

The effects of pomegranate (*Punica granatum*) seed kernel meal on color parameters of rainbow trout (*Oncorhynchus mykiss*)

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Received date: 2017/11/27

Reception date: 2018/06/03

Abstract

This research was aimed to investigate the effects of pomegranate (*Punica granatum*) seed kernel meal (pskm) as a supplement in the diet of rainbow trout (*Oncorhynchus mykiss*). The experiment was carried out in better and more favourable growth of color parameters, in a period of 90 days from December 2014 until March 2015, in Abzi Eksir Koesar Complex, situated in south east of Tehran. Fish population included 600 fingerlings with average weight of 6.74 g and average Fork length of 5,50 cm which were divided to five treatments, each treatment had three replicates. One of them was control group, without any pskm and four main treatments with added 1, 2, 3 and 4 percent of pskm to their food, respectively, were main treatments. Results of spectrophotometer tests represented increase of brightness parameter or transparency (L^*) with the maximum of 58.60 and increasing of the red to green parameter (a^*) with maximum amount of 2.94 in treatment 1. Results also indicated that the maximum parameter from blue to yellow (b^*), with amount of 10.12 was related to the control group. Provided indicated that, using pomegranate seed kernel meal to improve the color of *Oncorhynchus mykiss* meat, especially at the level of 1%, has significant impact which is possibly due to the presence of the effective pigment, particularly astaxanthin in pskm. It should be noted that this article is derived from the master's thesis.

Keywords: rainbow trout (*Oncorhynchus mykiss*), pomegranate seed kernel meal (pskm), Color parameters.