

Redox behaviour of nifuroxazide: Generation of the one-electron reduction product

Squella,

Letelier,

Lindermeyer,

Nuñez-Vergara,

The electrochemical properties of nifuroxazide have been investigated in aqueous and aqueous-DMF mixed solvents. In aqueous media, a single, irreversible four-electron reduction occurs to give the hydroxy]amine derivative. In mixed media, a reversible one-electron reduction to form a nitro radical anion takes place. Cyclic voltammetric studies show that the anion radical product is stable, although the nitro radical anion intermediate shows a tendency to undergo further chemical reactions. A comparison with the voltammetric behaviour of other nitrofurans such as nifurtimox, nitrofurazone and furazolidone is made. The electrochemically-obtained parameters are correlated with the in vivo studies of oxygen consumption on *Trypanosoma cruzi* cell suspensions.