

 <p>THE UNIVERSITY OF QUEENSLAND AUSTRALIA CREATE CHANGE</p>	<p>UQ Animal Ethics Committee - Standard Operating Procedure</p> <p>RUM_023 Administration of a Rumen Bolus</p> <p>Institutional author: School of Agriculture and Food Sustainability</p> <p>AEC Reviewed & Approved: June 2025</p> <p>SOP Expiry: June 2028</p>	<p>Version #2.0</p> <hr/> <p>Page 1 of 2</p>
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RUM_023 Administration of a Rumen Bolus (Expiry: June 2028)

I. OBJECTIVE

The objective of this SOP is to describe the safe oral administration of rumen boluses in 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.”¹

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/or lead rope for safety of both the animal and operator. Animals should be restrained in a same manner that allows for the effective placement of the bolus applicator allowing the bolus to be deposited into the oesophagus. Effective restraint allows the head to be held in a position that allows for oral administration to occur.
- 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. SAFETY AND COMPLIANCE

- The person undertaking this task must ensure all relevant approvals are in place, training has been undertaken, and risk assessments have been performed. If unsure, consult your supervisor.
- Facility protocols should be followed.
- Animal handling should be as safe as possible using species specific approaches
- Possible risks include bite injury to the fingers, if this occurs risk of zoonotic disease is possible , and musculoskeletal injury could occur.

V. TRAINING CONSIDERATIONS

- All unsupervised procedures must be performed by appropriately trained personnel who have been deemed to be competent in the procedure.
- Training of staff and students can be undertaken on live animals under supervision.
- Animal temperament should be assessed as suitable prior to commencement.

VI. EQUIPMENT

- Appropriate animal handling facilities, i.e. cattle crush with head bail, and handling equipment, i.e. halter and/or rope for restraint
- Bolus applicator (specific to bolus type) - these are purpose-designed to be able to withstand the bite-strength of the ruminants’ molars (note: ruminants will crush and chew through plastic tubing or subpar equipment if placed in their throat).

¹ NHMRC, 2013, *Australian code for the care and use of animals for scientific purposes*, National Health and Medical Research Council (NHMRC).

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).

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- Bolus to be administered

VII. PREPARATION

- Boluses will need to be 'activated' per manufacturers specifications prior to oral administration

VIII. PROCEDURE

1. Restrain animal in head bail or use manual restraint
2. Ensure bolus is correctly inserted into the applicator
3. Elevate head slightly and extend neck
4. Insert thumb into the gap between the incisors and molars and open the animal's mouth
5. Carefully insert the applicator and gently move it to the back of the mouth
6. Guide the applicator gently down the throat and into the oesophagus, as the animal swallows (do not force the applicator as it may damage the oesophagus). *The applicator is in the correct placement in the oesophagus if you can feel it behind the trachea*
7. Once the handle of the applicator is flush against the corner of the mouth release the bolus and then withdraw the applicator.
8. Monitor animals after bolus insertion to ensure no adverse effects.

Version #	Reviewing AEC	AEC Review Date	Approval To Date
1.0	Production and Companion Animals (PCA)	March 2022	March 2025
2.0	Production and Companion Animals (PCA)	June 2025	June 2028

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