

## **Microbial surfactant**

### **ABSTRACT**

Microbial surface active agents (biosurfactant) have recently been recognized as important microbial products with properties applicable in a number of industries and processes. Being capable of lowering surface- and interfacial- tension, biosurfactants are today thought to be efficient replacers and possible enhancer of chemically synthesized surface-active agents. Some of their superior, such as absence of toxicity, biodegrade ability, and their specificity, make these microbial products both attractive for specific industries and environmentally acceptable. Most of the emphasis to date has been on the application of biosurfactants in petroleum-related activities and industries. They offer attractive products for use in enhanced oil recovery, in cleaning oil spills, in oil emulsification, and in breaking industrially derived oil-in-oil emulsions. Their in situ and ex situ utilization in enhanced oil recovery represent attractive alternatives. More recently, other applications of biosurfactants have also been under development. These include applications in the food industry, pharmaceuticals, and cosmetics, this article emphasizes the effect of nutritional and environmental factors on the production of biosurfactants.

**Keyword:** Biosurfactant; Classification; Carbon sources; Nitrogen sources; Production