

Erratum

Simple flow meter and viscometer of high accuracy for gases

R F Berg 2005 *Metrologia* 42 11–23

Table 2 was incorrect due to a sign error of the viscosity ratios C_{N_2} (gas) and a misinterpretation of literature values for helium, nitrogen and argon. The corrected table is below. For helium, the corrected measured value differs from the *ab initio* calculated value of $(19.823 \pm 0.006) \mu\text{Pa s}$ by twice the combined uncertainty of 0.05%.

Table 2. Values of the low density viscosity η_0 at 25 °C obtained from the literature and from the present measurements. For optimum consistency, the measured values were derived only from flow measurements made with $De < 20$ and $P_2 \approx 100$ kPa, and the literature ratios were derived only from measurements made in a single laboratory (Vogel and co-workers). The absolute uncertainties of the last column correspond to a standard uncertainty of 0.037%.

Gas	η_0 (literature)/ ($\mu\text{Pa s}$)	$[C_{N_2}(\text{gas}) - 1] \times 100$	η_0 (present work)/ ($\mu\text{Pa s}$)
He	19.844 [31]	+0.039 \pm 0.010	19.842 \pm 0.007
N ₂	17.777 [31]	0.000 \pm 0.010	17.762 \pm 0.007
Ar	22.586 [31]	+0.050 \pm 0.008	22.582 \pm 0.008
C ₃ H ₈	8.146 [18, 32]	+0.162 \pm 0.010	8.148 \pm 0.003
SF ₆	15.234 [28, 33]	+0.076 \pm 0.009	15.226 \pm 0.006