



ELECTROCHEMICAL DEGRADATION AND DETERMINATION OF 2,4-DINITROPHENOL FROM WATER

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Abstract

Certain conventional and alternative carbon-based electrodes, *i.e.*, glassy carbon electrode (GCE) and, commercial boron-doped diamond electrode (BDDE) were investigated and compared for the electrochemical determination and degradation of 2,4-dinitrophenol (2,4-DNP). The electrochemical behavior of electrodes in the presence of target pollutants was investigated using cyclic voltammetry (CV), chronoamperometry (CA), and multiple-pulsed amperometry (MPA). The duality of the electrode material and electrochemical techniques both in electrochemical degradation and process control was underlined. The optimum working conditions for both electrodes were established as a function of the application type, electrochemical degradation, or determination.

Key words: 2,4-dinitrophenol, boron-doped, diamond electrode, electrochemical degradation, glassy carbon electrode

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