

FORMULASI KRIM WAJAH SEBAGAI *ANTI-AGING* BERBAHAN DASAR MINYAK ZAITUN DAN *RED PALM OIL* (RPO) SERTA VARIASI PENAMBAHAN TEA-STEARAT SEBAGAI PENSTABIL EMULSI

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INTISARI

Penelitian berjudul ‘Formulasi Krim Wajah Sebagai *Anti-Aging* Berbahan Dasar Minyak Zaitun dan *Red Palm Oil* (RPO) Serta Variasi Penambahan TEA-Stearat Sebagai Penstabil Emulsi’ telah dilakukan. Tujuan dari penelitian ini adalah membuat formulasi emulsi M/A yang terdiri dari minyak zaitun dan RPO sebagai zat terdispersi serta air sebagai media pendispersi. Selanjutnya diteliti karakteristik dari sediaan krim tersebut, antara lain kestabilan emulsi yang meliputi uji organoleptik, homogenitas, pH krim, daya sebar, pemisahan fase dan tipe emulsi. Selain itu juga diteliti pengaruh variasi konsentrasi RPO terhadap aktivitas antioksidan dan pengaruh variasi konsentrasi emulgator (kombinasi trietanolamin dan asam stearat) terhadap kestabilan emulsi dalam sediaan krim yang dihasilkan.

Hasil penelitian menunjukkan krim wajah yang dihasilkan merupakan emulsi tipe M/A. Krim terbaik dengan kestabilan emulsi paling tinggi tanpa mengalami perubahan sifat komponen diperoleh dengan formulasi komposisi RPO 4%, air 66,97%, TEA 2%, dan asam stearat 8%. Krim yang dihasilkan memiliki bentuk semipadat, homogen, dan beraroma khas minyak penyusunnya (RPO). Nilai pH dari krim ini yaitu 7,52 dengan daya sebar sebesar 6,43 cm. Krim ini memiliki nilai aktivitas antioksidan yang sangat kuat dengan nilai IC₅₀ sebesar 44,81 µg/mL, serta nilai SPF 2,60 yang menunjukkan tingkat proteksi minimal.

Kata kunci: *anti aging*, emulsi, krim wajah, *red palm oil* (rpo).

FORMULATION OF ANTI-AGING FACE CREAM BASED ON OLIVE OIL AND RED PALM OIL (RPO) AND VARIATION OF TEA-STEARATE ADDITION AS EMULSION STABILIZER

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ABSTRACT

A research entitled "Formulation of Anti-Aging Face Cream Based on Olive Oil and Red Palm Oil (RPO) with Variations in the Addition of TEA-Stearate As Emulsion Stabilizer" has been conducted. The objective of this study was to formulate an M/A emulsion consisting of olive oil and RPO as dispersed substances and water as the dispersing medium. Furthermore, the characteristics of the cream preparation were studied, including emulsion stability, which included organoleptic testing, homogeneity, pH, spreadability, phase separation, and emulsion type. In addition, the effect of RPO concentration variation on antioxidant activity and the effect of emulsifier concentration variation (a combination of triethanolamine and stearic acid) on emulsion stability of the cream were also studied.

The results showed that the facial cream produced was an M/A type emulsion. The best cream with the highest emulsion stability without any changes in component properties was obtained with a formulation of 4% RPO, 66.97% water, 2% TEA, and 8% stearic acid. The resulting cream is semi-solid, homogeneous, and has a distinctive aroma of its constituent oil (RPO). The pH value of this cream is 7.52 and a spreadability of 6.43 cm. This cream has a very strong antioxidant activity with an IC_{50} value of 44.81 $\mu\text{g/mL}$, as well as an SPF value of 2.60, which indicates a minimal level of protection.

Keywords: anti-aging, emulsion, face cream, red palm oil (rpo).