Graphene Nanocomposite Modified Glassy Carbon Electrode: As a Sensing Platform for Simultaneous Determination of Methyldopa and Uric Acid

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Fe₃O₄@SiO₂/GO nanocomposite was synthesized and used for surface modification of glassy carbon electrode. This modified electrode was used for electrochemical determination of methyldopa (MD) in the presence of uric acid (UA). Operational parameters such as amount of solution pH and scan rate which affected the analytical performance of the modified electrode were optimized. The calibration curve for MD was linear in the range of 0.1–400.0 μM with the detection limit (S/N=3) of 86.0 nM. The modified electrode was successfully applied for the determination of MD and UA in some real samples

Keywords: Methyldopa, Uric acid, Nanocomposite, Graphene, Glassy Carbon Electrode

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