

## Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh jumlah pengulangan penggorengan dan jenis minyak goreng terhadap kualitas minyak dan produk goreng (singkong) menggunakan metode deep fat frying pada suhu 180°C. Minyak yang digunakan adalah Red Palm Oil (RPO) dan Palm Oil (PO), diuji selama lima kali pengulangan penggorengan. Parameter yang dianalisis meliputi bilangan peroksida, kadar air, asam lemak bebas, kadar kotoran, pH, dan uji organoleptik (rasa, tekstur, dan warna). Hasil analisis ANOVA dua faktor menunjukkan bahwa jumlah pengulangan berpengaruh signifikan terhadap kadar asam lemak bebas dan kadar air. Interaksi antara jenis minyak dan jumlah penggorengan juga menunjukkan pengaruh signifikan terhadap kedua parameter tersebut. Namun, tidak ditemukan pengaruh signifikan terhadap bilangan peroksida, kadar kotoran, dan pH. Hasil uji organoleptik menunjukkan nilai tertinggi pada penggunaan RPO. Disarankan agar minyak tidak digunakan lebih dari 2–3 kali penggorengan untuk menjaga kualitas dan keamanan pangan.

**Kata kunci:** Red Palm Oil, Palm Oil, Deep Fat Frying, Singkong, Bilangan Peroksida, Asam Lemak Bebas.

## Abstract

This study aims to determine the effect of the number of frying repetitions and the type of cooking oil on the quality of oil and fried products (cassava) using the deep fat frying method at a temperature of 180°C. The oils used were Red Palm Oil (RPO) and Palm Oil (PO), tested for five frying repetitions. The parameters analyzed included peroxide value, water content, free fatty acids, dirt content, pH, and organoleptic tests (taste, texture, and color). The results of the two-factor ANOVA analysis showed that the number of repetitions had a significant effect on free fatty acid content and water content. The interaction between the type of oil and the number of frying also showed a significant effect on both parameters. However, no significant effect was found on the peroxide value, dirt content, and pH. The results of the organoleptic test showed the highest value in the use of RPO. It is recommended that oil not be used more than 2–3 times frying to maintain food quality and safety.

**Keywords:** Red Palm Oil, Palm Oil, Deep Fat Frying, Cassava, Peroxide Value, Free Fatty Acids