

GOOD MICROBIOLOGICAL PRACTICES

- Access to the laboratory is limited or restricted at the discretion of the laboratory in-charge (investigator) when experiments are in progress
- Never pipette by mouth
- Avoid hand-to-mouth or hand-to-eye contact in the laboratory
- Never eat, drink, take medicine or apply cosmetics in the laboratory where any biological or chemical material
- Always wear protective equipment (lab coat, gloves, eye protection) appropriate for the task
- Change gloves frequently and whenever contaminated
- Remove gloves and lab coat and wash hands before leaving the laboratory
- Wash hands thoroughly after handling microorganisms before leaving the laboratory
- Handle all pathogens or materials containing pathogens in biosafety cabinets if the potential for aerosolization exists
- Store all biohazards securely in clearly labeled, sealed, leak proof containers
- Do not recap the syringes and dispose of needles and other sharps in sharps containers only
- Shake the broth cultures in a manner that avoids wetting of the cotton plug/cap.
- Clean work surfaces with proven disinfectant after work with biohazards and at end of work

GOOD CELL CULTURE PRACTICES:

Cell culture work falls under BSL-2 category labs and cell culture labs need approval from IBSC. Work in cell culture should provide product safe and personal safety. BSL-2 is appropriate for activities with all primate cell line, all tumor and lymphoid cells derived from primate origin; all cells derived from human origin; cells exposed to or transformed by a primate oncogenic virus etc. Good cell culture practices include but not limited to;

- All cell and tissue work should be performed in a Class II BSC
- A strict quarantine procedure, including suitable precautions to prevent the spread of potential contamination
- Horizontal laminar flow cabinets should not be used when handling cells, as such cabinets are designed to protect only the work area and the air flow is directed toward the user. Hence use vertical laminar flow cabinets.
- It is recommended that, as a minimum and where advisable, mycoplasma testing should be carried out on all samples received.
- Hands should be washed or disinfected before and after handling cells. An appropriate gown or laboratory coat should be worn when entering and removed when leaving the laboratory.
- Personal accessories (rings, watches), which might compromise cell and tissue culture activities, should be removed or covered up to prevent contamination. Gloves should be worn, and replaced immediately if torn or punctured or during extended work sessions.
- When handling cell and tissue cultures, workers must avoid transferring contamination on the hands from the culture work to unprotected body parts (for example, eyes or mouth), clothing or items in the open laboratory environment.
- Mouth-pipetting must be strictly prohibited, always use mechanical pipette aids.
- All procedures should be undertaken by using methods that minimize the production of aerosols that might spread contamination by micro-organisms or cells.
- All work surfaces should be cleaned with an appropriate disinfectant, usually 70% alcohol, before and after use.
- All cultures should be clearly and unambiguously labeled
- The use of sharps should be avoided as far as is possible. Any used sharps should be disposed of safely into sharp containers.
- All liquid waste, with the exception of sterile media or solutions, should be either chemically inactivated by bleach or autoclaved.

- All solid waste contaminated with tissue culture liquid and/or cells should either be autoclaved before leaving the laboratory, or should be placed in rigid, leak-proof containers before being transported elsewhere for autoclaving.