

North Dakota State University Veterinary Diagnostic Laboratory
Diagnostic Recommendations for Bovine Trichomoniasis

I. Timing and location of sample

A. Fetus

1. placental fluids, abomasal contents
2. immunohistochemistry on tissues

B. Cows

1. in the uterus for several days post abortion
2. in the vaginal mucous for 12-20 days post infection
 - a. thereafter varies with stage of estrous cycle (highest 3-7 days post ovulation)
 - b. cows will clear the infection in about 3 months

C. Bulls

1. on the penile and preputial mucosa
 - a. allow one week to pass after last service before taking sample

II. Sample collection

A. *Avoid fecal contamination (fecal trichomonads)*

B. *Remove extraneous material and soiled hair*

C. *Do not cleanse sample area with disinfectants (inactivates protozoa)*

D. Cows *

1. Aspiration of exudate from the fornix of the vagina

E. Bulls *

1. Pipette method: trim prepuce; insert 21-inch sterile insemination pipette into the fornix of the prepuce; squirt in 10-20 ml. of sterile PBS (saline) then scrape pipette back and forth 2 or 3 inches in the same spot with gentle pressure while applying suction with a 20 cc syringe; repeat about 40 times to get into epithelial crypts; a pink color in the aspirate is desirable; use a fresh pair of exam gloves for each sampling; inoculate into pouch or in sterile tube (i.e. red top tube without separator gel). We need at least 1 ml. of sample for testing.

III. Sample transportation

A. Send preputial washing in sterile tube or inoculate InPouch™ TF

1. Our lab does not encourage using the InPouch™ TF pouches for transport because of the special handling requirements.

B. Samples sent in sterile tubes (preferred method):

1. Samples can be at room temp. up to 72 hours or refrigerated for up to one week after collection before testing at the lab (includes transport time to the lab)

2. Samples should be shipped to the lab on ice packs, but DO NOT FREEZE.
3. For best results, refrigerate the samples after collection and send to the lab as soon as possible (avoid shipping samples on Friday as we don't have weekend mail, Fed Ex or UPS delivery).

C. InPouch Samples:

1. Inoculate InPouch and incubate 24-48 hours at 37°C before sending to the lab. During transport protect from exposure to sunlight or temperature extremes. Inoculated InPouches should be maintained between 15°C – 37°C.

V. Polymerase Chain Reaction Test

A. Specific for *Tritrichomonas foetus*

B. Test sensitivity: 1 test by PCR vs. 3 cultures = 96-99% sensitive.
Doesn't cross react with commensals or fecal trichomonads.

Best results are obtained with properly collected and transported samples.

B. Test is run on Wednesday and Friday with results the same day.

C. Samples cannot be pooled for testing.

VI. Pricing

A. PCR confirmation of *T. foetus* = \$25.00 per sample + \$7.00 case accession fee
(out of state surcharge is an additional 20%)

B. If more than 10 samples are submitted, the price is \$15.00 per sample.

VII. Shipping Address

U.S. Postal Service Mail Address: Veterinary Diagnostic Lab
 NDSU Dept. 7691
 PO Box 6050
 Fargo, ND 58108-6050

UPS or Fed Ex Address: Veterinary Diagnostic Lab
 NDSU Van Es Hall
 1523 Centennial Blvd.
 Fargo, ND 58102

**Feel free to contact us if you have any questions.
Phone: 701-231-8307 or 701-231-7527 Fax: 701-231-7514**

From: Trichomonosis, chapter 2.3.6, pp. 392-398, Office of International des Epizooties, World Organization For Animal Health, Manual of Standards for Diagnostic Tests and Vaccines, 2000

* Adapted from Steven E. Wikse, Texas Cooperative Ext. Veterinary Quarterly Review, Vol. 22, No.4, Winter 2006-2007, Pg. 1-3
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