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STABILITY INDICATING METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF ALPRAZOLAM, CLIDINIUM BROMIDE AND DICYCLOMINE HYDROCHLORIDE BY RP-HPLC

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A simple, accurate, precise method was developed for the simultaneous estimation of the Dicyclomine hydrochloride, Clidinium bromide and Alprazolam in Tablet dosage form. Chromatogram was run through Kromasil 250 x 4.6 mm, 5m. Mobile phase containing buffer and Acetonitrie in the ratio of 40:60 was pumped through column at a flow rate of 1ml/min. Buffer used in this method was OPA buffer at pH 2.8. Temperature was maintained at 30°C. Optimized wavelength for Dicyclomine hydrochloride, Clidinium bromide and Alprazolam was 225nm. Retention time of Dicyclomine hydrochloride, Clidinium bromide and Alprazolam were found to be 2.473min, 3.842min and 5.218min. %RSD of system precision for Dicyclomine hydrochloride, Clidinium bromide and Alprazolam were and found to be 0.3, 0.7 and 1.2 respectively. %RSD of method precision for Dicyclomine hydrochloride, Clidinium bromide and Alprazolam were and found to be 0.9, 0.5 and 0.5 respectively. Percent recovery was obtained as 99.86%, 100.33% and 100.45% for Dicyclomine hydrochloride, Clidinium bromide and Alprazolam respectively. LOD, LOQ values are obtained from regression equations of Dicyclomine hydrochloride, Clidinium bromide and Alprazolam were 0.41ppm, 0.03ppm, 0.005ppm, 1.24ppm and 0.10ppm, 0.01ppm respectively. Regression equation of Dicyclomine hydrochloride was y= 8451x+13349, Clidinium bromide was y= 13323x+6412 and of Alprazolam was y= 90717x + 3843.

BIOGRAPHY

Lal Prasanth M L is from DM WIMS College of Pharmacy, India. His research findings mainly focus on stability indicating method development and validation for the determination of Alprazolam, Clidinium bromide and Dicyclomine hydrochloride by RP-HPLC.

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