

DIVERSITY OF SOIL ORGANIC MATTER  
DEGRADING BACTERIA IN THE TALANGO AND  
POTERAN VILLAGE OF POTERAN ISLAND

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**Abstract**

Poteran island is one of the largest islands in Sumenep, the priority sector is plantation resource development. Results of previous studies indicate that soil organic matter content is very low. This study was conducted to determine the potential of soil bacteria exoenzyme in Talango and Poteran village Poteran island, in degrading organic matter, and determine the bacterial diversity.

Exoenzyme potential calculated by the amyolytic index on starch agar medium, proteolytics index on Bushnell-Haas Casein 1% medium, cellulolytics index on CMC agar medium, and lipolytic index on Tween 80-Peptone agar medium. Characterization of bacterial conducted using dichotomous keys based on *Bergey's Manual of determinative Bacteriology* up to the genus level.

This study get 17 isolates of bacteria from the Talango village and 32 isolates of bacteria from Poteran village. Isolates that have potential of amyolytic totaled 29. Isolates that have potential of proteolytic totaled 45. Isolates that have potential of cellulolytic totaled 32. Isolates that have potential of lipolytic totaled 14. After characterization and identification of suspected isolates divided into fifteen genera are *Bacillus*, *Corynebacterium*, *Micrococcus*, *Staphylococcus*, *Pseudomonas*, *Aeromonas*, *Vibrio*, *Escherichia*, *Morganella*, *Proteus*, *Providencia*, *Edwardsiella*, *Shigella*, *Yersinia*, and *Lampropedia*.

*Keywords: Bacteria, organic matter, Poteran island.*

