

Semi-automated Home-made HPLC-UV System for determination of Amoxicillin Trihydrate (AMO) in Antibiotic Drugs

Abstract:

An accurate, precise and sensitive HPLC assay was developed for the determination of Amoxicillin in Oral dosage form, to compare the bioavailability of two Amoxicillin Trihydrate (AMO) capsule (500mg) from Brazil formulations and Amoxicillin Trihydrate (AMO) Analr as a test formulation. Amoxicillin concentrations were analysed by a home-made UV-HPLC System at ($\lambda=230$ nm).

The separation was achieved using the Ion Pac zorbax 300- SCX Agilent Column; 5 μ m, 4.6 \times 250 mm. The mobile phase consisted of a Ammonium acetate (20 mM) + Methanol] buffer (95:5) with a pH=4.8. The study of bioequivalence between the two Amoxicillin formulations was assessed by calculating the peak height. The standard Amoxicillin and amoxicillin drug eluted at a flow rate of 1.0 ml/min. The recoveries were rang within 90.0-100% Linearity rang (0.2 -1.0) μ g/ml, (n=5) with $r^2 \geq 0.9970$ and RSD ± 0.505 -2.672 at room temperature 25oC. The detection limit of quantification (LLOQ) was 2.830 μ g/ml and Lower limit of detection (LLOD) 1.047 μ g/ml.