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EFFECT OF pH ON PHA PRODUCTION FROM DIFFERENT STREPTOMYCES SPECIES

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ABSTRACT

The problem of pollution which has been caused by the constant utilization of man-made polymers has drawn substantial attention related to the growth and production of biodegradable polymer. Polyhydroxyalkanoate (PHA) is known to be intracellular addition in some bacteria. PHA has the parallel structural properties of many conventional plastics, but it can be produced from renewable resources which gets biodegraded easily. The present work is an attempt that PHAs can be substitutes to conventional plastics. A research investigation was felt in order to explore the indigenous bacterial culture from PHA production. Four *Streptomyces* species *e.g. Streptomyces diastaticus, Streptomyces cyaneus, Streptomyces microflavus and Streptomyces achromogens* adopted effectively in harsh environment state e.g. pH. The culture medium is used as liquid or gel is designed to support the growth of microorganisms. There are different types of media for growing different types of cells. It was revealed in light of present investigation that there is limitless demarcation for the use of biodegradable polymer which can be allied to various sectors.

KEYWORDS: *Streptomyces*, Harsh Environmental, Rpm, Polyhydroxyalkanoate and Bioplastic