ESTROM SGPT (ALT) -Lypho

(IFCC Method)

ANGSTROM BIOTECH PVT. LTD

This reagent kit is for quantitative estimation of Glutamate Pyruvate Transaminase/L-alanine transferase activity in serum or plasma.

PRINCIPLE:

In the bisubstrate reaction, transfer of aminogroup from L-alanine to ketoglutarate gives pyruvate and glutamate, this reaction is catalysed by pyruvate oxaloacetate transaminase. Further Lactate Dehydrogenase (LDH) acts on Pyruvate to yield Lactate coupled with oxidation of NADH to NAD. The rate of decrease in absorbance is measured at 340 nm which corresponds to the GPT activity.

α-KETOGLUTARATE+L-ALANINE SGPT L-GLUTAMATE + PYRUVATE

PYRUVATE + NADH LDH LACTATE + NAD

CLINICAL SIGNIFICANCE:

GPT assay is an important factor in evaluating liver function in viral, bacterial or toxic hepatitis. Alanine transaminase is present in high concentration in liver, kidney, heart and skeletal muscle tissue. Elevated serum GPT is found in primary liver diseases (cirrhosis obstructive jaundice, carcinoma, viral or toxic hepatitis) and kidney diseases in metastatic carcinoma, hepatic congestion and myocardial infarction, there is slight increase in serum GPT level. In patients undergoing long term hemodialysis without vitamin B6 therapy, the GPT levels in serum may be decreased.

SPECIMEN COLLECTION AND STORAGE:

- Fresh, clear and fasting unhemolysed serum is preferred.
- Anticoagulants like oxalates, citrates and EDTA should be avoided.

PRECAUTION:

Estrom SGPT reagent is for In Vitro diagnostic use only.

REAGENTS:

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

	No. of bottles			
	12 x 1.1 ml	5x10 ml	20X25 ml	**10X 5 ml**
Reagent 1 (Substrate)	12	5	20	10 Vials
Reagent 2 (Buffer)	1	5	20	50 ml

REAGENT RECONSTITUTION:

(A) 12x1.1 ml: One tablet/vial of Reagent 1 (Substrate) is to be dissolved in 1.1 ml of Reagent 2 (Buffer).

(B) 5x10 & 20 x 25 ml: Transfer one vial of Reagent 1 (Substrate) to Reagent 2 (Buffer)

Mix gently 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 is stable for 15 days at 2-8°C.

GENERAL INSTRUMENT PARAMETERS:

Reaction Type	: Kinetic
Interval	: 30 seconds
Slope of Reaction	: Decreasing
No. of readings	: 3
Wavelength	: 340 nm
Factor	: 1745
Flowcell Temp.	: 37°C
Units	: IU/L
Reagent Volume	: 1.0 ml
Zero Setting	: Distilled water
Sample Volume	: 100 µl (0.1 ml)
Path length	: 1.0 cm
Delay Time	: 60 seconds

PROCEDURE:

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

Dispensing into test tube	Test
Working Reagent	1.0 ml
Sample	100 µl

Mix and aspirate. Read absorbance after a delay of 60 seconds at an interval of 30 seconds i.e. at 60, 90 and 120 seconds at 340 nm. Obtain the mean change in absorbance per minute (ΔA/min.).

LINEARITY:

This method is linear for SGPT activity up to 500 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 SGPT in sample (IU/L)

= ΔA/min. x Factor, [Factor = 1745]

REFERENCE VALUES:

Normal Value : 0-49 IU/L at 37° C.

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

BIBLIOGRAPHY:

- The committee on Enzymes of the Scandinavian Society for Clinical Chemistry and Clinical Physiology, Recommended methods for determination of four enzymes in bloods. Scand. J. Clin. Lab invest 33, 291 (1974).
- Clin. Clim. Acta. 105, 147-172 (1980)

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