Objectives:

The effect of the particle size of the drugs on their dissolution rates and biological availability was reviewed comprehensively by scientists. For drugs whose gastrointestinal absorption is rate limited by dissolution, reduction of the particle size generally increases the rate of absorption and or total bioavailability. Solid dispersion is unique approach to reduce the particle size causing rapid dissolution rates that result in an increase in the rate and extent of the absorption of the drug, and a reduction in presystemic metabolism.

Main disadvantage of poorly water soluble drug is lack of bioavailability due to low dissolution rate and hence there is need to design a system which improves solubility and dissolution rate of drug and this can be achieved by solid dispersion technology.

Present study intended towards improvement of dissolution rate of poorly soluble drugs by Solid dispersion technology using various water soluble carriers, surfactants and sugars by adopting different methods of Solid dispersion technology.

Present study is also an attempt to study the effect of various methods on solubility improvement and the effect of binary, tertiary and quaternary system on improvement of dissolution rate of poorly water soluble drug.