

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032521\  
 Data File : VL036476.D  
 Acq On : 25 Mar 2021 5:51  
 Operator : SY/AP  
 Sample : VSTDIC015  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA L  
 ClientSampleId :  
 VSTDIC015

Manual Integrations  
 APPROVED

Reviewed By : Semsettin Yesilyurt 03/26/2021  
 Supervised By : Mahesh Dadoda 03/29/2021

Quant Time: Mar 25 08:27:20 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521A  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument:  
 QLast Update : Thu Mar 25 07:52:30 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 1540499  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 3801321  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.09 | 117  | 3679064  | 10.00 | ppbv  | 0.00     |

## System Monitoring Compounds

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.42  | 95    | 2975158  | 9.84     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 98.40% |

## Target Compounds

|                                |      |     |         |        |        | Ovalue |
|--------------------------------|------|-----|---------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.04 | 85  | 2896959 | 13.015 | ppbv   | 96     |
| 3) Chlorodifluoromethane       | 2.99 | 51  | 3937238 | 19.584 | ppbv   | 99     |
| 4) Chloromethane               | 3.13 | 50  | 1451901 | 16.326 | ppbv   | 99     |
| 5) Vinyl Chloride              | 3.26 | 62  | 1473539 | 17.516 | ppbv   | 99     |
| 6) Bromomethane                | 3.47 | 94  | 863186  | 16.551 | ppbv   | 100    |
| 7) Chloroethane                | 3.56 | 64  | 528467  | 16.818 | ppbv   | 96     |
| 8) Dichlorotetrafluoroethane   | 3.19 | 85  | 3138267 | 14.572 | ppbv   | 100    |
| 9) Propene                     | 3.01 | 41  | 1354570 | 16.550 | ppbv   | 99     |
| 10) Heptane                    | 8.13 | 43  | 3457259 | 17.093 | ppbv   | 100    |
| 11) Trichlorofluoromethane     | 3.95 | 101 | 3573453 | 15.809 | ppbv   | 97     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.48 | 101 | 2316133 | 15.962 | ppbv   | 99     |
| 13) Ethanol                    | 3.61 | 45  | 151002m | 12.865 | ppbv   |        |
| 14) Bromoethene                | 3.74 | 108 | 975650  | 16.229 | ppbv   | 97     |
| 15) Acetone                    | 3.85 | 43  | 2047285 | 11.912 | ppbv   | 99     |
| 16) 1,3-Butadiene              | 3.32 | 39  | 1535467 | 17.236 | ppbv   | 99     |
| 17) tert-Butyl alcohol         | 4.29 | 59  | 1648002 | 11.973 | ppbv   | 100    |
| 18) 1,1-Dichloroethene         | 4.29 | 96  | 1031858 | 15.912 | ppbv   | 90     |
| 19) Isopropyl Alcohol          | 3.97 | 45  | 1042366 | 10.866 | ppbv   | 99     |
| 20) Methylene Chloride         | 4.34 | 84  | 916294  | 14.820 | ppbv   | 94     |
| 21) Allyl Chloride             | 4.41 | 41  | 1800803 | 17.371 | ppbv   | 97     |
| 22) trans-1,2-Dichloroethene   | 4.89 | 96  | 1011190 | 17.109 | ppbv   | 94     |
| 23) Vinyl Acetate              | 5.08 | 43  | 3830719 | 18.313 | ppbv   | 99     |
| 24) 1,1-Dichloroethane         | 5.01 | 63  | 2705796 | 16.594 | ppbv # | 97     |
| 25) Ethyl Acetate              | 5.68 | 43  | 5071768 | 14.729 | ppbv   | 100    |
| 26) Hexane                     | 5.69 | 57  | 2376395 | 16.345 | ppbv   | 99     |
| 27) Carbon Disulfide           | 4.55 | 76  | 2676771 | 18.697 | ppbv   | 99     |
| 28) Methyl tert-Butyl Ether    | 5.03 | 73  | 2801289 | 14.731 | ppbv   | 99     |
| 29) Chloroform                 | 5.75 | 83  | 3765021 | 15.966 | ppbv   | 98     |
| 30) Cyclohexane                | 7.13 | 84  | 2043169 | 16.994 | ppbv   | 99     |
| 31) cis-1,2-Dichloroethene     | 5.55 | 61  | 2448857 | 17.391 | ppbv   | 95     |
| 32) 1,1,1-Trichloroethane      | 6.51 | 97  | 3759274 | 15.912 | ppbv   | 98     |
| 34) 2-Butanone                 | 5.25 | 43  | 2690462 | 12.120 | ppbv   | 100    |
| 35) Carbon Tetrachloride       | 7.02 | 117 | 3988217 | 15.947 | ppbv   | 99     |
| 36) Benzene                    | 6.89 | 78  | 4937730 | 16.306 | ppbv   | 97     |
| 37) 1,2-Dichloroethane         | 6.31 | 62  | 2951047 | 15.599 | ppbv   | 99     |
| 38) Trichloroethene            | 7.84 | 130 | 1761169 | 15.497 | ppbv   | 99     |
| 39) 1,2-Dichloropropane        | 7.62 | 63  | 2003676 | 15.501 | ppbv   | 98     |
| 40) 1,4-Dioxane                | 7.83 | 88  | 396430  | 10.037 | ppbv   | 77     |
| 41) Tetrahydrofuran            | 6.05 | 42  | 1299478 | 11.034 | ppbv   | 96     |
| 42) Bromodichloromethane       | 7.80 | 83  | 4032871 | 15.773 | ppbv   | 98     |
| 43) Methyl Methacrylate        | 8.02 | 69  | 1874089 | 15.823 | ppbv   | 99     |

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| Internal Standards            | R.T.  | QIon | Response  | Conc   | Units  | Dev(Min) |
|-------------------------------|-------|------|-----------|--------|--------|----------|
| 44) 2,2,4-Trimethylpentane    | 7.87  | 57   | 7995460   | 14.573 | ppbv   | 98       |
| 45) t-1,3-Dichloropropene     | 9.28  | 75   | 2307361   | 19.497 | ppbv   | 98       |
| 46) cis-1,3-Dichloropropene   | 8.71  | 75   | 2800461   | 18.119 | ppbv   | 98       |
| 47) 1,1,2-Trichloroethane     | 9.48  | 97   | 2014680   | 15.758 | ppbv   | 97       |
| 48) Dibromochloromethane      | 10.31 | 129  | 3386741   | 17.447 | ppbv   | 99       |
| 49) Bromoform                 | 13.05 | 173  | 2789137   | 17.607 | ppbv   | 98       |
| 50) 4-Methyl-2-Pentanone      | 8.74  | 43   | 4083230   | 12.767 | ppbv   | 100      |
| 51) 2-Hexanone                | 10.14 | 43   | 2380402   | 10.481 | ppbv # | 99       |
| 52) Tetrachloroethene         | 11.23 | 164  | 1688585   | 14.962 | ppbv   | 99       |
| 53) Toluene                   | 9.81  | 91   | 5522662   | 16.917 | ppbv   | 99       |
| 54) 1,2-Dibromoethane         | 10.62 | 107  | 2971083   | 16.155 | ppbv   | 100      |
| 56) 1,1,1,2-Tetrachloroethane | 12.13 | 131  | 2217988   | 13.485 | ppbv # | 70       |
| 57) Chlorobenzene             | 12.16 | 112  | 3997133   | 14.599 | ppbv   | 99       |
| 58) Ethyl Benzene             | 12.72 | 91   | 7262014   | 15.386 | ppbv   | 96       |
| 59) m/p-Xylene                | 13.01 | 91   | 12090895m | 29.145 | ppbv   |          |
| 60) o-Xylene                  | 13.70 | 91   | 5712345   | 14.336 | ppbv   | 98       |
| 61) Styrene                   | 13.54 | 104  | 3655975   | 15.600 | ppbv   | 99       |
| 62) Isopropylbenzene          | 14.68 | 105  | 7808558   | 13.234 | ppbv   | 98       |
| 63) 1,1,2,2-Tetrachloroethane | 13.69 | 83   | 4142424   | 13.441 | ppbv   | 100      |
| 64) n-propylbenzene           | 15.57 | 120  | 2119441   | 14.426 | ppbv   | 89       |
| 65) tert-Butylbenzene         | 16.75 | 119  | 6728894   | 13.115 | ppbv   | 100      |
| 66) Benzyl Chloride           | 17.00 | 91   | 986011    | 8.217  | ppbv   | 99       |
| 67) sec-Butylbenzene          | 17.30 | 105  | 9273582   | 12.962 | ppbv   | 97       |
| 69) p-Isopropyltoluene        | 17.66 | 119  | 7777622   | 13.585 | ppbv   | 99       |
| 70) n-Butylbenzene            | 18.56 | 91   | 7961471   | 13.465 | ppbv   | 98       |
| 71) 2-Chlorotoluene           | 15.46 | 91   | 6108543   | 13.816 | ppbv   | 98       |
| 72) 4-Ethyltoluene            | 15.85 | 105  | 6825861   | 15.735 | ppbv   | 99       |
| 73) 1,3,5-Trimethylbenzene    | 16.00 | 105  | 6272736   | 15.007 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene    | 16.77 | 105  | 6261614   | 14.116 | ppbv   | 97       |
| 75) 1,3-Dichlorobenzene       | 17.01 | 146  | 3726042   | 15.011 | ppbv   | 100      |
| 76) 1,4-Dichlorobenzene       | 17.15 | 146  | 3658775   | 14.768 | ppbv   | 100      |
| 77) 1,2-Dichlorobenzene       | 17.83 | 146  | 3561413   | 14.751 | ppbv   | 99       |
| 78) Hexachloro-1,3-Butadiene  | 23.38 | 225  | 2754550   | 14.059 | ppbv   | 100      |
| 79) Naphthalene               | 22.20 | 128  | 5117418   | 19.375 | ppbv   | 99       |
| 80) Naphthalene, 2-methyl-    | 24.98 | 142  | 1719558   | 30.592 | ppbv   | 98       |
| 81) 1,2,4-Trichlorobenzene    | 21.94 | 180  | 2778205   | 17.999 | ppbv   | 98       |

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

