



PAC-Solution Ltd. has launched an environmentally-friendly disinfectant treatment system that enables wastewater to be reused for agricultural irrigation. The system offers effective purification without any harmful by-products often associated with traditional cleaning methods.

The development of this chemical-based treatment technology comes at a time when many countries are faced with challenges in their water supply. The ability to use purified wastewater in irrigation and other agricultural applications reduces the demand on exploitable raw water resources and supports the farming industry. Sustainable wastewater purification system is energy-efficient and does not create harmful by-products at any stage of the process.

A safe chemical

In order to be suitable for agricultural use, wastewater has to meet certain quality criteria particularly with regard to microbial quality. The PAC-Solution system is a chemical treatment technology based on peracetic acid (PAA) as the active component in the chemical mixture, which already has application as a disinfectant in the food, beverage and paper industries. PAA is used alongside hydrogen peroxide which has synergistic effects in many applications. Chemicals used in the PACS8 system are called PACS5 or PACS12 and contain 5% or 12 % PAA respectively.

PACS is an ideal anti-microbial agent because of its high oxidation potential which makes it effective against many types of bacteria, viruses and spores. After PACS-based disinfection there is no microbial reactivation as is the case with other treatments. It does not generate any harmful by-products with acetic acid and water being the only residues and the acetic acid rapidly decomposes in to carbon dioxide in natural aquatic systems.

How it works

PAC-Solutions' PACS8 system controls the disinfection process to ensure optimized performance and cost-effectiveness. The equipment carries out controlled dosing of the disinfectant chemicals, performs online measures and automated analysis. The online measurements relate to the water flow, reduction-oxidation potential and residual disinfectant which ensure that the correct amount of chemical is delivered to produce a cost-effective and environmentally safe wastewater treatment. Compared to other existing alternatives such as chlorine-based treatments or ozonation, the PACS solution does not create harmful carcinogenic or disinfection by-products. Real time automated systems are equipped with remote monitoring and control as well as data transfer.

Being easy to use and almost maintenance free, the PAC-Solution approach is also energy-effective when compared to other methods of disinfecting wastewater such as ultraviolet radiation, for example. The system can be scaled for daily flow rates from 10,000 to over 1,000,000 cubic metres making it suitable for a broad range of agricultural, industrial and municipal wastewater concerns.

About PAC-Solution Ltd.

PAC-Solution Ltd. is a young, innovative clean technology company specializing in environmentally friendly and energy-efficient wastewater and raw water treatment systems. The company operates worldwide with a presence in major markets such as China, Russia, Brazil, South-Africa, Saudi-Arabia and the European Union. Its main activities are the design and manufacture of systems for wastewater post-disinfection, odour removal, the prevention of swelling sludge, sludge disinfection and raw water treatment. Systems can be easily integrated into established operating plants.

PAC-Solution Ltd. is exhibiting at following trade fairs:

- IFAT ENTSORGA May 7-11, Munich Germany, stand A5 609
- WISA May 6-10, Capetown South-Africa, stand D29
- ECWATECH June 5-8, Moscow Russia, stand 13D9.2