Supplementary data

Food safety control of α-zearalanol through voltammetric immnosensing on Au-Pt bimetallic nanoparticles surface

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The electrodeposition time, electrodeposition potential and $\text{K}_2\text{PtCl}_6$ solution concentration employed for the PtNPs electrodeposition procedure are relevant parameters which affect the sensivity of the proposed method.

For these reasons, the electrodeposition time was evaluated in a range of 20–100 s. The current response increased linearly if the time rises from 20 to 60 s, insignificant differences were observed when time was greater than 60 s. So, an electrodeposition time of 60 s was selected as optimum.

![Graph showing the relationship between electrodeposition time and current response.]

Regarding to the electrodepositing potential, the time employed was 60 s and the working electrode potential was varied between $-0.1$ and $-0.6$ V. The current response increased rapidly by increasing the potential up to a value of $-0.4$ V, and then remained constant between $-0.4$ and $-0.6$ V. Therefore, a potential of $-0.4$ V was selected as optimum.
K₂PtCl₆ solution concentration employed for the electrode surface modification was also optimized. This study was carried out in the range of 0.01–0.4 %. An important increase of the signal was observed between 0.01 and 0.2 %. However, at higher concentrations insignificant differences were obtained. Then 0.2 % K₂PtCl₆ solution was used for the electrodeposition process.