

**Radiation protection instrumentation -
Measurement of personal dose
equivalents $H_p(10)$ and $H_p(0,07)$ for X,
gamma, neutron and beta radiations -
Direct reading personal dose equivalent
meters and monitors**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 61526:2007 sisaldab Euroopa standardi EN 61526:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.04.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 61526:2007 consists of the English text of the European standard EN 61526:2007.</p> <p>This document is endorsed on 27.04.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This International Standard applies to personal dose equivalent meters with the following characteristics:a) They are worn on the trunk or the extremities of the body.b) They measure the personal dose equivalents $H_p(10)$ and $H_p(0,07)$ from external X and gamma, neutron and beta radiations, if the radiation can be considered to be continuous.c) They have a digital indication.d) They may have alarm functions for the personal dose equivalents or personal dose equivalent rates.</p>	<p>Scope:</p> <p>This International Standard applies to personal dose equivalent meters with the following characteristics:a) They are worn on the trunk or the extremities of the body.b) They measure the personal dose equivalents $H_p(10)$ and $H_p(0,07)$ from external X and gamma, neutron and beta radiations, if the radiation can be considered to be continuous.c) They have a digital indication.d) They may have alarm functions for the personal dose equivalents or personal dose equivalent rates.</p>
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ICS 13.280

Võtmesõnad:

**Radiation protection instrumentation -
Measurement of personal dose equivalents $H_p(10)$
and $H_p(0,07)$ for X, gamma, neutron and beta radiations -
Direct reading personal dose equivalent meters and monitors
(IEC 61526:2005, modified)**

Instrumentation pour la radioprotection -
Mesure des équivalents de dose
individuels $H_p(10)$ et $H_p(0,07)$
pour les rayonnements X, gamma,
neutron et bêta -
Appareils de mesure à lecture directe
et moniteurs de l'équivalent
de dose individuel
(CEI 61526:2005, modifiée)

Strahlenschutz-Messgeräte -
Messung der Tiefen- und
der Oberflächen-Personendosis
 $H_p(10)$ und $H_p(0,07)$
für Röntgen-, Gamma-,
Neutronen- und Betastrahlung -
Direkt ablesbare Personendosimeter
und -monitore
(IEC 61526:2005, modifiziert)

This European Standard was approved by CENELEC on 2006-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of the International Standard IEC 61526:2005, prepared by SC 45B, Radiation protection instrumentation, of IEC TC 45, Nuclear instrumentation, together with the common modifications prepared by the CENELEC BTTF 111-3, Nuclear instrumentation and radiation protection instrumentation, was submitted to the formal vote and was approved by CENELEC as EN 61526 on 2006-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2007-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-10-01

Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61526:2005 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Introduction

Modify the second paragraph in order to read:

“... 1,5 MeV is considered in the standard and for neutron radiation, from at least thermal neutrons to 15 MeV.”

In the fourth paragraph **replace** “10 MeV is” with “10 MeV should be” and **replace** “10 keV is” with “10 keV should be” .

In the fifth paragraph **delete** “for which no requirements are given”.

1 Scope and object

In sub-paragraph b) **replace** “if the radiation can be considered to be continuous” with “and may measure the personal dose equivalent rates $\dot{H}_p(10)$ and $\dot{H}_p(0,07)$ ”.

In the paragraph below sub-paragraph d), **replace** “quantities and radiation” with “dose quantities (including the respective dose rates) and radiation”.

Add at the end of the penultimate paragraph: “In addition, usage categories are given in Annex ZA with respect to different measuring capabilities.”

Replace the last sentence of the last paragraph with: “The standard does not apply to dosimeters used for measurement of pulsed radiation where the dose rate in the pulse exceeds the specification such as that emanating from linear accelerators or similar equipment.”.

2 Normative references

Add:

IEC/TR 62461:2006, *Radiation protection instrumentation – Determination of uncertainty in measurement*

3 Terms and definitions

3.30 reference point of an assembly

Replace “at a point” with “at the point of test”.

3.31 reference response

Replace the whole definition with:

reference response

R_0

response of the assembly under reference conditions to unit reference dose (rate) and is expressed as:

$$R_0 = \frac{H_{i,r,0}}{H_{t,r,0}}$$

where $H_{i,r,0}$ is a reference (conventionally true) value of the quantity to be measured for a specified reference radiation under specified reference conditions and $H_{t,r,0}$ is the respective indicated value.