



MATEO TL

Microscope User Manual - Activate Confluency Module





When the image is shared, the Wifi dongle can be unplugged from the equipment to avoid unauthorized connection to download images.

Confluency Check

The Confluency module can be used to estimate cell confluency, the percentage of the surface of a culture vessel that is covered by adherent cells. Many cell-based experiments require cell culture to reach a certain confluency. With Mateo TL microscope, you can use the onboard Confluency module to measure the confluency of your cell culture.

Checking Confluency Module Status

Before performing a confluency check, please make sure the Confluency module is purchased and its feature is activated.

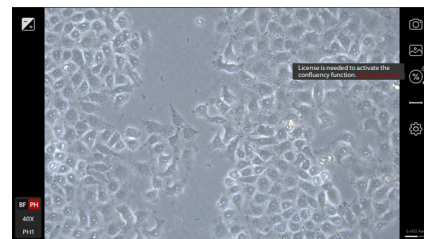
Inactivated: There is a lock sign that appears at the top right corner of Confluency module icon .

Hover your mouse over the lock, it shows “License is needed to activate the Confluency module function”.

You can click “Activate Confluency module” and follow the on-screen instructions to activate it.

You can also click “Activate Confluency module” in the system setting to activate it.

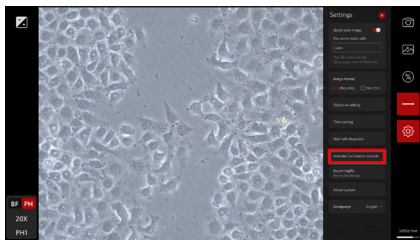
For details, please refer to “Activating Confluency Module” on page 43.



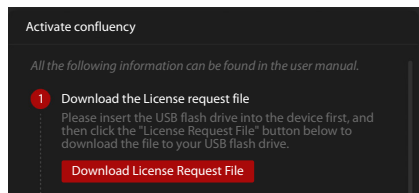
Activated: There is no lock icon on the top right corner of .

Activating Confluency Module

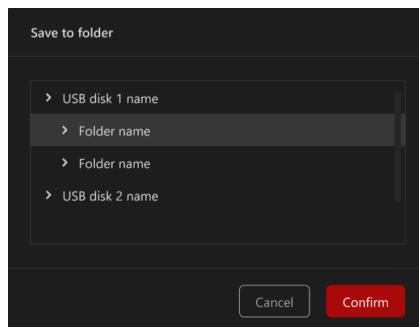
1. After purchasing the Confluency module, you will receive a paper document containing the **ticket number** required to activate the Confluency module.
2. In the system "Settings" menu, click "Activate Confluency module" to activate the module.



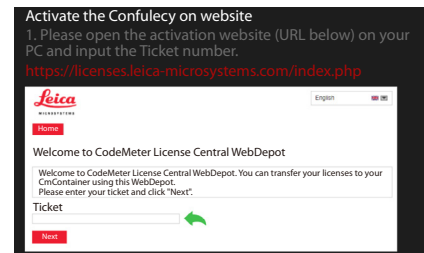
3. Download the "License Request File" to a USB disk.
 - 3.1 Plug in your USB disk to a USB port of the stand.
 - 3.2 Click "Download License Request File" in the "Activate Confluency module" window.



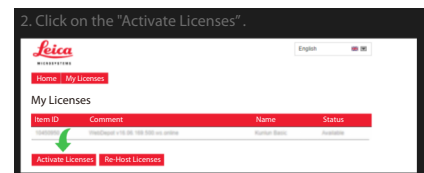
- 3.3 Select the target folder, then click "Confirm".



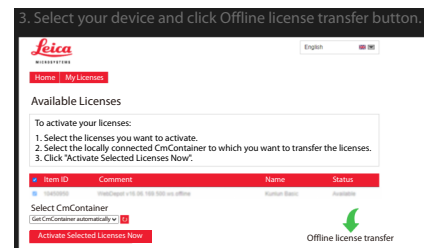
4. Generate the "License Update File" from Leica website.
 - 4.1 On your computer, open the webpage <https://licenses.leica-microsystems.com/index.php>. Enter the ticket number and click "Next".



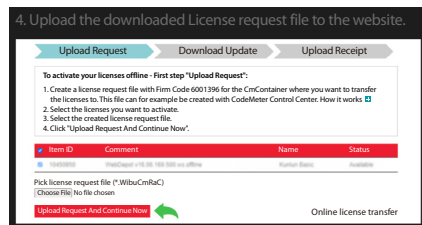
- 4.2 Click "Activate Licenses".



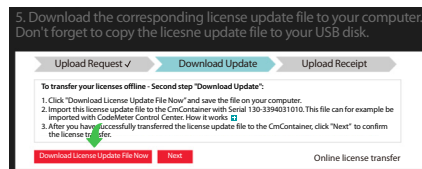
- 4.3 Click "Offline license transfer".



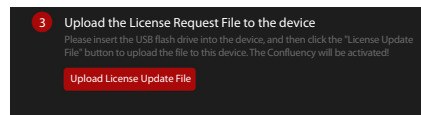
- 4.4 Plug in the USB disk that stores the “License Request File” that you got in Step 3.
- 4.5 Click “Choose File” and select the “License Request File” from your USB disk, then click “Upload Request and Continue Now”.



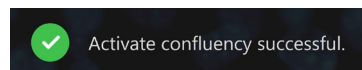
- 4.6 Click “Download License Update File Now” to download the license update file to the local drive of your computer.
- 4.7 Copy the downloaded “License Update File” to the USB disk.



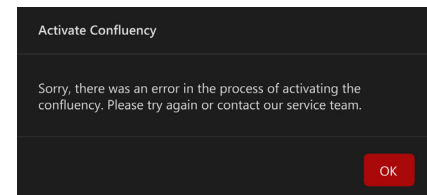
5. Upload the “License Update File” to your Mateo TL system.
- 5.1 Plug in the USB disk that stores the “License Update File” that you got in step 4.6.
- 5.2 Click “Upload the License Update File to the device”.



- 5.3 Select the “License Update File” from your USB disk, then click “Confirm” to start activating the license.
- 5.4 When the activation completes, you can see message as shown below.



 If something goes wrong during the activation, the system prompts warning information to remind you to retry or contact Leica service team.



Checking Cell Confluency

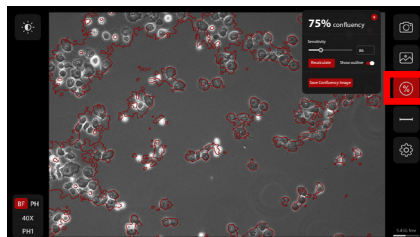
1. Place the sample on the stage.
2. Set the phase ring position to PH0 or PH1.
With the correct illumination method set, focus the cells to get a clear image.



The Confluency module can only be used in PH mode and is not available under BF mode.

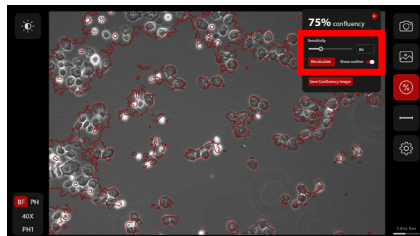
3. Click  in the live view. The system takes an image of the sample and calculates its confluency percentage automatically.

The confluency value is presented on the top right corner of the image. And the cells in the image are outlined in red.



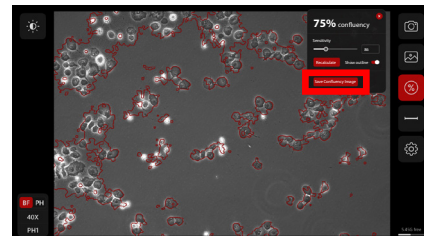
4. You can click “Show outline” toggle to make the red outlines invisible/visible. Doing so you can evaluate the result by comparing the original image and the image processed by Confluency module.

If the result fails to reach your expectation, you can change the “Sensitivity” and click “Recalculate” to repeat the process until your desired view is observed.



To set “Sensitivity”, you can move the slider or enter the value in the input box.

5. Click “Save Confluency Image”, then enter the image name in the prompted dialog box to save the current view to Gallery.

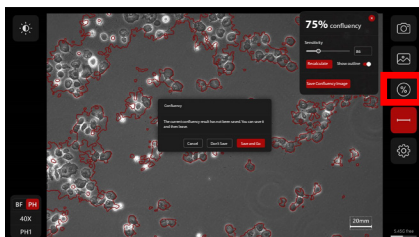


If “Quick save image” is enabled, the image is automatically named with a suffix “-Confluency”, following the naming rules of “Quick save image”.

After that, the system closes the Confluency module and goes back to live view automatically.



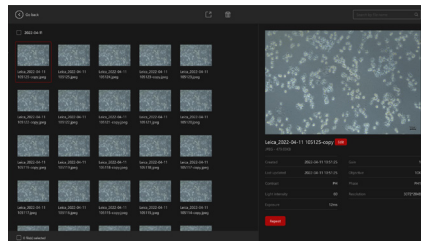
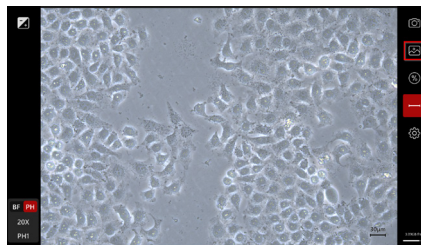
You can also close the Confluency module manually by clicking the  on the top right corner of the module. If the image is not saved yet, a message is prompted to remind you of that. You can click “Don’t Save” to exit without saving image or click “Save to save and exit.



Repeating

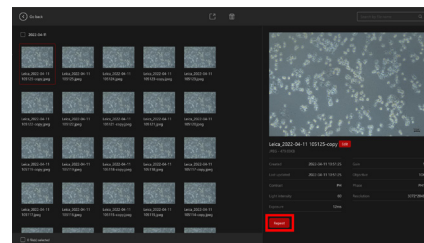
Many experiments are conducted repeatedly under the same conditions. With Mateo TL microscope, you can take one image from the gallery as a reference and reuse its parameters to repeat the imaging conditions of the reference.

1. In the live view, click  to open gallery where your experiment images are stored.

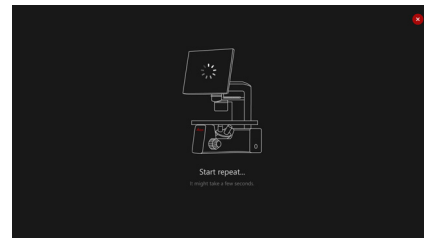


2. Click the image of interest.

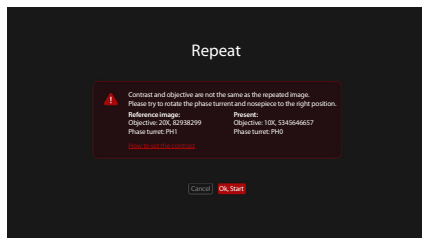
You can see all its parameters on the right side of the screen.



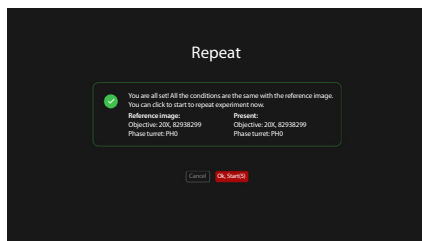
3. Click “Repeat”. The system starts verifying whether the current imaging parameters are identical with those of the reference image.



4. If there is any parameter discrepancy (for example phase turret position or objective position), a warning message displays as shown below. Follow the on-screen instructions to clear the discrepancy.



5. Click "OK, Start" to start repeating.



If "OK, Start" is not clicked, the "Repeat" starts automatically in 5 seconds.



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