AutoSpill

An improved method for calculating compensation in cytometric data

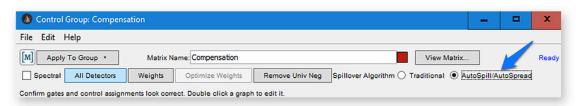
Compensation has always been difficult, and it is only getting harder with more parameters. From poor controls to matrices that don't quite match the fully stained samples to complex compensation processes, it can be a headache for everyone involved.

About AutoSpill

AutoSpill is a new algorithm for calculating spillover coefficients in high-parameter flow cytometry. It makes traditional and spectral compensation faster and easier by relaxing the need for perfect controls and eliminating many of the steps in the compensation workflow.



AutoSpill is incorporated into the compensation wizard of FlowJo^{**} Software v10.7 and greater.



Activate AutoSpill by selecting the AutoSpill function

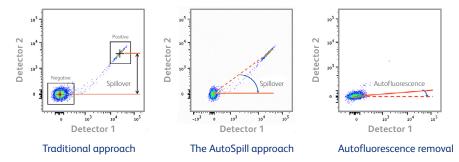
The algorithm combines automatic gating with linear regression through an iterative process that helps reduce error and improve the compensation matrix.

- Generates an optimized compensation matrix quickly and easily as it automatically matches the compensation controls to the appropriate detectors.
- Allows for less errors thanks to an iterative process that eliminates outliers and optimizes the traditional compensation process.
- Is less demanding in the preparation of controls as no manual tuning of the spillover matrix is needed.



Why use AutoSpill for compensation in flow cytometry data analysis?

- Automatic gating eliminates the need to create positive or negative gates as the algorithm will determine its own positive populations.
- The algorithm can compensate out the autofluorescence background using an empty channel, a full set of cell based single-color controls and an unstained control.



- AutoSpill provides a superior solution to the problem of fluorophore spillover and a robust estimate of the SSM without negative and positive populations when used together with AutoSpread.
- As always, FlowJo[®] Software provides quick visualization of the compensation matrix with compensation data applied.



Quick visualization of an optimized compensation matrix with compensation data applied.

The result

AutoSpill is a smart new approach to compensation that reduces the requirements of your controls, optimizes your compensation matrix and is flexible enough to handle both conventional and spectral experiments.

Thanks to its robust linear regression approach, it produces better compensation with an easier workflow and no additional control tubes. The outcome is simply easier cytometry!

Check out the FlowJo University website **flowjo.com/learn/flowjo-university** and learn more about AutoSpill and other compensation tools at **flowjo.com/learn/flowjo-university/flowjo/comp-unmix**

Read the Nature Communications article: flowjo.com/about/articles and nature.com/articles/s41467-021-23126-8

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