

## ABSTRAK

Nindita, Marsella. 2013. **Pengaruh Konsentrasi Perendaman Ekstrak Daun Jati (*Tectona grandis* Linn. F.) Metode *Microwave Assisted Extraction* Terhadap Kadar Total Protein Daging Sapi Has Dalam.** Tugas Akhir, Program Studi Ilmu Gizi Fakultas Kedokteran Universitas Brawijaya. Pembimbing : (1) Dr. dr. Endang Sriwahyuni, MS. (2) Titis Sari Kusuma S.Gz.

Daun jati (*Tectona grandis* Linn. F.) diketahui memiliki senyawa kimia yang dapat digunakan sebagai antibakteri. Salah satu senyawa tersebut adalah Flavonoid yang dapat diperoleh dengan cara ekstraksi metode *Microwave Assisted Extraction*. Ekstraksi ini sangat berguna jika diaplikasikan pada daging sapi yang kaya akan zat gizi sehingga dikenal sebagai *perisable food*. Kandungan flavonoidnya dapat mempertahankan pigmen merah pada daging sapi (oxymyoglobin) yang merupakan bentuk oksidasi dari myoglobin (zat besi dan protein globulin). Daging sapi diketahui memiliki zat gizi protein yang jumlahnya terbesar kedua setelah air dan sebagiannya bersifat larut dalam air. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi perendaman ekstrak daun jati (*Tectona grandis* Linn. F.) metode *Microwave Assisted Extraction* terhadap kadar total protein daging sapi has dalam. Penelitian eksperimental dengan rancangan *post test only control grup design* ini menggunakan 6 perlakuan yaitu konsentrasi 0%, 20%, 40%, 60%, 80% dan 100% serta replikasi sebanyak 4 kali. Hasil analisis statistik metode *Kruskal Wallis* menunjukkan kadar total protein berbeda signifikan ( $p < 0,05$ ) pada berbagai perlakuan. Hasil uji korelasi metode *Spearman* menunjukkan hubungan signifikan ( $p < 0,05$ ) dengan arah positif ( $r = 0,908$ ). Kesimpulan penelitian ini adalah semakin tinggi konsentrasi ekstrak daun jati maka semakin dapat mempertahankan kadar total protein dengan perlakuan terbaik pada konsentrasi 100% yang dapat mempertahankan 98,7% kadar total protein. Saran penelitian ini adalah perlunya penelitian lanjutan tentang mutu organoleptik dan aktivitas antibakteri pada daging sapi yang diberi perlakuan perendaman pada ekstrak daun jati.

Kata Kunci: Ekstrak Daun Jati, *Microwave Assisted Extraction*, Protein, Daging Sapi Has Dalam

## ABSTRACT

Nindita, Marsella. 2013. **The Influence of Immersion Concentration of Teak Leaf Extract (*Tectona grandis* Linn. F.) with Microwave Assited Extraction Methods to The Total Protein content in Beef Tenderloin.** Finnal Assignment, Nutrition program, Medical Faculty, Brawijaya University. Supervisors : (1) Dr. dr. Endang Sriwahyuni, MS. (2) Titis Sari Kusuma S.Gz.

Teak leaf (*Tectona grandis* Linn. F.) has chemical compound which can be used as an antibacterial agent. The one of compound is Flavonoid which can be got from *Microwave Assisted Extraction* Methods. This extraction is very useful when applied to beef that is rich in nutrition so is known as *perisable food*. Flavonoid content can mantain red pigmen in beef (oxymyoglobin) which is oxidation form of myoglobin (iron dan globulin protein). Beef nutrient is known to has protein which is second largest number after water and is partially soluble in water. This study aimed to determine the influence of immersion concentration of teak leaf extract (*Tectona grandis* Linn. F.) *Microwave Assisted Extraction* methods of the total protein content of beef tenderloin. Experimental research with *post test only control grup design* uses 6 treatments which are the concentration of 0%, 20%, 40%, 60%, 80% and 100% and replicate as much as 4 times. Statistical analysis result using Kruskal-Wallis methods showed significantly different levels of total protein ( $p < 0.05$ ) in the various treatment. Result of correlation test using *Spearman* methods showed a significant relationship ( $p < 0.05$ ) with the positive direction ( $r = 0,908$ ). The conclusion of this study is the higher concentration of teak leaf extract can sustain the higher level of total protein with the best treatment at a concentration of 100%, which can maintain 98.7% of total protein content. Suggestion of this research is continued research on the organoleptic quality and antibacterial activity of the beef immersion in teak leaf extract.

Keyword: Teak Leaf Extract, *Microwave Assisted Extraction*, Protein, Beef Tenderloin