

PREFACE

One of the emerging areas of drug delivery today is in the area of Novel Drug Delivery Systems. During the last two decades colossal amount of work had already been done by pharmaceutical scientists all over the world relating to novel drug delivery systems. The study of the controlled release of drug for their extended and safe use has become an important field of research and drug delivery to the systemic circulation through the intact skin has been considered as an important route of drug delivery. Though the concept of transdermal therapeutic system of drug delivery has been well known since 1924, it is only in the year of 1979, with FDA approval of scopolamine transdermal systems, it has received broad impact on the scenario of novel dosage forms. Transdermal therapeutic systems are designed for controlled drug delivery through the skin into systemic circulation maintaining consistent efficacy and reducing dose of the drug and it's related side effects. It provides an alternative route of drug delivery avoiding the hepatic first pass effect. It also improves patient compliance, safety and efficacy of the drug. While the aim was to fabricate transdermal patches of antihypertensive drug propranolol hydrochloride using easily available and economic excipients, author wanted to optimize transdermal patch formulation of propranolol hydrochloride to deliver the drug for a prolong period of time. The work has adopted simple and precise methods and computer supported systems to design and evaluate the efficacy of the delivery system experimented upon. The results indicate that the findings are resemble to the expectation and the formulated transdermal patches of propranolol hydrochloride could effectively sustain the release of the contained drug for a prolong time period and at the same time could maintain a steady plasma concentration. Successful development of propranolol hydrochloride transdermal patches is therefore expected to enrich the field of same specialization and the entire pharmaceutical research activity as well.