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Development and characterization of a controlled-release Ciprofloxacin hydrochloride drug delivery system

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Ciprofloxacin Hydrochloride (CFX-HCl) is an antibiotic used to treat bacterial infections in many different parts of the body. The study was able to outline development and characterization of a controlled-release CFX-HCl drug delivery system. The study has utilized propylene glycol (PG), carbopol 934P (C-934), xanthan gum (XG) and micro-encapsulated them by making use of spray drying method. According to British Pharmacopoeia, the drug delivery systems were sterilized with the assistance of gamma radiation. Investigation of spray dried powder has been carried out by scanning electron microscopy (SEM), and assessed for microbial effectiveness. Similarly, stability studies were also performed. These systems displayed drug's sustained and controlled release of CFX-HCl in the in-vitro studies over a prolonged period. Product's shelf life having PG was analyzed to be above two years. These systems that are physically and chemically stable, display assurance of huge therapeutic benefits in the management of conjunctivitis and corneal ulceration.

Biography

Samar Zuhair Alshawwa has completed her from Jordan University of Science and Technology in Jordan School of Pharmacy. She is working in Princess Nourahbint Abdulrahman University College of Pharmacy, teaching different pharmaceutical technology courses. She is the; vice rector of department of pharmaceutical sciences, head of strategic plan committee, coordinator of quality assurance and coordinator of pharmaceutics unit. She worked previously in Alzaytoonah Private University College of Pharmacy in Jordan. She has participated in many local and international Scientific Conferences. She is interested in research; drug delivery systems, bioavailability, biostatistics, stability studies, and *in vitro - in vivo* studies.

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