

KARAKTERISTIK SUSU FERMENTASI DENGAN STARTER BUBUK *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 YANG DIPRODUKSI MENGUNAKAN PEPTON DARI EKSTRAK IKAN GABUS

INTISARI

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Bubuk ampas ikan gabus (*Channa striata*) sebagai hasil samping ekstraksi albumin memiliki potensi untuk dimanfaatkan sebagai sumber pepton dalam media pertumbuhan *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 sebagai kultur starter susu fermentasi. Penggunaan ampas ikan gabus sebagai sumber pepton dapat menekan biaya, halal, serta dapat memanfaatkan hasil samping ekstraksi albumin. Susu fermentasi atau yogurt merupakan produk fermentasi probiotik yang sudah banyak dikenal dan dapat menggunakan kultur starter bubuk *L. plantarum* Dad-13 sebagai kultur campuran dengan *Streptococcus thermophilus* Dad-11. Tujuan penelitian ini adalah mempelajari apakah perbedaan sumber pepton pada media pertumbuhan *Lactiplantibacillus plantarum* Dad-13 dari ekstrak daging dan ekstrak ikan gabus menyebabkan perbedaan jumlah sel probiotik *L. plantarum* Dad-13, karakteristik kimia, fisik, dan sensoris *overall* pada susu fermentasi dengan kultur starter bubuk campuran (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 rasio 1:3). Pembuatan susu fermentasi menggunakan susu pasteurisasi, susu skim bubuk, sukrosa, kultur *Lactiplantibacillus plantarum* Dad-13 dari media pertumbuhan dengan sumber pepton ekstrak daging dan ekstrak ikan gabus, dan kultur *Streptococcus thermophilus* Dad-11 (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 rasio 1:3). Pada penelitian ini dilakukan analisis jumlah sel probiotik *L. plantarum* Dad-13, pH, total asam tertitiasi (%TAT), viskositas, sineresis, dan uji sensoris *overall*. Hasil penelitian menunjukkan bahwa tidak ada perbedaan signifikan pada jumlah sel *L. plantarum* Dad-13, karakteristik kimia, fisik, dan sensoris *overall* pada susu fermentasi dengan kultur starter *L. plantarum* Dad-13 dari sumber pepton ekstrak ikan gabus. susu fermentasi dengan kultur starter bubuk campuran (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 rasio 1:3) dengan *L. plantarum* Dad-13 dari media pertumbuhan sumber pepton ekstrak ikan gabus memiliki jumlah sel *L. plantarum* Dad-13 sebanyak 9,47 log CFU/ml, pH 4,34, %TAT 0,99%, viskositas 3,52 Pa.s, serta sineresis 23,63%.

Kata kunci: media pertumbuhan, sumber pepton, ekstrak ikan gabus (*Channa striata*), susu fermentasi, *L. plantarum* Dad-13, *triangle test*

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**CHARACTERISTICS OF FERMENTED MILK WITH POWDER
STARTER *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13
PRODUCED USING PEPTONE FROM SNAKEHEAD FISH EXTRACT**

ABSTRACT

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Snakehead fish (*Channa striata*) powder as a by-product of its albumin extraction has a potential to be used as a source of peptone in the growth medium of *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 as a starter culture in fermented milk. The use of snakehead fish powder as a source of pepton can reduce costs, fulfill *kosher* status requirement, and can utilize by-product of albumin extraction. Fermented milk or yoghurt is a probiotic fermented product that is widely known and can use powdered starter culture of *L. plantarum* Dad-13 as a mixed culture with *Streptococcus thermophilus* Dad-11. The purpose of this study was to study whether differences in peptone sources in the growth medium of *Lactiplantibacillus plantarum* Dad-13 from meat extracts and snakehead fish extracts caused differences in probiotic *L. plantarum* Dad-13 cells count, chemical, physical, and overall sensory characteristics in fermented milk using mixed powdered starter culture (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 ratio 1:3). Production of fermented milk using pasteurized milk, powdered skim milk, sucrose, *Lactiplantibacillus plantarum* Dad-13 from growth media with peptone sources of meat extract and snakehead fish extract, and culture of *Streptococcus thermophilus* Dad-11 (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 ratio 1:3). In this study, the samples were analyzed for probiotic *L. plantarum* Dad-13 cells count, pH, total titratable acid (% TTA), viscosity, syneresis, and overall sensory tests. The results showed that there was no significant difference in the *L. plantarum* Dad-13 cells count, chemical, physical, and overall sensory characteristics of fermented milk with *L. plantarum* Dad-13 starter culture from peptone sources of snakehead fish extract. Fermented milk using mixed powdered starter culture (*L. plantarum* Dad-13:*S. thermophilus* Dad-11 ratio of 1:3) with *L. plantarum* Dad-13 from growth media with peptone source from snakehead fish extract had *L. plantarum* Dad-13 cells count of 9.47 log CFU/ml, pH 4.34, % TAT 0.99%, viscosity 3.52 Pa.s, and syneresis 23.63%

Keywords: growth media, source of peptone, snakehead fish extract (*Channa striata*), fermented milk, *L. plantarum* Dad-13, *triangle test*

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