# ASO-Turbilatex

## Latex turbidimetry

Hemezyme

GENUINE QUALITY, RELIABLE RESULTS

### 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 -heamolitic 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 onnective tissue from several parts of human body as skin, heart, joints etc and acute glomerulonephritis is a renal infection that affects mainly to renal glommerulus.

### REAGENTS

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| **Diluent(R1)** | Tris buffer20 mmol/L pH 8.2 Sodium azide 0.90g/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 546 nm filter.

### SAMPLES

Fresh serum. Stable 7 days at 2-8°C or 3 months at-20°C.
Samples with presence offibrin should be centrifuged before testing.
Do not use highly hemolized or lipemic samples.

### GENERALSYSTEMPARAMETERS:

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| **REACTION TYPE** | Fixed Time |
| **WAVE LENGTH** | 546 nm |
| **LIGHT PATH** | 1 cm |
| **REACTION TEMPERATURE** | 37°c |
| **BLANK / ZERO SETTING** | Distilled Water |
| **REAGENT VOLUME** | 1 ml |
| **SAMPLE VOLUME** | 20 µl |
| **LAG / DELAY TIME** | 5 Sec. |
| **READ INTERVAL** | 120 Sec. |
| **CALIBRATOR CONCENTRATION** | Stated On Vial Label |
| **NORMAL VALUE** | Up to 200 IU/ml |
| **LINEARITY** | Up to 800 IU/ml |

### PROCEDURE

1. Aspirate the Calibrator and wait for factor generation.
2. .Add the sample to reagent tube (T), one by one,mix well,then aspirate and see the final results on the instrument.

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| **WORKING REAGENT (ML)** | 1.0 |
| **CALIBRATOR OR SAMPLE (µL)** | 20 |

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

### CALCULATIONS

$$\text{ASO (IU/ml)} = \frac{(A2\text{-}A1)_{\text{sample}}}{(A2\text{-}A1)_{\text{calibrator}}} \times \text{Calibrator concentration}$$

### 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

Bilirrubin (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


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