

PRODUCT CODE

CS029

INTENDED USE

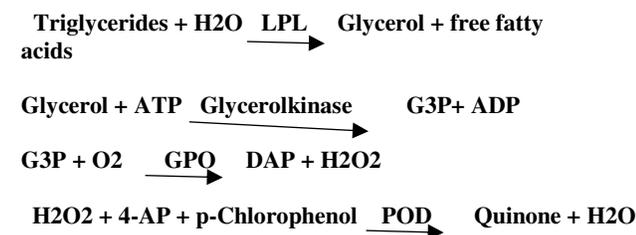
The reagent is intended for in vitro quantitative determination of Triglycerides in serum or plasma.

CLINICAL SIGNIFICANCE

Triglycerides are fats that provide energy for the cell. Like cholesterol, they are delivered to the body's cells by lipoproteins in the blood. A diet with a lot of saturated fats or carbohydrates will raise the triglyceride levels. The increases in serum triglycerides are relatively non-specific. For example liver dysfunction resulting from hepatitis, extra hepatic biliary obstruction or cirrhosis, diabetes mellitus is associated with the increase^{3,6,7}. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

PRINCIPLE

Sample triglycerides incubated with lipoproteinlipase (LPL), liberate glycerol and free fatty acids. Glycerol is converted to glycerol-3-phosphate (G3P) and adenosine-5-diphosphate (ADP) by glycerol kinase (GK) and ATP. Glycerol-3-phosphate (G3P) is then converted by glycerol phosphate oxidase (GPO) to dihydroxyacetone phosphate (DAP) and hydrogen peroxide (H₂O₂). In the last reaction, hydrogen peroxide (H₂O₂) reacts with 4-aminophenazone (4-AP) and p-chlorophenol in presence of peroxidase (POD) to give a red colored dye:



The intensity of the color formed is proportional to the triglycerides concentration in the sample.

REAGENT COMPOSITION

R	GOOD PH 6.3	50 mmol/L
	p-Chlorophenol	2 mmol/L
	Lipoprotein(LPL)	150000 U/L
	Glycerol kinase (GK)	500 U/L
	Glycerol - 3- oxidase (GPO)	3500 U/L
	Peroxidase (POD)	440 U/L
4-Aminophenazone (4-AP)	0.1 mmol/L	
ATP	0.1 mmol/L	
TRIGLYCERIDE CAL	Aqueous primary standard	200 mg/dl

REAGENT PREPARATION

Both reagents are ready to use.

REAGENT STORAGE AND STABILITY

All the components of the kit are stable until the expiration date on the label when stored tightly closed at 2-8°C, protected from light and

contaminations prevented during their use.
Do not use reagents over the expiration date.

Signs of reagent deterioration:

- Presence of particles and turbidity.
- Blank absorbance (A) at 505 nm > 0,26 .

SPECIMEN

Fresh hemolysis-free serum or heparinized plasma may be used. Carefully protect from light until use. Bilirubin in sample is stable for '5' days when stored at 2-8° C.

PRECAUTION

Reagent and standard provided are ready to use.

PROCEDURE

1.ASSAY CONDITION :

Wavelength 505 NM (490-550)
Temperature 15-25 °C/ 37°C

2. Adjust the instrument to zero with distilled water.

3. Pipette into cuvette

	Blank	standard	Sample
R(ml)	1	1	1
Standard (μL)	--	10	--
Sample	--	--	10

4. Mix and incubate for 5 min at 37°C or 10 min at 15-25°C.

5. Read the absorbance (A) of the samples and standard, against the Blank. The colour is stable for at least 30 minutes.

CALCULATION

$$\frac{(A) \text{ Sample} - (A) \text{ Sample Blank}}{(A) \text{ Calibrator} - (A) \text{ Calibrator Blank}} \times \text{Conc. Calibrator} = \text{mg/dl triglycerides}$$

Conversion factor : mg/dl x 0.0113 μmol/L

NORMAL RANGE

Men 40 – 160 mg/dL
Women 35 – 135 mg/dL

These values are for orientation purpose; each laboratory should establish its own reference range.

LINEARITY

From detection limit of 0,000 mg/dL to linearity limit of 1200 mg/dl
If the results obtained were greater than linearity limit, dilute the sample 1/2 with NaCl 9 g/L and multiply the result by 2.

QUALITY CONTROL

All control sera with Total Bilirubin value estimated by this method can be used.

Each laboratory should establish its own Quality Control scheme and corrective actions if controls do not meet the acceptable tolerances.

NOTES

- 1- It is important to ensure the working reagent and nitrite reagent are thoroughly mixed before adding the sample.
- 2- Bilirubin levels may be reduced if the sample is exposed to light. Haemolytic sample will also show low value.

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

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