SUCCESS ACADEMY EDUCATION INSTITUTE

Yeast Culture Instructions

Life Science (Lower Middle)
Unit 3

Yeast Culture Instructions

How to Sterilize Glassware: Microwave Protocol:

The goal of sterilization is to remove all potential contaminants (bacteria, fungi, yeast, etc.) prior to the use of the labware in experiments. This ensures that when you culture an organism, you are culturing the organism you want. This is an important safety step because if glassware is not properly sterilized, it can provide an ideal environment for dangerous, pathogenic organisms to flourish in place of the safer organisms you are attempting to culture.

Place glassware inside the microwave uncovered.

Microwave for 60 seconds to 5 minutes, depending on the power of the microwave and length of time cultures will be grown for.

- *If the cultures will grow for several days, microwave times should be closer to 5 minutes. For shorter-term cultures, microwave times can be closer to 60 seconds, so long as your microwave is sufficiently powerful.*
- Any microwave-safe tools that will be used with the glassware should also be microwaved.

As soon as the glassware finishes microwaving (while the glassware is still very hot), cover any openings (such as to beakers and flasks) with aluminum foil.

Microwaved tools should also be sealed in containers (which have also been microwaved) to keep them from the open air until they are ready to be used.

Alternatively, you can also sterilize glassware at the same time as microwave-unsafe materials using the Boiling Protocol.

How to Sterilize Lab Materials: Boiling (Microwave-Unsafe) Protocol:

- Place lab materials to be sterilized in a large pot of water.
- Bring water to a boil; continue to boil for 10 minutes.
- Carefully remove lab materials and set to dry, minimizing air exposure.
  - *Set beakers upside-down on clean paper towels.*
  - *Cover other materials loosely with tin foil.*
- Store in a sterilized, sealed container.
  - At minimum, cover all beaker and flask openings with foil while still hot.

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How to Prepare Yeast Medium:

1. Follow directions on “Yeast-Extract Dextrose Medium (YED), for Preparing 2 L” from Carolina. Instead of “autoclave,” use microwave and heat for 5 minutes.

2. Let the media cool according to instructions.

3. Pour media into plates so that they are filled ½-¾ to the top.

4. Cover plates and let solidify overnight.

How to Create Yeast Culture:

1. Dissolve 1 gram of Baker’s Yeast into 50 mL of warm water.

2. Use a Q-tip and dip into Baker’s Yeast.

3. Gently streak premade agar plate in a zigzag formation with Q-tip.

4. Rotate plate 90° and with new Q-tip, start from bottom of previous streak and create a new zig-zag (this will help to dilute and isolate colonies when they form).

5. Repeat step 5 once more, your plate should look like the picture below:

Image Source: Discontinuous Streaking Method (addgene.org, 2017)

6. Cover plate immediately and store in a warm area for 2-3 days as colonies form (near heater or under light source).