

UNIVERSITY OF DELAWARE
OFFICE OF LABORATORY ANIMAL MEDICINE

Oral Gavage – Mouse & Rat SOP #A-106

Oral gavage is used to dose an animal with a specified volume of material directly into its stomach.

Equipment required:

- Gavage tube with rounded tip (available through OLAM)
 - Mouse: usually 20-22 gauge
 - Rat: usually 18-20 gauge
- Permanent marker
- Syringe to deliver material

Technique:

1. Only perform on an **awake** animal!
2. Measure the tube for the correct length by placing it along the outside of the animal, so that the ball tip is at the last rib and the other end of tube is by the animal's nose.
3. Mark the tube at the point where it reaches the tip of animal's nose. Do not pass the tube farther than this mark or you risk perforation of the stomach.
4. **Mouse:** Scruff mouse over the shoulders so that the skin pulls the front legs out to the side. This keeps the front feet from pushing the tube away.
Rat: Requires an assistant to hold the rat by the chest and support the lower body.
5. Hold the animal in an upright (vertical) position.
6. Extend the head back using index finger on top of the head or using the tube to raise the head so the esophagus is in a straight line.
7. Insert the tube into the right side of the animal's mouth.
8. Slide the tip gently past the back of the tongue. The gavage tube should slide down the esophagus easily, if properly placed.
9. **DO NOT FORCE!** If any resistance is met, remove the tube and reinsert.
10. Once the gavage tube is properly placed, slowly administer the material.
(If animal has trouble breathing, struggles violently, or coughs, you may be in the trachea. Stop administration immediately and remove the gavage tube!)
11. After administration, slowly remove tube from esophagus.
12. Return animal to its cage.
13. Observe animal for 15-30 minutes for any signs of pain or distress
(Labored breathing, sudden lethargy, or poor mucous membrane color indicates delivery into the lungs. Any animal with these signs must be euthanized)

Maximum Recommended Volumes*:

- **Mouse:** 0.10 ml/10 grams body weight (max. of 0.25 ml)
- **Rat:** 1.0-2.0 ml /100 grams body weight

*(Pregnant animals should only receive 25% of the maximum volume)