



Bacterial control in water

- perfectly clean water without the use of toxic chemicals

Danish Clean Water A/S
C/O Danfoss A/S
Nordborgvej 81, E 17 B 206
6430 Nordborg
Denmark

www.danishcleanwater.dk


Danish Clean Water



We believe technology can help create a better future

For years the world has been facing an increased pressure on the supply of safe drinking water due to a growing population and demands of industrial growth in many countries worldwide. We have furthermore recognized that outbreaks of food poisoning, from bacteria such as E.coli, Campylobacter, Salmonella and Listeria, can have serious consequences in the food and water industry.

Our strategy is to develop fully automated ECA generators, based on a plug and play philosophy to secure an optimal reliable operation. In the Danish tradition of environmental responsibility all DCW ECA generators are designed to leave the least possible negative impact on the environment.

Our ECA generators produce the disinfectant liquid NEUTHOX®, which is highly efficient in removing dangerous bacteria and biofilm. An ECA generator from Danish Clean Water can help you save energy and water as it allows water to be recycled and some processes to be run at lower temperatures.



Danish Clean Water is located at the Danfoss Industrial Park and has access to the full range of Danfoss facilities including Danfoss state of the art fully accredited laboratories.

All Danish Clean Water generators are manufactured to the highest standards of engineering excellence.

Safe and eco-friendly solution

In contrast to other known solutions on the market for bacterial control, our generators only use common salt, water and electric power to produce the powerful disinfectant liquid NEUTHOX®. Therefore, when released into the environment NEUTHOX® will naturally break down to only salt, and will not leave any dangerous by-product.

Chlorine is often used as a disinfectant in drinking water treatment, sewage plants, and some food processing facilities. Every year people are injured, and some even killed, in accidents involving chlorine gas. Exposure to concentrated amounts of chlorine gas may not be deadly, but higher chlorine exposure may lead to inflammation of the lungs from breathing in chemical fumes, and even death.

Chlorine and its chemical compounds is, however, highly efficient as a disinfecting agent, and the safety of our modern food and water supply chain heavily depends on it.

The challenge has been to maintain the safety in the food and water supply chain, while protecting the health of the people working within these areas.

Through Electro Chemical Activation (short named to ECA) our generators produce the disinfectant liquid NEUTHOX®, which contains the active agent hypochlorous acid.

We want to contribute to a healthier and safer world – without leaving a negative impact on the environment.



Our ECA generators

- a natural way of fighting bacteria

Our ECA generators produce the disinfection agent, NEUTHOX[®], where the active substance is Hypochlorous acid. Hypochlorous acid, or HOCl, also occurs naturally in the human body.

Hypochlorous acid is the active substance that handles the disinfection when NEUTHOX[®] is added to water, and ensures that all pathogenic bacteria, which are harmful to people, are eliminated.

In our bodies HOCl does the exact same thing - killing bacteria. HOCl is an important part of our immune system and it helps defend us against dangerous bacteria.

With our generator you will not only have the most effective technology available for bacterial control in water, you will also have the safest solution.

Our generators remove and prevent biofilm, produce on-site, are economical and entirely eco-friendly.

We offer:

- A fully automatic system
- Low maintenance and operational costs
- Harmless but effective disinfectant



The T10 generator

Our ECA generator is sold in two models that each come with different production capacity.



The T25 generator

Easy to monitor

The generators allow various communication systems to be applied for remote monitoring via mobile phone or the internet.

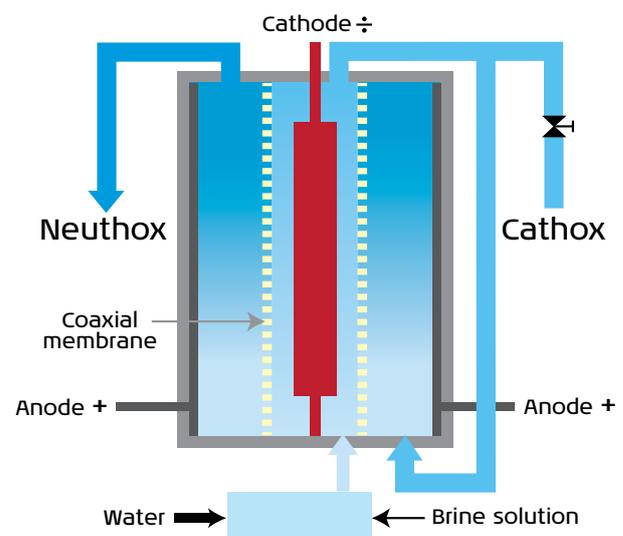
This allows you to monitor your ECA generator no matter where you are.

The technology behind NEUTHOX®

The Electro Chemical Activation technology is a process where ordinary, naturally occurring salt and water passes across an electrochemical cell.

DCW generators use the ECA technology to produce the non-toxic, close to pH neutral, safe disinfectant - NEUTHOX®, in which hypochlorous acid is the active substance. Hypochlorous acid is highly effective in eliminating most infection causing bacteria such as Legionella, E.coli, Listeria and Salmonella.

NEUTHOX® is therefore powerful enough to eliminate dangerous bacteria in water systems, and on work surfaces, while being completely safe for humans, and animals and having close to zero impact on the environment.



Above: The illustration shows the cell and the process.

Facts about NEUTHOX®

- Eliminates bacteria known to cause diseases in humans. The bacteria does not become resistant to NEUTHOX®
- NEUTHOX® can be stored without taking any precautions, and paperwork and permissions are limited since the product is completely harmless
- NEUTHOX® will keep its disinfectant properties even after several months of storage





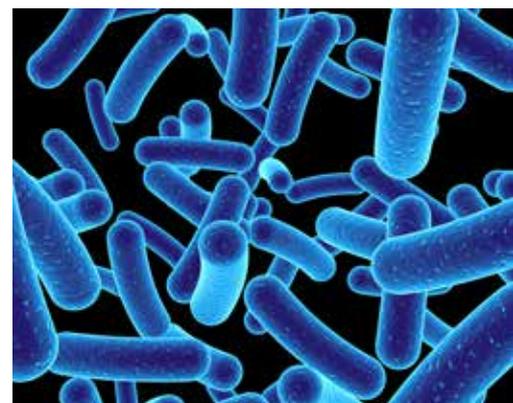
Did you know?

Bacteria grows in biofilm, which is a collection of organic and inorganic, living and dead material collected on a surface. Biofilms in drinking-water networks can cause a wide range of water quality and operational problems. Biofilm also contribute to increased bacterial levels, taste and odour changes, corrosion and reduced material life.

NEUTHOX® manages what other known solutions cannot, which is to remove biofilm entirely within a short period of time, and by adding only small doses to the contaminated water.

Our water treatment solution is known to successfully eliminate all unwanted bacteria, including well known bacteria such as:

- Legionella pneumophila
- Escherichia coli
- Listeria monocytogenes
- Salmonella enterica
- Campylobacter jejuni



Eliminating the problem - biofilm

Biofilm is always the problem when dealing with bacterial growth in water. NEUTHOX® is the only biocide that is able to remove biofilm entirely - and does so at very low concentrations.

Biofilm is recognizable by its slimy substance. It occurs naturally in all water environments, and you may have come across it by the ocean or a creek, where stones are covered in a shiny coat of biofilm. You may also have come across it while cleaning the shower drain.

It may sound harmless, but it is not. Bacteria thrive in biofilm and once the biofilm has developed it can be difficult to remove.

NEUTHOX®, being the only biocide able to completely remove biofilm, has been scientifically proved to be highly effective in doing so within few hours.

Biofilm in piping is removed easily by NEUTHOX® making the purchase of new pipes or continuous use of hazardous chemicals absolutely redundant.

NEUTHOX® does not only remove the existing biofilm, it also prevents future occurrence of it, which is a very unique ability.

The ECA technology is the only available technology capable of helping you achieve an absolute biofilm-free water system.



How we can help

NEUTHOX® is proven to effectively remove biofilm within a short period of time. This means that dangerous bacteria such as Legionella, Salmonella, Listeria and E.coli will be eliminated, and the future occurrence of any biofilm is prevented.

Fighting Legionella

Within many industries one of the biggest problems is bacterial growth in the water pipes. One of these bacteria groups is particularly dangerous to humans - Legionella.

Legionella got its name from an incident in 1976 where an outbreak of an unknown disease among people attending a convention of the American Legion infected 221 people and killed 34.

The disease is now known as Legionnaires' Disease and is transmitted by inhalation of small particles of contaminated

water from sources such as air-conditioning systems, cooling towers and hot-water tanks.

Legionella occurs naturally in water and thrives in hot water. The growth of Legionella bacteria is therefore often seen in piping in larger buildings such as hospitals, apartment buildings, hotels and etc.



Waste water treatment

Waste water can easily be treated without the use of hazardous chemicals.

Adding NEUTHOX® to waste water will reduce the bacteria count to a safe level without contaminating the environment.

Industrial cooling towers

Whether direct cooling or indirect cooling - both types of cooling towers need to control the bacteria level. Biofilm in cooling towers does not only host dangerous bacteria, it also reduces the performance considerably.

Indirect cooling towers can experience a severe drop in performance if biofilm develop on the heat exchanger's surface. This will reduce the heat transfer and cause a need for the use of more electricity.

NEUTHOX® removes the biofilm completely and prevents it from ever occurring again, while contributing to a decrease in the consumption of electricity.

Our solution is suitable for a wide range of industries and applications.



Improving animal health

Self-contamination in drinking water is a common known problem within agriculture. It can cause animals to suffer from different diseases, which often results in costly medical treatments.

Improving the water quality will improve the animals' health, which will eventually lead to the animals being more productive.

Drinking water treatment

NEUTHOX® is approved for treatment of drinking water in European countries.

When using NEUTHOX® as a disinfection agent for drinking water, the water will be safe for consumption. With NEUTHOX® there is no unpleasant odour and taste, which is often the case with conventional chlorine based water treatment.



Let us help you

We offer a safe, non-toxic and eco-friendly solution to bacteria control in water.

Our ECA generators produce the disinfectant NEUTHOX[®], which will help you achieve high water quality.

Adding NEUTHOX[®] to the water ensures the elimination of dangerous bacteria.

The ECA technology, which our generators are based on is the only available technology capable of helping you achieve an absolute biofilm-free water system.



"Our mission is to provide cost effective, safe, environmentally responsible solutions to bacterial control in the food and water industries"



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