

Effects of Dietary Administration of *Aloe vera* on the Growth and Some Antioxidant Enzymes in Rainbow Trout, *Oncorhynchus mykiss*

Golestan, Ghazale¹; Salati, Amir Parviz^{2*}; Keyvanshokoo, Saeed³; Zakeri, Mohammad⁴; Moradian, Hossein⁵

1- M.Sc., in Aquaculture, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: ghazalgolestan@ymail.com

2- Assistant Professor, Department of Fisheries, Faculty of Marine Natural Resources, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: salatia@gmail.com

3- Associate Professor, Department of Fisheries, Faculty of Marine Natural Resources, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: keyvan65@yahoo.com

4- Assistant Professor, Department of Fisheries, Faculty of Marine Natural Resources, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: mhdzakeri@gmail.com

5- Iranian Fisheries Research Organization, Iran. Email: moradian.s.h@gmail.com

Received Date: January 20, 2013

*Corresponding Author

Accepted Date: June 7, 2013

© 2014 Oceanography. All rights reserved.

Abstract

Aloe vera has been used worldwide both for pharmaceutical, food and cosmetic industries due to the plethora of biological activities of some of its constituents. The aim of this study was to evaluate the effects of *Aloe vera* on the antioxidant defense and growth index in rainbow trout. 480 Rainbow trout, weighing 9.50 gr were divided into four group, group 1: normal group, group 2: 0.5 mg/kg *Aloe vera* concentration, group 3: 1 mg/kg *Aloe vera* concentration, group 4: 2 mg/kg *Aloe vera* concentration. Serum catalase, superoxide dismutase, glutathione peroxidase and growth index were estimated. Our results showed that growth was not significantly affected by *Aloe vera* extract. In experimental control groups, 0.5 and 2 concentration enzyme activities were significantly lower compared with control group. In conclusion, *Aloe vera* is not recommended for strengthen of antioxidant defenses.

Keywords: *Catalase*, *Superoxide dismutase*, *Glutathione peroxidase*, *Growth indices*, *Oncorhynchus mykiss*.
