



California State Polytechnic University, Pomona
Environmental Health & Safety

BIOSAFETY INSPECTION CHECKLIST AND CORRECTION FORM

This form is to be used to document inspection of areas where Biosafety Level 1 and/or 2 Agents are used or stored.

Principal Investigator:	Building/Room:
Inspection Date:	Biosafety Level:
Select Agents/ Toxins:	
Please <i>circle</i> all that apply: [rDNA] , [Bloodborne Pathogens] Please complete additional checklists below.	

When information is entered in this form, the form is to be considered as “Sensitive Select Agent Information.”

- Biosafety Level 1 may stop after completing the BSL1 checklist.
- Biosafety Level 2 must complete BSL1 and BSL2 checklist
- Both BSL1 and BSL2 must complete the **rDNA Checklist** if applicable, or indicate N/A
- Both BSL1 and BSL2 must complete the **Bloodborne Pathogens Checklist** if applicable or indicate N/A

Biosafety Level 1 (BSL1) Checklist: Minimum containment level required for all labs using biological agents	YES	NO	N/A
1. Principal Investigator (PI) is familiar with the most current CDC/NIH “ Biosafety in Microbiological and Biomedical Laboratories ”.			
2. Access to the laboratory is limited or restricted at the discretion of the PI while experiments are in progress. The PI has the final responsibility for assessing each circumstance and determining who may enter or work in the laboratory. (BMBL: A1)(NIH:G-11-B-1-a)			
3. The PI assures proper instruction of lab staff in microbiological techniques, approved protocols, and emergency procedures, and compliance with these instructions. Documentation of training is kept by the PI (contents, trainer, attendees, and date). [7 CFR 12 (b)]			
4. A plan for emergencies has been developed and is available to lab employees. This includes fire, hazardous material spills (chemical, biological, radiological), injuries, and exposures. Spill plans must specifically address the hazards in the laboratory. [7 CFR 331.12 (a)]			
5. Laboratory coats, gowns, or uniforms are worn to prevent contamination or soiling of street clothes. This protective clothing is removed and left in the laboratory before leaving for or travel through non-laboratory areas (e.g., cafeteria, library, administrative offices, and public corridors). All protective clothing is disposed of in the laboratory, laundered by the institution, or autoclaved and laundered at home by personnel. (BMBL: C2) & (NIH: G-II-B-2f)			

Biosafety Level 1 (BSL1) Checklist: (continued)	YES	NO	N/A
6. Suitable gloves (e.g., nitrile, vinyl) should be worn at all time. (BMBL: C4) Gloves are disposed of when contaminated, removed when work is completed, and are not worn outside the laboratory. Disposable gloves are not washed or reused. Hands are washed after glove use.			
7. The laboratory is designed to easily clean and kept neat and clean. Carpet and rugs in laboratories are not permitted. (BMBL:D3)(NIH:G-11-B-3-a)			
8. Work surfaces are decontaminated daily and immediately following spills or splash of potentially infectious material with appropriate disinfectant. The decontaminant used is _____. (BMBL:A7)			
9. All biological wastes are decontaminated before disposal. Procedure: _____. (NIH:G-11-B-1-c) (NIH:G-11-B-1-b)			
10. Contaminated items are decontaminated before washing, reuse or disposal.			
11. Materials decontaminated away from the laboratory are packaged in durable leak-proof containers, which are closed before removal from the laboratory. (NIH: G-II-B-2)			
12. Lab doors must be self close and are kept closed while experiments are in progress. Closed doors facilitate directional airflow, special ventilation used to control odors or aerosols. (BMBL:D1)			
13. Eating, drinking, applying cosmetics, and food storage are not permitted in the lab. (BMBL: A3) (NIH: G-II-B1-e)			
14. Hand washing facilities are available, and persons wash their hands after handling recombinant DNA or other biohazardous materials and before leaving the laboratory. (NIH:G-II-B-1-h)			
15. A plumbed eyewash station is available within <i>50 feet & 10 seconds</i> of the hazard location. The eyewash is activated weekly. (BMBL:D8)			
16. Pippetting by mouth is prohibited. Mechanical pipetting devices are used. (BMBL: A4)			
17. Care is taken to minimize the creation of aerosols. (NIH: G-II-B1-g)			
18. Cultures, stocks, contaminated plastic ware, and other non-sharps wastes are autoclaved prior to disposal. Consult specific University or College disposal requirements (e.g., clear autoclave bags, red biohazard bags). (BMBL:A8-a)			
19. Culture fluids and other contaminated liquid wastes are autoclaved or decontaminated with a suitable disinfectant before disposal down the sanitary drain. (BMBL:A8)			
20. Special containment devices or equipment such as a biological safety cabinet is generally required for manipulations of agents assigned to Biosafety Level 1. (NIH-G-11-B-3-a)			
21. The use of needles and other sharps is avoided when alternatives are available. Plasticware should substitute for glassware whenever possible. Broken glassware must not be handled directly. Instead, it must be removed using a squeegee/ scraper and dustpan, tongs, or forceps. (BMBL:A5-d)			

⇒ If your work only requires Biosafety Level 1 containment, stop here. If your work requires Biosafety Level 2 containment, complete the rest of the checklist.

Biosafety Level 2 (BSL2) Containment	YES	NO	N/A
22. The Biosafety plan must contain sufficient information and documentation to describe the biosafety and containment procedures. [9 CFR 121.12 (a)]			
23. PI has established policies whereby only persons who are advised of the potential hazard and meet any specific entry requirements may enter lab or animal rooms. [BMBL: A1]			
24. The universal biohazard sign is posted on all lab access doors while experiments are in progress, and is posted on all units used to store organisms containing biohazardous materials. The sign includes name(s) of infectious agent(s), name and telephone numbers of responsible individuals, and any special entry requirements. (BMBL:A9)(BMBL:B1)(NIH:G-11-B-2-d)			
25. All persons working with human blood, body fluids or tissues receive annual OSHA Blood borne Pathogens Training and have been offered the HBV vaccination series.			
26. A biosafety manual or standard operating procedure is prepared or adopted. Personnel are advised of hazards and handling procedures, and are required to read and follow instructions on practices and procedures. Procedures and policies are routinely reviewed and updated. (7 CFR 331 Section 12(d))			
27. Lab specific biosafety information is available, and personnel are required to be familiar with it. Information that should be included: general information regarding biohazardous agent, routes of disease transmission, recommended vaccinations, signs and symptoms of disease, personal protective equipment required, waste handling protocol, spill cleanup procedures for inside and outside containment equipment including centrifuges, exposure follow-up procedure, aerosol control procedure. See NIH Guidelines or CDC/NIH Biosafety in Microbiological and Biomedical Laboratories . (BMBL:B4)(NIH:G-11-B-2-m)			
28. Laboratories must have a sink for hand washing. The sink may be manually, hands-free, or automatically operated. It should be located near the exit door. (BMBL:D2)			
29. The PI has notified Environmental Health and Safety” regarding the use of Select Agents or USDA “ High Consequence ” these agents are stored in secured locations and doors are closed when work is in progress.			
30. The Principal Investigator has the final responsibility for the safety of all personnel within his/her laboratory. In general, persons who are at an increased risk of acquiring infection or for whom infection may be unusually hazardous (e.g., immunocompromised, immunosuppressed, pregnancy) may require special conditions or precautions before being allowed to work in the laboratory or animal rooms. If applicable, personnel should consult with their own personal physician or Student Health Services. (NIH:G-11-B-2-b)(NIH:G-11-B-2-c)			
31. Laboratory personnel receive appropriate immunizations or tests for the agents handled or potentially present in the laboratory (e.g., hepatitis B vaccine, TB skin testing). (BMBL:B2)(NIB:G-11-B-2-k)			

Biosafety Level 2 (BSL2) Containment (Continued)	YES	NO	N/A
32. The Principal Investigator provides specific training on the potential hazards associated with the work involved, the necessary precautions to prevent exposures, and the exposure evaluation procedures (e.g., symptoms of a disease) to all laboratory personnel. Personnel receive regular updates or additional training as necessary. Training is documented. (BMBL:B5)(BMBL:A11)			
33. Incident that may result in exposure to infectious materials must be immediately evaluated and treated according to procedures describe in the laboratory biosafety safety manual. All such incidents must be reported to the PI. Medical Evaluation, surveillance and treatment should be provided and appropriated records maintained. (BMBL:B8)			
34. BLS-2 laboratory worker should: not wash or reuse disposable gloves, worker should dispose of gloves with other contaminated laboratory waste. Hand washing protocols must be rigorously followed. (BMBL:C4-c)			
35. Face protection in the form of safety goggles and a mask or a chin-length face shield is worn when a splashing or spraying potential exists. Protective gear should be decontaminated or disposed of after use. (BMBL:C5) Persons who wear contact lenses in laboratories should also wear eye protection. (BMBL:C3)			
36. An insect or rodent control program is in effect. (BMBL: A10) (NIH: G-II-B-2-e)			
37. Animals and plant not associate to the experiments are excluded from the lab. (BMBL:A5-c)			
38. Needles and syringes are used only for parenteral injections and fluid aspiration from animals. Only locking or integral-type of syringes are used. Safe needle devices are required for use with blood borne pathogens and human materials. (BMBL:A5-c)			
39. Sharps including needles, razors, scalpels, contaminated broken glass and pasteur pipettes are disposed of in a sharps container. Careful manage of the material. (NIH: G-II-B-2-j)(BMBL:A5-a)(BMBL:A5-b)			
40. Extreme caution is used when handling needles and syringes to avoid autoinoculation and the generation of aerosols during use and disposal. (NIH:G-II-B-2-j)			
41. Contaminated needles are not sheared, bent, or recapped. (NIH: G-II-B-2-j)			
42. An autoclave for decontaminating infectious laboratory waste is available. (NIH: B G-II-B-4-f)			
43. Laboratory equipment should be routinely decontaminated, as well as, after spills, splashes, or other potential contamination. Equipment must be decontaminated before repair, maintenance, or removal from the laboratory. (BMBL:B7)			
44. A biohazard symbol is placed on equipment (e.g., incubators, freezers) where biohazardous materials are used or stored. Provision to assure properly safety cabinet performance and air system operation must be verified. (BMBL:D10)			
45. Special containment devices or equipment such as a biological safety cabinet is generally required for manipulations of agents assigned to Biosafety Level 2. (NIH-G-11-B-3-a)			

Biosafety Level 2 (BSL2) Containment (Continued)		YES	NO	N/A
46. Biosafety cabinets are certified annually: list cabinets below				
Location:	Date last certified:			
Certifier:	Model:			
Manufacturer:	Serial No.:			
Location:	Date last certified:			
Certifier:	Model:			
Manufacturer:	Serial No.:			
47. Centrifuges and microfuges are located within the laboratory.				
48. Chairs and furniture in the lab are made of non-fabric, easily cleanable materials. (NIH: G-II-B-4-c)				
49. A container of decontaminant is available in or near the biosafety cabinet when work is in progress. All procedures involving the manipulation of infectious material that may generate an aerosol should be conducted within a BSC or other physical containment devices. (BMBL:B10)				
50. Windows in the lab that can be opened are fitted with fly screens. (BMBL: D5) (NIH: G-II-B-4-e)				
51. A method for decontaminating all laboratory wastes should be available in the facility (e.g. autoclave, chemical disinfection, incineration, or other valid decontamination method.) (BMBL:D11)				
52. On campus transport (between laboratories, buildings) of cultures, tissues, or specimens is accomplished in closed, leak proof, break resistant containers, lined with absorbent material and labeled with the biohazard sign and contact information. Off campus transport complies with domestic (US DOT) and/or international regulations (ICAO), including required training. (BMBL:A8)				
53. Properly maintained biological safety cabinets, preferably Class II, or other appropriate physical containment devices are used whenever High concentrations or large volumes of infectious agents are handled. Such materials may be centrifuged in the open laboratory if sealed rotor heads, centrifuge safety cups, or gasket-containing centrifuge tubes are used. These rotors, safety cups, or tubes are packaged and opened only in a biological safety cabinet. (BMBL:B3)(NIH:G-II-B-3-a(2))				
54. Studies using animals must also be reviewed and approved by the Animal Care & Use Committee prior to starting work. (BMBL:A1)				
55. A permanent record shall be maintained of the experimental use and disposal of each animal or group of animals. (NIH:Q-I:B2)				
56. A safety manual specific to the use of animals is prepared or adopted in consultation with the animal facility director and appropriate safety professionals. (BMBL:A2)				
57. Advance consideration should be given to emergency and disaster recovery plans, as a contingency for man-made or natural disasters (BMBL:A5)				

Biosafety Level 2 (BSL2) Containment (Continued)	YES	NO	N/A
<p>58. Consideration should be given to the use of restraint devices and practices that reduce the risk of exposure during animal manipulations (e.g., physical restraint devices, chemical restraint medications, etc). Consideration should be given to the use of restraint devices and practices that reduce the risk of exposure during animal manipulations (e.g., physical restraint devices, chemical restraint medications, etc). (BMBL:B2)</p>			
<p>59. Materials to be decontaminated outside of the immediate areas where infectious materials and/or animals are housed or are manipulated must be placed in a durable, leak proof, covered container and secured for transport. The outer surface of the container is disinfected prior to moving materials. The transport container must contain a universal biohazard label. (BMBL:B3)</p>			
<p>60. Develop and implement an appropriate waste disposal program in compliance with applicable institutional, local and state requirements. Autoclaving of content prior to incineration is recommended. (BMBL: B3)</p>			
<p>61. Equipment, cages, and racks should be handled in manner that minimizes contamination of other areas. (BMBL:B4)</p>			
<p>62. Ventilation should be provided in accordance with the Guide for Care and Use of Laboratory Animals. The direction of airflow into the animal facility is inward; animal rooms should maintain inward directional airflow compared to adjoining hallways. A ducted exhaust air ventilation system is provided. Exhaust air is discharged to the outside without being recirculated to other rooms. Ventilation system design should consider the heat and high moisture load produced during the cleaning of animal rooms and the cage wash process. (BMBL:D6)</p>			
<p>63. Internal facility appurtenances, such as light fixtures, air ducts, and utility pipes, are arranged to minimize horizontal surface areas, to facilitate cleaning and minimize the accumulation of debris or fomites. (BMBL:D7)</p>			
<p>64. Floor drains must be maintained and filled with water, and/or appropriate disinfectant to prevent the migration of vermin and gases. (BMBL:D8)</p>			
<p>65. Cages should be autoclaved or otherwise decontaminated prior to washing. Mechanical cage washer should have a final rinse temperature of at least 180°F. The cage wash area should be designed to accommodate the use of high pressure spray systems, humidity, strong chemical disinfectants and 180°F water temperatures, during the cage/equipment cleaning process. (BMBL:D9)</p>			
<p>66. Illumination is adequate for all activities, avoiding reflections and glare that could impede vision. (BMBL:D10)</p>			
<p>67. If BSCs are present, they must be installed so that fluctuations of the room air supply and exhaust do not interfere with proper operations. HEPA filtered exhaust air from a Class II BSC can be safely re-circulated back into the laboratory environment if the cabinet is tested and certified at least annually and operated according to manufacturer's recommendations. BSCs can also be connected to the laboratory exhaust system by either a thimble (canopy) connection or a direct (hard) connection. Correct performance of the BSCs should be recertified at least once a year. (BMBL:D11)</p>			
<p>68. If vacuum service (i.e., central or local) is provided, each service connection should be fitted with liquid disinfectant traps and an in-line HEPA filter, placed as near as practicable to each use point or service cock. Filters are installed to permit in-place decontamination and replacement. (BMBL:D12)</p>			

Note: If there are any changes to the originally approved protocol, it is the responsibility of the PI to notify the Environmental Health & Safety Officer at (909)869-4697 as soon as possible to discuss these changes.

Things you should know:

- ❖ **To determine if the agent you are using is Biosafety Level 1 or 2, check these links:**
<http://www.absa.org/index.html> or <http://www4.od.nih.gov/oba/>
- ❖ **NOTE: Risk Group 1 is equal to Biosafety Level 1**
Risk Group 2 is equal to Biosafety Level 2
- ❖ **IBC Approval must be completed PRIOR to initiation of Biosafety Level 2 experiments.**
- ❖ **Personal protective equipment (PPE) must be provided to employees, and must be suitable for the biological agents used and the task(s) performed.** PPE includes lab coats, gloves, eye/face protection (if appropriate/necessary) and any other necessary protective measures.
- ❖ **A plan for containment of SHARPS should be in place if they are used** (e.g., use of sharps containers; no re-capping of needles, etc).
- ❖ **Changes in the proposed use of recombinant DNA materials or biohazardous agents within this project must be documented:**

Use in Whole Animals (includes lab work on animal specimens):
Contact the Animal Care and Use Committee.

Use in the Laboratory ONLY (e.g., *in-vitro* work):

Submit Biological Agents User Application Form and Biosafety Plan (with SOP) to the EH&S Department

For assistance, contact David Patterson, EH&S; dlpatterson@cpp.edu, phone (909) 869-4697.

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