



Contribution ID: 274

Type: **Poster Presentation**

Batch anaerobic co-digestion of cow dung and donkey manure

Thursday, 14 July 2011 17:00 (2 hours)

Biogas from anaerobic digestion can be a solution to current and future energy needs in South Africa. One option for improving biogas yield of anaerobic digestion of organic matter is co-digestion. Cow dung and donkey manure were co-digested together at different mixing ratios. Total Solids (TS) and volatile solids (VS), ammonia-nitrogen, pH, alkalinity, volatile fatty acids (VFA) and chemical oxygen demand (COD) were determined by using the standard methods of the American Public Health Association (APHA). The pressure of the biogas was measured daily by means of a pressure gauge fixed on top on the batch biogas digester. Methane and carbon dioxide contents in the biogas were sensed by non-dispersive infra red sensors. Palladium/Nickel sensors were used for sensing hydrogen and hydrogen sulphide in biogas. Highest biogas yield was obtained for a mixing ratio of 50

**Level (Hons, MSc,
 PhD, other)?**

PhD

**Consider for a student
 award (Yes / No)?**

Yes

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

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Session Classification: Poster2

Track Classification: Track F - Applied and Industrial Physics