



# ANTI-STREPTOLYSIN-O (ASO)

**Turbilatex**

**Quantitative determination**

Cat. No. 101-0469

Size 1x45 ml / 1x5 ml

## PRINCIPLE:

The reagent ASO-Turbilatex agglutination assay is a quantitative turbidimetry assay for measurement of ASO in human serum or plasma. Latex particles coated with streptolysin O 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:

Streptolysin O is a toxic immunogenic exoenzyme produced by  $\beta$ -hemolytic Streptococcus group A, C and G. Measuring the antibodies ASO is useful for the diagnostic of rheumatoid fever, acute glomerulonephritis and streptococcal infections.

## REAGENTS:

### 1. Reagent 1 (1x45 ml)

Diluent; TRIS buffer pH 8.2 20 mmol/L  
Sodium azide 0.95 g/L

### 2. Reagent 2 (1x5 ml)

ASO Latex  
Sodium azide 0.95 g/L

### 3. Reagent 3 (1x1 ml)

ASO Calibrator  
Concentration see on the vial label

**Optional:** 101-0466 Control serum ASO/CRP/RF Level I  
101-0467 Control serum ASO/CRP/RF Level II

Components from human origin have been tested and found to be negative for the presence of HBsAg and HCV, and of antibody to HIV (1/2). However handle cautiously as potentially infectious.

## CALIBRATION:

The assay is calibrated to the ASO International Calibrator (WHO). The use of other commercially available ASO calibrators is not recommended.

## REAGENT PREPARATION AND STABILITY:

**Working reagent:** Shake the latex vial gently before use. Prepare the necessary amount as follow: 1 mL Latex Reagent + 9 mL Diluent. Stable for 30 days at 2-8°C.

**ASO Calibrator:** Reconstitute with 1.0 mL of distilled water. Stable for 1 month at 2-8°C or 3 months at -20°C.

All the components of the kit are stable until the expiration date on the label when stored at 2-8°C. Do not use reagents over the expiration date. Do not freeze; frozen reagents could change the functionality of the test.

## SAMPLES:

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

The samples with particles or fibrin should be centrifuged to eliminate them.

Do not use haemolized or lipemic samples.

## PROCEDURE:

Wavelength: 540 nm (530-550)  
Cuvette: 1 cm light path  
Temperature: 37 °C  
Zero: Distilled water

Pipette into a cuvette:	Calibrator	Sample
Working reagent	1000 $\mu$ l	1000 $\mu$ l
Calibrator	10 $\mu$ l	--
Sample	--	10 $\mu$ l
Mix and read the absorbance immediately ( $A_1$ ) and after 2 minutes ( $A_2$ ) of the sample addition.		

## CALCULATION:

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

**Chronolab has instruction sheets for several automatic analyzers. Instructions for many of them are available on request.**

## QUALITY CONTROL:

Serum controls are recommended to monitor the performance of manual and automated assay procedures.

Chronolab Control Serum ASO/CRP/RF are available: Level I (Cat.No. 101-0466) and Level II (Cat.No.101-0467)

## REFERENCE VALUES:

Up to 200 IU/mL.  
Each laboratory should establish its own reference range.

## PERFORMANCE CHARACTERISTICS:

- Linearity:** Up to 800 IU/mL, under the described assay conditions. The linearity limit depends on the sample reagent ratio. It will be higher by decreasing the sample volume, although the sensitivity of the test will be proportionally decreased.
- Prozone effect:** No prozone effect was detected upon 1300 IU/mL.
- Sensitivity:** Values less than 20 IU/mL give non-reproducible results.
- Precision:**

Mean (IU/mL)	Intra-assay			Inter-assay		
	135	236	372	135	236	372
SD	3.4	16.2	5.9	7.9	13.2	17.8
CV	2.5	2.26	1.61	5.87	5.5	4.76
N	10	10	10	10	10	10

## INTERFERENCES:

*Rheumatoid factors:* up to 300 IU/mL do not interfere.  
*Bilirubin:* up to 20 mg/dL do not interfere.  
*Hemoglobin:* up to 10 g/L do not interfere.  
*Lipids:* up to 20 g/L do not interfere.

## REFERENCES:

- I Haffeejee, Quarterly Journal of Medicine 1992, New series 84; 305: 641 – 658
- Alouf et al. Biochimie 1973; 56-61
- M Fasani et al. Eur J Lab Med 1994; vol2.n°1: 67
- E W Todd. J Exp Med 1932; 55: 267 – 280
- Klein et al. Applied Microbiology 1970; 19: 60-61

EN0822MI/02