

Immobilization of Tyrosinase on Electroenzymatic Synthesis of L-DOPA

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Parkinson's disease (PD) in humans is caused by dopamine deficiency in the nigro-striatum. Dopamine in dopamine neurons is synthesized from L-3,4-dihydroxy phenilalanine (L-DOPA). In this study, electroenzymatic synthesis of L-DOPA was investigated. Tyrosinase was immobilized on glassy carbon electrode and the reaction was conducted under the reduction potential of DOPAquinone. Variation of pH and temperature were investigated. The optimum condition of electroenzymatic immobilized tyrosinase for synthesis of L-DOPA was obtained. Immobilization of tyrosinase on electroenzymatic synthesis was found to be promising way for producing L-DOPA.