World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:9, No:01, 2015

Antifungal Lactobacilli Affect Mycelium Morphology and Protect Apricot Juice against Mold Spoilage

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Abstract : Preservation of foods mainly depends on delaying or inhibiting the growth of spoilage microorganisms, and antifungal activity of lactic acid bacteria is one of the technological properties researched. The antifungal activity was screened with overlay method of six strains of lactic acid bacteria (Lactobacillus plantarum LB54, LB52, LB51, LB20, LB24 Lactobacillus farciminis LB53) isolated from silage, camel milk and carrot against Aspergillus sp. Lactobacillus plantarum and farciminis inhibit spore germination and mycelia growth of Aspergillus sp., the production of antifungal compounds by these strains was detectable after 4h of incubation at 30°C and show total inhibition after 24h in liquid media, but in solid media showed a good inhibition after 96h of incubation, these compounds cause malformations in the thalle, conidiophore and conidia. These strains could be used as agents of biopreservation since have the ability to retard Aspergillus sp., growth in apricot juice with and without sugar conserved in refrigerator but not in bread.

Keywords : lactobacillus, antifungal substances, aspergillus, biopreservation
Conference Title : ICFAPE 2015 : International Conference on Food and Agricultural Process Engineering
Conference Location : Jeddah, Saudi Arabia
Conference Dates : January 26-27, 2015