

**PENGARUH PENAMBAHAN KARAGENAN
PADA PATI BENGKUANG (*Pachyrhizus erosus*)DALAM
PEMBUATAN *YAM BEAN PAPER*
TERHADAP KARAKTERISTIK *YAM BEAN PAPER***

SKRIPSI



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Pengaruh Penambahan Karagenan pada Pati Bengkuang (*Pachyrhizus erosus*) dalam Pembuatan *Yam Bean Paper* terhadap Karakteristik *Yam Bean Paper*

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan karagenan terhadap karakteristik *yam bean paper* dan menentukan konsentrasi terbaik antara pati bengkuang dan karagenan berdasarkan analisis kimia, analisis fisika dan analisis sensori terhadap penerimaan *yam bean paper* sebagai kulit martabak telur. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 3 kali ulangan. Data di analisis menggunakan *Analysis of Variant* (ANOVA) dan jika berbeda nyata dilanjutkan dengan uji *Duncan's Multiple Range Test* (DNMRT) pada taraf 5%. Penelitian ini menggunakan rasio pati bengkuang dan karagenan yaitu A (100 gram pati bengkuang : 0 gram karagenan), B (100 gram pati bengkuang : 15 gram karagenan), C (100 gram pati bengkuang : 20 gram karagenan), D (100 gram pati bengkuang : 25 gram karagenan) dan E (100 gram pati bengkuang : 30 gram karagenan). Hasil penelitian menunjukkan bahwa penambahan karagenan pada *yam bean paper* berbahan dasar pati bengkuang berbeda nyata terhadap ketebalan, rehidrasi, *tensile strength* dan elongasi dan tidak berbeda nyata pada kadar air dan permeabilitas uap air. Karakteristik edible film yang terbaik yaitu pada perlakuan E dengan nilai kadar air 12%; ketebalan 100 μm ; rehidrasi 96,57%; *tensile strength* 37,02 MPa; elongasi 4,93%; permeabilitas uap air $5,71 \cdot 10^{-7} \text{ g s}^{-1}\text{m}^{-1}\text{Pa}^{-1}$; organoleptik warna 3,92 (suka); aroma 3,84 (suka); rasa 3,84 (suka) dan tekstur 3,56 (suka).

Kata kunci –*yam bean paper*, pati bengkuang, karagenan, karakteristik *yam bean paper*

The Effect of Adding Carrageenan to Yam Bean Starch (*Pachyrhizus erosus*) in Making Yam Bean Paper on The Characteristics of Yam Bean Paper

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ABSTRACT

The research aims to determine the effect of the addition of carrageenan to characteristics of yam bean paper and to determine the best concentrations of yam bean starch and carrageenan based on the chemical analysis, physics analysis and sensory analysis to acceptance of yam bean paper as martabak eggs skin. The experimental design used was Completely Randomized Design (CRD) with 5 treatments and 3 replications. The data were analyzed statistically by ANOVA and if significantly different it will followed by duncan's New Multiple Range Test (DNMRT) at significance of 5%. The treatment in this research of yam paper were the ratio of yam bean starch and carrageenan, A (100 gram yam bean starch : 0 gram carrageenan), B (100 gram yam bean starch : 15 gram carrageenan), C (100 gram yam bean starch : 20 gram carrageenan), D (100 gram yam bean starch : 25 gram carrageenan) and E (100 gram yam bean starch : 30 gram carrageenan). The results showed that the addition of carrageenan on yam bean starch based yam paper had a significant effect on thickness rehydration, tensile strength and elongation, but did not significant on water content and permeability of water vapor. The best treatment based on the results of chemical and physical analysis is treatment E (100 gram yam bean starch : 30 gram carrageenan) with the average value of water content 12%, thickness 100 μm , rehydration 96.57%, tensile strength 37.02 Mpa, elongation 4.93% and water vapor permeability $5.71 \cdot 10^{-7} \text{ g s}^{-1}\text{m}^{-1}\text{Pa}^{-1}$, colour organoleptic 43.92 (like), scents 3.8 (like), taste 3.8 (like) and texture 3.5 (like).

Keyword – yam bean paper, yam bean starch, carrageenan, characteristics yam bean paper