

NSF/ANSI 53 – 2005

Drinking water treatment units — Health effects

**NSF International Standard/
American National Standard**

NSF/ANSI 53 – 2005



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American National Standard
for Drinking Water Treatment Units —

**Drinking water treatment units –
Health effects**

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Foreword²

The purpose of this Standard is to establish minimum requirements for materials, design and construction, and performance of drinking water treatment systems that are designed to reduce specific health-related contaminants in public or private water supplies. NSF/ANSI 53 specifies minimum product literature requirements that manufacturers must provide to authorized representatives and owners.

Water contact materials in Drinking Water Treatment Units listed under NSF/ANSI 42, 44, 53, 55, 58, and 62 are tested and evaluated under a separate protocol from NSF/ANSI 61 with criteria that were developed specifically for the intended end-use. NSF/ANSI 61 listing should not be additionally required for acceptance of these listed units for water contact application.

This edition of the Standard contains the following revisions:

- Section 6.1 has been revised to clarify how the test method is carried out for Performance indication Devices (PID) to determine when the PID activates. The revision requires the transition from no warning to warning of the PID be completed within the allowed range of the Standard.
- Language has been added in sections 1.3, 3, and 8 to provide revised requirements for conformance of commercial modular systems where multiple replacement cartridges may be interchangeably installed in to a manifold based upon the needs of the specific installation.

This Standard was developed by the NSF Joint Committee on Drinking Water Treatment Units using the consensus process described by the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Drinking Water Treatment Units, c/o NSF International, Standards Department, PO Box 130140, Ann Arbor, Michigan 48113-0140, USA.

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NSF/ANSI Standard for Drinking Water Treatment Units —

Drinking water treatment units — Health effects

1 General

1.1 Purpose

It is the purpose of this Standard to establish minimum requirements for materials, design and construction, and performance of point-of-use and point-of-entry drinking water treatment systems that are designed to reduce specific health-related contaminants in public or private water supplies. This includes point-of-entry drinking water treatment systems used to treat all or part of the water at the inlet to a residential facility or a bottled water production facility and the material and components used in these systems. This Standard also specifies the minimum product literature and labeling information that a manufacturer shall supply to authorized representatives and system owners as well as the minimum service-related obligations that the manufacturer shall extend to system owners.

1.2 Scope

The point-of-use and point-of-entry systems addressed by this Standard are designed to be used for the reduction of specific substances that may be present in drinking water (public or private). These substances are considered established or potential health hazards. They may be microbiological, chemical, or particulate (including filterable cysts) in nature. It is recognized that a system may be effective in controlling one or more of these contaminants, but it is not required to control all. Activated carbon filter systems covered by this Standard are not intended to be used with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

1.3 Minimum requirements

This Standard establishes minimum requirements.

A system as defined in this standard shall meet the applicable requirements of 4, 5, 6, and 8, plus at least one performance claim as described in 7.

A component as defined in this standard shall meet the requirements of 4 and 8. If the component is pressure-bearing, it shall also meet the applicable requirements of 5.

A commercial modular system as defined in this standard shall collectively meet the applicable requirements of 4, 5, 6, and 8, plus at least one performance claim as described in 7. Manifolds of commercial modular systems shall meet the requirements 4, 5 (if pressure bearing), and 8, and shall be evaluated as a stand-alone component. Manifolds shall have a minimum internal diameter such that the water velocity in the manifold will not exceed 3 m (10 ft) per second (which can be calculated based upon the system flow rate and the manifold internal diameter). Individual modular elements evaluated as a manifold and modular element combination shall meet the applicable requirements of 4, 5, 6, and 8, plus at least one performance claim as described in 7.