

**LOCAL JOINT HEALTH AND SAFETY COMMITTEE
DEPARTMENT OF BIOMEDICAL SCIENCES
STANDARD OPERATING PROCEDURE**

1. WORKING IN A BIOSAFETY CABINET

Effective Date: July 2001

Author(s): J. Silvertown

Purpose: To promote the safe use of BioSafety Cabinets

Approvals Required: Faculty Supervisor, Local JHSC, EHS

2. DEFINITIONS:

Disinfectant Bleach: A solution of 5.25 % sodium hypochlorite (household bleach) diluted 1:10 with water, e.g. 50 mL of household bleach in 450 mL of water.

3. REQUIREMENTS:

Fulfills OHSA; UoG Safety Policy; training/competency; scheduled maintenance/inspection.

4. DESCRIPTION OF THE TASK:

Preparing Cabinet for Use -

- a) **CAUTION: TURN OFF UV LIGHT IF IT IS ON**
- b) Turn on the blower and run for 15-30 minutes before use.
- c) Wipe the work space with 70% ethyl alcohol or Vesphene II se.
- d) Place a *biohazard* bag into the waste container ready for discarding material as it is used.
- e) Prepare all tubes, cultures, pipettes and tips by placing them in the cabinet ready for use.
- f) Adjust the sash opening so as not to exceed the safe containment limit.
- g) Only gloved hands should be in the cabinet.
- h) All manipulation should be performed inside the cabinet.
- i) All containers should be placed away from the front opening of the cabinet but not on the perforated panel at the back of the work space.
- j) Do not block the perforated panel at the front of the work-bench.
- k) Only open flasks, culture bottles, media etc. inside the cabinet.
- l) Avoid generating aerosols at all times: gently aspirate and eject fluids and cultures.
- a) Do not leave culture vessels open except when in use (never open for more than a few seconds). Replace caps immediately after use.

Cleaning up the Cabinet -

- a) Cap and return all cultures and media to the incubator.
- b) Discard all tubes, flasks, pipettes into the biohazard bag.
- c) Discard all paper towels in the biohazard bag.
- d) Clean the work surface with Vesphene II se decontaminate.
- e) Clean with 70% ethyl alcohol.
- f) Lower blower on and turn on UV light for 30 minutes.
- g) Turn blower off and leave light on.
- h) Double bag all biohazardous material for autoclaving.
- i) Label bags clearly with name and department and deliver for autoclaving.
- j) Autoclave biohazardous waste for 20 minutes at 125°C (15-18 lbs pressure).

Spills in the Laboratory or BioSafety Cabinet -

Small Spills

- a) Soak up ALL of the spill with paper towel immediately.

- b) Do not lift towels.
- c) Soak paper towels in Vesphene II se detergent or bleach (diluted 1:10).
- d) Leave for 20 minutes to allow inactivation of biohazardous material.
- e) Discard towels in biohazard bags.
- f) Discard gloves.
- g) Put on a new pair of gloves and clean up spill area again with Vesphene II se; discard towels and gloves.
- h) Repeat disinfection.
- i) Rinse with 70% ethyl alcohol.

Larger Spills

- a) Reduce the bulk of the liquid/culture by soaking up most of the spill with paper towel.
- b) Soak the towels in Vesphene II se.
- c) Discard the towels in a biohazard bag.
- d) Soak up the remainder of the spill with paper towel and soak in bleach.
- e) Allow to inactivate biohazardous material.
- f) Follow step 5-9 for small spills.

Spills Inside Safety Cabinet/Hood

- a) Stop work immediately.
- b) Soak up spill with paper towel.
- c) Dowse paper towel in Vesphene II se.
- d) Leave for 20 minutes to allow inactivation of biohazardous material.
- e) Discard towels in biohazard bags.
- f) Discard gloves.
- g) Put on a new pair of gloves and clean up spill area again with Vesphene II se followed by 70% ethyl alcohol and discard towels.
- h) Repeat three times.
- I) Rinse with 70% ethyl alcohol.
- j) Replace layer of paper towel, soak with Vesphene II se and continue working.

Spills on Labcoats

- a) Immediately remove labcoat.
- b) Soak affected area with Vesphene II se.
- c) Leave to inactivate biohazardous material for 20 minutes.
- d) Place labcoat in biohazard bag and take to stock room for cleaning.

Spills on Shoes

- a) Immediately remove shoes.
- b) Soak affected area with Vesphene II se.
- c) Leave to inactivate biohazardous material for 20 minutes.
- d) Wipe off disinfectant.
- e) If soles affected ? soak shoes in a footbath using 400 ppm Vesphene II for 20 minutes.
- f) Dry carefully, particularly the soles before leaving the laboratory

5. CONTINGENCY PLAN AND REPORTING:

For Spill Cleanup - see above

6. WASTE MANAGEMENT AND ENVIRONMENTAL RESPONSIBILITY:

For biohazardous waste removal - see above

7. REFERENCES:
Occupational Health and Safety Act
Laboratory BioSafety Guidelines, 2nd Ed. Health Canada
<http://www.cdc.gov/od/ohs/biosfty/bsc/bsc.htm>

8. DISTRIBUTION OF COPIES:
Technicians, Graduate Students, Project Students, other University of Guelph employees working in the lab.
Faculty or Managing Supervisor
Environmental Health and Safety
Local JHSC, Department of Biomedical Sciences

Written by: J. Silvertown, Graduate Student
Authorization: Faculty Supervisor
Date: July 2001