

# Facility and Equipment Standard and Safety Operation Standard for a Laboratory Where Specific Biological Agents are Used

Procedure 12-3

June 16, 2000

Revised on June 1, 2011

A laboratory where biological agents are used, and the operation of the handling of biological agents at such a facility must comply with the following standards.

## 1. Level 1

The standards of the laboratories (BSL-1 laboratories) handling Level 1 biological agents defined by “the standard to classify the Biosafety Level of the specific biological agent” are as follows.

### (1) Facility and Equipment

- 1) The laboratory space must be separated from the space where the experiment is not conducted.
- 2) The door to the laboratory must close automatically.
- 3) An “international biohazard sign” should be posted near the entrance of the laboratory indicating the name and level of the specific biological agent in use and the name of the person in charge of the biological experiment.
- 4) Equipment for disinfection and sterilization must be installed.
- 5) The laboratory must be equipped with waste containers that prevent odor and volatile gas from escaping, to temporarily keep used samples, culture medium, and organic solvent.

### (2) Safety operation

- 1) The laboratory must be kept organized and clean at all times.
- 2) When using plant samples, conduct the experiment under conditions that do not allow release of pollen or spores.

- 3) The used specific biological agents must be disinfected/sterilized.
- 4) The used experimental materials that emit the odor and volatile gas must be disposed of immediately after temporary storage.

## 2. Level 2

The standards for the laboratories (BSL-2 laboratories) handling Level 2 biological agents defined by “the standard to classify the Biosafety Level of the specific biological agent” must meet the following conditions in addition to the above-mentioned standards in section 1 (Level 1).

### (1) Facility and Equipment

- 1) The appropriate equipment for physical containment such as a safety cabinet and glove box must be installed in the “separated laboratory” so that double-layered physical containment is established.
- 2) Disinfection/sterilization equipment appropriate for the experimental apparatus, floor, wall, and ventilation system (including filters) must be installed when handling Level 2 specific biological agents.
- 3) Equipment to disinfect the fingers must be installed near the entrance of the laboratory.
- 4) A change room must be installed near the entrance of the laboratory with lab coats, footwear, and masks for exclusive use inside the laboratory.

### (2) Safety operation

- 1) While in the laboratory, put on the exclusive lab coat and footwear for use inside the laboratory.
- 2) An experiment that may produce aerosol, must be conducted in a physically contained facility such as a safety cabinet.
- 3) If microorganisms and pollen are dispersed by accident during the experiment or the malfunction of the physical containment facility, immediately sterilize the inside of the laboratory and physical containment facility.
- 4) As a general rule, visitors are not allowed to enter the laboratory during the experiment. If a collaborator, a person who adjusts the experimental equipment, or a person who inspects and repairs the facility must enter the laboratory, a biological experiment worker or a staff member of the Safety Office should accompany the

person and give the necessary instructions.

5) When leaving the laboratory, disinfect and wash the fingers.

6) The laboratory clothing must be sterilized before it is removed from the laboratory to be washed.

### 3. Miscellaneous

When Level 1 experimental materials and Level 2 experimental materials are used in the experiment at the same time, the relevant experiment is treated as an experiment using Level 2 materials.

Supplementary provisions

This procedure has come into effect on June 16, 2000.

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