**REGULATIONS FOR THE OPERATION OF UHPLC – ESI – MS**
**DEPARTMENT OF CHEMICAL ENGINEERING**

### ****Equipment Specifications:****

The high-resolution and high-accuracy mass spectrometry system is of the type UHPLC-MS/ESI-LTQ-ORBITRAP (ThermoFisherScientific) (<http://lsii-speclab.cheng.auth.gr/drupal/el/infrastructureUpcl>).

### ****Purpose and Objectives of the Unit:****

**Research, Education, and Service Provision:** The unit is used to provide information related to elemental composition, structures of inorganic, organic, and biological molecules, and the qualitative-quantitative composition of complex mixtures.

The unit is engaged in the following fields:

* Identification of synthetic molecules and analysis of natural products.
* Characterization of environmental samples – applications in metabolomics analysis.
* Characterization of biological samples.
* Applications in proteomics and lipidomics analysis.

The UHPLC-ESI-MS instrumental infrastructure is available to internal, interdepartmental, and external university researchers, as well as industrial entities, to support laboratories through analysis services and the development of identification methods for synthetic molecules and natural product analysis.

### ****Organization of the Unit:****

#### ****Scientific Supervisor (SS):****

The SS of LC-MS is Prof. …………… (........@auth.gr, 2310 99-…..)

#### ****Committee – Unit Staff:****

The LC-MS/LTQ-ORBITRAP Unit is managed by a three-member scientific committee, whose members are appointed by the Assembly of the Department of Chemical Engineering.

#### ****Instrument Operators:****

1. Dr. XXX YYY (………@auth.gr, 2310 99-…..)
2. ……………………………

### ****3. Unit Financial Aspects:****

The funding of the unit may come from:

1. The Regular Budget of AUTH, the Public Investment Program of AUTH, and ELKE AUTH.
2. Provision of services to third parties through contracts managed by the Research Committee of AUTH.
3. Research projects carried out at AUTH.
4. User participation with consumables.

### ****4. Code of Conduct:****

The infrastructure must be an open unit and provide services to the entire University Community and third parties, in accordance with the access rules outlined on the equipment registration-use platform. Ethical and research integrity rules must be followed, relevant permits must be obtained where required, intellectual property rights must be clarified, and data confidentiality must be ensured. Additionally, confidentiality agreements may be signed. Instrument use does not entitle operators to publication participation unless there is a substantial contribution and a prior agreement.

### ****Access Requirements to the Unit’s Premises:****

Access to the Unit’s premises is restricted to authorized operators and, under their supervision, individuals requesting sample analysis.

### ****Use of Unit Instrumentation:****

#### ****6.1. Records Maintenance:****

To ensure the proper functioning of the Unit, the following records shall be maintained:

* Scheduling and recording of analyses.
* Operating conditions of the Unit.
* User/operator identity.
* Technical support and scheduled technical inspections.
* Purchased materials – consumables.
* Scientific material (CVs, publications, etc.).

#### ****6.2. Usage Regulations:****

The Unit operates in accordance with the rules of the hosting Department of Chemical Engineering and requires the submission of an analysis request ([https://booking-emde.auth.gr](https://booking-emde.auth.gr/)). Requests are submitted electronically and evaluated for compatibility with the instrumental infrastructure. Factors such as instrument availability, sample nature, researcher safety, and submission priority are considered. The notification period for sample submission does not exceed one week, unless additional sample information is required.

Each research team may request services for a maximum of three weeks per request. Urgent cases (e.g., deliverables) are managed by the Unit’s Coordinating Committee.

For extended or exclusive instrument use, approval from the Coordinating Committee is required. Applications must specify the project’s objectives and are evaluated based on research potential, originality, significance, and compatibility with the instruments. The evaluation process is prompt, and applicants receive decisions within one week.

If research teams reserve instrument time without utilization, the Coordinating Committee issues a written warning. After two warnings, usage suspension may be enforced.

### ****6.3. Sample Handling and Preparation Protocol:****

Each sample submitted for analysis at the UPLC-ESI-MS infrastructure must be accompanied by a properly completed electronic form. Information for accurate spectrum acquisition is available at: <http://lsii-speclab.cheng.auth.gr/drupal/el/infrastructureUpcl>.

### ****6.4. Usage Acknowledgment – Reports – Publications:****

All users of the Unit’s infrastructure must acknowledge the facility in presentations, publications, and theses. Results obtained at the Research Infrastructure of CIRI-AUTH must include the following acknowledgment:

**Acknowledgment:** The authors acknowledge the Center of Interdisciplinary Research and Innovation of Aristotle University of Thessaloniki (CIRI-AUTH), Greece, for access to the Large Research Infrastructure and Instrumentation of the Liquid Chromatography and Mass Spectrometry Laboratory at the Center for Research of the Structure of Matter in the Chemical Engineering Department.

A PDF copy of any publication, conference proceedings, or thesis section including this acknowledgment must be submitted to mslab@cheng.auth.gr, along with supporting documents (cover page, first pages, etc.).

### ****6.5. Charging Policy for Unit Access:****

Given the high operational and maintenance costs of the Unit, services are subject to fees based on sample type, analysis type, and instrument usage time.

**Pricing:**

* **AUTH Faculty Members:** €10 per sample (infusion tests), €20 per sample (LC-MS with predefined chromatographic method), €40 per sample (method development for molecular identification).
* **Research Institutes and Centers:** €20 per sample (infusion tests), €40 per sample (LC-MS with predefined chromatographic method), €60 per sample (method development).
* **Private Individuals, Companies, and Other Entities:** €60 per sample (infusion tests), €120 per sample (LC-MS with predefined chromatographic method), €140 per sample (method development).
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