

**Formulation and Evaluation of Transdermal patch of Tramadol HCl****Submitted By**

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**Abstract**

The present study was designed to develop a transdermal patch using natural polymer like psyllium and Guar gum in combination with semisynthetic polymer like HPMC K15M. Tramadol hydrochloride was used as a model drug. FTIR study was carried out to study drug excipient compatibility. The transdermal patches using different polymer concentration were prepared by solvent casting method. The prepared patches were evaluated for parameter like drug content, folding endurance, thickness and drug release etc. The optimized patch consisting of 0.25%w/v psyllium and 0.75%w/v HPMC K15M had drug content of 99.12±0.149%, folding endurance of 380±1.027, thickness of 0.82±0.002mm and drug release of 98.78%. The *ex-vivo* drug release showed that drug was release in a sustained manner for a period of 24 hrs. Hence it can be concluded that natural polymer like psyllium could be successfully used for preparation of transdermal patch.

**Key words:** Transdermal Patch, Solvent Casting Method, Tramadol HCl, Psyllium, Guar gum, HPMC K15M, Controlled drug release.