

# Drinking Water Treatment Units

## Applicable NSF Standards

### Trust the Global Leader in Independent Certification and Testing

Businesses, regulators and consumers look to NSF for the development of public health standards and services that help protect the world's food, water, consumer products and environment.

In addition, NSF since its founding in 1944, has been recognized as the leading authority in the development of national standards based on consensus among experts from the regulatory, manufacturing, academic, scientific research and consumer communities.

### NSF Drinking Water Treatment Units (DWTU) Certification Program

The NSF DWTU Certification Program for Point-of-Use (POU) and Point-of-Entry (POE) systems and components was established in the early 1970s, beginning with the adoption of the first NSF DWTU Standard in 1973.

Today, a total of 11 NSF DWTU standards and protocols have been adopted, to which hundreds of companies have certified thousands of POU and POE systems and components.



Recognized by both local and international regulatory agencies, the NSF certification mark indicates your product complies with all stated standard or protocol requirements.

Each NSF standard is technology-specific. Once you have identified the proper standard, that one standard includes all the test methods and criteria for all requirements of your product necessary to achieve NSF certification.

## NSF/ANSI 42: *Drinking Water Treatment Units – Aesthetic Effects*

This standard establishes minimum requirements for systems designed to reduce non-health-related contaminants.

### Scope

POU and POE systems

### Claims

Chlorine, taste and odor, chloramine, particulate, iron, manganese, zinc and total dissolved solids (TDS)

### Testing

Material safety, lead content evaluations, structural integrity and specific aesthetic-related contaminant reduction claims (claims vary by product)

## NSF/ANSI 53: *Drinking Water Treatment Units – Health Effects*

This standard establishes minimum requirements for systems designed to reduce health-related contaminants.

### Scope

POU and POE systems

### Claims

Reduction of more than 50 contaminants, including lead, *Cryptosporidium*, microcystins, volatile organic chemicals (VOCs), chromium, and various pesticides and herbicides, as well as total per- and polyfluorinated substances (PFAS), which was added to the standard in 2022

## NSF/ANSI 44: *Residential Cation Exchange Water Softeners*

This standard establishes the minimum requirements for certification of residential water softeners using a cation exchange resin regenerated with sodium or potassium chloride, reducing hardness from public or private water supplies.

### Scope

Residential water softening systems

### Claims

Including barium reduction, radium-226 and -228 reduction, and efficiency of salt and water consumptions

## NSF/ANSI 55: *Ultraviolet Microbiological Water Treatment Systems*

This standard establishes the minimum requirements for POE and POE ultraviolet (UV) water treatment systems that may be either microbiologically safe or microbiologically unsafe. These systems are not intended for water that has an obvious contamination.

### Scope

Residential UV water treatment systems

### Claims

Including *Cryptosporidium*, *Giardia* cysts and coliforms

## NSF/ANSI 58: *Reverse Osmosis Drinking Water Treatment Units*

This standard establishes the minimum requirements for materials, design and construction, and performance of reverse osmosis drinking water treatment systems.

### Scope

POU reverse osmosis-based systems

### Claims

**Required:** TDS (total dissolved solids) reduction

**Optional:** Reduction of cysts, hexavalent and trivalent chromium, arsenic, nitrates and nitrites, cadmium, lead, barium, turbidity, fluoride, copper, VOCs, asbestos, perchlorates, radium-226 and -228, selenium and pentavalent arsenic



## **NSF/ANSI 62: Drinking Water Distillation Systems**

This standard establishes the minimum materials, design and construction, and performance requirements for POU and POE drinking water distillation systems and their components.

### **Scope**

POU and POE drinking water distillation systems

### **Claims**

Reduction of specific chemical and/or microbiological contaminants from potable drinking water supplies

## **NSF/ANSI 244: Supplemental Microbiological Water Treatment Systems – Filtration**

This standard establishes the minimum requirements for the reduction of microorganisms using mechanical filtration devices for supplemental treatment of microbiologically safe drinking water. Mechanical filtration devices covered by this standard are intended for use only on water supplies that have been treated to public water system standards or otherwise are determined to be microbiologically safe as demonstrated by routine testing. They are intended only for protection against intermittent incursions or accidental microbiological contamination of otherwise safe drinking water.

### **Scope**

Drinking water filters

### **Claims**

Structural integrity, material safety, reduction of bacteria and virus counts

### **Testing**

Material safety, lead content evaluations, structural integrity and specific aesthetic-related contaminant reduction claims (claims vary by product)

## **NSF/ANSI 401: Drinking Water Treatment Units – Emerging Compounds/Incidental Contaminants**

This standard addresses the ability of a water treatment device to remove up to 15 individual contaminants identified in published studies as occurring in drinking water. The contaminants covered in NSF/ANSI 401 have been detected in drinking water supplies at trace levels and can affect some consumers' perception of drinking water quality.

### **Scope**

POU and POE systems

### **Claims**

Up to 15 specific contaminant reduction claims, including for common categories like prescription drugs, over-the-counter medications, herbicides, pesticides and chemical compounds

### **Testing**

Material safety, lead content verification, structural integrity and specific emerging compounds/incidental contaminants outlined in the standard

## **NSF/ANSI P231: Microbiological Water Purifiers**

Microbiological water purifiers use chemical, mechanical, and/or physical technologies to filter and treat waters of unknown microbiological quality that are presumed to be potable. This protocol addresses contains minimum requirements for materials, design and construction, and performance of these systems. The systems are not intended to convert wastewater or raw sewage into drinking water.

### **Scope**

POU treatment systems for water with unknown microbiological quality

### **Claims**

Structural integrity, material safety, reduction of bacteria and virus counts

## NSF/ANSI P343: Health and Sanitation Requirements for Atmospheric Water Generators

This protocol addresses atmospheric water generators, either POU and POE units. The units are tested against microorganism reduction claims while running to ensure the water produced is microbiologically safe. Systems must have an integrated disinfection system — such as ozonation and UV — to avoid mold and bacteria growth.

### Scope

Atmospheric water generators used as POU or POE systems

### Claims

Structural integrity, material safety, and reduction of bacteria and virus counts

## NSF/JWPA P508: Drinking Water Treatment Units – Filtration

This protocol establishes minimum requirements for materials, design and construction, and performance of POU and POE drinking water treatment systems designed to reduce specific contaminants in public or private water supplies in regions with lower water pressure than in the U.S. and Canada.

### Scope

POU and POE systems

### Claims

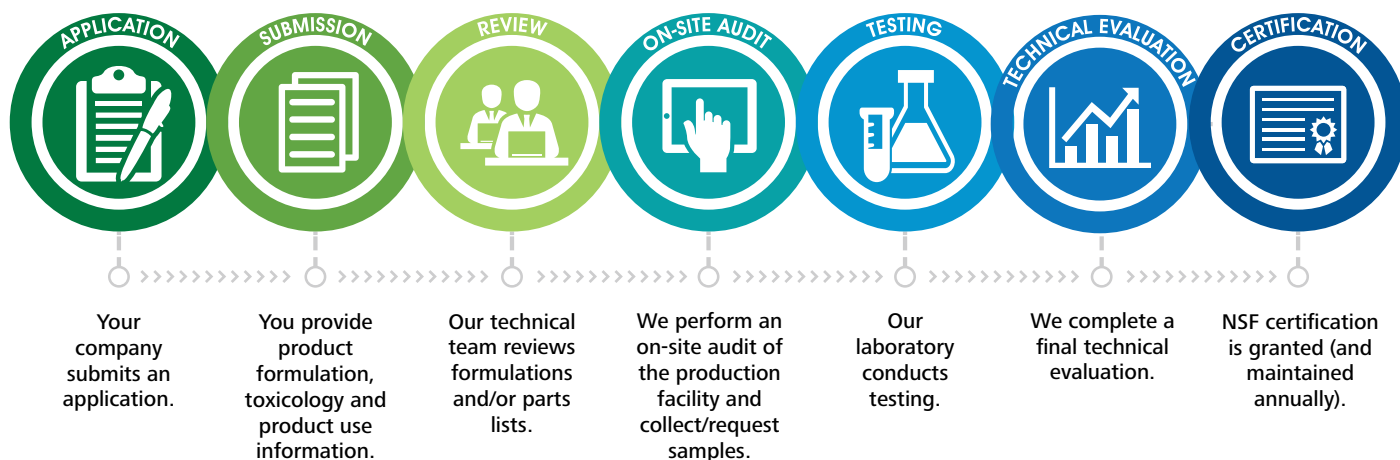
Incorporates all claims from NSF/ANSI 42, 53 and 401

### Testing

Material safety, lead content evaluations, structural integrity and performance claims

## 7 Steps to Get NSF Certification for Your Products

When you're ready to pursue certification, NSF makes it easy. Standards and protocols like those listed in this brochure usually require seven steps to gain certification:



## Ask for Details on Protocols and Standards for Your Products.

**NSF**

789 N. Dixboro Road Ann Arbor, MI 48105 USA | [www.nsf.org](http://www.nsf.org)

E: [info@nsf.org](mailto:info@nsf.org)