

ASTUDY OF SOME CHEMICAL PROPERTIES OF CANNED FISH PRODUCTS IN LOCAL MARKETS IN BASRAH CITY,IRAQ

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ABSTRACT

Concentrations of seven heavy metals (Cadmium, Lead, Zinc, Nickel, Iron, Copper and Manganese) in five canned fish samples found in the local market Basrah city, Iraq were determined after digestion according to the Association of Official Analytical Chemists methods. Concentrations of metals were measured using the Flame Atomic Absorption Spectrophotometer. The results showed that the range obtained for the elements analyzed in mg/kg (dry weight) were as follows, Cd (0.0027 - 0.0078), Pb (0.0048 - 0.0093), Zn (0.0103 - 0.0205), Ni (0.0122 - 0.0128), Fe (0.0149 - 0.0237), Cu (0.0008 - 0.0034) and Mn (0.0014 - 0.0037). The results indicated that canned fish samples in this study have concentrations well below the permissible FAO/WHO levels for these toxic metals.

INTRODUCTION

Fish is a good source of protein rich in essential amino acids, omega - 3 fatty acids, fats that are valuable sources of energy, vitamins, and minerals (٢٧). Fish is one of the most highly perishable food products by growth of microorganisms and autolysis (22). Canning is one of the most important means of fish preservation (9). Canned fish can be spoiled because of heavy metals and chemical reactions as a result of the interaction between food components and can metals causing many undesirable changes or fish may be contaminated by toxic heavy metal elements during its growth, transportation and storage or also during their production, handling and canning processes (16). Fish can accumulate substantial amounts of heavy metals in their tissues especially muscles and this can represent a major dietary source of these