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(57) Abstract :
The present invention relates to a formulation of Primaquine phosphate loaded Poly(lactic-co-glycolic acid) nanoparticles. The formulation comprising of Primaquine phosphate; Poly(lactic-co-glycolic acid) and pharmaceutically acceptable excipients; wherein the amount of Primaquine phosphate is 10 mg and Poly (D-acid, L-lactic-co-glycol) 70 mg; wherein the pharmaceutically acceptable excipients are dichloromethane 3 mL; Polyvinyl alcohol 2% and water 2 mL. The Primaquine phosphate loaded PLGA nanoparticles, wherein size of nanoparticles is 109±3 nm; polydispersity index is 0.483; zeta potential is -13.97 mV; the drug entrapment efficiency is 87% and drug loading capacity is 54%. The process for the preparation of Primaquine phosphate loaded PLGA nanoparticles, comprising of dissolving Primaquine phosphate in 2 mL of water; PLGA in dichloromethane; adding drug solution to the PLGA solution; preparing aqueous solution by using 2% of Polyvinyl alcohol solution having pH 7.4 phosphate buffer saline; adding organic phase dropwise into the aqueous phase; stirring at room temperature; removing organic solvents by stirring overnight at 1200 rpm at room temperature; sonicating the formulation under a bath sonicator for 20 minutes at lower temperature; recovering nanoparticles by centrifugating the formulation at 17,000 rpm for 15 minutes; washing nanoparticles twice and lyophilizing the prepared nanoparticles and storing in a vacuum desiccator at 4°C. The Primaquine phosphate loaded Poly (D-acid, L-lactic-co-glycol) nanoparticles are useful in malaria treatment.

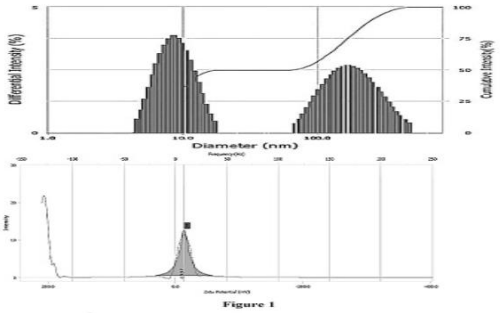

Figure 1

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