

PENGARUH KONSENTRASI DAN LAMA MARINASI PERASAN AIR JERUK LEMON (*Citrus limon* L.) TERHADAP KUALITAS KIMIA, SENSORIS, DAN KEEMPUKAN STEAK DAGING SAPI

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi dan lama marinasi jeruk lemon (*Citrus limon* L.) terhadap kualitas kimia, sensoris, dan keempukan *steak* daging sapi. Variabel yang diamati meliputi sifat kimia (kadar air, kadar protein, kadar lemak, dan kadar kolagen), sifat sensoris (warna, rasa, aroma, tekstur, dan daya terima), dan keempukan. Penelitian menggunakan daging sapi bagian *sirloin* dengan berat 200 g setiap perlakuan. Level perlakuan yang diperlakukan dengan konsentrasi jeruk lemon berbeda yakni 0, 10, dan 20%, serta lama marinasi 8, 16, dan 24 jam pada suhu *refrigerator*. Larutan marinasi yang digunakan untuk merendam sebanyak 10% dari berat daging (*v/w*). Data yang diperoleh dianalisis dengan menggunakan analisis variansi pola faktorial 3x3 dengan 3 kali pengulangan dan dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT) pada variabel yang berbeda nyata. Data yang diperoleh pada uji sensoris dianalisis dengan uji statistik non parametrik dari *Kruskal Wellis Test*. Hasil penelitian menunjukkan bahwa konsentrasi dan lama marinasi berpengaruh ($P < 0,01$) terhadap kadar air, kadar lemak, kadar kolagen, dan keempukan, serta tidak berpengaruh nyata ($P > 0,05$) pada kadar protein. Interaksi antara konsentrasi dan lama marinasi berpengaruh ($P < 0,01$) terhadap kualitas kimia dan keempukan. Pada uji sensoris, perbedaan konsentrasi berpengaruh ($P < 0,05$) terhadap aroma serta lama marinasi berpengaruh ($P < 0,05$) terhadap rasa *steak* daging sapi. Interaksi antara konsentrasi dan lama marinasi tidak berpengaruh ($P > 0,05$) terhadap kualitas sensoris. Kombinasi terbaik marinasi jeruk lemon terhadap *steak* daging sapi adalah konsentrasi 10% dan lama marinasi 16 jam.

(Kata kunci : *Steak*, Jeruk lemon (*Citrus limon* L.), Daging sapi, Marinasi, Kualitas kimia, Kualitas sensoris, Keempukan)

THE EFFECT OF MARINADE CONCENTRATION AND DURATION OF LEMON JUICE (*Citrus limon* L.) ON THE CHEMICAL, SENSORY, AND TENDERNESS QUALITY OF BEEF STEAK

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ABSTRACT

This research aims to determine the effect of lemon (*Citrus limon* L.) concentration and marinade duration on the chemical, sensory, and tenderness qualities of beef steak. The observed variables include chemical properties (moisture content, protein content, fat content, and collagen content), sensory properties (color, taste, aroma, texture, and acceptability), and tenderness. The study uses 200 g of sirloin beef for each treatment. The treatment levels included different lemon concentrations of 0, 10, and 20%, and marination durations of 8, 16, and 24 hours at refrigerator temperature. The marination solution used was 10% of the beef's weight (v/w). The obtained data were analyzed using a factorial 3x3 variance analysis with three replications, followed by Duncan's New Multiple Range Test (DMRT) for significantly different variables. The data obtained from the sensory tests were analyzed using the non-parametric Kruskal-Wallis Test. The results showed that both the concentration and marination duration had significant effects ($P < 0.01$) on moisture content, fat content, collagen content, and tenderness, but had no significant effect ($P > 0.05$) on protein content. The interaction between concentration and marination duration significantly affected ($P < 0.01$) the chemical quality and tenderness. In the sensory tests, differences in concentration significantly affected ($P < 0.05$) the aroma, and marination duration significantly affected ($P < 0.05$) the taste of the beef steak. The interaction between concentration and marination duration did not significantly affect ($P > 0.05$) sensory quality. The best combination of lemon marination for beef steak was a 10% concentration and 16 hours of marination.

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