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Benefit twice from NIIST waste treatment plan



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PILOT PLANT



➔ Pune-based firm to produce compact anaerobic digester

➔ Pollution-free unit can produce 500 litres of biogas daily

➔ Saving on LPG to offset initial investment

Lab to transfer technology to Pune-based company on June 4

The National Institute for Interdisciplinary Science and Technology (NIIST) here, a constituent laboratory of the Council of Scientific and Industrial Research (CSIR), is joining hands with a Pune-based company for the production of a compact domestic waste treatment unit that also generates biogas for household use.

The technology for the improved anaerobic digester developed by scientists at NIIST will be transferred to Mailhem Ikos Environment, a company specialising in waste management solutions, at a function to be held here on July 4.

The pilot plants that have been in operation for more than two years produces up to 500 litres of methane-rich biogas daily from one to three kg of biodegradable household waste, enough for more than two hours of cooking.

The plant works on the principle of anaerobic digestion for treatment of biodegradable biomass and the recovery of biogas.

“Unlike conventional biogas plants for treatment of household waste, it does not need water and does not discharge smelly effluents,” says senior principal scientist and project leader V.B. Manilal.

The process

The treatment involves a slow digestion process extending up to 100 days. The intensive biochemical reactions by the microbial growth in the digester break down the particulate matter, fats and complex molecules and lead to production of biogas.

The slurry produced as a by product can be used as manure in homestead vegetable gardens or flower pots. The pollution free system also prevents mosquitoes from breeding.

NIIST is transferring the technology to the Pune-based company for a licence fee of Rs.10 lakh and 5 per cent royalty on sales.

A. Ajayghosh, Director, NIIST, said the unit costing Rs.25,000 would be eligible for subsidy from the Central and State governments.

“The initial investment can be offset by the saving on cooking gas,” says Dr. Manilal, who claims to have cut LPG consumption by one-third on the pilot plant installed at his residence.

A larger version of the digester designed by NIIST for hotels and canteens is undergoing tests.

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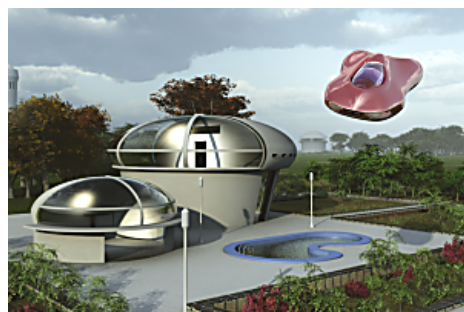
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