An innovative method for accurate and rapid identification

Early identification is key for taking appropriate action with infected animals and reducing costs related to maintenance, infertility, and movement of animals.

The Pourquier IIF Taylorella equigenitalis Test is an indirect immunofluorescence (IF) test, a simple and cost-effective method based on the direct detection of Taylorella equigenitalis bacterial bodies collected from swabs and fixed by acetone on microscope slides. The test is based on the specific binding of mouse monoclonal antibodies to the surface of the bacterium and identification of the monoclonals by a secondary antibody labeled with a fluorescein isothiocyanate (FITC) molecule. The reaction is observed through a fluorescence microscope (Figure 1).

The Pourquier IIF Taylorella equigenitalis Test is OIE (World Organization for Animal Health) validated and certified as fit for the detection of Taylorella equigenitalis bacterial bodies from the swabs of the reproductive tract of stallions and mares for the following purposes:

• Certify freedom from infection or agent in individual animals for trade or movement purposes
• Control of infection in stallions and mares at the beginning of the breeding season

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OIE official website link: http://bit.ly/2Ajk9ZA

Figure 1. Taylorella equigenitalis as observed through a fluorescence microscope.
Choose the Pourquier® IIF Taylorella equigenitalis Test as a rapid screening tool

Test Results within 2 hours.

Accurate. Results are comparable to culture and PCR methods.

Less restrictive conditions for transport of samples. Samples can be transported under more favorable conditions for non-cultured conditions versus culture, which requires one day in non-cultured conditions and stops in refrigerated conditions.

Eliminates risk of false-negative results. The test detects viable and non-viable Taylorella equigenitalis bacterial bodies. The associated toxin has no influence on the detection of Taylorella equigenitalis.

Excellent performance. The Pourquier® IIF Taylorella equigenitalis Test has a sensitivity of 100% and a specificity of 97.2% for the detection of contagious equine metritis.

Preparation of reagents:
- Prepare phosphate buffer (PBS) pH 7.2 for washing of slides and buffered glycerin (1 volume of PBS and 9 volumes of glycerol) for mounting of cover slips.

Preparation of samples:
- Wipe swabs on the slides and fix by immersion in acetone bath for 15 minutes.

Sample distribution and incubation:
- Dispense 30 µl of anti-Taylorella equigenitalis monoclonal antibodies and incubate for 30 minutes at 37°C.

Washing:
- Wash slides by immersion in a PBS bath under magnetic rod agitation for 15 minutes.

Conjugate distribution and incubation:
- Dispense 30 µl of anti-mouse FITC conjugate and incubate for 30 minutes at 37°C.

Washing:
- Wash slides by immersion in a PBS bath under magnetic rod agitation for 15 minutes.

Setting slides and reading:
- Set slides with buffered glycerin and read with a fluorescent microscope.

Interpretation: The presence of Taylorella equigenitalis is indicated by bacterial bodies with a typical fluorescence on cell wall and a nonfluorescent center.

Contagious equine metritis (CEM) is a highly contagious venereal disease that causes mucopurulent vaginal discharge and temporary infertility and disrupts breeding in stallions. CEM is caused by Taylorella equigenitalis, a Gram-negative, microaerophilic coccobacillus. The clinical detection of CEM is difficult because of the characteristic nonfluorescent bodies and chronic asymptomatic carrier state.

Bovine, equine, and canine breeding organizations and many countries have strict regulations to avoid the introduction of CEM into herds and feeding grounds or breeding operations. Breeding organizations often use identification of infected carrier animals, follows the disease or abortion from the breeding program. Negative in the management system results should be confirmed by culture.

Reliable results in a few simple steps

One Pourquier® IIF Taylorella equigenitalis Test kit contains two vials of ready-to-use reagents for 40 tests:
- One vial of a pool of monoclonal antibodies: 1.2 ml.
- One vial of an anti-mouse FITC conjugate F(ab)’2 fragment (affinity purified): 1.2 ml.

The reagents should be stored away from light at ≤-16°C until the expiry date or up to 2 months at 2–8°C. The shelf life of the kit is 24 months at ≤-16°C.

Preparation of reagents: Prepare phosphate buffer (PBS) pH 7.2 for washing of slides and buffered glycerin (1 volume of PBS and 9 volumes of glycerol) for mounting of cover slips.

Preparation of samples: Wipe smears on the slides and fix by immersion in acetone bath for 15 minutes.

Sample distribution and incubation: Dispense 30 µl of anti-Taylorella equigenitalis monoclonal antibody and incubate for 30 minutes at 37°C.

Washing: Wash slides by immersion in a PBS bath under magnetic rod agitation for 15 minutes.

Conjugate distribution and incubation: Dispense 30 µl of anti-mouse FITC conjugate and incubate for 30 minutes at 37°C.

Washing: Wash slides by immersion in a PBS bath under magnetic rod agitation for 15 minutes.

Setting slides and reading: Set slides with buffered glycerin and read with a fluorescent microscope.

Interpretation: The presence of Taylorella equigenitalis is indicated by bacterial bodies with typical fluorescence on cell wall and a nonfluorescent center.

The Pourquier® IIF Taylorella equigenitalis Test is the only method validated and certified by the OIE for the detection of contagious equine metritis. The rapid screening tool provides an excellent alternative to the culture method to certify freedom from infection in individual animals for trade, movement purposes, prevalence of infection, and control of stallions and mares at the start of the breeding season.