LiquiCHEK™

SGOT (S.L)

2 x 30 mL, 3 x 50 mL, 4 x 125 mL
11408005, 11408003, 11408007

INTENDED USE

This reagent is intended for *in vitro* quantitative determination of SGOT in serum or plasma.

- IFCC recommended procedure
- Linear up to 1000 U/L
- Working reagent can be prepared as per requirements

CLINICAL SIGNIFICANCE

It is present in most of the tissues. Especially in cardiac muscle, liver cells, skeletal muscle & kidneys. Injury to these tissues results in the release of the enzyme in blood stream.

Increased levels are found in myocardial infarction. The duration & extent of increase is related to the infract. GOT determination is of considerable value to differentiate myocardial infarction from other cardiac disorders.

Increased levels are also found in various types of liver disease, skeletal muscle trauma & in renal diseases.

Decreased levels may be found in pregnancy, Beri-Beri & Diabetic ketoacidosis.

PRINCIPLE

Kinetic determination of Aspartate Aminotrasferase (AST) based upon the following reaction.

L- Asparate + alpha - ketoglutarate —(AST)—> Oxaloacetate + L-Glutamate.

Oxaloacetate + NADH + H^+ —(MDH)—> L- Malate + NAD^+

AST: Aspartate aminotransferase.

MDH : Malate dehydrogenase.

REAGENT COMPOSITION

SGOT (S.L) R1	**2 x 24 mL / 3 x 40 mL / 4 x 100 mL**
Tris Buffer (pH 7.8)	88 mmol/L
L-Aspartate	260 mmol/L
LDH	> 1500 U/L
MDH	> 900 U/L
SGOT (S.L)R2	**2 x 6 mL / 3 x 10 mL / 4 x 25 mL**
alpha -ketoglutarate	12 mmol/L
NADH	0.24 mmol/L

STORAGE AND STABILITY

The sealed reagents are stable up to the expiry date stated on the label, when stored at 2 - 8°C.

LINEARITY

This reagent is linear up to 1000 U/L.

If the concentration is greater than 350 U/L, follow the high linearity procedure to get higher linearity of 1000 U/L.

If the concentration is greater than linearity, dilute the sample with normal saline and repeat the assay. Multiply the result with dilution factor.

NORMAL RANGE

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

The following value may be used as guide line.

Serum up to : 46 U/L

PREPARATION AND STABILITY OF WORKING REAGENT

Mix 4 volumes of Reagent 1 (R1) with 1 volume of Reagent 2 (R2)

The working reagent is stable for 30 days at 2-8°C.

NOTE: Discard the working reagent if the blank absorbance is less than 1.0 at 340 nm.

PRECAUTION

To avoid contamination, use clean laboratory wares.

Avoid direct exposure of reagent to light.

SAMPLE

Serum / plasma (free of haemolysis)

GENERAL SYSTEM PARAMETER

	Normal procedure	High Linearity procedure
Mode of Reaction	Kinetic	Kinetic
Slope of reaction	Decreasing	Decreasing
Wavelength	340 nm	340 nm
Temperature	37°C	37°C
Factor	1745	1745
Linearity	350 U/L	1000 U/L
Blank	DI Water	DI Water
Delay	60 sec	60 sec
No of reading	3	3
Interval	60 sec	20 sec
Sample volume	100 µL	100 µL
Reagent volume	1000 µL	1000 µL
Cuvette	1 cm light path	1 cm light path

LABORATORY PROCEDURE

Working reagent	1000 µL
Sample	100 µL

Mix and incubate at 37°C for 1 minute. Measure the change in absorbance per minute (ΔOD/min) during 3 minutes.

High Linearity Procedure

Mix and incubate at for 1 minutes 37°C. Read the change in absorbance per 20 sec, during 1 minute.

CALCULATION

SGOT activity (U/L) = (ΔOD/min) x 1745

BIBLIOGRAPHY

1. Clin. Chem, Acta. 70, 19-42 (1976)
2. Thefeld, W., *et al.*; Dtsch. Med Wschr.99, 343 (1974)

SYMBOLS USED ON THE LABELS

SYMBOLS USED ON THE LABELS : IVD IN VITRO DIAGNOSTIC USE | SEE PACKAGE INSERT FOR PROCEDURE | LOT LOT NUMBER | MANUFACTURER'S ADDRESS | MANUFACTURING DATE | EXPIRY DATE | TEMPERATURE LIMIT

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CE ISO 9001 : 2008
ISO 13485 : 2003