



Vi-CELL BLU 2.0 Software

Next-Generation Performance

ACCELERATING
answers

 **BECKMAN
COULTER**
Life Sciences

Your Trusted Partner in Cell Counting

The Vi-CELL BLU 2.0 software delivers precise and reliable cell viability and counting by fully automating the trypan blue dye exclusion method - eliminating the need for manual microscopy, pipetting, and hemocytometer-based workflows.

Ideal for both large- and small-scale applications across process development and manufacturing.

Key Benefits



Consistent, Comparable Data —Every Run

Advanced algorithms and intelligent analysis tools support **strong comparability with legacy platforms**, helping preserve historical data alignment and validated workflows during transition.



Elevated Data Integrity and Support for GMP-Aligned Workflows

Enhanced roles, permissions, and reporting capabilities help support modern **GMP expectations** and audit-ready documentation. Greater control, consistency, and confidence in regulated environments.



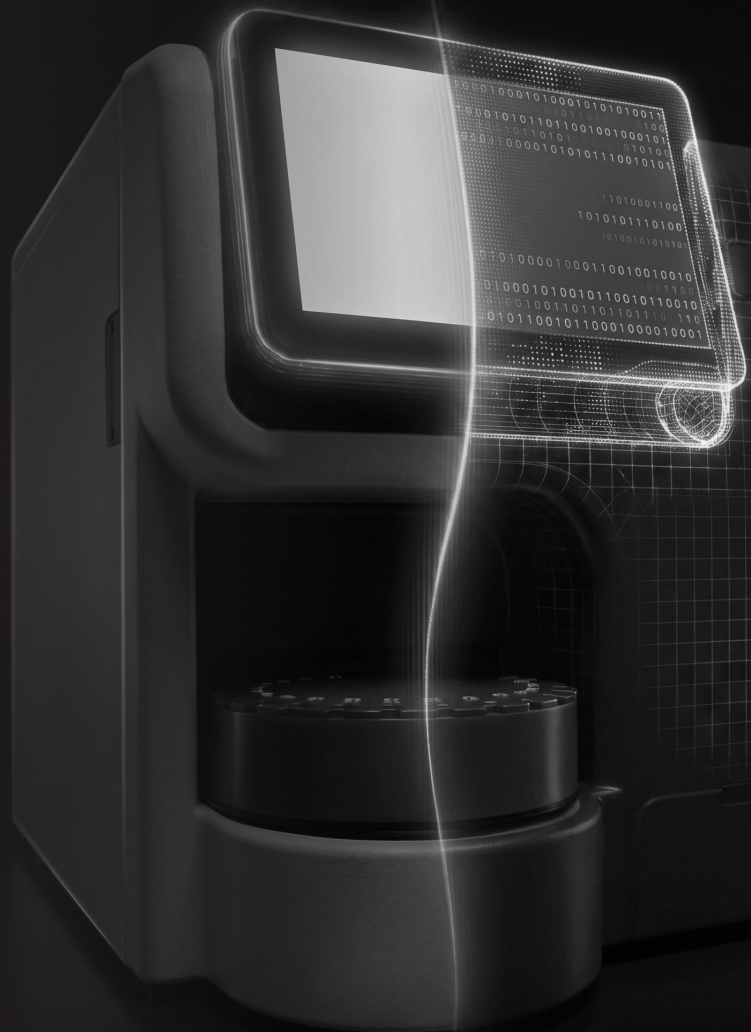
Flexibility across CLD, PD, and QC

Expanded cell-type parameters, advanced image analysis tools, and refined cluster detection enable broader application support from early process development to quality control.



Designed for Reliable Uptime in Real-World Operations

Built on the proven Vi-CELL BLU hardware, the 2.0 software enhances performance without introducing changes to existing instrument hardware.



Design Inspired by the Vi-CELL XR Cell Viability Analyzer

- Fully automated sample preparation and cell counting
- 24-position sample carousel for continuous, on-the-fly loading
- Compatible with 96-well plates for flexible workflows
- Integrated reagent pack including:
 - Trypan blue
 - Buffer solution
 - Conditioning solution
 - Cleaning solution
- Built-in PC with Windows 10 operating system
- Intuitive touchscreen interface for streamlined control
- Supports 21 CFR Part 11 compliance requirements
- Enables IQ/OQ qualification readiness
- Single Sign-On (SSO) with Active Directory for secure access

Advanced Improvements

Working with highly clustered samples or complex cell morphologies?

The Vi-CELL BLU 2.0 software introduces a range of enhancements designed to improve accuracy, usability, and data integrity.



Enhanced Image Processing & Analysis

- Two additional image processing parameters for greater analytical flexibility
- Four new enhanced declustering levels to better analyze aggregated cells
- Improved edge detection and segmentation for more precise cell identification



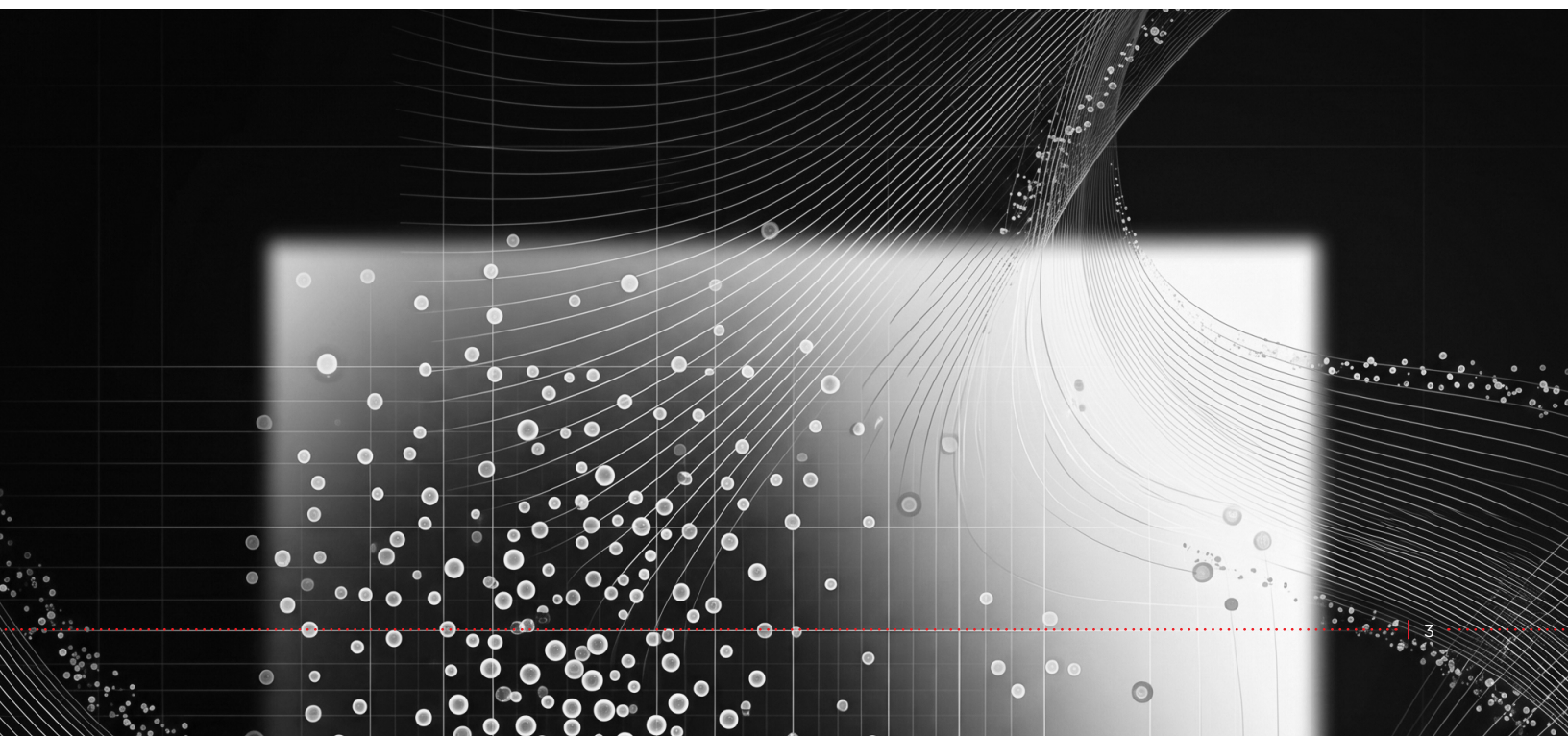
New adjustable parameters allowing better matching of results with your legacy instrument and remove debris from the field of view:

- Cell Brightness
- Minimum Cell Dark Contrast
- Concentration Adjustment Factor



Strengthened Data Integrity & GMP Compliance

- Improved sample naming controls to reduce risk of unintended data manipulation
- Invalid sample cup detection to prevent processing errors
- Enhanced audit trails and logging capabilities for traceability
- Support for a controlled sample recovery process (sample reloading)
- Customizable, user-defined roles tailored to organizational needs for flexible user management



Specifications

Operating System	Power Requirements	Temperature	Weight	Unit Dimensions
Windows 10	50 Watts, 200 Watts max AC Input: 100-240V~, 2.5A, 50-60Hz	13° - 37°C 55° - 99°F	34 - 35 kg 74 - 77 lbs	W x D x H 42 x 54 x 45 (cm) 16.5 x 21 x 18 (in)

Performance & Workflow

Parameter	Specification	Benefit
Sample Analysis Time	<130 sec (Normal Mode); <90 sec (FAST Mode)	Faster results, Time efficient, Increased throughput
Auto Sampler	24-position carousel; on-the-fly loading	Enables walk-away operation and continuous workflow
Sample from 96-well plate	Yes	Flexible sample handling for diverse applications
Minimum Sample Volume	170 µL (FAST mode); 200 µL (Normal mode)	Preserves valuable samples, ideal for limited volumes
Maximum Sample Volume	±20 µL	Ensures consistent and reliable measurements
Aspiration & Mixing	Adjustable trypan blue mixing	Optimizes cell types, improves accuracy for difficult or sticky cell types

Measurement Capabilities

Parameter	Specification	Benefit
Concentration Range	5×10^4 to 1.5×10^7 cells/mL	Reduces need for dilution
Size Range	2-60 µm	Enables analysis of small cells and yeast
Circularity Measurement	Available	Isolates debris
Declustering Options	User-definable	Optimizes cell types such as “sticky cell lines” and helps number cells in clusters
Out-of-Range Concentration Flagging	Automatic alerts	Keeps users informed and prevents data errors

Accuracy & Reproducibility

Parameter	Specification	Benefit
Counting Accuracy	Within ±10% of Coulter Counter ($\geq 2 \times 10^6$ cells/mL)	High confidence in results
Counting Repeatability	CV ±5% ($\geq 2 \times 10^6$ particles/mL)	Consistent and reproducible data
Data Output	Cell count, concentration, viability (%)	Provides critical decision-making metrics

Compliance & Data Integrity

Parameter	Specification	Benefit
Regulatory Compliance	Supports 21 CFR Part 11	Meets regulatory requirements confidently
User Access	Single Sign-On (Active Directory)	Simplifies login and enhances security
Audit Trail	Available	Ensures traceability of all actions
Electronic Signatures	Supported	Enables compliant digital approvals
Data Security	Role-based permissions, secure login	Protects sensitive data and limits access
Data Management	SQL-compatible database	Facilitates integration and data handling
Reagent Tracking	RFID tracking (lot, expiry, usage)	Improves inventory control and compliance tracking

Compare your
instrument-to-
instrument data



Reduce hands-
on time through
fully automated
processing from
sample to result



Flexible sample
loading with
24-position
carousel or 96-
well plate



Save space
through small
footprint



Easy-to-use
fully enclosed
reagent pack



Integrate into
your existing
automated
processes with
OPC UA



Get more from
less with 200 μ L
sample size



Increase
throughput via
fast sample
processing time:
130 s



Easy method
migration
from legacy
instruments



Be 21 CFR Part
11 compliance
fostered by data
integrity tools

Improved Automation Capabilities

The Vi-CELL BLU 2.0 software automation option enables hands-free sample handling, eliminating the need for manual intervention. By integrating seamlessly with your existing automation systems, it supports online sampling for cell concentration and viability measurements.

This automated mode delivers results comparable to standalone systems while improving overall efficiency and productivity. With smooth integration into your workflows, it helps streamline processes and maximize throughput.

Responsibility Chart

Beckman Coulter Life Sciences

- Sell and install Vi-CELL BLU analyzer with automation option
- Provide developer kit to Automation Solution Provider

Automation Solution Provider

- Develop automation client using Vi-CELL BLU analyzer API
- Validate automation solution

Customer

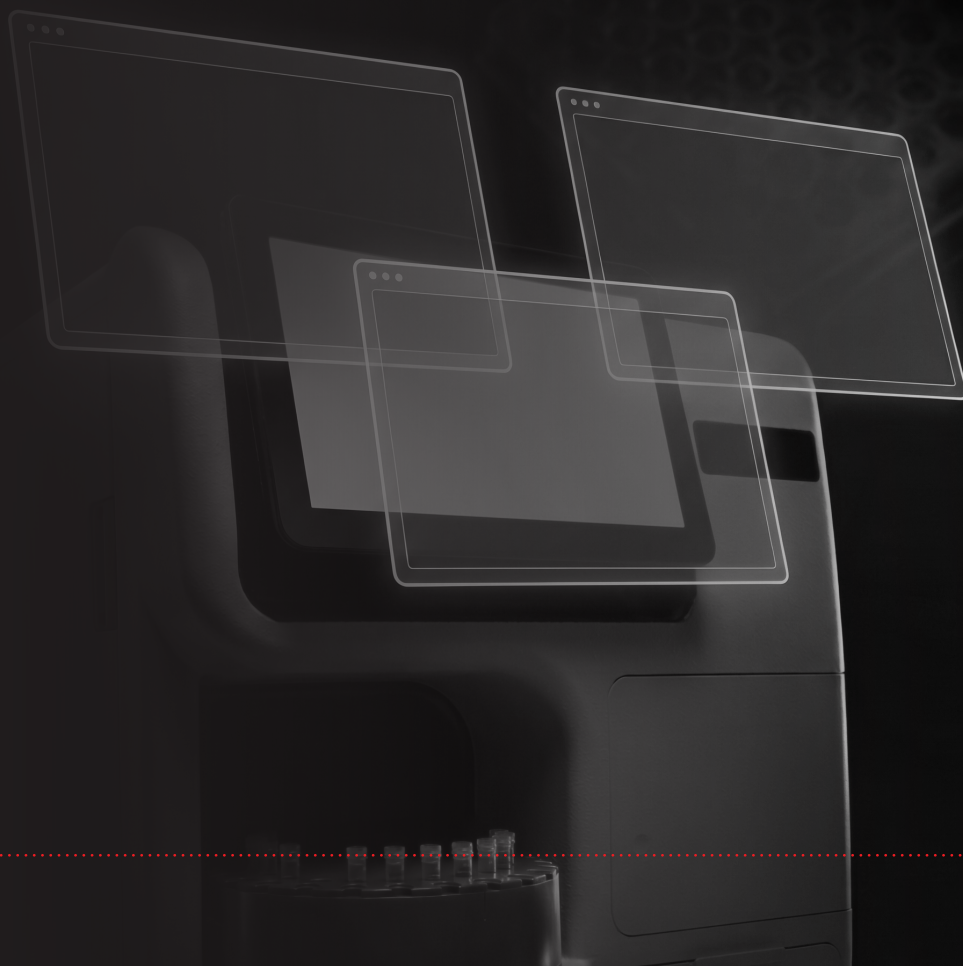
- Purchase Vi-CELL BLU analyzer from Beckman Coulter Life Sciences
- Purchase solution from Automation Solution Provider

Flexibility and Ease of Use

- Easy-to-install reagent pack
- Single-use controls
- Export data with ease
- Analyze encrypted data on your personal desktop
- Allow other software programs to access data from Vi-CELL BLU analyzer

Cleanroom Compatible

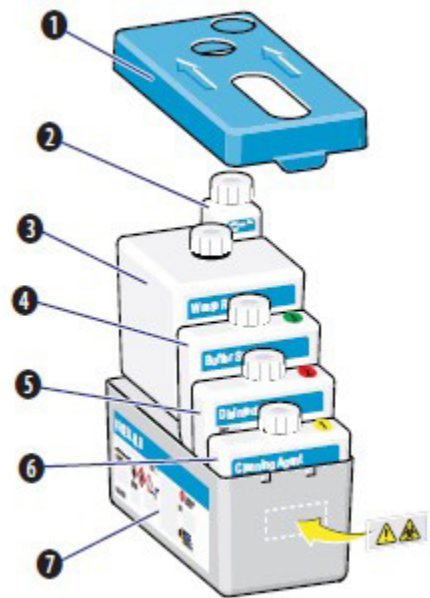
- Surface can be wiped down
- No external PC or monitor
- VHP tolerant (20 cycles)



Ready-to-Use Reagent Pack

The Vi-CELL BLU analyzer is equipped with a convenient, ready-to-use reagent pack designed for simplicity and consistency. Integrated RFID tracking monitors reagent part number, lot number, usage activity, and expiration date—enabling proactive management and ensuring optimal performance.

- 1 Reagent Pack Lid
- 2 Trypan Blue Bottle
- 3 Waste Bottle
- 4 Buffer Solution Bottle
- 5 Conditioning Solution
- 6 Cleaning Agent Bottle
- 7 Reagent Pack Tray



Service and Support

The Vi-CELL BLU 2.0 software is equipped with features designed to support 21 CFR Part 11 compliance, helping ensure data integrity and regulatory readiness.

From installation to ongoing operation, we provide comprehensive support throughout the entire instrument lifecycle—including preventive maintenance, qualification, and repairs. Our expertise helps maintain optimal performance and reliability, allowing you to focus on your work with confidence.

Maintenance	Compliance	Training
Avoid unexpected downtime and reduce long-term costs with flexible service plans designed to keep your instrument running at peak performance.	Ensure quality and regulatory readiness with standardized service procedures, fully traceable controls, and comprehensive documentation.	Accelerate user adoption with flexible on-site and online training options, enabling teams to quickly become proficient.
BeckmanConnect Remote Support	Technical Support	Technical Documents
Our service specialists can securely access your system to diagnose and resolve issues remotely in real time—minimizing downtime and ensuring rapid resolution.	Certified experts are available to identify, troubleshoot, and resolve technical issues over the phone, providing timely and reliable assistance.	Access essential resources, including instruction manuals, safety data sheets, and certificates of analysis, to support your operations and compliance needs.

Ordering Information

Instrument

Part Number	Description
C19201	Vi-CELL BLU system, includes the instrument and start-up kit
C82796	Vi-CELL BLU with Integration Option 1 with Sample Introduction Cup
C82797	Vi-CELL BLU with Integration Option 2 with Plate Holder
D09686	Vi-CELL BLU Instrument with Sartorius Ambr [®] Automation Kit

NEW Software

Part Number	Description
D43913	Upgrade to Vi-CELL BLU 2.0 Software
D43995	
D43914	Upgrade to Vi-CELL BLU 2.0 Software with Sartorius Ambr [®] Automation Kit
D44108	

Accessories and Consumables

Part Number	Description
C06019	Vi-CELL BLU single reagent kit
C39291	Vi-CELL BLU quad pack reagent kit (qty 4)
C99606	Sample vials (500 sample vials/bag)
C24842	96-well plate cover slip, qty 10
C09147	0.5M single-use concentration control (25 vials of 0.5×10^6 beads/mL)
C09148	2.0M single-use concentration control (25 vials of 2×10^6 beads/mL)
C09149	4.0M single-use concentration control (25 vials of 4×10^6 beads/mL)
C09150	10.0M single-use concentration control (25 vials of 10×10^6 beads/mL)
C09145	50% single-use viability control (25 vials of 50% viability beads)
C99716	96-well plate, for use with Vi-CELL BLU 5 Count
C99715	96-well plate, for use with Vi-CELL BLU 50 Count



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.

For details, visit beckman.com/beckmanconnect.



Product in development. Performance characteristics have not been validated.

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