conferenceseries.com

J Bioequiv Availab 2017, 9:5 (Suppl)
DOI: 10.4172/0975-0851-C1-031

Formulation and evaluation of liquid crystalline nanoparticles of artemether and lumefantrine for the treatment of malaria

Vandana Chaudhary[1], **Shakir Hussain**[2] and **Vijay Bhalla**[1]
[1]SGT College of Pharmacy, India
[2]Sidhi Vinayak College of Science, India

Liquid crystalline nanoparticles of artemether and lumefantrine were prepared by using glyceryl monooleate, oleic acid, poloxamer 407, ethanol and water. The optimization of liquid crystalline nanoparticles was achieved by response surface methodology (BBD. 17 trials were prepared making use of artemether, lumefantrine and oleic acid in varying concentration and GMO, poloxamer, ethanol and water were kept constant. Out of these F9 formulation was found best formulation. The selection was made based on particle size and entrapment efficiency of artemether and lumefantrine. Optimized formulation (OF1) contained particle size in the range of 193.5-194 nm (PDI 0.10) indicated that particle size was uniform. Entrapment efficiency of artemether and lumefantrine were found 85% and 95.5%. Release study of artemether and lumefantrine revealed that the drugs were released in a remarkably controlled manner up to 72 hrs. Physical and chemical stability study revealed that the optimized formulation (OF9) was physically and chemically stable.

vandana13984@gmail.com