



USING ZEOLITE-MODIFIED ELECTRODE FOR THE ELECTROCHEMICAL DETERMINATION OF 4-AMINOPHENOL FROM WATER

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Abstract

Two types of zeolite-modified electrodes, *e.g.*, Ag-doped zeolite-expanded graphite-epoxy (AgZEG) and Cu-doped zeolite-expanded graphite-epoxy (CuZEG) composite electrodes were tested for the application of the electrochemical determination of 4-aminophenol (4-AP). The electrochemical techniques used for the electrochemical determination of 4-AP were cyclic voltammetry (CV) and chronoamperometry (CA). Some aspects related to the mechanistic behaviour are discussed. The electrochemical determination of 4-aminophenol on AgZEG and CuZEG composite electrodes was achieved in the concentration range 0.05 to 0.4 mM, with a sensitivity of about $0.2 \text{ mA} \cdot \text{cm}^{-2} \cdot \text{mM}^{-1}$. The electroanalytical performance of the determination of 4-AP on zeolite-modified electrodes was not influenced by the type of electrode.

Key words: 4-aminophenol, electrochemical determination, zeolite-modified electrode

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