Title (2)	:	**Effect of Pandanus Amaryllifolius Fibre on Physio-Mechanical, Thermal and Biodegradability of Thermoplastic Cassava Starch/Beeswax Composites**
Journal	:	Journal of Polymers and the Environment
Document Type	:	Article
Publisher	:	Springer Nature
UniKL Author	:	Fahmi Asyadi Md Yusof
Link to Full Text	:	https://link.springer.com/article/10.1007/s10924-023-03039-x#:~:text=tensile%20force%20employment.-,The%20addition%20of%20Pandanus%20amaryllifolius%20fibre%20improved%20thermal%20stability%20from,affinity%20from%20physical%20properties%20testing.
Link to Scopus Preview	:	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172078512&doi=10.1007%2fs10924-023-03039-x&partnerID=40&md5=aaa11cae70196da855eb75b9922c783d
Abstract	:	Pandanus amaryllifolius fibre (PAF) is an agricultural waste plant derived from the natural cellulosic source of fibre that can be used in various bio-material applications. In the present study, a novel biodegradable thermoplastic cassava starch/beeswax blends reinforced with Pandanus amaryllifolius fibre (TCPS/BW/PAF) bio-composites were successfully developed at varied Pandanus amaryllifolius fibre concentrations of 0, 10, 20, 30, 40, 50 and 60 wt% while beeswax loading was remained constant at 2.5 wt% concentration using hot moulding compression method. A comprehensive characterisation of TCPS/BW/PAF bio-composites was examined in terms of their physical, mechanical, thermal and biodegradation properties. The addition of Pandanus amaryllifolius fibre has significantly improved tensile strength and tensile modulus at maximum value obtained 10.9 and 606.5 MPa, respectively as well as flexural strength and flexural modulus of bio-composite at maximum value obtained 21.37 and 523.76 MPa, respectively until 50 wt% Pandanus amaryllifolius fibre loading. Surface morphology of the fractured tensile samples PAF10 to PAF50 shows compacted structure and fibre breakage, indicating effective stress transfer from starch matrix to PAF during tensile force application.