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Isolation and Characterization of an Agarase Producing Bacteria from Marine Sediment

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Abstract : A new agarase was purified from an agarolytic bacterium, *Bacillus megaterium*, a novel agar degrading bacterium isolated from marine sediment. The enzyme was purified from the culture supernatant by ammonium sulfate precipitation method and staining of the purified agarase on an SDS-polyacrylamide gel revealed a single band with an apparent molecular weight of 35 kDa. The optimum pH and temperature for this enzyme were 7 and 40°C, respectively. The effect of medium composition on agarase production was investigated in shake flasks. The most suitable carbon source, nitrogen source, and salt sources were agar, yeast extract, and sodium chloride, respectively.

Keyword: Agarase, Agarolytic bacteria, *Bacillus megaterium*.

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