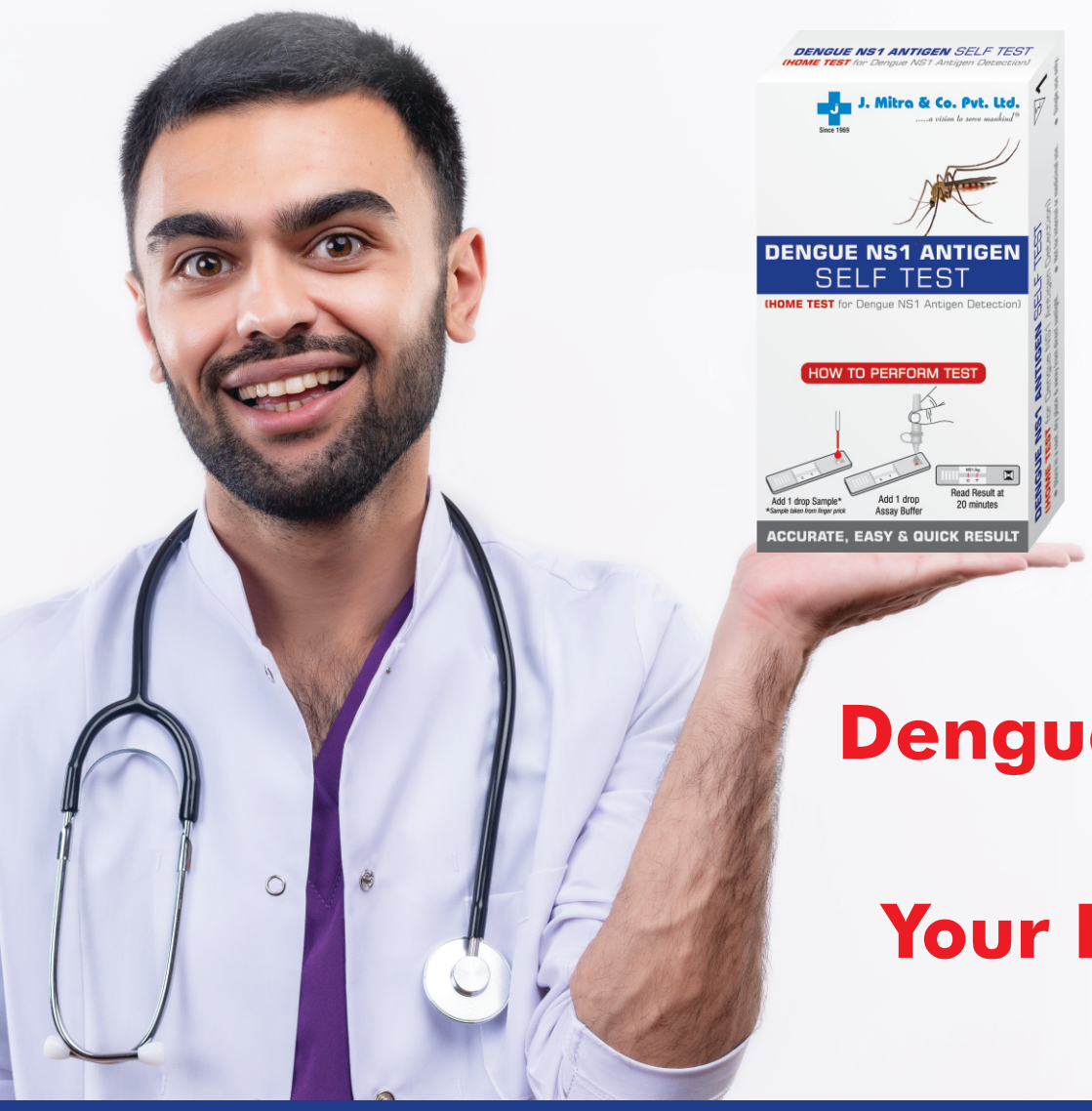
J. Mitra & Co. Pvt. Ltd.

.....a vision to serve mankind™

Since 1969



Dengue Defence

at

Your Doorstep

with

DENGUE NS1 ANTIGEN SELF TEST

Finger Prick Test for the detection of
Dengue NS1 Antigen in Human Whole Blood/ Serum/ Plasma
(Detects Dengue on DAY1 of the FEVER)

- **Quick result within 20 minutes**
- **Detects all 4 serotypes of Dengue virus**
- **Rapid, Visual test for Easy Result Interpretation**
- **2 Step Procedure, just add 1 drop Sample, 1 drop Assay Buffer & Read Result**
- **Excellent Sensitivity & Specificity**

Dengue: The Virus

Dengue is a viral Infection transmitted by a mosquito (vector), the most important of which is Aedes aegypti.

The dengue virus belongs to the family of flaviviruses.There are four distinct but closely related serotypes (DEN 1-4) that co-circulate in many dengue endemic countries of Asia Pacific region. A person can be infected by any one of all four serotypes. A second infection with a different dengue serotype is thought to be associated with increased risk of developing severe manifestations of Dengue.

Severe Dengue (previously known as Dengue hemorrhagic fever) affects most Asian and Latin American Countries has become a leading cause of hospitalization and death among children in these regions.

Why Detection of Dengue virus NS1 Antigen is Important?

- Detection of Disease at an early stage.
- To provide timely & correct disease management to patients.
- For Effective Vector surveillance and control.

Clinical significance of NS1 Ag in Dengue Diagnosis

- Dengue NS1 Antigen can be detected from day 0 as the symptoms appear in patients.**
- NS1 Antigen can be detected in both primary & secondary dengue infection. However NS1 is difficult to detect once the appearance of anti NS1 Antibodies.
- Studies have shown that NS1 Antigen is present at high concentrations in the sera of Dengue virus infected patients during the early clinical phase of the disease.
- Early Diagnosis of Dengue Infection is very necessary, especially in the severe cases of either dengue hemorrhagic fever(DHF) or Dengue Shock syndrome (DSS), which are the major causes of Death.

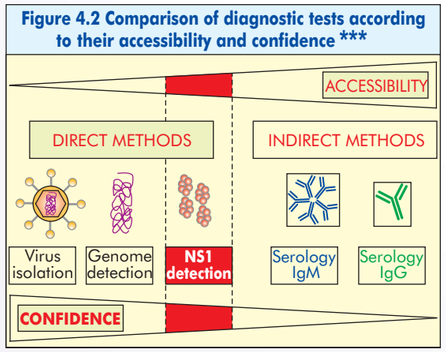
source: Dengue Guidelines for Diagnosis, Treatment, Prevention & Control, New edition : 2009, WHO, Page No.: 25(*)
http://whqlibdoc.who.int/publications/2009/9789241547871_eng.pdf

source: Guidelines for Dengue Surveillance and Mosquito Control, Second edition(**)
http://www.wpro.who.int/publications/pub_9290610689.htm

NS1 Ag detection is the method of choice being the direct method and have a balance relationship between the ease of use or accessibility of a diagnostic method and the confidence in the results of the test (Figure 4.2).

***source: Dengue Guidelines for Diagnosis, Treatment, Prevention & Control, New edition: 2009, WHO, Page No.: 92
http://whqlibdoc.who.int/publications/2009/9789241547871_eng.pdf

Figure 4.2 Comparison of diagnostic tests according to their accessibility and confidence ***



Dengue course of illness & approximate time-line of NS1 antigen in Primary and Secondary infection

Dengue is the most rapidly spreading mosquito-borne disease in the world. The key to handle dengue infection is its early recognition and understanding of the clinical problems during the different phases of the disease, leading to a rational approach to case management and good clinical outcome (Figure 2.1).

Dengue infection is the systematic and dynamic disease. After the incubation period, the illness begins abruptly and is followed by the 3 phases - febrile, critical and recovery (Figure 2.1).

NS1 ANTIGEN (Figure 4.1)

As can be observed from Figure 4.1, during early stage of disease, Antigen Detection can be used to diagnose the infection.

Detection of NS1 antigen is important for early and accurate diagnosis of dengue. NS1 Antigen can be detected from approximately Day 1 to Day 7 of fever setting in.

IgM ANTIBODIES (Figure 4.1)

Antibody response to infection differes according to the immune status of the host. In primary infection, IgM antibodies become detectable about 5-6 days after onset of disease.

In Secondary infection IgM antibodies become detectable about 4-5 days and their levels are comparatively low.

IgG ANTIBODIES (Figure 4.1)

In primary infection, IgG antibodies are generally detectable at low levels in about 11-12 days and in Secondary infection, the IgG antibody level rises quickly reaching to peak in about 2 weeks after the onset of symptoms and may persists for years.

Figure 2.1 The course of dengue illness*

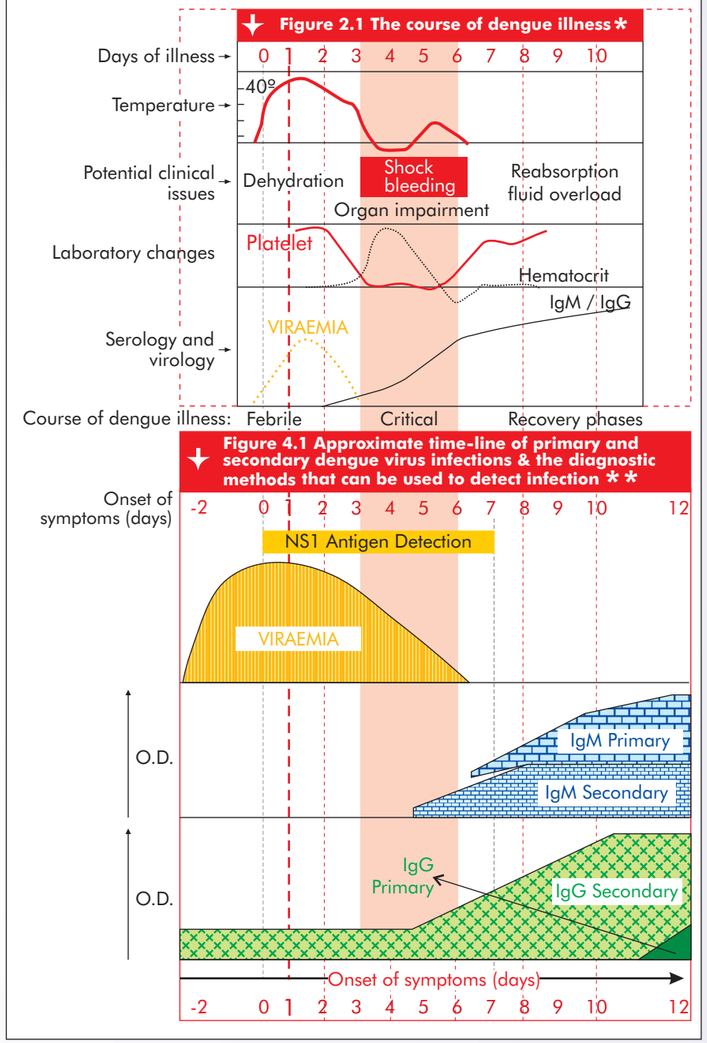


Figure 4.1 Approximate time-line of primary and secondary dengue virus infections & the diagnostic methods that can be used to detect infection **

* source: Dengue Guidelines for Diagnosis, Treatment, Prevention & Control, New edition : 2009, WHO, Page No.: 25

** source: Dengue Guidelines for Diagnosis, Treatment, Prevention & Control, New edition : 2009, WHO, Page No.: 92
http://whqlibdoc.who.int/publications/2009/9789241547871_eng.pdf

For Educational Purpose only.

DENGUE: Early Diagnosis is Essential

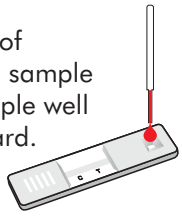
Benefits of Dengue NS1 Antigen Self Test

- Use of Finger prick whole blood
- Point of Care Test (POCT) with user friendly test procedure
- No specialized training required
- Dengue detection from Day 1 of the fever
- Time saving
- Self-management of the Dengue infection

Test Procedure

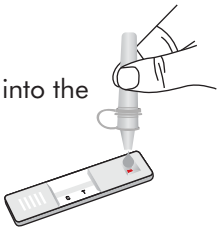
STEP-1

Add 1 drop of whole blood sample into the sample well of the test card.



STEP-2

Add 1 drop assay buffer into the sample well.

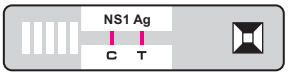


STEP-3

Allow reaction to occur for 20 minutes and read result.

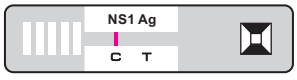
Result Interpretation

Positive Result



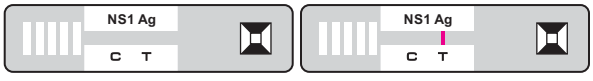
If two distinct pink line appear in the control region 'C' and test region 'T', then the specimen is positive for Dengue NS1 Antigen.

Negative Result

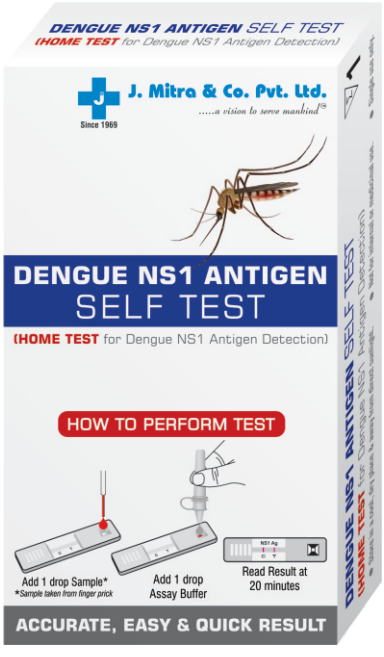


If only one pink coloured line appear in the control region 'C', then the specimen is negative for Dengue NS1 Antigen.

Invalid Result



If neither control line "C" nor test line "T" appears or only test line appears, the test should be treated as Invalid. Repeat the test again with new card.



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