## Addition of probiotic microorganisms to broiler diets on serum concentrations of cholesterol, triglyceride and performance in Broiler chickens

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In this experiment, effects of two phosphate solublizing bacteria as probiotic on serum concentrations of cholesterol and triglyceride and performance factors were investigated. The experiment included 320 Ross broilers from 1 to 49 days of age. Birds were randomly allocated to 4 treatments, with 4 replicates of 20 birds. Treatments include T1.Negative Control (basal diet, with no added probiotic); T2 - Negative Control + Probiotic(in starter, grower and finisher); T3 - Negative Control + Probiotic(in grower and finisher) and T4 - Negative Control + Probiotic(in finisher). The results obtained in this experiment showed that the probiotic significantly increased body weight gain(P<0.05). Probiotic significantly improved feed conversion ratio (P<0.05). However, the probiotic supplementation did not affect on feed intake between treatments (P<0.05). In addition, results showed that probiotic caused significantly decrease on the serum cholesterol and triglyceride (P<0.05). Mean total cholesterol was significantly lower in the T2 fed group (P<0.05) when compared to treatment without probiotic.

Keywords: Probiotic, phosphate-solublizing bactria, cholesterol, triglyceride, broiler chicken

## Antibacterial effect of Chitosan derived from artemia cyst shell against *Staphylococcus* aureus, *Streptococcus agalactiae*, *E. coli* and *Salmonella typhimurium*

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Chitosan is partially deacetylated polymer of N-acetyl glucoseamin ,which is obtained after alkaline deacetyltion of the chitin derived from the exoskeletons of crustaceans and arthropods. Chitosan has strong antimicrobial effect, and is safe for human body. In this study the antibacterial effects four concentration(0/25%,0/5%,0/75%,1%) of chitosan derived from Artimia cyst shell, determinated against *Staphylococcus aureus*, *Streptococcus agalactiae*, *E.coli* and *Salmonella typhimurium*. It was also this effects compared with the commercial chitosan. The results indicated that the antibacterial effect strengthened as the concentration of chitosan increased. It was also observed that the antibacterial activity to *Staphylococcus aureus*, *Streptococcus agalactiae* was much greater than to *E.coli* and *Salmonella typhimurium*. Also the antibacterial effect of the chitosan derived from Artemia cyst shell alittle less than comerical chitosan

**Keywords:** Chitosan, Antimicrobial effect, Artemia, Staphylococcus aureus, Streptococcus agalactiae, E. coli. Salmonella typhimurium