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Paper 8

Thermal, Biodegradability and Water Barrier Properties of Bio-Nanocomposites Based on Plasticised Sugar Palm Starch and Nanofibrillated Celluloses from Sugar Palm Fibres

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 Journal of Biobased Materials and Bioenergy Vol. 14, 234–248, 2020

Journal of
Biobased Materials and Bioenergy
Vol. 14, 234–248, 2020

RESEARCH ARTICLE

Thermal, Biodegradability and Water Barrier Properties of Bio-Nanocomposites Based on Plasticised Sugar Palm Starch and Nanofibrillated Celluloses from Sugar Palm Fibres

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Sugar palm (*Arenga pinnata*) starch and fibre are considered as a waste product of the agro-industry. The purpose of the current study is to determine the thermal, water barrier, and soil degradation properties of biodegradable plasticised sugar palm starch (PSPS) that contains sugar palm nanofibrillated celluloses (SP-NFCs) derived from sugar palm fibre. The bio-nanocomposites were fabricated by using the solution casting method with the nanocellulose contents in the range