

***Parthenium hysterophorus*: LOW COST SUBSTRATE FOR THE PRODUCTION OF
PHA**

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Abstract:

Parthenium hysterophorus is considered as one of the most devastating and hazardous weed; abundantly available in several parts of the world, it is utilized as a substrate for the production of Polyhydroxyalkanoates (PHA). Bacterial strain *Bacillus aerophilus* isolated from oil contaminated soil was investigated for its potential to accumulate PHA. Utilizing the cheap substrate, the highest yield of PHA content obtained was 5.4 g/L PHA with 11.92 g/L cell biomass. The produced PHA was extracted using sodium hypochlorite method and the polymer synthesized was characterized as Polyhydroxybutyrate (P3 (HB)) by FT- IR and NMR analysis.

Keywords: Biopolymer, *Bacillus aerophilus*, biomass, *Parthenium hysterophorus*, P3 (HB).