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Development of Cardiac Troponin I Electrochemical Impedance Immunosensor

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It is well known that acute myocardial infarction (AMI), a type of heart attack, is a primary cause of sudden death that has high potential to lead to nonreversing damage or necrosis of myocardial tissues. In this easy, we focused on the biosynthesis of Ag nanoparticles with the employment of green algae Stoechospermum marginatum as a reductant. The whole course of synthesis was fast in which the development of Ag nanoparticles was accomplished less than 1 hour after the chemical reaction between Ag salt and algal extract. After this, the AgNPs were utilized for the formation of electrochemical impedance cardiac troponin I immuno-transducer.

Keywords: Electrochemistry; Immunosensor; cTnl; Acute myocardial infarction; Diagnosis

FULL TEXT