After immunizing a group of ten 16-week old laying hens of the Lohmann breed with a canine parvovirus (CPV), vaccine strain, polyclonal IgY antibodies were obtained against CPV in the egg yolk. For the extraction of the antibodies from egg yolk, the two steps of lipid removal and protein precipitation were performed; the first with the chloroform PBS technique and the second by salting-out with ammonium sulfate (NH₄)₂SO₄) for the precipitation of the soluble antibodies (IgY Immunoglobulins). The standard commercial method, EGGstract IgY Purification System® from PROMEGA, was used for the evaluation of the process. The methodology used permitted the obtaining of polyclonal IgY antibodies against CPV from chicken egg yolks in high concentrations per milliliter of yolk, with an acceptable purity and high titers. The results were comparable with the commercial method.

Abstract

Canine Parvovirus; egg yolk; hen antibodies; IgY; lipid removal; precipitation