THRIVE BIOSCIENCE

WORKFLOW SERIES

The CellAssist 50 in BSL-3 Facilities: Remote, Safe, and Smart Cell Culture Monitoring with Thrive IQ

Remote Experiment Configuration | Automated Imaging | Real-Time Notifications | On-Demand Control | Project Isolation

Conventional Workflow

CellAssist 50 Workflow



CELLASSIST 50 WORKFLOW

1. In-Lab Setup

- Enter the BSL-3 facility with appropriate PPE
- Seed cells and load up to 50 plates into the CellAssist 50
- Assign plate barcode

2. Remote Configuration (Outside the lab)

- Add experimental metadata (cell type, treatment, plate layout)
- Redefine scanning schedule
- Set up real-time email or text alerts

3. Automated Monitoring

- CellAssist 50 executes scheduled scans
- High-resolution images and growth curves are uploaded automatically
- Notifications sent for key events

BENEFITS

- Make informed decisions in real time without requiring BSL-3 Entry Procedures
- Remotely configure your experiments and inspect data
- Automate your projects imaging schedules for 1-50 plates
- On-demand scan adjustments to capture key events or investigate deviations in real time
- Receive real-time notifications of key events
- Self-contained incubator design supports project isolation and reduces cross-contamination risks

CONVENTIONAL CHALLENGES	HOW CELLASSIST 50 SOLVES IT
Requires time-consuming preparation to enter	Build and monitor experiments entirely remotely after loading plate
Delayed response to unknown cell culture changes	Set alerts (e.g., confluency thresholds) to receive notifications via text or email
Lack of visibility into cell health	Continuous monitoring with automated and on- demand imaging for real-time cell health insights
Shared resources increase the risk of cross- contamination	Siloed, automated units can be assigned to individual projects or pathogens
Manual imaging requires trained personnel to be physically present for long periods	Automated, remote-controlled imaging reduces time and personnel required inside the BSL-3 lab
BSL-3 regulations recommend buddy systems, limiting availability and flexibility	Enables single-user operation from outside the lab, minimizing the time two people need to be present

BSL-3 entry procedures and strict facility protocols are essential for maintaining a safe and compliant working environment. However, these necessary safeguards introduce operational challenges, including restricted personnel access, limited ability to perform quick routine checks, and significant time constraints that can create workflow bottlenecks.

The CellAssist 50 enables scientists to remotely design, monitor, and control live-cell imaging experiments, significantly reducing the need for in-person lab time. Researchers can access real-time insights and make informed decisions from outside the BSL-3 environment, eliminating unnecessary entries and optimizing both safety and efficiency.

Learn even more at: www.thrivebio.com

Thrive Bioscience, located in the Boston area, offers customers a family of instruments and software that provide imaging, analytics, and automation for reproducible cell culture. Our products empower biologists by combining advanced software, microscopy, and robotics, to acquire, organize, and analyze images of all their cells.

Thrive Bioscience

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