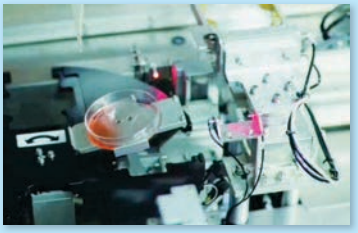
Panasonic

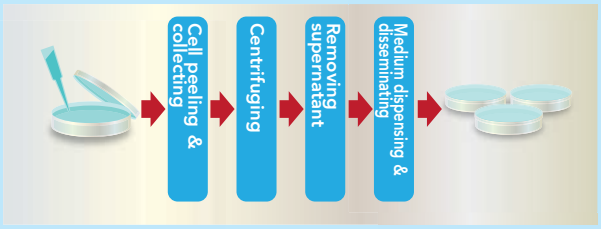
Automated Cell Culture System

Creating the Future of Medical Care

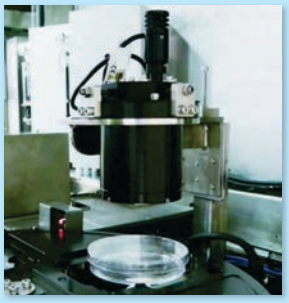
Equipment with diverse applications:



Automated medium change



Automated cell passage



Cell observation

What is Cell Cultivation?

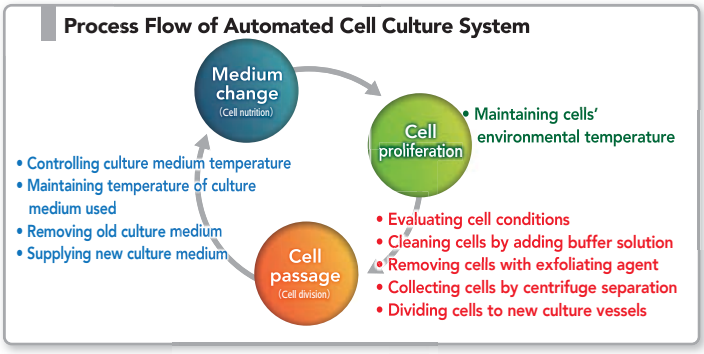
① **Changing culture medium daily**
Suctioning and removing old culture medium, without peeling off cells, and adding new culture medium

② **Conducting cell passages every few days**
Uniformly disseminating proliferated cells into multiple culture vessels according to desired size and density

Requires much time for training | **Requires continuous work**

Significant burden on researchers

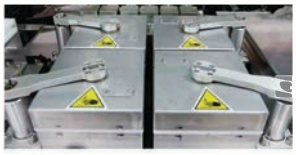
Automated cell culture system that continuously supplies cells



Basic Functions for Automating Cell Culturing Processes

Clean cabinet

HEPA filter keeps clean and safe environment equivalent to class II safety cabinet



Refrigerator & Warmer

Refrigerators can store Max. 4 500-mL bottles at 4°C. Warmers are provided to warm liquid temporarily.

Incubator

Max. 60 100-mm dishes (or max. 27 6-well plates) can be stored in CO_2 incubator

Cell observation

Deep-learning AI technology leveraged to find cells' conditions or count cell number

Dispensing & Swinging

Special 10 mL pipette is suitable for separating cells. Swing equipment to blend suspension in a dish.

Centrifuging

A centrifuge is implemented for automated cell passage. Considering its effect on cells, it's placed far from the incubator.

Advantages of New System

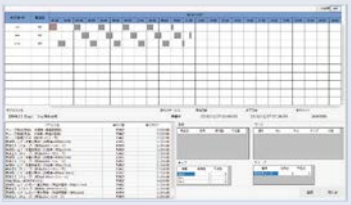
Automating manual techniques

Reproducing techniques by thoroughly analyzing manual work and utilizing proposed manipulation control technique

Compact size

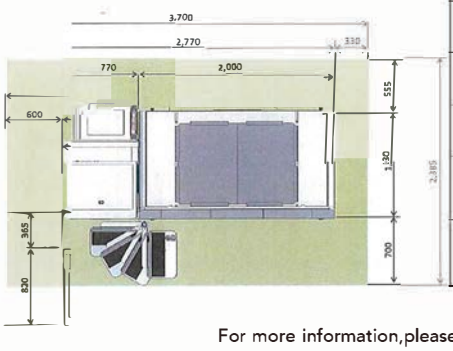
Achieved a compact size that easily fits into laboratories by designing a structure that is interchangeable with a standard clean bench

Scheduling



Automatically conducting preset movements and maintaining history records of each culture vessel

Size



Cultivating process	Culture medium change, cell passage, cell observation	Biohazard	Cabinet class II equivalent (Clean 100 equivalent within the unit) Partly evaluated according to our own standards
Target cell	Adhesive cell: ES/IPS cell (colony/single cell), etc.	Decontamination	UV irradiation, peracetic acid fumigation
Heat insulation	4-500ml bottles	Cell observation	Image storage, passage timing determination, cell count
Culture vessel	Max. 60 Φ100-mm dishes (or max. 27 6-well plates) can be stored	Main unit dimensions	W 2,000 x D 1,130 x H 2,412 mm (main apparatus only, excluding PC rack)
Dedicated supplies	10mL pipettes (Max. 100 bottles)	Utilities	・Three-phase 200 VAC, 30 A: One system ・100 VAC, 20 A: One system ・100 VAC, 15 A: Two systems (two 2-pin sockets with a ground) ・CO_2 gas supply : One system (outer diameter Φ12-mm hose barb fitting)
Cultivation plan	Cultivating process can be set using scheduling function		

For more information,please visit our website ▶ https://www.panasonic.com/jp/company/ppe/en/saibobaiyo.html

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