

INFLUENCE OF EXPERIMENTAL CONDITIONS ON THE PHASE TRANSITIONS OF α , α -TREHALOSE

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Trehalose (α -D-glucopyranosyl, α -D-glucopyranosyl) is a non-reducing disaccharide that is used as cryoprotectant for drugs that might undergo degradation during freeze-drying processes. During heating α , α -Trehalose shows phase transitions between crystalline di-hydrate, an-hydrous and an amorphous phase. These phase transitions strongly depend on the environmental and also on the process conditions. An understanding on the stability conditions and properties of the different phases is essential for the use of this cryoprotectant and for the optimization of the production process and the storage conditions for drugs. The influence of the experimental set-up on the phase transitions and the recrystallization is demonstrated and discussed.