

Radiation protection instrumentation — Radon and radon decay product measuring instruments —

Part 2: Specific requirements for radon measuring instruments

ICS 13.280

National foreword

This British Standard reproduces verbatim IEC 61577-2:2000 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee NCE/2, Health physics instrumentation, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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61577-2

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**Instrumentation pour la radioprotection –
Instruments de mesure du radon
et des descendants du radon –**

**Partie 2:
Exigences spécifiques concernant
les instruments de mesure du radon**

**Radiation protection instrumentation –
Radon and radon decay product
measuring instruments –**

**Part 2:
Specific requirements for radon
measuring instruments**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RADIATION PROTECTION INSTRUMENTATION –
RADON AND RADON DECAY PRODUCT
MEASURING INSTRUMENTS –**

Part 2: Specific requirements for radon measuring instruments

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 61577-2 has been prepared by subcommittee 45B: Radiation protection instrumentation, of IEC technical committee 45: Nuclear instrumentation.

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

FDIS	Report of voting
45B/269/FDIS	45B/283/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 3.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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- withdrawn;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

INTRODUCTION

This International Standard is part of a series covering radon and radon decay product measuring instruments as well as systems for test atmospheres with radon (acronym STAR) ¹⁾. This series consists of the following parts:

Part 1: General requirements

Part 2: Specific requirements for radon measuring instruments

Part 3: Specific requirements for radon decay product measuring instruments ²⁾

Part 4: Instruments for rapid measurement of potential alpha energy in mines ³⁾

Part 1 covers the general characteristics of tests and calibrations of radon and radon decay product measuring instruments as well as general characteristics of radon and radon decay product measuring instruments.

¹⁾ System for Test Atmospheres with Radon, sometimes called radon chambers. See IEC 61577-1.

²⁾ To be published.

³⁾ Under consideration. Presently available under reference IEC 61263.

RADIATION PROTECTION INSTRUMENTATION – RADON AND RADON DECAY PRODUCT MEASURING INSTRUMENTS –

Part 2: Specific requirements for radon measuring instruments

1 Scope and object

The requirements of this part of IEC 61577 are applicable to instruments for measuring airborne radon volume activity. This part is applicable to instruments used to measure radon in work places, in dwellings, outdoors and in soil. The method of measurement depends on the exact objective but the requirements are for general purpose instruments to be used for radiological protection or research applications.

This standard applies to all types of radon measuring instruments that are based on grab sampling, continuous and integrated methods. The activity can be measured continuously by pumping or by diffusing the air containing radon into the detector or at a particular moment by measuring the activity of an air sample (grab sampling).

The purpose of this part of IEC 61577 is to specify the main performance characteristics of instruments intended for measurement of airborne radon volume activity, their specific method of testing and documentation requirements.

This part is to be used with IEC 61577-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61577. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61577 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60050(393):1996, *International Electrotechnical Vocabulary (IEV) – Chapter 393: Nuclear instrumentation: Physical phenomena and basic concepts*

IEC 60050(394):1995, *International Electrotechnical Vocabulary (IEV) – Chapter 394: Nuclear instrumentation: Instruments*

IEC 60068 (all parts), *Environmental testing*

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*