

**Investigation of the effect of yeast extract on the immune parameters
before and after thermal stress in Gilthead seabream (*Sparus aurata*)
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Abstract

After 8 weeks of feeding of juvenile Gilthead seabream with 40 g kg⁻¹ of yeast extract (Nupro), liver enzymes and total protein in fish fed with this supplement did not have any significant changes compared to the control group and even their level were less than the control group. But, after 7 days of chronic thermal stress, the enzymes of alanine aminotransferase, alkaline phosphatase and aspartate transaminase as well as total protein were increased in comparison with the control group. The results of this study showed that the use of yeast extract supplementation is effective in improving the immune system after thermal stress, Therefore, the use of this supplement in such areas affected by this problem can lead to a reduction in stress and mortality.

Keywords: Gilthead seabream, prebiotic, yeast extract