INTERNATIONAL STANDARD

IEC 61675-3

First edition
1998-02

Radionuclide imaging devices – Characteristics and test conditions –

Part 3: Gamma camera based wholebody imaging systems

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

Partie 3: Systèmes d'imagerie du corps entier à gamma-caméra

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE H

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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RADIONUCLIDE IMAGING DEVICES – CHARACTERISTICS AND TEST CONDITIONS –

Part 3: Gamma camera based wholebody imaging systems

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.
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International Standard IEC 61675-3 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/211/FDIS	62C/221/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:

– requirements, compliance with which can be tested, and definitions: in roman type;
– explanation, advice, introductions, general statements, exceptions and reference: in smaller roman type;
– *test specifications: in italic type;*
– TERMS USED THROUGHOUT THIS STANDARD WHICH HAVE BEEN 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 3: Gamma camera based wholebody imaging systems

1 General

1.1 Scope and object

The object of this part of IEC 61675 is to specify test methods for describing the characteristics of GAMMA CAMERA BASED WHOLEBODY IMAGING SYSTEMS. As these systems are based on Anger type GAMMA CAMERAS this part of IEC 61675 should be read in conjuction with IEC 60789.

Two additional tests, scanning speed constancy, and system SPATIAL RESOLUTION without scatter, shall be performed. Measurement of system uniformity for wholebody imaging systems is possible but difficult to perform because of the requirement for large and uniform sources. Most of the potential problems that could affect uniformity will also affect the system resolution, and therefore such a uniformity test is not included in this standard.

The test methods specified in this part of IEC 61675 have been selected to reflect as much as possible the clinical use of GAMMA CAMERA BASED WHOLEBODY IMAGING SYSTEMS. It is intended that the test methods be carried out by manufacturers, thereby enabling them to describe the characteristics of GAMMA CAMERA BASED WHOLEBODY IMAGING SYSTEMS.

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 61675-2: *Radionuclide imaging devices – Characteristics and test conditions – Part 2: Single photon emission computed tomographs*