

Optimisation of natural ingredient based lipstick formulation by using mixture design

Abstract

The cosmetic industry in Malaysia is proven to be one of the important economy sources. Lipstick is one of the decorative cosmetic products that command a unique market. The quality of lipstick is directly linked to the basic material used in the formulation. The ratio of the ingredients used determines the final product characteristics. In previous researches, statistical mixture design has been proved to be effective tool to investigate the relationship between variables in formulation work. Contour graphics were formed to assess the change in the response surface in order to understand the relationship between the product cost and consumer acceptance of the lipsticks. In this work, natural waxes, solvents and colorant were used to prepare lipstick formulation. Statistical mixture design has been applied for experimental setting for the components system. The effects of the mixture components on the physical properties and consumer acceptance of the lipstick have been investigated. The results indicate that the physical properties of the lipstick can be manipulated by changing the composition of the base ingredient used in the formulation. It was found that the variation of the mixture component affected the consumer acceptance on lipstick's rub-off characteristic. © 2007 Asian Network for Scientific Information.