

ABSTRACT

THE EFFECT OF CAPRYLIC COMPOSITION ON ZETA POTENTIAL NANOSTRUCTURED LIPID CARRIER (NLC) COENZYME Q10

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ABSTRACT: Coenzyme Q10 has advantages such as having high lipophilicity and not soluble in water, and also has several disadvantages, including lipid solubility. Coenzyme Q10 requires a proper delivery system, one of which is the Lipid Nanoparticle system is namely NLC. This study aims to determine the composition of solid lipids and liquid lipids for optimal NLC preparations so as to increase the effectiveness of Coenzyme Q10 as an antiaging agent. In the zeta potential test, it is expected that the preparation has a potential that is in the range of $\pm 20 - \pm 30$ mV, if the zeta potential value is $< \pm 20$ mV, the stability of the coenzyme Q10 preparation is poor. Statistical test of the zeta potential of the cream preparations of Coenzym Q10 nanoparticles. The result of the Shapiro – Wilk statistical analysis showed that the data were normally distributed because all formulas had $\text{sig } p \leq 0,05$ then the one-way ANOVA test was continued. Zeta potential is a measure of interaction between particles that can be used to determine the stability of colloids and to determine the strength of the repulsive forces between particles.. The study explained that the results of the zeta potential test showed that the greater the concentration of Caprylic used, the smaller the zeta potential.

Keywords: Coenzyme Q10, Zeta Potensial, NLC, Caprylic