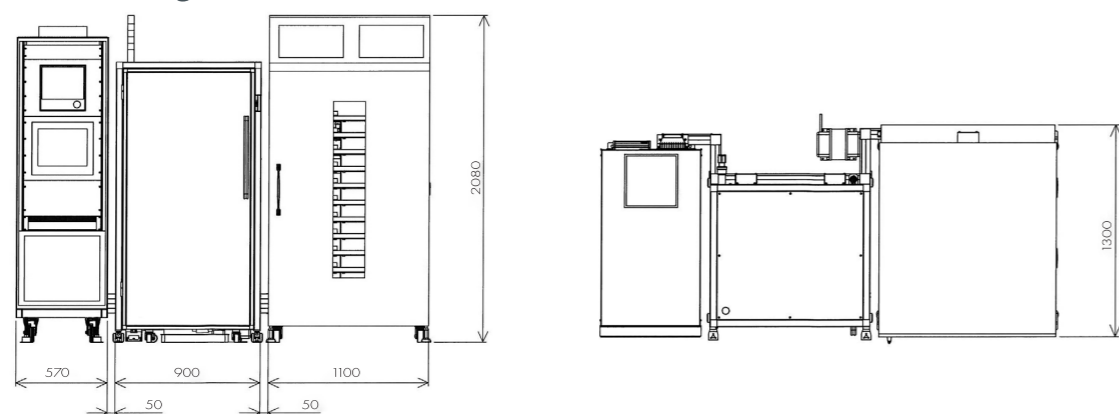


Specification

Function	Seeding cells, Medium change, Monitoring and recording images of cells
Number of vessels	At most 10
Growth Surface Area	About 5,000 cm ² (culture vessel about 500 cm ² × 10 vessels)(= 100 mm dish × 90 dishes)
Incubator	34 – 40 °C
Refrigerator	Target temperature ± 4 °C (except during door opening and closing)
UPS	Providing compensation for above 5 minute power failure (except for refrigerator and temperature control mechanism of incubator unit)
Cell Monitoring	
Methods	Scanning by color CCD camera
Target for observation	Colonies (>50 μm in diameter)
Field of view	About 4 mm × about 3 mm
Field of scanning	About 160 mm × about 200 mm
Scheduled Record	Available
Dimensions (W×D×H) and weight	
Whole	2,700 mm × 1,300 mm × 2,080 mm, About 1,030kg
Control unit	570 mm × 1,057 mm × 2,000 mm, About 270kg
Reagent unit	900 mm × 800 mm × 1,780 mm, About 260kg (including refrigerator)
Incubator unit	1,100 mm × 1,300 mm × 2,080mm*, About 500kg **Height is 1,876 mm in transportation
Power consumption(AC 100V)	Below 3,500 W
Part11	Restrict access, record operations and revisions of data, clarification of operator, and so on

※Customers are responsible for validating the use of this equipment for their intended therapy.
 ※This specification is in Japan. By the region of the customer, specifications may change.

External dimensions diagram



Disposables and option

Product name	Model code	Quantity	Note
Closed flow channel set	HTSET01	10 sets	Including a cap for a humidification bottle, a trap bottle, a bottle for cell suspension, collecting bags for culture medium, and a waste bag Excluding a 500mL bottle for humidification
Bottle Cap set	HTSET02	See Note	Including 10 Caps for 1L bottle, 20 Caps for 2L bottle, 10 Caps for 5L bottle and 10 Caps for 10L bottle
Culture vessel set	MC-28505H	15 sets	Set of 5 culture vessels
Bottle for cell suspension	HTASA06	10 bottles	
Bottle Cap for humidification	HTASA01	10 caps	Excluding bottles
Cap for 1L bottle	HTASA02	10 caps	Excluding bottles
Cap for 2L bottle	HTASA03	10 caps	Excluding bottles
Cap for 5L bottle	HTASA04	10 caps	Excluding bottles
Cap for 10L bottle	HTASA05	10 caps	Excluding bottles
Bottles (500 mL, 1L, 2L, 5L, 10L)			Bottles made by Cellon S.A are designated
PC for monitoring			Equipment can be monitored from outside clean room
Support for validation			Contact us for more details

- Specification and design may be subject to change without notice.
- For the correct usage, be sure to read the operation manual.
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Automated Cell Culture Equipment ACC-200



The Next Step for commercialization of Regenerative Medicine and Cell Therapy

The phase changed from research use to mass production.

Regenerative Medicine and Cell Therapy are proceeding from research phase to commercialized phase.

Hitachi's technologies for culturing cells have developed.

Automated Cell Culture Equipment leads to spread Regenerative Medicine and Cell Therapy.



Stable supply of high quality cells by automated cell culture process

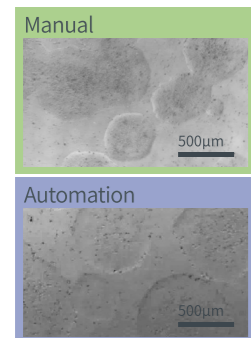
- ✓ Mass cell production
- ✓ Automation of cell expansion and differentiation
- ✓ Sterile environment by single-use closed module

Example of culturing cells (iPS cells)

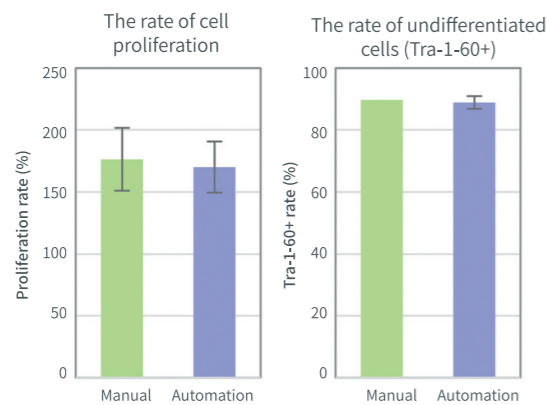
Automation reduces the frequency of routine process and ensures same quality as experts.

Cell expansion

Colonies of iPS cells

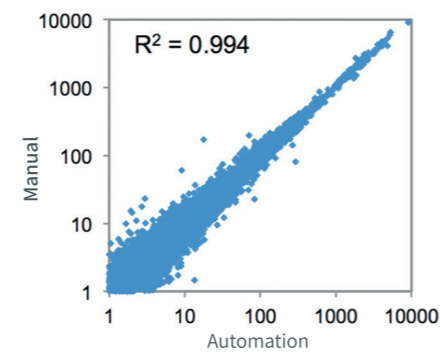


Similar morphology to manual



The result of automation by proliferation rate and undifferentiated rate is equivalent to manual

Initial differentiation to nerve cells Comprehensive gene expression analysis



Gene expression of automation is similar to manual

Some parts of these data are implemented within the framework of the "Evaluation for Industrialization in the Field of Regenerative Medicine", with support of the Japan Agency of Medical Research and Development (AMED).

Component

Control unit



The unit controls each device. It comprises controller device, a panel PC for control, a paperless recorder of data from each sensor, and an uninterruptible power supply (UPS).

Reagent unit



The unit delivers medium, reagents, and cell suspension to culture vessels. It also delivers 5% carbon dioxide gas and air. Fresh medium, culture medium, and wastes are stored in a refrigerator.

Incubator unit

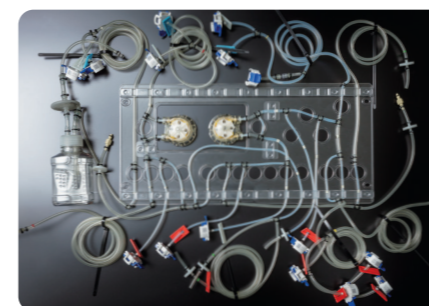


At most 10 culture vessels can be set in the unit. The unit can move vessels back/forth and left/right, so it can seed cells uniformly and change medium efficiently. Customer can monitor cells without taking out vessels by cell monitoring device.

Consumables

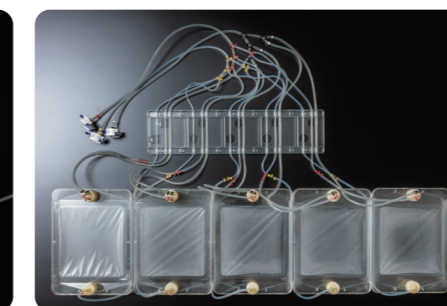
Disposable and single-use closed module to prevent contamination from the outside.

Closed flow channel set



The set comprises tubes, a bottle for cell suspension, a cap for humidification bottle, a trap bottle, collecting bags for culture medium, and a waste bag. The terminals of tubes are attached with aseptic connectors for maintaining sterile environment by the closed culture system.

Culture vessel set



Five culture vessels for mass culture are connected as a set. After culturing, consumer can peel the film of top of vessels and collect culture cells by a scraper efficiently.

Bottles and caps



1L, 2L, 5L, 10L bottles are available. A bottle cap is attached with an aseptic connector and a vent filter, so it can connect a bottle to a closed flow channel set.