

GUIDELINES AND RULES FOR ACCESS AND USE OF THE SCANNING ELECTRON MICROSCOPY LABORATORY

Article 1 – Lab description and mission

The Scanning Electronic Microscopy laboratory of the IOM Institute is aimed at the microstructural characterisation of inorganic materials for research purposes. Analysis of organic and biological materials can be conducted, after the scientific responsible of the laboratory assesses the compatibility of materials with the instrumentation. The objectives of the research can be both purely scientific and commercial/industrial.

Article 2- Lab management

The management of the laboratory is entrusted to a scientific responsible, appointed by the IOM Director, who will operate in total autonomy for the management of the ordinary administration. The laboratory responsible will manage the funds appropriately allocated for operating costs and coming from the payment of the access fees.

For extraordinary management activities, the laboratory responsible will be supported by a management committee consisting of the Director of the Institute, the laboratory responsible and a third member.

Article 3 – Users and Access

Four types of possible users and related access modes are identified:

- 1) Academic Users with Direct Access – UAD
Employee and associate CNR staff, as well as internship university students, PhD students from the groups linked to that staff, researchers from public and private non-profit scientific institutions associated with the CNR, spin-off researchers from the CNR.
- 2) Academic Users with Indirect Access – UAI
Same category as before, but with the request of CNR Staff for the performance of the experiments.

3) Commercial Users with Direct Access – UCD

Commercial users with direct access within specific commercial activities

4) Commercial Users with Indirect Access – UCI

Commercial services provided through the use of laboratory operators

UAD and UCD (i.e. Direct Access) will be appropriately trained through a standard course of an average duration of 3 days (in sessions of 2/3 hours per day) – with access costs equivalent to indirect access, i.e. with CNR operator – to enable an independent use of the instrumentation.

Once the license has been obtained following hands-on verification with the lab responsible and after acquiring all the standards of behavior for access to the laboratory, the UADs and UCDs will operate in total autonomy within the laboratory. After the training period is over, the laboratory responsible will not be required to provide further assistance.

UADs and UCDs must be covered by appropriate third-party liability and injury policies, which also include damage to third-party property during their use.

The activities of UCI (i.e. Commercial User with Indirect Access) will be carried out by the scientific responsible of the laboratory (or other staff in charge) on behalf of the contractor, who therefore will not have direct access to the structure and will not be able to operate directly on the machines and will be regulated by appropriate trade agreements. The services will be charged on the basis of the hours of work dedicated by the staff.

Commercial and consulting activities (CCC) which will involve a wide-ranging and protracted activity over time will be regulated by specific agreements. These projects may include the involvement of both internal and external staff temporarily placed in the laboratory.

Article 4 – Contributions, rates and payment methods

Access to the laboratory is regulated by the payment of the contributions or rates listed below:

- Academic Users with Direct Access – UAD:
The hourly rate is 40 euros/h. For long-term access, a lump sum contribution of 1000 euros is expected for 50 hours and 2 users (to be enabled)
- Academic Users with Indirect Access – UAI
The hourly rate is 60 euros/h. For long-term access, a lump sum contribution of EUR 1250 is expected for 25 hours.
- Direct Access Commercial Users – UCD
The hourly rate is 80 euros/h. For long-term access, a lump sum contribution of 1500 euros per maximum 25 hours (1 user to be enabled) is expected.
- Indirect Access Commercial Users – UCI
The hourly rate is 130 euros/h. For long-term access, a lump sum contribution of EUR 2000 is expected for up to 20 hours.
- Commercial consulting contracts - CCC: as from specific agreements.

Contributions for Direct Access (i.e. UAD and UCD) will be paid in advance.

Contributions for Indirect Access (i.e. UAI and UCI) as well as for Commercial Services/Projects will be invoiced at the end of the activity, according to the calculation of the work actually done, except possibly as specified in the trade agreements.

Article 5 – Operating rules

The access rules listed in the following apply to all staff working at the laboratory, except for the instrumentation management staff (staff), indicated in the following art.9.

- The use of the instrumentation, indicated in the following art. 8, is subject to the reservation, strictly and strictly individual, on the website facility.iom.cnr.it
- A limit of no more than 6 hours per user is set. In the case of specific emergencies (e.g. beamtimes in progress or optimization of material growth protocols), it is possible to allow an extension of the use of the instrumentation, but reservations beyond the sixth hour must be made in the afternoon;
- Incorrect use of the booking system (e.g. repeated empty bookings, long-term bookings) may imply inhibition of the access
- Access to the laboratory may not take place outside the following times: 8-18 and is prohibited on weekends and holidays
- It is strictly forbidden to allow unauthorized personnel to access the laboratory.

Standard consumables (sample holders, carbon tapes, nitrogen gas for camera venting, silver paste) will normally be supplied to users, limited to what is used in standard analyses.

The Institute will not respond due to any outages due to force majeure and/or independent of its management.

Article 6 – Access organization and management

The access request should be accompanied by a brief description of the scientific objectives and activities envisaged by the project. However, applications will not only be selected on the basis of the projects, but will be accepted until the maximum available number of users is reached, compatibly with the maximum access capacity of the laboratory. However, 30% of the available machine time will be reserved for maintenance and in-house research.

In the event of violations of the rules of use of the facility referred to in art. 5

detected by the laboratory responsible, users may be denied the right of access, without this entails the return of the fees already paid.

Article 7 – Publication and sharing of results

All users are invited to share their data on a voluntary basis in accordance with European guidelines set by the EOSC regarding FAIR data policies.

Users are required to include in the thanks of the publications a reference to the use of the CNR-IOM microscopy facility.

Article 8 – Instrumentation Available

The SEM microscope is equipped with:

- Standard ET Secondary Detector (SE)
- Backscattered electrons detector (AsB)
- InLens detector (INLens)
- STEM detector (STEM)
- Energy Dispersive X-ray Spectroscopy (EDS) detector for chemical-compositional analysis

During training, users will be provided with all the skills necessary for independent use of the SE, AsB, InLens and EDS detectors.

The use of the STEM detector will be defined on the basis of the feasibility assessment by the scientific responsible of the laboratory.

Article 9 – Instrumentation management personnel (staff)

- Regina Ciancio (Scientific Responsible)
- Simone Dal Zilio
- Ezio Cociancich
- Staff of the Electronic Microscopy group