

Standard Microbiological Practices

- Wash your hands often during work and before you leave.
- No outside activities like eating, drinking and smoking are permitted in lab areas.
- Mouth pipetting is not allowed.
- Follow safe handling procedures for sharps. Use engineering and work practice controls that reduce the risk of sharps injury.
- Minimize the creation of splashes and/ or aerosols.
- Decontaminate surfaces after completion of work.
- Laboratory personnel must receive appropriate training annually or when procedural or policy changes occur.

Extra precautions to take with sharps are as follows:

- Carefully manage all needles and other sharps.
- Used disposable sharps must be placed in a puncture resistant container for disposal.
- Non disposable sharps must be placed in a puncture resistant container until disinfected.
- Broken glassware must not be handled directly.
- Plastic should be substituted for glass whenever possible.



Additional Resources:

OU Biosafety Manual

www.ohio.edu/ehs/docs/Biosafety_Manual_2007.pdf

CDC and NIH

“Biosafety in Microbiological and Biomedical Laboratories”

www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm

NIH

“Guidelines for Research Involving Recombinant DNA Molecules”

http://oba.od.nih.gov/rdna/nih_guidelines_oba.html

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BSL -1

Biosafety Level 1



Have a safe day!

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Biosafety level one is suitable for work involving agents not known to consistently cause disease in immunocompetent adult humans, and that present minimal hazard to laboratory personnel and the environment. Work is typically done on open bench tops using standard microbiological practices. Special containment equipment or facility design is not required, but may be used as determined by appropriate risk assessment. Laboratory personnel must have specific training in the procedures conducted in the laboratory and must be supervised by a scientist with training in microbiology or a related science.

Safety Precautions for Biosafety Level 1

Safety Equipment:

- Wear protective laboratory coats, gowns, smocks, or uniforms designated for laboratory use while working with hazardous materials. Be sure to remove clothing before leaving the work area.
- Wear protective eyewear when conducting procedures that have the potential to create splashes.
- Gloves must be worn to protect hands from exposure to hazardous materials; use gloves appropriate for what you are working with.

In addition BSL-1 workers should:

- Change gloves when contaminated, integrity has been compromised, or when otherwise necessary.
- Remove gloves and wash hands when work with hazardous materials has been completed .
- Do not wash or reuse disposable gloves.

All labs must have a sink for hand washing and should be set up that the sink can be easily cleaned.

Detailed information about all of these topics can be found in the Ohio University Biosafety Manual. Information was gathered from the CDC and NIH.

Spills and Clean up:

Inside a biosafety cabinet:

- 1.Leave the cabinet running; inform others of the spill.
- 2.You need disinfectant, absorbent and gloves.
- 3.Use a tool to remove sharps and put them in the correct waste container.
- 4.Spray all surfaces with disinfectant
- 5.If necessary flood surfaces with disinfectant.
- 6.Wait the appropriate contact time.
- 7.Absorb up all spill material and disinfectant; then place absorbent materials into the appropriate waste container.
- 8.Inform the laboratory supervisor and EHS, if necessary.

Outside the biosafety cabinet:

- 1.Inform others of the spill and get help if needed.
- 2.You need disinfectant, absorbent, gloves, eye goggles, and a lab coat.
- 3.Cover the spill with absorbent material.
- 4.Pour disinfectant over the spill and absorbent material.
- 5.Allow the appropriate contact time.
- 6.Pick or scoop up absorbent material and put directly into the appropriate waste container.
- 7.Rewipe the spill area with disinfectant.
- 8.Inform the laboratory supervisor and EHS, if necessary.

Disinfectant Information:

(Detergents can be used prior to disinfectants, to break-up organic matter—esp. when using chlorine.)

Alcohols (isopropanol, ethanol)	70%	10 minutes	Bacteria, Most Viruses	Flammable; Eye Irritant; Toxic
Iodophor (ex. Wescodyne)	1%	10 minutes (or as listed on bottle)	Bacteria, Most Viruses	Corrosive; Skin & Eye Irritant; Toxic
Phenolic Compounds (ex. Lysol)	5%	10 minutes (or as listed on bottle)	Bacteria, Most Viruses (not effective on cox-sackie virus)	Corrosive; Skin & Eye Irritant; Toxic
Chlorine Compounds (ex. Clorox)	10%	15 minutes	Bacteria, Most Viruses & Some Spores	Corrosive; Skin, Eye & Respiratory Irritant; Toxic
Use Dilution (in water)		Contact Time	Inactivates?	Hazards

Biological Waste:

Infectious waste must be handled according to EPA procedures as outlined in the Biosafety manual. Biological waste that does not meet the infectious waste definition should be treated according to lab specific procedures.

