



# BD FACSymphony™ A3 Cell Analyzer

Special Order Research Product

Customized solutions for high-parameter cell analysis



# Built by scientists for scientists



## Driving deeper scientific insights

High-parameter flow cytometry is a powerful tool that enables scientists to identify and analyze distinctive phenotypes in heterogeneous populations. Advances in biology and a greater understanding of immunological structure and function allow us to ask more complex questions that require a comprehensive solution.

BD FACSymphony™ analyzers, the centerpiece of BD's high-parameter solution, fully utilize the advancements in instrumentation, fluorochrome development and bioinformatics for discovery in a high-dimensional space.

The BD FACSymphony A3 offers 30 parameters across up to five lasers, enabling the use of new dyes with improved brightness and spillover characteristics. The ability to develop panels for broader phenotyping, more intense interrogation of cellular subsets and improved panels with higher resolution allows researchers to drive deeper scientific insights.





## Customizable models and optics provide flexibility for your research

The BD FACSymphony A3 is a part of the BD FACSymphony family of high-parameter flow cytometers utilizing ultra-quiet VPX electronics, powerful lasers and highly sensitive photomultiplier tubes (PMTs).

The BD FACSymphony A3 model provides a smaller footprint, while maintaining the same performance and flexibility of the BD FACSymphony A5 system, up to five lasers and 30 parameters.

Each lab's needs are different, so options are available for lasers of varying wavelength or power rating, number of detectors per laser and optimized filters to detect dyes and proteins of interest. All instruments are field upgradeable to grow with your changing needs and accommodate advancements.

Flexibly designed to maximize use for many different applications, researchers can select their preferred optics and consult with their BD specialists.



Additional laser wavelengths include 375 nm, 420 nm, 445 nm, 458 nm, 460 nm, 473 nm, 505 nm, 514 nm, 532 nm, 552 nm, 568 nm, 588 nm, 592 nm, 628 nm, 640 nm, 647 nm, 660 nm, 685 nm, 730 nm, 785 nm and 980 nm. Power ratings range from 20 mW to 1000 mW.

# Brilliant portfolio of dyes and antibodies offer maximum options for panel design

BD's complete high-parameter solution includes an unparalleled reagent offering. In addition to our broad portfolio of catalog reagents, high-parameter dyes were developed utilizing Nobel Prize winning chemistry to expand the number of colors used simultaneously, as well as replace less favorable dyes. These fluorochromes were selected for their improved spectral characteristics such as increased fluorescence intensity, reduced cross-laser excitation and reduced spillover into other channels.

BD FACSymphony users benefit from BD's small-scale custom conjugations to enable the optimization of panels with fewer limitations on experimental design. Each conjugation is provided at a high concentration to enable precise titration and reduced staining volume.



Red	Yellow-Green	Blue	Violet	UV
APC	BD Horizon™ BYG584-P	BD Horizon™ BB515	BD Horizon™ BV421	BD Horizon™ BUJ395
BD Horizon™ APC-R700	BD Horizon™ PE-CF594	BD Horizon™ BB630-P2	BD Horizon™ BV480	BD Horizon™ BUJ496
APC-Cy7	PE-Cy™5	BD Horizon™ BB660-P2	BD Horizon™ BV570	BD Horizon™ BUJ563
	PE-Cy™7	BD Horizon™ BB700	BD Horizon™ BV605	BD Horizon™ BUJ615
		BD Horizon™ BB755-P	BD Horizon™ BV650	BD Horizon™ BUJ661
		BD Horizon™ BB790-P	BD Horizon™ BV711	BD Horizon™ BUJ737
			BD Horizon™ BV750	BD Horizon™ BUJ805
			BD Horizon™ BV786	

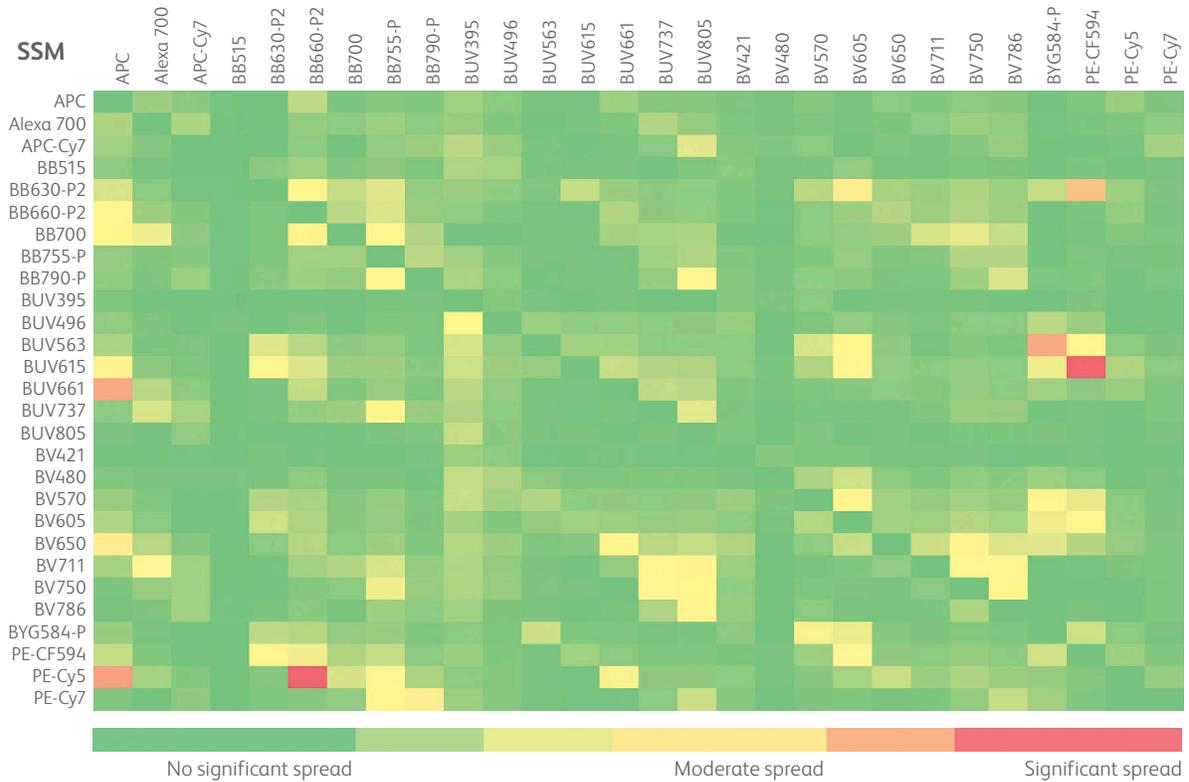
**Figure 1. Example of 28 colors that can be used together in a single experiment**

For an inclusive list of fluorochrome options in each channel, see the Fluorochrome/Laser Reference Chart or Spectral Viewer in the BD Biosciences Multicolor Flow Cytometry Resources & Tools page.

# Completing the high-parameter solution

## On-site training and instrument setup

The BD FACSymphony A3 is supported by an elite team of engineers and field applications specialists that provide decades of experience in flow cytometry. On-site training includes instrument setup and characterization with anti-CD4 fluorochrome evaluation kits consisting of individual antibodies conjugated with each available dye. Setting voltages with biological samples allows for the identification of instrument-specific stain indices as well as quantifying spillover spread values.



**Figure 2. Example of spillover spread matrix (SSM)**

Peripheral blood mononuclear cells (PBMCs) were stained with CD4 fluorochrome evaluation kits. Samples were run on a BD FACSymphony A3 and compensated data were used to create SSM. Stain index and SSM should be generated on each flow cytometer based on configuration.

## Specialized technical applications support

Applications specialists are available to help you with your panel and experimental design using instrument-specific stain indices, the instrument-specific spillover spread matrix and extensive knowledge of dye characteristics and antigen expression. Our specialists always put science first and will work with you to incorporate the clones and colors that are important to your research.

## High-dimensional data analysis

Discovery is further accelerated using dimensionality reduction algorithms from FlowJo™ to cluster and identify unique populations that might not have been observed using standard bi-variate plots.

Access the newest plug-ins and training for unsupervised data analysis with an individual or portal site license.



## Additional options for instrument performance and ease of use

### BD® High Throughput Sampler option

- Automates and accelerates sample acquisition
- Compatible with 96- and 384-well plates
- <0.5% sample carryover in high-throughput mode

### BD FACSFlow™ Supply System (FFSS) option

- Increases capacity and ease of use while maintaining a stable fluidics pressure
- Reduces daily maintenance by incorporating a 20-L BD FACSFlow™ cubitainer

**Australia**

Toll free 1.800.656.100  
Tel 61.2.8875.7000  
Fax 61.2.8875.7200

**Canada**

Tel 866.979.9408  
Fax 888.229.9918

**China**

Tel 86.21.3210.4610  
Fax 86.21.5292.5191

**Europe**

Tel 32.2.400.98.95  
Fax 32.2.401.70.94

**India**

Tel 91.124.2383566  
Fax 91.124.2383224/25/26

**Japan**

**Nippon Becton Dickinson**

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Fax 81.24.593.3281

**Latin America / Caribbean**

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Tel 55.11.5185.9688

**New Zealand**

Toll free 0800.572.468  
Tel 64.9.574.2468  
Fax 64.9.574.246

**Singapore**

Tel 65.6690.8691  
Fax 65.6860.1593

**United States**

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BD Life Sciences, San Jose, CA, 95131, USA

[bdbiosciences.com](http://bdbiosciences.com)

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