

ABSTRAK

Tujuan dari penelitian ini yaitu untuk mengetahui perbandingan kacang hijau dengan air dan lama fermentasi terhadap karakteristik kefir sari kacang hijau.

Rancangan percobaan yang digunakan adalah Rancangan Petak Terbagi (RPT) dengan pola faktorial 3x3 dengan ulangan sebanyak 3 kali. Faktor pertama yaitu perbandingan kacang hijau dengan air yang terdiri dari 3 taraf a1 1:7 (kacang hijau : air), a2 1:8 (kacang hijau : air), dan a3 1:9 (kacang hijau : air). Faktor kedua yaitu lama fermentasi yang terdiri dari 3 taraf b1 (16 jam), b2 (20 jam) dan b3 (24 jam). Respon pada penelitian ini terdiri dari respon organoleptik (warna, aroma, rasa, dan kekentalan), respon kimia (kadar asam total, kadar protein, dan kadar alkohol), dan respon fisik (viskositas dan nilai pH).

Hasil penelitian pendahuluan menunjukkan bahwa perlakuan konsentrasi susu 10 % dan kacang hijau tanpa kulit menjadi perlakuan terpilih untuk penelitian utama. Hasil penelitian utama menunjukkan bahwa perbandingan kacang hijau dengan air berpengaruh terhadap sifat kimia (kadar asam total, kadar protein, dan kadar alkohol), sifat organoleptik (warna, aroma, rasa, dan kekentalan), dan sifat fisik (viskositas, pH) serta lama fermentasi berpengaruh terhadap sifat kimia (kadar asam total, kadar protein, dan kadar alkohol), sifat organoleptik (warna, aroma, rasa, dan kekentalan), dan sifat fisik (viskositas, pH) serta interaksi perbandingan kacang hijau dengan air dan lama fermentasi berpengaruh terhadap sifat kimia (kadar asam total, kadar protein, dan kadar alkohol), sifat organoleptik (warna, aroma, rasa, dan kekentalan), dan sifat fisik (viskositas) tetapi tidak berpengaruh terhadap nilai pH. Perlakuan terpilih dari kefir sari kacang hijau diperoleh pada perlakuan a1b2 (perbandingan kacang hijau dengan air 1:7 dan lama fermentasi selama 20 jam) karena memiliki aroma dan rasa yang disukai oleh panelis dengan kadar asam total 0,63%, kadar protein 1,68%, kadar alkohol 3,74, Viskositas 238,27 cP, dan pH 3,19.

Kata kunci : Perbandingan kacang hijau dengan air, lama fermentasi, kefir, kadar asam total, kadar protein, kadar alkohol, viskositas, pH.

ABSTRACT

The aims of this research is to find out the ratio of green beans with water and fermentation time towards green bean kefir's characteristics.

The experimental designed used is split plot design (RPT) with factorial pattern 3x3 and 3 repliations. The first factor is ratio of green beans with water which consist of 3 levels a1 1:7 (green bean : water), a2 1:8 (green bean : water), dan a3 1:9 (green bean : water). The second factor is fermentation time which consist of 3 levels b1 (16 hour), b2 (20 hour) dan b3 (24 hour). Variable response of this research are organoleptic response (colour, flavour, taste, viscosity), chemical reponse (total acid content, protein content, and alcohol content), and physical response (viscosity and pH rate).

The result of the preliminary research showed that treatment with 10% milk concentration and green beans without shell become the selected product for main research. The main research result showed that ratio of green bean with water content was influenced to the chemical properties (total acid content, protein content, and alcohol content), organoleptic properties (colour, flavour, taste, and viscosity), and physical properties (vicosity and pH rate) as well as fermentation time was influenced to the to the chemical properties (total acid content, protein content, and alcohol content), organoleptic properties (colour, flavour, taste, and viscosity), and physical properties (vicosity and pH rate), as well as its interactions were influenced to the chemical properties (total acid content, protein content, and alcohol content), organoleptic properties (colour, flavour, taste, and viscosity), and physical properties (vicosity) but not with pH rate. The selected treatment from green beans kefir was a1b2 (ratio of green bean with water 1 : 7 and fermentation time with 20 hours) because it has flavour and taste which liked by panelist with 0,63% total acid content, 1,68% protein content, 3,74% alcohol content, 238,27 cP of viscosity, and 3,19 pH rate.

Keyword: Ratio of green beans with water, fermentation time, kefir, total acid content, protein content, alcohol content, viscosity, pH.