

PERBANDINGAN PENGARUH KARBON DAN ZEOLIT AKTIF TERHADAP KUALITAS *VIRGIN COCONUT OIL*

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INTISARI

Telah dilakukan penjernihan minyak kelapa murni (VCO) dengan beberapa adsorben. Penelitian ini meneliti pengaruh karbon aktif dan zeolit aktif sebagai adsorben dalam penjernihan VCO. Adsorben direndam dalam VCO selama 24 jam, dimana rasio adsorben dan VCO yaitu 1:7. Penelitian ini juga mempelajari sifat fisika dan kimia, seperti aroma dan warna, kadar air, turbiditas, viskositas, kadar asam lemak bebas, bilangan peroksida, uji total fenol dan komposisi asam lemak.

Hasil penelitian menunjukkan kualitas penjernihan VCO dengan karbon aktif lebih baik dibandingkan dengan zeolit aktif. Hasil analisis penjernihan dengan karbon aktif menunjukkan uji total fenol sebesar 0,13%. Kadar air sebesar 0,037% dan kadar asam lemak bebas 0,22% yang cukup rendah, menunjukkan kualitas sampel VCO yang baik. Keduanya dapat menyebabkan oksidasi dengan adanya cahaya. Nilai bilangan peroksida rendah yaitu 1,14 meq kg⁻¹, menandakan stabilitas oksidasi yang tinggi. VCO yang telah dijernihkan memiliki nilai turbiditas 3,7 NTU, viskositas 36 mm²s⁻¹ dan kadar metil laurat 39,55%. Sifat fisika dan kimia ini memenuhi Standar Industri (SNI) 7381:2008 dan Asian Pacific Coconut Community (APCC) CODEX STAN 1-1985, Rev 1-2008.

Kata kunci : VCO, adsorben, karbon aktif, zeolit aktif

COMPARISON EFFECT OF CARBON AND ZEOLITE ACTIVE FOR VIRGIN COCONUT OIL

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ABSTRACT

Purification of virgin coconut oil (VCO) with some adsorbent has been done. This research has investigated the effect of carbon active and zeolite as an adsorbent in VCO purification. The adsorbent was soaked onto VCO for 24 hours, wherein the adsorbent and VCO ratio was 1:7. It was also to study the chemical and physical properties of purified VCO such as flavor and color, moisture content, turbidity, viscosity, levels of free fatty acids, peroxide value, total phenol content and composition of fatty acids.

The results showed that the quality of purified VCO with carbon active better than with zeolite. Results of analyses showed that purified with carbon active has 0.13% of total phenol content. The moisture content of 0.037% and free fatty acid content of 0.22 were fairly low, showing that VCO samples were of good quality. Both can cause oxidation in the presence of light. The low peroxide value 1.14 meq kg^{-1} signified its high oxidative stability. The purified VCO have 3.7 NTU of turbidity, $37.36 \text{ mm}^2\text{s}^{-1}$ of viscosity and 39.55% of methyl laurate content. These physical and chemical properties fulfil the Industrial Standard of Indonesia (SNI) 7381:2008 and Asian Pacific Coconut Community (APCC) CODEX STAN 1-1985, Rev 1-2008.

Keywords: VCO, adsorbent, carbon active, zeolite active