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Responsible committee: LBI/37 Particle characterization including sieving

Interested committees:

Title: Draft BS ISO 14411-2 Preparation of particulate reference materials. Part 2: Polydisperse spherical particles.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Submission of Comments

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

DRAFT INTERNATIONAL STANDARD

ISO/DIS 14411-2

ISO/TC 24/SC 4

Secretariat: **BSI**

Voting begins on:
2019-01-07

Voting terminates on:
2019-04-01

Preparation of particulate reference materials —

Part 2: Polydisperse spherical particles

Préparation des matériaux de référence à l'état particulaire —

Partie 2: Particules sphériques polydispersées

ICS: 19.120

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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The committee responsible for this document is ISO/TC 24/SC 4 Particle characterization

ISO 14411 consists of the following parts, under the general title *Preparation of particulate reference materials*:

- *Part 1: Polydisperse material based on picket fence of monodisperse spherical particles*
- *Part 2: Polydisperse spherical particles*

Part 1 is a Technical Specification.

Introduction

The measurement of particle size distribution can be accomplished by a number of techniques which measure some characteristics of the particle and usually equate this to a circular or spherical equivalent. Each of these techniques measures different properties of an irregular particle and thus has particular requirements for reference materials and method standardization. Often, the methods that are employed for particle size distribution are indirect in nature which rely on measuring some other property and converting this to a particle size distribution by means of equations based on ideal shapes (usually spherical) and sizes to that of the equivalent particle size distribution. Thus these techniques usually require or assume knowledge of some other constant in order to calculate the particle size distribution.

Even methods that do not require size calibration require reference materials for quality control and operation qualification. Such a reference material should be certified for its particle size distribution and the values should be traceable to the SI unit meter. This material allows instrument manufacturers to demonstrate proper calibration of all input factors and hence demonstration that their instrument results are traceable to the SI Unit meter. To achieve this, the reference material should be polydisperse and consist of spherical particles.

The heterogeneity of a particle size distribution poses statistical challenges for particle size analysis and therefore also for the production of reference materials for particle size analysis. This standard therefore describes the production of particulate reference materials consisting of spherical particles.

