

DETERMINASI COD, PH, DAN INTENSITAS WARNA PADA LIMBAH CAIR INDUSTRI SONGKET MENGGUNAKAN ADSORBEN AMPAS TEH

DETERMINATION OF COD, pH AND COLOR INTENSITY ON SONGKET INDUSTRIAL WASTE USING TEA DREGS AS ADSORBENT

Indah Purnamasari, Muhammad Yerizam, Nyayu Zubaidah

Staf Pengajar Jurusan Teknik Kimia Politeknik Negeri Sriwijaya
Jl. Srijaya Negara Bukit Besar, Palembang 30319
email : indah_chemistry@yahoo.com

ABSTRACT

The activities of textile industry is often pollute the surrounding environment. It also occurs in industrial of Palembang Weaving Songket. It influences the acidity and colored of the water. To manage this condition, the colored wastewater using adsorbents that absorbed from tea dregs. This study aimed to determine the effect of tea dregs adsorbent for wastewater quality improvement Songket industry. The Method of treatment of wastewater is used Batch system, which the wastewater is placed in a container by adding the adsorbent from the dregs of tea. The used of variable is the absorption time for 2 hours, 4 hours, and 6 hours, with the composition of adsorbent mass 5 gr, 10 gr, and 15 gr. Tea dregs that used in this study has the 19.26% of hemicellulose, 39.54% of cellulose and lignin 20%. It takes four hours for the research in order to obtain maximum results, with tea dregs adsorbent composition that produces a pH smaller than the initial waste 6, COD content of 89.41 gr / L, and 3.993 ppm color intensity. Therefore, adsorbent from the dregs of tea is very useful for the development of the textile industry, especially for Songket industrials.

Keywords: Tea Dregs, adsorbents, Batch Process