

عنوان مقاله:

Quantitative Determination of Pefloxacin Mesylate through UV Method and Study of Gelling Form of Pefloxacin

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خلاصه مقاله:

The present study was conducted to develop a new simple, rapid, precise, sensitive, eco-friendly UV spectroscopic method for the quantitative determination of Pefloxacin Mesylate in bulk form and prepared in-situ gelling ocular formulations. Method was successfully developed in simulated tear fluid pH 7.4 and further validated in accordance with International Conference on Harmonization (ICH) Q2B guidelines. In line to this, it was tested for linearity, accuracy, precision, detection limit, quantification limit, stability testing, Sandell's sensitivity and molar absorptivity. Finally developed method was applied to conduct assay of Pefloxacin Mesylate and recovery study in developed in-situ gelling ocular formulations. The absorption maximum of the drug was found to be 272 nm and linearity was observed from 0.5-20 $\mu\text{g/ml}$ with a regression coefficient of 0.999. Validation and statistical results strongly suggested that the developed UV spectroscopic method was accurate, precise, sensitive, versatile and stable. It could be a feasible eco-friendly alternate for the rapid analysis of Pefloxacin Mesylate in bulk as well as insitu gelling ocular formulations.

کلمات کلیدی:

Pefloxacin Mesylate, In-Situ Gelling, UV Spectrophotometric Method, Ocular

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