

## ABSTRAK

**Kasni Aldelwis Butar Butar (5183240012), Pengembangan Produk *Cookies* Substitusi Tepung Ubi Jalar Putih, Kacang Hijau dan wortel Sebagai Sumber Serat bagi Pralansia dan Lansia. Skripsi. Fakultas Teknik Universitas Negeri Medan 2023.**

Semakin bertambahnya usia akan semakin mengalami kemunduran biologis tubuh terus menerus yang menyebabkan gangguan gizi pada pra lansia dan lansia. Salah satunya yaitu masalah kekurangan konsumsi serat. Berdasarkan hasil Riskesdas Pra lansia dan lansia hanya memenuhi 1/3 dari kebutuhan total yaitu (20-30 gram). Penelitian ini bertujuan untuk mengetahui hedonik, mutu hedonik, kandungan zat gizi, serta serat pada formula terbaik *cookies* substitusi tepung ubi jalar putih, kacang hijau dan wortel. Penelitian ini dilaksanakan di program studi gizi dan balai standarisasi dan pelayanan jasa industri kota Medan selama bulan September- November 2022. Penelitian ini bersifat eksperimen dengan metode Rancangan Acak Lengkap (RAL), masing masing terdiri dari 3 perlakuan dengan substitusi tepung ubi jalar putih, kacang hijau dan wortel sebanyak 60 persen, 80 persen dan 100 persen dengan total masing masing 2 kali pengulangan. Teknik pengumpulan data menggunakan kuisisioner organoleptik (hedonik dan mutu hedonik) serta pengujian kandungan gizi. Analisis yang dilakukan yaitu uji organoleptik dan analisis kandungan gizi. Analisis statistik dianalisis menggunakan SPSS 26.0 dengan uji nonparametrik kruskal wallis dan uji lanjut Mann-Whitney.

Hasil uji organoleptik formula terbaik adalah perlakuan F1 (40 persen tepung terigu : 60 persen tepung ubi jalar putih, kacang hijau dan wortel). Secara mutu hedonik F1 memiliki kategori warna (kuning kecoklatan), rasa (manis), aroma (agak terasa ubi jalar putih, kacang hijau dan wortel) dan tekstur yang renyah. Hal tersebut dibuktikan berdasarkan nilai signifikan pada uji kruskal waliis dan uji lanjut Man-whitneyy dimana nilai ( $P > 0,05$ ). Hasil analisis kimia kadar serat pada perlakuan terbaik yaitu perlakuan F1 adalah karbohidrat (30,6%), lemak (31,7%), protein (7,64%), serat (24,6%), kadar air (2,17%), kadar abu (3,29%) dan energi total (435.86 kkal). Kandungan serat per 100 gram yaitu 24,6 gram. Kandungan gizi pertakaran saji 25 gram karbohidrat 7,65 gram, lemak 7,9 gram, protein 1,91 gram dan sesuai ketentuan BPOM kandungan serat pada *cookies* mencapai syarat klaim gizi yaitu 6,15 gram, sehingga berdasarkan kandungan serat pada *cookies*, maka dapat disimpulkan bahwa kandungan serat pada *cookies* cukup sebagai cemilan sumber serat bagi pralansia dan lansia.

## ABSTRACT

***Kasni Aldelwis Butar Butar (5183240012), Product Development of Cookies Substitute White Sweet Potato Flour, Green Beans and Carrots as a Source of Fiber for Pre-elderly and Elderly. Thesis. Faculty of Engineering, Medan State University 2023.***

As you get older, you will experience continuous biological decline which causes nutritional disorders in the pre-elderly and elderly. One of them is the problem of lack of fiber consumption. Based on the results of Riskesdas, the elderly and the elderly only fulfill 1/3 of the total needs (20-30 grams). This study aims to determine the hedonic, hedonic quality, nutrient content, and fiber in the best formula of cookies substituted for white sweet potato flour, green beans and carrots. This research was conducted at the nutrition study program and standardization center and industrial services in Medan city during September-November 2022. This research was experimental with the Completely Randomized Design (CRD) method, each consisting of 3 treatments with substitutions for white sweet potato flour, peanuts greens and carrots as much as 60 percent, 80 percent and 100 percent with a total of 2 repetitions each. Data collection techniques used organoleptic questionnaires (hedonic and hedonic quality) as well as nutritional content testing. The analyzes carried out were organoleptic tests and nutrient content analysis. Statistical analysis was analyzed using SPSS 26.0 with the Kruskal Wallis nonparametric test and the Mann-Whitney follow-up test.

The best formula organoleptic test results were F1 treatment (40 percent wheat flour: 60 percent white sweet potato flour, green beans and carrots). In terms of hedonic quality, F1 has categories of color (brownish yellow), taste (sweet), aroma (slightly taste of white sweet potato, green beans and carrots) and crunchy texture. This was proven based on the significant value on the Kruskal Wallis test and the Man-Whitney follow-up test where the value ( $P > 0.05$ ). The results of chemical analysis of fiber content in the best treatment, namely treatment F1 were carbohydrates (30.6%), fat (31.7%), protein (7.64%), fiber (24.6%), water content (2.17 %), ash content (3.29%) and total energy (435.86 kcal). The fiber content per 100 grams is 24.6 grams. The nutritional content for a serving of 25 grams of carbohydrates is 7.65 grams, fat is 7.9 grams, protein is 1.91 grams and according to BPOM provisions the fiber content in cookies reaches the nutritional claim requirements of 6.15 grams, so based on the fiber content in cookies, it can be it was concluded that the fiber content in cookies was sufficient as a source of fiber snacks for pre-elderly and the elderly.