ESTROM GGT (Lypho)
(SZASZ Method)

This reagent kit is for quantitative estimation of Gamma Glutamyl Transaferase (Transpeptidase) activity in serum or plasma.

PRINCIPLE:
The substrate Gamma Glutamyl p-nitroanilide is acted upon by enzyme Gamma Glutamyl transpeptidase releasing Gamma Glutamyl group which is transferred to Glycylglycine. The product formed is p-nitroaniline which absorbs light at 405 nm. Increase in absorbance is related to enzyme activity.

GPNA + GLYCYLGLYCINE $\xrightarrow{\gamma\text{-GT}}$
L-γ GLUTAMYL -- GLYCYLGLYCINE + p-NITROANILINE

(GPNA = L-γ- GLUTAMYL- p - NITROANILIDE)

CLINICAL SIGNIFICANCE:
Estimation of GGT activity is an important parameter in diseases of liver, biliary tract and pancreas. GGT activity rises in case of viral hepatitis and metastatic carcinoma, cholangitis, cholecystitis, cholelithiasis and chronic hepatitis. In differentiating bone and liver disease, it serves as characteristic parameter, as serum GGT activity is not elevated in any form of bone disorder.

SPECIMEN COLLECTION AND STORAGE:
- Fresh, clear and fasting unhemolysed serum is preferred.
- Anticoagulants like citrates and EDTA should be avoided.

PRECAUTION:
- Estrom GGT reagent is for In Vitro diagnostic use only.

REAGENTS:
All the reagents are to be stored at 2-8° C.

	No. of bottles 12x1.1 ml
Reagent 1 (GPNA Substrate)	12
Reagent 2 (Buffer)	1

REAGENT RECONSTITUTION:
A) 12x1.1 ml: One vial of Reagent 1(Substrate) is to be dissolved in 1.1 ml of Reagent 2 (Buffer). Mix gently. Keep for 5 minutes before use. Reconstituted reagent may be stored at 2-8° C, protected from light when not in use.

REAGENT STORAGE AND STABILITY:
All the reagents are stable up to expiry date stated on the label. Working reagent when stored at 2-8° C protected from light is stable for 5 days. Working reagent should be discarded if the blank exceeds 0.85 at 405 nm.

GENERAL INSTRUMENT PARAMETERS:

Reaction Type	: Kinetic
Slope of Reaction	: Increasing
Wavelength	: 405 nm
Flowcell Temperature	: 37° C
Reagent volume	: 1.0 ml
Sample Volume	: 100 µl (0.1 ml)
Delay Time	: 60 seconds.
Interval	: 60 seconds.
No. of readings	: 3
Factor	: 1158
Units	: IU/L.
Zero Setting	: Distilled water
Path length	: 1.0 cm

PROCEDURE:
Allow the sample and reagent to attain room temperature prior to use.

Dispense into test tubes	Test
Working Reagent	1.0 ml
Sample	100µl

Mix and aspirate. Read absorbance after a delay of 60 seconds at an interval of 60 seconds i.e. at 60, 120, and 180 seconds at 405 nm. Obtain the mean change in absorbance per minute (Δ A/min).

LINEARITY:
This method is linear for GGT activity up to 250 IU/L. For sample values exceeding the linearity limit, dilute the sample suitably with normal saline and repeat the assay. Apply proper dilution factor while calculation.

CALCULATION:
Concentration of GGT in sample (IU/L) = Δ A/min x Factor

Factor = 1158.

REFERENCE VALUES:

AT 37°C	AT 30°C
MEN : 9-52 IU/L	MEN : 7-40 IU/L
WOMEN : 5-32 IU/L	WOMEN : 4-25 IU/L

It is recommended that each laboratory establish its own reference values.

BIBLIOGRAPHY:

- SZASZ G:, Clin. Chem. 22, 1976, 2051 – 2055

Angstrom Biotech Pvt.Ltd.
G1 - 1035, RIICO Industrial Area
Phase - III, Bhiwadi,
Alwar, Rajasthan.
Pin Code - 301019
Email: info@angstrombiotech.in
Website: www.angstrombiotech.in.
Customer Care Number - 9599194831

⚠	Attention,see instructions for use		Consult Instructions For Use
IVD	For in vitro diagnostic use only	REF	Catalog #
2°C 8°C	Store between 2-8°C	LOT	Lot Number
	Do not use if package is damaged		Date of Manufacturing
	Manufacturer		Use by