



# SYPHILIS CARD TEST

A Rapid Card Test to detect Antibodies to  
*Treponema Pallidum* (TP) in human serum or plasma

## READ THE PACK INSERT CAREFULLY BEFORE PERFORMING THE TEST

### CATALOGUE NUMBER : SC

**INTENDED USE :** BHAT BIO SCAN™ Syphilis Card Test is a rapid Card Test to detect antibodies to *Treponema Pallidum* in human serum or plasma.

### INTRODUCTION :

*Treponema Pallidum* (TP) is the causative agent of the venereal disease Syphilis. TP is a spirochete bacterium with an outer envelope and a cytoplasmic membrane. Relatively little is known about the organism in comparison with other bacterial pathogens. According to the Center for Disease Control (CDC), the number of cases of Syphilis infection has markedly increased since 1985. Some key factors that have contributed to this rise include the crack cocaine epidemic and the high incidence of prostitution among drug users. One study reported a substantial epidemiological correlation between the acquisition and transmission of the HIV virus and Syphilis.

Multiple clinical stages and long periods of latent, asymptomatic infection are characteristic of Syphilis. Primary Syphilis is defined by the presence of a chancre at the site of inoculation. The antibody response to the TP bacterium can be detected within 4 to 7 days after the chancre appears. The infection remains detectable until the patient receives adequate treatment.

The Syphilis Rapid Test Device (Serum/Plasma) utilizes a double antigen combination of a Syphilis antigen coated particle and Syphilis antigen immobilized on membrane to detect TP antibodies (IgG and IgM) qualitatively and selectively in serum or plasma.

### TEST PRINCIPLE :

The BHAT BIO SCAN™ Syphilis Rapid Test Device (Serum/Plasma) is a qualitative membrane device based immunoassay for the detection of TP antibodies (IgG and IgM) in serum or plasma. In this test procedure, recombinant Syphilis antigen is immobilized in the test line region of the device. After a specimen is added to the specimen well of the device, it reacts with Syphilis antigen coated particles in the test. This mixture migrates chromatographically along the length of the test strip and interacts with the immobilized Syphilis antigen. The double antigen test format can detect both IgG and IgM in specimens. If the specimen contains TP antibodies, a colored line will appear in the test line region, indicating a positive result. If the specimen does not contain TP antibodies, a colored line will not appear in this region, indicating a negative result. To serve as a procedural control, a colored line will always appear in the control line region, indicating that proper volume of specimen has been added and membrane wicking has occurred.

**STORAGE & STABILITY :** Store between 2-30 °C. Do not freeze. The Kit is stable until the expiry date mentioned on the Pouch, when stored under the above condition.

**PACK SIZE :** Available in packs of 10's, 20's and 50's.

### CONTENTS OF THE KIT :

PACK SIZE	10 TEST	20 TEST	50 TEST
Test Device	10 Nos.	20 Nos.	50 Nos.
2 ml droppers	10 Nos.	20 Nos.	50 Nos.
Silicagel	10 Nos.	20 Nos.	50 Nos.
Pack Insert	1 No.	1 No.	1 No.

### MATERIAL REQUIRED BUT NOT PROVIDED :

- Sterilized Vial
- Disposable Gloves
- Precession Pipette
- Sodium hypochlorite Solution (Free available Chlorine 50 - 500 mg/L)
- Autoclaved Tips

### WARNINGS & PRECAUTIONS :

- Read this Pack Insert carefully.
- DO NOT FREEZE THE KITS.
- Do not use after the expiration date.
- Use only serum / plasma specimen. Further more do not use umbilical cord blood, because it prevents colloidal gold from migrating and can interface with result.
- Carefully observe the prescribed number of drops to be added 2 drops of serum or plasma only.
- If the kit is refrigerated should be brought down to room temperature before testing. Assay should be conducted at room temperature (15-30°C)
- Use the kit soon after removing from the pouch.
- Do not use the test device, if the pouch seal is broken or silica gel pouch white in colour.
- Frozen specimens should be brought to room temperature before testing. Specimen should not be repeatedly frozen and thawed.
- Specimen with extremely high concentrations of red blood cells, fibrin should be recentrifuged before using.
- For Invitro Diagnostic Use only.

**SPECIMEN :** Fresh Serum or Plasma can be used for testing.

### SPECIMEN COLLECTION & PREPARATION :

- Collect blood in a clean, dry, sterilized vial and allow it to clot. Separate the Serum by centrifugation at 5000 r.p.m. for 15 minutes at room temperature.
- If serum is not to be assayed immediately it should be stored at 2-8°C or if storing more than 3 days then freeze the specimen at - 20°C or below.

### ASSAY PROCEDURE :

- Bring the pouch to room temperature.
- Remove the device from the pouch just prior to testing.
- Place the device on flat surface.
- Add 2 drops of serum or plasma into the sample window.
- Interpret the test result in 10 minutes. DO NOT INTERPRET AFTER 30 MINUTES.
- Any line appearing after 30 minutes would be of no diagnostic value.

### INTERPRETATION OF THE TEST RESULTS :



### NEGATIVE

- NEGATIVE :** The Presence of only one band at 'C' (Control Line) within in the result window indicates a Negative Result.



**POSITIVE**

2. **POSITIVE** : The presence of two bands at 'C' (Control Line) and 'T' (Test Line) within the result window, no matter which band appears first, indicates that sample is reactive for Syphilis.



**INVALID**

3. **INVALID** : If no lines appear or only test line appears with in the result window, after performing the test, the result is considered invalid. The directions may not have been followed correctly or the test may have deteriorated. It is recommended that the specimen to be re-tested with new device.

**PERFORMANCE CHARACTERISTICS :**

**Clinical Sensitivity, Specificity and Accuracy**

The BHAT BIO SCAN™ Syphilis Rapid Test Device (Serum or Plasma) has correctly identified specimens of a seroconversion panel and has been compared to a leading commercial TPHA Syphilis test using clinical specimens. The results show that the relative sensitivity of the Syphilis Rapid Test Device (Serum/Plasma) is 99.7% and the relative specificity is 99.6%.

**BHAT BIO SCAN™ Syphilis Rapid Test Device vs. TPHA.**

Method		TPHA		Total Results
BHAT BIO SCAN™ Syphilis Rapid Test Device	Results	Positive	Negative	
	Positive	384	2	386
	Negative	1	493	494
<b>Total Results</b>		385	495	880

Relative Sensitivity : 99.7% (98.6%-100.0%)

Relative Specificity : 99.6% (98.5% - 100.0%)\*.

**LIMITATIONS :**

1. The BHAT BIO SCAN™ Syphilis Rapid Test Device (Serum/Plasma) is for *in vitro* diagnostic use only. The test should be used for the detection of TP antibodies in serum or plasma specimens only. Neither the quantitative value nor the rate of increase in TP antibodies can be determined by this qualitative test.
2. The BHAT BIO SCAN™ Syphilis Rapid Test Device (Serum/Plasma) will only indicate the presence of TP antibodies in the specimen and should not be used as the sole criteria for the diagnosis of TP infection.
3. As with all diagnostic tests, all results must be interpreted together with other clinical information available to the physician.
4. If the test result is negative and clinical symptoms persist, additional testing using other clinical methods is recommended. A negative result does not at any time preclude the possibility of TP infection.

**References :**

1. Claire FM. *Complete genome sequence of Treponema Pallidum, the Syphilis spirochete*, Science 1998 ; 281 July 375-381.
2. Center for Disease Control. *Recommendations for diagnosing and treating Syphilis in HIV-infected patients*, MMWR Morb. Mortal Wkly Rep. 1988; 37:601.
3. Marx AR. *Crack, sex and STD*, Sexually Transmitted Diseases, 1991: 18:92-101.
4. Wasserheit JN. *Epidemiological Synergy, Interrelationships between human immunodeficiency virus infection and other sexually transmitted diseases*, 1992 ; 19 : 61-77.
5. Johnson PC. Testing for Syphilis, Dermatologic Clinic 1994; 12 Jan: 9-17.

	Temperature Limitation
	Batch Code
	Use by
	Date of Manufacture
	Company name & address
	Company Name
	In vitro Diagnostic Device
	Refer Operating Instructions
	Authorised Representative in European Community
	Do Not Reuse



**BHAT BIO - TECH INDIA (P) LTD.**

11-A, 4th Cross, Veerasandra Industrial Area, Electronics City, Bangalore - 560100, Karnataka

Tel.: 080-2783 3473, 2783 3620. Fax : 080-2783 3621

E-mail : bhatbiotech@vsnl.net Visit us at : www.bhatbiotech.com

