

RESEARCH PAPERS

间歇结晶器中维生素C的结晶热力学与动力学研究

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 The bench-scale cooling crystallization for ternary solution of L-ascorbic acid (Vitamin C) was studied. The solid-liquid phase diagram of Vitamin C-water-ethanol system was obtained on the basis of differential scanning calorimeter (DSC) curves. The heat of crystallization of Vitamin C was calculated with the aid of quantitative analysis. According to the population balance equation under unsteady state, the rates of nucleation and growth were determined. The parameters of crystallization kinetics equations were estimated by regression of experimental data. Crystal morphology and size were determined with x-ray diffraction and TA II Coulter Counter.

关键词 [Vitamin C](#) [crystallization](#) [thermodynamics](#) [DSC](#) [kinetics](#)

分类号

DOI:

Crystallization Thermodynamic and Kinetic Behaviors of Vitamin C in Batch Crystallizer

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Received Revised Online Accepted

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Key words [Vitamin C](#); [crystallization](#); [thermodynamics](#); [DSC](#); [kinetics](#)

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