

Individual Training in BSL3 Procedures: Best Practices

Composed July 11, 2012, revised 8/28/12

Training of students and research personnel in BSL3 procedures is the responsibility of the program principal investigator. CSU, through the Biosafety Office, provides an introductory course (Unit 3) in laboratory techniques and procedures to be used in a BSL3 environment, and after that initial training, the individual will be allowed keycard access to the areas in which they will work. However, keycard access does not imply permission to work unescorted, and training in specific techniques and procedures, including handling of animals, is to be provided by the PI or their delegate for that task. The extent of this individualized training will vary considerably among personnel, depending on their past experiences and aptitudes. Key points for such training (to replace Unit 5) are:

1. Training must be documented in a manner that will satisfy local and governmental agencies. It is suggested that for every training session the following items be recorded:
 - a. Date of the training
 - b. Who was trained
 - c. Who did the training
 - d. Specifically what training took place (list of procedures)
 - e. The length of time for that training session
 - f. Signature of the trainee and trainer

PLEASE NOTE: *It is absolutely critical that accurate training records be maintained. CDC, APHIS, AAALAC and other agencies will periodically request documentation of all training.* In addition, the Biosafety Office will request to review training documentation during routine lab audits. There are many different ways to accomplish this, one suggested method is for the trainee to maintain a notebook with entries for each training session and that periodically, the trainee and trainer review the entries, modify as necessary and that the trainer sign off for each session. Each trainee's notebook would then serve as the documentation of the above training conducted by the PI.

2. The PI, and delegate trainers, will determine when a given individual is adequately trained and capable of performing specific tasks in the BSL3 environment and at that point, the trainee will be allowed to work unescorted in the laboratory. Permission to perform a specific procedure does not mean that the individuals will be allowed to perform unfamiliar procedures by themselves; rather, additional training is required for each unique type of procedure (e.g. titrating stocks of an agent, necropsying a mouse, homogenizing tissues, etc). The clear intent of this program is for all individuals to receive the training necessary to safely conduct their work, and that in many cases, this will be an ongoing process.

Guidelines for PI/lab manager training

Different users have significantly different training needs, but there are some common procedures that all users share and require specific attention and logging of training efforts.

All individuals working in BSL3 laboratories or animal rooms:

- Putting on and taking off PPE and what PPE is required
- Entry and exit procedures
- Incident reporting
- Material transfer: entry and exit
- Sharps procedures
- Emergency equipment location and evacuation procedures

Individuals performing laboratory work in BSL3:

- Proper use of equipment (e.g. biological safety cabinet, electroporator, centrifuge, shaker incubators...)
- Procedures to use in the case of a spill (within or outside cabinet)
- Biological waste management
- Lab specific procedures: such as growing pathogens, homogenizing tissue, DNA extraction, harvesting cells...

Individuals conducting work with animals at ABSL3

- Proper animal handling (assumes that the person has already been trained and is considered competent in handling uninfected animals)
- Use of microisolator caging, if relevant
- Animal procedures- injection techniques, dosing, weighing, cage change, anesthesia, euthanasia, and necropsy
- Disposal of animals