

## **Pati Resisten dan Daya Cerna Pati *Snack Bar* Tepung Sorgum, Tepung Kacang Hijau, dan Biji Chia Sebagai Alternatif Selingan Penderita Diabetes**

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### **ABSTRAK**

**Latar belakang:** Kondisi hiperglikemia pada diabetes melitus dikaitkan dengan komplikasi penyakit, sehingga dibutuhkan upaya pengendalian seperti modifikasi makanan. Kombinasi kadar pati resisten dalam sorgum dan kacang hijau, serta kandungan serat biji chia, bermanfaat dalam menunda kecepatan daya cerna pati dan berpotensi diolah menjadi alternatif selingan bagi penderita diabetes.

**Tujuan:** Mengetahui kadar pati resisten dan daya cerna pati *snack bar* tepung sorgum, tepung kacang hijau, dan biji chia.

**Metode:** Rancangan acak lengkap satu faktor dengan perbandingan komposisi tepung sorgum dan tepung kacang hijau masing-masing dengan persentase sebesar F0 (0:0), F1 (60:40), F2 (50:50), dan F3 (40:60). Analisis pati resisten dengan metode multienzim dan hidrolisis asam, daya cerna pati dengan metode hidrolisis asam dan enzimatis. Data diuji statistik dengan *One Way Anova* dan uji lanjut Tukey HSD.

**Hasil:** Kadar pati resisten meningkat dari 5,07% (F0), 5,58% (F1), 8,66% (F2), hingga 11,39% (F3). Sementara itu, daya cerna pati menurun dari 78,41% (F0), 71,25% (F1), 45,27% (F2), hingga 39,52% (F3).

**Simpulan:** Peningkatan komposisi tepung kacang hijau berbanding lurus dengan kadar pati resisten yang lebih tinggi dan daya cerna pati yang lebih rendah.

**Kata kunci:** Sorgum, kacang hijau, pati resisten, daya cerna pati

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## Resistant Starch and Digestibility of Sorghum Flour, Mung Bean Flour, and Chia Seed Snack Bars as an Alternative for Diabetes Mellitus

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### ABSTRAK

**Background:** Hyperglycemia in diabetes mellitus is associated with disease complications, highlighting the need for control measures such as food modifications. The combination of resistant starch content in sorghum and mung beans, along with the fiber content of chia seeds, is beneficial in delaying the starch digestion rate and has the potential to be processed as an alternative snack for diabetes patients.

**Objective:** To determine the resistant starch content and starch digestibility of snack bars made from sorghum flour, mung bean flour, and chia seeds.

**Methods:** The completely randomized one-factor experimental study with a ratio of sorghum flour to mung bean flour at F0 (0:0), F1 (60:40), F2 (50:50), and F3 (40:60). Resistant starch and starch digestibility were analyzed using the multienzyme, acid, and enzymatic hydrolysis methods. The data were statistically tested using One-Way ANOVA followed by Tukey HSD post hoc test.

**Results:** The resistant starch content increased from 5.07% (F0) to 5.58% (F1), 8.66% (F2), and 11.39% (F3). Meanwhile, starch digestibility decreased from 78.41% (F0) to 71.25% (F1), 45.27% (F2), and 39.52% (F3).

**Conclusion:** A higher proportion of mung bean flour is associated with an increase in resistant starch content and a decrease in starch digestibility.

**Keywords:** Sorghum, mung bean, resistant starch, starch digestibility

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