

**Influence of materials on water intended for
human consumption - Influence due to
migration - Part 4: Test method for water
treatment membranes**

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Test method for water treatment membranes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12873-4:2006 sisaldab Euroopa standardi EN 12873-4:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12873-4:2006 consists of the English text of the European standard EN 12873-4:2006.</p> <p>This document is endorsed on 29.05.2006 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 European standard describes a test method for laboratory evaluation of possible adverse effects of water treatment membranes on drinking water quality. In principle it is applicable to microfiltration, ultrafiltration, nanofiltration, reverse osmosis and electrodialysis modules for use in the treatment of public water supplies and of water inside buildings.</p>	<p>Scope:</p> <p>This European standard describes a test method for laboratory evaluation of possible adverse effects of water treatment membranes on drinking water quality. In principle it is applicable to microfiltration, ultrafiltration, nanofiltration, reverse osmosis and electrodialysis modules for use in the treatment of public water supplies and of water inside buildings.</p>
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ICS 13.060.20, 67.250

Võtmesõnad:

ICS 13.060.20; 67.250

English Version

**Influence of materials on water intended for human consumption
- Influence due to migration - Part 4: Test method for water
treatment membranes**

Influence des matériaux sur l'eau destinée à la
consommation humaine - Influence due à la migration -
Partie 4 : Méthode d'essai des membranes des systèmes
de traitement d'eau

Einfluss von Materialien auf Wasser für den menschlichen
Gebrauch - Einfluss infolge der Migration - Teil 4:
Prüfverfahren für Membranen für die Wasserbehandlung

This European Standard was approved by CEN on 3 February 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.



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Foreword

This document (EN 12873-4:2006) 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 September 2006, and conflicting national standards shall be withdrawn at the latest by September 2006.

It is derived from a CEN Workshop Agreement prepared by the Project Team of the CEN Workshop CWA Water Treatment Membranes.

This standard is one of a series of standards on test methods which support the appropriate standards.

It has been drawn up with the objective to describe a test method to determine the migration of substances from water treatment membranes.

Annex A, which is informative, provides a flow diagram of the steps in the test procedure.

Annex B, which is informative, describes a test rig.

This standard is the fourth in a series of standards dealing with the influence of migration from materials on water intended for human consumption, including:

- Part 1 Test method for non-metallic and non-cementitious factory made products;
- Part 2 Test method for non-metallic and non-cementitious site-applied materials;
- Part 3 Test method for ion exchange and adsorbent resins;
- Part 4 Test method for water treatment membranes.

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.

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption caused by the materials, it is called to mind that, while awaiting the adoption of verifiable European acceptance criteria, the relevant national regulations remain in force.

1 Scope

This European standard describes a test method for laboratory evaluation of possible adverse effects of water treatment membranes on drinking water quality.

In principle it is applicable to microfiltration, ultrafiltration, nanofiltration, reverse osmosis and electrodialysis modules for use in the treatment of public water supplies and of water inside buildings.

NOTE Such devices can vary considerably in design and operation and hence some modification of the procedures may be required.

Evaluation of the efficiency of the membrane filter in removing contaminants from the treated water is not included.

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 ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*

3 Terms and definitions

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

3.1

analytical sample

portion of the extract collected for the determination of specified water quality parameters

3.2

cell pair

basic unit of ED systems consisting of a cation transfer membrane, a dilute flow (product) spacer, an anion transfer membrane and a concentrate (waste) spacer

3.3

electrodialysis

process in which ionic species in a feed water are transferred by means of an electrical driving force via a membrane, which is either cation or anion specific, to a waste water stream

3.4

feed water

inlet water for the test rig

3.5

leaching test/migration test

determination of the effects on parameters of water quality following contact with the test sample under specified conditions

3.6

leaching/migration

process of transferring constituents from a material of the test sample into test water carried out under specified conditions