



Innovation in Environmental & Process Technology

We **Understand** Water & Waste Water Monitoring

## AER 200



### WASTE WATER RESPIROMETRY



#### Features:

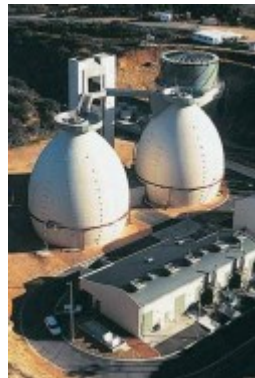
- 8 bottle modules
- Magnetic stirrer bases & bars
- Up to 3 modules run on one interface module
- Each module may be used in a different mode simultaneously
- Optional thermostatically controlled heater/cooler units
- Interfaces to your computer

#### Benefits:

- Aerobic/Anaerobic, liq/solid phase tests in the same unit
- Not O<sub>2</sub> limiting enabling long term measurement
- Measures health of existing sludge cultures
- Assesses toxic affect of single & sequential discharge
- Predicts gas/energy production
- Determines composting completion
- Assesses success of land remediation

#### Applications:

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



**RespSys: AER 200** is a multi-bottle 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 very simple, i.e. counting numbers of gas bubbles, the volume of which has already been calibrated under standard conditions. This technique is equally applicable to aerobic gas utilisation or anaerobic gas generation. Bubble counting is achieved by detecting the interruption of an IR light beam by a photosensitive cell. Each respirometer system comprises four elements: reactor vessels +stirrers and temperature control, Bubble counting module, interface module and computer. 3 bottle sizes and two flow cell sizes are available, and either heating only or heating+cooling systems may be provided. Windows Software is supplied for deployment on your 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. Up to three 8 bottle bases may be deployed at the same time with just one interface unit.

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### System Specification

Operation principle	Gas utilisation or production measurement using gas bubble counting techniques
Equipment items:	8 cell flow measuring module Interface module Computer/keyboard/monitor – (not provided) MS8-300 Magnetic stirring base Water Bath + Cover Temperature control module Reaction vessel size: 125ml – 1l Electrical requirement: 110-240VAC 50-60 Hz Temperature of operation: 5-70 oC Read out interval: 1-720 mins
Computer System:	Pentium 100MHz CPU with Windows XP or below. 500Mb hard disc drive minimum SVGA colour monitor CD drive
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.

### Transmitter Specification

		Aerobic Cell	Anaerobic Cell
Min flow detection	Normal cell	0.078 mg	0.06ml Hi
	Flow cell	0.15 mg	0.12 ml
Max flow capacity	Normal cell	850mg/hr	650ml/hr Hi
	Flow cell	1600mg/hr	1250ml/hr
Calibration precision		<1% Cv	< 2% Cv
Measurement precision		<3% Cv	<3% Cv

### Optional

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, 1l, also available
3. Is a water bath required?
4. Is heating only or heating and cooling required?
5. Is the standard flow cell or anaerobic flow cell required (540 and 1500 ml/hr max respectively)
6. How many base units are required?