

Australian/New Zealand Standard™

**Evaluation and routine testing in
medical imaging departments
Part 2.9: Constancy tests—Equipment
for indirect radioscopes and indirect
radiography**

AS/NZS 4184.2.9:2002

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee HE-008, Diagnostic Ionizing Imaging Equipment. It was approved on behalf of the Council of Standards Australia on 18 March 2002 and on behalf of the Council of Standards New Zealand on 21 March 2002. It was published on 20 May 2002.

The following interests are represented on Committee HE-008:

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Australian/New Zealand Standard™

Evaluation and routine testing in medical imaging departments Part 2.9: Constancy tests— Equipment for indirect radiology and indirect radiography

First published as AS/NZS 4184.2.9:2002.

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Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 4491 5

PREFACE

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

This Standard is identical with, and has been reproduced from, IEC 61223-2-9:1999, *Evaluation and routine testing in medical imaging departments—Part 2.9, Constancy tests—Equipment for indirect radiology and indirect radiography*.

Those terms listed in the Index of Defined Terms appear 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.

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 2.2: 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 2.9:

Constancy tests—Equipment for indirect radioscopy and indirect radiography

1 Scope and object

1.1 Scope

This part of IEC 61223 applies to those components of X-RAY EQUIPMENT which

- a) generate, influence the propagation of, and detect X-RADIATION, and
- b) process, present and store diagnostic X-ray images in RADIOLOGICAL INSTALLATIONS with diagnostic X-ray systems for INDIRECT RADIOSCOPY and INDIRECT RADIOGRAPHY which use X-RAY IMAGE INTENSIFIERS in conjunction with analogue and/or digital storage systems:
 - closed-circuit television display systems:
 - cut film cameras
 - cine cameras.

This standard is a part of a series of Particular Publications (international standards and technical reports) which define methods of testing the constancy of operation of various sub-systems of diagnostic X-RAY EQUIPMENT.

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).

This part of IEC 61223 is designed to be applicable to equipment for indirect radioscopy and indirect radiography without digital imaging devices.

1.2 Object

This standard defines

- the essential parameters which describe or affect the performance of the above components of X-RAY EQUIPMENT, and
- methods of checking that variations in measured quantities related to those parameters are within acceptable limits, in order to maintain adequate standards of imaging whilst reducing unnecessary IRRADIATION of the PATIENT.

These methods are based upon assessment of radiological information using appropriate TEST DEVICES.

The purpose of the methods is

- to establish a reference level of performance when such equipment is accepted;
- to detect or verify any significant variation in functional parameters which may then require corrective actions.