

PENGARUH DURASI PRESTO DAN PENYIMPANAN TERHADAP KUALITAS KIMIA DAN FISIK CEKER BACEM

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh durasi presto dan lama penyimpanan terhadap kualitas kimia dan fisik ceker bacem. Bahan yang digunakan pada penelitian ini yaitu ceker ayam, gula jawa, bawang putih, bawang merah, asam jawa, laos, daun salam, kecap, garam, royco, ketumbar, gula pasir, dan minyak. Perlakuan durasi presto yang digunakan yaitu 0, 15, 30, dan 45 menit. Penyimpanan ceker bacem dilakukan pada minggu 0, 2, 4, 6, dan 8 dengan rangkap tiga untuk setiap sampel. Parameter yang diuji adalah kualitas kimia (air, protein, lemak, dan kolagen) dan kualitas fisik (pH, *cooking loss*, keempukan, dan kekerasan tulang). Kualitas kimia diuji menggunakan metode Osborne dengan alat NIRS (*Near Infrared Spectroscopy*) *food scan*. Nilai pH diuji menggunakan pH meter. *Cooking loss* diuji dengan penimbangan sampel sebelum dan sesudah pemasakan. Keempukan diuji menggunakan penetrometer. Kekerasan tulang diuji menggunakan alat *Texture Analyzer*. Data kualitas kimia dan fisik dianalisis menggunakan Rancangan Acak Lengkap (RAL) pola faktorial dan apabila data yang dihasilkan signifikan akan diuji lanjut menggunakan uji *Duncan's Multiple Range Test* (DMRT). Hasil analisis statistik menunjukkan bahwa durasi presto dan penyimpanan yang berbeda berpengaruh nyata ($P < 0,05$) terhadap kualitas kimia dan fisik ceker bacem.

Berdasarkan kualitas kimia durasi presto 15 menit memiliki kadar air paling rendah dan penurunan kadar kolagen paling rendah. Durasi presto 30 menit menghasilkan persentase kadar protein paling tinggi dan kadar lemak paling rendah. Berdasarkan kualitas fisik, durasi presto 15 menit memiliki nilai *cooking loss* paling rendah. Durasi presto 30 menit dan 45 menit memiliki nilai pH paling baik karena berada pada kisaran pH pangan yang baik. Durasi presto 30 menit menghasilkan nilai keempukan paling tinggi. Durasi presto 45 menit memiliki nilai kekerasan tulang paling tinggi. Kualitas kimia kadar protein terhadap penyimpanan minggu ke-2 memiliki nilai paling tinggi. Kadar lemak pada penyimpanan minggu ke-4 memiliki nilai paling tinggi. Kadar air pada minggu ke-2 memiliki nilai paling rendah. Kadar kolagen pada penyimpanan minggu ke-2 memiliki nilai paling rendah. Hasil dapat disimpulkan bahwa durasi presto ceker bacem dengan kualitas kimia dan fisik yang terbaik yaitu 30 menit. Lama penyimpanan semakin lama dapat menurunkan kualitas kimia dan fisik ceker bacem. Penyimpanan dengan kualitas kimia dan fisik yang baik yaitu hingga minggu ke-2. Terdapat interaksi antara durasi presto dengan penyimpanan produk ceker bacem terhadap kualitas kimia dan fisik yaitu

pada durasi presto 30 menit penyimpanan minggu ke-4 karena penurunan kualitas kimia seperti kadar protein yang tidak tinggi serta kualitas fisik seperti nilai pH yang berada pada kisaran pH pangan yang baik.

Kata kunci: Ceker bacem, Presto, Penyimpanan, Kualitas kimia, dan Kualitas fisik.

EFFECT OF PRESSURE COOKING DURATION AND STORAGE ON THE CHEMICAL QUALITY AND PHYSICAL QUALITY OF BACEM CHICKEN FEET

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ABSTRACT

This study aimed to determine the effect of pressure cooking and storage duration on the chemical and physical qualities of “bacem” chicken feet. The materials used in this study were chicken feet, palm sugar, shallot, garlic, tamarind, laos, bay leaf, soy sauce, salt, royco, coriander, sugar, and oil. Pressure cooking duration treatment used were 0, 15, 30, and 45 minutes. Bacem chicken feet stored at 0, 2, 4, 6, dan 8 week with three duplication. The parameter tested were chemical quality (water, protein, fat, and collagen) and physical quality (pH, cooking loss, tenderness, and bone hardness). Chemical qualities were analyzed using Osborne method with NIRS (*Near Infrared Spectroscopy*) *food scan*. Value of pH tested using pH meter. Cooking loss was tested through sample weighing before and after cooking. Tenderness was tested using penetrometer. Texture analyzer was used to observe bone hardness. Data of chemical and physical qualities were analyzed using Completely Randomized Design of factorial and if the data were significant different will be further tested using *Duncan's Multiple Range Test* (DMRT). The results of statistical analysis showed that different duration of pressure cooking and storage had a significant effect ($P < 0,05$) on the chemical and physical quality of bacem chicken feet.

Based on the chemical quality, the duration of the pressure cooker was 15 minutes having the lowest water and the lowest reduction in collagen. Pressure cooking for 30 minutes resulted the highest percentage of protein and the lowest fat. Based on the physical quality, the duration of the 15 minutes pressure cooking has the lowest cooking loss value. Pressure cooking of 30 minutes and 45 minutes duration have the best pH value because it is in a good food pH range. Pressure cooking duration of 30 minutes has the highest tenderness value. 45 minutes pressure cooking has the highest bone hardness value. The chemical quality of protein on the 2nd week of storage had the highest value. The fat in the 4th week of storage had the highest value. The water in the 2nd week has the lowest value. The level of collagen in the 2nd week of storage has the lowest value. The results can be concluded that the duration of presto bacem chicken feet with the best chemical and physical quality is 30 minutes. The longer storage time can reduce the chemical and physical quality of the bacem chicken feet. Storage with good chemical and physical quality is up to the 2nd week. There is an interaction between the duration of presto and the storage of bacem chicken feet products on the

chemical and physical quality, namely at the duration of presto 30 minutes of storage in the 4th week due to a decrease in chemical quality such as protein levels that are not high and physical qualities such as pH values that are in the good food pH range.

Keyword: Bacem chicken feet, Pressure cooking, Storage, Chemical quality, and Physical quality.