

Experiment with microbial removal by hydrodynamic cavitation

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When cavity made of various ways is collapsed, Shock wave or water jet is occurred. because it, Surrounding solid is eroded. Therefore, Because, It makes severe damage to equipment, Conventional awareness about the cavitation was a target that should be restrained. However, In this study, We assumed that foreign substance like microbes in water can be eliminated by effect of cavitation, And produced cavitation in water existed microbes. It has various method for producing cavitation like ultrasonic. In this study, We used hydrodynamic method that the cavitation is occurred when fluid flows through a decompression device. Typical cavitation equipment of hydrodynamic is orifice or venturi. Among of these, Orifice can be manufactured easily and cheaply, and it has bigger pressure difference than venturi. Therefore, In this study, We produced cavitation using orifice. Then, collected the water each time, and checked elimination of microbes, and figured out relation between operation time and microbes elimination.