

Research Article

Development of Reverse-Phase HPLC Method for Simultaneous Analysis of Metoprolol Succinate and Hydrochlorothiazide in a Tablet Formulation

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Abstract

Purpose: To develop a simple, sensitive and rapid reverse phase HPLC method for the simultaneous analysis of metoprolol succinate and hydrochlorothiazide in a solid dosage form.

Methods: The drugs were analysed by a reverse phase C-18 column using 50mM di-sodium hydrogen phosphate:methanol:acetonitrile in a ratio of 525:225:250 as mobile phase. The flow rate was 1 ml/min and the compounds were detected by a UV-detector at 222 nm at a column temperature of 24 ± 2 °C. The method was statistically validated for linearity and accuracy.

Results: The retention time and drug content of metoprolol succinate and hydrochlorothiazide were 5.38 min, 96.05 % and 3.04 min., 97.64 %, respectively.

Conclusion: The study shows that the developed method is simple and accurate and that it would be suitable for the simultaneous determination of metoprolol succinate and hydrochlorothiazide in pharmaceutical formulations.

Keywords: Metoprolol succinate; Hydrochlorothiazide; Simultaneous analysis; High performance liquid chromatography; Tablet formulation

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