

**Research Animal Standard Operating Procedures (SOP) must meet the following criteria:**

1. Describe procedures or activities involving research animal(s) common to more than one research project.
2. Support the handling and or performance or undertaking of a procedure(s), involving an animal, in the same way on each occasion it is performed.
3. Describe a procedure or activity involving a research animal(s) undertaken by more than one person; and
4. Describe a procedure or activity involving a research animal(s) that will be undertaken in more than one location.

<b>Name of Procedure</b>	Euthanasia using sodium pentobarbitone	
<b>Species</b>	Mouse	
<b>ACEC</b>	<b>Reference</b>	SOP#9 – Jan22 - Euthanasia using sodium pentobarbitone – mouse
	<b>Author</b>	Jenny Smart
	<b>Version</b>	1.1
	<b>Date approved</b>	28 January 2022
	<b>Date for review</b>	28 January 2025
	<b>Procedure classification</b>	2
<b>Ethical considerations</b>	<ol style="list-style-type: none"> <li>1. Respect for animals must underpin all decisions and actions involving the care and use of animals for scientific purposes.</li> <li>2. The procedure must be performed according to current best practice to support the wellbeing of the animal.</li> <li>3. Persons performing this procedure must be competent in the procedure or be under the direct supervision of someone who is competent.</li> </ol>	

## Details

### 1. Purpose

Euthanasia of mouse by overdose of sodium pentobarbitone

### 2. Description of procedure

#### 1. **Equipment:**

- 1.1. 2ml syringe
- 1.2. 23 gauge needle
- 1.3. Esky with lid, or washable container
- 1.4. Sodium pentobarbitone solution 325 mg/ml
- 1.5. Saline

#### 2. **Method:**

- 2.1. Fill a 1ml syringe with 0.9 ml saline using a 26 gauge needle.
- 2.2. Add 0.1 ml sodium pentobarbitone solution.
- 2.3. Ensure that only one animal is treated at a time. Any other animals to be euthanased must be kept in a separate area out of sight and sound of the animal being euthanised.
- 2.4. Remove an animal from its cage, and place it on the lid of the cage. Hold the tail of the animal then scruff the mouse firmly by the skin on the back of the neck with your thumb and fore finger. Lift the animal from the cage lid, holding the tail firmly with your thumb and supporting the mouse in the palm of your hand.
- 2.5. Inject 0.2 ml of diluted sodium pentobarbitone into the mouse *via* the intra peritoneal route
- 2.6. Place the mouse in an esky or other washable container until it ceases moving.
- 2.7. Verify death by lack of cardiac pulse before performing any procedures on the animal.

### 3. Substances administered

Drug name (generic name, not trade name)	Dose rate (mg/kg body weight)	Route	Timing of administration, and frequency	Purpose
Sodium pentobarbitone	At least 200 mg/kg	IP	One injection. (Repeat only if euthanasia not achieved.)	Euthanasia

## References

1. **AVMA Guidelines for the euthanasia of animals 2013 edition.**  
<https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>
2. **NHMRC Guidelines to promote the wellbeing of animals used for scientific purposes:  
Part III humane killing and euthanasia**  
[https://nhmrc.gov.au/sites/default/files/documents/attachments/publications/ea18\\_1.pdf](https://nhmrc.gov.au/sites/default/files/documents/attachments/publications/ea18_1.pdf)

## ACEC Chair

