ESTROM SGOT (AST)-Lypho

(IFCC Method)

ANGSTROM BIOTECH PVT. LTD

This reagent kit is for quantitative estimation of Glutamate OxaloacetateTransaminase Aspartate transferase activity in serum or plasma.

PRINCIPLE:
In the bisubstrate reaction, transfer of aminogroup from L-aspartate to alpha-ketoglutarate gives oxaloacetate and glutamate, this reaction is catalysed by glutamate oxaloacetate transaminase. Further malate dehydrogenase (MDH) acts on oxaloacetate to yield malate coupled with oxidation of NADH to NAD. The rate of decrease in absorbance is measured at 340 nm which corresponds to the GOT activity.

α-KETOGLUTARATE+L-ASPARTATE $\xrightarrow{SGOT}$ L-GLUTAMATE + OXALOACETATE

OXALOACETATE + NADH $\xrightarrow{MDH}$ L-MALATE + NAD

CLINICAL SIGNIFICANCE:
Elevated SGOT levels are observed in myocardial infarction, rheumatic diseases and acute congestive diseases. It is particularly useful in diagnosis and follow up of myocardial infarction. The increase in activity begins from 3-9 hours after infarction peaks at 24 hours and returns to normal on 4-6th day after infarction. SGOT is distributed in various organs like liver, muscle and kidney hence depending on the severity of the damage caused, the SGOT activity increases.

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

PRECAUTION:
- Estrom SGOT 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)
- **(C) 10x5 ml : Mix 5 ml of (R2) Buffer into one vial of (R1) Substrate and mix gently before use.**

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 SGOT 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 SGOT in sample (IU/L)
= ΔA/min. x Factor, [Factor = 1745]

REFERENCE VALUES:
Normal Value : 0-46 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. 70, 19-42 (1976)

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