I. PURPOSE
This document provides standard procedures for managing animals, animal bedding, and other objects potentially contaminated after the animals have been dosed with hazardous drugs or hazardous chemicals.

II. OBJECTIVE
The purpose of the procedure is to prevent or minimize hazards to personnel handling animals or objects related to the animals after the animal has been dosed with hazardous drugs or hazardous chemicals.

III. SCOPE
The guideline applies to managing animals, their bedding, etc. in animal care facilities.

IV. APPLICATION
The guideline applies to, but is not limited to, the following categories of hazardous drugs and chemicals and is not all inclusive:
- Anthracyclines (Doxorubicin, Daunorubicin)
- Paclitaxel
- Vincristine
- Phenethylamino selenide
- Cisplatin
- Azoxymethane

V. MATERIALS NEEDED
- Disposable gown
- Disposable shoe covers
- Disposable hair bonnet
- Nitrile gloves
- Safety glasses, goggles, or face shield
- Rodent cage liners
- Absorbent pads with impervious backing for work surfaces
- Black plastic bags
- Designated sharps container
- Tape
- Room signage
- SDS sheets
- 10% bleach solution
- Quatricide PV

VI. GENERAL GUIDELINES
Note: Some drugs and chemicals are toxic to the human fetus and can disturb the development of a fetus, cause birth defects, or cause miscarriage. Please refer to the Auburn University Fetal Risk Policy at: https://sites.auburn.edu/admin/universitypolicies/Policies/FetalRiskPolicy.pdf

In the course of research, laboratory animals may be dosed with hazardous drugs (including chemotherapeutic agents) or hazardous chemicals. Animals that have been dosed with a hazardous drug or a hazardous chemical may excrete
some of that substance or metabolites of the drug or chemical into bedding, usually during the first 72 hours after dosing. Excretion times may be extended past 72 hours for some hazardous drugs, therefore the following procedures are to be followed regardless of the time of drug administration. Animal Care Personnel can then be exposed to these drugs or chemicals through inhalation or absorption of the drug through the skin during the animal care or cage cleaning process. Adverse health effects from hazardous drug or chemical exposure may include harm to internal organs, damage to the reproductive system, genetic damage, birth defects, and cancer.

SAFE HANDLING PROCEDURES FOR THOSE HANDLING ANIMALS/BEDDING OF ANIMALS DOSED WITH HAZARDOUS DRUGS OR HAZARDOUS CHEMICALS

Facility Managers will review this SOP with animal care attendants prior to the employees working with animals that have been dosed with hazardous drugs or hazardous chemicals or the animal's caging.

PPE Requirements
Open cuts or irritated skin should be covered with an impervious bandage during animal care.

All personnel working with animals that have been dosed with hazardous chemicals or hazardous drugs should don the following PPE:
  o Disposable closed front gown
  o Disposable shoe covers. Closed toe shoes should be worn.
  o Disposable hair bonnet
  o Nitrile gloves. Change Gloves when they become torn or obviously contaminated with excreta AND before handling animals in other experimental groups. Wash hands after removing gloves.
  o Safety glasses, goggles, or face shields. If these items will be reused they should be washed with water and detergent, and stored in a clean place.

Signage Requirements
  o Animals receiving hazardous drugs or hazardous chemicals must be housed in an animal room designated for use of hazardous drugs or hazardous chemicals with the appropriate signage. (Example included with this guideline).
  o **MANDATORY INVESTIGATOR ITEM**: Investigators will label cage cards with the agent that has been administered and place a copy of the Safety Data Sheet (SDS) in the Notebook outside the animal housing room.

Animal Care Procedures
  o All animals will be housed in cages on ventilated racks. Effluent air should pass through a HEPA filter and be vented outdoors.
  o Open cages in a ventilated cage changing station, a ventilated biological safety cabinet, or a chemical fume hood that is assigned to the room. This includes opening cages for animal care, cage changing, or for experiment related reasons.
  o Cage changes will be performed once per week. All used animal bedding, uneaten feed, etc. will be placed in black bags (double bagged) and managed by RMS. Cages will be emptied in a ventilated cage dumping station, a vented biosafety cabinet, or a chemical fume hood that is assigned to the animal room.
  o Cages should be sprayed with a 10% bleach solution (1 part bleach to 9 parts made fresh daily) prior to transport to cage wash. Leave the bleach solution in contact with surfaces for 3-5 minutes prior to washing.
  o Cages, feeders, water bottles and other cage parts will be sent to cage wash for washing.
  o Clean surfaces and instruments in the animal room with a 10% bleach solution. Leave the bleach solution in contact with surfaces for 3-5 minutes. After wiping up the bleach solution clean the surfaces with detergent and water (Quatricide PV). Proceed from least contaminated area to most contaminated area when cleaning.

**NOTE:** Autoclaving bedding does not destroy most toxic chemicals and hazardous drugs. Autoclaving bedding before dumping cannot be used in place of the above requirements.
Disposal Procedures
- All used animal bedding, uneaten feed, PPE etc. will be double bagged and managed by Risk Management and Safety (RMS).
- Water remaining inside the animal’s water bottle can be poured into the sink drain, unless the drug or chemical is administered via the water. If the drug or chemical is administered via the animal’s water, contact RMS for collection and management.
- Animal carcasses will be placed in containers and stored in a designated refrigerator for RMS pickup and disposal.
- Bags containing materials for disposal should be goosenecked, closed with tape, and labeled “Incinerate” on the outside of the bag.
- Waste bags must be taped closed for transport through the building.
- Schedule waste pickups at: [https://aim.auburn.edu/aim](https://aim.auburn.edu/aim)

Animal Bite Procedures
- Put the animal back in its cage.
- Wash the wound for 15 minutes with soap and vigorously running water directed at the wound.
- Inform your supervisor immediately.
- Go to Auburn University Medical Clinic at 400 Lem Morrison Drive 844-4416 for evaluation of the animal bite and exposure to a hazardous drug or hazardous chemical. Take a copy of the Safety Data Sheet with you.
- Complete a First Report of Injury form by calling Cannon Cochran Management Service (CCMSI) at 1-866-931-0502.
References:
Evaluation of Decontamination Efficacy of Cleaning Solutions on Stainless Steel and Glass Surfaces Contaminated by 10 Antineoplastic Agents Thomas Queruau Lamerie,1 Susanne Nussbaumer,2,5 Bertrand Décaudin,1,3* Sandrine Fleury-Souverain,2 Jean-François Goossens,4 Pascal Bonnaby,2,5 and Pascal Odou1,3

Cleaning surfaces contaminated w/ Chemo drugs
CDC.gov http://www.cdc.gov/niosh/topics/antineoplastic/sampling.html
Decontamination and Deactivation of Antineoplastic Agents

Division of Laboratory Animal Medicine, University of North Carolina at Chapel Hill (2011)
Handling Cages Dosed with Chemical Hazards. Retrieved from http://research.unc.edu/ccm/groups/public/@research/@iacuc/documents/content/ccm3_030595.pdf


WARNING!

TOXIC CHEMICAL HAZARD

Carcinogen
Reproductive Hazard

Other (Specify):

See Safety Data Sheet

Principal Investigator: ____________________________

Agent(s)/Concentration: __________________________ Dose: __________________________

Date/Time Administered: __________________________ Route: __________________________

Required PPE:
- Don double nitrile gloves, closed-front gown, shoe covers, hair cover, and face shield, safety glasses or goggles before dumping bedding.
- Open cages (including for cage-change) in ventilated cage-changing station, ventilated biological safety cabinet, or chemical fume hood.
- Dump bedding in ventilated dumping station, ventilated biological safety cabinet, or chemical fume hood.

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