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Second edition  
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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.

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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 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*.

This second edition cancels and replaces ISO 13318-2:2001, of which it constitutes a minor revision, due to the extension of Clause 4 and 5.2, and the addition of Figure 3 and the Bibliography.

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*

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## Introduction

The sample suspension in a photocentrifuge may be contained in a cuvette or a disc. Sample concentration is determined by changes in a light signal monitored at a known radius. The cuvette 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.