



Asritha

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Asritha TYDAL - S

(STAINED TYDAL ANTIGENS FOR SLIDE AND TUBE TEST)

CLINICAL SIGNIFICANCE

Salmonella typhi & Salmonella paratyphi are the causative agents of "Enteric Fever". The antigens of typhoid and paratyphoid consist of two distinct fractions – the stable somatic 'O' Antigen and the labile flagellar 'H' antigen. The paratyphoid antigens are further classified into A & B species. In typhoid and paratyphoid, the 'H' antigen is type specific whereas the 'O' antigen is group specific.

Tydal-S antigens are the standardised smooth suspension of killed bacterial antigens for qualitative and semi-quantitative detection of S. typhi and S. paratyphi antibodies. The different color to each antigen facilitates the differentiation of antigens and clear reading of agglutination. It also avoids the possible error of mixing and/or misinterpretation. As undiluted serum is used in Slide Test, it is a simple, rapid and convenient screening test. The slide test antigens are standardised in such a way that they can be used for either slide or tube technique. In doubtful cases, it is recommended to perform the tube technique for obtaining conclusive results. A marked rise in the titre to one sero type (above 1:80) suggests infection. Diagnostically a rising antibody titre of at least four fold (two tube difference) is considered more significant than a single test. It is observed that individuals immunised with TAB vaccine may show a moderately high titre for all the antigens.

REAGENTS

Reagent A₁ S. typhi 'O' Antigen

Reagent A₂ S. typhi 'H' Antigen

Reagent A₃ S. paratyphi 'AH' Antigen

Reagent A₄ S. Paratyphi 'BH' Antigen

Reagent A₅ Positive Control

STORAGE AND STABILITY

All reagents are stable at 2-8°C till the expiry date mentioned on the labels.

SAMPLE COLLECTION & STORAGE OR SPECIMEN AND STORAGE

1. No special preparation of the patients is required prior to sample collection by approved technique. Do not use haemolysed samples.
2. Clean and dry glassware free from detergents must be used for sample collection.
3. Though freshly collected serum is preferable, store samples at 2-8°C in case of delay in testing for upto 72 hrs.

PRECAUTIONS

1. Bring all the reagents and samples to room temperature before use.
2. Shake all the antigens thoroughly before use
3. Avoid using turbid, contaminated or inactivated serum.

ACCESSORIES

1. Slide - 1No.

PROCEDURE

I. Rapid Screening Slide Test :

1. On a slide with six circles, place 0.05 ml of test serum in each of the first four circles and 0.05ml each of Positive Control and Normal Saline in each of the last two circles respectively.
2. Add one drop each of 'O', 'H', 'AH' and 'BH' antigens in the first four circles respectively and one drop of any one antigen in the remaining two circles.
3. Mix the contents of each circle separately and spread it in the entire circle.
4. Rock the slide gently for **One minute** and observe for **agglutination**.

INTERPRETATION OF RESULTS

Agglutination with Positive Control and no agglutination with Normal Saline validate test results. No agglutination up to one minute is a negative test, and indicates the absence of corresponding antibodies.

Agglutination within one minute is a positive test, and indicates presence of corresponding antibodies. Then proceed for semi-quantitative slide or tube technique for determination of antibody titre.

Do not observe result after one minute.

I. Semi-Quantitative Slide Test:

1. Put one drop of normal saline in the first circle and 0.005 ml, 0.01 ml, 0.02 ml, 0.04 ml & 0.08 ml of test serum in the remaining five circles respectively. The corresponding titres obtained will be 1:320, 1:160, 1:80, 1:40, 1:20 respectively.
2. To each of the above circles, add one drop of the appropriate antigen, which gives an agglutination in the Screening Slide Test.
3. Mix the contents of each circle separately and spread it in the entire circle.

- Rock the Slide gently for **one minute** & observe for agglutination.

NOTE: This method is recommended for obtaining quick approximately titers only

INTERPRETATION OF RESULTS

The lowest volume of serum, which shows clear agglutination, indicates the cut off level of the positive test and the corresponding antibody titre as per the tube technique is given below:

Serum Volume	Antibody Titre	Serum Volume	Antibody Titre
0.08 ml	1:20	0.01 ml	1:160
0.04 ml	1:40	0.005 ml	1:320
0.02 ml	1:80		

QUANTITATIVE METHOD

II. Tube technique using slide antigens:

- Perform the assay for all four antigens or for that which has given a positive result in the Screening Slide Test.
- Take a set of six test tubes (10 x 75mm) for each antigen. Dilute the serum sample and set up the test as indicated in the table.

TUBE NO.	1	2	3	4	5	6
Dilution	Saline Control	1:20	1:40	1:80	1:160	1:320
Normal Saline	1.0 ml	1.9 ml	1.0 ml	1.0 ml	1.0 ml	1.0 ml
Test Serum	-	0.1 ml	-	-	-	-
Diluted Serum from Tube 2	-	-	1.0 ml	1.0 ml	1.0 ml	1.0 ml
Appropriate Antigen	One drop	One drop	One drop	One drop	One drop	One drop

1.0 ml Discard

- Mix well after each addition and incubated at 37°C for 18 - 20 hours.
- Observe for agglutination. The highest dilution for Serum which shows clear-cut agglutination indicates the antibody titre.

NOTE

- Sera from normal individuals may show agglutination up to 1: 40 dilution.
- Agglutination titre greater than 1:80 is considered significant and usually suggestive of infection.
- Tydal is only screening test.
- The correlation of test results with typical clinical signs, symptoms and patient's history should be taken into account before arriving at the final diagnosis.
- As with all diagnostic procedures, the Physician should evaluate data obtained by use of this kit in light of other clinical information.
- For accuracy of results, the procedure has to be followed meticulously.

REFERENCES

- Cruickshank, R. (1982) Medical Microbiology, 12th Edition, P.403.
- Felix, A. (1942) Brit. Med. J., 11, 597.

PRESENTATION

PRODUCT CODE	PACK SIZE	A ₁ -O-ANTIGEN	A ₂ -H-ANTIGEN	A ₃ -AH-ANTIGEN	A ₄ -BH-ANTIGEN	POSITIVE CONTROL
ATS 0644	4x5ml	5.0ml	5.0ml	5.0ml	5.0ml	0.5ml

PRODUCT FEATURES AT A GLANCE :

- Qualitative and Semi Quantitative determination of Typhoid & Paratyphoid antibodies.**
- Stained widal Antigens.**
- Clear Cut Result within 1 minute.**
- Color Differentiation for each Antigen.**
- Avid Agglutination.**
- Shelf life – 24 months.**
- Store at 2-8°C.**



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IN VITRO DIAGNOSTIC REAGENTS

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