ABSTRACT

ANDI RAHMANTO. F351074021. Utilization of Jatropha curcas Oil (Jatropha curcas, Linn.) as a Dosage Component for the Hand & Body Cream Formulation. Supervised by ERLIZA HAMBALI and ANI SURYANI.

Jatropha oil (Jatropha curcas, Linn.) is one of potential vegetable oils are constantly being developed in Indonesia. However, the utilization of jatropha oil is still very limited. Previous research showed that jatropha oil is one of the renewable resources which have good potential for fuel and personal care products. This study aimed to improve the utilization of jatropha oil especially for the development of hand & body cream products. The function of Jatropha oil in this product is to replace the oil supplier material commonly used such as mineral oil, olive oil or virgin coconut oil (VCO). The purpose of this research is to obtain the right composition of Jatropha oil concentration, to know its influence on the hand & body cream products physicochemical characteristics, and to know the consumer’s acceptance level on hand & body cream products generated.

This research is using one factor (the concentration of pure jatropha oil) with 4 standard treatments (0%, 3%, 6% and 9%). Pure jatropha oil (PJO) is obtained from the purification of the crude jatropha oil (CJO) through the process of degumming, neutralization and bleaching. The result of PJO has a low FFA value that is equal to 0.16%. PJO concentration effects used on the hand & body cream products are observed on the effect of pH value, density, viscosity, color, globula size, total of microbial and emulsion stability. The entire hand & body cream sample being produced has a homogeneous appearance with a pH value range of 4.23 to 4.49, 0.9953 to 1.0008 g/cm³ density, 37.45 to 41.08 cP viscosity, the globula emulsion average size of 9.6 to 13.8 μm and a negative contamination for microbiological testing. Statistical tests showed that the PJO concentration has no significant effect on the pH value, density and viscosity. Emulsion stability test shows a very stable result for creams with a concentration of 6% PJO.

Sensory analysis is also conducted in this research to determine consumer preferences for hand & body cream product. The preference attribute being examined includes the color, aroma, homogeneity, viscosity, softness, ease of deployment, ease of absorbing, the impression skin soft and sticky skin impression. The analysis showed that the increasing of PJO concentration was decreasing the spread on the skin, it actually increases the spread of skin homogeneity. Overall, the sample with PJO 6% was preferred and chosen by consumers because it has a better value attribute preference than the sample of 3% and 9% PJO content.

Keywords: jatropha curcas oil, hand & body cream, PJO, sensory analysis