

BIOSAFETY INSPECTION CHECKLIST
BIOSAFETY LEVEL 2 / 2+ ENHANCED LABORATORIES

Inspection Date:

Inspected by:

Principal Investigator(s):

Biosafety Level(s):

Lab Contact(s):

Biological Agent(s):

Location(s):

Biological Registration ID:

IBC Expiration Date:

ADMINISTRATIVE	YES	NO	N/A	COMMENTS
<p>1.1 Access to lab is restricted to authorized personnel only. Doors to labs should be closed and secured (locked) when personnel are not present. Freezers have locks if in publicly accessible area(s). No person under 16 years of age is permitted in BSL-2 enhanced area(s).</p>				
<p>1.2 Door card(s) are posted with current NFPA signs, contact information and biosafety level(s). Door card information is updated on BioRAFT, printed and placed on all egress doors in research area(s).</p>				
<p>1.3 Biosafety manual and laboratory-specific documents are available and accessible. Biosafety manual is current and in an accessible location with approved biological research registration, SOPs, shipping documents, pathogen safety data sheets, reference guides, factsheets, and signage.</p>				
<p>1.4 Biological Research Registration is current, available and accessible. Research with biological material(s) or recombinant and synthetic nucleic acid material(s) require current registration with the IBC. Modifications to personnel, agents, or processes require prior approval.</p>				
<p>1.5 Lab-specific exposure control plan(s) and vaccination offer documentation is available and accessible. An exposure control plan is required for personnel handling any human, non-human primate or other potentially infectious materials or as indicated in the biological research registration. Hepatitis B vaccination must be offered to all personnel that handle human materials.</p>				
<p>1.6 Required training(s) and lab-specific training(s) are current for all research personnel. All training(s) are current on BioRAFT including Lab Safety I, II, Biosafety I, II, Regulated Medical Waste, and any others listed on biological registration. Lab-specific training is completed at least annually.</p>				
<p>1.7 Agent-specific training is available and accessible. Personnel are trained and have reviewed, understand, and have access to agent-specific information. Personnel know the signs and symptoms associated with lab-specific agents.</p>				

<p>1.8 Emergency procedures are available and accessible. Personnel know emergency procedures, contact and reporting information in the event of biological incidents, spills and/or exposures. Exposure Response reference guide and signage are accessible.</p> <p>Biohazard exposure: 1) Wash/ flush the area for 15 mins (if on skin use soap and water) 2) For medical assistance, please contact NUPD 3) Report incident to PI and biosafety within 24hrs.</p> <p>Biohazard spill: 1) While wearing proper PPE collect any broken glass or sharps with tongs and dispose in a sharps container. 2) Cover the spill with absorbent material to prevent the spill from spreading. 3) Pour FRESHLY MADE 10% bleach from the outside of the spill to the inside. 4) Let this sit for a minimum of 20 minutes 5) After 20 minutes, waste can be picked up and disposed of as biohazardous waste.</p>				
PRACTICES				
<p>2.1 Eating, drinking, smoking, and applying cosmetics are not permitted in research area(s). Food and drink are not permitted in research area(s) where biological materials are used or stored. Disposal of food items or wrappers in research trash cans or biohazardous burn boxes are not permitted.</p>				
<p>2.2 Only plants and/or animals associated with approved biological research are present in research area(s). Plants or animals, not used for research purposes, are not permitted in research area(s). Pest control and management program is in place.</p>				
<p>2.3 Biohazard labels and hazard communication signage are placed on all equipment and in areas where biological materials are handled. Label all equipment that is used with or to store biological materials (e.g. refrigerators, incubators, freezers, centrifuges, etc.). Ensure appropriate signage for hazard communication.</p>				
<p>2.4. Approved disinfectants are available and accessible. Appropriate disinfectants must be available, listed on biological registration and used at the approved concentration and contact time based on biological agent(s). Contact time for surface disinfection with 70% ethanol or freshly made 10% bleach is 10 minutes. Alcohol is not an appropriate disinfectant for human or other BBP materials or AAV.</p>				
<p>2.5 Sharps are eliminated, substituted, and/or always used appropriately. Sharps are eliminated or substituted with non-sharps or safer sharps devices as possible. If sharps are used they are never bent, sheared, broken, recapped, removed from syringes or otherwise manipulated prior to sharps disposal. Sharps are disposed of immediately after use with containers within arms reach. Sharps are not permitted in BSL-2 enhanced area(s) unless specified in biological registration with specialized precautions.</p>				

FACILITY				
<p>3.1 Door(s) to research area(s) are self-closing or procedures are in place to close door(s) when work is in progress. Doors are kept closed and not propped open when work is in progress. Doors open inwards for BSL-2 enhanced laboratory area(s) as possible.</p>				
<p>3.2 Hand-washing sink and supplies are available and accessible. BSL-1 and higher laboratory area(s) must have a hand-washing sink available with soap and paper towels accessible. Personnel should practice good hand hygiene including washing hands when leaving the lab, after handling biological materials, and after removal of gloves.</p>				
<p>3.3 Eyewash station(s) are available and accessible. Eyewash stations are in all research area(s) where hazardous or biological material(s) are handled. Eyewash stations are certified with monthly testing records available and unobstructed.</p>				
<p>3.4 Windows do not open or have screens in research area(s). Windows that open to the exterior are not recommended. Fitted screens may be permitted based on a risk assessment and additional procedural considerations.</p>				
<p>3.5 Research area(s) are adequately illuminated. Lights are functional and appropriate in research area(s).</p>				
<p>3.6 Research area(s), furniture and equipment are designed to be easily cleaned. Walls, floors, and work surfaces are non-porous, smooth, cleanable, and are in good condition. Benchtops are impervious to water and resistant to hazardous materials. Surfaces of equipment and furniture are non-porous (no cloth or mesh furniture, rugs, drapes, unfinished wood).</p>				
<p>3.7 Directional airflow is from low to high containment for BSL-2 area(s). Negative directional airflow is recommended for BSL-2 research area(s) and are required for BSL-2 enhanced. Airflow can be tested close to the door opening about an inch with a strip of tissue paper or kimwipe. The tissue should be pulled towards high containment area. Contact facilities to re-configure air exchanges and air pressure. BSL-2 enhanced research areas require negative directional airflow for containment.</p>				
CONTAINMENT EQUIPMENT				
<p>4.1 Biosafety cabinet(s) have current certification and equipment inventory is updated in BioRAFT. Biosafety cabinets must be certified when new, at least annually, and if relocated. Contact TSS at 866-336-7734 for certification or repair. Prior to relocation BSC requires TSS professional decontamination and certification of decontamination.</p>				

Date of Last Certification: _____				
4.2 Aerosol containment equipment is available and used with biohazardous materials. Aerosol-generating activities (i.e. pipetting, centrifugation, sonicating, vortexing, homogenizing, FACS or other manipulations that may present a splash or aerosol) are performed inside a biosafety cabinet or other approved containment device for risk group 2 (RG2) agents or higher, BBP material, or if required on biological registration.				
4.3 Centrifuge safety cups or sealed rotors are available and used with biohazardous materials. Centrifuges are equipped with safety cups or an aerosol-tight rotor to contain potential aerosols and only opened within a BSC or other containment device or as designated on biological registration.				
4.4 Biosafety cabinet(s) is available and maintained appropriately. BSC is uncluttered and not used for storage of items, equipment, or other materials. BSC is disinfected before and after use and if there are any spills. Open flames are not used in BSC. Front and back air vents are not blocked. Porous material(s), cardboard or paper are located away from BSC. BSC is located away from doors, supply air vents, high traffic area(s), or disruptive equipment. All work is conducted in a BSC for BSL-2 enhanced areas.				
4.5 Aspiration vacuum system(s) are appropriately set-up and maintained. Aspiration system(s) are equipped with two flasks, flasks are in secondary container(s) with a clean HEPA filter appropriately placed to protect the main vacuum line. Collected liquid waste is disinfected with 1 part bleach for every 9 parts waste for a contact time of at least 20 minutes and disposed down the drain with water or if mixed waste (chemical or other) appropriately managed as hazardous waste. Disinfected waste is disposed of at the end of each experiment or at least daily.				
4.6 Biological material are transported appropriately through public area(s). Biological material must be in a primary and secondary container to minimize risk of accidental exposure. A closed, non-porous, leak-resistant secondary container is available and used for transport with a cart. PPE is not permitted in public area(s), so personnel should complete a surface disinfection of secondary container and cart (70% ethanol for 10 minutes) prior to leaving the laboratory. A spill kit and PPE should be taken on cart as necessary.				
PERSONAL PROTECTIVE EQUIPMENT				
5.1 Personal protective equipment (PPE) is available and appropriate lab attire is worn by personnel. PPE is clean, accessible and appropriate for the agent(s) being used. At minimum, a laboratory coat, disposable gloves, and eye protection are required. Face shields and cryogloves are used for handling liquid nitrogen. Personnel are wearing appropriate lab attire to cover areas from waist to toes.				

<p>5.2 Respirators are used fitted and used properly with biological agents. Respirators are used for procedures outside of containment that may produce aerosols (e.g. cell sorting) or if otherwise designated on approved biological research registration. Respirator users must be fitted and receive annual respirator fit training.</p>				
<p>5.3 Designated disposable lab coats and additional PPE are available and accessible for BSL-2 enhanced area(s). Biosafety level 2 enhanced research requires additional personal protective equipment including disposable lab coats, double gloves, sleeve covers, surgical masks and/or respirators as indicated in biological registration.</p>				

DECONTAMINATION AND DISINFECTION				
<p>6.1 Approved disinfectants are available, accessible, and used appropriately. Disinfectant(s) and contact time:_____.</p> <p>Disinfectants must be used at the appropriate concentration and contact time based on the agent(s) you are working with. The recommended disinfection method for surface decontamination is freshly prepared 10% bleach (1 part bleach for every 9 parts water) for a contact time of 10 minutes followed by 70% ethanol or water to reduce bleach residue. 70% ethanol is not an appropriate disinfectant for specific agents, human or other bloodborne pathogen material(s) or AAV. Disinfection methods must be reviewed by the IBC and listed on approved biological registration.</p>				
<p>6.2 Equipment and work surfaces are uncluttered and routinely decontaminated. Work surfaces and equipment must be decontaminated with an appropriate disinfectant routinely, after working with biological material and after any spills, splashes, or potential aerosol-generating activities. Work area(s) should be uncluttered and any cardboard or other porous material(s) should be away from potential splash area(s). Absorbent mats used must be disposed of after each use.</p>				
<p>6.3 Spill response material(s) are available and accessible. Absorbent material, disinfectant, red biohazard waste bags, PPE, and a tool for picking up sharps (tongs or dustpan and broom).</p>				

WASTE				
<p>7.1 Biologically contaminated waste is collected and maintained appropriately. All biological waste should be collected in a biohazard burn box that is properly folded, labeled with the universal biohazard symbol, and lined with double red biohazard bags. Biohazard box is not overfilled and closed when not in use. Bags are tied when ¾ full with gooseneck or overhand knot, secured, a white generator label is placed on upper right corner of box, and transported with a 4-wheel dolly to designated areas for waste disposal.</p>				

<p>7.2 Biologically contaminated liquid waste is treated prior to disposal and maintained appropriately. Liquid biological waste is treated with an appropriate disinfectant (1 part bleach to 9 parts liquid waste) for a minimum contact time of 30 minutes. Treated liquid waste is discarded down the drain with water or through the hazardous waste stream for mixed waste.</p>				
<p>7.3 Sharps container(s) are available, accessible, and used appropriately. Leak-resistant, puncture-resistant sharps containers are readily accessible and container is less than 2/3 full. Full sharps containers are closed and placed in biohazard burn box for disposal. Sharps are not placed in regular trash or directly into biohazard burn box.</p>				
<p>7.4 Autoclave is available and used appropriately. An autoclavable secondary container is required for any materials being autoclaved and a lipped cart is used for transport. Autoclaving of waste is no longer recommended for BSL-2 area(s). Autoclave is used only used for pre-treating waste before disposal in biohazard burn box in BSL-2 enhanced laboratories and as approved by the IBC.</p>				

ADDITIONAL NOTES:
