



*NSF International Standard /
American National Standard*

NSF/ANSI 42 - 2020

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**

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Contents

1	General	1
1.1	Purpose.....	1
1.2	Scope.....	1
1.3	Alternate materials, designs, and construction.....	1
1.4	Chemical and mechanical reduction performance claims	1
1.5	Minimum requirements	2
1.6	Treatment train.....	2
2	Normative references	2
3	Definitions	3
4	Materials	3
4.1	Materials in contact with drinking water	3
4.2	Materials evaluation.....	4
4.3	Gas chromatography / mass spectroscopy (GC/MS) analysis.....	6
4.4	Materials in contact with the user's mouth.....	8
5	Structural performance	12
5.1	Structural integrity.....	12
5.2	Acceptance	12
5.3	Working pressure.....	13
5.4	Structural integrity test methods	13
6	Minimum performance requirements.....	19
6.1	Elements	19
6.2	Waste connections.....	19
6.3	Product water dispensing outlets.....	19
6.4	Hazards.....	19
6.5	Operation temperature.....	19
6.6	Rated service flow.....	19
6.7	POE rated pressure drop.....	20
6.8	Minimum service flow	20
6.9	Active agents and additives	20
7	Elective performance claims – Test methods.....	21
7.1	General requirements	21
7.2	Bacteriological performance	23
7.3	Chemical reduction testing	25
7.4	Mechanical reduction testing	48
7.5	Scale control testing	51
8	Instruction and information	53
8.1	Installation, operation, and maintenance instruction	53
8.2	Data plate.....	54
8.3	Replacement components.....	56
8.4	Performance data sheet	57
	Normative Annex 1 Procedure for the analysis of monochloramine by high performance liquid chromatography (HPLC).....	60
N-1.1	Summary of method	61
N-1.2	Equipment and materials.....	61
N-1.3	Reagents and consumable materials	61
N-1.4	Safety.....	63
N-1.5	Procedure	64

N-1.6	Data analysis	64
N-1.7	Quality control.....	64
N-1.8	References	66
Normative Annex 2	Test method for evaluating mouth drawn water treatment units.....	67
N-2.1	Scope and purpose	67
N-2.2	Method.....	67
N-2.3	Sampling.....	67
Normative Annex 3	Test method for evaluating squeeze bottle drinking water treatment units.....	71
N-3.1	Scope and purpose	71
N-3.2	Method – Mechanical gripper apparatus	71
N-3.3	Alternate method – Pressurized bottle	72
N-3.4	Sampling.....	72
Normative Annex 4	Methods and procedures to minimize premature filter plugging	75
N-4.1	Mechanical filtration component of tested system.....	75
N-4.2	Mechanical filtration of waters	75
N-4.3	Disinfection and cleaning of test apparatus.....	75
N-4.4	Antimicrobial treatment.....	76
N-4.5	Methanol used as carrier solvent	76
N-4.6	Operational cycle.....	76
Normative Annex 5	Evaluation methods for systems with multiple technologies – Treatment train	77
N-5.1	Requirements for the evaluation of a system containing multiple, sequential treatment technologies.....	77
N-5.2	Example application of treatment train option B.....	78
N-5.3	Example application of treatment train option C.....	79
Informative Annex 1	Key elements of a certification program for drinking water treatment systems and components	81
I-1.1	Marking the product.....	81
I-1.2	Listing certified companies	81
I-1.3	Annual audits	81
I-1.4	Testing.....	81
I-1.5	Toxicological evaluation of materials formulations	82
I-1.6	Corrective action.....	82
I-1.7	Enforcement	82
I-1.8	Administrative review.....	82
I-1.9	Appeals.....	82
I-1.10	Complaints.....	82
I-1.11	Advertising.....	83
I-1.12	Records	83
I-1.13	Public notice	83
I-1.14	Confidentiality	83
Informative Annex 2	85
Interpretation Annex	87

Foreword²

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, the Standard provides minimum service-related obligations that the manufacturer must extend to system owners.

This edition of the Standard contains the following revisions:

Issue 102

This revision clarifies the method for powdered activated carbon and polymer binders in Section 4.2.3.1.1.

Issue 104

This revision clarifies the test pressure for non-pressurized water treatment devices in Section 4.3.2.1.

Issue 105

Guidance on extraction testing for hot and cold water dispensers was added under Section 4.2.3.4.

Issue 106

An exemption was added for cyclic pressure testing for components downstream of the system on/off valve that are not subject to pressure under the off mode, and that either contain no media subject to pugging or are not designed to contain media in Sections 5.4.2, and 5.4.4.

Issue 107

This revision added clarification on how systems shall be tested with and without adsorptive or absorptive for replacement elements in Section 4.2.3.5 and 4.2.3.6.

Issue 108

This revision corrects the improper use of requirements (i.e., "shall") in notes and information annexes, update normative reference and minor typos in Sections 2, 4.1.3.1, 5.2, 7, 8, and I-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.

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.

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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.