PENGARUH PENAMBAHAN TEH HIJAU (*Camelia sinensis*) DAN LAMA PENYIMPANAN TERHADAP ANGKA PEROKSIDA, TOTAL MIKROBA, KUALITAS FISIK DAN SENSORIS SOSIS ITIK AFKIR

INTISARI

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Penelitian ini bertujuan untuk mengetahui pengaruh penambahan teh hijau (*Camelia sinensis*) dan lama penyimpanan terhadap angka peroksida, total mikroba, kualitas fisik, kimia dan sensoris sosis itik afkir. Level penambahan teh hijau yakni 0; 0,4; 0,8; dan 1,2% dari berat adonan sosis. Lama penyimpanan yang dilakukan adalah 0; 7; dan 14 hari pada suhu 4±1ºC. Variabel yang diamati meliputi angka peroksida, total mikroba, kualitas fisik (pH, daya ikat air, tekstur dan warna), kualitas kimia (kadar air, protein dan lemak) serta kualitas sensoris (warna, rasa, aroma, tekstur dan daya terima). Analisis data menggunakan analisis variansi pola faktorial 4 (penambahan teh hijau) x 3 (lama penyimpanan). Apabila terdapat perbedaan yang nyata dilanjutkan dengan uji *Duncan's New Multiple Ranges Test* (DMRT). Data hasil uji sensoris dianalisis menggunakan analisis non parametrik dengan uji *Kruskal-Wallis.* Setiap perlakuan diulangi sebanyak empat kali. Penambahan teh hijau berpengaruh menurunkan angka peroksida, total mikroba, pH, *springiness, lightness* (L*), *redness* (a*) dan kualitas sensoris sosis berupa warna, aroma, rasa dan daya terima (P<0,01), berpengaruh meningkatkan daya ikat air, *hardness, gumminess, chewiness* sosis (P<0,01) dan *yellowness* (b*) (P<0,05) serta tidak berpengaruh terhadap kadar air, protein, lemak dan kualitas sensoris tekstur. Penambahan teh hijau 1,2% pada sosis dapat menurunkan angka peroksida hingga 5,19±0,57 meq/kg, total mikroba hingga 2,95±0,55 log cfu/g, pH hingga 6,56±0,02 serta masih dapat diterima secara sensoris dengan skor 3,40. Lama penyimpanan berpengaruh meningkatkan angka peroksida, total mikroba, *hardness, gumminess* dan *chewiness* (P<0,01), berpengaruh menurunkan pH, daya ikat air, *springiness, lightness* (L*), *redness* (a*), kadar protein dan daya terima panelis (P<0,01) serta tidak berpengaruh terhadap *yellowness* (b*), kadar air, lemak dan kualitas sensoris berupa warna, aroma dan tekstur. Lama penyimpanan 14 hari pada sosis dapat meningkatkan angka peroksida hingga 7,90±2,56 meq/kg serta total mikroba hingga 4,17±0,84 log cfu/g dan menurunkan pH hingga 6,56±0,02. Interaksi penambahan teh hijau dan lama penyimpanan mempengaruhi angka peroksida, total mikroba, pH, daya ikat air, *hardness*, *lightness* (L*) dan *redness* (a*) secara sangat nyata (P<0,01). Berdasarkan hasil penelitian dapat disimpulkan bahwa sosis terbaik adalah sosis dengan penambahan teh hijau 1,2% dikarenakan selama 14 hari penyimpanan memiliki hasil terbaik dengan angka peroksida 5,69±0,11 meq/kg, total mikroba 3,69±0,03 log cfu/g, pH 6,56±0,02 dan masih dapat diterima secara sensoris.

Kata kunci: Teh hijau, Sosis itik afkir, Lama penyimpanan, Angka peroksida, Total mikroba

THE EFFECT OF GREEN TEA (*Camelia sinensis*) AND STORAGE TIME ON PEROXIDE VALUE, TOTAL MICROBES, PHYSICAL, CHEMICAL, AND SENSORY QUALITIES OF SPENT DUCK SAUSAGE

ABSTRACT

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This study aims to determine the effect of green tea (*Camelia sinensis*) addition and storage time on peroxide value, total microbes, physical, chemical and sensory qualities of spent duck sausage. The levels of green tea addition were 0; 0.4; 0.8; and 1.2% of the total sausage dough. While the storage time were 0; 7; and 14 days at 4±1ºC. The observed variables including peroxide value, total microbes, physical quality (pH, water holding capacity, texture, and color), chemical quality (moisture, protein, and fat contents), and sensory quality (color, taste, aroma, texture, and acceptance). The data were analyzed by using the analysis of factorial design with 4 different levels of green tea and 3 different storage times, then continued by using Duncan's New Multiple Ranges Test (DMRT). Sensory quality data were analyzed by using non-parametric analysis with the Kruskal-Wallis test. Each treatment had four replications. The addition of green tea decreased peroxide value, total microbes, pH, springiness value, lightness (L*), redness (a*), and the sensory quality of sausages including color, aroma, taste, and acceptance ($P<0.01$). Meanwhile it increased water holding capacity, hardness, gumminess, chewiness ($P<0.01$) and yellowness (b*) ($P<0.05$). However, it did not influence moisture, protein, fat contents, and sensory quality (texture). The addition of 1.2% green tea to sausages decreased peroxide value up to 5.19±0.57 meq/kg, total microbes up to 2.95±0.55 log cfu/g, pH up to 6.56±0.02 but still had the acceptance of 3.40. The storage time increased the peroxide value, total microbes, hardness, gumminess, and chewiness value ($P<0.01$). Meanwhile it decreased pH, water holding capacity, springiness value, lightness (L*), redness (a*), protein content and overall acceptance ($P<0.01$). However, it did not influence the yellowness (b*), moisture content, fat content and sensory quality (color, aroma and texture) ($P>0.05$). The 14-day storage time increased the peroxide value up to 7.90±2.56 meq/kg, total microbes up to 4.17±0.84 log cfu/g and pH to 6.56±0.02. The interaction of green tea level and storage time affects the peroxide value, total microbes, pH, water holding capacity, hardness value, lightness (L*) and redness (a*) ($P<0.01$). Based on this study, it can be concluded that the best treatment was sausage with the 1.2% of green tea in 14 days of storage with a peroxide value of 5.69±0.11 meq/kg, total microbes of 3.69±0.03 log cfu/g and pH of 6.56±0.02 while still having good acceptance.

Keywords: Green tea, Peroxide value, Spent duck sausage, Storage time, Total microbes