



## Prevalence of Newcastle Disease Antibodies in Egg Yolk of Layers after Chloroform and Ammonium Sulfate Extraction

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**Objectives:** Hemmagglutination inhibition (HI) is the most common serological assay for detection of immune response in poultry to investigate Newcastle disease (ND). Also, Egg yolk provides good alternative for blood samples because it is not invasive and also reduce stress in poultry. Nevertheless, there is no standard method for antibody extraction from egg yolk. This study was done to compare two commercial methods (Chloroform and Ammonium Sulfate Extraction) for isolation of antibodies from egg yolk.

**Material and Methods:** In this study, 91 eggs of 7 layer flocks of East Azerbaijan province (Northwest of Iran) included. NDV antibody titers of yolk samples were measured after chloroform and ammonium sulfate extraction by HI. Statistical analysis was carried out by Minitab 17.

**Results and Conclusion:** Mean ND titers were significantly higher in chloroform assay (10.8) than ammonium sulfate extraction (3.66). Moreover, unlike chloroform method, there was no correlation between antibody titers of yolk samples evaluated by HI and total protein of the sample in ammonium sulfate method. Chloroform extraction is more functional in regard to NDV antibody isolation and immune system evaluation than ammonium sulfate precipitation.

**Keywords:** Ammonium sulfate, Chloroform, egg yolk antibody, Newcastle disease.