

Miscibility, Thermal, Morphological and Mechanical Behavior of Cellulose acetate butyrate/Poly(lactic acid) blends with compatibilizer

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(bunam@koreatech.ac.kr *)

The thermal, mechanical and morphological behavior of Cellulose acetate butyrate(CAB), Poly(lactic acid) and Compatibilizer blends were investigated. Blends were prepared by a melt mixing process using a twin screw extruder. Dynamic mechanical analysis and field emission scanning electron microscopy showed that CAB/PLA binary blends provide a compatible system. In the CAB/PLA/PBAT ternary blends, PBAT led to improved compatibility. In particular, The CAB25/PLA75/PBAT3 composition was good compatible system. In addition, CAB/PLA/Elvaloy blends represented improved mechanical properties such as notched-izod impact test. The results showed that PBAT and Elvaloy play an important role as improved properties as a compatibilizer in CAB/PLA/Compatibilizer blends.