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(57) Abstract :
ABSTRACT The solubility of Carvedilol, a hydrophobic pharmaceutical agent often used in the treatment of cardiovascular problems, poses a riotable obstacle. in attaining the desired therapeutic effectiveness. The objective of this study was to improve the solubility and dissolution rate of Carvedilol by using the liquisolid compact technology. The formulation of liquisolid compacts included the preparation of a medication solution containing CaiVedilol in PEG, using polysorbate 80 as the nonvolatile solvent. The carrier powder used was miCrocrystalline cellulose, with Aerosil being used as the coating material. Multiple ratios of medication solution to carrier powder were examined tu enhance the formulation. The liquisolid compacts were . transformed into tablets by the direct compression technique. The use of the liquisolid compact technology might possibly boost the solubility and dissolution rate of Carvedilol, resulting in better bioavailability and therapeutic efficacy. The enhanced drug dissolution may be attributed to the increased surface area and better wetting capabilities of the liquisolid compacts. These results emphasize the potential of the liquisolid compact technology as a viable method for improving the solubility of medications that are poorly soluble in water, such as Carvedilol.

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