HOME TREATMENT DEVICES LISTING ORGANIZATIONS

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Today there is a need for consumer information to assess the multitude of drinking water treatment devices for home use as well as related private drinking water services. There are several organizations that have conducted or conduct on a continuing basis testing of water treatment devices and water treatment services.

1) National Sanitation Foundation (NSF)
2) Water Quality Association (WQA)
3) Consumer Reports (Consumer Union)
4) Rodale Product Testing (Rodale Press, Inc.)

Two of these organizations, NSF and WQA, have a very broad scope and continually update on a semiannual basis those devices or services that meet their established standards. The basic philosophy and purpose of these two organizations are different. The following description of these organizations is taken from the literature that each provides.
The Foundation, popularly referred to as NSF, is a nonofficial and non-commercial agency. It is incorporated under the laws of Michigan as a not-for-profit organization devoted to research, education and service. It seeks to solve problems involving man and his environment. It wishes to promote man's health and enrich the quality of life through conserving and improving that environment. Its fundamental principle of operation is to serve as a neutral medium in which business and industry, official regulatory agencies and the public come together to deal with problems involving products, equipment, procedures and services related to health and the environment.

NSF is perhaps best known for its role in the developing of standards and criteria for equipment, products and services that bear upon health. The NSF mark is widely recognized as a sign that the article to which it is affixed complies with public health requirements. NSF conducts research, tests and evaluates equipment, products and services for compliance with NSF standards and criteria; and grants and controls the use of the NSF mark.

STANDARDS

NSF standards are developed with the active participation of public health and other regulatory officials, users, and industry. Joint committees, with members from the three sectors - regulatory, user, and industry - are responsible for developing and revising the standards. Proposed standards or revisions are reviewed, and must be accepted by the Council of Public Health Consultants, a group of individuals from all levels of government, academia, and private consulting firms with expertise in health and environmental issues. It is only after acceptance by a joint committee and the Council of Public Health Consultants that proposed standards or revisions may be adopted by the NSF Board of Trustees.

Devices covered by Drinking Water Treatment Units--Aesthetic Effects, Standard 42, are designed to reduce tastes and odors, sediments and particulates, iron, and/or color.

Devices covered by Drinking Water Treatment Units--Health Effects, Standard 53, are designed to remove pesticides; trihalomethanes, such as chloroform; heavy metals, such as mercury and lead; or cysts that cause certain intestinal diseases.

NSF Standard 14: Plastics Piping Systems Components and Related Materials covers thermoplastic and thermoset plastics pipe, valves, fittings, tanks, joining materials, appurtenances and the materials from which they are made. The Standard includes requirements for their use in potable water piping systems; drain, waste and vent piping; drainage systems; corrosive waste systems; water well casings; and other components for plumbing systems.
Plastics components for use in potable water applications must comply with chemical extraction and taste and odor requirements of Standard 14. Included are pertinent maximum contaminant levels (MCLs) established in the US Environmental Protection Agency's National Primary Drinking Water Regulations.

These standards are based on the device or pipe delivering water that does not exceed the Maximum Contaminant Level (MCL) set by the US Environmental Protection Agency under challenge with a standard contaminated water or purified water.

LISTING SERVICES

NSF Listing Services programs benefit the regulator, the user, and the industry. The regulator and the user have the assurance that a credible, objective, third-party certifier, widely recognized by public health officials, has actually tested and verified that the Listed products comply with specific standards. The cost of the program is placed in the private sector, rather than adding to the cost of official regulation. An advantage to the regulator, the user, and industry is participation in the development of the requirements. An advantage to the industry is wide acceptance of Listed products by regulatory officials and users; and voluntary (not mandatory) participation in the Listing program. By participating in the Listing program, with required testing, retesting, and unannounced plant inspections by a third party, the manufacturer demonstrates the intent and capability to provide a product complying with NSF standards.

NSF's Listing programs are offered only for NSF standards. The standards specify the requirements for the products, and may include requirements relating to materials, design, construction, and performance. NSF has policies that establish additional requirements that a manufacturer must comply with to be able to obtain and maintain Listing of products and authorization to use an NSF Listing Mark (Mark). These include requirements for initial and periodic testing and/or evaluation. These may include requirements—for one or more annual unannounced plant inspections. If the Mark is misused, or products do not continue to comply with requirements, NSF will take enforcement action which may include placing product and inventory on hold, destruction of product, de-listing, recall, legal action, public notice, or cancellation of contract.

CERTIFICATION

Certification Services tests and certifies products, systems, and services for compliance with governmental regulations and nationally recognized consensus standards other than those of NSF. Products, systems, and services meeting the regulations or standards may display a Certification Mark and appear in the Registry, published annually. These programs are being used to assure that bottled water is produced in compliance with - and meets the requirements of - applicable FDA water quality and good manufacturing practices regulations.
ASSESSMENT

Assessment Services offers technical assistance, testing, and evaluation services related to point-of-use drinking water treatment systems to small communities, homeowner associations, and public health agencies. Through previous studies and research, NSF has gained experience in problem definition, equipment evaluation, equipment selection, field testing, and formation and management of water districts. NSF has extensive state-of-the-art analytical laboratories to analyze for inorganic, organic, and microbiological contaminants. NSF can be retained to provide any or all of these services. If you are interested in more information about the specific types of assistance available, please write or telephone the Director of Assessment Services.

The NSF Marks, as identified above, are shown in Figure 1.

WATER QUALITY ASSOCIATION
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The Water Quality Association is a not-for-profit international trade association representing firms and individuals engaged in the design, manufacture, production, distribution and sale of equipment, products, supplies and services for providing quality water for specific uses in residential, commercial, industrial and institutional establishments. Membership is voluntary.

One of the basic purposes of WQA is to promote the acceptance and use of industry equipment, products and services. Activities, programs and services are designed to enable the industry to perform with the greatest economy and efficiency and to provide the greatest service to the public. The benefits of this shared experience accrue to all, and might otherwise be unobtainable.

STANDARDS


Validation means that a manufacturer-selected representative sample of a production line water softener was tested at the Water Quality Association laboratory and was found to have met the standards for hardness removal, softening capacity, flow rate, pressure drop, dielectric strength, hydrostatic test, cycle test, and the requirements of nontoxicity of components.

Voluntary Industry Standard For Household, Commercial and Portable Exchange Water Softeners, S-100-85, Section VI.0 Validation of Performance Ratings—Demand Initiated Regeneration (DIR).

Validation means that a manufacturer-selected representative sample of a production line water softener was tested at the Water Quality Association laboratory and was found to have met the salt efficiency of a system,
reported as grains of exchange per pound of salt, as reported by the manufacturer.


Validation means that a manufacturer-selected representative sample of a production line water softener was tested at the Water Quality Association laboratory and was found to have met the standards for Salt Efficiency Rating and has a Rating of not less than 2850 grains of exchange per pound of salt.

Voluntary Industry Standard For Point-Of-Use Low Pressure Reverse Osmosis Drinking Water Systems, S-300-84.

Validation means that a manufacturer-selected representative sample of a production line reverse osmosis system was tested at the Water Quality Association laboratory and was found to have met the standards for total dissolved solids (TDS) reduction, hydrostatic tests, cycle tests, and the requirements of nontoxicity of components.

A directory is published on a biannual basis identifying those water treatment devices that have been validated as of the publication date.

PROFESSIONAL CERTIFICATION PROGRAM

The Water Quality Association's (WQA) Professional Certification Program is designed to assist the public in selecting a water quality improvement professional who has demonstrated, through an accreditation program, the knowledge required to satisfy most water quality improvement requirements. All members of the water quality improvement industry are eligible and membership in WQA is not a requirement.

Business entities which employ WQA certified individuals may make use of the individual’s WQA Certification status in the advertising and promotion of the business entity in accordance with the policies of the Professional Certification Program.

The objectives of the program are to:

* Encourage compliance with the principles established in the WQA Code of Ethics.
* Improve the level of technical competency of industry personnel through responsive educational programs.
* Establish minimum requirements against which an industry member can be measured for certification.
* Create an incentive for personal professional improvement.
* Ensure that products are factually represented.

The association offers three general certification designations: Certified Water Specialist (CWS), Certified Installer (CI), and Certified Sales Representative (CSR). Individuals who successfully complete a general
certification examination may use the corresponding designation title following their name. Individuals may be certified in more than one designation.

Upon successful completion of the Certified Water Specialist examination, the certified individual earns the designation of CWS-I. A Certified Water Specialist may then be certified in any or all of the following specialty categories:

* Reverse Osmosis and Ultrafiltration
* Demineralization by Ion Exchange
* Filtration
* Disinfection

Individuals certified in these categories may use designations II through V, with CWS-V being the highest certification designation earned.

The Certified Installer and Certified Sales Representative designations have one examination and one certification level.

A certified individual has demonstrated satisfactory compliance with minimum program requirements necessary to ensure that products are specified, installed, and serviced in a highly credible manner.

A directory is published yearly listing the Certified personnel of the Water Quality Association. The WQA logos and seals representing certified devices and personnel are shown in Figure 2.
FIGURE 1: NATIONAL SANITATION FOUNDATION MARKS.
FIGURE 2: WATER QUALITY ASSOCIATION SEALS AND LOGOS.