

## RINGKASAN

Upaya pemerintah terhadap ketergantungan tepung terigu perlu diperhatikan dalam penggunaan tepung mocaf (*Modified Cassava Flour*) dan tepung jagung sebagai bahan pengganti alternatif tepung terigu dalam pembuatan bahan baku pangan. *Brownies Cookies* dengan substitusi tepung mocaf dan tepung jagung merupakan salah satu olahan pangan dengan kandungan *gluten-free* (bebas gluten). Penelitian ini dilakukan dengan tujuan untuk mengetahui kandungan protein dan kandungan serat pada produk *brownies cookies*.

Penelitian ini dilaksanakan pada bulan November 2025 sampai Februari 2026 di Laboratorium Pangan Universitas Jendral Soedirman dan Laboratorium Agribisnis Pengolahan Hasil Pertanian SMK Negeri 1 Kalibagor. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan tiga kali ulangan dari enam taraf perlakuan, oleh karena itu unit dihasilkan sebanyak 18 perlakuan. Formulasi yang digunakan yaitu P1 (tepung terigu 100% : tepung mocaf 0%: tepung jagung 0%), P2 (tepung mocaf 100% : tepung jagung 0%), P3 (tepung mocaf 75% : tepung jagung 25%), P4 (tepung mocaf 50% : tepung jagung 50%), P5 (tepung mocaf 25% : tepung jagung 75%), dan P6 (tepung mocaf 0% : tepung jagung 100%). Analisis ini menggunakan software statistik SPSS dengan uji ANOVA *oneway* kemudian diuji lanjut menggunakan *Duncan Multiple Range Test* (DMRT) dengan taraf 5% untuk mengetahui perbedaan signifikan antar perlakuan.

Hasil yang diperoleh pada penelitian ini yaitu terdapat perlakuan berbeda nyata pada perlakuan P1, P3, P6 pada kelompok subset \*a, P2 dan P5 pada subset \*ab, dan P4 pada subset \*abc perbedaan nyata pada semua perlakuan. Nilai kadar protein tertinggi pada *brownies cookies* terdapat pada P1 (100% tepung terigu : tepung mocaf 0%: tepung jagung 0%) yaitu 12.51% dan nilai kadar protein terendah pada perlakuan P2 (tepung mocaf 100% : tepung jagung 0%) yaitu 5.08%. Nilai kadar serat terdapat adanya perlakuan berbeda nyata pada perlakuan P3 dan P6 terdapat pada subset \*ab, serta perlakuan P4, P2, P5, dan P1 pada subset \*a. Nilai kadar serat tertinggi terdapat pada perlakuan P3 (tepung mocaf 75% : tepung jagung 25%) yaitu 83.65% dan nilai kadar serat terendah pada perlakuan P1 (tepung terigu 100%: tepung mocaf 0%: tepung jagung 0%).

Kata Kunci : *brownies cookies*, kadar protein, kadar serat, tepung jagung, tepung mocaf

## SUMMARY

*The government's efforts to reduce dependence on wheat flour need to be considered in the use of mocaf flour (Modified Cassava Flour) and corn flour as alternative substitutes for wheat flour in the manufacture of food raw materials.. Brownie cookies, made with mocaf flour and corn flour as substitutes, are one such gluten-free food product. This study aimed to determine the protein and fiber content of brownie cookies.*

*This research was conducted from November 2025 to February 2026 at the Food Laboratory of General Soedirman University and the Agricultural Product Processing Agribusiness Laboratory of State Vocational School 1 Kalibagor.. This research used a Completely Randomized Design (CRD) with three replications of six treatment levels, therefore 18 units were produced per treatment. The formulations used were P1 (100% wheat flour: 0% mocaf flour: 0% corn flour), P2 (100% mocaf flour: 0% corn flour), P3 (75% mocaf flour: 25% corn flour), P4 (50% mocaf flour: 50% corn flour), P5 (25% mocaf flour: 75% corn flour), and P6 (0% mocaf flour: 100% corn flour). This analysis uses SPSS statistical software with a oneway ANOVA test, then further tested using the Duncan Multiple Range Test (DMRT) at a 5% level to determine significant differences between treatments.*

*The results obtained in this study were that there were significantly different treatments in the treatments P1, P3, P6 in the subset group \*a, P2 and P5 in the subset \*ab, and P4 in the subset \*abc significant differences in all treatments. The highest protein content value in brownies cookies was in P1 (100% wheat flour: 0% mocaf flour: 0% corn flour) which was 12.51% and the lowest protein content value was in treatment P2 (100% mocaf flour: 0% corn flour) which was 5.08%. The fiber content value was significantly different in the treatments P3 and P6 in the subset \*ab, as well as the treatments P4, P2, P5, and P1 in the subset \*a. The highest fiber content value was in treatment P3 (75% mocaf flour: 25% corn flour) which was 83.65% and the lowest fiber content value was in treatment P1 (100% wheat flour: 0% mocaf flour: 0% corn flour).*

*Keywords: brownies cookies, protein content, fiber content, corn flour, mocaf flou*