

Influence of materials on water intended for human consumption - Influence due to migration - Part 1: Test method for factory-made products made from or incorporating organic or glassy (porcelain/vitreous enamel) materials

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12873-1:2014 sisaldab Euroopa standardi EN 12873-1:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 12873-1:2014 consists of the English text of the European standard EN 12873-1:2014.
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English Version

Influence of materials on water intended for human consumption
- Influence due to migration - Part 1: Test method for factory-
made products made from or incorporating organic or glassy
(porcelain/vitreous enamel) materials

Influence des matériaux en contact sur l'eau destinée à la
consommation humaine - Influence de la migration - Partie
1: Méthode d'essai des matériaux de fabrication industrielle
constitués de ou contenant des matériaux organiques ou
vitreux (émaux vitrifiés)

Einfluss von Materialien auf Trinkwasser - Einfluss infolge
der Migration - Teil 1: Prüfverfahren für fabrikmäßig
hergestellte Produkte aus oder mit organischen oder
glasartigen Materialien (Emails/Emailierungen)

This European Standard was approved by CEN on 14 May 2014.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 12873-1:2014) 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of an identical text or by endorsement, at the latest by January 2015, and conflicting national standards shall be withdrawn at the latest by January 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12873-1:2003.

The major revisions of EN 12873-1:2003 are:

- the inclusion of procedures for testing glassy (porcelain/vitreous enamel) materials. This inclusion enabled an improvement of the title of the standard;
- the test temperatures, outlined in Clause 4 'Principle', are more specific;
- the use of chromic acid is removed because of safety concerns;
- the examples of extended collection and analysis of migration waters (Annex C) are more systematic.

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

This European Standard has been drawn up with the objective to describe a test method to determine the migration of substances from products made from, or incorporating, organic and glassy (porcelain/vitreous enamel) material for use in contact with water intended for human consumption.

Annex A, which is normative, describes an alternative arrangement for flushing pipes having a nominal size greater than DN 80.

Annex B, which is informative, describes additional procedures for testing non-homogeneous products and pipes having a nominal size greater than DN 80.

Annex C, which is informative, describes a schedule for the preparation of migration waters.

Annex D, which is informative, describes procedural tests using standard additions (positive controls).

Annex E, which is informative, describes the migration test procedure in a schematic manner.

Annex F, which is informative, provides information on a Cell system for testing glassy materials.

This European Standard will result in one of a series of standards on test methods which support the appropriate standards.

This standard, Part 1, is the first in a series of standards for dealing with the influence of migration from materials on water intended for human consumption, including:

- Part 1: Test method for factory-made products made from or incorporating organic and glassy (porcelain/vitreous enamel) materials;
- Part 2: Test method for non-metallic and non-cementitious site-applied products;
- Part 3: Test method for ion exchange and absorbent resins;
- Part 4: Test method for membrane water treatment systems.

1 Scope

This European Standard specifies a procedure to determine the migration of substances from factory-made or factory-applied products for use in contact with water intended for human consumption. Materials used to make such products include plastics, rubber and glassy (porcelain/vitreous enamel) materials.

This European Standard is applicable to products intended to be used under various conditions for the transport and storage of water intended for human consumption, including raw water used for the production of water intended for human consumption. It covers the extraction by water of substances from the finished products.

2 Normative references

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

EN 15826, *Vitreous and porcelain enamels - Terminology*

EN ISO 7393-2, *Water quality - Determination of free chlorine and total chlorine - Part 2: Colorimetric method using N, N-diethyl-1, 4-phenylenediamine, for routine control purposes (ISO 7393-2)*

EN ISO 28764, *Vitreous and porcelain enamels - Production of specimens for testing enamels on sheet steel, sheet aluminium and cast iron (ISO 28764)*

3 Terms and definitions

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

3.1

test

technical operation that consists of the determination of one or more characteristics of a given product

3.2

test procedure

specified technical method for performing a test

3.3

test report

document that presents test results and other information relevant to a test

3.4

test laboratory

laboratory that performs tests

3.5

product

manufactured item, in its finished form, that comes into contact with water intended for human consumption, or a component part of a manufactured item

3.6

homogeneous product

a product where the water contact surface is made from the same material as the remainder of the product