Lipase-catalyzed Esterification of Structural Butanol Isomers in Supercritical Carbon Dioxide

정정영, 권정훈, 강정원*
고려대학교
(jwkang@korea.ac.kr*)

Lipase-catalyzed esterification of structural butanol isomers and n-butyric acid was investigated in supercritical carbon dioxide. The experiments were performed in a high pressure cell for 7 hrs with a stirring rate of 200 rpm at 323.15 K and 130 bar. The enzyme, Candida Antarctica lipase B (CALB), was used in whole system as a catalyst. The experimental results were analyzed by GC-FID using a INNOWAX capillary column. The conversion yield and the initial velocity of the esterification reaction in supercritical carbon dioxide were compared with those in ambient condition.