

## عنوان مقاله:

Investigation the electroanalytical behavior of the tamoxifen as breast anticancer drugs using differential pulse anodic adsorptive stripping and it's extraction from tablets

## محل انتشار:

کنفرانس بین المللی علوم و مهندسی (سال: 1394)

تعداد صفحات اصل مقاله: 13

## نویسندگان:

z Deris Falahiye - *Department of Chemistry, Faculty of Science, Islamic Azad University, Arak Branch, P.O.B: 83183-365, Arak, Iran*

m Jalali - *Department of Chemistry, Faculty of Science, Islamic Azad University, Omidyeh Branch, P.O.B: 68581-98519, Omidyeh, Iran*

m Alimoradi - *Department of Chemistry, Faculty of Science, Islamic Azad University, Arak Branch, P.O.B: 83183-365, Arak, Iran*

## خلاصه مقاله:

In this work, the electrochemical behavior of tamoxifen as an anti cancer drug were addressed at a glassy carbon electrode (GCE). Cyclic voltametry (CV) and chronoamperometry were used to understand the electrochemical characteristics of tamoxifen (Tam) In Britton-Rubinson (BR) buffer (pH= 2.4). Based on the results of the recorded CV, the electrodeposition and anodic stripping behavior of the Tam were investigated at the surface of GCE. To find the best condition for taking a sharp analytical peak concerning the electro-oxidation of Tam, differential pulse anodic adsorptive stripping voltammetry (DPAASV) was studied. The primary experiments demonstrated that the DPAASV presents a sufficient oxidation peak current at approximately 1.1 V vs Ag/AgCl. Therefore, the effects of different parameters such as; deposition potential, deposition time, pH and the electrocleaning condition has been studied and optimized. The obtained results shown that the -1.2 v, 83s, pH=2.4 and cleaning in H<sub>4</sub>SO<sub>2</sub> 3.3 M are the optimal values, respectively. Then the calibration curve was plotted in the range of 1 to 13  $\mu$ M and the limits of detection (LOD) and quantitation (LOQ) were calculated to be 3.641 and 4.35  $\mu$ M, respectively. The mean, standard error and relative standard deviation (RSD) for five replicates of 2.3  $\mu$ M were found to be 2.1  $\mu$ M, 4.63 % and 8.64 %, respectively. To estimate the application potential of the proposed method, the extraction of Tam from tablets containing 43 mg Tam were investigated and optimized. Finally, the proposed method was successfully employed for .determination of Tam in spiked physiological samples

## کلمات کلیدی:

Tamoxifen, DPAASV, Stripping voltametry, deposition

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/424603>



