

# Correction

**Temperature and Volume Dependence of the Viscosity of Water and Heavy Water at Low Temperatures.** Kenneth R. Harris\* and Lawrence A. Woolf, *J. Chem. Eng. Data* 2004, 49, 1064–1069.

There are two errors to be corrected in this paper. These relate to the densities used in the calculations of viscosities from the experimental fall times.

The first was due to a mistake in transferring density and molar volume data for ordinary water to the final version of Table 2 at temperatures of 278, 283, and 298 K. The values published were derived from the older IAPWS correlation of 1985.<sup>16</sup> The correct values are derived from the formulation of 1995,<sup>17</sup> for which we employed the NIST/ASME Steam Properties Database Software, version 2.2. This affects some of the reported viscosities very slightly

(in the fourth decimal place), and corrected values for both density and viscosity are given below. The values given in Tables 4 and 5 for the coefficients of best fit to eq 4 for ordinary water were based on the correct densities and are therefore unaffected, as are the Figures.

The other is an incorrect attribution on p 1067 for the equation of state used for D<sub>2</sub>O. The citation should be for the work of Aleksandrov and Matveev (ref 20), not ref 16. The equation of state in the latter paper is valid only below 100 MPa.

## Acknowledgment

We thank Dr Marcia Huber (NIST, Boulder, CO) for detecting the error in Table 2.

**Table 2. Viscosity of Ordinary Water from 298 K to 278 K**

<i>T</i> /K	<i>t</i> /s	<i>p</i> /MPa	<i>V</i> /(cm <sup>3</sup> /mol)	$\rho$ /(g/cm <sup>3</sup> )	$\eta$ /(mPa·s)	Re <sup>a</sup>	<i>T</i> /K	<i>t</i> /s	<i>p</i> /MPa	<i>V</i> /(cm <sup>3</sup> /mol)	$\rho$ /(g/cm <sup>3</sup> )	$\eta$ /(mPa·s)	Re
298.15	29.64	0.1	18.0686	0.99706	0.8916	374	283.15	42.38	150.8	16.971	1.06155	1.263	197
298.15	29.64	0.1	18.0686	0.99705	0.8916	374	283.15	42.84	180.8	16.808	1.07185	1.275	195
298.15	29.68	0.1	18.0686	0.99705	0.8927	373	283.15	43.49	210.2	16.659	1.08142	1.293	191
298.15	29.68	0.1	18.0686	0.99705	0.8927	373	283.15	44.26	240.6	16.515	1.09082	1.313	186
298.15	29.68	0.1	18.0686	0.99705	0.8928	373	283.15	45.11	270.7	16.382	1.09972	1.337	181
298.15	29.58	31.0	17.8272	1.01055	0.8881	382	283.15	46.00	300.2	16.258	1.10808	1.362	176
298.15	29.64	61.0	17.6124	1.02288	0.8881	386	283.15	46.98	330.0	16.141	1.11614	1.389	170
298.15	29.80	90.9	17.415	1.03447	0.8913	387	283.15	48.06	359.2	16.031	1.12377	1.420	163
298.15	30.06	120.7	17.2328	1.04541	0.8979	384	283.15	49.12	385.2	15.938	1.13032	1.450	158
298.15	30.42	150.6	17.0629	1.05582	0.9070	380							
298.15	30.87	180.6	16.904	1.06574	0.9191	373	278.15	50.78	0.1	18.016	0.99997	1.528	128
298.15	31.36	210.6	16.7553	1.07520	0.9326	365	278.15	50.77	0.1	18.016	0.99997	1.528	128
298.15	31.92	240.6	16.6156	1.08424	0.9478	356	278.15	50.76	0.6	18.012	1.00021	1.527	128
298.15	32.53	270.1	16.4861	1.09276	0.9649	345	278.15	49.33	30.7	17.758	1.01451	1.481	138
298.15	33.18	299.7	16.3633	1.10096	0.9830	335	278.15	48.53	60.7	17.527	1.02786	1.454	145
298.15	33.86	329.2	16.2473	1.10882	1.0018	324	278.15	48.16	90.5	17.318	1.04030	1.440	149
298.15	34.58	358.5	16.1377	1.11635	1.0222	313	278.15	48.18	120.3	17.125	1.05198	1.439	151
298.15	35.30	384.3	16.0454	1.12277	1.0422	303	278.15	48.44	150.8	16.944	1.06324	1.444	151
							278.15	48.93	180.7	16.779	1.07366	1.456	150
283.15	43.65	0.1	18.021	0.99971	1.313	173	278.15	49.67	210.7	16.626	1.08356	1.476	147
283.15	43.56	0.1	18.021	0.99971	1.310	174	278.15	50.47	240.4	16.485	1.09286	1.498	143
283.15	43.54	0.1	18.021	0.99971	1.310	174	278.15	51.32	270.4	16.351	1.10182	1.521	140
283.15	43.54	0.5	18.018	0.99987	1.310	174	278.15	52.51	300.6	16.224	1.11043	1.554	135
283.15	42.65	30.7	17.769	1.01388	1.280	184	278.15	53.77	330.3	16.106	1.11854	1.590	130
283.15	42.19	60.7	17.544	1.02686	1.264	191	278.15	55.18	360.0	15.995	1.12632	1.630	124
283.15	42.03	90.7	17.337	1.03912	1.257	195	278.15	56.64	389.0	15.891	1.13365	1.671	119
283.15	42.09	120.8	17.147	1.05067	1.257	197							

<sup>a</sup> Reynolds number for annular flow:  $Re = 2r_1^2\rho v/(r_2 - r_1)\eta$ , where  $v$  is the terminal velocity of the sinker and  $r_1$  and  $r_2$  are the radii of the sinker and tube, respectively.<sup>9</sup>

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