Spectrophotometric Methods Based on Charge Transfer Complexation Reactions for the Determination of Saxagliptin in Bulk and Pharmaceutical Preparation

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Abstract

Simple, accurate and precise spectrophotometric methods have been developed for the determination of saxagliptin in bulk and dosage forms. The proposed methods are based on the charge transfer complexes of saxagliptin with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ) and 7,7,8,8-tetracyanoquinodimethane (TCNQ). All the variables were studied to optimize the reactions’ conditions. Beer's law was obeyed in the concentration ranges of 50-300 μg/ml and 10-110 μg/ml with DDQ and TCNQ, respectively. The developed methods were validated and proved to be precise and accurate for the quality control of the saxagliptin in its pharmaceutical dosage form.

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