Biosafety Fact Sheet

BASICS OF BIOSAFETY LEVEL 1

The term **containment** is used in describing safe methods for managing biological materials in the laboratory environment where they are being handled or maintained. The purpose of containment is to reduce or eliminate exposure of laboratory workers, other persons, and the outside environment to potentially hazardous or detrimental materials.

The Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) in their publication entitled Biosafety in Microbiological and Biomedical Laboratories (BMBL), established criteria for four levels of containment safety called **Biosafety Levels (BSLs)**. These criteria consist of combinations of laboratory practices and techniques, safety equipment, and laboratory facilities. Each combination is specifically appropriate for the operations performed, biological materials to be used, and the laboratory function or activity.

Biosafety Level 1 refers to a Basic Laboratory with open bench operations. It is classified as Risk Group 1 (RG1), with a low individual risk and low community risk for exposure to BL1 agents. Examples of BL1 work include the use of E. coli K12, murine tissue, and baculovirus.

The Following Standard Microbiological Practices Must Be Followed in BL1 Laboratories

- Staff must be trained on procedures specific to the work being performed in the laboratory.
- Appropriate personal protective equipment (PPE) must be worn, such as disposable gloves and safety glasses when splashes are possible.
- Disposable gloves should be changed frequently and hands should be washed between glove changes.
- No eating, drinking, chewing gum, smoking, or applying cosmetics is allowed in the BL1 laboratory at any time. This is to prevent ingestion or absorbtion of infectious materials, chemicals, or radionuclides.
- No mouth pipetting is permitted.
- Sharps must be disposed in special Sharps Containers. Sharps include needles, scalpel blades, broken glassware, disposable razors, suture needles, and Pasteur pipettes. Do not fill Sharps Containers more than 2/3 full.
- Report injuries immediately to the laboratory administrator or department administrator. Seek medical attention for injuries requiring more than basic First Aid. Submit Incident Report Form to the Harvard Institues of Medicine/New Research Building (HIM/NRB) Environmental Health and Safety (EH&S) Office within 2 working days.
- Needlestick injuries must be reported within one to two hours of injury. Some institutions have a designated number for needlestick injuries. Check with your institution's occupational heatlh department.

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