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Formulation and in vitro Evaluation of pH-Sensitive Cross-linked Copolymer for Controlled Delivery of Perindopril Erbumine (PE)

Abstract:

A novel xanthan gum-co-acrylic acid superabsorbent hydrogel composite was formulated by free radical polymerization reaction of acrylic acid on xanthan gum. Effect of variables like dynamic swelling ratio, equilibrium swelling ratio, drug loading and drug release was investigated. Swelling ratio increases with decrease in crosslinker concentration. Drug release studies were conducted in pH 7.4 and 0.1N HCl. In acidic environment, drug release was low whereas it was sustained release in alkaline. XG4 showed significant swelling and drug release up to 24 hr. Physicochemical evaluation also confirmed it was optimized formulation. Hence XG4-co-AA was optimized for once daily dose of Perindopril Erbumine.

Biography

Hira Ijaz has completed his PhD (Pharmaceutics) in November 2020. I have served as Lecturer at Department of Pharmacy, University of Agriculture Faisalabad as assistant Professor in Department of Pharmacy, The University of Faisalabad. Currently, Working as Assistant Professor Pharmaceutics at Department of Pharmaceutical Sciences, Pak-Austria Fachhochschule: Institute Of Applied Science And Technology. I have received Young Scientist Award in 2022. My fields of interest include polymerization, solubility enhancement and drug product development by designing hydrogel micro-particles, microneedle patches, microgels, solid dispersions, inclusion complexes, orodispersible tablets and hydrogels etc. My current projects include development of various carrier systems from natural polymers for anticancer drug delivery