

 CREATE CHANGE	UQ Animal Ethics Committee - Standard Operating Procedure RUM_032 Collection of vaginal or preputial samples using Tricamper sampling tool Institutional author: UQ School of Veterinary Science AEC Reviewed & Approved: 01/12/2025 SOP Expiry: December 2028	Version #2.0
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RUM_032 Collection of vaginal or preputial samples using Tricamper sampling tool (Expiry: December 2028)

I. OBJECTIVE

To describe the safe and effective collection of vaginal mucus from adult heifers and cows, or preputial smegma from bulls using a tricamper sampling tool. Samples are most commonly used for culture to assess for the presence of *Campylobacter fetus subsp. venerealis* and *Tritrichomonas foetus* in cattle..

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 (updated 2021))

III. COMMENTS / RECOMMENDATIONS

- Cattle must be restrained using appropriate methods, taking into account the animal’s temperament and the procedure being performed. A rear end kick gate should be used for cows and heifers, while a split side panel should be used for bulls.
- 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.
- The Tricamper™ sampling tool is a 60 cm long polyethylene tube with a hollow lumen and corrugated sample tip/head (pictured below). When agitated across mucosal membranes sample material is collected within the corrugations and within the lumen at the distal end of the tool. After a sample has been collected, the lumen of the tool must be blocked with a finger (at the handle end), and the tool handled in a steady/controlled manner, as the sample can otherwise be lost before it is placed into the sample media (e.g. dribbled out of the lumen, or flicked off the end of the tool).

IV. SAFETY AND COMPLIANCE

- The person undertaking this task must ensure all relevant approvals are in place, training has been undertaken and risk assessments (including those for working with cattle) have been performed. If unsure, consult your supervisor.
- Operators should be advised about protection against Q fever, or tested for immunity and vaccinated if not immune.
- Facility protocols should be followed.
- Possible risks could include blunt force injury, musculoskeletal injury and psychosocial harm

V. TRAINING CONSIDERATIONS

- All unsupervised procedures must be performed by appropriately trained personnel who have been deemed to be competent in the procedure.

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).

- Students must receive prior instruction on the relevant aspects of cattle reproductive anatomy and physiology.
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- An acceptable level of competence in trainees can only be achieved by providing supervised training with live animals.
- Animal temperament should be assessed as suitable prior to commencement.

VI. EQUIPMENT

- Tricamper™ sampling tool (tip of the device pictured below)



- Saline diluent
- Gloves
- Side-cutters

Sample kits are available which contain a sampling tool and saline or Trichomonas medium

VII. PROCEDURE (cows and heifers)

1. Hold the vulva open with one hand.
2. Insert the tip of the Tricamper sampling tool into the vagina. The tool should be inserted on a slight angle (dorsocranial) so that the tip of the tool is proximate to the dorsal surface of the vagina, avoiding the urethra (located ventrally within the vagina).
3. Advance the sampling tip past the point of the urethral and then correct the angle of the tool (to be horizontal) so that the tip can continue to be advanced in a cranial direction towards the cervix.
4. Once at the sampling tip reaches the cervix (identified by resistance) gently move the Tricamper tool back and forth within the vagina.
5. Block the end of the tool with your finger and withdraw the tool from the vagina.
6. Insert the sample tip into the saline diluent (or sample media), with the Tricamper's handle elevated in the air. Remove your finger from the handle-end of the tool and let the sample run out into the saline diluent. Use side-cutters to cut the black head off the Tricamper tool, letting the sample tip drop into the saline diluent.
7. Seal the sample tube containing the saline diluent and sample tip of the Tricamper tool.

VIII. PROCEDURE (bulls)

1. Prepare the prepuce for sampling - clip hair and other material from around the preputial orifice. Do not clean with disinfectants as this may reduce diagnostic sensitivity. Gentle rectal palpation, using a lubed and gloved hand may be applied by an experienced assistant during the procedure, to relax the bull.
2. Hold the distal aspect of the preputial sheath with one hand, and using the other hand insert the Tricamper tool into the prepuce.

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3. Advanced the sample tip within the prepuce to the point that it is adjacent to the penis, and then gently move the Tricamper tool back and forth, so that it scrapes across the preputial mucosa and surface of the penis.
4. Block the end of the tool with your finger and withdraw the tool from the prepuce.
5. Insert the sample tip into the saline diluent (or sample media), with the Tricamper's handle elevated in the air. Remove your finger from the handle-end of the tool and let the sample run out into the saline diluent. Use side-cutters to cut the black head off the Tricamper tool, letting the sample tip drop into the saline diluent.
6. Seal the sample tube containing the saline diluent and sample tip of the Tricamper tool.

IX. REFERENCE MATERIAL

NSW DPI, 2021. Sample Collection Guide: Collection of samples from bulls and cows for culture of *Campylobacter fetus* and *Tritrichomonas foetus*. Available via:

https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0007/800692/SCG-003-Camp-and-Tritrich-cult-2021.pdf

QLD GOV. DAF, 2018. Biosecurity Sciences Laboratory Form BSL Gen-002: Bovine Infertility – Sample Collection – Culture / PCR [*Campylobacter fetus subsp venerealis* and *Tritrichomonas foetus*] Available via:

https://www.daf.qld.gov.au/_data/assets/pdf_file/0004/277753/Tricamper-sampling-handout.pdf

This SOP deserves notable reference and acknowledgement of authorship by Associate Professor Gry Boe-Hansen – School of Veterinary Science, The University of Queensland

Version #	Reviewing AEC	AEC Review Date	Outcome
1.0	Production and Companion Animals AEC	16/03/2022	Approved
2.0	Production and Companion Animals AEC	01/12/2025	Approved

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