

---

---

**Fine ceramics (advanced ceramics, advanced technical ceramics) — Sample preparation for the determination of particle size distribution of ceramic powders**

*Céramiques techniques — Préparation de l'échantillon pour la détermination de la répartition granulométrique des poudres céramiques*



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## Contents

Page

Foreword.....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions.....	1
4 Sampling.....	2
5 Dispersing media.....	2
6 Deagglomeration of sample.....	4
7 Suspension and dispersion of sample .....	4
8 Treatment of suspension.....	5
9 Record of preparation conditions.....	5

## 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 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 14703 was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

This second edition cancels and replaces the first edition (ISO 14703:2000), which has been technically revised.

# Fine ceramics (advanced ceramics, advanced technical ceramics) — Sample preparation for the determination of particle size distribution of ceramic powders

## 1 Scope

This International Standard specifies a general wet-sample preparation technique common to the size analysis of powdered fine ceramic materials. The analyzed size distribution of fine particles is strongly dependent on the sample preparation.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 8213:1986, *Chemical products for industrial use — Sampling techniques — Solid chemical products in the form of particles varying from powders to coarse lumps*

## 3 Terms and definitions

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

### 3.1

#### **fine particles**

particles of which sizes are less than a few micrometres

### 3.2

#### **sample preparation**

process that includes deagglomeration, dispersion of a test sample and treatment of suspension in stages up to taking the test portion

### 3.3

#### **test sample**

representative part taken from a quantity of material

### 3.4

#### **test portion**

quantity of material taken from the test sample entirely used in the test

### 3.5

#### **dispersing medium**

liquid in which the sample is dispersed and suspended

### 3.6

#### **Na-HMP**

sodium hexametaphosphate