

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL090519\  
 Data File : VL034121.D  
 Acq On : 5 Sep 2019 3:09  
 Operator : SY/AP  
 Sample : VSTDIC002  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC002

Manual Integrations  
 APPROVED

MMDadoda  
 9/12/2019 5:14:54 AM

Quant Time: Sep 05 10:04:57 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep 05 10:04:57 2019  
 QLast Update : Thu Sep 05 09:42:59 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.71  | 49   | 1213167  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.23  | 114  | 2242469  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.17 | 117  | 2366688  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.51  | 95    | 1919383  | 9.92     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.20% |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Ovalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.04 | 85   | 453629   | 2.267 | ppbv   | 96     |
| 3) Chlorodifluoromethane       | 2.98 | 51   | 281138   | 2.079 | ppbv   | 98     |
| 4) Chloromethane               | 3.13 | 50   | 168835   | 1.997 | ppbv   | 98     |
| 5) Vinyl Chloride              | 3.25 | 62   | 152005   | 1.974 | ppbv   | 96     |
| 6) Bromomethane                | 3.48 | 94   | 77261    | 2.033 | ppbv   | 93     |
| 7) Chloroethane                | 3.56 | 64   | 54873    | 2.091 | ppbv # | 87     |
| 8) Dichlorotetrafluoroethane   | 3.18 | 85   | 346396   | 2.151 | ppbv   | 99     |
| 9) Propene                     | 3.00 | 41   | 156284   | 2.066 | ppbv   | 99     |
| 10) Heptane                    | 8.18 | 43   | 416146   | 2.119 | ppbv   | 97     |
| 11) Trichlorofluoromethane     | 3.96 | 101  | 343376   | 2.104 | ppbv   | 93     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.50 | 101  | 229823   | 2.105 | ppbv   | 99     |
| 13) Ethanol                    | 3.61 | 45   | 29964    | 1.750 | ppbv   | 75     |
| 14) Bromoethene                | 3.74 | 108  | 99650    | 2.111 | ppbv   | 98     |
| 15) Acetone                    | 3.86 | 43   | 308661   | 2.111 | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.32 | 39   | 157437   | 2.126 | ppbv   | 97     |
| 17) tert-Butyl alcohol         | 4.31 | 59   | 223757   | 2.108 | ppbv   | 100    |
| 18) 1,1-Dichloroethene         | 4.30 | 96   | 104306   | 2.094 | ppbv   | 95     |
| 19) Isopropyl Alcohol          | 3.98 | 45   | 208347   | 2.118 | ppbv # | 99     |
| 20) Methylene Chloride         | 4.36 | 84   | 100401   | 2.077 | ppbv   | 96     |
| 21) Allyl Chloride             | 4.43 | 41   | 197287   | 2.047 | ppbv   | 99     |
| 22) trans-1,2-Dichloroethene   | 4.91 | 96   | 99383    | 1.991 | ppbv   | 94     |
| 23) Vinyl Acetate              | 5.10 | 43   | 529029   | 2.133 | ppbv # | 96     |
| 24) 1,1-Dichloroethane         | 5.04 | 63   | 345826   | 2.101 | ppbv   | 98     |
| 25) Ethyl Acetate              | 5.72 | 43   | 690783   | 2.154 | ppbv   | 99     |
| 26) Hexane                     | 5.72 | 57   | 308055   | 2.159 | ppbv   | 96     |
| 27) Carbon Disulfide           | 4.57 | 76   | 262626   | 2.044 | ppbv # | 91     |
| 28) Methyl tert-Butyl Ether    | 5.07 | 73   | 450395   | 2.154 | ppbv   | 98     |
| 29) Chloroform                 | 5.79 | 83   | 400108   | 2.079 | ppbv   | 98     |
| 30) Cyclohexane                | 7.18 | 84   | 213526   | 2.070 | ppbv # | 82     |
| 31) cis-1,2-Dichloroethene     | 5.59 | 61   | 290143   | 2.123 | ppbv   | 95     |
| 32) 1,1,1-Trichloroethane      | 6.56 | 97   | 372961   | 2.063 | ppbv   | 98     |
| 34) 2-Butanone                 | 5.28 | 43   | 459517   | 2.131 | ppbv   | 99     |
| 35) Carbon Tetrachloride       | 7.08 | 117  | 355123   | 2.048 | ppbv   | 99     |
| 36) Benzene                    | 6.95 | 78   | 552944   | 2.157 | ppbv   | 97     |
| 37) 1,2-Dichloroethane         | 6.35 | 62   | 326202   | 2.077 | ppbv   | 99     |
| 38) Trichloroethene            | 7.90 | 130  | 182721m  | 1.928 | ppbv   |        |
| 39) 1,2-Dichloropropane        | 7.68 | 63   | 229678   | 2.093 | ppbv   | 93     |
| 40) 1,4-Dioxane                | 7.91 | 88   | 87641m   | 2.165 | ppbv   |        |
| 41) Tetrahydrofuran            | 6.10 | 42   | 273584   | 2.126 | ppbv   | 99     |
| 42) Bromodichloromethane       | 7.85 | 83   | 439033   | 2.142 | ppbv   | 95     |
| 43) Methyl Methacrylate        | 8.07 | 69   | 229257   | 2.171 | ppbv   | 99     |

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 QLast Update : Thu Sep 05 09:42:59 2019  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.93  | 57   | 1059993  | 2.243 | ppbv   | 96       |
| 45) t-1,3-Dichloropropene     | 9.35  | 75   | 270461   | 2.182 | ppbv   | 91       |
| 46) cis-1,3-Dichloropropene   | 8.77  | 75   | 330758   | 2.191 | ppbv   | 95       |
| 47) 1,1,2-Trichloroethane     | 9.55  | 97   | 214385   | 2.148 | ppbv   | 92       |
| 48) Dibromochloromethane      | 10.39 | 129  | 325051   | 2.180 | ppbv   | 98       |
| 49) Bromoform                 | 13.13 | 173  | 294276   | 2.254 | ppbv   | 97       |
| 50) 4-Methyl-2-Pentanone      | 8.81  | 43   | 723042   | 2.198 | ppbv   | 98       |
| 51) 2-Hexanone                | 10.21 | 43   | 640137   | 2.274 | ppbv # | 99       |
| 52) Tetrachloroethene         | 11.31 | 164  | 182283   | 2.032 | ppbv   | 93       |
| 53) Toluene                   | 9.88  | 91   | 614285   | 2.167 | ppbv   | 98       |
| 54) 1,2-Dibromoethane         | 10.70 | 107  | 323689   | 2.180 | ppbv   | 90       |
| 56) 1,1,1,2-Tetrachloroethane | 12.21 | 131  | 224229   | 2.209 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.23 | 112  | 445754   | 2.189 | ppbv # | 95       |
| 58) Ethyl Benzene             | 12.80 | 91   | 867879   | 2.239 | ppbv   | 95       |
| 59) m/p-Xylene                | 13.08 | 91   | 1421181m | 4.500 | ppbv   |          |
| 60) o-Xylene                  | 13.78 | 91   | 692055   | 2.195 | ppbv   | 100      |
| 61) Styrene                   | 13.62 | 104  | 523483   | 2.222 | ppbv   | 98       |
| 62) Isopropylbenzene          | 14.76 | 105  | 907426   | 2.213 | ppbv   | 99       |
| 63) 1,1,2,2-Tetrachloroethane | 13.77 | 83   | 514309   | 1.994 | ppbv   | 98       |
| 64) n-propylbenzene           | 15.65 | 120  | 230558   | 2.211 | ppbv   | 84       |
| 65) tert-Butylbenzene         | 16.84 | 119  | 798393m  | 2.260 | ppbv   |          |
| 66) Benzyl Chloride           | 17.09 | 91   | 292165   | 2.244 | ppbv   | 96       |
| 67) sec-Butylbenzene          | 17.39 | 105  | 1165080  | 2.289 | ppbv   | 97       |
| 69) p-Isopropyltoluene        | 17.75 | 119  | 932925   | 2.295 | ppbv   | 98       |
| 70) n-Butylbenzene            | 18.64 | 91   | 1066298  | 2.300 | ppbv   | 97       |
| 71) 2-Chlorotoluene           | 15.55 | 91   | 751837   | 2.243 | ppbv   | 98       |
| 72) 4-Ethyltoluene            | 15.93 | 105  | 799701   | 2.248 | ppbv   | 98       |
| 73) 1,3,5-Trimethylbenzene    | 16.09 | 105  | 783045   | 2.265 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.86 | 105  | 817009   | 2.295 | ppbv   | 92       |
| 75) 1,3-Dichlorobenzene       | 17.09 | 146  | 421047   | 2.233 | ppbv   | 99       |
| 76) 1,4-Dichlorobenzene       | 17.24 | 146  | 427733   | 2.151 | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.92 | 146  | 426292   | 2.212 | ppbv   | 98       |
| 78) Hexachloro-1,3-Butadiene  | 23.47 | 225  | 294938m  | 2.244 | ppbv   |          |
| 79) Naphthalene               | 22.33 | 128  | 744619   | 2.315 | ppbv   | 99       |
| 80) Naphthalene, 2-methyl-    | 25.06 | 142  | 201398   | 1.803 | ppbv   | 96       |
| 81) 1,2,4-Trichlorobenzene    | 22.05 | 180  | 402956m  | 2.301 | ppbv   |          |

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

