

Method Path : Z:\VOASRV\HPCHEM1\MSV0A X\METHOD\  
 Method File : 624X031220W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Thu Mar 12 14:12:53 2020  
 Response Via : Initial Calibration

## Calibration Files

5 =VX015229.D 20 =VX015230.D 50 =VX015231.D  
 100 =VX015232.D 150 =VX015233.D

|       | Compound            | 5              | 20    | 50    | 100   | 150   | Avg    | %RSD  |
|-------|---------------------|----------------|-------|-------|-------|-------|--------|-------|
| ----- |                     |                |       |       |       |       |        |       |
| 1) I  | Bromochloromethane  | -----ISTD----- |       |       |       |       |        |       |
| 2) M  | Dichlorodifluoromet | 1.660          | 1.467 | 1.447 | 1.417 | 1.553 | 1.509  | 6.54  |
| 3) M  | Chloromethane       | 2.335          | 2.199 | 2.038 | 2.036 | 2.283 | 2.178  | 6.33  |
| 4) M  | Vinyl Chloride      | 2.312          | 2.227 | 2.090 | 2.117 | 2.338 | 2.217  | 5.03  |
| 5) M  | Bromomethane        | 1.615          | 1.428 | 1.313 | 1.362 | 1.503 | 1.444  | 8.26  |
| 6) M  | Chloroethane        | 1.499          | 1.409 | 1.290 | 1.333 | 1.430 | 1.392  | 5.92  |
| 7) M  | Trichlorofluorometh | 2.949          | 2.870 | 2.678 | 2.701 | 2.933 | 2.826  | 4.54  |
| 8) T  | Diethyl Ether       | 1.336          | 1.263 | 1.155 | 1.196 | 1.313 | 1.253  | 6.12  |
| 9)    | 1,1,2-Trichlorotrif | 1.949          | 1.715 | 1.612 | 1.627 | 1.763 | 1.733  | 7.84  |
| 10) M | 1,1-Dichloroethene  | 1.871          | 1.734 | 1.649 | 1.662 | 1.820 | 1.747  | 5.56  |
| 11)   | Methyl Iodide       | 1.284          | 1.467 | 1.899 | 2.058 | 2.277 | 1.797  | 22.97 |
| 12)   | Methyl Acetate      | 2.158          | 2.051 | 2.162 | 2.102 | 2.304 | 2.155  | 4.38  |
| 13) M | Acrolein            | 0.415          | 0.324 | 0.312 | 0.310 | 0.340 | 0.340  | 12.81 |
| 14) M | Acrylonitrile       | 1.024          | 0.931 | 0.992 | 0.974 | 1.079 | 1.000  | 5.54  |
| 15) M | Acetone             | 0.324          | 0.327 | 0.278 | 0.259 | 0.279 | 0.293  | 10.40 |
| 16) M | Carbon Disulfide    | 5.111          | 4.444 | 4.783 | 4.817 | 5.310 | 4.893  | 6.78  |
| 17)   | Allyl chloride      | 3.251          | 3.023 | 3.202 | 3.215 | 3.516 | 3.241  | 5.46  |
| 18) M | Methylene Chloride  | 2.137          | 1.852 | 1.917 | 1.885 | 2.082 | 1.975  | 6.42  |
| 19) M | trans-1,2-Dichloroe | 1.981          | 1.729 | 1.856 | 1.844 | 2.013 | 1.885  | 6.08  |
| 20) T | Diisopropyl ether   | 6.726          | 6.086 | 6.356 | 6.324 | 6.704 | 6.439  | 4.23  |
| 21) M | 1,1-Dichloroethane  | 3.626          | 3.196 | 3.288 | 3.313 | 3.636 | 3.412  | 6.00  |
| 22) M | cis-1,2-Dichloroeth | 2.325          | 2.034 | 2.085 | 2.089 | 2.120 | 2.130  | 5.31  |
| 23) M | tert-Butyl Alcohol  | 0.421          | 0.354 | 0.377 | 0.376 | 0.427 | 0.391  | 8.00  |
| 24) M | Methyl tert-Butyl E | 5.805          | 5.258 | 5.552 | 5.555 | 6.057 | 5.645  | 5.32  |
| 25) M | Chloroform          | 3.437          | 3.204 | 3.175 | 3.180 | 3.232 | 3.246  | 3.38  |
| 26)   | Cyclohexane         | 3.362          | 3.051 | 3.134 | 3.145 | 3.160 | 3.171  | 3.63  |
| 27) s | 1,2-Dichloroethane- | 1.958          | 2.111 | 2.012 | 2.008 | 2.030 | 2.024  | 2.74  |
| ----- |                     |                |       |       |       |       |        |       |
| 28) I | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |        |       |
| 29)   | 1,1-Dichloropropene | 0.532          | 0.442 | 0.453 | 0.448 | 0.427 | 0.460  | 8.98  |
| 30) M | 2-Butanone          | 0.270          | 0.241 | 0.254 | 0.240 | 0.227 | 0.247  | 6.67  |
| 31)   | 2,2-Dichloropropane | 0.530          | 0.437 | 0.473 | 0.471 | 0.453 | 0.473  | 7.44  |
| 32) M | 1,1,1-Trichloroetha | 0.573          | 0.486 | 0.492 | 0.486 | 0.469 | 0.501  | 8.19  |
| 33) M | Carbon Tetrachlorid | 0.467          | 0.410 | 0.429 | 0.424 | 0.413 | 0.429  | 5.29  |
| 34) M | Benzene             | 1.573          | 1.372 | 1.384 | 1.360 | 1.286 | 1.395  | 7.64  |
| 35)   | Methacrylonitrile   | 0.285          | 0.245 | 0.275 | 0.272 | 0.256 | 0.267  | 6.03  |
| 36) M | 1,2-Dichloroethane  | 0.552          | 0.460 | 0.449 | 0.441 | 0.425 | 0.465  | 10.77 |
| 37) M | Trichloroethene     | 0.426          | 0.362 | 0.382 | 0.376 | 0.383 | 0.386  | 6.24  |
| 38)   | Methylcyclohexane   | 0.589          | 0.506 | 0.565 | 0.558 | 0.578 | 0.559  | 5.71  |
| 39) M | 1,2-Dichloropropane | 0.384          | 0.337 | 0.358 | 0.358 | 0.365 | 0.360  | 4.64  |
| 40)   | Dibromomethane      | 0.249          | 0.216 | 0.228 | 0.223 | 0.229 | 0.229  | 5.44  |
| 41) M | Bromodichloromethan | 0.474          | 0.410 | 0.455 | 0.456 | 0.469 | 0.453  | 5.57  |
| 42) M | Vinyl Acetate       | 1.061          | 0.892 | 0.975 | 0.964 | 0.969 | 0.972  | 6.17  |
| 43)   | Ethyl Acetate       | 0.495          | 0.433 | 0.487 | 0.474 | 0.450 | 0.468  | 5.52  |
| 44)   | Isopropyl Acetate   | 0.843          | 0.766 | 0.795 | 0.788 | 0.764 | 0.791  | 4.01  |
| 45) T | 1,4-Dioxane         | 0.008          | 0.007 | 0.008 | 0.008 | 0.008 | 0.008# | 6.10  |
| 46)   | Methyl methacrylate | 0.376          | 0.361 | 0.400 | 0.402 | 0.412 | 0.390  | 5.37  |
| 47)   | n-amyl Acetate      | 0.699          | 0.668 | 0.718 | 0.736 | 0.730 | 0.710  | 3.87  |
| 48) M | t-1,3-Dichloroprope | 0.475          | 0.443 | 0.515 | 0.521 | 0.510 | 0.493  | 6.68  |
| 49) T | cis-1,3-Dichloropro | 0.558          | 0.524 | 0.580 | 0.575 | 0.560 | 0.559  | 3.91  |
| 50) M | 1,1,2-Trichloroetha | 0.374          | 0.318 | 0.343 | 0.336 | 0.323 | 0.339  | 6.52  |
| 51)   | Ethyl methacrylate  | 0.515          | 0.488 | 0.546 | 0.553 | 0.539 | 0.528  | 5.06  |
| 52)   | 1,3-Dichloropropane | 0.620          | 0.542 | 0.585 | 0.573 | 0.545 | 0.573  | 5.63  |

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|       | Compound             | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD |
|-------|----------------------|----------------|-------|-------|-------|-------|-------|------|
| 53) M | Dibromochloromethan  | 0.362          | 0.330 | 0.371 | 0.373 | 0.368 | 0.361 | 4.91 |
| 54) M | 1,2-Dibromoethane    | 0.361          | 0.331 | 0.360 | 0.354 | 0.340 | 0.349 | 3.78 |
| 55) M | 2-Chloroethyl vinyl  | 0.253          | 0.247 | 0.279 | 0.279 | 0.265 | 0.265 | 5.66 |
| 56) M | Bromoform            | 0.274          | 0.266 | 0.285 | 0.294 | 0.296 | 0.283 | 4.57 |
| 57) I | Chlorobenzene-d5     | -----ISTD----- |       |       |       |       |       |      |
| 58) M | 4-Methyl-2-Pentanone | 0.538          | 0.478 | 0.520 | 0.503 | 0.515 | 0.511 | 4.34 |
| 59) M | 2-Hexanone           | 0.403          | 0.362 | 0.393 | 0.378 | 0.393 | 0.386 | 4.17 |
| 60) S | 4-Bromofluorobenzene | 0.467          | 0.475 | 0.470 | 0.481 | 0.494 | 0.478 | 2.21 |
| 61) M | Tetrachloroethene    | 0.483          | 0.398 | 0.415 | 0.393 | 0.399 | 0.418 | 8.96 |
| 62) M | Toluene              | 1.784          | 1.471 | 1.573 | 1.540 | 1.569 | 1.588 | 7.40 |
| 63) S | Toluene-d8           | 1.313          | 1.241 | 1.291 | 1.285 | 1.295 | 1.285 | 2.06 |
| 64) M | Chlorobenzene        | 1.111          | 0.987 | 0.990 | 0.978 | 1.006 | 1.014 | 5.40 |
| 65)   | 1,1,1,2-Tetrachloro  | 0.403          | 0.363 | 0.362 | 0.363 | 0.377 | 0.374 | 4.75 |
| 66) M | Ethyl Benzene        | 1.866          | 1.706 | 1.754 | 1.747 | 1.771 | 1.768 | 3.36 |
| 67) M | m/p-Xylenes          | 0.721          | 0.653 | 0.671 | 0.665 | 0.684 | 0.679 | 3.85 |
| 68) M | o-Xylene             | 0.698          | 0.621 | 0.638 | 0.640 | 0.657 | 0.651 | 4.48 |
| 69) M | Styrene              | 1.148          | 1.090 | 1.131 | 1.124 | 1.171 | 1.133 | 2.65 |
| 70)   | Isopropylbenzene     | 1.826          | 1.686 | 1.707 | 1.692 | 1.751 | 1.732 | 3.35 |
| 71) M | 1,1,2,2-Tetrachloro  | 0.608          | 0.537 | 0.534 | 0.533 | 0.600 | 0.562 | 6.74 |
| 72)   | 1,2,3-Trichloroprop  | 0.498          | 0.452 | 0.438 | 0.439 | 0.474 | 0.460 | 5.50 |
| 73)   | Bromobenzene         | 0.501          | 0.449 | 0.453 | 0.455 | 0.505 | 0.472 | 5.85 |
| 74)   | n-propylbenzene      | 2.096          | 1.925 | 2.014 | 1.989 | 2.208 | 2.047 | 5.34 |
| 75)   | 2-Chlorotoluene      | 1.255          | 1.133 | 1.156 | 1.149 | 1.282 | 1.195 | 5.70 |
| 76)   | 1,3,5-Trimethylbenz  | 1.560          | 1.404 | 1.428 | 1.438 | 1.564 | 1.479 | 5.21 |
| 77)   | t-1,4-Dichloro-2-bu  | 0.186          | 0.171 | 0.191 | 0.200 | 0.216 | 0.193 | 8.51 |
| 78)   | 4-Chlorotoluene      | 1.421          | 1.317 | 1.333 | 1.334 | 1.474 | 1.376 | 4.97 |
| 79)   | tert-butylbenzene    | 1.442          | 1.243 | 1.367 | 1.359 | 1.521 | 1.386 | 7.46 |
| 80)   | 1,2,4-Trimethylbenz  | 1.501          | 1.327 | 1.434 | 1.430 | 1.619 | 1.462 | 7.34 |
| 81)   | sec-Butylbenzene     | 1.800          | 1.549 | 1.703 | 1.682 | 1.870 | 1.721 | 7.11 |
| 82)   | p-Isopropyltoluene   | 1.652          | 1.436 | 1.572 | 1.568 | 1.683 | 1.582 | 6.07 |
| 83) M | 1,3-Dichlorobenzene  | 0.887          | 0.762 | 0.808 | 0.814 | 0.904 | 0.835 | 7.09 |
| 84) M | 1,4-Dichlorobenzene  | 0.909          | 0.753 | 0.818 | 0.821 | 0.874 | 0.835 | 7.12 |
| 85)   | n-Butylbenzene       | 1.380          | 1.249 | 1.401 | 1.415 | 1.488 | 1.387 | 6.28 |
| 86) T | Hexachloroethane     | 0.284          | 0.240 | 0.272 | 0.283 | 0.306 | 0.277 | 8.73 |
| 87) M | 1,2-Dichlorobenzene  | 0.902          | 0.742 | 0.801 | 0.791 | 0.833 | 0.814 | 7.28 |
| 88)   | 1,2-Dibromo-3-Chlor  | 0.119          | 0.102 | 0.117 | 0.117 | 0.124 | 0.116 | 7.17 |
| 89)   | 1,2,4-Trichlorobenz  | 0.604          | 0.534 | 0.597 | 0.607 | 0.666 | 0.602 | 7.80 |
| 90)   | Hexachlorobutadiene  | 0.341          | 0.284 | 0.295 | 0.298 | 0.329 | 0.310 | 7.80 |
| 91) M | Naphthalene          | 1.542          | 1.490 | 1.723 | 1.727 | 1.852 | 1.667 | 8.91 |
| 92)   | 1,2,3-Trichlorobenz  | 0.641          | 0.538 | 0.610 | 0.591 | 0.648 | 0.605 | 7.27 |

(#) = Out of Range