

Determination of particle size distribution by centrifugal liquid sedimentation methods —

Part 2: Photocentrifuge method

ICS 19.120

National foreword

This British Standard reproduces verbatim ISO 13318-2:2001 and implements it as the UK national standard. Together with BS ISO 13318-1:2001 and BS ISO 13318-3 (to be published), it supersedes BS 3406-6:1985, which will be withdrawn on publication of BS ISO 13318-3.

The UK participation in its preparation was entrusted by Technical Committee LBI/37, Sieves, screens and particle sizing, to Subcommittee LBI/37/4, Sizing by methods other than sieving, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for their correct application.

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INTERNATIONAL STANDARD

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Determination of particle size distribution by centrifugal liquid sedimentation methods —

Part 2: Photocentrifuge method

*Détermination de la distribution granulométrique par les méthodes de
sédimentation centrifuge dans un liquide —*

Partie 2: Méthode photocentrifuge



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 part of ISO 13318 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13318-2 was prepared by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*, Subcommittee SC 4, *Sizing by methods other than sieving*.

ISO 13318 consists of the following parts, under the general title *Determination of particle size distribution by centrifugal liquid sedimentation methods*:

- *Part 1: General principles and guidelines*
- *Part 2: Photocentrifuge method*
- *Part 3: Centrifugal X-ray method*

Annexes A to C of this part of ISO 13318 are for information only.

Introduction

The sample suspension in a photocentrifuge may be contained in a cuvet or a disc. Sample concentration is determined by changes in a light signal monitored at a known radius. The cuvet photocentrifuge can only be run in the homogeneous mode whereas the disc photocentrifuge may be run in either the homogeneous or the line-start mode. Some systems permit the coarse end of the distribution to be measured in a gravitational mode and the fine end in the centrifugal mode. The use of light to determine particle size distribution requires a calibration factor to be applied as the particle size approaches the wavelength of the light, due to the inapplicability of the laws of geometric optics.

