

## **ABSTRACT**

### **THE EFFECT OF MYRISTIC ACID COMPOSITION ON PARTICLE SIZE OF THE NANOSTRUCTURED LIPID CARRIER (NLC) KOENZIM Q10**

**FINA DWI AJIWADANI**

Coenzyme Q10 is a compound that functions as an antioxidant with very low solubility in water (4 ng/ml), it causes low bioavailability and permeability when taken orally. Coenzyme Q10 needs to be formulated as delivery system to improve stability, bioavailability and permeability. This study aims to determine the effect of myristic acid composition on the particle size of Nano Lipid Carriers (NLC) preparations. Coenzyme Q10 is combined with myristic acid solid lipid and caprylic liquid lipid. This research was made in 3 formulas of Nano Lipid Carriers (NLC) F1, F2 and F3 with each formula 3 times of replication. Particle size evaluation was carried out after 24 hours after the preparation was made. The research data was statistically processed using ANOVA statistical analysis. The results of the research show that the p-value (sig) is smaller than 0.05. This shows that there is a significant difference in particle size between the Nano Lipid Carriers (NLC) formulas in the lipid composition.

**Keyword:** NLC, Coenzyme Q10, Antioxidant, Asam Miristat, Caprylic