



Rhode Island State Health Laboratories
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COLLECTION KIT FOR B. PERTUSSIS (WHOOPING COUGH) AND B. PARAPERTUSSIS PCR - BIOFIRE FILMARRAY RESPIRATORY PANEL 2.1 -

STORAGE:

- Universal transport media (UTM) 3 mL should be stored at a temperature range of 2-25°C until use.

IMPORTANT INFORMATION TO ENSURE THE BEST QUALITY SPECIMEN:

1. Both sides of the nasopharynx should be cultured, as this enhances the chances of recovering *B. pertussis*. A separate nasopharyngeal swab should be used for each side.
2. Only nasopharyngeal swabs with tips made of polyester (such as Dacron), or rayon are acceptable for collection. The Rhode Island State Health Laboratories (RISHL) provides these swabs in addition to the Universal transport media (upon request). **Cotton tipped and calcium alginate tipped swabs are unacceptable.** Cotton tipped swabs are toxic to the bacteria and calcium alginate tipped swabs may contain substances that interfere with PCR.
3. The nasopharynx is the **required** site for culture. Throat and nasal swabs are unacceptable.
4. The nasopharyngeal swabs should be left in the UTM with the swab tips immersed in the liquid medium. No testing will be performed if the swabs are not in the transport tube.
5. With PCR, the most rapid test, the specimen should ideally be collected during the first 3 weeks of illness but may provide accurate results for up to 4 weeks.

Therefore, for optimal laboratory results:

- Collect the specimen as early in the course of illness as possible.
- Collect the specimen prior to the use of antibiotics.
- Do not collect the specimen in a room that is also used for administering pertussis vaccine as this practice has been shown to cause false positive PCR results.

COLLECTION PROCEDURE:

1. Verify that the UTM has not reached the expiration date. **DO NOT use expired media.** Do not use the media if it shows signs of breakage, leakage, or contamination.
2. Label the transport media with at least 2 patient identifiers, including the patient's name. Please do not cover the expiration date on the UTM tube.
3. Fill out a RISHL requisition form **completely** and **legibly**.
4. Collect the specimen as follows:
 - a. Gently insert the swab straight back into a nostril aiming posteriorly along the floor of the nasal cavity until reaching the posterior wall of the nasopharynx, being careful NOT to insert it upwards. The distance from the nose to the ear gives an estimate of the distance the swab should be inserted. Do not force the swab. If an obstruction is encountered, try the

other nostril. Leave swab in place for 15-30 seconds, rotate and remove slowly. The use of a nasal speculum is optional.

- b. Repeat with the other nostril using a second polyester or rayon swab.
- c. **Insert both swab tips into the same UTM tube.** The swab tips must be completely immersed in the liquid medium for proper transport. Cut any excess wire off and replace the cap tightly. Do not bend the upper ends of swabs into the transport tubes.
- d. Place the inoculated UTM tube and requisition form in the plastic specimen transport bag provided. Only one patient specimen per transport bag.

HOLDING and TRANSPORT:

Specimens should be transported to the RISHL as soon as possible after collection.

If it becomes necessary to hold a specimen prior to delivery:

- **Transport all specimens refrigerated at 2-8°C (up to 3 days after collection)**
- If there is a delay greater than three (3) days after specimen collection, samples should be frozen at -70°C and transported on dry ice.
- Specimens received greater than three (3) days after specimen collection that are not frozen will receive a disclaimer on the report to interpret any negative results with caution.

ORDERING KITS and HEALTH Lab Requisition Forms:

- Kits containing instructions, UTM, nasopharyngeal swabs and specimen biohazard bags are available on demand from RISHL Central Receiving area. Each kit contains enough material to test three patients.
- The RISHL test requisition form is available as a PDF on our website.
<https://health.ri.gov/forms/LabRequisitionForm.pdf>

QUESTIONS:

Please refer to the RISHL Clinical Specimen Submission Guidance for Bordetella pertussis/parapertussis (<https://health.ri.gov/programs/laboratory/biological/about/specimensubmission/>).

If there are questions regarding specimen collection, transport, or reporting of results please contact the Molecular Diagnostics Lab at 222-5538.

RESULTS AND TURN AROUND TIMES:

- PCR is performed daily (M-F) on all specimens with a one-business day turn-around-time.
- RISHL will phone all positive PCR results to the submitter (*B. pertussis* and *B. parapertussis*)

For further information and a CDC instructional video for proper collection of pertussis:

- www.health.ri.gov/diseases/vaccinepreventable/?parm=12
- www.cdc.gov/pertussis/