

## RINGKASAN

Buah carica merupakan buah khas dataran tinggi yang menjadi komoditi unggulan daerah Dieng, Wonosobo. Kulit buah carica mengandung papain, salah satu enzim protease yang dapat memecah protein pada serat-serat otot (*muscle fiber*) daging menjadi lebih sederhana seperti peptida serta asam amino. Aktivitas enzim papain mampu meningkatkan keempukan daging. Penelitian ini bertujuan untuk (1) mengetahui pengaruh proporsi serbuk kulit buah carica terhadap sifat fisikokimia daging sapi (2) mengetahui pengaruh lama penyalutan terhadap sifat fisikokimia daging sapi (3) mengetahui pengaruh interaksi antara proporsi serbuk kulit buah carica dengan lama penyalutan terhadap sifat fisikokimia daging sapi (4) menetapkan kombinasi perlakuan terbaik antara proporsi serbuk kulit buah carica dengan waktu penyalutan melalui uji indeks efektivitas.

Penelitian dilakukan di Laboratorium Teknologi Pertanian, Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto. Penelitian dilaksanakan dari bulan Oktober 2018 sampai Juli 2019. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK). Faktor yang diteliti adalah proporsi serbuk kulit buah carica (0%, 0,5%, 0,75%, dan 1%) dan lama inkubasi (30 menit, 60 menit, 90 menit, dan 120 menit). Dari perlakuan tersebut diulang sebanyak 2 kali ulangan sehingga diperoleh 32 unit percobaan. Variabel yang diamati meliputi kadar air, kadar abu, kadar protein terlarut, tingkat keempukan, dan variabel sensori meliputi warna, *aftertaste*, keempukan, dan kesukaan.

Hasil penelitian menunjukkan bahwa 1) proporsi serbuk kulit carica dari 0% hingga 1% berpengaruh nyata pada kadar abu, kadar protein terlarut, dan tingkat keempukan. Peningkatan proporsi serbuk kulit carica menyebabkan peningkatan kadar abu, kadar protein terlarut, dan tingkat keempukan, masing-masing sebesar 14,23%, 21% dan 79,24%. 2) waktu penyalutan dari 30 menit hingga 120 menit berpengaruh nyata pada kadar protein terlarut dan tingkat keempukan. Lama waktu penyalutan menyebabkan peningkatan kadar protein terlarut dan keempukan daging, masing-masing sebesar 7,25% dan 26,04%. 3) interaksi antara proporsi serbuk kulit buah carica dengan waktu penyalutan berpengaruh nyata pada tingkat keempukan. 4) kombinasi perlakuan terbaik berdasarkan variabel tingkat keempukan, kadar protein terlarut, kadar abu, dan kadar air yaitu 1% serbuk kulit buah carica dan penyalutan selama 120 menit. Dibandingkan dengan kontrol peningkatan protein terlarut daging sapi dengan perlakuan terbaik sebesar 26,48% (dari 56,27% bk menjadi 71,17% bk) dan peningkatan keempukan daging sapi dengan perlakuan terbaik sebesar 86,11% (dari 28223,65 gF menjadi 3920,15 gF). Secara sensori terjadi peningkatan intensitas keempukan (27,53%) dan kesukaan dari 26 orang panelis secara keseluruhan (19,80%).

## SUMMARY

*Carica* is a typical plateau fruit that became the flagship commodity of Dieng area, Wonosobo. *Carica* skin is containing papain, one of enzyme protease can break down proteins in the muscle fibers (muscle fiber) of the meat into simple components such as peptides and amino acids. Enzyme papain activity is able. This research aimed to (1) knowing the influence of the carica skin powders proportion on the physicochemical properties of beef (2) Knowing the effect of coating duration on the physicochemical properties of beef (3) Knowing the influence of interaction between the carica skin powder proportions with coating duration on the physicochemical properties of beef. (4)

The research was conducted at the Laboratory of Agricultural Technology, Faculty of Agriculture, Jenderal Soedirman University, Purwokerto. The research was conducted from October 2018 to July 2019. The experimental design used was a block randomized design (BRD). Factors examined are the proportion of carica skin powder; 0% (A1); 0.5% (A2); 0.75% (A3); 1% (A4) and coating duration 30 min (B1); 60 min (B2); 90 mins (B3); 120 min (B4). From the treatment was repeated 2 times a repeat so obtained 32 units of trial. The observed variables included moisture content, ash content, soluble protein level, the degree of tenderness, and sensory variables including color, aftertaste, tenderness, and preference.

The results showed that 1) *Carica* skin powder proportion from 0% to 1% has significant effect on ash, solved protein level and meat tenderness. Increasing proportion of carica skin powder lead to increase the ash, soluble protein levels and meat tenderness respectively by 14,23%, 21%, and 79,24%. 2) Coating duration from 30 to 120 min has a significant effect on solved protein level and meat tenderness. Coating duration lead to increase soluble protein levels and meat tenderness, respectively by 7,25%, and 26,04%. 3) The interaction between the proportion of carica skin powder and coating duration significantly affect the meat tenderness. 4) The best combination of treatment based on variables meat tenderness, solved protein levels, ash, and moisture content i.e. 1% carica fruit skin powder and 120 minute coating duration. Compared with the control increase in meat solved protein with the best treatment by 26,48% (from 56,27% db to 71.17% db) and increase in meat tenderness with the best treatment by 86,11% (from 28223 gF to 3920.15 gF). Sensory, there was an increase in tenderness intensity (27,53% and the preference of 26 panelists (19,80%).