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

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Abstract	Kimpul is one type of tubers that is high in carbohydrate content so it canbe used as a source of starch. Natural starch generally still has severaldisadvantages. One of method that can be done to overcome theseweaknesses is by modifying cross-linked starch. The objectives of thisstudy are: 1) to know the effect of STPP concentration on chemical andphysical characteristics of modified kimpul starch; 2) to know the effect ofsoaking time on chemical and physical characteristics of modified kimpulstarch; 3) to determine the best combination treatment between STPPconcentration and soaking time on the chemical and physicalcharacteristics of modified kimpul starches. This is an experimentalresearch with Randomized Block Design. The factors studied were theconcentration of sodium trypolyphosphate (1, 2 and 3%) and soaking time(60 and 90 minutes). The variables tested were moisture content, starchcontent, amylose content and calcium oxalate content, brightness, swellingpower, sollubility and its amylographic properties. The results showedthat both STPP concentration factors and soaking time affected themodified chemical and physical characteristics of kimpul starchcrosslinking methods. The chemical and physical characteristics of crossbonded modified kimpul starch increased with STPP concentration andsoaking time used. Modified kimpul starch using 3% STPP concentrationand 90 minutes soaking time had moisture content, starch content, amylosecontent, calcium oxalate content, brightness and high swelling power. Thebest modified kimpul starch is modified kimpul starch using 2% STPPconcentration and 60 minutes soaking time. It has a water content of7,88%, starch content of 63,13%, amylose content of 17,28%, oxalatecontent of 15,84 ppm, swelling power 15,79 g/g, sollubility 11,55%,brightness of 44.13, initial gelatinization temperature of 78,75oC, peakviscosity of 5152.5 cP, hot paste viscosity of 2310,4 cP, breakdownviscosity of 2815 cP, setback viscosity of 1563 cP and cold paste viscosityof 3873,5 cP
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