

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091219\  
 Data File : VL034168.D  
 Acq On : 13 Sep 2019 9:23  
 Operator : SY/AP  
 Sample : VSTDCCC010  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleID :  
 VSTDCCC010EC

Manual Integrations  
 APPROVED

MMDadoda  
 9/14/2019 12:09:50 AM

Quant Time: Sep 13 10:06:54 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep 0  
 QLast Update : Thu Sep 05 10:21:45 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.70  | 49   | 1207906  | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 7.22  | 114  | 2115026  | 10.00 | ppbv  | -0.01    |
| 55) Chlorobenzene-d5    | 12.16 | 117  | 2215748m | 10.00 | ppbv  | -0.02    |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.50  | 95    | 1867391  | 10.31    | ppbv | -0.02   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 103.10% |

| Target Compounds               |      |     |         |        | Ovalue    |
|--------------------------------|------|-----|---------|--------|-----------|
| 2) Dichlorodifluoromethane     | 3.03 | 85  | 1319930 | 6.625  | ppbv 93   |
| 3) Chlorodifluoromethane       | 2.97 | 51  | 1378744 | 10.240 | ppbv 98   |
| 4) Chloromethane               | 3.13 | 50  | 827661  | 9.832  | ppbv 96   |
| 5) Vinyl Chloride              | 3.24 | 62  | 719845  | 9.388  | ppbv 99   |
| 6) Bromomethane                | 3.47 | 94  | 354991  | 9.381  | ppbv 97   |
| 7) Chloroethane                | 3.55 | 64  | 265885  | 10.178 | ppbv 95   |
| 8) Dichlorotetrafluoroethane   | 3.18 | 85  | 1479464 | 9.226  | ppbv 98   |
| 9) Propene                     | 2.99 | 41  | 685085  | 9.094  | ppbv 97   |
| 10) Heptane                    | 8.18 | 43  | 1789413 | 9.153  | ppbv 99   |
| 11) Trichlorofluoromethane     | 3.95 | 101 | 1575892 | 9.699  | ppbv 97   |
| 12) 1,1,2-Trichlorotrifluoroet | 4.49 | 101 | 1025292 | 9.432  | ppbv 98   |
| 13) Ethanol                    | 3.60 | 45  | 139860  | 9.477  | ppbv 100  |
| 14) Bromoethene                | 3.74 | 108 | 452941  | 9.624  | ppbv 97   |
| 15) Acetone                    | 3.85 | 43  | 1364152 | 9.371  | ppbv 99   |
| 16) 1,3-Butadiene              | 3.32 | 39  | 719529  | 9.760  | ppbv 99   |
| 17) tert-Butyl alcohol         | 4.30 | 59  | 1141980 | 10.806 | ppbv 99   |
| 18) 1,1-Dichloroethene         | 4.30 | 96  | 470797  | 9.480  | ppbv 99   |
| 19) Isopropyl Alcohol          | 3.97 | 45  | 1063425 | 10.823 | ppbv 99   |
| 20) Methylene Chloride         | 4.35 | 84  | 435450  | 9.047  | ppbv 96   |
| 21) Allyl Chloride             | 4.42 | 41  | 952942  | 9.929  | ppbv 99   |
| 22) trans-1,2-Dichloroethene   | 4.90 | 96  | 469473  | 9.444  | ppbv 96   |
| 23) Vinyl Acetate              | 5.10 | 43  | 2409123 | 9.754  | ppbv 99   |
| 24) 1,1-Dichloroethane         | 5.03 | 63  | 1555732 | 9.491  | ppbv 99   |
| 25) Ethyl Acetate              | 5.70 | 43  | 2875843 | 8.999  | ppbv 99   |
| 26) Hexane                     | 5.72 | 57  | 1206296 | 8.491  | ppbv 98   |
| 27) Carbon Disulfide           | 4.56 | 76  | 1316389 | 10.267 | ppbv 99   |
| 28) Methyl tert-Butyl Ether    | 5.05 | 73  | 1923825 | 9.242  | ppbv 100  |
| 29) Chloroform                 | 5.78 | 83  | 1771932 | 9.247  | ppbv 100  |
| 30) Cyclohexane                | 7.18 | 84  | 942230  | 9.173  | ppbv 96   |
| 31) cis-1,2-Dichloroethene     | 5.58 | 61  | 1326752 | 9.751  | ppbv 94   |
| 32) 1,1,1-Trichloroethane      | 6.55 | 97  | 1724362 | 9.524  | ppbv 97   |
| 34) 2-Butanone                 | 5.27 | 43  | 2028982 | 9.979  | ppbv 97   |
| 35) Carbon Tetrachloride       | 7.06 | 117 | 1707834 | 10.357 | ppbv 99   |
| 36) Benzene                    | 6.93 | 78  | 2232424 | 9.234  | ppbv # 94 |
| 37) 1,2-Dichloroethane         | 6.35 | 62  | 1612707 | 10.875 | ppbv 98   |
| 38) Trichloroethene            | 7.89 | 130 | 749976  | 8.314  | ppbv 95   |
| 39) 1,2-Dichloropropane        | 7.66 | 63  | 1013739 | 9.799  | ppbv 95   |
| 40) 1,4-Dioxane                | 7.88 | 88  | 353385  | 9.295  | ppbv # 97 |
| 41) Tetrahydrofuran            | 6.08 | 42  | 1218172 | 9.993  | ppbv 97   |
| 42) Bromodichloromethane       | 7.85 | 83  | 1989311 | 10.292 | ppbv 99   |
| 43) Methyl Methacrylate        | 8.06 | 69  | 1001812 | 10.059 | ppbv 93   |

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| Internal Standards            | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|--------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.92  | 57   | 4107083  | 9.215  | ppbv   | 98       |
| 45) t-1,3-Dichloropropene     | 9.34  | 75   | 1311737  | 11.206 | ppbv   | 100      |
| 46) cis-1,3-Dichloropropene   | 8.76  | 75   | 1471647  | 10.334 | ppbv   | 96       |
| 47) 1,1,2-Trichloroethane     | 9.54  | 97   | 892783   | 9.472  | ppbv   | 96       |
| 48) Dibromochloromethane      | 10.37 | 129  | 1483103  | 10.545 | ppbv   | 96       |
| 49) Bromoform                 | 13.13 | 173  | 1175587  | 9.534  | ppbv   | 100      |
| 50) 4-Methyl-2-Pentanone      | 8.79  | 43   | 2955227  | 9.524  | ppbv   | 97       |
| 51) 2-Hexanone                | 10.19 | 43   | 2531092  | 9.443  | ppbv # | 96       |
| 52) Tetrachloroethene         | 11.30 | 164  | 707723   | 8.302  | ppbv   | 96       |
| 53) Toluene                   | 9.87  | 91   | 2471555  | 9.244  | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.69 | 107  | 1323333  | 9.424  | ppbv   | 98       |
| 56) 1,1,1,2-Tetrachloroethane | 12.20 | 131  | 942972   | 9.922  | ppbv # | 60       |
| 57) Chlorobenzene             | 12.23 | 112  | 1739082  | 9.124  | ppbv   | 99       |
| 58) Ethyl Benzene             | 12.79 | 91   | 3315322  | 9.125  | ppbv   | 100      |
| 59) m/p-Xylene                | 13.08 | 91   | 5441979m | 18.361 | ppbv   |          |
| 60) o-Xylene                  | 13.77 | 91   | 2667495  | 9.036  | ppbv   | 99       |
| 61) Styrene                   | 13.61 | 104  | 2026285  | 9.176  | ppbv   | 98       |
| 62) Isopropylbenzene          | 14.75 | 105  | 3422552  | 8.910  | ppbv   | 100      |
| 63) 1,1,2,2-Tetrachloroethane | 13.76 | 83   | 1874404  | 7.791  | ppbv   | 99       |
| 64) n-propylbenzene           | 15.65 | 120  | 884508   | 9.193  | ppbv   | 93       |
| 65) tert-Butylbenzene         | 16.83 | 119  | 2838082  | 8.562  | ppbv   | 96       |
| 66) Benzyl Chloride           | 17.08 | 91   | 1313119  | 10.744 | ppbv   | 97       |
| 67) sec-Butylbenzene          | 17.38 | 105  | 4135532  | 8.676  | ppbv   | 99       |
| 69) p-Isopropyltoluene        | 17.74 | 119  | 3411363  | 8.944  | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.64 | 91   | 3893775  | 8.973  | ppbv   | 100      |
| 71) 2-Chlorotoluene           | 15.54 | 91   | 2821346  | 8.992  | ppbv   | 100      |
| 72) 4-Ethyltoluene            | 15.93 | 105  | 3034262  | 9.110  | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.09 | 105  | 2902273  | 8.966  | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.85 | 105  | 2912589  | 8.738  | ppbv   | 98       |
| 75) 1,3-Dichlorobenzene       | 17.09 | 146  | 1565184  | 8.862  | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.23 | 146  | 1665055  | 8.995  | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.91 | 146  | 1608626  | 8.896  | ppbv   | 98       |
| 78) Hexachloro-1,3-Butadiene  | 23.47 | 225  | 1442920  | 11.697 | ppbv   | 99       |
| 79) Naphthalene               | 22.32 | 128  | 3440836  | 11.418 | ppbv # | 97       |
| 80) Naphthalene, 2-methyl-    | 25.05 | 142  | 1674995  | 16.013 | ppbv   | 99       |
| 81) 1,2,4-Trichlorobenzene    | 22.05 | 180  | 1751812m | 10.684 | ppbv   |          |

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

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