CNSI Innovation Workshop and Microfluidics Lab Laboratory Ovens Operating Procedures

Last updated 1/5/23 Haley

Location

- Thermoline / Lindberg Blue M Oven (Room 2448)
- Yamoto DKN400 Convection Oven (Room 3430)
- Lindberg Blue M Convection Oven (Room 3430)

Overview

- This training provides an introduction to using and operating the laboratory ovens including:
  - PPE
  - Operational Safety Checks
  - Operating Instructions
  - Oven Specifications

PPE

The general lab requirement to wear safety glasses, long pants and closed toe shoes applies.

Additionally, thermally insulating gloves must be work when working with hot items. They can usually be found on the bench next to the ovens

Operational Safety Checks

1. Familiarize yourself with the oven operation and controls.
2. No food may be placed in laboratory ovens.
3. Never heat a sealed container.
4. Never heat flammable or combustible materials in the oven. A fire or explosion may result.
5. Do not use the ovens to heat any material that might pose a hazard because of acute or chronic toxicity unless an SOP has been prepared together with laboratory staff to safely vent the oven.
6. Do not operate the oven if it is damaged, or is not working properly. Please place a note on the oven to alert other users, and notify laboratory staff of the problem.
7. Use tongs or insulating gloves to handle hot items, and be aware of other people nearby when placing or removing items from the oven.
8. **Double containment is required for heating containers of liquid to prevent leaked material from contaminating the oven. This is especially true when heating PDMS molds.**

Operating Instructions

1. Enter the set point temperature (see instructions for the different controllers below)
2. Place your items in the oven. **Remember to place liquid materials on a baking sheet or other secondary container.**
3. Set the countdown timer for the length of your run. If the timer reads zero time remaining another user who needs to use the oven may remove your items.
4. Remove your items from the oven and close the door.
5. The ovens in room 3430 are usually left powered on. The oven in 2448 is usually turned off after each run, but may be left on if repeated runs are planned.

Max Temperatures

- Yamoto DKN400: 260C
- Lindberg Blue M Convection Oven: 300C
- Thermoline / Lindberg Blue M Oven:

Changing the oven set point

Blue M Ovens:

- Use the ↑↓ to adjust the temperature
- Press the **SET/ENT** button

Yamoto Oven: Operating range

- Press **FIXED TEMP**
- Use the ↑↓ to adjust the temperature
- Press the **SET/ENT** button

Setting the countdown timers

Ovens in room 3430

- Press **1**
- Enter the run time (**HMS buttons**)
- Press **1** to start the countdown
- Press and hold **1** to reset

Oven in 2448

- Make sure that the slide switch on the right is on countdown
- Enter the run time (HMS Buttons)
- Press Start/Stop

References:

- Yamoto DKN400 Convection Oven Manual
- Lindberg Blue M Convection Oven Manual

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