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**Lab Dept:** Microbiology/Virology

**Test Name:** INFLUENZA ANTIGEN DETECTION

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***General Information***

**Lab Order Codes:** DFLU

**Synonyms:** Rapid Flu A and Flu B; Direct Influenza Virus; Influenza Antigen Detection

**CPT Codes:** 87804 x2- Infectious agent antigen detection by immunoassay with direct optical observation; Influenza

**Test Includes:** Direct detection of Influenza Virus type A and type B antigen. This test **Does Not** include Influenza 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**.
- During periods of low influenza activity, rapid tests are not recommended due to low specificity and sensitivity. This testing will not be offered outside of influenza season.
- **Influenza PCR is recommended for hospitalized patients. Refer to [RSV and Influenza PCR](#).**
- Collect specimens as early in the illness as possible (ideally less than 4 days from illness onset).
- A negative test is considered presumptive. It is recommended that negative results be confirmed by PCR or viral culture.

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***Specimen***

**Specimen Type:** Nasal aspirate; nasal washing

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

**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 aspirate in container and forward promptly.

**Nasal Aspiration:**

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 Apply suction as catheter is withdrawn.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 Laboratory 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:**

Specimens other than nasopharyngeal washes or aspirates, swab specimens; specimen not submitted in appropriate transport container; improperly labeled specimen; insufficient volume; external contamination.

If an unacceptable specimen is received, the physician or nursing unit will be notified and another specimen will be requested before the specimen is discarded.

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**Interpretive****Reference Range:**

No Influenza A viral antigen detected.  
No Influenza B viral antigen detected.

**Limitations:**

- The etiology of respiratory infection caused by microorganisms other than influenza virus will not be established with this test.
- This test is intended for use on specimens from symptomatic patients.
- Inadequate specimen collection, improper sample handling/transport, or low levels of virus shedding may yield a false-negative result.
- A negative result does not exclude infection with influenza.
- Performance of this test has not been established for monitoring antiviral treatment of influenza.
- Individuals who received nasally administered influenza vaccine may have positive test results for up to 3 days after vaccination.

**Methodology:**

Sofia Influenza A+B Fluorescence Immunoassay

**Additional Information:**

Performance Characteristics (2012 – 2013 Flu season) versus PCR or culture

Flu type:	Sensitivity (%)	Specificity (%)	Positive Predictive Value (%)	Negative Predictive Value (%)
Influenza A	97%	97%	88%	99%
Influenza B	94%	97%	77%	99%

**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

Morbidity and Mortality Weekly Report, (September 26, 2003), Using Live, Attenuated Influenza Vaccine for Prevention and Control of Influenza, CDC, Atlanta, GA

Quidel Corporation (10/2011) San Diego, CA 92121

World Health Organization (2005) WHO recommendations on the use of rapid testing for influenza diagnosis, Geneva, Switzerland

Garcia, L (ed) Clinical Microbiology Procedures Handbook, 3<sup>rd</sup> Ed., American Society for Microbiology, Washington DC

**Updates:**

12/26/2012: Method updated, previously listed as  
Immunochematographic Assay

10/22/2013: Added Performance Characteristics, annual update.