

SAFE WORK INSTRUCTION

LIQUID NITROGEN

PERSONAL PROTECTIVE EQUIPMENT

- Laboratory coats
- Safety glasses to prevent LN₂ splashing into eyes
- Non permeable footwear which entirely covers the feet, leather is by far the best
- LOOSE trousers/Skirts – must go over your footwear (not tucked in) to prevent LN₂ pooling into shoes, denim jeans are by far the best

POTENTIAL RISKS

- ❗ Cold burns to eyes, body, hands and feet.
- ❗ Asphyxiation due to oxygen displacement.
- ❗ Cryo burns from cold tools

ZERO TOLERANCE:

(Contravention will result in eviction from Lab)

- ✗ Pumps, ballet flats, court shoes, joggers, sandals, jandals, trainers, any shoes where LN₂ can penetrate
- ✗ Tights, skinnys, leggings
- ✗ Shorts, mini-skirts
- ✗ Gloves (these are either cumbersome, or non-insulating)
- ✗ Any clothing that allows pooling or absorption of LN₂

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Remove rings, bracelets, bangles and watches from hands and wrists.
- ✓ At all times be aware of the safety of others in the vicinity, make sure they are >2m away
- ✓ Ensure the work area is ventilated and the room doors are open
- ✓ Make sure hands are dry

ENDING OPERATIONS AND CLEANING UP

- ✓ Filter excess LN₂ back into dewar.
- ✓ Warm and dry tools out thoroughly including all joints.
- ✓ Clean and dry all cryo-SEM sample holders (if used)
- ✓ Leave the work area in a safe, clean and tidy state.
- ✓ Dispose of/remove all excess sample material

OPERATIONAL SAFETY CHECKS

- ✓ Check you are wearing safety glasses
- ✓ Ensure cold front on tools remains below handling level.
- ✓ Use Hair dryer and tissues for warming up tools as necessary
- ✓ Ensure tools are dry before returning to LN₂
- ✓ Remove tools from LN₂ when not using them
- ✓ Keep hands dry while using LN₂
- ✓ Request others to stay a safe distance or wear PPE

This Safe Work Instruction does not necessarily cover all possible hazards associated with this equipment and should be used in conjunction with other references. It is designed as a guide to be used to compliment training and as a reminder to users prior to equipment use

