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A Study on Optimization of Biomass of *Bacillus pumilus* for Feather Degradation †

S. Dhiva [1], Afna [1], Akshara [1], Arya [1], Dhanush [1,*]

[1] Department of Microbiology, Sree Narayana College, Alathur, Palakad, Kerala, India - 678682
* Correspondence: dhivasoju@gmail.com;
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Abstract: Soil samples were collected from the feather dumped area, and they were screened for the presence of keratinolytic bacteria *Bacillus pumilus*. Based on its growth on Bacillus isolation agar, Skim milk agar, and Starch agar, it was conformed as *Bacillus pumilus*. The growth of bacteria was estimated by biomass estimation. In the optimization study, the optimum incubation period observed for feather degradation was 48hrs, pH 7, and temperature 40°C. Purified Keratinase enzyme was used for the feather degradation study. The maximum degradation observed was 29% at the temperature of 40^0C. The size of kerinase produced was estimated as 52KDa.

Keywords: Keratinase; feather; keratinolytic bacteria; spectrophotometer.

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Conflicts of Interest

The authors declare no conflict of interest.