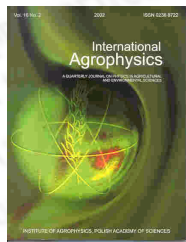




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Glass transition temperature of thermoplastic starches

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abstract Thermoplastic starch was produced by mixing potato starch and glycerol in a single screw extruder. The glass transition temperatures of the materials obtained were measured by differential scanning calorimetry (DSC). Both the influence of extruder parameters and material parameters, such as moisture and glycerol content and amyloses/amylopectine ratio were investigated. Repeated extrusion cycles affect the glass transition temperature only to a very small extent.

keywords thermoplastic starch, glass transition temperature, differential scanning calorimetry, extrusion