台塑生醫科技股份有限公司
FORMOSA BIOMEDICAL TECHNOLOGY CORP.

TRIGLYCERIDE-GPO Enzymatic Method TG

FOR BECKMAN CX AND LX SYSTEMS

INTENDED USE

For the quantitative determination of Triglycerides in serum or plasma.

CLINICAL SIGNIFICANCE

Triglycerides circulate in blood associated with proteins in the form of lipoproteins. Elevated levels of triglycerides in plasma has reported as a possible indicator of atherosclerosis. Diseases such as nephrotic syndrome, glycogen storage disease, biliary cirrhosis and others resulting from derangements in lipid metabllism also show increased triglyceride levels in serum.

PRINCIPLE

$$\text{Triglyceride} + H_2O \xrightarrow{\text{lipase}} \text{glycerol} + \text{fatty acids}$$

$$\text{Glycerol} + \text{ATP} \xrightarrow{\text{Glycerol Kinase}} \text{glycerol-3-phosphate} + \text{ADP}$$

$$\text{Glycerol-3-phosphate} + O_2 \xrightarrow{\text{GPO}} \text{dihydroxyacetone phosphate} + H_2O_2$$

$$H_2O_2 + \text{4-aminoantipyrine} + \text{DHBS} \xrightarrow{\text{peroxidase}} H_2O + \text{red quinone dye}$$

SPECIMEN COLLECTION AND PREPARATION

Blood specimen should be drawn after the patient has fasted for at least 12 hours. All tubes and collection materials should be free of glycerol. Prolonged storage of samples at room temperature should be avoided in order to minimize possible degradation of triglyceride by endogenous lipase or by lipase secreted from contaminated bacteria.

REAGENT

- Each kit contains 2 cartrige of triglyceride reagent (2×300 tests).
- Ready to use

Components: lipase 200 KU; glycerol kinase 4ku/l; glycerol-3-phosphate oxidase 10 ku/l; peroxidase 9ku/l; 4-aminoantipyrine 0.7mM; ATP 2.5mM; 3,5-dichloro-2-hydroxybenzene sulfonate(DHBS) 1.5mM;

STORAGE: Store all the above at 2~8℃

PRECAUTIONS:

1. For in vitro diagnostic use only.
2. Since all specimens are potentially infectious, they should be handled with appropriate precautions and

practices in accordance with Biosafety level 2 as recommended by USA NIH manual Biosafety in

Microbiological and Biomedical Laboratories, and in accordance with National or local regulations related to the safety precautions of such materials.

3. Each laboratory has to perform the quality control test to assure the results being reliable before running the specimen tests

PROCEDURES: Use bar code reading to follow the Beckman CX4 parameters and procedures.

EXPECTED VALUE:

36~165 mg/dl (0.41~1.86 mmol/l)

NOTE: It is generally recommended that each laboratory establish its own range of normal values for commonly performed tests

REFERENCES:

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5. Fossati,P., and L.Prencipe. 1982. Serum triglycerides determined colorimentrically with an enzyme that produces hydrogen peroxide. Clin. Chem. 28:2077-2080.