

Method Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\

Method File : VL082720AIR.M

Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Aug 27 06:46:28 2020

Last Update : Thu Aug 27 06:46:28 2020

Response Via : Initial Calibration

## Calibration Files

0.03=VL035510.D 0.1 =VL035509.D 0.5 =VL035508.D 1 =VL035507.D 2 =VL035506.D 10 =VL035505.D 15 =VL035511.D

| Compound                  | 0.03  | 0.1   | 0.5   | 1     | 2     | 10    | 15    | Avg   | %RSD  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -----ISTD-----            |       |       |       |       |       |       |       |       |       |
| 1) I Bromochloromethane   |       |       |       |       |       |       |       |       |       |
| 2) T Dichlorodifluo...    |       |       | 2.261 | 1.967 | 1.670 | 1.485 | 1.282 | 1.733 | 22.37 |
| 3) Chlorodifluoro...      |       |       | 1.140 | 1.153 | 1.131 | 1.056 | 1.051 | 1.106 | 4.41  |
| 4) Chloromethane          |       |       | 0.601 | 0.610 | 0.600 | 0.578 | 0.575 | 0.593 | 2.62  |
| 5) T Vinyl Chloride       | 0.967 | 0.701 | 0.684 | 0.699 | 0.708 | 0.675 | 0.680 | 0.731 | 14.34 |
| 6) T Bromomethane         |       |       | 0.620 | 0.622 | 0.621 | 0.601 | 0.605 | 0.614 | 1.61  |
| 7) Chloroethane           |       |       | 0.261 | 0.257 | 0.264 | 0.253 | 0.257 | 0.258 | 1.69  |
| 8) T Dichlorotetra...     |       |       | 2.290 | 2.297 | 2.183 | 1.954 | 1.770 | 2.099 | 10.98 |
| 9) T Propene              |       |       | 0.444 | 0.432 | 0.430 | 0.409 | 0.417 | 0.426 | 3.20  |
| 10) T Heptane             |       |       | 1.097 | 1.169 | 1.177 | 1.141 | 1.142 | 1.145 | 2.72  |
| 11) T Trichlorofluor...   |       |       | 2.627 | 2.681 | 2.615 | 2.363 | 2.350 | 2.527 | 6.24  |
| 12) T 1,1,2-Trichlor...   |       |       | 1.996 | 1.988 | 1.928 | 1.814 | 1.813 | 1.907 | 4.73  |
| 13) Ethanol               |       |       | 0.117 | 0.110 | 0.112 | 0.097 | 0.092 | 0.106 | 10.25 |
| 14) T Bromoethene         |       |       | 0.778 | 0.829 | 0.845 | 0.818 | 0.836 | 0.821 | 3.19  |
| 15) T Acetone             |       |       | 1.214 | 1.165 | 1.146 | 0.989 | 1.000 | 1.103 | 9.24  |
| 16) T 1,3-Butadiene       |       |       | 0.396 | 0.411 | 0.419 | 0.409 | 0.416 | 0.411 | 2.15  |
| 17) tert-Butyl alc...     |       |       | 1.310 | 1.367 | 1.378 | 1.359 | 1.299 | 1.342 | 2.65  |
| 18) T 1,1-Dichloroet...   |       |       | 0.811 | 0.847 | 0.857 | 0.835 | 0.849 | 0.840 | 2.15  |
| 19) T Isopropyl Alcohol   |       |       | 0.647 | 0.665 | 0.661 | 0.676 | 0.640 | 0.658 | 2.20  |
| 20) T Methylene Chlo...   |       |       | 0.966 | 0.921 | 0.880 | 0.661 | 0.679 | 0.821 | 17.24 |
| 21) T Allyl Chloride      |       |       | 0.479 | 0.496 | 0.508 | 0.550 | 0.550 | 0.517 | 6.18  |
| 22) T trans-1,2-Dich...   |       |       | 0.888 | 0.894 | 0.907 | 0.875 | 0.907 | 0.894 | 1.53  |
| 23) T Vinyl Acetate       |       |       | 1.324 | 1.342 | 1.450 | 1.461 | 1.500 | 1.416 | 5.48  |
| 24) T 1,1-Dichloroet...   |       |       | 1.483 | 1.485 | 1.505 | 1.401 | 1.411 | 1.457 | 3.26  |
| 25) T Ethyl Acetate       |       |       | 1.989 | 2.039 | 2.049 | 1.844 | 1.821 | 1.948 | 5.57  |
| 26) T Hexane              |       |       | 1.100 | 1.145 | 1.184 | 1.045 | 1.047 | 1.104 | 5.51  |
| 27) T Carbon Disulfide    |       |       | 1.310 | 1.462 | 1.627 | 1.747 | 1.775 | 1.584 | 12.41 |
| 28) T Methyl tert-Bu...   |       |       | 1.791 | 1.921 | 2.011 | 1.958 | 1.940 | 1.924 | 4.24  |
| 29) T Chloroform          |       |       | 2.293 | 2.305 | 2.312 | 2.162 | 2.174 | 2.249 | 3.31  |
| 30) T Cyclohexane         |       |       | 1.033 | 1.167 | 1.238 | 1.230 | 1.245 | 1.183 | 7.54  |
| 31) T cis-1,2-Dichlo...   |       |       | 1.055 | 1.115 | 1.175 | 1.143 | 1.175 | 1.133 | 4.43  |
| 32) T 1,1,1-Trichlor...   | 2.761 | 1.861 | 1.987 | 2.106 | 2.171 | 2.165 | 2.224 | 2.182 | 13.03 |
| -----ISTD-----            |       |       |       |       |       |       |       |       |       |
| 33) I 1,4-Difluorobenzene |       |       |       |       |       |       |       |       |       |
| 34) T 2-Butanone          |       |       | 0.284 | 0.304 | 0.310 | 0.295 | 0.291 | 0.297 | 3.45  |
| 35) T Carbon Tetrach...   | 0.584 | 0.425 | 0.455 | 0.494 | 0.519 | 0.522 | 0.520 | 0.503 | 10.23 |
| 36) T Benzene             |       |       | 0.624 | 0.673 | 0.691 | 0.637 | 0.612 | 0.647 | 5.18  |
| 37) T 1,2-Dichloroet...   |       |       | 0.315 | 0.317 | 0.315 | 0.298 | 0.297 | 0.309 | 3.22  |
| 38) T Trichloroethene     | 0.525 | 0.373 | 0.337 | 0.354 | 0.365 | 0.344 | 0.334 | 0.376 | 17.92 |
| 39) T 1,2-Dichloropr...   |       |       | 0.216 | 0.226 | 0.229 | 0.214 | 0.209 | 0.219 | 3.90  |

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|     |   |                   |       |       |       |       |       |       |       |       |      |
|-----|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 40) | T | 1,4-Dioxane       | 0.098 | 0.112 | 0.114 | 0.117 | 0.106 | 0.109 | 6.96  |       |      |
| 41) | T | Tetrahydrofuran   | 0.140 | 0.151 | 0.164 | 0.167 | 0.166 | 0.157 | 7.44  |       |      |
| 42) | T | Bromodichlorom... | 0.451 | 0.494 | 0.519 | 0.521 | 0.510 | 0.499 | 5.78  |       |      |
| 43) |   | Methyl Methacr... | 0.211 | 0.245 | 0.266 | 0.266 | 0.263 | 0.250 | 9.36  |       |      |
| 44) | T | 2,2,4-Trimethy... | 0.837 | 0.912 | 0.931 | 0.818 | 0.760 | 0.852 | 8.24  |       |      |
| 45) | T | t-1,3-Dichloro... | 0.183 | 0.218 | 0.258 | 0.303 | 0.306 | 0.254 | 21.14 |       |      |
| 46) | T | cis-1,3-Dichlo... | 0.246 | 0.287 | 0.327 | 0.358 | 0.356 | 0.315 | 15.24 |       |      |
| 47) | T | 1,1,2-Trichlor... | 0.319 | 0.333 | 0.334 | 0.316 | 0.312 | 0.323 | 3.10  |       |      |
| 48) | T | Dibromochlorom... | 0.416 | 0.479 | 0.530 | 0.560 | 0.554 | 0.508 | 11.84 |       |      |
| 49) | T | Bromoform         | 0.333 | 0.416 | 0.478 | 0.538 | 0.537 | 0.460 | 18.95 |       |      |
| 50) | T | 4-Methyl-2-Pen... | 0.389 | 0.441 | 0.458 | 0.438 | 0.422 | 0.430 | 6.01  |       |      |
| 51) | T | 2-Hexanone        | 0.296 | 0.341 | 0.369 | 0.381 | 0.375 | 0.353 | 9.96  |       |      |
| 52) | T | Tetrachloroethene | 0.458 | 0.361 | 0.368 | 0.375 | 0.376 | 0.357 | 0.353 | 0.378 | 9.59 |
| 53) | T | Toluene           | 0.743 | 0.840 | 0.887 | 0.820 | 0.780 | 0.814 | 6.80  |       |      |
| 54) | T | 1,2-Dibromoethane | 0.488 | 0.518 | 0.534 | 0.508 | 0.500 | 0.510 | 3.43  |       |      |

|     |   |                   |       |       |       |       |       |       |       |       |       |
|-----|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 55) | I | Chlorobenzene-d5  |       |       |       |       |       |       |       |       |       |
|     |   |                   |       |       |       |       |       |       |       |       |       |
| 56) |   | 1,1,1,2-Tetrac... |       |       | 0.392 | 0.412 | 0.424 | 0.406 | 0.401 | 0.407 | 2.96  |
| 57) | T | Chlorobenzene     |       |       | 0.812 | 0.808 | 0.768 | 0.662 | 0.630 | 0.736 | 11.53 |
| 58) | T | Ethyl Benzene     |       |       | 0.993 | 1.097 | 1.131 | 0.995 | 0.940 | 1.031 | 7.72  |
| 59) | T | m/p-Xylene        |       |       | 0.867 | 0.937 | 0.942 | 0.804 | 0.758 | 0.862 | 9.38  |
| 60) | T | o-Xylene          |       |       | 0.856 | 0.940 | 0.940 | 0.824 | 0.780 | 0.868 | 8.20  |
| 61) | T | Styrene           |       |       | 0.568 | 0.676 | 0.724 | 0.687 | 0.664 | 0.664 | 8.75  |
| 62) |   | Isopropylbenzene  |       |       | 1.443 | 1.557 | 1.530 | 1.272 | 1.168 | 1.394 | 12.08 |
| 63) | T | 1,1,2,2-Tetrac... | 0.954 | 0.626 | 0.664 | 0.672 | 0.665 | 0.579 | 0.550 | 0.673 | 19.69 |
| 64) |   | n-propylbenzene   |       |       | 0.409 | 0.448 | 0.452 | 0.413 | 0.405 | 0.425 | 5.36  |
| 65) |   | tert-Butylbenzene |       |       | 1.246 | 1.427 | 1.468 | 1.213 | 1.127 | 1.296 | 11.22 |
| 66) | T | Benzyl Chloride   |       |       | 0.201 | 0.244 | 0.298 | 0.426 | 0.442 | 0.322 | 33.49 |
| 67) |   | sec-Butylbenzene  |       |       | 1.723 | 1.945 | 1.988 | 1.567 | 1.409 | 1.727 | 14.27 |
| 68) | S | 1-Bromo-4-Fluo... | 0.725 | 0.721 | 0.725 | 0.717 | 0.696 | 0.690 | 0.697 | 0.710 | 2.15  |
| 69) |   | p-Isopropyltol... |       |       | 1.493 | 1.676 | 1.726 | 1.400 | 1.278 | 1.514 | 12.35 |
| 70) |   | n-Butylbenzene    |       |       | 1.442 | 1.613 | 1.659 | 1.349 | 1.230 | 1.459 | 12.29 |
| 71) |   | 2-Chlorotoluene   |       |       | 0.986 | 1.095 | 1.107 | 0.970 | 0.918 | 1.015 | 8.11  |
| 72) | T | 4-Ethyltoluene    |       |       | 1.035 | 1.190 | 1.220 | 1.068 | 1.002 | 1.103 | 8.75  |
| 73) | T | 1,3,5-Trimethy... |       |       | 0.952 | 1.101 | 1.131 | 0.984 | 0.935 | 1.020 | 8.76  |
| 74) | T | 1,2,4-Trimethy... |       |       | 1.135 | 1.239 | 1.245 | 1.028 | 0.957 | 1.121 | 11.37 |
| 75) | T | 1,3-Dichlorobe... |       |       | 0.872 | 0.906 | 0.889 | 0.757 | 0.726 | 0.830 | 9.95  |
| 76) | T | 1,4-Dichlorobe... |       |       | 0.835 | 0.882 | 0.873 | 0.767 | 0.737 | 0.819 | 7.86  |
| 77) | T | 1,2-Dichlorobe... |       |       | 0.832 | 0.865 | 0.861 | 0.744 | 0.719 | 0.804 | 8.48  |
| 78) | T | Hexachloro-1,3... |       |       | 0.514 | 0.558 | 0.565 | 0.470 | 0.460 | 0.513 | 9.46  |
| 79) | T | Naphthalene       |       |       | 1.074 | 1.262 | 1.396 | 1.269 | 1.216 | 1.243 | 9.32  |
| 80) | T | Naphthalene,2-... |       |       | 0.261 | 0.352 | 0.464 | 0.512 | 0.533 | 0.424 | 27.17 |
| 81) | T | 1,2,4-Trichlor... |       |       | 0.702 | 0.773 | 0.807 | 0.725 | 0.716 | 0.745 | 5.89  |

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 (#) = Out of Range