



# Abbott Rapid Strep Testing

## CHAPTER 6: RAPID STREP TESTING ON THROAT SWABS

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## Procedure: Rapid Strep Testing on Throat Swabs

### USE

Group A streptococcus is one of the most important causes of acute upper respiratory tract infection. Early diagnosis and treatment of Group A streptococcal pharyngitis has been shown to reduce the complications such as rheumatic fever and glomerulonephritis.

### PRINCIPLE

The Signify™ Strep A test uses color immunochromatographic technology with rabbit antibodies coated on the nitrocellulose membrane. In the test procedure, a throat swab is subjected to a chemical extraction of a carbohydrate antigen unique to Group A Streptococcus. The Lab Strip is then placed in the extraction mixture and the mixture migrates along the membrane. If Group A Strep is present in the sample, it will form a complex with the anti-Group A streptococcus antibody conjugated color particles. The complex will then be bound by the anti-Group A Streptococcus capture antibody and a visible blue Test line will appear to indicate a positive result.

### REAGENTS AND MATERIALS

The Signify™ Test Kit includes:

- 50 LabStrips
- 50 Test Tubes
- 50 Sterile Swabs
- 1 bottle of Reagent 1 (2M sodium nitrite)
- 1 bottle of Reagent 2 (0.3M acetic acid)
- 1 Positive control (nonviable Group A streptococci, 0.1% sodium azide)
- 1 Negative control (nonviable Group C streptococci, 0.1% sodium azide)

Store LabStrips and reagents tightly capped at room temperature (59°-86°F)

### SPECIMEN COLLECTION AND HANDLING

- Collect specimens with a sterile rayon or Dacron swab from the tonsil and /or back of the throat. Take care to avoid the teeth, gums, and tongue or cheek surfaces.
- Process the swab as soon as possible after collecting the specimen.
- The swabs and the test kit **must** be at room temperature before starting the test.

### QUALITY CONTROL

Each kit contains positive and negative control materials. These controls are used ensure that the extraction reagents and the testing strips are functioning properly and to insure that the procedure is being performed correctly by testing personnel.

Controls are to be run every 25 tests (twice per kit), and/or when changing operators within the test kit.

Controls should be tested when **each new kit** of test materials is opened, or whenever there is any question about kit storage, operator technique, or other aspect of system performance. **If the controls do not perform as expected, repeat the test or contact your POCT site supervisor, the UMDNJ - Robert Wood Johnson Medical School POCT coordinator, or the UDL central administrative office. Correct control results must be obtained before testing patient samples.**

#### Quality Control Test Procedure

1. Add 3 drops of Reagent 1 to the Test Tube. It should be pink.
2. Add 3 drops of Reagent 2 to the Tube. The solution should turn light yellow.
3. Vigorously mix the control contents. Add 1 free falling drop of control from the dropper bottle.
4. Place a clean swab into the tube.
5. Continue as you would for a patient testing, from step 4 below.

### PROFICIENCY TESTING

