ABSTRAK

THE EFFECT OF MIXING LENGTH IN MANUFACTURING ON THE SIZE OF NANOSTRUCTURED LIPID CARRIER (NLC) COENZYME Q10 PARTICLES

Winda Titasari

NLC (Nanostructured Lipid Carrier) is the second generation of SLN (Solid Lipid Nanoparticles). One method that can be used to manufacture NLC is HPH (High Shear Homogenization). Stirring time is one of the factors that influences the size of NLC particles. The aim of this research is to analyze the effect of variations in stirring time on the physical characteristics of NLC. The variation in stirring time observed was 30 minutes (batch A); 45 minutes (batch B); 60 minutes (batch C). The three test samples were made using a speed of 7000 rpm. The physical characteristics observed include particle size. The data obtained was analyzed statistically using One Way Anova. The particle size test results show that the three samples have particle sizes that meet specifications. The particle sizes of the three samples are in the range of 10 – 1,000 nm. The sample that has the smallest particle size is batch C.

Key words: physical characteristics, NLC, stirring time