

# Safetygram

NCI Frederick

ISM130

Laboratory Personnel

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## Good Laboratory Practices

1. Never mouth pipette anything. Use mechanical pipetting devices.
2. Don't eat, drink, store food, or apply cosmetics in the laboratory.
3. Wash your hands after handling chemicals, infectious materials, or animals and before leaving the laboratory.
4. Wear buttoned laboratory coats and other appropriate protective clothing while performing laboratory activities. Don't wear personal protective equipment outside the laboratory. Feet and legs should be covered; sandals and open-toed shoes should not be worn in laboratories. Wear appropriate gloves while handling infectious or toxic materials, chemicals, and animals.
5. Keep laboratory doors closed at all times. Restrict access to the laboratory.
6. Use a biological safety cabinet (BSC) for handling infectious materials and a chemical fume hood (CFH) for toxic or volatile materials; mixed hazards need individual evaluation. Contact EHS for guidance at x1451.
7. Minimize or contain all aerosol producing activities, large volume work, or concentrated cultures. Activities that may potentially generate aerosols include pipeting, centrifugation (use safety cups), vortex mixing (stopper tube), blending (use metal safety blender), sonication, grinding, opening containers of infectious materials, inoculating culture flasks, intranasal inoculating animals, harvesting infectious materials from cultures or animals, weighing or reconstituting toxic powders, etc. These procedures should be conducted within the confines of an appropriately ventilated engineering control, such as a BSC or CFH.
8. Biological safety cabinets and chemical fume hoods should be located in low traffic areas and not near doors, air supply or exhaust. While working in a BSC, minimize activities that disrupt airflow in or around the cabinet.
9. Chemical fume hoods should be used for laboratory activities that could result in chemical explosions or fires and for experiments involving toxic, hazardous, volatile flammable or carcinogenic compounds. Biological safety cabinets should not be used for these materials since some biological safety cabinets recirculate the HEPA filtered exhaust air back into the lab. Consult with the Biological Safety Officer regarding the use of volatile chemicals or radioactive materials within a biological safety cabinet. Remember that chemical fume hoods and biological safety cabinets are ventilated engineering controls, not storage cabinets. Refrain from storing equipment, labware and other ancillary materials to avoid compromising proper cabinet directional airflow patterns.

10. Wipe down the BSC before beginning work and immediately after work is completed with an EPA approved disinfectant.
11. Place contaminated materials in covered, sealed, leak proof containers prior to removing them from the biological safety cabinet, other engineering control, or laboratory for autoclaving or incineration.
12. Decontaminate (by autoclaving or chemical disinfection as appropriate) all biologically contaminated materials (glassware, animal cages, laboratory equipment, etc.) before washing, reuse, or disposal. Discard materials via the proper waste stream.
13. Decontaminate all equipment before repair work is conducted by FME or outside vendors and prior to sending equipment to surplus. A properly completed Work Authorization Tag must be affixed to the equipment and signed by a lab equipment decontamination qualified individual. Contact EHS at x1451 if training is needed.
14. Be cautious when using sharps (i.e. needles, razors, etc.). Never recap, bend or shear a needle. Use sharps only when alternative methods are not feasible. Only needle-locking or single unit syringes should be used. When possible, replace sharps with non-sharp alternatives or with "safe" sharps.
15. Used syringes with needles (uncapped) should be placed in approved rigid, puncture resistant, leak proof sharps containers and packaged for disposal immediately after use. Never fill sharps containers more than  $\frac{3}{4}$  full.
16. Pipettes and broken glassware should be placed in an appropriate red bag, lined biohazard bag, or glass box after decontamination. Cardboard biohazard pipette keepers are also encouraged for use in sharps disposal.
17. Handle chemicals and radionuclides following appropriate safety precautions. Chemical and radioactive waste must not be poured down the drain. Call for waste pickup (x5718 for chemicals and x1384 for radioactive) or additional information.
18. Know the location of the nearest eyewash, safety shower, and fire extinguisher. Know how to use them. Flush eyewash weekly.
19. Secure all gas cylinders to prevent their toppling over.
20. Vacuum lines shall be protected with liquid disinfectant traps and HEPA filters (i.e. Vacushield™) which are checked routinely and replaced as necessary.
21. Practice good housekeeping in your laboratory.
22. For an opportunity to discuss particular safety related issues which you may encounter in your laboratory, please contact EHS at x1451.