



*ONLINE & OFFLINE SAMPLE ANALYSIS FOR BIOPROCESSES*



**LaboTRACE**

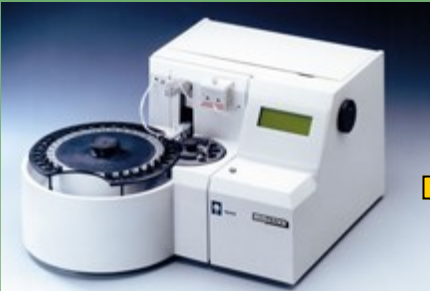
The automatic analyzer for the simultaneous determination of glucose and lactate in cell cultivations and fermentations.

The well proved biosensor technology guarantees fast and accurate results in less then one minute.

Calibration measurements and cleaning cycles will be done automatically.

**LaboTRACE is offered in two versions:**

- For the fast routine analysis of up to eight samples
- Extra large sample rotor for up to thirty samples



**The Filtration Probe**

The filtration probe is designed to withdraw sterile, cell-free filtrate from fermenters and bioreactors.

The tubular micro-filtration polypropylene membrane, supported by a stainless steel probe, is positioned inside the reaction vessel. The filtration probe is sterilized together with the fermenter.

The filtration probe is offered in three versions:

- Membrane length 125 mm for fermenter with a volume of 50 to 1000 Liter
- Membrane length 40 mm for fermenter and especially glass fermenter with a volume of approximately 300 ml
- Membrane length 125 mm with a protective sheat for fermenter with high turbulence to avoid deformation of the membrane module



**Process Monitor**

ProcessMonitor provides the solution for a reliable biopharmaceutical production process. Taking advantage of the ProcessMonitor combines measurement precision, robustness and reliability in order to ensure production effectiveness and product quality

**Features:**

- On-line measurements of glucose, methanol, ethanol or lactate with the industrial proven filtration probe in biotechnological production or pilot plants.
- Reliable, pressurized liquid delivery system with a maximum of measurement frequency, correctness and precision.
- User-friendly software with multiple alarm system and touch-screen control. Can be used in cGMP and FDA regulated processes.
- Complete quality monitoring and documentation.



**Flowcell**

The flowcell with integrated sensor is suitable for electro-chemical detection in HPLC and flow injection analysis.

Instead of using solid materials at conventional electrodes, TRACE coats planar structures with thin layers of electrode materials. The electrodes are integrated onto a sensorship which can be easily exchanged after use.

**Features:**

- Measuring chambers in different materials (PMMA and PEEK)
- Easily and fast exchangeable sensors.
- Low cost and stabile sensorships with long life time.





**ONLINE & OFFLINE SAMPLE ANALYSIS FOR BIOPROCESSES**

<b>PRODUCT</b>	<b>APPLICATION</b>
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**TRACE C2**  
2-channel on-line analyzer for cell culture and disposable bioprocessing

A competitive dual-channel analyzer for the measurement of glucose and lactate for use in cGMP environments



**ProcessTRACE**  
On-line analysis to monitor and control fermentations and cell cultures

On-line monitoring of industrial or laboratory cultures of microorganisms and cell cultures which utilize glucose as a carbon source



**ProcessMonitor**  
On-line monitoring in industrial Bioprocesses

ProcessMonitor provides the solution for a reliable biopharmaceutical production process



**MultiTRACE**  
Parallel on-line monitoring of up to six bioreactors

Parallel measurement of the parameters glucose, methanol, ethanol, lactate or sucrose in small- volume laboratory reactor series or cubic-meter-sized production fermenters



**LaboTRACE**  
2-channel analysis for bioprocess control

Automatic analyzer for simultaneous determination of glucose and lactate in cell cultivations and fermentations



**Dialysis probe**  
Volume free, sterile and automatic sampling for on-line analysis

Sterile on-line sampling in connection with the on-line analyzer Process-TRACE and MultiTRACE in bioreactors used in industrial and lab facilities



**Filtration probe**  
Sterile sampling of cell free analytes for on-line and off-line analysis in bioreactors used in industrial and laboratory facilities

The filtration probe is designed to withdraw sterile, cell-free filtrate from fermenters and bioreactors



**Flowcell**  
Flowcell with integrated sensor for electrochemical detection in HPLC and flow injection analysis

The flowcell with integrated sensor is suitable for electrochemical detection in HPLC and flow injection analysis



**Enzyme reactors**  
Enzyme reactors with immobilized enzymes for bioprocess control in biotechnology and quality assurance

Enzyme reactors are suitable for bioprocess control in the biotechnology and quality assurance as well as for the increased productivity in the food industry



**TRACE TRAP**  
Removes gas bubbles of your flow system

Removes gas bubbles effectively in-line, making degassing of the carrier buffer or eluent unnecessary