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MAXIMIZING UTILIZATION OF THE FRESH WATER CRAYFISH

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ABSTRACT

Fresh water crayfish (*Procombarus clarkii*) is one of the crustacean that look like a tiny lobster, had been introduced accidentally and appear in the River Nile and its tributary all over Egypt during the last years. Therefore, the objective of this study was to maximize the utilization of crayfish for burger production as a human food and extraction of chitosan from wastes. These different treatments were carried out to produce crayfish burger samples, the first was the control without any addition, the second treatment was produced with adding 0.5% of the extracted chitosan, while the third one was formed by adding 0.5% commercial chitosan. Chemical composition and quality of crayfish flesh, wastes, crayfish burger and chitosan were determined at fresh state and during frozen storage at -18 °C for 3 months. The obtained results revealed a good freshness and high chemical quality of crayfish, with regard to the total volatile basic nitrogen (4.06 mg/100g), trimethylamine nitrogen (0.63 mg/100g), pH (6.97) and total bacterial count (5.324 Log cfu/g). The proximate composition of crayfish possessed that the mean values of moisture, total protein, fat, ash and carbohydrate were 76.81%, 19.18%, 1.95%, 1.49% and 0.57%, respectively. Crayfish burger products showed high quality of freshness, technological and sensory attributes as respect to their content of chitosan extracted from the wastes compared with the other treatments.

Key words: Antioxidant activity and Function properties, Chitosan, Crayfish wastes, fish burger.