

Original Article

Propagation of Uncertainty in Establishing the Viscosity Scale

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Abstract

The viscosity scale is established by step up method, in which several master viscometers and standard liquids are used. Starting point is the distilled water. The basic measurand is the efflux time. Uncertainty in the determination of viscometer constant of a viscometer or the kinematic viscosity of standard liquid at a particular step is carried forward for subsequent steps. The expressions for uncertainty for viscometer constant of the viscometer and kinematic viscosity of the liquid in n th step have been derived. Various applicable corrections and their contribution to uncertainty have been discussed.