

KUALITAS FISIKO-KIMIA, MIKROBIA, DAN SENSORIS  
SOSIS FERMENTASI (*SUMMER SAUSAGE*)  
DAGING AYAM DENGAN PENAMBAHAN  
BAL (*L. FERMENTUM B17*)

INTISARI

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Penelitian ini bertujuan untuk mengevaluasi kualitas pangan sosis fermentasi (*summer sausage*) dengan penambahan bakteri asam laktat (*L. fermentum BR17*). Penelitian ini menggunakan metode eksperimental dengan rancangan acak lengkap pola faktorial dua faktor dengan tiga replikasi. Faktor pertama adalah tingkat penambahan starter bakteri (0%, 1%, 3%, dan 5% dari total adonan) dan faktor kedua adalah durasi fermentasi (6, 12, 18, 24 jam). Sampel selanjutnya diuji secara fisiko-kimia, mikrobia, dan sensoris. Parameter yang diamati adalah karakteristik fisiko-kimia (nilai pH, *water activity*, daya ikat air, warna objektif, analisis profil tekstur, kadar air, kadar abu, kadar protein, kadar lemak, dan kadar karbohidrat), mikrobia (jumlah bakteri asam laktat, dan bakteri patogen) dan sensoris (aroma, warna, rasa, tekstur, dan kesukaan keseluruhan (*overall*)). Analisis data kualitas fisiko-kimia dan mikrobia dengan Rancangan Acak Lengkap pola faktorial dua faktor dan apabila terdapat perbedaan yang signifikan antar hasil perlakuan, maka diuji lanjut menggunakan *Duncan's new Multiple Range Test* (DMRT). Data uji sensoris dianalisis dengan analisis non-parametrik melalui uji Hedonik Kruskal Wallis dan hasil yang berbeda nyata diuji lanjut menggunakan *Duncan's new Multiple Range Test* (DMRT). Penambahan starter *L. fermentum BR17* dan durasi fermentasi memberikan dampak yang signifikan terhadap kualitas fisiko-kimia produk. Nilai pH dan  $a_w$  menurun dengan peningkatan konsentrasi starter dan durasi fermentasi. Pada durasi fermentasi 18 sampai 24 jam, dengan konsentrasi starter 3% dan 5%,  $pH < 4,8$  dan  $a_w < 0,92$ . Kombinasi ini menciptakan kondisi yang shelf-stable. Mikrobia patogen dan pembusuk seperti *E. coli*, *salmonella*, *S. aureus* tidak ditemukan pada semua sampel. Uji kualitas sensoris menunjukkan kombinasi konsentrasi starter 3% dengan durasi fermentasi 12 jam menghasilkan produk yang sangat disukai panelis. Penambahan *Lactobacillus fermentum BR17* pada konsentrasi 3% dan durasi fermentasi 12 jam menghasilkan kualitas summer sausage dengan kualitas fisik, kimia, mikrobiologis, dan sensoris yang unggul.

Kata kunci: Kualitas, *Lactobacillus fermentum BR17*, Sosis fermentasi, Summer sausage, Semi-dry

PHYSICO-CHEMICAL, MICROBIAL, AND SENSORY QUALITY OF  
FERMENTED SAUSAGE (SUMMER SAUSAGE) MADE FROM  
CHICKEN MEAT WITH THE ADDITION OF  
LAB (*L. FERMENTUM* B17)

**ABSTRACT**

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This study aims to evaluate the quality and food safety of fermented sausage (summer sausage) with the addition of lactic acid bacteria (*L. fermentum* BR17). This study used an experimental method with a completely randomized design with a two-factor factorial pattern with three replications. The first factor is the level of bacterial starter addition (0%, 1%, 3%, and 5% of the total dough) and the second factor is the fermentation time (6, 12, 18, 24 hours). The samples were then tested physicochemically, microbially, and sensorically. The parameters observed were physicochemical characteristics (pH value, water activity, water binding capacity, objective color, texture profile analysis, water content, ash content, protein content, fat content, and carbohydrate content), microbially (number of lactic acid bacteria, and pathogenic bacteria) and sensory (aroma, color, taste, texture, and overall preference). Analysis of physicochemical and microbial quality data with a completely randomized design with a two-factor factorial pattern and if there was a significant difference between the treatment results, then it was further tested using Duncan's new Multiple Range Test (DMRT). Sensory test data were analyzed using non-parametric analysis through the Kruskal Wallis Hedonic test and significantly different results were further tested using Duncan's new Multiple Range Test (DMRT). The addition of *L. fermentum* BR17 starter and fermentation duration had a significant impact on the physicochemical quality of the product. The pH and  $a_w$  values decreased with increasing starter concentration and fermentation duration. At a fermentation duration of 18 to 24 hours, with starter concentrations of 3% and 5%, pH <4.8 and  $a_w$  <0.92. This combination created shelf-stable conditions. Pathogenic and spoilage microbes such as *E. coli*, *salmonella*, *S. aureus* were not found in all samples. Sensory quality tests showed that the combination of a starter concentration of 3% with a fermentation duration of 12 hours produced a product that was highly favored by panelists. The addition of *Lactobacillus fermentum* BR17 at a concentration of 3% and a fermentation duration of 12 hours produced summer sausage with superior physical, chemical, microbiological, and sensory qualities.

Kata kunci: Quality, *Lactobacillus fermentum* BR17, Fermented sausage, Summer sausage, Semi-dry