

Overview

Useful For

Evaluation of risk factors in individuals with elevated cholesterol values

Special Instructions

- [Lipids and Lipoproteins in Blood Plasma \(Serum\)](#)

Method Name

EnzymaticColorimetric

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Patient Preparation:

1. Fasting-overnight (12-14 hours)
2. Patient must not consume any alcohol for 24 hours before the specimen is collected.

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume:0.5 mL

Collection Instructions:

1. Serum gel tubes should be centrifuged within 2 hours of collection.
2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Forms

If not ordering electronically, complete, print, and send a [Cardiovascular Test Request Form](#) (T724) with the specimen.

Specimen Minimum Volume

0.25 mL

Reject Due To

Gross hemolysis	Reject
-----------------	--------

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

Clinical and Interpretive**Clinical Information**

Triglycerides are esters of the trihydric alcohol, glycerol, with 3 long-chain fatty acids. They are partly synthesized in the liver and partly derived from the diet.

Increased plasma triglyceride levels are indicative of a metabolic abnormality and, along with elevated cholesterol, are considered a risk factor for atherosclerotic disease. Hyperlipidemia may be inherited or be associated with biliary obstruction, diabetes mellitus, nephrotic syndrome, renal failure, or metabolic disorders related to endocrinopathies. Increased triglycerides may also be medication-induced (eg, prednisone).

Since cholesterol and triglycerides can vary independently, measurement of both is more meaningful than the measurement of cholesterol only.

Reference Values

The National Lipid Association and the National Cholesterol Education Program (NCEP) have set the following guidelines for lipids (total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol, and Non HDL cholesterol) in adults ages 18 and up:

TRIGLYCERIDES

Normal: <150 mg/dL

Borderline high: 150-199 mg/dL

High: 200-499 mg/dL

Very high: > or =500 mg/dL

The Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents has set the following guidelines for lipids (total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol, and non-HDL cholesterol) in children ages 2 to 17:

TRIGLYCERIDES

2-9 years:

Acceptable: <75 mg/dL

Borderline high: 75-99 mg/dL

High: > or =100 mg/dL

10-17 years:

Acceptable: <90 mg/dL

Borderline high: 90-129 mg/dL

High: > or =130 mg/dL

For SI unit Reference Values, see <https://www.mayocliniclabs.com/order-tests/si-unit-conversion.html>

Interpretation

In the presence of other coronary heart disease risk factors, both borderline-high (150-199 mg/dL) and high values (>200 mg/dL) require attention.

Triglyceride concentrations above 1,000 mg/dL can lead to abdominal pain and may be life-threatening due to chylomicron-induced pancreatitis.

See [Lipids and Lipoproteins in Blood Plasma \(Serum\)](#) in Special Instructions.

Cautions

Result can be falsely decreased in patients with elevated levels of N-acetyl-p-benzoquinone imine (NAPQI, a metabolite of acetaminophen), N-acetylcysteine (NAC), and Metamizole.

Clinical Reference

1. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. Fifth edition Edited by CA Burtis, ER Ashwood. St. Louis, MO. Elsevier Saunders, 2012
2. Rifai N, Warnick GR: Laboratory Measurements of Lipids, Lipoproteins and Apolipoproteins. AACC Press, Washington, DC, 1994
3. Jacobson TA, Ito MK, Maki KC, et al: National Lipid Association recommendations for patient-centered management of dyslipidemia: Part 1-executive summary. J Clin Lipidol 2014;8(5):473-488
4. Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents: Pediatrics 2011;128;S213

Performance

Method Description

Serum triglycerides are measured by an automated enzymatic method. The chemistry includes hydrolysis of the triglycerides and phosphorylation of the resulting glycerol. The method is referenced to the Center of Disease Control standardized method performed in the Cardiovascular Risk Assessment Laboratory.(Package insert: Bayer Triglyceride Reagent, Bayer Diagnostics Corp; package insert: Roche Triglyceride Reagent, Roche Diagnostics Corp., 2017)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Sunday; Continuously

Analytic Time

1 day

Maximum Laboratory Time

1 day

Specimen Retention Time

1 week

Performing Laboratory Location

Rochester

Fees and Codes**Fees**

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared or approved by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

84478

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
TRIG	Triglycerides, S	2571-8

Result ID	Test Result Name	Result LOINC Value
TRIG	Triglycerides, S	2571-8