

PENURUNAN KONSENTRASI COD, TSS, TOTAL NITROGEN AIR LIMBAH DOMESTIK DENGAN *CONSTRUCTED WETLANDS* MENGGUNAKAN TANAMAN KANGKUNG AIR (*Ipomoea aquatica*)

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ABSTRACT

*Constructed wetlands is an alternative of wastewater treatment technology using natural treatment concept. Constructed wetlands is a shallow pond containing some sorts of substrate e.g dirt, gravel and water plant. Constructed wetlands employed activities of microorganism in the soil and plants to treat the wastewater. Constructed wetlands system can be used to remove BOD, COD, TSS, Nitrogen, Phosphor, Pathogenes and heavy metals in domestic wastewater or in industrial wastewater. This research employed free water surface system and *Ipomoea aquatica* plant. Concentration of domestic wastewater and detention time were the variables and the parameters examined were COD, TSS and Total Nitrogen. The highest efficiency of COD removal which was 53,692 %, was achieved in 100 % reactor on the 10th day. The highest efficiency of TSS removal, which was 68,727 %, was achieved in 100 % reactor on the 10th day and the highest efficiency of Total Nitrogen removal, which was 42,728 %, was achieved in 100 % reactor on the 10th day.*

Keyword : *Constructed wetlands, COD, TSS, Total Nitrogen*