

HAMILTON 

Cell Care STAR

Just focus. We take care.



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The tilted position provides precise liquid handling without disturbing adherent cells.

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Begin a New Era with Automation

Unveiling the Versatility of Cell Culture: Opportunities for Advancement

Cell culture is a versatile technique, offering immense potential in diverse fields such as cell therapy, regenerative medicine, bioprocessing, and human biology research. Its adaptability paves the way for groundbreaking applications that continue to push the boundaries of scientific knowledge.

Navigating Demands, Embracing Innovation: The Role of Automation

In response to the growing demand for advancements in biopharma, automation emerges as a vital solution. Through process streamlining and reduced human intervention, automation not only improves efficiency but also safeguards the integrity of research findings. In this dynamic landscape, automation becomes a catalyst for progress, empowering researchers to unlock new possibilities in cell culture.

Addressing Challenges, Ensuring Consistency: The Pursuit of Reliability

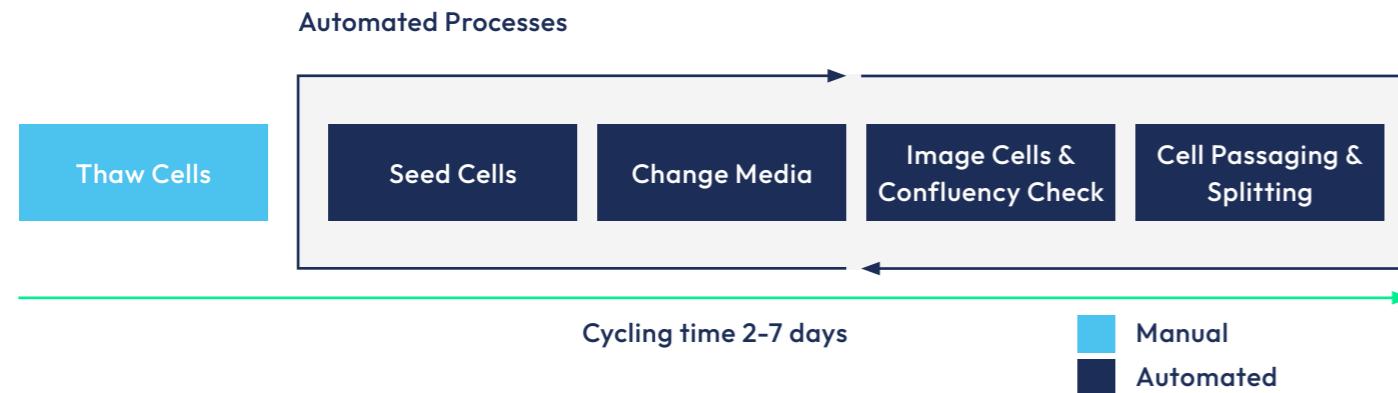
Achieving reliable and consistent results in cell culture poses significant challenges. Optimizing protocols and maintaining rigorous conditions are essential but resource-intensive tasks. Moreover, the inherent risks of bias, inconsistencies, and contamination underscore the need for careful attention to detail.

We Take Care of It

Transitioning to an automated cell culture solution isn't just to optimize workflows – it's about instilling unwavering trust in every step of the process. By circumventing the bottlenecks inherent in manual handling, Hamilton ensures a level of consistency and efficiency that transcends human limitations. In the face of challenges posed by manual mammalian cell culture, and the complexities of customizing automated solutions, we've pioneered an off-the-shelf cell culture maintenance solution. With Hamilton's Assay Ready Workstation, you're not just upgrading your mammalian cell culture maintenance – you're elevating it to unparalleled levels of reliability. Enhanced integrated solutions, trustworthy results, and increased staff efficiency are all integral components of our promise to advance your laboratory routines with confidence.

Know-How and Quality in Perfect Symbiosis

Drawing upon Hamilton's extensive experience in both liquid handling and cell culture, we've successfully automated critical processes with safety and efficiency in mind. This empowers laboratories to accelerate their research while freeing up time to complete other essential tasks.



When the Standard is Excellence

In response to the growing demand for cell culture automation in life sciences, we introduce Cell Care STAR. Developed to meet the need for standardized, precise processes, Cell Care STAR revolutionizes cell culture with enhanced efficiency, reproducibility, and minimized human error. Built on Hamilton's trusted Microlab® STAR platform, the system offers unparalleled process reliability and pipetting accuracy across several application areas. With advanced safety features and precision, it stands as the cornerstone of your 2D adherent cell culture lab. The Cell Care STAR was specifically designed to handle cell culture plates in various formats, tailored to meet the needs of your subsequent cell-based assays. Equipped with state-of-the-art technology, it excels in crucial tasks such as cell seeding, splitting, media change, and incubation over long time periods, while offering users a seamless experience through its intuitive software, Cell Control. Widely applicable across industries including pharmaceuticals, biotechnology, CROs, regenerative medicine, food industry, veterinary medicine, environmental testing, academic research, and cosmetics, Cell Care STAR represents versatility.

Advance Your Cell Culture Environment

1 Keep it Safe

The Class II Safety Cabinet protects cells, staff, and the environment. It is designed and optimized to accommodate an automated liquid handling system for cell culture automation.

5 Keep it Checked

The Cell Imaging Plate Reader combines fluorescence and brightfield imaging with multi-mode detection for cell imaging. It provides detailed information about cells and their characteristics; perfect for automatically checking cell growth.

6 Keep Yourself Informed

The status bar light, visible from outside, provides real-time updates on the progress of the run. Each emitted color corresponds to a specific run status, facilitating instant comprehension for the user.

2 Keep it Precise

The Microlab STAR is well known for its high-precision liquid handling, ensuring remarkable efficiency in cell culture workflows. With a wide range of standard carriers and functional modules, from heating and shaking to cooling and tilting, every aspect of the 2D cell culture maintenance workflow is carefully considered.

3 Keep it Stored

The Hamilton Plate Hotel offers secure and efficient storage of SBS plates, making it an ideal solution for cell culture automation. It is equipped with a barcode scanner to check for labware and resources entering and leaving the cell culture system.

4 Keep it Growing

The Cell Incubator is a fully automated incubator designed for high-capacity cell growth and incubation in a controlled environment, empowering your cells to grow and thrive.



The Software That Takes Care of Your Cells

The Perfect Tool for Running Long-Term Cell Culture-Based Workflows

Cell Control is specifically designed for customers performing cell culture maintenance and preparation for subsequent cell-based assays. The software supports the operator in executing complex automated cell culture workflows with flexibility, while also providing easy-to-use management of process parameters.

Furthermore, the user interface assists the operator while loading resources into the automated system and monitors the consumables consumption, providing a helpful forecast. With Cell Control, you can easily plan batches lasting several weeks.



With the Process Overview, you get a straightforward look at what the Cell Care STAR is currently working on and which tasks are lined up for the days and weeks ahead.

BATCH NAME	OWNER	DAY	PRIO	SCHEDULED	STEP TYPE	PLATES	STEP STATUS
Hela Batch2	Yannik	1	10	Friday, March 22, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	1	0	Friday, March 22, 2024	Refresh24Wells	0	Planned
Hela Batch2	Yannik	2	10	Saturday, March 23, 2024	Passaging24Wells	0	Planned
Hek293 Batch 1	Natalia	2	0	Saturday, March 23, 2024	Refresh24Wells	0	Planned
Hela Batch2	Yannik	3	10	Sunday, March 24, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	3	0	Sunday, March 24, 2024	Refresh24Wells	0	Planned
Hela Batch2	Yannik	4	10	Monday, March 25, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	4	0	Monday, March 25, 2024	Passaging24Wells	0	Planned
Hela Batch2	Yannik	5	10	Tuesday, March 26, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	5	0	Tuesday, March 26, 2024	Refresh24Wells	0	Planned
Hela Batch1	Yannik	1	0	Tuesday, March 26, 2024	Refresh24Wells	0	Planned
HepG2 Batch1	Stefan	1	0	Tuesday, March 26, 2024	Refresh24Wells	0	Planned
Hela Batch2	Yannik	6	10	Wednesday, March 27, 2024	Passaging24Wells	0	Planned
Hek293 Batch 1	Natalia	6	0	Wednesday, March 27, 2024	Refresh24Wells	0	Planned
Hek293 Batch 2	Natalia	1	0	Wednesday, March 27, 2024	Refresh24Wells	0	Planned
HepG2 Batch1	Stefan	2	0	Wednesday, March 27, 2024	Expansion24Wells	0	Planned
Hela Batch2	Yannik	7	10	Thursday, March 28, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	7	0	Thursday, March 28, 2024	Expansion24Wells	0	Planned
Hek293 Batch 2	Natalia	2	0	Thursday, March 28, 2024	Refresh24Wells	0	Planned
Hela Batch1	Yannik	3	0	Thursday, March 28, 2024	Passaging24Wells	0	Planned
HepG2 Batch1	Stefan	3	0	Thursday, March 28, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	8	0	Friday, March 29, 2024	Refresh24Wells	0	Planned
Hek293 Batch 2	Natalia	3	0	Friday, March 29, 2024	Passaging24Wells	0	Planned
HepG2 Batch1	Stefan	4	0	Friday, March 29, 2024	Refresh24Wells	0	Planned
Hek293 Batch 1	Natalia	6	0	Saturday, March 30, 2024	Refresh24Wells	0	Planned

Users can quickly and effortlessly create new cell culture batches, as well as define desired work steps and cell-specific parameters.

Batch Name: Hela Batch2
Assigned User: Yannik
Batch Start Day: 3/21/2024
Batch Status: Planned

Steps:

DAY	SCHEDULED	PRIO	STEP TYPE	STEP STATUS
1	2024-3-22 Fri	10	Refresh24Wells	Planned
2	2024-3-23 Sat	10	Passaging24Wells	Planned
3	2024-3-24 Sun	10	Refresh24Wells	Planned
4	2024-3-25 Mon	10	Refresh24Wells	Planned
5	2024-3-26 Tue	10	Refresh24Wells	Planned

Step Parameters:

PARAMETER	VALUE
Start Plate Type	Plate24W
Target Plate Type	Plate24W
Volume of Medium to Aspirate from Cells in ul	1000
Volume of Medium to Dispense onto Cells in ul	1000
Passaging Ratio 1x	2
Shaking time for incubation in s	5
Shaking speed for incubation in rpm	100
Temperature for incubation in °C	37
Number of Plates to Use in Simulation	8

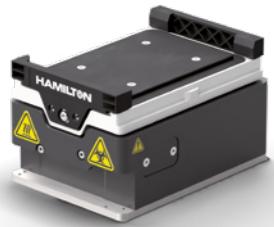
Plates: Current Plate Format: Plate24W

Buttons: Move Plate, Delete Plate, Load Plate, Unload Plate

PLATE TYPE	PLATE STATE	COMMENT	CREATION DATE
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Functional Features

The Cell Care STAR features an entire portfolio of highly-developed, functional modules that automate common manual processes and can be integrated onto the deckspace.



Heat & Shake

The Hamilton Heater Shaker (HHS) automates the heating and shaking of a large variety of standard ANSI/SLAS micro plates and is ideal for cell detachment of adherent cultures using trypsin.



Tilt Function

To ensure gentle handling of delicate cell lines, Hamilton offers a Tilt Module to assist in automating cell culture workflows. Tilting plates enables the removal without disturbing adherent cells, while also ensuring dissociated cells are harvested without leaving cells behind.



Temperature Control Carrier

Maintain optimal cell culture media temperature with two on-deck carriers, each accommodating five positions, capable of both heating and cooling labware. Large quantities of medium can be heated while sample plates can be cooled until the user intervenes.



Single Temperature Control

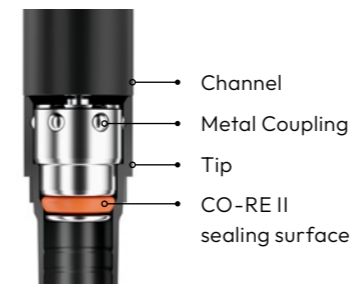
The new Hamilton Heater Cooler (HHC) is the premier device for your cell culture workflows that require heating and cooling. The HHC automates the temperature control of standard ANSI/SLAS micro plates, as well as maintaining optimal temperature for cell culture reagents.



The Liquid Waste

The active Liquid Waste feature ensures safe and reliable disposal of liquid waste such as cell culture media and PBS. All generated liquid waste is channeled below the deck, with easy access to remove from the system.

Additional Functionalities



CO-RE II

Pipetting Tool

CO-RE II technology assures precise tip alignment, minimizing the risk of leaks and collisions, while fast tip coupling boosts productivity. Cell Care STAR is equipped with 8 pipetting channels with a volume range of 1 to 1000 μ L.



Transportation Tools

The CO-RE Gripper is a tool for moving labware around on-deck by utilizing two pipetting channels. It can transport a variety of labware such as cell culture plates, micro plate lids, and reservoirs.

iSWAP

The iSWAP robotic plate handler complements the CO-RE Gripper transportation tool, enabling the off-deck integration of third-party devices. Cell culture plates can be transported and fed to additional devices such as the incubator, imager, and plate hotel.



DeckWatch

On-deck processes are essential in every cell culture workflow. DeckWatch utilizes two cameras to continuously record and monitor workflow steps in real time. Ideal for runs lasting over several days or taking place during weekends, DeckWatch ensures cell culture processes can be tracked and observed without interruption, reducing risks and safeguarding valuable resources.

Safe Process

Safety is Key

Safety is paramount in laboratory settings, particularly when working with delicate cell cultures. It's crucial to safeguard not only operators and cells but also your investments. Several safety features are included on the Cell Care STAR to ensure a secure process for both you and your cell culture. These include the automatic identification of barcoded cell culture plates, and meticulous recording of all pipetting steps using sophisticated error handling technologies. The system ensures continuous workflows and provides clear indications when user intervention is required to ensure the integrity of experiments and results.



The Cells are in Focus

Hamilton understands how important process reliability is in the cell culture environment. That's why we employ advanced technologies to minimize errors, offering peace of mind throughout your workflow. With thorough traceability, your cell cultures are handled with care.



The Solution

Cell Care STAR prioritizes efficiency, standardization, and user-friendliness, resulting in significant time savings and streamlined workflows for your cell culture processes. With a steadfast commitment to reliability, our safety features safeguard result integrity, while advanced technologies minimize errors and provide comprehensive traceability. Count on Hamilton to revolutionize your cell culture practices, empowering you with increased productivity and unwavering confidence in your results.





Industry-Leading Support

Service & Support You Can Count On

Our worldwide Service organization provides the industry's best service and support. Local engineers are trained by Hamilton-certified experts and supported by service centers and distributors. Our commitment to high-quality standards goes beyond ISO 9001 certification and includes the continuous training of all authorized service technicians.



Extra-Mile Support

Always there when you need us:

Our global field service and support network - from the technical support hotline to local service engineers and application specialists - guarantees a fast response to your request, minimizing downtime. Whether routine maintenance, service support, or application support, the Hamilton team ensures your lab will be up and running as quickly as possible.

Training makes perfect:

Hamilton offers customers in-depth training sessions to ensure laboratories know how to properly use their automated handlers. Whether a general overview of your equipment at a Hamilton facility or personalized sessions in your lab, we are committed to setting your team up for success.



Highest Quality Level and The Best Service

Quality from a single source:

We guarantee the highest standards of quality, reliability, and precision for all our products; from our own production and state of the art quality control systems to final inspection.

System installation made to measure:

All Hamilton systems are installed according to strict procedures and in accordance with ISO 9001 standards. Each system includes a comprehensive Installation Qualification (IQ) and detailed documentation.

Service as individual as you are:

Ensure the longevity and peak performance of your automated system with a Hamilton service contract, including regular monitoring and preventative maintenance.



● Headquarters / Manufacturing



Years of Experience
75+



Locations Worldwide
22+



Employees Internationally
3,000+

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