VARIASI CAMPURAN UBI UNGU (*Ipomoea batatas*) DAN KACANG MERAH (*Phaseolus vulgaris*) TERHADAP SIFAT SENSORI, SIFAT OGANOLEPTIK, DAN KADAR ZAT BESI SEBAGAI SNACK SEHAT TINGGI ZAT BESI

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ABSTRAK

Latar Belakang: Anemia defisiensi besi masih menjadi salah satu masalah gizi yang banyak dialami masyarakat, terutama remaja putri. Salah satu upaya pencegahannya adalah melalui pengembangan pangan selingan tinggi zat besi. Mochi merupakan pangan yang digemari berbagai kalangan, namun umumnya memiliki kandungan zat besi yang rendah. Penambahan tepung ubi ungu dan tepung kacang merah diharapkan dapat meningkatkan kandungan zat besi sekaligus menghasilkan produk yang dapat diterima konsumen.
Tujuan: Mengetahui pengaruh variasi campuran tepung ubi ungu (*Ipomoea batatas*) dan tepung kacang merah (*Phaseolus vulgaris*) terhadap sifat sensori, sifat organoleptik, dan kadar zat besi pada mochi serta menentukan formulasi terbaik.
Metode: Penelitian ini merupakan penelitian eksperimental murni dengan Rancangan Acak Lengkap (RAL) yang terdiri atas empat perlakuan, yaitu A (100% tepung ketan), B (60% tepung ketan : 35% tepung ubi ungu : 5% tepung kacang merah), C (50% : 40% : 10%), dan D (40% : 45% : 15%). Uji organoleptik dilakukan menggunakan uji hedonik oleh 25 panelis agak terlatih. Data organoleptik dianalisis menggunakan uji Kruskal-Wallis dilanjutkan Mann-Whitney, sedangkan kadar zat besi dianalisis menggunakan One Way ANOVA dilanjutkan Duncan Multiple Range Test (DMRT).
Hasil: Variasi campuran tepung ubi ungu dan tepung kacang merah berpengaruh terhadap sifat sensori, sifat organoleptik ($p<0,05$), dan kadar zat besi mochi ($p<0,05$). Semakin tinggi proporsi tepung ubi ungu dan tepung kacang merah, warna mochi semakin ungu gelap, aroma semakin khas ubi ungu, tekstur semakin kurang kenyal, serta kandungan zat besi meningkat. Kadar zat besi tertinggi diperoleh pada perlakuan D sebesar 15,84 mg/kg, sedangkan terendah pada perlakuan A sebesar 1,48 mg/kg. Hasil penentuan formulasi terbaik menggunakan metode De Garmo menunjukkan bahwa perlakuan A merupakan formulasi terbaik dengan nilai indeks efektivitas sebesar 0,800.
Kesimpulan: Variasi campuran tepung ubi ungu dan tepung kacang merah berpengaruh terhadap sifat sensori, sifat organoleptik, dan kadar zat besi mochi.. Formulasi terbaik adalah perlakuan B (60% tepung ketan : 35% tepung ubi ungu : 5% tepung kacang merah) karena memberikan keseimbangan antara daya terima panelis dan kandungan zat besi sehingga berpotensi dikembangkan sebagai snack sehat tinggi zat besi.
Kata kunci: Anemia defisiensi besi, mochi, ubi ungu, kacang merah, zat besi

THE EFFECT OF PURPLE SWEET POTATO (*Ipomoea batatas*) AND RED KIDNEY BEAN (*Phaseolus vulgaris*) BLEND VARIATION IN MOCHI ON SENSORY CHARACTERISTICS, ORGANOLEPTIC PROPERTIES, AND IRON CONTENT AS A HEALTHY IRON RICH SNACK

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ABSTRACT

Background: Iron deficiency anemia remains one of the most prevalent nutritional problems, particularly among adolescent girls. One strategy to prevent anemia is the development of iron-rich healthy snacks. Mochi is a popular food product; however, its iron content is generally low. The incorporation of purple sweet potato flour and red kidney bean flour is expected to increase its iron content while maintaining consumer acceptability.
Objective: To determine the effect of varying proportions of purple sweet potato (*Ipomoea batatas*) flour and red kidney bean (*Phaseolus vulgaris*) flour on the sensory characteristics, organoleptic properties, and iron content of mochi, and to identify the best formulation..
Method: This study employed a true experimental design using a Completely Randomized Design (CRD) with four treatments: A (100% glutinous rice flour), B (60% glutinous rice flour : 35% purple sweet potato flour : 5% red kidney bean flour), C (50% : 40% : 10%), and D (40% : 45% : 15%). Organoleptic evaluation was conducted using a hedonic test involving 25 semi-trained panelists. Organoleptic data were analyzed using the Kruskal-Wallis test followed by the Mann-Whitney test, while iron content data were analyzed using One-Way ANOVA followed by Duncan's Multiple Range Test (DMRT).
Result: Variations in the proportions of purple sweet potato flour and red kidney bean flour significantly affected sensory characteristics, organoleptic properties ($p<0.05$), and iron content ($p<0.05$) of mochi. Increasing the proportion of both flours resulted in darker purple color, a stronger purple sweet potato aroma, less chewy texture, and higher iron content. The highest iron content was found in treatment D (15.84 mg/kg), while the lowest was observed in treatment A (1.48 mg/kg). The De Garmo method identified treatment A as the best formulation, with an effectiveness index of 0.800.
Conclusion: Variations in the proportions of purple sweet potato flour and red kidney bean flour significantly affected the sensory characteristics, organoleptic properties, and iron content of mochi. Treatment B (60% glutinous rice flour : 35% purple sweet potato flour : 5% red kidney bean flour) was identified as the best formulation because it provided the best balance between consumer acceptability and iron content, indicating its potential as a healthy iron-rich snack.
Keywords: Iron deficiency anemia, mochi, purple sweet potato, red bean, iron