

A Review on Recent Trends in Bioavailability Enhancement Techniques for BCS Class II Pharmaceuticals

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Abstract: Poor water solubility has prohibited the production of 40% of pharmaceutical industry screening program new chemical entities, making their formulation difficult or impossible. Solubility issues hamper the distribution of many present pharmaceuticals and new innovative ones. This article briefly discusses standard and cutting-edge strategies for improving BCS Class II drug solubility. Co-solvents, hydrotropic, micronization, change in solvent dielectric constant, amorphous forms, chemical modification of drug, surfactants, inclusion complex or catharses, pH alteration, hydrates or solvates, soluble prod rugs, ultrasonic waves, controlled precipitation technology, evaporative precipitation in aqueous solution, precipitation inhibitors, solvent deposition, precipitation, and selective adsorption on ins. Size reduction, lipid-based, macular, and porous micro particle drug delivery methods have been developed to increase stubborn pharmaceutical solubility. Additionally, the solid dispersion approach and numerous systems have been briefly explained.

Keywords: Solid dispersion, Lipid-based formulations, Nanotechnology