

**SOP: SP057.3**

**Modified 4/27/21 by MCL**

**Autoclaving Glassware and Biohazard Trash**

**Materials:**

1. Items that need to be autoclaved
2. Autoclave tape
3. SteriGage strip
4. Autoclave tray
5. Autoclave gloves
6. Autoclave

**Protocol:**

1. \_\_\_\_\_ Prepare material for autoclaving:
  - a. **Clean Glassware** – Loosely attach lids to tubes and bottles (DO NOT AUTOCLAVE TIGHTLY SEALED BOTTLES). Add a few inches of autoclave tape to bottle (note 1) and put in an autoclave tray. Write on the tape what the items are for (e.g. Dobos Save).
  - b. **Biohazard Trash** – Spray a small amount of water or disinfectant into the biohazard bag to assist with steam production. Seal the opening of the biohazard bag by tying a knot or by twisting tightly shut and wrapping in autoclave tape. Attach a couple inches of autoclave tape (note 1). Use a thick black sharpie to write on tape the contents (e.g. “TRASH”), date, and initials. Set the bag in an autoclave tray.
  - c. **Liquids** – Loosely attach lids to tubes or bottle (DO NOT AUTOCLAVE TIGHTLY SEALED BOTTLES). Add a few inches of autoclave tape to bottle (note 1). Place bottles directly on the autoclave rack, with a tray on bottom of the autoclave to catch any boil-over (note 2).
2. \_\_\_\_\_ Use a small piece of autoclave tape to attach a SteriGage strip to a bottle, bag, or directly to the autoclave tray. Be sure that the SteriGage strip can be easily seen when the autoclave door is opened for unloading.
3. \_\_\_\_\_ Ensure that the autoclave drain is clear of debris of media, and that the door seal is intact.
4. \_\_\_\_\_ Put tray and items in open autoclave.
5. \_\_\_\_\_ Firmly close the door, crank handle to the locked position, and check that door is completely sealed.
6. \_\_\_\_\_ Press the cycle select button to view run conditions, select the appropriate cycle for your load (note 3), and press the cycle select button a second time to start the run.
7. \_\_\_\_\_ Sign in on log book, filling out all requested information (note 4).
8. \_\_\_\_\_ Once cycle is complete, check that the pressure is at 0psig, put on autoclave gloves and open door one inch to allow residual steam to dissipate. DO NOT OPEN THE AUTOCLAVE UNLESS THE PRESSURE IS AT ZERO.
9. \_\_\_\_\_ Check the SteriGage strip to confirm that the run was sufficient for sterilization. Tape the strip into the log book (note 5)
10. \_\_\_\_\_ Carefully remove contents from the autoclave while wearing autoclave gloves (note 6).

11. \_\_\_\_ Allow clean items to cool before putting away.
12. \_\_\_\_ Sterilized biohazard trash can be discarded in a dumpster (note 7).

**Notes:**

1. The stripes on autoclave indicator tape will turn black after exposure to high temperatures. This is not an accurate indicator of sterility, but is required for all biohazard trash that enters the landfill. It also provides individuals in the lab easy identification of which items have been autoclaved and which items are still waiting.
2. An alternative method for autoclaving liquids is to place the bottles/containers directly into a shallow metal autoclave tray with approximately ¼ inch of water in the bottom. Nalgene autoclave trays should not be used for liquids (these degrade over time and could collapse under the weight).
3. Autoclave cycles in media prep (A124) are as follows (other autoclave locations may have different cycles, so be sure to confirm run conditions before starting):

<b>Cycle #</b>	<b>STERILIZATION TIME</b>	<b>TEMPERATURE</b>	<b>DRY TIME</b>	<b>REASON FOR CYCLE</b>
Glass	30 minutes	250°F/121°C	10 min	Glass Sterilization
Trash	60 minutes	250°F/121°C	Slow exhaust	Trash Decon
Media	15 minutes	250°F/121°C	Slow exhaust	DO NOT USE THIS CYCLE (time may not be sufficient for sterilization)
Liquid	45 minutes	250°F/121°C	Slow exhaust	Liquid Biohaz Decon and Media Sterilization

4. Do not leave material in the autoclave overnight. If you will not be available to remove items from the autoclave, be sure that another trained person(s) knows when the cycle will be complete and what needs to be done with the contents.
5. If the SteriGage strip indicates failed sterilization, attach a new strip and repeat the run (it may be necessary to increase time).
6. Standard autoclave gloves are not waterproof, so care should be taken not to come in contact with the hot/boiling water.
7. Ensure that the autoclave tape remains attached to the biohazard bag as an indicator that the contents have been sterilized.