

CRAFT Tissue Foundry: Orientation

Below is an overview of things discussed for the mandatory in-person orientation before new users gain entry to the CRAFT Tissue Foundry (MC403 and MC405). Everything in this orientation can be found in the Health and Safety page on the CRAFT website:

<https://craftmicrofluidics.ca/facilities/health-and-safety/>

Pre-Entry

- Lab coats must be worn inside MC403 and MC405.
- Use daily lockers to store personal items.
 - If electronics are needed (cellphone/laptop), disinfect them before leaving the lab to prevent bringing RG2 biologicals with you.
- Users transferring RG2 organisms must use sealable containers and have TDG training.
- Dress-code: all exposed skin must be covered (ie. no skirts/shorts, no sandals).
- We encourage a scent-free environment as some users have allergic reactions to the perfumes / colognes.
- For biosecurity, do not share card access with others.
- No lab gloves on doors.
- No food or drinks.
- No earbuds – can inhibit users from hearing emergency alarms.
- Tie back long hair.
- Hands must be washed before leaving - close faucet handles and open the exit door with paper towel.
- Instruments with interlocks must be booked on LMACs to guarantee it's use.
- User meetings are mandatory for news regarding facility updates, and a chance to ask questions or make suggestions.
- Data on instruments must be saved to USB external drives (or OneDrive), then deleted from the instrument storage drive.

Entry

- Locations of the following items will be indicated: eyewash station, face shields, first aid kit, fire extinguisher, emergency contact info, and spill kit.

- Waste management:
 - Bins in the hallway are for clean items only.
 - Green bins: for **chemical powders/solids**, but also for glassware containing **chemicals**.
 - Yellow bins: for **biological solid waste** only. Media or waste bottles should be empty prior to disposal.
 - Yellow sharps container: for sharps or glassware containing **biologicals** (ie. microscope slides).
 - **Liquid biohazardous waste**: must be added with stock bleach until 1-3% concentration is achieved. Let the bleach-waste mixture stand for 30 min (or more) before disposal down the sink with copious amounts of water.
 - Because the Tissue Foundry purchases 6% bleach stock. Add ~25 mL 6% stock to ~75 mL waste (1:3 ratio) for a total volume of 100 mL.
 - **Liquid chemical waste**: should be disposed in the user's own lab where a chemical waste system is already in place. If not, liquid waste must be stored in a sealed container with a red chemical label found under the sink.
- Work surfaces need to be disinfected with RTU or 70% ethanol with a minimum contact time of 3-5 min.
- Items relating to biological work must be labelled with the following details before storage (fridge/freezer/incubator):
 - Name or initials
 - PI name, or company/department (ie. NASA)
 - Description
 - Dates (prepared, expiry, etc)
- Workplace labels found in the **Labels binder** (indicated during orientation) are required for all chemicals.
- A tour of the tissue foundry space is provided, showing: various instruments, gloves, disinfectant bottles (RTU/Ethanol), safety signs, shared space and supplies for users:
 - Some supplies are available at CRAFT, but we **strongly encourage** users to bring their own items to avoid cross-contamination.
- The biosafety manual, SOPs, SWPs, waste management practices, and many safety related documents can be found on the website.
- The emergency procedure for the incubator alarm is explained during the orientation.

- **Freezers ($\leq -80^{\circ}\text{C}$):** Cryo-gloves and face shield must be worn to prevent injuries to hands, and to the eyes (cryovials may explode due to sudden change in temperature).
- **Centrifuge:**
 - Spills need to be cleaned up with water and absorbing material, then disinfected.
 - Ensure all 4 black metal rotors are in the centrifuge.
 - Ensure samples are balanced. Use weight bottles in the drawer, or prepare custom weights from the analytical balance.
 - Close the centrifuge lid when not in use to prevent dust from accumulating at the base of the rotor.
- **Autoclave:**
 - **Dry (fast-exhaust)** mode is for tips, stainless tools.
 - **Wet (slow exhaust)** mode is generally for water or media. Ensure lids are loose to prevent pressure built-up that may result in explosion or cracking of the bottles.
 - Apply autoclave tape to items, the strip will turn black if autoclaving was successful. You may also write on it as a label.
- **Sharps:**
 - Razor blades and needles go into the yellow sharps container.
 - Needles: never cap using two hands.
 - Apply the **One Hand Rule**: place the cap onto a flat surface, and then insert the needle into the cap.
 - If bleeding from a cut, apply pressure, wash with soap and water. Seek help if necessary and fill out an incident report with **Dan Voicu**.
 - Never pick up broken glassware or sharp objects with hands. Use a dustpan/tweezers (found in spill kits by the lab sink).
- **Biosafety Cabinets (BSC) and Incubators:**
 - This is a separate session where new users go through the SOP together with a CRAFT staff member.