Accepted Manuscript

Electrochemical determination of paracetamol in presence of folic acid at nevirapine modified carbon paste electrode: A cyclic voltammetric study

S.B. Tanuja, B.E. Kumara Swamy, K.V. Pai

PII: S1572-6657(17)30386-7

DOI: doi: 10.1016/j.jelechem.2017.05.025

Reference: JEAC 3301

To appear in: Journal of Electroanalytical Chemistry

Received date: 3 February 2017 Revised date: 15 May 2017 Accepted date: 16 May 2017

Please cite this article as: S.B. Tanuja, B.E. Kumara Swamy, K.V. Pai, Electrochemical determination of paracetamol in presence of folic acid at nevirapine modified carbon paste electrode: A cyclic voltammetric study, *Journal of Electroanalytical Chemistry* (2017), doi: 10.1016/j.jelechem.2017.05.025

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

Electrochemical determination of paracetamol in presence of folic acid at nevirapine modified carbon paste electrode: A cyclic voltammetric study

S.B. Tanuja, B.E. Kumara Swamy *, K.V. Pai ⁺

Department of P.G. Studies and Research in Industrial Chemistry, Jnana Sahyadri, Kuvempu University, Shankaraghatta-577 451, Shimoga, Karnataka, India

ABSTRACT

The carbon paste electrode was modified by nevirapine drug, the voltammetric behaviour of paracetamol and folic acid at modified carbon paste electrode were investigated by cyclic voltammetric technique. The modified nevirapine carbon paste electrode showed an enhanced sensitivity towards paracetamol and folic acid. The modified nevirapine electrode had strong resolving capacity for overlapping voltammetric response of paracetamol and folic acid into two well resolved peaks, with increment of peak current as compared to the bare carbon paste electrode. The simultaneous determination of paracetamol in presence of folic acid without any interference is feasible at nevirapine modified carbon paste electrode, the detection limit of paracetamol and folic acid were found to be $0.77~\mu M$, $2.53~\mu M$ respectively. The practical utility of the proposed electrode was evaluated by analyzing paracetamol in pharmaceutical sample with satisfactory result.

Keywords: Paracetamol (PA), folic acid (FA), bare carbon paste electrode (BCPE), Nevirapine, cyclic voltammetry, differential pulse voltammetry (DPV).

* Corresponding author. E-mail address:kumaraswamy21@yahoo.com (B.E. Kumara Swamy) and vasantapai@gmail.com (K. Vasanatakumar Pai). Tel.:+918282256225; fax: +91 8282 256255

Download English Version:

https://daneshyari.com/en/article/4907838

Download Persian Version:

https://daneshyari.com/article/4907838

<u>Daneshyari.com</u>