

This document provides guidance on how to use high-speed centrifuges (which can, if not operated correctly, cause serious injury and damage) safely in a laboratory environment.

Centrifuges rotate at very high speeds to separate materials on the basis of their density. There are

GLOVE MATERIAL

CHEMICAL GROUP

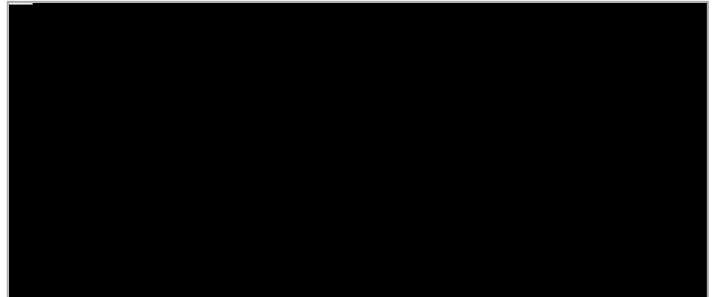
Water miscible substances, weak acids / alkalis

Natural Rubber	Nitrile Rubber	Neoprene™	PVC	Butyl	Viton™

NEVER overfill tubes and check they are tightly sealed.

Place the tubes in the rotor and **CHECK** the rotor is balanced properly.

This will depend on the number of tubes the rotor holds. Below shows examples for a 6 and 12-tube rotor.



Opening the Centrifuge Before and After Use

Never open the centrifuge until it has come to a complete stop.

Loading and Installing the Rotor

Always use the correct rotor for the type of centrifuge.

NEVER exceed the maximum rotor speed - usually displayed on the rotor lid.

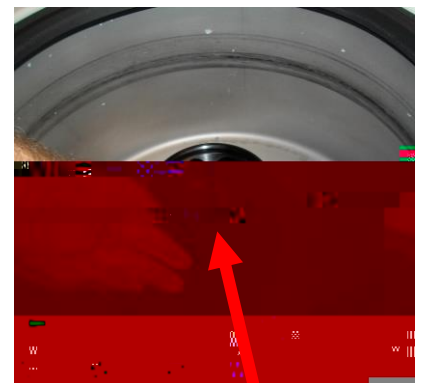
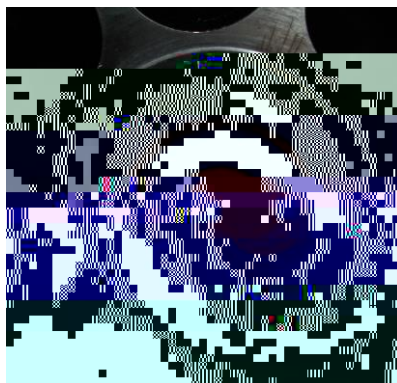
ALWAYS check the rotor for signs of damage or corrosion before use.



ALWAYS seat the rotor correctly on the drive.

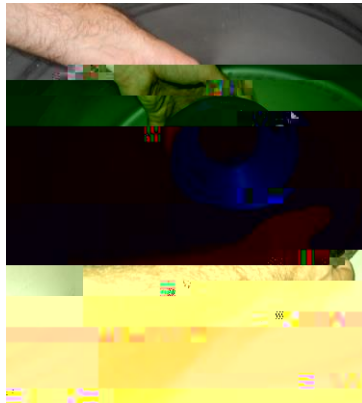


Ensure rotor pins line up with spindle pins



Spin rotor to check pins are located and rotor moves freely

Fit the rotor lid and check it is screwed down properly into the spindle, with no gaps between the rotor lid and the rotor. Gently pull the rotor upwards to check it is secure.



Secure the centrifuge lid and start the machine.

Stay with the centrifuge until full operating speed is reached and the machine appears to be running without vibration.

If there appears to be excessive noise or vibration:

Stop the machine and wait for it to stop.

Check the rotor balancing.

If you can't see anything wrong, make sure no one else uses the machine and report the problem to your Supervisor.

If a tube breaks:

- Stop the machine and leave for 30 minutes to reduce aerosols risk.
- Wear appropriate gloves for the sample handled.
- Clean the centrifuge as per manufacturer's advice, or if unsure ask your Supervisor.

General Cleaning of Centrifuge and Rotors

Centrifuge rotors can corrode unless properly cleaned (very important if using corrosive chemicals such as cesium chloride).

After each use clean and dry rotors according to manufacturer's instructions.



Water left in the centrifuge has caused corrosion

If operated below room temperature, condensation forms within the centrifuge chamber. To prevent corrosion mop up excess water and leave the lid open until dry.

