Mantra Snap is the software use to acquire quantitative imagery with the Mantra system.

Want a quick tour? Below, we've highlighted the most frequently used features in Mantra Snap.

- References
- Brightfield Acquisition
- Snap Rules (Fluorescence only)
- Exposures (Fluorescence only)
- Fluorescence Acquisition
- Post Processing

Select 'Help' in the settings menu for complete system documentation

References

When you first get your Mantra system, it's necessary to take references. Brightfield references enable the software to acquire imagery in Optical Density units, which is required for quantitation. Fluorescence references flat-field fluorescence imagery.

You can access the reference editor by selecting 'References' from the settings menu.

Before taking brightfield references, make sure you have a clean slide available. Fluorescent references require the blue slide shipped with your system.

The system will prompt you to move the slide and trinocular during the reference acquisition. When complete, you'll have valid references for all system objectives and epi-filters.
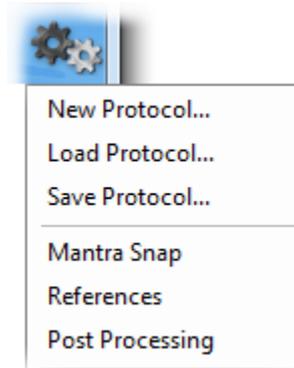
➤ **Brightfield Acquisition**

When the system has brightfield references, it's ready to acquire! Select Mantra Snap from the settings menu to get to the acquisition editor.

Select your output directory and base filename. Every picture will be automatically saved using that filename plus an incrementing number.

Once you're ready, click Snap to acquire quantitative imagery. Alternatively, you can use the snap button directly on the hardware.

If you only need a color picture, press and hold Alt before clicking the button; it will become a Snap Color button.
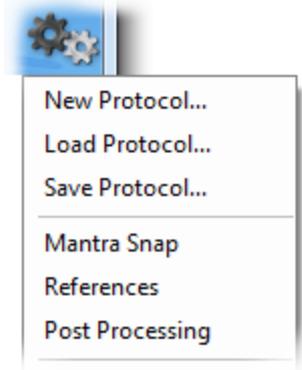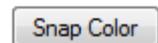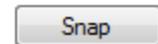
▶ **Snap Rules**

Fluorescence imaging requires a little more information before Mantra Snap can take pictures. To set up the rules for acquiring, start with the Snap Rules editor from the settings menu.

Choose imaging bands based on the fluorophores in your sample. Add more if you need them. The bands can be in any order; the system will acquire them in the order listed.

Mantra Snap can protect against over-exposure by autoexposing only when necessary. To take advantage of that, which is recommended, select Use Saturation Protection.

In order to take quantitative data, your trinocular should always be set in the same position for acquisition.
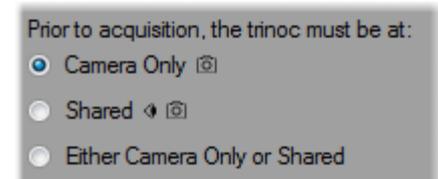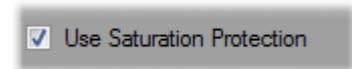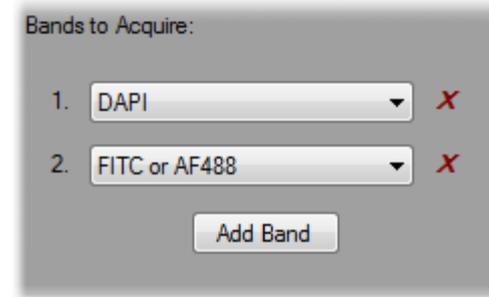
➤ **Exposures**

Once you've selected imaging bands in Snap Rules, you can set exposures. Start by selecting Exposures from the settings menu. The system will display exposure times for the current objective.

Select the imaging band you'd like to expose; the hardware will switch to the appropriate epi-filter automatically.

Once you've found a bright location on your sample, click autoexpose to automatically determine the best exposure. The system will ignore the brightest 0.01% of pixels, and choose an exposure 20% below saturation for the remaining pixels. You can also manually type in the exposure time.

If you'd like to expose for epi-filters that you aren't using for imaging, change the epi-filter on the system first, then set the exposure.

▶ **Fluorescence Acquisition**

With Snap Rules and Exposures in place, you can begin fluorescence acquisition. Select Mantra Snap from the settings menu to begin. An overview of your imaging bands and exposures will be shown.

Imaging Band	Exposure
DAPI	42.489
FITC or AF488	250

Current Objective: 4x

Select your output directory and base filename. Every picture will be automatically saved using that filename plus an incrementing number.

Save Snap To: Browse...
Base Filename:
Starting Number: 1

Once you're ready, click Snap to acquire quantitative imagery. Alternatively, you can use the snap button directly on the hardware. The system will automatically cycle through each epi-filter using the exposures you've selected.
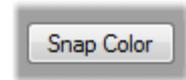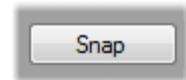
Snap

If you only need a color picture, press and hold Alt before clicking the button; it will become a Snap Color button.

Snap Color

▶ **Post Processing**

By default, Mantra Snap automatically saves each image you acquire. There are additional processing steps you can take if desired; these are all selectable in the Post Processing editor.

Select Launch inForm to send this image directly to inForm Analysis; the system will start inForm if it not presently running, and will process and display the image using the current inForm algorithm.

⊙ Launch inForm Analysis

If you would like the image to be processed by inForm in the background, select Batch Process Using inForm. Select an appropriate algorithm or project, and the system will automatically process all acquired images.

⊙ Batch Process Using inForm

[   ] Browse...

If you need more flexibility, you can also write your own Windows .bat file.

⊙ Launch a Custom .bat file

[   ] Browse...