Local Rules for Confocal Microscopes, Department of Medicine, e6 site

NIHR Cambridge BRC Phenotyping Hub

Analyser room2 (annex)

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Description

These local rules cover the use of lasers embedded in the Leica confocal microscopes (Sp5 and SPE) in the BRC Cambridge NIHR Phenotyping Hub, Level 6, Addenbrooke's hospital. They cover both normal use and maintenance and 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.

These machines feature enclosed CW beams wavelength: 402 to 633nm. (Violet to Red). Each is coupled fibre-optically to a confocal scanner, which moves the beam across the specimen, the laser light diverges rapidly after the specimen intercept and poses little risk.

Integral Engineering controls prevents users being exposed directly to the beam through the eyepieces.

Authorised users

We specify two types of user: Maintenance user and confocal laser user, both require Hub induction and two machine specific training sessions. A list of registered users is kept in a blue folder in our JCBC office

Laser Controlled Area

There is no permanent laser controlled area. Access is limited by electronic card access provided after training

(i) Confocal Laser User

These are people who plan to use the instruments but not maintain them.
(ii) Maintenance User

Maintenance work that requires access to the laser path can only be undertaken by Leica engineers and/or designated maintenance users: at present just Simon McCallum (LSO). It is occasionally necessary for authorised maintenance users and/or Leica engineers to disassemble these machines to alter the beam path (e.g. replacement of a laser). Laser goggles are available for all beams present but are not mandated. No metal watches or jewellery should be worn during exposed beam procedures.

A short table is available on the departmental internet site that lists the laser wavelengths of each machine along with plausible injuries from direct beam exposure.

https://www.med.cam.ac.uk/nihr-cambridge-brc-cell-phenotyping-hub/cytometry-lasersafety/

Summary of Hazard

There is little hazard in the day-to-day use of the equipment.

Contingency plan

In the event of a suspected laser injury or emergency: Simon McCallum (LSO) 0787 2525 130 and Departmental Safety Officer: John O’Brien must be alerted. Power to the machine should be cut off. All suspected laser injuries should be investigated clinically.

User declaration

I have read and understand the above local rules

Name in print Simon McCallum

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Date of next review 1st October 2022