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Determination of particle size distribution — Single particle light interaction methods —

Part 1: Light scattering aerosol spectrometer

Détermination de la distribution granulométrique — Méthodes d'interaction lumineuse de particules uniques —

Partie 1: Spectromètre d'aérosol en lumière dispersée

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 21501-1 was prepared by Technical Committee ISO/TC 24, *Particle characterization including sieving*, Subcommittee SC 4, *Particle characterization*.

ISO 21501 consists of the following parts, under the general title *Determination of particle size distribution — Single particle light interaction methods*:

— *Part 1: Light scattering aerosol spectrometer*

— *Part 2: Light scattering liquid-borne particle counter*

— *Part 3: Light extinction liquid-borne particle counter*

— *Part 4: Light scattering airborne particle counter for clean spaces*

Introduction

Monitoring particle size distributions and particle number concentrations is required in various fields, e.g. in filter manufacturing, in the electronic industry, in the pharmaceutical industry, in the chemical industry, in the manufacture of precision machines and in medical operations. The aerosol spectrometer is a useful instrument for the determination of the size distribution and number concentration of particles suspended in a gas. The purpose of this part of ISO 21501 is to provide the calibration procedure and the validation method for aerosol spectrometers, so as to improve the accuracy of the measurement result by aerosol spectrometers in general, and to minimize the difference in the results measured by different instruments.