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Research Article

Effects of chitosan coating on the quality of Rainbow trout fillet during storage in the refrigerator

Vahid Chamanara[a*], Anahita Farhoudi[b], Armita Ahmadi[c]

[a]*Young Researchers and Elite club, Ilam Branch, Islamic Azad University, Ilam, POBox: 69311-33145, Iran*
[b]*Young Researchers and Elite club, Gachsaran Branch, Islamic Azad University, Gachsaran, POBox: 63786-75818, Iran*
[c]*Department of Fisheries, Science and Research Branch, Islamic Azad University, Tehran, POBox: 14515-775, Iran*

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* Direct inquiries to author:
v.chamanara@gmail.com

ABSTRACT

The aim of the present study was to evaluate the effects of chitosan coating on quality and shelf life of fresh Rainbow trout (*Oncorhynchus mykiss*) in refrigerator (5±1 °C). Fishes were slaughtered quickly and fresh samples were treated with a solution of 2% (w/v) medium molecular weight chitosan dissolved in glacial acetic acid randomly and stored in refrigerator for 15 days. Then all the samples were investigated for psychrotrophic bacteria count and also sensory analysis within 3-day intervals. As shown results illustrated that the initial bacterial load was 2.51±0.3 log10 CFU g^{-1} in chitosan coated samples followed by 2.93±0.5 log10 CFU g^{-1} in control samples. These values were increased to 6.51±0.3 and 8.5±0.5 log10 CFU g^{-1} for chitosan coated and control samples, respectively. Thus, it could be concluded that chitosan coating can retard the microbial growth for treated samples and also extend the shelf life of Rainbow trout in refrigerator significantly (P<0.05).

Keywords: Chitosan; Fish quality; Microbial deterioration; Storage.