

Trichomoniasis Sample Submission

Trichomoniasis is a sexually transmitted protozoal reproductive disease of cattle caused by *Tritrichomonas foetus* that is characterized by infertility, early embryonic death, abortions and pyometra in cows and heifers. For more information on transmission and prevention, see <https://store.extension.iastate.edu/Product/Trichomoniasis-in-Beef-Cattle>.

Bulls are the primary carriers of trichomoniasis, and most diagnostic sampling strategies focus on testing bulls. Bulls are asymptomatic carriers of the protozoa. Therefore, when trichomoniasis is suspected, all bulls in the herd should be tested, and new bulls should be tested before introducing into your herd.

Trichomoniasis is a reportable disease, and there is no treatment for this infection; affected bulls and cows must be culled. Testing and importation requirements vary by state. Check with each state for specific requirements prior to writing health certificates.

Sample collection

There are three common methods to collect samples for trichomoniasis testing: preputial scraping, flushing, and sponge sampling. Some states may not recognize certain collection methods as official tests, and some labs may not be set up to handle all sample collection methods.

Preputial scraping is the traditional sample for diagnosis of trichomoniasis. To obtain a sample, the surface of the preputial and penile mucosa is vigorously scraped with a sterile rigid insemination pipette with or without a scraping attachment while applying negative pressure with a syringe (Figure 1). Flushing the prepuce is another method used to obtain a sample. Repeatability of preputial flushing has not been determined, and this technique is probably the least reliable. Typically, 50 mL of PBS or other fluid is instilled into the prepuce, massaged and then suctioned back. Urination during both of these collection methods can decrease diagnostic sensitivity. Use separate sterile pipettes and syringes for each animal tested.

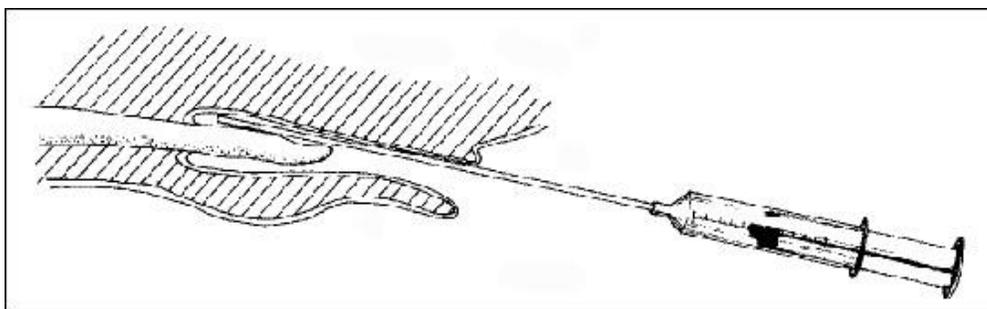


Figure 1. Preputial scraping for *T. foetus*.

Penile sponge sampling is performed by extending the penis with an electroejaculator and then swabbing the penile and preputial surface with a 4x4 gauze sponge (Figure 2-4).



Figure 2. Extension of penis



Figure 3. Swabbing with sponge around glans



Figure 4. Swabbing down the penile shaft and prepuce

Place collected sample in an appropriate transport media for desired test. Avoid fecal contamination as feces contain non-pathogenic trichomonads that can lead to false positive culture results no matter what method you use.

Sample handling

Depending upon the diagnostic test requested, sample handling can vary. For culturing of *T. foetus*, the sample should be inoculated into an appropriate culture media. Commonly, InPouch™ TF (Biomed Diagnostics) (Figure 5) is used as a commercial culture media. Diamonds media has also been used but is generally not as reliable as commercial media. If sending samples to a diagnostic laboratory for culture, do NOT refrigerate or send on ice. Note: Some states do not accept culture as an official trichomoniasis test.

PCR testing

For PCR testing, there are more options for sample handling. Since culture or live organisms are not required for PCR testing, growth media such as the InPouch™ TF is not necessary. However, the InPouch™ TF or the TF-Transit tube (Biomed Diagnostics) (Figure 6) are compatible with PCR testing. Laboratories appreciate the TF-Transit tube as they can centrifuge and collect the DNA with less sample handling compared to the pouch, and they are generally cheaper than the InPouch™ TF. Another option for PCR diagnosis is to inoculate the sample into 10 ml of sterile saline in a 50 ml conical tube (Figure 7). Do not use glass tubes. For PCR testing only, the sample can be refrigerated or shipped on ice.



Figure 5. InPouch



Figure 6. TF-Transit tube



Figure 7. 50 ml conical tube

Contact Information:

ISU Veterinary Diagnostic Laboratory: 515-294-1950

ISU Beef Extension: 515-294-2822

To order large volume of Trich pouches or tubes:

Biomed Diagnostics

1-800-964-6466

Catalog # 11-1010 10 pouch test kit

Catalog# 11-1003 100 pouch test kit

Catalog # 60-1010 10 tube test kit

Catalog # 60-1050 50 tube test kit