

This Standard Operating Procedure (SOP) is applicable to all UniSQ Research Workers who care for and use Animals for Scientific Purposes. The procedure must only be performed by those persons who have been deemed competent, and who believe they remain competent to do so. Access to supervision by suitably qualified staff whilst undertaking this procedure is encouraged, where required.

Species

- Native and introduced small mammals < 200 g.

Purpose

The purpose of this procedure is to provide information, such that students and staff are following the correct protocol to euthanise small mammals.

The purpose of this procedure is also to provide information to students and staff considering euthanising small mammals, particularly as part of surveying and research on wildlife, specifically why they are euthanised and how to euthanise them.

Small mammals, including *Mus musculus* are an introduced vertebrate pest species and have well-described negative impacts on Australian wildlife as competitors (e.g. to native rodents) and predators (of a wide range of native species of invertebrates and vertebrates).

Small mammals also include native species such as *Antechinus*, *Planigales* and *Sminthopsis*, and if they are found severely injured (e.g. from predator attack) or severely diseased (e.g. extensive open wounds on their body from fungal or mite infection) then their immediate euthanasia is recommended rather than prolonging their suffering.

Definitions

Not applicable

Linked SOPs

SOP ID number	SOP title
WL012	Dry pitfall trapping for vertebrates
WL019	The use of box and cage traps

Potential hazard to Research Workers

UniSQ Risk Management Plan ID number	UniSQ Management Plan title
RMP_2020_4960	Wildlife research and teaching fieldwork

Personal Protective equipment required

- Disposable examination gloves – various sizes
- Eye protection
- Long-sleeve shirt

Animal wellbeing considerations

Perceived stressors	Management strategy
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Disease risk	Handlers must wash hands thoroughly before and after handling small mammals (e.g. from fleas).
Stress from a prolonged process	Handlers must be sufficiently trained prior to starting work on small mammals so that the process is quick.

The overall perceived level of risk to an animal undergoing this procedure is:

- High
 Medium
 Low

Substances to be administered

Substance	Dose	Route	Purpose
Not applicable			

Equipment/ materials required

- Data record sheet
- A flat surface such as a table (hard folder or Elliott trap)
- Plastic zip-lock bags
- Pens.

Site specification or location requirements

At locations/ fields outlined in the UniSQ AEC approved application that includes the use of this SOP.

Procedure

1. Remove small mammal from cage and place on the hard surface.
2. Restrain the small mammal by grasping the base of the tail with the thumb and forefinger. Press downward and outward at the base of the head with the free thumb or thumb and forefinger together (Figure 1).
3. Pull the tail with a quick upwards and outwards motion, and the thumb will roll down onto the neck. Doing this procedure on a soft or flexible surface allows the possibility that there will only be partial dislocation of the neck vertebrae.
4. Ensure that there is a distinct dislocation of the vertebrae of the neck, leaving a gap of 2-4 mm behind the head.
5. Check that the eyes and that the pupils are fixed and dilated. Ensure that the heartbeat and respiration have ceased. Check again in a minute to ensure the animal is dead.



Figure 1: Cervical dislocation in a mouse.

Training, qualifications or competencies required

Researchers with relevant experience or qualifications can only undertake this SOP to complete the procedures required.

Student researchers must receive appropriate training and supervision from UniSQ research supervisors or qualified individuals prior to undertaking procedures.

References

American Veterinary Medical Association, Report of the AVMA Panel on Euthanasia, JAVMA (1993) 202: 229-249.
 The UFAW Handbook on the Care and Management of Laboratory Animals, 6th Edition. Ed. T.B. Poole, Longman Scientific and Technical, 1998.
 Recommendations for euthanasia of experimental animals, Report of a Working Party. Reprinted from Laboratory Animals (1996) 30: 293-316 and (1997) 31: 1-32.

Licences and permits

Any required licences and/or permits to undertake the procedure(s) under this SOP must be obtained before undertaking this SOP.

SOP approval and review history

Date	Version	Review Pathway	Notes
18 February 2021	0.0	18/02/2021 UniSQ AEC "Subject to Modifications." 20/07/2021 Reviewed and approved by the UniSQ AEC Executive.	N/A
6 August 2024	0.1	11/04/2024 UniSQ AEC "Subject to Modifications". 6/08/2024 Reviewed and approved by the UniSQ AEC executive	N/A