Lab Dept: Microbiology/Virology

Test Name: BORDETELLA PERTUSSIS CULTURE

**General Information**

Lab Order Codes: BPC

Synonyms: Culture, Bordetella pertussis; Culture, Pertussis; Pertussis Culture; Whooping Cough Culture

CPT Codes:
- 87081 – Culture, presumptive, pathogenic organisms, screening only
- 87206 – Smear, fluorescent and/or acid fast stain for bacteria, fungi, parasites, viruses or cell types (if appropriate)

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).

Test Includes: Culture and identification of *Bordetella pertussis* and *Bordetella parapertussis*. All positive results are reported immediately by phone to the physician or patient’s nurse.

**Logistics**

Lab Testing Sections: Microbiology

Phone Numbers:
- MIN Lab: 612-813-5866
- STP Lab: 651-220-6555

Test Availability: Daily, 24 hours

Turnaround Time: Cultures often are not positive until after 3 or more days. Negative cultures are final after 10 days.

Special Instructions:
- Specimens should be obtained during the early phases of the disease and prior to antimicrobial therapy.
- **Specimen site and date/time of collection** are required for processing.
- NP aspirates/washes will yield higher *Bordetella* isolation rates than those obtained by NP swabs since more material is collected.

**Specimen**

Specimen Type: 2 nasopharyngeal swabs, one each from right and left nares; nasal aspirate; bronch aspirate
Container:
- Charcoal; Stuart’s or Amies transport culturette medium, mini tip culturette swabs for NP specimens
- Luki tube for bronch or nasal aspirate specimens

Volume:
- 2–NP swabs; Charcoal, Stuart’s or Amies culturette transport medium
- 0.5 mL of nasal or bronch aspirate.

Collection:
NP swabs
1. Carefully insert the swab into the posterior nasopharynx via the nose.
2. Rotate the swab slowly for 5 s to absorb secretions, keeping the swab near the floor and the septum of the nose.
3. Remove the swab and place swab in Charcoal; Stuart’s or Amies culturette transport medium.
4. Repeat the procedure for the other nare.

Nasal aspiration
1. Prepare suction set up on low to medium suction.
2. Wash hands.
3. Put on protective barriers (e.g., gloves, gown, mask).
4. Place child supine and obtain assistant to hold child during procedure.
5. Attach luki tube to suction tubing and #6 french suction catheter.
6. Insert catheter into nostril and pharynx without applying suction.
7. Apply suction as catheter is withdrawn.
8. If necessary, suction 0.5 - 1 mL of normal saline through catheter in order to clear the catheter and increase the amount of specimen in the luki tube.

Bronchoscopy
1. Specimen obtained by physician through the biopsy channel of the bronchoscope.
2. Transfer specimen into a luki tube.

Special Processing:
Specimens received must be cultured within 2 hours of collection.

Transport/Storage:
Transport to the laboratory immediately at room temperature. Do not refrigerate. Refrigeration decreases the colony numbers by >75%.

Sample Rejection:
Specimen that has been refrigerated; specimen with a transit time exceeding 2 hours after collection; 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.

Interpretive
Reference Range: No Bordetella pertussis or Bordetella parapertussis isolated
Alert Values: The physician or patient's nurse will be notified of all positive cultures.

Limitations: The culture sensitivity is limited to the number of viable organisms present in the secretions. Negative cultures do not rule out pertussis.

Methodology: Culture on Regan-Lowe medium

References:


Updates:
3/24/2010: CPT Updates
2/1/2012: Specimen container/ transport medium update.
5/16/2012: Critical value changed to Alert value.
1/7/2013: Bordetella FA testing no longer available.
2/27/2013: Addition of charcoal swab info and removal of Infection Prevention notification. DFA no longer performed.