

STUDYING AMORPHOUS PHARMACEUTICAL MATERIALS BY POWDER X-RAY DIFFRACTION AND OTHER SOLID-STATE TECHNIQUES

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The last few years have seen great advances in the understanding and importance of amorphous pharmaceutical materials. Making stable amorphous API and/or preventing crystalline API becoming amorphous plus understanding amorphous systems through physical characterization techniques have been quite challenging for industry and academia as well. Traditionally, Powder X-Ray Diffraction (PXRD) has played a critical role for crystalline materials. However, it has been shown that PXRD can be used for characterizing the systems containing amorphous material(s), especially combined with other tools. In this presentation, illustrated by examples, we will discuss the amorphous pharmaceutical materials, the comprehensive physical characterization strategies and how PXRD is used as one of the combinatorial techniques for pharmaceutical systems.