

Abstract

Two types of different chilling methods were used for *Cyprinus carpio* in this study: whole fish (Group 1), gutted fish (Group 2), flake ice- treated whole fish (Group 3), flake ice- treated gutted fish (Group 4), Mixture water and ice- treated whole fish (Group 5) and mixture water and ice – treated gutted fish (Group 6). The effects of these systems on the quality of *syprinus carpio* were evaluated. The results showed that with increasing storage period increases the value of volatile nitrogenous bases and in Group 6 reached to the 49 mg N/100g and in Group 1 reached to the 21.46 mg N/100g. Tiobarbituric acid levels remained low during the storage period and in the Group 1 reached to the 0.86 µg MA/100 kg and in the Group 6 reached to the 0.42 µg MA/100 kg. Iron values decreased for all Groups at day 9 and the maximum levels was for Group 6 (11.58 ± 0.24) and the least levels for Group 1 (3.2 ± 0.27). Total bacterial counts (TVC) and Psychrotropic total counts (PTC) increase for all Groups and the least levels was for Group 6 ($3.79 \text{ Log cfu}/100\text{g}$). Levels of E.coli, Coliforms and Entrobacteriaceae for all Groups increased. The results of the comparison evaluation eye, skin, part of the paunch and meat showed better quality Group 6 in the all treatments. According to the results of chemical, microbiological and sensory samples that pretreated for 2h and gutted has been better quality compared to samples not pretreated and not gutted.

Key words: *Cyprinus carpio*, Microbiological and Chemical properties, Gutting, Chilling



University of Zabol
Graduate school
Faculty of Natural resources

**The Thesis Submitted for the Degree of M.Sc Of Fisheries
(in the field of fisheries)**

Title:

**Effect of the ice- water mixture
pretreatment on quality of *Cyprinus
carpio* during storage in refrigerator**

Supervisors:

Dr. M. Ghaffari
Dr. A. Gharaei

Adviser:

Dr. M. Alipoor eskandani

By:

S. Askari Dehno

May 2014