

vii. NIGHT SOIL BIOGAS PLANT



Night Soil cum Kitchen Waste based Biogas Plant is the integration of modern biogas technology with disposal of night soil and food wastes generated from hostel kitchens and dining halls for harnessing bio-based energy.

- The hydraulic retention time of the plant is 45-55 days and human waste from 40 persons will be required for the production of 1 m³.
- Biogas contains 65-70% methane and 30-35% carbon dioxide with traces of H₂S.
- Available at varying capacities from 1 m³ to any higher capacity, based on the feedstock availability.
- Cost of installation is Rs. 30,000 for 1 m³ and about Rs. 6.5 lakhs for 20 m³ capacity.
- Biogas is utilised for cooking, lighting through mantle lamps, running engines, electricity generation, etc.
- Biogas burners, lamps and engines are available with hourly capacities from 8 to 100, 4-5 and from 50 cubic feet, respectively.
- Major advantages are sanitation and hygiene, environmental improvement, energy generation, provision of community facilities, etc.