ABSTRACT

PHYSICOCHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF PROBIOTIC DRINK FROM KWENI MANGO (*Mangifera odorata* Griff) WITH VARIOUS CONCENTRATIONS OF SKIMMED MILK AND SUCROSE

By

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The process of probiotic drinks needs to consider nutrition for Lactic Acid Bacteria (LAB) such as carbon and nitrogen. Sources of this nutrient can be obtained from sucrose and skimmed milk. The aims of this research was to see the effect of sucrose and skimmed milk concentrations on the kweni mango probiotic drink and to find the best formulation for the viscosity and characteristics according to SNI 7552:2018. This research was arranged in a factorial manner in a Randomized Block Design (RAKL) with 3 replications and 2 factors. In this research, the formulation of sucrose use 4 levels of concentration (0%; 3%; 6%; 9%) and skimmed milk with 4 levels of concentration (0%; 3%; 6%; 9%).The data obtained were tested for the similarity of variance with the Bartlett test and the additional data was tested with the Tuckey test. The data were then analyzed for variance and all data were further processed by using the Orthogonal Polynomial test at the level of 1% and 5%. In this research, probitoic drink with a concentration of 3% skimmed milk and 9% sucrose (S1G3) was the best formulation which had total of lactic acid bacteria (2,3 x10^{10} CFU/mL), total lactic acid 0.853%, pH 3.28, viscosity 1.813%, the average score of color is 3,133 (neutral), score of aroma is 3,560 (neutral), score of tastes 3,520 (neutral) and the overall acceptance score is 3,346 (neutral).

Keywords: lactid acid bacteria (LAB), mango kweni, probitoic drink, sucrose, skimmed milk

ABSTRAK

KARAKTERISTIK FISIKOKIMIA DAN ORGANOLEPTIK MINUMAN PROBIOTIK SARI BUAH MANGGA KWENI (*Mangifera odorata* Griff) DENGAN VARIASI KONSENTRASI SUSU SKIM DAN SUKROSA

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Minuman probiotik dalam pembuatannya, harus memperhatikan faktor kondisi optimal bagi pertumbuhan Bakteri Asam Laktat (BAL). Salah satunya yaitu sumber energi yang meliputi karbon dan nitrogen yang dapat diperoleh dari sukrosa dan susu skim. Tujuan dari penelitian ini yaitu untuk melihat pengaruh konsentrasi sukrosa dan susu skim terhadap minuman probiotik mangga kweni yang dihasilkan serta mendapatkan formulasi terbaik terhadap viskositas dan karakteristik minuman probiotik sari buah mangga kweni sesuai SNI 7552:2018. Penelitian ini disusun secara faktorial dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 3 kali ulangan dan 2 faktor. Pada penelitian ini digunakan formulasi sukrosa dengan 4 taraf konsentrasi (0%; 3%; 6%; 9%) dan susu skim dengan 4 taraf konsentrasi (0%; 3%; 6%; 9%). Data yang diperoleh diuji kesamaan ragamnya dengan uji Bartlett dan kenambahan data diuji dengan uji Tuckey. Data kemudian dianalisis sidik ragam dan seluruh data diolah lebih lanjut dengan uji Polinomial Ortogonal pada taraf 1% dan 5%. Pada penelitian ini, minuman probiotik dengan konsentasi susu skim 3% dan sukrosa 9% (S1G3) merupakan perlakuan terbaik yang memiliki nilai total BAL 2,3 x10^{10} CFU/mL, total asam laktat 0,853%, pH 3,28, viskositas 1,813%, skor kesukaan warna rata-rata sebesar 3,133 (agak suka), skor kesukaan aroma rata-rata sebesar 3,560 (agak suka), skor kesukaan rasa rata-rata sebesar 3,520 (agak suka) dan skor penerimaan keseluruhan rata-rata sebesar 3,346 (agak suka).

Kata Kunci: bakteri asam laktat (BAL), mangga kweni, minuman probitoik, sukrosa, susu skim