



Challenge Accepted

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The water treatment industry has met the consumer call for increased solutions for lead contamination in drinking water through new solutions

By Lauren Estes

Lead—you cannot see, taste or smell it in drinking water, according to the U.S. Centers for Disease Control and Prevention, but it remains a priority issue for legislators,

water treatment providers and consumers. Notably, in the last several years since the Flint, Mich., lead contamination crisis raised public awareness of the contaminant, solution providers have met the increased

demand for treatment options with innovation. Solution and certification providers also have worked to increase consumer awareness around treatment options and the value of certification.

New Solutions

A variety of treatment options is available, each with its own benefits and limitations, said Deb Stapel, senior marketing manager for Pentair.

“Distillation will reduce lead but is a slow process, requires a lot of heat energy and is costly to operate—not an optimal choice,” Stapel said. “Activated carbon filters for lead reduction are an economical, straightforward option, though certain types can become quickly exhausted, requiring frequent change outs, reducing its convenience. Finally, reverse osmosis (RO), the process of forcing molecules through a membrane, has long been considered the best way to protect the family’s drinking water from lead contamination.”

Additionally, point-of-entry (POE) filtration options for lead removal are relatively new to the marketplace, mainly because a long contact time generally is involved in the actual lead removal, which can lead to a slower flow on a pitcher or faucet mount, said Meghan Stout, vice president of corporate marketing and brand management for Brita Pro.

“Historically, lead removal has been at point-of-use (POU), which would be pitchers or faucet mounts,” Stout said. “However, that does not take into the equation your laundry, your dishes, your showers, and I know every parent bathes their kid in the shower or bathtub and that is important too.”

In recent years, several manufacturers have begun problem solving to develop POE filtration systems for lead removal, including Pentair, Brita Pro and Enpress.

“This is a relatively new solution in the industry, offering an economical solution for treating water at the main water supply for the home,” Stapel added.

While soluble lead can be removed from drinking water through ion exchange, RO or distillation, particulate lead can be more difficult to remove, particularly from POE, but can be removed through RO, distillation and adsorption.

Certification Counts

When it comes to verifying lead reduction claims and assuring the public of the validity of a product, product certification is crucial. Related to lead removal in drinking water, there are several certification standards,

depending on the type of system, that verify these claims. NSF/ANSI Standard 58 pertains to POU RO systems that have a claim of lead reduction, while NSF/ANSI Standard 53 covers other drinking water filters.

“NSF/ANSI 53 is the [standard] that applies to water filters,” said Rick Andrew, director of global business development for water systems for NSF Intl. “It is called Drinking Water Treatment Units Health Effects, so it covers products that have contaminant reduction claims that could be affecting health; certainly lead is one of those.”

When NSF Intl. tests products for a lead reduction claim, the process is similar to how it tests for other claims. This includes

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seven steps, including application, submission, review, onsite audit, testing, technical evaluation and certification. All testing is done by NSF Intl. in their in-house laboratories to ensure quality control.

“For a lead reduction claim, it is actually two different tests: one of the tests is at low pH and the second test is at high pH, because the lead can be in different forms depending on the characteristics of the water,” Andrew said. “So sometimes there can be particles of lead, other times the lead is soluble.”

Water filters certified by NSF Intl. for lead reduction are evaluated in a study using water that contains 150 ppb of lead, 10 times higher than the U.S. EPA’s maximum standard for drinking water. The organization also audits the facilities where the filters are manufactured, according to the organization’s website. Water filters certified for lead removal then will be clearly labeled. If a consumer is unsure a water filter is certified for lead removal, they can reach out to the NSF Intl. consumer information hotline at 800.673.8010 or info@nsf.org.

Solution providers agree that product certification is important for consumer transparency and product validity.

“Anybody can claim that they can remove lead, whether or not they actually can or not is left to be determined,” Stout said. “With independent certification, consumers can feel confident that they are getting what they have installed and paid for.”

Mike Mormino, vice president of sales and marketing for Enpress LLC, agreed with Stout that product certification for lead removal is essential for consumer trust.

“Certification to NSF/ANSI Standard 53 is very important to the consumer to have product validation that the product they plan to install in their home, school or business meets the requirements for the removal of lead,” Mormino said. “[It] provides them the peace-of-mind that they are using and drinking water that is free of lead below the EPA standard of 15 ppb.”

As consumer demand continues to increase for lead removal water filters, solution providers will need to continue to meet that demand with innovative solutions for residential and commercial drinking water treatment. Product certification will continue to remain important in order to verify manufacturer claims and ensure consumers have access to the information they need to choose the right solution for their home or system. Manufacturers, dealers and consumers can all agree that when it comes to lead contamination in drinking water, trust in product validity and safety is essential. **WQP**

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