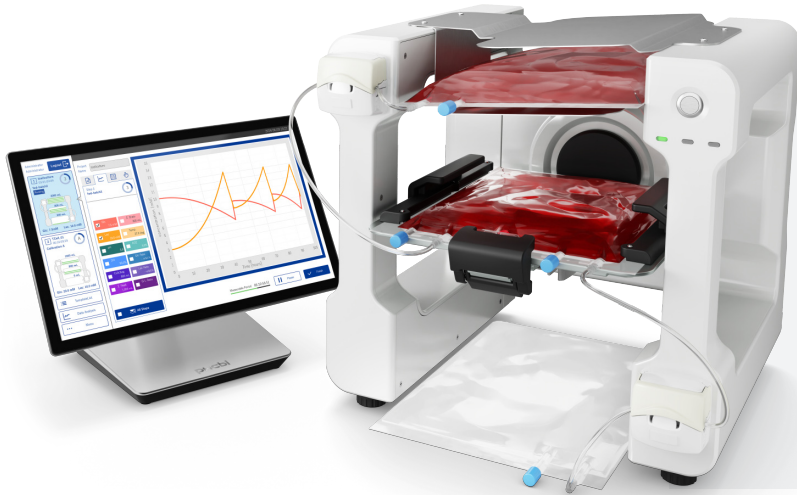


LiCellGrow



Real-time Wave-mixing Bioreactor

Visualization of cell state through continuous monitoring of glucose and lactate concentration.

Optimal culture conditions maintained by automatic culture control, contributing to enhanced cell quality.

GLUCOSE AND LACTATE IN-LINE PROCESS MONITORING

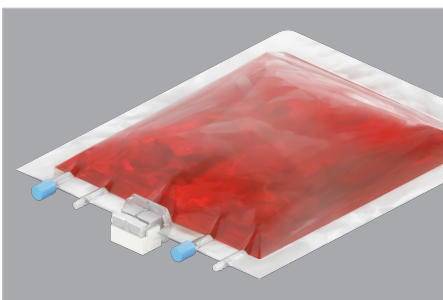
Continuous glucose and lactate monitoring with precise in-line sensors without need for sampling.

PROCESS CONTROL BY GLUCOSE AND LACTATE

Automated cell feeding based on glucose and lactate creates optimal culture conditions.

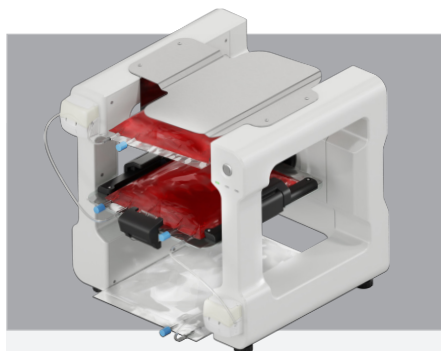
TRUSTED CELL GROWTH CONDITIONS

Bioreactor is installed inside a conventional CO₂ incubator to assure consistent cell quality.



Single-use Culture Bags

with standard integrated sensors for glucose and lactate concentration, and option for pH and DO monitoring.



Closed system

guarantees sterility, reproducibility and prevents the risk to lose precious samples.

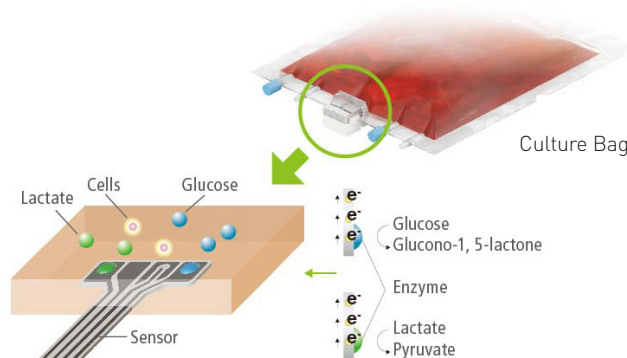


Reliable Cell Culture Environment

with precise control of temperature and CO₂ facilitates reproducible results.

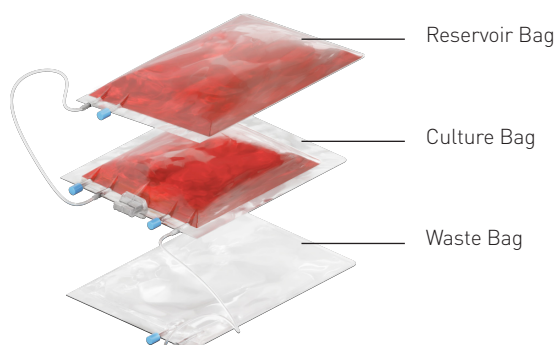
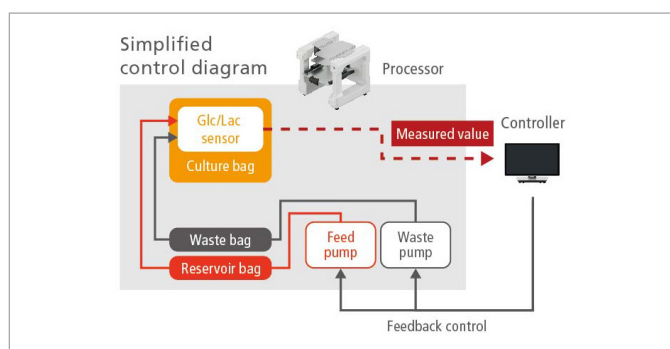
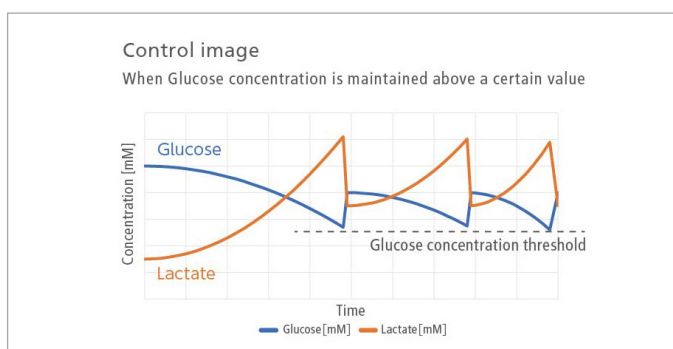
CONTINUOUS MEASUREMENT BY THE IN-LINE SENSORS ALLOWS VISUALIZATION OF GLUCOSE AND LACTATE CONCENTRATION EVOLUTION

Glycolysis is one of the major energy metabolism pathways in cells. Since in this process glucose is consumed and lactate is produced, changes of their concentrations are a useful index for cell vitality. The Culture Bag is equipped with an in-line sensor, which measures glucose and lactate in real time as continuous in-line data.



CULTURE MEDIUM IS REPLACED AUTOMATICALLY BASED ON REAL-TIME MEASUREMENT AND ANALYSIS

The Real-time Wave-mixing Bioreactor measures the concentrations of glucose and lactate in real-time and automatically replaces the culture medium based on the measured values. An optimal and stable supply of glucose is guaranteed and exposure to elevated levels of lactate is avoided.



Closed system cell culture with single-use Culture Bags

The dedicated Culture Bags are gas-permeable, single-use bags, each fitted with an In-Line Sensor. This system eliminates the need for sampling, greatly reducing the risk of contamination.

Highly reproducible cell culture with guaranteed sterility

The Culture Bags with in-line sensors are gamma-irradiated before supply and simply need to be fitted to the device to ensure a sterile environment for highly reproducible cell cultures.

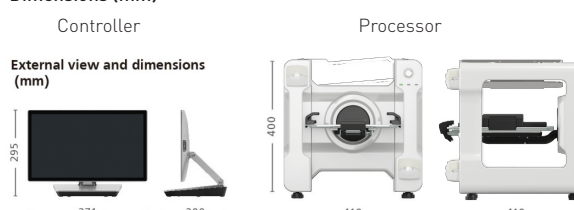
Main product specifications

Product overview	Monitoring parameters	Glucose, lactate (simultaneous measurement of both parameters) pH/DO (simultaneous measurement of both parameters) *pH/DO measurement is available as an option	Product overview	Culture Bags capacity	<ul style="list-style-type: none"> 500 ml (minimum culture volume 100 ml) 1000 ml (minimum culture volume 300 ml)
	Main device components	Processor, controller		Monitoring time	Maximum 10 days
	Main consumables (single use)	Culture Bag, Sensor Helder, Reservoir Bag, Waste Bag		Measurement ranges	Glucose: 1-27 mM or less Lactate: 1.5-15 mM or less pH: 6.0-8.0 DO: 0-250% a.s. (a.s.= air saturation)
Processor	Dimensions	Width 410 mm x Depth 410 mm x Height 400 mm	Controller	Dimensions	Width 371 mm x Depth 200 mm x Height 295 mm
	Installation	Inside CO ₂ incubator		Screen	15.6-inch wide touch-panel display

*Specifications may change at the time of launch, as the product is under development.

*Product shown is sold for research purposes only.

Dimensions (mm)



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