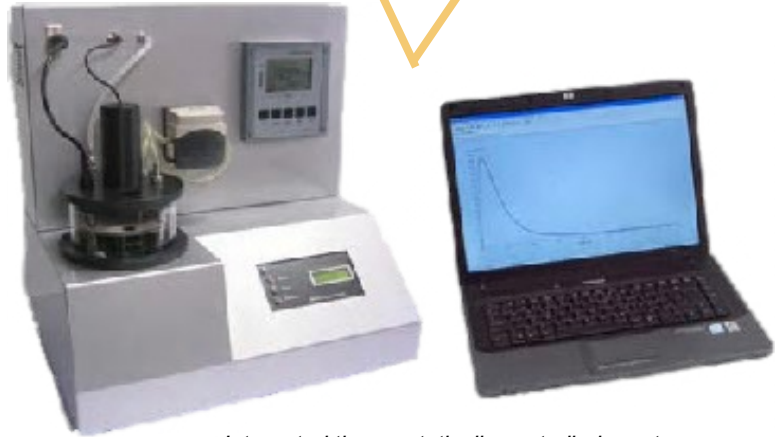




Optional adaptation for testing biomass carriers



Integrated thermostatically controlled reactor vessel, air supply and DO sensor

Features:

- Internal Air compressor
- Maintenance free DO probe
- Small with carry case
- Integral thermostatic control system
- "Open" system
- Three operational modes
- Powerful data processing software

Applications:

- Municipal & Industrial ASP monitoring for sludge activity
- Toxicity testing
- Influent treatability testing
- Determination of Kinetic constants for modelling
- Nitrification assessment
- Determination of easily degradable fractions
- Oxygen requirement determination
- Process parameter optimisation for ASP's
- Bio-augmentation control

Benefits:

- Not O₂ limiting enabling long term measurement
- Easily transportable
- Easy to use
- Low maintenance
- No gas cylinders required
- Automatic Respirogram generation
- Test substances may be added at any time
- Total oxygen uptake and respiration rate at any time may be viewed
- Easy report production



Typical Application:
ASP process control

RespSys: BM-EVO is a single bottle aerobic respirometer for the laboratory measurement of oxygen consumption rate and derived parameters in aerobic cultures. It is an open system, allowing additions of test substances or nutrients throughout the testing period, unlike those respirometers based on pressure reduction techniques. It also supplies air to the culture, hence never being oxygen limiting like some simpler barometric systems. The measurement principal is that of DO concentration measurement over time. Temperature stability is achieved with a self contained peltier heating/cooling system.

Three modes of operation are available: a. Static - this just measures a single oxygen decay of a pre-aerated sample, giving the OUR or SOUR for that sample. Very useful for rapid checks on ASP functionality. b. Cyclic – This measures multiple oxygen decay curves between fixed DO set points, allowing construction of a long term respirogram. c. Dynamic – This measures the variation in respiration rate through the treatment of a sample. Max respiration rates are determined as are total oxygen demands. It is particularly useful for rapid comparative tests, cumulative oxygen requirement tests, relative bioactivity tests, Kinetic parameter determinations.



System Specification

BM-EVO	Batch, closed circulation circuit, laboratory respirometer
Operational Principle:	Measurement of DO consumption with time using an electrochemical DO probe.
Range:	OUR :3-700mgO ₂ /l.h , Consumed oxygen: 10-30000 mg/l, Biodegradable & readily biodegradable COD: 10-30,000mg/l
Respiration rate Repeatability:	+/- 0.5% (under identical conditions)
Respiration rate accuracy:	+/- 0.2%
CO, bCOD accuracy:	+/- 10%
Min response time for Rs:	1 sec
Temperature range:	10-50 deg C
Temperature control:	automatic using peltier device
Oxygen Sensor:	t98% < 60 secs, maintenance free, air calibration.
Equipment items:	1 Reactor vessel + integral thermostatic control Max usable vol. 1.2 litres Min activated sludge volume 600ml Max substrate vol. 600ml Min substrate vol. 1ml PC + operating software (provided) Interface for PC Circulating pump DO sensor and transmitter (built in) Electrical requirement: 230VAC 50/60 Hz, 800W Analyser dimensions – 500x400x460mm (wxdxh) Weight: 37kg
Computer System:	Program environment: - Windows 2000, XT, NT, Vista File Types: rsn (BM-T) & CSV (Excel) Windows compatible Security file generation – Automatic Personal file generation – BM-T program storing mode Data entry – via PC keyboard

System Features

Individual assay configurations
Open assay system – allowing substance addition during assay
Graphic and tabular data display
Zoom capability on graphics
Respirogram overlay capability – for easy comparisons
Manual input of VSS – to permit SOUR calculation
User programmable data collection rate
Auto temperature control and display
Data export in excel format – for easy manipulation and reporting

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. Is a biomass carrier adaptation required?
3. Is a transportation case required?
4. Would training at Surcis (Spain) be required?

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