

LiCellMo



Live Cell Metabolic Analyzer

Continuous, sampling-free measurement of glucose and lactate in culture medium. Visualize real-time changes in cell metabolism. The PHCbi Live Cell Metabolic Analyzer will open the door to new discoveries.

IN-LINE MEASUREMENT OF GLUCOSE AND LACTATE UP TO 10 DAYS

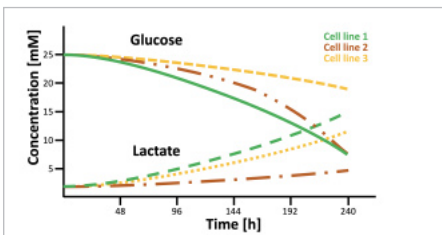
Continuous data of glucose consumption and lactate production without the need for manual sampling.

COMMON CELL CULTURE ENVIRONMENT & SMALL FOOTPRINT

The detector is placed in a conventional CO₂ incubator. Existing culture equipment can be used with any custom gas mix.

USE OF CONVENTIONAL 24 WELL CELL CULTURE PLATES

Five adapters are available, suitable for the most common brands of 24 well plates.



Precise metabolic information

to follow the exact conditions of cultured cells with high measurement frequency. This allows to optimize growth conditions and to uncover the impact of treatments.



Established and stable cell culture environment

keeps experimental set up free from unwanted variables, and provides flexibility for different gas environments such as hypoxia conditions.



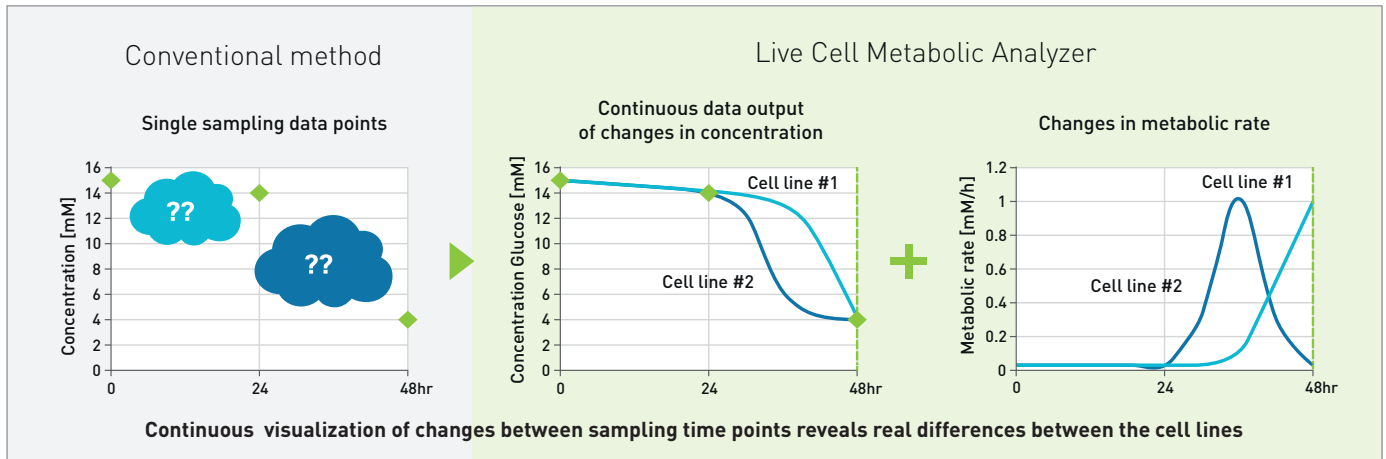
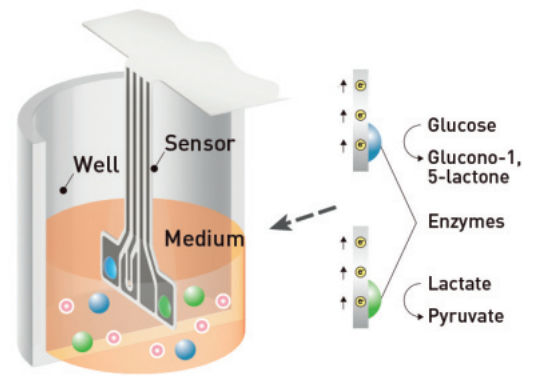
Standard conditions

for cell culture in commercially available 24 well plates. Easy handling and no extra expenses for instrument specific dishes.

IN-LINE SENSORS: THE KEY TO CONTINUOUS MEASUREMENTS OF GLUCOSE AND LACTATE

The glycolytic pathway is one of the main cellular metabolic pathways to produce energy. During glycolysis, glucose is taken up into cells and lactate is produced. Conventional analysis of cell metabolism typically involves estimating glucose and lactate concentrations from data points obtained from periodic manual sampling. With its unique high-precision in-line sensors, the PHCbi Live Cell Metabolic Analyzer offers unique advantages:

- real-time monitoring of glucose and lactate concentrations,
- continuous measurement in a 24 well set up,
- no sampling of the culture medium is needed and the same cells can be used for evaluations after measurement.



Measure cells in their usual culture environment.

The simple design of the PHCbi Live Cell Metabolic Analyzer makes it suitable for any laboratory space. Plus, there is no need for specialized cell culture equipment. Common commercial products (culture medium, 24-well plates, calibration liquid, additive reagents) can be used for cell culture.

The sensor module and plate adaptor can be attached to the most common 24-well plates. Once the plate is placed in the pre-installed detector within the CO₂ incubator, real-time measurements can be checked easily using the touch-panel controller. Optional plate adapters for five different commercial 24-well plates are available.

Evaluate glycolytic changes directly.

Changes in the glycolytic pathway can be evaluated directly by measuring the culture medium concentrations of glucose taken up and lactate produced by cells. With the PHCbi Live Cell Metabolic Analyzer, the state of cell metabolism can be visualized as the rate of metabolic change using the consumption rate and production rate based on concentration values. Monitoring the efficiency of conversion from glucose to lactate makes it possible to evaluate not only glycolysis, but also changes in the balance with other cellular metabolic processes, such as oxidative phosphorylation.

Product summary	
Items monitored	Glucose, lactate (simultaneous continuous measurement of both items)
Main device components	Controller, Detector, Plate adaptor
Main consumables	Sensor module (single use)
Compatible plates	24-well plate*
Monitoring duration	Maximum 10 days
Measurement range	Glucose: up to 27 mM (up to 4.9 g/L) Lactate: up to 15 mM (up to 1.4 g/L)

*Compatible with 5 commercial products

Detector	
External dimensions	Width 162 mm x Depth 280 mm x Height 118 mm
Installation	Inside CO ₂ incubator

Controller	
External dimensions	Width 371 mm x Depth 197 mm x Height 220 mm
Screen	12.1-inch-wide touch panel display
Extendability	Wired connectivity for up to 4 detectors

- Product currently under development. Specifications of the final product may differ.
- For research purposes only.

PHCbi

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Dimensions (mm)

