

Isolation and Characterization of Psychrotrophs from Subterranean Environment

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We have collected water and soil samples from 10 meters to 1800 meters below the surface. Screening was conducted and we were able to isolate two psychrotrophic isolates and three chemoautotrophic strains. One of the psychrotrophic isolates, SN16A, was able to grow at temperatures between -5 and 37 degrees, while the other psychrotroph, KB700A, was able to grow between -10 and 30 degrees. Complete 16S rRNA of isolate KB700A was 98.7 % homologous with that of *Pseudomonas marginalis*. However, 16S rRNA of SN16A showed only 95.4 % identity at maximum with *Arthrobacter globiformis*, suggesting that the strain may belong to a novel genus. Our results suggest that subterranean environment is a good source for isolation of psychrotrophic microorganisms.