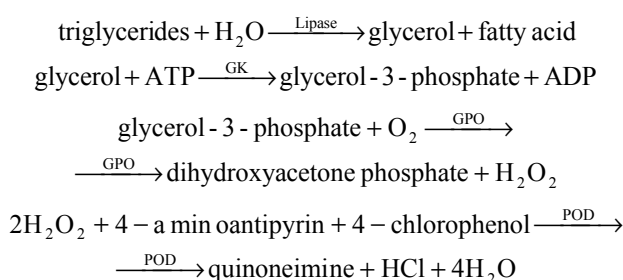


Cat.No. 101-0444

Size: 4x250 ml

### PRINCIPLE:

Glycerol produced by enzymatic hydrolysis of triglycerides is phosphorylated by ATP to produce glycerol-3-phosphate and ADP in the reaction catalyzed by glycerol kinase (GK). Glycerol-3-phosphate oxidase (GPO) catalyzes the oxidation of the glycerol-3-phosphate to produce dihydroxyacetone phosphate and H<sub>2</sub>O<sub>2</sub>. In further a reaction quinoneimine is formed from H<sub>2</sub>O<sub>2</sub>, 4-aminoantipyrine and 4-chlorophenol under the catalytic influence of peroxidase (POD). The intensity of the colour formed is proportional to the concentration of glycerol in the reaction mixture and hence to the level of triglycerides in the sample.



### SAMPLE:

Serum, heparinized or EDTA plasma.

Triglycerides in serum is stable 3 days at +2 °C to +8 °C.

### REAGENTS:

	Concentration in the test
1. Reagent 1	
GOOD buffer, pH 7.5	50.0 mmol/L
p-chlorophenol	2.0 mmol/L
Lipoproteinlipase	150000 U/L
Glycerol-kinase (GK)	500 U/L
Glycerol-3-phosphate oxidase (GPO)	3500 U/L
Peroxidase (POD)	1000 U/L
4-aminophenazone	0.1 mmol/L
ATP	0.1 mmol/L
2. Standard	
Triglycerides	Standard concentration see on the vial label

### PREPARATION OF REAGENTS:

Liquid reagent, ready to use.

This reagent is stable up to the date of expiration at +2 °C to +8 °C. Avoid direct sunlight.

### PROCEDURE:

Wavelength:	505 nm (500 - 550 nm)
Cuvette:	1 cm light path
Temperature:	37 °C
Colour stability:	30 min
Zero:	Reagent blank

Pipette into test tubes	Reagent blank	Standard	Sample
Standard	-	10 µl	-
Sample	-	-	10 µl
Working reagent	1000 µl	1000 µl	1000 µl

Mix and incubate for 5 min. at room temperature.  
Measure the absorbance of the standard and sample against the reagent blank at 505 nm (490-550) within 30 minutes at room temperature.

### CALCULATION:

$$\frac{A_{\text{sample}}}{A_{\text{standard}}} \times \text{stand. conc.} = \text{Triglycerides conc.}$$

$$\text{mg/dL} \times 0,0113 = \text{mmol/L}$$

### EXPECTED VALUES:

Normal values	up to 1.71 mmol/L (150 mg/dL)
Suspected above	> 1.71 mmol/L (> 150 mg/dL)
Increased above	> 2.28 mmol/L (> 200 mg/dL)

### LINEARITY

up to 11.4 mmol/L (1000 mg/dL)

### QUALITY CONTROL:

CONTRO-N	20 x 5 ml	Cat. No. 101-0083
CONTRO-P	20 x 5 ml	Cat. No. 101-0084

### NOTE:

- If the triglycerides concentration >11.4 mmol/L (1000 mg/dL), dilute sample 1:2 with physiological solution and repeat the assay ( result x 2 ).
- To correct for free glycerol, subtract 0.11 mmol/L from the triglycerides value ( triglycerides mmol/L - 0.11mmol/L ).
- Hemoglobin concentration >2 g/L and bilirubin concentration >340 µmol/L influence the results of the triglycerides.
- Reagents contains sodium azide as stabilizer. Do not swallow. Avoid contact with the skin and mucous membranes.

### REFERENCE:

- Young, D., Pestaner, L. Clin. Chem. 21, 5 (1975).
- Printer, J. Hayashi, J. Arch. Biochem Biophys 121, 404 (1966).