

ABSTRACT

Sherif Hussein Abd El-Rahman. Monitoring the behavior of some pesticide residues and heavy metals in certain water resources and their degradation by microorganisms. Unpublished Doctor of philosophy dissertation, Ain Shams University, Faculty of Agriculture, Department of Plant Protection, Egypt, 2005.

Twenty-one different pesticide residues and heavy metals were investigated in variety of water samples collected from different locations during 2002-2003.

The obtained results showed that most of the analyzed water contained different residues level of pesticides and heavy metals, according to sampling location and the time during which the samples were examined. Also, laboratory experiments were carried out at Faculty of Agricultural, Ain Shams University, Egypt, to study the bioaccumulation of butachlor and fenitrothion in *Tilapia nilotica* fish. Moreover, biodegradation of the two studied pesticides by certain microorganisms was also studied. The effects of temperature and UV on the degradation of these pesticides were investigated.

Key words: Monitoring, Contamination, Pollution, Pesticides, Heavy Metals, Residues, Water, Bioaccumulation, Biodegradation, Thermal and photodegradation.

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