Intisari

PENGARUH PENAMBAHAN EKSTRAK FIKOSIANIN DARI *Arthrospira platensis*
TERHADAP KARAKTERISTIK FISIK DAN SENSORIS GELATO

Penelitian ini dilakukan untuk mengetahui pengaruh penambahan ekstrak fikosianin dari *Arthrospira platensis* terhadap karakteristik fisik dan sensoris gelato. Penelitian diawali dengan ekstraksi pigmen fikosianin dari *Arthrospira platensis* menggunakan metode *freezing-thawing*. Perlakuan yang diberikan adalah penambahan ekstrak fikosianin pada berbagai konsentrasi yaitu 0% (kontrol), 2%, 4%, 6%, dan 8%. Parameter yang diamati meliputi *overrun,* pH, stabilitas emulsi, *first dripping time, melting rate,* aktivitas antioksidan, warna, kadar fikosianin pada produk, *Quantitative Descriptive Analysis, Time Intensity,* dan hedonik. Data yang diperoleh dianalisis dengan analisis varian (ANOVA) pada tingkat kepercayaan 95% dan dilanjutkan dengan uji lanjut *Duncan's Multiple Range Test* (DMRT) untuk menentukan perbedaan signifikan antara setiap perlakuan. Hasil menunjukkan bahwa perlakuan 8% merupakan perlakuan optimum berdasarkan nilai efektivitas keseluruhan parameter uji. Perlakuan tersebut memiliki nilai *overrun* sebesar 30,38±1,38%; pH 5,99±0,04; stabilitas emulsi 71,71±3,06%; *first dripping time* 1598±215 detik; *melting rate* 0,012±0,007 gram/menit; aktivitas antioksidan 79,84±2,10%; kadar fikosianin 0,068±0,005 mg/ml; serta skor hedonik sebesar 7,28 dengan skor atribut tekstur sebesar 7,08; *mouthfeel* 7,15; rasa 7,41; warna 7,23; aroma 7,42; dan penerimaan keseluruhan sebesar 7,36 dari skala maksimal 9.

Kata kunci: *Arthrospira platensis,* fikosianin, gelato, pangan fungsional

Abstract

THE EFFECT OF PHYCOCYANIN EXTRACT FROM *Arthrospira platensis* ON THE PHYSICAL AND SENSORY PROPERTIES OF GELATO

This research was conducted to determine the effect of adding phycocyanin extract from *Arthrospira platensis* on the physical and sensory properties of gelato. The research began with the extraction of phycocyanin pigment from *Arthrospira platensis* using the freezing-thawing method. The treatment given was the addition of phycocyanin extract at various concentrations 0% (control), 2%, 4%, 6%, and 8%. The parameters observed include overrun, pH, emulsion stability, first dripping time, melting rate, antioxidant activity, color, phycocyanin content in the product, Quantitative Descriptive Analysis, Time Intensity, and hedonics. The data obtained were analyzed using analysis of variance (ANOVA) at a confidence level of 95% and continued with the Duncan's Multiple Range Test (DMRT) to determine significant differences between each treatment. The results show that the 8% treatment is the optimum treatment based on the overall effectiveness value of the test parameters. This treatment has an overrun value of 30.38 ± 1.38%; pH 5.99 ± 0.04; emulsion stability 71.71 ± 3.06%; first dripping time 1598 ± 215 seconds; melting rate 0.012 ± 0.007 gram/minute; antioxidant activity 79.84 ± 2.10%; phycocyanin content 0.068 ± 0.005 mg/ml; and a hedonic score of 7.28 with a texture attribute score of 7.08; mouthfeel 7.15; taste 7.41; color 7.23; aroma 7.42; and overall acceptance of 7.36 from a maximum scale of 9.

Keywords: *Arthrospira platensis*, phycocyanin, gelato, functional food