

<b>STN</b>	<b>Jemná keramika (špeciálna keramika, špeciálna technická keramika) Metódy chemickej analýzy práškov oxidu zirkoničitého (ISO 23739: 2021)</b>	<b>STN EN ISO 23739</b>  72 7560
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Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods for chemical analysis of zirconium oxide powders (ISO 23739:2021)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/23

Obsahuje: EN ISO 23739:2023, ISO 23739:2021

Oznámením tejto normy sa ruší  
STN EN 725-12 (72 7515) z decembra 2001

**137561**

EUROPEAN STANDARD

**EN ISO 23739**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2023

ICS 81.060.30

Supersedes EN 725-12:2001

English Version

**Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods for chemical analysis of zirconium oxide powders (ISO 23739:2021)**

Céramiques techniques - Méthodes pour l'analyse chimique des poudres d'oxyde de zirconium (ISO 23739:2021)

Hochleistungskeramik - Verfahren zur chemischen Analyse von Zirconiumoxidpulvern (ISO 23739:2021)

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**EN ISO 23739:2023 (E)**

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## **European foreword**

The text of ISO 23739:2021 has been prepared by Technical Committee ISO/TC 206 "Fine ceramics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 23739:2023 by Technical Committee CEN/TC 184 "Advanced technical ceramics" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2024, and conflicting national standards shall be withdrawn at the latest by February 2024.

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The text of ISO 23739:2021 has been approved by CEN as EN ISO 23739:2023 without any modification.

# INTERNATIONAL STANDARD

**ISO**  
**23739**

First edition  
2021-08

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## **Fine ceramics (advanced ceramics, advanced technical ceramics) — Methods for chemical analysis of zirconium oxide powders**

*Céramiques techniques — Méthodes pour l'analyse chimique des  
poudres d'oxyde de zirconium*



Reference number  
ISO 23739:2021(E)

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Published in Switzerland

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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](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

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](http://www.iso.org/members.html).

# Fine ceramics (advanced ceramics, advanced technical ceramics) — Methods for chemical analysis of zirconium oxide powders

## 1 Scope

This document specifies methods for the chemical analysis of zirconium oxide powders used as the raw material for fine ceramics.

It stipulates the determination methods of the zirconium, aluminium, barium, calcium, cerium, cobalt, gadolinium, hafnium, iron, magnesium, potassium, silicon, sodium, strontium, titanium and yttrium contents in zirconium oxide powders for fine ceramics. The test sample is decomposed by acid pressure decomposition or alkali fusion. Contents of zirconium and yttrium are determined by using either a precipitation and gravimetric method or an inductively coupled plasma–optical emission spectrometry (ICP–OES) method. Contents of aluminium, barium, calcium, cerium, cobalt, gadolinium, hafnium, iron, magnesium, potassium, silicon, sodium, strontium and titanium are determined by using an ICP–OES method.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 835, *Laboratory glassware — Graduated pipettes*

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

ISO 8656-1, *Refractory products — Sampling of raw materials and unshaped products — Part 1: Sampling scheme*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**