



Biosafety Fact Sheet



BASICS OF BIOSAFETY LEVEL 2

Biosafety Level 2 refers to a basic laboratory with biosafety cabinets (BSC) and other physical containment devices. Exposure to microbiological agents used in a BL2 laboratory present a moderate individual risk and low community risk. Examples of BL2 work include the use of Hepatitis A – E viruses, Adenovirus, Herpes simplex types 1 and 2, and human blood, body fluids, tissues, or primary human cell lines where the presence of an infectious agent is unknown.

Registration

The use of any BL2 agents at Harvard Institutes of Medicine/New Research Building (HIM/NRB) must be approved by the Harvard Committee on Microbiological Safety (COMS).

Exposure risks at BL2 include:

- Accidental needle sticks or cuts.
- Exposure to the mucous membranes of the eyes, nose, and mouth.
- Ingestion of infectious materials (due to failure to wash hands after handling infectious materials and before leaving the laboratory).
- Laboratory procedures with aerosol or high splash potential.

The Following Standard Microbiological Practices Must Be Followed in BL2 Laboratories

- Provide job-specific training to staff.
- Provide U.S. Occupational Safety and Health Administration (OSHA) bloodborne pathogen (BBP) training before work begins and annually thereafter.
- Follow Universal Precautions procedures at all times.
- Limit access to work areas. Doors to the laboratory should be closed during work with BL2 materials.
- Post biohazard warning signs on doors to laboratory and on all equipment containing or potentially contaminated with infectious materials.
- Wear appropriate personal protective equipment (PPE) (labcoats, disposable latex or nitrile gloves, and safety glasses and a face shield when splashes are possible.)
- Change disposable gloves frequently and wash hands between glove changes.
- Wash hands before leaving the laboratory.
- No eating, drinking, chewing gum, smoking, or applying cosmetics is allowed.
- 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.
- Conduct procedures likely to create aerosols, sprays, or splashes in a biosafety cabinet.
- Decontaminate work surfaces daily, at a minimum. Decontaminate the work surface inside the BSC with 70% Ethanol before and after use.
- Decontaminate plenum (area under the work surface of the BSC) at least monthly.
- Aspiration flasks outside a BSC must be in secondary containment to prevent spills on countertops and floors.
- In-line hydrophobic filters should be used for all aspiration flasks.
- Use secondary containment whenever transporting BL2 materials outside of the laboratory.
- Follow the one-glove rule: wear a glove on the hand carrying the secondary container. Wear no gloves on the hand you'll use to open doors etc.
- 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 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 health department.
- Report illnesses suspected to be work-related to the Laboratory Administrator or Department Administrator and to the Safety Office immediately.

Also See...

- Biosafety Fact Sheet on Registering your Project with COMS
- Biosafety Fact Sheet on Lentiviral Vector System
- HIM/NRB Biosafety Manual

For more information contact the HIM/NRB Associate Biosafety Officer, Jessica Healey at 1-800-825-5343 or jhealey@eheinc.com