

Siti Mabruroh. NPM 200331100072. Analisis Sensoris dan Fisikokimia pada Yoghurt Berbahan Jagung (*Zea mays*), Kacang Bambara (*Vigna subterranea* (L.) dan Kedelai (*Glycine max*) Berdasarkan Suhu dan Lama Fermentasi. Di Bawah Bimbingan **Dr. Banun Diyah Probowati, S.TP., M.Si.** dan **Dr. Askur Rahman, S.TP., M.P.**

ABSTRAK

Yoghurt yang dikonsumsi masyarakat umumnya adalah yoghurt susu sapi yang memiliki kelemahan kadar kolesterolnya sekitar 9,2-9,9% dan kadar lemak pada susu sapi sekitar 6,4%. Salah satu upaya mengatasi permasalahan tersebut dengan mengganti bahan baku hewani dengan bahan baku nabati seperti jagung, kacang bambara, dan kedelai. Tujuan penelitian ini untuk mengetahui karakteristik sensoris dan fisikokimia pada yoghurt berbahan jagung, kacang bambara, dan kedelai. Faktor yang dapat berpengaruh terhadap kualitas sensoris dan fisikokimia pada yoghurt yaitu suhu dan lama fermentasi. Hal ini karena keduanya berhubungan erat dengan perkembangbiakan bakteri asam laktat yang digunakan dalam proses fermentasi. Hasil penelitian menunjukkan bahwa pH yoghurt sekitar 3,98-4,79 dengan nilai total padatan terlarut sebesar 7,8-9,3. Nilai kecerahan kemerahan dan kekuningan masing-masing sebesar 58,06-63,66; 2,43-3,60; dan 29,20-32,06. Hasil uji sensoris menunjukkan bahwa sampel lama fermentasi 18 jam dengan suhu 40°C memiliki kemiripan dengan yoghurt komersial. Kadar lemak yoghurt sekitar 2,91%, kadar abu sekitar 7,06%, serta kadar protein sekitar 12,25%. Faktor yang mempengaruhi hasil penelitian adalah suhu fermentasi, lama fermentasi, dan kandungan gizi pada bahan baku yang digunakan. Suhu optimum pada bakteri *Streptococcus thermophilus* dan *Lactobacillus bulgarius* sekitar 38-45°C. Lama fermentasi untuk bakteri asam laktat sekitar 6-18 jam. Bakteri asam laktat akan memproduksi asam laktat yang akan menimbulkan rasa asam serta aroma khas yoghurt.

Kata Kunci: Lama Fermentasi, Suhu Fermentasi, Uji Fisikokimia, Uji Sensoris

Siti Mabruroh. NPM 200331100072. *Sensory and Physicochemical Analysis of Yoghurt Made from Corn (Zea mays), Bambara Beans (Vigna subterranea (L.)) and Soybean (Glycine max) Based on Temperature and Fermentation Duration. Under the guidance of Dr. Banun Diyah Probowati, S.TP., M.SI._dan Dr. Askur Rahman, S.TP., M.P.*

ABSTRACT

Yoghurt consumed by the public is generally cow's milk yogurt which has the disadvantage of cholesterol levels of around 9.2-9.9% and fat content in cow's milk around 6.4%. One of the efforts to overcome these problems is by replacing animal raw materials with vegetable raw materials such as corn, bambara beans, and soybeans. The purpose of this study was to determine the sensory and physicochemical characteristics of yogurt made from corn, bambara beans, and soybeans. Factors that can affect the sensory and physicochemical quality of yogurt are temperature and fermentation time. This is because both are closely related to the proliferation of lactic acid bacteria used in the fermentation process. The results showed that the pH of yogurt was around 3.98-4.79 with a total soluble solids value of 7.8-9.3. The reddish and yellowish brightness values were 58.06-63.66; 2.43-3.60; and 29.20-32.06, respectively. Sensory test results showed that the 18-hour fermentation time sample with a temperature of 40°C was similar to commercial yogurt. The fat content of yogurt is about 2.91%, ash content is about 7.06%, and protein content is about 12.25%. Factors that influence the results of the study are fermentation temperature, fermentation time, and nutritional content of the raw materials used. The optimum temperature for *Streptococcus thermophilus* and *Lactobacillus bulgarius* bacteria is around 38-45°C. The fermentation time for lactic acid bacteria is about 6-18 hours. Lactic acid bacteria will produce lactic acid which will cause a sour taste and aroma typical of yogurt.

Keywords: Fermentation time, Fermentation Temperatur, Physical Test, Chemical Test