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Production of Thermostable α-Amylase Obtained from a Novel *Bacillus vallismortis*

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Aim of the study: In this study, a bacterium, which was isolated from hot-spring mud sample of Meyremderesi, Sirnak in Turkey, was used.

Material and Methods: The morphological, biochemical and 16s rDNA analysis of the isolated bacteria were experimented. Based on morphological, physiological and 16S ribosomal RNA sequencing, the isolate was closely related to *Bacillus vallismortis*. Influences of various parameters such as incubation time, temperature and pH, carbon and nitrogen sources, various metal ions, agriculture wates, NaCI concentration, different surfactants on α-amylase production were examined.

Results: The optimum incubation time, temperature and pH for production of α-amylase was found 36th, 35 °C and 7.0, respectively. When compared with control, the amylase production increased approximately 10% in presence of Mn(II) and Ca(II). On the other hand, amylase production rised up 8.2%and 12.4% with Triton-X100 and Tween 20, respectively.

Keywords: α-Amylase production, *Bacillus vallismortis*, surfactant, heavy metal