

## INTISARI

Penelitian tentang optimasi formula sabun transparan dengan fase minyak *Virgin Coconut Oil* dan surfaktan *cocoamidopropyl betaine* bertujuan untuk mengetahui signifikansi antara VCO, *cocoamidopropyl betaine*, dan interaksinya dalam mempengaruhi sifat fisis serta menemukan area komposisi optimum VCO dan *cocoamidopropyl betaine* yang menghasilkan sabun transparan dengan sifat fisis yang baik.

Penelitian ini merupakan penelitian eksperimental dengan desain penelitian aplikasi desain faktorial dengan dua faktor yaitu VCO–*betaine* dan dua level yaitu level rendah–level tinggi. Optimasi dilakukan terhadap sifat fisis sabun transparan meliputi kekerasan sabun dan kemampuan membentuk busa. Teknik analisis statistik yang digunakan adalah *Yate's treatment* dengan taraf kepercayaan 95%.

Diperoleh hasil bahwa interaksi berpengaruh terhadap kekerasan sabun dan faktor-faktor dalam interaksinya signifikan menentukan respon kemampuan membentuk busa. Berdasarkan *superimposed contour plot* dapat diperoleh area optimum yang diperkirakan sebagai formula optimum sabun transparan pada level yang diteliti.

Kata kunci: sabun transparan, VCO, *cocoamidopropyl betaine*, kekerasan sabun, kemampuan membentuk busa

## ABSTRACT

The aims of the research on optimization transparent soap formula with Virgin Coconut Oil as oil phase and cocoamidopropyl betaine surfactants objectives were to determine the main effect between the VCO, betaine, and their interaction in influencing the physical properties and to obtain the optimum area between VCO and cocoamidopropyl betaine which provided a transparent soap with good physical properties.

This research was a experimental research with the application of factorial design with two factors namely VCO-betaine and two levels of low-high level. Optimization was carried out on physical properties of soap transparent i.e. hardness soap and lathering. Statistical analysis technique used was Yate's treatment with 95% confidence level.

The results showed that the interaction effect on hardness soap and the factors in their interaction was significant in determining the lathering response. Based on the superimposed contour plot the optimum area can be obtained and was estimated as the area of optimum transparent soap formula at levels studied.

Keywords: transparent soap, VCO, cocoamidopropyl betaine, hardness soap, lathering