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## Development of oral sustained release dosage form of rizatriptan and its in vitro-in vivo evaluation

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A simple, sensitive RP-HPLC method was developed, validated and pharmacokinetic profiling of Rizatriptan sustained release (SR) tablets in rabbit plasma was performed. Drug was extracted from the spiked plasma by means of simple protein precipitation method using 10% perchloric acid as precipitating solvent. The separation was carried out on Hibar C18 (250x4.6 mm, 5 $\mu$ ) stationary phase with a mobile phase of 10 mM di-potassium hydrogen orthophosphate buffer (pH 3.2) and methanol in the ratio of 77:23 with flow rate of 1.1 mL/min. Limit of detection and quantification were found out to be 4.14 and 12.42 ng/ml respectively. Pharmacokinetic profiling of SR was evaluated and the concentration maximum ( $C_{max}$ ) was found to be 243.590 ng/ml, maximum time for SR to reach its maximum concentration ( $T_{max}$ ) was found to be 2.0 hr and the elimination half -life ( $t_{1/2}$ ) was found to be 2.143 hr. The extraction recovery of the drug was obtained as 93.76%. Hence the developed and validated method is simple, repeatable and applicable for bioequivalence studies. The extent of absorption of drug from the developed Rizatriptan SR tables was significantly higher than that for developed Rizatriptan tablets due to lower elimination rate and longer half life.

## Biography

Jeyaprakash M R is working as a Faculty member in the Department of Pharmaceutical Analysis, JSS College of Pharmacy, Udhagamandalam, the Nilgiris, from Sep 2007 to till date. He is pursuing Doctor of Philosophy in impurity profiling and genotoxicity area. He graduated from AK College of Pharmacy, Srivilliputhur, Tamilnadu, India.

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