

Couette-Taylor crystallizer

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The Couette-Taylor is often used as mixing devices in bio-process and chemical industries. Recently the reactor has been applied to crystallization field because its specific characteristics. In this study, the effects of flow conditions on crystal formation and growth in Couette-Taylor crystallizer was investigated through 2-D CFD simulations(using Comsol multiphysics). Two important operation manipulated variables (inner cylinder velocity & axial velocity) are affect the mixing effect in crystallizer. Temperature is also simillar effect due to it affect the kinematic viscosity and the kinematic viscosity is affect the Couette-Taylor flow patterns. the flow has certain regular vortex flow and most particles(or crystals) are trapped and reside in the vortices. these special effect of vortex flow is affect a crytal growth