

Supplementary information

The Excel™ sheet contains the calculation of the molar mass M , amount-of-substance fractions $x(i\text{Si})$ and degrees of equivalence d_i using the tabulated uncertainties.

The model equation for the calculation of the molar mass using the VE-IDMS method is

$$M = \frac{M(^{28}\text{Si})}{1 + \frac{m_{yx}}{m_x} \times \frac{M(^{28}\text{Si}) \times (1 + R_{x,2}) - M(^{29}\text{Si}) - R_{x,2} \times M(^{30}\text{Si})}{R_{y,3} \times M(^{28}\text{Si}) + M(^{29}\text{Si}) + R_{y,2} \times M(^{30}\text{Si})} \times \frac{(R_{y,2} - R_{bx,2})}{(R_{bx,2} - R_{x,2})}}$$

Reference:

Pramann, A.; Narukawa, T.; Rienitz, O. Determination of the isotopic composition and molar mass of a new 'Avogadro' crystal: homogeneity and enrichment-related uncertainty reduction. *Metrologia*, **2017**, 54, 738–747.