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**Lab Dept:** Microbiology/Virology

**Test Name:** CHLAMYDIA TRACHOMATIS DIRECT FA

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***General Information***

**Lab Order Codes:** DCHL

**Synonyms:** Microtrak®

**CPT Codes:** 87270 - Infectious agent antigen detection by immunofluorescent technique; *Chlamydia trachomatis*

**Test Includes:** Fluorescent antibody (FA) smear for *Chlamydia trachomatis*, culture must be ordered separately. [Refer to \*Chlamydia trachomatis\* culture](#)

This assay should not be used for routine testing of genital tract specimens. Refer to [Chlamydia/GC Amplified RNA Assay](#).

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***Logistics***

**Test Indications:** Detection of *Chlamydia trachomatis* from conjunctival specimens for the diagnosis of acute conjunctivitis and from nasopharyngeal specimens for the diagnosis of chlamydial pneumonia or lower respiratory tract infections in infants.

**Lab Testing Sections:** Virology

**Phone Numbers:** MIN Lab: 612-813-5806

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours

**Turnaround Time:** Specimens must arrive by 12 PM/noon for same day results. All specimens received after that time will be held until the next working day for completion.

**Special Instructions:**

- Requisition must state **specific site** of specimen and **date/time of collection**.
  - Collect specimens using a MicroTrak Chlamydia trachomatis Direct Specimen Collection Kit preferred. **Slides may be made in lab if swab is received.**
  - **Do Not** use calcium alginate swabs.
  - If both gonorrhea and chlamydia testing are requested, collect 2 separate specimens using 2 separate specimen collection and transport kits. The gonorrhea specimen should be collected prior to the chlamydia specimen.
  - Chlamydiae are obligate intracellular parasites. It is necessary to collect infected columnar epithelial cells.
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**Specimen****Specimen Type:**

Direct smear from cervix, urethra, rectum, conjunctiva or nasopharynx

**Container:**

Collection kit containing single well glass slide, Dacron swabs, and methanol fixative (available in Microbiology).  
Swab Transport System

**Volume:**

1 slide

**Collection:****Cervical:**

1. Use a large swab to remove exudate or mucous from exocervix.
2. Gently insert separate large swab or cytobrush into endocervical canal past squamocolumnar junction. Rotate cytobrush one full turn. If using a swab, rotate for 5 - 10 seconds. To avoid contamination, withdraw swab while avoiding touching any vaginal surfaces.
3. Prepare slide immediately. Rotate and twist brush back and forth across center of slide well; or firmly roll one side of swab over the top half of the well. Turn swab over and roll other side over bottom half of slide well.

**Urethral (Males Only):**

1. Instruct the patient not to urinate for 1 hour prior to sampling.
2. Remove excess mucus/pus with a cotton ball or swab. Discard cotton ball or swab.
3. Insert a small swab with a wire shaft 2 - 4 cm into penis.
4. Gently rotate swab, using sufficient pressure to obtain an adequate number of epithelial cells.
5. Prepare slide immediately. Firmly roll one side of the swab over the top half of the well. Turn swab over and roll other side over the bottom half of the well.

**Conjunctival: (Neonates, Symptomatic Only)**

1. Use a large swab to gently remove any pus or discharge and discard.
2. If both eyes are sampled, swab the less affected eye first. Swab inside of the lower, then upper lid.

3. Prepare slide immediately. Firmly roll one side of the swab over the top half of the well. Turn swab over and roll other side over the bottom half of the well.

**Nasopharyngeal: (Neonates, Symptomatic Only)**

1. Carefully insert a small swab into the posterior nasopharynx via the nose.
2. Rotate the swab slowly for 5 seconds to absorb secretions, keeping the swab near the floor and septum of the nose.
3. Remove the swab and prepare slide immediately. Firmly roll one side of the swab over the top half of the well. Turn swab over and roll other side over the bottom half of the well.

**Rectal: (Symptomatic Patients Only)**

1. Insert swab approximately 1 inch into anal canal.
2. Gently move the swab from side to side to sample the anal crypts. If fecal contamination occurs, discard swab and use another to obtain specimen.
3. Prepare slide immediately. Firmly roll one side of the swab over the top half of the well. Turn swab over and roll other side over the bottom half of the well.

**Special Processing:**

Allow specimen to air dry. Lay slide flat and flood with methanol fixative. Let entire quantity evaporate. Refold pack without touching the fixed specimen.

If specimen is received on swabs, slides should be made immediately, air dried and fixed with the included methanol fixative.

**Transport/Storage:**

Transport slides at room temperature. Slides must be stained within 7 days of collection.

**Sample Rejection:**

Specimen not submitted in appropriate transport container; improperly labeled specimen; insufficient volume; external contamination. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

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**Interpretive**

**Reference Range:**

No *Chlamydia trachomatis* detected

**Limitations:**

- Optimal performance of this test is dependent on the collection of a good patient specimen and proper slide smearing technique.
- If less than 10 columnar epithelial cells appear on the slide, the results will not be interpreted.
- A negative result does not rule out a chlamydia infection.
- Culture is recommended as the standard for *Chlamydia trachomatis* detection in suspected sexual abuse.
- This assay should not be used for routine testing of genital tract specimens. Nucleic acid amplification tests (NAATS) are the recommended test method.

**Methodology:**

Direct Fluorescent Antibody (DFA)

**References:**

Cook, JH, and M Pezzlo (2010). Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In HD Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington DC

Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Baron, EJ and RB Thompson Jr (2011) Specimen Collection, Transport and Processing: Bacteriology in J Versalovic, et al (ed), Manual of Clinical Microbiology, 11<sup>th</sup> ed, American Society for Microbiology, Washington DC, pg 232-237

Papp, John, et al (3/14/2014) Recommendations for the Laboratory-Based Detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, MMWR 66 (RR02) Centers for Disease Control, Atlanta, GA