

**PRODUCT CODE**  
**CZ006**

**INTENDED USE**

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

**METHOD**

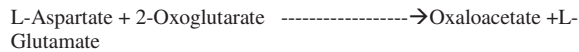
Colorimetric, Reitman-Frankel Method

**CLINICAL SIGNIFICANCE**

The AST 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 infarct. 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, Beriberi & Diabetic ketoacidosis.

**PRINCIPLE**

AST determination is based on the following reaction:



Oxaloacetate formed reacts with 2-4-dinitrophenyl hydrazine to yield a colored hydrazone that can be measured at 505 nm.

**REAGENT COMPOSITION**

**REAGENT 1 (SUBSTRATE)**

Phosphate buffer pH 7.4	100 mmol/L
L-Aspartate	200 mmol/L
2-Oxoglutarate	4 mmol/L

**REAGENT 2 (COLORREAGENT)**

2-4-dinitrophenyl hydrazine	1 mmol/L
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**STANDARD**

Pyruvic Standard	1.2 mmol/L
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**Additional Reagent, but not provided**

Sodium hydroxide	0.4 mol/L
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**REAGENT PREPARATION**

Reagents and standard are ready to use.

**REAGENT STORAGE AND STABILITY**

The reagents are stable, if protected from light, up to the stated expiry date when stored at 2 - 8° C.

**SPECIMEN**

Serum, free of hemolysis.

**PRECAUTION**

- To avoid contamination, use clean laboratory wares.
- Avoid direct exposure of reagent to light.

**ASSAY**

Wavelength	:	505 nm (490-520 nm)
Cuvette	:	1 cm light path
Temperature	:	37°C

**PROCEDURE**

	GOT
Reagent-1, (Substrate)	1 mL
Incubate for 5 minutes at 37°C	
Serum	0.2 mL
Mix and incubate at 37°C for 60 minutes	
Reagent-2 (Color)	1 mL
Mix and let 20 minutes at room temperature	
NaOH 0.4N	10 mL
Mix, wait for 5 minutes. Measure under conditions identical to those used for the standard curve. The color intensity stable for one hour	

**CALCULATION**

From absorbencies, read unit of GOT from corresponding curves.

**CALIBRATION (mL)**

Pipette into cuvettes	1	2	3	4	5	6
Distilled Water	0.2	0.2	0.2	0.2	0.2	0.2
Reagent 1 Substrate	1.0	0.9	0.8	0.7	0.6	0.5
Pyruvic standard	--	0.1	0.2	0.3	0.4	0.5
Reagent 2 Color	1.0	1.0	1.0	1.0	1.0	1.0
Mix, let stand for 20 minutes at room temperature						
NaOH 0.4 N	10	10	10	10	10	10
Mix, wait for 5 minutes, read absorbance of all tubes.						
Plot the standard curve of the absorbance found VS the corresponding unit, on a graph paper, according to the following concentrations						
GOT U/mL	0	22	55	95	150	215

**LINEARITY**

When GOT exceeds 165 U/mL, re-measure diluting the sample 1:10 in 9 g/L Sodium chloride.















**NORMAL RANGE**

GOT/AST: <40 units/mL

**QUALITY CONTROL**

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

**SYMBOL ON LABELS**

Symbols	Signify	Symbols	Signify
	Catalogue Number		Pack Size
	Expiry Date		Volume
	Storage Condition		Lot Number
	Instruction for Use		In Vitro Diagnostics
	Manufacturing Date		Manufacturer
	Number of Tests		For Single Use Only
	EC Representative		European conformity

**BIBLIOGRAPHY**

- Reitman S., Frankel S., Am. Clin. Pathol., 28,56 (1957)
- Tietz, NW., Fund of Clinical Chem., 446 (1970)
- Schmidt, E., Enzymology Biol.Clin., 3,1 (1963)

