



Production and characterization of extracellular polymeric substances by *Bacillus* sp. LNSP2103-3

Poster

Bioprocesses and emerging biotechnologies with halophiles , Industrial applications of halophilic enzymes and metabolites

Joseph Guevara Luna¹, **Rubi Santibañez Gomez**¹,
María Soledad Vásquez Murrieta¹.

(1) Instituto Politécnico Nacional, Departamento de Microbiología, Laboratorio de Biotecnología Microbiana, Escuela Nacional de Ciencias Biológicas, Prol. de Carpio y Plan de Ayala s/n, Ciudad de México, México.

josephguevara.28@gmail.com

One of the known strategies to tolerate the presence of high salt concentrations is the synthesis of extracellular polymeric substances, known as EPS, high molecular weight polymers secreted into the extracellular environment that have demonstrated applications in various industries due to their structural and functional properties, such as in the food, agricultural, and pharmaceutical industries. Different species of the *Bacillus* genus are recognized for their high efficiency in EPS synthesis under environmental stress conditions, such as high salinity, extreme pH, or nutrient limitation. The objective of this work was to characterize the EPS produced by the *Bacillus* strain LNSP2103-3 isolated from Los Negritos, Villamar, Mexico, as an EPS producer under 10% salts. **Results:** The EPS presented a content of 12% carbohydrates and 0.6% protein, as well as concentration-dependent antioxidant activity, up to a total of 14% inhibition of the DPPH radical. **Conclusion:** The EPS produced by the LNSP2103-3 strain showed promising properties for biotechnological applications, with possible application in the food industry.

Palabras Clave

(1) *Bacillus*, (2) extracellular polymeric substances, (3) antioxidant.

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