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Investigations on active pharmaceutical ingredient crystal growth and comparative study of properties

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In pharmaceutics field many drugs are available in crystalline solid form for oral dosage due to its chemical stability, storage and easy handling. This paper deals the crystalline form of an Active Pharmaceutical Ingredients (API) of Paracetamol and Aspirin by slow evaporation technique using ethanol as a solvent to analyze and compare its physicochemical properties. Good quality of bio medical drug crystals was grown within three weeks and its stability was analyzed by thermal studies. The unit cell parameters of the grown crystals were determined by single crystal and powder X-Ray diffraction studies. Complete vibrational assignment of the various functional groups present in the crystalline drug substance was identified by FTIR studies. Optical and dielectric studies were also carried out to the grown crystals. It is found that both the APIs are crystallized well and it belongs to thermodynamically stable form of monoclinic system.

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Development of transdermal drug delivery system-a regulatory perspective

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Transdermal drug delivery systems is a topically administered medicaments. Transdermal patches are pharmaceutical preparation of varying sizes, containing one or more active ingredients, intended to be applied to the unbroken skin in order to deliver the active ingredient to the systemic circulation after passing through the skin barriers. Ideally, they may improve drug potency, control drug release to give a sustained therapeutic effect, provide greater safety, and decrease toxic side effects. Through a diffusion process, the drug enters the bloodstream directly through the skin. The intention of the study is based on regulatory perspective which deals with characterization of transdermal patch which is use to check it's quality, size, time of onset & duration, adhesive property and control of excipients such as adhesives, rate controlling membranes, backing films, release liners, packaging materials involving Critical Quality Attributes and Process Analytical Technology Approaches during the manufacturing and development of transdermal drug delivery system.

Biography

Ch. Teja is currently pursuing her 2nd year M. Pharmacy in Pharmaceutical Regulatory Affairs from JSS University, Mysore. She has done her graduation from the same college i.e. JSS College of Pharmacy, Mysore, Karnataka. She published 2 articles in reputed journals titled "Comparative Study of In- Process and Finished Products Quality Control Tests of Indian Pharmacopoeia, British Pharmacopoeia & United States Pharmacopoeia for Capsules and Liquid Orals" and "New Era in US Prescription Drug Labeling" Which was also presented as a poster in 63rd IPC. And also attended Indo- American Pharmaceutical Regulatory Symposium- 2011 and presented a poster on "Indian Regulations on Cosmetics".

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