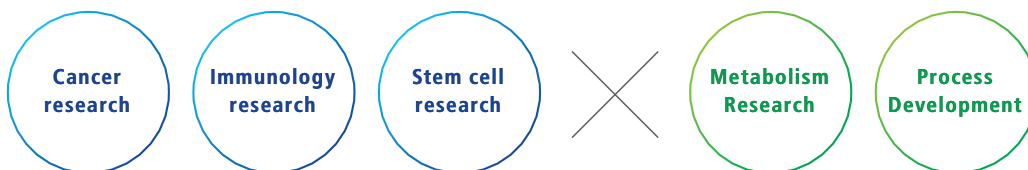




NEW LiCellMo™

Continuous, sample-free measurement of glucose and lactate in culture medium. Visualize real-time changes in cell metabolism.

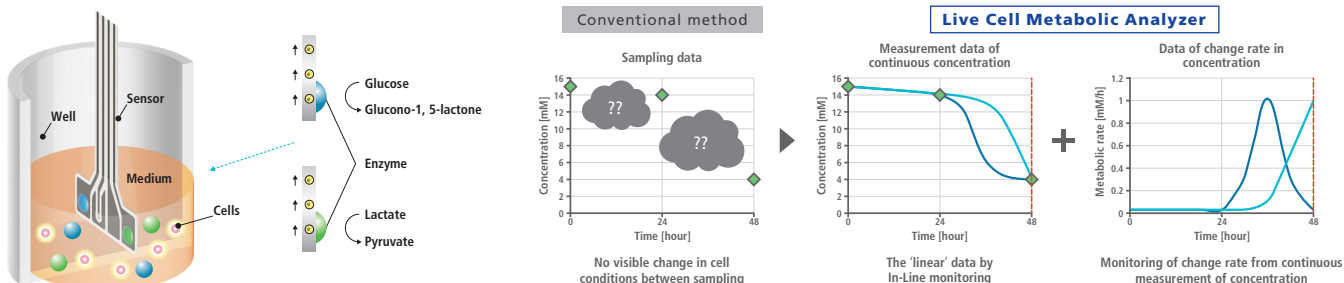
Cells are constantly growing and differentiating, and those processes are known to be closely linked to metabolism. In the field of cancer immunology, stem cell research, and the development of manufacturing processes for cell-based formulations, understanding the metabolic state of cells is a factor of ever-growing importance in the analysis of cell activation and disease. Continuous analysis of cell metabolism offers the ability to visualize the state of cells in real-time, creating opportunities for unprecedented new discoveries in cell metabolism. The PHCbi live cell metabolic analyzer will open new doors to those discoveries.



In-Line sensors: the key to continuous measurements of glucose and lactate

The glycolytic pathway is one of the main components of cellular energy metabolism. During glycolysis, glucose is metabolized and lactate is produced. Conventional analysis of cell metabolism typically involves estimating glucose and lactate concentrations from data points obtained from periodic sampling. With its unique high-precision In-Line sensors, the PHCbi live cell metabolic analyzer offers these unique advantages:

- real-time monitoring of glucose and lactate concentrations
- continuous measurements, sample-free analysis
- preservation of cells for further evaluation after measurement
- comprehensive, quantifiable data



Visualization of changes between samplings reveals differences in cell conditions

Measure cells in their usual culture environment

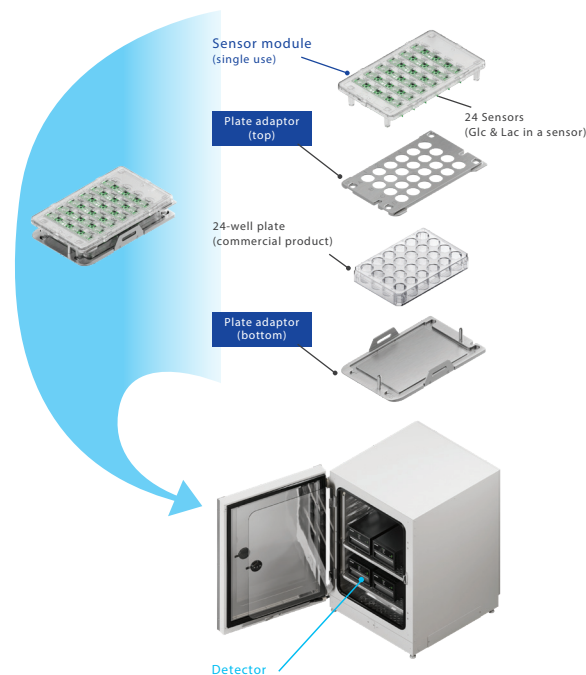
The simplicity of LiCellMo's design makes it suitable for any laboratory and does not require specialized cell culture equipment. Common commercial products (culture medium, 24-well plates, calibration liquid, additive reagents) can be used for cell culture.

The single-use sensor module and plate adaptor can be attached to standard 24-well plates. Once the plate is placed in the detector pre-installed in the CO₂ incubator, real-time measurements can be monitored easily monitored using the touch-panel controller.

Optional plate adaptors for five different commercial 24-well plates are available.

Evaluate glycolytic changes directly

LiCellMo enables direct evaluation of changes in the glycolytic pathway by measuring glucose uptake and lactate production in the cell culture medium. It visualizes cell metabolism using consumption and production rates based on concentration values, providing valuable metabolic rate data. Monitoring the efficiency of conversion from glucose to lactate makes it possible to evaluate not only glycolysis but also the balance with other cellular metabolic processes, such as the TCA cycle and oxidative phosphorylation in mitochondria.



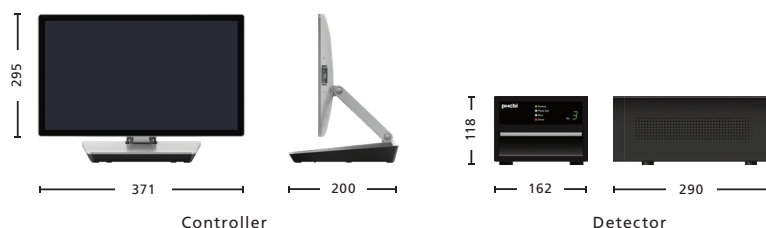
Specifications

Product summary		Controller		Detector	
Items monitored	Glucose, lactate (simultaneous continuous measurement of both items)	External dimensions	Width 371 mm × Depth 200 mm × Height 295 mm	External dimensions	Width 162 mm × Depth 290 mm × Height 118 mm
Main device components	Controller, Detector, Plate adaptor (optional product)	Weight	2.5 kg (excluding accessories)	Weight	4.7 kg
Main consumables	Sensor module (single use)	Screen	15.6-inch-wide touch panel display	Installation	Inside CO ₂ incubator
Compatible plates	24-well plate *Compatible with 5 commercial products	Extendability	Wired connectivity for up to 4 detectors	Recommended number of units to be installed in a CO ₂ incubator*1	MCO-50 series MCO-170 series • MCO-171AICUVD • MCO-230 series
Monitoring duration	Maximum 10 days			Max. 1 unit	Max. 4 units (2 units × 2 tiers)
Measurement range	Glucose: 1 to 27 mM (0.18 to 4.86 g/L) Lactate: 1.5 to 15 mM (0.14 to 1.35 g/L)				

*Specifications are subject to change without notice.

*1 When placing two detectors on one shelf, use a reinforced shelf.

External view and dimensions (mm)



PHCbi

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