

**PENGARUH INJEKSI MINYAK ALMOND (*Prunus dulcis*)
TERHADAP KUALITAS FISIK DAN SENSORIS
STEAK DAGING SAPI MELTIQUE**

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh injeksi minyak nabati berupa minyak almond pada proses pembuatan daging *meltique* dengan komposisi emulsi yang berbeda terhadap kualitas fisik (warna, nilai pH, daya ikat air, susut masak, dan *texture profile analysis*) serta kualitas sensoris (warna, aroma, rasa, tekstur, dan daya terima) pada *steak* daging *meltique*. Penelitian ini menggunakan daging sapi lokal diperoleh dari sapi dengan bangsa Peranakan Ongole (PO). Bagian daging sapi yang digunakan yaitu pada bagian *sirloin* sebanyak 3 potong masing-masing 150 gram dengan perlakuan jumlah emulsi yang berbeda. Digunakan perlakuan kontrol positif (K+) yaitu daging *meltique* komersial dan kontrol negatif (K-) yaitu daging sapi Peranakan Ongole tanpa injeksi sebagai sampel perbandingan. Penelitian dilakukan pada bulan September 2024 hingga Januari 2025 di Laboratorium Ilmu dan Teknologi Daging Gedung H1 lantai 1 dan Laboratorium Pusat Penelitian Ternak Tropik, Gedung *Animal Science Learning Center* (ASLC) Fakultas Peternakan Universitas Gadjah Mada, Daerah Istimewa Yogyakarta. Pengujian kualitas fisik yang diperoleh dianalisis menggunakan analisis statistik *One Way Analysis of Variance* (ANOVA) dengan 4 kali pengulangan dan data pengujian kualitas sensoris dianalisis menggunakan metode *Kruskal-Wallis*. Apabila terdapat perbedaan yang signifikan dan pengaruh yang nyata, maka dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT). Keduanya diolah melalui bantuan aplikasi *software Statistical Program for Social Science* (SPSS). Hasil penelitian menunjukkan bahwa injeksi lemak nabati dengan menggunakan minyak almond pada daging sapi lokal berjenis PO berpengaruh nyata dapat meningkatkan kualitas fisik seperti warna (*lightness* dan *yellowness*), nilai pH, daya ikat air, susut masak, *texture profile analysis* (*hardness*, *springiness*, *cohesiveness*, *chewiness*, dan *gumminess*) serta berpengaruh nyata dapat meningkatkan kualitas sensoris seperti warna, rasa, dan tekstur *steak* daging *meltique*. Perbandingan konsentrasi emulsi minyak almond pada daging sapi lokal berjenis PO yang terbaik adalah konsentrasi perbandingan emulsi 21:100:10W (P3).

Kata kunci: Daging *Meltique*, Injeksi, Kualitas Fisik, Kualitas Sensoris, Minyak Almond

THE EFFECT OF ALMOND OIL (*Prunus dulcis*) INJECTION ON THE PHYSICAL AND SENSORY QUALITY OF MELTIQUE BEEF STEAK

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ABSTRACT

This study aims to determine the effects of injecting vegetable oil variations in the form of almond oil during the production process of meltique beef with different emulsion compositions on its physical quality (color, pH value, water holding capacity, cooking loss, and texture profile analysis) and sensory quality (color, aroma, taste, texture, and acceptability) of meltique beef steak. The research uses local beef from Peranakan Ongole (PO) cattle. The beef used comes from the sirloin cuts section, with three pieces of 150 gram each, subjected to different emulsion treatments. A positive control (K+) which is commercial meltique beef, and a negative control (K-) which is untreated Peranakan Ongole beef, are used as comparison samples. The study is conducted from September 2024 to January 2025 at the Meat Science and Technology Laboratory, H1 Building, 1st floor, and the Tropical Livestock Research Center Laboratory, Animal Science Learning Center (ASLC) Building, Faculty of Animal Science, Universitas Gadjah Mada, Yogyakarta Special Region. The obtained physical quality data will be analyzed using One-Way Analysis of Variance (ANOVA) with four repetitions, while sensory quality data will be analyzed using the Kruskal-Wallis method. If significant differences and notable effects are found, further analysis will be conducted using Duncan's New Multiple Range Test (DMRT). Both analyses will be processed using the Statistical Program for Social Science (SPSS) software. Based on the research, the injection of vegetable fat using almond oil into local PO beef has a significant effect on improving physical quality, including color (lightness and yellowness), pH value, water-holding capacity, cooking loss, and texture profile analysis (hardness, springiness, cohesiveness, chewiness, and gumminess). The sensory quality also has a significant effect such as the color, taste, and texture of meltique beef steak. The best concentration comparison of almond oil emulsion on local beef of the PO breed is the emulsion ratio of 2l:100:10W (P3).

Keywords: Almond Oil, Injection, Meltique Beef, Physical Quality, Sensory Quality