

Ultracentrifuges

Optima XL Floor Ultracentrifuge (PSC 543, 637, 659, NSC 340, 460)

Optima TL Tabletop ultracentrifuge (PSC 543, 559, 637, NSC 340, 460)

Optima Max XP tabletop ultracentrifuge (PSC 555)

Every time you use the Ultracentrifuge, you MUST sign the log book.

Balance all tubes very carefully (weight balance not eye level).

Make sure tubes are sealed completely and all O-rings are intact and present on rotor lid.

Clean up any spills in the rotor and/or the ultracentrifuge.

If you use a swinging bucket rotor, make absolutely sure that both hooks are on the bar. Most rotor accidents are from swinging bucket rotors.

ATTENTION!!! If the ultracentrifuge is not working for any reason, press clear and try again.

Contact: Sonja Young (404) 413-5363; sstovall@gsu.edu

Optima XL Ultracentrifuge

1. All tubes must be as closely balanced as you can get them.
2. Make sure all quick-seal tubes are properly sealed. To check seal, hold sealed end pointing away from your face, gently squeeze the tube. There shouldn't be any oozing. If there is, try to reseal. If this doesn't work (and it usually doesn't), put sample in a new tube and try again. Failure to check for a proper seal, usually ends with the loss of the sample. Improperly sealed tubes collapse during a run and get all over the rotor.
3. Log in run in log book.
4. The power should be on. Standby mode the screen is blank. Selecting any key will return the screen to Operating mode. The centrifuge has a circuit breaker instead of a power switch. I = on and O = off; located on the right side of the panel.
5. The screen has the current values on the left and the settings on the right. It also has some status information along the bottom (for example, whether the vacuum is on or off).
6. Make sure the overspeed disk is on the bottom of your rotor. This prevents the rotor from going too fast.
7. Open door and place rotor in chamber. Make sure it is seated properly.
8. Press speed. The Speed field blinks. Use the keypad to change the speed. Press enter.
9. Press time. The Time field blinks. Use the keypad to change the time. Press enter.
10. Press temp. The Temp field blinks. Use the keypad to change the time. Press enter.
11. 2 of the softkeys are for acceleration and deceleration. Usually you want maximum acceleration, which is 9. For different applications, you will want different deceleration speeds. You can select No Brake or 1 – 9, with 1 the slowest deceleration.
12. Start run. The vacuum will automatically start. The rotor will stop at 3000 rpm until the vacuum reaches 750 microns and then will continue on to the set speed.
13. Come back in 15 or 20 min. to make sure the run is going as you expect – temperature correct, still holds vacuum and the speed is what you set.
14. At the end of the run, the vacuum must be vented. Press vacuum to release the vacuum. Open door to remove rotor.

15. If there are ANY spills in the centrifuge, clean the drum out with water. If there are ANY spills or collapsed tubes, clean out the rotor and air dry completely.

Beckman Tabletop ultracentrifuge, Optima TL

1. Power on. Log in run in log book.
2. All tubes must be as closely balanced as you can get them.
3. Make sure all quick-seal tubes are properly sealed. To check seal, hold sealed end pointing away from your face, gently squeeze the tube. There shouldn't be any oozing. If there is, try to reseal. If this doesn't work, put sample in a new tube and try again. Failure to check for a proper seal, will probably end with the loss of the sample. Improperly sealed tubes, usually collapse during a run and get all over the rotor.
4. Press door button. Open lid as soon as vacuum stops. If you wait, the vacuum will automatically start up again.
5. Put in rotor and spin slightly to make sure it's sitting properly. Before loading, be sure that all used slots are balanced. Push button down in middle of rotor.
6. To set speed – press speed button. The speed starts flashing. Type in the new speed. Press enter.
7. To set time – press time button. The time starts flashing. Type in the new time. Press enter.
8. To set temp. – press temp. button. The temp. starts flashing. Type in the new temp. Press enter. Precool chamber with vacuum on.
9. Close door and let vacuum go for about 10 min.
10. Press Start. Come back after about 30 min. to make sure that everything is at the speed and temp. you set. If the vacuum doesn't get to the correct pressure, the run will stop.
11. To Stop, press Stop button.
12. Once vacuum is released, press door button and open door. Push button in middle of rotor to release rotor. If your finger doesn't work, use the end of a ball point pen.
13. Close door.
14. Turn power off. Log run time in log book.
15. If there are ANY spills in the centrifuge, clean the drum out with water. If there are ANY spills or collapsed tubes, clean out the rotor and air dry completely.

Beckman Tabletop ultracentrifuge, Optima Max - XP

1. Power on, ? front of the instrument. Log in run in log book.
2. Touch screen comes on. At the bottom in the middle of the screen will be the login button. After training, you will be given a login.
3. This screen is where you will set the time, temperature and speed.
4. Touch whichever parameter you want to set.
5. A number pad screen will appear. Type in appropriate numbers.
6. Select OK.
7. Repeat for all other parameters as needed.
8. After you are done, the screen will return to the main screen and show the #'s you have entered.
9. You can also set Accel/Decel. and see runs that have already been programmed.
10. Select the rotor button. A list of rotors for you lab along with their SN# will appear. Select the rotor you are using and then press OK.
11. Press Start

12. When your run is done, logout and turn off the ultracentrifuge. Note any problems in the logbook.