

## ABSTRAK

### PEMANFAATAN KULIT DURIAN SEBAGAI ADSORBEN DALAM PENYISIHAN WARNA DAN BAHAN ORGANIK PADA AIR GAMBUT

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#### **Abstrak**

Masyarakat Desa Mentaro Kabupaten Muaro Jambi sebagian menggunakan air gambut sebagai sumber air bersih untuk memenuhi kebutuhan sehari-hari. Tingginya kadar warna dan BOA pada air gambut dapat dikurangi dengan metode adsorpsi menggunakan limbah biomassa. Pada penelitian ini limbah biomassa yang digunakan kulit durian. Penelitian ini bertujuan untuk mengetahui pengaruh variasi massa dan efektifitas adsorben kulit durian dalam menyisihkan kadar warna dan BOA pada air gambut. Variasi massa adsorben antara lain 9,18 dan 27 gr dengan perlakuan aktivasi NaOH 2% dan non aktivasi. Nilai kadar awal warna di tiga titik sampling menunjukkan nilai dari 850-970 ptCo dan kadar Bahan Organik Alami 79-82 mg/l. Hasil penelitian menunjukkan variasi massa 27 gr adsorben kulit durian mampu menyisihkan kadar warna dan BOA pada air gambut dengan efisiensi penyisihan 9,32- 13,61 %. Adsorben kulit durian efektif dalam menyisihkan kadar warna dan BOA Hal ini menunjukkan adsorben kulit durian mampu dan efektif dalam penyisihan kadar warna dan BOA pada air gambut Desa Mentaro.

**Kata Kunci** : Air Gambut, BOA, Kulit Durian, Warna

## ABSTRACT

### USE OF DURIAN SKIN AS AN ADSORBENT IN THE REMOVAL OF COLOR AND ORGANIC INGREDIENTS IN PEAT WATER

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The people of Mentaro Village, Muaro Jambi Regency, partly use peat water as a source of clean water to meet their daily needs. High levels of color and BOA in peat water can be reduced by adsorption methods using biomass waste. In this research, biomass waste was used for durian skin. This research aims to determine the effect of mass variations and the effectiveness of durian peel adsorbent in removing color and BOA levels in peat water. Variations in adsorbent mass include 9.18 and 27 gr with 2% NaOH activation and non-activation treatment. Initial color content values at three sampling points showed values of 850-970 ptCo and Natural Organic Material levels of 79-82 mg/l. The research results showed that variations in the mass of 27 grams of durian peel adsorbent were able to remove color and BOA levels from peat water with a removal efficiency of 9.32-13.61%. Durian skin adsorbent is effective in removing color and BOA levels. This shows that durian skin adsorbent is capable and effective in removing color and BOA levels in the peat water of Mentaro Village.

**Keywords** : Peat Water, Color, Natural Organic Matter, Durian peel adsorbent