Setting the Image Gallery Display Properties

When a new data file opens in the default template it may be difficult to clearly see cell morphology because the image gallery display properties have not yet been properly adjusted for the data set. Setting the appropriate display properties will maximize the contrast and image quality.

To view the images in full color:
Click the Color tool to show/hide color in the Image Gallery.

To customize channel color, name, and display intensity:
2. Click the Channels tab of the Image Gallery Channel Display Properties window.
3. Enter the Channel Name for each channel. Channel names must be unique.
4. Click on the Color square and select a new color from the launched palette and click OK. Setting the color to white is equivalent to the original grayscale image.
5. Select a channel to adjust the display intensity for that channel by clicking to the left of the channel name. Select a representative cell to view for the selected channel. You may need to select different cells when adjusting each channel as a cell may not fluoresce in all channels.
6. Click near the vertical green lines (but not near the yellow pointers) to drag the vertical lines and to adjust the pixel mapping for display. Generally, set the left vertical line to the dimmest pixel in the image and set the right vertical green line to the brightest pixel.
7. The graph maps the pixel value of an image to the pixel value of the display. The display range of intensities is 0-255; the range of intensities from the camera is 0-1023. Setting the limits in this graph enables use of the full dynamic range of the display to map the pixel intensities of the image. Make the adjustments for all channels.
8. By dragging the yellow cross you may change the mapping curve to be more logarithmic or exponential. Click Linear Curve to restore the mapping to a linear curve.
9. To adjust the scaling on the X Axis, click Full Scale to set the scale Axis from 0 to 1023. Click Autoscale to set the scale of the X Axis to the range of the vertical green lines or to include all pixel intensities for the selected object – whichever is larger.
10. Brightfield settings are different in that the maximum and minimum display values are typically set about 50 counts to the right and left of the histogram to produce an image with crisp brightfield contrast.

Once you have adjusted the channel names, colors, masking, and/or display intensities you may:
11. Click Preview Changes in Gallery to display
12. Click OK to apply the display changes to the image gallery and close the window. These display changes will not affect any images in the Analysis Area. Click Cancel to restore the display properties to the original state when the Image Gallery Channel Display Properties window was opened. The window closes.
Generating Novel Composites and Views

Composites are a way to look at any combination of channel imagery overlaid on top of each other. Views allow the user to edit how the images are displayed in the image gallery.

To edit an existing or define a new composite:

2. Click the Composites tab of the Image Gallery Channel Display Properties window.
3. Click New to make a new composite. The default composite is open and may be edited.
4. Change the name of the Composite in the Composite name window.
5. Change the percentage for each channel to include in the composite under Channel Color Percentages. The currently selected image is shown in the window and updates as the changes are made.
6. The Preview Changes in Gallery will show the changes in the gallery only when the composite is saved and then chosen in the view currently displayed in the image gallery.
7. Click OK to save the changes and close the window.
8. Click Cancel to cancel all changes and close the window.

To customize the view for the Image Gallery:

The Image Gallery view can be customized to view any combination of channels or composites.

3. Edit a view by clicking on the row. Each cell has a pull down menu with every available channel or composite. Blank columns are not allowed preceding a defined column.
4. Add a new view to the list by clicking New.
5. Enter a name for the new view.
6. Select the channel for each column from the pulldown menu.
7. The edited or new view can be previewed if selected in the Image Gallery by clicking Preview Changes in Gallery.
8. Click Cancel to revert back to the state at the beginning of the editing session.
9. Delete a view from the list by clicking Delete.
10. Click OK to keep the changes and exit.
11. Select the new view in the Image Gallery.

To show or hide masks or choose user defined masks for each channel:

1. Click the Masks tool to show/hide masks in the Image Gallery.
2. Select the Channels tab of the Image Gallery Channel Display Properties window.
3. Select a mask for each channel from the pull down menu. All masks are available.
4. Click OK to keep the changes and exit.