

641—14.4(714) Performance testing. A water treatment system shall be tested for performance by a third-party testing agency or by the manufacturer. If the manufacturer does the performance testing, the provisions of 14.4(3) shall apply.

14.4(1) Standards. The performance testing shall be conducted in accordance with the applicable standard(s) from Table 1 or in accordance with a protocol approved by the state hygienic laboratory. Performance testing shall include an evaluation of structural integrity and of the water contact materials of the water treatment system in accordance with the applicable standard(s) listed in Table 1 or methods approved by the state hygienic laboratory.

Table 1

Treatment Process	NSF/ANSI Standard
Mechanical filtration	53 ¹
Carbon adsorption/filtration	53 ¹
Reverse osmosis	58 ²
Cation exchange softening	44 ³
Ion exchange except softening	53 ¹
UV disinfection, Class A	55 ⁴
Distillation	62 ⁵

¹Drinking Water Treatment Units-Health Effects, 2007

²Reverse Osmosis Drinking Water Systems, 2007

³Residential Cation Exchange Water Softeners, 2007

⁴Ultraviolet Microbiological Water Treatment Systems, 2007

⁵Drinking Water Distillation Systems, 2007

14.4(2) Alternate performance testing protocols. If a water treatment system is not tested in accordance with a standard(s) in Table 1, the manufacturer of the water treatment system shall submit an alternate performance testing protocol for the water treatment system to the department.

a. The submission shall include, but may not be limited to, the following information:

(1) The name and address of the manufacturer and the name, address, telephone number, and E-mail address of the manufacturer's representative.

(2) The brand name, model number, and trade names of each water treatment system requiring performance testing. The manufacturer shall state whether each water treatment system will be performance tested or if one water treatment system will be performance tested and the results used to represent the performance of other water treatment systems. The manufacturer shall provide justification that the performance testing of one water treatment system will reliably represent the performance of other water treatment systems.

(3) A detailed drawing with part numbers identifying each component of the water treatment system. Where applicable, this includes, but may not be limited to, pre- and post-filters, storage tank, dispensing unit (faucet), booster pump, and the main treatment module. Replaceable components shall be specifically identified and the approximate treatment capacity or replacement frequency shall be stated.

(4) Identification of the water treatment system materials that are in contact with the water and of any chemical added to the drinking water by the water treatment system.

(5) Specification of the pressure, flow and temperature requirements and limits for the water treatment system.

(6) A list of the contaminants claimed to be reduced by the water treatment system.

(7) A statement indicating whether the water treatment system will be advertised and sold to treat water that is microbiologically unsafe as defined in NSF/ANSI standard 53.

(8) A detailed description of the performance testing protocol including, but not necessarily limited to:

1. A schematic of the test rig with specifications for the critical components and instrumentation.

2. Characterization of the general test water and the challenge water, including the level of the challenge parameter(s) in the water. A justification for the level of the challenge parameter(s) shall be provided.

3. Details of how the general test water and the challenge water are prepared.

4. Water pressure, flow rate and temperature during the test.

5. Sample schedule for influent and effluent water.

6. Analytical methods for the challenge parameter(s).

7. Performance standard for the challenge parameter(s).

b. The performance testing protocol shall include the following provisions:

(1) At least two units shall be tested.

(2) The flow rate and water pressure shall be typical of the end use for the water treatment system.

(3) Where applicable, a water treatment system with a PID shall be tested to at least 120 percent of the capacity listed on the PDS. A water treatment system without a PID shall be tested to at least 200 percent of the capacity listed on the PDS.

(4) The structural integrity of the water treatment system shall be tested in accordance with the method in the applicable standard in Table 1.

(5) The materials shall be evaluated for safety in accordance with one of the standards in Table 1 or in accordance with NSF/ANSI standard 61-2007a, "Drinking Water System Components - Health Effects."

c. The state hygienic laboratory shall review the performance testing protocol and shall report the approval, conditional approval or disapproval of the protocol in writing to the department. The conditions of approval or the reasons for disapproval shall be in the report.

d. The manufacturer shall pay a fee not to exceed \$200 to the state hygienic laboratory for each performance testing protocol review done in accordance with these rules.

14.4(3) *Manufacturer testing and audit.* A manufacturer may do performance testing of a water treatment system at its own facilities provided that a performance testing protocol from a standard in Table 1 or a performance testing protocol approved in accordance with 14.4(2) is used and the manufacturer's personnel, facilities and data are found to be adequate when audited by a third-party testing agency.

a. The manufacturer shall submit to the department information including, but not necessarily limited to, the following:

(1) The applicable standard(s) from Table 1 or the information required by 14.4(2).

(2) The name and address of the third-party testing agency performing the audit, and the name, address, telephone number, and E-mail address of an authorized representative of the third-party testing agency.

b. The third-party testing agency responsible for the audit of the manufacturer's facilities and data shall submit to the department information including, but not necessarily limited to, the following:

(1) A detailed description of the manufacturer's testing facilities and equipment.

(2) Résumés of the management, scientific, and technical personnel responsible for conducting the performance testing.

(3) A copy of the manufacturer's state drinking water laboratory certification for the contaminants treated by the water treatment system, or verification that the manufacturer has the capability to perform USEPA-approved analytical methods for the contaminants treated by the water treatment system. If the analyses are performed by another agency, a copy of that agency's certificate and documentation of the business relationship between the manufacturer and the agency shall be submitted.

(4) An evaluation of the manufacturer's laboratory quality assurance program.

(5) The number of water treatment systems tested at the manufacturer's testing facilities, if applicable, listed by the standard(s) used as the basis for testing and including the contaminants for which testing was done.

(6) An evaluation of the capability of the facility to conduct performance testing in accordance with the approved performance testing protocol.

c. Upon receipt of the report of the audit, the department shall transmit a letter of approval, conditional approval, or disapproval to the manufacturer within 30 days. The conditions of approval or the reasons for disapproval shall be in writing and shall be provided to the manufacturer's representative.

14.4(4) Performance requirements. A water treatment system shall meet or exceed the performance requirements of the standard(s) in Table 1 applicable to the water treatment system. If a contaminant treated by the water treatment system is not addressed by a standard in Table 1, the water treatment system shall reduce the level of the contaminant to or below the MCL when the water treatment system is tested in accordance with a performance testing protocol approved according to 14.4(2).

14.4(5) Retesting.

a. If a water treatment system is listed by an ANSI-accredited third-party testing agency, the manufacturer shall have the water treatment system retested for performance in accordance with the policies of the third-party testing agency, but no less frequently than every five years. Other water treatment systems shall be retested by a third-party testing agency at least every five years.

b. After a water treatment system is retested, the manufacturer shall submit the test data in accordance with 14.6(1). The manufacturer shall submit a PDS modified to include the results of the retesting at the time of the next annual registration.

c. A change in the capacity of the water treatment system or to the contaminant claims shall be reported in accordance with 14.6(3).

d. Water treatment systems registered prior to January 1, 2009, shall be retested, and the test data and PDS submitted prior to January 1, 2014.