



NEONATAL DIARRHEA KIT INSTRUCTION SHEET

MONTANA VETERINARY DIAGNOSTIC LABORATORY
DIVISION OF THE DEPARTMENT OF LIVESTOCK – STATE OF MONTANA
1911 WEST LINCOLN STREET, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771

Phone 406-994-4885
Fax 406-994-6344
WEB www.liv.mt.gov/lab
Email livdiagnosticlab@mt.gov

PURPOSE - The kit is designed to improve the chances of identifying the etiological agent of neonatal diarrhea. The kit is written in reference to calves but may also be used for piglets, lambs and foals.

SAMPLE SELECTION – To make a herd diagnosis, selection of the best animal source is imperative:

- ♦ Optimal source is from a fresh, *untreated* animal that died in the acute stages of disease
- ♦ An acutely ill animal in a herd outbreak may be selected for euthanasia rather than treatment

KIT CONTENTS AND INSTRUCTIONS FOR USE

- ♦ An SV43 submission form in a Whirl-Pak®
 - Complete the form being sure to include *the age* of the source animal, herd morbidity, herd mortality, any treatment given and response to treatment given
 - Place completed form back into Whirl-Pak® to prevent contamination during transport
- ♦ Red top blood tube & small Whirl-Pak®
 - Collect 5-10 cc blood from large vein or heart
 - Place in small Whirl-Pak® labeled with animal ID
- ♦ Feces container & small Whirl-Pak®
 - Collect 5-10 cc contents small and large intestine and seal container
 - Place in small Whirl-Pak® labeled with animal ID
- ♦ Fresh tissues – two small Whirl-Pak® bags
 - One bag – mesenteric lymph nodes and 2-inch cubes of lung, liver, kidney and spleen
 - Second bag – two each of 3-inch segments of small and large intestine; include any grossly abnormal intestine
 - Label each bag with animal ID, tissues contained and Owner's name
 - Place both labeled small bags into a large Whirl-Pak®
- ♦ Fixed tissues - one bottle of 10% formalin & large Whirl-Pak®
 - Collect ½ to ¾ inch thick pieces of lung, liver, heart, spleen, kidney and mesenteric lymph nodes
 - Collect two each of 1-inch sections of jejunum, ileum and colon; include any grossly abnormal tissue
 - Cap tightly (no tape please) and place bottle in large Whirl-Pak® labeled with animal ID
- ♦ Refrigerate all samples – do not freeze – and ship immediately; the kit *does not include* cold packs or absorbent padding and these items must be supplied by submitter

SHIPPING

US POSTAL ADDRESS

Montana Veterinary Diagnostic Lab
P O Box 997
Bozeman, MT 59771

UPS, FEDEX EXPRESS, GREYHOUND ADDRESS

Montana Veterinary Diagnostic Lab
Marsh Lab, Room 76
1911 West Lincoln Street
Bozeman, MT 59718

CONTINUED ON REVERSE



NEONATAL DIARRHEA KIT INSTRUCTION SHEET

SAMPLE TESTING

The testing done is directed by the age of the calf at onset of diarrhea and clinical history. Specific tests may also be requested by the submitting veterinarian on the SV43.

Additional tests that are not listed may be requested at the discretion of a MVDL pathologist if the additional testing is required for a definitive diagnosis.

CALVES UP TO 5 DAYS OLD

- ♦ Routine culture will detect the predominate bacteria involved in neonatal scours
- ♦ ELISA assay to for K-99 *Escherichia coli*

CALVES UP TO 7 DAYS OLD

- ♦ Serum IgG level to assess passive transfer of immunoglobulins

CALVES MORE THAN 5 DAYS OLD

- ♦ *Cryptosporidia* – direct smear of intestinal contents or a scraping of the ileum mucosal surface; also fixed tissue section of small intestine, particularly the ileum

CALVES MORE THAN 18 DAYS OLD

- ♦ *Coccidia* – fecal sample or a scraping of the ileum mucosal surface

AGE INDEPENDENT

- ♦ *Salmonella* culture
- ♦ If Clostridial enteropathy is suspected and high numbers of spore formers are detected in the intestinal contents, an anaerobic culture for genotyping of *Clostridia* may be performed
- ♦ Examination of fixed intestinal tissue aids in interpretation of Clostridial genotype
- ♦ Fixed small intestinal tissue is needed for the detection of attaching and effacing bacterial *E. coli*
- ♦ Coronavirus – FA, IHC and PCR are sensitive and specific
- ♦ Rotovirus – ELISA of intestinal contents
- ♦ Bovine Viral Diarrhea – ELISA and PCR; preferred sample for persistent infection is an ear notch

