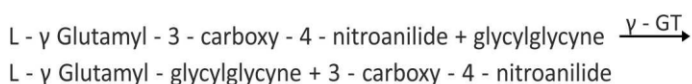


INTENDED USE : This reagent kit is intended for "in vitro" quantitative determination of γ - Glutamyl - Transferase (γ - GT) activity in serum.

CLINICAL SIGNIFICANCE : γ - GT plays an important role in amino acid transport in the course of glutathione metabolism. The enzyme present in the serum is mainly of hepato-biliary origin. Increased enzyme activities are found in association with chronic alcoholism, different toxic liver damages, intra- and extrahepatic cholestasis, acute viral hepatitis, pancreatitis, neoplastic diseases of the liver and pancreas, myocardial infarction as well as with diabetes mellitus.

PRINCIPLE : γ -GT catalyzes the transfer of the γ - Glutamyl group from L - γ Glutamyl - 3 - carboxy - 4 - nitroanilide substrate to glycylglycine. The amount of released p-nitroaniline is proportional to the γ - GT activity of serum.



REAGENT COMPOSITION :

Reagent 1: Buffer Reagent

Reagent 2: Substrate Reagent

MATERIALS REQUIRED BUT NOT PROVIDED :

- Clean & Dry Glassware
- Micropipettes & Tips.
- Colorimeter or Bio-Chemistry Analyzer.

SAMPLES : Serum free from hemolysis.

WORKING REAGENT PREPARATION & STABILITY : Mix 4 Volume of Enzyme Reagent 1 with 1 Volume of Reagent Enzyme 2. Working Reagent is stable for 30 days at 2 - 8°C.

ASSAY PROCEDURE :

Working Solution	1000 μ l
Sample	50 μ l

Mix and after 60 second incubation, measure the change in absorbance every minute during 3 minutes at 37°C.

Determine Δ A/min.

CALCULATION : Gamma - GT Activity (U/l) = Δ A/min. x 2211

LINEARITY : Reagent is linear up to 1000 U/l.

Dilute the sample appropriately and re-assay if Gamma - GT activity exceeds 1000 U/l or Δ Abs / min Exceeds 0.452.

Multiply result with dilution factor.

GENERAL SYSTEM PARAMETERS :

Reaction Type	Kinetic Reaction (Increasing)
Wavelength	405 nm
Light Path	1cm
Reaction Temperature	37°C
Blank / Zero Setting	With Distilled Water
Reagent Volume	1000 μ l
Sample Volume	50 μ l
Lag / Delay Time	60 seconds
Read Time	180 seconds
Interval Time	60 seconds
Factor	2211
Low Normal at	0 U/l
High Normal at	55 U/l
Linearity	1000 U/l
Max. Δ Abs / Min.	0.452

REFERENCE NORMAL VALUE :

Male : 11 - 50 U/l

Female : 7 - 32 U/l

QUALITY CONTROL : For accuracy it is necessary to run known controls with every assay.

SENSITIVITY / LIMIT DETECTION : The Lower Limit of detection is 5 U/L.

LIMITATION & PRECAUTIONS :

- Storage conditions as mentioned on the kit to be adhered.
- Do not freeze or expose the reagents to higher temperature as it may affect the performance of the kit.
- Before the assay bring all the reagents to room temperature.
- Avoid contamination of the reagent during assay process.
- Use clean glassware free from dust or debris.
- Reagent to sample ratio as mentioned here above must be strictly observed as any change in to it will effect the factor.

BIBLIOGRAPHY :

- 1) SASZ Gen. Clin. Chem. 22:2051 (1976).
- 2) TIETZ - Text Book of Clin. Chem. Burtis - Ashwood 2nd Edition (1984).
- 3) BERGMEYERHU Methods of enzymatic Analysis. (1987).

Mfd. In India By:

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