

**STUDI PENDAHULUAN LUMPUR SIDOARJO  
SEBAGAI ADSORBEN LIMBAH ZAT WARNA TEKSTIL  
( REAKTIF : PROCION RED MX-5B )**

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**ABSTRACT**

The growth of Indonesian textile industry has positive effect for economy, but it also has negative effect for environment by producing waste. Primary characteristic of textile industry is high content of sintetic dyes. Textile dyes are non-biodegradable organic compounds that can potentially make environmental pollution. One of the methods that can be applied for reducing dyes is adsorption. Sidoarjo mud has kaolinit-montmorilonit mineral compound. This mineral can be used for adsorbent, because of the electricity contents and ability to tie up metal ions and organic compounds. This research had been done adsorption experiment of textile dyes (reaktif : Procion Red MX-5B) using Sidoarjo mud adsorbent. Adsorption experiment had been done by batch reactor with different methods of mud activation. From experiment result, acid activation method has the biggest adsorption efficiency compared to alkali and hotting (neutral) activation method. Acid adsorbent has adsorption efficiency until 96,5 %. While alkali adsorbent can only reach the efficiency of 12,5 % and 57,5 % for neutral adsorbent. Adsorption model for acid and neutral adsorbent follow BET isotherm, while alkali adsorbent is follows Langmuir isotherm.

*Key word : Adsorption, Sidoarjo mud, textile dyes*