Voltammetric study and direct analytical determination of the antiparkinson drug benserazide

Pérez-Ortiz,

Bollo,

Zapata-Urzúa,

Yáñez,

Álvarez-Lueje,

For the first time, a simple differential pulse voltammetry methodology for direct determination of benserazide in presence of levodopa in tablets was developed without any redox mediator, modified electrodes, or the aplication of mathematic deconvolution of signals. Benserazide was studied by differential pulse voltammetry using glassy carbon electrode in aqueous media. The drug exhibited a main well-defined oxidation signal in a broad pH range (2-10), and two poorly resolved signals at higher potentials. We have found that levodopa does not interfere on the electrochemical response of benserazide at pH 6.0. Thus, at this pH value, the developed analytical method exhibited adequate repeatability and reproducibility (RSD<2%), recoveries >98.5%, which permitted its successful application to both the assay and the uniformity content of benserazide. Also, hydrolytic degradation studies of benserazide were carried out by differential pulse voltammetry.