Voltammetric Determination of Tenoxicam in Drug Formulation at Modified Glassy Carbon Electrode

Murat Sadikoglu^{1,*}, Ahmet Cabuk²

¹ Department of Science Education, Faculty of Education, University of Tokat Gaziosmanpasa

² Department of Chemistry, Faculty of Science and Arts, University of Tokat Gaziosmanpasa

*E-mail: murat.sadikoglu@yahoo.com

doi: 10.20964/2019.05.08

Received: 7 January 2019 / Accepted: 20 February 2019 / Published: 10 April 2019

In this study, the electrocatalytic reduction of tenoxicam (TNX) was studied on a 4-aminobenzene sulfonic acid (4-ABSA) modified glassy carbon (GC) electrode using cyclic voltammetry (CV) and differential pulse voltammetry (DPV) techniques. The modified glassy carbon electrode showed a significant catalytic effect on the reduction of TNX in a wide pH range of 3.0-8.0. The CV technique was used to investigate electrochemical behaviors of TNX and the effect of pH on the reduction reaction. 0.2 M acetate buffer (pH 5.0) was selected as support electrolyte. The voltammetric determination of TNX was performed using differential pulse voltammetry (DPV) technique. The limits of detection (LOD) and quantification (LOQ) were determined to be 2.82×10^{-7} M and 9.43×10^{-7} M. Also, the amount of TNX in the drug tablets was determined at the optimum conditions developed. It is observed that the modified GC electrode is sensitivity and selectivity for the determination of TNX in Oksamen tablets by DPV technique

Keywords: tenoxicam, voltammetric determination, electrochemical reduction, electrochemical polymerization, modified glassy carbon

[FULL TEXT](#)

© 2019 The Authors. Published by ESG (www.electrochemsci.org). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).