

Electrochemical study of the nitro radical anion from nicardipine: Kinetic parameters and its interaction with glutathione

Squella, J. A.

Bollo, S.

de la Fuente, J.

Nuñez-Vergara, L. J.

The cyclic voltammetric behavior of nicardipine was studied. Particular attention was directed to the one-electron $\text{ArNO}_2/\text{ArNO}_2^{\cdot-}$ couple as measured by the cyclic voltammetric mode in aqueous DMF mixed media. Analysis of this response as a function of scan rate yields information on the stability of the nitro radical anion. A second-order rate constant $k_2 = 174 \text{ l mol}^{-1} \text{ s}^{-1}$ for the decomposition of the nitro radical anion from nicardipine and a half-life of 1.15 s were obtained. The cyclic voltammetric technique was also employed to study the tendency of $\text{ArNO}_2^{\cdot-}$ to undergo further chemical reaction; specific attention was paid to the interaction with glutathione. © 1994.