



Square Wave Voltammetric Determination of Ampyrone in Human Biological fluids using Pencil Graphite Sensor

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ABSTRACT

Electrochemical behavior of Ampyrone (AMP) was investigated at Pencil Graphite Sensor in 0.2 M Phosphate buffer solution at pH 3.0 by using cyclic (CV), differential pulse (DPV) and square wave voltammetric (SWV) techniques. AMP showed one oxidation peak 0.5348 V at scan rate of 100 mV s⁻¹. The effect of scan rate and concentration was found to be diffusion-controlled electrode process. The electrocatalytic effect of AMP was dependent on pH. The developed method was found to be precise, selective and rapid for the simultaneous determination of AMP. The proposed method has been applied for the determination of AMP in real sample.

Highlights:

1. Developed a new voltammteric method which is cost effective in technology against conventional methods.
2. This method is helpful in performing identification and quantification of *Ampyrone* drug in real samples.
3. The electro-redox mechanism involves two electron-one proton transfers.

Keywords: Ampyrone, Square Wave Voltammetry, Pencil Graphite Sensor, Analytical applications.