

Autoclaves

Sanyo (PSC 645, NSC 484, Kell 445)

Hiroyama Electric Autoclaves (PSC 545, 651)

General Electric Autoclave Warnings:

Every time you use the autoclaves and/or dishwashers, you **MUST** sign-in and sign-out of the appropriate logbook.

Do not under any circumstance stop someone's cycle before it is done.

Do not leave anything in the autoclave rooms.

Make sure the Exhaust tank is filled with H₂O to the **LOW** mark and not over the **HIGH** mark.

Check the chamber for H₂O first and then if needed fill chamber with ~2 L H₂O.

Allow for temp. lag when setting up sterilization time.

Contact PSC: Sonja Stovall or Gemeia Cameron (404) 413-5363

Contact NSC: Chip Foster (404) 413-5361

Common Autoclave Rules

1. Both NSC and PSC stockrooms have biohazard bags and boxes. They are also brown biohazard boxes and bags near the drop off location.
2. Do NOT overfill biohazard bags. You should be able to close the bag. Use a rubber band or loosely tape the bag. Do not twist the bag, it won't sterilize properly if the bag is sealed. Place the bag into the black trash bins immediately after autoclaving.
3. Do NOT fill bottles more than half full of liquids. The pressure and temperature within the chamber will cause the liquids to boil over into the chambers.
4. Do NOT tighten caps, lids, and/or tops onto bottles & containers. The chamber pressure will cause the bottles to explode inside the chamber & lids to permanently seal to its container.
5. Sharps containers should NOT ever, under any circumstances be stored in the autoclave rooms. All sharps containers upon being autoclaved **MUST** be placed into red Biohazard bags, and placed into the Biohazard brown cardboard boxes, sealed, and taken to the appropriate locale of the building on the 1st floor in freight elevator hallway (PSC) and 2nd floor near freight elevator (NSC) for disposal pickup after 1:00 pm on Tuesdays & before 8:00 am on Wednesdays. This is the only time slot that the boxes can be left.
6. Pick your items up in a timely manner.
7. If the autoclaves are in use, sign-in as "waiting" status; however, take your stuff back to your lab.

8. Be sure that the autoclave area is left in an orderly condition. All spills must be properly cleaned, debris must be properly disposed of, and all glassware etc. removed in a timely manner.
9. **Do Not** trouble-shoot autoclave issues. If there is an issue with the equipment, notify either Gemeia Cameron or Sonja Stovall.

Electric Autoclaves

Sanyo Labo Autoclave (PSC 645)/New Brunswick AC-48 (NSC 484)

1. Warning: this autoclave takes a really long time to come up to temp., as long as 1 1/2 hrs. It is fairly common for someone to come in and not realize that it is in use and stop the sterilization and take your stuff out. Recommend putting a note on the sterilizer "**IN USE**". If the "°C" is flashing, the sterilization is done and the pressure and temp. are coming down.
2. Use distilled H₂O in autoclave.
3. Check to see if there is any H₂O in the main chamber. To do this, wiggle the whole unit and look down in the chamber – if you see H₂O through the round hole, do not add anymore H₂O. There should not be standing H₂O in the chamber
4. Remove the exhaust tank and fill with H₂O to the High level mark.
5. Open the chamber door and pour H₂O inside (~2 L) until you can physically see H₂O in the round hole in the bottom of the chamber. This will take the H₂O level in the exhaust tank to usually between the HIGH and LOW mark.
6. Fill the exhaust tank with H₂O to the LOW mark and not over the HIGH mark. Connect the exhaust hose and place the tank inside the unit.
7. Turn the power switch on (MAIN).
8. The sterilization temperature (usually 121 °C) should not be changed. Set time, hold timer button down and use arrows to go up and down (there is a lag time for the sterilizer to reach the set temp. and this depends on the volume you are autoclaving; Example, for a 500 ml flask, there is a 15 min. lag, so for a 15 min. sterilization ,set the time for 30 min.).
9. Place the items to be sterilized into the chamber. There are 2 large round racks that fit into the chamber. Use the solid one for liquids. You can also stack the 2 racks if you have a lot to autoclave. Turn the exhaust knob (control panel right) fully clockwise until it becomes tight. (do not overtighten)
10. Close the chamber door. Although the door closure light indicator lamp lights up, continue to turn the handle until it becomes difficult to turn. Attach the magnetic safety connector to the back panel. The safety connector is usually wrapped around the lid; unwind and it clicks into the round connector on the left side panel below the main control panel. If for any reason this comes off, the autoclave will shut down.
11. Press the start button to begin automatic sterilization process.
12. Come back in ~20 min. to make sure that everything is going as you expect – correct time and temp.

13. After the sterilization process is completed and the chamber pressure returns to normal atmospheric pressure, the temperature inside the chamber will fall below 80°C. At this point the END buzzer will sound 5 X's. Be sure that the gauge pressure reading falls below 0 before opening chamber door and removing sterilized items. The pressure drops very quickly to 0, but takes a while for the temp. to drop.
14. Take care when opening chamber as hot H₂O will drip from the underside of the door when opened. Make sure that H₂O does not splash on the control panel.

Hirayama HV-110 (PSC 651/BSL3 lab) large blue autoclave

1. Warning: this autoclave does not take as long to heat up as the above Sanyo, but does take a little while.
2. **Use distilled H₂O in autoclave.**
3. Check to see if there is any H₂O in the main chamber. To do this, wiggle the whole unit and look down in the chamber – if you see H₂O through the round hole, do not add anymore H₂O. There should not be any standing H₂O in the bottom of the chamber.
4. Remove the exhaust tank and fill with H₂O to the High level mark.
5. Open the chamber door and pour H₂O inside (~2 L) until you can physically see H₂O in the round hole in the bottom of the chamber. This will take the H₂O level in the exhaust tank to usually between the HIGH and LOW mark.
6. Fill the exhaust tank with H₂O to the LOW mark and not over the HIGH mark. Connect the exhaust hose and place the tank inside the unit.
7. The control panel is usually in “Sleep” mode – blank panel. Hit any button to take it out of Sleep mode.
8. Turn the power switch on, lower right in body of sterilizer.
9. Place the items to be sterilized into the chamber. Push the lever on the front of the door to locked (be sure to push the lever all the way or the control panel won't work). You can hear it engage.
10. Mode. Mode (keep pressing Mode to select) – select either liq. Solid or agar (please note that the temp. for agar is 60 °C, this is hot enough to melt agar but does NOT sterilize).
11. Func – select either timer, clock. Print is one of the choices, but there isn't a printer.
12. Func./Timer/Set/Next/use arrow to set hr. if that's how you want to time/or next/use arrow for min./Enter
13. Settings. Temp. - usually 121 °C; or time - there is a lag time for the sterilizer to reach the set temp. and this depends on the volume you are autoclaving. For example, for a 500 ml flask, there is a 15 min. lag, so for a 15 min. sterilization ,set the time for 30 min.).
14. Press the start button to begin automatic sterilization process.
15. Take care when opening chamber as hot H₂O will drip from the underside of the door when opened. Make sure that H₂O does not splash on the control panel.