

Optimisation of non-stick insect repellent cream formulation

Abstract

Nowadays, insect repellent is widely used by consumer, especially insect repellent that is produced from natural-based. Since the component of insect repellent could not be applied directly to human skin, base cream with insect repellents need to be formulated. The quality of the base cream is directly linked to the basic material used in the formulation. In this work, various compositions of carbopol, triethylamide, glycerine, water and ethanol were used to prepare the base cream formulations. D-optimal mixture design was performed to obtain the optimum formulation. Twenty-five combination components were selected according to the D-optimal criterion. The consumer acceptance and physical properties of the base cream such as viscosity, drying time stickiness were studied. Three-dimensional surface plots were formed to assess the change in the response surface and to understand the effect of the mixture composition on lipstick characteristics. The result indicates that there are relationships between the processing variables of the lipstick formulation and the consumer acceptance. © 2007 Asian Network for Scientific Information.