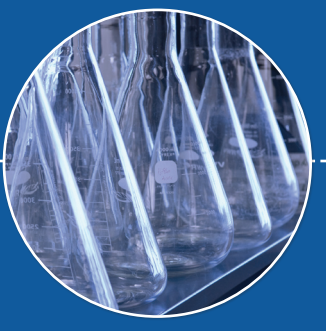
NSF International Standard /
American National Standard

NSF/ANSI 42 - 2021

Drinking Water Treatment Units - Aesthetic Effects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NSF International Standard /
American National Standard
for Drinking Water Treatment Units –

Drinking Water Treatment Units – Aesthetic Effects

Standard Developer
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Contents

Foreword[2]

The purpose of this standard is to establish minimum requirements for materials, design, construction, and performance of drinking water treatment units that are designed to reduce specific aesthetic-related contaminants in public or private water supplies. This standard specifies the minimum product literature and labeling information that a manufacturer must supply to authorized representatives and system owners. Lastly, this standard provides minimum service-related obligations that the manufacturer must extend to system owners.

This edition of the standard contains the following revisions:

Issue 110

This revision clarifies the requirements for drinking fountains under the general performance requirements in Section 6. The ballot also revises the minimum air gap requirement for drinking fountain outlets from 2 inches to 1 inch to be aligned with other industry standards and codes.

Issue 111

This revision specifies that tannic acid be used per Annex N-6 to achieve a consistent level of TOC in the starting test water when it can't be achieved from the natural water.

Issue 112

This revision adds a minimum TOC requirement (> 1.0 mg/L) to the chloramine test water in Section 7.3.2.6. An upper limit is also specified if chlorinated tannic acid is used to increase the level of TOC in the source water to meet the minimum specification for the test water. Normative Annex 6 was created to outline the preparation of TOC solution using tannic acid.

Issue 113

This revision adds Section 8.2.2.3.1, which allows for separate rated capacity / rated service life for chlorine and monochloramine claims for commercial modular systems.

Issue 114

This revision clarifies the chlorine reduction claim requirements in Section 7.3.

Issue 115

This revision adds clarifying language for chloramine sampling under Section 7.3.2.8 to require representative sample points throughout the test and the final sample point to have 4 hours of operational time before collecting the sample.

Issue 116

This revision changes the chloramine reduction test in from a maximum effluent concentration (0.5 mg/L) to a percent reduction (≥ 80%) (Section 7.3.2.1 and Tables 7.2, 8.1, and 8.2).

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Issue 118

This revision updates the minimum 2-L sample requirement to a recommendation in Section 4.2.3.

Issue 119

This revision updates the fine media extraction test method in Section 4.2.3.1.1.

The Interpretations Annex contains responses to interpretation requests. The responses will be published in each version of the standard until such time that the interpretation response is no longer applicable.

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.

This standard and the accompanying text are intended for voluntary use by certifying organizations, regulatory agencies, and/or manufacturers as a basis of providing assurances that adequate health protection exists for covered products.

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, PO Box 130140, Ann Arbor, Michigan 48113-0140, USA.

NSF/ANSI Standard
for Drinking Water Treatment Units –

Drinking Water Treatment Units – Aesthetic 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 drinking water treatment systems that are designed to reduce specific aesthetic related (nonhealth effects) contaminants in public or private water supplies. 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 (POU) and point-of-entry (POE) 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) considered to be microbiologically safe and of known quality. Systems covered under this standard are intended to address one or more of the following: reduce substances affecting the aesthetic quality of the water, add chemicals for scale control, or limit microbial growth in the system (bacteriostatic). Substances may be soluble or particulate in nature. It is recognized that a system may be effective in controlling one or more of these substances but is not required to control all. Systems with manufacturer claims that include components or functions covered under other NSF or NSF/ANSI Standards or Criteria shall conform to the applicable requirements therein. Filter systems covered by this standard are not intended to be used with drinking water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

> NOTE — Systems that are compliant with NSF/ANSI 55 Class A or other standards that cover technologies to treat microbiologically unsafe water (e.g., US EPA *Guide Standard and Protocol for Testing Microbiological Water Purifiers* or NSF P231) are examples of demonstrating 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 Chemical and mechanical reduction performance claims

1.4.1 All NSF/ANSI 42 performance claims shall be verified and substantiated by test data generated under the requirements of NSF/ANSI 42.

1.4.2 When performance claims are made for substances not specifically addressed in the scope of this standard or for substances not specifically addressed but falling under the scope of NSF/ANSI 42, such claims shall be identified as not specifically addressed in the standard.