



Spectrophotometric Estimation of a few Commercial Drugs using Potassium Permanganate and Amaranth Dye in Acidic Media

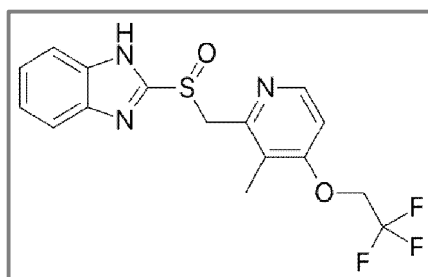
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ABSTRACT

Simple, sensitive selective and Precise methods are developed for the UV-Visible Spectrophotometric methods have been developed for the estimation of five drugs Viz., Atazanavir sulphate (ATV), Carvedilol (CRV), Dexlansoprazole (DLP) Doxycycline Hyclate (DOX), Omeprazole (OMZ). The method involves the addition of excess $KMnO_4$ of known concentration in the presence of 0.2M H_2SO_4 , reactants are allowed to react and the unreacted $KMnO_4$ is estimated by the measurement in the decrease in the absorbance of the Amaranth dye (λ_{max}). This method has been applied for the estimation of drugs in their pure form as well as in tablet formulation. The results of analysis have been validated statistically for linearity, accuracy, precision, LOD and LOQ.

Graphical Abstract



Structure of Dexlansoprazole

Keywords: UV-Visible Spectrophotometry, Drugs, $KMnO_4$, Amaranth dye, Quantification, Validation.