

Laboratory - SpecificBiosafety Plan

# *For*

# *PI / Building / Lab Room(s)*

****

## 

**BIOSAFETY LEVEL**

**1**

## Updated on: DATE

**Emergency Information**

**Emergency Contacts**

|  |  |  |
| --- | --- | --- |
| Name | Phone Number | |
| **ALL EMERGENCIES ON CAMPUS** | **210-784-1911** |
| A&M-SA Police Department | 210-784-1900 (non-emergency) |
| A&M-SA Risk and Safety | 210-784-2028 (non-emergency) |
| **A&M-SA Research & Academic EHS (RAEHS)**  **Victor Pantusa, BSO** | **210-784-2822 (non-emergency)** |
| **830-423-6796 (Emergency)** |
| Facilities/SSC | 210-784-2100 (non-emergency) |

Use the non-emergency A&M-SA UPD number, for information and to contact A&M-SA support personnel as needed

## Emergency Equipment:

Emergency Equipment Locations (see floor plan drawings for locations of safety equipment Appendix D.)

|  |  |
| --- | --- |
| **Emergency Equipment** | **Nearest Location in/ to Your Work Area**  **(List Rm # and briefly describe location in room, i.e., “At lab sink,” or “On wall by main lab entry,” etc.)** |
| Telephones and phone numbers |  |
| Eyewash Stations |  |
| Emergency Showers or Drench Hoses |  |
| Fire Extinguishers |  |
| Fire Alarm Pull Stations |  |
| First Aid kit |  |
| Biological Spill Kit\*\* |  |
| Location of Assembly Location (after building evacuation) |  |

\*\*(Example contents of spill kit: Disposable lab coat/ gloves/ shoe covers/ disposable face shield;

absorbent paper towels; dustpan; tongs/ forceps; autoclave bags; disinfectant; copy of spill

procedure; warning sign for spill to post; N-95 respirator if appropriate)

**Posting Of Emergency Contacts and Hazards**

We have posted an Emergency Contacts sign on the access doors to all areas where potentially infectious material is used or stored (including refrigerators, freezers, or cryogenic storage units). Emergency contact sheet(s) is/are accurate and kept current. They include:

* Names of Principal Investigators, Lab Managers and/or other responsible personnel; a MINIMUM of 2 names for responsible parties is provided.
* Telephone numbers for these individuals where they can be reached at any time.

We have placed a Biosafety level sign and warning signs for other hazards present in the laboratory on the main access doors to the lab.

# Principal Investigator(s) (PI) / Manager

Principal Investigator\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name: | PI Name | Email: | PI Email | |
| Office Phone: | Office Phone | Alternate Phone: | | Alternate Phone No. |

Collaborators\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name: | Collaborator Name | Email: | Collaborators Email | |
| Office Phone: | Office Phone | Alternate Phone: | | Alternate Phone No. |

To add Collaborator’s information: Click on a row, then click the blue plus sign on the right.

Lab Manager\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name: | Lab Manager’s Name | Email: | Lab Manager Email | |
| Office Phone: | Office Phone | Alternate Phone: | | Alternate Phone Manager |

\* This information will be provided to the UPD for use in emergencies involving your labs.

**Signature(s) - Principal Investigators and Designees**

A designee can be assigned the task of completing the LSBP by the PI of the research program. Designees must be persons of competence, proficiency and responsibility in the PI’s research program (post‐doctoral student or fellow, doctoral student, lab technician, research associate, etc.). If a designee completes this template, the PI must review it for correctness prior to providing a signature. Designee signatures are also required on the completed document.

|  |  |  |
| --- | --- | --- |
| Upon providing your signature below when this document is complete, as PRINCIPAL INVESTIGATOR you are verifying:   * Accuracy, currency, and correctness of the content, to the best of your knowledge. * Your agreement with and compliance with the conditions and requirements set forth in the document, item by item, and as denoted by placing a ‘check’ in check boxes provided with items. * Your understanding that you will be held accountable if these conditions and requirements are not met. * Your review and approval of the content in the document as provided by your designee (if applicable).   Principal Investigator(s) | | |
| Print Name | Signature | Date |
|  |  | Date |
| Upon providing your signature below when this document is complete, as **DESIGNEE** for your Principal Investigator you are verifying:   * Accuracy, currency and correctness of the content you provided, to the best of your knowledge. * Your agreement with and compliance with the conditions and requirements set forth in the document, item by item, and as denoted by placing a ‘check’ in check boxes provided with items.   Designee(s) | | |
| Print Name | Signature | Date |
|  |  | Date |

**Laboratory Specific Biosafety Plan (LSBP)**

* This document, when completed will satisfy the requirement for a “safety manual specific to the facility” found in the Biosafety in Microbiological and Biomedical Laboratories (BMBL) 6th edition (pages 33, 37). [A4 1+2]
* The document is a living, working document that is an important resource for staff and students engaged in the activities using biological and/or recombinant DNA or synthetic genomic materials. Its primary focus is to provide pertinent information to help execute the operations of the lab in a safe and professional manner.
* Maintenance of a printed copy of this completed document in the lab is required for reference, training, and emergency response. The completed document is also essential for IBC review of your protocol for approval/renewals, and for biosafety inspections by RAEHS.

**Using and Maintaining the LSBP**

Required for lab-specific training: All laboratory personnel must read this copy of your laboratory’s completed LSBP before actively working with biohazardous materials in the laboratory. All laboratory personnel must verify that they have read this document by signing the Worksite Specific Safety Training Checklist for Laboratories document.

* Update the LSBP when anything changes such as personnel, agents, procedures, equipment, work locations, etc. Document all updates below in the Plan Review / Revision Status table.
* The LSBP must be reviewed annually by PI or designee. Document your annual reviews in the Plan Review / Revision Status table below.

**Plan Review / Revision Status**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **Revision #** | **Comments** | **By** |
| Date | 0 | Comments | By |

To add another row: Click on a row, then click the blue plus sign on the right.

**SECURITY OF LABORATORIES AND BIOLOGICAL MATERIAL** (Choose all that apply)

|  |  |
| --- | --- |
|  | Access to the laboratory is controlled when work is being conducted. **[B.1]** |
|  | This lab will practice the policy of closing access doors to biohazardous work areas when work is being performed with biohazardous materials. |
|  | Entry doors to the biohazardous area will be locked when no one is in the lab. |
|  | If biohazardous material is stored in freezers, refrigerators, Dewars, etc. that are located in areas accessible to individuals not on this protocol (such as core labs or prep labs), those storage units will be 1) kept locked except when lab personnel are removing or adding material, or 2) maintained in those locations using the following security measures:  Lab Specific Security Measures |
|  | Visitor Access - Visitors to this lab will be: **[A.2]**   * authorized by the PI or designee, * escorted by lab personnel, and * informed of necessary lab safety and lab hazards information prior to entering the lab. |

If biohazardous material is stored in freezers, refrigerators, Dewars, etc. that are located in areas accessible to individuals not on this protocol (such as core labs or prep labs), those storage units will be 1) kept locked except when lab personnel are removing or adding material, or 2) maintained in those locations using the following security measures:

Comments

**Service Providers Lab Access and Safety** (Servicing of Lab Equipment)

As PI of this laboratory, I (or my designee) will:

Arrange for a lab escort when service providers (e.g., facilities workers, equipment repair technicians, movers, etc.) need to enter the lab and access their work areas in the lab. Laboratory equipment that will be serviced is to be decontaminated prior to service personnel working on the units. Lab hazard information can be verbally communicated to service providers at this time.

**LAB EQUIPMENT will be DECONTAMINATED** and moved out of the laboratory space for service/repair. A document will be attached to the equipment stating the type of hazardous materials was used in/with the equipment; how it was decontaminated; by whom; date of decontamination; approval by BSO. (Contact RAEHS for decontamination procedures and form).

|  |
| --- |
| **Introduction** |

**1. Purpose**

This Lab Biosafety Plan is intended to be specific to the activities performed in the Principal Investigator’s Name laboratory.

This plan shall include specific policies and procedures established by the Principle Investigator(s) for all laboratory personnel. It is also intended to enhance the University’s overall Emergency Plan by providing specific information to lab personnel on what should be done in various emergencies.

**2. Biosafety Level**

This lab operates at the Biosafety Level marked below.

|  |  |
| --- | --- |
| **X** | **Biosafety Level 1**  Involves well-characterized agents not known to consistently cause disease in immunocompetent adult humans, and present minimal potential hazard to laboratory personnel and the environment. |
|  | **Biosafety Level 2**  Involves agents that pose moderate hazards to personnel and the environment. |

**3. Work Locations**

In the table below, list the building and room number associated with your work using biological agents, and list the primary category for each location. List the names of all PI’s using the laboratory spaces.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Building** | **Room** | **Phone** | **Research** | **Teaching\*** | **Storage** | **Prep Space** | **Animal Housing** | **Animal Procedures** | **All PI’s Using Space** |
| CAB | 302 | Comments |  |  |  |  |  |  | Comments |
| CAB | 305 | Comments |  |  |  |  |  |  | Comments |
| CAB | 306 | Comments |  |  |  |  |  |  | Comments |

To add another row: Click on a row, then click the blue plus sign on the right.

### For teaching labs, please provide the information below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Course Title | Primary PI | Semester |
|  | Course Title | Primary PI | Semester |
|  | Course Title | Primary PI | Semester |
|  | Course Title | Primary PI | Semester |
|  | Course Title | Primary PI | Semester |

To add another course: Click on a row, then click the blue plus sign on the right.

**4. IBC Protocol(s)**

### In the table below, provide information for the approved IBC Protocol(s) covering the work in this laboratory:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **IBC Protocol Title** | **IBC #** | **Expiration** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |
|  | **IBC Protocol Title** | **IBC #** | **Date** |

To add another IBC Protocol: Click on a row, then click the blue plus sign on the right.

# 4. General Information

The BSL1 research laboratory, 302, 305 & 306 are located on the 3rd floor of the CAB Building. An ID reader restricts access to this facility. Special instrumentation is employed in this area to contain potential aerosols and reduce operator exposure.

# 5. Training

Prior to being allowed independent access to or performing work independently in the facility, all personnel will be trained by the Principal Investigator, Comments. Training in the Lab will include knowledge of the Biosafety Manual and approved protocols, followed by observation of a certified (already trained) user performing the intended procedures specific to the laboratory. Then the trainee will work under supervision of a certified lab user until the certified user gives approval and has successfully completed all lab training requirements. Records and details of training are maintained in Appendix 6.

|  |
| --- |
| **Biosafety Procedures** |

# 6. Biosafety Level 1

Biosafety Level 1 (BSL-1) is suitable for work involving well-characterized agents not known to consistently cause disease in immunocompetent adult humans and that present minimal potential hazard to laboratory personnel and the environment. BSL-1 laboratories are not necessarily separated from the general traffic patterns in the building. Work is typically conducted on open benchtops using standard microbiological practices. Special containment equipment or facility design is not generally required but may be used as determined by appropriate risk assessment. Laboratory personnel receive specific training in the procedures conducted in the laboratory and are supervised by a scientist with training in microbiology or a related science. (See Appendix 1 for BMBL excerpts)

**7. Responsibilities**

7.1 Principal Investigator/Laboratory Supervisor/Instructor

1. Will assure that all research and support personnel obtain required training on the potential hazards associated with the work involved, the necessary precautions to prevent exposures, the exposure control/medical surveillance plan, and the incident reporting procedures.
2. Will assure that documentation of training is maintained in the laboratory and available for inspection.
3. Will assure that biosafety procedures are incorporated into standard operating procedures for the laboratory and that the laboratory maintains written policies and procedures for handling of other potentially infectious materials (OPIM) or biohazardous agents.
4. Will assure that personal protective equipment and necessary safety equipment is provided and used.
5. Will assure that all laboratory personnel and support personnel are compliant with the relevant regulations, guidelines, and policies.
6. Will submit an incident report form to the IBC concerning reportable incidents as outlined in the A&M-SA IBC Procedures Manual.
7. Will review and update the Laboratory Specific Biosafety Plan at least annually and more frequently if procedures and practices change.
8. List any additional PI/Laboratory Supervisor/Instructor responsibilities in this laboratory:

Comments

## 7.2 Research Personnel

1. Will participate in and complete all required training.
2. Will follow biosafety procedures and practices outlined in this manual and the A&M-SA Biosafety Manual.
3. Will report incidents of exposure or accidents as outlined in the A&M-SA IBC Biosafety Procedures Manual to the Principal Investigator/Laboratory Supervisor/Instructor.
4. Will comply with all aspects of the exposure control/medical surveillance plan for the agents covered by this biosafety laboratory manual.
5. Will review this Laboratory Specific Biosafety Plan at least annually and more frequently if procedures and practices change.
6. List additional research personnel responsibilities in this laboratory:

Additional Responsibilities

8 Agents / Projects and Risk Assessment

*Insert the content provided on the applicable protocol form(s) for the materials in use under this laboratory manual. Remember to mark Not Applicable or No for material types that are not in use.*

8.1 Infectious Agents

No, will not be used

Yes, Infectious agents will be used. (See list in Application for IBC Permit in Appendix 2)

8.2 rDNA or synthetic DNA Materials

Not Applicable

Yes, rDNA or synthetic DNA Materials will be used. (See list in Application for IBC Permit in Appendix 2)

8.3 Human or Nonhuman Primate Materials

Not Applicable, will not be used

Yes, Human or Nonhuman Primate Materials will be used. (See list in Application for IBC Permit in Appendix 2) See RAEHS *Guidelines: Universal Precautions for Handling Human Blood, Body Fluids and tissues in Research Laboratories* for more information.

8.4 Biological Toxins

Not Applicable, will not be used

Yes, Biological toxins will be used. (See list in Application for IBC Permit in Appendix 2)

8.5 Risk Assessment

Please see the IBC Protocol in Appendix 2 IBC Risk Assessment Form(s) for each of the Agents listed in Table A Part II of the IBC Protocol Application.

8.6 List any additional PI/Laboratory Supervisor/Instructor information for this laboratory:

Enter text here

**9. Procedures for BSL-1**

**9.1 General Signage for BSL-1 materials or agents**

1. A Laboratory Door Sign is posted at the laboratory entrance.
2. Posted information includes:
   * 1. The laboratory’s biosafety level
     2. Supervisors name and contact phone number(s)
     3. PPE requirements
     4. General occupational health requirements
     5. Agent information

**9.2 Entry and Exit Procedures**

9.2.1Access to this laboratory is restricted to those personnel approved by the principal investigator (list name of PI/Lab Supervisor/Instructor) when work with the biological agents is in progress.

PI: Enter Name

9.2.2 Does entry into this laboratory requires participation in medical surveillance plan?

Yes  No

9.2.3 Does entry into this laboratory require vaccination against some infectious agent(s)

Yes  No

If Yes, then list the agents below:

Agents

9.2.4 List additional PI/Laboratory Supervisor/Instructor requirements for this laboratory:

Additional entry requirements

**9.3 Good Laboratory Practices must be followed at all times.**

9.3.1 Eating, drinking, chewing gum, smoking, handling contact lenses, or applying cosmetics is prohibited in this laboratory.

9.3.2 All food for human consumption must be stored outside the laboratory area in cabinets or refrigerators designated for this purpose.

9.3.3 Mouth pipetting is prohibited. Mechanical pipetting devices must be used.

9.3.4 Personal items such as coats, boots, bags and books should not be stored in the laboratory.

9.3.5 All procedures will be conducted such that the creation of splashes and aerosols are minimized.

9.3.6 No animals or plants may enter this laboratory unless used specifically for the research being performed and approved by the IACUC. If animals are used in the context of an IBC protocol, use in the laboratory must be approved by the IBC.

9.3.7 Appropriate PPE must be worn when handling BSL-1 agents.

Personnel in the laboratory will use the following personnel protective equipment when working with potentially infectious materials:

1. At a minimum disposable gloves and lab coats, gowns, or uniform must be used.
2. Personnel wearing contacts will be advised to wear eye protection when working with potentially infectious material.
3. Personnel will change gloves when they are contaminated, compromised, at conclusion of work, or more frequently if required. Gloves will be disposed in appropriate accumulation containers.
4. Gloves will not be reused.

|  |
| --- |
| e. Will additional PPE be used?  Yes  No  If Yes, then list the additional PPE in the box below:  Additional PPE required |
|  |

9.3.8 Upon completion of work with BSL-1 agents, the following procedures must be done.

(1) Remove and discard gloves in biohazard waste. Disposable gloves may not be washed or reused.

(2) Wash hands.

(3) Remove Laboratory coat, gown, smock, or uniform before leaving laboratory for non- laboratory areas such as cafeteria, library, or administrative offices. For disposable protective clothing, place in biohazardous waste. For reusable protective clothing, hang in designated area in laboratory for reuse, or place in designated area for laundering by the institution. Protective clothing should not be taken home.

(4) Eye and face protection must be disposed of with contaminated waste or decontaminated after use.

(5) Wash hands before exiting.

9.3.9 Sharps, such as needles, scalpels, pipettes, and broken glassware will be handled in the following manner:

1. Whenever possible, use of sharps with potentially hazardous material will be avoided. Plasticware will be substituted for glassware whenever possible.
2. The handling of sharps will be minimized. Needles will not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal.
3. Used disposable needles and syringes will be carefully placed in a puncture-resistant containers used for sharps disposal. Sharps containers will not be beyond ¾ full.
4. Will **Non-disposable** sharps be used in this lab? Yes  No
5. If *Yes*, list the types of non-disposable sharps used:

List Non-Disposable Sharps

1. If *Yes*, once **non-disposable sharps** are contaminated with infectious material, select one or both of the following and provide a description.

They are placed in a hard-walled container for transport to a processing area for decontamination or

Describe the manner in which they are decontaminated below:

Decontamination Methods

1. **Biohazardous sharps** will be disposed when containers are 2/3 to 3/4 full. RA-EH&S will be contacted to arrange disposal of biohazard sharps.
2. Broken glassware will not be handled directly. It will be removed using a brush and dustpan, tongs, or forceps and into proper disposal.

|  |
| --- |
| Are there additional precautions?  Yes  No  If Yes, then list the additional PPE in the box below:  List Additional PPE |
|  |

9.3.10 All procedures will be conducted in a manner that minimizes the creation of splashes and/or aerosols. Work may be conducted on the open bench; however, if procedure produces excessive aerosols (e.g., sonication), a biosafety cabinet will be used along with eye protection.

9.3.11 Work surfaces will be decontaminated after completion of work and after any spill or splash of potentially infectious material.

Mark the applicable box and add specifics.

10% final concentration of household bleach made daily followed by 70% ethanol to

remove bleach residue.

Other decontaminant – List agent and concentration:

Disinfectant / Concentration / Contact Time

9.3.12 Spills will be handled in accordance with A&M-SA Biological Decontamination & Spill Clean-up Plan. This plan should be posted in the lab. All personnel will be familiar with these procedures.

9.3.13 All incidents of actual or potential exposure or accidents involving potentially infectious material will be reported to the Principal Investigator/Laboratory Supervisor / Instructor. The PI/Laboratory Supervisor will submit an incident report to the IBC.

9.3.13 All laboratory personnel will be informed of these biosafety practices and procedures and the principal investigator/laboratory supervisor/instructor will ensure that laboratory personnel receive appropriate training regarding their duties, the necessary precautions to prevent exposures, and exposure evaluation procedures. Documentation of training will be maintained in the laboratory. Lab personnel will receive annual updates or additional training when procedural or policy changes occur.

9.3.14 All personnel are to be instructed that their health status may have an impact on their susceptibility to infection and the availability of immunizations or prophylactic interventions. Therefore, all laboratory personnel (particularly women of childbearing age) will be provided with information regarding immune competence and conditions that may predispose them to infection. Personnel that have conditions that would render them more susceptible to infection, or who are pregnant, will be encouraged to self-identify these issues to the PI/Laboratory Supervisor/Instructor and their personal physician, such that appropriate counseling and guidance can be provided. See RAEHS *Guideline: Immunocompromised Personnel in Research Laboratories* for more information.

**10 Biological Waste Disposal**

**10.1 Liquid Waste Decontamination and Disposal**

10.1.1 The following method will be used for decontamination of liquid biohazardous waste:

10% final concentration of household bleach

Other – List agent and concentration:

List Non-Disposable Sharps

Not Applicable

10.1.2 **Contact time must be at least 30 minutes.**

10.1.3 Following decontamination, liquid may be disposed of down the sink and the sink rinsed with water.

**10.2 Solid Waste Decontamination and Disposal**

Solid waste that has been in contact with potentially infectious materials will be disposed of in the following manner [*select one method*]:

Autoclaved and disposed – All biohazardous waste is placed in biohazard bag, with the biohazard bag then placed in an autoclavable container (i.e., polypropylene tray), and transported to autoclave on a cart. Waste is autoclaved in the tray and then placed in black plastic bag and discarded in standard waste.

**11. Safe Use of Autoclaves**

It is the responsibility of the supervisor to ensure that all authorized individuals are properly trained on the use of the autoclave(s) used by laboratory personnel.

1. Will Autoclaves be used by this laboratory's personnel?  No  Yes

If *Yes*, list the location with the point of contact responsible to maintain the autoclave in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Location** | | **Person responsible for Testing Autoclave** | |
| **Building** | **Room** | **Name** | **Phone** |
| Select building | Room | Name of Person responsible | Phone Number |

To add another autoclave location: Click on a row, then click the blue plus sign on the right.

Training on the use of autoclaves will consist of the following (a. through h.). Maintain training records in the laboratory and make them available for review by RA-EH&S and IBC upon request.

1. Appropriate PPE requirements such as the use of heat resistant gloves, lab coats, and safety eye and face protection.
2. A discussion of the types of items that can and cannot be autoclaved.
3. Proper packaging of biohazardous wastes for autoclaving.
4. Methods for loading materials into an autoclave and unloading procedures.
5. The use of biological indicators for quality control.
6. Autoclave operational procedures including emergency shutdown precautions.
7. How to dispose of autoclaved waste.
8. Record keeping

Maintenance and Testing of Autoclaves

* 1. Department or person responsible for autoclave must properly maintain and service the machine.
  2. Department or person responsible for autoclave must occasionally quality tested to ensure proper sterilization procedures are met and decontamination of biohazardous waste is complete.

**12. Transport of Agents**

12.1 Transport between Labs

12.1.1 The following potentially infectious materials will be transported between the listed locations (add rows as needed):

|  |  |  |
| --- | --- | --- |
| Material(s) | From | Destination/To |
| List of biological materials to be transported | Transported from | Transported to |

To add more materials to transport or more destinations: Click on a row, then click the blue plus sign on the right.

12.1.2 What will be the primary containment for these materials/agents? List below:

Describe the packaging of the samples

12.1.3 The primary containment will be placed in a secondary containment, which is non- breakable and sealed.

**12.2 Shipping and Receiving**

12.2.1 If potential infectious materials will be shipped from the lab, RAEHS must be contacted for guidance, 210-784-2822. All appropriate local, state and federal (U.S. Department of Transportation) regulations must be followed. For air or international shipments, International Air Transportation Association (IATA) rules must be followed.

12.2.2 Personnel responsible for shipping will complete the appropriate training for packaging, labeling and shipping of all infectious materials. Contact RAEHS for training on shipping dangerous goods. Documentation of this training must be maintained with this manual and provided to the IBC or the Biosafety Officer upon request.

# Please contact RAEHS for guidance prior to receiving any potentially infectious materials, whether through purchase or by colleague exchange.

**13. Laboratory Specific Procedures**

Describe **any** laboratory specific procedures required when handling biohazardous material.

Examples of procedures needed include, but are not limited to, centrifugation, sonication, shakers, etc.

13.1 Centrifuge will be used:  Not Applicable Applicable

If Applicable, then describe the containment in the box below. List location – building and room number. Include whether sealed rotors are used:

Centrifuge Information

13.2 Shaker use:  Not Applicable  Applicable

If Applicable, describe the containment in the box below. List location – building and room number.

Shaker Information

13.3 Sonicator use:  Not Applicable  Applicable

If Applicable, describe the containment in the box below. List location – building and room number.

Sonicator Information

**14. Biosafety Cabinet in Laboratory**  Not Applicable  Applicable

14.1Special containment devices or equipment, such as biosafety cabinets (BSCs), are not generally required at the BSL1 level.

14.2 List the Make, Model with building and room location with last certification date for the BSC to be used for the work covered by this laboratory manual:

|  |  |  |  |
| --- | --- | --- | --- |
| Location (Bldg/Room) | Manufacturer | Model | Class / Type |
| Select building / Room | Manufacturer | Model | Class / Type |

14.2.1 Biosafety cabinet is operated:  Continuously  As Needed

If "As Needed" is checked, please indicate the minimum time cabinet blower is on

* 1. prior to beginning work: Mins blower is to run before use
  2. after work in completed: Mins. Blower is to run after BSC use

14.2.2 Procedures for Working in a biosafety cabinet

(1) Other activities (e.g., rapid movement, open/closing room doors, etc.) in the room are minimized when operations are being conducted in the biosafety cabinet to avoid disrupting the cabinet air barrier.

(2) PPE as outlined in section 4.3.7 will be worn when working in the biosafety cabinet.

(3) Before beginning work, stool height will be adjusted such that personnel’s face is above the front opening. The sash should be set at the recommended height in order for proper cabinet operation and user protection. The cabinet user should adjust their shoulder height to be level with the lower edge of the sash.

(4) Closure of the drain valve under the work surface will be done prior to beginning work so that all contaminated materials are contained within the cabinet should a large spill occur.

(5) Wipe down the interior of the cabinet with an appropriate surface disinfectant (e.g.,10% commercial bleach solution, 70% alcohol, or similar non-corrosive antimicrobial agent)

(6) Materials needed for work in the biosafety cabinet will be placed in the cabinet prior to beginning work to avoid disruption of airflow. Materials will be placed as far back in the cabinet as is practical.

* 1. All operations within the cabinet will be performed on the work surface at least four (4) inches from the inside edge of the front grille.
  2. If plastic-backed absorbent toweling is placed on work surface it will be placed such that it does not cover front or rear grille openings.
  3. The front grille will not be blocked with research notes, discarded plastic wrappers, pipetting devices, etc.

(7) The number of arm-movement disruptions across the air barrier of the cabinet will be minimized.

(8) Will any aspirator suction flasks be used?  No  Yes

* 1. If *Yes*, then **two flasks will be connected in series**, and they will be pre-filled with appropriate disinfectant such that the final concentration is sufficient to kill the microorganisms. A filter (either 0.3 µM or HEPA) will be placed in-line along with a second flask to prevent overflow into building vacuum system.
  2. List disinfectant and final concentration

(check the relevant boxes and add detail if "other" is selected):

Not Applicable

10% final concentration of household bleach

Other – List agent and concentration:

Disinfectant / Concentration / Contact time

**Contact time must be at least 30 minutes.**

(9) Horizontal pipette discard trays containing an autoclave bag, or an appropriate chemical disinfectant will be used within the cabinet. Upright pipette collection containers placed on the floor outside the cabinet, or autoclavable biohazard collection bags taped to the outside of the cabinet are not to be used. The frequent inward/outward movement needed to place objects in these containers is disruptive to the integrity of the cabinet air barrier and can compromise both personnel and product protection.

(10) Active work should flow from the clean to contaminated area across the work surface. Bulky items such as biohazard bags, discard pipette trays and suction collection flasks must be placed to one side of the interior of the cabinet.

(11) Use of glass Pasteur pipettes is discouraged. Glass pipettes should be replaced with safer alternatives (i.e., plastic).

(12) Will an UV light be used in BSC?  No  Yes

If *Yes* describe use:

Description of UV light source use

(13) Upon completion of work, the interior surfaces of the cabinet will be wiped down a disinfectant (check relevant boxes and list details as asked):

10% final concentration of household bleach followed by 70% ethanol to   
 remove bleach residue.

Other – List agent and concentration:

Disinfectant / Concentration / Contact time

(14) Gloves and disposable PPE will be removed and disposed of as biohazard waste and hands will be washed.

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| **Appendices** |

Appendix 1 Laboratory Biosafety Levels 1 Criteria (BMBL 6th ed.)

Appendix 2 Approved IBC Registration Document and Approved Amendments

Appendix 3 Pathogen Safety Sheet(s) / Biological agent Reference Sheet(s)

Appendix 4 Laboratory Specific Standard Operating Procedures (SOPs)

Add Titles of Lab Specific SOP’s

Appendix 5 Laboratory Sketch / Layout

*Include a floor plan of each of the laboratory spaces covered by this Plan and identifying the following items:*

Appendix 6 Biosafety Training Documents

Appendix 7 Laboratory Inspection Report(s) (Last 3 yrs.)

Appendix 8 Emergency Response Procedures

Appendix 9 University Emergency Response Procedures

1. Texas A&M University-San Antonio – Emergency Action Plan (rev 09.30.2022)

Appendix 10 Forms

Appendix 11 Additional Information