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Dahiya S, Tayde P. Binary and ternary solid systems of carvedilol with 2-hydroxypropyl-β-cyclodextrin and PVP K30. *Bull. Pharm. Res.* 2013;3(3):128-34.

Abstract: The present investigation undertook a study on BCS class II drug, Carvedilol (CRL), a nonselective beta-blocker indicated in the treatment of congestive heart failure, angina pectoris, hypertension, using 2-Hydroxypropyl-β-cyclodextrin (HPβCD) as carrier and Kollidon® 30 as auxiliary substance. The formulations were prepared using physical mixing, kneading and freeze drying method and evaluated for percent drug incorporation, solubility studies, *in vitro* dissolution studies, DSC, XRD and FTIR studies. Among all solid systems, formulation prepared by freeze drying method using equimolar ratio of CRL to HPβCD with 0.5% *w/v* of Kollidon® 30 showed significant modifications in the physicochemical properties and exhibited almost complete drug release within 10 min. The studies concluded that the addition of small amount of water soluble polymer as third auxiliary substance during complexation could display tremendous enhancement in release characteristics of poorly water soluble drugs exhibiting significant pharmaceutical potential in the development of better commercial products over existing dosage forms.

Key words: Inclusion complex, Ternary complex, Binary complex, Dissolution.

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*Author to whom correspondence should be addressed:
Dr. Sunita Dahiya (*drsunitadahiya@gmail.com*)
HOD & Associate Professor, Department of Pharmaceutics,
Globus College of Pharmacy, Bhopal, Madhya Pradesh, India