

**FERMENTASI SARI KORO PEDANG PUTIH (*Canavalia ensiformis* L.)
MENGGUNAKAN BAKTERI ASAM LAKTAT YANG DIISOLASI DARI
DADIH DENGAN PENAMBAHAN SUKROSA, SUSU SKIM, DAN
KOMBINASINYA**

ABSTRAK

Oleh:

MIFTHA FACHRURI RACHMAWATI

15/379271/TP/11227

Penelitian ini bertujuan untuk mengetahui kemampuan bakteri yang diisolasi dari dadih yaitu *S. thermophilus* Dad 11 dan *L. plantarum* Dad 13 selama fermentasi, pengaruh penambahan sukrosa dan susu skim pada fermentasi sari koro pedang, produksi asam dan karakteristik produk fermentasi serta stabilitasnya selama penyimpanan pada 4°C. Kacang koro pedang putih diekstraksi dengan perbandingan koro pedang kupas dan air 1:3 (b/v). Sari koro pedang diberi penambahan sukrosa 8%, susu skim 4% serta kombinasi sukrosa 8% + susu skim 4% (b/v). Selanjutnya diinokulasikan 1% (v/v) bakteri asam laktat dan diinkubasi selama 24 jam pada 37°C. Hasil fermentasi disimpan pada suhu 4°C selama 14 hari. Pengujian yang dilakukan yaitu analisis jumlah sel, kadar asam tertitrasi, dan pH. Pengamatan kenampakan, aroma, rasa dilakukan secara deskriptif oleh peneliti. *Sreptococcus thermophilus* Dad 11 dan *Lactobacillus plantarum* Dad 13 mampu tumbuh pada sari koro pedang dengan penambahan sukrosa dan susu skim dengan kenaikan jumlah sel 1,53-1,90 log CFU/mL, memproduksi asam laktat pada kisaran 0,82-1,37% dengan pH 3,98-4,32. Penambahan sukrosa dan susu skim menghasilkan produk fermentasi yang kental, beraroma asam, terasa asam dan manis dan terasa berpasir. Setelah penyimpanan 14 hari pada suhu 4°C, tidak ada perubahan signifikan pada jumlah sel bakteri asam laktat dan pH namun terjadi peningkatan produksi asam laktat dengan kenaikan 0,01-0,40%. Produk fermentasi mengalami peningkatan keasaman dan kekentalan.

Kata kunci : Fermentasi sari koro pedang putih, bakteri asam laktat, sukrosa, susu skim

JACK BEAN MILK (*Canavalia ensiformis* L.) FERMENTATION USING LACTIC ACID BACTERIA WHICH WAS ISOLATED FROM DADIH WITH ADDITIONAL OF SUCROSE, SKIM MILK, AND IT'S COMBINATION

ABSTRACT

By:

MIFTHA FACHRURI RACHMAWATI

15/379271 / TP / 11227

The objectives of this research were to determine the ability of lactic acid bacteria which was isolated from dadih during fermentation of jack bean milk, the effect of adding sucrose and skim milk to fermentation, acid production and characteristics of fermented products and their stability during storage at 4°C. Jack bean seeds were extracted by ratio dehulled jack bean and water 1: 3 (b/v). The jack bean milk was added with 8% of sucrose, 4% of skim milk and both combination. Then inoculated 1% (v/v) lactic acid bacteria and incubated for 24 hours at 37°C. The fermentation products were stored at 4°C for 14 days. Analysis of cell counts, titrable acidity, and pH were determined. Observation of appearance, aroma, taste was carried out descriptively by the researcher. *Streptococcus thermophilus* Dad 11 and *Lactobacillus plantarum* Dad 13 were able to grow on jack bean milk fermentation with the addition of sucrose and skim milk with an increase in the number of cells 1.53-1.90 log CFU/mL and produced 0.82-1.37 % of lactic acid with pH of 3.98-4.32. The addition of sucrose and skim milk produced a thick, sour-flavored fermented product, tasted sour, sweet and sandy. After 14 days of storage at 4°C, there were no significant changes in the number of viable cells and pH but increased in lactic acid production 0.01-0.40%. Fermented products increased the level of acidity and thickness.

Keywords: Jack bean milk fermentation, lactic acid bacteria, sucrose, skim milk