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A green Liquid Chromatographic Method For the Simultaneous Determination of Amlodipine besylate and Irbesartan in Pharmaceutical formulation

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Abstract

The concept of green analytical chemistry prevails due to the increasing environmental pollution. Our aim is to develop sensitive and eco-friendly method which is non hazardous to the environment by producing minimal waste. In this context, a green HPLC method was applied for the simultaneous determination of amlodipine besylate (AML) and irbesartan (IRB) in pharmaceutical formulation. Separation was carried out using X select cyano analytical column (250 ×4.6 mm, 5µm) using methanol -0.02 M phosphate buffer pH 3.5 (65: 35, by volume) as a mobile phase. The separated peaks were detected at 240 nm at a flow rate 1.0 mL/min. Quantification was done over the concentration ranges of 1-25 µg/mL for AML and 1-60 µg/mL for IRB. The suggested method was validated with regard to linearity, accuracy and precision according to the International Conference on Harmonization guidelines with good results. It was successfully applied to pharmaceutical formulation without interference from excipients. The proposed method could be used as a safer alternative for routine analysis of the mentioned drugs in quality control laboratories..

Biography:

Dina A.El Mously is an assistant lecturer in the Analytical Chemistry department at Faculty of Pharmacy, Cairo University where she also received her MSc degree in Analytical Chemistry. She is a Ph.D student and her research interests are focused on application of different analytical techniques including ion selective electrodes and chromatography for various pharmaceutical and biological applications.