



LOCATION DETAILS

School/Branch: School of Molecular & Biomedical Science

SAFE OPERATING PROCEDURE DETAILS

Operating the Shandon Thermo Cryostat

Date Prepared:
16/03/2010

Updated:

PREPARED BY: Name, position, & Signature (insert names of supervisor, HSO, subject matter expert)

Michael Beard

Signature:

RISK ASSESSMENT

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

See risk assessment dated:
27/09/2009

Risk Rating:
Low
Medium
High
Very High

RISKS IDENTIFIED

- Lacerations from sharp blade
- Manual handling injuries
- Electric shock from electrical components

SAFETY PRECAUTIONS

The following control measures **MUST** be adhered to:

- All operators of this machine must have appropriate training
- Appropriate PPE must be worn

PERSONAL PROTECTIVE EQUIPMENT REQUIRED

The following PPE must be worn at all times:

- Lab Coat
- Safety glasses
- Gloves (if cutting hazardous specimens)

SAFE OPERATING PROCEDURE

1. Put on lab coat, glasses and gloves.
2. Turn on the light.
3. Prepare the cryostat. Every time you use the machine, it must be oiled. (Only use the oil supplied as this is a special, low temperature oil.
4. Remove your frozen tissue blocks from the moulds.
5. Adhere them to the chuck by freezing them on with a small amount of OCT, put these on the stub.
6. Insert block into the holder and tighten the screw. Always insert block into cryostat before inserting the knife into the holder.

7. Make sure your tissue block is securely fastened in the holder.
8. Set the preferred thickness for your sections.
9. Insert a disposable blade into the holder
10. Disengage the wheel block and move the block towards the knife with the external buttons.
11. Bring the knife and block together.
12. Lower the anti-roll plate.
13. Cut your sections by turning the wheel.
14. Keep the knife and anti-roll plate clean by using the big brush, always wiping away from the knife edge.
15. Remove the knife and place into the sharps container located near the cryostat.
16. Empty and clean the catch tray under the cutting area into the bin.
17. Use tissue and disinfectant to wipe down inside the cryostat.
18. Turn off the light.

THE KNIFE

1. Dispense blade from the manufacturer's container onto the workbench.
2. Use only disposable blades.
3. Clean by immersing into a container of 70% ethanol.
4. Allow to dry on flat surface near the workbench – **(DO NOT LEAVE BLADE UNATTENDED)**

OTHER INFORMATION

- The main danger with this machine is the knife. Operators must keep fingers away at all times. Use forceps or brush to clean handle of knife.
- Is also a slight danger of repetitive strain so regular breaks during prolonged use of machine.

ADMINISTRATION

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.