

Auburn University Risk Management and Safety Standard Operating Procedure	Effective Date: 8/30/2018		SOP Number: AP – 113-0
	Supersedes NA	Superseded: NA	Page: 1 of 4
Subject: Use of Bromodeoxyuridine at Auburn University Swine Research Extension Center	Approval: <u>Donna Tucker</u> Risk Management and Safety		

I. PURPOSE

This document provides standard operating procedures (SOP) for handling bromodeoxyuridine and managing swine and other objects potentially contaminated with bromodeoxyuridine or its metabolites after the swine have been dosed with bromodeoxyuridine up to 3 hours prior to euthanasia. This SOP is for use at the Auburn University Swine Research and Extension Center.

II. OBJECTIVE

The purpose of the procedure is to prevent or minimize hazards to personnel handling bromodeoxyuridine and swine or potentially contaminated objects after the animals have been dosed with bromodeoxyuridine.

III. SCOPE

These guideline applies to the Auburn University Swine Research Extension Center.

IV. GENERAL GUIDELINES

Note: Bromodeoxyuridine has potential teratogenic and mutagenic properties, use caution while handling the chemical or potentially contaminated bedding and animals. Refer to the Auburn University Reproductive Health Policy and Procedures at:

<https://sites.auburn.edu/admin/universitypolicies/Policies/ReproductiveHealthPolicy.pdf>

Review Product Safety Data Sheet (SDS) prior to use of bromodeoxyuridine.

Employees may be exposed to bromodeoxyuridine while handling animals and excretions of animals given the drug. The PI or facility manger will review this SOP with animal care personnel prior to the employees working with bromodeoxyuridine dosed animals or their caging.

Bromodeoxyuridine solutions should be prepared in a Chemical Fume Hood and drawn into syringes using a closed (needleless system) to avoid the potential for inhalation of aerosols. The work area should be covered with a disposable, plastic backed absorbent pad/liner. Contact Starr Miller (844-8011), CVM Pharmacist for information and training.

Bromodeoxyuridine will be administered to animals by the PI or those lab personnel designated and trained by the PI to perform the injections. The PI will assign a person to properly restrain the pig while the drug is administered.

Used needles must be disposed of in an approved sharps container immediately after use. Used needles should not be set on the bench, sheared, bent or re-capped.

After receiving bromodeoxyuridine the animals will be housed in stainless steel pens in a room separate from the general population. The room entrance will be marked with the appropriate signage. (Example included with this guideline)

PPE Requirements

Open cuts or irritated skin should be covered with an impervious bandage while working with animals and during animal care.

All personnel should wear appropriate Personal Protective Equipment (PPE). Appropriate PPE consists of:

- Disposable, impervious closed front gown with elastic cuffs
- Nitrile gloves. Gown cuffs should be tucked under gloves to protect skin. Wash hands with soap and water after removing gloves.
- Safety goggles, or face shields. If reused, these items should be washed with soap and water, dried, and then stored in a clean place.
- Disposable, impervious shoe covers. Closed toe shoes should be worn.
- Disposable hair cover

Cage Cleaning Procedures

DO NOT PRODUCE AEROSOLS WHILE CLEANING

- Don PPE
- Remove solid excrement with disposable towels or pads and place in waste to be handled by Risk Management and Safety (RMS).
- Remove gloves, wash hands and re-glove
- Spray all surfaces with a 10% bleach solution. Allow the bleach solution to dry.
- Clean cages with detergent and water.

HANDLING DOSED ANIMALS, THEIR CAGES AND BEDDING

The following procedures should be followed when handling animals, contaminated cages and bedding potentially contaminated with bromodeoxyuridine.

- Wear all appropriate PPE (listed above) during handling.
- The piglets will be held in individual caging after the bromodeoxyuridine is administered.

DISPOSAL PROCEDURES

- No materials contaminated with bromodeoxyuridine are to be placed in regular waste receptacles (this includes excrement of animals injected with bromodeoxyuridine, disposable towels used for cleaning, PPE of those handling bromodeoxyuridine, bromodeoxyuridine contaminated sharps, and carcasses and tissues of bromodeoxyuridine dosed animals).
- Unused bromodeoxyuridine is a hazardous chemical waste and must be disposed of by RMS.
- All bromodeoxyuridine exposed carcasses or tissues will be double bagged, placed in containers and stored in a cooler to slow down decomposition prior to waste pick up.
- All waste will be double bagged and placed in designated area for RMS pick up. Waste bags shall be goose necked and securely taped.
- [Schedule waste pickups at https://aim.auburn.edu/aim](https://aim.auburn.edu/aim)

Cleaning Floors & Other Work Surfaces

- Don PPE
- Mop the floor of the room with a 10% bleach solution.
- Clean countertops and other work surfaces with a 10% bleach solution. Leave the bleach solution in contact with surfaces for 3-5 minutes. Then clean with soap and water. Surfaces to be cleaned include countertops, exam tables, doorknobs, cage latches, equipment including knobs and handles, light switches, telephones
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V. SPILL PROCEDURES

For major spills isolate the area, Call 911, and report the spill to RMS 844-4870. Direct contact with the solution should be avoided.

For minor spills contain the spill and clean up material with a paper towel or absorbent pads from the nearest chemical spill kit. It may be helpful to wet the absorbent material for spills of powder. In addition to the required PPE an additional layer of nitrile gloves or equivalent should be used whenever spills are handled. Once cleanup is done wash the area with a 10% bleach solution and then soap and water.

Waste generated from the spill and its cleanup should be double bagged and handled as contaminated waste.

Schedule waste pick-ups at <https://aim.auburn.edu/aim>

References:

Office of Environmental, Health, and Safety Management, Indiana University (n.d.) Laboratory Safety Guideline Bromodeoxyuridine. Retrieved from <http://www.ehs.iu.edu/docs/Bromodeoxyuridine.pdf>

Occupational Health and Safety, Monash University (May 2011) Working with Bromodeoxyuridine (BRDU) – OHS information sheet. Retrieved from <http://www.monash.edu.au/ohs/topics/info-sheets/brdu.html>

Risk Management and Safety, Auburn University. (2013) Standard Operating Guideline for Hazardous Drugs in Animal Bedding.

WARNING!



TOXIC CHEMICAL HAZARD

✓ Carcinogen

✓ Reproductive
Hazard

Other (Specify):

See Material Safety Data Sheet

Principal Investigator: _____

Agent(s)/Concentration: _____ Dose: _____

Date/Time Administered: _____ Route: _____

Emergency Contact	Name	Work Phone	Afterhours Number
Primary			
Secondary			