



## Job Aid for Open Drop Isoflurane Overdose (Euthanasia) in Rodents

Version 1.2; 04/2023. Contact: dartrn@emory.edu

### General Information:

- Only perform open-drop isoflurane overdose for euthanasia if it is listed as standard procedure (Inhalant Anesthesia Overdose; Isoflurane - Rat or Mouse) or as Team Procedure in your approved animal use protocol.
- A secondary physical euthanasia method must be performed to ensure death of the animal.
- Per EHSO isoflurane guidelines, the procedure must be performed with Waste Anesthetic Gas (WAG) scavenging, such as a chemical fume hood (see section 8.0 on page 3 of the document linked below).
  - <https://www.ehso.emory.edu/includes/documents/isoflurane-guidelines.pdf>
- Human isoflurane exposure is a risk when performing this procedure. Should you have concerns, contact EHSO for exposure monitoring ([indhvg@emory.edu](mailto:indhvg@emory.edu)).

### Supplies

- WAG scavenging method (i.e. chemical fume hood)
- Transparent, non-porous container (Examples: Figs 1 & 2)
- Isoflurane
- Absorbent material **in or behind a physical barrier** (Examples: Figs 3 & 4)



Fig 1: Plastic food storage container, labeled "for animal use only"



Fig 2: Bell jar with grate floor

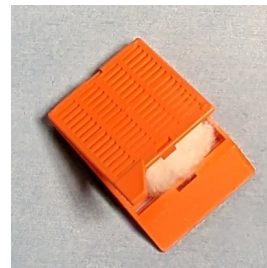


Fig 3: Tissue cassette with cotton ball



Fig 4: Test tube with cotton ball

### Procedure

- Read the Standard or Team Procedure in the approved IACUC animal use protocol
- Using WAG scavenging (such as a chemical fume hood), apply enough isoflurane to the absorbent material to provide *at least* a 10% concentration
  - Calculation: volume of container in mL x 0.005 = mL isoflurane at 10% concentration
  - Ex: 500mL container x 0.005 = 0.25mL isoflurane
- Place isoflurane-soaked absorbent material *in or behind a physical barrier* inside a transparent, non-porous container
  - The animal must not come into direct contact with isoflurane or the absorbent material containing the isoflurane.
- Place animal in container
- Wait at least 60 seconds after the animal has ceased respirations
- Remove animal from container and perform a secondary physical euthanasia method
  - Ex: cervical dislocation (mice and rats <200g), decapitation, opening of the chest cavity
- Disinfect the container between animals following the IACUC Policy, "Sanitation of Investigator-Maintained Equipment Used with Animals"