

# A visual guide to diagnostic sampling

Below is a guide to the base sample set required when completing a disease investigation in Ruminants. Refer to document '**A visual guide to a ruminant animal postmortem**' for detailed postmortem instructions.

## Antemortem Samples

It is recommended the following is collected from live animals where live animals are available:

- blood
- faeces.



If you are concerned about lead toxicosis, ARGV or cyanobacterial toxicosis, please refer to the specific sample guide for sampling instructions.

Collect 10ml of blood in each of the following tubes:

- EDTA
- plain clotted
- lithium heparin.

Collect 50 g of faeces

(If no live animals are available, faeces can be collected from the colon during the postmortem)

Sample type	Storage and transport
Blood (EDTA and Lithium Heparin)	<ul style="list-style-type: none"><li>• all to stand at room temperature</li><li>• mix gently with anticoagulant</li><li>• refrigerate (do not freeze)</li></ul>
Blood (Plain Clotted)	<ul style="list-style-type: none"><li>• allow to stand at room temperature</li><li>• refrigerate once clotted.</li></ul>
Faeces	<ul style="list-style-type: none"><li>• refrigerate.</li></ul>
Fresh Tissues	<ul style="list-style-type: none"><li>• individual containers</li><li>• refrigerate</li><li>• do not freeze.</li></ul>
Fixed Samples (ratio 10:1 formalin to tissue)	<ul style="list-style-type: none"><li>• tissues can be pooled into a single formalin pot</li><li>• keep at room temperature.</li></ul>

# A guide to diagnostic sampling – postmortem samples

Collect fixed and fresh samples of all lesions noted during the postmortem

Below is the base sample set to be collected during a postmortem examination of a ruminant

Sample type	Tissue type	Sample to take
Fresh tissue	Brain	Refer to the <b>brain removal techniques</b> section.
	Lung	Collect one 3x3x3 cm section of fresh lung.
	Liver	Collect one 3x3x3 cm section (50 grams) of fresh liver <b>Additional:</b> Sterile E-swab can be taken.
	Ileal Contents	Collect 5 ml of ileal contents.
	Rumen Contents	Test rumen pH (normal 5.5 – 7.0). Collect 50 ml of rumen fluid and 50ml plant digesta.
	Kidney	Collect one 3x3x3 cm section of kidney (include medulla and cortex) or half a kidney chilled.
	Vitreous humour	Collect 1.5-2.0ml in a 2.0ml serum tube (freeze)
Fixed samples	Brain	Refer to the <b>brain removal techniques</b> section.
	Lung	Collect one 1 cm thick section of lung.
	Heart	Trim a 1 cm thick trasverse slice of mid-ventricular heart that includes both left and right ventricular free wall and interventricular septum.
	Liver	Collect one 1 cm thick slices of liver (left and right lobes).
	Duodenum, Jejunum and Ileum	Collect 2.5 cm tubes of duodenum, jejunum and ileum.
	Caecum and Colon	Collect one 2.5 cm piece of caecum and colon.
	Abomasum	Collect 2.5 x 2.5 cm pieces of pylorus and fundus.
	Rumen, Omasum and Reticulum	Collect 2.5 x2.5 cm pieces of rumen, omasum and reticulum.
	Kidney	Collect one 1 cm thick slice of kidney including the cortex, medulla and pelvis.
	Skeletal muscle	Collect 1 cm thick longitudinal slices of two muscle groups.