

RUM_031 Ear punch collection in ruminants using a tissue sampling unit

I. OBJECTIVE

To describe the use of a tissue sampling unit to collect ear punch samples for genotyping ruminants.

II. DEFINITIONS

Competent - “the consistent application of knowledge and skill to the standard of performance required regarding the care and use of animals. It embodies the ability to transfer and apply knowledge and skill to new situations and environments.” (as per, Australian code for the care and use of animals for scientific purposes, 2013)

Tissue Sampling Unit – Purchased (purpose designed) component that includes needle, vial and buffer.

III. COMMENTS / RECOMMENDATIONS

- Animals should be restrained using appropriate methods for the size and type of animal. For example, mature cattle should be restrained in a cattle crush using a head bail with or without a halter and lead rope for safety of both the animal and operator. Sheep, goats, and young calves may be restrained manually unless their size and temperament prohibit safe manual handling.
- As per routine the conditions (see document footer) this procedure must be performed by, or under the direct supervision of, personnel who are competent to perform the procedure.

IV. EQUIPMENT

- Tissue sampling unit - *the most common model of tissue sampling unit and applicator are commercially available from Allflex. See their (promotional) instructional [factsheet](#), and operational [tutorial video](#).*
- Applicator for tissue sampling unit
- Gloves

V. PROCEDURE

1. Load the tissue sampling unit into the applicator
2. Restrain animal in an appropriate way for their size
3. If ear is dirty wipe clean with paper towel and water (don't use any sort of chemical cleanser or disinfectant as it can degrade the sample).
4. Position the cutter approximately 2.5 cm from the edge of the ear. Be careful to avoid the veins in the ear when positioning the cutter.
5. Take sample: Push handles together in one swift, fluid motion with enough pressure to pierce the ear on the first attempt.
6. Check that sample is present in buffer and that hair is not protruding from the top of the vial
7. Pull handles apart to remove tool from ear
8. Remove sampling unit from applicator and place sample in cool place (not on ice).
9. Release animal from restraint

Version #	Reviewing AEC (note: all other relevant AECs ratify the approval)	AEC Review Date	Approval To Date
1	PCA	16/03/2022	16/03/2025

Conditions:

- Investigators named in an animal ethics application, relative to this SOP, must be competent to implement the SOP
- Any variation to this SOP must be described in the relevant animal ethics application
- If this SOP has not been reviewed and approved by a UQ AEC within the last three years it is no longer valid and cannot be used in animal ethics applications until reapproved (see “AEC Reviewed/Approved” date in this document’s header).