



# Cairo University Faculty of African Postgraduate Studies Department of Natural Resources

## Monitoring of pesticide residues in fish and agriculture drainage water in Egypt and Sudan

#### **THESIS**

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By

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#### **ABSTRACT**

The study aims to identify the pesticide residues used in Egypt in both agricultural drainage water as well as Nile tilapia (gills - muscles) as well as the effect of heat treatment (frying) of fish muscles on the remaining level of these pesticides under study. Where samples of agricultural drainage water and fish were collected from (Beheira-Gharbia-Alexandria) Governorates in 3 months (June-November-December). The fish were kept in plastic bags and kept under cooling -20 ° C. The period between the collection of the samples' analyzers was 30 days, and from the results of the analysis, the contamination of the agricultural drainage water samples were found, the majority of pesticides are present at a level higher than the acceptable daily intake followed by pesticide residues that were monitored in the fish gills, while the bulk of the pesticide residues level was in the muscles The fish is below the Acceptable daily intake. It was also found that the heat treatments by browning the muscle samples of the Nile tilapia fish reduced all levels of the existing pesticides to less than the acceptable daily intake, as reddening exposes the samples to a temperature of 140 °C able to destroy most of the remaining pesticides to the lowest level or most of them disappeared in the samples after heat treatment.

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