

عنوان مقاله:

Effect of dietary supplementation of garlic and vitamin E on lipid and protein oxidation in common carp meat during different storage times

محل انتشار:

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خلاصه مقاله:

This study was conducted to investigate the effects of dietary garlic powder and vitamin E supplement for 6 weeks on lipid and protein oxidation markers in nonfrozen and frozen carp meat at various time intervals. Fish were divided into four groups: Group 1 served as control; Group 2 and 3 received 25 and 50 g/kg diet garlic powder, respectively; Group 4 received diet supplemented with 150 mg/kg vitamin E. Based on the results, meat malondialdehyde (MDA) concentrations showed a significant ($p < 0.05$) decrease after 12, 48, 72 and 96 hours storage at 4 °C and after a storage period of 1 and 3 months at -20 °C in all treatment groups as compared to the control group. Carbonyl groups accumulation was found to be significantly reduced at 6 hours (in group 4), at 12 hours (in groups 3 and 4) and at 24, 48, 72 and 96 hours (in all treatment groups) after storage at 4 °C compared to the control group. Alpha-tocopheryl acetate supplementation resulted in the lowest MDA and protein carbonyl contents relative to garlic supplementation. It can be concluded that both studied compounds are notably effective against lipid and protein oxidation of carp meat during storage.

کلمات کلیدی:

Common carp, garlic, lipid oxidation, protein oxidation, vitamin E

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