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**Lab Dept:** Microbiology/Virology

**Test Name:** RSV ANTIGEN DETECTION

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***General Information***

**Lab Order Codes:** REIA

**Synonyms:** RSV EIA; Respiratory Syncytial Virus Antigen; RSV Rapid Antigen; Rapid RSV

**CPT Codes:** 87807 – Infectious agent antigen detection by immunoassay with direct optical observation; respiratory syncytial virus

**Test Includes:** Detection of RSV antigen. This test **Does Not** include RSV culture. [Refer to Viral Respiratory Culture.](#)

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***Logistics***

**Lab Testing Sections:** Virology

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

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 hours

**Special Instructions:**

- Requisition must state **specific site** of specimen and **date/time of collection**.
- Specimens obtained early in the course of the illness will contain the highest virus titers.
- The use of routine rapid testing is not recommended outside of the respiratory season due to low specificity and sensitivity. Results must be interpreted with caution and confirmation by immunofluorescence assay (IFA), viral culture or PCR is recommended.
- This test is suitable for the pediatric population (less than 19 years of age) only. Performance characteristics have not been established for use with patients older than 19 years of age and for immunocompromised patients. RSV PCR (RIP) or viral respiratory culture should be performed on patients 19 and older.

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***Specimen***

**Specimen Type:** Nasopharyngeal washings, nasopharyngeal aspirates

**Container:** Sterile screw cap container; luki tube

**Draw Volume:** 1 – 2 mL washings or aspirates

**Collection:** **Nasopharyngeal Washings:**

1. Tilt patient's head back at a 70° angle.
2. Insert rubber bulb syringe containing 1 – 2 mL of sterile saline until it occludes the nostril.
3. Collect specimen (Minimum: 1 mL) with one complete squeeze and release bulb.
4. Repeat in other nostril.
5. Place washings in container and forward promptly.

**Nasal Aspiratation:**

1. Prepare suction set up on low to medium suction.
2. Wash hands and put on protective barriers (e.g., gloves, gown, mask).
3. Place child supine and obtain assistant to hold child during procedure.
4. Attach luki tube to suction tubing and #6 French suction catheter.
5. Insert catheter into nostril and pharynx without applying suction.
6. Apply suction as catheter is withdrawn. 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.

**Special Processing:** Place specimen into viral transport media (M4VTM).

**Transport/Storage:** Transport to the Microbiology Lab immediately. Store refrigerated up to 24 hours prior to testing.

**Note:** If specimen cannot be transported to the laboratory immediately, place 1 - 2 mL of specimen in viral transport media (VTM) and refrigerate.

**Sample Rejection:** Non-refrigerated specimens with a transit time exceeding 4 hours after collection; specimens other than nasopharyngeal washes or aspirates; 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 RSV antigen detected.

**Limitations:**

- The etiology of respiratory infection caused by microorganisms other than RSV will not be established with this test.
- Inadequate specimen collection, improper sample handling/transport or low levels of virus shedding may yield a false negative result.
- A negative result does not eliminate the possibility of RSV infection.
- This test is suitable for patients less than 19 years of age only.

**Methodology:** Sofia RSV Fluorescence Immunoassay

**Additional Information:** A negative test is presumptive and it is recommended that these results be confirmed by an FDA cleared RSV molecular assay, DFA or virus culture.

**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, 7<sup>th</sup> edition, American Society for Microbiology, Washington DC, pg 33-104

Respiratory Syncytial Virus (2015) Centers for Disease Control, 20 April, 2015. [www.cdc.gov/rsv/clinical/index.html](http://www.cdc.gov/rsv/clinical/index.html)

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