

Voltammetric behavior of 1,4-dihydropyridine calcium antagonists

Alvarez-Lueje,

Nuñez-Vergara,

Squella,

The anodic electrochemical behavior of the five members of the 1,4-dihydropyridine calcium antagonists family was studied. In all of the studied compounds (nifedipine, nitrendipine, nimodipine, nicardipine, and fluraldipine), the oxidation process reveals only one anodic peak due to the two-electron oxidation of the dihydropyridine ring to form the pyridine derivative compound. The differential pulse voltammetric technique was used for the quantitation of the 1,4-dihydropyridines in pharmaceutical forms. The voltammetric determination developed here represents a good analytical alternative, because sample preparation is easy (no excipient separation is necessary), is not time consuming, and is adequately accurate and precise. Furthermore, the developed method can be applied as an important tool in photodegradation studies. Copyright © 1994 VCH Publishers, Inc.