

PENGARUH PENAMBAHAN HIDROLISAT PROTEIN OKARA DAN AMPAS KOPI TERHADAP SIFAT SENSORIS DAN FISIKOKIMIA PRODUK COOKIES NON-GLUTEN

INTISARI

Oleh:

DEVITA NURUL SAFITRI

20/460652/TP/12862

Okara merupakan limbah padat hasil pembuatan tahu. Proses hidrolisis protein okara dilakukan dengan pembuatan tepung tempe gembus melalui fermentasi dengan *Rhizopus oligosporus*. Tepung tempe gembus ditambahkan dalam produk *cookies* untuk meningkatkan nilai gizi produk serta nilai ekonomis ampas tahu. Penambahan bubuk ampas kopi (*Spent Coffee Ground*) bertujuan meningkatkan rasa dan nilai fungsional produk *cookies* serta sebagai pemanfaatan limbah ampas kopi. Penggunaan tepung beras sebagai pengganti tepung terigu untuk memperoleh produk *cookies* non-gluten. Penelitian ini bertujuan mengetahui pengaruh penambahan hidrolisat protein okara (tepung tempe gembus) dan bubuk ampas kopi terhadap sifat sensoris dan fisikokimia produk *cookies* non-gluten.

Pada penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan variasi rasio tepung beras : tepung tempe gembus : bubuk ampas kopi sebesar kontrol(100:0:0), F1(80:17:3), F2(67:27:7), dan F3(57:33:10). Semua formulasi *cookies* non-gluten dilakukan analisis sensoris untuk mengetahui tingkat penerimaan dan kesukaan panelis dengan metode hedonik meliputi atribut warna, aroma, tekstur, rasa, aftertaste, dan keseluruhan. Kemudian akan dilakukan analisis fisik (warna dan kekerasan) dan kimia (kadar air, kadar abu, kadar lemak, kadar protein, kadar karbohidrat *by-difference*, dan aktivitas antioksidan) pada formula *cookies* non-gluten terpilih dari hasil uji sensoris dengan skor hedonik tertinggi.

Hasil penelitian menunjukkan bahwa formula *cookies* non-gluten terpilih hasil uji sensoris dengan skor hedonik tertinggi adalah F1 (80:17:3) dengan skor atribut keseluruhan sebesar 5,43 parameter agak suka. Komposisi kimia *cookies* non-gluten terpilih mengandung kadar air 6,69 %, kadar abu 1,96%, kadar lemak 19,67%, kadar protein 10,12%, kadar karbohidrat *by-difference* 61,57% dan aktivitas antiosidan sebesar 80,34%RSA. Hasil uji warna menunjukkan nilai L 44,01; a* 12,39; dan b*30,26 dengan tingkat kekerasan yaitu Fmax 20,33 N.

Kata Kunci : Okara, tepung tempe gembus, bubuk ampas kopi, *cookies* non-gluten

EFFECT OF ADDING OKARA PROTEIN HYDROLYZATE AND COFFEE GROUNDS ON THE SENSORY AND PHYSICOCHEMICAL PROPERTIES OF NON-GLUTEN COOKIES PRODUCT

ABSTRACT

By:

DEVITA NURUL SAFITRI

20/460652/TP/12862

Okara is a solid waste from making tofu. The hydrolysis process of okara protein is carried out by making gembus tempe flour through fermentation with *Rhizopus oligosporus*. Gembus tempeh flour is added to cookie products to increase the nutritional value of the product as well as the economic value of tofu dregs. The addition of coffee grounds (Spent Coffee Ground) aims to improve the taste and functional value of cookies products as well as utilizing coffee grounds waste. Using rice flour as a substitute for wheat flour to obtain non-gluten cookie products. This research aims to determine the effect of adding okara protein hydrolyzate (gembus tempeh flour) and coffee grounds powder on the sensory and physicochemical properties of non-gluten cookies products.

In this study, a Completely Randomized Design (CRD) was used with variations in the ratio of rice flour : tempeh gembus flour : coffee grounds powder equal to control (100:0:0), F1 (80:17:3), F2(67:27:7), and F3(57:33:10). All non-gluten cookies formulations were subjected to sensory analysis to determine the level of acceptance and preference of panelists using the hedonic method including color, aroma, texture, taste, aftertaste and overall attributes. Then physical (color and hardness) and chemical analysis (moisture content, ash content, fat content, protein content, carbohydrate content by-difference, and antioxidant activity) will be carried out on the selected non-gluten cookies formula from the sensory test results with the highest hedonic score. .

The research results showed that the selected non-gluten cookies formula from the sensory test with the highest hedonic score was F1 (80:17:3) with an overall attribute score of 5.43, rather like parameters. The chemical composition of selected non-gluten cookies contains water content of 6.69%, ash content of 1.96%, fat content of 19.67%, protein content of 10.12%, carbohydrate content by-difference of 61.57% and antioxidant activity of 80%. .34%RSA. The color test results show an L value of 44.01; a* 12.39; and b*30.26 with a hardness level of Fmax 20.33 N.

Keywords: Okara, tempe gembus flour, coffee grounds powder, non-gluten cookies