Utilization of Nanocellulose Fiber from Tapioca Industrial Solid Waste as a Bioplastic Filling Material

Title	Utilization of Nanocellulose Fiber from Tapioca Industrial Solid Waste as a Bioplastic Filling Material
Author Order	1 of 2
Accreditation	
Abstract	This study aims to examine the properties of nanocellulose fibers produced from cassava through the acid hydrolysis process, as well as their potential use as a filler for bioplastics based on cassava starch (tapioca). The treatment of this research was acid hydrolysis process time consisting of 15 and 30 minutes and the use of nanocellulose fiber as a filler for bioplastics as much as 0%, 1%, 2%, and 3% w/w starch. The results of this study indicate that the diameter of the nanocellulose fibers produced is about 18-40 nm, good dispersion stability, the crystallinity index of the nanocellulose fibers produced by acid hydrolysis for 15 and 30 minutes are 39.7% and 31.2%, respectively. The addition of nanocellulose fibers can increase the tensile strength, but decrease its elongation ability.
Publisher Name	Program Studi Teknologi Pangan Fakultas Pertanian UNSOED
Publish Date	2022-06-29
Publish Year	2022
Doi	DOI: 10.20884/1.ijft.2022.1.1.6158
Citation	
Source	Indonesian Journal of Food Technology
Source Issue	Vol 1 No 1 (2022): Indonesian Journal of Food Technology
Source Page	11-23
Url	http://jos.unsoed.ac.id/index.php/ijft/article/view/6158/3244
Author	Dr RUMPOKO WICAKSONO, S.P, M.P