
**Reference materials for particle size
measurement — Specification of
requirements**

*Matériaux de référence pour la mesure de taille de particules —
Spécification des exigences*



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

	Page
Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Abbreviated terms.....	4
5 Basic principles.....	5
5.1 Measurand definitions in particle size analysis.....	5
5.1.1 General.....	5
5.1.2 Operationally defined measurands in particle characterisation: Equivalent diameters.....	5
5.1.3 Required detail of procedure description for operationally defined measurands.....	7
5.1.4 Conditions for equivalent diameters to coincide with the actual particle diameter.....	7
5.2 Metrological traceability of size measurement results.....	8
5.2.1 General.....	8
5.2.2 Establishing versus verifying traceability in particle characterisation.....	11
5.3 Types of RMs.....	11
5.3.1 Certified and non-certified RMs/certified and non-certified values.....	11
5.3.2 Primary/secondary/tertiary CRMs.....	12
5.3.3 Spherical/non-spherical and monodisperse/polydisperse RMs.....	13
5.4 Porous/dense RMs.....	14
6 Practical handling.....	14
7 Requirements for specific uses.....	14
7.1 General.....	14
7.2 Instrument verification/design qualification.....	14
7.3 Installation qualification.....	14
7.3.1 General.....	14
7.3.2 Type of material.....	14
7.3.3 Kind of quantity of the assigned value.....	15
7.3.4 Degree of homogeneity.....	15
7.4 Calibration.....	16
7.4.1 General.....	16
7.4.2 Type of material.....	16
7.4.3 Traceability of the certified values.....	16
7.4.4 Kind of quantity of the certified property.....	16
7.4.5 Uncertainty of the certified value.....	17
7.5 Operational qualification/demonstration of proficiency.....	17
7.5.1 General.....	17
7.5.2 Type of material.....	17
7.5.3 Kind of quantity of the certified property.....	18
7.5.4 Uncertainty of certified values.....	20
7.6 Statistical quality control/performance qualification.....	20
7.6.1 General.....	20
7.6.2 Type of material.....	20
7.6.3 Kind of quantity.....	20
7.6.4 Degree of homogeneity.....	21
7.7 Summary.....	21
Bibliography.....	24

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 24, *Particle characterization including sieving*, Subcommittee SC 4, *Particle characterization*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Reference materials for particle size measurement — Specification of requirements

1 Scope

This document is intended to support users of reference materials (RMs) for particle size analysis to identify suitable RMs (certified or not) for their needs. In line with the focus on users, questions on sample preparation that go beyond preparation of the sample as received by the user will not be covered by this document.

This document describes the fundamental requirements that RMs (certified or not) for the determination of particle size shall fulfil in order to be fit for a given purpose. The document is limited to a description of the fundamental principles – the discussion whether a certain numerical value is fit for purpose is beyond the scope of this document.

The scope of this document is limited to RMs (certified or not) in the form of particles. This document does not deal with any other form of RMs, like calibration grids.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

kind of quantity

aspect common to mutually comparable quantities

Note 1 to entry: The division of 'quantity' according to 'kind of quantity' is to some extent arbitrary.

EXAMPLE The quantities diameter, circumference, and wavelength are generally considered to be quantities of the same kind, namely of the kind of quantity called length.

Note 2 to entry: Quantities of the same kind within a given system of quantities have the same quantity dimension. However, quantities of the same dimension are not necessarily of the same kind.

[SOURCE: ISO/IEC Guide 99:2007, 1.2, modified — Note 3 to entry and EXAMPLES 2 and 3 have been deleted.]

3.2

measurand

quantity intended to be measured

Note 1 to entry: The specification of a measurand requires knowledge of the *kind of quantity* (3.1), description of the state of the phenomenon, body, or substance carrying the quantity, including any relevant component, and the chemical entities involved.