BD FACSuite™ CS&T Research Beads

Automated setup and tracking for the BD FACSVerse™ flow cytometer

Features

- Work with BD FACSuite software's innovative cytometer setup features
- Automate and track the daily performance of lasers and detectors
- Increase the accuracy and reproducibility of the systems
- Accommodate a broad range of fluorochromes, which enables a wider range of applications
- Manufactured under GMP for improved quality

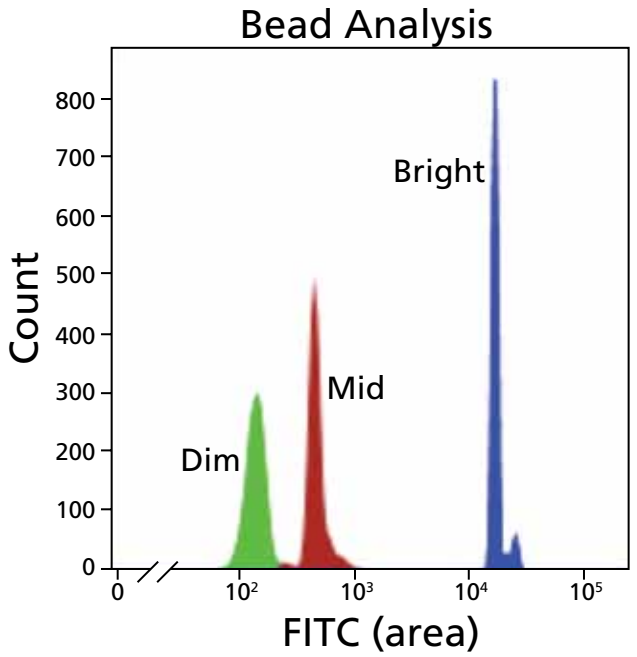

Figure 1. BD FACSuite CS&T research bead brightness profiles

The graph shows representative dim (green), mid (red), and bright (blue) BD FACSuite CS&T research beads fluorescence histograms, analyzed using BD FACSuite software on a BD FACSVerse digital flow cytometer. CS&T research beads are excited by all supported lasers and filter combinations.

BD FACSuite™ CS&T research beads provide automated cytometer setup, assay setup, and performance tracking for the BD FACSVerse™ flow cytometer. Designed for use with BD FACSuite software, the CS&T research beads automate performance adjustments to help improve day-to-day cytometer performance and consistency.

Each bead reagent vial contains sufficient volume and concentration to perform 25 performance quality control (QC) checks.

Address a broad range of applications

The BD FACSuite CS&T research bead reagent contains equal concentrations of three polystyrene beads differing in relative fluorescence intensity: dim, mid, and bright. These beads contain a mixture of dyes with a wide range of excitation and emission wavelengths that are used to set up the flow cytometer for a diverse set of applications.

Characterize cytometer performance

Each bead's median fluorescence intensity (MFI) and robust coefficient of variation (rCV) are used to determine the initial performance of the BD FACSVerse fluorescence detectors (characterization QC). BD FACSuite setup and QC algorithms use this information to determine a variety of cytometer settings (eg, laser delays) and performance measurements such as relative fluorescence detection efficiency (Qr), relative background (Br), and instrument sensitivity (IS).

Automation streamlines workflow

Once characterization QC is complete, the same BD FACSuite CS&T research beads are used daily to check and monitor performance (performance QC). BD FACSuite software automatically tracks these daily measurements and presents them in Levey-Jennings charts, which can be customized to meet user requirements. In addition, the performance QC process alerts the user if automated laser alignment is needed. BD FACSuite CS&T research beads also ensure reproducible assays and tube settings from day to day, from instrument to instrument, and among BD FACSVerse cytometers.

The entire process can be completed in less than 15 minutes without the need for manual intervention.

Visit **bdbiosciences.com** for more information.

BD

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Enabling Automated Compensation

Accurate compensation is absolutely necessary for proper analysis of multicolor flow cytometry experiments, but achieving it has always been challenging and time-consuming for users. BD FACSuite CS&T research beads offer significant advances in adjusting compensation values.

The use of CS&T research beads enables automatic updates to the compensation matrix, based on instrument performance.

Detector				Bright Bead		Linearity (±2%)		Resolution			
								Sensitivity			
Name	Mirror	Filter	Position	Median	%rCV	Min Channel	Max Channel	Actual	%Diff	Qr (x 10^3)	Br
SSC	10	488/15	F	134419	4.3	N/A	N/A	1924	0	N/A	N/A
FITC	507LP	527/32	E	103737	3.8	123	224627	585	1	152.0	150
PE	560LP	586/42	D	104898	2.9	155	230244	1574	1	1040.6	146
PerCP-Cy5.5	665LP	700/54	B	106700	3.8	107	227607	414	2	55.5	98

Table 1. Example of the Performance QC Report data for the blue laser (488 nm)

For each laser in the BD FACSVerse instrument, the software uses BD FACSuite CS&T research beads to generate detailed performance data for each detector. Measurements of brightness, linearity, and resolution allow BD FACSuite software to track performance over time. In this way, BD FACSuite software helps to ensure consistent performance and accurate results from your BD FACSVerse flow cytometer.

Specifications

Bead Type	Polystyrene
Bead Sizes	2 micron (dim), 3 micron (midrange and bright)
Volume	3 mL
Solution	PBS with 0.5% BSA and 0.1% sodium azide
Fluorophore Compatibility	FITC, PE, PerCP, PerCP-Cy™5.5, PE-Cy™7, APC, APC-Cy7, APC-H7, PE-Texas Red®
Filters	783/56, 700/54, 586/42, 527/32, 528/45, 448/45, 660/10, 720/30, 613/18, 510/10, 545/20
Systems Supported	BD FACSVerse

Ordering Information

Description	Quantity	Number of Tests	Cat. No.
BD FACSuite CS&T Research Beads Kit	2 vials	50 Tests	**650621**
BD FACSuite CS&T Research Beads Kit	6 vials	150 Tests	**650622**

23-13375-00

BD Biosciences
2350 Qume Drive
San Jose, CA 95131
US Orders: 877.232.8995
answers@bd.com
bdbiosciences.com