SRDHS
SOCIETY FOR RESEARCH DEVELOPMENT IN HEALTH SCIENCE

Society for Research Development in Health Sciences (RDHS),
Sponsored

2nd International Conference

Organized By
Ambe Durga Education Society's
Dadasaheb Balpande College of Pharmacy
(Degree and Diploma),
Near Swami Samarth Dham Mandir, Besa,
Nagpur-440037, Maharashtra, India.

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Theme:
"Invigorating Research in Pharmaceuticals: Reasonable Industrial Approach"

Venue: Hotel RE-GEN-TA, CENTRAL Nagpur. Jagnade Square, Nandanvan, Nagpur, Maharashtra, India.

Souvenir and Abstract Book

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ENHANCEMENT OF SOLUBILITY OF DICLOFENAC SODIUM BY PASTILLATION METHOD

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ABSTRACT

Research scheme was enhancement of solubility of Diclofenac Sodium by pastillation method. Main objective was to increase the solubility and dissolution rate of Diclofenac Sodium. Pastillation technique is widely employed in chemical industry for solidification and better handling.Pastillation is the process in which the solid dispersion using the drug and the polymer is made.The selection of polymer was done by the solubility studies and Kolliphor HS 15 was used to make the pastilles of Diclofenac Sodium. Then this dispersion is placed in the glass syringe and then as the heat is applied by the heating coil then this hot molten mass is allowed to fall drop by drop on the metallic plate with cooling system. The over them the hot droplets solidifies and forms the pastilles. The selection of polymer was done by the solubility studies and Kolliphor HS 15 was used to make the pastilles of Diclofenac Sodium. Formation of pastilles were confirmed by FT-IR and further evaluated for % yield, drug contents, solubility study and dissolution test. From the results it was concluded that, solubility of Diclofenac Sodium was increased bypastillation method by 2-fold and dissolution rate was also enhanced by double than that of the drug. Pastillation can be an effective and easiest method to enhance the solubility, dissolution rate and bioavailability of poorly water-soluble drugs having good permeability.

Keywords Diclofenac Sodium, Pastillation, Solubility Enhancement, Solid Dispersion.

PHASE TRANSITION SYSTEM FOR NASAL DELIVERY USING COMBINATION OF POLYMERS AND ITS IN-VITRO EVALUATION

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ABSTRACT

Present study is to develop phase transition system for nasal delivery as novel drug delivery system using combination of polymers Rivastigmine Tartrate was selected. The reason behind choosing this drug is bioavailability of drug have approximately 36%, metabolism shows by hepatic ally (pseudo cholinesterase), That's way for development of phase transition system for nasal drug delivery system of Rivastigmine Tartarate. Chitosan hydrochloride, hydroxy propyl methyl cellulose K4M, gallan gum, carbopol 934, sod alginate. In Combination batch the concentrations of polymer increase the drug permeation of drug decrease. In this formulation batch (CF1) (94.88 ± 0.4984) Carbopol 934 shows that more drug release as compared to (CF6) (81.42 ± 1.4214) Gellan gum batch. It was concluded that combination of polymers viscosity building capacity affect performance of phase transitions systems. As combination of polymers concentration in formulation was increased viscosity of formulation increases with gelation time, gelation temperature, muco-adhesion time, stresses increase and release of drug also retarded.

Keywords Phase Transition , Nasal Delivery , Rivastigmine Tartarate