Local Rules for the Use of the Leica SP5 confocals
Location: Cancer Research UK Cambridge Institute, Light Microscopy Facility, Room 034C

These local rules cover the use of the lasers and fluorescent light source attached to the Leica SP5 tandem and multiphoton confocals located in room 034C. They cover the normal use only. They implement the University’s laser safety policy at a practical level and form part of the University's duties under section 2(3) of the Health and Safety at work etc Act 1974.

Description
1. Class 4 Coherent Chameleon Ultra II Ti-Sapphire laser 690 – 1080nm
2. Class 3B Diode 405nm laser
3. Class 3B pulsed Diode 405nm laser
4. Class 3B Argon Ion laser with 458, 476, 488, 496 and 514nm lines
5. Class 3B HeNe 543nm laser
6. Class 3B HeNe 633nm laser
7. Fluorescent light source containing mercury

Authorised Users
Only light microscopy facility staff and persons who are adequately trained by the light microscopy facility staff and are on the authorised users list may use the confocal systems.

Class 3B and 4 lasers
- Do not disconnect any of the optical fibres that route the laser beam to the microscope.
- Do not change samples or filter cubes while the laser is scanning.
- Do not introduce fingers or other objects into the beam path at the objective.
- Do not insert reflective material into the beam path at the objective.
- Avoid looking directly into the light beam at the sample.

Fluorescent light source
- Avoid looking directly into the light beam at the sample.
- Ensure that the light source is blocked before changing the sample or objective.
- Once turned off, allow the bulb to cool for at least 20 minutes before switching back on.
- In the rare event that the lamp breaks or bursts leave the room and report to a facility staff member or an appropriate safety person. No one must enter the room until told it is safe to do so.

General
- Use lens tissue to remove oil from the objectives after use.
- Clear up any spillages or glass breakages immediately and report them to facility staff
- Dispose of all sharps in the sharps bin provided.

Summary of hazards
If the rules are not followed:
- Class 3B laser radiation and prolonged exposure to the fluorescent light source can cause long-term damage to the eyes and skin.
- Exposure to toxic mercury vapour

See the laser risk assessment for additional rules

Contingency Plans
- In the event of any eye injury or suspected eye injury, proceed straight to Addenbrooke’s Accident and Emergency and tell staff that it concerns a laser eye injury. Get advice from Moorfields Eye Hospital (020 7253 3411)
- In the event of skin injury or suspected skin injury, proceed straight to Addenbrooke’s Accident and Emergency (01223 217 118).