

# INTERNATIONAL STANDARD

## AMENDMENT 1

### Radionuclide imaging devices – Characteristics and test conditions – Part 1: Positron emission tomographs

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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland  
Email: [inmail@iec.ch](mailto:inmail@iec.ch)  
Web: [www.iec.ch](http://www.iec.ch)

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### Radionuclide imaging devices – Characteristics and test conditions – Part 1: Positron emission tomographs

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## FOREWORD

This amendment 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 amendment is based on the following documents:

|               |                  |
|---------------|------------------|
| Enquiry draft | Report on voting |
| 62C/419/CDV   | 62C/432/RVC      |

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,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

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

### Introduction to this amendment

Further developments of POSITRON EMISSION TOMOGRAPHS allow most of the tomographs to be operated in fully 3D acquisition mode. To comply with this trend, this amendment describes test conditions in accordance with the acquisition characteristic. It is the intention to simulate 3D imaging without introducing new phantoms or new acquisition or processing protocols. The test does simulate more realistically count rate characteristics for whole body imaging. Measurement of SCATTER FRACTION is not intended with this test. Certain parts of the standard are amended as stated below.

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### 3.5.3 Method

*Add, after the first paragraph, the following new text:*

For scatter condition as simulated in 3.5.3.1.3, the total amount of ACTIVITY is the ACTIVITY in the body phantom.

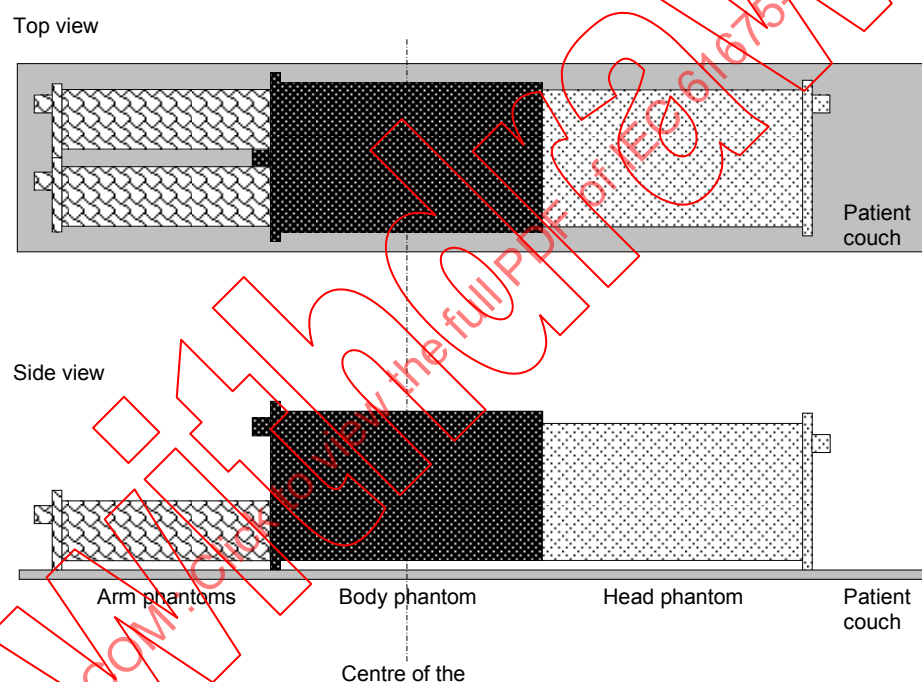
### 3.5.3.1.3 Abdominal imaging

*Replace the existing paragraph by the following:*

The body phantom without any insert is homogeneously filled with ACTIVITY  $A_{ref}$  and centred in the FOV. The head phantom is filled with the same amount of ACTIVITY  $A_{ref}$  and is positioned in contact with the body phantom. The two arm phantoms are each filled with half the amount of ACTIVITY  $A_{ref}$  and are positioned in contact with the body phantom on the other side. All phantoms will rest on the patient couch. For details on the position of the phantoms and the location of the filling screws, see Figure 13. The arm phantoms are a first order approximation of the abdomen/ legs of the PATIENT.

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*Add the following new Figure 13:*



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**Figure 13 – Phantom position and location of screws for abdominal imaging  
(see 3.5.3.1.3)**

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### Index of defined terms

*Add, to the existing list, the following term:*

PATIENT.....rm-62-03

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