

UV Disinfection Of Drinking Water

While the adoption of ultraviolet (UV) radiation for drinking water treatment has been relatively slow to date, that is about to change, as questions surrounding regulations, royalties, technology, and engineering are now being answered.

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Conventional drinking water treatment technologies include the use of chlorine or other oxidants for final disinfection. In the case of surface waters, pretreatment such as coagulation, sedimentation, or filtration is generally used to prepare the water before final disinfection. The disinfection of drinking water with chemicals has successfully protected public health against waterborne disease for many years. There are a number of drawbacks to chemical disinfection, however, such as potentially toxic byproducts and problems with taste and odor. In addition, the emergence of waterborne pathogens resistant to chemical disinfection, such as *Cryptosporidium parvum*, has led to a reappraisal of traditional disinfection practices. Water companies and regulators must consider how to respond to such concerns without compromising safety and public health. Over the last decade, UV (ultraviolet) disinfection technology has proven to be an effective, low-cost, nonhazardous, and environmentally friendly water disinfection technology. The worldwide acceptance of UV disinfection at water plants treating in excess of 800 MGD (million gallons daily)¹ is proof that UV is no longer an emerging technology, but rather an accepted technology to be used routinely by engineers to safeguard human health.

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References

1. Manufacturers' estimate based on an audit of the leading UV equipment manufacturers (Trojan, Wedeco, Calgon, Ozonia, and Halma UV companies).