

Development of high performance liquid chromatography method for miconazole analysis in powder sample

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Abstract	A simple high performance liquid chromatography (HPLC) method has been developed in this study for the analysis of miconazole, an antifungal drug, in powder sample. The optimized HPLC system using C-8 column was achieved using mobile phase composition containing methanol: water (85: 15, v/v), a flow rate of 0.8 mL/min, and UV detection at 220 nm. The calibration graph was linear in the range from 10 to 50 mg/L with r^2 of 0.9983. The limit of detection (LOD) and limit of quantitation (LOQ) obtained were 2.24 mg/L and 7.47 mg/L, respectively. The present HPLC method is applicable for the determination of miconazole in the powder sample with a recovery of 101.28 % (RSD = 0.96%, n = 3). The developed HPLC method provides short analysis time, high reproducibility and high sensitivity.
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