

A New Spectrofluorimetric Method for Determination of Nifedipine in Pharmaceutical Formulations

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A new, simple, sensitive, and fast spectrofluorimetric method for determination of nifedipine in pharmaceutical formulations has been presented. In the proposed procedure nifedipine was oxidized with Ce(IV) and the fluorescence of the produced Ce(III) was measured at 354 nm after excitation at 255 nm. The factors influencing oxidation of the drug were studied and optimized. Under the applied experimental conditions, the calibration plots were linear over nifedipine concentration range 0.05–2.0 mg L⁻¹. The limit of detection was 0.015 mg L⁻¹ and the relative standard deviation for 5 replicate determinations of nifedipine at 1.0 mg L⁻¹ concentration level was 1.53%. Good recoveries in the range 95–104% were obtained in spiked samples. The proposed method was successfully applied to the determination of nifedipine in pharmaceutical formulations.