Lifescreen™ - ASO

(Latex Agglutination Method)

CLINICAL SIGNIFICANCE:

The group A beta-hemolytic Streptococci produce various exotoxins such as Streptolysin-O & Streptolysin-S which can act as antigens. The affected individuals produce specific antibodies, Antistreptolysin – O (ASO) that has clinical significance. Detection of ASO is very useful in the diagnosis of streptococcal infections. Antistreptolysin – O can be detected in 1-3 weeks after infection, attaining maximum levels up to 3-6 weeks. The elevated ASO titre may be associated with acute rheumatic fever and glomerulonephritis. An elevated ASO titre of more than 200 IU/ml indicates an acute streptococcal infection. Testing of successive serum sample after an interval of 10-12 days is diagnostically more important than a single sample.

TEST PRINCIPLE:

The latex Reagent is coated with Streptolysin-O. The specimen containing ASO, on mixing with Latex Reagent agglutinates, showing the positive test result. If ASO is absent there will be no agglutination, which is a negative test result.

KIT CONTENTS:	**Code No. KAS1 (25T)**	**Code No. KAS2 (50T)**
Reagent 1 Latex Reagent	25 T	50 T
Reagent 2 Positive Control	0.25 ml	0.25 ml
Reagent 3 Negative Control	0.25 ml	0.25 ml

ACCESSORIES:

Black glass slide with 4-circles, glass dropper for latex reagent, capillary droppers & mixing sticks.

SPECIMEN:

Fresh serum collected by approved techniques. In case of a delay in testing, store at 2-8^{0}C (stable upto a week). Hemolysed , lipaemic or icteric serum samples should not be used.

STORAGE & STABILITY :

All the reagents are ready-to-use and are Stable at 2-8^{0}C till the expiry date mentioned on the labels.

PROCEDURE:

QUALITATIVE TEST:

1. Place one drop each of specimen, positive control and negative control in separate circles of the slide using the capillary droppers provided.
2. Add one drop of Latex Reagent in each of these circles.
3. Mix the content of each circle separately ,spreading it within the circle.
4. Rock the slide gently for 2 minutes and look for agglutination.

SEMI QUANTITATIVE TEST:

1. Dilute the specimen serially 1:2, 1:4, 1:8, 1:16, 1:32, 1:64 using normal saline.
2. Place one drop each of the serially diluted serum sample using the capillary droppers, in each circle of the slide. Now, proceed testing further as in the Qualitative Test method.

INTERPRETATION OF RESULTS:

QUALITATIVE TEST:

1. To validate test results , check agglutination with Positive Control and no agglutination with Negative Control .
2. Agglutination within 2 minutes is a positive test and indicates presence of ASO in the test specimen.
3. No agglutination up to 2 minutes is a negative test and indicates absence of ASO in the test specimen.

DO NOT OBSERVE RESULTS BEYOND 2 MINUTES

SEMI QUANTITATIVE TEST:

1. The highest dilution, which shows a visible agglutination within 2 minutes, indicates the ASO titre.
2. The approximate ASO concentration can be obtained by multiplying titre by sensitivity of the test.
   ASO in IU/ml = D x S
   Where,
   D= Highest dilution showing clear-cut agglutination.
   S= Sensitivity of the test is 200 IU/ml

NOTES:

1. Bring all the reagents and samples to RT before use.
2. Do not freeze the Latex Reagent.
3. Positive and Negative Controls are ready to use and should not be diluted while using in test procedure
4. The reagents can be damaged on exposure to extreme temperatures.
5. It is recommended that the performance of the reagents be verified using the positive control provided
6. All material derived from human source have been tested for HBsAg & HIV antibodies and found to be non reactive. However, for better safety, handle this material with proper care.
7. Hold the glass dropper vertically while dispensing Latex Reagent to ensure uniform drop size
8. Do not use hemolysed or turbid specimen. The use of plasma instead of serum could lead to erroneous results. Drying of the mixture at the periphery of the circle could lead to erroneous results.
9. Do not read results beyond 2 minutes. Contaminated sera and a longer reaction time beyond 2 minutes may lead to false positive results.
10. The Latex Reagent (1) should be shaken well prior to use, to ensure a homogeneous suspension of latex.
11. Non specific positive reaction may occur if plasma is used or serum is highly lipaemic or hemolysed.
12. As with all diagnostic procedures, the physician should evaluate data obtained by the use of the kit in light with other clinical information.

BIBLIOGRAPHY:

1. Rantz, L.D., Dicaprio J.M. Randall, E., (1952); Am.J.Med.Sci,24
2. Todd,W.W.(1934), J.Path. and Bact., 39:299.
3. Klein, G.C,(1976), Manual of Clinical Immunology ASM, 264
4. Klein,G.C,*et al,*(1971),Appl.Microbiol,21:999.

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