

RINGKASAN

**KOMPOSISI DAGING KALENG DENGAN KOMPLEMENTASI
RUMPUT LAUT (*Euchema cottonii*) DITINJAU DARI
KANDUNGAN PROTEIN, YODIUM DAN SERAT
Emy Koestanti Sabdoningrum**

Daging kaleng rumput laut merupakan hasil komplementasi antara daging dengan rumput laut dari jenis *Euchema cottonii*. Tujuan penelitian ini adalah untuk mempelajari kandungan protein, yodium, serat, uji organoleptik serta tingkat efisiensi secara ekonomis daging kaleng yang ditambah rumput laut dari berbagai konsentrasi.

Metode penelitian yang digunakan adalah metode eksperimental laboratoris dengan menggunakan Rancangan Acak Kelompok (RAK) yang terdiri atas 4 perlakuan ($t=4$) dengan simbol-simbol, P0 (tanpa penambahan rumput laut), P1 (10% rumput laut), P2 (20% rumput laut), dan P3 (30% rumput laut), dengan 6 kali ulangan ($n=1,2,3,4,5,6$). Analisis data untuk skala data rasio kandungan protein, yodium, dan serat pada daging kaleng rumput laut, dengan menggunakan uji *One Way Anova* dan jika terdapat perbedaan akan dilanjutkan dengan uji LSD (*Least Significant Difference*). Analisis data untuk skala ordinal yaitu uji organoleptik (tekstur, rasa, warna dan aroma) menggunakan analisis *Friedman Two Way Anova* dan jika terdapat perbedaan (beda nyata) dilanjutkan dengan uji *Wilcoxon Signed Ranks Test*.

Berdasarkan hasil analisis *One Way Anova* kandungan protein daging kaleng rumput laut diperoleh nilai uji statistik = 42,724 dan nilai signifikansi (p) = 0,000. Hal ini menunjukkan terdapat perbedaan yang nyata antar perlakuan ($p < 0,005$) yang berarti bahwa kandungan protein daging kaleng rumput laut berbeda nyata pada berbagai konsentrasi penambahan rumput laut. Kandungan protein tertinggi diperoleh pada perlakuan P0 (tanpa penambahan rumput laut) yaitu 16,4952% per 100g bahan. Semakin tinggi konsentrasi penambahan rumput laut ke dalam daging kaleng, semakin menurun kandungan proteinnya.

Berdasarkan hasil analisis *One Way Anova* kandungan yodium daging kaleng rumput laut diperoleh nilai uji statistik = 164,906% dan nilai signifikansi (p) = 0,000. Hal ini menunjukkan terdapat perbedaan yang nyata antar perlakuan ($p < 0,005$) yang berarti bahwa kandungan yodium daging kaleng rumput laut berbeda nyata pada berbagai konsentrasi penambahan rumput laut. Kandungan yodium tertinggi diperoleh pada perlakuan P3 (30% penambahan rumput laut) yaitu 2,36472 μg per 100g bahan. Semakin tinggi konsentrasi penambahan rumput laut ke dalam daging kaleng, semakin tinggi pula kandungan yodiumnya.

Berdasarkan hasil analisis *One Way Anova* kandungan serat daging kaleng rumput laut diperoleh nilai uji statistik = 4,442 dan nilai signifikansi (p) = 0,015. Hal ini menunjukkan terdapat perbedaan nyata antar perlakuan ($p < 0,005$) yang berarti bahwa kandungan serat daging kaleng rumput laut berbeda nyata pada berbagai konsentrasi penambahan rumput laut. Kandungan serat tertinggi diperoleh pada perlakuan P3 (30% penambahan rumput laut) yaitu 2,82264% per 100g bahan.

Semakin tinggi konsentrasi penambahan rumput laut kedalam daging kaleng, semakin tinggi pula kandungan seratnya.

Uji organoleptik menggunakan metode *hedonik* berdasarkan hasil analisis *Friedman Two Way Anova*. Uji tekstur menunjukkan terdapat perbedaan yang nyata antar perlakuan (p)= 0,000. Uji rasa (p) = 0,206 menunjukkan tidak terdapat perbedaan nyata antar perlakuan. Uji warna menunjukkan (p) = 0,002 berarti terdapat perbedaan nyata antar perlakuan. Nilai signifikansi uji aroma (p) = 0,368 berarti tidak terdapat perbedaan antar perlakuan.

Analisis perlakuan terbaik dengan variabel zat gizi (protein, yodium dan serat) dan organoleptik menunjukkan perlakuan terbaik pada P2 (20% penambahan rumput laut) dengan total nilai 181,01. Analisis aspek ekonomi daging kaleng rumput laut menunjukkan bahwa terdapat keuntungan ganda dalam pembuatan daging kaleng rumput laut yaitu efisiensi biaya dan peningkatan kandungan yodium dan serat.



SUMMARY

PROTEIN, IODINE AND FIBER CONTENT IN CANNED MEAT COMPLEMENTED WITH SEAWEED (*Euchema cottonii*)

Emy Koestanti Sabdoningrum

Seaweed canned meat is a combination between meat and seaweed of *Euchema cottonii* and they canned together. The purposes of this research were studying the protein, iodine and fiber, examine the organoleptic aspects as well as the economical efficiency of this product with seaweed on various concentrations in it.

The method used in research, was experimental laboratories method which was Group Randomized Design, consists of 4 treatments (t=4), symbolized P0 (control), P1 (10% seaweed), P2 (20% seaweed) and P3 (30% seaweed), and conducted in 6 repetitions (n = 1,2,3,4,5,6). Data analysis for data ratio scale, contained of protein, iodine and fiber were analysed with One Way Anova. If there were any differences the analysis will be continued with LSD (Least Significant Difference). The data analysis for ordinal scale is organoleptic tests (texture, taste, colour and aroma) employed the Friedman Two Way analysis. If there is any differences (real difference) will be continued with Wilcoxon Signed Ranks Test.

Based on the analysis One Way Anova, the statistic value of protein content was 42.724 and the significancy value (p) was 0.000. It showed that there were a real differences among treatments ($p < 0.005$) which means that the protein content of this product was real differ, depends on the concentrations of seaweed added. The highest protein found on P0 treatment (control) which was 16.4952% per 100g material. Higher concentration of seaweed added into this canned meat, was lesser the protein content.

Based on the analysis One Way Anova, the statistic value of iodine content was 164.906 and the significancy value (p) was 0.000. It showed that there were a real differences among treatments ($p < 0.005$) which means that the iodine content of this product was real differ depends on the concentrations of seaweed added. The highest iodine found on P3 treatment (30% seaweed) was 2.36472 μg per 100g material. Higher concentration of seaweed added into this canned meat, was higher the iodine content.

Based on analysis One Way Anova, the statistic value of fiber content found 4.442 and the significancy value (p) was 0.015. It showed that there were a real differences among treatments ($p < 0.005$) which means that the fiber content of this product was real differ depends on the concentrations of seaweed added. The highest fiber found on P3 treatment (30% seaweed) was 2.82264 % per 100g material. Higher concentration of seaweed added into this canned meat, was higher the fiber content.

The organoleptics test used *hedonik* method based on the result of Friedman Two Way analysis. Texture tests showed there were a real differences among treatments (p)= 0.000. Taste test (p) = 0.206 showed there were no real differences

among treatments. Colour test showed (p) = 0.002. means that there were a real differences among treatments. The significant value of aroma test (p) = 0.368 means that there were no differences among treatments.

Using a nutrient content (protein, iodine and fiber) and an organoleptic aspects (texture, taste, colour and aroma) as parameter, the best analysis treatment resulted in P2 (20% seaweed) with total value of 181.01. The analysis of economical aspect of this product revealed that there were a double advantages in producing this canned meat, which were the cost efficiency and the increased of iodine and fiber content.



ABSTRACT
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COMPLEMENTED WITH SEAWEED (*Euchema cottonii*)

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Seaweed canned meat is a combination between meat and seaweed of *Euchema cottonii* and the canned together. The purposes of this research were studying the protein, iodine, and fiber, examine the organoleptic aspects as well as the economical efficiency of this product with seaweed on various concentrations in it.

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The result showed was that the highest protein content found in P0 treatment (control), which was 16,4952 % per 100 gram material. The highest iodine content was found in P3 treatment (30% seaweed) which was 2,36472 µg per 100g material. The highest fiber content was found in P3 treatment (30% seaweed) which was 2,82264% per 100g material. The organoleptic test showed that seaweed concentration increase had a significant influence on the texture and colour, but had no significant influence on the taste and aroma. The best treatment was P2 (20% seaweed). The economical efficiency aspect showed that was a double advantages of this product, which were on nutrient (iodine and fiber) content and the production cost.

Key Word : Canned Meat, Seaweed, Protein, Iodine, Fiber