Short Communication

Electrochemical Behavior and Determination of four drugs using Multi-Wall Carbon Nanotubes Modified Glassy Carbon Electrode

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A glassy carbon electrode (GCE) that is modified with a thin film of multi-wall carbon nanotubes (MWCNT) is a useful tool for determining concentration, and a new method for obtaining this type of electrode with excellent determination characteristics is presented. In this paper, the electrochemical behavior of picoplatin, caffeic acid, ferulic acid, and breviscapine on the electrode was studied by cyclic voltammetry and showed effective improvements in terms of the sensitivity of measurement. The optimum conditions for the determination were investigated. Differential pulse voltammetry was used to determine the content of four drugs in the actual sample. The electrochemical detection method based on MWCNTs/GCE has a low detection limit, good recovery, and precision in pharmaceuticals determination. Therefore, the method is simple, rapid, accurate, and reliable to apply in pharmaceuticals field.

Keywords: MWCNTs/GCE; Pharmaceuticals determination; Electrochemical Behavior; Detection limit

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