



ISO 13485:2016 ISO 9001:2015

Ver.25112

Triglyceride (TG) Assay Kit

BC9907-01 (60Tests)

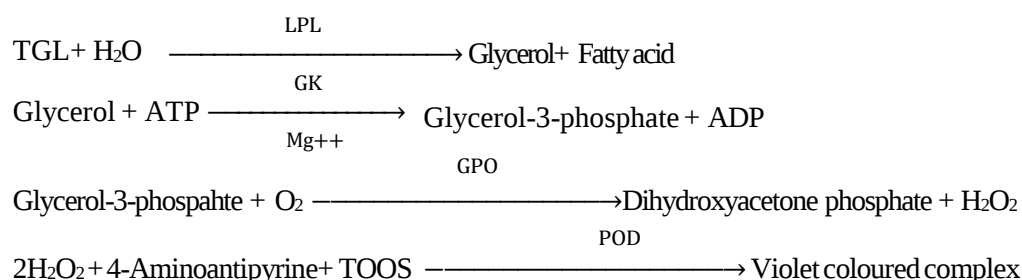
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Product Description

Triglycerides are simple lipids, formed in the liver by glycerol & fatty acids. They are transported by VLDL, LDL & constitute about 95% of fat, stored as source of energy in the tissue & plasma.

Increased levels are found in hyperlipidemias, diabetes, nephrotic syndrome & hypothyroidism. Increased levels are risk factor for arteriosclerotic coronary disease, peripheral vascular disease, acute pancreatitis & hyperlipoproteinaemia. Decreased levels are found in malnutrition & hyperthyroidism.

Enzymatic determination of triglyceride is based on following reactions.



GPO = Glycerol-3-phosphate Oxidase.

LPL = Lipoprotein Lipase

GK = Glycerol Kinase

Wavelength of absorbance is 630nm

Kit components

Reagent	Volume	Storage
Extraction Reagent	1 × 60mL	2-8°C
Triglycerides	1 × 60mL	2-8°C
Triglycerides Standard (Concentration 200mg/dL)	1 × 2mL	2-8°C

Open Vial Stability

Once opened, the reagent is stable up to 4 weeks at 2-8°C, if contamination is avoided

Reagents and Equipment Required but Not Provided

Constant temperature water bath, cooling centrifuge, spectrophotometer/microplate reader, micro glass cuvette/96 well flat bottom plate and distilled water.

Reagent Deterioration

Turbidity or precipitation on in any kit component indicates deterioration and the component must be discarded. Values outside the recommended acceptable range for the Qualicheck Norm & Path control may also be an indication of reagent instability and associated results are invalid. Sample should be retested using a fresh vial of reagent.

Reagent Preparation

Triglycerides Reagent & Standard are ready to use.

Precaution

- To avoid contamination, use clean laboratory wares. Use clean, dry disposable pipette tips for dispensing. Close reagent bottles immediately after use.
- Avoid direct exposure of reagent to light. Do not blow into the reagent bottles.

Operation Procedures

Sample Preparation

1. Bacteria or cells

Harvest the cells and wash twice with PBS. Ideal to use 5 million cells for the assay. Add 1mL Extraction Reagent to 5 million cells and ultrasonicate (200W, work time 3 second / interval 10 second repeat for 30 times) for complete lysis. Perform ultrasonication while keeping the cells in ice bath. Centrifuge at 8000 rpm, 4°C for 10 minutes and collect the supernatant. The supernatant should be kept on ice.

Note: Ideal proportion of Cells/Bacteria to Extraction Reagent is 1:5-10.

2. Tissue

Prepare 10% tissue homogenate by adding 1mL Extraction Reagent to 0.1g tissue. Grind completely to make a homogenate. Centrifuge at 8000 rpm, 4°C for 10 minutes and collect the supernatant.

3. Serum or Plasma

Directly use for the assay.

Unit Conversion

Traditional Unit	SI Unit	Conversion from Traditional to SI
mg/dL	mmol/L	$\times 0.0114$

Procedure Notes

	Blank	Standard	Sample
Reagent	1000 μ L	1000 μ L	1000 μ L
Standard	-	10 μ L	-
Sample	-	-	10 μ L
Mix and incubate for 5 minutes at 37°C. Measure the change in absorbance of standard and sample against reagent blank.			

Calculation

$$\text{Triglycerides Con. (mg/dL)} = \frac{\text{Absorbance of Sample}}{\text{Absorbance of Standard}} \times 200$$

Performance

Linearity

This reagent is linear up to 1000mg/dL.

If the concentration is greater than linearity (1000mg/dL), dilute the sample with normal saline and repeat the assay. Multiply the result with dilution factor.

Sensitivity

Lower detection Limit is 2mg/dL.