
**Nuclear fuel technology —
Determination of the isotopic and
elemental uranium and plutonium
concentrations of nuclear materials
in nitric acid solutions by thermal-
ionization mass spectrometry**

*Technologie du combustible nucléaire — Détermination de la
teneur isotopique et des concentrations en matériaux nucléaires de
l'uranium et du plutonium dans une solution d'acide nitrique par
spectrométrie de masse à thermoionisation*

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Published in Switzerland

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Foreword

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This document was prepared by ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 5, *Nuclear installations, processes and technologies*.

This third edition cancels and replaces the second edition (ISO 8299:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the procedure for the preparation of resin used for separation and purification of the samples has been added in [5.3](#);
- sample preparation procedure from pellet, powder and other material forms to the solution has been added in [8.1](#);
- uncertainty of the measurement is considered in [Clause 15](#) instead of repeatability and accuracy.

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