Effect of bioherbal feed supplement (contains *Foeniculum vulgare* and *Zingiber officinale* function of liver and digestive enzymes and chemical parameters in *Mugil* powder) on *cephalus*

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Abstract

This experiment was conducted to evaluate the effect of of bioherbal feed supplement on the liver (aspartat amimotrasferase (ASP), alaninaminotransferase (ALT) and alkanin phosphatase (ALP)) and digestive enzymes (amylase, protease and lipase) and chemical parametese (glucose (GLU), cholesterol (CHO), triglyceride (TRI), total protein (TP), albumin (ALB) and globulin (GLO) of *Mugil cephalus* for 60 days. The experiment was conducted in a completely randomized design with 450 of grey mullet larvae (with average weight of 0.72±0.01g) in 5 treatments and 3 replicates (n=30 in each replicate) and included: control group without using bioherbal, an another groups (treatment 2, 3,4 and 5) the amounts of this herbal supplement were 5,10,15 and 20 g/kg food. At the end of experiment, the results showed that the highest the activity of protease (341±12.08U/mg protein), amylase (404.67±11.23 U/mg/protein) and lipase (5.76±0.18 U/mg protein), the lowest ASP (92.66±13.05U/mL), ALT (15.33±1.15 U/mL) and ALP (66.33±2.51 U/mL) enzymes were observed in the diet containing 20 g /kg bioherbal supplement in all of these parameters, treatment 5 (20 g/kg) (4) showed a significant difference compared with control treatment ($P<0.05$). Also, the lowest serum CHO (120.66± 3.78 mg/dL), GLU (80.33± 1.57 mg/dL) and TRI (120.06±9.01 mg/dL), the highest GLO (1.52±0.15 g/dL) were recorded in treatment 4. Finally, the present results suggest that diet containing 20 g/kg bioherbal supplement (ginger and fennel powder) could improve digestion and liver function index enzymes and biochemical parameters of *Mugil cephalus* larvae.

Key words: *Mugil cephalus*, Bioherbal, Biochemical parameters, Digestive enzyme, Liver fuction index enzymes