

## Utilization of Kitchen Waste inside Green House Chamber: A Community Level Biogas Programme

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**Abstract :** The present study was undertaken with the objective of evaluating kitchen waste as an alternative organic material for biogas production in community level biogas plant. The field study was carried out for one month (January 19, 2012-February 17, 2012) at Centre for Energy Studies, IIT Delhi, New Delhi, India. This study involves the uses of greenhouse canopy to increase the temperature for the production of biogas in winter period. In continuation, a semi-continuous study was conducted for one month with the retention time of 30 days under batch system. The gas generated from the biogas plant was utilized for cooking (burner) and lighting (lamp) purposes. Gas productions in the winter season registered lower than other months. It can be concluded that the solar greenhouse assisted biogas plant can be efficiently adopted in colder region or in winter season because temperature plays a major role in biogas production.

**Keywords :** biogas, green house chamber, organic material, solar intensity, batch system

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