SKIN MOISTURIZING EFFECT OF CREAM FORMULATIONS CONTAINING FREEZE-DRYING ALOE VERA (Aloe vera Linn.) LEAF GEL AND ETHYL ASCORBIC ACID

Ratih Aryani¹, Anita Anggriani², Sismayati², Mutiara Hartiwan², Sani Nurlela²

¹) Bandung Islamic University
²) Stikes Bakti Tunas Husada Tasikmalaya
e-mail address of corresponding author : ratih_aryani@ymail.com

ABSTRACT

Aloe vera (Aloe vera Linn.) is a plant that can improve skin moisture and enhance fibroblast which produces collagen and elastin. Ethyl ascorbic acid is a derivative of vitamin C is more stable as an antioxidant, can booster formation of collagen. The purpose of this research was making the preparation of Aloe vera leaf gel (dried by freeze drying method) and ethyl ascorbic acid as combination in moisturizing cream for foot heel dryness. In this study, there were five types of formula, F0 (base) and four formulas with different combinations of dried Aloe vera leaf gel and ethyl ascorbic acid were formulated such as F1 (3%,3%), F2 (5%,3%), F3 (3%,5%), and F4 (5%,5%). Evaluation of preparations included organoleptic, homogeneity, pH, viscosity, centrifugation test, cycling test, and irritation test for all formula showed good result and did not irritate volunteer skin. Effectivity test on increasing volunteers cracked heels moisture for 28 days was done by using FCM-1 skin moisture meter analysis, and showed skin moisture improvement results, F0 (1,72%); F1 (12,92%); F2 (15,38%); F3 (17,03%); and F4 (10,18%). F3 is the best formula with the highest percentage of moisture (initial moisture is 26,47% to 43,50%), good skin moisture value is more than 40%.

Keywords: Aloe vera, ethyl ascorbic acid, moisturizer, cream