

**Utilization rules for the 4800*plus* MALDI-TOF/TOF mass spectrometer  
(AB Sciex)**

## 1. Objective

The goal of this document is to describe some of the rules for the utilization of the MALDI-TOF/TOF mass spectrometer in order to guarantee a good utilization and also utilization record system of the equipment.

The rules described in this document are mandatory for the UniMS technicians and for any person that will use the MALDI-TOF/TOF.

## 2. Training

Before using the mass spectrometer equipment independently, the user must be fully trained. The training shall be provided by the UniMS technicians. The users who are not fully trained must request the assistance of the UniMS technicians in order to perform any sort operation on the equipment.

## 3. General rules

- In order to preserve the files organized by the database Oracle, it is strictly forbidden to:
  - o Alter the PC language
  - o Alter the PC date and time
  - o Alter the users
  - o Alter the PC IP address
  - o Alter the name of the PC
  - o Perform windows upgrades
- In order to avoid file corruption in the 4000 Series Explorer, all spotsets and plate names must be different every time using the equipment.
- USB Pen's, external hard drives and other data storage devices must be scanned for viruses (using an up-to-date antivirus software) prior to its use on the Maldi data acquisition PC.
- The spotsets must be purged from the Maldi data acquisition PC after the database search is completed. These spotsets may stay in the Maldi data acquisition PC for a maximum period of 1 month (in order to guarantee sufficient space for data acquisition). If the spotsets are not purged by the user until the maximum period of 1 month, these shall be removed by the UniMS technician in charge of the equipment. Each user is responsible for the backup of its spotsets.
- Each user is responsible for its Maldi plate that is for its maintenance, cleaning, utilization, and safe keeping. If the user does not have a Maldi plate, please get advice from the UniMS technician responsible for the equipment on how to obtain one.
- If the Maldi plate holder falls or hits any hard surface, the holder must be placed a side in order to avoid its utilization and the accident must be immediately reported to the UniMS technician.

- After finishing the Maldi assay, the user must eject its Maldi plate and close the 4000 Series Explorer.

#### 4. Booking the equipment

- Any user that wants to use the Maldi-TOF/TOF must book the equipment, with advance notice, in the available online calendar.

<http://unims.itqb.unl.pt/MALDI-TOF/month.php>

- Select events>add new event
- Fill in the different fields, in order to be easily identifiable who booked the equipment. In the Participants field(s) chose accordingly:
  - Research IBET – If it is from an iBET project
  - Research ITQB – If it is from an ITQB project
  - Mass group – If it is from a research project from the Mass Spectrometry Group
  - External Academic Services – If it is from a mass spectrometry service for an External Academic Sponsor
  - Industry services – If it is from a mass spectrometry service for Industry
- **ALWAYS select** “Public access” and if necessary a UniMS technician.

Multiple Participants can be chose by pressing the CTRL key.

The Maldi-TOF/TOF can only be considered booked after the confirmation from the UniMS technicians and only then the booking becomes visible on the public access calendar.

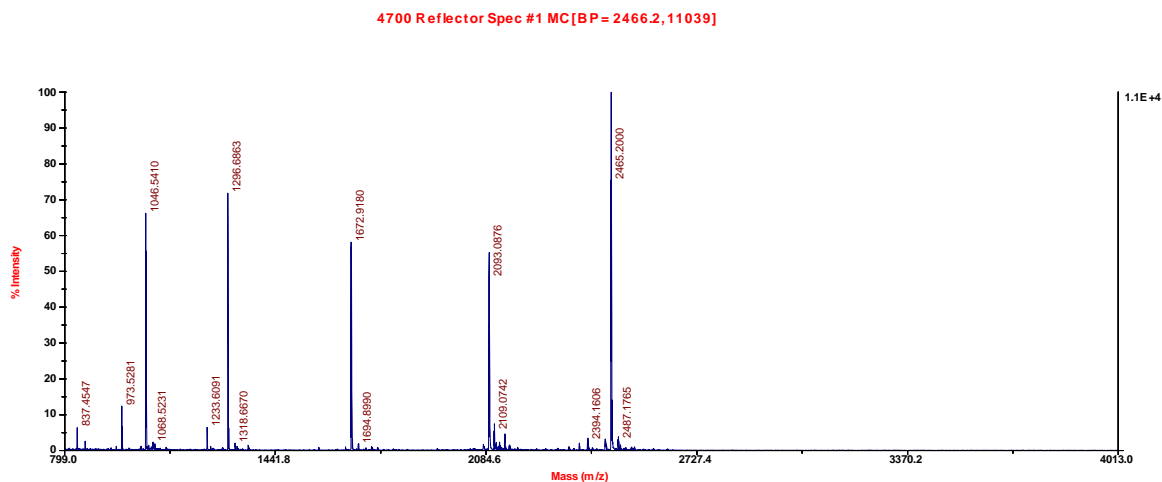
#### 5. Log Book

- The utilization of the Maldi-TOF/TOF must be registered on appendix 1. All fields must be are mandatory.
- In case of being detected any problem or error with the equipment, these must be registered in the log book of the equipment.

#### 6. Equipment verification

- 30 minutes before starting the first maldi assay of the day, the high voltage of the equipment must be switched on so that the equipment stabilizes allowing the maximum mass accuracy.
- The reflectron calibration has always to be performed before a Maldi assay with an appropriate calibrant, namely Calmix 5 (AB Sciex) or Pepmix1 (LaserBio Labs, MS

spectrum below) in order to demonstrate that the equipment is working properly. It must be registered on appendix 1 if the internal calibration passed the specifications.



Example of reflectron MS spectrum of PepMix1 (LaserBio Labs)

