AST/GOT (UV) (BR-160/ BR-120) Kinetic-IFCC Method

IVD

PRODUCT
CODE CZ005

INTENDED USE
This reagent is intended for *in vitro* quantitative determination of AST/GOT in serum or plasma.

METHOD
Optimized UV KINETIC-TEST according to IFCC (International Federation of Clinical chemistry)

CLINICAL SIGNIFICANCE
The Aspartate aminotransferase (AST/GOT) a cellular enzyme, 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 infraction 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, Beriberi & Diabetic ketoacidosis.

PRINCIPLE
the (AST/GOT) catalyzes the transfer of the amino group from L-aspartate to 2-Oxoglutarate to yield oxaloacetate and L-glutamate. The oxaloacetate undergoes reduction with simultaneous oxidation of NADH to NAD^+ in the malate dehydrogenase (MDH) catalyzed indicator reaction. The resulting rate of decrease in absorbance at 340nm is directly proportional to the AST activity. Lactate dehydrogenase (LDH) is added to prevent interference from endogenous pyruvate which is normally present in serum.

AST/GOT
L-Aspartate + 2-Oxoglutarate ----------→ Oxaloacetate +L-Glutamate
MDH
Oxaloacetate + NADH+ H^+ ----------→ L-Malate +NAD^+

REAGENT COMPOSITION

REAGENT 1 (ENZYME REAGENT) Tris pH 7.8	80 mmol/L
L-Aspartate	240 mmol/L
MDH	> 600 U/L
LDH	≥ 600 U/L
REAGENT 2 (SUBSTRATE) 2-Oxoglutarate	12 mmol/L
PNADH	0.18 mmol/L

REAGENT PREPARATION Reagent is ready for use.

SPECIMEN
Serum, heparinized plasma

PRUCEDURE

APPLICATION ON AUTO BIOCHEMISTRY ANALYSERS

BR-160 AUTO BIOCHEMISTRY ANALYZER

TEST NAME	AST		SAMPLE VOLUME	20	
FULL NAME	Aspirate Amino Transferase				
				R1	R2
	PRI.	SEC.	REAGENT VOLUME	200	50
WAVE LENGTH	340	NONE			
		START	END		
ASSAY /POINT	KINETIC	14	22		
DECIMAL PLACE	2				
UNIT	u/L				
	LOW	HIGH			
LINEARITY RANGE	0	467			

BR-120 AUTO BIOCHEMISTRY ANALYZER						
TEST NAME	lipase			SAMPLE VOLUME	4	
FULL NAME	lipase					
					R1	R2
	PRI.	SEC.		REAGENT VOLUME	200	50
WAVE LENGTH	578	700				
		START	END			
ASSAY /POINT	FIXED - TIME	26	34			
DECIMAL PLACE	2					
UNIT	u/L					
	LOW	HIGH				
LINEARITY RANGE	0	300				

PRECAUTION

1- The reagents contain sodium azide as preservative. Do not swallow and avoid contact with skin and mucous membranes.
2- To avoid contamination, use clean laboratory wares. Avoid direct exposure of reagent to light.

Measuring range:

Up to linearity limit of 467 U/L.
If the results obtained were greater than linearity limit, dilute the sample 1/10 with NaCl 9 g/L and multiply the result by 10.

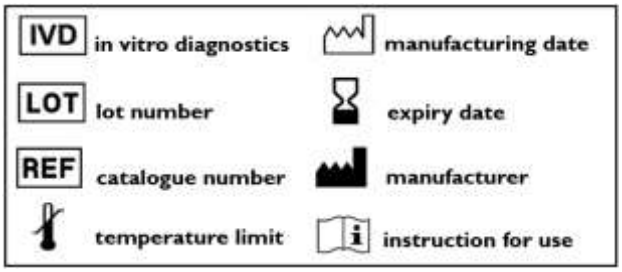
NORMAL RANGE

Men up to 37 U/L
Women up to 31 U/L
Each laboratory should establish reference ranges for its own patients' population.

QUALITY CONTROL

All control sera with values determined by this method can be used.

SYMBOL ON LABELS



BIBILOGRAPHY

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2- .Thefeld W. ET. AI. DT . MED. WSCHR. 99 (1974) 343.