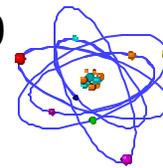


LABORATORY SAFETY FACT SHEET #19



Centrifuge Safety

1. Before using any centrifuge review the owner's manual- obtain a copy of the manual if it is not available. Check rotor for rough spots, pitting & discoloration. Consult manufacturer if discovered.
2. High speed rotor heads are prone to metal fatigue. Each rotor should be accompanied by its own log book indicating the number of hours run at top or de-rated speeds. Do not exceed the design mass for the maximum speed of the rotor. Failure to observe this precaution can result in dangerous and expensive rotor disintegration.
3. Make sure rotor, tubes and spindle are dry and clean and that the rotor is properly seated and secured to the drive hub. Tubes must be properly balanced in rotor ($\frac{1}{2}$ gram at 1 G is roughly equivalent to 250 Kg @ 500,000 G's).
4. Before use, tubes should be checked for cracks. The inside of cups should be inspected for rough walls caused by erosion and adhering matter should be removed. Metal or plastic tubes (other than nitrocellulose) should be used whenever possible.
5. Use sealed rotors, sealed buckets, or a guard bowl with gasketed cover as well as safety centrifuge tubes (tube or bottle carrier with sealable cap or "O" gasketed cap).
6. After use, tubes, rotors, and centrifuge interiors should be cleaned and disinfected.
7. If a tube breaks, the centrifuge should be turned off, allowed to stand undisturbed for 15 minutes before opening. Clean and disinfect the rotor. If infectious material was placed in the centrifuge, plan proper decontamination and cleanup.
8. Cleaning and disinfection of tubes, rotors and other components requires considerable care. No single method is suitable for all items, and the various manufacturers' recommendations must be followed to avoid rotor fatigue, distortion and corrosion.
9. Once run is complete, make sure the rotor has STOPPED before opening the centrifuge lid.

Infectious Materials

1. High- speed centrifuge chambers are connected to a vacuum pump. If there is a breakage or accidental dispersion of infected particles, the pump and pump oil will become contaminated. A HEPA filter should be placed between the centrifuge inner chamber and the vacuum pump when containment is needed.
2. Centrifuge tubes or bottles should only be filled, loaded into rotors, and removed from rotors from within a biological safety cabinet. This practice provides containment in case a tube or bottle leaks or breaks.

For further information, contact the EH&S Laboratory Safety Specialist at x-4899