NSF International Standard /
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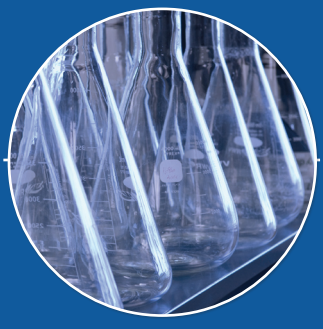
NSF/ANSI 42 - 2009

Drinking Water Treatment Units - Aesthetic Effects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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

2 Normative references 2

3 Definitions 3

4 Materials 6
4.1 Materials in contact with drinking water 6
4.2 Materials evaluation 7
4.3 Gas chromatography/mass spectroscopy (GC/MS) analysis 8
Table 1 – Extraction testing parameters 9
Table 2 – Formulation dependent extraction testing parameters 11
Table 3 – Materials listed in U. S. Code of Federal Regulations,
Table 4 – Non-specific extraction testing parameters 14

5 Structural performance 15
5.1 Structural integrity 15
5.2 Acceptance 15
5.3 Working pressure 15
5.4 Structural integrity test methods 15
Table 5 – Structural integrity testing requirements 19

6 Minimum performance requirements 20
6.1 Elements 20
6.2 Waste connections 20
6.3 Product water dispensing outlets 20
6.4 Hazards 21
6.5 Operation temperature 21
6.6 Electrical safety and operation 21
6.7 Rated service flow 21
6.8 POE rated pressure drop 21
6.9 Minimum service flow 21
Table 6 – Minimum service flow 22
6.10 Active agents and additives 22
6.11 Media 23

7 Elective performance claims – test methods 24
7.1 General requirements 24
7.2 Bacteriological performance 26
7.3 Chemical reduction testing 27
Table 7 – Chemical reduction requirements 28
Table 8 – Chloramine reduction requirements 30
Table 9 – Chlorine reduction 34
Table 10 – Hydrogen sulfide and phenol reduction requirements 36
Table 11 – Iron and manganese reduction requirements 38
Table 12 – pH adjustment requirements 40
Table 13 – Zinc reduction requirements 42
7.4 Mechanical reduction testing 44
Table 14 – Nominal particulate reduction (85%) classes 44

Table 15 – Test dust specifications for nominal particulate reduction (85%) 45
7.5 Scale control testing 46
Table 16 – Additives intended for scale control 47

8 Instruction and information 48
8.1 Installation, operation, and maintenance instruction 48
8.2 Data plate 49
8.3 Replacement components 50
8.4 Performance data sheet 51
Table 17 – Performance data sheet reduction claims 53
Table 18 – Performance data sheet reduction claims 53

Annex A A1
A.1 Marking the product A1
A.2 Listing certified companies A1
A.3 Annual audits A1
A.4 Testing A2
A.5 Toxicological evaluation of materials formulations A2
A.6 Corrective action A2
A.7 Enforcement A2
A.8 Administrative review A2
A.9 Appeals A2
A.10 Complaints A3
A.11 Advertising A3
A.12 Records A3
A.13 Public notice A3
A.14 Confidentiality A3

Annex B B1
B.1 Summary of method B1
B.2 Equipment and materials B1
B.3 Reagents and consumable materials B1
B.4 Safety B3
B.5 Procedure B4
B.6 Data analysis B4
B.7 Quality control B4
B.8 References B6

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, 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 64

The revision made in this issue revised the criteria for laboratory evaluation of filter media.

Issue 65

The revision in this issue revised the procedure for extraction testing with and without media.

Issue 66

The revision in this issue revised the procedure for collection of effluent samples when conducting mechanical reduction tests.

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, 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 – 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 (non-health 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 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) considered to be microbiologically safe and of known quality. Systems covered under this Standard are intended to reduce substances affecting the aesthetic quality of the water or to add chemicals for scale control, or both. Substances may be soluble or particulate in nature at concentrations influencing public acceptance of the drinking water. 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 components or functions covered under other NSF or NSF/ANSI standards or criteria shall conform to the applicable requirements therein.

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.

1.5 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, and 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, and 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 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, and at least one performance claim as described in 7.

2 Normative references

The following documents contain requirements that, by reference in this text, constitute requirements of this Standard. At the time of publication, the indicated editions were valid. All of the documents are subject to revision and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below.

ANSI/NFPA 70, 1999. *National Electrical Code*[3]

APHA, *Standard Methods for the Examination of Water and Wastewater*, twentieth edition[4]

NSF/ANSI 53 – 2006. *Drinking water treatment units – Health effects*

NSF/ANSI 60 – 2005. *Drinking water treatment chemicals – Health effects*

NSF/ANSI 61 – 2005. *Drinking water system components – Health effects*

ISO 12103-1:1997. *Road Vehicles – Test dust for filter evaluation – Part 1: Arizona test dust*[5]

USEPA-600/4-79-020. *Methods for the Chemical Analysis of Water and Wastes*, March 1983[6]

USEPA-600/4-84/053. *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, June 1984[6]

USEPA-600/R-94/111. *Methods for the Determination of Metals in Environmental Samples*, Supplement 1, May 1994[6]

[3] National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269 www.nfpa.org

[4] American Public Health Association (APHA), 800 I Street, NW, Washington, DC 20001 www.ahpa.org

[5] International Organization for Standardization (ISO), Case postale 56, CH-1211 Geneve 20, Switzerland www.iso.org

[6] USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, OH 45268 www.epa.gov