



Preparation and Solid State Characterization of Binary Mixtures of Acyclovir – Succinic Acid

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Abstract : Physical interaction of acyclovir – succinic acid (AS) was studied. The aim of this study is to prepare and characterize binary mixture of AS. Methods of cocrystallization was solvent evaporation in equimolar ratio between acyclovir and succinic acid using ethanol and methanol. The cocrystals were characterized by Differential Scanning Calorimetry (DSC), Powder X-Ray Diffraction (PXRD), and Fourier Transform Infra Red (FTIR) spectroscopy. Physical characterization showed a new endothermic peak at 175.36°C according to DSC analysis. The PXRD patterns of AS binary mixture after cocrystallization are different from pure components. Furthermore, specific peaks was found at $2\theta = 24,77^\circ$, $35,88^\circ$ and $37,99^\circ$ (AS in ethanol); $19,99^\circ$ and $21,01^\circ$ (AS in methanol). In addition, there are a shift in the O-H, N-H and C=O spectrum of FTIR.

Keywords : acyclovir, succinic acid , solvent evaporation, characterization, binary mixture.

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