

Bovine Undifferentiated Neonatal Diarrhea Postmortem Sampling Protocol

1. Perform a complete postmortem examination with particular attention to the gastrointestinal tract. Note any gross abnormalities.

****Remember that the gastrointestinal tract undergoes rapid autolysis which can hinder diagnosis. The best sample is the fresh carcass (just euthanized) of an acutely affected, untreated animal or feces from live, acutely affected, untreated animal. Often multiple submissions required.**

2. Collect the following tissues for ancillary testing. Submit a separate tissue sample for each lab section!
 - a. **Histopathology and immunohistochemistry** (10% neutral buffered formalin; 10:1 formalin to tissue ratio)
 - i. Gastrointestinal tract- Esophagus, forestomachs, abomasum, mesenteric lymph node, duodenum, several levels of jejunum, ileum with Peyer's patches, spiral colon, cecum, including any areas with gross lesions. **Open gut to be fixed. Never tie off!!**
 - ii. Routine tissues- Ear notch, parotid salivary gland, tongue, thyroid, thymus, lung, heart (t-section), diaphragm, liver, kidney, adrenal gland, spleen, skeletal muscle, brain
 - iii. Immunohistochemistry is available for many viral agents (BVD, Bovine coronavirus)
 - b. **Bacteriology** (Fresh)
 - i. Jejunum, ileum, spiral colon, mesenteric lymph node
 - ii. Tied off loops of intestine placed into separate, tightly sealed, labeled sterile containers
 - c. **Virology** (Fresh)
 - i. Feces, jejunum, ileum, spiral colon
 - ii. Tied off loops of intestine placed into separate, tightly sealed, labeled sterile containers
 - iii. Specifically for PCR for bovine coronavirus and bovine rotavirus
 - d. **Parasitology** (Fresh)
 - i. Submit feces in tightly sealed, labeled sterile container
 - ii. Routine fecal flotation
 - iii. FAT for *Cryptosporidium* and *Giardia* species