

ABSTRACT

UTILIZATION OF CORN COBS (*Zea mays L.*) TO REQUALITY USED COOKING OIL

by :

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The study of requality used cooking oil was done with corn cobs (*Zea mays L.*) as sorbent. In this research parameters studied were weight variation corn cobs are 5, 10, 15, and 20 g and contact time is 7, 14, 21, and 28 days was studied for analysis of colour, free fatty acid (FFA), peroxide value (PV), and concentration of cholesterol. The results showed that the optimum condition of the variation of the weight is 15 g and contact time is 28 days. The percentage of decrease colour could reduced 29,1349%, FFA 87,1815% and PV 75,5602%. Analysis concentration of cholesterol for total cholesterol reduced 108,9 mg/dL, triglycerides 128,78 mg/dL, low density lipoprotein 58,2 mg/dL, and malondialdehyde 5.88 nmol/mL. The data of SEM seem had porous morphology at surface corn cobs.

Keyword : Used cooking oil, Corn cobs, biosorption, FTIR, SEM

