

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and symbols
3.1	Terms and definitions
3.2	Symbols
4	Requirements for preparing polydisperse particles
4.1	General description of a project for the production of a reference material
4.2	Requirements on the general properties of the material for polydisperse particles
4.3	Size distribution for polydisperse particles
5	Characterization of polydisperse particles
5.1	Particle size distribution
5.2	Aspect ratio
5.3	Apparent particle density
5.4	Refractive index
6	Estimation of size measurement uncertainties
6.1	Uncertainty from sampling
6.1.1	Uncertainty of the average value N replicate measurement
6.1.2	Uncertainty of a single measurement
6.1.2.1	Uncertainty of number-based size distribution
6.1.2.2	Uncertainty of volume-based size distribution (a log-normal size distribution)
6.2	Other uncertainty factors
6.3	Expanded uncertainty of size distribution
Annex A	(informative) Example calculation of the uncertainty estimation of particle size distribution determined by N replicate measurement
Annex B	(informative) Example calculation of the uncertainty estimation of number-based particle size distribution determined by a single measurement
Annex C	(informative) Example calculation of the uncertainty estimation for a volume-based cumulative size distribution transformed from the number-based size distribution having a log-normal size distribution