

# Arthropod Containment Survey

**Dept. & Room:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**PI:** \_\_\_\_\_

*This is the checklist that EHS uses for their annual survey. The purpose of this survey is to identify unsafe conditions and/or behaviors in laboratories where arthropods requiring containment are present. This list is meant to be used in conjunction with the Biological Safety Survey and Chemical Safety Survey. Laboratory personnel are encouraged to utilize this survey to evaluate their work area(s) on a regular basis. Safe science is smart science.*

<b>Critical</b>	Critical finding: a safety departure that can result in personnel injury or exposure and/or environmental contamination. Non-critical findings that continue unaddressed or are found to be excessive within a work area and thus present more than a moderate hazard will be elevated to a critical finding. These findings are required to be corrected onsite but no longer than 24hrs.
<b>Non-Critical</b>	Non-critical finding: a safety departure that presents a moderate hazard; are generally indicative of inadequate safe work practice(s). These findings should be corrected as soon as possible, but no longer than 30 calendar days.
<b>Admin</b>	Administrative safety departure: Indicates the lack of, or deficiency in, written safety policies, rules, supervision, schedules, and / or training with the goal of reducing the duration, frequency, and severity of exposure to hazardous materials or situations. Administrative safety departures can be critical or non-critical in nature. Unless otherwise specified, corrective actions should be completed within 30 calendar days.

### ACL1 - FACILITIES

#	TYPE	QUESTION	YES	NO	N/A	COS
1	NC	Are electrical boxes, lighting, switches, wiring, conduit, etc, sealed with appropriate materials (caulk, foam, etc,) that are impenetrable to the contained organisms and can withstand repeated decontamination with bleach or other caustic solutions? (USDA: II(G)4) Notes:				
2	NC	Are the interior walls light-colored, and are the floors light-colored, smooth, and uncovered? (BMBL: App(E)) Notes:				
3	NC	Are work surfaces and laboratory furniture (bench tops, cabinets, tables, etc.) light gray or white, water-resistant, impervious to arthropods, and resistant to caustic chemicals and heat? (USDA: IV(A)1) Notes:				
4	C	Do door openings, whether covered by rigid panels, glass, screens, plastic sheets, or cloth, minimize the escape and entrance of arthropods or pests? (BMBL: App(E)) Notes:				
5	C	Do windows effectively prevent the escape of the smallest arthropods contained within as well as prevent entry of wild arthropods and pests? (BMBL: App(E)) Notes:				

### ACL1 - PRACTICES

6	C	Are all life stages of arthropods killed by an approved method before disposal? (BMBL: App(E)) Notes:				
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7	NC	Are arthropods identified with descriptive labels (firmly attached to the container, and cover if removable) to include the species, strain/origin, date of collection, responsible investigator, and so on? (BMBL: App(E)) Notes:				
8	C	Are cages used to hold arthropods labeled and effective in preventing the escape of all life stages? (BMBL: App(E)) Notes:				
9	C	Are exterior doors locked at all times? (USDA: V(B)1) Notes:				
10	NC	Are furniture and incubators containing arthropods located in such a way that accidental contact and release are minimized (i.e., out of the flow of general traffic, avoiding hallways, or in closets)? (BMBL: App(E)) Notes:				
11	C	Are harborage and breeding areas reduced as appropriate and are benches, cabinets, and equipment easy to inspect? (BMBL: App(E); USDA: IV(A)2) Notes:				
12	A	Are investigators assessing and logging whether escapes are occurring, and if exotic (i.e., imported) arthropods are used, is the exterior monitored with evidence of escape initiating a review of practices before resuming work? (BMBL: App(E)) Notes:				
13	A	Are protocols in place to prevent arthropod survival and escape during containment cleaning and disinfection (e.g., heated to, or chilled below, lethal temperature)? (BMBL: App(E)) Notes:				
14	C	Are white laboratory coats, gowns, and/or uniforms worn at all times along with clothing that minimizes exposed skin while in the insectary? (BMBL: App(E)) Notes:				
15	C	Is the entry of overcoats, hats, purses, etc. into the containment areas prohibited, as these articles may allow organisms to hide and escape? (USDA: V(C)2) Notes:				
<b>ACL2 - FACILITIES</b>						
16	NC	Are appropriate filters/barriers installed in ventilation systems to prevent the escape of arthropods? (BMBL: App(E)) Notes:				
17	NC	Are central vacuum system service outlets fitted with suitable barriers/filters to prevent arthropod escape? (BMBL: App(E)) Notes:				

18	NC	Are downdraft fans located in the vestibule and internal corridor that can be used to help prevent the escape of flying arthropods? (BMBL: App(E)) Notes:			
19	NC	Are floor drains and plumbing covered by appropriate-sized mesh and/or suitable filters? (BMBL: App(E)) Notes:			
20	NC	Are internal facility appurtenances (e.g., light fixtures, pipes, ducting) minimal since these provide hiding places for loose arthropods? (BMBL: App(E)) Notes:			
21	NC	Are light fixtures flush with the ceiling and sealed, and are other penetrations of walls, floors, and ceilings minimal and sealed/caulked? (BMBL: App(E)) Notes:			
22	C	Are vacuum appliances used only in the facility? (USDA: II(I)1) Notes:			
23	C	Are windowless doors installed, or are windows of the most interior doors blocked (e.g., blinds or other covers) to prevent organisms from moving toward light, and are windows sealed and resistant to breakage (e.g., double-paned or wire reinforced)? (USDA: II(B)8; BMBL: APP(E)) Notes:			
24	NC	Ceilings are as low as possible to simplify the detection and capture of flying insects. (BMBL: App(E)) Notes:			
25	C	Do the Internal doors open outward or are sliding, and are kept closed when arthropods are present? (BMBL: App(E)) Notes:			
26	A	Does the PI or insectary director document the annual inspection of the facility to ensure that alterations and maintenance have not compromised the containment characteristics? (BMBL: App(E)) Notes:			
27	NC	If there is not a dedicated insectary, are non-flying arthropod vectors, such as ticks or fleas, manipulated in a dedicated area within a BSL-2 laboratory using a moat system (pan within a pan of water) and accounting for all specimens? (BMBL: App(E)) Notes:			
28	C	Is a communication system (telephones, intercoms, etc.), and/or a computer system (LAN, modem, etc.), or a fax machine installed that allows communication and data transfer between the interior and exterior of the facility and prevents organism escape? (USDA: II(K)1; USDA: II(K)2) Notes:			

29	NC	Is a progressively negative pressure gradient maintained as the distance from the main entrance increases? (BMBL: App(E)) Notes:				
30	NC	Is an autoclave available and conveniently located in rooms containing arthropods within the insectary building? (BMBL: App(E)) Notes:				
31	C	Is the entrance to the insectary via a double-door vestibule that prevents flying and crawling arthropod escape, and are the two contiguous doors prohibited from being open at the same time? (BMBL: App(E)) Notes:				
<b>ACL2 - PRACTICES</b>						
32	NC	Are all infectious and potentially infectious samples collected, labeled, transported, and processed in a manner that contains and prevents transmission of the agent(s)? (BMBL: App(E)) Notes:				
33	C	Are all supplies for insect maintenance that must be kept within the insectary located in a designated area and in cabinets with tight-fitting doors or drawers that are only opened for access (to enhance detection of escaped arthropods), and is the insect diet kept in sealed containers? (BMBL: App(E)) Notes:				
34	C	Are cages shatter-proof and screened with mesh of a size to prevent escape while holding, during removal, and introduction of arthropods? (BMBL: App(E)) Notes:				
35	NC	Are containers clearly marked to easily distinguish infected from uninfected arthropods? (BMBL: App(E)) Notes:				
36	C	Are foreign-sourced packages placed in a sleeve cage or Biosafety cabinet before opening? (USDA: V(F)2) Notes:				
37	NC	Are harborage and breeding areas eliminated? (BMBL: App(E)) Notes:				
38	C	Are infected arthropods autoclaved after being rendered non-viable? (BMBL: App(E)) Notes:				
39	NC	Are physical barriers (overlapping sheets and screens) or air curtains used? (BMBL: App(E)) Notes:				

40	<b>C</b>	Are vector packing materials autoclaved immediately after the removal of specimens and cultures? (USDA: V(F)3) Notes:				
41	<b>A</b>	Are visitors required to sign a logbook? (USDA: V(B)4) Notes:				
42	<b>NC</b>	Is equipment in which water is stored or might accumulate (e.g., humidifiers) screened to prevent arthropod access, or containing chemicals to prevent arthropod survival? (BMBL: App(E)) Notes:				
43	<b>NC</b>	Is the transfer of arthropods between manipulation and holding areas in non-breakable secure containers? (BMBL: App(E)) Notes:				