



Foto Respirometer Biodegradation measurementst in ALGAE environment

Foto-respirometer is a new device that measures respiration of living organisms under controlled conditions. Foto-respirometer simulates the natural conditions in algae grow environment. With foto-respirometer measurements of different algae grow and reactions of different substances like bioplastic or wastes on algae are possible. The system measures O₂ and CO₂ concentration under controlled conditions and controlled light intensity conditions. The system will be in production in 2021/2022.

Applications:

- Bioplastic degradation in marine environment;
- Algae production and ecology;
- Effect of pollution in algae environment;
- R&D in biotechnology.

Advantages:

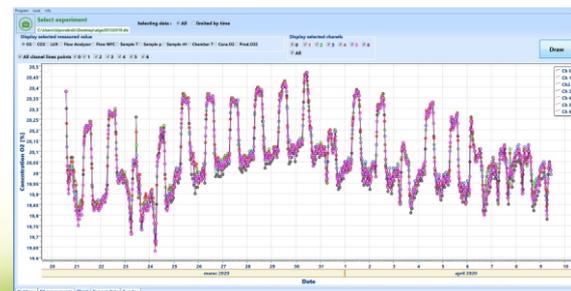
- Modular design (up gradable);
- Lighting with changing wavelength and intensity of light;
- Plug & Play design (easy to install, use and maintain);
- Laboratory or industrial use;
- Anaerobic or aerobic measuring conditions;
- Preparing different gas concentrations with gas mixing module;
- Mixing with adjustable mixing speed for each photo reactor;
- 6, 12, 24, 36, 48, 60 or more channels;
- MFC (mass flow controller) for each channel;
- Different flow configuration;
- 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;
- User friendly software with excel export files;
- Remote desktop control;
- Laboratory air pump;
- No special connections required.

Technical specifications

- Dimensions - Control unit: 60 x 60 x 60 cm;
- Dimensions - Thermostatic chamber (6 ch): 62 x 65 x 110 cm;
- O₂ and CO₂ sensors (additional sensors on request);
- MIC +/- 1,5%, Range 0-500 ml/min;
- Vessels for algae samples – 2000 ml;
- Vessels for algae samples (controlled LED lighting);
- AIO computer with process control software.



Vessel for algae samples with LED lights



ECHO software