

ABSTRACT

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REDUCTION IRON (Fe) GROUNDWATER USING AERATION WITH
BUBBLE AERATOR AND ZEOLITE STONE FILTRATION

X + 56 Pages + 9 Tables + 6 Pictures + 7 Attachments

Iron is a chemical element that can be found in almost every place on earth, in all geological layers and in all water bodies. Excessive levels of iron (Fe) in water will cause corrosion of iron, smells fishy, makes yellow stains on white equipment. With the iron content in the water, it is necessary to reduce the iron content (Fe) in the water.

This study aims to determine the ability of bubble aerators and zeolite stone filtration in reducing iron (fe) in water to meet the quality standards set by the Minister of Health. This type of research is an experiment on the design of a bubble aeration device with aeration times of 40, 50, 60 and 70 minutes and zeolite stone filtration, using 6 replications. By using the Friedman test.

Based on the results of the research that has been done, it can be seen that using an aeration bubble design with an aeration time of 50 minutes and zeolite stone filtration has the highest level of effectiveness. The results of the analysis with statistical tests using the Friedman test can be concluded that there are differences in iron content before and after treatment. For further research, it is necessary to examine the iron (Fe) content after the aeration process.

Literature :

Keywords : Groundwater, Bubble aerator, Filtration, Iron (Fe)

