

Pengaruh Pemberian Arang Aktif dari Tempurung Kelapa yang Telah diAktivasi dengan Asam Fosfat Terhadap Sifat Fisiko Kimia Minyak Jelantah yang Dihasilkan

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ABSTRACT

Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan jumlah pemberian arang aktif dari tempurung kelapa yang diaktivasi dengan asam fosfat terhadap sifat fisiko kimia minyak jelantah yang dihasilkan. Penelitian ini dilakukan di laboratorium Laboratorium Incasi Raya Edible Oil dan Laboratorium Teknologi Pertanian Universitas Andalas. Penelitian ini menggunakan rancangan acak lengkap, dengan 5 perlakuan dan 3 ulangan. Analisis data menggunakan metode ANOVA dan jika berbeda nyata dilanjutkan dengan DNMRT (Duncan's New Multiple Range Test pada taraf 5%. Parameter yang diuji yaitu sifat fisik meliputi warna, berat jenis, rendemen dan sifat kimia yaitu Free Fatty Acid (FFA), bilangan asam, bilangan peroksida, bilangan iod, kadar air. Hasil penelitian menunjukkan berpengaruh nyata terhadap warna, densitas, rendemen, asam lemak bebas, bilangan asam dan kadar air, sementara tidak berpengaruh nyata terhadap bilangan iod dan peroksida pada minyak jelantah. Hasil terbaik yang didapatkan pada penelitian ini adalah perlakuan E dengan konsentrasi arang aktif 7%, dengan nilai warna 4,7/51, berat jenis 0.9122 g/cm³, rendemen 73,6%, FFA 0,304%, bilangan asam 0,65 mgKOH/g, bilangan peroksida 17,96 mekO₂/kg, bilangan iod 58,04 g iod/100 g minyak, kadar air 0,13%

Kata Kunci : *arang aktif tempurung kelapa, asam fosfat, minyak jelantah*



The Effect of Active Charcoal from Coconut Shell that Has Been Activated by Phosphoric Acid Against Physico Chemistry Properties Generated Used Cooking Oil

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ABSTRACT

This research aims to determine the effect of differences in the amount of administration of activated charcoal from coconut shell activated with phosphoric acid to the physico chemistry properties by used of cooking oil produced. This research was conducted in the Incasi Raya Edible Oil Laboratory and Agricultural Technology Laboratory, University of Andalas. This study used a completely randomized design, with five treatments and three repetitions. The data analyzed using ANOVA method followed by DNMRT (Duncan's New Multiple Range Test) at 5% level. The parameters examined were physical properties consist of color, density, yield and chemical properties were Free Fatty Acid (FFA), acid value, peroxide, iodine number, water content. The results showed significant effect on the color, density, yield, free fatty acids, acid value and water content, but not significantly effect on iodine value and peroxide on used cooking oil. The best results obtained in this research was the treatment E with 7% concentration of activated charcoal, the color value of 4.7R/51Y, 0,936 g/cm³ density, yield (73,6%), (0,304%) FFA, acid value (0,65 mgKOH/g), peroxide (17,96 mekO₂/kg), iodine value (58,04 g iod/100g oil), the water content (0,13%).

Keywords : *coconut shell activated charcoal, phosphoric acid, used cooking oil*

