ELECTROCHEMICAL DETERMINATION OF PARACETAMOL USING CARBON PASTE ELECTRODES MODIFIED BY SILICA JEL\MWCNTS AND ITS APPLICATION IN TABLETS

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Abstract - The present paper reports the preparation of a novel, sensitive, and low-cost electrochemical sensor for the determination of paracetamol. The main strategy of this study lies on providing the surface of a carbon paste electrode (by silica jel\MWCNTs). This may be attributed to the good adherence and adsorption of paracetamol at the modified electrode surface paracetamol oxidation. Electrochemical behavior of paracetamol on CPE modified by silica jel\MWCNTs was investigated with cyclic voltammetry (CV) under optimized experimental conditions. The limit of detection determination of paracetamol was calculated to be $2.7x10^{-8}$ M according to ($S/N = 3$) and the linear range of calibration was between 0.1–5μM. The proposed method could be applied to pharmaceutical formulations samples with satisfactory results.