

thermo scientific

Dependable sample protection

Thermo Scientific Cytomat automated incubators and storage systems

Trusted reliability

Worldwide support

Environmental stability

Innovative design

ThermoFisher
SCIENTIFIC

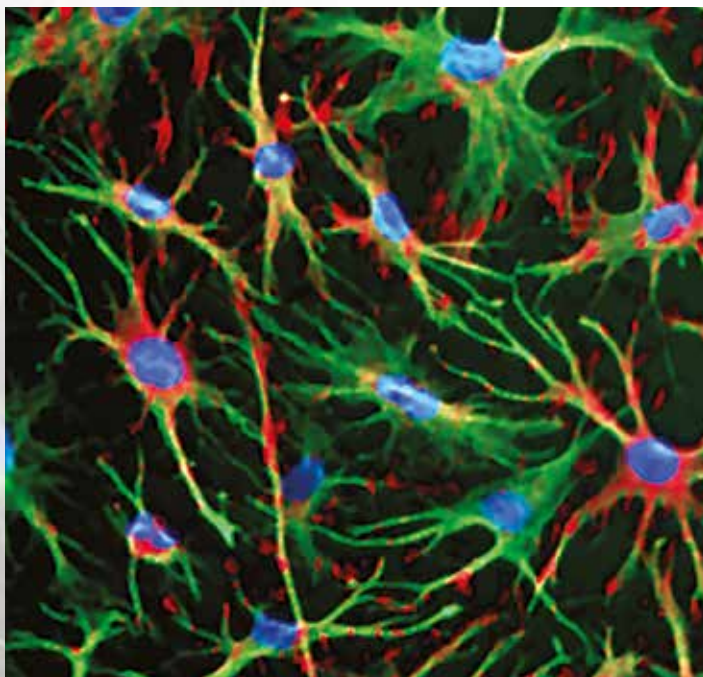
Safeguarding your samples

Thermo Scientific Cytomat automated incubators and storage systems

When valuable assay samples are properly stored and accessed, research laboratories can achieve significant increase in productivity and efficiency.

Laboratory equipment manufacturers and researchers worldwide depend on highly reliable Thermo Scientific™ Cytomat™ automated incubators and microplate storage systems. With more than 50 years of experience in CO₂ incubator technology, the robot-accessible Cytomat automated incubators and storage systems are the established leaders in the field, offering:

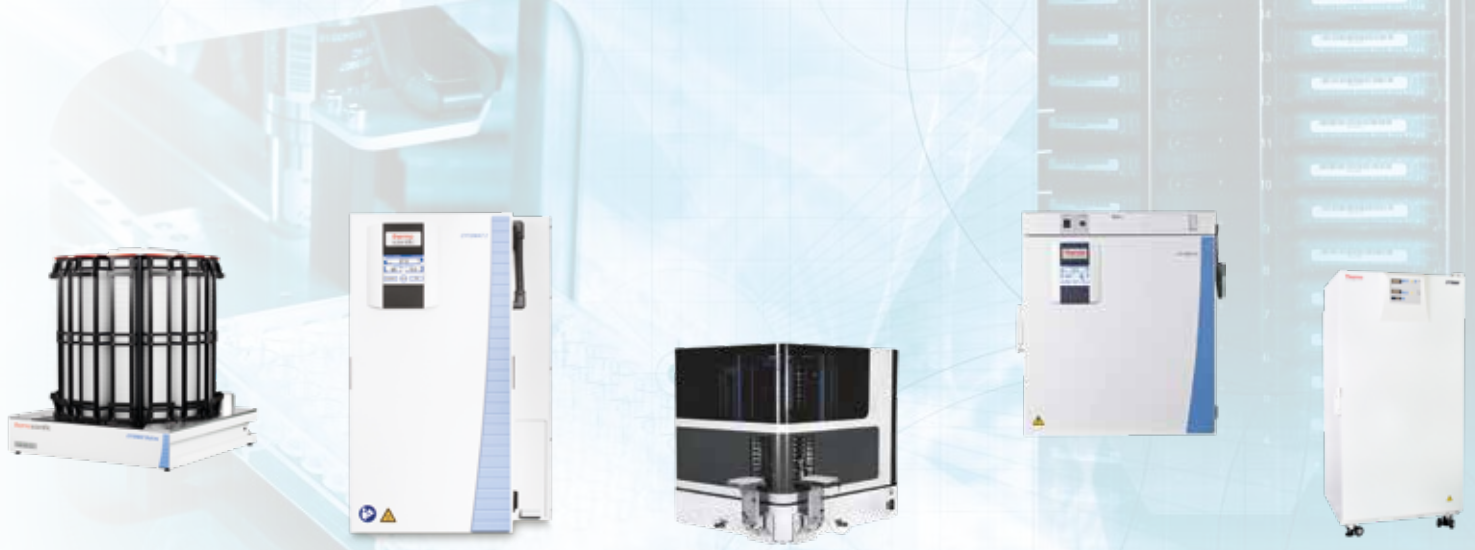
- Broad range of automated incubators and storage modules
- Continuous operation with maximum sample and operator protection, conforming to:
 - CE, ROHS
 - DIN EN ISO/IEC 17025 (DKD/DAKKS certification) for laboratory temperature calibration
- Simple robotics teaching and programming for fast integration and start-up
- Superior conditions for all applications requiring precise environmental control



Intelligent inventory management

The Thermo Scientific™ Cytomat™ systems are the first and only range of incubators that have an internal database-driven inventory management and device grouping.

- Fast and easy integration
- Secured internal inventory database (position, barcode, time stamp, etc.)
- Device-grouping for easy capacity ramp-up
- Simple and cost-effective upgrade of existing incubators



The range

A wide variety of Cytomat systems are available with specific storage capacities, temperatures, dry storage, gassing options and various layout configuration options, supporting their use in multiple applications.

Cytomat SkyLine storage system

The Cytomat SkyLine high-throughput microplate storage and sequential delivery device can hold up to 728 microplates and/or lids in 14 stackers. Providing rapid plate access in under 12 seconds, its built-in plate sequencer safely separates and precisely centers labware for optimal transfer placement. Plates can be loaded back into the system, eliminating the need for additional ambient storage, and the optional plate lift gives up to 150 mm of transfer position range, allowing flexible placement in automation systems.

Cytomat 2 automated incubator

The Cytomat 2 automated incubator is the most compact system with a capacity for 42 standard microplates. This series offers several models with various temperature ranges, and includes features to reduce the contamination risk such as: external water tank with controlled humidity; ContraCon decontamination routine; and inner chamber design, with options for copper chambers.

Cytomat Shaker

The Cytomat Shaker automated incubator with True Orbital Shaking is based on the Cytomat 2 automated incubator and has a capacity of 32 standard microplates. The series is available with individual Tower Shakers, providing ideal conditions for cells requiring consistent TRUE Orbital Shaking.

Cytomat 5 automated incubator

The Thermo Scientific Cytomat 5 automated incubators provide medium capacity (105 SBS-standard microplates) incubation and storage while still offering all of the features of the well-established Cytomat 10 automated incubators. It also benefits from the full range of Cytomat automated incubator options and accessories, opening up an array of possibilities to suit your requirements and specific applications.

Cytomat 10 automated incubator

The Cytomat 10 automated incubator is our most advanced, offering wide temperature range and ambient storage (hotel) units, with a mean access time below 10 seconds and a capacity for 210 microplates. A fully automated decontamination routine, controlled humidity and superior temperature control ensure dependable sample protection.

Cytomat 24 automated incubator

The Cytomat 24 automated incubator series is a floor-standing unit, with a capacity for 504 standard microplates. This series is available as an incubator, a wide temperature range unit, and a dry and ambient storage (hotel) unit. Storage capacity can be increased with the use of up to four Cytomat 24 automated incubator units. These can be daisy-chained and managed by one control box to reach a capacity of up to 2016 standard microplates.

Further customized solutions are available upon request.

Trusted reliability

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Worldwide support

Thermo Scientific Cytomat system service and support are backed up by our global network of Unity Lab Services™. Like all of our services, support for our Cytomat automated incubators helps increase your productivity via increased uptime, reduced costs and optimized system performance.

Software integration

Our experts will help your system operate seamlessly with any automated solution. We minimize and simplify robotic teaching and programming for fast implementation and start-up. Software commands are easy and intuitive.

Customized solutions

Define the configuration of your robotic system or workstation through a choice of microplate, T-flask, or petri dish handling. A wide variety of temperature ranges and gassing environment options are available to provide the right atmosphere for different applications.

Whatever your Cytomat system configuration, your customized solution is certified to DIN EN ISO 9001 and supplied with full documentation, plus a quality test certificate similar to our standard Cytomat units. As an optional service, we also offer IQ and OQ validation.

Field service

In addition to phone or email-based technical help, you can access experienced Field Service Specialists dedicated to the Cytomat systems. More than 100 trained Thermo Fisher Scientific Service Engineers are available to minimize the average repair time.

If our standard solutions don't fit your requirements, our Engineering and R&D teams can design and develop customized products that meet the most demanding needs.



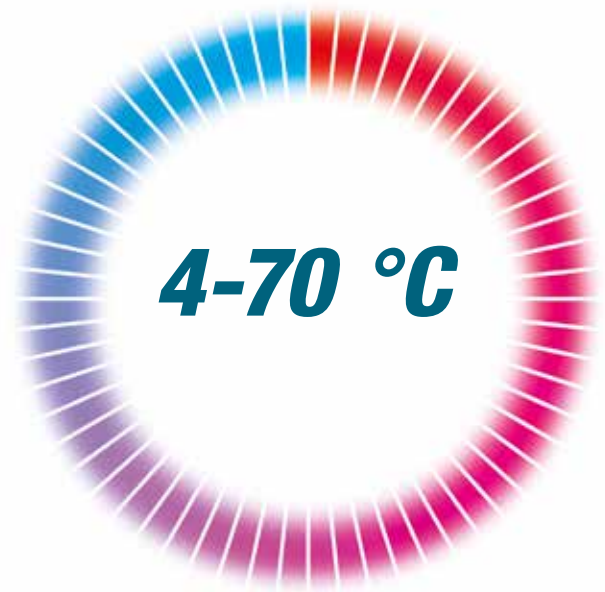


Environmental expertise

The Cytomat system accommodates all standard microplate formats, provides a choice of temperature (+4 to +70 °C) and humidity ranges, as well as gaseous atmospheres.

Cytomat incubators create ideal, stable environmental conditions for cell-based assays. Cooled storage systems ensure a dry climate, via inert gas, minimizing absorption of water by DMSO. In contrast, units are available that create hot and humid conditions to minimize evaporation for applications such as primer hybridization.

Advanced Cytomat automated incubator designs promote superior environmental conditions and provide risk-free incubation, assay after assay.



High performance and ease of use

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Innovative design

With Cytomat systems, users get the industry's most advanced technology for automated storage and retrieval within a precisely-controlled environment.

The internally automated Plate Shuttle system optimizes microplate handling. It comprises a lift system, a handler for X/Y/Z movement axes, and a heated automatic access door. Plate access won't disturb inner chamber conditions as all Cytomat models are equipped with a small gate. Microplates enter and exit in seconds, significantly minimizing disruption of the controlled environment and providing dependable delivery times.

In addition, the sophisticated stacker (microplate storage) design is equipped with ventilation slots, allowing uniform temperature distribution across all plates.

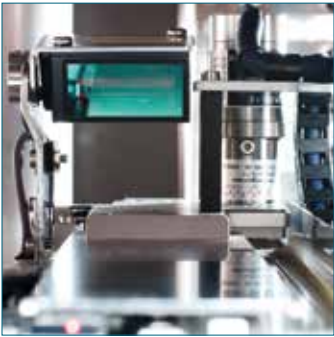
Ease of integration

The Cytomat system delivers the microplate to a single point, offering "easy-teach" integration for any automated system. A single loading and unloading point – the transfer station – makes teaching simple and cuts down the programming time, making an extremely robot-friendly design.

On system implementation, the robot needs to be taught only one position for plate pick-up.

Save significant time during installation and minute-to-minute operation with Cytomat systems.





The right options

Transfer stations

Depending on the system integration, we offer various transfer station options for plate delivery. The standard transfer station presents microplates in portrait format. Other available options include: 90° turning for presentation in landscape format; a 180° turnable Swap Station; a linear transfer station with different lengths and vertical plate lift for under-bench units.

Stackers

The stainless steel, robust Cytomat Stacker accommodates all standard microplates. Dedicated pitch sizes are available to optimize capacity for different type of plates. They are easily removable for manual loading and unloading, and for validated decontamination processes, stackers can be autoclaved and dry heat sterilized at 180 °C.

True orbital shaking

The true orbital Tower Shaker Stacker allows flexible individual settings for each stacker, from 100-1200 rpm. The active microplate clamping design secures both microplate and lid during shaking. Synchronized and unique dual magnetic drive systems are located in the top and bottom to provide consistent shaking amplitude across all microplates. The Shaker Stacker allows true orbital shaking of individual microplates.

Both options are exclusively available for the Cytomat 2 systems.

Barcode reader

The barcode reader is located on the plate handler, allowing retrieval of information on every position, even when manually loaded.

Copper inner chamber

The use of 100% pure copper as the chamber material minimizes contamination (introduced through door opening or sample handling) due to its inherent properties.

Various gate positions

Various gate positions provide flexibility for numerous layout and space requirements and restrictions.

Linear shaking (agitation)

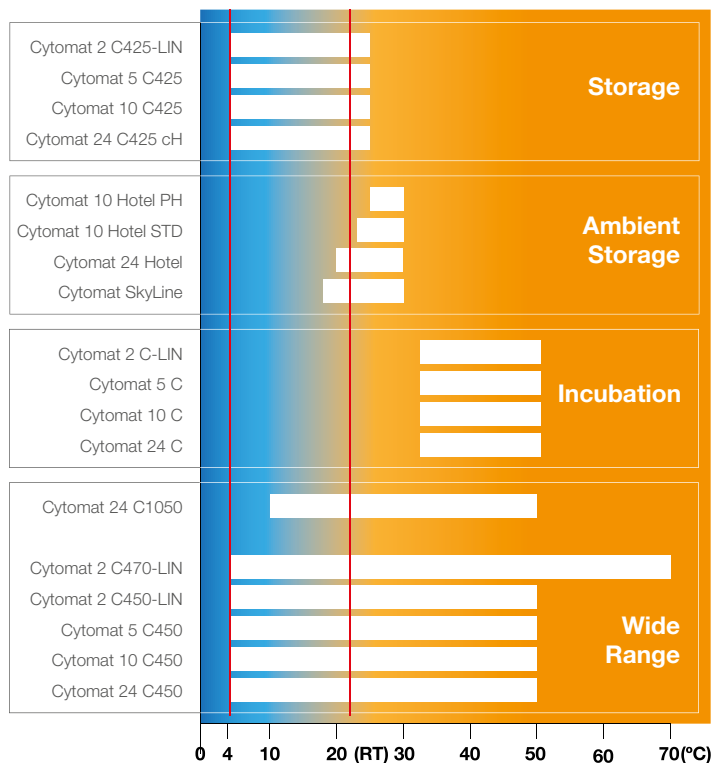
The Cytomat 5 / 10 C450 models also have agitation/linear shaking by accelerating and decelerating the turntable: 1-100 mm amplitude, 12-300 rpm for cell dispersing and other gentle mixing applications.

Further options such as hydrogen peroxide (H₂O₂) sterilization ports, O₂ control and high humidity are also available.

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Selecting the right Cytomat

Choose from a wide range of Cytomat models to match your application requirements.



Model	No. Stackers	Capacity*
Cytomat 2	2	42
Cytomat 5	5	105
Cytomat 10	10	210
Cytomat 24	24	504
Cytomat SkyLine	14	560

* standard microplates with max. height of 18 mm

Options	Description
O ₂ -control	O ₂ control to regulate oxygen level with N ₂ / O ₂ supply
hH	High Humidity for up to 98% rel. Humidity @ 37 °C
FLC (H ₂ O ₂)	H ₂ O ₂ sterilization ports
Gate Position	Various gate positions depending on Cytomat model
DL	Door left hinged
HydraSmart	Controlled humidity with external water tank

Accessories	Description
Stacker	Various stacker pitches for multiple microplate heights
BCR	Internal Bar Code Reader
Transfer Station	Numerous transfer station options
Plate lift	Vertical moving transfer station for under-bench

Further Options and Accessories on request.

Find out more at thermofisher.com/cytomat