Personal Protection Requirements

	Wear safety glasses or goggles when handling liquid cultures, when performing procedures that may create a splash hazard or when spread plating
	Wear close-toe shoes that cover the top of the foot
	Wear gloves when handling microroganisms or hazardous chemicals
	Recommended: Wear lab coats

Lab Physical Space Requirements

	Nonporous floor, bench tops, chairs and stools
	Sink for hand washing
	Eyewash station
	Lockable door to the room
	Follow proper pest control practices
	Recommended: Keep personal belongings in an area separate from the work area
	Recommended: Use a woring and validated autoclave

Personal Protection Requirements

	§ Wear safety goggles or glasses when handling liquid cultures, when performing procedures that may create a splash hazard, or when spread plating.
	§ Wear closed-toe shoes that cover the top of the foot.
	§ Wear gloves when handling microorganisms or hazardous chemicals.
	§ Recommended: Wear lab coats.
	Lab Physical Space Requirements
	§ Require all lab space to include:
	o Nonporous floor, bench tops, chairs, and stools.
	o Sink for hand washing.
	o Eyewash station.
	o Lockable door to the room.
	§ Follow proper pest control practices.
	§ Recommended: Keep personal belongings in an area separate from the work area.
	§ Recommended: Use a working and validated autoclave.

Stock Culture Requirements

	§ Only use cultures from authorized, commercial, or reputable sources (e.g., an academic lab or state health department). Do not subculture unknown microbes isolated from the environment because they may be organisms that require BSL2 practices and facilities.
	§ Maintain documents about stock organisms, sources, and handling of stock cultures.
	§ Obtain fresh stock cultures of microorganisms annually (e.g., purchased, revived from frozen stock cultures, etc.) to be certain of the source culture, minimize spontaneous mutations, and reduce contamination.

Standard Lab Practices

	§ Wash hands after entering and before exiting the lab.
	§ Tie back long hair.
	§ Do not wear dangling jewelry.
	§ Disinfect bench before and after the lab session with a disinfectant known to kill the organisms handled
	§ Use disinfectants according to manufacturer instructions.
	§ Do not bring food, gum, drinks (including water), or water bottles into the lab.
	§ Do not touch the face, apply cosmetics, adjust contact lenses, or bite nails.
	§ Do not handle personal items (cosmetics, cell phones, calculators, pens, pencils, etc.) while in the lab.
	§ Do not mouth pipette.
	§ Label all containers clearly.
	§ Keep door closed while the lab is in session. Lab director or instructor approves all personnel entering the lab.
	§ Minimize the use of sharps. Use needles and scalpels according to appropriate guidelines and precautions.

	§ Use proper transport vessels (test tube racks) in the lab, and store these in a leak-proof container when work with them is complete.
	§ Use leak-proof containers for storage and transport of infectious materials.
	§ Use microincinerators or disposable loops rather than Bunsen burners whenever possible.
	§ Arrange for proper (safe) decontamination and disposal of contaminated material (e.g., in a properly maintained and validated autoclave) or arrange for licensed waste removal in accordance with local, state, and federal guidelines.
	§ Do not handle broken glass with fingers; use a dustpan and broom.
	§ Notify instructor of all spills or injuries.
	§ Document all injuries according to school, university, or college policy.
	§ Use only institution-provided marking pens and writing instruments.
	§ Teach, practice, and enforce the proper wearing and use of gloves.
	§ Advise immune-compromised students (including those who are pregnant or may become pregnant) and students living with or caring for an immune-compromised individual to consult physicians to determine the appropriate level of participation in the lab.
	§ Recommended: Keep note-taking and discussion practices separate from work with hazardous or infectious material.
	Training Practices
	§ Be aware that student assistants may be employees of the institution and subject to OSHA, state, and/or institutional regulations.
	§ Conduct extensive initial training for instructors and student assistants to cover the safety hazards of each lab. The institution's biosafety officer or microbiologist in charge of the labs should conduct the training.
	§ Conduct training for instructors whenever a new procedural change is required.
	§ Conduct training for student assistants annually.
	§ Require students and instructors to handle microorganisms safely and responsibly.
	§ Inform students of safety precautions relevant to each exercise before beginning the exercise.
	§ Emphasize to students the importance of reporting accidental spills and exposures.
	Document Practices
	§ Require students to sign safety agreements explaining that they have been informed about safety precautions and the hazardous nature of the organisms they will handle throughout the course.
	§ Maintain student-signed safety agreements at the institution.
	§ Prepare, maintain, and post proper signage.
	§ Document all injuries and spills; follow school/college/university policy, if available.
	§ Make Material Safety Data Sheets (MSDS) available at all times; follow institutional documentation guidelines regarding number of copies, availability via print or electronic form, etc.
	§ Post emergency procedures and updated contact information in the lab.
	§ Maintain and make available (e.g., in a syllabus, in a laboratory manual, or online) to all students a list of all cultures (and their sources) used in the course.

	Personal Protection Requirements
	§ Wear safety goggles or glasses for normal lab procedures involving liquid cultures that do not generate a splash hazard (e.g., proper pipetting, spread plates, etc.). Use safety goggles and face shields or safety goggles and masks when performing procedures that may create a splash hazard. If work is performed in a biological safety cabinet, goggles and face shields/masks do not need to be worn.
	§ Wear closed-toe shoes that cover the top of the foot.
	§ Wear gloves when handling microorganisms or hazardous chemicals.
	§ Wear lab coats.
	Lab Physical Space Requirements
	§ Require all lab space to include:
	o Nonporous floor, bench tops, chairs, and stools.
	o Sink for hand washing.
	o Eyewash station.
	o Lockable door to the room.
	§ Follow proper pest control practices.
	§ Keep the storage area for personal belongings separate from work area.
	§ Keep a working and validated autoclave in the building or arrange for licensed waste removal according to local, state, and federal regulations..
	§ Post biohazard signage
	o wherever cultures are used and stored.
	o on the door to the room.
	o on any containers used to transport cultures.
	§ Recommended: Have a biological safety cabinet. The biological safety cabinet is required when large volumes of culture are used or when a procedure will create aerosols.
	Stock Culture Requirements
	§ Only use cultures from authorized, commercial, or reputable sources (e.g., an academic lab or state health department). Maintain documents about stock organisms, sources, and handling of stock cultures.
	§ Obtain fresh stock cultures of microorganisms annually (e.g., purchased, revived from frozen stock cultures, etc.) to be certain of the source culture, minimize spontaneous mutations, and reduce contamination.
	§ Keep stock cultures in a secure area.
	Standard Lab Practices
	§ Wash hands after entering and before exiting the lab.
	§ Tie back long hair. § Do not wear dangling jewelry.
	§ Disinfect bench before and after the lab session with a disinfectant known to kill the organisms handled.
	§ Use disinfectants according to manufacturer instructions.
	§ Do not bring food, gum, drinks (including water), or water bottles into the lab.
	§ Do not touch the face, apply cosmetics, adjust contact lenses, or bite nails.
	§ Do not handle personal items (cosmetics, cell phones, calculators, pens, pencils, etc.) while in the lab.
	§ Do not mouth pipette.
	§ Label all containers clearly.
	§ Keep door closed while the lab is in session. Lab director or instructor approves all personnel entering the lab.
	§ Minimize the use of sharps. Use needles and scalpels according to appropriate guidelines and precautions.
	§ Use proper transport vessels (test tube racks) in the lab and store these in a leak-proof container when work with them is complete.
	§ Use leak-proof containers for storage and transport of infectious materials.
	§ Use microincinerators or disposable loops rather than Bunsen burners.
	§ Arrange for proper (safe) decontamination and disposal of contaminated material (e.g., in a properly maintained and validated autoclave) or arrange for licensed waste removal according to local, state, and federal regulations.
	§ Do not handle broken glass with fingers; use a dustpan and broom.

	§ Notify instructor of all spills or injuries.
	§ Document all injuries according to university or college policy.
	§ Keep note-taking and discussion practices separate from work with hazardous or infectious material.
	§ Use only institution-provided marking pens and writing instruments.
	§ Teach, practice, and enforce the proper wearing and use of gloves.
	§ Advise immune-compromised students (including those who are pregnant or may become pregnant) and students living with or caring for an immune-compromised individual to consult physicians to determine the appropriate level of participation in the lab.
	Training Practices
	§ Be aware that student assistants may be employees of the institution and subject to OSHA, state, and/or institutional regulations.
	§ Conduct extensive initial training for instructors and student assistants to cover the safety hazards of each lab. The institution's biosafety officer or microbiologist in charge of the labs should conduct the training.
	§ Conduct training for instructors whenever a new procedural change is required.
	§ Conduct training for student assistants annually.
	§ Require students and instructors to handle microorganisms safely and responsibly.
	§ Require students to demonstrate competency at BSL1 before working in a BSL2 laboratory.
	§ Inform students of safety precautions relevant to each exercise before beginning the exercise.
	§ Emphasize to students the importance of reporting accidental spills and exposures.
	Document Practices
	§ Require students to sign safety agreements explaining that they have been informed about safety precautions and the hazardous nature of the organisms they will handle throughout the course.
	§ Maintain student-signed safety agreements at the institution.
	§ Prepare, maintain, and post proper signage.
	§ Document all injuries and spills; follow university policy, if available.
	§ Make Material Safety Data Sheets (MSDS) available at all times; follow institutional documentation guidelines regarding number of copies, availability via print or electronic form, etc.
	§ Post emergency procedures and updated contact information in the lab.
	§ Maintain and make available (e.g., in a syllabus, in a laboratory manual, or online) to all students a list of all cultures (and their sources) used in the course.
	§ Keep a biosafety manual specific to the laboratory and/or course in the lab.
	§ Keep a copy of the current version of Biosafety in Microbiological and Biomedical Laboratories (BMBL) in the lab.