

1. PURPOSE

This Standard Operating Procedure (SOP) describes methods for anesthetizing rabbits.

2. RESPONSIBILITY

Principal Investigators (PIs) and their research staff, veterinary care staff.

3. INTRODUCTION

- 3.1. Perform a thorough physical exam and obtain an accurate weight.
- 3.2. Withhold food (not) water for a short period of time (1–6 hours).
- 3.3. Rabbits can be anesthetized with either inhalant gas or injectable drugs. The use of inhalant gases is the preferred method of anesthesia whenever possible.

4. MATERIALS

- 4.1. Material or equipment to provide or conserve body heat (e.g. heating disc or pad, warm-water circulating pad)
- 4.2. Ophthalmic ointment (natural tears)
- 4.3. Gas anesthesia machine (calibrated within the last 12 months) with adequate gas scavenging system or filter
- 4.4. Isoflurane
- 4.5. Butorphanol (10mg/mL) *Controlled Drug
- 4.6. Ketamine (100mg/mL) *Controlled Drug
- 4.7. Xylazine (20mg/mL)
- 4.8. Acepromazine (10mg/mL)

5. PROCEDURES

- 5.1. Sedation:
 - 5.1.1. Used for short periods of restraint for non-painful procedures (e.g. blood collection).
 - 5.1.2. Dose: Butorphanol 0.5 mg/kg, Acepromazine 0.75mg/kg.
 - 5.1.3. Both drugs can be mixed in the same syringe.
 - 5.1.4. Inject intramuscularly.
 - 5.1.5. Animal will be adequately sedated after 15 minutes.
 - 5.1.6. Duration of sedation is approximately 1 hour.
- 5.2. Injectable anesthesia:
 - 5.2.1. Can be used alone for short, non-invasive procedures.
 - 5.2.2. Used for induction prior to use of Isoflurane anesthesia for smooth and rapid induction and to facilitate intubation.
 - 5.2.3. Ketamine-Xylazine-Acepromazine anesthesia
 - 5.2.3.1. Inject acepromazine and xylazine intramuscularly. Both drugs can be mixed in the same syringe. Dose of acepromazine: 0.75mg/kg. Dose of xylazine: 5mg/kg.

- 5.2.3.2. Inject ketamine intramuscularly in a different muscle. Dose: 20-35mg/kg.
- 5.2.3.3. Apply ophthalmic ointment (natural tears) to both eyes to prevent dryness and damage to the cornea.

5.3. Isoflurane anesthesia:

5.3.1. Induction (if injectable anesthetics not previously administered):

- 5.3.1.1. Place the animal in the induction chamber.
- 5.3.1.2. Adjust the oxygen flowmeter to 0.8 to 1.5 L/min.
- 5.3.1.3. Adjust the isoflurane vaporizer to 3% to 5%.

5.3.2. Maintenance:

- 5.3.2.1. Use a tight-fitting mask connected to the Bain circuit or intubate the rabbit.
- 5.3.2.2. Adjust the flowmeter to 400 to 800mL/min.
- 5.3.2.3. Adjust the isoflurane vaporizer to 1.5 to 3%.
- 5.3.2.4. Apply ophthalmic ointment (natural tears) to both eyes to prevent dryness and damage to the cornea.

5.3.3. Recovery:

- 5.3.3.1. Turn off the isoflurane vaporizer but keep the animal on oxygen.
- 5.3.3.2. Transfer animal to their cage once it begins to move and allow to recover fully.

SOP REVISION HISTORY

DATE	PREVIOUS VERSION	NEW VERSION
2017.09.26	4.5. Buprenorphine (0.3 mg/mL) *Controlled Drug	4.5. Buprenorphine Butorphanol (0.3 10 mg/mL) *Controlled Drug
2017.09.26	5.1.2 Dose: Buprenorphine 0.2 mg/kg, Acepromazine 1mg/kg.	5.1.2 Dose: Buprenorphine Butorphanol 0.2-0.5mg/kg, Acepromazine 1 0.75 mg/kg.