# Development of validated rp-hplc method for the simultaneous estimation of tamsul...

DEVELOPMENT OF VALIDATED RP-HPLC METHOD FOR THE SIMULTANEOUS ESTIMATION OF TAMSULOSIN HYDROCHLORIDE AND FINASTERIDE FROM TABLET DOSAGE FORM Susheel John Varghese, Leela Madhuri Pola, K. Murugavel, and T. K. Ravi. College of Pharmacy, Sri Ramakrishna Institute of Paramedical Sciences, Coimbatore – 641044, Tamilnadu. E-Mail: [email protected]com A precise, accurate and rapid RP-HPLC method has been developed and validated for the simultaneous estimation of Tamsulosin Hydrochloride and Finasteride in tablet dosage form. Chromatography was carried on RP – 18e Hiber RT (250 ? . 6) column using Water: Methanol (30: 70%) v/v as mobile phase at a flow rate 0. 7 ml/min and the effluent was monitored at 225 nm. The retention times of Tamsulosin Hydrochloride and Finasteride were 5. 4 and 15. 4 minutes respectively. The limit of detection for Tamsulosin Hydrochloride and Finasteride were found to be 15 and 50 ng/ml respectively and their limit of quantification were found to be 100 and 1250 ng/ml respectively. Tamulosin Hydrochloride and Finasteride were found to be linear in the range of 0. 3 to 10 µg/ml and 3. 75 to 125 µg/ml respectively.

The developed method was validated in terms of linearity, accuracy, precision, specificity, limit of detection, and limit of quantification as per ICH guidelines. System suitability parameters like number of theoretical plates (N), peak asymmetry factor (As), and resolution (Rs), etc. were studied and it was found that all results were within limits. The proposed method was successfully applied for simultaneous determination of drugs in tablets.

Keywords: Tamsulosin Hydrochloride, Finasteride, High Performance Liquid Chromatography, Simultaneous determination.