

PRODUCT CODE
CS014
INTENDED USE

This reagent is intended for in vitro quantitative determination of Total Lipids in serum & plasma

CLINICAL SIGNIFICANCE

The lipids are organic compounds whose more important function is the one to act like fuel. They have an extraordinary yield, favored by the possibility of storing itself in remarkable amounts like fatty weave. Other functions: they are constituent of biological membranes, form protective fatty structures of the internal organs; provide important compounds in the formation with diverse hormones. Great part of the interest in the study of the increase of these compounds must to the connection between hyperlipemia and arteriosclerosis, diabetes and cardiac disease. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

PRINCIPLE

Unsaturated lipids react with sulphuric acid to form carbonium ions. In a second step the carbonium ions react with phosphovanilline to give a pink color. The intensity of the color formed is proportional to the total lipids concentration in the sample.

REAGENT COMPOSITION
Reagent 1

Total Lipids Standard (Mixture of unsaturated fatty acids esters)	750 mg/dl
Reagent 2 (Color Reagent)	
Phosphoric Acid	800 ml/L
Vanillin	1.2 g/L
Required reagent, but not provided (Sulphuric acid H ₂ SO ₄)	

REAGENT PREPARATION

Reagent and standard are ready for use.

REAGENT STORAGE AND STABILITY

Reagent and standard are stable up to the expiration date given on label when stored at 2-8°C

PRECAUTION

To avoid contamination, use clean laboratory wares.
 Avoid direct exposure of reagent to light.

SAMPLE

Serum or plasma ,
 Stability of the sample: Total lipids are stable 24 h at room temperature (15-25°C) or 3 days at 2-8°C

EQUIPMENT

Vortex mixer

Wavelength 525nm (Hg546)
 Cuvette 1 cm light path
 Incubation Temperature Boiling Water - bath
 Measurement Against reagent blank

PROCEDURE

Pipette into cuvettes	Blank	Standard	Sample
Reagent 1 (Standard)	--	33 µL	
Sample	--	--	33 µL
Sulphuric Acid	--	1 mL	1 mL
Mix on Whirlimixer for 10 seconds. Place in boiling water - bath for 10 minutes. Cool tubes.			
Standard-H ₂ SO ₄	--	33 µL	--
Sample-H ₂ SO ₄	--	--	33 µL
Sulfuric Acid (H ₂ SO ₄)	33 µL	--	--
Reagent 2	1 mL	1 mL	1 mL
Mix and Incubate for 30 minutes in the dark at room temperature. Measure the absorbance of sample and standard against the reagent blank.			

CALCULATION

$$\text{Total lipid Conc.} = \frac{(\Delta A \text{ sample})}{(\Delta A \text{ standard})} \times 750 \text{ STD Conc}$$

LINEARITY

0-2 g/100 mL (20 g/L)

NORMAL RANGE

0.5 – 0.75 g/100 mL
 5 – 7.5 g /L















QUALITY CONTROL

All control sera with values determined by this method can be employed.

NOTE

Use clean disposable pipette tips for its dispensation.

SYMBOL ON LABELS

Symbols	Signify	Symbols	Signify
	Catalogue Number		Pack Size
	Expiry Date		Volume
	Storage Condition		Lot Number
	Instruction for Use		In Vitro Diagnostics
	Manufacturing Date		Manufacturer
	Number of Tests		For Single Use Only
	EC Representative		European conformity

BIBLIOGRAPHY

- 1- CHABROLE E., CHARNNAT R. Presse Med. 1937, 96, 1713.
- 2- Schmitt J. m. these, Lyon, 1964.
- 3- Tietz N W et al. Clinical Guide to Laboratory Tests, 3rd ed AACC 1995

ASSAY