

Liquid Reagents – ready to use

# ASO 5+1

**Diagnostic reagent for the quantitative in vitro determination of ASO (Anti-Streptolysin O) in human serum by turbidimetric assay.**

Ref.No.	Kit Size	Content
DIA020020	60 ml	2x25 ml R1 + 1x10 ml R2
DIA020021	120 ml	4x25 ml R1 + 1x20 ml R2
DIA020022	6 x 25 ml	5x25 ml R1 + 1x25 ml R2

### Additionally offered:

DIA040030	1 x 1 mL	ASO Calibrator High
DIA030050	1 x 1 mL	ASO Control High
DIA030090	1 x 1 mL	Triple Control (ASO, CRP, RF)

### GENERAL INFORMATION

Method	Immunoturbidimetric
Reaction	Nonlinear, endpoint
Wavelength	600 nm
Assay Temperature	18 – 37 °C
Sample	Serum
Measuring Range	approx. 0 – 400 IU/mL
Sensitivity	10.0 IU/mL (Hitachi 911)
Hook Effect	No risk

### Automated Test Procedure

Instrument dependent – please ask for applications

### REAGENT COMPOSITION

COMPONENTS	FINAL CONCENTRATION
<b>ASO Latex Reagent</b>	
ASO sensitized Latex particles	0.17 %
Glycine Buffer	
Sodium azide	0.095 %
<b>PEG4 Buffer</b>	
Phosphate buffered saline	
PEG	4 %
Sodium azide	0.095 %

### REAGENT PREPARATION

The reagents are liquid and ready to use.

### REAGENT STABILITY AND STORAGE

**Conditions:** Protect from light. Close immediately after use.

**Stability:** at 2 – 8 °C up to the expiration date  
at 18 – 25 °C 1 month

Do not freeze!

### SAMPLE STABILITY AND STORAGE

**Stability:** at 2 – 8 °C 48 hours  
at – 20 °C 3 months

Freeze only once!

### TEST PRINCIPLE

The assay of ASO is based on turbidimetric measurement. Turbidity is caused by the formation of antigen-antibody insoluble immuno complexes. The formation of the complexes is accelerated and enhanced by PEG.

### REFERENCE RANGE

Normal reference: 0 – 200 IU/mL

It is recommended that each laboratory establishes its own normal

range.

### MANUAL TEST PROCEDURE

#### Test Procedure without Sample Dilution:

Samples/Controls: ready to use

Calibration curve: Use ASO Calibrator High or Super High to generate a calibration curve by making 1:2 serial dilutions of the calibrator with 0.9% saline as diluent. Use 0.9% saline as zero point.

Pipette into test tubes:	Calibrators	Samples/Controls
Buffer	1000 µL	1000 µL
Cal./Ctrls/Samples	16 µL	16 µL
Mix. Read A1 of calibrators and samples/controls at 600 nm. Then add:		
Latex Reagent	200 µL	200 µL
Mix. Incubate 5 minutes at assay temperature. Read A2 of calibrators and samples/controls at 600 nm. Calculate: $\Delta A = (A2 - A1)$		

### CALCULATION

Calculate and plot  $\Delta A = (A2 - A1)$  of the calibrators versus assigned concentration values on a linear-linear graph paper. Calculate  $\Delta A$  optical densities of samples and control(s) and read values in IU/mL on the reference curve. Samples yielding absorbances above highest calibrator should be retested after further dilution.

### DIAGNOSTIC IMPLICATIONS

The group A  $\beta$ -hemolytic streptococci produces various toxins that can act as antigens. One of these exotoxins is streptolysin O. The affected organism produces specific antibodies against ASO. The concentration of anti-ASO in the patient's serum will enable to establish the degree of infection due to  $\beta$ -hemolytic streptococci.

### PERFORMANCE CHARACTERISTICS

#### SENSITIVITY

10.0 IU/mL (Hitachi 911)

#### ACCURACY

An internal control serum for ASO was measured on the Hitachi 911.

Control	Assigned Value (IU/mL)	Measured Value (IU/mL)
DIAG Control	111 (94 – 128)	118

### PRECISION

#### Intra-Assay Precision

The test was performed on the Hitachi 911 with a low, medium and high ASO positive serum.

Expected Value	n	Mean	S.D.	C.V
Low	20	26.47	1.73	6.5
Medium	20	132.45	5.86	4.43
High	20	174.73	6.57	3.76

### METHOD COMPARISON

A comparison with Turbidimetry gave the following results:  
 $y = 0.9893x + 1.6174$ ;  $r = 0.9952$

### INTERFERING SUBSTANCES

No interference up to:

Bilirubin	25 mg/dL	Hemoglobin	550 mg/dL
Triglycerides	1250 mg/dL	Rheumatoid Factor	1600 IU/mL

### QUALITY CONTROL

All Control sera with ASO values measured by this method may be used. We recommend the Diagnostica ASO Control, Protein Control and the Triple Control.

### CALIBRATION

The assay requires the use of ASO serum Calibrators. We recommend the Diagnostica ASO Calibrator High.

### AUTOMATION

Applications for automated systems are available upon request.

### WARNINGS AND PRECAUTIONS

- The ASO reagents are intended for in vitro diagnostic use only.
- Sodium azide has been reported to form lead or copper azide in laboratory plumbing which may explode on percussion.
- Each donor unit used in the preparation of the standards and controls was found to be negative for the presence of HIV antibodies, as well as for Hepatitis B surface antigen, using a method approved by the FDA

### WASTE MANAGEMENT

Please refer to local requirements.



