

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL020519\  
 Data File : VL033170.D  
 Acq On : 6 Feb 2019 2:31  
 Operator : SY/AP  
 Sample : VSTDIC002  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC002

Manual Integrations  
 APPROVED

MMDadoda  
 2/20/2019 12:20:52 PM

Quant Time: Feb 20 05:47:02 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL020519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Feb 20 2019  
 QLast Update : Wed Feb 20 05:04:48 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 1167266  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 2734213  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 2920195  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 2137811  | 9.39     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 93.90% |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Qvalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.08 | 85   | 371550   | 1.665 | ppbv   | 96     |
| 3) Chlorodifluoromethane       | 3.01 | 51   | 266903   | 1.899 | ppbv   | 99     |
| 4) Chloromethane               | 3.17 | 50   | 139122   | 1.875 | ppbv   | 97     |
| 5) Vinyl Chloride              | 3.29 | 62   | 136570   | 1.761 | ppbv   | 98     |
| 6) Bromomethane                | 3.52 | 94   | 80296    | 1.885 | ppbv   | 88     |
| 7) Chloroethane                | 3.60 | 64   | 48368    | 1.909 | ppbv # | 88     |
| 8) Dichlorotetrafluoroethane   | 3.22 | 85   | 333135   | 1.909 | ppbv   | 100    |
| 9) Propene                     | 3.04 | 41   | 127937   | 1.884 | ppbv   | 100    |
| 10) Heptane                    | 8.25 | 43   | 399708   | 1.946 | ppbv   | 100    |
| 11) Trichlorofluoromethane     | 4.00 | 101  | 343389   | 1.901 | ppbv   | 97     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.55 | 101  | 232214   | 1.855 | ppbv   | 99     |
| 13) Ethanol                    | 3.65 | 45   | 43978m   | 1.942 | ppbv   |        |
| 14) Bromoethene                | 3.79 | 108  | 101882   | 1.887 | ppbv   | 98     |
| 15) Acetone                    | 3.90 | 43   | 251514   | 1.913 | ppbv   | 98     |
| 16) 1,3-Butadiene              | 3.36 | 39   | 112117   | 1.796 | ppbv   | 94     |
| 17) tert-Butyl alcohol         | 4.36 | 59   | 45967    | 1.833 | ppbv   | 97     |
| 18) 1,1-Dichloroethene         | 4.35 | 96   | 105209   | 1.877 | ppbv   | 99     |
| 19) Isopropyl Alcohol          | 4.02 | 45   | 155736   | 1.746 | ppbv # | 99     |
| 20) Methylene Chloride         | 4.41 | 84   | 97656    | 1.867 | ppbv   | 97     |
| 21) Allyl Chloride             | 4.48 | 41   | 165295   | 1.904 | ppbv   | 99     |
| 22) trans-1,2-Dichloroethene   | 4.96 | 96   | 100862   | 1.853 | ppbv   | 95     |
| 23) Vinyl Acetate              | 5.15 | 43   | 417632   | 1.832 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.09 | 63   | 297211   | 1.844 | ppbv   | 97     |
| 25) Ethyl Acetate              | 5.77 | 43   | 630265   | 2.132 | ppbv   | 99     |
| 26) Hexane                     | 5.78 | 57   | 298921   | 2.153 | ppbv   | 97     |
| 27) Carbon Disulfide           | 4.62 | 76   | 238089   | 1.872 | ppbv   | 98     |
| 28) Methyl tert-Butyl Ether    | 5.12 | 73   | 355942   | 1.877 | ppbv   | 99     |
| 29) Chloroform                 | 5.85 | 83   | 452936   | 2.129 | ppbv   | 99     |
| 30) Cyclohexane                | 7.25 | 84   | 243447   | 1.890 | ppbv   | 89     |
| 31) cis-1,2-Dichloroethene     | 5.64 | 61   | 290344   | 2.090 | ppbv   | 99     |
| 32) 1,1,1-Trichloroethane      | 6.62 | 97   | 425784   | 1.818 | ppbv   | 99     |
| 34) 2-Butanone                 | 5.33 | 43   | 366374   | 2.112 | ppbv   | 99     |
| 35) Carbon Tetrachloride       | 7.14 | 117  | 426098   | 2.041 | ppbv   | 94     |
| 36) Benzene                    | 7.00 | 78   | 612464   | 2.210 | ppbv   | 99     |
| 37) 1,2-Dichloroethane         | 6.41 | 62   | 337243   | 2.196 | ppbv   | 100    |
| 38) Trichloroethene            | 7.96 | 130  | 231353   | 1.950 | ppbv   | 92     |
| 39) 1,2-Dichloropropane        | 7.73 | 63   | 236997   | 2.166 | ppbv   | 97     |
| 40) 1,4-Dioxane                | 7.97 | 88   | 79106m   | 1.989 | ppbv   |        |
| 41) Tetrahydrofuran            | 6.16 | 42   | 248400   | 2.314 | ppbv   | 97     |
| 42) Bromodichloromethane       | 7.91 | 83   | 494314   | 2.221 | ppbv   | 94     |
| 43) Methyl Methacrylate        | 8.14 | 69   | 244244   | 2.195 | ppbv   | 97     |

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| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.99  | 57   | 1053378  | 2.243 | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.42  | 75   | 272832   | 2.208 | ppbv   | 99       |
| 46) cis-1,3-Dichloropropene   | 8.84  | 75   | 345272   | 2.193 | ppbv   | 97       |
| 47) 1,1,2-Trichloroethane     | 9.61  | 97   | 245521   | 2.162 | ppbv   | 97       |
| 48) Dibromochloromethane      | 10.45 | 129  | 391673   | 2.191 | ppbv   | 99       |
| 49) Bromoform                 | 13.20 | 173  | 341741   | 2.222 | ppbv   | 99       |
| 50) 4-Methyl-2-Pentanone      | 8.88  | 43   | 616659   | 2.217 | ppbv   | 99       |
| 51) 2-Hexanone                | 10.28 | 43   | 475388   | 2.168 | ppbv # | 100      |
| 52) Tetrachloroethene         | 11.37 | 164  | 225440   | 2.118 | ppbv   | 98       |
| 53) Toluene                   | 9.95  | 91   | 725403   | 2.211 | ppbv   | 98       |
| 54) 1,2-Dibromoethane         | 10.76 | 107  | 383461   | 2.153 | ppbv   | 94       |
| 56) 1,1,1,2-Tetrachloroethane | 12.28 | 131  | 289203   | 2.126 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.30 | 112  | 543277   | 2.101 | ppbv   | 97       |
| 58) Ethyl Benzene             | 12.87 | 91   | 1002465  | 2.091 | ppbv   | 98       |
| 59) m/p-Xylene                | 13.13 | 91   | 1699139m | 4.261 | ppbv   |          |
| 60) o-Xylene                  | 13.85 | 91   | 812324   | 2.089 | ppbv   | 99       |
| 61) Styrene                   | 13.69 | 104  | 620688   | 2.114 | ppbv   | 99       |
| 62) Isopropylbenzene          | 14.83 | 105  | 1143792  | 2.085 | ppbv   | 99       |
| 63) 1,1,2,2-Tetrachloroethane | 13.83 | 83   | 576967   | 1.898 | ppbv   | 98       |
| 64) n-propylbenzene           | 15.73 | 120  | 288852   | 2.071 | ppbv   | 95       |
| 65) tert-Butylbenzene         | 16.91 | 119  | 1021480  | 2.138 | ppbv   | 98       |
| 66) Benzyl Chloride           | 17.16 | 91   | 344000   | 2.015 | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.46 | 105  | 1489211  | 2.147 | ppbv   | 98       |
| 69) p-Isopropyltoluene        | 17.82 | 119  | 1224827  | 2.121 | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.72 | 91   | 1311781  | 2.105 | ppbv   | 99       |
| 71) 2-Chlorotoluene           | 15.62 | 91   | 906082   | 2.102 | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 16.00 | 105  | 939304   | 2.094 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.16 | 105  | 906463   | 2.113 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.93 | 105  | 950933   | 2.137 | ppbv   | 94       |
| 75) 1,3-Dichlorobenzene       | 17.17 | 146  | 544294   | 2.121 | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.31 | 146  | 546655   | 2.150 | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.99 | 146  | 538209   | 2.123 | ppbv   | 100      |
| 78) Hexachloro-1,3-Butadiene  | 23.55 | 225  | 279568m  | 2.217 | ppbv   |          |
| 79) Naphthalene               | 22.42 | 128  | 1049944  | 2.196 | ppbv   | 97       |
| 80) Naphthalene,2-methyl-     | 25.12 | 142  | 621556   | 2.570 | ppbv   | 98       |
| 81) 1,2,4-Trichlorobenzene    | 22.14 | 180  | 515218   | 2.122 | ppbv   | 99       |

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

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