

**“Biological transesterification of poultry waste to biodiesel using
bacteria isolated from chicken feather”**

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Abstract

The need to find a source for bio fuel, an alternative to non-renewable resources is an important task being faced by the world today. Waste management is another equally important sector which seeks our immediate attention. This project aims at utilizing poultry wastes for the production of biodiesel. Chicken feather, which is the major poultry waste, consists of 2-12% fats. This fat was extracted from feather by soxhlet extraction method using hexane as solvent. The extracted oil was converted into biodiesel by transesterification process. The transesterification process was carried out by enzymatic method where the enzyme lipase was used as catalyst. Lipase was produced from pseudomonas spp. which was isolated from chicken feathers. The content of biodiesel was determined by GC analysis.

Keywords: **Biodiesel:** Transesterification; lipase; extraction; chicken feather; Gas Chromatography.