

## **“PENGARUH KONSENTRASI PERASAN JERUK LEMON (*Citrus limon L.*) DAN LAMA MARINASI TERHADAP KUALITAS FISIK DAN MIKROSTRUKTUR STEAK DAGING SAPI”**

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### **INTISARI**

*Steak* merupakan olahan daging yang dimasak dengan cara dipanggang. Kualitas *steak* dipengaruhi oleh metode pengolahan yang dilakukan. Salah satu metoda yang dilakukan dengan penggunaan bahan marinasi pada daging. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi dan lama marinasi dengan jeruk lemon (*Citrus limon L.*) terhadap kualitas fisik dan mikrostruktur *steak* daging sapi. Kualitas fisik yang diamati meliputi pH, daya ikat air (DIA), *cooking loss*, *hardness*, *cohesiveness*, *gumminess*, dan kualitas mikrostruktur. Penelitian dilakukan dengan melakukan perendaman daging sapi dengan air jeruk lemon selama 8, 16, dan 24 jam dan disimpan pada suhu refrigerator dengan perlakuan konsentrasi air jeruk lemon 0%, 10%, dan 20%. Larutan marinasi yang digunakan sebanyak 10% dari berat daging (v/w). Hasil pengujian kualitas fisik yang diperoleh akan dianalisis menggunakan Rancangan Acak Lengkap (RAL) dengan pola faktorial 3x3 dengan 3 kali pengulangan. Apabila terdapat pengaruh yang nyata maka dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT). Mikrostruktur *steak* daging sapi dilihat menggunakan mikroskop dan dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa marinasi jeruk lemon dengan konsentrasi yang berbeda menurunkan nilai pH, daya ikat air, *hardness*, *cohesiveness* dan meningkatkan nilai *cooking loss*, *gumminess* serta menurunkan kualitas mikrostruktur *steak* daging sapi. Lama marinasi jeruk lemon yang berbeda menurunkan nilai pH, daya ikat air, *hardness*, *cohesiveness*, *gumminess* dan meningkatkan nilai *cooking loss*, serta menurunkan kualitas mikrostruktur *steak* daging sapi. Interaksi terbaik marinasi jeruk lemon dengan konsentrasi 10% dan lama marinasi 16 jam.

**Kata kunci:** Daging Sapi, Jeruk Lemon (*Citrus limon L.*), Kualitas Fisik, Kualitas Mikrostruktur, Marinasi, *Steak*.

## **“THE EFFECT OF LEMON JUICE (*Citrus limon* L.) CONCENTRATION AND MARINATION DURATION ON THE PHYSICAL QUALITIES AND MICROSTRUCTURE OF BEEF STEAK”**

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### **ABSTRACT**

*Steak* is a meat dish that is cooked by grilling. The quality of *steak* is influenced by the processing method used. One of the methods involves using marinade on the meat. This research aims to determine the effect of concentration and duration of marination with lemon juice (*Citrus limon* L.) on the physical quality and microstructure of beef *steak*. The observed physical qualities include pH, water holding capacity (WHC), cooking loss, hardness, cohesiveness, gumminess, and microstructure quality. The research immerses beef in lemon juice for 8, 16, and 24 hours and stores it at refrigerator temperature with lemon juice concentrations of 0%, 10%, and 20%. The marinade solution used is 10% of the meat weight (v/w). The physical quality test results are analyzed using a Completely Randomized Design (CRD) with a 3x3 factorial pattern and 3 repetitions. If there is a significant effect, the analysis continues with Duncan's New Multiple Range Test (DMRT). The microstructure of the beef *steak* is observed using a microscope and analyzed descriptively. The result showed that lemon marinade with different concentrations decreased the pH value, water holding capacity, hardness, cohesiveness, and increased cooking loss, gumminess, and decreased the microstructural quality of the beef steak. Different marination times of lemon marinade decreased the pH value, water holding capacity, hardness, cohesiveness, gumminess, and increased cooking loss, as well as decreased the microstructural quality of the beef steak. The best interaction of lemon marinade occurred at a concentration of 10% and a marination time of 16 hours.

**Keywords:** Beef, Lemon Juice (*Citrus limon* L.), Marination, Microstructure Quality, Physical Quality, Steak