



STAPHYLOCOCCUS RAPID LATEX KIT

A qualitative latex agglutination
test for the detection of
Staphylococcus aureus in cultures.

For *In-Vitro* and professional use only

Store at 2° to 8° C

INTRODUCTION & PRINCIPLES

ATLAS Staphylococcus latex is a rapid test intended for use in the differentiation of staphylococcus aureus possessing clumping factor and/or protein A, from other species of staphylococci, which do not possess these factors. The test is based on latex particles (test reagent) coated with human fibrinogen and IgG which agglutinate in a suspension of species of staphylococci possessing clumping factor and/or protein A. No visible agglutination indicates negative reaction.

The kit also includes a control reagent which consists of latex particles treated exactly the same as the test particles but without the specific antibodies. The control reagent should be used in conjunction with the test reagent to eliminate false positives or negatives.

PRECAUTIONS

1. The reagents should be stored refrigerated between 2° to 8°C. Never freeze or expose to elevated temperature. Before testing, reagents must be brought to room temperature.
2. Prior to use, the latex reagents should be mixed well to obtain a uniform suspension of the latex particles.
3. Do not use beyond the expiration date.

4. Do not use the latex reagents if it is marked with turbidity as this may indicate reagent deterioration or contamination.
5. The reagents in this kit contains Sodium Azide which is toxic and can be absorbed through the skin. When drained, the drains should be thoroughly flushed with water.
6. The IgG and Fibrinogen used to sensitize the latex particles have been tested for the presence of HIV and HBs Ag and found to be negative. Nevertheless, reagents should be handled with care following proper lab procedures when performing the assay.

MATERIALS PROVIDED

Test latex reagent, Control latex reagent, and reaction slides.

MATERIALS NEEDED BUT NOT PROVIDED

Sterile loop.

SPECIMEN PREPARATION

Cultures should be fresh 24 hour growth, and may be tested direct from the plate. If there is insufficient growth, sub culture to blood or nutrient agar and incubate overnight at 37°C. Organisms grown on high salt media such as mannitol-salt agar may show signs of stringiness when mixed with the reagents. Any discrepancies can be eliminated by parallel use of the control latex with the test latex. Alternatively, sub culturing to blood or nutrient agar should be sufficient.

PROCEDURE

1. Shake the test latex reagent well and place one drop in the center of a circle on the slide.
2. Using a sterile loop, pick off 2-4 colonies from a fresh overnight culture plate of the organism to be investigated, and emulsify in the drop of the reagent on the slide.
3. Rotate the slide gently for one minute and observe for agglutination.
4. In case of rough or stringy samples, carry out the above procedure using the control latex and using the same sample culture.

READING THE RESULTS

POSITIVE - If agglutination has occurred in the Test Reagent. This indicates the presence of either coagulase (clumping factor) or protein A.

NEGATIVE - If no visible agglutination appears in the Test Reagent.

In some cases, a culture sample may cause the test latex to appear stringy or stringy, whilst not seeming to be a definite positive reaction. In these instances, the control latex should be used. If the control latex remains smooth (i.e. with a completely milky background), then the sample is likely to be positive for coagulase or protein A. If the control latex gives a rough or stringy appearance, then further biochemical tests may be necessary.

QUALITY CONTROL

Between test batches, check that the test reagent agglutinates with a known *S. aureus* strain, and that the test and the control latex reagents do not auto-agglutinate in normal saline solution.

LIMITATIONS

1. Rare species such as *S. lugdunensis* and *S. schleiferi* have been reported as clumping factor positive.
2. Some Staphylococcus species other than *S. aureus* (e.g. *S. intermedium*, *S. hyicus*) may also give positive results.
3. Novobiocin-resistant *E. coli*, *C. albicans* and other organisms that possess immunoglobulin binding factors may also give false positive results with this test.

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