

## ABSTRAK

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### **KARAKTERISTIK *SOYGHURT* BERSIFAT PROBIOTIK DENGAN PENAMBAHAN SARI KULIT NANAS**

Tugas Akhir, Fakultas Sains dan Teknologi (2022)

(xix + 67 halaman, 19 gambar, 8 tabel, 48 lampiran)

*Soyghurt* atau *yoghurt* berbasis kacang kedelai adalah produk pangan probiotik dari hasil fermentasi susu yang melibatkan bakteri asam laktat (BAL) *Lactobacillus bulgaricus* dan *Streptococcus thermophilus*. Penambahan *Lactobacillus acidophilus*, *Lactobacillus plantarum*, dan *Lactobacillus casei* dapat meningkatkan kemampuan probiotik dari *soyghurt*. Penggunaan sari kulit nanas dan *stabilizer* seperti CMC (*Carboxy Methyl Cellulose*) dapat meningkatkan kualitas mutu *soyghurt*. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi *starter* dan CMC serta penambahan sari kulit nanas terhadap mutu *soyghurt*. Penelitian diawali dengan pembuatan *soyghurt* menggunakan kombinasi konsentrasi *starter* (0.05%; 0.1%; 0.15%; 0.2%) dan CMC (0.2%; 0.4%; 0.6%). Kombinasi konsentrasi *starter* dan CMC terpilih memiliki hasil nilai pH  $4.33 \pm 0.01$ , total asam tertitiasi  $0.50 \pm 0.03$  %, total BAL  $6.48 \pm 0.02$  log CFU/mL, total mikroba  $7.99 \pm 0.00$  log CFU/mL, total padatan terlarut  $6.25 \pm 0.35$  °Brix, dan nilai viskositas  $89.75 \pm 0.03$  cP. *Soyghurt* dengan kombinasi konsentrasi *starter* dan CMC terpilih dilakukan penambahan sari kulit nanas dengan konsentrasi 5%; 10%; 15%; 20%. *Soyghurt* dengan sari kulit nanas terpilih menghasilkan nilai pH  $4.36 \pm 0.01$ , total asam tertitiasi  $0.44 \pm 0.03$  %, kandungan vitamin C  $0.0310 \pm 0.00$  mg/mL, total BAL  $6.47 \pm 0.09$  log CFU/mL, total mikroba  $7.69 \pm 0.01$  log CFU/mL, total padatan terlarut  $6.67 \pm 0.58$  °Brix, nilai viskositas  $27.67 \pm 0.00$  cP, lebih disukai panelis dibandingkan *soyghurt* dengan konsentrasi sari kulit nanas lainnya, dan ketahanan asam  $5.76 \pm 0.04$  CFU/mL.

Kata kunci: *Soyghurt*, konsentrasi *starter*, konsentrasi CMC, kulit nanas, probiotik

Referensi: 75 (2000-2021)

## ***ABSTRACT***

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### **PROBIOTIC CHARACTERISTIC OF *SOYGHURT* WITH THE ADDITION OF PINEAPPLE PEEL EXTRACT**

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(xix + 67 pages, 19 figures, 8 tables, 48 appendices)

*Soyghurt* or soybean-based yogurt is a probiotic food product from fermented milk containing lactic acid bacteria (LAB) *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. The addition of *Lactobacillus acidophilus*, *Lactobacillus plantarum*, and *Lactobacillus casei* can increase the probiotic ability of *soyghurt*. The use of pineapple peel extract and stabilizers such as CMC (Carboxy Methyl Cellulose) can improve the quality of *soyghurt*. This study aims to determine the effect of *starter* concentration and CMC and the addition of pineapple peel extract on the quality of *soyghurt*. The study began with making *soyghurt* using a combination of *starter* concentrations (0.05%; 0.1%; 0.15%; 0.2%) and CMC (0.2%; 0.4%; 0.6%). The combination of the selected *starter* and CMC concentrations resulted in a pH value of  $4.33 \pm 0.01$ , total titrated acid  $0.50 \pm 0.03\%$ , total LAB  $6.48 \pm 0.02$  log CFU/mL, total microbes  $7.99 \pm 0, 00$  log CFU/mL, total dissolved solids  $6.25 \pm 0.35$  °Brix, and viscosity value  $89.75 \pm 0.03$  cP. *Soyghurt* with a combination of *starter* concentration and selected CMC was added with pineapple peel extract with a concentration of 5%; 10%; 15%; 20%. *Soyghurt* with selected pineapple peel extract produced a pH value of  $4.36 \pm 0.01$ , total titrated acid  $0.44 \pm 0.03\%$ , vitamin C content  $0.0310 \pm 0.00$  mg/mL, total BAL  $6.47 \pm 0.09$  log CFU/mL, total microbial  $7.69 \pm 0.01$  log CFU/mL, total dissolved solids  $6.67 \pm 0.58$  °Brix, viscosity value  $27.67 \pm 0.00$  cP, preferred by panelists over *soyghurt* with other pineapple peel extract concentrations, and acid resistance  $5.76 \pm 0.04$  CFU/mL.

Keyword: *Soyghurt*, *starter* concentration, CMC concentration, pineapple peel, probiotics

Reference: 75 (2000-2021)