PENGARUH KARBON AKTIF TERHADAP KADAR AIR DALAM SABUN PADAT BERBAHAN DASAR *VIRGIN COCONUT OIL* (VCO) DAN *RED PALM OIL* (RPO) SEBAGAI ANTIOKSIDAN

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ABSTRAK

Penelitian tentang pengaruh karbon aktif terhadap kadar air dalam sabun padat berbahan dasar *Virgin Coconut Oil* (VCO) dan *Red Palm Oil* (RPO) sebagai antioksidan telah dilakukan. Tujuan penelitian ini yaitu untuk mengetahui aktivitas antioksidan, kualitas sabun padat, serta menganalisis produk pada sabun padat VCO, RPO, serta karbon aktif berdasarkan SNI 2016. Pembuatan sabun padat ini dilakukan dengan menggunakan metode *cold process* dengan bahan dasar dari VCO, RPO, serta karbon aktif. Pada sabun padat ini dilakukan analisis kekerasan, pH, kadar air, stabilitas busa, kadar asam lemak bebas, kadar lemak tak tersabunkan, daya bersih, serta juga dilakukan analisis antioksidan pada sabun.

Hasil penelitian menunjukkan bahwa aktivitas antioksidan (persen penangkapan radikal bebas) pada sampel sabun padat A, B, C, D, dan E yaitu sebesar 28,85; 24,52; 23,13; 22,86; dan 22,58%. Penambahan karbon aktif sebagai adsorben dalam sabun padat ini dapat meningkatkan kualitas sabun dengan menurunkan kadar air dalam sabun. Karbon aktif dalam sabun padat A, B, C, D, dan E dapat mengangkat kotoran-kotoran atau minyak di permukaan kulit sebesar 26,64; 18,01; 0,46; 4,41; dan 0,08 FTU. Hasil analisis sabun telah sesuai syarat SNI 2016.

Kata kunci: antioksidan, karbon aktif, *red palm oil*, sabun, *virgin coconut oil*

THE EFFECT OF ACTIVATED CARBON TO THE WATER CONTENT IN BAR SOAP MADE FROM VIRGIN COCONUT OIL (VCO) AND RED PALM OIL (RPO) AS AN ANTIOXIDANT

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ABSTRACT

Research on the effect of activated carbon to the water content in bar soap made from *Virgin Coconut Oil* (VCO) and *Red Palm Oil* (RPO) as an antioxidant had been done. The purpose of this research were to determine the antioxidant activity, the quality of bar soap, and analyze the bar soap products from VCO, RPO, and activated carbon based on SNI 2016. The production of bar soap was done by using the cold process method with the basic ingredients of VCO, RPO, and activated carbon. Analyses of hardness, pH, water content, foam stability, acid levels of free fat, non-soapy fat levels, cleaning ability, and antioxidant on the soap were done to the soaps.

The results show that antioxidant activity (percentage of free radical capture) found in bar soap samples A, B, C, D, and E was 28.85; 24.52; 23.13; 22.86; dan 22.58%. The addition of activated carbon as an adsorbent in bar soap can improve the quality of soap by reducing the water content in soap. Activated carbon in solid soap A, B, C, D, and E can remove dirt or oil on the skin surface by 26.64; 18.01; 0.46; 4.41; and 0.08 FTU. The results of soap analysis are in accordance with SNI 2016 requirements.

Keywords: antioxidant, activated carbon, red palm oil, soap, virgin coconut oil