



VI-CELL BLU CELL VIABILITY/COUNTING ANALYZER

Automated platform. Accelerated results.



The Vi-CELL BLU automates the widely accepted trypan blue dye exclusion method for cell viability that has historically been performed with a light microscope, pipette, and a hemacytometer. This makes it perfect for large-to small-scale cell viability/counting applications in many fields including biopharma and academia.

- Fully automated sample preparation
- Fast sample processing
- Small sample volume requirements
- Strong instrument-to-instrument comparability
- More sample capacity

CHARACTERIZED
by ingenuity.

 **BECKMAN
COULTER**
Life Sciences

BUILT ON LEGACY

Design Inspired by the Vi-CELL XR

- Fully automated sample prep and cell counting
- 24 position sample carousel 96-well plate compatible
- Reagent pack complete with trypan blue, buffer, disinfectant and cleaning solutions
- Built-in PC (Win 10 OS) with touchscreen monitor
- Facilitates 21 CFR Part 11 Compliance
- Facilitates your ability to be compliant with IQ/OQ

Advancements

Thanks to cutting-edge liquid handling and imaging technology, the entire system – from sample aspiration, reagent handling, image analysis, to instrument cleaning – is fully controlled by an advanced yet easy to use software interface designed for maximum flexibility.

This instrument revolutionizes the speed, reliability and objectivity of your results, and provides critical information conventional methods simply cannot offer.

- High speed camera enables the system to capture images as the sample flows continuously through the flowcell. Without the need to pause the sample flow for image capture, we are able to increase the speed of sample analysis, thereby decreasing the total sample processing time.
- Decreasing tubing length and inner diameter enables the system to utilize smaller sample volumes for analysis
- Optimizing the syringe pump speed accelerates mixing and washing time while minimizing the introduction of bubbles
- Advanced software algorithms:
 - Use of a Concentration slope for improved linearity and accuracy of concentration
 - Ability to reanalyze data for cell type optimization
 - Bubble detection to alert the operator of the presence of bubble(s) in an image.
 - Ability to detect and ignore dust on the flowcell



Data Integrity and Compliance

The Electronic Records and Electronic Signatures Rule (21 CFR Part 11) was established by the Food and Drug Administration (FDA) to define the requirements for submitting documentation in electronic form and the criteria for approved electronic signatures. Since analytical instrument systems, such as the Vi-CELL, generate electronic records, these systems must facilitate compliance with the Electronic Records Rule. By enabling the Security option in the software, it automatically allows the user to configure the system. The Vi-CELL features the following key system components to facilitate 21 CFR Part 11 compliance

- Audit trail
- Error log files
- Electronic signature capability
- Secure user sign-on
- User level permissions
- Administrative configuration tools
- Facilitates your ability to be compliant with IQ/OQ
- RFID tracking of reagent part number, lot number, activities and expiration date

Flexibility and Ease of Use

- Easy to install reagent pack
- Single-use controls
- Exporting data
- Analysis of data on personal desktop
- Supports the ability of other software programs to access data from Vi-CELL BLU

Cleanroom Compatible

- Surfaces can be wiped down
- No external PC or monitor
- VHP tolerant (20 cycles/year)



System-to-system mean sample concentration results of a common divided sample shall be within 10% of each other, with at least 2.0e+6 cells/mL concentration and 95% confidence.



SPECIFICATIONS

Feature	Auto sampler	Sample from 96-well plate	Sample analysis time	Minimum sample volume	Maximum sample volume	Facilitates 21 CFR Part 11	Aspiration and trypan blue mixing	Default cell analysis parameters	Ability to optimize analysis parameters	Concentration range	Counting accuracy	Counting repeatability	Size range	Out-of-range concentration flag	User-definable declustering options	Circularity measurement
VI-CELL BLU	Yes, 24 position	Yes	<130 seconds Normal Mode <90 seconds FAST Mode Typical analysis time: Normal mode: 110 seconds FAST mode: 80 seconds 100 images, ~2x10 ⁶ cells/ml	170 microliters in FAST mode 200 microliters in Normal mode	500 microliters	Yes	Adjustable	Yes	Yes	5 x 10 ⁴ to 1.5 x 10 ⁷ cells/mL	Within 10% of Coulter Counter concentration for concentrations of 2e+6 or more	Concentration repeatability CV of ± 5% for a common sample with greater than or equal to 2.0 x 10 ⁶ particles/ml	2-60 microns	Yes	Yes	Yes
Benefits	Walkaway operation	<ul style="list-style-type: none"> • Convenience of loading samples at once • Walk away operation 	Time savings, increased throughput	Less cell culture depletion from small scale cell cultures	-	Compliance	Helps optimize cell types, such as fragile cell lines. Added mixing helps separate sticky cells before analysis, improving results.	Easy start-up	<ul style="list-style-type: none"> • Improved accuracy • Correlation to alternative method 	Minimize need to dilute samples	Confidence in answer	Confidence in answer	Improved measuring range for small cells and yeast	Automatically keeps operator informed	Helps in optimizing cell types, such as "sticky cell lines" and helps number cells in clusters	Helps in isolating debris from sample

Operating System	Power Requirements	Temperature	Weight	Unit Dimensions
Win 10	50 Watts, 65 Watts max AC Input: 100-240V~, 2.5A, 50-60Hz	13° - 37°C 55° - 99°F	28 kg 63 lbs	W x D x H 42 x 54 x 45 (cm) 16.5 x 21 x 18 (in)

BUILT ON LEGACY



Part Numbers

Part Number	Description
C19201	Vi-CELL BLU System, includes the instrument and start-up kit

Accessories and Consumables

Part Number	Description
C06019	Vi-CELL BLU single reagent kit
C39291	Vi-CELL BLU quad pack reagent kit (qty 4)
C24843	Sample vials (350 sample vials/bag)
C24841	96-well plate, qty 5
C24842	96-well plate cover slip, qty 10
C09147	0.5M single-use concentration control (20 vials of 0.5×10^6 beads/mL)
C09148	2.0M single-use concentration control (20 vials of 2×10^6 beads/mL)
C09149	4.0M single-use concentration control (20 vials of 4×10^6 beads/mL)
C09150	10.0M single-use concentration control (20 vials of 10×10^6 beads/mL)
C09145	50% single-use viability control (20 vials of 50% viability beads)
C23660	Start-up kit



Service Offerings

Part Number	Description
C22907	Vi-Cell BLU preventative maintenance
C22908	Vi-Cell BLU installation with basic training, IQ and OQ
C22909	Vi-Cell BLU instrument qualification
C22910	Vi-Cell BLU installation without training
C22911	Vi-Cell BLU installation with basic training
C22912	Vi-Cell BLU installation qualification



Remote Service & Support

Fast, secure, online support to help:

- Proactively reduce instrument downtime
- Maximize productivity
- Optimize workflows

Easy-to-configure and firewall-friendly, **BeckmanConnect** gives our service experts real-time system visibility so they can resolve instrument issues and get you back up and running—fast.

This cloud-based service is offered **at no cost** for instruments under warranty or covered by a service agreement.

For details, visit beckman.com/beckmanconnect.



Product is not verified or validated for use in diagnostic procedures.

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