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STN	**Jadrová energia Stanovenie obsahu oxidu gadolinitého v peletách obsahujúcich oxid uránu röntgenovou fluorescenčnou spektrometriou (ISO 16795: 2024)**	**STN EN ISO 16795** 40 1026

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

Obsahuje: EN ISO 16795:2025, ISO 16795:2024

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 16795

August 2025

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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)

This European Standard was approved by CEN on 11 August 2025.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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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.

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of an identical text or by endorsement, at the latest by February 2026, and conflicting national standards shall be withdrawn at the latest by February 2026.

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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

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Foreword

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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 Gd_2O_3 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.

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.

International Standard **ISO 16795:2024(en)**

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 Lα-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*