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PORTABLE BIOGAS DIGESTER

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'Our Business is Industry…"

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PORTABLE BIOGAS DIGESTER

DESCRIPTION

The portable biogas digester is an airtight, oxygen free vessel fed with organic material where the microbial digestion takes place inside to produce gas. The major components of the portable biogas digester are the anaerobic digester and the gasholder. The material is either a plastic drum or fabricated metal or a combination of the two. The plastic material has a maximum capacity of 210 liters (0.21m^3) for the digester and 145 liters (0.145m^3) for the gasholder while the metal type material has a capacity of 450 liters (0.45m^3) for the digester and 530 liters (0.530m^3) for the gasholder. The substrates fed to the digester can be kitchen waste, animal manure and organic yard waste.

USES

The portable Biogas Digester converts the wastes into two (2) useful products, namely:

- fuel gas for cooking and lighting applications, and
- sludge as organic fertilizer or soil condition.

BENEFITS

- Easy to fabricate and install
- Transferrable
- Supplement energy needs of a small household
- Better waste management of agricultural, industrial and household waste
- Reduce groundwater contamination
- Reduce greenhouse gas emission by replacing the use of fuel wood and capturing of methane and carbon dioxide
- Production of organic fertilizer/compost

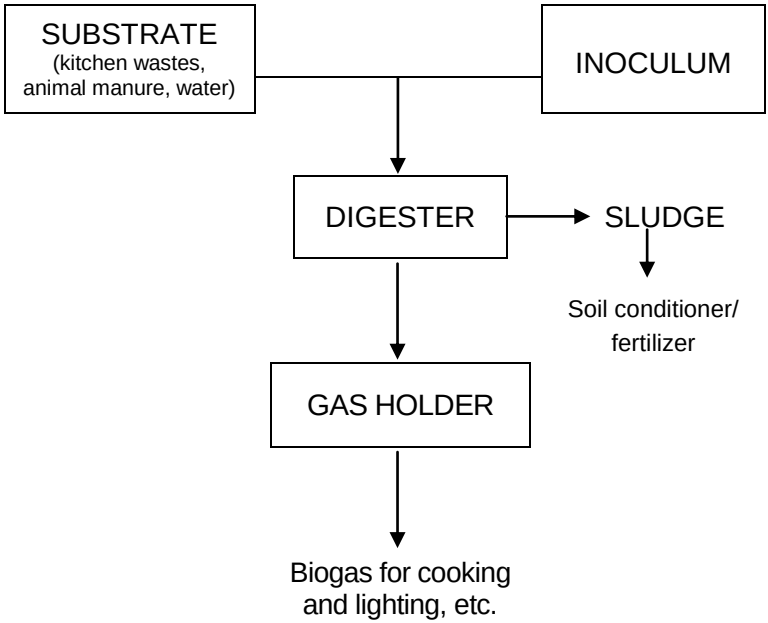
POSSIBLE SUBSTRATE FOR BIOGAS

- kitchen waste
- vegetable waste
- chicken dung
- cattle/pig manure
- human feces
- agricultural waste
- slaughterhouse waste
- other animal manure

BIOGAS COMPOSITION

Methane	CH_4	50-70%
Carbon dioxide	CO_2	30-40%
Hydrogen sulfide	H_2S	1-2%
Hydrogen	H_2	5-10%
Nitrogen	N_2	1-2%
Water vapor	H_2O	0.3%

FLOW PROCESS DIAGRAM



PICTURE OF THE BIOGAS DIGESTER