Aislamiento y selección de bacterias con capacidad de degradar celulosa y almidón [

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text (article)

Analítica

The intention of isolating and selecting autochthonous bacterial strains with potential to degradation of cellulose and starch; five different environments were chosen (organic area, AO; conventional area, AQ; Forest, BM; sugarcane area, RC and Compost, C) which were located on plates-traps containing modified nutrient agar, and soil samples taken from those sites. Plates-traps were collected at 24 hours and taken to laboratory for sampling of visible colonies. Soil samples were serially diluted. In both cases, it was plated by exhaustion and purifying to obtain a strain collection of 93 strains (71 from soil samples and 22 traps). All agar seeded in carboxy methyl cellulose (CMC) to determine the cellulolytic activity by revealing them with congo red from the hydrolysis halo. Amylolytic activity was assessed by placing the strains in an environment whose only energy source was starch as revealed with Lugol's iodine solution. AO-19 strain isolated from the organic area made the largest halo cellulose degradation 12.33 IU/mm while BM-1 strain isolated from the forest obtained 9.33 IU/mm diameter of starch hydrolysis halo. AO-19 strain has potential to be considered in obtaining bacterial bio preparations or composting organic fibrous material
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