Effectiveness of Haemagglutination test in detection of Newcastle disease virus (NDV) AF2240 strain from harvested allantoic fluids of infected chicken eggs

ABSTRACT

Haemagglutination (HA) test for the detection of Newcastle disease virus (NDV) is described experimentally using chicken red blood cells (RBCs). The method proved to be reliable and effective, since infectious stocks of AF2240 strains of NDV were detected after the experimental procedure. To detect NDV in chicken allantoic fluids of SPF eggs, 0.1 mL of NDV AF2240 (velogenic) virus stock were inoculated into each egg. The virus was allowed to propagate for production of more stock and the unclarified allantoic fluids were harvested aseptically and tested for confirmation of the virus presence before the stock virus was further clarified and purified using high speed refrigerated centrifuge following sucrose gradients method. This sucrose gradients were later balanced with NTE buffer and sieved using 0.45 µm filter and the purified samples of the virus were collected followed by HA test to detect the presence and to determine the virus titer. The results showed (28 = 256 HAU/mL) virus titer after purification of the allantoic fluids.

Keyword: Chicken red blood cells; Embryonated chickens eggs; Haemagglutination (HA) test; Newcastle disease virus (NDV)