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Solid State Characterization and Pharmaceutical Development

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ABSTRACT

Pharmaceutical materials solid-state property plays a critical role from early discovery to finalizing the formulation type. Pharmaceutical material exists in a crystalline or amorphous state. The crystalline state generally shows a high melting point, less hygroscopic, low solubility, lower bioavailability, and higher Physico-chemical stability compared to the amorphous material. A major concern in the pharmaceutical industry is the selection of solids state forms for the final formulations. This is because it can significantly affect the drug product quality in terms of Physico-chemical stability, processibility, solubility, bioavailability, and having regulatory, legal, and commercial implications.

Keywords:

Pharmaceutical materials; Crystalline; Hygroscopic

Introduction

Pollution Intermolecular force differences can result in significant variation of the physicochemical properties between different solid-state forms of pharmaceuticals. Particle morphology, mechanical properties including powder flow ability, and compressibility are greatly

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