

عنوان مقاله:

Short communication: Influence of vacuum packaging and frozen storage time on fatty acids, amino acids and ω -3/ ω -6 ratio of rainbow trout (*Oncorhynchus mykiss*)

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نویسندگان:

E Rahimzade - Islamic Azad University of Bandar Abbas

A.H. Bahri - Islamic Azad University of Bandar Abbas

S Moini - Islamic Azad University of North tehran branch

D Nokhbe Zare - Islamic Azad University of Bandar Abbas

خلاصه مقاله:

In this study rainbow trout (*Oncorhynchus mykiss*) fillets were vacuum packed, frozen and stored at -18°C and the effect of this packaging method on proximate composition, fatty acids and amino acid profile and their changes compared to control conditions during 9 months of storage were studied. The results showed that 18 fatty acids were identified. The unsaturated fatty acid (UFA) were 56.77 and 57.23 % in control and vacuum packed samples in zero time and oleic acid and linoleic acid had high amounts among the UFA. The saturated fatty acid (SFA) were 29.51 and 29.31 in control and vacuum packed samples, respectively and stearic acid and palmitic acid were the most among the SFA. As a result of a frozen storage period of 9 months, a marked content decrease was found in the fatty acid groups such as MUFA, PUFA and ω -3 PUFA, as well as in the ω -3/ ω -6 ratio. However, a preserving effect on such fatty acid parameters could be observed due to the vacuum packed treatment. Results showed that moisture, ash, protein and fat content were 72.1, 2.27, 20.78 and 7.1 g/100g in fresh fillets. At the end of storage time moisture and protein content were decrease and fat and ash were increase in control and vacuum packed samples. On the other hand, the most abundant amino acids in rainbow trout fillets were glutamic acid, aspartic acid, arginine and leucine. The results indicate that vacuum packaging treatment, in all measuring factors had significantly reduced than those in control samples. Thus, vacuum packaging retain quality of fatty acid and amino acid of rainbow trout fillets within the cold storage and utilization of this method is recommended.

کلمات کلیدی:

Rainbow trout, Fatty acid, Amino acid, Freezing, Vacuum packaging

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