

## **THE AMORPHOUS STATE: A STRUCTURAL PERSPECTIVE**

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The traditional view of an amorphous phase is a solid form without any specific order or structure. However, the observation of characteristic X-ray diffraction patterns from amorphous forms and material densities not too different from crystalline densities indicate that there has to be significant order present. X-ray powder diffraction gives us insight into the different types of characteristic local order that appear within amorphous forms and allows the local structure to be interpreted in terms of Random Close Packed (RCP) or Continuous Random Network (CRN) models. The observed local order for a number of different pharmaceutically relevant materials will be presented and characterized with respect to the RCP and CRN models and how the local structure relates to physical properties such as stability.