

*the Effect of Ginger Juice Emprit and Types of Sweeteners to the Quality of
Tempeh Juice Drink*

ABSTRACT

Tempe juice drink is a product that is produced through the destruction of tempeh with water to obtain a yellowish white solution, with a distinctive aroma and taste of tempeh. Tempe juice drink has a pleasant aroma and bitter after taste that can affect consumer acceptance. It is necessary to add natural flavors and sweeteners to improve the quality and taste of tempeh juice drinks. The natural flavors and sweeteners used in the manufacture of this tempeh juice are emprit ginger extract and honey, palm sugar, and rock sugar. This study aims to determine the concentration of emprit ginger extract, the type of sweetener (honey, palm sugar, and rock sugar), and the interaction effect of the two. This research is using experimental method. The experimental design was a Factorial Completely Randomized Design with two replications. The treatments consisted of emprit ginger extract concentration (A) (A1 = 4%; A2 = 6%; and A3 = 8%) and type of sweetener (B) (B1 = honey 20%; B2 = 15% palm sugar; B3 = rock sugar 20%). Performed tests of physical quality (stability and viscosity), chemistry (pH value, total dissolved solids, moisture content, ash content, fat content, protein content, carbohydrate content, total sugar content, and antioxidant activity) and organoleptic (hedonic and hedonic quality) . The data were processed with Analysis of Variance (ANOVA) $\alpha = 0.01$ and 0.05 . It can be concluded that the best treatment is the concentration of 8% emprit ginger extract and 15% palm sugar with stability characteristics of 16.00%; viscosity value of 3.45 cP; pH 5.61; total dissolved solids 15.90 ° brix; water content 84.00%; ash content 0.34%; fat content 0.76%; protein content of 1.61%; carbohydrate content of 13.29%; total sugar content of 28.20%; and IC50 antioxidant activity of 12.18 ppm, with a brown color, an unpleasant aroma, a slightly spicy taste, and a slightly thick texture.

Keywords: Tempeh juice, emprit ginger, honey, palm sugar, rock sugar

Ronna Rosyita. 2016340028. **Pengaruh Sari Jahe Emprit (*Zingiber officinale var.amarum*) dan Jenis Pemanis Terhadap Mutu Minuman Sari Tempe.** Di bawah bimbingan Shanti Pujilestari, ST, MM, MBA.

RINGKASAN

Minuman sari tempe merupakan produk yang dihasilkan melalui tahapan penghancuran tempe dengan air diperoleh larutan berwarna putih kekuningan, aroma dan rasa khas tempe. Minuman sari tempe memiliki aroma yang langu dan *after taste* yang pahit sehingga dapat memengaruhi penerimaan konsumen. Perlu ditambahkan perisa dan pemanis alami untuk meningkatkan kualitas terhadap mutu dan citarasa pada minuman sari tempe. Perisa dan pemanis alami yang digunakan pada pembuatan minuman sari tempe ini adalah sari jahe emprit dan madu, gula aren, serta gula batu. Penelitian ini bertujuan untuk mengetahui konsentrasi sari jahe emprit, jenis pemanis (madu, gula aren, dan gula batu), dan pengaruh interaksi keduanya. Penelitian ini menggunakan metode eksperimen. Rancangan percobaan adalah Rancangan Acak Lengkap Faktorial (RALF) dengan dua kali ulangan. Perlakuan terdiri dari konsentrasi sari jahe emprit (A) (A1=4%; A2=6%; dan A3=8%) dan jenis pemanis (B) (B1=madu 20%; B2=gula aren 15%; B3=gula batu 20%). Dilakukan uji mutu fisik (stabilitas dan viskositas), kimia (nilai pH, total padatan terlarut, kadar air, kadar abu, kadar lemak, kadar protein, kadar karbohidrat, kadar gula total, dan aktivitas antioksidan) dan organoleptik (hedonik dan mutu hedonik). Data diolah dengan Analisis Varian (ANAVA) $\alpha=0,01$ dan $0,05$. Dapat disimpulkan perlakuan terbaik adalah konsentrasi sari jahe emprit 8% dan gula aren 15% dengan karakteristik stabilitas 16,00%; nilai viskositas 3,45 cP; pH 5,61; total padatan terlarut 15,90°brix; kadar air 84,00%; kadar abu 0,34%; kadar lemak 0,76%; kadar protein 1,61%; kadar karbohidrat 13,29%; kadar gula total 28,20%; dan aktivitas antioksidan IC50 12,18 ppm, dengan warna cokelat, aroma tidak langu, rasa agak pedas, dan tekstur agak kental.

Kata kunci: sari tempe, sari jahe emprit, madu, gula aren, gula batu