

Sampling Technique

- Sampling intervals in biogas plant
 - *Weekly during startup*
 - *Later, fortnightly*
 - *Monthly when the biogas plant shows a stable performance*
- For a standard biogas substrate analysis- approx. 500 mL sample volume is required
- For BMP (Biomethane potential) test
 - *sample needed-500 gms (if solid)*
 - *substrate sample needed- 1000 ml (if liquid)*

Sampling Technique...cont

- Sample bottles of PP or PET make (preferably in that order) to be used
- For microbe culture test, Polystyrene (PS) make sample bottles are recommended
- Sample bottle should have a wide opening
- Rinse the substrate containing lines sufficiently before sampling
- Fill the sample bottle completely and closely air-tight it
- Cool down the sample in cold water or ice pack (preferably less than 5 °C to eliminate any gas production)
- Mark the sample with a non-water soluble sticker and note the following:
 - *Date of sampling*
 - *Sample origin (pre-F, F, post-F or, storage)*
 - *Fermentation temp. measured at the time the sample is taken*



Sampling Technique...cont

- For heterogenous substrates, its recommended to source the sample from several points
- Sample from several collection points, if possible needs to be shredded and mixed well
- Keep collected samples refrigerated (<5 °C) during storage
- Preferably transport the sample within 24 hours from the sample collection
- Transport the samples using freezer pack at (<5 °C) to our lab
- For long-term sample storage and transport (more than one week)
 - *you may freeze the samples using dry-ice/ ice pack (not applicable for sample that needs to undergo microbial analysis or culture test)*

Samples for micro-biological test

- All samples must be shipped
 - cold, and not frozen (use freezer packs)
- Sample should remain upright.
- Samples that are not shipped properly may be rejected by the lab



Address for sending the sample

To,

Dr. Sachin Kumar

Department of Biochemical Engineering, Harcourt Butler Technical
University (HBTU), East Campus, Nawabganj, Kanpur, Uttar
Pradesh (PIN CODE: 208002).