Square Wave Voltammetric Determination of Rasagiline Mesylate on Hanging Mercury Drop Electrode and its application in Dosage Form and Biological Fluids

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A new square wave voltammetric (SWV) method has been developed and validated for the determination of Rasagiline mesylate in bulk, dosage form and human plasma due to a cathodic behaviour of its acetylene group at Hanging Mercury Drop Electrode (HMDE). Many facts such as different supporting electrolytes, scan rate, pulse amplitude, accumulation time and accumulation potential were studied. A good linearity was obtained over a concentration range of (2.8×10^{-8} to 1.4×10^{-7} mol L⁻¹) with 99.78% as mean recovery and 1.09%, as the relative standard deviation and limits of detection and quantification were found to be (2.7×10^{-9} and 9.24×10^{-9} mol L⁻¹), respectively. The accuracy and precision of the method were within acceptable limits. The method was applied for determining the active ingredients in its tablets with % recoveries $\pm$ relative standard deviation of 95.46 ± 3.76 and in spiked human plasma with $94.3 \pm 2.89\%$, respectively.

Keywords: Rasagiline mesylate; Square Wave Voltammetry; Hanging Mercury Drop Electrode; acetylene group.

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