

Safe Operating Procedure

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Title: Containment Level 2: General Laboratory

Location of Activity: CLS

Procedure

Note: This is a summary of the main points. For full details see "Procedures for Safe Working With Microorganisms" at www.lifesci.dundee.ac.uk/services/healthandsafety/other-topics/microorganisms/microorganisms_home.html.

Procedure

1. Read, understand & sign the relevant risk assessment & local rules & receive adequate training from your supervisor.
2. Wear disposable gloves, a white lab coat &, where there is risk of splashing or spraying, safety glasses.
Note: if there is risk of airborne contamination, e.g. if aerosols may be produced, a microbiological safety cabinet must be used and SOP 48 must be followed.
3. Use centrifuges in strict accordance with the manufacturer's instructions. Aerosol containment canisters must be used during centrifugation. Disinfect with 1% Virkon after use.
4. While work is in progress, clearly display a biohazard sign & demarcate the work area with biohazard tape. Work in a lined spill tray.
5. When using shaking incubators ensure the culture is doubly contained. The inner container/tube should be robust, leak-proof, clearly labelled with the nature of the sample & biohazard symbol. The outer container should also be robust, leak-proof, clearly labelled & contain sufficient absorbent material to absorb the total volume of culture should the inner container leak.
6. Avoid vortexing, sonicating, rapid pouring & use of homogenisers on the open bench. Use aerosol resistant pipette tips & plugged pipettes. Use pipettes slowly & carefully. Eject pipette tips carefully & directly into sharpsafe container.
7. Waste must be disposed of correctly & all waste containers clearly labelled with your name, lab of origin, nature of the waste & the word "BIOHAZARD". Ensure no chemical waste is present in containers destined for the autoclave.
 - o True sharps waste & plastic pipette tips must be disposed of into an autoclavable sharpsafe container. The use of sharps must be avoided unless essential.
 - o Do not use large glass pipettes.
 - o Large plastic pipettes must be placed directly into a beaker of 1% Virkon and soaked for at least 10 minutes before being drained and disposed of as solid waste.
 - o Solid waste (including agar plates) must be collected in a red, lined, biohazard labelled, autoclavable bin (available from Media/Wash-Up). There must be no liquid in the solid waste. Do not use the cardboard biohazard bins.
 - o Liquid waste must be collected in a sealable, robust, autoclavable container. Do not use the aspirator setups.
 - o Blood and tissue waste (recognisable as such) must be disposed of as clinical waste (see the CLS H&S web site Waste Disposal section for further details).
 - o Radioactive or chemically toxic waste must not be autoclaved. Consult your Biological Safety Adviser (BSA) for advice.

At the end of the work session all bin liners must be loosely taped around the neck of the bag to prevent spillage during transport to the autoclave. Liquid waste containers and sharpsafes, with the temporary closure engaged, must be placed in the red biohazard bin along side the bags of solid waste. Inform the Wash-Up Technician that there is waste ready for immediate uplift.

8. Surfaces must be decontaminated after work. Use fresh 1% Virkon solution. Thoroughly spray area, leave for at least ten minutes then thoroughly wipe down with water to remove residue. Do not spray

sensitive equipment with Virkon!

9. Reusable glass/plastic ware, if autoclavable, must be sealed in an autoclavable liner & placed in a red, biohazard labelled, autoclavable bin. If not autoclavable, consult your BSA for advice on disinfection.

10. In the event of a spill, follow SOP number 62.

11. Samples must be doubly contained during transport within/between buildings & clearly labelled with a contact name and number, the nature of the sample & the biohazard symbol. Inner container/tube must be robust & leak-proof. Outer container must be robust, leak-proof & contain enough absorbent material to absorb the total volume of sample should the inner container leak.

12. Samples in liquid nitrogen cryo-stores must be contained in proper cryo-tubes & stored in the liquid nitrogen vapour phase to eliminate risk of tube explosion upon initial warming. Samples in fridges/freezers will be doubly contained. Fridges, freezers & cryogenic storage vessels must be secure, biohazard labelled & subject to a well maintained inventory system.

13. Before leaving the laboratory area, remove gloves & lab coat then wash hands.

14. Any accident or incident - including a major or minor spill - must be formally reported to your Lab Manager.