Neuroscience Program Microtome

This is the home page for the Neuroscience Program’s Sliding Microtome, housed in the Van Hooser Lab (Bassine 327).

For safety’s sake, it is important to first be trained by someone who knows how to use it.

The Leica SM2010R manual is online here.

The manual for the freezing stage is online here.

1. General Use

The microtome is used for histology - slicing frozen brain tissue for later staining and imaging.

The microtome was provided by the Neuroscience Program training grant and is therefore a program resource for all neuroscience labs, maintained by VH Lab, room 327. Please refer to the manual to familiarize yourself with the piece of equipment and refer back to if you have any questions.

First, if you:

- haven’t signed up for the microtome Google calendar
- aren’t on the mailing list
- or haven’t been trained

Then you absolutely should not be using the microtome! Seriously, I promise that you would much rather postpone your experiment now than be responsible for the inevitable (and expensive) damage later. This is not something you can teach yourself!

If you are unsure if you are a registered user, look for your name on the registered user link here. Otherwise, please contact Nora in the VH Lab (at nmarie@brandeis.edu) to start the process.

2. Users Responsibilities

As a responsible user of the microtome, you will first need to check the calendar and book out the time you plan on using the microtome. (If you do not know about or have access to this calendar, STOP and go back to the top of this page) If you are not at the microtome 30 minutes into your scheduled appointment, you forfeit you spot and someone else may use the microtome.

If you’re going to walk away from a brain, there is a little “slicing in progress” sign that you can put out to let people know you’re coming back.

You must properly clean the microtome and the slicing stage after each use and return all materials back to their original locations so others may use them after you.

Each lab has their own, labeled bottle of OCT to use at the machine to prep the tissue for slicing. These are the Tissue-Tek/OCT rules:

- If there is an open bottle of Tissue-Tek above the microtome, use it.

- If you finish a bottle of Tissue-Tek, go get a new one from YOUR OWN LAB’S stock.

- If you take the last bottle of your own lab's stock, go tell YOUR OWN LAB to order more.

(That’s currently Nora/order page for Van Hooser).

- When new bottles come in, LABEL THEM.

You will need dry ice to use the microtome. Where would I get dry ice you may ask; Rosensteil 2nd floor. Bring a bucket to carry the ice back in. Weigh out what you want, then write down how much you took, your name, and the lab name.

We have a mallet and fabric bag to smash dry ice if needed. Fun Fact! The mallet is named after Thor’s hammer. We have fabric bags in the microtome area. They’re drawstring and everything. We also have an alcohol sprayer, KimWipes, and a drawer organizer containing brushes for moving slices, and pencils for marking slides. It’s almost as if we planned it that way!

- Point people
- calendar
- Shared Facilities Mailing List

3. Example Protocols

Here are some protocols and recipes we have found most successful in our experiences. Take a look around and see if any material pertains to your project(s); if you have any questions, updates or suggestions for us, please let us know!

Also, if you are working on anything interesting and want to share, we are more than excited to see your ideas.