NMR Study of Blends of Thermoplastic Starch and Poly(Butylene-Adipate-Co-Terephthalate) Compatibilized with Liquid Isoprene Rubber

Simona Saparová[1, a)], Oľga Fričová[1, b)], Natália Šmídová[1, c)], Hamed Peidayesh[2, d)], Ivan Chodák[2, e)], and Mária Kovaľaková[1, f)]

[1]*Department of Physics, Faculty of Electrical Engineering and Informatics, Technical University of Košice, Park Komenského 2, 042 00 Košice, Slovak Republic*
[2]*Polymer Institute, Slovak Academy of Sciences, Dúbravská cesta 9, 845 41 Bratislava 45, Slovak Republic*

[a)] Corresponding author: simona.saparova@tuke.sk
[b)] olga.fricova@tuke.sk
[c)] natalia.smidova@tuke.sk
[d)] hamed.peidayesh@savba.sk
[e)] ivan.chodak@savba.sk
[f)] maria.kovalakova@tuke.sk

Abstract. This paper presents an investigation into blends of thermoplastic starch plasticized with glycerol and poly(butylene-adipate-co-terephthalate) (PBAT) compatibilized with a system consisting of liquid rubber containing carboxylic moieties and varying amounts of dicumyl peroxide. ^{1}H NMR spectra show increased molecular mobility in the studied samples prepared with dicumyl peroxide. This increase was probably caused by more effective compatibility between thermoplastic starch and PBAT. ^{13}C CP/MAS NMR spectra show that crystallization of starch chains was slower in the samples prepared with dicumyl peroxide.

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