

Utilization of Biogas and Biomass from the Palm Oil Industry for New Bioproducts



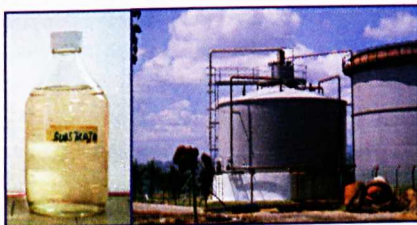
Universiti Putra Malaysia (UPM), Kyushu Institute of Technology, Japan (KIT) and FELDA Palm Industries Sdn. Bhd (FPI) are currently involved in a joint research and development project involving the utilization of effluent, biogas and biomass from the palm oil industry for the production of new bioproducts. Another goal of this project is to reduce the emission of greenhouse gases from the palm oil industry in Malaysia, incorporating the clean development mechanism (CDM) under the Kyoto Protocol. A 500ton pilot biogas fermentor was constructed, commissioned and currently in operation at FELDA palm oil mill in Serting Hilir, Negeri Sembilan.

The research and development activities and projects carried out includes improved biomethanation of palm oil mill effluent for green and renewable energy supply; production and recovery of organic acids for industrial use and for bioplastic production; and production of fermentable sugars from lignocellulosic residues by local microbes. The research project will also encompass the techno-economic study for the commercial production of the valuable products generated.



POME

Treatment



Organic acids 500 ton biogas plant

The first phase of the project from 2002-2004, involves a feasibility study and laboratory work, with a total funding of RM700,000. The second phase from 2004-2006 involves pilot scale operations at the palm oil mill, with a funding of RM3 million. UPM, KIT and FPI will jointly own the intellectual property developed in this research.

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