

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL101619\  
 Data File : VL034299.D  
 Acq On : 16 Oct 2019 13:33  
 Operator : SY/AP  
 Sample : VSTDIC002  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC002

Manual Integrations  
 APPROVED

MMDadoda  
 10/18/2019 3:03:47 PM

Quant Time: Oct 16 17:23:56 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL101619AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Oct 16 16:52:05 2019  
 QLast Update : Wed Oct 16 16:52:05 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.69  | 49   | 1212884  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.21  | 114  | 2312455  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.15 | 117  | 2445041  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.49  | 95    | 2038090  | 9.59     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 95.90% |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Ovalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.03 | 85   | 504472   | 2.816 | ppbv   | 95     |
| 3) Chlorodifluoromethane       | 2.97 | 51   | 293694   | 2.065 | ppbv   | 98     |
| 4) Chloromethane               | 3.12 | 50   | 174163   | 2.084 | ppbv   | 97     |
| 5) Vinyl Chloride              | 3.24 | 62   | 154523   | 2.023 | ppbv   | 95     |
| 6) Bromomethane                | 3.46 | 94   | 77010    | 2.161 | ppbv   | 84     |
| 7) Chloroethane                | 3.55 | 64   | 58483    | 2.191 | ppbv   | 99     |
| 8) Dichlorotetrafluoroethane   | 3.17 | 85   | 383685   | 2.427 | ppbv   | 98     |
| 9) Propene                     | 2.99 | 41   | 133000   | 1.896 | ppbv   | 99     |
| 10) Heptane                    | 8.17 | 43   | 335457   | 1.835 | ppbv   | 98     |
| 11) Trichlorofluoromethane     | 3.95 | 101  | 415861   | 2.550 | ppbv   | 92     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.49 | 101  | 269282   | 2.523 | ppbv   | 98     |
| 13) Ethanol                    | 3.60 | 45   | 28151m   | 1.657 | ppbv   |        |
| 14) Bromoethene                | 3.73 | 108  | 108813   | 2.494 | ppbv   | 99     |
| 15) Acetone                    | 3.85 | 43   | 368168   | 2.265 | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.31 | 39   | 141624   | 1.996 | ppbv   | 99     |
| 17) tert-Butyl alcohol         | 4.30 | 59   | 173086m  | 1.680 | ppbv   |        |
| 18) 1,1-Dichloroethene         | 4.29 | 96   | 118984m  | 2.556 | ppbv   |        |
| 19) Isopropyl Alcohol          | 3.97 | 45   | 147919m  | 1.480 | ppbv   |        |
| 20) Methylene Chloride         | 4.34 | 84   | 139234   | 2.971 | ppbv   | 96     |
| 21) Allyl Chloride             | 4.41 | 41   | 195314   | 2.127 | ppbv   | 98     |
| 22) trans-1,2-Dichloroethene   | 4.90 | 96   | 119105   | 2.557 | ppbv   | 96     |
| 23) Vinyl Acetate              | 5.09 | 43   | 455053   | 1.900 | ppbv   | 98     |
| 24) 1,1-Dichloroethane         | 5.02 | 63   | 337692   | 2.094 | ppbv   | 99     |
| 25) Ethyl Acetate              | 5.70 | 43   | 621185   | 2.021 | ppbv   | 98     |
| 26) Hexane                     | 5.71 | 57   | 265173   | 2.074 | ppbv   | 97     |
| 27) Carbon Disulfide           | 4.56 | 76   | 266761   | 2.262 | ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.05 | 73   | 395044   | 2.080 | ppbv   | 100    |
| 29) Chloroform                 | 5.77 | 83   | 408396   | 2.235 | ppbv   | 97     |
| 30) Cyclohexane                | 7.17 | 84   | 183877   | 1.992 | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene     | 5.56 | 61   | 263344   | 2.020 | ppbv # | 88     |
| 32) 1,1,1-Trichloroethane      | 6.54 | 97   | 381720   | 2.166 | ppbv   | 99     |
| 34) 2-Butanone                 | 5.27 | 43   | 394401   | 1.670 | ppbv   | 99     |
| 35) Carbon Tetrachloride       | 7.05 | 117  | 406912   | 2.118 | ppbv   | 93     |
| 36) Benzene                    | 6.92 | 78   | 471896   | 1.848 | ppbv   | 97     |
| 37) 1,2-Dichloroethane         | 6.33 | 62   | 343892   | 1.893 | ppbv   | 100    |
| 38) Trichloroethene            | 7.88 | 130  | 184990   | 2.027 | ppbv # | 94     |
| 39) 1,2-Dichloropropane        | 7.65 | 63   | 196736   | 1.714 | ppbv   | 99     |
| 40) 1,4-Dioxane                | 7.89 | 88   | 56467m   | 1.521 | ppbv   |        |
| 41) Tetrahydrofuran            | 6.08 | 42   | 214248   | 1.611 | ppbv   | 99     |
| 42) Bromodichloromethane       | 7.83 | 83   | 429592   | 1.971 | ppbv   | 98     |
| 43) Methyl Methacrylate        | 8.06 | 69   | 190225   | 1.803 | ppbv   | 99     |

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| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.91  | 57   | 886434   | 1.803 | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.33  | 75   | 222090   | 1.780 | ppbv   | 98       |
| 46) cis-1,3-Dichloropropene   | 8.75  | 75   | 264478   | 1.763 | ppbv   | 94       |
| 47) 1,1,2-Trichloroethane     | 9.53  | 97   | 202116   | 1.962 | ppbv   | 95       |
| 48) Dibromochloromethane      | 10.36 | 129  | 335206   | 2.052 | ppbv   | 100      |
| 49) Bromoform                 | 13.11 | 173  | 294935   | 2.232 | ppbv   | 98       |
| 50) 4-Methyl-2-Pentanone      | 8.79  | 43   | 585314   | 1.703 | ppbv   | 99       |
| 51) 2-Hexanone                | 10.19 | 43   | 470192   | 1.630 | ppbv # | 96       |
| 52) Tetrachloroethene         | 11.28 | 164  | 169593   | 2.010 | ppbv   | 91       |
| 53) Toluene                   | 9.86  | 91   | 528142   | 1.892 | ppbv   | 98       |
| 54) 1,2-Dibromoethane         | 10.67 | 107  | 298175   | 1.946 | ppbv   | 94       |
| 56) 1,1,1,2-Tetrachloroethane | 12.19 | 131  | 235900   | 2.163 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.21 | 112  | 419531m  | 1.971 | ppbv   |          |
| 58) Ethyl Benzene             | 12.77 | 91   | 745465   | 1.890 | ppbv   | 96       |
| 59) m/p-Xylene                | 13.03 | 91   | 1261147m | 3.859 | ppbv   |          |
| 60) o-Xylene                  | 13.76 | 91   | 634557   | 1.942 | ppbv   | 97       |
| 61) Styrene                   | 13.59 | 104  | 453520m  | 1.938 | ppbv   |          |
| 62) Isopropylbenzene          | 14.74 | 105  | 845059   | 1.998 | ppbv   | 97       |
| 63) 1,1,2,2-Tetrachloroethane | 13.74 | 83   | 461267m  | 1.722 | ppbv   |          |
| 64) n-propylbenzene           | 15.64 | 120  | 212931   | 1.990 | ppbv   | 91       |
| 65) tert-Butylbenzene         | 16.82 | 119  | 764269   | 2.068 | ppbv   | 98       |
| 66) Benzyl Chloride           | 17.06 | 91   | 257721   | 1.971 | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.37 | 105  | 1089457  | 2.061 | ppbv   | 97       |
| 69) p-Isopropyltoluene        | 17.73 | 119  | 889403   | 2.078 | ppbv   | 98       |
| 70) n-Butylbenzene            | 18.63 | 91   | 975018   | 1.957 | ppbv   | 96       |
| 71) 2-Chlorotoluene           | 15.53 | 91   | 663185   | 1.919 | ppbv   | 98       |
| 72) 4-Ethyltoluene            | 15.91 | 105  | 723917   | 1.961 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.07 | 105  | 705578   | 1.978 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.84 | 105  | 769664m  | 2.033 | ppbv   |          |
| 75) 1,3-Dichlorobenzene       | 17.07 | 146  | 426223   | 2.098 | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.22 | 146  | 423538   | 2.036 | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.90 | 146  | 426452   | 2.074 | ppbv   | 99       |
| 78) Hexachloro-1,3-Butadiene  | 23.46 | 225  | 357335   | 2.624 | ppbv   | 98       |
| 79) Naphthalene               | 22.31 | 128  | 529898   | 1.590 | ppbv   | 98       |
| 80) Naphthalene, 2-methyl-    | 25.05 | 142  | 113756   | 0.734 | ppbv   | 95       |
| 81) 1,2,4-Trichlorobenzene    | 22.03 | 180  | 341814   | 1.851 | ppbv   | 99       |

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

