

#### **VALUE**

**High Throughput** – Once the device is inoculated no other culture preparation is required saving time

Cost Savings – The InPouch™ TV reduces laboratory materials and medical waste

**High specificity** – Designed for the growth of *Trichomonas* by inhibiting the growth of yeasts, mold, bacteria, and other commensal micro flora

#### **BENEFITS**

**Convenient -** Combines collection, culture, and observation into one device

Easy to use - Minimal lab procedures and equipment needed

Easy to store – 12 months shelf life at room temperature

**Mobile -** Compact and nonbreakable package is ideal for off-site sampling or for pointof-care testing

Safe - Fully enclosed InPouch™ system prevents contamination and reduces exposure to collected samples

**Functional -** PCR compatible transport and incubation device

## PRODUCT SPECIFICS

**Storage -** Room Temperature (18-25 °C)

Shelf Life - 12 months

Incubation - 37°C

# **Quantity Sold**

10 Pack (10-2010) 100 Pack (10-2003)

# InPouch™ TV (*Trichomonas vaginalis*)

#### PRODUCT BIO

BioMed's InPouch™ TV test is a microbiology sample collection, transport, and culture device that allows for simultaneous growth and observation of *Trichomonas vaginalis*, the parasite responsible for the sexually transmitted infection trichomoniasis. By combining several procedures into a single device, BioMed's patented InPouch™ TV test saves time and money while reducing exposure to collected samples.



The patented InPouch™ system consists of a high barrier, oxygen resistant, plastic pouch with two V-shaped chambers connected by a narrow passage. The innovative two-compartment system allows for direct preliminary "wet-mount" observation of a newly collected specimen in the upper chamber before expressing the contents into the lower chamber for culture and further observation when necessary. Combining both growth and observation into one fully enclosed system removes the need to prepare wet mount slides increasing efficiency and throughput while decreasing the cost of laboratory materials and medical waste.

Additionally, the InPouch™ design lends itself to high performance in off-site or austere environments with limited reliance on laboratory equipment making the InPouch™ TV ideal for point-of-care testing or off-site sampling. This is possible because the InPouch™ TV can be stored for up to a year at room temperature (18-25 °C) and organisms can be kept viable at this temperature for up to 48 hours prior to incubation. Transport from off-site locations and point-of-care testing can be performed easily due to the flexible packaging and robust, integral design of the InPouch™ system.

As the first, most robust and economical IVD for clinical trichomoniasis, the InPouch™ TV is known as "The Gold Standard" diagnostic for this STI. The proprietary medium of the InPouch™ TV is selective for the transport and growth of *T. vaginalis* and increases specificity by inhibiting the growth of yeasts, mold, bacteria, and other commensal microflora. The specially formulated media inhibits the potential for interference in obtaining accurate results.

## QUALITY CONTROL

Quality control testing is performed on each lot of  $InPouch^{TM}$  TV tests prior to shipment in order to ensure viability, doubling time and sterility. Quality control tests are repeated throughout the product shelf life by BioMed Diagnostics confirming the ability of the  $InPouch^{TM}$  TV to support the growth of T. vaginalis while maintaining suppression of commensal micro-flora.

# **BACKGROUND**

*Trichomonas vaginalis* is a flagellated, parasitic protozoan, and the cause of the STI trichomoniasis in humans. *T. vaginalis* is the most common non-viral STI globally. Infection rates are relatively the same between men and women and there are an estimated 7.4 million new cases each year.

Trichomoniasis can cause many complications in women, such as: preterm delivery, low birth rate, infant mortality, and cervical cancer, but can also cause: pneumonia, bronchitis, and oral lesions in immunocompromised individuals.



### **CORPORATE OVERVIEW**

BioMed Diagnostics, Inc., a boutique biotech firm and an industry leader since 1989, develops and manufactures in vitro diagnostic devices. BioMed's point-of-care ready tests provide accurate diagnostic tools for scientists worldwide to aid in the identification of bacteria, parasites and fungi. The company formed as the result of a mercy mission conducted by a group of physicians to Central America; there they discovered the need for robust diagnostic tools for use in austere environments. Their experience unleashed the inspiration for BioMed's innovative products that support medical professionals, veterinarians, research teams, and environmental and industry scientists globally.

### **BIOMED DIAGNOSTICS**

PO Box 2366 1388 Antelope Road White City, Oregon 97503

P 800.964.6466 F 541.830.3001

www.biomeddiagnostics.com

# InPouch™ TV (*Trichomonas vaginalis*)

Symptoms in women usually appear 5-28 days after exposure while men are commonly asymptomatic. Whether symptomatic or asymptomatic, an infection in either males or females leads to dramatically increased susceptibility to HIV transmission.

Signs of infection in women usually consist of a frothy, yellow-green discharge, strong odor, inflammation, itching, and discomfort during intercourse or urination. Although trichomoniasis in men is often asymptomatic, when symptoms do occur, they usually consist of irritation inside the genitalia and are often accompanied by mild discharge, and slight burning after urination or ejaculation.

In the developing world, STIs and their complications rank among the top five disease categories for which adults seek treatment. According to WHO the presence of untreated *Trichomonas* infection increases the probability of acquisition and transmission of HIV by a factor of ten, even more for people in high-risk areas.

### **DIRECTIONS**

Specimen collection for culture should be taken from the posterior fornix of the vagina or from the male urethra. Male seminal fluid or urine can also be used as specimens.

To inoculate the upper chamber, tear along the notched area and pull the tabs to open, squeeze the top to close and fold the top edge down, roll twice and fold the wire tabs to prevent the InPouch™ from opening. Immediate specimen concentration can be observed under the microscope using the accompanying viewing clip. Only a few viable organisms are needed for detection; an inoculum containing 1 to 10 organisms is sufficient to result in a presumptive positive test.

To culture, express all liquid from the upper chamber into the lower chamber; use the edge of a straight hard surface, such as a workstation or table, for best results. Roll down the pouch until it reaches the top of the lower chamber then fold the wire tabs to lock the InPouch™ into position.

Inoculated InPouch™ TV medium can be held up to 48 hours at room temperature (18°-25°C), before incubation at 37°C is required. Best practice suggests specimens should be examined every 24 hours for three days for urine, amniotic fluid, or prostatic fluid; five days using seminal fluid samples. If no trichomonads are observed during this period and incubation at 37°C, the test is presumptive negative for *T. vaginalis*.

#### **DETECTION**

As the parasites multiply, white sediment along the sides and bottom of the chamber will become visible. *T. vaginalis* are oval shaped, flagellated, and measure slightly larger than a white blood cell. Five flagella arise from the organism, four immediately extend out, while the fifth wraps backwards along the surface of the organism. A barb-like axostyle projection can be seen across from the four-flagella bundle. If *T. vaginalis* organisms are present, they will be identifiable by their distinct features; characteristically the rolling, jerky motions exhibited by the protozoan and can be observed using a 10X objective lens.

## ALSO AVAILABLE FROM BIOMED

Other products available from BioMed Diagnostics for education, research and laboratory maintenance of live organisms include:

# InPouch™ TV Lab Kit (10-2016)

Provides all the items needed for growth and study of T. vaginalis from the point of inoculation and to begin using the  $InPouch^{TM}$  TV diagnostic system.

InPouch™ TVC Subculture (10 Pack) (10-2108) Culture medium with slower growth rate than the InPouch™ TV; for maintenance of live *T. vaginalis* cultures in the laboratory.

### **REFERENCES**

- Soper, D. 2004. Trichomoniasis: under control or undercontrolled, American Journal of Obstetrics and Gynecology 190 (1): 281–90
- 2. Schwebke, J. R., D. Burgess. 2004. Trichomoniasis. Clinical Microbiology Reviews 17: 794–803
- 3. Center for Disease Control (CDC). Trichomoniasis CDC Fact Sheet
- 4. Ryan K. J., C. G. Ray, ed. 2004. Sherris Medical Microbiology (4th ed.) McGraw Hill
- 5. World Health Organization (WHO). Fact Sheet N°110.