

Method Path : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\  
 Method File : 624X031819W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Mon Mar 18 14:34:46 2019  
 Response Via : Initial Calibration

## Calibration Files

5 =VX008164.D 20 =VX008159.D 50 =VX008160.D  
 100 =VX008161.D 150 =VX008162.D

|       | Compound            | 5              | 20    | 50    | 100   | 150   | Avg    | %RSD  |
|-------|---------------------|----------------|-------|-------|-------|-------|--------|-------|
| ----- |                     |                |       |       |       |       |        |       |
| 1) I  | Bromochloromethane  | -----ISTD----- |       |       |       |       |        |       |
| 2) M  | Dichlorodifluoromet | 1.644          | 1.310 | 1.241 | 1.243 | 1.282 | 1.344  | 12.66 |
| 3) M  | Chloromethane       | 2.331          | 1.620 | 1.528 | 1.469 | 1.525 | 1.694  | 21.23 |
| 4) M  | Vinyl Chloride      | 2.377          | 1.678 | 1.588 | 1.527 | 1.566 | 1.747  | 20.38 |
| 5) M  | Bromomethane        | 2.553          | 1.110 | 1.398 | 1.369 | 1.410 | 1.568  | 36.00 |
| 6) M  | Chloroethane        | 1.520          | 1.011 | 0.976 | 0.924 | 1.030 | 1.092  | 22.21 |
| 7) M  | Trichlorofluorometh | 3.157          | 2.043 | 1.932 | 1.923 | 1.945 | 2.200  | 24.40 |
| 8) T  | Diethyl Ether       | 1.417          | 1.179 | 1.100 | 1.109 | 1.135 | 1.188  | 11.09 |
| 9)    | 1,1,2-Trichlorotrif | 1.808          | 1.457 | 1.387 | 1.384 | 1.425 | 1.492  | 12.00 |
| 10) M | 1,1-Dichloroethene  | 1.624          | 1.380 | 1.319 | 1.339 | 1.386 | 1.410  | 8.73  |
| 11)   | Methyl Iodide       | 1.864          | 1.630 | 1.747 | 1.828 | 1.903 | 1.794  | 6.03  |
| 12)   | Methyl Acetate      | 2.508          | 2.297 | 2.199 | 2.233 | 2.298 | 2.307  | 5.21  |
| 13) M | Acrolein            | 0.517          | 0.325 | 0.301 | 0.312 | 0.319 | 0.355  | 25.67 |
| 14) M | Acrylonitrile       | 1.198          | 1.008 | 0.960 | 0.969 | 0.984 | 1.024  | 9.68  |
| 15) M | Acetone             | 0.385          | 0.355 | 0.312 | 0.298 | 0.294 | 0.329  | 12.07 |
| 16) M | Carbon Disulfide    | 5.131          | 4.349 | 4.249 | 4.277 | 4.464 | 4.494  | 8.14  |
| 17)   | Allyl chloride      | 3.449          | 2.923 | 2.917 | 2.993 | 3.123 | 3.081  | 7.20  |
| 18) M | Methylene Chloride  | 1.986          | 1.623 | 1.527 | 1.512 | 1.565 | 1.643  | 11.97 |
| 19) M | trans-1,2-Dichloroe | 1.749          | 1.483 | 1.428 | 1.437 | 1.476 | 1.514  | 8.78  |
| 20) T | Diisopropyl ether   | 6.984          | 5.880 | 5.728 | 5.745 | 5.834 | 6.034  | 8.86  |
| 21) M | 1,1-Dichloroethane  | 3.535          | 3.021 | 2.880 | 2.936 | 3.025 | 3.079  | 8.51  |
| 22) M | cis-1,2-Dichloroeth | 1.985          | 1.693 | 1.618 | 1.650 | 1.687 | 1.727  | 8.55  |
| 23) M | tert-Butyl Alcohol  | 0.426          | 0.372 | 0.355 | 0.359 | 0.373 | 0.377  | 7.56  |
| 24) M | Methyl tert-Butyl E | 5.836          | 4.986 | 4.797 | 4.919 | 5.031 | 5.114  | 8.08  |
| 25) M | Chloroform          | 3.375          | 2.889 | 2.730 | 2.739 | 2.792 | 2.905  | 9.30  |
| 26)   | Cyclohexane         | 3.359          | 2.807 | 2.777 | 2.840 | 2.896 | 2.936  | 8.21  |
| 27) s | 1,2-Dichloroethane- | 2.506          | 2.566 | 2.460 | 2.448 | 2.498 | 2.495  | 1.87  |
| ----- |                     |                |       |       |       |       |        |       |
| 28) I | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |        |       |
| 29)   | 1,1-Dichloropropene | 0.458          | 0.383 | 0.380 | 0.386 | 0.390 | 0.399  | 8.24  |
| 30) M | 2-Butanone          | 0.319          | 0.290 | 0.273 | 0.260 | 0.259 | 0.280  | 8.91  |
| 31)   | 2,2-Dichloropropane | 0.444          | 0.382 | 0.386 | 0.398 | 0.403 | 0.403  | 6.12  |
| 32) M | 1,1,1-Trichloroetha | 0.472          | 0.410 | 0.406 | 0.408 | 0.419 | 0.423  | 6.54  |
| 33) M | Carbon Tetrachlorid | 0.394          | 0.335 | 0.343 | 0.346 | 0.356 | 0.355  | 6.51  |
| 34) M | Benzene             | 1.379          | 1.166 | 1.145 | 1.135 | 1.146 | 1.194  | 8.70  |
| 35)   | Methacrylonitrile   | 0.303          | 0.264 | 0.266 | 0.265 | 0.263 | 0.272  | 6.35  |
| 36) M | 1,2-Dichloroethane  | 0.505          | 0.429 | 0.413 | 0.405 | 0.415 | 0.433  | 9.47  |
| 37) M | Trichloroethene     | 0.328          | 0.275 | 0.273 | 0.271 | 0.275 | 0.285  | 8.65  |
| 38)   | Methylcyclohexane   | 0.548          | 0.462 | 0.468 | 0.468 | 0.478 | 0.485  | 7.40  |
| 39) M | 1,2-Dichloropropane | 0.369          | 0.317 | 0.314 | 0.311 | 0.316 | 0.325  | 7.49  |
| 40)   | Dibromomethane      | 0.233          | 0.194 | 0.190 | 0.188 | 0.190 | 0.199  | 9.72  |
| 41) M | Bromodichloromethan | 0.426          | 0.372 | 0.371 | 0.373 | 0.382 | 0.385  | 6.10  |
| 42) M | Vinyl Acetate       | 1.047          | 0.910 | 0.910 | 0.916 | 0.923 | 0.941  | 6.30  |
| 43)   | Ethyl Acetate       | 0.565          | 0.486 | 0.478 | 0.476 | 0.476 | 0.496  | 7.80  |
| 44)   | Isopropyl Acetate   | 0.845          | 0.736 | 0.749 | 0.752 | 0.767 | 0.770  | 5.62  |
| 45) T | 1,4-Dioxane         | 0.008          | 0.007 | 0.007 | 0.007 | 0.007 | 0.007# | 9.41  |
| 46)   | Methyl methacrylate | 0.447          | 0.391 | 0.396 | 0.395 | 0.401 | 0.406  | 5.70  |
| 47)   | n-amyl Acetate      | 0.672          | 0.638 | 0.649 | 0.652 | 0.677 | 0.658  | 2.52  |
| 48) M | t-1,3-Dichloroprope | 0.425          | 0.395 | 0.424 | 0.434 | 0.449 | 0.425  | 4.59  |
| 49) T | cis-1,3-Dichloropro | 0.500          | 0.444 | 0.465 | 0.474 | 0.484 | 0.473  | 4.39  |
| 50) M | 1,1,2-Trichloroetha | 0.331          | 0.279 | 0.277 | 0.269 | 0.273 | 0.286  | 8.93  |
| 51)   | Ethyl methacrylate  | 0.500          | 0.445 | 0.458 | 0.451 | 0.463 | 0.463  | 4.69  |
| 52)   | 1,3-Dichloropropane | 0.592          | 0.507 | 0.492 | 0.483 | 0.484 | 0.512  | 8.97  |

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|       | Compound             | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD  |
|-------|----------------------|----------------|-------|-------|-------|-------|-------|-------|
| 53) M | Dibromochloromethan  | 0.292          | 0.266 | 0.273 | 0.271 | 0.279 | 0.276 | 3.62  |
| 54) M | 1,2-Dibromoethane    | 0.335          | 0.299 | 0.287 | 0.284 | 0.286 | 0.298 | 7.08  |
| 55) M | 2-Chloroethyl vinyl  | 0.289          | 0.332 | 0.334 | 0.350 | 0.344 | 0.330 | 7.29  |
| 56) M | Bromoform            | 0.201          | 0.189 | 0.199 | 0.198 | 0.207 | 0.199 | 3.35  |
| 57) I | Chlorobenzene-d5     | -----ISTD----- |       |       |       |       |       |       |
| 58) M | 4-Methyl-2-Pentanone | 0.637          | 0.571 | 0.555 | 0.552 | 0.554 | 0.574 | 6.26  |
| 59) M | 2-Hexanone           | 0.497          | 0.465 | 0.436 | 0.431 | 0.434 | 0.453 | 6.26  |
| 60) S | 4-Bromofluorobenzene | 0.489          | 0.504 | 0.501 | 0.501 | 0.508 | 0.501 | 1.40  |
| 61) M | Tetrachloroethene    | 0.355          | 0.295 | 0.284 | 0.286 | 0.290 | 0.302 | 9.82  |
| 62) M | Toluene              | 1.644          | 1.378 | 1.353 | 1.351 | 1.368 | 1.419 | 8.90  |
| 63) S | Toluene-d8           | 1.456          | 1.472 | 1.458 | 1.462 | 1.440 | 1.458 | 0.80  |
| 64) M | Chlorobenzene        | 0.972          | 0.824 | 0.805 | 0.808 | 0.812 | 0.844 | 8.50  |
| 65)   | 1,1,1,2-Tetrachloro  | 0.321          | 0.283 | 0.287 | 0.295 | 0.294 | 0.296 | 5.04  |
| 66) M | Ethyl Benzene        | 1.709          | 1.450 | 1.454 | 1.474 | 1.489 | 1.515 | 7.23  |
| 67) M | m/p-Xylenes          | 0.623          | 0.536 | 0.538 | 0.546 | 0.556 | 0.560 | 6.46  |
| 68) M | o-Xylene             | 0.593          | 0.517 | 0.519 | 0.527 | 0.533 | 0.538 | 5.88  |
| 69) M | Styrene              | 0.948          | 0.840 | 0.848 | 0.861 | 0.885 | 0.876 | 4.95  |
| 70)   | Isopropylbenzene     | 1.641          | 1.396 | 1.398 | 1.397 | 1.420 | 1.451 | 7.38  |
| 71) M | 1,1,2,2-Tetrachloro  | 0.571          | 0.509 | 0.486 | 0.480 | 0.493 | 0.508 | 7.27  |
| 72)   | 1,2,3-Trichloroprop  | 0.495          | 0.448 | 0.429 | 0.411 | 0.408 | 0.438 | 8.11  |
| 73)   | Bromobenzene         | 0.402          | 0.329 | 0.326 | 0.327 | 0.333 | 0.343 | 9.60  |
| 74)   | n-propylbenzene      | 1.915          | 1.628 | 1.657 | 1.689 | 1.699 | 1.717 | 6.64  |
| 75)   | 2-Chlorotoluene      | 1.155          | 0.978 | 0.966 | 0.966 | 0.980 | 1.009 | 8.12  |
| 76)   | 1,3,5-Trimethylbenz  | 1.315          | 1.153 | 1.158 | 1.176 | 1.197 | 1.199 | 5.55  |
| 77)   | t-1,4-Dichloro-2-bu  | 0.143          | 0.146 | 0.157 | 0.167 | 0.175 | 0.157 | 8.62  |
| 78)   | 4-Chlorotoluene      | 1.294          | 1.108 | 1.113 | 1.132 | 1.164 | 1.162 | 6.60  |
| 79)   | tert-butylbenzene    | 1.330          | 1.154 | 1.197 | 1.198 | 1.229 | 1.221 | 5.43  |
| 80)   | 1,2,4-Trimethylbenz  | 1.340          | 1.160 | 1.176 | 1.173 | 1.205 | 1.211 | 6.12  |
| 81)   | sec-Butylbenzene     | 1.598          | 1.367 | 1.385 | 1.390 | 1.422 | 1.432 | 6.61  |
| 82)   | p-Isopropyltoluene   | 1.330          | 1.154 | 1.197 | 1.198 | 1.229 | 1.221 | 5.43  |
| 83) M | 1,3-Dichlorobenzene  | 0.695          | 0.593 | 0.586 | 0.590 | 0.613 | 0.615 | 7.42  |
| 84) M | 1,4-Dichlorobenzene  | 0.694          | 0.575 | 0.583 | 0.588 | 0.613 | 0.611 | 7.97  |
| 85)   | n-Butylbenzene       | 1.211          | 1.046 | 1.117 | 1.161 | 1.225 | 1.152 | 6.33  |
| 86) T | Hexachloroethane     | 0.219          | 0.195 | 0.203 | 0.207 | 0.222 | 0.209 | 5.35  |
| 87) M | 1,2-Dichlorobenzene  | 0.687          | 0.590 | 0.582 | 0.590 | 0.617 | 0.613 | 7.09  |
| 88)   | 1,2-Dibromo-3-Chlor  | 0.119          | 0.106 | 0.107 | 0.113 | 0.118 | 0.113 | 5.26  |
| 89)   | 1,2,4-Trichlorobenz  | 0.421          | 0.369 | 0.383 | 0.402 | 0.423 | 0.399 | 5.89  |
| 90)   | Hexachlorobutadiene  | 0.245          | 0.190 | 0.197 | 0.198 | 0.206 | 0.207 | 10.52 |
| 91) M | Naphthalene          | 1.311          | 1.211 | 1.245 | 1.321 | 1.380 | 1.294 | 5.16  |
| 92)   | 1,2,3-Trichlorobenz  | 0.430          | 0.369 | 0.381 | 0.397 | 0.418 | 0.399 | 6.31  |

(#) = Out of Range