

## **HEMAGGLUTININ REACTIVITY AND ELUTION PROPERTIES OF NEWCASTLE DISEASE VIRUS ISOLATES TO VARIOUS ANIMAL ERYTHROCYTES FOR VIRUS CHARACTERIZATION**

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### **ABSTRACT**

The purpose of this study was to determine the hemagglutinin reactivity and elution properties of some Newcastle disease virus to various animal erythrocytes. This research uses animal erythrocytes of chicken, bovine, guinea pig, and swine. Virus used was derived from the NDV field isolates 03/10, 20/10, 41/10, 68A/11, AK/12 and virus derived from the vaccine strain LaSota and Hitchner B1. HA test was performed on all seven virus strain with chicken erythrocytes and the virus titer were then adjusted to 64 HA-Unit/0,025 ml. The HA test were performed again with erythrocytes from the other animal. HA test was read when the erythrocyte has sedimented in the control wells. The titer was read again 24 hours after the microplate was stored at 4°C and was read for the third time after the microplate was shaken and continued by placing the microplate at 4°C for 2 hours. After all data of the titer has obtained, descriptive analysis were done. The results of the hemagglutination reactivity of all ND virus on chicken erythrocytes were almost uniformly but a titer uniformity was shown despite the fluctuations in the subsequent stages. With guinea pig erythrocytes showed a higher and more stable titer than chicken erythrocytes. With bovine erythrocytes the titer was fairly uniform and showed high titer in the first stage but negative in other stages, whereas with swine erythrocytes all ND virus was not reactive. Hemagglutination of 68A/11 virus with chicken erythrocytes showed slow elution on all stages and therefore are suitable for use as antigen in Hemagglutination Inhibition test .

**Key words** : Newcastle disease, hemagglutinin, HA test, elution