Utility of p-Chloranilic Acid for Spectrophotometric Determination of Some Antithistaminic Drugs

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Abstract

A simple, sensitive and accurate spectrophotometric procedure has been described for determination of three antihistaminic drugs, loratadine (I), dimethindene maleate (II), and clemastine hydrogen fumarate (III). The procedure is based on the interaction of each of these drugs with p-chloranilic acid (P-CA) in methylene chloride to give a stable highly coloured chromogen exhibiting maximum absorbance at 530 nm. Optimization of different experimental parameters as well as the stoichiometry of the reaction have been studied. Conformity to Beer's Law enables determination of these drugs in concentration ranges of 40–320 μg. ml−1, 40–240 μg. ml 40–400 μg. ml−1 for drugs I,II and III respectively. The validity of the suggested procedure was checked by applying the standard addition technique using different pharmaceutical dosage forms. Results revealed high accuracy and good reproducibility, when compared with reference methods.

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