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Impact of Gamma Irradiation on the Quality of Tilapia Fish(*Oreochromis niloticus*) Fillets Stored under Refrigerated Condition

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Abstract : The present study was conducted to evaluate the effect of low-dose of gamma irradiation (0, 1,2 and 3KGy) on physicochemical,microbial and sensory attributes of Tilapia fish fillets stored at4 \pm 1°C periodically at2days intervals for12days.The results showed that slightly decrease of TVB-N, TMA-N and PH values of treated samples with 1,2and3KGy doses.While the thiobarbituric acid value showed slightlyincrease in the same samples. During storage period the TVB–N, TMA-N, TBA and pH parameters showed significant increase but were these values still within the permissible level after 12days of storage of treated samples.The untreated samples reached to onset of spoilage after 8 days of storage. All doses (1,2 and 3 KGy) were enough to reduce the microbial loads and extend the shelf- life of treated Tilapia fish fillets without adverse effect on the acceptability of these samples. It could be concluded that the treatment by 3KGydose showed thehighest values of all quality parameters.

Keywords: Irradiation, Tilapia Fish, Physicochemical, Microbial, Sensory Evaluation.

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