

DEVELOPMENT OF NANOPARTICLE DRUG DELIVERY SYSTEM FOR NAPROXEN FOR THE TREATMENT OF RHEUMATOID ARTHRITIS

Short Communication

ABSTRACT

Naproxen sodium is a widely prescribed non-steroidal anti-inflammatory drug and used as first line therapy for the treatment of ailments such as Arthritis and Dysmenorrhoea ankylosing spondylitis. NSAID has a major side effect of gastric irritation. Formulating such drug into nanoparticles using biocompatible polymers is expected to increase the sustain release action and to improve patient compliance with reduce side effects. The Naproxen sodium half life is 12hrs. The Naproxen sodium loaded BSA nanoparticles were prepared by desolvation technique using different desolvating agent. The prepared nanoparticles were subjected to drug content, entrapment efficiency, loading capacity and characterized for mean particle diameter and stability. The formulation acetone(P2) prepared by intermittent addition method at 800rpm was showing promising results with mean particle diameter of 556nms. It was able to sustain the drug release upto 9hrs with 98% following first order rate constant with nonfickian diffusion. From the result it was observed that intermittent addition method and acetone were considered as best method and desolvating agent for the preparation of Naproxen sodium nanoparticle.

Biography

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