

**UJI FUNGSIONAL GRANULA ARANG AKTIF KULIT JENGKOL
SEBAGAI ADSORBEN**

SKRIPSI

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Uji Fungsional Granula Arang Aktif Kulit Jengkol Sebagai Adsorben

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ABSTRAK

Penelitian ini telah dilakukan di Laboratorium Biokimia hasil Pertanian dan Gizi Pangan, Laboratorium Teknologi dan Rekayasa Proses Hasil Pertanian dan Laboratorium Instrumen Fakultas Teknologi Pertanian Universitas Andalas Padang. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan adsorben kulit jengkol terhadap perbaikan kualitas air tanah dan minyak jelantah. Penelitian menggunakan Rancangan Acak lengkap (RAL) dengan 5 perlakuan dan 4 ulangan. Perlakuannya adalah perbedaan jumlah kali penyaringan dengan masing-masing A = 1 kali, B = 2 kali, C = 3 kali, D = 4 kali, E = 5 kali. Pengamatan yang dilakukan yaitu pH, warna, berat jenis, asam lemak bebas, angka peroksida, bilangan iod, bilangan penyabunan, total padatan terlarut. Data yang diperoleh dianalisis dengan menggunakan ANOVA, apabila berbeda nyata dilanjutkan dengan uji Duncan's New Multiple Range Test (DNMRT) pada taraf nyata 5%. Hasil terbaik yang diperoleh dari penyaringan minyak jelantah yaitu pH 6,0, berat jenis 0,911 g/cm³, warna menjadi lebih cerah, bilangan penyabunan 72,47, asam lemak bebas 1,38%, bilangan iod 15,50, kadar air 0,044%. Hasil terbaik dari penyaringan air tanah diperoleh pH 6,7, berat jenis 1,00 g/cm³, total padatan terlarut 40 mg/L.

Kata Kunci - adsorben, kulit jengkol, air tanah, minyak jelantah

UNTUK

KEDJAJAAN

BANGSA

Functional Test of Activated Carbon Granules Jengkol As Adsorbent

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ABSTRACT

This research has been conducted in Laboratory of Agricultural Biochemistry and Food Nutrition, Laboratory of Technology and Process Engineering of Agricultural Products and Instrument Laboratory of Faculty of Agricultural Technology Andalas University of Padang. This study aims to determine the effect of jengkol skin adsorbent on improving the quality of groundwater and cooking oil. The study used complete Randomized Design (RAL) with 5 treatments and 4 replications. The treatment is the difference of number of filtration times with each A = 1 time, B = 2 times, C = 3 times, D = 4 times, E = 5 times. Observations made were pH, color, specific gravity, free fatty acid, peroxide number, iodine number, saponification number, total dissolved solids. The data obtained were analyzed using ANOVA, if significantly different, followed by Duncan's New Multiple Range Test (DNMRT) test at 5% real level. The best results obtained from the filtering of waste cooking oil that is pH 6,0, specific gravity 0.911 g / cm³, the color becomes brighter, saponing number 72.47, free fatty acid 1.38%, iodine number 15.50, moisture content 0.044% . The best result from groundwater filtration was obtained pH 6.7, specific gravity 1.00 g / cm³, total dissolved solids 40 mg / L.

Keywords - adsorbent, husk jengkol, ground water, waste cooking oil

