THE APPLICATION OF MARBLE-CERAMICS FILTER FOR NEAR THE RIVER GROUNDWATER TREATMENT

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Abstract

The river water is vulnerable to contamination that may directly affect in a decrease of the quality of near the river groundwater. This may caused due to intrusion of river water into the soil around so that groundwater quality is affected. Various kinds of pollutants from domestic and industrial waste contaminate the groundwater, for example Fe and Mn, therefore this research is done to reduce the rate of Fe and Mn in groundwater near the river by using the marble-ceramics filter.

The variables that used in this study are the diameter of marble 1.5 cm, 1 cm, and 0.5 cm, then the height of marble 40 cm high, 50 cm, 60 cm and ceramic using 5-10 cm diameter.

Based on research, the removal of Fe and Mn using the variables above has not been so effective. The best removal efficiency variation present in the filter with a diameter of 0.5 cm and 60 cm high with 39.64% efficiency for Fe, and 45.22 for Mn.

Keywords : Marble filter, Filtration, Ground Water, Iron, Mangan.
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