



# 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](mailto:jhealey@eheinc.com)**