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(57) Abstract :
FABRICATION OF ELECTROCHEMICAL BIOSENSING PLATFORM FOR THE DETECTION OF ORAL CANCER THROUGH SALIVARY BIOMARKER CD44 ABSTRACT The present invention aims to fabricate an electrochemical biosensing platform for rapid, cost effective and selective examination of salivary biomarker. The gold nanoparticles are conjugated with antibodies for CD44 detection which is employed as biological transducer on 96 well plate and microelectrodes. The invention focuses on the identification of biomarker, synthesis and characterization of nanoparticles and its biofunctionalization with receptor antibody, observe detection of antigen antibody binding electrochemical and comparative analysis with conventional ELISA. The invention discloses a noninvasive diagnosis of early oral cancer by measuring the molecular marker. The invention provides reduction method for synthesizing gold nanoparticles having UV-Visible range absorption as well as electrochemical properties. The invention relates to the detection of salivary biomarker CD44 through cyclic voltammetry, chronoamperometry and nanoparticles immobilized ELISA with limit of detection (LOD) 0.1ng/ml and 1ng/ml respectively.

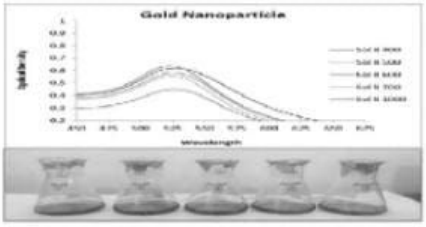

Figure 1

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