STUDY OF WATER QUALITY IMPROVEMENT WITH POTTERY FILTER AND OZONATION SYSTEM

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Abstract

Pottery filter is a simple tool that can be used to filtering the water. Ozone is a strong oxidant that can be used as disinfection of water treatment. This study testing the effectiveness of pottery filter and ozonation as a water purifier in household scale.

The variables of this study is about comparing the treatment of raw water and contact time of ozon by 2 minutes, 4 minutes, 6 minutes, 8 minutes. In this research, the reactor was intermittently operated to know the results of parameters changes, E.coli, turbidity, organic matter. This research used well water which it was really used as a source of daily drinking water.

The results showed that treatment with a contact time of ozone for 8 minutes or ozone dose of $5.7 \times 10^{-2} \mu g$ has not been able to provide the water that meets drinking water standards, because the processed water still contain bacteria E.coli. From the operation of equipment and with a contact time of ozone for 8 minutes have the power allowance against the bacteria E. coli amounted to 97.2%.

Keywords: Pottery filter, Ozon, Drinking water treatment