

## ABSTRACT

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### **SUBSTITUTION OF WHEAT FLOUR WITH SWEET POTATO AND ADDITION OF DIFFERENT SUGAR IN MAKING OF BISCUIT**

Thesis, Faculty of Science and Technology (2018).

(xiv + 76 pages, 6 tables, 16 figures, 12 appendices)

Sweet potato is one of local ingredients that high in carbohydrate content. It has similar characteristic with wheat flour and has the potential to replace wheat flour in biscuit making. The aim of this research were to know the characteristic of sweet potato flour with pre-cooked method and to determine the ratio of sweet potato flour and wheat flour to different types of sugar in making biscuit that has the best characteristic. Different formulations of sweet potato flour and wheat flour (1:4, 2:3, 3:2, 4:1) and sugar (sugar, palm sugar powder) are analyzed to produce biscuits based on texture, color, and organoleptic results prioritizing the hedonic results. Based on result, sweet potato flour with pre-cooked method had moisture content 7.71%, water absorption 274.67%, 3.73% protein content, starch 50.92%, amylose 13.74%, amylopectin 37.18%, and resistant starch 1.36%. Organoleptic test result showed that biscuit with sweet potato flour:wheat flour ratio 2:3 and sugar most favored by panelist. The biscuit had 2356.67 g hardness, <sup>0</sup>Hue 77.72, yellow color, the aroma and the foreign flavor was not strong, and had a fairly crispy texture. The best formulation of biscuit contained 2.48% moisture, 2.23% ash, 7.20% protein, 13.36% fat, 74.73% carbohydrate, total calories 447.92 kcal, and 0.60% resistant starch.

Keywords: biscuit, palm sugar powder, resistant starch, sugar, sweet potato flour

References: 84 (1970-2017)

## **ABSTRAK**

Trikadibusana, Anindya Angelina (00000004840)

### **SUBSTITUSI TEPUNG TERIGU DENGAN UBI JALAR DAN PENAMBAHAN GULA YANG BERBEDA DALAM PEMBUATAN BISKUIT**

Tugas Akhir, Fakultas Sains dan Teknologi (2018).

(xiv + 76 halaman, 6 tabel, 16 gambar, 12 lampiran)

Ubi jalar merupakan salah satu bahan lokal yang tinggi akan karbohidrat. Ubi jalar memiliki karakteristik yang hampir sama dengan tepung terigu dan berpotensi menggantikan tepung terigu dalam pembuatan biskuit. Tujuan penelitian ini adalah untuk menentukan karakteristik tepung ubi jalar dengan metode pra-masak dan menentukan rasio tepung ubi jalar dan tepung terigu dengan jenis gula yang berbeda dalam pembuatan biskuit yang memiliki karakteristik terbaik. Formulasi yang berbeda dari tepung ubi jalar dan tepung terigu (1:4, 2:3, 3:2, 4:1) dan gula (gula pasir, gula semut) dianalisis untuk menghasilkan biskuit berdasarkan karakter fisik dan uji organoleptik terbaik yang mengutamakan hasil hedonik. Berdasarkan hasil penelitian, karakteristik tepung ubi jalar dengan metode pra-masak memiliki kadar air 7.71%, daya serap air 274.67%, kadar protein 3.73%, kadar pati 50.92%, kadar amilosa 13.74%, kadar amilopektin 37.18%, dan kadar pati resisten 1.36%. Hasil uji organoleptik menunjukkan biskuit dengan rasio tepung ubi jalar:tepung terigu 2:3 dan gula pasir paling disukai oleh panelis. Biskuit tersebut memiliki kekerasan 2356.67 g, <sup>0</sup>Hue 77.72, warna kuning, aroma dan rasa asing tidak kuat, dan memiliki tekstur yang cukup renyah. Formulasi biskuit terbaik memiliki kadar air 2.48%, kadar abu 2.23%, kadar protein 7.20%, kadar lemak 13.36%, kadar karbohidrat 74.73%, total kalori 447.92 kkal, dan kadar pati resisten 0.60%.

Kata Kunci: biskuit, gula semut, pati resisten, gula pasir, tepung ubi jalar

Referensi: 84 (1970-2017)