

## PENGARUH SUBSTITUSI DAGING AYAM PETELUR AFKIR DAN DAGING AYAM BROILER TERHADAP KUALITAS FISIK DAN MIKROSTRUKTUR BAKSO DAGING SAPI

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### INTISARI

Penelitian ini bertujuan untuk mengetahui kualitas fisik dan mikrostruktur bakso daging sapi yang disubstitusi daging ayam petelur afkir dan ayam broiler. Bahan-bahan yang digunakan dalam pembuatan bakso kombinasi adalah daging sapi, daging ayam petelur afkir, daging ayam broiler, garam, bawang putih, merica, STTP, tepung tapioka, dan es batu. Parameter yang diamati pada penelitian ini adalah uji kualitas fisik (pH, daya ikat air, warna, dan teksturyang terdiri dari *hardness*, *cohesiveness*, *springiness*, *chewiness*) dan uji mikrostruktur. Data uji kualitas fisik dianalisis dengan analisis variansi desain (*ANOVA*) rancangan acak lengkap pola faktorial (2 jenis daging x 4 level komposisi sapi 100%, 25%, 50%, dan 75%). Perbedaan signifikan dilanjutkan uji *Duncan's New Multiple Range Test*. Uji mikrostruktur dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwaimbangan daging sapi dan ayam petelur afkir sebesar 75:25% menurunkan pH, daya ikat air, warna  $a^*$  (*redness*), *hardness*, *cohesiveness*, *springiness*, *chewiness*, tetapi meningkatkan warna  $l^*$  (*lightness*) dan  $b^*$  (*yellowness*). Imbangan daging ayam broiler dan petelur afkir mengubah karakteristik mikrostruktur dan menunjukkan interaksi pada uji pH, daya ikat air, warna  $a^*$  (*redness*), warna  $l^*$  (*lightness*),  $b^*$  (*yellowness*), *hardness*, *springiness*, *chewiness*. Imbangan daging sapi dan ayam petelur afkir sebesar 75:25% menunjukkan hasil terbaik.

Kata kunci: Bakso, Daging sapi, Daging broiler, Daging ayam petelur afkir, kualitas fisik, Mikrostruktur

## **THE EFFECT OF SUBSTITUTION OF CULLED SPENT LAYERS MEAT AND BROILER MEAT ON THE PHYSICAL QUALITY AND MICROSTRUCTURE OF BEEF MEATBALLS**

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### ***ABSTRACT***

This study aims to determine the physical quality and microstructure of beef meatballs substituted with culled spent layers meat and broiler meat. The ingredients used in the production of the meatball mixture were beef, culled spent layers meat, broiler chicken meat, salt, garlic, pepper, STTP, tapioca flour, and ice cubes. The parameters observed in this study were physical quality tests (pH, water-holding capacity, color, and texture, which included hardness, cohesiveness, springiness, and chewiness) and microstructure tests. Physical qualities test data were analyzed using analysis of variance (ANOVA) with a completely randomized design (2 types of meat x 4 levels of composition: 100%, 25%, 50%, and 75%). Significant differences were further analyzed using Duncan's New Multiple Range Test. Microstructure test data were analyzed descriptively. The results showed that a 75:25% ratio of beef and culled spent layers meat decreased pH, water holding capacity, color  $a^*$  (redness), hardness, cohesiveness, springiness, chewiness, but increased color  $L^*$  (lightness) and  $b^*$  (yellowness). The meat balance of broiler and culled spent layers meat changed the microstructure characteristics and showed interaction in pH, water holding capacity, color  $a^*$  (redness), color  $L^*$  (lightness),  $b^*$  (yellowness), hardness, springiness, chewiness. The ratio of beef and culled spent laying of 75:25% showed the best results.

**Keywords:** Meatballs, Beef, Broiler meat, Culled spent laying meat, Physical quality, Microstructure.