

Safe handling of liquid nitrogen in biobank cryopreservation rooms



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Avoid direct contact with skin to protect against cryogenic burns



CRYOGENIC GLOVES WITH ELASTICATED WRISTBANDS



SAFETY GOGGLES



LAB COATS WITH SLEEVE GAUNTLETS



CLOSED-TOE SHOES WITHOUT LACE EYEHOLES



LONG TROUSERS



PROPER VENTILATION

Protect against asphyxiation



LOW LEVEL EXTRACTION SYSTEM LINKED TO OXYGEN DEPLETION MONITOR



O₂ 19.5 %



SECURE STORAGE CONTAINERS



DEWARs



CRYOGENIC STORAGE CONTAINERS



EQUIPMENT MAINTENANCE CONTRACT



AVOID ROUGH HANDLING



REPLACE YDD RANGE VALVES EVERY FIVE YEARS



WELL-TRAINED STAFF



CRYOGENIC BURN FIRST AID TRAINING



EQUIPMENT TRAINING



SAFETY PROCEDURE IN PLACE



INTERNAL RISK ASSESSMENT



PERSONAL O₂ MONITOR ALARMS



BUDDY SYSTEM



EXTERNAL AUDIO AND VISUAL ALARM



CRYOROOM CCTV



INSTALL SPECIFIC WARNING SIGNS