

# BerkeLYT-Technology

Sustainable and effective removal of biofilms

**WATER TECHNOLOGIES**



Water is used as an energy source, a transfer agent and as a solvent. That is why water is essential for many sectors of everyday life for cooling, climate regulation, humidification, heating, various production processes and in swimming pools.

## Biofilms challenge

Due to its specific properties, water provides the basic prerequisites for biology and the formation of biofilms, other layers and corrosion. Biofilms provide an ideal environment for the colonization and proliferation of legionella bacteria. These conditions mean risks for hygiene, and therefore people's health, and also for the operational safety and energy efficiency of industrial systems. For the prevention of these dangers, a great number of treatment systems, and in particular dosing chemicals, are used today. These systems require extensive knowledge and experience for proper management, dosing and maintenance.



**BerkeLYT OXY:**  
catalyst technology for  
reducing biofilms

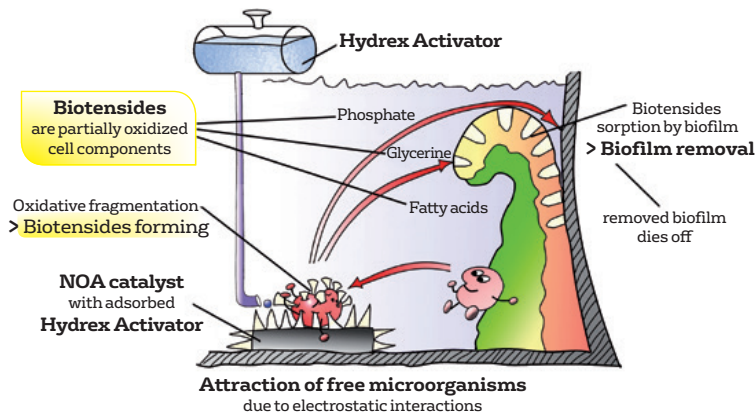
## Our recommendation: natural disinfection by catalysts

We offer a number of disinfection systems that are tailored to the respective applications. These systems have been developed to cover additional options. The key components of the innovative system, which have extensive experience, are high-performance solidstate catalysts specially developed and tested for this application. These catalysts are able to eliminate the biology in water transfer systems extremely effectively and environmentally soundly.

## The system: BerkeLYT catalysts

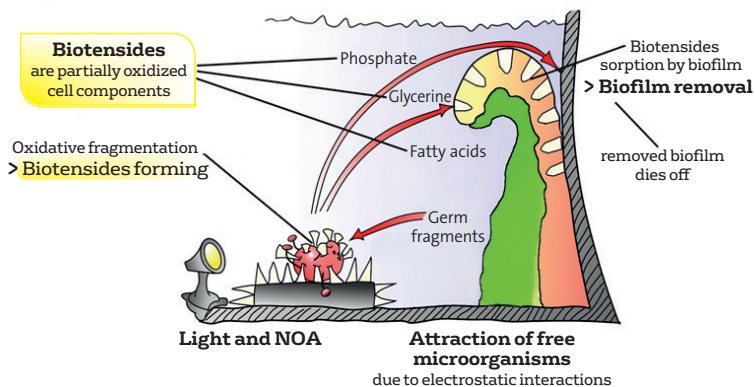
The heart of this disinfection system is the BerkeLYT catalyst technology. By combining high-performance solid-state catalysts and electrostatic charging, free microorganisms are attracted and through their fragmentation so-called biotensides are produced. These biotensides cause a removal and dying-off of the biofilms. Existing legionella bacteria are thereby combated, due to the removal of their preferred habitat, and future colonization is prevented both effectively and sustainably. These disinfection systems are utilized in two core technologies.

Existing legionella bacteria are thereby combated, due to the removal of their preferred habitat, and future colonization is prevented both effectively and sustainably.



## BerkeLYT OXY

With this system, interactions occur on the surface of the BerkeLYT ox-full metal catalysts between small amounts of Hydrex Activator and free microorganisms in the water. From the reactions on the catalysts' surface biotensides are produced, which remove the bio-layers in the water treatment plant and prevent their regeneration. This process minimises the use of biocides.

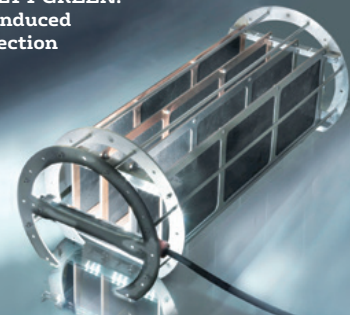


## BerkeLYT GREEN

Using a specific wavelength range of light, oxygen species similar to those found in nature, are formed directly on the surface of the high-performance catalysts. Thereby, undesirable side effects for people and the environment are eliminated. BerkeLYT GREEN performs completely without the use of biocides.

# Benefits

**BerkeLYT GREEN:**  
light-induced  
disinfection



- > High effectiveness in the removal and sustainable prevention of biofilms
- > Health protection due to the reliable combating of legionella bacteria and other microorganisms
- > Increase of energy efficiency due to optimum water conditioning and prevention of corrosion
- > Environmentally compatible by eliminating the use of non-oxidising biocides
- > No formation of endotoxins or harmful by-products
- > Verifiable lower energy consumption and carbon footprint of the BerkeLYT technology compared with alternative systems
- > Economically-sound investment, with a sustainable reduction of energy and other operating costs
- > Low maintainability and reliability in long-term operation
- > Technical standards and applicable guidelines are reliably met (e.g. German engineering guidelines VDI 6022, 3803)



## Applications

- > Open and closed cooling circuits/cooling towers
- > Ventilation and air-conditioning technology/air washer
- > Swimming pools
- > Paint shops, rinsing bates
- > Fountains
- > Production processes
- > Sprinkler systems

## Operating sites

To date, the BerkeLYT technology has been used successfully in

- > Public buildings, e.g. shopping centres, hospitals, hotels, office buildings
- > Power plants
- > Automobile/automotive industry
- > Food processing industry
- > Swimming pools
- > Other industrial companies
- > Agriculture

## Contact

Each case has specific requirements for an optimum disinfection. Therefore the careful analysis of the application is very important. On this basis we recommend a solution that meets your needs and focus on both effectiveness and sustainability. If necessary, we will test the most promising option at your premises, as a pilot project.

Describe briefly your application and we shall contact you promptly.

### E-Mail:

[veoliawatertech.de@veolia.com](mailto:veoliawatertech.de@veolia.com)

### Website:

[www.veoliawatertechnologies.de](http://www.veoliawatertechnologies.de)



## Veolia Water Technologies Deutschland GmbH

Site Celle · Lückenweg 5 · D-29227 Celle · Tel.: +49 (0) 51 41/803 - 0 · [veoliawatertech.celle@veolia.com](mailto:veoliawatertech.celle@veolia.com)  
Site Bayreuth · Bindlacher Straße 4 · D-95448 Bayreuth · Tel.: +49 (0) 9 21/15 08 79 - 0 · [veoliawatertech.bayreuth@veolia.com](mailto:veoliawatertech.bayreuth@veolia.com)  
Site Leipzig · Walter-Köhn-Straße 1 c · D-04356 Leipzig · Tel.: +49 (0) 3 41/6 50 68 - 0 · [veoliawatertech.leipzig@veolia.com](mailto:veoliawatertech.leipzig@veolia.com)

[www.veoliawatertechnologies.de](http://www.veoliawatertechnologies.de)