

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Medical electrical equipment – Dosimeters with ionization chambers and/or semiconductor detectors as used in X-ray diagnostic imaging

Appareils électromédicaux – Dosimètres à chambres d'ionisation et/ou à détecteurs à semi-conducteurs utilisés en imagerie de diagnostic à rayonnement X



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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope and object.....	7
1.1 Scope.....	7
1.2 Object	7
2 Normative references	7
3 Terms and definitions	8
4 General requirements.....	15
4.1 Performance requirements	15
4.2 REFERENCE VALUES and STANDARD TEST VALUES.....	15
4.3 General test conditions.....	16
4.3.1 STANDARD TEST CONDITIONS.....	16
4.3.2 Statistical fluctuations.....	17
4.3.3 STABILIZATION TIME	17
4.3.4 Adjustments during test	17
4.3.5 Batteries.....	17
4.4 Constructional requirements as related to performance	18
4.4.1 Components	18
4.4.2 Display	18
4.4.3 Indication of battery condition.....	18
4.4.4 Indication of polarizing voltage failure.....	18
4.4.5 Over-ranging.....	18
4.4.6 MEASURING ASSEMBLIES with multiple DETECTOR ASSEMBLIES	19
4.4.7 Radioactive STABILITY CHECK DEVICE.....	19
4.5 UNCERTAINTY of measurement.....	20
5 Limits of PERFORMANCE CHARACTERISTICS	20
5.1 Linearity.....	20
5.2 Repeatability.....	20
5.2.1 General.....	20
5.2.2 Repeatability in the ATTENUATED BEAM.....	20
5.2.3 Repeatability in the UNATTENUATED BEAM.....	21
5.3 RESOLUTION of reading	21
5.4 STABILIZATION TIME.....	21
5.5 Effect of pulsed radiation on AIR KERMA and AIR KERMA LENGTH PRODUCT measurements.....	22
5.6 Reset on AIR KERMA and AIR KERMA LENGTH PRODUCT ranges	22
5.7 Effects of LEAKAGE CURRENT.....	22
5.7.1 AIR KERMA RATE measurements	22
5.7.2 AIR KERMA and AIR KERMA LENGTH PRODUCT measurements.....	22
5.8 Stability.....	23
5.8.1 Long term stability	23
5.8.2 Accumulated dose stability	23
5.9 Measurements with a radioactive STABILITY CHECK DEVICE.....	23
6 LIMITS OF VARIATION for effects of INFLUENCE QUANTITIES	24
6.1 General.....	24
6.2 Energy dependence of RESPONSE	24

6.3	AIR KERMA RATE dependence of AIR KERMA and AIR KERMA LENGTH PRODUCT measurements.....	25
6.3.1	MEASURING ASSEMBLY.....	25
6.3.2	IONIZATION CHAMBER – Recombination losses.....	26
6.4	Dependence of DETECTOR RESPONSE on angle of incidence of radiation.....	26
6.4.1	Non-CT detectors.....	26
6.4.2	CT DETECTORS.....	26
6.5	Operating voltage.....	27
6.5.1	Mains-operated DOSIMETERS.....	27
6.5.2	Battery-operated DOSIMETERS.....	27
6.5.3	Mains rechargeable, battery-operated DOSIMETERS.....	27
6.6	Air pressure.....	28
6.7	Air pressure EQUILIBRATION TIME of the RADIATION DETECTOR.....	28
6.8	Temperature and humidity.....	28
6.9	Electromagnetic compatibility.....	29
6.9.1	ELECTROSTATIC DISCHARGE.....	29
6.9.2	Radiated electromagnetic fields.....	29
6.9.3	CONDUCTED DISTURBANCES induced by bursts and radio frequencies.....	30
6.9.4	Voltage dips, short interruptions and voltage VARIATIONS.....	30
6.10	Field size.....	30
6.11	EFFECTIVE LENGTH and spatial uniformity of RESPONSE of CT DOSIMETERS.....	30
7	Marking.....	31
7.1	DETECTOR ASSEMBLY.....	31
7.2	MEASURING ASSEMBLY.....	31
7.3	Radioactive STABILITY CHECK DEVICE.....	31
8	ACCOMPANYING DOCUMENTS.....	31
	Annex A (informative) COMBINED STANDARD UNCERTAINTY for dosimeter performance.....	33
	Index of defined terms.....	34
	Table 1 – REFERENCE and STANDARD TEST CONDITIONS.....	16
	Table 2 – Number of readings required to detect true differences Δ (95 % confidence level) between two sets of instrument readings.....	17
	Table 3 – Maximum values for the COEFFICIENT OF VARIATION, v_{\max} , for measurements in the attenuated beam.....	21
	Table 4 – Maximum values for the COEFFICIENT OF VARIATION, v_{\max} , for measurements in the unattenuated beam.....	21
	Table 5 – LIMITS OF VARIATION for the effects of INFLUENCE QUANTITIES.....	24
	Table 6 – Climatic conditions.....	28
	Table A.1 – Estimation of COMBINED STANDARD UNCERTAINTY for dosimeter performance.....	33

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MEDICAL ELECTRICAL EQUIPMENT –
DOSIMETERS WITH IONIZATION CHAMBERS AND/OR
SEMICONDUCTOR DETECTORS AS USED
IN X-RAY DIAGNOSTIC IMAGING**

FOREWORD

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International Standard IEC 61674 has been prepared by subcommittee 62C: Equipment for radiotherapy, nuclear medicine and radiation dosimetry, of IEC technical committee 62: Electrical equipment in medical practice.

This second edition cancels and replaces the first edition of IEC 61674. This edition constitutes a technical revision.

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

FDIS	Report on voting
62C/551/FDIS	62C/555/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.

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

In this standard, the following print types are used:

- Requirements and definitions: roman type.
- *Test specifications: italic type.*
- Informative material appearing outside of tables, such as notes, examples and references: in smaller type. Normative text of tables is also in a smaller type.
- TERMS DEFINED IN CLAUSE 3 OF IEC 60601-1, IN THIS PARTICULAR STANDARD OR AS NOTED: SMALL CAPITALS.

The verbal forms used in this standard conform to usage described in Annex H of the ISO/IEC Directives, Part 2. For the purposes of this standard, the auxiliary verb:

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

Withdrawing

INTRODUCTION

Diagnostic radiology is the largest contributor to man-made IONIZING RADIATION to which the public is exposed. The reduction in the exposure received by PATIENTS undergoing medical radiological examinations or procedures has therefore become a central issue in recent years. The PATIENT dose will be minimized when the X-ray producing equipment is correctly adjusted for image quality and radiation output. These adjustments require that the routine measurement of AIR KERMA, AIR KERMA LENGTH PRODUCT and/or AIR KERMA RATE be made accurately. The equipment covered by this standard plays an essential part in achieving the required accuracy. The DOSIMETERS used for adjustment and control measurements must be of satisfactory quality and must therefore fulfil the special requirements laid down in this standard.

Withdrawn