

## Supplement 2. Safe Handling of Life Science Experiment

### Appendix 2-2 Classification of Physical Containment

|  | P1   | P2  |
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| Containment Facilities / Laboratory Layout | Laboratories must be as well-equipped as normal, well-maintained microbiology laboratories. Also, they must be properly-designed.  | <p>[Containment Facilities]</p> <p>Take every possible measure to prevent contaminated aerosol from leaking to the outside when using devices that can cause a leakage of a great deal of aerosol (Devices such as a blender, a freeze dryer, a ultrasonic cell breakage device, a centrifuge, etc., that require the disposal of recombinant materials). Safety cabinets are preferable if cabinets are required. Also, test the performance of cabinets if necessary.</p> <p>[Laboratory Layout]</p> <p>Laboratories must be located inside buildings that are equipped with autoclaves for contaminant and waste disposal.</p> |
| Implementation of Experiment               | <ol style="list-style-type: none"> <li>1. During an experiment, keep the windows and doors of the laboratory closed.</li> <li>2. Decontaminate lab benches after each experiment every day. Also, decontaminate immediately when contamination occurs during an experiment.</li> <li>3. Sterilize all the waste derived from the organisms involved with experiments before disposal. Sterilize other contaminated devices. Either decontaminate or sterilize other</li> </ol> | <ol style="list-style-type: none"> <li>1. During an experiment, keep the windows and doors of the laboratory closed.</li> <li>2. Decontaminate lab benches and safety cabinets after each experiment every day. Also, decontaminate immediately when contamination occurs during an experiment.</li> <li>3. Either decontaminate or sterilize all the waste including recombinants before washing, re-use, and disposal.</li> <li>4. Use mechanical pipette.</li> <li>5. Refrain from drinking, eating, smoking, and storing food in laboratories.</li> <li>6. Wash hands after handling recombinants and when leaving</li> </ol> |

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|  | <p>contaminated devices before washing, re-use, and disposal.</p> <ol style="list-style-type: none"> <li>4. Use of mechanical pipette is preferable.</li> <li>5. Refrain from drinking, eating, smoking, and storing food in laboratories.</li> <li>6. Wash hands after handling recombinants and when leaving laboratories.</li> <li>7. Pay close attention to all the operations in order to minimize the outbreak of aerosol.</li> <li>8. In the event of contamination disposal of contaminated substances in a place outside the laboratory, put them in firm and watertight containers and take them out of the laboratory.</li> <li>9. Conduct laboratory insect &amp; rodent control.</li> <li>10. Avoid using injection syringes if there are other methods.</li> <li>11. Keep laboratories clean and tidy at all times.</li> <li>12. Follow the instructions of the principal investigators of the laboratories when using laboratory clothes.</li> <li>13. Observe the rules decided by the principal investigator of the laboratories.</li> </ol> | <p>laboratories.</p> <ol style="list-style-type: none"> <li>7. Pay close attention to all the operations in order to minimize the outbreak of aerosol.</li> <li>8. In the event of contamination disposal of contaminated substances in a place outside the laboratory, put them in firm and watertight containers and take them out of the laboratory.</li> <li>9. Conduct laboratory insect &amp; rodent control.</li> <li>10. Avoid using injection syringes if there are other methods.</li> <li>11. Put on laboratory clothes inside laboratories and take them off when leaving laboratories.</li> <li>12. Do not allow people who have no knowledge about the quality of the ongoing experiment in the laboratory without the principal investigator's permission.</li> <li>13. Put a sign 'P2 LEVEL EXPERIMENT IN OPERATION' on the entrance door when an experiment is under progress.</li> <li>14. Keep laboratories clean and tidy at all times.</li> <li>15. Decontaminate the HEPA filter of a safety cabinet by using 10g/m<sup>3</sup> of formaldehyde vapor with the cabinet hermetically closed either before the filter exchange or at the time of the filter test.</li> <li>16. When operating an experiment together with another experiment evaluated for P1 containment level in the same laboratory, conduct the experiments with full attention by setting clearly-controlled areas.</li> </ol> |
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|  |  | 17. Strictly keep other instructions established by the principal investigator of the laboratory. |
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