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## Electrochemical determination of glucose using polyaniline electrode modified by glucose oxidase

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Polyaniline (PANI) enzyme electrode was formed by immobilization of Glucose oxidase (GOx) via glutaraldehyde into electrochemically polymerized PANI on graphite electrode. Electrochemical polymerization of PANI on graphite was performed from aqueous solution of 1.0 mol dm<sup>-3</sup> HCl and 0.25 mol dm<sup>-3</sup> aniline at constant current density of 2.0 mA cm<sup>-2</sup>. Chronopotentiometric curves of the PANI enzyme electrode obtained at current density of 10 μA cm<sup>-2</sup> were recorded in different glucose concentrations. The linearity response range was between 1.0-5.0 mmol dm<sup>-3</sup> of glucose concentration. The estimated apparent Michaelis-Menten constant, was  $K_m' = 0.30$  mmol dm<sup>-3</sup>, which is scientifically lower than that of free enzyme.

Key words: Glucose oxidase, Immobilization, Electrochemical synthesis, Polyaniline, Biosensors