

**ISOLATION AND CHARACTERIZATION OF HALOPHILIC
BACTERIA PRODUCING AMYLASE AND PROTEASE ENZYME
FROM MARAKKANAM SALT PAN**

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ABSTRACT

Halophilic bacteria are organisms which inhabit the salt-rich environment and are capable of producing wide variety of bioactive compounds. Sediment samples were collected from four different sites of Marakkanam salt pan, Tamil Nadu. Totally, 23 halophilic bacteria were isolated and their colony characteristics were recorded. Based on the colony morphology and gram staining results, ten isolates were selected and screened for their ability to produce commercially important hydrolytic enzymes such as amylase and protease. The results showed that the isolates MSP1 and MSP2 produce highest amylase and protease enzyme activity. Further, the isolates MSP1 and MSP2 were identified as Bacillus sp. and Pseudomonas sp. respectively by 16SrRNA method.

KEYWORDS: Halophiles, Marakkanam, Salt Pan, Amylase, Protease, Bacillus sp & Pseudomonas sp

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