

Corrections

Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure. Changsheng Yang, Wei Xu, Peisheng Ma* *J. Chem. Eng. Data* **2004**, *49*, 1802–1808.

Table 2 of this paper reports excess molar volumes and viscosities for the binary mixtures dimethyl carbonate (1) + chlorobenzene (2), dimethyl carbonate (1) + hexane (2), and dimethyl carbonate (1) + heptane (2) from (293.15 to 353.15) K and at atmospheric pressure. The data for the binary mixtures dimethyl carbonate (1) + chlorobenzene (2) had been previously published in *J. Chem. Eng. Chin. Univ.* **2004**, *18*, 766–772. The authors apologize to the editors, the publishers, and the reviewers of these two papers for this duplication of experimental data.

At the same time, Table 2 in the above referenced paper contained an error that concerns the data for the binary mixture DMC + chlorobenzene at 333.15 K. The correct data are shown below.

Table 2. Densities (ρ), Viscosities (η), Excess Molar Volumes (V^E), and Viscosity Deviations ($\Delta\eta$) for the Binary Mixtures at Different Temperatures

x_1	$\rho/\text{g}\cdot\text{cm}^{-3}$	$\eta/\text{mPa}\cdot\text{s}$	$V^E/\text{cm}^3\cdot\text{mol}^{-1}$	$\Delta\eta/\text{mPa}\cdot\text{s}$	x_1	$\rho/\text{g}\cdot\text{cm}^{-3}$	$\eta/\text{mPa}\cdot\text{s}$	$V^E/\text{cm}^3\cdot\text{mol}^{-1}$	$\Delta\eta/\text{mPa}\cdot\text{s}$
(x)DMC + (1 - x_1)Chlorobenzene									
$T = 333.15\text{ K}$									
0.0000	1.06332	0.5069	0.0000	0.000	0.6518	1.03233	0.4277	0.1924	-0.003
0.1225	1.05753	0.4954	0.0821	0.003	0.7445	1.02792	0.4150	0.1660	-0.004
0.2380	1.05207	0.4791	0.1391	0.000	0.8332	1.02372	0.4046	0.1259	-0.004
0.3499	1.04676	0.4619	0.1771	-0.004	0.9182	1.01974	0.3949	0.0715	-0.004
0.4545	1.04166	0.452	0.2081	-0.002	1.0000	1.01600	0.3893	0.0000	0.000
0.5559	1.03693	0.4401	0.2016	-0.001					

Acknowledgment

We thank Dr. Robert D. Chirico for detecting the error.

JE050124X

10.1021/je050124x

Published on Web 04/29/2005

Bubble-Temperature Measurements on Some Binary Mixtures Formed by Tetrahydrofuran or Amyl Alcohol with Hydrocarbons, Chlorohydrocarbons, or Butanols at (94.6 or 95.8) kPa. T. E. Vitthal Prasad, E. D. Aswin Raj, G. Maheedhar, M. Sainath Reddy, V. Senthil Kumar, Satish Garapati, V. Patanjali, and D. H. L. Prasad* *J. Chem. Eng. Data* **2004**, *49*, 746–749.

The substance mentioned as amyl alcohol in the paper is actually 2-methyl-1-butanol. In view of several changes to the numerical data due to typographic as well other errors that have occurred, entries of all the tables in the correct form are given below.

Acknowledgment

The authors thank Dr. Robert Chirico of NIST for uncovering tabulated errors using Guided Data Capture (GDC), which we will use in the future.

Table 1. Comparison of the Density (D) and Refractive Index (n) of Pure Substances Used in This Study with Literature Data from Riddick et al.⁵ at 298.15 K

substance	$D/(\text{kg}\cdot\text{m}^{-3})$		n		substance	$D/(\text{kg}\cdot\text{m}^{-3})$		n	
	this work	Riddick et al. ⁵	this work	Riddick et al. ⁵		this work	Riddick et al. ⁵	this work	Riddick et al. ⁵
tetrahydrofuran ^a	889.2	889.20	1.4072	1.40716	isobutanol	798.0	797.80	1.3939	1.39389
1,2-dichloroethane	1246.4	1246.37	1.4421	1.44210	sec-butanol	802.4	802.41	1.3953	1.39530
1,1,1-trichloroethane	1329.9	1329.90	1.4359	1.43590	tert-butanol	781.2	781.20	1.3850	1.38520
1,1,2,2-tetrachloroethane	1586.7	1586.66	1.4914	1.49140	2-methyl-1-butanol	815.0	815.00	1.4084	1.40860
trichloroethylene	1451.4 ^b	1451.40 ^b	1.4750	1.47500	<i>n</i> -heptane	679.5	679.46	1.3851	1.38511
tetrachloroethylene	1614.3	1614.32	1.5032	1.50320	cyclohexane	773.9	773.89	1.4235	1.42354
<i>n</i> -butanol	805.8	805.75	1.3974	1.39741	methylethyl ketone	799.7	799.70	1.3769	1.37685

^a At 293.15 K, ^b At 303.15 K.

Table 2. Bubble-Temperature Measurements at 94.6 kPa or 95.8 kPa

x_1	T/K	x_1	T/K	x_1	T/K
Total Pressure = 94.6 kPa					
Tetrahydrofuran (1) + <i>n</i> -Heptane (2)		Tetrahydrofuran (1) + Cyclohexane (2)		Tetrahydrofuran (1) + Methylethyl Ketone (2)	
0.0000	369.35	0.0000	351.75	0.0000	350.75
0.1411	362.05	0.2103	345.65	0.1810	347.05
0.3301	354.05	0.3990	341.85	0.3985	344.35
0.4508	349.95	0.6313	338.65	0.6120	341.75
0.6002	345.35	0.7998	337.45	0.8466	338.95
0.7831	340.95	1.0000	337.15	1.0000	337.15
0.9002	338.75				
1.0000	337.15				
Total Pressure = 95.8 kPa					
1,2-Dichloroethane (1) + 2-Methyl-1-butanol (2)		1,1,1-Trichloroethane (1) + 2-Methyl-1-butanol (2)		2-Methyl-1-butanol (1) + 1,1,2,2-Tetrachloroethane (2)	
0.0000	400.35	0.0000	400.35	0.0000	417.35
0.1626	384.35	0.1745	374.05	0.1052	412.35
0.2798	377.95	0.2971	364.85	0.2278	407.85
0.4372	371.25	0.4581	357.45	0.3199	405.15
0.6133	365.55	0.5376	354.95	0.4137	402.95
0.7041	362.85	0.6379	352.55	0.7976	397.65
0.8263	359.65	0.7854	349.65	0.8546	397.45
0.9049	357.65	0.8409	348.65	0.9216	397.45
1.0000	355.25	1.0000	345.65	1.0000	400.35

Table 3. Bubble-Temperature Measurements at 95.8 kPa

x_1	T/K	x_1	T/K	x_1	T/K
Tetrahydrofuran (1) + 1,2-Dichloroethane (2)		Tetrahydrofuran (1) + 1,1,1-Trichloroethane (2)		Tetrahydrofuran (1) + 1,1,2,2-Tetrachloroethane (2)	
0.0000	355.25	0.0000	345.65	0.0000	417.45
0.1024	354.35	0.1512	344.95	0.1565	406.55
0.2181	352.95	0.3498	343.85	0.3576	390.45
0.2949	351.95	0.4177	343.35	0.4812	379.65
0.4108	349.95	0.4728	342.85	0.6024	368.75
0.4939	348.45	0.6374	341.45	0.6944	360.35
0.6507	344.85	0.7455	340.35	0.8197	349.55
0.7736	342.25	0.8978	338.65	0.9009	342.15
0.8723	339.95	1.0000	337.55	1.0000	337.55
1.0000	337.55				
Tetrahydrofuran(1) + Trichloroethylene (2)		Tetrahydrofuran (1) + Tetrachloroethylene (2)		Tetrahydrofuran (1) + <i>n</i> -Butanol (2)	
0.0000	357.95	0.0000	392.25	0.0000	389.45
0.1367	356.55	0.1528	378.65	0.1338	370.65
0.3220	353.25	0.2650	370.25	0.2436	360.45
0.4480	350.55	0.3570	364.15	0.3257	354.75
0.6080	346.65	0.4741	357.65	0.3918	350.95
0.7211	343.85	0.5955	351.65	0.4460	348.25
0.7950	342.05	0.6883	347.65	0.4914	346.35
0.8858	339.75	0.8154	342.95	0.6123	342.15
1.0000	337.55	1.0000	337.55	0.6637	340.75
				0.7247	339.35
				0.8206	337.95
				0.8876	337.25
				1.0000	337.55
Tetrahydrofuran (1) + Isobutanol (2)		Tetrahydrofuran (1) + <i>sec</i> -Butanol (2)		Tetrahydrofuran (1) + <i>tert</i> -Butyl Alcohol (2)	
0.0000	379.65	0.0000	371.35	0.0000	354.15
0.1367	373.15	0.1072	366.45	0.1423	351.75
0.2456	367.85	0.1847	363.15	0.2491	349.95
0.3281	363.95	0.2536	360.45	0.3323	348.55
0.3943	360.95	0.3615	356.25	0.4534	346.45
0.4487	358.45	0.5047	351.25	0.5753	344.45
0.4941	356.45	0.6132	347.85	0.6702	342.85
0.5707	353.05	0.7257	344.65	0.8904	339.25
0.6147	351.25	0.7984	342.65	1.0000	337.55
0.6660	349.15	0.8880	340.35		
0.7995	343.95	1.0000	337.55		
0.8886	340.85				
1.0000	337.55				

Table 4. Antoine Constants for the Equation $\ln(P/\text{kPa}) = A - B/(T/K) + C$

substance	A	B	C	substance	A	B	C
tetrahydrofuran	14.0895	2768.37	-46.90	isobutanol	14.8538	2874.72	-100.30
1,2-dichloroethane	14.1590	2929.16	-50.22	<i>sec</i> -butanol	15.1928	3026.03	-86.65
1,1,1-trichloroethane	13.9897	2802.75	-48.15	<i>tert</i> -butyl alcohol	14.8374	2658.39	-95.40
1,1,2,2-tetrachloroethane	14.0633	3341.88	-62.15	2-methyl-1-butanol	14.2534	2752.19	-116.30
trichloroethylene	14.1555	3023.13	-43.15	<i>n</i> -heptane	13.8564	2911.31	-56.51
tetrachloroethylene	14.1468	3259.27	-52.15	cyclohexane	13.7253	2352.10	-50.50
<i>n</i> -butanol	15.1986	3137.02	-95.13	methylethyl ketone	14.1569	3150.41	-36.65

Table 5. Representation of the Measurements by the Wilson Model for the Tetrahydrofuran Systems Investigated at 94.6 and 2-Pentanol Systems Investigated at 95.8 kPa

system	$[(\lambda_{12} - \lambda_{11})/R]/K$	$[(\lambda_{12} - \lambda_{22})/R]/K$	std. dev. in T/K
Total Pressure = 94.6 kPa			
tetrahydrofuran (1) + <i>n</i> -heptane	-265.84	523.07	0.05
tetrahydrofuran (1) + cyclohexane (2)	-142.96	392.79	0.05
tetrahydrofuran (1) + methylethyl ketone (2)	554.72	-282.42	0.03
Total Pressure = 95.8 kPa			
1,2-dichloroethane (1) + 2-methyl-1-pentanol (2)	276.33	-60.13	0.08
1,1,1-trichloroethane (1) + 2-methyl-1-pentanol (2)	26.86	391.85	0.04
2-methyl-1-pentanol (1) + 1,1,2,2-tetrachloroethane (2)	-271.19	2594.66	0.03

Table 6. Representation of the Measurements by Wilson Model for the Tetrahydrofuran Systems Investigated at 95.8 kPa

system	$[(\lambda_{12} - \lambda_{11})/R]/K$	$[(\lambda_{12} - \lambda_{22})/R]/K$	std. dev. in T/K
tetrahydrofuran (1) + 1,2-dichloroethane (2)	-47.87	-75.57	0.09
tetrahydrofuran (1) + 1,1,1-trichloroethane (2)	-131.58	90.37	0.03
tetrahydrofuran (1) + 1,1,2,2-tetrachloroethane (2)	-525.77	99.15	0.08
tetrahydrofuran (1) + trichloroethylene (2)	-14.35	-120.57	0.04
tetrahydrofuran (1) + tetrachloroethylene (2)	92.12	-151.99	0.03
tetrahydrofuran (1) + <i>n</i> -butanol (2)	-178.37	5785.54	0.06
tetrahydrofuran (1) + isobutanol (1)	-292.29	323.84	0.04
tetrahydrofuran (1) + <i>sec</i> -butanol (2)	-46.09	57.37	0.05
tetrahydrofuran (1) + <i>tert</i> -butyl alcohol (2)	168.30	-137.13	0.03

JE049606J

10.1021/je049606j

Published on Web 06/23/2005

Infinite Dilution Activity Coefficients of Hydrocarbons in Triethylene Glycol and Tetraethylene Glycol. Ping-Ping Sun, Guang-Hua Gao,* and Hong Gao, *J. Chem. Eng. Data* **2003**, *48*, 1109–1112.

This paper had been previously published in *Petrochem. Technol. (Beijing)* **2002**, *31* (10), 823–826. The authors apologize to the Editors, the publishers, and the reviewers of these two papers for this duplication.

JE030473W

10.1021/je030473w

Published on Web 06/22/2005

Vapor–Liquid Equilibrium Measurements for MTBE and TAME with Toluene. D. G. Vorenberg, J. D. Raal, and D. Ramjugernath*, *J. Chem. Eng. Data* **2005**, *50*, 56–59.

Table 5 in the above reference contained errors. The correct Table 5 follows.

Table 5. Vapor–Liquid Equilibrium Measurements for TAME (1) + Toluene (2) at 318.15 K

TAME (1) + Toluene (2)		
x_1	y_1	P/kPa
0.000	0.000	9.88
0.021	0.058	10.27
0.044	0.115	10.69
0.063	0.155	11.01
0.124	0.263	11.87
0.257	0.456	13.90
0.413	0.625	16.27
0.569	0.753	18.45
0.806	0.897	21.65
0.909	0.953	22.91
0.935	0.966	23.24
0.979	0.989	23.74
1.000	1.000	23.99

Acknowledgment

We thank Dr. Rob Chirico of the NIST Thermodynamics Research Center (TRC) for detecting these errors with Guided Data Capture (GDC) software, as part of the cooperation between NIST/TRC and the Journal.

JE050155S

10.1021/je050155s

Published on Web 06/25/2005

Solid–Liquid Equilibria of 1,4-Benzenedicarboxylic Acid in Binary Acetic Acid + Water Solvent Mixtures at Elevated Temperatures. Q. Wang,* H. Xu, and X. Li *J. Chem. Eng. Data* **2005**, 50, 258–260.

The Buchowski equation coefficients for the ternary systems composed of 1,4-benzenedicarboxylic acid, acetic acid, and water were calculated incorrectly.¹ Tables 1 and 2 contain the corrected calculated solubilities and the Buchowski equation coefficients. We apologize for our calculation mistake and thank Neal of Eastman Chemical Company for detecting the errors.

Table 1. Solubilities of 1,4-Benzenedicarboxylic Acid (1) as Mass Per Unit Mass g Solvent in Binary Acetic Acid (2) + Water Solvent Mixtures in the Temperature Range from (433.2 to 513.2) K^a

<i>T</i> /K	<i>S</i> /g (100 g) ⁻¹	<i>S_c</i> /g (100 g) ⁻¹	<i>T</i> /K	<i>S</i> /g (100 g) ⁻¹	<i>S_c</i> /g (100 g) ⁻¹
<i>w</i> ₂ = 1.0					
433.2	0.61	0.67	483.2	1.98	2.18
443.2	0.82	0.86	493.2	2.48	2.70
453.2	1.02	1.10	503.2	3.09	3.32
463.2	1.27	1.39	513.2	3.86	4.06
473.2	1.59	1.75			
<i>w</i> ₂ = 0.8					
433.2	0.95	0.77	483.2	3.66	3.44
443.2	1.30	1.07	493.2	4.75	4.48
453.2	1.68	1.46	503.2	6.16	5.79
463.2	2.18	1.96	513.2	7.98	7.43
473.2	2.82	2.61			
<i>w</i> ₂ = 0.7					
433.2	1.03	0.94	483.2	4.98	4.68
443.2	1.53	1.33	493.2	6.58	6.23
453.2	2.06	1.86	503.2	8.69	8.19
463.2	2.85	2.56	513.2	11.49	10.69
473.2	3.76	3.49			
<i>w</i> ₂ = 0.6					
433.2	1.52	1.48	483.2	6.76	7.64
443.2	2.05	2.11	493.2	9.11	10.23
453.2	2.77	2.97	503.2	12.27	13.54
463.2	3.73	4.12	513.2	16.53	17.77
473.2	5.02	5.65			

^a *S*: experimental solubilities of 1,4-benzenedicarboxylic acid (1) in acetic acid (2) + water solvent mixtures. *S_c*: calculated solubilities of 1,4-benzenedicarboxylic acid (1) in acetic acid (2) + water solvent mixtures by eq 2. *w*₂: mass fraction of acetic acid in acetic acid (2) + water solvent mixtures.

Table 2. Curve-Fitting Parameters of 1,4-Benzenedicarboxylic Acid in Binary Acetic Acid (2) + Water Solvent Mixtures in the Temperature Range from (433.2 to 513.2) K and Solvent Composition Range from (*w*₂ = 0.6 to 1.0)

	<i>a_i</i>	<i>b_i</i>	<i>c_i</i>
<i>i</i> = 1	-0.0148	18.444	-4.629
<i>i</i> = 2	-3129.7	1388.0	3.147
variance	0.095		

Literature Cited

- (1) Wang, Q.; Xu, H.; Li, X. Solid–Liquid Equilibria of 1,4-Benzenedicarboxylic Acid in Binary Acetic Acid + Water Solvent Mixtures at Elevated Temperatures. *J. Chem. Eng. Data* **2005**, 50, 258–260.

JE0500678

10.1021/je0500678

Published on Web 04/08/2005