



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG ISSN: 0974-4290

Vol.8, No.12 pp 343-347, 2015

Fabrication of Carbon Nano Tube Based Amperometric Choline Biosensor for Detection of Neurological Disorders

P. Ravikumar*¹, S.Arumugam²

¹Department of Biomedical Engineering, Velalar College of Engineering and Technology, Erode-12, Tamilnadu, India

²Department of Computer Science and Engineering, Nandha Engineering College, Erode-52, Tamilnadu, India

Abstract: An amperometric electrochemical biosensor is constructed for detection of important neurochemical choline based on choline oxidase enzyme catalyzed reaction. The electrochemical reactions produce current on platinum electrode surface, which is recorded by cyclic voltammetry. The carbon nanotube combined with choline oxidase biosensor produce higher sensitivity than simple choline oxidase biosensor. The sensor is optimized for various pH, temperature and substrate concentration. Detection limit of choline biosensor is 6×10^{-3} M.

Keywords: Choline, Acetylcholine, Biosensor, Neurochemical.

P. Ravikumar *et al* /Int.J. ChemTech Res. 2015,8(12),pp 343-347.
