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COMS BL2+ Policy

I. Purpose

This policy was created to define proper BL2+ work practices for research with COMS Regulated Materials ("CRM"), as defined in the Policy Introduction (II) Scope, registered with the Harvard Medical School Committee on Microbiological Safety (COMS).

II. Applicability

All laboratories having a COMS-approved registration requiring BL2+ practices.

III. Definitions

BL2+: The application of specific BL3 work practices to enhance the biosafety of BL2 work practices.

IV. Implementation Procedures

A. General Information

Contact your institutional biosafety officer should you have any questions about BL2+ procedures. Laboratory space and specific work practices for BL2+ work must be reviewed by the institutional biosafety officer prior to beginning research.

B. Practices

The following practices are required in addition to BL2 practices and procedures.

1. Personal Protection Equipment (PPE):
    a. A disposable solid front gown that is impervious to fluids is required. This gown may be reused unless it becomes contaminated or its integrity is compromised, in which case it must be replaced. Double gloves are required. Skin should not be exposed during work with infectious materials. Options for protection of the skin include extended cuff gloves and gowns with closed cuffs.
    b. Respiratory protection, such as a positive air purified respirator (PAPR) or fitted N95 respirator, may be required for laboratory activities that

may generate aerosols. This requirement must be evaluated by the institutional biosafety officer.

c. All PPE must be dedicated to BL2+ activities and must be disposed of in a biowaste container.

2. Work Practices
   a. Sharps, including glass Pasteur pipettes and needles, must be eliminated from laboratory procedures. If your scientific procedures require the use of sharps, that deviation must be described in your COMS application and approved by the Committee.
   b. BL2+ laboratory spaces must be designated 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.
   c. All work involving the manipulation of infectious materials must be conducted in the biosafety cabinet or other physical containment device (e.g., centrifuge rotor covers). Any transfer of materials to or from incubators, freezers, or centrifuges should be conducted within a secondary container. If your scientific procedures require work outside of a biosafety cabinet, that deviation must be described in your COMS application and approved by the Committee.
   d. All centrifugation must be conducted using sealed rotors or centrifuge safety cups/buckets.
   e. Efforts should be made to reduce aerosols.
   f. Depending on the agent in use and experiment being conducted, an absorbable pad may be appropriate.

g. Any research material handled in the biosafety cabinet while working at BL2+ must be decontaminated on the outside of each container prior to removal from the biosafety cabinet.

3. Waste Procedures: Inside the Biosafety Cabinet
    a. A solid waste collection container must be placed inside the cabinet to collect solid experimental materials. Petri dishes should be sealed closed prior to disposal. No infectious agents or materials may be left unattended inside the biosafety cabinet.
    b. Liquid waste must be inactivated with the appropriate disinfectant prior to being removed from the biosafety cabinet. Aspiration tubing must be flushed with disinfectant following completion of work.
    c. Solid waste (including paper wrappers and outer gloves) and all other materials generated inside the biosafety cabinet in a BL2+ laboratory are considered contaminated and must be disposed in an autoclavable biohazard waste bag within the biosafety cabinet prior to leaving the laboratory. All sharps waste must be disposed of in a sharps container.
4. Waste Procedures: Solid Waste Disposal Options
    a. Solid waste collected in a manner consistent with the procedures listed above can be placed directly into biowaste containers for off-site disposal.
    b. In some circumstances, the Committee will require materials to be autoclaved prior to disposal in biowaste containers. This requirement will be identified on the COMS approval letter. If autoclaving is required, materials must be placed in secondary containment prior to being moved to the autoclave.
    c. An autoclave must be available but does not need to be located within the BL2+ laboratory.
5. Waste Procedures: Outside the Biosafety Cabinet
    a. Laboratory materials outside of the biosafety cabinet (e.g., media, gels, PCR) do not need to be placed in an autoclavable container if they have not come into contact with materials requiring BL2+ practices. A rigid

waste container with a lid must be provided to collect all the waste inside the BL2+ laboratory.

b. Shipping cartons that have not come into contact with infectious materials and have not been placed inside a biosafety cabinet can be disposed of as regular trash.

V. BL2+ Training

PIs are responsible for ensuring their staff have proper training in BL2+ practices and must provide agent-specific training.

VI. Policy Authority

The Office of Biological Safety of the Harvard Medical School is responsible for supporting the Committee on Microbiological Safety. This includes preparation and revision of the COMS Policy Manual for committee review and approval. The institutional biosafety officer enforces and interprets this policy in collaboration with the Committee on Microbiological Safety (COMS).

VII. Related Policies

- Liquid Waste Policy
- Sharps Policy
- Solid Waste Policy

VIII. References

- BMBL 5th Edition
- NIH guidelines