

# The effect of different ratio of bacteria (*Lactobacillus bulgaricus* + *Streptococcus thermopiles* and *Bifidobacterium longum*. ATCC 15707) on the total lab, acidity and viscosity of yogurt at different storage period

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## Abstract

The main purpose of this research is to provide information about the effect of *Bifidobacterium longum* ATCC15707 on the characteristics of yogurt during different of storage period. The *B.longum* was obtained from Laboratory of Food and Nutrition Collection Culture Gadjah Mada University and a *S.thermophilus* + *L.bulgaricus* (1:1) was obtained from a commercial yogurt (Milkuat). This research was performed in Laboratory of Animal Science and Dairy Milk Processing Industry, Gadjah Mada University, used 8 L fresh milk cow, yogurt sample were stored at 4 °C for 28 days. Research using Completely Randomized Design with Factorial pattern A x B (4 x 2). Factor A is the ration between yogurt starter *ST+Lb* and *BL* (T1 is control 4% from yogurt starter, T2 1:3 (v/v), T3 2:2 (v/v), T4 3:1(v/v)). Factor B is the storage period (1 and 21 days) for chemical, physical and organoleptic analyses and (1, 14, 21 and 28) for microbial. Parameters measured are microbiology (total lactic acid bacteria), chemistry (acidity, pH, fat content, protein content, and lactose), and physical (viscosity). If there is a real effect of treatment was followed by Duncan Multiple Test. Microbial counts were log transformed and statistically evaluated. The result indicated that the yogurt produce with 3% (*S.thermophilus* and *L. delbrueckii* subsp. *bulgaricus*) and 1% *B.longum* ATCC15707 during storage period (1 and 21 days) at 4 °C effected significantly to increase acidity and the storage period effected to decreased viscosity and total lactic acid bacteria during storage period at 4 °C.

**Keywords:** *B. longum* ATCC 15707, Storage period, Yogurt.

