Ultracentrifuges

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

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.