

Prepared by

Sira Mady Dabo, PhD and
Tamara Casebolt, PhD

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Revised by

Carolyn Keierleber, PhD

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A. PURPOSE

This SOP describes the procedures for handling animals following the administration of hazardous chemicals to animals. After having been dosed with hazardous drugs or chemicals, animals may secrete or excrete hazardous chemicals or metabolites. The procedures outlined below are designed to protect employees and the environment from exposure to or contamination with hazardous chemicals.

B. SCOPE

This SOP covers any employees who handle animals that have been treated with hazardous chemicals, including drugs and toxins, in the course of animal research at USC. For this SOP, employees include researchers, veterinary staff, DAR staff, volunteers and visitors.

C. DEFINITIONS

| | |
|--------|-----------------------------------|
| ABSL-1 | Animal Biosafety Level 1 |
| BSC | Biosafety Cabinet |
| DAR | Department Of Animal Resources |
| ECP | Exposure Control Plan |
| EH&S | Environmental Health & Safety |
| IBC | Institutional Biosafety Committee |
| SOP | Standard Operating Procedure |
| USC | University of Southern California |

D. PROCEDURES

1. If a DAR/Biosafety Training is required, you will be contacted prior to the start of animal use by EH&S Biosafety to set up a meeting for training on this SOP and the project execution.
2. Make arrangements for housing research animals and for disposing of the contaminated bedding by contacting USC Department of Animal Resources (DAR) Manager or Supervisor before the study begins.
3. At least one week prior to the need for housing the animals, contact
 1. HSC
 - i. Vivarium Manager Ramiro Montano, 213 400-1266; rmontano@med.usc.edu
 - ii. Vivarium Supervisor Bruce Wilkinson, 213 280-5248
 2. UPC
 - i. Vivarium Supervisor Darryl Adams, 213 446-0042
 to obtain blue chemical cage card labels.

4. Label every animal cage with a blue cage card that has written information to indicate:
 - i. The name of the chemical agent(s) administered
 - ii. The date of application of the chemical or drug (dosing date)
2. Place the blue cage card over the standard cage card
5. Complete DAR/Biosafety training and acknowledge that they have read and understood the procedures in this SOP by completing and signing the Training and Documentation sheet.
6. Agree to follow this SOP and IBC ABSL SOP 2, Chemical Use SOP – *in vivo* procedures” as described.
7. For continuous dosing:
 - i. Transfer cage cards to new cages at the time of cage change.
 - ii. Ensure that dosing dates are recorded on cage cards
8. Post a completed Animal Handler Precautions sign to the front of the door where the animals will be housed.
9. Ensure that the door sign matches the cage cards label.
10. Leave the door sign and cage cards in place for the first week after dosing AND once the contaminated bedding is changed.

E. PERSONAL PROTECTIVE EQUIPMENT (PPE):

Employees must wear the minimum PPE standard.

1. Full-length pants or clothing that otherwise fully covers the legs and ankles
2. Shoes with closed toes and closed heels shoes

Employees must also wear the minimum PPE required by the vivarium.

1. Disposable closed-front gown
2. Nitrile gloves
3. Shoe covers
4. Head cover such as a bonnet

Additional PPE required for handling animals outside a BSC or ventilated cage-changing station may include:

1. Safety glasses, goggles, or safety shield when there is a need to cover the mucous membranes, i.e. splashing may occur.
2. A respirator such as an N95 which requires medical evaluation, fit-testing, and training prior to use.

F. ENGINEERING CONTROLS:

1. Animals must be housed only in micro-isolator cages.
2. Cages must be changed in a ventilated cage-changing station or a biological safety cabinet as described in USC DAR SOP for “Changing mice and rat cages in ventilated or conventional cage racks-Chemical Hazards”.

G. WORK PRACTICES:

1. Employees must wash hands before donning and after doffing gloves.
2. Gloves must be changed at least every 2 hours and when they become torn or obviously contaminated.

3. Contaminated bedding must be collected inside of a BSC or ventilated cage-changing station. Bedding must be collected into labeled hazardous waste buckets lined with a clear bag labeled with chemical sticker. Contact the Office of Environmental Health and Safety (EH&S) Hazardous Waste Program for immediate disposal of contaminated bedding.
 - a. HSC: 2-2225
 - b. UPC: 0-7215
4. Decontamination of the ventilated cage-changing station or biological safety cabinet with an appropriate disinfectant. Cleaning must proceed from least to most contaminated areas.

H. CARCASS AND WASTE DISPOSAL

1. Animals treated with chemical or with both biological and chemical agents must be disposed in a clear plastic bag labeled with chemical sticker and sealed. Place the bag with the carcass in the lab freezer and call EHS for pick up (323-442-2200) or place in a designated vivarium freezer location for disposal.
2. Bedding of animals treated with chemical agents or with both biological and chemical agents will be disposed as chemical waste within one week post administration of agent.
3. Gloves, wipes, protective paper and other chemically contaminated dry waste must be disposed as chemical waste.

I. WORK-RELATED EXPOSURE/INJURY/ILLNESS

1. For non-life-threatening exposure, follow standard procedures in the EH&S "Non-Emergency Injury and Illness Reporting Fact Sheet"), report your injury to a supervisor, and seek medical assistance, if necessary.
2. For serious or life-threatening injuries call DPS at 213-442-1000 (HSC) or 231-740-4321 (UPC)
3. Follow further instructions on the Workers' Compensation website:
<http://benefits.usc.edu/timeoff/workers-comp/>

ADDITIONAL INFORMATION

Please contact the Environmental Health and Safety Office at 323-442-2200, press 4, then 1 to reach the Biosafety group, or send an email to Biosafety@usc.edu

J. SIGNAGE

Animal Handler Precautions Sign is attached

University of Southern California
Laboratory Safety (323) 442-2200

ANIMAL HANDLER PRECAUTIONS

Building:

Room Number:



CHEMICAL HAZARD

Certain animals in this room are part of an approved experiment involving hazardous chemicals. The requirements below apply to this experiment.

1. Principal Investigator: Department: Phone:
2. Emergency Contact Person: Phone: IACUC Protocol:
3. Hazard(s) used in animals:

Required PPE (all work performed in biosafety cabinet or ventilated cage-changing station)

1. Disposable gown
2. Nitrile gloves
3. Shoe covers
4. Hair cover or bonnet

Special Instructions

1. Prior to injection of agent, arrangements for housing and bedding disposal must be made with an animal caretaker supervisor.
2. All animals must be housed in micro-isolator cages.
3. Individual cages must be labeled with chemical hazard card upon injection of agent. The label must indicate the name of the agent and the date of injection.
4. All animal handling must occur inside a certified biological safety cabinet or ventilated cage-changing station.
5. Contaminated bedding shall be collected inside a biosafety cabinet or ventilated cage-changing station. Bedding must be collected into labeled hazardous waste buckets lined with clear sealing plastic bags. Please call EH&S for immediate pickup of contaminated bedding (HSC: 2-2225, UPC: 0-7215)
6. Biosafety cabinet or ventilated cage changing station must be decontaminated with an appropriate disinfectant after use or cage change.
7. Remove gloves and wash hands with soap and water upon leaving room.