

## **THE EFFECT OF STORAGE TIME AT THE REFRIGERATOR TEMPERATURE ON THE MICROBIOLOGICAL, PHYSICAL AND SENSORY QUALITIES MANILA DUCK MEATBALLS**

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### **ABSTRACT**

This research was conducted to study the effect of storage time at the refrigerator temperature on the microbiological, physical and sensory qualities Manila duck meatballs. The meatballs were made from Manila duck meat which has been separated from connective tissue, fat, bone and the skin, then it was minced with meat grinder. The spices were garlic, pepper, salt and flavor enhancer. All ingredients were mixed until homogenous, then they were formed into round shape and boiled until floating. The parameters observed were microbiological qualities, physical qualities (pH, water holding capacity, and tenderness), and sensory qualities (color, taste, texture, and acceptability). Microbiological and physical quality data were analyzed by one-way variance analysis of completely randomized design, and continued by Duncan's New Multiple Ranges Test, while the data of sensory quality was analyzed statistically by analysis non-parametric with hedonic Kruskal Wallis Test. The results showed that Manila duck meatballs stored at the refrigerator temperature for 0 (control), 3, 6 and 9 days had total plate count (1,22; 2,43; 21,93 and 87,66 x 10<sup>4</sup> cfu/g), pH (5,81; 5,58; 5,45 and 5,30), water holding capacity (61,17; 60,25; 59,69 and 53,42%), tenderness (14,74; 13,92; 13,69 and 11,51 mm), color (3,73; 4,27; 4,33 and 4,46), taste (2,33; 2,47; 2,33 and 2,53), texture (2,47; 2,80; 2,80 and 2,80) and acceptability (2,33; 2,33; 2,27 and 2,67). It could be concluded that storage time at the refrigerator temperature until nine days increased total plate count and also lowered physical and sensory qualities.

**Keywords:** Storage time, Microbiological qualities, Physical qualities, Sensory qualities, Meatballs.

**PENGARUH LAMA PENYIMPANAN PADA SUHU REFRIGERATOR TERHADAP KUALITAS MIKROBIOLOGIS, FISIK DAN SENSORIS BAKSO DAGING ITIK MANILA**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh lama penyimpanan pada suhu *refrigerator* terhadap kualitas mikrobiologis, fisik dan sensoris bakso daging itik Manila. Bakso dibuat dari daging itik Manila yang dipisahkan dari jaringan ikat, lemak, tulang dan kulit kemudian digiling dengan *meat grinder*. Bumbu-bumbu disiapkan berupa bawang putih, lada halus, garam dapur dan penyedap rasa. Semua bahan dicampur sampai adonan homogen, kemudian dibentuk bulat-bulat dan direbus sampai bakso mengapung. Parameter yang diamati meliputi kualitas mikrobiologis, kualitas fisik (pH, daya ikat air, dan keempukan) dan kualitas sensoris (warna, rasa, tekstur dan daya terima). Data kualitas mikrobiologis dan fisik dianalisis dengan analisis variansi pola searah dan dilanjutkan dengan uji *Duncan's New Multiple Ranges Test*, sedangkan data kualitas sensoris dianalisis dengan analisis non parametrik dengan uji hedonik *Kruskal wallis Test*. Hasil penelitian menunjukkan bahwa bakso daging itik Manila yang disimpan pada suhu *refrigerator* selama 0 (kontrol), 3, 6 dan 9 hari yaitu total mikrobiologis (1,22; 2,43; 21,93 dan  $87,66 \times 10^4$  cfu/g), pH (5,81; 5,58; 5,45 dan 5,30), daya ikat air (61,17; 60,25; 59,69 dan 53,42%), keempukan (14,74; 13,92; 13,69 dan 11,51 mm), warna (3,73; 4,27; 4,33 dan 4,46), rasa (2,33; 2,47; 2,33 dan 2,53), tekstur (2,47; 2,80; 2,80 dan 2,80) dan daya terima (2,33; 2,33; 2,27 dan 2,67). Berdasarkan hasil penelitian dapat disimpulkan bahwa lama penyimpanan pada suhu *refrigerator* selama sembilan hari meningkatkan total mikrobiologis, selain itu juga menurunkan kualitas fisik dan sensoris bakso.

Kata kunci: Lama penyimpanan, Kualitas mikrobiologis, Kualitas fisik, Kualitas sensoris, Bakso.