Short Communication

Electrochemical Detection of Liquiritin in Liquorice Based on Carbon Materials

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doi: 10.20964/2016.12.24

Received: 12 August 2016 / Accepted: 4 October 2016 / Published: 10 November 2016

To quantify liquiritin, an electrochemical sensor was synthesized with a glassy carbon electrode (GCE), which was modified by the carboxylic acid-based graphene (C-GO) and acidified MWCNT. Compared with the original GCE, the GCE after modification with MWCNT or C-GO exhibited a well-defined oxidation and reduction of liquiritin. Moreover, the current response was enhanced significantly by this process, where the current response of the oxidation peak of liquiritin showed a linear relationship with the concentration of liquiritin in the range of 0.05 to 100 μ M when the limit of detection was 0.03 μ M. The modified voltammetric performance of the electrochemical sensor demonstrated that it could be practically applied in the determination of liquiritin for the real licorice specimens.

Keywords: Electrochemistry, Sensor, Liquiritin, Liquorice, Carbon nanotube; Graphene

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