

- SOP No:** ATT 011
- SUBJECT:** Bronchoalveolar lavage in Ruminants
- POLICY:** This procedure may only be performed by, or under the supervision of operators skilled in the technique
- PRECAUTIONS:** Aseptic conditions are required to avoid introduction of infectious pathogens into the subcutaneous tissues around the tracheal puncture site. Restraint of the animal is necessary for the procedure, for cattle this is ideally a crush with a headlock or in the case of smaller ruminants this may be achieved by manual restraint in the standing position. An assistant is required.
- EQUIPMENT:** Xylazine (or similar sedative) and appropriate syringes and needles
Bronchoalveolar lavage (BAL) catheter (sterilized)
Sterile lubricant
Sterile 60 mL syringes - 2
10 to 20 mL syringe
Sterile saline (250 mL) warmed to approximate body temperature
3-way sterile stopcock (optional)
Collection tubes and culturettes
Halter
- PROCEDURE:**
- 1. Restraint:** The animal is restrained using methods appropriate for its size and demeanour. A halter is used to control the head. In most cases, light sedation (e.g. xylazine) is required. The gross contamination of the nostril and external nares is removed. The length of the BAL catheter to be passed into the nose is estimated.
 - 2. Passage of tube:** The external surface of the BAL catheter is topically lubricated as the clinician passes it through the nasal passage, pharynx and down the trachea into the lungs. When nearing the estimated length of the BAL catheter required (see above), the passage of the catheter is continued slowly. When resistance to further passage of the catheter is felt, passage of the catheter is stopped, the cuff on the catheter is inflated with air (10 to 20 mL syringe), and the stopcock attached to the catheter lumen (optional).
 - 3. BAL:** The two 60 mL syringes loaded with sterile saline are rapidly infused through the BAL catheter. (The optional stopcock is closed to the lung between infusions.) Immediately after the second syringe is infused, the syringe is aspirated to collect any fluid present. If unsuccessful, a second infusion and aspiration attempt may be made. The cuff is deflated and the catheter is then removed.
Fluid collected is transferred to the appropriate sample containers.
- RECOMMENDATIONS:** Results of sample analysis will determine the recommendations.
- DATE APPROVED:** April 2009
- REVISED:**

REFERENCES

- 1. Chapter 16. Clinical examination of the respiratory tract.** B.C. McGorum, P.M. Dixon, O.M. Radostits, et al. In: *Veterinary Clinical Examination and Diagnosis*. O.M. Radostits, I.G. Joe Mayhew, Doreen M. Houston (editors). WB Saunders 2000. ISBN 0-7020-2476-7