

## RUM\_018 Nasal and oral sampling from ruminants using swabs

### I. OBJECTIVE

To describe a standardised procedure for nasal and oral sampling of ruminants using swabs.

### 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)

**Nasal sampling (using swabs)** – insertion of the swab into the nares, followed by gentle agitation of the swab while in contact with the nasopharyngeal mucosa to effect sample collection.

**Oral sampling (using swabs)** – insertion of the swab into the mouth, followed by gentle agitation of the swab in contact with mucosa (anywhere within the oropharyngeal cavity) to effect sample collection.

### III. COMMENTS / RECOMMENDATIONS

- Relative to animal ethics applications, when using this SOP, the following must be described in the individual ethics application: rationale for sampling, frequency of sampling, any intended variation to this procedure.
- Consideration must be made to ensure this sampling method is necessary and most appropriate (e.g. porcine oral fluid can be collected by use of suspended ropes which they will voluntarily chew)
- Nasal and oral sampling should be considered a quick and minimally invasive procedure. Ruminants must, however, be appropriately restrained for the procedure. For adult cattle, a head bale (+/- halter) is likely to be required for safe restraint in adult cattle. Calves and small ruminants may be manually restrained.
- 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

- Disposable gauze swabs
- Cotton swabs (attached to ~10-20cm handle)
- Assay specific transport media
- Mouth gag (only for intra oral-arcade sampling from adult cattle); appropriate type and size  
*Various types exist. An appropriate gag is one that will securely hold the mouth open, enabling intra oral exam and sample collection and does not risk the animal being able to bite down or otherwise break off parts of the swab, risking foreign body ingestion (this is pertinent when PVC pipe is being used as a gag).*
- PPE (as appropriate relative to the location and procedure) – protective clothing, footwear and disposable gloves are all recommended, if required seek advise from biosecurity personnel

### V. PROCEDURE

1. Restrain the animal as required. For adult cattle this requires a cattle crush. Usually, a head bale and or a halter and rope is also required to secure the head in an elevated position. If collecting an oral sample from within the dental arcade of adult cattle, e.g. sampling the tonsillar tissue, a dental gag for cattle is also required. Calves and small ruminants may be manually restrained.

#### 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).

2. Use the gauze swab to remove any gross contamination from around the external nares or mouth.
3. Insert the swab into the nostril or mouth then gently rotate or agitate the swab so that the cotton tip of the swab is gently rubbed against the targeted anatomical landmark.  
*When sampling the nasopharynx the swab tip is not inserted beyond 20cm of the external nares in adult cattle, and 10cm in adult sheep. There should never be resistance to insertion of the swab into the nasopharynx. If resistance is felt, withdraw the swab, reposition, and reattempt insertion.*
4. Remove the swab and place it into the transport media.

Version #	Reviewing AEC (note: all other relevant AECs ratify the approval)	AEC Review Date	Approval To Date
2	PCA	15/06/2022	15/06/2025

**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).