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**Lab Dept:** Microbiology/Virology

**Test Name:** THROAT CULTURE, ROUTINE

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**General Information**

**Lab Order Codes:** TC

**Synonyms:** Culture, Throat (Routine); Culture, Throat (Cystic Fibrosis); Culture, Throat (Primary Ciliary Dysplasia); Culture, Throat for Diphtheria; Culture, Throat for *N. meningitidis*; Diphtheria Culture; Throat Culture, Cystic Fibrosis; Cystic Fibrosis Culture, Throat; Throat Culture, PCD

**CPT Codes:** 87070 – Culture, bacterial; any other source except urine, blood or stool, with isolation and presumptive identification of isolates

The following testing may be added if appropriate based on findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87077 – Aerobic isolate, additional methods required for definitive identification, each isolate (if appropriate)

87106 – Culture, fungi, definitive identification, each organism, yeast (if appropriate)

87107 – Culture, mold, definitive identification, each organism, mold (if appropriate)

87147 – Culture, typing; immunologic method, other than immunofluorescence (e.g., agglutination grouping), per antiserum (if appropriate)

87184 – Susceptibility studies, disk method, per plate (if appropriate)

87185 – Enzyme detection (eg, beta lactamase), per enzyme (if appropriate)

87186 – Susceptibility studies, microdilution or agar dilution, each multi-antimicrobial, per plate (if appropriate)

**Test Includes:** Culture for routine aerobic flora and *Streptococcus pyogenes* (groups A, C, G streptococci).

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**Logistics**

**Lab Testing Sections:** Microbiology

**Phone Numbers:** MIN Lab: 612-813-5866

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours

**Turnaround Time:** Preliminary report available at 1 day, final report within 2 - 5 days.

- Special Instructions:**
- **Specimen site** and **date/time of collection** are required for processing.
  - Cultures suspecting *C. diphtheriae*, *N. meningitidis* and *N. gonorrhoeae* must be specified since special isolation procedures are required.
  - Cultures from cystic fibrosis (CF) patients must be specified since special isolation procedures are required.
  - Cultures from primary ciliary dysplasia patients (PCD) must be specified since special isolation procedures are required.
  - If *Candida* sp. or viruses are suspected, refer to [Yeast Culture Only](#) and [Viral Culture](#).
  - Note if specimen is from a peritonsillar abscess.
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### ***Specimen***

- Specimen Type:** Throat swab
- Container:** **Swab transport medium:**  
White top, Liquid Stuart (CHC #359)  
OR  
Red top double swab, Liquid Stuart (CHC #19092)
- Collection:**
1. Depress tongue with tongue depressor.
  2. Sample the posterior pharynx, tonsils, and inflamed areas with a sterile swab.
  3. Place swab in transport medium.
- Transport/Storage:** **Onsite collections:** Transport to the Microbiology Laboratory immediately at room temperature.
- Offsite collections:** Refrigerate specimen. Specimens must be promptly transported to the laboratory, with the next available courier, not to exceed 24 hours from the time of collection. However, delayed transport causes a delay of test results.
- Sample Rejection:** Improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements); specimen not submitted in appropriate transport container; 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:** Usual upper respiratory flora

**Alert Value:**

- Gram-negative rods identified as ESBL or Carbapenemase producers will be called to the physician or patient's nurse. Infection Prevention will be notified.
- If MRSA is isolated for the first time, and the patient location is not Emergency department, the result will be called to the physician or patient's nurse.
- If Group A *Streptococcus* or *Burkholderia* are isolated from a patient with CF or PCD, the result will be called to the physician or patient's nurse.
- If *Corynebacterium diphtheria* is isolated, the result will be called to the physician or patient's nurse.

**Limitations:**

- Special media is required for the isolation of *Corynebacterium diphtheriae*, *N. meningitidis* and *N. gonorrhoeae*.
- Use of throat cultures to aid in diagnosis of lower respiratory tract disease is not recommended since the results of such cultures often produce dangerously misleading information.

**Methodology:** Culture

**Contraindications:** Throat cultures are not advised for patients with inflamed epiglottis. Swabbing the epiglottis may precipitate acute respiratory obstruction.

**Additional Information:** Usual upper respiratory tract flora includes alpha and non-hemolytic streptococci, micrococci, *Corynebacterium* sp., coagulase-negative staphylococci, *Neisseria* sp., *Lactobacillus* sp., *Stomatococcus* sp., *S. pneumoniae*, *Actinomyces* sp, *Haemophilus* sp., *M. catarrhalis*, and a few colonies of *S. aureus*, Gram-negative rods, and yeast. If present in significant numbers, *H. influenzae*, *S. pneumoniae*, *S. aureus*, and *M. catarrhalis* will be identified. Mucoid strains of *P. aeruginosa* are generally associated with cystic fibrosis.

The majority of cases of pharyngitis are of viral etiology. At least 9 different viruses have been implicated, some of them producing symptoms indistinguishable from those of streptococcal infection such as severe sore throat with ulceration, exudate, and fever. Most cases of bacterial pharyngitis (up to 98%) are caused by beta-hemolytic streptococci, primarily those in group A. There is some evidence that other beta-hemolytic streptococci, especially groups C and G and *Arcanobacterium haemolyticum* (*Corynebacterium*) may occasionally cause pharyngitis. These organisms are thought to be self-limiting and so far have not been associated with serious sequelae as seen with group A.

**References:** Cook, JH, and M Pezzlo (1992). 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

Miller, J Michael, and HT Holmes (1999) Specimen Collection, Transport, and Storage In PR Murray et al, (ed), Manual of Clinical Microbiology, 7th edition, American Society for Microbiology, Washington DC, pp 33-104

**Updated:**

3/23/2010: CPT Update

3/7/2011: CPT Update

6/20/2012: Alert value added

11/20/2014: Offsite information added

7/8/2016: Info added for PCD patients.

12/3/2019: Added specific swab transport descriptions