IDEAS IMAGE ANALYSIS SOFTWARE: Exceptional accessible power

The IDEAS image analysis software package is an integral part of the ImageStream system. Powerful, flexible and extremely easy to learn and use, IDEAS will help you discover and analyze characteristics of your cell populations in ways that have never been possible before.

- Powerful integration of population statistics and quantitative image analysis
- Every dot in a scatter plot is connected to a corresponding image; visual confirmation of cell identity is always available
- Efficient generation and display of all experimental data including cell images, graphs/plots and statistics
- Complete imagery – up to six independent images – of every cell
- Automatic generation of over 35 features per image – nearly 200 for every cell
- Virtually unlimited capability to develop and adapt new features
- Exceptionally easy to learn and use, IDEAS offers powerful tools for defining and analyzing sub-populations

An Efficient, Flexible Data Display
The efficient IDEAS interface puts everything you need just a few clicks away, so you'll never lose control of your data. A cell Image Gallery shows you every image of every cell, while the flexible Analysis Area gives you tools to define and analyze corresponding cells and populations. In the Image Gallery, you can create composite images, produce pseudocolor representations and carry out image transforms. The Analysis Area gives you tools for histogram and scatter plot development, sub-population definition, statistical analysis, image quantitation and much more.
**Image Data and Statistical Data are Fully Integrated**
The ImageStream takes its data directly from cell images, so the population statistics and imagery are completely integrated with one another. When you prepare a scatter plot, every dot on your graph will link directly to a cell’s images — click on the dot and the IDEAS program will display the imagery. Or click on an image to locate the dot in the scatter plot.

**Virtual Gating with IDEAS**
When you define a cell sub-population using the efficient gating tools, the IDEAS gating function will show you the cell images of that population, allowing you to confirm identity and check for consistency of the cell types, and it will give you full statistical summaries for your populations and graphs.

**Simple Fluorescence Compensation**
Running experiments with multiple dyes can create cross-talk problems that confuse your data interpretation — but not with the IDEAS compensation functions. In processing data from the ImageStream, the IDEAS program uses your dye selections to create, automatically, a compensation matrix based on known dye characteristics. For the majority of your experiments, the need for your intervention in defining the compensation matrix will be minimal. Still, if you want to make adjustments to the matrix for any reason, all of the data are accessible and the process is quick, easy and efficient.

**Feature Sets are Expandable to Meet Your Needs**
Each experiment you run on the ImageStream generates nearly 200 photometric and morphometric features for every cell. This extensive feature set gives you an immense array of tools you can use to define biologically relevant cell sub-populations. But even this set will not meet all needs, so the IDEAS package also includes the capability to do feature and mask ‘math’, allowing you to create almost any new feature you many need.

**Population Creation — From Basic to Advanced**
Like conventional flow cytometry software, the IDEAS system gives you all the tools for basic cell population definition – multiple gating tools (box, ellipse, polygon), and cell image tagging. But the IDEAS system can extend your analytical power much farther. Advanced techniques such as Boolean combination of populations and feature-filtering from example cells (“find cells like this”) allow you to take what your eyes tell you and turn that information into rigorous statistical analysis. The IDEAS package delivers whatever level of analytical power your application needs.

**With IDEAS You Don’t Need to be a Flow Expert or an Imaging Guru**
IDEAS analytical software was designed by biologists for biologists – you don’t have to be an instrument professional to get excellent results with this program. All of the software functions are logical and intuitive; you won’t be spending a lot of time learning a new programming language or file structures. Together, the ImageStream and IDEAS software create a true productivity tool that will give you a completely new capability in cell analysis no matter what your scientific background.

The ImageStream® system advances your science by combining quantitative cellular imagery with powerful population statistics.