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Antibody functionalized graphene biosensor for label-free electrochemical immunosensing of fibrinogen, an indicator of trauma induced coagulopathy

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### **ACCEPTED MANUSCRIPT**

Antibody functionalized graphene biosensor for label-free electrochemical immunosensing of fibrinogen, an indicator of trauma induced coagulopathy.

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#### **Abstract**

An antibody, specific to fibrinogen, has been covalently attached to graphene and deposited onto screen printed electrodes using a chitosan hydrogel binder to prepare an inexpensive electrochemical fibrinogen biosensor. Fourier Transform Infrared (FT-IR) spectroscopy has been utilized to confirm the presence of the antibody on the graphene scaffold. Electrochemical Impedance Spectroscopy (EIS) has been utilized to demonstrate that the

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