

Centrifuge Use

There are a few important guidelines for operating a centrifuge, even a small one. Following them can prevent damage to the centrifuge and possible serious injury to you and others.

Use

- 1. The work surface must be level and firm.** Do not use the centrifuge on an uneven or slanted work surface.
- 2. Balance the tubes in the rotor!** If you want to run a tube with 10 mL of liquid, put another tube with 10 mL of water in the **opposing** hole on the rotor. If the liquid has a higher or lower density than water, you must balance the tubes by mass, not volume.
- 3. Do not open the lid while the rotor is moving.** Even though many centrifuges have a "safety shutoff" if the lid is opened, the only thing this does is stop *powering* the rotor. The rotor will still spin due to its own inertia for a while until friction slows and eventually stops it.
- 4. If you see it wobbling or shaking, turn it off or pull the plug.** A little vibration is normal, but excessive amounts can mean danger. FIRST, double check that you correctly balanced the tubes. If the answer is yes and the wobbling still happens, contact the manufacturer or dealer and get the unit serviced. Do NOT continue to run a centrifuge that wobbles visibly when the rotor is spinning.
- 5. Wear a face shield and / or safety goggles** if you have to work anywhere near a centrifuge that's in use.
- 6. Do not bump, jar, or move the centrifuge while the rotor is spinning.** Make sure you don't have the cord dangling from a table edge where someone could catch their foot in it and pull down the centrifuge.

The following procedures for centrifugation shall be used when working with biohazardous materials:

- Examine tubes and bottles for cracks or stress marks before using them. Discard any centrifuge tubes that have cracks in them.
- When working with biohazardous materials, wipe outside of tubes with disinfectant prior to removal from the biological safety cabinet and before placing in safety cups or rotors
- Place all tubes in safety buckets or sealed rotors when centrifuging infectious materials. Inspect the "O" ring seal of the safety bucket and the inside of safety buckets or rotors.

- Open safety buckets or rotors in a biological safety cabinet.
- If any spills or leakage are apparent in the centrifuge rotor should be cleaned with a mild detergent, rinsed thoroughly with distilled water, and allowed to air dry completely (while in biosafety cabinet).
- Clean the rotor and centrifuge well after each use.

Centrifuge Safety Online:

- Beckman Coulter Centrifugation Laboratory Resources:
http://www.beckman.com/resourcecenter/labresources/resource_centrif.asp
- Sorvall Centrifuge Information:
<http://www.kendro.com>
- AIHA Laboratory Health and Safety Committee Centrifuge information:
<http://www2.umdnj.edu/eohssweb/aiha/accidents/explosion.htm#Centrifuge>
<http://www2.umdnj.edu/eohssweb/aiha/technical/labequipment.htm#Centrifuges>