

## ABSTRACT

### STUDY OF MAKING INSTANT SIGER RICE FROM WAXY CASSAVA (*Manihot esculenta* Crantz)

By

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This study aims to determine the effect of temperature and storage time of the instantization process on the physical and sensory properties of instant siger rice and to obtain the best instant siger rice. This study was arranged in a completely factorial randomized block design using 12 levels of treatment which 3 storage rooms (room temperature, refrigerator temperature, and freezer temperature) with storage time of 0, 24, 48, and 72 hours, respectively. The research consisted of the process of making glucomannan, waxy cassava flour, waxy cassava siger rice and waxy cassava instant rice, then physical testing of water absorption and rehydration time as well as sensory testing including color, texture, aroma and taste. The best treatments were tested for water, ash, fat, protein, carbohydrate, and fiber content. The data obtained were analyzed for the similarity of variance with the Bartlett test and additional data with the Tuckey test, then the data were analyzed for variance and further analyzed with an orthogonal polynomial 5%. The results show that the temperature and storage time of the instantization process significantly affect the physical and sensory properties of instant siger rice which include water absorption, rehydration time, color, texture, aroma and taste of instant siger rice. The storage of the instantization process at 4°C for 72 hours produced the best siger rice with a water absorption capacity of 61.26% with a rehydration time of 7.77 minutes sensory characteristics of 39 (yellowish white), texture 4.15 (fluffier), aroma 3.87 (atypical of cassava) and a taste 3.98 (similar to rice), with water content is 10.78%, ash content is 2.08%, fat is 0.02%, protein is 3.72%, crude fiber is 4.25%, and carbohydrates are 79.15%.

**Keywords:** instant siger rice, instantization storage, waxy cassava, *Manihot esculenta* Crantz

## ABSTRAK

### KAJIAN PEMBUATAN NASI SIGER INSTAN DARI UBI KAYU WAXY (*Manihot esculenta* Crantz)

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Penelitian ini bertujuan untuk mengetahui pengaruh suhu dan lama penyimpanan proses instanisasi terhadap sifat fisik dan sensori nasi siger instan serta mendapatkan nasi siger instan terbaik. Penelitian ini disusun dalam Rancangan Acak Kelompok Lengkap Faktorial menggunakan 12 taraf perlakuan yang meliputi 3 ruang penyimpanan (suhu ruang, suhu refrigerator dan suhu freezer) masing-masing lama penyimpanan 0, 24, 48, dan 72 jam. Penelitian terdiri dari proses pembuatan glukomanan, tepung ubi kayu *waxy*, beras siger ubi kayu *waxy* dan pembuatan nasi instan ubi kayu *waxy*, kemudian pengujian fisik daya serap air dan waktu rehidrasi serta pengujian sensori meliputi warna, tekstur, aroma dan rasa. Perlakuan terbaik diuji kadar air, abu, lemak, protein, karbohidrat, dan serat. Data yang diperoleh dianalisis kesamaan ragamnya dengan uji Bartlett dan kementerian data dengan uji Tuckey, selanjutnya data dianalisis sidik ragam dan dianalisis lanjut dengan orthogonal polynomial 5%. Hasil menunjukkan suhu dan lama penyimpanan proses instanisasi berpengaruh nyata terhadap sifat fisik dan sensori nasi siger instan yang meliputi daya serap air, waktu rehidrasi, warna, tekstur, aroma dan rasa nasi siger instan. Penyimpanan proses instanisasi suhu 4°C selama 72 jam menghasilkan nasi siger terbaik dengan daya serap air sebesar 61,26% dengan waktu rehidrasi selama 7,77 menit dengan karakteristik sensori warna 3,9 (putih kekuningan), tekstur 4,15 (pulen), aroma 3,87 (tidak khas ubi kayu) serta rasa 3,98 (sama dengan nasi beras padi), dengan kadar air 10,78%, kadar abu 2,08%, lemak 0,02%, protein 3,72% serat kasar 4,25%, dan karbohidrat 79,15%.

**Kata kunci:** nasi siger instan, penyimpanan instanisasi, ubi kayu *waxy*, *Manihot esculenta* Crantz