



## ASO TEST

### INTRODUCTION:

ASO TEST method is a rapid latex agglutination test for the qualitative and semiquantitative determination of antistreptolysin-O in serum WITHOUT SAMPLE DILUTION.

Antistreptolysin-O test systems detect serum antibodies to streptolysin, an oxygen labile hemolysin derived from group A streptococci. The detection of antistreptolysin-O may be the single best test for documenting antecedent streptococcal infections.

Over 80% of patients with acute rheumatic fever and 95% of patients with acute glomerulonephritis have elevated titers of ASO.

The group A beta-hemolytic streptococci produces various toxins that can act as antigens. One of these exotoxins is streptolysin-O.

In the presence of ASO in the serum, the latex suspension agglutinates due to the antigen-antibody reaction.

### STORAGE:

Store as packaged at 2<sup>o</sup> - 8<sup>o</sup> C. DO NOT FREEZE or use beyond the expiration date printed on the label.

### SAMPLE COLLECTION & HANDLING:

Only serum should be used with this test. DO NOT use plasma. Collect venous blood by venipuncture or convenient fingertip method. Separate serum as soon as possible after collection. Store sera refrigerated, if testing is delayed more than of 48 hours, specimen should be frozen.

### REAGENTS AND MATERIALS PROVIDED:

01. ASO latex reagent
02. ASO Positive control
03. ASO Negative control
04. Stirrers & Glass slide

### PROCEDURE:

1. Bring all reagents and samples to Room Temperature prior to testing.
2. Label circles on the slide provided with appropriate sample identification.
3. Using a separate Pipet/Stirrer for each sample, presqueeze and draw up SAMPLE. Dispense ONE drop (20ul) of sample to the appropriately identified circle on the test slide.
4. Mix the ASO Liquid Reagent by inverting bottle several times, then, holding bottle in vertical position, gently squeeze and dispense ONE free falling drop into each circle, being used on the test slide.
5. Using the paddle end of the Pipet/Stirrer from Step 3 mix the contents of each circle completely together over the entire surface area of the circle.
6. Rock the card by a to and fro motion for up to 2 minutes. Alternately, an automated rocker or rotator may be used to mix the card for the required time.
7. Observe the for any sign of agglutination.

### INTERPRETATION OF RESULTS:

Agglutination indicates an ASO content of more than 200 IU/ml in the specimen. Sera with positive results in the qualitative test should be retested in the semiquantitative test.

### B. SEMIQUANTITATIVE TEST:

Prepare further dilution of the specimen (1:2, 1:4, 1:8, 1:16, 1:32 etc.) with physiological saline 0.9%.

Then proceed as in qualitative test.

### INTERPRETATION OF RESULTS:

The Presence of agglutination indicates a content of ASO in the sample equal or greater than 200 IU/ml. The lack of agglutination indicates an ASO level lower than 200 IU/ml in the sample.

**NOTES:** As with all serologic procedures for ASO, it is advisable to compare the results of 2 separate samples taken in 2 week intervals. The early use of penicillin, as well as other antibiotics, will prevent the ASO titre from rising. Compare the agglutination with that of positive and negative control for a correct interpretation.

**EXPECTED VALUES:** Normal sera has an ASO titer of less than 200 IU/ml, i.e., reportedly, 166-200 IU/mL, depending on the population. Higher titers are representative of a streptococcal infection.

### REFERENCES:

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