

KUALITAS FISIKO-KIMIA DAN ORGANOLEPTIK SUSU SAPI TERFERMENTASI DENGAN INOKULUM KOMBUCHA TEH HITAM DAN TEH HIJAU

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INTISARI

Penelitian ini bertujuan untuk mengetahui kualitas fisiko-kimia, mikrobiologis, dan organoleptik susu sapi dengan penggunaan inokulum kombucha teh hitam dan teh hijau pada konsentrasi 5% (v/v) serta susu terfermentasi dengan kultur yoghurt sebagai kontrol. Penelitian dilakukan menggunakan *One-Way ANOVA* dengan 3 perlakuan inokulum dan 2 ulangan. Hasil penelitian yang berbeda nyata ($P < 0,05$) dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Data hasil pengujian organoleptik dianalisis menggunakan metode *Kruskal Wallis* dan dilanjutkan dengan uji *Mann-Whitney* apabila terdapat perbedaan signifikan ($P < 0,05$). Inokulum dibuat menggunakan susu sapi yang dipasteurisasi pada suhu 80°C selama 30 menit. Setelah mencapai suhu ruang susu pasteurisasi diinokulasi kultur kombucha teh hitam dan teh hijau masing-masing sebanyak 5% (v/v), lalu diinkubasi pada suhu 37°C selama 6 jam. Parameter yang diuji yaitu kualitas fisik (viskositas, sineresis), kualitas kimia (total solid, pH, keasaman, kadar alkohol, kadar laktosa, kadar protein, kadar asam organik), kualitas mikrobiologis (total bakteri asam laktat (BAL), total bakteri asam asetat (BAA), dan total yeast), dan kualitas organoleptik (warna, rasa, aroma, kekentalan). Hasil analisis didapatkan bahwa penggunaan inokulum kombucha teh hitam dan teh hijau berpengaruh nyata ($P < 0,05$) terhadap viskositas, sineresis, pH, keasaman, total solid, kadar alkohol, kadar laktosa, dan asam organik meliputi asam laktat, asam asetat. Pemberian inokulum kombucha teh hitam dan teh hijau tidak berpengaruh nyata ($P > 0,05$) terhadap kadar protein, total BAL, total BAA, dan total yeast. Pemberian inokulum kombucha teh hitam dan teh hijau berpengaruh nyata ($P < 0,05$) terhadap kualitas organoleptik meliputi kekentalan, dan tidak berpengaruh nyata ($P > 0,05$) terhadap warna, rasa, dan aroma.

Kata kunci: Susu fermentasi, inokulum kombucha, teh hitam, teh hijau, organoleptik

PHYSICO-CHEMICAL AND ORGANOLEPTIC QUALITIES OF FERMENTED COW'S MILK WITH BLACK TEA AND GREEN TEA KOMBUCHA INOCULUMS

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ABSTRACT

This study aims to determine the physicochemical, microbiological, and organoleptic qualities of cow's milk using black tea and green tea kombucha inoculums at a concentration of 5% (v/v), as well as milk fermented with yogurt culture as the control. The research was conducted using One-Way ANOVA with 3 inoculum treatments and 2 replications. Results showing significant differences ($P < 0.05$) were further analyzed using Duncan's New Multiple Range Test (DMRT). Organoleptic data were analyzed using the Kruskal-Wallis method and followed by the Mann-Whitney test if there were significant differences ($P < 0.05$). Inoculums were prepared using pasteurized cow's milk at 80°C for 30 minutes. After reaching room temperature, black tea and green tea kombucha cultures were respectively inoculated at 5% (v/v) and then incubated at 37°C for 6 hours. The tested parameters included physical qualities (viscosity, syneresis), chemical qualities (total solids, pH, acidity, total alcohol, total lactose, total protein, total organic acid), microbiological qualities (total lactic acid bacteria (LAB), total acetic acid bacteria (AAB), and total yeast), and organoleptic qualities (color, taste, aroma, consistency). The results showed that the use of black tea and green tea kombucha inoculums significantly affected ($P < 0.05$) the viscosity, syneresis, pH, acidity, total solids, total alcohol, total lactose, and total organic acid, including lactic acid and acetic acid. The application of black tea and green tea kombucha inoculums had no significant effect ($P > 0.05$) on total protein, total LAB, total AAB, and total yeast. Additionally, the use of black tea and green tea kombucha inoculums had a significant impact ($P < 0.05$) on organoleptic qualities, including consistency, but no significant effect ($P > 0.05$) on color, taste, and aroma."

Keywords: Fermented milk, kombucha inoculum, black tea, green tea, organoleptic

