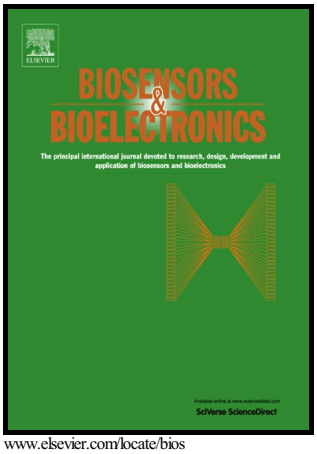

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PII: S0956-5663(16)30846-6
DOI: http://dx.doi.org/10.1016/j.bios.2016.08.092
Reference: BIOS9089

To appear in: *Biosensors and Bioelectronic*

Received date: 15 March 2016
Revised date: 15 August 2016
Accepted date: 26 August 2016

Cite this article as: Hongwu Wang, Su Yao, Yanqing Liu, Shoulian Wei, Jiawen Su and Gengxin Hu, Molecularly imprinted electrochemical sensor based on Au nanoparticles in carboxylated multi-walled carbon nanotubes for sensitiv determination of olaquindox in food and feedstuffs, *Biosensors an Bioelectronic,* http://dx.doi.org/10.1016/j.bios.2016.08.092

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Abstracts

A novel molecularly imprinted electrochemical sensor (MIECS) was proposed to determine olaquindox (OLA) using gold nanoparticles in molecularly imprinted polymer (AuNPs@MIP) and carboxylated multi-walled carbon nanotubes (cMWCNTs). Glassy carbon electrode (GCE) was modified with cMWCNTs (cMWCNTs/GCE), and AuNPs/cMWCNT/GCE was obtained by electrodeposition on cMWCNTs/GCE using chronoamperometry in $HAuCl_4$. Then, the obtained MIP/AuNPs/cMWCNTs/GCE was electropolymerized using OLA as template and o-PD as monomer to determine OLA. Important experimental parameters, namely,scan cycles, mole ratio of template molecules to functional monomers, pH value, and incubation time were optimized. The novel MIP sensor can offer a 2.7 nM of detection limit for OLA. In addition, a series of food and feedstuffs were analyzed to demonstrate the feasibility of MIECS.

Keywords:

olaquindox, carboxylated multi-walled carbon nanotube, Au nanoparticle, molecularly imprinted electrochemical sensor, electrochemical determination

1. Introduction

Olaquindox [OLA;