

Ultraviolet Light

UV disinfection offers a prompt and efficient method for deactivating microorganisms within the water treatment sector.

curio®

Ultraviolet (UV) disinfection is recognized as a safe and effective method for eliminating a wide range of pathogens, including viruses, in an environmentally friendly manner.

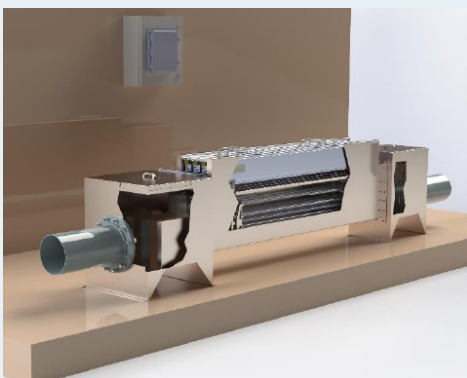
How does Ultraviolet disinfection work?

UV irradiation systems disinfect **by inactivating pathogenic microorganisms**, such as viruses, bacteria and parasites.

In the UV-C light spectrum (200-280nm), the wavelength 254nm has been proven to be the most efficient wavelength to inactivate micro-organisms by damaging the nucleic acids (DNA and RNA), which disrupts the organism's **ability to replicate**.

In normal applications, UV has the advantage that no chemicals are added to the water being treated and that no disinfection by-products are formed. Due to the small footprint, the UV equipment can be easily integrated into most existing water treatment plants.

Curio UV disinfection products



Aquaray S Horizontal open channel UV disinfection system



Aquaray 3X



Aquaray 40Ho



**Aquaray Hi Cap
UV System**

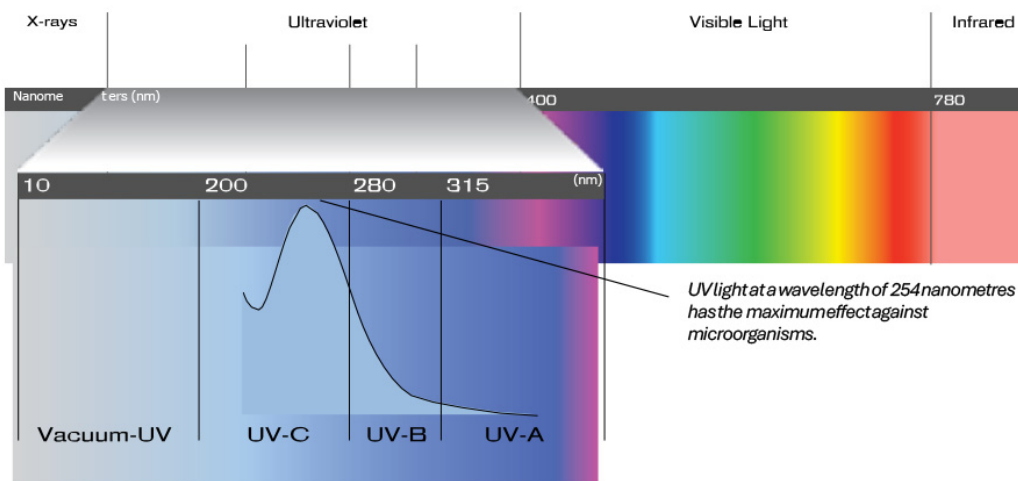
What is ultraviolet (UV) light, and how does it work?

UV light is a form of light that is invisible to the human eye. It occupies the portion of the electromagnetic spectrum between X-rays and visible light. The sun emits ultraviolet light; however, much of it is absorbed by the earth's ozone layer.

A unique characteristic of UV light is that wavelengths between 200 and 280 nanometers (billionths of a meter), are effective for inactivation of microorganisms such as E. Coli and Fecal Coliforms. This region between 200 and 280 nm is also known as the UV-C region or the inactivation zone. This capability has led to widespread adoption of UV light as a highly effective way to treat wastewater and drinking water.

A UV lamp is quite different than your standard incandescent light bulb. Electricity is still passed through a filament which heats up, but that energy 'excites' a very small amount of mercury vapor contained in the UV lamp. It is the mercury vapor that glows and emits UV light.

In water treatment applications, **UV light provides rapid, effective inactivation of microorganisms** through a physical process. When microorganisms are exposed to certain wavelengths of UV light, they are instantaneously rendered incapable of reproducing, and if they cannot reproduce, they are **unable to infect**.



Curio customer service

At Curio, we're all about customer service. Our main goal is to make sure you get the UV disinfection equipment you need without any unnecessary stress. We know that UV disinfection can be a bit of a niche industry, but we're here to help make things as easy as possible for you. Just let us know what you need, and we'll take care of the rest!

We offer **high quality genuine UV disinfection equipment** and products at great prices; you can be sure that we understand the marketplace demands and your requirements. All our UV disinfection equipment is manufactured in Europe and is made from high quality materials to ensure that you receive an effective and robust product. That's why we make our focus customer service because we know that we are supplying quality UV systems and spare parts.

In addition to supplying spare parts and building bespoke UV systems, we have our **servicing department** that can help maintain your UV systems that are already in operation. Making sure your system is kept in optimal working order, advising on best practices, and supplying replacement parts.

We provide a comprehensive range of UV service options to ensure optimal maintenance and functionality of your UV systems. Located in Buckingham, our Curio UV service department offers nationwide assistance, including servicing, maintenance, commissioning, and technical support for all your UV equipment needs.

Servicing and maintenance

Having made the investment in a UV system the servicing and maintenance of your equipment is important. To ensure your equipment is effectively maintained Curio offer a full range of servicing options. From simple lamp replacements through to comprehensive service contracts which include replacing critical aged components and re-calibrating / validating your system.

All UV systems require an annual maintenance inspection (some may require 6 monthly visits) to ensure the unit is functioning correctly and disinfecting the water, failure to keep up the maintenance on your unit can lead to lower efficiency and potentially failure of discharge regulations and unsafe drinking water.

All our technicians are **fully trained specialists** and can offer advice on the maintenance and operation of your equipment.

We keep an unparalleled number of genuine UV lamps and other UV spare parts in our fully stocked warehouse.

Summary of benefits of using UV technology

Ultraviolet (UV) technology is a **proven method** for effectively treating a variety of microorganisms, including E.coli, Fecal Coliform, and Enterococci, as well as chlorine-resistant microbes like Cryptosporidium and Giardia.

UV treatment works by **physically inactivating microorganisms**, typically requiring only a few seconds of retention time. This not only reduces the system's footprint but also **lowers the capital costs** associated with installing UV systems.

Brave thinking.

Curio Water Ltd

Pioneer House, 30 Celtic Court, Ball Moor,
Buckingham, MK18 1RQ, UK

www.curiowater.co.uk

curio[®]