INTISARI

Penelitian optimasi proses pencampuran *lotion Virgin Coconut Oil* (VCO) bertujuan untuk mengetahui pengaruh dari lama, suhu pencampuran atau interaksi antara keduanya, yang dominan mempengaruhi sifat dan stabilitas fisis *lotion Virgin Coconut Oil* (VCO) serta memperoleh area proses pencampuran optimum yang memiliki sifat dan stabilitas fisis *lotion Virgin Coconut Oil* yang baik. Formula yang dioptimasi adalah formula optimum dari penelitian Hartanto (2007).

Penelitian ini merupakan rancangan penelitian eksperimental murni menggunakan metode desain faktorial dengan dua faktor (lama pencampuran-suhu pencampuran) dan dua level (level tinggi-level rendah). Optimasi proses pencampuran meliputi parameter sifat fisis yaitu daya sebar, viskositas dan stabilitas fisis yaitu pergeseran viskositas, ukuran droplet, pergeseran ukuran droplet, dan persen pemisahan emulsi. Data yang diperoleh dianalisis secara statistik menggunakan *Yate's treatment* dengan taraf kepercayaan 95%.

Hasil penelitian menujukkan bahwa suhu pencampuran berpengaruh signifikan terhadap daya sebar, viskositas, pergeseran viskositas dan ukuran droplet *lotion Virgin Coconut Oil* (VCO), dan terdapat interaksi antara lama dan suhu pencampuran terhadap daya sebar dan viskositas *lotion Virgin Coconut Oil* (VCO). Melalui *contour plot super imposed* diperoleh area proses pencampuran optimum dari *lotion Virgin Coconut Oil* pada level yang diteliti.

Kata kunci: *lotion*, *Virgin Coconut Oil* (VCO), lama pencampuran, suhu pencampuran, desain faktorial.

ABSTRACT

The aims of mixing process optimization of Virgin Coconut Oil (VCO) lotion with mixing temperature and mixing duration as factors by using factorial design method were to determine the dominant influence among mixing duration, mixing temperature and interaction between them on the physical properties and stabilities of lotion, and to obtain the optimum mixing process area which has good physical properties and stabilities of lotion. The formula used was the optimum formula obtained by Hartanto (2007).

This study was experimental research with two factors: mixing temperature-mixing duration and two levels: high level-low level factorial design. The mixing process was optimized on their physical properties (spreadability, viscosity) and their physical stabilities (viscosity shift over one month storage, globule size, globule size alteration over one month storage, and the degree of coalescence over one month storage). The data were analyzed statistically using Yate's treatment with 95% level of confidence.

The result showed that the mixing temperature significantly influenced the spreadability, viscosity, viscosity shift over one month storage, and globule size of lotion, and there was interaction between mixing temperature and mixing duration in determining the response of spreadability, viscosity of (VCO) lotion. Contour plot super imposed showed the optimum mixing process area on the level studied.

Keywords: lotion, Virgin Coconut Oil, mixing temperature, mixing duration, factorial design.