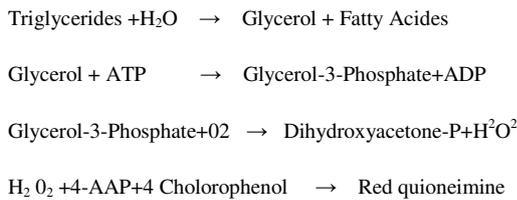




PRINCIPLE

The Triglycerides present in the serum is catabolised into Glycerol and free Fatty Acids by Lipoprotein Lipase. Liberated Glycerol is converted to Glycerol-3-Phosphate in presence of Glycerol Kinase and ATP. Glycerol-3-Phosphate is acted upon by Glycerol-3-Phosphate oxidase to form Hydrogen peroxide. This together with phenolic compound and 4-Aminoantipyrine in presence of peroxidase gives the Pink colored complex and its intensity is measured at 505 nm corresponding to the Triglycerides concentration.



CLINICAL SIGNIFICANCE

Triglycerides constitute 95% of tissue storage fat and their main role is to provide energy for the Cells. They are synthesized both in the intestine from dietary fats and in liver from dietary carbohydrates and are then transported in the blood by LDL and VLDL. High serum Triglyceride are associated with important risks of Atherosclerosis. The elevated levels can be due to diseases like different Lipid metabolism disorders, Diabetes, Renal, Endocrine disorders

SAMPLE COLLECTION & STORAGE

Fresh, Fasting Un-hemolysed serum sample is preferred
 Plasma collected with heparin or EDTA used
 Serum Triglycerides are slightly higher than plasma levels
 Samples are stable for 2 days when stored at 2-80 C

PRECAUTIONS

Triglycerides Ls reagent is for In Vitro diagnostic use only. Bring all reagents to room temperature before use.

KIT CONTENTS & STORAGE

Enzyme Reagent (ml)	25x1	5x10	2x50	4x50l	5x100
Standard (200 mg/dl)	1x1	1x1	1x2	1x2	1x2

All reagents are to be stored at 2-8°C and stable till expiry date mentioned on the label.

REAGENT PREPARATION

All reagents are ready to use

SYSTEMS PARAMETERS

Reaction Type	End point with Standard
Wavelength	505 nm
Flow Cell Temp	37°C
Reagent Volume	1.0 ml
Sample Volume	10 µl
Standard Concentration	200
Units	mg/dL
Incubation	5 minutes
Zero Setting	Reagent Blank

PROCEDURE

Pipette in a clean dry test tubes labeled as standard(S) and Test(T)

	Blank	Standard	Test
Boron Reagent	1.0 ml	1.0 ml	1.0 ml
Standard		1.0 µl	
Sample			1.0 µl

Mix well and keep at 37°C for 5 minutes or at 20 minutes at RT. Measure the absorbance of Test (T) and Standard(S) against reagent blank on photometer using Green filter or on a spectrophotometer at 505nm

CALCULATIONS

Conc of Triglycerides in serum (mg/dl) = (Abs of Test/ Abs of Standard) x Conc of Std

LINEARITY

This method is linear up to 1000 mg/dl. Samples exceeding 1000 mg/dl should be diluted and reassayed. The result has to be multiplied by the dilution factor

NORMAL RANGE

Females : 45 - 145 mg/dl
Males : 65-170 mg/dl

Due to variation in inter laboratory assay conditions , instruments and demography it is recommended that each laboratory should establish own normal range.

BIBLIOGRAPHY

1. Executive summary of the third report of the National Cholesterol Education Program (NCEP) Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). JAMA 2001 ; 285:2486-97.
2. Rubins HB. Triglycerides and coronary heart disease: implications of recent clinical trials. J Cardiovasc Risk 2000;7(5):339-45.
3. Forrester JS. Triglycerides: risk factor or fellow traveler? Curr Opin Cardiol^o 2001;16:261-4.