



Confocal Microscope Safety

The Confocal microscope (Zeiss LSM410) is a laser scanning microscope located in DV1106 on an optical table.

LASERS:

633/543 nm HeNe laser (<5 mW, does not require safety precautions)

488 nm Argon laser (150 mW, Class 3B)

Anyone using the Argon laser must take EHS737 (laser safety theory) and EHS738 (laser safety practical) first and show certification to the Laser Supervisor, in addition to the mandatory training to use the confocal microscope.

The HeNe laser does not require special precautions at either wavelength, even if its beam is exposed.

There is no need to use PPE for the Argon laser because the beam is enclosed, and a camera is used instead of the eyepiece. It is also noteworthy that the laser shuts off automatically if the microscope tower is tilted back or the eyepiece is engaged. **The Argon laser could be dangerous if you access the open beam, so do not attempt to service/open the microscope while the Argon laser is on under any circumstances.**

Emergency Response:

These lasers are not powerful enough to harm skin. In the event that someone has opened the machine while the Argon laser beam is on, and injured an eye, follow these steps:

1. Turn off the laser but don't change any settings.
2. Calm the injured party as best you can.
3. Notify the Lab Supervisor or Lab Coordinator
4. Call 911.
5. Fill out an incident report notifying the Teaching Labs Manager and the department Chair within 24 hours. <https://ehs.utoronto.ca/report-an-incident/#eForms>