

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL081219\  
 Data File : VL034102.D  
 Acq On : 12 Aug 2019 12:59  
 Operator : SY/AP  
 Sample : VL0812ABS01  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL0812ABS01

Manual Integrations  
 APPROVED

MMDadoda  
 8/16/2019 8:54:18 AM

Quant Time: Aug 13 04:53:41 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL080519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Aug 0  
 QLast Update : Mon Aug 05 17:09:48 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.72  | 49   | 1195894  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.24  | 114  | 2387197  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.18 | 117  | 2568528m | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.52  | 95    | 2114330  | 10.15    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 101.50% |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Ovalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.05 | 85   | 1453129  | 9.873 | ppbv   | 98     |
| 3) Chlorodifluoromethane       | 2.98 | 51   | 1174019  | 8.490 | ppbv   | 97     |
| 4) Chloromethane               | 3.14 | 50   | 764516   | 8.575 | ppbv   | 99     |
| 5) Vinyl Chloride              | 3.26 | 62   | 675877   | 8.604 | ppbv   | 100    |
| 6) Bromomethane                | 3.48 | 94   | 360544   | 8.882 | ppbv   | 95     |
| 7) Chloroethane                | 3.56 | 64   | 245259   | 8.334 | ppbv   | 99     |
| 8) Dichlorotetrafluoroethane   | 3.19 | 85   | 1398563  | 8.237 | ppbv   | 94     |
| 9) Propene                     | 3.01 | 41   | 684114   | 8.391 | ppbv   | 99     |
| 10) Heptane                    | 8.19 | 43   | 1749424  | 8.295 | ppbv   | 98     |
| 11) Trichlorofluoromethane     | 3.97 | 101  | 1443399  | 8.272 | ppbv   | 98     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.51 | 101  | 1015836  | 8.250 | ppbv   | 93     |
| 13) Ethanol                    | 3.62 | 45   | 130555   | 5.682 | ppbv   | 98     |
| 14) Bromoethene                | 3.75 | 108  | 452045   | 8.221 | ppbv   | 98     |
| 15) Acetone                    | 3.87 | 43   | 1249264  | 7.310 | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.33 | 39   | 683224   | 8.221 | ppbv   | 100    |
| 17) tert-Butyl alcohol         | 4.32 | 59   | 1232797  | 7.731 | ppbv   | 100    |
| 18) 1,1-Dichloroethene         | 4.31 | 96   | 465815   | 7.999 | ppbv   | 94     |
| 19) Isopropyl Alcohol          | 3.99 | 45   | 988447   | 7.428 | ppbv # | 46     |
| 20) Methylene Chloride         | 4.37 | 84   | 417509   | 8.147 | ppbv   | 96     |
| 21) Allyl Chloride             | 4.44 | 41   | 953021   | 8.057 | ppbv   | 98     |
| 22) trans-1,2-Dichloroethene   | 4.92 | 96   | 481859   | 8.515 | ppbv   | 100    |
| 23) Vinyl Acetate              | 5.11 | 43   | 2254948  | 7.958 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.05 | 63   | 1444708  | 8.569 | ppbv   | 99     |
| 25) Ethyl Acetate              | 5.72 | 43   | 2668502  | 7.939 | ppbv   | 100    |
| 26) Hexane                     | 5.73 | 57   | 1165615  | 8.181 | ppbv   | 97     |
| 27) Carbon Disulfide           | 4.58 | 76   | 1284853  | 8.554 | ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.07 | 73   | 1948232  | 8.177 | ppbv   | 99     |
| 29) Chloroform                 | 5.80 | 83   | 1686497  | 8.708 | ppbv   | 99     |
| 30) Cyclohexane                | 7.19 | 84   | 967534   | 8.597 | ppbv   | 98     |
| 31) cis-1,2-Dichloroethene     | 5.60 | 61   | 1201946  | 8.541 | ppbv   | 97     |
| 32) 1,1,1-Trichloroethane      | 6.57 | 97   | 1597653  | 8.335 | ppbv   | 99     |
| 34) 2-Butanone                 | 5.28 | 43   | 1889532  | 8.514 | ppbv   | 98     |
| 35) Carbon Tetrachloride       | 7.08 | 117  | 1545143  | 8.433 | ppbv   | 98     |
| 36) Benzene                    | 6.96 | 78   | 2325212  | 8.570 | ppbv   | 98     |
| 37) 1,2-Dichloroethane         | 6.36 | 62   | 1330732  | 9.116 | ppbv   | 100    |
| 38) Trichloroethene            | 7.91 | 130  | 763128m  | 7.262 | ppbv   |        |
| 39) 1,2-Dichloropropane        | 7.69 | 63   | 975812   | 8.913 | ppbv   | 99     |
| 40) 1,4-Dioxane                | 7.90 | 88   | 352659   | 8.537 | ppbv # | 96     |
| 41) Tetrahydrofuran            | 6.10 | 42   | 1181658  | 8.655 | ppbv   | 99     |
| 42) Bromodichloromethane       | 7.87 | 83   | 1861433  | 9.095 | ppbv   | 98     |
| 43) Methyl Methacrylate        | 8.08 | 69   | 974837   | 8.759 | ppbv   | 99     |

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 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|--------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.94  | 57   | 3951925  | 8.135  | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.36  | 75   | 1278039  | 9.059  | ppbv   | 99       |
| 46) cis-1,3-Dichloropropene   | 8.78  | 75   | 1442615  | 8.860  | ppbv   | 98       |
| 47) 1,1,2-Trichloroethane     | 9.56  | 97   | 918998   | 8.781  | ppbv   | 98       |
| 48) Dibromochloromethane      | 10.40 | 129  | 1436756  | 8.561  | ppbv   | 100      |
| 49) Bromoform                 | 13.14 | 173  | 1283259  | 8.552  | ppbv   | 98       |
| 50) 4-Methyl-2-Pentanone      | 8.81  | 43   | 2795630  | 8.276  | ppbv   | 100      |
| 51) 2-Hexanone                | 10.22 | 43   | 2417905  | 8.518  | ppbv # | 99       |
| 52) Tetrachloroethene         | 11.31 | 164  | 760328   | 7.256  | ppbv   | 98       |
| 53) Toluene                   | 9.89  | 91   | 2581202  | 8.244  | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.70 | 107  | 1349244  | 8.509  | ppbv   | 98       |
| 56) 1,1,1,2-Tetrachloroethane | 12.22 | 131  | 933282   | 7.948  | ppbv   | 95       |
| 57) Chlorobenzene             | 12.24 | 112  | 1806772  | 7.811  | ppbv # | 96       |
| 58) Ethyl Benzene             | 12.81 | 91   | 3476663  | 8.050  | ppbv   | 98       |
| 59) m/p-Xylene                | 13.09 | 91   | 5554221m | 16.021 | ppbv   |          |
| 60) o-Xylene                  | 13.79 | 91   | 2725067  | 7.866  | ppbv   | 98       |
| 61) Styrene                   | 13.63 | 104  | 2184104  | 7.943  | ppbv   | 97       |
| 62) Isopropylbenzene          | 14.77 | 105  | 3584437  | 7.707  | ppbv   | 100      |
| 63) 1,1,2,2-Tetrachloroethane | 13.78 | 83   | 1951509  | 7.798  | ppbv   | 100      |
| 64) n-propylbenzene           | 15.66 | 120  | 960198   | 7.812  | ppbv   | 93       |
| 65) tert-Butylbenzene         | 16.85 | 119  | 3071691  | 7.415  | ppbv   | 96       |
| 66) Benzyl Chloride           | 17.10 | 91   | 1856212  | 8.095  | ppbv   | 97       |
| 67) sec-Butylbenzene          | 17.40 | 105  | 4366341  | 7.468  | ppbv   | 99       |
| 69) p-Isopropyltoluene        | 17.76 | 119  | 3625397  | 7.518  | ppbv   | 98       |
| 70) n-Butylbenzene            | 18.66 | 91   | 4101473  | 7.885  | ppbv   | 98       |
| 71) 2-Chlorotoluene           | 15.56 | 91   | 2960330  | 7.917  | ppbv   | 98       |
| 72) 4-Ethyltoluene            | 15.94 | 105  | 3256921  | 7.987  | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.10 | 105  | 3095956  | 7.892  | ppbv   | 94       |
| 74) 1,2,4-Trimethylbenzene    | 16.87 | 105  | 3064246  | 7.509  | ppbv   | 96       |
| 75) 1,3-Dichlorobenzene       | 17.11 | 146  | 1767170  | 7.732  | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.25 | 146  | 1795063  | 7.686  | ppbv   | 98       |
| 77) 1,2-Dichlorobenzene       | 17.93 | 146  | 1760657  | 7.814  | ppbv   | 98       |
| 78) Hexachloro-1,3-Butadiene  | 23.49 | 225  | 1453022  | 8.134  | ppbv   | 100      |
| 79) Naphthalene               | 22.34 | 128  | 3058034  | 7.216  | ppbv   | 99       |
| 80) Naphthalene, 2-methyl-    | 25.06 | 142  | 1376499  | 10.357 | ppbv   | 97       |
| 81) 1,2,4-Trichlorobenzene    | 22.06 | 180  | 1735429  | 7.377  | ppbv   | 100      |

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

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