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The effect of different levels of pectin from *Malus pomila* wastes on hematological and biochemical parameters of rainbow trout (*Oncorhynchus mykiss*)

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Abstract

This study was to investigate the effects of apple pomace (*Malus pomila*) derived pectin (APDP) on rainbow trout (*Oncorhynchus mykiss*). Therefore, 300 rainbow trout with an average weight of 3.56 ± 0.007 were fed diets containing 0.5, 1 and 2% pectin per kg of diet and the control group was fed a diet without pectin for 6 weeks. At the end of the experiment, hematological and biochemical indices were evaluated based on standard formulas and means were analyzed using Tukey test. Based on the results obtained from hematological parameters, the treatment fed with 5 and 10 g of pectin showed the highest levels of hematocrit, hemoglobin and numbers of white blood cells significantly different from those of control treatment ($P < 0.05$). In terms of other blood parameters (erythrocytes, MCV and MCH), no significant difference was found between the experimental treatments and control group ($P > 0.05$). Feeding fish with pectin-containing diets significantly increased albumin index and decreased cholesterol, glucose and cortisol indices ($P < 0.05$). In case of total protein, globulin and triglyceride, no significant difference was observed between different levels of pectin and control group ($P > 0.05$). Therefore, it can be concluded that the use of pectin in the diet of rainbow trout not only poses no negative effect on the normal levels of blood parameters but also leads to the improvement of some hematological and biochemical parameters.

Keywords: Agricultural wastes, Prebiotics, Rainbow trout, Stress indices

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