

**FEATHER DEGRADATION AND KERATINASE PRODUCTION BY
BACILLUS SP. AND *LACTOBACILLUS* SP**

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ABSTRACT

The aim of this research was to investigate the potential of chicken feather degradation by Bacillus sp. and Lactobacillus sp. The bacteria were grown with 43 °C and pH 7.5 in basal medium, the growth cell of bacteria, dry weight and percentage of the feather were measured. Both strains could degrade part of the feather at 5 and 10 days. The bacteria growths were monitored by turbidity method. The growth of cell showed Bacillus sp. Had highest of growth, cell at 10 days. Whole feather, dry weights of both strains was related to a percentage of the feather degradation. These found, Lactobacillus sp. resulting great in feather, dry weight and percentage of feather degradation, higher than that the Bacillus sp. This strain showed the feather, dry weight at 67.67 grams and partial degradation of the feather at 32.33% after 10 days of incubation. Keratinolytic activity assay were shown as 50.36 and 60.92 U/ml from Lactobacillus sp. And Bacillus sp., respectively. This is very interesting; because of Lactobacillus sp. showed great of a feather degrading percentage, but secreted the enzyme less than Bacillus sp. strain. This strain has been a little reported for feather degradation and we indicated that the strain could be strong to degrade feather of the chicken and can be a highly useful bacterium for feather meal production and in leather industry.

KEYWORDS: Feather Degradation, Keratin, Keratinolytic Production & Bacillus Sp. & Lactobacillus Sp

Received: Apr 29, 2017; **Accepted:** May 21, 2017; **Published:** Jun 05, 2017; **Paper Id.:** IJBTRJUN20174