

PENGARUH METODE PENDINGINAN PADA PROSES *THERMAL SHOCK* DAN PENYIMPANAN SUHU RUANG TERHADAP KUALITAS FISIK, MIKROBIOLOGI DAN SENSORIS SATE AMBAL

Isnaton Widyastuti

15/378415/PT/06906

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan metode pendinginan pada proses *thermal shock* terhadap kualitas fisik, mikrobiologi dan sensoris sate ambal pada penyimpanan suhu ruang. Penelitian ini menggunakan analisis Rancangan Acak Lengkap Pola Faktorial, dengan perlakuan metode pendinginan pada proses *thermal shock* yaitu kontrol, refrigerator 6°C, air es 3°C, freezer -24°C dengan waktu pendinginan masing-masing selama 45 menit dan waktu penyimpanan selama 0, 2, 4, 6, dan 8 minggu. Parameter yang diuji adalah pH, daya ikat air, keempukan, TPC (*Total Plate Count*) serta sensoris (warna, aroma, tekstur dan daya terima). Perbedaan rerata data variabel yang diamati akibat perlakuan diuji dengan *Duncan's New Multiple Ranges Test*. Kualitas sensoris dianalisis dengan uji Friedman. Hasil penelitian menunjukkan bahwa metode pendinginan pada proses *thermal shock* memberikan pengaruh yang nyata ($P < 0,05$) terhadap pH, mikrobiologi, warna, aroma, tekstur dan daya terima. Perlakuan penyimpanan memberikan pengaruh yang nyata ($P < 0,05$) terhadap pH, daya ikat air, keempukan, mikrobiologi, aroma dan daya terima. Hasil terbaik terdapat pada perlakuan pendinginan air es 3°C dengan nilai pH $5,64 \pm 0,34$, DIA $32,91 \pm 4,78$, keempukan $3,41 \pm 0,74$, jumlah mikrobia 9×10^3 koloni/g, nilai daya terima sensoris $3,67 \pm 0,58$. Berdasarkan hasil yang diperoleh dapat disimpulkan bahwa metode pendinginan pada proses *thermal shock* meningkatkan kualitas fisik mikrobiologi serta sensoris sate ambal. Lama penyimpanan menurunkan kualitas fisik, mikrobiologi serta sensoris sate ambal. Terdapat interaksi antara kedua perlakuan yaitu semakin rendah suhu pendinginan dan semakin lama waktu penyimpanan menurunkan kualitas fisik, mikrobiologi serta sensoris sate ambal.

Kata kunci : Sate ambal, Metode pendinginan, *Thermal shock*, Kualitas fisik, Mikrobiologi, Sensoris

**EFFECT OF COOLING METHODE IN THERMAL SHOCK PROCESS
AND ROOM TEMPERATURE STORAGE ON PHYSICAL,
MICROBIOLOGICAL AND SENSORY QUALITY OF SATE AMBAL**

**Isnaton Widyastuti
15/378415/PT/06906**

ABSTRACT

The study aim to reveal the effect of differences in cooling methode in thermal shock process on physical, microbiological and sensory quality of sate ambal in room temperature storage. The reseach analysis used Completely Randomized Design with factorial pattern, with the treatment of cooling methode on thermal shock process were control, refrigeration at 6°C, ace water at 3°C and freezer at -24°C in 45 minute and the treatment of storage time used 0, 2,4,6, and 8 weeks. The observed variables were pH, water holding capacity, tenderness, microbiological with TPC (Total Plate Count) test and sensory quality (color, aroma, texture and acceptance). The differences in average results of variable observed due to the treatment were analysed with Duncan's New Multiple Ranges Test. Sensory quality analysed with Friedman test. The result showed that the cooling methode in thermal shock process was significant ($P < 0,05$) on pH, tenderness, microbiological, color, aroma, texture and acceptance. The storage variable was significant ($P < 0,05$) on pH, water holding capacity, tenderness, microbiological, aroma and acceptance. The best result showed on treatment of cooling methode with ace water 3°C with pH value was $5,64 \pm 0,34$, DIA $32,91 \pm 4,78$, tenderness value was $3,41 \pm 0,74$, total plate count was 9×10^3 koloni/g, acceptance sensory was $3,67 \pm 0,58$. Based on the result obtained it can be concluded that the cooling method on thermal shock process improves physical, microbiological, and sensory quality of sate ambal. Storage time decreases physical, microbiological, and sensory quality of sate ambal. There is an interaction between the two treatments was the lower of the cooling method and the longer of the storage time decreases the physical, microbiological, and sensory quality of sate ambal.

Keyword : Sate ambal, Cooling methode, Thermal shock, Physical quality, Microbiology, Sensory