

Australian/New Zealand Standard™

**Evaluation and routine testing in
medical imaging departments**

**Part 2.7: Constancy tests—Equipment
for intra-oral dental radiography
(IEC 61223-2-7:1999, MOD)**

AS/NZS 4184.2.7:2002

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The following interests are represented on Committee HE-008:

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Australian Radiation Protection and Nuclear Safety Agency
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Australian/New Zealand Standard™

Evaluation and routine testing in medical imaging departments

Part 2.7: Constancy tests—Equipment for intra-oral dental radiography (IEC 61223-2-7:1999, MOD)

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee HE-008, Diagnostic Ionizing Imaging Equipment.

This Standard has been reproduced, with national modifications, from IEC 61223-2-7:1999, *Evaluation and routine testing in medical imaging departments—Part 2.7 Constancy tests—Equipment for intra-oral dental radiography excluding dental panoramic equipment.*

Appendix ZZ lists the variations between this Standard and IEC 61223-2-7:1999. These changes are indicated by a rule in the margin against the clause affected.

Those terms listed in Annex A appear in - IN SMALL CAPITALS.

As this publication has been reproduced from an international Standard, the following modifications apply:

- (a) Its number does not appear on each page and its identity is shown on the cover and title page.
- (b) The words ‘this Australian/New Zealand Standard’ should replace the words ‘this part of IEC 61223’ wherever they appear.
- (c) A full point (.) should replace a comma (,) where it appears as a decimal marker.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex or appendix to which they apply. A ‘normative’ annex or appendix is an integral part of a Standard, whereas an ‘informative’ one is for information or guidance only.

The references to international Standards should be replaced by references to the following Australian or Joint Australian/New Zealand Standards:

<i>Reference to International Standard or other publication</i>		<i>Australian/New Zealand Standard</i>	
IEC		AS/NZS	
61223	Evaluation and routine testing in medical imaging departments	4184	Evaluation and routine testing in medical imaging departments
61223-1	Part 1: General aspects	4184.1	Part 1: General aspects
61223-2-1	Part 2-1: Constancy tests – Film processors	4184.2.1	Part 2.1: Constancy tests–Film processors
61223-2-2	Part 2-2: Constancy tests – Radiographic cassettes and film changers – Film-screen contact and relative sensitivity of the screen-cassette assembly	4184.2.2	Part 2.4: Constancy tests– Radiographic cassettes and film changers - Film-screen contact and relative sensitivity of the screen-cassette assembly
61223-2-3	Part 2-3: Constancy tests – Darkroom safelight conditions	4184.2.3	Part 2.3: Constancy tests–Darkroom safelight conditions
61223-2-4	Part 2-4: Constancy tests – Hard copy cameras	4184.2.4	Part 2.4: Constancy tests–Hard copy cameras
61223-2-5	Part 2-5: Constancy tests – Image display devices	4184.2.5	Part 2.5: Constancy tests–Image display devices

Any international Standards not listed do not have an Australian/New Zealand equivalent.

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AUSTRALIAN/NEW ZEALAND STANDARD

Evaluation and routine testing in medical imaging departments

Part 2.7:

Constancy tests—Equipment for intra-oral dental radiography (IEC 61223-2-7:1999, MOD)

1 Scope and object

1.1 Scope

This part of IEC 61223 applies to RADIOLOGICAL INSTALLATIONS with diagnostic X-ray systems designed to expose intra-orally placed radiographic films or electronic equipment (sensors), but excluding dental panoramic equipment.

This standard is a part of a series of Particular Publications (standards and technical reports), which give methods of tests for the constancy of operation of various subsystems of diagnostic X-RAY EQUIPMENT.

This part of IEC 61223 is designed to be applicable to equipment for intra-oral dental radiography without digital imaging devices.

1.2 Object

This standard describes a method to check, in terms of functional parameters, that the constancy of the quality of images produced by intra-oral dental X-RAY EQUIPMENT is maintained after installation, calibration and adjustment have been carried out.

This standard defines

- the functional parameters, which describe the performance of X-RAY EQUIPMENT for intra-oral dental radiographic examination;
- methods of checking, whether variations in measured functional parameters meet ESTABLISHED CRITERIA, in order to ensure that the conditions for adequate imaging performance are maintained, while unnecessary IRRADIATION of the PATIENT is avoided.

The methods are based upon assessment of radiographic information using an appropriate TEST DEVICE.

The purpose of the methods is

- to establish a reference level of performance following an ACCEPTANCE TEST and an initial CONSTANCY TEST;
- to detect and verify any significant variation in functional parameters which may then require corrective actions.

Because RADIOLOGICAL INSTALLATIONS differ widely from each other, it is not possible in this standard to specify target values and tolerances for the parameters which would be generally applicable as criteria of acceptable performance. Guidance is given, however, as to the degree of variation in single measurements which might require appropriate action.

This standard gives methods of tests for the constancy of properties of diagnostic X-RAY EQUIPMENT as described in IEC 61223-1 (see clause 2).