

INTRODUCTION

The peanut (*Arachis hypogaea L.*) is a popular food because of its pleasing aroma and flavor and its dry crunchy texture. Peanuts are a major component of several food products manufactured in the world. Peanut is an important source of food world wide and constitutes an inexpensive source of protein, fat, minerals and vitamins in the diets of rural populations, especially children. Despite its importance as food, the presence of aflatoxin has the potential to limit its use in the human diet (Woodroof, 1983).

Aflatoxins, a group of closely related heterocyclic compounds were first discovered in 1960 in England after the outbreaks of Turkey disease that resulted in deaths (Blount, 1961) and of cancer development in rainbow trout fed on rations formulated from peanut and cottonseed meals (Halver, 1965). Subsequently the toxin was isolated (Vander Zijden *et al.*, 1962). Aflatoxins are produced predominantly by *Aspergillus flavus* and *Aspergillus parasiticus*. Several studies revealed that *A. nominus* and *A. tamari* strains are capable of producing the toxin (Goto *et al.*, 1996 and 1997). The fungi contaminate a vast array of dietary staples and agricultural products such as rice, corn, cassava, peanuts and spices. Most commodities in the developing countries are therefore easily contaminated due to the environmental condition, poor processing and lack of proper storage facilities.

Studies to investigate methods for the elimination of aflatoxin from contaminated peanuts and other agricultural commodities are continuously being conducted. Heat treatment is not a useful method

for the reduction of aflatoxins because the temperature required to destroy aflatoxins is ca.270°C (Beuchat, 2000).Chemical degradation of aflatoxins may be brought about by the addition of chlorinating agents (sodium hypochlorite, gaseous chlorine), oxidizing agents (hydrogen peroxide, ozone, sodium bisulfite), or hydrolytic agents (acids, alkalis, ammonia).Some bacteria, yeasts, molds, actinomycetes, and algae are known to remove aflatoxin from or degrade aflatoxin in foods and feeds (Marth and Doyle, 1979). The ability of *Flavobacterium aurantiacum* to remove aflatoxin B₁ from milk, corn oil, peanut butter, corn, soybeans, peanuts (Ciegler *et al.*, 1966), and peanut milk (Hao and Brackett, 1988) was demonstrated.

The aim of this investigation was undertaken to:

1. Survey the aflatoxins contamination of non roasted and roasted peanut in Cairo.
2. Evaluate the nutritional value of non contaminated and contaminated with aflatoxins non roasted and roasted peanut.
3. Histopathological studies.