

## عنوان مقاله:

Risk Assessment of Heavy Metal Bioaccumulation in Raw Crab and Prawn Flesh Marketed in Egypt

## محل انتشار:

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## نویسندگان:

Hanan A. Zaher - *Department of Food Hygiene and Control, Faculty of Veterinary Medicine, Mansoura University, Mansoura, Egypt*

.Azza H. Mohamed - *Department of Agricultural Chemistry, Faculty of Agriculture, Mansoura University, Egypt*

.Sahar E. Hamed - *Department of Chemistry, Faculty of Agriculture, Damietta University, Damietta, Egypt*

.Ayman El-Khateeb - *Department of Agricultural Chemistry, Faculty of Agriculture, Mansoura University, Egypt*

## خلاصه مقاله:

Background: Heavy metal toxicity at low levels damages the function of the brain, lungs, kidney, liver, blood composition, and other important organs. Long-term exposure leads to gradual disease progression in multiple sclerosis, Parkinson's disease, Alzheimer's disease, muscular dystrophy, and cancer. Methods: In total, 100 crustacean samples (50 crabs and 50 prawns) were analyzed in terms of nickel, zinc, chromium, and copper residues using an atomic absorption spectrophotometer and compared to Egyptian standard limits. Results: The concentrations of nickel, zinc, chromium, and copper in the crab samples were  $0.292 \pm 0.02$ ,  $20.688 \pm 3.06$ ,  $1.158 \pm 0.01$ , and  $22.304 \pm 4.04$   $\mu\text{g/g}$  of wet weight, respectively. The values in the prawn samples were  $0.373 \pm 0.01$ ,  $16.204 \pm 2.01$ ,  $0.844 \pm 0.01$ , and  $18.524 \pm 1.03$   $\mu\text{g/g}$  of wet weight, respectively. Conclusion: Our findings could lay the groundwork for monitoring the heavy metal contamination of marine organisms. The estimated daily detection intake of nickel, zinc, chromium, and copper was below the reported PTDI of each element. In addition, the THQ and HI values of the heavy metals were below 1.00 in the crab and shrimp samples, suggesting no significant risks to the community health due to the consumption of the crab and shrimp samples.

## کلمات کلیدی:

Heavy metals, Crab, Prawn, Risk assessment

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