## E2-23 Problems associated with electrochemical detection of organo-pesticides

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Organo-pesticides are found to be hazardous due to such unfavourable factors as persistence, bioaccumulation, neurotoxicity and mutagenic behaviour. It has already been reported that some organic substances have harmful effects at substantially lower levels than previously thought.

Detection of organo-pesticides at low concentration levels would therefore be of great importance. Use of electroanalytical techniques, owing to their unique advantages, would provide alternative methodology in this regard.

Among the organo-pesticides investigated Propanil and Diuron do not show any electrochemical activity at bare glassy carbon surfaces. Although Endosulfan, Chlopyrifos and Trichlorfon are electroactive, they do not exhibit well-defined electrochemistry. Sluggish electrode kinetics, unpredictable surface reactivity and surface adsorption are probable factors that would lead to the above mentioned electrochemical behaviour. Modification of bare electrode surfaces with suitable electrocatalytic materials such as metalloporphyrins catalyses the electrochemical process of many pesticides, However, ill-defined solvent and electrolyte effects complicate the electrochemistry of pesticides, which would result in irreproducible electrochemical activity.