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Development and Validation for Simultaneous Estimation of Drug in Combination from Pharmaceutical Formulation by RP-HPLC Method

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Abstract : In present work development and validation of new reverse phase high performance liquid chromatography method for estimation of Ivabradine (IVA) and Metoprolol Succinate (MET)from their combined tablet dosage form was carried out. The method was performed on Shimadzu SPD-10Avp, inbuilt with UV detector, UltraSil-MCX; 5µ, 100 X 2.1mm. ID Column and 15mM Ammonium Formate: MeOH (15:85 v/v) as mobile phase at ambient temperature. Detection was carried out at 223 nm and 230 nm. Concentration range 5-25 µg/ml for Ivabradine and 25-75 µg/ml for Metoprolol Succinate. The Percentage recovery of Ivabradine and Metoprolol succinate was found to be in the range of 98.06±1.70 % – 101.47±1.18 and 95.17±0.93 % - 101.2±1.00 % respectively. Correlation coefficient for Ivabradine and Metoprolol succinate was found 0.9995 and 0.9999 respectively. The Rt values for Ivabradine and Metoprolol succinate were found to be 1.78 min and 5.18 min respectively. The method was validated according to the guidelines of International Conference on Harmonization (ICH) and was successfully employed in the estimation of commercial formulations.

Keywords : Ivabradine, Metoprolol, Mobile Phase, Reverse-Phase High Performance Liquid Chromatography, Stability indicating method.

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