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Research Details :

Research Title : *Determination of trace levels of diosmin in a pharmaceutical preparation by adsorptive stripping voltammetry at a glassy carbon electrode*

Determination of trace levels of diosmin in a pharmaceutical preparation by adsorptive stripping voltammetry at a glassy carbon electrode

Descriptipn : A systematic study on the electrochemical behavior of diosmin in Britton-Robinson buffer (pH 2.0 - 10.0) at a glassy carbon electrode (GCE) was made. The oxidation process of the drug was found to be quasi-reversible with an adsorption-controlled step. The adsorption stripping response was evaluated with respect to various experimental conditions, such as the pH of the supporting electrolyte, the accumulation potential and the accumulation time. The observed anodic peak current at +0.73 V vs. Ag/AgCl reference electrode increased linearly over two orders of magnitude from 5.0×10^{-8} M to 9.0×10^{-6} M. A limit of detection down to 3.5×10^{-8} M of diosmin at the GCE was achieved with a mean recovery of 97 +/- 2.1%. Based on the electrochemical data, an open-circuit accumulation step in a stirred sample solution of BR at pH 3.0 was developed. The proposed method was successfully applied to the determination of the drug in pharmaceutical formulations. The results compared favorably with the data obtained via spectrophotometric and HPLC methods.

Research Type : Article

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Attatchments :

File Name	Type	Description
Determination of Trace Levels of Diosmin.pdf	pdf	المقال كاملا - Full Text