

# AUTOCLAVE USER GUIDE

## GENERAL PROCEDURES

1. Sign up in the log for runs in advance. The log entry should clearly mark the time needed, and should include the user's full name, lab room number, and phone extension.
2. Spills must be reported and cleaned up immediately. Get help for this (see 8).
3. ALL materials to be autoclaved must be placed in containment trays before being loaded into the chamber.
4. Finished material should be removed as soon as possible when a cycle ends.
5. Autoclave door should not be opened until the chamber temperature falls below 100 degrees Centigrade.
6. Never use excessive force when sealing or opening the chamber door.
7. The red ON/OFF button should be out (in the OFF position) both before and after each run. Be sure it is OFF before you try to seal the door at the beginning of a run, and before you open the door at the end of a run.
8. When problems arise: contact Mary Howe, ex 9-3692, [howe@chemistry.ucsc.edu](mailto:howe@chemistry.ucsc.edu)

## STARTING A RUN

1. Inspect chamber before loading. If there is a spill in the chamber, do not use the machine – report the spill immediately. Leave a note (“spill in chamber, DO NOT USE”) on the machine.
2. If the green Jacket Steam light is ON, ~~press the RED RESET button.~~
3. The boiler is on a timer (located on top of boiler). Set the timer. NOTE: It takes about one half hour from when you set the boiler timer until the autoclave jacket is pressurized.
4. Check the jacket pressure – should be approximately 20psi (12 o'clock on the lower gauge).
5. Load your material. Select cycle type with pushbuttons. Set sterilize time (and dry time, if running a dry cycle). Check that red ON/OFF button is out (the OFF position) – if necessary, push to pop it out.
6. Seal the chamber door by spinning the locking wheel clockwise. Tighten securely but **DO NOT OVERTIGHTEN.**

**Note:** The click that you may hear while spinning the wheel does not necessarily mean the door is sealed. Continue to spin the wheel until it feels tight.

7. Push the red ON/OFF button in.
8. WAIT AND WATCH until the chamber temperature (green arrow) approaches the set point (~120C). **If steam shoots out from any part of the chamber door (or any other part of the machine other than the drain pipes), push the red ON/OFF button immediately so it pops out to the OFF position.** If the steam was leaking from the edge of the door, wait for the chamber to cool below 100C. Then you may try to reseat the door. If the problem persists leave the machine off and report the problem. If the steam was leaking from near the center of the door (around the locking mechanism), leave the machine off and report the problem.

## ENDING A RUN

1. Wait for the chamber temperature (green arrow) to fall below 100 degrees Centigrade.
2. **Before unsealing the door:**
  - a. Make sure the chamber has cooled below 100C.
  - b. Push the red ON/OFF button to pop it out to the OFF position.
  - c. Disengage door lock rod per instructions on the door.
3. Use gloves when opening the autoclave door.
4. Unseal the door slowly by spinning the locking wheel counterclockwise. If the locking wheel won't turn, get help - never use excessive force to spin the wheel.
5. Open the door slowly, just a crack at first. Keep head and body well behind the door, using it as a shield against any escaping steam.
6. When no more escaping steam is visible, step back and slowly swing the door fully open.
7. Unload the chamber and inspect for spills. If there is a spill you are responsible for cleanup – contact Mary Howe for help. Do not attempt to clean the chamber with the jacket pressurized (hot chamber walls). Post a warning note to prevent further use until cleaning is complete.

## SAFETY TIPS

1. Use containment trays for all materials to be autoclaved.
2. Never autoclave tightly sealed containers.
3. Check the red ON/OFF button before either closing or opening the chamber door. It should be out – in the OFF position.
4. Use gloves when opening the chamber door and when loading/unloading the chamber.
5. Avoid exposure to steam when opening the chamber door at the end of a run. Open the door slowly, and use it as a shield. **NEVER attempt to open door before the chamber cools below 100C.**