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**Slime Mold Maze Propagation Protocol**

**Rating:**

**Yellow** (no supervision required after training)

[Aseptic technique](https://docs.google.com/document/d/1qZs2GS0wH85JVMnXy2t4CrEO7a2GxikeEwcOgO6lw5A/edit?usp=sharing) training required.

### **Introduction:**

This protocol will guide you through the process of propagating slime molds from an existing culture into a maze. This will allow for the transfer of slime molds into a maze for imaging or other purposes.

Estimate time: 30 minutes

### **Safety Information:**

The lab has little to no safety issues. Just use common sense and refrain from cutting yourself. Call 911 if there is an emergency or reference our [list of emergency contacts](#) [link pending]

### **Technical Requirements:**

Proper aseptic technique is required for this lab. For more information please reference [this document.](https://docs.google.com/document/d/1qZs2GS0wH85JVMnXy2t4CrEO7a2GxikeEwcOgO6lw5A/edit?usp=sharing)

### **Materials:**

* BSC fan hood (or other sterile environment)
* Spray bottle of 70% ethanol
* Latex or Nitrile Gloves
* Scalpel
* Tweezers
* Petri dish of established slime mold (in plasmodium state)
* Mazes with media. For guidance see [here](https://docs.google.com/document/d/1kjd5p907Fo31G0ssqClZn8PbArZGlZwG8dImnbpdbq4/edit#heading=h.gfpcmjyrwpim).
* Oats
* Parafilm

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### **Procedure:**

1. Turn on the fan and light for the biological safety cabinet (BSC). The rest of this procedure is done inside the BSC and assumes that a sterile environment is maintained. Ensure that all items going in and out of the BSC have been sterilized with 70% ethanol, gloves are worn, and a sterile environment is maintained.
2. In the maze, take a sterilized pair of tweezers and gently press oats into the media in the desired location. A typical maze uses 1 oat in the start of the maze and 2-3 oats at the end.
3. Open the existing petri dish of established slime mold that will be going into the maze. Using the scalpel, cut out 1cm squared of media that is at least 75% covered by slime mold veins. This will be the colony that will be going in the maze.
4. Place the square of media covered with slime mold on the oat at the start of the maze. The designated oat may vary depending on the experiment but unless specified otherwise, the oat at the start of the maze is the one you want.
5. Place lids back on plates and seal with parafilm.

**Storage, Disposal and Clean up:**

Store mazes with slime mold in a dark location (usually in a cabinet drawer). The petri dishes with the existing slime mold can be discarded in the trash or placed stored in a dark location for future use.

If you would like to image the mazes and track the progress of slime mold growth, please reference this guide on imaging: [Scanning Imaging Guide](https://docs.google.com/document/d/1U-_w97qfWhMz4LauB8e7hLh7zKLPtgSoX2DuWeJwAGU/edit#)