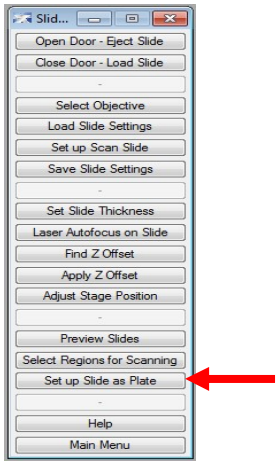
SETTING UP A SLIDE AS PLATE QUICK START GUIDE FOR METAXPRESS 3.1-5.x

This guide will help you set-up slide scanning as a plate to acquire images through Plate Acquisition Setup

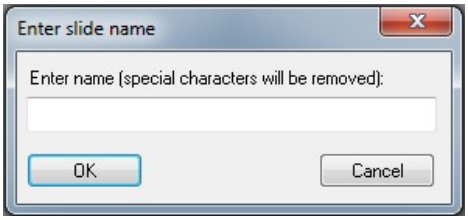
**NOTE* Shading correction is very important for imaging slides, especially those with colorimetric stains. Correction images should be configured with the same type of slide and coverslip that you are using for your sample. If acquiring images without overlap, click on System Maintenance on the main taskbar, and select Slide Shading Correction. If acquiring images with overlap, on the main toolbar, click on Apps → Scan Slide. Use the Acquire Shading Image button on the Acquisition tab to create shading correction images. T is recommended to save slide shading correction images in a folder separate from plate shading correction images. Make sure that Shading Correction is enabled in Plate Acquisition your experiment.*

SECTION A: Setup Slide with as a Plate Definition

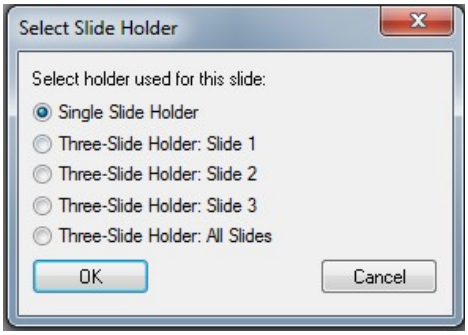
1. Click on **Set up Slide as Plate** in the taskbar



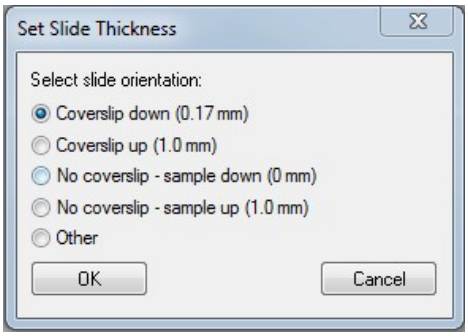
2. Enter a name for your slide setup. This name will appear in the drop down menu of the Plate tab in the Plate Acquisition Setup wizard. Click **OK**



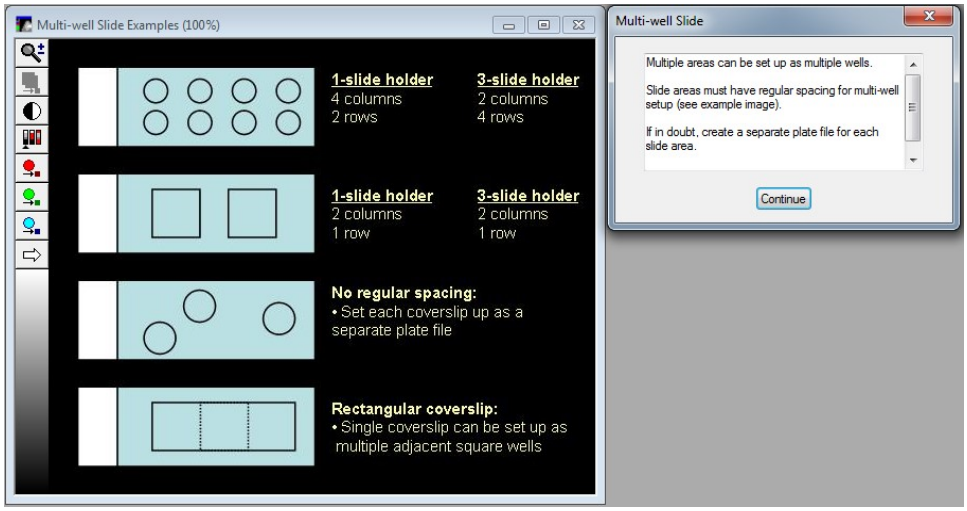
3. Select the appropriate slide holder. Click **OK**



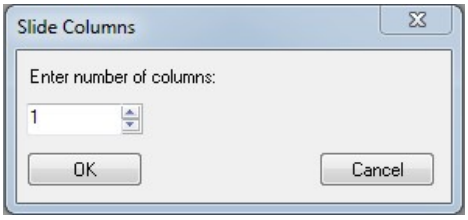
4. Select the orientation of your slide. Click **OK**



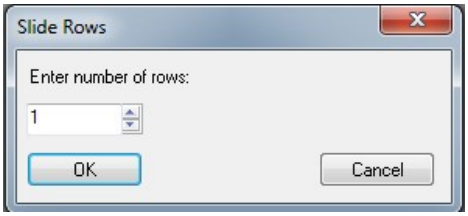
5. The next few dialogs will ask you to define your slide in terms of spacing in the slide holder. You will be presented with screenshots giving you instructions with how to set up your slide as a plate. It is recommended to have a metric ruler handy.
6. You will be asked to set up multiple areas of your slides as wells. You can set up multiple rows and columns. Note that if you are using a 3-slide holder, you can only have one column per slide. Please see screen shot below.



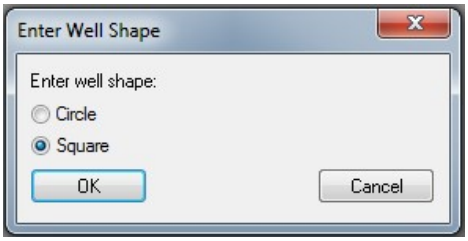
7. Enter the number of columns and click **OK**



8. Enter the number of rows and click **OK**

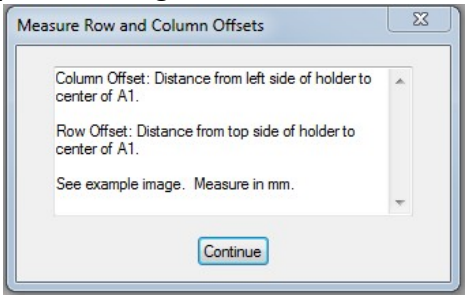


9. Enter the well shape and then click **OK**

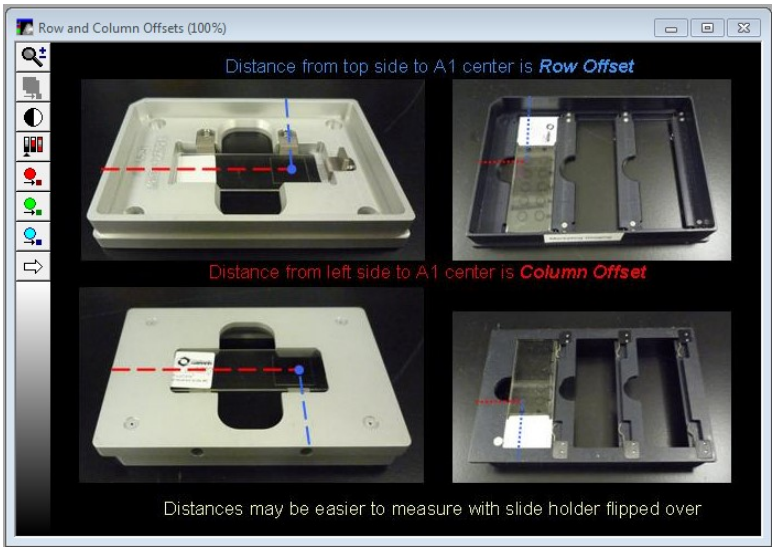


10. Select the method for measuring the position of your sample. It is recommended to choose **Measure with ruler in mm.** Click **OK**. You will need a metric ruler for the next few steps.

11. The following message will appear defining the column and row offsets. Click **Continue**



12. Use the instructions to calculate column and row offsets

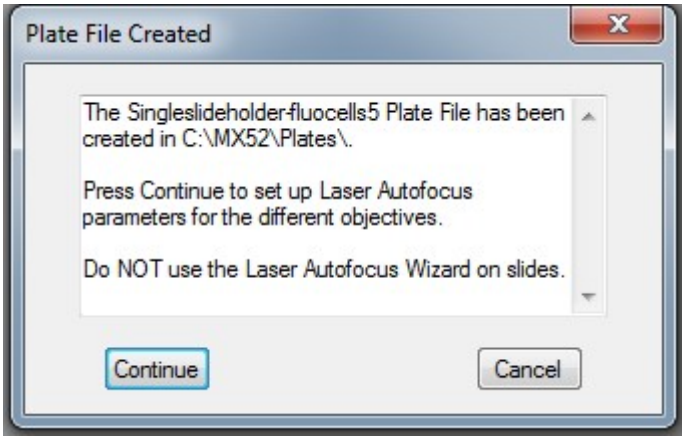


13. Enter the column offset in mm and click **OK**

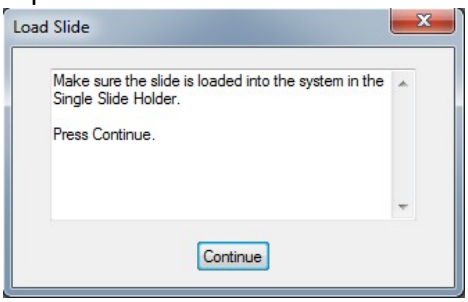
14. Enter the row offset and click **OK**

15. Enter the well diameter in mm and click **OK**

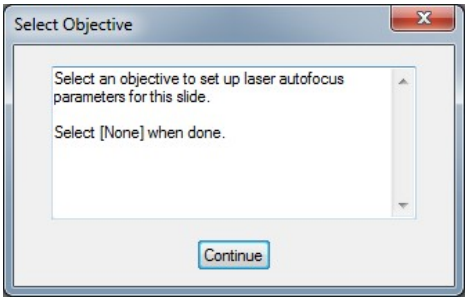
16. A message will appear stating that you have successfully created a plate layout for your slide. You will now be prompted to set up laser autofocus settings. Click **Continue.** **Warning: use this journal to set up autofocus settings, do not the run laser autofocus *wizard* from the Plate Acqustion Setup wizard on your slide.**



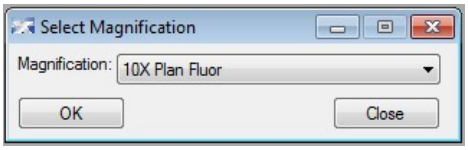
17. Load the slide holder with a sample slide in the instrument and click **OK**



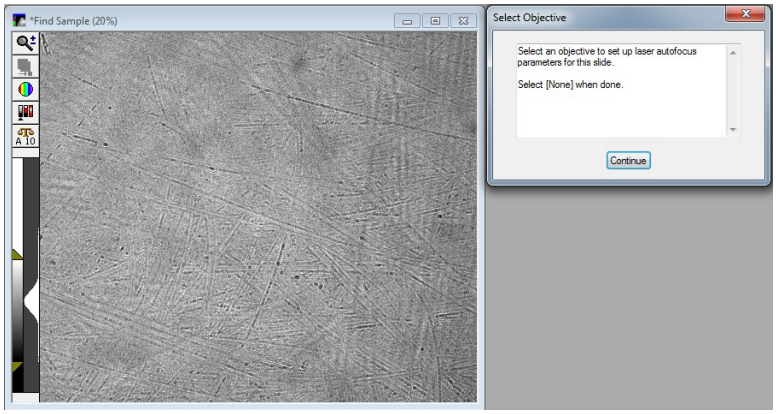
18. A message will appear with directions on selecting an objective to set up laser autofocus settings. Click **Continue**



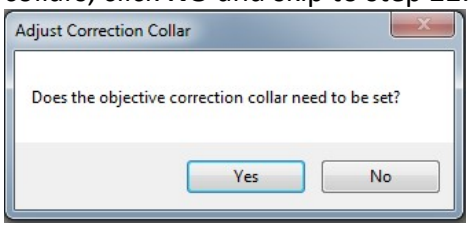
19. Select an objective from the drop down menu and click **OK**. It is recommended to start with the 10X objective first.



20. An image will appear called Find Sample along with a message asking you to select an objective. Click C**ontinue** and repeat the above process for all objectives.

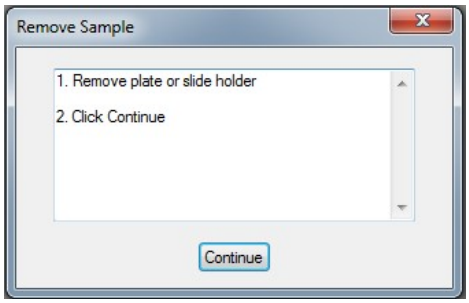


21. If you are working with an objective that has a correction collar, a message dialog box will appear asking you if the correction collar needs to be set.
    a. Click **YES** if you need to change the correction collar on the objective. If you do not have any objectives with correction collars, click **NO** and skip to step 22.



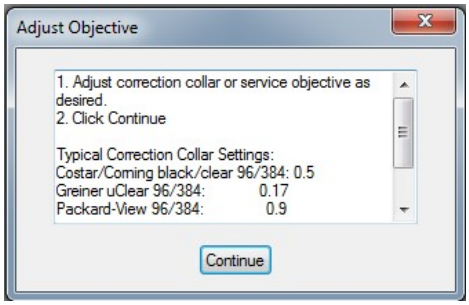
    b. You will be asked how you would like to access the objective. Select the appropriate choice and click **OK**

    c. If you selected "From the top" in step b above, you will need to remove the slide holder from the system. When done, click **Continue**

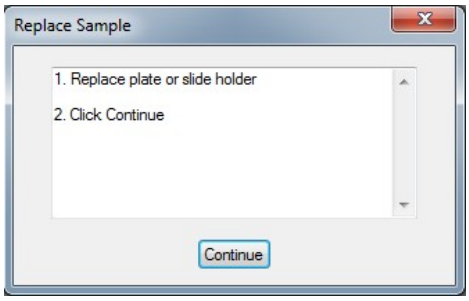


    d. Remove the objective from the instrument and set it to the appropriate correction collar setting. The dialog box lists correction collar settings for commonly used plates and slides. Set the correction collar to the appropriate number based on the thickness of your slide. If imaging with coverslip down, typical settings are 0.17. If imaging with coverslip up, typical settings are

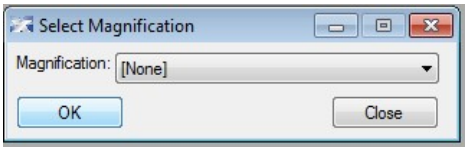
1.0. Once the correction collar has been set, replace the objective in the instrument and click **Continue**.



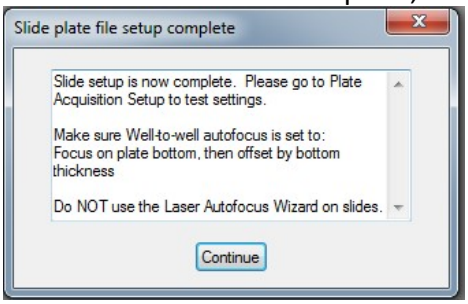
e. Load the slide holder back in the instrument and click **Continue**



22. Once laser autofocus has been set for all objectives, select [None] from the drop down menu and click **OK**

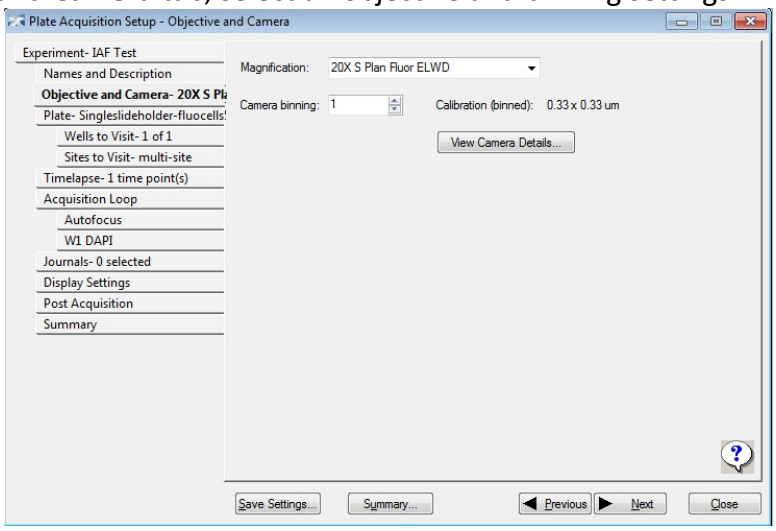


23. The process of setting up your Slide as a Plate is not complete, click **Continue**

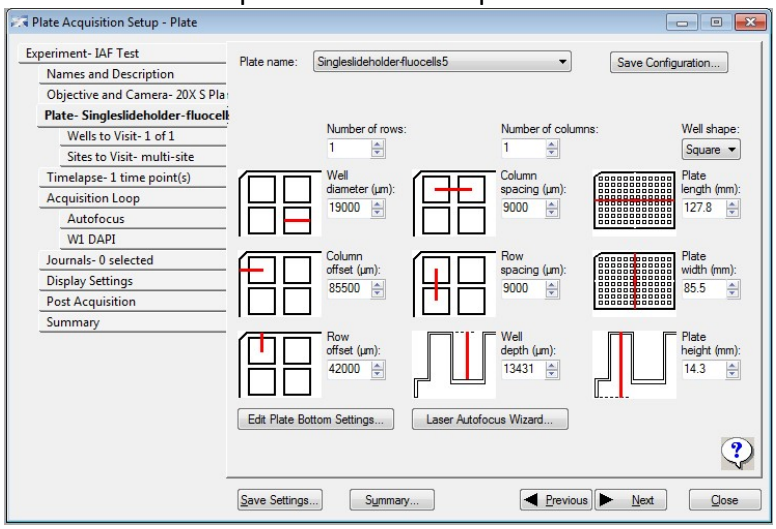


SECTION B: Acquire Slide Using Plate Acquisition Setup

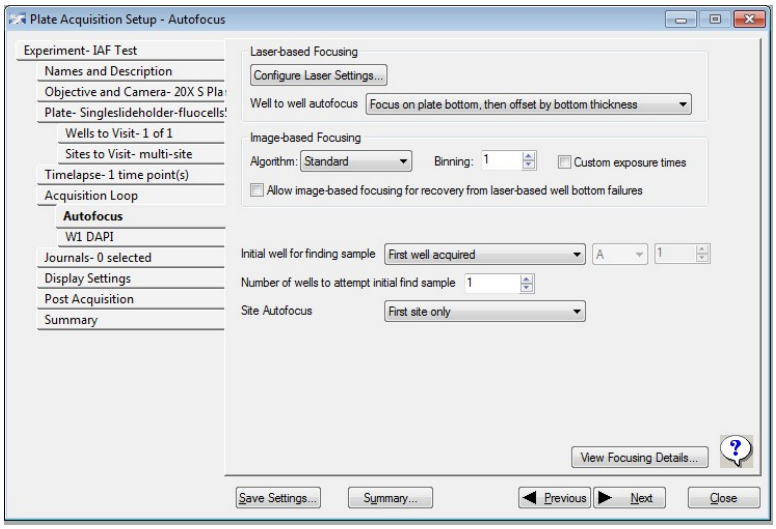
1. On the main tool bar, select Screening → Plate Acquisition Setup. On the **Names and Description** tab, enter a name for the *experiment set* and *experiment base name*
2. On the **Objective and Camera** tab, select an objective and binning settings



3. Click on the **Plate** tab and select the plate from the drop down menu that was created in Section A



4. Click the one **Acquisition Loop** tab, and select the **Autofocus** sub tab. Select "*Focus on plate bottom, then offset by bottom thickness*" from the Well to well autofocus drop down menu



5. On the **Acquisition Loop** tab, select the correct number of wavelengths you want acquire.
6. Set up each wavelength you want to acquire using the **W** – wavelength tabs.
    a. Select wavelength from the drop down menu
    b. Enter exposure time
    c. Find the offset
7. **Journal** tab
    a. Usually leave everything deselected (turned off) here.
8. **Display Settings** tab
    a. You can just use default display settings.
    b. ***Display images during acquisition*** is usually on.
    c. Optional: to customize display (only affects display during acquisition, does not affect raw data), select the ***Manually set image display properties*** option and click the ***Display Images*** button. Resize and position windows as desired, then click ***OK***.
9. **Post Acquisition** tab
    a. Only turn on Auto Run Analysis if you already have optimized analysis settings for the assay.
    b. If you are not sure of analysis settings to use, make sure this option is turned off.
10. **Summary** tab
    a. Review summary of settings and print if desired
11. Click on **Save Settings** and select ***Save to file***. Click on **Save** and it will prompt you for a location and filename.
12. Click **Acquire Plate** to begin image acquisition.