

## **PENGARUH JENIS DAGING DAN LEVEL TEPUNG TAPIOKA TERHADAP KUALITAS FISIK DAN MIKROSTRUKTUR BAKSO DAGING KUDA DAN SAPI**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh jenis daging dan level tepung tapioka serta interaksi keduanya terhadap kualitas fisik, *cooking yield*, kadar air dan mikrostruktur bakso daging kuda dan sapi. Bahan yang digunakan yaitu daging kuda, daging sapi, garam, bawang putih bubuk, lada bubuk, bawang merah goreng, tepung tapioka, dan air es. Uji kualitas fisik, *cooking yield*, dan kadar air dianalisis menggunakan Variansi Pola Faktorial, perbedaan yang nyata dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Uji mikrostruktur dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa jenis daging mempengaruhi kualitas fisik (pH), *cooking yield*, kadar air ( $P \leq 0,05$ ) dan mikrostruktur bakso. Level tepung tapioka yang berbeda mempengaruhi kualitas fisik (keempukan), *cooking yield*, kadar air ( $P \leq 0,05$ ), dan mikrostruktur bakso. Interaksi antara jenis daging dan level tepung tapioka yang berbeda mempengaruhi nilai *cooking yield* ( $P \leq 0,05$ ). Hasil penelitian menunjukkan bahwa bakso kuda memiliki kualitas fisik (pH), *cooking yield*, kadar air dan mikrostruktur yang lebih baik dari pada bakso sapi. Bakso dengan level tepung tapioka 25% memiliki kualitas fisik (keempukan), *cooking yield*, kadar air dan mikrostruktur yang lebih baik dari pada bakso dengan level tepung tapioka 10%. Interaksi antara jenis daging dan level tepung tapioka hanya terjadi pada *cooking yield*.

**Kata Kunci:** Bakso, Daging kuda, Daging sapi, Tepung tapioka, Kualitas fisik, dan Mikrostruktur.

## **INFLUENCE OF MEAT TYPE AND TAPIOCA FLOUR LEVEL ON PHYSICAL QUALITY AND MICROSTRUCTURE OF HORSE AND BEEF MEATBALLS**

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### **ABSTRACT**

This research aimed to determine the effects of meat type and tapioca flour levels, and their interactions, on the physical quality, cooking yield, water content, and microstructure of horse and beef meatballs. The materials used were horse meat, beef, salt, garlic powder, pepper powder, fried shallots, tapioca flour, and ice water. Physical quality tests, cooking yield, and water content were analyzed using Factorial Variance, and significant differences were further analyzed with Duncan's New Multiple Range Test (DMRT). The microstructure test was analyzed descriptively. The results showed that the type of meat affected the physical quality (pH), cooking yield, water content ( $P \leq 0.05$ ), and microstructure of the meatballs. Different levels of tapioca flour affected the physical quality (tenderness), cooking yield, water content ( $P \leq 0.05$ ), and microstructure of the meatballs. The interaction between meat type and different levels of tapioca flour affected the cooking yield value ( $P \leq 0.05$ ). The results indicated that horse meatballs had better physical quality (pH), cooking yield, water content, and microstructure than beef meatballs. Meatballs with 25% tapioca flour levels had better physical quality (tenderness), cooking yield, water content, and microstructure than meatballs with 10% tapioca flour levels. The interaction between meat type and tapioca flour levels only occurred in cooking yield.

**Keywords:** Meatballs, Horse meat, Beef, Tapioca flour, Physical quality, and Microstructure.