ABSTRACT

EFFECT OF CETYL PALMITATE CONCENTRATION ON STABILITY OF *ZETA POTENTIAL* PREPARATIONS OF *NANOSTRUCTUREDLIPID CARRIERS* (NLC) COENZYME Q10

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Coenzyme Q10 is a natural compound found in the inner membrane of mitochondria and is fat soluble with a log P value of 19.4. This causes the penetration of coenzyme Q10 into the skin to be less than optimal and this compound is easily degraded when exposed to light. This research began by making a Nanostructured Lipid Carrier (NLC) coenzyme Q10 preparation formula with varying concentrations of solid lipids in cetyl palmitate F1 10%, F2 11%, and F3 12% liquid lipid Caprylic 7%. After the formulation of the Nanostructured Lipid Carrier (NLC) coenzyme Q10 preparation, a stability test was carried out on the zeta potential of the Nanostructured Lipid Carrier (NLC) coenzyme Q10, Of the three formulas created, F3 is the best formula because it shows the highest zeta potential, namely before |38.86mV| after |36.75mV|.

Keywords : *Coenzyme Q10, Nanostructured Lipid Carrier (NLC), Cetyl Palmitate, Stability of zeta potential.*