



## Offer an Extra Layer of Protection. Offer UV.

In water treatment, there's no better selling tool than the water test. Even if a customer approaches you with color, taste, or odor concerns, encourage water testing as it provides hard evidence of a need, and, of course, facilitates treatment choices.

### The water test—a snapshot in time

Because you can't see, smell, or taste microbes in water, a water test is critical. Unlike hard or iron-containing waters where the mineral level is unlikely to fluctuate, microbial contamination changes unexpectedly. A sudden thaw, a torrential downpour, a leaking septic tank—any of these can suddenly contaminate your customer's water. Because the presence of microbes isn't constant, test results are often reported as not detected. Remember, that's FOR NOW. A change could occur tomorrow, which is why public health authorities recommend water testing at least annually.

For water treatment, it's not just about selling to the need; it's about selling to the risk.

### UV treatment is proven

Constant chlorination and ultraviolet (UV) light are recognized by public health agencies as effective means of water treatment. UV adoption is on the rise, because under normal operating conditions,

it inactivates common waterborne pathogens—including *cryptosporidium*, *giardia*, *pathogenic E. coli (STEC/VTEC)*, *campylobacter*, *legionella*, *salmonella*, *shigella*, *norovirus*, *enterovirus*, and *hepatitis A virus*.<sup>\*</sup> It's also a reliable, simple, and energy-efficient method of treating water.

### UV treatment is not new

Chlorine has been widely used for public water treatment in the U.S. since the early 1900s. But treatment with sunlight has been recognized for centuries. In 1877, Downes and Blunt demonstrated the inactivation properties of sunlight. Once it was understood that specific UV-C wavelengths inactivate microorganisms, UV technology was developed for controlled and meaningful use. Europe and Canada have widely adopted UV treatment for municipal and private water. Continued advancements have made UV systems more compact and energy efficient. Many municipalities around the world have shifted from chlorine-based treatment to UV.

<sup>\*</sup>Efficacy of VIQUA systems has been demonstrated in internal testing. Visit [VIQUA.com](http://VIQUA.com) for details.

### UV technology is easy to explain

UV light is a sophisticated solution that doesn't require an overly technical explanation. Light of a specific wavelength passes through the water, inactivating any microbes that are present. Inactivation prevents the microbes from multiplying, rendering them unable to cause infection.

### Pretreatment requirements are straightforward

For the best results and minimal maintenance, UV systems require some pretreatment, like a sediment filter, which is often included in newer, high-quality systems.

A water softener can address hardness, which is common in groundwater, and low levels of iron. Some iron (and sulfur) treatment options do not add noxious chemicals to the water. Oxidation does not have to mean chlorination. Even though residual chlorine can be easily addressed with granular activated carbon (GAC) at the tap, consumers are looking for solutions that don't use chemicals. After all, why add something only to remove it again?

	Hardness (CaCO <sub>3</sub> )	Iron
<b>Pretreatment requirement</b>	<120 PPM (7 gpg)	<0.3 PPM
<b>Percentage of private wells with these conditions</b>	Between 25 and 50%	>75%*

Source: Trace Elements and Radon in Groundwater Across the United States (USGS, 2011)

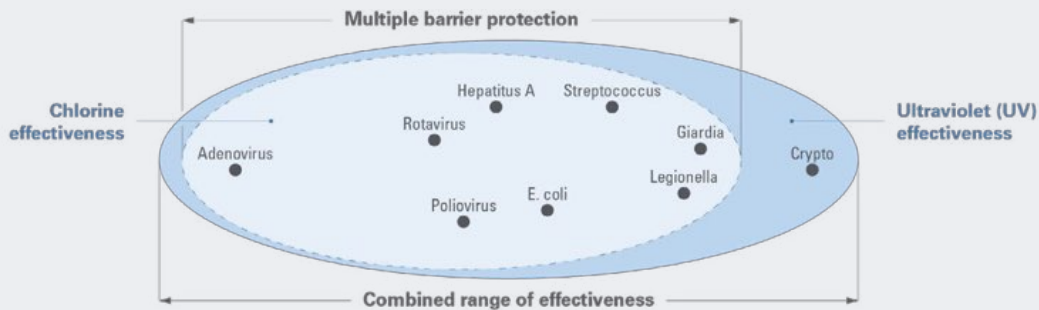
\*More likely to be in Western portions of U.S.

### UV provides the multibarrier approach that addresses the need for residual

While generally unnecessary for residential applications, a residual may be required by regulators. Adding UV requires less chlorine, reducing the potential for the formation of disinfection byproducts.

### UV provides downstream revenue opportunities

UV systems require less maintenance than a chlorinator, so you won't have to make countless service calls that take you away from the business of selling. However, depending on water quality, the quartz sleeve will require periodic cleaning. Often, this can coincide with the annual lamp replacement. With a managed service schedule, it's possible to balance service satisfaction and customer loyalty.



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