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## Analysis of organochlorine pesticides (OCP'S) residues in fish from Edko Lake, Egypt by using eco-friendly methods and their health risk implications for humans

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Levels of organochlorine pesticide (OCP) residues in tilapia fish and their health risk for humans associated with the consumption of the fish from Edko Lake, Egypt were determined. The analytical methods included solid phase extraction (SPE) and quick, easy, cheap, effective, rugged and safe (QuEChRS) for extraction and clean-up of OCP residues from fish followed by GC-ECD and GC-ITD as analytical tools. A total of 18 OCPs were analysed, heptachlor epoxide, p,p-DDE, dieldrin, p,p-DDD and endrin ketone were detected in fish with concentrations of 0.1144, 0.2119, 0.4352, 0.1196 and 0.1323 mg/kg b.w., respectively. Heptachlor epoxide recorded the lowest concentration while dieldrin recorded the highest concentration. The results of human health risk assessment showed that dieldrin in fish of Edko Lake recorded human health risk index more than one and

this means that there was human health risk associated with adult consumption of this fish. However, heptachlor epoxide, p,p-DDE, p,p-DDD and endrin ketone did not show any direct human health risk although of their presence in fish of Edko Lake.

### Biography

Moustafa A Khalifa has completed his PhD in Chemistry (Pesticides Chemistry) from the Institute of Industrial Organic Chemistry, Academy of Science, Warsaw, Poland (1982). He is a Lab Consultant for Drug and Food Quality Control Laboratories, Ministry of Health, Kuwait and has been serving as a Professor of Pesticides Chemistry and Analysis (1992 till now) at Kafer Elsheikh University, Egypt.

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