NSF International Standard /
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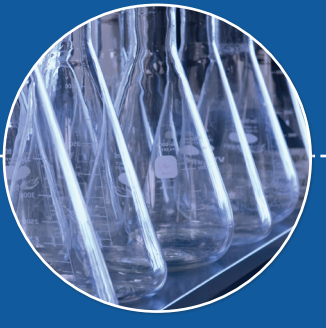
NSF/ANSI 44 - 2022

Residential Cation Exchange Water Softeners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NSF International Standard /
American National Standard
for Drinking Water Treatment Units –

Residential Cation Exchange Water Softeners

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Abbreviations

The following tables are provided as a reference for unit abbreviations for common forms of measurement used within NSF documents.

time	second	s
	minute	min
	hour	h
	day	d
	week	wk
	month	mo
	year	yr
length	inch	in
	foot	ft
	yard	yd
	micrometer	µm
	nanometer	nm
	millimeter	mm
	centimeter	cm
	meter	m
	kilometer	km
liquid measure	milliliter	mL
	liter	L
	liters per day	LPD
	liters per minute	LPM
	ounce	oz
	pint	pt
	quart	qt
	gallon	gal
	gallons per minute	GPM
	gallons per day	GPD
weight	microgram	µg
	picogram	pg
	nanogram	ng
	milligram	mg
	centigram	cg
	gram	g
	kilogram	kg
	pound	lb
	ton	t
	metric ton	mt

miscellaneous	atomic mass unit	amu
	daltons	Da
	grain per gallon	gpg
	kilopascals	kPa
	mass-to-charge ratio	m/z
	molecular weight	MW
	nephelometric turbidity unit	NTU
	pounds per square inch guage	psig

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, 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 47

This revision adds language to Sections 8.1 and 8.3 to allow installation, operation, and maintenance instruction manuals, as well as performance data sheets, to be provided online.

Issue 50

This revision adds NSF/ANSI/CAN 372 as a normative reference in Section 2, and updates requirements for lead content in Section 4.1.2.

Issue 52

This revision updates normative references in Section 2 and the NIST Mass Spectral Library version in Section 4.3.1.2, corrects “shall” to “should” in various informative notes, and makes minor grammatical updates.

Issue 53

This revision removes EPA-600/4-82-057 as a normative reference in Section 2.

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, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, U.S.A.

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NSF/ANSI Standard
for Drinking Water Treatment Units –

Residential Cation Exchange Water Softeners

1 General

1.1 Purpose

The purpose of this standard is to establish minimum requirements for materials, design and construction, and performance of residential cation exchange water softeners. This standard also specifies the minimum product literature that manufacturers shall supply to authorized representatives and owners, as well as the minimum service-related obligations that manufacturers shall extend to owners.

1.2 Scope

The manual, auto-initiated, and demand-initiated regeneration (DIR) residential cation exchange water softeners addressed by this standard are designed 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 hardness affecting the aesthetic quality of water. The established health hazards, barium and radium, are optional performance claims addressed by this standard. 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. 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., U.S. 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, design, and construction

While specific materials, design, 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.

1.4 Treatment train

A system that contains multiple, sequential treatment technologies for a performance claim under this standard shall meet the applicable requirements as described in Annex N-1.