



Dez-i-des 100 - waste water disinfection

FECAL GERMS AND EFFECTS

Water contaminated by bacteria from human and animal excrements (urine, feces) can cause diverse illnesses such as diarrhea or urinary tract infections. Indicators and triggerare the fecal germs escherichia coli (e-coli) and enterococci.

FECAL GERMS AND DRINKING WATER

The diverse mechanical/biological waste water treatment plants aim at the reduction of the organic load. Fecal germs however pass the treatment plants and enter the environment together with the waste water and often also enter drinking water reservoirs.

WASTE WATER DISINFECTION AND DIAMOND ELECTRODES

Mechanically/biologically pretreated waste water from a clarification plant is pumped through the pro aqua disinfection cell. The diamond electrodes integrated in this cell are supplied with voltage and produce oxidizers such as OH-radicals, chlorine, ozone without the adding of chemicals or other auxiliary agents directly from the water and its contents. These oxidizers kill the fecal germs e-coli and enterococci in the waste water.

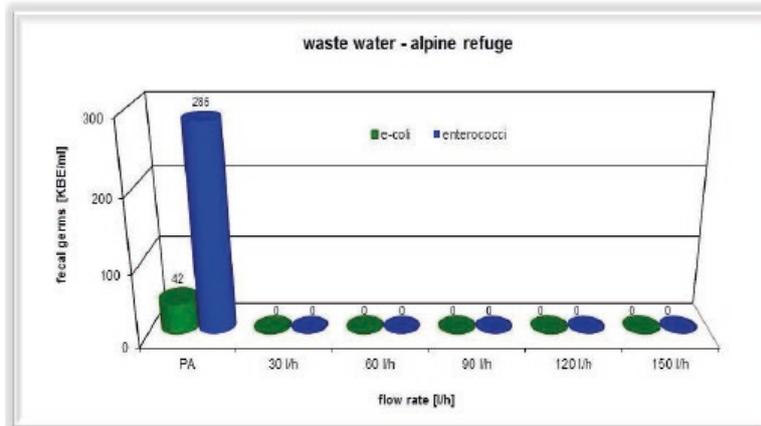
APPLICATION FIELDS

pro aqua disinfection cell has been developed for buildings (detached houses, cabins, scattered settlements) in less densely populated or decentralized areas. It is often not possible to connect these buildings to the public/municipal sewage system for geographic or economic reasons.

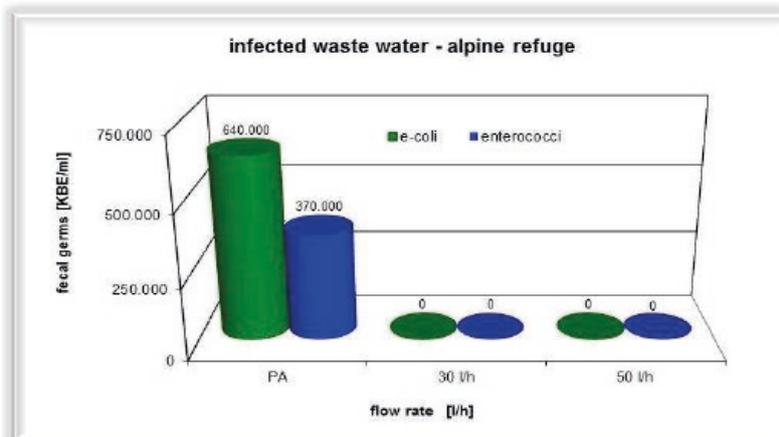
DISINFECTION EFFICIENCY

The use of a disinfection cell in situ has shown that fecal germs can be killed efficiently. This was also the case for the waste water of an alpine refuge which is operated throughout the year. The initial load of e-coli of 42 KBE/ml (total bacterial content) and enterococci of 285 KBE/ml could be reduced completely at flow-through of 150 l/h (litre per hour).

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The waste water of the alpine refuge was taken to a laboratory for an extreme test and was infected with fecal germs there. Therefore the waste water had a very high concentration of germs. The results in this diagram prove that despite the high contamination all fecal germs (reduction of more than 105) could be killed.



RESUMEE

The use of the disinfection cell in situ without problems and for years in the meantime proves that it is very suitable for decentralized objects. The present results of the extreme test also demonstrate that the disinfection cell still shows high potential, such as the increase of the flow-through.