



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





# **BUILT ON LEGACY**

### Design Inspired by the Vi-CELL XR

- Fully automated sample prep and cell counting
- Built-in PC (Win 10 OS) with touchscreen monitor
- 24 position sample carousel 96-well plate compatible
- Reagent pack complete with trypan blue, buffer, disinfectant and cleaning solutions
- 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:
  - <sup>o</sup> Use of a Concentration slope for improved linearity and accuracy of concentration
  - <sup>o</sup> Ability to reanalyze data for cell type optimization
  - Bubble detection to alert the operator of the presence of bubble(s) in an image.
  - <sup>o</sup> Ability to detect and ignore dust on the flowcell

# **SPECIFICATIONS**



# **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

#### 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

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.

| Feature                             | Auto<br>sampler       | Sample from<br>96-well plate  | Sample analysis time  | Minimum sample<br>volume   | Maximum sample<br>volume | Facilitates 21<br>CFR Part 11 | Aspiration and trypan blue mixing   | Default cell<br>analysis<br>parameters | Ability to optimize<br>analysis<br>parameters  | Concentration range                | Counting<br>accuracy   | Counting repeatability  | Size range  | Out-of-range<br>concentration flag          | User-definable<br>declustering<br>options   | Circularity<br>measurement                  |
|-------------------------------------|-----------------------|---|---|--|--------------------------|-------------------------------|---|--|--|------------------------------------|--|---|---|---|---|---|
| Vi-CELL BLU                         | Yes, 24<br>position   | Yes   | <130 seconds Normal Mode<br><90 seconds FAST Mode<br>Typical analysis time:<br>Normal mode: 110 seconds<br>FAST mode: 80 seconds<br>100 images, -2x10 <sup>6</sup> cells/ml | 170 microliters in<br>FAST mode<br>200 microliters in<br>Normal mode | 500 microliters          | Yes                           | Adjustable  | Yes                                    | Yes  | 5 x 104 to<br>1.5 x 107 cells/mL   | Within 10% of<br>Coulter Counter<br>concentration for<br>concentrations of<br>2e+6 or more | Concentration<br>repeatability CV of<br>± 5% for a common<br>sample with<br>greater than or<br>equal to 2.0 × 10 <sup>6</sup><br>particles/ml | 2-60 microns  | Yes   | Yes   | Yes   |
| Benefits                            | Walkaway<br>operation | <ul> <li>Convenience of<br/>loading samples<br/>at once</li> <li>Walk away operation</li> </ul> | Time savings, increased<br>throughput   | Less cell culture<br>depletion from<br>small scale cell<br>cultures  | -                        | Compliance                    | Helps optimize cell types,<br>such as fragile cell lines.<br>Added mixing helps<br>separate sticky cells before<br>analysis, improving results. | Easy start-up                          | <ul> <li>Improved<br/>accuracy</li> <li>Correlation to<br/>alternative<br/>method</li> </ul> | Minimize need to<br>dilute samples | Confidence in<br>answer  | Confidence in<br>answer   | Improved<br>measuring range<br>for small cells<br>and yeast | Automatically<br>keeps operator<br>informed | Helps in<br>optimizing cell<br>types, such as<br>"sticky cell lines"<br>and helps number<br>cells in clusters | Helps in isolating<br>debris from<br>sample |
| Operating System Power Requirements |                       | Tempera   | ture  |  | Weight                   | Unit Di                       | nensions  | _                                      |  |                                    |  |   |   |   |   |   |

| Win 10 | 50 Watts, 65 Watts max             | 13° - 37°C | 28 kg  | W x D x H<br>42 x 54 x 45 (cm)           |  |
|--------|------------------------------------|------------|--------|--|--|
| WIN IO | AC Input: 100-240V~, 2.5A, 50-60Hz | 55° - 99°F | 63 lbs | 42 x 54 x 45 (cm)<br>16.5 x 21 x 18 (in) |  |

- compliant with IQ/OQ
- and expiration date

#### Cleanroom Compatible

• Facilitates your ability to be

• RFID tracking of reagent part number, lot number, activities



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



# **ORDERING INFORMATION**

## **Part Numbers**

Part Number

Vi-CELL BLU System, includes the instrument and start-up kit

Description

# Accessories and Consumables

| Part Number | Description   |  |
|-------------|---|--|
| C06019      | Vi-CELL BLU single reagent kit  |  |
| C39291      | Vi-CELL BLU quad pack reagent kit (qty 4)   | and the second s |
| C24843      | Sample vials<br>(350 sample vials/bag)  | • T  |
| C24841      | 96-well plate, qty 5  |  |
| C24842      | 96-well plate cover slip, qty 10  |  |
| C09147      | 0.5M single-use concentration control<br>(20 vials of 0.5 x 10 <sup>6</sup> beads/mL) |  |
| C09148      | 2.0M single-use concentration control<br>(20 vials of 2 x 10 <sup>6</sup> beads/mL)   | • 🕷 📠  |
| C09149      | 4.0M single-use concentration control<br>(20 vials of 4 x 10 <sup>6</sup> beads/mL)   |  |
| C09150      | 10.0M single-use concentration control<br>(20 vials of 10 x 10 <sup>6</sup> beads/mL) | U  |
| C09145      | 50% single-use viability control<br>(20 vials of 50% viability beads)                 |  |
| C23660      | Start-up kit  | V  |

### 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                  |

# Connect

**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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