

Tuttnauer 3545EP Protocol

Dry Cycles

1. For non-liquid goods (tips, glassware, swabs, toothpicks).
 - a. *Note: agar becomes semi-solid as it cools, but for sterilization purposes consider it a liquid.*
2. See descriptions on the back to determine if you need Wrapped or Unwrapped as your cycle for dry goods.

Liquid Cycles

1. Containers holding liquids should only be **2/3 full** and the **lid should be loose**.
2. Containers holding liquids should be placed on a **solid tray**.
3. Containers should not touch the walls of the autoclave.

Operating instructions

1. **Check calendar** to see if someone has reserved the autoclave before loading your material.
2. **Sign in** on log sheet.
3. Turn the **power** on (if it is not already on; green toggle switch on lower right).
4. Press the appropriate key along the top to **select the program** you need (symbol explanations on back).
5. **Load** the material to be autoclaved.
 - a. *Note: liquids MUST be resting on a solid tray!!!!*
 - b. *1L Erlenmyers fit; 1L orange-capped media bottles fit with the right tray.*
6. **Close the door and tighten**. "Close Door" indicator may be illuminated green before a complete seal is made; continue to tighten until "hand tight." Do not over-tighten or it will damage the gasket.
7. Press the **Start** key.
8. **Water Inlet** is displayed while water is flowing into the chamber. **WAIT** by the autoclave to be certain there is enough water for your cycle. If the **Add Water** light comes on, add distilled water (grey tap) to the reservoir from the opening on the top of the autoclave. **DO NOT OVERFILL**. Water should be below the safety valve holder (big metal thing that is just below the opening) or you will block the safety valve from properly functioning.
9. Indicator lights will tell you what stage the autoclave is in as the cycle proceeds (Heat, Ste, Exh, and Dry).
10. A buzzer will sound the end of the cycle and the Start light switches off.
11. Open the door and unload the chamber using the big white or orange gloves.
12. **LEAVE A MINIMUM TIME OF 10 MINUTES BETWEEN CYCLES TO PREVENT OVERHEATING.**

Notes:

- Combine materials with other students if there is room.
- Combine only similar materials - ANY liquid requires liquid cycle even if dry stuff is included in the run.
- 3 L max total liquid volume.
- If you don't hear hissing during the liquid cycle, something is wrong - it should vent off steam.

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Explanation of Programs (left to right on front of autoclave):

1. Unwrapped instruments (scissor symbol)
 - a. For unwrapped instruments and materials that do not require a drying cycle.
 - b. 121°C, 15 min sterilization time, 0 min dry time.
 - c. Fast exhaust (*liquids will lose significant volume if you accidentally chose this cycle*).
 - d. **Total cycle takes about 30-45 min.**
2. Wrapped instruments (odd symbol that looks a bit like a shirt)
 - a. For wrapped instruments and materials that require a drying stage.
 - b. 121°C, 15 min sterilization time, 60 min dry time.
 - c. Fast exhaust (*liquids will lose significant volume if you accidentally chose this cycle*).
 - d. **Total cycle takes about 90-100 min.**
3. Liquids (flask symbol)
 - a. For sterilizing agar, broth, buffers, and other solutions (even though agar doesn't end up liquid, it starts that way, so it counts as a "liquid" for this purpose).
 - b. 121°C, 30 min sterilization time, 15-20 minute slow exhaust, 0 min dry time.
 - c. **Total cycle takes about 1 hr 10 min.**
4. Dry only (accessory program, NOT for sterilization) (star symbol)
 - a. To be used if dry time in wrapped or unwrapped cycles is insufficient.
 - b. Heat-only cycle, no sterilization takes place during this cycle.
 - c. When using this cycle, leave the door just barely cracked open before hitting the Start button.
 - d. **Total cycle takes about 10 min.**

See Professor Humphreys (B.211) or Liz Caskey (B.003) if you have any questions or doubts about how to use this instrument.