NEO CHEM - ASO

(LATEX AGGLUTINATION TEST)

KIT NAME	KIT SIZE
NEO CHEM - ASO	50 Tests

NEOGENIX
DIAGNOSTICS PVT LTD

INTRODUCTION

The first group of streptococci are called hemolytic streptococci which can be further subdivided into group (a), group (b), group (c) and group (d). it includes most of the species associated with primary streptococcal infections in humans. The group (a) hemolytic streptococci produce various exotoxins such as streptolysin O and streptolysis S that can act an antigens. The affected individuals reduce specific antibodies against streptolysis O, namely Anti streptolysis O. Determination of these antibodies is very useful for the diagnosis of streptococcal infections and their relative effects such as rheumatic fever and acute glomerulonephritis. An elevated ASO titre of more than 200 IU/ml may indicate an acute streptococcal infection.

METHOD PRINCIPLE

ASO slide test for detection of antibodies to streptolysis O is based on the principle of agglutination. The test specimen (serum) is mixed with ASO latex reagent and allowed to react. If antibodies to streptolysin O are present then a visible agglutination is observed. If antibodies to streptolysin O are not present or are in concentration less than 200 IU/ml then no agglutination will be observed.

KIT CONTENTS

Reagent Name	SASO00050T
R1 ASO Latex	2 ml
R2 Positive Control	0.5 ml
R3 Negative Control	0.5 ml

WORKING REAGENT PREPARATION AND STABILITY

1. Store the reagent at 2-8°C. DO NOT FREEZE.
2. The shelf life of the reagent is as per the expiry date mentioned on the reagent vial labels.

SPECIMEN

Only serum should be used to testing. If any delay in testing store the samples at 2-8°C. Samples can be stored for upto a week. Do not use hemolysed serum.

MATERIAL PROVIDED WITH THE KIT

Accessories : Glass Slide, Plastic Droppers, Mixing sticks.

ADDITIONAL MATERIAL REQUIRED

Stop watch.

NOTES:

1. In vitro diagnostic reagent for laboratory and professional use only. Not for medicinal use.
2. All the reagents derived form human source have been tested for HBsAg and anti HIV antibodies and are found to be non-reactive. However handle the material as if infectious.
3. Reagent contains 0.1% sodium Azide as preservative. Avoid contact with skin and mucosa. On disposal flush with large quantities of water.
4. The reagent can be damaged due to microbial contamination or on exposure to extreme temperature. It is recommended that the performance of the reagent be verified with the positive and negative controls provided with the kit.
5. The Latex reagent should be shaken will prior to use, to ensure homogeneous suspension of latex.
6. Only a clean and dry glass slide must be used. Clean the slide with distilled water and wipe dry.
7. Accessories provided with the kit only must be used for optimum results.

PROCEDURE

QUALITATIVE METHOD

1. Pipette one drop of test sample onto the glass slide using a disposable pipette provided with the kit.
2. Add one drop of ASO latex reagent to the drop of test sample on the slide.
3. Using a mixing stick, mix the serum and the ASO latex reagent uniformly over the entire circle. Do not let the dropper tip touch the liquid on the slide.
4. Immediately start a stopwatch. Rock the slide gently, back and forth, observing for agglutination macroscopically at two minutes. Proceed similarly with each dilution as test specimen
5. Do not read the results beyond 2 minutes.

SEMI QUANTITATIVE METHOD

1. Using isotonic saline prepare serial dilutions of the serum sample positive in the qualitative method 1:2,1:4,1:8,1:16 and so on.
2. Pipette the diluted specimens onto the slide. Start with the 1:2 diluted test specimen.
3. Add a drop of ASO reagent to it. Mix well. Spread the mixture uniformly over the entire circle.
4. Immediately start a stop watch. Rock the slide gently, back and forth, observing for agglutination macroscopically at two minutes. Proceed similarly with each dilution as test specimen.

INTERPRETATION OF TEST RESULTS

Qualitative Method

Agglutination is a positive test result and indicates the presence of detectable levels of Anti-Streptolysin O in the test specimen. No agglutination is a negative test result and indicates the absence of detectable levels of Anti- streptolysis O in the test specimen.

Semi Quantitative method

Agglutination in the highest serum dilution corresponds to the amount of ASO in IU/ml present in the test specimen.

Calculation

ASO (IU/ml) = S x D

Where S = Sensitivity of the reagent ie., 200 IU/ml
D = Highest dilution of serum showing agglutination.

REMARKS:

1. Lipemic, hemolysed and contaminated serum samples could produce non-specific results.
2. Serum samples having higher protein content may produce non-specific reagent aggregation.
3. Use of plasma rather than serum can lead to false positive results.
4. Do not read results beyond two minutes.
5. It is recommended that all positive test results should be further tested with methods enabling quantitation of ASO titres.
6. It is recommended that results of the tests should be correlated with clinical findings to arrive at the final diagnosis.

LITERATURE

1. ToddE.W.,(1934), J. path and Bact., No.39, 299-320.
2. Klein G.C., 91980) Manuel of Clin. Immunol., 7th Ed., 431.
3. Spaun J., Bentzon m.w., Larsen S.O. et. Al., (1961) Bull. WHO, 24, 271-279.
4. Klein G.C et., Al., (1971(Appl. Microbiol., 21.000.