

Biosafety Level 1 – Plants (BL1-P)
*NIH Guidelines for Research Involving Recombinant or Synthetic
Nucleic Acid Molecules*
(Appendix L-II-A) – April 2019



Biosafety Level 1 - Plants (BL1-P)

Appendix L-II-A-1. Standard Practices (BL1-P)

a. Greenhouse Access (BL1-P)

- 1) Access to the greenhouse shall be limited or restricted, at the discretion of the Greenhouse Director, when experiments are in progress.
- 2) Prior to entering the greenhouse, personnel shall be required to read and follow instructions on BL1-P greenhouse practices and procedures. All procedures shall be performed in accordance with accepted greenhouse practices that are appropriate to the experimental organism.

b. Records (BL1-P)

- 1) A record shall be kept of experiments currently in progress in the greenhouse facility.

c. Decontamination and Inactivation (BL1-P)

- 1) Experimental organisms shall be rendered biologically inactive by appropriate methods before disposal outside of the greenhouse facility.

d. Control of Undesired Species and Motile Macroorganisms (BL1-P)

- 1) A program shall be implemented to control undesired species (e.g., weed, rodent, or arthropod pests and pathogens), by methods appropriate to the organisms and in accordance with applicable state and Federal laws.
- 2) Arthropods and other motile macroorganisms shall be housed in appropriate cages. If macroorganisms (e.g., flying arthropods or nematodes) are released within the greenhouse, precautions shall be taken to minimize escape from the greenhouse facility.

e. Concurrent Experiments Conducted in the Greenhouse (BL1-P)

- 1) Experiments involving other organisms that require a containment level lower than BL1-P may be conducted in the greenhouse concurrently with experiments that require BL1-P containment, provided that all work is conducted in accordance with BL1-P greenhouse practices.

Appendix L-II-A-2. Facilities (BL1-P)

a. Definitions (BL1-P)



- 1) The term "greenhouse" refers to a structure with walls, a roof, and a floor designed and used principally for growing plants in a controlled and protected environment. The walls and roof are usually constructed of transparent or translucent material to allow passage of sunlight for plant growth.
- 2) The term "greenhouse facility" includes the actual greenhouse rooms or compartments for growing plants, including all immediately contiguous hallways and head-house areas, and is considered part of the confinement area.

b. Greenhouse Design (BL1-P)

- 1) The greenhouse floor may be composed of gravel or other porous material. At a minimum, impervious (e.g., concrete) walkways are recommended.
- 2) Windows and other openings in the walls and roof of the greenhouse facility may be open for ventilation as needed for proper operation and do not require any special barrier to contain or exclude pollen, microorganisms, or small flying animals (e.g., arthropods and birds); however, screens are recommended.

