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**Innovating for a better world.** 

## **Akshaya Engineering Innovatives**

# Akshaya Biodigester

#### Food Waste (FW) •

FW = Left Over foods, Vegetables, Peels, Oil and Fruits.

• FW is the waste that is collected in the municipal bins / containers

• Sources of FW: Domestics, hotels, Food Outlets, commercial establishments, etc.

- It is consistently INCONSISTENT
- Design of the treatment facilities is difficult
- It is not hazardous; but the problem is its very large Quantity/Volume and stink.
- It is a problem in Cities / Towns / Municipalities; but not a big issue in Villages / Rural areas
- The problem is FW can be seen and smelled.







#### **Features of Biodigester:**

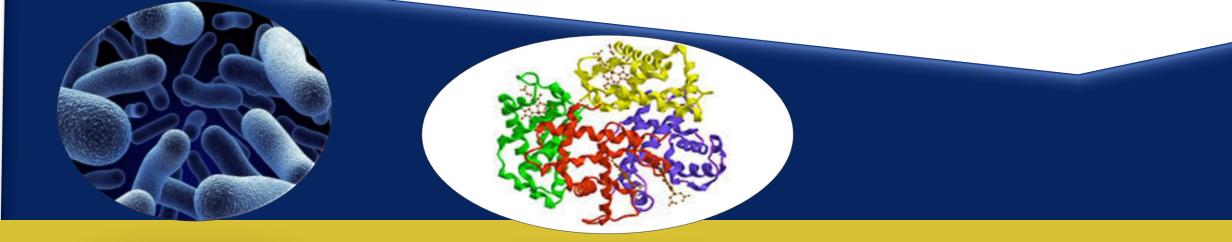
- •Eco-Friendly and 100% hazard free.
- •Single time feeding of bacteria inoculums throughout operational life.
- •Food waste in the bio tank is not visible.
- •No clogging of digester.
- •Fermentation container is made of MS with FRP lining.
- •Anaerobic bacteria can double its population within 6 to 8 hrs.
- •De-composes matter into effluent and gases.
- •The biodigester can function at temperature between  $5^{\circ}$  to  $50^{\circ}$  C.
- •Water outlet from biodigester can be used for watering plants in gardens.

#### **Advantages of Biodigester Technology:**

- •Less than 30% of conventional septic tank area is sufficient.
- •Completely eliminates need for human intervention for maintenance as no evacuation is required.
- •More than 99% of pathogens are killed and hence it is hygienic and healthy.
- More than 99% of waste is decomposed.
- •Low to moderate capital costs; No operating costs.
- •Requires no Power to operate, works on gravity flows.
- •Occupies less space
- •Requires zero maintenance
- •Stable against peak loads
- •Aesthetically pleasing and no Odors are produced.
- •Negligible sludge volume generated.



Akshaya Biogest-100



Biogas Production/kg of Waste = 0.45 Kg	
Food waste Considered per	100 Kg each Plant
day	
Commercial Cylinder	1 Commercial cylinder Per Day (19
Equivalent/day	Kg Weight)
Cost of Each commercial	Rs. 1250/Cylinder
cylinder	
No of commercial cylinders	30
replaced per month	
Cost recovery per month	Rs. 37,500/-
Recovery Per Year	Rs. 4,50,000/-

### **Available Models**



**Akshaya Biogest-D** 



#### **Akshaya Biogest-B**



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Come.. Let us Build a sustainable tomorrow



# Akshaya InnoTech

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