
Gospodinjske naprave, ki se uporabljajo za čiščenje pitne vode in niso priključene na vodovodno omrežje - Sistemi za filtriranje vode v vrčih - Varnostne zahteve za delovanje, označevanje in podatki, ki morajo biti navedene

Domestic appliances used for drinking water treatment not connected to water supply - Jug water filter systems - Safety and performance requirements, labeling and information to be supplied

Leitungsungebundene Haushaltsgeräte zur Behandlung von Trinkwasser - Haushaltswasserfiltersysteme - Sicherheits- und Leistungsanforderungen, Kennzeichnung und mitzuliefernde Informationen

Appareils domestiques de traitement de l'eau non connectés au réseau d'alimentation en eau - Systèmes de carafes filtrantes d'eau - Exigences de sécurité et de performance, étiquetage et informations à fournir

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**Domestic appliances used for drinking water treatment
not connected to water supply - Jug water filter systems -
Safety and performance requirements, labeling and
information to be supplied**

Appareils domestiques de traitement de l'eau non
connectés au réseau d'alimentation en eau - Systèmes
de carafes filtrantes d'eau - Exigences de sécurité et de
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Behandlung von Trinkwasser -
Haushaltswasserfiltersysteme - Sicherheits- und
Leistungsanforderungen, Kennzeichnung und
mitzuliefernde Informationen

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COMITÉ EUROPÉEN DE NORMALISATION
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prEN 17093:2026 (E)**European foreword**

This document (prEN 17093:2026) has been prepared by Technical Committee CEN/TC 426 “Domestic appliances used for water treatment not connected to water supply”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 17093:2018.

This document includes the following significant technical changes with respect to EN 17093:2018:

- addition of reduction of PFAS as chemical requirement;
- addition of free chlorine reduction as chemical requirement.

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Introduction

Jug water filter systems are used for the conditioning of drinking water with the objective of optimizing drinking water for specific applications.

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1 Scope

This document describes the specifications and test methods for gravity fed devices for conditioning of drinking water that are not connected to the mains water distribution system in buildings, known as jug water filter systems. It also gives instructions for the user manuals, so that the jug water filter system can be used and maintained properly. Jug water filter systems are intended to modify the properties of drinking water only and are not designed to make non-potable water safe for drinking. The scope of this document does not extend to combination systems that require an electrical power supply such as water heaters and water coolers systems.

NOTE Although jug water filter systems are covered by the widely harmonized food legislation (EU Regulations 178/2002 and 1935/2004), existing national regulations concerning the use and or the characteristics of these products remain in force.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12673, *Water quality - Gas chromatographic determination of some selected chlorophenols in water*

EN 12903, *Products used for the treatment of water intended for human consumption - Powdered activated carbon*

EN 12904, *Products used for treatment of water intended for human consumption - Silica sand and silica gravel*

EN 12905, *Products used for treatment of water intended for human consumption - Expanded aluminosilicate*

EN 12906, *Products used for treatment of water intended for human consumption - Pumice*

EN 12907, *Products used for treatment of water intended for human consumption - Pyrolyzed coal material*

EN 12909, *Products used for treatment of water intended for human consumption - Anthracite*

EN 12910, *Products used for treatment of water intended for human consumption - Garnet*

EN 12911, *Products used for treatment of water intended for human consumption - Manganese greensand*

EN 12912, *Products used for treatment of water intended for human consumption - Barite*

EN 12913, *Products used for treatment of water intended for human consumption - Powdered diatomaceous earth*

EN 12914, *Products used for treatment of water intended for human consumption - Powdered perlite*

EN 12915-1, *Products used for the treatment of water intended for human consumption - Granular activated carbon - Part 1: Virgin granular activated carbon*

EN 13752, *Products used for treatment of water intended for human consumption - Manganese dioxide*

EN 13753, *Products used for treatment of water intended for human consumption - Granular activated alumina*

EN 13754, *Products used for treatment of water intended for human consumption - Bentonite*

EN 14368, *Products used for treatment of water intended for human consumption - Manganese dioxide coated limestone*

EN 14369, *Products used for treatment of water intended for human consumption - Iron-coated granular activated alumina*

EN 17892, *Water quality - Determination of selected per- and polyfluoroalkyl substances in drinking water - Method using liquid chromatography/tandem-mass spectrometry (LC-MS/MS)*

EN 26777, *Water quality - Determination of nitrite - Molecular absorption spectrometric method (ISO 6777)*

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

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

EN ISO 9308-1, *Water quality - Enumeration of Escherichia coli and coliform bacteria - Part 1: Membrane filtration method for waters with low bacterial background flora (ISO 9308-1)*

EN ISO 9963-1, *Water quality - Determination of alkalinity - Part 1: Determination of total and composite alkalinity (ISO 9963-1)*

EN ISO 10301, *Water quality - Determination of highly volatile halogenated hydrocarbons - Gas-chromatographic methods (ISO 10301)*

EN ISO 10304-1, *Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate (ISO 10304-1)*

EN ISO 10523, *Water quality - Determination of pH (ISO 10523)*

EN ISO 13395, *Water quality - Determination of nitrite nitrogen and nitrate nitrogen and the sum of both by flow analysis (CFA and FIA) and spectrometric detection (ISO 13395)*

EN ISO 11885, *Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885)*

EN ISO 17294-2, *Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of selected elements including uranium isotopes (ISO 17294-2)*

ISO 6059, *Water quality — Determination of the sum of calcium and magnesium — EDTA titrimetric method*

ISO 7890-3, *Water quality — Determination of nitrate — Part 3: Spectrometric method using sulfosalicylic acid*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

active medium

active material that significantly changes the composition of the water by physical or chemical processes

3.2

cartridge

replaceable or rechargeable component, which contains the active medium through which the water passes in order to be treated

3.3

cartridge replacement indicator

device indicating the need to replace a cartridge

3.4

challenge water

water spiked with chemicals or inoculated with bacteria, used for carrying out the tests

3.5

filtrate

water that has passed through the filter active medium

3.6

flow rate

time taken for one litre of water to pass through the cartridge

3.7

hopper

separate, removable or non-removable chamber that contains the water before it passes through the active medium

3.8

jug

receptacle that collects the filtrate

3.9

jug water filter system

freestanding water filter device, not connected to a water supply system

3.10

maximum usage time

time in weeks specified by the manufacturer up to which hygienic conditions of the filter are maintained subject to correct operation in accordance with manufacturer's instructions

3.11**nominal capacity
(NC)**

volume in litres of treated water stated by the manufacturer, up to which cartridge performances are guaranteed

4 Design requirements**4.1 Jug water filter system components**

The jug water filter system can comprise some or all of the following components:

- a) jug;
- b) hopper;
- c) cartridge;
- d) cartridge replacement indicator;
- e) lid.

NOTE The components of a jug water filter system can vary and might include parts other than those listed. However, this list is representative of most jug water filter systems currently available.

4.2 Jug water filter system constituent materials

All materials used in the jug water filter system coming into contact with inlet water and filtrate shall meet the regulations for materials in contact with food [11] [12].

The active media shall comply with the requirements relating to the water extractable chemical parameters in EN 12903, EN 12904, EN 12905, EN 12906, EN 12907, EN 12909, EN 12910, EN 12911, EN 12912, EN 12913, EN 12914, EN 12915-1, EN 13752, EN 13753, EN 13754, EN 14368, and EN 14369 as appropriate.

For the use of an ion exchange resin, ResAP (2004) 3 [14] shall be considered.

5 Chemical and microbiological safety requirements**5.1 Filtered water quality**

For compliance with this European Standard, instructions on the filtered water quality can be found in the European drinking water Directive 2020/2184/EU, Annex 1, Part A and B and any subsequent amendments [1] or appropriate food legislation.

5.2 Packaging

Filter cartridges shall be adequately protected from mechanical damage during shipment and storage. They shall also be individually, hygienically packed to prevent contamination during shipment and storage.

5.3 Release of silver

There is no European regulated limit governing the amount of silver in drinking water. Taking into consideration the information provided in the WHO Guidelines [15], if the cartridge is treated with silver, the average silver concentration when tested in accordance with 7.2.5.3 shall not exceed 80 µg/l.

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When testing for silver leachate in a new cartridge, an initial volume of water specified shall be discarded before commencement of use and before testing is carried out.

5.4 Microbiological contamination**5.4.1 Condition on the new cartridge**

The new cartridge as delivered to the consumer shall not contain numbers or concentrations of micro-organisms constituting a potential danger to the health of the user.

When tested in accordance with 7.3.2 sterile filtered challenge water after filtration by a new jug water filter system, shall comply with the microbiological requirements. More instructions can be found in the Drinking Water Directive 2020/2184/EC, Annex 1, Part A [1], as applicable to tap water.

5.4.2 Potential for colonisation of the jug water filter system

During normal use, the jug water filter system shall not promote microbiological growth, therefore, a microbiological challenge test according to 7.3.3 shall be carried out.

When tested in accordance with 7.3.3, the sum of the Colony Forming Units (CFU) counts of E.coli for day 2 to day 4 shall not exceed twice the CFU counts of the challenge water, for each of the two challenge weeks.

6 Performance requirements**6.1 General**

6.1.1 Compliance with this standard may only be claimed if the jug water filter system has been tested as a complete unit.

The jug water filter system shall only be assessed against the performance claims relevant to the parameters present in the standard.

At least one parameter shall be identified in those performance claims based on the nominal capacity in litres.

If more than one performance parameter is declared for the jug water filter system, the performance parameter with the lowest capacity (in litres) defines the maximum capacity declared.

All claims made to this standard shall be clearly separated from other claims or information.

6.1.2 Any additional substance reduction claims (see Annex H) not specifically mentioned in this standard but tested according to the procedures specified in Clause 7 shall have a reduction rate of at least 90 %.

6.1.3 If a filter cartridge, which has been confirmed to comply with this standard in a specific jug water filter system, is to be used in an alternative system (hopper and jug), compliance of the alternative system can be assumed if:

- a) the cartridge has been tested in the jug water filter system with the highest water level above the cartridge (the reference system), and
- b) a seal verification confirms that the cartridge fits into the alternative jug water filter system(s) with the same seal tightness as in the reference system (see Annex J);
- c) the contact time for the cartridge is not less than 90 % of that for the originally tested system.