

EFFECTS OF DIETARY *LENTINULA EDODES* EXTRACT ON LIVER AND GUT HISTOLOGY OF RAINBOW TROUT (*ONCORHYNCHUS MYKISS*, WALBAUM 1792)

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ABSTRACT

In this research, the effects of *Lentinula edodes* medicinal mushroom extract which was extracted in water was used in feed to examine the liver and the gut histology of the rainbow trout (*Oncorhynchus mykiss*). For this purpose, three fish groups were formed. Fish were fed with mushroom extract supplemented diets at 0% (control group), 1% and 2% for six weeks. Ten fish from each group were randomly selected and anesthetized by using phenoxyethanol. Sampled fish were incised liver and gut tissues were fixed in 10% neutral buffered formalin at least 24 h. Tissue samples were embedded in paraffin using standard histological protocols. Sections were cut and stained with haematoxylin and eosin. Stained sections were examined under the light microscope. The comparative histological examinations of gut samples of two experimental groups and the control groups; there haven't been found any microscopic changes. In the liver samples, severe infiltration of lipid in the hepatocytes (steatosis) to be seen in the control group, however, the experimental group liver samples showed moderate lipid infiltration. As a result, in recent years, one of the major problems of rainbow trout farming fish usually has a fatty liver, which can be suggested as alternative solution to reduce lipid in liver by adding of *Lentinula edodes* mushroom extract into feed.

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