

Water Quality Effect on Pesticides Residue by Mass Spectrometry

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The environmental pollution with pesticides and other organic contaminants initiated the interest to investigate the level and the fate of these compounds in different environmental compartments. Contamination of water resources by pesticide residues is one of the major challenges for the preservation and sustainability of the environment .However, these pesticides must be used properly, respecting the law, the environment and human health, since they are toxic and can cause contamination. In Egypt, The use of organchlorine insecticides began in the 1950s.DDT, endrin and other organochlorine pesticides were extensively used until 1981. This class of chemicals is characterized by its long persistence in the environment .The organic contaminants (e.g. OCPs) in environmental samples are often affected by sample matrix constituents who may interfere with the chromatographic separation of contaminants and lead to misidentification of chromatographic peaks and wrong quantification.The class of pesticides are scarce; the majority of matrix effects are promoted by the complex chemical composition of the environmental matrix, especially changes in physicochemical characterization such as pH, turbidity, suspend and electrical conductivity (E.C). In our study we extracted water samples according to EPA 508.1. The results showed positive differences for the levels of pesticide residues between water types like (industrial wastewater and drinking water). We also found that physicochemical parameters measured in types of water effect on the efficiency of pesticides recovery percentages was (ranged from 74.54% to 99.5%). For further plane work we will study on anthers different types of water like (drainage wastewater, municipal wastewater, sea wastewater and, etc...) to investigate the relation between physicochemical characterization on pesticides residuals analysis. Assessing the recovery efficiency and detection limits of the parameters will be measured are tools to specify the sensitive and accuracy of the qualitative and quantitative analysis by mass spectrometry.

Ch. Eman Farouk Ahmed Mohamed has graduated from Faculty of Science University of Alexandria. she has completed diploma in Analytical chemistry then she has completed her Master's degree in Organic Chemistry by Institute of Graduate Studies and Research Alexandria. She has current worked a chemist of pesticides residue in water lab in central laboratories Alexandria (CLA) Ministry of Health in Alexandria . She has on her way to publish her papers in journals. NOW in these days she is searching for studying abroad in her field to prepare her PHD. she appreciate yours to attend this conference to give me an experience knowledge in this field .

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