

Method Path : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\  
 Method File : 624X102320W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Mon Oct 26 11:58:08 2020  
 Response Via : Initial Calibration

## Calibration Files

5 =VX019068.D 20 =VX019069.D 50 =VX019070.D  
 100 =VX019071.D 150 =VX019072.D

|       | Compound            | 5              | 20    | 50    | 100   | 150   | Avg    | %RSD  |
|-------|---------------------|----------------|-------|-------|-------|-------|--------|-------|
| ----- |                     |                |       |       |       |       |        |       |
| 1) I  | Bromochloromethane  | -----ISTD----- |       |       |       |       |        |       |
| 2) M  | Dichlorodifluoromet | 1.448          | 1.297 | 1.569 | 1.641 | 1.583 | 1.508  | 9.10  |
| 3) M  | Chloromethane       | 1.376          | 1.200 | 1.448 | 1.479 | 1.307 | 1.362  | 8.26  |
| 4) M  | Vinyl Chloride      | 1.729          | 1.563 | 1.862 | 1.912 | 1.860 | 1.785  | 7.92  |
| 5) M  | Bromomethane        | 1.349          | 1.360 | 1.438 | 1.343 |       | 1.373  | 3.21  |
| 6) M  | Chloroethane        | 1.170          | 1.041 | 1.247 | 1.335 | 1.257 | 1.210  | 9.16  |
| 7) M  | Trichlorofluorometh | 3.046          | 2.622 | 3.210 | 3.358 | 3.308 | 3.109  | 9.56  |
| 8) T  | Diethyl Ether       | 1.068          | 1.005 | 1.218 | 1.286 | 1.249 | 1.165  | 10.47 |
| 9)    | 1,1,2-Trichlorotrif | 1.434          | 1.276 | 1.539 | 1.610 | 1.568 | 1.485  | 9.02  |
| 10) M | 1,1-Dichloroethene  | 1.426          | 1.287 | 1.566 | 1.660 | 1.612 | 1.510  | 10.09 |
| 11)   | Methyl Iodide       | 0.747          | 0.897 | 1.532 | 1.943 | 1.864 | 1.397  | 39.33 |
| 12)   | Methyl Acetate      | 1.339          | 1.281 | 1.562 | 1.697 | 1.597 | 1.495  | 11.88 |
| 13) M | Acrolein            | 0.154          | 0.091 | 0.120 | 0.156 | 0.167 | 0.138  | 22.82 |
| 14) M | Acrylonitrile       | 0.652          | 0.595 | 0.732 | 0.796 | 0.736 | 0.702  | 11.21 |
| 15) M | Acetone             | 0.189          | 0.159 | 0.202 | 0.235 | 0.221 | 0.201  | 14.63 |
| 16) M | Carbon Disulfide    | 4.027          | 3.587 | 4.324 | 4.596 | 4.454 | 4.198  | 9.54  |
| 17)   | Allyl chloride      | 1.742          | 1.581 | 1.979 | 2.098 | 2.032 | 1.886  | 11.51 |
| 18) M | Methylene Chloride  | 1.644          | 1.476 | 1.793 | 1.914 | 1.785 | 1.722  | 9.73  |
| 19) M | trans-1,2-Dichloroe | 1.653          | 1.509 | 1.822 | 1.945 | 1.890 | 1.764  | 10.20 |
| 20) T | Diisopropyl ether   | 3.637          | 3.228 | 4.009 | 4.223 | 4.011 | 3.821  | 10.29 |
| 21) M | 1,1-Dichloroethane  | 2.653          | 2.402 | 2.945 | 3.074 | 2.954 | 2.806  | 9.76  |
| 22) M | cis-1,2-Dichloroeth | 1.952          | 1.739 | 2.131 | 2.256 | 2.138 | 2.043  | 9.87  |
| 23) M | tert-Butyl Alcohol  | 0.309          | 0.285 | 0.342 | 0.385 | 0.382 | 0.341  | 12.89 |
| 24) M | Methyl tert-Butyl E | 4.449          | 4.050 | 4.990 | 5.319 | 5.068 | 4.775  | 10.78 |
| 25) M | Chloroform          | 2.906          | 2.639 | 3.267 | 3.459 | 3.273 | 3.109  | 10.62 |
| 26)   | Cyclohexane         | 2.136          | 1.841 | 2.264 | 2.388 | 2.273 | 2.180  | 9.61  |
| 27) s | 1,2-Dichloroethane- | 2.088          | 2.060 | 1.979 | 1.911 | 1.953 | 1.998  | 3.70  |
| ----- |                     |                |       |       |       |       |        |       |
| 28) I | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |        |       |
| 29)   | 1,1-Dichloropropene | 0.391          | 0.353 | 0.448 | 0.483 | 0.440 | 0.423  | 12.12 |
| 30) M | 2-Butanone          | 0.147          | 0.138 | 0.178 | 0.202 | 0.178 | 0.169  | 15.34 |
| 31)   | 2,2-Dichloropropane | 0.450          | 0.406 | 0.512 | 0.549 | 0.503 | 0.484  | 11.56 |
| 32) M | 1,1,1-Trichloroetha | 0.461          | 0.425 | 0.535 | 0.584 | 0.539 | 0.509  | 12.63 |
| 33) M | Carbon Tetrachlorid | 0.387          | 0.359 | 0.469 | 0.518 | 0.474 | 0.441  | 14.88 |
| 34) M | Benzene             | 1.141          | 1.039 | 1.321 | 1.435 | 1.290 | 1.245  | 12.51 |
| 35)   | Methacrylonitrile   | 0.153          | 0.159 | 0.194 | 0.215 | 0.192 | 0.183  | 14.21 |
| 36) M | 1,2-Dichloroethane  | 0.404          | 0.358 | 0.453 | 0.483 | 0.439 | 0.427  | 11.18 |
| 37) M | Trichloroethene     | 0.326          | 0.293 | 0.380 | 0.415 | 0.375 | 0.358  | 13.46 |
| 38)   | Methylcyclohexane   | 0.441          | 0.392 | 0.501 | 0.543 | 0.496 | 0.474  | 12.34 |
| 39) M | 1,2-Dichloropropane | 0.261          | 0.236 | 0.310 | 0.337 | 0.302 | 0.289  | 13.99 |
| 40)   | Dibromomethane      | 0.203          | 0.184 | 0.238 | 0.263 | 0.233 | 0.224  | 13.70 |
| 41) M | Bromodichloromethan | 0.386          | 0.359 | 0.477 | 0.529 | 0.466 | 0.444  | 15.78 |
| 42) M | Vinyl Acetate       | 0.580          | 0.552 | 0.696 | 0.760 | 0.691 | 0.656  | 13.28 |
| 43)   | Ethyl Acetate       | 0.329          | 0.291 | 0.376 | 0.410 | 0.362 | 0.354  | 12.82 |
| 44)   | Isopropyl Acetate   | 0.536          | 0.484 | 0.634 | 0.696 | 0.612 | 0.592  | 14.09 |
| 45) T | 1,4-Dioxane         | 0.005          | 0.005 | 0.006 | 0.007 | 0.007 | 0.006# | 14.82 |
| 46)   | Methyl methacrylate | 0.242          | 0.236 | 0.302 | 0.332 | 0.290 | 0.280  | 14.46 |
| 47)   | n-amyl Acetate      | 0.393          | 0.386 | 0.510 | 0.560 | 0.527 | 0.475  | 16.91 |
| 48) M | t-1,3-Dichloroprope | 0.433          | 0.401 | 0.532 | 0.594 | 0.524 | 0.497  | 15.84 |
| 49) T | cis-1,3-Dichloropro | 0.465          | 0.430 | 0.568 | 0.625 | 0.554 | 0.528  | 15.07 |
| 50) M | 1,1,2-Trichloroetha | 0.288          | 0.264 | 0.350 | 0.389 | 0.334 | 0.325  | 15.27 |
| 51)   | Ethyl methacrylate  | 0.406          | 0.382 | 0.518 | 0.568 | 0.496 | 0.474  | 16.44 |
| 52)   | 1,3-Dichloropropane | 0.490          | 0.438 | 0.565 | 0.620 | 0.533 | 0.529  | 13.19 |

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| Compound |                      | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD  |
|----------|----------------------|----------------|-------|-------|-------|-------|-------|-------|
| 53) M    | Dibromochloromethan  | 0.300          | 0.279 | 0.392 | 0.447 | 0.392 | 0.362 | 19.44 |
| 54) M    | 1,2-Dibromoethane    | 0.323          | 0.288 | 0.377 | 0.420 | 0.358 | 0.353 | 14.28 |
| 55) M    | 2-Chloroethyl vinyl  | 0.177          | 0.236 | 0.268 | 0.312 | 0.274 | 0.253 | 20.03 |
| 56) M    | Bromoform            | 0.193          | 0.191 | 0.262 | 0.320 | 0.299 | 0.253 | 23.59 |
| 57) I    | Chlorobenzene-d5     | -----ISTD----- |       |       |       |       |       |       |
| 58) M    | 4-Methyl-2-Pentanone | 0.331          | 0.325 | 0.411 | 0.427 | 0.398 | 0.378 | 12.53 |
| 59) M    | 2-Hexanone           | 0.243          | 0.245 | 0.303 | 0.313 | 0.305 | 0.282 | 12.28 |
| 60) S    | 4-Bromofluorobenzene | 0.436          | 0.442 | 0.441 | 0.450 | 0.481 | 0.450 | 4.01  |
| 61) M    | Tetrachloroethene    | 0.343          | 0.302 | 0.373 | 0.397 | 0.364 | 0.356 | 10.05 |
| 62) M    | Toluene              | 1.495          | 1.318 | 1.656 | 1.757 | 1.657 | 1.577 | 10.93 |
| 63) S    | Toluene-d8           | 1.331          | 1.337 | 1.324 | 1.289 | 1.341 | 1.325 | 1.57  |
| 64) M    | Chlorobenzene        | 0.900          | 0.804 | 1.037 | 1.123 | 1.037 | 0.980 | 12.96 |
| 65)      | 1,1,1,2-Tetrachloro  | 0.310          | 0.290 | 0.377 | 0.417 | 0.389 | 0.356 | 15.23 |
| 66) M    | Ethyl Benzene        | 1.611          | 1.436 | 1.803 | 1.968 | 1.825 | 1.729 | 11.99 |
| 67) M    | m/p-Xylenes          | 0.583          | 0.543 | 0.697 | 0.756 | 0.717 | 0.659 | 13.88 |
| 68) M    | o-Xylene             | 0.558          | 0.508 | 0.662 | 0.725 | 0.689 | 0.629 | 14.56 |
| 69) M    | Styrene              | 0.897          | 0.846 | 1.113 | 1.243 | 1.197 | 1.059 | 16.88 |
| 70)      | Isopropylbenzene     | 1.510          | 1.370 | 1.782 | 1.967 | 1.824 | 1.691 | 14.44 |
| 71) M    | 1,1,2,2-Tetrachloro  | 0.412          | 0.405 | 0.508 | 0.555 | 0.560 | 0.488 | 15.39 |
| 72)      | 1,2,3-Trichloroprop  | 0.381          | 0.377 | 0.462 | 0.485 | 0.490 | 0.439 | 12.75 |
| 73)      | Bromobenzene         | 0.362          | 0.334 | 0.426 | 0.480 | 0.464 | 0.413 | 15.34 |
| 74)      | n-propylbenzene      | 1.706          | 1.575 | 2.003 | 2.182 | 2.105 | 1.914 | 13.68 |
| 75)      | 2-Chlorotoluene      | 0.978          | 0.881 | 1.127 | 1.226 | 1.201 | 1.083 | 13.71 |
| 76)      | 1,3,5-Trimethylbenz  | 1.197          | 1.106 | 1.434 | 1.573 | 1.550 | 1.372 | 15.35 |
| 77)      | t-1,4-Dichloro-2-bu  | 0.136          | 0.139 | 0.184 | 0.206 | 0.206 | 0.174 | 20.01 |
| 78)      | 4-Chlorotoluene      | 1.129          | 1.036 | 1.323 | 1.438 | 1.436 | 1.272 | 14.35 |
| 79)      | tert-butylbenzene    | 1.165          | 1.093 | 1.396 | 1.560 | 1.540 | 1.351 | 15.81 |
| 80)      | 1,2,4-Trimethylbenz  | 1.204          | 1.117 | 1.413 | 1.546 | 1.538 | 1.364 | 14.31 |
| 81)      | sec-Butylbenzene     | 1.390          | 1.303 | 1.668 | 1.825 | 1.806 | 1.598 | 15.01 |
| 82)      | p-Isopropyltoluene   | 1.270          | 1.185 | 1.526 | 1.685 | 1.700 | 1.473 | 16.06 |
| 83) M    | 1,3-Dichlorobenzene  | 0.649          | 0.597 | 0.754 | 0.834 | 0.858 | 0.738 | 15.37 |
| 84) M    | 1,4-Dichlorobenzene  | 0.646          | 0.604 | 0.773 | 0.853 | 0.874 | 0.750 | 16.16 |
| 85)      | n-Butylbenzene       | 1.120          | 1.057 | 1.356 | 1.518 | 1.544 | 1.319 | 16.93 |
| 86) T    | Hexachloroethane     | 0.173          | 0.172 | 0.239 | 0.266 | 0.280 | 0.226 | 22.59 |
| 87) M    | 1,2-Dichlorobenzene  | 0.609          | 0.573 | 0.736 | 0.791 | 0.826 | 0.707 | 15.79 |
| 88)      | 1,2-Dibromo-3-Chlor  | 0.085          | 0.089 | 0.117 | 0.131 | 0.131 | 0.110 | 20.31 |
| 89)      | 1,2,4-Trichlorobenz  | 0.413          | 0.402 | 0.526 | 0.615 | 0.589 | 0.509 | 19.28 |
| 90)      | Hexachlorobutadiene  | 0.181          | 0.169 | 0.225 | 0.251 | 0.252 | 0.216 | 18.04 |
| 91) M    | Naphthalene          | 1.328          | 1.317 | 1.761 | 1.970 | 1.952 | 1.665 | 19.43 |
| 92)      | 1,2,3-Trichlorobenz  | 0.413          | 0.388 | 0.507 | 0.574 | 0.565 | 0.489 | 17.45 |

(#) = Out of Range