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Analytical Method development and Validation of Lamivudine in Formulation by using Reversed Phase Ultra Performance Liquid Chromatography

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Abstract : Aim of the experiment was to develop a simple, specific and accurate reverse phase ultra-performance liquid chromatographic (UPLC) method for the determination of lamivudine in the tablet dosage forms. The chromatographic separation was achieved on Acquity UPLC HSST3 (2.1 x 100mm) 1.8 um particle size and the mobile phase containing 0.1%TFA: MeOH for lamivudine. The run time was 10 min and the retention time of lamivudine was about 4.6. The detection was carried out 215nm using photo diode array detector (PDA) with a flow rate 0.6 ml/min. The linearity of lamivudine with correlation coefficient 0.9998. The recovery was found in the range (100±10%). The developed method was validated as per International Conference on Harmonization guidelines (ICH) with respect to specificity, linearity, accuracy, method precision, system precision, solution stability and robustness.

Key words : Lamivudine, method development, method validation, UPLC.

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