

**MICROBIAL PRODUCTION OF RHAMNOLIPIDS FROM ISOLATE *PSEUDOMONAS SP.*
—A MONO-RHAMNOLIPID PRODUCER**

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Rhamnolipids are a class of glycolipid biosurfactants containing mono- or di-rhamnose as the sugar moiety linked to β -hydroxylated fatty acid chain(s). Rhamnolipids are used in many consumer products such as cosmetics, food and pesticides, due to their excellent surface and biological activities. The main rhamnolipid producer is *Pseudomonas aeruginosa*, an opportunistic pathogen which may cause safety and health concerns during large-scale production. Furthermore, cost of microbial production of rhamnolipids is more expensive as compared to that of the chemical surfactants. Therefore, extensive studies have been carried out to explore suitable and economical methods to obtain rhamnolipids in non-pathogenic strains.

In our study, we have isolated a rhamnolipid-producing strain capable of producing 2 g/L mono-rhamnolipids when supplemented with 8g/L glucose as the sole carbon source in 72h. The production of only mono-rhamnolipids eliminates the need for costly and laborious separation of mono- and di-rhamnolipids. The mono-rhamnolipid yield can be further improved through optimization of medium composition and fermentation conditions.