

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL041019\  
 Data File : VL033565.D  
 Acq On : 10 Apr 2019 15:25  
 Operator : SY/AP  
 Sample : VL0410ABS01  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VL0410ABS01

Manual Integrations  
 APPROVED

MMDadoda  
 4/11/2019 1:01:05 PM

Quant Time: Apr 11 03:59:07 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Mar 2  
 QLast Update : Tue Mar 26 16:00:50 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 956817   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 2489056  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 2631497m | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 1922807  | 9.32     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 93.20% |

| Target Compounds               |      |     |         |       | Ovalue   |
|--------------------------------|------|-----|---------|-------|----------|
| 2) Dichlorodifluoromethane     | 3.08 | 85  | 1175629 | 8.425 | ppbv 99  |
| 3) Chlorodifluoromethane       | 3.01 | 51  | 919233  | 8.345 | ppbv 98  |
| 4) Chloromethane               | 3.17 | 50  | 497210  | 8.530 | ppbv 97  |
| 5) Vinyl Chloride              | 3.29 | 62  | 496261  | 8.665 | ppbv 100 |
| 6) Bromomethane                | 3.52 | 94  | 324099  | 8.806 | ppbv 95  |
| 7) Chloroethane                | 3.60 | 64  | 185273  | 8.692 | ppbv 98  |
| 8) Dichlorotetrafluoroethane   | 3.22 | 85  | 1234235 | 8.300 | ppbv 98  |
| 9) Propene                     | 3.04 | 41  | 411301  | 8.891 | ppbv 99  |
| 10) Heptane                    | 8.25 | 43  | 1066492 | 8.625 | ppbv 99  |
| 11) Trichlorofluoromethane     | 4.00 | 101 | 1395798 | 8.116 | ppbv 99  |
| 12) 1,1,2-Trichlorotrifluoroet | 4.55 | 101 | 967412  | 8.375 | ppbv 97  |
| 13) Ethanol                    | 3.65 | 45  | 105790  | 8.837 | ppbv 65  |
| 14) Bromoethene                | 3.79 | 108 | 405924  | 8.811 | ppbv 98  |
| 15) Acetone                    | 3.90 | 43  | 911665  | 7.924 | ppbv 98  |
| 16) 1,3-Butadiene              | 3.36 | 39  | 419764  | 9.199 | ppbv 88  |
| 17) tert-Butyl alcohol         | 4.36 | 59  | 177578  | 8.395 | ppbv 98  |
| 18) 1,1-Dichloroethene         | 4.35 | 96  | 437946  | 8.826 | ppbv 97  |
| 19) Isopropyl Alcohol          | 4.02 | 45  | 598718  | 8.228 | ppbv 100 |
| 20) Methylene Chloride         | 4.41 | 84  | 380331  | 7.788 | ppbv 92  |
| 21) Allyl Chloride             | 4.48 | 41  | 652089  | 8.966 | ppbv 100 |
| 22) trans-1,2-Dichloroethene   | 4.96 | 96  | 453421  | 8.759 | ppbv 97  |
| 23) Vinyl Acetate              | 5.16 | 43  | 1498805 | 9.153 | ppbv 98  |
| 24) 1,1-Dichloroethane         | 5.09 | 63  | 1032730 | 8.303 | ppbv 98  |
| 25) Ethyl Acetate              | 5.77 | 43  | 1740940 | 8.156 | ppbv 99  |
| 26) Hexane                     | 5.78 | 57  | 794160  | 8.368 | ppbv 97  |
| 27) Carbon Disulfide           | 4.62 | 76  | 1105118 | 9.792 | ppbv 99  |
| 28) Methyl tert-Butyl Ether    | 5.11 | 73  | 1275984 | 9.334 | ppbv 99  |
| 29) Chloroform                 | 5.85 | 83  | 1349558 | 8.295 | ppbv 100 |
| 30) Cyclohexane                | 7.25 | 84  | 707775  | 9.427 | ppbv 98  |
| 31) cis-1,2-Dichloroethene     | 5.64 | 61  | 827695  | 8.772 | ppbv 97  |
| 32) 1,1,1-Trichloroethane      | 6.62 | 97  | 1349545 | 8.711 | ppbv 99  |
| 34) 2-Butanone                 | 5.33 | 43  | 1154567 | 7.721 | ppbv 98  |
| 35) Carbon Tetrachloride       | 7.14 | 117 | 1456984 | 8.264 | ppbv 100 |
| 36) Benzene                    | 7.01 | 78  | 1751055 | 8.384 | ppbv 97  |
| 37) 1,2-Dichloroethane         | 6.42 | 62  | 1023854 | 7.314 | ppbv 99  |
| 38) Trichloroethene            | 7.96 | 130 | 689811  | 8.776 | ppbv 99  |
| 39) 1,2-Dichloropropane        | 7.74 | 63  | 655657  | 8.014 | ppbv 96  |
| 40) 1,4-Dioxane                | 7.96 | 88  | 237040  | 8.124 | ppbv 95  |
| 41) Tetrahydrofuran            | 6.15 | 42  | 683302  | 8.307 | ppbv 97  |
| 42) Bromodichloromethane       | 7.92 | 83  | 1490917 | 7.820 | ppbv 99  |
| 43) Methyl Methacrylate        | 8.14 | 69  | 712168  | 8.398 | ppbv 98  |

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|-------------------------------|-------|------|----------|--------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.99  | 57   | 2818334  | 7.722  | ppbv   | 99       |
| 45) t-1,3-Dichloropropene     | 9.42  | 75   | 967158   | 9.289  | ppbv   | 99       |
| 46) cis-1,3-Dichloropropene   | 8.84  | 75   | 1079955  | 8.882  | ppbv   | 96       |
| 47) 1,1,2-Trichloroethane     | 9.62  | 97   | 717564   | 7.724  | ppbv   | 97       |
| 48) Dibromochloromethane      | 10.45 | 129  | 1304371  | 8.324  | ppbv   | 100      |
| 49) Bromoform                 | 13.21 | 173  | 1197459  | 7.999  | ppbv   | 100      |
| 50) 4-Methyl-2-Pentanone      | 8.87  | 43   | 1714163  | 7.828  | ppbv   | 98       |
| 51) 2-Hexanone                | 10.27 | 43   | 1390149  | 8.511  | ppbv   | 98       |
| 52) Tetrachloroethene         | 11.38 | 164  | 668190   | 8.480  | ppbv   | 98       |
| 53) Toluene                   | 9.95  | 91   | 2108843  | 8.689  | ppbv   | 100      |
| 54) 1,2-Dibromoethane         | 10.76 | 107  | 1161514  | 7.993  | ppbv   | 96       |
| 56) 1,1,1,2-Tetrachloroethane | 12.28 | 131  | 917762   | 7.610  | ppbv # | 54       |
| 57) Chlorobenzene             | 12.30 | 112  | 1561697  | 7.643  | ppbv   | 95       |
| 58) Ethyl Benzene             | 12.87 | 91   | 2862457  | 8.145  | ppbv   | 99       |
| 59) m/p-Xylene                | 13.15 | 91   | 4797791m | 15.285 | ppbv   |          |
| 60) o-Xylene                  | 13.85 | 91   | 2349502  | 7.741  | ppbv   | 98       |
| 61) Styrene                   | 13.69 | 104  | 1788071  | 8.583  | ppbv   | 98       |
| 62) Isopropylbenzene          | 14.83 | 105  | 3326648  | 7.739  | ppbv   | 100      |
| 63) 1,1,2,2-Tetrachloroethane | 13.84 | 83   | 1626800  | 7.279  | ppbv   | 99       |
| 64) n-propylbenzene           | 15.72 | 120  | 875929   | 8.031  | ppbv   | 95       |
| 65) tert-Butylbenzene         | 16.91 | 119  | 2990459  | 7.895  | ppbv   | 97       |
| 66) Benzyl Chloride           | 17.16 | 91   | 1717830  | 9.754  | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.46 | 105  | 4222457  | 7.839  | ppbv   | 100      |
| 69) p-Isopropyltoluene        | 17.82 | 119  | 3532515  | 8.055  | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.72 | 91   | 3640865  | 7.835  | ppbv   | 99       |
| 71) 2-Chlorotoluene           | 15.62 | 91   | 2600330  | 7.956  | ppbv   | 99       |
| 72) 4-Ethyltoluene            | 16.00 | 105  | 2803156  | 8.216  | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.16 | 105  | 2663091  | 8.156  | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.93 | 105  | 2730922  | 7.804  | ppbv   | 97       |
| 75) 1,3-Dichlorobenzene       | 17.17 | 146  | 1640014  | 7.582  | ppbv   | 98       |
| 76) 1,4-Dichlorobenzene       | 17.31 | 146  | 1624579  | 7.709  | ppbv   | 99       |
| 77) 1,2-Dichlorobenzene       | 17.99 | 146  | 1597742  | 7.785  | ppbv   | 99       |
| 78) Hexachloro-1,3-Butadiene  | 23.54 | 225  | 1191852  | 8.773  | ppbv   | 99       |
| 79) Naphthalene               | 22.42 | 128  | 2735548  | 9.132  | ppbv   | 99       |
| 80) Naphthalene, 2-methyl-    | 25.11 | 142  | 1246815  | 12.402 | ppbv   | 98       |
| 81) 1,2,4-Trichlorobenzene    | 22.14 | 180  | 1415710  | 8.520  | ppbv   | 99       |

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

