

Influence of operating conditions on the polymorphism of mannitol

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Polymorphism is the ability of a solid material to exist in more than one form or crystal structure. Polymorphism is important in the development of pharmaceutical ingredients. Many drugs receive regulatory approval for only a single crystal form or polymorph and organic materials with the medicinal effect have the different physical properties of a medicine according to their shape. So it is important to control a crystal form. In this study, in order to get the optimal control strategy, the effect of the operating conditions such as the cooling rate, the stirring rate and the solvent conditions on a polymorph is investigated with mannitol used for an osmotic diuretic agent, and then the optimal control strategy is found.