

BD Paint-A-Gate™ Pro for Windows®

Features

Routine steps streamlined for faster analysis

Intuitive interface for pattern recognition in multiparameter flow cytometry

Visualization tools highlight co-expression of markers

Biexponential scaling and cropping enhance data display

Offline compensation, robust statistics, and absolute counts simplify analysis

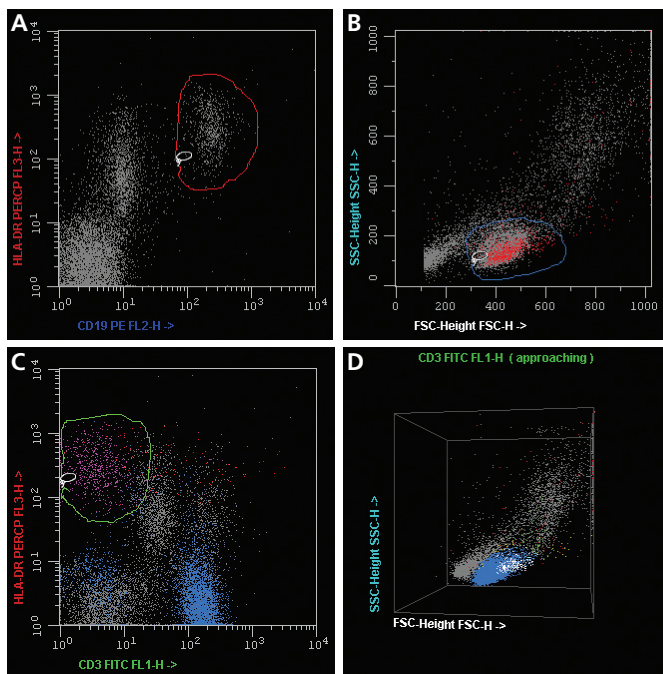


Figure 1. BD Paint-A-Gate Pro for Windows combines primary colors to show co-expression of markers.

Using a lasso, CD19⁺HLA-DR⁺ cells are first selected to be displayed in red in all plots (A). FSC^{low}SSC^{low} cells are then selected to be displayed in blue in all plots (B). Cells that have been painted both red and blue (dual positives) are automatically re-colored violet (red + blue = violet) in all plots.

Selected CD3⁺HLA-DR⁺ cells (C) are displayed in green in all plots. Cells painted with all three colors (D)—the triple-positive cells—are automatically re-colored white, in a 3D plot. Gray cells are those that remain unpainted.

¹Poynton CA. *Digital Video and HDTV: Algorithms and Interfaces*. Morgan Kaufmann, 2003.

BD Paint-A-Gate™ Pro software is an interactive and intuitive tool that makes qualitative multiparameter analysis of flow cytometry data straightforward. Now available for Windows® operating systems, BD Paint-A-Gate Pro software uses a combination of color mixing and automated tools to visually capture the complex relationships within data.

Multiparameter analysis that is easy to learn and use

With BD Paint-A-Gate Pro software, complex relationships between parameters are quickly revealed through color. Using the Cell Painting feature, primary colors (red, green, blue) can be used to identify a group of cells on a dot plot. Populations are painted quickly and easily, using a lasso feature that immediately displays a population in the selected color in all plots. After all populations are painted, the percentages of each colored population are displayed in a color-coded status bar at the top of the display.

Enhanced productivity through automated analysis

Paint-A-Gate Pro provides an easy-to-learn, easy-to-use visual framework for data analysis. If the same cell is painted first with one primary color and subsequently with a second primary color, the cell is displayed in the secondary color (cyan, magenta/violet, yellow, white) at the intersection of the primary colors (see Figure 1). A range of editing features makes it easy to follow these painting processes in an iterative analysis path through a virtually unlimited number of parameters.

Identify single, double, and triple-positive events

A unique Autopaint feature sets markers on single-parameter histograms to denote positive and negative ranges for up to three parameters. BD Paint-A-Gate Pro software uses these ranges to automatically paint events in 2D or 3D plots based on the marker settings. This feature offers a quick way to identify single, double, and triple-positive events.

Store, reply, and reuse analysis activities

A Paint-A-Gate set document allows users to save the formats and steps performed during an FCS file analysis and then replay the analysis steps later with different data files from samples stained with the same reagent combination. All painting activities can be stored using the Record Analysis command. To analyze files subsequently acquired with the same reagent protocol, the recorded analysis procedure is played. Paint-A-Gate set documents can be combined into a batch analysis protocol to automatically analyze and print results, as well as output results to tab-delimited files for spreadsheet input.

Visit bdbiosciences.com for more information.

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BD Paint-A-Gate Pro for Windows

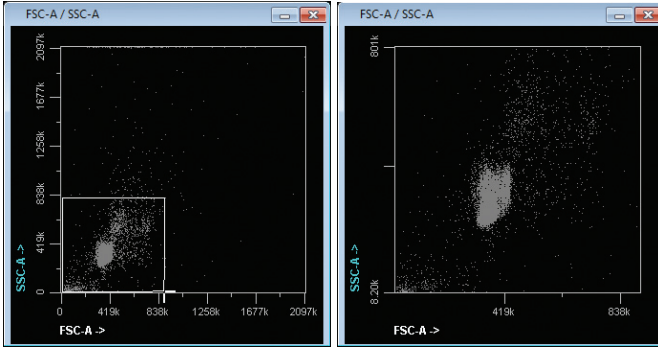


Figure 2. Cropping enables users to expand a subsection of the plot for painting.

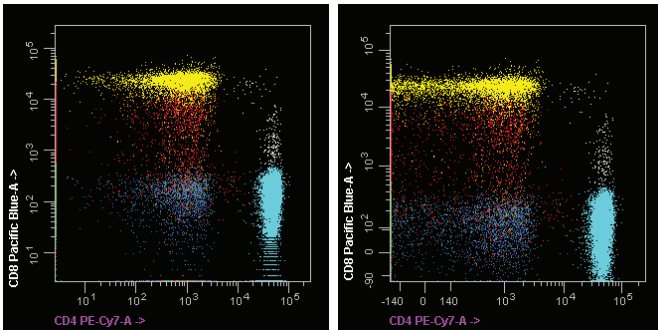


Figure 3. Biexponential display. Left plot shows typical log display artifacts: piling up of data on the axes, discontinuous distributions, and “picket fence” phenomenon. Biexponential display (right) minimizes these artifacts allowing better visualization of populations.

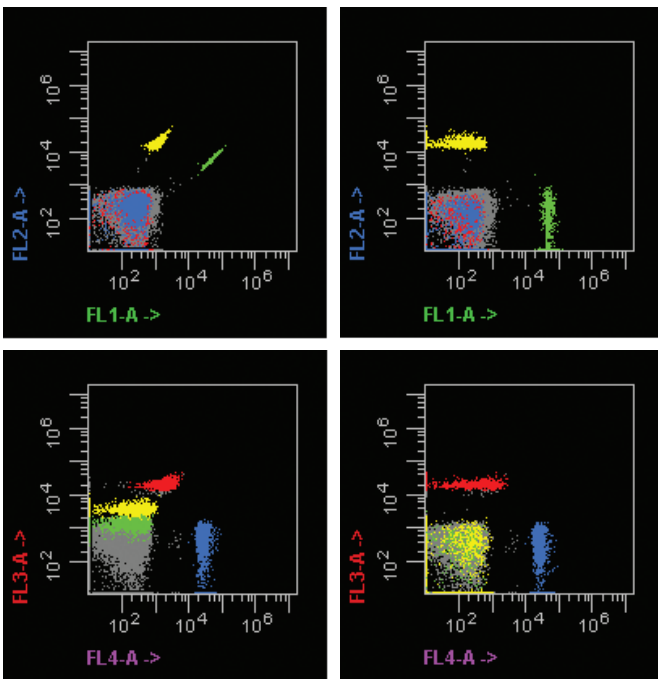


Figure 4. Autocompensation. Uncompensated beads (left plots) were gated and autocompensation calculated and applied (right plots).

Offline compensation

For offline compensation, users can either import the spillover matrix generated with the autocompensation feature into the set document, or define a custom compensation setting for each set document used in the batch setup.

Robust statistics

BD Paint-A-Gate software also offers the added option of using robust statistics (rSD and rCV) to minimize the impact of outlying events in a sample population. Users can enable or disable robust statistics for each set document.

Supports BD Trucount™ beads

For users who use BD Trucount™ beads (or other control beads) to determine sample cell concentration, they can now use the software to calculate absolute counts for all populations.

Decipher complex data relationships with advanced visualization tools

Powerful visualization tools make it easy to examine and analyze populations that can be difficult to resolve. BD Paint-A-Gate Pro software provides a Transformed SSC feature to scale the SSC axis of plots, enabling clearer visualization of events with lower SSC values.

A variety of features improve data visualization. Biexponential scaling improves resolution between poorly resolved negative populations. The manual and auto cropping features enable users to zoom in on and isolate data in a plot for further examination. An interactive 3D plot feature enables users to view the data from any angle by simply moving the mouse over the plot. The least populous last (LPL) painting algorithm feature organizes the displayed populations by the number of cells they each contain, with the population containing the fewest cells in front. This ensures that all populations are visible, regardless of how few cells exist in them.

Hardware requirements

Component	Requirement
Computer	PC running Windows® XP SP2/SP3 or Windows 7
Random-access memory (RAM)	At least 4 GB
Hard disk	At least 500 GB
Video	LCD monitor capable of natively displaying 1920x1080 pixels

Ordering information

Description	Cat. No.
BD Paint-A-Gate Pro software for Windows	649728

