

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL013020\  
 Data File : VL034569.D  
 Acq On : 30 Jan 2020 12:46  
 Operator : SY/AP  
 Sample : VSTDIC002  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VSTDIC002

Manual Integrations  
 APPROVED

MMDadoda  
 1/31/2020 4:25:50 PM

Quant Time: Jan 30 14:54:23 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL013020AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Jan 30 14:54:23 2020  
 QLast Update : Thu Jan 30 14:46:59 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 1195124  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 2440116  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.11 | 117  | 2500075  | 10.00 | ppbv  | 0.00     |

| System Monitoring Compounds |        | R.T.  | QIon     | Response | Conc | Units  | Dev(Min) |
|-----------------------------|--------|-------|----------|----------|------|--------|----------|
| 68) 1-Bromo-4-Fluorobenzene | 14.45  | 95    | 2054966  | 9.85     | ppbv | 0.00   |          |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 98.50% |          |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units  | Ovalue |
|--------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.01 | 85   | 568014   | 3.014 | ppbv   | 98     |
| 3) Chlorodifluoromethane       | 2.95 | 51   | 307240   | 2.158 | ppbv   | 99     |
| 4) Chloromethane               | 3.10 | 50   | 191089   | 2.259 | ppbv   | 96     |
| 5) Vinyl Chloride              | 3.22 | 62   | 175531   | 2.119 | ppbv   | 96     |
| 6) Bromomethane                | 3.44 | 94   | 91019    | 2.208 | ppbv # | 80     |
| 7) Chloroethane                | 3.53 | 64   | 65835    | 2.281 | ppbv # | 83     |
| 8) Dichlorotetrafluoroethane   | 3.15 | 85   | 446482   | 2.362 | ppbv   | 98     |
| 9) Propene                     | 2.97 | 41   | 121300   | 2.210 | ppbv   | 100    |
| 10) Heptane                    | 8.13 | 43   | 301220   | 2.125 | ppbv   | 100    |
| 11) Trichlorofluoromethane     | 3.92 | 101  | 515117   | 2.362 | ppbv   | 97     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.46 | 101  | 327828   | 2.363 | ppbv   | 99     |
| 13) Ethanol                    | 3.57 | 45   | 34204m   | 2.245 | ppbv   |        |
| 14) Bromoethene                | 3.71 | 108  | 129090   | 2.301 | ppbv   | 99     |
| 15) Acetone                    | 3.82 | 43   | 386245   | 2.214 | ppbv   | 98     |
| 16) 1,3-Butadiene              | 3.29 | 39   | 153255   | 2.285 | ppbv   | 97     |
| 17) tert-Butyl alcohol         | 4.27 | 59   | 249599   | 1.787 | ppbv   | 99     |
| 18) 1,1-Dichloroethene         | 4.27 | 96   | 139855   | 2.314 | ppbv   | 94     |
| 19) Isopropyl Alcohol          | 3.94 | 45   | 194160   | 1.720 | ppbv # | 97     |
| 20) Methylene Chloride         | 4.32 | 84   | 143304   | 2.088 | ppbv   | 94     |
| 21) Allyl Chloride             | 4.39 | 41   | 230399   | 2.298 | ppbv   | 98     |
| 22) trans-1,2-Dichloroethene   | 4.87 | 96   | 142969   | 2.326 | ppbv   | 90     |
| 23) Vinyl Acetate              | 5.06 | 43   | 438369   | 2.177 | ppbv   | 97     |
| 24) 1,1-Dichloroethane         | 4.99 | 63   | 360310   | 2.227 | ppbv   | 99     |
| 25) Ethyl Acetate              | 5.67 | 43   | 607784   | 2.231 | ppbv   | 99     |
| 26) Hexane                     | 5.68 | 57   | 253924   | 2.212 | ppbv   | 97     |
| 27) Carbon Disulfide           | 4.53 | 76   | 340971   | 2.350 | ppbv   | 98     |
| 28) Methyl tert-Butyl Ether    | 5.02 | 73   | 448696   | 2.341 | ppbv   | 99     |
| 29) Chloroform                 | 5.74 | 83   | 453988   | 2.286 | ppbv   | 99     |
| 30) Cyclohexane                | 7.13 | 84   | 182312   | 2.137 | ppbv # | 82     |
| 31) cis-1,2-Dichloroethene     | 5.54 | 61   | 263239   | 2.251 | ppbv   | 98     |
| 32) 1,1,1-Trichloroethane      | 6.51 | 97   | 447573   | 2.171 | ppbv   | 99     |
| 34) 2-Butanone                 | 5.23 | 43   | 394692   | 2.263 | ppbv   | 99     |
| 35) Carbon Tetrachloride       | 7.02 | 117  | 491055   | 2.219 | ppbv   | 97     |
| 36) Benzene                    | 6.90 | 78   | 464630   | 2.184 | ppbv   | 95     |
| 37) 1,2-Dichloroethane         | 6.30 | 62   | 377667   | 2.186 | ppbv   | 100    |
| 38) Trichloroethene            | 7.84 | 130  | 195998   | 2.281 | ppbv   | 93     |
| 39) 1,2-Dichloropropane        | 7.62 | 63   | 187455   | 2.143 | ppbv   | 94     |
| 40) 1,4-Dioxane                | 7.85 | 88   | 72822m   | 2.057 | ppbv   |        |
| 41) Tetrahydrofuran            | 6.05 | 42   | 194654   | 2.176 | ppbv   | 99     |
| 42) Bromodichloromethane       | 7.80 | 83   | 476615   | 2.242 | ppbv # | 99     |
| 43) Methyl Methacrylate        | 8.02 | 69   | 185481   | 2.138 | ppbv   | 99     |

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 ALS Vial : 1 Sample Multiplier: 1

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 VSTDIC002

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 QLast Update : Thu Jan 30 14:46:59 2020  
 Response via : Initial Calibration

| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.88  | 57   | 870223   | 2.212 | ppbv   | 98       |
| 45) t-1,3-Dichloropropene     | 9.29  | 75   | 233814   | 2.092 | ppbv   | 95       |
| 46) cis-1,3-Dichloropropene   | 8.72  | 75   | 275344   | 2.155 | ppbv   | 99       |
| 47) 1,1,2-Trichloroethane     | 9.50  | 97   | 207786m  | 2.155 | ppbv   |          |
| 48) Dibromochloromethane      | 10.32 | 129  | 370748   | 2.218 | ppbv   | 98       |
| 49) Bromoform                 | 13.07 | 173  | 347261   | 2.295 | ppbv   | 96       |
| 50) 4-Methyl-2-Pentanone      | 8.75  | 43   | 542868   | 2.145 | ppbv   | 97       |
| 51) 2-Hexanone                | 10.16 | 43   | 434609   | 2.127 | ppbv # | 97       |
| 52) Tetrachloroethene         | 11.25 | 164  | 180668   | 2.177 | ppbv   | 94       |
| 53) Toluene                   | 9.82  | 91   | 526711   | 2.254 | ppbv   | 97       |
| 54) 1,2-Dibromoethane         | 10.64 | 107  | 306999   | 2.188 | ppbv   | 96       |
| 56) 1,1,1,2-Tetrachloroethane | 12.16 | 131  | 261771   | 2.169 | ppbv # | 1        |
| 57) Chlorobenzene             | 12.17 | 112  | 432387   | 2.096 | ppbv   | 97       |
| 58) Ethyl Benzene             | 12.74 | 91   | 738693   | 2.191 | ppbv   | 97       |
| 59) m/p-Xylene                | 13.03 | 91   | 1294107m | 4.389 | ppbv   |          |
| 60) o-Xylene                  | 13.72 | 91   | 666005   | 2.251 | ppbv   | 95       |
| 61) Styrene                   | 13.55 | 104  | 434249   | 2.147 | ppbv   | 99       |
| 62) Isopropylbenzene          | 14.70 | 105  | 864303   | 2.233 | ppbv   | 97       |
| 63) 1,1,2,2-Tetrachloroethane | 13.71 | 83   | 475700   | 2.004 | ppbv   | 100      |
| 64) n-propylbenzene           | 15.59 | 120  | 210478   | 2.130 | ppbv   | 82       |
| 65) tert-Butylbenzene         | 16.78 | 119  | 797389   | 2.281 | ppbv   | 97       |
| 66) Benzyl Chloride           | 17.03 | 91   | 303018   | 1.977 | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.34 | 105  | 1094874  | 2.230 | ppbv   | 98       |
| 69) p-Isopropyltoluene        | 17.69 | 119  | 903441   | 2.269 | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.59 | 91   | 958893   | 2.232 | ppbv   | 97       |
| 71) 2-Chlorotoluene           | 15.49 | 91   | 663610   | 2.208 | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 15.87 | 105  | 737973   | 2.229 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.03 | 105  | 725343   | 2.233 | ppbv   | 92       |
| 74) 1,2,4-Trimethylbenzene    | 16.80 | 105  | 785114   | 2.260 | ppbv   | 94       |
| 75) 1,3-Dichlorobenzene       | 17.04 | 146  | 444557m  | 2.136 | ppbv   |          |
| 76) 1,4-Dichlorobenzene       | 17.18 | 146  | 438405   | 2.188 | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.86 | 146  | 428725m  | 2.192 | ppbv   |          |
| 78) Hexachloro-1,3-Butadiene  | 23.42 | 225  | 413489   | 2.227 | ppbv   | 99       |
| 79) Naphthalene               | 22.26 | 128  | 642150   | 2.454 | ppbv   | 98       |
| 80) Naphthalene, 2-methyl-    | 25.02 | 142  | 219543   | 3.028 | ppbv # | 93       |
| 81) 1,2,4-Trichlorobenzene    | 21.98 | 180  | 399645   | 2.345 | ppbv   | 99       |

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

