

Solubility and Miscibility of Drug/Polymer Systems

Bin Lin

Graduate Student

Department of Chemical, Biological and Pharmaceutical Engineering

The solubility and miscibility of drug-polymer systems was studied by combining theoretical principles with experimental methods such as melting point depression, to estimate the Flory-Huggins interaction parameter, and Regular Solution Theory, to estimate solubility parameters. It was desired to analyze the solubility and miscibility of drug-polymer systems in order to provide a better comprehension of interactions between drugs and polymers and the physical stability of such amorphous systems. The study of such systems is important in the characterization of the thermodynamics of mixing and ultimately to quantify the solubility/miscibility of various drug-polymer systems.