

# SIMPLIFIED TECHNIQUE FOR THE COLLECTION OF RABIES DIAGNOSTIC MATERIAL FROM ANIMALS

(Photos courtesy of KwaZulu-Natal Rabies Project and Serengeti Carnivore Disease Project)

## Preparation

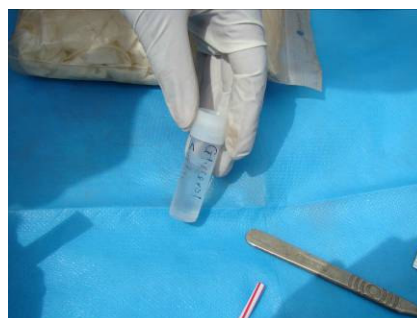
This procedure can be made simpler if done with assistance. Get all the equipment ready before starting the procedure. A full list of equipment is provided in the table at the end of this document. Work on plastic base that can be thrown away with other contaminated items to avoid contaminating environment.



Pre-label sample and mailing containers. Submission forms should be filled in and sealed in ziplock bags. This is important to avoid contamination of forms, pens, marker pens etc. Place all items used back in tool box.



Open sample bottles containing glycerol-saline solution.



Make up fresh disinfectant in spray and instrument soaking bottles. Ensure that the correct mixture is used, and when applying that the correct contact time is allowed.



Put on gloves, face mask and eye protection. Preferably wear overalls, which should be disposal if possible.

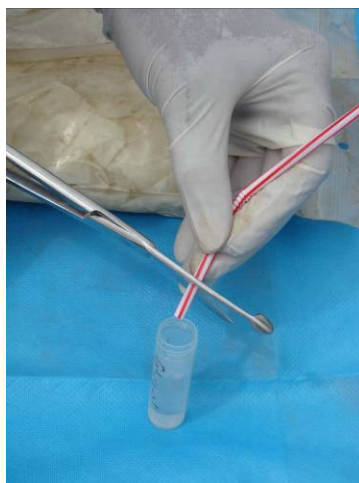
### ***Taking the sample***

**WARNING – this is the most dangerous part of the procedure and care must be taken when using the knife and scalpel.**

Remove the head by cutting through the neck muscles at the base of the skull and dislocating the cervical spinal vertebrae. Pinch the end of the straw and insert straw through the occipital foramen, pointing the straw towards the eye. Withdraw straw and check that a core of brain tissue has been drawn into the straw. Try to ensure 1-2 cm of straw is filled with brain tissue. If the carcass is very fresh, the brain tissue may not enter the straw easily and it may be necessary to withdraw brain stem tissue through the occipital foramen using forceps. In general, some operators may prefer the latter procedure. Brain stem tissue obtained in this manner may be inserted into the straw manually or can be placed directly into the sample tube containing glycerol saline solution.



Cut straw into multiple sample containers if possible (at least 2). Throw remainder of straw into waste bag.



Close sample container and spray outside lightly with disinfectant. Allow to dry in an un-contaminated area. When dry, place sample tube containing glycerol saline and sample into a secondary mailing container with correct absorbent material. Spray outside of mailing container lightly with disinfectant and allow to dry in an un- contaminated area.



Place instruments into a bottle of disinfectant, which should be open and ready. At this point if you need to move or bag the carcass, do it with your soiled gloves.





When handling of the carcass and sample extraction is complete, change gloves placing soiled gloves into waste packet.



Put on new set of gloves. Place mailing container into a ziplock bag and label the ziplock bag. Seal packet. Spray outside lightly with disinfectant. Allow to dry in an un-contaminated area.



With the same gloves on, tidy up all possibly contaminated things, into waste bags. All uncontaminated equipment should already be in the tool box. Then remove gloves into waste bag and continue without gloves or put on a new pair.

### ***Dispatch of sample to the laboratory***

Place packet into a padded envelope or box for transportation and close. Place appropriate stickers on the envelope/box and ensure that correct laboratory address is on the envelope/box. The sample should be sent immediately to the diagnostic laboratory closest to you. If the sample cannot be transported immediately, it should be stored in a fridge, +4<sup>0</sup>C (for a few days) or freezer, -20<sup>0</sup>C (for longer periods).

### ***Carcass disposal***

Carcasses should be burnt, composted or buried if rabies is suspected. People should be advised not to butcher, handle or consume meat from a suspected rabid animal.

## ***Rabies post-mortem kit***

<b>Item</b>	<b>No.</b>	<b>Comment</b>
Tool box	1	
<b><i>Personal Safety</i></b>		
Latex gloves	20	
Safety goggles	1	
Face mask	1	
Protective overall	1-5	Could be disposable
Washable boots	1	
<b><i>Sampling Equipment</i></b>		
Large knife	1	
Scalpel blades	5	
Blade holder	1	
Plastic straws	20	
Scissors	1	
Forceps	1	
Large bottle 1-2 litres	1	For soaking instruments
Spray bottle 350-500 ml		For disinfecting area and equipment
Disinfectant F10/Virkon	1	Bottle with correct dosage on label
Water bottle	5 litres	
<b><i>Packaging</i></b>		
Sample containers – 10-15 ml polypropylene, leak-resistant	5	Containing glycerol-phosphate buffer solution*
Secondary mailing containers	5	For sending sample containers (above)
Ziplock bags	10	
Carcass bags large	4	
Cable ties for sealing bag	20	
Tape	1	For sealing bags
<b><i>Administration</i></b>		
Submission forms	5	
Ziplock bags for sealing form	10	
Marker pen	1	Marking samples
Instruction manual/protocol	1	
Contact details	1	
Normal waste bags	10	

\* The simplest method to make glycerol-saline is as follows:

- (1) Dissolve one tablet of PBS in 200 ml of distilled water.
- (2) To obtain glycerol saline solution mix PBS in equal parts with glycerol.
- (3) Store stock solutions of glycerol saline in refrigerator if possible.