



# BD FACSymphony™ S6 Cell Sorter

Special Order Research Product

A cell sorter to put you at the forefront of research







High-parameter flow cytometry has been a primary driver in recent biological research. Cell sorters have not been able to keep up with the increasing requirements for isolating newly discovered subpopulations. Until now. Today the ability to sort distinct phenotypes is available for your lab. What's the first experiment you would do with the ability to sort based on high-parameter flow cytometry?

The BD FACSymphony™ S6 Cell Sorter is designed to power your scientific discoveries—the cutting edge discoveries that will define a new future in your field and have a lasting impact.

Cutting edge science requires cutting edge technology, and the BD FACSymphony™ S6 Cell Sorter delivers.

Built on the solid foundations of the BD FACSymphony™ A5 Cell Analyzer and BD FACSAria™ Fusion Cell Sorter, the innovations in the BD FACSymphony™ S6 Cell Sorter bring cell sorting in line with the capabilities of modern flow cytometry. Now, you can sort populations identified with 20 or more colors in the complex hierarchies required for your application.

But more than this, when coupled with the broad portfolio of BD high-parameter reagents, bioinformatics analysis tools, single-cell multiomics solutions and applications support capabilities, the BD FACSymphony™ S6 Cell Sorter equips you with a complete, end-to-end solution for your high-parameter experimental success.

### Spearheading new discoveries

Enable the sorting of ultra-specific populations by using configurations up to 50 parameters to define populations deep in your hierarchy, and sort up to six of them at one time so that you can get more information from each cell and more value from each experiment—whether it's isolating the population of interest prior to your downstream assay or linking deeper phenotypic information with your functional or genomic read-outs. All these data puts you on the right track to results that make an impact.

But the data set is not just powerful because there's more information per cell, it's high-quality data as well. Low-noise electronics and PMT detectors with high sensitivity at respective detector wavelengths are combined with optics designed to maximize signal collection, including the BD patented gel-coupled cuvette, in order to provide excellent sensitivity to resolve dim populations and explore the nuances of marker expression deep within the biology of the sample.

BD FACS™ Accudrop Technology enables high-performance sort results by maintaining an optimal breakoff and pausing the sort when necessary to protect the purity of the sorted sample.

Index sorting makes it possible to review the cell-surface phenotype of every cell deposited into a multi-position device, such as a 96-well plate. Sort and tray position information is available on an event-by-event basis in order to correlate post-isolation results to each individual sorted cell, allowing you to link a precise phenotype to your downstream experimental observations.





# Accelerating science

## Leveraging the leadership of BD across high-parameter flow cytometry

Our innovations in high-parameter instrumentation with the BD FACSymphony™ Cell Analyzers and in high-parameter reagents with the BD Horizon Brilliant™ Reagents are the foundation for a high-parameter cell sorter. The combination of all three—reagents, analyzers and sorters—lead to a broad range of solutions for high-parameter experimentation, enabling you to move quickly from biological question analysis to sorting.

Now, with the ability to match your configurations between your BD FACSymphony™ A5 Cell Analyzer and your BD FACSymphony™ S6 Cell Sorter, you can easily transfer a panel from one to the other without spending the time to develop a new panel. Whether you want to keep all of the markers for cellular immunophenotyping or only a subset of markers needed to sort the populations of interest, rest easy knowing that the parameters needed to identify your populations of interest are available on the BD FACSymphony™ S6 Cell Sorter.

Accelerate your discoveries by taking a panel you've optimized on your BD FACSymphony™ A5 Cell Analyzer and move it to the BD FACSymphony™ S6 Cell Sorter to sort.

Figure 1

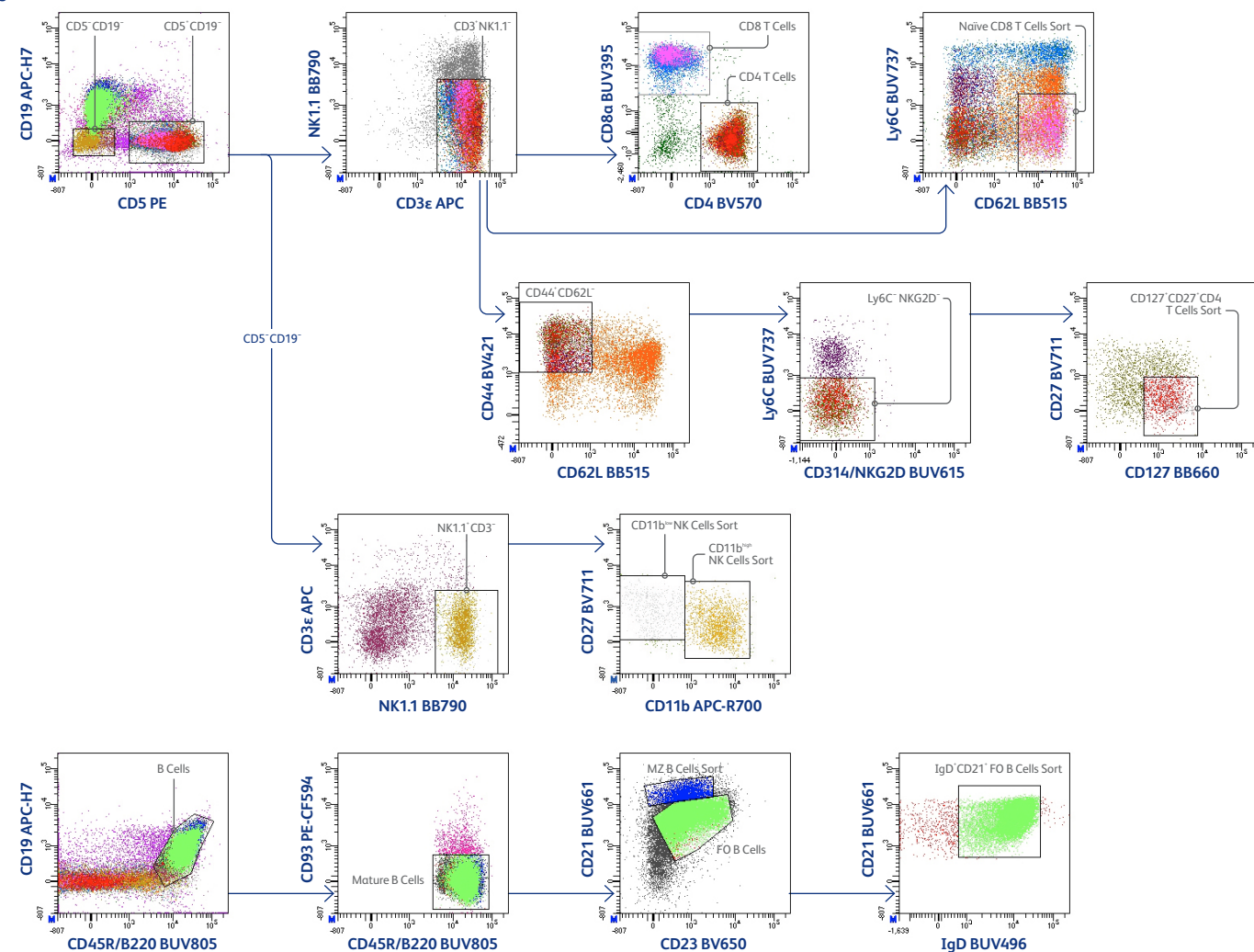


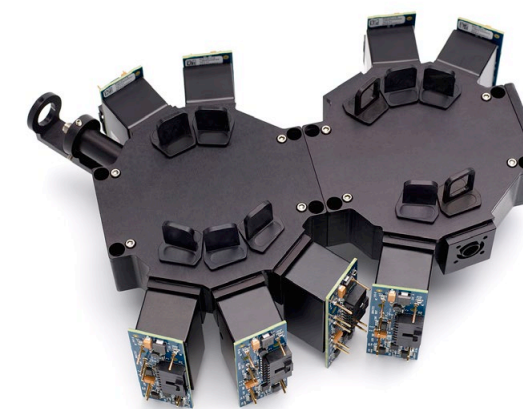
Figure 1: A 27-color panel for analysis of immune cell composition in mice

A 27-color mouse panel was optimized and acquired on the BD FACSymphony™ A5 Cell Analyzer and target MFIs were transferred to the BD FACSymphony™ S6 Cell Sorter to allow sorting six distinct subsets from the panel: Naive CD8 T Cells, Mantle Zone B Cells, IgD<sup>+</sup> CD21<sup>+</sup> B Cells, CD11b<sup>hi</sup> Natural Killer Cells, CD11b<sup>lo</sup> Natural Killer Cells, and CD127<sup>+</sup> CD27<sup>+</sup> T Cells. Cells were gated on scatter as well as doublets and dead cells (7-AAD positive) were excluded (data not shown) prior to gating for the sort populations above. Of particular interest, the CD127<sup>+</sup> CD27<sup>+</sup> sort population was in the 10th generation of the gating hierarchy. All populations were between 1 and 10% of live cells and achieved greater than 90% purity (data not shown). Data shown were acquired on a BD FACSymphony™ S6 Cell Sorter.

# Flexible platform

Built with the flexibility of the BD Special Order Research Product (SORP) program, the BD FACSymphony™ S6 Cell Sorter is designed to meet your assay's needs—no matter how unique.

- The system can be configured with up to 9 spatially separated lasers. There are more than 25 wavelength options available through SORP.
- The StepSort option further improves the accuracy and speed of the BD FACSymphony™ S6 Cell Sorter using enhanced software and plate sorting hardware for 96, 384 and 1,536-well plates.
- A multitude of collection devices are provided with new flexibility to change tubes and holders without stopping the sort.
- High-precision interchangeable nozzles are available for a wide range of cell size support: 70, 85 and 100 μm come standard. An optional 130-μm nozzle is also available.
- Have peace of mind through support for field upgrades, including the addition of up to 9 laser lines or 50 parameters in the future, and the biosafety cabinet after purchase.
- Contact your local BD representative for a full discussion on options for the BD FACSymphony™ S6 Cell Sorter.

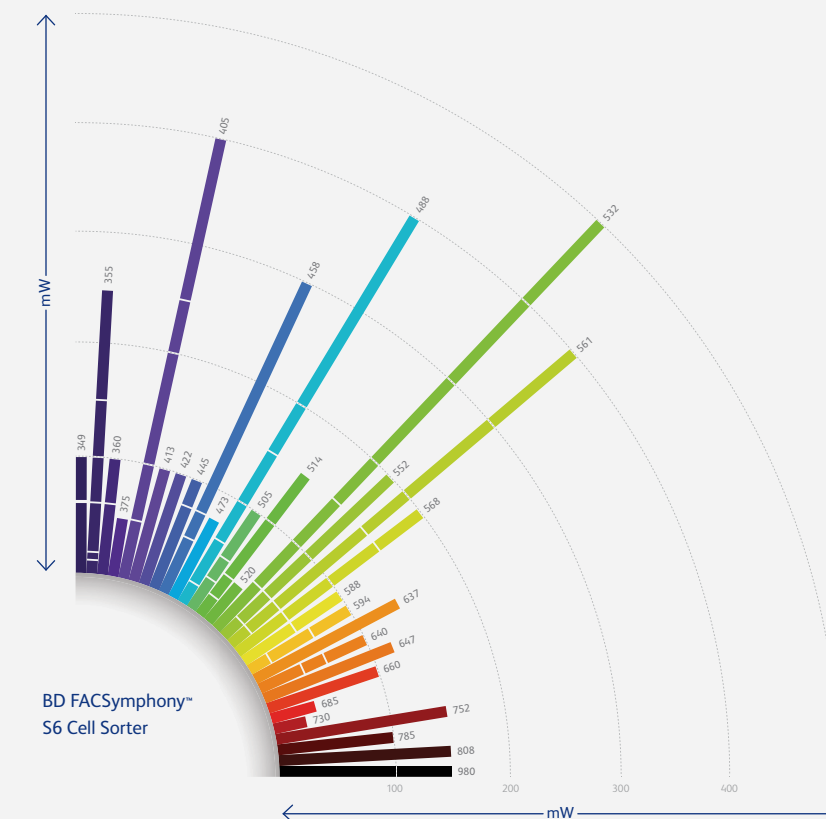


Patented detector technology allows for up to 20 parameters on one laser line.

Figure 2

Figure 2: Available laser wavelength and power options through the SORP program

Each ray of the diagram represents an available laser wavelength, and each segment represents an available laser power of the given wavelength. Please contact your BD representative for a full list of laser options.



## Priority on biosafety

BD and The Baker Company have joined forces to provide a biosafety solution that meets personnel and product protection standards.

BD knows that your safety is important so the BD FACSymphony™ S6 Cell Sorter has been designed with safety in mind. The purpose-built BD FACSARIA™ Fusion Cell Sorter biosafety cabinet (BSC) with independent aerosol management system (AMS) means that National Sanitation Foundation International Standard 49, the European Standard 12469, the China Standard SFDA YY-0569:2005 and the Australian Standard AS 2252.2-2009 for personnel and product protection are all met.

Since the BD FACSymphony™ S6 Cell Sorter and The Baker Company BSC were designed for a seamless fit, a BSC can be added later in a field upgrade that takes less than a day to install.

Additionally, the easy-to-clean stainless steel sort chamber, enclosed sample pathway and the Prepare for Aseptic Sort procedure all enable you to prioritize biosafety while also prioritizing performance and usability with the BD FACSymphony™ S6 Cell Sorter.

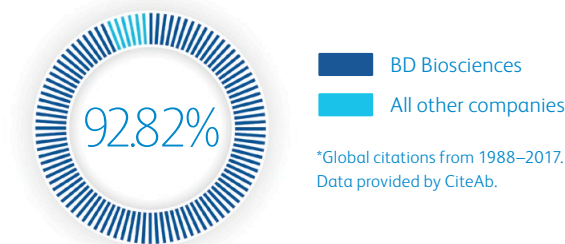


## Built by BD, as part of the BD Total Solution

Building on our 40-year history of expertise and innovation in flow cytometry, it only makes sense that the game-changing BD FACSymphony™ S6 Cell Sorter comes from BD. BD has consistently led the progression to higher parameter flow cytometry with instruments and reagents, and we continue that progression now with high-parameter cell sorting.

BD has led the way with thousands of peer-reviewed publications using BD instruments, technology and software. The BD FACSymphony™ S6 Cell Sorter is built on that legacy with the reliability and performance of the BD FACSARIA™ Fusion Cell Sorter instrument and the cutting-edge optics and electronics of the BD FACSymphony™ A5 Cell Analyzer. With a familiar interface via the BD FACSDiva™ Software package, you will quickly be up to speed on running the BD FACSymphony™ S6 Cell Sorter but be appreciative of the reengineering to take full advantage of Windows™ 10 64-bit power.

### Share of Flow Cytometry Citations\*



## Support

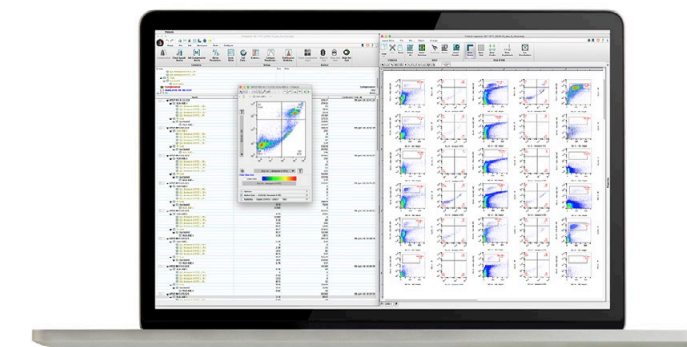
In addition to innovative technology and a history of reliability, BD has a worldwide team of engineers and application specialists ready to help you through comprehensive training and field service calls. Hands-on training is included with each BD FACSymphony™ S6 Cell Sorter, and applications specialists are available to help with panel design.

## Reagents

Our broad portfolio of fluorochromes featuring the BD Horizon Brilliant™ Reagents and BD OptiBuild™ Reagent technology, along with our custom reagent services, offer flexibility for experimental design.

BD Horizon Brilliant™ Reagents were developed utilizing Nobel prize-winning Sirigen technology to expand the number and options of fluorochromes for the blue, yellow-green, violet and UV lasers. These reagents were selected for their specific spectral characteristics such as increased fluorescence intensity, reduced cross-laser excitation and reduced spillover into other channels.

## FlowJo™ Software



Utilize FlowJo™ Software for your high-parameter analysis needs. In addition to native models for advanced data analysis and necessary tools for publication-quality graphics, FlowJo™ v10 Software has a plug-in architecture to enable access to the latest algorithms and easiest workflows. Popular plug-ins from FlowAI to FlowSOM are available to help you get the most out of your high-parameter data, and now, the HyperFinder plugin and the BD FACSDiva™ Software import and export workflow combine to allow you to define a gating strategy for a population found using any combination of clustering, gating and dimensionality reduction.

## Single-cell multiomics

A cell sorter is often the gateway to downstream single-cell applications, and in this regard, the BD FACSymphony™ S6 Cell Sorter combined with the BD Rhapsody™ Single-Cell Analysis System make a powerful pair. Utilize the BD FACSymphony™ S6 Cell Sorter to target and isolate specific, rare cell populations that require high-parameter sorting. Make great discoveries and gain novel insights about the sorted populations via multiomic analyses performed using BD® AbSeq Reagents, BD single-cell multiomics kits and the BD Rhapsody™ Single-Cell Analysis System. Combining sorting with single-cell analyses also dramatically lowers the sequencing costs of your experiments because every cell sequenced has already been characterized.

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