

PENGARUH KONSENTRASI STARTER BAKTERI *Lactobacillus casei* TERHADAP MUTU TEPUNG KACANG MERAH TERMODIFIKASI

(The Effect of Lactobacillus casei Bacteria Starter Concentration on Quality of Modified Red Bean Flour)

Indah Nahdiat Isrori^{1)*}, Nazaruddin²⁾, Moegiratul Amaro²⁾

¹⁾Mahasiswa Fakultas Teknologi Pangan dan Agroindustri, Universitas Mataram

²⁾Staff Pengajar Fakultas Teknologi Pangan dan Agroindustri, Universitas Mataram

*email: indahnahdiat@gmail.com

ABSTRACT

This study aims to determine the effect of Lactobacillus casei bacterial starter concentration on the quality of modified red bean flour with the addition of various concentrations of Lactobacillus casei. The study used a complete randomized design (CRD) with one factor that was concentration of Lactobacillus casei bacteria 0%, 2%, 4%, 6%, 8% and 10% and repeats 3 times so that 18 experimental units were obtained. Parameters observed were total lactic acid bacteria, yield, moisture content, protein, ash, phytic acid, color and organoleptic. Observed data were analyzed for diversity with a real level of 5% using Co-Stat. If there was a real difference, further analysis was carried out Orthogonal Polynomial Method (OPM) and Honestly Significant Difference at the level of 5%. Red bean flour with concentration of Lactobacillus casei 10% was the best treatment based on the value of total lactic acid bacteria 6.32 of log CFU/g, yield 67.33%, moisture content 9.23%, protein 25.10%, ash 3.50%, phytic acid 0.38 mg/g, a color (° Hue) of 68.52, a color (L) of 89.86, as well as a slightly acidic white and slightly acidic color and somewhat preferred by panelists.

Keywords: *Lactobacillus casei*, modification, red bean flour

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi starter bakteri *Lactobacillus casei* terhadap mutu tepung kacang merah termodifikasi dengan penambahan berbagai konsentrasi *Lactobacillus casei*. Penelitian ini menggunakan rancangan acak lengkap satu faktor yaitu konsentrasi starter bakteri *Lactobacillus casei* 0%, 2%, 4%, 6%, 8% dan 10% serta ulangan sebanyak 3 kali sehingga didapat 18 unit percobaan. Parameter yang diamati yaitu total Bakteri Asam Laktat (BAL), rendemen, kadar air, kadar protein, kadar abu, kadar asam fitat, warna (° hue dan L), dan organoleptik (warna dan aroma). Data hasil pengamatan dianalisis dengan analisis keragaman (ANOVA) pada taraf nyata 5% dengan menggunakan *software Co-Stat* dan diuji lanjut dengan Beda Nyata jujur (BNJ). Apabila terdapat beda nyata, dilakukan uji lanjut *Polynomial Orthogonal* dan Beda Nyata Jujur (BNJ) pada taraf 5%. Perlakuan terbaik adalah konsentrasi starter bakteri *Lactobacillus casei* 10% dengan total bakteri asam laktat 6,32 log CFU/g, rendemen 67,33%, kadar air 9,23%, kadar protein 25,10%, kadar abu 3,50%, kadar asam fitat 0,38 mg/g, warna (° Hue) 68,52, warna (L) 89,86, serta warna putih dan aroma agak asam serta agak disukai panelis.

Kata kunci: *Lactobacillus casei*, modifikasi, tepung kacang merah