Radionuclide imaging devices - Characteristics and test conditions - Part 2: Single photon insion computer tomographs de Oreview Senerales of Files



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61675-2:2002 sisaldab Euroopa standardi EN 61675-2:1998 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 18.12.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This Estonian standard EVS-EN 61675-2:2002 consists of the English text of the European standard EN 61675-2:1998.

This standard is ratified with the order of Estonian Centre for Standardisation dated 18.12.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

This a previous senerates. The standard is available from Estonian standardisation organisation.

ICS 11.040.50

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EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 61675-2

February 1998

ICS 11.040.50

English version

Radionuclide imaging devices - Characteristics and test conditions Part 2: Single photon emission computer tomographs (IEC 61675-2:1998)

Dispositifs d'imagerie par radionucléides Caractéristiques et conditions d'essais Partie 2: Systèmes de tomographie d'émission à photon unique (CEI 61675-2:1998)

Bildgebende Systeme in der Nuklearmedizin - Merkmale und Prüfbedingungen Teil 2: Einzelphotonen-Emissions-Tomographie (IEC 61675-2:1998)

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

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Foreword

The text of document 62C/206/FDIS, future edition 1 of IEC 61675-2, prepared by SC 62C, Equipment for radiotherapy, nuclear medicine and radiation dosimetry, of IEC TC 62, Electrical equipment in medical practice, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61675-2 on 1998-01-01.

The following dates were fixed:

 latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement

(dop) 1998-11-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 1998-11-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given for information only. In this standard, annex ZA is normative and annex A is informative. Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61675-2:1998 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies

Publication	<u>Year</u>	Title	EN/HD	<u>Year</u>
IEC 60788	1984	Medical radiology - Terminology	HD 501 S1	1988
IEC 60789	1992	Characteristics and test conditions of radionuclide imaging devices Anger type gamma cameras	EN 60789	1993
IEC 61675-1	1998	Radionuclide imaging devices Characteristics and test conditions Part 1: Positron emission tomographs	EN 61675-1	1998

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INTERNATIONAL **STANDARD**

IEC 61675-2

> First edition 1998-01

Radionuclide imaging devices –
Characteristics and test conditions –
Part 2:
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Single photon emission computed tomographs

Caracteristiques et conditions à conditions à partie 2:
Systèmes de tomographie d'émission à photon unique



Reference number IEC 61675-2:1998(E)

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As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series.

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- **IEC Yearbook** On-line access*
- Catalogue of IEC publications Published yearly with regular update (On-line access)*

Terminology, graphical and letter symbols

For general terminology, readers are referred to IEC 60050: International Electrotechnical Vocabulary (IEV).

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: Letter symbols to be used in electrical technology, IEC 60417: Graphical symbols for use on equipment. Index, survey and compilation of the single sheets and IEC 60617: Graphical symbols for diagrams.

IEC publications prepared by the same technical committee

ist . The attention of readers is drawn to the end pages of this publication which list the IEC publications issued by the technical committee which has prepared the present publication.

* See web site address on title page.

INTERNATIONAL **STANDARD**

IEC 61675-2

First edition 1998-01

Radionuclide imaging devices – Characteristics and test condition:

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Single photon emission computed tomographs

Dispositifs d'imagerie par radionucléides -Caractéristiques et conditions d'essais -

Partie 2:

Systèmes de tomographie d'émission à photon unique

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CODE PRIX PRICE CODE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RADIONUCLIDE IMAGING DEVICES – CHARACTERISTICS AND TEST CONDITIONS –

Part 2: Single photon emission computed tomographs

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61675-2 has been prepared by subcommittee 62C: Equipment for radiotherapy, nuclear medicine and radiation dosimetry, of IEC technical committee 62: Electrical equipment in medical practice.

The text of this standard is based on the following documents:

FDIS	Report on voting
62C/206/FDIS	62C/215/RVD

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

In this standard, the following print types are used:

- TERMS DEFINED IN CLAUSE 2 OF THIS STANDARD OR LISTED IN ANNEX A: SMALL CAPITALS

The requirements are followed by specifications for the relevant tests.

Annex A is for information only.

A bilingual version of this standard may be issued at a later date.

RADIONUCLIDE IMAGING DEVICES – CHARACTERISTICS AND TEST CONDITIONS –

Part 2: Single photon emission computed tomographs

1 General

1.1 Scope and object

This part of IEC 61675 specifies terminology and test methods for describing the characteristics of Anger type rotational GAMMA CAMERA SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHS (SPECT), equipped with parallel hole collimators. As these systems are based on Anger type GAMMA CAMERAS this part of IEC 61675 shall be used in conjunction with IEC 60789. These systems consist of a gantry system, single or multiple DETECTOR HEADS and a computer system together with acquisition, recording, and display devices.

The test methods specified in this part of IEC 61675 have been selected to reflect as much as possible the clinical use of Anger type rotational GAMMA CAMERA SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHS (SPECT). It is intended that the test methods be carried out by manufacturers thereby enabling them to describe the characteristics of SPECT systems on a common basis.

No test has been specified to characterize the uniformity of reconstructed images because all methods known so far will mostly reflect the noise of the image.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61675. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61675 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60788:1984, Medical radiology - Terminology

IEC 60789:1992, Characteristics and test conditions of radionuclide imaging devices – Anger type gamma cameras

IEC 61675-1, — Radionuclide imaging devices – Characteristics and test conditions – Part 1: Positron emission tomographs

2 Terminology and definitions

For the purpose of this part of IEC 61675 the definitions given in IEC 60788, IEC 60789 and IEC 61675-1 (see annex A), and the following definitions apply.

Defined terms are printed in small capital letters.