

## Optical Purification of Lactide

유동근, 김덕준\*, 이두성  
성균관대학교  
(djkim@skku.edu\*)

Poly(lactic acid) (PLA) is a well known biodegradable polymer that has found a number of applications in industry in the form of plastics, fibers, etc. . The PLA synthetic process via direct condensation reaction has difficulties in attaining high molecular weight due to the occurrence of depolymerization reaction. The most industrially acceptable PLA synthetic process is known via lactide formation reaction. The formation of optically pure lactide is regarded as one of the most important processes, since the optical purity of the lactide significantly affects the quality of the final product. We also investigated how optical purity of lactide was affected by the temperature, RPM, solvent, and stirring time. The separation of optically pure lactide was carried out at various conditions(temperature, RPM, stirring time). The composition of resulting lactide was investigated by nuclear magnetic resonance(NMR).