SLOVENSKI STANDARD
SIST EN IEC 61563:2021

01-april-2021

Instrumenti za zaščito pred sevanjem - Oprema za merjenje koncentracije aktivnosti radionuklidov, ki oddajajo gama žarke v živila (IEC 61563:2019)

Radiation protection instrumentation - Equipment for measuring the activity concentration of gamma-emitting radionuclides in foodstuffs (IEC 61563:2019)

Strahlenschutz-Messgeräte - Einrichtungen für die Messung der Aktivitätskonzentration von Gammastrahlung emittierenden Radionukliden in Lebensmitteln (IEC 61563:2019)

Instrumentation pour la radioprotection - Équipement de mesure de la concentration d'activité des radionucléides émetteurs gamma dans les aliments (IEC 61563:2019)

Ta slovenski standard je istoveten z: **EN IEC 61563:2021**

ICS:

13.280	Varstvo pred sevanjem	Radiation protection

SIST EN IEC 61563:2021 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61563

February 2021

ICS 13.280

English Version

Radiation protection instrumentation - Equipment for measuring the activity concentration of gamma-emitting radionuclides in foodstuffs (IEC 61563:2019)

Instrumentation pour la radioprotection - Équipement de mesure de la concentration d'activité des radionucléides émetteurs gamma dans les aliments (IEC 61563:2019)

Strahlenschutz-Messgeräte - Einrichtungen für die Messung der Aktivitätskonzentration von Gammastrahlung emittierenden Radionukliden in Lebensmitteln (IEC 61563:2019)

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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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

This document (EN IEC 61563:2021) consists of the text of IEC 61563:2019 prepared by SC 45B "Radiation protection instrumentation" of IEC/TC 45 "Nuclear instrumentation".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-01-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-01-25

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

Endorsement notice

The text of the International Standard IEC 61563:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60846-1	NOTE	Harmonized as EN 60846-1
IEC/TR 62461	NOTE	Harmonized as CLC IEC/TR 62461

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60050-395	-	International Electrotechnical Vocabulary - Part 395: Nuclear instrumentation: Physical phenomena, basic concepts, instruments, systems, equipment and detectors	-	-
IEC 60086-2	-	Primary batteries - Part 2: Physical and electrical specifications	EN 60086-2	-
IEC 60529	-	Classification of degrees of protection provided by enclosures	-	-
IEC 61187	-	Electrical and electronic measuring equipment - Documentation	EN 61187	-
IEC 62706	-	Radiation protection instrumentation - Environmental, electromagnetic and mechanical performance requirements	-	-
ISO 11929	-	Determination of the characteristic limits (decision threshold, detection limit and limits of the confidence interval) for measurements of ionizing radiation - Fundamentals and application	-	-

IEC 61563

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Radiation protection instrumentation – Equipment for measuring the activity concentration of gamma-emitting radionuclides in foodstuffs

Instrumentation pour la radioprotection – Équipement de mesure de la concentration d'activité des radionucléides émetteurs gamma dans les aliments

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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RADIATION PROTECTION INSTRUMENTATION – EQUIPMENT FOR MEASURING THE ACTIVITY CONCENTRATION OF GAMMA-EMITTING RADIONUCLIDES IN FOODSTUFFS

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard 61563 has been prepared by subcommittee 45B: Radiation protection instrumentation, of IEC technical committee 45: Nuclear instrumentation.

This second edition cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) The previous edition applied to handheld-type and portable-type instruments. This edition applies to transportable-type and installed-type instruments, as well as the scope of the previous edition. The handheld-type and portable-type instruments are mainly used in case of a post accidental situation, however, the transportable-type and installed-type instruments can be used through recovery phase.
b) Uncertainty of measurement according to GUM is introduced.
c) Detection limit defined in ISO 11929 is introduced to specify a minimum detectable activity.

d) Environmental requirements, mechanical requirements and electromagnetic requirements are updated according to IEC 62706.

e) Sample format of measuring report is introduced as Annex C (informative).

The text of this International Standard is based on the following documents:

FDIS	Report on voting
45B/931/FDIS	45B/936/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

RADIATION PROTECTION INSTRUMENTATION – EQUIPMENT FOR MEASURING THE ACTIVITY CONCENTRATION OF GAMMA-EMITTING RADIONUCLIDES IN FOODSTUFFS

1 Scope

This document applies to instruments used to measure the activity and/or activity concentration of gamma-emitting radionuclides in food and/or foodstuffs. This document applies to instruments used both as gross count type instruments and pulse height analysing type instruments used in field conditions and in measurement facilities. This document does not apply to high-resolution spectrometers that use germanium detectors.

The instruments to which this document applies can be used to measure the activity and activity concentration of gamma-emitting radionuclides for a wide variety of samples, such as soil, sewage, plant, and animal life.

The object of this document is to establish performance requirements, to provide test methods and to specify general characteristics, general test conditions, and radiological, environmental, mechanical and electromagnetic characteristics to be used to determine whether an instrument meets the requirements of this document. The test results provide information to end-users and manufacturers regarding the capability of instrument for reliable measurement of the activity and/or activity concentration of gamma-emitting radionuclides.

This document does not apply to sample preparation.

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.

IEC 60050-395, *International Electrotechnical Vocabulary (IEV) – Part 395: Nuclear instrumentation: Physical phenomena, basic concepts, instruments, systems, equipment and detectors*

IEC 60086-2, *Primary batteries – Part 2: Physical and electrical specifications*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61187, *Electrical and electronic measuring equipment – Documentation*

IEC 62706, *Radiation protection instrumentation – Environmental, electromagnetic and mechanical performance requirements*

ISO 11929, *Determination of the characteristic limits (decision threshold, detection limit and limits of the coverage interval) for measurements of ionizing radiation – Fundamentals and application*