GOT / AST TEST KIT

INTENDED USE : This Reagent kit is intended for ***"In Vitro"*** quantitative determination of SGOT (AST) activity in serum / plasma.

CLINICAL SIGNIFICANCE : The AST is a cellular enzyme, is found in highest concentration in heart muscle, the cells of the liver, the cells of the skeletal muscle and in smaller amounts in other weaves. Although an elevated level of AST in the serum is not specific of the hepatic disease, is used mainly to diagnostic and to verify the course of this disease with other enzymes like ALT and ALP. Also it is used to control the patients after myocardial infarction, in skeletal muscle disease and other. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

PRINCIPLE : Aspartate transaminase (GOT - AST) catalyses the reaction between Alpha - Ketoglutaric acid and L - aspartate giving glutamate and oxaloacetate, in the presence of Malate Dehydrogenase (MDH) reacts with NADH giving Malate and NAD. The rate of NADH decrease is determined photometrically and is directly proportional to the GOT activity in the sample.

REAGENT COMPOSITION :

Reagent 1 : Enzyme 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. Heparin or EDTA plasma.

WORKING REAGENT PREPARATION & STABILITY : Mix 4 Volume of Reagent 1, with 1 Volume of Reagent 2. Working Reagent is stable for 30 days at 2°C to 8°C.

ASSAY PROCEDURE :

Working Reagent	**1000 µl**
Sample	**100 µl**

Mix and after 60 second incubation, measure the decrease in absorbance every minute during 3 Minute at 37°C.

Determine the Δ A / min.

CALCULATION :

At 340 nm with 1cm Light Path

SGOT Activity (U/L) = Δ A / min. X 1746

GENERAL SYSTEM PARAMETERS :

Reaction Type	**Kinetic Reaction (Decreasing)**
Wavelength	**340 nm**
Light Path	**1cm**
Reaction Temperature	**37°C**
Blank / Zero Setting	**With Distilled Water**
Reagent Volume	**1000 µl**
Sample Volume	**100 µl**
Lag / Delay Time	**60 seconds**
Read Time	**180 seconds**
Interval Time	**60 seconds**
Factor	**1746**
Low Normal at 37°C	**0 U/L**
High Normal at 37°C	**37 U/L**
Linearity	**500 U/L**
Reagent Absorbance Limit	**> 0.8**
Max. Δ Abs / Min.	**0.286**

LINEARITY : Reagent is Linear up to 500 U/L.

Dilute the sample appropriately and re-assay if SGOT Activity exceeds 500 U/L or Δ Abs / Min. Exceeds 0.286. Multiply result with dilution factor.

REFERENCE NORMAL VALUE : 0 to 37 U/L

QUALITY CONTROL : For accuracy it is necessary to run known controls with every assay.

SENSITIVITY / LIMIT DETECTION : The Lower Limit of detection is 5 U/L.

LIMITATION & PRECAUTIONS :

- Storage conditions as mentioned on the kit to be adhered.
- Do not freeze or expose the reagents to higher temperature as it may affect the performance of the kit.
- Before the assay bring all the reagents to room temperature.
- Avoid contamination of the reagent during assay process.
- Use clean glassware free from dust or debris.
- Reagent to sample ratio as mentioned here above must be strictly observed as any change in to it will effect the factor.
- Higher AST / GOT values may induce falsely low result due to depletion of the substrate (total consumption of NADH before reading of the result). If an analyzer is used verify the presence of depletion factors on application.

BIBLIOGRAPHY :

Expert Panel on enzyme of the IFCC, Clin. Chem. Acta, 70, PM, (1976), Teitz., N. W.

Mfd. In India By:

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