

DO YOU WANT TO USE THE SORVALL RC5B Plus CENTRIFUGE?

READ AND UNDERSTAND THESE INSTRUCTIONS FIRST

1. Turn on centrifuge using rocker switch on the front right side of machine.
2. Open the lid using the black push button on the front of the machine.
3. Choose a rotor appropriate for your spin:

SLA3000



Type: fixed angle
R-max: 151.3 mm
Max RPM: 12,000
Max RCF (G): 24,336 x g

SA600



Type: fixed angle
R-max: 129.6 mm
Max RPM: 17,000
Max RCF (G): 41,837 x g

SH3000



Type: swinging bucket
R-max: 185.4 mm
Max RPM: 4,700
Max RCF (G): 4,575 x g

4. Place the rotor (stored in the cabinet behind the DU 800 spectrophotometer in the CMBB lab) in the centrifuge. NOTE: the SLA-3000 and SA-600 rotors have lids, the SH-3000 does not. The base of the rotor will sit on the centrifuge pin.
5. Place samples into the rotor. **MAKE SURE THE SAMPLES ARE BALANCED WITHIN THE ROTOR! FAILURE TO PROPERLY BALANCE THE CENTRIFUGE IS VERY DANGEROUS AND CAN DAMAGE THE EQUIPMENT.**
6. For determining centrifugation parameters use the following equation: $RCF = (1.118r) * (RPM/1000)^2$
...or consult a centrifugation rotor calculator such as the following:
<http://www.sciencegateway.org/tools/rotor.htm>
7. Attach lid to rotor (if applicable), then screw the rotor to the pin. Notice that tightening requires twisting counter-clockwise.
8. Once the samples and rotor are situated, close and latch the lid of the chamber.
9. To start a program, perform following steps:

- a. Adjust temp: Blue pointer should be placed at desired chamber temp during spin. Black pointer needs to be between the Blue and Orange pointer or program will not run. Black pointer cannot be to the right of orange pointer.
- b. Set speed: displayed in RPM, using the left dial. Note that $\text{RPM} \neq \text{RCF (g)}$. Consult the rotor calculator for correct RPM and **do not exceed the recommended rotor G-force!**



- c. Set time: right dial, “Hold” will keep the program spinning indefinitely.
 - d. Select if you want to use the brake during the program, press button in to enable braking.
 - e. Press Start Button.
10. When program is complete, and the rotor is done spinning, you can open the lid.
 11. Power off the centrifuge. Leave the lid slightly open so it can air out.
 12. Inspect the rotor and centrifuge chamber. If you make a spill, clean out the sample from the rotor and/or chamber. Clean the rotors with soap and water, allow to dry and then return the rotor to the cabinet.

If you have any questions about the operation of this instrument, please ask your research mentor or contact Dr. Liepman (aliepman@emich.edu)