
Fina keramika (sodobna keramika, sodobna tehnična keramika) - Metode za kemijsko analizo praškov barijevega titanata visoke čistosti (ISO/DIS 21813:2026)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods for chemical analysis of high purity barium titanate powders (ISO/DIS 21813:2026)

Hochleistungskeramik - Verfahren zur chemischen Analyse von hochreinen Bariumtitanatpulvern (ISO/DIS 21813:2026)

Céramiques techniques (céramiques techniques avancées) - Méthodes d'analyse chimique des poudres de titanate de baryum de haute pureté (ISO/DIS 21813:2026)

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ICS:

81.060.30	Sodobna keramika	Advanced ceramics
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oSIST prEN ISO 21813:2026	en,fr,de
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DRAFT International Standard

ISO/DIS 21813

Fine ceramics (advanced ceramics, advanced technical ceramics) — Methods for chemical analysis of high purity barium titanate powders

*Céramiques techniques (céramiques techniques avancées) —
Méthodes d'analyse chimique des poudres de titanate de baryum
de haute pureté*

ICS: 81.060.30

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Foreword

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This document, which is based on,^[1] was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

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Fine ceramics (advanced ceramics, advanced technical ceramics) — Methods for chemical analysis of high purity barium titanate powders

1 Scope

This document specifies methods for the chemical analysis of fine high purity barium titanate powders used as the raw material for fine ceramics.

This document stipulates the determination methods of the barium, titanium, aluminium, cadmium, calcium, cobalt, dysprosium, iron, lead, magnesium, manganese, nickel, niobium, potassium, silicon, sodium, strontium, vanadium, zirconium, carbon and oxygen contents in high purity barium titanate powders. The barium and titanium contents, the major elements, are determined by using an acid decomposition-gravimetric method or an acid decomposition-inductively coupled plasma-optical emission spectrometry (ICP-OES) method. The aluminium, cadmium, calcium, chromium, cobalt, dysprosium, iron, lead, magnesium, manganese, nickel, potassium, silicon, strontium, vanadium and zinc contents are simultaneously determined via an acid digestion-ICP-OES method. The oxygen content is determined via an inert gas fusion-IR absorption spectrometry method. Finally, the carbon content is determined using a combustion-IR absorption spectrometry method or a combustion-thermal conductometry 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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 6353-1, *Reagents for chemical analysis — Part 1: General test methods*

ISO 6353-2, *Reagents for chemical analysis — Part 2: Specifications — First series*

ISO 6353-3, *Reagents for chemical analysis — Part 3: Specifications — Second series*

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

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological 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/>

4 Analytes and ranges

- a) Barium (Ba), range of 40 % to 60 % (mass fraction).
- b) Titanium (Ti), range of 10 % to 30 % (mass fraction).