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**Abstract :** Arginine majorly acts as a substrate for the enzyme nitric oxide synthase (NOS) for the production of nitric oxide, a strong vasodilator. Current study demonstrated a novel amperometric approach for estimation of arginine using nitric oxide synthase. The enzyme was co-immobilized in carbon paste electrode with NADP+, FAD and BH4 as cofactors. The detection principle of the biosensor is enzyme NOS catalyzes the conversion of arginine into nitric oxide. The developed biosensor could able to detect up to 10-9M of arginine. The oxidation peak of NO was observed at 0.65V. The developed arginine biosensor was used to monitor arginine content in fruit juices.

Keywords : arginine, biosensor, carbon paste elctrode, nitric oxide

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