

ORDER INFORMATION

CODE : DL3601: R1-1x40 ML + R2-1x10ML

Quantitative determination of anti-streptolysin O (ASO). IVD.

Store 2-8°C.

PRINCIPLE OF THE METHOD

The ASO-Turbilatex is a quantitative turbidimetric test for the measurement of ASO in human serum or plasma.

Latex particles coated with streptolysin O (SLO) are agglutinated when mixed with samples containing ASO. The agglutination causes an absorbance change, dependent upon the ASO contents of the patient sample that can be quantified by comparison from a calibrator of known ASO concentration.

CLINICAL SIGNIFICANCE

SLO is a toxic immunogenic exoenzyme produced by β -hemolytic Streptococci of groups A, C and G. Measuring the ASO antibodies are useful for the diagnostic of rheumatoid fever, acute glomerulonephritis and streptococcal infections. Rheumatic fever is an inflammatory disease affecting connective tissue from several parts of human body as skin, heart, joints etc... and acute glomerulonephritis is a renal infection that affects mainly to renal glomerulus.

REAGENTS

Diluent (R1)	Tris buffer 20 mmol/L, pH 8.2. Sodium azide 0.90 g/L. Merthiolate 0.05 g/L.
Latex (R2)	Latex particles coated with streptolysin O, pH 10.0. Sodium azide 0.90 g/L. Merthiolate 0.05 g/L.
ASO-CAL	ASO Calibrator. ASO concentration is stated on the vial label.

PREPARATION

Working reagent: Swirl the latex vial gently before use. Prepare the necessary amount as follow:

- 1 mL Latex Reagent + 4 mL Diluent

ASO Calibrator: Ready to use. Value mentioned on the vial in IU/ml.

STORAGE AND STABILITY

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

Working reagent: Stable for 30 days at 2-8°C.

Reagent deterioration: Presence of particles and turbidity.

ASO Calibrator: Ready to use. Stable till expiry at 2-8°C. Do not freeze.

Do not freeze. Frozen Latex or Diluent could change the functionality of the test.

ADDITIONAL EQUIPMENT

- Thermostatic bath at 37°C.

- Spectrophotometer or photometer thermostatable at 37°C with a 540 nm filter.

SAMPLES

Fresh serum. Stable 7 days at 2-8°C or 3 months at -20°C.

Samples with presence of fibrin should be centrifuged before testing.

Do not use highly hemolyzed or lipemic samples.

GENERAL SYSTEM PARAMETERS :

Reaction Type	Fixed Time
Wave length	540nm (530-550 nm)
Light Path	1 Cm
Reaction Temperature	37°C
Blank / Zero Setting	Distilled Water
Reagent Volume	1 ml
Sample Volume	10 μ l
Delay / Lag Time	10 sec
Read Time	120 sec
Read Interval	120 Sec
Calibrator Concentration	Stated on Vial Label
Normal Value	Upto 200 IU/ml
Linearity	Upto 800 IU/ml

PROCEDURE

1. Bring the working reagent and the photometer (cuvette holder) to 37°C.

2. Assay conditions:

Wavelength: 540 nm (530-550)

Temperature: 37°C

Cuvette lighth path: 1 cm

3. Adjust the instrument to zero with distilled water.

4. Pipette into a cuvette:

Working Reagent (mL)	1.0
Calibrator or sample (μ L)	10

5. Mix and read the absorbance after 10 sec. (A1) and after 2 minutes (A2) of the sample addition.

CALCULATIONS

$$\text{ASO (IU/mL)} = \frac{(A_2 - A_1)_{\text{sample}}}{(A_2 - A_1)_{\text{calibrator}}} \times \text{Calibrator concentration}$$

QUALITY CONTROL

Control sera are recommended to monitor the performance of manual and automated assay procedures.

Each laboratory should establish its own Quality Control scheme and corrective actions if controls do not meet the acceptable tolerances.

REFERENCE VALUES

Normal values up to 200 IU/mL (adults) and 100 IU/mL (children < 5 years old).

Each laboratory should establish its own reference range.

LINEARITY LIMIT

Up to 800 IU/mL, under the described assay conditions.

Samples with higher concentrations, should be diluted 1:3 in NaCl 9 g/L and retested again.

The linearity limit depends on the sample-reagent ratio, as well the analyzer used. It will be higher by decreasing the sample volume, although the sensitivity of the test will be proportionally decreased.

INTERFERENCES

Bilirubin (20 mg/dL), hemoglobin (10 g/L), lipemia (10 g/L) and rheumatoid factors (600 IU/mL), do not interfere. Other substances may interfere.

NOTES

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

BIBLIOGRAPHY

1. Alouf Jodeph E. Pharma Ther 1980; 11: 661-717.

2. M Fasani et al. Eur J Lab Med 1994; vol2.n°1: 67.

3. Todd E W. J Exp Med 1932; 55: 267 - 280.

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