BT System Pack
SGPT (ALAT) Kit

(Mod. IFCC Method)

For the determination of SGPT (ALAT) activity in serum.
(For Invitro Diagnostic Use Only)

Summary
SGPT is found in a variety of tissues but is mainly found in the liver. Increased levels are found in hepatitis, cirrhosis, obstructive jaundice and other hepatic diseases. Slight elevation of the enzymes is also seen in myocardial infarction.

Principle
SGPT (ALAT) catalyzes the transfer of amino group between L - Alanine and a Ketoglutarate to form Pyruvate and Glutamate. The Pyruvate formed reacts with NADH in the presence of Lactate Dehydrogenase to form NAD. The rate of oxidation of NADH to NAD is measured as a decrease in absorbance which is proportional to the SGPT (ALAT) activity in the sample.

$$\text{L-Alanine} + \text{Ketoglutarate} \xrightarrow{SGPT} \text{Pyruvate} + \text{L-Glutamate}$$

$$\text{Pyruvate} + \text{NADH} + H^+ \xrightarrow{LDH} \text{Lactate} + NAD^+$$

Normal reference values

Serum	Males	:	upto 40 U/L at 37°C
	Females	:	upto 31 U/L at 37°C

It is recommended that each laboratory establish its own normal range representing its patient population.

Contents	**4 x 50 ml**	**8 x 50 ml**
L1 : Enzyme Reagent	4 x 40 ml	8 x 40 ml
L2 : Starter Reagent	4 x 10 ml	8 x 10 ml

Storage / stability
Contents are stable at 2-8°C till the expiry mentioned on the labels.

Reagent preparation
Reagents are ready to use.

Sample material
Serum. Free from hemolysis. SGPT (ALAT) is reported to be stable in serum for 3 days at 2 - 8°C.

Linearity
The procedure is linear up to 500 U/L at 37°C.

References
IFCC methods for the measurement of catalytic concentrations of enzymes, J. Clin. Chem. Clin Biochem. (1986) 24 : 481

Mfd. by : Coral Clinical Systems
A Division of Tulip Diagnostics (P) Ltd.
Gitanjali, Dr. Antonio Do Rego Bagh,
Bambolim Complex P.O. GOA - 403 202, INDIA

GPT2(BT)/0417/VER- 01

BT SYSTEM PACK
PROGRAMMING PARAMETERS FOR SGPT (ALAT)

Double reagent application		SERUM PARAMETERS		URINE PARAMETERS	
Code for BAR_CODE	User Defined	Name	SGPT	Name	
Test Methodology	Mod. IFCC	Sample	22.5	Sample	3
Method	Kinetic	Pre-Dilution	1	Pre-Dilution	1
Kind of Process	Linear	**Dilution**		**Dilution**	
Filters	340 / 700	Factor	5	Factor	1
Reaction Direction	Decreasing	Limit Test (Conc.)	500	Limit Test (Conc.)	
Reagent #1(µl)	180	Initial ABS (mABS)	2000	Initial ABS (mABS)	
Reagent #2 (µl)	45	Final ABS (mABS)	750	Final ABS (mABS)	
Sample Starter	Active	Max ABS Delta (mABS)	250	Max ABS Delta (mABS)	
Delay Time (sec)	0 / 180	Check Prozona (mABS)	Inactive	Check Prozona (mABS)	Inactive
Incubation Time (sec)	90	Instrumental Factor	1	Instrumental Factor	1
Reading Time (sec)	90	Shift	0	Shift	0
Unit Serum	U/L	Re-run Hyperactive	Active	Re-run Hyperactive	Inactive
Unit Urine		Re-run Pathological	Inactive	Re-run Pathological	Inactive
Number of Needle Washes	2 / 2	Re-run out of curve "Above"	Inactive	Re-run out of curve "Above"	Inactive
Number of Cuvette Washes	2	Re-run out of curve "Below"	Inactive	Re-run out of curve "Below"	Inactive
Dynamic Blank	Inactive	**Normal Range**		**Normal Range**	
Reagent Blank	Every run	Men	Upto 40	Men	
Reagent Limit (mABS)	1000	Women	Upto 31	Women	
Curves Acceptance (%)	100	Children		Children	