ScienceBridge Tech Site Job Description

Title: **Autoclaving Dry Materials Job Description**		
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Scope	For use by biotechnology students at Mira Mesa High School when autoclaving dry materials for general lab use.
Objective	This SOP sets the procedural specifications for autoclaving dry materials to sterilize them, eliminating any microorganisms or contaminants that may be present that could compromise the integrity of the materials or affect the results in general lab use.
Required Skills and Training	• Autoclave Training
When	Whenever dry materials are ready to be autoclaved.
Supplemental Aids	Tracking Sheets: • Batch Production Sheet SOPs: • Racking Micropipette Tip Boxes SOP Videos: • Autoclaving Set Up Training Video • How to Set Up Autoclave Settings for Dry Materials
Safety Training	• Ensure Ms. Yoneda checks autoclave at important steps • **Do not** open the autoclave if temperature is hot or pressure gauge is over 0. The sudden release of pressure will make the autoclave explode
Workflow Protocol	**Overview: Complete the following for autoclaving dry materials. Some jobs may require repetition of specific steps and/or not every step may be needed. This will require an initial plan that is signed off by the teacher and a weekly check-in to adjust for changes and problems that arise.** • This job description assumes all dry materials have already been prepared for autoclaving o Ex: Stocked micropipette tip boxes, glassware clean and prepped • All materials mentioned (except final locations of sterilized dry materials) and all work is done/located backroom 224A **Step 1: Put Autoclave Tape on All Dry Materials** 1. Get prepared dry materials a. They are stored in the Ready to be Autoclaved Cabinet 2. Get autoclave tape (this is **not** normal tape)

a. Tape is stored on the shelf next to the fridge
3. Cut tape so only 2 marks are seen per piece, to not waste it
4. Place one piece on each material to be autoclaved.

Step 2: Put Dry Materials in Autoclave Pots

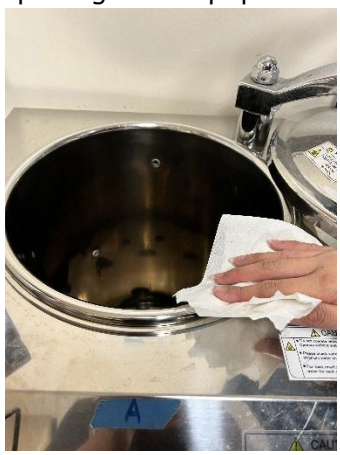
1. Get autoclave pots with vents from the shelf
2. Ensure vents at bottom of pots are open
    a. Use the vent slider to open the vents if not

3. Fit as many materials as possible in 2 autoclave pots
    a. Do not overfill pots
4. Close the lid and lock clips entirely

Step 3: Set Up and Start Autoclave

1. Open the autoclave, check the water level at the bottom. The water level needs to be below the plate but above the square notch
    a. Use the plastic jug labeled "Autoclave" (on the shelf) to fill with dH20 if needed

2. Put the 2 full autoclave pots into the autoclave
3. Open the handle to the water storage in the front of the autoclave. Remove the water storage. The water should be at the fill line. If not, dump the water in the sink and/or fill the storage with dH20 to the fill line. Put the water storage back into the autoclave

	4. Check that the small plastic cup on the right side of autoclave is empty. Empty if not **5. Leave the autoclave open. Ask Ms. Yoneda to check if autoclave is set up right** 6. Wipe the bottom rim of the lid *and* the rim of the autoclave's opening with a paper towel wet with dH20  7. Close autoclave tightly; turn the wheel all the way to the right 8. Turn on autoclave with black lever on the left 9. Set settings to sterilize and dry mode, 121 degrees, and 20 minutes a. Do **NOT** start the autoclave b. Watch the video embedded in Supplemental Aids above for guidance **10. Ask Ms. Yoneda to check, then start if approved** **Step 4: Empty Autoclave** 1. Check that the pressure gauge is 0 and temperature is room temperature. If true, open the autoclave **after** checking with Ms. Yoneda. a. If not, the autoclave is not done. It takes a few hours to finish. Check again the next day **2. QC: Check that the autoclave tape has burned on each item.** 3. Remove autoclave pots. Place dry materials into respective storage location a. Ex: glassware in glassware cabinets, micropipette tip boxes in Full Pipet Tip Boxes cabinet 4. Place autoclave pots back onto shelf in bag.
Documentation	**Batch Production Record:** 1. When setting up the autoclave, fill out name of SOP as "Autoclaving Dry Materials" 2. Fill out Batch # as "ADM [date] [letter]". The letter indicates how many batches have been made, i.e. if it is the first batch the letter would be "A". This counts across class periods 3. How to fill out "Quantity Assigned to Make" section: a. Total Packages: Two autoclave buckets b. Quantity: Number of micropipette boxes in the buckets

	c. Total Quantity: Same number as "Quantity" 4. How to fill out "Consumable Materials Used" section: a. Include tape and dH2O if used 5. How to fill out "Materials Need Replenishment" section: a. If tape needs to be replenished, write down "**autoclave tape**" and the number of rolls of tape. Make sure you specify autoclave tape, it is different than lab tape b. If dH2O needs to be refilled, do **not** write it down, refill it yourself 6. How to fill out "Actions Performed" section: a. Fill out the Job Description steps completed with descriptions asked b. Make sure to check if or if not complete by the end of the period 7. Fill out the quantity completed section with the amount of materials autoclaved. When they pass QC in the empty autoclave step subtract from "running total" as you empty each bucket. **Communication Log:** 1. Enter your name, date, period 2. Enter "MTBR", the date, and batch number letter for abbreviation box 3. The Job Duty full name is "Micropipette Tip Box Restock" 4. Add description of what you did with the autoclave (temperature, pressure, etc.). Fill out the communications log with this Job Duty title for both filling and emptying the autoclave for micropipette tips 5. State "N/A" for tracking sheet if autoclaving dry materials such as micropipette tips 6. Enter what the next step will be after what you completed 7. Fill out "N/A" for "Total Quantity Left" as autoclaving dry materials is constant and not for a one-time SOP 8. List problems with the autoclave or documentation 9. List all other Lab Managers that assisted with autoclaving dry materials **Tracking Sheet Information:** • The tracking sheet for Autoclaving Dry Materials (micropipette tips specific) is the Batch Production Sheet you fill out per each autoclave. This should be the first page of your binder until fully signed off.
Document Control	Store the **Batch Production Sheets** for every autoclave in the Lab Managers green binder. These sheets are the tracking sheet for autoclaving dry materials and should be archived in the folder to reference.
Quality Control	**Fails QC:** Ms. Yoneda does Quality Control for Autoclaving, she will check if Lab Managers correctly set up the autoclave. A batch will fail QC if it is not set up correctly; Ms. Yoneda will state what needs to be fixed. Problems that need to be fixed include not taping micropipette boxes, incorrect volume of dH20, and incorrect setting choices. These problems

	can be fixed by following the job description correctly to properly set up the autoclave.
Tech Site Kit: *Group*	Dry autoclaved materials are for general lab use.