

RESPIROMETER

Respirometer is a device that measures respiration of living organisms. Respirometer determines aerobic or anaerobic biodegradability of solid or liquid samples in various applications.

Principles

Respirometer measures O₂ and CO₂ concentration in flow through the sample under controlled conditions. Additional gases can also be measured.

Applications:

- 🌿 **ISO 14855-1, ASTM D 5338** - Biodegradability of plastics in solid medium;
- 🌿 **ISO 14852** - Biodegradability of plastics in aqueous medium;
- 🌿 **ASTM D6691; OECD 301B**, and others;
- 🌿 Organic waste (solid or liquid samples);
- 🌿 Food production;
- 🌿 Compost biological activity;
- 🌿 Wastewaters;
- 🌿 R&D in biotechnology, biology, ecology and pharmacy.

Advantages

- 🌿 Modular design (upgradable)
- 🌿 Plug & Play design (easy to install, use and maintain);
- 🌿 Laboratory or industrial use;
- 🌿 Suitable for solid and liquid samples;
- 🌿 Aerobic and anaerobic measurements;
- 🌿 6, 12, 24, 48 or more channels;
- 🌿 MFC (mass flow controller) for each channel;
- 🌿 Different flow configuration (0-200ml/min, 0-1l/min, or more);
- 🌿 Flow is set for each channel separately;
- 🌿 Optional additional sensors: CH₄, H₂S, H₂, VOC, etc;
- 🌿 Temperature range: 5°C - 70°C;
- 🌿 Automatic humidification and condensate removal system;
- 🌿 Temperature, flow, pressure, humidity measurements;
- 🌿 Flow leakage alarm;
- 🌿 Various sizes of vessels;
- 🌿 User friendly software with excel export files;
- 🌿 Remote desktop control;
- 🌿 Laboratory air pump;
- 🌿 Can be connected on internal air supply system;
- 🌿 No special connections required;
- 🌿 Only 2 multitube cable connection for 12 channel system;
- 🌿 Suitable for various applications in different fields.



ECHO Respirometer

Technical specifications

-  Dimensions - Control unit: 60 x 60 x 60 cm, Weight: 50kg;
-  Dimensions - Thermostatic chamber: 60 x 60 x 105 cm, Weight: 70kg;
-  O₂ and CO₂ sensors (additional sensors on request);
-  MFC +/- 1,5% FS: 0-200ml/min or 0-1l/min;
-  2 connecting multtube cables;
-  Vessels for solid medium measurements - 2,8l;
-  Vessels for liquid medium measurements - 125ml - 1000ml;
-  AIO computer with process control software.



36 channel ECHO Respirimeter

Gas sensors ranges

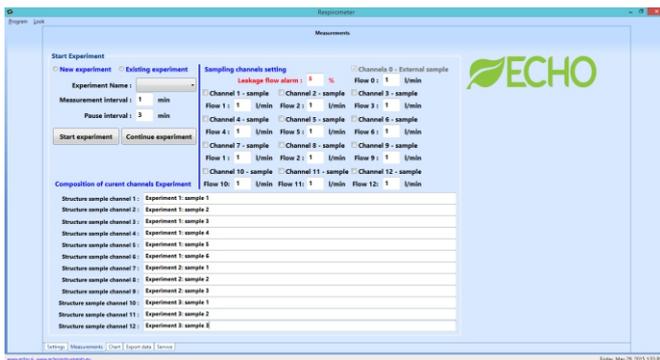
-  Sensor O₂: Range 0-25%, Accuracy: 2%;
-  Sensor CO₂: Range 0-2000ppm, Accuracy: 2%;
Range 0-5000ppm, Accuracy: 2%;
Range 0-1%, Accuracy: 2%;
Range 0-5%, 0-10%, 0-30%, 0-100%, Accuracy: 2%;
-  Sensor CH₄: Range 0-5%, Accuracy: 2%;
Range: 0-10%, 0-30%, 0-100%, 100%, Accuracy: 2%;
-  Sensor H₂S: Range: 0-100 ppm to 0-1000ppm, Accuracy 5%.



Vessel for solid samples

Vessel for liquid samples

ECHO Respirimeter Software ERS 12



Start screen



Measuring screen



CO₂ concentration



CO₂ production