

STN	Jadrová energia Stanovenie obsahu oxidu gadolinitého v peletách obsahujúcich oxid uránu röntgenovou fluorescenčnou spektrometriou (ISO 16795: 2024)	STN EN ISO 16795 40 1026
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Nuclear energy - Determination of Gd₂O₃ content in pellets containing uranium oxide by X-ray fluorescence spectrometry (ISO 16795:2024)

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. 10/25

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EUROPEAN STANDARD

EN ISO 16795

NORME EUROPÉENNE

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English Version

Nuclear energy - Determination of Gd_2O_3 content in pellets
containing uranium oxide by X-ray fluorescence
spectrometry (ISO 16795:2024)

Énergie nucléaire - Détermination de la teneur de
 Gd_2O_3 par spectrométrie à fluorescence X dans des
pastilles combustibles contenant de l'oxyde d'uranium
(ISO 16795:2024)

Kerntechnik - Bestimmung des Gadoliniumoxidgehalts
in Gadolinium-Brennstofftabletten mittels
Röntgenfluoreszenzspektrometrie (ISO 16795:2024)

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EN ISO 16795:2025 (E)

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European foreword

The text of ISO 16795:2024 has been prepared by Technical Committee ISO/TC 85 "Nuclear energy, nuclear technologies, and radiological protection" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 16795:2025 by Technical Committee CEN/TC 430 "Nuclear energy, nuclear technologies, and radiological protection" the secretariat of which is held by AFNOR.

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Endorsement notice

The text of ISO 16795:2024 has been approved by CEN as EN ISO 16795:2025 without any modification.



International Standard

ISO 16795

Nuclear energy — Determination of Gd_2O_3 content in pellets containing uranium oxide by X-ray fluorescence spectrometry

*Énergie nucléaire — Détermination de la teneur de Gd_2O_3 par
spectrométrie à fluorescence X dans des pastilles combustibles
contenant de l'oxyde d'uranium*

**Second edition
2024-04**

ISO 16795:2024(en)



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ISO 16795:2024(en)**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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This document was prepared by Technical Committee ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 5, *Nuclear installations, processes and technologies*

This second edition cancels and replaces the first edition (ISO 16795:2004), which has been technically revised.

The main changes are as follows:

- the title of this document has been modified;
- requirements for the standard pellet has been added in [Clause 7](#);
- range of Gd₂O₃ content covered by calibration curve has been added in [Clause 10](#);

A list of all parts in the ISO 16795 series can be found on the ISO website.

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Nuclear energy — Determination of Gd_2O_3 content in pellets containing uranium oxide by X-ray fluorescence spectrometry

1 Scope

This document specifies a method which covers the determination of Gd_2O_3 content in UO_2 fuel pellets, by X-ray fluorescence spectrometry.

Either wave dispersion X-ray fluorescence (WD-XRF) or energy dispersion X-ray fluorescence (ED-XRF) is applicable, however, this document states a method by using WD-XRF using Gd $L\alpha$ -line.

This method has been tested for mass fractions of from 2 % to 10 % Gd_2O_3 .

2 Normative references

ISO 17034, *General requirements for the competence of reference material producers*

ASTM C1128, *Standard Guide for Preparation of Working Reference Materials for Use in Analysis of Nuclear Fuel Cycle Materials*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN