ABSTRACT

The development of resistance of malaria parasite against the drugs used for treatment of malaria led to the discovery of more effective antimalarial drugs derived from Quinghao. Artemisinin and derivatives are of much interest in malaria treatment in this decade. However, the formulation of these drugs have still lack of scientific data support. Therefore, the attempt was made to study the formulation of dihydroartemisinin in the form of fast released capsule and tablet. Surfactants such as sodium lauryl sulfate (SLS) and sodium dioctyl sulfosuccinate were used for improvement of dissolution characteristics of dihydroartemisinin. The results obtained revealed that the dihydroartemisinin capsule containing surfactant at the concentrations of 0.5-1.5% could enhance the drug release from capsule and showed comparable dissolution with Cotecxin® powder. For the development of dihydroartemisinin tablet, the surfactant (SLS) together with disintegrant was used to improve the dissolution property. The formulation using 1% SLS and 5% sodium starch glycolate showed the best fast-release characteristics. In addition, the dihydroartemisinin tablets containing surfactant and disintegrant were supperior in dissolution to Cotecxin® tablet. In conclusion, the use of surfactant as well as disintegrant in the capsule and tablet formulations could enhance the dissolution characteristics of dihydroartemisinin from the dosage form. In this study, the fast released capsule and tablet of dihydroartemisinin could be obtained for further clinical evaluation as well as industrial scale-up.