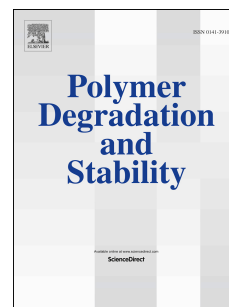


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A comparative study of three-dimensional printing directions: The degradation and toxicological profile of a PLA/PHA blend

Jennifer Gonzalez-Ausejo^a, Joanna Rydz^{b,*}, Marta Musioł^b, Wanda Sikorska^b, Michał Sobota^b, Jakub Włodarczyk^b, Grażyna Adamus^b, Henryk Janeczek^b, Iwona Kwiecień^b, Anna Hercog^b, Brian Johnston^c, Habib R. Khan^c, Vinodh Kannappan^c, Keith R. Jones^c, Mark R. Morris^c, Gouzhan Jiang,^d Iza Radecka^c, Marek Kowalczyk^{b,c}

^aPolymers and Advanced Materials Group (PIMA), Universitat Jaume I, Avda. Vicent Sos Baynat s/n, 12071 Castellon, Spain

^bCentre of Polymer and Carbon Materials, Polish Academy of Sciences, 34, M. Curie-Skłodowska St, 41-819 Zabrze, Poland

^cUniversity of Wolverhampton, Faculty of Science and Engineering, Department of Biology, Chemistry and Forensic Science, Wulfruna Street, Wolverhampton, WV1 1LY, UK

^dCranfield University, School of Water, Energy and Environment, Centre for Bioenergy and Resource Management, Bedfordshire MK43 0AL, UK

Corresponding author. E-mail address: jrydz@cmpw-pan.edu.pl (J. Rydz).

ABSTRACT: The use of biobased plastics is of great importance for many applications. Blending thermoplastic polylactide (PLA) with polyhydroxyalkanoate (PHA) enables the formulation of a more mechanically powerful material and this enables tailored biodegradation properties. In this study we demonstrate the 3D printing of a PLA/PHA blend as a potential candidate for biocompatible material applications. The filament for 3D printing consisted of PHA, which contains predominantly 3-hydroxybutyrate units and a small amount of 3-hydroxyvalerate units, as revealed by multistage mass spectrometry (ESI-MSⁿ). This research

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