

PENGARUH JENIS OTOT DAN LEVEL *FILLER* TERHADAP PERUBAHAN BERAT, KUALITAS FISIK DAN MIKROSTRUKTUR BAKSO SAPI

Abdan Ihsan Kurniawan
16/394435/PT/07108

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh jenis otot, level *filler* dan interaksi jenis otot dan level *filler* terhadap perubahan berat, kualitas fisik dan mikrostruktur bakso sapi. Bahan yang digunakan dalam pembuatan bakso sapi adalah daging sapi bagian otot *Longissimus dorsi* dan *Biceps femoris*, tepung tapioka, bawang putih, merica, garam, STTP, dan es batu. Perlakuan yang digunakan adalah tepung tapioka sebagai *filler* dengan 3 level yaitu P1 (10%), P2 (15%) dan P3 (20%). Variabel yang diteliti meliputi perubahan berat, kualitas fisik (pH, daya ikat air dan keempukan) dan mikrostruktur. Data hasil penelitian uji kualitas fisik dan berat dianalisis dengan analisis variansi acak lengkap (RAL) pola faktorial (2 jenis otot x 3 level *filler*) dan perbedaan yang nyata dilanjutkan dengan *Duncans New Multiple Rangers Test* (DMRT). Hasil analisis statistik menunjukkan bahwa jenis otot menurunkan perubahan berat, pH dan keempukan, dan meningkatkan daya ikat air bakso sapi, level *filler* meningkatkan perubahan berat, pH, daya ikat air dan menurunkan nilai keempukan, dan interaksi jenis otot dan level *filler* menurunkan perubahan berat, pH, keempukan dan meningkatkan daya ikat air. Hasil analisis deskriptif mikrostruktur bakso sapi menunjukkan bahwa jenis otot menyebabkan perubahan tekstur dan struktur semakin padat dan kompak, perubahan warna merah yang memudar dan keadaan rongga yang semakin banyak jumlahnya dan semakin kecil ukurannya, level *filler* menyebabkan perubahan tekstur dan struktur semakin padat dan kompak, perubahan warna merah yang memudar dan keadaan rongga yang semakin banyak jumlahnya dan semakin kecil ukurannya, dan interaksi jenis otot dan level *filler* menyebabkan perubahan tekstur dan struktur semakin padat dan kompak, perubahan warna merah yang memudar dan keadaan rongga yang semakin banyak jumlahnya dan semakin kecil ukurannya. Penggunaan jenis otot *Longissimus dorsi* dan level *filler* 20% menghasilkan bakso sapi dengan perubahan berat, kualitas fisik dan mikrostruktur terbaik.

Kata Kunci: Bakso Sapi, Perubahan berat, Kualitas fisik, Mikrostruktur.

EFFECT OF MUSCLE AND FILLER LEVELS ON CHANGES IN COOKING YIELD, PHYSICAL QUALITY AND MICROSTRUCTURE OF BEEF MEATBALLS

Abdan Ihsan Kurniawan
16/394435/PT/07108

ABSTRACT

This study aimed to understand the effect of muscle typed, levelled *filler* and the interaction of muscle typed and levelled *filler* on cooking yield, physical quality and microstructure of beef meatballs. The ingredients used in the manufacture of beef meatballs were beef from the *Longissimus dorsi* and *Biceps femoris* muscle, tapioca flour, garlic, pepper, salt, STTP, and ice cubes. The treatment used was tapioca flour as a filler with 3 levelled, named P1 (10%), P2 (15%) and P3 (20%). The variable studied included changed in cooking yield, physical quality (pH, water binding capacity and tenderness) and microstructure. The research data on physical quality and cooking yield were analyzed by means of the analysis of variance completely randomized design (CRD) factorial patterns (2 types of muscle x 3 levelled of filler) and significant differences followed by the Duncans New Multiple Rangers Test (DMRT). The resulted of statistical analysis showed that muscle typed reduced changed in cooking yield, pH and tenderness, and increased the binding capacity of beef meatball water, levelled *filler* increased changed in cooking yield, pH, water binding capacity and decreased tenderness, and the interaction of muscle typed and levelled *filler* decreased cooking yield, pH, tenderness and increased water binding capacity. The resulted of the descriptive analysis of the microstructure of beef meatballs show that the typed of muscle caused changed in texture and structured to be denser and more compacted, changed in red color fading and cavities are increased in number and smaller in size, levelled *filler* caused changed in texture and structured to became denser and more compacted, changed fading red color and the presence of cavities that are increased in number and smaller in size, and the interaction of muscle typed and levelled *filler* caused changed in texture and structured to became denser and more compacted, changed in red color that are faded and the condition of the cavities that are increased in number and got smaller in size. The used of muscle typed *Longissimus dorsi* and levelled *filler* 20% resulted in beef meatballs with the best changed in cooking yield, physical quality and microstructure.

Keywords: Meatballs, Change in weight, Physical quality, Microstructure.