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Analytical Method Development and Validation for Estimation ofTamsulosin Hydrochloride by UV-Spectroscopic method

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Abstract: A Simple, specific, rapid, precise and accurate UV Spectrophotometric method have been developed and Validated for determination of Tamsulosin Hydrochloride. Drug showed the absorption maxima in at 224 nm and was linear for a range of 5 µg/ml -25µg/ml with a correlation coefficient of 0.9997. The validation of the above proposed method was done by carrying out precision and accuracy studies. The percentage recovery at three different levels i.e. 50%, 100% and 150% was found to be 50.1%, 99.2% and 149.2% respectively. The analytical method showed good Intra precision (repeatability) with relative standard deviation 0.306 % and Inter precision with relative standard deviation is 0.411% which is less than 2. The proposed method was validated for the parameter Specificity, Precision, Linearity and range, accuracy and recovery. Hence proposed analytical method for estimation of Tamsulosin Hydrochloride formulation drug by UV spectrophotometer in pharmaceutical can be applied for the routine quality control analysis.

Keywords: Validation, Tamsulosin Hydrochloride, UV Spectrophotometer.

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