

Abstract

The aim of this study has been to investigate the anti-oxidation and anti-bacterial effects of the green tea extract on the quality of common carp while it is preserved in ice powder (2-0degree centigrade). So the fish were immersed in 3% and 6% green tea extracts and the experimental sample in distilled water for 90 minutes and then they were placed in ice powder. Its Chemical measurement, fat Corruption measurement factors and microbial analysis were measured in 0, 3, 6, 9 and 12 days. The Moisture, ash and fat indexes showed decreasing process in experimental and containing extract treatments until the end of the period and the protein index showed the increasing process ($p < 0.05$). PH showed the increasing process in all treatments and at the end of the period (12days), the increase in treatments containing 3% and 6% extract of green tea was less than experimental treatment ($p < 0.05$). the results of total volatile nitrogenous bases showed the increasing process in treatments which it was less in containing extract treatments. Peroxide showed significant increase in all treatments which it was less in containing extract treatments ($p < 0.05$). Thiobarbitic showed increasing process in all treatments until the day 12 that the process was less than acceptable in treatments containing green tea extract until the day 9. Hem iron had decreasing process in experimental and containing extract treatments until he sixth day and then it was decreased. Microbial results show that the amount of psychrophilic and total bacteria had increase in all treatments and in experimental treatment exceeded the permitted limit ($7 \log_{10} \text{ cfu/g}$) on the 9th day, but this amount in containing extract treatments had less increase than the experimental treatment, it was exceeded the permitted limit on the 12th day which it was less in treatment containing 6% extract. The Results of chemical and microbial experiments of this study showed better performance of the treated fish with 6% green tea extract in comparison with other treatments so the retention time in ice powder in the sample containing 6% treatment showed increase than the experimental treatment and it was determined 9 days. So it can be recommended using 6% density of green tea extract as the best suggested dose for keeping common carp in ice powder.

Key words: green tea, common carp, retention time, ice powder, anti-oxidant.



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**Effect of green tea extract on the quality of
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powder storage**

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