KARAKTERISTIK FISIKOKIMIA DAN ORGANOLEPTIK ROTI *SOURDOUGH* DENGAN PENAMBAHAN KEFIR *GRAIN* PADA *STARTER*

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Skripsi

Sebagai Salah Satu Syarat untuk Memperoleh
Gelar Sarjana Teknologi Pertanian

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Nayli Husni, Novelina, Purnama Dini Hari

ABSTRAK

Kefir *grain* merupakan *starter* yang mengandung mikrobiota beragam untuk memproduksi susu kefir. Kefir *grain* tersusun dari campuran simbiosis mikroba yang menempel pada matriks polisakarida terdiri dari bakteri asam laktat, yeast dan asam asetat. Penamabahan kefir *grain* pada pembuatan *starter sourdough* bertujuan untuk mengetahui karakteristik fisik dan kimia serta mengetahui formulasi terbaik dari roti *sourdough* yang dihasilkan berdasarkan penerimaan organoleptik. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 3 kali ulangan. Data penelitian dianalisis secara statistik menggunakan Analisis Of Varians (ANOVA) dan dilanjutkan dengan analisis Duncan's New Multiple Range Test (DNMRT) pada taraf 5%. Hasil penelitian menunjukkan roti *sourdough* yang dihasilkan dari *starter* dengan penambahan kefir *grain* berpengaruh nyata terhadap derajat pengembangan adonan, derajat pengembangan roti, derajat keasaman (pH), kadar air, kadar abu, kadar protein, kadar karbohidrat, dan tingkat kesukaan panelis terhadap tekstur dan rasa. Formulasi terbaik yang didapatkan yaitu perlakuan C (konsentrasi *starter* 10%). Hasil pengujian terhadap perlakuan C diperoleh rata-rata derajat pengembangan adonan 37,75%, derajat pengembangan roti 54,39%, derajat keasaman (pH) 4,65, kadar air 34,49%, kadar abu 1,83%, kadar protein 7,56%, kadar lemak 2,70%, kadar karbohidrat 53,42%, cemaran kapang, dan uji organoleptik terhadap aroma 3,76 (suka), warna 3,72 (suka), rasa 3,80 (suka), dan tekstur 3,80 (suka).

Kata kunci*: *bakteri asam laktat, fermentasi, kefir grain, ragi alami, roti sourdough.

PHYSICOCHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF *SOURDOUGH* BREAD WITH KEFIR *GRAIN* ADDED TO THE *STARTER*

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ABSTRACT

Kefir *grain* is a *starter* that contains a variety of microbiota to produce kefir milk. Kefir *grain* is composed of a mixture of microbial symbiosis that adheres to the polysaccharide matrix consisting of lactic acid bacteria, yeast, and acetic acid. The use of kefir *grain* in *sourdough starter* production aims to know the physical and chemical characteristics and the best formulation of *sourdough* bread produced based on organoleptic reception. This research uses the Complete Randomized Design (CRD) with 5 treatments and 3 repetitions. The research data was analyzed statistically using the Analysis of Variance (ANOVA) and continued with the analysis of Duncan's New Multiple Range Test (DNMRT) at the level of 5%. The results of the research show that *sourdough* bread produced from a *starter* with the addition of kefir *grain*s has a significant effect on the degree of dough development, degree of bread development, acidity (pH), water content, ash content, protein content, carbohydrate content, and the rate of preference of the panels to texture and taste. The best formulation obtained was treatment C (*starter* concentration 10%). The test results for treatment C were averaged degrees of development of the dough at 37.75%, degree of growth of the bread at 54.39%, grade of acidity (pH) of 4.65, water content of 34.49%, ash content of 1.83%, protein content of 7.56%, fat content of 2.70%, carbohydrate content of 53.42%, and organoleptic tests on aroma 3.76 (like), color 3.72 (likes), taste 3.80 (like), and texture 3.80 (like).

Keywords: fermentation, kefir grains, lactic acid, natural yeast, sourdough bread.