

# **Guidelines for the use of the measuring equipment at the Core Facility *BioSupraMol* provided by the Freie Universität Berlin**

(valid since June 1, 2019)

*BioSupraMol* is a scientific service facility of the Department of Biology, Chemistry, and Pharmacy at the Freie Universität Berlin (FU Berlin). These guidelines meet the requirements of the user rules for core facilities established by the Deutsche Forschungsgemeinschaft (DFG) on November 25, 2011.

## **§ 1 Scope of the guidelines**

These guidelines define the rules for using the services at the FU Berlin provided by the Core Facility *BioSupraMol*. They are valid for the large-scale equipment, use of the control and evaluation computers including software, the Core Facility's laboratories, and for assistance from the service personnel.

Separate cooperation agreements will be made with external research institutions and commercial partners that regulate the use of services provided by the Core Facility *BioSupraMol*.

## **§ 2 Equipment and service of the Core Facility**

A detailed description of the provided large-scale equipment, the range of services at the Core Facility *BioSupraMol*, and the contact persons can be found on the web site of the Core Facility:

<https://www.biosupramol.de>

## **§ 3 Permission of use and device operation**

(1) The range of services offered by the Core Facility *BioSupraMol* is primarily aimed at:

- (a) Scientific staff and students of research groups from the Department of Biology, Chemistry, and Pharmacy (BCP) at the Freie Universität Berlin,

Additionally, the Core Facility *BioSupraMol* is made available to the following users:

- (b) Scientific staff and students of research groups from different departments at the Freie Universität Berlin,
- (c) Scientific staff and students of external research institutions
- (d) Staff of commercial partners.

(2) In case a user's requests cannot be fulfilled because of overbooking, the head of the respective unit will decide on the access to the measuring equipment. The priority for utilization of the equipment is determined by section (1) for the user groups in descending

order from (a) to (d). If the corresponding device is financed by the DFG, it must be used for the research tasks described in the application (purpose of use) for a period of at least five years after commissioning.

(3) Users under this regulation are persons, who have been authorized by the responsible personnel of user groups according to section (1) and in consultation with the heads of the respective measuring units, i.e., members of a research group in the Department BCP of FU Berlin who have been authorized by the corresponding group leader.

(4) After authorization by the persons responsible for user groups according to section (1), permission for use must be obtained from the head of the respective measuring unit. Registration is required prior to obtaining access. Usage is normally time limited.

(5) The operating of the large-scale equipment provided by the Core Facility *BioSupraMol* including the control and evaluation computers is carried out, depending on the instrument, by the service staff of the respective unit or by the user on his or her own. If an autonomous usage is desired and possible, the user must be properly trained beforehand by the staff of the respective unit, especially in regard to the valid occupational safety regulations. This training has to be documented.

(6) In preliminary discussions it will be checked, whether there is sufficient free capacity for the research project, and whether the measuring equipment is expected to yield positive results. Moreover, due to the greater know-how or because of a heavy utilization of instruments and the service staff, it is also possible to perform the project in cooperation (usually with the responsible faculty member). Projects can be turned down for measurements because of inadequacy or lack of capacity but may not be unreasonably rejected.

#### **§ 4 Booking and granting of measurement time**

(1) Booking of measurement times is made via a user tool that is accessible on the web site of the Core Facility.

(2) The measurement times for service measurements are allotted by the service staff of the individual units. Insufficient free capacity or full occupancy of instruments or service staff can delay the course of the measurement. Backlogged samples will be carefully stored and measured as soon as the equipment is free according to the priorities specified in sections (1) and (2) of § 3. Users are requested to coordinate appointments with the service staff for sensitive samples.

(3) In the case of unassisted measurement, the measurement time starts according to the booking of the device. The heads of the measuring units will contact the concerned users, if the instruments are faulty and require postponement and changing of the measurement times. After previous consultation, the heads of the individual measuring units offer guidelines for evaluation and interpretation of data and can give additional information regarding evaluation computers, etc.

(4) Optionally, the individual measuring units may have logbooks which are used to record the required measuring time or any errors that may have occurred. The user must fill these in correctly.

(5) If a user cannot meet the deadline of a booked measuring time, the head of respective measuring unit or the service staff must be informed. A telephone call to the head of measuring unit or the respective staff is sufficient for a short-term cancellation. Cancellations of bookings up till 24 h beforehand will not be charged. Later cancellations are only free of charge, if a replacement can be found. Otherwise, the user will be fully charged.

## **§ 5 Data supply and storage**

(1) Upon completion of the measurement, the measurement data is made available for download on the central BCP drive (for registered FU members) or for external users on a cloud drive or a portable external data storage device.

(2) As data storage space is limited, users are responsible for the security of their data and are requested to transfer their data to their own storage media within one month. After expiration of the period specified in subsection 2, Core Facility *BioSupraMol* is entitled to delete the measurement data. The time limit according to subsection 2 will be communicated to the users. Unprocessed original measurement data measured for or by FU members are an exception: These are archived in accordance with the recommendations of the DFG for "Safeguarding Good Scientific Practice". Data, which have been saved outside the designated storage locations, are not secure and can be deleted at any time.

## **§ 6 Usage costs**

(1) By submitting an application, the users and/or their work group leaders agree to pay for access to the resources of the Core Facility *BioSupraMol* provided by the FU Berlin. According to DFG form 55.04, the charges to the research groups at the Freie Universität Berlin cover the project-specific additional expenditure. Personnel costs for the basic operation, costs for service and maintenance contracts as well as current expenditure for buildings are expressly not included.

(2) The calculated costs depend on the type of analysis and the anticipated expense. The billed amount is based on the required measurement time or a fixed price per sample or measurement. Usually after the end of the quarter, every working group receives a summary of usage times and ensuing costs.

(3) The price list applicable to all work groups at the Freie Universität Berlin, subject to any adjustments, is found in the Appendix.

(4) The costs for external scientific institutions are set in the cooperation agreements prior to the start of project.

(5) The prices charged to external commercial institutions will include all costs and are regulated in separate contracts. Moreover, these institutions will be charged the correspondingly applicable rate of value added tax.

## **§ 7 Obligations of users**

(1) Users may only use the large-scale equipment of the Core Facility *BioSupraMol*, including the control and evaluation computers, after they have been instructed and have learned how to operate them.

(2) The work place must be left in a perfectly tidy condition. There should not be any foreseeable hindrance of the lab work. Furthermore, activities producing infrastructural damage or disturbing others in their scientific activities are to be avoided.

(3) The general safety regulations for work in laboratories apply (BGI 850-0: Safe working in laboratories. Basics and guidelines).

(4) When results, which have been obtained with a notable participation from the Core Facility *BioSupraMol* are published, its contribution should be acknowledged as follows: “*We would like to acknowledge the assistance of the Core Facility BioSupraMol supported by the DFG.*”

(5) If the resources of the Core Facility *BioSupraMol* are used, the DFG's proposals for “Safeguarding Good Scientific Practice” (cf. [https://www.dfg.de/en/research\\_funding/principles\\_dfg\\_funding/good\\_scientific\\_practice.index.html](https://www.dfg.de/en/research_funding/principles_dfg_funding/good_scientific_practice.index.html)) must be followed.

## **§ 8 Rights and obligations of the Core Facility**

(1) The Core Facility *BioSupraMol* is obliged to nominate a contact person to assist users and to grant access to the measured and saved data by a user-specific password.

(2) If the equipment is defective or needs maintenance work, usage of the equipment can be restricted by the head of the measuring unit and the service personnel.

(3) The head of the corresponding measuring unit and the service personnel are authorized to check running measurements or to terminate the measurement at any time in the case of malfunction.

(4) If necessary, the head of measuring unit and the service personal are authorized to look at the users' measured data. The measured data will be kept confidential.

## **§ 9 Liability**

(1) The Core Facility *BioSupraMol* does not ensure that the special requirements of users will be fully met. It also does not guarantee that the resources will run error-free and without any interruption and that there will be no errors in the permanent saving of measured data.

(2) The Core Facility *BioSupraMol* supports the user in the interpretation of measured data, if needed, and within the scope of capacities. The responsibility for interpretation, however, still remains with the users.

Date, Signatures

23.5.15

Rainer Kay

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[Sprecher des Gerätezentrums BioSupraMol]

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**Price list for working groups of the Freie Universität Berlin (as of January 18, 2024)**

**1. Unit SupraMS**

Instrument/Service	estimated cost
FTICRMS	4.00 € / utilization unit
ESI-TOF	4.00 € / utilization unit
ESI-IMS/MS)	4.00 € / utilization unit
EI-Sektorfeldgerät	4.00 € / utilization unit
GC-MS	2.00 € / measurement

For each utilization unit, a period of 15 min for measurement and reset of the measuring function, if measured by the service staff, and of 30 min, if measured by a trained user is billed, respectively. Costs for supplies are included in the base price. In the case of special measurements, the costs of expensive supplies, such as nanospray needles, can be shifted onto the respective users.

**2. Unit BioMS**

Instrument/Service	estimated cost
MALDI, un-assisted	60 € / one half day (4h) 100 € / day (8h)
MALDI, simple sample, assisted	20 € / measurement
MALDI, MS/MS-measurement, assisted	25 € / measurement
MALDI, peptide mass fingerprint, assisted	25 € / measurement
LC-ESI-MS, analysis time (HPLC run) 60-120 min per measurement	25 € / hour

For larger numbers of similar samples, a discount is granted for MALDI and LC-ESI analyses. The prices will depend on the type and complexity of sample and will be quoted individually. For additionally required scientific support (e.g. further bioinformatic analysis of the measurement results) a flat rate of 25 - 50 € per hour can be added.

**3. Unit PharmaMS**

Instrument/Service	estimated cost
LC/SFC-QQQ-MS, LC-QTOF-MS	120 € / day (8h) 560 € / week

For larger numbers of similar samples, a discount is granted. Due to the variations in the measurements the prices for columns and eluents must be quoted individually in agreement with the service staff.

#### 4. Unit NMR

Instrument/Service	estimated cost
elemental analysis, solid	5.00 € / sample
elemental analysis, liquid	7.50 € / sample
elemental analysis, solid, including S	6.00 € / sample
elemental analysis, liquid, including S	9.00 € / sample
extra charge for elemental analysis including F	4.00 € / sample
NMR 400 MHz	1.00 € / hour
NMR 500 MHz	1.00 € / hour
NMR 600 MHz	2.00 € / hour
NMR 700 MHz	3.00 € / hour

#### 5. Unit Electron Microscopy

Instrument/Service	estimated cost
REM Hitachi 8030	25 € / hour
TEM, un-assisted	20 € / hour
TEM, assisted	60 € / hour
cryo-TEM, Tecnai/Talos L120C, un-assisted	25 € / hour
cryo-TEM, Tecnai/Talos L120C, assisted	75 € / hour
cryo-TEM, Talos Arctica, un-assisted	70 € / hour
cryo-TEM, Talos Arctica, assisted	100 € / hour
cryo-TEM, Talos Arctica, Tomographie	100 € / hour
cryo-TEM, Talos Arctica, Tomo (batch operation mode)	60 € / hour
cryo-TEM, Talos Arctica, Titan Krios, EPU,	25 € / hour
cryo-TEM, Titan Krios, Titan Krios, <i>surcharge</i> set-up EPU assisted <sup>1)</sup>	+75 € / hour

1) A flat rate of 6 hours is assumed for the assisted set-up of the EPU measurement. Self-measuring Persons (unassisted) pay the surcharge to the hourly rate according to the actual time spent for the set-up.

## 6. Unit Optical Microscopy

Instrument/Service	estimated cost
CLSM Leica SP8 (1)	10 € / hour
CLSM Leica SP8 (2)	10 € / hour
TIRF Zeiss 200M	10 € / hour
Bruker Vutara 352	10 € / hour
Abberior STED Expert Line	20 € / hour

## 7. Microfluidics

Instrument/Service	estimated cost
Microfluidics system: (incl. microscopy, videocamera, data storage, microinjection pump, tubing, consumables for the system, sample preparation (incl. use of e.g. steril bench, chemical hood, incubator))	20 € / hour 30 € / hour (assisted)
Plastic Mask fabrication: (incl. materials and printing)	200 € / mask 250 € / mask (assisted)
Chip fabrication: (incl. equipment, consumables, chemicals)	30 € / hour 40 € / hour (assisted)

## 8. X-Ray Diffraction

Instrument/Service	estimated cost
Diffractometer/ assisted <sup>1), 2)</sup> hourly rate <sup>3)</sup>	7.00 €
Diffractometer/ un-assisted <sup>4)</sup> hourly rate <sup>3)</sup>	2.50 €

1) Contains the entire process of single crystal X-ray structure analysis: crystal selection, data collection, structure solving incl. refinement, preparation of data for publication (CCSD-No.). This is to be regarded as a scientific contribution.

2) Prices may vary: for problem structures a maximum surcharge of 100% is applied.

3) Usually the measurement times are 4.5 h for a day measurement and 15 h for a night measurement.

4) The entire process of single crystal X-ray structure analysis is performed independently by instructed working group members.



## 9. Unit Surface-Analytics

Instrument/Service	estimated costs
XPS, assisted	80 € / hour
XPS, un-assisted	28 € / hour
ToF-SIMS, assisted	85 € / hour
ToF-SIMS, un-assisted	35 € / hour

## 10. Price adjustment and delivery of invoices

The Core Facility points out that the cost will be regularly evaluated and adjusted as required.

Usually, invoices are issued each quarter and will be sent to the responsible heads of working groups.