

Water conditioning equipment inside buildings - Devices using mercury low-pressure ultraviolet radiators - Requirements for performance, safety and testing

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radiators - Requirements for performance, safety
and testing

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14897:2006 sisaldab Euroopa standardi EN 14897:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 31.07.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14897:2006 consists of the English text of the European standard EN 14897:2006.</p> <p>This document is endorsed on 31.07.2006 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 document specifies definitions, principles of construction, requirements and methods for testing the performance of UV devices for drinking water installations inside buildings which are permanently connected to the mains supply at the point of entry into a building or within the water distribution system inside the building.</p>	<p>Scope:</p> <p>This document specifies definitions, principles of construction, requirements and methods for testing the performance of UV devices for drinking water installations inside buildings which are permanently connected to the mains supply at the point of entry into a building or within the water distribution system inside the building.</p>
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ICS 91.140.60

Võtmesõnad:

ICS 91.140.60

English Version

**Water conditioning equipment inside buildings - Devices using
mercury low-pressure ultraviolet radiators - Requirements for
performance, safety and testing**

Équipements de conditionnement de l'eau à l'intérieur des
bâtiments - Dispositifs utilisant des radiateurs à mercure et
basse pression de rayonnement UV - Exigences relatives
aux performances, à la sécurité et aux essais

Anlagen zur Behandlung von Trinkwasser innerhalb von
Gebäuden - Geräte mit Quecksilberdampf-
Niederdruckstrahlern - Anforderungen an Ausführung,
Sicherheit und Prüfung

This European Standard was approved by CEN on 10 May 2006.

CEN 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 CEN 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 CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 14897:2006) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

With respect to potential adverse effects on the quality of water intended for human consumption/caused by the product covered by this standard, the following is pointed out to the user of the standard.

- 1) This standard provides no information as to whether the product may be used without restriction in any of the Member States.
- 2) It should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or characteristics of this product remain in force.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This document specifies definitions, principles of construction, requirements and methods for testing the performance of UV devices for drinking water installations inside buildings which are permanently connected to the mains supply at the point of entry into a building or within the water distribution system inside the building.

UV devices in the sense of this standard are UV bactericidal treatment devices or UV disinfection devices.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

3 Definitions

For the purposes of this document, the following terms and definitions apply.

3.1 absorption

decrease of the incident irradiance of a light beam including transformation into other forms suffered by radiant energy passing through a material substance (e. g. heat)

3.2 irradiance

measure of the UV light flux divided by the area that intercepts the radiation, in W/m^2

NOTE The irradiance measured in UV disinfection devices by the UV device sensor is mainly influenced by the lamp output, the transmittance of the water, and scaling/fouling of the protective quartz sleeves and the position of the lamps in the radiation chamber.

3.3 disinfection

action of killing or inactivating all types of pathogenic bacteria to a specified degree of at least 99,999 % and all types of pathogenic viruses to a degree of at least 99,99 % using a UV disinfection device

3.4 bactericidal treatment

action of inactivating or killing bacteria present in water to an unspecified degree using a UV bactericidal treatment device

3.5 fluence

dose
product of irradiance in W/m^2 and exposure time in s, in J/m^2

NOTE Fluence is the correct term from a strictly scientific point of view.

3.6 germicidal fluence

fluence weighted with the germicidal UV sensitivity, in J/m^2