ABSTRACT

EFFECT OF SOLID LIPID CETYL PALMITATE AND LIQUID OIL MEDIUM-CHAIN TRIGLYCERIDE (MCT) RATIOS ON CHARACTERISTICS OF NLC CoQ_{10}

Coenzyme Q_{10} (CoQ_{10}) is chemically unstable and easy to degrade when exposed to light. SLN and NLC are an alternative drug carrier systems that can be used. Compared to SLN, NLC shows a higher loading capacity for drugs and minimizing potential drug expulsion during storage. The aim of this study was to identify the characteristics of CoQ_{10} loaded NLC with different lipid ratio of cetyl palmitate (CP) and medium-chain triglyceride (MCT), such as 10:0; 9:1; 8:2; and 7:3. NLC was prepared using high shear hot homogenization method at 24000 rpm for 8 minutes. The products were characterized for pH, spreading property, particle size and entrapment efficiency (EE). The change in the ratio of MCT led to differences in EE. As MCT ratio increase up to 30% resulted the biggest %EE (35.30%).

Keyword (s) : Nanostructured lipid carriers, different lipid ratio cetyl palmitate-MCT, high shear homogenization, particle size, entrapment efficiency.