

BD Horizon™ Brilliant Stain Buffer

Optimizing Experiments Using BD Horizon Brilliant Polymer Conjugates

Features

Improves staining quality when multiple BD Horizon Brilliant™ polymer conjugates are used in the same experiment

Allows pre-mixing of cocktails containing multiple conjugates for at least 24 hours before use

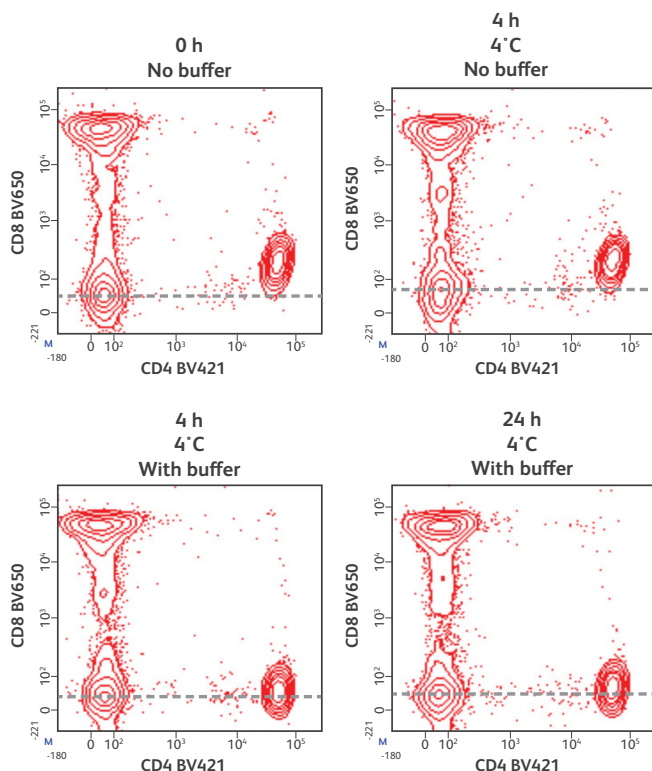


Figure 1. Brilliant Stain Buffer improves the performance of BV dyes in cocktails. Antibody cocktails were prepared in the presence or absence of Brilliant Stain Buffer for the designated period of time at 4°C protected from light. Lysed human whole blood samples were subsequently stained with the cocktails. In the absence of Brilliant Stain Buffer, the CD4⁺ population shows non-specific interaction. Addition of Brilliant Stain Buffer restored the populations to their expected locations.

Mitigates Non-specific Interactions

BD Horizon Brilliant™ Violet (BV), Ultraviolet (BUV), and Blue (BB) polymer conjugates have expanded the number of bright fluorochromes available for multicolor flow cytometry. As with all fluorochromes, building multicolor panels with these reagents requires optimization.

While using multiple BD Horizon Brilliant reagents in the same experiment, we observed several artifacts that appeared to be related to non-specific interactions between the polymer dyes themselves. In some instances populations appear to be undercompensated in multicolor staining, while single color compensation controls appear to be properly compensated. In other instances the negative population can appear multivariate rather than as a single, discrete population. The effects of interactions can be seen in reagents from BD and from other companies

BD Horizon™ Brilliant Stain Buffer, when added to samples prior to addition of antibodies, can mitigate these interactions, improving staining quality regardless of the source of reagents. The solution also can be used to stabilize antibody cocktails containing BD Horizon Brilliant polymer conjugates for at least 24 hours.

For more information, visit bdbiosciences.com/go/brilliantstain.

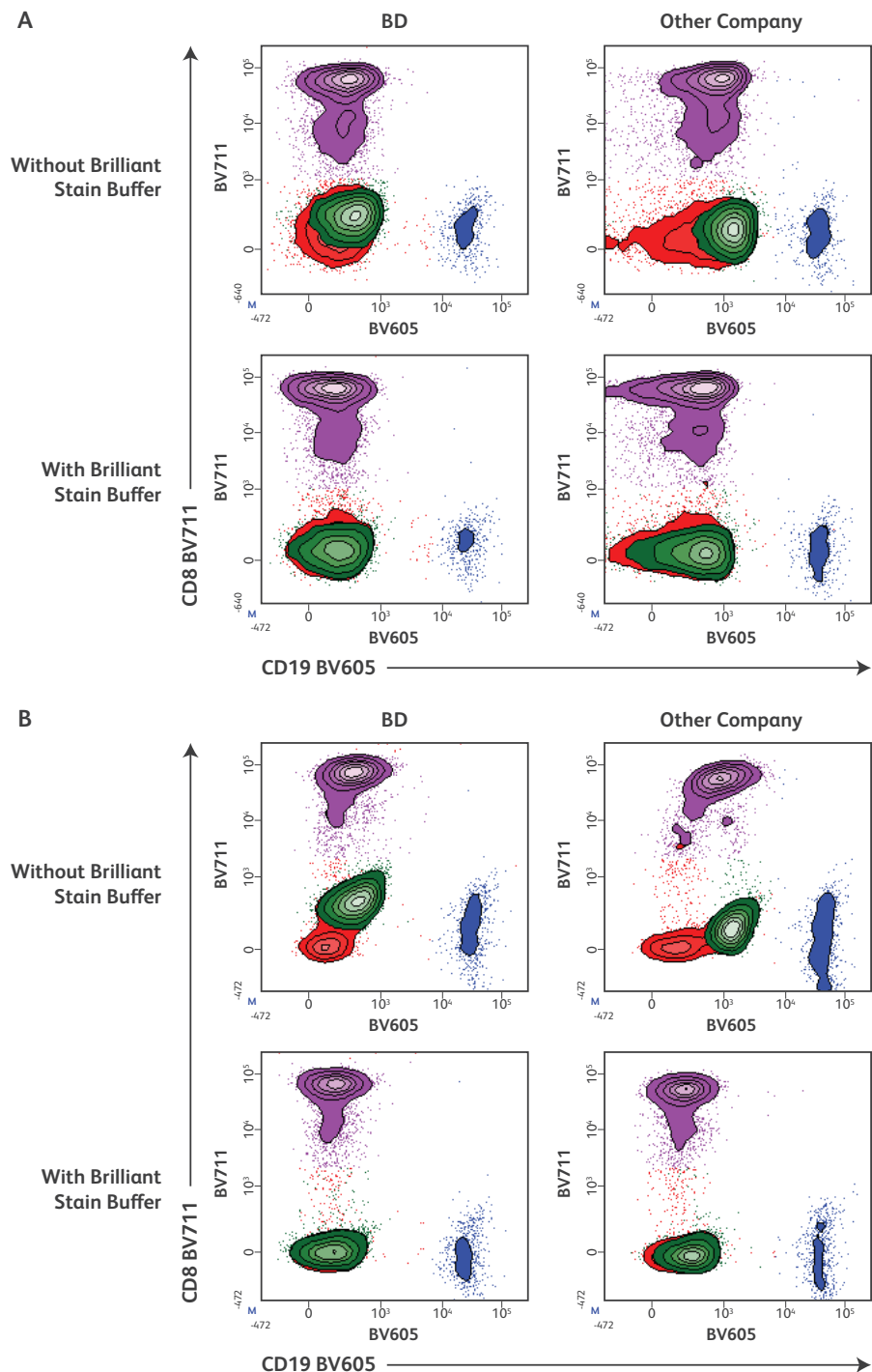


Applicable to Many Experiments

The various interactions appear to be dependent upon several factors, including reagent combination, staining volume, sample type, and variation between samples. Regardless of the cause, the interactions can be mitigated with the addition of Brilliant Stain Buffer prior to the addition of antibodies to the samples. Since there are so many variables that can contribute to the interactions, Brilliant Stain Buffer might not be required in all experiments. However, we recommend using Brilliant Stain Buffer any time more than one BD Horizon Brilliant polymer conjugate is used in the same experiment.

As with any new protocol, we highly recommend that investigators perform side-by-side experiments to determine if their staining can benefit from the addition of Brilliant Stain Buffer.

Figure 2. Enhanced performance of BV reagents CD19 BV605, CD8 BV711, and CD4 BV421 from BD or from another company were used to stain (A) peripheral blood mononuclear cells or (B) lysed whole blood. In the absence of Brilliant Stain Buffer, these mutually exclusive populations can appear under-compensated. Note the multivariate negative population, where the red population corresponds to the CD8/CD19 double negative population and the green population corresponds to the CD4⁺ population. In both instances the addition of Brilliant Stain Buffer eliminates the issue and staining returns to the expected pattern.



Ordering information

Description	Size	Cat. No.
BD Horizon™ Brilliant Stain Buffer	100 Tests	563794
	1,000 Tests	566349

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