

Product Name :
Anaerobic Digester**Product Code :**
ALABS-A104-428ALTEC™**Description :****Anaerobic Digester**

- A bench top Anaerobic digester for waste water treatment studies
- Equipped with two 5 litre packed bed, upward flow reactors
- Each reactor has gas sampling & collection facilities
- Reactors may be operated in series or parallel flow arrangement, using variable speed peristaltic pumps
- Feed flow rate to each reactor can be accurately & independently controlled to any temperature between ambient and 55°C, using 200W heating jackets
- Thermostatic cut-out set to 85°C
- An instruction manual describing test and practical work capabilities, including details of a proven test substrate formulation is included

Description:

The anaerobic digester comprises two 5 litre upward-flow packed bed reactors with feed rate and temperature control facilities to allow steady, continuous operation at up to seven litres per day over periods of many days.

The reactors may be operated in series or parallel. A buffer vessel between the reactors permits discharge of excess flow from the first reactor when the second reactor is operated in series but at a lower flow rate. The flow rates to the vessels are set and controlled by calibrated peristaltic pumps.

The temperature of each reactor is controlled by an electric heating mat wrapped around the external wall. The temperature distribution within each reactor is maintained to $\pm 0.5^{\circ}\text{C}$. Reactor temperatures may be separately set at any desired value in the range ambient to 55°C .

Technical Details:

Reactors:

- Two, identical -nominal capacity:
- 5 litres packed volume:
- 4 litres 150mm dia x 250mm high

Reactor packing:

- 25mm diameter Bio-balls

Temperature control:

- For each reactor: 200W heating jacket with PID control from a temperature sensor positioned inside the reactor.
- Set point within range ambient to 55°C , the jacket is thermostatically protected by a cut-out set at 85°C .

Feed pumps:

- Two, identical peristaltic pumps – variable speed using 10 turn potentiometer to 4rpm supplied with three tube diameters: 1.6, 3.2 and 4.0mm, flow rates from 0.2 to 5.8 l/day

Gas collection Vessels:

- Two, identical – linear scale, 0-5 litre capacity



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