

### Detection of Dopamine on Glassy Carbon Electrode Modified by Using Tyrosinase and Multi-Walled Carbon Nanotube

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As a crucial catecholamine neurotransmitter, dopamine (DA) is widely present in both the brain and the peripheral nervous system. In this study, characterization and application of dopamine biosensor, glassy carbon electrode (GCE) modified by tyrosinase and multi-walled carbon nanotube are described using electrochemical impedance spectroscopy (EIS) and cyclic voltammetry (CV). Research was conducted in three electrode system at room temperature. The working electrode, glassy carbon electrode, has been modified using tyrosinase and multi-walled carbon nanotube. Optimization of experimental variables, such as the influence of the amount of tyrosinase, effect of pH, scan rate and interferences were also investigated. These results indicated that the modified electrode has good potential sensitivity and selectivity for determination of dopamine.