

**THE INFLUENCE OF SILVER NANOPARTICLES LIQUID
ON NEWCASTLE DISEASE VIRUS IN
EMBRYONATED CHICKEN EGGS**

Riza Norma Septiarini

ABSTRACT

This research was conducted to finding out the influence silver nanoparticles liquid obstructing replication of Newcastle Disease Virus in embryonated chicken eggs using two different procedures (procedure 1: mixing silver nanoparticles with ND virus pre inoculation until 2 hours and procedure 2: embryonated chicken eggs was infected ND virus and then giving silver nanoparticles treatment after 48 hours incubation period). The method used for synthesized silver nanoparticles by chemical reduction using tri sodium citrate as reductor and silver nitrate as precursor. The doses silver nanoparticles given in embryonated chicken eggs in all procedures were 0 ppm (control), 10 ppm, 20 ppm, and 50 ppm. The result of HA titer between treatments in every each procedures was analyzed used ANOVA (Analysis of Variance) then proceed to Tukey Test in order to determine significant differences. The result showed that there was significant different in the first procedure (control, 10 ppm, 20 ppm and 50 ppm) but in the second procedure only (control, 10 ppm and 20 ppm) had significant different. The optimum effect of silver nanoparticles by obstructing virus replication in this research was 50 ppm dose in the first procedure and the second procedure are 10 ppm and 20 ppm.

Key words: Newcastle Disease Virus, silver nanoparticles, embryonated chicken eggs, HA titer