

# NSF/ANSI 419 TECHNICAL REQUIREMENTS



NSF/ANSI 419 is the American National Standard that establishes requirements for the performance of public drinking water equipment. The need for an official standard arose after the U.S. EPA's Environmental Technology Verification (ETV) program ended in 2014. Up to that point, the ETV program had verified the safety and performance of public drinking water equipment.

## THE EVOLUTION OF THE STANDARD

To provide manufacturers with a way to continue maintaining third-party evaluation of their public drinking water equipment, NSF converted the existing ETV membrane protocol into an NSF/ANSI standard. NSF/ANSI 419 was published in January 2015 after review by a committee with equal representation of manufacturers, regulators and end users.

The standard includes requirements found in the U.S. EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), which allows manufacturers to prove *Cryptosporidium* reduction.

While the standard includes requirements referencing well established rules and methods like the LT2ESWTR, it also includes additional requirements for safety, including optional evaluation of microfiltration and ultrafiltration modules for virus reduction, which allows manufacturers to further prove the quality of their product.



## PRODUCTS COVERED UNDER THE SCOPE OF NSF/ANSI 419

The scope of this standard applies to equipment used in the treatment or production of drinking water in EPA-defined public water supplies, such as:

- ✓ **Microfiltration modules**
- ✓ **Ultrafiltration modules**
- ✓ **Bag and cartridge filters**



# WHAT YOU CAN EXPECT WHEN GETTING CERTIFIED TO NSF/ANSI 419

When you're ready to become certified, NSF makes it easy by breaking the process up into six simple steps:



## TESTING UNDER NSF/ANSI 419

Testing under NSF/ANSI 419 includes evaluation of material safety according to NSF/ANSI 61: *Drinking Water System Components – Health Effects*, plus evaluation of *Cryptosporidium* reduction using test methodologies and surrogates that are appropriate to the technologies being evaluated.

### Bag and cartridge systems:

- > Two units challenged with polystyrene microspheres at the maximum designed flow rate

### Microfiltration and ultrafiltration modules:

- > Five modules challenged with *Bacillus atrophaeus* endospores as a surrogate for *Cryptosporidium*
- > Virus-specific challenge testing using MS2 coliphages
- > Membrane integrity tests performed before and after each test to determine a quality control release value

## WHY CHOOSE NSF?

NSF worked closely with the U.S. EPA to host the ETV Program Drinking Water Systems Center before NSF/ANSI 419 was created. Our staff, along with other industry experts, led the way in developing the standard, so we have the most knowledge of its application.

Additionally, when you work with us, you can always expect:

- > Dedicated account managers, giving you a single point of contact
- > Use of the NSF mark, which is well-known globally
- > Expert technical staff who ensure your product is evaluated accurately

## NSF INTERNATIONAL

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