



## RPR ANTIGEN TEST

### INTRODUCTION:

Syphilis is a sexually transmitted disease caused by *Treponema pallidum*. After infection the host forms antilipid antibodies of the immunoglobulin class IgG and IgM in response to lipoidal material released from damaged host cell and to the lipid present on the Treponemal cell surface. The test for detection of antibodies resulting from infection are of unique diagnostic value. It is paradoxical that the first line of tests for Syphilis are biologically non specific.

### REAGENT:

Syphi TEST reagent is a ready to use stabilized suspension of standardized VDRL antigen and particles of sized charcoal is used as the RPR card antigen. Syphi TEST detects syphilis antibodies in serum, plasma and spinal fluid. As against the conventional VDRL reagents, test samples do not require heat inactivation.

### REAGENT STORAGE AND STABILITY:

Store the reagents at 2-8°C. DO NOT FREEZE.

The shelf life of the reagent is as per the expiry date mentioned on the reagent vial labels.

Avoid exposure to elevated temperatures and air as the reagents are highly sensitive to denaturation and drying.

### NOTE:

1. In vitro diagnostic reagent for laboratory and professional use only. Not for medicinal use. The reagents contain sodium azide 0.1% as preservative. Avoid contact with skin and mucosa. On contact flush with large quantities of water.
2. Cloudy, hematogenous spinal fluid should be centrifuged at 1000 (125g) rpm for 1 minute. Use clear supernatant for testing.

### MATERIALS PROVIDED WITH KIT:

1. RPR Reagent
2. Positive control
3. Negative control
4. Dropper assembly
5. RPR slides

### PROCEDURE:

Bring all reagents and samples to room temperature before testing

1. Thoroughly mix SyphiTEST reagent by gentle agitation before testing.
2. Remove the cap and replace it with the dropper assembly provided with the kit. Once fixed do not remove. Cover needle nozzle tightly with the cap provided when not in use.
3. With cerebrospinal fluid, the test specimen volume is 0.01 ml.
4. For use with cerebrospinal fluid, each drop of Syphi TEST reagent should be diluted with 0.02 ml of isotonic saline before testing.

### QUALITATIVE TEST:

1. Pipette 1 drop of serum or plasma or positive or negative control to the RPR slide circle.
2. Dispense one drop of the SyphiTEST reagent to the surface of the test sample in the same circle.
3. Rotate the slide continuously at 180 rpm for four minutes, observing for flocculation.
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5. Read the results macroscopically.
6. All positive test results must be further tested by the quantitative test procedure.

### QUANTITATIVE TEST:

1. Pipette 0.1 ml of isotonic saline into seven test tubes.
2. Pipette 0.1 ml of the test samples into the first test tube.
3. Transfer 0.1 ml of the diluted test samples from the first tube to the second tube.
4. Continue the serial dilution of the test samples as follows:  
1:2, 1:4, 1:8, 1:16, 1:32, 1:64, 1:128.
5. Transfer 0.05 ml each of the diluted test sample from tubes 1 to 7 to a conventional RPR slide circle.
6. Dispense one drop of the SyphiTEST reagent to the surface of the test sample in the same cavity.
7. Rotate the slide continuously at 180 rpm for four minutes.
8. Observe for flocculation macroscopically.

### INTERPRETATION OF RESULTS

#### QUALITATIVE TEST:

Flocculation is a positive test result and indicates the presence of syphilis antibodies in the test sample.

No flocculation is a negative test result and indicates the absence of the syphilis antibodies in the test sample.

The strength of flocculation would vary, depending upon the degree of positivity of the test.

#### QUANTITATIVE TEST:

The syphilis antibody titre is the highest dilution of the test sample giving a positive test result (flocculation)

### REMARKS:

1. Quantitative procedure must be performed to determine the response to treatment and to detect reinfection.
2. False positive reactions occur sometimes and have been attributed to a variety of acute and chronic conditions.
3. In the absence of supporting clinical history or epidemiological evidence, reactive results must be confirmed with the more specific treponemal tests.
4. It is recommended that the results of the tests should be correlated with the clinical findings.

### REFERENCES:

1. Hambie, E; Larse, M; Perryman, D. et. al. J. Clin. Microbiol. 17, 1983
2. Portnoy, Am. J. Clin. Pathol. 40, 1963
3. Huber, T; Storns, S.J. Clin. Microbiol. 17, 1983