ABSTRACT

THE EFFECT OF FERMENTATION TIME WITH MIXED OF PICKLE BRINE AND YEAST STARTER ON CHARACTERISTICS OF WHITE SWEET POTATO NOODLE

By

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ABSTRACT

The aims of this study were to (1) compare the physicochemical characteristics of fermented white sweet potato flour noodle with the addition of mixed of pickle brine – yeast starter and single starter of pickle brine and yeast, (2) figure out the effect of fermentation time (0, 24, 48, 72, 96 hours) on characteristics of white sweet potato noodle, (3) had best combination of starter and fermentation time to produce white sweet potato noodle with the best sensory characteristic. This study was arranged in complete randomized block design (CBRD) with two factors and three replications. The first factor was fermentation starters : (1) pickle brine , (2) yeast and (3) mixed of pickle - yeast and non-fermented fresh sweet potato as the control. The second factor was fermentation time : 24 hours , 48 hours , 72 hours and 96 hours. The homogenity of data was analyzed by Bartlett test and additify was tested by Tuckey test. ANOVA was used to know the effect of treatments. Data then were further analyzed using orthogonal polynomial at 1% level. The results showed that the fermentation treatment with addition of a mixed pickle brine –yeast starter improved the quality of flour and sweet potato noodle. Longer fermentation time had caused lower pH and whiter color of the flour, lower cooking loss, shorter cooking time of the noodle. Overall the best treatment was found in the mixed pickle brine – yeast starter fermented for 96 hours. The noodle resulted from the best treatment had the characteristics of cooking loss (16,446%),

cooking time (3,267 minutes), whereas the flour was characterized as having pH (3,720) and color score of 5 (white).

Keywords: fermentation time, fermented white sweet potato flour, mixed starter, noodle

ABSTRAK

PENGARUH LAMA FERMENTASI DENGAN STARTER CAMPURAN CAIRAN PIKEL DAN YEAST TERHADAP KARAKTERISTIK MIE UBI JALAR PUTIH

Oleh

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Penelitian ini bertujuan untuk : (1) membandingkan sifat fisikokimia mie tepung ubi jalar putih terfermentasi dengan penambahan starter campuran cairan pikel – yeast dan starter tunggal pikel atau yeast, (2) mengetahui pengaruh lama fermentasi (0, 24, 48, 72, 96 jam) terhadap karakteristik mie ubi jalar putih, (3) mengetahui starter fermentasi dan lama fermentasi yang tepat untuk menghasilkan mie ubi jalar putih dengan karakteristik sensori terbaik. Penelitian disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor dan tiga kali ulangan. Faktor pertama adalah jenis fermentasi yaitu dengan (1) starter pikel, (2) starter yeast, (3) campuran starter pikel dan yeast dan sebagai kontrol adalah ubi jalar segar yang tidak difermentasi. Faktor kedua adalah lama fermentasi yaitu 24 jam (L1), 48 jam, 72 jam, dan 96 jam. Data yang diperoleh diuji kesamaan ragamnya dengan uji Bartlett dan keaditifitasan dengan uji Tuckey. Analisis sidik ragam digunakan untuk mengetahui ada tidaknya pengaruh perlakuan, data kemudian diuji lanjut menggunakan uji orthogonal polinominal pada taraf 1%. Hasil penelitian menunjukkan bahwa perlakuan fermentasi dengan penambahan campuran cairan pikel dan starter yeast dapat memperbaiki kualitas tepung dan mie ubi jalar. Semakin lama waktu fermentasi, telah menyebabkan pH yang lebih rendah dan warna tepung yang lebih putih, kehilangan masak yang lebih kecil,

waktu memasak mie yang lebih singkat. Perlakuan terbaik secara keseluruhan terdapat pada starter campuran cairan pikel dan yeast yang difermentasi selama 96 jam. Mie yang dihasilkan dari perlakuan terbaik memiliki karakteristik *cooking loss* (16,446%), *cooking time* (3,267 menit), sedangkan karakteristik tepungnya yaitu pH (3,720) dan skor warna 5 (putih).

Kata Kunci: Lama fermentasi, mie, starter campuran, tepung ubi jalar putih terfermentasi