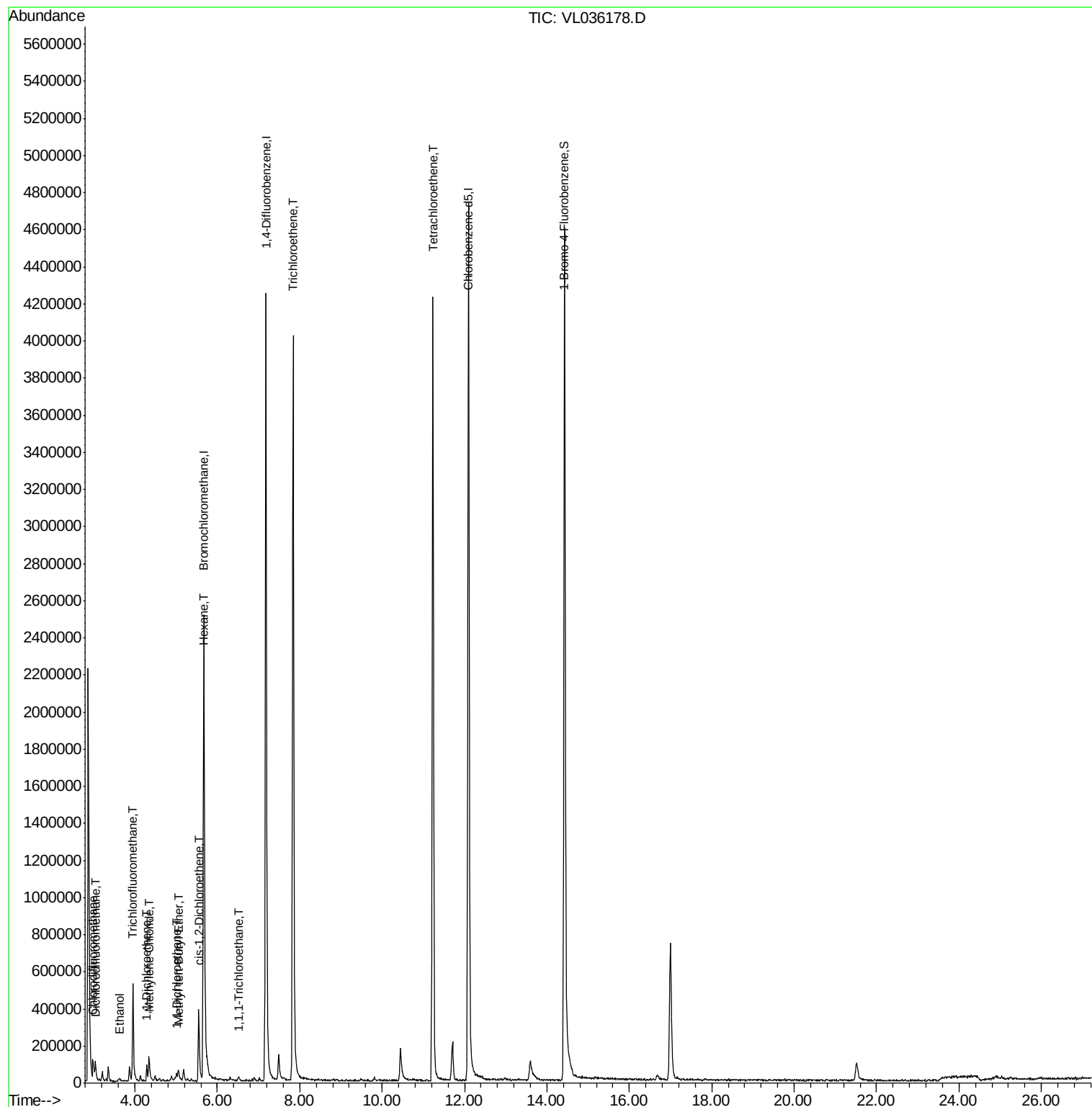
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL121620\  
Data File : VL036178.D  
Acq On : 16 Dec 2020 22:31  
Operator : SY/AP  
Sample : L5061-01DL 10X  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

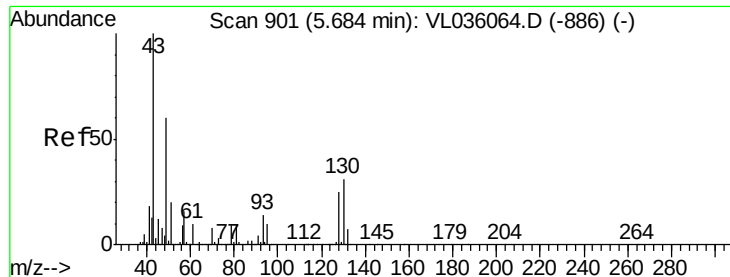
Instrument :  
MSVOA\_L  
ClientSampleId :  
AS-EFF-201210DL

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Quant Time: Dec 24 05:54:57 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Dec  
QLast Update : Mon Dec 07 16:56:49 2020  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.02 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

Instrument :

MSVOA\_L

ClientSampleId :

AS-EFF-201210DL

Tot Ion: 49 Resp: 1570081

Ion Ratio Lower Upper

49 100

128 35.9 21.1 63.1

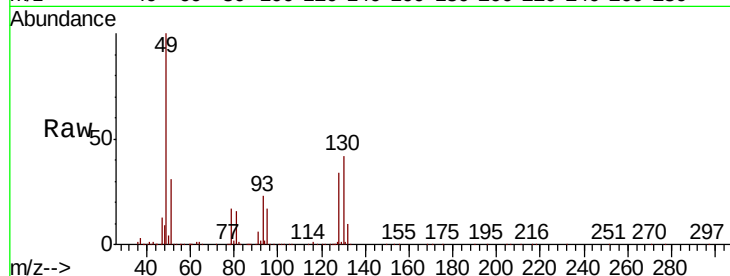
130 46.3 27.1 81.3

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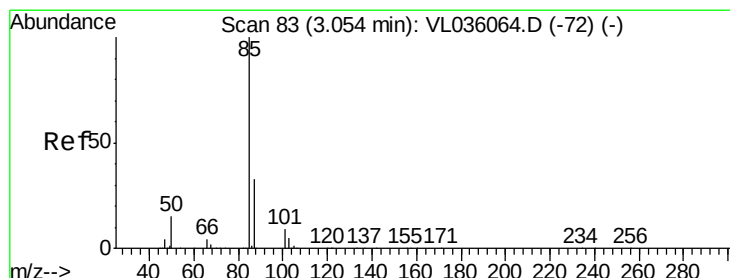
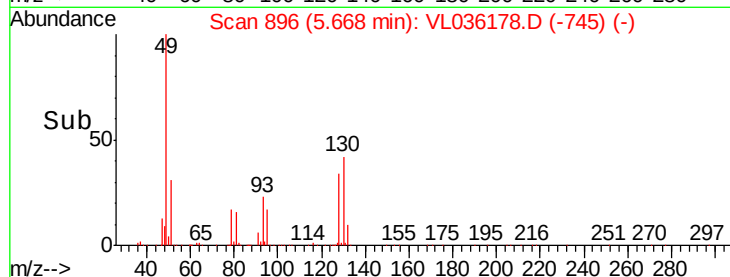
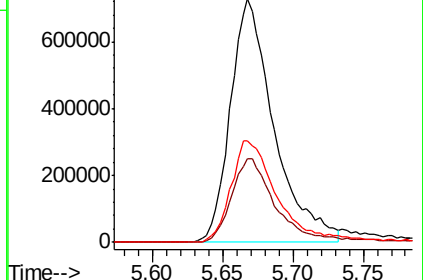
12/24/2020 7:56:10 AM



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: 0.385 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.01 min

Lab File: VL036178.D

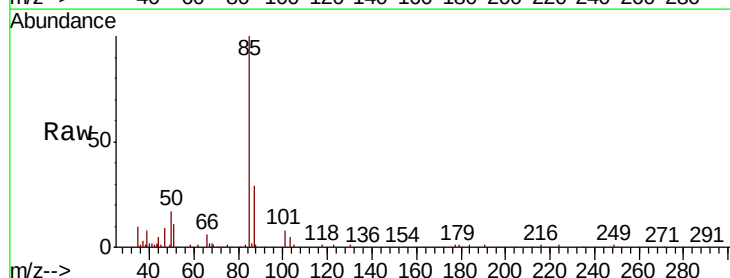
Acq: 16 Dec 2020 22:31

Tgt Ion: 85 Resp: 70511

Ion Ratio Lower Upper

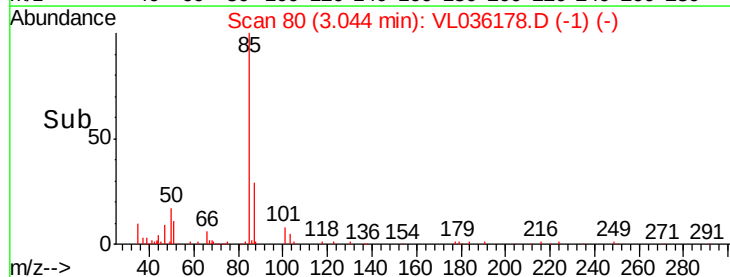
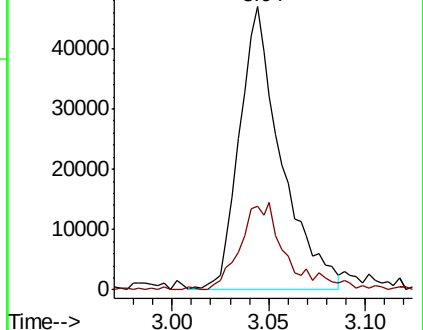
85 100

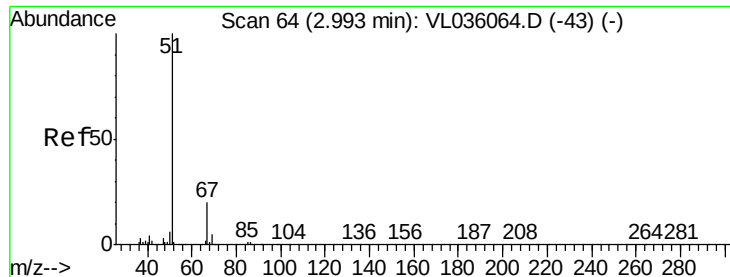
87 28.4 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.723 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.01 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

Instrument :

MSVOA\_L

ClientSampleId :

AS-EFF-201210DL

Tot Ion: 51 Resp: 129589

Ion Ratio Lower Upper

51 100

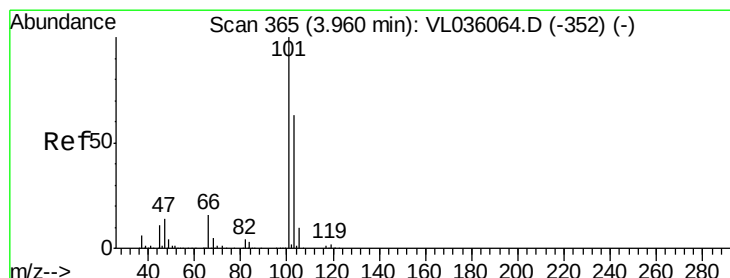
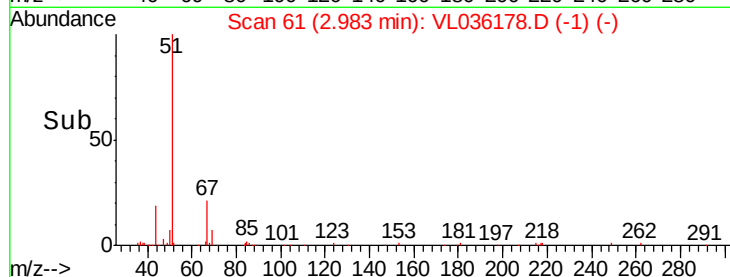
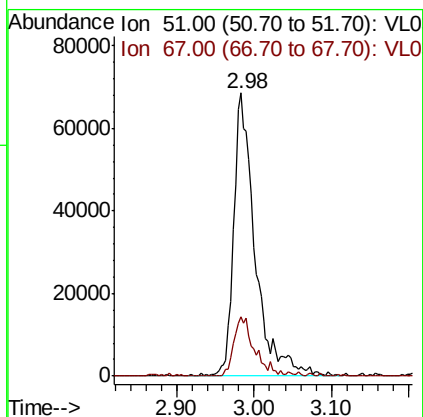
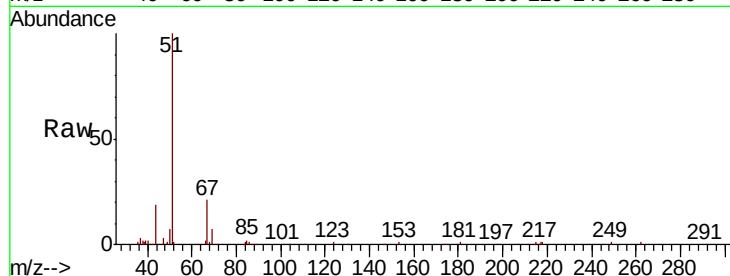
67 20.1 14.3 21.5

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#11

Trichlorofluoromethane

Concen: 1.847 ppbv

RT: 3.95 min Scan# 362

Delta R.T. -0.01 min

Lab File: VL036178.D

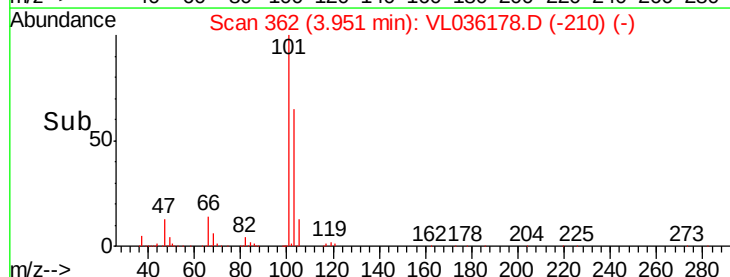
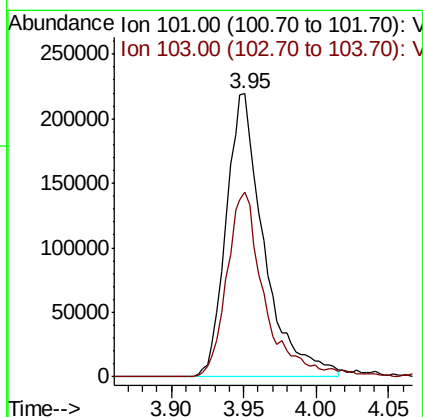
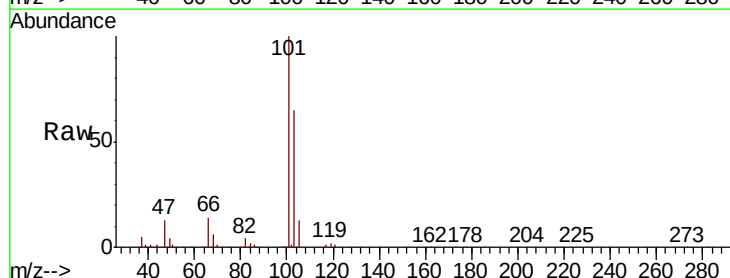
Acq: 16 Dec 2020 22:31

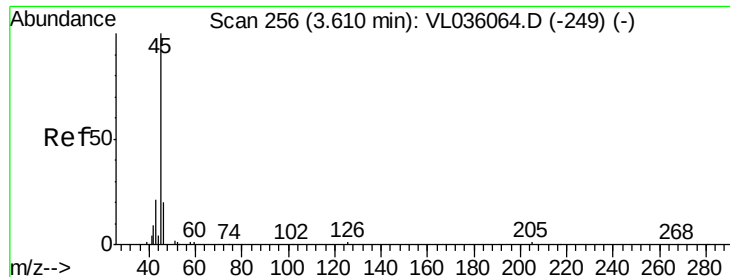
Tgt Ion: 101 Resp: 397310

Ion Ratio Lower Upper

101 100

103 65.0 50.3 75.5





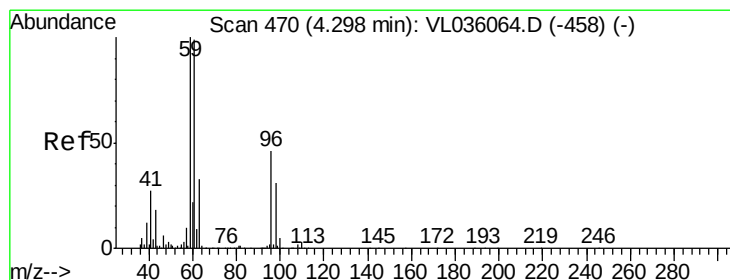
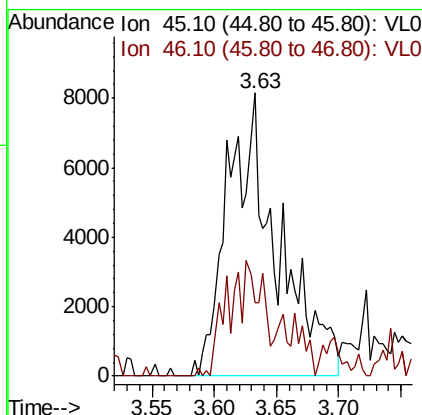
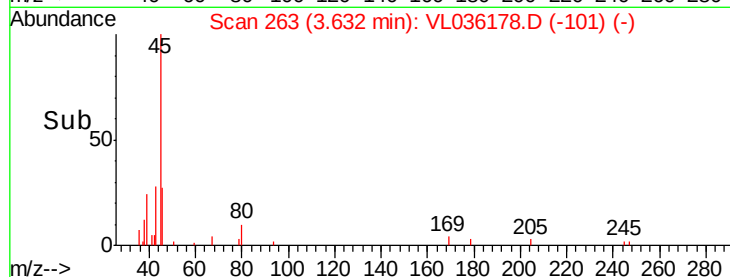
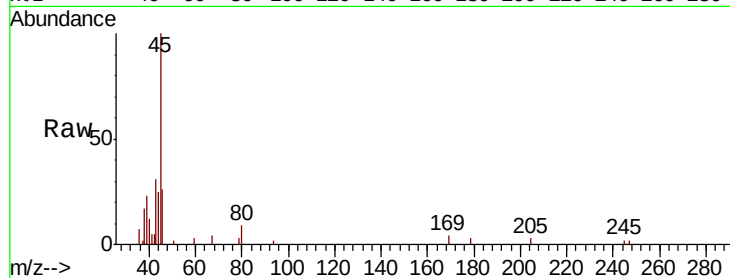
#13  
Ethanol  
Concen: 1.833 ppbv m  
RT: 3.63 min Scan# 263  
Delta R.T. 0.02 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
AS-EFF-201210DL

Tot Ion: 45 Resp: 22672  
Ion Ratio Lower Upper  
45 100  
46 0.0 19.0 75.8#

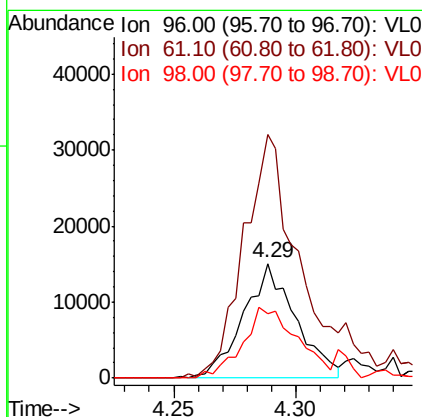
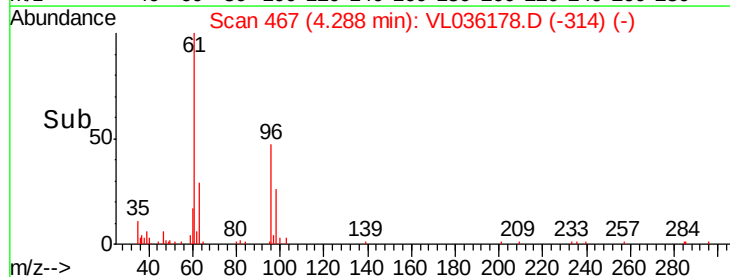
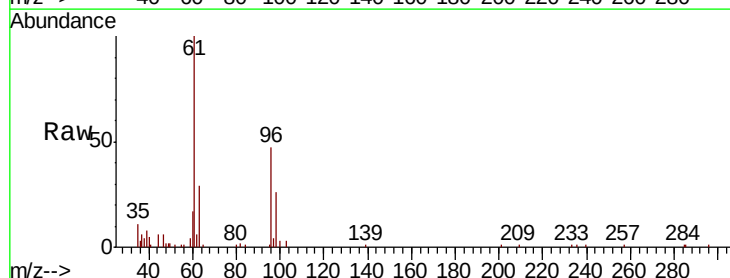
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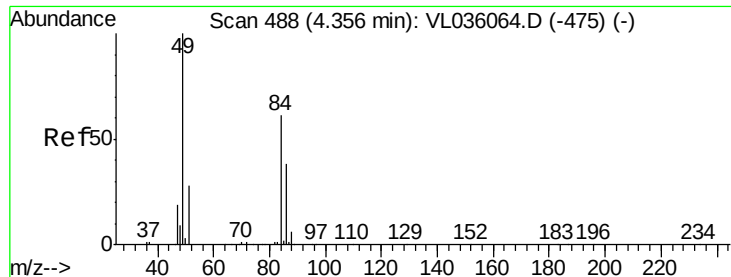
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#18  
1,1-Dichloroethene  
Concen: 0.344 ppbv  
RT: 4.29 min Scan# 467  
Delta R.T. -0.01 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

Tgt Ion: 96 Resp: 22307  
Ion Ratio Lower Upper  
96 100  
61 207.8 171.4 257.2  
98 56.1 54.2 81.2





#20

Methylene Chloride

Concen: 0.539 ppbv m

RT: 4.35 min Scan# 485

Delta R.T. -0.01 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

Instrument :

MSVOA\_L

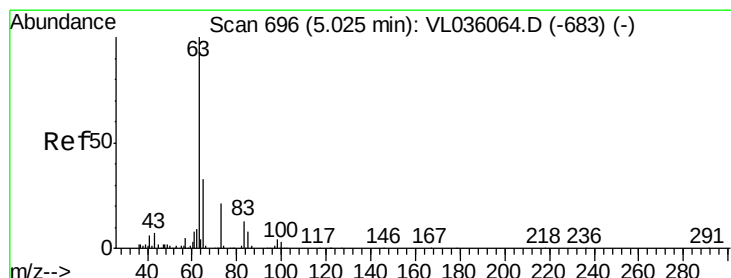
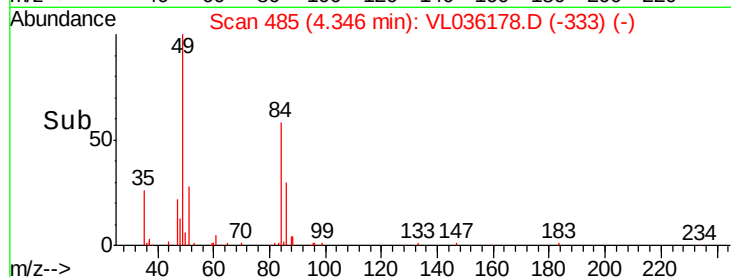
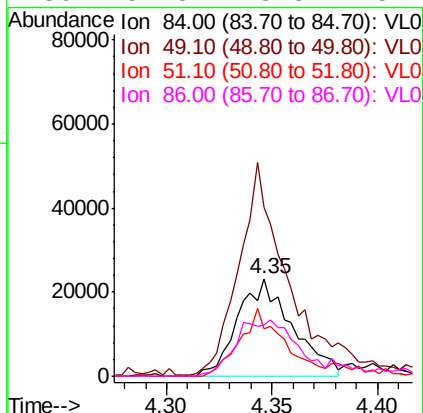
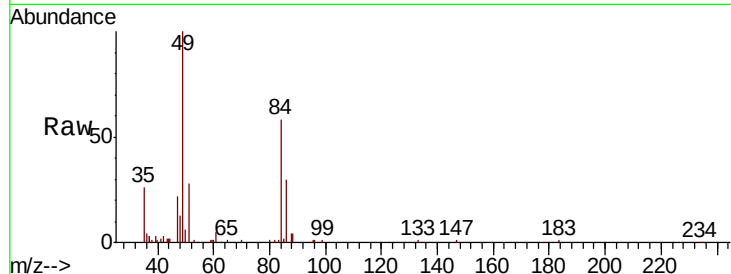
ClientSampleId :

AS-EFF-201210DL

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 84    | Resp: | 41646 |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 172.9 | 133.0 | 199.4 |
| 51       | 48.0  | 38.9  | 58.3  |
| 86       | 52.3  | 48.8  | 73.2  |

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#24

1,1-Dichloroethane

Concen: 0.164 ppbv

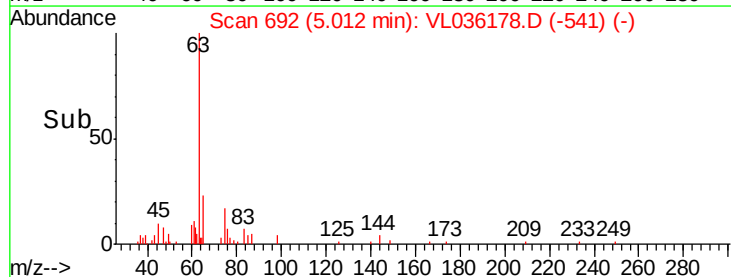
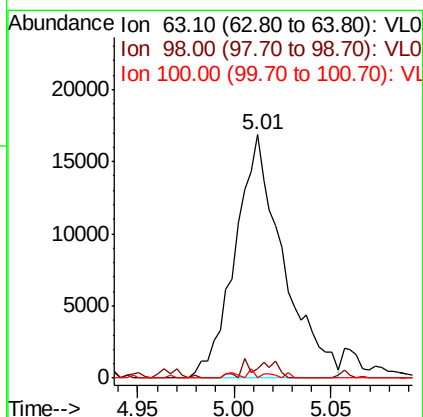
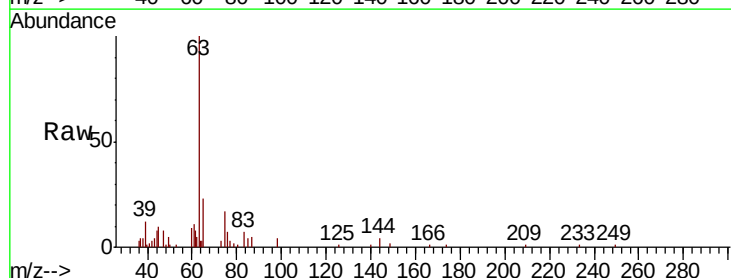
RT: 5.01 min Scan# 692

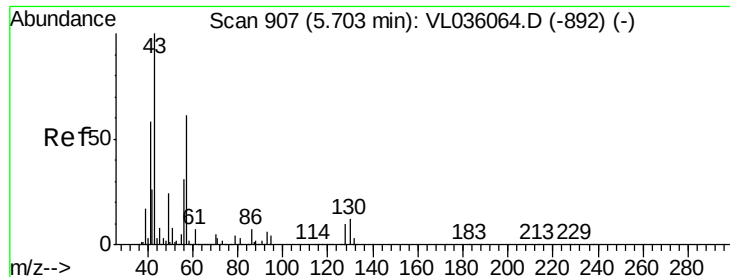
Delta R.T. -0.01 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 63    | Resp: | 29051 |
| Ion      | Ratio | Lower | Upper |
| 63       | 100   |       |       |
| 98       | 4.0   | 2.2   | 6.6   |
| 100      | 0.0   | 1.5   | 4.4#  |





#26

Hexane

Concen: 0.307 ppbv m

RT: 5.69 min Scan# 902

Delta R.T. -0.02 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

Instrument :

MSVOA\_L

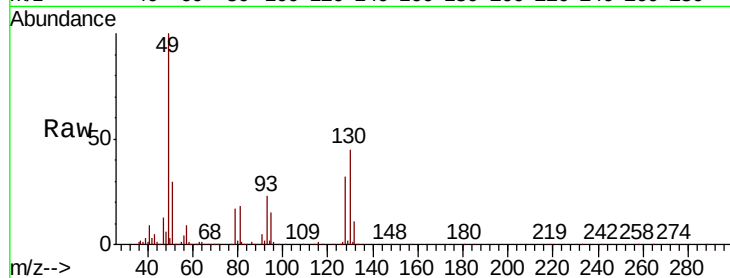
ClientSampleId :

AS-EFF-201210DL

| Tot Ion | 57    | Resp  | 52046  |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 57      | 100   |       |        |
| 41      | 119.6 | 82.9  | 124.3  |
| 43      | 86.5  | 199.9 | 299.9# |
| 56      | 57.5  | 43.1  | 64.7   |

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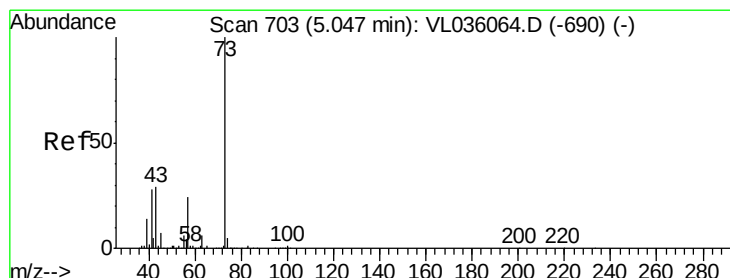
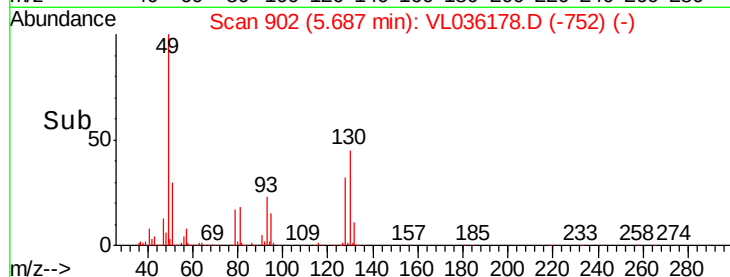
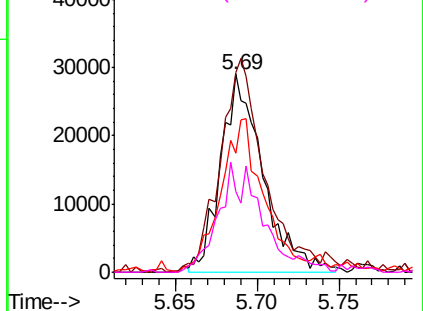
Abundance

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



#28

Methyl tert-Butyl Ether

Concen: 0.155 ppbv m

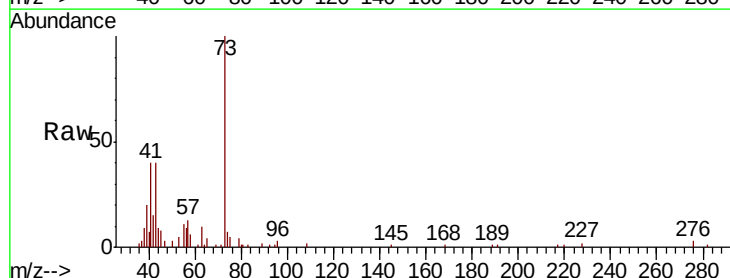
RT: 5.05 min Scan# 704

Delta R.T. 0.00 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

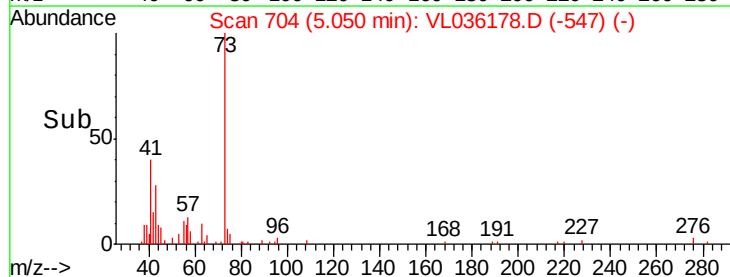
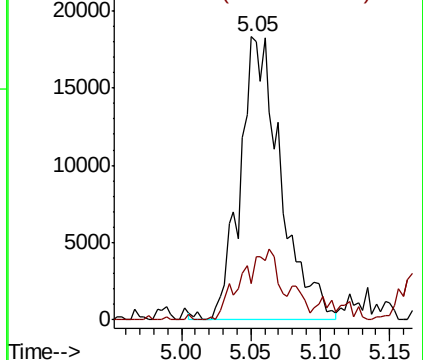
| Tgt Ion | 73    | Resp  | 37350 |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 73      | 100   |       |       |
| 57      | 0.0   | 19.2  | 28.8# |

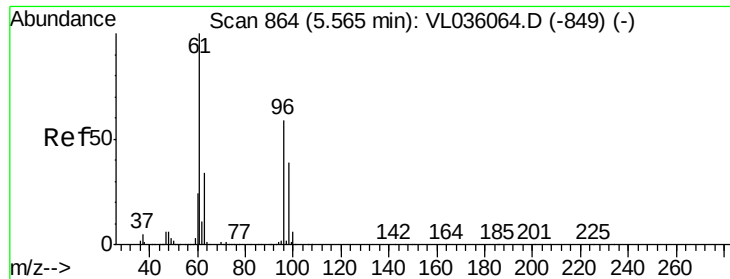


Abundance

Ion 73.10 (72.80 to 73.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#31

cis-1,2-Dichloroethene

Concen: 1.737 ppbv

RT: 5.55 min Scan# 859

Delta R.T. -0.02 min

Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

Instrument :

MSVOA\_L

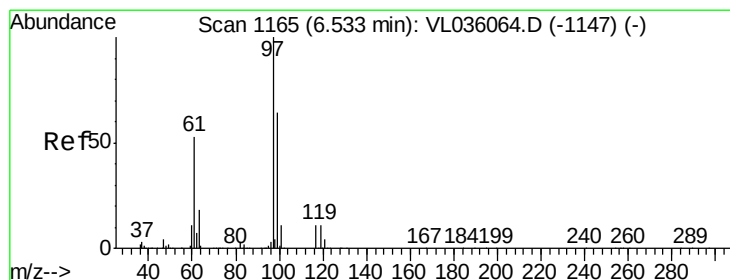
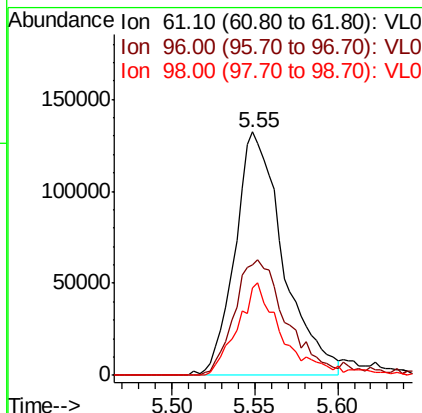
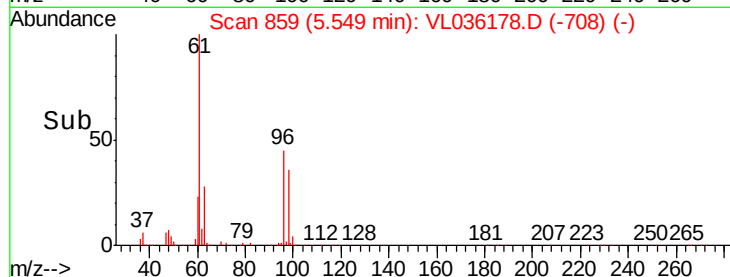
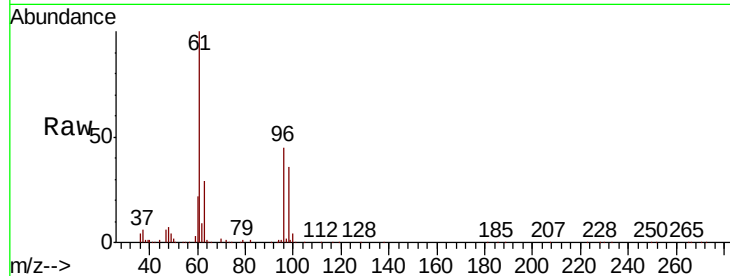
ClientSampleId :

AS-EFF-201210DL

| Tot Ion   | 61    | Resp  | 267854 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 61        | 100   |       |        |
| 96        | 45.3  | 47.3  | 70.9#  |
| 98        | 36.1  | 31.4  | 47.0   |

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#32

1,1,1-Trichloroethane

Concen: 0.049 ppbv m

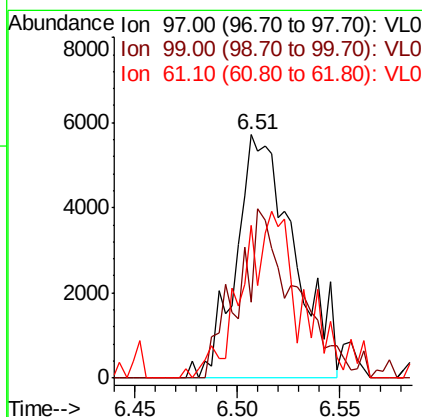
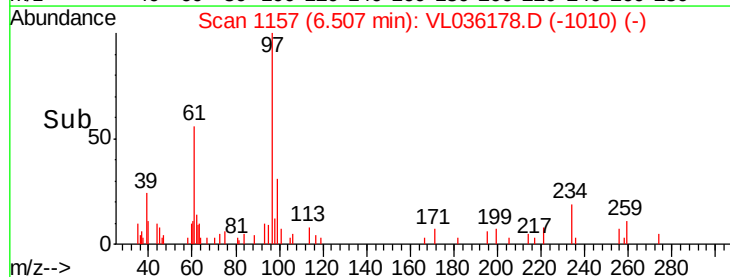
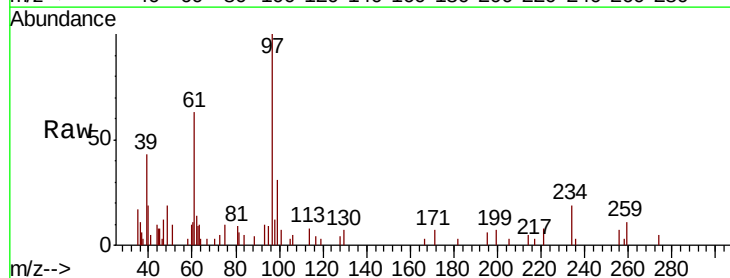
RT: 6.51 min Scan# 1157

Delta R.T. -0.03 min

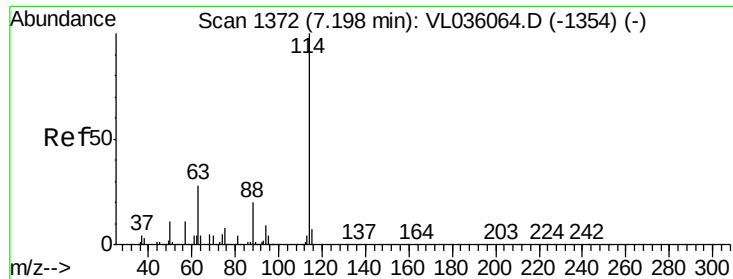
Lab File: VL036178.D

Acq: 16 Dec 2020 22:31

| Tgt Ion   | 97    | Resp  | 11274 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 97        | 100   |       |       |
| 99        | 68.6  | 52.4  | 78.6  |
| 61        | 71.8  | 43.4  | 65.0# |







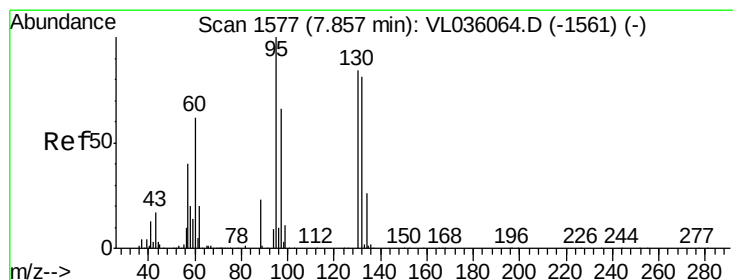
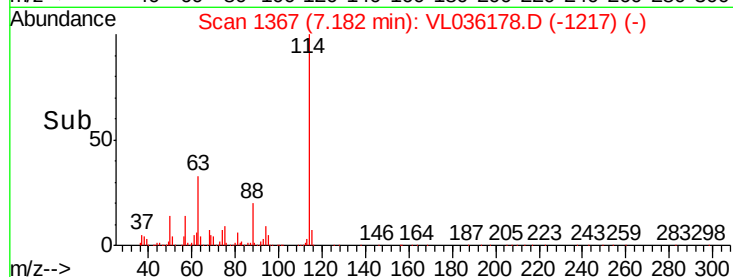
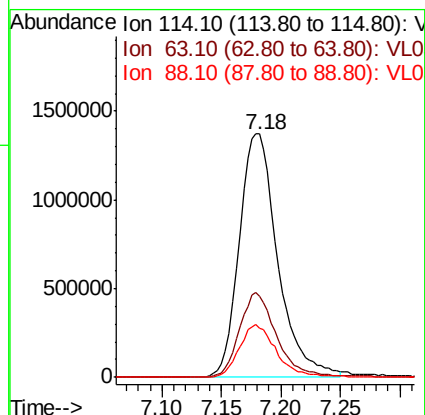
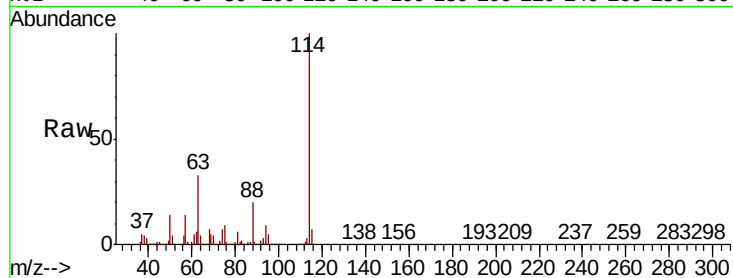
#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.18 min Scan# 1367  
Delta R.T. -0.02 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
AS-EFF-201210DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 33.9  | 23.6  | 35.4  |
| 88      | 21.3  | 15.8  | 23.6  |

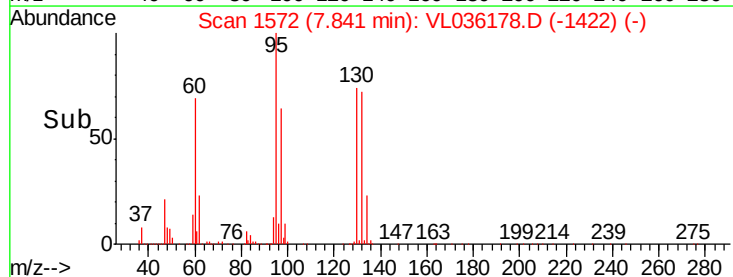
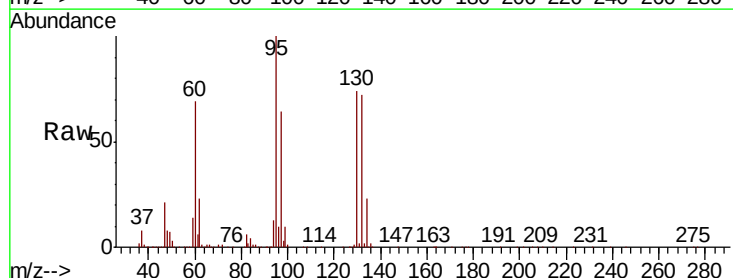
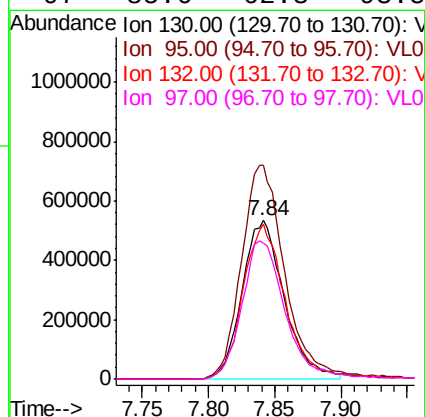
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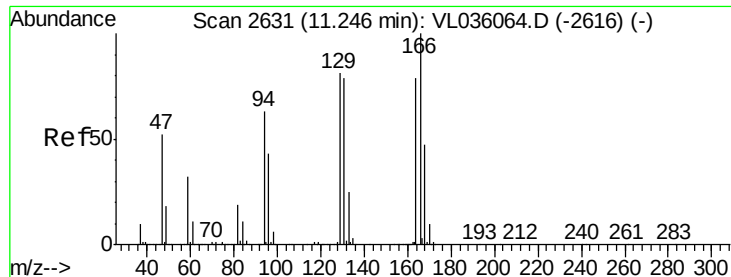
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#38  
Trichloroethene  
Concen: 12.137 ppbv  
RT: 7.84 min Scan# 1572  
Delta R.T. -0.02 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 130     | 100   |       |       |
| 95      | 134.7 | 95.2  | 142.8 |
| 132     | 97.6  | 76.9  | 115.3 |
| 97      | 85.6  | 62.3  | 93.5  |





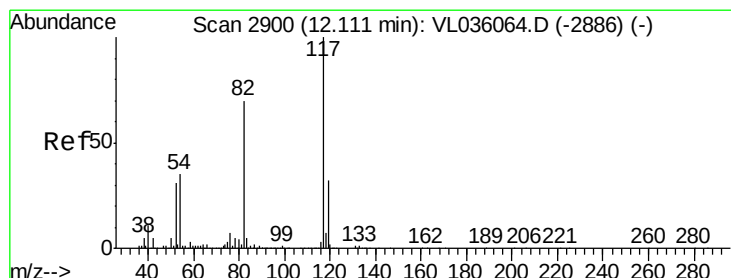
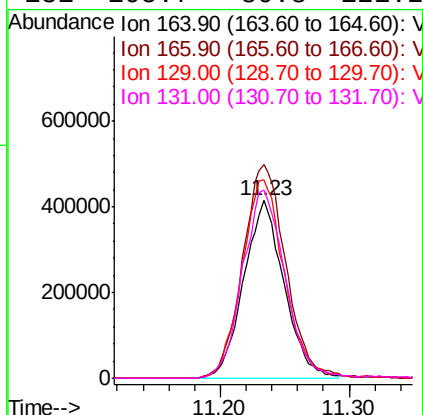
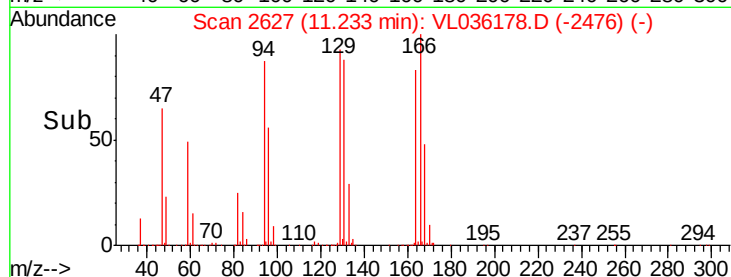
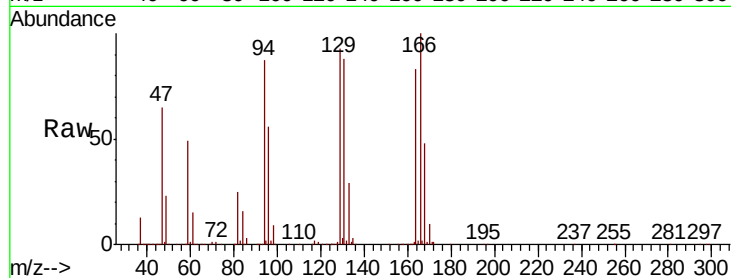
#52  
Tetrachloroethene  
Concen: 9.558 ppbv  
RT: 11.23 min Scan# 2627  
Delta R.T. -0.01 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

Instrument :  
MSVOA\_L  
ClientSampleId :  
AS-EFF-201210DL

| Tot Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 164     | 100   |       |       |       |
| 166     | 120.2 | 101.9 | 152.9 |       |
| 129     | 111.5 | 82.1  | 123.1 |       |
| 131     | 105.7 | 80.8  | 121.2 |       |

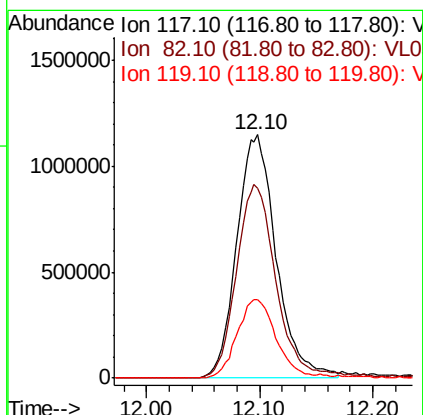
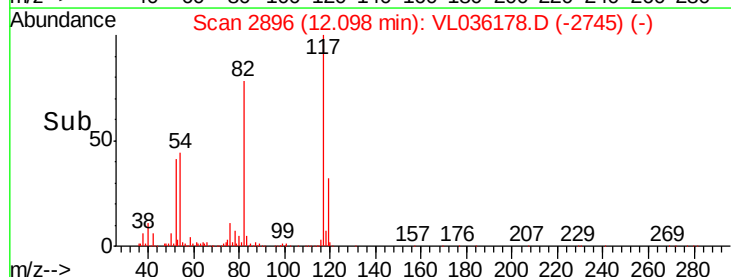
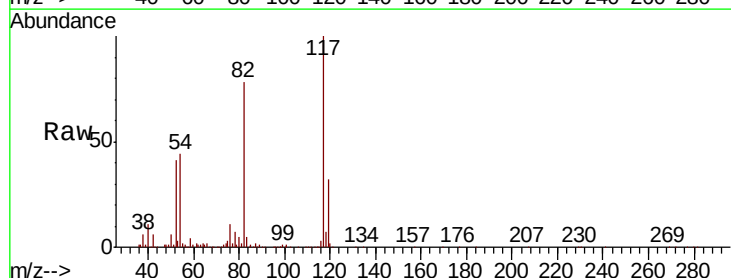
Manual Integrations  
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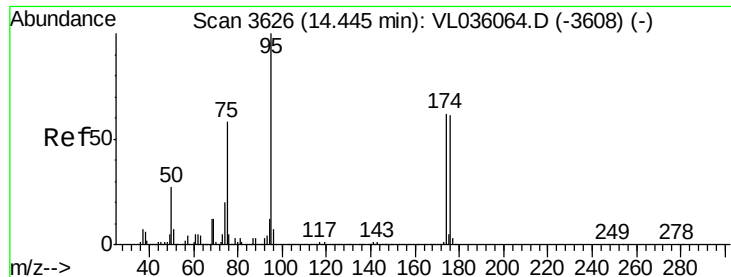
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#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.10 min Scan# 2896  
Delta R.T. -0.01 min  
Lab File: VL036178.D  
Acq: 16 Dec 2020 22:31

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 117     | 100   |      |       |       |
| 82      | 82.5  | 0.0  | 0.0#  |       |
| 119     | 33.1  | 0.0  | 0.0#  |       |





#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.991 ppbv  
 RT: 14.43 min Scan# 3621  
 Delta R.T. -0.02 min  
 Lab File: VL036178.D  
 Acq: 16 Dec 2020 22:31

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AS-EFF-201210DL

Tot Ion: 95 Resp: 2425324  
 Ion Ratio Lower Upper  
 95 100  
 174 53.6 50.7 76.1  
 175 4.1 4.0 6.0

Manual Integrations  
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