

PENGARUH KONSENTRASI STPP DAN LAMA PERENDAMAN TERHADAP KARAKTERISTIK PATI KIMPUL TERMODIFIKASI IKATAN SILANG

Title	PENGARUH KONSENTRASI STPP DAN LAMA PERENDAMAN TERHADAP KARAKTERISTIK PATI KIMPUL TERMODIFIKASI IKATAN SILANG
Author Order	2 of 3
Accreditation	2
Abstract	<p>Kimpul is one type of tubers that is high in carbohydrate content so it can be used as a source of starch. Natural starch generally still has several disadvantages. One of the methods that can be done to overcome these weaknesses is by modifying cross-linked starch. The objectives of this study are: 1) to know the effect of STPP concentration on chemical and physical characteristics of modified kimpul starch; 2) to know the effect of soaking time on chemical and physical characteristics of modified kimpul starch; 3) to determine the best combination treatment between STPP concentration and soaking time on the chemical and physical characteristics of modified kimpul starches. This is an experimental research with Randomized Block Design. The factors studied were the concentration of sodium tripolyphosphate (1, 2 and 3%) and soaking time (60 and 90 minutes). The variables tested were moisture content, starch content, amylose content and calcium oxalate content, brightness, swelling power, solubility and its amylographic properties. The results showed that both STPP concentration factors and soaking time affected the modified chemical and physical characteristics of kimpul starch crosslinking methods. The chemical and physical characteristics of crossbonded modified kimpul starch increased with STPP concentration and soaking time used. Modified kimpul starch using 3% STPP concentration and 90 minutes soaking time had moisture content, starch content, amylose content, calcium oxalate content, brightness and high swelling power. The best modified kimpul starch is modified kimpul starch using 2% STPP concentration and 60 minutes soaking time. It has a water content of 7.88%, starch content of 63.13%, amylose content of 17.28%, oxalate content of 15.84 ppm, swelling power 15.79 g/g, solubility 11.55%, brightness of 44.13, initial gelatinization temperature of 78.75°C, peak viscosity of 5152.5 cP, hot paste viscosity of 2310.4 cP, breakdown viscosity of 2815 cP, setback viscosity of 1563 cP and cold paste viscosity of 3873.5 cP.</p>
Publisher Name	Agroindustrial Technology, University of Trunojoyo Madura
Publish Date	2020-08-21
Publish Year	2020
Doi	DOI: 10.21107/agrointek.v14i2.6262
Citation	
Source	AGROINTEK
Source Issue	Vol 14, No 2 (2020)
Source Page	199-212
Url	https://journal.trunojoyo.ac.id/agrointek/article/view/6262/pdf
Author	Doctor of Philosophy NUR AINI, S.TP, M.P.