



Standard Operating Procedures for experiments with special Health & Safety requirements

These **Standard Operating Procedures (SOP)** are designed to regulate access to microscopy equipment for experiments with elevated health & safety requirements, while ensuring the safety of other facility users. The implementation of these procedures might vary with specific experiments, so please note that any experiments involving organisms rated above Biohazard Containment Level 1 can only be started following approval by the facility management.

These SOP's cover the following types of experiments:

- Experiments involving live cell lines and micro-organisms which require containment level two for biological agents
- Work with class two genetically modified animals or organisms
- Experiments involving **live rodents** (mice and rats).

Any other organisms requiring special health & safety considerations (e.g. biohazard containment Level 3 or 4) are not allowed to be performed in the facility. If microscopy with such organisms is needed, please get in contact with the facility management.

Experiments with samples requiring Biological Containment Level 2

Fixed samples

Imaging with fixed samples of organisms is principally allowed on any facility microscope, provided that the samples are sufficiently cleaned and sterilised to guarantee the equipment is not contaminated with any live organisms. No special permission is required.

Live samples

Microscopy with live micro-organisms of "Biological Containment Level 2" is possible on facility microscopes under the following conditions:

- The imaging project must be communicated to the facility management through a detailed project description, containing the following information:
 - type and strain of organism involved
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- equipment to be used
- person to perform the experiment
- a description and time scale of the project, including either GM project reference or copy of DP1/2 form.
- The samples have to be transferred to containers (e.g. multiwell slides, dishes), which can easily be fitted onto the microscope stage, and they must be appropriately sealed to prevent any contamination of the microscope with the organism.
- The samples must be transported to the microscope in a lidded leak-proof secondary container.
- The sealed sample container (e.g. slide or dish) must not be opened at any time within the facility.
- At any time during the use of facility equipment, the user must provide a sufficient amount of a disinfectant designed and approved for use with the specific organism. Users must have appropriate spillage procedures in place for use with their organisms.
- Users need to ensure that all equipment is appropriately disinfected after use
- The user makes other users in the same room aware of the higher Biological Safety standard (sign on the door).
- The user organises the disposal of any biological waste according to the appropriate standards.
- All experiments are performed during normal working hours (9.00-18.00), unless pre-arranged with facility staff.

Experiments involving live mice and rats

Microscopy with mice or rats is acceptable only on designated facility microscopes (currently confocal 3), under the following conditions:

- The imaging project must be communicated to the facility management through a detailed project description prior to any work being conducted, containing the following information:
 - type and strain of animal involved
 - equipment to be used
 - person to perform the experiment
 - a description and time scale of the project, including either GM project reference or copy of DP1/2 form where relevant.
 - Only terminal experiments on fully anaesthetised animals are allowed within the imaging facility.
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- A copy of the project permission by the Home Office must be forwarded to the facility management
 - Animals must be transported to the facility in appropriate filter top boxes.
 - The person to perform the experiment must be appropriately trained for the performance of the planned animal procedures (e.g. mouse surgery).
 - The equipment must be shielded from other users
 - The animals must not be kept within the facility longer than required to perform the microscopy experiment.
 - Whilst the experiments are being conducted the user must stay within the facility.
 - All waste must be removed by the user from the facility once the experiment has been completed and the equipment sterilised.
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