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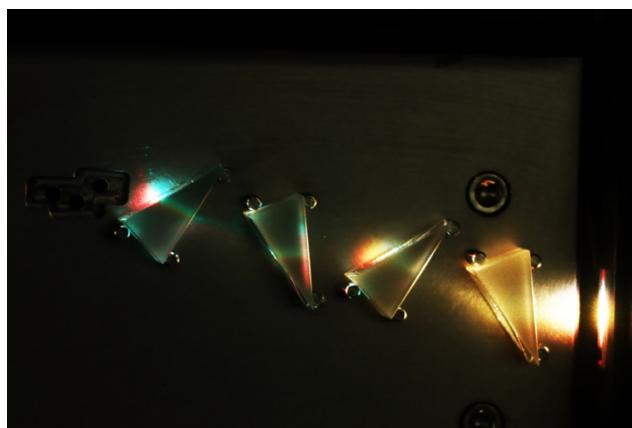E INOVAÇÃO
EM SAÚDE**
UNIVERSIDADE
DO PORTO

Translational Cytometry (TraCy) Scientific Platform

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1. Purpose

The purpose of this document is to define the methods of correct and safe usage of the equipment in the Translational Cytometry (TraCy) Scientific Platform. The listed procedures are meant to ensure the safety of all users, guarantee the correct usage of equipment and prevent cross contamination between different samples or users. All SOPs are fully available in the facility and online.

2. Quality Control Procrdure

All equipment, Cell anlyzers and Sorters, quality control are monetarized by TraCy staff. TraCy members are responsible for running QC beads and check if they pass or not. In case of QC failure, TraCy staff is responsible to do troubleshooting. All equipment has annual maintenance contracts that require an engineer to visit at least every 6 months for regular maintenance or to reply to any request that we may have in less than 48 hours.

3. Detailed discrimination of user's procedure based on best practices.

3.1. Cell Analyzers

- Accuri C6 Plus + CSampler
- FACS CANTOII
- LSR Fortessa
- Cytek Aurora

The following rules apply to all cell analyzers. Exceptional situations requiring deviating from these rules, must be dealt with and by the TraCy staff.

3.1.1. Training

- Usage of any Cell Analyzer at the platform is only allowed after personal training.
- Training is specific to each cytometer, and will only provide the user access to that cytometer, not to the others.
- Training is divided in two parts: i) initial training provided by TraCy staff members; ii) 10h of supervised training provided by TraCy staff or an approved senior user. Once iii) is completed, the training supervisor must provide a declaration indicating that the new member is able to start using the equipment independently.

3.1.2. Booking

- Access to the booking scheduler (at the i3S portal) is granted only to independent users.
- The users can only book the equipment up to 30 days in advance.
- **Bookings are valid for 30 minutes from the start of the booking**. After that time, anyone can start their acquisition without taking into account the intended booking.
- **The after-hours** usage of the equipment is the user´s responsibility.

3.1.3. Sample Preparation

- <u>All samples must be filtered before acquisition.</u>

3.1.4. Care of the Equipment

The cytometers are sensitive and expensive apparatus. Users must comply with all the rules, most importantly:
- Never leave empty tubes being aspirated.
- Make sure to change the FACS flow (Sheath) or empty the waste tank, always following the rules written in the wet cart.

3.1.5. Reporting

- Users must fill the tables left on the desk near to the cytometer; write down if everything was ok or if any problem occurs (software needs restarting, clogging, laser warnings…) to help establish the instrument history and solve problems.
- Any problem should be reported to the following users and an e-mail sent to the TraCy staff members (catarina.meireles@i3s.up.pt or/and emilia.cardoso@i3s.up.pt).

3.1.6. Cancellation policy

- Always respect the other users. Do not book and not show up. If the user does not show up, costs will be applied.
- Users may cancel reservations 24h in advance and always as soon as possible.
- If a booking is cancelled at the last moment or delayed by more than 1h, the user must send an email to all users informing that the cytometer is available.

Our aim is to maximize the best usage of our equipment while maintaining a certain degree of operational flexibility. So, please collaborate with us to reach this goal.

3.2. Cell Sorters

- FACS ARIA II
- FACS ARIA Fusion

<u>The sorters can only be operated by TraCy Staff.</u>

3.2.1. Booking

- Users should book their reservation on the equipment scheduler at the i3S portal.
- The reservation is valid only after confirmation from the TraCy staff.
- The cell sorters can be booked **up to 30 days in advance**, and are available for use every weekday between 10am and 5pm.
- Users must book for themselves and not for others.
- When booking, **include time for new settings, purity checks and cleaning** (minimum 30 min).
- If booking a **last-minute reservation for sorting**, the users must contact the platform members. The sorters need time to be ready to start sorting.
- If a booking is swapped with a colleague, the booking system must be updated (or the TraCy staff contacted directly by e-mail (catarina.meireles@i3s.up.pt or/and emilia.cardoso@i3s.up.pt) or phone: 6015).
- If booking a sorter outside the regular working hours or beyond the 30-days online booking window, the users must contact the TraCy staff beforehand to check for staff availability.
- If later for a sort, users must inform the platform as soon as possible. If the sorter is already switched on when a user notifies the platform of the delay, users will be charged according to the booking start time.

3.2.2. Sample Preparation

- <u>All samples must be in 5mL FACS tubes and FILTERED.</u>

3.2.3. Cancellation of Cell Sorters

- Sorter cancellations can be made **up to 24 hours in advance.** For less than 24 hours cancellations, TraCy members must be notified as early as possible. This can result in a penalty depending on the reason and/or how close is with the starting time of the sorting.

- **Failure to show up for a reservation** will be charged at the running cost of the system for the duration of the booked slot.

4. Computer Usage and Data Storage

- **Users must transfer the acquired data to a safe storage and immediately empty the local folder, and must do so within the booked time.** We allow users to keep their .fcs files on the acquisition software for 15 days. However, they may be deleted without previous warning if space is needed.
- Users are responsible for backup their own data.

5. Acknowlegments to TraCy in Publications

- When data acquired or analyzed on the Flow cytometry equipment, offline stations, or with the help of our flow cytometry specialists are published, as well as the grant providers for this platform must be acknowledged using the following text: "The authors acknowledge the support of the i3S or "The authors acknowledge the support of the i3S Translational Cytometry (TraCy) Scientific Platform".
- To facilitate grant applications, please send us the reference of your latest publications.