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ISOLATION, SCREENING OF ENDOGLUCANASE PRODUCING ACTINOMYCETES AND IDENTIFICATION OF THE POTENT ISOLATE B-PNG23

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Abstract

A total of 152 different actinomycetes isolates were recovered from samples that were collected from different ecosystems of Algeria. The desert soil of Bousaada gives the greatest number of actinomycetes compared to others soils. The first screening indicates that 63.15 % of the isolates were able to produce carboxymethyl cellulase enzyme. Isolates were evaluated for their cellulase activity by growing in carboxymethyl cellulose broth. B-PNG23 isolate is one of the isolates displayed a high enzyme activity of 0.92 IU/mL and specific activity of 2.09 U/mg proteins. These results indicate that the isolate B-PNG23 has an interesting potential for the production of endoglucanase activity. Furthermore, nucleotide sequence of the 16S rRNA gene (608 pb) of *Streptomyces* sp. B-PNG23 exhibited 100 % of identity with *Streptomyces* sp. SES404 16S rRNA genes.

Keywords: Algerian soils, carboxymethyl cellulases, identification, isolation, *Streptomyces*

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