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BTX compounds tolerant bacteria

Rocio Perez-y-Terron, Sthefany Woolrich-Zavaleta and Rebeca D Martinez-Contreras
Autonomous University of Puebla, Mexico

Economic development and maintenance of Mexico has been based mainly in different productive sectors of the oil industry among which the exploration, production, refining and processing of crude oil. This has led to the presence of hazardous waste, reporting environmental contingencies approximately 550 per year for spills that contaminate water and soil, causing the loss or deterioration of natural bioprocesses. Lagoon Mecoaacan located in the State of Tabasco, is the most affected area by the presence of xenobiotic compounds BTX (benzene, toluene and xylene), due to the activity of the Maritime Terminal Dos Bocas because of its proximity, leads to the exit accidental hydrocarbon and wastewater discharges through the marine diffuser. This study is based on analysis of bacterial tolerance to BTX compounds by agar diffusion technique, where concentrations of 80000 to 840000 ppm were examined for each of the compounds. Our results show that 51 strains recovered from samples of contaminated water from the lagoon and only 22 showed tolerance to BTX, registering a minimum inhibitory 80000, 160000 and 260000 ppm concentration xylene, toluene and benzene respectively. These 22 strains were identified phenotypically result 8 distinct species, which belong to the genera: *Burkholderia*, *Pseudomonas*, *Sphingomonas*, *Aeromonas*, *Rhizobium* and *Vibrio*. Further studies of these bacterial strains will allow us to form consortia for the purpose of bioremediation to degrade or modify these and other toxic aromatic compounds.

Biography

Rocio Perez-y-Terron has completed her PhD in Biotechnology at the National Polytechnic Institute. He is currently a Research Professor in the Laboratory of Microbiology and Molecular Biology, Biology Faculty of the Autonomous University of Puebla. She has studied microbial ecology, microbial pathogenicity and bacterial antagonism. She has published articles and is a Reviewer in various international journals.

rocperez33@hotmail.com

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