

ABSTRACT

THE EFFECT OF SUBSTITUTION TAPIOCA FLOUR WITH PURPLE SWEET POTATO (*Ipomoea batatas* Blackie) FLOUR ON THE ORGANOLEPTIC PROPERTIES OF BEEF MEATBALLS

The increasing demand for processed food encourages innovation in meat-based products such as beef meatballs. However, the use of tapioca flour as a filler lacks nutritional content such as fiber and antioxidants. This study aimed to determine the effect of substitution of tapioca flour with purple sweet potato flour (*Ipomoea batatas* Blackie) on the organoleptic properties of beef meatballs. The research was conducted in April 2025 at the Laboratory of Universitas Islam Balitar using a Completely Randomized Design (CRD) with four treatments: P0 (no substitution), P1 (10 g purple sweet potato flour), P2 (20 g), and P3 (30 g) each with three replications. The organoleptic assessment included color, taste, aroma, and texture involving 30 panelists. The results showed that the substitution significantly affected ($P < 0,05$) all parameters. Treatment P1 (10 g) received the highest scores for color (2,61) and taste (2,66), while texture was highest at P3 (2,59). Aroma remained highest in P0 (2,66). Increasing the concentration of purple sweet potato flour led to a decrease in color, taste, and aroma scores, but improved the texture. It can be concluded that a 10% substitution produced the best overall sensory quality and was still acceptable to consumers, whereas higher concentrations reduced consumer preference.

Keywords: *Purple Sweet potato Flour, Tapioca Flour, Beef Meatballs, Substitution, Organoleptic Test*

ABSTRAK

PENGARUH SUBSTITUSI TEPUNG TAPIOKA DENGAN TEPUNG UJI JALAR UNGU (*Ipomoea batatas* Blackie) TERHADAP UJI ORGANOLEPTIK BAKSO SAPI

Meningkatnya kebutuhan masyarakat akan pangan olahan mendorong inovasi produk berbasis daging, seperti bakso sapi. Namun, penggunaan tepung tapioka sebagai bahan pengisi cenderung minim kandungan gizi seperti serat dan antioksidan. Penelitian ini bertujuan untuk mengetahui pengaruh substitusi tepung tapioka dan tepung ubi jalar ungu (*Ipomoea batatas* Blackie) terhadap uji organoleptik bakso sapi. Penelitian dilakukan pada April 2025 di Laboratorium Universitas Islam Balitar menggunakan Rancangan Acak Lengkap (RAL) dengan empat perlakuan: P0 (tanpa substitusi), P1 (10 g ubi jalar ungu), P2 (20 g) dan P3 (30 g), serta tiga kali ulangan. Penelitian organoleptik mencakup warna, rasa, aroma dan tekstur dengan melibatkan 30 panelis. Hasil menunjukkan bahwa substitusi tepung ubi jalar ungu memberikan pengaruh yang nyata ($P < 0,05$) terhadap semua parameter. Perlakuan P1 (10 g) memperoleh skor tertinggi pada warna (2,61) dan rasa (2,66) sedangkan tekstur tertinggi diperoleh pada P3 (2,59). Aroma tertinggi tetap berada pada P0 (2,66). Semakin tinggi konsentrasi tepung ubi jalar ungu, nilai warna, rasa dan aroma cenderung menurun, namun tekstur justru meningkat. Kesimpulannya, substitusi maksimal 10% memberikan hasil terbaik dan masih disukai konsumen, sedangkan konsentrasi lebih tinggi cenderung menurunkan daya terima.

Kata Kunci: Tepung Ubi Jalar Ungu, Tepung Tapioka, Bakso Sapi, Substitusi, Uji Organoleptik.