

IBC Biosafety Manual Template & Instructions

SUNY ESF

BIOSAFETY MANUAL FOR Project # _____ **Date** _____

- I. WORK AREA & AREA ACCESS** - Identify all rooms and/or areas where the work will be done, who will have access, and how access will be controlled.

- II. CONTAINMENT** - State where and how samples will be stored. Describe how samples will be labeled. If necessary, describe how they will be transported from one area to another. If shipping samples, describe how they will be packaged and shipped.

Note: All personnel shipping OR RECEIVING potentially hazardous materials must receive D.O.T. Training (This is available on CITI)

- III. PERSONAL PROTECTIVE EQUIPMENT** - Describe any protective clothing and/or equipment that will be required when working with hazardous agents.

- IV. CENTRIFUGATION** - State the location, centrifuge model and procedures to be employed when potentially infectious agents are centrifuged. Detail decontamination procedures for shared or dual-use equipment.

- V. NEEDLES & SHARPS** - State how these will be used, collected as waste, and discarded. Describe procedures to be followed in the event of a needle stick or other sharps' injury.

- VI. ACCIDENTS OR SPILLS** - State the procedures to be followed in the event of an accident or spill involving potentially hazardous materials.

- VII. CONTAMINATED WASTE** - Describe procedures for disposal of all contaminated and potentially-contaminated waste. This should include samples, manipulation materials, personal protective equipment, and any other potentially contaminated materials for disposal.

VIII. AEROSOLS - State how potential aerosols will be generated and the procedures to contain them and/or protect personnel.

IX. TRAINING - State how personnel will be trained to handle potentially infectious materials properly.

X. HAZARDOUS MATERIALS (biological, chemical, radiation) USED IN ANIMALS (as Applicable)- Describe specific methods to protect employees from exposure to hazardous materials (biological, chemical, radiation) used in animals. This should include methods to be used during transport of the agent or exposed animals to and from the animal facility, during the actual inoculation or exposure, during animal housing post-exposure, and during terminal procedures.

XI. QUESTIONS/CONCERNS: (This section must be included in all biosafety manuals) - Lab personnel who have questions or concerns about lab practices and/or safety should contact the SUNY ESF Institutional Biosafety Committee (IBC) Administrator at (315) 470-6896.

FOR INDIVIDUALS WHO ARE/MAY BE IMMUNOCOMPROMISED OR PREGNANT:
(Add this section if applicable)- Please be aware that this project uses agent(s) which may present an increased risk to individuals with a compromised immune system or to individuals taking medication which may reduce their ability to fight infection. It is important that such individuals review these risks with the Principal Investigator and discuss these risks and specific management procedures with their health care provider.

INSTRUCTIONS FOR WRITING A BIOSAFETY MANUAL

INSTRUCTIONS: Make sure to include each section below, providing project specific information to address each section. **EXAMPLES ARE PROVIDED BUT PROJECT SPECIFIC ANSWERS ARE REQUIRED IN EACH SECTION.**

Work Area & Area Access:

Provide a detailed description of the procedures in place to minimize risks to personnel working in the lab (or other facility). Identify all rooms and/or areas where the work will be done, who will have access, and how access will be controlled.

Examples:

1. During times when working with human blood, body fluid, tissue or pathogenic organisms, access will be restricted to only authorize individuals. Authorized individuals will be advised of the potential hazards and have received training and shown proficiency at the appropriate laboratory practices.
2. While working with potential hazards, doors will remain closed and labeled. Labels include the universal biohazard symbol, the pathogen(s) being used, and the contact information of the responsible individual.
3. All work areas will be properly equipped for hand washing and waste disposal.
4. During work with potentially infectious agents, personnel are not allowed to eat, drink, smoke, apply cosmetics or handle contact lenses. Mouth pipetting is not allowed.

Containment:

State where and how samples will be stored. Describe how samples will be labeled. If necessary, describe how they will be transported from one area to another. If shipping samples, describe how they will be packaged and shipped.

Examples:

1. All equipment that contacts or contains potentially infected samples are labeled with the biohazard symbol.
2. A Class II biological safety cabinets will be used for work with potentially infectious substances.
3. Vacuum lines (used to aspirate potentially infectious fluids) are protected by a liquid disinfectant trap and have a HEPA filter between the trap and the vacuum source.
4. Food is not stored in any refrigerator or freezer used for sample storage.

5. During transport, samples are kept in leak proof containers. At least two layers of containment (i.e., samples within a sealed pouch within another sealed transport container such as a small cooler) will be used. Transport container is also be labeled with biohazard symbol.

PERSONAL PROTECTIVE EQUIPMENT

Describe any protective clothing and/or equipment that will be required when working with hazardous agents.

Examples:

1. Universal Precautions will be employed by all individuals with potential exposure to any human biological samples.
2. Gloves will be worn whenever potentially infected substances are in use. Gloves will be suitable for the task, changed if torn or contaminated, and not worn outside of the laboratory. Hands will be washed when gloves are removed.
3. Protective clothing (i.e. lab coats, protective gowns) will be worn whenever potentially infected substances are in use. These will be changed if contaminated and not worn outside of the laboratory.
4. Glasses with side shields, goggles and/or face shields will be worn whenever there is the potential of spray, splash, splatter or aerosol generation of potentially infected substances.
5. Water repellent face masks will be worn whenever there is the potential of spray, splash, splatter or aerosol generation of potentially infected substances.

CENTRIFUGATION

State the location, centrifuge model and procedures to be employed when potentially infectious agents are centrifuged. Detail decontamination procedures for shared or dual use equipment.

Examples:

1. Centrifugation of potentially contaminated samples will only be done in equipment with secondary containment (i.e. sealed rotors or buckets).

NEEDLES & SHARPS

State how these will be used and discarded. Describe procedures to be followed in the event of a needle stick or other sharps injury.

Examples:

1. Needles and other sharps will only be used in procedures involving potentially contaminated materials when no other alternative is available.
2. Needles will not be removed, recapped, bent or sheared. Needle and syringes will be deposited in a puncture proof, leak proof sharps container labeled as such and including the biohazard symbol. Containers will never be overfilled, and will be submitted for disposal by sending a message to labwaste@esf.edu.
3. Sharps' injury procedures include contacting the employee's immediate supervisor and the ESF Biosafety Officer (315-470-6896)

ACCIDENTS OR SPILLS

State the procedures to be followed in the event of an accident or spill involving potentially hazardous materials.

Examples:

1. Spills resulting in overt exposure to potentially infectious substances will be reported immediately to the Laboratory Director and Environmental Health & Safety (315-470-6666).
3. Procedures are in place to initiate medical evaluation, surveillance and/or treatment as necessary along with proper procedures for documentation.

CONTAMINATED WASTE

Describe procedures for disposal of all contaminated and potentially contaminated waste. This should include samples, manipulation materials, personal protective equipment, and any other potentially contaminated materials for disposal.

Examples:

1. All potentially contaminated items will be placed in biohazard labeled bags contained within leak proof, biohazard labeled receptacles.
2. Materials that are autoclaved will still be disposed of through ESF's regulated medical waste stream by submitting a message to labwaste@esf.edu.

AEROSOLS

State how potential aerosols will be generated and the procedures to contain them and/or protect personnel.

Examples:

1. All efforts will be made to minimize the potential for generating aerosols of potentially infectious materials.
2. Primary containment (i.e. biological safety cabinets) will be the principle means of protecting personnel from aerosols.

TRAINING

State how personnel will be trained to handle potentially infectious materials properly.

Examples:

1. All employees working with potentially infected substances have participated in the basic required training and extended training provided by their laboratory supervisor and specific to the potential hazards.
2. A complete completed "Appendix A Study Personnel Log" is attached to the Bio-Safety Manual.

HAZARDOUS MATERIALS (biological, chemical, radiation) USED IN ANIMALS

Describe specific methods to protect employees from exposure to hazardous materials (biological, chemical, radiation) used in animals. This should include methods to be used during transport of the agent or exposed animals to and from the animal facility, during the actual inoculation or exposure, during animal housing post exposure, and during terminal procedures.

QUESTIONS/CONCERNS: (This section must be included in all biosafety manuals)

Lab personnel who have questions or concerns about lab practices and/or safety should contact the SUNY ESF Institutional Biosafety Committee (IBC) Administrator at (315) 470-6896.

APPENDIX A- STUDY PERSONNEL LOG

List all personnel involved with this project; include lab technicians, vertebrate animal handlers, collaborators, etc. **Each employee must sign** to indicate they have been informed of potential hazards, safe work practices, availability of medical surveillance, and training related to this project. All personnel must receive appropriate training prior to starting work on this project. *Add additional sheets as necessary.*

IBC #: _____ **PI:** _____

Employee Name	Employee ID# (not SSN)	Position/Title	*Experience (insert applicable letter(s) below)	Signature of Employee

Appointment of any additional personnel to this study requires notification to the IBC, along with submission of the above information for each appointee.

***Experience:** *(use this list for PI above, and other personnel, below)*

- a) Prior hands on experience in working with infectious agents (include number of years)
- b) Prior hands on experience in working with recombinant DNA (include number of years)
- c) No prior hands on experience, but has received training from: