- Liquid Chromatographic Determination of Linagliptin in Bulk, in Plasma and in its Pharmaceutical Preparation”.

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Abstract

In this work, two reversed-phase liquid chromatographic (RP-LC) methods have been developed for the determination of linagliptin (LNG) based on isocratic elution using a mobile phase consisting of potassium dihydrogen phosphate buffer pH (4.6)-acetonitrile(20:80, v/v) at a flow rate of 1 mL min(-1). Two detection techniques have been applied either UV detection at 299 nm in the first method or fluorometric detection at 239 nm for excitation and 355 nm for emission in the second method. Chromatographic separation in the two methods was achieved on a Symmetry® cyanide column (150 mm × 4.6 mm, 5 μm). Linearity, accuracy and precision were found to be acceptable over the concentration ranges of 2.5-80 μg mL(-1) for LNG in bulk and 2.5-15 μg mL(-1) for LNG in plasma with the first method and 5-160 μg mL(-1) for LNG in bulk with the second method. The optimized methods were validated and proved to be specific, robust and accurate for the quality control of the cited drug in its pharmaceutical preparation.

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