Discovery-1™

Using Classifiers to Exclude (or Include) Unwanted Objects From Region Measurements

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Abstract

The capabilities of object classifiers can be used to exclude (or include) unwanted objects from measurements of Intensity, Signal to Noise, Thresholded Area or Percent Thresholded Area.

Instructions

Note this entire procedure can be made into a journal for easier operation.

1. Set up measurement preferences for this procedure. Choose Preferences (Edit Menu) and select Measure Objects. You will most likely want to disable the following options: Draw centroid mark and Draw failed classifier objects. Refer to F1 help function to decide whether you will want to enable or disable the following options: Fill holes in objects, Exclude objects if centroid is not in the current region, Exclude objects that touch the edge of the image.

2. Set up classifier conditions to select the objects that you want to get rid of or select the objects that you want to keep. Use Configure Object Classifiers (Measure Menu) to set up a classifier set to use.

3. Set the threshold on the image of interest. Use the image window threshold tools or Threshold Image (Process menu).

4. Create a measurement image. Use Measure Objects (Measure menu). The measurement image called "Measured XXXXX" will appear. XXXXX is the image of interest}.

5. Set the threshold for the measurement image from 2 - 255 and binarize the image. Use Binary (Process menu), set the threshold settings and choose Binarize. A new binary mask image will appear.

6. You can now close the measurement image.

7. Use image arithmetic to subtract the binary mask from your original image. This will leave the excluded objects black. Use Arithmetic (Process menu) for image subtractions with the offset set to 0.

8. You can now set the threshold on the final image (discussed above) and use Show Region Statistics (Measure menu) to get the measurements of interest.

Note: this function is very commonly used in journals to ensure the same settings for your assays, so check or add this function to your journal.

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