Title: Rodent Euthanasia

I. Purpose:

The purpose of this policy is to establish minimum standards for euthanasia rodent species in the lab animal setting.

II. Policy:

All units providing animal care for rodent species must meet or exceed these minimum requirements for euthanasia based on the Guide for the Care and Use of Laboratory Animals and the AVMA Guidelines for the Euthanasia of Animals.

III. Procedure:

Refer to the AVMA Guidelines on Euthanasia for approved euthanasia methods:


The agents and methods of euthanasia appropriate for rodent species are available in the AVMA Guidelines for the Euthanasia of Animals: 2013 Edition or subsequent revisions of that document. Euthanasia is the procedure of killing an animal rapidly, painlessly, and without distress.

Euthanasia must be carried out by trained personnel using acceptable techniques in accordance with applicable regulations and policies. The method used should not interfere with postmortem evaluations. Proper euthanasia involves skilled personnel to help ensure that the technique is performed humanely and effectively and to minimize risk of injury to people. Personnel who perform euthanasia must have training and experience with the techniques to be used. The equipment and materials required to perform euthanasia should be readily available, and the attending veterinarian or a qualified animal scientist should ensure that all personnel performing euthanasia have demonstrated proficiency in the use of the techniques selected.
Euthanasia techniques should result in rapid unconsciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function. In addition, the technique used should minimize any stress and anxiety experienced by the animal before unconsciousness. For this reason, anesthetic agents are generally acceptable, and animals of most species can be quickly and humanely euthanized with the appropriate injection of an overdose of a barbiturate. Certain other methods may be used for euthanasia of anesthetized animals because the major criterion (insensibility) has been fulfilled.

Physical methods of euthanasia may be used if persons performing the procedure are properly trained. If physical methods such as cervical dislocation are used, anesthetizing the rodent prior to this procedure is recommended. Every attempt should be made to minimize stress to the animal before euthanasia.

If euthanizing more than one animal at a time in the same chamber, the chamber must not be overcrowded. Animals must be able to move freely and make normal postural adjustments. Only animals of the same species may be euthanized in the same chamber at the same time.

No matter what method of euthanasia is performed, personnel must ensure that death has occurred. Assurance of death may include ascertaining the absence of heartbeat and respiration, lack of corneal or other reflexes, and lack of physical movement.

Personnel should be trained on how to assure death in animals.

2013 AVMA Guidelines for the Euthanasia of Animals
Rodent Species

<table>
<thead>
<tr>
<th>Acceptable Methods</th>
<th>Acceptable with Conditions</th>
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</thead>
<tbody>
<tr>
<td>Injected barbiturates and barbiturate combinations, dissociative agent combinations</td>
<td>Inhaled anesthetics, CO2**, CO, tribromoethanol, cervical dislocation, decapitation, focused beam microwave irradiation</td>
</tr>
</tbody>
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**Conditions required for CO2 euthanasia provided
- Source is from a compressed gas CO2 cylinder (dry ice and other sources not acceptable)
- Flow rate displaces 10%-30% of the chamber volume per minute (prefilled chambers are not acceptable)
- Flow should be maintained for one minute after respiratory arrest
- Death is verified by physical exam or ensured by an adjunctive physical method
- Animals should be euthanized in their home cages whenever possible
- Chamber should be cleaned after each use