



BSI Standards Publication

Nuclear fuel technology — Determination of uranium in solutions, uranium hexafluoride and solids

Part 2: Iron(II) reduction/cerium(IV) oxidation titrimetric method

National foreword

This British Standard is the UK implementation of [ISO 7097-2:2022](#).

The UK participation in its preparation was entrusted to Technical Committee NCE/9, Nuclear Installations, Processes & Technologies.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Nuclear fuel technology — Determination of uranium in solutions, uranium hexafluoride and solids —

Part 2: Iron(II) reduction/cerium(IV) oxidation titrimetric method

*Technologie du combustible nucléaire — Dosage de l'uranium dans
des solutions, l'hexafluorure d'uranium et des solides —*

*Partie 2: Méthode titrimétrique par réduction au fer(II) et oxydation
au cérium(IV)*



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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).

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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 7097-2:2004), which has been technically revised.

The main changes are as follows:

- the Scope was updated (see [Clause 1](#));
- information on interferences was updated (see [5.2](#));
- requirements for standardisation of ceric titrant were updated (see [6.16](#));
- [Annex A](#) was divided into two annexes ([Annex A](#) and [Annex B](#)).

A list of all parts in the ISO 7097 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.

Introduction

This document describes procedures for the determination of uranium in solutions, uranium hexafluoride, and solids. The procedures described in the two independent parts of this International Standard are similar: this document uses a titration with cerium(IV) and ISO 7097-1 uses a titration with potassium dichromate.

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