ABSTRACT

PENGARUH KONSENTRASI ASAM PALMITAT TERHADAP KARAKTERISTIK FISIK *NANOSTRUCTURED LIPID CARRIERS* (NLC) KOENZIM Q10

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Skin aging is a natural process for older people, which is caused by an increase in free radicals in the body. The sign is the appearance of wrinkles, thin, dry, the skin becomes itchy more often. Skin aging can occur at a young age caused by exposure to sunlight, air pollution or food. So that it will trigger an increase in free radicals in the body at a young age. To avoid this, anti-aging products that contain antioxidants are needed. In this study, Nanostructures Lipid Carrier (NLC) preparations with the active ingredient Coenzyme Q10 will be made. NLC preparations require both solid and liquid lipids. The use of palmitic acid as a solid lipid is expected to produce good physical characteristics of NLC preparations. Palmitic acid will be taken at 3 different concentrations for each formula. The preparation will go through organoleptic, homogeneity, pH and spreadability tests. All formulas produced good organoleptic and homogeneity, but the spreadability test on formula 1 concentration of 2.5% and formula 3 of 4.5% concentration produced diameters that did not meet the requirements. Whereas in formula 2 it meets the requirements, with a concentration of 3.5%. The pH test produces a value that is within the specified range. The pH test of palmitic acid as a solid lipid can still meet a good range, as long as the concentration is appropriate. Whereas in the yield spread test, the higher the concentration of palmitic acid used, the wider the diameter of the resulting spreadability number. This means that palmitic acid will affect the level of dilution of the preparation.

Keywords : Skin aging, Coenzyme q10, palmitic acid concentration, Physical characteristics of nanostructured lipids carriers