

## **PEMBUATAN MINYAK INTI SAWIT DENGAN METODE PENGASAMAN SERTA ANALISIS SIFAT FISIK DAN KIMIANYA**

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### **INTISARI**

Telah dilakukan kajian pembuatan minyak inti sawit dengan metode pengasaman serta analisis sifat fisik dan kimianya. Tujuan dari kajian ini yaitu menentukan pH isoelektrik emulsi inti sawit serta analisis sifat fisik dan kimianya.

Penelitian ini dilakukan dengan membuat minyak inti sawit menggunakan metode pengasaman dengan variasi pH 3,7; 4,2; 4,5; dan 4,9. Analisis sifat fisik dan kimia minyak inti sawit dengan analisis kualitatif dan kuantitatif di antaranya kadar air, kadar asam lemak bebas, turbiditas, densitas, viskositas serta asam lemak penyusun minyak. Asam lemak penyusun ditentukan dengan analisis metil esternya menggunakan GC-MS

Hasil penelitian menunjukkan bahwa pH isoelektrik emulsi minyak inti sawit adalah 4,2. Sifat fisik dan sifat kimianya yaitu warna cokelat madu, kadar air 1,45%, kadar FFA 2,05%, turbiditas 65 NTU, densitas  $0,8582 \text{ g mL}^{-1}$ , viskositas 2,715 cP dan asam lemak penyusun serupa dengan VCO. Hasil minyak inti sawit belum memenuhi standar kualitas dari MS 80:2011 dan CODEX STAN 210-1999 sehingga metode lanjutan dibutuhkan untuk menghasilkan minyak inti sawit sesuai kualitas yang diinginkan. Berdasarkan asam lemak penyusunnya, minyak inti sawit memiliki potensi untuk mengganti VCO.

Kata kunci: emulsi, pH isoelektrik, minyak inti sawit, VCO.

***PRODUCING PALM KERNEL OIL WITH ACIDIFICATION METHOD AND  
ANALYZING THE PHYSICAL AND CHEMICAL PROPERTIES***

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**ABSTRACT**

Study of producing palm kernel oil with acidification method and analyzing the physical and chemical properties has been conducted. The purposes of this study were to determine the isoelectric pH from palm kernel oil emulsion and analyzing the physical and chemical properties.

The research was conducted by producing palm kernel oil using acidification method with variations of pH were 3.7, 4.2, 4.5, and 4.9. Analysis of palm kernel oil's physical and chemical properties used qualitative and quantitative analysis including the water content, free fatty acid level, turbidity, density, viscosity and the fatty acids composed in oil. Fatty acids determined by analyzing the methyl ester using GC-MS.

The result showed that the isoelectric pH of palm kernel oil is 4.2. The physical and chemical properties of the palm kernel oil were brown-honey colored with the water content of 1.45%, free fatty acid level of 2.05%, turbidity 65 NTU, density 0.8582 g mL<sup>-1</sup>, viscosity 2.715 cP and the composition of fatty acids in palm kernel oil was similar to the composition of VCO. The product of palm kernel oil had not meet the quality standards from MS 80:2011 and CODEX STAN 210-1999. Based on the fatty acids that composed in, palm kernel oil has a potential to substitute VCO.

Key words: emulsion, isoelectric pH, palm kernel oil, VCO.