

# BD Horizon Brilliant™ Violet Reagents

## Features

- Seven bright polymer dyes for the violet laser
- Excellent resolution of dim populations
- More color choices for multicolor panel design



BD Horizon Brilliant™ Violet unique polymer dyes were developed from pioneering polymer dye technology acquired from Sirigen Ltd. that enables researchers to identify cell populations with lower receptor density than previously possible and resolve cell populations previously obscured.

### Seven bright dyes for the violet laser

The seven Brilliant Violet polymer dyes come in two forms—a base polymer and a tandem polymer. These dyes are bright and in many cases, provide unprecedented brightness for dyes excited by the violet laser (Figure 1). Brilliant Violet polymer dyes are available in a broad array of specificities including dim markers where the dyes offer strong benefits. Together, these polymer dyes deliver exceptional choices for the violet laser for more flexible panel design.

The seven Brilliant Violet dyes cover six detection channels on the violet laser. As part of our continual improvement efforts, BD Horizon™ BV480 was developed as an alternative to BV510. BV480 is brighter than BV510 with less spillover into BV605 and BV650.

### Excellent population resolution

The brightness of the Brilliant Violet dyes provides excellent resolution of dim populations. These conjugates exhibit significantly improved resolution compared to typical violet excitable fluorochromes and in many cases, similar resolution to PE conjugates. The Brilliant Violet family of dyes provides more options to effectively resolve dim populations, leading to easier and more optimal panel design.

### More choices for multicolor panel design

In addition to offering bright dyes, the Brilliant Violet family adds more options for designing multicolor panels. The dyes enable up to six colors to be run on the violet laser, making large multicolor experiments more accessible. For smaller panels, a wider selection of fluorochromes makes it easier to control spillover by spreading markers over multiple lasers.

The Brilliant Violet dyes are available as BD OptiBuild™ custom reagents, which greatly expands the antibody-fluorochrome options available for multicolor panel design. Unlike traditional large-scale, expensive custom conjugates, these reagents come in convenient 50-µg vials and can be ordered the same way as any catalog reagent. Your products are made on demand, and usually ship in less than 72 hours.\*

### Convenient size options

Brilliant Violet polymer conjugates are available in multiple sizes to address a range of requirements from 25 tests for multicolor panel pilot-scale experiments to 100-test sizes needed for routine assays.

As with all BD mouse reagents, BD Horizon Brilliant Violet reagents are offered in mass sizes for optimal value and flexibility across different tissue types and strains.

### Compatible with standard surface and intracellular staining protocols

Brilliant Violet polymer dyes are compatible with standard buffers used in surface and intracellular staining protocols, making the reagents easy to incorporate into current workflows. These Brilliant Violet polymer conjugates have been tested in multiple intracellular staining protocols, including BD Cytofix/Cytoperm™ Fixation/Permeabilization Solution and BD Phosflow™ Perm Buffer III, with successful results. Buffer compatibility is also clone-dependent, so some reagents may not be compatible with all buffer systems.

\*US shipping time is typically overnight. Shipping times vary by region according to shipping schedules. Since production of BD OptiBuild reagents begins immediately after order placement, pending orders cannot be canceled.

	Fluoro-chrome	Filter	Stain Index	Relative Brightness
	BV421	450/40 or 431/28**	705	
	BV711	710/50	359	
	PE		264	
	BV480	525/40	255	
	BV786	786/60	250	
	BV650	660/20	184	
	BV605	610/20	176	
	BV510	525/40	150	
	FITC		54	

**Figure 1.** Lysed whole blood stained with various human CD4 reagents

Data shown is on lymphocytes. The BD Horizon Brilliant Violet dyes were excited by the violet laser, and PE and FITC were excited by the blue laser. Relative stain index is dependent on instrument configuration including lasers, filters, and laser power.

\*\*To reduce spillover into the BV421 channel from BV510/BV480, a 431/28 filter can be adopted for the BV421 channel.



Laser	Spillover into other detectors						
	BUV395	BUV496	BUV563	BUV661	BUV737	BUV805	
UV	BV421						
	BV480						
	BV510						
	BV605						
	BV650						
	BV711						
	BV786						
Violet	BV421						
	BV480						
	BV510						
	BV605						
	BV650						
	BV711						
	BV786						
Blue	BV421						
	BV480						
	BV510						
	BV605						
	BV650						
	BV711						
	BV786						
Yellow-Green	BV421						
	BV480						
	BV510						
	BV605						
	BV650						
	BV711						
	BV786						
Red	BV421						
	BV480						
	BV510						
	BV605						
	BV650						
	BV711						
	BV786						

**Table 1.** BD Horizon Brilliant Violet dye spillover into channels on each laser line

This table shows relative spillover values of the dyes, since spillover values obtained can vary depending on the filter used and PMT voltage. White fill colors represent minimal to no spillover, green fill colors represent spillover of 1–5%, yellow fill colors represent spillover between 5–30% and red fill color represents spillover greater than 30%. In order to collect data across the most number of channels, data from multiple BD LSRFortessa™ X-20 instruments was combined.

Class 1 Laser Product.

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

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

