Formulation and Evaluation of Mesalamine Niosomes



Arun Kumar*, Kashif Shakeel, Swarnim Srivastava

Aryakul College of Pharmacy and Research, Lucknow,

U.P., India

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ABSTRACT

The goal of this study was to use the ether injection approach to create and characterize mesalamine-loaded niosomes. The kind and concentration of surfactant were changed to create a total of sixteen formulations using the ether injection technique. The drug content, entrapment effectiveness, loading capacity, and drug release characteristics of every formulation were assessed. Based on assessment criteria, formulation FMN9 made using the ether injection method demonstrated 96.53 percent entrapment efficiency, 97.65 percent drug content, and a particle diameter of roughly 377.8 nm. Its zeta potential value was 31.8 mV, which indicated greater stability. According to in-vitro release trials, FMN9 had the highest level of drug release out of all the formulations towards the end of 24 hours, at roughly 97.45 percent, demonstrating a sustained release pattern. The super case 2 transport mechanism was demonstrated by drug release kinetic measurements of the improved formulation (FMN9), which followed zero order release and had an R2 value of 0.997. The findings suggest that the investigated Mesylamine loaded niosome (FMN9) has the potential for prolonged drug release and may function as an exciting vehicle for Mesylamine drug delivery.

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