

## ABSTRAK

**Henisah Pebrianti : *Daya Terima dan Karakteristik Fisikokimia Flakes Tepung Ubi Jalar Orange dan Tepung Kelapa Sebagai Pangan Sumber Serat*. Skripsi. Fakultas Teknik. Universitas Negeri Medan. 2025**

Serat pangan memiliki berbagai manfaat fisiologis, seperti mencegah terjadinya konstipasi dan divertikulosis, membantu mengendalikan berat badan, serta berperan dalam pengaturan fungsi usus. Konsumsi pangan sumber serat pada masyarakat Indonesia masih rendah. Kurangnya konsumsi serat pangan dapat meningkatkan risiko terjadinya sindrom metabolik. Tujuan dari penelitian ini adalah untuk mengetahui formulasi terbaik, daya terima sensori, karakteristik fisik dan kimia, serta kontribusi serat pangan pada flakes tepung ubi jalar *orange* dan tepung kelapa.

Penelitian ini dilaksanakan pada Juni 2025 – Juli 2025 di Laboratorium Gizi Universitas Negeri Medan. Metode dalam penelitian ini digunakan Rancangan Acak Lengkap (RAL) dengan tiga perlakuan dan dua pengulangan. Perlakuan F1 (75% tepung ubi jalar *orange* : 25% tepung kelapa), F2 (50% tepung ubi jalar *orange* : 50% tepung kelapa), F3 (25% tepung ubi jalar *orange* : 75% tepung kelapa). Tepung ubi jalar *orange* dibuat dengan menggunakan metode pengeringan menggunakan *dehydrator* pada suhu 70°C selama 12 jam, pembuatan tepung kelapa pada suhu 60°C selama 7 jam. Data yang diperoleh dari hasil penelitian dianalisis dengan menggunakan uji ANOVA dan dilanjutkan dengan *Duncan Multiple Range Test* (DNMRT) dengan signifikansi 5%. Untuk menentukan formula terpilih dengan menggunakan uji De Garmo dengan memberikan bobot pada berbagai parameter.

Hasil uji organoleptik menunjukkan bahwa tingkat kesukaan panelis terhadap warna berkisar antara 3.65-3.87 (agak suka), aroma berkisar antara 3.90-4.17 (agak suka-suka), rasa berkisar antara 3.10-3.75 (agak suka), tekstur berkisar antara 3.35-3.92 (agak suka), dan keseluruhan berkisar antara 3.55-3.97 (agak suka). Rendemen tepung ubi jalar *orange* menghasilkan 24.59%, dan rendemen tepung kelapa menghasilkan 11.25%. Karakteristik fisik pada *flakes* tepung ubi jalar *orange* dan tepung kelapa yaitu pada daya serap air berkisar antara 312.15 – 596.27%, ketahanan dan kerenyahan dalam susu berkisar antara 1.23 menit – 9.10 menit. Karakteristik kimia pada *flakes* tepung ubi jalar *orange* dan tepung kelapa yaitu pada kadar air berkisar antara 2.22 - 5.71%, kadar abu berkisar antara 2.33 – 2.84%, kadar lemak berkisar antara 3.54 – 9.86%, kadar protein berkisar antara 4.20 – 4.73%, kadar karbohidrat berkisar antara 80.80 – 83.71%, dan kadar serat pangan berkisar antar 24.38 – 48.08%. Kontribusi serat pangan produk *flakes* tepung ubi jalar *orange* dan tepung kelapa berkisar antara 30.63 – 49.27%. Perlakuan terbaik dipilih menggunakan uji indeks efektivitas De Garmo yang menunjukkan bahwa F2 sebagai perlakuan terbaik (50% tepung ubi jalar *orange* : 50% tepung kelapa).

**Kata kunci : *Flakes*, Tepung ubi jalar *orange*, Tepung kelapa, Serat Pangan**

## ABSTRACT

***Henisah Pebrianti: Acceptance and Physicochemical Characteristics of Orange Sweet Potato Flour and Coconut Flour Flakes as a Source of Dietary Fiber. Thesis. Faculty of Engineering. State University of Medan. 2025.***

Dietary fiber has various physiological benefits, such as preventing constipation and diverticulosis, helping to control body weight, and playing a role in regulating intestinal function. The consumption of fiber-rich foods among the Indonesian population is still low. A lack of dietary fiber intake can increase the risk of developing metabolic syndrome. The aim of this study is to determine the best formulation, sensory acceptability, physical and chemical characteristics, as well as the dietary fiber contribution of orange sweet potato flour and coconut flour flakes.

This research was conducted in June 2025 – July 2025 at the Nutrition Laboratory of Medan State University. In this study, a Completely Randomized Design (CRD) was used with three treatments and two replications. Treatment F1 (75% orange sweet potato flour: 25% coconut flour), F2 (50% orange sweet potato flour: 50% coconut flour), F3 (25% orange sweet potato flour: 75% coconut flour). Orange sweet potato flour was made using a drying method using a dehydrator at a temperature of 70°C for 12 hours, making coconut flour at a temperature of 60°C for 7 hours. The data obtained from the research results were analyzed using the ANOVA test and continued with the Duncan Multiple Range Test (DNMRT) with a significance of 5%. To determine the selected formula using the De Garmo test by giving weights to various parameters.

The results of the organoleptic test showed that the panelists' preference levels for color ranged from 3.65 to 3.87 (somewhat liked), aroma ranged from 3.90 to 4.17 (somewhat liked to liked), taste ranged from 3.10 to 3.75 (somewhat liked), texture ranged from 3.35 to 3.92 (somewhat liked), and overall acceptance ranged from 3.55 to 3.97 (somewhat liked). The yield of orange sweet potato flour was 24.59%, while the yield of coconut flour was 11.25%. The physical characteristics of the flakes made from orange sweet potato flour and coconut flour showed water absorption ranging from 312.15% to 596.27%, and the resistance and crispness in milk ranged from 1.23 minutes to 9.10 minutes. The chemical characteristics of the flakes made from orange sweet potato flour and coconut flour indicated that the moisture content ranged from 2.22% to 5.71%, ash content ranged from 2.33% to 2.84%, fat content ranged from 3.54% to 9.86%, protein content ranged from 4.20% to 4.73%, carbohydrate content ranged from 80.80% to 83.71%, and dietary fiber content ranged from 24.38% to 48.08%. The contribution of dietary fiber in the flakes made from orange sweet potato flour and coconut flour ranged from 30.63% to 49.27%. The best treatment was selected using the De Garmo effectiveness index test, which indicated that F2 was the best treatment (50% orange sweet potato flour: 50% coconut flour).

**Keywords:** *Flakes, Orange sweet potato flour, Coconut flour, Dietary fiber.*