

Minimum Biosafety Level 2+ Laboratory Requirements for COMS-Approved Projects. *Additional stipulations may be listed in your approval letter.*

Biosafety Level 2+ (BL2+) builds upon Biosafety Level 2 (BL2). All requirements of BL2 are also required for BL2+, with the addition of the following:

Training

- The PI must ensure that the laboratory members are trained in agent-specific BL2+ practices.

Work Practices

- Sharps, including glass Pasteur pipettes and needles, must be eliminated from all laboratory procedures.
- BL2+ laboratory spaces must be designed with a sign on the door indicating that materials requiring BL2+ work practices are in use and listing the agent(s). A laboratory may choose to temporarily designate a space as BL2+. In this case, a temporary sign must be placed on the laboratory door and on designated biosafety cabinet(s) when BL2+ work practices are taking place. This sign may be removed when work inside the cabinet is completed, the cabinet has been decontaminated, and all PPE used for BL2+ work has been disposed in a biowaste container.
- All work must be conducted in a biosafety cabinet.
- All centrifugation must be conducted using sealed rotors or centrifuge safety cups/buckets.
- Any transfer of materials to or from incubators, freezers, centrifuges should be transported within a secondary container.
- All solid waste must be collected in an autoclavable biohazard waste bag within the biosafety cabinet. This bag must be sealed prior to removal from the biosafety cabinet for transfer to larger biowaste container in the BL2+ laboratory.
- All liquid waste must be inactivated with an appropriate disinfectant before removal from the biosafety cabinet. Aspiration tubing must be flushed with disinfectant after completion of work.

Personal Protective Equipment (PPE)

- A disposable solid front gown that is impervious to fluids must be worn.
- Double gloves are required.
- Wrist and forearm skin must be protected by use of extended cuff gloves, gowns with closed cuffs and/or sleeve covers.
- All used PPE must remain within the BL2+ laboratory space and either be reused or disposed of in a biowaste container within that space

References:

NIH guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines).
<https://osp.od.nih.gov/biotechnology/nih-guidelines/>

Biosafety in Microbiological and Biomedical Laboratories, 5th ed.
<https://www.cdc.gov/biosafety/publications/bmbl5/index.htm>