Arthropod Containment Level 2 Inspection Report (10/2015)

Oklahoma State University
Institutional Biosafety Committee
223 Scott Hall
Stillwater, OK 74078

Lab Director:	Inspected By:	
Lab Location (Bldg/Rm Nos.):	Department:	Inspection Type: ☐Initial ☐Annual ☐3 yr Renewal
Lab Safety Officer:	College/Department Safety Officer:	Inspection Date:

List of Agents that will be Used/Stored in Lab
(Check all applicable agent categories and list agents by category):

☐Recombinant DNA:
☐Bacterial:
☐Viral:
☐Fungal:
☐Parasitic:
☐Toxin:
☐Prion:
☐Other:

Agents/toxins are a risk to:

☐Humans
☐Animals
☐Plants

Arthropod Containment Level 2 (ACL-2): Suitable for work with exotic or indigenous arthropods infected with risk group 2 agents associated with animal and/or human disease, or that are suspected of being infected with such agents. Also suitable for work with uninfected genetically modified arthropod vectors provided that the modification has no, or only negative effects on viability, survivorship, host range, or vector capacity.

ACL	AGENTS	PRACTICES	SAFETY EQUIPMENT	FACILITIES
2	Associated with human and/or animal disease	BSL-1/ACL-1 practices plus: •Additional access restrictions •Biohazard warning signs •Lab-specific biosafety manual •Arthropods decontaminated before disposal	**Primary Barriers:** Physical containment devices used for all manipulations of agents with the potential to cause splashes or aerosols of infectious materials **PPE:** Lab coats, gloves, face and respiratory protection as needed	BSL-1/ACL-1 plus: •Entrance via a double-door vestibule •Light-colored interior surfaces •Modified floor drains

IBC Disposition:

☐Approved for Work at: .....☐ACL-2
☐Provisionally Approved for Work at:.....☐ACL-2

Comments:

IBC Chair Signature:	Date:	Biological Safety Officer Signature:	Date:

INSPECTION CHECKLIST					
Verbal Inspection		**YES**	**NO**	**N/A**	**Comments**
1.1	Laboratory/insectary access is limited/restricted when work with cultures/specimens is in progress				
1.2	Laboratory/insectary doors are kept shut at all times and are locked when laboratory personnel are not present.				
1.3	Select agent labs: access is restricted to SRA cleared personnel when lab is hot and when SATs are present; non-SRA cleared personnel are escorted				
1.4	Non lab personnel are escorted				
1.5	Minimum requirements to enter and work in lab are established and enforced.				
1.6	Personnel at risk of acquiring infections or for whom infections may have serious consequences are denied access to lab				
1.7	All personnel are advised of potential hazards prior to entering and working in the lab				
1.8	Lab personnel receive appropriate training on standard operating procedures, potential hazards, precautions to prevent exposures, and exposure evaluation procedures				
1.9	Lab personnel have read and follow biosafety procedures and practices				
1.10	Lab personnel are trained in the opening of packages containing biohazards				
1.11	Personnel are trained on how to contain, decontaminate, and clean spills				
1.12	All lab employees have attended chemical hygiene or hazard communication training				
1.13	Lab personnel receive annual refresher training and/or additional training as necessary				
1.14	Lab personnel have been offered appropriate immunizations for agents and materials handled or potentially present in laboratory (e.g., Hepatitis B vaccine, Influenza vaccine, etc.)				
1.15	Baseline and periodic serum samples are collected/stored as dictated by risk assessment				
1.16	Light-colored protective laboratory clothing such as a lab coats, solid-front or wrap-around gown, scrub suits or coveralls is worn when handling recombinant/infectious materials				
1.17	Eye and face protection (e.g., goggles, mask, face shield, or other splatter guard) is used for anticipated splashes or sprays of biohazardous materials				
1.18	Persons who wear contact lenses in the laboratory also wear eye protection				
1.19	Eye and face protection is disposed of as biohazardous waste or decontaminated before reuse				
1.20	Personnel using respirators are enrolled in Respiratory Protection Program				
1.21	Gloves are worn if hands are at risk of contact with infectious materials, infected animals, contaminated surfaces, infected arthropods, and when handling host animals or blood for arthropod feeding				
1.22	Gloves are not worn outside of the lab or when touching “clean” surfaces (e.g., telephones, keyboards, elevator buttons, etc.)				
1.23	Lab personnel wash hands after handling biohazardous materials, after removing gloves, and before leaving the lab				

Verbal Inspection		YES	NO	N/A	Comments
1.24	PPE is changed when contaminated, when the integrity is compromised, or at the completion of work				
1.25	Disposable PPE, including gloves, is not reused and is disposed of as biohazardous waste				
1.26	Protective clothing is either discarded appropriately in the lab or laundered on-site				
1.27	Soiled/used lab clothing is autoclaved or chemically disinfected before laundering				
1.28	All PPE is removed and left in lab before leaving				
1.29	No eating, drinking, smoking, handling contact lenses, applying cosmetics, or storing human food in lab				
1.30	Mechanical pipetting devices are used (i.e., no mouth pipetting)				
1.31	Sharps handling policies and practices in place				
1.32	Plasticware is substituted for glassware whenever possible				
1.33	Broken glassware is only handled by mechanical means				
1.34	Needle/syringe use is kept to absolute minimum.				
1.35	Only needle-locking syringes or syringes with permanently affixed needles are used for injection or aspiration of infectious materials				
1.36	Needles are not bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated prior to disposal				
1.37	Sharps containers are decontaminated (e.g., autoclaved or appropriate chemical treatment) prior to disposal or reprocessing				
1.38	Lab maintains a needlestick injury log				
1.39	Procedures minimize splashes/aerosols				
1.40	Spills, accidents, and arthropod releases are immediately reported to the lab director (f spill is outside primary containment and >10ml report to the BSO immediately)				
1.41	Work surfaces including those in the BSC are decontaminated at the completion of work and after any spill or splash of viable material				
1.42	Lab equipment is decontaminated on routine basis and prior to sending it for repair/maintenance or packaging it for shipment				
1.43	A method for decontaminating lab waste (e.g., autoclave) is available in the building				
1.44	Materials decontaminated outside of lab are transported in durable, leak-proof, closed containers (e.g., plastic bags transported in tray or pan with a leakproof bottom)				
1.45	Materials to be removed from the facility for decontamination are packed in accordance with applicable local, state, and federal regulations				
1.46	Cultures, stocks, and regulated wastes are decontaminated by an approved method (*e.g*., autoclaving) before disposal				
1.47	Cultures, tissues, specimens, and infectious wastes are kept in covered, leak-proof containers during collection, handling, processing, storage, transport, and shipment.				
1.48	There are written procedures in place for offsite transportation of biohazards				
1.49	Written procedures are in place for handling leaking or damaged packages containing biohazards				
1.50	Animals and plants not associated with the work are not permitted in the laboratory				
1.51	An insect and rodent control program is in effect				

Verbal Inspection		YES	NO	N/A	Comments
1.52	A Class II BSC or equivalent is used for procedures that have the potential to create aerosols or splashes and for work w/ high concentrations (>10^8 cfu/ml) or large volumes (>1 liter) of infectious agent				
1.53	Accidental sources of arthropods from within the insectary are eliminated (e.g., soil and water are not left exposed)				
1.54	Cages and other culture containers are appropriately cleaned to prevent arthropod survival and escape; cages containing infectious materials are autoclaved before cleaning and/or disposal				
1.55	Spread of infectious agents to uninfected arthropods is prevented				
1.56	Living arthropods are killed before disposal; infected arthropods are autoclaved before disposal				
1.57	Arthropods fed on host animals are prevented from accidental transfer to host cages				
1.58	Personnel take precautions to prevent transport or dissemination of arthropods on their persons or via the sewer				
1.59	When handling/removing animals after exposure to arthropods, precautions are taken to prevent arthropod escape through screens, covers, and by flying				
1.60	Host animals are inspected closely to ensure that arthropods are not concealed in fur, ears, etc.				
1.61	If blood is used as a food source, the blood is pathogen-free				
1.62	All procedures are carefully designed and performed to prevent arthropod escape				
1.63	Animals other than those needed for the study are not accessible to the arthropods				
1.64	An effective arthropod trapping and monitoring program has been instituted				
1.65	Escaped arthropods are killed and disposed of or recaptured and returned to their containers				
Visual Inspection		**YES**	**NO**	**N/A**	**Comments**
2.1	Lab/insectary is located away from public areas and has lockable doors for access control				
2.2	Biohazard signage including a biohazard symbol, the lab biosafety level, required immunizations, required PPE, required lab exit procedures, and emergency contact information is posted at all lab entrances when infectious agents are present				
2.3	Posted signage indicates the presence of arthropod vectors				
2.4	Entrance into the insectary is via double-door vestibule that prevents flying and crawling arthropod escape				
2.5	Emergency contact information (including the Biosafety Officer's contact information) is posted in a conspicuous location				
2.6	A lab-specific biosafety manual has been developed and is available in the lab				
2.7	MSDSs are available for any biohazards used in the lab				
2.8	Training of personnel is adequately documented				
2.9	Spill clean-up procedures are developed and posted				
2.10	Lab has adequate lighting				
2.11	Lab is designed to be easily cleaned (e.g., no carpets/rugs, spaces between cabinets/equipment are accessible, etc.)				

	Visual Inspection	YES	NO	N/A	Comments
2.12	Bench tops are impervious to water and resistant to heat, organic solvents, acids, alkalis, and disinfectants.				
2.13	No fabric upholstered/covered furniture or chairs				
2.14	Lab has a sink for hand washing				
2.15	BSC is tested and certified at least annually				
2.16	BSC is not located near doors, windows that can be opened, or heavy traffic areas				
2.17	The front grill of the BSC not blocked or covered and cabinet is free of clutter				
2.18	Vacuum lines are protected with liquid disinfectant traps or are HEPA filtered.				
2.19	Sharps containers are labeled, conveniently located, and puncture resistant				
2.20	Containers for non-disposable sharps are hard-walled and leak proof				
2.21	Effective disinfectants are available for all agents in use				
2.22	Refrigerators and freezers containing biohazards are labeled with a biohazard symbol				
2.23	All lab equipment that may be contaminated is labeled with a biohazard symbol				
2.24	All containers holding biohazardous materials are labeled with a biohazard symbol				
2.25	All biohazard waste receptacles are closed/covered when not in use or waste is autoclaved daily				
2.26	Lab windows that open to the outside are fitted with fly screens				
2.27	An eyewash station is readily available				
2.28	There is no exposed soil, water, or insect diet in the insectary				
2.29	Arthropods are identified with labels (e.g., species, strain/origin, date of collection, PI, etc.) firmly attached to the container (and cover if removable)				
2.30	Furniture and incubators containing arthropods are located in such a way that accidental contact and release is minimized				
2.31	Equipment and supplies not required for operation of the insectary are not located in the insectary; supplies kept in the insectary are located in designated areas and not open shelves				
2.32	Arthropod cages are non-breakable and screened with mesh to prevent escape; openings for removal and introduction of arthropods are designed to prevent escape				
2.33	Species appropriate traps are in place to catch escapes arthropods and records of exterior captures of escaped arthropods are maintained				
2.34	An accidental release procedure (which includes emergency contacts and immediate mitigating actions) is developed and posted				
2.35	Interior walls, floor, and ceiling are light-colored to aid in location of loose arthropods				
2.36	Floor drains have been modified to prevent accidental release of arthropods and agents; if present, floor drains are filled with a chemical treatment to prevent survival of all arthropod stages				
2.37	Fixtures, pipes, and ducting are minimal and penetrations of walls, floors, and ceilings are sealed to reduce hiding places for loose arthropods				

Visual Inspection		YES	NO	N/A	Comments
2.38	Ventilation is appropriate for arthropod maintenance; the direction of airflow in the insectary is inward and exhaust air is discharged to the outside without being recirculated				

INSPECTION FINDINGS

Code M = Minor Deficiency Code S = Significant Deficiency

Checklist Number	Code	Deficiencies	Required Corrective Actions	Suspense