

Auburn University Risk Management and Safety Standard Operating Procedure	Effective Date: 1/5/2018		SOP Number: AP – 106 -1
	Supersedes AP-106	Superseded:	Page: 1 of 4
Subject: Use of Azoxymethane in Laboratories	Approval: <u>Donna Tucker</u> Risk Management and Safety		

I. PURPOSE

This document provides standard procedures for handling azoxymethane in the laboratory and standard procedures for administering azoxymethane to laboratory animals.

II. OBJECTIVE

The purpose of the procedure is to prevent or minimize hazards to personnel handling azoxymethane in a laboratory setting.

III. SCOPE

The guideline applies to laboratory uses of azoxymethane.

IV. GENERAL GUIDELINES

Note: Azoxymethane is a carcinogen and a teratogen (causes birth defects). Please refer to the Auburn University Fetal Risk Policy at: <https://sites.auburn.edu/admin/universitypolicies/Policies/FetalRiskPolicy.pdf>

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

Azoxymethane is used to induce colon cancer in rats and mice.

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

Azoxymethane **must** be administered in a Fume Hood or a Type II, B2 Biological Safety Cabinet (BSC) and the work area should be covered with a disposable plastic backed liner. All Fume Hoods and BSC's are certified on an annual basis. Do not use a Fume Hood or BSC unless the certification certificate is current. For information on cabinet certification, call Risk Management and Safety (RMS) at (344) 844-4870. If neither of these options is available a Powered Air Purifying Respirator (PAPR) must be worn, call Donna Tucker at 334-703-8186 for information.

Do not let product enter drains.

Personal Protective Equipment (PPE)

Open cuts, abraded or irritated skin should not be exposed to this material to avoid entry into the blood-stream as it may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any skin damage is protected by an impervious bandage.

All personnel handling azoxymethane must wear:

- Chemotherapy gown
- Disposable shoe covers. Closed toe leather or rubber shoes (not fabric) should be worn.
- Disposable hair bonnet
- Chemotherapy or chemotherapy resistant nitrile gloves. Long gloves that cover the cuffs are recommended. Change Gloves at least every 2 hours or more often if they become torn or obviously contaminated. Wash hands after removing gloves.
- Wear ANSI approved safety glasses or goggles, face shielding is recommended whenever there is a splash hazard.

Always wash hands thoroughly after handling azoxymethane.

Areas where azoxymethane is prepared and/or administered will be covered with a disposable, plastic backed liner.

Areas where azoxymethane is prepared and/or administered must be cleaned and decontaminated with a 10% Bleach solution immediately following each task. Leave the bleach solution in contact with surfaces for 3-5 minutes. After wiping up the bleach solution clean the surface with soap and water. Potentially contaminated areas include bench tops, biological safety cabinet interiors, equipment, reusable personal protective equipment, intravenous bags and tubing.

Store azoxymethane per SDS instructions, in clearly labeled, tightly closed containers within a designated area.

A closed needless system with a T-port for administration of azoxymethane is recommended. Contact the Veterinary Teaching Hospital Pharmacy at 844-8011 for purchase of closed system supplies and training in use of chemotherapeutic supplies and drugs.

Animals should be anesthetized prior to the administration of azoxymethane.

Animals receiving azoxymethane must be housed in an animal room designated for use of hazardous drugs or hazardous chemicals with the appropriate door signage.

After the animals are returned to their cages the entire procedure area must be cleaned and decontaminated with a 10% Bleach solution. Leave the bleach solution in contact with surfaces for 3-5 minutes. After cleaning with the bleach solution clean the surface with soap and water.

Wash hands thoroughly after administering azoxymethane.

Contaminated sharps must be placed in puncture proof and leak proof sharps containers.

The sharps container will be disposed of immediately following completion of the research study (or when the container is filled).

V. DISPOSAL PROCEDURES

Unused azoxymethane is a hazardous chemotherapeutic waste and must be disposed of by RMS. Chemotherapeutic Waste will be collected in yellow containers. No waste streams containing azoxymethane shall be disposed of in sinks or general refuse.

No materials contaminated with azoxymethane are to be placed in regular waste receptacles (this includes bedding of animals injected with azoxymethane and PPE of those handling azoxymethane or azoxymethane dosed animals). Double bag all azoxymethane contaminated waste and place in yellow waste container. To seal waste bags gooseneck and securely tape the inner bag then gooseneck and securely tape the outer bag. Schedule waste pickups by calling Steven Nolen at 703-3859 or Billy Cannon at 703-0419.

Animal carcasses will be placed in closed, leak proof containers and stored in a cooler for RMS pickup and disposal. Schedule carcass pickups by submitting a waste pickup request via AIM at: <https://aim.auburn.edu/aim> . If you do not have AIM access, contact Steven Nolen at 703-3859 for direction.

Place sharps in in the appropriate puncture proof and leak proof sharps container. Schedule sharps waste pickups by calling Steven Nolen at 703-3859 or Billy Cannon at 703-0419.

All waste containers must be suitable for transportation and must not be leaking.

VI. EXPOSURE PROCEDURES

If ingested immediately seek medical attention. Take a copy of the product SDS with you.

If azoxymethane comes into contact with skin, eyes, or mouth flush with plenty of water and seek immediate medical

attention. Take a copy of the product SDS with you.

If your clothing is involved, affected clothing should be removed and exposed skin areas washed in copious amounts of water for 15 minutes. Do not re-don contaminated clothing

Procedure following a bite from a azoxymethane injected animal or otherwise invasive incident (i.e. needle puncture) when using azoxymethane

- 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 and complete an On The Job Injury/Incident Report at <https://cws.auburn.edu/rms/pm/claims>
- Go to Auburn University Medical Clinic at 400 Lem Morrison Drive 844-4416 with a copy of the SDS for evaluation of animal bite and/or exposure to azoxymethane.

VII. SPILL PROCEDURES

Individuals should become familiar with proper clean up procedures and spill kit locations before a spill occurs.

- Don PPE as described above
 - Control the area of the spill by restricting access.
 - Completely cover the spill with an inert material such as vermiculite or sand to avoid vapors from spreading into other areas of the lab. If the spill is inside the fume hood, move the sash to the lowest possible position after placing inert material on the spill.
 - Clean the contaminated surface from *outside to inside* to avoid spreading the spill.
 - Double Bag cleanup materials and used PPE and place into yellow waste container. To seal gooseneck and securely tape the inner bag then gooseneck and securely tape the outer bag.
 - Schedule waste pickups at: <https://aim.auburn.edu/aim>
 - Replenish spill clean-up supplies.
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References:

Azoxymethane; Product No. A5486 [Online]; Sigma-Aldrich. Saint Louis, MO, July 31, 2014, <http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=US&language=en&productNumber=A5486&brand=SIGMA&PageToGoToURL=%2Fsafety-center.html>
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McGill University, (2010) *STANDARD OPERATING PROCEDURE #712 USE OF AZOXYMETHANE IN RODENTS*

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

Risk Management and Safety, Auburn University. (2015) Use of Doxorubicin in Laboratories