NSF International Standard /
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NSF/ANSI 53 - 2014

Drinking Water Treatment Units - Health Effects



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NSF International Standard/
American National Standard
for Drinking Water Treatment Units —

Drinking water treatment units – Health effects

Standard Developer
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Contents

Foreword[2]

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.

This edition of the Standard contains the following revisions:

Issue 51
This revision added a test protocol for evaluating the removal of perchlorate for devices that fall under the scope in NSF/ANSI 53.

Issue 92
This revision removed the definitions from this Standard and added language under section 2 to address undated normative references.

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. This Standard is maintained on a Continuous Maintenance schedule and can be opened for comment at any time. Comments should be sent to Chair, Joint Committee on Drinking Water Treatment Units at standards@nsf.org, or c/o NSF International, Standards Department, P.O. 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. Such systems include 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 includes 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 systems are 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 Alternate materials, designs, and construction

While specific materials, designs, and construction may be stipulated in this Standard, systems that incorporate alternate materials, designs, and construction may be acceptable when it is verified that such systems meet the applicable requirements stated herein.

1.4 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 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 of 4, 5 (if pressure bearing), and 8, and shall be evaluated as stand-alone components. 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