

# COMPACT GAS ANALYSER MS GAS-100



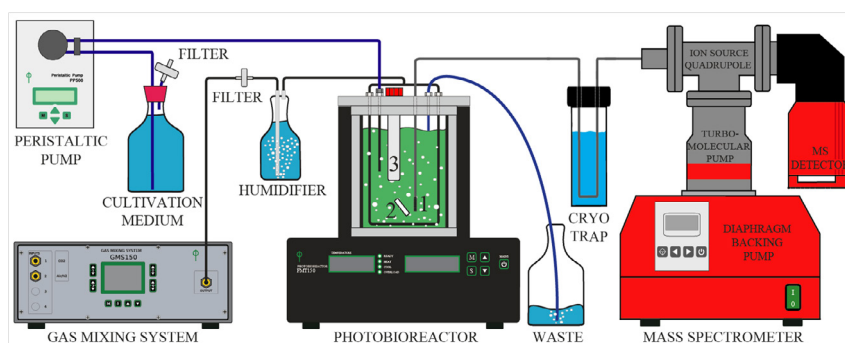
**NEW!**

## Key Features

- Real time, long-term analyses of multiple gases and volatile species by a single device
- Accurate, sensitive and rapid measurements
- Membrane based inlet or needle valve inlet for atmospheric measurements and/or special gaseous and liquid applications
- Highly efficient removal of water molecules by Stirling cooler water trap for significant enhancement of ion source lifetime
- Configurable for gas exchange analyses on whole plants, leaves or on cell suspensions
- User friendly software interface

**Rapid and accurate real-time analyses of gases and volatiles in liquid and/or gaseous environment**

- Mass sensitive spectrometer
- Highly efficient vacuum system
- Unique Stirling cooler water trap
- Precise capillary inlet



*Scheme of MS GAS-100 connections with photobioreactor*

## Technical Specifications

- **Ion source**
  - Electron ionization
  - Two independent filaments
- **Quadrupole mass analyzer**
  - Mass scales available: 1–100, 1–200 and 1–300 amu
- **Detector types**
  - Faraday: sensitivity < 10 ppm
  - Secondary Electron Multiplier (SEM): Sensitivity < 100 ppb
  - Response Time < 20 s
- **Stirling cooler water freezing trap**

## Applications

- **Gas exchange kinetics analysis** (CO<sub>2</sub>, O<sub>2</sub>)
- **Nitrogen fixing species** (N<sub>2</sub>, C<sub>2</sub>H<sub>2</sub>)
- **Biofuels** (H<sub>2</sub>, CH<sub>3</sub>CH<sub>2</sub>OH, hydrocarbons)
- **Photorespiration with labeled <sup>18</sup>O<sub>2</sub>**
- **Isotopic distribution analysis**
- **Air and water pollution**
- **Gas pollutants** (CH<sub>4</sub>, H<sub>2</sub>S, NO<sub>x</sub>, SO<sub>2</sub>, CS<sub>2</sub>, CO, ...)
- **Volatile organics, solvents**

For additional information, please contact us at [info@psi.cz](mailto:info@psi.cz)

[www.psi.cz](http://www.psi.cz)

**Reference:** Zavřel T. *et al*, 2016. A quantitative evaluation of ethylene production in the recombinant cyanobacterium *Synechocystis* sp. PCC 6803 harboring the ethylene-forming enzyme by membrane inlet mass spectrometry. *Bioresource Technology* 202, p. 142–151.