

**EVALUATION OF THE NUTRITIONAL VALUE
OF THE CRAYFISH, *PROCAMBARUS CLARKH* (GIRARD,
1852), COLLECTED FROM THE RIVER NILE, EGYPT**

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ABSTRACT

The present study was conducted to evaluate the nutritional value of the crayfish, *Procambarus clarkii* since it represents a popular food in many parts of the world, though it is not yet exploited in Egypt. Samples of *P. clarkii* were collected from four different sites on the River Nile (I: Gezyrat El-Warrak, II: Mania! Sheeha, III: Al-Hawamdia & IV: Helwan) during the period from May to September 2002.

Muscles (edible part) were isolated, digested and analyzed for the metals content by using the atomic absorption spectrophotometer (AAS). Total protein, total lipids, glycogen and amino acids contents as well as caloric value of muscles were determined.

The concentrations of Ca, Cu, Fe, Mg, Mn and Zn in muscles of crayfish in control site (because it has a low factories effluent) were 459.6, 4.36, 48.9, 1842, 2.51 and 14.2 ug metal/g wet tissue, respectively. Total protein, total lipids, glycogen and amino acids/g muscle tissue were 33.6, 3.8, 0.661, 518 mg, respectively. The caloric value of such muscles was 176.6 Cal/mg tissue. The amino acids in muscles comprised 10 essential and 7 nonessential amino acids. Variable levels of such parameters were reported in the three examined sites.

Relative to allowable limits for metals in foods, there was no sufficient accumulation of any metal in crayfish muscles, indicating that no significant health hazards would result from consumption of such muscles of the animal.