Model for Calculating the Viscosity of Aqueous Solutions, Marc Laliberté,* *J. Chem. Eng. Data* **2007**, *52*, 321−335.

Page 326. A parenthesis was misplaced in eq 12:

$$(\eta_i/\text{mPa·s}) = \frac{e^{[(\upsilon_1(1-w_w)^{\upsilon_2} + \upsilon_3)/(\upsilon_4(t/°\text{C}) + 1)]}}{\upsilon_5(1 - w_w)^{\upsilon_6} + 1} \quad (12)$$

where η_i is the solute viscosity; w_w is the mass fraction of water, and υ_1 to υ_6 are dimensionless empirical constants.

Equation 13 needs to be corrected accordingly:

$$\ln(\eta_i/\text{mPa·s}) = \frac{\upsilon_1(1 - w_w)^{\upsilon_2} + \upsilon_3}{(\upsilon_4 t/°\text{C} + 1)\ln\{\upsilon_5(1 - w_w)^{\upsilon_6} + 1\}} \quad (13)$$

The spreadsheets attached as Supporting Information to the review have not been changed, as the formulas in Excel were correct.

For $NaClO_3$ and $MgSO_4$, an older correlation for calculating the viscosity of water was used. This has a slight impact on the calculation of υ_1 to υ_6 as this older correlation was less accurate.

For the components below, the wrong molecular weight was used to convert mole-based concentration (mole fraction, molarity, or molality) to mass fractions. The overall error in calculating υ_1 to υ_6 is variable and depends on how inaccurate the molecular weight was, on how many data points were mole-based, and on their value (the error is lower when the concentration is lower). For Na_2CO_3, the K_2CO_3 MW was used. The MW of $CaCl_2$ was used for $Ca(NO_3)_2$, $Cd(NO_3)_2$, $Cu(NO_3)_2$, HCH_3COO, KBr, KCH_3CO_2, KH_2PO_4, KI, $Li(NO_3)_2$, $Mg(NO_3)_2$, $Na_2S_2O_3$, NH_3, $Pb(NO_3)_2$, $Sr(NO_3)_2$, and sucrose.

Finally, the density and viscosity data for $Ni(NO_3)_2$ that were ready for publication but were overlooked have been added.

With all these changes, the average difference between the calculated and experimental viscosities for all the available data is 0.03 %. (The average of all experimental viscosities of solution of one solute in water is 2.2 mPa·s, and the average difference between the experimental and calculated viscosity is 0.0006 mPa·s.) The standard deviation of this difference is 3.5 % of the average viscosity (down from 3.7 %).

Table 2 has been updated with these changes. Because of the length of the table, it is not possible to reprint the data for the components where no change has occurred. The reader is referred to either the original publication or to the file _PropertiesAqueousSolution.xls in the Supporting Information for these components.

These changes have reduced the error when predicting the viscosity for mixtures. The two worse mixtures were the LiCl and $LiNO_3$ system where the standard deviation s_{δ_η} is unchanged at 25 % and the $Ca(NO_3)_2$ and NaCl system where it went down to 4.3 % from 55 %. Table 5 is not reprinted because of space constraints, and the reader is again referred to the Supporting Information.

Supporting Information Available:

Calculation spreadsheets for all the solutions presented in the original review. This material is available free of charge via the Internet at http://pubs.acs.org.

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Table 2. Results for Solutions of One Solute in Water[a]

name	$Ca(NO_3)_2$	$Cd(NO_3)_2$	$Cu(NO_3)_2$	HCH_3CO_2	KBr	KCH_3CO_2	
υ_1	69.623	7.7484	10.728	−1.4323	348.32	6.5787	
υ_2	4.9340	2.1518	1.7784	9.9878	−0.00030253	2.8228	
υ_3	3.4578	2.5049	2.1116	3.5600	−349.15	3.7025	
υ_4	0.010566	0.0096163	0.0083713	0.015191	−0.0042580	0.013558	
υ_5	1883.8	0.86015	−3.4975	3.1883	−1.1044	0.13910	
υ_6	12.100	−0.068299	2.0697	0.43029	0.76315	−0.64166	
min t/°C	−10	15	25	15	0	15	
max t/°C	100	55	25	55	95	55	
max w_i	0.603	0.542	0.458	1	0.462	0.595	
average viscosity residual δ_η/%	−0.15	0.01	0.02	−0.23	0.00	0.09	
SD of viscosity residual s_{δ_η}/%	1.1	0.20	0.26	1.4	1.1	0.79	
no. of points in correlation	72	84	10	238	347	126	
no. of inconsistent points	2	7	0	0	6	0	
references	3, 13, 78, 237, 241, 286	63, 77,[a] 125, 260, 261	63,[a] 74, 106	34, 57, 66, 98, 99, 124, 161, 162	20, 43, 83, 94, 95, 118, 125, 135, 137, 164, 179, 183, 196, 209, 228, 250, 253, 263, 264, 273	66, 124, 162	
name	KH_2PO_4	KI	$LiNO_3$	$Mg(NO_3)_2$	$MgSO_4$	Na_2CO_3	
υ_1	49.178	2.9858	15.057	72.798	72.269	21.777	
υ_2	2.0655	2.3776	1.4396	4.3110	2.2238	1.3040	
υ_3	1.2471	0.49977	1.3451	4.1044	6.6037	6.4363	
υ_4	0.012350	0.0093425	0.0078374	0.012556	0.0079004	0.015225	
υ_5	−0.67910	1.7089	123.55	12347	3340.1	−6.9093E+20	
υ_6	17.896	−0.0016505	3.3135	20.972	6.1304	42.630	
min t/°C	19.95	5	0	25	15	20	
max t/°C	44.95	95	110	120	150	90	
max w_i	0.232	0.627	0.671	0.72	0.303	0.308	
average viscosity residual δ_η/%	0.63	−0.01	−0.04	−0.02	0.01	0.32	
SD of viscosity residual s_{δ_η}/%	9.2	1.2	2.7	2.0	0.90	2.3	
no. of points in correlation	60	245	104	56	180	51	
no. of inconsistent points	0	0	25	0	13	0	
references	47,[a] 50, 176, 184[a]	43, 62, 94, 142, 164, 179, 183, 196, 223, 228, 250, 253, 254	14, 30, 31, 241, 293, 300	63, 115, 138, 241, 256, 263, 290	16, 17, 43, 44, 67, 79, 80, 115, 125, 134, 140, 150, 177, 179, 182, 206, 209, 228, 248, 263	53, 113, 116, 168, 179, 206	
name	$Na_2S_2O_3$	$NaClO_3$	NH_3	$Ni(NO_3)_2$	$Pb(NO_3)_2$	$Sr(NO_3)_2$	sucrose
υ_1	18.291	20.952	214.09	23.288	3.9904	12.449	16.239
υ_2	2.1091	0.32364	8.0241	2.14217	1.3862	1.6546	1.4693
υ_3	2.3485	−6.1134	6.6265	1.9926	1.3591	1.0765	3.2849
υ_4	0.016497	0.0019919	0.0057943	0.0083713	0.028370	0.0083713	0.010285
υ_5	6.0523E+12	24387	255.27	52.492	62.501	7.3912	33.939
υ_6	68.515	3.0662	0.24309	3.7236	5.3410	2.0697	2.2817
min t/°C	20	25	20	25	25	25	15
max t/°C	50	55	40	25	50	25	55
max w_i	0.658	0.583	0.340	0.422	0.375	0.388	0.507
average viscosity residual δ_η/%	0.10	0.11	−0.08	−0.01	0.02	0.01	−0.20
SD of viscosity residual s_{δ_η}/%	4.3	5.9	1.4	0.19	5.4	0.07	0.71
no. of points in correlation	26	34	25	12	14	7	81
no. of inconsistent points	0	0	0	0	0	0	0
references	139, 193, 209, 260	37, 43, 209, 240	24, 84, 163, 209, 231,[a] 243[a]	63	43, 63, 115, 228	63, 172, 263	124, 183, 249

[a] For references marked with this symbol, see the Supporting Information for additional notes or qualifiers.