

## **Abstract:**

New technologies, such as immunoglobulin egg yolk (IgY), has been in progress for therapeutic and diagnostic purposes and has been used to control many infections and results of various studies have shown that IgG immunoglobulin has inhibitory effect on the growth of many bacteria in liquid medium and animal body, the tendency to use egg yolk is increasing to produce polyclonal antibodies for application and economic purposes. *فيبريو فلأوياليس* cause diseases in Human and fish. This bacterium is one of the most important factors in the development of cholera Like diarrhea in human beings in underdeveloped countries. The purpose of this study was to produce, purify and evaluate specific immunoglobulin (IgY) against *Vibrio fluvialis* in hyper-immunized hen egg yolks. For this purpose, we immunized laying hens with formalin killed bacterial cells, IgG against *Vibrio fluvialis* was detected in the serum of the laying hens, then IgY (IgG transferred to the yolk) using PEG 6000 from egg yolks were purified then Dialyzed. IgY evaluation was initially investigated by proteinometry to ensure produced product contains protein (IgY), then used SDS PAGE method to evaluate the purity and nature of protein. Therefore, the presence of this antibody in the purified product was confirmed. Then, to evaluate the effectiveness of this antibody, Indirect ELISA, accomplished. concentration of 38 ng IgY/well and above, react with the antigen at Indirect ELISA. The microbial growth inhibitory assay was conducted and results showed that IgY specific anti- *Vibrio fluvialis* with a concentration of 20 mg/ml would inhibit bacterial growth in liquid medium. According to the results, it seems use of IgY biotechnology to produce specific antibody against *Vibrio fluvialis* can could control pathogenicity of bacterium easily and at low cost and can be a good alternative to antibiotics.

**Key words:** egg yolk immunoglobulin (IgY), *Vibrio fluvialis*, Indirect ELISA, SDS-PAGE



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Production, Purification and evaluation of specific egg yolk immunoglobulin  
(IgY) against *Vibrio fluvialis* of hyper immunized hen egg yolks

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