
Lab Dept: Chemistry

Test Name: ASO (ANTISTEPTOLYSIN O)

General Information

Lab Order Codes: ASOT

Synonyms: Antistreptolysin-O (ASO) Quantitative

CPT Codes: 86060 – Antistreptolysin O; titer

Test Includes: Antistreptolysin O concentration reported in IU/mL. If anti-DNase B is also desired, see [Streptococcal Antibodies](#)

Logistics

Test Indications: Antistreptolysin O (ASO) titers are used to diagnose current versus past infections with group A streptococci. The test detects antibodies to Streptolysin O, one of the many streptococcal antigens. In addition, it may be used to help diagnose rheumatic fever.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: ASO)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 3 days, testing performed Monday-Saturday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: Red top (plain, no gel) tube

Draw Volume: 3 mL (Minimum: 1.5 mL) blood

Processed Volume: 1 mL (Minimum: 0.5 mL) serum

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into a plastic sample cup. Store at refrigerated temperatures.

Patient Preparation: Fasting is preferred, but not required.

Sample Rejection: Mislabeled or unlabeled; specimens other than serum; gross lipemia

Interpretive

Reference Range:

Age:	Range (IU/mL):
<5 years:	Less than or equal to 70 IU/mL
5 – 17 years:	Less than or equal to 640 IU/mL
≥18 years:	Less than or equal to 530 IU/mL

Interpretation: Elevated values are consistent with an antecedent infection by group A streptococci. Although the antistreptolysin O (ASO) test is quite reliable, performing the anti-DNase is justified because ASO response is not universal and elevated ASO titers are found in the sera of about 85% of individuals with rheumatic fever. ASO titers remain normal in about 15% of individuals with the disease. The same holds true for other streptococcal antibody tests. A significant portion of individuals with normal antibody titers for 1 test will have elevated antibody titers for another test. Thus, the percentage of false-negatives can be reduced by performing 2 or more antibody tests. Skin infections, in contrast to throat infections, are associated with a poor ASO response. Patients with acute glomerulonephritis following skin infection (post-impetigo) have an attenuated immune response to streptolysin O. For such patients, performance of an alternative streptococcal antibody test such as anti-DNase B is recommended.

Critical Values: N/A

Limitations: The use of the antistreptolysin O (ASO) for the diagnosis of an acute A streptococcal infection is rarely indicated, unless the patient has received antibiotics that would render the culture negative. There are a certain limitations to the use of the ASO test in these circumstances due to the delay and attenuation of the immune response following early antibiotic therapy.

False-high titers may be obtained with sera that are contaminated by certain bacterial organisms during shipment or storage and in patients with liver disease where the presence of high lipoprotein concentrations in the serum may mimic antibody activity.

Methodology: Nephelometry

References: [Mayo Medical Laboratories](#) March 2014

Updates:

3/24/2014: Moved from an internal test to Mayo.