

## Analysis of Ethanol Production using Two-Stage Continuous High Cell Density Culture System

강종원, 장호남\*

KAIST

(hnchang@kaist.edu\*)

Multi stage continuous high cell density culture (MSC-HCDC) was developed for high productivity and high product concentration. In this study, we analyzed ethanol production system using 2-stage cell recycle bioreactor. The cell bleed from the first fermentor contained highly concentrated cells, therefore, these cells could enhanced ethanol production rate in the second fermentor. The cell mass in the fermentors were maintained at proper dilution rate and bleed ratio.