



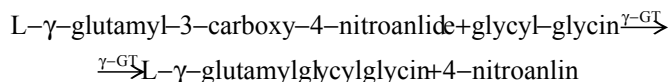
**$\gamma$ -GT**  
**L -  $\gamma$ - Glutamyltransferase**  
**E.C.2.3.2.2.**

**Colorimetric Method**

Cat.No. 101-0160	Size 20 x 2.5 ml
Cat.No. 101-0226	Size 10 x 10 ml
Cat.No. 101-0221	Size 6 x 100 ml
Cat.No. 101-0454	Size 8 x 100 ml

**PRINCIPLE:**

$\gamma$ -GT catalyzes the transfer of the  $\gamma$ -glutamyl group from L- $\gamma$ -glutamyl-3-carboxy-4-nitroanilide to glycylglycine. The rate of p-nitroaniline formation, measured at 405 nm, is proportional to  $\gamma$ -GT activity in the sample.



**SAMPLE:**

Nonhemolyzed serum. Do not use plasma.  
 Stability: 7 days at +2 °C to +8 °C.

**REAGENTS:**

- |    |  |            |
|----|--|------------|
| 1. | Buffer   |            |
|    | Tris buffer pH 8.25                            | 100 mmol/L |
| 2. | Substrate                                      |            |
|    | L- $\gamma$ -glutamyl-3-carboxy-4-nitroanilide | 3.0 mmol/L |
|    | Glycylglycine                                  | 100 mmol/L |

Store the reagents at +2 °C to +8 °C.

**PREPARATION OF REAGENT:**

- Reconstitute substrate (vial 2) with the corresponding volume of buffer (vial 1).  
 Stable for 30 days at +2 °C to +8 °C or 3 days at +15 °C to +25 °C in the dark.

**PROCEDURE:**

Wavelength:	405 nm (400 - 420 nm)
Cuvette:	1 cm light path
Temperature:	25 °C, 30 °C, 37 °C
Zero:	air or distilled water

Pipette into tubes:	Micro	Semi-micro	Macro
Sample	50 $\mu$ l	100 $\mu$ l	200 $\mu$ l
Working solution	500 $\mu$ l	1000 $\mu$ l	2000 $\mu$ l
Mix incubate for 1 min.. Read initial absorbance and start stopwatch. Repeat reading after exactly 1, 2 and 3 minutes. Calculate $\Delta A/\text{min}$ .			

**CALCULATION:**

$$\Delta A / \text{min.} \times 1158 = \text{U/L } \gamma\text{-GT}$$

$$\text{U/L} \times 16.67 = \text{nkat/L}$$

**EXPECTED VALUES:**

	25 °C	30 °C	37 °C	Unit
Men	6 - 28 100 - 467	8 - 38 133 - 633	11 - 50 183 - 834	U/L nkat/L
Women	4 - 18 67 - 300	5 - 25 83 - 417	7 - 32 117 - 533	U/L nkat/L

**LINEARITY:**

up to 230 U/L (3834 nkat/L)

**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 absorbance change  $\Delta A/\text{min} > 0.200$ , dilute sample 1:10 with physiological solution and repeat the assay (result x 10).
- Reagents contain sodium azide. Do not swallow. Avoid contact with skin or mucous membranes.
- If measurements can not be taken at 405 nm, a calibration curve must be prepared using 5-amino-2-nitro-benzoate, or the factor must be determined using control serum with known  $\gamma$ -GT content value.

**REFERENCES:**

- Szasz, G. Clin. Chem. 15 124-136 (1969).
- Lum, G. and Gabino, S.R. Clin.Chem. 18, 358 (1972).