

USER WELCOME DOCUMENT

SCAC



**Servei de Cultius Cel·lulars,
Producció d'Anticossos i
Citometria**

ANNEX 1. WORKING REGULATIONS IN THE SCAC CELL CULTURE LABORATORIES

The following table lists the different laboratories and equipment available for cell culture work.

SCAC LABORATORIES	USE	EQUIPMENT
<i>Myc Free Cell Culture Lab</i>	<ul style="list-style-type: none"> - Handling of mycoplasma-free cell lines: Cell cultures derived from a cell line repository approved by the SCAC. - Handling of cultures from other sources is allowed but only if they have been tested by SCAC staff for the presence of mycoplasma, and the result is negative. 	https://www.uab.cat/ca/servei-cultius-anticossos-citometria/equipament?categoria=banc-cellular-fx&categoria=cultiu-cellular-fx
<i>Primary and quarantine Cell Culture Lab</i>	<ul style="list-style-type: none"> - Establishment of Primary cell cultures - Tissue dissection and cells isolation - Primary cell culture handling - Handling of quarantine cell cultures: <ul style="list-style-type: none"> • Established cell lines from another laboratories Will be maintained in quarantine until the will be negative after mycoplasma testing. The test Will be performed by the SCAC staff. • Cell cultures mycoplasma infected. 	https://www.uab.cat/ca/servei-cultius-anticossos-citometria/equipament?categoria=banc-cellular-fx&categoria=cultiu-cellular-fx
<i>Virus Lab</i>	<ul style="list-style-type: none"> - Infection of cell cultures with bacteria and virus - Transfection using viral vectors - To work in this laboratory, it is necessary a specific training 	https://www.uab.cat/ca/servei-cultius-anticossos-citometria/equipament?categoria=banc-cellular-fx&categoria=cultiu-cellular-fx
<i>Cryopreservation Lab</i>	Storage of Cell lines cryopreserved in liquid nitrogen	The opening of the tanks is carried out only by SCAC staff
<i>Flow Cytometry Lab</i>	Reading of assays on multi-well plates by fluorescence, colorimetry, and luminometry.	https://www.uab.cat/ca/servei-cultius-anticossos-citometria/lector-multiplaques

- Outside the working hours of the technical service staff, only the equipment that **can be reserved through PPMS** will be available for self-service.
- In the case of **cabinets that allow reservations outside the technical staff's working hours**, the user must make the reservation before 3:00 PM on the same day (on Fridays and the day before public holidays, before 2:00 PM). Otherwise, they will be without power and cannot be used until the next working day.
- The SCAC staff will determine and inform each user about the incubator and cabinet they should use, as well as any other special working conditions, depending on the biosecurity requirements and quality control standards of the service.
- Outside the SCAC technical staff's working hours, the user, once their activity is completed, is responsible for turning off both the equipment they have used and the laboratory lighting. The window blinds must be lower.
- The user **must record** the real usage in the **notebook** located next to each SCAC equipment.

US OF LAMINAR FLOW AND BIOLOGICAL SAFETY CABINETS

The working conditions, as well as the general regulations for the use of cabinets, are outlined in the **SCAC/IT/0304 Utilization and Control of Laminar Flow and Biological Safety Cabinets (Users)**, which you can find in the cell culture laboratories.

INCUBATORS USE

- Keep the door open for the shortest time possible to avoid fluctuations in temperature, humidity, and CO₂ levels.
- Identify all culture flasks/plates with the owner's name and the biological material they contain. Unidentified cultures may be discarded without prior notice.
- Do not use incubators that are for exclusive use by SCAC staff.
- Incubators are exclusively for working with cell cultures. Their use for other purposes is forbidden

WATER BATH USE

- Never change the temperature of the baths without authorization from the technical service staff
- Add deionized water when the level is low or notify the technical staff to do so.
- Identify all tubes, bottles, etc., being tempered in the bath with the user's name and group name. Unidentified materials may be removed without prior notice.

CENTRIFUGES USE

- The use of glass tubes is prohibited
- Before starting the centrifuge, ensure that the tubes are properly balanced.
- Tubes must always be centrifuged with their caps on.
- Unidentified materials may be removed without prior notice
- Viruses and viral vectors cell cultures centrifugation must be done using the aerosol-proof containers provided by SCAC.
- In case of an accidental spill in the centrifuges of the **Lines** and **Primary Laboratories**, the following steps should be taken:
 1. Cover the spill with absorbent paper and add 10% bleach in a circular motion, from the outside towards the center.
 2. Allow a 10-minute contact time
 3. Remove the paper and any plastic fragments (if present) with forceps and dispose of them in the temporary non-sharp/sharp solid waste container.
 4. Disinfect the affected area again by spraying with 70% ethanol and allowing it to dry.
 5. Report the incident to the SCAC staff
- In case of a tube breakage or suspicion of tube breakage containing potentially hazardous material during centrifugation in the **Virus Laboratory**, the following measures must be taken:
 1. Move the buckets to the biological safety cabinet.
 2. **Use forceps to collect any plastic fragments** and place them in an autoclave bag
 3. **Disinfect the inside of the centrifuge** with 3% Virkon and allow it to act for 10 minutes. Afterward, remove the disinfectant and wash all surfaces with water and soap.
 4. Dispose of the autoclave bag with the waste in the approved container for biohazardous waste

USE OF REFRIGERATORS AND FREEZERS

- SCAC users will be assigned a space in the refrigerator and freezer of the cell culture room where they conduct their activities.
- Users will periodically review the materials they have stored and dispose of any that are no longer in use or have expired

USE OF MICROSCOPES

The microscopes available to users in the mycoplasma-free cell line laboratory, the primary culture/quarantine laboratory, and the virus laboratory can be found at the following link: [<https://www.uab.cat/ca/servei-cultius-anticossos-citometria/microscopis>]<https://www.uab.cat/ca/servei-cultius-anticossos-citometria/microscopis> .

To use the fluorescence microscope, **PRIOR TRAINING IS REQUIRED**, and the use of the microscopy system must be recorded in the equipment usage logbook (this can only be done during the technical service staff's working hours).

General Guidelines for Microscope Use

- Prior training is required to use the fluorescence microscope
- Do not move the microscope from its designated location
- Keep the microscope stage always dry and clean
- Objective lens changes should be done by rotating the revolving nosepiece, always keeping your focus on the sample to prevent the lens from touching the specimen.
- Never force the adjustable screws of the microscope (macrometric, micrometric, stage, nosepiece, and condenser).
- Never touch the lenses with your hands. If they get dirty, clean them using soft absorbent paper to avoid damaging or scratching the lens
- **Always turn off the lamp** after using the microscope, gradually reducing the intensity. This action helps protect the filament, which may break due to sudden temperature changes
- **Use the equipment reservation form (SCAC/FOR/0101 Microscope Reservation)** if you need to use the small, inverted microscope (ECLIPSE TS2) for more than 30 continuous minutes

USE OF THE MICROSCOPES' CAMERA SYSTEMS

Image storage

- The camera is associated with the fluorescence inverted microscope (ECLIPSE Ts2R-FL). To use it, the user must be trained and authorized by the SCAC.

The training will include:

- Log in to the SCAC network
- Turn on the hardware and launch the software associated with the camera
- Create a storage folder on the SCAC network
- Capture images using camera software.
- Configure image capture settings (scale, auto white, autoexposure, etc.).

- Once the training is completed, the user will be able to capture images, provided the equipment is reserved in PPMS.
- If the equipment is to be used outside of the SCAC staff's working hours, the user must notify the technicians to leave the computer on. Otherwise, image capture will not be possible.
- The SCAC **does not create backups** of data stored on the networkSCAC, and therefore, the service is not responsible for images stored on this drive
- Each user has 2 GB of storage on the networkSCAC
- The user must download and store all generated data on a personal device and then delete it from networkSCAC
- The use of the equipment implies acceptance of these conditions
- The user is the main person responsible for the proper storage of their data and must back up each experiment daily by downloading the files generated from networkSCAC. The disk space on networkSCAC should not be used for long-term data storage, as it has limited capacity.
- If, due to space limitations, the responsible technician needs to delete old files from users, the time required for this action will be charged. Only experiments from the last month will be retained.
- SCAC staff will delete files older than 30 days

WASTE COLLECTION AND TREATMENT

The document **SCAC/IT/0303 SCAC Waste Management (Users)**, which can be found on the SCAC website <https://www.uab.cat/ca/servei-cultius-anticossos-citometria/normativa>, is mandatory reading for SCAC users.

Laboratory Usage Regulations for Cell Culture and Virus Laboratories

Use of the Biological Safety Cabinet

The working conditions, as well as the regulations for the use of the cabinet in the Virus Laboratory, are outlined in the **SCAC/IT/0304 Procedure for Utilization and Control of Laminar Flow and Biological Safety Cabinets (Users)**, which is mandatory reading and can be found in the cell culture laboratories.

While handling viral particles:

- Double gloves
- Lab coat for exclusive use in the virus laboratory
- Face mask
- Protective glasses
- The use of **cutting and/or piercing materials** is prohibited (except when working with Baculovirus or if explicitly authorized by the CBS of the UAB).
- The use of the **vacuum pump** is prohibited (except when working with Baculovirus or if explicitly authorized by the CBS of the UAB). Instead, pipette (if using a micropipette, the tips must have filters) the liquid into a tube/container that can be sealed and then dispose of it along with the contaminated plastic. See **SCAC/IT/0303 Waste Management Procedure (Users)** <https://www.uab.cat/ca/servei-cultius-anticossos-citometria/normativa>

- Non-disposable materials used in the cabinet (supports, waste containers, racks, micropipettes, etc.) must be **decontaminated with Virkon** before being removed from the cabinet

Use of incubators

No additional conditions apply

Use of water bath

No additional conditions apply

Use of the centrifuge

- When centrifuging potentially infectious biological material, closed tubes must be used, and the safety cap should be placed on the *buckets*.
- The accidental breakage of a tube and its spill in the bucket must be immediately reported to the SCAC staff.
- In case of tube breakage or suspected breakage of tubes containing potentially dangerous material during centrifugation in the **Virus Laboratory**, the following measures must be taken:
 5. Transport the buckets to the biosafety cabinet.
 6. Use forceps to recover the plastic fragments into an autoclave bag.
 7. Disinfect the interior of the centrifuge with 3% Virkon and let it act for 10 minutes. Afterwards, remove it and wash all surfaces with water and soap.
 8. Dispose of the autoclave bag with the waste in the approved container for biohazardous waste.

Waste collection and Treatment

The user must read the waste management procedures for the Virus Laboratory in the SCAC/IT/0303 Waste Management SCAC (users) document, which can be found in **SCAC/IT/0303 Waste Management Procedure (Users)**, which can be found in <https://www.uab.cat/ca/servei-cultius-anticossos-citometria/normativa> .