

Think Disinfection. Think UV.

There is no better selling tool, perhaps, than the water test. Even if a customer approaches you with colour, taste, or odour concerns, it's smart to encourage water testing. This provides hard evidence of a need, and, of course, facilitates treatment choices.

As you can't see, smell, or taste microbes in water, a water test is all the more critical. But with microbiological contaminants, the water test is simply a snapshot in time. With hard or iron-containing waters, the level of these minerals is less likely to change over time. Microbiological contamination, however, can change unexpectedly. A sudden thaw, a torrential downpour, a septic tank that develops a leak – any of these can cause sudden microbiological contamination. Because bacterial contamination is not a constant, the water test result is often reported as not detected. **FOR NOW.** That can change tomorrow, which is why the public health recommendation for regular testing is at least annually.

For disinfection, it is not just about selling to the need. It's about selling to the risk.

Both constant chlorination and ultraviolet (UV) disinfection are recognized by authorities like the EPA and Health Canada as effective means of disinfection. UV adoption, though, is on the rise, because under normal operating conditions, it's effective against a broader range of microorganisms, including protozoa, like Cryptosporidium and Giardia. It's also a chemical-free, environmentally-friendly solution.

UV disinfection is not new!

Chlorine has been widely used for public water treatment in the USA since the early 1900s, which speaks to the fundamental need for disinfection to protect health. But disinfection with sunlight has been recognized for centuries. The germicidal properties of sunlight were demonstrated by Downes and Blunt in 1877. Once it was understood that specific UV-C wavelengths are responsible for this germicidal activity, the technology was developed so that UV light could be used in a controlled and meaningful way. UV disinfection has been widely adopted in Europe and Canada for municipal and private water treatment. Advancements have continued making UV systems more compact and even more energy efficient over the years. Many municipalities around the world have overhauled their primary disinfection from chlorine-based to UV.

UV technology is easy to explain!

Ultraviolet light is a sophisticated disinfection solution, but it doesn't require an overly technical explanation. Light of a specific wavelength is passed through the water, inactivating any pathogens that are present. Because they are inactivated, microbes can no longer multiply, which means they can't cause infection.



UV disinfection is
as tried and true
as chlorination.

Inactivated is as
good as dead!



Pre-treatment requirements are straight forward!

For the best results and minimal maintenance, UV systems do require some pre-treatment. At the least, this includes a sediment filter, which is often included with the newer, high quality systems. Hardness, which is common in ground water, can be problematic and should be addressed by a water softener. There are many benefits to softening water, however, that can be readily appreciated by any homeowner. That leaves the matter of iron-bearing waters. For low levels, this may already be solved by the addition of a water softener. But beyond this, there are iron (and sulfur) treatment options that 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, more and more consumers are seeking chemical-free solutions. Why add something only to remove it again?

	Hardness (CaCO3)	Iron
Pretreatment Requirement	<120 PPM (7 gpg)	<0.3 PPM
% Private Wells Meeting	Between 25-50%	>75% *

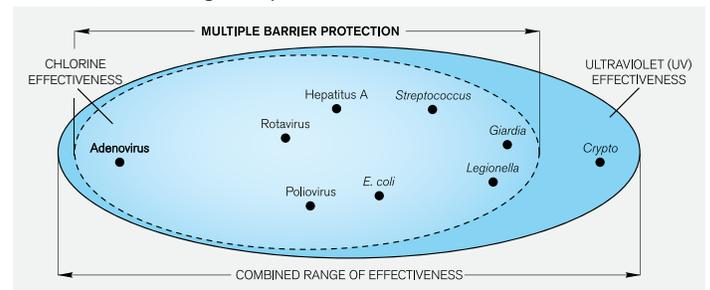
Source: Trace Elements and Radon in Groundwater across the United States (USGS, 2011)
 *More likely to be in Western portions of USA.

Provides downstream revenue opportunities

For the most part, UV systems require less maintenance than a chlorinator, so you won't be making countless nuisance service calls that take you away from the business of selling. However, depending on the quality of the water, the quartz sleeve will require periodic cleaning. This can often be coincided with the annual lamp change. With a managed service schedule, it's possible to balance service satisfaction and customer loyalty.

Multi-barrier approach addresses need for residual

While generally not necessary for residential applications, there are times when regulations demand a residual disinfectant. Using a multi-barrier approach to disinfection can help reduce undesirable disinfection by-products (DBPs). The addition of UV will mean less chlorine is needed, reducing the potential for the formation of DBPs.



UV technology — disinfection without all the hazards of chemicals.

About VIQUA

VIQUA is proud to be the world's largest supplier of residential and light commercial UV water disinfection systems, providing safe water without the use of chemicals. Whether you choose a point-of-entry or a point-of-use system, your VIQUA UV system will disinfect your drinking water, keeping you and your family safe from microbiological contaminants.

Our promise is clear: simply safe water.
 For more information, visit www.viqua.com.

