



4 cell liquid system and 4 cell solid system

Features:

- 4 bottle module
- Magnetic stirrer bases & bars
- Optional thermostatically controlled heater/cooler units
- Interfaces to supplied laptop computer
- May be used with solid phase vessels

Benefits:

- Aerobic/Anaerobic, liq/solid phase tests may be accommodated
- Not O₂ limiting enabling long term measurement
- Measures health of existing sludge cultures
- Assesses toxic affect of single & sequential discharges
- Predicts gas/energy production
- Determines composting completion
- Assesses success of land remediation



Typical Applications:

- (i) ASP process control
- (ii) Digester input control

Applications:

- Municipal & Industrial ASP monitoring & control
- Tanker discharge monitoring
- Digester management control
- Composting control
- Land remediation control
- Reaction kinetics study

RespSys: Quickscan is a 4 vessel aerobic/anaerobic respirometer for the laboratory measurement of oxygen consumption rate in aerobic cultures or gas production rate in anaerobic environments. Variants are available for both liquid and solid phase sample assessment. The principal of operation is based on the collection of gas in a vessel thus increasing the pressure. At a preset level this gas is then discharged to waste, the whole operation being governed by high precision pressure sensors and solenoid valves. The volume of each "discharge packet" has already been calibrated under standard conditions. This technique is equally applicable to aerobic gas utilisation or anaerobic gas generation. Each respirometer system comprises three basic elements: reactor vessels +stirrer base, flow measuring & interface module, and computer for data processing and storage. A fourth optional item is the water bath + heating only or heating+cooling system. Windows Software is supplied preloaded onto a computer, and data files may be manipulated in excel if required. Graphs, tables & reports may be printed out directly. The respirogram or gas production may be viewed in real time on screen. Special solids phase vessels are available for soil or compost studies.



System Specification

AER – Quickscan:

Operational Principle: Gas utilisation or production measurement using digital flow measurement techniques.

Equipment items:

4 cell flow measuring module
Interface module
Laptop Computer
MS304 Magnetic stirring base
Water Bath + Cover
Temperature control module
Reaction vessel size: 125ml – 500ml
Electrical requirement: 110-240VAC 60-50 Hz
Temperature of operation: 5-70 °C
Read out interval: 1-720 mins

Computer System:

Laptop with preloaded software.

Data Format:

Cumulative gas flow in ml or mg
Gas flow rate in ml/hr or mg/hr
Real time charts and tables
User selectable channels for display in one chart/table.
ASCII format (filename.csv) for direct import into excel and equivalent.

System Performance

Minimum flow rate detection	aerobic	0.3mg/hr
Minimum flow rate detection	anaerobic	0.25ml/hr
Maximum flow capacity	aerobic	2160 mg/hr
Maximum flow capacity	anaerobic	1800 ml/hr

Ordering Information

When placing an order it is important to indicate the following requirements to our sales staff:

1. Is the application for aerobic, anaerobic or solid phase application?
2. What reactor sizes are required (std. 500ml), 125ml, 250ml also available
3. Is a water bath required?
4. Is heating only or heating and cooling required?

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