

affinity and binding energy of photochromic molecule to HSA, Autodock 3.0.5 software was used. The negative value of docking energy has revealed interaction of protein with this molecule.

Keywords: Photochromism, Human Serum Albumin, Rate constant.

Abstract No.296

Electrochemical Characterization of Cytochrome C by Using the Electrode Modified with Cadmium Selenium Nanoparticles

Saeid Rezaei-Zarchi¹, Saber Imani², Ali Mohammad Zand³, Yunes Panahi², Amir Nejad Moghaddam², Eisa Tahmasbpour Marzon²

1. Department of Biology, Payame Noor University, Yazd, IR
2. Chemical Injuries Research Center, Baqiyatallah University of Medical Sciences, Tehran, IR
3. Department of Biology, Basic Science Faculty, IHU, Tehran, IR
(E-mail: Imani.Saber@yahoo.com)

Bare surface of the electrode in electrochemical studies of proteins are not suitable. In this case, leads to a decrease in the rate of electron transfer between electrode and protein and protein irreversible adsorption on the electrode surface which is associated with conformational changes and loss of protein activity. Therefore, you must provide the necessary groups on the electrode surface for active communication with the macromolecules. Molecules could provide the group called facilitator. In this paper, was diagnosed with cytochrome c with modified glass carbon electrode surface by cadmium selenium nanoparticles. This detection can be used in Biosensors designed for measurement of hydrogen peroxide. X-ray Diffraction (XRD) results showed size nanoparticles synthesized with electrochemical method are 57 nm. Alpha

Absorption spectra revealed the size limit. Advantage of electrochemical methods for synthesis of nanoparticles of cadmium selenium is an easy, cheap and low cost. Biosensors with cytochrome c stabilized on this electrode shows high sensitivity and linear range from 15 to 700 micro M for determination of hydrogen peroxide.

Keywords: Cytochrome C, Cadmium Selenium Nanoparticles, Electrochemical Characterization.
