

### PRODUCT CODE

CZ007

### INTENDED USE

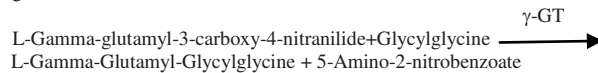
This reagent is intended for *in vitro* quantitative determination of Gamma-GT in serum or plasma.

### CLINICAL SIGNIFICANCE

Gamma-glutamyl transferase ( $\gamma$ -GT) is a cellular enzyme with wide tissue distribution in the body, primarily in the kidney, pancreas, liver and prostate. Measurements of gamma-glutamyl transferase ( $\gamma$ -GT) activity are used in the diagnosis and treatment of hepatobiliary diseases such as biliary obstruction, cirrhosis or liver tumors. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

### PRINCIPLE

Gamma-GT catalyzes the transfer of glutamic acid to acceptors like glycylglycine in this case. This process releases 5-amino-2-nitrobenzoate, which can be measured at 405 nm. The increase in absorbance at this wavelength is directly related to the activity of gamma-GT.



### REAGENT COMPOSITION

#### REAGENT 1 (BUFFER)

Tris pH 8.25 100 mmol/L  
Glycylglycine 100 mmol/L

#### REAGENT 2 (SUBSTRATE)

L- $\gamma$ -glutamyl-3-carboxy-4-nitroanilide (Glupa-C) 4mmol/L

### REAGENT PREPARATION

#### SUBSTRATE START

R1 and R2 are ready-to-use and stable upto the expiry date if contamination is avoided and stored at 2-8°C and protect from light.

#### SAMPLE START

Mix 4 parts of R1 + 1 Part of R2 = Mono reagent  
Stability of mono reagent: 4 Weeks at 2-8°C, 5 days at 15-25°C,  
Protect from light.

### SPECIMEN

Serum, EDTA plasma, avoid hemolysis.

### PRECAUTION

- The reagents contain sodium azide as preservative. Do not swallow and avoid contact with skin and mucous membranes.
- Avoid contamination, use clean laboratory wares. Avoid direct exposure of working reagent to light.

### ASSAY

Wavelength : 405 nm  
Cuvette : 1 cm light path  
Temperature : 25°C/ 30°C/37°C

### PROCEDURE

#### SUBSTRATE START

Reagent 1 Buffer	1000 $\mu$ L
Sample	100 $\mu$ L
Mix, incubates for approx... 1 min, then add,	
Reagent 2 Substrates	250 $\mu$ L

#### SAMPLE START

Mono reagent (R1+R2)	1000 $\mu$ L
Sample	100 $\mu$ L

### READING FOR BOTH

Mix and read absorbance after 1 min and start stop watch.  
Read absorbance again after 1, 2 and 3 min.

### CALCULATION

#### SUBSTRATE START

405 nm  $\Delta A / \text{min} \times 1421$

#### SAMPLE START

405 nm  $\Delta A / \text{min} \times 1158$

### LINEARITY

up to 700 U/L, the sample should be diluted 1 + 5 with 0.9 % NaCl solution, if  $\Delta A/\text{min}$  exceeds 0.200, multiply the result by 6.

### NORMAL RANGE















	25°C	30°C	37°C
Women	4-18 U/L	5-23 U/L	7-32 U/L
Men	6-28 U/L	8-38 U/L	11-50 U/L

Each laboratory should establish reference ranges for its own patients' population.

### QUALITY CONTROL

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

### 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

- Szasz, G. And M.Z. Klin. Chem.,Klin. Biochem. 12(1972) 228.
- Persijn, J. P. U. Van Der Silk W.J. Clin. Chem., Clin.Biochem. 14 (1976) 421.
- Szasz G. Gamma-Glutamyltranspeptidase. In: Bergmeyer Hu. Methoden Der Enzymatischen Analyse. Weinheim: Verlag Chemie, 1974. P. 757.

