# ABSTRAK


**PEMANFAATAN KULIT JAGUNG SEBAGAI BIOADSORBEN UNTUK MENURUNKAN KADAR ASAM LEMAK BEBAS (FFA) DAN KADAR AIR PADA MINYAK GORENG BEKAS**

(Melta Harseli, 2026, 47 Halaman, 6 Tabel, 23 Gambar, 4 Lampiran)

Penelitian yang dilakukan bertujuan untuk memurnikan minyak goreng bekas dan menguji kualitas minyak goreng bekas hasil pemurnian menggunakan bioadsorben. Proses pemurnian dilakukan dengan metode adsorpsi menggunakan bioadsorben dari kulit jagung dan telah diaktivasi oleh NaOH 0,1 M dengan variasi massa bioadsorben dan waktu pengadukan. Minyak goreng bekas yang telah diadsorpsi kemudian dianalisis kulitasnya melalui uji kadar air, uji asam lemak bebas (FFA), dan bilangan peroksida. Hasil pengujian menunjukkan bahwa minyak setelah diadsorpsi pada massa bioadsorben 15 gram dan waktu pengadukan 120 menit, memiliki kadar sebesar 0,1%, kadar asam lemak bebas sebesar 0,3%, dan bilangan peroksida sebesar 10 mek $O_2$/kg. Berdasarkan hasil pengujian, minyak goreng bekas setelah diadsorpsi telah memenuhi standar mutu minyak goreng SNI 7709:2019.



***Kata kunci:*** minyak goreng bekas, adsorben, asam lemak bebas, kadar air, bilangan peroksida.

# ABSTRACT

## UTILIZATION OF CORN HUSK AS A BIOADSORBENT TO REDUCE FREE FATTY ACID (FFA) CONTENT AND WATER CONTENT IN USED COOKING OIL

(Melta Harseli, 2026, 47 *Pages*, 6 *Tables*, 23 *Images*, 4 *Attachments*)

*This research aims to purify used cooking oil and test the quality of the purified used cooking oil using a bioadsorbent. The purification process was carried out using the adsorption method with a bioadsorbent made from corn husk, which had been activated with 0.1 M NaOH, using variations in bioadsorbent mass and stirring time. The adsorbed used cooking oil was then analyzed for its quality through water content testing, free fatty acid (FFA) testing, and peroxide value testing. The test results showed that the oil, after being adsorbed at a bioadsorbent mass of 15 grams and a stirring time of 120 minutes, had a water content of 0.1%, a free fatty acid content of 0.3%, and a peroxide value of 10 meq $O_2$/kg. Based on the test results, the used cooking oil after adsorption had met the cooking oil quality standard of SNI 7709:2019.*

**Keywords:** *used cooking oil, adsorbent, free fatty acid, water content, peroxide value.*