Animal Requisitioning Update

Our office is now strictly following the animal ordering deadlines for all staff and all departments. You can find these guidelines on the PACUC website under “General Guidelines for Animal Ordering”. This document was updated on 2/5/10, so please print it out, or save for future reference.

Also, keep in mind that your animal housing facility may have a separate deadline for animal order placing, because they have to ensure clean, safe and adequate housing for your animals. If you’re not sure what the ordering deadlines are for your area, check with the facility manager.

And remember that the business office has to sign off on your project funding. This often takes extra time. So be sure to start your animal orders as early as possible!

If you have any questions or issues with Animal Requisitioning, please don’t hesitate to give me a call or an email;
Lori Bugher
PACUC Administrative Assistant
lbugher@purdue.edu
494-7259

Some Frequently Asked Questions On PACUC Online Orientation:

Q: Where do I find the online orientation?
A: On the PACUC website www.purdue.edu/animals.

Q: What is my user name?
A: Please enter both your first and last name.

Q: What is the password?
A: Pass

Q: What if I have a problem accessing this module?
A: Please try it again later, the module only allows a small number of people to access it at one time.
Things You Need to Know:

Carbon Dioxide Euthanasia in Rodents

Recent observations have suggested the need to remind the animal research community on the appropriate use of Carbon Dioxide (CO2) for rodent euthanasia.

CO2 is a frequently used euthanasia agent for rodents due to its rapid onset of action, safety, low cost, and ready availability. However, when the steps listed below are followed, it needs to be understood that the use of CO2, for the user, is not necessarily a quick method but requires time to minimize stress and assure death of the animal. Despite its widespread use, euthanasia methods using CO2 and types of CO2 chambers are not standardized.


Research and animal care staff are reminded of the following principles when using carbon dioxide for rodent euthanasia:

- Carbon dioxide is to be delivered only from a regulated pressurized tank, not from dry ice.

- Research and animal care staff should seek methods that minimize the stress experienced by rodents that undergo CO2 euthanasia. Changes in the rodent’s environment should be minimized to a degree that is practical. Rodents are sensitive to their environment and to handling. Removal from their home cage, regrouping with other animals, introduction to new sites and odors, transport and placement into the euthanasia chamber can all alter physiologic and metabolic parameters and possibly cause stress. Ideally, animals from multiple cages should not be mixed for CO2 euthanasia.

- Transporting animals and performing euthanasia in home cages, using carts that are quiet, roll freely, do not jostle cages or occupants, and minimizing regrouping to prevent social aggression are simple approaches to lessening potentially stressful conditions.

- Rodents are best euthanized in their home cage. If this is not possible, rodents should be placed in an un-crowded chamber with familiar individuals, i.e., only cage-mates. As such, having only one chamber available will increase the time needed to euthanize groups of animals.

- An un-crowded euthanasia chamber is one that is large enough to permit each animal to stand on the floor of the chamber with all four feet and have sufficient space to turn around and perform normal postural adjustments. For a rule of thumb, the Guide for the Care and Use of Laboratory Animals requires 12 square inches of floor space for each 25 gram mouse.

- Euthanasia chambers need to be kept clean and free of debris and excreta, i.e., cleaned after each animal or group of animals.

- For rodents, the euthanasia chamber should allow for ready visibility of the animals, e.g., clear and not opaque.

- For rodents, the euthanasia chamber should not be pre-filled with CO2.

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- CO₂ should be slowly added to the chamber once the rodent(s) is placed in the chamber. Sudden exposure of conscious rodents to carbon dioxide concentrations of 70% or greater has been shown to be distressful. It is recommended that 100% carbon dioxide be introduced at the rate of 10-20% of the chamber volume per minute so as to optimize reduction in distress. This is a low flow rate and at this flow rate, the gas entering the chamber is barely audible. After the animal(s) become unconscious, the flow rate can be increased to minimize the time to death.

- Sufficient carbon dioxide must be introduced into the chamber to totally displace the residual air by both mixing and dilution. Excess gas must be allowed to escape from the chamber in a way that allows a gradual increase in the concentration of CO₂ at the floor of the container that holds the animal.

- Neonatal (up to 13 days of age) and pre-weaning rodents are resistant to the effects of CO₂. It may require from 30 to 60 minutes of CO₂ exposure to euthanize neonatal rodents. Therefore, alternative methods are recommended. Carbon dioxide may be used for narcosis of neonatal animals provided it is followed by another method of euthanasia (e.g. cervical dislocation).

- The anesthetic effects of CO₂ are reversible — animals should be left in the container until clinical death has been ensured. Individual rodents may become apneic at certain concentrations of CO₂, giving the false impression that death has occurred. Animals prematurely removed from the chamber can recover! For rodents 21+ days of age, wait at least 5 minutes for the animal to stop breathing. Unintended recovery must be prevented and as such CO₂ euthanasia must be followed by a physical technique such as cervical dislocation, decapitation, or bilateral thoracotomy.

- Death of the animal must be ensured prior to disposal of the carcass. Failure to confirm death is a significant, reportable non-compliance to NIH-OLAW.

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Any questions regarding the design of CO₂ chambers or use of CO₂ for euthanasia should be directed to the Laboratory Animal Program Staff (lap@purdue.edu) / 4-9163.

### PACUC Meeting Dates

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<thead>
<tr>
<th>Meeting Date</th>
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