Biosurfactants from *Trichoderma* filamentous fungi : a preliminary study.

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Streszczenie

Biosurfactants represent a structurally diverse group of secondary metabolites produced by bacteria, yeasts, and filamentous fungi. Their character is often associated with numerous additional properties. The observation of Trichoderma fungi of various species used as a source of bioinhibitors against pathogenic plants fungi focuses attention to the often quite specific behavior of preparations in contact with, among others, plant leaves, dependent on strain. Thus, an evaluation of the selected strains belonging to the species: T. atroviride, T. citrinoviride,T. reesei and T. harzianum was conducted towards their capability of the extracellular secretion of surfactants, with a simultaneous attempt to pre-determine their chemical nature. Two mineral-organic media were used for this purpose, and the culture fluid was extensively tested using a variety of methods. A decrease in surface tension was observed in culture fluid of each tested strain, especially T. citrinoviride HL and C1. The results strongly depended on medium composition, of which Saunders 1 and MGP 1 were most beneficial. The secreted compounds were further analyzed to pre-determine their chemical nature using IR, GC, and NMR. In the case of most efficient biosurfactant producers, a lipopeptide structure of the surfactants was concluded.

Słowa kluczowe

Trichoderma citrinoviride, biosurfactants, IR, GC, NMR

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