

Seahorse® metabolic analysis Service

Overview

Seahorse analyzers are live-cell metabolic assay platforms that allow to measure oxygen consumption rate (OCR) and extracellular acidification rate (ECAR) in 24/96 wells plates, interrogating key cellular functions such as mitochondrial respiration and glycolysis. They perform compounds addition and mixing, label-free analytical detection, and automatic measurement of OCR and ECAR in real time.

Equipment

- Seahorse XFe24, 24 wells flux analyzer (Seahorse Biosciences)
- Seahorse XF PRO, 96 wells flux analyzer (Agilent technologies)

User manuals are available at the following links [\[see “User support material”\]](#)

Location

Seahorse XFe24 and XF PRO analyzers are located at 2° floor, north side, room GEOTEC 03-081 (ex-meeting room).

Opening hours

Monday to Friday, 24/24h

Instruments cannot be used during the weekend; at the end of your session, please check if you are the last user of the week and, in this case, switch it off.

Service Coordinator

Prof. Diego De Stefani (diego.destefani@unipd.it, 049-8276152)

Staff

Elena Trevisan (seahorse.biomed@unipd.it, 049-8276064)

Guidelines

Booking procedures

All equipment must be reserved before every work session.

Reservations are made through the dedicated page on the DSB Facilities & Services website by selecting the “book now” icon associated with the required instrument.

The calendar is divided in 3.5 hours/session, for single experiments:

Session 1 09:00 – 12:30

Session 2 12:30 – 16:00

Session 3 16:00 – 19:30

Session 4 19:30 – 23:00 (overnight)

If your plans change, reservations may be cancelled up to 24 hours before the start of the reserved time slot.

Use of the instrument and training

Users are expected to perform experiments independently and must be adequately trained to ensure proper use of the instrument.

Video training is available to all users at the followed links [\[see “User support material”\]](#)

For specific technical assistance, please feel free to contact Lorena Maria Ferreira from AHSI (ferreira@ahsi.it).

Only Agilent Technologies consumables (plates and kits) are compatible with XF analyzers; they are not included in the service.

Rules

Before your session:

- The system must be checked in all its parts, must be clean and without any obvious damage; if this is not the case, please contact immediately the staff.

After your session:

- Always remove or transfer your files. Staff will periodically remove the user files without prior notice.
- The default set temperature of measurement is 37°C; if changed to perform specific experiments, it has to be set again at 37°C at the end of the session (see “*temperature control*” below).
- Please check if you are the last user of the week and, in this case, switch the instrument off.

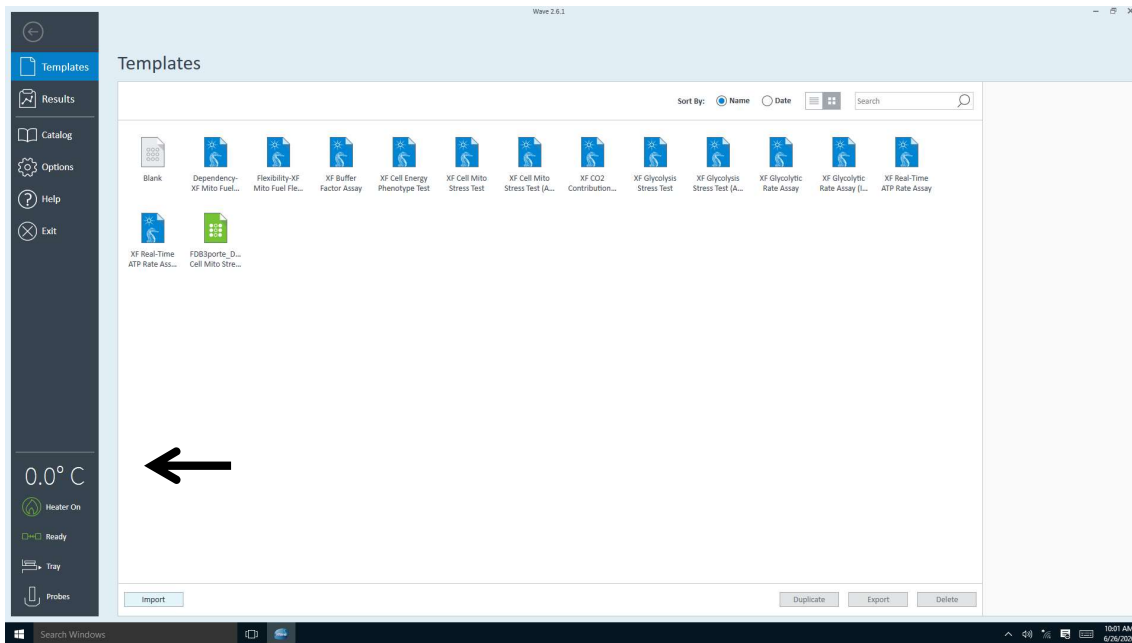
Costs

Updates fees are available on the DSB Facility website.

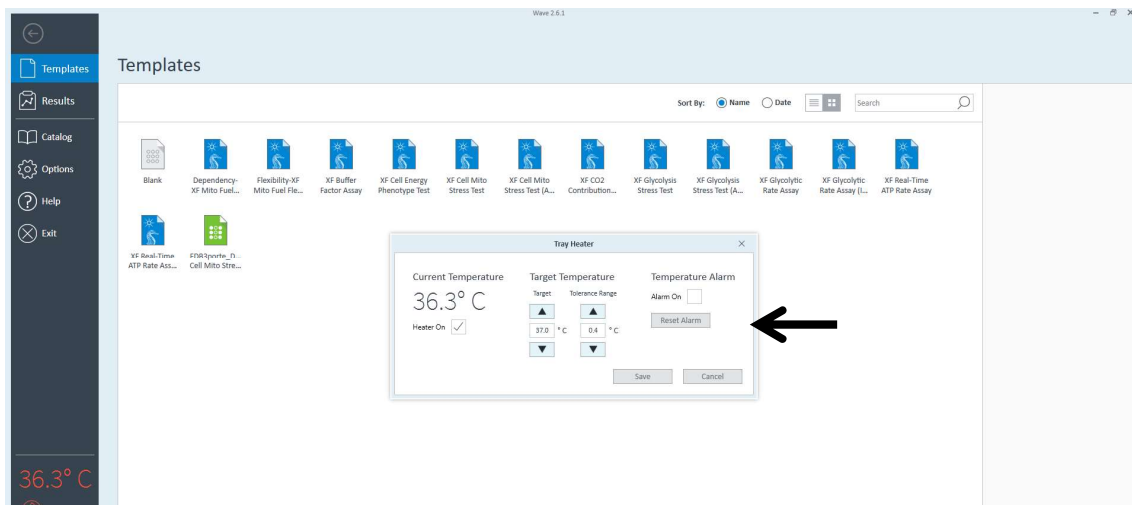
Users will receive biannual reports that summarize all reservations, based on the online booking calendar.

Temperature control

1) Click on the current temperature



2) Set the desired temperature



User support material

Seahorse user manuals

Seahorse XFe24

<https://www.agilent.com/cs/library/usermanuals/public/user-manual-seahorse-xfe-analyzer-operating-manual-5994-6018en-agilent.pdf>

https://www.agilent.com/cs/library/usermanuals/public/S7894-10000_Rev_C_Wave_2_6_User_Guide.pdf

Seahorse XF PRO

<https://www.agilent.com/cs/library/usermanuals/public/user-manual-agilent-seahorse-xf-pro-analyzer-5994-6017en-agilent.pdf>

<https://www.agilent.com/cs/library/usermanuals/public/ug-seahorse-wavepro-xf-pro-controller-software-5994-4582en-agilent.pdf>

Seahorse video training

Part 1: Agilent Seahorse XF Training Webinar: Gather Assay Materials | Agilent

<https://www.agilent.com/en/video/cell-analysis-training-gather-xf-assay-materials>

Part 2: Agilent Seahorse XF Training Webinar: Prepare for your XF assay | Agilent

<https://www.agilent.com/en/video/cell-analysis-training-prepare-xf-assays>

Part 3: Cell Analysis Training - Set Up to Run XF Assays | Agilent

<https://www.agilent.com/en/video/cell-analysis-training-set-up-to-run-xf-assays>

General protocol and workflows

How to run an assay | Agilent

<https://www.agilent.com/en/product/cell-analysis/how-to-run-an-assay>

Seahorse consumables list

Seahorse XFe24

https://www.agilent.com/cs/library/sales/public/5991-8587EN_XFe24_Consumables_Ordering_Guide.pdf

Seahorse XF PRO

<https://www.agilent.com/cs/library/sales/public/ordering-guide-agilent-seahorse-xf-pro-analyzer-consumables-cell-analysis-5994-4181-agilent.pdf>