

TITLE: LABORATORY BENCH CENTRIFUGES

1. Scope.

- a. This is the Standard Operating Procedure for all types and makes of bench centrifuges used in the Discipline of Pharmacology, University of Adelaide
- b. Also listed are all hazards and risks associated with the use of centrifuges, those persons at risk and precautions to be taken.
- c. All potential users must be instructed by their supervisor or other appointed person before using a centrifuge. Required controls for the use of centrifuges

2. Procedures for use of centrifuges

- a. Only suitably trained persons may operate a centrifuge.
- b. The machine log book if present must be completed. (Hours run could determine life of the rotor).
- c. Before use the rotor, its lid and seals must be checked for cleanliness and damage. Damaged rotors must not be used.
- d. Ensure that the rotor & lids (if any) are correctly attached & in place before starting the centrifuge.
- e. If using a swing-out rotor ensure that the tubes you are using clear the rotor in the full swing-out position
- f. Centrifuge tubes must never be filled above the maximum recommended by the manufacturer. The maximum stated speed must never be exceeded.
- g. The rotor must be balanced to within the limits specified (tubes containing materials of similar densities should be used to balance the rotor on the opposing side).
- h. The centrifuge must not be operated without the correct cover being fitted and its seals in place. Tube material must be compatible with solvents being used. Use only correctly fitting tubes.
- i. Any spillage must be cleaned up immediately. Explosive or highly flammable chemicals must not be used.
- j. Never attempt to lift off lid or slow the rotor by hand while rotor is in motion.
- k. Only authorised persons may service or repair a centrifuge. Report all faults promptly. Do not attempt repairs yourself. Do not use centrifuge until reported faults are repaired.

3. Hazards associated with use of centrifuge

- a. Mechanical failure of rotating parts (often violent).
- b. Contact with rotating parts.
- c. Sample leaks causing aerosols, stress corrosion, contamination.
- d. Sample imbalance causing machine movement/walking.
- e. Fire/explosion.
- f. Contact with contaminated components/vapours.

4. Risks associated with the use of a centrifuge.

- a. Centrifuges are potentially lethal. Care and vigilance must be exercised at all times. Laid down operating procedures **MUST** be followed.
- b. People at risk when using a centrifuge. Students, academic staff, technical staff.