

Policy on Rodent Euthanasia Using Carbon Dioxide

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Only one species is allowed in the chamber at a time. Use of the home cage as the euthanasia chamber reduces stress and is the preferred method to employ. Furthermore, mixing of unfamiliar or incompatible animals is discouraged.

Neonatal animals (up to 10 days of age) are resistant to the effects of CO₂, therefore, alternative methods are recommended (5). Carbon dioxide may be used to induce anesthesia/unconsciousness of neonatal animals provided it is followed by another method of euthanasia (e.g. decapitation using sharp blades).

Unintended recovery of animals after apparent death from CO₂ is a documented occurrence. Such incidents constitute serious noncompliance with the PHS policy and serious deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals*.

Death of the animal must be ensured prior to disposal of the carcass. Therefore, the IACUC is requiring that a secondary method that ensures irreversibility of the procedure is used.

Acceptable secondary methods include:

- exsanguination
- decapitation
- cervical dislocation
- bilateral thoracotomy

References:

1. *Guide for the Care and Use of Laboratory Animals*, 8th Edition
2. *AVMA Guidelines for the Euthanasia of Animals*: 2020 Edition.
- 3.