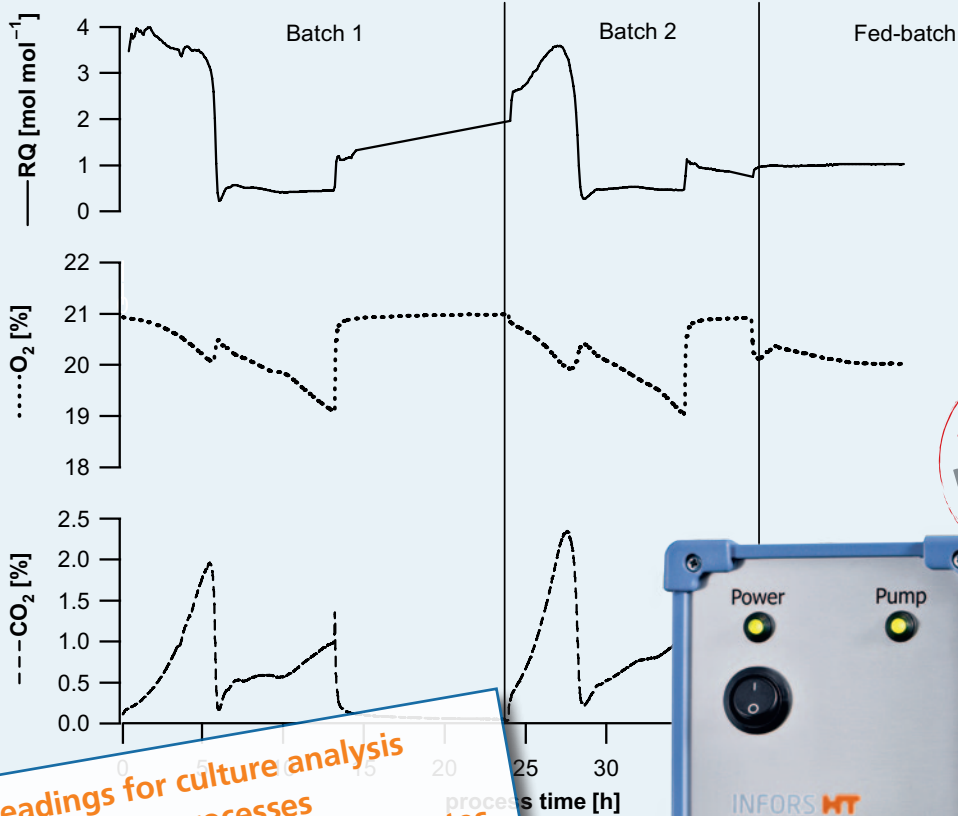


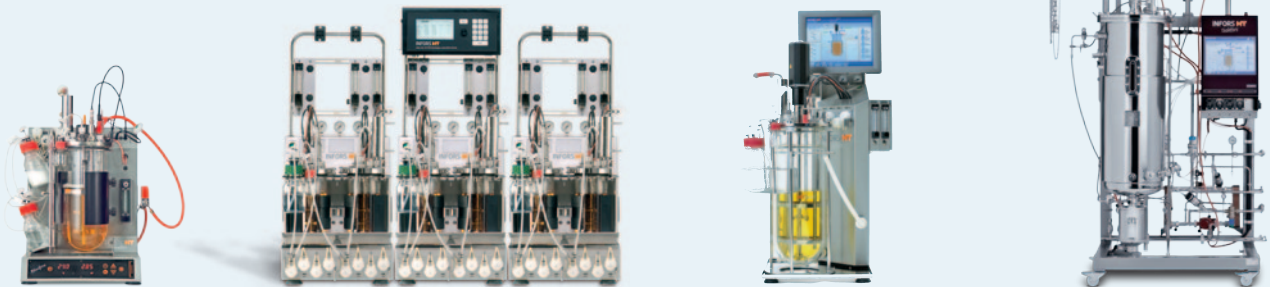


Gas Analyser

O₂ and CO₂ analysis for metabolic studies and bioprocess control



- ▶ Immediate readings for culture analysis
- ▶ Precision control of bioprocesses
- ▶ Real-time O₂ uptake and CO₂ evolution rates
- ▶ Calculation of respiratory quotients (RQ)
- ▶ Compatible with other bioreactors



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May be subject to technical amendments. Product images examples only.

INFORS HT

Real-time understanding of bioprocesses

▶ Immediate readings for culture analysis

Direct deductions as to the condition of the culture can be made during the actual bioprocess from the O₂ and CO₂ readings.

▶ Precision control of bioprocesses

The Iris software allows the calculation of parameters such as the CO₂ evolution rate (CER), the O₂ uptake rate (OUR) and the resulting respiratory quotient (RQ). This in turn makes it possible to adopt a systematic approach to bioprocess control, to maintain specific metabolic states and to prevent O₂ limitations or substrate limitations.

▶ Compatible with other bioreactors

The gas analyser can be operated with both bench-top bioreactors and in-situ sterilisable bioreactors. The analogue connection also enables analysis of exit gases from bioreactors supplied by other manufacturers.

▶ Compact

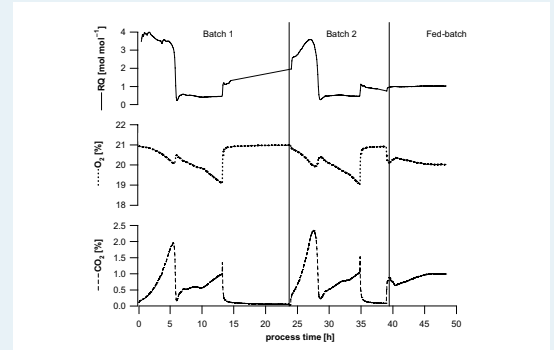
With a footprint of just 115 x 235 mm, the gas analyser can be mounted on a workbench or in a rack.

▶ Optional multiplexer function for parallel bioreactors

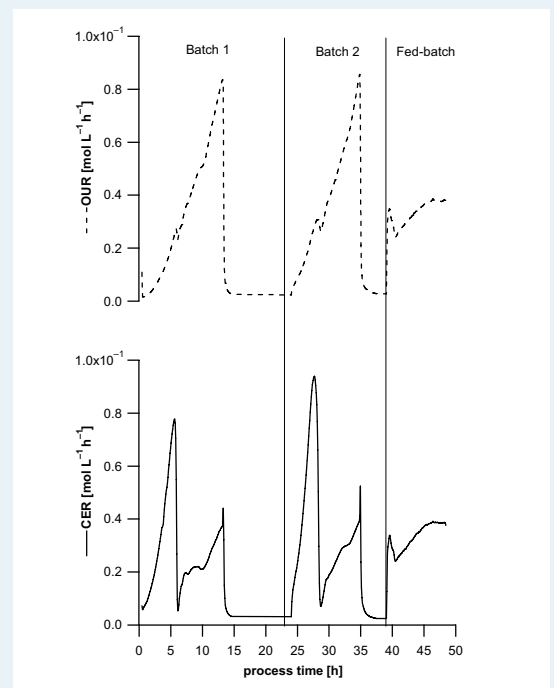
The multiplexer function allows the INFORS HT gas analyser to read the O₂ and CO₂ levels on up to six INFORS HT parallel bioreactors.

▶ Online data acquisition

Data can be logged, archived, formatted into graphs and used for calculations and control algorithms using the Iris software – from any workstation.



Example exit gas analysis and RQ control (fed-batch) for an *S. cerevisiae* bioprocess



Example O₂ uptake rate and CO₂ evolution rate trace during an *S. cerevisiae* bioprocess

Technical specifications:

- O₂ reading: 0–25% (+/- 2% FS), zirconium electrolysis cell
- CO₂ reading: 0–10% (+/- 0,5% FS), infrared spectrometer
- Gas flow: from 0.5 L/min
- Warm-up time: 2 min
- Weight: 2 kg
- Dimensions w x d x h: 142 x 275 x 135 mm
- Footprint w x d: 115 x 235 mm

Data can be used for the following:

- Metabolic analysis and bioprocess control
- RQ-based nutrient supply
- Calculation of growth rate (μ)
- Automatic calculation of OUR, OTR, CER, CTR and RQ
- Monitoring of decomposition rate (bioremediation)

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