ORDER INFORMATION

CODE : DL4001: 25 Test
DL4002: 50 Test
DL4003: 100 Test

DELTA
ANTISTREPTOLYSIN - O
Latex Method

This diagnostic reagent kit is used for "in-vitro" determination of Antistreptolysin - O activity in serum by qualitative and semi quantitative latex slide method.

PRINCIPLE OF THE METHOD :

The ASO Latex test contain polystyrene latex particles, coated with purified and stabilized Streptolysin-O (Antigen), which reacts with its corresponding Antistreptolysin - O (Antibody) in the test sample resulting in the agglutination of latex particles.

CLINICAL SIGNIFICANCE :

Group A Streptococci produces soluble and oxygen labile hemolysin known as streptolysin 'O'. This has lethal effects on the human being and especially toxic action to heart muscles. The pathological changes to the heart are proliferative where it produces Valvular endocarditis, myocarditis and fibrinous pericarditis. When the joints are affected, it produces migratory non purulent arthritis. The heart involvement is seen commonly in pediatric age group where as joints involvement is observed mostly in adult patients.

REAGENTS :

Reagent 1: ASO Latex Antigen
Reagent 2: Positive Control
Reagent 3: Negative Control

STORAGE AND STABILITY :

ASO Latex Antigen , Positive and Negative control are ready to use.

All the components of the kit are stable until the expiration date mentioned on the individual label when stored tightly closed at 2-8ºC and contaminations are prevented during their use. Do not use reagents over the expiration date.

Do not freeze. Frozen latex and diluent could change the functionality of the test.

SAMPLES:

Only serum should be used.

Lipemic, haemolysed and contaminated serum could produce non-specific results.

In case of delay the sample should be stored at 2°-8°C.

PROCEDURE FOR QUALITATIVE SLIDE TEST:

Allow all reagents as well as the sample to reach room temperature.

1. Using disposable plastic dropper place one drop of test specimen in circled area of the plastic slide provided in the kit.
2. Shake the Latex reagent well. Add one drop of ASO Latex Antigen Reagent to the above drop and mix well with disposable applicator stick.
3. Rock the slide gently back and forth for two minutes and examine for agglutination. Do not examine beyond two minutes.
4. For Positive & Negative Controls follow the same Procedure as mentioned above by taking control serum from respective vials.

RESULT INTERPRETATION FOR QUALITATIVE SLIDE TEST:

Agglutination is a Positive test result and indicates the presence of detectable AntiStreptolysin - O Antibody in serum.

No agglutination is a negative test result and indicates the absence of detectable AntiStreptolysin - O Antibody in serum.

PROCEDURE FOR SEMI QUANTITATIVE TEST:

Allow all reagents as well as the sample to reach room temperature.

1. Dilute the specimen serially in the ratio of 1:2, 1:4, 1:8, 1:16, and 1:32 using Normal Saline.
2. Place one drop of diluted sample using plastic droppers in each circle of the plastic slide.
3. Shake the Latex reagent well. Add one drop of ASO Latex Antigen reagent in each of these circle. Mix well with applicator stick.
4. Rock the slide gently back and forth for two minutes and examine for agglutination. Do not examine beyond two minutes.

RESULT CALCULATIONS FOR SEMI QUANTITATIVE TEST:

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

Concentration of ASO can be calculated as follows:

ASO (IU/ml) = Titre x ASO Sensitivity (IU/ml)

Where ASO Sensitivity = 200 IU/ml
Titre = Highest dilution showing clear agglutination.

LIMITATIONS:

An elevated ASO titre may be observed in conditions like acute glomerulonephritis. For sample showing very high titre of ASO in the initial phase, successive testing after 10 to 12 days should be carried out.

PRECAUTIONS:

1. Contaminated sera and longer reaction time will lead to false Positive results.
2. Improper mixing and drying of reagents will lead to erroneous results.
3. Do not perform the test directly under the air flow.
4. Do not interchange the dropper of bottles.
5. Care should be taken to empty the dropper after every use.
6. The Latex Gammaglobulin Reagent vial should be properly closed to avoid drying and formation of flakes when stored at 2-8°. Do not freeze it or leave it at room temperature for long period.
7. Specimen bottles or tubes and the test slides must be free from detergents.
8. Use positive and negative controls for greater proficiency of result interpretation.

NOTES :

Clinical diagnosis should not be made on findings of a single test result, but should integrate both clinical and laboratory data.

BIBLIOGRAPHY :

1. Rantz LD, Dicaprio JM, Randall E, Am. J. Med. Sci, 24, 1952.
2. Klien GC 1976, Manual of Clinical Immunology ASM, 264.
3. Medical Bacteriology N.C. Day 6th edition P. 189. 204.

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