Square Wave Stripping Voltammetric Determination of Pantoprazole in Rabbit Plasma Using Surfactant-Based Pencil Graphite Electrode

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Abstract:

Simple, inexpensive, accurate and sensitive square wave adsorptive stripping voltammetry method depends on oxidation of anti-ulcer drug pantoprazole sodium on pencil graphite electrode using sodium dodecyl sulphate as a surfactant at pH 6.0 was introduced. The current signal due to the oxidation process as a function of the amount of the cited drug, pH of the medium, type of surfactant, frequency and adsorption time at the electrode surface was studied. The oxidation peak current varied linearly with the concentration over the range of $5 \times 10^{-6}$ to $6 \times 10^{-6}$ M. The limit of detection was 2 nM. The validity of the proposed method for pharmacokinetic study in rabbit plasma was conducted.

Keywords:

pantoprazole sodium, pencil graphite electrode, sodium dodecyl sulphate, pharmacokinetic study

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