



Comparative Studies of Ciprofloxacin 250 mg Tablets Available in Pakistani Market

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SUMMARY. A simple and cost effective comparative study consisting of quality control assessment of 12 brands of ciprofloxacin 250 mg tablets having price range of 0.486 to 2.823\$ per pack and purchased from retail pharmacies of Pakistan has been achieved. Brands T₃ was considered as reference due to its excellent physicochemical and quality controlled properties. Both pharmacopeial and non pharmacopeial tests were applied for the evaluation of physical tests like weight variation, hardness, friability, thickness and chemical test such as disintegration time, assay, single and multiple dissolution profile. Dissolution medium like 0.01 N HCl and phosphate buffer of pH 4.5 and 6.8 were used for single and multiple point dissolution and *in vitro* rate kinetics was applied after estimating the percentage release of ciprofloxacin. Already developed HPLC analysis method was applied to the determination of ciprofloxacin content in marketed formulations. Model dependent and model independent approaches were used. In multiple point dissolution test model independent (similarity factor f_2) and dependent (zero-order, first order and Hixson Crowell) approaches were applied. Brands T₄, T₇ and T₁₂ found to be similar with standard while First order release rate was observed in all formulation at different pH values.

KEY WORDS: Ciprofloxacin, Dissolution studies, HPLC analysis, UV-Visible spectrophotometer and RP-HPLC.

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