



## EFFECT OF GAMMA RAYS ON NUTRITIVE VALUE AND *VIBRIO ALGINLYTICUS* OF PUFFERFISH (*LAGOCEPHALUS SCCELERATUS*) FILLETS

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### Abstract

This work was planned to study the effect of gamma rays on nutritive value, *Vibrio alginlyticus* infection and some radioactivity elements of *Logocephalus sceleratus* filets. Pufferfish samples (41.0 – 69.5cm length and 700 – 4350gm weight) were obtained from El-Anfoushy, Alexandria during February and March, 2017. Fish filets were exposed to 4 and 7 KGy using Co-60, then nutritive value, histamine content, and *Vibrio alginolyticus* were determined. The results showed that raw filets (wet wt.) showed 76.69 % water content, 17.68% protein, 0.41% lipid, 1.25% ash and 3.97% carbohydrate. Total amino acids were 78.93 and histamine level was 2.2365 mg/100 g. The minerals contents (mg\100g) were 1.660 K, 0.300 Na, 4.087 Ca, 17.905 Mg, 0.778 Fe, 0.222 Zn and 1.149 Cu. Changes in these results were based on doses used. *V. alginolyticus* was isolated from raw samples but the treated samples were negative. The isolated strains showed homogenous biochemical patterns and PCR pointed out specific amplification product of 737 bp for collagenase gene. On the other hand, the measurement of NaI Gamma spectrometer was nearly the same for raw and treatment filets. However, the effective doses for 10 and 22 kg were lower than the world-wide average. In conclusion, although pufferfish is a good nutritive source but further studies are necessary to overcome its toxicity.

**Keywords:** Pufferfish, nutritive value, *Vibrio alginlyticus* and Gamma rays.