



**Wisconsin Veterinary
Diagnostic Laboratory**
UNIVERSITY OF WISCONSIN-MADISON

Diagnostic Submission Guidelines: Neonatal Calves

The ideal samples for investigation of neonatal calf diseases are those that are collected within 4-8 hours of death, however, any sample is better than none and the lab does not charge based on the number of samples submitted. **Both** fresh and formalin fixed tissues from any gross lesions and the following tissues are recommended for submission:

Organ	Formalin*	Fresh	Size Fresh Samples
Brain**	Yes	Yes	One cerebral hemisphere
Heart [†]	Yes	No	
Lung [†]	Yes	Yes	4 x 4 x 2 cm
Liver [†]	Yes	Yes	4 x 4 x 2 cm
Kidney [†]	Yes	Yes	4 x 4 x 2 cm
Spleen [†]	Yes	Yes	4 x 4 x 2 cm
Mesenteric Lymph Node	Yes	Yes	
Forestomachs	Yes	No	
Abomasum	Yes	Yes	10 cm length
Ileum	Yes	Yes	10 - 20 cm length
Jejunum	Yes	Yes	10 - 20 cm length
Spiral Colon	Yes	Yes	10 cm length

* A 2 x 2 x 1 cm piece of tissue from all the organs listed above should be placed in formalin. The ratio should be 9 parts formalin to 1 part tissue for proper fixation. The WVDL recommends using a 16 ounce wide mouthed jar that contains 8 ounces of 10% buffered formalin (Fischer catalog # 23-426-797). Since the formalin jars tend to leak; **please place the formalin jar inside a Ziploc® bag.**

**Fresh and formalin-fixed samples should be collected from animals where the cause of death is not readily explainable or the animals have neurological disease.

[†] Denotes essential tissue for submission.

Shipping Requirements

- Veterinarians should completely fill out the WVDL General Submission Form which includes the **age** of the animal. An electronic copy is available at www.wvdl.wisc.edu. Click on the forms link to download the submission form.
- Ideally, the laboratory should receive the samples within 24-36 hours so samples collected on a Friday should be refrigerated and shipped on Monday.
- Package the samples with a sufficient number of ice packs to ensure they remain **cold** during shipment.
- Check out our special shipping rates [here](#).
- **WINTER SHIPMENTS:** Please add isopropyl alcohol (1:10 ratio) to the formalin for formalin fixed tissues to prevent freezing during shipment.