

## **Sterisol - One of the most significant developments for the production of metastable disinfectants for the sterilization of drinking water**

### ***Total disinfection without side effects***

Leading scientists and responsible government officials agree that one of the biggest concerns in the future will be how to supply humanity with germ-free drinking water. Over one billion people lack access to clean drinking water and more than 2.9 billion have no sanitation facilities. It is sad but true that in our world, a child dies every eight seconds from drinking contaminated water. How many diseases are microbially induced in our part of the world at present and how many will be induced in this way in the future is uncertain. It would surely be worthwhile to discuss and investigate this matter further in order to reach the pertinent conclusions.

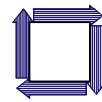
It is a well-known fact that water is an extremely sensitive product and above all a strategic one in the event of military conflicts and it will become even more important as time goes by. The research and development in this field have advanced greatly in the last thirty-five years, especially in Russia. A large number of scientists carried out research to develop processes that allow contaminated water to be made quickly drinkable, without leaving undesirable residues due to either insufficient cleaning or to chemical or biological decontamination agents. In the first place, however, the aim was to purify completely water that was contaminated by microbes. Success was achieved for the most part through intensive research and through the accumulation of certain coincidences. One very interesting

method, called diaphragm-electrolysis, came about in this way and we developed it further into an industrial process. This new technology allows the production of two highly active metastable disinfectant solutions: the Anolyte (by the anode current) and the Catholyte (by the cathode current). Both substances are produced electrochemically, mainly from water with a very small amount of special salts.

**The two solutions, which are rightly called "electrochemically-activated water", are able to make harmless all known bacteria, viruses, germs, etc., without allowing the formation of resistances or causing untoward effects. Consequently, total disinfection is achieved without side effects and without harmful residues.**

The recent widely-reported antibiotics scandals have made it drastically clear that the thought-less handling of non-degradable or difficultly degradable substances poses a lasting threat to the health of humans and animals.

Responsible physicians agree that viruses, bacteria and, in recent times, prions, are the main cause of outbreaks of semi-epidemic diseases. These agents propagate more easily if the immune systems are weakened. The resulting illnesses are fought today with various pharmaceutical products, to some extent with rather questionable success. Resistances are steadily arising. Moreover, tissue deposits are demonstrably rising in slaughtered animals, that is, in the meat entering the food cycle, and in the end they reach humans with their negative effects.



Likewise, the fact that "electrochemically-activated aqueous solutions" are, in many cases, effective prophylactic agents in animal breeding and animal feeding, has been corroborated by the most diverse experiences for many years. It has been proven, in particular, that the immune systems becomes strengthened significantly with even very low doses of Anolyte. In the field of cleaning and disinfection and in many other applications, the use of **Anolyte** and **Catholyte** is an unquestionable solution to problems.

In Canada and, increasingly, in Germany, Austria and Switzerland, diaphragm-electrolysis processes are being used successfully for disinfection of drinking water, farming and dairy operations, industrial cooling circuits, swimming pools, and the cleaning of foods.

### **HOW EFFECTIVE IS "ELECTROCHEMICALLY-ACTIVATED WATER" AGAINST MICROBES?**

The Anolyte disinfectant solution has a redox voltage of approx. 1200 mV. Consequently, it is up to 300 times more effective than any other type of sterilization means. There is no difficulty, for example, in keeping medical instruments sterile under cold conditions by means of Anolyte. Diaphragm-electrolysis solutions contain no harmful by-products and are neither toxic nor corrosive when used in appropriate concentrations.

### **CLEAN CLEAR DRINKING WATER IS THE BEST WAY TO PROTECT HEALTH!**

Zimmermann, based in Münchenstein, Switzerland, has made this its goal. The company cooperates with prominent scientists, uses the Russian research

centres' world-patented reactors, and has developed a special process for the production of the solutions. This patented process now allows safe complete sterilization of drinking water at a minimal expense. In this way, for example, Anolyte is used instead of chlorine to make all the fill-water for the airliner tanks at the Frankfurt airport as completely and safely germ-free as the cooling circuits at Bayer's facilities in Leverkusen.

The necessary knowledge and no less essential experience for the most diverse applications has been acquired through years of endeavour. All this we place at our customers' disposal.