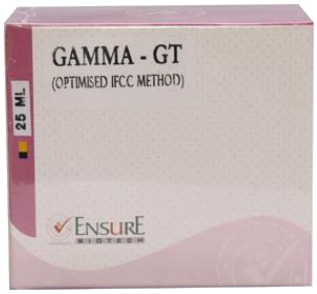
GAMMA – GT

(OPTIMISED IFCC METHOD)



INTENDED USE :

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

CLINICAL SIGNIFICANCE :

γ-GT plays an important role in amino acide 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 infraction as well as with diabetes militus.

PRINCIPLE :

γ-GT catalyzes the transfer of the -glutamy group from L-y glutamil 3-carboxy-4 nitroaniide substrate to glycylglycine. The amount of relealsed p-nitrcanlilline is pr0portional to the GT activity of serum.

L- γ-glutamyl-3-carboxy-4-nitroanilide+glycylglycyne →

L -- glytamyl-glycylglycyne+3-carboxy-4-nitroaniline

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 of hemolysis

WORKING REAGENT PREPARATION 84 STABILITY

Mix 4 volume of Reagent 1 with 1 Volume of Reagent 2

GENERAL SYSTEM PARAMETERS:

Reaction type Reaction	Kinetic
Wave length	405 nm
Light Path	1 Cm
Reaction Temperature	37^0C
Blank /Zero Setting	With Distilled Water
Reagent Volume	1ml
Sample Volume	100µl
Lag / Delay Time	60 Sec.
Read Time	180 Sec.
Interval Time	60 Sec.
Factor	1280
Low Normal at 37^0 C	7 U/I
High Normal at 37^0 C	50 U/I
Linearity	300 U/I
Max. Abs / Min	0. 234
Units	U/I

ASSAY PROCEDURE:

Working Reagent	1000 µl
Sample	100 µl

Mix and after 60 second incubation, measure the decrease in absorbance every minute during 3 minutes at 37^0C.
Determine the ΔA/Min

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CALCULATION:

Gamma-GT Activity (U/l) = ΔA/min. X 1280

LINEARITY:

Reagent Is Linear up to 300 U/l .

Dilute the sample appropriately and re-assay if Gamma GT activity exceeds 300 U/I or Δ Abs/min Exceeds 0.234. Multiply result with dilution factor.

NORMAL RANGE

Male : 11 50 U/l

Female : 7 31 WI

The reference values are only indicative in nature. Every laboratory should establish its own normal ranges.

QUALITY CONTROL

For accuracy it Is necessary to run kown controls with every assay.

LIMITATIONS & PRECAUTIONS

1. Storage conditions as mentioned on the kit to be adhered.
2. Do not freeze expose the reagents to higher temperature as it may affect the performance of the kit.
3. Before the assay bring all the reagents to room temperature.
4. A voice contamination of the reagent during assay process.
5. Use clean glassware free from dust or debris.
6. 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)