

Supercavitation *a method for water disinfection*

Field of use

Water treatment plants,
hydroponic crop
production farms,
swimming pools

Current state of technology

Prototype developed
and tested

Intellectual property

patent application no.:
20200482.6

Developed by

University of Ljubljana,
Faculty of Mechanical
Engineering in collaboration
with National Institute of
Biology and »Jožef Stefan«
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Reference

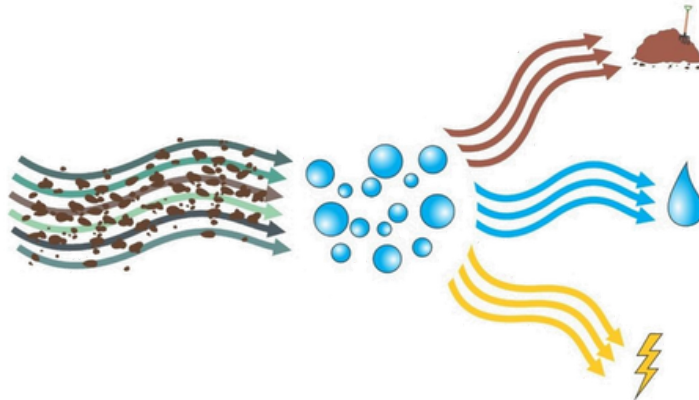
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Background

Standard water disinfection methods involve extremely energy consuming heating to high temperatures for a long time. A popular method of disinfecting water is also chemical treatment, where various chemical compounds, e.g. chlorine are added. This method is mainly used for cleaning drinking water and swimming pools water in baths. Other cleaning methods are based on the radiation of various energy particles, such as e.g. electrons or photons. Both ultraviolet radiation (UV light) and gamma ray radiation are used for disinfection. In addition to the listed methods, the method of cleaning with the help of ozone is also possible.

Description of the Invention

Our invention combines two methods of water purification, cavitation and plasma. Both methods are effective in cleaning the water, where each has its advantages and limitations. In the invention, both methods were combined to take advantage of each method. The advantage of the invention over other methods of water purification is mainly in energy efficiency and the fact that no additional chemicals are needed for efficient operation. The advantage of the invention is also in the relatively simple design, which is extremely flexible in terms of quantity needs purified water. The device described by the invention can be scaled and adapted to specific needs individual problem.

Main Advantages

- Effective purification
- Energy efficient
- Simple design