INTISARI

Telah dilakukan penelitian tentang optimasi formula *lotion Virgin Coconut Oil* dengan komposisi emulsifying agent polysorbate 80 dan cetyl alcohol. Tujuan dari penelitian ini adalah untuk memperoleh komposisi optimum dari kedua emulsifying agent agar didapatkan *lotion* yang memiliki sifat fisik sesuai kriteria dan stabil dalam penyimpanan.

Penelitian ini termasuk dalam rancangan ekperimental murni dengan desain faktorial dengan 2 faktor, yaitu komposisi *emulsifying agent* polysorbate 80 - cetyl alcohol, dan 2 level yaitu level tinggi-level rendah. Optimasi formula *lotion Virgin Coconut Oil* menggunakan desain faktorial dengan parameter sifat fisik *lotion* (daya sebar, viskositas) dan stabilitas emulsi pada penyimpanan (pergeseran viskositas, pemisahan fase *lotion*).

Analisis data dilakukan dengan menggunakan desain faktorial. Hasil penelitian menunjukkan bahwa polysorbate 80 diprediksi dominan dalam menentukan daya sebar dan pergeseran viskositas *lotion Virgin Coconut Oil* dan cetyl alcohol diprediksi dominan dalam menentukan viskositas *lotion Virgin Coconut Oil*. Dalam penelitian ini, ditemukan area komposisi optimum *emulsifying agent* polysorbate80-cetyl alcohol dalam *lotion Virgin Coconut Oil.*

Kata kunci: *Virgin Coconut Oil, lotion, emulsifying agent*, polysorbate 80, cetyl alcohol, desain faktorial

ABSTRACT

The research on optimization of formula Virgin Coconut Oil lotion with emulsifying agents polysorbate 80 and cetyl alcohol has been conducted. The purpose of the research is to obtain the optimal composition of both emulsifying agents in order to achieve lotion which has appropriate physical properties and the stability.

The research is pure experimental design with factorial design using two factors, which are the composition of emulsifying agents polysorbate 80-cetyl alcohol, and two levels, which are high and low. The optimization of Virgin Coconut Oil lotion applies the factorial design with parameter of lotion physical characteristics including spreadability, viscosity, and the stability of emulsion in storage including alteration of viscosity, and phase separation.

Data analysis has been conducted by applying the factorial design. The result shows that polysorbate 80 is predicted to be dominant in influencing spreadibility and viscosity changes of Virgin Coconut Oil lotion, while cetyl alcohol is predicted to be dominant in infuencing viscosity of the lotion. In this research, the optimal composition area of emulsifying agents polysorbate 80-cetyl alcohol in Virgin Coconut Oil has been figured out.

Key words: Virgin Coconut Oil, lotion, emulsifying agents, polysorbate 80, cetyl alcohol, factorial design.