Recovery of succinic acid produced by fermentation of a metabolically engineered *Mannheimia succiniciproducens* strain

최 솔, 송효학, 허윤석, 홍원희, 이상엽*
한국과학기술원
(leesy@kaist.ac.kr*)

We report the development of a simpler and more efficient method for the recovery of succinic acid. For the recovery of succinic acid from the fermentation broth of Mannheimia succiniciproducens LPK7 strain, a simple process composed of a single reactive extraction, vacuum distillation, and crystallization yielded highly purified succinic acid (greater than 99.5% purity, wt%) with a high yield of 67.05% (wt%). When the same recovery process or even multiple reactive extraction steps were applied to the fermentation broth of the wild-type M. succiniciproducens MBEL55E, lower purity and yield of succinic acid were obtained. These results suggest that succinic acid can be purified in a cost effective manner by using the fermentation broth of engineered LPK7 strain, showing the importance of integrating the strain development, fermentation and downstream process for optimizing the whole processes for succinic acid production. This work was supported by the Korea Science and Engineering Foundation (KOSEF) grant funded by the Korea government (MOST) (No. 2005-01294).