STAINED SALMONELLA ANTIGEN SET
(WIDAL SLIDE TEST)

INTENDED USE:
This diagnostic reagent kit is used for detection of specific antibodies produced in response to the stimulation by specific antigen of Salmonella (group).

PRINCIPLE:
The killed bacterial suspension of Salmonella carries specific ‘O’ and ‘H’ antigen. This will react with immunospecific antibodies which may be present in patient serum and agglutinate the antigen to produce agglutination or clumps on the slide.

CLINICAL SIGNIFICANCE:
The organism Salmonella typhosa is responsible for causing enteric fever or typhoid fever, which is characterized generally by very high consistent fever, loss of appetite, transitory bacteraemia, round or oval shaped ulcer on smooth peritoneal surface of Peyer’s patches and solitary lymphoid folicle of ileum etc. The organism possesses ‘O’ antigen on the cell wall and ‘H’ antigen on it’s flegella, against which the host body produces immunospecific antibodies, to counteract the effect of corresponding antigens. On the other hand the paratyphoid fever caused by Salmonella paratyphi A or Salmonella paratyphi B is characterized by milder course of disease. These organisms also possess somatic ‘O’ and flagellar antigen which is termed as A(H) and B(H) respectively. The Other Organisms of Salmonella species like Salmonella typhi are responsible for causing food poisoning or Arizona group causing fetal infection do have similar antigenic properties.

Contents:
Reagent 1 : Stained Salmonella Antigen S.typhi “O”
Reagent 2 : Stained Salmonella Antigen S.typhi “H”
Reagent 3 : Stained Salmonella Antigen S.paratyphi “A(H)”
Reagent 4 : Stained Salmonella Antigen S.paratyphi “A(B)”
Reagent 5 : Positive Control Serum

SAMPLE:
Fresh serum sample is preferred. In case of any delay the sample should be stored at 2-8°C away from direct light. However the test is to be performed within 24 hrs. of collection of sample.

STORAGE AND STABILITY:
All reagents are stable till expiry date mentioned on the label when stored at 2 - 8°C away from direct light.

PROCEDURES:
A. Rapid slide Test (Widal Screening Test):
1. Clean the glass slide provided in the kit and wipe.
2. Place one drop of undiluted serum to be tested in each of the first four circles (1-4).
3. Add one drop of antigen O, H, A(H) and B(H) in circles 1, 2, 3, 4 respectively.
4. Mix the contents of each circle with separate stick and spread to fill the entire circle area.
5. Rock the slide for one minute and observe for agglutination.
6. If agglutination is visible within one minute then proceed for quantitative estimation.
7. Titre is the highest dilution observed in rapid slide screening test which gives visible agglutination.

B. Quantitative Slide Test:
Clean the glass slide supplied in the kit and proceed as follows.

<table>
<thead>
<tr>
<th>Circle</th>
<th>Serum Volume</th>
<th>Appropriate Antigen Drop</th>
<th>Mix and</th>
<th>Titre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.08 ml</td>
<td>1 Drop</td>
<td>rotate 1</td>
<td>1:20</td>
</tr>
<tr>
<td>2</td>
<td>0.04 ml</td>
<td>1 Drop</td>
<td>one minute</td>
<td>1:40</td>
</tr>
<tr>
<td>3</td>
<td>0.02 ml</td>
<td>1 Drop</td>
<td>one minute</td>
<td>1:80</td>
</tr>
<tr>
<td>4</td>
<td>0.01 ml</td>
<td>1 Drop</td>
<td>one minute</td>
<td>1:160</td>
</tr>
<tr>
<td>5</td>
<td>0.005 ml</td>
<td>1 Drop</td>
<td>one minute</td>
<td>1:320</td>
</tr>
</tbody>
</table>

Repeat the above procedure for visible agglutination.

INTERPRETATION OF RESULT:
A. Rapid slide test:
Granular agglutination in case of ‘O’ and flocculating agglutination in case of H or A(H), or B(H) indicates positive reaction.

B. Quantitative slide test:
A diagnostic titre of 1:80 suggests positive reaction.

LIMITATIONS:
Rapid slide tests or quantitative slide tests are non-specific type of test. The positive result should be further confirmed by tube test and other microbiological investigations.

TO REMEMBER:
1. Bring all the reagents and samples to room temperature before use.
2. Serum should not be inactivated.
3. Use clean and dry glassware.
4. Include positive and negative control sera (normal saline) for greater proficiency in interpretation of results.
5. Shake antigen vial well before use.
6. Test serum should be clear.
7. Avoid performing the test directly under the fan.
8. Before giving the final result, patient history should be taken into consideration.
9. In non vaccinated persons the titre as high as 1 : 80 between 7th or 10th day of fever is of diagnostic value and the same titre increases gradually during subsequent period.
10. In vaccinated persons the question of anamnestic response should always be borne in mind and ‘H’ titre should not be taken into account for the purpose of diagnosis unless there is a rising titre of ‘H’ in subsequent period.
11. Care should be taken to empty the dropper after use in order to avoid the possibilities of false positive results.

REFERENCES:

Code No.     Pack Size
G02A         4x5 ml
G02B         2+2x5 ml

ISO 13485:2003
ISO 9001:2015