

ABSTRACT

EFFECT OF CAPRYLIC COMPOSITION ON THE PHYSICAL CHARACTERISTICS OF NANOSTRUCTURED LIPID CARRIER (NLC) KOENZIM Q10

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Coenzim Q10 is a compound that functions as an antioxidant with a large molecular weight of 863.36 g/mol and has lipophilic properties. This makes coenzyme Q10 need to be formulated to improve the solubility of the material and the delivery system in the skin. This purpose of this study is to compare the effects of optimum fluid lipid composition to get the NLC characteristics that match. Coenzym Q10 will be made with caprylic concentration by 9%, 11%, 13%. Evaluation of physical characteristics is done after 24 hours after the preparations is complete, observations made include organoleptic (shape, color and phase formed), Homogeneity, pH, and dispersion. The resulting NLC is homogeneous, semi-solid, yellow color and odorless. In the pH test, the average pH results for formulas I, II, and III respectively were 5.4, 5.32, 3.34. in the dispersion test, the average result of the dispersion of formulas I, II, and III were 5.4, 4.5, 4.8 respectively. Formula I is the best formula because the specifications. Statistical tests were carried out using SPSS 25 on pH and dispersion tests, the result showed that the pH value of NLC coenzym Q10 had no significant difference while the difference while the dispersion had a significant difference.

Keyword : *NLC, coenzym Q10, caprylic, physical characteristics*