

ABSTRACT

FERMENTED TEMPEH WHEY BEVERAGE PROBIOTIC AND ANALYSIS OF COST OF GOODS SOLD (COGS)

By

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This research aimed to determine the hedonic sensory characteristics, nutritional value, and cost of goods sold of a modified tempeh whey probiotic beverage using *Saccharomyces cerevisiae*. This research was conducted using a Randomized Complete Block Design (RCBD) with different treatment formulations. The parameters that were observed were hedonic sensory (color, aroma, taste, overall acceptance), total microbes, protein content, viscosity, and the calculation of the cost of goods sold. The data were analyzed using analysis of variance to determine whether there was a significant difference between treatments, and then followed by a Least Significant Difference (LSD) test at the 5% level. The results of the research showed that the different treatment formulations did not significantly affect the total microbes but significantly affected the hedonic sensory of the tempeh whey probiotic beverage. The total microbes produced ranged from 7.15 log CFU/mL to 7.23 log CFU/mL, which was in accordance with SNI 7552:2009, which stipulates ≥ 6 log CFU/mL for the number of probiotic microbes. The highest hedonic sensory score for color was 5.92 from P3, the highest hedonic sensory score for aroma was 5.22 from P1 and P2, the highest hedonic sensory score for taste was 6.04 from P1, and the highest hedonic sensory score for overall acceptance was 5.88 from P1. The best treatment based on total microbes and hedonic sensory was the tempeh whey probiotic beverage P1. The protein content of the tempeh whey probiotic beverage P1 was 2.5%, and the viscosity was 0.31 mPas. The cost of goods sold that was obtained was IDR 3.758,13.

Keywords: Tempeh whey probiotic beverage, total microbes, hedonic sensory, protein content, viscosity, COGS.

ABSTRAK

PRODUK FERMENTASI MINUMAN SARI TEMPE PROBIOTIK DAN ANALISIS PERHITUNGAN HARGA POKOK PRODUKSI (HPP)

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Penelitian ini bertujuan untuk mengetahui karakteristik sensori hedonik, nilai gizi dan menentukan harga pokok produksi dari minuman probiotik sari tempe modifikasi *Saccharomyces cerevisiae*. Penelitian ini disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan perbedaan formulasi perlakuan. Parameter yang diamati adalah sensori hedonik (warna, aroma, rasa, penerimaan keseluruhan), total mikroba, kadar protein, viskositas dan perhitungan harga pokok produksi. Data dianalisis sidik ragam untuk mengetahui pengaruh antar perlakuan lalu dilanjutkan dengan uji BNJ taraf 5%. Hasil penelitian menunjukkan bahwa perbedaan formulasi perlakuan tidak berpengaruh nyata terhadap total mikroba dan berpengaruh nyata terhadap sensori hedonik minuman probiotik sari tempe. Total mikroba yang dihasilkan adalah 7,15 log CFU/mL hingga 7,23 log CFU/mL hal ini sesuai dengan SNI 7552:2009 sebesar ≥ 6 log CFU/mL untuk jumlah mikroba probiotik. Skor sensori hedonik warna tertinggi adalah 5,92 dari P3, hedonik aroma tertinggi adalah 5,22 dari P1 dan P2, hedonik rasa tertinggi adalah 6,04 dari P1 dan hedonik penerimaan keseluruhan tertinggi adalah 5,88 dari P1. Perlakuan terbaik berdasarkan total mikroba dan sensori hedonik adalah minuman probiotik sari tempe P1. Kadar protein minuman probiotik sari tempe P1 sebesar 2,5% dan viskositas sebesar 0,31 mPas. Harga pokok produksi yang didapatkan adalah Rp. 3.758,13.

Kata kunci : minuman probiotik sari tempe, total mikroba, sensori hedonik, kadar protein, viskositas, HPP