

Abstract

One way to preserve fishery products using edible films and coatings for food. In this research effect of edible coatings alginate sodium with vitamin C on the chemical composition, chemical and organoleptic spoilage fillet of *Oncorhynchus mykiss* during refrigerated storage. Therefore fishes after filleting and preparation of preliminary, were coverage with two solutions alginate sodium and combined alginate sodium with vitamin C and For 15 days at a time 3 days were evaluated during phase 6. Chemical parameters (moisture, fat, protein and ash) were measured at day zero and day 15. The results showed that the amount of ash and protein in treatment 1 (control), group 2 (solution 1/5% of alginate sodium) and group 3 (solution 1/5% of alginate sodium + 5% vitamin C) had no significant changes ($p>0/05$). The amount of moisture and fat in Treatments covered showed significant increase ($p<0/05$). After 15 days the amount of fat significantly reduced ($p<0/05$). Moisture, protein and ash did not significantly change. PH levels in Treatments covered was significantly lower than the control treatments ($p<0/05$), but showed a significant increase in all treatments during storage ($p<0/05$). Parameters TVB-N, PV and TBA in treatments 2 and 3 than in group 1 was significantly decreased ($p<0/05$) but are significant ($p<0/05$) in all treatments during storage had increased. The results of microbial experiments also confirmed that the rate of aerobic mesophilic bacteria (TVC), in treatments 2 and 3 than in group 1 was significantly decreased ($p<0/05$). The results of sensory evaluation showed that treatment coated in higher sensory scores were acquired at the beginning of the period But at the end of the period was gradually reduced sensory scores. According to the results concluded that Treatments covered compared to control are the better quality during refrigerated storage.

Keywords: Edible coating, *Oncorhynchus mykiss*, Alginate Sodium, Vitamin C, Chemical corruption.



University of Zabol
Graduate school
Faculty of Natural resources
Department of fisheries

**The Thesis Submitted for the Degree of M.Sc
Of Fish products processing**

Title:

**Effects of alginate sodium based edible coating with vitamin
C on quality characteristic *Oncorhynchus mykiss* during
refrigerated storage.**

Supervisor:

Dr. E. Zaki pour Rahimabadi

Adviser:

Dr. A. Khanipour

By:

E. nami khasmakhi

May- June 2014