

Current Issues in PHARMACY

Qamar Uddin Ahmad



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Editor

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CHAPTER 9

PHARMACEUTICAL APPLICATION OF SOLID DISPERSION TECHNOLOGY IN IMPROVING SOLUBILITY OF POORLY SOLUBLE DRUGS: A REVIEW

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Together with the permeability, the solubility of a drug plays an important role in determining its oral bioavailability. Nowadays, a majority of the new chemical entities are poorly water soluble candidates. For formulation scientists, it is a big deal to handle those drug candidates in order to formulate a stable pharmaceutical dosage form with appropriate bioavailability. To increase the oral bioavailability of poorly soluble drugs, so far formulation scientists have adopted many chemical and formulation approaches. Out of those approaches, solid dispersion has played an important role for the past few decades. There are many formulation strategies employed to prepare solid dispersions. Solid dispersion mainly increases solubility and dissolution characteristics and thereby also oral bioavailability of poorly soluble drugs. The present review article deals with different strategies of solid dispersion preparation techniques, problems associated with those techniques and how to overcome them in order to improve the solubility as well as bioavailability of poorly water soluble drugs.