

SAFE OPERATING PROCEDURE (Beckman J2-21 HS Refrigerated Centrifuge)

LOCATION DETAILS

School/Branch: Medical Sciences, Pharmacology N533

SAFE OPERATING PROCEDURE DETAILS

Task/activity (including specify particular equipment, substance)
Beckman J2-21 HS Refrigerated Centrifuge

Date prepared:
24/7/2008

PREPARED BY Name, Position and Signature (insert names of the supervisor, HSR, HSO and operator involved)

Name Gordon A. Crabb

Position Lab Manager, HSO

Signature



RISK ASSESSMENT

Has a risk assessment been completed and have all other environmental considerations been made?

Yes No

See Risk Assessment dated:
1/7/2008

Risk Rating:

Low

Medium

High

Very High

SAFE OPERATING PROCEDURE DETAILS

Procedure (Include control measures listed in risk assessment within the procedure):

Training :

Please see your supervisor or Gordon Crabb (N514a, ext. 33121) if you wish to use this centrifuge and have never used it before. **DO NOT** operate this equipment if you are unfamiliar with its operation.

Starting A Run :

1. Pre-cool the rotor in a cold room if necessary, and load your samples into the rotor. **Ensure that your samples are appropriately balanced – opposing tubes should balance to within 0.5 grams (JA-14) or 0.1 grams (JA-20 & JA-20.1).**
2. Using the OVERTEMP knob, set the **red** overtemp bar well above ambient temperature.
3. Turn the POWER switch ON.
4. Using the SET knob, set the **green** temperature bar to the desired centrifuge run temperature (ie usually 4°C).

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5. Install the rotor into the centrifuge chamber – sit the rotor on the drive hub, and ensure that the two pins located in the rotor's drive hole sit in the grooves of the centrifuge drive hub, otherwise the rotor lid won't screw tightly onto the rotor. Close the chamber door – it will make a definite 'click' when it locks into place.
6. The rotor can be pre-cooled in the centrifuge, if not done already in a cold room: Set the SPEED dial to 1000rpm, and the TIME dial to 20 minutes. Press START. After ~20 minutes (once the STOP light has gone out), open the chamber door, load your samples & close the chamber.
7. Once the chamber has reached the desired temperature (indicated by the black bar on the temperature dial), set the OVERTEMP bar to the maximum allowable sample temperature. If the OVERTEMP temperature is exceeded during the run, the centrifuge will shutdown.
8. Set the desired run speed using the SPEED dial.
9. Set the TIME dial to required spin time (for runs longer than 180 minutes, set the dial on HOLD).
10. Press the START button.

Stopping A Run :

1. Stop the run by either allowing the timer to count down to zero, or by turning manually the timer to zero. The STOP light will come on. Pressing the STOP button will stop the rotor, but the freezer will continue to operate, and the door remain locked, until the timer reaches zero.
2. Wait for the STOP light to go out (you will also hear the centrifuge door lock release), indicating that the rotor has stopped. Pull the centrifuge door latch towards you, and the door will lift open.
3. Remove the rotor, and remove your samples from the rotor. Remove & clean the rotor! For prolonged (ie > overnight) periods of non-use, store the rotor in a cool dry place - **not** in the centrifuge.
4. Turn the POWER switch OFF when centrifuge is not in regular use, to conserve power, and reduce equipment wear and tear.

J2-21 HS Centrifuge Do's and Don'ts :

Do's:

- If the refrigeration unit is operating, keep the chamber door closed as much as possible to prevent moisture build up inside the chamber.
- If you notice any unusual vibrations, sounds or odours, TURN THE POWER OFF until the cause can be determined.
- Turn the POWER switch OFF when centrifuge is not in regular use, to conserve power, and reduce equipment wear and tear.
- Keep the rotor and drive hub contact surfaces clean and lightly lubricated with 'Spinkote' lubricant, to prevent the rotor sticking to the drive-shaft.
- Ensure the rotor is securely installed prior to use.
- When removing the rotor, lift it vertically to avoid bending the driveshaft.
- Periodically defrost the chamber and wipe up accumulated moisture.
- If the BRUSH light goes on, the centrifuge will need IMMEDIATE servicing – the drive motor brushes will need replacing.
- Clean the condenser fins at the back of the instrument every 4-6 months.
- Any questions, queries etc – please see one of the contacts above.

Don'ts:

- Do not operate the instrument if any panels have been removed – this is an electrical shock / mechanical injury hazard.
- Do not operate the equipment if the ambient temperature exceeds 38°C.
- Do not operate the equipment unless it has a valid electrical testing tag.

Note: This Safe Operating Procedure must be reviewed :

- a) after any accident, incident or near miss;
- b) when training new staff;
- c) if adopted by new work group;
- d) if equipment, substances or processes change; or
- e) within 5 years of date of issue.