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Product Name :
Anaerobic Digester

Product Code :
LBNY-0005-1190007



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 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 .

The reactors may be operated in series or parallel. The flow rates to the vessels are set and controlled by calibrated peristaltic pumps. 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.

Liquid and gas sampling points are located at all strategic points around the reactors. Non-return valves and liquid seal syphon breaks are included in the process pipework to ensure each reactor operates at a constant volume without the ingress of air or the danger of accidental syphonic action.

The equipment is mounted on a vacuum formed plastic base with an integral drain channel to cope with spillages and wash down.

The gas off-take from each reactor is taken to a volumetrically calibrated collector vessel operating by water displacement. The collected gas can be exhausted from the vessel and the volume re-filled with water during a run without breaking the liquid seal. A constant head, liquid seal device ensures that the gas pressure in the reactor is maintained at a constant value throughout the test run.

Technical Specification :

A bench top Anaerobic digester for waste water treatment studies

Reactors may be operated in series or parallel flow arrangement, using variable speed peristaltic pumps

Equipped with two 5 litre packed bed, upward flow reactors

An instruction manual describing test and practical work capabilities, including details of a proven test substrate formulation is included.

Each reactor has gas sampling & collection facilities

Thermostatic cut-out set to 85°C .

Feed flow rate to each reactor can be accurately & independantly controlled to any temperature between ambient and 55°C, using 200W heating jackets.



Laboratory Instrument India