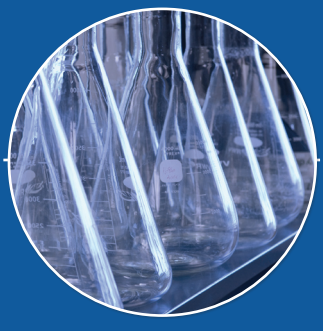
NSF International Standard /
American National Standard

NSF/ANSI 58 - 2022

Reverse Osmosis Drinking Water Treatment Systems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NSF International Standard /
American National Standard
for Drinking Water Treatment Units –

Reverse Osmosis Drinking Water Treatment Systems

Standard Developer
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Unless otherwise referenced, the annexes are not considered an integral part of NSF standards. The annexes are provided as general guidelines to the manufacturer, regulatory agency, user, or certifying organization.

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Abbreviations

The following table is 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
	kilopascal	kPa

miscellaneous	m/z	mass-to-charge ratio
	nephelometric turbidity unit	NTU
	pCi	picocurie
	pounds per square inch	psi
	pounds per square inch gauge	psig
	microsecond	µs

Contents

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Foreword[2]

The purpose of this standard is to establish minimum requirements for materials, design and construction, and performance of point-of-use (POU) reverse osmosis drinking water treatment systems. NSF/ANSI 58 also specifies minimum product literature requirements that manufacturers must provide to authorized representatives and owners. Minimum service-related obligations for manufacturers to extend to system owners are also specified in this standard.

Water contact materials in drinking water treatment units listed under NSF/ANSI 42, 44, 53, 55, 58, and 62 are tested and evaluated under a separate protocol from NSF/ANSI/CAN 61 with criteria that were developed specifically for the intended end-use. NSF/ANSI/CAN 61 listing should not be additionally required for acceptance of these listed units for water contact application.

This edition of the standard contains the following revisions:

Issue 90

This revision adds more PFAS compounds to the chemical reduction claims in Sections 7 and 8.

Issue 97

This revision adds U.S. EPA Method 521 to the U.S. EPA Method(s) column of Table 4.2 NSF/ANSI 53 and NSF/ANSI 58.

Issue 100

This revision updates normative references throughout the standard.

Issue 101

This revision adds NSF/ANSI 401 to reduction capacity statements in Section 7.1.1.

Issue 102

This revision adds NSF/ANSI/CAN 372 as a normative reference in Section 2, and its requirements for lead content as Section 4.1.1.5.

Issue 103

This revision updates a normative reference in Section 2 and removes the word “note” from normative language throughout the standard.

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:

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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.

NSF/ANSI Standard
for Drinking Water Treatment Units –

Reverse Osmosis Drinking Water Treatment Systems

1 General

1.1 Purpose

The purpose of this standard is to establish minimum requirements for materials, design and construction, and performance of reverse osmosis (RO) drinking water treatment systems. 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 system owners.

1.2 Scope

The point-of-use (POU) RO drinking water treatment 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 by this standard are intended for reduction of total dissolved solids (TDS) and other contaminants specified herein. They may be 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, however, TDS testing is required. 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 Chemical and mechanical reduction performance claims

1.3.1 All NSF/ANSI 58 performance claims shall be verified and substantiated by test data generated under the requirements of NSF/ANSI 58.

1.3.2 When performance claims are made for substances not specifically addressed in the scope of this standard or for those substances not specifically addressed but falling under the scope of NSF/ANSI 58, claims not specifically addressed in the standard shall be so identified.

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-2.