ICS 13.280 SLOVENSKÁ TECHNICKÁ NORMA December 2022

STN	**Radiačná ochrana Monitorovanie a dozimetria vnútorných expozícií spôsobených kontamináciou rany rádionuklidmi (ISO 20031: 2020)**	**STN EN ISO 20031** 40 1420

Radiological protection - Monitoring and dosimetry for internal exposures due to wound contamination with radionuclides (ISO 20031:2020)

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. 11/22

Obsahuje: EN ISO 20031:2022, ISO 20031:2020

obsahuje farebné strany

135813

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20031

August 2022

ICS 13.280

English Version

Radiological protection - Monitoring and dosimetry for internal exposures due to wound contamination with radionuclides (ISO 20031:2020)

Radioprotection - Surveillance et dosimétrie en cas d'exposition interne due à la contamination d'une plaie par radionucléides (ISO 20031:2020)

Strahlenschutz - Überwachung und Dosimetrie für innere Expositionen aufgrund von Wundkontaminationen mit Radionukliden (ISO 20031:2020)

This European Standard was approved by CEN on 24 July 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

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

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

Ref. No. EN ISO 20031:2022 E

Contents

Page

European foreword

The text of ISO 20031:2020 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 20031:2022 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 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 20031:2020 has been approved by CEN as EN ISO 20031:2022 without any modification.

Annex H
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC national member.

This European Standard does not fall under any Directive/Regulation of the EU.

In the relevant CEN-CENELEC countries, these A-deviations are valid instead of the respective provisions of the European Standard until the national situation causing the A-deviation has changed.

Clause	**Deviation**
General	Germany Incorporation monitoring in Germany is legally regulated by the German Guidelines on physical radiation protection control for determination of the body dose part 2: Determination of the body dose of internal exposition (incorporation monitoring) of January 12, 2007. Regarding the measurements and the quality control described in this standard shall comply with the guideline on physical radiation protection control for determination of the body dose part 2: Determination of the body dose of internal exposition (incorporation monitoring) of January 12, 2007
9.5	Germany Measurement uncertainties as described in this clause are legally not taken into account in Germany.

INTERNATIONAL STANDARD

ISO 20031

First edition
2020-02

Radiological protection — Monitoring and dosimetry for internal exposures due to wound contamination with radionuclides

Radioprotection — Surveillance et dosimétrie en cas d'exposition interne due à la contamination d'une plaie par radionucléides

Reference number
ISO 20031:2020(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 2, *Radiological protection*.

Introduction

In the course of their employment, radiation workers may be exposed to radioactive materials that could be incorporated into the body. Intakes of radionuclides need to be monitored to determine that any exposures are at expected levels. Internal doses resulting from intakes of radionuclides cannot be measured directly. Estimating the dose requires decisions to be made about the monitoring techniques and frequencies along with methodologies for dose assessment. The criteria governing the regimes of such a monitoring programme or for the selection of methods and frequencies of monitoring usually depends upon regulations, the purpose of the radiation protection programme, the probabilities of potential radionuclide intakes, and the characteristics of the materials handled.

For these reasons, ISO standards for monitoring programmes (ISO 20553[1]), laboratory requirements (ISO 28218), and dose assessment (ISO 27048[2]) have been developed and can be applied to many workplaces where internal contamination may occur. Their application for internal exposures due to wound contamination with radionuclides requires account to be taken of special aspects resulting from the type of wound and the associated specific biokinetics of radionuclides at the origin of contamination.

This document offers guidance for the design of a special monitoring programme and for dose assessment in the case of wound contamination with radionuclides. Recommendations of international expert bodies and international experience with the practical application of these recommendations in radiological protection programmes have been considered in the development of this document. Its application facilitates the exchange of information between authorities, supervisory institutions and employers.

INTERNATIONAL STANDARD **ISO 20031:2020(E)**

Radiological protection — Monitoring and dosimetry for internal exposures due to wound contamination with radionuclides

1 Scope

This document specifies the requirements for personal contamination monitoring and dose assessment following wounds involving radioactive materials. It includes requirements for the direct monitoring at the wound site, monitoring of uptake of radionuclides into the body and assessment of local and systemic doses following the wound event.

It does not address:

— details of monitoring and assessment methods for specific radionuclides;

— monitoring and dose assessment for materials in contact with intact skin or pre-existing wounds, including hot particles;

— therapeutic protocols. However, the responsible entity needs to address the requirements for decontamination and decorporation treatments if appropriate.

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 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

ISO 5725-3, *Accuracy (trueness and precision) of measurement methods and results — Part 3: Intermediate measures of the precision of a standard measurement method*

ISO 28218, *Radiation protection — Performance criteria for radiobioassay*

ISO/IEC Guide 99, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

