

What Are Requirements for a BSL1 Lab?

Biosafety Level 1 is suitable for well-characterized agents that are not known to consistently cause disease in health adults, and present minimal potential hazard to lab personnel and the environment. Work in a BSL1 lab is typically conducted on an open bench top, using standard microbiological practices (listed below). Special containment equipment or facility design is not required, but may be used as determined by appropriate risk assessment. Supervisors/Teachers must be trained in procedures conducted in the laboratory as well as microbiology or a related science.

Standard Microbiological Practices

1. The supervisor must enforce policies that control lab access.
2. Hands must be washed after working with potentially hazardous material AND before leaving the lab.
3. Eating, drinking, handling contact lenses, putting on makeup, storing food for human consumption is NOT permitted in the lab area at any time. Food should be stored outside of the lab area and in designated cabinets/refrigerator specifically for food use.
4. Mouth pipetting is prohibited; mechanical pipetting is acceptable.
5. Safe handling of sharps i.e. needles, scalpels, glass pipettes, as well as broken glassware must be implemented. Supervisors should have practices implemented that reduce the risk of injuries. NEVER dispose of any sharps in the trash can.
 - a. Needles: must NOT be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated before disposal.
 - b. USED needles and syringes must be placed in a **puncture-resistant** sharps container for disposal.
 - c. Non disposable sharps must be placed in a hard walled container to be transported for decontamination; i.e. scalpels with non-removable blades.
 - d. **BROKEN** glassware must not be handled directly; use a brush, dustpan, tongs or forceps. Place broken glassware into the sharps container (a plastic 5 gallon bucket works great for this).
6. Splashing and/or aerosol (any airborne substance) should be avoided, make sure all procedures are performed to minimize the occurrence.
7. Use the appropriate disinfectant after the experiment to decontaminate the work surfaces, especially after a spill or splash.
8. All cultures, stocks, and other potentially infectious matters should be decontaminated **before** disposal.
 - a. Materials to be decontaminated outside of the lab must be placed into a durable, leak proof container and secured for transport.
 - b. Materials to be removed from the facility for decontamination must be packed in accordance with applicable local, state, and federal laws and regulations.
9. While using an infectious agent a biohazard symbol must be posted on the entrance to the lab. The sign must include: the name of the agent(s) in use, and the name and phone number of the supervisor or responsible personnel. As well the infectious agent's information should be posted in accordance with the institutional policy.
10. Pests should be kept to a minimum (insects, rodents, etc.)

11. Supervisor must ensure that lab personnel have received training on their duties in the lab and any precautions to prevent exposures, and exposure evaluation procedures.

Safety Equipment

1. Protective lab coats are recommended to prevent contamination of personal clothing.
2. Goggles should be worn to prevent slashes of microorganisms and/or other hazardous materials into the eyes. Those who wear contacts should also wear eye protection.
3. Gloves MUST be worn.
 - a. If gloves are contaminated, dispose of and put on a new pair.
 - b. Remove gloves and wash hands after working with the hazardous material AND before leaving the lab.
 - c. Do NOT wash or reuse disposable gloves. Dispose of used gloves WITH other contaminated waste.

Room Requirements

1. Must have doors for access control to the lab.
2. Must have a sink for hand washing.
3. Must be easily cleanable; carpets and rugs are NOT appropriate.
4. Lab furniture must be able to support loads and users. All spaces should be accessible for cleaning.
 - a. Bench tops MUST be impervious to water and heat resistant, as well as resistant to organic solvents, acids, alkalis, and other chemicals.
 - b. Chairs used MUST be covered with a non-porous material that can be easily cleaned and decontaminated with an appropriate disinfectant.
5. Lab windows that open to exterior should be fitted with screens.

For further reference please visit: <http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm>