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Research Abstracts

Evaluation of Vinasse Derived From the Ethanol Manufacture as Substrate for Production of Useful Microorganisms

Claudia J. Hernández-Guerrero¹*, Diana R. Barajas-Sandoval¹, R. Noemí Aguila-Ramírez¹, Francisco Javier Vergara-Camarena², Sergio F. Martínez-Díaz¹

¹Instituto Politécnico Nacional-Centro Interdisciplinario de Ciencias Marinas (Departamento de Desarrollo de Tecnologías), La Paz, B.C.S., México.

²X-NAX, S.A. de C.V., Zapopan, Jalisco, México.

Abstract: During the distillation of ethanol, vinasse is the main byproduct reaching about 90% of the volume of fermentation, and their final disposal is a serious environmental problem. The aim of this study was to evaluate the vinasse as a substrate to produce different strains of probiotics for aquaculture and biomass of *Bacillus thuringiensis* and *Spirulina maxima*. Culture media formulated with 25, 50, 75 and 100% of vinasse, alone and supplemented with molasses were utilized to cultivate bacteria. *Spirulina* was cultured in Jourdan medium supplement with 5, 10 and 20% of vinasse. All experiments were carried out by triplicate. The optimal conditions to produce bacteria were at 25% and 50% of vinasse. The yield of *B. thuringensis* at 24 h was similar in media supplemented with vinasse to commercial medium (TSA). The media supplemented with vinasse allows a better development of *Spirulina*, than the typical Jourdan medium. The results obtained in this study support the idea that it is feasible to use waste from the alcoholic fermentation for the production of useful microorganisms.

Keywords: Vinasse, Bacteria, Probiotics, Spirulina

Corresponding author: Claudia J. Hernández-Guerrero * e-mail corresponding author, cguerrer@ipn.mx