ANALISIS FORMULASI *CUPCAKE* TEPUNG SUKUN (*Artocarpus altilis*) PENAMBAHAN TINTA CUMI DENGAN KRIM DADIH SEBAGAI ALTERNATIF MAKANAN SELINGAN MENGONTROL KADAR GULA DARAH

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Sebagai Salah Satu Syarat untuk Memperoleh Gelar Magister Ilmu Gizi
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xi + 111 halaman, 15 tabel, 9 gambar, 10 lampiran

ABSTRAK

Tujuan Penelitian

Diabetes melitus merupakan penyakit metabolik dengan hiperglikemia akibat gangguan kerja insulin. Pengembangan pangan fungsional seperti cupcake berbahan tepung sukun, tinta cumi, dan krim dadih berpotensi membantu mengontrol kadar gula darah karena kaya serat, antioksidan, dan probiotik. Penelitian ini bertujuan menganalisis formula cupcake tinta cumi dengan substitusi tepung sukun dan krim dadih sebagai pangan fungsional bagi penderita DM.

Metode

Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan empat formulasi (F0, F1, F2, dan F3). Pengujian meliputi uji hedonik, proksimat, serat pangan, aktivitas antioksidan, total gula, asam amino, analisis deskriptif, dan bakteri asam laktat pada krim dadih. Analisis data menggunakan uji *Shapiro-Wilk*, dilanjutkan *One Way* ANOVA dan DMRT atau *Kruskal-Wallis* dan *Mann-Whitney*.

Hasil

Formulasi terbaik adalah F1 (0,5% tinta cumi) karena memiliki keseimbangan mutu sensori dan nilai fungsional. F1 mengandung protein 4,44%, lemak 17,63%, karbohidrat 5,23%, serat pangan 15,84%, aktivitas antioksidan 22,52%, kadar gula total <2,28%, asam amino glutamat 2,46, serta didukung krim dadih dengan bakteri asam laktat tinggi (1,65 × 10^9 cfu/gr).

Kesimpulan

Cupcake tinta cumi substitusi tepung sukun dengan krim dadih berpotensi sebagai pangan fungsional bagi penderita diabetes melitus karena kaya serat, antioksidan, asam amino, bakteri asam laktat, dan memiliki kadar gula total yang rendah.

Daftar Pustaka : 134 (2000-2025)
Kata Kunci : cupcake; dadih; diabetes melitus; pangan fungsional; tepung sukun.

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ANALYSIS OF BREADFRUIT (*Artocarpus altilis*) FLOUR CUPCAKE FORMULATIONS WITH SQUID INK AND DADIH CREAM AS A FUNCTIONAL SNACK FOR BLOOD GLUCOSE CONTROL

xi + 111 pages, 15 tables, 9 pictures, 10 attachments

ABSTRACT

Objective

Diabetes mellitus is a metabolic disease characterized by hyperglycemia. Functional foods, such as cupcakes made with breadfruit (Artocarpus altilis) flour, squid ink, and dadih cream, may support blood glucose control due to their dietary fiber, antioxidant, and probiotic contents. This study aimed to analyze the formulation of squid ink cupcakes with breadfruit flour substitution and dadih cream as a functional snack for individuals with diabetes mellitus.

Methods

The study employed a Completely Randomized Design (CRD) with four formulations (F0, F1, F2, and F3). The formulations were evaluated using hedonic, proximate, dietary fiber, antioxidant activity, total sugar, amino acid, descriptive sensory, and lactic acid bacteria analyses of dadih cream. Data were analyzed using the Shapiro–Wilk test, followed by one-way ANOVA and Duncan's Multiple Range Test (DMRT) for normally distributed data, or the Kruskal–Wallis and Mann–Whitney tests for non-normally distributed data.

Results

The best formulation was F1 (0.5% squid ink), which demonstrated the most favorable balance between sensory quality and functional properties. F1 contained 4.44% protein, 17.63% fat, 5.23% carbohydrates, 15.84% dietary fiber, and 22.52% antioxidant activity. It also exhibited a low total sugar content (<2.28%), contained 2.46 mg/g of glutamic acid, and was complemented by dadih cream with a high lactic acid bacteria count (1.65×10^9 CFU/g).

Conclusion

Breadfruit flour-substituted squid ink cupcakes with dadih cream have the potential to serve as a functional food for individuals with diabetes mellitus due to their high dietary fiber, antioxidant, amino acid, and lactic acid bacteria contents, as well as their low total sugar content.

References : 134 (2000-2025)
Keywords : breadfruit flour; cupcakes; dadih; diabetes mellitus; functional food