

ABSTRACT

There were two major aims of this project

- (a) Analysis for aflatoxins of retail i.e. supermarket - type products
e.g. peanuts, corn and corn products and legumes
- (b) Evaluation of various methods for the detection and quantitation
of aflatoxins in food samples

The various methods employed for objective (b) were minicolumn procedure as developed by Velasco, fluorescence spectroscopy, thin-layer chromatography and microbiological analysis.

By using the minicolumn procedure as the screening method and thin layer chromatography as a presumptive method, the presence of aflatoxins in the food samples under investigation was not indicated above 15 ppb. The microbiological analysis served to reinforce these findings as organisms belonging to the genus *Aspergillus* were found to be almost totally absent. Fluorescence spectroscopy was used to investigate the mechanisms of bonding of aflatoxins to the Florisil layer and also to determine the changes that occur in the free, absorbed and derivatised aflatoxins.