

PENGARUH KONSENTRASI EKSTRAK KAYU MANIS TERHADAP BEBERAPA KOMPONEN MUTU YOGHURT SUSU KUDA LIAR SUMBAWA

[*The Effect of the Concentration of Cinnamon Extract on Some Quality Components Sumbawa's Wild Horse Milk Yoghurt*]

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ABSTRACT

Objective of this research was to find out the effect of the concentration of cinnamon extract on some quality components of Sumbawa's wild horse milk yoghurt. The method used in this research was an experimental method carried out in the laboratory and designed using a single factor completely randomized design (CRD) with a concentration of cinnamon extract (P) consisting of 6 treatments, i.e. P1 (0%), P2 (2%), P3 (4%), P4 (6%), P5 (8%) and P6 (10%) which was repeated 3 times. The parameters observed were chemical quality (antioxidant activity, protein content and pH value), physical quality (viscosity and color), microbiological quality (total LAB) and organoleptic quality (color, aroma, taste, and thickness). The data from the observations were analyzed using Anova with a real level of 5% using Costat software. If there was a significant difference, a further Orthogonal Polynomial test carried out for chemical quality, HSD at a significant level of 5% for organoleptic quality, and microbiological quality was analyzed descriptively. The increasing concentration of cinnamon extract added to the Sumbawa's wild horse milk yoghurt had an effect in the form of increased antioxidant activity, protein content, viscosity, color, total LAB, and more preferred by panelists but also had an effect in the form of a decrease in pH value. The results showed that 10% concentration of cinnamon extract was the best treatment in the process of making Sumbawa's wild horse milk yoghurt with 35.76% of antioxidant activity, 3.85% of protein content, 4.65 of pH value, 4,746.67 mPa.s of viscosity, color 62° of Hue value and 43.88 of lightness value, 8.2×10^9 CFU/ml of LAB total in accordance with the quality requirements of yoghurt based on SNI 2981: 2009 as well as organoleptics accepted by the panelists.

Keywords: *cinnamon extract, milk, Sumbawa's wild horse, yoghurt.*

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi ekstrak kayu manis terhadap beberapa komponen mutu yoghurt susu kuda liar Sumbawa. Metode yang digunakan dalam penelitian ini adalah metode eksperimental yang dilaksanakan di laboratorium dan dirancang menggunakan Rancangan Acak Lengkap (RAL) faktor tunggal adalah konsentrasi ekstrak kayu manis (P) yang terdiri atas 6 perlakuan, yaitu P1 (0%), P2 (2%), P3 (4%), P4 (6%), P5 (8%) dan P6 (10%) yang diulang sebanyak 3 kali. Parameter yang diamati yaitu mutu kimia (aktivitas antioksidan, kadar protein dan nilai pH), mutu fisik (viskositas dan warna), mutu mikrobiologi (total BAL) dan mutu organoleptik (warna, aroma, rasa, dan kekentalan). Data hasil pengamatan dianalisis menggunakan Anova dengan taraf nyata 5% dengan menggunakan *software* Costat. Apabila terdapat perbedaan nyata, maka dilakukan uji lanjut *Polynomial Orthogonal* untuk mutu kimia, uji lanjut BNJ pada taraf nyata 5% untuk mutu organoleptik, dan mutu mikrobiologis dianalisis secara deskriptif. Semakin meningkat konsentrasi ekstrak kayu manis yang ditambahkan pada yoghurt susu kuda liar Sumbawa memberikan pengaruh berupa peningkatan aktivitas antioksidan, kadar protein, viskositas, warna, total BAL, dan semakin disukai oleh panelis tetapi juga dapat menurunkan nilai pH. Hasil penelitian menunjukkan bahwa konsentrasi 10% ekstrak kayu manis merupakan perlakuan terbaik pada proses pembuatan yoghurt susu kuda liar Sumbawa dengan aktivitas antioksidan 35,76%, kadar protein 3,85%, nilai pH 4,65; viskositas 4746,67 mPa.s; warna dengan nilai °Hue 62° dan nilai *lightness* sebesar 43,88; total BAL $8,2 \times 10^9$ CFU/ml yang sesuai dengan persyaratan mutu yoghurt berdasarkan SNI 2981:2009 serta organoleptik yang dapat diterima oleh panelis.

Kata kunci: ekstrak kayu manis, kuda liar Sumbawa, susu, yoghurt.