

Potential of Developed Microbial Biofilms in Generating Bioactive Compounds

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Abstract: Generation of bioactive compounds using a developed fungal-bacterial biofilm is described. Here, a developed *Penicillium* sp.-*Bradyrhizobium elkanii* SEMIA 5019 biofilm was used in comparison with the constituent microorganisms' monocultures. Treatment broth cultures were centrifuged, supernatants freeze-dried and analyzed for monosaccharides as test compounds, using gas-liquid chromatography. The biofilm was observed to generate a higher number of detectable compounds with relatively high concentrations in comparison to the monocultures. The manipulative nature of this technology can be used to produce different or novel compounds by combining a variety of microbes, by changing their carbon source or altering the culture conditions.

Key words: Biofilms, bioactivity, monosaccharides, gas-liquid chromatography
