

Separation and structure determination of nicardipine photoproducts by LC-ESI-MS

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AB

摘要

Abstract

A sample of 0.104 m nicardipine in methanol was photoirradiated with a Philips 400 W UV lamp for 3 h in a photochemical chamber. A total of four major photoproducts were found from the HPLC chromatogram. The same sample was used for taking LC-MS, while eight major photoproducts were observed and the structures elucidated by analyzing the CID patterns of their respective mass spectra. A reaction scheme of nicardipine is proposed that the photochemical reactions occur mainly via oxidation of 1,4-dihydropyridine moiety, following the stepwise photo-reduction of the m-nitro group and demethylation of the ester group at 5-position of the pyridine ring. Copyright © 2008 John Wiley & Sons, Ltd.