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Validation of Developed Analytical Method for Balofloxacin Floating Tablets by Reverse Phase High Performance Liquid Chromatography

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Abstract : Aim of the present investigation was to validate a new analytical, simple, sensitive, selective and precise High Performance Layer Chromatograpic (HPLC) method for the estimation of Balofloxacin in tablet dosage form. Balofloxacin chemically 1 cyclopropyl-6-fluoro-8-methoxy-7- (3-methylamino piperidine -1-yl)-4- oxoquinoline-3-carboxalic acid used as an Antibacterial agent. The mobile comprised of Methanol:water (350:650) and set at a flow rate of 1.2ml/minute. Detection was carried out at 293nm using pre-packed Symmetry C_{18}; 250x4.6mm, 5µm particle size column. The retention time of Balofloxacin was found to be 2.978. The assay was linear over concentration range of 12.5µg/ml to 75µg/ml (R=0.9998). The limit of detection and the limit of quantification were found to be 1.47µg/ml and 4.46µg/ml respectively. The amount of Balofloxacin was found to be 100.88±0.89 and the accuracy of Balofloxacin was found to be 99.60% to 101.60%. The statistical analysis of the data showed that the method is reproducible and selective for the estimation of Balofloxacin in tablet dosage form during routine analysis.
Keywords : Balofloxacin, RP-HPLC, Validation, Method development.

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