12.0 HAZARDOUS MATERIALS INFORMATION

*Complete this form if you will be using hazardous materials and reagents in your AUP. Contact Environmental Health and Safety (951-786-2648) for assistance in completing sections **2.0** and **12.0**.*

If this AUP indicates the use of biohazards or wild caught animals, this AUP will be reviewed by the Institutional Biosafety Committee and must be approved by the IBC prior to IACUC approval of this AUP.

If this form indicates the use of radiation or chemical hazards, this form will be reviewed by EH&S for appropriate safety precautions.

PROTOCOL #_____
EXPIRES: _____

_____ Reviewed by Biological Safety Officer

_____ Reviewed by Radiation Safety Officer

_____ Reviewed by Environmental Health & Safety

Identity of Hazard:	**Formaldehyde / Formalin / Paraformaldehyde**		
Last Name:		Department:	
First Name:		Phone:	
Email:		Fax:	
Laboratory Building:		Room(s):	
Vivarium:		Room(s):	

Provide a short description of the reagent(s):

Formaldehyde (gas/liquid), Formalin (buffered formaldehyde), and Paraformaldehyde (solid formaldehyde are reagents used commonly in the preservation and fixation of biological tissues and organisms. Paraformaldehyde is a white crystalline sand-like solid that when dissolved creates a liquid formaldehyde solution.

This material/ reagent is hazardous for:

Humans only	
Animals only	
Humans and Animals	X
For which Animal Species?	

The reagent can be spread by:

Blood	
Feces/urine	
Saliva/nasal droplets	
Does not leave animal	
Other:	N/A

Describe any human health risk associated with this agent:

Formalin can cause significant skin corrosion/irritation/sensitization, serious eye damage/irritation, and is a mutagen and carcinogen. It is considered a Category 1 (most severe) Target Organ Toxicity for the CNS and respiratory system on a single exposure. It is acutely toxic by ingestion.

In addition to the above hazards, Formaldehyde is also acutely toxic by inhalation and skin contact. On repeated exposure it is a Category 1 Target Organ Toxicity on kidney, liver, heart, spleen, and blood

Paraformaldehyde can cause skin irritation and sensitization, serious eye damage, and is suspected of causing cancer. It is considered a Category 3 Target Organ Toxicity for the respiratory system.

The state of California categorizes Formalin as causing reproductive harm. Pregnant researchers or those who may become pregnant should consult with a physician before work.

Formaldehyde in aqueous solution is combustible.

The precautions checked below apply to this experiment:

The researcher or his/her technicians are responsible for the feeding and care of these animals.	
The following items must be assumed to be contaminated with hazardous material and must be handled only by the researcher or his/her technicians.	
Cage	
Stall	
Water Bottle	
Animal Carcasses	
Bedding	
Other:	
Cages must be autoclaved before cleaning.	
Label cages and remove label after decontamination.	
Animal carcasses must be labeled and disposed of as follows:	
Incineration	
Bag and Autoclave	
Biohazardous Waste Container	
EH&S will pick-up (x5528)	
All contaminated waste (soiled bedding or other animal waste) must be properly labeled and disposed of as follows	
Incineration	
Bag and Autoclave	
Biohazardous Waste Container	
EH&S will pick-up (x5528)	

Personal Protective Equipment Required:

The following personal protective equipment must be worn/used in the room or when handling animals:		
Lab Coat/Coveralls	X	
Shoe Covers/Booties		
Disposable or Utility Gloves	X	
Head Cover		
NIOSH Certified Dust Mask		
Disinfectant footbath		
Eye/Face Protection	X	
NIOSH Certified Fitted Respirator		Type:
Other:		Describe:
Personal protective equipment must be removed before leaving the room.		
Personal protective equipment must be discarded or decontaminated at the end of the project		
Hands, arms, and face must be thoroughly washed upon leaving the room	X	
Full shower, including washing of hair, must be taken upon leaving the room.		
Decontaminate Room (Inform ARS area supervisor when cage and/or room can be returned to general use).		

Provide any other information needed to safely work in this designated areas of research.

The permissible exposure limit (PEL) for formaldehyde in the workplace is 0.75 ppm as an 8-hour time-weighted average. The short term exposure limit (STEL) is 2.0 ppm as a 15 minute time weighted average. Concentrations of 100ppm or more are immediately dangerous to life and health. Contact EH&S (ehslaboratory@ucr.edu) for concerns or questions about exposures and monitoring.

The preparation of all formaldehyde solutions and handling of solid formaldehyde should take place in a fume hood or local exhaust ventilation (canopy hood, snorkel).

High-concentration formaldehyde solutions (>4%) should be handled in a fume hood or local exhaust ventilation.

All Formalin, formaldehyde, and paraformaldehyde waste should be disposed of as hazardous chemical wastes through EH&S.