



Dear Sir or Madam,

Thank you for deciding for a **Cell Observer SD / Laser TIRF / DirectFRAP** system. We at ZEISS take pride in providing leading technology for your demanding research.

It is especially important to us that you can rely 100% on our promise of stability and security of operation. Today we need to inform you that in very rare cases the laser safety shutter of your imaging system may not fully function after years of operation. This means that a portion of the laser excitation light may leave your microscope system through the eye pieces or objective, even though the system shows it is laser safe.

We already informed our service engineers to take care of all potentially affected systems. This will be free of charge and can be done at your location. It will not take more than 1 day. We will get in contact with you soon to plan the service visit at your convenience. In the meanwhile, we recommend to NOT use the eye pieces and to NOT tilt back the transmitted light arm when the laser is switched on in the software. In case of a TIRF System do not open the reflected light cover or laser safety incubator if the laser lines are switched on.

We apologize for any inconvenience this may cause you. If you have further questions, please feel free to contact your local service representation or contact us directly: <mailto:critical-incident.microscopy@zeiss.com>.

Yours sincerely,

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How can I check if a system is affected?

If possible, dim the room lights during this test. All lasers of your Microscope system (inverted and upright stand) must be switched off.

Place a sheet of thin white paper on the stage instead of a sample. Remove both eyepieces and cover the openings with a sheet of thin white paper for your safety!

Turn on your system and all laser(s) to an intensity that enables you to observe a weak laser spot on the sheet of paper on the stage insert. First, check the light path for laser mode, while lasers are running. Check for laser light visible on the sheet of paper in the sample area as intended. After, switch from laser mode to visual mode. In case you do see laser light reflection on the paper at the eyepieces, stop using this system!

Please contact your Service engineer immediately! Remove the system key from the laser module to avoid operation of the system through other users.



In case of inverted stands, additionally set up an image acquisition mode by using all lasers with low intensity and start the acquisition. Laser light will now be visible on the piece of paper in the sample area as intended, but not on the eyepieces. For inverted stands, push back the transmitted light arm while the acquisition is running. Laser light must now not be visible anymore on the piece of paper in the sample area. In case you do see laser light reflection on the paper at the sample area or the eyepieces, stop using this system and please contact your Service engineer immediately! Remove the system key from the laser module to avoid operation of the system through other users.

If you do NOT see laser light on the papers, your system is safe. In case you do see laser light reflection on the paper, stop using this system and please contact your Service engineer immediately!

In case of a TIRF System do not remove the reflected light cover or laser safety incubator, while the described procedure is performed (especially if the laser lines are switched on)! To observe the laser spot visual inspection of the sheet of paper is just possible by:

- observation from below the sample area (in case of small incubators on top of the sample stage)
- observation through the door windows of red/black XL incubators (if door is open, laser light must not be visible anymore!)

If you do NOT see laser light on the papers, your system is safe. In case you do see laser light reflection on the paper, stop using this system and please contact your Service engineer immediately!

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