ABSTRACT

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UTILIZATION OF CUCUMBER JUICE (Cucumis sativus L.) AS PROBIOTIC BEVERAGE

(xvii + 96 pages; 5 tables; 20 pictures; 25 appendixes)

Cucumbers are one of the vegetables which spread over the world and rich in nutrients. In this research, cucumber juice was fermented with lactic acid bacteria to produce a probiotic beverage. *L. acidophilus*, *L. casei*, and *S. thermophilus* used as starter. The objectives of preliminary research was to determine the most suitable sucrose and skim milk powder concentration fermented by single-starter lactic acid bacteria. The result showed the most suitable sucrose concentration was 2%, while the most suitable skim milk powder concentration was 3%. This result was used in main research to determine the most suitable combination starter. In main research the most suitable combination starter obtained was 1:1:1. The final product kept in refrigerator at 4°C for 15 days. The viable lactic acid bacteria survived above 1,00x10⁶ cfu/ml during ten days of storage and completely lost its viability after 15 days of storage.

Keywords : cucumber, probiotic, lactic acid bacteria, fermentation, *Lactobacillus acidophilus*, *Lactobacillus casei*, *Streptococcus thermophilus*.

References : 46 (2002-2011)