

ABSTRAK

ESTIMASI KADAR AIR PADA DAGING SAPI SEGAR BERDASARKAN LUAS JEJAK AIR AKIBAT PENEKANAN DENGAN BEBAN 2 KG

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Daging sapi mengandung protein tinggi, zat besi, seng, selenium, riboflavin, vitamin B6, vitamin B12, niasin, fosfor, dan asam amino esensial yang dibutuhkan manusia. Tingkat konsumsi daging sapi per kapita di Indonesia pada tahun 2016 sebesar 0,417 kg. Peningkatan konsumsi masyarakat perlu diikuti dengan penjaminan higiene dan kualitas dari daging sapi yang beredar. Salah satu faktor yang memengaruhi kualitas daging sapi adalah kadar air daging. Kadar air normal daging adalah 65-80%. Jika lebih dari itu daging akan lebih berair, cepat busuk, dan memiliki susut masak yang tinggi. Mengantisipasi hal tersebut diperlukan alat uji guna mengestimasi kadar air daging dengan akurat dan efisien. Penelitian ini bertujuan mendapatkan rumus untuk mengestimasi kadar air berdasarkan jejak air daging yang diberi tekanan 2 kg.

Daging sebanyak 10 potongan bagian sirloin masing-masing 250 gram yang diperoleh dari individu sapi yang berbeda digunakan sebagai sampel. Setiap daging dilakukan uji proksimat untuk mendapatkan kadar nutrisi dan diambil 5 gram untuk diuji tekan dengan beban 2 kg selama 5 menit. Luas jejak air daging pada kertas Whatmann no 1 diukur menggunakan planimeter. Hasil uji proksimat dianalisis secara deskriptif. Kadar air daging (variabel terikat) dan luas jejak air (variabel bebas) pada kertas Whatmann dianalisis dengan regresi linear sederhana.

Hasil yang diperoleh pada uji proksimat menunjukkan rerata kadar nutrisi sampel daging secara deskriptif masuk dalam kisaran kadar nutrisi standar. Luas jejak air pada kertas saring dan kadar air dianalisis *Kolmogorov-Smirnov* menunjukkan sebaran data normal ($p > 0,05$) dan analisis korelasi *Pearson* menunjukkan adanya hubungan kolinearitas yang signifikan ($p > 0,8$). Hasil analisis regresi linear sederhana adalah $Y = 71,573 + 0,059X$ ($p < 0,05$). Berdasarkan rumus fungsi linear tersebut diperoleh kisaran luas jejak air untuk daging sapi segar yaitu 1-143 cm² dengan estimasi kadar air 71,63-80,01%.

Kata Kunci : daging, air, abu, protein, lemak, luas, regresi linear.

ABSTRACT

ESTIMATION OF FRESH MEAT WATER CONTENT BASED ON MEASUREMENTS OF WATER TRACE AREA DUE TO PRESSING USING OF 2 KG LOAD

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Beef contains high protein, iron, zinc, selenium, riboflavin, vitamin B6, vitamin B12, niacin, phosphorus, and essential amino acids needed by humans. The level of consumption of beef per capita in Indonesia in 2016 was 0.417 kg. Increased public consumption needs to be followed by the hygiene and quality assurance of the requested beef. One factor that affects the quality of beef is the water content of meat. The normal water content of meat is 65-80%. If more than that the meat will be more watery, rotten faster, and has a high cooking shrinkage. Anticipating this requires a test equipment that is used to estimate meat water levels accurately and efficiently. This study aims to obtain formula for estimate beef water content based on measurements of water traces area due to pressing using of 2 kg load.

The 10 pieces of meat from the 250 gram portion of sirloin each obtained from different individual cows were used as samples. Each proximate test was performed to obtain nutrient content and 5 grams was taken to be tested with a pressure of 2 kg for 5 minutes. The trace area of meat water in Whatmann paper no 1 is measured using a planimeter. The proximate test of meat nutrient results analyzed descriptively. Meat water content (dependent variable) and trace area of meat water (independent variable) in Whatmann paper was analyzed by simple linear regression.

The results obtained in the proximate test showed that the nutrient levels of the meat samples were descriptively included in the standard nutrient level range. The water trace area on filter paper and water content analyzed by Kolmogorov-Smirnov showed normal data distribution ($p > 0.05$) and Pearson correlation analysis showed a significant correlation of colinearity ($p > 0.8$). The results of a simple linear regression analysis was $Y = 71,573 + 0,059X$ ($p < 0,05$). Based on the linear function formula, the wide range of water traces for fresh beef is obtained from 1-143 cm² with estimated water content of 71.63-80.01%.

Keywords: beef, water, ash, protein, fat, trace area, linear regression.