عنوان مقاله:

Disposable electrochemical biosensor based on magnetic nano composite for somatotropin hormone detection in human blood serum

محل انتشار:

کنگره ملی شیمی ونانو شیمی از پژوهش تا توسعه ملی (سال: 1396)

تعداد صفحات اصل مقاله: 17

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خلاصه مقاله:

As a novel performance, the magnetic nano composite was doped into the electropolymerized polypyrole film accompany with the carboxilated carbon nanotube (COO-CNT). This sensing film was made electrochemically on Au bare electrode in order to trace determination of somatotropin in human blood serum samples at optimized pH. This sensor covered a linear concentration range from 0.06 to 45 nM with detection limit of 0.05 nM. Cyclic voltammetry (CV), differential pulse voltammetry (DPV), scanning electron microscopy (SEM) and electrochemical impedance spectroscopy (EIS) techniques also demonstrated the morphology of modified electrode s surface and electrochemical behavior of somatotropin on this platform. We believe that such kind of bio-devices possess the .prominent potential to trace determination of bio-compounds in biological fluids with accuracy and precise analysis

کلمات کلیدی:

Differential Pulse Voltammetry; Scanning Electron Microscopy; Electrochemical Impedance Spectroscopy; Magnetic Nano Composites