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Perbedaan Penggunaan Jenis Media Filtrasi Pasir dengan Karbon Aktif terhadap Penurunan Fe (Besi) Air Sumur Gali di Dusun Sidomulyo, Trimulyo, Sleman

Dena Kurnia Isradaningtyas, Tuntas Bagyono, Herman Santjoko

Abstract

Water is the most essential need for people to fulfill their daily needs. Residents in Sidomulyo Hamlet, of Trimulyo Village, in Sleman District, use dug wells as the primary source of clean water supply. However, the water quality gained is low because of high iron content in it. The study was aimed to determine the differences between sand and activated carbon as filtration media for decreasing Fe concentration, by conducting a pre-test post-test with control

group designed experiment with five replications. The study results showed that sand media was able reduce the Fe in average of 1.18 mg/l, while with activated carbon media it was 1.27 mg/l, and in the control group it was 0.4 mg/l. The analysis of one way anova test at 95 % confidence level obtained pvalue <0,001, which means that the differences is significant. To conclude, to decrease the Fe content in Sidomulyo Hamlet, the well water can be processed by filtration, either with sand or activated carbon. Nonetheless, activated carbon media is proved more effective.

Keywords

dug well water; iron; filtration; sand; activated carbon

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