

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL102523\  
 Data File : VL040805.D  
 Acq On : 25 Oct 2023 18:12  
 Operator : SY/MD  
 Sample : 04699-15 0.40 MDL  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MDL-AIR-03-QT4-2023DL

Manual Integrations  
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/26/2023  
 Supervised By : Mahesh Dadoda 10/26/2023

Quant Time: Oct 26 03:53:53 2023

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL101123AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 2

QLast Update : Thu Oct 12 00:21:08 2023

Response via : Initial Calibration

| Compound                | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|--------|------|----------|--------|-------|----------|
| -----                   |        |      |          |        |       |          |
| Internal Standards      |        |      |          |        |       |          |
| 1) Bromochloromethane   | 5.189  | 49   | 899490   | 10.000 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 6.642  | 114  | 2336843  | 10.000 | ppbv  | -0.03    |
| 55) Chlorobenzene-d5    | 11.446 | 117  | 2191415  | 10.000 | ppbv  | -0.03    |

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene 13.754 95 1749825 10.852 ppbv -0.03  
 Spiked Amount 10.000 Range 65 - 135 Recovery = 108.500%

Target Compounds

|                               |       |     |         |       |        | Qvalue |
|-------------------------------|-------|-----|---------|-------|--------|--------|
| 2) Dichlorodifluoromethane    | 2.745 | 85  | 81775   | 0.516 | ppbv   | 97     |
| 3) Chlorodifluoromethane      | 2.690 | 51  | 68365   | 0.517 | ppbv   | 99     |
| 4) Chloromethane              | 2.825 | 50  | 23924   | 0.458 | ppbv   | 99     |
| 5) Vinyl Chloride             | 2.932 | 62  | 21847   | 0.405 | ppbv   | 98     |
| 6) Bromomethane               | 3.124 | 94  | 11345m  | 0.508 | ppbv   |        |
| 7) Chloroethane               | 3.205 | 64  | 7637    | 0.435 | ppbv   | 91     |
| 8) Dichlorotetrafluoroethane  | 2.870 | 85  | 60655   | 0.505 | ppbv   | 99     |
| 9) Propene                    | 2.710 | 41  | 22925   | 0.467 | ppbv   | 92     |
| 10) Heptane                   | 7.571 | 43  | 49860   | 0.404 | ppbv   | 98     |
| 11) Trichlorofluoromethane    | 3.568 | 101 | 61896   | 0.506 | ppbv   | 96     |
| 12) 1,1,2-Trichlorotrifluo... | 4.070 | 101 | 41516m  | 0.476 | ppbv   |        |
| 13) Ethanol                   | 3.266 | 45  | 7482m   | 0.675 | ppbv   |        |
| 14) Bromoethene               | 3.372 | 108 | 16289   | 0.436 | ppbv # | 84     |
| 15) Acetone                   | 3.491 | 43  | 53566m  | 0.576 | ppbv   |        |
| 16) 1,3-Butadiene             | 2.993 | 39  | 22212m  | 0.455 | ppbv   |        |
| 17) tert-Butyl alcohol        | 3.896 | 59  | 35264   | 0.370 | ppbv   | 96     |
| 18) 1,1-Dichloroethene        | 3.883 | 96  | 18368   | 0.470 | ppbv # | 91     |
| 19) Isopropyl Alcohol         | 3.604 | 45  | 26456m  | 0.442 | ppbv   |        |
| 20) Methylene Chloride        | 3.938 | 84  | 23970   | 0.619 | ppbv # | 85     |
| 21) Allyl Chloride            | 4.002 | 41  | 25884   | 0.422 | ppbv   | 87     |
| 22) trans-1,2-Dichloroethene  | 4.446 | 96  | 18100m  | 0.435 | ppbv   |        |
| 23) Vinyl Acetate             | 4.632 | 43  | 40391   | 0.341 | ppbv # | 92     |
| 24) 1,1-Dichloroethane        | 4.562 | 63  | 38163   | 0.427 | ppbv   | 97     |
| 25) Ethyl Acetate             | 5.208 | 43  | 82368   | 0.404 | ppbv   | 99     |
| 26) Hexane                    | 5.208 | 57  | 42076   | 0.452 | ppbv   | 91     |
| 27) Carbon Disulfide          | 4.128 | 76  | 37081   | 0.361 | ppbv # | 66     |
| 28) Methyl tert-Butyl Ether   | 4.594 | 73  | 25591   | 0.353 | ppbv   | 92     |
| 29) Chloroform                | 5.266 | 83  | 65552   | 0.487 | ppbv   | 93     |
| 30) Cyclohexane               | 6.584 | 84  | 33003m  | 0.416 | ppbv   |        |
| 31) cis-1,2-Dichloroethene    | 5.076 | 61  | 37367   | 0.435 | ppbv # | 85     |
| 32) 1,1,1-Trichloroethane     | 5.992 | 97  | 53733   | 0.375 | ppbv # | 83     |
| 34) 2-Butanone                | 4.803 | 43  | 49419   | 0.467 | ppbv   | 92     |
| 35) Carbon Tetrachloride      | 6.481 | 117 | 61132   | 0.466 | ppbv   | 90     |
| 36) Benzene                   | 6.359 | 78  | 79969   | 0.445 | ppbv   | 97     |
| 37) 1,2-Dichloroethane        | 5.793 | 62  | 46109m  | 0.501 | ppbv   |        |
| 38) Trichloroethene           | 7.275 | 130 | 30539   | 0.384 | ppbv # | 89     |
| 39) 1,2-Dichloropropane       | 7.057 | 63  | 32007m  | 0.456 | ppbv   |        |
| 40) 1,4-Dioxane               | 7.308 | 88  | 12928m  | 0.486 | ppbv   |        |
| 41) Tetrahydrofuran           | 5.578 | 42  | 30469m  | 0.416 | ppbv   |        |
| 42) Bromodichloromethane      | 7.234 | 83  | 63091   | 0.458 | ppbv   | 94     |
| 43) Methyl Methacrylate       | 7.468 | 69  | 25067   | 0.348 | ppbv # | 76     |
| 44) 2,2,4-Trimethylpentane    | 7.314 | 57  | 131895m | 0.434 | ppbv   |        |
| 45) t-1,3-Dichloropropene     | 8.706 | 75  | 16717m  | 0.291 | ppbv   |        |

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 APPROVED

Reviewed By :Semsettin Yesilyurt 10/26/2023  
 Supervised By :Mahesh Dadoda 10/26/2023

Quant Time: Oct 26 03:53:53 2023

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL101123AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LFri Aug 2

QLast Update : Thu Oct 12 00:21:08 2023

Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|-------|--------|----------|
| 46) cis-1,3-Dichloropropene   | 8.134  | 75   | 23450m   | 0.335 | ppbv   |          |
| 47) 1,1,2-Trichloroethane     | 8.883  | 97   | 34763m   | 0.471 | ppbv   |          |
| 48) Dibromochloromethane      | 9.690  | 129  | 47425m   | 0.384 | ppbv   |          |
| 49) Bromoform                 | 12.388 | 173  | 34154    | 0.340 | ppbv   | 94       |
| 50) 4-Methyl-2-Pentanone      | 8.189  | 43   | 72858m   | 0.403 | ppbv   |          |
| 51) 2-Hexanone                | 9.571  | 43   | 48680m   | 0.353 | ppbv   |          |
| 52) Tetrachloroethene         | 10.600 | 164  | 30583m   | 0.419 | ppbv   |          |
| 53) Toluene                   | 9.205  | 91   | 81314    | 0.380 | ppbv   | 98       |
| 54) 1,2-Dibromoethane         | 9.986  | 107  | 44769m   | 0.433 | ppbv   |          |
| 56) 1,1,1,2-Tetrachloroethane | 11.487 | 131  | 38247m   | 0.428 | ppbv   |          |
| 57) Chlorobenzene             | 11.504 | 112  | 71250    | 0.454 | ppbv   | 97       |
| 58) Ethyl Benzene             | 12.073 | 91   | 112019   | 0.406 | ppbv   | 91       |
| 59) m/p-Xylene                | 12.343 | 91   | 201602m  | 0.888 | ppbv   |          |
| 60) o-Xylene                  | 13.037 | 91   | 94994    | 0.439 | ppbv   | 99       |
| 61) Styrene                   | 12.876 | 104  | 41936    | 0.350 | ppbv   | 96       |
| 62) Isopropylbenzene          | 14.008 | 105  | 144700   | 0.435 | ppbv   | 96       |
| 63) 1,1,2,2-Tetrachloroethane | 13.028 | 83   | 70748    | 0.436 | ppbv   | 95       |
| 64) n-propylbenzene           | 14.905 | 120  | 34757m   | 0.389 | ppbv   |          |
| 65) tert-Butylbenzene         | 16.072 | 119  | 128184   | 0.427 | ppbv   | 88       |
| 66) Benzyl Chloride           | 16.301 | 91   | 6202m    | 0.205 | ppbv   |          |
| 67) sec-Butylbenzene          | 16.609 | 105  | 184378m  | 0.449 | ppbv   |          |
| 69) p-Isopropyltoluene        | 16.979 | 119  | 131175   | 0.381 | ppbv # | 93       |
| 70) n-Butylbenzene            | 17.870 | 91   | 140281   | 0.415 | ppbv   | 95       |
| 71) 2-Chlorotoluene           | 14.780 | 91   | 105109   | 0.420 | ppbv   | 97       |
| 72) 4-Ethyltoluene            | 15.172 | 105  | 100586   | 0.397 | ppbv # | 94       |
| 73) 1,3,5-Trimethylbenzene    | 15.336 | 105  | 89818m   | 0.403 | ppbv   |          |
| 74) 1,2,4-Trimethylbenzene    | 16.079 | 105  | 106121m  | 0.435 | ppbv   |          |
| 75) 1,3-Dichlorobenzene       | 16.310 | 146  | 62389m   | 0.412 | ppbv   |          |
| 76) 1,4-Dichlorobenzene       | 16.449 | 146  | 62105m   | 0.414 | ppbv   |          |
| 77) 1,2-Dichlorobenzene       | 17.124 | 146  | 60211    | 0.405 | ppbv   | 88       |
| 78) Hexachloro-1,3-Butadiene  | 22.603 | 225  | 47457m   | 0.446 | ppbv   |          |
| 79) Naphthalene               | 21.368 | 128  | 44836m   | 0.226 | ppbv   |          |
| 81) 1,2,4-Trichlorobenzene    | 21.130 | 180  | 30940m   | 0.288 | ppbv   |          |

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

## Manual Integrations

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Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL101123AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LFri Aug  
QLast Update : Thu Oct 12 00:21:08 2023  
Response via : Initial Calibration

