

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL050619\  
 Data File : VL033655.D  
 Acq On : 6 May 2019 11:39  
 Operator : SY/AP  
 Sample : VSTDIC002  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC002

Manual Integrations  
 APPROVED

MMDadoda  
 5/8/2019 12:05:52 PM

Quant Time: May 06 12:25:37 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050619AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon May 0  
 QLast Update : Mon May 06 12:00:34 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 1036504  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 2576562  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 2607405  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.57  | 95    | 2073527  | 9.96     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.60% |

| Target Compounds               |      |     |        |              | Ovalue |
|--------------------------------|------|-----|--------|--------------|--------|
| 2) Dichlorodifluoromethane     | 3.08 | 85  | 542953 | 3.141 ppbv   | 99     |
| 3) Chlorodifluoromethane       | 3.01 | 51  | 337506 | 2.701 ppbv   | 93     |
| 4) Chloromethane               | 3.17 | 50  | 171703 | 2.494 ppbv   | 99     |
| 5) Vinyl Chloride              | 3.29 | 62  | 167577 | 2.340 ppbv   | 93     |
| 6) Bromomethane                | 3.52 | 94  | 103151 | 2.424 ppbv   | 100    |
| 7) Chloroethane                | 3.60 | 64  | 57874  | 2.419 ppbv   | 99     |
| 8) Dichlorotetrafluoroethane   | 3.22 | 85  | 442421 | 2.538 ppbv   | 98     |
| 9) Propene                     | 3.04 | 41  | 123747 | 2.845 ppbv   | 97     |
| 10) Heptane                    | 8.25 | 43  | 306892 | 2.317 ppbv   | 98     |
| 11) Trichlorofluoromethane     | 4.00 | 101 | 492281 | 2.559 ppbv   | 95     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.55 | 101 | 325889 | 2.467 ppbv   | 99     |
| 13) Ethanol                    | 3.65 | 45  | 36849  | 2.293 ppbv   | 98     |
| 14) Bromoethene                | 3.79 | 108 | 130649 | 2.441 ppbv   | 98     |
| 15) Acetone                    | 3.90 | 43  | 359597 | 2.756 ppbv   | 100    |
| 16) 1,3-Butadiene              | 3.36 | 39  | 148471 | 2.556 ppbv   | 99     |
| 17) tert-Butyl alcohol         | 4.36 | 59  | 236886 | 2.159 ppbv   | 97     |
| 18) 1,1-Dichloroethene         | 4.35 | 96  | 139976 | 2.441 ppbv   | 96     |
| 19) Isopropyl Alcohol          | 4.03 | 45  | 193218 | 2.217 ppbv # | 96     |
| 20) Methylene Chloride         | 4.41 | 84  | 127451 | 2.497 ppbv   | 93     |
| 21) Allyl Chloride             | 4.48 | 41  | 199071 | 2.436 ppbv   | 98     |
| 22) trans-1,2-Dichloroethene   | 4.96 | 96  | 144956 | 2.561 ppbv   | 99     |
| 23) Vinyl Acetate              | 5.15 | 43  | 442043 | 2.338 ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.09 | 63  | 322739 | 2.282 ppbv   | 97     |
| 25) Ethyl Acetate              | 5.77 | 43  | 535947 | 2.221 ppbv   | 99     |
| 26) Hexane                     | 5.78 | 57  | 232416 | 2.277 ppbv   | 96     |
| 27) Carbon Disulfide           | 4.62 | 76  | 325559 | 2.568 ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.11 | 73  | 407580 | 2.376 ppbv   | 100    |
| 29) Chloroform                 | 5.85 | 83  | 410756 | 2.200 ppbv   | 96     |
| 30) Cyclohexane                | 7.25 | 84  | 200997 | 2.322 ppbv   | 87     |
| 31) cis-1,2-Dichloroethene     | 5.64 | 61  | 239438 | 2.328 ppbv   | 99     |
| 32) 1,1,1-Trichloroethane      | 6.62 | 97  | 416968 | 2.131 ppbv   | 98     |
| 34) 2-Butanone                 | 5.33 | 43  | 358449 | 2.249 ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.13 | 117 | 452084 | 2.186 ppbv   | 98     |
| 36) Benzene                    | 7.00 | 78  | 488792 | 2.191 ppbv   | 98     |
| 37) 1,2-Dichloroethane         | 6.41 | 62  | 314751 | 2.125 ppbv   | 99     |
| 38) Trichloroethene            | 7.96 | 130 | 199994 | 2.257 ppbv   | 93     |
| 39) 1,2-Dichloropropane        | 7.73 | 63  | 184311 | 2.204 ppbv   | 97     |
| 40) 1,4-Dioxane                | 7.97 | 88  | 65200  | 1.942 ppbv   | 66     |
| 41) Tetrahydrofuran            | 6.16 | 42  | 195508 | 2.286 ppbv   | 99     |
| 42) Bromodichloromethane       | 7.91 | 83  | 435996 | 2.172 ppbv   | 99     |
| 43) Methyl Methacrylate        | 8.13 | 69  | 185436 | 2.204 ppbv   | 99     |

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| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.98  | 57   | 863904   | 2.228 | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.41  | 75   | 222905   | 2.053 | ppbv   | 96       |
| 46) cis-1,3-Dichloropropene   | 8.83  | 75   | 261261   | 2.080 | ppbv   | 97       |
| 47) 1,1,2-Trichloroethane     | 9.61  | 97   | 211438   | 2.138 | ppbv   | 96       |
| 48) Dibromochloromethane      | 10.44 | 129  | 351348   | 2.116 | ppbv   | 99       |
| 49) Bromoform                 | 13.20 | 173  | 309305   | 2.171 | ppbv   | 99       |
| 50) 4-Methyl-2-Pentanone      | 8.87  | 43   | 537311   | 2.150 | ppbv   | 98       |
| 51) 2-Hexanone                | 10.27 | 43   | 420096   | 2.141 | ppbv # | 98       |
| 52) Tetrachloroethene         | 11.37 | 164  | 181550   | 2.148 | ppbv   | 96       |
| 53) Toluene                   | 9.94  | 91   | 545267   | 2.166 | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.75 | 107  | 308367   | 2.087 | ppbv   | 98       |
| 56) 1,1,1,2-Tetrachloroethane | 12.27 | 131  | 255132   | 2.235 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.29 | 112  | 456750   | 2.246 | ppbv # | 97       |
| 58) Ethyl Benzene             | 12.86 | 91   | 757846   | 2.315 | ppbv   | 99       |
| 59) m/p-Xylene                | 13.15 | 91   | 1347953m | 4.784 | ppbv   |          |
| 60) o-Xylene                  | 13.84 | 91   | 677435   | 2.387 | ppbv   | 98       |
| 61) Styrene                   | 13.68 | 104  | 454374   | 2.334 | ppbv   | 98       |
| 62) Isopropylbenzene          | 14.82 | 105  | 891623   | 2.357 | ppbv   | 99       |
| 63) 1,1,2,2-Tetrachloroethane | 13.83 | 83   | 482826   | 2.248 | ppbv   | 99       |
| 64) n-propylbenzene           | 15.72 | 120  | 231935   | 2.358 | ppbv   | 96       |
| 65) tert-Butylbenzene         | 16.90 | 119  | 835117   | 2.359 | ppbv   | 97       |
| 66) Benzyl Chloride           | 17.15 | 91   | 358528   | 2.196 | ppbv   | 100      |
| 67) sec-Butylbenzene          | 17.45 | 105  | 1185259  | 2.388 | ppbv   | 99       |
| 69) p-Isopropyltoluene        | 17.81 | 119  | 978842   | 2.369 | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.71 | 91   | 1048430  | 2.328 | ppbv   | 99       |
| 71) 2-Chlorotoluene           | 15.61 | 91   | 676054   | 2.382 | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 15.99 | 105  | 774454   | 2.384 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.15 | 105  | 752282   | 2.364 | ppbv   | 100      |
| 74) 1,2,4-Trimethylbenzene    | 16.92 | 105  | 833156   | 2.360 | ppbv   | 97       |
| 75) 1,3-Dichlorobenzene       | 17.16 | 146  | 500603   | 2.286 | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.30 | 146  | 478176   | 2.289 | ppbv   | 100      |
| 77) 1,2-Dichlorobenzene       | 17.98 | 146  | 459732   | 2.254 | ppbv   | 99       |
| 78) Hexachloro-1,3-Butadiene  | 23.53 | 225  | 351903m  | 2.261 | ppbv   |          |
| 79) Naphthalene               | 22.41 | 128  | 764403   | 2.320 | ppbv   | 97       |
| 80) Naphthalene, 2-methyl-    | 25.11 | 142  | 270388   | 1.934 | ppbv   | 99       |
| 81) 1,2,4-Trichlorobenzene    | 22.13 | 180  | 440542m  | 2.321 | ppbv   |          |

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

