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A PROJECT REPORT ON

"ENERGY RECOVERY FROM ORGANIC WASTE"

Under the Guidance of
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ABSTRACT

Resource recovery and recycle of organic waste is a major concern now-a-days all over the world. The unmanaged organic waste causes environmental pollution and consequently affects the public health so Composting is an opportunity for individuals and families to have a direct effect on a much larger problem. This paper deals with the Composting system which helps in two ways to reduce waste i.e. which uses waste biomass (such as kitchen refuse and agricultural wastes) for heating water as well as production of bioelectricity. Since they are simple and inexpensive to construct, use widely available materials, and require minimal technical expertise. When properly constructed they require minimal maintenance, are free of odors, no pose of public health hazardous. Two System have been constructed i.e. one for producing hot water for household activities using heat exchanger in compost bed and providing input of cold water to heat exchanger and obtaining hot water as output and another is Microbial Fuel Cells (MFC) using kitchen garbage to produce electricity. Microbial fuel cells are bio-electrochemical transducers that convert microbial reducing power (generated by the metabolism of organic substrates), into electrical energy. A rectangular acrylic container was used as the cell. The container was filled with well mixed kitchen garbage, leaf mold, effective micro-organisms and distilled water. Voltage increased rapidly during initial time then decreased because of reduced enzyme activity.

Key words: compost, heat exchanger, hot water, MFC, Bio-Electricity.