Torrey Pines Programmable Hot Plate HP61

Hot Plates

Tool Type: Programmable Hot Plate
Location: Microfluidics Lab under Convection Ovens
Description: Programmable hotplate for automated heating recipes
Manufacturer: Torrey Pines

About

A hot plate is a portable stand-alone heating element. Most hot plates only offer a simple manual temperature control. However, this hot plate is programmable with up to 10 steps. Each step is composed of a temperature ramp speed, a final temperature, and a duration. The ability to set the ramp speed is particularly useful for avoiding thermal shock (heating or cooling too quickly). This model is equipped with an aluminum top for a high heat transfer rate.

Safety Concerns

High heat danger! To prevent damage to the tool, your sample, and others, **do not leave a hot plate unattended** in a public space where someone could get easily burned. If you would like to use this hotplate for long unattended recipes, please move the hotplate into one of the fume hoods and leave a note while your recipe runs. The note should include your name, contact info, and expected completion time.

Fire and explosion danger! **Heating volatile flammables/combustibles is not approved** in the Innovation Workshop or Microfluidics Lab.

Operating Procedures

General SOP for Hot Plate Operation

Before using your hotplate, ensure that you have adequate space and that there are no solvents/flammables nearby. Also ensure that your sample will fit on the hot plate heating surface.

If you are working with a sample that could contaminate the hot plate (PDMS, photoresist, etc.), please cover the heating surface with aluminum foil to keep it clean.

For Heating Samples

1) Turn the hot plate on and set the desired temperature program. (# of steps, temperature, ramp, and duration for each step.) Place your sample on the center of the heating surface, where the temperature is most accurate.

2) Allow your sample to heat for the desired time.

3) If your sample must be heated for several hours and you cannot be present, please contact the lab staff in advance to ensure a safe workspace.

4) When you are finished, turn off the hotplate and remove your sample. Ensure that the heating surface is clean. If dirty, allow the hotplate to cool and clean the heating surface with a non-abrasive cleaner.

5) If previously stored, return the hotplate to its storage location.

Detailed Specifications

Hot plate area: 12“ x 12” (30.5 x 30.5 cm)
Max Steps: 10, each with temp, ramp, and duration
Max Temp: 400 C
Max Power: 1400 W

Reference Documentation

Manual

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